

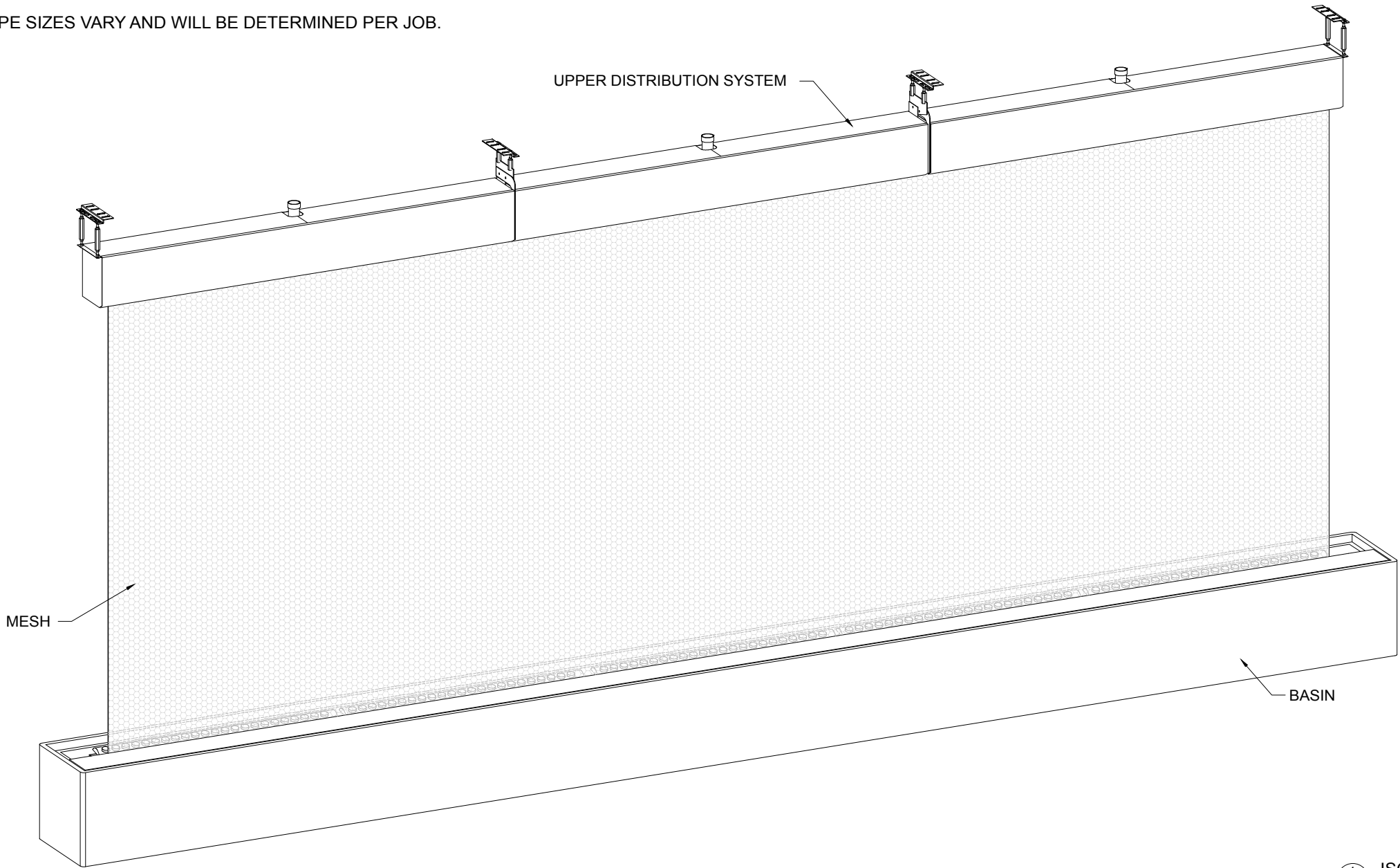
FRAMELESS HARMONIC CASCADE® SERIES

Large Features - 12' Wide by 16' Tall Minimum Dimensions

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NOT FOR CONSTRUCTION USE

DESIGN CONSIDERATIONS -

- MINIMUM DIMENSIONS OF A LARGE FEATURE ARE 12 FEET WIDE BY 16 FEET TALL.
- STAINLESS STEEL MESH MAY BE A MAXIMUM OF 50' WIDE AND ANY HEIGHT (NO MAXIMUM) WITHOUT SEAM, AS ONE CONTINUOUS PANEL.
- OPEN POOL (BY OTHERS) MAY BE PROVIDED IN LIEU OF A CLOSED BASIN DESIGN.
- BASIN/OPEN POOL MAY BE INSTALLED BELOW GRADE, ABOVE GRADE, BUILT INTO SURROUNDING CASEWORK, ETC.
- UPPER DISTRIBUTION SYSTEM MAY BE CONCEALED BEHIND A SOFFIT, FASCIA, DROP CEILING, ETC.
- EQUIPMENT SPECS AND PIPE SIZES VARY AND WILL BE DETERMINED PER JOB.



① ISOMETRIC
SCALE: 1/2" = 1'-0"

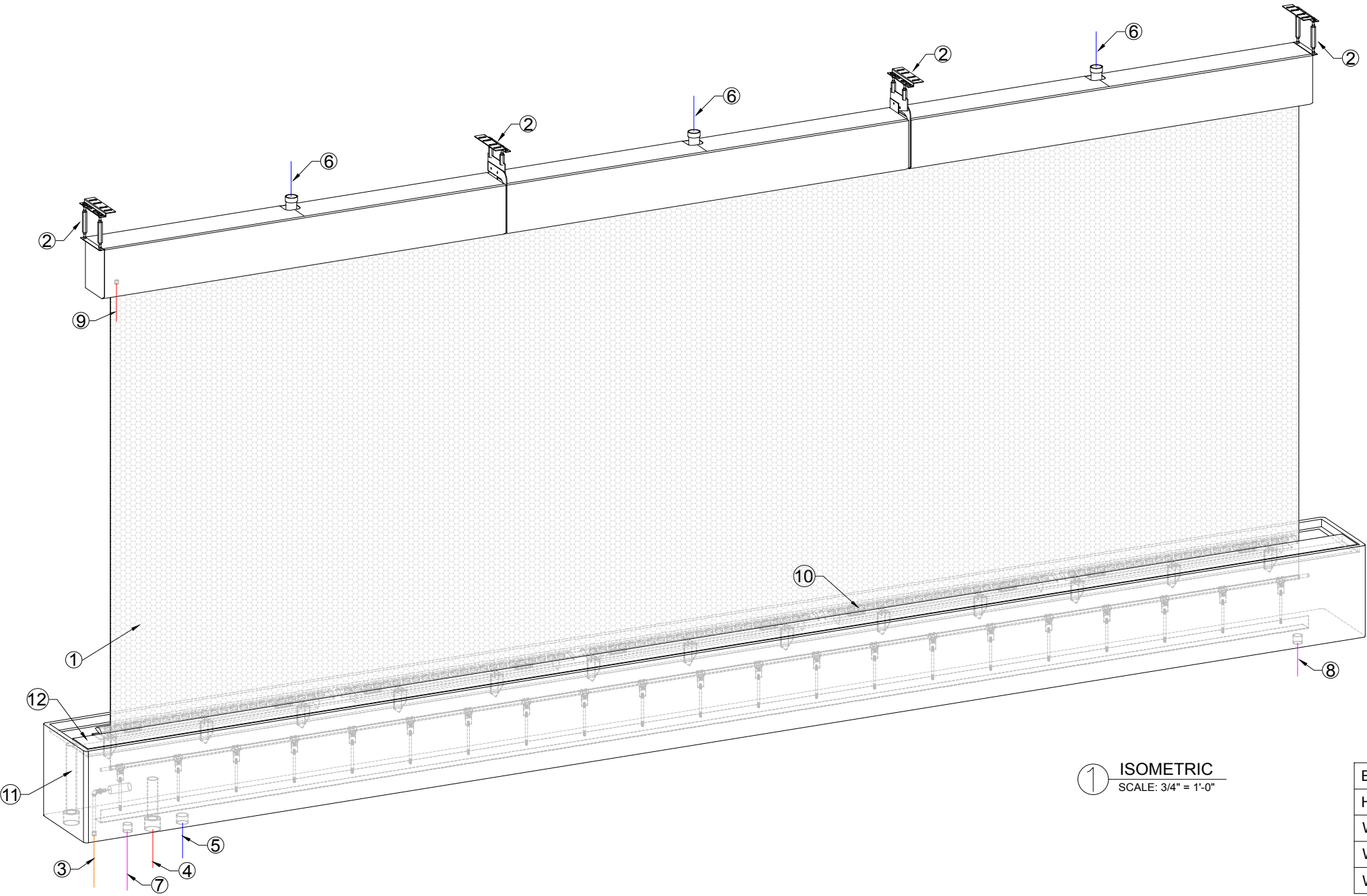
Harmonic Environments®
the premier maker of custom waterfalls®

1075 Hialeah Drive
Hialeah, FL 33010 USA
772.223.9011 p 772.382.6431 f

Generic Drawings
Harmonic Cascade® Series
Large Frameless
Stainless Steel Basin

PROJECT #	N/A
DATE	5/22/17
REVISION #	00
DRAWN BY	JYM
DESIGNED BY	TM
SHEET #	01 OF 09

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1 ISOMETRIC
SCALE: 3/4" = 1'-0"

SHEET NOTES:

1	HARMONIC MESH™
2	(4) MOUNTING AND LEVELING BRACKETS; TO SUSPEND UPPER DISTRIBUTION SYSTEM FROM STRUCTURAL SYSTEM (BY OTHERS)
3	1/2" STANDARD WATER LINE (BY OTHERS); NPT SS FEMALE CONNECTION COUPLING WITH AUTO-FILL FLOAT VALVE BY HARMONIC ENVIRONMENTS
4	1-1/2" DRAIN LINE (BY OTHERS); NPT SS FEMALE CONNECTION COUPLING WITH PVC STANDPIPE OVERFLOW BY HARMONIC ENVIRONMENTS
5	2" MAIN SUCTION LINE (BY OTHERS)
6	(3) 2" MAIN RETURN LINE (BY OTHERS)
7	1-1/2" RECIRCULATION SUCTION LINE (BY OTHERS)
8	1-1/2" RECIRCULATION RETURN LINE (BY OTHERS)
9	1/2" UPPER DISTRIBUTION DRAIN LINE (BY OTHERS)
10	LED LIGHTING FIXTURES (IF APPLICABLE)
11	1-1/2" ELECTRICAL CONDUIT; NPT SS FEMALE CONNECTION COUPLING AND CONDUIT PROVIDED BY HARMONIC ENVIRONMENTS
12	REMOVABLE BASIN LID(S) (IF APPLICABLE)

BREAKDOWN OF LOADS IN LBS	
HARMONIC MESH	TBD
WATERFALL (WITHOUT MESH)	
WITH WATER	TBD
WITHOUT WATER	TBD

BREAKDOWN OF WATER VOLUME IN GALLONS	
UPPER DIST SYS	TBD
HARMONIC MESH	TBD
BASIN	TBD
PIPES	TBD
TOTAL	TBD

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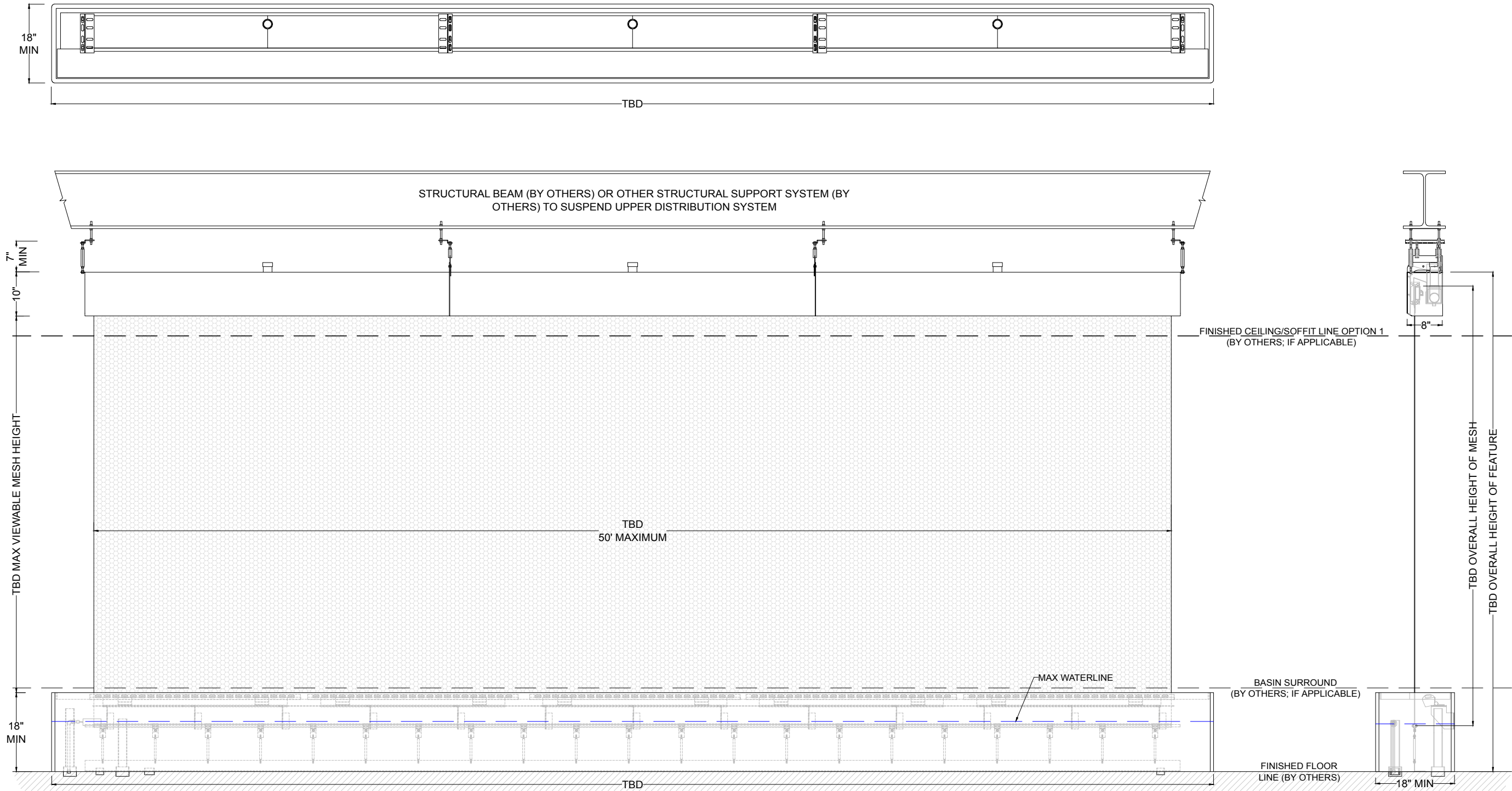
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1 PLAN AND ELEVATIONS
SCALE: 1/2" = 1'-0"

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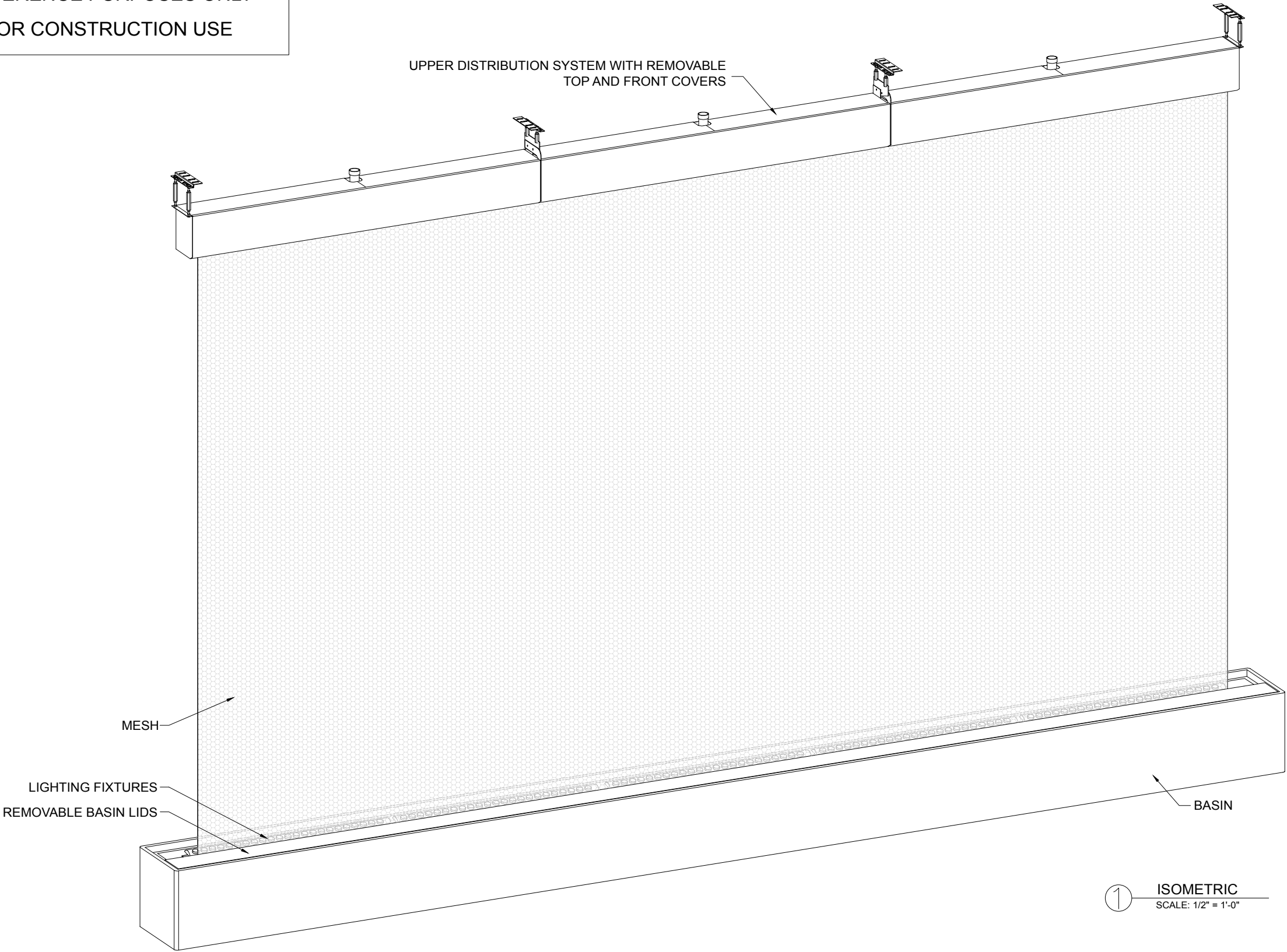
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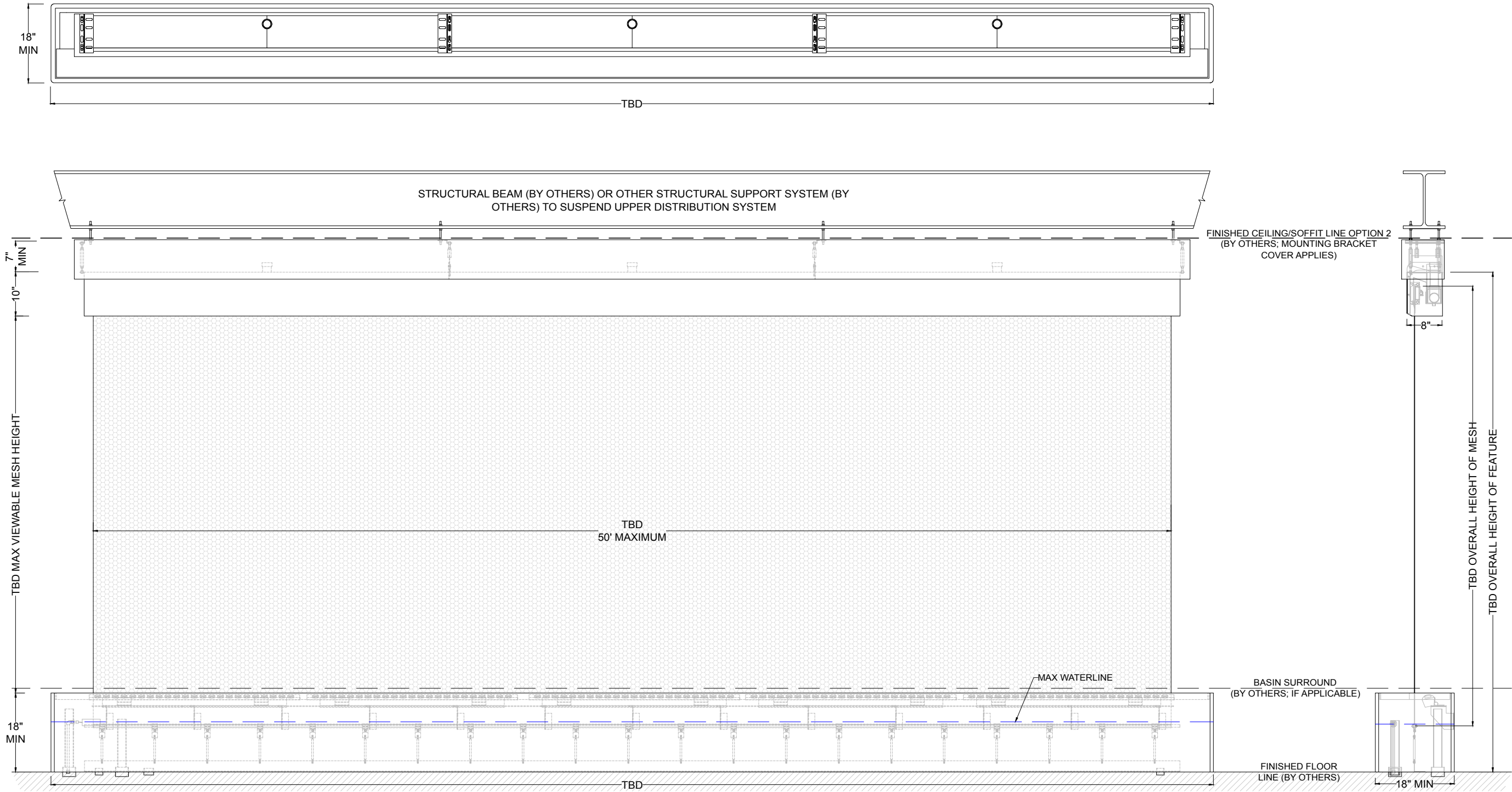
04

OF

09

1 PLAN AND ELEVATIONS
SCALE: 1/2" = 1'-0"

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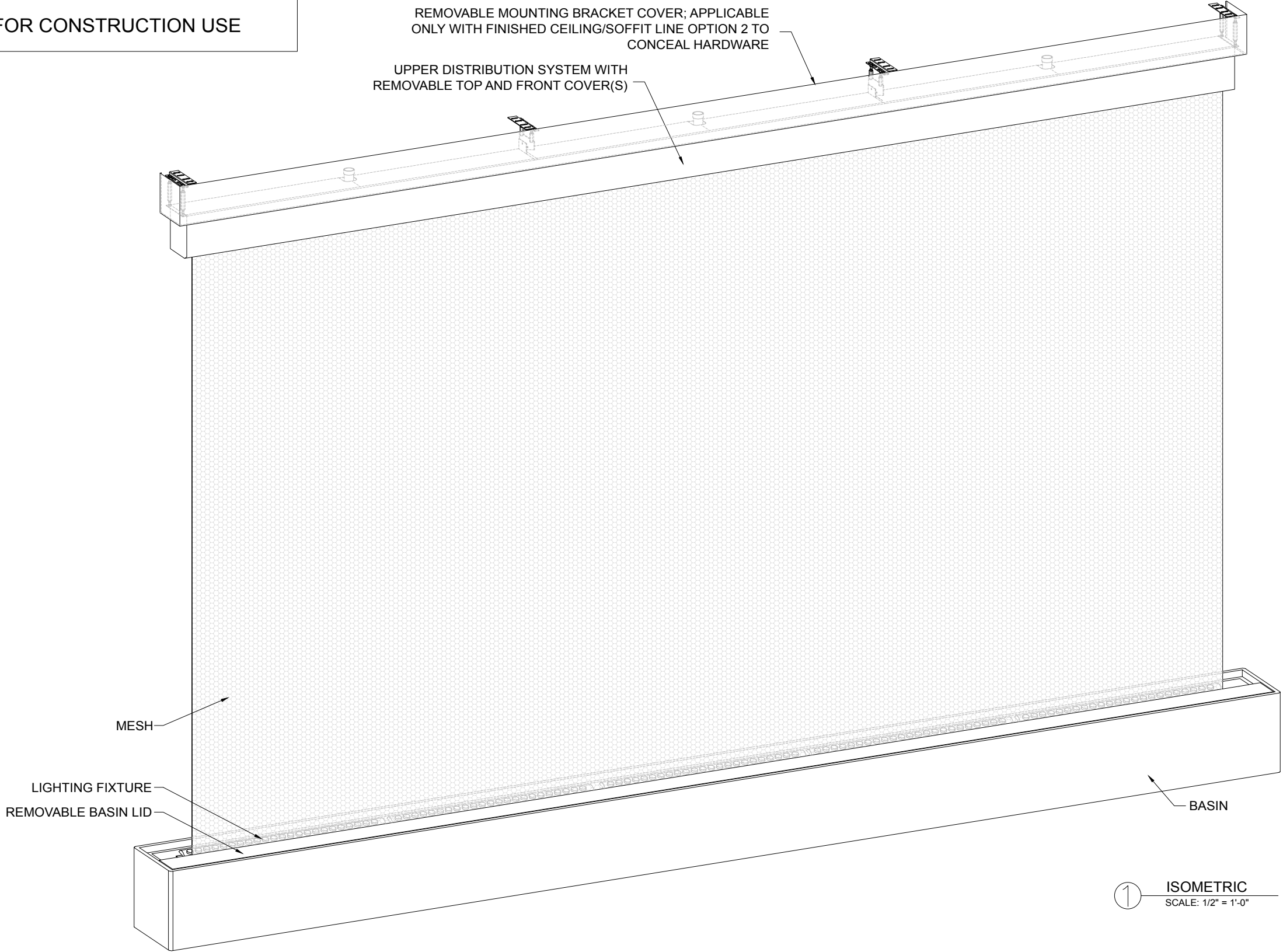
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06

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SHEET NOTES:		
1a	MAIN PUMP Model Number: TBD Design Flow Rate: 220 GPM @ 105 ft of head	Power: 208-230/460V,3HP,3Ph,9.5-9.4/4.7A,50/60Hz
1c	RECIRCULATION PUMP Model Number: TBD Design Flow Rate: 190 GPM @ 90 ft of head	Power: 208-230/460V,2HP,3Ph,7.1-7.2/3.8A,50/60Hz
2	FILTER Product Number: TBD Design Flow Rate: 56 GPM	Effective Filtration Area: 150 ft²
3a	UTILITY PUMP #1 Product Number: TBD	Power: 120V,1.7A,50/60Hz
3b	CHEMICAL VAT #1	

SHEET NOTES:			4a	UTILITY PUMP #2 Product Number: TBD Power: 120V, 1.7A, 50/60Hz
1a	MAIN PUMP Model Number: TBD Design Flow Rate: 220 GPM @ 105 ft of head	Power: 208-230/460V, 3HP, 3Ph, 9.5-9.4/4.7A, 50/60Hz	4b	CHEMICAL VAT #2
1c	RECIRCULATION PUMP Model Number: TBD Design Flow Rate: 190 GPM @ 90 ft of head	Power: 208-230/460V, 2HP, 3Ph, 7.1-7.2/3.8A, 50/60Hz	5	CONTROL PANEL AND PROBE TESTER ASSEMBLY Product Number: TBD Power: 120V/240V, 9.25A, 50/60Hz
2	FILTER Product Number: TBD Design Flow Rate: 56 GPM	Effective Filtration Area: 150 ft²	6	WATER CONDITIONER FILTER Product Number: TBD Design Flow Rate: 15 GPM
3a	UTILITY PUMP #1		7	PRE FILTER Product Number: TBD Design Flow Rate: 6 GPM
			8	BIOLOGICAL FILTER Product Number: TBD Design Flow Rate: 25 GPM



ALL PLUMBING/ELECTRICAL CONNECTIONS PROVIDED BY OTHERS

 <p>Harmonic Environments® the premier maker of custom waterfalls®</p> <p>1075 Hialeah Drive Hialeah, FL 33010 USA 772.223.9011 p 772.382.6431 f</p>	<h1>Generic Drawings</h1>			PROJECT #	N/A
				DATE	5/22/17
	<h2>Harmonic Cascade® Series</h2> <h3>Large Frameless</h3> <h3>Stainless Steel Basin</h3>			REVISION #	00
				DRAWN BY	JYM
				DESIGNED BY	TM
					SHEET # 07 OF 09

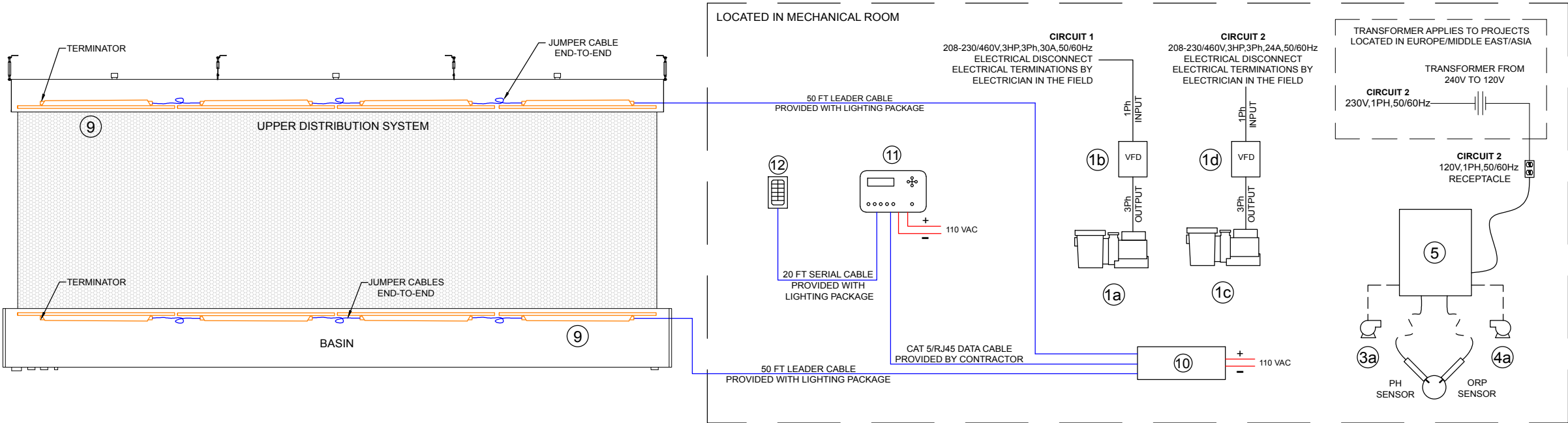
SHEET NOTES:		LABELS CORRESPOND WITH PLUMBING DIAGRAM ON PREVIOUS SHEET	
CIRCUIT 1 - 230V,1Ph,30A circuit,50/60Hz (EXAMPLE; MAY VARY)			
1b	PUMP CONTROL PANEL		
	Product Number: TBD Max Input Amp: 24 amp	Input: 208/230V,3HP,1Ph,max 24A,50/60Hz Output: 230V,3HP,3Ph,50/60Hz	
1a	MAIN PUMP		
	Model Number: TBD Design Flow Rate: 220 GPM @ 105 ft of head	Power: 208-230/460V,3HP,3Ph,9.5-9.4/4.7A,50/60Hz	

CIRCUIT 2 - 120V,45A circuit,50/60Hz (EXAMPLE; MAY VARY)	
1d	PUMP CONTROL PANEL
	Product Number: TBD
	Input: 208/230V,2HP,1Ph,max 17.8A,50/60Hz
	Max Input Amp: 24 amp
	Output: 208/230V,2HP,3Ph,max 7.5A,50/60Hz
1c	RECIRCULATION PUMP
	Model Number: TBD
	Power: 208-230/460V,2HP,3Ph,7.1-7.2/3.8A,50/60Hz
3a	UTILITY PUMP #1
	Product Number: TBD
	Power: 120V,1.7A,50/60Hz
4a	UTILITY PUMP #2
	Product Number: TBD
	Power: 120V,1.7A,50/60Hz
5	CONTROL PANEL AND PROBE TESTER ASSEMBLY
	Product Number: TBD
	Power: 120V/240V,9.25A,50Hz/60Hz

CIRCUIT 3 - 120V,15A,50/60Hz (EXAMPLE; MAY VARY)	
9	LIGHTING FIXTURES
	Product Number: TBD
	Beam Angle: 10° x 60°
	Power: 120V,5.6A,50/60Hz
10	LIGHTING ENABLER
	Product Number: TBD
11	LIGHTING CONTROLLER
	Product Number: TBD
12	LIGHTING CONTROLLER KEYPAD
	Product Number: TBD

LEGEND:	
	LINE VOLTAGE
	120V POWERED RELAY CORD PROVIDED WITH CONTROL PANEL
	CORD AND PLUG PROVIDED WITH EQUIPMENT
	LOW VOLTAGE CABLE

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1 ELECTRICAL SCHEMATIC
SCALE: 5/16" = 1'-0"

ALL PLUMBING/ELECTRICAL CONNECTIONS PROVIDED BY OTHERS

PROJECT #

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SHEET #

OF

09

N/A

5/22/17

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08

Generic Drawings

Harmonic Cascade® Series

Large Frameless

Stainless Steel Basin

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GENERAL NOTES

OWNER/GENERAL CONTRACTOR TO PROVIDE THE FOLLOWING:

1. MANPOWER AND EQUIPMENT REQUIRED TO UNLOAD THE CRATED PRODUCTS DELIVERED TO THE JOB AND PERFORM INSTALLATION. HARMONIC ENVIRONMENTS WILL PERFORM INSTALLATION CONSULTATION ONLY.

2. PLUMBING CONNECTIONS TO MINIMIZE CLEANING AND MAINTENANCE.

a. STANDARD 1/2" WATER LINE (BY OTHERS); NPT SS FEMALE CONNECTION COUPLING WITH AUTO-FILL FLOAT VALVE BY HARMONIC ENVIRONMENTS.

b. 1-1/2" DRAIN LINE (BY OTHERS); NPT SS FEMALE CONNECTION COUPLING WITH STANDPIPE OVERFLOW BY HARMONIC ENVIRONMENTS.

c. 1/2" UPPER DISTRIBUTION SYSTEM DRAIN LINE (BY OTHERS; IF APPLICABLE); NPT SS FEMALE CONNECTION COUPLING BY HARMONIC ENVIRONMENTS.

d. A DRAIN IN THE MECHANICAL ROOM IS HIGHLY RECOMMENDED (IF APPLICABLE).

3. LEVEL SURFACE FOR THE BASIN (IF APPLICABLE).

4. STRUCTURAL SUPPORTS AS NECESSARY.

5. IF WATER FEATURE TOWER EXTENDS UP BEHIND A SOFFIT OR FASCIA, SOFFIT OR FASCIA SHOULD BE INSTALLED AFTER WATER FEATURE IS IN PLACE.

6. IF THERE IS TO BE A SURROUND AT THE WATER FEATURE BASIN, IT SHOULD BE INSTALLED AFTER WATER FEATURE IS IN PLACE.

7. VERIFY THAT SITE FACILITIES (I.E ELEVATORS, DOORWAYS, ETC.) WILL ALLOW CLEAR ACCESS FOR ALL WATERFALL COMPONENTS TO BE DELIVERED AND MOVED INTO PLACE AS NEEDED.

8. ALLOW 6" MINIMUM ACCESS BEHIND AND AT LEAST 3" ON EACH SIDE OF THE MESH, UNLESS CLEAR ACCESS IS AVAILABLE FROM THE BACK OF THE MESH FOR MAINTENANCE.

9. MINIMUM 7" CLEARANCE REQUIRED ABOVE UPPER DISTRIBUTION SYSTEM FOR REMOVAL OF TOP COVER(S) AND 4" CLEARANCE IN FRONT AND BACK OF UPPER DISTRIBUTION SYSTEM FOR REMOVAL OF FRONT COVER(S) (IF APPLICABLE) AND ACCESS TO LIGHTING (IF APPLICABLE).

10.ACCESSIBLE AREA TO ACCOMMODATE EQUIPMENT PER PLUMBING & ELECTRICAL SCHEMATIC AND LED POWER SUPPLY COMPONENTS PER LIGHTING SPECIFICATIONS, WITHIN 50 FT OF WATER FEATURE (IF APPLICABLE).

11. PLUMBING PER PLUMBING SCHEMATIC ON SHEETS 07.

12. ELECTRICAL SERVICES AND OUTLETS PER ELECTRICAL SCHEMATIC ON SHEETS 08.
- ABBREVIATIONS FOUND IN THIS DOCUMENT REPRESENT THE FOLLOWING -
- TBD: TO BE DEFINED
 - LBS: POUNDS (WEIGHT)
 - UPPER DIST SYS: UPPER DISTRIBUTION SYSTEM
 - NPT SS: NOMINAL PIPE SIZE STAINLESS STEEL
 - VFD: VARIABLE FREQUENCY DRIVE
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- Generic Drawings

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- | | |
|-------------|----------|
| PROJECT # | N/A |
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| REVISION # | 00 |
| DRAWN BY | JYM |
| DESIGNED BY | TM |
| SHEET # | 09 OF 09 |