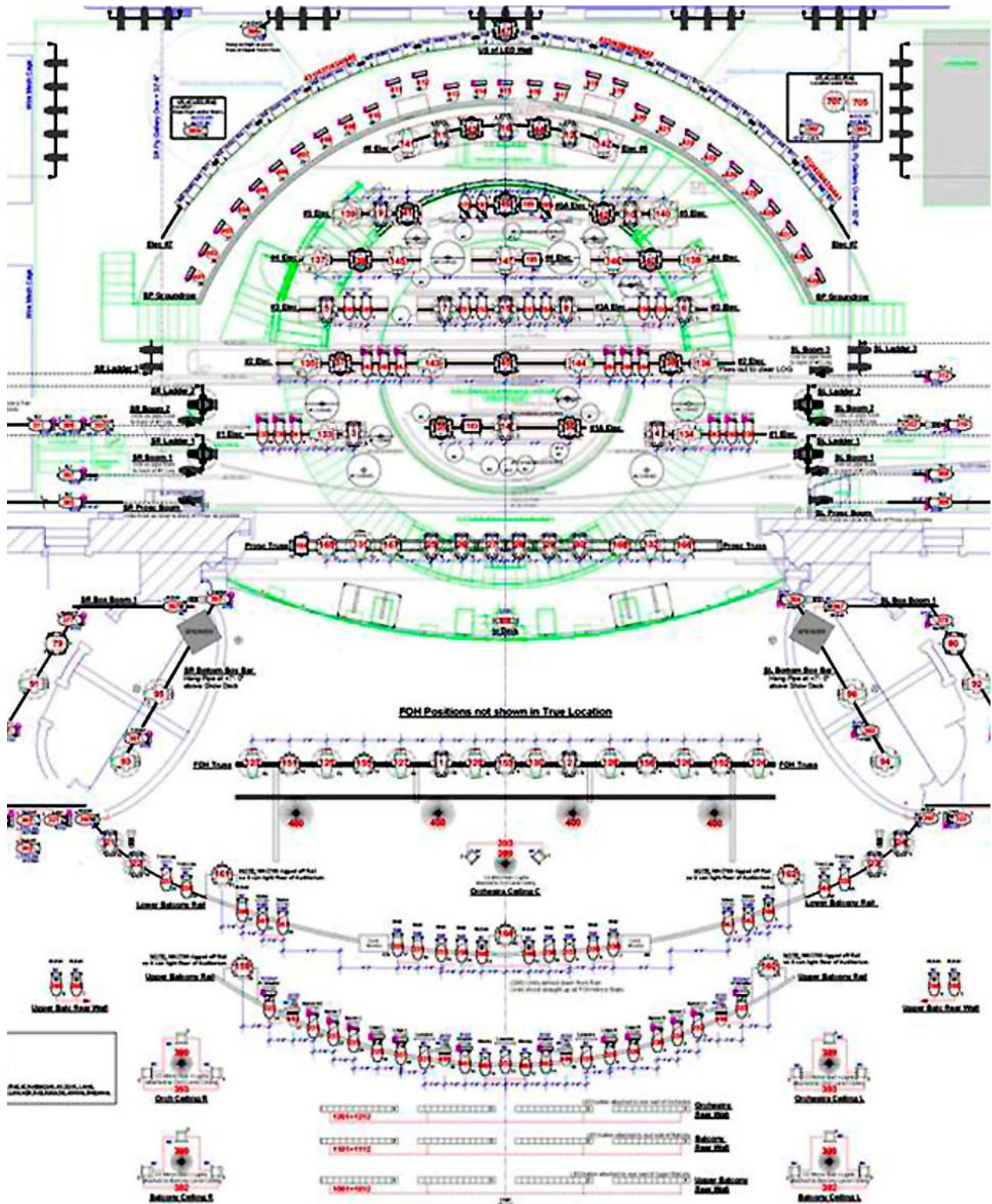


I was in New York City in May for the 14<sup>th</sup> annual Broadway Master Lighting Classes which showcased the very best of Broadway design talent. There were so many ideas being discussed there that I could not fit them all into one article. Because of this month's topic of show paperwork, I am going to give you a pictorial rather than a mostly written article.

Today I am having lunch with Vivien Leone near her home on the upper westside of Manhattan. When we first met at her lecture on paperwork she was having trouble with her laptop computer. It would not work with the video projection system that was being used in the lecture hall so she was understandably very nervous. I carry my laptop with me whenever I'm working so I offered to lend my system to her for her presentation. She was so grateful to have the use of my computer that when I suggested we should meet for an informal interview after the day's event she graciously accepted.

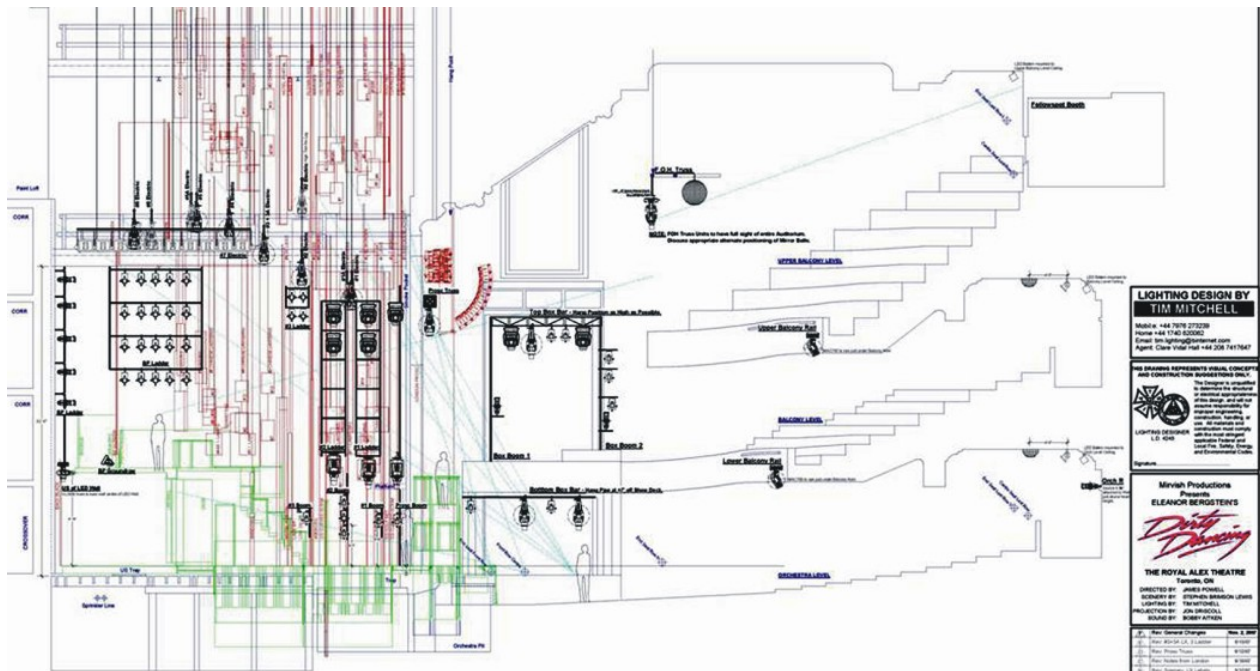
I wrote in my last article that she is one of the "Masters" in American theatre. And she is whether she admits it or not. Until I saw her presentation I thought of myself as a good creator of production paperwork both as a designer and a manager. I quickly found out that I still have more to learn in this fast changing, mad, wonderful business. I have placed some of her work on the next few pages to show you how production information can *tgcmf* be encapsulated on paper.

Every show is different. Each has its own needs and peculiarities. So the paperwork for one show may not work for the next one. One thing must be said however. For you to have concise paperwork you must also have a complete picture in your mind as to what you want your design to accomplish.



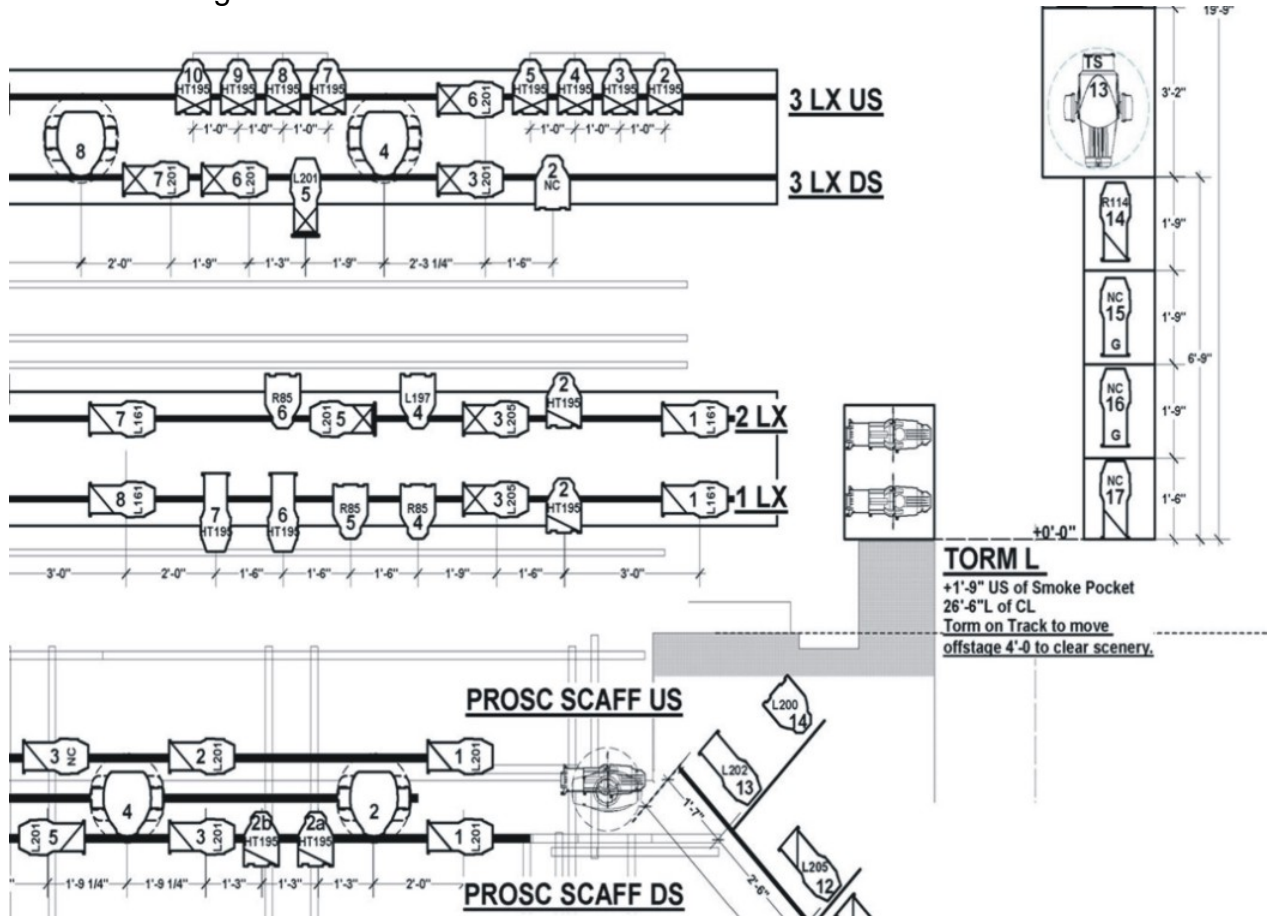
Drawing A – Dirty Dancing – The Plan View

There is a great amount of information in these first two drawings. Unfortunately for us, the scale of the drawing is too small to see every piece of information. We would need to have a magazine that was three or four times larger than the one you are reading to see that kind of detail. But the point of looking at these drawings is to see the overall organization of the information. Everything is labeled and cleanly laid out. And you can see the scenery (in green) lying under the light plot. This is the plan view (drawing A - the theatre seen from above looking down) and sectional view (drawing B - the theatre seen from the side) of the musical, Dirty Dancing that was produced in Canada. In the plan view you can see the lighting positions over the stage and in the auditorium. And in the sectional view you can see the height of the scenery and lights on stage, as well as the angle of the lighting positions from the auditorium.

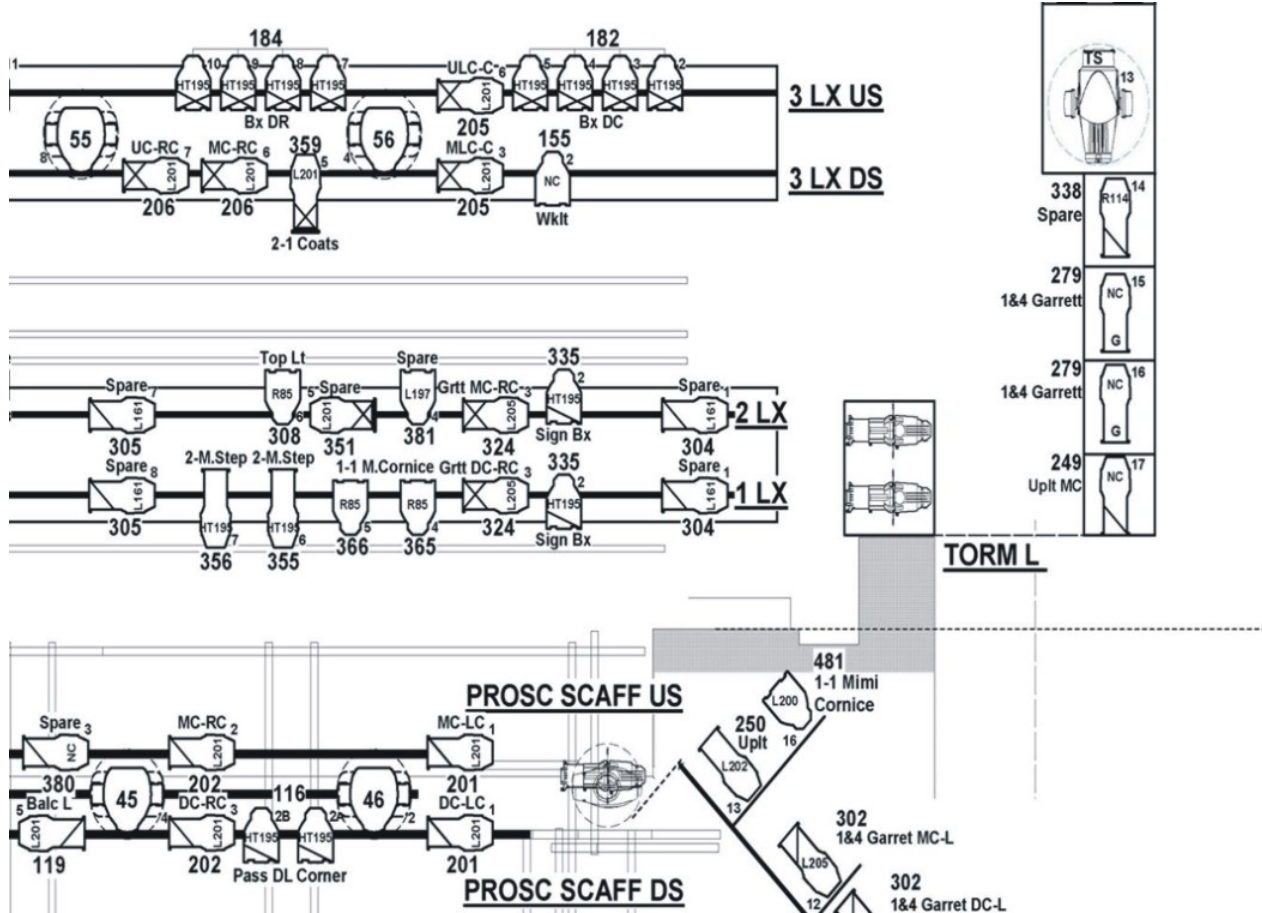


Drawing B – Dirty Dancing – The Sectional View

There are designers who create two plots for the show electrician. The first is to help him hang the lights in their correct locations. (See drawing C) And the second is to assist him during the focus of the lights. (See drawing D) The dimensions are written on the “hanging plot” so the electrician knows the exact distance between each light. While the second plot carries the channel number and color for each light. On a simpler show both sets of information can be combined onto one plot but give your electrician two copies so he can make his notes on one but keep the second for reference once the show is running.



Drawing C – Generic Hanging Plot Close-up



Drawing D – Generic Focus Plot Close-up

All information about the lights must be on the associated paperwork. Programs such as Lightwright are very effective for storing and updating your light plot paperwork. With today's technology we know that dimmers as well as channels must be assigned and tracked during the creation of a production. Once you update your show in Lightwright, all your necessary paperwork is updated at the same time. In the days before computers the Channel and Dimmer Hook-ups were created by hand so the addition of even one light in a single location meant re-writing at least two pages of notes. I know. I used to do the updates for several designers when I worked as an assistant LD. But what about the rest of your paperwork?

In Drawings E and F you see examples of Lightwright showing the Tony Award winning design by Don Holder of South Pacific by both the channel hook-up (E) and instrument schedule on the light plot (F). Lightwright is a specialized spreadsheet program like Excel but it is written for the lighting professional. The examples below are showing you the same lights on the third catwalk. Some of the information Lightwright organizes include the light, its color, template, the purpose of the light and any special effects that you might have with that light; while it keeps you from overloading your circuits and dimmers.

# Revista Backstage – Technical Paperwork – September 2008

Lightwright 4: South Pacific18Mar08.lw4

File Edit Worksheet Utilities Maintenance Setup Paperwork Layout Attributes Help

All Pos Chn Dim CktN C# Pos Chn Dim Pur CktN List Ljb Go Back

S F1 - Scrollers S F2 - Moving Lights S F3 - Strobes S F4 - Not In Use

View: All Hold:  Show Work Notes

Sorted by: Channel  Append

Channel	Position	Unit#	Instrument Type	Wattage	Purpose	Color	Template	Dimmer
(1)	3 CAT UND	11	S4 10"	750w	Thrust Wm Frt DL	L218+R119		119a
(2)	3 CAT UND	19	S4 10"	750w	Thrust Wm Frt DLC	L218+R119		122a
(3)	3 CAT UND	22	S4 10"	750w	Thrust Wm Frt DC	L218+R119		123b
(4)	3 CAT UND	27	S4 10"	750w	Thrust Wm Frt DRC	L218+R119		322a
(5)	3 CAT UND	35	S4 10"	750w	Thrust Wm Frt DR	L218+R119		319a
(6)	3 CAT OVR	1	S4 10"	750w	Thrust Wm Frt ML	L218+R119		110a
(7)	3 CAT OVR	4	S4 10"	750w	Thrust Wm Frt MLC	L218+R119		111b
(8)	3 CAT OVR	7	S4 10"	750w	Thrust Wm Frt MC	L218+R119		113a
(9)	3 CAT OVR	12	S4 10"	750w	Thrust Wm Frt MRC	L218+R119		311b
(10)	3 CAT OVR	15	S4 10"	750w	Thrust Wm Frt MR	L218+R119		310a
(11)	1 CAT HAND	1	S4 14"	550w	Thrust US/In-1 Wm Frt L	L218+R119		140a
(12)	1 CAT HAND	5	S4 14"	550w	Thrust US/In-1 Wm Frt LC	L218+R119		142a
(13)	1 CAT DS TOE	16	S4 14"	550w	Thrust US/In-1 Wm Frt C	L218+R119		134b
(14)	1 CAT HAND	12	S4 14"	550w	Thrust US/In-1 Wm Frt RC	L218+R119		341a
(15)	1 CAT HAND	16	S4 14"	550w	Thrust US/In-1 Wm Frt R	L218+R119		339a
(16)	1 CAT US HEAD	6	S4 19"	750w	In-2/3 Wm Frt LC	L218+R119		137b
(17)	1 CAT US HEAD	2a	S4 19"	750w	In-2/3 Wm Frt L	L218+R119		136b
(18)	1 CAT HAND	8a	S4 19"	750w	In-2/3 Wm Frt C	L218+R119		138b
(19)	1 CAT US HEAD	12	S4 19"	750w	In-2/3 Wm Frt RC	L218+R119		337b
(20)	1 CAT US HEAD	15b	S4 19"	750w	In-2/3 Wm Frt R	L218+R119		336b
(21)	FOH TRUSS	19	S4 10"	750w	Dune Bott C/C Frt L	R119.Scroll		149a
(21)	FOH TRUSS	19	10" ColoRam	10w	Lamp (21)	HS.Note 1		12
(22)	FOH TRUSS	21	S4 10"	750w	Dune Bott C/C Frt LC	R132.Scroll		149b
(22)	FOH TRUSS	21	10" ColoRam	10w	Lamp (22)	HS.Note 1		13
(23)	FOH TRUSS	23	S4 10"	750w	Dune Bott C/C Frt C	R119.Scroll		150a
(23)	FOH TRUSS	23	10" ColoRam	10w	Lamp (23)	HS.Note 1		14
(24)	FOH TRUSS	24	S4 10"	750w	Dune Bott C/C Frt RC	R119.Scroll		151a
(24)	FOH TRUSS	24	10" ColoRam	10w	Lamp (24)	HS.Note 1		15
(25)	FOH TRUSS	26	S4 10"	750w	Dune Bott C/C Frt R	R119.Scroll		151b
(25)	FOH TRUSS	26	10" ColoRam	10w	Lamp (25)	HS.Note 1		16
(26)	4 ELEC	3	S4 26"	550w	Dune Top Wm Frt Far L	L218+R119		402a

Worksheet Focus Layout 1654 items

Drawing E – Lightwright by Channels

Lightwright 4: South Pacific18Mar08.lw4

File Edit Worksheet Utilities Maintenance Setup Paperwork Layout Attributes Help

All Pos Chn Dim CktN C# Pos Chn Dim Pur CktN List Ljb Go Back

S F1 - Scrollers S F2 - Moving Lights S F3 - Strobes S F4 - Not In Use

View: All Hold:  Show Work Notes

Sorted by: Position  Append

Position	Unit#	Instrument Type	Wattage	Purpose	Color	Template	Channel	Dimmer
3 CAT UND	1	S4 14"	750w	Thrust ML Wm X Nr <	R302+R119		(79)	114a
3 CAT UND	2	7 1/2" ColoRam	10w	Lamp (133)	HS.Note 1		(133)	4
3 CAT UND	2	S4 14"	750w	Thrust Mid C/C X Nr <	R119.Scroll		(133)	114b
3 CAT UND	3	S4 14"	550w	Blue Tmp Thrust Mid Nr <	L161	R77405	(272)	115a
3 CAT UND	4	S4 14"	550w	Wm Tmp Thrust Mid Nr <	L162	R77405	(237)	115b
3 CAT UND	5	7 1/2" ColoRam	10w	Lamp (130)	HS.Note 1		(130)	5
3 CAT UND	5	S4 14"	750w	Thrust DS C/C X Nr <	R119.Scroll		(130)	116a
3 CAT UND	6	S4 14"	750w	Thrust DL Wm X Nr <	R302+R119		(76)	116b
3 CAT UND	7	S4 14"	550w	Blue Tmp Thrust DS Nr <	L161	R77405	(270)	117a
3 CAT UND	8	S4 14"	550w	Wm Tmp Thrust DS Nr <	L162	R77405	(235)	117b
3 CAT UND	9	S4 19"	750w	Lav Box Thrust DS Nr <	R51+R119		(208)	118a
3 CAT UND	10	S4 19"	750w	Amb Box Thrust DS Nr <	G323+R119		(222)	118b
3 CAT UND	11	S4 10"	750w	Thrust Wm Frt DL	L218+R119		(1)	119a
3 CAT UND	12	S4 10"	750w	Thrust Cool Frt DL	L201+R119		(32)	119b
3 CAT UND	13	S4 10"	750w	Thrust Dk Blue Frt L	L165+R119		(65)	120a
3 CAT UND	14	S4 10"	750w	Office Day Blinds	NC	GAM204	(427)	120b
3 CAT UND	15	Lycian 1272	1200w	Followspot 1				H1
3 CAT UND	15a	S4 14"	550w	Far DL Frt Fill	R119		(601)	124b
3 CAT UND	16	S4 10"	750w	Office Day Blinds	NC	GAM204	(427)	121a
3 CAT UND	17	AY S4 10"	750w	Fix 2 Lamp				2817
3 CAT UND	17	AY S4 10"	750w	Fix 2 Power				2841
3 CAT UND	17	AY S4 10"	750w	Fix 2	HS.Note 1,R132		(903)	1335
3 CAT UND	18	Lycian 1272	1200w	Followspot 2				H3
3 CAT UND	19	S4 10"	750w	Thrust Wm Frt DLC	L218+R119		(2)	122a
3 CAT UND	20	S4 10"	750w	Thrust Cool Frt DLC	L201+R119		(33)	122b
3 CAT UND	21	S4 10"	750w	Thrust Dk Blue Frt LC	L165+R119		(56)	123a
3 CAT UND	21a	S4 10"	750w	Thrust Cool Frt DC	L201+R119		(34)	124a
3 CAT UND	22	S4 10"	750w	Thrust Wm Frt DC	L218+R119		(3)	123b
3 CAT UND	22a	AY S4 10"	750w	Fix 5 Lamp				2821
3 CAT UND	22a	AY S4 10"	750w	Fix 5 Power				2845
3 CAT UND	22a	AY S4 10"	750w	Fix 5	HS.Note 1,R132		(902)	1367

Worksheet Focus Layout 1654 items

















Drawing F – Lightwright by Position

What is Lightwright?

Lightwright, written by John McKernon, is a unique combination of a spreadsheet and a database, designed specifically to manage professional lighting design paperwork.

Lightwright understands what designers and electricians do with their paperwork. It knows that dimmers and circuits shouldn't be overloaded, that striplights have more than one color, that color scrollers have a whole series of colors and need a control channel, and that some lights don't use color at all!

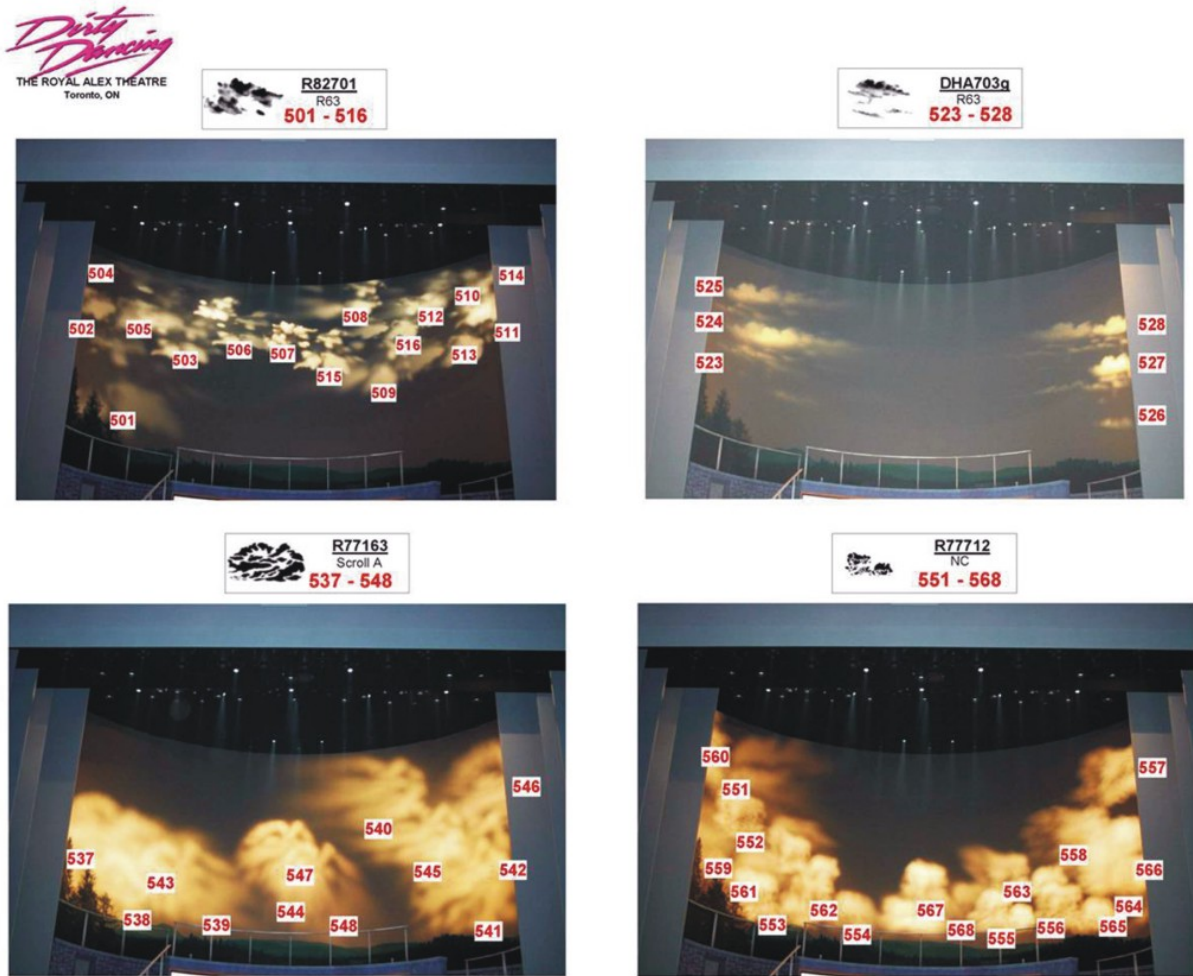
Speed and accuracy are critical to professionals and the theatres they work in, so Lightwright's emphasis is on making changes quickly and easily while helping you spot potential errors with a minimum of effort. It is used every day on Broadway, in major and minor opera houses, ballet companies, regional theatres, community theatres, and universities.

Moving Light Gobo Load - P		Date: Nov. 12, 2007	
6)VL3500Q Spot (Fixtures 25>30)		<i>Dirty Dancing</i> THE ROYAL ALEX THEATRE Toronto, ON	
<b>Fixed Gobo Wheel</b>		<b>Rotating Gobo Wheel</b>	
1	DEFAULT OPEN	1	DEFAULT OPEN
2	 Apollo 255175-Night Sky	F25 F26 F27 F28 F29 F30	
3	 VL 5009 - Liquid Texture	3	
4	 VL41.6030.7002 Pebbles (Standard)	4	
5	 R77107 - Pine Branch	5	 Apollo Custom JDD6 - DDGreyCloud1CA Fixture 25
6	 VL41.6030.5503 Palm Leaves (Standard)	5	 Apollo Custom JDD7 - DDGreyCloud2CA Fixture 26
7	 VL41.6030.7014 Triangle Break Up (Standard)	5	 Apollo Custom JDD8 - DDGreyCloud3CA Fixture 27
Load gobos with identical positioning in holder/light		5	 Apollo Custom JDD9 - DDGreyCloud4CA Fixture 28
Fabricate all new gobos with largest possible image per aperture.		5	 Apollo Custom JDD10 - DDGreyCloud4CA Fixture 29
Fabricate all new gobos with identical positioning in holder/light		5	 Apollo Custom JDD11 - DDGreyCloud4CA Fixture 30
VL = Vari*Lite		6	 Apollo Custom JDD15 - Line-up Grid
R = Rosco			
Martin = Martin			
Custom = Apollo			
All gobos = Glass			

Drawing G – Single Moving Light Gobo Details

In drawing G, you see templates used in a single Vari\*Lite VL3500Q. Each wheel and template are graphically represented on this single page. With this paper your electrician can load the correct gobo into the correct light. And you can look up the information quickly without having to remember what template is in what light. Memory is great to have if you are a computer. For me, it is most important to write it down and have it on my desk as I work.

What if your design includes many different cloud gobos in many different locations? Yes, you could use your channel hook-up to look for the gobos and then have the electrician turn them on. But what about using a graphic representation to simplify your job? An example of this is shown in drawing H.



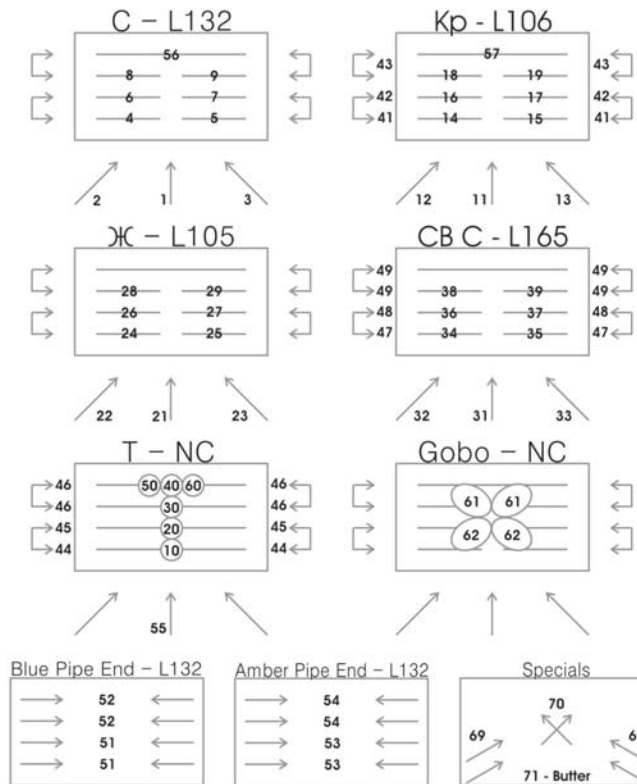
Drawing H – Cloud Magic Sheets

With all of your design at your fingertips on a few pieces of paper, creating a complex design with moving light projections, gobos and mood lighting will become easier for you. (See photo I)



Drawing I – Live Stage Photo of Dirty Dancing

Carmen Magic Sheet



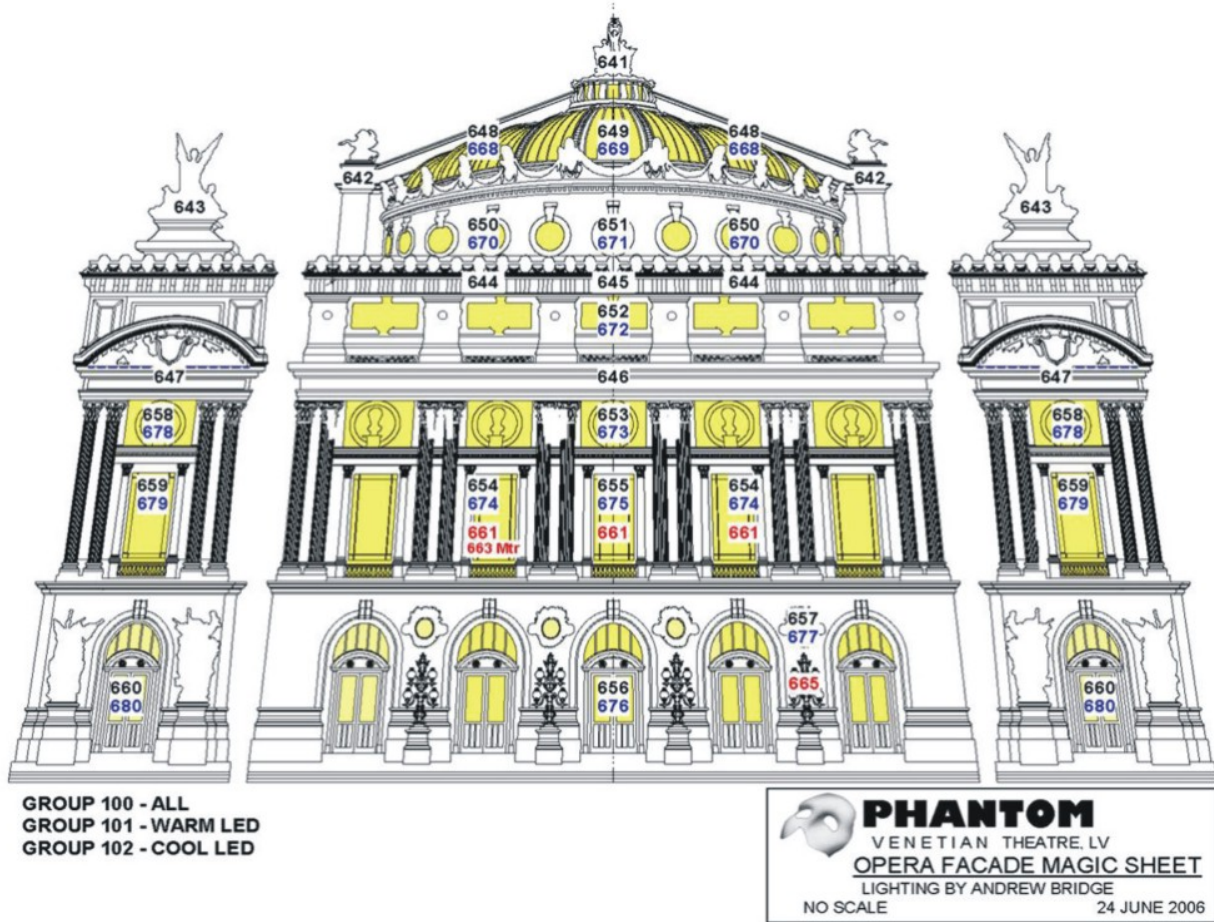
"

Drawing J – St. Petersburg Ballet Theatre’s “Carmen” – Magic Sheet

Not every show requires such detailed magic sheets. For example, earlier this year I worked with the St. Petersburg Ballet theatre. While on the road through the U. S. their LD redesigned the plot for “Carmen”. Here is the magic sheet that I created from his design (see drawing J.) which clearly shows the color, channel and direction of lighting. Each box on this page represents a plan view of the stage so it is easy to choose the channel you want with the color and direction you desire.

"

However, there are times when a really detailed page of information will save you a tremendous amount of time and trouble. Check out drawing K. from Phantom of the Opera. Each area high-lighted in yellow has lighting behind it with channels for both warm and cool colors clearly written on the paper. The creation of the set’s lighting for the exterior of the opera house can be accomplished from this single page. (see Photo L.)



Drawing K – Phantom – Opera Façade Magic Sheet



Drawing L – Live Stage Photo of Phantom – Opera Façade Magic Sheet

I hope the ideas I have shared with you today will provide you with the tools you need to make your designing experience good, or at least as pain-free as possible. Because whether you are designing a complex musical, a staged comedy or a Rock & Roll show, detailed paperwork will make the show come together easier. Just remember; “If it isn’t on the page, it won’t make it to the stage.”

As always, if you have a question regarding my articles or just want to comment on them, you can reach me at [david@backstage.com.br](mailto:david@backstage.com.br).