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		E	XISTIN	IG BU	ILDING II	NFO				
ARE EXISTING / RE	ENOVATION	ALTERATIO	N	CONV	NOTE: ERT EXISTING "V	S ACANT	TENAN	IT	SECTION	
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FLOOR CONS				0	EXIST		ALTER	ED		TENANT FIT-OUT OF EX SPACE RECONFIGRUAT
BEARING W	ALLS (EXT)	+		2	EXIST	ING UN		ED	]	AND STORAGE RACKS.
		FIR			ION SYS		1 <b>S</b>		SECTION	CIVIL / SITE
SPRINKLER		YES		YES		NOTE	_5		2016 CBC 903	
PORT. FIRE EX		YES		YES					2016 CBC 906	ARCHITECTURA
			PLUN	<b>IBING</b>	FIXTURE	ES				OFFICE, BREAK ROOM,
OCCUP	ANTS	MALE	FEMALE	50%	% OF FIXTURES T	O BE MA	ALE / F	EMALE		
224	4	112	112	RE			PRO		SECTION	Non2.
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SERVICI	E SINK	1			1			1		
<ol> <li>2016 CFC C THE CONTI</li> <li>MUST KEEI TIMES, WIT</li> <li>THE INSPE AT THE INSPE</li> <li>THE INSPE</li> <li>THE ADDRI</li> <li>A "HIGH PIL HOWEVER TO VERIFY</li> <li>A "HIGH PIL HOWEVER</li> <li>A "HIGH PIL HOWEVER</li> <li>THE FIRE F GRANT AC THEIR FINA INSPECTIO</li> </ol>	UEPA CHAPTER 14 - "I RACTOR MUST P THE APPROV THOUT APPROV CTOR MAY REA THOUT APPROV CTOR MAY REA IE OF FINAL INS ESS NUMBER FINAL CALLY ILLUMI CALLY ILLUMI CALLY ILLUMI CALLY ILLUMI CEPTANCE BEI AL INSPECTION NS.	FIRE SAFETY I ADHERE TO I ED FIRE DEPA (ED SET OF PI QUIRE ADDITIO SPECTION. REQUIREMENT (ATED) REVIEW WA QUIRED BY LO JREAU MUST FORE THE BUI PLEASE CAL	DURING COI DURING COI RTMENT PI ANS WILL F DNAL EXIT S S; NUMBEF CING THE S S NOT A PA CAL AHJ. A NSPECT TH LDING DEP FIRE PREV	NOTE NSTRUCTION NSTRUCTION LANS ON THE RESULT IN NO SIGNS AND IN SIGNS	DN AND DEMOLITI N HE JOB SITE AT A NO FIRE INSPECT FIRE EXTINGUISH E 12 INCHES TALL RONT AND REAR) S APPROVAL, ENGINEER OF RE G FOR FINAL AND S SUMMONED FO JREAU FOR	ON," LL ION. IERS AND ECORD	CH M R A S B D M R R	PRINKLER ONTRACTO AS A SPRIN ODIFICATIO EQUIRED O PROFESSI UPPRESSIO E RESPONS ESIGN, LAY ATERIALS, EET GOVE EGULATION	NOTE: NR TO VERIFY NKLER SYSTE ONS TO THE S ONTRACTOR ONAL OF REC ON WORK. TH SIBLE FOR AL OUT, DETAIL LABOR AND A RNING AUTHO NS, LANDLOR NTS FOR ALL	Y IF EXISTING BUILDING M. IF A NEW SYSTEM OF SPRINKLER SYSTEM AR TO RETAIN AND PAY FO CORD FOR ALL FIRE IE CONTRACTOR SHALL L FEES, PERMITS, S, DRAWINGS, ALL REQUIREMENTS TO ORITIES, CODES, D AND UNDERWRITER WORK
7. THE PERSO INSPECTOR AND PROV	ON REQUESTIN R ON TIME, PRO IDING AN APPF	IG AN INSPEC OVIDING ACCE OVED SET OF	TION IS RES	SPONSIBLE AREA REQ D SUPPORT	FOR MEETING TH UIRING INSPECTI	IE ON S.			2016 0	
<ol> <li>ALL EXTERIOR DOORS MUST BE ACCESSIE FIRE DEPARTMENT. CFC CHAPTER 5 SECT</li> <li>LABEL ALL "FIRE ALARM CONTROL PANELS"</li> </ol>			SSIBLE FOR CTION 504. ELS" AND "E	EMERGEN .1 ELECTRICA	CY ACCESS FOR L ROOM" WITH 6 I	THE INCH		CONSTRUCT		
LETTERS. ( 10. KNOX LOCI FIRE DEPA WATER-BA SPECIFICA 11. FIRE DEPA LEAST 1 IN DEPARTME 2016 CHAP	CFC 2016 CHAF KING FIRE DEP RTMENT CONN SED FIRE PRO TIONS AND AP RTMENT CONN CH IN SIZE (AD ENT CONNECTI TER 9 SECTION	PTER 5 SECTIC ARTMENT CO IECTION (FDC TECTION SYS PLICATION. CF IECTION SIGN DRESS ONLY) ONS SERVING 1 912 4	N 510 NECTION ( ) THEFT ARI IEMS. CON IC 2016 CHA AGE. A MET SHALL BE N THE AUTO	CAPS. LOCH E REQUIRE TACT THE F APTER 9 SEC TAL SIGN WI MOUNTED ( MATIC SPR	KING CAPS TO PR D ON ALL FDC FO TRE DEPARTMEN CTION 912.3.1 ITH RAISED LETTI DN ALL FIRE INKLER SYSTEM.	REVENT OR T FOR ERS AT CFC	В.	RECYCLING "C ISSUANCE BY APPLICANT). F DEPARTMENT COVER DUCT EQUIPMENT D	CITY" FORM, TO BE THE PROJECT CC CORM CAN BE OB (CGBSC 5.408) OPENINGS AND F URING CONSTRU	E TON, DISPOSAL, AND E COMPLETED BEFORE PERMIT DNTRACTOR (OR PERMIT TAINED AT CITY BUILDING PROTECT MECHANICAL ICTION (CGBSC 5.504)
12. FDC ACCES MAINTAINE TREES, WA CHAPTER S	SS. IMMEDIATE D AT ALL TIME LLLS, OR ANY ( SECTION 912)	ACCESS TO F S AND WITHO OTHER OBJEC 3	FIRE DEPAR UT OBSTRU TS FOR MIN	RTMENT CON ICTION BY F IIMUM OF 3	NNECTIONS SHAI ENCES, BUSHES FEET. CFC 2016	LL BE				
WATER-BA SPECIFICA 11. FIRE DEPA LEAST 1 IN DEPARTME 2016 CHAP 12. FDC ACCES MAINTAINE TREES, WA CHAPTER S	SED FIRE PRO TIONS AND AP RTMENT CONN CH IN SIZE (AD INT CONNECTION TER 9 SECTION SS. IMMEDIATE D AT ALL TIME LLLS, OR ANY ( D SECTION 912)	TECTION SYS PLICATION. CF IECTION SIGN DRESS ONLY) ONS SERVING 1912.4 ACCESS TO F S AND WITHO OTHER OBJEC 3	THE AUTO	TACT THE F APTER 9 SEG TAL SIGN WI MOUNTED ( MATIC SPR ATMENT COL DICTION BY F IIMUM OF 3	TIRE DEPARTMEN CTION 912.3.1 ITH RAISED LETTI DN ALL FIRE INKLER SYSTEM. NNECTIONS SHAI ENCES, BUSHES FEET. CFC 2016	T FOR ERS AT CFC LL BE	В.	APPLICANT). F DEPARTMENT COVER DUCT EQUIPMENT D	ORM CAN BE OB (CGBSC 5.408) OPENINGS AND F URING CONSTRU	TAINED AT CITY BUILDING PROTECT MECHANICAL ICTION (CGBSC 5.504)



# JAL RENDERING



# **SCOPE OF WORK**

STING MERCANTILE SPACE INCLUDING TION, INSTALLATION OF DISPLAY FIXTURES, NO CHANGE IN OCCUPANCY.

/ INTERIOR PARTITIONS FOR VESTIBULE, FITTING ROOMS, AND EGRESS HALLWAY,

**MECHANICAL** MAINTENANCE ON EXISTING (6) RTU'S. EXISTING DUCTWORK TO REMAIN WITH MINOR MODIFICATIONS PER SPACE RECONFIGURATION. <u>ELECTRICAL</u>

EXISTING PANELS AND SERVICE TO REMAIN. INSTALL NEW LIGHTS, EXIT SIGNS, & NEW POWER RECEPTACLES AS NOTED.

PLUMBING INSTALL NEW WATER HEATER, AND MOP SINK. MINOR MODIFICATIONS TO EXISTING RESTROOMS.

**SPRINKLER** DEFERRED SHOP DRAWINGS BY CONTRACTOR.

FIRE ALARM DEFERRED SHOP DRAWINGS BY CONTRACTOR.

**SHOP DRAWINGS & SUBMITTALS:** 

1. G.C. TO SUBMIT SHOP DRAWINGS TO ARCHITECT/ENGINEER OF **RECORD (COPY TENANT REPRESENTATIVE) FOR APPROVAL PRIOR** TO CONSTRUCTION. SEE SHEET A1.0 FOR FURTHER DIRECTION.

DEFERRED SUBMITTALS

- FIRE SPRINKLER SYSTEM
- EXTERIOR SIGNAGE
- FIRE ALARM

# PROJECT DIRECTORY

CLIENT ADDRESS

PARTY CITY GREEN POND ROAD ROCKAWAY, NJ 07866

# LANDLORD

SHIN YEN MANAGEMENT, INC. CONTACT: YALE HUANG 3808 GRAND AVE., SUITE B EXT: 106 CHINO, CA 91710

## ARCHITECT

LARSON DESIGN GROUP

ENGINEER: SEREE YENGAI, PE CONTACT PROJECT MANAGER: BRENT DRESSLER 1000 COMMERCE DRIVE

EXT: 218 SUITE 201 FAX: 570.323.9902 WILLIAMSPORT, PA 17701

# ELECTRICAL ENGINEER

PETER A. LEPTUCH ENGINEERING & CONSULTING SERVICE ENGINEER: PETER A. LEPTUCH, PE

CONTACT PROJECT MANAGER: BRENT DRESSLEF 1000 COMMERCE PARK DRIVE TEL: 570.323.6603

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# MECHANICAL ENGINEER

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1000 COMMERCE PARK DRIVE TEL: 570.323.6603 SUITE 201 WILLIAMSPORT, PA 17701 FAX: 570.323.9902





TEL: 909.902.5365

TEL: 570.323.6603

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SHEET NO.	DESCRIPTION	REV# -	REV# -	REV# -	REV# -				
COVER G1.0	COVER SHEET								
G1.1	EGRESS PLAN							5	
G1.2	ACCESSIBILITY STANDARDS								
G2.0									
G3.0	SYMBOLS & ABBREVIATIONS SPECIFICATION / GENERAL NOTES								
G5.0	SITE PLAN						$\langle O$	•	
G6.0	TITLE 24								
G6.1	TITLE 24								
G6.2	TITLE 24						-	09/	05/17
G6.3	IIILE 24					PE	RMIT ISSU	<sup>e date</sup> 09/0	5/17
DEMOLITION						RF	VISIO	NS	
D1.0	DEMOLITION PLAN					#	DATE	DESCRIPTIO	N BY
ARCHITECTU	RAL								
A1.0	FLOOR / FINISH PLAN								
A1.1	ROOF PLAN								
A1.2			-						
A1.3 A2.0	WALL TYPES & DETAILS				$\left  - \right $				
A2.1	DOOR SCHEDULE				$\left  - \right $				
A2.2	VESTIBULE PLAN AND ELEVATIONS								
A3.0	TOILET ROOM & OFFICE DETAILS								
A3.1									
A4.0				-					
A5.0	INTERIOR ELEVATIONS								
A6.0	ROOM FINISH SCHEDULE								
A6.1	FINISH DETAILS						$\overline{\mathbf{O}}$		_
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FP1.2	FIRE SPRINKLER NOTES AND DETAILS		+					$\mathbf{\underline{\nabla}}$	U
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FIRE ALARM							$\checkmark$	Ŧ	S
FAD1.1	FIRE ALARM PLAN- DEMOLITION WORK						$\bigcirc)$		$\infty$
FA1.1	FIRE ALARM PLAN - NEW WORK							U	3
FA1.2	FIRE ALARM NOTES AND SITE PLAN		-						
FA1.3	CALCULATIONS & DETAILS								
FA1.4	FIRE ALARM SPECIFICATIONS								
	·		-		-				



	OCO	CUPANT L	OAD	
NAME	AREA	OCCUPANCY	SF PERSON	PERSONS
ASSEMBLY				
BREAK ROOM	69 SF	ASSEMBLY	15	5
BUSINESS				
CHECKOUT	732 SF	BUSINESS	100	8
OFFICE	80 SF	BUSINESS	100	1
MERCHANTILE		1	1	
SALES AREA	11251 SF	MERCHANTILE	60	188
STORAGE				
STOCKROOM	6593 SF	STORAGE	300	22
UNOCCUPIED				
RESTROOM 1	66 SF	UNOCCUPIED	0	
RESTROOM 2	66 SF	UNOCCUPIED	0	
HALLWAY	78 SF	UNOCCUPIED	0	
JAN.	14 SF	UNOCCUPIED	0	
HALLWAY	150 SF	UNOCCUPIED	0	
VESTIBULE	84 SF	UNOCCUPIED	0	
FITTING	73 SF	UNOCCUPIED	0	
FITTING	26 SF	UNOCCUPIED	0	
FITTING	26 SF	UNOCCUPIED	0	
TOTALS	19307 SF (	(NET SQUARE FOO	ΓAGE)	224

OCCUPANCY IBC TABLE 1004.1.1					
OCCUPANCY S.F. TYPE	S.F.PER PERSON	S.F UNIT			
ASSEMBLY	15	Net			
BUSINESS	100	Gross			
MECHANICAL	300	Gross			
MERCANTILE	60	Gross			
STORAGE	300	Gross			
UNOCCUPIED	0				

(					
EGRESS PATHS					
EXIT PATH	EXIT PATH DISTANCE				
'A'	TOTAL PATH LENGTH - 168'-6"				
'B'	TOTAL PATH LENGTH - 121'-2"				
'C'	TOTAL PATH LENGTH - 93'-10"				
'D'	TOTAL PATH LENGTH - 193'-2"				
'E'	TOTAL PATH LENGTH - 219'-8"				

# KEYED NOTES

1	G.C. TO FURNISH & INSTALL NEW FIRE EXTINGUISHERS AS REQ'D BY LOCAL
	CODES. WHEN MOUNTING ADJACENT TO DOOR OPENING, MAINTAIN 12"
	CLEAR TO DOOR OPENING FOR ADA COMPLIANCE. FINAL LOCATION,
	MOUNTING HEIGHT, & QUANTITY BY FIRE INSPECTOR. G.C. TO VERIFY FIRE
	MARSHALL REQUIREMENTS FOR INSPECTION & TAGGING.
2	TACTILE "EXIT" SIGN. SEE DETAIL 2/G1.2
3	TACTILE "EXIT ROUTE" SIGN. SEE DETAIL 2/G1.2

4 TACTILE ADA ACCESSIBILITY "ENTRY" SIGN. SEE DETAIL 2/G1.2









- 1. LETTERS AND NUMERALS SHALL BE RAISED 1/32" (0.8 MM) MINIMUM, JPPERCASE, SANS-SERIF OR SIMPLE SERIF AND SHALL BE ACCOMPANIED WITH GRADE 2 BRAILLE, RAISED CHARACTERS SHALL BE AT LEAST 5/8" 16 MM) HEIGHT, BUT NO HIGHER THAN 2" (50 MM). PICTOGRAMS SHALL BE ACCOMPANIED BY THE EQUIVALENT VERBAL DESCRIPTION PLACED DIRECTLY OW THE PICTOGRAM. THE BORDER DIMENSIONS OF THE PICTOGRAM
- 4. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH-TO-HEIGHT RATIO FOR WIDTH OF THE UPPERCASE LETTER "O" IS 60% MIN. AND 110% MAX. OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF 15% MAX.
- 5. THE CHARACTERS AND BACKGROUND OF SIGNS SHALL BE EGGSHELL, MATTE OR OTHER NON-GLARE FINISH. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND - EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND.
- CHARACTERS AND NUMBERS ON SIGNS SHALL BE SIZED ACCORDING TO THE VIEWING DISTANCE FROM WHICH THEY ARE TO BE READ. THE MINIMUM HEIGHT IS MEASURED USING AN UPPER CASE X. LOWER CASE CHARACTERS
- BRAILLE SHALL BE CONTRACTED (GRADE 2) BRAILLE AND SHALL COMPLY
- MULTILINED, BRAILLE SHALL BE PLACED BELOW THE ENTIRE TEXT. BRAILLE SHALL BE SEPARATED 3/8" (9.5 MM) MIN. FROM ANY OTHER TACTILE CHARACTERS AND 3/8" (9.5 MM) MIN. FROM RAISED BORDERS AND DECORATIVE ELEMENTS. BRAILLE PROVIDED ON ELEVATOR CAR CONTROLS SHALL BE SEPARATED 3/16" (4.8 MM) MIN. EITHER DIRECTLY BELOW OR ADJACENT TO THE CORRESPONDING RAISED CHARACTERS OR SYMBOLS.
- 9. ALL BUILDING ENTRANCES THAT ARE ACCESSIBLE TO AND USABLE BY PERSONS WITH DISABILITIES AND AT EVERY MAJOR JUNCTION ALONG OR LEADING TO AN ACCESSIBLE ROUTE OF TRAVEL SHALL BE IDENTIFIED WITH A SIGN DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND WITH ADDITIONAL DIRECTIONAL SIGNS, AS REQUIRED, TO BE VISIBLE O PERSONS ALONG APPROACHING PEDESTRIAN WAYS. (ICC/IBC SEC. 1110)
- SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR. WHERE THERE IS NO WALL SPACE TO THE LATCH SIDE OF THE DOOR, INCLUDING AT DOUBLE LEAF DOORS, SIGNS SHALL BE PLACE ON THE NEAREST ADJACENT WALL. MOUNTING HEIGHT SHALL BE 48" (1219 MM) ABOVE THE FINISH FLOOR TO THE BASELINE OF THE LOWEST BRAILLE CELLS AND 60" (1524 MM) MAX. ABOVE THE FINISH FLOOR MEASURED TO THE BASELINE OF THE HIGHEST LINE OF RAISED CHARACTERS. SIGNS SHALL HAVE A CLEAR FLOOR SPACE
- ADDITIONAL DIRECTIONAL SIGNS ALONG ACCESSIBLE PATH OF TRAVEL 12 BUILDINGS REMODELED TO PROVIDE ACCESSIBLE SANITARY FACILITIES FOR PUBLIC USE SHALL HAVE INFORMATION POSTED IN THE LOBBY AS
- 15. WHEN ENFORCING AGENCY DETERMINES, IF APPROPRIATE, SPECIAL

- 19. DOTS RAISED 0.025" (0.6 MM) TO 0.037" (0.9 MM) ABOVE BACKGROUND.



- LEAST 4" HIGH SO AS TO ALLOW THE INSERTION OF A CUP OR GLASS UNDER THE FLOW OF WATER.  $^{\!\!\!2\!\!\!\!\!\!}$  Controls shall be front mounted or side mountei
- NEAR THE FRONT EDGE. SPOUTS SHALL BE NO HIGHER THAN 36" MEASURED FROM THE FLOOR OR GROUND SURFACES TO THE SPOUT OUTLET.

MOUNTED SIGNAGE:

A. DOOR MOUNTED SIGNAGE:

**B. WALL MOUNTED SIGNS** 

OF ACCESSIBILITY.

MAXIMUM OF 2" HIGH.

1. (UNISEX) -12" DIAMETER CIRCLE 1/4" THICK WITH 1/4" THICK

EGGSHELL, MATTE, OR OTHER NON-GLARE FINISH AND THE COLOR AND THE CONTRAST OF THE SIGN DISTINCTIVELY

CONTRASTS WITH THE COLOR AND CONTRAST OF THE DOOR

THE INTERNATIONAL SYMBOL OF ACCESSIBILITY IS INSTALLED

ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR.

THE BORDER DIMENSION SHALL BE A MINIMUM OF 6" IN HEIGH

ON THE NEAREST ADJACENT WALL, PREFERABLY ON RIGHT.

VERBAL DESCRIPTION AS TO REST ROOM USAGE (LE. MEN'S

EGGSHELL, MATTE, OR OTHER NON -GLARE FINISH AND THE

NOTE: THE REQUIRED COLOR OF THE SYMBOL OF ACCESSIBILITY

UPPERCASE CHARACTERS AND ARE ACCOMPANIED BY GRADE 2 BRAILLE. CHARACTERS ARE MINIMUM 5/8" HIGH AND A

6. MOUNTING LOCATION ALLOWS A PERSON TO APPROACH WITHIN 3" OF THE SIGN WITHOUT ENCOUNTERING PROTRUDING

EQEQ

18"MIN CLEAR

AREA O

└-DOOR LATCH SID

OBJECTS OR STANDING WITHIN THE SWING OF A DOOR.

PROVIDE TACTILE

CODE SECTION 703

TACTILE SIGNAGE MOUNTING HEIGHTS

SIGNAGE AS PER ANSI

COLOR AND THE CONTRAST OF THE SIGN DISTINCTIVELY CONTRASTS WITH THE COLOR OF THE WALL.

CONSISTS OF A WHITE FIGURE ON A BLUE BACKGROUND

4. SIGNS ARE CENTERED ON THE WALL 60" FROM THE FLOOR.

5. LETTERS AND NUMERALS ARE RAISED 1/32", SANS-SERIF

3. THE CHARACTER AND BACKGROUND OF THE SIGN IS

NOTE: IF NO WALL SPACE IS AVAILABLE, SIGN IS TO BE PLACED

REST ROOM) IS TO BE PLACED DIRECTLY BELOW THE SYMBOL

3. SIGNS ARE CENTERED ON THE DOOR 60" FROM THE FLOOR.

ANGLE SUPERIMPOSED WITHIN CIRCLE.

2. THE CHARACTERS AND BACKGROUND OF THE SIGN IS

- 3. WALL AND POST MOUNTED CANTILEVERED UNITS SHALL HAVE A CLEAR KNEE SPACE BETWEEN THE BOTTOM OF THE APRON AND THE FLOOR OR GROUND AT LEAST 27" HIGH 30" WIDE, AND 17-19" DEEP. SUCH UNITS SHALL HAVE A MINIMUM CLEAR FLOOR SPACE 30" X 48" TO ALLOW A PERSON IN A WHEEL- CHAIR TO APPROACH THE UNIT FACING FORWARD.
- 4. THE FOLLOWING KNEE CLEARANCE IS REQUIRED UNDERNEATH THE FOUNTAIN: 27" MIN. FROM THE FLOOR TO THE UNDERSIDE OF THE FOUNTAIN WHICH EXTENDS 8" MIN MEASURED FROM THE FRONT EDGE UNDERNEATH THE FOUNTAIN BACK TOWARDS THE WALL; IF A MIN. 9" OF TOE CLEARANCE IS PROVIDED, A MAX. OF 6" OF THE 48" OF CLEAR FLOOR SPACE REQUIRED AT THE FIXTURE MAY EXTEND INTO THE TOE SPACE.



HARDWARE HAND ACTIVATED DOOR OPENING HARDWARE IS REQUIRED TO BE CENTERED BETWEEN 30 AND 44 INCHES HIGH. LATCHING AND LOCKING DOORS THAT ARE HAND ACTIVATED AND WHICH ARE IN A PATH OF TRAVEL HAVE TO BE OPERABLE WITH A SINGLE EFFORT BY LEVER TYPE HARDWARE, BY PANIC BARS, PUSH-PULL ACTIVATING BARS, OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE. LOCKED EXIT DOORS ARE REQUIRED TO OPERATE AS DESCRIBED ABOVE IN THE DIRECTION OF EGRESS.

**CLOSERS** THE MAXIMUM EFFORT TO OPERATE DOORS CANNOT EXCEED 8.5 POUNDS FOR EXTERIOR DOORS AND 5 POUNDS FOR INTERIOR DOORS. REQUIRED FIRE DOORS MAY REQUIRED UP TO 15 POUNDS PRESSURE. THE PRESSURE IS TO BE MEASURED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. COMPENSATING DEVICES OR AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE REQUIREMENTS. IF A DOOR HAS A CLOSER, THEN THE SWEEP PERIOD OF THE CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 70 DEGREES, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3 INCHES (75 mm) FROM THE LATCH, MEASURED TO THE LEADING EDGE OF THE DOOR.

DOORS **ENTRANCES** ALL PRIMARY ENTRANCES TO BUILDINGS AND FACILITIES ARE REQUIRED TO BE MADE ACCESSIBLE. A PRIMARY ENTRANCE IS DEFINED AS, "...ANY ENTRANCE TO A FACILITY WHICH HAS A SUBSTANTIAL FLOW OF PEDESTRIANS TO ANY SPECIFIC MAJOR FUNCTION OF THE FACILITY." REVOLVING DOORS CAN NOT BE USED AS A REQUIRED ENTRANCE FOR THE HANDICAPPED. RECESSED DOORMATS ARE REQUIRED TO BE ANCHORED TO PREVENT INTERFERENCE WITH WHEELCHAIR TRAFFIC.

DOOR WIDTHS & HEIGHTS REQUIRED EXIT DOORWAYS ARE REQUIRED TO HAVE A CLEAR OPENING NOT LESS THAN 32 INCHES WIDE. FOR HINGED DOORS, THE OPENING IS MEASURED WITH THE DOOR AT A 90 DEGREE ANGLE FROM ITS CLOSED POSITION. AT LEAST ONE OF A PAIR OF DOORS, INCLUDING AUTOMATIC DOORS, HAS TO PROVIDE THE 32 INCH CLEAR OPENING. DOOR HEIGHTS ARE REQUIRED TO BE A MINIMUM OF 80 INCHES.

DOOR/HARDWARE DETAIL 8 G1.2 SCALE: 1/4" = 1'-0"









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DOOR PULLS AT I J TOILET PARTITIONS













## **AUTOMATIC DOOR VENI**

## FRP

# PLUMBING ACCESSORI

IMPERIAL BAG & PAPER CO. CONTACT: DEBRALUZ HERNAND 255 ROUTE 1 & 9 JERSEY CITY, NJ 07306 TEL: 201.437.7440 EXT. 3702 AILEEN FONTANEZ AFONTEZ@IMPERIALBAG.COM (201)437-7440 EXT. 3117

	<b>VENDOR LIST</b>		
AUTOMATIC DOOR VENDOR (REQUIRED)	VCT	COLUMN WRAPS & CORNER GUARDS	REQUIRED)
MACKENZIE AUTOMATIC DOORS CONTACT: DONALD MATTSON 72 READE STREET NEW YORK, NY 10007 dmattson@mackenzie-group.com TEL:917.613.8621 MINIMUM LEAD TIME: 6 WEEKS	INSIDE EDGE CONTACT: VANESSA BECKSTROM 2700 BLUE WATER ROAD SUITE 400 EAGAN, MN 55121 vbeckstrom@iecis.com TEL: 651.389.4238 FAX: 651.389.3901 MINIMUM LEAD TIME: 6 WEEKS	RETAIL SPECIALTY INC. CONTACT: DAN HICKEY RSICEO@YAHOO.COM TEL: 586.566.7716	
FRP (REQUIRED)	HELIUM SYSTEM (REQUIRED)	ELIASON DOORS	REQUIRED)
MARLITE CONTACT: KARLIE ANDERSON 202 HARGER STREET DOVER, OH 44622 kanderson@marlite.com TEL: 330.602.2214 FAX: 856.786.1155	WESTERN ENTERPRISES partycityPO@WesternEnterprises.com TEL: 800.783.7890 FAX: 440.835.8283	ELIASON CONTACT: CHRIS JOHNSON quotes-orders@seneca.com TEL-GENERAL: 800-415-5013 FAX: 440-835-8283 MINIMUM LEAD TIME: 9 WEEKS	
PLUMBING ACCESSORIES (REQUIRED)	LIGHTING & CONTROLS (REQUIRED)	HVAC UNITS	REQUIRED)
MPERIAL BAG & PAPER CO. CONTACT: DEBRALUZ HERNANDEZ 255 ROUTE 1 & 9 JERSEY CITY, NJ 07306 TEL: 201.437.7440 EXT. 3702 -OR- AILEEN FONTANEZ AFONTEZ@IMPERIALBAG.COM (201)437-7440 EXT. 3117	WIEDENBACH - BROWN CONTACT: LISA PETRO EMAIL QUOTE REQUESTED TO: PCSUPPORT@WBLIGHT.COM TEL: 781.619.6074 MINIMUM LEAD TIME: 4-6 WEEKS	LENNOX CONTACT: NATIONAL ACCOUNTS nationalaccountrequest@lennoxind.com TEL: 800.367.6285 MINIMUM LEAD TIME: 8 WEEKS	

					RESPONSI	BILITY SCHEDU	LE					
GENERAL REQUIREMENTS	G.C.	S.C. TENANT N/A REMARKS		REMARKS	FIXT'R/FURN/EQUIPT	T.(	G.C.	TENA F	NT I	N/A	REMARKS	
PERMITS/FEES/TAXES CERTIFICATE OF INSURANCE	•••					CASHWRAP & COUNTERS WALL FIXTURE SYSTEM & HARDWARE			•	•		
	•••				INCLUDING ASBESTOS REMOVAL	FLOOR FIXTURE SYSTEM & HARDWARE			•	•		
BARRICADE	••					BULLETIN BD, SAFE, LOCKERS, MGR CHAIR			•	•		
DEMOLITION BUILDING SHELL	••					BREAK ROOM REFRIG, MICROWAVE			•	•		
FINAL CLEAN UP READY FOR OCCUPANCY CERTIFICATE OF OCCUPANCY						SLATWALL ALL MIRRORS	•	•		•		
AS-BUILT/JOB SITE PLANS SEISMIC ENGINEERING AND PERMITS	• • • •				INCLUDING STORAGE TUBE	OFFICE MILLWORK & SHELVES	•	•	•	•		
FLOOR CONSTRUCTION	G.C.	TEN		N/A	REMARKS	WALK OFF MAT						
COMPACTED FILL							F	I	F	I	N/A	REMARKS
GRAVEL BASE VAPOR BARRIER	•••					ROOF PENETRATIONS / PATCHING	•	•				
CONCRETE SLAB & CURING SEALER	••				FLASH PATCH AS REQUIRED	FRAMING / SUPPORTS MECHANICAL EQUIPMENT	•	•				***: INCLUDING T-STAT
SLAB PREPARATION	••				FLASH PATCH AS REQUIRED	SMOKE EVACUATION SYSTEM	•	•				AS REQUIRED
SLAB INFILL	G.C.	TEN	IANT	N/A	DEMARKS	DUCTWORK & DIFFUSERS DAMPERS & GRILLES		•				
NEUTRAL PIER(S)	F I	F	I		IF APPLICABLE	TOILET RM. EXHAUST FAN	•	•				
FIREPROOFING	•••				AS REQUIRED BY CODE	TESTING & BALANCING	•	•				
FIRESTOPPING METAL STUDS					AS REQUIRED BY CODE	ELECTRICAL	G. F	с. I	F TENA	NT I	N/A	REMARKS
BLOCKING / STRAPPING	••					SERVICE TO PREMISES-CONDUIT/PULL WIRE SERVICE TO PREMISES-SERVICE WIRE	•	•				INSTALL NEW IF REQUIRED
INSULATION	•••					METER	•	•				
GYPSUM BOARD TAPING & SPACKLING					PATCH & REPAIR AS REQ'D	METER BASE TEL/DATA TO PREMISE-CONDUIT/WIRE	•	•				INSTALL NEW IF REQUIRED
INTERIOR PARTITIONS	G.C.	TEN		N/A	REMARKS	TEL/DATA IN PREMISE-CONDUIT/PRE WIRE	•	•				CONDUIT, CAT 5E DATA CABLE & CAT 5E PHONE CABLE BY G.C.
METAL STUDS/GYPSUM BOARD	• •	1			PATCH & REPAIR AS REQ'D				•	•		
	G.C.	TEN			REQ'D	TRANSFORMER DISTRIBUTION/WIRING	•	•				
	F I	F	I	N/A	REMARKS	LIGHT FIXTURES & LAMPS-SALES AREA	•	•				***
ACOUSTICAL CEILING TILE AND GRID	••					FINAL SIGN CONNECTION(S)	•	•				COORDINATE WITH TENANT VENDOR
	G.C.	TEN	IANT	- N/A		EXIT/EMERGENCY LIGHTS SECURITY SYSTEM		•	•	•		***
ALUMINUM STOREFRONT FRAMING SYSTEM	F I	F	I	N/A	REMARKS				•	•		
AUTOMATIC SLIDING DOORS & FRAMES	••				***	SERVICE DOOR BUZZER / ANNUNCIATOR	•	•				RING AT STOCKROOM & CASHWRAP
GLAZING: STOREFRONT & SLIDING DOORS STRUCTURAL STEEL FRAMING	•••				AS REQUIRED	ELECTRICAL PANELS BUSSWAY	•	•				
OVERHEAD ROLLING DOORS STOREFRONT SECURITY GRILLE	• • • •					PLUMBING	G. F	С. I	TENA F	NT I	N/A	REMARKS
DOORS: ACCESS PANELS/DOORS DOORS: HOLLOW MTL, WOOD, HARDWARE	••				INCLUDING FRAMES	SANITARY WASTE TO PREMISES	•	•				
DOORS: TRAFFIC & HARDWARE	••				INCLUDING FRAMES	VENT PIPE TO PREMISES	•	•				AT MULTI-LEVEL LOCATIONS
LOCKSETS: DETEX LOCKSETS: "BEST" 7-PIN CORES & KEYS						SUPPLY, VENT, WASTE PIPING WATER HEATER		•				EXTEND ALL UTILITY LINES AS REQ'D
SIGNAGE	G.C.	TEN		N/A	REMARKS	WATER METER GAS PIPING	•	•				INSTALL NEW IF DAMAGED, OR AS REQ'D
STOREFRONT		•			***, UNDER SEPARATE PERMIT	GAS METER	•	•				AS REQUIRED
INTERIOR SIGNAGE		•				FIXTURES/EQUIPMENT		•				
BLADE SIGN (UNDER CANOPY SIGN) WINDOW DECALS (ADDRESS)	••						•	•				
	• •	TEN				SLOP SINK/MOP SINK/BREAK ROOM SINK	•	•				
FINISHES	F 1	F		N/A	REMARKS	HELIUM FILLING STATION @ STOCK AREA HELIUM TUBING FROM STOCK AREA TO CASHWRAP	•	•				4'x8' PLYWOOD BACKING BY G.C., *** PRESSURE TEST AFTER INSTALLATION
FLOORS CONCRETE SLAB SEALER (TRAFFIC)	•				STOCK ROOM ONLY	INFLATION STATION EQUIP @ CASHWRAP	•		TENA			***
RESILIENT VINYL TILE FLOORING	• •				***	FIRE PROTECTION	F	1	F	I	N/A	REMARKS
RESILIENT SHEET VINYL FLOORING						SPRINKLER MAIN TO PREMISES SPRINKLER BRANCH LINES/DROPS/HEADS						
WALLS						MODIFICATIONS TO LINES/DROPS HEADS	•	•				INCLUDE AUDIO & VISUAL ALARMS IF
PRIMER & PAINTING	••					FIRE ALARM SYSTEM	•	•				REQUIRED BY CODE. FURNISH & INSTALL "SILENT KNIGHT 5808" (NO SUBSTITUTIONS) IN LOCATIONS WHERE
WALLS & CORNER GUARDS FIBERGLASS REINFORCED PANELS (FRP)	• • • •					-						PARTY CITY IS RESPONSIBLE FOR FIRE ALARM MONITORING
MIRROR AT TOILET ROOMS	• •					FIRE EXTINGUISHERS/CABINET	•	•				
CEILINGS		-				FIRE ALARM SYSTEM MODIFICATIONS SHOP DRAWINGS REQ'D FOR PERMIT		•				FIRE ALARM AND SPRINKLER
PRIMER & PAINTING	•					-						
KEY:F- FURNISHE - EXISTINGI- INSTALLG.C GENERAL CONTRACTORN/A - NOT APPLICABLE***- REFER TO NATIO	E NAL ACCOUNT	'S LIST				NOTE: - REFER TO THE VENDOR LIST FOR THE COMPA - REFER TO ATTACHED CONSTRUCTION DOCUI - THE RESPONSIBILITY SCHEDULE IS INTENDED - ALL PERSONS BIDDING WORK OR CONTRACT LANDLORD CRITERIA, AND THE EXECUTED LEA	ANY/CON MENTS F D TO BE ED FOR ASE AGR	ITACTS OR SP USED WORK EEMEI	S FOR I ECIFIC AS A GI ARE T NT, IN T	Tems Wor Jide O Re Heir	REQU K. ONLY, VIEW 1 ENTIR	IIRED BY THE TENANT. AND IS NOT ALL-INCLUSIVE. THESE DOCUMENTS, THE ETY.
NOTE: NOT ALL WORK LISTED MAY	<u>IOTE:</u> IOT ALL WORK LISTED MAY BE APPLICABLE. VERIFY W/ ACTUAL PROJECT SCOPE OF WORK - SCHEDULE PROVIDED FOR REFERENCE ONLY											

09/05/17 PERMIT ISSUE DATE 09/05/17 REVISIONS DATE DESCRIPTION BY

QR

25 Green Pond Road Rockaway, NJ 07866



APPV'D BY GWB SHEET TITLE

CONTRACTOR INFORMATION

SHEET NO.

# ABBREVIATIONS

A		С	
@	АТ	СТОС	CENTER TO CENTER
&	AND	CANTIL	CANTILEVER
А	AMPERE, COMPRESSED AIR	CAP	CAPACITY
A/C	AIR CONDITIONING	CB	CATCH BASIN
AB	ANCHOR BOLT	CBORE	COUNTERBORE
ABAN	ABANDON(ED)	CC	CUBIC CENTIMETER
ABT	ABOUT	CCTV	CLOSED CIRCUIT TEL
ABUT	ABUTMENT	CLSM	CONTROLLED LOW S
ABV	ABOVE		MATERIAL
AC	ALTERNATING CURRENT	CEM	CEMENT
ACC	ACCESSIBLE	CER	CERAMIC
ACI	AMERICAN CONCRETE INSTITUTE	CERIS	CERTIFICATES
ACS		CEM	CUBIC FOOT (FEET) P
		CF3	
		CG	
		CHER	CHAMEER
		CHKD	
AFG	ABOVE FINISHED GRADE	CLGHT	CEILING HEIGHT
AGGR	AGGREGATE	CI	CASTIRON
AHD	AHFAD	CIP	CAST-IN-PLACE, CAST
AHU	AIR HANDLING UNIT		PIPE
AISC	AMERICAN INSTITUTE	CJ	CONSTRUCTION JOIN
	OF STEEL CONSTRUCTION	CL	CENTER LINE
ALT	ALTERNATE	CLG	CEILING
ALUM	ALUMINUM	CLJ	CONTROL JOINT
AMER STD	AMERICAN STANDARD	CLO	CLOSET
ANC	ANCHOR, ANCHORAGE	CLR	CLEAR, CLEARANCE
ANOD	ANODIZED	CLWG	CLEAR WIRE GLASS
APPD	APPROVED	CM	CENTIMETER
APPROX	APPROXIMATE	CMP	
APPV		CMU	
		CONC	CONCRETE
		CONE	CONFERENCE
ASTM	AMERICAN SOCIETY OF TESTING	CONN	CONNECTION CONNE
	AND MATERIALS	CONSTR	CONSTRUCTION
AUTO	AUTOMATIC	CONT	CONTINUE, CONTINUA
AUX	AUXILIARY		CONTINUOUS
AVG	AVERAGE	COORD	COORDINATE
AWG	AMERICAN WIRE GAGE	CORP	CORPORATE, CORPO
AWS	AMERICAN WELDING SOCIETY	CORR	CORRIDOR, CORRUG
AZ	AZIMUTH	CPT	CARPET
		CRS	COLD ROLLED STEEL
		CS	CARBON STEEL
В		CSK	COUNTERSINK
		CSMI	
B/B		CIB	CERAMIC TILE BASE
BR	BACK		
BL	BASE LINE. BUILDING LINF	CU	COPPER
		~ ~	

CANTIL	CANTILEVER
CAP	
CB	
CBORE	
CLSIM	CONTROLLED LOW STRENGTH
CER	
CERIS	
CFIM	
050	
CF5	
~~	
CHFR	
CHKD	
CLG HI	
CI	
CIP	CAST-IN-PLACE, CAST IRON
<u>.</u>	
CJ	CONSTRUCTION JOINT
CL	CENTER LINE
CLG	CEILING
CLJ	CONTROL JOINT
CLO	CLOSET
CLR	CLEAR, CLEARANCE
CLWG	CLEAR WIRE GLASS
CM	CENTIMETER
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CLEAR OPENING
COL	COLUMN
CONC	CONCRETE
CONF	CONFERENCE
CONN	CONNECTION, CONNECTOR
CONSTR	CONSTRUCTION
CONT	CONTINUE, CONTINUATION,
	CONTINUOUS
COORD	COORDINATE
CORP	CORPORATE, CORPORATION
CORR	CORRIDOR, CORRUGATED
CPT	CARPET
CRS	COLD ROLLED STEEL
CS	CARBON STEEL
CSK	COUNTERSINK
CSMT	CASEMENT
СТВ	CERAMIC TILE BASE
CTF	CERAMIC TILE FLOOR
CTJ	CONTRACTION JOINT
CTR	CENTER
CTW	CERAMIC TILE WAINSCOT
CTWALK	CATWALK
CU	COPPER
CU IN	CUBIC INCH
CU FT	CUBIC FEET
CU M	CUBIC METER
CU MM	CUBIC MILLIMETER
CUB	CUBICLE
CU YD	CUBIC YARD
CYL	CYLINDER

### DEEP, DEPTH, PENNY(NAIL) DRY BULB DOUBLE DIRECT CURRENT DIRECT DIGITAL CONTROL DEGREE DEMOLISH. DEMOLITION DETAIL DRINKING FOUNTAIN DRY FILM THICKNESS DOUBLE HUNG DIAMETER DIAGONAL, DIAGRAM DIFFERENCE DIMENSION DEAD LOAD DAMPER DOWN DOMESTIC DEW POINT DOOR DISCONNECT SWITCH, DOWNSPOUT

### EAST EACH ENTERING AIR TEMPERATURE ELECTRICAL CONTRACTOR ENERGY EFFICIENCY RATIO EACH FACE EFFICIENCY EXPANSION JOINT EACH LAYER, ELEVATION ELECTRIC/ELECTRICAL ELEVATOR EMBANKMENT EMBEDMENT EMERGENCY ELECTRICAL METALLIC TUBING ENCLOSURE EDGE OF DECK EDGE OF SLAB EQUAL EQUALLY SPACED EQUIPMENT ENERGY RECOVERY VENTILATOR EVAP EVAPORATOR EACH WAY EWC EXCAVATE EXPANSION EXIST EXISTING EXT EXT GR EXTERIOR GRADE

FA	FIRE ALARM
FB	FLAT BAR
FC BRK	FACE BRICK
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT
	CONNECTION
FDMPR	FIRE DAMPER
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINE I
	FINISHED FLOOR ELEVATION
FGL	
FI	FLOOR LINE
FLA	
FLG	FLANGE, FLOORING
FLJ	FLOOR JOIST
FLR	FLOOR
FLR PL	FLOOR PLATE
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FPM	FOUT (FEET) PER MINUTE
FPS ED	FOUT (FEET) PER SECOND
FS	FAR SIDE FEDERAL
10	SPECIFICATION
FT	FOOT (FEET)
FTG	FOOTING
FVNR	FULL VOLTAGE
	NoN-REVERSING
FVR	FULL VOLTAGE REVERSING
$\frown$	
G	
G	
9	WIRE NATURAL GAS
GA	GALIGE OR GAGE
GAB	GRADED AGGREGATE BASE
GALV	GAL VANIZED

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	WIRE, NATURAL GAS
GA	GAUGE OR GAGE
GAB	GRADED AGGREGATE BASE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GF	GROUND FACE
GFCI/GFI	GROUND FAULT CIRCUIT
	INTERRUPTION
GL	GIRT LINE, GLASS
	GROUND LEVEL
GND	GROUND
GOVT	GOVERNMENT
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPS	GALLONS PER SECOND
GR	GRADE
GR BM	GRADE BEAM
GRTG	GRATING
GT	GIRDER TRUSS, GROUT
GWB	GYPSUM WALLBOARD
GWR	GLYCOL WATER RETURN
GWS	GLYCOL WATER SUPPLY

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KB

KFT KLF

KO

KPL KSI

KV KVA KVAR KW

JAN CLO

Н	HIGH
HC	HOLLOW CORE
HCA	HEADED CONCRETE ANCHOR
HDR	HEADER
HDW	HARDWARE
HDWD	HARDWOOD
HEX	HEXAGONAL
HEX HD	HEXAGONAL HEAD
HG	HOT GAS, HEAT GAIN,
	MERCURY
HGR	HANGER
НК	HOOK
НМ	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HORSE POWER
HPS	HIGH PRESSURE SODIUM
HPT	HIGH POINT
HS	HIGH STRENGTH
HSB	HIGH STRENGTH BOLT
HSS	HOLLOW STRUCTURAL SHAPE
HT	HEIGHT
HVAC	HEATING, VENTILATION AND
	AIR CONDITIONING
HVY	HEAVY
HW	HOT WATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HWY	HIGHWAY
HZ	HERTZ

INTERNATIONAL BUILDI	NG
CODE INSTALLED BY OTHERS	
INSIDE DIAMETER	
THAT IS	
INSIDE FACE	
ISOLATION JOINT	
INCH	
INCORPORATED, INCRE	EASE
INCLUDE	
INFORMATION	
INSULATE/INSULATION	
INTERMEDIATE	
INTERIOR	
IRON PIPE SIZE	
INSIDE RADIUS	

JUNCTION BOX
JANITOR'S CLOSET
JOIST
JOINT

KIP (THOUSAND POUNDS)
KNEE BRACE
THOUSAND FT POUNDS
KIPS PER LINEAR FOOT
KNOCK OUT
KICK PLATE
KIPS PER SQUARE INCH
KILOVOLT
KILOVOLT-AMPERE
KILOVAR
KILOWATT

ĄΖ	AZIMUTH
R	
<b>B</b> /B	ВАСК ТО ВАСК
BC	BOLT CIRCLE
3D	BOARD
BFILL	BACK FILL
	BITUMINOUS
	BASELINE BUILDING LINE
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM, BENCH MARK
BOF	BOTTOM OF FOOTING
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STEEL
BOT	BOTTOM
30W	
SRCG	BRACING
BRG	BEARING
BRG PL	BEARING PLATE
3RK	BRICK
BRKT	BRACKET
SSMT	BASEMENT
BTU	BRITISH THERMAL UNIT
<b>BTUH</b>	BRITISH THERMAL UNIT PER HOUR
BTWN	BETWEEN
3VL	BEVELED

### D DB DBL DC DDC DEG

D

CU IN

DEMO DET DF DFT DH DIA DIAG DIFF DIM DL DMPR

DN	DOWN
DOM	DOMESTIC
DP	DEW POINT
DR	DOOR
DR	DISCONNEC
DS	DOWNSPO
DWG	DRAWING
E	EAST
A	EACH
EAT	ENTERING
EC	ELECTRICA
ER	ENERGY EF

EF EFF EJ EL ELEC ELEV EMB EMBED EMER EMT ENCL EOD EOS EQ EQL SP EQUIP ERV ES ESP

EW

EXC

EXP

EACH SIDE, EDGE OF SHOULDER, ELECTROSTATIC EXTERNAL STATIC PRESSURE ELECTRIC WATER COOLER EXTERNAL, EXTERIOR

### LEFT LAD LADDER LAM LAMINATE LAVATORY LAV POUNDS LBS LF LINEAR FEET LG LENGTH LH LEFT HAND LIVE LOAD LL LONG LEG BACK TO BACK LLBB LONG LEG HORIZONTAL LLH LLV LONG LEG VERTICAL LONG LONGITUDE, LONGITUDINAL LPCR LOW PRESSURE CONDENSATE RETURN LOW PRESSURE STEAM LPS LPT LOW POINT LS LUMP SUM LVL LAMINATED VENEER LUMBER, LEVEL LVR LOUVER LWC LIGHTWEIGHT CONCRETE LWIC LIGHTWEIGHT INSULATING CONCRETE

# Μ

MAINT MAINTENANCE MAS MASONRY MATL MATERIAL MAX MAXIMUM THOUSAND BRITISH THERMAL MBTUH UNITS PER HOUR MC MECHANICAL CONTRACTOR MOMENT CONNECTION MAIN CIRCUIT BREAKER MCB MCC MOTOR CONTROL CENTER MECHANICAL MECH MED MEDIUM MEMB MEMBRANE MEZZ MEZZANINE MFD MANUFACTURED MFR MANUFACTURER MH MI MANHOLE MALLEABLE IRON, MILE MIL ONE THOUSANDTH INCH MIN MINIMUM MISC MISCELLANEOUS MOLDING, MOULDING MLDG MLO MAIN LUGS ONLY MM MO MR MILLIMETER MASONRY OPENING MOISTURE RESISTANT MTD MOUNTED MTL MV METAL MERCURY VAPOR

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NORTH NA NOT APPLICABLE NAAMM NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MFR. NATL NATIONAL NORMALLY CLOSED NC NEC NATIONAL ELECTRICAL CODE. NECESSARY NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION NF NESC NATIONAL ELEC SAFETY CODE NEAR FACE NF NIC NOT IN CONTRACT NO NUMBER NOM NOMINAL NPT NS NATIONAL TAPER PIPE (THREAD) NEAR SIDE NTS NOT TO SCALE

# 0

OA OUTSIDE AIR OC ON CENTER OD OF OUTSIDE DIAMETER OUTSIDE FACE OFM OUTSIDE FACE OF MASONRY OPH OPPOSITE HAND OPNG OPENING OPP OPPOSITE OR OUTSIDE RADIUS ORIENTED STRAND BOARD OSB OCCUPATIONAL SAFETY AND OSHA HEALTH ADMINISTRATION OVHD OVERHEAD OWJ OPEN-WEB JOIST

OUNCE

D

ΟZ

-	
1	PER (BETWEEN WORDS)
Р	PUMP
PAR	PARALLEL
PB	PUSH BUTTON
PBO	PROVIDED BY OTHERS
PC	PLUMBING CONTRACTOR
	PIECE
PCC	PRECAST CONCRETE
PCF	POUNDS PER CUBIC FOOT
PEC	PHOTO ELECTRIC CELL
PERF	PERFORATED
PERP	PERPENDICULAR
PH	PHASE
PIBO	PROVIDED AND INSTALLED
	BY OTHERS
PL	PLATE, PROPERTY LINE
PLAM	
PLF	POUNDS PER LINEAR FOOT
PL GI	PLATE GLASS
PMF	PRE-MOLDED FILLER
1 1011	PROBABLE MAXIMUM FLOO
PNI	PANEI
PR	PAIR
PREFIN	PREFINISHED
PSE	POLINDS PER SOLIARE FOO
PSI	POLINDS PER SOLIARE INCL
PSIA	POUNDS PER SOUARE INCH
1007	ABSOLUTE
PSIC	
1 510	GAGE
DT	
ГУС	

CURVE, POLYVINYL CHLORIDE

Q QA QC QT QTY	QUALITY ASSURANCE QUALITY CONTROL QUARRY TILE, QUART QUANTITY
R R RA RC RD RE: RECPT REINF REM REQD REV RFG RH RM RO RPM RT RTU RWC	RADIUS, RISER RETURN AIR REINFORCED CONCRETE ROOF DRAIN REFER TO RECEPTACLE REINFORCING REMOVABLE REQUIRED REVISION ROOFING RIGHT HAND ROOM ROUGH OPENING REVOLUTIONS PER MINUTE RIGHT ROOFTOP UNIT RAINWATER CONDUCTOR
S	

S	SOUTH
(S)	SLOPES
ŚĆ	SOLID CORE
SCHED	SCHEDULE
SECT	SECTION
SENS	SENSIBLE
SHN	SHOWN
SHT	SHEET
SHT MTI	SHEET METAL
SHTHG	SHEATHING
SIM	SIMILAR
SJI	STEEL JOIST INSTITUTE
SLBB	SHORT LEG BACK TO
	BACK
SP	SPACE (D) (S)
SPEC	SPECIFICATION
SPF	SPRUCE-PINE-FIR
SQ	SQUARE
SQ FT	SQUARE FOOT
SQ IN	SQUARE INCH
SQ MI	SQUARE MILE
SS	SANITARY SEWER
SST	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STIF	STIFFENER
STIR	STIRRUP
STOR	STORAGE
STRUCT	STRUCTURAL
SQ YD	SQUARE YARD
SYMM	SYMMETRICAL

T&B T&G	TREAD TOP AND BOTTOM TONGUE AND GROOVE
ТВ	TOWEL BAR
тс	TERRA COTTA, TOP CHORD
TEMP	TEMPORARY
THD	THREAD
THK	THICKNESS
THRES	THRESHOLD
THRU	THROUGH
то	TOP OF
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOG	TOP OF GRATING
TOJ	TOP OF JOIST
TOS	TOP OF STEEL
TRS	TRUSS
TRTD	TREATED
TS	TUBE STEEL
TOD	TOP OF DUCT
TOW	TOP OF WALL
ΤV	TELEVISION
TYP	TYPICAL

# U

UGND UH UN UNC UNEX UNFIN UNF	UNDERGROUND UNIT HEATER UNDERWRITER'S LABORATORIES UNLESS NOTED UNIFIED COARSE THREAD UNEXCAVATED UNFINISHED UNIFIED FINE THREAD UNIVERSAL
UNFIN UNF	UNFINISHED UNIFIED FINE THREAD
UNIV	UNIVERSAL
UNO UR	UNLESS NOTED OTHERWISE

# V

VB

VCT

VIF

VIN

VENT, VOLT, VOLTAGE VAR VARIABLE, VARIATION, VARIES VAV VARIABLE AIR VOLUME BOX VACUUM BREAKER, VINYL BASE VACUUM CIRCUIT BREAKER VCB VINYL COVER BASE VINYL COMPOSITION TILE VEL VELOCITY VERT VERTICAL VEST VESTIBULE VERIFY IN FIELD VINYL VSD VARIABLE SPEED DRIVE VTR VENT THRU ROOF

### W WASTE, WATT, WEST, WIDE WITH W/O WITHOUT WET BULB, WOOD BASE WOOD BLOCKING WATER CLOSET WOOD WIDE FLANGE WATER GAUGE, WIRE GUARD WATER HEATER WATT HOUR METER WHM WIND LOAD WALL OPENING, WHERE OCCURS, WORK ORDER WORK POINT WSCT WAINSCOT WINDOW UNIT WWR WELDED WIRE REINFORCING BY (BETWEEN DIMENSIONS) XBRA CROSS BRACING XMFR

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		W	ALL LEGEND		Larson De	sign Group <sub>®</sub>
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GLASS			NEW STUD WALL ASSEMBLY		FAX 570.3 www.larsonde Architects Engi It is in violatic	23.9902 signgroup.com neers Surveyors on of the law for
GRANULAR SUBBASE		 	DEMOLISHED WALL OR WALL / BULKHEAD ABOVE		any person, under the o licensed Archit Land Surveyor in any way.	unless acting direction of a tect, Engineer or , to alter an item Plans, maps,
PLYWOOD					specification reports not cor seal imprint on accompanied signature by	s, studies, and taining a red ink the cover sheet by and original the licensed
RIGID INSULATION		F	RE RATINGS		professional i fraudulently a not be consid copy. Copyr	may have been Itered and shall ered an orginal ight Protected
WOOD			1-HOUR FIRE RATED ASSEMBL	Y	PROTO NO.	1703
STEEL				_Y _Y	PROJECT NO.	8099-196 BCW
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						OLS & /IATIONS
		NC	DTE: NOT ALL ABBREVIATIONS AND SYM BE USED IN THIS PROJECT. THIS S PROVIDED FOR GENERAL REFERE	IBOLS MAY SHEET IS NCE ONLY	SHEET NO.	.0

GENERAL NOTES	DIVISION I GENERAL REQUIREMENTS/GENERAL CONDITIONS (CO
1. VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS. BRING ANY DEVIATIONS THE ATTENTION OF THE TENANT'S PROJECT MANAGER	I. GUARANTEE: 1. A WRITTEN GUARANTEE SHALL BE PROVIDED ON ALL LABOR AND
2. ALL DIMENSIONS SHOWN SHALL BE CONSIDERED APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO COMMENCING THE WORK. FAILURE TO DO SO SHALL PLACE FULL RESPONSIBILITY FOR ANY ERRORS UPON THE CONTRACTOR.	PERIOD OF NO LESS THAN ONE YEAR FROM THE DATE OF THE SUBS COMPLETION OF THE PROJECT. 2. THE TENANT'S REPRESENTATIVES SIGNATURE AND DATE OF ACC REQUIRED IN ORDER TO ACTIVATE THIS GUARANTEE. THIS GUARAN
3. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, AND/OR EASEMENTS, EXISTING UTILITIES, AND ANY UNDERGROUND OR SURFACE STRUCTURE OR CONDITIONS PRIOR TO COMMENCING TO WORK.	ALL OF THE GENERAL AND SUBCONTRACTOR'S WORK. ALL DEFECT DURING THIS GUARANTEE PERIOD SHALL BE REPAIRED TO THE OW TENANT'S SATISFACTION AT CONTRACTOR'S EXPENSE AT NO COST AND/OR TENANT.
4. UPON COMPLETION OF THE WORK, PROVIDE A WALL FRAME WITH CLEAR PLEXI FACE OVER THE MANAGER'S DESK CONTAINING THE CERTIFICATE OF OCCUPANCY.	J. SUPERVISION: 1. PROVIDE A FULL TIME, QUALIFIED SUPERVISOR ON THE JOB SITE. DECUMPED TO BE COMPLETED DURING NON PUSINESS HOURS SHA
5. SECURE AND PAY FOR ALL PERMITS AND LICENSES NECESSARY FOR THE EXECUTION OF THE WORK.	THE BID. 2. PROVIDE A JOB SITE TELEPHONE AND FAX MACHINE DURING THE
6. SEE RESPONSIBILITY SCHEDULE TO CLARIFY RESPONSIBILITIES FOR SPECIFIED WORK.	NUMBERS. 3. COORDINATE AND SCHEDULE ALL NON-BUSINESS HOUR WORK W MANAGER.
	K. UTILITIES: 1. PROVIDE ALL TEMPORARY UTILITIES (INCLUDING, BUT NOT LIMITE
THE CONTRACTOR SHALL BE RESPONSIBLE FOR A COMPLETE AND OPERATIONAL TENANT SPACE INCLUDING, BUT NOT LIMITED TI ALL FINISHES, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION.	SEWERAGE, ELECTRICAL POWER, FUEL AND TELEPHONES) AND TH ASSOCIATED WITH THESE. PROVIDE TENANT'S REPRESENTATIVE V COMPANY NAMES, NUMBERS, CONTACTS AND ACCOUNT NUMBERS TRANSFER ACCOUNTS TO THEIR NAME AT TURNOVER).AL
A. COORDINATION: 1. COORDINATE WORK WITH WORK OF OTHER TRADES, THE LANDLORD'S FORCES, OTHER TENANT CONTRACTORS, AND TENANT STORE OPERATIONS IN ORDER TO AVOID CONFLICTS AND EXPEDITE THE COMPLETION OF THE PROJECT. 2. FURNISH LABOR, MATERIALS, EQUIPMENT AND APPLIANCES NECESSARY TO COMPLETE	L. TRASH REMOVAL: 1. PROVIDE FOR DAILY REMOVAL OF ALL TRASH, RUBBISH AND SUR RESULTING FROM CONSTRUCTION, FIXTURING, AND MERCHANDISIN DEMISED PREMISES. M. CLEAN UP AT TURNOVER:
THE INSTALLATION OF ALL ITEMS FURNISHED BY OTHERS. B. PROTECTION:	1. PROVIDE A PROFESSIONAL CLEANING SERVICE FOR ALL AREAS C THE COMPLETION OF THE PROJECT AND BEFORE TURNING THE PRO THE TENANT. WORK TO INCLUDE, BUT NOT BE LIMITED TO ALL CEIL
<ol> <li>ERECT A TEMPORARY BARRICADE AT THE STOREFRONT ONLY IF REQUIRED BY THE GUIDELINES.</li> <li>PROTECT THE PROPERTY OF THE ADJACENT TENANTS, COMMON AREAS, AND NEUTRAL PIERS AT ALL TIMES. ANY DAMAGE THAT OCCURS OF A RESULT OF DEMOLITION (OR CONSTRUCTION) IS TO BE REPAIRED TO LIKE NEW CONDITION.</li> </ol>	FLOOR AND WALL SURFACES, BOTH INTERIOR AND EXTERIOR. THE CLEAN AND READY FOR MERCHANDISING. 2. STOREFRONT IS TO BE CLEAN OF ALL DUST, GLUE, GROUT, AND N 3. HVAC FILTERS TO BE CHANGED FOLLOWING THE CLEANING.
C. CONTRACT CONSIDERATIONS: 1. SCHEDULE OF VALUES	N. INSURANCE: 1. SECURE, PAY FOR AND MAINTAIN, DURING CONSTRUCTION, ALL O POLICIES REQUIRED WORK SHALL NOT COMMENCE UNTIL ALL REC
a. SUBMIT A PRINTED SCHEDULE ON FORM INCLUDED WITH BID PROPOSAL b. INCLUDE A DIRECT PROPORTIONAL AMOUNT OF OVERHEAD AND PROFIT WITH EACH LINE ITEM. c. REVISE SCHEDULE TO LIST APPROVED CHANGE ORDERS, WITH EACH APPLICATION FOR PAYMENT	HAS BEEN OBTAINED AND CERTIFICATES OF SUCH INSURANCE HAV DELIVERED. LANDLORD MUST BE NAMED AS "ADDITIONAL INSURED INSURANCE SHALL COVER WORK PERFORMED BY CONTRACTOR, E SUBCONTRACTOR AND ALL MAJOR SUPPLIERS.
2. PAYMENT AND WAIER LIENS a. PAYMENT APPLICATION FORMS SUBMIT PER THE OWNER'S REPRESENTATIVES	O. INDEMNIFICATION: 1. TO THE FULLEST EXTENT PERMITTED BY LAW, INDEMNIFY AND HO LANDLORD, TENANT, AND ARCHITECT AND THEIR AGENTS AND EME
REQUIREMENTS. b. UTILIZE SCHEDULE OF VALUES FOR LISTING ITEMS IN APPLICATION FOR PAYMENTS. c. ALL PAYMENTS FOR THIS PROJECT ARE TO BE ALLOCATED FOR THIS PROJECT ONLY FOR PAYMENTS TO SUB-CONTRACTORS TO PERFORM WORK OR SUPPLE MATERIALS TO THIS PROJECT. SUBMIT PARTIAL WAIVERS OF LIENS INCLUDING SUB-CONTRACTORS AND MATERIAL SUPPLIERS	AGAINST ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDIN LIMITED TO, ATTORNEY'S FEES ARISING OUT OF OR RESULTING FRO PERFORMANCE OF THE WORK, PROVIDED THAT ANY SUCH CLAIM, D EXPENSE IS ATTRIBUTABLE TO BODILY INJURY, SICKNESS, DISEASE INJURY OR TO DESTRUCTION OF TANGIBLE PROPERTY (OTHER THA
3. CHANGE PROCEDURES: a. OWNERS' REPRESENTATIVE WILL ADVISE OF MINOR CHANGES IN THE WORK NOT	P. BACKGROUND COMPUTER-AIDED CONTRACT DESIGN DOCUMEN
INVOLVING AN ADJUSTMENT RO CONTRACT SUM/PRICE OR CONTRACT TIME. b. MAINTAIN DETAILED RECORDS OF WORK DONE ON TIME AND MATERIAL BASIS TO SUBSTANTIATE COSTS FOR CHANGES IN THE WORK.	REQUIRE BACKGROUND DRAWINGS, COPIES OF THESE DRAWINGS SUBJECT TO THE FOLLOWING CONDITIONS:
c. CHANGE ORDER FORMS: SUBMIT PER THE OWNER'S REPRESENTATIVE'S REQUIREMENTS d. EXECUTION OF CHANGE ORDERS: OWNER'S REPRESENTATIVE WILL ISSUE CHANGE OPDERS FOR SIGNATURES OF PARTIES AS REQUIRED IN THE CONDITIONS OF THE	A SEPARATE AGREEMENT TITLED USE OF COMPUTER-AIDED DES MUST BE SIGNED BY THE CONTRACTOR/SUBCONTRACTOR BEFORE THE FILES.
e. SUBMIT AN UPDATED CONSTRUCTION PROGRESS SCHEDULE.	<ul> <li>b. CONTRACTOR MUST AGREE TO USE THE PROJECT FILES ONLY FO PURPOSE AS DESCRIBED IN THE AGREEMENT.</li> <li>c. CONTRACTOR MUST AGREE TO REIMBURSE WJCA INC. OR THE TI</li> </ul>
4. ALTERNATIVES: a. ACCEPTED ALTERNATIVES WILL BE IDENTIFIED IN OWNER-CONTRACTOR AGREEMENT.	USE OF THE DOCUMENTS PER THE AGREEMENT. CONTRACTOR MA WJCA INC. DIRECTLY OR MAY AGREE TO CREDIT TENANT AN AMOUN WITH ARCHITECT & TENANT'S REPRESENTATIVE.
b. ALTERNATIVES MUST BE SUBMITTED WITH BID PROPOSAL, AS SEPARATE AND/OR DEDUCT ITEMS. BASE BID SHALL INCLUDE ALL ITEMS AND MANUFACTURERS AS ENUMERATED ON DRAWINGS AND/OR SPECIFICATIONS. c. COORDINATE RELATED WORK AND MODIFY SURROUNDING WORK AS REQUIRED.	Q. DAMAGED FREIGHT (TENANT FURNISHED MATERIALS): 1. OPEN BOXES/CARTONS WITH OBVIOUS DAMAGE 2. INSPECT FREIGHT BEFORE SIGNING THE FREIGHT BILL, NOTE SPE
5. CLOSE OUT: a.THE FINAL TEN PERCENT RETENTION ON THIS PROJECT MUST INCLUDE SIGNED AND EXECUTED WAIVERS OF LIEN INDICATING 100% COMPLETION AND 100% PAYMENT IN FULL BY	3. AFTER THE DAMAGE IS NOTED ON THE FREIGHT BILL, HAVE CARR SIGN IN ORDER TO VERIFY THAT BOTH PARTIES AGREE TO THE EXT DAMAGE
ALL SUB-CONTRACTORS AND MATERIAL SUPPLIERS. b. PROVIDE A LIST OF ALL SUBCONTRACTORS, INCLUDING ADDRESS AND PHONE NUMBERS INSTALLED IN A PICTURE FRAME ON BACK OF THE MANAGER'S OFFICE DOOR	4. WHEN DAMAGE IS DISCOVERED UPON UNPACKING THE FREIGHT, PACKING FOR SIGNS OF DAMAGE OR ABUSE. THE FREIGHT BILL IS T
c. SUBMIT OPERATION MANUALS, MAINTENANCE INSTRUCTIONS, ETC. d. THE GENERAL CONTRACTOR SHALL PROVIDE AS BUILT DRAWINGS TO THE OWNERS REPRESENTATIVE THAT BEELECTS ALL CHANGES TO THE PROJECT DUPING THE COURSE OF	5. CONTACT THE TENANT'S REPRESENTATIVE WITHIN 48 HOURS OF OF MATERIALS TO INFORM THEM OF ANY LOSS. FAX ALL REQUIRED
CONSTRUCTION AT THE COMPLETION OF PROJECT. e. LANDLORD AND TENANT ACKNOWLEDGE AND AGREE THAT LANDLORD SHALL SUBMIT A "CLOSE OUT" PACKAGE (IN ELECTRONIC FORMAT) TO TENANT WITHIN FORTY-FIVE (45) DAYS OF THE DATE OF DELIVERY OF POSSESSION WHICH SHALL INCLUDE THE FOLLOWING ITEMS:	6. IF TENANT'S REPRESENTATIVE. 6. IF TENANT'S CONTRACTOR FAILS TO FOLLOW THIS PROCEDURE, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS RELATED TO REPLACEMENT OF MISSING OR DAMAGED TENANT FURNISHED MAT
·ALL EQUIPMENT WARRANTIES AND CUT SHEETS; ·HVAC BALANCING REPORT; ·PROOF OF HVAC POST CONSTRUCTION FILTER CHANGE(S); ·CERTIFICATE OF OCCUPANCY; (V) AS-BUILT DRAWINGS;	
PERFORMED; ·SLAB MOISTURE TEST RESULTS; AND ·CORY OF SEPENKI ED TEST DEPORT DEPENDED WITHIN ONE (1) MONTH OF THE STREET	
DELIVERY OF POSSESSION.	
D. QUALITY OF WORK: 1. ALL WORK SHALL BE PERFORMED IN A SAFE AND WORKMANLIKE MANNER IN ACCORDANCE WITH ACCEPTED CONSTRUCTION STANDARDS AND O.S.H.A. DECUMPERATION AND ACCEPTED CONSTRUCTION STANDARDS AND O.S.H.A.	EQUIPMENT, ETC. PRIOR TO COMMENCING THE WORK.
REQUIREMENTS. ALL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE PLANS UNLESS A VARIANCE IS APPROVED BY THE TENANT AND ALL AUTHORITIES HAVING JURISDICTION.	B. DEMOLITION: 1. SCOPE OF WORK - THIS PORTION OF THE WORK INCLUDES ALL L AND SERVICES NECESSARY FOR THE REASONABLY INCIDENTAL TO DIMANTIFIERD DEVICE STATE OF THE REASONABLY INCIDENTAL TO
2. ALL EQUIPMENT AND MATERIALS UNDER THE CONTRACT ARE TO BE NEW UNLESS OTHERWISE SPECIFIED IN THE PLANS.	DISMANTLING, DEMOLITION, AND SALVAGE AS SHOWN AND NOTED DRAWINGS AND SPECIFIED HEREIN. IN GENERAL, THE ITEMS TO BE UNDER THIS SECTION SHALL INCLUDE, BUT ARE NOT LIMITED TO: RI
E. CODE COMPLIANCE: 1. OT OS THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE CERTAIN THAT ALL WORK IN IN COMPLIANCE WITH ALL CODES, ORDINANCES, AND REGULATIONS OF ALL CONSTITUTED PUBLIC AUTHORITIES HAVING JURISDICTION. THIS INCLUDES BUT IS NOT LIMITED TO LOCAL BUILDING CODE REQUIREMENTS. FIRE DEPARTMENT REGULATIONS UTILITY COMPANY	EXISTING ACOUSTICS AND GYPSUM WALL BOARD, CEILING AND FRA FIXTURES, FLOORING, DOORS AND WALLS, FURRED OUT COLUMN E STOREFRONT AND AS SPECIFIED ON THE DRAWINGS. 2. DISCONNECTION OF SERVICES: a. EXISTING SERVICES THAT WILL BE DISRUPTED BY CONSTRUCTION
REQUIREMENTS, O.S.H.A., AND THE BEST TRADE PRACTICES.	RE-ROUTED AS NECESSARY TO PROVIDE TEMPORARY CONTINUATI b. DISCONNECTED SERVICES SHALL BE PLUGGED AND SEALED IN A MANNER
1. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE MEASURED FORM FINISHED FACE TO FINISHED FACE OF MATERIALS, FACE OF STOREFRONT, OR LEASE LINE. 2. VERIFY ALL PROPOSED DIMENSIONS WITH FIELD CONDITIONS ADVISE TENANT'S	<ul> <li>c. SPRINKLER SHUT DOWN SHALL BE COORDINATED WITH THE BUIL</li> <li>EXECUTION OF WORK.</li> <li>3. ABANDONED ELECTRICAL WIRING:</li> </ul>
REPRESENTATIVE OF ANY DISCREPANCY BETWEEN THE DRAWINGS AND ACTUAL JOB CONDITIONS BEFORE BEGINNING THE WORK. 3. ALL ANGLES SHALL BE 90 OR 45 DEGREES UNLESS OTHERWISE NOTED IN THE CONSTRUCTION DOCUMENTS.	a. CONDUITS AND OTHER UTILITIES ENCOUNTERED IN THE PROGRE DEMOLITION THAT ARE TO BE ABANDONED SHALL BE DISCONNECT PLUGGED IN AN APPROVED MANNER. ANY ABANDONED UTILITIES IN WORK UNDER THIS CONTRACT SHALL BE REMOVED ONLY TO THE E
G. SHOP DRAWINGS & SUBMITTALS: 1. G.C. TO SUBMIT SHOP DRAWINGS TO ARCHITECT/ENGINEER OF RECORD (COPY TENANT REPRESENTATIVE) FOR APPROVAL PRIOR TO CONSTRUCTION.	
2. SUBMIT THE NUMBER OF OPAQUE REPRODUCTIONS WHICH CONTRACTOR REQUIRES, PLUS TWO COPIES, TO ARCHITECT/ENGINEER AND TENANT'S REPRESENTATIVE FOR APPROVAL.	A. PATCHING (WHEN REQUIRED)
3. SUBMITTALS MUST BE SCHEDULED SO AS NOT TO IMPEDE THE PROGRESS OF THE WORK. 4. MARK EACH COPY TO IDENTIFY APPLICABLE PRODUCTS, MODELS, OPTIONS, AND OTHER DATA SUPPLEMENT MANUFACTURER'S STANDARD DATA TO PROVIDE INFORMATION.	1. INSTALL MINIMUM 3000 PSI CONCRETE FILLER AND PATCHING WH HAS BEEN REMOVED FOR UNDER SLAB CONDUITS, PLUMBING, ETC.
SPECIFIC TO THIS PROJECT. 5. INDICATE SPECIAL UTILITY AND ELECTRICAL CHARACTERISTICS, UTILITY CONNECTION REQUIREMENTS, AND LOCATION OF UTILITY OUTLETS FOR SERVICE FOR SUMPTIONAL	B. CONCRETE SLAB 1. INSTALL MINIMUM 3000 PSI CONCRETE WITH 6" X 6" - W1.4 X W1.4 OVER 6 MIL. VAPOR BARRIER (AT SLAB ON GRADE CONDITIONS OR A
EQUIPMENT AND APPLIANCES. 6. IDENTIFY VARIATIONS FROM CONTRACT DOCUMENTS AND PRODUCT OR SYSTEM 1 IMITATIONS WHICH MAY AFFECT THE CONSTRUCTION PROCRESS	CODE REQUIREMENTS). INSTALL CONTROL JOINTS AT MAXIMUM 20
H. SAMPLES: SUBMIT THREE COPIES OF SAMPLE TO TENANT'S REPRESENTATIVE FOR	DIVISION IV MASONRY
2. INCLUDE IDENTIFICATION ON EACH SAMPLE WITH FULL PROJECT INFORMATION.	A. NO WORK UNDER THIS SECTION UNLESS REQUIRED FOR PROPER REPAIR OF BUILDING SHELL. IN THIS EVENT ALL WORK SHALL BE PE THE HIGHEST LEVELS OF QUALITY AND CRAFTSMANSHIP AND SHAL COORDINATED WITH LANDLORD'S REPRESENTATIVE.

NT.)	DIVISION V METALS	DIVISION VIII DOORS & WINDOWS (CONT.) B. ACCESS DOORS:
MATERIALS FOR A	A. METAL STUDS 1. 20 GA. MINIMUM AT NON-SALES WALLS, AT STOREFRONT OR WALLS WITH DECKS ABOVE.	1. PROVIDE FLUSH TYPE METAL DOORS MIN 16" X 20", OR AS SPE DRAWINGS, MANUFACTURED FORM # 16 GA. STEEL, COMPLETE
STANTIAL	2. 25 GA. MINIMUM, AT 16" O.C. MAXIMUM, AT TYPICAL PARTITIONS UNLESS OTHERWISE NOTED.	TYPE FRAMES MANUFACTURED FROM # 16 GA. STEEL, WITH AND 2. INSTALL ACCESS DOORS WHERE NECESSARY TO PROVIDE AC
EPTANCE IS	3. CONTRACTOR SHALL PROVIDE ALL FASTENERS, SCREWS, BOLTS, CLIPS, ANCHORS, ANGLES, BRIDGES, BRACKETS, SLEEVES, ETC, AS REQUIRED.	CONCEALED VALVES, AND OTHER EQUIPMENT REQUIRING SERV
TS DISCOVERED NER AND/OR	B. METAL STANDARDS	3. ACCESS DOORS SHALL BE SUITABLE FOR INSTALLATION IN TH
TO THE OWNER	1. FURNISH AND INSTALL PER PLANS AND MANUFACTURER'S RECOMMENDATIONS.	4. ACCESS DOORS LOCATED IN FIRE-RATED WALLS, FLOORS, CE ROOF ASSEMBLIES SHALL BE UL FIRE RATED LISTED AND LABEL
	C. STRUCTURAL STEEL, AND/OR HEAVY GAUGE METAL FRAMING 1. INSTALL FRAMING, CONNECTION PLATES, SCREWS, BOLTS, ETC. AS SHOWN IN PLANS	5. FINISH TO MATCH ADJACENT SURFACES. 6. PROVIDE KEYED LOCK AT ALL PANELS IN COMMON AREAS.
ANY WORK LL BE INCLUDED IN	AND DETAILS.	
CONSTRUCTION	D. REVEALS 1. INSTALL METAL REVEALS: SIZE AND LENGTH AS INDICATED ON PLANS. PROVIDE	C. STOREFRONT: 1 FURNISH ALL NECESSARY MATERIALS LABOR AND FOUR
EPHONE AND FAX	BLOCKING OR BACKING AS REQUIRED TO SECURE IN PLACE. 2. PAINT OR FINISH PER PLANS.	COMPLETE INSTALLATION OF FRAMING AS SHOWN ON THE DRAY
/ITH BUILDING	E. EXPANSION JOINTS	2. ALL GLASS FRAMING SHALL BE SET IN CORRECT LOCATIONS A
	1. INSTALL PER PLANS AND MANUFACTURER'S RECOMMENDATIONS. 2. USG 093 FOR CEILINGS AND WALLS, AS MAY BE INDICATED IN THE DRAWINGS.	IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION
ED TO, WATER, E COSTS	3. 100 OR 200 SERIES AS REQUIRED FOR APPLICATION (OPTIONAL 1" DEPTH) WITH ELASTOMERIC FILLER TO MATCH FINISH AS MANUFACTURED BY CONSPEC SYSTEMS INC	3. PROTECT STOREFRONT FROM DAMAGE BEFORE, DURING, AN
VITH ALL UTILITY (TENANT WILL	877-CONSPEC.	
	F. SUSPENSION SYSTEM 1. PROVIDE AND INSTALL UNISTRUT SPACE FRAME GRID SYSTEM PER MANUFACTURERS	DIVISION IX FINISHES
PLUS MATERIALS	SPECIFICATIONS AS REQUIRED FOR LIGHTING, CEILING ACCESSORIES OR MECHANICAL SYSTEMS SUSPENSION.	A. GYPSUM DRYWALL 1. INSTALL ALL GYPSUM DRYWALL SYSTEMS COMPLETE WITH P/
IG OF THE	2. SUPPORT FROM STRUCTURE WITH THREADED RODS AND NUTS AS REQUIRED OR DETAILED.	CEILING SUSPENSION SYSTEMS, AND RELATED ACCESSORIES, F AS SHOWN ON DRAWINGS AND AS SPECIFIED. INSTALL ALL MAT
	3. CONTACT UNISTRUT CORPORATION 800-468-9510.	MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. 2. GYPSUM DRYWALL: U.S. GYPSUM 5/8" THICK FIRE CODE SHEE
OF THE STORE AT OJECT OVER TO		OF STANDARD QUALITY OR EQUAL. 3. FASTENERS: DRYWALL SCREWS OF PROPER SIZE AND TYPE.
ING SURFACES, STORE IS TO BE		4. ACCESSORIES AND TRIM: U.S. GYPSUM BOARD OR GOLD BON COMPONENTS AND PERFORATED TAPE. ALL METAL TRIM SHALL
MISAPPLIED PAINT.		TYPE FOR COMPOUND FINISH. 5. PROVIDE A LEVEL 4 FINISH PRIOR TO THE APPLICATION OF TH
	DIVISION VI WOOD & PLASTICS	TO THE GYPSUM ASSOCIATION GUIDELINES FOR A DESCRIPTION
OF THE INSURANCE	A. CARPENTRY & BLOCKING: 1. BEFORE LISING WOOD FRAMING OR BLOCKING OF ANY TYPE, CONFIRM CODE	B. CEILING SYSTEMS 1. FURNISH AND INSTALL CEILING SYSTEMS COMPLETE WITH SU
QUIRED INSURANCE E BEEN	RESTRICTIONS. IF USE OF WOOD IS PERMITTED BY REQUIREMENTS, ADHERE TO THE	RELATED ACCESSORIES AS INDICATED ON DRAWINGS. 2. ALL LIGHT GAUGE METAL FRAMING AND CEILING SUSPENSION
". CERTIFICATE OF ACH	a. USE NEW LUMBER BEARING GRADE AND TRADEMARK OF ASSOCIATION UNDER WHICH IT	SOFFITS, GYPSUM BOARD AND LAY-IN CEILINGS SHALL BE ANCH STRUCTURAL JOISTS AND BEAMS ONLY. PROVIDE AND INSTALL
	b. LAYOUT, CUT, FIT AND ERECT FRAMING FOR ROUGH AND FINISHED WORK. INSTALL	REQUIRED.
OLD HARMLESS THE	REQUIRED. BRACE, PLUMB, AND LEVEL MEMBERS IN TRUE ALIGNMENT AND RIGIDLY	GRILLES, DIFFUSERS, AND OTHER TYPICAL CEILING ACCESSORI
LOYEES FROM AND IG BUT NOT	c. FURNISH AND INSTALL ALL DOUCH HADDWARE ANCHORS BOLTS AS RECESSART.	5. INSTALL CEILING AND SUSPENSION SYSTEMS IN STRICT ACCC MANUFACTURER'S RECOMMENDATIONS AND ALL APPLICABLE B
DM THE DAMAGE, LOSS OR	6. FORNISH AND INSTALL ALL ROUGH HARDWARE, ANCHORS, BOLTS, ETC. AS REQUIRED FOR CARPENTRY WORK.	REQUIREMENTS. FINISHED CEILING SHALL BE LEVEL, WITH JOIN
OR DEATH, OR TO N THE WORK	WITH A UL LABEL CERTIFYING THIS CLASSIFICATION.	6. MATERIALS AND FINISHES: a REFER TO REFLECTED CEILING PLAN FOR SPECIFIED MATERIA
		b. LEAVE ONE CASE OF CEILING TILES FOR LATER REPLACEMEN
TS: NTRACTORS	1. RECEIVE AND INSTALL ALL OWNER PROVIDED FINISHED MILLWORK, CABINETS, PANELING, DOORS AND FRAMES, ETC., AS SHOWN ON DRAWINGS OR AS DIRECTED.	C. PAINTING AND FINISHING
MAY BE PROVIDED	2. COT, FIT, AND INSTALL ALL MILLWORK AND SET PLOM AND TRUE IN ACCORDANCE WITH ASSEMBLY/INSTALLATION DRAWINGS PROVIDED.	OTHERWISE.
GIGN DOCUMENTS"	3. BACK CUT FLAT TRIM TO PREVENT WARPING. DRILL WHERE NECESSARY TO PREVENT SPLITTING.	3. COVER ALL SURFACES THOROUGHLY. IF THE NUMBER OF CO
	4. CONFIRM BLOCKING REQUIREMENTS WITH VENDORS PRIOR TO CLOSING UP ALL ASSEMBLIES.	GIVE SATISFACTORY COVERAGE. SEE FINISH SCHEDULE.
ENANT FOR THE		4. FREFARE BT CLEANING ALL SURFACES FREE OF LOOSE DIRT METAL SURFACES IN STRICT ACCORDANCE WITH MANUFACTUR
VY REIMBURSE		5. PAINTED DRYWALL TO RECEIVE ONE COAT LATEX PRIMER AND SPECIFIED DAINT. TINT DRIMED TO ADDROXIMATE SHADE OF TH
	DIVISION VII THERMAL & MOISTURE PROTECTION	PRODUCE AN EVEN RESULT IN THE FINISH COAT. DRY ALL COAT
	A. VAPOR BARRIER: 1. PROVIDE AND INSTALL 6 MIL. POLYETHYLENE BELOW ALL REQUIRED PATCH AREAS AT	RE-COAT TIME.
ECIFICALLY THE	SLAB ON GRADE CONDITIONS AND 4 MIL. POLYETHYLENE AT WALLS THAT RECEIVE BATT INSULATION.	APPLYING FINISH.
RIER'S DRIVER ALSO	B. ELASTOMERIC CRACK BRIDGING:	8. BEFORE STARTING FINISH WORK, REMOVE HARDWARE, ACCE
	1. PROVIDE AND INSTALL ELASTOMERIC CRACK BRIDGING AS MANUFACTURED BY NATIONAL APPLIED CONSTRUCTION PRODUCTS, INC, 800-633-4622 OR APPROVED EQUAL.	ITEMS.
O BE NOTED WITH	C. BATT INSULATION:	LIGHTS, EXPOSED PIPING, ACCESS DOORS, VENTS, FIRE EXTING
TAKING RECEIPT	1. PROVIDE AND INSTALL A MINIMUM OF R-13 FRICTION FIT (OR AS DICTATED BY CODE), FULL BATT INSULATION AS MANUFACTURED BY OWENS-CORNING FIBERGLASS OR EQUAL	ADJACENT WORK UNLESS OTHERWISE NOTED OR DIRECTED.
TENANT'S	AT ALL EXTERIOR WALLS AND WHERE INDICATED IN THE DRAWINGS.	AND DEFECTIVE BRUSHING AND CLOGGING. MAKE EDGES OF P.
O THE FRIALS	D. WATERPROOF MEMBRANE: 1. PROVIDE AND INSTALL A (M) 30 MIL. (MIN.) WATERPROOF MEMBRANE.	D CARDET:
	2. EXTEND A MINIMUM OF 6" UP VERTICAL SURFACES IN TOILET ROOMS OR AS REQUIRED.	1. REFER TO RESPONSIBILITY SCHEDULE AND FINISH SCHEDULE
	E. FIRESTOPPING: 1. PROVIDE AND INSTALL UL TESTED FIRESTOPPING ASSEMBLIES AS ARE APPLICABLE FOR	LESS THAN 60 DEGREES. ALL SUBFLOORS MUST BE SMOOTH AN
	EACH CONDITION ENCOUNTERED. IN THE ABSENCE OF TESTED ASSEMBLIES, PROVIDE FIRESTOPPING ASSEMBLIES AS RECOMMENDED BY THE FIRESTOPPING SYSTEM	3. PROVIDE PREMIUM MULTI PURPOSE 1000 ADHESIVE TO ASSU
	MANUFACTURER'S STAFF ENGINEERS AND AS APPROVED BY AUTHORITIES HAVING JURISDICTION.	NOTCHED TROWEL FOR APPLICATION. ONE GALLON WILL HAND
	2. PROVIDE FIRESTOPPING MATERIALS AND THICKNESS AS REQUIRED TO MAINTAIN THE FIRE RATINGS OF THE ASSEMBLIES INTO WHICH THE MATERIALS ARE INSTALLED.	INTO THE ADDESIVE.
OF DRAINS, HVAC	<ul> <li>3. STRICTLY MATCH UL TESTED ASSEMBLIES.</li> <li>4. INSTALL FIRESTOPPING WITHOUT GAPS AND VOIDS OF ANY KIND.</li> </ul>	MATERIALS AND MUST CONFORM TO ALL CODE REQUIREMENTS
	5. INSPECT FIRESTOPPING WORK AND REPAIR OR REPLACE WORK WHICH HAS BEEN DAMAGED, DISTURBED, OR REMOVED BEFORE FIRESTOPPING IS CONCEALED OR	5. COMPLETED INSTALLATION TO BE FREE OF STAINS OR SNAGS
ABOR, MATERIALS	ENCLOSED. 6. PROVIDE ANCHORAGE ACCESSORIES AND OTHER COMPONENTS AS NEEDED TO	
COMPLETE ALL	PROVIDE COMPLETE, EFFECTIVE FIRESTOPPPING SYSTEMS COMPLYING WITH UL TESTED ASSEMBLIES.	E. RESILIENT SHEET FLOORING:     1. REFER TO RESPONSIBILITY SCHEDULE AND FINISH SCHEDULE
PERFORMED EMOVAL OF ALL	F. FIRE CAULKING:	2. ALL EDGE CONDITIONS AT TRANSITIONS TO BE FLOATED UP F EVEN TRANSITION.
AMES, LIGHT ENCLOSURES, AND	1. ALL SLEEVES, OPENINGS, ETC. THROUGH FIRE RATED WALLS AND FLOORS SHALL BE FIRE SEALED WITH CALCIUM SILICATE, SILICONE "RTV" FOAM, "3M" FIRE RATED SEALANTS	3. ALL SUBFLUORS TO BE MUISTURE TESTED AND RESULTS COM MANUFACTURERS RECOMMENDED INSTALLATION GUIDELINES.
	OR EQUAL.	ID MOISTURE TESTING TO BE REPORTED TO TENANT'S REPRES
N WORK SHALL BE ON SERVICE.	G. ACOUSTICAL INSULATION: 1. PROVIDE AND INSTALL ASTM C665. UNFACED. 0.32 K-VALUE. WIDTHS TO COORDINATE	4. RESILIENT SHEET FLOORING WITH INTEGRAL 6" HIGH, RADIUS SEE FINISH SCHEDULE.
N APPROVED	WITH FRAMING FOR FRICTION FIL, THICKNESS SHOWN OR IF NOT SHOWN, FILL CAVITY.	5. FILL ALL CRACKS, JOINTS, ETC., IN SUB-FLOOR WITH CRACK F APPROVED BY FLOORING MANUFACTURER,
DING PRIOR TO		6. INSTALL ALL MATERIALS WITH WEATHERPROOF TYPE ADHEST RECOMMENDED BY FLOORING MANUFACTURER FOR MATERIALS
SS OF THE		INVOLVED.
ED AND THE ENDS NTERFERING WITH		
EXTENT THAT THEY	DIVISION VIII DOORS & WINDOWS	
	A. DOORS AND HARDWARE:	
	1. FURNISH AND INSTALL ALL DOORS, FRAMES, HARDWARE AND RELATED PARTS AND MATERIALS AS INDICATED ON DRAWINGS AND RESPONSIBILITY SCHEDULE.	
ERE FXISTING SI AP	2. HOLLOW METAL FRAMES: K.D. MINIMUM 16 GA. SIZE, SHAPE AND PARTITION TYPE PER DOOR SCHEDULE.	
	3. LABELED DOORS: PROVIDE U.L. LABEL DOORS AND FRAMES PER APPLICABLE STATE AND LOCAL BUILDING CODES, WHERE REQUIRED.	
	4. FABRICATE AND ERECT TRUE, PLUMB, AND SQUARE AS SPECIFIED AND DETAILED AND AS PER MANUFACTURER'S RECOMMENDATIONS.	
ADHERE TO LOCAL	5. AUTOMATIC SLIDING DOORS, ALUMINUM DOORS AND FRAMES WITH SIDELIGHTS, TRANSOM AND ACTIVE DOOR LEAVES, OVERHEAD OPERATOR AND EMERGENCY	
	BREAKOUT PER APPLICABLE BUILDING CODES. 6. SEE DOOR SCHEDULE FOR SPECIFIC INFORMATION AND HARDWARE.	
	_	
RECUTTING AND		
LBE		

		-PartyCity
ECIFIED ON THE WITH FLUSH FLANGE CHORS. CCESS TO	<ul> <li>F. VINYL COMPOSITION TILE:</li> <li>1. REFER TO RESPONSIBILITY SCHEDULE AND FINISH SCHEDULE</li> <li>2. ALL EDGE CONDITIONS AT TRANSITIONS TO BE FLOATED UP FOR SMOOTH EVEN TRANSITION.</li> <li>3. ALL SUBFLOORS TO BE MOISTURE TESTED AND RESULTS COMPARED TO</li> </ul>	25 Green Pond Road Rockaway, NJ 07866
HE SPECIFIED WALL AND EILING-FLOOR OR CEILING- LED.	MANUFACTURERS RECOMMENDED INSTALLATION GUIDELINES. ANY PROBLEMS DUE TO MOISTURE TESTING TO BE REPORTED TO TENANT'S REPRESENTATIVE IMMEDIATELY. 4. 1/8" X 12" X 12" VINYL RESILIENT TILES WITH 4" HIGH X 1/8" THICK, TOP-SET, STRAIGHT VINYL BASE (PRE FORMED CORNERS ARE REQUIRED). SEE FINISH SCHEDULE. 5. FILL ALL CRACKS, JOINTS, ETC., IN SUB-FLOOR WITH CRACK FILLER APPROVED BY FLOORING MANUFACTURER	
	6. SUB-FLOOR TO BE PROPERLY PREPPED, SMOOTH, & LEVEL TO WITHIN ±1/8" OVER 10'- 0". NO RIDGES OR DEPRESSIONS. 7. INSTALL ALL MATERIALS WITH WEATHERPROOF TYPE ADHESIVES AS RECOMMENDED BY FLOORING MANUFACTURER FOR MATERIALS AND SURFACE INVOLVED.	
NT FOR THE WINGS AND AS SHOWN IN	G. FIBERGLASS REINFORCED PANELS 1/8": 1. REFER TO RESPONSIBILITY SCHEDULE AND FINISH SCHEDULE. 2. PROVIDE AND INSTALL FIBERGLASS REINFORCED PANELS ON SURFACES AS SHOWN ON PLANS	$\mathbf{\nabla}$
IGNMENT WITH OTHER WORK	3. INSTALL PER MANUFACTURER'S INSTRUCTIONS.	
ID AFTER INSTALLATION.	H. WALK-OFF MAT 1. REFER TO RESPONSIBILITY SCHEDULE 2. TENANT TO PROVIDE 3. (ROLL-UP TYPE)	BOSTOST 17       REVISIONS       #     DATE     DESCRIPTION     BY
	A. LAVATORY FIXTURES:	
ARTITION FRAMING, PARTS, MATERIALS, ETC. TERIALS PER	1. REFER TO MECHANICAL DRAWINGS.	
TROCK (TYPE "X") PANELS	<ol> <li>1. REFER TO ARCHITECTURAL DRAWINGS.</li> <li>2. INSTALL IN-WALL BLOCKING AS REQUIRED TO PROVIDE ADEQUATE SUPPORT.</li> <li>3. INSTALL ACCESSORIES OVER FINISHED WALL SURFACE.</li> </ol>	
L BE PERFORATED FLANGE	C. SIGNS/SIGNAGE: 1. REFER TO ELECTRICAL PLANS. 2. ALL TEMPORARY SIGNS AND BANNERS ARE PROVIDED BY OTHERS. INSTALL ALL	
HE FINAL FINISHES. REFER	TEMPORARY SIGNS AND BANNERS PER OWNER'S DIRECTION. 3. STOREFRONT SIGN PROVIDED BY OTHERS. 4. COORDINATE INSTALLATION WITH TENANT'S VENDOR.	57
N COMPONENTS FOR	DIVISION XI EQUIPMENT	0 # 0
HORED TO THE ANY ADDITIONAL FRAMING	A. RECEIVE AND INSTALL PER MANUFACTURER'S INSTRUCTION ALL EQUIPMENT AND FIXTURES.	1 1 1
GHTING FIXTURES, CEILING IES.	B. AUDIO SYSTEM 1. REFER TO ELECTRICAL PLANS	- R 三 5
RER. ORDANCE WITH BUILDING CODE NTS SNUG AND SQUARE,	2 PROVIDED BY OTHERS. COORDINATE INSTALLATION WITH TENANT'S VENDOR. DIVISION XII FURNISHINGS	CA CA CA
ALS AND FINISHES. IT.	A. REFER TO THE RESPONSIBILITY SCHEDULE. B. RECEIVE, ASSEMBLE AND PLACE OFFICE AND NON-SALES EQUIPMENT AND	Ϋ́ Ξ Ϋ́
PECIFICALLY STATED	C. RECEIVE, ASSEMBLE AND PLACE/INSTALL ALL SALES AREA FIXTURES.	
DATS SPECIFIED DOES NOT	DIVISION XIII SPECIAL CONSTRUCTION	
SPECIFIED MATERIAL TO AND DUST. PREPARE ALL RERS WRITTEN	A. NO ANTICIPATED WORK UNDER THIS SECTION. CONFIRM WITH TENANT'S REPRESENTATIVE.	
ID TWO COATS OF IE FINAL COAT TO	DIVISION XIV CONVEYING SYSTEMS	l ( S W
TS THOROUGHLY BEFORE ECOMMENDATIONS FOR RACKS, ETC. BEFORE	A. NO ANTICIPATED WORK UNDER THIS SECTION. CONFIRM WITH TENANT'S REPRESENTATIVE.	
PLYING FINISH. ESSORIES, PLATES, ROTECTION FOR SUCH	DIVISION XV MECHANICAL A. REFER TO MECHANICAL DRAWINGS FOR SPECIFICATIONS.	ND
HTS, SPEAKERS, TRIM GUISHER CABINETS,	DIVISION XVI ELECTRICAL	( <b>is \$</b>
TH, FREE OF RUNS, SAGS,	A. REFER TO ELECTRICAL DRAWINGS FOR SPECIFICATIONS.	
PAINT ADJOINING OTHER PPING. E.		CHIN 3850
T A TEMPERATURE OF NO ND LEVEL, FREE OF DIRT, RE FULL WARRANTY		
UM OF 1/8 X 1/8 X 1/8 INCH V DLE 10-15 YARDS OF E PLACING THE CARPET		
S AND INDUSTRY QUALITY		
E		Larson Design Group <sub>®</sub> 1000 Commerce Park Dr Suite 201
-OR SMOOTH MPARED TO		vviiliamsport, PA 17701 PHONE 570.323.6603
ANY PROBLEMS DUE SENTATIVE		FAX 570.323.9902 www.larsondesigngroup.com
SED COVE BASE.		It is in violation of the law for any person, unless acting
		under the direction of a licensed Architect, Engineer or Land Surveyor, to alter an item
S AND SURFACE		in any way. Plans, maps, specifications, studies, and reports not containing a red ink
		seal imprint on the cover sheet accompanied by and original signature by the licensed
		professional may have been fraudulently altered and shall not be considered an orginal copy. Copyright Protected 2016, Larson Design Group
		<sup>ркото но.</sup> 1703
		PROJECT NO. 8099-196
		DRAWN BY BCW
		APPV'D BY GWB
		SHEET TITLE SPECIFICATION /
		SHEET NO.
	NOTE: NOT ALL SPECIFICATIONS ARE USED. REFER TO PROJECT SPECIFIC DRAWINGS FOR APPLICABILITY.	G4.0

# KEYED NOTES

- 1 EXISTING SIDEWALK TO REMAIN. FULLY COMPLIES WITH ACCESSIBILITY REQUIREMENTS PER 2016 CBC 11B.202.
- 2 EXISTING COMPLIANT PARKING STALL, SIGNAGE, AND SYMBOL TO REMAIN. FULLY COMPLIES WITH ACCESSIBILITY REQUIREMENTS PER 2016 CBC 11B.202 AND 11B.502. 3 EXISTING PLANTER TO REMAIN.
- 4 EXISTING CONCRETE CURB RAMP WITH DETECTABLE WARNING TO REMAIN. FULLY COMPLIES WITH ACCESSIBILITY REQUIREMENTS PER 2016 CBC 11B.406. REF: DETAIL 2/G5.0 FOR EXISTING DETECTABLE WARNING SURFACE. 5 EXISTING / PROPOSED SLOPES AND TRANSITION/THRESHOLD AT FRONT ENTRY COMPLIES WITH ACCESSIBILITY REQUIREMENTS PER 2016 CBC 11B.202.
- 6 EXISTING PUBLIC TRANSIT BUS STOP.







Project Name: Party City Store #427				NRCC-PRF-01	1-E	Page 1 of 21					
Proje	Project Address: 3850 Grand Ave. Chino 91710				Calculation D	Date/Time:	15:33, Mon,	Aug 28, 2017			
Com	pliance Scope:	ExistingAlteration				Input File Na	me:	207764.cibd	16x		
A. P	ROJECT GENERAL										
1.	Project Location (	city)	Chino		8.	Standards Ve	ersion		Compliance2	2016	
2.	CA Zip Code		91710		9.	Compliance S	Software (ve	rsion)	EnergyPro 7.	1	
3.	Climate Zone		10		10.	Weather File	0		CHINO_7228	899_CZ2010.epw	
4.	Total Conditioned	Floor Area in Scope	20,091 ft <sup>2</sup>		11.	Building Orie	ntation (deg	)	(S) 180 deg		
5.	Total Uncondition	ed Floor Area	0 ft <sup>2</sup>		12.	Permitted So	ope of Work		ExistingAlter	ation	
6.	Total # of Stories	(Habitable Above Grade)	1		13	Building Type	uilding Type(s)		Nonresident	ial	
7.	Total # of dwelling	g units	0		14	Gas Type	аѕ Туре		NaturalGas		
											3 140.1
				BUILDING	CON	VIPLIES	2000 2004				3 140.1
<b>S m n n</b>	1. Energy Comp	onent 2. Sta	andard Design (TDV)	BUILDING 3. Proposed	CON Design		4. Com	pliance Marg	in (TDV)	5. Percent Bett	er than Standard
Spac	1. Energy Comp e Heating	onent 2. Sta	andard Design (TDV) 5.66	BUILDING 3. Proposed	CON Design	<b>VIPLIES</b> (TDV) 4.44	4. Com	pliance Marg	in (TDV) 1.22	5. Percent Bett	er than Standard 21.69 7.28
Spac Spac	1. Energy Comp e Heating e Cooling	onent 2. Sta	andard Design (TDV) 5.66 97.45 63.02	BUILDING 3. Proposed	CON Design	<b>MPLIES</b> (TDV) 4.44 104.44 63.02	4. Com	pliance Marg	in (TDV) 1.22 -6.99	5. Percent Bett	er than Standard 21.69 -7.29
Spac Spac Indo	1. Energy Comp e Heating e Cooling or Fans Rejection	onent 2. Sta	andard Design (TDV) 5.66 97.45 63.02 	BUILDING 3. Proposed	CON Design	MPLIES (TDV) 4.44 104.44 63.02	4. Com	pliance Marg	in (TDV) 1.22 -6.99 	5. Percent Bett	er than Standard 21.69 -7.29 0.09
Spac Spac Indo Heat Pum	1. Energy Comp e Heating e Cooling or Fans Rejection os & Misc.	onent 2. Sta	andard Design (TDV) 5.66 97.45 63.02 	BUILDING 3. Proposed	COI Design	MPLIES (TDV) 4.44 104.44 63.02 	4. Com	pliance Marg	in (TDV) 1.22 -6.99  	5. Percent Bett	er than Standard 21.69 -7.29 0.09
Spac Spac Indo Heat Pum Dom	1. Energy Comp e Heating e Cooling or Fans Rejection os & Misc. estic Hot Water	ionent 2. Sta	andard Design (TDV) 5.66 97.45 63.02   20.16	BUILDING 3. Proposed	CON Design	MPLIES (TDV) 4.44 104.44 63.02   20.16	4. Com	pliance Marg	in (TDV) 1.22 -6.99   	5. Percent Bett	er than Standard 21.69 -7.29 0.09 - -
Spac Spac Indo Heat Pum Dom	1. Energy Comp e Heating e Cooling or Fans Rejection os & Misc. estic Hot Water or Lighting	onent 2. Sta	andard Design (TDV) 5.66 97.45 63.02  20.16 80.43	BUILDING 3. Proposed	CON Design	MPLIES (TDV) 4.44 104.44 63.02  20.16 54.44	4. Com	pliance Marg	in (TDV) 1.22 -6.99    25.99	5. Percent Bett	er than Standard 21.69 -7.29 0.09 - 0.09 32.39
Spac Spac Indo Heat Pum Dom Indo	1. Energy Comp e Heating e Cooling or Fans Rejection os & Misc. estic Hot Water or Lighting PLIANCE TOTAL	oonent 2. Sta	andard Design (TDV) 5.66 97.45 63.02  20.16 80.43 266.72	BUILDING 3. Proposed	COP Design	MPLIES (TDV) 4.44 104.44 63.02   20.16 54.44 246.50	4. Com	pliance Marg	in (TDV) 1.22 -6.99    25.99 20.22	5. Percent Bett	er than Standard 21.69 -7.29 0.09 - - - - - - - - - - - - - - - - - - -
Spac Spac Indo Heat Dom Indo COM Rece	1. Energy Comp e Heating e Cooling or Fans Rejection os & Misc. estic Hot Water or Lighting PLIANCE TOTAL ptacle	onent 2. Sta	andard Design (TDV) 5.66 97.45 63.02  20.16 80.43 266.72 61.52	BUILDING 3. Proposed	COP Design	MPLIES (TDV) 4.44 104.44 63.02  20.16 54.44 246.50 61.52	4. Com	pliance Marg	in (TDV) 1.22 -6.99     25.99 20.22 0.0	5. Percent Bett	er than Standard 21.69 -7.29 0.09 - - - 0.09 32.39 7.69 0.09
Spac Spac Indoo Heat Dom Indoo COM Rece Proce	1. Energy Comp e Heating e Cooling or Fans Rejection os & Misc. estic Hot Water or Lighting PLIANCE TOTAL ptacle ess	onent 2. Sta	andard Design (TDV) 5.66 97.45 63.02 20.16 20.16 80.43 266.72 61.52 0.67	BUILDING 3. Proposed		MPLIES (TDV) 4.44 104.44 63.02  20.16 54.44 246.50 61.52 0.67	4. Com	pliance Marg	in (TDV) 1.22 -6.99    25.99 20.22 0.0 0.0	5. Percent Bett	er than Standard 21.69 -7.29 0.09 -7.29 0.09 -7.29 0.09 -7.29 0.09 0.09 0.09 0.09 0.09
Space Space Indoo Heat Pum Indoo COM Rece Proce Othe	1. Energy Comp e Heating e Cooling or Fans Rejection os & Misc. estic Hot Water or Lighting PLIANCE TOTAL ptacle ess r Ltg	onent 2. Sta	andard Design (TDV) 5.66 97.45 63.02  20.16 80.43 266.72 61.52 0.67	BUILDING 3. Proposed		MPLIES (TDV) 4.44 104.44 63.02  20.16 54.44 246.50 61.52 0.67 	4. Com	pliance Marg	in (TDV) 1.22 -6.99    25.99 20.22 0.0 0.0 0.0	5. Percent Bett	er than Standard 21.69 -7.29 0.09 - - 0.09 32.39 7.69 0.09 0.09

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance

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Project Nan	me:	Party City Store #427	Party City Store #427			Page 4 of 21	
Project Add	dress:	3850 Grand Ave. Chino 91	710	Calcula	tion Date/Tir	ne: 15:33, Mon, Aug 28, 2017	
Compliance	e Scope:	ExistingAlteration		Input Fi	ile Name:	207764.cibd16x	
G. COMPLIANCE PATH & CERTIFICATE OF COMPLIANCE SUMMARY							
The Johow	nng bullatng	relevant to the	project.	The Jollo	wing bunaing	which are relevant to the p	roject.
Yes	NA	Prescriptive Requirement	Compliance Forms	Yes	NA	Mandatory Requirement	Compliance Forms
	×	Lighting (Indoor Unconditioned) §140.6	NRCC-LTI-01 / 02 / 03 / 04 / 05-E		XX	Commissioning: §120.8 Simple Systems Complex Systems	NRCC-CXR-01 / 02 / 03 / 05-E NRCC-CXR-01 / 02 / 04 / 05-E
	$\boxtimes$	Lighting (Outdoor) §140.7	NRCC-LTO-01 / 02 / 03-E			Electrical: §130.5	NRCC-ELC-01-E
	$\boxtimes$	Lighting (Sign) §140.8	NRCC-LTS-01-E		×	Solar Ready: §110.10	NRCC-SRA-01 / 02-E
	⊠	Solar Thermal Water Heating: §140.5	NRCC-STH-01-E		XXXXX	Covered Process: §120.6 Parking Garage Commercial Refrigeration Warehouse Refrigeration Compressed Air Process Boilers	NRCC-PRC-01-E NRCC-PRC-02-E NRCC-PRC-05-E NRCC-PRC-06/07/08-E NRCC-PRC-10-E NRCC-PRC-11-E

	ect Name: Party City Store #427			NRCC-PRF-01-E	Page 2 of 21
Project Ac	ldress: 3	3850 Grand Ave. Chino 91710		Calculation Date/Time:	15:33, Mon, Aug 28, 2017
Complian	ce Scope: E	ExistingAlteration		Input File Name:	207764.cibd16x
			3 94 2 Bit 2757050000 52	-	
C. PRIOR	ITY PLAN CHEC	K/ INSPECTION ITEMS (in order of highes	t to lowest TDV energy savin	ngs)	
1st	Indoor Lighting	: Check lighting	Com	pliance Margin By Energy	Component (from Table B column 4)
2nd	Space Heating:	Check envelope and mechanical	Indoor	Lighting	
3rd	Indoor Fans: Ch	eck envelope and mechanical	Space	Heating	-
4th	Heat Rejection:	Check envelope and mechanical	Inde Host F	oor Fans	
5th	Pumps & Misc.:	: Check mechanical	Pump	s & Misc.	
6th	Domestic Hot V	Vater: Check mechanical	Domestic H	lot Water	
			Space	e Cooling	
7th	Space Cooling:	Check envelope and mechanical			Popular Energy Credit
his Section	on Does Not Appl	ly			
F. ADDIT	IONAL REMARK	(5			
None Prov	/ided				

Project Name:	Party City Store #427	ty City Store #427 NRCC-PRF-01-E Page 5 of 21					
Project Address:	3850 Grand Ave. Chino 91710	Calculation Date/Time:	15:33, Mon, Aug 28, 2017				
Compliance Scope:	ExistingAlteration	tingAlteration Input File Name: 207764.cibd16x					
H. CERTIFICATE OF II Documentation Auth (Retain copies and vo See Tables G. and H.	NSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VER nor to indicate which Certificates must be submitted for the features perify forms are completed and signed to post in field for Field Inspect in MCH and LTI Details Sections for Acceptance Tests and forms by e	IFICATION SUMMARY (NRCI to be recognized for complia tor to verify). equipment.	<b>/NRCA/NRCV)</b> – ance	Confi	rmed		
Building Component Compliance Forms (required for submittal)					Fail		
Envelope	🛛 NRCI-ENV-01-E - For all buildings						
Envelope	NRCA-ENV-02-F- NFRC label verification for fenestration						
	NRCI-MCH-01-E - For all buildings with Mechanical Systems						
	NRCA-MCH-02-A- Outdoor Air	NRCA-MCH-02-A- Outdoor Air					
	NRCA-MCH-03-A – Constant Volume Single Zone HVAC	NRCA-MCH-03-A – Constant Volume Single Zone HVAC					
	NRCA-MCH-04-H- Air Distribution Duct Leakage	NRCA-MCH-04-H- Air Distribution Duct Leakage					
	NRCA-MCH-05-A- Air Economizer Controls	NRCA-MCH-05-A- Air Economizer Controls					
	NRCA-MCH-06-A- Demand Control Ventilation	NRCA-MCH-06-A- Demand Control Ventilation					
	NRCA-MCH-07-A – Supply Fan Variable Flow Controls	NRCA-MCH-07-A – Supply Fan Variable Flow Controls					
	NRCA-MCH-08-A- Valve Leakage Test	NRCA-MCH-08-A- Valve Leakage Test					
	NRCA-MCH-09-A – Supply Water Temp Reset Controls	NRCA-MCH-09-A – Supply Water Temp Reset Controls					
Mechanical	NRCA-MCH-10-A- Hydronic System Variable Flow Controls	NRCA-MCH-10-A- Hydronic System Variable Flow Controls					
	NRCA-MCH-11-A – Auto Demand Shed Controls	NRCA-MCH-11-A – Auto Demand Shed Controls					
	NRCA-MCH-12-A- Packaged Direct Expansion Units						
	NRCA-MCH-13-A- Air Handling Units and Zone Terminal Units						
	NRCA-MCH-14-A- Distributed Energy Storage						
	NRCA-MCH-15-A – Thermal Energy Storage						
	NRCA-MCH-16-A- Supply Air Temp Reset Controls						
	NRCA-MCH-17-A – Condensate Water Temp Reset Controls						
	NRCA-MCH-18-A- Energy Management Controls Systems						
	NBCV-MCH-04-H- Duct Leakage Test	□ NRCV-MCH-04-H- Duct Leakage Test					

Project Name:	Party
Project Address:	3850
Compliance Scope:	Existir
H. CERTIFICATE OF II Documentation Auth (Retain copies and vo See Tables G. and H.	NSTALLA nor to inc erify forr in MCH
Building Component	
Plumbing	
Indoor Lighting	
Outdoor Lighting	
Sign Lighting	
Electrical	

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance

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Project Name:	Party City Store #427				NRCC-PRF-01-E	Page 3 of 21		
Project Address:	3850 Grand Ave. Chi	3850 Grand Ave. Chino 91710			Calculation Date/Time:	15:33, Mon, Aug 28, 2017		
Compliance Scope:	ExistingAlteration				Input File Name:	207764.cibd16x		
G. COMPLIANCE PAT	H & CERTIFICATE OF	сом	PLIANCE SUMM	ARY				
	Ident	ifv wh	ich building comp	onents use the performance or pre	escriptive path for complia	nce. "NA"= not in proiect		
	For con	ponei	nts that utilize the	performance path, indicate the sh	neet number that includes	mandatory notes on plans.		
Building Component		Com	pliance Path	Compliance Forms (required for	submittal)		Location of Mandatory Notes on Plans	
			Performance	NRCC-PRF-ENV-DETAILS (section	of the NRCC-PRF-01-E)			
Envelope			Prescriptive	NRCC-ENV-01 / 02 / 03 / 04 / 05	/ 06-E			
			NA					
			Performance	NRCC-PRF-MCH-DETAILS (section	NRCC-PRF-MCH-DETAILS (section of the NRCC-PRF-01-E)			
Mechanical			Prescriptive	NRCC-MCH-01 / 02 / 03 / 04 / 05				
			NA					
		X	Performance	NRCC-PRF-PLB-DETAILS (section of the NRCC-PRF-01-E)				
Domestic Hot Water			Prescriptive	NRCC-PLB-01-E				
			NA					
		X	Performance	NRCC-PRF-LTI-DETAILS (section of	NRCC-PRF-LTI-DETAILS (section of the NRCC-PRF-01-E)			
Lighting (Indoor Condit	ioned)		Prescriptive	NRCC-LTI-01 / 02 / 03 / 04 / 05-E				
			NA					
C			Performance	S2 (section of the NRCC-PRF-01-	E)			
Covered Process: Commercial Kitchens			Prescriptive	NRCC-PRC-01/03-E				
		$\boxtimes$	NA					
Coursed Deserves			Performance	S3 (section of the NRCC-PRF-01-	E)			
Covered Process: Computer Rooms			Prescriptive	NRCC-PRC-01/04-E				
83)		$\boxtimes$	NA					
Covered Drosses			Performance	S4 (section of the NRCC-PRF-01-	E)			
Laboratory Exhaust			Prescriptive	NRCC-PRC-01/09-E				
		$\boxtimes$	NA					

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance

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Store #427	NRCC-PRF-01-E	Page 6 of 21		
d Ave. Chino 91710				
eration				
N, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFI e which Certificates must be submitted for the features to re completed and signed to post in field for Field Inspecto LTI Details Sections for Acceptance Tests and forms by equ	Confirmed			
npliance Forms (required for submittal)			Pass	Fail
NRCI-PLB-01-E - For all buildings with Plumbing Systems				
NRCI-PLB-02-E - required on central systems in high-rise resident	tial, hotel/motel application.			
NRCI-PLB-03-E - Single dwelling unit systems in high-rise residen	tial, hotel/motel application.			
NRCI-PLB-21-E - HERS verified central systems in high-rise reside	ntial, hotel/motel application	,		
NRCI-PLB-22-E - HERS verified single dwelling unit systems in hig	h-rise residential, hotel/mote	l application.		
NRCV-PLB-21-H- HERS verified central systems in high-rise reside	ential, hotel/motel applicatior	ì.		
NRCV-PLB-22-H - HERS verified single dwelling unit systems in hi	gh-rise residential, hotel/mot	el application.		
NRCI-STH-01-E - Any solar water heating				
NRCI-LTI-01-E - For all buildings				
NRCI-LTI-02-E - Lighting control system, or for an Energy Manage	ement Control System (EMCS)			
NRCI-LTI-03-E - Line-voltage track lighting integral current limiter rgize only line-voltage track lighting	, or for a supplementary over	current protection panel used to		
NRCI-LTI-04-E - Two interlocked systems serving an auditorium, a	a convention center, a confere	ence room, or a theater		
NRCI-LTI-05-E - Lighting Control Credit Power Adjustment Factor	(PAF)			
NRCI-LTI-06-E - Additional wattage installed in a video conferenc	ing studio			
NRCA-LTI-02-A - Occupancy sensors and automatic time switch c	controls.			
NRCA-LTI-03-A - Automatic daylighting controls				
NRCA-LTI-04-A - Demand responsive lighting controls				
NRCI-LTO-01-E – Outdoor Lighting				
NRCI-LTO-02-E- EMCS Lighting Control System				
NRCA-LTO-02-A - Outdoor Lighting Control				
NRCI-LTS-01-E – Sign Lighting				
IRCI-ELC-01-E - Electrical Power Distribution				
VRCI-SPV-01-E Photovoltaic Systems				

lards- 2016 Nonresidential Compliance

Report Version: NRCC-PRF-01-E-08082017-4377 Report Generated at: 2017-08-28 15:34:23



#	DATE	DESCRIPTION	BY					



Project Na	ame:	Party City Store	#427			NRCC-PRF-01-E	Page 7	' of 21			
Project A	ddress:	3850 Grand Ave	. Chino 91710			Calculation Date/Time:	15:33,	Mon, Aug 28, 2017			
Complian	ce Scope:	ExistingAlteration	n			Input File Name:	20776	4.cibd16x			
<b>H. CERTI</b> Docume (Retain c See Table	FICATE OF IN ntation Author copies and ver es G. and H. i	<b>STALLATION, CE</b> or to indicate wh rify forms are co n MCH and LTI D	RTIFICATE OF ACCEPTA ich Certificates must b mpleted and signed to etails Sections for Acce	NCE & CERTIFICAT e submitted for the post in field for Fie ptance Tests and fo	e <b>OF VER</b> e features eld Inspec orms by e	<b>IFICATION SUMMARY (NRCI/</b> to be recognized for complia tor to verify). equipment.	<b>NRCA/</b> nce	/NRCV) –	Co	nfirmed	
Building (	Component	Complia	ce Forms (required for s	ubmittal)					Pass		Fail
		🗆 NRCI-	PRC-01-E Refrigerated Wa	irehouse							
			-PRC-01-F- Compressed A	Air Systems							
			-PRC-02-F- Kitchen Exhau	ist							
			-PRC-03-F- Garage Exhau	st							
Covered F	Process	🗖 NRCA	-PRC-04-F- Refrigerated \	Varehouse- Evaporat	or Fan Mo	tor Controls					
		🗆 NRCA	-PRC-05-F- Refrigerated \	Varehouse- Evaporat	ive Conde	nser Controls					
		🗆 NRCA	RC-06-F- Refrigerated Warehouse- Air Cooled Condenser Controls								
			-PRC-07F- Refrigerated W	RC-07F- Refrigerated Warehouse- Variable Speed Compressor							
			-PRC-08-F- Electrical Resi	stance Underslab Hea	ating Syste	m					
I. ENVEL	OPE GENERA		l (See NRCC-PRF-ENV-I	DETAILS for more in	nformatio	on)					
1.	Total Conditio	ned Floor Area	20,091 ft <sup>2</sup>		5.	Number of Floors Above Grade		1		Conf	irmed
2.	Total Uncondit	ioned Floor Area	0 ft <sup>2</sup>		6.	Number of Floors Below Grade		0			
3.	Addition Cond	itioned Floor Area	0 ft <sup>2</sup>							Q	
4.	Addition Unco	nditioned Floor A	ea 0 ft²							ass	ai.
7. Opaqu	e Surfaces & O	rientation		8. Total Gross Surf	face Area	9. Total Fenestration	n Area	10. Window t	to Wall Ratio		
North Wa	ill				1,950 ft <sup>2</sup>		0 ft <sup>2</sup>		00.0%		
East Wall					1,970 ft <sup>2</sup>		0 ft <sup>2</sup>		00.0%		
South Wa	all				2,200 ft <sup>2</sup>	1,:	300 ft <sup>2</sup>		59.1%		
West Wal					1,900 ft <sup>2</sup>		0 ft <sup>2</sup>		00.0%		
			Total		8,020 ft <sup>2</sup>	1,3	300 ft²		16.2%		
Poof					19.926 ft <sup>2</sup>		0 ft <sup>2</sup>		00.0%		

	Р	Party City Sto	ore #427					NRCC-PRF	-01-E	Page	e 10 of 21				
Project Address:	3	3850 Grand A	Ave. Chino	91710				Calculatio	n Date/Tim	e: 15:3	3, Mon, Aug 28, 2017				
Compliance Scop	e: E	ExistingAltera	ation					Input File	Name:	207	764.cibd16x				
N. ECONOMIZE	R & FAN	SYSTEMS S	UMMAR	<b>/</b> <sup>1</sup>								§ 14	10.4	Conf	irmed
1.	2.				3.					4.		5	•		
	Outside Air			Supp	oly Fan				Retu	ırn Fan		Feenemi	Jor Tyrno	Pa	Fa
Equip Name	CFM	CFM	HP	внр	TSP (inch WC)	Control	CFM	HP	внр	TSP (inch WC)	Control	(if pre	er Type esent)	SS	=
Existing RTU Units x 6	713	5000	2.000	2.000	1.52	ConstantVolume	NA	NA	NA	NA	NA	Differenti	alEnthalp /		
	1.														
	1.				2. 3.										
	Fauin I	Name				2. Fauin Type					3. Controls		Pass		Fail
	Equip I	Name				2. Equip Type			1 7/	nes With	3. Controls	<b>I</b>	Pass		Fail
E	Equip I	Name U Units x 6				2. Equip Type SZAC			1 Zc [	ones With Differentia No Supp No No Ev	3. Controls CO2Sensor Vent. Contro al Enthalpy Economizer bly Air Temp. Control Optimum Start vaporative Cooler	1			Fail
E	Equip I	Name U Units x 6 ts29				2. Equip Type SZAC Exhaust			1 Ze Ecol	ones With Differentia No Supp No No Ev No Ev No Supp No Supp No Ev	3. Controls CO2Sensor Vent. Control al Enthalpy Economizer bly Air Temp. Control Optimum Start vaporative Cooler DCV Controls ype not properly specifie bly Air Temp. Control Optimum Start vaporative Cooler	d	Pass		Fail
E	Equip I	Name U Units x 6 ts29 ooms35				2. Equip Type SZAC Exhaust Exhaust			1 Ze Ecol	ones With Differentia No Supp No No Ev No Supp No Supp No Supp No Supp No Supp No Supp	3. Controls CO2Sensor Vent. Control al Enthalpy Economizer bly Air Temp. Control Optimum Start vaporative Cooler o DCV Controls ype not properly specifie bly Air Temp. Control Optimum Start vaporative Cooler o DCV Controls ype not properly specifie bly Air Temp. Control Optimum Start vaporative Cooler	d d	Pass		

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance

Report Version: NRCC-PRF-01-E-08082017-4377 Report Generated at: 2017-08-28 15:34:23

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roject Name:	Party City	/ Store #427				NRCC-PRF	F-01-E	Page 8 c	of 21					
roject Address:	3850 Gra	nd Ave. Chino 9	1710			Calculatio	on Date/Time:	15:33 <i>,</i> N	1on, Aug 28, 2	017				
Compliance Scope:	ExistingA	Iteration				Input File	e Name:	207764.	cibd16x					
. FENESTRATION AS	EMBLY SU	MMARY									§ 110.6		Confi	rmed
1.			2.	3.		4.	l.	5.	6.	7.	8.	9.		
Fenestration Assemb Tag or I.D.	y Name /	Fenestration 7 / Fr	Type / Product Type ame Type	Certification M	ethod <sup>1</sup>	Assembly	y Method	Area ft	2 Overall U-factor	Overall SHGC	Overall VT	Status	Pass	Fail
New Storefront W	indow	Vertica Fixe Met	lFenestration dWindow alFraming	Default Perforr	mance	SiteB	Built	1216	0.71	0.73	0.77	A		
New Storefront [	oors	Vertica Gla Met	IFenestration azedDoor aIFraming	Default Perforr	mance	SiteB	Built	84	0.77	0.70	0.53	А		
verification. Site-built fenestr tatus: N - New, A – Altered, E aking compliance crec	- Existing	ration shading	devices? (if "Yes", sea	e NRCC-PRF-ENV-D	DETAILS for m	ore informat	ation)					<del></del>	No	
verification. Site-built fenestr itatus: N - New, A – Altered, t aking compliance crec	ation values are – Existing it for fenest	ration shading	residential Appendix NA6 a devices? (if "Yes", sea	e NRCC-PRF-ENV-D	DETAILS for m	ore informat	ation)					<u> </u>	No	
verification. Site-built fenestr itatus: N - New, A – Altered, f aking compliance crec X. OPAQUE SURFACE	- Existing it for fenest ASSEMBLY	ration shading	residential Appendix IVA6 a devices? (if "Yes", sea	≥ NRCC-PRF-ENV-D	DETAILS for m	ore informat	ation)			§ 120.7/ §	140.3		No Confi	rmed
verification. Site-built fenesti tatus: N - New, A – Altered, t aking compliance crec . OPAQUE SURFACE	- Existing it for fenest ASSEMBLY 1.	ration shading	residential Appendix NA6 a devices? (if "Yes", sea	e NRCC-PRF-ENV-D	DETAILS for m	ore informat	ation) 4.	5.	6.	§ 120.7/ §	140.3	8.	No Confi	rmed
verification. Site-built fenesti tatus: N - New, A – Altered, t aking compliance crec C. OPAQUE SURFACE Surfa	- Existing it for fenest ASSEMBLY 1.	ration shading	residential Appendix NA6 a devices? (if "Yes", see 2 Surfac	e NRCC-PRF-ENV-D 2. ce Type	DETAILS for m	ore informat	4. aming Ca Type R-1	5. avity Value	6. Continuous R-Value	<b>§ 120.7/ §</b> 7 U-Factor / / C-Fa	<b>140.3</b> F-Factor		No Confi Pass	rmed Fail
verification. Site-built fenesti tatus: N - New, A – Altered, t aking compliance crec . OPAQUE SURFACE Surfa Slab O	ASSEMBLY ASSEMBLY 1. E Name n Grade7	ration shading	residential Appendix NA6 a devices? (if "Yes", sea : Surfac Undergro	e NRCC-PRF-ENV-D 2. ee <b>Type</b> pundFloor	DETAILS for m	ore informat	4. Faming C. Type R- NA	5. avity Value 0	6. Continuous R-Value NA	§ 120.7/ § 7 U-Factor / / C-Fa F-Factor	<b>140.3</b> F-Factor actor : 0.730	8. Status <sup>1</sup> E	No Confi Pass	rmed
verification. Site-built fenesti tatus: N - New, A – Altered, t aking compliance crec . OPAQUE SURFACE Surfa Slab O Existing R-19	ASSEMBLY 1. ASSEML	ration shading SUMMARY m9	residential Appendix NA6 a devices? (if "Yes", sec 2 Surfac Undergro	e NRCC-PRF-ENV-D 2. ce <b>Type</b> pundFloor	DETAILS for m 3. Area ( 1943) 1992	ore informat ft <sup>2</sup> ) Fra 78 N 26 W	4. Carrier Car	5. avity Value 0 22	6. Continuous R-Value NA NA	§ 120.7/ § 7 U-Factor / / C-Fa F-Factor U-Factor	<b>140.3</b> F-Factor ictor : 0.730 : 0.050	8. Status <sup>1</sup> E	No Confi Pass	rmed Fail
verification. Site-built fenesti itatus: N - New, A – Altered, E aking compliance crec C. OPAQUE SURFACE Surfa Slab O Existing R-19 Tiltup	it for fenest ASSEMBLY 1. ce Name n Grade7 Roof to Re Wall11	ration shading <b>SUMMARY</b> m9	residential Appendix NA6 a devices? (if "Yes", sec Surfac Undergro Ro Exteri	e NRCC-PRF-ENV-D 2. ce Type bundFloor pof orWall	DETAILS for m 3. Area ( 194) 1992 802	ore informat ft <sup>2</sup> ) Fra Ty 78 N 26 W 0 N	4. Caraming Caraming Caraming R- NA NA Nood NA	5. avity Value 0 22 0	6. Continuous R-Value NA NA NA	§ 120.7/ § 7 U-Factor / / C-Fa F-Factor U-Factor U-Factor	<b>140.3</b> <b>F-Factor</b> <b>ctor</b> : 0.730 : 0.050 : 0.775	8. Status <sup>1</sup> E E	No Confi Pass	rmed
verification. Site-built fenesti Status: N - New, A – Altered, t aking compliance crec C. OPAQUE SURFACE Surfa Slab O Existing R-19 Tiltus Metal Framed	ASSEMBLY ASSEMBLY 1. re Name n Grade7 9 Roof to Res Wall11 Demising W	ration shading SUMMARY m9 Val22	residential Appendix NA6 a devices? (if "Yes", sec Surfac Undergro Ro Exteri Interi	e NRCC-PRF-ENV-E 2. ee <b>Type</b> bundFloor bof orWall orWall	DETAILS for m 3. Area ( 1997) 802 50	ore informat           ft²)         Fra           78         M           26         W           0         M	4. aming Ca Type R- NA NA NA NA NA	5. avity Value 0 22 0 0	6. Continuous R-Value NA NA NA NA	§ 120.7/ § 7 U-Factor / / C-Fa F-Factor U-Factor U-Factor U-Factor	<b>140.3</b> <b>F-Factor</b> <b>ictor</b> : 0.730 : 0.050 : 0.775 : 0.345	8. Status <sup>1</sup> E E E	No Confi Pass	rmed
verification. Site-built fenesti itatus: N - New, A – Altered, t aking compliance crec . OPAQUE SURFACE Surfa Slab O Existing R-1 Tiltup Metal Framed R-13	ASSEMBLY ASSEMBLY 1. a Grade7 Roof to Re Wall11 Demising W Wall42	ration shading <b>SUMMARY</b> m9 /al22	residential Appendix NA6 a devices? (if "Yes", sea Surfac Undergro Ra Exteri Interi Interi	e NRCC-PRF-ENV-D 2. ce Type bundFloor boof orWall orWall	DETAILS for m 3. Area ( 1947 1997 802 50 0	ore informat ft <sup>2</sup> ) Fra 78 M 26 W 0 M W	4. C. Type R- NA Nood NA NA NA	5. avity Value 0 22 0 0 13	6. Continuous R-Value NA NA NA NA NA	§ 120.7/ § 7 U-Factor / / C-Fa F-Factor U-Factor U-Factor U-Factor U-Factor	<b>F-Factor</b> (ctor) : 0.730 : 0.050 : 0.345 : 0.095	8. Status <sup>1</sup> E E E A	No Confi Pass	Fail
verification. Site-built fenesti itatus: N - New, A – Altered, t aking compliance creck COPAQUE SURFACE Surfa Slab O Existing R-19 Tiltup Metal Framed R-13 itatus: N - New, A – Altered, t	ASSEMBLY ASSEMBLY 1. Can Grade7 Roof to Re Wall11 Demising W Wall42 - Existing	ration shading rSUMMARY m9 /al22	residential Appendix NA6 a devices? (if "Yes", sec Surfac Undergro Ro Exteri Interi Interi	e NRCC-PRF-ENV-E 2. ce <b>Type</b> bundFloor bof orWall orWall	DETAILS for m 3. Area ( 1992) 802 50 0	ft <sup>2</sup> ) Fra Ty 78 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4. Type C. Type R-' NA NA NA NA NA NA NA NA NA	5.       avity       Value       0       22       0       0       13	6. Continuous R-Value NA NA NA NA NA NA	§ 120.7/ § 7 U-Factor / / C-Fa F-Factor U-Factor U-Factor U-Factor U-Factor	<b>F-Factor</b> ictor : 0.730 : 0.050 : 0.775 : 0.345 : 0.095	8. Status <sup>1</sup> E E E A	No Confi Pass	Fail
verification. Site-built fenesti tatus: N - New, A – Altered, t aking compliance crea S. OPAQUE SURFACE Surfa Slab O Existing R-19 Tiltup Metal Framed R-13 tatus: N - New, A – Altered, t . ROOFING PRODUC	it for fenest ASSEMBLY ASSEMBLY 1. re Name n Grade7 Roof to Rei Wall11 Demising W Wall42 – Existing T SUMMA	ration shading <b>SUMMARY</b> m9 Val22 RY	devices? (if "Yes", see devices? (if "Yes", see Surfac Undergro Ro Exteri Interi Interi	e NRCC-PRF-ENV-D 2. ce Type bundFloor boof orWall orWall orWall	DETAILS for m 3. Area ( 194) 199) 802 50 0	ore informat ft <sup>2</sup> ) Fra Ty 78 N 6 W 0 N W	4. C. Type R- NA Nood NA NA Nood NA	5. avity Value 0 22 0 0 13	6. Continuous R-Value NA NA NA NA NA	§ 120.7/ § 7 U-Factor / C-Fa F-Factor U-Factor U-Factor U-Factor U-Factor	F-Factor ictor : 0.730 : 0.050 : 0.345 : 0.095	8. Status E E E E A	No Confi Pass	rmed
verification. Site-built fenesti itatus: N - New, A – Altered, t aking compliance creck C. OPAQUE SURFACE Surfa Slab O Existing R-19 Tiltup Metal Framed R-13 Status: N - New, A – Altered, t	ASSEMBLY ASSEMBLY 1. re Name n Grade7 Roof to Re Wall11 Demising W Wall42 – Existing 1.	ration shading rSUMMARY m9 /al22 RY	eresidential Appendix NA6 a devices? (if "Yes", sec Surfac Undergro Ra Exteri Interi Interi 2.	e NRCC-PRF-ENV-D 2. ce <b>Type</b> bundFloor bof orWall orWall orWall 3.	DETAILS for m 3. Area ( 194) 1992 802 50 0	ore informat	4. C. Type R-' NA NA NA NA NA NA NA NA NA SA NA SA NA SA NA SA NA SA NA SA NA SA NA SA NA SA SA	5. avity /alue 0 22 0 0 0 13 0 0 13 0 0 0 0 0 0 0 0 0 0 0 0	6. Continuous R-Value NA NA NA NA NA NA NA	§ 120.7/ § 7 U-Factor / / C-Fa F-Factor U-Factor U-Factor U-Factor U-Factor	<b>140.3</b> F-Factor ictor : 0.730 : 0.050 : 0.345 : 0.095 <b>§</b> 2 <b>7</b> .	8. Status, E E E E A	No Confi Pass Confi Confi	rmed
verification. Site-built fenesti Status: N - New, A – Altered, t aking compliance creck C. OPAQUE SURFACE Surfa Slab O Existing R-19 Tiltup Metal Framed R-13 Status: N - New, A – Altered, t . ROOFING PRODUC	ASSEMBLY ASSEMBLY 1. ASSEMBLY 1. a Roof to Rea Wall11 Demising W Wall42 - Existing T SUMMA 1. uct Type	m9 /al22	devices? (if "Yes", see devices? (if "Yes", see Surfac Undergro Exteri Interi Interi 2. Product Density (lb/ft <sup>2</sup> )	e NRCC-PRF-ENV-D 2. ce Type bundFloor boof orWall orWall orWall 3. Aged Solar Reflectance	DETAILS for m 3. Area ( 1947 1997 802 50 0 4. Therma Emittan	ore informat	4. C. Type R- NA NA NA NA NA NA NA NA NA S NA S NA S	5. avity value 0 22 0 0 13 0 13 0 10 10 10 10 10 10 10 10 10 10 10 10 1	6. Continuous R-Value NA NA NA NA NA A NA Cool Roof Credit	§ 120.7/ § 7 U-Factor / C-Factor U-Factor U-Factor U-Factor U-Factor Roofi	F-Factor ictor : 0.730 : 0.050 : 0.345 : 0.345 : 0.395 <b>7.</b> Ing Products scription	8. 5tatus E E E A L40.3	No Confi Pass Confi Confi Pass	rmed

Project Name:	Party City Sto	re #427				NRCC	C-PRF-01-E	P	age 9 of 21	·					
Project Address:	3850 Grand A	ve. Chino 91710				Calcu	ulation Date/Ti	me: 1	5:33, Mon,	Aug 28, 201	7				
Compliance Scope:	: ExistingAltera	tion				Input	t File Name:	2	07764.cibd	16x					
M. HVAC SYSTEN	I SUMMARY (see	RCC-PRF-MCH	-DETAIL	S for more info	ormation)						<b>§ 110</b> .	.1 / § 110.	2		
		Dr	/ System	Equipment <sup>1</sup> (Fa	n & Economizer	info included	below in Tabl	e N)						Conf	iirme
1.	2.	3.	4.	5.	6.	7.	8.		ç	).		10.	11.		Т
Equip Name	Equip Type	System Type (Simple <sup>2</sup> or	Qty	Total Heating Output	Supp Heat	Supp Hea Output	nt Total Coo Outpu	oling It	Effici	iency	Acce Te Requir	eptance esting red? (Y/N)	Statu	Pass	ā
		Complex <sup>3</sup> )		(kBtu/h)	554100 (1)14,	(kBtuh)	(kBtu/	h)	Cooling	Heating	_ noqui	4	°5		
Existing RTU Units x 6	SZAC (Packaged3Phase)	Simple	6	148	No	0	150	1	EER-10.8	AFUE-80.0		No	E		
Toilets29	Exhaust ((null))	Simple	1	0	No	0	0		NA	NA		No	E		
Fitting Rooms35	Exhaust ((null))	Simple	1	0	No	0	0		NA	NA		No	E		
Dry System Equipment i Simple Systems must co Complex Systems must of A summary of which acc Status: N - New, A – Alte	includes furnaces, air hand implete NRCC-CXR-03-E co complete NRCC-CXR-04-E c ceptance tests are applicat ered, E – Existing	ing units, heat pumps nmissioning design re ommissioning design le is provided in NRCC	. etc. view form eview form -PRF-MCH-1	DETAILS					T	0				Confi	
Dry System Equipment i Simple Systems must co Complex Systems must of A summary of which acc Status: N - New, A – Alte	includes furnaces, air hand implete NRCC-CXR-03-E co complete NRCC-CXR-04-E c ceptance tests are applicat ered, E – Existing	ing units, heat pumps nmissioning design re ommissioning design le is provided in NRCC	. etc. view form eview form -PRF-MCH-I -PRF-MCH-I	DETAILS n Equipment <sup>1</sup>						Pum	ps			Confi	rmed
Dry System Equipment i Simple Systems must co. Complex Systems must cd A summary of which acc Status: N- New, A – Alte 12.	includes furnaces, air hand implete NRCC-CXR-03-E co complete NRCC-CXR-04-E c ceptance tests are applical ered, E – Existing	ing units, heat pumps amissioning design re ommissioning design le is provided in NRCC 13. 14	etc. view form eview form -PRF-MCH-I /et System 15	DETAILS	1	7.	18.	19.	20.	Pum 21.	ps 22.	23.	24.	Confi	rmed
Dry System Equipment i Simple Systems must co. Complex Systems must cd A summary of which acd Status: N- New, A – Alte 12. Equip Nan	ncludes furnaces, air hand implete NRCC-CXR-03-E co complete NRCC-CXR-04-E c ceptance tests are applicat ered, E – Existing	ing units, heat pumps amissioning design re ommissioning design le is provided in NRCC 13. 14 p Type Qt <sup>4</sup>	etc. view form eview form -PRF-MCH-1 /et Syster 15 / Vol (g	n Equipment <sup>1</sup> . 16. gal) Rated Cap	1 acity 1) Effic	7. Siency S	18. Standby Loss	19. Tank Ext. R Value	20. Qty	Pum 21. GPM	<i>ps</i> 22. НР	23. VSD (Y/N)	24. Status <sup>2</sup>	Confi Pass	rmec
Dry System Equipment i Simple Systems must co. Complex Systems must cd A summary of which acc Status: N - New, A – Alte 12. Equip Nan Existing water h	ne Equ neater2 St	ing units, heat pumps nmissioning design re ommissioning design le is provided in NRCO 13. 14 p Type Qt prage 1	etc. view form eview form PRF-MCH-1 /et Syster 15 / Vol ({ 10	n Equipment <sup>1</sup> . 16. gal) Rated Cap (kBtu/f	acity 1) Effic EF: C	7S iencyS 0.950	18. Standby Loss NA	19. Tank Ext. R Value NA	20. Qty NA	Pum 21. GPM NA	<i>рs</i> 22. НР NA	23. VSD (Y/N) No	24. Status <sup>2</sup> E	Confi Pass	

Project Name:	Party City Store #4	27				NRCC-PRF-01-E		Page 11 of 21				
Project Address:	3850 Grand Ave. C	hino 91710				Calculation Dat	:e/Time:	15:33, Mon, Aug 28,	2017			
Compliance Scope:	ExistingAlteration					Input File Name	e:	207764.cibd16x				
P. SYSTEM DISTRIBUTIO	ON SUMMARY								§ 120.4/ § 140.4(	)		
						Dry Sys	stem Distri	ibution	•	Co	onfirme	ed
1.		2.		3	3.	4.		5.				
_		Equip Type		Duct Leakage and Sealing Duct Leakage will be		D	ucts	Pas		Fai		
Equip Name		Equip Type D		Required per 140.4(I) verified per NA1 a NA2		IA1 and	Insulation R-Value	Location	Ĩ			
Existing RTU Units x (	6	SZAC	SZAC		lo	No		4.2	Conditioned			
Joes the Project Include	Zonal Systems? (if	"Yes", see NRC	C-PRF-MCH-DET	AILS for syster	m informatior	ı)					<u>م</u>	No
oes the Project Include	a Solar Hot Water	System? (if "Ye	s". see NRCC-PRF	, F-MCH-DETAIL	LS for system i	, information)						No
Aultifamily or Hotel/ Mo	tel Occupancy? (if	"Yes", see NRC	C-PRF-MCH-DET	AILS for DHW	system inforr	nation)					N	No
Q. INDOOR CONDITION	NED LIGHTING GE	NERAL INFO	(see NRCC-PRF-	-LTI-DETAILS	for more inf	0) <sup>3</sup>					<b>§</b> 14	40.
Q. INDOOR CONDITION	NED LIGHTING GE	INERAL INFO	(see NRCC-PRF-	-LTI-DETAILS	for more inf	o) <sup>3</sup>	1				§ 14 Confi	<b>40</b> . irm
Q. INDOOR CONDITION	NED LIGHTING GE	NERAL INFO	(see NRCC-PRF-	-LTI-DETAILS	for more info	0) <sup>3</sup> 4.		5			§ 14 Confi	<b>40</b> . irm
Q. INDOOR CONDITION	NED LIGHTING GE	ENERAL INFO	(see NRCC-PRF- 3. Installed Ligh (Wat	-LTI-DETAILS	for more info	ی) <sup>3</sup> 4. ontrol Credits Vatts)		5 Additional (Cust	om) Allowance		§ 14 Confi Pass	<b>40</b> . irm
Q. INDOOR CONDITION	NED LIGHTING GE	ENERAL INFO 2. Floor Area <sup>2</sup> <sup>2</sup> )	(see NRCC-PRF- 3. Installed Ligh (Wat	-LTI-DETAILS	for more info	4. ontrol Credits Vatts)	Area Ca	5 Additional (Cust ategory Footnotes (Watts)	om) Allowance Tailored Method (\	Vatts)	§ 14 Confi Pass	40. irm
Q. INDOOR CONDITION	NED LIGHTING GE Conditioned (f d 6,7	Floor Area <sup>2</sup> <sup>2</sup>	(see NRCC-PRF- 3. Installed Ligh (Wat 3,12	-LTI-DETAILS ting Power tts) 20	for more info	4. ontrol Credits Vatts)	Area Ca	5 Additional (Cust ategory Footnotes (Watts) 0	om) Allowance Tailored Method (\ 0	Vatts)	§ 14 Confi Pass	40. irm
<b>Q. INDOOR CONDITION</b> <b>1.</b> <b>Occupancy Type</b> <sup>1,4</sup> Commercial and Industria Storage Areas (conditione or unconditioned) Corridors, Restrooms, Sta and Support Areas	NED LIGHTING GE Conditioned (f d 6,7 irs, 4:	Floor Area <sup>2</sup> <sup>2</sup> <sup>2</sup> <sup>2</sup> <sup>2</sup> <sup>2</sup> <sup>2</sup> <sup>2</sup>	(see NRCC-PRF- 3. Installed Ligh (Wat 3,12 19!	-LTI-DETAILS	for more info	4. ontrol Credits Vatts)	Area Ca	5 Additional (Cust ategory Footnotes (Watts) 0 0	om) Allowance Tailored Method (\ 0	/atts)	§ 12 Confi	40.
2. INDOOR CONDITION 1. Occupancy Type <sup>1,4</sup> Commercial and Industria Storage Areas (conditioned) Corridors, Restrooms, Sta and Support Areas Kitchen, Commercial Food Preparation	NED LIGHTING GE Conditioned (f I I I I I I I I I I I I I I I I I I	<b>Floor Area</b> <sup>2</sup> <sup>2</sup> <sup>2</sup> <sup>2</sup> <sup>2</sup> <sup>2</sup> <sup>2</sup> <sup>2</sup> <sup>3</sup> <sup>3</sup> <sup>3</sup> <sup>3</sup> <sup>4</sup> <sup>4</sup> <sup>5</sup>	(see NRCC-PRF- 3. Installed Ligh (Wat 3,12 19) 39	-LTI-DETAILS	for more info	4. ontrol Credits Vatts) 0 0 0	Area Ca	5 Additional (Cust ategory Footnotes (Watts) 0 0 0 0	om) Allowance Tailored Method (\ 0 0 0	/atts)	§1/ Confi	40.
2. INDOOR CONDITION 1. Occupancy Type <sup>1,4</sup> Commercial and Industria itorage Areas (conditione or unconditioned) Corridors, Restrooms, Sta ind Support Areas (itchen, Commercial Food Preparation ocker/Dressing Room	NED LIGHTING GE Conditioned (f d d d f rrs, d f f f f f f f f f f f f f f f f f f	ENERAL INFO Energy Provide the second sec	(see NRCC-PRF- 3. Installed Ligh (Wat 3,12 19: 39	-LTI-DETAILS ting Power tts) 20 5 9 7	for more info	4. ontrol Credits Vatts) 0 0 0 0	Area Ca	5 Additional (Cust ategory Footnotes (Watts) 0 0 0 0 0	om) Allowance Tailored Method (V 0 0 0 0	Vatts)	§1 <sup>2</sup> Confi Pass	40.
2. INDOOR CONDITION 1. Occupancy Type <sup>1,4</sup> Commercial and Industria Storage Areas (conditione or unconditioned) Corridors, Restrooms, Sta and Support Areas (itchen, Commercial Food Preparation .ocker/Dressing Room Office (250 square feet in loor area or less)	NED LIGHTING GE Conditioned (f d d d d f f rs, 4: d 7 14 7 9	<b>ENERAL INFO Ploor Area</b> <sup>2</sup> <b>Ploor A</b>	(see NRCC-PRF- 3. Installed Ligh (Wat 3,12 19: 39 111 39	-LTI-DETAILS ting Power tts) 20 5 7 9	for more info	4. ontrol Credits Vatts) 0 0 0 0 0 0 0 0 0 0 0 0 0	Area Ca	5 Additional (Cust ategory Footnotes (Watts) 0 0 0 0 0 0 0 0	m) Allowance Tailored Method (V 0 0 0 0 0 0 0	Vatts)	§ 1 <sup>2</sup> Confi           Pass           □           □           □           □           □           □           □           □	
<b>Q. INDOOR CONDITION</b> <b>1.</b> <b>Occupancy Type</b> <sup>1,4</sup> Commercial and Industria Storage Areas (conditioned) Corridors, Restrooms, Sta and Support Areas Kitchen, Commercial Food Preparation Locker/Dressing Room Office (250 square feet in iloor area or less) Retail Merchandise Sales, Wholesale Showroom	NED LIGHTING GE Conditioned (f d d d f d f d f f f f f f f f f f f	ENERAL INFO Floor Area <sup>2</sup> <sup>2</sup> ) <sup>2</sup> 00 18 5 45 0 663	(see NRCC-PRF- 3. Installed Ligh (Wat 3,12 19) 39 117 39 9,83	-LTI-DETAILS atting Power tts) 20 5 7 9 35	for more info	4. ontrol Credits Vatts) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Area Ca	5 Additional (Cust ategory Footnotes (Watts) 0 0 0 0 0 0 0 0 0 0 0	om) Allowance Tailored Method (V 0 0 0 0 0 0 0 0	/atts)	§1 <sup>2</sup> Confi Pass	

Project Name:	Party	' City
Project Address:	3850	Gra
Compliance Scope:	Existi	ingA
<sup>3</sup> Lighting information for existing <sup>3</sup> Multiple entries for an Occupancy	spaces y Type i	mode nay b
R. INDOOR CONDITION	IED L	IGH
Luminaire Schedule (inclu conditioned space, and po offices)	udes a ortabl	ill pe e lig
Name or Item Tag	Com 3-la on	plete amp e dii
А		
С		
D		
If lighting power densities were u	sed in t	the co
S1. COVERED PROCESS	SUN	1MA
This Section Does Not Ap	ply	
S2. COVERED PROCESS	SUN	1MA
Space Name		
S-7-Break Room		
S3. COVERED PROCESS	SUN	1MA
This Section Does Not An	olv	
	.,	
S4. COVERED PROCESS	SUN	1MA
This Section Does Not Ap	ply	
CA Building Energy Efficien	icy Sta	anda

<sup>2</sup> See NRCC-LTI-01-E for unconditioned spaces

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance

Report Version: NRCC-PRF-01-E-08082017-4377 Report Generated at: 2017-08-28 15:34:23

ty Store #427 NRCC-PRF-01-E Page 12 of 21 rand Ave. Chino 91710 Calculation Date/Time: 15:33, Mon, Aug 28, 2017 Alteration Input File Name: 207764.cibd16x deled is not included in the table be listed in the table as these have been aggregated for Building Stories that have the same floor multiplier. HTING SCHEDULE (Adapted from NRCC-LTI-01-E)<sup>1</sup> § 130.0 permanent installed lighting in Installed Watts (Conditioned) Confirmed ighting over 0.3 w/ft<sup>2</sup> in How Wattage is Determined te Luminaire Description (i.e., Total Number p fluorescent troffer, F32T8, Installed Watts Pass Fail Watts per luminaire CEC Default According to Luminaires limmable electronic ballast) from NA8 §130.0(c) A Fixture LED 3,120 65 No Yes 48 C Fixture (4' LED) 429 39 Yes No 11 D Fixture (79w LED) 79 Yes No 124 9,796 compliance model Building Departments will need to check prescriptive forms for Luminaire Schedule details. IARY – ENCLOSED PARKING GARAGES § 140.9 § 140.9 IARY – COMMERCIAL KITCHENS Confirmed Exhaust Flow Rate (cfm) Exhaust Hood Style Exhaust Hood Duty Exhaust Length (ft) Pass Fail Light Light Light Light Light IARY – COMPUTER ROOMS § 140.9 IARY – LABORATORY EXHAUSTS § 140.9 lards- 2016 Nonresidential Compliance Report Version: NRCC-PRF-01-E-08082017-4377 Report Generated at: 2017-08-28 15:34:23





Williamspo	ort, PA 17701
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2016, Larsor	right Protected n Design Group
2016, Larsor	1703
PROJECT NO.	1703 8099-196
PROTO NO. PROJECT NO. DRAWN BY	1703 8099-196 BCW
PROJECT NO. PROJECT NO. DRAWN BY APPV'D BY	1703 8099-196 BCW GWB
PROTO NO. PROJECT NO. DRAWN BY APPV'D BY SHEET TITLE	1703 8099-196 BCW GWB
PROJECT NO. PROJECT NO. DRAWN BY APPV'D BY SHEET TITLE TITLE	1703 8099-196 BCW GWB

G6.1

Project Name:	Party City St	ore #427			NRCC-PRE	F-01-E		Page 13 of 21			
Project Address:	3850 Grand	Ave. Chino 91710	)		Calculatio	on Date/1	Time:	15:33, Mon, Aug 28, 201	7		
Compliance Scope:	ExistingAlte	ration			Input File	Name:		207764.cibd16x			
. UNMET LOAD HOU	JRS	-							1		
Thermal Zone	Name	Cooling Unme The	t Load Hour Limit for rmal Zone	Proposed Cooling Un	net Load Hours Heating Unmet Load Hour Limit for Thermal Zone			imet Load Hour Limit for Thermal Zone	Proposed Heating Unmet Load H		
2-Office			150	0				150	2091		
7-Break Roo	om		150	32.5				150	2150.25		
J. ENERGY USE SUM	MARY		~	201	1020			0001	10		
Energ	γ Component		Standard Design S (MWh)	ite Proposed Des (MWh	ign Site )	Margin (MWh)	S	tandard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)	
Spa	ace Heating		<u>27</u>	122		222		67.8	53.4	14.4	
Spa	ace Cooling		45.1	49.0		-3.9			2 <del>73</del> -1	10220	
In	idoor Fans		54.6	54.6		0.0				9 <del>05</del> .0	
Hea	at Rejection			7. <del>5.5</del> .3		<del></del> 3		त्वर्ग	2000	23 <del>4 a</del> 3	
Pur	nps & Misc.								(met)	()	
Dome	stic Hot Water		17.2	17.2		0.0		<u>=</u> 3	040	(***)	
Ind	oor Lighting		65.8	44.5		21.3			2000	374473	
COMP	LIANCE TOTAL		182.7	165.3	ž.	17.4		67.8	53.4	14.4	
R	eceptacle		50.2	50.2		0.0		<u>200</u> 2			
	Process		0.7	0.7		0.0			2770	10 <del>2.0</del> 41	
(	Other Ltg		200			55)		<u>स्व</u> ार्थ	(1 <del>111)</del>	5 <del>75</del> 6	
	TOTAL		233.6	216.2		17.4		67.8	53.4	14.4	

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roject Name:	Party Cit	ty Store #4	27					1	VRCC-PRF-	01-E	F	Page 16 o	of 21						
roject Address:	3850 Gr	and Ave. C	hino 91710	)				0	Calculation	Date/Ti	me: 1	L5:33, M	on, Aug	28, 201	7				
ompliance Scope:	Exi sting/	Alteration						1	nput File N	lame:	2	207764.0	ibd16x						
RCC-PRF-MCH	-DETAILS -	SECTIO	N START																10 10
. MECHANICAL V	ENTILATION	AND REP	HEAT (Add	pted fron	n 2016-NI	RCC-MCH	-03-E	,	2. VENTILATION (§ 120.1)							Confi	rmed I		
1		1. DESIGN	AIR FLOW	S	1	2	r	-	7:	-	2. VENTI I	LATION	§ 120.1	)	-				
CONDITIONED ZONE NAME	HEATING/COOLING SYSTEM ID	DESIGN PRIMARY AIR FLOW (CFM)	DESIGN PRIMARY MINIMUM AIR FLOW (CFM)	MINIMUM PRIMARY AIR FLOW FRACTION	MAXIMUM HEATING AIR FLOW (CFM)	MAXIMUM HEATING AIR FLOW FRACTION	DDC CONTROL (Y/N)	VENT SYSTEM ID	CONDITIONED AREA (ft2)	MIN. VENT PER AREA (CFM/ft2)	DESIGN NUM. OF PEOPLE	MIN. VENT PER PERSON (CFM/person)	req'd vent air flow (cfm)	DESIGN VENT AIR FLOW (CFM)	TRANSFER AIRFLOW (CFM)	DCV (Y/N)	Operable Window Interlock § 140.4(n) (Y/N)	Pass	Fail
1-Stock Room	Existing RTU Units x 6	1,667	NA	NA	NA	NA	N	Existing RTU Units x 6	6,700	NA	7	150.0	1,005	1,005	NA	N	NA		
2-Office	Existing RTU Unitsx 6	22	NA	NA	NA	NA	N	Existing RTU Units x 6	90	NA	0	30.0	14	14	NA	N	NA		
3-Hallways	Existing RTU Unitsx 6	65	NA	NA	NA	NA	N	Existing RTU Units x 6	260	NA	1	30.0	39	39	NA	N	NA		
4-Toilets	Existing RTU Unitsx 6	39	NA	NA	NA	NA	N	Existing RTU Units x 6	158	NA	1	30.0	24	24	NA	N	NA		
5-Fitting Rooms	Existing RTU Units x 6	36	NA	NA	NA	NA	N	Existing RTU Units x 6	145	NA	1	15.0	22	22	NA	N	NA		
6-Sales Area	Existing RTU Units x 6	3,151	NA	NA	NA	NA	N	Existing RTU Units x 6	12,663	NA	211	15.0	3,165	3,165	NA	Y	NA		
7-Break Room	Existing RTU Units x 6	19	NA	NA	NA	NA	N	Existing RTU Units x 6	75	NA	0	60.0	11	11	NA	N	NA		
								TOTAL	20,091		NA		NA	NA	NA				

Project Na	me: Party City Store #427	NRCC-PRF-01	1-E Page	14 of 21	Project Name:	Party City
Project Add	dress: 3850 Grand Ave. Chino 91710	Calculation D	Date/Time: 15:33	, Mon, Aug 28, 2017	Project Address:	3850 Gra
Compliance	e Scope: ExistingAlteration	Input File Na	ime: 20776	4.cibd16x	Compliance Scope:	Exi stingA
DOCUME	NTATION AUTHOR'S DECLARATION STATEMENT			§ 10-103		
I certify that	at this Certificate of Compliance documentation is accurate and co	mplete.			NKCC-PKF-ENV-DE	EIAILS -S
Documenta	ation Author Name: Mark Madison	and a second comparison of the second second second	0	1. 1 1	A. OPAQUE SURFACE	ASSEMBL
Company:	ENERGY CODE WORKS	Signature:	n (=	e nefaction	1.	
Address: 26	600 Michelson Drive Suite 1700	Signature Date: 8	3/28/2017		Surface Name	
City/State/	/Zip: Irvine Ca 92612	CEA Identification (If a	applicable):			
Phone: (94	9) 240-1867			Slab On Grade7	U	
RESPONS	IBLE PERSON'S DECLARATION STATEMENT					
I certify the	e following under penalty of perjury, under the laws of the State of	f California:				
1	hereby affirm that I am eligible under the provisions of Division 3 icensed in the State of California as a civil engineer, mechanical er	of the Business and Professions Code to si gineer, electrical engineer, or I am a licens	ign this document a sed architect.	s the person responsible for its preparation; and that I am	Existing R-19 Roof to Re	em9
2	affirm that I am eligible under the provisions of Division 3 of the loreparation; and that I am a licensed contractor performing this w	Business and Professions Code by section 5 ork.	5537.2 or 6737.3 to	sign this document as the person responsible for its	Tiltup Wall11	
3  I B	affirm that I am eligible under Division 3 of the Business and Prof Business and Professions Code Sections 5537, 5538 and 6737.1.	essions Code to sign this document becaus	se it pertains to a st	ructure or type of work described as exempt pursuant to	Metal Framed Demisi	ng
Responsible	e Envelope Designer Name: Seree Yenjai , PE	Cimatura		NERVEZ CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR	Wal22	
Company:	JYC Service	Signature: <	SA			-
Address: 87	780 19th St. #401	Date Signed:		7/5/17	B 12 Moll 42	
City/State/2	Zip: Alta Loma, CA 91701	Declaration Statemen	nt		K-13 Wali42	
Phone: (626	6) 241-8551	Type: Title: Civil Eng	ineer	License #: C73151		
Responsible	le Lighting Designer Name: Peter A. Leptuch, PE		111	17	<b>B. OVERHANG DETAI</b>	LS (Adapte
Company:	Peter A. Leptuch, PE	Signature:	X/ala	1	This Section Does Not A	vlaa/
Address: 12	236 Golden Eagle Ct.	Date Signed:	10	39/01/17		
City/State/	Zip: Aubrey, TX 76227	Declaration Statemen	nt Type:		C. OPAQUE DOOR SU	JMMARY
Phone: (94	40) 735-5127	Title: P.E.		License #: E19072	1.	
Responsible	e Mechanical Designer Name: Matthew P. Nealis, PE	L /	· 11/	Englisher of the control state of a state of providents	Opaque Door Assembly	y Name
	Larson Design Group	Signature:	h Al		/ Tag or I.D.	
Company:	000 Commerce Park Drive #201	Date Signed: 9/5/17			Metal Door15	
Company:   Address: 10		Declaration Statemen	t Type:		<sup>1</sup> Status: N - New A – Altered F	E – Evistina
Company:   Address: 10 City/State/	Zip: Williamsport PA 17701	Deciaration Statemen			Sedenor in them, it is needed, a	e enouring

	Party City St	ore #427						NRCC-PRF-01	-E	Page 1	7 of 21					
Project Address:	3850 Grand .	Ave. Chino	91710					Calculation D	ate/Time:	15:33,	Mon, Aug 28	, 2017				
Compliance Scope:	ExistingAlter	ation						Input File Nar	ne:	207764	4.cibd16x					
B. ZONAL SYSTEM A		UNIT SU	ЛMARY												§ 14(	).4
1.	2.	3.	4	l.	5.			6.		7.			8.		Conf	irme
System ID	Sustem Tun		Rated C (kB	Capacitγ tuh)	Fconomizer		700	Name	Ai	rflow (	cfm)		Fan		Pa	7
System id	System typ		Heating	Cooling	Economizer		2016	ename	Design	Min.	Min. Ratio	внр	Cycles	ECM Motor	SSE	<u> </u>
7-Break Room-Trm	Uncontrolle	ed 6	NA	NA	NA		7-Bre	ak Room	19	NA	NA	NA	NA			
6-Sales Area-Trm	Uncontrolle	ed 6	NA	NA	NA		6-Sa	les Area	3151	NA	NA	NA	NA			
5-Fitting Rooms-Trm	Uncontrolle	ed 6	NA	NA	NA	Į,	5-Fittiı	ng Room s	36	NA	NA	NA	NA			
4-Toilet s-Trm	Uncontrolle	ed 6	NA	NA	NA		4-1	Foilets	39	NA	NA	NA	NA			
3-Hallways-Trm	Uncontrolle	9d 6	NA	NA	NA		3-H	allways	65	NA	NA	NA	NA			
2-Office-Trm	Uncontrolle	!d 6	NA	NA	NA		2-0	Office	22	NA	NA	NA	NA			
1-Stock Room-Trm	Uncontrolle	ed 6	NA	NA	NA		1-Sto	ck Room	1667	NA	NA	NA	NA			
C. EXHAUST FAN SU	MMARY														Confirn	ned
1.				2.		3.		4.	5.			6.			P	π
System I	D		Zon	e Name		Qty	3	CFM	Motor Bl	IP	Total Sta	tic Pressure	e (in H20)		SS	
Toilets2	)		4-	Toilets		1		150	0.200			5.08				
Fitting Room	1s35		5-Fitti	ng Room s		1		150	0.200			5.08				
											-	6 1 1 0 2		-	Conf	
	CLIBARAADV	1000000000										9 I I U.S		10	Conn	rmed
D. DHW EQUIPMEN	r SUMMARY –	Adapted	Jrom NRC			7			0		10	11				
D. DHW EQUIPMEN 1.	2.	- (Adaptec 3.	4.	5.	6.	7.		8. Tank	9.	_	10.	11.	3	Tank		
D. DHW EQUIPMEN 1. DHW Name E	2. Heater lement Type	- ( <i>Adaptec</i> 3. Tank Type	4.	5. Tank Vol (gal)	6. Rated Input (kBtu/h)	7. Efficie	ncy	8. Tank Insulation R-value (Int/Ext)	9. Pilot Ene (Btu/h	rgy <sub>S1</sub>	10. tandby Loss	11. Heat Pum Түре	ip Loc Ai Co	Tank ation or mbient ndition	Pass	Fail

F. SOLAR HOT WATER This Section Does Not A G. MECHANICAL HVA Dedaration of Required Inspector to verify).	HEA pplγ C ACC
This Section Does Not A G. MECHANICAL HVA Dedaration of Required Inspector to verify).	pply C ACC
G. MECHANICAL HVA Dedaration of Required Inspector to verify).	C AC
Dedaration of Required Inspector to verifγ).	Acco
	ALLE
Test Description	MCH-02A
Equipment Requiring # of Testing or units Verification	Outdoor Air
1-SHW 1	
Existing RTU Units x 6	
Toilets29 1	
Fitting Room s35	<u></u>
H. EVAPORATIVE COC	DLER S

CA Building Energy Efficiency Standards- 2016 Nonresidential Compliance

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Store #427 NRCC-PRF			IRCC-PRF-01-E	Page 15 of 21					
d Ave. Chino 91710 Calculation Date/			alculation Date/Time:	15:33, Mon, Au	g 28, 2017				
eration Input File N			nput File Name:	207764.cibd16>	(				
CTION START-									
DETAILS						2	Со	nfirme	ed
2.		3.			4.		Pa		7
Surface Type		Description of Assem	bly Layers		Notes		SSE		≝.
dergroundFloor		Slab Type = UnheatedS Insulation Orientatio Insulation R-Value	labOnGrade n = None e = R0						
Roof	Asphalt shingles - 1/4 in. Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Wood framed roof, 16in. OC, 3.5in., R-22 Gypsum Board - 1/2 in.								
ExteriorWall		Concrete - 140 lb/f	t3 - 6 in.						
InteriorWall	teriorWall Stucco - 7/8 in. Air - Wall - 3 1/2 in. Gypsym Board - 1/2 in								
InteriorWall		Stucco - 7/8 i Vapor permeable fel Wood framed wall, 16in. C Gypsum Board - 1	n. t - 1/8 in. DC, 3.5in., R-13 L/2 in.						
I from NRCC-ENV-02-E)									
							ŝ	Confi	rmed
2.		3.	4.	5.	6.	7.	+		
Door Type		Certification Method	Operation	Area	Overall U-factor	Status <sup>1</sup>	us <sup>1</sup> Pass		Fail
MetallIninsulatedDoubleTaverDoor DefaultPerformance Swinging					0.700				

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lards- 2016 Nonresidential Compliance

Store #427 NRCC-PRF-01-E Page 18 of 21 nd Ave. Chino 91710 15:33, Mon, Aug 28, 2017 Calculation Date/Time: Alteration Input File Name: 207764.cibd16x SUMMARY (Adapted from NRCC-STH-01) §RA4 NCE TESTS & FORMS (Adapted from 2016-NRCC-MCH-01-E) e Certificates (NRCA) – Acceptance Certificates that may be submitted. (Retain copies and verify forms are completed and signed to post in field for Field Confirmed Pass - | - | 🗆 | 🗆 ARY

lards- 2016 Nonresidential Compliance

Report Version: NRCC-PRF-01-E-08082017-4377 Report Generated at: 2017-08-28 15:34:23



91710

CA

CHINO,

AVE.

GRAND

3850

Ц С Ш

MARKETPLA

**TRUM** 

SPEC

CHINO

LDG

Larson Design Group

1000 Commerce Park Dr Suite 201 Williamsport, PA 17701

PHONE 570.323.6603

www.larsondesigngroup.com

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1703

8099-196

BCW

GWB

TITLE 24

G6.2

PROTO NO.

PROJECT NO.

DRAWN BY

APPV'D BY

SHEET TITLE

SHEET NO.

FAX 570.323.9902

Project Name:	Party City Store #427			NRCC-PRF-01-E Page 19 of 21					
Project Address:	3850 Grand Ave. Chino 917	/10		Calculation Date/Time: 15:33, Mon, Aug 28, 2017					
Compliance Scop	ompliance Scope: ExistingAlteration			Input File Name:	207764.cil	od16x			
IRCC-PRF-LTI	-DETAILS -SECTION START-								
A. INDOOR COI	NDITIONED LIGHTING CONTROL	CREDITS (Adapted from NRCC-L	TI-02-E)				§ 140.6		
Lighting Con	t <b>rol Credits Schedule</b> (includes all li, compliance credit per §14	ghting controls installed in condition 0.6(a)2 and Table 140.6-A)	ed space for	Contr	ol Credit Calcul	ation	v/ If Accentance	Confi	rmed
Location in Building	Occupancy Type (must meet requirements of Table 140.6-A)	Type/Description of Lighting Control (i.e., partial on occupancy sensor, manual dimming, etc.)	# of Units	Watts of Controlled Lighting	Power Adjustment Factor	Control Credit Watts	Test Required	Pass	Fail
S-1-Stock Room	Commercial and Industrial Storage Areas (conditioned or unconditioned)	- none specified -	1		0.00	0			
S-2-Office	Office (250 square feet in floor area or less)	- none specified -	1		0.00	0			
S-3-Hallways	Corridors, Restrooms, Stairs, and Support Areas	- none specified -	1		0.00	0			
S-4-Toilets	Corridors, Restrooms, Stairs, and Support Areas	- none specified -	1		0.00	0			
S-5-Fitting Rooms	Locker/Dressing Room	- none specified -	1		0.00	0			
S-6-Sales Area	Retail Merchandise Sales, Wholesale Showroom	- none specified -	1		0.00	0			
S-6-Sales Area	Retail Merchandise Sales, Wholesale Showroom	- none specified -	1		0.00	0			
S-7-Break Room	Kitchen, Commercial Food Preparation	- none specified -	1		0.00	0			
B. INDOOR COM	NDITIONED LIGHTING MANDATC	DRY LIGHTING CONTROLS (Adapt	ted from NRC	C-LTI-02-E)				<b>§</b> 13	30.1
This Section Does	Not Apply								
130.1 <b>(a)</b> = Manual are	ea controls; §130.0(b) = Multi Level; §130.1(c) =	= Auto Shut-Off; §130.1(d) = Mandatory Dayligi	ht; §130.1(e) = Dem	and Responsive					
C. TAILORED M	ETHOD CONDITIONED LIGHTING	OPOWER ALLOWANCE SUMMAR		LIST (Adapted from	NRCC-LTI-04-	E)	§ 140.6		
General lighting p	oower (see Table D)							0	
General lighting p	oower from special function areas (s	ee Table E)						NA	
Additional "use it	or lose it" (See Table G)							0	

Project Name	e Store #427	Date 8/28/2017
	PTION	0/20/2011
Building E	Envelope Measures:	
§110.8(a):	Installed insulating material shall have been certified by the manufacturer to comply with the Califor Standards for insulating material, Title 20 Chapter 4, Article 3.	ornia Quality
§110.8(c):	All Insulating Materials shall be installed in compliance with the flame spread rating and smoke de Sections 2602 and 707 of Title 24, Part 2.	ensity requirements of
§110.8(g):	Heated slab floors shall be insulated according to the requirements in Table 110.8-A.	
§110.7(a):	All Exterior Joints and openings in the building that are observable sources of air leakage shall be weatherstripped or otherwise sealed.	caulked, gasketed,
§110.6(a):	Manufactured fenestration products and exterior doors shall have air infiltration rates not exceedir window area, 0.3 cfm/ft. <sup>2</sup> of door area for residential doors, 0.3 cfm/ft. <sup>2</sup> of door area for nonresider (swinging and sliding), and 1.0 cfm/ft. <sup>2</sup> for nonresidential double doors (swinging).	ng 0.3 cfm/ft.² of ntial single doors
§110.6(a):	Fenestration U-factor shall be rated in accordance with NFRC 100, or the applicable default U-fac	tor.
§110.6(a) :	Fenestration SHGC shall be rated in accordance with NFRC 200, or NFRC 100 for site-built fenes applicable default SHGC.	stration, or the
§110.6(b):	Site Constructed Doors, Windows and Skylights shall be caulked between the unit and the buildin weatherstripped (except for unframed glass doors and fire doors).	g, and shall be
§120.7(a):	The opaque portions of the roof/ceiling that separates conditioned spaces from unconditioned spa shall meet the applicable U-Factor requirements as follows:	aces or ambient air
	Metal Building- The weighted average U-factor of the roof assembly shall not exceed 0.098. Wood Framed and Others- The weighted average U-factor of the roof assembly shall not exceed	ed 0.075.
	The opaque portions of walls that separate conditioned spaces from unconditioned spaces or amb applicable U-factor as follows: <b>Metal Building-</b> The weighted average U-factor of the wall assembly shall not exceed 0.113.	vient air shall meet the
§120.7(b):	<ul> <li>Metal Framed- The weighted average U-factor of the wall assembly shall not exceed 0.151.</li> <li>Light Mass Walls- A 6 inch or greater Hollow Core Concrete Masonry Unit shall have a U-factor Heavy Mass Walls- An 8 inch or greater Hollow Core Concrete Masonry Unit shall have a U-fa 0.690.</li> <li>Wood Framed and Others- The weighted average U-factor of the wall assembly shall not exceed Spandrel Panels and Opaque Curtain Wall- The weighted average U-factor of the spandrel panels</li> </ul>	or not to exceed 0.440 ctor not to exceed ed 0.110. nels and opaque
	<ul> <li>curtain wall assembly shall not exceed 0.280.</li> <li>Demising Walls The opaque portions of framed demising walls shall meet the requirements of A. Wood framed walls shall be insulated to meet a U-factor not greater than 0.099.</li> <li>B. Metal Framed walls shall be insulated to meet a U-factor not greater than 0.151.</li> </ul>	Item A or B below:
	The opaque portions of floors and soffits that separate conditioned spaces from unconditioned sp shall meet the applicable U-Factor requirements as follows:	aces or ambient air
§120.7(c):	<b>Raised Mass Floors-</b> Shall have a minimum of 3 inches of lightweight concrete over a metal dec average U-factor of the floor assembly shall not exceed 0.269. <b>Other Floors-</b> The weighted average U-factor of the floor assembly shall not exceed 0.071.	ck or the weighted

roject Name.	Party City Store #427		NRCC-PR	F-01-E	Page 20 of 21					
Project Address:	3850 Grand Ave. Chino 91710		Calculati	on Date/Time:	15:33, Mon, Aug 28, 20	17				
Compliance Scope:	ExistingAlteration		Input File	e Name:	207764.cibd16x					
	-									
C. TAILORED METH		NANCE SUMMARY A	AND CHECKLIST (Ad	apted from N	RCC-LTI-04-E)		§ 140.6			
						Total watts		0		
). GENERAL LIGHTI	ING POWER (Adapted from NRCC-LTI-04-E)						8	\$ 140.6-1	<u> </u>	
This Section Does Not	- Apply							,	-	
The section boos Not										
. GENERAL LIGHTI	NG FROM SPECIAL FUNCTION AREAS (Ada	ted from NRCC-LTI-0	04-E)				§	§ 140.6(a	:) 3H	
Boom Number	Drimon, Function Area	Illuminance Value	Room Cavity Ratio	Allowed LDF	$\sum_{i=1}^{n} \frac{1}{i} $	Allowed M	Co		rmed	
Koom Number	Primary Function Area	(LUX)	(Table G)	Allowed LPL	Ploor Area (IL <sup>2</sup> )	Allowed W		Pass	Fail	
NA	NA	NA	NA	NA	NA	NA				
Room Number	Task/Activity Description	Room Length (ft)	Room Wid	ith (ft) F	coom Cavity Height (ft)	RC	RCR Confirmed			
								Pass Fail		
NA	NA	NA	NA		NA	N	A			
NA Non-Rectangular Si	NA	NA	NA		NA	N	A			
NA Non-Rectangular S This Section Does Not ote: All applicable spaces an	NA paces : Apply re listed under the Non-Rectangular Spaces table	NA	NA		NA	N	Ą			
NA Non-Rectangular S This Section Does Not ote: All applicable spaces of G. ADDITIONAL "US	NA paces : Apply re listed under the Non-Rectangular Spaces table SE IT OR LOSE IT" (Adapted from NRCC-ITI-	NA 04-F)	NA		NA	N.	A			
NA Non-Rectangular Sp This Section Does Not ote: All applicable spaces an G. ADDITIONAL "US 1.	NA paces Apply re listed under the Non-Rectangular Spaces table SE IT OR LOSE IT" (Adapted from NRCC-LTI- 2.	NA 04-E)	3.		NA .	N.	A	Confi	irmed	
NA Non-Rectangular Sp This Section Does Not Jote: All applicable spaces of G. ADDITIONAL "US 1. Wall Disp	NA paces Apply re listed under the Non-Rectangular Spaces table SE IT OR LOSE IT" (Adapted from NRCC-LTI- 2. play Combined Floor Display and Lighting	D4-E) Task Combined C	3. Ornamental and Speci fects Lighting	al Very V	NA 4. /aluable Merchandise	Allowed	Ą Watts	Confi	irmed	
NA <b>Non-Rectangular Sg</b> This Section Does Not ote: All applicable spaces an <b>3. ADDITIONAL "US</b> 1. Wall Disg 0	NA paces Apply re listed under the Non-Rectangular Spaces table SE IT OR LOSE IT" (Adapted from NRCC-LTI- 2. play Combined Floor Display and Lighting 0	NA 04-E) I Task Combined C Eff	3. Ornamental and Speci fects Lighting 0	al Very \	NA 4. /aluable Merchandise 0	Allowed 0	Ą Watts	Confi	irmed	
NA Non-Rectangular Sp This Section Does Not ote: All applicable spaces at G. ADDITIONAL "US 1. Wall Disp 0	NA paces CAPPIV re listed under the Non-Rectangular Spaces table SE IT OR LOSE IT" (Adapted from NRCC-LTI- 2. play Combined Floor Display and Lighting 0	NA D4-E) I Task Combined C Eft	3. Ornamental and Speci fects Lighting 0	al Very V	NA 4. /aluable Merchandise 0	Allowed 0	A Watts	Confi Pass	irmed	
NA Non-Rectangular Sp This Section Does Not tote: All applicable spaces at G. ADDITIONAL "US 1. Wall Disp 0 5. Wall Display	NA paces Apply re listed under the Non-Rectangular Spaces table SE IT OR LOSE IT" (Adapted from NRCC-LTI- 2. play Combined Floor Display and Lighting 0	NA 04-E) I Task Combined C Efi	3. Ornamental and Speci fects Lighting 0	al Very \	NA 4. /aluable Merchandise 0	Allowed 0	Ą Watts	Confi	irmed	

roject Name:	Party City Store #427		NRCC-PRF-01-E	Page 21 of 21	Page 21 of 21		
roject Address:	3850 Grand Ave. Chino 9	1710	Calculation Date	e/Time: 15:33, Mon, Au	: 15:33, Mon, Aug 28, 2017		
Compliance Scope:	ExistingAlteration		Input File Name	e: 207764.cibd16	<		
6. Floor Display and	Task Lighting						
his Section Does Not A	vpply						
/. Combined Ornam	ental and Special Effects	Lighting					
his Section Does Not A	pply						
8. Very Valuable Me	chandise						
This Section Does Not A	vlad						
	,						
H. INDOOR & OUTD	OOR LIGHTING ACCEPTA	VCE TESTS & FORMS (Adapted from	m NRCC-LTI-01-E and NRCC-L	LTO-01-E)		§1	30.4
H. INDOOR & OUTD	OOR LIGHTING ACCEPTA d Acceptance Certificates (	NCE TESTS & FORMS (Adapted from NRCA) —Acceptance Certificates that n Field	m NRCC-LTI-01-E and NRCC-L nust be verified in the field. (Re d Inspector to verify).	LTO-01-E) etain copies and verify for	ms are completed and signed	§ 1 to post in	3 <b>0.4</b> field f
H. INDOOR & OUTDO	DOR LIGHTING ACCEPTA	NCE TESTS & FORMS (Adapted from NRCA) –Acceptance Certificates that n Field	m NRCC-LTI-01-E and NRCC-L nust be verified in the field. (Re d Inspector to verify). Indoor	. <b>TO-01-E)</b> etain copies and verify for	ms are completed and signed Outdoor	§ 1 to post in Conf	3 <b>0.4</b> field f
H. INDOOR & OUTDO Declaration of Require Te	OOR LIGHTING ACCEPTA d Acceptance Certificates ( st Description	NCE TESTS & FORMS (Adapted from NRCA) –Acceptance Certificates that m Fiel NRCA-LTI-02-A	m NRCC-LTI-01-E and NRCC-L nust be verified in the field. (Re d Inspector to verify). Indoor NRCA-LTI-03-A	. <b>TO-01-E)</b> etain copies and verify for NRCA-LTI-04-A	ms are completed and signed Outdoor NRCA-LTO-02-A	§ 1 to post in Conf	30.4 field f irmed
H. INDOOR & OUTDO Declaration of Require Te Equipment Requirir Testing or Verificatio	DOR LIGHTING ACCEPTA d Acceptance Certificates ( st Description g # of units	NCE TESTS & FORMS (Adapted from NRCA) –Acceptance Certificates that in Field NRCA-LTI-02-A Occ Sensors / Auto Time Switch	m NRCC-LTI-01-E and NRCC-L must be verified in the field. (Re d Inspector to verify). Indoor NRCA-LTI-03-A Auto Daylight	LTO-01-E) etain copies and verify for NRCA-LTI-04-A Demand Responsive	ms are completed and signed Outdoor NRCA-LTO-02-A Outdoor Controls	§ 1 to post in Conf	30.4 field f
H. INDOOR & OUTDO Declaration of Require Te Equipment Requirir Testing or Verificatio Occupant Sensors	DOR LIGHTING ACCEPTA d Acceptance Certificates ( st Description g # of units n 4	NCE TESTS & FORMS (Adapted from NRCA) –Acceptance Certificates that in Field NRCA-LTI-02-A Occ Sensors / Auto Time Switch	m NRCC-LTI-01-E and NRCC-L must be verified in the field. (Re d Inspector to verify). Indoor NRCA-LTI-03-A Auto Daylight	LTO-01-E) etain copies and verify for NRCA-LTI-04-A Demand Responsive	ms are completed and signed Outdoor NRCA-LTO-02-A Outdoor Controls	\$ 1 to post in Conf	30.4 field f irmed
H. INDOOR & OUTDO Declaration of Require Te Equipment Requirir Testing or Verificatio Occupant Sensors Automatic Time Swit	DOR LIGHTING ACCEPTA d Acceptance Certificates ( st Description g # of units 4 ch 1	NCE TESTS & FORMS (Adapted from NRCA) –Acceptance Certificates that in Field NRCA-LTI-02-A Occ Sensors / Auto Time Switch Switch	m NRCC-LTI-01-E and NRCC-I must be verified in the field. (Re d Inspector to verify). Indoor NRCA-LTI-03-A Auto Daylight	TO-01-E) etain copies and verify form NRCA-LTI-04-A Demand Responsive	ms are completed and signed Outdoor NRCA-LTO-02-A Outdoor Controls	§ 1 to post in Conf	30.4 field f
H. INDOOR & OUTDO Declaration of Require Te Equipment Requirin Testing or Verificatio Occupant Sensors Automatic Time Swit Automatic Daylighti	DOR LIGHTING ACCEPTA d Acceptance Certificates ( st Description g # of units 4 ch 1 ng 1	NCE TESTS & FORMS (Adapted from NRCA) –Acceptance Certificates that in Field NRCA-LTI-02-A Occ Sensors / Auto Time Switch Switch	m NRCC-LTI-01-E and NRCC-I nust be verified in the field. (Re d Inspector to verify). Indoor NRCA-LTI-03-A Auto Daylight Auto Daylight I I I I I I I I I I I I I I I I I I I	TO-01-E) etain copies and verify for NRCA-LTI-04-A Demand Responsive	ms are completed and signed Outdoor NRCA-LTO-02-A Outdoor Controls	§ 1     to post in     Conf     Big     Big	30.4 field f
H. INDOOR & OUTDO Declaration of Require Te Equipment Requirin Testing or Verificatio Occupant Sensors Automatic Time Swit Automatic Daylighti Demand Responsiv	DOR LIGHTING ACCEPTA d Acceptance Certificates ( st Description g # of units 0 4 ch 1 ng 1 e 0	NCE TESTS & FORMS (Adapted from NRCA) –Acceptance Certificates that in Field NRCA-LTI-02-A Occ Sensors / Auto Time Switch Switch	m NRCC-LTI-01-E and NRCC-L must be verified in the field. (Red Inspector to verify). Indoor NRCA-LTI-03-A Auto Daylight Auto Daylight M	TO-01-E) etain copies and verify for NRCA-LTI-04-A Demand Responsive	ms are completed and signed Outdoor NRCA-LTO-02-A Outdoor Controls Outdoor Controls Outdoor Control	§ 1 to post in Conf	30.4 field f

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Report Version: NRCC-PRF-01-E-08082017-4377 Report Generated at: 2017-08-28 15:34:23



# **FLOOR PLAN GENERAL NOTES**

- A. UPON POSSESSION OF THE PREMISES, DIMENSIONS OF SPACE SHALL BE VERIFIED. G.C. SHALL SUBMIT NOTED DISCREPANCIES TO THE ARCHITECT/ENGINEER, TENANT PROJECT MANAGER, AND REQUIRED VENDORS WITHIN 3 DAYS OF THE START OF CONSTRUCTION.
- B. WHEN RE-USING EXISTING DRYWALL CONSTRUCTION, PATCH AND REPAIR WALLS AS NECESSARY TO ENSURE REQUIRED RATING. PATCH ALL VOIDS INCLUDING DECK FLUTES WITH NON-COMBUSTIBLE MATERIALS.

( A )<del>\</del>

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( E )

- C. ALL PENETRATIONS AT EXISTING SLABS MUST BE APPROVED IN WRITING BY THE LANDLORD PRIOR TO THE COMMENCEMENT OF WORK. GENERAL CONTRACTOR SHALL ENSURE THAT ALL SLAB PENETRATIONS WITHIN THE TENANTS PREMISES ARE PROPERLY SEALED AND REMAIN WATERTIGHT TO PREVENT POSSIBLE DAMAGE
- D. ALL DIMENSIONS ON PLAN FOR NEW INTERIOR WALL LAYOUTS ARE FROM FINISHED WALL TO FINISHED WALL UNLESS NOTED OTHERWISE. PATCH & FIRE STOP GYP. BD. PARTITIONS AS REQUIRED BY LOCAL CODES E.
- WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALING ON THE CONSTRUCTION DOCUMENTS. DO NOT F. SCALE
- G. APPROVED FIRE EXTINGUISHERS SHALL BE FURNISHED AND INSTALLED BY GC AS REQUIRED BY LOCAL
- AUTHORITY. H. PROVIDE & INSTALL BROWN PAPER COVERING APPLIED TO THE STOREFRONT GLAZING DURING MERCHANDISING.
- I. ALL EXTERIOR WALLS TO HAVE A MINIMUM OF R-15 INSULATION VALUE.
- J. VERIFY INTERIOR & EXTERIOR DIMENSIONS, NOTIFY ARCHITECT IMMEDIATELY WITH DISCREPANCIES. K. REFER TO G5.0 (IF APPLICABLE) FOR SITE INFORMATION & REFERENCES.

NOTE: G.C. TO VERIFY ALL EXISTING CONDITIONS PRIOR TO START OF CONSTRUCTION. PATCH & REPAIR EXISTING FINISHES AS REQ'D AND/OR SUPPLY NEW GWB AS REQ'D ABOVE AND BELOW CEILING LEVEL TO COVER ALL EXPOSED CMU. ENSURE THAT ALL WALLS IN SALES AREA ARE FLUSH WIITH ANY COLUMNS, BUMP OUTS, OR CHANGE IN PLANE FOR ATTACHMENT OF NEW SHELVING, REF: A7.0.

# WALL LEGEND SYMBOL DESCRIPTION EXISTING DEMISING PARTITION NEW WALL CONSTRUCTION

====	SOFFIT/BULKHEAD ABOVE.
A	WALL TYPE (SEE WALL TYPE SCHEDULE ON SHEET A2.0)
	DOOR DESIGNATION (SEE DOOR SCHEDULE ON SHEET A2.1)
$\langle \mathbf{A} \rangle$	STOREFRONT DESIGNATION (SEE GLAZING SCHEDULE ON SHEET A2.1)

# **KEYED NOTES** X

-	
1	SINGLE GANG BOX MOUNTED IN WALL AT THIS LOCATION FOR KNOX BOX.
2	STORE ADDRESS TO BE CENTERED ABOVE ENTRANCE STOREFRONT W/ 6" VINYL PEEL/STICK WHITE LETTERS. MOUNT ON INTERIOR SIDE.
3	SALES AREA COLUMN SHALL HAVE STAINLESS STEEL COLUMN WRAPS. PAINT COL. P-2 ABOVE WRAP TO BOTTOM OF DECK, REFER TO 5/A2.0.
4	SALES AREA WALLS ARE REQUIRED TO BE FLUSH.
5	G.C. TO FURNISH & INSTALL NEW FIRE EXTINGUISHERS AS REQ'D BY LOCAL CODES. WHEN MOUNTING ADJACENT TO DOOR OPENING, MAINTAIN 12" CLEAR TO DOOR OPENING FOR ADA COMPLIANCE. PREFERRED LOCATIONS SHOWN. FINAL LOCATION, MOUNTING HEIGHT, & QUANTITY BY FIRE INSPECTOR. G.C. TO VERIFY FIRE MARSHALL REQUIREMENTS FOR INSPECTION & TAGGING.
6	G.C. TO INSTALL WALL BLOCKING AT 48" AND 120" O.C. A.F.F. AT ALL WALLS WITH WALL FIXTURES SHOWN ON FIXTURE PLAN INCLUDING THE STOCKROOM. RE: DETAIL SHEETS A5.1 & A7.0
7	HELIUM TANK STORAGE AREA, SEE A7.0 & P2.0
8	EXISTING ELECTRICAL PANELS. RE: ELECTRICAL DRAWINGS.
9	PHONE/EMS BOARD, RE: ELECTRICAL DRAWINGS.
10	NEW FURRING WALL TO ALIGN WITH EXISTING WALL CONSTRUCTION.
11	TACTILE "EXIT" SIGN. SEE DETAIL 2/G1.2
12	TACTILE ADA ACCESSIBILITY "ENTRY" SIGN. SEE DETAIL 2/G1.2
13	LINE OF FLOORING CHANGE UNDER GONDOLAS.
14	APPLY SV-2 AND FRP-1 TO HATCHED AREAS INDICATED FOR UNDER FIXTURE FOR PREPACKAGED CANDY STORAGE. REF: SHEET A3.2

![](_page_12_Figure_15.jpeg)

![](_page_13_Figure_0.jpeg)

![](_page_14_Picture_0.jpeg)

![](_page_15_Figure_0.jpeg)

											Party City 25 Green Pond Road Rockaway, NJ 07860
	4 4 4 1					- -					09/05/17 PERMIT ISSUE DATE 09/05/17 REVISIONS # DATE DESCRIPTION E
± 15'-	5 A1.3 -8" EQ EQ									ADJACENT TENANT (BATH AND BODY WORKS)	STORE #427 TPLACE 0. CA 91710
CELEX FURNITURE GALLERY)								± 52' - 2"			NO SPECTRUM MARKE
											Larson Design Group 1000 Commerce Park D Suite 201 Williamsport, PA 17701 PHONE 570.323.6603 FAX 570.323.9902 www.larsondesigngroup.con Architects Engineers Survey
	± 36'-9"		± 37' - 7"		± 149' - 3"	± 37' - 6"		± 37' - 5	<u></u>		It is in violation of the law for any person, unless acting under the direction of a licensed Architect, Engineer of Land Surveyor, to alter an iter in any way. Plans, maps, specifications, studies, and reports not containing a red in seal imprint on the cover shee accompanied by and original signature by the licensed professional may have been fraudulently altered and shal not be considered an orginal copy. Copyright Protected 2016, Larson Design Group PROTO NO. 1703 PROJECT NO. 8099-196 DRAWN BY TCR APPV'D BY BMD SHEET TITLE
A1.3 SCALE: 1/8"	"= 1'-0" BID FOR BI	ALTE D PURPOS	ERNATE	EITE	M #1	- SM	OKE 8	& HEA		NTS	SMOKE/HEAT VEN PLAN SHEET NO. A1.3

![](_page_16_Figure_0.jpeg)

METAL STUD SIZE	MAXIMUM UNBRACED HEIGHT
3 5/8" X 25 GA.	11'-3"
3 5/8" X 20 GA.	14'-0"
3 5/8" X 16 GA.	16'-0"
6" X 25 GA.	16'-0"
6" X 20 GA.	21'-0"
6" X 16 GA.	25'-0"
NOTES	
1. ALL METAL STU ALLOWABLE UN CHART BELOW.	DS TO BE CEMCO ICC ESR# 3016. BRACED HEIGHT AS PER
2. ALL CONNECTIO DETAILS. ALL M/ BE STRICTLY AE APPROVAL FOR FROM THE BUIL	ON AND FASTENERS TO BE AS PER ANUFACTURERS AND ESR # TO DHERED TO BY G.C. UNLESS EQUAL SUBSTITUTION IS RECEIVED DING DEPARTMENT.
3. ALL GYPSUM BC THROUGHOUT. SCREWS 12" O.C O.C. AROUND PI OTHERWISE	DARD TO BE 5/8" TYPE "X" ATTACH WITH 1" TYPE S DRYWALL C. VERTICALLY AT STUDS AND 8" ERIMETER. UNLESS NOTED

![](_page_17_Figure_0.jpeg)

	HARDWARE	SCHEDL	JLE	
	AUTOMATIC ENTRY DOORS -10" BOTTOM RAILS -ONE POINT ALARM CONTACTS W/ INTERNAL CONTACTS TO ALARM THE ENTIRE DOOR INLCUDING BREAKOUTS	GROUP #3	TOILET ROOM DOORS 3- HINGES 1- PRIVACY LOCK SET 3- SILENCERS	1- DOOR STOP 1- CLOSER 1- 48" KICK PLATE
	-ROTARY KEY SWITCH THAT WILL ALLOW FOR OFF/AUTOMATIC/OPEN/LIMITED OPENING AND DIRECTIONAL TRAFFIC -DOOR POSITION SWITCH -LOCK INDICATOR	GROUP #4	HALLWAY DOOR 3- HINGES 3- SILENCERS 1- PANIC HARDWARE	1- DOOR STOP 1- CLOSER 1- 48" KICK PLATE
-L -B C( -D -D -D	-BEST CYLINDER LOCK W/ REMOVABLE CONST. CORE -DOUBLE BEVELED GUIDE TRACK -DG 3000 BP SLIDING DOOR W/ FULL BREAKOUT -DS 3000 BP IMPACT SLIDING DOOR WHERE DADE	GROUP #5	OFFICE DOOR 3- HINGES 1- STOREROOM LOCK SET 3- SILENCERS	1- DOOR STOP 1- CLOSER 1- PEEP HOLE
	COUNTY REGULATION OR EQUAL APPLY (-MUST BE ORDERED THROUGH MCKENZIE. RE: G2.0) STOCKROOM/SALES AREA DOUBLE DOORS "ELIASON" "EASY SWING' DOUBLE ACTION DOORS MODEL: HEAVY DUTY HCP-10 1-1/2" THICK POLYMRE CELL CORE W/ HIGH STRENGTH STRUCTURAL PVC FRAME AND 14"X16"	GROUP #6	DOUBLE STOCKROOM EXT6-HINGES1- PANIC HARDWARE SET3- SILENCERS2- 10" KICK PLATES1- CLOSER1- PEEP HOLE1	ERIOR DOORS - WEATHERSTRIPPING - SWEEPS - FLUSH BOLTS - DOUBLE DOOR STRIK - EXIT ALARM - RAIN DRIP
	WINDOWS. FINISH: .125" THICK HIGH IMPACT THERMOPLASTIC EXTERIOR - BLACK WITH BLACK BUMPERS REQUIRES HM STEEL "KNOCK-DOWN" FRAME WITHOUT STOPS. INSTALL "ELIASON" BRACKET AND	GROUP #7	PASSAGE EXTERIOR DOOF 3- HINGES 1- PANIC HARDWARE SET 3- SILENCERS 1- 48" KICK PLATE	1- CLOSER 1- WEATHERSTRIPPIN 1- SWEEP 1- PEEP HOLE 1- RAIN DRIP
JAMB REINF INSTF	JAMB GUARD ASSEMBLIES AND ADDITIONAL REINFORCEMENT PER MANUFATURER'S INSTRUCTIONS	GROUP #8	JANITOR DOOR 3- HINGES 1- 48" KICK PLATE 1- STOREROOM LOCKSET	3- SILENCERS 1- DOOR STOP 1- CLOSER
		GROUP #9	FITTING ROOM DOORS 2- SPRING HINGES 1- PRIVACY LOCK SET 3- SILENCERS	1- DOOR STOP

	HARDWARE SPEC	IFICATIONS	
	BALL BEARING HINGES: PBB BB81 4 1/2" X 4 1/2" FINISH: SATIN CHROME	KICK PLATE:	HIAWATHA 10" X 34" FINISH: SATIN STAINLESS STEEL (SEE NOTE 11. FOR 48" KICK PLATE)
LATCH SET:	"SCHLAGE" AL10S FINISH: SATIN CHROME	SILENCER:	IVES, NO. 20
OCK SET:	"SCHLAGE" AL40S FINISH: SATIN CHROME	WEATHERSTRIPPING:	REESE DS75 FINISH: ALUMINUM
OM LOCK SET:	"SCHLAGE" AL80BD FINISH: SATIN CHROME	SWEEP:	REESE 377 FINISH: ALUMINUM
RDWARE SET:	"DETEX" V40xEB BATTERY POWERED -	PEEP HOLE:	IVES 698 FINISH: SATIN CHROME
CYLINDER "SCHLAGE 80-102 FINISH: SATIN	FLUSH BOLTS:	IVES FB458 FINISH: SATIN CHROME	
	CHROME	DOUBLE DOOR STRIKE:	DETEX 102212-2 FINISH: BLACK
	DOR-O-MATIC SC81 FINISH: ALUMINUM	EXIT ALARM:	DETEX EAX500 FINISH: GRAY
OP:	IVES TYPE 436 FINISH: SATIN CHROME	RAIN DRIP:	REESE 535 FINISH: ALUMINUM
INGES	PBB SP81 3-KNUCKLE FULL MORTISE		
<u>DTES:</u> HARDWARE RE E AND APPEAR DWARE CUT SH R TO CONSTRU OCKS TO BE P	PRESENTS THE INTENDED QUALITY, RANCE. CONTRACTOR TO PROVIDE IEETS TO TENANT PROJECT MANAGER JCTION. ROVIDED WITH "BEST 7-PIN"	<ol> <li>PROVIDE ANY REQU DOOR. CONTACT LA</li> <li>PAINT DOOR &amp; FRAM</li> <li>INSTALL "PEMKO" SM</li> <li>INSTALL DOOR STOF</li> </ol>	IRED SIGNAGE AT EXIT OF SERVICE NDLORD REPRESENTATIVE IE TO MATCH ADJACENT WALL. NOKE SEALS AT FIRE RATED DOORS.
RCHANGEABLE	CORES AND CYLINDERS	A WALL OR OTHER F	PART OF CONSTRUCTION WHEN
DOORS SHALL IOUT THE USE WLEDGE OR EF	BE OPERABLE FROM THE INSIDE OF A KEY OR ANY SPECIAL FORT.	10. INSTALL NEW DOOR CLOSING SPEED FRO LATCH IS 3 SECOND	CLOSING HARDWARE SO THAT OM 70° OPEN TO 3" FROM THE S MINIMUM AND THAT THE SPEED
XTERIOR DOOF S WITH TAMPE SHOLD IF NOT	RS PROVIDE WEATHER STRIPPING, RPROOF PINS AND AN ADA EXISTING - ALL THRESHOLDS	FROM 90° OPEN TO MINIMUM (PER 2010 ADJUST DOOR CLOS LBS OF FORCE TO O	12° FROM THE LATCH IS 5 SECONDS ADA STANDARDS). IF NECESSARY, SER(S) TO REQUIRE LESS THAN 5 PERATE.

![](_page_18_Figure_0.jpeg)

	GLASS SCHEDULE		
MARK	GLASS TYPE	METAL	COMMENTS
(V1)	1" INSULATED LOW-E TEMPERED	ALUMINUM	LOW-E ON 3RD FACE
(V2)	1/4" TEMPERED	ALUMINUM	
STOREFRONT SYSTEM TO HAVE THERMAL BREAK			

![](_page_18_Figure_2.jpeg)

A2.2 SCALE: 1 1/2" = 1'-0"

![](_page_18_Figure_3.jpeg)

\_\_\_\_\_

![](_page_18_Figure_4.jpeg)

R		ACCESSORIES SCHEDULE	NOTE: ALL PLUMBING ACCESSORIES TO BE SUPPLIED AND INSTALLED BY G.C
MARK	DESCRIPTION	MANUFACTURER / CATALOG NO.	NOTES
1	MIRROR	BOBRICK #B-290-1836, 36"x 18" MIRROR FINISH: STAINLESS STEEL, SATIN	
2	TOILET SEAT COVER DISPENSER	IMPERIAL BAG & PAPER CO. # 708DISPPK	CONTACT: AILEEN 201-437-7440 X 3117
3	TOILET ROOM SIGNAGE	REFERENCE DETAIL 2/G1.2	
4	GRAB BARS	BOBRICK #B-6806.99, CONCEALED MOUNTING/ SNAP FLANGE, 18 GA. TYPE 304 STAINLESS STEEL 18", 36" AND 42" LENGTHS, STAIN FINISH W/ PEENED NON-SLIP GRIPPING SURFACE.	
5	HAND DRYER	XLERATOR HAND DRYER- MODEL XL-BW, WITH RECESS KIT	110/120 V - 12.5 AMP
6	UTILITY HOOK	BOBRICK #B-670, SURFACE MOUNTED, STAINLESS STEEL, BRIGHT POLISHED FINISH, 1/2"x 2", FLANGE 2"x 2"	
7	SOAP DISPENSER	IMPERIAL BAG & PAPER CO. GOJO CHROME DISPENSER #1919-04	CONTACT: AILEEN 201-437-7440 X 3117
8	SANITARY NAPKIN DISPOSAL	BOBRICK #B-270, SURFACE MOUNTED. FINISH: STAINLESS STEEL, SATIN. SIZE: 8"Wx 11H"x 4"D - WOMEN'S ROOM ONLY	
9	BABY CHANGING STATION	KOALA CORPORATION #KB208-01, SURFACE MOUNTED, BABY CHANGING STATION & IDENTIFYING DOOR PLAQUE. FINISH: GRAY	
10	TOILET PAPER DISPENSER	IMPERIAL BAG & PAPER CO. # R2790TBK	CONTACT: AILEEN 201-437-7440 X 3117
11	UNDERSINK PIPE COVER	TRUEBRO LAV. SHIELD #2018-AS-L1 20"X18"	
12	MOP SINK SUPPLY SHELF	EXISTING TO REMAIN.	INSTALL NEW SHELF.
13	MOP & BROOM HOLDER	BOBRICK #B-223x24. FINISH: STAINLESS STEEL, SATIN. SIZE: 24"W X 5"H X 3- 1/4"D.	

![](_page_19_Figure_2.jpeg)

OF	FICE AC	CESSORIES SCH
MARK	DESCRIPTION	MANUFACTURER / CATALOG NO.
1	COUNTERTOP	30" DEEP COUNTERTOP WITH BACKSPLAS
2	SHELVES AND STANDARDS	18" DEEP SHELVES - FINISH: WHITE MELAM BRACKETS ON 48"L REEVE 20-4 STANDAR BLOCKING AS REQUIRED
3	SAFE	INSTALL UNDER COUNTER BOLTED TO SL
4	FILE CABINET	INSTALL UNDER COUNTER
5	OFFICE CHAIR	
6	FAX MACHINE	
7	COMPUTER MONITOR	
8	PRINTER	
9	COPIER	
10	BULLETIN BOARD	
11	MUSIC SYSTEM	
12	SECURITY SYSTEM	
13	WHITE BOARD	

![](_page_20_Figure_1.jpeg)

![](_page_20_Figure_2.jpeg)

![](_page_20_Figure_3.jpeg)

![](_page_20_Figure_6.jpeg)

![](_page_20_Figure_8.jpeg)

![](_page_20_Figure_9.jpeg)

![](_page_20_Figure_10.jpeg)

E BREAK ROOM ELEVATION

A3.1 SCALE: 1/2" = 1'-0"

![](_page_20_Figure_11.jpeg)

![](_page_21_Figure_0.jpeg)

![](_page_22_Figure_0.jpeg)

![](_page_22_Figure_1.jpeg)

![](_page_22_Figure_2.jpeg)

A5.0

# SIGNAGE NOTES:

- 1. SIGNAGE BY OTHERS UNDER SEPARATE PERMIT.
- 2. G.C. SHALL COORDINATE ALL POWER SIGNAL & BLOCKING REQUIREMENTS WITH OTHERS.
- 3. G.C. TO INSTALL ACCESS PANELS ON INTERIOR WALL BEHIND SIGN AREA TO ALLOW SIGN INSTALLER TO WIRE THE SIGN

# KEYED NOTES

1	AUTOMATIC SLIDING DOORS W/ TRANSOM. REF 2/A1.0.	under
2	ADA APPROVED ENTRANCE SIGN. SEE SHEET G1.2 FOR MOUNTING HEIGHTS.	Land Surv
3	STORE ADDRESS.	in any v
4	NEW EMERGENCY LIGHTING.	specifica reports not
5	EXISTING SINGLE GANG BOX MOUNTED IN WALL AT THIS LOCATION FOR KNOX BOX, IF REQUIRED BY LOCAL FIRE DEPARTMENT, G.C. TO VERIFY IF REQUIRED.	seal imprir accompa
6	NEW STOREFRONT & TEMPERED SAFETY GLAZING TO MATCH EXISTING. NEW WINDOWS AND DOORS TO BE MIN. 1/4" "TEMPERED SAFETY."	professio fraudulen
7	PATCH AND REPAIR FINISHES IF/AS REQUIRED FOR NEW STOREFRONT WORK. MATCH ADJACENT FINISHES.	not be co copy. Co 2016 L a
8	FACADE LEASE LINE	2010, La
9	INTERNALLY ILLUMINATED SIGN - REFER TO SIGN SHOP DRAWINGS FOR DETAILS & MATERIALS. FINAL CONNECTION BY TENANT SIGNAGE CONTRACTOR.	PROTO NO.
10	EXISTING FACADE TO REMAIN, NO WORK.	
11	EXISTING STOREFRONT CANOPY TO REMAIN, NO WORK. PROTECT DURING DEMOLITION AND CONSTRUCTION.	
12	EXISTING LIGHTING TO REMAIN	DRAWN BT
13	EXISTING BOLLARDS TO REMAIN. PATCH AND REPAIR AS REQUIRE TO BRING BACK TO LIKE NEW CONDITION. (TYP. OF 11)	APPV'D BY
14	EXISTING ROOF DRAIN DOWNSPOUT TO REMAIN.	
15	EXISTING HOSE BIB TO REMAIN.	SHEET TITLE
16	EXISTING WATER METER TO REMAIN.	EX
17	EXISTING GAS METER TO REMAIN	
18	EXISTING METER BANK AND CONDUIT TO REMAIN. REFERENCE ELECTRICAL DRAWINGS.	
19	EXISTING ELECTRICAL EQUIPMENT TO REMAIN.	
20	EXISTING SPRINKLER RISER TO REMAIN.	SHEET NO.
21	EXISTING FIRE ALARM BELL TO REMAIN.	
22	EXISTING ELECTRICAL OUTLET TO REMAIN.	
		1 -

![](_page_23_Figure_0.jpeg)

1	NEW ENTRY, DOORS, STOREFRONT, AND TRANSOM.
2	TYPE-B STOREFRONT LIGHTING MOUNTED TO ACT CEILING. KEEP TIGHT TO STOREFRONT, REF: 2/A4.0
3	CART CORRAL. REF 7/7.2
4	FRP-3 TO CONTINUE TO 12" BEHIND FIXTURE
5	PROVIDE BLOCKING BEHIND FIXTURES. REFER TO SHEET A7.2
6	CORNER FILLER.
7	P-3 DOOR AND FRAME.

BTM. OF DECK - ±18'-2 3/4"
BTM. OF BEAM - ±17'-2 1/4"
BTM. OF DUCT - ±13'-0"
BTM. OF CASHWRAP LIGHTING -16'-0"
BTM. OF SALES LIGHTING - 12'-6"
BTM. OF STOCKROOM LIGHTING - 12'-6"
PERIMETER SHELVING - 12'-0"
INTERIOR SHELVING 10'-6"
NOTE: CONTRACTOR TO VERIFY EXISTING CONDITIONS & MOUNT SPRINKLERS, CONDUIT, AND DUCTWORK AS HIGH AS POSSIBLE WITHIN THE EXISTING CEILING SPACE. NOTIFY ARCHITECT/ENGINEER OF ANY POTENTIAL CONFLICTS PRIOR TO FABRICATION/INSTALLATION.
FINISH FLOOR
KEY HEIGHTS DIAGRAM

![](_page_23_Figure_8.jpeg)

![](_page_23_Figure_10.jpeg)

![](_page_23_Figure_11.jpeg)

# 2016 California Green Building Code

Tables 4.504.1, 4.504.2, 4.504.3, 4.5
C CONTENT LIMITS FOR ARCHITECTURAL COATINGS <sup>2,3</sup>
Grams of VOC per Liter of Coating,
Less Water and Less Exempt Compounds

COATING CATEGORY <sup>2,3</sup>	CURRENT LIMIT
Flat coatings	50
Nonflat coatings	100
Nonflat-high gloss coatings	150
Specialty Coatings	
Aluminum roof coatings	400
Basement specialty coatings	400
Bituminous roof coatings	50
Bituminous roof primers	350
Bond breakers	350
Concrete curing compounds	350
Concrete/masonry sealers	100
Driveway sealers	50
Dry fog coatings	150
Faux finishing coatings	350
Fire resistive coatings	350
Floor coatings	100
Form-release compounds	250
Graphic arts coatings (sign paints)	500
High temperature coatings	420
Industrial maintenance coatings	250
Low solids coatings <sup>1</sup>	120
Magnesite cement coatings	450
Mastic texture coatings	100
Metallic pigmented coatings	500
Multicolor coatings	250
Pretreatment wash primers	420
Primers, sealers, and undercoaters	100
Reactive penetrating sealers	350
Recycled coatings	250
Roof coatings	50
Rust preventative coatings	250
Shellacs	
Clear	730
Opaque	550
Specialty primers, sealers and undercoaters	100
Stains	250
Stone consolidants	450
Swimming pool coatings	340
Traffic marking coatings	100
Tub and tile refinish coatings	420
Waterproofing membranes	250
Wood coatings	275
Wood preservatives	350
Zinc-rich primers	340

## <sup>3</sup> Values in this table are derived from those specified by the California Air Resources Board, Architectural Coatings Suggested Control Measure, February 1, 2008. More information is available from the Air Resources Board. FORMALDEHYDE LIMITS<sup>1</sup>

ximum Formaldehyde Emissions in Parts per M	
	CURREN
PRODUCT	LIMIT
Hardwood plywood veneer core	0.05
Hardwood plywood composite core	0.05
Particleboard	0.09
Medium density fiberboard	0.11
Thin medium density fiberboard <sup>2</sup>	0.13

# VOC AND FORMALDEHYDE LIMITS

## FORM **GRN 11**

The tables below are taken from the 2016 California Green Building Code 4.504.1, 4.504.2, 4.504.3, 4.504.5, 5.504.4.1, 5.504.4.2, 5.504.4.3, 5.504.4.5

Toxics Control Measure for Composite Wood additional information, see <i>California Code of</i> 93120.12. <sup>2</sup> Thin medium density fiberboard has a maxir	as tested in accordance with ASTM E 1333. For <i>Regulations</i> , Title 17, Sections 93120 through mum thickness of <sup>5</sup> / <sub>16</sub> inches (8 mm).
Less Water and Less Exemp	ot Compounds in Grams per Liter
SEALANTS	CURRENT VOC LIMIT
Architectural	250
Marine deck	760
Nonmembrane roof	300
Roadway	250
Single-ply roof membrane	450
Other	420
SEALANT PRIMERS	
Architectural	
Nonporous	250
Porous	775
Modified bituminous 500	500
Marine deck	760
Other	750
Note: For additional information regarding me tables, see South Coast Air Quality Managem	thods to measure the VOC content specified in these ent District Rule 1168.
ADHESIV	E VOC LIMIT <sup>1,2</sup>

RENT VOC LIMI
50
50
150
100
60
50
65
50
50
50
70
100
250
50
510
490
325
250
550
80
250
140
250
30
50
50
30
80
0

ROOM FINISH SCHEDULE					
ROOM	FLOOR	BASE	WALLS	CEILING	CEILING HEIGHT
SALES	VCT-1	B-1	FRP-3 TO 48" AFF ON EXPOSED WALLS P-3 ABOVE	OPEN TO DECK	OPEN TO DECK
STOCKROOM	SC-1	B-1	P-1	OPEN TO DECK	OPEN TO DECK
RESTROOMS	SV-1	SV-1	FRP-2	EXISTING GYP.	±8'-0"
HALLWAY	VCT-1	B-1	FRP-3TO 48" AFF	EXISTING GYP.	±8'-0"
OFFICE	VCT-1	B-1	P-1	ACT-1	9'-0"
VESTIBULE	VCT-1	B-1	FRP-3 TO 48" AFF P-3 ABOVE	ACT-1	±13'-0"
BREAK ROOM	SV-1	SV-1	FRP-1]TO 48" AFF	ACT-1	9'-0"
EGRESS HALLWAY	VCT-1	B-1	FRP-3TO 48" AFF	ACT-1	9'-0"
FITTING ROOMS	VCT-1	B-1	P-1	ACT-1	9'-0"
JANITOR'S CLOSET	SV-1	SV-1	FRP-1TO 48" AFF	EXISTING GYP.	± 8'-0"

MATERIAL	DESCRIPTION
VINYL TILE	ARMSTRONG- EXCELON COMPANION SQUARE / PARTY WHITE 12" x TURN PATTERN
CONCRETE SEALANT	L&M CONSTRUCTION CHEMICAL- DRESS AND SEAL WB30 SEALER, M
SHEET VINYL (ALT.)	ARMSTRONG MEDINTONE - H5303 ALMOST BLACK. G.C. TO CURVE UP WALL MIN. OF 6" WITH 3/8" COVE.
PAINT	BENJAMIN MOORE- NAVAJO WHITE #OC95, EGGSHELL FINISH
PAINT	BENJAMIN MOORE- WHITE HERON #OC57, FLAT FINISH OR SHERWIN WILLIAMS - BRILLIANT WHITE #B48W61 SUPER SAVE-LITE
PAINT	CALIFORNIA PAINTS- EYE CANDY #DE5943, EGGSHELL FINISH OR DUNN EDWARDS - MARDI GRAS DE5943
FIBERGLASS PANEL	MARLITE COMPANY- COLOR: #P-100 WHITE, PEBBLE WITH MATCHING ALL TRIMMED EDGES TO BE MITERED. HOLD FRP CONNECTORS 4" A
FIBERGLASS PANEL	MARLITE COMPANY- SYMMETRIX WITH SANI-COAT, COLOR: C100-G4 TRIM AT EDGES) ALL TRIMMED EDGES TO BE MITERED. HOLD FRP C
FIBERGLASS PANEL	MARLITE COMPANY- COLOR: #P619 PURPLE, PEBBLE WITH MATCHIN TRIMMED EDGES TO BE MITERED. HOLD FRP CONNECTORS 4" AFF.
BREAK METAL	22 GA. FOR TUBE STEEL COL. WRAPS & 18 GA. FOR CUSTOM WRAPS
PLASTIC LAMINATE	WILSONART- #D315 -6 COLOR: PLATINUM
VINYL BASE	JOHNSONITE- 4" COVE VINYL BASE, COLOR: BLACK
ACOUSTICAL CEILING	ARMSTRONG 24" X 48" X 5/8" "FISSURED" #755 WHITE CLASS 'A' PANEL IN FACTORY WHITE. WITH PRELUDE ML 15/16" EXPOSED TEE
	MATERIAL VINYL TILE CONCRETE SEALANT CONCRETE SEALANT SHEET VINYL (ALT.) PAINT PAINT PAINT PAINT FIBERGLASS PANEL FIBERGLASS PANEL FIBERGLASS PANEL BREAK METAL BREAK METAL VINYL BASE ACOUSTICAL CEILING

![](_page_24_Figure_15.jpeg)

A6.0 SCALE: 12" = 1'-0"

A6.0

SHEET NO.

	1	8" MAX
CATEGORY	REQUIREMENTS	12 GA HANGER
CONNECTIONS/HANGERS	NOTE: USE HEAVY DUTY GRID	
INTERSECTION STRENGTH	180 LBS	SLOPED MAX.
HANGERS	#12 @ 4' O.C./#10 @ 5' O.C.	
PLUMB	NOT MORE THAN 1 IN 6 OR 10" FROM VERTICAL	TEE END
CONNECTION DEVICES	MIN. 100LBS.	
PERIMETER WIRES	MAXIMUM 8" FROM WALLS	
SPLAY BRACING	NOTE: USE HEAVY DUTY GRID	SCREW ATTACH
4 WIRE CLUSTERS	REQUIRED OVER 1000 SF.	GRID TO CLIP
FIRST POINT	MAX. 6' FROM PERIMETER WALLS	WALL ANGLE.
SPACING	12' O.C.	ATTACH TO WALL
CONNECTION STRENGTH	MIN. 200LBS.	DETAIL @ TWO
COMPRESSION POSTS	REQUIRED (CONDUIT/STEEL STUD)	GRID ATTACHED TO
MOLDING/PARTITIONS	NOTE: USE HEAVY DUTY GRID	WALL ANGLE
MOLDING	MIN. 2"	12 GA HANGER 8" MAX
ATTACHMENT(NO MOVEMENT)	REQUIRED @ 2 ADJACENT WALLS	WIRE. INSTALL
CLEARANCE (FREE TO MOVE)	3/4" @ 2 ADJACENT WALLS	
SPACER BARS	REQUIRED	(1:6 MAX)
PARTITION ATTACHMENT	ALLOWED WITH BRACING, UNDER 2,500 SF.	OR VERTICALLY
LIGHTING/FIXTURES	NOTE: USE HEAVY DUTY GRID	TEE END
LIGHTS LESS THAN 56LBS	2 CONNECTORS/2 SLACK WIRES	
LIGHTS GREATER THAN 56LBS	SUSPEND FROM STRUCTURE, NOT GRID	
MECHANICAL LESS THAN 20LBS	ATTACHED TO GRID	NO ATTACHMENT-
MECHANICAL GREATER THAN 20LBS, LESS THAN 56LBS	2 SLACK WIRES	GRID TO CLIP
MECHANICAL GREATER THAN 56LBS	SUSPEND FROM STRUCTURE, NOT GRID	

GRID: MAX 4 LBS/SF, 1/360 MAX DEFLECTION.

![](_page_25_Figure_2.jpeg)

1 SEISMIC CEILING DETAIL A6.1 SCALE: NTS

![](_page_25_Figure_4.jpeg)

SUSPENSION SYSTEM FOR ACOUSTICAL LAY-IN CEILING TO COMPLY WITH SEISMIC DESIGN CATEGORY D REF: 2009 IBC; ASTM C 635, C 636 & E 580/E 580M; ASCE 7-05 AND CEILINGS AND INTERIOR SYSTEMS CONSTRUCTION ASSOCIATION (CISCA). CODES LISTED IN ORDER OF PRECEDENCE.

![](_page_25_Figure_6.jpeg)

![](_page_25_Figure_7.jpeg)

3 ARMSTRONG S A6.1 SCALE: NTS

	Party City 25 Green Pond Road
CUT THROUGH THE END DETAILS OF CROSS TEES INSERTED INTO THE MAIN BEAM DESIGNATED FOR THE SEISMIC SEPARATION.	Rockaway, NJ 07866           09/05/17           09/05/17           PERMIT ISSUE DATE 09/05/17           REVISIONS           #         DATE         DESCRIPTION         BY           -         -         -         -         -           -         -         -         -         -         -           -         -         -         -         -         -         -           -         <
INSET A <sup>1</sup> / <sub>4</sub> " LONG #10 SCREW THROUGH THE SLOT IN THE CLIP, INTO THE UPPER XL CLIP STAKE HOLE. USE THE VERTICAL STAMP MARK BELOW THE HORIZONTAL SLOT TO PROPERLY POSITION THE SCREW WITHIN THE CLIP. INSTALL ONE SCREW FROM EACH SIDE OF THE ASSMEBLED CLIP TO HOLD THE PROPER SHAPE. DO NOT ALLOW SCREW THREADS TO STRIP OUT THE STEAK HOLE	STORE #427 IARKETPLACE CHINO, CA 91710
EISMIC JOINT CLIP-CROSS TEE         PREPARE THE MAIN BEAM SPLICE TO RECIEVE THE SEPARATION JOINT CLIP BY CUTTING THE LOCKING TAB FROM THE LEFT SIDE OF THE CONNECTION AND REMOVING <sup>3</sup> / <sub>4</sub> " FROM THE END OF THE BEAM ON THE RIGHT.         INSTALL THE CLIP USING SCREWS #1 AND #2 INSTALL THROUGH THE HOLES IN THE CLIP AND INTO THE RIGHT HAND MAIN BEAM.         ALIGN THE INDEXING NIB WITH THE LOWER HOLE ON THE LEFT HAND MAIN AND INSERT SCREWS #3 AND #4 INTO THE UPPER HOLES.         INSTALL SJCG CROSS TEE SEPARATION JOINT CLIPS AT ONE END OF EVERY CROSS TEE THAT	CHINO SPECTRUM M 3850 GRAND AVE.
SPANS THE AREA OF THE MAIN BEAM SEPARATION. FOLLOW INSTRUCTIONS FOUND ON THE SUG BATA PAGE (CS-3815).	Larson Design Group <sub>®</sub> 1000 Commerce Park Dr Suite 201 Williamsport, PA 17701 PHONE 570.323.6603 FAX 570.323.9902 www.larsondesigngroup.com Architects Engineers Surveyors It is in violation of the law for any person, unless acting under the direction of a licensed Architect, Engineer or Land Surveyor, to alter an item in any way. Plans, maps, specifications, studies, and reports not containing a red ink seal imprint on the cover sheet accompanied by and original signature by the licensed professional may have been fraudulently altered and shall not be considered an orginal copy. Copyright Protected

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 PROTO NO.
 1703

 PROJECT NO.
 8099-196

 DRAWN BY
 BCW

APPV'D BY GWB

FINISH DETAILS

A6.1

SHEET NO.

S		ΔΤΔ	NOTE: FIXTURE LAYOUT SHOW	IN IS FOR		
			REFERENCE ONLY AS A PREFE OBTAIN THE APROVED FIXTURI	ERRED LAYOUT.		
SE	EASONAL:	0 LN FT 28%	STORE DATA DIRECTLY FROM	PARTY CITY.		
EV	/ERYDAY: TOTAL: 1	0 LN FT 72% .656 LN FT	NOTE:	NOTE:		
PLU	S CARDS:	64 LN FT		G.C. TO VERIFY FLOORING ID		5
PLUS MY PLUS INSCF	'LAR DSP: RIBE/INVs:	56 LN FT ECK LN FT	BY LOCAL AND STATE CODE.	TO ANCHORING FIXTURES.		33' - 3
SQUARE FOC	DTAGE					+
SAL NON-SAL	ES AREA: ES AREA: TOTAL: 19	0 SQ FT 88% 0 SQ FT 12% ,945 SQ FT				
FIXTU	RE LEGE	END				
LABEL	SYMBOL	DESCRIPTION				
WF-1		48 W X 144 H GO BASE) (AT SALES	S AREA) ANCHORED TO WALL		B	
WF-2		48"W X 144"H GO BASE) (AT STOCI	NDOLA WALL UNIT (W/ 19" KROOM) ANCHORED TO WALL			
FF-1		48"W X 126"H (DC ISLAND GONDOL	OUBLE SIDED) A UNIT			
FF-2		48"W X 144"H (DC GONDOLA CARD	OUBLE SIDED) ISLAND UNIT,			
FF-3		48"W X 102"H (DC ISLAND GONDOL	OUBLE SIDED) A UNIT			1' - 5"
FF-4		48"W X 102"H (SII ISLAND UNIT	NGLE SIDED) GONDOLA			+ +
FF-5	18"x48"	18"W X 48"L X 120 SHELVING	"H LOZIER STOCKROOM			
FF-6	2 - 6 "	96"H LOZIER BUI	MP OUT UNIT			
FF-7		48"W X 144"H (DO 13"/19" BASE)	UBLE SIDED) ISLAND GONDOLA (W/		<b>(C</b> )	
FF-8		48"W X 186"H ISLA	AND GONDOLA (W/ 13" BASE)		" ס	
FF-9		48"W X 54"H (DOL GONDOLA ON WH	IBLE SIDED) ROLLING ISLAND IEELS NO ANCHORAGE REQ'D		± 131'	
EC-1		126"H GONDOLA BOLTED DIRECTL	ISLAND UNIT ENDCAP Y TO ISLAND UNIT.			=
NOTE: CONT	TACT PARTY CIT	Y STRUCTURAL ENG SEISMIC DRAWINGS	INEER VENDOR ON DETAILS.			31' - 6
						+
FVFD	NOTES	X				
1 G.C. TC			STEEL CHAIN PERMANENTLY SECURED TO V	WALL AND 4'X8' PLYWOOD BACKING.		
PROVIE 2 CART C	DE PERMANENT	ANCHOR AT ONE SI	DE AND HOOK AND I-BOLT AT OPPOSITE SIDE	FOR SECUREMENT OF TANKS TO WALL.		
3 COUNT	ER HEIGHT TO	BE 34" A.F.F. MAX. FUI			$\frown$	
4 TENAN SHEET	VINYL FLOORIN	16) BOX LOCKERS BY G AND FRP-1 TO BE II	GRAINGER, ITEM # 4HE43, FOR EMPLOYEE S NSTALLED BELOW AND BEHIND LOCKERS TO	A MIN. OF 12" BEYOND AND ABOVE. REF:	$(\mathbf{D})$	
F/A3.1 5 G.C. TC	O PROVIDE SUPP	PLY SHELF AS INDICA	TED NEXT TO NEW MOP SINK FOR STORAGE	OF ALL CLEANING CHEMICALS. BOBRICK,	$\bigvee$	
6 NEW M	B-295X24. SEE D	DTL. H/A3.0. I HOLDER, REF: REST	ROOM ACCESSORIES SCHEDULE, SHEET G/A	3.0.		
7 PREPA	CKAGED CANDY	/FOOD DISPLAY ARE	A SHOWN HATCHED. 104 SF OF FLOOR AREA.			
8 PREPA	CKAGED CANDY	MODEL # 1848C. AS F	EA SHOWN HATCHED, 8 SF OF FLOOR AREA. ( REQ'D BY AHJ, SV-1 SHEET VINYL FLOORING A EXOND AND ABOVE, DEF. 2442.2	CHROME WIRE SHELF UNIT TO BE USED		
9 A MIN.	OF 48"X48" SV-1	FLOORING TO BE INS	TALLED BELOW MOP SINK. FRP-1 TO BE INST	TALLED UP TO 48" AFF AND EXTEND FULL		
		L WALLS TOUCHING	REF: 2/A3.0,G, & H/A3.0			
10 SV-1 FL INSTAL	LOORING TO BE	INSTALLED BELOW T EHIND UP TO 48" AFF	ABLE AND EXTEND 12" BEYOND ON THE SIDE AND EXTEND FULL LENGTH OF SV-1. RED: F/	S W/ A MIN. DEPTH OF 48". FRP-1 TO BE A3.1		

35

〔 E 💺 🖡

![](_page_26_Figure_1.jpeg)

![](_page_27_Figure_0.jpeg)

				N
POS 4	· / 0/= · / 0/= OPEN OPEN POS 5	POS 6 SC.		2'-8" COUNTER WIDTH

A8.1 SCALE: 3/8" = 1'-0"

![](_page_27_Figure_6.jpeg)

![](_page_28_Figure_0.jpeg)

![](_page_28_Picture_1.jpeg)

![](_page_28_Figure_10.jpeg)

![](_page_29_Figure_0.jpeg)

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6	192	28 1/4	55U30192N
6	186	28 1/4	SSU30186N
5	180	28 1/4	55U30180N
5	174	28 1/4	55U30174N
5	168	28 1/4	SSU30168N
5	162	28 1/4	55U30162N
5	156	28 1/4	SSU30156N
5	150	28 1/4	55U30150N
5	144	28 1/4	55U30144N
5	138	28 1/4	SSU30138N
4	132	28 1/4	55U30132N
4	126	28 1/4	55U30126N
4	120	28 1/4	55U30120N
4	114	28 1/4	55U30114N
4	108	28 1/4	5511301.08N
4	102	28 1/4	55U30102N
3	96	28 1/4	55U30096N
3	90	28 1/4	55U30090N
3	84	28 1/4	55U30084N
3	78	28 1/4	55050004N
2	70	28.1/4	55U30072N
2	12	20 1/4	55030072N
2	66	28.1/4	6611200C00
2	60 E4	20 1/4	55030060N
3	54	20 1/4	55030054N
2	48	28 1/4	55030048N
2	42	28 1/4	55030042N
2	40	28 1/4	55U30040N
2	36	28 1/4	55U30036N
2	30	28 1/4	55U30030N
2	24	28 1/4	55U30024N
2	18	28 1/4	55U30018N
	12	28 1/4	SSU30012N
6	192	22 1/4	SSU24192N
6	186	22 1/4	55U24186N
5	180	22 1/4	SSU24180N
5	174	22 1/4	55U24174N
5	168	22 1/4	SSU24168N
5	162	22 1/4	SSU24162N
5	156	22 1/4	55U24156N
5	150	22 1/4	SSU24150N
5	144	22 1/4	55U24144N
5	138	22 1/4	SSU24138N
4	132	22 1/4	55U24132N
4	126	22 1/4	55U24126N
4	120	22 1/4	SSU24120N
4	114	22 1/4	55U24114N
4	108	22 1/4	55U24108N
4	102	22 1/4	55U24102N
2	902	22 1/4	55U2409CN
2	90	22 1/4	5502-1056N
2	84	22 1/4	55024050N
2	74	22 1/4	55024004N
3	70	22 1/4	55024070N
3	12	22 1/4	55024072N
BRACE	В	А	PART
QTY	_		NUMBER

			-
3	66	22 1/4	55U24066N
3	60	22 1/4	55U24060N
3	54	22 1/4	55U24054N
2	48	22 1/4	SSU24048N
2	42	22 1/4	55U24042N
2	40	22 1/4	SSU24040N
2	36	22 1/4	55U24036N
2	30	22 1/4	55U24030N
2	24	22 1/4	55U24024N
2	18	22 1/4	55U24018N
	12	22 1/4	SSU24012N
6	192	161/4	SSU18192N
6	186	161/4	SSUIBIBEN
5	180	161/4	55U18180N
5	174	161/4	SSU18174N
5	168	161/4	55U18168N
5	162	161/4	SSU18162N
5	156	161/4	SSU18156N
5	150	161/4	55U18150N
5	144	161/4	SSU18144N
5	138	161/4	55018138N
4	132	161/4	55U18132N
4	126	161/4	55U18126N
4	120	161/4	55U1812ON
4	114	161/4	SSUI8II4N
4	108	161/4	55U18108N
4	102	161/4	SSU18102N
3	96	161/4	55018096N
3	90	161/4	55U18090N
3	84	161/4	SSU18084N
3	78	161/4	55U18078N
3	72	161/4	SSU18072N
3	66	161/4	55018066N
3	60	161/4	55U18060N
3	54	161/4	SSU18054N
2	48	161/4	55018048N
2	42	161/4	55U18042N
2	40	161/4	55U18040N
2	36	161/4	55018036N
2	30	161/4	55018030N
2	24	161/4	55U18024N
2	18	161/4	55U18018N
	12	161/4	55U18012N
6	192	14 1/4	55U16192N
4	120	14 1/4	55016120N
4	102	14 1/4	55U16102N
3	96	14 1/4	55016096N
3	84	14 1/4	55016084N
BRACE	в	A	PART
QTY			NUMBER

BRACE QTY	В	A	P NU
	12	10 1/4	SSU
2	18	10 1/4	550
2	24	10 1/4	SSU
2	30	10 1/4	55U
2	36	10 1/4	SSU
2	40	10 1/4	SSU
2	42	10 1/4	SSU
2	48	10 1/4	550
3	54	10 1/4	55U
3	60	10 1/4	550
3	66	10 1/4	SSU
3	72	10 1/4	550
3	78	101/4	550
3	84	10 1/4	550
3	90	10 1/4	550
3	96	10 1/4	550
4	102	10 1/4	550
4	108	10 1/4	550
ат Д	114	10 1/4	<u>550</u>
4	120	10 1/4	550
-1 -1	132	10 1/4	550
3	130	10 1/4	660
5	144	10 1/4	550
5	150	10 1/4	350
5	156	10 1/4	550
5	162	10 1/4	550
5	168	10 1/4	550
5	174	10 1/4	550
5	180	10 1/4	550
6	186	10 1/4	550
6	192	10 1/4	SSU
	20	1 2 17-1	000

![](_page_29_Figure_6.jpeg)

![](_page_29_Figure_7.jpeg)

--- 156 120 84 48 162

![](_page_29_Figure_8.jpeg)

186	162	126	90
180	156	120	84
	174	138	102
	168	132	96
	162	126	90
F	É	D	Ċ

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![](_page_29_Picture_11.jpeg)

### UPRITE ASSEMBLY DETAIL ©2000 LOZIER CORP.

# S-SERIES STORAGE SHELVING SHEET **2** OF

US PATENT NO. 6,085,918

![](_page_29_Picture_15.jpeg)

![](_page_29_Picture_16.jpeg)

UPRITES · UPRITE FACE CHANNEL - HOT ROLLED STEEL CHANNEL WITH 3/16 (.187 MINIMUM) THICK FACE UPRITE SIDE RAIL - 18 GAGE HIGH STRENGTH LOW ALLOY (HSLA) STEEL IN ACCORDANCE WITH ASTM A607, GRADE 45 (45,000 LB. MINIMUM YIELD STRENGTH)

BASE BRACKETS · BASE BRACKET HALVES - 18 GAGE HIGH STRENGTH STEEL IN ACCORDANCE WITH ASTM SPECIFICATION A607, GRADE 45 (45,000 LB. MINIMUM YIELD STRENGTH)

BASE BRACKET HOOK - DOUBLE THICKNESS 12 GAGE COLD ROLLED FULL HARD STEEL, 107,000 P.S.I. MINIMUM TENSILE STRENGTH, 95,000 P.S.I. MINIMUM YIELD STRENGTH SHELVES AND DECKS • TOPS - 22 GAGE COLD ROLLED COMMERCIAL QUALITY STEEL IN ACCORDANCE WITH ASTM SPECIFICATION A366.

HAT CHANNELS - SHELVES AND DECKS USE 24 GAGE COLD ROLLED COMMERCIAL QUALITY STEEL IN ACCORDANCE WITH ASTM SPECIFICATION A366.

SHELF BRACKETS - 12 GA.(7 D-15 D) OR 11 GA. (16 D AND GREATER) COLD ROLLED FULL HARD STEEL, 107,000 P.S.I. MINIMUM TENSILE STRENGTH, 95,000 P.S.I. MINIMUM YIELD STRENGTH

BACK MATERIAL 7/32 MEDIUM DENSITY FIBERBOARD (MDF)

150 LB. PER SIDE LOAD CAPACITY WITH STANDARD DUTY BOTTOM RAILS 300 LB. PER SIDE LOAD CAPACITY WITH HEAVY DUTY BOTTOM RAILS

BRACE LOCATIONS

DETAIL B

			150	114	78	42	15
			144	114	78	42	15
			138	108	78	42	14
			132	102	72	42	13
				126	90	54	13
				120	84	48	12
				114	78	42	12
54	192			108	78	42	11
48	186			102	72	42	10
54	180			96	66	36	10
54	174				90	54	96
54	168				84	48	90
В	A	F	É	D	с	В	A

66 42 60 54 30 6 48 30 36 30 24 3 18 2 12

72

42

# S-SERIES STORAGE SHELVING SHEET 3 OF 3

US PATENT NO. 6,085,918

LOZIER MATERIAL SPECIFICATIONS 4/28/09

Port 25 Green Rockawa		B/05/17
PERMIT ISSUE I       REVISIONS       #     DATE       -     -       -     -       -     -       -     -       -     -       -     -       -     -       -     -       -     -	DATE 09/ S DESCRIPTI	05/17 ол ву
STORE #427	<b>KETPLACE</b>	HINO, CA 91710
	CHINO SPECTRUM MAR	3850 GRAND AVE. CI
Larson D 1000 Com Su Williamsp PHONE & FAX 570. www.larsond Architects Eng It is in violat any persor under the licensed Arch Land Surveyo in any way specificatio reports not co seal imprint o accompanie signature to professional fraudulently not be consi copy. Copy 2016, Larso	esign ( merce F ite 201 ort, PA 570.323 323.990 designgro gineers S ion of the n, unless direction itect, En- or, to alte may have altered an dered	Croup Park Dr 17701 .6603 .02 .04 .05 .03 .02 .04 .05 .03 .03 .02 .04 .05 .03 .03 .03 .03 .04 .05 .03 .04 .05 .05 .05 .05 .05 .05 .05 .05 .05 .05
PROJECT NO. DRAWN BY APPV'D BY SHEET TITLE FIXTUR	1703 8099 BCV GWI	9-196 V B AILS

![](_page_30_Figure_0.jpeg)

![](_page_30_Picture_1.jpeg)

# S-SERIES STORAGE SHELVING

SHEET 1 OF 1

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![](_page_30_Figure_7.jpeg)

©2000 LOZIER CORP.

# **REGULAR DUTY SHELF DETAILS**

# S-SERIES STORAGE SHELVING

![](_page_30_Picture_11.jpeg)

![](_page_30_Picture_12.jpeg)

BASE BRACKETS BASE BRACKET HALVES - 18 GAGE HIGH STRENGTH STEEL IN ACCORDANCE WITH ASTM SPECIFICATION A607, GRADE 45 (45,000 LB. MINIMUM YIELD STRENGTH)

BASE BRACKET HOOK - DOUBLE THICKNESS 12 GAGE COLD ROLLED FULL HARD STEEL, 107,000 P.S.I. MINIMUM TENSILE STRENGTH. 95.000 P.S.I. MINIMUM YIELD STRENGTH SHELVES AND DECKS • TOPS - 22 GAGE COLD ROLLED COMMERCIAL QUALITY STEEL IN ACCORDANCE WITH ASTM SPECIFICATION A366.

HAT CHANNELS - SHELVES AND DECKS USE 24 GAGE COLD ROLLED COMMERCIAL QUALITY STEEL IN ACCORDANCE WITH ASTM SPECIFICATION A366.

SHELF BRACKETS - 12 GA.(7 D-15 D) OR 11 GA. (16 D AND GREATER) COLD ROLLED FULL HARD STEEL, 107,000 P.S.I. MINIMUM TENSILE STRENGTH, 95,000 P.S.I. MINIMUM YIELD STRENGTH

BACK MATERIAL 7/32 MEDIUM DENSITY FIBERBOARD (MDF)

150 LB. PER SIDE LOAD CAPACITY WITH STANDARD DUTY BOTTOM RAILS 300 LB. PER SIDE LOAD CAPACITY WITH HEAVY DUTY BOTTOM RAILS

![](_page_30_Picture_21.jpeg)

![](_page_30_Figure_24.jpeg)

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# **HEAVY DUTY SHELF DETAILS**

# S-SERIES STORAGE SHELVING

6336 PERSHING DR. OMAHA, NE 68110 1-800-228-9882

SHEET **1** OF **1** 

LOZIER MATERIAL SPECIFICATIONS 4/28/09

UPRITES · UPRITE FACE CHANNEL - HOT ROLLED STEEL CHANNEL WITH 3/16 (.187 MINIMUM) THICK FACE UPRITE SIDE RAIL - 18 GAGE HIGH STRENGTH LOW ALLOY (HSLA) STEEL IN ACCORDANCE WITH ASTM A607, GRADE 45 (45,000 LB. MINIMUM YIELD STRENGTH)

![](_page_30_Picture_32.jpeg)

![](_page_31_Figure_0.jpeg)

![](_page_31_Figure_1.jpeg)

![](_page_31_Picture_5.jpeg)

![](_page_32_Picture_0.jpeg)

### **GENERAL REQUIREMENTS**

### A. GENERAL

- CONFORM TO ALL GENERAL AND SPECIAL CONDITIONS OF CONTRACT AS SPECIFIED BY ENGINEER'S AND/OR OWNER. VISIT SITE, CHECK FACILITIES AND CONDITIONS AND MAKE ALL NECESSARY OBSERVATIONS AND MEASUREMENTS. NOTE
- CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED AND TAKE ALL ITEMS INTO CONSIDERATION IN BID. SYSTEMS ARE TO BE COMPLETE AND WORKABLE IN ALL RESPECTS, PLACED IN OPERATION AND PROPERLY ADJUSTED.
- CONTRACTOR SHALL PROVIDE HIS OWN CLEAN-UP, REMOVAL AND LEGAL DISPOSAL OF ALL RUBBISH DAILY. CONTRACTOR SHALL PROTECT HIS WORK, HIS EXISTING AND ADJACENT PROPERTY AGAINST WEATHER.
- CONTRACTOR SHALL PROTECT HIS WORK, MATERIALS, APPARATUS AND FIXTURES FROM DAMAGE. ANY WORK DAMAGED BY FAILURE TO PROVIDE PROTECTION REQUIRED, SHALL BE REMOVED AND REPLACED WITH NEW MATERIAL AT THE CONTRACTOR'S EXPENSE.
- ARRANGE FOR AND OBTAIN OWNER'S AND INSURANCE REPRESENTATIVE'S PERMISSION FOR ANY SERVICE SHUTDOWNS THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, SEQUENCES OF CONSTRUCTION
- AND THE SAFETY OF WORKMEN. NO PIPING, DUCTWORK, WIRING, ETC. SHALL BE INSTALLED OR ROUTED ABOVE ELECTRICAL PANELS AND EQUIPMENT.
- 10. THE CONTRACTOR SHALL COORDINATE AND OBTAIN A WRITTEN APPROVAL IDENTIFYING THE ELECTRICAL CHARACTERISTICS OF ALL MECHANICAL EQUIPMENT PRIOR TO ORDERING OF EQUIPMENT. NO ADDITIONAL PAYMENT WILL BE MADE FOR LACK OF CONTRACTOR COORDINATION OF ELECTRICAL CHARACTERISTICS.
- 11. DURING CONSTRUCTION THE CONTRACTOR MAY UNCOVER AN EXISTING CONDITION THAT WILL HAVE TO BE MODIFIED. ANY SUCH WORK WHICH COMES UNDER THE JURISDICTION OF THIS CONTRACTOR SHALL BE DONE BY THIS CONTRACTOR WITHOUT EXTRA COST TO THE OWNER, AS THOUGH FULLY DETAILED ON PLANS AND/OR DESCRIBED IN THE SPECIFICATIONS.
- 12. ALL DIMENSIONS, MEASUREMENTS AND PROJECT CONDITIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR. REFER ALL DIFFERENCES, IN WRITING, TO THE OWNER'S REPRESENTATIVE FOR CONSIDERATION PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BARE THE COST OF RECTIFYING WORK NOT APPROVED BY THE OWNER'S REPRESENTATIVE, CAUSED BY LACK OF COORDINATION AND OR NOTIFICATION.
- 13. INSTALL ALL EQUIPMENT IN FULL ACCORDANCE WITH LOCAL CODE REQUIREMENTS, OTHER SPECIFICATION SECTION REQUIREMENTS, AND MANUFACTURER RECOMMENDATIONS.
- B. CODES. PERMITS. STANDARDS AND REGULATIONS
  - CONFORM TO ALL APPLICABLE CODES (LOCAL, STATE, NATIONAL CODES, NFPA, OSHA, ETC.). GOVERNMENT REGULATIONS, UTILITY COMPANY REQUIREMENTS, AND APPLICABLE STANDARDS.
  - 2. OBTAIN PERMITS AND PAY ALL FEES, ARRANGE FOR ALL REQUIRED INSPECTIONS AND APPROVALS.

### C. DRAWINGS

- 1. THE SYSTEMS AS SHOWN ON MECHANICAL DRAWINGS ARE DIAGRAMMATIC. CONFIRM ALL DIMENSIONS BY FIELD
- MEASUREMENT. THE EXACT LOCATIONS FOR FIXTURES, EQUIPMENT AND PIPING WHICH IS NOT COVERED BY DRAWINGS, SHALL BE OBTAINED FROM THE ENGINEER'S OR HIS REPRESENTATIVE IN THE FIELD AND THE WORK SHALL BE LAID OUT ACCORDINGLY.
- D. BASE EQUIPMENT, MATERIALS AND SUBSTITUTIONS.
  - ALL EQUIPMENT AND MATERIALS SHALL BE NEW, FREE OF DEFECTS AND U.L. LABELED.
  - BASE BID MANUFACTURERS ARE INCLUDED IN THE SPECIFICATIONS OR LISTED IN THE NAME OR MAKE OF ANY ARTICLE, DEVICE, MATERIAL, FORM OF CONSTRUCTION, FIXTURE, ETC. STATED IN THIS SPECIFICATIONS, WHETHER OR NOT THE WORDS "OR APPROVED EQUAL" ARE USED, SHALL BE KNOWN AS A "STANDARD".
  - 3. ALL PROPOSALS SHALL BE BASED ON "STANDARDS" SPECIFIED.
  - 4. THE EQUIPMENT SCHEDULES ON THE DRAWINGS INDICATE MANUFACTURERS EQUIPMENT MODEL NUMBERS THAT THIS DESIGN HAS BEEN BASED ON. THE USE OF OTHER MANUFACTURES EQUIPMENT THAT IS LISTED AS ACCEPTABLE ALTERNATES AND REFLECTS ANY ADDITIONAL COST OF SUCH CHANGES SHALL BE PAID BY THE CONTRACTOR.
  - SUBSTITUTIONS ARE SUBJECT TO THE APPROVAL OF THE OWNER. IF A SUBSTITUTION IS SUBMITTED, IT IS THE CONTRACTOR'S RESPONSIBILITY TO EVALUATE IT AND CERTIFY THAT THE SUBSTITUTION IS EQUIVALENT IN ALL RESPECTS TO THE BASE SPECIFICATIONS.
  - COORDINATE ALL APPROVED SUBSTITUTIONS. ANY COSTS RESULTING FROM SUBSTITUTION SHALL BE THE RESPONSIBILITY OF AND PAID FOR BY THE CONTRACTOR. APPROVED SHOP DRAWINGS DO NOT ABSOLVE THIS CONTRACTOR FROM THIS RESPONSIBILITY.

E. ALL EQUIPMENT SHALL BE INSTALLED IN FULL ACCORDANCE WITH THE MANUFACTURER'S DATA AND INSTALLATION INSTRUCTIONS. IT IS THIS CONFORM THESE REQUIREMENTS PRIOR TO STARTING WORK.

### WARRANTY

- FULLY WARRANT ALL MATERIALS, EQUIPMENT AND WORKMANSHIP FOR (1) YEAR FROM DATE OF ACCEPTANCE.
- EXTEND ALL MANUFACTURERS' WARRANTIES TO OWNER. REPAIR OR REPLACE WITHOUT CHARGE TO THE OWNER ALL ITEMS FOUND DEFECTIVE DURING THE WARRANTY PERIOD. IN THE CASE OF REPLACEMENT OR REPAIR DUE TO FAILURE WITHIN THE WARRANTY PERIOD. THE WARRANTY ON THAT PORTION OF THE WORK SHALL BE EXTENDED FOR A MINIMUM PERIOD OF ONE (1) YEAR FROM THE DATE OF SUCH REPLACEMENT OR REPAIR.
- G. SHOP DRAWING SUBMITTALS
  - SUBMIT SHOP DRAWINGS FOR MECHANICAL AND PLUMBING SYSTEMS. INCLUDING BUT NOT LIMITED TO SHEET METAL. PLUMBING FIXTURES AND EQUIPMENT WITH ADEQUATE DETAILS AND SCALES TO CLEARLY SHOW CONSTRUCTION. INDICATE THE OPERATING CHARACTERISTICS FOR EACH REQUIRED ITEM. CLEARLY IDENTIFY EACH ITEM ON THE SUBMITTAL AS TO MARK, LOCATION AND USE. USING SAME IDENTIFICATION AS PROVIDED ON THE CONSTRUCTION DOCUMENTS.
  - SHEET METAL DRAWINGS SHALL BE FULLY DIMENSIONED AND COORDINATED BASED ON FIELD VERIFIED BUILDING CLEARANCES AND SITE ENGINEER'S CEILING LAYOUTS. INDICATE STRUCTURAL, LIGHTING, DUCTWORK AND PIPING AT ALL CRITICAL LOCATIONS.
  - CONTRACTOR SHALL REVIEW AND INDICATE HIS APPROVAL OF EACH SHOP DRAWINGS PRIOR TO SUBMITTAL FOR REVIEW. SHOP DRAWINGS WILL NOT BE REVIEWED BY THE ENGINEER UNLESS THE CONTRACTOR'S APPROVAL IS NOTED. DO NOT START WORK OR FABRICATION UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED BY THE ENGINEER AND RETURNED TO THE CONTRACTOR.
  - 4. SUBMITTALS WILL BE REVIEWED ONLY FOR GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS AND NOT FOR DIMENSIONS OR QUANTITIES. THE SUBMITTAL REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PURCHASE OF ANY ITEM IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS OR ITS COMPLETE AND PROPER INSTALLATION.
  - WHERE SUBMITTALS VARY FROM THE CONTRACT REQUIREMENTS, THE CONTRACTOR SHALL CLEARLY INDICATE ON SUBMITTAL OR ACCOMPANYING DOCUMENTS THE NATURE AND REASON FOR THE VARIATIONS.
  - EACH MANUFACTURER OR HIS REPRESENTATIVE MUST CHECK THE APPLICATION OF HIS EQUIPMENT AND CERTIFY AT TIME OF SHOP DRAWING SUBMITTAL THAT THE EQUIPMENT SPECIFIED HAS BEEN PROPERLY APPLIED AND CAN BE INSTALLED, SERVICED AND MAINTAINED WHERE INDICATED ON THE DRAWINGS. ADVISE ENGINEER IN WRITING WITH SUBMITTAL DRAWINGS OF ANY POTENTIAL PROBLEMS. THE MANUFACTURER SHALL BE RESPONSIBLE FOR ANY CHANGES THAT MIGHT BE NECESSARY BECAUSE OF PHYSICAL CHARACTERISTICS OF EQUIPMENT THAT HAVE NOT BEEN CALLED TO THE ENGINEER'S ATTENTION AT THE TIME OF SUBMITTAL.

## BASIC MATERIALS AND METHODS

A. GENERAL

- THIS SECTION INCLUDES BASIC MECHANICAL MATERIALS AND METHODS TO COMPLEMENT OTHER SECTIONS IN THIS SPECIFICATION AND REQUIREMENTS INDICATED ON THE MECHANICAL DRAWINGS.
- B. SUPPORTS AND HANGERS
  - INSTALL HANGERS, SUPPORTS, CLAMPS AND ATTACHMENTS AS REQUIRED TO PROPERLY SUPPORT PIPING FROM BUILDING STRUCTURE. THE INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF MSS SP-69 AND SP-89.
- C. CUTTING, PATCHING AND DRILLING
  - PATCH AND FINISH TO MATCH ADJACENT AREAS THAT HAVE BEEN CUT, DAMAGED OR MODIFIED AS A RESULT OF THE INSTALLATION OF THE MECHANICAL SYSTEMS.
  - EXACT LOCATION OF ROOF TOP MECHANICAL UNITS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. CONTRACTOR SHALL FURNISH AND INSTALL ALL SUPPLEMENTAL SUPPORT STEEL FOR EQUIPMENT AND ROOF PENETRATIONS AFTER APPROVAL OF STRUCTURAL ENGINEER.

### HVAC SYSTEMS AND EQUIPMENT

A. GENERAL

- CONTRACTORS BIDDING THIS PROJECT SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THEIR WORK. SUBMISSION OF A BID ON THIS PROJECT SHALL BE CONSTRUED AS HAVING SUCH KNOWLEDGE. VERIFY EXACT CONDITIONS IN FIELD AND COORDINATE WITH THESE DRAWINGS AND OTHER TRADES BEFORE BEGINNING NEW 2.
- AIR DISTRIBUTION SYSTEMS

WORK.

### A. GENERAL

- CONTRACTORS BIDDING THIS PROJECT SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THEIR WORK. SUBMISSION OF A BID ON THIS PROJECT SHALL BE CONSTRUED AS HAVING SUCH KNOWLEDGE. VERIFY EXACT CONDITIONS IN FIELD AND COORDINATE WITH THE DRAWINGS AND OTHER TRADES BEFORE BEGINNING NEW
- WORK. DETERMINE EXACT LOCATIONS FOR ALL NEW DUCTWORK AND ACCESSORIES IN THE FIELD. 3.
- COORDINATE WORK OF THIS CONTRACT WITH OTHER TRADES.
- ANY DISCREPANCIES BETWEEN WHAT IS SHOWN ON DRAWINGS OR SPECIFIED AND THE ACTUAL CONDITIONS IN THE FIELD
- SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE SITE ENGINEER'S BEFORE PROCEEDING. BUILDING AND SURFACES DAMAGED DURING INSTALLATION SHALL BE REPAIRED, REPLACED, AND/OR RESTORED TO ORIGINAL CONDITION AFTER COMPLETION OF WORK AND BEFORE ACCEPTANCE BY OWNER.

### B. DUCTWORK

- FABRICATE AND ERECT ALL DUCTWORK TO SMACNA STANDARDS FOR GALVANIZED STEEL. COMPLY WITH NFPA 90A
- REQUIREMENTS DUCTWORK SHALL BE SMACNA LOW PRESSURE CONSTRUCTION 1" STATIC PRESSURE RATING WITH SEAL CLASS B SEAMS AND 2.
- JOINTS. 3. INCLUDE ALL ACOUSTIC, AIRFOIL SHAPED PERFORATED ALUMINUM TURNING VANES, MANUAL DAMPERS, FLEXIBLE
- CONNECTORS, GRILLES AND DIFFUSERS, ACOUSTIC LINING, AND OTHER SHEET METAL ACCESSORIES FOR THE PROJECT.
- ALL BRANCH CONNECTIONS SHALL BE AS PER THE DETAILS SHOWN ON THE DRAWINGS. 5. EXHAUST DUCT OUTLETS SHALL BE INSTALLED A MINIMUM OF 10 FEET FROM ALL OUTSIDE AIR INTAKES.
- C. HVAC INSULATION (AS MANUFACTURED BY OWENS CORNING, KNAUF, SCHULLER, OR CERTAINTEED)
  - 1. INSULATE ALL NON-LINED SUPPLY, RETURN, AND EXHAUST DUCTS IN UNCONDITIONED SPACES WITH 1-1/2" THICK FOIL FACED REINFORCED KRAFT JACKET, FIBERGLASS DUCT WRAP FULLY SECURED TO DUCT. LAP AND TAPE SEAMS AND SECURE TIGHTLY TO THE DUCTS WITH WIRE OR STICK PINS. a. INSULATE ALL SUPPLY AND RETURN DUCTS LOCATED OUTSIDE OF BUILDING WITH 3" THICK FOIL FACED REINFORCED KRAFT JACKET.FIBERGLASS DUCT WRAP FULLY SECURED TO DUCT.
  - INSTALL A PVC JACKET ON ALL INSULATED DUCTWORK LOCATED OUTSIDE OF BUILDING ALL INSULATION TO BE APPLIED IN FULL ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND COMPLY WITH 25/50 FLAME AND SMOKE HAZARD RATINGS PER ASTM E-84, NFPA 255 AND UL 723.
  - INSULATE AIR CONDITIONING CONDENSATE DRAIN PIPING WITH 1" THICK MOLDED FIBER GLASS INSULATION. INSULATE REFRIGERANT PIPING WITH 1" THICK ELASTOMERIC.
  - a. COVER ALL EXPOSED REFRIGERANT PIPING ON EXTERIOR OF BUILDING WITH SLIMDUCT

### D. DUCT ACCESSORIES

- FLEXIBLE DUCTWORK (AS MANUFACTURED BY CLEVAFLEX, FLEXMASTER OR WIREMOLD).
- DAMPERS (AS MANUFACTURED BY RUSKIN, NAILOR OR SAFE-AIR) FABRICATE IN ACCORDANCE WITH SMACNA STANDARDS. 2 PROVIDE END BEARINGS AND LOCKING, INDICATING QUADRANT REGULATORS, BLADE TO BE SINGLE THICKNESS WITH CONTINUOUS HINGE OR ROD.
- 3. BACKDRAFT DAMPERS (AS MANUFACTURED BY RUSKIN, NAILOR OR SAFE-AIR) a. MULTIPLE BLADE, PARALLEL TYPE DAMPER CONSTRUCTED OF GALVANIZED STEEL WITH FELT OR FLEXIBLE VINYL SEALED EDGES, BALL BEARINGS, PIVOT PIN AND ADJUSTMENT DEVICE FOR VARYING PRESSURES.
- FIRE DAMPERS (AS MANUFACTURED BY RUSKIN, NAILOR OR SAFE-AIR) a. FABRICATE IN ACCORDANCE WITH NFPA 90A AND UL555. DAMPERS SHALL BE SUITABLE FOR USE IN THE VERTICAL OR HORIZONTAL POSITION AS INDICATED ON THE DRAWINGS, BE TYPE 'B' WITH BLADES OUT OF AIRSTREAM, AND BE RATED FOR 1-1/2 HOURS MINIMUM (UNLESS NOTED OTHERWISE).
- PROVIDE DUCT MOUNTED ACCESS DOORS AT ALL FIRE DAMPER LOCATIONS.
- ACCESS DOORS (AS MANUFACTURED BY RUSKIN, NAILOR OR SAFE-AIR)
- a. FABRICATE IN ACCORDANCE WITH SMACNA STANDARDS. DOORS TO BE FABRICATED OF GALVANIZED STEEL WITH SEALING GASKET AND QUICK LOCKING DEVICE.
- b. FOR INSULATED DUCTWORK, DOORS SHALL HAVE MINIMUM ONE (1) INCH INSULATION WITH SHEET METAL COVER.

## A. GENERAL

- INSTRUCTIONS.

- 4

## HVAC INSTRUMENTS AND CONTROLS

1. AFTER INSTALLATION, CHECK ALL EQUIPMENT AND PERFORM START UP IN ACCORDANCE WITH THE MANUFACTURER'S

WORK THAT IS SCHEDULED TO BE CONCEALED OR INSULATED SHALL REMAIN UNCOVERED UNTIL REQUIRED TESTS HAVE BEEN COMPLETED. IF THE CONSTRUCTION SCHEDULE REQUIRES, ARRANGE FOR TESTS ON SECTIONS OF THE SYSTEM AT A TIME. BALANCE ALL SYSTEMS, CALIBRATE CONTROLS, CHECK FOR PROPER OPERATION AND SEQUENCE UNDER ALL CONDITIONS AND MAKE ALL NECESSARY ADJUSTMENTS. SUBMIT AIR AND WATER BALANCE REPORT FROM INDEPENDENT AABC OR NEBB CERTIFIED SUBCONTRACTOR FOR ALL AIR AND WATER SYSTEMS PER AABC OR NEBB STANDARDS.

TESTING, ADJUSTING, AND BALANCING

A. BALANCING, START UP AND INSTRUCTIONS

AFTER EQUIPMENT IS PLACED IN OPERATION, SYSTEMS SHALL BE BALANCED TO WITHIN 10% OF DESIGN FLOW WITH REPORT SUBMITTED TO OWNER. BALANCING SHALL BE PERFORMED BY AN INDEPENDENT AABC OR NEBB CERTIFIED CONTRACTOR. BALANCE THE AIR SYSTEMS PRIOR TO BALANCING HYDRONIC AND REFRIGERANT SYSTEMS.

TEST, ADJUST AND BALANCE COOLING SYSTEMS DURING SUMMER SEASON AND HEATING SYSTEMS DURING WINTER SEASON BALANCE SYSTEMS WHEN THE OUTSIDE AIR CONDITIONS ARE WITHIN 5 DEGREES F WET BULB TEMPERATURE OF THE MAXIMUM SUMMER DESIGN CONDITION AND WITHIN 10 DEGREES F DRY BULB TEMPERATURE OF THE MINIMUM WINTER DESIGN CONDITION. START UP AND PLACE ALL SYSTEMS IN OPERATION AND TAG ALL SWITCHES AND CONTROLS WITH PERMANENT LABELS INSTRUCT OWNER ON PROPER OPERATION AND PREVENTATIVE MAINTENANCE OF SYSTEM.

5. G.C. TO REPLACE ALL RTU FILTERS FOLLOWING CONSTRUCTION, BALANCING, AND INITIAL START-UP

# 25 Green Pond Road Rockaway, NJ 07866 09/05/17 PERMIT ISSUE DATE 09/05/17 REVISIONS DATE DESCRIPTION $\mathbf{O}$ M σ Ľ O L RKI Σ ſ $\mathbf{O}$ Z Δ C, G O **N** 50 300 C Larson Design Group 1000 Commerce Park Dr Suite 201 Williamsport, PA 17701 PHONE 570.323.6603 FAX 570.323.9902 www.larsondesigngroup.com rchitects Engineers Surveyor It is in violation of the law for any person, unless acting under the direction of a licensed Architect, Engineer of Land Surveyor, to alter an iter in any way. Plans, maps, specifications, studies, and reports not containing a red inl seal imprint on the cover shee accompanied by and original signature by the licensed professional may have been fraudulently altered and shall not be considered an orginal copy. Copyright Protected 2016, Larson Design Group PROTO NO. 1703 8099-196 PROJECT NO. DRAWN BY TCR APPV'D BY MPN SHEET TITLE MECHANICAL

SPECIFICATIONS

SHEET NO.

![](_page_34_Picture_0.jpeg)

![](_page_34_Figure_2.jpeg)

![](_page_34_Figure_11.jpeg)

## KEYED NOTES

PROVIDE REMOTE TEMPERATURE SENSOR FOR RTU UNIT NOTED (+60"AFF). CONNECT TO THERMOSTAT IN MANAGER'S OFFICE. INSTALL THERMOSTATS AS SPECIFIED IN MANAGERS OFFICE (+48"AFF). PROVIDE PERMANENT PLASTIC LABELS NOTING AHU UNIT SERVED. THERMOSTATS TO BE LABELED DESIGNATING AREA OF COVERAGE. THERMOSTATS TO BE PROGRAMMED FOR "OCCUPIED HOURS": MONDAY-SATURDAY - 8AM-10PM, SUNDAY - 9AM-6PM. INSTALL DUCT SMOKE DETECTOR IN SUPPLY/RETURN OR AS REQUIRED BY LOCAL CODE/JURISDICTION. PROVIDE ACCESS PANEL. DETECTOR TO SHUT DOWN RTU UPON ACTIVATION. CONNECT TO EXISTING ALARM SYSTEM OR PROVIDE AND CONNECT TO AUDIO/VISUAL DEVICE LOCATED IN CONSTANTLY ATTENDED AREA PER CODE. 4 EXISTING DUCT MOUNTED SUPPLY/RETURN DIFFUSER TO REMAIN. CLEAN, PATCH, REPAIR AS REQ'D TO RETURN TO LIKE-NEW CONDITION. G.C. TO REBALANCE AS INDICATED. 5 DIGITAL WALL ADJUSTER FOR THERMAFUSER MOUNTED AT 48" A.F.F.. 6 G.C. TO DEMO EXISTING DUCTWORK BEYOND POINT INDICATED IN PREPARATION OF NEW DUCTWORK AND DIFFUSERS LOCATED IN OFFICE, BREAK ROOM, DRESSING ROOMS, AND HALLWAY. INSTALL NEW DUCTWORK AND DIFFUSERS AS INDICATED ON PLAN/SCHEDULE EXHAUST DUCT UP THRU ROOF AND USE EXISTING ROOF OPENING. PROVIDE WITH ROOF CAP WITH BIRDSCREEN AND WEATHER TIGHT PENETRATION. ENSURE EXHAUST OUTLET IS MIN. 10'-0" FROM ANY FRESH AIR INTAKE, OPERABLE WINDOW, OR EDGE OF ROOF. 8 EXISTING UNIT HEATER TO REMAIN 9 EXHAUST FANS SHALL OPERATE VIA A SEPARATE OCCUPANCY SENSOR FROM THE RESTROOM LIGHTS. EXHAUST FAN TO BE MOUNTED AS CLOSE TO RESTROOM AS POSSIBLE. 10 G.C. TO DEMO EXISTING DUCTWORK BRANCH BEYOND POINT INDICATED. 11 NEW DUCTWORK/DIFFUSER. 12 BOTTOM OF SUPPLY/RETURN GRILLE TO BE AS HIGH AS POSSIBLE TO BOTTOM. COORDINATE EXACT HEIGHT IN FIELD TO MATCH DUCTWORK HEIGHT. REF: KEY HEIGHTS DIAGRAM 13 NO DUCTWORK TO BE INSTALLED ABOVE CHECKOUT. HATCHED AREA INDICATES AREA ABOVE CHECKOUT TO KEEP CLEAR. 14 CONTRACTOR SHALL SERVICE EXISTING AIR CONDITIONING SYSTEM COMPLETELY INCLUDING, BUT NOT LIMITED TO- CLEANING

INTERIOR AND EXTERIOR OF ALL COMPONENTS, TOUCH UP PAINTING, REPLACING AIR FILTERS, INSPECTING AND REPLACING FAN

SHOULD ANY REPAIRS BE REQUIRED, CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER'S REPRESENTATIVE AND SUBMIT A WRITTEN

COST PROPOSAL INCLUDING COMPLETE COST TO PLACE UNIT IN "LIKE-NEW" CONDITION AND TIME ESTIMATE TO COMPLETE REPAIRS.

BELTS (IF REQUIRED), CHECKING EVAPORATOR AND CONDENSER COILS, CHECKING AND TRIMMING REFRIGERANT CHARGE,

CHECKING COMPRESSOR AMP DRAW, INSPECTING HEAT EXCHANGER, INSPECTING AND VERIFYING OPERATION OF GAS TRAIN

CHECKING DAMPER OPERATION AND DAMPER MOTORS, CLEANING CONDENSATE TRAP, ETC., TO INSURE PROPER OPERATION.

## **GENERAL NOTES**

- 1. CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO ANY REMOVAL OR INSTALLATION.
- 2. ALL DUCTWORK TO BE PAINTED WHITE.
- 3. COORDINATE DUCTWORK WITH CONDITIONS IN FIELD.
- 4. LENNOX NATIONAL ACCOUNTS TO PROVIDE EQUIPMENT OPERATION CHECK (ECC). 5. CONDENSATE TRAP PER MANUFACTURER SPECIFICATIONS. CONNECT TO EXISTING CONDENSATE PIPING SYSTEM. MODIFY/REPLACE ANY EXISTING CONDENSATE DRAIN PIPING OR PROVIDE NEW LINES AS REQUIRED TO EXISTING/NEW APPROVED TERMINATION OUTLET. VERIFY WITH LOCAL CODE.

![](_page_35_Picture_7.jpeg)

# <u>BTM. OF DECK - ±18'-2 3/4"</u> BTM. OF BEAM - ±17'-2 1/4" \_\_\_\_ BTM. OF DUCT - ±13'-0" \_\_\_\_ BTM. OF CASHWRAP LIGHTING -16'-0" BTM. OF SALES LIGHTING - 12'-6" BTM. OF STOCKROOM LIGHTING - 12'-6" PERIMETER SHELVING - 12'-0"

INTERIOR SHELVING 10'-6" \_\_\_\_

CONTRACTOR TO VERIFY EXISTING CONDITIONS & MOUNT SPRINKLERS, CONDUIT, AND DUCTWORK AS HIGH AS POSSIBLE WITHIN THE EXISTING CEILING SPACE. NOTIFY ARCHITECT/ENGINEER OF ANY POTENTIAL CONFLICTS PRIOR TO FABRICATION/INSTALLATION.

\_\_\_\_\_\_FINISH FLOOR\_\_\_\_\_\_\_\_\_\_

## **AIR DISTRIBUTION SCHEDULE**

	MARK	MANUFACTURER	MODEL #	DESCRIPTION	SIZE	BORDER	COLOR
	S-1	TITUS	300RL	SIDEWALL SUPPLY	AS NOTED ON DWG	WALL-MOUNT	WHITE
	S-2	TITUS	TMS	SUPPLY AIR DIFFUSER	24x24	LAY-IN	WHITE
	S-3	ACUTHERM	TF-HC-8	THERMAFUSER	24x24	LAY-IN	WHITE
	R-1	TITUS	355FL	SIDEWALL RETURN	AS NOTED ON DWG	WALL-MOUNT	WHITE
	R-2	TITUS	PAR	RETURN AIR GRILLE	24x24	LAY-IN	WHITE
Ī	E-1	TITUS	PAR	EXHAUST GRILLE	24x24	LAY-IN	WHITE

# EXHAUST FAN SCHEDULE

				FAN	ELECTR	ICAL		NOTES/	
MARK	MANUFACTURER	MODEL #			FAN			WEIGHT	ACCESSORIES
			CFM (TOTAL)	T.S.P ("WC)	WATTS	VOLTAGE	AMPS		ACCECCONIEC
EF-1	LOREN COOK	GC-146	75 CFM	.25	35	115/1Ø	.313	-	1,2
EF-2	LOREN COOK	GC-146	75 CFM	.25	35	115/1Ø	.313	-	1,2
EF-3	LOREN COOK	GC-146	75 CFM	.25	35	115/1Ø	.313	-	1,3
	NOTES:								
1.	1. PROVIDE CEILING MOUNTED EXHAUST FAN WITH TOGGLE DISCONNECT SWITCH, WHITE ALUMINUM GRILLE, DAMPER, AND ROOF CAP								
	WITH BIRDSCREEN. REUSE EXISTING ROOF OPENING.								

2. FAN SHALL BE CONTROLLED BY LIGHTING OCCUPANCY SENSOR FOR EACH RESTROOM. 3. FAN SHALL BE RUN CONTINUOUSLY.

### **UNIT HEATER SCHEDULE (GAS)** MANUFACTURER MODEL # INPUT OUTPUT EFFICIENCY VOLTAGE MCA MOCP HEATING (NATURAL GAS) ELECTRICAL NOTES/ MARK WEIGHT ACCESSORIES EXISTING 120/208V | EXISTING | EXISTING | EXISTING | REZNOR | EXISTING | EXISTING | EXISTING | EXISTING EX. UH TO REMAIN

![](_page_35_Figure_20.jpeg)

### **EXISTING RTU WORK:**

PRESSURE-WASH COILS (NON-CHEMICAL). IN THE EVENT THAT REPAIR SERVICE IS NEEDED, G.C. SHALL PROVIDE "UNIT PRICING" ON THE FOLLOWING ITEMS INCLUDING BUT

\*REPAIR/REPLACE HEAT EXCHANGERS (TYPICAL LIFESPAN 10-15 YEARS)

\*REPAIR/REPLACE COMPRESSORS \*REPLACE BELTS (NORMAL MAINTENANCE ANNUALLY)

\*REPLACE FILTERS (NORMAL MAINTENANCE EVERY 3-6 MONTHS)

\*REPAIR/REPLACE FAN MOTOR \*REPAIR/REPLACE BLADES

\*CLEAN/REPLACE CONDENSER COILS

\*REPAIR/REPLACE DRAIN PANS (CHECK FOR RUST, DAMAGE, ETC.)

PER 2016 NONRESIDENTIAL COMPLIANCE MANUAL MECHANICAL SYSTEMS SECTION 4.9.1 EXISTING SYSTEMS OR EQUIPMENT ARE NOT REQUIRED TO MEET THE ENERGY STANDARDS.

			FAN			COOLING		HEATING (NATURAL GAS)		ELECTRICAL			NOTES/					
MARK	MANUFACTURER	MODEL #	TONS	CFM (TOTAL)	CFM (O/A)	T.S.P ("WC)	FAN HP	TOTAL (MBH)	SENSIBLE (MBH)	EFFICIENCY	INPUT	OUTPUT	STAGES	VOLTAGE	MCA	MOCP	WEIGHT	ACCESSORIES
EX. RTU 1	CARRIER	48TCDD1	12.5	5000 CFM	927 CFM	-	2	150	-	10.8 EER	-	-	2	208/120	67	80	EX.	1,2,3
EX. RTU 2	CARRIER	48HJD014	12.5	5000 CFM	938 CFM	-	2	150	-	10.8 EER	-	-	2	208/120	60.6	70	EX.	1,2,3
EX. RTU 3	CARRIER	48HJD014	12.5	5000 CFM	589 CFM	-	2	150	-	10.8 EER	-	-	2	208/120	60.6	70	EX.	1,2,3
EX. RTU 4	CARRIER	48HJD014	12.5	5000 CFM	938 CFM	-	2	150	-	10.8 EER	-	-	2	208/120	60.6	70	EX.	1,2,3
EX. RTU 5	CARRIER	48HJD014	12.5	5000 CFM	940 CFM	-	2	150	-	10.8 EER	-	-	2	208/120	60.6	70	EX.	1,2,3
EX. RTU 6	CARRIER	48HJD014	12.5	5000 CFM	587 CFM	-	2	150	-	10.8 EER	-	-	2	208/120	60.6	70	EX.	1,2,3
NOTES	S:																	

1. PROVIDE EXISTING ROOFTOP UNIT WITH FACTORY SMOKE DETECTORS(AS REQUIRED BY CODE), DUAL ENTHALPY ECONOMIZER AND POWER EXHAUST. 2. PROVIDE WITH PROGRAMMABLE THERMOSTAT (HONEYWELL TH8320R1003 VISIONPRO 8000 W/ REMOTE TEMP. SENSOR C7189U1005/U) COOLING SETPOINTS - OCCUPIED 74°F, UNOCCUPIED 82°F. OCCUPIED HOURS: MONDAY-SATURDAY 8:00AM-10:00PM, SUNDAY 9:00AM-6:00PM

HEATING SETPOINTS - OCCUPIED 68°F, UNOCCUPIED 60°F. OCCUPIED HOURS: MONDAY-SATURDAY 8:00AM-10:00PM, SUNDAY 9:00AM-6:00PM 3. THERMOSTATS ARE TO BE LABELED DESIGNATING AREA OF COVERAGE

SHEET NO. M1.0

**MECHANICAL PLAN** 

TCR

**MPN** 

DRAWN BY

APPV'D BY

SHEET TITLE

![](_page_36_Figure_0.jpeg)

					CONNECTION	MAXIMUM
DUCT SIZE	VERTICAL	DIAGONAL	HORIZONTAL	BOLT	TYPE TO	MASS
WxD	HANGERS	BRACES	BRACES	SIZE	STRUCTURE	PER FOOT
(in)	(in)	(in)	(in)	(in)	(in)	(in)
30X30	4X4X14ga	2-1/2X2-1/2X12ga	2X2X16ga	3/8	В	17
42X42	4X4X12ga	2-1/2X2-1/2X12ga	2-1/2X2-1/2X16ga	3/8	С	29
54X54	3X3X1/4	2-1/2X2-1/2X12ga	2-1/2X2-1/2X16ga	3/8	D	46
60X60	3X3X1/4	3X3X12ga	3X3X16ga	1/2	D	54
84X84	5X3X1/4	3X3X12ga	4X4X14ga	5/8	F	103
96X96	5X3X3/8	4X4X12ga	4X4X12ga	5/8	F	129
54X28	4X4X12ga	2-1/2X2-1/2X12ga	2-1/2X2-1/2X16ga	1/2	E	34
60X30	4X4X12ga	3X3X12ga	3X3X16ga	1/2	E	39
84X42	3X3X1/4	3X3X1/4	4X4X14ga	5/8	G	74
96X48	4X4X1/4	2" PIPE	4X4X12ga	3/4	Н	97
108X54	4X4X1/4	2-1/2" PIPE	3X3X1/4	3/4	Н	110
120X60	5X3X1/4	2-1/2" PIPE	3X3X1/4	7/8	Н	121

						CONNECTION	MAXIMUM
DUCT SIZE	VERTICAL	DIAGONAL	HORIZONTAL	LONGITUDINAL	BOLT	TYPE TO	MASS
WxD	HANGERS	BRACES	BRACES	BRACES	SIZE	STRUCTURE	PER FOOT
(in)	(in)	(in)	(in)	(in)	(in)		(lb/ft)
30x30	4x4x12ga	4x4x14ga	2x2x16ga	2 1/2" PIPE	3/8	С	17
42x42	4x4x12ga	4x4x14ga	2-1/2x2-1/2x16ga	2 1/2" PIPE	3/8	С	29
54x54	3x3x1/4	14x4x12ga	2-1/2x2-1/2x16ga	2 1/2" PIPE	1/2	С	46
60x60	3x3x1/4	4x4x12ga	3x3x16ga	2 1/2" PIPE	1/2	D	54
84x84	5x3x1/4	4x4x12ga	4x4x14ga	2 1/2" PIPE	5/8	E	103
96x96	5x3x3/8	4x4x12ga	4x4x12ga	2 1/2" PIPE	5/8	F	129
54x28	4x4x12ga	4x4x12ga	2-1/2x2-1/2x16ga	2 1/2" PIPE	1/2	F	34
60x30	4x4x12ga	4x4x12ga	3x3x16ga	2 1/2" PIPE	1/2	E	39
84x42	3x3x1/4	2" PIPE	4x4x14ga	2 1/2" PIPE	5/8	E	74
96x48	4x4x1/4	2 1/2" PIPE	4x4x12ga	2 1/2" PIPE	3/4	F	97
108x54	4x4x1/4	2 1/2" PIPE	3x3x1/4	2 1/2" PIPE	3/4	G	110
120x60	5x3x1/4	2 1/2" PIPE	3x3x1/4	2 1/2" PIPE	7/8	н	121

9

## DUCT SIZE WхD (in) OVER 33 36 60

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- 5 REFER TO SEISMIC CONNECTIONS TO STRUCTURE SCHEDULE FOR TYPICAL CONNECTIONS.

![](_page_36_Figure_39.jpeg)

TRANSVERSE

LONGITUDINAL

### NOTE:

PROVIDE TRANSVERSE BRACING AT EVERY 40 FEET AND LONGITUDINAL BRACING AT EVERY 80 FEET OF DUCT RUN. PROVIDE BRACING FOR ROUND DUCT AS SCHEDULED BELOW:

L MAXIMUM LENGTH ALLOWED IS 4.5 FEET

VERTICAL HANGERS (in)	DIAGONAL BRACES (in)	BOLT SIZE (in)	CONNECTION TYPE TO STRUCTURE	MASS PER FOOT (lb/ft)	REMARKS
2x2x16ga	2x2x16ga	3/8	А	14	SINGLE HANGER
2x2x16ga	2x2x16ga	3/8	А	16	SINGLE HANGER
2x2x16ga	2x2x16ga	3/8	В	21	DOUBLE HANGER
3x3x16ga	4x4x14ga	3/8	D	34	DOUBLE HANGER
3x3x16ga	4x4x14ga	1/2	F	69	DOUBLE HANGER

## SEISMIC ROUND DUCT

# NOTES:

## GENERAL NOTES:

ULTIPLE STRAND STEEL CABLE IS ACCEPTABLE FOR LONGITUDINAL ND TRANSVERSE BALANCING IN LIEU OF ANGLES INDICATED -IZED IN ACCORDANCE WITH SMACNA SEISMIC RESTRAINT GUIDE.

### DTES:

- VERTICAL HANGER (TYPICAL).
- (2) DIAGONAL BRACE (TYPICAL).
- 3 LONGITUDINAL BRACE (TYPICAL), PROVIDE AT INTERVALS DESIGNATED ON DETAIL
- 4 BOLT (TYPICAL), SEE SCHEDULE FOR BOLT SIZE ON DETAIL.
- (6) INSULATION WHERE REQUIRED.
- (7) RESTRAINTS NOT REQUIRED FOR ROUND DUCTS LESS THAN 30" DIAMETER.
- 8 METAL STRAP, MINIMUM SIZE 2-1/2" x 1/8"
- (9) SEISMIC RESTRAINTS NOT REQUIRED IF DUCT IS SUSPENDED BY HANGERS 12" OR LESS IN LENGTH, AS MEASURED FROM THE TOP OF THE DUCT TO BOTTOM OF STRUCTURE.

![](_page_36_Picture_59.jpeg)

**GENERAL REQUIREMENTS** 

A. GENERAL

- 1. CONFORM TO ALL GENERAL AND SPECIAL CONDITIONS OF CONTRACT AS SPECIFIED BY SITE ENGINEER'S AND/OR
- OWNER. 2. VISIT SITE, CHECK FACILITIES AND CONDITIONS AND MAKE ALL NECESSARY OBSERVATIONS AND MEASUREMENTS.
- NOTE CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED AND TAKE ALL ITEMS INTO CONSIDERATION IN BID.
  3. SYSTEMS ARE TO BE COMPLETE AND WORKABLE IN ALL RESPECTS, PLACED IN OPERATION AND PROPERLY ADJUSTED.
- CONTRACTOR SHALL PROVIDE HIS OWN CLEAN-UP, REMOVAL AND LEGAL DISPOSAL OF ALL RUBBISH DAILY.
   CONTRACTOR SHALL PROTECT HIS WORK, HIS EXISTING AND ADJACENT PROPERTY AGAINST WEATHER.
   CONTRACTOR SHALL PROTECT HIS WORK. MATERIALS. APPARATUS AND FIXTURES FROM DAMAGE. ANY WORK.
- DAMAGED BY FAILURE TO PROVIDE PROTECTION REQUIRED, SHALL BE REMOVED AND REPLACED WITH NEW MATERIAL AT THE CONTRACTOR'S EXPENSE.
- ARRANGE FOR AND OBTAIN OWNER'S AND INSURANCE REPRESENTATIVE'S PERMISSION FOR ANY SERVICE SHUTDOWNS.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, SEQUENCES OF CONSTRUCTION AND THE SAFETY OF WORKMEN.
   NO PIPING, DUCTWORK, WIRING, ETC. SHALL BE INSTALLED OR ROUTED ABOVE ELECTRICAL PANELS AND EQUIPMENT.
- NO PIPING, DUCTWORK, WIRING, ETC. SHALL BE INSTALLED OR ROUTED ABOVE ELECTRICAL PANELS AND EQUIPMENT
   THE CONTRACTOR SHALL COORDINATE AND OBTAIN A WRITTEN APPROVAL IDENTIFYING THE ELECTRICAL CHARACTERISTICS OF ALL MECHANICAL EQUIPMENT PRIOR TO ORDERING OF EQUIPMENT. NO ADDITIONAL PAYMENT WILL BE MADE FOR LACK OF CONTRACTOR COORDINATION OF ELECTRICAL CHARACTERISTICS.
- 11. DURING CONSTRUCTION THE CONTRACTOR MAY UNCOVER AN EXISTING CONDITION THAT WILL HAVE TO BE MODIFIED. ANY SUCH WORK WHICH COMES UNDER THE JURISDICTION OF THIS CONTRACTOR SHALL BE DONE BY THIS CONTRACTOR WITHOUT EXTRA COST TO THE OWNER, AS THOUGH FULLY DETAILED ON PLANS AND/OR DESCRIBED IN THE SPECIFICATIONS.
- ALL DIMENSIONS, MEASUREMENTS AND PROJECT CONDITIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR. REFER ALL DIFFERENCES, IN WRITING, TO THE OWNER'S REPRESENTATIVE FOR CONSIDERATION PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BEAR THE COST OF RECTIFYING WORK NOT
- APPROVED BY THE OWNER'S REPRESENTATIVE, CAUSED BY LACK OF COORDINATION AND OR NOTIFICATION.
  13. INSTALL ALL EQUIPMENT IN FULL ACCORDANCE WITH LOCAL CODE REQUIREMENTS, OTHER SPECIFICATION SECTION REQUIREMENTS, AND MANUFACTURER RECOMMENDATIONS.
- B. CODES, PERMITS, STANDARDS AND REGULATIONS
  - 1. CONFORM TO ALL APPLICABLE CODES (LOCAL, STATE, NATIONAL CODES, NFPA, OSHA, ETC.). GOVERNMENT REGULATIONS, UTILITY COMPANY REQUIREMENTS, AND APPLICABLE STANDARDS.
- 2. OBTAIN PERMITS AND PAY ALL FEES, ARRANGE FOR ALL REQUIRED INSPECTIONS AND APPROVALS.
- C. DRAWINGS
  - . THE SYSTEMS AS SHOWN ON PLUMBING DRAWINGS ARE DIAGRAMMATIC. CONFIRM ALL DIMENSIONS BY FIELD
  - MEASUREMENT.
     THE EXACT LOCATIONS FOR FIXTURES, EQUIPMENT AND PIPING WHICH IS NOT COVERED BY DRAWINGS, SHALL BE OBTAINED FROM THE SITE ENGINEER'S OR HIS REPRESENTATIVE IN THE FIELD AND THE WORK SHALL BE LAID OUT ACCORDINGLY.
- D. BASE EQUIPMENT, MATERIALS AND SUBSTITUTIONS.
  - 1. ALL EQUIPMENT AND MATERIALS SHALL BE NEW, FREE OF DEFECTS AND U.L. LABELED.
  - BASE BID MANUFACTURERS ARE INCLUDED IN THE SPECIFICATIONS OR LISTED IN THE NAME OR MAKE OF ANY ARTICLE, DEVICE, MATERIAL, FORM OF CONSTRUCTION, FIXTURE, ETC. STATED IN THIS SPECIFICATIONS, WHETHER OR NOT THE WORDS "OR APPROVED EQUAL" ARE USED, SHALL BE KNOWN AS A "STANDARD". ALL PROPOSALS SHALL BE BASED ON "STANDARDS" SPECIFIED.
  - THE EQUIPMENT SCHEDULES ON THE DRAWINGS INDICATE MANUFACTURERS EQUIPMENT MODEL NUMBERS THAT THIS DESIGN HAS BEEN BASED ON. THE USE OF OTHER MANUFACTURES EQUIPMENT THAT IS LISTED AS ACCEPTABLE ALTERNATES AND REFLECTS ANY ADDITIONAL COST OF SUCH CHANGES SHALL BE PAID BY THE CONTRACTOR.
  - SUBSTITUTIONS ARE SUBJECT TO THE APPROVAL OF THE OWNER. IF A SUBSTITUTION IS SUBMITTED, IT IS THE CONTRACTOR'S RESPONSIBILITY TO EVALUATE IT AND CERTIFY THAT THE SUBSTITUTION IS EQUIVALENT IN ALL RESPECTS TO THE BASE SPECIFICATIONS.
  - 6. COORDINATE ALL APPROVED SUBSTITUTIONS. ANY COSTS RESULTING FROM SUBSTITUTION SHALL BE THE RESPONSIBILITY OF AND PAID FOR BY THE CONTRACTOR. APPROVED SHOP DRAWINGS DO NOT ABSOLVE THIS CONTRACTOR FROM THIS RESPONSIBILITY.
- E. ALL EQUIPMENT SHALL BE INSTALLED IN FULL ACCORDANCE WITH THE MANUFACTURER'S DATA AND INSTALLATION INSTRUCTIONS. IT IS THIS CONFORM THESE REQUIREMENTS PRIOR TO STARTING WORK.

### F. WARRANTY

- 1. FULLY WARRANT ALL MATERIALS, EQUIPMENT AND WORKMANSHIP FOR (1) YEAR FROM DATE OF ACCEPTANCE.
- EXTEND ALL MANUFACTURERS' WARRANTIES TO OWNER.
   REPAIR OR REPLACE WITHOUT CHARGE TO THE OWNER ALL ITEMS FOUND DEFECTIVE DURING THE WARRANTY PERIOD. IN THE CASE OF REPLACEMENT OR REPAIR DUE TO FAILURE WITHIN THE WARRANTY PERIOD, THE WARRANTY ON THAT PORTION OF THE WORK SHALL BE EXTENDED FOR A MINIMUM PERIOD OF ONE (1) YEAR FROM THE DATE OF SUCH REPLACEMENT OR REPAIR.
- G. SHOP DRAWING SUBMITTALS
  - 1. SUBMIT SHOP DRAWINGS FOR PLUMBING SYSTEMS, INCLUDING BUT NOT LIMITED TO FIXTURES AND EQUIPMENT WITH ADEQUATE DETAILS AND SCALES TO CLEARLY SHOW CONSTRUCTION. INDICATE THE OPERATING CHARACTERISTICS FOR EACH REQUIRED ITEM. CLEARLY IDENTIFY EACH ITEM ON THE SUBMITTAL AS TO MARK, LOCATION AND USE, USING SAME IDENTIFICATION AS PROVIDED ON THE CONSTRUCTION DOCUMENTS.
  - CONTRACTOR SHALL REVIEW AND INDICATE HIS APPROVAL OF EACH SHOP DRAWINGS PRIOR TO SUBMITTAL FOR REVIEW. SHOP DRAWINGS WILL NOT BE REVIEWED BY THE ENGINEER UNLESS THE CONTRACTOR'S APPROVAL IS NOTED. DO NOT START WORK OR FABRICATION UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED BY THE ENGINEER AND RETURNED TO THE CONTRACTOR.
  - 3. SUBMITTALS WILL BE REVIEWED ONLY FOR GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS AND NOT FOR DIMENSIONS OR QUANTITIES. THE SUBMITTAL REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PURCHASE OF ANY ITEM IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS OR ITS COMPLETE AND PROPER INSTALLATION.
  - WHERE SUBMITTALS VARY FROM THE CONTRACT REQUIREMENTS, THE CONTRACTOR SHALL CLEARLY INDICATE ON SUBMITTAL OR ACCOMPANYING DOCUMENTS THE NATURE AND REASON FOR THE VARIATIONS.
  - EACH MANUFACTURER OR HIS REPRESENTATIVE MUST CHECK THE APPLICATION OF HIS EQUIPMENT AND CERTIFY AT TIME OF SHOP DRAWING SUBMITTAL THAT THE EQUIPMENT SPECIFIED HAS BEEN PROPERLY APPLIED AND CAN BE INSTALLED, SERVICED AND MAINTAINED WHERE INDICATED ON THE DRAWINGS. ADVISE ENGINEER IN WRITING WITH SUBMITTAL DRAWINGS OF ANY POTENTIAL PROBLEMS. THE MANUFACTURER SHALL BE RESPONSIBLE FOR ANY CHANGES THAT MIGHT BE NECESSARY BECAUSE OF PHYSICAL CHARACTERISTICS OF EQUIPMENT THAT HAVE NOT BEEN CALLED TO THE ENGINEER'S ATTENTION AT THE TIME OF SUBMITTAL.

### **BASIC MATERIALS AND METHODS**

- A. GENERAL
  - 1. THIS SECTION INCLUDES BASIC PLUMBING MATERIALS AND METHODS TO COMPLEMENT OTHER SECTIONS IN THIS SPECIFICATION AND REQUIREMENTS INDICATED ON THE MECHANICAL DRAWINGS.
- B. SUPPORTS AND HANGERS
  - 1. INSTALL HANGERS, SUPPORTS, CLAMPS AND ATTACHMENTS AS REQUIRED TO PROPERLY SUPPORT PIPING FROM BUILDING STRUCTURE. THE INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF MSS SP-69 AND SP-89.
- C. ESCUTCHEONS
  - 1. FIT ALL PIPE PASSING THROUGH WALLS, FLOORS OR CEILINGS IN FINISHED ROOMS WITH STEEL OR BRASS ESCUTCHEONS. WHERE SURFACE IS TO RECEIVE A PAINT FINISH, MAKE ESCUTCHEONS PRIME PAINTED; OTHERWISE MAKE ESCUTCHEONS NICKEL OR CHROME PLATED. WHERE PIPING IS INSULATED, FIT ESCUTCHEONS OUTSIDE INSULATION.
- D. IDENTIFYING DEVICES AND LABELS
  - . PROVIDE METAL EQUIPMENT NAMEPLATES PERMANENTLY FASTENED TO EQUIPMENT WITH PERATIONAL DATA
  - ENGRAVED OR STAMPED. 2. IDENTIFY ALL PIPES AND VALVES UNEXPOSED AREAS, AND ACCESSIBLE CEILINGS AND SHAFTS.
  - COLOR CODE IDENTIFICATION BANDS OR MARKER BACKGROUNDS TO IDENTIFY CONTENTS OF PIPE AND DIRECTION OF FLOW LOCATED NEAR EACH VALVE AND FITTING, ON BOTH SIDES OF PIPE PASSING THROUGH WALLS AND ON LONG RUNS AT NOT OVER 20 FOOT INTERVALS.

E.	CUTTING, PATCHING AND DRILLING	<u>PLL</u>	JMBING SYS
	<ol> <li>PATCH AND FINISH TO MATCH ADJACENT AREAS THAT HAVE BEEN CUT, DAMAGED OR MODIFIED AS A RESULT OF THE INSTALLATION OF THE MECHANICAL SYSTEMS.</li> </ol>	Α.	GENERAL
	<ol> <li>EXACT LOCATION OF ROOF TOP MECHANICAL UNITS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. CONTRACTOR SHALL FURNISH AND INSTALL ALL SUPPLEMENTAL SUPPORT STEEL FOR EQUIPMENT AND ROOF PENETRATIONS AFTER APPROVAL OF STRUCTURAL ENGINEER.</li> </ol>		1. CONTRACTOR AFFECTING TH KNOWLEDGE
<u> 11</u>	<u>ISULATION</u>		2. VERIFY EXAC BEGINNING N
Α.	PLUMBING INSULATION (AS MANUFACTURED BY OWENS CORNING, KNAUF, SCHULLER OR CERTAINTEED)		<ol> <li>DETERMINE E</li> <li>COORDINATE</li> </ol>
	1. INSULATE ALL ABOVE GRADE HOT AND COLD WATER PIPING WITH MOLDED FIBER GLASS HAVING AN ALL SERVICE JACKET.		5. ANY DISCREP
В.	INSULATION THICKNESS SCHEDULE: 1) LESS THAN 2" DIAMETER PIPE: 1" THICK-HW AND $\frac{1}{2}$ " THICK-CW; 2) 2"-8" DIAMETER PIPE: 1-1/2" THICK.		6. BUILDING AND
	<ol> <li>INSULATE ALL ABOVE-GRADE, HORIZONTAL RAIN CONDUCTORS AND ROOF DRAIN SUMPS WITH ONE (1) INCH THICK MOLDED FIBER GLASS HAVING TYPE ASJ JACKET AND MANUFACTURED BY OWENS-CORNING FIBERGLASS COMPANY.</li> <li>INCLUDE INSULATION OF FITTINGS AND VALVES. KEEP VAPOR BARRIERS INTACT. APPLY TO MANUFACTURER'S</li> </ol>	В.	EQUIPMENT
<u>P</u>	IPING AND VALVES		<ol> <li>PLUMBING CC COMPLETE W</li> <li>INSTALL COM</li> </ol>
A.	GENERAL		ADJUST AS RE 3. EQUIPMENT T
	1. LABEL ALL PIPING AND SHOW DIRECTION OF FLOW EVERY 20 FEET ON CENTER.		PERFORMANC
В.	CONNECTIONS TO EQUIPMENT		
	1. PROVIDE VALVED WATER CONNECTION FOR EQUIPMENT. 2. INCLUDE ACCESSORIES REQUIRED BY CODE, DRAWING OR MANUFACTURER'S INSTRUCTIONS.	<u>PLL</u>	JMBING INS
C.	SANITARY AND STORM SEWERS	А.	GENERAL
	<ol> <li>PVC PIPING SHALL NOT BE INSTALLED UNLESS PERMITTED BY CODE.</li> <li>SANITARY/STORM SEWER AND VENT MATERIAL SHALL BE AS FOLLOWS:</li> <li>AS PART OF THE FINAL INSPECTION PROCESS, THE GENERAL CONTRACTOR SHALL SCHEDULE AND PAY FOR A COMPLETE SEWER LINE VIDEO INSPECTION. PROVIDE A DVD COPY OF THE ENTIRE VIDEO INSPECTION TO THE OWNER.</li> </ol>		<ol> <li>AFTER INSTAI MANUFACTUF</li> <li>ALL PIPING SF</li> <li>WORK THAT F</li> <li>HAVE BEEN C</li> </ol>
D.	ABOVE GRADE SANITARY/STORM SEWER AND VENT MATERIAL SHALL BE AS FOLLOWS: (EXISTING TIE-IN FOR ROOF DRAIN IS SCH 40 PVC)		4. BALANCE ALL
	<ol> <li>NO-HUB CAST IRON PIPE CISPI 1-301-78.</li> <li>PVC-DWV PLASTIC ASTM D1785 WITH ASTM D2665 DWV SOLVENT WELD SOCKET FITTINGS.</li> <li>SCHEDULE 40 GALVANIZED STEEL PIPE, ASTM A120-83 WITH CAST IRON SCREWED FITTINGS ANSI B16.22 1983.</li> </ol>		5. INSTRUCT OV EQUIPMENT A 6. SUBMIT AIR A
E.	SITE STORM AND SANITARY SEWERS	<b></b>	
	1. UP TO 15" - PVC PLASTIC ASTM D3034 SDR 35 WITH ASTM D3212 GASKET JOINTS.	<u>1E</u> \$	<u>STING, ADJU</u>
F.	DOMESTIC WATER PIPING	А.	BALANCING, START

- 1. INSTALL DOMESTIC WATER PIPING AS INDICATED ON DRAWINGS. INCLUDE ALL FITTINGS, VALVES, HANGERS AND OTHER ACCESSORIES INCLUDING WATER METER AND BACKFLOW PREVENTER. EXTEND DOMESTIC WATER PIPING TO ALL FIXTURES AND EQUIPMENT REQUIRED FOR COMPLETE INSTALLATION.
- 1. INCLUDE UNIONS, OR OTHER DISCONNECT MEANS, STOPS OR VALVES FOR ISOLATION OF FIXTURES AND EQUIPMENT. VALVES TO BE FULLY COMPATIBLE WITH PIPING FOR SERVICE INTENDED AS MANUFACTURED BY NIBCO, CRANE OR MILWAUKEE. INCLUDE HOSE OR DRAIN VALVES AT LOW POINTS WHERE FIXTURES CANNOT BE USED FOR DRAINAGE.
- 2. DOMESTIC WATER PIPING SHALL BE AS FOLLOWS:
- a. ABOVE GRADE TYPE "L" HARD COPPER ASTM B88-832 WITH WROUGHT COPPER FITTINGS ASTM B16.22 1980 AND NON-LEAD OR ANTIMONY SOLDER JOINTS.
- b. BELOW GRADE TYPE "K" SOFT COPPER WITHOUT JOINTS.
- c. FLUSH, VENT AND SANITIZE ALL WATER PIPING WITH CHLORINE AS REQUIRED PER AWWA, LOCAL BUILDING DEPARTMENT AND HEALTH DEPARTMENT CODES.
- d. DOMESTIC HOT AND COLD WATER PIPING UNDER CONCRETE FLOOR TO BE COVERED WITH SAND SO THAT PIPING WILL NOT BECOME EMBEDDED IN THE FLOOR SLAB.
- 4. ALL PIPING UNDER CONCRETE FLOOR SHALL BE TYPE "K" SOFT COPPER, CONTINUOUS. NO SPLICES OR FITTINGS WILL
- BE ALLOWED.
  5. EXTREME CAUTION MUST BE TAKEN SO THAT NO COPPER PIPING AND INSULATION UNDER CONCRETE FLOORS
- BECOMES CRUSHED, CUT, SPLIT OR DEFORMED DURING THE POURING OF THE FLOOR SLAB.
- 6. ALL PIPING UNDER CONCRETE FLOORS SHALL BE COVERED INSIDE A PVC PIPE
- G. PIPE SUPPORTS
  - PIPE SUPPORTS FOR HOT PIPE SHALL BE ANVIL FIG. 181 OR EQUAL.
     PIPE SUPPORTS FOR NATURAL GAS SHALL BE ANVIL FIG. 260 OR EQUAL

## G SYSTEMS AND EQUIPMENT

NTRACTORS BIDDING THIS PROJECT SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS ECTING THEIR WORK. SUBMISSION OF A BID ON THIS PROJECT SHALL BE CONSTRUED AS HAVING SUCH

IFY EXACT CONDITIONS IN FIELD AND COORDINATE WITH THESE DRAWINGS AND OTHER TRADES BEFORE INNING NEW WORK.

ERMINE EXACT LOCATIONS FOR ALL EQUIPMENT, PIPING, CONDUITS AND DUCTWORK IN FIELD. DRDINATE WORK OF THIS CONTRACT WITH OTHER TRADES. CONFLICTS SHALL IMMEDIATELY BE BROUGHT TO THE ENTION OF THE SITE ENGINEER'S. SITE ENGINEER'S RESOLUTION TO CONFLICTS SHALL BE FINAL. ' DISCREPANCIES BETWEEN WHAT IS SHOWN ON DRAWINGS OR SPECIFIED AND THE ACTUAL CONDITIONS IN THE .D SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE SITE ENGINEER'S BEFORE PROCEEDING. LDING AND SURFACES DAMAGED DURING INSTALLATION SHALL BE REPAIRED, REPLACED, AND/OR RESTORED TO GINAL CONDITION AFTER COMPLETION OF WORK AND BEFORE ACCEPTANCE BY OWNER.

IMBING CONTRACTOR TO FURNISH ALL PLUMBING EQUIPMENT INDICATED AND/OR SCHEDULED ON THE DRAWINGS IPLETE WITH BASES, ISOLATORS, SUPPORTS AND OTHER REQUIRED ACCESSORIES, TALL COMPLETE AND PLACE IN PROPER OPERATION PER MANUFACTURER'S RECOMMENDATIONS, LUBRICATE AND UST AS REQUIRED. FURNISH AND INSTALL CLEAN SET OF FILTERS PRIOR TO BALANCING. JIPMENT TO BE MADE AND MODEL AS SCHEDULED UNLESS ALTERNATE EQUIPMENT OF EQUIVALENT QUALITY AND RFORMANCE IS SUBMITTED AS A SUBSTITUTION PRIOR TO BIDDING. ALL SUBSTITUTIONS ARE SUBJECT TO CEPTANCE WITHOUT QUALIFICATION BY OWNER, ENGINEER AND SITE ENGINEER'S.

### G INSTRUMENTS AND CONTROLS

ER INSTALLATION, CHECK ALL EQUIPMENT AND PERFORM START UP IN ACCORDANCE WITH THE

NUFACTURER'S INSTRUCTIONS. PIPING SHALL BE TESTED AND FREE OF LEAKS AS REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION. RK THAT IS SCHEDULED TO BE CONCEALED OR INSULATED SHALL REMAIN UNCOVERED UNTIL REQUIRED TESTS 'E BEEN COMPLETED. IF THE CONSTRUCTION SCHEDULE REQUIRES, ARRANGE FOR TESTS ON SECTIONS OF THE TEM AT A TIME.

ANCE ALL SYSTEMS, CALIBRATE CONTROLS, CHECK FOR PROPER OPERATION AND SEQUENCE UNDER ALL DITIONS AND MAKE ALL NECESSARY ADJUSTMENTS.

RUCT OWNER IN OPERATION OF SYSTEMS AND SUBMIT OPERATING AND MAINTENANCE MANUAL FOR ALL IPMENT AND SYSTEMS.

MIT AIR AND WATER BALANCE REPORT FROM INDEPENDENT AABC OR NEBB CERTIFIED SUBCONTRACTOR FOR AIR AND WATER SYSTEMS PER AABC OR NEBB STANDARDS.

### ADJUSTING, AND BALANCING

IG, START UP AND INSTRUCTIONS

 AFTER EQUIPMENT IS PLACED IN OPERATION, SYSTEMS SHALL BE BALANCED WITH REPORT SUBMITTED TO OWNER.
 START UP AND PLACE ALL SYSTEMS IN OPERATION AND TAG ALL SWITCHES AND CONTROLS WITH PERMANENT LABELS INSTRUCT OWNER ON PROPER OPERATION AND PREVENTATIVE MAINTENANCE OF SYSTEM.

![](_page_37_Picture_74.jpeg)

PERMIT ISSUE DATE 09/05/17

REVISIONS						
#	DATE	DESCRIPTION	BY			

![](_page_37_Picture_77.jpeg)

# 2016, Larson Design Group PROTO NO. 1703 PROJECT NO. 8099-196 DRAWN BY TCR APPV'D BY MPN SHEET TITLE PLUMBING SPECIFICATIONS SHEET NO.

**P0.1** 

# KEYED NOTES 🗵

- 1 G.C. TO CONNECT NEW SANITARY LINE FROM RELOCATED WATER COOLER INTO EXISTING SANITARY LINE FROM WATER COOLER PRIOR TO RELOCATION. 2 G.C. TO CONNECT RELOCATED TOILET INTO EXISTING SANITARY LINE USING AN OFFSET FLANGE. REF: A3.0 FOR INSTALLATION LOCATION OF RELOCATED TOILET.
- 3 VERIFY SIZE AND POINT OF CONNECTION IN FIELD. 4 G.C. TO CONNECT NEW COLD WATER PIPING INTO EXISTING FROM PRIOR TO RELOCATION. PATCH AND REPAIR ADJACENT SURFACES AFFECTED BY WORK. REMOVE EXISTING FIXTURES AS SHOWN. SAVE FOR RELOCATION. PROPERLY CAP-OFF, TERMINATE, OR REMOVE ALL ASSOCIATED PLUMBING LINES NOT BEING REUSED TO BELOW SLAB, ABOVE CEILING OR WITHIN REMAINING WALLS.

FIXTURE TYPE	MAXIMUM FLOW RATE >20% REDUCTION
Showerheads	2.0 gpm @ 80 psi
Lavatory faucets, residential	1.5 gpm @ 60 psi <sup>1</sup>
Lavatory faucets, non-residential	0.5 gpm @ 60 psi <sup>3</sup>
Kitchen faucets	1.8 gpm @ 60 psi <sup>2</sup>
Wash fountains	1.8 [rim space (in.)/20 gpm @ 60 psi
Metering faucets	0.2 gallons/cycle
Metering faucets for wash fountains	.20 [rim space (in.)/20 gpm @ 60 psi]
Gravity tank type water closets	1.28 gallons/flush <sup>1</sup>
Flushometer tank water closets	1.28 gallons/flush <sup>1</sup>
Flushometer valve water closets	1.28 gallons/flush <sup>1</sup>
Electromechanical hydraulic water closet	1.28 gallons/flush <sup>1</sup>
Jrinals	0.125 gallons/flush

<sup>1</sup> Lavatory faucets shall not have a flow rate less than 0.8 gpm @ 20 psi.

default to a maximum flow rate of 1.8 gpm @ 60 psi. <sup>3</sup> Where complying faucets are unavailable, aerators rated at .35 gpm or other means may be used to achieve reduction. <sup>4</sup> Includes single and dual flush water closets with an effective flush of 1.29 gallons or less. Single flush toilets: the effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is the average flush volume when tested in accordance with ASME A112.19.233.2. Dual flush toilets: the effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush. Flush volumes will be tested in accordance with ASME A112.19.2 and ASME A112.19.14.

![](_page_38_Figure_8.jpeg)

![](_page_38_Figure_9.jpeg)

SHEET NO.

P1.0

![](_page_38_Figure_10.jpeg)

![](_page_38_Figure_12.jpeg)

TABLE 5.303.2 FIXTURE FLOW RATES

<sup>2</sup> Kitchen faucets may temporarily increase flow above the maximum rate, but not above 2.2 gpm @ 60 psi and must

### ADJUSTABLE ROLLER HANGER

3 PIPING SUPPORT DETAIL **P1.0** SCALE: 12" = 1'-0"

WELD

-SADDLE

# PLUMBING FIXTURE SCHEDULE

					CONNE	CTIONS	
WARK	DESCRIPTION	MANUFACTURER MODEL #		VENT	WASTE	COLD	H
EWC	ELECTRIC WATER COOLER	EX.	EX.	-	-	-	
FCO	FLOOR CLEANOUT	EX.	EX.	-	-	-	
FD	FLOOR DRAIN	EX.	EX.	-	-	-	
LAV	LAVATORY	EX.	EX.	-	-	-	
MS	MOP SINK	EX.	EX.	-	-	-	
TP	TRAP PRIMER	EX.	EX.	-	-	-	
ТХ	POWER TRANSFORMER	EX.	EX.	-	-	-	
UR	URINAL	EX.	EX.	-	-	-	
WC	WATER CLOSET	EX.	EX.	-	-	-	
WCO	WALL CLEANOUT	EX.	EX.	-	-	-	
WH	WATER HEATER	EX.	EX.	-	-	-	
WHA	WATER HAMMER ARRESTOR	EX.	EX.	-	-	-	

# PLUMBING GENERAL NOTES

- A. ALL PLUMBING LINES NOT BEING REUSED TO BE REMOVED OR CAPPED OFF BELOW SLAB, WITHIN WALL, OR ABOVE CEILING.
- B. CONTRACTOR TO VERIFY ALL EXISTING LINES PRIOR TO ANY REMOVAL OR
- INSTALLATION.
- C. THE PLUMBING SYSTEMS (SANITARY, WASTE DISTRIBUTION, AND GAS) AND ALL ASSOCIATED EQUIPMENT WILL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE FULL REQUIREMENTS OF THE PLUMBING CODE.
- D. GAS PIPING AND EQUIPMENT WILL BE INSTALLED IN FULL COMPLIANCE WITH THE GAS CODE.

![](_page_39_Figure_0.jpeg)

![](_page_39_Figure_3.jpeg)

![](_page_40_Figure_0.jpeg)

![](_page_40_Figure_1.jpeg)

![](_page_40_Picture_2.jpeg)

# KEYED NOTES

1	HELIUM FILLING STATION (NOTE: 2 NOZZLES) REF: DTL. 5/P2.0.
2	G.C. TO RUN (1) HELIUM PIPE DOWN WALL TO FEED SIDE OF CHECKOUT COUNTER. HELIUM TO BE RUN THROUGH WALL AS REQUIRED TO EXIT WALL AT 1'-0" AFF AND INTO CASHWRAP. REF: 3/P2.0.
3	G.C. TO RUN (1) HELIUM PIPE DOWN WALL TO FEED SIDE OF CHECKOUT COUNTER. HELIUM TO BE RUN THROUGH WALL AS REQUIRED TO EXIT WALL AT 14'-0" AFF, INTO BACKSIDE OF GONDOLA, THROUGH GONDOLA FIXTURE TO EXIT AT 14'-0" AFF. AND INTO CASHWRAP. REF: DTL. 3/P2.0.
4	HELIUM FILLING STATION (NOTE: 1 NOZZLE)

# **ELEVATION (CHECKOUT SIDE)**

ECKOUT O EXIT

![](_page_40_Figure_10.jpeg)

EXISTING WORK A. PRIOR TO CONSTRUCTION & INSTALLATION, CONTRACTOR TO VERIFY EXISTING CONDITIONS AND NOTIFY ARCHITECT/ENGINEER OF CONFLICTS OR CONDITIONS WHICH INTERFERE WITH INSTALLATION AS SET FORTH IN CONTRACT DOCUMENTS. B. CONTRACTOR RESPONSIBLE FOR ALL NEW FLOOR OPENINGS, EXCAVATIONS, AND PENETRATIONS, UNLESS SPECIFICALLY NOTED. UNLESS SPECIFICALLY NOTED, UPON COMPLETION, ALL PENETRATIONS TO BE SEALED TO MAINTAIN FIRE RATING AS SPECIFIED ON ARCHITECTURAL DRAWINGS. C. ALL CUTTING AND PATCHING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS CLEARLY INDICATED AS PART OF ANOTHER PRIME CONTRACT D. COORDINATE ANY NEW ROOF PENETRATIONS WITH THE OTHER TRADES E. REMOVE, RELOCATE, AND EXTEND EXISTING INSTALLATIONS TO ACCOMMODATE NEW CONSTRUCTION. REPAIR ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND EXTENSION WORK G. MAINTAIN ACCESS TO EXISTING BOXES AND OTHER INSTALLATIONS REMAINING ACTIVE AND REQUIRING ACCESS. MODIFY INSTALLATION OR PROVIDE ACCESS PANEL. H. EXTEND EXISTING RACEWAY AND BOX INSTALLATIONS USING MATERIALS AND METHODS COMPATIBLE WITH EXISTING ELECTRICAL INSTALLATIONS, OR AS SPECIFIED. CLEAN AND REPAIR EXISTING COMPONENTS TO REMAIN OR TO BE REINSTALLED. PROVIDE ACCESS TO EXISTING WIRING CONNECTIONS REMAINING ACTIVE AND REQUIRING ACCESS. MODIFY INSTALLATION OR INSTALL ACCESS PANEL. K. EXTEND EXISTING CIRCUITS USING MATERIALS AND METHODS COMPATIBLE WITH EXISTING ELECTRICAL INSTALLATIONS, OR AS SPECIFIED. RING OUT CIRCUITS IN EXISTING PANEL AFFECTED BY THE WORK. WHERE ADDITIONAL CIRCUITS ARE NEEDED, REUSE CIRCUITS AVAILABLE FOR REUSE. INSTALL NEW BREAKERS. M. TAG UNUSED CIRCUITS AS SPARE AND SWITCH BREAKER TO THE "OFF" POSITION. N. WHERE EXISTING CIRCUITS ARE INDICATED TO BE REUSED, USE SENSING MEASURING DEVICES TO VERIFY CIRCUITS FEEDING PROJECT AREA OR ARE NOT IN USE O. PROVIDE NEW UPDATED DIRECTORIES WHERE MORE THAN THREE CIRCUITS HAVE BEEN MODIFIED OR REWIRED. P. IDENTIFY SALVAGE ITEMS IN COOPERATION WITH OWNER. REMOVE AND PROTECT ITEMS TO BE SALVAGED AND TURN OVER TO OWNER. Q. CAREFULLY REMOVE EQUIPMENT, MATERIALS, OR FIXTURES WHICH ARE TO BE REUSED MINOR ELECTRICAL DEMOLITION A. DEMOLITION DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION AND EXISTING RECORD DOCUMENTS. REPORT DISCREPANCIES TO ARCHITECT/ENGINEER BEFORE DISTURBING EXISTING INSTALLATION B. CEASE OPERATIONS IMMEDIATELY WHEN STRUCTURE APPEARS TO BE IN DANGER AND NOTIFY ARCHITECT/ENGINEER. DO NOT RESUME OPERATIONS UNTIL DIRECTED. C. VERIFY WIRING AND EQUIPMENT INDICATED TO BE DEMOLISHED SERVE ONLY ABANDONED FACILITIES. D. PROVIDE TEMPORARY EGRESS SIGNAGE AND EMERGENCY LIGHTING. E. DISCONNECT ELECTRICAL SYSTEMS IN WALLS, FLOORS, AND CEILINGS SCHEDULED FOR REMOVAL. REMOVE CONDUIT, WIRE, BOXES, AND FASTENING DEVICES TO AVOID ANY INTERFERENCE WITH NEW INSTALLATION. INSTALL TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. G. REMOVE EXPOSED ABANDONED WIRE, CABLE, CONDUIT, GROUNDING AND BONDING COMPONENTS, FASTENERS AND SUPPORTS, AND ELECTRICAL IDENTIFICATION COMPONENTS, INCLUDING ABANDONED COMPONENTS ABOVE ACCESSIBLE CEILING FINISHES. CUT EMBEDDED CONDUITS AND SUPPORT ELEMENTS FLUSH WITH WALLS AND FLOORS. PATCH SURFACES DAMAGED BY REMOVAL OF EXISTING COMPONENTS. H. DISCONNECT ABANDONED CIRCUITS AND OUTLETS AND REMOVE ABANDONED RACEWAY. OUTLETS, BOXES, WIRE, AND CABLE INCLUDING ABOVE ACCESSIBLE CEILING FINISHES. CUT RACEWAY FLUSH WITH WALLS AND FLOORS, AND PATCH SURFACES. REMOVE CONCEALED ABANDONED RACEWAY TO ITS SOURCE RECONNECT EQUIPMENT BEING DISTURBED BY RENOVATION WORK AND REQUIRED FOR CONTINUED SERVICE TO NEAREST AVAILABLE PANEL. REMOVE, RELOCATE, AND EXTEND EXISTING INSTALLATIONS TO ACCOMMODATE NEW CONSTRUCTION. REPAIR ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND EXTENSION WORK. K. CLEAN AND REPAIR EXISTING EQUIPMENT TO REMAIN (AFFECTED BY THE SCOPE OF THE PROJECT) OR TO BE REINSTALLED. PROTECT AND RETAIN POWER TO EXISTING ACTIVE EQUIPMENT REMAINING. M. CAP ABANDONED EMPTY CONDUIT AT BOTH ENDS AND MARK AS SPARE. RACEWAY AND BOXES A. PROVIDE RACEWAY AND BOXES LOCATED AS INDICATED, AND AT OTHER LOCATIONS REQUIRED FOR SPLICES, TAPS, WIRE PULLING, EQUIPMENT CONNECTIONS, AND COMPLIANCE WITH REGULATORY REQUIREMENTS. RACEWAY AND BOXES ARE SHOWN IN APPROXIMATE LOCATIONS UNLESS DIMENSIONED. PROVIDE RACEWAY TO COMPLETE WIRING SYSTEM. 3. UNDERGROUND MORE THAN 5 FEET OUTSIDE FOUNDATION WALL: PROVIDE SCHEDULE 80 PVC. PROVIDE CAST METAL BOXES OR NONMETALLIC HANDHOLES WHERE REQUIRED. C. UNDERGROUND WITHIN 5 FEET FROM FOUNDATION WALL: PROVIDE RIGID STEEL CONDUIT OR THICKWALL NONMETALLIC CONDUIT (SCHEDULE 80 PVC). PROVIDE CAST METAL OR NONMETALLIC BOXES. D. IN OR UNDER SLAB ON GRADE: PROVIDE THICK WALL NONMETALLIC CONDUIT. PROVIDE CAST OR BUILDING WIRE AND CABLE NONMETALLIC METAL BOXES. E. OUTDOOR LOCATIONS, ABOVE GRADE: PROVIDE RIGID STEEL CONDUIT. PROVIDE CAST METAL OR NONMETALLIC OUTLET, PULL, AND NEMA-3R RATED JUNCTION BOXES. F. IN SLAB ABOVE GRADE: PROVIDE THICKWALL NONMETALLIC CONDUIT. PROVIDE CAST NONMETALLIC BOXES. G. WET AND DAMP LOCATIONS: PROVIDE THICKWALL NONMETALLIC CONDUIT. PROVIDE CAST MOUNTING OUTLET BOX IN FINISHED AREAS. H. CONCEALED DRY LOCATIONS: PROVIDE ELECTRICAL METALLIC TUBING. PROVIDE SHEET-METAL BOXES. PROVIDE FLUSH MOUNTING OUTLET BOX IN FINISHED AREAS. PROVIDE HINGED ENCLOSURE FOR LARGE PULL BOXES MINIMUM RACEWAY SIZE: 3/4 INCH UNLESS OTHERWISE SPECIFIED. ARRANGE RACEWAY AND BOXES TO MAINTAIN HEADROOM AND PRESENT NEAT APPEARANCE. PERCENT ADDITIONAL RACEWAYS. K. RACEWAY ROUTING IS SHOWN IN APPROXIMATE LOCATIONS UNLESS DIMENSIONED. ROUTE TO COMPLETE WIRING SYSTEM. DO NOT SUPPORT RACEWAY WITH WIRE, PERFORATED PIPE STRAPS, CEILING SUPPORT WIRES OR OTHER PIPING SYSTEMS. WALLS CONDUIT BODIES TO MAKE SHARP CHANGES IN DIRECTION, AS AROUND BEAMS. INSTALL FACTORY ELBOWS FOR BENDS IN METAL CONDUIT LARGER THAN 2 INCH SIZE. CONDUIT SYSTEM Q. INSTALL FITTINGS TO ACCOMMODATE EXPANSION AND DEFLECTION WHERE RACEWAY CROSSES SEISMIC, CONTROL AND EXPANSION JOINTS. R. INSTALL SUITABLE PULL STRING OR CORD IN EACH EMPTY RACEWAY EXCEPT SLEEVES AND NIPPI FS. CLOSE ENDS AND UNUSED OPENINGS IN WIREWAY. . INSTALL PULL BOXES AND JUNCTION BOXES ABOVE ACCESSIBLE CEILINGS AND IN UNFINISHED AREAS ONLY. U. IN ACCESSIBLE CEILING AREAS: INSTALL OUTLET AND JUNCTION BOXES NO MORE THAN 6 INCHES FROM CEILING ACCESS PANEL OR FROM REMOVABLE RECESSED LUMINAIRE. V. LOCATE FLUSH MOUNTING BOX IN MASONRY WALL TO REQUIRE CUTTING OF MASONRY UNIT CORNER ONLY. COORDINATE MASONRY CUTTING TO ACHIEVE NEAT OPENING. INCHES SEPARATION. INSTALL WITH MINIMUM 24 INCHES SEPARATION IN ACOUSTIC RATED WALLS X. DO NOT FASTEN BOXES TO CEILING SUPPORT WIRES OR OTHER PIPING SYSTEMS. Y. SUPPORT BOXES INDEPENDENTLY OF CONDUIT. Z. USE FLUSH MOUNTING OUTLET BOX IN FINISHED AREAS. AA. SET FLOOR BOXES LEVEL AND FLUSH WITH FINISH FLOORING MATERIAL FI FMENTS. AC. ROUTE CONDUIT THROUGH ROOF OPENINGS FOR PIPING AND DUCTWORK OR THROUGH SUITABLE ROOF JACK WITH PITCH POCKET AD. ALIGN ADJACENT WALL MOUNTED OUTLET BOXES FOR SWITCHES, THERMOSTATS, AND SIMILAR DEVICES.

ELECTRICAL SPECIFICATIONS A. ALL ELECTRICAL WORK TO CONFORM TO:

- 1. NFPA 70 (NATIONAL ELECTRIC CODE) CURRENT VEF NECA (NATIONAL ELECTRICAL CONTRACTORS ASSO
- NETA ATS (INTERNATIONAL ELECTRICAL TESTING AS SPECIFICATIONS FOR ELECTRICAL POWER DISTRIBU
- NFPA 72 (NATIONAL FIRE PROTECTION ASSOCIATION
- 5. ALL APPLICABLE LOCAL CODES.
- B. ALL WORK SHOWN ON THIS DRAWING IS THE RESPONSI CLEARLY INDICATED AS PART OF ANOTHER PRIME CONT
- C. PROVIDE TEMPORARY POWER REQUIRED FOR ALL TRAD
- D. MATCH OWNERS EXISTING STANDARD EQUIPMENT. E. COORDINATE WORK TO MINIMIZE OUTAGE DURATION.
- **OBTAIN ALL REQUIRED PERMITS & INSPECTIONS.**
- G. PROVIDE FOR ELECTRICAL INSPECTIONS AND SUBMIT R
- H. SUBMIT O&M MANUALS TO OWNER UPON COMPLETION PROVIDE TRAINING SESSION FOR DESIGNATED MAINTEN
- J. PROVIDE SUBMITTALS FOR ALL ELECTRICAL EQUIPMENT FASTENERS.
- 1. HANDHOLES 2. PANELBOARDS - SHOP DRAWINGS (INDICATE OUTLIN
- VOLTAGE, MAIN BUS AMPACITY, INTEGRATED SHORT CIRCUI BREAKER AND FUSIBLE SWITCH ARRANGEMENT AND SIZES) SPECIFIED FEATURES OF STANDARD PRODUCTS.
- 3. ENCLOSED SWITCHES SWITCH RATINGS AND ENCLO 4. DEVICES - MANUFACTURER'S CATALOG INFORMATIO
- CONFIGURATIONS 5. LUMINAIRES (INCLUDING EMERGENCY & EXIT FIXTUR
- DIMENSIONS, RATINGS, AND PERFORMANCE DATA. K. SELECT MATERIALS, SIZES, AND TYPES OF ANCHORS, F LOADS OF EQUIPMENT AND RACEWAY, INCLUDING WEIG

**GROUNDING SYSTEMS** 

- A. GROUNDING SYSTEM RESISTANCE: 25 OHMS. B. GROUNDING SYSTEMS:
- 1. MECHANICAL CONNECTORS: BRONZE CONNECTORS BONDING APPLICATIONS, IN CONFIGURATIONS REQU
- INSTALLATION. C. EXOTHERMIC CONNECTIONS: EXOTHERMIC MATERIALS, PREPARING AND MAKING PERMANENT FIELD CONNECTION
- COMPONENTS. D. WIRE: STRANDED COPPER. E. GROUNDING ELECTRODE CONDUCTOR: SIZE TO MEET N
- REQUIREMENTS. F. INSTALLATION:
- 1. EQUIPMENT GROUNDING CONDUCTOR: INSTALL SEP/ WITHIN EACH FEEDER AND BRANCH CIRCUIT RACEWA
- SUITABLE LUG, BUS, OR BUSHING. DO NOT FASTEN SUPPORTS TO PIPES, DUCTS, MECH. 3. OBTAIN PERMISSION FROM ARCHITECT/ENGINEER BI
- ANCHORS OR DRILLING OR CUTTING STRUCTURAL M
- HANGERS AND SUPPORTS A. ANCHORS & FASTENERS TO BE CORROSION RESISTANT. B. ANCHOR AND FASTEN ELECTRICAL PRODUCTS TO BUILD
- FOLLOWS: 1. CONCRETE STRUCTURAL ELEMENTS: PROVIDE EXPA
- STEEL STRUCTURAL ELEMENTS: PROVIDE BEAM CLA
- CONCRETE SURFACES: PROVIDE EXPANSION ANCHO 4. HOLLOW MASONRY, PLASTER, AND GYPSUM BOARD
- BOLTS AND HOLLOW WALL FASTENERS. 5. SOLID MASONRY WALLS: PROVIDE EXPANSION ANCH
- 6. SHEET METAL: PROVIDE SHEET METAL SCREWS.
- 7. WOOD ELEMENTS: PROVIDE WOOD SCREWS. C. SUPPORTS:
- 1. FABRICATE SUPPORTS FROM STRUCTURAL STEEL C WELD MEMBERS OR INSTALL HEXAGON HEAD BOLTS WITH ADEQUATE STRENGTH AND RIGIDITY. INSTALL NUTS
- 2. INSTALL SURFACE MOUNTED CABINETS AND PANELE
- ANCHORS. 3. IN WET AND DAMP LOCATIONS INSTALL STEEL CHAN
- AND PANELBOARDS 1 INCH OFF WALL. 4. INSTALL SHEET METAL CHANNEL TO BRIDGE STUDS
- PANELBOARDS RECESSED IN HOLLOW PARTITIONS.
- A. PROVIDE PRODUCTS AS FOLLOWS: SOLID CONDUCTOR FOR FEEDERS AND BRANCH CIR
- STRANDED CONDUCTORS FOR CONTROL CIRCUITS.
- CONDUCTOR NOT SMALLER THAN #12 AWG FOR POV . CONDUCTOR NOT SMALLER THAN #16 AWG FOR CON
- 5. 10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BR
- FFFT 6. 10 AWG CONDUCTORS FOR 20 AMPERE, 277 VOLT BR
- FEET. B. WIRING METHODS: PROVIDE THE FOLLOWING WIRING M
- 1. CONCEALED DRY INTERIOR LOCATIONS: USE ONLY B INSULATION, IN RACEWAY.
- 2. ABOVE ACCESSIBLE CEILINGS: USE ONLY BUILDING V
- INSULATION, IN RACEWAY. WET OR DAMP INTERIOR LOCATIONS: USE ONLY BUIL
- INSULATION, IN RACEWAY. 4. UNDERGROUND LOCATIONS: USE ONLY BUILDING WI IN RACEWAY.
- C. WIRE AND CABLE ROUTING INDICATED IS APPROXIMATE WIRE AND CABLE LENGTHS WITHIN 10 FT OF LENGTH SH D. COMPLETELY AND THOROUGHLY SWAB RACEWAY BEFO
- E. NEATLY TRAIN AND LACE WIRING INSIDE BOXES, EQUIPM F. SPECIAL TECHNIQUES--BUILDING WIRE IN RACEWAY:
- PULL CONDUCTORS INTO RACEWAY AT SAME TIME. INSTALL BUILDING WIRE 4 AWG AND LARGER WITH P
- G. SPECIAL TECHNIQUES CABLE: 1. PROTECT EXPOSED CABLE FROM DAMAGE.
- 2. SUPPORT CABLES ABOVE ACCESSIBLE CEILING, USIN TIES TO SUPPORT CABLES FROM STRUCTURE OR CE NOT REST CABLE ON CEILING PANELS.
- 3. USE SUITABLE CABLE FITTINGS AND CONNECTORS H. SPECIAL TECHNIQUES - DIRECT BURIAL CABLE:
- TRENCH AND BACKFILL FOR DIRECT BURIAL CABLE I TAPE ALONG ENTIRE LENGTH OF DIRECT BURIAL CAR 2. USE SUITABLE DIRECT BURIAL CABLE FITTINGS AND
- SPECIAL TECHNIQUES WIRING CONNECTIONS: 1. CLEAN CONDUCTOR SURFACES BEFORE INSTALLING 2. MAKE SPLICES, TAPS, AND TERMINATIONS TO CARR'
- WITH NO PERCEPTIBLE TEMPERATURE RISE.
- 3. TAPE UNINSULATED CONDUCTORS AND CONNECTOR PERCENT OF INSULATION RATING OF CONDUCTOR
- INSTALL SPLIT BOLT CONNECTORS OR MULTI-TAP BL SPLICES AND TAPS, 6 AWG AND LARGER.
- 5. INSTALL SOLDERLESS PRESSURE CONNECTORS WI COPPER CONDUCTOR SPLICES AND TAPS, 8 AWG AN
- 6. INSTALL INSULATED SPRING WIRE CONNECTORS WIT CONDUCTOR SPLICES AND TAPS, 10 AWG AND SMAL
- 7. TERMINATE EXISTING ALUMINUM CONDUCTORS WITH COMPRESSION CONNECTORS ONLY. FILL WITH ANTI-
- INSTALLING CONDUCTOR. 8. INSTALL SUITABLE REDUCING CONNECTORS OR MED
- FOR CONNECTING ALUMINUM CONDUCTORS TO COP J. GROUND CONDUCTORS:
- FOR 6 AWG AND SMALLER: GREEN. FOR 4 AWG AND LARGER: IDENTIFY WITH GREEN TAP
- POINTS INCLUDING JUNCTION BOXES. K. ALL WIRING SHALL BE #12 CU UNLESS SPECIFIED OTHER
- IDENTIFICATION

### A. IDENTIFY ELECTRICAL COMPONENTS AS FOLLOWS: 1. ENGRAVED LAMINATED PLASTIC NAMEPLATE FOR EA

- CONTROL EQUIPMENT ENCLOSURE, AND COMMUNIC 2. CLOTH TYPE WIRE MARKER FOR EACH CONDUCTOR
- BOXES 3. RACEWAY MARKER FOR EACH RACEWAY WHERE IT
- THE FLOOR. UNDERGROUND WARNING TAPE ALONG LENGTH OF CABLE, 3" BELOW FINISHED GRADE. TAPE TO BE 4-IN TYPE, COLORED YELLOW WITH SUITABLE WARNING I ELECTRICAL LINES.

- - METAL OR NONMETALLIC OUTLET, NEMA-3R RATED JUNCTION, AND PULL BOXES. PROVIDE FLUSH

  - GROUP RELATED RACEWAY; SUPPORT USING CONDUIT RACK; PROVIDE SPACE ON EACH FOR 25

  - M. ROUTE EXPOSED & ABOVE ACCESSIBLE CEILINGS RACEWAY PARALLEL AND PERPENDICULAR TO
  - N. DO NOT CROSS CONDUITS IN SLAB. O. INSTALL NO MORE THAN EQUIVALENT OF THREE 90 DEGREE BENDS BETWEEN BOXES. INSTALL
  - P. AVOID MOISTURE TRAPS; INSTALL JUNCTION BOX WITH DRAIN FITTING AT LOW POINTS IN

  - W. DO NOT INSTALL FLUSH MOUNTING BOX BACK-TO-BACK IN WALLS; INSTALL WITH MINIMUM 6

  - AB. INSTALL CONDUIT TO PRESERVE FIRE RESISTANCE RATING OF PARTITIONS AND OTHER

	SEALING AND FIREPROOFING A. INSTALL FIRESTOPPING TO MAINTAIN ALL RATINGS AT ALL FIRE SEPARATIONS.	HIGH INTENSITY DISCHA A. MANUFACTURERS: 1 VENTURE LIGHT
RSION CIATION) - STANDARD OF INSTALLATION (SOCIATION) - ACCEPTANCE TESTING	<ul> <li>B. FIRE RATED SURFACE:</li> <li>1. SEAL OPENING AT AS FOLLOWS:</li> <li>C. INSTALL 12 GAGE STEEL SLEEVE THROUGH OPENING AND EXTENDING BEYOND MINIMUM OF 1 INCH ON</li> </ul>	2. ADVANCE TRAN 3. OSRAM SYLVAN
ITION EQUIPMENT AND SYSTEMS. I - NATIONAL FIRE ALARM CODE).	EACH SIDE OF BUILDING ELEMENT. D. SIZE SLEEVE ALLOWING MINIMUM OF 1 INCH VOID BETWEEN SLEEVE AND BUILDING ELEMENT.	4. GE/MAGNETEK. B. PRODUCT DESCRIP
BILITY OF THE CONTRACTOR, UNLESS	<ul> <li>E. PACK VOID WITH BACKING MATERIAL.</li> <li>F. SEAL ENDS OF SLEEVE WITH UL LISTED FIRE RESISTIVE SILICONE COMPOUND TO MEET FIRE RATING OF STRUCTURE PENETRATED.</li> </ul>	VOLTAGE CAPABILI FLOURESCENT LAMPS
DES.	<ol> <li>WHERE CABLE TRAY, BUS, CABLE BUS, CONDUIT, WIREWAY, OR TROUGH PENETRATES FIRE RATED SURFACE, INSTALL FIRESTOPPING PRODUCT IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTRUCTIONS.</li> <li>NON-RATED SURFACES:</li> </ol>	A. MANUFACTURERS: 1. PHILIPS LIGHTIN 2. OSRAM SYLVAN 3. GE LIGHTING EC
EPORTS TO THE OWNER. OF WORK.	<ol> <li>SEAL OPENING THROUGH NON-FIRE RATED ROOF OPENING AS FOLLOWS:</li> <li>INSTALL 12 GAGE STEEL SLEEVE THROUGH OPENING AND EXTENDING BEYOND MINIMUM OF 1 INCH ON EACH</li> </ol>	HID LAMPS A. MANUFACTURERS:
NEANCE PERSONNEL. F, EXCLUDING WIRE, CONDUIT, AND	SIDE OF BUILDING ELEMENT. I. SIZE SLEEVE ALLOWING MINIMUM OF 1 INCH VOID BETWEEN SLEEVE AND BUILDING ELEMENT. I. INSTALL TYPE OF FIRESTORPING MATERIAL RECOMMENDED BY MANUFACTURED.	2. PHILIPS LIGHTN 3. SYLVANIA
IF AND SUPPORT POINT DIMENSIONS	<ol> <li>INSTALL TYPE OF FIRESTOPPING MATERIAL RECOMMENDED BY MANUFACTURER.</li> <li>EXTERIOR WALL OPENINGS BELOW GRADE: ASSEMBLE RUBBER LINKS OF MECHANICAL SEAL TO SIZE OF CONDUIT AND TIGHTEN IN PLACE. IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.</li> </ol>	4. GE LIGHTING B. HID LAMPS TO BE S
IT AMPERE RATING, CIRCUIT AND CATALOG DATA SHOWING	PANELBOARDS A. MANUFACTURERS: 1. EATON/CUTLER-HAMMER.	C. HID LAMPS TO MEE LED LIGHT FIXTURES A. MANUFACTURERS: 1. AS SPECIFIED IN
OSURE DIMENSIONS. ON SHOWING DIMENSIONS, COLORS, AND	<ol> <li>2. GE ELECTRICAL.</li> <li>3. SIEMENS/ITE.</li> </ol>	B. CRI OF 80. CCT OF 4 C. RATED LAMP LIFE C
RES) - CATALOG INFORMATION SHOWING	4. SQUARE D MODEL. B. BOLT-ON CIRCUIT BREAKER TYPE, DISTRIBUTION ,LIGHTING AND APPLIANCE BRANCH CIRCUIT PANELBOARD. C. PANELBOARD BUS' COPPER CURRENT CARRYING COMPONENTS, RATINGS AS INDICATED ON DRAWINGS	D. LAMPS DIMMABLE F E. INTERNAL DRIVER F. NOMINAL OPERATIN
ASTENERS, AND SUPPORTS TO CARRY SHT OF WIRE AND CABLE IN RACEWAY.	FURNISH COPPER GROUND BUS IN EACH PANELBOARD; FURNISH INSULATED GROUND BUS AS INDICATED ON DRAWINGS.	EMERGENCY FLOURES A. MANUFACTURERS:
	<ul> <li>D. MINIMUM INTEGRATED SHORT CIRCUIT RATING: 22,000 AMPERES RMS SYMMETRICAL FOR 240 VOLT PANELBOARDS; 65,000 AMPERES RMS SYMMETRICAL FOR 480 VOLT PANELBOARDS.</li> <li>E. MOLDED CASE CIRCUIT BREAKERS: NEMA AB 1, BOLT-ON TYPE THERMAL MAGNETIC TRIP CIRCUIT BREAKERS, WITH COMMON TRIP HANDLE FOR ALL POLES. LISTED AS TYPE SWD FOR LIGHTING CIRCUITS. TYPE HACR FOR</li> </ul>	1. AS SPECIFIED B B. PRODUCT DESCRIP C. BATTERY: 12 VOLT, D. BATTERY CHARGEF
S, SUITABLE FOR GROUNDING AND JIRED FOR PARTICULAR	AIR CONDITIONING EQUIPMENT CIRCUITS, CLASS A GROUND FAULT INTERRUPTER CIRCUIT BREAKERS AS INDICATED ON DRAWINGS. DO NOT USE TANDEM CIRCUIT BREAKERS.	HOURS. E. LAMPS: 12 WATT MI
ACCESSORIES, AND TOOLS FOR	<ul> <li>F. ENCLOSURE: NEMA PB 1, TYPE 1</li> <li>G. CABINET BOX: 6 INCHES DEEP, 20 INCHES WIDE FOR 240 VOLT AND LESS PANELBOARDS, 20 INCHES WIDE FOR 480 VOLT PANELBOARDS</li> </ul>	F. HOUSING: WHITE PL G. INDICATORS: LAMPS H TEST SWITCH: TRAN
NFPA 70 AND LOCAL MUNICIPALITY	<ul> <li>H. CABINET FRONT: SURFACE DOOR-IN-DOOR TYPE, FASTENED WITH HINGE AND LATCH, HINGED DOOR WITH FLUSH LOCK, METAL DIRECTORY FRAME, FINISHED IN MANUFACTURER'S STANDARD GRAY ENAMEL. OUTER PANELBOARD TRIMS SHALL COVER ALL LIVE PARTS. SWITCHING DEVICE HANDLES SHALL BE ACCESSIBLE.</li> </ul>	I. AIM AND ADJUST LA EMERGENCY LED LIGHT A. MANUFACTURERS:
	I. SURFACE TRIMS SHALL BE SAME HEIGHT AND WIDTH AS BOX. FLUSH TRIMS SHALL OVERLAP THE BOX BY 3/4 OF AN INCH ON ALL SIDES. INSTALL RECESSED PANEL BOARDS FLUSH WITH WALL FINISHES	1. AS SPECIFIED B B. PRODUCT DESCRIP C BATTERY: 12 VOLT
ARATE, INSULATED CONDUCTOR AY. TERMINATE EACH END ON	<ul> <li>K. HEIGHT: 6 FEET TO TOP OF PANELBOARD; INSTALL PANELBOARDS TALLER THAN 6 FEET WITH BOTTOM NO MORE THAN 4 INCHES ABOVE FLOOR.</li> </ul>	D. BATTERY CHARGEF HOURS.
HANICAL EQUIPMENT, OR CONDUIT. EFORE USING POWDER-ACTUATED	<ul> <li>INSTALL FILLER PLATES FOR UNUSED SPACES IN PANELBOARDS.</li> <li>PROVIDE TYPED CIRCUIT DIRECTORY FOR EACH BRANCH CIRCUIT PANELBOARD PER ARICHTECTURAL ROOM</li> </ul>	E. HOUSING: WHITE PL F. INDICATORS: LAMPS
IEMBERS.	<ul> <li>N. MARK UNUSED CIRCUIT BREAKERS AS SPARE AND SWITCH TO OFF POSITION.</li> <li>O. MEASURE STEADY STATE LOAD CURRENTS AT EACH PANELBOARD FEEDER: REARRANGE CIRCUITS IN</li> </ul>	H. AIM AND ADJUST LA
DING ELEMENTS AND FINISHES AS	PANELBOARD TO BALANCE PHASE LOADS TO WITHIN 20 PERCENT OF EACH OTHER. MAINTAIN PROPER PHASING FOR MULTI-WIRE BRANCH CIRCUITS.	A. MANUFACTURERS: 1. AS SPECIFIED IN
ANSION ANCHORS.	ENCLOSED SWITCHES	B. PRODUCT DESCRIP C. FACE: STENCIL FAC
MPS AND SPRING STEEL CLIPS. DRS. PARTITIONS' PROVIDE TOGGLE	<ol> <li>CUTLER-HAMMER.</li> <li>SQUARE D.</li> <li>GE ELECTRICAL.</li> <li>SIEMENS.</li> <li>PRODUCT DESCRIPTION: NEMA KS 1, TYPE HD WITH EXTERNALLY OPERABLE HANDLE INTERLOCKED TO PREVENT</li> </ol>	<ul> <li>E. MOUNTING: AS INDI</li> <li>F. BATTERY: 12 VOLT,</li> </ul>
IORS.	<ul> <li>OPENING FRONT COVER WITH SWITCH IN ON POSITION, ENCLOSED LOAD INTERRUPTER KNIFE SWITCH. HANDLE LOCKABLE IN OFF POSITION, WITH PROVISIONS FOR THREE PADLOCKS.</li> <li>C. SWITCH MECHANISM: TO BE QUICK-MAKE, QUICK-BREAK SUCH THAT, DURING NORMAL OPERATION OF THE SWITCH. THE OPERATION OF THE CONTACTS SHALL NOT BE CAPABLE OF BEING RESTRAINED BY THE OPERATING.</li> </ul>	G. BATTERY CHARGER HOURS. H. LAMPS: LED.
R FORMED STEEL MEMBERS, RIGIDLY	HANDLE AFTER THE CLOSING OR OPENING ACTION OF THE CONTACTS HAS STARTED. D. FUSE CLIPS: DESIGNED TO ACCOMMODATE NEMA FU 1, CLASS R, J FUSES.	G. POSITION EXIT SIGN
S TO PRESENT NEAT APPEARANCE SPRING LOCK WASHERS UNDER	<ul> <li>E. ENCLOSURE: NEMA CONFIGURATION TO MEET CONDITIONS</li> <li>1. INTERIOR DRY LOCATIONS: TYPE 1.</li> <li>2. EXTEDIOR LOCATIONS: TYPE 2P</li> </ul>	FIRE ALARM SYSTEM A. SYSTEM DESCRIPTI
BOARDS WITH MINIMUM OF FOUR	<ol> <li>EXTERIOR LOCATIONS: TYPE 3R.</li> <li>INDUSTRIAL LOCATIONS: TYPE 4X.</li> <li>F. SERVICE ENTRANCE: SWITCHES IDENTIFIED FOR USE AS SERVICE EQUIPMENT ARE TO BE LABELED FOR THIS</li> </ol>	B. SUBMITTALS 1 PRODUCT DATA
NEL SUPPORTS TO STAND CABINETS	APPLICATION. FURNISH SOLID NEUTRAL ASSEMBLY AND EQUIPMENT GROUND BAR. G. FURNISH SWITCHES WITH ENTIRELY COPPER CURRENT CARRYING PARTS.	2. SHOP DRAWING C. FIELD QUALITY-CON
ABOVE AND BELOW CABINETS AND	<ul> <li>H. SWITCH RATING: HORSEPOWER RATED FOR AC AS INDICATED ON DRAWINGS.</li> <li>I. SHORT CIRCUIT CURRENT RATING: 200,000 RMS SYMMETRICAL AMPERES WHEN USED WITH OR PROTECTED BY CLASS R OR CLASS J EUSES (30-600 AMPERE SWITCHES EMPLOYING APPROPRIATE EUSE REJECTION SCHEMES)</li> </ul>	1. OPERATION ANI MAINTENANCE I
	<ul><li>J. HEIGHT: 5 FEET TO OPERATING HANDLE.</li><li>K. INSTALL FUSES FOR FUSIBLE DISCONNECT SWITCHES.</li></ul>	1. PERSONNEL SH 2. INSTALLATION S
CUITS 10 AWG AND SMALLER.	WIRING DEVICES	E. OBTAIN FIRE-ALARM ACCESSORIES: LIST
VER AND LIGHTING CIRCUITS.	<ul> <li>A. MANUTACTORERS.</li> <li>1. PASS &amp; SEYMOUR LEGRAND.</li> <li>2. HUBELL.</li> <li>3. LEVITON.</li> <li>4. GENERAL ELECTRIC.</li> <li>B. PRODUCT DESCRIPTION: NEMA WD 1, HEAVY-DUTY, AC ONLY SPECIFICATION GRADE SWITCH/RECEPTACLE.</li> <li>ALL</li> </ul>	F. FIRE-ALARM SIGNAL
RANCH CIRCUITS LONGER THAN 75	DEVICES TO BE SPECIFICATION GRADE OR BETTER. C. BODY / HANDLE: IVORY PLASTIC WITH TOGGLE HANDLE.	<ol> <li>HEAT DETECTO</li> <li>SMOKE DETECT</li> </ol>
RANCH CIRCUITS LONGER THAN 200	<ul> <li>D. RATINGS: MATCH BRANCH CIRCUIT AND LOAD CHARACTERISTICS, MINIMUM 20A.</li> <li>E. GFCI RECEPTACLE: CONVENIENCE RECEPTACLE WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER TO MEET REGULATORY REQUIREMENTS.</li> </ul>	4. AUTOMATIC SPE G. CONTINUOUSLY OP
BUILDING WIRE, TYPE THHN/THWN	F. WP RECEPTACLE: (WEATHERPROOF) TO BE GFI PROTECTED.	I. TRANSMIT AN ALAR J. GENERAL REQUIRE
WIRE, TYPE THHN/THWN	WALL PLATES A. MANUFACTURERS:	1. FIELD-PROGRAM UL 864 AND LIST
	1. PASS & SEYMOUR LEGRAND. 2. TAYMAC 20510 (WEATHERPROOF-IN-USE). 3. HUBELL (BELL/RACO)	2. ADDRESSABLE 3. ALPHANUMERIC UNIT AND ADDR
UNLESS DIMENSIONED. INCLUDE	4. LEVITON. 5. GENERAL ELECTRIC.	COMPONENT ST 4. KEYPAD: ARRA
IOWN. DRE INSTALLING WIRE.	B. INSTALL DECORATIVE PLATES ON SWITCH, RECEPTACLE, AND BLANK OUTLETS IN FINISHED AREAS. DECORATIVE COVER PLATE: NYLON. C. INSTALL JUMPO SIZE DI ATES FOR OUTLETS INSTALLED IN MASONRY WALLS. JUMPO COVER PLATE: NYLON	CONTROL COMI K. ADDRESSABLE INIT
IENT, AND PANELBOARDS.	<ul> <li>D. WEATHERPROOF COVER PLATE (RECEPTACLE): IMPACT RESISTANT PLASTIC PLATE WITH HINGED AND GASKETED DEVICE COVER. COVER TO BE RATED FOR WET LOCATION WHILE IN USE, AND TO BE LOCKABLE.</li> </ul>	CONTROL UNIT. M. TEMPERATURE SEN
ULLING EQUIPMENT.	E. WEATHERPROOF COVER PLATE (SWITCH): GASKETED CAST METAL PLATE WITH HINGED AND GASKETED DEVICE COVER OR LEVER SWITCH MECHANISM. (P&S CA-31G/HUBBELL/BELL/RACO 5125 OR EQUAL)	N. ANNUNCIATOR AND O. INITIATING DEVICE,
NG SPRING METAL CLIPS OR CABLE	<ul> <li>F. KITCHEN AREAS: 302/430 STAINLESS STEEL, WEATHERPROOF FOR STARTUPS.</li> <li>G. INSTALL GALVANIZED (STAMPED) STEEL PLATES ON OUTLET BOXES AND JUNCTION BOXES IN UNFINISHED AREAS, ABOVE ACCESSIBLE CELLINGS, AND ON SURFACE MOUNTED OUTLETS.</li> </ul>	Q. GENERAL REQUIRE RAISED-LETTER OP
	<ul> <li>H. INSTALL DEVICES PLUMB AND LEVEL.</li> <li>I. INSTALL SWITCHES WITH OFF POSITION DOWN.</li> </ul>	MOUNTED ON RECE R. DOUBLE-ACTION ME
NSTALLATION. INSTALL WARNING	<ul> <li>J. INSTALL RECEPTACLES WITH GROUNDING POLE ON TOP, OR TO THE LEFT (IF MOUNTED HORIZONTALLY.</li> <li>K. CONNECT WIRING DEVICE GROUNDING TERMINAL TO OUTLET BOX WITH BONDING JUMPER AND BRANCH CIRCUIT</li> </ul>	ARRANGED TO COM S. STATION RESET: KI
BLE, WITHIN 3 INCHES OF GRADE. CONNECTORS.	L. CONNECT WIRING DEVICES BY WRAPPING SOLID CONDUCTOR AROUND SCREW TERMINAL. INSTALL STRANDED CONDUCTOR FOR BRANCH CIRCUITS 10 AWG AND SMALLER. WHEN STRANDED CONDUCTORS ARE USED IN LIEU	1. INTEGRAL ADDF CONTROL UNIT.
G LUGS AND CONNECTORS. Y FULL AMPACITY OF CONDUCTORS	OF SOLID, USE CRIMP ON FORK TERMINALS FOR DEVICE TERMINATIONS. DO NOT PLACE BARE STRANDED CONDUCTORS DIRECTLY UNDER DEVICE SCREWS.	2. BASE MOUNTING CONNECTS TO A
RS WITH ELECTRICAL TAPE TO 150	M. ADJUST DEVICES AND WALL PLATES TO BE FLUSH AND LEVEL.	3. SELF-RESTORIN OPERATION. 4. INTEGRAL VISU
OCKS FOR COPPER CONDUCTOR	A. ALL FIXTURES TO BE SPECIFICATION GRADE OR BETTER. B. PERFORMANCE REQUIREMENTS: FOR AREAS OF ASSEMBLY, SUBMIT POINT-BY-POINT LIGHT LEVEL	<ol> <li>5. PHOTOELECTRI</li> <li>6. DETECTOR ADD</li> </ol>
TH INSULATING COVERS FOR ND SMALLER.	CALCULATIONS TO VERIFY COMPLIANCE WITH DESIGN LEVELS. C. PROVIDE COMPLETE INTERIOR LUMINAIRE ASSEMBLIES, WITH FEATURES, OPTIONS, AND	LOCATION WITH U. AN OPERATOR AT F
HT FLASTIC CAPS FOR COPPER LER. H TIN-PLATED, ALUMINUM-BODIFD	ACCESSORIES AS SCHEDULED. D. INSTALL SUSPENDED LUMINAIRES USING PENDANTS SUPPORTED FROM SWIVEL HANGERS OR CABLE SUPPORTS, INSTALL PENDANT LENGTH REQUIRED TO SUSPEND LUMINAIRE AT INDICATED HEIGHT	1. PRIMARY STATU 2. DEVICE TYPE.
OXIDANT COMPOUND BEFORE	<ul> <li>E. SUPPORT LUMINAIRES LARGER THAN 2 X 4 FOOT SIZE INDEPENDENT OF CEILING FRAMING.</li> <li>F. INSTALL SURFACE MOUNTED LUMINAIRES PLUMB AND ADJUST TO ALIGN WITH BUILDING LINES AND</li> </ul>	<ol> <li>PRESENT AVER</li> <li>PRESENT SENS</li> </ol>
CHANICAL CONNECTOR ADAPTORS PPER CONDUCTORS.	WITH EACH OTHER. SECURE TO PREVENT MOVEMENT. G. EXPOSED GRID CEILINGS: SUPPORT SURFACE-MOUNTED LUMINAIRES ON GRID CEILING DIRECTLY FROM BUILDING. FASTEN SURFACE MOUNTED LUMINAIRES TO CEILING GRID MEMBERS USING	5. SENSOR RANGE V. HEAT DETECTORS, W. REMOTE ANNUNCIA
PE AT BOTH ENDS AND VISIBLE	BOLTS, SCREWS, RIVETS, OR SUITABLE CLIPS. H. INSTALL RECESSED LUMINAIRES TO PERMIT REMOVAL FROM BELOW.	1. ANNUNCIATOR I INDICATIONS. M
WISE.	<ul> <li>INSTALL RECESSED LUMINAIRES USING ACCESSORIES AND FIRESTOPPING MATERIALS TO MEET REGULATORY REQUIREMENTS FOR FIRE RATING.</li> <li>INSTALL CLIPS TO SECURE RECESSED GRID-SUPPORTED LUMINAIRES IN PLACE</li> </ul>	2. MOUNTING: FLU 3. DISPLAY TYPE A
	<ul> <li>K. CONNECT LUMINAIRES TO BRANCH CIRCUIT OUTLETS USING FLEXIBLE CONDUIT. MAXIMUM LENGTH FIXTURE WHIP TO BE 5 FEET.</li> </ul>	
ACH ELECTRICAL DISTRIBUTION, CATION CABINET.	L. MAKE WIRING CONNECTIONS TO BRANCH CIRCUIT USING BUILDING WIRE WITH INSULATION SUITABLE FOR TEMPERATURE CONDITIONS WITHIN LUMINAIRE.	<ul> <li>A. EQUIPMENT INSTAL</li> <li>1. COMPLY WITH N</li> <li>2. INSTALL WALL</li> </ul>
	N. AIM AND ADJUST LUMINAIRES TO PROVIDE LIGHT LEVELS CONSISTENT WITH DESIGN.	Y. LOCATE DETECTOR Z. LOCATE DETECTOR
EACH UNDERGROUND RACFWAY OR	FLOURESCENT BALLASTS A. MANUFACTURERS:	AA. FIRE-ALARM CONTE FLOOR.
	<ol> <li>ADVANCE TRANSFORMER.</li> <li>OSRAM SYLVANIA QUIKTRONIC.</li> <li>GE/MAGNETEK.</li> <li>PRODUCT DESCRIPTION: HIGH FREQUENCY ELECTRONIC BALLAST, INSTANT START, LESS THAN 20</li> </ol>	GROUND TO FIRE-ALAF

PERCENT THD, SUITABLE FOR LAMPS SPECIFIED, WITH VOLTAGE TO MATCH LUMINAIRE VOLTAGE.

ARGE (HID) BALLASTS TING INTERNATIONAL INC OPTI-WAVE. ISFORMER

PTION: ANSI C82.4, HIGH PRESSURE SODIUM, SUITABLE FOR LAMP SPECIFIED WITH UNIVERSAL VOLTAGE. PTION: ANSI C82.4 PULSE START METAL HALIDE LAMP BALLAST, SUITABLE FOR LAMP SPECIFIED, WITH UNIVERSAL/MULTI-TAP ITIES. PROVIDE PULSE START SYSTEM, WITH THE BULB AND THE BALLAST AS THE SYSTEM.

NG COMPANY ALTO PLUS **VIA ECOLOGIC** COLUX

TING INTERNATIONAL INC UNI-FORM. NG COMPANY

SELF EXTINGUISHING TYPE. ET FEDERAL STANDARD 21 CFR 1040.30 AND TO HAVE A TWO YEAR WARRANTY

IN LIGHT FIXTURE SCHEDULE

OF MIN. 50,000 HRS FROM 100 PERCENT TO 0 PERCENT OF MAXIMUM LIGHT OUTPUT

NG VOLTAGE 120/277V AC SCENT LIGHTING

3Y LIGHT FIXTURE SCHEDULE

PTION: SELF-CONTAINED INCANDESCENT (HALOGEN) EMERGENCY LIGHTING UNIT, WITH SELF-TEST DIAGNOSTICS. NICKEL-CADMIUM TYPE, WITH 1.5 HOUR CAPACITY. R: DUAL-RATE TYPE, WITH SUFFICIENT CAPACITY TO RECHARGE DISCHARGED BATTERY TO FULL CHARGE WITHIN TWELVE

INIMUM, SEALED BEAM TYPE IN NICKEL OR CHROME PLATED STEEL HOUSING. I ASTIC

PS TO INDICATE AC ON AND RECHARGING. VOLTMETER TO INDICATE BATTERY VOLTAGE. INSFERS UNIT FROM EXTERNAL POWER SUPPLY TO INTEGRAL BATTERY SUPPLY. AMP FIXTURES TO PROVIDE OPTIMAL COVERAGE.

BY LIGHT FIXTURE SCHEDULE. PTION: SELF-CONTAINED LED EMERGENCY LIGHTING UNIT, WITH SELF-TEST DIAGNOSTICS. , NICKEL-CADMIUM TYPE, WITH 1.5 HOUR CAPACITY. R: DUAL-RATE TYPE, WITH SUFFICIENT CAPACITY TO RECHARGE DISCHARGED BATTERY TO FULL CHARGE WITHIN TWELVE

PS TO INDICATE AC ON AND RECHARGING. VOLTMETER TO INDICATE BATTERY VOLTAGE. NSFERS UNIT FROM EXTERNAL POWER SUPPLY TO INTEGRAL BATTERY SUPPLY. AMP FIXTURES TO PROVIDE OPTIMAL COVERAGE.

IN LIGHT FIXTURE SCHEDULE

PTION: EXIT SIGN FIXTURE, WITH SELF-TEST DIAGNOSTICS. CE WITH RED LETTERS OWS: UNIVERSAL TYPE FOR FIELD ADJUSTMENT

DICATED ON DRAWINGS OR UNIVERSAL, FOR FIELD SELECTION. NICKEL-CADMIUM TYPE, WITH 1.5 HOUR CAPACITY.

R: DUAL-RATE TYPE, WITH SUFFICIENT CAPACITY TO RECHARGE DISCHARGED BATTERY TO FULL CHARGE WITHIN TWELVE

20 VOLTS. N DIRECTIONAL ARROWS AS INDICATED ON DRAWINGS.

FION: NONCODED ADDRESSABLE SYSTEM, WITH AUTOMATIC SENSITIVITY CONTROL OF CERTAIN SMOKE DETECTORS AND IAL TRANSMISSION, DEDICATED TO FIRE-ALARM SERVICE ONLY.

FOR EACH TYPE OF PRODUCT INDICATED. 3S: FOR FIRE-ALARM SYSTEM. INCLUDE PLANS, ELEVATIONS, SECTIONS, DETAILS, AND ATTACHMENTS TO OTHER WORK. NTROL REPORTS D MAINTENANCE DATA: FOR FIRE-ALARM SYSTEMS AND COMPONENTS TO INCLUDE IN EMERGENCY, OPERATION, AND MANUALS

ICATIONS IALL BE TRAINED AND CERTIFIED BY MANUFACTURER FOR INSTALLATION OF UNITS. SHALL BE BY PERSONNEL CERTIFIED BY NICET AS FIRE-ALARM LEVEL II TECHNICIAI

M SYSTEM FROM SINGLE SOURCE FROM SINGLE MANUFACTURER. ELECTRICAL COMPONENTS, DEVICES, AND TED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND

. INITIATION SHALL BE BY ONE OR MORE OF THE FOLLOWING DEVICES:

**PRINKLER SYSTEM WATER FLOW** PERATE ALARM NOTIFICATION APPLIANCES.

FIRE-ALARM CONTROL UNIT AND REMOTE ANNUNCIATORS.

RM SIGNAL TO THE REMOTE ALARM RECEIVING STATION EMENTS FOR FIRE-ALARM CONTROL UNIT:

MMABLE, MICROPROCESSOR-BASED, MODULAR, POWER-LIMITED DESIGN WITH ELECTRONIC MODULES, COMPLYING WITH TED AND LABELED BY AN NRTL.

CONTROL CIRCUITS FOR OPERATION OF MECHANICAL EQUIPMENT. C DISPLAY AND SYSTEM CONTROLS: ARRANGED FOR INTERFACE BETWEEN HUMAN OPERATOR AT FIRE-ALARM CONTROL RESSABLE SYSTEM COMPONENTS INCLUDING ANNUNCIATION AND SUPERVISION. DISPLAY ALARM, SUPERVISORY, AND STATUS MESSAGES AND THE PROGRAMMING AND CONTROL MENU ANGED TO PERMIT ENTRY AND EXECUTION OF PROGRAMMING, DISPLAY, AND CONTROL COMMANDS AND TO INDICATE

MANDS TO BE ENTERED INTO THE SYSTEM FOR CONTROL OF SMOKE-DETECTOR SENSITIVITY AND OTHER PARAMETERS. TIATION DEVICES THAT COMMUNICATE DEVICE IDENTITY AND STATUS. SHALL ADDITIONALLY COMMUNICATE SENSITIVITY SETTING AND ALLOW FOR ADJUSTMENT OF SENSITIVITY AT FIRE-ALARM

NSORS SHALL ADDITIONALLY TEST FOR AND COMMUNICATE THE SENSITIVITY RANGE OF THE DEVICE. DISPLAY: LIQUID-CRYSTAL TYPE, 1 LINE(S) OF 40 CHARACTERS, MINIMUM.

, NOTIFICATION APPLIANCE, AND SIGNALING LINE CIRCUITS: NFPA 72, CLASS B.

RANSMIT ALARM, SUPERVISORY, AND TROUBLE SIGNALS TO A REMOTE ALARM STATION. EMENTS FOR MANUAL FIRE-ALARM BOXES: COMPLY WITH UL 38. BOXES SHALL BE FINISHED IN RED WITH MOLDED, PERATING INSTRUCTIONS IN CONTRASTING COLOR; SHALL SHOW VISIBLE INDICATION OF OPERATION; AND SHALL BE ESSED OUTLET BOX. IF INDICATED AS SURFACE MOUNTED, PROVIDE MANUFACTURER'S SURFACE BACK BOX. ECHANISM REQUIRING TWO ACTIONS TO INITIATE AN ALARM, PULL-LEVER] TYPE; WITH INTEGRAL ADDRESSABLE MODULE MMUNICATE MANUAL-STATION STATUS (NORMAL, ALARM, OR TROUBLE) TO FIRE-ALARM CONTROL UNIT. EY- OR WRENCH-OPERATED SWITCH. EMENTS FOR SYSTEM SMOKE DETECTORS:

RESSABLE MODULE: ARRANGED TO COMMUNICATE DETECTOR STATUS (NORMAL, ALARM, OR TROUBLE) TO FIRE-ALARM IG: DETECTOR AND ASSOCIATED ELECTRONIC COMPONENTS SHALL BE MOUNTED IN A TWIST-LOCK MODULE THAT A FIXED BASE. PROVIDE TERMINALS IN THE FIXED BASE FOR CONNECTION TO BUILDING WIRING.

NG: DETECTORS DO NOT REQUIRE RESETTING OR READJUSTMENT AFTER ACTUATION TO RESTORE THEM TO NORMAL AL-INDICATING LIGHT: LED TYPE INDICATING DETECTOR HAS OPERATED AND POWER-ON STATUS

IC SMOKE DETECTORS: DRESS SHALL BE ACCESSIBLE FROM FIRE-ALARM CONTROL UNIT AND SHALL BE ABLE TO IDENTIFY THE DETECTOR'S HIN THE SYSTEM AND ITS SENSITIVITY SETTING. FIRE-ALARM CONTROL UNIT, HAVING THE DESIGNATED ACCESS LEVEL, SHALL BE ABLE TO MANUALLY ACCESS THE EACH DETECTOR:

RAGE VALUE.

SITIVITY SELECTED

E (NORMAL, DIRTY, ETC.). GENERAL REQUIREMENTS FOR HEAT DETECTORS: COMPLY WITH UL 521.

FUNCTIONS SHALL MATCH THOSE OF FIRE-ALARM CONTROL UNIT FOR ALARM, SUPERVISORY, AND TROUBLE MANUAL SWITCHING FUNCTIONS SHALL MATCH THOSE OF FIRE-ALARM CONTROL UNIT, INCLUDING ACKNOWLEDGING, ETTING, AND TESTING. JSH CABINET, NEMA 250, TYPE 1.

AND FUNCTIONAL PERFORMANCE: ALPHANUMERIC DISPLAY AND LED INDICATING LIGHTS SHALL MATCH THOSE OF FIRE-OL UNIT. PROVIDE CONTROLS TO ACKNOWLEDGE, SILENCE, RESET, AND TEST FUNCTIONS FOR ALARM, SUPERVISORY, SIGNALS. I I ATION

NFPA 72 FOR INSTALLATION OF FIRE-ALARM EQUIPMENT.

MOUNTED EQUIPMENT, WITH TOPS OF CABINETS NOT MORE THAN 72 INCHES (1830 MM) ABOVE THE FINISHED FLOOR. RS NOT CLOSER THAN 3 FEET (1 M) FROM AIR-SUPPLY DIFFUSER OR RETURN-AIR OPENING. RS NOT CLOSER THAN 12 INCHES (300 MM) FROM ANY PART OF A LIGHTING FIXTURE. ROL UNIT: SURFACE MOUNTED, WITH TOPS OF CABINETS NOT MORE THAN 72 INCHES (1830 MM) ABOVE THE FINISHED

RM CONTROL UNIT AND ASSOCIATED CIRCUITS; COMPLY WITH IEEE 1100. INSTALL A GROUND WIRE FROM MAIN SERVICE

ALARM CONTROL UNIT. AC. ENGAGE A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE TO TRAIN OWNER'S MAINTENANCE PERSONNEL TO ADJUST, OPERATE, AND MAINTAIN FIRE-ALARM SYSTEM.

# 09/05/17 PERMIT ISSUE DATE 09/05/17 REVISIONS DATE DESCRIPTION <u></u> $\mathbf{O}$ M σ O RKF N $\mathbf{O}$ LL 7 C, C N N N 50 $\boldsymbol{\omega}$ C Õ Larson Design Group 1000 Commerce Park Di Suite 201 Williamsport, PA 17701 PHONE 570.323.6603 FAX 570.323.9902 www.larsondesigngroup.com chitects Engineers Surveyo It is in violation of the law for any person, unless acting under the direction of a icensed Architect, Engineer o Land Surveyor, to alter an iter in any way. Plans, maps, specifications, studies, and reports not containing a red in seal imprint on the cover shee accompanied by and original signature by the licensed professional may have been fraudulently altered and shall not be considered an orginal copy. Copyright Protected 2016, Larson Design Group PROTO NO. 1703 8099-196 PROJECT NO. RAWN BY TCR APPV'D BY SHEET TITLE ELECTRICAL **SPECIFICATIONS** HEET NO.

E0.1

25 Green Pond Road

Rockaway, NJ 07866

<u>KE</u>	YED NOTES 🗵
1	ELECTRICAL DISTRIBUTION EQUIPMENT. SEE RISER DIAGRAM SHEET E3.0.
2	TELEPHONE TERMINAL BOARD. 2'X4'X3/4" FIRE RATED PLYWOOD. VERIFY EXACT LOCATION. COORDINATE EXACT REQUIREMENTS WITH THE PHONE CO. PROVIDE TWO SURFACE MOUNTED DUPLEX RECEPTACLES.
3	IN LOCATIONS IN WHICH PARTY CITY IS RESPONSIBLE FOR THE FIRE ALARM MONITORING, THE G.C. TO FURNISH & INSTALL A "SILENT KNIGHT 5808" (NO SUBSTITUTIONS) FIRE ALARM CONTROL PANEL (FACP).
4	PROVIDE (4) 1" CONDUITS WITH PULLSTRING ROUTED AT STRUCTURE AS SHOWN, (2) FOR TELEPHONE CABLE, AND (2) FOR DATA CABLE. USE LONG RADIUS SWEEPS FOR ALL CHANGES IN DIRECTION. INSTALL JUNCTION BOXES FOR EVERY 270° IN BENDS.
5	PROVIDE REAR DOOR BUZZER SYSTEM WITH (1) BUZZER AT STOCKROOM WALL AND (1) BUZZER AT CASHWRAP AREA. REFER TO DETAIL 3/E3.0.
6	WIRELESS ACCESS POINT. PROVIDE (1) DATA OUTLET AT EACH LOCATION. TENANT TO PULL CABLE AS REQUIRED TO LOCATIONS AS INDICATED AND/OR DESIRED. (8 MIN. REQ'D)
7	TENANT TO RUN SEPARATE CAT 5E DATA CABLE FROM MANAGER'S OFFICE TO EACH DATA RECEPTACLE LOCATION. LEAVE 10'-0" SLACK AND LABEL PULLED CABLES AT EACH END. PUNCHDOWNS BY TENANT. G.C. TO PROVIDE/INSTALL CONDUIT AND ELECTRICAL BOXES FOR DATA/PHONE JACKS AS INDICATED.
8	TENANT TO RUN SEPARATE CAT 5E PHONE CABLE FROM TELEPHONE TERMINAL BOARD TO EACH TELEPHONE RECEPTACLE LOCATION. LEAVE 10'-0" SLACK AND LABEL PULLED CABLES AT EACH END. PUNCHDOWNS BY TENANT. G.C. TO PROVIDE/INSTALL CONDUIT AND ELECTRICAL BOXES FOR DATA/PHONE JACKS AS INDICATED.
9	G.C. TO RUN (1) CONDUIT FOR POWER (1) FOR DATA, AND (1) FOR TELEPHONE DOWN WALL TO FEED LEFT SIDE (PLAN VIEW) OF CHECKOUT COUNTER. WIRING TO BE RUN THROUGH WALL AS REQUIRED TO EXIT WALL AT 14'-0" AFF, INTO BACKSIDE OF GONDOLA, THROUGH GONDOLA FIXTURES AND INTO CASHWRAP.
10	G.C. TO RUN (1) CONDUIT FOR POWER (1) FOR DATA AND (1) FOR TELEPHONE DOWN WALL TO FEED DESIGN STUDIO AND CHECKOUT COUNTER. CONDUIT TO EXIT WALL @ 1'-0" AFF.
11	LIGHTING AND EXHAUST FAN IN RESTROOM TO BE CONTROLLED VIA SAME OCCUPANCY SENSOR.
12	EXHAUST FAN IN JAN. CLOSET TO RUN CONTINUOUSLY.
13	PROVIDE POWER WIRING AND MEANS OF DISCONNECT FOR STOREFRONT SIGNAGE. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH SIGN VENDOR PRIOR TO INSTALLATION. J-BOX MUST BE WITHIN 5FT OF SIGN LOCATION.
14	PROVIDE A MINIMUM ONE (1) INCH UNDERGROUND CONDUIT WITH PULL STRING FOR FIRE ALARM CABLING CONNECTIONS TO THE EXTERIOR BACKFLOW PREVENTER.

BTM. OF DECK - ±18'-2 3/4"					
BTM. OF BEAM - ±17'-2 1/4"					
BTM. OF DUCT - ±13'-0"					
BTM. OF CASHWRAP LIGHTING -16'-0"					
BTM. OF SALES LIGHTING - 12'-6"					
BTM. OF STOCKROOM LIGHTING - 12'-6"					
PERIMETER SHELVING - 12'-0"					
INTERIOR SHELVING 10'-6"					
<b>NOTE</b> : CONTRACTOR TO VERIFY EXISTING CONDITIONS & MOUNT SPRINKLERS, CONDUIT, AND DUCTWORK AS HIGH AS POSSIBLE WITHIN THE EXISTING CEILING SPACE. NOTIFY ARCHITECT/ENGINEER OF ANY POTENTIAL CONFLICTS PRIOR TO FABRICATION/INSTALLATION.					

NOTE: PAINT ALL ELECTRICAL COVER PLATES TO MATCH WALL PAINT COLOR OF ADJACENT WALLS.

ALL CAT5E CABLES TO BE "WHITE"

![](_page_42_Figure_4.jpeg)

![](_page_43_Figure_0.jpeg)

![](_page_44_Figure_0.jpeg)

![](_page_44_Figure_1.jpeg)

![](_page_44_Figure_2.jpeg)

![](_page_44_Figure_4.jpeg)

![](_page_44_Picture_9.jpeg)

![](_page_44_Picture_10.jpeg)

![](_page_45_Picture_0.jpeg)

![](_page_45_Figure_1.jpeg)

![](_page_45_Picture_2.jpeg)

![](_page_45_Picture_3.jpeg)

![](_page_45_Picture_4.jpeg)

![](_page_45_Picture_5.jpeg)

![](_page_45_Picture_6.jpeg)

![](_page_45_Picture_7.jpeg)

![](_page_45_Picture_8.jpeg)

![](_page_45_Picture_9.jpeg)

![](_page_45_Picture_10.jpeg)

![](_page_45_Picture_11.jpeg)

![](_page_45_Figure_12.jpeg)

![](_page_45_Figure_13.jpeg)

![](_page_45_Figure_14.jpeg)

![](_page_45_Picture_15.jpeg)

![](_page_45_Picture_16.jpeg)

![](_page_45_Picture_17.jpeg)

![](_page_45_Picture_18.jpeg)

![](_page_45_Picture_19.jpeg)

![](_page_45_Picture_20.jpeg)

![](_page_45_Picture_21.jpeg)

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![](_page_45_Picture_33.jpeg)

![](_page_45_Picture_34.jpeg)

![](_page_45_Picture_35.jpeg)

![](_page_45_Figure_37.jpeg)

![](_page_45_Figure_38.jpeg)

![](_page_45_Figure_39.jpeg)

SK DETAILS	_

STORE #4	<b>IARKETPLACE</b>	<b>CHINO, CA 91710</b>
PortyColfy	CHINO SPECTRUM N	<b>3850 GRAND AVE.</b>
Larson De 1000 Comm Suit Williamspo PHONE 5 FAX 570.3 www.larsonde Architects Eng It is in violatic any person, under the o licensed Archi Land Surveyor in any way. specification reports not cor seal imprint or accompanied signature by professional fraudulently a not be consid copy. Copyr 2016, Larsor	esign ( herce F e 201 rt, PA 70.323 23.990 esigngro ineers S on of the unless direction tect, Eng than, r s, studie tect, Eng than, r s, studie than, r by and y the lice may hav litered a ight Pro b Design	Group Park Dr 17701 .6603 .02 .00 .03 .02 .00 .03 .03 .03 .03 .03 .03 .03 .03 .03
PROTO NO.	1703	3
PROJECT NO.	8099	9-196
APPV'D BY		
SHEET TITLE INSRIB DET	E KIO AILS	SK
E1	.3	

![](_page_46_Figure_0.jpeg)

![](_page_46_Figure_1.jpeg)

THE CX RIBBON CABLE THAT INTERCONNECTS THE CONTROLLER AND THE MOTHERBOARD IS TO BE PLACED IN T BE OFF TO THE CX PANEL IF RE

> INSTALL CX DIMMING CARD NUMBER 2 MOTHERBOAR PANEL, (THE TOP N SEE

![](_page_47_Figure_2.jpeg)

**Dimming Card Detail** 

X-XX

C-11

C-2

C-1

C-19

C-3

C-4

C-5

C-6

C-7

C-8

X-XX

X-XX

X-XX

C-21

C-23

X-XX

X-XX

THE MOTHEI MOVING OF ON THE NU DS OF THE MOST MOTH DIMMING C	RBOARD # R REATTAC IMBER 1 AN CX24 REL4 ERBOARDS CARD DETA	I LOCATION. POWER MUS CHING THE RIBBON CABLE ID AY S). JL CX24	т 1		NOTE Please not wi This m	TO INST e read thi red exac nay incur	ALLER: s drawing completely prior to instal tly as shown, then the programming charges and require additional wo	llation. If the Panel/ g will <u>not</u> operate t rk to rectify.	Circuits/Inputs are he panel as specified.	
			Π				7			
-					-				RELAT PANEL SU	
8				0	Γ <u></u>			RELAY		CONTROL
								1	SIGN/EXTERIOR	SCHEDULE/SWITCH
0					0 0			2		SCHEDULE/SWITCH
								3	WINDOWS	
				20AMP 1 POLE RELAY	•			5	STOCK ROOM	OCCUPANCY SENSOR
0					0			6	STOCK ROOM (SPARE)	OCCUPANCY SENSOR
	SOAMP 1 POLE 1 POLE 1 POLE						WINDOWS	7	EMERGENCY STOCKROOM	STAND ALONE OCCUPANCY SENSORS
				20AMP 1 POLE RELAY	• •		C-11 STOCK ROOM	8	EMERGENCY SALES FLOOR	SCHEDULE/SWITCH
					0		X-XX	9	SALES FLOOR - PRIMARY DAYLIGHT ZONE	SCHEDULE/PHOTO SENSOR
						0)	EMERG. SALES FLOOR	10	EMERGENCY SALES FLOOR	SCHEDULE/SWITCH
					0		C-1	11	SALES FLOOR - SECONDARY DAYLIGHT ZONE	SCHEDULE/PHOTO SENSOR
	TOULE NOLE						EMERG. SALES FLOOR	12	SALES FLOOR	SCHEDULE/SWITCH
					0		0.2	13	SALES FLOOR	SCHEDULE/SWITCH
			MR12	1 POLE RELAY				14	SALES FLOOR	SCHEDULE/SWITCH
0	PEDE GMAOS						0,1220	15	SALES FLOOR	SCHEDULE/SWITCH
					0		C-5	16	SALES FLOOR	SCHEDULE/SWITCH
	SOAMP 200MP							17	SALES FLOOR	SCHEDULE/SWITCH
					0		6.7	18	SALES FLOOR	SCHEDULE/SWITCH
				1 POLE RELAY		0		19	SALES FLOOR	SCHEDULE/SWITCH
	REAL GMAOS						0,1220	20	SALES FLOOR STOCKROOM - PRIMARY	SCHEDULE/SWITCH
								21		SCHEDULE/SWITCH
	BELAY TO			20AMP 1 POLE			X-XX	22	DAYLIGHT	SCHEDULE/SWITCH
							SALES	23	SALES FLOOR	SCHEDULE/SWITCH
F				20AMP FERT	0		X-XX	24	SALES FLOOR	SCHEDULE/SWITCH
	Stormer Pole			1 POLE RELAY			SALES	NOTES:		
			MR22	20AMP 1 POLE RELAY 0 20AMP 1 POLE RELAY 1 POLE RELAY 1 POLE 1 POLE		0	C-23 STOCKROOM - SECONDARY DAYLIGHT ZONE X-XX SALES	<ol> <li>Caution: Al making any Failure to c warranty.</li> </ol>	WAYS remove supply power to th connections between dimming bo lo so may result in personnel injury	e Panel control Trans ards and panel proce , damage to the pane
								<ol> <li>Contractor wire marke</li> </ol>	shall identify all line and low voltag rs.	e cable in the panel w
		CX24 Circuiti	ng Detail	SEI	e inpu	T DETAII	-		CX24 Relay So	chedule
E RELAYS ≀CUITS EX RELAYS A'	5 WHEN (CEED TH VAILABI F	E								

![](_page_47_Figure_7.jpeg)

These Switches will function normally 24 hrs a day. Connect the LVS Switches to a CAT5 cable. (See Diagram Below)

### DIMMING WIRES CONNECT TO LIGHTING LOAD IN ASSOCIATED

LOAD IN ASSOCIATED SPACE				DIN	IMING CARD #1
	+		1 1		on <b>e e e e S</b> 2 <b>e</b> AN
C11 0-10V FOR RELAY 5	-		VIOLET GREY	$\Box$	
	+		VIOLET		
C12 0-10V FOR RELAY 6	-		GREY	$\Box$	
	+		1 1		
EMPTY FOR RELAY 8	-		VIOLET	ш	
	+		VIOLET		
C19 0-10V FOR RELAY 9	-		GREY	ш	
	+		1		C OPTION BOARD
C1 0-10V FOR RELAY 10	-		VIOLET GREY	ш	
	+				BOARD WITH POWER ON
C21 0-10V FOR RELAY 11	-		GREY	$\Box$	
	+		1 1		
C3,C4 0-10V FOR RELAY 12, 13	-		VIOLET GREY	ш	
	+		VIOLET		
C5,C6 0-10V FOR RELAY 14, 15	-		GREY		
		-	•		BOARD WITH POWER ON

HUBBELL BUILDING AUTOMATION, INC

SAME FUNCTION MUST **BE WIRED IN PARALLEL.** 

### DIMMING WIRES CONNECT TO LIGHTING

LOAD IN ASSOCIATED SPACE		DIMMING CARD #2				
	+					
C7,C8 0-10V FOR RELAY 16, 17	-					
[]	+					
C9 0-10V FOR RELAY 18, 19	-					
·	+					
EMPTY FOR RELAY 20, 21	-					
	+					
EMPTY FOR RELAY 22, 23	-					
	+					
EMPTY FOR RELAY 24	-					
	+	BOARD WITH POWER ON				
C2 FOR RELAY 7	-					
с	+					
DM27 NOT USED	-					
	+					
DM28 NOT USED	-					
		BOARD WITH POWER ON				
		HUBBELL BUILDING AUTOMATION, INC				

![](_page_47_Picture_15.jpeg)

# Input Detail

# **CONTRACTOR NOTES:**

CONTRACTOR SHALL NOT POWER-UP THE HUBBELL "CX" LIGHTING CONTROL PANEL TO PREVENT INTERNAL 24V DAMAGE.

WB ELECTRICAL SERVICES WILL PROVIDE ON-SITE COMMISSIONING. CONTRACTOR SHALL NOT TERMINATE LINE-VOLTAGE CIRCUITS ON THE LIGHTING CONTROL PANEL RELAYS, THIS WILL COMPLETED BY THE WB COMMISSIONING AGENT. EXTEND, CUT, STRIP WIRE, AND WIRENUT EACH CIRCUIT AT EACH RELAY PER E2.1. CONTRACTOR MUST TERMINATE ALL LOW VOLTAGE WIRES INCLUDING 0-10V, WALL SWITCH STATIONS, DAYLIGHT SENSORS, AND OCCUPANCY SENSORS. ALL LINE-VOLTAGE AND LOW-VOLTAGE CABLES WILL BE WIRE MARKED WITH PANEL CIRCUIT OR ASSOCIATED DEVICE. CONTRACTOR SHALL CALL OR EMAIL WB ELECTRICAL SERVICES TO REQUEST COMMISSIONING SERVICE FIVE DAYS PRIOR TO ON SITE REQUIREMENT. EMAIL: PCSUPPORT@WBLIGHT.COM

CONTACT: LISA PETRO TEL: 781.619.6074

CALL: LISA 781-619-6074 / RON DOYLE 714-952-1538

Sequence of Operations:	

CIRCUIT	Sign/Exterior Lighting, NovSept.:
LA-13	Mon-Sun: ON-30 Minutes Before Sunset / OFF Midnight
LA-15	Mon-Sun: ON-30 Minutes Before Sunset / OFF 2AM
C-14	

Storefront Window Lighting, Nov.-Sept.: Mon-Sun: ON-30 Minutes Before Sunset / OFF-Midnight Storefront Window Lighting, October: C-10 Mon-Sun: ON-30 Minutes Before Sunset / OFF-2AM

> Sales Area, Nov.-Sept. Open Times are 15 minutes past the time shown. 15 minutes prior to Open time the Fixtures are to go to 100% except in the Daylight Areas:

M-W 9:15AM to 8:30PM X-XX TH-F 9:15AM to 9PM SAT 8:15AM to 8:30PM C-17 SUN 9:45AM to 6PM

> Sales Area, October. Open Time for fixtures to go to 100%, except in the Daylight Areas and Closing time for fixtures to go to 30% will be scheduled as:

ALL DAYS 7:00AM to 1:00AM Morning Daily Alarm Sales Area, Open:

When activated at the beginning of the Business Day the fixtures will turn ON and maintain 30% output until the ON Schedule runs, turning the fixtures to Operational Levels.

Evening Daily Alarm Sales Area, Close: The Lights will dim to 30% after 30 minutes past closing time, then Off based on the Alarm Panel input.

Stock Room: Controlled by Occupancy Sensors w/override switch controlled via the CX Panel Programming. The stockroom is in vacancy controlled.

For any Questions Contact Hubbell Control Solutions, (800)-888-8006 Option

l control Transformer prior to Manager's Office ind panel processor board. age to the panel, and void its Override Switch #1 Will be Placed in the Manager's Office e in the panel with permanent LVS Wires - ON/OFF - Sales 
 1
 Black

 5
 Red

 3
 Orange

ON/OFF - Sign/Windows 00 LVSM4NP Overridde Switch #2 Will be Placed in the Manager's Office LVS Wires ) E ON/OFF - Stock Room Blue Black -RAISE - Stock (▲) Gray LOWER - Stock (▼) Red  $\left( \right)$ LVSM3NP STOCKROOM Overridde Switch #3 Will be Placed at the Stockroom Entry LVS Wires CAT5 Cable ON/OFF - Stock Room Blue Black ⊖+--RAISE - Stock (▲) CAT5 Cable Gray LOWER - Stock (▼) Red Co LVSM3NP

SWITCHES WITH THE

RJ45 is T568 Standard		3B	Number used to Define CAT5	CX Designation	CAT5 Wire Colors	LVS Switch Functions	LVS Wire Colors
			Color		Orange/White	+24V	Black
	ु दु दु		2	А	Orange	On/Off	Blue
Ca Ca		3	В	Green/White	On/Off	Orange	
	ခိုင်စု		4	С	Blue	Raise Dimmed Level	Gray
	l mir o		5	D	Blue/White	Lower Dimmed Level	Red
	ŬĒ		6		Green	Not Used	
542 T		7		Brown/White	Not Used		
⊄°C			8		Brown	Not Used	

	PartyCity
LIGHTING CONTROL PANEL TO	25 Green Pond Road Rockaway, NJ 07866
ACTOR SHALL NOT TERMINATE LINE- OMPLETED BY THE WB COMMISSIONING ELAY PER E2.1. CONTRACTOR MUST ONS, DAYLIGHT SENSORS, AND BE WIRE MARKED WITH PANEL CIRCUIT FAL SERVICES TO REQUEST	
APPROVED LIGHTING CONTROLS	
VIEDENBACH - BROWN CONTACT: LISA PETRO	09/05/17
EL: 781.619.6074	PERMIT ISSUE DATE 09/05/17
PCSUPPORT@WBLIGHT.COM	REVISIONS       #     DATE     DESCRIPTION     BY
AINIMUM LEAD TIME: 3-4 WEEKS ARO FIELD PROGRAMMING AND FINAL COMMISSIONING REQUIRED	
NOTE: DIFFERENT CX PANEL DESIGNS ARE AVAILABLE FOR AREAS OF THE COUNTRY WITH VARYING ENERGY CODE REQUIREMENTS. PLEASE CONTACT: RON DOYLE WEIDENBACH - BROWN TEL: 714.982.1538 EMAIL: RON.DOYLE@WBLIGHT.COM	
	STORE #42 ARKETPLACE CHINO, CA 91710
vs	CHINO SPECTRUM M 3850 GRAND AVE.
<b>DM</b>	Larson Design Group <sub>®</sub> 1000 Commerce Park Dr Suite 201 Williamsport, PA 17701 PHONE 570.323.6603 FAX 570.323.9902 www.larsondesigngroup.com Architects Engineers Surveyors It is in violation of the law for any person, unless acting under the direction of a
Colors	IICensed Architect, Engineer or Land Surveyor, to alter an item in any way. Plans, maps, specifications, studies, and reports not containing a red ink seal imprint on the cover sheet accompanied by and original signature by the licensed professional may have been fraudulently altered and shall not be considered an orginal copy. Copyright Protected 2016, Larson Design Group         PROTO NO.       1703         PROJECT NO.       8099-196         DRAWN BY       TCR         APPV'D BY       PL
	SHEET TITLE LIGHTING CONTROL PANEL SHEET NO. E2.1

![](_page_48_Picture_0.jpeg)

![](_page_48_Picture_1.jpeg)

![](_page_48_Picture_2.jpeg)

![](_page_48_Picture_3.jpeg)

![](_page_48_Picture_4.jpeg)

![](_page_48_Picture_5.jpeg)

![](_page_48_Figure_6.jpeg)

		Location: STC Supply From: SEF Mounting: Surf Enclosure: Type	CKROC VICE IN ace e 1	DM I	A Volts: 120/208 Phases: 3 Wires: 4							A.I.C. Rating: Mains Type: MLO Mains Rating: 1200 A				
RMK	СКТ	Circuit Description	Trip	Poles	Α	В	с	A	В	с	Poles	Trip	Circuit De	scription	скт	
	MDP-1				4.8 kVA			0.0 kVA							MDP-	
	MDP-3	PANEL 'C'	200 A	3		4.5 kVA			0.0 kVA		3	200 A	PANEL 'LP'		MDP-	
	MDP-5						5.3 kVA			0.0 kVA	1				MDP-	
	MDP-7				0.0 kVA			10.4 kV/	4						MDP-	
	MDP-9	PANEL 'D'	200 A	3		0.0 kVA			8.4 kVA		3	200 A	PANEL 'LA'		MDP-'	
	MDP-11						0.0 kVA			6.0 kVA	1				MDP-1	
	MDP-13				0.0 kVA			7.6 kVA							MDP-1	
	MDP-15	PANEL 'LB'	200 A	3		0.0 kVA			7.6 kVA		3	80 A	EX. RTU 1		MDP-1	
	MDP-17						0.0 kVA			7.6 kVA	1				MDP-1	
	MDP-19				7.3 kVA			7.3 kVA							MDP-2	
	MDP-21	EX. RTU 2	70 A	3		7.3 kVA			7.3 kVA		3 7	70 A	EX. RTU 3		MDP-2	
	MDP-23						7.3 kVA			7.3 kVA	1				MDP-2	
	MDP-25				7.3 kVA			7.3 kVA							MDP-2	
	MDP-27	EX. RTU 4	70 A	3		7.3 kVA			7.3 kVA		3	70 A	EX. RTU 5		MDP-2	
	MDP-29	-					7.3 kVA			7.3 kVA	1				MDP-3	
	MDP-31				7.3 kVA										MDP-3	
	MDP-33	EX. RTU 6	70 A	3		7.3 kVA									MDP-3	
	MDP-35	-					7.3 kVA								MDP-3	
	MDP-37														MDP-3	
	MDP-39														MDP-4	
	MDP-41														MDP-4	
		1	Tota	Load:	5924	4 VA	5690	)3 VA	5542	15 VA			1			
Load	Classificat	ion		Con	nected L	oad C	emand Fa	actor E	Estimated	Demand			Panel	Totals		
HVAC					2100 VA		100.009	%	2100	VA						
Lightin	g			12964 VA		100.009	%	12964	VA		Total (	Conn. Load:	171562 V	A		
Power	-			1	44700 VA	<b>۱</b>	100.009	%	144700	) VA		Total E	st. Demand:	169186 V	A	
Recep	tacle				11880 VA		80.00%	, D	9504	VA	Т	otal Co	nn. Current:	476 A		
											т	otal Est	t. Demand	470 A		

L = BREAKER WITH LOCK ON DEVICE

\* = DEDICATED CIRUIT WITH AN ISOLATED GROUND

CIRCUIT BREAKER RATINGS:

ALL CIRCUIT BREAKERS ARE 1P/20A SWITCHING DUTY BOLT-ON, UNLESS NOTED OTHERWISE ALL CIRCUIT BREAKERS FOR HVAC EQUIPMENT SHALL BE "HACR" TYPE

	Pa	anelboard: D					Volto	120/209					oting				
				JIVI								A.I.C. Rating.					
		Supply From: MD	P 6		មានទទះ ថ							Mains	Type: MLO				
		Final actions The					wires:	4			IVI	ains R	ating: 225 A				
		Enclosure: Typ															
RMK	СКТ	Circuit Description	Trin	Poles	A	В	с	Α	В	с	Poles	Trip	Circuit Description	Ск			
	1	Spare	20 A	1	0.0 kVA			0.0 kVA			1	20 A	Spare	2			
	3	Spare	20 A	1	0.0	0.0 kVA		0.0	0.0 kVA		1	20 A	Spare	4			
	5	Spare	20 A	1			0.0 kVA			0.0 kVA	1	20 A	Spare	6			
	7	Spare	20 A	1	0.0 kVA			0.0 kVA			1	20 A	Spare	8			
	9	Spare	20 A	1		0.0 kVA			0.0 kVA		1	20 A	Spare	10			
	11	Spare	20 A	1			0.0 kVA			0.0 kVA	1	20 A	Spare	12			
	13	Spare	20 A	1	0.0 kVA			0.0 kVA			1	20 A	Spare	14			
	15	Spare	20 A	1		0.0 kVA			0.0 kVA		1	20 A	Spare	16			
	17	Spare	20 A	1			0.0 kVA			0.0 kVA	1	20 A	Spare	18			
	19	Spare	20 A	1	0.0 kVA			0.0 kVA			1	20 A	Spare	20			
	21	Spare	20 A	1		0.0 kVA			0.0 kVA		1	20 A	Spare	22			
	23	Spare	20 A	1			0.0 kVA			0.0 kVA	1	20 A	Spare	24			
	25	Spare	20 A	1	0.0 kVA			0.0 kVA			1	20 A	Spare	26			
	27	Spare	20 A	1		0.0 kVA			0.0 kVA		1	20 A	Spare	28			
	29	Spare	20 A	1			0.0 kVA			0.0 kVA	1	20 A	Spare	30			
	31	Spare	20 A	1	0.0 kVA			0.0 kVA	<b>\</b>		1	20 A	Spare	32			
	33	Spare	20 A	1		0.0 kVA			0.0 kVA		1	20 A	Spare	34			
	35	Spare	20 A	1			0.0 kVA			0.0 kVA	1	20 A	Spare	36			
	37	Spare	20 A	1	0.0 kVA			0.0 kVA			1	20 A	Spare	38			
	39								0.0 kVA		1	20 A	Spare	4(			
	41													42			
			Tota	I Load:	0	VA	0	VA	0	VA							
Load	Classi	ification		Cor	nnected L	oad D	emand Fa	actor E	Estimated	Demand			Panel Totals				

		1
	1	

L = BREAKER WITH LOCK ON DEVICE

\* = DEDICATED CIRUIT WITH AN ISOLATED GROUND

CIRCUIT BREAKER RATINGS:

ALL CIRCUIT BREAKERS ARE 1P/20A SWITCHING DUTY BOLT-ON, UNLESS NOTED OTHERWISE ALL CIRCUIT BREAKERS FOR HVAC EQUIPMENT SHALL BE "HACR" TYPE WP = A NEMA 3R RATED. GFI = GROUND FAULT

Total Est. Demand... 0 A WP = A NEMA 3R RATED.

Total Conn. Load:0 VATotal Est. Demand:0 VA

Total Conn. Current: 0 A

VVP = A NEMA 3R RATED GFI = GROUND FAULT

			۲		CKROC	M			Volts:	120/208 3	i		A	.I.C. R Maine	ating: Type: MLO				Гì	
-			1	Mounting: Surfa Mounting: Surfa Enclosure: Type	ace 1		1	1	Wires:	4		1	Μ	ains R	ating: 225 A		1		1	Mountin Enclosu
	RMK	RMK					Α	в	с	A	В	с					RMK	RMK		
			СКТ	Circuit Description	Trip	Poles	4.012/4			071)/4			Poles	Trip	Circuit Description	СКТ			СКТ	Circuit Descrip
-			C-1 C-3	LTG SALES	20 A 20 A	1	1.3 KVA	0.9 kVA		0.7 KVA	1.1 kVA		1	20 A 20 A	LTG SALES	C-2 C-4			3	Spare
			C-5	LTG SALES	20 A	1			0.7 kVA			0.8 kVA	1	20 A	LTG SALES	C-6			5	Spare
			C-7	LTG SALES	20 A	1	0.5 kVA			0.7 kVA	<b>\</b>		1	20 A	LTG SALES	C-8			7	Spare
			C-9	LTG SALES	20 A	1		0.3 kVA			1.0 kVA	0.2 1/)//	1	20 A		C-10			9	Spare
┢			C-11	LTG - TOILET RM	20 A	1	0.3 kVA		1.0 KVA	0.6 kVA		0.3 KVA	1	20 A	LTG - MGR/BRKRM	C-12 C-14			13	Spare
			C-15	LTG - EMERGENCY	20 A	1	0.0 1.071	0.4 kVA		0.0 107	0.6 kVA		1	20 A	LTG CNTRL PANEL	C-16			15	Spare
			C-17	LTG - DAYLIGHT 1	20 A	1			1.3 kVA			1.0 kVA	1	20 A	EMERG. INVERTER	C-18			17	Spare
			C-19	LTG - DAYLIGHT 2	20 A	1	0.8 kVA	0.011/4			_					C-20			19	Spare
-			C-21	LTG - STK DAYLIGHT 1	20 A	1		0.3 KVA	0.3 k\/A							C-22			21	Spare
┢			C-25		207	-			0.0 KVA							C-24			25	Spare
			C-27													C-28			27	Spare
			C-29													C-30			29	Spare
┢			C-31													C-32			31	
┢			C-35								-					C-34			35	
┢			C-37													C-38			37	
			C-39													C-40			39	
			C-41		Total	Loodi	477		446	7 \ / A		9.1/4				C-42			41	
-		<u> </u>			Total	Load:	477	o va	440	/ VA	531	8 VA								
_		<b>Load</b> Lighti	I Class	ification		Со	nnected L 12964 VA	oad D	emand Fa 100.00%	actor E	Estimated 12964	<b>Demand</b> VA			Panel Totals			Load	l Classi	fication
		Powe	er				1600 VA		100.00%	6	1600	VA			Conn. Load: 14555 VA					
													Т	otal Co	nn Current: 40 A					
													Т	otal Es	t. Demand 40 A					
								I												
		L = B	REAK	ER WITH LOCK ON DEVICE												ATED		L = B	REAKE	R WITH LOCK ON
·		* = DE		TED CIRUIT WITH AN ISOLA	ATED G	ROUN	D									521		* = D CIRC		FED CIRUIT WITH A
		ALL C	CIRCU	IT BREAKERS ARE 1P/20A S	SWITCI	HING D	UTY BOL	T-ON, UN	LESS NOT	TED OTH	IERWISE							ALL (	CIRCUI	T BREAKERS ARE
		ALL C	CIRCU	IT BREAKERS FOR HVAC E	QUIPM	ENT S	HALL BE '	HACR" T	/PE									ALL (	CIRCUI	T BREAKERS FOR
		J																		
		1																1		
			Ρ	anelboard: LA															Pa	anelboard
				Location: STO	CKROC	M			Volts:	120/208			A	A.I.C. R Maina	ating:					Locatio
				Mounting: Surfa	ace				Wires:	4			м	ains R	ating: 225 A					Mountir
				Enclosure: Type	1										ating: 225 A					Enclosu
		l .											I							
							_	_									<b> </b>			
т	RMK	RMK	скт	Circuit Description	Trip	Poles	Α	В	С	A	В	с	Poles	Trin	Circuit Description	СКТ	RMK	RMK	СКТ	Circuit Descrir
Т	RMK	RMK	<b>СКТ</b> LA-1	Circuit Description	Trip 20 A	Poles	<b>A</b> 0.4 kVA	В	с	<b>A</b> 1.0 kVA	В	с	Poles	<b>Trip</b> 20 A	Circuit Description	<b>СКТ</b> LA-2	RMK	RMK	<b>СКТ</b>	Circuit Descrip
T	RMK	RMK L	CKT LA-1 LA-3	Circuit Description REC - TELEPHONE FACP PANEL	<b>Trip</b> 20 A 20 A	<b>Poles</b> 1 1	<b>A</b> 0.4 kVA	<b>B</b> 0.6 kVA	С	<b>A</b> 1.0 kVA	B 0.4 kVA	С	Poles 1 1	<b>Trip</b> 20 A 20 A	Circuit Description AUTO ENTRY DOORS ISO - RECEIVER	<b>CKT</b> LA-2 LA-4	RMK	RMK	<b>CKT</b> 1 3	Circuit Descrip Spare Spare
T	RMK	RMK L	<b>CKT</b> LA-1 LA-3 LA-5	Circuit Description REC - TELEPHONE FACP PANEL ISO - RECEIVER	<b>Trip</b> 20 A 20 A 20 A	<b>Poles</b> 1 1 1 1	<b>A</b> 0.4 kVA	<b>B</b> 0.6 kVA	<b>C</b> 0.4 kVA	<b>A</b> 1.0 kVA	B 0.4 kVA	<b>C</b>	Poles 1 1 1 1 1	<b>Trip</b> 20 A 20 A 20 A	Circuit Description AUTO ENTRY DOORS ISO - RECEIVER REC/STCKRM/BUZZER	<b>CKT</b> LA-2 LA-4 LA-6	RMK	RMK	<b>CKT</b> 1 3 5	Circuit Descrip Spare Spare Spare
T		RMK L *	<b>CKT</b> LA-1 LA-3 LA-5 LA-7	Circuit Description REC - TELEPHONE FACP PANEL ISO - RECEIVER UNIT HEATER UH-1	<b>Trip</b> 20 A 20 A 20 A 20 A	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<b>A</b> 0.4 kVA 1.0 kVA	B 0.6 kVA	<b>C</b> 0.4 kVA	<b>A</b> 1.0 kVA 1.5 kVA	B 0.4 kVA	<b>C</b> 0.7 kVA	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<b>Trip</b> 20 A 20 A 20 A 20 A	Circuit Description AUTO ENTRY DOORS ISO - RECEIVER REC/STCKRM/BUZZER WATER HEATER	<b>CKT</b> LA-2 LA-4 LA-6 LA-8	RMK	RMK	<b>CKT</b> 1 3 5 7 9	Circuit Descrip Spare Spare Spare Spare
T	RMK	RMK L *	<b>CKT</b> LA-1 LA-3 LA-5 LA-7 LA-9 LA-11	Circuit Description REC - TELEPHONE FACP PANEL ISO - RECEIVER UNIT HEATER UH-1 REC - BRKRM REC - BRKRM	<b>Trip</b> 20 A	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A 0.4 kVA 1.0 kVA	B 0.6 kVA 0.2 kVA	<b>C</b> 0.4 kVA 0.2 kVA	<b>A</b> 1.0 kVA 1.5 kVA	B 0.4 kVA 0.2 kVA	C 0.7 kVA 1.1 kVA	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<b>Trip</b> 20 A 20 A 20 A 20 A 20 A 20 A	Circuit Description AUTO ENTRY DOORS ISO - RECEIVER REC/STCKRM/BUZZER WATER HEATER REC - BRKRM RTU MAINT.	<b>CKT</b> LA-2 LA-4 LA-6 LA-8 LA-10 LA-12	RMK	RMK	<b>CKT</b> 1 3 5 7 9 11	Circuit Descrip Spare Spare Spare Spare Spare Spare Spare
<b>T</b>	RMK	RMK	CKT LA-1 LA-3 LA-5 LA-7 LA-9 LA-11 LA-13	Circuit Description REC - TELEPHONE FACP PANEL ISO - RECEIVER UNIT HEATER UH-1 REC - BRKRM REC - BRKRM SIGN	<b>Trip</b> 20 A	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A 0.4 kVA 1.0 kVA 1.5 kVA	B 0.6 kVA 0.2 kVA	<b>C</b> 0.4 kVA 0.2 kVA	A 1.0 kVA 1.5 kVA 1.0 kVA	B 0.4 kVA 0.2 kVA 0.2 kVA	C 0.7 kVA 1.1 kVA	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Trip           20 A	Circuit Description AUTO ENTRY DOORS ISO - RECEIVER REC/STCKRM/BUZZER WATER HEATER REC - BRKRM RTU MAINT. EXHAUST FAN 1 (EF-1)	CKT LA-2 LA-4 LA-6 LA-8 LA-10 LA-12 LA-14	RMK	RMK	<b>CKT</b> 1 3 5 7 9 11 13	Circuit Descrip Spare Spare Spare Spare Spare Spare Spare Spare
<b>T</b>		RMK 	CKT LA-1 LA-3 LA-5 LA-7 LA-9 LA-11 LA-13 LA-15	Circuit Description REC - TELEPHONE FACP PANEL ISO - RECEIVER UNIT HEATER UH-1 REC - BRKRM REC - BRKRM SIGN SIGN 2	<b>Trip</b> 20 A 20 A 20 A 20 A 20 A 20 A 20 A	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A 0.4 kVA 1.0 kVA 1.5 kVA	B 0.6 kVA 0.2 kVA 1.5 kVA	C 0.4 kVA 0.2 kVA	<b>A</b> 1.0 kVA 1.5 kVA 1.0 kVA	B 0.4 kVA 0.4 kVA 0.2 kVA 0.2 kVA	C 0.7 kVA 1.1 kVA	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<b>Trip</b> 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	Circuit Description AUTO ENTRY DOORS ISO - RECEIVER REC/STCKRM/BUZZER WATER HEATER REC - BRKRM RTU MAINT. EXHAUST FAN 1 (EF-1) EXHAUST FAN 3 (EF-3)	CKT LA-2 LA-4 LA-6 LA-8 LA-10 LA-12 LA-14 LA-16	RMK	RMK	<b>CKT</b> 1 3 5 7 9 11 13 15	Circuit Descrip Spare Spare Spare Spare Spare Spare Spare Spare
		RMK	CKT LA-1 LA-3 LA-5 LA-7 LA-9 LA-11 LA-13 LA-15 LA-17	Circuit Description REC - TELEPHONE FACP PANEL ISO - RECEIVER UNIT HEATER UH-1 REC - BRKRM REC - BRKRM SIGN SIGN 2 EXHAUST FAN 2 (EF-2)	<b>Trip</b> 20 A	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A 0.4 kVA 1.0 kVA 1.5 kVA	B 0.6 kVA 0.2 kVA 1.5 kVA	C 0.4 kVA 0.2 kVA 0.1 kVA	A 1.0 kVA 1.5 kVA 1.0 kVA	B 0.4 kVA 0.2 kVA 0.2 kVA 1.0 kVA	C 0.7 kVA 1.1 kVA 0.5 kVA	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Trip           20 A	Circuit Description AUTO ENTRY DOORS ISO - RECEIVER REC/STCKRM/BUZZER WATER HEATER REC - BRKRM RTU MAINT. EXHAUST FAN 1 (EF-1) EXHAUST FAN 3 (EF-3) REC - MGR OFFICE REC - MGR OFFICE	CKT LA-2 LA-4 LA-6 LA-8 LA-10 LA-12 LA-14 LA-16 LA-18	RMK	RMK	CKT         1         3         5         7         9         11         13         15         17         10	Circuit Descrip Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare
		RMK */L *	CKT LA-1 LA-3 LA-5 LA-7 LA-9 LA-11 LA-13 LA-15 LA-17 LA-19 LA-21	Circuit Description REC - TELEPHONE FACP PANEL ISO - RECEIVER UNIT HEATER UH-1 REC - BRKRM REC - BRKRM SIGN SIGN 2 EXHAUST FAN 2 (EF-2) ISO - SECURITY ISO - MGR OFFICF	<b>Trip</b> 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A 0.4 kVA 1.0 kVA 1.5 kVA 0.4 kVA	B 0.6 kVA 0.2 kVA 1.5 kVA	C 0.4 kVA 0.2 kVA 0.1 kVA	A 1.0 kVA 1.5 kVA 1.0 kVA 0.2 kVA	B 0.4 kVA 0.4 kVA 0.2 kVA 0.2 kVA 1.0 kVA 0.2 kVA	C 0.7 kVA 1.1 kVA 0.5 kVA	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Trip           20 A	Circuit Description AUTO ENTRY DOORS ISO - RECEIVER REC/STCKRM/BUZZER WATER HEATER REC - BRKRM RTU MAINT. EXHAUST FAN 1 (EF-1) EXHAUST FAN 3 (EF-3) REC - MGR OFFICE REC - MGR OFFICE WATER COOLER	CKT LA-2 LA-4 LA-6 LA-8 LA-10 LA-12 LA-14 LA-16 LA-18 LA-20 LA-22	RMK	RМК	CKT           1           3           5           7           9           11           13           15           17           19           21	Circuit Descrip Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare
		RMK	CKT LA-1 LA-3 LA-5 LA-7 LA-9 LA-11 LA-13 LA-15 LA-17 LA-19 LA-21 LA-23	Circuit Description REC - TELEPHONE FACP PANEL ISO - RECEIVER UNIT HEATER UH-1 REC - BRKRM REC - BRKRM SIGN SIGN 2 EXHAUST FAN 2 (EF-2) ISO - SECURITY ISO - MGR OFFICE ISO - MUSIC	Trip           20 A	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A 0.4 kVA 1.0 kVA 1.5 kVA 0.4 kVA	B 0.6 kVA 0.2 kVA 1.5 kVA 0.4 kVA	C 0.4 kVA 0.2 kVA 0.1 kVA 0.4 kVA	A 1.0 kVA 1.5 kVA 1.0 kVA 0.2 kVA	B 0.4 kVA 0.4 kVA 0.2 kVA 0.2 kVA 1.0 kVA 0.2 kVA	C 0.7 kVA 1.1 kVA 0.5 kVA 0.2 kVA	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Trip           20 A	Circuit Description AUTO ENTRY DOORS ISO - RECEIVER REC/STCKRM/BUZZER WATER HEATER REC - BRKRM RTU MAINT. EXHAUST FAN 1 (EF-1) EXHAUST FAN 3 (EF-3) REC - MGR OFFICE REC - MGR OFFICE WATER COOLER REC - TOILET RM	CKT LA-2 LA-4 LA-6 LA-8 LA-10 LA-12 LA-14 LA-16 LA-18 LA-20 LA-22 LA-24	RMK	RМК	CKT           1           3           5           7           9           11           13           15           17           19           21           23	Circuit Descrip Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare
		RMK	CKT LA-1 LA-3 LA-5 LA-7 LA-9 LA-11 LA-13 LA-15 LA-17 LA-19 LA-21 LA-23 LA-25 LA-25	Circuit Description REC - TELEPHONE FACP PANEL ISO - RECEIVER UNIT HEATER UH-1 REC - BRKRM REC - BRKRM SIGN SIGN 2 EXHAUST FAN 2 (EF-2) ISO - SECURITY ISO - MGR OFFICE ISO - MUSIC REC - TOILET RM	Trip 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A 0.4 kVA 1.0 kVA 1.5 kVA 0.4 kVA 0.2 kVA	B 0.6 kVA 0.2 kVA 1.5 kVA 0.4 kVA	C 0.4 kVA 0.2 kVA 0.1 kVA 0.4 kVA	A 1.0 kVA 1.5 kVA 1.0 kVA 0.2 kVA	B 0.4 kVA 0.2 kVA 0.2 kVA 1.0 kVA 0.2 kVA	C 0.7 kVA 1.1 kVA 0.5 kVA 0.2 kVA	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Trip           20 A	Circuit Description AUTO ENTRY DOORS ISO - RECEIVER REC/STCKRM/BUZZER WATER HEATER REC - BRKRM RTU MAINT. EXHAUST FAN 1 (EF-1) EXHAUST FAN 3 (EF-3) REC - MGR OFFICE REC - MGR OFFICE WATER COOLER REC - TOILET RM HAND DRYER	CKT LA-2 LA-4 LA-6 LA-8 LA-10 LA-12 LA-14 LA-16 LA-18 LA-20 LA-22 LA-24 LA-26	RMK	RМК	CKT           1           3           5           7           9           11           13           15           17           19           21           23           25	Circuit Descrip Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare
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<b>T</b>		RMK    */L * * *	CKT LA-1 LA-3 LA-5 LA-7 LA-9 LA-11 LA-13 LA-15 LA-17 LA-19 LA-21 LA-23 LA-25 LA-27 LA-29	Circuit Description REC - TELEPHONE FACP PANEL ISO - RECEIVER UNIT HEATER UH-1 REC - BRKRM REC - BRKRM SIGN SIGN 2 EXHAUST FAN 2 (EF-2) ISO - SECURITY ISO - MGR OFFICE ISO - MUSIC REC - TOILET RM HAND DRYER ISO - PRINTER ISO - PRINTER	Trip           20 A	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A 0.4 kVA 1.0 kVA 1.5 kVA 0.4 kVA 0.2 kVA	B 0.6 kVA 0.2 kVA 1.5 kVA 0.4 kVA 1.5 kVA	C 0.4 kVA 0.2 kVA 0.1 kVA 0.4 kVA	A 1.0 kVA 1.5 kVA 1.0 kVA 0.2 kVA 1.5 kVA	B 0.4 kVA 0.2 kVA 0.2 kVA 1.0 kVA 0.2 kVA 0.2 kVA 1.1 kVA	C 0.7 kVA 1.1 kVA 0.5 kVA 0.2 kVA	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Trip           20 A	Circuit Description AUTO ENTRY DOORS ISO - RECEIVER REC/STCKRM/BUZZER WATER HEATER REC - BRKRM RTU MAINT. EXHAUST FAN 1 (EF-1) EXHAUST FAN 3 (EF-3) REC - MGR OFFICE REC - MGR OFFICE WATER COOLER REC - TOILET RM HAND DRYER REC - CASHWRAP ISO - CASHWRAP REC - CASHWRAP	CKT LA-2 LA-4 LA-6 LA-8 LA-10 LA-12 LA-14 LA-16 LA-18 LA-20 LA-22 LA-24 LA-26 LA-28 LA-30 LA-30	RMK	RМК	CKT           1           3           5           7           9           11           13           15           17           19           21           23           25           27           29           31	Circuit Descrip Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare Spare
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		RMK  L  X  X  X  X  X  X  X  X  X  X  X  X	CKT LA-1 LA-3 LA-5 LA-7 LA-9 LA-11 LA-13 LA-15 LA-17 LA-19 LA-21 LA-23 LA-25 LA-27 LA-29 LA-31 LA-33 LA-35 LA-37 LA-39	Circuit Description REC - TELEPHONE FACP PANEL ISO - RECEIVER UNIT HEATER UH-1 REC - BRKRM REC - BRKRM SIGN SIGN 2 EXHAUST FAN 2 (EF-2) ISO - SECURITY ISO - MGR OFFICE ISO - MUSIC REC - TOILET RM HAND DRYER ISO - PRINTER ISO - PRINTER ISO - INSCRIBE REC - GEN	Trip 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A 0.4 kVA 1.0 kVA 1.5 kVA 0.4 kVA 0.2 kVA	B 0.6 kVA 0.2 kVA 1.5 kVA 0.4 kVA 0.4 kVA	C 0.4 kVA 0.2 kVA 0.1 kVA 0.4 kVA 0.4 kVA 0.7 kVA	A 1.0 kVA 1.5 kVA 1.0 kVA 0.2 kVA 1.5 kVA 1.5 kVA 0.4 kVA	B 0.4 kVA 0.4 kVA 0.2 kVA 1.0 kVA 0.2 kVA 0.2 kVA 1.0 kVA 1.1 kVA 1.1 kVA	C 0.7 kVA 1.1 kVA 0.5 kVA 0.2 kVA 1.1 kVA 0.2 kVA	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Trip           20 A	Circuit Description AUTO ENTRY DOORS ISO - RECEIVER REC/STCKRM/BUZZER WATER HEATER REC - BRKRM RTU MAINT. EXHAUST FAN 1 (EF-1) EXHAUST FAN 3 (EF-3) REC - MGR OFFICE REC - MGR OFFICE WATER COOLER REC - TOILET RM HAND DRYER REC - CASHWRAP ISO - CASHWRAP ISO - CASHWRAP ISO - CASHWRAP REC - CASHWRAP	CKT LA-2 LA-4 LA-6 LA-8 LA-10 LA-12 LA-14 LA-16 LA-20 LA-22 LA-24 LA-26 LA-28 LA-28 LA-30 LA-30 LA-32 LA-34 LA-36 LA-38 LA-30	RMK	RMK	CKT         1         3         5         7         9         11         13         15         17         19         21         23         25         27         29         31         33         35         37         39         41	Circuit Descrip Spare
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T		RMK  L  X  X  X  X  X  X  X  X  X  X  X  X	CKT LA-1 LA-3 LA-5 LA-7 LA-9 LA-11 LA-13 LA-15 LA-17 LA-19 LA-21 LA-23 LA-27 LA-29 LA-21 LA-29 LA-31 LA-33 LA-35 LA-37 LA-39 LA-41	Circuit Description REC - TELEPHONE FACP PANEL ISO - RECEIVER UNIT HEATER UH-1 REC - BRKRM SIGN SIGN 2 EXHAUST FAN 2 (EF-2) ISO - SECURITY ISO - MUSIC REC - TOILET RM HAND DRYER ISO - PRINTER ISO - PRINTER ISO - INSCRIBE REC - GEN	Trip           20 A           20 A	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A 0.4 kVA 1.0 kVA 1.5 kVA 0.4 kVA 0.2 kVA 0.4 kVA	B 0.6 kVA 0.2 kVA 1.5 kVA 0.4 kVA 1.5 kVA 0.4 kVA	C 0.4 kVA 0.2 kVA 0.1 kVA 0.4 kVA 0.4 kVA 0.7 kVA	A 1.0 kVA 1.5 kVA 1.0 kVA 0.2 kVA 1.5 kVA 1.1 kVA 0.4 kVA	B 0.4 kVA 0.4 kVA 0.2 kVA 1.0 kVA 0.2 kVA 0.2 kVA 0.2 kVA 1.1 kVA 1.1 kVA 1.1 kVA 0.2 kVA	C 0.7 kVA 1.1 kVA 0.5 kVA 0.2 kVA 0.2 kVA 0.2 kVA	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Trip           20 A	Circuit Description AUTO ENTRY DOORS ISO - RECEIVER REC/STCKRM/BUZZER WATER HEATER REC - BRKRM RTU MAINT. EXHAUST FAN 1 (EF-1) EXHAUST FAN 3 (EF-3) REC - MGR OFFICE REC - MGR OFFICE REC - MGR OFFICE WATER COOLER REC - TOILET RM HAND DRYER REC - CASHWRAP ISO - CASHWRAP ISO - CASHWRAP ISO - CASHWRAP REC - CASHWRAP	CKT LA-2 LA-4 LA-6 LA-8 LA-10 LA-12 LA-14 LA-16 LA-18 LA-20 LA-22 LA-24 LA-26 LA-24 LA-26 LA-30 LA-32 LA-30 LA-32 LA-34 LA-36 LA-38 LA-30 LA-38	RMK	RMK	CKT         1         3         5         7         9         11         13         15         17         19         21         23         25         27         29         31         33         35         37         39         41	Circuit Descrip Spare
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T       )       2       i       j       2       i       j <t< td=""><td></td><td>RMK L L * * * * * * * * * * * * * * * * *</td><td>CKT LA-1 LA-3 LA-5 LA-7 LA-9 LA-11 LA-13 LA-15 LA-17 LA-19 LA-21 LA-23 LA-25 LA-27 LA-29 LA-31 LA-33 LA-35 LA-37 LA-39 LA-41</td><td>Circuit Description REC - TELEPHONE FACP PANEL ISO - RECEIVER UNIT HEATER UH-1 REC - BRKRM SIGN SIGN 2 EXHAUST FAN 2 (EF-2) ISO - SECURITY ISO - MGR OFFICE ISO - MUSIC REC - TOILET RM HAND DRYER ISO - PRINTER ISO - PRINTER ISO - INSCRIBE REC - GEN ification</td><td>Trip           20 A           20 A</td><td>Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td><td>A 0.4 kVA 1.0 kVA 1.0 kVA 0.4 kVA 0.4 kVA 0.2 kVA 0.4 kVA 0.2 kVA 1038</td><td>B 0.6 kVA 0.2 kVA 1.5 kVA 0.4 kVA 1.5 kVA 0.4 kVA 0.4 kVA 0.4 kVA</td><td>C 0.4 kVA 0.2 kVA 0.1 kVA 0.4 kVA 0.4 kVA 0.7 kVA 0.7 kVA 0.7 kVA</td><td>A 1.0 kVA 1.5 kVA 1.0 kVA 0.2 kVA 1.5 kVA 1.5 kVA 0.4 kVA 0.4 kVA 0.4 kVA 0.4 kVA</td><td>B 0.4 kVA 0.2 kVA</td><td>C 0.7 kVA 1.1 kVA 0.5 kVA 0.2 kVA 0.2 kVA 1.1 kVA 0.4 kVA 0.4 kVA</td><td>Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td><td>Trip 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A</td><td>Circuit Description AUTO ENTRY DOORS ISO - RECEIVER REC/STCKRM/BUZZER WATER HEATER REC - BRKRM RTU MAINT. EXHAUST FAN 1 (EF-1) EXHAUST FAN 3 (EF-3) REC - MGR OFFICE REC - MGR OFFICE WATER COOLER REC - TOILET RM HAND DRYER REC - CASHWRAP ISO - CASHWRAP ISO - CASHWRAP ISO - CASHWRAP ISO - CASHWRAP ISO - CASHWRAP REC - CASHWRAP REC - CASHWRAP</td><td>CKT LA-2 LA-4 LA-6 LA-8 LA-10 LA-12 LA-14 LA-16 LA-18 LA-20 LA-22 LA-24 LA-24 LA-26 LA-28 LA-30 LA-32 LA-34 LA-36 LA-38 LA-30 LA-32</td><td>RMK</td><td>RМК</td><td>CKT         1         3         5         7         9         11         13         15         17         19         21         23         25         27         29         31         35         37         39         41</td><td>Circuit Descrip Spare</td></t<>		RMK L L * * * * * * * * * * * * * * * * *	CKT LA-1 LA-3 LA-5 LA-7 LA-9 LA-11 LA-13 LA-15 LA-17 LA-19 LA-21 LA-23 LA-25 LA-27 LA-29 LA-31 LA-33 LA-35 LA-37 LA-39 LA-41	Circuit Description REC - TELEPHONE FACP PANEL ISO - RECEIVER UNIT HEATER UH-1 REC - BRKRM SIGN SIGN 2 EXHAUST FAN 2 (EF-2) ISO - SECURITY ISO - MGR OFFICE ISO - MUSIC REC - TOILET RM HAND DRYER ISO - PRINTER ISO - PRINTER ISO - INSCRIBE REC - GEN ification	Trip           20 A           20 A	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A 0.4 kVA 1.0 kVA 1.0 kVA 0.4 kVA 0.4 kVA 0.2 kVA 0.4 kVA 0.2 kVA 1038	B 0.6 kVA 0.2 kVA 1.5 kVA 0.4 kVA 1.5 kVA 0.4 kVA 0.4 kVA 0.4 kVA	C 0.4 kVA 0.2 kVA 0.1 kVA 0.4 kVA 0.4 kVA 0.7 kVA 0.7 kVA 0.7 kVA	A 1.0 kVA 1.5 kVA 1.0 kVA 0.2 kVA 1.5 kVA 1.5 kVA 0.4 kVA 0.4 kVA 0.4 kVA 0.4 kVA	B 0.4 kVA 0.2 kVA	C 0.7 kVA 1.1 kVA 0.5 kVA 0.2 kVA 0.2 kVA 1.1 kVA 0.4 kVA 0.4 kVA	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Trip 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	Circuit Description AUTO ENTRY DOORS ISO - RECEIVER REC/STCKRM/BUZZER WATER HEATER REC - BRKRM RTU MAINT. EXHAUST FAN 1 (EF-1) EXHAUST FAN 3 (EF-3) REC - MGR OFFICE REC - MGR OFFICE WATER COOLER REC - TOILET RM HAND DRYER REC - CASHWRAP ISO - CASHWRAP ISO - CASHWRAP ISO - CASHWRAP ISO - CASHWRAP ISO - CASHWRAP REC - CASHWRAP REC - CASHWRAP	CKT LA-2 LA-4 LA-6 LA-8 LA-10 LA-12 LA-14 LA-16 LA-18 LA-20 LA-22 LA-24 LA-24 LA-26 LA-28 LA-30 LA-32 LA-34 LA-36 LA-38 LA-30 LA-32	RMK	RМК	CKT         1         3         5         7         9         11         13         15         17         19         21         23         25         27         29         31         35         37         39         41	Circuit Descrip Spare
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	20 A			U.U Κνη	0.0 kVA	5.013/0	U.U KVA	0.0 kVA	2.2.13/4	1	20 A	Spare	20		
	20 A 20 A			0.0 kVA		0.0 kva	0.0 kVA		0.0 KVA	1	20 A 20 A	Spare Spare	24 26		žõ
	20 A 20 A	1	 		0.0 kVA	0.0 kVA		0.0 kVA	0.0 kVA	1	20 A 20 A	Spare	28 30		HI 35
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	20 A 20 A	1		0.0 kVA		0.0 kVA	0.0 kVA		0.0 kVA	1	20 A 20 A	Spare Spare	36 <u>38</u>		
	20 A 20 A			-	0.0 kVA	0.0 kVA		0.0 kVA	0.0 kVA	1	20 A 20 A	Spare	40 42		
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E3.1

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![](_page_51_Figure_0.jpeg)

SYMBOL KE	Y	
$\succ$ — — —	EXISTING PIPING TO REMAIN	
,	NEW PIPING	
<del>به آهر</del>	RECONNECT EXISTING PIPE	
٠	CHROME RECESSED	ORD/5.6/QR
Ħ	BRASS UPRIGHT	INT/25.2/SR
×	BRASS UPRIGHT	INT/5.6/QR
()	EXISTING CHROME RECESSED	
— • —	CENTER LINE OF SPRINKLER: ALIGN WITH LIGHTS A SPRINKLERS: COORDINATE WITH OTHER TRADES.	ND/OR OTHER
	RECOMMENDED CENTER LINE ELEVATION OF NEW F BOTTOM OF SOLD BEAM OR SOLID PURLIN	PIPE TIGHT TO
<b>—</b> @—	RISE FROM LEFT TO RIGHT AND DROP FROM RIGHT	TO LEFT
⊢	CAPPED PIPE	
XX	HYDRAULIC REFERENCE POINT	
<b>+</b>	AUX DRAIN WITH 3/4" HOSE END ADAPTER	
	NOT IN SCOPE	

## GENERAL NOTES

1.	PROVIDE ALL NECESSARY OFFSETS, RAISES OR DROPS IN PIPING AND AUXILIARY
	DRAINS REQUIRED BY BUILDING CONDITIONS WHETHER OR NOT SHOWN ON THE
	DRAWINGS.

- EXAMINE THE JOB CONDITIONS AND VERIFY ALL MEASUREMENTS, DISTANCES, ELEVATIONS, CLEARANCES, PIPE SIZES, ETC.
- ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, AND ELECTRICAL BACKGROUND INFORMATION IS SHOWN FOR COORDINATION PURPOSES ONLY. REFER TO THE PROPER DRAWINGS FOR EXACT LOCATIONS, SIZES, AND QUANTITIES OF OTHER TRADES' WORK.
- THE ENGINEERING DRAWINGS HAVE BEEN PREPARED USING AUTOCAD. THE DRAWINGS ARE 100% CAD. THE HYDRAULIC CALCULATIONS HAVE BEEN PREPARED USING HASS. THESE DOCUMENTS WILL BE MADE AVAILABLE TO THE SUCCESSFUL FIRE SPRINKLER CONTRACTOR IN EITHER ELECTRONIC FORM OR HARD COPY.
- SUPPLY ONLY ONE (1) SPRINKLER FROM A SINGLE BRANCH LINE OUTLET. PROVIDE NEW BRANCH LINES AS REQUIRED.
- SPRINKLERS NEAR A HEAT SOURCE (UNIT HEATERS, DIFFUSERS, STEAM MAINS, SKYLIGHTS, ETC.) SHALL HAVE TEMPERATURE RATINGS IN ACCORDANCE WITH NFPA 13.
- IT IS UNDERSTOOD, UNLESS SPECIFICALLY INDICATED OTHERWISE, THAT THE PIPE SIZES AS SHOWN ON THE BID DOCUMENTS WILL BE USED.
- FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ANY EXISTING PIPING OR FITTINGS DAMAGED AS A RESULT OF HIS WORK AT NO COST TO THE OWNER.

### DESIGN CRITERIA

SALES AREA, STOCKROOM AND STORAGE ROOMS (HIGH PILED STORAGE WET PIPE FIRE SPRINKLER SYSTEM)

- PRIMARY AREA DENSITY - 0.70 GPM/SQ FT
- (PER NFPA 13 SECTION 20.3.6, 0.49 GPM/SQ FT IS REQUIRED) OPERATING AREA - 2,000 SQ FT
- TEMPERATURE CLASS / NOMINAL K-FACTOR / RESPONSE TYPE INT / 25.2 / SR
- HOSE STREAM ALLOWANCE 500 GPM
- DURATION 2 HRS
- SECONDARY AREA
- DENSITY 1.00 GPM/SQ FT
- (PER NFPA 13 SECTION 20.3.6, 0.55 GPM/SQ FT IS REQUIRED) OPERATING AREA - 900 SQ FT
- (PER NFPA 13 SECTION 20.3.6, (4) SPRINKLERS ARE REQUIRED) • TEMPERATURE CLASS / NOMINAL K-FACTOR / RESPONSE TYPE - INT /
- 25.2 / SR
- HOSE STREAM ALLOWANCE 500 GPM DURATION - 2 HRS

### WATER SUPPLY:

FIRE PROTECTION WATER SUPPLY HAS BEEN OBTAINED FROM A HYDRANT FLOW TEST PERFORMED ON 08/22/2017 AT BY CITY OF CHINO PUBLIC WORKS. THE WATER SUPPLY SHALL BE CONSIDERED EFFECTIVE AT THE POINT OF CONNECTION TO THE 12" PUBLIC WATER MAIN. THE APPROXIMATE WATER SUPPLY ELEVATION IS APPROXIMATELY EVEN WITH THE FINISH FLOOR. NO SUBSTITUTIONS OF WATER SUPPLY DATA OR ITS EFFECTIVE POINT WILL BE ALLOWED.

ACTUAL STATIC:	95 PSI
ACTUAL RESIDUAL:	70 PSI
ACTUAL FLOW:	1,953 GPM
THE ABOVE WATER S REQUIRED 10% OF THE BE ENFORCED. THE F	SUPPLY COORDINATES DO NOT INCLUDE THE STATIC PRESSURE SAFETY FACTOR THAT SHALL FOLLOWING WATER SUPPLY COORDINATES HAVE

BEEN ADJUSTED -10 PSI FOR THE REQUIRED SAFETY FACTOR. DESIGN STATIC: 85 PSI

DESIGN RESIDUAL: 60 PSI DESIGN FLOW: 1,953 GPM

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Larson Design Group<sub>®</sub> 1000 Commerce Park Dr Suite 201 Williamsport, PA 17701 PHONE 570.323.6603 FAX 570.323.9902 www.larsondesigngroup.com Architects Engineers Surveyors

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PROJECT NO.	170744.06
DRAWN BY	DKK
APPV'D BY	WBS

SHEET TITLE

SHEET NO.

FIRE SPRINKLER PLAN

**FP1.**1

2043 WOODLAND PKWY, SUITE 300 ST. LOUIS, MISSOURI 63146-4235 314-991-2633 www.codeconsultants.com

![](_page_51_Picture_43.jpeg)

 $\subset$ 

FIRE PROTECTION ENGINEER OF RECORD:

WILLIAM B. SMITH, PE LICENSE NO. FP1687 CODE CONSULTANTS, INC. 2043 WOODLAND PKWY, SUITE 300 ST. LOUIS, MO 63146-4235 PHONE: 314-991-2633 CORPORATE CERTIFICATE OF AUTHORITY NO. C3221171

![](_page_52_Figure_0.jpeg)

![](_page_52_Picture_2.jpeg)

PRESSURE GAUGE — FLOW SWITCH-

TERMINATE WITH 2" ELBOW 6" ABOVE PAVEMENT ------

![](_page_52_Picture_11.jpeg)

	Party City         25 Green Pond Road         Rockaway, NJ 07866         Image: Notest and Stress an
	STORE #427 RKETPLACE INO, CA 91710
	CHINO SPECTRUM MAF 3850 GRAND AVE. CH
N RD: 300	Larson Design Group® 1000 Commerce Park Dr Suite 201 Williamsport, PA 17701 PHONE 570.323.6603 FAX 570.323.9902 www.larsondesigngroup.com Architects Engineers Surveyors It is in violation of the law for any person, unless acting under the direction of a licensed Architect, Engineer or Land Surveyor, to alter an item in any way. Plans, maps, specifications, studies, and reports not containing a red ink seal imprint on the cover sheet accompanied by and original signature by the licensed professional may have been fraudulently altered and shall not be considered an orginal copy. Copyright Protected 2015, Larson Design Group PROTO NO. I70744.06 DRAWN BY DKK
HORITY TM	APPV'D BY WBS SHEET TITLE FIRE SPRINKLER NOTES AND DETAILS SHEET NO. FP1.2

![](_page_52_Figure_13.jpeg)

# ELEVATION AT NEW RISER

# FIRE PROTECTION ENGINEER OF RECOR WILLIAM B. SMITH, PE LICENSE NO. FP1687

CODE CONSULTANTS, INC 2043 WOODLAND PKWY, SUITE 3 ST. LOUIS, MO 63146-4235 PHONE: 314-991-2633 CORPORATE CERTIFICATE OF AUTHO NO. C3221171

2043 WOODLAND PKWY, SUITE 300 ST. LOUIS, MISSOURI 63146-4235 314-991-2633 www.codeconsultants.com

CODE CONSULTANTS, INC

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### SECTION 15300 - FIRE SPRINKLER SYSTEMS

PART 1 - GENERAL 1.01 <u>SUMMARY</u>

> A. RELATED DOCUMENTS: CONDITIONS OF THE CONTRACT, DIVISION 1 - GENERAL REQUIREMENTS AND DRAWINGS APPLY TO THE WORK OF THIS SECTION.

### 1.02 DESCRIPTION OF WORK

- A. PROVIDE ALL REQUIRED LABOR, MATERIALS, EQUIPMENT, TESTING AND SERVICES NECESSARY FOR A COMPLETE AND OPERATIONAL FIRE PROTECTION SYSTEM FOR THE BUILDING AND SITE AS HEREINAFTER DESCRIBED AND AS SHOWN ON THE ENGINEERING DRAWINGS.
- B. WORK SHALL BEGIN AT THE EXISTING 6 IN. FIRE SERVICE SPIGOT BEHIND BUILDING AND SHALL INCLUDE THE FOLLOWING:
- 1. NEW WET PIPE SPRINKLER SYSTEM.
- 2. DISCONNECTION AND DEMOLITION OF EXISTING SPRINKLERS, PIPING AND OTHER EQUIPMENT AS SHOWN ON THE ENGINEERING DRAWINGS.
- 3. COORDINATION OF WORK AND SCHEDULES WITH OTHER TRADES.
- C. SITE WORK PROVIDE THE FOLLOWING: (ADD ALTERNATE)
- 1. ABOVE GRADE BACKFLOW PREVENTER.
- 2. THRUST BLOCKING AS REQUIRED.
- 3. BACKFILL AND COMPACTION.
- D. INTERIOR WORK PROVIDE THE FOLLOWING:
- 1. PRESSURE GAUGES.
- 2. FLOW SWITCH.
- OVERHEAD PIPE, FITTINGS, HANGERS AND SPRINKLERS.
- 4. TEST CONNECTIONS, MAIN DRAINS AND AUXILIARY DRAINS.
- E. IT IS INTENDED THAT THE ENGINEERING DRAWINGS AND SPECIFICATION SHALL DESCRIBE AND PROVIDE FOR A WORKING INSTALLATION COMPLETE IN EVERY DETAIL AND ALL ITEMS NECESSARY FOR SUCH COMPLETE INSTALLATION SHALL BE PROVIDED WHETHER OR NOT SPECIFICALLY MENTIONED HEREIN OR SHOWN ON THE ENGINEERING DRAWINGS.

### 1.03 <u>REFERENCES</u>

- A. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REFERENCED DESIGN STANDARDS:
- 1. CALIFORNIA BUILDING CODE 2016 EDITION
- 2. CALIFORNIA FIRE CODE 2016 EDITION
- 3. NFPA 13, SPRINKLER SYSTEMS 2016 EDITION
- 4. NFPA 24, PRIVATE FIRE SERVICE MAINS 2016 EDITION

### 1.04 SYSTEM DESCRIPTION

- A. FIRE SPRINKLER SYSTEM DESIGN CRITERIA SHALL BE STRICTLY PER THIS SPECIFICATION.
- B. FIRE SPRINKLER SYSTEM TO PROVIDE FIRE PROTECTION FOR THE AREAS INDICATED ON THE ENGINEERING DRAWINGS.
- C. INTERFACE FIRE SPRINKLER SYSTEM WITH BUILDING FIRE AND SMOKE ALARM SYSTEM.
- D. OFFICE AREAS, RESTROOMS, VESTIBULE, ETC. (LIGHT HAZARD WET PIPE FIRE SPRINKLER SYSTEM):
  - DENSITY 0.10 GPM/SQ FT
  - OPERATING AREA 1,500 SQ FT
  - TEMPERATURE CLASS / NOMINAL K-FACTOR / RESPONSE TYPE ORD / 5.6 / QR
  - HOSE STREAM ALLOWANCE 100 GPM DURATION - 0.50 HRS
- E. <u>SALES AREA, STOCKROOM AND STORAGE ROOMS</u> (HIGH PILED STORAGE WET PIPE FIRE SPRINKLER SYSTEM)
- PRIMARY AREA • DENSITY - 0.70 GPM/SQ FT
- (PER NFPA 13 SECTION 20.3.6, 0.49 GPM/SQ FT IS REQUIRED)
- OPERATING AREA 2,000 SQ FT
- TEMPERATURE CLASS / NOMINAL K-FACTOR / RESPONSE TYPE INT / 25.2 / SR
- HOSE STREAM ALLOWANCE 500 GPM DURATION - 2 HRS
- SECONDARY AREA
- DENSITY 1.00 GPM/SQ FT
- (PER NFPA 13 SECTION 20.3.6, 0.55 GPM/SQ FT IS REQUIRED)
- OPERATING AREA 900 SQ FT
- (PER NFPA 13 SECTION 20.3.6, (4) SPRINKLERS ARE REQUIRED) • TEMPERATURE CLASS / NOMINAL K-FACTOR / RESPONSE TYPE - INT / 25.2 / SR
- HOSE STREAM ALLOWANCE 500 GPM
- DURATION 2 HRS
- F. WATER SUPPLY:

FIRE PROTECTION WATER SUPPLY HAS BEEN OBTAINED FROM A HYDRANT FLOW TEST PERFORMED ON 08/22/2017 AT BY CITY OF CHINO PUBLIC WORKS. THE WATER SUPPLY SHALL BE CONSIDERED EFFECTIVE AT THE POINT OF CONNECTION TO THE 12" PUBLIC WATER MAIN. THE APPROXIMATE WATER SUPPLY ELEVATION IS APPROXIMATELY EVEN WITH THE FINISH FLOOR. NO SUBSTITUTIONS OF WATER SUPPLY DATA OR ITS EFFECTIVE POINT WILL BE ALLOWED.

ACTUAL STATIC:	95 PSI
ACTUAL RESIDUAL:	70 PSI
ACTUAL FLOW:	1,953 GPM
THE ABOVE WATER SUP THE STATIC PRESSUR FOLLOWING WATER SUF REQUIRED SAFETY FACT	PLY COORDINATES DO NOT INCLUDE THE REQUIRED 10% OF E SAFETY FACTOR THAT SHALL BE ENFORCED. THE PPLY COORDINATES HAVE BEEN ADJUSTED -10 PSI FOR THE OR.
DESIGN STATIC:	85 PSI
DESIGN RESIDUAL:	60 PSI
DESIGN FLOW:	1,953 GPM

- G. SPRINKLER SPACING SHALL BE AS SHOWN ON THE ENGINEERING DRAWINGS.
- 1. ACOUSTICAL TILE LOCATE SPRINKLERS IN ACCORDANCE WITH THE

ENGINEERING DRAWINGS. NOT MORE THAN A 3 IN. RADIUS TOLERA THE POINT IDENTIFIED BY DIMENSION WILL BE ACCEPTED. WHER SPRINKLERS ARE PROVIDED WITHIN THE SAME CEILING PLANE, AI THE TOLERANCE USED FOR ONE SPRINKLER SHALL BE THE SAM OTHERS IN THAT SAME ROW.

- 2. HARD CEILINGS LOCATE SPRINKLERS IN ACCORDANCE ENGINEERING DRAWINGS. SPRINKLERS SHALL BE IN LINE FIXTURES AND OTHER SPRINKLERS WHERE INDICATED ON THE COORDINATE CLOSELY WITH THE ELECTRICAL CONTRACTOR.
- 3. UNFINISHED AREAS LOCATE SPRINKLERS AS SHOWN ON THE E DRAWINGS.
- H. EXISTING FREE-STANDING FIRE DEPARTMENT CONNECTION TO REMAIN.
- I. PROVIDE ALL NECESSARY OFFSETS, RAISES OR DROPS IN MAIN OR BI PIPING AND AUXILIARY DRAINS REQUIRED BY BUILDING CONDITIONS W NOT SHOWN ON THE ENGINEERING DRAWINGS.
- J. EXAMINE THE JOB CONDITIONS AND VERIFY ALL MEASUREMENTS, ELEVATIONS, CLEARANCES, PIPE SIZES, ETC.
- K. IT IS UNDERSTOOD, UNLESS SPECIFICALLY INDICATED OTHERWISE, THA SIZES AS SHOWN ON THE ENGINEERING DRAWINGS WILL BE USED.
- 1.05 QUALITY ASSURANCE
- A. INSTALLER QUALIFICATIONS:
- 1. INSTALLER'S RESPONSIBILITIES INCLUDE PREPARING SHOP SUBMITTAL, FABRICATING AND INSTALLING SPRINKLER SYSTE CALCULATIONS ON WATER SUPPLY COORDINATES PROVIDED HERE a. INSTALLER SHALL BE STATE AND LOCALLY LICENSED.
- B. EQUIPMENT AND COMPONENTS NOT SPECIFICALLY SPECIFIED SHALL BE UNDERWRITERS LABORATORIES INC. FOR FIRE PROTECTION INSTALLATION.
- C. ALL FIRE SPRINKLER SYSTEM COMPONENTS SHALL BE INSTALLED F RUST, CORROSION OR VISIBLE DAMAGE. ALL ITEMS NOT COMPLYING REQUIREMENT SHALL BE REPLACED WITHOUT COST TO THE OWNER.
- 1.06 PROJECT CONDITIONS
- INTERRUPTION OF EXISTING SPRINKLER SERVICE: DO NOT INTERRUPT Α SERVICE TO FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARR PROVIDE TEMPORARY SPRINKLER SERVICE ACCORDING TO REC INDICATED:
- 1. NOTIFY CONSTRUCTION MANAGER IN ADVANCE OF PROPOSED INT OF SPRINKLER SERVICE.
- 2. DO NOT PROCEED WITH INTERRUPTION OF SPRINKLER SERVICE CONSTRUCTION MANAGER'S WRITTEN PERMISSION.
- 3. PROVIDE TEMPORARY PIPING, FITTINGS AND VALVES AS REC MAINTAIN SPRINKLER SERVICE.
- 1.07 REGULATORY REQUIREMENTS
- A. ALL WORK SHALL MEET THE REQUIREMENTS OF SECTION 1.03.
- B. THE FIRE SPRINKLER CONTRACTOR SHALL NOT PURSUE ANY APPI INTERPRETATIONS OF CCI'S CONSTRUCTION DOCUMENTS EXCEPT THRO
- C. SPRINKLER PIPING SHALL NOT BE CONCEALED WHERE IT IS INACCESSI IT IS FIRST INSPECTED AND ACCEPTED BY A REPRESENTATIVE OF THE A HAVING JURISDICTION.
- D. ANY WORK PERFORMED PRIOR TO THE SATISFACTORY REVIEW APPROVAL BY THE AUTHORITY HAVING JURISDICTION AND THE UNDERWRITER WILL BE SOLELY AT THE FIRE SPRINKLER CONTRACTOR'S
- E. THE SYSTEM WILL NOT BE ACCEPTABLE UNTIL FINAL TESTING AND RECI CONTRACTOR'S MATERIAL AND TEST CERTIFICATE HAS BEEN OBTAINED.
- 1.08 SUBMITTALS
  - A. THE ENGINEERING DRAWINGS HAVE BEEN PREPARED USING AUTO ENGINEERING DRAWINGS ARE 100% CAD. THE HYDRAULIC CALCULATION BEEN PREPARED USING HASS. THESE DOCUMENTS WILL BE MADE AV THE SUCCESSFUL FIRE SPRINKLER CONTRACTOR IN EITHER ELECTRON HARD COPY. UTILIZATION OF THESE DOCUMENTS FOR THE DEVELOPMENT DRAWINGS AND SUBMITTALS DOES NOT RELIEVE THE FIRE CONTRACTOR FROM ANY OF HIS RESPONSIBILITIES REQUIRED HEREIN.
- B. SUBMIT THE FOLLOWING:
- 1. SHOP DRAWINGS. SUBMIT IN .PDF FORMAT OR TWO (2) HARD COPI DRAWING. DRAWINGS WILL BE RETURNED IN THE SAME FORMAT SUBMITTAL MUST BE COMPREHENSIVE OF ENTIRE PROJECT, COMP DETAIL AND THE SAME SCALE AS THE ENGINEERING DRAWINGS.
- HYDRAULIC CALCULATIONS. SUBMIT IN .PDF FORMAT OR TWO (2) H OR EACH CALCULATION. CALCULATIONS WILL BE RETURNED IN FORMAT RECEIVED. CALCULATIONS SHALL INCLUDE PEAKING INFO
- 3. MANUFACTURER'S LITERATURE ON ALL SYSTEM EQUIPMENT. SUB FORMAT OR TWO (2) HARD COPIES OF THE LITERATURE. LITERATU RETURN IN THE SAME FORMAT AS RECEIVED. LITERATURE SHAL IDENTIFY EXACTLY WHAT COMPONENTS ARE BEING PROVIDED W INCLUDE: FINISH, SIZE, TYPE, OPTIONS, ETC. LITERATURE WH CLEARLY IDENTIFIED WILL BE REJECTED.
- C. CCI WILL REVIEW THIS SUBMITTAL FOR CONSISTENCY WITH CCI'S CON DOCUMENTS.
- D. AFTER THE SATISFACTORY REVIEW BY CCI, PROVIDE SUBMITTAL AUTHORITY HAVING JURISDICTION AND THE INSURANCE UNDERW APPROVAL.
- E. THE FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR RESPONDING, IN WRITING, TO ANY COMMENTS FROM THE AUTHORITY HAVING JURISDICTION OR THE INSURANCE UNDERWRITER WITHIN TEN (10) WORKING DAYS AFTER THE RECEIPT OF THEIR COMMENTS. COPIES OF THE RESPONSE SHALL BE SENT TO THE GENERAL CONTRACTOR AND CCI.
- 1.09 AS-BUILT DRAWINGS
- A. PROVIDE AS-BUILT DRAWINGS IN ACCORDANCE WITH REQUIREMENTS OF THE GENERAL CONDITIONS OF THE CONTRACT AND NFPA 13.

ANCE ABOUT RE ROWS OF		
NY PART OF		B. ACCEPTABLE MANOLACTORERS. GLOBE, RELIABLE, T
ME FOR ALL	ACCORDANCE WITH REQUIREMENTS OF THE GENERAL CONDITIONS OF THE	C. ONLY SPRINKLERS MANUFACTURED AFTER JANUAR
	CONTRACT AND NFPA 13.	FOR USE.
WITH LIGHT		
DRAWINGS.	1.11 WARRANTY	D. ONLY SPRINKLERS MANUFACTURED UTILIZING BELLE
	A. REPAIR ALL DEFECTIVE WORKMANSHIP OR REPLACE ALL DEFECTIVE MATERIALS	ACCEPTABLE FOR USE.
NGINEERING	WORKMANSHIP OR EQUIPMENT FOUND TO BE DEFECTIVE DURING THAT PERIOD	E PROVIDE INSIDE THE BUILDING BY THE FIRE ALAF
	SHALL BE REPLACED WITHOUT COST TO THE OWNER.	TWELVE (12) HEAD SPARE SPRINKLER CABINETS STO
		ESCUTCHEON ASSEMBLIES PROPORTIONATE TO THO
	PART 2 - PRODUCTS	AND ALL NECESSART SPRINKLER WRENCHES.
BRANCH LINE	2.01 <u>PIPING</u>	E IF FLEXHEAD OR A SIMILAR PRODUCT IS USED HYD
VHETHER OR	A. UNDERGROUND PIPING: (ADD ALTERNATE) PER LOCAL REQUIREMENTS AND NFPA 13	BE REVISED TO INCLUDE THE ADDITIONAL FRICT
	NOTE: ALL PIPE PRIOR TO THE "BACKFLOW PREVENTION DEVICE" SHALL BE	ADJUSTED IF REQUIRED AT NO ADDITIONAL COST.
DISTANCES.	ACCEPTABLE FOR USE IN POTABLE WATER SYSTEMS PER LOCAL REQUIREMENTS	
,	(E.G., CEMENT LINED DUCTILE IRON, GALVANIZED, ETC.).	
		A. APPROVED ENAMELED METAL SIGNS SHALL BE SECU DRAINS. AUXILIARY DRAINS AND ALARM TEST CONNEC
AT THE PIPE	CORROSION RESISTANCE RATIO (CRR) EQUAL TO OR GREATER THAN 1.00. REFER	-,
	TO THE CURRENT UL FIRE PROTECTION EQUIPMENT DIRECTORY - STEEL SPRINKLER	B. PROVIDE A PERMANENTLY ATTACHED PLACARD INI
	FIFE FOR AGGEFTABLE MANOFACTORERS, SIZES, AND JOINING METHODS.	INFORMATION IN ACCORDANCE WITH NFPA 13 AND
	C. THE ENGINEER'S HYDRAULIC CALCULATIONS ANTICIPATES THAT ALL WET PIPE	LITERATURE.
	SYSTEM RISERS, FEED AND CROSS MAINS AND BRANCH LINES SHALL HAVE	
P DRAWING	HYDRAULIC CHARACTERISTICS EQUAL TO OR GREATER THAN SCHEDULE 10 PIPE.	C. PROVIDE A PERMANENTLY ATTACHED PLACARD INDIC
EMS. BASE		IN ACCORDANCE WITH NFPA 13 AND PLACED BY THE F MOCK-UP OF PLACARD SHALL BE INCLUDED WITH FOU
EIN.	2.02 JUINING OF PIPE AND FITTINGS	
	A. ALL PIPE SHALL BE JOINED IN ACCORDANCE WITH NEPA 13 AND NEPA 24 AND MANUFACTURER'S RECOMMENDATIONS.	D. PROVIDE BY THE FIRE ALARM CONTROL PANEL A
		SERVED BY EACH CONTROL VALVE. THE PLAN SHALL
I SYSTEMS	B. FITTINGS SHALL BE 175 PSI SCREWED OR FLANGED BLACK CAST IRON OR	OF EACH LOW POINT OR AUXILIARY DRAIN VALVE.
	APPROVED EQUAL SUCH AS MECHANICAL, GROOVED, PLAIN END OR WELDED	VALVE, AND MANUAL AIR VENT. THIS PLAN SHALL BE
	THEY SHALL BE OF THE SAME MANUFACTURER. NOTE: ALL FITTINGS PRIOR TO THE	COVER AND SHALL BE PERMANENTLY ATTACHED TO A
REE OF ANY	"BACKFLOW PREVENTION DEVICE" SHALL BE ACCEPTABLE FOR USE IN POTABLE	ENOUGH TO CLEARLY DEFINE THE AREAS PROTECTED
5 WIIII 11115	WATER SYSTEMS PER LOCAL REQUIREMENTS (E.G., CEMENT LINED DUCTILE IRON,	2.09 TEST AND DRAIN CONNECTIONS
	GALVANIZED, ETC.J.	
	C. BUSHINGS SHALL NOT BE USED.	EQUAL TO THE AGF MANUFACTURING CO. MODEL 101
r sprinkler		ORIFICE WHERE INDICATED ON DRAWINGS.
	D. FLEXIBLE COUPLINGS SHALL BE IDENTIFIED ON THE SHOP DRAWINGS.	
QUIREMENTS		B. AUXILIARY DRAINS CONSISTING OF PLUGS, OR GLOB CAPACITY OF TRAPPED PIPE SECTION EXCEEDS 5 GAI
	2.03 HANGERS AND SLEEVES	DRAIN ALL POINTS IN THE SYSTEM THAT CANNOT BE D
	A. SLEEVES SHALL BE SET FOR ALL PIPES PASSING THROUGH CONCRETE FLOORS,	
TERRUPTION	FOUNDATIONS AND MASONRY WALLS.	PART 3 - EXECUTION
		3.01 COORDINATION WITH OTHER TRADES
	HOLE WOULD OTHERWISE BE EXPOSED TO VIEW.	A. COORDINATE CLOSELY WITH ALL OTHER TRADES TO E
EQUIRED TO		AVOID INTERFERENCE.
	C. ALL HANGERS TO BE OF APPROVED MATERIALS AND SPACED IN ACCORDANCE WITH	
	NFPA 13 AND THE PIPING MANUFACTURER'S SPECIFICATIONS.	
		SPRINKLER PIPING SHALL BE THOROUGHLY CLEANED,
	TRAPEZE MEMBERS SUPPORTING PIPING.	AND MADE READY TO RECEIVE PAINT IN ACCOR
		CONDITIONS OF THE CONTRACT.
DUGH CCI.	E. PROTECT PIPING AGAINST DAMAGE DUE TO EARTHQUAKE IN ACCORDANCE WITH	B. HOLES IN WALLS OR FLOORS CUT DURING THE PE
	NFPA 13, WHICH SHALL INCLUDE THE FOLLOWING:	SHALL BE PATCHED IF THE HOLES CANNOT B
IBLE UNLESS		ESCUTCHEON PLATES SO AS TO COMPLETELY CONO
AUTHORITY	BRACING, FOUR-WAY BRACING AND RETAINING STRAPS.	
	2. VERTICAL AND LATERAL RESTRAINT SHALL BE PROVIDED ON ALL BRANCH	C. FIRE STOP ALL PENETRATIONS OF FIRE RATED ASSEM
BY CCI AND	LINES, INCLUDING END OF LINE, PER NFPA 13. EXCEPTION: BRANCH LINES	
INSURANCE	SUPPORTED BY RODS LESS THAN 6 IN. LONG MEASURED BETWEEN THE TOP	3.03 SYSTEM TESTS
S RISK.	AS DEFINED BY NFPA 13, REQUIRE VERTICAL RESTRAINT ONLY.	A. HYDROSTATICALLY TEST ENTIRE ALL SYSTEMS IN AC
	3. WIRE USED FOR RESTRAINT SHALL BE LOCATED WITHIN 24 IN. OF A HANGER.	NFPA 24.
, EIPT OF THE	HANGER SHALL BE OF A TYPE THAT RESISTS UPWARD MOVEMENT OF THE	
		B. WHEN THE SYSTEM IS INITIALLY COMMISSIONED (FI MANUAL AIR VENT VALVE AND HOSE-END ADAPTER
	4. SPRIGS 4 FI OR LONGER SHALL BE RESTRAINED AGAINST LATERAL MOVEMENT.	ATTACHED TO A HOSE TO THE EXTERIOR AND OPEN
OCAD. THE		DISCHARGED THROUGH HOSE. THIS PROCEDURE SH
TIONS HAVE	2.04 BACKFLOW PREVENTION (ADD ALTERNATE)	STSTEM IS DRAINED AND REFILLED.
NIC FORM OR		C. FLUSH UNDERGROUND IN ACCORDANCE WITH NEPA
ENT OF SHOP	A. 8 IN. DOUBLE CHECK DETECTOR BACKFLOW PREVENTER WITH TWO SUPERVISED	MATTER HAS BEEN PURGED FROM UNDERGROUND
SPRINKLER		NEW RISER.
	1. AOULI TADLE MANOLAUTORERO, EQUAE TO WIERING MODEL 400 DA.	
	2.05 VALVES	D. TESTS SHALL BE WITNESSED BY THE AUTHORITY OWNER'S AUTHORIZED AGENT.
	A. EXTERIOR VALVES: NONE.	
IES OF EACH	B INTERIOR VALVES	E. PRELIMINARY TESTING PROCEDURES SHALL BE COND
T RECEIVED. PLETE IN ALL	1 GLOBE VALVE: BRONZE THREADED: RENEWABLE COMPOSITION DISC: 175 PSI	TO ASSURE PROPER OPERATION WHEN THE FINAL TES
	RATED WORKING PRESSURE.	
IARD COPIES	a. ACCEPTABLE MANUFACTURERS: CRANE, MILWAUKEE, NIBCO, STOCKHAM	F. THE CONTRACTOR'S MATERIAL AND TEST CERTIFIC MUST BE COMPLETED AND SUBMITTED TO THE
N THE SAME	OR APPROVED EQUAL.	ACCEPTANCE MAY BE GIVEN.
URE WILL BE	2.06 WATERFLOW SWITCH	END OF SECTION
	A. VANE TYPE: SHALL BE MOUNTED IN ACCORDANCE WITH ITS LISTING AND THE	
VHICH SHALL HICH IS NOT	EQUALS OR EXCEEDS 10 GPM; DETECTOR SWITCH MECHANISM SHALL	
	INCORPORATE AN INSTANTLY RECYCLING PNEUMATIC RETARD ELEMENT WITH AN	
	ADJUSTABLE RANGE OF 0 TO 60 SECONDS; TWO SINGLE POLE, DOUBLE THROW SWITCHES SHALL BE PROVIDED SHITABLE FOR OPERATION ON 24-VOLT D.C. OP	
	CONTRACTOR OF A CONTRACT OF A	
	110-VOLT A.C.; DUST TIGHT CONSTRUCTION; TAMPER RESISTANT SCREWS ON	
Noncontin	110-VOLT A.C.; DUST TIGHT CONSTRUCTION; TAMPER RESISTANT SCREWS ON ENCLOSURE; CORROSION RESISTANT COMPONENTS WITHIN WATERWAY.	
	110-VOLT A.C.; DUST TIGHT CONSTRUCTION; TAMPER RESISTANT SCREWS ON ENCLOSURE; CORROSION RESISTANT COMPONENTS WITHIN WATERWAY.	
LS TO THE VRITER FOR	<ol> <li>ACCEPTABLE MANUFACTURERS: GUARDIAN, POTTER ELECTRIC, STARFIRE, SYSTEM SENSOR OR APPROVED FOLIAL</li> </ol>	
LS TO THE VRITER FOR	<ol> <li>110-VOLT A.C.; DUST TIGHT CONSTRUCTION; TAMPER RESISTANT SCREWS ON ENCLOSURE; CORROSION RESISTANT COMPONENTS WITHIN WATERWAY.</li> <li>1. ACCEPTABLE MANUFACTURERS: GUARDIAN, POTTER ELECTRIC, STARFIRE, SYSTEM SENSOR OR APPROVED EQUAL.</li> </ol>	

B. THE DETECTOR SHALL BE FURNISHED AND INSTALLED BY THE FIRE SPRINKLER CONTRACTOR AND WIRED COMPLETE BY THE FIRE ALARM CONTRACTOR.

### 2.07 SPRINKLERS A. TYPES:

- 1. CHROME RECESSED GLASS BULB QUICK RESPONSE RECESSED SPRINKLER WITH POLISHED CHROME RECESSED ESCUTCHEON.
- 2. BRASS UPRIGHT GLASS BULB STANDARD RESPONSE UPRIGHT SPRINKLER.

- YCO, VICTAULIC AND VIKING.
- ARY 1, 2017 WILL BE ACCEPTED
- EVILLE SPRING SEALS WILL BE
- ARM CONTROL PANEL ONE (1) OCKED WITH SPRINKLERS AND DSE PROVIDED IN THE BUILDING
- DRAULIC CALCULATIONS SHALL TION LOSS, AND PIPE SIZES
- URELY ATTACHED AT ALL MAIN CTIONS.
- IDICATING HYDRAULIC DESIGN PLACED BY THE FIRE ALARM E INCLUDED WITH EQUIPMENT
- CATING GENERAL INFORMATION FIRE ALARM CONTROL PANEL. A JIPMENT LITERATURE.
- PLAN INDICATING THE AREAS ALSO INCLUDE THE LOCATION THE PLAN SHALL CLEARLY V POINT AND AUXILIARY DRAIN E FRAMED WITH A PLEXIGLASS A WALL. PLAN SHALL BE LARGE D BY THE SYSTEM.
- ALVE WITH PRESSURE RELIEF 11A, 2 IN. SIZE WITH 1/2 IN. TEST
- OBE VALVES AND PLUGS WHERE LLONS, SHALL BE PROVIDED TO DRAINED BACK TO MAIN RISER.
- EXPEDITE CONSTRUCTION AND
- DED IN THIS CONTRACT. ALL , REMOVING ALL DIRT, OIL, ETC. RDANCE WITH THE GENERAL
- ERFORMANCE OF THIS WORK BE COVERED BY STANDARD NCEAL THE CUTS WHERE THEY
- MBLIES.
- CCORDANCE WITH NFPA 13 AND
- FILLED WITH WATER), USE THE R AT THE END OF THE SYSTEM. PEN THE VALVE UNTIL WATER IS SHALL BE USED ANY TIME THE
- A 13 TO ENSURE ALL FOREIGN PIPE BEFORE CONSTRUCTING
- HAVING JURISDICTION AND
- DUCTED AS MENTIONED ABOVE ESTING IS PERFORMED.
- CATES AS SHOWN IN NFPA 13 E ENGINEER <u>BEFORE</u> FINAL

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	SPECIF SHEET NO. FP	<u>1.3</u>	<u>INO</u>

FIRE PROTECTION ENGINEER OF RECORD: WILLIAM B. SMITH, PE LICENSE NO. FP1687 CODE CONSULTANTS, INC.

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![](_page_54_Figure_0.jpeg)

FACP	RM SYMBOL KEY	QTY.	
1	EXISTING FIRE ALARM CONTROL PANEL (BOSCH 9412GV4)		
FAAN	EXISTING FIRE ALARM ANNUNCIATOR (BOSCH D1256)		
[22]	EXISTING CELLULAR COMMUNICATOR (DMP UNIVERSAL FIRE COMMUNICATOR (12V)		
DOC	EXISTING DOCUMENTATION CABINET (RED ENCLOSURE)		
ß	EXISTING MANUAL PULL STATION (EDWARDS SIGNALS 270-SPO)		
( <u>S</u> )	EXISTING SMOKE DETECTOR (SYSTEM SENSOR 2W-B)		
۲D) s	EXISTING DUCT-TYPE PHOTOELECTRIC SMOKE DETECTOR (S = SUPPLY SIDE)		
B <sub>XX</sub>	EXISTING POINT OF PROTECTION INPUT TRANSPONDER (POPIT) (BOSCH D9127T) (XX = POPIT POINT ADDRESS)		
P <sub>XX</sub>	NEW POINT OF PROTECTION INPUT TRANSPONDER (POPIT) (BOSCH D9127T) (XX = POPIT POINT ADDRESS)	1	
R	NEW RELAY MODULE (BOSCH D130)	1	
(FS)	EXISTING FLOW SWITCH		
(ŢS)	EXISTING TAMPER SWITCH		
TS	NEW TAMPER SWITCH (BY OTHERS)	2	
TSM	NEW TRANSIENT SUPPRESSION MODULE (DITEK DTK-1LVLP-X)	1	
<u> </u>	EXISTING WALL MOUNTED RED AUDIBLE/VISUAL APPLIANCE (XX = CANDELA RATING) (WHEELOCK AS-121575W-FR)		
	FIRE ALARM CONDUCTORS (MATCH EXISTING)		
	NEW FIRE ALARM CONDUCTORS LISTED FOR WET LOCATION IN UNDERGROUND CONDUIT (1 INCH MINIMUM)		
<b></b>	NEW FIRE ALARM CONDUCTORS LISTED FOR WET LOCATION		
J	JUNCTION BOX		
-~~~	END OF LINE RESISTOR		
	NG FIRE ALARM CONTROL PANEL AND ASSOCIATED FIRE ALARM MENT LOCATED IN THE STOCK ROOM SHALL REMAIN AS CURRENTLY GURED AND KEPT IN GOOD WORKING CONDITION. THE EXISTING FIRE I CONTROL PANEL TO BE RE-USED TO MONITOR THE FIRE ALARM MENT THROUGHOUT THE BUILDING.		
2 EXISTI REMAI THE CI OFF-SI	NG CELLULAR COMMUNICATOR LOCATED IN THE STOCK ROOM SHALL N AS CURRENTLY CONFIGURED AND KEPT IN GOOD WORKING CONDIT ELLULAR COMMUNICATOR SHALL BE RE-USED TO TRANSMIT SIGNAL T TE MONITORING FACILITY AS CURRENTLY CONFIGURED.	FION. TO	
3 THE FI ANNUN SHALL CITY. BE REI	RE ALARM CONTRACTOR SHALL DISCONNECT THE EXISTING FIRE ALA NICATOR (FAAN) LOCATED AT THE FRONT ENTRANCE. THE EXISTING F BE KEPT IN GOOD WORKING CONDITION AND BE RE-USED WITHIN PAI THE ASSOCIATED CABLING AND CONDUIT CONNECTED TO THE FAAN S MAIN AND BE REUSED/ EXTENDED TO THE NEW LOCATION.	ARM FAAN RTY SHALL	
THE FI STATIC AND A AND B CONNE REUSE	RE ALARM CONTRACTOR SHALL DISCONNECT THE EXISTING MANUAL ON AND ASSOCIATED POPIT MODULE. THE EXISTING MANUAL PULL ST SSOCIATED POPIT MODULE SHALL BE KEPT IN GOOD WORKING COND E RE-USED WITHIN PARTY CITY. THE ASSOCIATED CABLING AND CON ECTED TO THE MANUAL PULL STATION SHALL BE REMAIN AND BE ED/ EXTENDED TO THE NEW LOCATION.	PULL Ation Ition Duit	
THE FI MOUN MOUN WORK CABLIN APPLI/ LOCAT	RE ALARM CONTRACTOR SHALL DISCONNECT THE EXISTING WALL TED AUDIBLE/VISUAL NOTIFICATION APPLIANCE. THE EXISTING WALL TED AUDIBLE/VISUAL NOTIFICATION APPLIANCE SHALL BE KEPT IN GO ING CONDITION AND BE RE-USED WITHIN PARTY CITY. THE ASSOCIAT NG AND CONDUIT CONNECTED TO THE AUDIBLE/VISUAL NOTIFICATION ANCE SHALL BE REMAIN AND BE REUSED/ EXTENDED TO THE NEW 'ION.	OD ED I	
	NG SMOKE DETECTOR AND ASSOCIATED POPIT MODULE SHALL REMA ENTLY CONFIGURED AND KEPT IN GOOD WORKING CONDITION.	IN AS	
THE FI ASSOC AND A AND B CONNE THE N	RE ALARM CONTRACTOR SHALL DISCONNECT THE EXISTING KNOX BO CIATED POPIT MODULE AT THE MAIN ENTRANCE. THE EXISTING KNOX SSOCIATED POPIT MODULE SHALL BE KEPT IN GOOD WORKING COND E RE-USED WITHIN PARTY CITY. THE ASSOCIATED CABLING AND CON ECTED TO THE KNOX BOX SHALL BE REMAIN AND BE REUSED/ EXTEND EW LOCATION.	dx and Box Ition Duit Ded to	
	NG KNOX BOX AND ASSOCIATED POPIT MODULE SHALL REMAIN AS ENTLY CONFIGURED AND KEPT IN GOOD WORKING CONDITION.		
8 EXISTI CURRE	XISTING MONITORING CONNECTIONS TO THE EXTERIOR CONTROL VAI		
EXISTI CURRE     O	ATERFLOW SWITCH SHALL REMAIN AS CURRENTLY CONFIGURED AND		

FIRE ALARM SHEET INDEX

DESCRIPTION FAD1.1 FIRE ALARM PLAN - DEMOLITION WORK FA1.1 FIRE ALARM PLAN - NEW WORK FA1.2 FIRE ALARM NOTES AND SITE PLAN FA1.3 FIRE ALARM MATRIX, PROGRAMMING, CALCULATIONS & DETAILS FA1.4 FIRE ALARM SPECIFICATIONS

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![](_page_54_Picture_7.jpeg)

![](_page_55_Figure_0.jpeg)

FIRE ALARM KEYED NOTES

- THE EXISTING FIRE ALARM CON ASSOCIATED FIRE ALARM EQUIF REMAIN AS CURRENTLY CONFIG
- THE INSTALLING FIRE ALARM CO ALARM CONTROL PANEL (FACP) I CAPACITY TO ACCOMMODATE TH SECONDARY BATTERY CAPACITY LARGER BATTERIES WITHOUT EX MANUFACTURERS CHARGING CA PROVIDED AS NEEDED.
- 3 RELOCATE THE EXISTING REMOTE ENTRANCE. THE FIRE ALARM CA MULLION FROM THE TOP OF THE CONDUIT AS NEEDED TO EXTEND THE NEW ENTRY VESTIBULE. CO GENERAL CONTRACTOR, OWNER
- THE EXISTING SMOKE DETECTOR THE FIRE ALARM CONTRACTOR S GOOD WORKING CONDITION. IF CONDITION, THE FIRE ALARM CO SMOKE DETECTOR AND MOUNT THE DECK (NOT ON THE BOTTOM MORE THAN THREE (3) FEET FRO NFPA 72.
- 5 RELOCATE THE EXISTING MANU/ NEW FRONT ENTRANCE VESTIBL DIRECTLY BELOW THE FIRE ALAI CONDUIT AS NEEDED TO EXTENI THE NEW ENTRY VESTIBULE. TH THROUGH THE MULLION FROM T
- 6 THE EXISTING FIRE SPRINKLER W ARE CURRENTLY MONITORED BY REMAIN AS CURRENTLY CONFIG
- THE MONITORING OF THE EXISTI CURRENTLY CONFIGURED. IF TH WORKING CONDITION, THE FIRE MECHANICAL CONTRACTOR TO D DETECTOR AND INSTALL A NEW D DETECTOR SHALL BE MONITORE CONDITIONS.
- 8 PROVIDE A SIGNAL TO MUTE THE UPON ACTIVATION OF A FIRE ALA FIRE ALARM CONTROL PANEL TO CONTROLLER. LOCATE THE REL BACKGROUND MUSIC SOUND SY CONNECTIONS WITH THE SOUND
- PROVIDE A SEPARATE BID: TO C INCH UNDERGROUND CONDUIT, CONNECTIONS TO ANY EXTERIO PARTY CITY SPACE. PROVIDE M OTHERS) ON THE ASSOCIATED E REQUIRED UNDERGROUND CON OWNER'S REPRESENTATIVE, ELE CONTRACTOR, AND SITE CIVIL C
- 10 PROVIDE A SEPARATE BID: PRO ALARM CIRCUITS LOCATED IN E SUPPRESSION MODULE FOR EA EXTERIOR CONDUIT SHALL BE L
- 11 THE EXISTING KNOX BOX IS CU ALARM SYSTEM AND WILL REM
- (12) RELOCATE POPIT ASSOCIATED ENTRANCE VESTIBULE. THE PO PARTY CITY SPACE. PROVIDE CO NEW CABLING AND CONDUIT AS PREVIOUS LOCATION TO THE EN REQUIRED INTERFACE CONNEC ELECTRICAL CONTRACTOR.
- (13) RELOCATE THE EXISTING WALL APPLIANCE TO THE NEW FRONT AUDIBLE/VISUAL NOTIFICATION ANNUNCIATOR. PROVIDE NEW THE CIRCUIT FROM PREVIOUS L THE FIRE ALARM CABLING SHAL TOP OF THE VESTIBULE.

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ADD	ALIEKINAII	=

PROVIDE ADD ALTERNATE PRICI OF THE NEW EXTERIOR BACKFLC 10 FOR MORE INFORMATION.

				Part	WCity
ES (THIS SHEET ONLY)	FIRE ALA	RM SYMBOL KEY	QTY.	25 Green	1 Pond Roa
CONTROL PANEL, CELLULAR COMMUNICATOR AND EQUIPMENT LOCATED IN THE STOCKROOM SHALL	FACP	EXISTING FIRE ALARM CONTROL PANEL (BOSCH 9412GV4)		Rockawa	<u>iy, NJ 0786</u>
M CONTRACTOR SHALL FIELD VERIFY EXISTING FIRE	FAAN	EXISTING FIRE ALARM ANNUNCIATOR (BOSCH D1256)			
ACP) HAS SUFFICIENT STANDBY SECONDARY BATTERY TE THE NEW FIRE ALARM EQUIPMENT. IF ADEQUATE ACITY IS NOT PROVIDED, CONTRACTOR WILL PROVIDE	[22]	EXISTING CELLULAR COMMUNICATOR (DMP UNIVERSAL FIRE COMMUNICATOR (12V)			5
NG CAPABILITIES. BATTERY CABINET WILL BE	[DOC]	EXISTING DOCUMENTATION CABINET (RED ENCLOSURE)			
EMOTE LCD ANNUNCIATOR TO THE NEW FRONT RM CABLING SHALL BE "FISHED" THROUGH THE	6	EXISTING MANUAL PULL STATION (EDWARDS SIGNALS 270-SPO)			
THE VESTIBULE. PROVIDE NEW CABLING AND (TEND THE CIRCUIT FROM PREVIOUS LOCATION TO E. COORDINATE EXACT MOUNTING LOCATION WITH THE	<b>(5)</b>	EXISTING SMOKE DETECTOR (SYSTEM SENSOR 2W-B)		PERMIT ISSUE	09/05/17
ECTOR SHALL REMAIN AS CURRENTLY CONFIGURED.		EXISTING DUCT-TYPE PHOTOELECTRIC SMOKE DETECTOR (S = SUPPLY SIDE)		REVISION	15
N. IF THE SMOKE DETECTOR IS NOT IN GOOD WORKING RM CONTRACTOR SHALL DISCONNECT THE EXISTING		EXISTING POINT OF PROTECTION INPUT TRANSPONDER (POPIT) (BOSCH D9127T) (XX = POPIT POINT ADDRESS)		# DATE	
TTOM OF STRUCTURAL MEMBERS) AND LOCATED TFROM ANY MECHANICAL DIFFUSERS, AS INDICATED IN	P <sub>vv</sub>	NEW POINT OF PROTECTION INPUT TRANSPONDER (POPIT) (BOSCH D9127T) (XX = POPIT POINT ADDRESS)	1		
IANUAL PULL STATION AND ASSOCIATED POPIT TO THE STIBULE. LOCATE THE MANUAL PULL STATION	R	NEW RELAY MODULE (BOSCH D130)	1		
ALARM ANNUNCIATOR. PROVIDE NEW CABLING AND (TEND THE CIRCUIT FROM PREVIOUS LOCATION TO E. THE FIRE ALARM CABLING SHALL BE "FISHED" (OM THE TOP OF THE VESTIBULE.		EXISTING FLOW SWITCH			
LER WATERFLOW SWITCHES AND TAMPER SWITCHES ED BY THE EXISTING FIRE ALARM SYSTEM AND WILL	र्राङ्ग	EXISTING TAMPER SWITCH			
EXISTING DUCT SMOKE DETECTOR SHALL REMAIN AS	ক্য	NEW TAMPER SWITCH (BY OTHERS)	2	<b>#</b> 42	
IF THE DUCT SMOKE DETECTOR IS NOT IN GOOD FIRE ALARM CONTRACTOR COORDINATE WITH THE TO DISCONNECT THE EXISTING DUCT SMOKE	TSM	NEW TRANSIENT SUPPRESSION MODULE (DITEK DTK-1LVLP-X)	1	— <del>т</del>	ЩĻ
NEW DUCT SMOKE DETECTOR. THE NEW DUCT SMOKE TORED AND TRANSMIT SIGNALS AS PREVIOUS	Į Į Į Į	EXISTING WALL MOUNTED RED AUDIBLE/VISUAL APPLIANCE (XX = CANDELA RATING) (WHEELOCK AS-121575W-FR)		R R	AC AC
E THE STORE BACKGROUND MUSIC SOUND SYSTEM E ALARM CONDITION. PROVIDE CABLING FROM THE		FIRE ALARM CONDUCTORS (MATCH EXISTING)			
EL TO THE BACKGROUND MUSIC SOUND SYSTEM E RELAY MODULE WITHIN THREE (3) FEET FROM THE ID SYSTEM CONTROLLER. COORDINATE INTERFACE OUND SYSTEMS CONTRACTOR.		NEW FIRE ALARM CONDUCTORS LISTED FOR WET LOCATION IN UNDERGROUND CONDUIT (1 INCH MINIMUM)		<b>O</b>	ЦС
TO COORDINATE INSTALLATION OF A MINIMUM ONE (1) DUIT, WITH PULL STRING, FOR FIRE ALARM CABLING		NEW FIRE ALARM CONDUCTORS LISTED FOR WET LOCATION IN EXTERIOR CONDUIT (1 INCH MINIMUM)			X X X
ERIOR BACKFLOW PREVENTER ASSOCIATED WITH THE DE MONITORING OF ALL TAMPER SWITCHES (BY TED BACKFLOW PREVENTER. COORDINATE ANY	L	JUNCTION BOX			₹ t
CONDUIT AND INTERFACE CONNECTIONS WITH THE E, ELECTRICAL CONTRACTOR, FIRE SPRINKLER VIL CONTRACTOR.	-~~	END OF LINE RESISTOR			2
PROVIDE TRANSIENT SUPPRESSION ON ALL FIRE IN EXTERIOR CONDUIT. PROVIDE ONE (1) TRANSIENT	WIRING	FGEND			الے ا
R EACH FIRE ALARM CIRCUIT. FIRE ALARM CABLING IN BE LISTED FOR WET LOCATIONS.		<u>CIRCUIT DESIGNATION:</u>			TR ∕
CURRENTLY MONITORED BY THE EXISTING FIRE REMAIN AS CURRENTLY CONFIGURED.	D = 14/4 TP F E = 18/2 TP F F = 14/2 TP F	PLP SHIELDEDL = INITIATION DATA CIRCUITPLPAV = AUDIBLE/VISUAL NOTIFICATIONPLPAN = ANNUNCIATOR CIRCUIT	CIRCUIT		
TED WITH THE KNOX BOX TO THE NEW FRONT E POPIT MODULE SHALL BE LOCATED INSIDE THE DE CONDUIT FOR ALL EXTERIOR CABLING. PROVIDE	G = AS REQ'I J = 18/2 WET	D BY MANF. RT = REMOTE TEST STATION POWER LOCATION SY = MULTIPLE SYNC CONNECTION SU = SUPERVISORY ZONE CIRCUIT			
IT AS NEEDED TO EXTEND THE CIRCUIT FROM HE ENTRY VESTIBULE COLUMN. COORDINATE ANY INECTIONS WITH THE OWNER'S REPRESENTATIVE, AND		SPARE - SPARE CIRCUIT			S C C
/ALL MOUNTED AUDIBLE/VISUAL NOTIFICATION	[	- CONDUCTOR TYPE			
ION APPLIANCE VESTIBULE. LOCATE THE TON APPLIANCE DIRECTLY ABOVE THE FIRE ALARM IEW CABLING AND CONDUIT AS NEEDED TO EXTEND					H 5 5
SHALL BE "FISHED" THROUGH THE MULLION FROM THE	C (1				<u>۳</u>
	SHOULD MAI	NUFACTURER OF FIRE ALARM EQUIPMENT REQUIRE A DIFFERENT TY	PE OR		
RICING TO INCLUDE ELECTRONIC MONITORING	CABLE SHAL	L BE USED.			DG
KFLOW PREVENTER. SEE KEYED NOTES 9 AND	ADDRESS	SING LEGEND			
				Larson D 1000 Com	Design Group
		M = MODULE D = DEVICE		Su Williamsp PHONE	uite 201 port, PA 17701 570.323.6603
		NG LINE CIRCUIT (SLC)		FAX 570 www.larson	.323.9902 designgroup.con
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NTS, INC. FA1.1

APPV'D BY

SHEET TITLE

SHEET NO.

PTK

FIRE ALARM

PLAN - NEW WORK

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### GENERAL NOTES

- THE EXISTING FIRE ALARM SYSTEM INSTALLED THROUGHOUT THE PARTY CITY AND ADJACENT TENANT SPACES SHALL REMAIN AS CURRENTLY CONFIGURED UNLESS NOTED OTHERWISE ON THE ENGINEERING DRAWINGS. ANY NEW FIRE ALARM SYSTEM COMPONENTS ASSOCIATED WITH THE PARTY CITY SHALL BE AN EXTENSION OF THE EXISTING BOSCH FIRE ALARM SYSTEM.
- THE FIRE ALARM SYSTEM SHALL OPERATE AS A STANDALONE LOW VOLTAGE SYSTEM AND SHALL BE AN INTELLIGENT ADDRESSABLE SUPERVISED SYSTEM. CIRCUITS SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:
- INITIATION DEVICE CIRCUITS (IDC) CLASS B
- SIGNALING LINE CIRCUITS (SLC) CLASS B
- NOTIFICATION APPLIANCE CIRCUITS (NAC) CLASS B CIRCUITS FOR RELAY COIL OPERATION SHALL BE 24 VDC MAXIMUM WITH A SEPARATE OR INTEGRAL FIELD COLLAPSING DIODE.
- THE INSTALLING FIRE ALARM CONTRACTOR WILL FIELD VERIFY EXISTING FIRE ALARM CONTROL PANEL (FACP) HAS SUFFICIENT STANDBY SECONDARY BATTERY CAPACITY TO ACCOMMODATE THE NEW FIRE ALARM EQUIPMENT. IF ADEQUATE SECONDARY BATTERY CAPACITY IS NOT PROVIDED, CONTRACTOR WILL PROVIDE LARGER BATTERIES WITHOUT EXCEEDING EXISTING FACP MANUFACTURERS CHARGING CAPABILITIES. BATTERY CABINET WILL BE PROVIDED AS NEEDED.
- COORDINATE INSTALLATION OF A GROUND ROD OR ACCEPTABLE BUILDING GROUND FOR PROPER GROUNDING OF THE FACP AND EACH APS WITH THE ELECTRICAL CONTRACTOR.
- THE EXISTING FIRE SPRINKLER WATERFLOW SWITCHES AND TAMPER SWITCHES ARE CURRENTLY MONITORED BY THE EXISTING FIRE ALARM SYSTEM AND WILL REMAIN AS CURRENTLY CONFIGURED.
- PROVIDE MONITORING CONNECTIONS TO ANY NEW SPRINKLER WATERFLOW SWITCHES AND TAMPER SWITCHES (SWITCHES ARE BY OTHERS). PROVIDE ALL CABLING TO SWITCHES, FINAL WIRING CONNECTIONS AT SWITCHES, AND SUPERVISION OF ALL WIRING CONNECTIONS. COORDINATE ALL CONNECTIONS WITH THE SPRINKLER CONTRACTOR.
- DEVICES AND APPLIANCE LOCATIONS AS SHOWN ON THE FIRE ALARM PLANS ARE NOT DIMENSIONED FOR EXACT INSTALLATION. COORDINATE EXACT PLACEMENT OF ALL DEVICES AND APPLIANCES WITH THE ARCHITECTURAL PLANS AND GENERAL CONTRACTOR PRIOR TO INSTALLATION.
- ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL BACKGROUND INFORMATION IS SHOWN FOR COORDINATION PURPOSES ONLY. REFER TO THE PROPER DRAWINGS FOR EXACT LOCATIONS, SIZES AND QUANTITIES OF OTHER TRADES' WORK.
- 12. IF A NEW SMOKE DETECTOR IS INSTALLED, MOUNT SMOKE DETECTORS AT THE CEILING/DECK, AND NOT ON THE BOTTOM OF BEAMS OR JOISTS. LOCATE ALL SMOKE DETECTORS A MINIMUM OF THREE (3) FEET FROM ANY MECHANICAL DIFFUSERS, AND AS REQUIRED BY NFPA 72. COORDINATE SMOKE DETECTOR LOCATIONS WITH LIGHTING, MECHANICAL. SPRINKLER AND BACKGROUND MUSIC EQUIPMENT.
- 13. IF A NEW SMOKE DETECTOR IS INSTALLED, THE SMOKE DETECTOR HEADS SHALL NOT BE INSTALLED UNTIL AFTER THE CONSTRUCTION CLEAN-UP OF ALL TRADES IS COMPLETE AND FINAL.
- ALL THROUGH-PENETRATIONS OF FIRE-RATED WALLS AND FLOORS SHALL BE FIRE-STOPPED.
- 15. ALL JUNCTION BOXES SHALL BE ACCESSIBLE FOR SERVICE. PROVIDE ANY REQUIRED ACCESS PANELS.
- 16. NOTIFICATION APPLIANCE CIRCUITS (NAC) HAVE BEEN DESIGNED FOR A MAXIMUM 1.6 AMPS, MAXIMUM 4.4 VDC DROP, AND MINIMUM OPERATING VOLTAGE OF 16 VDC. SEE FIRE ALARM NAC VOLTAGE DROP CALCULATIONS ON THIS SHEET.
- ALL AUDIBLE APPLIANCES SHALL BE SET TO THE HIGH DBA SETTING AND SHALL SOUND A THREE-PULSE TEMPORAL PATTERN EVACUATION SIGNAL.
- 18. THE EXISTING AUDIBLE/VISUAL AND VISUAL NOTIFICATION APPLIANCE SHALL BE KEPT IN GOOD WORKING CONDITION AND REINSTALLED WITHIN THE PARTY CITY.
- 19. NOTIFICATION APPLIANCE POLARITY SHALL BE OBSERVED.
- 20. WHERE POSSIBLE, PROVIDE FLUSH MOUNTING OF NOTIFICATION APPLIANCES. WHERE SURFACE-MOUNTED NOTIFICATION APPLIANCES ARE NECESSARY, PROVIDE DECORATIVE BACKBOX SKIRT COVERING THE APPLIANCE BACKBOX.
- DEVICES AND APPLIANCE LOCATIONS AS SHOWN ON THE FIRE ALARM PLANS ARE NOT DIMENSIONED FOR EXACT INSTALLATION. COORDINATE EXACT PLACEMENT OF ALL DEVICES AND APPLIANCES WITH THE ARCHITECTURAL PLANS, APPLICABLE TRADES, AND OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
- PROVIDE ANY REQUIRED SEISMIC BRACING FOR ALL FIRE ALARM SYSTEM DEVICES, CONDUIT AND BACKBOXES.
- 23. ALL SIGNALING LINE CIRCUITS, INITIATING DEVICE CIRCUITS, AND NOTIFICATION APPLIANCE CIRCUITS SHALL BE SUPERVISED IN ACCORDANCE WITH NFPA 72.

### INSTALLATION NOTES

- ADOPTED CODES.
- SPECIFIED, THE LARGER OR MORE STRINGENT TYPE OF CABLE SHALL BE USED.
- ALL FIRE ALARM CABLING SHALL BE FPL, FPLR OR FPLP AS REQUIRED BY THE
- PROVIDE ALL REQUIRED CONDUIT, BACKBOXES, AND FITTINGS FOR THE FIRE ALARM SYSTEM CABLING.
- ALL READY INSTALLED.
- 6. FIRE ALARM CABLING SHALL <u>NOT</u> BE PAINTED.
- DETAILS FOR ACCEPTABLE INSTALLATION METHODS.
- ALL CABLE RUNS SHALL BE NEATLY BUNDLED, WRAPPED TIGHT AND PROPERLY OWNER.
- EACH CABLE.
- STRUCTURE. EXPOSED CABLING SHALL NOT BE RUN IN A "SPAN" FASHION OF JOISTS AND BEAMS). ALL CABLING SHALL BE SECURED TO THE STRUCTURAL CEILING BETWEEN JOISTS OR BEAMS.
- BUILDING STRUCTURE AT NO MORE THAN FIVE (5) FOOT INTERVALS.
- 12. ALL FIRE ALARM CABLING BELOW THE STRUCTURE, IN ELECTRICAL AND MECHANICAL ROOMS (SUBJECT TO PHYSICAL DAMAGE), CONCEALED ABOVE CEILINGS OR IN PARTITIONS (SUBJECT TO PHYSICAL DAMAGE) SHALL BE INSTALLED IN METALLIC CONDUIT.
- PHYSICAL DAMAGE) ARE NOT REQUIRED TO BE INSTALLED IN CONDUIT.
- 14. ALL NON-POWER LIMITED FIRE ALARM CABLING FOR THE FIRE ALARM SYSTEM SHALL BE INSTALLED IN CONDUIT.
- OF GROMMET OR BOX CONNECTOR.
- INCHES ABOVE THE CEILING TILE.
- 17. FOR DRYWALL APPLICATIONS, ALL CONDUIT AND BACKBOXES SHALL BE RECESSED INSIDE THE WALL.
- 18. ALL FIRE ALARM CABLING IN FINISHED AREAS SHALL BE CONCEALED.
- OWNER'S REPRESENTATIVE AND ALL OTHER TRADES PRIOR TO INSTALLATION.
- DEVICES SHALL BE INSTALLED WITHOUT A BACKBOX. 21. ALL CABLING, CONDUIT, AND BACKBOXES SHALL BE PROPERLY SUPPORTED AND
- JURISDICTION. 22. CONDUIT AND CABLING SHALL ENTER INTO THE FACP AND EACH APS ONLY AS
- APPROVED BY THE EQUIPMENT MANUFACTURER.
- 23. CONDUIT FILL SHALL NOT EXCEED 40%.

ALL WORK SHALL BE IN ACCORDANCE WITH NFPA STANDARDS AND ALL LOCAL

FIRE ALARM CABLING SHALL BE ACCEPTABLE TO THE FIRE ALARM EQUIPMENT MANUFACTURER FOR THE INTENDED PURPOSE. SHOULD MANUFACTURER OF FIRE ALARM EQUIPMENT REQUIRE DIFFERENT TYPE OR SIZE OF CABLE THAN HEREIN

ELECTRICAL CODE. SEE WIRING LEGEND FOR CABLE TYPES AND SIZES.

THE COLOR OF THE FIRE ALARM CABLING SHALL MATCH THE EXISTING CABLING

CABLE ROUTING SHOWN ON DRAWINGS IS FOR INTENT. EXACT ROUTING SHALL BE COORDINATED WITH OTHER TRADES IN THE FIELD. SEE DRAWING NOTES AND

SECURED. ANY CABLING NOT INSTALLED IN A NEAT AND PROFESSIONAL MANNER SHALL BE PULLED OUT AND RE-RUN BY INSTALLER AT NO ADDITIONAL COST TO

CONTRACTOR RUNNING CABLING MUST MARK BOTH ENDS OF CABLING, PROVIDE A WIRE LEGEND FOR ALL LOCATIONS, AND PROVIDE A CONTINUITY TEST LOG FOR

10. EXPOSED CABLING SHALL BE RUN PARALLEL AND PERPENDICULAR TO BUILDING BETWEEN BAR JOISTS OR BEAMS (I.E.: CABLING SHALL BE ROUTED ALONG PATH

ALL CABLING SHALL BE SUPPORTED FROM BUILDING STRUCTURE AND NOT FROM GRID, TILES, OR SUPPORT WIRES. EXPOSED CABLING SHALL BE SUPPORTED BY

ALL POWER LIMITED FIRE ALARM CABLING ABOVE THE STRUCTURE, ABOVE LAY-IN CEILINGS, OR CONCEALED ABOVE CEILINGS OR IN PARTITIONS (NOT SUBJECT TO

15. ALL CONDUIT SHALL BE TERMINATED AT THE BAR JOIST LEVEL WITH SOME FORM

16. ALL CONDUIT LOCATED IN DRYWALL SHALL BE TERMINATED NO LESS THAN SIX (6)

19. COORDINATE DRILLING OF ANY HOLES (I.E. COLUMN PENETRATIONS) WITH THE

20. ALL FIRE ALARM DEVICES SHALL BE INSTALLED IN OR ON A PROPER BACKBOX. NO

SEISMICALLY BRACED, AS REQUIRED BY ALL APPLICABLE CODES AND THE LOCAL

24. ALL FIRE ALARM JUNCTION BOXES SHALL BE RED IN COLOR.

PROJECT INFORMATI	PROJECT INFORMATION						
PROJECT NAME:	PARTY CITY - CHINO, CALIFORNIA						
LOCATION:	3850 GRAND AVE CHINO, CA 91710						
FIRE PROTECTION:	100% SPRINKLERED						
OCCUPANCY:	MERCANTILE						
AREA OF WORK:	20,091 SQ. FT.						
OCCUPANT LOAD:	224 OCCUPANTS						
SYSTEM TYPE:	PROTECTED PREMISE FIRE ALARM SYSTEM WITH CENTRAL STATION SERVICE						

## APPLICABLE CODES

ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REFERENCED DESIGN STANDARDS.

2016 CALIFORNIA BUILDING CODE

2016 CALIFORNIA FIRE CODE

- 2016 CALIFORNIA MECHANICAL CODE
- 2016 CALIFORNIA ELECTRICAL CODE
- 2016 EDITION NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE WITH CALIFORNIA STATE AMENDMENTS

CONFLICTS BETWEEN THE REFERENCE NFPA STANDARDS, FEDERAL OR STATE CODES, SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF FIRE PROTECTION ENGINEER (CCI) FOR RESOLUTION.

# GENERAL PROGRAMMING NOTES

- CONTROL-BY-EVENT PROGRAMMING IS PROVIDED FOR GENERAL INFORMATIONAL PURPOSES ONLY. SPECIFIC SYSTEM PROGRAMMING SHALL BE PROVIDED BY THE FIRE ALARM CONTRACTOR IN SHOP DRAWING SUBMITTAL.
- COORDINATE SPECIFIC ALPHANUMERIC DESCRIPTIONS WITH THE OWNER PRIOR TO SYSTEM PROGRAMMING.

# FIRESTOP NOTES

- ALL THROUGH-PENETRATIONS OF FIRE-RATED WALLS AND FLOORS SHALL BE FIRE-STOPPED.
- FIRE-RATED GYPSUM BOARD WALLS CONSTRUCTED AS DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGNS IN THE U.L. FIRE RESISTANCE DIRECTORY (GENERALLY DOUBLE THICKNESS WALLBOARD) SHALL BE FIRE-STOPPED WITH U.L. SYSTEMS.
- ALL REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOORS OR WALLS, AND ALL U.L. CLASSIFIED CONCRETE BLOCK WALLS SHALL BE FIRE-STOPPED WITH U.L. SYSTEMS.

# SPRINKLER NOTE

THE PARTY CITY SPACE WILL BE FULLY SPRINKLERED. THE SPRINKLER SYSTEM WILL BE INSTALLED IN ACCORDANCE WITH NFPA 13.

![](_page_56_Figure_92.jpeg)

FIRE PROTECTION ENGINEER OF RECORD JACOB P. HEMKE, PE LICENSE NO. FP1686 CODE CONSULTANTS, INC. 2043 WOODLAND PKWY, SUITE 300

ST. LOUIS, MO 63146-4235 PHONE: 314-991-2633 CORPORATE CERTIFICATE OF AUTHORITY NO. C3221171

2043 WOODLAND PKWY, SUITE 300 ST. LOUIS, MISSOURI 63146-4235 314-991-2633 www.codeconsultants.com

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CODE CONSULTANTS, INC.

FIRE ALARM NOTES AND

SITE PLAN

FA1.2

SHFFT NO

# FIRE ALARM MATRIX

	4CTIL	AMULL ALARM C	TRAMS ALARIS	ACTILI ALARM CON	ANUNG SUPERVIC	TANE VARTES UPENIN	ACTIL	AMU., CATES TROUBLE	TRANSIE ROLL	OIATON ROUBLER	ACTIVATION "UNIN	CITY ERIC
											<u> </u>	—
- WATEREI OW SWITCH												
- CONTROL VALVE TAMPER SWITCH				•	•							
MANUAL PULL STATION	•	•	•								•	
SMOKE DETECTION DEVICES												
- ABOVE FACP												
- AIR HANDLING UNIT - SUPPLY												
KNOX BOX TAMPER SWITCHES				•	•	•						
LOSS OF PRIMARY POWER AT THE FACP AND CELLULAR COMMUNICATOR												
											<u> </u>	
											┼───	<u> </u>

ON-BOARD POPIT MODULES LISTING				
ALPHANUMERIC LABEL				
SPARE				
EXTERIOR BELL CIRCUIT TROUBLE				
SPARE				

	FIRE ALARM POPEX MODULE LISTING
POPIT ADDRESS	ALPHANUMERIC LABEL OF DEVICE
PT09	SPARE
PT10	SMOKE DETECTOR ABOVE FACP
PT11	MANUAL PULL STATION @ SUITE 3850 ENTRY LOBBY
PT12	WATERFLOW @ BACK OF BUILDING
PT13	PIV @ BACK OF BLIII DING
PT14	
DT15	
DT16	
DT17	
P120	
PT21	
P122	
P123	
P124	DUCT DETECTOR @ AC-10 3850
P125	
PT26	MANUAL PULL STATION @ 3860 SUITE C ENTRY LOBBY
P127	MANUAL PULL STATION @ 3860 SUITE & ENTRY LOBBY
P128	MANUAL PULL STATION @ 3860 SUITE A ENTRY LOBBY
P129	KNOX BOX @ OUTSIDE SUITE 3860 SUITE A
P130	
P 131	DUCT DETECTOR @ 3860 SUITE A
P132	
P133	
P134	
P135	
P 130	
P137	
P138	
P139	
P140	
P141	
P 142	
P143	
P144	
P 140	
P 140	
P 147	
P 140	
PT50	
DT51	SPARE
PT52	SPARE
PT53	SPARE
PT54	SPARE
DT55	SPARE
PT56	SPARE
PT57	SPARE
PT58	SPARE
PT59	SPARE
PT60	SPARE
THRU	
PT99	SPARE
	-

FIRE ALARM CONTROL PANEL BATTERY CALCULATIONS (BOSCH D9412GV4 - 12 VDC)								
			STANDBY	POWER	IN ALARM			
MODEL NUMBER	DESCRIPTION	QUANTITY	CURRENT PER DEVICE (mA)	TOTAL CURRENT (mA)	CURRENT PER DEVICE (mA)	TOTAL CURRENT (mA)	STANDBY BATTERIES (12-VOLT)	CURRENT (mA)
D9412GV4	FIRE ALARM CONTROL PANEL	1	225	225	300	300		
D125B	DUAL INITIATING MODULE	1	12	12	75	75	STANDBY CURRENT	451.25
D1256RB	ANNUNCIATOR	1	104	104	225	225	HOURS	24
D192G	INDICATING CIRCUIT MODULE	1	35	35	100	100	STANDBY mAH	10,830
D8125	POPEX MODULE	1	50	50	50	50	ALARM CURRENT	1,365.2
D9127T	POPIT MODULE	19	0.8	15.2	0.8	15.2	HOURS	0.083
MDL3	SYNC CIRCUIT MODULE	1	10	10	50	50	ALARM mAH	113
2W-B	SMOKE DETECTOR	1	0.05	0.05	130	130	TOTAL mAH	10,943
AS-121575W-FR	NOTIFICATION APPLIANCES	1	0	0	360	360	TOTAL AH	10.9
D130	RELAY MODULE	1	0	0	60	60	CONTINGENCY	20%
							BATTERY TOTAL (AH)	13.2
		∥						
								_
TOTAL				451.25		1,365.2	BATTERY PROVIDED (AH)	18.0
NOTES:								

NOTES:

PROVIDE ONE (1) 12 VOLT 18 AH BATTERY. BATTERY SHALL BE INSTALLED IN THE FIRE ALARM CONTROL PANEL CABINET. BATTERY CALCULATIONS WERE BASED ON THE AS-BUILT DRAWINGS DATED 01/27/17 AND INCLUDES NEW FIRE ALARM EQUIPMENT.

FIRE ALAR	M NOTIFICATION APPLIANCE CIRC	UIT VOLTAGE D	ROP CALCULA	TIONS	
		ACTUAL ALARM	MAXIMUM DISTANCE TO LAST APPLIANCE		
DESCRIPTION	APS / CIRCUIT LOCATION	CURRENT (AMPS)	12 AWG CABLING (FEET)	14 AWG CABLING (FEET)	
FACP LOCATION OF FACP / APS					
AV01	INTERIOR A/V AT EACH MAIN ENTRANCE	0.360	3,166	1,991	

NOTES:

NOTIFICATION APPLIANCE CIRCUITS (NAC) DESIGNED FOR A MAXIMUM 1.6 AMPS, MAXIMUM 4.4 VDC DROP, AND MINIMUM OPERATING VOLTAGE OF 16 VDC.

FIELD VERIFY ALL VOLTAGE DROP AND POWER REQUIREMENTS. NOTIFICATION APPLIANCE CIRCUITS HAVE BEEN DESIGNED BASED UPON THE ABOVE CURRENT AND VOLTAGE CRITERIA USING WHEELOCK NOTIFICATION APPLIANCE CRITERIA.

![](_page_57_Figure_12.jpeg)

![](_page_57_Figure_15.jpeg)

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![](_page_57_Figure_16.jpeg)

![](_page_57_Figure_18.jpeg)

![](_page_57_Figure_19.jpeg)

![](_page_57_Figure_21.jpeg)

### PART 1 - GENERAL

### 01 RELATED DOCUMENTS

A. CONDITIONS OF THE CONTRACT. DRAWINGS, GENERAL AND SUPPLEMENTRY CONDUTIONS APPLY TO THE WORK OF THIS SECTION. / DRAWINGS.

### .02 SUMMARY

- A. PROVIDE ALL REQUIRED LABOR, WARRANTY LABOR, MATERIALS, EQUIPMENT, SYSTEM PROGRAMMING, TESTING, SUBMITTALS AND SERVICES NECESSARY FOR A COMPLETE AND OPERATIONAL FIRE ALARM SYSTEM AS HEREINAFTER DESCRIBED, AND AS SHOWN ON THE ENGINEERING DRAWINGS.
- B. WORK SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
- ADDRESSABLE FIRE ALARM CONTROL PANELS DIGITAL ALARM COMMUNICATOR TRANSMITTER (DACT) . CIRCUITS
- DETECTION DEVICES
- . MANUAL PULL STATIONS ADDRESSABLE INTERFACE MODULES
- NOTIFICATION APPLIANCES 8. ALARM VERIFICATION
- HVAC SHUTDOWN 10. REMOTE ANNUNCIATOR
- C. PROVIDE A MINIMUM OF ONE (1) HOUR TRAINING, FOR STAFF PERSONNEL, IN THE OPERATION AND USE OF THE SYSTEM.
- D. IT IS INTENDED THAT THE ENGINEERING DRAWINGS AND SPECIFICATIONS SHALL DESCRIBE AND PROVIDE FOR A WORKING INSTALLATION COMPLETE IN EVERY DETAIL AND ALL ITEMS NECESSARY FOR SUCH COMPLETE INSTALLATION SHALL BE PROVIDED WHETHER OR NOT SPECIFICALLY MENTIONED HEREIN OR SHOWN ON THE ENGINEERING DRAWINGS.
- E. PROVIDE SUFFICIENT LABOR FOR ONE (1) COMPLETE SYSTEM REPROGRAMMING THIS ALLOTTED REPROGRAMMING TIME SHALL BE CONDUCTED FOR CHANGES AFTER PROJECT CONDITIONS SYSTEM INTERCONNECTIONS AND REQUIRED TEXT ARE FINALIZED AND REVIEWED BY THE ENGINEER. PROVIDE UNIT PRICING FOR FACH ADDITIONAL REPROGRAMMING

03 <u>REFERENCES</u>

- A. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REFERENCED DESIGN STANDARDS.
- B. IF THERE IS A CONFLICT BETWEEN THE APPLICABLE CODES, REFERENCED DESIGN STANDARDS, OR LOCAL AMENDMENTS AND THIS SPECIFICATION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO IMMEDIATELY BRING THE CONFLICT TO THE ENGINEER FOR RESOLUTION.
- 04 SYSTEM DESCRIPTION
- A. THE SYSTEM SHALL OPERATE AS A LOW VOLTAGE FIRE ALARM SYSTEM AND SHALL BE A COMPLETE INTELLIGENT ADDRESSABLE SUPERVISED FIRE ALARM SYSTEM AS HEREINAFTER SPECIFIED. INITIATING DEVICE CIRCUITS SHALL MEET THE MINIMUM REQUIREMENTS OF CLASS B. NOTIFICATION APPLIANCE CIRCUITS SHALL MEET THE MINIMUM REQUIREMENTS OF CLASS B. SIGNALING LINE CIRCUITS SHALL MEET THE MINIMUM REQUIREMENTS OF CLASS B. AUXILIARY CIRCUITS, WHERE NOT INSTALLED AS SIGNALING LINE CIRCUITS, SHALL MEET THE MINIMUM REQUIREMENTS OF A CLASS B NOTIFICATION APPLIANCE CIRCUIT. CIRCUITS FOR RELAY COIL OPERATION SHALL BE 24 VOLT MAXIMUM WITH A SEPARATE OR INTEGRAL FIELD COLLAPSING DIODE.
- B. THE CONTROL PANELS SHALL RECEIVE THEIR POWER FROM 120 VOLT AC DEDICATED BRANCH CIRCUITS. THE CIRCUIT DISCONNECTING MEANS SHALL HAVE A RED MARKING, SHALL BE ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL, AND SHALL BE IDENTIFIED AS "FIRE ALARM CIRCUIT". THE 24 VOLT DC POWER FOR ALL SYSTEM INITIATION, SUPERVISORY, NOTIFICATION AND CONTROL CIRCUITS SHALL BE PROVIDED BY THE FIRE ALARM CONTROL PANEL POWER SUPPLIES.
- C. UPON LOSS OF BUILDING POWER, THE ENTIRE SYSTEM SHALL TRANSFER TO SECONDARY POWER WITHIN TEN (10) SECONDS, AND WITHOUT LOSS OF SIGNALS. THE SYSTEM SHALL OPERATE UNDER SECONDARY POWER IN NORMA OR TROUBLE CONDITIONS FOR TWENTY-FOUR (24) HOURS AND HAVE SUFFICIENT POWER TO SUPPORT COMPLETE ALARM CONDITION OPERATION FOR A SUBSEQUENT FIVE (5) MINUTES OF EVACUATION ALARM OPERATION AT MAXIMUM CONNECTED LOAD.
- E. UPON LOSS OF PRIMARY POWER TO THE CONTROL PANELS, OR ACTIVATION OF THE FIRE ALARM SYSTEM, ALL LOCKED EXIT DOORS SHALL AUTOMATICALLY BE UNLOCKED.
- F. SYSTEM OPERATION SHALL BE AS FOLLOWS:
- 1. ABNORMAL CIRCUIT CONDITIONS OR DEVICES, AS REQUIRED FOR THE CLASS OF THE CIRCUIT, SHALL INITIATE A "TROUBLE" CONDITION AT THE CONTROL PANELS AND REMOTE ANNUNCIATORS FOR THAT SPECIFIC CIRCUIT OR DEVICE. THE "TROUBLE" INDICATION SHALL DESCRIBE THE NATURE OF THE CONDITION ON THE AFFECTED CIRCUIT OR DEVICE. THI FIRE ALARM SYSTEM SHALL TRANSMIT A POINT SPECIFIC "TROUBLE" CONDITION TO AN APPROVED UL CENTRAL STATION AS CURRENTLY CONFIGURED.
- 2. ACTIVATION OF ANY SUPERVISORY DEVICE AS INDICATED ON THE ENGINEERING DRAWINGS SHALL INITIATE A "SUPERVISORY" CONDITION AT THE CONTROL PANELS AND REMOTE ANNUNCIATORS FOR THAT SPECIFIC DEVICE. THE "SUPERVISORY" INDICATION SHALL DESCRIBE THE NATURE OF THE CONDITION AND SPECIFIC ADDRESS AND ALPHANUMERIC DESCRIPTION OF THE DEVICE AFFECTED. THE FIRE ALARM SYSTEM SHALL TRANSMIT A POINT SPECIFIC "SUPERVISORY" CONDITION TO AN APPROVED UL CENTRAL STATION AS CURRENTLY CONFIGURED.
- 3. ACTIVATION OF ANY ALARM DEVICE AS INDICATED ON THE ENGINEERING DRAWINGS SHALL INITIATE AN "ALARM" CONDITION AT THE CONTROL PANELS AND REMOTE ANNUNCIATORS FOR THAT SPECIFIC DEVICE. TH "ALARM" INDICATION SHALL DESCRIBE THE NATURE OF THE CONDITION AND SPECIFIC ADDRESS AND ALPHANUMERIC DESCRIPTION OF THE DEVICE AFFECTED. THE FIRE ALARM SYSTEM SHALL TRANSMIT A POINT SPECIFIC "ALARM" CONDITION TO AN APPROVED UL CENTRAL STATION AS CURRENTLY CONFIGURED.
- 4. INITIATION OF AN "ALARM" CONDITION SHALL RESULT IN THE FOLLOWING FUNCTIONS TO BE PERFORMED BY THE SYSTEM:
- A. INITIATE AN ALARM INDICATION ON THE CONTROL PANEL BY TONE AND ILLUMINATE THE CORRESPONDING DEVICE SPECIFIC ALPHANUMERIC LCD DESCRIPTION. MANUALLY ACTIVATING THE "ALARM SILENCE" SHALL SILENCE THE TONE AT THE PANEL. THE ALARM ALPHANUMERIC DISPLAY SHALL REMAIN "ON" AT THE CONTROL PANEL UNTIL THE CONDITION CAUSING THE ALARM HAS BEEN CLEARED AND RESET. AN ADDITIONAL ALARM REPORTED TO THE PANEL SUBSEQUENT TO ACTIVATING THE "ALARM SILENCE" SHALL REACTIVATE THE CONTROL PANEL TONE.
- B. ACTIVATE THE AUDIBLE AND VISUAL NOTIFICATION APPLIANCES THROUGHOUT THE BUILDING.
- C. TRANSMIT A GENERAL "ALARM" SIGNAL TO THE APPROVED REMOTE MONITORING STATION.
- 5. ACTUATION OF ALARM NOTIFICATION APPLIANCES, FIRE SAFETY FUNCTIONS, AND ANNUNCIATION AT THE PROTECTED PREMISES SHALL OCCUR WITHIN TEN (10) SECONDS AFTER THE ACTIVATION OF AN INITIATING DEVICE.

1.05 QUALITY ASSURANCE

- A. ALL WORK SHALL MEET THE REQUIREMENTS OF THE OWNER, ARCHITECT, ENGINEER AND AUTHORITY HAVING JURISDICTION (AHJ).
- B. ALL EQUIPMENT AND COMPONENTS SHALL BE UL LISTED FOR THE ACTUAL INTENDED USE, UNLESS HEREINAFTER SPECIFICALLY EXCLUDED FROM SUCH A LISTING.
- C. INSTALLATION AND SUPERVISION OF INSTALLATION SHALL BE IN STRICT COMPLIANCE WITH THE REQUIREMENTS OF THE REGULATIONS, LICENSES, AND PERMITS FOR FIRE ALARM SYSTEM INSTALLERS IN THIS JURISDICTION.
- D. INSTALLER MUST HAVE BEEN ACTIVELY ENGAGED IN THE BUSINESS OF SELLING INSTALLING, AND SERVICING FIRE ALARM SYSTEMS FOR AT LEAST FIVE (5)
- E. INSTALLER MUST BE AN AUTHORIZED REPRESENTATIVE OF THE FIRE ALARM EQUIPMENT MANUFACTURER (FAEM) AND HAVE TECHNICAL FACTORY TRAINING SPECIFICALLY FOR THE SYSTEM PROPOSED.
- F. THE FAEM SHALL HAVE A REPRESENTATIVE SUPERVISE THE FINAL CONNECTION OF DEVICES, WIRING, AND PROGRAMMING OF THE CONTROL PANELS. THE FAEM REPRESENTATIVE SHALL BE NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES (NICET) CERTIFIED AS LEVEL II OR HIGHER FIRE ALARM PROTECTION / FIRE ALARM SYSTEMS ENGINEERING TECHNICIAN.
- .06 REGULATORY REQUIREMENTS
- A. ALL WORK SHALL MEET THE REQUIREMENTS OF ALL APPLICABLE CODES AND REFERENCED DESIGN STANDARDS.
- B. NO APPROVALS OR INTERPRETATIONS OF THE DESIGN DOCUMENTS SHALL BE PURSUED EXCEPT THROUGH THE ENGINEER.

- C. ANY WORK PERFORMED PRIOR TO THE SATISFACTORY REVIEW OF THE SHOP DRAWINGS BY THE ENGINEER, APPROVAL BY THE AHJ, AND DETERMINED TO BE NONCOMPLIANT WITH THE CONTRACT DOCUMENTS OR APPLICABLE CODES BY THE OWNER OR AHJ WILL BE REPLACED AT THE CONTRACTORS' EXPENSE.
- D. THE SYSTEM WILL NOT BE ACCEPTABLE UNTIL FINAL TESTING AND RECEIPT OF THE INSPECTION AND TESTING FORM HAS BEEN OBTAINED.

### 1.07 SUBMITTALS

- A. THE ENGINEERING DRAWINGS HAVE BEEN PREPARED USING AUTOCAD. THESE DOCUMENTS WILL BE MADE AVAILABLE FITHER IN ELECTRONIC OR HARD COPY FORM. UTILIZATION OF THESE DOCUMENTS FOR THE DEVELOPMENT OF SHOP DRAWINGS AND SUBMITTALS DOES NOT RELIEVE THE CONTRACTOR FROM ANY RESPONSIBILITIES REQUIRED HEREIN
- B. IN THE SUBMITTALS, THE CONTRACTOR MUST CLEARLY IDENTIFY ALL AREAS AND SECTIONS OF THIS SPECIFICATION TO WHICH THEY TAKE EXCEPTION OR ARE NOT CAPABLE OF PROVIDING.
- C. SUBMITTALS WILL BE DISAPPROVED UNLESS REQUIRED EQUIPMENT LITERATURE, CALCULATIONS, AND COMPLETE SHOP DRAWINGS ARE SUBMITTED TOGETHER AS ONE PACKAGE FOR REVIEW.
- D. THE ENGINEER SHALL REVIEW THE CONTRACTOR'S SUBMITTALS TO VERIFY CONFORMANCE TO THE PROJECT SPECIFICATIONS AND DESIGN CONCEPTS EXPRESSED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL ALLOW SUFFICIENT TIME TO PERMIT ADEQUATE REVIEW. REVIEW OF SUCH SUBMITTALS IS NOT CONDUCTED FOR THE PURPOSE OF DETERMINING THE ACCURACY AND COMPLETENESS OF DETAILS AND DIMENSIONS, OR SUBSTANTIATING INSTALLATION OR PERFORMANCE OF EQUIPMENT AND SYSTEMS DESIGNED BY THE CONTRACTOR. ALL OF WHICH REMAIN THE CONTRACTOR'S RESPONSIBILITY TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW SHALL NOT CONSTITUTE APPROVAL OF SAFETY PRECAUTIONS OF CONSTRUCTION, MEANS, METHODS, TECHNIQUES, SEQUENCES OF PROCEDURES. OR APPROVAL OF A SPECIFIC ASSEMBLY.
- E. PRIOR TO RELEASE OF EQUIPMENT FOR SHIPMENT OR INSTALLATION, SUBMIT TO THE ENGINEER THE FOLLOWING:
- 1. SHOP DRAWINGS. THE SPECIFIC QUANTITY TO BE SUBMITTED SHALL BE CONFIRMED WITH THE GENERAL CONTRACTOR AND OWNER. ELECTRONIC SUBMITTALS ARE ACCEPTABLE. SUBMITTAL MUST BE COMPREHENSIVE OF THE ENTIRE PROJECT, COMPLETE IN ALL DETAIL, AND INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING
- A. FLOOR PLANS SHOWING EQUIPMENT PLACEMENT, POINT TO POINT WIRING, WIRING TYPES AND SIZES, CONDUIT TYPES AND SIZES, WIRING AND RACEWAY ROUTES, AND PROPOSED MOUNTING METHODS FOR CONDUIT AND BACKBOXES. FLOOR PLANS SHALL BE AUTOCAD GENERATED.
- B. SEQUENCE OF OPERATIONS IN MATRIX FORM TO INCLUDE A DETAILED DESCRIPTION OF THE OPERATION OF EACH SYSTEM FUNCTION FOR ALL POSSIBLE CONDITIONS
- RISER DIAGRAM SHOWING TYPICAL WIRING CONNECTIONS FOR EACH TYPE OF DEVICE AND MODULE.
- D. SUPERVISORY AND ALARM CURRENT CALCULATIONS FOR PRIMARY POWER AND EMERGENCY BATTERY SIZING OF ALL CONTROL PANELS AND AUXILIARY POWER SUPPLIES.
  - 1) BATTERY CALCULATIONS SHALL LIST THE TYPE OF DEVICES AND MODULES, QUANTITIES, AMPERAGE DRAW FOR STANDBY AND ALARM CONDITIONS FOR EACH DEVICE, THE TOTAL AMPERAGE DRAW FOR EACH PANEL, AND EACH PANEL'S BATTERY AMP/HOUR RATING.
  - 2) THE CALCULATED LOAD SHALL BE THE DESIGN LOAD, INCLUDING ALL REQUIRED SPARE CAPACITY.
  - 3) THE BATTERY CAPACITY USED TO MEET THE CALCULATED LOAD SHALL BE A MAXIMUM OF EIGHTY (80) PERCENT OF THE AMP/HOUR LISTED BY THE MANUFACTURER.
- E. A COMPLETE LIST OF ALL PROPOSED ALPHANUMERIC DESCRIPTIONS AND THEIR ASSOCIATED POINT ADDRESS AND CIRCUIT NUMBER.
- F. VOLTAGE DROP CALCULATIONS FOR ALL NOTIFICATION APPLIANCE CIRCUITS. 1) CALCULATIONS SHALL FOLLOW THE VOLTAGE DROP
  - CALCULATION CRITERIA AS OUTLINED IN NFPA 72 AND UL 864.
  - 2) CALCULATIONS SHALL USE THE WORST CASE OPERATING VOLTAGE OF EACH CONTROL PANEL OR POWER SUPPLY AS A STARTING VOLTAGE. THE STARTING VOLTAGE SHALL BE 20.4 VDC, UNLESS WRITTEN DOCUMENTATION IS PROVIDED CONFIRMING THAT THE SPECIFIC CONTROL PANEL OR POWER SUPPLY IS CAPABLE OF MAINTAINING A VOLTAGE HIGHER THAN 20.4 VDC.
  - 3) CALCULATIONS SHALL USE THE LOWEST OPERATING VOLTAGE OF THE NOTIFICATION APPLIANCES AND THE ASSOCIATED INCREASED CURRENT DRAW. THE LOWEST OPERATING VOLTAGE SHALL BE THE UL STANDARD OPERATING VOLTAGE OF 16 VDC, UNLESS APPROVED OTHERWISE BY THE ENGINEER.
- 2. MANUFACTURER'S LITERATURE ON ALL SYSTEM EQUIPMENT. THE SPECIFIC QUANTITY TO BE SUBMITTED SHALL BE CONFIRMED WITH THE GENERAL CONTRACTOR AND OWNER. ELECTRONIC SUBMITTALS ARE ACCEPTABLE. LITERATURE WHICH IS NOT CLEARLY IDENTIFIED WILL BE REJECTED.
- A. LITERATURE SHALL INCLUDE SPECIFICATION AND DESCRIPTION OF RECOMMENDED SUPPORTING METHODS, ENCLOSURES OR BOXES, AND WIRING CONNECTIONS
- B. THE EXACT COMPONENTS TO BE UTILIZED ON THIS SPECIFIC PROJECT SHALL BE INDICATED, BY HIGHLIGHTING OR ARROWS, ON EACH DATA SHEET OF THE EQUIPMENT LITERATURE.
- 1. QUALIFICATIONS AND AUTHORIZATION OF THE REPRESENTATIVE OF THE F. THE ENGINEER SHALL REVIEW FOR ACCURACY ALL SUBMITTALS REQUIRED TO
- BE RECEIVED BY THE ENGINEER PRIOR TO EQUIPMENT RELEASE OR INSTALLATION. THE OWNER, OWNER'S REPRESENTATIVE, OR DESIGN FIRMS RETAINED BY THE OWNER SHALL NOT BE RESPONSIBLE FOR ANY ADDITIONAL COSTS RESULTING FROM REPLACEMENT OF EQUIPMENT OR MATERIALS NOT REVIEWED PRIOR TO INSTALLATION.
- G. FORWARD TO THE ENGINEER A COPY OF THE TRANSMITTAL OF THE PERMIT APPLICATION. H. FORWARD TO THE ENGINEER. IN WRITING, ANY COMMENTS FROM THE AHJ OR
- THE INSURANCE UNDERWRITER WITHIN FIVE (5) WORKING DAYS AFTER THE RECEIPT OF THEIR COMMENTS. I. FORWARD TO THE ENGINEER A COPY OF THE UL CENTRAL STATION SUPERVISORY CENTER CERTIFICATE.

### 1.08 PROJECT RECORD DOCUMENTS

- A. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ON SITE AN UP-TO-DATE RECORD SET OF SATISFACTORY SHOP DRAWINGS WHICH SHALL BE MARKED TO SHOW EACH AND EVERY CHANGE MADE TO THE FIRE ALARM SYSTEM FROM THE ORIGINAL APPROVED SHOP DRAWINGS. THIS SHALL NOT BE CONSTRUED AS AUTHORIZATION TO DEVIATE FROM OR MAKE CHANGES TO THE SHOP DRAWINGS REVIEWED BY THE ENGINEER WITHOUT WRITTEN INSTRUCTIONS FROM THE ENGINEER IN EACH CASE. THIS SET OF DRAWINGS SHALL BE ISSUED ONLY AS A RECORD SET. THESE DRAWINGS SHALL BE MADE AVAILABLE TO THE OWNER, OR THE OWNER'S REPRESENTATIVE, UPON REQUEST.
- B. THE CONTRACTOR SHALL CONTINUALLY DOCUMENT SOFTWARE AND PROGRAMMING CHANGES. THIS DOCUMENTATION SHALL INCLUDE:

CHANGE, WITH ALL MODIFICATIONS HIGHLIGHTED.

- 1. A COMPLETE PRINTOUT OF THE SYSTEM PRIOR TO THE CHANGE. 2. A COMPLETE PRINTOUT OF THE SYSTEM PROGRAM SUBSEQUENT TO THE
- 3. A LETTER PREPARED AND SIGNED BY THE INDIVIDUAL WHO MADE THE CHANGES. DESCRIBING EACH CHANGE MADE AND THE REASON FOR THE CHANGE. THIS LETTER SHALL CERTIFY THAT THE PROGRAMMER HAS PERSONALLY REVIEWED AND COMPARED THE BEFORE AND AFTER PROGRAM PRINTOUT AND VERIFIED THE CORRECTNESS OF THE MODIFICATION(S).
- 4. AN EQUIVALENT MEANS PERFORMED AUTOMATICALLY IN COMPUTER SOFTWARE, WHICH VERIFIED THE RESULTS OF CHANGES MADE IS ACCEPTABLE.
- ONCE THE FIRE ALARM SYSTEM IS PUT INTO SERVICE, IN WHOLE OR IN PART, AND THE ASSOCIATED BUILDING(S) ARE PARTIALLY OR WHOLLY OCCUPIED, NO SOFTWARE CHANGES SHALL BE PERFORMED WITHOUT PRIOR WRITTEN PERMISSION OF THE OWNER, OR OWNER'S REPRESENTATIVE.
- D. ONLY A CERTIFIED MANUFACTURER'S REPRESENTATIVE TRAINED IN THE SPECIFIC PROGRAMMING SOFTWARE SHALL MAKE CHANGES TO THE FIRE ALARM SYSTEM SOFTWARE ONCE THE SYSTEM IS IN SERVICE.

## NUMBER AND DATE.

PROJECT RECORD DOCUMENTS TO THE OWNER'S REPRESENTATIVE:

## AND NFPA 72:

- A. THE RECORD OF COMPLETION FORM SHALL BE IN THE FORMAT AS OUTLINED IN NFPA 72.
- B. THE INSPECTION AND TESTING FORM SHALL BE IN THE FORMAT AS OUTLINED IN
- OWNER BY THE AHJ.
- PLANS SHALL BE AUTOCAD GENERATED.

# PORTION OF THIS SPECIFICATION.

DOCUMENTS.

- INSTALLATION AND INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING INFORMATION:
- CONSIDERATIONS AND LIMITATIONS. 2. A DETAILED DESCRIPTION OF ROUTINE MAINTENANCE REQUIRED OR
- TROUBLE CONDITION.
- OF EQUIPMENT ON THE LIST.
- MANUALS/INSTRUCTIONS FOR ALL EQUIPMENT INSTALLED.
- CONTROL PANEL
- REPRESENTATIVE AT THE COMPLETION OF THE PROJECT.

### 1.9 WARRANTY

- TO THE OWNER.

### PART 2 - PRODUCTS

SCHEDULED TESTING DURING THE WARRANTY PERIOD.

2.01 ACCEPTABLE MANUFACTURERS A. EXISTING BOSCH D9412GV4

CONDITION AND REUSED.

A. MONITOR MODULES (POPIT)

IDENTIFY

C. MANUAL PULL STATIONS

E. REMOTE ANNUNCIATORS

F. AUXILIARY RELAY MODULES

CIRCUIT OR DEVICE.

TYPE WILL BE USED.

NPLFP, NPLFR OR THHN.

USE IN WET LOCATIONS.

2. TYPE LISTED FOR DIRECT BURIAL.

2.04 CONDUCTORS

B. PHOTOELECTRIC SMOKE DETECTORS

2.02 CONTROL PANELS

2.03 FIELD DEVICES

### E. EACH REVISION TO THE SOFTWARE SHALL BE IDENTIFIED BY A UNIQUE VERSION

### F. PRIOR TO FINAL PAYMENT FOR THE FIRE ALARM SYSTEM AND THE BEGINNING OF THE WARRANTY PERIOD. SUBMIT A CD ROM AND TWO (2) SETS (OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE) OF THE FOLLOWING COMPLETED

- 1. COPIES OF ALL TEST AND INSPECTION REPORTS AS REQUIRED BY THE AHJ
- 1. ALL PERMITS AND LICENSES REQUIRED TO BE IN THE POSSESSION OF THE
- ACCURATE RECORD (AS-BUILT) DRAWINGS OF THE COMPLETE INSTALLATION TO INCLUDE, BUT NOT BE LIMITED TO, THE INFORMATION REQUIRED FOR THE SHOP DRAWINGS. RECORD DRAWINGS OF THE FLOOR
- 3. ORIGINAL WARRANTY DOCUMENTS INCLUDING, BUT NOT LIMITED TO, THOSE OF THE FAEM. WARRANTY DOCUMENTS SHALL REFERENCE AND BE BINDING TO THE WARRANTY PROVISIONS SPECIFIED IN THE WARRANT
- 4. SUBMIT TO THE ENGINEER A COPY OF THE TRANSMITTAL TO THE OWNER'S REPRESENTATIVE FOR ALL FINAL COMPLETE PROJECT RECORD
- G. UPON COMPLETION OF CONSTRUCTION, SUBMIT TWO (2) SETS AND A CD ROM OF EQUIPMENT WARRANTIES AND TWO (2) SETS AND A CD ROM OF INSTALLATION. OPERATIONS AND MAINTENANCE INSTRUCTIONS TO THE OWNER'S REPRESENTATIVE. THIS MANUAL SHALL REFLECT THE COMPLETED
- 1. A DETAILED NARRATIVE DESCRIPTION OF THE SYSTEMS ARCHITECTURE, INPUTS, EVACUATION SIGNALING, AUXILIARY FUNCTIONS, ANNUNCIATION, SEQUENCE OF OPERATION, EXPANSION CAPABILITY, APPLICATION
- RECOMMENDED, OR AS WOULD BE PROVIDED UNDER A MAINTENANCE CONTRACT, INCLUDING A TESTING SCHEDULE AND DETAILED MAINTENANCE INSTRUCTIONS FOR EACH TYPE OF DEVICE INSTALLED.
- 3. DETAILED TROUBLESHOOTING INSTRUCTIONS FOR EACH POSSIBLE
- 4. AN EQUIPMENT LIST/SCHEDULE DETAILING ALL EQUIPMENT AND QUANTITIES INSTALLED. THE MANUFACTURER'S PRODUCT MODEL/IDENTIFICATION NUMBER SHALL BE SHOWN NEXT TO EACH PIECE
- 5. UPDATED MANUFACTURER'S DATA SHEETS AND INSTALLATION
- 6. A DETAILED DESCRIPTION OF THE OPERATION OF THE SYSTEMS INCLUDING OPERATOR RESPONSES. COPIES OF THE APPROVED SEQUENCE OF OPERATION SHALL BE PLACED IN OR ADJACENT TO THE
- H. A COPY OF ALL SOFTWARE DOCUMENTATION REQUIRED BY THIS SECTION SHALL BE MAINTAINED ON-SITE BY THE CONTRACTOR, IN A BINDER, ARRANGED IN CHRONOLOGICAL ORDER. THIS BINDER SHALL BE PROVIDED TO THE OWNER'S
- A. REPAIR ALL DEFECTIVE WORKMANSHIP OR REPLACE ALL DEFECTIVE MATERIALS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. WORKMANSHIP OR EQUIPMENT FOUND TO BE DEFECTIVE DURING THAT PERIOD SHALL BE REPLACED AT NO ADDITIONAL COST
- B. THE WARRANTY OR ANY PART OF THE WARRANTY SHALL NOT BE MADE VOID BY ANY REQUIRED OPERATION OR INSPECTION OF THE SYSTEM AFTER ACCEPTANCE DURING THE WARRANTY PERIOD. THE OWNER MAY SELECT QUALIFIED FIRMS OTHER THAN WARRANTOR TO PROVIDE REQUIRED TESTS AND INSPECTIONS. SYSTEM TESTING AND INSPECTIONS WILL BE CONDUCTED ONLY BY A DULY LICENSED COMPANY UNDER CONTRACT WITH THE OWNER TO PERFORM SCHEDULED TESTING AND INSPECTIONS AS REQUIRED BY THE AHJ THE OWNER MAY ELECT TO HAVE A REPRESENTATIVE PRESENT AT THE
- A. EXISTING FIRE ALARM CONTROL PANEL TO BE KEPT IN GOOD WORKING
- 1. PROVIDE ADDRESSABLE MONITOR MODULES (POPIT) WHERE REQUIRED TO INTERFACE WITH CONTACT ALARM DEVICES. OR TO CONNECT A SUPERVISED ZONE OF CONVENTIONAL INITIATING DEVICES (ANY NORMALLY OPEN DRY CONTACT DEVICE) TO AN INTELLIGENT DATA LOOP.
- 2. PROVIDE ADDRESS-SETTING MEANS AND STORE AN INTERNAL IDENTIFICATION CODE WHICH THE CONTROL PANEL SHALL USE TO
- 3. ACCEPTABLE MANUFACTURER IS BOSCH D9127U.
- 1. THE EXISTING SMOKE DETECTOR SHALL BE KEPT IN GOOD WORKING CONDITION AND BE RE-USED WITHIN PARTY CITY.
- 1. THE EXISTING MANUAL PULL STATION SHALL BE KEPT IN GOOD WORKING CONDITION AND BE RE-USED WITHIN PARTY CITY.
- D. AUDIBLE/VISUAL NOTIFICATION APPLIANCES WALL MOUNTED
- 1. THE EXISTING AUDIBLE/VISUAL NOTIFICATION APPLIANCE SHALL BE KEPT IN GOOD WORKING CONDITION AND BE RE-USED WITHIN PARTY CITY.
- 1. THE EXISTING FIRE ALARM ANNUNICATOR SHALL BE KEPT IN GOOD WORKING CONDITION AND BE RE-USED WITHIN PARTY CITY.
- 1. PROVIDE RELAYS FOR ALL AUXILIARY CONTROL INTERFACE. PROVIDE HEAVY DUTY TYPE RATED UP TO TEN (10) AMPS AT 24 VOLT DC. PROVIDE WITH NEMA I DUST COVER ASSEMBLY AND DPDT CONTACTS.
- 2. RELAYS SHALL BE MOUNTED WITHIN THREE (3) FEET OF THE CONTROLLED
- 3. ACCEPTABLE MANUFACTURER IS BOSCH D130.
- A. INITIATION, NOTIFICATION AND AUXILIARY DEVICE CIRCUIT CONDUCTORS FOR POWER LIMITED CIRCUITS SHALL BE TYPE FPL, FPLP, OR FPLR WHERE THE SIZE OR TYPE OF CONDUCTOR HEREINAFTER SPECIFIED CONFLICTS WITH THE FAEM'S REQUIREMENTS, THE LARGER SIZE OR MORE SPECIALIZED CONDUCTOR
- B. CONDUCTORS FOR ANY NON-POWER LIMITED CIRCUITS SHALL BE TYPE NPLF,
- C. CONDUCTORS FOR WET LOCATIONS SHALL BE AS FOLLOWS:
- 1. TYPES RHW, TW, THW, THHW, THWN, XHHW OR OTHER TYPE LISTED FOR

- ALL ELECTRICAL CHARACTERISTICS (CONDUCTOR-TO-CONDUCTOR CAPACITANCE, DC RESISTANCE, ETC.) OF THE FIRE ALARM CONDUCTORS SHALL MEET THE REQUIREMENTS OF THE SELECTED FAEM FOR THE INTENDED APPLICATION.
- E. ALL FIRE ALARM CONDUCTORS SHALL CONFORM TO THE REQUIREMENTS OF ARTICLE 760 OF THE NATIONAL ELECTRICAL CODE, AND ALL LOCAL CODES AND STANDARDS.
- 2.05 RACEWAY
- A. THE FOLLOWING RACEWAY TYPES SHALL BE PERMITTED:
- 1. EMT CONDUIT (3/4 INCH MINIMUM). RIGID CONDUIT (3/4 INCH MINIMUM)
- 3. NON-METALLIC CONDUIT FOR WET LOCATIONS (3/4 INCH MINIMUM). 4. SURFACE MOUNTED METALLIC RACEWAY WITH A MINIMUM SIZE EQUIVALENT TO THREE QUARTER (3/4) INCH NOMINAL CONDUIT.
- B. ALL RACEWAY TYPES SHALL BE NEW. INSTALLING USED RACEWAY IS UNACCEPTABLE.
- USING EXISTING RACEWAY IS UNACCEPTABLE WITHOUT PRIOR WRITTEN PERMISSION OF THE ENGINEER OR OWNER'S REPRESENTATIVE.
- D. BOXES, SUPPORTS, AND OTHER ACCESSORIES FOR THE RACEWAY INSTALLATION SHALL BE LISTED FOR THE INTENDED APPLICATION.
- PART 3 EXECUTION
- 3.01 COORDINATION WITH OTHER TRADES
- A. COORDINATE CLOSELY WITH ALL OTHER TRADES TO EXPEDITE CONSTRUCTION, ACCURATELY INTERFACE WITH RELATED SYSTEMS AND AVOID INTERFERENCES. 3.02 INSTALLATION / APPLICATION
- A. FURNISH AND INSTALL ALL CONTROL WIRING, RACEWAY AND OUTLET BOXES FOR THE FIRE ALARM SYSTEM.
- B. FURNISH AND INSTALL ALL BACKBOXES, EQUIPMENT AND DEVICES FOR THE FIRE ALARM SYSTEM.
- BACKBOXES SHALL BE OF THE EXACT TYPE RECOMMENDED BY THE FAEM AS SHOWN ON THE EQUIPMENT AND DEVICE SUBMITTALS.
- BACKBOXES SHALL BE INSTALLED PER THE MANUFACTURER'S INSTALLATION RECOMMENDATIONS
- 3. DEVICES AND EQUIPMENT MUST BE INSTALLED BY PERSONNEL LEGALLY PERMITTED AND CURRENTLY LICENSED TO INSTALL THE DEVICES AND EQUIPMENT. THE COST OF INSTALLATION, WARRANTY OF INSTALLATION AND EQUIPMENT, COORDINATION OF THE INSTALLATION, AND SUPERVISION OF THE INSTALLATION ARE RESPONSIBILITIES OF THE CONTRACTOR.
- ALL FIRE ALARM CONDUIT, JUNCTION BOXES, PULL BOXES, CABLE SPLICES AND TERMINAL CABINETS SHALL BE ACCESSIBLE, PAINTED RED OR CLEARLY MARKED "FIRE ALARM". THE CONTRACTOR SHALL COMPLY WITH ANY LOCAL CODES OR AHJ REQUIREMENTS FOR CIRCUIT IDENTIFICATION. ANY ACCESS PANELS REQUIRED FOR THE ACCESSIBILITY TO THE JUNCTION BOXES, PULL BOXES, CABLE SPLICES AND TERMINAL CABINETS SHALL BE THE RESPONSIBILITY OF THE FIRE ALARM CONTRACTOR.
- D. ALL WIRING CONDUCTORS AND CONDUITS SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER AT RIGHT ANGLES TO THE BUILDING WALLS, FLOORS AND CEILINGS, AND SUPPORTED FROM THE BUILDING STRUCTURE AT INTERVALS COMPLIANT WITH NEC REQUIREMENTS.
- E. ALL POWER LIMITED WIRING CONDUCTORS FOR THE FIRE ALARM SYSTEM SHALL BE INSTALLED IN CONDUIT IN THE FOLLOWING LOCATIONS:
- SEVEN (7) FEET OR LESS ABOVE THE FINISHED FLOOR. ELECTRICAL AND MECHANICAL ROOMS.
- 3. ELEVATOR HOISTWAYS AND ELEVATOR MACHINE ROOMS. 4. CONCEALED ABOVE CEILINGS OR IN PARTITIONS.
- AREAS SUBJECT TO PHYSICAL DAMAGE.
- WHERE REQUIRED BY APPLICABLE CODES. WIRING CONDUCTORS IN FINISHED AREAS THAT CANNOT BE CONCEALED ARE ALLOWED TO BE INSTALLED IN SURFACE-MOUNTED METALLIC RACEWAY ONLY UPON APPROVAL OF THE OWNER'S REPRESENTATIVE.
- F. ALL NON-POWER LIMITED WIRING CONDUCTORS FOR THE FIRE ALARM SYSTEM SHALL BE INSTALLED IN CONDUIT.
- G. POWER LIMITED WIRING CONDUCTORS FOR THE FIRE ALARM SYSTEM ARE NOT REQUIRED TO BE INSTALLED IN CONDUIT IN THE FOLLOWING LOCATIONS:
- MORE THAN SEVEN (7) FEET ABOVE THE FINISHED FLOOR.
- ABOVE LAY-IN CEILINGS. CONCEALED IN CEILINGS OR PARTITIONS NOT SUBJECT TO DAMAGE.
- H. EXPOSED WIRING CONDUCTORS AND CONDUITS SHALL BE CONCEALED FROM PUBLIC VIEW AT ALL LOCATIONS BY ROUTING ON THE INSIDE OF JOISTS, ABOVE LAY-IN CEILINGS, OVER GIRDERS, WITHIN PARTITIONS OR IN ANY OTHER MANNER ACCEPTABLE TO THE OWNER'S REPRESENTATIVE.
- WIRING CONDUCTORS AND CONDUITS INSTALLED ABOVE LAY-IN CEILINGS SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE AND SHALL NOT BE PERMITTED LESS THAN NINE (9) INCHES ABOVE OR BEHIND REMOVABLE PANELS OR CEILING TILES.
- EXPOSED WIRING CONDUCTORS SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE AT INTERVALS OF NO MORE THAN FIVE (5) FEET.
- K. ALL WIRING CONDUCTORS SHALL BE TAGGED AT ALL JUNCTION POINTS AND SHALL TEST FREE FROM GROUNDS OR CROSSES BETWEEN CONDUCTORS.
- POWER-LIMITED WIRING CONDUCTORS SHALL NOT BE INSTALLED IN CONDUITS WITH ELECTRIC LIGHT, POWER CLASS 1, NON-POWER-LIMITED FIRE ALARM AND MEDIUM POWER NETWORK-POWERED BROADBAND COMMUNICATIONS CIRCUITS.
- M. FINAL CONNECTIONS BETWEEN EQUIPMENT AND THE WIRING SYSTEM SHALL BE MADE UNDER DIRECT SUPERVISION OF A REPRESENTATIVE OF THE FAEM. IF OTHER PERSONNEL ARE REQUIRED BY THE AHJ TO BE PRESENT DURING FINAL CONNECTIONS, THIS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF PROVIDING A REPRESENTATIVE OF THE FAEM FOR DIRECT SUPERVISION.
- N. FIRE ALARM CABLING SHALL NOT BE PAINTED.
- CONDUITS SHALL ENTER THE CONTROL PANEL ENCLOSURES ONLY IN THE APPROVED LOCATIONS, AS IDENTIFIED IN THE FAEM INSTALLATION INSTRUCTIONS.
- 3.03 EQUIPMENT MOUNTING
- A. COMPLY WITH NFPA 72 FOR INSTALLATION OF FIRE ALARM EQUIPMENT.
- B. THE REMOTE ANNUNCIATOR SHALL BE MOUNTED SO THAT NO SWITCH MANUALLY OPERATED DEVICE, DISPLAY, OR LED IS GREATER THAN SIXTY (60) INCHES ABOVE THE FINISHED FLOOR. THE REMOTE ANNUNCIATOR SHALL BE LOCATED AT THE ENTRANCE DESIGNATED FOR RESPONDING PERSONNEL OR AS OTHERWISE ACCEPTABLE TO THE AHJ.
- MANUAL PULL STATIONS SHALL BE SECURELY MOUNTED WITH THE OPERABLE PART OF THE MANUAL PULL STATION NO GREATER THAN FORTY-EIGHT (48) INCHES ABOVE THE FINISHED FLOOR AND NO LESS THAN FORTY-TWO (42) INCHES ABOVE THE FINISHED FLOOR. PROVIDE SEMI-FLUSH MOUNTED ON STANDARD ELECTRICAL BOXES.
- WALL MOUNTED VISUAL APPLIANCES SHALL BE SURFACE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN EIGHTY (80) INCHES AND NOT GREATER THAN NINETY-SIX (96) INCHES ABOVE THE FINISHED FLOOR OR AT THE MOUNTING HEIGHT SPECIFIED USING THE PERFORMANCE-BASED ALTERNATIVE. WHERE LOW CEILING HEIGHTS DO NOT PERMIT WALL MOUNTING AT A MINIMUM OF EIGHTY (80) INCHES, WALL MOUNTED APPLIANCES SHALL BE MOUNTED

WITHIN SIX (6) INCHES OF THE CEILING.

- E. ALL INITIATING DEVICES AND ADDRESSABLE MODULES SHALL BE MOUNTED IN A LOCATION ACCESSIBLE FOR TESTING AND MAINTENANCE.
- PROVIDE A LABEL FOR EACH INITIATING DEVICE INDICATING THE SPECIFIC ADDRESS FOR THAT DEVICE. THE LABEL SHALL INCLUDE THE NODE NUMBER. LOOP NUMBER AND DEVICE NUMBER WHERE APPLICABLE. THE LABEL SHALL BE LOCATED ON THE BASE OF ALL DETECTORS AND THE COVER PLATES OF ADDRESSABLE MODULES. HAND WRITTEN LABELS ARE NOT ACCEPTABLE

G. TRANSIENT SUPPRESSION MODULES SHALL BE LOCATED WITHIN AN APPROVED JUNCTION BOX OR CABINET AS INDICATED ON THE ENGINEERING DRAWINGS.

## 3.04 RESTORATION OF SITE

A. WHERE SIDEWALKS, CURBS, AND LAWNS ARE EXCAVATED BY THE FIRE ALARM CONTRACTOR, THESE AREAS SHALL BE BACKFILLED AND REPLACED TO THE ORIGINAL CONDITION AND TO THE SATISFACTION OF THE OWNER, ARCHITECT AND AHJ

### 3.05 PAINTING AND PATCHING

- A. ALL FIRE ALARM CONDUIT SHALL BE THOROUGHLY CLEANED, REMOVING ALL DIRT, OIL, FTC, AND MADE READY TO RECEIVE PAINT.
- B. HOLES IN WALLS OR FLOORS CUT DURING THE PERFORMANCE OF THIS WORK SHALL BE PATCHED OR COVERED WITH STANDARD ESCUTCHEON PLATES SO AS TO COMPLETELY CONCEAL THE CUTS WHERE THEY WOULD OTHERWISE BE EXPOSED TO VIEW.
- C. HOLES IN WALLS AND CEILINGS CREATED BY THE REMOVAL OF FIRE ALARM EQUIPMENT NO LONGER USED SHALL BE PATCHED AND PAINTED TO MATCH THE EXISTING WALLS AND CEILINGS, OR COVERED WITH STANDARD ESCUTCHEON PLATES SO AS TO COMPLETELY CONCEAL THE "HOLES" WHERE THEY WOULD OTHERWISE BE EXPOSED TO VIEW.
- D. ALL PENETRATIONS OF FIRE RATED ASSEMBLIES (WALL OR FLOOR CONSTRUCTION) SHALL BE FIRESTOPPED TO PRESERVE THE ORIGINAL FIRE RESISTANCE AND SMOKETIGHT INTEGRITY OF THE ASSEMBLY. ALL FIRESTOPPING METHODS SHALL BE UL LISTED THROUGH PENETRATION FIRESTOP SYSTEMS OR OTHERWISE APPROVED BY THE OWNER, ARCHITECT ENGINEER, AND AHJ. SPECIFIC FIRESTOP ASSEMBLY SHALL BE IDENTIFIED AT THE PENETRATION LOCATION WITH A STICKER OR OTHER APPROVED IDENTIFICATION MEANS.

### 3.06 SYSTEM TESTS

- A. ALL TEST AND INSPECTIONS SPECIFIED IN THIS SECTION SHALL BE REPORTED IN WRITING AND SUBMITTED IN ACCORDANCE WITH THIS SPECIFICATION SECTION.
- B. THE SYSTEM SHALL MEET ALL THE REQUIREMENTS OF THE LISTED APPLICABLE CODES AND THE REQUIREMENTS OF THE AHJ. THE SYSTEM TESTS AND TEST DOCUMENTS, INCLUDING THOSE REQUIRED FOR AND BY THE APPROVED REMOTE MONITORING STATION, SHALL MEET THE REQUIREMENTS OF THE AHJ.
- C. PROVIDE ONE HUNDRED (100) PERCENT INITIAL ACCEPTANCE TESTING OF THE ENTIRE FIRE ALARM SYSTEM PRIOR TO THE REQUIRED AHJ ACCEPTANCE TESTING. BEFORE REQUESTING THE AHJ ACCEPTANCE TESTING, FURNISH A WRITTEN STATEMENT TO THE OWNER'S REPRESENTATIVE INDICATING THAT THE SYSTEM HAS BEEN INSTALLED IN ACCORDANCE WITH THE APPROVED DOCUMENTS AND TESTED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND THE APPLICABLE NFPA REQUIREMENTS. THE RECORD OF COMPLETION SHALL BE COMPLETED AND SUBMITTED AS PART OF THE WRITTEN STATEMENT.
- D. ALL TESTING, INSPECTION AND RETESTING REQUIRED FOR CERTIFICATION AND REQUIRED FOR ALL WARRANTY WORK OR REPLACEMENTS SHALL MEET THE REQUIREMENTS OF THE AHJ. THIS CERTIFICATION, INSPECTION, OR TESTING SHALL BE COMPLETED AT NO ADDITIONAL COST TO THE OWNER.
- E. PROVIDE THE TESTING DATE IN WRITING TO THE OWNER A MINIMUM OF TWO (2) WEEKS BEFORE THE DATE. THE OWNER MAY ELECT TO HAVE A REPRESENTATIVE PRESENT FOR TESTING.
- F. THE FIRE ALARM SYSTEM WILL NOT BE ACCEPTABLE UNTIL FINAL TESTING AND RECEIPT OF THE TESTING CERTIFICATES HAVE BEEN OBTAINED.
- G. A PROPOSAL TO PERFORM ANNUAL TESTING AND/OR INSPECTION SERVICES SHALL BE SUBMITTED TO THE OWNER A MINIMUM OF THREE (3) WEEKS BEFORE THE DATE OF INITIAL ACCEPTANCE TESTING. THE PROPOSAL SHALL INCLUDE ALL TESTING AND/OR INSPECTION SERVICES REQUIRED BY THE AHJ FOR THE TWO (2) YEAR PERIOD BEGINNING AT FINAL ACCEPTANCE OF THE SYSTEM. THE OWNER HAS THE OPTION TO ACCEPT OR REJECT THE PROPOSAL.

END OF SECTION

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SHOP DRAWING SUBMITTAL NOTES

THE ENGINEERING DRAWINGS WERE PREPARED USING AUTOCAD AND WILL BE MADE AVAILABLE TO THE FIRE ALARM CONTRACTOR IN ELECTRONIC (.DWG) FORMAT. THE ENGINEERING DRAWINGS WERE PREPARED FOR BIDDING PURPOSES ONLY.

THE AWARDED FIRE ALARM CONTRACTOR SHALL BE RESPONSIBLE FOR PRODUCING SHOP DRAWINGS FOR THE FIRE ALARM SYSTEM IN ACCORDANCE WITH THE SECTION 907.1.2 OF THE 2016 CALFIORNIA FIRE CODE.

SHOP DRAWINGS FOR THE FIRE ALARM SYSTEM SHALL BE SUBMITTED TO THE AUTHORITY HAVING JURISDICTION (AHJ) FOR REVIEW AND APPROVAL PRIOR TO SYSTEM INSTALLATION. WHERE INSTALLATION CHANGES FROM THE APPROVED SHOP DRAWINGS, CORRECTED SHOP DRAWINGS SHOWING THE SYSTEM AS ACTUALLY INSTALLED SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO INSPECTION.

2043 WOODLAND PKWY, SUITE 300 ST. LOUIS. MISSOURI 63146-4235 314-991-2633 www.codeconsultants.com

FIRE PROTECTION **ENGINEER OF RECORD:** JACOB P. HEMKE, PE LICENSE NO. FP1686 CODE CONSULTANTS, INC.

2043 WOODLAND PKWY, SUITE 300 ST. LOUIS, MO 63146-4235 PHONE: 314-991-2633 CORPORATE CERTIFICATE OF AUTHORITY NO. C3221171

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