



Dufferin-Peel Catholic District School Board

STANDARD TEXT GUIDELINE FOR

Performing Arts

for

SECONDARY SCHOOLS

Prepared by the Design Department

**With Assistance from Novita Techne Limited
and Scenework Ltd.**

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1. INSTRUCTIONS TO ARCHITECTS

1.1 GENERAL NOTES

- 1.1.1 ***This is not a Specification.*** It is a Guideline to be followed by the Architect and Consultants in the development of typical Performing Arts rigging and Theatrical Lighting Fixtures for the Dufferin-Peel Catholic District School Board's Secondary Schools.
- 1.1.2 It is the Architect's responsibility to insure that the Guidelines, as listed below, are incorporated within the appropriate sections of the Contract Documents.
- 1.1.3 This Guideline is to be read in conjunction with the Secondary School Guidelines, *Design Criteria and Fitments* and Secondary School Illustrative Sketches. The *Design Criteria and Fitments* will supersede this Guideline.

1.2 ACKNOWLEDGEMENT

- 1.2.1 *This Guideline was developed with the assistance of Novita Techne Limited, reviewed and updated with the assistance of Scenework Ltd.*

1.3 CONSULTANTS

- 1.3.1 All structural elements, including the supplementary channels to support the rigging at the Stage, as well as the pipe grids for the Drama/Lecture Room and the TV Studio are to be designed by the Structural Engineer of the Prime Consultant.
- 1.3.2 Although not mandatory, the Architect is encouraged to commission a qualified Theatre Design Sub-Consultant to develop the Tender Documents for the rigging, and for the Theatrical Lighting Fixtures & dimming controls packages.
 - 1.3.2.1 The Theatre Design Sub-Consultant should not be connected in any way with manufacturers or suppliers of any of the products specified.
- 1.3.3 The Theatrical Design Sub-Consultant must co-ordinate all the theatrical work with the Architect and with the electrical Engineer.

1.4 THEATRE SAFETY CONSULTANT

- 1.4.1 The Board employs a Theatre Safety Consultant who will review the drawings for compliance of rigging safety ONLY. (For review procedures, by this Consultant, refer to the *Information Manual* for Architects.)

1.5 ACCEPTABLE SUPPLIERS/INSTALLERS FOR STAGE RIGGING

- 1.5.1 The Architect and/or Consultants are to identify in the **Supplementary Information Form**, acceptable Suppliers and Installers of stage rigging. Installation of the rigging systems by the General Contractor is unacceptable.
- 1.5.2 Based on the Structural Consultant's detailed drawings the Supplier/Installer shall take full responsibility for supplying complete and fully functioning rigging system in compliance with all pertinent codes.
- 1.5.3 The Supplier/Installer is to supply to the Architect "shop drawings" for each installation, stamped by an Engineer licensed to practise in the Province of Ontario.
- 1.5.3.1 The stamped engineering drawings are to be limited to the points, track and pipe employed in the system including the spans and weight capacity of the pipe and batons

1.6 ACCEPTABLE SUPPLIERS/INSTALLERS OF THEATRICAL EQUIPMENT

- 1.6.1 The Electrical and/or Theatrical Design Consultants are to identify in the **Supplementary Information Form** acceptable Suppliers and Installers of the Theatrical Equipment. The supplier/installer named in the *Supplementary information Form* is to supply the theatrical lighting fixtures, dimming systems, all voltage termination, stage lighting controls, stage lighting distribution etc. The supply of these components by an Electrical Sub-Contractor is unacceptable.
- 1.6.1.1 The testing and commissioning of the dimming control system and training of the Board's representatives on operation and maintenance is to be part of the work of Supplier/Installer.
- 1.6.1.2 Also part of the work of Supplier/Installer is the hanging and focusing of all the Theatrical fixtures.
- 1.6.1.3 Based on the Theatre Design Sub-Consultant's or Electrical Consultant's detailed drawings the Supplier/Installer of Theatrical Lighting Fixtures and their peripherals shall take full responsibility to make the systems fully functional.

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- 1.6.2 **Note:** The installation of the dimming system, supply and installation of the high voltage wiring and placement of related equipment is to be the responsibility of the Electrical Sub-Contractor.

1.7 CO-ORDINATION BY THE GENERAL CONTRACTOR

- 1.7.1 The Architect and/or Consultants are to specify that the General Contractor shall co-ordinate the commencement of the installation of the stage rigging and drapery tracks.
- 1.7.2 The General Contractor must also co-operate with the stage drapery Supplier/Installer (Board commissioned) in the installation of draperies.

1.8 SCAFFOLDING

- 1.8.1 The Architect and or Consultants are to specify that the rigging supplier/installer shall be responsible for scaffolding or other ascent equipment in the installation of the Work.

2. STRUCTURAL REQUIREMENTS INCLUDED IN GENERAL CONTRACT

2.1 SUPPLEMENTARY CHANNELS TO SUPPORT RIGGING (AS REQUIRED)

- 2.1.1 Regardless of the roof structure details, stage rigging is to be supported at a distance of no more than 2400 mm (8 Ft.) on center.
- 2.1.2 Depending on the stage roof structure, *supplementary channels* (e.g., Unistrut or I beam) may be required for the attachment of rigging. Such supplementary channels are to be designed and detailed by the structural sub-consultant to the Architect, supplied and installed by the structural steel sub-contractor to the General Contractor.
- 2.1.2.1 The *supplementary channels* over the stage are to be parallel to the center line of stage at intervals of no more than 2400 mm (8 ft.) on center, and extending up to 3000 ± mm (10± ft.) beyond the proscenium opening width.
- 2.1.2.2 The *supplementary channels* are to be installed so as to run continuously from rear wall of stage (upstage) to front of stage (plaster line or downstage).
- 2.1.2.3 The *supplementary channels* are to be positioned at the same height with the entire bottom flange accessible for stage rigging.

- 2.1.2.4 The *supplementary channels* are to be capable of supporting up to twelve (12) Schedule 40 pipe battens evenly spaced upstage/downstage.
- 2.1.2.5 HVAC ducts, sprinkler pipes, electrical conduits and etc. are to run within the OWSJ's or parallel to the rigging support members.
- 2.1.3 If Supplementary Channels are not required the Structural Engineer must detail appropriate bearing points to support the required rigging spacing, coordinated with the Theatrical Design Sub-Consultant.

3. ITEMS INCLUDED IN THE STAGE RIGGING CONTRACT

- 3.1.1 Included is the supply and installation of all drapery tracks, leg pivot devices and associated hangers & accessories to accept fabric materials.
- 3.1.2 The supply and installation of pipe grids in the Drama Room and Television Studio in order to support the rigging and Theatrical Lighting Fixtures based on the description in this Guideline and Illustrative Sketches.
- 3.1.3 The supply and installation of electric pipes and battens for the Stage
- 3.1.4 The supply and installation of all drapery tracks and associated hangers and accessories in order to accept the cyclorama & leg pivot devices (at the Cafetorium Stage & Drama Room) and backdrop (at TV Studio) etc.
- 3.1.5 The supply and installation of the Theatrical Lighting Fixtures, dimming systems, tormentor bars, etc., as described in this Guideline.

4. ITEMS NOT INCLUDED IN THE STAGE RIGGING CONTRACT

- 4.1.1 Fabric draperies, curtains, teasers, borders, cyclorama, cloth backdrops and panels are to be supplied and installed by others.
- 4.1.2 The supply and installation of the electrical projection screen.

5. TERMINOLOGY USED IN THE GUIDELINE

5.1 STAGE PLASTER LINE

- 5.1.1 The stage plaster line is an imaginary line drawn from one side of the stage to the other. It stretches between the inside face surface of the proscenium wall.

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5.2 STAGE CENTER LINE

- 5.2.1 The stage centre line is an imaginary line drawn perpendicular to the plaster line, extending from the back wall of the Cafetorium to the rear wall of the stage. (Upstage)

5.3 STAGE CROSSOVER OR CYCLORAMA LINE

- 5.3.1 The stage crossover is a demarcation line composed of a 'soft crossover' – made up of a fixed curtain - parallel to the rear wall of the stage (upstage) approximately 1220 mm from the rear wall of the stage.

5.4 STAGE ELECTRIC PIPE

- 5.4.1 The stage electric pipes are Schedule 40 steel pipes at 38 mm (1½") O.D. supported from the structure or from "Supplementary Channels" at a maximum distance of 2400 mm (8 ft.) onto which the Theatrical Lighting Fixtures are clamped. (Refer to Illustrative Sketch STD - B15.4)

- 5.4.1.1 These stage electric pipes are to be at a *maximum* height of 4725 mm (15'-6" ft).

5.5 STAGE BATTENS

- 5.5.1 The Stage battens are Schedule 40 steel pipes at 38 mm (1½") O.D. hung from the structure or from "Supplementary Channels" at a maximum distance of 2400 mm (8 ft.)

- 5.5.2 The following fabric materials (NIC) are to be dead hung (fixed) from battens:

Front Valence
First, second and third Border (masking light fixtures)
Crossover (cyclorama) Drapes

5.6 LEG PIVOT DEVICES

- 5.6.1 The Leg Pivot Devices (8 required – 4 for the Cafeteria stage and 4 for the Drama Room) are similar to H&H Specialties 10 BK pivot devices, 1830 mm (6 ft.) long, complete with end stops. (Refer to STD – B 15.7)

- 5.6.2 The pivot devices are to be mounted on a track similar to H&H Specialties # 100 series track. Lengths of tracks will vary depending on site conditions.

6. STAGE DESIGN GUIDELINES

6.1 STAGE LAYOUT

- 6.1.1 The maximum area of the stage is to be 140 m² (1,500 sq. ft.) EXCLUSIVE OF the double stairs & forestage in front of the proscenium arch (apron), but includes the rear access stairs to the Instrumental Music Room, the barrier free lift/ramp [whichever is provided], the stage wing spaces, any storage area beyond either ends of the stage wings, the “upstage crossover”, and the Control Booth. Depth and width of stage is to be adjusted so as not to exceed the maximum area.
- 6.1.2 The stage is to have two exits with oversized doors suitable for the loading musical instruments and other bulky objects. One door is to lead directly into the school corridor. The other door is to lead to the Music or Band Room.
- 6.1.3 Soundproofing of door (without visual panel) between Stage and Music/Band Room is required.
- 6.1.4 Access from corridor to the stage shall be barrier free. Stage walls and ceilings are to be painted dark grey.

6.2 FORESTAGE

- 6.2.1 The stage is to be designed with a forestage of 1520 mm (5'-0”) deep measured from the plaster line.
- 6.2.2 The floor of the forestage is to be hardwood, varnished, flush with the stage floor. Length of forestage is to match the proscenium opening dimension.
- 6.2.3 Steps to the stage are to be provided at each side of the forestage. The steps are to be hardwood, varnished to match forestage floor. If required, yellow strips for visually impaired will be added Post General Tender.
- 6.2.4 A set of handrails to match the front of Cafetorium design are to be installed at the proscenium arch wall.

6.3 STAGE PROSCENIUM OPENING

- 6.3.1 The proscenium opening is to be between 8540 mm (28 ft) and 10980 mm (36 ft. maximum) wide with a maximum height of 4575 mm (15 ft).
- 6.3.2 Dimensions of stage wings on both sides of the proscenium opening are to be between 1830 mm (6 ft. minimum) and 3660 mm (12 ft. maximum).

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- 6.3.3 The Architect shall determine whether a fire separation is required at the proscenium.

6.4 STAGE HEIGHT

- 6.4.1 The elevation of the stage floor above the Cafetorium floor is to be determined by using a base elevation of 750 mm (30 inches) and adding 25 mm in height for every 2000 mm of depth of room to a maximum of 1075 mm (42 inches.) Height of stage, however, is dictated by the under-stage chair storage.

6.5 STORAGE REQUIREMENTS

- 6.5.1 Other than any storage area beyond either ends of the stage wings no additional storage area for stage materials is to be designed.

6.6 STAGE FLOOR CONSTRUCTION

- 6.6.1 The stage floor shall be a resilient wood floor assembly installed on a structural slab. The resiliency of the stage floor shall be consistent throughout.
- 6.6.2 The basic construction of the stage floor shall be 2 layers of ¾" medium density plywood screwed down.
- 6.6.3 The finish of the stage floor shall be a durable even surface free of flaws. The stage surface is to be stained black. Stage to be finished with "Rosco Color" coat.

6.7 STAGE RIGGING - TYPICAL DIMENSIONS AND LOCATIONS

- 6.7.1 APPROXIMATE dimensional information is to be as noted in this Guideline and on associated Illustrative Sketches, but it is the responsibility of the Architect and/or the Theatre Design Consultant is to provide exact quantities of hardware and final placement of equipment in accordance with the intent of this Guideline.

- 6.7.2 Typically, the distance of the rigging from the Plaster Line (PL) is to be as follows: (Depending on stage layout, dimensions may vary.)

Valence	Batten hanger (STD-B15.8)	-300
Electric projection screen †		
Main (grand) drape	Drapery track	200
1 st . border	Steel pipe batten (STD - B 15.4)	490
1 st . electric pipe	Steel pipe batten (STD - B 15.9)	750
1 st . leg pivot device	(STD - B 15.13)	1200
2 nd border	Steel pipe batten (STD - B 15.8)	2140
2 nd electric pipe	Steel pipe batten (STD - B 15.4)	2400
2 nd . leg pivot device	(STD - B 15.13)	2950
3 rd . border	Steel pipe batten (STD - B15.8)	4140
3 rd . electric pipe	Steel pipe batten (STD - B 15.4)	4400
Upstage traveller	Drapery track	5200
Crossover (cyclorama) drape★	Steel pipe batten (STD - B15.4)	7320

† The supply and installation of the Electric Projection Screen is in Contract, but back charged to the School's Furniture and equipment Budget.

★ Walking space between crossover drape and upstage (rear wall of stage) is to be a **maximum of 1220 mm (4 ft.)**

- 6.7.3 Lighting batten positions on the stage are to be determined by applying standard "McCandless" stage lighting methods. A sightline analysis will determine the precise locations of all on stage batten positions.
- 6.7.4 The calculated position of the stage lighting battens will determine the placement of the masking borders and Leg Pivot Devices.
- 6.7.5 Centre all battens and tracks on the Centre Line.

6.8 STAGE RIGGING - MAXIMUM HEIGHTS

- 6.8.1 The Architect and/or the Theatre Design Consultant must note that the **maximum** height from the stage floor **to the pivot point** of **Theatrical Lighting Fixtures is 4115 mm (13'-6")**. The fixture pipes onto which the Theatrical Lighting Fixtures are clamped are to be at a **maximum height of 4725 mm (15'-6")**. [Refer to Illustrative Sketch STD B – 15.4]
- 6.8.2 The battens for the front valence & the 3 borders, as well as the drapery tracks for the main drape track, the 2 leg pivot devices, and the upstage traveler drape may be located above the electric pipes.

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6.9 ELECTRIC PROJECTION SCREEN

6.9.1 The projection screen is to be mounted by the General Contractor on the inside edge of the proscenium arch supported by brackets that are traditionally included with the projection screen.

6.9.1.1 The size of the projection screen is to be approximately 3430 mm high and 6100 mm wide. (Dimensions are to be closest to a standard manufactured size of screen.)

6.10 STAGE WORK LIGHTS

6.10.1 Work lights on stage are to be fluorescent, preferably 1' x 4' with wire cages and tube sleeves. Fixtures are to be pendant type, installed above the rigging, lighting and masking systems and are not be supported directly from the OWS Joists. AND

6.10.2 Three (3) "blue light" fixtures mounted on the rear wall of the stage, at approximately 3000 mm (10 ft.) from the finished floor of the stage, to illuminate the passage way between the rear "crossover" curtain and rear (upstage) wall of the stage.

6.10.2.1 Switching for the work lights and the "blue light" fixtures is to be from the Control Booth and from downstage right. (D.N.R.)

6.11 STAGE TRACK

6.11.1 The stage track and associated hanging devices is to be standard theatre grade channel aluminum track to stage design.

6.11.2 Parallel lengths of track shall utilize overlap clamps to provide a 600 mm overlap centered on the proscenium arch opening with the opposing track ends extending a minimum of 1000 mm each way off stage beyond the edges of the proscenium arch.

6.11.3 Note that stage tracks are to be utilized for the following applications:

Main (Grand) drape
Upstage traveler
Leg pivot devices

6.12 STAGE HOUSEKEEPING

6.12.1 Make provisions for electrical power at the rear wall of the stage (upstage) at approximately 1500 mm (5 ft.) on centre. No more than two receptacles are to be on one circuit.

- 6.12.2 At downstage left (D.S.L) detail an electrical sub panel to provide power for visiting “ensembles”
- 6.12.3 Provide rough-in for control plug-in connections for microphone/sound system on both sides of the forestage apron.
- 6.12.4 At one side of the stage, provide SCP^L. (Refer to Secondary School Guideline, Systems, Computer Provisions)

7. CAFETORIUM DESIGN GUIDELINES

7.1 ACCOUSTICS

- 7.1.1 The interior treatment of the area is to create an appropriate acoustical environment for communication through speech, music and amplified sound.
- 7.1.2 Articulation of interior surface is to provide for even dispersal of sound energy and prevent hot spots and echoes.
- 7.1.3 Ideally, the reverberation time of the room in an empty configuration should be between .7 and .9 seconds.

7.2 CAFETORIUM FRONT OF HOUSE (FOH) LIGHTING BATTEN

- 7.2.1 One (1) FOH steel pipe batten for Theatrical Lighting Fixtures is required in the Cafetorium with the following characteristics:
 - 7.2.1.1 The FOH lighting batten is to be dead hung (not able to move). The FOH Batten position is to be determined to provide proper stage lighting angles based on “McCandless” lighting methods at approximately 4000 mm from the plaster line.
 - 7.2.1.2 The FOH batten is to be as high in the space of the Cafetorium as is possible, but should not exceed 7320 mm (24 feet) from the finished floor of the Cafetorium.
 - 7.2.1.3 The FOH batten is to be a maximum of 12200 mm (40 feet) long, and shall be supported at intervals as per the Structural Consultant’s design but at no greater than 2440 mm (8 feet).
- 7.2.2 The position of, and access to the FOH lighting batten shall take precedence over any acoustic or aesthetic treatment of the room.

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7.3 CAFETORIUM TORMENTOR PIPES (TORM)

- 7.3.1 One fixed side lighting Torm, 1½" I.D. Schedule 40 pipe is required on each side wall of the Cafetorium with the following characteristics:
 - 7.3.1.1 Each lighting Torm position is to be determined to provide proper stage lighting angles based on "McCandless" lighting methods, located approximately 9760 mm (32 ft.) downstage of the plaster line. (Exact location is to be determined by the Architect and/or Theatre Design Consultant.)
 - 7.3.1.2 Each lighting Torm will be installed vertically and should be approximately 1220 mm (4 ft.) long.
 - 7.3.1.3 Lowest point of the lighting Torms is to be at 2440 mm (8 ft.) from the Cafetorium floor.

7.4 CAFETORIUM HOUSE LIGHTS

- 7.4.1 House lights configuration is to be designed by the Architect's Electrical Engineer in consultation with the Design Department.
- 7.4.2 Cafetorium house lights are to consist of the following:
 - 7.4.2.1 Fluorescent fixtures on 2 circuits per fixture, providing 50 ft. candles at over the entire audience area (Fluorescent fixtures are to be controlled by a motion sensor, overridden by switches at Stage and Control Booth. Key switches are unacceptable.) AND
 - 7.4.2.2 Dimmable pot-type light fixtures, and (optional) wall mounted, non-dimmable fluorescent fixtures.
 - 7.4.2.3 The separate pot-type light fixtures are to be operated through the dimming control system.

8. CAFETORIUM AND STAGE THEATRICAL LIGHTING FIXTURES

8.1 FRONT OF HOUSE FIXTURES

- 8.1.1 The Theatrical Lighting Fixtures as described below are to be included in the Contract Documents and are to be operated through the dimming control system.
 - 8.1.1.1 Twelve (12) ERS lighting fixtures with twist lock connectors and safety cables for front of house (FOH) batten.

- 8.1.1.2 Four (2 on each side) ERS lighting fixtures with twist lock connectors and safety cables for Cafetorium Torms.
- 8.1.2 The Theatre Design Consultant shall determine precise locations of the fixtures.
- 8.1.3 Any additional Theatrical Lighting Fixtures are to be purchased by the school from the school's Furniture and Equipment Budget, Post General Tender.

8.2 STAGE THEATRICAL LIGHTING FIXTURES

- 8.2.1 The Theatrical Lighting Fixtures as described below are to be included in the Contract Documents.
 - 8.2.1.1 Twelve (12) soft focus fixtures with twist lock connectors and safety cables.
- 8.2.2 The Architect and/or Theatre Design Consultant is to determine precise locations of the fixtures.
- 8.2.3 Any additional Theatrical Lighting Fixtures are to be purchased by the school from the school's Furniture and Equipment Budget, Post General Tender.

9. DRAMA ROOM DESIGN GUIDELINES

9.1 DRAMA ROOM LAYOUT

- 9.1.1 There is to be a sound rated folding wall between the Drama Room and the Lecture Room.
- 9.1.2 The proscenium opening between the two spaces is to be between 3960 mm (13 ft.) and 4270 mm (14 ft.) high.
- 9.1.3 The stage wings are to extend beyond the proscenium opening on both sides between 1200 mm (4 ft.) and 1830 mm (6 ft.)

9.2 DRAMA ROOM PIPE GRID

- 9.2.1 The Drama Room should be designed with a 1220 mm (4 ft.) x 1220 mm (4 ft.) pipe grid to receive theatrical lights. The pipe grid is to be constructed with over/under joints, must not be higher than 4725 mm (15'-6") from finished floor and must be made rigid by securing it to no fewer than two walls that are perpendicular to each other.

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- 9.2.1.1 The pipe grid is to be attached to the ceiling structure as per Structural Consultant's load design for its size and weight.
- 9.2.1.2 The pipe grid is to be 1 $\frac{7}{8}$ " O.D. Schedule 40 pipe with over/under joints.
- 9.2.1.3 There is to be a minimum of 810 mm (32") clear space between the grid and the roof structure.
- 9.2.2 The pipe grid is to be located within 1000 mm (3 ft.) of perimeter walls and/or ceiling bulkheads. Building components are not to be installed above the grid.

9.3 DRAMA ROOM TRACK AND LEG PIVOT DEVICES

- 9.3.1 Suspended from the pipe grid, the drapery track is to be continuous, "U shaped" to form a cyclorama from plaster line to plaster line. Upstage corners of track are to be rounded.
- 9.3.2 Along both sides of the upstage/downstage portion of the track provide 4 leg pivot devices – 2 at each side. Both leg pivot devices are to be capable of being stored along the downstage wall of the Drama Room.
- 9.3.3 A sight line analysis will determine the locations of the track location.

9.4 DRAMA ROOM THEATRICAL LIGHTING FIXTURES

- 9.4.1 The Theatrical Lighting Fixtures as described below are to be included in the Contract are to be operated through the dimming control system.
 - 9.4.1.1 Eight (8) soft focus stage lighting fixtures with twist lock connectors and safety cables.
- 9.4.2 The maximum height from the Drama Room floor to the pivot point of the Theatrical Lighting Fixtures is 4115 mm (13'-6").

9.5 DRAMA ROOM WORK LIGHTS

- 9.5.1 Work lights for Drama Room are to be standard fluorescent fixtures, but must fit above the rigging, lighting and masking systems.
- 9.5.2 Provide switches for all work lighting fixtures in the Drama Room and at the rear of the Lecture Room. Work lights are to be 1' X 4' with wire cages and tube sleeves.

9.6 DRAMA ROOM HOUSEKEEPING

- 9.6.1 Make appropriate provisions for electrical power around the perimeter of the space.

10. LECTURE ROOM DESIGN GUIDELINES

10.1 ACCOUSTICS

- 10.1.1 The interior treatment of the area shall create an appropriate acoustical environment for communication through speech, music and amplified sound.
- 10.1.2 Articulation of interior surface shall provide for even dispersal of sound energy and prevent hot spots and echoes.
- 10.1.3 Ideally the reverberation time of the room in an empty configuration should be between .7 and .9 seconds.

10.2 LECTURE ROOM FRONT OF HOUSE (FOH) LIGHTING BATTEN

- 10.2.1 One (1) FOH lighting batten is required in the Lecture Room with the following characteristics:
 - 10.2.1.1 The FOH lighting batten will be dead hung (not able to move).
 - 10.2.1.2 The FOH batten shall be as high in the space of the Lecture Room as possible, but should not exceed 6710 mm (22 feet) from the finished floor of the Lecture Room.
 - 10.2.1.3 The FOH batten shall be a maximum of 9760 mm (32 feet) long, and shall be supported at intervals not greater than 2440 mm (8 feet).
- 10.2.2 The position of and access to the FOH lighting batten shall take precedence over any acoustic or aesthetic treatment of the room.
- 10.2.3 Batten position must be determined to provide proper stage lighting angles based on “McCandless” lighting methods.

10.3 LECTURE ROOM THEATRICAL LIGHTING FIXTURES

- 10.3.1 The Theatrical Lighting Fixtures as described below are to be included in the Contract are to be operated through the dimming control system.

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- 10.3.1.1 Four (4) ERS stage lighting fixtures with twist lock connectors and safety cables installed on the front of house (FOH) batten.

10.4 LECTURE ROOM HOUSE LIGHTS

- 10.4.1 House lights configuration is to be designed by the Architect's Electrical Engineer in consultation with the Design Department.
- 10.4.2 Lecture Room house lights are to consist of the following:
- 10.4.3 Fluorescent fixtures are to be on 2 circuits per fixture, providing 30 ft. candles over the entire audience area. (Fluorescent fixtures are to be controlled by a motion sensor, overridden by switches at Stage and Control Booth. Key switches are unacceptable.) AND
- 10.4.4 Separate pot type light fixtures are to be connected to two (2) 2400 watt stage dimmers for control through the dimming control system. Switching is to be controlled through the dimming system both at the Drama Room and at the control are in the rear of the Lecture Room.

10.5 LECTURE ROOM HOUSEKEEPING

- 10.5.1 Make appropriate provisions for electrical power around the perimeter of the space.
- 10.5.2 At one of the wing walls, provide one TCP^L (Refer to Secondary School Provide rough-in for control plug-in connections for microphone/sound system at both sides of the proscenium opening of the Drama Room.
- 10.5.3 Provide rough-in for control plug-in connections for microphone/sound system at both sides of the proscenium opening of the Lecture Room.

11. TELEVISION STUDIO DESIGN GUIDELINES

- 11.1.1 The "Television Studio" is located at one corner of the Communication Technology Laboratory. For detailed description of the TV Studio, refer to the Secondary School Guidelines.

11.2 TELEVISION STUDIO PIPE GRID

- 11.2.1 The Television Studio should be designed with a 1220 mm (4 ft.) x 1220 mm (4 ft.) pipe grid to receive theatrical lights. The pipe grid must be constructed with over/under joints, must not be higher than 4725 mm (15'-6") from finished floor and must be made rigid by securing it to no fewer than two walls that are perpendicular to each other.

- 11.2.1.1 The pipe grid is to be attached to the ceiling structure as per Structural Consultant’s load design for its size and weight.
- 11.2.1.2 The material of the pipe grid is to be 1 $\frac{7}{8}$ ” O.D. Schedule 40 pipe with over/under joints. Aluminum pipe grid is unacceptable.
- 11.2.2 The pipe grid should be located within 1000 mm (3 ft.) of perimeter walls and or any ceiling bulkheads. Building components are not to be installed above the grid.
 - 11.2.2.1 There is to be a minimum of 810 mm (32”) clear space between the grid and roof structure.

11.3 TELEVISION STUDIO TRACK

- 11.3.1 A drapery track in front of the hard cyclorama (Refer to Secondary School Guidelines – TV Studio) for a backdrop is to be fastened from the pipe grid. Curve track at corner.

11.4 TELEVISION STUDIO THEATRICAL LIGHTING FIXTURES

- 11.4.1 The Theatrical Lighting Fixtures as described below are to be included in the Contract are to be operated through the dimming control system.
 - 11.4.1.1 Eight (8) soft focus fixtures with twist lock connectors and safety cables.

11.5 TELEVISION STUDIO WORK LIGHTS

- 11.5.1 Work lights for the Television Studio are to be pendant type fluorescent fixtures, to fit above the pipe grid so as not to interfere with the lighting or masking systems.
- 11.5.2 Provide switches for work lighting fixtures in the Television Studio on a separate switch controlled at a convenient location in the Communication Technology Area.

12. DIMMING SYSTEMS

- 12.1.1 The load diversity factor should range based on performance. Minimum dimming system power requirements follow:
 - Stage/Cafetorium..... 48-circuit dimmer system fed with 200A
 - Drama/Lecture Room 24-circuit dimmer system fed with 100A
 - TV Studio 24-circuit dimmer system fed with 100A

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- 12.1.2 The dimmer board for the Stage & Cafetorium FOH/Torms will be able to control the Theatrical Lighting Fixtures at either the stage or at the Control Booth.
- 12.1.3 The dimmer Board for the Drama & Lecture Room FOH will be able to control the Theatrical Lighting Fixtures in the Drama Room or at the control station on the upper rear platform of the Lecture Room.
- 12.1.4 The dimmer board at the TV Studio will be able to control the Theatrical Lighting Fixtures either at a convenient location in the Communication Technology Lab or in the Main Edit Room.

13. AUDIO SYSTEMS

- 13.1.1 Audio Systems for the Cafeteria and for the Drama/Lecture Room and Chapel are to be detailed and tendered Post General Tenders.
- 13.1.2 There are no sound requirements for the TV Studio.
- 13.1.3 The Consultants are to detail rough-ins for a sound system in the above mentioned areas in CONTRACT. Please note that all audio system speakers are surface mounted.
- 13.1.4 As a minimum provide conduit and back boxes for speakers in the following areas:
 - Cafetorium Proscenium Right
 - Cafetorium Proscenium Left
 - Rear of Cafetorium

 - Drama Room/Lecture Hall Proscenium Right
 - Drama Room/Lecture Hall Proscenium Left

 - Chapel altar right
 - Chapel altar left
- 13.1.5 Provide rough-in for control plug-in connections for microphone/sound system at both sides of the stage apron.
- 13.1.6 Provide rough-in for control plug-in connections for microphone/sound system at both sides of the proscenium opening of the Lecture Room.

14. MECHANICAL DESIGN CONSIDERATIONS

14.1 HVAC

- 14.1.1 Return air grilles shall not be located closer than 2400 mm (8 ft.) from any curtain location.
- 14.1.2 No ductwork shall be located below the bottom of the rigging steel flange or interfere in any way with rigging, lighting or draperies at any point on stage.
- 14.1.3 Major building ducts are not to traverse any of the Theatrical Spaces identified herein.

15. PRODUCTS

15.1 THEATRICAL LIGHTING FIXTURES

15.1.1 Suggested Manufacturers

- 15.1.1.1 Theatrical Lighting Fixtures by the following manufacturers are suggested. The Architect and/or Consultants are to amend as required.

Leviton ECT Selecon Strand

15.1.2 Features

- 15.1.2.1 Theatrical Lighting Fixtures are to have the following features and devices:

'C' clamp and safety chain
Gel frame
Long life (at least 2,000 hr) lamp
One meter pigtail with rubber support for strain relief
NEMA L5-20P connector
Cable mounted shrink wrap for labeling

15.2 DIMMERS AND CONTROL

15.2.1 Dimmer Raceways

- 15.2.1.1 Stage lighting distributed dimmer raceways by the following manufacturers are suggested. The Architect and/or Consultants are to amend as required.

ECT Arkadium

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15.2.2 Dimmer Racks

15.2.2.1 Suggested manufactures

ECT Leviton Strand Lighting

15.2.3 Dimmer Controls

15.2.3.1 Control systems by the following manufacturers are suggested. The Architect and/or Consultants are to amend as required.

ECT Leviton Strand Lighting

15.3 DRAPERY TRACK

15.3.1 Track systems by the following manufacturers are suggested. The Architect and/or Consultants are to amend as required.

H&H ADC

16. RIGGING INSTALLATION REQUIREMENTS

16.1.1 Hanging and fastening of all systems components, products and assemblies is to utilize safety rated hardware only and designs are to include recommended safety ratios.

16.1.2 Applications include but are not limited to:

Eye bolts.....	Crosby S-279 or equal
Compression sleeves	Crosby Cold Tuff or Nicopress copper
Shackles	Crosby G-2130 or equal
Channel	Unistrut P 100 or equal
Flat plate fitting Unistrut	P 1045 or equal
Spring nuts	Unistrut P 1010 or equal, SAE Grade 3, 13 UNC threaded rod
Drapery trim chain	No 8 Jack chain
Beam clamps.....	Unistrut
Batten clamps.....	H & H Specialties
Wire rope.....	Galvanized 7 x 19
Thimbles.....	Crosby G-411 or equal

17. SUPPLEMENTARY INFORMATION**17.1 SECONDARY SCHOOL GUIDELINES**

Refer to the Design Criteria and Fitments for detailed building requirements of each of the Theatrical Spaces identified herein.

17.2 BOARD'S ILLUSTRATIVE SKETCHES

- 17.2.1 The Dufferin Peel Catholic District School Board has developed a set of drawings as an aid to design.
- 17.2.2 The following list of drawings is included to illustrate the minimum requirements. The Architect and or Consultants are to prepare their drawings to suit particular site conditions.

DRAWING NO.	DESCRIPTION
STD – B 15.1	Typical Plan of the Stage at Short Side of Cafetorium
STD – B 15.2	Typical Section thru Stage Showing Stage Rigging
STD – B 15.3	Typical Pipe Grid for Drama room and TV Studio
STD – B 15.4	Typical Installation of Electrical pipe and Fixtures on Stage
STD – B 15.5	Typical Installation of FOH Lighting in Cafeteria and Lecture Room
STD – B 15.6	Typical Detail of Track Hanger
STD – B.15.7	Typical Detail of Leg Pivot Device
STD – B.15.8	Typical detail of Standard Batten Hanger
STD – B15.9	Typical Detail of track for Main Traveller Drapes

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LATEST REVISION IN GREEN FONT

END OF SECONDARY SCHOOL PERFORMING ARTS GUIDELINE

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