COMPTON UNIFIED SCHOOL DISTRICT

BUSINESS AND ADMINISTRATIVE SERVICES DIVISION PURCHASING AND CONTRACTS DEPARTMENT

ADDENDUM No. 4

FA & Comm. Systems- Multisite:

1.Fire Alarm & Emergency Voice Communication (EVAC), (9) District Sites

2. Mass Communication, Public Address & VoIP Systems, (9) District Sites

CORRECTION TO PA SYSTEM DRAWINGS SHEET E3.1

DATE ISSUED:	November 6, 2026
DATE EFFECTIVE:	November 6, 2026
BID NO.:	**RFP #27-003**

CONTACT: Kimberly Davilla, Director of Purchasing for CUSD. (310) 639-4321, Ext. 55051; kdavila@compton.k12.ca.us

INTENT:

To correct a discrepancy between construction drawings and written specifications of Division 27 of the project specifications, The clarification listed in this addendum shall be considered part of the RFP document for the referenced project.

For Bidders comply with **Compton USD RFQ No. 27-003:**

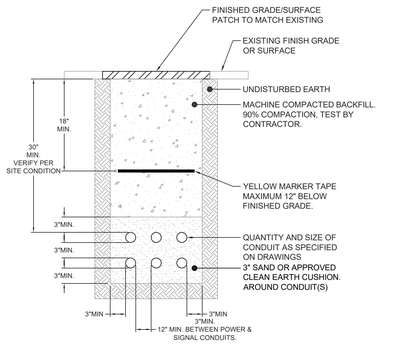
I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans, and/or specifications, etc.

Refer to Drawings and specifications provided for the PA System, Sheet Reference E 3.1 Detail 1- Atlas IED System Block Diagram.

for PoE Switches shall be read:

PoE+ SWITCHES: ” PROVIDED AND PROGRAMMED BY THE CONTRACTOR, IP END POINTS SHALL USE IEEE 802.3 STANDARD PoE IMPLEMENTATION SO THAT THEY CAN BE USED WITH ANY IEEE 802.3AT (POE+ SWITCHES (30W/PORT) “.

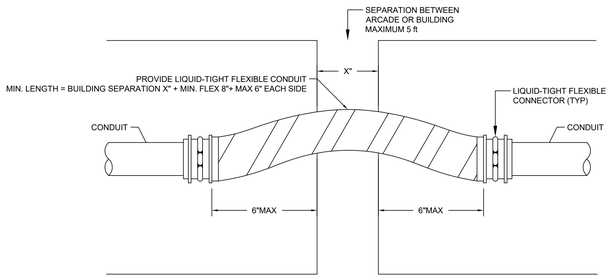
This addendum is applicable to all sites: Carver ES, Chester Adult Center, Enterprise MS, Jefferson ES, Martin Luther King ES, McKinnley Es, Robert F Kennedy ES, Ronald E McNair ES.



NOTES:
1. SAW CUT AND PATCH (E) CONCRETE/ASPHALT TO MATCH ADJACENT SURFACES.
2. ALL UNDERGROUND CONDUITS SHALL BE PVC SCH40 WITH GRC RISER.

UNDERGROUND CONDUIT DUCT BANK DETAIL

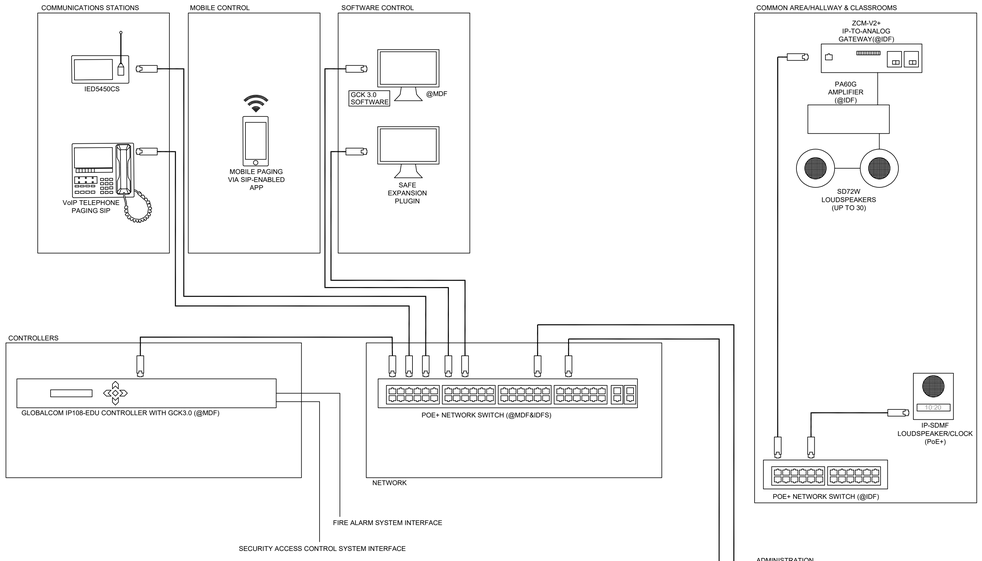
SCALE N.T.S. | 2



CONDUIT CONNECTION AT BUILDING OR ARCADE SEPARATION
PLAN VIEW. PROVIDE GROUND WIRE WITHIN FLEXIBLE CONDUIT.
(PORTABLE BUILDING ONLY)

CONDUIT CONNECTION AT BUILDING OR ARCADE SEPARATION

SCALE N.T.S. | 3



ATLAS IED GLOBAL COMP IP PA SYSTEM COMPONENTS & CABLING REQUIREMENTS:

PART NUMBER	EQUIPMENT DESCRIPTION
PoE+ SWITCHES:	PROVIDED AND PROGRAMMED BY CONTRACTOR. IP ENDPOINTS SHALL USE IEEE 802.3 STANDARD POE IMPLEMENTATION SO THAT THEY CAN BE USED WITH ANY IEEE 802.3AT (POE+) 10GB MANAGED POE + SWITCHES (30W/PORT).
IP108 - EDU	GLOBAL COM IP CONTROLLER (CAT 6 (GREEN COLOR) CABLING TO PoE+ SWITCH AT IDF/MDF). USE IED 1112PS RACK MOUNTED POWER SUPPLY 12VDC (CONNECT TO RACK PDU). SOFTWARE TO BE INSTALLED AT ADMINISTRATIVE COMPUTER WITH GCK & ALL OTHER SOFTWARE APPLICATIONS SUPPORTED BY ATLAS IED SYSTEM
SAFE SERVER SOFTWARE CONTROL	EDU SOFTWARE, SAFE SERVER EXPANSION PLUG IN - FOR EMERGENCY ACKNOWLEDGEMENT APPLICATION, SAFE DESKTOP – COMPUTER POP UP EMERGENCY/INSTANT MESSAGE. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
VOIP TELEPHONE INTERFACE	SIP INTERFACE AND IED 5450CS & MOBILE PAGING VIA MOBILE PAGING SIP ENABLED APP. LOCATED ALONG WITH CONTROLLER AT MDF.
FOR DISTRICT SELECTED VOIP	SYSTEM ENABLED APP. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
IPCSDTOUCH-G	GLOBALCOM IP SERIES PROGRAMMABLE TOUCH SCREEN DIGITAL COMMUNICATION STATION (CAT 6+ CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
SUPERVISED FIRE ALARM INTERFACE	FIRE ALARM TAKES PRIORITY, INTERFACE WITH IP-108 & FACP WITH CONTACT CLOSURE CONNECTION. ONCE FA RELAY EITHER OPENS OR CLOSE THE CONTACT – CLOSURE INPUT PORT SHALL LAUNCH AN EVENT BASED TO MUTE ALL MESSAGES & FIRE ALARM SYSTEM SHALL TAKE PRIORITY.
IP-SDMF	CLASSROOM WALL MOUNTED, PoE + INDOOR IP END POINT WITH SPEAKER, LCD CLOCK, INTEGRATED TALK BACK MICROPHONE AND LED FLASHER (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
SD72W	INDOOR CEINING PRE ASSEMBLED 8" ANALOG EXTENSION LOUD SPEAKER & BAFFLE, FOR USE WITH IXP END POINTS, IP 8 OHM EXTENSION SPEAKERS WHEN CONNECTED TO ATLAS IED IPX END POINT WHEN USED AT LARGER ROOMS WITH SURFACE MOUNT SLANTED ENCLOUSRE FOR IP-8
IP – HVP	HIGH OUTPUT OUTDOOR HORN SPEAKER WITH IP - SEST - HPV - SURFACE MOUNT STRAIGHT ENCLOSURE FOR IP - HV SPEAKER, PoE+ VANDAL AND WEATHER RESISTANT WALL MOUNT IP SPEAKER. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF USE INDOOR/OUTDOOR CAT 6 (GREEN COLOR) CABLE WHEN EXPOSED TO WEATHER DAMP,WET LOCATIONS). COLOR CODE CABLE WITH GREEN LIQUID TAPE AT BOTH ENDS.
SD72 W (SPEAKER WITH KIT)	KIT INCLUDING SD72W CS95 – 8 – 81.8R (RECESSED AT CEILING T- BAR/GYP BOARD) - DAISY CHAIN CONNECTED TO IP – ZCM. (MAXIMUM UPTO 30 SPEAKERS). ADJUST TAP WATTAGE AS REQUIRED @ 70.7V TO MAINTAIN AUDIBILITY OF SPACE. USE 14/2 AWG SPEAKER WIRE CONNECTED TO PA 60G AMPLIFIER.
IP -SEST -S	SURFACE MOUNT STRAIGHT ENCLOSURE
IP ZCM 2RMK– V2+ (ZONE CONTROLLER)	PoE+ IP TO ANLOG GATEWAY DUAL OUTPUTE KIT WITH PA702 – RMK RACK MOUNT KIT (LOCATE AT IDF/MDF RACKS, CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
PA 60G	60 W AMPLIFIER.
IP-SEA -SD	SURFACE MOUNT SLANTED ENCLOSURE (IP-SDMF-72)
IP – SEST -HVP	SURFACE MOUNT STRAIGHT ENCLOSURE (IP- HPV)

NOTES:
1. ATHLETICS/GYM/AUDITORIUM HAS EXISTING AUTONOMOUS SYSTEM - INTERFACE IP ZCM V2+ GATEWAY (IP TO ANALOG GATEWAY) WITH ATLAS IED SYSTEM TO MUTE AUTONOMOUS PA DURING CAMPUS WIDE PA ACTIVATES AND ADD ATLAS IED PA SPEAKERS FOR SITE WIDE PA NOTIIFICATION.
2. ALL INSTALLATION, CABLING, PROGRAMMING, TESTING SHALL COMPLY WITH MANUFACTURER'S RECOMMENDATION SHALL BE PROVIDED BY CONTRACTOR. CONTRACTOR SHALL COORDINATE WITH DISTRICT AND PROVIDE COMPLETELY OPERABLE INSTALLATION AND DISTRICT TRAINING.
3. ALL ATLAS IED CAT 6 CABLES SHALL BE BELDEN WITH GREEN COLOR JACKET & JACKS.

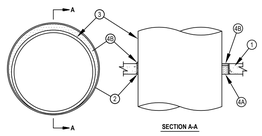
ATLAS IED SYSTEM BLOCK DIAGRAM

SCALE N.T.S. | 1

CLASSIFIED C UL US
Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

System No. C-AJ-1155

ANSI/UL1479 (ASTM E814)
F Rating — 2 and 3 Hr (See Item 3)
T Rating —0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft
L Rating At 400 F — 4 CFM/sq ft
W Rating — Class 1 (See Item 4)



1. FLOOR OR WALL ASSEMBLY — MIN 4-1/2" THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M3) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX Ø OF OPENING IS 32".
2. SEE CONCRETE BLOCKS (CAZT) CATEGORY IN FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
3. METALLIC SLEEVE (OPTIONAL) — NOM 32" Ø (OR SMALLER) SCHEDULE 40 (OR HEAVIER) STEEL PIPE CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY, FLUSH WITH FLOOR OR WALL ASSEMBLY.
4. THROUGH PENETRANTS — ONE METALLIC PIPE OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. PIPE OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE ANNULAR SPACE SHALL BE MIN 0" (POINT CONTACT) TO MAX 12". WHEN MAXIMUM ANNULAR SPACE EXCEEDS 2-1/4" THE F RATING IS 2 HR. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR TUBING MAY BE USED:
   A. STEEL PIPE — NOM 20" Ø (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE — NOM 20" Ø (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT — NOM 4" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" Ø (OR SMALLER) STEEL CONDUIT.
   D. COPPER TUBING — NOM 6" Ø (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE — NOM 6" Ø (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
5. FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
   A. PACKING MATERIAL — MIN 4" THICKNESS OF MIN 4 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP END OF SLEEVE FOR FLOORS OR FROM BOTH ENDS OF SLEEVE FOR WALLS TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
   B. FILL, VOID OR CAVITY MATERIAL* — SEALANT — MIN 1/2" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH THE TOP END OF THE SLEEVE FOR FLOORS, OR WITH BOTH ENDS OF THE SLEEVE FOR WALLS. MIN 1/2" THICK BEAD OF ALL MATERIAL TO BE INSTALLED AROUND PIPE AT INTERFACE OF SLEEVE FOR POINT CONTACT INSTALLATIONS. W RATING APPLIES ONLY WHEN FS-ONE MAX INTUMESCENT SEALANT IS USED. FOR THE W RATING, MAX ANNULAR SPACE IS 1-7/8" AND AN ADDITIONAL FILM OF SEALANT SHALL BE APPLIED OVER THE SLEEVE (WHEN USED) LAPPING AT LEAST 1/2" ONTO TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT

*INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

X-RAY ALL MASONRY/CONCRETE WALL/CEILING PENETRATIONS PRIOR TO WORK. USE SLEEVES OR CORE DRILLING FOR PENETRATIONS (LOCATIONS TO BE DETERMINED BASED ON STRUCTURAL CONDITIONS, EXISTING OBSTRUCTIONS, AND FIELD CONDITIONS, AND COORDINATED WITH THE DISTRICT). NO CONDUITS THROUGH STRUCTURAL SLABS.

HOLES IN WALL AND FLOOR SHALL BE DONE BY CORE DRILLING ONLY. DO NOT DAMAGE REINFORCING STEEL BAR IN WALL. LOCATE BY NON-DESTRUCTIVE MEANS PRIOR TO CORING.

ALL WALL AND FLOOR PENETRATIONS MADE UNDER THIS PROJECT SHALL BE SEALED PER THE APPLICABLE DETAIL WHETHER THE WALL OR FLOOR IS KNOWN TO BE FIRE RATED OR NOT

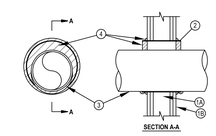
CONCRETE/MASONRY WALL/FLOOR PENETRATION DETAIL

SCALE N.T.S. | 4

CLASSIFIED C UL US
Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

System No. W-L-1465

ANSI/UL1479 (ASTM E814)
F Rating — 1 or 2 Hr (See Item 1)
T Rating — 0 and 1/4 Hr (See Item 1)
L Rating At Ambient — Less Than 1 CFM/Sq Ft
L Rating At 400 F — Less Than 1 CFM/Sq Ft

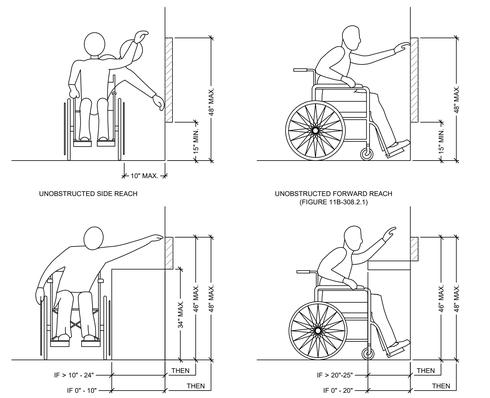


1. WALL ASSEMBLY — THE 1 OR 2 HR FIRE RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300, U400, V400 OR W400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS — WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4" LUMBER SPACED MAX 16" OC. STEEL STUDS TO BE MIN 3-1/2" WIDE AND SPACED MAX 24" OC.
   B. GYPSUM BOARD* — THICKNESS, TYPE, NUMBER OF LAYERS AND ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX Ø OF OPENING IS 10" THE HOURLY F, FH RATINGS OF THE FIRESTOP SYSTEM ARE EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED. THE T, FT, FTH RATINGS ARE 0 AND 1/4 HR FOR 1 AND 2 HR RATED WALL ASSEMBLIES, RESPECTIVELY.
2. STEEL SLEEVE — CYLINDRICAL SLEEVE FABRICATED FROM MIN 0.016" THICK GALV SHEET STEEL AND HAVING A MIN 1" LAP ALONG THE LONGITUDINAL SEAM. SLEEVE INSTALLED BY COILING THE SHEET STEEL TO A Ø SMALLER THAN THE THROUGH OPENING, INSERTING THE COIL THROUGH THE OPENINGS AND RELEASING THE COIL TO LET IT UNCOIL AGAINST THE CIRCULAR CUTOUTS IN THE GYPSUM BOARD LAYERS. THE ENDS OF THE STEEL SLEEVE SHALL BE FLUSH WITH OR EXTEND MAX 1" BEYOND EACH SURFACE OF THE WALL.
3. THROUGH PENETRANTS — ONE METALLIC PIPE, CONDUIT OR TUBING INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN PIPE, CONDUIT OR TUBING AND PERIPHERY OF SLEEVE SHALL BE MIN 0" (POINT CONTACT) TO MAX 1-7/8". PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
   A. STEEL PIPE — NOM 8" Ø (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE — NOM 8" Ø (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT — NOM 4" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" STEEL CONDUIT.
   D. COPPER TUBING — NOM 4" Ø (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE — NOM 4" Ø (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
4. CONFIGURATION A
   FILL, VOID OR CAVITY MATERIAL* — SEALANT — MIN 1" THICKNESS OF SEALANT APPLIED WITHIN ANNULUS, FLUSH WITH BOTH ENDS OF SLEEVE. A MIN 1/4" Ø BEAD OF SEALANT TO BE APPLIED AT THE TUBING/SLEEVE INTERFACE AT THE POINT CONTACT LOCATION AND AROUND THE ENTIRE PERIMETER OF THE SLEEVE AT THE SLEEVE/GYPSUM BOARD INTERFACE WHEN THE SLEEVE EXTENDS BEYOND THE WALL SURFACE.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 SEALANT, FS ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT.
5. CONFIGURATION B
   FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING ITEMS:
   A. PACKING MATERIAL — MIN 5/8" THICKNESS OF MIN 4 PCF MINERAL WOOL BAT INSULATION COMPRESSED AND TIGHTLY AND PACKED IN TO EACH END OF THE SLEEVE. PACKING MATERIAL IS TO BE RECESSED FROM EACH END OF THE SLEEVE TO ACCOMMODATE FILL MATERIAL.
   A1. PACKING MATERIAL* - STRIPS — (AS AN ALTERNATE TO CONFIG. B ITEM 4A) - NOM 5/8" WIDE PRECUT MINERAL WOOL STRIPS. THE STRIPS ARE FIRMLY PACKED INTO THE GAP BETWEEN THE SLEEVE AND THE PERIPHERY OF THE OPENING. PACKING MATERIAL IS TO BE RECESSED FROM EACH END OF THE SLEEVE TO ACCOMMODATE FILL MATERIAL.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 767 SPEED STRIPS.
   B. FILL, VOID OR CAVITY MATERIAL* — SEALANT — MIN 1/2" THICKNESS OF SEALANT APPLIED WITHIN ANNULUS, FLUSH WITH BOTH ENDS OF SLEEVE. A MIN 1/4" Ø BEAD OF SEALANT TO BE APPLIED AT THE TUBING/SLEEVE INTERFACE AT THE POINT CONTACT LOCATION AND AROUND THE ENTIRE PERIMETER OF THE SLEEVE AT THE SLEEVE/GYPSUM BOARD INTERFACE WHEN THE SLEEVE EXTENDS BEYOND THE WALL SURFACE.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 SEALANT OR FS ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT.
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ALL WALL AND FLOOR PENETRATIONS MADE UNDER THIS PROJECT SHALL BE SEALED PER THE APPLICABLE DETAIL WHETHER THE WALL OR FLOOR IS KNOWN TO BE FIRE RATED OR NOT

GYPSUM WALL PENNETRATION DETAIL

SCALE N.T.S. | 5



NOTE:
1. CBC2022, 11B-308.1.1 ELECTRICAL SWITCHES: CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF A ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES OR COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL COMPLY WITH SECTION 11B-308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.
2. CBC2022, 11B-308.1.2 ELECTRICAL RECEPTACLE OUTLETS: ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL COMPLY WITH SECTION 11B-308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.
3. CBC2022, 11B-309.4 OPERATION: OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM.
4. OPERABLE PARTS CANNOT BE LOCATED WHERE A PERSON USING A WHEELCHAIR WOULD BE FORCED TO REACH OVER AN OBSTRUCTION.
5. FIRE ALARM INITIATING DEVICE MUST BE LOCATED ON PATH OF TRAVEL.
6. PROVIDE FRONT AND PARALLEL APPROACH AT NEWLY INSTALLED FIRE ALARM INITIATING DEVICE.

MOUNTING HEIGHT OVER OBSTRUCTION

SCALE N.T.S. | 6

REV	DATE	DESCRIPTION
	12/10/2025	BID SET
	11/06/2026	ADDENDUM # 4

multi-discipline collaborative
MDC engineers,INC
Consulting Engineers
5101 E La Palma Ave., Suite 205
Anaheim Hills, CA 92807-2056
Tel: (213) 745-2644
Fax: (213) 745-6483

STAMP
LICENSED PROFESSIONAL ENGINEER
SUMEETH SUMEETHARAN
No.E 19325
Exp.12/31/27
ELECTRICAL
STATE OF CALIFORNIA

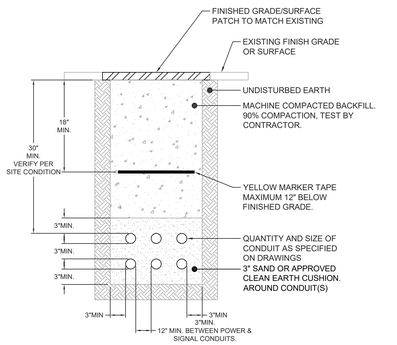
PUBLIC ADDRESS SYSTEM
CARVER ELEMENTARY SCHOOL
1425 E 120TH ST,
LOS ANGELES, CA 90059

COMPTON UNIFIED SCHOOL DISTRICT
501 S SANTA FE AVE,
COMPTON, CA 90221

ELECTRICAL DETAILS

PROJECT	2025-008
DRAWN	RUNGSUB SU
CHECKED	BA SATYA
SHEET	E3.1

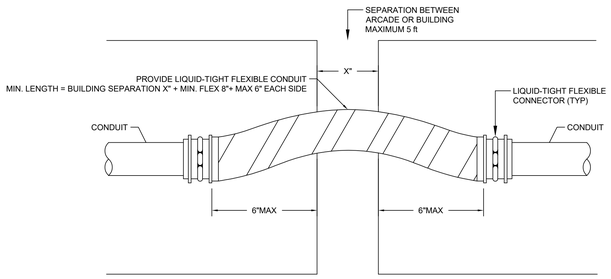
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2. ALL UNDERGROUND CONDUITS SHALL BE PVC SCH40 WITH GRC RISER.

UNDERGROUND CONDUIT DUCT BANK DETAIL

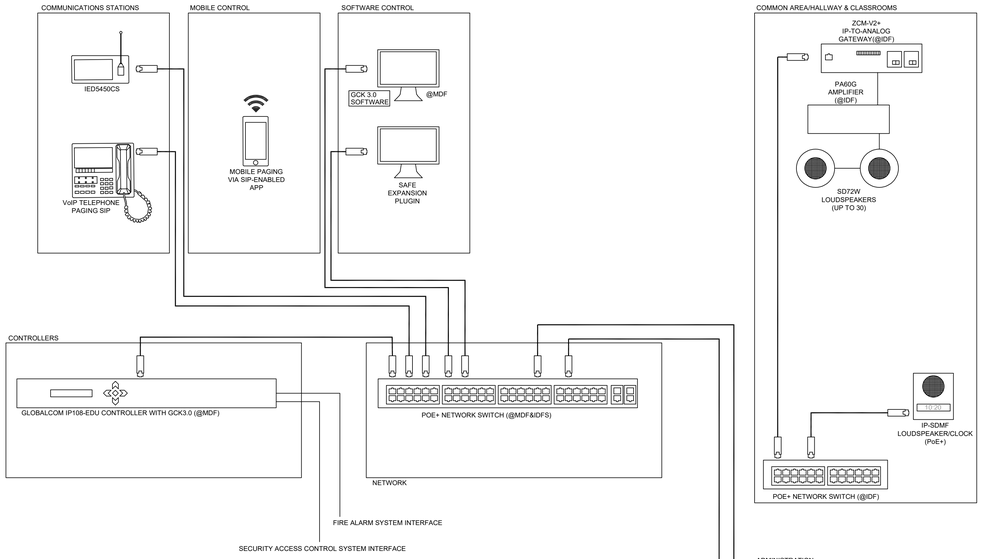
SCALE N.T.S. | 2



CONDUIT CONNECTION AT BUILDING OR ARCADE SEPARATION PLAN VIEW. PROVIDE GROUND WIRE WITHIN FLEXIBLE CONDUIT. (PORTABLE BUILDING ONLY)

CONDUIT CONNECTION AT BUILDING OR ARCADE SEPARATION

SCALE N.T.S. | 3



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IP-SDMF	CLASSROOM WALL MOUNTED, PoE + INDOOR IP END POINT WITH SPEAKER, LCD CLOCK, INTEGRATED TALK BACK MICROPHONE AND LED FLASHER (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
SD72W	INDOOR CEINING PRE ASSEMBLED 8" ANALOG EXTENSION LOUD SPEAKER & BAFFLE, FOR USE WITH IXP END POINTS, IP 8 OHM EXTENSION SPEAKERS WHEN CONNECTED TO ATLAS IED IPX END POINT WHEN USED AT LARGER ROOMS WITH SURFACE MOUNT SLANTED ENCLOUSRE FOR IP-8
IP – HVP	HIGH OUTPUT OUTDOOR HORN SPEAKER WITH IP - SEST - HPV - SURFACE MOUNT STRAIGHT ENCLOSURE FOR IP - HV SPEAKER, PoE+ VANDAL AND WEATHER RESISTANT WALL MOUNT IP SPEAKER. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF USE INDOOR/OUTDOOR CAT 6 (GREEN COLOR) CABLE WHEN EXPOSED TO WEATHER DAMP;WET LOCATIONS). COLOR CODE CABLE WITH GREEN LIQUID TAPE AT BOTH ENDS.
SD72 W (SPEAKER WITH KIT)	KIT INCLUDING SD72W CS95 – 8 – 81 8R (RECESSED AT CEILING T- BAR/GYP BOARD) - DAISY CHAIN CONNECTED TO IP – ZCM. (MAXIMUM UPTO 30 SPEAKERS). ADJUST TAP WATTAGE AS REQUIRED @ 70.7V TO MAINTAIN AUDIBILITY OF SPACE. USE 14/2 AWG SPEAKER WIRE CONNECTED TO PA 60G AMPLIFIER.
IP -SEST -S	SURFACE MOUNT STRAIGHT ENCLOSURE
IP ZCM 2RMK– V2+ (ZONE CONTROLLER)	PoE+ IP TO ANLOG GATEWAY DUAL OUTPUTE KIT WITH PA702 – RMK RACK MOUNT KIT (LOCATE AT IDF/MDF RACKS, CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
PA 60G	60 W AMPLIFIER.
IP-SEA -SD	SURFACE MOUNT SLANTED ENCLOSURE (IP-SDMF-72)
IP – SEST -HVP	SURFACE MOUNT STRAIGHT ENCLOSURE (IP- HPV)

NOTES:
1. ATHLETICS/GYM/AUDITORIUM HAS EXISTING AUTONOMOUS SYSTEM - INTERFACE IP ZCM V2+ GATEWAY (IP TO ANALOG GATEWAY) WITH ATLAS IED SYSTEM TO MUTE AUTONOMOUS PA DURING CAMPUS WIDE PA ACTIVATES AND ADD ATLAS IED PA SPEAKERS FOR SITE WIDE PA NOTIIFICATION.
2. ALL INSTALLATION, CABLING, PROGRAMMING, TESTING SHALL COMPLY WITH MANUFACTURER'S RECOMMENDATION SHALL BE PROVIDED BY CONTRACTOR. CONTRACTOR SHALL COORDINATE WITH DISTRICT AND PROVIDE COMPLETELY OPERABLE INSTALLATION AND DISTRICT TRAINING.
3. ALL ATLAS IED CAT 6 CABLES SHALL BE BELDEN WITH GREEN COLOR JACKET & JACKS.

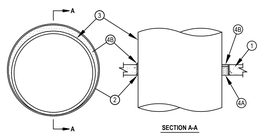
ATLAS IED SYSTEM BLOCK DIAGRAM

SCALE N.T.S. | 1

System No. C-AJ-1155

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

ANSI/UL1479 (ASTM E814)
F Rating — 2 and 3 Hr (See Item 3)
T Rating —0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft
L Rating At 400 F — 4 CFM/sq ft
W Rating — Class 1 (See Item 4)



1. FLOOR OR WALL ASSEMBLY — MIN 4-1/2" THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M3) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX Ø OF OPENING IS 32".
2. SEE CONCRETE BLOCKS (CAZT) CATEGORY IN FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
3. METALLIC SLEEVE (OPTIONAL) — NOM 32" Ø (OR SMALLER) SCHEDULE 40 (OR HEAVIER) STEEL PIPE CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY, FLUSH WITH FLOOR OR WALL ASSEMBLY.
4. THROUGH PENETRANTS — ONE METALLIC PIPE OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. PIPE OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE ANNULAR SPACE SHALL BE MIN 0" (POINT CONTACT) TO MAX 12". WHEN MAXIMUM ANNULAR SPACE EXCEEDS 2-1/4" THE F RATING IS 2 HR. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR TUBING MAY BE USED:
   A. STEEL PIPE — NOM 20" Ø (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE — NOM 20" Ø (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT — NOM 4" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" Ø (OR SMALLER) STEEL CONDUIT.
   D. COPPER TUBING — NOM 6" Ø (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE — NOM 4" Ø (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
5. FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
   A. PACKING MATERIAL — MIN 4" THICKNESS OF MIN 4 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP END OF SLEEVE FOR FLOORS OR FROM BOTH ENDS OF SLEEVE FOR WALLS TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
   B. FILL, VOID OR CAVITY MATERIAL* — SEALANT — MIN 1/2" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH THE TOP END OF THE SLEEVE FOR FLOORS, OR WITH BOTH ENDS OF THE SLEEVE FOR WALLS. MIN 1/2" THICK BEAD OF ALL MATERIAL TO BE INSTALLED AROUND PIPE AT INTERFACE OF SLEEVE FOR POINT CONTACT INSTALLATIONS. W RATING APPLIES ONLY WHEN FS-ONE MAX INTUMESCENT SEALANT IS USED. FOR THE W RATING, MAX ANNULAR SPACE IS 1-7/8" AND AN ADDITIONAL FILM OF SEALANT SHALL BE APPLIED OVER THE SLEEVE (WHEN USED) LAPPING AT LEAST 1/2" ONTO TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT

*INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

X-RAY ALL MASONRY/CONCRETE WALL/CEILING PENETRATIONS PRIOR TO WORK. USE SLEEVES OR CORE DRILLING FOR PENETRATIONS (LOCATIONS TO BE DETERMINED BASED ON STRUCTURAL CONDITIONS, EXISTING OBSTRUCTIONS, AND FIELD CONDITIONS, AND COORDINATED WITH THE DISTRICT). NO CONDUITS THROUGH STRUCTURAL SLABS.

HOLES IN WALL AND FLOOR SHALL BE DONE BY CORE DRILLING ONLY. DO NOT DAMAGE REINFORCING STEEL BAR IN WALL. LOCATE BY NON-DESTRUCTIVE MEANS PRIOR TO CORING.

ALL WALL AND FLOOR PENETRATIONS MADE UNDER THIS PROJECT SHALL BE SEALED PER THE APPLICABLE DETAIL WHETHER THE WALL OR FLOOR IS KNOWN TO BE FIRE RATED OR NOT

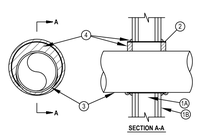
CONCRETE/MASONRY WALL/FLOOR PENETRATION DETAIL

SCALE N.T.S. | 4

System No. W-L-1465

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

ANSI/UL1479 (ASTM E814)
F Rating — 1 or 2 Hr (See Item 1)
T Rating — 0 and 1/4 Hr (See Item 1)
L Rating At Ambient — Less Than 1 CFM/Sq Ft
L Rating At 400 F — Less Than 1 CFM/Sq Ft

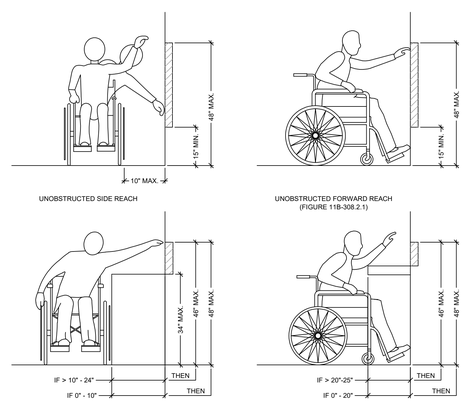


1. WALL ASSEMBLY — THE 1 OR 2 HR FIRE RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300, U400, V400 OR W400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS — WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4" LUMBER SPACED MAX 16" OC. STEEL STUDS TO BE MIN 3-1/2" WIDE AND SPACED MAX 24" OC.
   B. GYPSUM BOARD* — THICKNESS, TYPE, NUMBER OF LAYERS AND ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX Ø OF OPENING IS 10" THE HOURLY F, FH RATINGS OF THE FIRESTOP SYSTEM ARE EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED. THE T, FT, FTH RATINGS ARE 0 AND 1/4 HR FOR 1 AND 2 HR RATED WALLS, RESPECTIVELY.
2. STEEL SLEEVE (OPTIONAL) — SLEEVE FABRICATED FROM MIN 0.016" THICK GALV SHEET STEEL AND HAVING A MIN 1" LAP ALONG THE LONGITUDINAL SEAM. SLEEVE INSTALLED BY COILING THE SHEET STEEL TO A Ø SMALLER THAN THE THROUGH OPENING, INSERTING THE COIL THROUGH THE OPENINGS AND RELEASING THE COIL TO LET IT UNCOIL AGAINST THE CIRCULAR CUTOUTS IN THE GYPSUM BOARD LAYERS. THE ENDS OF THE STEEL SLEEVE SHALL BE FLUSH WITH OR EXTEND MAX 1" BEYOND EACH SURFACE OF THE WALL.
3. THROUGH PENETRANTS — ONE METALLIC PIPE, CONDUIT OR TUBING INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN PIPE, CONDUIT OR TUBING AND PERIPHERY OF SLEEVE SHALL BE MIN 0" (POINT CONTACT) TO MAX 1-7/8". PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
   A. STEEL PIPE — NOM 8" Ø (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE — NOM 8" Ø (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT — NOM 4" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" Ø (OR SMALLER) STEEL CONDUIT.
   D. COPPER TUBING — NOM 4" Ø (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE — NOM 4" Ø (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
4. CONFIGURATION A
   FILL VOID OR CAVITY MATERIAL* — SEALANT — MIN 1" THICKNESS OF SEALANT APPLIED WITHIN ANNULUS, FLUSH WITH BOTH ENDS OF SLEEVE. A MIN 1/4" Ø BEAD OF SEALANT TO BE APPLIED AT THE SLEEVE/GYPSUM BOARD INTERFACE AT THE POINT CONTACT LOCATION AND AROUND THE ENTIRE PERIMETER OF THE SLEEVE AT THE SLEEVE/GYPSUM BOARD INTERFACE WHEN THE SLEEVE EXTENDS BEYOND THE WALL SURFACE.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 SEALANT, FS ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT
5. CONFIGURATION B
   FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING ITEMS:
   A. PACKING MATERIAL — MIN 5/8" THICKNESS OF MIN 4 PCF MINERAL WOOL BAT INSULATION COMPRESSED AND TIGHTLY AND PACKED IN TO EACH END OF THE SLEEVE. PACKING MATERIAL IS TO BE RECESSED FROM EACH END OF THE SLEEVE TO ACCOMMODATE FILL MATERIAL.
   A1. PACKING MATERIAL* - STRIPS — (AS AN ALTERNATE TO CONFIG .B ITEM 4A) - NOM 5/8" WIDE PRECUT MINERAL WOOL STRIPS. THE STRIPS ARE FIRMLY PACKED INTO THE GAP BETWEEN PENETRANT AND THE STEEL SLEEVE ITEM 2 ON BOTH SIDES OF THE WALL. PACKING MATERIAL IS TO BE RECESSED FROM EACH END OF THE SLEEVE TO ACCOMMODATE FILL MATERIAL.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 767 SPEED STRIPS
   B. FILL VOID OR CAVITY MATERIAL* — SEALANT — MIN 1/2" THICKNESS OF SEALANT APPLIED WITHIN ANNULUS, FLUSH WITH BOTH ENDS OF SLEEVE. A MIN 1/4" Ø BEAD OF SEALANT TO BE APPLIED AT THE TUBING/SLEEVE INTERFACE AT THE POINT CONTACT LOCATION AND AROUND THE ENTIRE PERIMETER OF THE SLEEVE AT THE SLEEVE/GYPSUM BOARD INTERFACE WHEN THE SLEEVE EXTENDS BEYOND THE WALL SURFACE.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 SEALANT OR FS ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT
   * INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

ALL WALL AND FLOOR PENETRATIONS MADE UNDER THIS PROJECT SHALL BE SEALED PER THE APPLICABLE DETAIL WHETHER THE WALL OR FLOOR IS KNOWN TO BE FIRE RATED OR NOT

GYPSUM WALL PENNETRATION DETAIL

SCALE N.T.S. | 5



NOTE:
1. CBC2022, 11B-308.1.1 ELECTRICAL SWITCHES: CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF A ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES OR COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL COMPLY WITH SECTION 11B-308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.
2. CBC2022, 11B-308.1.2 ELECTRICAL RECEPTACLE OUTLETS: ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL COMPLY WITH SECTION 11B-308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.
3. CBC2022, 11B-309.4 OPERATION: OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM.
4. OPERABLE PARTS CANNOT BE LOCATED WHERE A PERSON USING A WHEELCHAIR WOULD BE FORCED TO REACH OVER AN OBSTRUCTION.
5. FIRE ALARM INITIATING DEVICE MUST BE LOCATED ON PATH OF TRAVEL.
6. PROVIDE FRONT AND PARALLEL APPROACH AT NEWLY INSTALLED FIRE ALARM INITIATING DEVICE.

MOUNTING HEIGHT OVER OBSTRUCTION

SCALE N.T.S. | 6

REV	DATE	DESCRIPTION
	12/10/2025	BID SET
	11/06/2026	ADDENDUM # 4

PUBLIC ADDRESS SYSTEM
CHESTER ADULT CENTER
1104 E. 148TH STREET
COMPTON, CA 90220

COMPTON UNIFIED SCHOOL DISTRICT
501 S SANTA FE AVE,
COMPTON, CA 90221

ELECTRICAL DETAILS

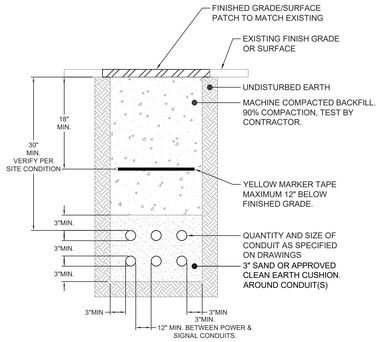
multi-discipline collaborative
MDC engineers,INC
Consulting Engineers
5101 E La Palma Ave., Suite 205
Anaheim Hills, CA 92807-2056
Tel: (213) 746-2644
Fax: (213) 746-6483

STAMP

LICENSED PROFESSIONAL ENGINEER — RUNGSUB SUMETKORN — No.E 19325 Exp.12/31/2026 — ELECTRICAL — STATE OF CALIFORNIA

PROJECT	2025-008
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SHEET	E3.1

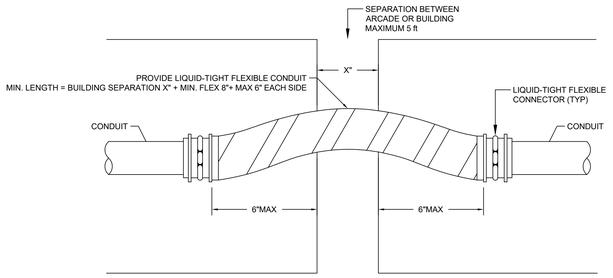
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NOTES:
1. SAW CUT AND PATCH (E) CONCRETE/ASPHALT TO MATCH ADJACENT SURFACES.
2. ALL UNDERGROUND CONDUITS SHALL BE PVC SCH40 WITH GRC RISER.

UNDERGROUND CONDUIT DUCT BANK DETAIL

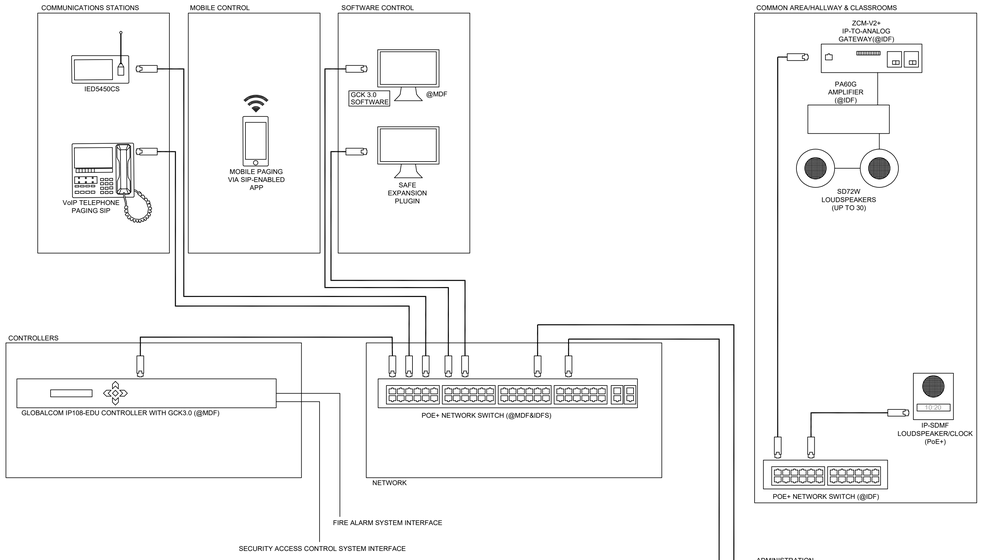
SCALE N.T.S. | 2



CONDUIT CONNECTION AT BUILDING OR ARCADE SEPARATION
PLAN VIEW. PROVIDE GROUND WIRE WITHIN FLEXIBLE CONDUIT.
(PORTABLE BUILDING ONLY)

CONDUIT CONNECTION AT BUILDING OR ARCADE SEPARATION

SCALE N.T.S. | 3



ATLAS IED GLOBAL COMP IP PA SYSTEM COMPONENTS & CABLING REQUIREMENTS:

PART NUMBER	EQUIPMENT DESCRIPTION
PoE+ SWITCHES:	PROVIDED AND PROGRAMMED BY CONTRACTOR. IP ENDPOINTS SHALL USE IEEE 802.3 STANDARD POE IMPLEMENTATION SO THAT THEY CAN BE USED WITH ANY IEEE 802.3AT (POE+) 10GB MANAGED POE + SWITCHES (30W/PORT).
IP108 - EDU	GLOBAL COM IP CONTROLLER (CAT 6 (GREEN COLOR) CABLING TO PoE+ SWITCH AT IDF/MDF). USE IED 1112PS RACK MOUNTED POWER SUPPLY 12VDC (CONNECT TO RACK PDU). SOFTWARE TO BE INSTALLED AT ADMINISTRATIVE COMPUTER WITH GCK & ALL OTHER SOFTWARE APPLICATIONS SUPPORTED BY ATLAS IED SYSTEM
SAFE SERVER SOFTWARE CONTROL	EDU SOFTWARE, SAFE SERVER EXPANSION PLUG IN - FOR EMERGENCY ACKNOWLEDGEMENT APPLICATION, SAFE DESKTOP – COMPUTER POP UP EMERGENCY/INSTANT MESSAGE. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
VOIP TELEPHONE INTERFACE	SIP INTERFACE AND IED 5450CS & MOBILE PAGING VIA MOBILE PAGING SIP ENABLED APP. LOCATED ALONG WITH CONTROLLER AT MDF.
FOR DISTRICT SELECTED VOIP	SYSTEM ENABLED APP. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
IPCSDTOUCH-G	GLOBALCOM IP SERIES PROGRAMMABLE TOUCH SCREEN DIGITAL COMMUNICATION STATION (CAT 6+ CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
SUPERVISED FIRE ALARM INTERFACE	FIRE ALARM TAKES PRIORITY, INTERFACE WITH IP-108 & FACP WITH CONTACT CLOSURE CONNECTION. ONCE FA RELAY EITHER OPENS OR CLOSE THE CONTACT – CLOSURE INPUT PORT SHALL LAUNCH AN EVENT BASED TO MUTE ALL MESSAGES & FIRE ALARM SYSTEM SHALL TAKE PRIORITY.
IP-SDMF	CLASSROOM WALL MOUNTED, PoE + INDOOR IP END POINT WITH SPEAKER, LCD CLOCK, INTEGRATED TALK BACK MICROPHONE AND LED FLASHER (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
SD72W	INDOOR CEINING PRE ASSEMBLED 8" ANALOG EXTENSION LOUD SPEAKER & BAFFLE, FOR USE WITH IXP END POINTS. IP S OHM EXTENSION SPEAKERS WHEN CONNECTED TO ATLAS IED IPX END POINT WHEN USED AT LARGER ROOMS WITH SURFACE MOUNT SLANTED ENCLOUSRE FOR IP-8
IP – HVP	HIGH OUTPUT OUTDOOR HORN SPEAKER WITH IP - SEST - HPV - SURFACE MOUNT STRAIGHT ENCLOSURE FOR IP - HV SPEAKER, PoE+ VANDAL AND WEATHER RESISTANT WALL MOUNT IP SPEAKER. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF USE INDOOR/OUTDOOR CAT 6 (GREEN COLOR) CABLE WHEN EXPOSED TO WEATHER DAMP,WET LOCATIONS). COLOR CODE CABLE WITH GREEN LIQUID TAPE AT BOTH ENDS.
SD72 W (SPEAKER WITH KIT)	KIT INCLUDING SD72W CS95 – 8 – 81 8R (RECESSED AT CEILING T- BAR/GYP BOARD) - DAISY CHAIN CONNECTED TO IP – ZCM. (MAXIMUM UPTO 30 SPEAKERS). ADJUST TAP WATTAGE AS REQUIRED @ 70.7V TO MAINTAIN AUDIBILITY OF SPACE. USE 14/2 AWG SPEAKER WIRE CONNECTED TO PA 60G AMPLIFIER.
IP -SEST -S	SURFACE MOUNT STRAIGHT ENCLOSURE
IP ZCM 2RMK– V2+ (ZONE CONTROLLER)	PoE+ IP TO ANLOG GATEWAY DUAL OUTPUTE KIT WITH PA702 – RMK RACK MOUNT KIT (LOCATE AT IDF/MDF RACKS, CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
PA 60G	60 W AMPLIFIER.
IP-SEA -SD	SURFACE MOUNT SLANTED ENCLOSURE (IP-SDMF-72)
IP – SEST -HVP	SURFACE MOUNT STRAIGHT ENCLOSURE (IP- HPV)

NOTES:
1. ATHLETICS/GYM/AUDITORIUM HAS EXISTING AUTONOMOUS SYSTEM - INTERFACE IP ZCM V2+ GATEWAY (IP TO ANALOG GATEWAY) WITH ATLAS IED SYSTEM TO MUTE AUTONOMOUS PA DURING CAMPUS WIDE PA ACTIVATES AND ADD ATLAS IED PA SPEAKERS FOR SITE WIDE PA NOTIIFICATION.
2. ALL INSTALLATION, CABLING, PROGRAMMING, TESTING SHALL COMPLY WITH MANUFACTURER'S RECOMMENDATION SHALL BE PROVIDED BY CONTRACTOR. CONTRACTOR SHALL COORDINATE WITH DISTRICT AND PROVIDE COMPLETELY OPERABLE INSTALLATION AND DISTRICT TRAINING.
3. ALL ATLAS IED CAT 6 CABLES SHALL BE BELDEN WITH GREEN COLOR JACKET & JACKS.

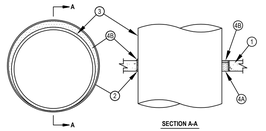
ATLAS IED SYSTEM BLOCK DIAGRAM

SCALE N.T.S. | 1

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

System No. C-AJ-1155

ANSI/UL1479 (ASTM E814)
F Rating — 2 and 3 Hr (See Item 3)
T Rating —0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft
L Rating At 400 F — 4 CFM/sq ft
W Rating — Class 1 (See Item 4)



1. FLOOR OR WALL ASSEMBLY — MIN 4-1/2" THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M3) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX Ø OF OPENING IS 32".
2. SEE CONCRETE BLOCKS (CAZT) CATEGORY IN FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
3. METALLIC SLEEVE (OPTIONAL) — NOM 32" Ø (OR SMALLER) SCHEDULE 40 (OR HEAVIER) STEEL PIPE CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY, FLUSH WITH FLOOR OR WALL ASSEMBLY.
4. THROUGH PENETRANTS — ONE METALLIC PIPE OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. PIPE OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE ANNULAR SPACE SHALL BE MIN 0" (POINT CONTACT) TO MAX 12". WHEN MAXIMUM ANNULAR SPACE EXCEEDS 2-1/4" THE F RATING IS 2 HR. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR TUBING MAY BE USED:
   A. STEEL PIPE — NOM 20" Ø (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE — NOM 20" Ø (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT — NOM 4" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" Ø (OR SMALLER) STEEL CONDUIT.
   D. COPPER TUBING — NOM 6" Ø (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE — NOM 6" Ø (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE
5. FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
   A. PACKING MATERIAL — MIN 4" THICKNESS OF MIN 4 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP END OF SLEEVE FOR FLOORS OR FROM BOTH ENDS OF SLEEVE FOR WALLS TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
   B. FILL, VOID OR CAVITY MATERIAL* — SEALANT — MIN 1/2" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH THE TOP END OF THE SLEEVE FOR FLOORS, OR WITH BOTH ENDS OF THE SLEEVE FOR WALLS. MIN 1/2" THICK BEAD OF ALL MATERIAL TO BE INSTALLED AROUND PIPE AT INTERFACE OF SLEEVE FOR POINT CONTACT INSTALLATIONS. W RATING APPLIES ONLY WHEN FS-ONE MAX INTUMESCENT SEALANT IS USED. FOR THE W RATING, MAX ANNULAR SPACE IS 1-7/8" AND AN ADDITIONAL FILM OF SEALANT SHALL BE APPLIED OVER THE SLEEVE (WHEN USED) LAPPING AT LEAST 1/2" ONTO TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT

*INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

X-RAY ALL MASONRY/CONCRETE WALL/CEILING PENETRATIONS PRIOR TO WORK. USE SLEEVES OR CORE DRILLING FOR PENETRATIONS (LOCATIONS TO BE DETERMINED BASED ON STRUCTURAL CONDITIONS, EXISTING OBSTRUCTIONS, AND FIELD CONDITIONS, AND COORDINATED WITH THE DISTRICT). NO CONDUITS THROUGH STRUCTURAL SLABS.

HOLES IN WALL AND FLOOR SHALL BE DONE BY CORE DRILLING ONLY. DO NOT DAMAGE REINFORCING STEEL BAR IN WALL. LOCATE BY NON-DESTRUCTIVE MEANS PRIOR TO CORING.

ALL WALL AND FLOOR PENETRATIONS MADE UNDER THIS PROJECT SHALL BE SEALED PER THE APPLICABLE DETAIL WHETHER THE WALL OR FLOOR IS KNOWN TO BE FIRE RATED OR NOT

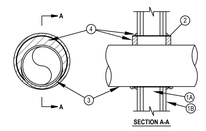
CONCRETE/MASONRY WALL/FLOOR PENETRATION DETAIL

SCALE N.T.S. | 4

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

System No. W-L-1465

ANSI/UL1479 (ASTM E814)
F Rating — 1 or 2 Hr (See Item 1)
T Rating — 0 and 1/4 Hr (See Item 1)
L Rating At Ambient — Less Than 1 CFM/Sq Ft
L Rating At 400 F — Less Than 1 CFM/Sq Ft

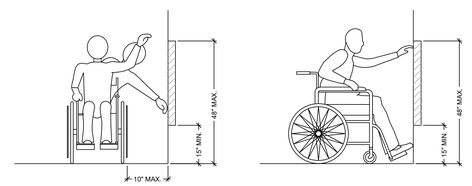


1. WALL ASSEMBLY — THE 1 OR 2 HR FIRE RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300, U400, V400 OR W400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS — WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4" LUMBER SPACED MAX 16" OC. STEEL STUDS TO BE MIN 3-1/2" WIDE AND SPACED MAX 24" OC.
   B. GYPSUM BOARD* — THICKNESS, TYPE, NUMBER OF LAYERS AND ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX Ø OF OPENING IS 10" THE HOURLY F, FH RATINGS OF THE FIRESTOP SYSTEM ARE EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED. THE T, FT, FTH RATINGS ARE 0 AND 1/4 HR FOR 1 AND 2 HR RATED WALL ASSEMBLIES, RESPECTIVELY.
2. STEEL SLEEVE — CYLINDRICAL SLEEVE FABRICATED FROM MIN 0.016" THICK GALV SHEET STEEL AND HAVING A MIN 1" LAP ALONG THE LONGITUDINAL SEAM. SLEEVE INSTALLED BY COILING THE SHEET STEEL TO A Ø SMALLER THAN THE THROUGH OPENING, INSERTING THE COIL THROUGH THE OPENINGS AND RELEASING THE COIL TO LET IT UNCOIL AGAINST THE CIRCULAR CUTOUTS IN THE GYPSUM BOARD LAYERS. THE ENDS OF THE STEEL SLEEVE SHALL BE FLUSH WITH OR EXTEND MAX 1" BEYOND EACH SURFACE OF THE WALL.
3. THROUGH PENETRANTS — ONE METALLIC PIPE, CONDUIT OR TUBING INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN PIPE, CONDUIT OR TUBING AND PERIPHERY OF SLEEVE SHALL BE MIN 0" (POINT CONTACT) TO MAX 1-7/8". PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
   A. STEEL PIPE — NOM 8" Ø (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE — NOM 8" Ø (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT — NOM 4" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" STEEL CONDUIT.
   D. COPPER TUBING — NOM 4" Ø (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE — NOM 4" Ø (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
4. CONFIGURATION A
   FILL VOID OR CAVITY MATERIAL* — SEALANT — MIN 1" THICKNESS OF SEALANT APPLIED WITHIN ANNULUS, FLUSH WITH BOTH ENDS OF SLEEVE. A MIN 1/4" Ø BEAD OF SEALANT TO BE APPLIED AT THE TUBING/SLEEVE INTERFACE AT THE POINT CONTACT LOCATION AND AROUND THE ENTIRE PERIMETER OF THE SLEEVE AT THE SLEEVE/GYPSUM BOARD INTERFACE WHEN THE SLEEVE EXTENDS BEYOND THE WALL SURFACE.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 SEALANT, FS ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT
5. CONFIGURATION B
   FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING ITEMS:
   A. PACKING MATERIAL — MIN 5/8" THICKNESS OF MIN 4 PCF MINERAL WOOL BAT INSULATION COMPRESSED AND TIGHTLY AND PACKED IN TO EACH END OF THE SLEEVE. PACKING MATERIAL IS TO BE RECESSED FROM EACH END OF THE SLEEVE TO ACCOMMODATE FILL MATERIAL.
   A1. PACKING MATERIAL — STRIPS — (AS AN ALTERNATE TO CONFIG 5 ITEM 4A) - NOM 5/8" WIDE PRECUT MINERAL WOOL STRIPS. THE STRIPS ARE FIRMLY PACKED INTO THE GAP BETWEEN THE STEEL SLEEVE AND THE CONCRETE. PACKING MATERIAL IS TO BE RECESSED FROM EACH END OF THE SLEEVE TO ACCOMMODATE FILL MATERIAL.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 767 SPEED STRIPS.
   B. FILL, VOID OR CAVITY MATERIAL* — SEALANT — MIN 1/2" THICKNESS OF SEALANT APPLIED WITHIN ANNULUS, FLUSH WITH BOTH ENDS OF SLEEVE. A MIN 1/4" Ø BEAD OF SEALANT TO BE APPLIED AT THE TUBING/SLEEVE INTERFACE AT THE POINT CONTACT LOCATION AND AROUND THE ENTIRE PERIMETER OF THE SLEEVE AT THE SLEEVE/GYPSUM BOARD INTERFACE WHEN THE SLEEVE EXTENDS BEYOND THE WALL SURFACE
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 SEALANT OR FS ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT
   * INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

ALL WALL AND FLOOR PENETRATIONS MADE UNDER THIS PROJECT SHALL BE SEALED PER THE APPLICABLE DETAIL WHETHER THE WALL OR FLOOR IS KNOWN TO BE FIRE RATED OR NOT

GYPSUM WALL PENNETRATION DETAIL

SCALE N.T.S. | 5



NOTE:
1. CBC2022, 11B-308.1.1 ELECTRICAL SWITCHES: CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF A ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES OR COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL COMPLY WITH SECTION 11B-308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.
2. CBC2022, 11B-308.1.2 ELECTRICAL RECEPTACLE OUTLETS: ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL COMPLY WITH SECTION 11B-308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.
3. CBC2022, 11B-309.4 OPERATION: OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM.
4. OPERABLE PARTS CANNOT BE LOCATED WHERE A PERSON USING A WHEELCHAIR WOULD BE FORCED TO REACH OVER AN OBSTRUCTION.
5. FIRE ALARM INITIATING DEVICE MUST BE LOCATED ON PATH OF TRAVEL.
6. PROVIDE FRONT AND PARALLEL APPROACH AT NEWLY INSTALLED FIRE ALARM INITIATING DEVICE.

MOUNTING HEIGHT OVER OBSTRUCTION

SCALE N.T.S. | 6

REV	DATE	DESCRIPTION
	12/10/2025	BID SET
	11/06/2026	ADDENDUM # 4

multi-discipline collaborative
MDC engineers,INC
Consulting Engineers
5101 E La Palma Ave., Suite 205
Anaheim Hills, CA 92807-2056
Tel: (213) 746-2644
Fax: (213) 746-6483

STAMP

REGISTERED PROFESSIONAL ENGINEER
RUNGSUB SUMETKORN
No.E 19325
Exp.12/31/2026
ELECTRICAL
STATE OF CALIFORNIA

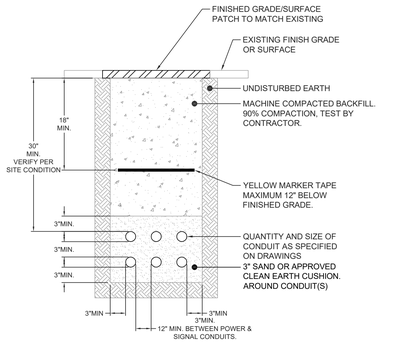
PUBLIC ADDRESS SYSTEM
ENTERPRISE MIDDLE SCHOOL
2600 W COMPTON BLVD,
COMPTON, CA 90220

COMPTON UNIFIED SCHOOL DISTRICT
501 S SANTA FE AVE,
COMPTON, CA 90221

ELECTRICAL DETAILS

PROJECT	2025-008
DRAWN	RUNGSUB SU
CHECKED	BA SATYA
SHEET	E3.1

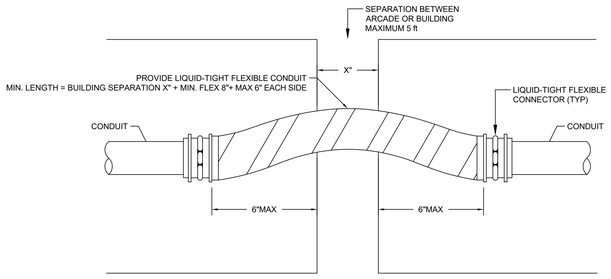
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NOTES:
1. SAW CUT AND PATCH (E) CONCRETE/ASPHALT TO MATCH ADJACENT SURFACES.
2. ALL UNDERGROUND CONDUITS SHALL BE PVC SCH40 WITH GRC RISER.

UNDERGROUND CONDUIT DUCT BANK DETAIL

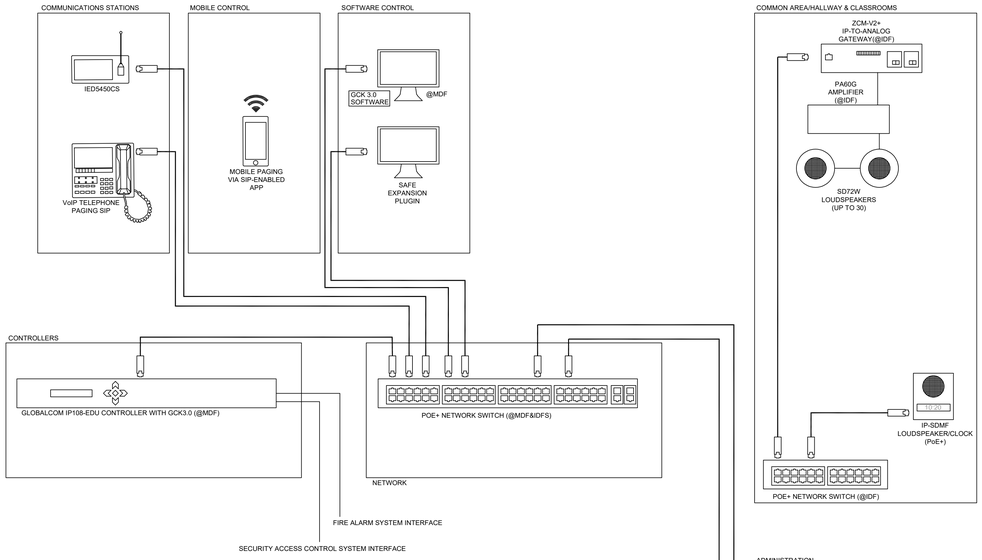
SCALE N.T.S. | 2



CONDUIT CONNECTION AT BUILDING OR ARCADE SEPARATION
PLAN VIEW. PROVIDE GROUND WIRE WITHIN FLEXIBLE CONDUIT.
(PORTABLE BUILDING ONLY)

CONDUIT CONNECTION AT BUILDING OR ARCADE SEPARATION

SCALE N.T.S. | 3



ATLAS IED GLOBAL COMP IP PA SYSTEM COMPONENTS & CABLING REQUIREMENTS:

PART NUMBER	EQUIPMENT DESCRIPTION
PoE+ SWITCHES:	PROVIDED AND PROGRAMMED BY CONTRACTOR. IP ENDPOINTS SHALL USE IEEE 802.3 STANDARD POE IMPLEMENTATION SO THAT THEY CAN BE USED WITH ANY IEEE 802.3AT (POE+) 10GB MANAGED POE + SWITCHES (30W/PORT).
IP108 - EDU	GLOBAL COM IP CONTROLLER (CAT 6 (GREEN COLOR) CABLING TO PoE+ SWITCH AT IDF/MDF). USE IED 1112PS RACK MOUNTED POWER SUPPLY 12VDC (CONNECT TO RACK PDU). SOFTWARE TO BE INSTALLED AT ADMINISTRATIVE COMPUTER WITH GCK & ALL OTHER SOFTWARE APPLICATIONS SUPPORTED BY ATLAS IED SYSTEM
SAFE SERVER SOFTWARE CONTROL	EDU SOFTWARE, SAFE SERVER EXPANSION PLUG IN - FOR EMERGENCY ACKNOWLEDGEMENT APPLICATION, SAFE DESKTOP – COMPUTER POP UP EMERGENCY/INSTANT MESSAGE. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
VOIP TELEPHONE INTERFACE	SIP INTERFACE AND IED 5450CS & MOBILE PAGING VIA MOBILE PAGING SIP ENABLED APP. LOCATED ALONG WITH CONTROLLER AT MDF.
FOR DISTRICT SELECTED VOIP	SYSTEM ENABLED APP. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
IPCSDTOUCH-G	GLOBALCOM IP SERIES PROGRAMMABLE TOUCH SCREEN DIGITAL COMMUNICATION STATION (CAT 6+ CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
SUPERVISED FIRE ALARM INTERFACE	FIRE ALARM TAKES PRIORITY, INTERFACE WITH IP-108 & FACP WITH CONTACT CLOSURE CONNECTION. ONCE FA RELAY EITHER OPENS OR CLOSE THE CONTACT – CLOSURE INPUT PORT SHALL LAUNCH AN EVENT BASED TO MUTE ALL MESSAGES & FIRE ALARM SYSTEM SHALL TAKE PRIORITY.
IP-SDMF	CLASSROOM WALL MOUNTED, PoE + INDOOR IP END POINT WITH SPEAKER, LCD CLOCK, INTEGRATED TALK BACK MICROPHONE AND LED FLASHER (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
SD72W	INDOOR CEINING PRE ASSEMBLED 8" ANALOG EXTENSION LOUD SPEAKER & BAFFLE, FOR USE WITH IXP END POINTS, IP 8 OHM EXTENSION SPEAKERS WHEN CONNECTED TO ATLAS IED IPX END POINT WHEN USED AT LARGER ROOMS WITH SURFACE MOUNT SLANTED ENCLOUSRE FOR IP-8
IP – HVP	HIGH OUTPUT OUTDOOR HORN SPEAKER WITH IP - SEST - HPV - SURFACE MOUNT STRAIGHT ENCLOSURE FOR IP - HV SPEAKER, PoE+ VANDAL AND WEATHER RESISTANT WALL MOUNT IP SPEAKER. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF USE INDOOR/OUTDOOR CAT 6 (GREEN COLOR) CABLE WHEN EXPOSED TO WEATHER DAMP,WET LOCATIONS). COLOR CODE CABLE WITH GREEN LIQUID TAPE AT BOTH ENDS.
SD72 W (SPEAKER WITH KIT)	KIT INCLUDING SD72W CS95 – 8 – 81 8R (RECESSED AT CEILING T- BAR/GYP BOARD) - DAISY CHAIN CONNECTED TO IP – ZCM. (MAXIMUM UPTO 30 SPEAKERS). ADJUST TAP WATTAGE AS REQUIRED @ 70.7V TO MAINTAIN AUDIBILITY OF SPACE. USE 14/2 AWG SPEAKER WIRE CONNECTED TO PA 60G AMPLIFIER.
IP -SEST -S	SURFACE MOUNT STRAIGHT ENCLOSURE
IP ZCM 2RMK– V2+ (ZONE CONTROLLER)	PoE+ IP TO ANLOG GATEWAY DUAL OUTPUTE KIT WITH PA702 – RMK RACK MOUNT KIT (LOCATE AT IDF/MDF RACKS, CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
PA 60G	60 W AMPLIFIER.
IP-SEA -SD	SURFACE MOUNT SLANTED ENCLOSURE (IP-SDMF-72)
IP – SEST -HVP	SURFACE MOUNT STRAIGHT ENCLOSURE (IP- HPV)

NOTES:
1. ATHLETICS/GYM/AUDITORIUM HAS EXISTING AUTONOMOUS SYSTEM - INTERFACE IP ZCM V2+ GATEWAY (IP TO ANALOG GATEWAY) WITH ATLAS IED SYSTEM TO MUTE AUTONOMOUS PA DURING CAMPUS WIDE PA ACTIVATES AND ADD ATLAS IED PA SPEAKERS FOR SITE WIDE PA NOTIIFICATION.
2. ALL INSTALLATION, CABLING, PROGRAMMING, TESTING SHALL COMPLY WITH MANUFACTURER'S RECOMMENDATION SHALL BE PROVIDED BY CONTRACTOR. CONTRACTOR SHALL COORDINATE WITH DISTRICT AND PROVIDE COMPLETELY OPERABLE INSTALLATION AND DISTRICT TRAINING.
3. ALL ATLAS IED CAT 6 CABLES SHALL BE BELDEN WITH GREEN COLOR JACKET & JACKS.

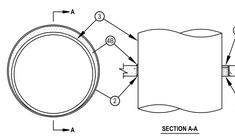
ATLAS IED SYSTEM BLOCK DIAGRAM

SCALE N.T.S. | 1

CLASSIFIED c UL us
Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. C-AJ-1155

ANSI/UL1479 (ASTM E814)
F Rating — 2 and 3 Hr (See Item 3)
T Rating — 0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft
L Rating At 400 F — 4 CFM/sq ft
W Rating — Class 1 (See Item 4)



1. FLOOR OR WALL ASSEMBLY — MIN 4-1/2" THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M3) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX Ø OF OPENING IS 32".
2. SEE CONCRETE BLOCKS (CAZT) CATEGORY IN FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
3. METALLIC SLEEVE (OPTIONAL) — NOM 32" Ø (OR SMALLER) SCHEDULE 40 (OR HEAVIER) STEEL PIPE CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY, FLUSH WITH FLOOR OR WALL ASSEMBLY.
4. THROUGH PENETRANTS — ONE METALLIC PIPE OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. PIPE OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE ANNULAR SPACE SHALL BE MIN 0" (POINT CONTACT) TO MAX 12". WHEN MAXIMUM ANNULAR SPACE EXCEEDS 2-1/4" THE F RATING IS 2 HR. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR TUBING MAY BE USED:
   A. STEEL PIPE — NOM 20" Ø (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE — NOM 20" Ø (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT — NOM 4" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" Ø (OR SMALLER) STEEL CONDUIT.
   D. COPPER TUBING — NOM 6" Ø (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE — NOM 6" Ø (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE
5. FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
   A. PACKING MATERIAL — MIN 4" THICKNESS OF MIN 4 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP END OF SLEEVE FOR FLOORS OR FROM BOTH ENDS OF SLEEVE FOR WALLS TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
   B. FILL, VOID OR CAVITY MATERIAL* — SEALANT — MIN 1/2" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH THE TOP END OF THE SLEEVE FOR FLOORS, OR WITH BOTH ENDS OF THE SLEEVE FOR WALLS. MIN 1/2" THICK BEAD OF ALL MATERIAL TO BE INSTALLED AROUND PIPE AT INTERFACE OF SLEEVE FOR POINT CONTACT INSTALLATIONS. W RATING APPLIES ONLY WHEN FS-ONE MAX INTUMESCENT SEALANT IS USED. FOR THE W RATING, MAX ANNULAR SPACE IS 1-7/8" AND AN ADDITIONAL FILM OF SEALANT SHALL BE APPLIED OVER THE SLEEVE (WHEN USED) LAPPING AT LEAST 1/2" ONTO TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT

*INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

X-RAY ALL MASONRY/CONCRETE WALL/CEILING PENETRATIONS PRIOR TO WORK. USE SLEEVES OR CORE DRILLING FOR PENETRATIONS (LOCATIONS TO BE DETERMINED BASED ON STRUCTURAL CONDITIONS, EXISTING OBSTRUCTIONS, AND FIELD CONDITIONS, AND COORDINATED WITH THE DISTRICT). NO CONDUITS THROUGH STRUCTURAL SLABS.

HOLES IN WALL AND FLOOR SHALL BE DONE BY CORE DRILLING ONLY. DO NOT DAMAGE REINFORCING STEEL BAR IN WALL. LOCATE BY NON-DESTRUCTIVE MEANS PRIOR TO CORING.

ALL WALL AND FLOOR PENETRATIONS MADE UNDER THIS PROJECT SHALL BE SEALED PER THE APPLICABLE DETAIL WHETHER THE WALL OR FLOOR IS KNOWN TO BE FIRE RATED OR NOT

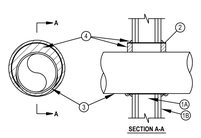
CONCRETE/MASONRY WALL/FLOOR PENETRATION DETAIL

SCALE N.T.S. | 4

CLASSIFIED c UL us
Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. W-L-1465

ANSI/UL1479 (ASTM E814)
F Rating — 1 or 2 Hr (See Item 1)
T Rating — 0 and 1/4 Hr (See Item 1)
L Rating At Ambient — Less Than 1 CFM/Sq Ft
L Rating At 400 F — Less Than 1 CFM/Sq Ft

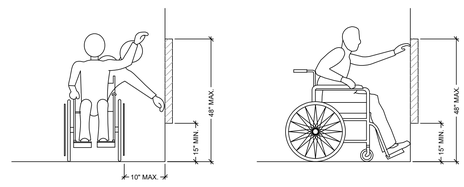


1. WALL ASSEMBLY — THE 1 OR 2 HR FIRE RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300, U400, V400 OR W400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS — WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4" LUMBER SPACED MAX 16" OC. STEEL STUDS TO BE MIN 3-1/2" WIDE AND SPACED MAX 24" OC.
   B. GYPSUM BOARD — THE REQUIRED TYPE, NUMBER OF LAYERS AND ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX Ø OF OPENING IS 10" THE HOURLY F RATING OF THE FIRESTOP SYSTEM ARE EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED. THE T, FT, FTH RATINGS ARE 0 AND 1/4 HR FOR 1 AND 2 HR RATED WALL ASSEMBLIES, RESPECTIVELY.
2. STEEL SLEEVE — CYLINDRICAL SLEEVE FABRICATED FROM MIN 0.016" THICK GALV SHEET STEEL AND HAVING A MIN 1" LAP ALONG THE LONGITUDINAL SEAM. SLEEVE INSTALLED BY COILING THE SHEET STEEL TO A Ø SMALLER THAN THE THROUGH OPENING, INSERTING THE COIL THROUGH THE OPENINGS AND RELEASING THE COIL TO LET IT UNCOIL AGAINST THE CIRCULAR CUTOUTS IN THE GYPSUM BOARD LAYERS. THE ENDS OF THE STEEL SLEEVE SHALL BE FLUSH WITH OR EXTEND MAX 1" BEYOND EACH SURFACE OF THE WALL.
3. THROUGH PENETRANTS — ONE METALLIC PIPE, CONDUIT OR TUBING INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN PIPE, CONDUIT OR TUBING AND PERIPHERY OF SLEEVE SHALL BE MIN 0" (POINT CONTACT) TO MAX 1-7/8". PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
   A. STEEL PIPE — NOM 8" Ø (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE — NOM 8" Ø (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT — NOM 4" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" STEEL CONDUIT.
   D. COPPER TUBING — NOM 4" Ø (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE — NOM 4" Ø (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
4. CONFIGURATION A
   FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING ITEMS:
   A. PACKING MATERIAL — MIN 5/8" THICKNESS OF MIN 4 PCF MINERAL WOOL BAT INSULATION COMPRESSED AND TIGHTLY AND PACKED IN TO EACH END OF THE SLEEVE. PACKING MATERIAL IS TO BE RECESSED FROM EACH END OF THE SLEEVE TO ACCOMMODATE FILL MATERIAL.
   A1. PACKING MATERIAL* - STRIPS — (AS AN ALTERNATE TO CONFIG .B ITEM 4A) - NOM 5/8" WIDE PRECUT MINERAL WOOL STRIPS. THE STRIPS ARE FIRMLY PACKED INTO THE GAP BETWEEN PENETRANT AND THE STEEL SLEEVE ITEM 2 ON BOTH SIDES OF THE WALL. PACKING MATERIAL IS TO BE RECESSED FROM EACH END OF THE SLEEVE TO ACCOMMODATE FILL MATERIAL.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 767 SPEED STRIPS
   B. FILL, VOID OR CAVITY MATERIAL* — SEALANT — MIN 1/2" THICKNESS OF SEALANT APPLIED WITHIN ANNULUS, FLUSH WITH BOTH ENDS OF SLEEVE. A MIN 1/4" Ø BEAD OF SEALANT TO BE APPLIED AT THE TUBING/SLEEVE INTERFACE AT THE POINT CONTACT LOCATION AND AROUND THE ENTIRE PERIMETER OF THE SLEEVE AT THE SLEEVE/GYPSUM BOARD INTERFACE WHEN THE SLEEVE EXTENDS BEYOND THE WALL SURFACE.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 SEALANT OR FS-ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT
   * INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

ALL WALL AND FLOOR PENETRATIONS MADE UNDER THIS PROJECT SHALL BE SEALED PER THE APPLICABLE DETAIL WHETHER THE WALL OR FLOOR IS KNOWN TO BE FIRE RATED OR NOT

GYPSUM WALL PENNETRATION DETAIL

SCALE N.T.S. | 5



NOTE:
1. CBC2022, 11B-308.1.1 ELECTRICAL SWITCHES: CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF A ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES OR COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL COMPLY WITH SECTION 11B-308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.
2. CBC2022, 11B-308.1.2 ELECTRICAL RECEPTACLE OUTLETS: ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL COMPLY WITH SECTION 11B-308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.
3. CBC2022, 11B-309.4 OPERATION: OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM.
4. OPERABLE PARTS CANNOT BE LOCATED WHERE A PERSON USING A WHEELCHAIR WOULD BE FORCED TO REACH OVER AN OBSTRUCTION.
5. FIRE ALARM INITIATING DEVICE MUST BE LOCATED ON PATH OF TRAVEL.
6. PROVIDE FRONT AND PARALLEL APPROACH AT NEWLY INSTALLED FIRE ALARM INITIATING DEVICE.

MOUNTING HEIGHT OVER OBSTRUCTION

SCALE N.T.S. | 6

REV	DATE	DESCRIPTION
	12/10/2025	BID SET
	11/06/2026	ADDENDUM # 4

PUBLIC ADDRESS SYSTEM
JEFFERSON ELEMENTARY SCHOOL
2508 E 133RD ST
COMPTON, CA 90222

COMPTON UNIFIED
SCHOOL DISTRICT
501 S SANTA FE AVE,
COMPTON, CA 90221

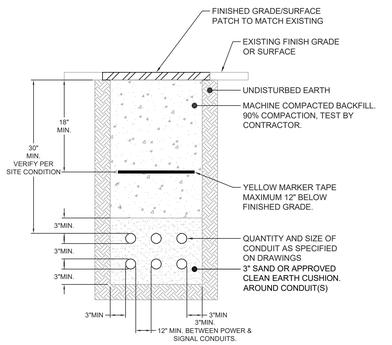
multi-discipline collaborative
MDC engineers,INC
Consulting Engineers
5101 E La Palma Ave., Suite 205
Anaheim Hills, CA 92807-2056
Tel: (213) 746-2644
Fax: (213) 746-6483

STAMP
REGISTERED PROFESSIONAL ENGINEER
SUMITRA SUMITRAN
No.E 19325
Exp.12/31/26
ELECTRICAL
STATE OF CALIFORNIA

ELECTRICAL DETAILS

PROJECT 2025-008
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SHEET E3.1

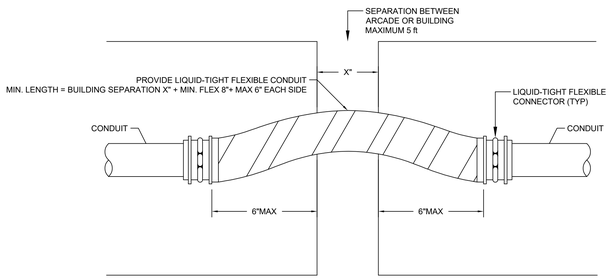
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NOTES:
1. SAW CUT AND PATCH (E) CONCRETE/ASPHALT TO MATCH ADJACENT SURFACES.
2. ALL UNDERGROUND CONDUITS SHALL BE PVC SCH40 WITH GRC RISER.

UNDERGROUND CONDUIT DUCT BANK DETAIL

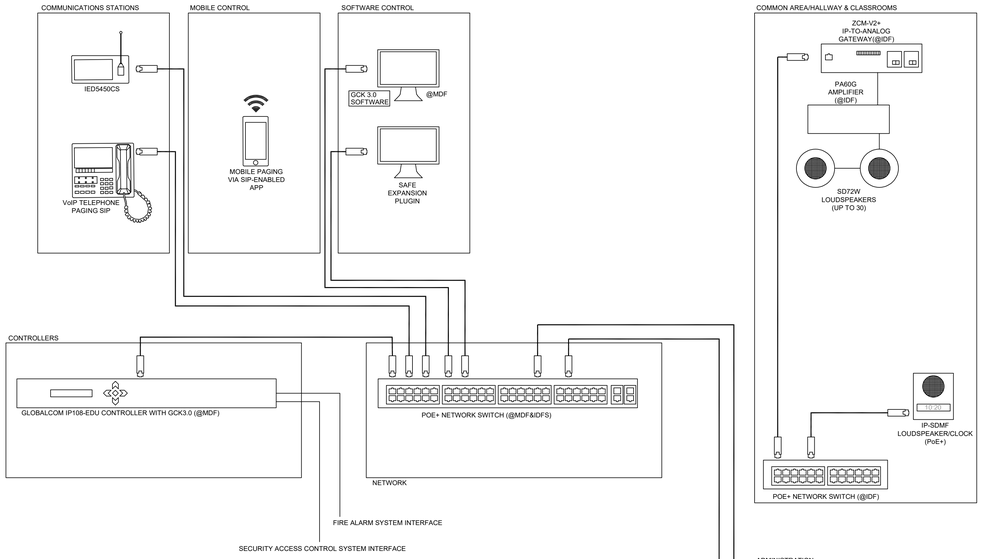
SCALE N.T.S. | 2



CONDUIT CONNECTION AT BUILDING OR ARCADE SEPARATION
PLAN VIEW. PROVIDE GROUND WIRE WITHIN FLEXIBLE CONDUIT.
(PORTABLE BUILDING ONLY)

CONDUIT CONNECTION AT BUILDING OR ARCADE SEPARATION

SCALE N.T.S. | 3



ATLAS IED GLOBAL COMP IP PA SYSTEM COMPONENTS & CABLING REQUIREMENTS:

PART NUMBER	EQUIPMENT DESCRIPTION
PoE+ SWITCHES:	PROVIDED AND PROGRAMMED BY CONTRACTOR, IP ENDPOINTS SHALL USE IEEE 802.3 STANDARD POE IMPLEMENTATION SO THAT THEY CAN BE USED WITH ANY IEEE 802.3AT (POE+) 10GB MANAGED POE + SWITCHES (30W/PORT).
IP108 - EDU	GLOBAL COM IP CONTROLLER (CAT 6 (GREEN COLOR) CABLING TO PoE+ SWITCH AT IDF/MDF). USE IED 1112PS RACK MOUNTED POWER SUPPLY 12VDC (CONNECT TO RACK PDU). SOFTWARE TO BE INSTALLED AT ADMINISTRATIVE COMPUTER WITH GCK & ALL OTHER SOFTWARE APPLICATIONS SUPPORTED BY ATLAS IED SYSTEM
SAFE SERVER SOFTWARE CONTROL	EDU SOFTWARE, SAFE SERVER EXPANSION PLUG IN - FOR EMERGENCY ACKNOWLEDGEMENT APPLICATION, SAFE DESKTOP – COMPUTER POP UP EMERGENCY/INSTANT MESSAGE. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
VOIP TELEPHONE INTERFACE	SIP INTERFACE AND IED 5450CS & MOBILE PAGING VIA MOBILE PAGING SIP ENABLED APP. LOCATED ALONG WITH CONTROLLER AT MDF.
FOR DISTRICT SELECTED VOIP	SYSTEM ENABLED APP. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
IPCSDTOUCH-G	GLOBALCOM IP SERIES PROGRAMMABLE TOUCH SCREEN DIGITAL COMMUNICATION STATION (CAT 6+ CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
SUPERVISED FIRE ALARM INTERFACE	FIRE ALARM TAKES PRIORITY, INTERFACE WITH IP-108 & FACP WITH CONTACT CLOSURE CONNECTION. ONCE FA RELAY EITHER OPENS OR CLOSE THE CONTACT – CLOSURE INPUT PORT SHALL LAUNCH AN EVENT BASED TO MUTE ALL MESSAGES & FIRE ALARM SYSTEM SHALL TAKE PRIORITY.
IP-SDMF	CLASSROOM WALL MOUNTED, PoE + INDOOR IP END POINT WITH SPEAKER, LCD CLOCK, INTEGRATED TALK BACK MICROPHONE AND LED FLASHER (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
SD72W	INDOOR CEINING PRE ASSEMBLED 8" ANALOG EXTENSION LOUD SPEAKER & BAFFLE, FOR USE WITH IXP END POINTS, IP 8 OHM EXTENSION SPEAKERS WHEN CONNECTED TO ATLAS IED IPX END POINT WHEN USED AT LARGER ROOMS WITH SURFACE MOUNT SLANTED ENCLOUSRE FOR IP-8
IP – HVP	HIGH OUTPUT OUTDOOR HORN SPEAKER WITH IP - SEST - HPV - SURFACE MOUNT STRAIGHT ENCLOSURE FOR IP - HV SPEAKER, PoE+ VANDAL AND WEATHER RESISTANT WALL MOUNT IP SPEAKER. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF USE INDOOR/OUTDOOR CAT 6 (GREEN COLOR) CABLE WHEN EXPOSED TO WEATHER DAMP;WET LOCATIONS). COLOR CODE CABLE WITH GREEN LIQUID TAPE AT BOTH ENDS.
SD72 W (SPEAKER WITH KIT)	KIT INCLUDING SD72W CS95 – 8 – 81 8R (RECESSED AT CEILING T- BAR/GYP BOARD) - DAISY CHAIN CONNECTED TO IP – ZCM. (MAXIMUM UPTO 30 SPEAKERS). ADJUST TAP WATTAGE AS REQUIRED @ 70.7V TO MAINTAIN AUDIBILITY OF SPACE. USE 14/2 AWG SPEAKER WIRE CONNECTED TO PA 60G AMPLIFIER.
IP -SEST -S	SURFACE MOUNT STRAIGHT ENCLOSURE
IP ZCM 2RMK– V2+ (ZONE CONTROLLER)	PoE+ IP TO ANLOG GATEWAY DUAL OUTPUTE KIT WITH PA702 – RMK RACK MOUNT KIT (LOCATE AT IDF/MDF RACKS, CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
PA 60G	60 W AMPLIFIER.
IP-SEA -SD	SURFACE MOUNT SLANTED ENCLOSURE (IP-SDMF-72)
IP – SEST -HVP	SURFACE MOUNT STRAIGHT ENCLOSURE (IP- HPV)

NOTES:
1. ATHLETICS/GYM/AUDITORIUM HAS EXISTING AUTONOMOUS SYSTEM - INTERFACE IP ZCM V2+ GATEWAY (IP TO ANALOG GATEWAY) WITH ATLAS IED SYSTEM TO MUTE AUTONOMOUS PA DURING CAMPUS WIDE PA ACTIVATES AND ADD ATLAS IED PA SPEAKERS FOR SITE WIDE PA NOTIIFICATION.
2. ALL INSTALLATION, CABLING, PROGRAMMING, TESTING SHALL COMPLY WITH MANUFACTURER'S RECOMMENDATION SHALL BE PROVIDED BY CONTRACTOR. CONTRACTOR SHALL COORDINATE WITH DISTRICT AND PROVIDE COMPLETELY OPERABLE INSTALLATION AND DISTRICT TRAINING.
3. ALL ATLAS IED CAT 6 CABLES SHALL BE BELDEN WITH GREEN COLOR JACKET & JACKS.

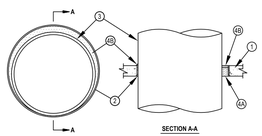
ATLAS IED SYSTEM BLOCK DIAGRAM

SCALE N.T.S. | 1

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

System No. C-AJ-1155

ANSI/UL1479 (ASTM E814)
F Rating — 2 and 3 Hr (See Item 3)
T Rating —0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft
L Rating At 400 F — 4 CFM/sq ft
W Rating — Class 1 (See Item 4)



1. FLOOR OR WALL ASSEMBLY — MIN 4-1/2" THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M3) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX Ø OF OPENING IS 32".
2. SEE CONCRETE BLOCKS (CAZT) CATEGORY IN FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
3. METALLIC SLEEVE (OPTIONAL) — NOM 32" Ø (OR SMALLER) SCHEDULE 40 (OR HEAVIER) STEEL PIPE CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY, FLUSH WITH FLOOR OR WALL ASSEMBLY.
4. THROUGH PENETRANTS — ONE METALLIC PIPE OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. PIPE OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE ANNULAR SPACE SHALL BE MIN 0" (POINT CONTACT) TO MAX 12". WHEN MAXIMUM ANNULAR SPACE EXCEEDS 2-1/4" THE F RATING IS 2 HR. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR TUBING MAY BE USED:
   A. STEEL PIPE — NOM 20" Ø (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE — NOM 20" Ø (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT — NOM 4" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" Ø (OR SMALLER) STEEL CONDUIT.
   D. COPPER TUBING — NOM 6" Ø (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE — NOM 4" Ø (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
5. FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
   A. PACKING MATERIAL — MIN 4" THICKNESS OF MIN 4 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP END OF SLEEVE FOR FLOORS OR FROM BOTH ENDS OF SLEEVE FOR WALLS TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
   B. FILL, VOID OR CAVITY MATERIAL* — SEALANT — MIN 1/2" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH THE TOP END OF THE SLEEVE FOR FLOORS, OR WITH BOTH ENDS OF THE SLEEVE FOR WALLS. MIN 1/2" THICK BEAD OF ALL MATERIAL TO BE INSTALLED AROUND PIPE AT INTERFACE OF SLEEVE FOR POINT CONTACT INSTALLATIONS. W RATING APPLIES ONLY WHEN FS-ONE MAX INTUMESCENT SEALANT IS USED. FOR THE W RATING, MAX ANNULAR SPACE IS 1-7/8" AND AN ADDITIONAL FILM OF SEALANT SHALL BE APPLIED OVER THE SLEEVE (WHEN USED) LAPPING AT LEAST 1/2" ONTO TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT

*INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

X-RAY ALL MASONRY/CONCRETE WALL/CEILING PENETRATIONS PRIOR TO WORK. USE SLEEVES OR CORE DRILLING FOR PENETRATIONS (LOCATIONS TO BE DETERMINED BASED ON STRUCTURAL CONDITIONS, EXISTING OBSTRUCTIONS, AND FIELD CONDITIONS, AND COORDINATED WITH THE DISTRICT). NO CONDUITS THROUGH STRUCTURAL SLABS.

HOLES IN WALL AND FLOOR SHALL BE DONE BY CORE DRILLING ONLY. DO NOT DAMAGE REINFORCING STEEL BAR IN WALL. LOCATE BY NON-DESTRUCTIVE MEANS PRIOR TO CORING.

ALL WALL AND FLOOR PENETRATIONS MADE UNDER THIS PROJECT SHALL BE SEALED PER THE APPLICABLE DETAIL WHETHER THE WALL OR FLOOR IS KNOWN TO BE FIRE RATED OR NOT

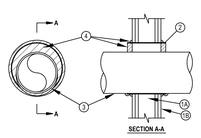
CONCRETE/MASONRY WALL/FLOOR PENETRATION DETAIL

SCALE N.T.S. | 4

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

System No. W-L-1465

ANSI/UL1479 (ASTM E814)
F Rating — 1 or 2 Hr (See Item 1)
T Rating — 0 and 1/4 Hr (See Item 1)
L Rating At Ambient — Less Than 1 CFM/Sq Ft
L Rating At 400 F — Less Than 1 CFM/Sq Ft

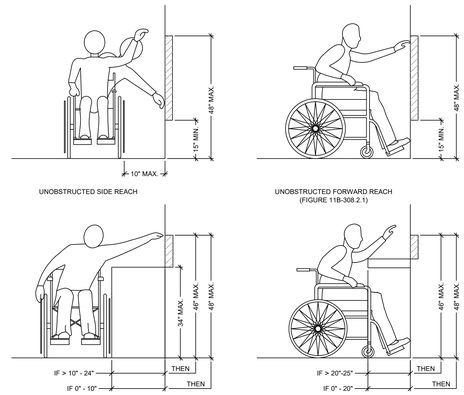


1. WALL ASSEMBLY — THE 1 OR 2 HR FIRE RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300, U400, V400 OR W400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS — WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4" LUMBER SPACED MAX 16" OC. STEEL STUDS TO BE MIN 3-1/2" WIDE AND SPACED MAX 24" OC.
   B. GYPSUM BOARD* — THICKNESS, TYPE, NUMBER OF LAYERS AND ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX Ø OF OPENING IS 10" THE HOURLY F, FH RATINGS OF THE FIRESTOP SYSTEM ARE EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED. THE T, FT, FTH RATINGS ARE 0 AND 1/4 HR FOR 1 AND 2 HR RATED WALLS, RESPECTIVELY.
2. STEEL SLEEVE (OPTIONAL) — SLEEVE FABRICATED FROM MIN 0.016" THICK GALV SHEET STEEL AND HAVING A MIN 1" LAP ALONG THE LONGITUDINAL SEAM. SLEEVE INSTALLED BY COILING THE SHEET STEEL TO A Ø SMALLER THAN THE THROUGH OPENING, INSERTING THE COIL THROUGH THE OPENINGS AND RELEASING THE COIL TO LET IT UNCOIL AGAINST THE CIRCULAR CUTOUTS IN THE GYPSUM BOARD LAYERS. THE ENDS OF THE STEEL SLEEVE SHALL BE FLUSH WITH OR EXTEND MAX 1" BEYOND EACH SURFACE OF THE WALL.
3. THROUGH PENETRANTS — ONE METALLIC PIPE, CONDUIT OR TUBING INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN PIPE, CONDUIT OR TUBING AND PERIPHERY OF SLEEVE SHALL BE MIN 0" (POINT CONTACT) TO MAX 1-7/8". PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
   A. STEEL PIPE — NOM 8" Ø (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE — NOM 8" Ø (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT — NOM 4" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" Ø STEEL CONDUIT.
   D. COPPER TUBING — NOM 4" Ø (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE — NOM 4" Ø (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
4. CONFIGURATION A
   FILL VOID OR CAVITY MATERIAL* — SEALANT — MIN 1" THICKNESS OF SEALANT APPLIED WITHIN ANNULUS, FLUSH WITH BOTH ENDS OF SLEEVE. A MIN 1/4" Ø BEAD OF SEALANT TO BE APPLIED AT THE TUBING/SLEEVE INTERFACE AT THE POINT CONTACT LOCATION AND AROUND THE ENTIRE PERIMETER OF THE SLEEVE AT THE SLEEVE/GYPSUM BOARD INTERFACE WHEN THE SLEEVE EXTENDS BEYOND THE WALL SURFACE.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 SEALANT, FS ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT
5. CONFIGURATION B
   FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING ITEMS:
   A. PACKING MATERIAL — MIN 5/8" THICKNESS OF MIN 4 PCF MINERAL WOOL BAT INSULATION COMPRESSED AND TIGHTLY AND PACKED IN TO EACH END OF THE SLEEVE. PACKING MATERIAL IS TO BE RECESSED FROM EACH END OF THE SLEEVE TO ACCOMMODATE FILL MATERIAL.
   A1. PACKING MATERIAL* - STRIPS — (AS AN ALTERNATE TO CONFIG .B ITEM 4A) - NOM 5/8" WIDE PRECUT MINERAL WOOL STRIPS. THE STRIPS ARE FIRMLY PACKED INTO THE GAP BETWEEN PENETRANT AND THE STEEL SLEEVE ITEM 2 ON BOTH SIDES OF THE WALL. PACKING MATERIAL IS TO BE RECESSED FROM EACH END OF THE SLEEVE TO ACCOMMODATE FILL MATERIAL.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 767 SPEED STRIPS
   B. FILL, VOID OR CAVITY MATERIAL* — SEALANT — MIN 1/2" THICKNESS OF SEALANT APPLIED WITHIN ANNULUS, FLUSH WITH BOTH ENDS OF SLEEVE. A MIN 1/4" Ø BEAD OF SEALANT TO BE APPLIED AT THE TUBING/SLEEVE INTERFACE AT THE POINT CONTACT LOCATION AND AROUND THE ENTIRE PERIMETER OF THE SLEEVE AT THE SLEEVE/GYPSUM BOARD INTERFACE WHEN THE SLEEVE EXTENDS BEYOND THE WALL SURFACE.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 SEALANT OR FS ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT
   * INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

ALL WALL AND FLOOR PENETRATIONS MADE UNDER THIS PROJECT SHALL BE SEALED PER THE APPLICABLE DETAIL WHETHER THE WALL OR FLOOR IS KNOWN TO BE FIRE RATED OR NOT

GYPSUM WALL PENNETRATION DETAIL

SCALE N.T.S. | 5



NOTE:
1. CBC2022, 11B-308.1.1 ELECTRICAL SWITCHES: CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF A ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES OR COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL COMPLY WITH SECTION 11B-308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.
2. CBC2022, 11B-308.1.2 ELECTRICAL RECEPTACLE OUTLETS: ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL COMPLY WITH SECTION 11B-308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.
3. CBC2022, 11B-309.4 OPERATION: OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM.
4. OPERABLE PARTS CANNOT BE LOCATED WHERE A PERSON USING A WHEELCHAIR WOULD BE FORCED TO REACH OVER AN OBSTRUCTION.
5. FIRE ALARM INITIATING DEVICE MUST BE LOCATED ON PATH OF TRAVEL.
6. PROVIDE FRONT AND PARALLEL APPROACH AT NEWLY INSTALLED FIRE ALARM INITIATING DEVICE.

MOUNTING HEIGHT OVER OBSTRUCTION

SCALE N.T.S. | 6

REV	DATE	DESCRIPTION
	12/10/2025	BID SET
	11/06/2026	ADDENDUM # 4

multi-discipline collaborative

MDC engineers,INC
Consulting Engineers
5101 E La Palma Ave., Suite 205
Anaheim Hills, CA 92807-2056
Tel: (213) 746-2644
Fax: (213) 746-6483

STAMP



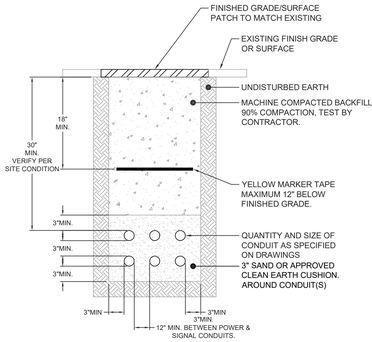
PUBLIC ADDRESS SYSTEM
MARTIN LUTHER KING
ELEMENTARY SCHOOL
2270 E 122ND ST
COMPTON, CA 90222

COMPTON UNIFIED
SCHOOL DISTRICT
501 S SANTA FE AVE,
COMPTON, CA 90221

ELECTRICAL
DETAILS

PROJECT	2025-008
DRAWN	RUNGSUB SU
CHECKED	BA SATYA
SHEET	E3.1

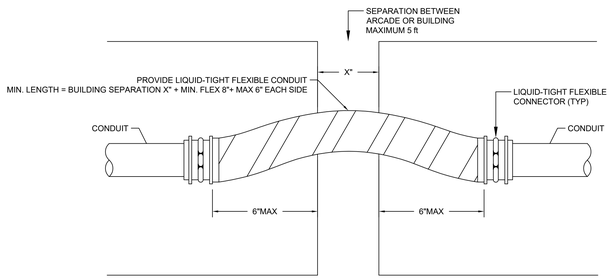
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NOTES:
1. SAW CUT AND PATCH (E) CONCRETE/ASPHALT TO MATCH ADJACENT SURFACES.
2. ALL UNDERGROUND CONDUITS SHALL BE PVC SCH40 WITH GRC RISER.

UNDERGROUND CONDUIT DUCT BANK DETAIL

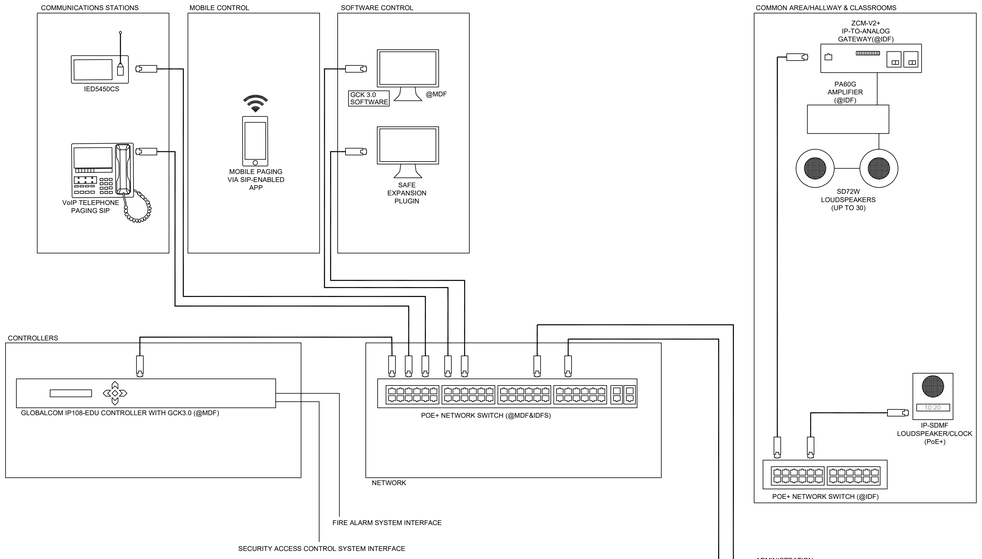
SCALE N.T.S. | 2



CONDUIT CONNECTION AT BUILDING OR ARCADE SEPARATION PLAN VIEW. PROVIDE GROUND WIRE WITHIN FLEXIBLE CONDUIT. (PORTABLE BUILDING ONLY)

CONDUIT CONNECTION AT BUILDING OR ARCADE SEPARATION

SCALE N.T.S. | 3



ATLAS IED GLOBAL COMP IP PA SYSTEM COMPONENTS & CABLING REQUIREMENTS:

PART NUMBER	EQUIPMENT DESCRIPTION
PoE+ SWITCHES:	PROVIDED AND PROGRAMMED BY CONTRACTOR. IP ENDPOINTS SHALL USE IEEE 802.3 STANDARD POE IMPLEMENTATION SO THAT THEY CAN BE USED WITH ANY IEEE 802.3AT (POE+) 10GB MANAGED POE + SWITCHES (30W/PORT).
IP108 - EDU	GLOBAL COM IP CONTROLLER (CAT 6 (GREEN COLOR) CABLING TO PoE+ SWITCH AT IDF/MDF). USE IED 1112PS RACK MOUNTED POWER SUPPLY 12VDC (CONNECT TO RACK PDU). SOFTWARE TO BE INSTALLED AT ADMINISTRATIVE COMPUTER WITH GCK & ALL OTHER SOFTWARE APPLICATIONS SUPPORTED BY ATLAS IED SYSTEM
SAFE SERVER SOFTWARE CONTROL	EDU SOFTWARE, SAFE SERVER EXPANSION PLUG IN - FOR EMERGENCY ACKNOWLEDGEMENT APPLICATION, SAFE DESKTOP – COMPUTER POP UP EMERGENCY/INSTANT MESSAGE. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
VOIP TELEPHONE INTERFACE	SIP INTERFACE AND IED 5450CS & MOBILE PAGING VIA MOBILE PAGING SIP ENABLED APP. LOCATED ALONG WITH CONTROLLER AT MDF.
FOR DISTRICT SELECTED VOIP	SYSTEM ENABLED APP. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
IPCSDTOUCH-G	GLOBALCOM IP SERIES PROGRAMMABLE TOUCH SCREEN DIGITAL COMMUNICATION STATION (CAT 6+ CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
SUPERVISED FIRE ALARM INTERFACE	FIRE ALARM TAKES PRIORITY, INTERFACE WITH IP-108 & FACP WITH CONTACT CLOSURE CONNECTION. ONCE FA RELAY EITHER OPENS OR CLOSE THE CONTACT – CLOSURE INPUT PORT SHALL LAUNCH AN EVENT BASED TO MUTE ALL MESSAGES & FIRE ALARM SYSTEM SHALL TAKE PRIORITY.
IP-SDMF	CLASSROOM WALL MOUNTED, PoE + INDOOR IP END POINT WITH SPEAKER, LCD CLOCK, INTEGRATED TALK BACK MICROPHONE AND LED FLASHER (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
SD72W	INDOOR CEINING PRE ASSEMBLED 8" ANALOG EXTENSION LOUD SPEAKER & BAFFLE. FOR USE WITH IXP END POINTS. IP 8 OHM EXTENSION SPEAKERS WHEN CONNECTED TO ATLAS IED IPX END POINT WHEN USED AT LARGER ROOMS WITH SURFACE MOUNT SLANTED ENCLOUSRE FOR IP-8
IP – HVP	HIGH OUTPUT OUTDOOR HORN SPEAKER WITH IP - SEST - HPV - SURFACE MOUNT STRAIGHT ENCLOSURE FOR IP - HV SPEAKER, PoE+ VANDAL AND WEATHER RESISTANT WALL MOUNT IP SPEAKER. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF USE INDOOR/OUTDOOR CAT 6 (GREEN COLOR) CABLE WHEN EXPOSED TO WEATHER DAMP/WET LOCATIONS). COLOR CODE CABLE WITH GREEN LIQUID TAPE AT BOTH ENDS.
SD72 W (SPEAKER WITH KIT)	KIT INCLUDING SD72W CS95 – 8 – 81 6R (RECESSED AT CEILING T- BAR/GYP BOARD) - DAISY CHAIN CONNECTED TO IP – ZCM. (MAXIMUM UPTO 30 SPEAKERS). ADJUST TAP WATTAGE AS REQUIRED @ 70.7V TO MAINTAIN AUDIBILITY OF SPACE. USE 14/2 AWG SPEAKER WIRE CONNECTED TO PA 60G AMPLIFIER.
IP -SEST -S	SURFACE MOUNT STRAIGHT ENCLOSURE
IP ZCM 2RMK– V2+ (ZONE CONTROLLER)	PoE+ IP TO ANLOG GATEWAY DUAL OUTPUTE KIT WITH PA702 – RMK RACK MOUNT KIT (LOCATE AT IDF/MDF RACKS, CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
PA 60G	60 W AMPLIFIER.
IP-SEA -SD	SURFACE MOUNT SLANTED ENCLOSURE (IP-SDMF-72)
IP – SEST -HVP	SURFACE MOUNT STRAIGHT ENCLOSURE (IP- HPV)

NOTES:
1. ATHLETICS/GYM/AUDITORIUM HAS EXISTING AUTONOMOUS SYSTEM - INTERFACE IP ZCM V2+ GATEWAY (IP TO ANALOG GATEWAY) WITH ATLAS IED SYSTEM TO MUTE AUTONOMOUS PA DURING CAMPUS WIDE PA ACTIVATES AND ADD ATLAS IED PA SPEAKERS FOR SITE WIDE PA NOTIIFICATION.
2. ALL INSTALLATION, CABLING, PROGRAMMING, TESTING SHALL COMPLY WITH MANUFACTURER'S RECOMMENDATION SHALL BE PROVIDED BY CONTRACTOR. CONTRACTOR SHALL COORDINATE WITH DISTRICT AND PROVIDE COMPLETELY OPERABLE INSTALLATION AND DISTRICT TRAINING.
3. ALL ATLAS IED CAT 6 CABLES SHALL BE BELDEN WITH GREEN COLOR JACKET & JACKS.

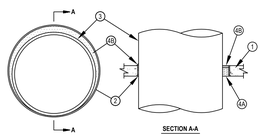
ATLAS IED SYSTEM BLOCK DIAGRAM

SCALE N.T.S. | 1

CLASSIFIED C UL US
Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

System No. C-AJ-1155

ANSI/UL1479 (ASTM E814)
F Rating — 2 and 3 Hr (See Item 3)
T Rating —0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft
L Rating At 400 F — 4 CFM/sq ft
W Rating — Class 1 (See Item 4)



1. FLOOR OR WALL ASSEMBLY — MIN 4-1/2" THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M3) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX Ø OF OPENING IS 32".
2. SEE CONCRETE BLOCKS (CAZT) CATEGORY IN FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
3. METALLIC SLEEVE (OPTIONAL) — NOM 32" Ø (OR SMALLER) SCHEDULE 40 (OR HEAVIER) STEEL PIPE CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY, FLUSH WITH FLOOR OR WALL ASSEMBLY.
4. THROUGH PENETRANTS — ONE METALLIC PIPE OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. PIPE OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE ANNULAR SPACE SHALL BE MIN 0" (POINT CONTACT) TO MAX "2". WHEN MAXIMUM ANNULAR SPACE EXCEEDS 2-1/4" THE F RATING IS 2 HR. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR TUBING MAY BE USED:
   A. STEEL PIPE — NOM 20" Ø (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE — NOM 20" Ø (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT — NOM 4" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" Ø (OR SMALLER) STEEL CONDUIT.
   D. COPPER TUBING — NOM 6" Ø (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE — NOM 6" Ø (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE
5. FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
   A. PACKING MATERIAL — MIN 4" THICKNESS OF MIN 4 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP END OF SLEEVE FOR FLOORS OR FROM BOTH ENDS OF SLEEVE FOR WALLS TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
   B. FILL, VOID OR CAVITY MATERIAL* — SEALANT — MIN 1/2" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH THE TOP END OF THE SLEEVE FOR FLOORS, OR WITH BOTH ENDS OF THE SLEEVE FOR WALLS. MIN 1/2" THICK BEAD OF ALL MATERIAL TO BE INSTALLED AROUND PIPE AT INTERFACE OF SLEEVE FOR POINT CONTACT INSTALLATIONS. W RATING APPLIES ONLY WHEN FS-ONE MAX INTUMESCENT SEALANT IS USED. FOR THE W RATING, MAX ANNULAR SPACE IS 1-7/8" AND AN ADDITIONAL FILM OF SEALANT SHALL BE APPLIED OVER THE SLEEVE (WHEN USED) LAPPING AT LEAST 1/2" ONTO TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT

*INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

X-RAY ALL MASONRY/CONCRETE WALL/CEILING PENETRATIONS PRIOR TO WORK. USE SLEEVES OR CORE DRILLING FOR PENETRATIONS (LOCATIONS TO BE DETERMINED BASED ON STRUCTURAL CONDITIONS, EXISTING OBSTRUCTIONS, AND FIELD CONDITIONS, AND COORDINATED WITH THE DISTRICT). NO CONDUITS THROUGH STRUCTURAL SLABS.

HOLES IN WALL AND FLOOR SHALL BE DONE BY CORE DRILLING ONLY. DO NOT DAMAGE REINFORCING STEEL BAR IN WALL. LOCATE BY NON-DESTRUCTIVE MEANS PRIOR TO CORING.

ALL WALL AND FLOOR PENETRATIONS MADE UNDER THIS PROJECT SHALL BE SEALED PER THE APPLICABLE DETAIL WHETHER THE WALL OR FLOOR IS KNOWN TO BE FIRE RATED OR NOT

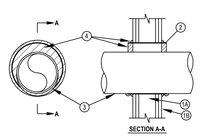
CONCRETE/MASONRY WALL/FLOOR PENETRATION DETAIL

SCALE N.T.S. | 4

CLASSIFIED C UL US
Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

System No. W-L-1465

ANSI/UL1479 (ASTM E814)
F Rating — 1 or 2 Hr (See Item 1)
T Rating — 0 and 1/4 Hr (See Item 1)
L Rating At Ambient — Less Than 1 CFM/Sq Ft
L Rating At 400 F — Less Than 1 CFM/Sq Ft

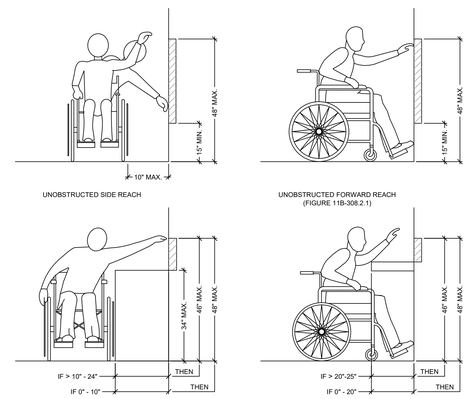


1. WALL ASSEMBLY — THE 1 OR 2 HR FIRE RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300, U400, V400 OR W400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS — WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4" LUMBER SPACED MAX 16" OC. STEEL STUDS TO BE MIN 3-1/2" WIDE AND SPACED MAX 24" OC.
   B. GYPSUM BOARD* — THICKNESS, TYPE, NUMBER OF LAYERS AND ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX Ø OF OPENING IS 10". THE HOURLY F, FH RATINGS OF THE FIRESTOP SYSTEM ARE EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED. THE T, FT, FTH RATINGS ARE 0 AND 1/4 HR FOR 1 AND 2 HR RATED WALL ASSEMBLIES, RESPECTIVELY.
2. STEEL SLEEVE — CYLINDRICAL SLEEVE FABRICATED FROM MIN 0.016" THICK GALV SHEET STEEL AND HAVING A MIN 1" LAP ALONG THE LONGITUDINAL SEAM. SLEEVE INSTALLED BY COILING THE SHEET STEEL TO A Ø SMALLER THAN THE THROUGH OPENING, INSERTING THE COIL THROUGH THE OPENINGS AND RELEASING THE COIL TO LET IT UNCOIL AGAINST THE CIRCULAR CUTOUTS IN THE GYPSUM BOARD LAYERS. THE ENDS OF THE STEEL SLEEVE SHALL BE FLUSH WITH OR EXTEND MAX 1" BEYOND EACH SURFACE OF THE WALL.
3. THROUGH PENETRANTS — ONE METALLIC PIPE, CONDUIT OR TUBING INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN PIPE, CONDUIT OR TUBING AND PERIPHERY OF SLEEVE SHALL BE MIN 0" (POINT CONTACT) TO MAX 1-7/8". PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
   A. STEEL PIPE — NOM 8" Ø (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE — NOM 8" Ø (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT — NOM 4" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" STEEL CONDUIT.
   D. COPPER TUBING — NOM 4" Ø (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE — NOM 4" Ø (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
4. CONFIGURATION A
   FILL, VOID OR CAVITY MATERIAL* — SEALANT — MIN 1" THICKNESS OF SEALANT APPLIED WITHIN ANNULUS, FLUSH WITH BOTH ENDS OF SLEEVE. A MIN 1/4" Ø BEAD OF SEALANT TO BE APPLIED AT THE TUBING/SLEEVE INTERFACE AT THE POINT CONTACT LOCATION AND AROUND THE ENTIRE PERIMETER OF THE SLEEVE AT THE SLEEVE/GYPSUM BOARD INTERFACE WHEN THE SLEEVE EXTENDS BEYOND THE WALL SURFACE.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 SEALANT, FS ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT.
5. CONFIGURATION B
   FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING ITEMS:
   A. PACKING MATERIAL — MIN 5/8" THICKNESS OF MIN 4 PCF MINERAL WOOL BAT INSULATION COMPRESSED AND TIGHTLY AND PACKED IN TO EACH END OF THE SLEEVE. PACKING MATERIAL IS TO BE RECESSED FROM EACH END OF THE SLEEVE TO ACCOMMODATE FILL MATERIAL.
   A1. PACKING MATERIAL — STRIPS — (AS AN ALTERNATE TO CONFIG .B ITEM 4A) - NOM 5/8" WIDE PRECUT MINERAL WOOL STRIPS. THE STRIPS ARE FIRMLY PACKED INTO THE GAP BETWEEN THE PIPE AND SLEEVE. THE STRIPS ARE TO BE INSTALLED AT THE POINT CONTACT LOCATION. PACKING MATERIAL IS TO BE RECESSED FROM EACH END OF THE SLEEVE TO ACCOMMODATE FILL MATERIAL.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 767 SPEED STRIPS.
   B. FILL, VOID OR CAVITY MATERIAL* — SEALANT — MIN 1/2" THICKNESS OF SEALANT APPLIED WITHIN ANNULUS, FLUSH WITH BOTH ENDS OF SLEEVE. A MIN 1/4" Ø BEAD OF SEALANT TO BE APPLIED AT THE TUBING/SLEEVE INTERFACE AT THE POINT CONTACT LOCATION AND AROUND THE ENTIRE PERIMETER OF THE SLEEVE AT THE SLEEVE/GYPSUM BOARD INTERFACE WHEN THE SLEEVE EXTENDS BEYOND THE WALL SURFACE.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 SEALANT OR FS ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT
   * INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

ALL WALL AND FLOOR PENETRATIONS MADE UNDER THIS PROJECT SHALL BE SEALED PER THE APPLICABLE DETAIL WHETHER THE WALL OR FLOOR IS KNOWN TO BE FIRE RATED OR NOT

GYPSUM WALL PENNETRATION DETAIL

SCALE N.T.S. | 5



NOTE:
1. CBC2022, 11B-308.1.1 ELECTRICAL SWITCHES: CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF A ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES OR COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL COMPLY WITH SECTION 11B-308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.
2. CBC2022, 11B-308.1.2 ELECTRICAL RECEPTACLE OUTLETS: ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL COMPLY WITH SECTION 11B-308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.
3. CBC2022, 11B-309.4 OPERATION: OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM.
4. OPERABLE PARTS CANNOT BE LOCATED WHERE A PERSON USING A WHEELCHAIR WOULD BE FORCED TO REACH OVER AN OBSTRUCTION.
5. FIRE ALARM INITIATING DEVICE MUST BE LOCATED ON PATH OF TRAVEL.
6. PROVIDE FRONT AND PARALLEL APPROACH AT NEWLY INSTALLED FIRE ALARM INITIATING DEVICE.

MOUNTING HEIGHT OVER OBSTRUCTION

SCALE N.T.S. | 6

REV	DATE	DESCRIPTION
	12/10/2025	BID SET
	11/06/2026	ADDENDUM # 4

multi-discipline collaborative
MDC engineers,INC
Consulting Engineers
5101 E La Palma Ave., Suite 205
Anaheim Hills, CA 92807-2056
Tel: (213) 746-2644
Fax: (213) 746-6463

STAMP
LICENSED PROFESSIONAL ENGINEER SIGNATURE SUMETHEIN No.E 19325 Exp. 12/31/27 ELECTRICAL STATE OF CALIFORNIA

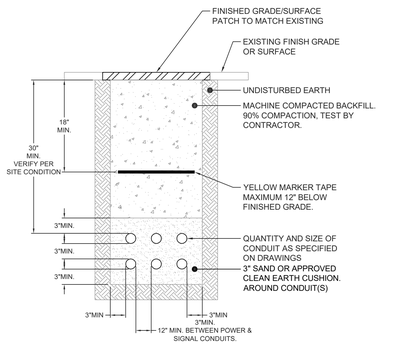
PUBLIC ADDRESS SYSTEM
MCKINLEY ELEMENTARY SCHOOL
14431 S STANFORD AVE
COMPTON, CA 90220

COMPTON UNIFIED SCHOOL DISTRICT
501 S SANTA FE AVE,
COMPTON, CA 90221

ELECTRICAL DETAILS

PROJECT	2025-008
DRAWN	RUNGSUB SU
CHECKED	BA SATYA
SHEET	E3.1

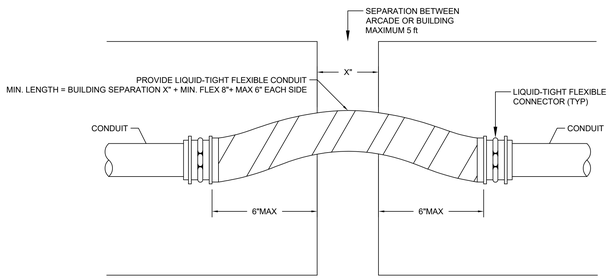
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NOTES:
1. SAW CUT AND PATCH (E) CONCRETE/ASPHALT TO MATCH ADJACENT SURFACES.
2. ALL UNDERGROUND CONDUITS SHALL BE PVC SCH40 WITH GRC RISER.

UNDERGROUND CONDUIT DUCT BANK DETAIL

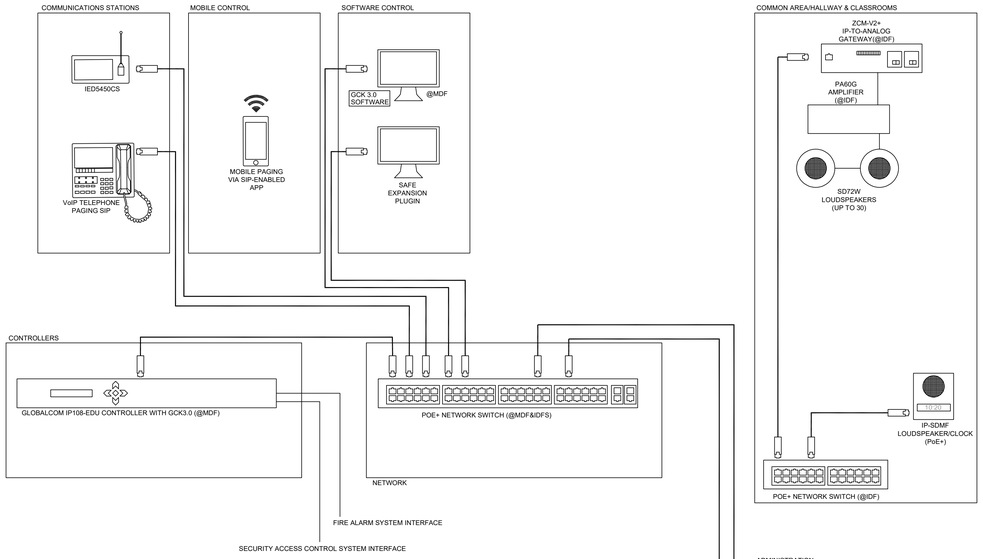
SCALE N.T.S. | 2



CONDUIT CONNECTION AT BUILDING OR ARCADE SEPARATION PLAN VIEW. PROVIDE GROUND WIRE WITHIN FLEXIBLE CONDUIT. (PORTABLE BUILDING ONLY)

CONDUIT CONNECTION AT BUILDING OR ARCADE SEPARATION

SCALE N.T.S. | 3



ATLAS IED GLOBAL COMP IP PA SYSTEM COMPONENTS & CABLING REQUIREMENTS:

PART NUMBER	EQUIPMENT DESCRIPTION
PoE+ SWITCHES:	PROVIDED AND PROGRAMMED BY CONTRACTOR. IP ENDPOINTS SHALL USE IEEE 802.3 STANDARD POE IMPLEMENTATION SO THAT THEY CAN BE USED WITH ANY IEEE 802.3AT (POE+) 10GB MANAGED POE + SWITCHES (30W/PORT).
IP108 - EDU	GLOBAL COM IP CONTROLLER (CAT 6 (GREEN COLOR) CABLING TO PoE+ SWITCH AT IDF/MDF). USE IED 1112PS RACK MOUNTED POWER SUPPLY 12VDC (CONNECT TO RACK PDU). SOFTWARE TO BE INSTALLED AT ADMINISTRATIVE COMPUTER WITH GCK & ALL OTHER SOFTWARE APPLICATIONS SUPPORTED BY ATLAS IED SYSTEM
SAFE SERVER SOFTWARE CONTROL	EDU SOFTWARE, SAFE SERVER EXPANSION PLUG IN - FOR EMERGENCY ACKNOWLEDGEMENT APPLICATION, SAFE DESKTOP – COMPUTER POP UP EMERGENCY/INSTANT MESSAGE. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
VOIP TELEPHONE INTERFACE	SIP INTERFACE AND IED 5450CS & MOBILE PAGING VIA MOBILE PAGING SIP ENABLED APP. LOCATED ALONG WITH CONTROLLER AT MDF.
FOR DISTRICT SELECTED VOIP	SYSTEM ENABLED APP. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
IPCSDTOUCH-G	GLOBALCOM IP SERIES PROGRAMMABLE TOUCH SCREEN DIGITAL COMMUNICATION STATION (CAT 6+ CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
SUPERVISED FIRE ALARM INTERFACE	FIRE ALARM TAKES PRIORITY, INTERFACE WITH IP-108 & FACP WITH CONTACT CLOSURE CONNECTION. ONCE FA RELAY EITHER OPENS OR CLOSE THE CONTACT – CLOSURE INPUT PORT SHALL LAUNCH AN EVENT BASED TO MUTE ALL MESSAGES & FIRE ALARM SYSTEM SHALL TAKE PRIORITY.
IP-SDMF	CLASSROOM WALL MOUNTED, PoE + INDOOR IP END POINT WITH SPEAKER, LCD CLOCK, INTEGRATED TALK BACK MICROPHONE AND LED FLASHER (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
SD72W	INDOOR CEINING PRE ASSEMBLED 8" ANALOG EXTENSION LOUD SPEAKER & BAFFLE, FOR USE WITH IXP END POINTS, IP 8 OHM EXTENSION SPEAKERS WHEN CONNECTED TO ATLAS IED IPX END POINT WHEN USED AT LARGER ROOMS WITH SURFACE MOUNT SLANTED ENCLOUSRE FOR IP-8
IP – HVP	HIGH OUTPUT OUTDOOR HORN SPEAKER WITH IP - SEST - HPV - SURFACE MOUNT STRAIGHT ENCLOSURE FOR IP - HV SPEAKER, PoE+ VANDAL AND WEATHER RESISTANT WALL MOUNT IP SPEAKER. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF USE INDOOR/OUTDOOR CAT 6 (GREEN COLOR) CABLE WHEN EXPOSED TO WEATHER DAMP,WET LOCATIONS). COLOR CODE CABLE WITH GREEN LIQUID TAPE AT BOTH ENDS.
SD72 W (SPEAKER WITH KIT)	KIT INCLUDING SD72W CS95 – 8 – 81 8R (RECESSED AT CEILING T- BAR/GYP BOARD) - DAISY CHAIN CONNECTED TO IP – ZCM. (MAXIMUM UPTO 30 SPEAKERS). ADJUST TAP WATTAGE AS REQUIRED @ 70.7V TO MAINTAIN AUDIBILITY OF SPACE. USE 14/2 AWG SPEAKER WIRE CONNECTED TO PA 60G AMPLIFIER.
IP -SEST -S	SURFACE MOUNT STRAIGHT ENCLOSURE
IP ZCM 2RMK– V2+ (ZONE CONTROLLER)	PoE+ IP TO ANLOG GATEWAY DUAL OUTPUTE KIT WITH PA702 – RMK RACK MOUNT KIT (LOCATE AT IDF/MDF RACKS, CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
PA 60G	60 W AMPLIFIER.
IP-SEA -SD	SURFACE MOUNT SLANTED ENCLOSURE (IP-SDMF-72)
IP – SEST -HVP	SURFACE MOUNT STRAIGHT ENCLOSURE (IP- HPV)

NOTES:
1. ATHLETICS/GYM/AUDITORIUM HAS EXISTING AUTONOMOUS SYSTEM - INTERFACE IP ZCM V2+ GATEWAY (IP TO ANALOG GATEWAY) WITH ATLAS IED SYSTEM TO MUTE AUTONOMOUS PA DURING CAMPUS WIDE PA ACTIVATES AND ADD ATLAS IED PA SPEAKERS FOR SITE WIDE PA NOTIIFICATION.
2. ALL INSTALLATION, CABLING, PROGRAMMING, TESTING SHALL COMPLY WITH MANUFACTURER'S RECOMMENDATION SHALL BE PROVIDED BY CONTRACTOR. CONTRACTOR SHALL COORDINATE WITH DISTRICT AND PROVIDE COMPLETELY OPERABLE INSTALLATION AND DISTRICT TRAINING.
3. ALL ATLAS IED CAT 6 CABLES SHALL BE BELDEN WITH GREEN COLOR JACKET & JACKS.

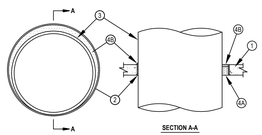
ATLAS IED SYSTEM BLOCK DIAGRAM

SCALE N.T.S. | 1

CLASSIFIED C UL US
Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

System No. C-AJ-1155

ANSI/UL1479 (ASTM E814)
F Rating — 2 and 3 Hr (See Item 3)
T Rating —0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft
L Rating At 400 F — 4 CFM/sq ft
W Rating — Class 1 (See Item 4)



1. FLOOR OR WALL ASSEMBLY — MIN 4-1/2" THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M3) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX Ø OF OPENING IS 32".
2. SEE CONCRETE BLOCKS (CAZT) CATEGORY IN FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
3. METALLIC SLEEVE (OPTIONAL) — NOM 32" Ø (OR SMALLER) SCHEDULE 40 (OR HEAVIER) STEEL PIPE CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY, FLUSH WITH FLOOR OR WALL ASSEMBLY.
4. THROUGH PENETRANTS — ONE METALLIC PIPE OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. PIPE OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE ANNULAR SPACE SHALL BE MIN 0" (POINT CONTACT) TO MAX 12". WHEN MAXIMUM ANNULAR SPACE EXCEEDS 2-1/4" THE F RATING IS 2 HR. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR TUBING MAY BE USED:
   A. STEEL PIPE — NOM 20" Ø (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE — NOM 20" Ø (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT — NOM 4" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" Ø (OR SMALLER) STEEL CONDUIT.
   D. COPPER TUBING — NOM 6" Ø (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE — NOM 6" Ø (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE
5. FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
   A. PACKING MATERIAL — MIN 4" THICKNESS OF MIN 4 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP END OF SLEEVE FOR FLOORS OR FROM BOTH ENDS OF SLEEVE FOR WALLS TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
   B. FILL, VOID OR CAVITY MATERIAL* — SEALANT — MIN 1/2" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH THE TOP END OF THE SLEEVE FOR FLOORS, OR WITH BOTH ENDS OF THE SLEEVE FOR WALLS. MIN 1/2" THICK BEAD OF ALL MATERIAL TO BE INSTALLED AROUND PIPE AT INTERFACE OF SLEEVE FOR POINT CONTACT INSTALLATIONS. W RATING APPLIES ONLY WHEN FS-ONE MAX INTUMESCENT SEALANT IS USED. FOR THE W RATING, MAX ANNULAR SPACE IS 1-7/8" AND AN ADDITIONAL FILM OF SEALANT SHALL BE APPLIED OVER THE SLEEVE (WHEN USED) LAPPING AT LEAST 1/2" ONTO TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL.

   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT

*INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

X-RAY ALL MASONRY/CONCRETE WALL/CEILING PENETRATIONS PRIOR TO WORK. USE SLEEVES OR CORE DRILLING FOR PENETRATIONS (LOCATIONS TO BE DETERMINED BASED ON STRUCTURAL CONDITIONS, EXISTING OBSTRUCTIONS, AND FIELD CONDITIONS, AND COORDINATED WITH THE DISTRICT). NO CONDUITS THROUGH STRUCTURAL SLABS.

HOLES IN WALL AND FLOOR SHALL BE DONE BY CORE DRILLING ONLY. DO NOT DAMAGE REINFORCING STEEL BAR IN WALL. LOCATE BY NON-DESTRUCTIVE MEANS PRIOR TO CORING.

ALL WALL AND FLOOR PENETRATIONS MADE UNDER THIS PROJECT SHALL BE SEALED PER THE APPLICABLE DETAIL WHETHER THE WALL OR FLOOR IS KNOWN TO BE FIRE RATED OR NOT

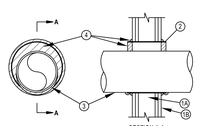
CONCRETE/MASONRY WALL/FLOOR PENETRATION DETAIL

SCALE N.T.S. | 4

CLASSIFIED C UL US
Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

System No. W-L-1465

ANSI/UL1479 (ASTM E814)
F Rating — 1 or 2 Hr (See Item 1)
T Rating — 0 and 1/4 Hr (See Item 1)
L Rating At Ambient — Less Than 1 CFM/Sq Ft
L Rating At 400 F — Less Than 1 CFM/Sq Ft

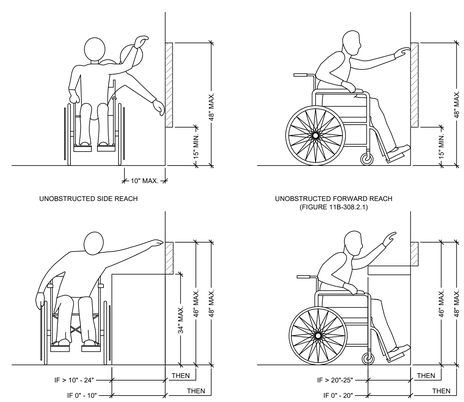


1. WALL ASSEMBLY — THE 1 OR 2 HR FIRE RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300, U400, V400 OR W400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS — WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4" LUMBER SPACED MAX 16" OC. STEEL STUDS TO BE MIN 3-1/2" WIDE AND SPACED MAX 24" OC.
   B. GYPSUM BOARD* — THICKNESS, TYPE, NUMBER OF LAYERS AND ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX Ø OF OPENING IS 10" THE HOURLY F, FH RATINGS OF THE FIRESTOP SYSTEM ARE EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED. THE T, FT, FTH RATINGS ARE 0 AND 1/4 HR FOR ANY FIRE RATED WALL ASSEMBLY.
2. STEEL SLEEVE (OPTIONAL) — SLEEVE FABRICATED FROM MIN 0.016" THICK GALV SHEET STEEL AND HAVING A MIN 1" LAP ALONG THE LONGITUDINAL SEAM. SLEEVE INSTALLED BY COILING THE SHEET STEEL TO A Ø SMALLER THAN THE THROUGH OPENING, INSERTING THE COIL THROUGH THE OPENINGS AND RELEASING THE COIL TO LET IT UNCOIL AGAINST THE CIRCULAR CUTOUTS IN THE GYPSUM BOARD LAYERS. THE ENDS OF THE STEEL SLEEVE SHALL BE FLUSH WITH OR EXTEND MAX 1" BEYOND EACH SURFACE OF THE WALL.
3. THROUGH PENETRANTS — ONE METALLIC PIPE, CONDUIT OR TUBING INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN PIPE, CONDUIT OR TUBING AND PERIPHERY OF SLEEVE SHALL BE MIN 0" (POINT CONTACT) TO MAX 1-7/8". PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
   A. STEEL PIPE — NOM 8" Ø (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE — NOM 8" Ø (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT — NOM 4" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" STEEL CONDUIT.
   D. COPPER TUBING — NOM 4" Ø (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE — NOM 4" Ø (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
4. CONFIGURATION A
   FILL VOID OR CAVITY MATERIAL* — SEALANT — MIN 1" THICKNESS OF SEALANT APPLIED WITHIN ANNULUS, FLUSH WITH BOTH ENDS OF SLEEVE. A MIN 1/4" Ø BEAD OF SEALANT TO BE APPLIED AT THE TUBING/SLEEVE INTERFACE AT THE POINT CONTACT LOCATION AND AROUND THE ENTIRE PERIMETER OF THE SLEEVE AT THE SLEEVE/GYPSUM BOARD INTERFACE WHEN THE SLEEVE EXTENDS BEYOND THE WALL SURFACE.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 SEALANT, FS ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT
5. CONFIGURATION B
   FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING ITEMS:
   A. PACKING MATERIAL — MIN 5/8" THICKNESS OF MIN 4 PCF MINERAL WOOL BAT INSULATION COMPRESSED AND TIGHTLY AND PACKED IN TO EACH END OF THE SLEEVE. PACKING MATERIAL IS TO BE RECESSED FROM EACH END OF THE SLEEVE TO ACCOMMODATE FILL MATERIAL.
   A1. PACKING MATERIAL* - STRIPS — (AS AN ALTERNATE TO CONFIG .B ITEM 4A) - NOM 5/8" WIDE PRECUT MINERAL WOOL STRIPS. THE STRIPS ARE FIRMLY PACKED INTO THE GAP BETWEEN PENETRANT AND THE STEEL SLEEVE ITEM 2 ON BOTH SIDES OF THE WALL. PACKING MATERIAL IS TO BE RECESSED FROM EACH END OF THE SLEEVE TO ACCOMMODATE FILL MATERIAL.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 767 SPEED STRIPS
   B. FILL VOID OR CAVITY MATERIAL* — SEALANT — MIN 1/2" THICKNESS OF SEALANT APPLIED WITHIN ANNULUS, FLUSH WITH BOTH ENDS OF SLEEVE. A MIN 1/4" Ø BEAD OF SEALANT TO BE APPLIED AT THE TUBING/SLEEVE INTERFACE AT THE POINT CONTACT LOCATION AND AROUND THE ENTIRE PERIMETER OF THE SLEEVE AT THE SLEEVE/GYPSUM BOARD INTERFACE WHEN THE SLEEVE EXTENDS BEYOND THE WALL SURFACE.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 SEALANT OR FS ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT
   * INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

ALL WALL AND FLOOR PENETRATIONS MADE UNDER THIS PROJECT SHALL BE SEALED PER THE APPLICABLE DETAIL WHETHER THE WALL OR FLOOR IS KNOWN TO BE FIRE RATED OR NOT

GYPSUM WALL PENNETRATION DETAIL

SCALE N.T.S. | 5



NOTE:
1. CBC2022, 11B-308.1.1 ELECTRICAL SWITCHES: CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF A ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES OR COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL COMPLY WITH SECTION 11B-308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.
2. CBC2022, 11B-308.1.2 ELECTRICAL RECEPTACLE OUTLETS: ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL COMPLY WITH SECTION 11B-308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.
3. CBC2022, 11B-309.4 OPERATION: OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM.
4. OPERABLE PARTS CANNOT BE LOCATED WHERE A PERSON USING A WHEELCHAIR WOULD BE FORCED TO REACH OVER AN OBSTRUCTION.
5. FIRE ALARM INITIATING DEVICE MUST BE LOCATED ON PATH OF TRAVEL.
6. PROVIDE FRONT AND PARALLEL APPROACH AT NEWLY INSTALLED FIRE ALARM INITIATING DEVICE.

MOUNTING HEIGHT OVER OBSTRUCTION

SCALE N.T.S. | 6

REV	DATE	DESCRIPTION
	12/10/2025	BID SET
	11/06/2026	ADDENDUM # 4

multi-discipline collaborative
MDC engineers,INC
Consulting Engineers
5101 E La Palma Ave., Suite 205
Anaheim Hills, CA 92807-2056
Tel: (213) 745-2644
Fax: (213) 745-6483

STAMP
REGISTERED PROFESSIONAL ENGINEER
No.E 19325
Exp.12/31/2026
STATE OF CALIFORNIA

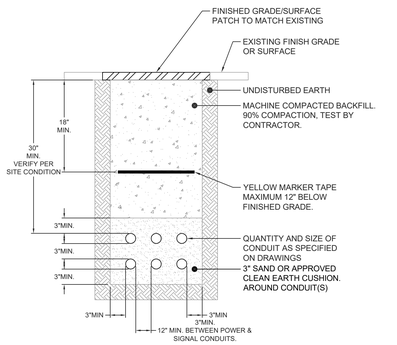
PUBLIC ADDRESS SYSTEM
ROBERT F. KENNEDY ELEMENTARY SCHOOL
1305 S. CLEANDER
COMPTON, CA 90221

COMPTON UNIFIED SCHOOL DISTRICT
501 S SANTA FE AVE,
COMPTON, CA 90221

ELECTRICAL DETAILS

PROJECT	2025-008
DRAWN	RUNGSUB SU
CHECKED	BA SATYA
SHEET	E3.1

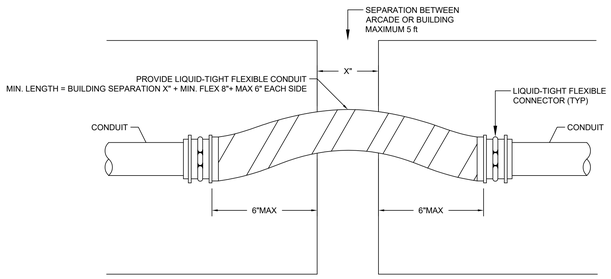
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NOTES:
1. SAW CUT AND PATCH (E) CONCRETE/ASPHALT TO MATCH ADJACENT SURFACES.
2. ALL UNDERGROUND CONDUITS SHALL BE PVC SCH40 WITH GRC RISER.

UNDERGROUND CONDUIT DUCT BANK DETAIL

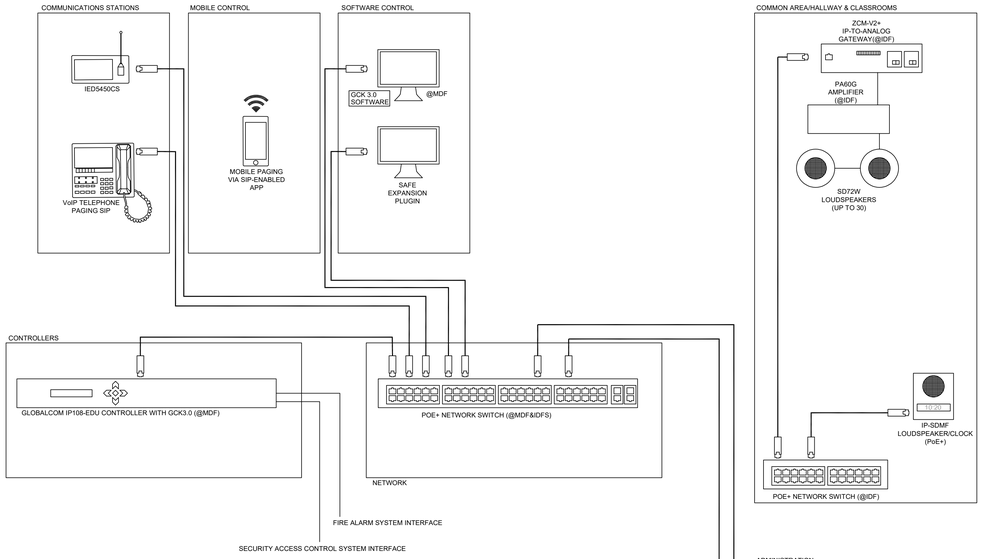
SCALE N.T.S. | 2



CONDUIT CONNECTION AT BUILDING OR ARCADE SEPARATION PLAN VIEW. PROVIDE GROUND WIRE WITHIN FLEXIBLE CONDUIT. (PORTABLE BUILDING ONLY)

CONDUIT CONNECTION AT BUILDING OR ARCADE SEPARATION

SCALE N.T.S. | 3



ATLAS IED GLOBAL COMP IP PA SYSTEM COMPONENTS & CABLING REQUIREMENTS:

PART NUMBER	EQUIPMENT DESCRIPTION
PoE+ SWITCHES:	PROVIDED AND PROGRAMMED BY CONTRACTOR. IP ENDPOINTS SHALL USE IEEE 802.3 STANDARD POE IMPLEMENTATION SO THAT THEY CAN BE USED WITH ANY IEEE 802.3AT (POE+) 10GB MANAGED POE + SWITCHES (30W/PORT).
IP108 - EDU	GLOBAL COM IP CONTROLLER (CAT 6 (GREEN COLOR) CABLING TO PoE+ SWITCH AT IDF/MDF). USE IED 1112PS RACK MOUNTED POWER SUPPLY 12VDC (CONNECT TO RACK PDU). SOFTWARE TO BE INSTALLED AT ADMINISTRATIVE COMPUTER WITH GCK & ALL OTHER SOFTWARE APPLICATIONS SUPPORTED BY ATLAS IED SYSTEM
SAFE SERVER SOFTWARE CONTROL	EDU SOFTWARE, SAFE SERVER EXPANSION PLUG IN - FOR EMERGENCY ACKNOWLEDGEMENT APPLICATION, SAFE DESKTOP – COMPUTER POP UP EMERGENCY/INSTANT MESSAGE. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
VOIP TELEPHONE INTERFACE	SIP INTERFACE AND IED 5450CS & MOBILE PAGING VIA MOBILE PAGING SIP ENABLED APP. LOCATED ALONG WITH CONTROLLER AT MDF.
FOR DISTRICT SELECTED VOIP	SYSTEM ENABLED APP. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
IPCSDTOUCH-G	GLOBALCOM IP SERIES PROGRAMMABLE TOUCH SCREEN DIGITAL COMMUNICATION STATION (CAT 6+ CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
SUPERVISED FIRE ALARM INTERFACE	FIRE ALARM TAKES PRIORITY, INTERFACE WITH IP-108 & FACP WITH CONTACT CLOSURE CONNECTION. ONCE FA RELAY EITHER OPENS OR CLOSE THE CONTACT – CLOSURE INPUT PORT SHALL LAUNCH AN EVENT BASED TO MUTE ALL MESSAGES & FIRE ALARM SYSTEM SHALL TAKE PRIORITY.
IP-SDMF	CLASSROOM WALL MOUNTED, PoE + INDOOR IP END POINT WITH SPEAKER, LCD CLOCK, INTEGRATED TALK BACK MICROPHONE AND LED FLASHER (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
SD72W	INDOOR CEIINING PRE ASSEMBLED 8" ANALOG EXTENSION LOUD SPEAKER & BAFFLE, FOR USE WITH IXP END POINTS, IP 8 OHM EXTENSION SPEAKERS WHEN CONNECTED TO ATLAS IED IPX END POINT WHEN USED AT LARGER ROOMS WITH SURFACE MOUNT SLANTED ENCLOUSRE FOR IP-8
IP – HVP	HIGH OUTPUT OUTDOOR HORN SPEAKER WITH IP - SEST - HPV - SURFACE MOUNT STRAIGHT ENCLOSURE FOR IP - HV SPEAKER, PoE+ VANDAL AND WEATHER RESISTANT WALL MOUNT IP SPEAKER. (CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF USE INDOOR/OUTDOOR CAT 6 (GREEN COLOR) CABLE WHEN EXPOSED TO WEATHER DAMP;WET LOCATIONS). COLOR CODE CABLE WITH GREEN LIQUID TAPE AT BOTH ENDS.
SD72 W (SPEAKER WITH KIT)	KIT INCLUDING SD72W CS95 – 8 – 81 8R (RECESSED AT CEILING T- BAR/GYP BOARD) - DAISY CHAIN CONNECTED TO IP – ZCM. (MAXIMUM UPTO 30 SPEAKERS). ADJUST TAP WATTAGE AS REQUIRED @ 70.7V TO MAINTAIN AUDIBILITY OF SPACE. USE 14/2 AWG SPEAKER WIRE CONNECTED TO PA 60G AMPLIFIER.
IP -SEST -S	SURFACE MOUNT STRAIGHT ENCLOSURE
IP ZCM 2RMK– V2+ (ZONE CONTROLLER)	PoE+ IP TO ANLOG GATEWAY DUAL OUTPUTE KIT WITH PA702 – RMK RACK MOUNT KIT (LOCATE AT IDF/MDF RACKS, CAT 6 (GREEN COLOR) CABLING WITH RJ 45 JACK TO PoE+ SWITCH AT IDF/MDF).
PA 60G	60 W AMPLIFIER.
IP-SEA -SD	SURFACE MOUNT SLANTED ENCLOSURE (IP-SDMF-72)
IP – SEST -HVP	SURFACE MOUNT STRAIGHT ENCLOSURE (IP- HPV)

NOTES:
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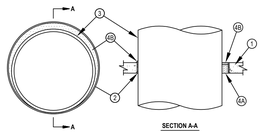
ATLAS IED SYSTEM BLOCK DIAGRAM

SCALE N.T.S. | 1

CLASSIFIED C UL US
Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

System No. C-AJ-1155

ANSI/UL1479 (ASTM E814)
F Rating — 2 and 3 Hr (See Item 3)
T Rating —0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft
L Rating At 400 F — 4 CFM/sq ft
W Rating — Class 1 (See Item 4)



1. FLOOR OR WALL ASSEMBLY — MIN 4-1/2" THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M3) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX Ø OF OPENING IS 32".
2. SEE CONCRETE BLOCKS (CAZT) CATEGORY IN FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
3. METALLIC SLEEVE (OPTIONAL) — NOM 32" Ø (OR SMALLER) SCHEDULE 40 (OR HEAVIER) STEEL PIPE CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY, FLUSH WITH FLOOR OR WALL ASSEMBLY.
4. THROUGH PENETRANTS — ONE METALLIC PIPE OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. PIPE OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE ANNULAR SPACE SHALL BE MIN 0" (POINT CONTACT) TO MAX 12". WHEN MAXIMUM ANNULAR SPACE EXCEEDS 2-1/4" THE F RATING IS 2 HR. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR TUBING MAY BE USED:
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   B. IRON PIPE — NOM 20" Ø (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT — NOM 4" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" Ø (OR SMALLER) STEEL CONDUIT.
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   B. FILL, VOID OR CAVITY MATERIAL* — SEALANT — MIN 1/2" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH THE TOP END OF THE SLEEVE FOR FLOORS, OR WITH BOTH ENDS OF THE SLEEVE FOR WALLS. MIN 1/2" THICK BEAD OF ALL MATERIAL TO BE INSTALLED AROUND PIPE AT INTERFACE OF SLEEVE FOR POINT CONTACT INSTALLATIONS. W RATING APPLIES ONLY WHEN FS-ONE MAX INTUMESCENT SEALANT IS USED. FOR THE W RATING, MAX ANNULAR SPACE IS 1-7/8" AND AN ADDITIONAL FILM OF SEALANT SHALL BE APPLIED OVER THE SLEEVE (WHEN USED) LAPPING AT LEAST 1/2" ONTO TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL.

   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT

*INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

X-RAY ALL MASONRY/CONCRETE WALL/CEILING PENETRATIONS PRIOR TO WORK. USE SLEEVES OR CORE DRILLING FOR PENETRATIONS (LOCATIONS TO BE DETERMINED BASED ON STRUCTURAL CONDITIONS, EXISTING OBSTRUCTIONS, AND FIELD CONDITIONS, AND COORDINATED WITH THE DISTRICT). NO CONDUITS THROUGH STRUCTURAL SLABS.

HOLES IN WALL AND FLOOR SHALL BE DONE BY CORE DRILLING ONLY. DO NOT DAMAGE REINFORCING STEEL BAR IN WALL. LOCATE BY NON-DESTRUCTIVE MEANS PRIOR TO CORING.

ALL WALL AND FLOOR PENETRATIONS MADE UNDER THIS PROJECT SHALL BE SEALED PER THE APPLICABLE DETAIL WHETHER THE WALL OR FLOOR IS KNOWN TO BE FIRE RATED OR NOT

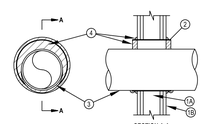
CONCRETE/MASONRY WALL/FLOOR PENETRATION DETAIL

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CLASSIFIED C UL US
Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

System No. W-L-1465

ANSI/UL1479 (ASTM E814)
F Rating — 1 or 2 Hr (See Item 1)
T Rating — 0 and 1/4 Hr (See Item 1)
L Rating At Ambient — Less Than 1 CFM/Sq Ft
L Rating At 400 F — Less Than 1 CFM/Sq Ft

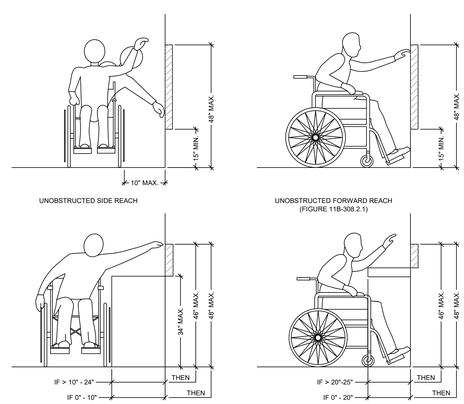


1. WALL ASSEMBLY — THE 1 OR 2 HR FIRE RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300, U400, V400 OR W400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS — WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4" LUMBER SPACED MAX 16" OC. STEEL STUDS TO BE MIN 3-1/2" WIDE AND SPACED MAX 24" OC.
   B. GYPSUM BOARD* — THICKNESS, TYPE, NUMBER OF LAYERS AND ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX Ø OF OPENING IS 10" THE HOURLY F, FH RATINGS OF THE FIRESTOP SYSTEM ARE EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED. THE T, FT, FTH RATINGS ARE 0 AND 1/4 HR FOR ALL FIRE RATED WALLS.
2. STEEL SLEEVE (OPTIONAL) — SLEEVE FABRICATED FROM MIN 0.016" THICK GALV SHEET STEEL AND HAVING A MIN 1" LAP ALONG THE LONGITUDINAL SEAM. SLEEVE INSTALLED BY COILING THE SHEET STEEL TO A Ø SMALLER THAN THE THROUGH OPENING, INSERTING THE COIL THROUGH THE OPENINGS AND RELEASING THE COIL TO LET IT UNCOIL AGAINST THE CIRCULAR CUTOUTS IN THE GYPSUM BOARD LAYERS. THE ENDS OF THE STEEL SLEEVE SHALL BE FLUSH WITH OR EXTEND MAX 1" BEYOND EACH SURFACE OF THE WALL.
3. THROUGH PENETRANTS — ONE METALLIC PIPE, CONDUIT OR TUBING INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN PIPE, CONDUIT OR TUBING AND PERIPHERY OF SLEEVE SHALL BE MIN 0" (POINT CONTACT) TO MAX 1-7/8". PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
   A. STEEL PIPE — NOM 8" Ø (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE — NOM 8" Ø (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT — NOM 4" Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6" STEEL CONDUIT.
   D. COPPER TUBING — NOM 4" Ø (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE — NOM 4" Ø (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
4. CONFIGURATION A
   FILL, VOID OR CAVITY MATERIAL* — SEALANT — MIN 1" THICKNESS OF SEALANT APPLIED WITHIN ANNULUS, FLUSH WITH BOTH ENDS OF SLEEVE. A MIN 1/4" Ø BEAD OF SEALANT TO BE INSTALLED AROUND SLEEVE INTERFACE AT THE POINT CONTACT LOCATION AND AROUND THE ENTIRE PERIMETER OF THE SLEEVE AT THE SLEEVE/GYPSUM BOARD INTERFACE WHEN THE SLEEVE EXTENDS BEYOND THE WALL SURFACE.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 SEALANT, FS ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT
5. CONFIGURATION B
   FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING ITEMS:
   A. PACKING MATERIAL — MIN 5/8" THICKNESS OF MIN 4 PCF MINERAL WOOL BAT INSULATION COMPRESSED AND TIGHTLY AND PACKED IN TO EACH END OF THE SLEEVE. PACKING MATERIAL IS TO BE RECESSED FROM EACH END OF THE SLEEVE TO ACCOMMODATE FILL MATERIAL.
   A1. PACKING MATERIAL* - STRIPS — (AS AN ALTERNATE TO CONFIG .B ITEM 4A) - NOM 5/8" WIDE PRECUT MINERAL WOOL STRIPS. THE STRIPS ARE FIRMLY PACKED INTO THE GAP BETWEEN PENETRANT AND THE STEEL SLEEVE ITEM 2 ON BOTH SIDES OF THE WALL. PACKING MATERIAL IS TO BE RECESSED FROM EACH END OF THE SLEEVE TO ACCOMMODATE FILL MATERIAL.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 767 SPEED STRIPS
   B. FILL VOID OR CAVITY MATERIAL* — SEALANT — MIN 1/2" THICKNESS OF SEALANT APPLIED WITHIN ANNULUS, FLUSH WITH BOTH ENDS OF SLEEVE. A MIN 1/4" Ø BEAD OF SEALANT TO BE APPLIED AT THE TUBING/SLEEVE INTERFACE AT THE POINT CONTACT LOCATION AND AROUND THE ENTIRE PERIMETER OF THE SLEEVE AT THE SLEEVE/GYPSUM BOARD INTERFACE WHEN THE SLEEVE EXTENDS BEYOND THE WALL SURFACE.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 SEALANT OR FS ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT
   * INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

ALL WALL AND FLOOR PENETRATIONS MADE UNDER THIS PROJECT SHALL BE SEALED PER THE APPLICABLE DETAIL WHETHER THE WALL OR FLOOR IS KNOWN TO BE FIRE RATED OR NOT

GYPSUM WALL PENNETRATION DETAIL

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NOTE:
1. CBC2022, 11B-308.1.1 ELECTRICAL SWITCHES: CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF A ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES OR COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL COMPLY WITH SECTION 11B-308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.
2. CBC2022, 11B-308.1.2 ELECTRICAL RECEPTACLE OUTLETS: ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL COMPLY WITH SECTION 11B-308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.
3. CBC2022, 11B-309.4 OPERATION: OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM.
4. OPERABLE PARTS CANNOT BE LOCATED WHERE A PERSON USING A WHEELCHAIR WOULD BE FORCED TO REACH OVER AN OBSTRUCTION.
5. FIRE ALARM INITIATING DEVICE MUST BE LOCATED ON PATH OF TRAVEL.
6. PROVIDE FRONT AND PARALLEL APPROACH AT NEWLY INSTALLED FIRE ALARM INITIATING DEVICE.

MOUNTING HEIGHT OVER OBSTRUCTION

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REV	DATE	DESCRIPTION
	12/10/2025	BID SET
	11/06/2026	ADDENDUM # 4

PUBLIC ADDRESS SYSTEM
RONALD E. MCNAIR ELEMENTARY SCHOOL
1450 W EL SEGUNDO BLVD
COMPTON, CA 90221

COMPTON UNIFIED SCHOOL DISTRICT
501 S SANTA FE AVE,
COMPTON, CA 90221

ELECTRICAL DETAILS

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MDC engineers,INC
Consulting Engineers
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Anaheim Hills, CA 92807-2056
Tel: (213) 745-2644
Fax: (213) 745-6483

STAMP
LICENSED PROFESSIONAL ENGINEER
No.E 19325
Exp.12/31/2026
ELECTRICAL
STATE OF CALIFORNIA

PROJECT	2025-008
DRAWN	RUNGSUB SU
CHECKED	BA SATYA
SHEET	E3.1

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