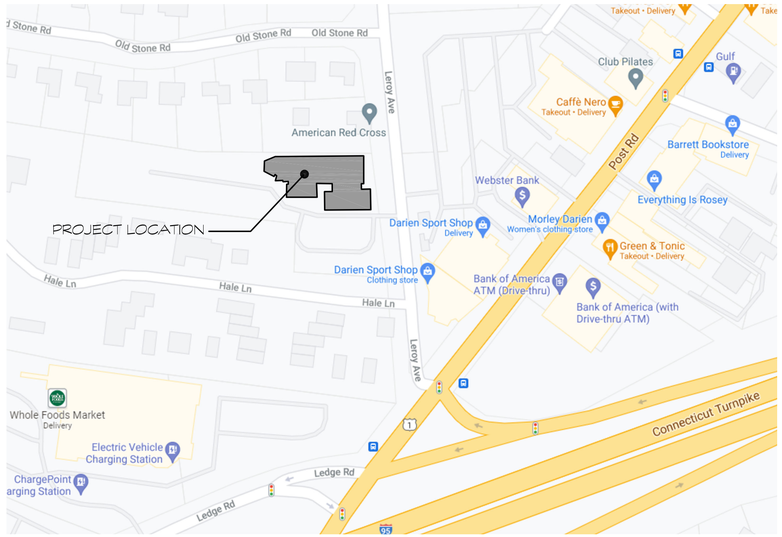
Copy Center Renovations

Darien Board of Education
34 Leroy Ave.
Darien, CT 06820



LOCUS MAP
SCALE: NONE

SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers

3190 Whitney Avenue, Hamden, CT 06518-2340
One Post Hill Place, New London CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

100% CDs: 08/24/2021

FULL SCALE PRINT: 24"x36"

ARCHITECTURAL ABBREVIATIONS

A.B.	ANCHOR BOLT
A.C.P	ASBESTOS CEMENT PIPE
ADJ.	ADJUSTABLE
A.F.F.	ABOVE FINISH FLOOR
A.C.T.	ACOUSTICAL CEILING TILE
ALUM	ALUMINUM ALUM
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
ASPH.	ASPHALT
AVG.	AVERAGE
BSMT.	BASEMENT
BD.	BOARD
BRG.	BEARING
BRK.	BRICK
BIT.	BITUMINOUS
BLK.	BLOCK
BLDG.	BUILDING
B.S.	BOTH SIDES
C.B.	CATCH BASIN
C.B.R.	CATCH BASIN TO BE REMOVED
C.I.	CAST IRON
C.I.P.	CAST IN PLACE CONCRETE
CLG.	CEILING
℄	CENTER LINE
C. BD.	CHALK ABOARD
C.O.	CLEAN OUT
COL.	COLUMN
CONC.	CONCRETE
C.M.U.	CONCRETE MASONRY UNIT
CONF.	CONFERENCE
CONSTR.	CONSTRUCTION
CONT.	CONTINUOUS, CONTINUE
C.J.	CONTROL/CONSTRUCTION JOINT
CONTR.	CONTRACTOR
C.C.	CURB CUT
DET.	DETAIL
DIA.	DIAMETER
DIM.	DIMENSION
DR.	DOOR
DN.	DOWN
DWG.	DRAWING
E	ELECTRICAL
EA.	EACH
ECTR	EXISTING CEILING TO REMAIN
ED.	EDUCATION
ELEC.	ELECTRICAL
E.F.	EACH FACE
E.J.	EXPANSION JOINT
EL.	ELEVATION
ELEV.	ELEVATION
EMER.	EMERGENCY
ENCL.	ENCLOSURE
ENL.	ENLARGED
ENT.	ENTRANCE
EP.	EPOXY PAINT
EQ.	EQUAL
ES.	EXPOSED STRUCTURE
E.T.R.	EXISTING TO REMAIN
E.W.	EACH WAY
E.W./E.F.	EACH WAY/EACH FACE
EXAM.	EXAMINATION
EXIST	EXISTING
EXP.	EXPANSION
EXT.	EXTERIOR
FDN.	FOUNDATION
F.F.	FINISHED FLOOR
F.P.	FOLDING PARTITION
FIN.	FINISH, FINISHED
FIXT.	FIXTURE
FL.	FLOOR
FT.	FOOT
F.S.	FAR SIDE
FTG.	FOOTING
G	GAS
GA.	GAGE, GAUGE
GEN.	GENERAL
G.C.	GENERAL CONTRACTOR
GYP.	GYPSUM
GYP. BD.	GYPSUM BOARD
H.C.	HANDICAPPED
HD.	HEADED
HDWR.	HARDWARE
HGT.	HEIGHT
H.P.	HIGH POINT
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL, HORIZONTALLY
H.B.	HOSE BIBB
HR.	HOUR
HYD.	HYDRANT
INSUL.	INSULATION, INSULATED
INT.	INTERIOR
INV.	INVERT
JAN.	JANITOR
K.P.	KICK PLATE
LAM.	LAMINATE
L.F.	LINEAL FOOT
LG.	LONG
LOC.	LOCATION
L.P.	LOW POINT
LTG.	LIGHTING
LVL.	LEVEL

M	MINUTE
MAS.	MASONRY
MAX.	MAXIMUM
MECH.	MECHANICAL
M.H.	MANHOLE
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
MTD.	MOUNTED
MTL.	METAL
N.A.	NOT APPLICABLE
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
NOM.	NOMINAL
N.P.S.	NOMINAL PIPE SIZE
N.S.	NEAR SIDE
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.C.C.	OCCUPANT
O.D.	OUTSIDE DIAMETER
OPNG.	OPENING
P.C.B.	PAINTED CONCRETE BLOCK
P.G.B.	PAINTED GYPSUM BOARD
PL.	PLATE
PLUMB.	PLUMBING
PLYWD.	PLYWOOD
PREP.	PREPARATION
P.T.	PRESSURE TREATED
PTD.	PAINTED
P.V.C.	POLYVINYL CHLORIDE
R	RISER
RAD.	RADIUS
R.C.P.	REINFORCED CONCRETE PIPE
R.D.	ROOF DRAIN
REINF.	REINFORCEMENT
REQD	REQUIRED
R.H.	ROOF HATCH
R.L.	ROOF LEADER
RM.	ROOM
S.	STORM
SAN.	SANITARY
S.C.	SEALED CONCRETE
SCHED.	SCHEDULE
SECT.	SECTION
S.F.	STEP FOOTING
SIM.	SIMILAR
S.O.G.	SLAB ON GRADE
SPEC.	SPECIFICATIONS
SQ.	SQUARE
SQ. FT.	SQUARE FEET
S.S.	STAINLESS STEEL
STL.	STEEL
STRUCT.	STRUCTURAL
SUSP.	SUSPENDED, SUSPENSION
S.W.	SHEAR WALL
S.W.F.	SHEAR WALL FOOTING
SYS., SYST.	SYSTEM
T.	TELEPHONE
T&B	TOP & BOTTOM
TECH.	TECHNOLOGY
T.O.	TOP OF
T.O.F.	TOP OF FRAME
T.O.S.	TOP OF STEEL
T/S	TOP OF SLAB
T.W.	TOP OF WALL
T.T.F	TRIM TO FIT
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
V.B.	VINYL BASE
V.C.T.	VINYL COMPOSITE TILE
VERT.	VERTICAL
V.I.F.	VERIFY IN FIELD
W.	WATER
W/	WITH
WCJ	WALL CONTROL JOINT
WD.	WOOD
WF.	WIDE FLANGE
WNDW.	WINDOW
W.W.F.	WELDED WIRE FABRIC
W.W.M.	WELDED WIRE MESH
@	AT
Ø	DIAMETER

GRAPHIC SYMBOL LEGEND

ROOM NAME / ROOM NUMBER — ROOM NAME / XXX — ROOM IDENTIFICATION

ROOM NAME / ROOM NUMBER / MATERIAL - HEIGHT — ROOM NAME / ### / ACT-1 | 8'-##" — CEILING PLAN ROOM IDENTIFICATION

ROOM NAME / MATERIAL - RM NUMBER / SQ FT — ROOM NAME / CPT-1 | ## / SQ FT — FINISH FLOOR PLAN ROOM IDENTIFICATION

CABINET TYPE / NOMINAL HEIGHT/WIDTH / SPECIAL DEPTH &/OR EQUIP. — CB1 / 3630 / 18" — CASEWORK SYMBOL

XXX — EQUIPMENT SYMBOL

XXX — DOOR NUMBER

XX — KEY NOTE

XX — WINDOW TYPE

DETAIL NUMBER / DRAWING NUMBER — XX / XX — DETAIL TAG

SECTION/DETAIL NUMBER / DRAWING NUMBER — X / X — SECTION/DETAIL TAG

SECTION NUMBER / DRAWING NUMBER — XX / XX — BUILDING SECTION DRAWING NUMBER

SECTION NUMBER / DRAWING NUMBER — XX / XX — WALL SECTION DRAWING NUMBER

ELEVATION NUMBER / DRAWING NUMBER — XX / XX — EXTERIOR ELEVATION TAG

INTERIOR ELEVATION NUMBER (#) / DRAWING NUMBER — # / # XXX # / # — INTERIOR ELEVATION TAG

X — WALL TYPE

X — REVISION MARK

X — COLUMNS (EXISTING)

DETAIL NUMBER / DRAWING NUMBER — XX / XX — DETAIL CALL OUT

ELEVATION LABEL — ELEVATION MARKER

DATUM POINT

— REVISION CLOUD

DRAFTING CONVENTIONS

EXISTING DOOR

NEW DOOR

DOUBLE LEAF DOOR

DOOR W/ 180 HOLD OPEN

VARYING LEAF DOOR

TWO-WAY DOOR

POCKET DOOR

BI- FOLDING DOOR

SLIDING DOOR

DOUBLE ACTING DOOR

EXISTING WALL TO REMAIN

TYPICAL WINDOW

NEW CONSTRUCTION

WINDOW WALL

RECESSED ITEM

MATERIAL CONVENTIONS

PLAN SECTION — BRICK

PLAN SECTION — CONCRETE MASONRY UNIT (CMU)

CONCRETE (CAST-IN-PLACE)

CONCRETE (PRE-CAST)

RIGID BOARD INSULATION

INSULATION (BATT)

EARTH

GYPSUM BOARD

PLYWOOD

WOOD FRAMING (THRU MEMBER)

WD FRAMING (UNINTERRUPTED MEMBER)

WD TRIM/FINISH

ACOUSTICAL TILE OR PANEL

GENERAL NOTES

1. CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL EXIST. CONDITIONS & DIMENSIONS PRIOR TO CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE TO REPAIR OR REPLACE ANY AREAS DAMAGED OUTSIDE THE SCOPE OF WORK RETURNING THEM TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE OWNER.
3. PATCH ALL EXISTING MATERIALS AFFECTED BY NEW CONSTRUCTION IN THIS PROJECT (MATCH EXISTING).
4. ALL MATERIALS/ EQUIPMENT/ FIXTURES ARE NEW UNLESS OTHERWISE NOTED AS 'EXISTING'.
5. REMOVE ALL DEMOLISHED MATERIALS FROM SITE. LEAVE SITE CLEAN OF ALL CONSTRUCTION DUST & DEBRIS AT THE END OF EACH DAY.
6. CONTRACTOR IS RESPONSIBLE FOR REMOVING, RELOCATING AND RECONNECTING ANY AND ALL MEP/FP DEVICES, CONDUIT, SECURITY AND/OR WIRING AFFECTED BY THE SCOPE OF WORK PRIOR TO DEMOLITION AND UPON COMPLETION OF CONSTRUCTION. CONTRACTOR TO VERIFY ALL ASSOCIATED COMPONENTS AFFECTED W/ ARCH & OWNER.
7. CONTRACTOR IS RESPONSIBLE TO SURVEY AND DOCUMENT ALL AREAS OF SCOPE PRIOR TO BID. CONTRACTOR IS RESPONSIBLE TO CARRY ALL TRADES IN BID REQUIRED TO REMOVE/ REINSTALL ALL CONDITIONS AFFECTED BY SCOPE OF WORK.
8. ANY DEMOLITION/CONSTRUCTION ACTIVITY WHICH WOULD IMPACT HAZARDOUS OR TOXIC MATERIALS MUST BE CONDUCTED WITHIN COMPLIANCE & CODE REQUIREMENTS.
9. CONTRACTOR TO COORDINATE ANY TEMPORARY SHUT-OFFS OR INTERRUPTIONS WITH EXISTING SERVICES PRIOR TO CONSTRUCTION.

DRAWING LIST

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

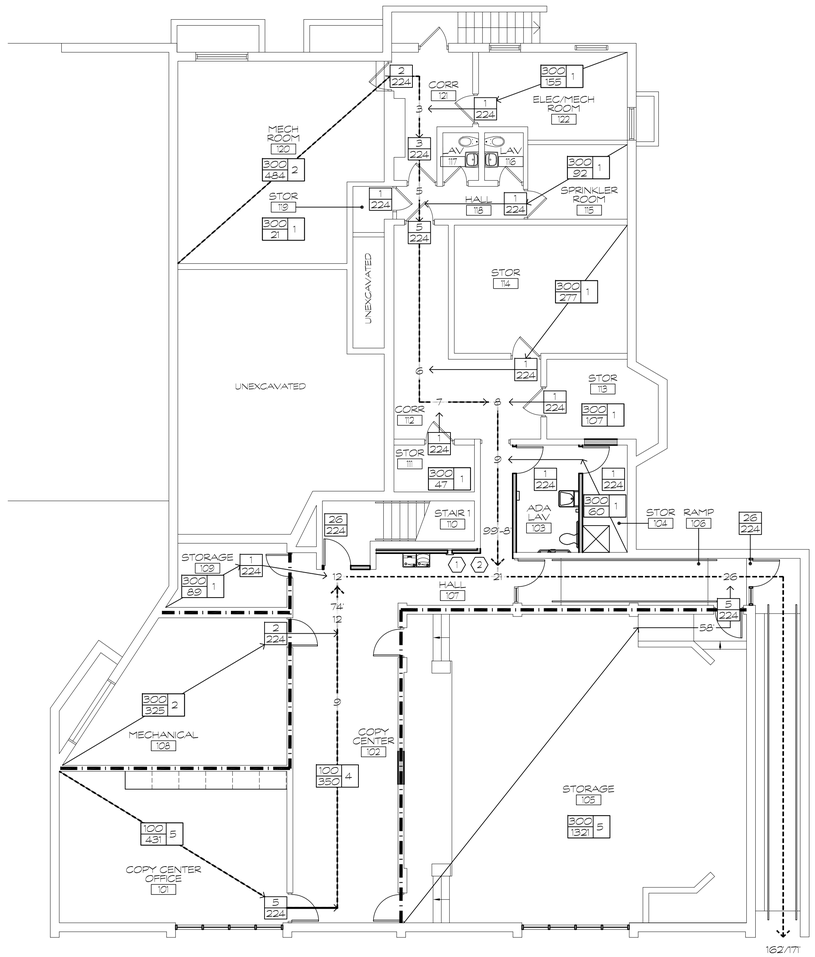
SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	Description:	Date:	Revised By:
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

Drawing Title:
General Information, Abreviations, and Symbol Legends

Date: August 24, 2021
Scale: 1" = 4'-0"
Drawn By: TIM
Project Number: 20.120

Drawing Number:
G001



1 BASEMENT CODE PLAN

1/8" = 1'-0"

CODE GENERAL NOTES

1. ALL EXISTING WALLS SHOWN AS 1 HR RATED ARE TO HAVE ALL ABANDONED PIPES, DUCTS, CHASES, ETC. REMOVED. ALL PENETRATIONS ARE TO BE PATCHED AND REPAIRED TO RESTORE WALL TO AS NEW CONDITION TO ENSURE RATING. ANY PENETRATIONS TO REMAIN MUST BE FIRE STOPPED TO ENSURE RATING.
2. ALL PIPES, WIRES, ETC., ARE TO BE REMOVED FROM THE ENCLOSURE OF STAIR 110 AND RE-ROUTED AS REQUIRED. REPAIR ENCLOSURE TO AS NEW CONDITION.

CODE KEY NOTES

1. SEE SHEET A401 FOR BEAM WRAP DETAILS.
2. SEE DRAWINGS 6, 7, 8, AND 9 ON SHEET A401 FOR SOFFIT AND BEAM WRAP DETAILS FOR CONTINUOUS GWB WRAP AROUND EXISTING UNRATED PORTIONS OF ENCLOSURE OF STAIR 110.

CODE INFORMATION

1. PROJECT DESCRIPTION:

   TENANT FIT-OUT WITHIN EXISTING BUILDING- THE ALTERATIONS TO THE BUILDING PROPOSED FOR THIS PROJECT DO NOT IMPACT OR CHANGE THE CONSTRUCTION TYPE, AND CHANGES TO OCCUPANCY CLASS ARE LIMITED TO ALTERED AREAS.

   WORK SCOPE FOR THIS PROJECT INCLUDES DEMOLITION AND ALTERATION OF EXISTING PARTITION WALLS WITHIN SPACE. NEW CONSTRUCTION INCLUDES NEW INTERIOR METAL STUD PARTITION WALLS & DOORS TO CREATE A NEW COPY CENTER AND ACCESSIBLE REST ROOM. IN ADDITION TO PARTITIONS, WORK INCLUDES NEW LIGHTING FIXTURES, CHANGES TO SPRINKLER SYSTEM HEIGHTS, FIRE PROTECTION/ DEVICES, POWER/DATA HVAC, AND PLUMBING FIXTURES.

2. CLASSIFICATION OF WORK:

   LEVEL 2 ALTERATION

   DATE OF ORIGINAL CONSTRUCTION 1982
   DATE OF CURRENT CONSTRUCTION 2020

3. APPLICABLE BUILDING CODES:

   -2018 CONNECTICUT STATE BUILDING CODE AND ALL CODES REFERENCED THEREBY.

4. CONSTRUCTION TYPE: (EXISTING, UNCHANGED) Type 2B

5. USE GROUP CLASSIFICATION: A-ASSEMBLY
   (Primary) Use B-BUSINESS

6. OCCUPANCY LOAD:

7. BASEMENT OCCUPANCY LOAD:
   Design Load Total 26
   Exit Capacity Total 244

8. FIXTURE COUNT:
   Use Group S =4,403 SF Total Occupants: 17
   Use Group B =4,403 SF Total Occupants: 9

Fixture Count:	REQUIRED	PROVIDED
Unisex WC:	1	1
LAVS:	1	1
Drinking Fountain:	1	1
Service Sink:	1	1

9. SPRINKLER PROTECTION: Entire Building YES

10. COMMON PATH OF TRAVEL:
    Auto Sprinklered BLDG Distance < 100'-0"

11. EXIT TRAVEL DISTANCE:
    Auto Sprinklered BLDG Distance < 250'-0" (S) or < 300'-0" (B)

12. DEAD-END CORRIDOR:
    Auto Sprinklered BLDG Distance < 50'-0"

13. FIRE SAFETY CODE DATA

Classification of occupancy	B-BUSINESS	
Minimum construction required	n/a	
Actual Construction Provided	n/a	
Notification / Alarms	YES X	NO
Detection	YES X	NO
Extinguishment requirements	YES X	NO

SYMBOL LEGEND

13 / 343 — # OF EGRESS OCC. / DOOR MAX ALLOW. — EXIT CAPACITY

120 — DIRECTION OF TRAVEL W/ ACCUMULATED OCC. LOAD

50' — MAXIMUM TRAVEL DISTANCE

- INDICATES RATED WALL SEE PARTITION TYPES FOR ADD. INFO.

XXX / XXX — - INDICATES ROOM NAME / - INDICATES ROOM NUMBER

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

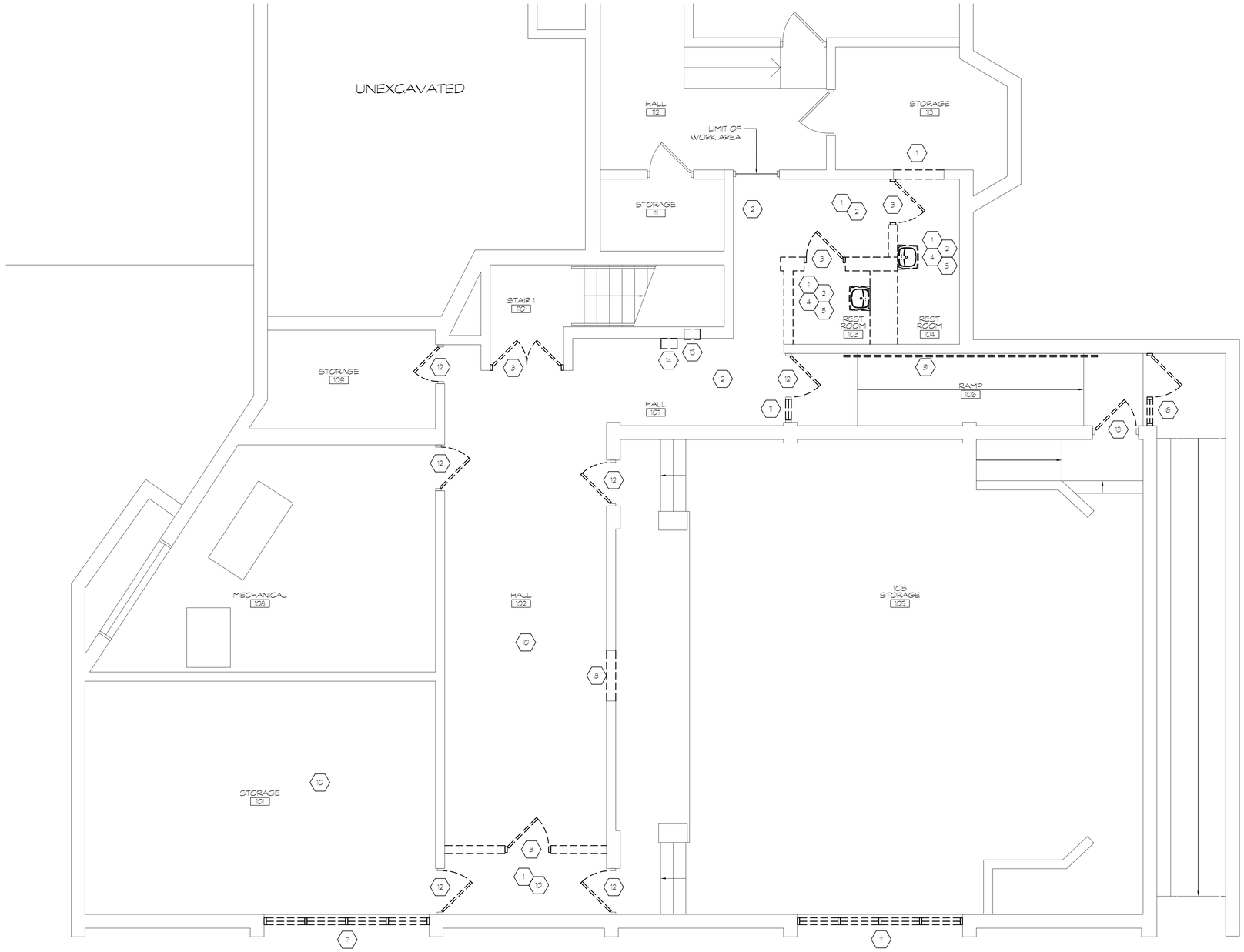
SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	*Description:*	*Date:*	*Revised By:*
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

Drawing Title:
Basement Code Plan

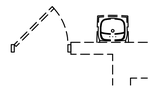
Date: August 24, 2021
Scale: 1/8" = 1'-0"
Drawn By: TIM
Project Number: 20.120

Drawing Number:
G101



1 BASEMENT DEMOLITION PLAN
1/4" = 1'-0"

DEMOLITION SYMBOL LEGEND



ALL WALLS, DOORS, AND FIXTURES TO BE REMOVED ARE SHOWN DASHED

GENERAL DEMOLITION NOTES

1. READ GENERAL NOTES ON SHEET G001.
2. REMOVE ANY ABANDONED FRAMING, DUCTS, PIPES, ETC. IN AREA OF WORK AND IN ROOM 105 (STORAGE).

DEMOLITION KEY NOTES

1. DEMOLISH AND REMOVE EXISTING PARTITION WALLS INCLUDING CMU, MTL STUDS, GYPSUM BOARD, FURRING, WALL FINISH, WALL BASE, AND ALL ASSOCIATED WALL COMPONENTS. REMOVE & RETAIN ANY WALL MOUNTED ITEMS (COORDINATE WITH OWNER PRIOR TO REMOVAL).
2. REMOVE EXISTING FINISH FLOORING & BASE AFFECTED BY NEW CONSTRUCTION DOWN TO EXISTING SLAB AND PREPARE FOR NEW FLOORING.
3. REMOVE EXISTING DOOR, FRAME AND ALL ASSOCIATED COMPONENTS. RETAIN FOR LATER USE (COORDINATE WITH OWNER).
4. DISCONNECT & REMOVE EXISTING TOILET, URINAL, SINK, LAVATORY & ALL ASSOCIATED COMPONENTS AFFECTED BY NEW CONSTRUCTION (SEE PLUMBING DWGS FOR ADDITIONAL INFORMATION).
5. REMOVE EXISTING RESTROOM GRAB BARS, ACCESSORIES & ALL ASSOCIATED COMPONENTS AFFECTED BY NEW CONSTRUCTION.
6. REMOVE EXISTING DOOR AND SIDE LITE ASSEMBLY. CLEAN, PATCH, AND REPAIR EXISTING WALL AND OPENING, AND PREPARE FOR NEW DOOR ASSEMBLY.
7. REMOVE EXISTING EXTERIOR WINDOW ASSEMBLY. CLEAN, PATCH, AND REPAIR EXISTING WALL AND OPENING, AND PREPARE FOR NEW WINDOW ASSEMBLY.
8. DEMOLISH PASS THROUGH IN EXISTING CMU WALL AND PREPARE FOR NEW CMU INFILL.
9. REMOVE EXISTING HANDRAIL AND SUPPORTS. PATCH AND REPAIR EXISTING WALL.
10. REMOVE ALL RESIDUE, ADHESIVE, NAIL STRIPS, ETC. FROM PREVIOUS FLOOR FINISHES AND PREPARE THE AREA FOR NEW FINISHED FLOORING.
11. REMOVE MASONITE PANEL FROM EXISTING FRAME AND PREPARE FRAME FOR NEW GLASS PANEL.
12. SAND DOOR AND FRAME TO PREPARE FOR NEW FINISH. IF EXISTING DOOR IS IN A RATED WALL AND CANNOT BE RATED, REMOVE AND RETAIN FOR LATER USE (COORDINATE WITH OWNER).
13. REMOVE DOOR, HINGES, AND STRIKE FROM FRAME. PATCH AND REPAIR. SAND DOOR AND FRAME TO PREPARE FOR NEW FINISH.
14. REMOVE EXISTING DRINKING FOUNTAIN AND ASSOCIATED PLUMBING. PATCH/ REPAIR EXISTING STAIR ENCLOSURE TO 1 HOUR RATING.
15. REMOVE EXISTING FIRE EXTINGUISHER BOX. PATCH/ REPAIR EXISTING STAIR ENCLOSURE TO 1 HOUR RATING.
16. REMOVE EXISTING DUCT FROM PENETRATION IN EXISTING CMU WALL AND PREPARE FOR NEW CMU INFILL.

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

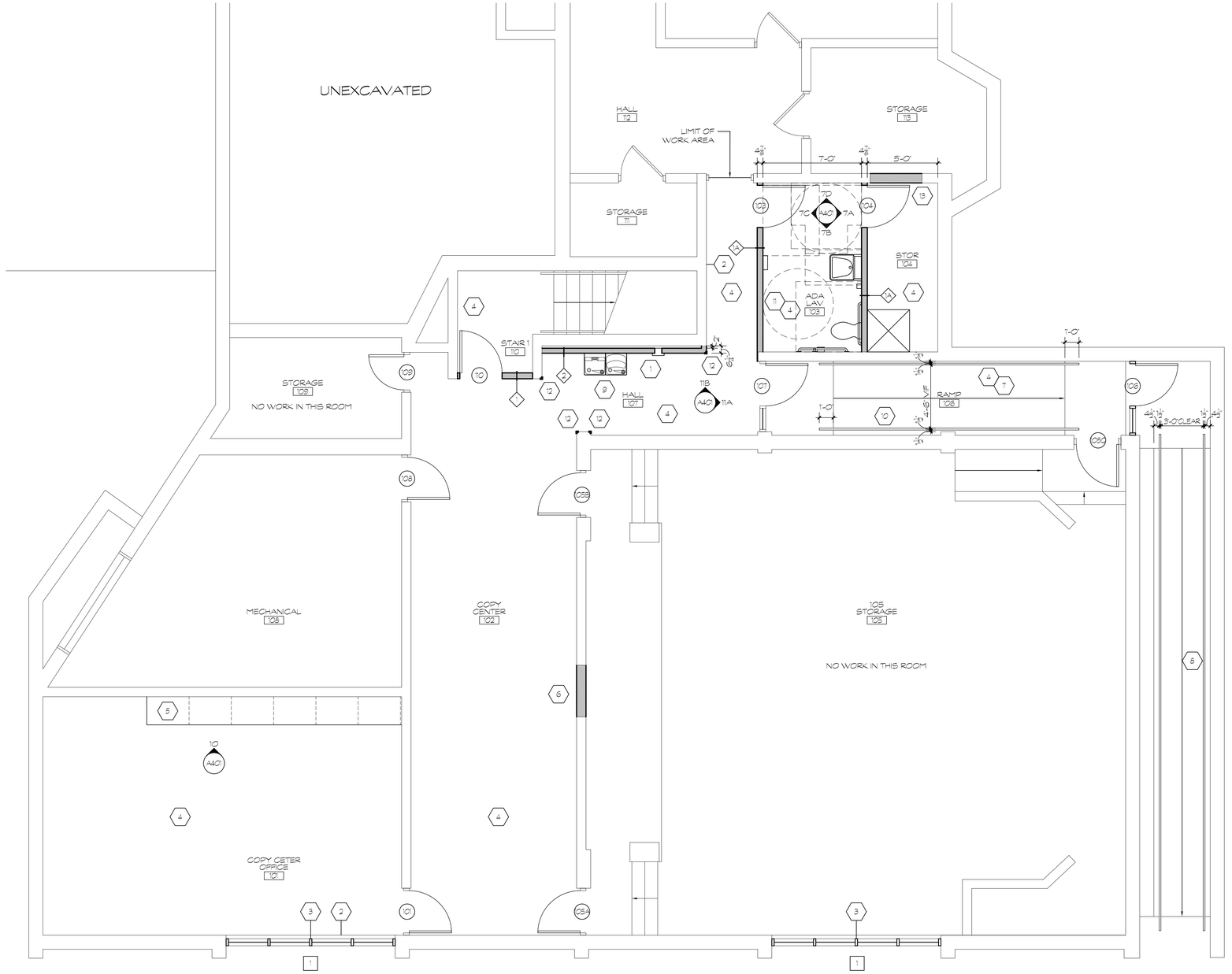
SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	*Description:*	*Date:*	*Revised By:*
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

Drawing Title:
Basement Demolition Plan

Date: August 24, 2021
Scale: 1" = 4'-0"
Drawn By: TIM
Project Number: 20.120

Drawing Number:
D101



1 BASEMENT FLOOR PLAN
1/4" = 1'-0"

DOOR SCHEDULE

(1) SAND, PRIME, AND PAINT EXISTING DOOR AND FRAME. EXISTING HARDWARE TO REMAIN. CLEAN/ REPAIR/ REPLACE EXISTING DOOR HARDWARE AS REQUIRED. COORDINATE LOCK SET KEYING WITH OWNER.

(103) PROVIDE NEW 6'-8" TALL BY 3'-0" WIDE SOLID CORE WD DOOR IN HM KNOCK DOWN FRAME. SAND, PRIME, AND PAINT DOOR AND FRAME. PROVIDE 3 BUTT HINGES, BORED CYLINDER, PRIVACY LOCK SET, 2 KICK PLATES, AND SILENCERS.

(104) PROVIDE NEW 6'-8" TALL BY 3'-0" WIDE SOLID CORE WD DOOR IN HM KNOCK DOWN FRAME. SAND, PRIME, AND PAINT DOOR AND FRAME. PROVIDE 3 BUTT HINGES, BORED CYLINDER, CLOSET LOCK SET WITH POSITIVE LATCHING, 2 KICK PLATES, AND SILENCERS. COORDINATE LOCKSET KEYING WITH OWNER.

(054) (058) SAND, PRIME, AND PAINT EXISTING DOOR AND FRAME. EXISTING HARDWARE TO REMAIN. CLEAN/ REPAIR/ REPLACE EXISTING DOOR HARDWARE AS REQUIRED. COORDINATE LOCK SET KEYING WITH OWNER. IF EXISTING DOOR CANNOT BE RATED, PROVIDE NEW 1 HOUR RATED DOOR TO MATCH EXISTING SIZE AND STYLE.

(054) CHANGE DOOR HINGE LOCATION AND SWING AS INDICATED. SAND, PRIME, AND PAINT EXISTING DOOR AND FRAME. EXISTING HARDWARE TO REMAIN. CLEAN/ REPAIR/ REPLACE EXISTING DOOR HARDWARE AS REQUIRED. COORDINATE LOCK SET KEYING WITH OWNER. IF EXISTING DOOR CANNOT BE RATED, PROVIDE NEW 1 HOUR RATED DOOR TO MATCH EXISTING SIZE AND STYLE.

(106) PROVIDE NEW FRP DOOR AND LAMINATED GLASS SIDELIGHT IN 2' POWDER COATED ALUMINUM FRAME IN EXISTING OPENING. PROVIDE 3 BUTT HINGES, BORED CYLINDER, LEVER SET WITH POSITIVE LATCHING, PANIC RELEASE LATCH, AUTOMATIC DELAYED CLOSER, AND SILENCERS. COORDINATE KEYING AND ADDITIONAL SECURITY REQUIREMENTS WITH OWNER.

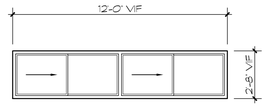
(107) SAND, PRIME, AND PAINT EXISTING DOOR AND FRAME. EXISTING HARDWARE TO REMAIN. CLEAN/ REPAIR/ REPLACE EXISTING DOOR HARDWARE AS REQUIRED. PROVIDE NEW TEMPERED SAFETY GLAZING IN EXISTING SIDE LITE FRAME.

(102) SAND, PRIME, AND PAINT EXISTING DOOR AND FRAME. EXISTING HARDWARE TO REMAIN. CLEAN/ REPAIR/ REPLACE EXISTING DOOR HARDWARE AS REQUIRED. COORDINATE LOCK SET KEYING WITH OWNER. IF EXISTING DOOR CANNOT BE RATED PROVIDE NEW 1 HOUR RATED DOOR TO MATCH EXISTING SIZE AND STYLE.

(108) SAND, PRIME, AND PAINT EXISTING DOOR AND FRAME. EXISTING HARDWARE TO REMAIN. CLEAN/ REPAIR/ REPLACE EXISTING DOOR HARDWARE AS REQUIRED. COORDINATE LOCK SET KEYING WITH OWNER. IF EXISTING DOOR CANNOT BE RATED PROVIDE NEW 1 HOUR RATED DOOR TO MATCH EXISTING SIZE AND STYLE.

(110) MOVE EXISTING, RESERVED 3'-0" WIDE BY 7'-0" DOOR TO NEW 2' HM KNOCK DOWN FRAME IN NEW LOCATION. INSTALL EXISTING RESERVED VISION LITE. PRIME AND PAINT DOOR AND FRAME. PROVIDE 3 BUTT HINGES, BORED CYLINDER, LEVER SET WITH POSITIVE LATCHING, PANIC RELEASE LATCH, AUTOMATIC DELAYED ACTION CLOSER, KICKPLATES, ACCESSIBLE THRESHOLD, AND SILENCERS. IF EXISTING DOOR CANNOT BE RATED PROVIDE NEW 1 HOUR RATED DOOR TO MATCH EXISTING SIZE AND STYLE.

WINDOW TYPES



1

1. ALUMINUM HORIZONTAL SLIDING WINDOW WITH THERMALLY BROKEN FRAME AND HIGH E GLAZING. MATCH EXISTING WINDOW PROFILE. PRIME AND PAINT TO MATCH EXISTING ADJACENT WINDOWS.

ROOM FINISH SCHEDULE

RM	FLOOR		WALL FINISH				CLNG	
NO.	FIN.	BASE	N	E	S	W	MATL	NOTES
101	VCT	RB	PT	PT	PT	PT	ACT	1
102	VCT	RB	PT	PT	PT	PT	ACT	1
103	VCT	RB	PT	PT	PT	PT	ACT	1
104	VCT	RB	PT	PT	PT	PT	ACT	1
106	VCT	RB	PT	PT	PT	PT	ACT	1
107	VCT	RB	PT	PT	PT	PT	ACT/GWB	1
110	VCT	RB	PT	PT	PT	PT	ACT	1

FINISH NOTES

1. COORDINATE WITH OWNER FOR MANUFACTURER, STYLE, AND COLOR OF ALL ROOM FINISHES.

LEGEND

ACT	-ACOUST. CEILING TILE	PT	-PAINTED GWB
CPT	-CARPET (TILE)	PLAM	-PLASTIC LAMINATE
ETR	-EXISTING TO REMAIN	WD	-WOOD
CFT	-CERAMIC FLOOR TILE	GL	-GLASS
CWT	-CERAMIC WALL TILE	SS-1	-SOLID SURFACE
GWB	-CERAMIC WALL BASE	VCT	-VINYL COMPOSITE TILE
RB	-RUBBER BASE		

FLOOR PLAN SYMBOL LEGEND

- EXISTING DOOR
- NEW DOOR
- EXISTING WALL TO REMAIN
- WINDOW
- NEW CONSTRUCTION
- ROOM NAME / XXX — ROOM IDENTIFICATION
- XXX — DOOR NUMBER
- # / # XXX # — INTERIOR ELEVATION TAG
- X — WALL TYPE (SEE DRAWING 9/A401)

GENERAL CONSTRUCTION NOTES

1. READ GENERAL NOTES ON SHEET G001
2. DOOR HARDWARE STYLE AND FINISH TO MATCH EXISTING U.O.N.
3. ALL DOORS, HARDWARE, FIXTURES, ETC. MUST MEET APLICABLE CODES.
4. ALL DOOR HARDWARE IS SUPPLIED BY OWNER TO MATCH EXISTING BUILDING AND MASTER KEY SYSTEM
5. ALL WALL SURFACES TO REMAIN ARE TO BE PATCHED AND REPAIRED TO AS NEW CONDITION AND RECEIVE NEW PAINT FINISH.
6. SEE DRAWING 3 ON SHEET 401 FOR NEW WALL TYPES.

CONSTRUCTION KEY NOTES

1. PROVIDE NEW SEMI RECESSED FIRE EXTINGUISHER CABINET AND REQUIRED FIRE EXTINGUISHER.
2. WHERE EXISTING FURRING AND GWB HAS BEEN REMOVED, REPAIR TO AS NEW CONDITION.
3. PROVIDE AND INSTALL NEW ALUMINUM WINDOW UNIT IN EXISTING OPENING (SEE WINDOW TYPES, THIS SHEET).
4. PROVIDE NEW FINISH FLOOR. (SEE ROOM FINISH SCHEDULE BELOW)
5. PROVIDE NEW COUNTER TOP AND BASE CABINETS (SEE DRAWINGS 4 AND 5 ON SHEET A401).
6. PROVIDE CMU INFILL AT EXISTING THROUGH WALL OPENING, FILL IN GWB WALL FININSH TO AS NEW CONDITION.
7. PROVIDE NEW 1 1/4" WALL MOUNTED POWDER COATED METAL HANDRAIL AT BOTH SIDES OF EXISTING INTERIOR RAMP. (SEE DRAWINGS 3 AND 4 ON SHEET A402)
8. PROVIDE NEW 1 1/4" FLOOR MOUNTED POWDER COATED METAL HANDRAIL AT BOTH SIDES OF EXISTING EXTERIOR RAMP. (SEE DRAWINGS 5 AND 6 ON SHEET A402).
9. PROVIDE NEW ACCESSIBLE DRINKING FOUNTAIN AND BOTTLE FILLING STATION.
10. PROVIDE EXTENDED HANDRAIL BRACKETS AT THIS HANDRAIL.
11. SEE DRAWING 1 ON SHEET A401 FOR REST ROOM FIXTURE CLEARANCES AND MOUNTING HEIGHTS.
12. PROVIDE S.S. CORNER GUARDS TO A HEIGHT OF 4'-0" AFF.
13. PROVIDE CMU INFILL AT EXISTING THROUGH WALL OPENING AND REPAIR WALL TO AS NEW CONDITION READY FOR NEW PAINT FINISH.

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

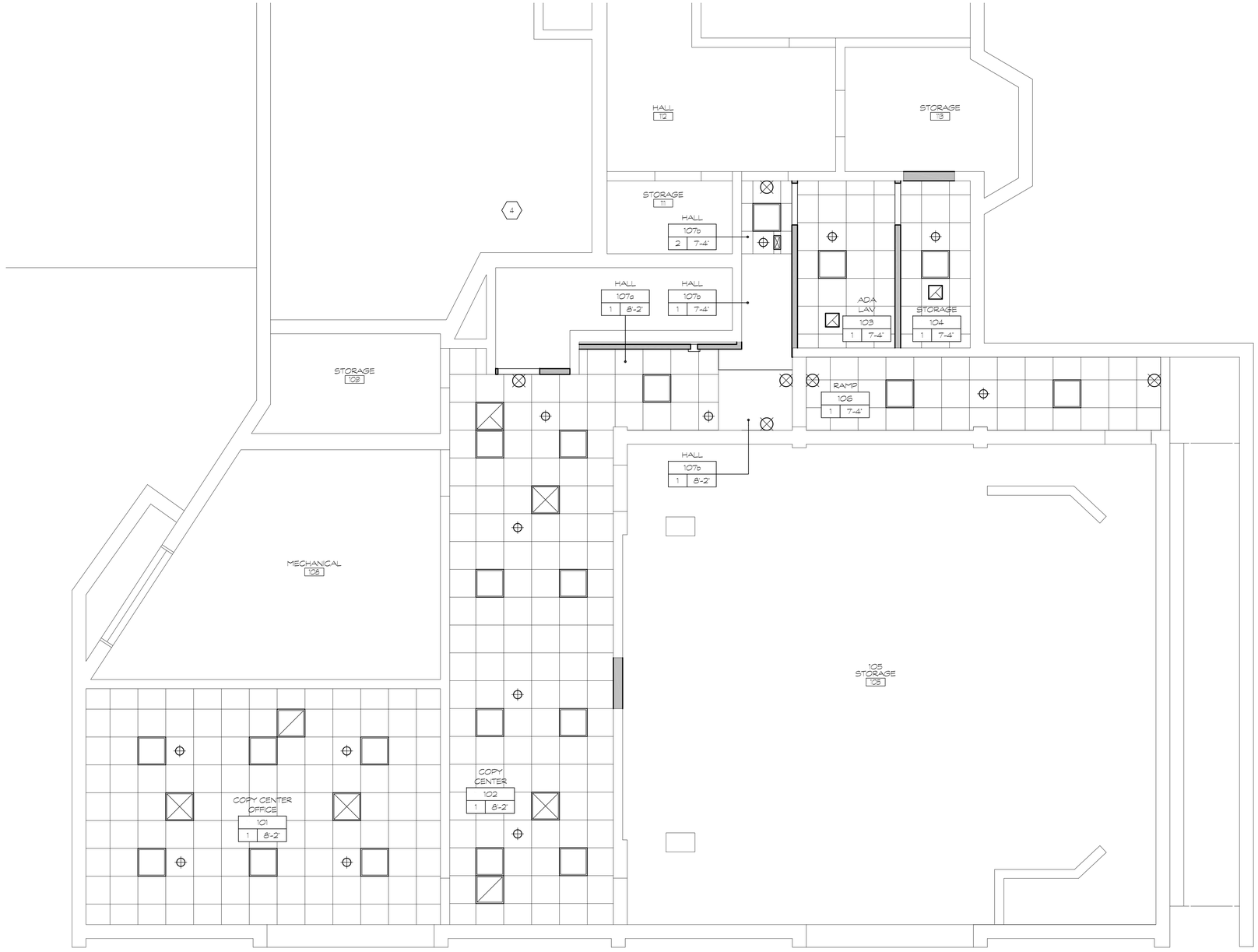
SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	Description:	Date:	Revised By:
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

Drawing Title:
Basement Floor Plan

Date: August 24, 2021
Scale: 1/4" = 1'-0"
Drawn By: TIM
Project Number: 20.120

Drawing Number:
A101



1 BASEMENT REFLECTED CEILING PLAN
1/4" = 1'-0"

RCP SYMBOL LEGEND

ROOM NAME
RM NUMBER
TYPE | HT
CEILING PLAN ROOM IDENTIFICATION

CEILING TYPES:
1. ACT
2. GWB

2X2 ACOUSTIC CEILING TILE SYSTEM

2X2 LIGHT FIXTURE

RECESSED LIGHT FIXTURE

SUPPLY DIFFUSER

RETURN DIFFUSER

EXHAUST DIFFUSER

SPRINKLER HEAD

EXIT SIGN

GENERAL RCP NOTES

1. READ ALL GENERAL NOTES ON G001.
2. FOR ADDITIONAL LIGHTING AND FIRE PROTECTION DEVICE INFORMATION SEE ELECTRICAL DWGS.
3. FOR ADDITIONAL MECHANICAL INFORMATION SEE MECHANICAL DRAWINGS.
4. FOR ADDITIONAL PLUMBING AND FIRE PROTECTION INFORMATION SEE PLUMBING AND FIRE PROTECTION DRAWINGS.

RCP KEY NOTES

1. SEE INTERIOR ELEVATIONS (6/A401) AND CEILING AND SOFFIT DETAILS (7/A401, 8/A401, AND 9/A401) FOR SCOPE OF STAIR ENCLOSURE WRAP AT CEILING.

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

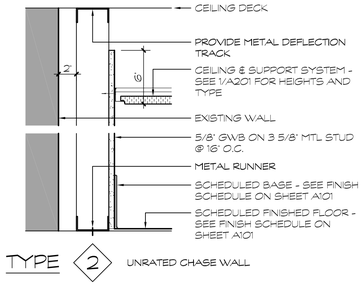
SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	*Description:*	*Date:*	*Revised By:*
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

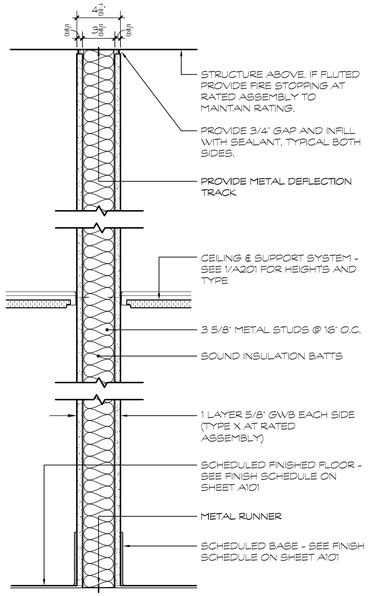
Drawing Title:
Basement Reflected Ceiling Plan

Date: August 24, 2021
Scale: 1" = 4'-0"
Drawn By: TIM
Project Number: 20.120

Drawing Number:
A201



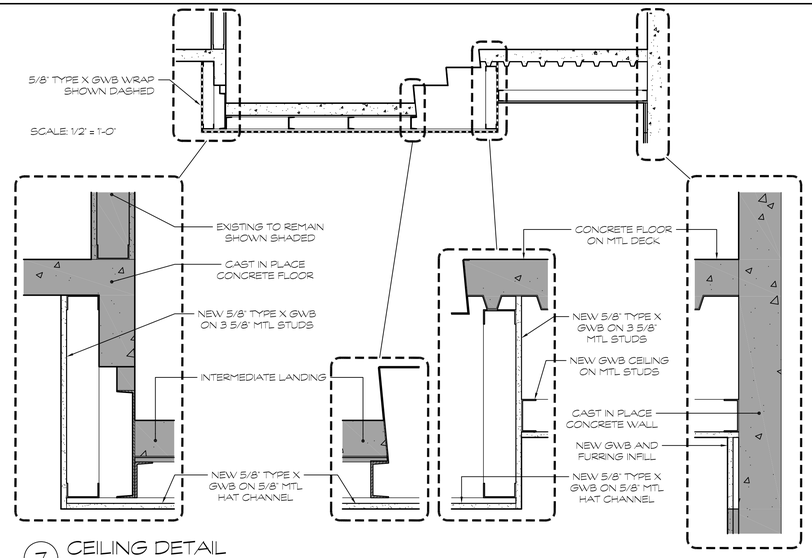
TYPE 2 — UNRATED CHASE WALL



TYPE 1 — 1 HOUR RATED - UL# U419, STC RATING 48

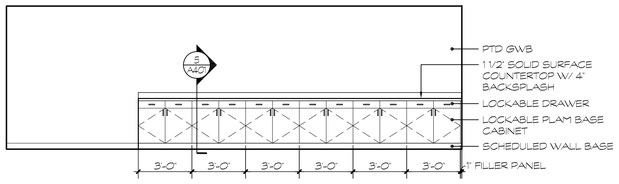
TYPE 1A — UNRATED WALL

3 WALL TYPES
1 1/2" =1'-0"

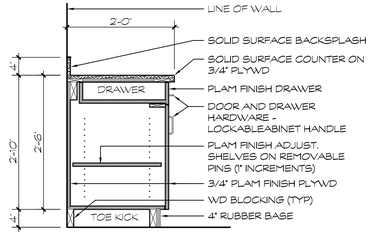


7 CEILING DETAIL
1 1/2" =1'-0"

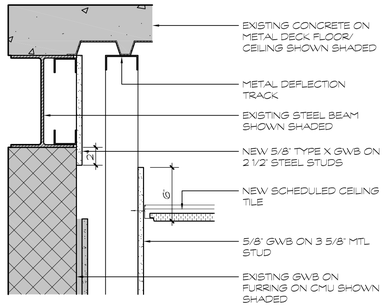
6 INTERIOR ELEVATIONS (ADA REST ROOM 103)
1/4" = 1'-0"



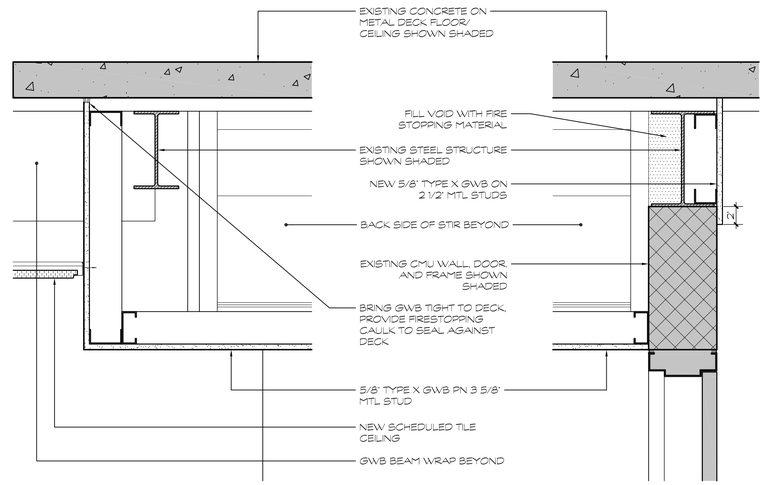
4 INTERIOR ELEVATIONS (ADA REST ROOM 103
1/4" = 1'-0"



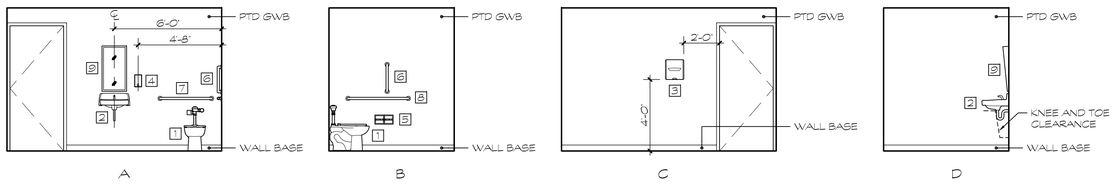
5 BASE CABINET DETAIL
3/4" = 1'-0"



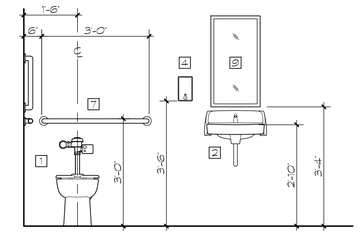
8 BEAM WRAP DETAIL
1 1/2" =1'-0"

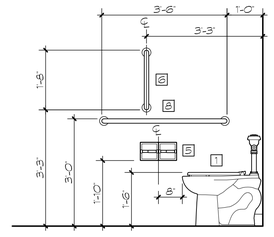


9 SOFFIT DETAIL AT STAIR LANDING
1 1/2" =1'-0"



1 INTERIOR ELEVATIONS (ADA REST ROOM 103)
1/4" = 1'-0"





2 REST ROOM FIXTURE LOCATION AND ELEVATION
1/2" = 1'-0"

TOILET ACCESSORY LEGEND & NOTES

1. FLOOR MOUNTED TOILET
2. WALL MOUNTED LAV
3. PAPER TOWEL DISPENSER
4. SOAP DISPENSER
5. TOILET PAPER DISPENSER
6. VERTICAL GRAB BAR
7. REAR GRAB BAR
8. SIDE GRAB BAR
9. 2 X 3 MIRROR

1. SEE ELEVATIONS FOR MOUNTING HEIGHTS; MOUNTING HEIGHTS SHALL CONFORM TO THE MOST RESTRICTIVE CODE FOR ALL TOILET ACCESSORIES.
2. SEE PLUMBING, ELECTRICAL, AND MECHANICAL DRAWINGS FOR MORE INFORMATION.
3. ALL DIMENSIONS ARE TO FACE OF FINISH WALL OR MASONRY UNLESS OTHERWISE NOTED.
4. REFER TO ELEVATIONS FOR ALL FIXTURE/ ACCESSORY TAGS.
5. PROVIDE BLOCKING IN ALL WALLS AS REQUIRED FOR FIXTURES, GRAB BARS, AND ACCESSORIES.
6. ALL FIXTURES MUST SATISFY ADA ACCESSIBILITY REQUIREMENTS.

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

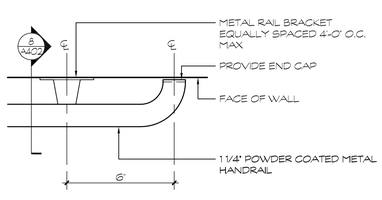
SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	Description:	Date:	Revised By:
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

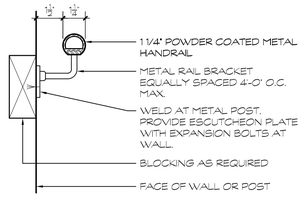
Drawing Title:
Interior Elevations, Sections, and Details

Date: August 24, 2021
Scale: AS NOTED
Drawn By: TIM
Project Number: 20.120

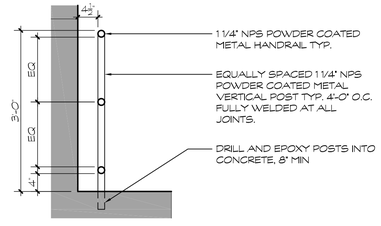
Drawing Number:
A401



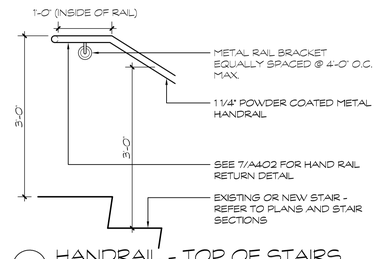
7 HANDRAIL - RETURN DETAIL
3" =1'-0"



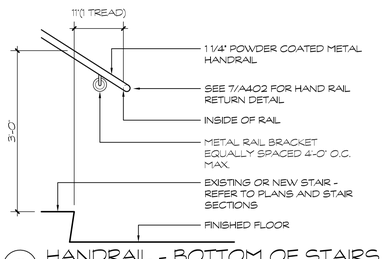
8 HANDRAIL - SECTION
3" =1'-0"



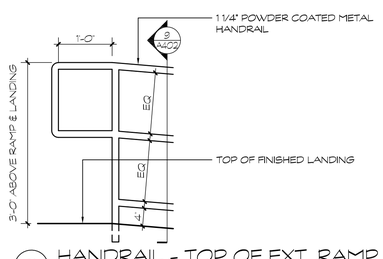
9 HANDRAIL - SECTION AT RAMP
1 1/2" =1'-0"



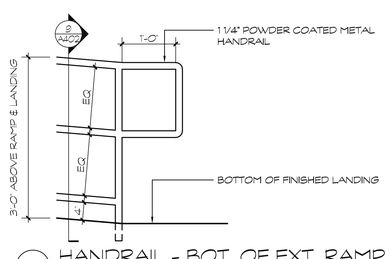
1 HANDRAIL - TOP OF STAIRS
1 1/2" =1'-0"



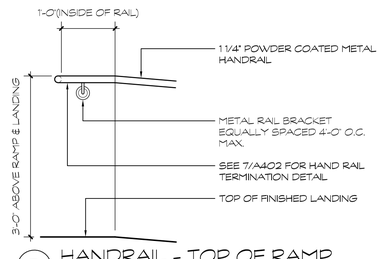
2 HANDRAIL - BOTTOM OF STAIRS
1 1/2" =1'-0"



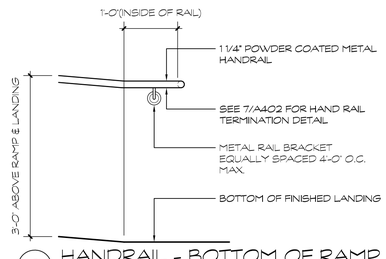
3 HANDRAIL - TOP OF EXT. RAMP
1 1/2" =1'-0"



4 HANDRAIL - BOT. OF EXT. RAMP
1 1/2" =1'-0"



5 HANDRAIL - TOP OF RAMP
3" = 1'-0"



6 HANDRAIL - BOTTOM OF RAMP
1 1/2" = 1'-0"

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	Description:	Date:	Revised By:
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

Drawing Title:
Interior Elevations, Sections, and Details

Date: August 24, 2021
Scale: AS NOTED
Drawn By: TIM
Project Number: 20.120

Drawing Number:
A402

SYMBOL LEGEND

(NOT ALL SYMBOLS ARE USED)

	BALL VALVE		PIPE UNION		MECHANICAL NOTE REFERENCE, NUMBER INDICATES NOTE
	BALANCING VALVE		AIR VENT, AUTOMATIC	CF	CUBIC FEET PER MINUTE
	PRESSURE GAUGE		AIR VENT, MANUAL		DUCT STATIC PRESSURE
	BUTTERFLY VALVE	OR	FLUE OR FAN		VOLUME DAMPER
	GATE VALVE		STRAINER		BACKDRAFT DAMPER
	ANGLE GLOBE VALVE		SYMBOL BELOW C.I.		DUCT STATIC PRESSURE SENSOR
	GLOBE VALVE		ROOF UNDERCUT 1/2" BY OTHER DIVISION	MD	MOTORIZED DAMPER
	ANGLE GLOBE VALVE		RETURN GRILLE		SUPPLY OR OUTSIDE AIR DUCT UP OR DSD
	TWO WAY MOTORIZED CONTROL VALVE		THERMOSTAT/SENSOR		SUPPLY OR OUTSIDE AIR DUCT DOWN
	THREE WAY MOTORIZED CONTROL VALVE		PRESSURE SENSOR		RETURN OR EXHAUST DUCT UP OR DSD/CRD
	CHECK VALVE		DIRECTION OF FLOW		RETURN OR EXHAUST DUCT DOWN
	HOSE END DRAIN VALVE WITH CAP AND CHAIN		METER		FLEXIBLE CONNECTION
	"Y" & "Y"	OR OR	DAMPER		RECTANGULAR TO ROUND TRANSITION
	SAFETY RELIEF VALVE (VALVE SILENT)		THERMOMETER		TRANSITION
	DRAIN VALVE W/ HOSE COUPLING W/CAP		PIPE TEE, OUTLET UP		DUCT WORK, DIRECTION OF FLOW
	CAP		PIPE ELBOW, UNION UP		POSITIVE PRESSURE DUCT
	PIPE CONNECTION BOTTOM		PIPE TEE, OUTLET DOWN		NEGATIVE PRESSURE DUCT
	PIPE CONNECTION TOP		HOT WATER SUPPLY		CHANGE OF ELEVATION, RISE (R) DROP (D)
	PIPE COUPLING JOINT		HOT WATER RETURN		DOUBLE LINE LINED DUCT WORK
	ELBOW, 90°		REFRIGERANT SUCTION		SINGLE LINE LINED DUCT WORK
	PIPE ELBOW, TURNED DOWN		REFRIGERANT LIQUID		DIRECTION OF SUPPLY OR OUTSIDE AIR
	PIPE TEE		POINT OF CONNECTION		DIRECTION OF RETURN OR EXHAUST AIR
FD/CD	FIRE DAMPER W/ ACCESS DOOR		RETURN OR EXHAUST DUCT UP		AIR TERMINAL UNIT
	CALIBRATED BALANCING VALVE		SUPPLY OR OUTSIDE AIR DUCT UP		SMOKE DETECTOR IN DUCT (HVAC)

GENERAL

1. THE INTENT OF THESE CONTRACT DOCUMENTS IS FOR THE CONTRACTOR TO FURNISH AND INSTALL COMPLETE MECHANICAL AND ELECTRICAL SYSTEMS. THESE MECHANICAL AND ELECTRICAL SYSTEMS INCLUDE PLUMBING, FIRE PROTECTION, HVAC, ELECTRICAL AND ALL ASSOCIATED SPECIAL SYSTEMS. ALL SYSTEMS SHALL BE COMPLETE IN ALL RESPECTS, OPERATING, TESTED, ADJUSTED, APPROVED BY THE AUTHORITIES HAVING JURISDICTION AND READY FOR BENEFICIAL USE BY THE OWNER.
2. THE CONTRACTOR SHALL OBTAIN AND REVIEW ALL CONTRACT DOCUMENTS, INCLUDING PROJECT MANUAL, PLANS AND SPECIFICATIONS OF ALL TRADES BEFORE SUBMITTING BID. REFER TO SPECIFICATIONS, PROJECT MANUAL AND PLANS, INCLUDING ALL EQUIPMENT SCHEDULES FOR MECHANICAL AND ELECTRICAL INFORMATION. CONTRACTOR SHALL WALK THROUGH BUILDING PRIOR TO SUBMITTING BID.
3. ALL OF THE CONTRACT DRAWINGS AND SPECIFICATIONS ARE COMPLIMENTARY TO FORM A TOTAL DESIGN PACKAGE. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER TO DETERMINE WHICH TRADE CONTRACTOR IS RESPONSIBLE FOR VARIOUS PORTIONS OF THE WORK.
4. ALL WORK AND ACTION SPECIFIED AND DESCRIBED SHALL BE PERFORMED BY THE CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.
5. PROVIDE SUPPORT BRACING OF EQUIPMENT AND BUILDING SERVICES FOR SEISMIC RESTRAINT AS REQUIRED BY CODE.
6. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND INSPECTIONS.
7. ALL EQUIPMENT, MATERIALS AND RELATED SYSTEMS COMPONENTS SHALL BE NEW UNLESS SPECIFICALLY NOTED OTHERWISE.
8. REPAIR AND/OR REPLACE AT NO COST TO OWNER ALL EQUIPMENT AND MATERIALS DAMAGED DURING CONSTRUCTION.
9. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. THE CONTRACTOR SHALL COORDINATE LOCATIONS OF EQUIPMENT WITH ALL TRADES BEFORE STARTING CONSTRUCTION. ANY MODIFICATIONS TO THE EQUIPMENT LAYOUT REQUIRED FOR INSTALLATION ARE TO BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER.
10. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE EXACT LOCATION OF LIGHT FIXTURES AND MOUNTING HEIGHTS OF EQUIPMENT, INCLUSIVE OF RECEPTACLES, SWITCHES, THERMOSTATS, ETC. ALL SUCH EQUIPMENT AND COLORS SHALL BE COORDINATED WITH THE ARCHITECT. CONTACT ARCHITECT FOR CLARIFICATION OF MOUNTING REQUIREMENTS, IF INFORMATION IS NOT CONTAINED IN THE DRAWINGS.
11. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH THE APPLICABLE CODES IN THE ORDINANCES AND THE REGULATORY AGENCIES HAVING JURISDICTION.
12. ALL EQUIPMENT SHALL BE GRAPHICALLY ACCESSIBLE. IN LOCATIONS WHERE A PIECE OF EQUIPMENT MUST BE LOCATED ABOVE AN INACCESSIBLE CEILING OR WALL THEN THE APPROPRIATE ACCESS DOOR SHALL BE PROVIDED. THESE SHALL BE COORDINATED WITH THE ARCHITECT.
13. WHEN CONFLICTS OCCUR BETWEEN THE DRAWINGS AND/OR SPECIFICATIONS IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE CONTRACTOR SHALL CARRY AS PART OF THE BID THE LARGER QUANTITY AND/OR MORE EXPENSIVE ITEM(S).
14. CONTRACTORS SHALL COORDINATE THEIR WORK WITH ALL OWNER-FURNISHED EQUIPMENT, INCLUDING REQUIRED SERVICE CONNECTIONS, RECEPTACLES, ETC. BEFORE INSTALLATION.
15. CONTRACTORS SHALL PROVIDE ALL REQUIRED SLEEVES AND SEALS FOR PIPES OR CONDUIT PENETRATING WALLS OR FLOOR SLABS WITH FIRE STOPPING SEALANT WHERE REQUIRED.
16. PROVIDE VIBRATION ISOLATION FOR ALL MECHANICAL EQUIPMENT.
17. PROVIDE VIBRATION ISOLATORS FOR ALL PIPING SUPPORTS CONNECTED TO AND WITHIN 50 FEET OF ISOLATED EQUIPMENT THROUGHOUT MECHANICAL EQUIPMENT ROOMS.
18. ALL EQUIPMENT, PIPING, DUCT WORK SHALL BE SUPPORTED AS DETAILED, SPECIFIED AND REQUIRED TO PROVIDE A VIBRATION FREE INSTALLATION.
19. LOCATION AND SIZES OF ALL FLOOR, WALL AND ROOF PENETRATIONS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED.
20. INSTALL COMPLETE OPERATING SYSTEMS. PROVIDE ALL COMPONENTS, DEVICES, CONTROLS, RELAYS, TRANSFORMERS, ETC., WHETHER INDICATED OR NOT, FOR COMPLETE SYSTEMS AS INTENDED BY THE CONSTRUCTION DOCUMENTS.
21. IF THE BUILDING IS TO BE OCCUPIED DURING CONSTRUCTION, MAINTAIN EXISTING SERVICES TO OCCUPIED AREAS. SEAL ALL DUCTWORK AND VENTILATION OPENINGS COMMUNICATING CONSTRUCTION AREAS WITH OCCUPIED AREAS TO PREVENT THE TRANSFER OF AIR CONTAMINATED BY CONSTRUCTION ACTIVITIES.
22. ALL PENETRATIONS THRU RATED WALLS, FLOORS & CEILINGS SHALL BE SEALED USING U.L. LISTED METHODS APPROPRIATE FOR INDICATED RATING.

HVAC

1. PIPING AND DUCT WORK LAYOUTS AS INDICATED ON THE DRAWINGS ARE DIAGRAMMATIC; PROVIDE ADDITIONAL TRANSITIONS AND OFFSETS AS REQUIRED FOR COORDINATION WITH BUILDING CONSTRUCTION AND THE WORK OF OTHER TRADES.
2. FLEX DUCT RUNS SHALL NOT BE LONGER THAN 5 FT.
3. PROVIDE VOLUME DAMPERS AT ALL EXHAUST GRILLES.
4. PROVIDE ALL 90 DEGREE SQUARE ELBOWS WITH DOUBLE RADIUS TURNING VANES UNLESS OTHERWISE INDICATED. ELBOWS SHALL BE UNVANED SMOOTH RADIUS CONSTRUCTION WITH A RADIUS EQUAL TO 1-1/2 TIMES THE WIDTH OF THE DUCT. PROVIDE ACCESS DOORS UPSTREAM OF ALL ELBOWS WITH TURNING VANES.
5. COORDINATE DIFFUSER, REGISTER AND GRILLE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS, LIGHTING AND OTHER CEILING ITEMS.
6. ALL DUCTWORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN DUCTS, INCLUDING DIVIDED DUCTS AND TRANSITIONS AROUND OBSTRUCTIONS, SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
7. ALL DUCTWORK SHALL BE SHEET METAL AND TO SMACNA STANDARDS.
8. TRANSITION NEW DUCTS AT CONNECTIONS TO AIR INLETS/OUTLETS TO MATCH CONNECTION SIZES.
9. PROVIDE SLEEVES FOR ALL PENETRATIONS THRU WALLS. PACK WITH FIRE CAULK FOR RATED WALLS

CONTRACTOR TO NOTE THAT ALL EXPOSED PRODUCTS TO BE PROVIDE WITH CUSTOM COLORS AS SPECIFIED BY ARCHITECT.

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

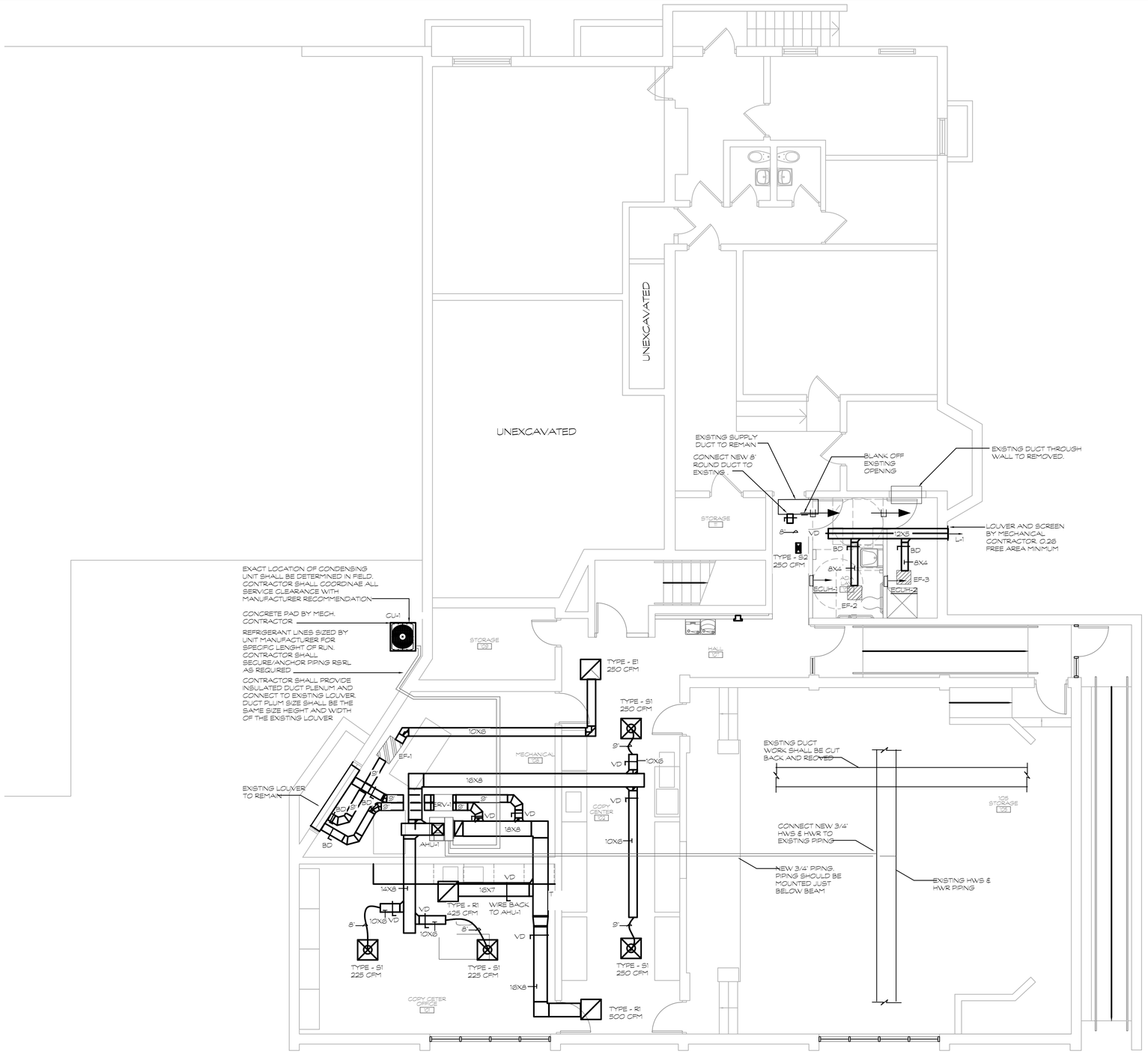
SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	Description:	Date:	Revised By:
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

Drawing Title:
MECHANICAL GENERAL NOTES & SYMBOLS

Date: August 24, 2021
Scale: N.T.S.
Drawn By: RL
Project Number: 20.120

Drawing Number:
M001



1 MECHANICAL BASEMENT PLAN

3/16"=1'-0"

Project Title:

Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

SILVER / PETRUCELLI + ASSOCIATES

Architects / Engineers / Interior Designers

3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	*Description:*	*Date:*	*Revised By:*
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

Drawing Title:

MECHANICAL BASEMENT PLAN

Date: August 24, 2021
Scale: 3/16"=1'-0"
Drawn By: RL
Project Number: 20.120

Drawing Number: M101

AIR COOLED CONDENSING UNIT

SYMBOL	MFGR.	MODEL NO.	AMBIENT AIR TEMP (°F)	GROSS CAPACITY (MBH)	NET CAPACITY (MBH)	EER	KW	ELECTRICAL DATA			COMPRESSORS					CONDENSER		WEIGHT	DIMENSIONS	NOTES
								VOLTS/PH	MCA	MAXIMUM CIRCUIT BREAKER	QTY	VOLTS/PH	AMP-RLA	AMP-LRA	QTY	VOLTS/PH	F.L. AMPS		H X W X D	
CU-1	TRANE	4TTR4024	95	24,000	18,000	14	--	208/1	14	25	1	208/1	10.1	52	1	208/1	9	133	30.1 X 26.7 X 30	1,2,3,4

1. PROVIDE WITH AUTO-RESET, HIGH AND LOW PRESSURE CONTROLS. REFRIGERANT SHALL BE R-410A.
2. PROVIDE WITH PAINTED STEEL CABINET AND HEAVY DUTY STEEL RAISED BEDS WITH 1-1/2" LEGS.
3. PROVIDE UNIT WITH MOUNTED DISCONNECT SWITCH.
4. MFGR. TO PROVIDE WITH LIQUID LINE DRYER AND SIGHT GLASS.

SUPPLY / RETURN DIFFUSER/GRILLE SCHEDULE

SYMBOL	MANUFACTURER & MODEL NO.	DUTY	TYPE	MAX NECK VEL (FPM)	MAX NC	CONSTRUCTION	REMARKS:
S1	KRUEGER 55H	12X12 SUPPLY	CEILING SUPPLY REGISTER	500	16	ALUMINUM	1,2,3,4
S2	KRUEGER 55H	12X6 SUPPLY	CEILING SUPPLY REGISTER	500	16	ALUMINUM	1,2,3,4
R1	KRUEGER 5580	12X12 RETURN	CEILING RETURN REGISTER	500	16	ALUMINUM	1,2,3,4
E1	KRUEGER 5580	12X12 RETURN	CEILING RETURN REGISTER	500	16	ALUMINUM	1,2,3,4

NOTES:
1. PROVIDE A FRAME 22 FOR GYP CEILING AND A FRAME 23 FOR T-BAR CEILINGS.
2. INSTALL DUCT VOLUME DAMPERS IN BRANCH DUCTS TO ALL DIFFUSERS.
3. FLEXIBLE DUCT CONNECTIONS TO DIFFUSERS SHALL NOT EXCEED 5 FEET IN LENGTH.
4. COORDINATE WITH ARCHITECTURAL PLANS FOR CEILING TYPES.

LOUVER SCHEDULE

SYMBOL	MANUFACTURER MODEL NUMBER	SERVICE	CM	INLET/OUT VELOCITY (FPM)	FREE AREA	NOM. WIDTH	NOM. HEIGHT	PD IN. WAG	REMARKS
L-1	RUSKIN ELF-375DX	EXHAUST	200	750	0.26	12	12	--	1,2,3,4

REMARKS:
1. PROVIDE WITH BIRD SCREEN.
2. PROVIDE WITH BACK DRAFT DAMPER .
3. ALL LOUVERS SHALL BE POWER COATED WHITE FINISH.
4. PROVIDE WITH FULL SIZE INSULATED PLENUMS.

ELECTRIC UNIT HEATER SCHEDULE

SYMBOL	MANUFACTURER	CFM	HEATING CAPACITY		MOTOR		TOTAL AMPS	RECESSED WALL HEATER	MODEL NUMBER	REMARKS
			KW	BTU/H	WATTS	VOLTS/PH				
ECUH-1	MARKEL	40	1	3413	1000	120/1	8.7	WLI	E3322TD-RP	1,2
ECUH-2	MARKEL	40	1	3413	1000	120/1	8.7	WLI	E3322TD-RP	1,2

REMARKS:
1. DISCONNECT SWITCH SHALL BE PROVIDED BY DIVISION 26.
2. PROVIDE WITH INTEGRAL THERMOSTATS AND MOTORS WITH THERMAL OVERLOAD PROTECTION.

AIR HANDLING UNIT SCHEDULE

SYMBOL	SUPPLY FAN			MIN OUTSIDE AIR (CFM)	COOLING				ELECTRICAL			HEATING						FILTERS	MODEL	NOTES
	TOTAL CFM	ESP	HP		CAPACITY TOTAL (MBH)	CAPACITY SENS. (MBH)	EAT db/wb (°F)	AMBIENT (°F)	VOLTS/Ø	MCA	MOP	CAPACITY (MBH)	FLOW (GPM)	EAT db-°F	LAT db-°F	EWT db-°F	TEMP DIFF			
AHU-1	950	.5	1/2	250	24	19	76/64	95	208/3	5.3 A	15.0 A	35	3.5	60	100	180	160	MERV 13	BCVD024 VERTICAL	1,2,3

1. BASED ON TRANE. CONTRACTOR SHALL VERIFY PERFORMANCE, SIZE, SPACE, SUPPLY OPENINGS, RETURN OPENINGS, DISCHARGE OPENINGS AND ELECTRICAL REQUIREMENTS OF EQUIPMENT PRIOR TO ORDERING EQUIPMENT.
2. PROVIDE CONVENIENCE OUTLET, BAC-NET COMMUNICATIONS INTERFACE, FREEZESTAT, CLOGGED FILTER SWITCH, FAN FAILURE SWITCH.
3. PROVIDE WITH CONDENSATE DRAIN AND AIR GAP AS REQUIRED PER CODE.

ENERGY RECOVERY VENTILATOR SCHEDULE

SYMBOL	MANUFACTURER & MODEL	AIR FLOW CFM	EAT	COOLING INPUTS		SUMMER LEAVING SUPPLY AIR	EAT	HEATING INPUTS		WINTER LEAVING SUPPLY AIR	ELECTRICAL		SUPPLY FAN		EXHAUST FAN		WEIGHT	REMARKS:
			(DB/WB)	(DB)	(RH)		(DB/WB)	(DB)	(RH)		VOLTS/Ø	PH	(HP)	(FLA)	(HP)	(FLA)		
ERV-1	RENEWAIRE EV450	250	91/73	79	62	79	8/6	70	38	54.7	120	1	.5	8.1	.5	8.1	200	1,2

NOTES:
1. INTERLOCKED WITH FAN COIL UNITS

EXHAUST FAN SCHEDULE

SYMBOL	AREA SERVED	CFM	EXTERNAL STATIC PRESS (IN. WG.)	ELECTRICAL		FRPM	MAX SONES	DRIVE	MANUFACTURER & MODEL	INTERLOCKED WITH	NOTES
				VOLTS/Ø	HP/ (W)						
EF-1	COPY CENTER	250	.25	115/1	(82.3 W)	1500	8.0	DIRECT	LOREN COOK DN-422	SPEED CONTROL LIGHTS	1,2,3,4,5
EF-2	ADA LAV	100	.2	115/1	(34.5W)	1100	1.2	DIRECT	LOREN COOK CD-166	SPEED CONTROL LIGHTS	1,2,3,4,5
EF-3	ADA LAV	100	.2	115/1	(34.5W)	1100	1.2	DIRECT	LOREN COOK CD-166	SPEED CONTROL LIGHTS	1,2,3,4,5

NOTES:
1. PROVIDE WITH FACTORY WIRED DISCONNECT AND BACKDRAFT DAMPER.
2. FAN INTERLOCKS INDICATED ABOVE SHALL BE WIRED UNDER DIVISION 26.
3. UNLESS NOTED OTHERWISE, MOUNT SPEED CONTROL SWITCH NEXT TO UNIT FOR BALANCING PURPOSES.
4. TRANSITION DUCTWORK ON INLET AND OUTLET OF EACH FAN TO MATCH SIZES SHOWN ON PLANS.
5. CAPACITIES LISTED ARE WITH UTILIZING FAN SPEED CONTROLLER,NOT THE MAXIMUM CAPACITY.

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

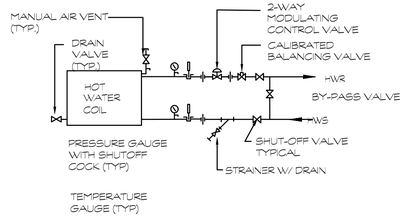
SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	Description:	Date:	Revised By:
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

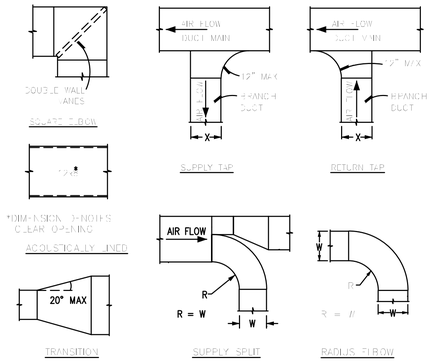
Drawing Title:
MECHANICAL SCHEDULES

Date: August 24, 2021
Scale: N.T.S.
Drawn By: RL
Project Number: 20.120

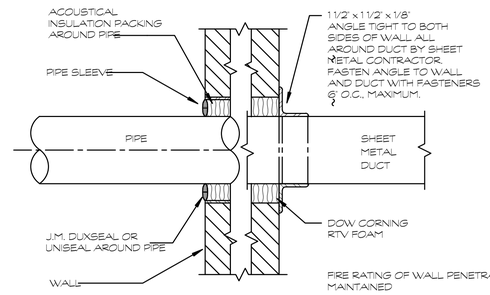
Drawing Number:
M201



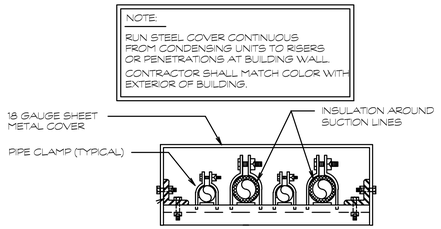
1 HOT WATER COIL PIPING DIAGRAM FOR AHUs
NOT TO SCALE

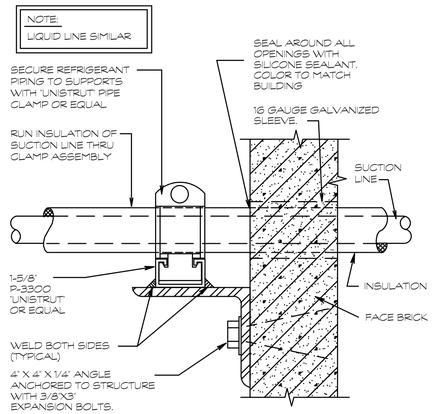


2 DUCT FITTING DETAIL
NOT TO SCALE

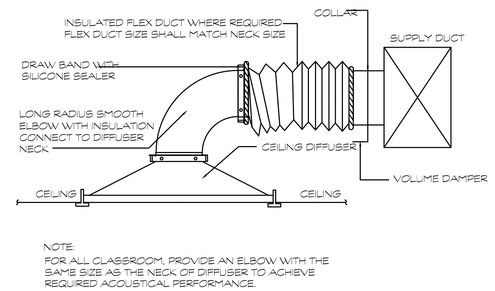


3 PIPE AND DUCT PENETRATION THROUGH WALL OR FLOOR
NOT TO SCALE





4 REFRIGERATE PIPE SUPPORT AT WALL DETAIL
NOT TO SCALE



5 TYPICAL SUPPLY DIFFUSER CONNECTION DETAIL
NOT TO SCALE

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

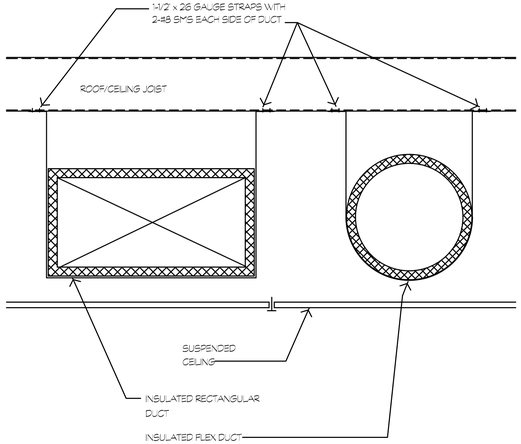
SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	*Description:*	*Date:*	*Revised By:*
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

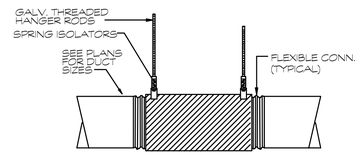
Drawing Title:
MECHANICAL DETAILS

Date: August 24, 2021
Scale: N.T.S.
Drawn By: RL
Project Number: 20.120

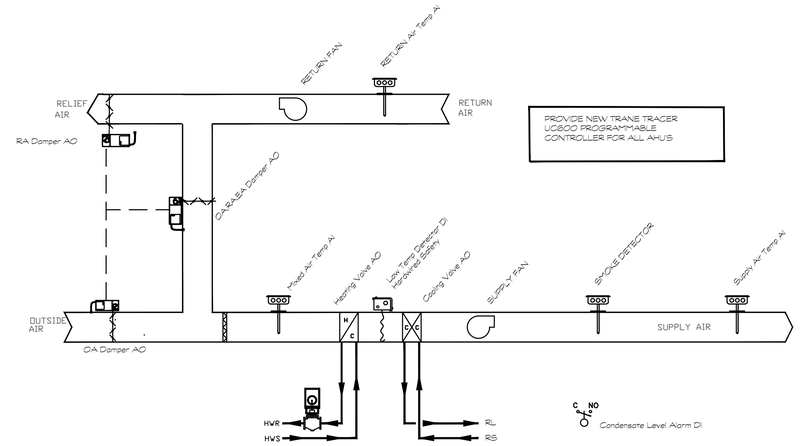
Drawing Number:
M301



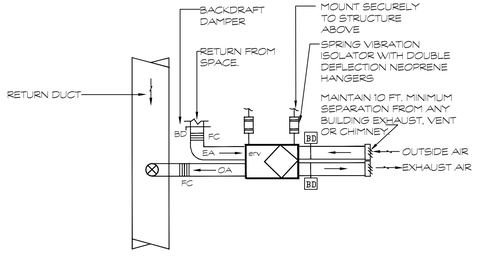
6 HORIZONTAL PIPE SUPPORT DETAIL
NOT TO SCALE



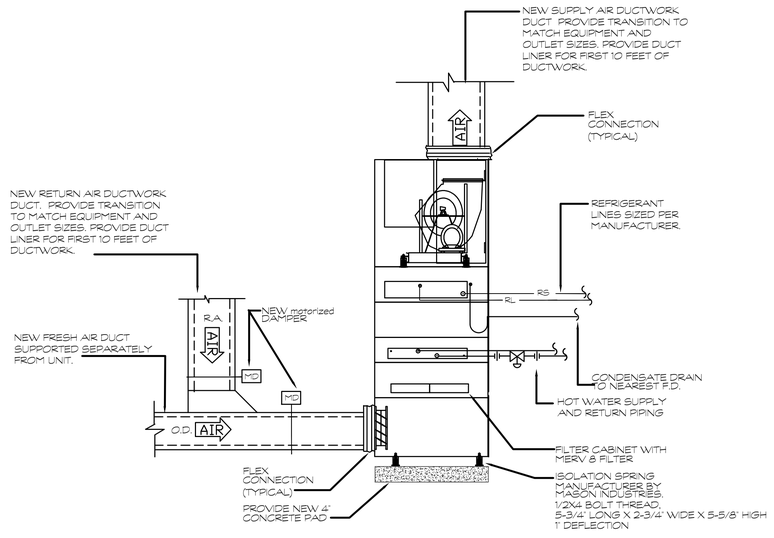
7 IN-LINE FAN MOUNTING DETAIL
NOT TO SCALE



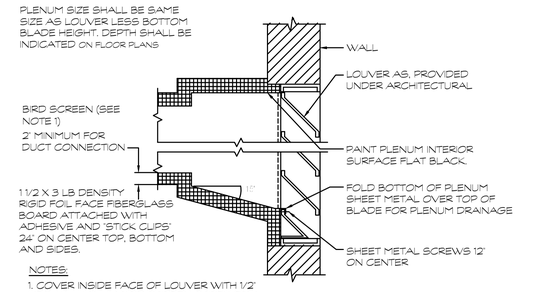
8 AHU CONTROL DIAGRAM
NOT TO SCALE



9 ENERGY RECOVERY VENTILATOR DETAIL
NOT TO SCALE



10 AHU DETAIL
NOT TO SCALE



NOTES:

1. COVER INSIDE FACE OF LOUVER WITH 1/2" MESH ALUMINUM BIRD SCREEN SCREWED IN PLACE, IF NOT SUPPLIED WITH LOUVER.
2. INSULATE UNUSED PORTION OF LOUVER WITH 1 1/2" GLASS FIBER INSULATING BOARD.
3. SEAL ALL PLENUM SEAMS WATERTIGHT WITH SILICONE SEALANT.
4. TYPICAL FOR SUPPLY AND EXHAUST PLENUMS.
5. PROVIDE ACCESS DOOR IN PLENUM. DOOR SHALL BE FIELD COORDINATED FOR ACCESS. DOOR SIZE SHALL BE 36" HIGH x 18" WIDE. REFER TO SPEC FOR DOOR CONSTRUCTION.

11 INTAKE AND EXHAUST LOUVER INSTALLTION DETAIL
NOT TO SCALE

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	*Description:*	*Date:*	*Revised By:*
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

Drawing Title:
MECHANICAL DETAILS

Date: August 24, 2021
Scale: N.T.S.
Drawn By: RL
Project Number: 20.120

Drawing Number:
M302

GENERAL

A. ARCHITECTURAL GENERAL CONDITIONS ARE PART OF THIS DIVISION. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE BUILDING CODE, FIRE CODE, AND LOCAL CODES AND ORDINANCES INCLUDING THE MECHANICAL CODE. ALL EQUIPMENT SHALL BE UL LISTED. THE CONTRACTOR SHALL BEAR THE COST OF ALL FEES, PERMITS, LICENSES AND TAXES.

B. ALL WORK SHALL COMPLY WITH REQUIREMENTS OF THE STATE OF CONNECTICUT BUILDING CODES.

C. PRIOR TO SUBMISSION OF HIS BID, THIS CONTRACTOR SHALL VISIT THE JOB SITE TO ASCERTAIN THE ACTUAL FIELD CONDITIONS AS THEY RELATE TO THE WORK AS INDICATED ON THE DRAWINGS AND DESCRIBED HEREIN. DISCREPANCIES, IF ANY, SHALL BE BROUGHT TO THE ARCHITECTS AND ENGINEERS ATTENTION PRIOR TO SUBMISSION OF HIS BID, AND IF NOT RESOLVED TO HIS SATISFACTION, SHALL BE A WRITTEN QUALIFICATION OF HIS BID. THE SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE, AND LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.

D. PRIOR TO SUBMISSION OF HIS FORMAL BID, THIS CONTRACTOR SHALL REVIEW ALL DRAWINGS OF THE ENTIRE PROJECT INCLUDING GENERAL CONSTRUCTION, DEMOLITION, ELECTRICAL, MECHANICAL, PLUMBING, AND HE SHALL NOTIFY THE PROJECT COORINATOR OF WORK REQUIRED IN HIS BID WHICH IS INDICATED OR IMPLIED IN OTHER SECTIONS OF THE WORK.

E. INSTALL WORK IN A NEAT WORKMANLIKE MANNER READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR.

F. DRAWING AND SPECIFICATIONS INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK IN CONTRACT. NEITHER THE SPECIFICATIONS NOR THE DRAWINGS UNDERTAKE TO ILLUSTRATE OR DESCRIBE ALL ITEMS NECESSARY FOR THE WORK. THE CONTRACTOR IS TO BE COMPLETELY FAMILIAR WITH THE FUNCTION OF ALL ITEMS INCLUDED AND THAT HIS ESTIMATE SHALL REFLECT THE INCLUSION OF ALL HANGERS, INSERTS, ETC., NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM. ALL MATERIAL, WORK, INCIDENTAL ACCESSORIES OR OTHER DETAILS NOT SHOWN BUT NECESSARY TO MAKE THE WORK COMPLETE AND PERFECT, AND IN ALL RESPECTS READY FOR OPERATION, EVEN IF NOT PARTICULARLY SPECIFIED, SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.

G. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF WORK AND APPROXIMATE LOCATION OF EQUIPMENT. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID CONFLICT.

H. REFER TO PROJECT GENERAL CONDITIONS FOR WARRANTY AND GUARANTEE REQUIREMENTS. IN THE ABSENCE OF SAME, CONTRACTOR SHALL PROVIDE GUARANTEE OF ONE YEAR ON WORKMANSHIP AND MATERIALS FROM DATE OF OWNER ACCEPTANCE.

I. IF ANY ERRORS, OMISSIONS OR DISCREPANCIES APPEAR IN THE DRAWINGS, SPECIFICATIONS OR OTHER DOCUMENTS, THE CONTRACTOR SHALL WITHIN TEN (10) DAYS AFTER RECEIVING SUCH DOCUMENTS NOTIFY THE ARCHITECT IN WRITING OF SUCH OMISSIONS OR ERRORS. IN THE EVENT OF THE CONTRACTORS FAILURE TO GIVE SUCH NOTICE, ERRORS OR OMISSIONS, THE COST OF RECTIFYING SAME, SHALL BE BORNE BY THIS CONTRACTOR.

J. IF THERE ARE ANY CONFLICTING REQUIREMENTS BETWEEN THIS SPECIFICATION AND THE DESIGN DRAWINGS OR BETWEEN DIFFERENT DRAWINGS AND CLARIFICATION IS NOT RECEIVED BY THE CONTRACTOR THEN, THE CONTRACTOR SHALL ABIDE BY THE MORE STRINGENT REQUIREMENT.

K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TOTAL COORDINATION BETWEEN THE DIFFERENT DIVISIONS OF THE CONTRACT. ITEMS FURNISHED UNDER ONE DIVISION AND REQUIRING WORK UNDER ANOTHER DIVISION IS PART OF THE CONTRACT AND NO ALLOWANCE WILL BE GIVEN TO THE CONTRACTORS CLAIM FOR EXTRA WORK.

L. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE BUILDING STANDARDS. COORDINATE WITH FACILITIES FOR SPECIAL REQUIREMENTS.

M. SEAL ALL PENETRATIONS THROUGH FIRE SEPARATION WITH AN APPROVED UL LISTED ASSEMBLY AND FIRE STOPPING MATERIALS.

SCOPE OF WORK

A. PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND CONTRACTORS SERVICES NECESSARY FOR COMPLETE, SAFE, INSTALLATION OF ALL WORK IN FULL CONFORMITY WITH REQUIREMENTS OF STATE OF CONNECTICUT BUILDING CODES AND OF ALL AUTHORITIES HAVING JURISDICTION.

B. SECURE CERTIFICATIONS, PERMITS, PAY ALL FEES AND CHARGES FOR ALL WORK INSTALLED.

SHOP DRAWINGS

A. SUBMIT CERTIFIED EQUIPMENT CUTS WITH CONSTRUCTION WIRING DIAGRAMS. SUBMIT FOUR (4) BOOK BOUND OPERATING AND SERVICE MANUALS WHICH SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING.

-TEMPERATURE CONTROLS
-DIFFUSERS, REGISTERS, GRILLES
--AHU
-EXHAUST FANS
-DUCTWORK

CUTTING, ALTERING AND PATCHING

A. PROVIDE ALL CUTTING, CHASING, DRILLING, ALTERING AND ROUGH PATCHING REQUIRED FOR THE WORK OF THIS DIVISION.

1. INCLUDING THE RESTORING OF EXISTING WORK CUT FOR OR DAMAGED BY INSTALLATION OF NEW WORK AND WHERE PRESENT WORK IS REMOVED.

2. ALL MATERIALS AND WORKMANSHIP REQUIRED IN CONNECTION WITH CUTTING, ALTERING AND ROUGH PATCHING SHALL MATCH THE EXISTING WORK IN EVERY RESPECT.

B. DO ALL SHORING, BRACING, CUTTING, PATCHING, PIECING OUT, FILLING IN, REPAIRING AND REFINISHING OF ALL PRESENT WORK AS MADE NECESSARY BY THE ALTERATION AND THE INSTALLATION OF NEW WORK.

C. ALL HOLES AND OPENINGS OCCURRING IN THE EXISTING FLOORS AFTER EQUIPMENT, PARTITIONS, FLOORS, STEEL WORK, CONDUITS AND PIPES ARE REMOVED OR INSTALLED SHALL BE CLOSED UP WITH MATERIALS SIMILAR TO THE ADJACENT WORK.

D. THE SIZE AND LOCATION OF ITEMS REQUIRING AN OPENING, CHASE OR OTHER PROVISIONS TO RECEIVE IT SHALL BE GIVEN BY THE TRADE REQUIRING SAME IN AMPLE TIME TO AVOID UNDUE CUTTING OF ANY NEW WORK TO BE INSTALLED. THESE PROVISIONS SHALL NOT RELIEVE THE CONTRACTOR FROM KEEPING INFORMED AS TO THE REQUIRED OPENING, CHASES, ETC., NOR FROM RESPONSIBILITY FOR THE CORRECTNESS THEREOF, NOR FOR CUTTING AND REPAIRING AFTER THE NEW WORK IS IN PLACE.

E. INCLUDE ALL CUTTING, REPAIRING AND PATCHING IN CONNECTION WITH THE WORK THAT MAY BE REQUIRED TO MAKE THE SEVERAL PARTS COME TOGETHER PROPERLY AND FIT IT TO RECEIVE OR BE RECEIVED BY THE WORK OF OTHER TRADES, AS SHOWN ON THE DRAWINGS AND/OR SPECIFIED, OR REASONABLY IMPLIED BY THE DRAWINGS AND SPECIFICATIONS.

F. ALL REPAIRING, PATCHING, PIECING-OUT, FILLING-IN, RESTORING AND REFINISHING SHALL BE NEATLY DONE BY MECHANICS SKILLED IN THEIR TRACE TO LEAVE SAME IN CONDITION SATISFACTORY TO THE OWNER.

G. MATERIALS AND THEIR METHODS OF APPLICATION FOR PATCHING SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF THE SPECIFICATIONS.

1. MATERIALS AND WORKMANSHIP NOT COVERED BY THE SPECIFICATIONS AND ITEMS OF WORK EXPOSED TO VIEW ADJOINING EXISTING WORK TO REMAIN SHALL CONFORM TO SIMILAR MATERIALS AND WORKMANSHIP EXISTING IN OR ADJACENT TO THE SPACES TO BE ALTERED.

H. CUTTING, REPAIRING AND PATCHING SHALL INCLUDE ALL ITEMS SHOWN ON THE DRAWINGS, SPECIFIED IN THE SPECIFICATIONS OR REQUIRED BY THE INSTALLATION OF NEW WORK OR THE REMOVAL OF EXISTING WORK.

I. REMOVE PARTITIONS, WALLS, SUSPENDED CEILINGS, ETC., AS NECESSARY TO PERFORM THE REQUIRED ALTERATIONS OR NEW CONSTRUCTION WORK.

1. AVOID DAMAGE TO CONSTRUCTION AND FINISHES THAT ARE TO REMAIN.

J. PROTECT AND BE RESPONSIBLE FOR THE EXISTING BUILDING, FACILITIES AND IMPROVEMENTS.

1. ANY DISTURBANCE OR DAMAGE TO THE WORK, THE EXISTING BUILDING, AND IMPROVEMENTS,OR ANY IMPAIRMENTS OF FACILITIES RESULTING FROM THE CONSTRUCTION OPERATIONS, SHALL BE PROMPTLY RECTIFIED, WITH THE DISTURBED, AMAGED, OR IMPARED WORK, RESTORED, REPARED OR REPLACED AT NO EXTRA COST.

K. ALL ALTERATIONS WHICH ARE NOT INDICATED ON THE DRAWINGS NOR SPECIFIED HEREIN, BUT NECESSARY TO MAKE GOOD EXISTING WORK DISTURBED BY REASON OF THE WORK SHALL BE RESTORED TO A CONDITION SATISFACTORY TO THE OWNER.

L. ALL HOLES IN MASONRY FLOORS AND WALLS ARE TO BE CORE DRILLED.

M. DISTURBED CONCRETE AND /OR CEMENT FLOOR AREAS SHALL BE PATCHED WITH APPROVED TYPE LATEX MORTAR.

1. WHEN CEMENT MORTAR IS USED FOR PATCHING, THE SURFACES SHALL BE DEPRESSED A MINIMUM DEPTH OF 1.

N. TEMPORARY OPENINGS.

1. ALL TEMPORARY OPENINGS CUT IN WALLS, FLOORS OR CEILINGS FOR PIPE OR DUCTWORK SHALL BE CLOSED OFF WITH TRANSITE OR AN EQUALLY NON-COMBUSTIBLE MATERIAL EXCEPT WHEN MECHANICS ARE ACTUALLY WORKING AT THE PARTICULAR OPENING.

DUCTWORK

A. REFER TO "HVAC DUCT MATERIAL" SCHEDULE, FOR DUCT MATERIALS PER APPLICATION. CONSTRUCT DUCTWORK OF SHEET STEEL OF LOCK-FORMING QUALITY

B. DUCT CONSTRUCTION, INCLUDING SHEET METAL THICKNESSES, SEAM AND JOINT CONSTRUCTION, REINFORCEMENTS, ELBOWS, TURNING VANES, AND HANGERS AND SUPPORTS, SHALL COMPLY WITH SMACNAS HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE' LATEST EDITION, AND PERFORMANCE REQUIREMENTS AND DESIGN CRITERIA BASED ON PRESSURE & LEAKAGE CLASSES INDICATED BELOW.

2. EXHAUST DUCTS (NEGATIVE PRESSURE): 1-INCH W.G.

LEAKAGE CLASS:

1. ROUND SUPPLY-AIR DUCT: 3 CFM/100 SQ. FT. AT 1-INCH WG.

C. SOLVENT-BASED JOINT AND SEAM SEALANT: PPLICATION BRUSH ON, SYNTHETIC RUBBER RESIN BASE, SOLVENT: TOLUENE AND HEPTANE, SOLIDS CONTENT: MINIMUM 60 PERCENT, SHORE A HARDNESS: MINIMUM 60, WATER RESISTANT, MOLD AND MILDEW RESISTANT, VOC: MAXIMUM 395 G/L, MAXIMUM STATIC-PRESSURE CLASS: 10-INCH WG, POSITIVE OR NEGATIVE, SERVICE: INDOOR OR OUTDOOR, SUBSTRATE: COMPATIBLE WITH GALVANIZED SHEET STEEL (BOTH PVC COATED AND BARE), STAINLESS STEEL, OR ALUMINUM SHEETS.

D. FLANGED JOINT SEALANT: COMPLY WITH ASTM C 920.; GENERAL: SINGLE-COMPONENT, ACID-CURING, SILICONE, ELASTOMERIC, TYPE: S, GRADE: NS., CLASS: 25., USE: O.

E. FLANGE GASKETS: BUTYL RUBBER, NEOPRENE, OR EPDM POLYMER WITH POLYISOBUTYLENE PLASTICIZER.

F. MAKE CONNECTIONS TO EQUIPMENT WITH FLEXIBLE CONNECTORS OF FLAME-RETARDANT OR NONCOMBUSTIBLE FABRICS. MANUFACTURERS: DUCTMATE INDUSTRIES, INC., DURO DYNE INC.,VENTFABRICS, INC.,WARD INDUSTRIES, INC.; A DIVISION OF HART & COOLEY, INC.

G. VOLUME DAMPERS-GALVANIZED STEEL, PER SMACNA HVAC DUCT CONSTRUCTION STANDARDS, LATEST EDITION, PROVIDE AXLES FULL LENGTH OF DAMPER BLADES AND BEARINGS AT BOTH ENDS OF OPERATING SHAFT.

H. SEAL OPENING AROUND DUCTS THROUGH WALLS WITH MINERAL WOOL OR OTHER NON-COMBUSTIBLE MATERIAL.

I. SEAL ALL PENETRATIONS THROUGH FIRE SEPARATION WITH AN APPROVED UL LISTED ASSEMBLY AND FIRE STOPPING MATERIALS.

J. CONSTRUCT FLEXIBLE CONNECTIONS OF NEOPRENE-COATED FLAMEPROOF FABRIC CRIMPED INTO DUCT FLANGES FOR ATTACHMENT TO DUCT AND EQUIPMENT. FLEXIBLE DUCT SHALL BE CONSTRUCTED OF TWO-PLY LAMINATE MECHANICALLY CORRUGATED BONDED ALUMINUM INNER CORE COVERED BY ONE INCH THICK FIBERGLASS INSULATION OF ONE POUND DENSITY. FIBERGLASS SHALL BE COVERED WITH A 2.5 MIL POLYETHYLENE VAPOR BARRIER. FLEXIBLE DUCT SHALL MEET THE LATEST REQUIREMENTS OF UL STANDARD 181, CLASS 1. FLEXIBLE AIR DUCT. DUCT TO BE RATED FOR 10 INCHES POSITIVE OR NEGATIVE PRESSURE. MANUFACTURERS: FLEXMASTER U.S.A. INC., MCGILL AIRFLOW LLC., WARD INDUSTRIES, INC., A DIVISION OF HART & COOLEY, INC.

K. ALL PENETRATIONS THROUGH FIRE RATED WALLS, CEILINGS OR FLOORS IN WHICH PIPES OR DUCTS PASS SHALL BE SEALED WITH A UL APPROVED FIRE-STOP FITTING CLASSIFIED FOR AN HOURLY RATING EQUAL TO THE RATING OF THE WALL CEILING OR FLOOR.

BALANCING AIR SYSTEMS

A. THIS CONTRACT IS FOR ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR BALANCING THE AIR AND

B. AIR SYSTEMS TO BE BALANCED INCLUDE ALL THE SUPPLY, RETURN, AND EXHAUST SYSTEMS. BALANCING SHALL INCLUDE REBALANCING (ADJUSTING OF SHEAVES AND REPLACING BELTS, IF NEEDED) OF EXHAUST FANS, AND AHU UNITS AS REQUIRED TO PROVIDE AIR FLOWS SPECIFIED. THE BALANCING CONTRACTOR SHALL SECURE A SET OF AS-BUILT DUCTWORK PLANS PRIOR TO COMMENCING WORK.

C. THE BALANCING CONTRACTOR SHALL ATTEND A COORDINATION MEETING WITH THE HVAC AND ATCS CONTRACTOR TO COORDINATE SENSOR LOCATIONS.

E. UPON COMPLETION OF ALL TESTS AND BALANCING OPERATIONS, THE CONTRACTOR SHALL SUBMIT FIVE (5) COPIES OF A CERTIFIED BALANCING REPORT TO THE ENGINEER. THIS REPORT SHALL INCLUDE ALL DATA

SEISMIC RESTRAINT

A. GENERAL: THIS PROJECT IS IN A SEISMIC ZONE PER STATE AND/OR LOCAL CODES AND ORDINANCES AND ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED, SUPPORTED, AND SEISMICALLY RESTRAINED ACCORDINGLY.

IDENTIFICATION

A. ALL DUCTWORK, PIPING, EQUIPMENT, AND VALVES SHALL BE IDENTIFIED IN COMPLIANCE WITH ASME A13.

B. DUCTWORK SHALL BE IDENTIFIED WITH NAME AND FLOW DIRECTION AT LEAST EVERY 20 FT. WITH ADHESIVE IDENTIFICATION LABELS.

C. EQUIPMENT SHALL BE IDENTIFIED WITH ENGRAVED PLASTIC MARKERS.

PIPING

A. CONDENSATE PIPING: TYPE 'L' COPPER

B. PROVIDE PIPE HANGERS CONSISTENT WITH PIPING MATERIAL.

C. HANGER MATERIALS TO BE PRIME PAINTED OR ZINC COATED.

D. USE DIELECTRIC FITTINGS FOR CONNECTING DISSIMILAR MATERIALS.

E. PROVIDE 22 GAUGE GALVANIZED PIPE SLEEVES FOR PIPE PENETRATIONS THROUGH SHEETROCK WALLS. USE SCHEDULE 40 GALVANIZED FOR SLEEVES THROUGH MASONRY WALLS OF ONE PIPE DIAMETER THAN OUTSIDE DIAMETER OF INSULATION.

F. PROVIDE HIGH CAPACITY AIR VENTS AT HIGH POINTS TO REPLACE EXISTING ON CHILLED WATER PIPING AND DRAINS AT LOW POINTS OF PIPING SYSTEM. PIPE VENTS TO DRAIN.

G. PRESSURE TEST EACH SECTION OF PIPING.

H. LABEL ALL PIPING SECTION WITH SETON PIPE LABELS AND VALVE TAGS.

I. REFRIGERANT PIPING

1. COPPER TUBE: ASTM B 88, TYPE K.
2. WROUGHT-COPPER FITTINGS: ASME B16.22.
3. WROUGHT-COPPER UNIONS: ASME B16.22.
4. SOLDER FILLER METALS: ASTM B 32, USE 95-5 TIN ANTIMONY OR ALLOY HB SOLDER TO JOIN COPPER SOCKET FITTINGS ON COPPER PIPE.
5. BRAZING FILLER METALS: AWS A5.8/A5.8M.

J. PIPE HANGERS

1. INSTALL THE FOLLOWING PIPE ATTACHMENTS:
   a. ADJUSTABLE STEEL CLEVIS HANGERS FOR INDIVIDUAL HORIZONTAL PIPING LESS THAN 20 FEET LONG.
   b. ADJUSTABLE ROLLER HANGERS AND SPRING HANGERS FOR INDIVIDUAL HORIZONTAL PIPING 20 FEET OR LONGER.
   c. PIPE ROLLER: MSS SP-58, TYPE 44 FOR MULTIPLE HORIZONTAL PIPING 20 FEET OR LONGER, SUPPORTED ON A TRAPEZE.
   d. SPRING HANGERS TO SUPPORT VERTICAL RUNS.
   e. PROVIDE COPPER-CLAD HANGERS AND SUPPORTS FOR HANGERS AND SUPPORTS IN DIRECT CONTACT WITH COPPER PIPE.

3. INSTALL HANGERS FOR DRAWN-TEMPER COPPER PIPING WITH THE FOLLOWING MAXIMUM SPACING AND MINIMUM ROD SIZES:
   a. NPS 3/4: MAXIMUM SPAN, 5 FEET; MINIMUM ROD SIZE, 1/4 INCH.
   b. NPS 1: MAXIMUM SPAN, 6 FEET; MINIMUM ROD SIZE, 1/4 INCH.
   c. NPS 1-1/2: MAXIMUM SPAN, 8 FEET; MINIMUM ROD SIZE, 3/8 INCH.
   d. NPS 2: MAXIMUM SPAN, 8 FEET; MINIMUM ROD SIZE, 3/8 INCH.
   e. NPS 2-1/2: MAXIMUM SPAN, 9 FEET; MINIMUM ROD SIZE, 3/8 INCH.
   f. NPS 3: MAXIMUM SPAN, 10 FEET; MINIMUM ROD SIZE, 3/8 INCH.

PIPE INSULATION

H. REFER TO 'HVAC PIPING/TUBING INSULATION' FOR APPLICTIONS & VALUES.

I. COMPLY WITH THE REQUIREMENTS OF THE INTERNATIONAL ENERGY CONSERVATION CODE 2008.

J. PRODUCTS SHALL NOT CONTAIN ASBESTOS, LEAD, MERCURY, OR MERCURY COMPOUNDS.

K. ACCEPTABLE MANUFACTURERS INCLUDE: CERTAINTEED CORP., COMMERCIAL BOARD., FIBREX INSULATIONS INC.; FBX., JOHNS MANVILLE, 800 SERIES SPIN-GLAS., KNAUF INSULATION: INSULATION BOARD., MANSON INSULATION INC.: AK BOARD., OWENS CORNING; FIBERGLAS 700 SERIES.

DESCRIPTION: GC 100 SERIES FAN SHALL BE CEILING MOUNTED, DIRECT DRIVEN, CENTRIFUGAL EXHAUST FAN.

CERTIFICATIONS:
FAN SHALL BE MANUFACTURED AT AN ISO 9001 CERTIFIED FACILITY. FAN SHALL BE LISTED BY UNDERWRITERS LABORATORIES (UL 705) AND UL LISTED FOR CANADA (CUL 705). FAN SHALL BEAR THE AMCA CERTIFIED RATINGS SEAL FOR SOUND AND AIR PERFORMANCE.

CONSTRUCTION:
THE FAN WHEEL HOUSING AND INTEGRAL OUTLET DUCT SHALL BE INJECTION MOLDED FROM A SPECIALLY ENGINEERED RESIN EXCEEDING UL REQUIREMENTS FOR SMOKE AND HEAT GENERATION. THE OUTLET DUCT SHALL HAVE PROVISION FOR AN ALUMINUM BACKDRAFT DAMPER WITH CONTINUOUS ALUMINUM HINGE ROD. THE INLET BOX SHALL BE MINIMUM 22 GAUGE GALVANIZED STEEL. MOTOR SHALL BE ISOLATION MOUNTED TO A ONE PIECE GALVANIZED STAMPED STEEL INTEGRAL MOTOR MOUNT/INLET. A FIELD WIRING COMPARTMENT WITH DISCONNECT RECEPTACLE SHALL BE STANDARD. TO ACCOMMODATE DIFFERENT CEILING THICKNESS, AN ADJUSTABLE PREPUNCHED MOUNTING BRACKET SHALL BE PROVIDED. A WHITE, HIGH IMPACT STYRENE INJECTION MOLDED GRILL SHALL BE PROVIDED AS STANDARD. UNIT SHALL BE DESIGNED WITH PROVISION FOR FIELD CONVERSION FROM CEILING TO IN-LINE. UNIT SHALL BE SHIPPED IN ISTA CERTIFIED TRANSIT TESTED PACKAGING.

WHEEL:
WHEEL SHALL BE CENTRIFUGAL FORWARD CURVED TYPE, INJECTION MOLDED OF P OLYPROPYLENE RESIN. WHEEL SHALL BE BALANCED IN ACCORDANCE WITHAMCA STANDARD 204-05, BALANCE QUALITY AND VIBRATION LEVELS FOR FANS. OR SHALL BE OPEN DRIP PROOF TYPE WITH PERMANENTLY LUBRICATED BEARINGS AND INCLUDE IMPEDANCE OR THERMALOVERLOAD PROTECTION ANDDISCONNECT PLUG. MOTOR SHALL BE FURNISHED AT THE SPECIFIED VOLTAGE.

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	Description:	Date:	Revised By:
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

Drawing Title:
MECHANICAL SPECIFICATIONS

Date: August 24, 2021
Scale: N.T.S.
Drawn By: RL
Project Number: 20.120

Drawing Number:
M401

1.3 SUBMITTALS

FIRST THREE PARAGRAPHS BELOW ARE DEFINED IN DIVISION 01 SECTION 'SUBMITTAL PROCEDURES' AS 'ACTION SUBMITTALS.'

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED, INCLUDE THE FOLLOWING:

1. DATA SHEET: INDICATE MATERIALS OF CONSTRUCTION, FINISH, AND MOUNTING DETAILS; AND PERFORMANCE DATA INCLUDING THROW AND DROP, STATIC-PRESSURE DROP, AND NOISE RATINGS.

2. DIFFUSER, REGISTER, AND GRILLE SCHEDULE: INDICATE DRAWING DESIGNATION, ROOM LOCATION, QUANTITY, MODEL NUMBER, SIZE, AND ACCESSORIES FURNISHED.

REMAINING PARAGRAPHS ARE DEFINED IN DIVISION 01 SECTION 'SUBMITTAL PROCEDURES' AS 'INFORMATIONAL SUBMITTALS.'

RETAIN FIRST PARAGRAPH BELOW IF DRAWINGS DO NOT INCLUDE DETAILED PLANS OR IF PROJECT INVOLVES UNUSUAL COORDINATION REQUIREMENTS.

B. COORDINATION DRAWINGS: REFLECTED CEILING PLANS, DRAWN TO SCALE, ON WHICH THE FOLLOWING ITEMS ARE SHOWN AND COORDINATED WITH EACH OTHER, USING INPUT FROM INSTALLERS OF THE ITEMS INVOLVED:

REVISE SUBPARAGRAPHS BELOW TO SUIT PROJECT.

1. CEILING SUSPENSION ASSEMBLY MEMBERS.

2. METHOD OF ATTACHING HANGERS TO BUILDING STRUCTURE.

3. SIZE AND LOCATION OF INITIAL ACCESS MODULES FOR ACOUSTICAL TILE.

4. CEILING-MOUNTED ITEMS INCLUDING LIGHTING FIXTURES, DIFFUSERS, GRILLES, SPEAKERS, SPRINKLERS, ACCESS PANELS, AND SPECIAL MOLDINGS.

5. DUCT ACCESS PANELS.

C. SOURCE QUALITY-CONTROL REPORTS.

1.4 DELIVERY, STORAGE AND HANDLING

A. HANDLE AIR TERMINAL UNITS AND COMPONENTS CAREFULLY TO PREVENT DAMAGE.

B. STORE AIR TERMINAL UNITS AND COMPONENTS IN CLEAN DRY PLACE OFF THE GROUND. PROTECT FROM WEATHER, WATER AND PHYSICAL DAMAGE.

PART 2 - PRODUCTS

2.1 FINISHES

A. EXCEPT WHERE OTHERWISE SPECIFIED, SURFACE FINISH WILL BE SELECTED BY THE ARCHITECT. INTERIOR FINISH SHALL BE FLAT BLACK.

2.2 ACCESSORIES

A. EACH GRILLE, REGISTER AND DIFFUSER SHALL HAVE THE ACCESSORIES REQUIRED TO PERFORM SATISFACTORILY AND BE FULLY ADJUSTABLE. THIS INCLUDES OPPOSED BLADE VOLUME DAMPERS, AIR DEFLECTORS, VANES, BLANKING QUADRANTS, ETC.

B. DAMPERS SHALL BE OMITTED FROM THE FOLLOWING:

SINGLE EXHAUST GRILLES, TRANSFER GRILLES.

2.3 CEILING DIFFUSERS

A. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:

1. KRUEGER.

2. PRICE INDUSTRIES.

3. TITUS

B. MATERIAL: ALUMINUM.

C. FINISH: BAKED ENAMEL, WHITE.

D. FACE SIZE: SEE SCHEDULE ON DRAWING.

E. MOUNTING: SURFACE AND T-BAR. SEE SCHEDULE ON DRAWING.

F. PATTERN: ADJUSTABLE.

G. DAMPERS: RADIAL OPPOSED BLADE.

H. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:

1. KRUEGER

2. PRICE INDUSTRIES.

3. TITUS

I. MATERIAL: HEAVY GAUGE EXTRUDED ALUMINUM.

J. FINISH: BAKED ENAMEL.

K. GRILL ROTATION: MINIMUM 25 DEGREE UP AND DOWN FROM CENTERLINE OF GRILLE. CONSTRUCTED WITH RADIUSED END CAP AND FOAM GASKETS.

L. BLADES: HEAVY DUTY, INDIVIDUALLY ADJUSTABLE.

M. UNIVERSAL END CAP.

N. MOUNTING: COUNTERSUNK SCREW HOLES AND CURVED BORDER.

O. AIR SCOOP DAMPER/EXTRACTOR: HEAVY DUTY ALUMINUM OPERABLE FROM THE FACE WITH SCREW DRIVER.

2.4 SOURCE QUALITY CONTROL

A. VERIFICATION OF PERFORMANCE: RATE DIFFUSERS, REGISTERS, AND GRILLES ACCORDING TO ASHRAE 70, 'METHOD OF TESTING FOR RATING THE PERFORMANCE OF AIR OUTLETS AND INLETS.'

PART 3 - EXECUTION

3.1 EXAMINATION

A. EXAMINE AREAS WHERE DIFFUSERS, REGISTERS, AND GRILLES ARE TO BE INSTALLED FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES AND OTHER CONDITIONS AFFECTING PERFORMANCE OF EQUIPMENT.

B. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.2 INSTALLATION

A. INSTALL DIFFUSERS, REGISTERS, AND GRILLES LEVEL AND PLUMB.

B. CEILING-MOUNTED OUTLETS AND INLETS: DRAWINGS INDICATE GENERAL ARRANGEMENT OF DUCTS, FITTINGS, AND ACCESSORIES. AIR OUTLET AND INLET LOCATIONS HAVE BEEN INDICATED TO ACHIEVE DESIGN REQUIREMENTS FOR AIR VOLUME, NOISE CRITERIA, AIRFLOW PATTERN, THROW, AND PRESSURE DROP. MAKE FINAL LOCATIONS WHERE INDICATED, AS MUCH AS PRACTICAL. FOR UNITS INSTALLED IN LAY-IN CEILING PANELS, LOCATE UNITS IN THE CENTER OF PANEL. WHERE ARCHITECTURAL FEATURES OR OTHER ITEMS CONFLICT WITH INSTALLATION, NOTIFY ARCHITECT FOR A DETERMINATION OF FINAL LOCATION.

C. INSTALL DIFFUSERS, REGISTERS, AND GRILLES WITH AIRTIGHT CONNECTIONS TO DUCTS AND TO ALLOW SERVICE AND MAINTENANCE OF DAMPERS, AIR EXTRACTORS, AND FIRE DAMPERS.

3.3 ADJUSTING

A. AFTER INSTALLATION, ADJUST DIFFUSERS, REGISTERS, AND GRILLES TO AIR PATTERNS INDICATED, OR AS DIRECTED, BEFORE STARTING AIR BALANCING.

B. PROVIDE BALANCING DAMPERS ON DUCT TAKE-OFF TO DIFFUSERS, GRILLES AND REGISTERS, REGARDLESS OF WHETHER DAMPERS ARE SPECIFIED AS PART OF THE DIFFUSER, OR GRILLE AND REGISTER ASSEMBLY.

C. PAINT DUCTWORK VISIBLE BEHIND AIR OUTLETS AND INLETS MATTE BLACK. REFER TO DIVISION 09.

Project Title:

Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

SILVER / PETRUCELLI + ASSOCIATES

Architects / Engineers / Interior Designers

3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	*Description:*	*Date:*	*Revised By:*
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

Drawing Title:

MECHANICAL SPECIFICATIONS

Date: August 24, 2021
Scale: N.T.S.
Drawn By: RL
Project Number: 20.120

Drawing Number:

M402

PLUMBING GENERAL NOTES

GENERAL

THE INTENT OF THESE CONTRACT DOCUMENTS (SPECIFICATIONS AND DRAWINGS) IS FOR THE CONTRACTOR TO FURNISH AND INSTALL COMPLETE PLUMBING SYSTEMS. ALL SYSTEMS SHALL BE COMPLETE IN ALL RESPECTS, OPERATING, TESTED, ADJUSTED, APPROVED BY THE AUTHORITIES HAVING JURISDICTION AND READY FOR BENEFICIAL USE BY THE OWNER.

WHEN A CONFLICT BETWEEN THE DRAWINGS, NOTES AND/OR SPECIFICATIONS OCCUR, THE MORE STRINGENT, AND/OR LARGER QUANTITY AND/OR MORE EXPENSIVE SHALL APPLY. THE REQUIREMENTS LISTED WITHIN NOTES OR SPECIFICATIONS SHALL BE REQUIRED, PROVIDED AND INSTALLED WHETHER SPECIFICALLY INDICATED ON THE DRAWINGS OR NOT.

ITEMS AND SERVICES NOT SHOWN ON DRAWINGS OR SPECIFICATIONS BUT REQUIRED TO RENDER THE WORK COMPLETE AND READY FOR OPERATION, SHALL BE PROVIDED WITHOUT ADDITIONAL COST.

WORK OF THIS SECTION SHALL BE GOVERNED BY THE CONTRACT DOCUMENTS. PROVIDE MATERIALS, LABOR, EQUIPMENT AND SERVICES NECESSARY TO FURNISH, DELIVER AND INSTALL ALL WORK AS SPECIFIED AND AS REQUIRED BY JOB CONDITIONS. WHERE A CONFLICT EXISTS BETWEEN THESE NOTES, THE DRAWINGS AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

DRAWINGS ARE DIAGRAMMATIC AND INDICATE A GENERAL ARRANGEMENT OF WORK AND ARE NOT TO BE CONSIDERED SUB-CONTRACTOR DOCUMENTS. IT IS THE INTENT OF THESE DOCUMENTS TO INCLUDE THE PROVISION AND INSTALLATION OF ALL NECESSARY WORK AND MATERIALS FOR COMPLETE OPERATIONAL AND CODE COMPLIANT SYSTEMS BY THE CONTRACTOR. GENERAL DESIGN CONCEPTS INDICATED MUST BE FOLLOWED OR BETTERED. THE BID SHALL INCLUDE OFFSETS, ADDITIONAL PIPING, VALVES AND EQUIPMENT AND COMPONENTS AS REQUIRED TO MEET CONSTRUCTION CONDITIONS FOR PROPER OPERATION. DO NOT SCALE DRAWINGS. CONSULT ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR SPACE CONDITIONS AND ADDITIONAL REQUIREMENTS.

PERFORM THE WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT GENERAL CONDITIONS AND WITH THE PROVISIONS OF ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES AND LAWS.

WORK SHALL INCLUDE ALL INCIDENTALS, LABOR, MATERIAL, EQUIPMENT, APPLIANCES, SERVICES, HOISTING, SCAFFOLDING, SUPPORTS, TOOLS, CONSUMABLE ITEMS, FEES, LICENSES, AND ADMINISTRATIVE TASKS REQUIRED TO COMPLETE AND MAKE OPERABLE WORK SHOWN ON THE DRAWINGS, SPECIFIED HEREIN AND AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.

ALL EQUIPMENT, MATERIALS AND RELATED SYSTEMS COMPONENTS SHALL BE NEW UNLESS SPECIFICALLY NOTED OTHERWISE.

STORE MATERIALS INSIDE AND PROTECTED FROM DEBRIS, WEATHER AND MOISTURE.

THE CONTRACTOR SHALL COORDINATE ALL POWER AND CONTROL WIRING REQUIRED FOR EQUIPMENT OPERATION REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM WITH ELECTRICAL CONTRACTOR. THE CONTRACTOR SHALL PROVIDE MOTOR STARTERS FOR INSTALLATION. COORDINATE REQUIREMENTS.

PROVIDE AND INSTALL ALL MAKE-UP WATER DISTRIBUTION TO HVAC EQUIPMENT INCLUDING BACKFLOW PREVENTER.

PROVIDE AND INSTALL INDIRECT CONDENSATE WASTE PIPING AND TRAP TO FLOOR DRAIN OR DRAIN RECEPTOR FROM ALL HVAC EQUIPMENT. PROVIDE ADDITIONAL FLOOR DRAINS WITH TRAP PRIMERS OR DRAIN RECEPTORS AS REQUIRED.

PLUMBING DEVICES, FAUCETS, VALVES AND FITTINGS REQUIRED FOR SPECIALTY SERVICE EQUIPMENT (IE. KITCHEN, LAB ETC) SHALL BE PROVIDED BY THIS CONTRACTOR UNLESS OTHERWISE SPECIFIED. THIS CONTRACTOR SHALL PROVIDE AND INSTALL PIPING, CONNECTIONS, DEVICES, VALVES AND EQUIPMENT REQUIRED FOR PROPER OPERATION. COORDINATE REQUIREMENTS.

KITCHENS, LABS AND SIMILAR SPECIALTY AREAS: ALL EXPOSED PIPING, STOPS, COCKS, AND WASTES WHICH ARE VISIBLE SHALL BE CHROME PLATED.

REPAIR AND/OR REPLACE AT NO COST TO OWNER ALL EQUIPMENT AND MATERIALS DAMAGED DURING CONSTRUCTION.

ALTERATION WORK AND DEMOLITION

ALL EQUIPMENT, FIXTURES, PIPING, ETC. TO BE REMOVED, SHALL BE DISPOSED OF, TURNED OVER TO THE OWNER, OR SALVAGED AS DIRECTED BY THE OWNER. EQUIPMENT, FIXTURES, PIPING, DEVICES, ETC. SHALL NOT BE REMOVED FROM THE PREMISES WITHOUT THE OWNERS APPROVAL.

UPON COMPLETION OF REMOVALS AND MODIFICATIONS, ALL PIPING TO REMAIN SHALL BE PROPERLY PLUGGED, VALVED, CAPPED AND/OR BY PASSED SUCH THAT UPON COMPLETION OF WORK ALL SYSTEMS TO REMAIN, REMAIN OPERATIONAL.

NO DEAD ENDS SHALL BE LEFT ON ANY PIPING SYSTEMS UPON COMPLETION OF WORK.

EXISTING EXPOSED PIPING SYSTEMS NOT TO BE REUSED, AND NOT SPECIFICALLY NOTED FOR REMOVAL SHALL BE COMPLETELY REMOVED.

ALL SYSTEMS SHALL BE LEFT IN WORKING ORDER TO THE SATISFACTION OF THE OWNER UPON COMPLETION OF ALL NEW WORK.

ALL EXISTING EXPOSED, UNNECESSARY PIPING RELATED TO NEW WORK SHALL BE COMPLETELY REMOVED.

RE-ROUTE OR REMOVE ALL EXISTING PIPING AND SYSTEMS WHERE NECESSARY TO AVOID NEW EQUIPMENT, STRUCTURAL OR MASONRY WORK AS REQUIRED BY THE PROPOSED ALTERATIONS.

COORDINATION

THE CONTRACTOR SHALL OBTAIN AND REVIEW ALL CONTRACT DOCUMENTS, INCLUDING PROJECT MANUAL, PLANS AND SPECIFICATIONS OF ALL TRADES BEFORE SUBMITTING BID. REFER TO SPECIFICATIONS, PROJECT MANUAL AND PLANS, INCLUDING ALL EQUIPMENT SCHEDULES FOR INFORMATION. CONTRACTOR SHALL WALK-THROUGH BUILDING PRIOR TO SUBMITTING BID WHEN AVAILABLE.

ALL OF THE CONTRACT DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY TO FORM A TOTAL DESIGN PACKAGE. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER TO DETERMINE WHICH TRADE CONTRACTOR IS RESPONSIBLE FOR VARIOUS PORTIONS OF THE WORK.

ALL WORK AND ACTION DEPICTED AND DESCRIBED SHALL BE PERFORMED BY THE CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.

THE PLUMBING CONTRACTOR SHALL VERIFY THESE DRAWINGS WITH EXISTING FIELD CONDITIONS AND SHALL COORDINATE WITH CIVIL ENGINEER LOCATIONS AND ELEVATIONS OF PLUMBING SERVICE LINES BEFORE PROCEEDING WITH CONSTRUCTION. THE UTILITY SERVICE LINES SHOWN ON THE DRAWINGS ARE FOR REFERENCE & BUILDING PERMIT ONLY. REFER TO CIVIL ENGINEERS DRAWINGS FOR UTILITY SERVICE LINES LAY-OUT & DETAILS.

CONTRACTORS SHALL COORDINATE THEIR WORK WITH ALL OWNER-FURNISHED EQUIPMENT, INCLUDING REQUIRED SERVICE CONNECTIONS, RECEPTACLES, ETC. BEFORE INSTALLATION.

THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. THE CONTRACTOR SHALL COORDINATE LOCATIONS OF EQUIPMENT WITH ALL TRADES BEFORE STARTING CONSTRUCTION. ANY MODIFICATIONS TO THE EQUIPMENT LAY-OUT REQUIRED FOR INSTALLATION ARE TO BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER. COORDINATE ALL PIPING AND CONDUITS LEAVING THE BUILDING WITH THE SITE CONTRACTOR BEFORE INSTALLATION.

LOCATION AND SIZES OF ALL FLOOR, WALL AND ROOF PENETRATIONS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED.

DEVELOP AND SUBMIT COORDINATION DRAWINGS AS OUTLINED.

SHEET METAL, PLUMBING AND FIRE PROTECTION SHOP DRAWINGS THAT HAVE BEEN COORDINATED WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW. DRAWINGS MUST BE RETURNED FROM ENGINEER EITHER REVIEWED, OR FURNISH AS CORRECTED PRIOR TO BEING USED AS BASIS FOR COORDINATION DRAWINGS.

AFTER SHEET METAL AND PIPING DRAWINGS HAVE BEEN REVISED PER ENGINEERS COMMENTS, REPRODUCIBLE COPIES SHALL BE SENT TO THE TRADES IN THE FOLLOWING SEQUENCE FOR THE INCLUSION OF THEIR WORK:

-MECHANICAL SHEET METAL
-PLUMBING PIPING
-MECHANICAL PIPING
-SPRINKLER PIPING
-ELECTRICAL WORK

AFTER ALL TRADES HAVE INCLUDED THEIR WORK ON THE COORDINATION DRAWING AND NOTED CONFLICTS, ALL TRADES SHALL MEET TO RESOLVE CONFLICTS AND AGREE TO ACCEPTABLE SOLUTIONS. EACH TRADE SHALL SIGN COORDINATION DRAWINGS. ITEMS NOT SHOWN ON COORDINATION DRAWING IS RESPONSIBILITY OF OMITTING CONTRACTOR AND CONTRACTOR IS SUBJECT TO ADDITIONAL COSTS INCURRED BY OTHER TRADES.

THE ARCHITECT AND ENGINEER ARE NOT PART OF THE COORDINATION DRAWING PROCESS. THE ENGINEER WILL PROVIDE ASSISTANCE FOR NOTED CONFLICTS ONLY. COORDINATION DRAWINGS ARE NOT TO BE CONSIDERED PIPING OR DUCT SHOP DRAWINGS. THE CONTRACTOR IS REQUIRED TO SUBMIT INDIVIDUAL PIPING AND DUCTWORK SHOP DRAWINGS FOR REVIEW BY THE ENGINEER. PIPING AND DUCTWORK SHOP DRAWINGS SHALL FOLLOW THE DESIGN INTENT OF THE CONTRACT DOCUMENTS.

SUBMIT FINAL SIGNED COORDINATION DRAWING TO ENGINEER FOR REVIEW. ENGINEER WILL REVIEW COORDINATION DRAWINGS FOR GENERAL ARRANGEMENT AND FOR NOTED CONFLICTS ONLY. SPECIFIC INSTALLATION REQUIREMENTS WILL BE REVIEWED ONLY IN INDIVIDUAL TRADE SHOP DRAWINGS.

ANY WORK FABRICATED OR INSTALLED PRIOR TO SIGN OFF BY ALL TRADES WHICH IS DEEMED TO BE IN CONFLICT WITH COORDINATION DRAWINGS SHALL BE REMOVED AND RE-INSTALLED IN CONFORMANCE WITH COORDINATION DRAWINGS.

EACH CONTRACTOR (MENTIONED ABOVE) IS RESPONSIBLE FOR THE COORDINATION OF HIS SUB-CONTRACTORS.

THE OVERALL COORDINATION OF THE COORDINATION PROCESS IS THE RESPONSIBILITY OF THE CONTRACTOR. THE ENGINEER IS NOT RESPONSIBLE FOR THE COORDINATION PROCESS. THE ENGINEER WILL RESPOND TO QUESTIONS THAT ARISE FROM THE COORDINATION PROCESS. DRAWINGS SUBMITTED WILL BE REVIEWED FOR EARLY DENYING CONFLICTS ONLY. SOLUTIONS TO CONFLICTS WILL NOT BEAR ADDITIONAL COST.

SHOP DRAWINGS

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO BE APPROVED, REVISED, OR RESUBMITTED AS PER THE ENGINEERS COMMENTS, PRIOR TO CONSTRUCTION, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

-PLUMBING FIXTURES	-CLEAN OUTS	-DRAINS
-PIPING	-PIPE SEALS	-COMPRESSORS
-FITTINGS	-BRACKETS	-HANGERS/SUPPORTS
-INSULATION	-EXPANSION TANKS	-WATER HEATERS
-PUMPS	-VALVES	-THERMOSTATIC MIXING VALVES

AS BUILT DRAWINGS

PROVIDE A COMPLETE SET OF AS-BUILT DRAWINGS REFLECTING AS INSTALLED CONDITIONS. AS-BUILT DRAWINGS SHALL INDICATE ALL INSTALLED CONDITIONS OF SYSTEMS WITHIN THIS DISCIPLINE. DRAWINGS SHALL BE OF SIMILAR SCALE AS THE CONSTRUCTION DOCUMENTS AND INCLUDE DETAILS AS NECESSARY TO CLEARLY REFLECT THE INSTALLED CONDITION. DRAWINGS SHALL BE BOUND IN A COMPLETE AND CONSECUTIVE SET. SUPPLEMENTAL SKETCHES AND LOOSE PAPER DRAWINGS WILL NOT BE ACCEPTABLE AND WILL BE RETURNED FOR REVISION. THE CONTRACTOR SHALL COMPLY WITH THE ENGINEERS COMMENTS TO PRODUCE A CLEAR AND CONCISE SET OF DRAWINGS. DRAWINGS SHALL BE SUBMITTED IN BOTH HARD COPY AND ELECTRONIC (AUTO-CAD VERSION AS REQUIRED BY THE OWNER) VERSION. NUMBER OF COPIES OF EACH AS REQUESTED BY THE OWNER.

PROVIDE AS-BUILT DRAWINGS INDICATING IN A NEAT AND ACCURATE MANNER A COMPLETE RECORD OF ALL REVISIONS OF THE ORIGINAL DESIGN OF THE WORK INDICATED IN THE FOLLOWING INSTALLED CONDITIONS:

INCLUDE ALL CHANGES AND AN ACCURATE RECORD, ON REPRODUCTIONS OF THE CONTRACT DRAWINGS OR APPROPRIATE SHOP DRAWINGS, OF ALL DEVIATIONS, BETWEEN THE WORK SHOWN AND WORK INSTALLED.

MAINS AND BRANCHES OF PIPING SYSTEMS, WITH VALVES AND CONTROL DEVICES LOCATED AND NUMBERED. CONCEALED UNIONS LOCATED, AND WITH ITEMS REQUIRING MAINTENANCE, LOCATED (IE. TRAPS, STRAINERS, EXPANSION COMPENSATORS, TANKS, ETC.). VALVE LOCATION DIAGRAMS, COMPLETE WITH VALVE TAG CHART.
EQUIPMENT LOCATIONS (EXPOSED AND CONCEALED), DIMENSIONED FROM PROMINENT BUILDING LINES.

APPROVED SUBSTITUTIONS, CONTRACT MODIFICATIONS, AND ACTUAL EQUIPMENT AND MATERIALS INSTALLED.

CONTRACT MODIFICATIONS, ACTUAL EQUIPMENT AND MATERIALS INSTALLED.

SUBMIT FOR REVIEW, BOUND SETS OF THE REQUIRED DRAWINGS, MANUALS AND OPERATING INSTRUCTIONS.

SUBMIT A COMPLETE MAINTENANCE MANUAL OF ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT.

HOUSEKEEPING PADS

PROVIDE CONCRETE HOUSEKEEPING PADS FOR FLOOR-MOUNTED EQUIPMENT. COORDINATE EXACT LOCATIONS, DIMENSIONS, PIPING LOCATIONS, AND ANCHOR BOLT REQUIREMENTS. PROVIDE CONCRETE HOUSEKEEPING PADS UNDER ALL FLOOR MOUNTED EQUIPMENT. PADS SHALL BE CONSTRUCTED OF 3,000 PSI CONCRETE. PADS SHALL BE 4 INCHES HIGH, AND 4 INCHES WIDER THAN THE EQUIPMENT IN BOTH DIRECTIONS.

COORDINATE FLOOR DRAIN LOCATIONS WITH RESPECT TO EQUIPMENT HOUSEKEEPING PADS. PLACE DRAINS SUCH THAT EDGE OF THE FLOOR GRATE EXTENDS NO FURTHER THAN 2 INCHES FROM THE SIDE OF THE PAD.

HANGERS AND SUPPORT

SEISMIC RESTRAINT: PROVIDE SEISMIC RESTRAINT AND EXPANSION OF ALL PLUMBING EQUIPMENT AND SYSTEMS IN ACCORDANCE WITH STATE AND FEDERAL BUILDING CODE REQUIREMENTS. SUBMIT SHOP DRAWINGS SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT INDICATING ALL NECESSARY COMPONENT CUTS, PLAN LOCATIONS AND CALCULATIONS FOR A COMPLETE SYSTEM.

PROVIDE ALL NECESSARY STRUCTURAL MEMBERS INCLUDING ADDITIONAL STRUCTURAL SUPPORT TO SUPPORT PIPING AND EQUIPMENT. HANGERS AND SUPPORTS SHALL BE OF AN APPROVED DESIGN NECESSARY TO SUPPORT PIPING, EQUIPMENT AND TO KEEP PIPING IN PROPER ALIGNMENT AND PREVENT TRANSMISSION OF INJURIOUS THRUSTS AND VIBRATIONS. IN ALL CASES WHERE HANGERS, BRACKETS, ETC. ARE SUPPORTED FROM CONCRETE CONSTRUCTION, DO NOT WEAKEN, CONCRETE OR PENETRATE WATERPROOFING. ALL HANGERS AND SUPPORTS SHALL BE CAPABLE OF SCREW ADJUSTMENT. AFTER PIPING IS ERECTED, HANGERS SUPPORTING PIPING EXPANDING INTO LOOPS, BENDS AND OFFSETS SHALL BE SECURED TO THE BUILDING STRUCTURE IN SUCH A MANNER THAT HORIZONTAL ADJUSTMENT PERPENDICULAR TO THE RUN OF PIPING SUPPORTED MAY BE MADE TO ACCOMMODATE DISPLACEMENT DUE TO EXPANSION. ALL SUCH HANGERS SHALL BE FINALLY ADJUSTED BOTH IN THE VERTICAL AND HORIZONTAL DIRECTION, AS REQUIRED. HANGERS IN CONTACT WITH COPPER OR BRASS PIPE SHALL BE DIELECTRIC, COMPATIBLE WITH COPPER AND BRASS ALLOY OR PROVIDED WITH FELT SLEEVES.

PROVIDE ADDITIONAL SUPPORT FOR PIPING AND EQUIPMENT WHEN DECK IS NOT CAPABLE OF SUPPORT.

BEAM CLAMPS - HANGERS SUPPORTED FROM STEEL, SHALL BE CENTER LOADING BEAM CLAMPS FOR HANGERS SUPPORTING PIPING 2 INCHES. FOR PIPING 2-1/2 INCHES AND LARGER, I BEAM CLAMPS SHALL BE FORGED STEEL. 'C' CLAMPS ARE NOT TO BE USED.

PROVIDE AND INSTALL EXPANSION COMPENSATION FOR ALL PIPING. SUBMIT PLANS, CALCULATIONS AND EQUIPMENT DATA.

BAND IRON, TIE WIRE, METAL STRAPPING OR WIRE STRAPPING SHALL NOT BE PERMITTED TO SUPPORT PIPING OR EQUIPMENT.

PIPE SEALS

SEAL ALL PIPING PASSING THROUGH ALL FIRE AND/OR SMOKE RATED PARTITIONS AND WALLS WITH A UL LISTED, APPROVED AND TESTED FIRE AND/OR SMOKE SEALING MATERIAL, INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

ALL PIPING PENETRATING A SLAB ON GRADE OR FOUNDATION WALL BELOW GRADE AND IN CONTACT WITH EARTH SHALL BE PROVIDED WITH A POURED IN PLACE SCHEDULE 80 GALVANIZED STEEL WATER TIGHT SLEEVE WITH INTEGRAL WATER STOP AND SEAL EQUAL TO LINK SEAL.

FURNISH AND SET STEEL PIPE SLEEVES OF SCHEDULE 40 BLACK STEEL, FOR ALL LOCATIONS OF INTERIOR PARTITIONS, WALLS AND FLOORS PROVIDING AT LEAST 1/2 CLEARANCE BETWEEN PIPE INSULATION AND SLEEVE OR PIPE AND SLEEVE. WALL SLEEVES SHALL BE SMOOTH CUT AND SET FLUSH WITH FINISHED WALLS. FLOOR SLEEVES SHALL EXTENDED 2 ABOVE THE FINISHED FLOOR.

ALL PIPING THROUGH WALLS, FLOORS OR CEILINGS SHALL HAVE SLEEVES AND ESCUTCHEONS. PROVIDE A TWO PIECE CHROME PLATED ESCUTCHEON WHERE PIPING PASSES THROUGH WALLS OR FLOORS OF FINISHED SPACES.

PLUMBING FIXTURES

PLUMBING FIXTURES SHALL BE NEW, COMPLETE WITH TRIMMINGS AND FITTINGS, INCLUDING FAUCETS, CARRIERS, SUPPLIES, STOPS, TRAPS, TAILPIECES, WASTE PLUGS, CASINGS, HANGERS, PLATES, BRACKETS, ANCHORS, SUPPORTS, HARDWARE AND FASTENING DEVICES. NOTE: ALL FIXTURES SHALL BE OF SAME MANUFACTURER. FITTINGS SHALL BE OF BRASS, CASTINGS OF FORGED, CAST, ROLLED OR EXTRUDED BRASS OR BRONZE WITH MONEL AND OTHER SUITABLE NON-CORROSIVE PARTS. DESIGNED WITH EASILY RENEWABLE PARTS THAT ARE SUBJECT TO WEAR OR DETERIORATION. NO DIE CASTINGS AND STAMPINGS OTHER THAN BRASS OR STAINLESS STEEL. PROVIDE PLUMBING FIXTURES AND TRIM WITH ALL NECESSARY TRIM DEVICES AND ACCESSORIES REQUIRED FOR PROPER OPERATIONS SPECIFICALLY NOTED OR NOT.

ESCUTCHEONS SHALL BE ONE-PIECE CHROME PLATED CAST BRASS OR STAINLESS STEEL.

P-TRAPS SHALL BE ONE PIECE CHROME PLATED CAST BRASS WITH CLEANOUT PLUG.

EXAMINE ROUGHING-IN WORK OF POTABLE WATER AND WASTE PIPING SYSTEMS TO VERIFY ACTUAL LOCATIONS PRIOR TO INSTALLING FIXTURES. CORRECT ANY INCORRECT LOCATION OF PIPING, AND UNSATISFACTORY CONDITIONS FOR INSTALLATION OF PLUMBING FIXTURES. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED IN A MANNER ACCEPTABLE TO THE ENGINEER. ALL ROUGH-IN TO PLUMBING FIXTURES SHALL CONFORM TO FIXTURE MANUFACTURER PUBLISHED ROUGH-IN DIMENSIONS, AND REQUIREMENTS.

UPON COMPLETION OF INSTALLATION OF PLUMBING FIXTURES AND AFTER UNITS ARE WATER PRESSURIZED, TEST FIXTURES TO DEMONSTRATE CAPABILITY AND COMPLIANCE WITH REQUIREMENTS. CORRECT MALFUNCTIONING UNITS AT SITE, THEN RETEST TO DEMONSTRATE COMPLIANCE; OTHERWISE, REMOVE AND REPLACE WITH NEW UNITS AND PROCEED WITH RETESTING.

CLEAN PLUMBING FIXTURES, TRIM, AND STRAINERS OF DIRT AND DEBRIS UPON COMPLETION OF INSTALLATION.

ADJUST WATER PRESSURE AT DRINKING FOUNTAINS, FAUCETS, SHOWER VALVES, AND FLUSH VALVES TO PROVIDE PROPER FLOW STREAM AND SPECIFIED GPM.

SET FIXTURES LEVEL AND UNIFORMLY, WITH CONNECTIONS AT RIGHT ANGLES TO WALL AND PROPERLY CENTERED. LAY OUT ROUGHING ACCURATELY AND IN COORDINATION WITH SPACE AND FINISH REQUIREMENTS.

LOCATE WASTE OUTLETS AND WATER SUPPLIES AT CONSTANT HORIZONTAL LEVELS, WITH WASTE OUTLET CENTERED ON FIXTURE DRAIN CONNECTION AND WATER SUPPLIES SPACED EQUALLY TO RIGHT AND LEFT.

REFER TO THE ARCHITECTURAL DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHTS OF EQUIPMENT. COLORS SHALL BE COORDINATED WITH THE ARCHITECT. CONTACT ARCHITECT FOR CLARIFICATION IF INFORMATION IS NOT CONTAINED IN THE CONTRACT DRAWINGS.

DRAINS AND CLEANOUTS

PROVIDE ALL POURED IN PLACE DRAINS AND CLEANOUTS WITH 24" X 24" FLASHING.

PROVIDE A MANUFACTURED BRONZE OUTLET FITTING FOR ALL SECONDARY ROOF DRAIN OUTLETS.

INSTALL EXTERIOR CLEANOUTS WITH A 18" SQUARE X 6" THICK CONCRETE APRON.

COORDINATE FLOOR DRAIN LOCATIONS WITH RESPECT TO EQUIPMENT HOUSEKEEPING PADS. PLACE DRAINS SUCH THAT EDGE OF THE FLOOR GRATE EXTENDS NO FURTHER THAN 2 INCHES FROM THE SIDE OF THE PAD. CLEANOUT PLUGS SHALL BE BRASS OR PLASTIC, OR OTHER APPROVED MATERIALS. BRASS CLEANOUT PLUGS SHALL BE UTILIZED WITH METALLIC DRAIN, WASTE AND VENT PIPING ONLY, AND SHALL CONFORM TO ASTM A 74, ASME A112.3.1 OR ASME A112.36.2M. CLEANOUTS WITH PLATE-STYLE ACCESS COVERS SHALL BE FITTED WITH CORROSION-RESISTING FASTENERS. PLUGS SHALL HAVE RAISED SQUARE OR COUNTERSUNK SQUARE HEADS. COUNTERSUNK HEADS SHALL BE INSTALLED WHERE RAISED HEADS ARE A TRIP HAZARD. CLEANOUT PLUGS WITH BOROSILICATE GLASS SYSTEMS SHALL BE OF BOROSILICATE GLASS.

PROVIDE TRAP PRIMERS FOR EACH FLOOR DRAIN, CONNECT TRAP PRIMER TO NEAREST COLD WATER MAIN. PROVIDE ISOLATION VALVE AND EXTEND TO FLOOR DRAIN AS REQUIRED.

CLEANOUTS SHALL BE LOCATED AT MINIMUM INTERVALS OF 50 FEET FOR PIPING NPS 4 AND SMALLER AND 100 FEET FOR LARGER PIPING.

BUILDING SEWERS SHALL BE PROVIDED WITH CLEANOUTS LOCATED NOT MORE THAN 100 FEET APART MEASURED FROM THE UPSTREAM ENTRANCE OF THE CLEANOUT. FOR BUILDING SEWERS 8 INCHES AND LARGER, MANHOLES SHALL BE PROVIDED AND LOCATED NOT MORE THAN 200 FEET FROM THE JUNCTION OF THE BUILDING DRAIN AND BUILDING SEWER, AT EACH CHANGE IN DIRECTION AND AT INTERVALS OF NOT MORE THAN 400 FEET APART. MANHOLES AND MANHOLE COVERS SHALL BE OF AN APPROVED TYPE.

CLEANOUTS SHALL BE INSTALLED AT EACH CHANGE OF DIRECTION OF THE BUILDING DRAIN OR HORIZONTAL WASTE OR SOIL LINES GREATER THAN 45 DEGREES (INCLUDING P-TRAPS). WHERE MORE THAN ONE CHANGE OF DIRECTION OCCURS IN A RUN OF PIPING, ONLY ONE CLEANOUT SHALL BE REQUIRED FOR EACH 40 FEET OF DEVELOPED LENGTH OF THE DRAINAGE PIPING.

A CLEANOUT SHALL BE PROVIDED AT THE BASE OF EACH WASTE OR SOIL STACK.

THERE SHALL BE A CLEANOUT NEAR THE JUNCTION OF THE BUILDING DRAIN AND THE BUILDING SEWER. THE CLEANOUT SHALL BE EITHER INSIDE OR OUTSIDE THE BUILDING WALL AND SHALL BE BROUGHT UP TO THE FINISHED GROUND LEVEL OR TO THE BASEMENT FLOOR LEVEL. AN APPROVED TWO-WAY CLEANOUT IS ALLOWED TO BE USED AT THIS LOCATION TO SERVE AS A REQUIRED CLEANOUT FOR BOTH THE BUILDING DRAIN AND BUILDING SEWER. THE CLEANOUT AT THE JUNCTION OF THE BUILDING DRAIN AND BUILDING SEWER SHALL NOT BE REQUIRED IF THE CLEANOUT ON A 3-INCH OR LARGER DIAMETER SOIL STACK IS LOCATED WITHIN A DEVELOPED LENGTH OF 10 FEET OF THE BUILDING DRAIN, AND BUILDING SEWER CONNECTION.

CONCEALED PIPING, CLEANOUTS ON CONCEALED PIPING OR PIPING UNDER A FLOOR SLAB OR IN A CRAWL SPACE OF LESS THAN 24 INCHES IN HEIGHT OR A PLENUM SHALL BE EXTENDED THROUGH AND TERMINATE FLUSH WITH THE FINISHED WALL, FLOOR OR GROUND SURFACE OR SHALL BE EXTENDED TO THE OUTSIDE OF THE BUILDING. CLEANOUT PLUGS SHALL NOT BE COVERED WITH CEMENT, PLASTER OR ANY OTHER PERMANENT FINISH MATERIAL WHERE IT IS NECESSARY TO CONCEAL A CLEANOUT OR TO TERMINATE A CLEANOUT IN AN AREA SUBJECT TO VEHICULAR TRAFFIC, THE COVERING PLATE, ACCESS DOOR OR CLEANOUT SHALL BE OF AN APPROVED TYPE DESIGNED AND INSTALLED FOR THIS PURPOSE.

MINIMUM SIZE: CLEANOUTS SHALL BE THE SAME NOMINAL SIZE AS THE PIPE THEY SERVE UP TO 4 INCHES. FOR PIPES LARGER THAN 4 INCHES NOMINAL SIZE, THE MINIMUM SIZE OF THE CLEANOUT SHALL BE 4 INCHES.

CAST-IRON CLEANOUT SEINS SHALL BE IN ACCORDANCE WITH ASTM A 74 FOR HUB AND SPIGOT FITTINGS OR ASTM A 888 OR CISPI 301 FOR HUBLESS FITTINGS.

ACCESS SHALL BE PROVIDED TO ALL CLEANOUTS.

PROVIDE CONDENSATE DRAINAGE, COMPLETE WITH CONDENSATE REMOVAL PUMP, FOR EACH COOLING COIL. CONDENSATE PUMP DISCHARGE SHALL BE CONNECTED VIA INDIRECT WASTE CONNECTION TO BUILDING SANITARY WASTE PIPING SYSTEM. COORDINATE PUMP WIRING WITH PROJECT ELECTRICIAN. IF GRAVITY DRAINAGE IS POSSIBLE WITHIN THE CONSTRAINTS OF PIPING PITCH, CONCEALMENT ABOVE CEILINGS, AND ONLY AFTER COMPLETE COORDINATION WITH STRUCTURE AND OTHER TRADES, THE CONTRACTOR MAY SUBMIT SKETCH PROPOSALS FOR GRAVITY ROUTING FOR REVIEW/APPROVAL.

MISCELLANEOUS SPECIALTIES

ALL EQUIPMENT, VALVES, STRAINERS, UNIONS, TRAPS, FLANGES AND OTHER APPURTENANCES REQUIRING ACCESS SHALL BE LOCATED IN ACCESSIBLE LOCATIONS. WHEN A PIECE OF EQUIPMENT MUST BE LOCATED ABOVE AN INACCESSIBLE CEILING OR WALL THEN THE APPROPRIATE ACCESS DOOR SHALL BE PROVIDED. SUCH EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO CLEANOUTS, WATER HAMMER ARRESTORS AND VALVES. THESE SHALL BE COORDINATED WITH THE ARCHITECT. ACCESS DOORS SHALL BE RIGID CONSTRUCTION WITH TWO HINGES AND A LATCH. IN PLENUM CEILINGS, PROVIDE FELT BETWEEN THE DOOR AND FRAME TO MAKE AN AIR TIGHT SEAL. ACCESS DOORS SHALL BE RATED TO THE SAME OR GREATER RATING OF THE PARTITION IN WHICH THEY ARE INSTALLED. ACCESS DOORS SHALL BE FLUSH MOUNTED, PRIME COATED WITH RUST INHIBITIVE PAINT, CONCEALED FRAME, FLUSH SCREW DRIVER OPERATED LOCKS WITH METAL CAMS AND HOOKS AS REQUIRED.

ACCESS DOOR SIZES SHALL BE:
12" X 12" AT EASILY ACCESSIBLE ITEMS
16" X 16" WHERE PARTIAL BODY ACCESS IS REQUIRED
24" X 24" WHERE FULL BODY ACCESS IS REQUIRED

PROVIDE AND INSTALL DRIP PANS WITH WATER DETECTOR AND DRAIN FOR PIPING REQUIRED BY ACTUAL FIELD CONDITIONS WHERE PIPING PASSES OVER INCLUDING AREA WITHIN 3'-0" OF ELECTRICAL EQUIPMENT.

DO NOT INSTALL AIR GAP BACKFLOW PREVENTERS IN CONCEALED SPACES OR IN AREAS WHERE SPLASHING WATER WILL DAMAGE FINISHES. PROVIDE AND INSTALL AN OVERSIZED COPPER FUNNEL WITH AIR GAP DIRECTLY BELOW RPZ PRESSURE RELIEF PORT. PIPE FUNNEL TO DRILL AS AN INDIRECT WASTE TO AN APPROVED DRAIN LOCATION.

INSTALL ELECTRONIC TRAP PRIMERS SERVING ALL DRAINS. INSTALL ALL TRAP PRIMER VALVES IN AN ACCESSIBLE LOCATION. PROVIDE AND INSTALL ACCESS PANELS AND DOORS WHERE REQUIRED TO GAIN ACCESS IN CONCEALED CONSTRUCTION.

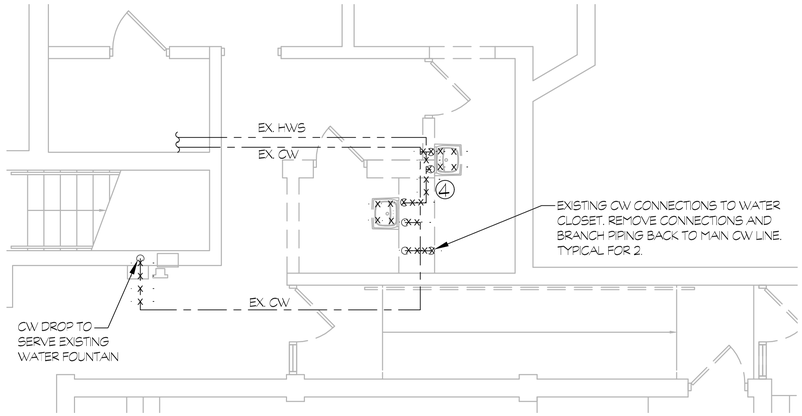
PROVIDE FLEXIBLE CONNECTIONS IN ALL PIPING SYSTEMS CONNECTED TO PUMPS AND OTHER EQUIPMENT WHICH REQUIRES VIBRATION ISOLATION, EXCEPT WATER COILS. FLEXIBLE CONNECTIONS SHALL BE PROVIDED AS CLOSE TO THE EQUIPMENT AS POSSIBLE.

PIPING GENERAL

NO PIPING SHALL BE COVERED UNTIL TESTED APPROVED BY THE AUTHORITIES HAVING JURISDICTION.

ALL PIPING SHALL BE RUN PERPENDICULAR AND/OR PARALLEL TO FLOORS, INTERIOR WALLS ETC. PIPING AND VALVES SHALL BE GROUPED NEATLY AND SHALL BE RUN AS TO MAXIMIZE HEADROOM OR PASSAGE CLEARANCE. ALL VALVES, CONTROLS AND ACCESSORIES CONCEALED IN FURRED SPACES AND REQUIRING ACCESS FOR OPERATION AND MAINTENANCE SHALL BE ARRANGED TO ASSURE THE USE OF A MINIMUM NUMBER OF ACCESS DOORS.

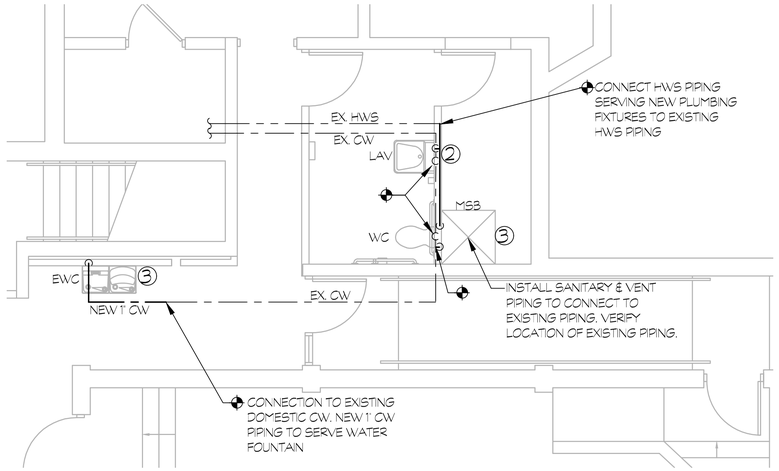
ALL PIPE LINES MADE WITH



DEMOLITION BATHROOM PLAN

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

1 / P101



NEW BATHROOM PIPING PLAN

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

2 / P101

GENERAL NOTES

1. CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL EXIST. CONDITIONS & DIMENSIONS PRIOR TO CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE TO REPAIR OR REPLACE ANY AREAS DAMAGED OUTSIDE THE SCOPE OF WORK RETURNING THEM TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE OWNER.
3. PATCH ALL EXISTING MATERIALS AFFECTED BY NEW CONSTRUCTION IN THIS PROJECT (MATCH EXISTING).
4. ALL MATERIALS/ EQUIPMENT/ FIXTURES ARE NEW UNLESS OTHERWISE NOTED AS 'EXISTING'.
5. REMOVE ALL DEMOLISHED MATERIALS FROM SITE. LEAVE SITE CLEAN OF ALL CONSTRUCTION DUST & DEBRIS AT THE END OF EACH DAY.
6. CONTRACTOR IS RESPONSIBLE FOR REMOVING, RELOCATING AND RECONNECTING ANY AND ALL MEP/FP DEVICES, CONDUIT, SECURITY AND/OR WIRING AFFECTED BY THE SCOPE OF WORK PRIOR TO DEMOLITION AND UPON COMPLETION OF CONSTRUCTION. CONTRACTOR TO VERIFY ALL ASSOCIATED COMPONENTS AFFECTED W/ ARCH & OWNER.
7. CONTRACTOR IS RESPONSIBLE TO SURVEY AND DOCUMENT ALL AREAS OF SCOPE PRIOR TO BID. CONTRACTOR IS RESPONSIBLE TO CARRY ALL TRADES IN BID REQUIRED TO REMOVE/ REINSTALL ALL CONDITIONS AFFECTED BY SCOPE OF WORK.
8. ANY DEMOLITION/CONSTRUCTION ACTIVITY WHICH WOULD IMPACT HAZARDOUS OR TOXIC MATERIALS MUST BE CONDUCTED WITHIN COMPLIANCE & CODE REQUIREMENTS.
9. CONTRACTOR TO COORDINATE ANY TEMPORARY SHUT-OFFS OR INTERRUPTIONS WITH EXISTING SERVICES PRIOR TO CONSTRUCTION.

PLUMBING DEMOLITION NOTES

① DOMESTIC WATER, WASTE, & VENT PIPE SIZES, ROUTING, AND LOCATIONS ARE TO BE FIELD VERIFIED BY CONTRACTOR BEFORE BEGINNING WORK.

② CONNECTIONS TO EXISTING PLUMBING FIXTURES SHOWN ON DRAWING ARE TO BE DEMOLISHED UP TO ABOVE CEILING LEVEL. DOMESTIC WATER PIPING TO BE CUT AND CAPPED ABOVE THE CEILING FOR FUTURE USE.

③ EXISTING WASTE PIPING CONNECTIONS TO EXISTING FIXTURES TO BE DEMOLISHED. EXISTING PIPING BELOW SLAB TO BE CAPPED AND LEFT UNUSED.

④ DOMESTIC HW LINE TO BE DEMOLISHED BACK TO ELBOW AS SHOWN. DOMESTIC CW LINE TO REMAIN ABOVE CEILING WITH BRANCHES TO FIXTURES BEING DEMOLISHED BACK TO MAIN PIPE.

PLUMBING NEW NOTES

① DOMESTIC WATER, WASTE, & VENT PIPE SIZES, ROUTING, AND LOCATIONS ARE TO BE FIELD VERIFIED BY CONTRACTOR BEFORE BEGINNING WORK.

② ALL PIPING TO NEW PLUMBING FIXTURES TO DROP TO RESPECTIVE CONNECTIONS IN WALL AS SHOWN ABOVE.

③ NEW WASTE & VENT PIPING TO CONNECT TO EXISTING LINES. LOCATIONS OF EXISTING WASTE & VENT PIPING TO BE FIELD VERIFIED BY CONTRACTOR.

④ DESIGN OF PLUMBING SYSTEM IS BASED ON SCHEDULED FIXTURES. IF THE CONTRACTOR IS DIRECTED TO USE A DIFFERENT FIXTURE THEY MUST CONTACT THE ENGINEER TO CONFIRM THAT THE FIXTURE IS SUITABLE FOR THE SYSTEM DESIGN IN THE CONSTRUCTION DOCUMENTS.

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	Description:	Date:	Revised By:
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

Drawing Title:
PLUMBING DEMO & NEW FLOOR PLANS

Date: August 24, 2021
Scale: AS NOTED
Drawn By: C.B.
Project Number: 20.120

Drawing Number: P101

PIPE AND FITTING SCHEDULE

DESCRIPTION	SIZE	PIPE		FITTING		REMARKS
		TYPE	SCHEDULE	TYPE	RATING	
SOIL, WASTE AND VENT ABOVE GROUND	ALL	CI-NH	SV	CI	SV	4 BAND FOR 4" AND SMALLER 6 BAND FOR LARGER THEN 4"
SOIL, WASTE AND VENT BELOW GROUND	ALL	CI-HES	SV	CI	SV	--
STORM ABOVE GROUND	ALL	CI-NH	SV	CI	SV	4 BAND FOR 4" AND SMALLER 6 BAND FOR LARGER THEN 4"
STORM BELOW GROUND	ALL	CI-HES	SV	CI	SV	--
DOMESTIC COLD WATER WITHIN BULDING	ALL	COPPER	TYPE L	CUS	STD	HARD TEMPERED
DOMESTIC HOT WATER WITHIN BULDING	ALL	COPPER	TYPE L	CUS	STD	HARD TEMPERED
DOMESTIC HOT WATER RECIRCULATION WITHIN BULDING	ALL	COPPER	TYPE L	CUS	STD	HARD TEMPERED
INDIRECT WASTE AND CONDENSATE PIPING	ALL	COPPER	TYPE L	CUS	STD	HARD TEMPERED
DOMESTIC WATER SERVICE PIPING	2-1/2" AND SMALLER	COPPER	TYPE K	CUS	STD	SOFT TEMPERED, NO JOINTS BELOW SLAB
DOMESTIC WATER SERVICE PIPING	3" AND LARGER	CL-DI	CLASS 52	DI-MJ	250	--
TRAP PRIMER PIPING	ALL	PEX	--	--	--	NO JOINTS ALLOWED BELOW SLAB
GAS PIPING	2" AND SMALLER	STL-BLK	SCH. 40	MT	CLASS 150	--
GAS PIPING	2-1/2" AND LARGER	STL-BLK	SCH. 40	W.E	SCH. 40	--

NOTES:
1. TRANSITION COUPLINGS AND NO-HUB PIPE SHALL NOT BE INSTALLED BELOW SLAB OR IN ANY BURIED CONDITIONS IN CONTACT WITH EARTH.
2. ALL PIPING IN RETURN AIR CEILING PLENUM INSTALLATIONS SHALL BE UL LISTED FOR THIS APPLICATION.
3. MECHANICAL JOINTS ARE ALLOWED FOR SERVICE PURPOSED ONLY IN WALLS AND CEILINGS BUT MUST BE READILY ACCESSIBLE. 25/50 PVDF IS UL LISTED FOR RETURN AIR CEILING PLENUM INSTALLATIONS

ABBREVIATIONS	DESCRIPTION	ABBREVIATIONS	DESCRIPTION
AWWA	AMERICAN WATER WORKS ASSOCIATION	MT	MALLEABLE IRON THREADED
CI	CAST IRON	NH	NO HUB W/SUPER DUTY HUSKY SD 4000 CLAMP
CPVC	CHLORINATED POLYVINYL CHLORIDE	PEX	PEX PIPING
CUS	WROUGHT COPPER SOLDER (95/5)	PF	PRESSURE FITTING
HES	HUB AND SPIGOT	SV	SERVICE WEIGHT
MJ	MECHANICAL JOINT	POLY-PRO	POLYPROPYLENE PIPING
TJ	THREADED JOINTS	STD	STANDARD
W.E	BUT WELD	STL-BLK	BLACK STEEL

INSULATION SCHEDULE

SYSTEM	PIPE SIZE	INSULATION TYPE	INSULATION THICKNESS	FITTINGS, VALVES, FLANGES INSULATION TYPE	REMARKS
DOMESTIC COLD WATER	ALL	MINERAL FIBER, ASJ, SSL	1"	MOLDED, PRE-FORMED MINERAL FIBER WITH PVC JACKET	TYPE 1
DOMESTIC HOT WATER	ALL	MINERAL FIBER, ASJ, SSL	1"	MOLDED, PRE-FORMED MINERAL FIBER WITH PVC JACKET	TYPE 1
DOMESTIC WATER UNDERGROUND & INSLAB	ALL	CLOSED CELL	1"	ARMAFLEX	--
CONDENSATE	ALL	MINERAL FIBER, ASJ, SSL	1/2"	MOLDED, PRE-FORMED MINERAL FIBER WITH PVC JACKET	TYPE 1

NOTES:
1. FIBERGLASS INSULATION, THERMAL CONDUCTIVITY .22 TO .288"U x N/H x FT x °F W/ 100°F MEAN TEMP, THICKNESS BASED ON ASHRAE 90.1, 1999 6.2.4.5.
2. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

VALVE SCHEDULE

DESCRIPTION	SIZE	TYPE						CLASS	REMARKS
		GATE	GLOBE	CHECK	BALL	PLUG	BALANCE		
DOMESTIC COLD WATER	3" AND SMALLER	GV-T	GL-VT	CV-T	BV-T	--	--	125PSI	--
DOMESTIC HOT WATER	3 AND SMALLER	GV-T	GL-VT	CV-T	BV-T	--	CBV	125PSI	--
GAS	2" AND SMALLER	--	--	--	--	PGV-T	--	125PSI	--
GAS	2-1/2 AND LARGER	--	--	--	--	PGV-F	--	125PSI	--

NOTES:
1. SOLENOID VALVE: UL LISTED, FM APPROVED FOR GAS SERVICE, EXPLOSION PROOF, TWO -WAY NORMALLY CLOSED, ASCO 8044 SERIES W/MANUAL RESET, (EMERGENCY GAS SHUT-OFF VALVE ASSEMBLY).
2. CALIBRATED PRESSURE RELIEF VALVE: INSTALL A MINIMUM OF 12" ABOVE WATER HEATER AND PIPE DISCHARGE TO ADEQUATE LOCATION. WATTS MODEL: 340C.

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
BV-F	BALL VALVE FLANGED - FULL PORT, BRONZE	CV-T	CHECK VALVE THREADED - BRONZE
BV-T	BALL VALVE THREADED - 2-PIECE, FULL PORT, 400PSI, BRONZE	GV-F	GATE VALVE FLANGED - MMB
CBV	CALIBRATED BALANCING VALVE - BRONZE	GV-T	GATE VALVE THREADED - BRONZE
CPRV	CALIBRATED PRESSURE RELIEF VALVE		

THERMOSTATIC MIXING VALVE SCHEDULE

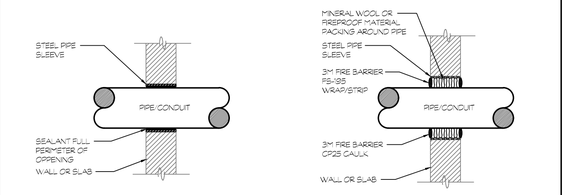
MARK	EQUIPMENT BEING SERVED (I.E. WATER HEATER, ETC.)	AREA SERVED	FLOW RATE @ 10PSI DIFFERENTIAL	MINIMUM FLOW RATE GPM	INLET TEMP	OUTLET TEMP	INLET SIZE	OUTLET SIZE	MANUFACTURER	REMARKS
									MODEL	
TMV	LAVS	AS NOTED ON DWGS	2.1	0.25	140°F	85°F - 110°F	1/2 - 3/8	1/2 - 3/8	ACORN STTO-12	ASSE 1070

NOTES:
1. MAXIMUM PRESSURE DIFFERENTIAL SHALL BE 10PSI FOR MIXING VALVE.
2. WITH DIAL THERMOMETER, ADJUSTABLE SET POINT, INTEGRAL STRAINER CHECKSTOPS ON INLETS, PROVIDE SHUTOFFS/UNIONS AT ALL CONNECTIONS.
3. MINIMUM FLOW RATE WHEN VALVE IS INSTALLED AT OR NEAR HOT WATER SOURCE WITH RECIRCULATED TEMPERED WATER AND CONTINUOUSLY OPERATING CIRCULATION PUMP.

PLUMBING FIXTURE/EQUIPMENT SCHEDULE

MARK	FIXTURE, MODEL NUMBER AND DESCRIPTION	ROUGH-IN			
		WASTE/ SANITARY	VENT	CW	HW
LAV	LAVATORY, WALL HUNG, AMERICAN STANDARD, LUCERNE, 0355.012, VITREOUS CHINA WALL MOUNT LAVATORY, FAUCET, AMERICAN STANDARD, MONTERRY, SINGLE CONTROL, CENTERSET FAUCET, 6114.75.002, 0.5 GPM, 4" CENTERS, 1-1/2" CHROME PLATED CAST BRASS P-TRAP, SUPPLIES, BRASS ANGLE STOPS WITH LOOSE KEY OPERATION, GRID DRAIN, ETC, FOR COMPLETE INSTALLATION. COORDINATE MOUNTING HEIGHTS WITH ARCHITECT PRIOR TO INSTALLATION.	1-1/2"	1-1/2"	1/2"	1/2"
WC	TANK TYPE FLOOR MOUNT WATER CLOSET, AMERICAN STANDARD COLONY 221CA004, TWO PIECE, 1.6 RM, 1.6 GPF, 12" ROUGH-IN, VITREOUS CHINA ELONGATED, FLOOR MOUNTED TANK TOILET, PROVIDE TOILER SEAT/COVER, AMERICAN STANDARD 5257A65C SLOW CLOSE AND EASY LIFT AND CLEAN, WHITE.	4"	2"	1"	---
SA	WATER HAMMER ARRESTOR, PRECISION PLUMBING PRODUCTS (PPP) SC SERIES, 1-2-1, SIZE PER MANUFACTURE RECOMMENDATIONS AND REQUIREMENTS	--	--	1/2-H	--
MSB	MOP SINK, RAT MSBIOT32424, MOLDED STONE, 24x24x12, SERVICE FAUCET PLATE #833-AA, HOSE AND BRACKET PLATE #832-AA, MOP HANGER BRACKET #888-CC, WITH INTEGRAL DRAIN, PROVIDE TRAP, SUPPLIES, STOPS, ETC FOR COMPLETE INSTALLATION.	3"	1-1/2"	3/4"	3/4"
EWC	ELECTRIC WATER COOLER, ELKAY EMABFTLBWSSK EZ-20 BOTTLE FILLING STATION W/ MECHANICALLY ACTIVATED BUBVEL, ADA COOLER NON-FILTERED REFRIGERATED STAINLESS, INCLUDED W/ WATER COOLER EMABFTLBWSSC 8 BOTTLE FILLER EZWSR, CHILLING CAPACITY OF 8.0 GPH OF 50°F DRINKING WATER.	1-1/2"	1"	1/2"	--

NOTES:
1. LAVATORY & WATER COOLERS SUPPLY SHALL BE BRASS W/BRASS ANGLE STOPS FOR 1/2" WATER SUPPLY LINES, W/LOOSE KEY (W/CAP), AND WALL FLANGE. ALL COMPONENTS SHALL BE POLISHED CHROME FINISH. MANUFACTURER BRASS CRAFT OR APPROVED EQUAL.
2. CAST BODY "P" TRAP 1-1/2 x 1-1/2 WITH HEAVY CAST J-BEND & FLAT CLEANOUT PLUG, SLIP NUTS AND WALL FLANGE. ALL COMPONENTS SHALL BE POLISHED CHROME FINISH. MANUFACTURER BRASS CRAFT OR APPROVED EQUAL.
3. STRAINERS SHALL BE FURNISHED WITH FIXTURES AS REQUIRED. FOR H/C LAVATORY OR SINKS PROVIDE OFFSET TAILPIECE.
4. PROVIDE TRUEBRO MODEL 103 (WHITE), ANTIMICROBIAL HANDI LAV-GUARDS INSTALLATION KIT FOR ALL WHEELCHAIR LAVATORY & SINKS FOR WATER SUPPLIES & WASTE LINE.
5. PROVIDE WATER SUPPLY & "P" TRAP & OPTIONAL WATER FILTERS FOR ELECTRIC WATER COOLERS AS PER MANUFACTURERS RECOMMENDATIONS.
6. THE PLUMBING FIXTURES VENDOR SHALL COORDINATE WITH THE PLUMBING AND GENERAL CONTRACTOR ALL PLUMBING FIXTURES ROUGH IN DIMENSIONS BEFORE CONSTRUCTION BEGIN.
7. UNLESS SHOWN ABOVE, PLUMBING FIXTURES MANUFACTURER, TRIM COLOR AND FINISH SHALL BE FURNISHED AS DIRECTED BY OWNER/ARCHITECT.
8. REFER TO ARCHITECTURAL DRAWINGS FOR STANDARD, A.D.A MOUNTING AND CHILD HEIGHTS. REFER TO ARCHITECTURAL FOR LOCATION OF A.D.A COMPLIANT SHOWER SEAT AND SHOWER BARS.



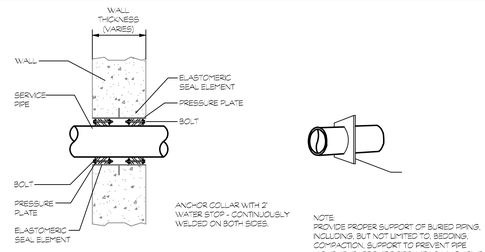
SLEEVES AT NON-RATED WALLS

SLEEVES AT RATED WALLS

GENERAL NOTES:
PROVIDE UL LISTED, FM APPROVED FIRE/SMOKE PENETRATION ASSEMBLIES IN ACCORDANCE WITH UL#79, ASTM E84 REQUIREMENTS FOR WALL TYPE, RATING AND PIPE SIZES.
FIRE STOPPING SHALL HAVE A RATING EQUAL TO OR GREATER THAN THE WALL BEING PENETRATED. REFER TO ARCHITECTURAL DRAWINGS FOR WALL RATINGS.
FOR WALL PENETRATIONS AT RATED WALLS SEE SPECIFICATION SECTIONS 'SEALANTS' AND 'FIRESTOPPING'

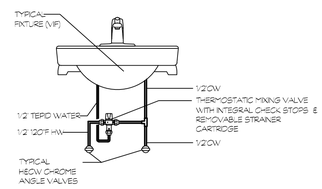
PIPE PENETRATION DETAIL

NOT TO SCALE



INSTALL AND PIPE IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS AND RECOMMENDATIONS

NOTE:
HAND SINK: SET TO 85°F

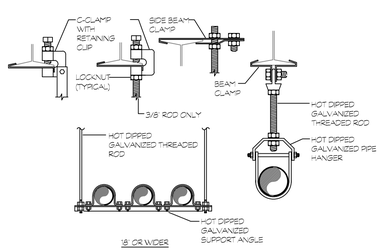


POINT OF USE SINGLE FIXTURE THERMOSTATIC MIXING VALVE DETAIL

NOT TO SCALE

EXTERIOR PIPE PENETRATION WITH SLEEVE DETAIL

NOT TO SCALE

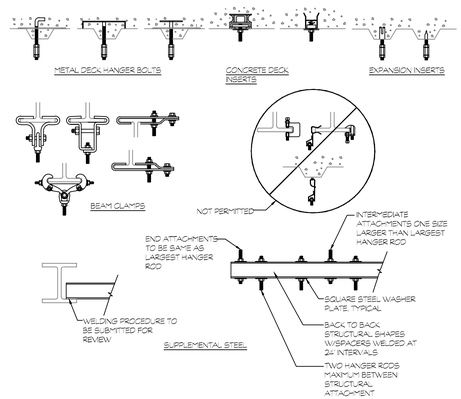


18" OR WIDER

PIPE SIZE	MAX SPACING STEEL PIPE EXCEPT THREADED LIGHTWALL	MAX SPACING STEEL PIPE THREADED LIGHTWALL
1", 1-1/4"	12'-0"	12'-0"
1-1/2", 2", 2-1/2", 3"	18'-0"	12'-0"
4", 6", 8"	18'-0"	N/A
INSTALL HANGERS IN ACCORDANCE WITH NFPA 13 AND STRUCTURAL REQUIREMENTS		

PIPE SUPPORT DETAIL

NOT TO SCALE



PIPE HANGER ATTACHMENT DETAIL

NOT TO SCALE

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	*Description:*	*Date:*	*Revised By:*
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

Drawing Title:
PLUMBING SCHEDULES & DETAILS

Date: August 24, 2021
Scale: N.T.S
Drawn By: C.B.
Project Number: 20.120

Drawing Number: P201

PLUMBING GENERAL NOTES

GENERAL

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT AS NECESSARY TO PROVIDE A COMPLETE INSTALLATION INCLUDING COORDINATION, SYSTEM CHECK OUT AND START UP ON EACH ITEM AND SYSTEM.

THE CONTRACTOR SHALL INFORM HIMSELF FROM THE GENERAL CONSTRUCTION SPECIFICATIONS AND PLANS, OF THE EXACT DIMENSION OF FINISHED WORK AND OF THE HEIGHT OF FINISHED CEILINGS IN ALL ROOMS WHERE EQUIPMENT OR PIPES ARE TO BE PLACED AND ARRANGE HIS WORK IN ACCORDANCE WITH THE SCHEDULE OF INTERIOR FINISHES, AS INDICATED ON THE ARCHITECTURAL DRAWINGS.

MANUFACTURER'S QUALIFICATIONS: FIRMS REGULARLY ENGAGED IN THE MANUFACTURER OF FIXTURES, APPLIANCES, PIPES AND PIPE FITTINGS OF TYPES AND SIZES REQUIRED, WHOSE PRODUCTS HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR NOT LESS THAN 5 YEARS.

MATERIAL QUALIFICATIONS: SHALL CONFORM TO ALL LOCAL, STATE, AND NATIONAL/FEDERAL CODES AND REGULATIONS WHICH MAY APPLY AND NOTHING IN THESE SPECIFICATIONS SHALL BE INTERPRETED AS AN INFRINGEMENT OF SUCH CODES OR REGULATIONS.

WELDING: QUALIFY WELDING PROCEDURES, WELDERS, AND OPERATORS IN ACCORDANCE WITH ASME B31.1, OR ASME B31.9, AS APPLICABLE. CERTIFY WELDING OF PIPING WORK USING STANDARD PROCEDURE SPECIFICATIONS BY, AND WELDERS TESTED UNDER SUPERVISION OF, NATIONAL CERTIFIED PIPE WELDING BUREAU (NCPWB).

BRAZING: CERTIFY BRAZING PROCEDURES, BRAZERS, AND OPERATORS IN ACCORDANCE WITH ASME BOILER AND PRESSURE VESSEL CODE, SECTION IX, FOR SHOP AND JOB-SITE BRAZING OF PIPING WORK.

RELATED DOCUMENTS

DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 1 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.

DEFINITIONS

FINISHED SPACES: SPACES OTHER THAN MECHANICAL AND ELECTRICAL EQUIPMENT ROOMS, FURRED SPACES, PIPE CHASES, UNHEATED SPACES IMMEDIATELY BELOW ROOF, SPACES ABOVE CEILINGS, UNEXCAVATED SPACES, CRAWLSPACES, AND TUNNELS.

EXPOSED, INTERIOR INSTALLATIONS: EXPOSED TO VIEW INDOORS. EXAMPLES INCLUDE FINISHED OCCUPIED SPACES AND MECHANICAL EQUIPMENT ROOMS.

EXPOSED, EXTERIOR INSTALLATIONS: EXPOSED TO VIEW OUTDOORS OR SUBJECT TO OUTDOOR AMBIENT TEMPERATURES AND WEATHER CONDITIONS. EXAMPLES INCLUDE ROOFTOP LOCATIONS.

CONCEALED, INTERIOR INSTALLATIONS: CONCEALED FROM VIEW AND PROTECTED FROM PHYSICAL CONTACT BY BUILDING OCCUPANTS. EXAMPLES INCLUDE ABOVE CEILINGS AND IN CHASES.

CONCEALED, EXTERIOR INSTALLATIONS: CONCEALED FROM VIEW AND PROTECTED FROM WEATHER CONDITIONS AND PHYSICAL CONTACT BY BUILDING OCCUPANTS BUT SUBJECT TO OUTDOOR AMBIENT TEMPERATURES. EXAMPLES INCLUDE INSTALLATIONS WITHIN UNHEATED SHELTERS.

QUALITY ASSURANCE

STEEL SUPPORT WELDING: QUALIFY PROCESSES AND OPERATORS ACCORDING TO AWS D1.1, "STRUCTURAL WELDING CODE--STEEL."

STEEL PIPE WELDING: QUALIFY PROCESSES AND OPERATORS ACCORDING TO ASME BOILER AND PRESSURE VESSEL CODE, SECTION IX, "WELDING AND BRAZING QUALIFICATIONS."

COMPLY WITH PROVISIONS IN ASME B31 SERIES, "CODE FOR PRESSURE PIPING."

CERTIFY THAT EACH WELDER HAS PASSED AWS QUALIFICATION TESTS FOR WELDING PROCESSES INVOLVED AND THAT CERTIFICATION IS CURRENT.

ELECTRICAL CHARACTERISTICS FOR PLUMBING EQUIPMENT: EQUIPMENT OF HIGHER ELECTRICAL CHARACTERISTICS MAY BE FURNISHED PROVIDED SUCH PROPOSED EQUIPMENT IS APPROVED IN WRITING AND CONNECTING ELECTRICAL SERVICES, CIRCUIT BREAKERS, AND CONDUIT SIZES ARE APPROPRIATELY MODIFIED. IF MINIMUM ENERGY RATINGS OR EFFICIENCIES ARE SPECIFIED, EQUIPMENT SHALL COMPLY WITH REQUIREMENTS.

DELIVERY, STORAGE, AND HANDLING

DELIVER PIPES AND TUBES WITH FACTORY-APPLIED END CAPS; MAINTAIN END CAPS THROUGH SHIPPING, STORAGE, AND HANDLING TO PREVENT PIPE END DAMAGE AND TO PREVENT ENTRANCE OF DIRT, DEBRIS, AND MOISTURE.

STORE PLASTIC PIPES PROTECTED FROM DIRECT SUNLIGHT. SUPPORT TO PREVENT SAGGING AND BENDING.

COORDINATION

PREPARE AND SUBMIT COORDINATION DRAWINGS. REFER TO OTHER DIVISION 15 SECTIONS FOR REQUIREMENTS.

CLOSELY SCHEDULE THE WORK SO THAT WORK WILL BE INSTALLED AT THE PROPER TIME WITHOUT DELAYING THE COMPLETION OF THE ENTIRE PROJECT.

WHERE THE WORK WILL BE INSTALLED IN CLOSE PROXIMITY TO THE WORK OF OTHER TRADES, OR WHERE THERE IS EVIDENCE THAT THE WORK WILL INTERFERE WITH THE WORK OF OTHER TRADES, ARRANGE SPACE CONDITIONS TO MAKE A SATISFACTORY ADJUSTMENT. IF WORK IS INSTALLED BEFORE COORDINATING WITH OTHER TRADES, MAKE NECESSARY CHANGES TO THE WORK TO CORRECT THE CONDITION WITHOUT ADDITIONAL COST TO THE OWNER.

PREPARE COMPLETE SET OF DRAWINGS SHOWING ALL NECESSARY SLAB OPENINGS AND STRUCTURAL SUPPORTS THAT REQUIRE STRUCTURAL FRAMING. DRAWINGS SHALL CLEARLY INDICATE SIZES AND LOCATION RELATIVE TO ESTABLISHED COLUMN LINES. DRAWINGS SHALL BE COMPLETED IN SUFFICIENT TIME TO ALLOW FOR STRUCTURAL STEEL FABRICATION SO AS NOT TO DELAY PROJECT SCHEDULE.

SHOP DRAWING SUBMISSIONS SHALL DEMONSTRATE A KNOWLEDGE OF THE WORK OF OTHER TRADES, AND SHALL SHOW THE LOCATIONS OF THE WORK OF OTHER TRADES WHICH AFFECTS THE WORK OF THIS CONTRACT.

ARRANGE FOR PIPE SPACES, CHASES, SLOTS, AND OPENINGS IN BUILDING STRUCTURE DURING PROGRESS OF CONSTRUCTION, TO ALLOW FOR PLUMBING INSTALLATIONS.

COORDINATE INSTALLATION OF REQUIRED SUPPORTING DEVICES AND SET SLEEVES IN POURED-IN-PLACE CONCRETE AND OTHER STRUCTURAL COMPONENTS AS THEY ARE CONSTRUCTED.

COORDINATE REQUIREMENTS FOR ACCESS PANELS AND DOORS FOR PLUMBING ITEMS REQUIRING ACCESS THAT ARE CONCEALED BEHIND FINISHED SURFACES. ACCESS PANELS AND DOORS ARE SPECIFIED IN DIVISION 8 SECTION "ACCESS DOORS AND FRAMES."

COORDINATION DRAWINGS

SHEET METAL, PLUMBING AND FIRE PROTECTION SHOP DRAWINGS THAT HAVE BEEN COORDINATED WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW. DRAWINGS MUST BE RETURNED FROM ENGINEER EITHER REVIEWED OR FURNISH AS CORRECTED PRIOR TO BEING USED AS BASIS FOR COORDINATION DRAWINGS.

AFTER SHEET METAL AND PIPING DRAWINGS HAVE BEEN REVISED PER ENGINEERS COMMENTS, REPRODUCIBLE COPIES SHALL BE SENT TO THE OTHERS TRADES IN THE FOLLOWING SEQUENCE FOR THE INCLUSION OF THEIR WORK:

PLUMBING CONTRACTOR
ELECTRICAL WORK
MECHANICAL PIPING
SPRINKLER PIPING

PRIOR TO INCLUSION OF SPRINKLER PIPING AND EQUIPMENT, CONTRACTOR SHALL HAVE SUBMITTED SPRINKLER PLANS AND CALCULATIONS TO ENGINEER FOR REVIEW AND TO RATING BUREAU FOR REVIEW.

AFTER ALL TRADES HAVE INCLUDED THEIR WORK ON THE COORDINATION DRAWING AND NOTED CONFLICTS, ALL TRADES SHALL MEET TO RESOLVE CONFLICTS AND AGREE TO ACCEPTABLE SOLUTIONS. EACH TRADE SHALL SIGN COORDINATION DRAWINGS. ITEMS NOT SHOWN ON COORDINATION DRAWING IS RESPONSIBILITY OF OMITTING CONTRACTOR AND CONTRACTOR IS SUBJECT TO ADDITIONAL COSTS INCURRED BY OTHER TRADES.

THE ARCHITECT AND ENGINEER ARE NOT PART OF THE COORDINATION DRAWING PROCESS. THE ENGINEER WILL PROVIDE ASSISTANCE RELATIVE TO ACCEPTABILITY OF INSTALLATIONS.

SUBMIT FINAL SIGNED COORDINATION DRAWING TO ENGINEER FOR REVIEW. ENGINEER WILL REVIEW FOR ACCEPTABILITY OF INSTALLATIONS.

ANY WORK FABRICATED OR INSTALLED PRIOR TO SIGN OFF BY ALL TRADES SHALL BE REMOVED AND RE-INSTALLED IN CONFORMANCE WITH COORDINATION DRAWINGS.

EACH CONTRACTOR (MENTIONED ABOVE) IS RESPONSIBLE FOR THE COORDINATION OF HIS SUB-CONTRACTORS.

THE OVERALL COORDINATION OF THE COORDINATION PROCESS IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE ENGINEER IS NOT RESPONSIBLE FOR THE COORDINATION PROCESS. THE ENGINEER WILL RESPOND TO QUESTIONS THAT ARISE FROM THE COORDINATION PROCESS. DRAWINGS SUBMITTED WILL BE REVIEWED FOR CLEARLY IDENTIFIED CONFLICTS ONLY. SOLUTIONS TO CONFLICTS WILL NOT BEAR ADDITIONAL COST.

AS BUILT DRAWINGS

PROVIDE A COMPLETE SET OF AS-BUILT DRAWINGS REFLECTING AS INSTALLED CONDITIONS. AS-BUILT DRAWINGS SHALL INDICATE ALL INSTALLED CONDITIONS OF SYSTEMS WITHIN THIS DISCIPLINE. DRAWINGS SHALL BE OF SIMILAR SCALE AS THE CONSTRUCTION DOCUMENTS AND INCLUDE DETAILS AS NECESSARY TO CLEARLY REFLECT THE INSTALLED CONDITION. DRAWINGS SHALL BE BOUND IN A COMPLETE AND CONSECUTIVE SET. SUPPLEMENTAL SKETCHES AND LOOSE PAPERWORK WILL NOT BE ACCEPTABLE AND WILL BE RETURNED FOR REVISION. THE CONTRACTOR SHALL COMPLY WITH THE ENGINEERS COMMENTS TO PRODUCE A CLEAR AND CONCISE SET OF DRAWINGS. DRAWINGS SHALL BE SUBMITTED IN BOTH HARD COPY AND ELECTRONIC (AUTOCAD VERSION AS REQUIRED BY THE OWNER) VERSION. NUMBER OF COPIES OF EACH AS REQUESTED BY THE OWNER.

PROVIDE AS-BUILT DRAWINGS INDICATING IN A NEAT AND ACCURATE MANNER A COMPLETE RECORD OF ALL REVISIONS OF THE ORIGINAL DESIGN OF THE WORK. INDICATE THE FOLLOWING INSTALLED CONDITIONS:

INCLUDE ALL CHANGES AND AN ACCURATE RECORD, ON REPRODUCTIONS OF THE CONTRACT DRAWINGS OR APPROPRIATE SHOP DRAWINGS, OF ALL DEVIATIONS, BETWEEN THE WORK SHOWN AND WORK INSTALLED.

MAINS AND BRANCHES OF PIPING SYSTEMS, WITH VALVES AND CONTROL DEVICES LOCATED AND NUMBERED, CONCEALED UNIONS LOCATED, AND WITH ITEMS REQUIRING MAINTENANCE LOCATED (I.E., TRAPS, STRAINERS, EXPANSION COMPENSATORS, TANKS, ETC.). VALVE LOCATION DIAGRAMS, COMPLETE WITH VALVE TAG CHART.

EQUIPMENT LOCATIONS (EXPOSED AND CONCEALED), DIMENSIONED FROM PROMINENT BUILDING LINES.

APPROVED SUBSTITUTIONS, CONTRACT MODIFICATIONS, AND ACTUAL EQUIPMENT AND MATERIALS INSTALLED.

CONTRACT MODIFICATIONS, ACTUAL EQUIPMENT AND MATERIALS INSTALLED.

SUBMIT FOR REVIEW BOUND SETS OF THE REQUIRED DRAWINGS, MANUALS AND OPERATING INSTRUCTIONS.

PIPE MATERIALS

REFER TO SCHEDULE ON DRAWING.

PIPE LABELS

1. Retain this article if these devices will identify some or all piping. Identification of piping by color-coded painting is covered in "Pipe Label Installation" Article.

Do not use pipe labels or plastic tapes for bare pipes conveying fluids at temperatures of 125 deg F (52 deg C) or higher.

GENERAL REQUIREMENTS FOR MANUFACTURED PIPE LABELS: PREPRINTED, COLOR-CODED, WITH LETTERING INDICATING SERVICE, AND SHOWING FLOW DIRECTION.

PRETENSIONED PIPE LABELS: PRECOILED, SEMIRIGID PLASTIC FORMED TO COVER FULL CIRCUMFERENCE OF PIPE AND TO ATTACH TO PIPE WITHOUT FASTENERS OR ADHESIVE.

SELF-ADHESIVE PIPE LABELS: PRINTED PLASTIC WITH CONTACT-TYPE, PERMANENT-ADHESIVE BACKING.

PIPE LABEL CONTENTS: INCLUDE IDENTIFICATION OF PIPING SERVICE USING SAME DESIGNATIONS OR ABBREVIATIONS AS USED ON DRAWINGS; PIPE SIZE; AND AN ARROW INDICATING FLOW DIRECTION.

FLOW-DIRECTION ARROWS: INTEGRAL WITH PIPING SYSTEM SERVICE LETTERING TO ACCOMMODATE BOTH DIRECTIONS OR AS SEPARATE UNIT ON EACH PIPE LABEL TO INDICATE FLOW DIRECTION.

LETTERING SIZE: AT LEAST 1-1/2 INCHES HIGH.

VALVE TAGS

Retain requirement in "Action Submittals" Article to submit numbering scheme for approval.

VALVE TAGS: STAMPED OR ENGRAVED WITH 1/4-INCH LETTERS FOR PIPING SYSTEM ABBREVIATION AND 1/2-INCH NUMBERS.

TAG MATERIAL: BRASS, 0.032-INCH MINIMUM THICKNESS, AND HAVING PREDRILLED OR STAMPED HOLES FOR ATTACHMENT HARDWARE.

FASTENERS: BRASS WIRE-LINK OR BEADED CHAIN; OR S-HOOK.

VALVE SCHEDULES: FOR EACH PIPING SYSTEM, ON 8-1/2-BY-11-INCH BOND PAPER. TABULATE VALVE NUMBER, PIPING SYSTEM, SYSTEM ABBREVIATION (AS SHOWN ON VALVE TAG), LOCATION OF VALVE (ROOM OR SPACE), NORMAL-OPERATING POSITION (OPEN, CLOSED, OR MODULATING), AND VARIATIONS FOR IDENTIFICATION. MARK VALVES FOR EMERGENCY SHUTOFF AND SIMILAR SPECIAL USES.

VALVE-TAG SCHEDULE SHALL BE INCLUDED IN OPERATION AND MAINTENANCE DATA.

PIPE HANGERS, SUPPORTS, SEISMIC RESTRAINT, AND VIBRATION ISOLATION

SEISMIC RESTRAINT: PROVIDE SEISMIC RESTRAINT OF ALL PLUMBING EQUIPMENT AND SYSTEMS IN ACCORDANCE WITH STATE BUILDING CODE REQUIREMENTS. SUBMIT SHOP DRAWINGS SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT INDICATING ALL NECESSARY COMPONENT CUTS, PLAN LOCATIONS AND CALCULATIONS FOR A COMPLETE SYSTEM. REFER TO OTHER DIVISION 15 REQUIREMENTS.

PROVIDE NECESSARY STRUCTURAL MEMBERS, HANGERS AND SUPPORTS OF APPROVED DESIGN TO KEEP PIPING IN PROPER ALIGNMENT AND PREVENT TRANSMISSION OF INJURIOUS THRUSTS AND VIBRATIONS. IN ALL CASES WHERE HANGERS, BRACKETS, ETC., ARE SUPPORTED FROM CONCRETE CONSTRUCTION, DO NOT WEAKEN CONCRETE OR PENETRATE WATERPROOFING. ALL HANGERS AND SUPPORTS SHALL BE CAPABLE OF SCREW ADJUSTMENT AFTER PIPING IS ERECTED. HANGERS SUPPORTING PIPING EXPANDING INTO LOOPS, BENDS AND OFFSETS SHALL BE SECURED TO THE BUILDING STRUCTURE IN SUCH A MANNER THAT HORIZONTAL ADJUSTMENT PERPENDICULAR TO THE RUN OF PIPING SUPPORTED MAY BE MADE TO ACCOMODATE DISPLACEMENT DUE TO EXPANSION. ALL SUCH HANGERS SHALL BE FINALLY ADJUSTED BOTH IN THE VERTICAL AND HORIZONTAL DIRECTION, AS REQUIRED. HANGERS IN CONTACT WITH COPPER OR BRASS PIPE SHALL BE DIELECTRIC, COMPATIBLE WITH COPPER AND BRASS ALLOY OR PROVIDED WITH FELT SLEEVE
INSULATION

INSULATION

REFER TO SCHEDULE ON DRAWING.

ALL INSULATING MATERIALS SHALL COMPLY WITH THE FOLLOWING RATINGS:

FLAMESPREAD -25
SMOKE DEVELOPED -50
FUEL CONTRIBUTED -50

FIBERGLASS PIPING INSULATION (INTERIOR)
MOLDED FIBROUS GLASS WITH 3.5 POUNDS MINIMUM DENSITY, MAXIMUM K-1 .3 AT 200 DEGREE F. MEAN AND RATED TO 450 DEGREE F. THE INSULATION SHOULD BE SECTIONAL PIPE JACKETED WITH AN EMBOSSED VAPOR BARRIER LAMINATE.

MANUFACTURERS:

OWENS-CORNING, TYPE 25 ASJ
KNAUF - PIPE INSULATION WITH ASJ
CERTAINTEED - TYPE 500 SNAP-ON WITH ASJ
MANVILLE - MICRO-LOK 650 WITH AP JACKET

D-TYPE G - FIBERGLASS INSULATION FOR VALVES, FITTINGS, FLANGES (VAPOR SEAL INSULATION).

MOLDED, FACTORY-FORMED FIBROUS GLASS WITH 3.5 PCF MINIMUM DENSITY, MAX K-1 .3 AT 200F MEAN, RATED TO 450 DEGREE F. ALL JOINTS TO BE SEALED WITH VAPOR BARRIER ADHESIVE AND WRAPPED WITH GLASS MESH TAPE. EACH FITTING TO BE FINISHED WITH TWO COATS OF BENJAMIN FOSTER 30-36 VAPOR SEAL.

VALVES

GENERAL: APPROVED MANUFACTURERS: NOBCO, APOLLO, STOCKHOLM.

REFER TO SCHEDULE ON DRAWING.

PIPE SLEEVES AND SEALS

MASONRY WALLS AND SLABS: SCHEDULE 40 GALVANIZED STEEL PIPE WITH INTEGRAL WATER STOP.

SLEEVE ADAPTERS: COATED CAST IRON, EQUIPPED WITH FLASHING CLAMP.

CONTRACTOR SHALL SEAL ALL PENETRATIONS THROUGH PARTITIONS, SLABS AND/OR CEILINGS WITH A U.L. APPROVED FIRE/SMOKE STOP TO MAINTAIN THE INTEGRITY OF THE RESPECTIVE RATING INCLUDING SMOKE TIGHT PARTITIONS.

PLUMBING FIXTURES

FIXTURES: NEW, COMPLETE WITH TRIMMINGS AND FITTINGS, INCLUDING FAUCETS, CARRIERS, SUPPLIES, STOPS, TRAPS, TAILPIECES, WASTE PLUGS, CASINGS, HANGERS, PLATES, BRACKETS, ANCHORS, SUPPORTS, HARDWARE AND FASTENING DEVICES.

STAINLESS STEEL: TYPE 302, 304, 316, OR 317, AS NOTED, SOUND DEADENED.

TRIMMINGS AND FITTINGS: CONSTRUCT OF FORGED, CAST, ROLLED OR EXTRUDED BRASS OR BRONZE WITH MONEL AND OTHER SUITABLE NON-CORROSIVE PARTS. DESIGNED WITH EASILY RENEWABLE PARTS THAT ARE SUBJECT TO WEAR OR DETERIORATION. NO DIE CASTINGS AND STAMPINGS OTHER THAN BRASS OR STAINLESS STEEL.

REFER TO SCHEDULE ON DRAWING.

WATER HEATING EQUIPMENT SPECIALTIES

THERMOSTATIC MIXING VALVE (WATER HEATER): THREADED INLETS AND OUTLET, THERMOSTATIC CONTROLLER WITH SWIVEL ACTION CHECK STOPS, REMOVABLE CARTRIDGE WITH STRAINER (PROVIDE 1 EXTRA CARTRIDGE), STAINLESS STEEL PISTON AND LIQUID FILL THERMAL MOTOR, VOLUME CONTROL/SHUT-OFF VALVE, BIMETAL DIAL THERMOMETER, (3" FACE, 20 DEGREES F. TO 240 DEGREES F.) BRASS PIPE, FITTINGS AND UNIONS. ROUGH CHROME BODY FINISH.

REFER TO DRAWING FOR MAKE AND MODEL.

THERMOMETER (TH): ADJUSTABLE ANGLE TYPE, MERCURY OR LIQUID ACTUATED, CONSTRUCTED WITH NON-CORROSIVE INTERNAL MECHANISM AND RECALIBRATOR ADJUSTMENT, ASSEMBLED IN MINIMUM 3-1/2 INCH DIAMETER GASKET SEALED, GLASS FACED STAINLESS STEEL CASE, EQUIPPED WITH STAINLESS STEEL BRACKET ASSEMBLY, SEPARABLE SOCKET, 30 TO 240 DEGREES F. WATER TEMPERATURE RANGE.

MANUFACTURER: TRERICE L60030.

PRESSURE AND TEMPERATURE RELIEF VALVE - PET: ASME RATED, BRONZE BODY, NON-CORROSIVE TRIM, AUTOMATIC RESEATING, EXTENSION THERMOSTAT, TEST LEVER, THREADED INLET AND OUTLET, 75 TO 150 PSI ADJUSTABLE PRESSURE RANGE, SET AT 125 PSI, 210 DEGREES F. WATER

EXPANSION TANKS: ASME CERTIFIED 125 PSI, HORIZONTALLY SUSPENDED, DIAPHRAGM TYPE TANK COMPATIBLE WITH DOMESTIC WATER SYSTEMS.

MANUFACTURER: AMTROL, SERIES.

MISCELLANEOUS PLUMBING SPECIALTIES

WATER HAMMER ARRESTORS: ALL STAINLESS STEEL, MECHANICAL-PNEUMATIC TYPE, HERMETICALLY SEALED BELLOWS, THREADED INLET, 150 PSI W.W.P., SIZE AND PLACEMENT DETERMINATION: PDI-WH 201.

MANUFACTURER PRECISION PLUMBING PRODUCTS SC SERIES.

AIR VENT: BRONZE BODY, STAINLESS STEEL TRIM AND FLOAT, THREADED INLET AND OUTLET, 150 PSI W.W.P.

MANUFACTURER SARCO 13W SERIES.

ACCESS DOORS IN WALLS AND CEILINGS

AT EACH VALVE, CLEANOUT OR PLUMBING DEVICE REQUIRING ACCESS, FURNISH AN ACCESS DOOR. RIGID CONSTRUCTION WITH TWO HINGES AND A LATCH, IN PLENUM CEILINGS, PROVIDE FELT BETWEEN THE DOOR AND FRAME TO MAKE AN AIR TIGHT SEAL. ACCESS DOORS SHALL BE FLUSH MOUNTED, PRIME COATED WITH RUST INHIBITIVE PAINT, CONCEALED FRAME, FLUSH SCREW DRIVER OPERATED LOCKS WITH METAL CAMS AND ANCHORS AS REQUIRED. REFER TO DIVISION 8 FOR ADDITIONAL REQUIREMENTS.

ACCESS DOOR SIZES SHALL BE:
12" X 12" AT EASILY ACCESSIBLE ITEMS.
16" X 16" WHERE PARTIAL BODY ACCESS IS REQUIRED.
24" X 24" WHERE FULL BODY ACCESS IS REQUIRED.

MANUFACTURER: MILCOR TYPE M SERIES, CESCO SERIES.

EXECUTION

GENERAL

THIS CONTRACTOR SHALL INFORM HIMSELF FROM THE GENERAL CONSTRUCTION SPECIFICATIONS AND PLANS, OF THE EXACT DIMENSION OF FINISHED WORK AND OF THE HEIGHT OF FINISHED CEILINGS IN ALL ROOMS WHERE EQUIPMENT OR PIPES ARE TO BE PLACED AND ARRANGE HIS WORK IN ACCORDANCE WITH THE SCHEDULE OF INTERIOR FINISHES, AS INDICATED ON THE ARCHITECTURAL DRAWINGS.

MANUFACTURER'S QUALIFICATIONS: FIRMS REGULARLY ENGAGED IN THE MANUFACTURER OF FIXTURES, APPLIANCES, PIPES AND PIPE FITTINGS OF TYPES AND SIZES REQUIRED, WHOSE PRODUCTS HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR NOT LESS THAN 5 YEARS.

MATERIAL QUALIFICATIONS: SHALL CONFORM TO ALL LOCAL, STATE, AND NATIONAL/FEDERAL CODES AND REGULATIONS WHICH MAY APPLY AND NOTHING IN THESE SPECIFICATIONS SHALL BE INTERPRETED AS AN INFRINGEMENT OF SUCH CODES OR REGULATIONS.

WELDING: QUALIFY WELDING PROCEDURES, WELDERS, AND OPERATORS IN ACCORDANCE WITH ASME B31.1, OR ASME B31.9, AS APPLICABLE. CERTIFY WELDING OF PIPING WORK USING STANDARD PROCEDURE SPECIFICATIONS BY, AND WELDERS TESTED UNDER SUPERVISION OF, NATIONAL CERTIFIED PIPE WELDING BUREAU (NCPWB).

BRAZING: CERTIFY BRAZING PROCEDURES, BRAZERS, AND OPERATORS IN ACCORDANCE WITH ASME BOILER AND PRESSURE VESSEL CODE, SECTION IX, FOR SHOP AND JOB-SITE BRAZING OF PIPING WORK.

COORDINATION OF WORK

CAREFULLY COORDINATE SPACE REQUIREMENTS WITH OTHER TRADES TO INSURE THAT ALL MATERIALS CAN BE INSTALLED IN SPACES ALLOTTED THERETO, INCLUDING FINISHED SUSPENDED CEILINGS.

PREPARE AND SUBMIT COORDINATION DRAWINGS.

ALTERATION WORK

ALL EQUIPMENT, FIXTURES, PIPING, ETC. TO BE REMOVED, SHALL BE DISPOSED OF, TURNED OVER TO THE OWNER, OR SALVAGED AS DIRECTED BY THE OWNER. EQUIPMENT, FIXTURES, PIPING, DEVICES, ETC. SHALL NOT BE REMOVED FROM THE PREMISES WITHOUT THE OWNERS APPROVAL.

WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE OWNERS AND PROJECT SCHEDULE AND PHASING. PROVIDE TEMPORARY SERVICES AND CONNECTIONS TO ACCOMMODATE THESE REQUIREMENTS. THE SHUTDOWN OR TRANSFERENCE OF SYSTEMS SHALL BE COORDINATED WITH THE OWNERS REQUIREMENTS.

ALL PIPING TO REMAIN SHALL BE PROPERLY PLUGGED, VALVED, CAPPED AND/OR BY PASSED SUCH THAT UPON COMPLETION OF WORK ALL ABANDON SYSTEMS ARE PROPERLY CONCEALED, AND THAT EXISTING SYSTEMS TO REMAIN, REMAIN OPERATIONAL.

NO DEAD ENDS SHALL BE LEFT ON ANY PIPING SYSTEMS UPON COMPLETION OF WORK.

EXISTING EXPOSED PIPING SYSTEMS NOT TO BE REUSED, AND NOT SPECIFICALLY NOTED FOR REMOVAL SHALL BE COMPLETELY REMOVED.

ALL SYSTEMS SHALL BE LEFT IN WORKING ORDER TO THE SATISFACTION OF THE OWNER UPON COMPLETION OF ALL NEW WORK.

ALL EXISTING EXPOSED, UNNECESSARY PIPING RELATED TO NEW WORK SHALL BE COMPLETELY REMOVED.

ALL PIPING NEW AND EXISTING TO REMAIN SHALL BE CONCEALED. RE-ROUTE OR REMOVE ALL EXISTING PIPING, AND SYSTEMS WHERE NECESSARY TO AVOID NEW EQUIPMENT, STRUCTURAL, MASONRY WORK OR AS REQUIRED BY THE PROPOSED ALTERATIONS.

PLUMBING FIXTURES

THE FIXTURES SHALL BE FURNISHED COMPLETE WITH CHROME PLATING ON EXPOSED PIPING OR TRIM. PROVIDE ANCHOR BOLTS, HANGERS, STRAINERS, FAUCETS AND OTHER INCIDENTAL ITEMS FURNISHED AS STANDARD. PROVIDE LOOSE KEY STOPS AT EVERY FIXTURE. ALL SUPPLY FITTINGS AND EXPOSED FIXTURE TRIM SHALL BE ALL BRASS, CHROME PLATED.

EXAMINE ROUGHING-IN WORK OF POTABLE WATER AND WASTE PIPING SYSTEMS TO VERIFY ACTUAL LOCATIONS OF PIPING CONNECTIONS PRIOR TO INSTALLING FIXTURES. CORRECT ANY INCORRECT LOCATION OF PIPING, AND OTHER UNSATISFACTORY CONDITIONS FOR INSTALLATION OF PLUMBING FIXTURES. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED IN A MANNER ACCEPTABLE TO THE ENGINEER. ALL ROUGH-IN TO PLUMBING FIXTURES SHALL CONFORM TO FIXTURE MANUFACTURER PUBLISHED ROUGH-IN DIMENSIONS, AND REQUIREMENTS.

UPON COMPLETION OF INSTALLATION OF PLUMBING FIXTURES AND AFTER UNITS ARE WATER PRESSURIZED, TEST FIXTURES TO DEMONSTRATE CAPABILITY AND COMPLIANCE WITH REQUIREMENTS. CORRECT MALFUNCTIONING UNITS AT SITE, THEN RETEST TO DEMONSTRATE COMPLIANCE. OTHERWISE, REMOVE AND REPLACE WITH NEW UNITS AND PROCEED WITH RETESTING.

INSPECT EACH INSTALLED UNIT FOR DAMAGE TO FINISH. IF DAMAGED, RESTORE AND MATCH FINISH TO ORIGINAL AT SITE TO THE SATISFACTION OF THE ARCHITECT/ENGINEER, OTHERWISE, REMOVE FIXTURE AND REPLACE WITH NEW UNIT. REMOVE CRACKED OR DENTED UNITS AND REPLACE WITH NEW UNITS.

CLEAN PLUMBING FIXTURES, TRIM, AND STRAINERS OF DIRT AND DEBRIS UPON COMPLETION OF INSTALLATION.

SET FIXTURES LEVEL AND UNIFORMLY, WITH CONNECTIONS AT RIGHT ANGLES TO WALL AND PROPERLY CENTERED. LAY OUT ROUGHINGS ACCURATELY AND IN COORDINATION WITH SPACE AND FINISH REQUIREMENTS. IF FIELD CUT-OUTS AND HOLES ARE REQUIRED USE PROPER CUTTING AND DRILLING TOOLS TO MAINTAIN INTEGRITY OF FINISHED SURFACE. PROVIDE CUT-OUT TEMPLATES FOR COUNTERTOP INSERT OR UNDERMOUNT ITEMS.

LOCATE WASTE OUTLETS AND WATER SUPPLIES AT CONSTANT HORIZONTAL LEVELS, WITH WASTE OUTLET CENTERED ON FINTURE DRAIN CONNECTION AND WATER SUPPLIES SPACED EQUALLY TO RIGHT AND LEFT.

PENETRATIONS THROUGH FIRE SEPARATIONS

FIRE AND SMOKE SEAL UL LISTED, APPROVED AND TESTED FIRE AND/OR SMOKE SEALING MATERIAL INSTALLED IN ALL FIRE AND/OR SMOKE RATED FLOOR AND PARTITIONS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

DISINFECTION OF POTABLE WATER SYSTEM

POTABLE WATER SYSTEMS SHALL BE DISINFECTED IN ACCORDANCE WITH STATE AND LOCAL CODES BUT BY NOT LESS THAN ONE OF THE FOLLOWING METHODS BEFORE IT IS PLACED IN OPERATION:

THE SYSTEM, OR PART THEREOF, SHALL BE FILLED WITH A SOLUTION CONTAINING 50 PARTS PER MILLION OF AVAILABLE CHLORINE AND ALLOWED TO STAND 24 HOURS BEFORE FLUSHING AND RETURNING TO SERVICE.

THE SYSTEM, OR PART THEREOF, SHALL BE FILLED WITH A SOLUTION CONTAINING 200 PARTS PER MILLION OF AVAILABLE CHLORINE AND ALLOWED TO STAND 3 HOURS BEFORE FLUSHING AND RETURNING TO SERVICE.

TESTS

GENERAL: TEST PLUMBING SYSTEMS TO SATISFACTION OF BUILDING OFFICIAL. DO NOT CLOSE IN, CONCEAL, OR COVER UP ANY PLUMBING WORK UNTIL IT HAS BEEN TESTED, INSPECTED, AND APPROVED.

FLUSH PIPING, PRIOR TO TESTING, TO REMOVE FOREIGN MATERIALS WHICH MAY HAVE ENTERED DURING COURSE OF INSTALLATION.

REPAIR ALL LEAKS, DEFECTS OR DAMAGE REVEALED BY THE RESULTS OF THE TESTING AND RE-TEST THE SYSTEM.

DO NOT INSULATE OR CONCEAL PIPING UNTIL THE SYSTEM HAS BEEN TESTED AND THE RESULTS APPROVED.

PERFORM TESTS IN THE PRESENCE OF THE AUTHORITY HAVING JURISDICTION. NOTIFY ARCHITECT AND/OR ENGINEER.

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	Description:	Date:	Revised By:
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

Drawing Title:
PLUMBING SPECIFICATIONS

Date: August 24, 2021
Scale: N.T.S
Drawn By: C.B.
Project Number: 20.120

Drawing Number: P301

FIRE PROTECTION GENERAL NOTES

GENERAL

FIRE PROTECTION WORK INCLUDES BUT NOT LIMITED TO REMOVAL AND PROPER DISPOSAL OF EXISTING FIRE PUMP CONTROLLER, SPRINKLER BRANCH PIPING, FITTINGS, HEADS, ETC., AND INSTALLATION OF NEW FIRE PUMP CONTROLLER/TRANSFER SWITCH, SPRINKLER HEADS, PIPING, HANGERS, ETC. AS REQUIRED TO ACCOMMODATE ARCHITECTURAL AND MECHANICAL RENOVATIONS. CONNECTION TO THE EXISTING UNDERGROUND FIRE MAIN SUPPLYING A NEW DOUBLE CHECK DETECTOR AND ELECTRIC DRIVEN FIRE PUMP ASSEMBLY. THE FIRE PUMP ASSEMBLY SHALL SUPPLY WET FIRE RISER CHECK VALVE ASSEMBLIES. THE RISER CHECK VALVE ASSEMBLY SHALL SUPPLY SPRINKLER CONTROL ASSEMBLIES CONTROL VALVES, FLOW SWITCHES AND TAMPER SWITCHES) SERVING WET SPRINKLERS ON EACH FLOOR.

CONTRACTOR TO PROVIDE ELECTRIC DRIVEN FIRE PUMP ASSEMBLY AS REQUIRED TO INCREASE EXISTING WATER PRESSURE TO MEET NFPA 13 REQUIREMENTS INCLUDING BUT NOT LIMITED TO: ELECTRIC DRIVEN FIRE PUMP ASSEMBLY, CONTROLLER, AUTOMATIC TRANSFER SWITCH AND ALL REQUIRED DEVICES IN ACCORDANCE WITH NFPA 20. FIRE PUMP ELECTRIC DRIVEN, 40 HP, 1800 RPM @ 95 PSI, FIRE BOOSTER PUMP. ALARMS SHALL INCLUDE NOTIFICATION OF PUMP RUNNING, LOSS OF POWER AND PHASE REVERSAL. FIRE PUMP DESIGN AND INSTALLATION SHALL CONFORM TO NFPA 20.

CONTRACTOR SHALL PROVIDE NECESSARY PIPING FITTINGS, ETC. AS REQUIRED TO ENSURE IT ACTIVE FIRE STANDPIPE WITH 2 1/2" FIRE DEPARTMENT VALVES (ON EACH FLOOR LEVEL) DURING THE CONSTRUCTION PROCESS IN ACCORDANCE WITH THE CT STATE BUILDING CODE, SECTION 3311.

UTILIZE CONCEALED PENDENT SPRINKLERS AND PIPING IN AREAS WITH FINISHED CEILINGS, AND EXPOSED PIPING AND UPRIGHT SPRINKLERS IN AREAS WITHOUT CEILINGS. CONCEALED SPRINKLER HEADS LOCATED IN ACOUSTICAL TILES TO UTILIZE FLEX HOSE FITTINGS IN LENGTH PROVIDE AND INSTALL FLEX SPRINKLERS UNDER AND ABOVE ALL OBSTRUCTIONS IN ACCORDANCE WITH NFPA 13.

PROVIDE AND PROPERLY INSTALL A COMPLETE ENGINEERED LISTED KITCHEN HOOD EXTINGUISHING SYSTEM. PROVIDE AND INSTALL ANSUL R-102 WET CHEMICAL FIRE SUPPRESSION SYSTEM IN ACCORDANCE WITH NFPA 17A AND NFPA 96.

INSTALL STAGE STANDPIPE SYSTEMS IN ACCORDANCE WITH PARTS RETAINED ON NFPA 13 AND NFPA 14. THE CONTRACTOR SHALL PROVIDE AND INSTALL THE FOLLOWING: 1" PRESSURE REGULATING TYPE (DRY) HOSE VALVE WITH 1-1/2" HOSE CONNECTION AT THE FIRST FLOOR LEVEL. 1" PRESSURE REGULATING HOSE VALVE WITH 2-1/2" HOSE CONNECTION AT EACH UPPER LEVEL. PROVIDE ENGINEERED CALCULATIONS AS REQUIREMENTS. ASSIGN 30 GPM WITH 100 PSI RESIDUAL PRESSURE REQUIREMENT TO THE HYDRAULIC CALCULATIONS AT POINT OF EACH HOSE VALVE CONNECTION TO THE LOCAL SPRINKLER SYSTEM.

EACH RISER CHECK VALVE ASSEMBLY (RCA) SHALL HAVE A CONTROL VALVE WITH TAMPER SWITCH, A CHECK VALVE, A WATERFLOW SWITCH AND A DRAIN CONNECTION. ACTIVATION OF A TAMPER SWITCH SHALL RESULT AS A TROUBLE INDICATION AT THE FIRE ALARM CONTROL PANEL AND THE FIRE ALARM ANNUNCIATOR PANEL.

ACTIVATION OF A FLOW SWITCH SHALL RESULT AS AN ALARM INDICATION AT THE FIRE ALARM CONTROL PANEL AND THE FIRE ALARM ANNUNCIATOR PANEL. THE SPRINKLER CONTRACTOR SHALL EXAMINE ALL CONTRACT DOCUMENTS AND SHALL VERIFY ALL CONDITIONS IN THE FIELD. THE SPRINKLER

FIRE PROTECTION PLANS ARE INTENDED TO INDICATE TOTAL COVERAGE AND MAY OR MAY NOT INDICATE ALL SPRINKLER HEADS. SPRINKLER HEADS INDICATED ON DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED OR COUNTED FOR BID. IT IS NOT THE INTENT OF THESE DRAWINGS TO SHOW ENTIRE PIPING LAYOUT, PROPOSED HANG AND BRACES INDICATED ONLY. THE CONTRACTOR SHALL PROVIDE A COMPLETE SPRINKLER SYSTEM WITH COMPLETE SPRINKLER COVERAGE, INDICATED OR NOT. ITEMS AND SERVICES NOT SHOWN ON DRAWINGS OR SPECIFICATIONS BUT REQUIRED TO RENDER THE WORK COMPLETE IN ACCORDANCE WITH NFPA INSURANCE COMPANY REQUIREMENTS AND CHANGES READY FOR OPERATION, SHALL BE PROVIDED AND INSTALLED. THE CONTRACTOR SHALL PROVIDE COMPLETE SPRINKLER COVERAGE AS REQUIRED INCLUDING BUT NOT LIMITED TO: CRAWL SPACES, CONCEALED COMBUSTIBLE SPACES, SHAFTS, AND ALL CLOSETS.

DRAWINGS ARE DIAGRAMMATIC AND INDICATE A GENERAL ARRANGEMENT OF WORK AND ARE NOT TO BE CONSIDERED SUBSTITUTE CONTRACT DOCUMENTS. IT IS THE INTENT OF THESE DOCUMENTS TO INCLUDE THE PROVISION AND INSTALLATION OF ALL NECESSARY WORK AND MATERIALS FOR COMPLETE, OPERATIONAL AND CODE COMPLIANT SYSTEMS BY THE CONTRACTOR. GENERAL DESIGN CONCEPTS INDICATED MUST BE FOLLOWED OR BETTERED. THE BID SHALL INCLUDE OFFSETS, ADDITIONAL PIPING, VALVES AND EQUIPMENT AND COMPONENTS AS REQUIRED TO MEET CONSTRUCTION CONDITIONS FOR PROPER OPERATION. DO NOT SCALE DRAWINGS. CONSULT ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR SPACE CONDITIONS AND ADDITIONAL REQUIREMENTS.

WHEN A CONFLICT BETWEEN THE DRAWINGS, NOTES AND/OR SPECIFICATIONS OCCUR, THE MORE STRINGENT, AND OR LARGER QUANTITY AND/OR MORE EXPENSIVE SHALL APPLY. THE REQUIREMENTS LISTED WITH NOTES OR SPECIFICATIONS SHALL BE REQUIRED, PROVIDED AND INSTALLED WHETHER SPECIFICALLY INDICATED ON THE DRAWINGS OR NOT.

THE CONTRACTOR SHALL COORDINATE SPRINKLER HEAD LOCATIONS WITH THE LATEST
ARCHITECTURAL REFLECTED CEILINGS PLANS. ANY DISCREPANCIES SHALL BE BROUGHT
BACK TO THE ARCHITECT/ ENGINEER. DO NOT SCALE DRAWINGS FOR DIMENSIONS NOT INDICATED. REFER TO ARCHITECT FOR RESOLUTION FOR ANY DIMENSIONS NOT INDICATED.

IT IS THE INTENTION OF THE SPECIFICATIONS AND DRAWINGS TO PROVIDE FOR FINISHED WORK, TESTED AND READY FOR OPERATION.

THE DESIGN OF ALL FIRE SUPPRESSION SYSTEMS WILL BE IN ACCORDANCE WITH THE LOCAL AND STATE BUILDING CODE, NFPA 13, FM GLOBAL. USE ONLY UL/FM SPRINKLERS, MATERIALS AND DEVICES, UNLESS NOTED OTHERWISE.

CONCEALED SPRINKLERS AND PIPING SHALL BE INSTALLED IN AREAS WITH FINISHED CEILINGS. AREAS WITH EXPOSED CONSTRUCTION SHALL HAVE EXPOSED PIPING AND
SPRINKLERS (CUSTOM COLOR)

THE SPRINKLER CONTRACTOR IS REQUIRED TO VISIT THE SITE AT THE TIME OF BID, TO EXAMINE CONDITIONS AND BECOME FAMILIAR WITH THE JOB, NOTING DEGREE OF DIFFICULTY IN GETTING EQUIPMENT, INCLUDING LIFTS AND SCAFFOLDING IN AND OUT OF THE BUILDING. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER IN WRITING PRIOR TO SUBMITTING A BID.

NOTIFY PROPER AUTHORITIES (INCLUDING BUT NOT LIMITED TO: THE LOCAL A.H.J., INSURANCE COMPANY, ETC.) OF ANY FIRE PROTECTION SHUT DOWNS. SCHEDULE ALL WORK TO MINIMIZE THE LENGTH OF TIME THAT THE FIRE PROTECTION SYSTEM(S) WILL BE OUT OF SERVICE. RETURN THE SPRINKLER SYSTEM BACK IN SERVICE AT THE END OF EACH WORKING DAY. IF A FIRE WATCH IS REQUIRED BY THE LOCAL A.H.J., BUILDING MANAGER, ETC. IT SHALL BE PROVIDED BY THE GENERAL CONTRACTOR. FIRE WATCH SCHEDULING AND PERSONNEL SHALL BE COORDINATED WITH THE LOCAL A.H.J., BUILDING MANAGER AND INSURANCE COMPANY.

ARRANGE PIPING TO FACILITATE FLUSHING. PROVIDE READILY ACCESSIBLE DRAIN AND FLUSHING CONNECTIONS AS REQUIRED BY NFPA 13. PROVIDE AND INSTALL A MINIMUM OF ONE 2" DRAIN AT EACH RISER TO ATMOSPHERE. PROVIDE AN INSPECTOR'S TEST CONNECTION AT THE MOST REMOTE BRANCH FROM EACH RISER. ALL DRAIN PIPING TO BE PIPED TO THE EXTERIOR OF THE BUILDING AND DISCHARGE AT GRADE. ALL DRAIN PIPING SHALL BE SIZED AS REQUIRED BY NFPA 13 AND SHALL BE CAPABLE OF DISCHARGING THE FULL FLOW OF THE SYSTEM WITHOUT CAUSING DAMAGE TO BUILDING OR SITE.

INSTALL A PRESSURE GAUGE WITH A BLEEDER MAINTENANCE VALVE AT THE TOP OF ALL RISERS.

PROVIDE A HEAD GUARD ON SPRINKLERS IN AREAS SUBJECT TO MECHANICAL DAMAGE (I.E. SPRINKLERS IN MECHANICAL ROOMS, ETC.)

REFER TO ADDITIONAL NOTES ON ARCHITECTURAL DRAWINGS.

THE CONTRACTOR SHALL COORDINATE SPRINKLER WORK WITH THE ON-SITE PHASING SCHEDULE PRIOR TO COMMENCEMENT OF ANY WORK. ALL PHASED SECTIONS OF WORK SHALL COMPLY WITH THE OWNERS SCHEDULE AND BE TESTED, INSPECTED READY FOR OPERATION IN ACCORDANCE WITH NFPA, OWNERS INSURANCE COMPANY AND AHJ REQUIREMENTS.

THE CONTRACTOR SHALL PROVIDE COMPLETE SIGNED AND SEALED (BY LICENSED P.E.) DRAWINGS INDICATING ALL PIPES AND SPRINKLER HEADS. CONTRACTOR SHALL SECURE AND PAY COSTS OF PERMITS, CERTIFICATES, LICENSES, INSPECTIONS AND APPROVALS.

INSTALL SPRINKLERS BELOW DUCTS, AND OR COMBINATIONS OF DUCTS EQUIPMENT IN ACCORDANCE WITH THE OBSTRUCTION REQUIREMENTS OF NFPA 13

PROVIDE SPRINKLER PROTECTION IN ORDER TO AVOID ALL OBSTRUCTIONS IN ACCORDANCE WITH NFPA 13, INCLUDING LIGHTING, CEILING FIXTURES, STRUCTURAL MEMBERS, ETC. WITHIN ALL HAZARD OCCUPANCIES.

ALL DRAIN PIPING AND ANY PIPING SUBJECT TO ALTERNATE WETTING AND DRYING SHALL BE GALVANIZED.

ALL SYSTEM COMPONENTS SHALL BE CAPABLE OF WITHSTANDING A MINIMUM WORKING
PRESSURE OF 175 PSI.

THE CONTRACTOR SHALL SEAL AROUND ALL NEW PENETRATIONS THROUGHOUT THE BUILDING WITH SEALANT OF FIRE AND/OR SMOKE RETARDANT TYPE EQUAL IN FIRE RATING TO THE STRUCTURE BEING PENETRATED. SEALANT SHALL BE A U.L. LISTED ASSEMBLY.

WORK OF THIS SECTION SHALL BE GOVERNED BY THE CONTRACT DOCUMENTS. PROVIDE MATERIALS, LABOR, EQUIPMENT AND SERVICES NECESSARY TO FURNISH, DELIVER AND INSTALL ALL WORK AS SPECIFIED AND AS REQUIRED BY JOB CONDITIONS. WHERE A CONFLICT EXISTS BETWEEN THESE NOTES, THE DRAWINGS AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

PERFORM THE WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT GENERAL CONDITIONS AND WITH THE PROVISIONS OF ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES AND LAWS.

WORK SHALL INCLUDE ALL INCIDENTALS, LABOR, MATERIAL EQUIPMENT, APPLIANCES, SERVICES, HOISTING, SCAFFOLDING, SUPPORTS, TOOLS, CONSUMABLE ITEMS, FEES, LICENSES, AND ADMINISTRATIVE TASKS REQUIRED TO COMPLETE AND FULLY OPERABLE WORK SHOWN ON THE DRAWINGS, SPECIFIED HEREIN AND AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.

STORE MATERIALS INDOOR AND PROTECTED FROM DEBRIS, WEATHER AND MOISTURE

THIS CONTRACTOR SHALL PROVIDE AND INSTALL ALL POWER AND CONTROL WIRING REQUIRED FOR EQUIPMENT OPERATION NOT SPECIFICALLY PROVIDED BY OTHERS BUT REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. THE CONTRACTOR SHALL PROVIDE MOTOR STARTERS FOR INSTALLATION BY OTHERS. COORDINATE REQUIREMENTS.

ALTERATION WORK AND DEMOLITION.

EXISTING PIPING AND SPRINKLERS SHOWN DO NOT NECESSARILY REFLECT EXACT FIELD CONDITIONS. FIELD VERIFY EXTENT AND LOCATION OF WORK TO BE REMOVED.

ALL EQUIPMENT, PIPING ETC. TO BE REMOVED, SHALL BE DISPOSED OF, TURNED OVER TO THE OWNER OR SALVAGED AS DIRECTED BY THE OWNER. EQUIPMENT, PIPING, DEVICES, ETC. SHALL NOT BE REMOVED FROM THE PREMISES WITHOUT THE OWNERS APPROVAL.

NO EXISTING PIPE MAY BE CUT OR DAMAGED WHEN ENCOUNTERED ALONG THE ROUTE DESIGNED FOR NEW SERVICE. ANY EXISTING PIPE DAMAGED OR DAMAGED SHALL BE REPLACED INCLUDING DAMAGED HEADS. ANY UNUSED OUTLETS SHALL BE PROPERLY CAPPED.

UPON COMPLETION OF REMOVALS AND MODIFICATIONS, ALL PIPING TO REMAIN SHALL BE PROPERLY PLUGGED, VALVED, CAPPED AND OR BY PASSED SUCH THAT UPON COMPLETION OF WORK ALL SYSTEMS TO REMAIN, REMAIN OPERATIONAL.

REMOVE & REPLACE ANY EXISTING SPRINKLER PIPING WHICH DOES NOT PASS THE REQUIRED HYDROSTATIC PRESSURE TESTS. CONDUCT VISUAL INTERNAL INSPECTIONS ON AT LEAST 5% OF ANY EXISTING PIPING TO REMAIN.
NO DEAD ENDS SHALL BE LEFT ON ANY PIPING SYSTEMS UPON COMPLETION OF WORK.

EXISTING EXPOSED PIPING SYSTEMS NOT TO BE REUSED, AND NOT SPECIFICALLY NOTED FOR REMOVAL SHALL BE COMPLETELY REMOVED.

ALL SYSTEMS SHALL BE LEFT IN WORKING ORDER TO THE SATISFACTION OF THE OWNER UPON COMPLETION OF ALL WORK.

ALL EXISTING EXPOSED, UNNECESSARY PIPING RELATED TO NEW WORK SHALL BE COMPLETELY REMOVED.

REMOVE OR REMOVE ALL EXISTING PIPING AND SYSTEMS WHERE NECESSARY TO AVOID NEW EQUIPMENT, STRUCTURAL OR MASONRY WORK AS REQUIRED BY THE PROPOSED ALTERATIONS

COORDINATION DRAWINGS

DEVELOP AND SUBMIT COORDINATION DRAWINGS AS OUTLINED:

SHEET METAL, PLUMBING AND FIRE PROTECTION SHOP DRAWINGS THAT HAVE BEEN COORDINATED WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW. DRAWINGS MUST BE RETURNED FROM ENGINEER EITHER REVIEWED OR FURNISH AS CORRECT TO PRIOR TO BEING USED AS BASIS FOR COORDINATION DRAWINGS.

AFTER SHEET METAL AND PIPING DRAWINGS HAVE BEEN REVIEWED FOR ENGINEERS COMMENTS, REPRODUCIBLE COPIES SHALL BE SENT TO THE TRADES IN THE FOLLOWING SEQUENCE FOR THE INCLUSION OF THEIR WORK:

1. MECHANICAL, SHEET METAL
2. PLUMBING PIPING
3. MECHANICAL PIPING
4. SPRINKLER PIPING
5. ELECTRICAL WORK

AFTER ALL TRADES HAVE INCLUDED THEIR WORK ON THE COORDINATION DRAWING AND NOTED CONFLICTS, ALL TRADES SHALL MEET TO RESOLVE CONFLICTS AND AGREE TO ACCEPTABLE SOLUTIONS. EACH TRADE SHALL SIGN COORDINATION DRAWINGS. ITEMS NOT SHOWN ON COORDINATION DRAWINGS IS RESPONSIBILITY OF SHIFTING CONTRACTOR AND CONTRACTOR IS SUBJECT TO ADDITIONAL COSTS INCURRED BY OTHER TRADES.

THE ARCHITECT AND ENGINEER ARE NOT PART OF THE COORDINATION DRAWING PROCESS. THE ENGINEER WILL PROVIDE ASSISTANCE FOR NOTED CONFLICTS ONLY. COORDINATION DRAWINGS ARE NOT TO BE CONSIDERED PIPING OR DUCT SHOP DRAWINGS. THE CONTRACTOR IS REQUIRED TO SUBMIT INDIVIDUAL PIPING AND DUCTWORK SHOP DRAWINGS FOR REVIEW BY THE ENGINEER. PIPING AND DUCTWORK SHOP DRAWINGS SHALL FOLLOW THE DESIGN INTENT OF THE CONTRACT DOCUMENTS.

SUBMIT FINAL SIGNED COORDINATION DRAWING TO ENGINEER FOR REVIEW. ENGINEER WILL REVIEW COORDINATION DRAWINGS FOR GENERAL ARRANGEMENT AND FOR NOTED CONFLICTS ONLY. SPECIFIC INSTALLATION REQUIREMENTS WILL BE REVIEWED ONLY IN INDIVIDUAL TRADE SHOP DRAWINGS.

WHERE CONFLICTS OCCUR BETWEEN DRAWINGS AND SPECIFICATIONS, OR WITHIN EITHER DOCUMENT, THE CONTRACTOR SHALL ASK FOR AND OBTAIN A WRITTEN CLARIFICATION FROM THE ENGINEER PRIOR TO SUBMITTING HIS BID. OTHERWISE, THE ITEMS OR ARRANGEMENTS OF SUPERIOR QUALITY, GREATER QUANTITY OR HIGHER COST SHALL PREVAIL AND BE INCLUDED IN THE CONTRACT PRICE.

ANY WORK FABRICATED OR INSTALLED PRIOR TO SIGN OFF BY ALL TRADES WHICH IS DEEMED TO BE IN CONFLICT WITH COORDINATION DRAWINGS SHALL BE REMOVED AND REINSTALLED IN CONFORMANCE WITH COORDINATION DRAWINGS.

EACH CONTRACTOR (MENTIONED ABOVE) IS RESPONSIBLE FOR THE COORDINATION OF HIS SUB-CONTRACTORS.

THE OVERALL COORDINATION OF THE COORDINATION PROCESS IS THE RESPONSIBILITY OF THE CONTRACTOR. THE ENGINEER IS NOT RESPONSIBLE FOR THE COORDINATION PROCESS. THE ENGINEER WILL RESPOND TO QUESTIONS THAT ARISE FROM THE COORDINATION PROCESS. DRAWINGS SUBMITTED WILL BE REVIEWED FOR CLEARLY IDENTIFIED CONFLICTS ONLY. SOLUTIONS TO CONFLICTS WILL NOT BEAR ADDITIONAL COST.

AS-BUILT DRAWINGS

PROVIDE A COMPLETE SET OF AS-BUILT DRAWINGS REFLECTING AS INSTALLED CONDITIONS. AS-BUILT DRAWINGS SHALL INDICATE ALL INSTALLED CONDITIONS OF SYSTEMS WITHIN THIS DISCIPLINE. DRAWINGS SHALL BE OF SIMILAR SCALE AS THE CONSTRUCTION DOCUMENTS AND INCLUDE DETAILS AS NECESSARY TO CLEARLY REFLECT THE INSTALLED CONDITION. DRAWINGS SHALL BE BOUND IN A COMPLETE AND CONSECUTIVE SET. SUPPLEMENTAL SKETCHES AND LOOSE PAPERWORK WILL NOT BE ACCEPTABLE AND WILL BE RETURNED FOR REVISION. THE CONTRACTOR SHALL COPY-IN THE ENGINEERS COMMENTS TO PRODUCE A CLEAR AND CONCISE SET OF DRAWINGS. DRAWINGS SHALL BE SUBMITTED IN BOTH HARD COPY AND ELECTRONIC (AUTO-CAD AND / VERSION AS REQUIRED BY THE OWNER) VERSION. NUMBER OF COPIES OF EACH AS REQUESTED BY THE OWNER.

INCLUDE ALL CHANGES OF ALL DEVIATIONS BETWEEN THE WORK INDICATED AND THE WORK INSTALLED INCLUDING APPROVED CONTRACT MODIFICATIONS AND SUBSTITUTIONS

INDICATE VALVES AND CONTROL DEVICES LOCATED AND NUMBERED COORDINATED WITH SUBMITTED VALVE CHARTS.
SUBMIT A COMPLETE MAINTENANCE MANUAL OF ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT.

PROVIDE AND INSTALL ACCESS DOORS FOR EACH VALVE, DRAIN, OR FIRE PROTECTION DEVICE REQUIRING ACCESS. ACCESS DOORS SHALL BE RIGID CONSTRUCTION WITH TWO HINGES AND A LATCH, IN FLUSH CEILINGS, PROVIDE FELT BETWEEN THE DOOR AND FRAME TO MAKE AN AIR TIGHT SEAL. ACCESS DOORS SHALL BE RATED TO THE SAME OR GREATER RATING OF THE PARTITION IN WHICH THEY ARE INSTALLED. ACCESS DOORS SHALL BE FLUSH MOUNTED, PRIME COATED WITH RUST INHIBITIVE PAINT, CONCEALED RAPID, FLUSH SCREW DRIVER OPERATED LOCKS WITH METAL CAMS AND ANCHORS AS REQUIRED.

ACCESS DOOR SIZES SHALL BE:
- 2' X 2' AT EASILY ACCESSIBLE ITEMS
- 18" X 18" WHERE PARTIAL BODY ACCESS IS REQUIRED
- 24" X 24" WHERE FULL BODY ACCESS IS REQUIRED

HOUSEKEEPING PADS

PROVIDE CONCRETE HOUSE-KEEPING PADS FOR FLOOR-MOUNTED EQUIPMENT. COORDINATE EXACT LOCATIONS, DIMENSIONS, PIPING LOCATIONS, AND ANCHOR BOLT REQUIREMENTS. PROVIDE CONCRETE HOUSEKEEPING PADS UNDER ALL FLOOR MOUNTED EQUIPMENT. PADS SHALL BE CONSTRUCTED OF 3,000 PSI CONCRETE. PADS SHALL BE 4 INCHES HIGH, AND 4 INCHES WIDER THAN THE EQUIPMENT IN BOTH DIRECTIONS.

HANGERS AND SUPPORT

SPRINKLER PIPING IN A SUBSTANTIAL MANNER FROM BUILDING STRUCTURE, AND INDEPENDENT OF THE CEILING SYSTEM. PROVIDE EARTHQUAKE SEISMIC BRACING
IN ACCORDANCE WITH NFPA 13 AND THE LOCAL CODE. DO NOT USE SPRINKLER PIPING OR HANGERS TO SUPPORT NON-SYSTEM COMPONENTS.

SEISMIC RESTRAINT. PROVIDE SEISMIC RESTRAINT AND EXPANSION OF ALL FIRE PROTECTION EQUIPMENT AND SYSTEMS IN ACCORDANCE WITH APPLICABLE NFPA STANDARDS, OWNERS INSURANCE COMPANY, STATE, FEDERAL AND LOCAL BUILDING CODE REQUIREMENTS. SUBMIT SHOP DRAWINGS SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT INDICATING ALL NECESSARY COMPONENT CUTS, PLAN LOCATIONS AND CALCULATIONS FOR COMPLETE SYSTEM.

PROVIDE ALL NECESSARY STRUCTURAL MEMBERS INCLUDING ADDITIONAL STRUCTURAL SUPPORT TO SUPPORT PIPING AND EQUIPMENT. HANGERS AND SUPPORTS SHALL BE OF AN APPROVED DESIGN NECESSARY TO SUPPORT PIPING, EQUIPMENT AND TO KEEP PIPING IN PROPER ALIGNMENT AND PREVENT TRANSMISSION OF INJURIOUS THRUSTS AND VIBRATIONS. IN ALL CASES WHERE HANGERS, BRACKETS, ETC. ARE SUPPORTED FROM CONCRETE CONSTRUCTION, DO NOT USHARGE CONCRETE OR PENETRATE WATERPROOFING. ALL HANGERS AND SUPPORTS SHALL BE CAPABLE OF SCREW ADJUSTMENT AFTER PIPING IS ERECTED. HANGERS SUPPORTING PIPING ENTERING INTO DOORS, BENDS AND OFFSETS SHALL BE SECURED TO THE BUILDING STRUCTURE IN SUCH A MANNER THAT HORIZONTAL ADJUSTMENT PERPENDICULAR TO THE RUN OF PIPING SUPPORTED MAY BE MADE TO ACCOMODATE DISPLACEMENT DUE TO EXPANSION. ALL SLOPE HANGERS SHALL BE FINALLY ADJUSTED BOTH IN THE VERTICAL AND HORIZONTAL DIRECTION, AS REQUIRED.

PROVIDE ADDITIONAL SUPPORT FOR PIPING AND EQUIPMENT WHEN DEEMED NOT CAPABLE OF SUPPORT.

BEAM CLAMPS - HANGERS SUPPORTED FROM STEEL, SHALL BE CENTER LOADING BEAM CLAMPS FOR HANGERS SUPPORTING PIPING 2-INCHES, FOR PIPING 2-1/2 INCHES AND LARGER I BEAM CLAMPS SHALL BE FORGED STEEL. C CLAMPS ARE PERMITTED ONLY WHEN PROVIDED WITH RESTRAINING STRAP. BAR JOIST HANGERS SHOULD BE UTILIZED WHEN HANGING FROM BAR JOIST CONSTRUCTION.

ALL HANGERS AND SUPPORTS SHALL BE HOT DIPPED GALVANIZED. ALL THREADED ROD AND HARDWARE SHALL BE HOT DIPPED GALVANIZED.

PROVIDE AND INSTALL EXPANSION COMPENSATION FOR ALL PIPING. SUBMIT PLANS, CALCULATIONS AND EQUIPMENT DATA

FIRE PROTECTION DESIGN CRITERIA

WORK STARTS AT AREAS INDICATED, INCLUDING BUT NOT LIMITED TO: REMOVAL OF EXISTING SPRINKLER PIPING, HEADS, HANGERS ETC. AND INSTALLATION OF NEW SPRINKLER HEADS, SPRINKLER PIPING, OFFSETS, ETC. AS NECESSARY TO PROVIDE COMPLETE SPRINKLER PROTECTION IN THE RENOVATED AREAS.

"THE DESIGN OF ALL FIRE SUPPRESSION SYSTEMS WILL BE IN ACCORDANCE WITH: "THE 2005 STATE OF CONNECTICUT BUILDING & FIRE CODE, LOCAL CODE AND "THE OWNERS INSURANCE COMPANY" FM GLOBAL REQUIREMENTS. USE ONLY UL/ FM APPROVED SPRINKLERS, MATERIALS AND DEVICES, UNO.

WORK SHALL ALSO INCLUDE PROVIDING PIPING, FITTINGS, ETC. AS NECESSARY TO SUPPLY EXISTING ADJUNCT SPRINKLERS OUTSIDE OF RENOVATED AREA

CONTRACTOR RESPONSIBLE FOR DOCUMENTING SIZE AND LENGTH OF EXISTING WATER SUPPLY INCLUDING SIZE OF ANY EXISTING PIPE ETC. AS NECESSARY IN ORDER TO SUBMIT A COMPLETE DESIGN.

"THE CONTRACTOR SHALL PROVIDE SPRINKLER COVERAGE OF ALL SPACES FORMED OF CONCEALED COMBUSTIBLE CONSTRUCTION.

"THE CONTRACTOR SHALL COMPLY WITH THE OWNERS INSURANCE INSTALLATION DETAILS, DESIGN CRITERIA, AND PLAN APPROVAL SUBMISSION (INCLUDING COMMENTS). ANY DEVIATIONS AS A RESULT OF THE OWNERS INSURANCE COMPANIES REQUIREMENTS SHALL BE PROVIDED AT NO ADDITIONAL COST.

USE OF LINE SPACING OFF WALL IN EXCESS OF 7-6", ETC (AS NOTED IN NFPA 13) IS NOT PERMITTED.

CONTRACTOR TO SUBMIT UNIT COST PER SPRINKLER HEAD INSTALLED AND OPERATIONAL WITH BID IN ACCORDANCE WITH THE GENERAL CONDITIONS (INCLUDING PIPING, FITTINGS, HANGERS, SPRINKLER HEAD, LABOR, ETC.)

PIPE SCHEDULE DESIGN CRITERIA

AS REQUIRED CONTRACTOR SHALL SUBMIT PLANS TO OWNERS INSURANCE COMPANY FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. REVIEW COMMENTS: COMPLY WITH ALL INSURANCE COMPANY REQUIREMENTS.

CONTRACTOR TO SUBMIT UNIT COST PER SPRINKLER HEAD INCLUDING PIPING, FITTINGS, HANGERS, SPRINKLER HEAD, LABOR, ETC.) INSTALLED AND OPERATIONAL WITH BID. IN ACCORDANCE WITH THE GENERAL CONDITIONS.

DESIGN CRITERIA FOR PIPE SCHEDULE SYSTEMS

LIGHT HAZARD AREAS:
OFFICES, HALLWAYS, LOBBY'S ETC. "MAXIMUM COVERAGE PER SPRINKLER HEAD IS 196 SQ.FT.

ORDINARY HAZARD (GROUP I) AREAS:
MECHANICAL ROOMS, ELECTRICAL ROOMS, ETC. MAXIMUM COVERAGE PER SPRINKLER HEAD IS 130 SQ.FT.

ORDINARY HAZARD (GROUP II) AREAS:
STORAGE ROOMS MAXIMUM COVERAGE PER SPRINKLER HEAD IS 130 SQ.FT.

"THE FM GLOBAL CUSTOMER SERVICES DESK AT 888-606-4572 SHOULD BE NOTIFIED WHEN ANY AUTOMATIC SPRINKLER CONTROL VALVES ENTER ANY MATTER WHAT "THE DURATION IS. "THE FM GLOBAL RED TAG PERMIT SYSTEM" SHOULD ALSO BE USED BY FIRE PROTECTION INSTALLATION PERSONNEL DURING ALL VALVE CLOSURES, WHO" MYAR EXISTING FIRE PROTECTION.

ALL DRAWINGS, SPECIFICATIONS, EQUIPMENT, ETC. SHALL BE SUBMITTED AND APPROVED BY THE CORRESPONDING FM GLOBAL DATA SHEETS REQUIREMENTS. PROVIDE CONCRETE HOUSEKEEPING PADS UNDER ALL FLOOR MOUNTED EQUIPMENT, PADS SHALL BE CONSTRUCTED OF 3,000 PSI CONCRETE. PADS SHALL BE 4 INCHES HIGH, AND 4 INCHES WIDER THAN THE EQUIPMENT IN BOTH DIRECTIONS. INCORPORATE ALL COMMENTS INTO PROJECT AT NO ADDITIONAL COST.

ALL FIRE PROTECTION EQUIPMENT SHALL BE FM APPROVED AND UL LISTED. EQUIPMENT SHALL CONFORM TO THE CORRESPONDING FM GLOBAL DATA SHEETS

FIRE PROTECTION SYMBOL LEGEND

SYMBOL	DESCRIPTION
	BALL VALVE
	CHECK VALVE
	GATE VALVE
	REDUCED PRESSURE BACKFLOW PREVENTER
	HYDRANT
	PRESSURE GUAGE
	ALARM BELL
	FIRE DEPARTMENT CONNECTION (FDC)
	REDUCED PRESSURE DETECTOR ASSEMBLY
	OSY VALVE
	POINT OF NEW CONNECTION
	POINT OF DISCONNECTION
AF	ANTIFREEZE CHARGING LOOP
SEJ	SEISMIC EXPANSION JOINT
	TEST AND DRAIN VALVE
	FLOW SWITCH
	PRESSURE SWITCH
TS	TAMPER SWITCH
	PIPE DOWN
	PIPE UP
	CAPPED PIPE
	PIPE OR EQUIPMENT TO BE DEMOLISHED

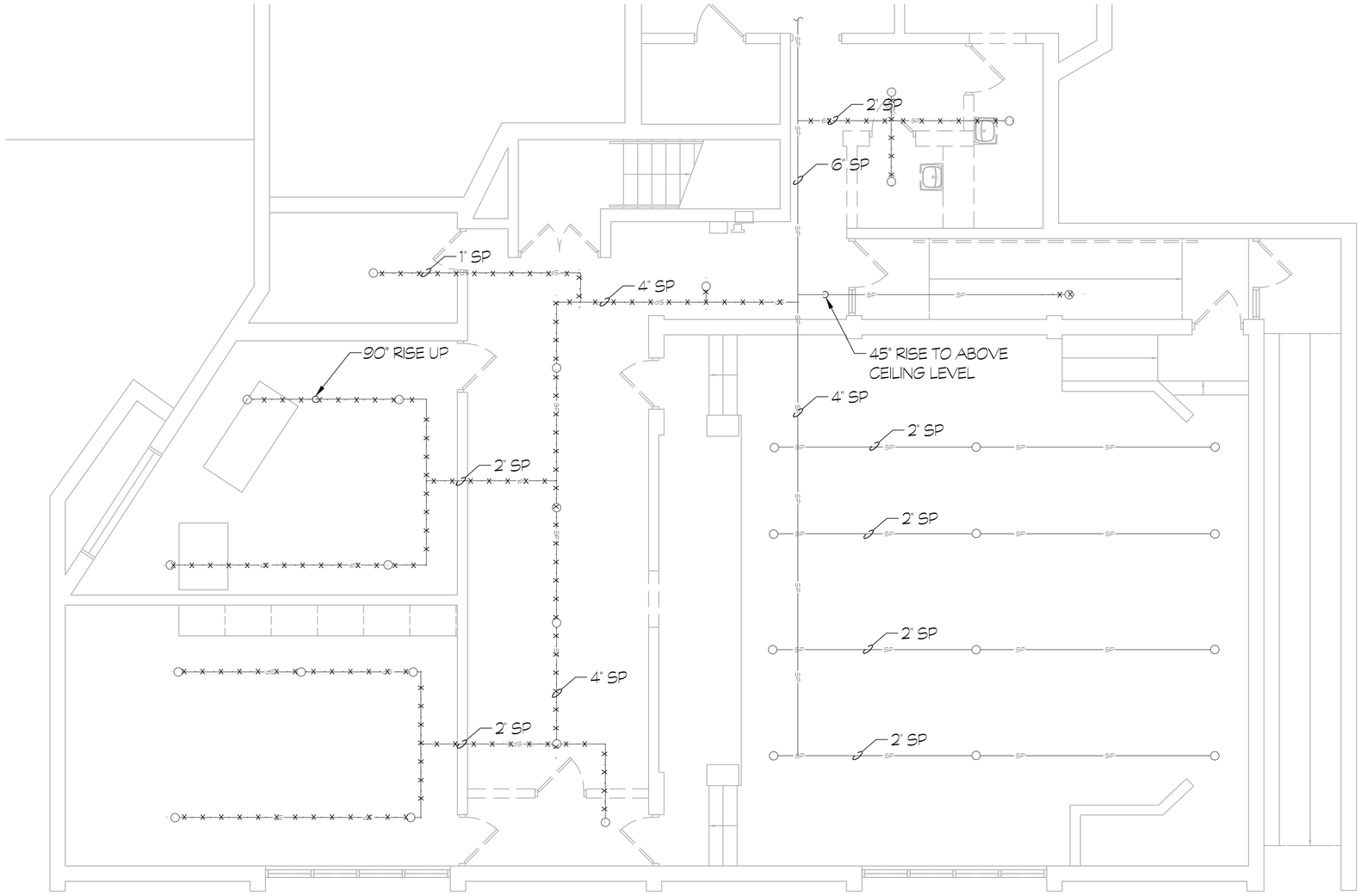
SPRINKLER SYMBOL LEGEND

EXISTING	NEW	DESCRIPTION
		UPRIGHT
		PENDENT
		PENDENT - SEMI RECESSED
		PENDENT - RECESSED
		PENDENT - CONCEALED
		DRY PENDENT
		DRY PENDENT - SEMI RECESSED
		DRY PENDENT - RECESSED
		DRY PENDENT - CONCEALED
		SIDEWALL
		SIDEWALL - RECESSED
		DRY SIDEWALL
		DRY SIDEWALL - RECESSED

NOTE SOME SYMBOLS AND ABBREVIATIONS SHOWN MAY NOT PERTAIN TO THIS PROJECT.

FIRE PROTECTION ABBREVIATIONS

ABBREVIATION	DESCRIPTION
ACV	ALARM CHECK VALVE
A.F.F.	ABOVE FINISHED FLOOR
A.F.G.	ABOVE FINISHED GRADE
B.F.F.	BELOW FINISHED FLOOR
BFP	BACKFLOW PREVENTER
BV	BUTTERFLY INDICATING VALVE
BLDG	BUILDING
C.E.	CIVIL ENGINEER
CONT.	CONTINUED
CV	CHECK VALVE
DIA	DIAMETER
DP	DROP TO BRANCH PIPE
DN	DOWN
DWG	DRAWING
EA	EACH
E.C.	ELECTRICAL CONTRACTOR
EX.	EXISTING
FCV	FLOOR CONTROL VALVE
FDV	FIRE DEPARTMENT VALVE
F.F.	FINISHED FLOOR
F.F.E.	FINISHED FLOOR ELEVATION
FLR.	FLOOR
F.P.C.	FIRE PROTECTION CONTRACTOR
FT	FEET
G.C.	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
MAX.	MAXIMU



DEMOLITION FLOOR PLAN

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

1 / FP101

GENERAL NOTES

1. CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL EXIST. CONDITIONS & DIMENSIONS PRIOR TO CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE TO REPAIR OR REPLACE ANY AREAS DAMAGED OUTSIDE THE SCOPE OF WORK RETURNING THEM TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE OWNER.
3. PATCH ALL EXISTING MATERIALS AFFECTED BY NEW CONSTRUCTION IN THIS PROJECT (MATCH EXISTING).
4. ALL MATERIALS/ EQUIPMENT/ FIXTURES ARE NEW UNLESS OTHERWISE NOTED AS 'EXISTING'.
5. REMOVE ALL DEMOLISHED MATERIALS FROM SITE. LEAVE SITE CLEAN OF ALL CONSTRUCTION DUST & DEBRIS AT THE END OF EACH DAY.
6. CONTRACTOR IS RESPONSIBLE FOR REMOVING, RELOCATING AND RECONNECTING ANY AND ALL MEP/FP DEVICES, CONDUIT, SECURITY AND/OR WIRING AFFECTED BY THE SCOPE OF WORK PRIOR TO DEMOLITION AND UPON COMPLETION OF CONSTRUCTION. CONTRACTOR TO VERIFY ALL ASSOCIATED COMPONENTS AFFECTED W/ ARCH & OWNER.
7. CONTRACTOR IS RESPONSIBLE TO SURVEY AND DOCUMENT ALL AREAS OF SCOPE PRIOR TO BID. CONTRACTOR IS RESPONSIBLE TO CARRY ALL TRADES IN BID REQUIRED TO REMOVE/ REINSTALL ALL CONDITIONS AFFECTED BY SCOPE OF WORK.
8. ANY DEMOLITION/CONSTRUCTION ACTIVITY WHICH WOULD IMPACT HAZARDOUS OR TOXIC MATERIALS MUST BE CONDUCTED WITH COMPLIANCE & CODE REQUIREMENTS.
9. CONTRACTOR TO COORDINATE ANY TEMPORARY SHUT-OFFS OR INTERRUPTIONS WITH EXISTING SERVICES PRIOR TO CONSTRUCTION.

FIRE PROTECTION DEMOLITION NOTES

① NOTIFY PROPER AUTHORITIES (INCLUDING BUT NOT LIMITED TO: THE LOCAL A.H.J., INSURANCE COMPANY, ETC.) OF ANY FIRE PROTECTION 'SHUT DOWNS'. SCHEDULE ALL WORK TO MINIMIZE THE LENGTH OF TIME THAT THE FIRE PROTECTION SYSTEM(S) WILL BE OUT OF SERVICE. RETURN THE SPRINKLER SYSTEM BACK IN SERVICE AT THE END OF EACH WORKING DAY.

② THE SPRINKLER CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL EXISTING SPRINKLER PIPING, HANGERS, HEADS, ETC. AS INDICATED (VERIFY IN FIELD). CAP ANY UNUSED OUTLETS.

③ THE CONTRACTOR SHALL PROPERLY CAP AND TERMINATE ANY UNUSED DRAIN AND FIRE PROTECTION WATER SUPPLIES (IN ACCORDANCE WITH LOCAL WATER AUTHORITY REQUIREMENTS).

④ EXISTING SPRINKLER PIPING RUNS EXPOSED AND BELOW CEILING GRID. ALL EXISTING SPRINKER HEADS ARE VERTICAL AND ABOVE THEIR RESPECTIVE BRANCH PIPE.

⑤ ALL EXISTING SPRINKLER PIPING AND HEADS ARE TO BE DEMOLISHED AND NOT REUSED. VERIFY LOCATION OF SPRINKLER PIPING AND HEADS BEFORE DEMOLISHING.

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

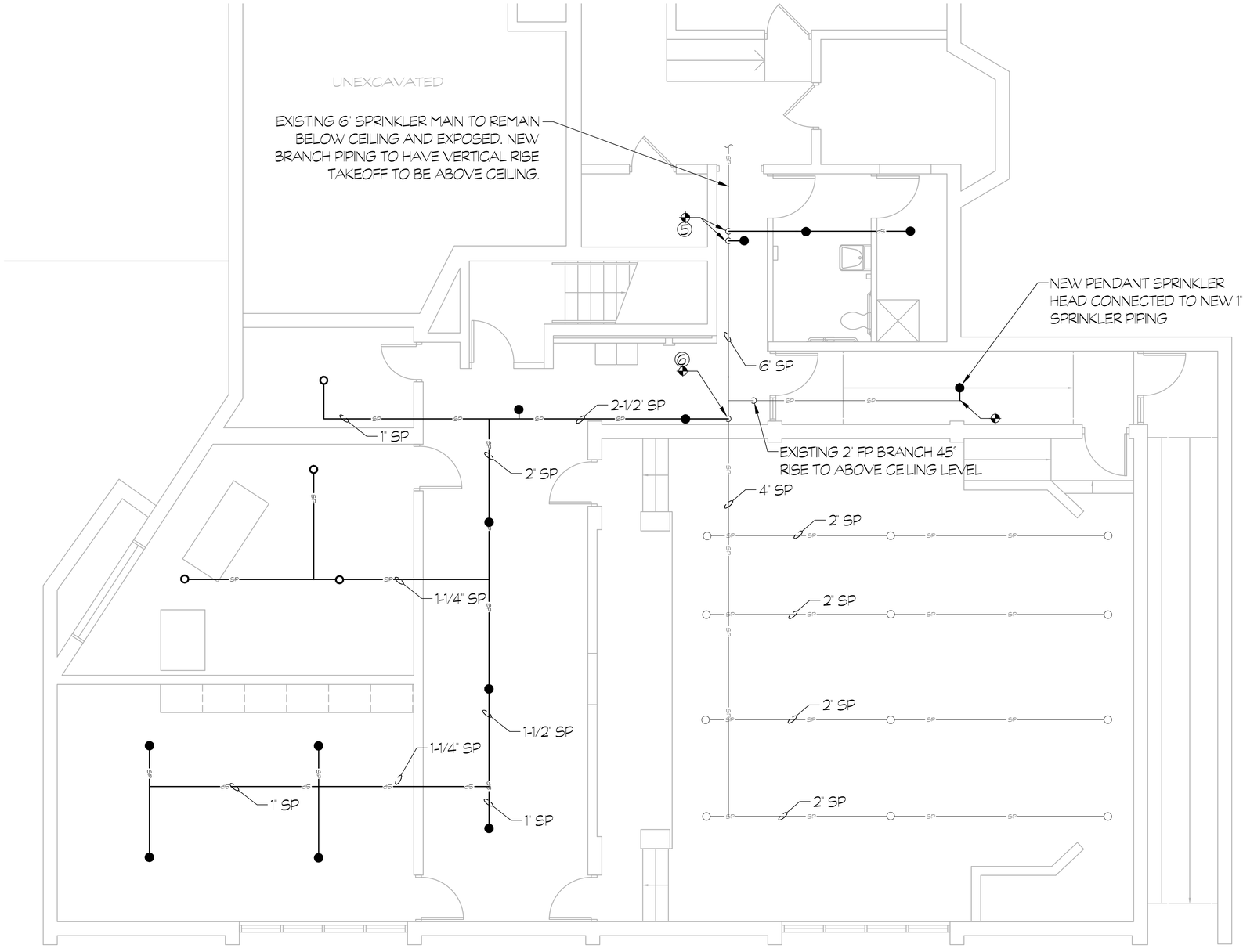
SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	*Description:*	*Date:*	*Revised By:*
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

Drawing Title:
FIRE PROTECTION
DEMO FLOOR PLAN

Date: August 24, 2021
Scale: AS NOTED
Drawn By: C.B.
Project Number: 20.120

Drawing Number:
FP101



NEW FLOOR PLAN

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

1 / FP102

GENERAL NOTES

1. CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL EXIST. CONDITIONS & DIMENSIONS PRIOR TO CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE TO REPAIR OR REPLACE ANY AREAS DAMAGED OUTSIDE THE SCOPE OF WORK RETURNING THEM TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE OWNER.
3. PATCH ALL EXISTING MATERIALS AFFECTED BY NEW CONSTRUCTION IN THIS PROJECT (MATCH EXISTING).
4. ALL MATERIALS/ EQUIPMENT/ FIXTURES ARE NEW UNLESS OTHERWISE NOTED AS 'EXISTING'.
5. REMOVE ALL DEMOLISHED MATERIALS FROM SITE. LEAVE SITE CLEAN OF ALL CONSTRUCTION DUST & DEBRIS AT THE END OF EACH DAY.
6. CONTRACTOR IS RESPONSIBLE FOR REMOVING, RELOCATING AND RECONNECTING ANY AND ALL MEP/FP DEVICES, CONDUIT, SECURITY AND/OR WIRING AFFECTED BY THE SCOPE OF WORK PRIOR TO DEMOLITION AND UPON COMPLETION OF CONSTRUCTION. CONTRACTOR TO VERIFY ALL ASSOCIATED COMPONENTS AFFECTED W/ ARCH & OWNER.
7. CONTRACTOR IS RESPONSIBLE TO SURVEY AND DOCUMENT ALL AREAS OF SCOPE PRIOR TO BID. CONTRACTOR IS RESPONSIBLE TO CARRY ALL TRADES IN BID REQUIRED TO REMOVE/ REINSTALL ALL CONDITIONS AFFECTED BY SCOPE OF WORK.
8. ANY DEMOLITION/CONSTRUCTION ACTIVITY WHICH WOULD IMPACT HAZARDOUS OR TOXIC MATERIALS MUST BE CONDUCTED WITHIN COMPLIANCE & CODE REQUIREMENTS.
9. CONTRACTOR TO COORDINATE ANY TEMPORARY SHUT-OFFS OR INTERRUPTIONS WITH EXISTING SERVICES PRIOR TO CONSTRUCTION.

FIRE PROTECTION NEW WORK NOTES

① NOTIFY PROPER AUTHORITIES (INCLUDING BUT NOT LIMITED TO: THE LOCAL A.H.J., INSURANCE COMPANY, ETC.) OF ANY FIRE PROTECTION 'SHUT DOWNS'. SCHEDULE ALL WORK TO MINIMIZE THE LENGTH OF TIME THAT THE FIRE PROTECTION SYSTEM(S) WILL BE OUT OF SERVICE. RETURN THE SPRINKLER SYSTEM BACK IN SERVICE AT THE END OF EACH WORKING DAY.

② ALL NEW SPRINKLER PIPING TO BE RUN ABOVE CEILING AND TIGHT TO STRUCTURAL BEAMS. PENDENT SPRINKLER HEADS TO BE LOCATED IN CENTER OF DROPPED CEILING TILES.

③ VERIFY LOCATION OF CONNECTION(S) TO EXISTING SPRINKLER PIPING BEFORE BEGINNING NEW WORK.

④ DESIGN OF SPRINKLER SYSTEM IS BASED ON THE SCHEDULED SPRINKLER HEADS. IF THE CONTRACTOR IS DIRECTED TO USE A DIFFERENT FIXTURE THEY MUST CONTACT THE ENGINEER TO CONFIRM THAT THE FIXTURE IS SUITABLE FOR THE SYSTEM DESIGN IN THE CONSTRUCTION DOCUMENTS.

⑤ 1" SPRINKLER BRANCH WITH VERTICAL CONNECTION TO EXISTING 6" SPRINKLER MAIN. PIPING TO RISE UP AND BE RUN TIGHT TO STRUCTURE.

⑥ 2-1/2" SPRINKLER BRANCH WITH VERTICAL CONNECTION TO EXISTING 6" SPRINKLER MAIN. PIPING TO RISE UP AND BE RUN TIGHT TO STRUCTURE.

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	*Description:*	*Date:*	*Revised By:*
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

Drawing Title:
FIRE PROTECTION NEW FLOOR PLAN

Date: August 24, 2021
Scale: AS NOTED
Drawn By: C.B.
Project Number: 20.120

Drawing Number: FP102

SPRINKLER HEAD SCHEDULE

TYPE	STYLE	RESPONSE	COVERAGE	COLOR	DISCHARGE COEFFICIENT (K)	ORIFICE	TEMP.	MANUFACTURE		REMARKS
								MODEL	SIN	
PENDENT	CONCEALED	QUICK	STANDARD	WHITE	5.6K	1/2	155°F	VICTAULIC V.38	V3802	--
PENDENT	EXPOSED	QUICK	STANDARD	BRASS	5.6K	1/2	155°F	VICTAULIC V27	V2708	--
UPRIGHT	EXPOSED	QUICK	STANDARD	BRASS	5.6K	1/2	155°	VICTAULIC V27	V2704	--

NOTES:
1. FINAL COLORS TO BE SELECTED BY ARCHITECT.

2. IN AREAS WITH FINISHED CEILINGS CONCEALED, PENDENT SPRINKLER HEADS AND CONCEALED PIPING SHALL BE UTILIZED, UNLESS OTHERWISE INDICATED ON PLANS

3. IN AREAS WITHOUT CEILINGS, EXPOSED UPRIGHT SPRINKLER HEADS AND EXPOSED PIPING SHALL BE UTILIZED. UL LISTED HEAD GUARDS SHALL BE PROVIDED IN AREAS SUBJECT TO DAMAGE (I.E. MECHANICAL ROOMS, GYMS, ETC..)

4. FLEXIBLE SPRINKLER HEADS ASSEMBLIES SHALL BE 6' IN LENGTH, UL LISTED AND HAVE A STAINLESS STEEL BRAID SIMILAR TO VICTAULIC VICFLEX 4QS BRAIDED SERIES. FLEXIBLE SPRINKLER ASSEMBLIES EQUIVALENT LENGTH MUST BE TAKING IN ACCOUNT WHEN PRODUCING HYDRAULIC CALCULATIONS.

PIPE AND FITTING SCHEDULE

DESCRIPTION	SIZE	PIPE		FITTING		REMARKS
		TYPE	SCHEDULE	TYPE	RATING	
WET SPRINKLER PIPING	2" AND SMALLER	STL-BLK	40	MIT	STD	--
WET SPRINKLER PIPING	2-1/2" AND LARGER	STL-BLK	10	GRV	STD	--
DRAIN PIPING	ALL	GALV.	40	MIT/GRV	STD	ALL FITTINGS MUST BE GALVANIZED

NOTES:
1. ALL PIPE ON THE SUCTION SIDE OF THE FIRE PUMP SHALL BE FLANGED TYPE CONNECTIONS AND FITTINGS.

2. ALL EXPOSED PIPING AND FITTINGS WITHIN FINISHED AREAS SHALL BE CUSTOM PAINTED IN ACCORDANCE WITH NFPA, OWNERS PAINTING REQUIREMENTS AND COORDINATED WITH ARCHITECT.

3. ALL PIPING IN RETURN AIR CEILING PLENUM INSTALLATIONS SHALL BE UL LISTED FOR THIS APPLICATION.

ABBREVIATIONS	DESCRIPTION	ABBREVIATIONS	DESCRIPTION
CI	CAST IRON	GRV	GROOVED JOINT SYSTEM FITTINGS/COUPLINGS
DIPJ	DUCTILE IRON MECHANICAL JOINT	STL-BLK	BLACK STEEL
STD	STANDARD	MIT	MALLEABLE IRON THREADED

VALVE SCHEDULE

DESCRIPTION	SIZE	TYPE				CLASS	REMARKS
		OSEY	BUTTERFLY	CHECK	BALL		
WET SPRINKLER PIPING	2" AND SMALLER	OSEYT	BFVT	CVT	BVT	175PSI	--
WET SPRINKLER PIPING	2-1/2" AND LARGER	OSEYS	BFVS	CVS	BVS	175PSI	--
DRAIN PIPING	ALL	--	--	--	BVT	175PSI	--

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
BVF	BALL VALVE FLANGED - FULL PORT, BRONZE	CVF	CHECK VALVE FLANGED
BVG	BALL VALVE GROOVED - FULL PORT, BRONZE	CVG	CHECK VALVE GROOVED
BVT	BALL VALVE THREADED - 2-PIECE, FULL PORT, 400PSI, BRONZE	CVT	CHECK VALVE THREADED - BRONZE
BFVF	BUTTERFLY VALVE FLANGED	OSEYF	OSEY RAISING STEM VALVE FLANGED
BFVG	BUTTERFLY VALVE GROOVED	OSEYG	OSEY RAISING STEM VALVE GROOVED
BFVT	BUTTERFLY VALVE THREADED	OSEYT	OSEY RAISING STEM VALVE THREADED

FIRE PROTECTION SPECIFICATIONS

A. MATERIALS (UL/FM APPROVED)

INTERIOR PIPING

1. STANDARD WEIGHT BLACK STEEL, SEAMLESS (SCHEDULE 40) EXCEPT AS NOTED FOR SIZES 1" AND LARGER.
2. SCHEDULE 10 BLACK STEEL, SEAMLESS PIPE MAY BE USED FOR SIZES 2" AND LARGER.
3. GALVANIZED PIPE FOR ALL DRAIN PIPING, TEST PIPING, PIPING BETWEEN FIRE DEPARTMENT CONNECTION AND CHECK VALVE AND FOR ALL DRY & DELUGE PIPING.

FITTINGS

1. CAST IRON THREADED, STANDARD WEIGHT, ANSI B-16.4.
2. CAST IRON FLANGED, STANDARD WEIGHT, ANSI B-16.1.
3. MALLEABLE IRON THREADED, STANDARD WEIGHT, ANSI B-16.3.
4. GROOVED END AND MECHANICAL TYPE. MALLEABLE IRON, WITH RUBBER SEALING GASKETS, SIMILAR TO VICTAULIC CO.

SLEEVES

1. STANDARD WEIGHT GALVANIZED SCHEDULE 40, PACKED WITH FIRE AND SMOKE RESISTIVE MATERIAL IN ACCORDANCE WITH NFPA 13.
2. ALL FIRESTOPPING MATERIAL SHOULD BE FM APPROVED AND INSTALLED WITH THE MANUFACTURE GUIDELINES AND THE APPROVAL GUIDE, A PUBLICATIONS OF FM APPROVALS

VALVES

1. GROOVED BUTTERFLY TYPE CONTROL VALVES WITH BUILT-IN TAMPER SWITCHES, SIMILAR TO NIBCO GD1765-8.
2. OSEY GATE CONTROL VALVES, RESILIENT WEDGE TYPE WITH TAMPER SWITCH SIMILAR TO NIBCO F-607-OTS.
3. CHECK VALVES, GROOVED END SWING CHECK WITH SPRING-LOADED CLAPPER ASSEMBLY SIMILAR TO CENTRAL MODEL 9C.
4. DRAIN AND TEST VALVES SHALL BE THREADED BRONZE ANGLE OR GLOBE TYPE WITH COMPOSITION DISC, 300 PSI WITH 1/2 300 PSI WATER PRESSURE GAUGE SIMILAR TO "ASP TEST AND DRAIN."

B. SPRINKLER HEADS

1. ALL SPRINKLER HEADS SHALL BE QUICK RESPONSE TYPE, CAST BRASS, CLOSED, FUSIBLE LINK, SPRAY TYPE WITH 1/2" DISCHARGE ORIFICE. SPRINKLERS SHALL BE ORDINARY TEMPERATURE RATING, HIGHER TEMPERATURE HEADS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 13.
2. ON EXPOSED PIPING: EXPOSED UPRIGHT OR PENDENT TYPE, VICTAULIC MODEL V27, HORIZONTAL SIDEWALL TYPE, VICTAULIC MODEL V27
3. ON CONCEALED PIPING: CONCEALED TYPE, VICTAULIC MODEL, V.38 ADJUSTABLE CONCEALED PENDENT HORIZONTAL RECESSED SIDEWALL TYPE, VICTAULIC MODEL V27. REFER TO SCHEDULES.
4. INCLUDE SPARE SPRINKLER HEAD CABINET WITH SPRINKLER HEAD WRENCH(S). INSTALL HEAD GUARDS ON ALL EXPOSED SPRINKLERS SUBJECT TO MECHANICAL INJURY.
5. ON EXPOSED PIPING: EXPOSED HORIZONTAL SIDEWALL TYPE, VICTAULIC, MODEL V27 STANDARD COMMERCIAL QUICK RESPONSE.

VALVE TAGS AND CHARTS

1. 1 1/2 ROUND BRASS WITH STAMPED TEXT ON ALL VALVES AND CONTROLS.
2. PROVIDE DIAGRAMMATIC CHART LISTING ESSENTIAL FEATURES OF THE SYSTEM.

PIPING SUPPORT

1. IN ACCORDANCE WITH NFPA 13, PROVIDE EARTHQUAKE BRACING IN ADDITION TO CONVENTIONAL HANGER ASSEMBLIES.
2. TOP BEAM CLAMPS, SIMILAR TO TOLCO FIG. 65.
3. HANGER RODS, CARBON STEEL, SIMILAR TO TOLCO FIG. 99, SIZED IN ACCORDANCE WITH NFPA 13.
4. ADJUSTABLE HANGER RINGS, CARBON STEEL, WITH KNURLED SWIVEL NUT, SIMILAR TO TOLCO FIG.2.
5. ADJUSTABLE CLEVIS HANGER, CARBON STEEL WITH NUT ABOVE AND BELOW CLEVIS, SIMILAR TO TOLCO FIG. 1.
6. MAXIMUM LOADING INCLUDING PIPE CONTENTS EQUALS 75% OF RATED CAPACITY. ALL HANGER MATERIAL SHALL BE GALVANIZED.

D. ENECUTION

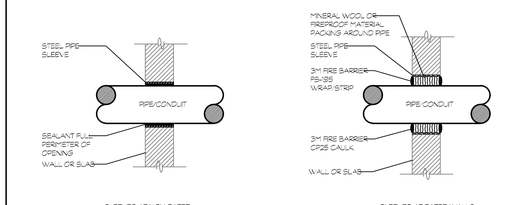
1. PROVIDE ADDITIONAL OFFSETS, FITTINGS, VALVES, DRAINS, ETC. WHERE REQUIRED BY COORDINATION AND CONSTRUCTION CONDITIONS.
2. NO CLOSE NIPPLES, BUSHINGS, OR STREET ELBOWS PERMITTED.
3. RUN PIPING PARALLEL WITH OR AT RIGHT ANGLES TO WALLS AND OTHER PIPING, NEATLY SPACED WITH PLUMB VERTICAL PIPING.
4. PROVIDE SPRINKLERS BELOW ALL EXPOSED DUCTS, COMBINATIONS OF DUCTS OR OTHER OBSTRUCTIONS EXCEEDING 4 FEET IN WIDTH.
5. NO FIELD WELDING PERMITTED. SHOP WELDING SHALL BE PERFORMED ONLY BY CERTIFIED WELDERS.
6. TEST ALL UNDERGROUND AND INTERIOR PIPING IN ACCORDANCE WITH NFPA 13.
7. INSTALL SPRINKLER HEADS IN CEILING AREAS, CENTER OF TILE. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF SPRINKLER HEADS. ARCHITECT TO DETERMINE FINISHES.
8. INSTALL SPRINKLERS THROUGHOUT ALL AREAS INCLUDING COMBUSTIBLE CONCEALED SPACES AND IN ACCORDANCE WITH OBSTRUCTION REQUIREMENTS SET FORTH IN NFPA 13.

ADDITIONAL FM GLOBAL REQUIREMENTS:

FINAL ACCEPTANCE OF THE SPRINKLER INSTALLATION WILL BE SUBJECT TO FINAL INSPECTION BY FM GLOBAL. COMPLETION OF FM GLOBAL FORM 85A. CONTRACTORS MATERIAL & TEST CERTIFICATE FOR ABOVE GROUND PIPING AND FM GLOBAL WITNESSING ALL SPRINKLER SYSTEM WATER FLOW TESTING. PLEASE NOTIFY FM GLOBAL AT LEAST TWO WEEKS IN ADVANCE OF ALARM TESTING FOR SCHEDULING PURPOSES.

FM GLOBAL CONTACT INFO

LOSS PREVENTION RESOURCES:
FM GLOBAL PROPERTY LOSS PREVENTION DATA SHEETS
(http://www.fmglobaldatasheets.com)
FM GLOBAL LOSS PREVENTION TRAINING (https://fmglobaltraining.gallbsm.com)
APPROVAL GUIDE (http://www.approvalguide.com)
ROOFNAV (http://roofnav.fmglobal.com)



SLEEVES AT NON-RATED WALLS

SLEEVES AT RATED WALLS

GENERAL NOTES:

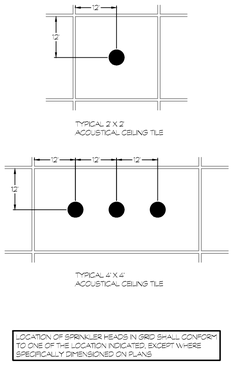
PROVIDE UL LISTED, FM APPROVED FIRE/SMOKE PENETRATION ASSEMBLIES IN ACCORDANCE WITH UL1479, ASTM E84 REQUIREMENTS FOR WALL TYPE, RATING AND PIPE SIZES.

FIRE STOPPING SHALL HAVE A RATING EQUAL TO OR GREATER THAN THE WALL BEING PENETRATED. REFER TO ARCHITECTURAL DRAWINGS FOR WALL RATINGS.

FOR WALL PENETRATIONS AT RATED WALLS SEE SPECIFICATION SECTIONS: SEALANTS AND "FIRESTOPPING"

PIPE PENETRATION DETAIL

NOT TO SCALE



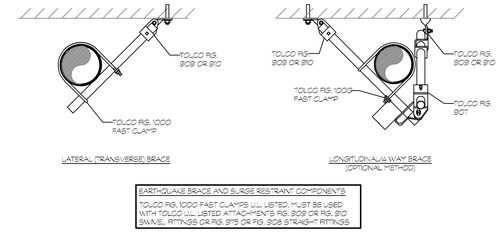
LOCATION OF SPRINKLER HEADS IN GRID SHALL CONFORM TO ONE OF THE LOCATION INDICATED, EXCEPT WHERE SPECIFICALLY DIMENSIONED ON PLANS

SUSPENDED CEILING SPRINKLER HEAD LOCATION DETAIL

NOT TO SCALE

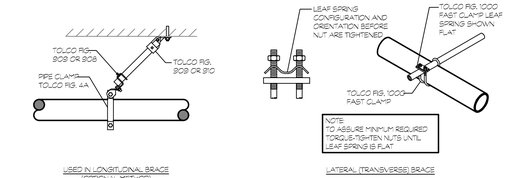
SEISMIC PIPING HANGER BRACING DETAIL

NOT TO SCALE



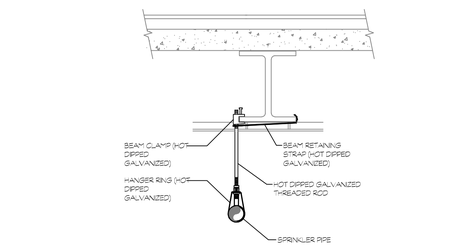
EARTHQUAKE BRACE AND SURGE RESTRAINT COMPONENTS

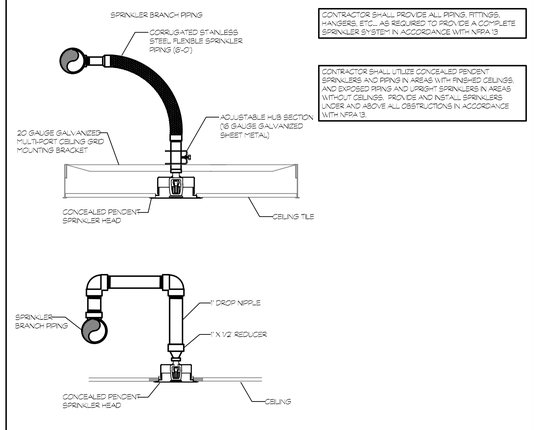
TOLCO FIG. 1000 FAST CLAMPS, U.L. LISTED, MUST BE USED WITH TOLCO U.L. LISTED ATTACHMENTS FIG. 909 OR FIG. 910 SWIVEL FITTINGS OR FIG. 975 OR FIG. 908 STRAIGHT FITTINGS



PIPE HANGER TO BEAM DETAIL

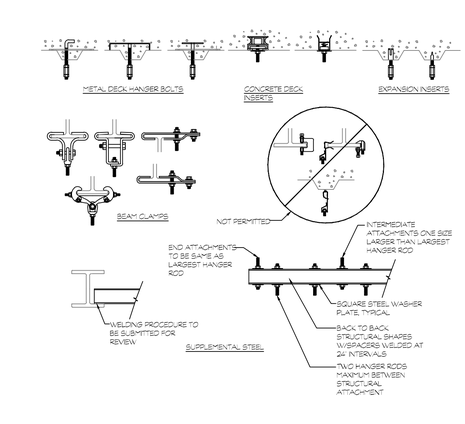
NOT TO SCALE





CONCEALED PENDENT SPRINKLER HEAD DETAILS

NOT TO SCALE



PIPE HANGER ATTACHMENT DETAIL

NOT TO SCALE

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

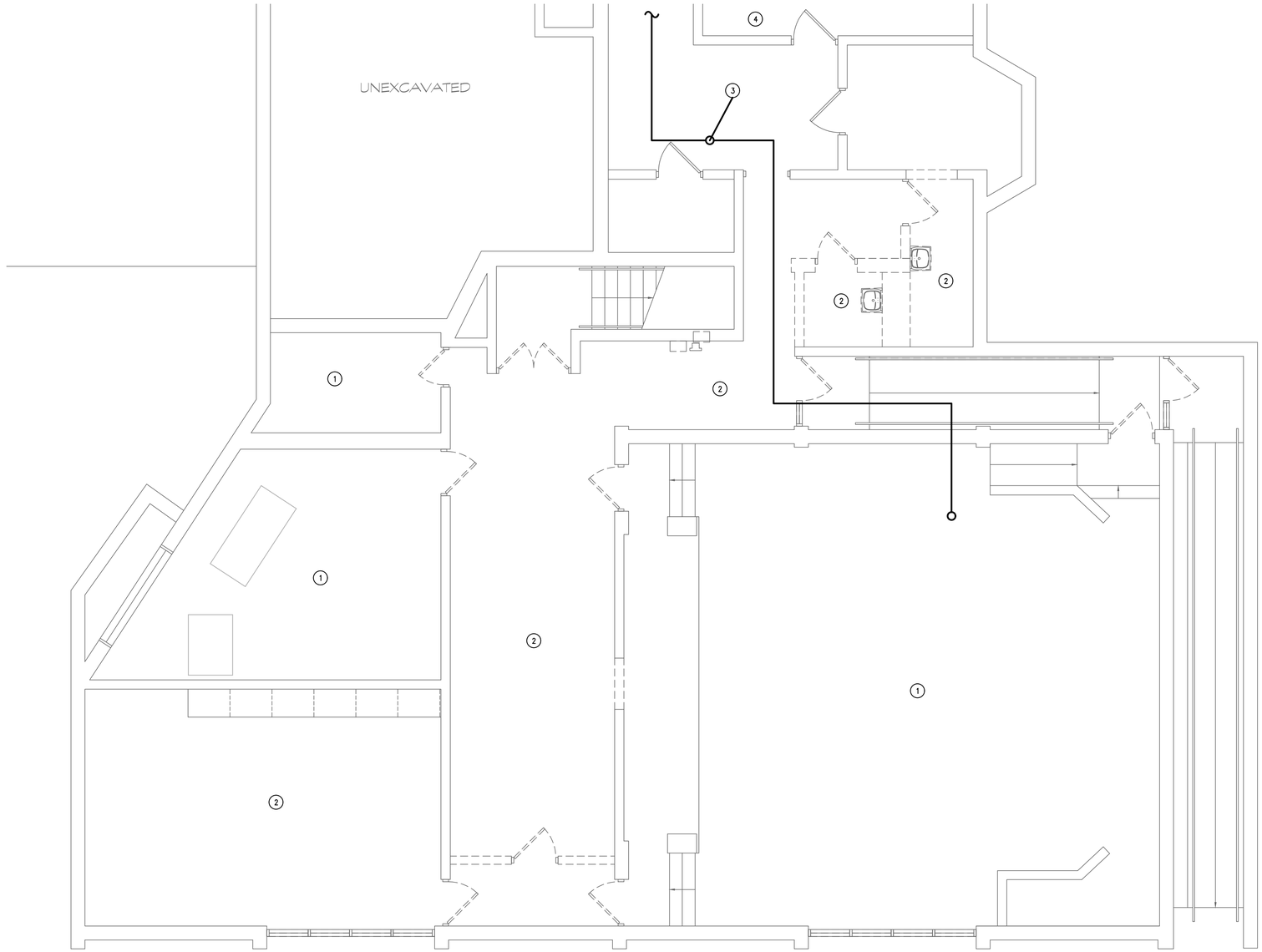
SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	Description:	Date:	Revised By:
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

Drawing Title:
FIRE PROTECTION SCHEDULES, DETAILS, & SPECS

Date: August 24, 2021
Scale: N.T.S
Drawn By: C.B.
Project Number: 20.120

Drawing Number:
FP201



1 BASEMENT ELECTRICAL DEMOLITION FLOOR PLAN
SCALE: 1/4" = 1'-0"

POWER PLAN KEY NOTES

1. REMOVE ALL EXISTING LIGHT FIXTURES AND ASSOCIATED WIRING IN THIS AREA. RETAIN LIGHTING BRANCH CIRCUIT FOR USE ON TEMPORARY LIGHTS. REMOVE ALL NM CABLE IN THE SPACE AND SEE LIGHTING PLAN FOR REWIRING OF TEMPORARY LIGHTS.
2. REMOVE ALL EXISTING LIGHT FIXTURES AND ASSOCIATED WIRING IN THIS AREA. RETAIN LIGHTING BRANCH CIRCUIT FOR USE ON NEW LIGHTS. REMOVE ALL NM CABLE AND TEMPORARY LIGHTING IN THE SPACE AND SEE LIGHTING PLAN FOR NEW FIXTURE LAYOUT.
3. APPROXIMATE ROUTE OF EXISTING MC CABLE BRANCH CIRCUITS FROM ELECTRICAL ROOM TO CURRENT COPY CENTER LOCATION. CUT BACK AND REWORK THESE FEEDS AS REQUIRED TO REROUTE TO NEW DEVICE LOCATIONS ON THIS FLOOR. REMOVE EXISTING DEVICES. PROVIDE PROPER SUPPORT FOR ALL CABLES. NEW ROUTING MUST BE OUTSIDE OF THE RATED STAIR ENCLOSURE.
4. APPROXIMATE LOCATION OF EXISTING IDF RACK SERVING CAT 5 CABLE FOR CURRENT COPY CENTER LOCATION. REMOVE THE ASSOCIATED CABLES AND DEVICES COMPLETELY. SEE POWER PLAN FOR NEW DEVICE AND CAT 6 CABLE LOCATIONS.

GENERAL DEMO NOTES

1. ELECTRICAL DEMOLITION TO BE SUPERVISED BY LICENSED ELECTRICAL CONTRACTOR. EACH CIRCUIT SHALL BE VERIFIED "COLD" & DISCONNECTED FROM ELECTRICAL SERVICE PRIOR TO COMMENCING REMOVAL.
2. REMOVE EXISTING ELECTRICAL EQUIPMENT & MATERIALS AS REQUIRED TO ACCOMODATE ARCHITECTURAL WORK AND AS SPECIFICALLY NOTED ON THE DEMOLITION DRAWINGS.
3. ALL MATERIALS BEING REMOVED SHALL BE HANDLED IN A MANNER COMPLYING WITH ALL PERTINENT LAWS, CODES AND ENVIRONMENTAL REGULATIONS.
4. WHERE ELECTRICAL EQUIPMENT & DEVICES ARE BEING REMOVED, COORDINATE AND FIELD VERIFY IF BRANCH CIRCUIT FEEDS THROUGH TO EQUIPMENT/DEVICES TO REMAIN. BRANCH CIRCUITS SHALL BE SPLICED OR RELOCATED TO MAINTAIN CONTINUATION OF SERVICES.
5. WHERE EXISTING DEVICES ARE REMOVED & NO NEW DEVICES ARE INSTALLED IN THE SAME LOCATION, REMOVE ALL WIRING FROM BOX & PROVIDE PROPERLY SIZED BLANK COVER PLATE.
6. ALL REMOVED COMPONENTS SHALL BE LEGALLY DISPOSED OF BY CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.
7. ELECTRICAL COMPONENTS SHOWN ON THE DEMOLITION DRAWINGS, AND THE ASSOCIATED CONDUIT, WIRE & BOXES ARE TO BE REMOVED AND DISPOSED OF UNLESS SPECIFICALLY NOTED OTHERWISE.

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

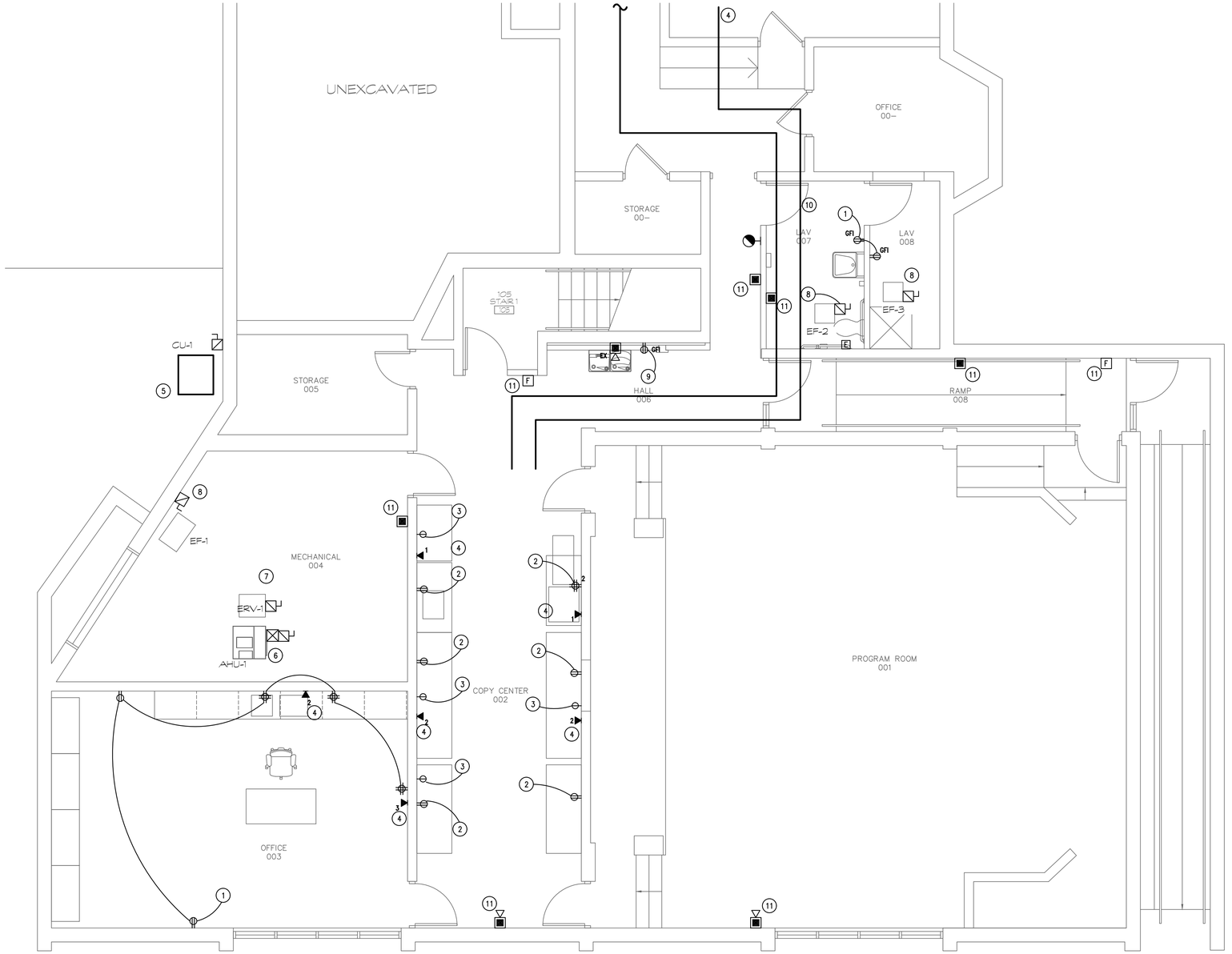
SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	Description:	Date:	Revised By:
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

Drawing Title:
Basement Elec. Demolition Floor Plan

Date: August 24, 2021
Scale: AS NOTED
Drawn By: MOB
Project Number: 20.120

Drawing Number:
E101



1 BASEMENT ELECTRICAL POWER FLOOR PLAN

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

POWER PLAN KEY NOTES

1. CONNECT NEW DEVICE TO EXISTING RECEPTACLE CIRCUIT SERVING THIS AREA.
2. REWORK EXISTING 120V, 20A DEDICATED COPIER CIRCUIT CURRENTLY SERVING THE FORMER COPY CENTER TO POWER NEW DEVICE.
3. REWORK EXISTING 208V, 1-PHASE, 20A DEDICATED COPIER CIRCUIT CURRENTLY SERVING THE FORMER COPY CENTER TO POWER NEW DEVICE. VERIFY DEVICE STYLE PRIOR TO INSTALL.
4. PROVIDE NEW CAT 6 JACK, BACKBOX, RACEWAY TO CEILING AND CAT 6 CABLE BACK TO BASEMENT IDF RACK. TERMINATE, LABEL AND TEST CABLE.
5. PROVIDE 208V, 1-PHASE, 25A BRANCH CIRCUIT FOR NEW CU-1 FROM EXISTING PANEL. PROVIDE 2-POLE BREAKER IN PANEL AND NEMA 3R, NON-FUSED DISCONNECT AT UNIT.
6. PROVIDE 208V, 3-PHASE, 15A BRANCH CIRCUIT FOR NEW AHU-1 FROM EXISTING PANEL. PROVIDE 3-POLE BREAKER IN PANEL AND COMBINATION STARTER/DISCONNECT AT UNIT.
7. PROVIDE 120V, 20A DEDICATED BRANCH CIRCUIT FOR NEW ERV-1 FROM EXISTING PANEL. PROVIDE 1-POLE BREAKER IN PANEL AND NEMA 1, NON-FUSED DISCONNECT AT UNIT.
8. PROVIDE 120V, 20A DEDICATED BRANCH CIRCUIT TO SERVE THREE NEW FANS FROM EXISTING PANEL. PROVIDE 1-POLE BREAKER IN PANEL AND NEMA 1, NON-FUSED DISCONNECT AT EACH UNIT.
9. PROVIDE 120V, 20A DEDICATED BRANCH CIRCUIT & GFI RECEPTACLE FOR NEW WATER COOLER FROM EXISTING PANEL.
10. REWORKING/EXTENDING OF COPY EQUIPMENT BRANCH CIRCUITS SHALL INCLUDE ROUTING OUTSIDE OF THE RATED STAIR ENCLOSURE.
11. PROVIDE NEW FIRE ALARM COMPONENTS WHICH ARE LISTED FOR USE WITH THE EXISTING SYSTEM.

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

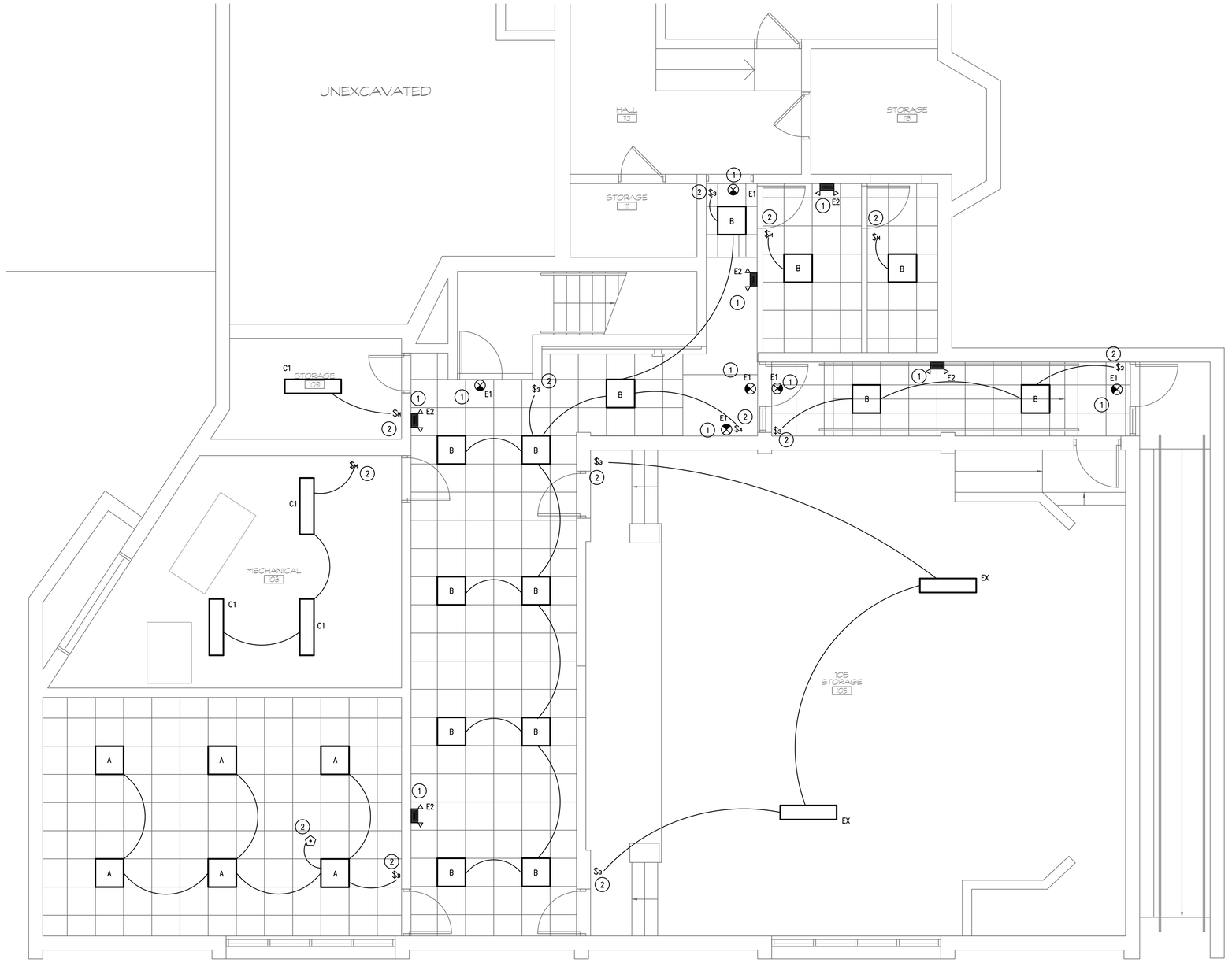
SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	Description:	Date:	Revised By:
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

Drawing Title:
Basement Elec.
Power Floor Plan

Date: August 24, 2021
Scale: AS NOTED
Drawn By: MOB
Project Number: 20.120

Drawing Number:
E102



LIGHT FIXTURE SCHEDULE

A	2'x2' ARCHITECTURAL TROFFER, DAY-BRITE 2FGX-G-45L-840-2-FS-UNV-DIM, 4500 LUMEN, 80 CRI, 4000K
B	2'x2' FLAT PANEL TROFFER, DAY-BRITE 2FPZ-45L-840-2-DS-UNV, 4500 LUMEN, 80 CRI, 4000K
E1	SINGLE-FACE, LED, BATTERY BACKUP, THERMOPLASTIC EXIT SIGN, CHLORIDE CLX-N-RW
E2	SELF-CONTAINED, TWIN-HEAD, LED EMERGENCY LIGHT, CHLORIDE VLTU

LIGHTING PLAN KEY NOTES

1. CONNECT EXIT SIGNS & EMERGENCY LIGHTS TO LIGHTING BRANCH CIRCUIT FOR AREA SERVED, AHEAD OF ANY CONTROLS.
2. PROVIDE NEW LIGHTING CONTROLS & CONNECT TO EXISTING PERMANENT LIGHTING CIRCUIT SERVING THE AREA. DO NOT USE NM CABLE CIRCUITS.

1 BASEMENT ELECTRICAL LIGHTING FLOOR PLAN

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

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	Description:	Date:	Revised By:
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

Drawing Title:
Basement Elec. Lighting Floor Plan

Date: August 24, 2021
Scale: AS NOTED
Drawn By: MOB
Project Number: 20.120

Drawing Number:
E103

GENERAL NOTES – ELECTRICAL

1. SPECIFICATION SECTIONS, GENERAL CONDITIONS, SUPPLEMENTAL GENERAL CONDITIONS AND DRAWINGS ARE INTEGRAL PARTS OF CONTRACT DOCUMENTS.
2. SYSTEM COMPONENTS ARE LOCATED APPROXIMATELY ON DRAWINGS. BASE ACTUAL LOCATIONS ON FIELD VERIFICATION OF EXISTING BUILDING CHARACTERISTICS INCLUDING BUT NOT LIMITED TO STRUCTURAL, MECHANICAL, ELECTRICAL & ARCHITECTURAL COMPONENTS.
3. ALL WORK AND ACTION DEPICTED AND DESCRIBED IN CONTRACT DOCUMENTS SHALL BE PERFORMED BY THE CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.
4. REFERENCE TO SPECIFIC SUB–CONTRACTORS SUCH AS "MECHANICAL", "ELECTRICAL", ETC. ARE INTENDED TO SUGGEST POSSIBLE DIVISION OF RESPONSIBILITY. PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION AND EXECUTION OF ALL WORK.
5. OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND INSPECTIONS.
6. ALL EQUIPMENT, MATERIALS AND RELATED SYSTEM COMPONENTS SHALL BE NEW UNLESS NOTED OTHERWISE.
7. REPAIR AND REPLACE AT NO COST TO OWNER ALL EQUIPMENT AND MATERIALS DAMAGED DURING CONSTRUCTION.
8. CIRCUITING DEPICTED FOR RECEPTACLES & LIGHTING FIXTURES DEFINES GROUPING OF FIXTURES, DEVICES AND COMPONENTS AND REQUIRED CONDUCTORS. CIRCUITING IS NOT INTENDED TO DEFINE CONDUIT LOCATIONS.
9. STUDY THE PROJECT MANUAL & DRAWINGS OF OTHER DISCIPLINES INCLUDING ARCHITECTURAL, STRUCTURAL, CIVIL & MECHANICAL.
10. ELECTRICAL CONDUITS & BOXES SHALL BE CONCEALED IN WALLS OR ABOVE CEILINGS WHEREVER POSSIBLE.
11. FURNISH & INSTALL GFCI RECEPTACLES IN ALL WET LOCATIONS.
12. ALL PENETRATIONS THRU RATED WALLS & CEILINGS SHALL BE SEALED USING U.L. LISTED METHODS APPROPRIATE FOR INDICATED RATING.
13. NO PENETRATIONS ARE ALLOWED INTO STAIR ENCLOSURES EXCEPT AS REQUIRED FOR SERVICES UTILIZED IN THE STAIR.
14. ALL INSTALLATIONS ON NEW WALLS SHALL BE FULLY RECESSED. INSTALLATIONS ON EXISTING MASONRY WALLS SHALL BE RUN WITH SURFACE RACEWAY PAINTED TO MATCH WALL FINISH AND SURFACE BOXES. INSTALLATIONS ON EXISTING STUD WALLS SHALL CUT IN OLD–WORK STYLE BOXES AND FISH WIRING IN WALL CAVITY.

ELECTRICAL LEGEND
(NOT ALL SYMBOLS ARE USED)

- ELECTRICAL PANEL, 120/208 VOLT.
- PANELBOARD FLUSH MOUNTED.
- PANELBOARD SURFACE MOUNTED.
- NON–FUSED DISCONNECT SWITCH.
- FUSED DISCONNECT SWITCH.
- J — JUNCTION BOX, ACCORDING TO NEC REQUIREMENTS.
- MOTOR STARTER. COORDINATE EXACT REQUIREMENTS WITH MOTOR FURNISHED.
- RECESSED LIGHT FIXTURE; SUBLETTER INDICATES FIXTURE TYPE.
- RECESSED LIGHT FIXTURE WITH INTEGRAL BATTERY PACK FOR 90 MINUTE EMERGENCY LIGHTING.
- TYPICAL RECESSED FLUORESCENT TROFFER; SUBLETTER INDICATES FIXTURE TYPE & SIZE.
- LIGHT FIXTURE WITH INTEGRAL BATTERY PACK FOR 90 MINUTE EMERGENCY LIGHTING.
- TYPICAL SURFACE MOUNTED OR CABLE HUNG FLUORESCENT FIXTURE; SUBLETTER INDICATES FIXTURE TYPE & SIZE.
- WALL MOUNTED FIXTURE; SUBLETTER INDICATES FIXTURE TYPE.
- WALL MOUNTED FIXTURE WITH INTEGRAL BATTERY PACK FOR 90 MINUTE EMERGENCY LIGHTING; SUBLETTER INDICATES FIXTURE TYPE.
- CEILING MOUNTED EXIT SIGN. SHADING INDICATES DIRECTION OF FIXTURE FACE. ARROW INDICATES DIRECTION OF CHEVRON. PROVIDE UNSWITCHED POWER FROM AREA LIGHTING CIRCUIT.
- WALL MOUNTED EXIT SIGN. INSTALL AT 7'–7" AFF OR ON EXISTING LOCATION.
- DOUBLE FACE EXIT SIGN.
- TWIN HEAD EMERGENCY LIGHT WITH INTEGRAL BATTERY FOR 90 MINUTE EMERGENCY LIGHTING.
- $ — SINGLE–POLE SWITCH; MOUNT AT 48" AFF.
- $3 — 3–WAY SWITCH; MOUNT AT 48" AFF.
- $4 — 4–WAY SWITCH; MOUNT AT 48" AFF.
- $M — SINGLE–POLE, MOTION SENSOR SWITCH; MOUNT AT 48" AFF.
- $D — LED DIMMING CONTROL COMPATIBLE WITH DIMMING BALLASTS.
- CEILING MOUNTED OCCUPANCY SENSOR. REFER TO SPECIFICATION 16500 FOR DETAILS.
- DUPLEX RECEPTACLE; MOUNT AT 18" AFF UNLESS OTHERWISE SPECIFIED.
- 250–VOLT, SINGLE RECEPTACLE IN FLUSH OUTLET BOX, MATCH BRANCH CIRCUIT RATINGS.
- QUAD RECEPTACLE; MOUNT AT 18" AFF UNLESS OTHERWISE SPECIFIED.
- POWER RECEPTACLE INSTALLED ABOVE CEILING AS SHOWN ON POWER PLANS.
- GFI — DUPLEX GROUND FAULT RECEPTACLE; MOUNT AT 18" AFF UNLESS OTHERWISE SPECIFIED.
- WP — RECEPTACLE WITH OUTDOOR RATED COVER PLATE. PROVIDE FLUSH MOUNTED BOX.
- TR — TAMPER RESISTANCE RECEPTACLE.
- D:X — COMPUTER NETWORK WORKSTATION PORT. MOUNT AT 18" AFF UNLESS OTHERWISE NOTED. D:X = NUMBER OF DATA OUTLETS. PROVIDE CAT 6 CABLE (4 PAIR UTP) ON EACH LOCATION.
- E — CALL–FOR–AID SWITCH. MOUNT AT 48" AFF WITH CORD EXTENDING TO WITHIN 12" OF FLOOR.
- CALL–FOR–AID CORRIDOR LIGHT/BUZZER.
- ETR — EXISTING TO REMAIN.
- RELOC — RELOCATE/RELOCATED.

ELECTRICAL SPECIFICATIONS

I. ELECTRICAL GENERAL REQUIREMENTS
- A. ALL WORK SHALL COMPLY WITH CONNECTICUT STATE BUILDING CODE AND CONNECTICUT STATE FIRE SAFETY CODE AND SHALL BE ACCOMPLISHED IN A NEAT AND WORKMAN LIKE MANNER.
- B. MATERIAL & EQUIPMENT SHALL BE NEW UNLESS SPECIFICALLY NOTED OTHERWISE AND SHALL BE LISTED BY UNDERWRITERS LABORATORIES.
- C. SUBMITTALS:
  1. SUBMIT PRODUCT DATA, SHOP DRAWINGS, RECORD DRAWINGS AND O&M MANUALS WHERE REQUIRED BY INDIVIDUAL SPECIFICATION SECTIONS.
  2. SUBMIT THREE COPIES TO OWNER.
- D. ELECTRICAL INSTALLATION:
  1. COORDINATE ELECTRICAL SYSTEMS, EQUIPMENT AND MATERIALS INSTALLATION WITH OTHER BUILDING COMPONENTS. REFER ALL CONFLICTS TO ENGINEER BEFORE CONTINUING WITH WORK.
  2. INSTALL SYSTEMS TO PROVIDE MAXIMUM HEADROOM POSSIBLE UNLESS INDICATED OTHERWISE.
  3. INSTALL SYSTEMS LEVEL, PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS.
  4. INSTALL EQUIPMENT TO FACILITATE REPAIR, MAINTENANCE OR REPLACEMENT.
  5. PERFORM CUTTING AND PATCHING REQUIRED TO REMOVE AND REPLACE DEFECTIVE WORK OR WORK NOT CONFORMING TO REQUIREMENTS OF CONTRACT DOCUMENTS.
  6. CONTRACTOR SHALL LEAVE THE ENTIRE ELECTRICAL SYSTEM IN PROPER WORKING ORDER AND SHALL, WITHOUT ADDITIONAL CHARGE, REPLACE ANY WORK, MATERIALS, OR EQUIPMENT FURNISHED & INSTALLED BY HIM UNDER THIS WHICH DEVELOP DEFECTS, EXCEPT FROM NORMAL WEAR & TEAR, WITHIN ONE YEAR FROM DATE OF FINAL ACCEPTANCE BY OWNER.

II. RACEWAYS, BOXES AND FITTINGS
- A. COMPONENTS AND INSTALLATION SHALL COMPLY WITH NFPA 70 & NEMA AND SHALL BE UL LISTED.
- B. INTERIOR RACEWAYS SHALL BE ELECTRICAL METALLIC TUBING.
- C. EXTERIOR RACEWAYS ABOVE GROUND SHALL BE RIGID METAL CONDUIT OR LIQUID–TIGHT FLEXIBLE METAL CONDUIT (MAX. LENGTH 5').
- D. EXTERIOR RACEWAYS BELOW GROUND SHALL BE RIGID METAL CONDUIT OR SCHEDULE 40 PVC.
- E. USE RACEWAY FITTINGS COMPATIBLE WITH ASSOCIATED RACEWAY AND APPLICATION.
- F. BOXES SHALL BE STEEL CONFORMING TO UL 514A AND NEMA OS1. FITTINGS SHALL CONFORM TO UL 514B.

III. BUILDING WIRE
- A. WIRE SHALL COMPLY WITH UL 83 AND NEMA WC–5. CONNECTORS SHALL COMPLY WITH UL 486A.
- B. CONDUCTORS SHALL BE COPPER AND INSULATION SHALL BE THHN/THWN.
- C. INTERIOR WIRING SHALL BE BUILDING WIRE IN CONDUIT WHERE EXPOSED AND MC CABLE WHERE CONCEALED.

IV. SUPPORTING DEVICES
- A. SUPPORTS, HARDWARE AND FASTENERS SHALL BE PROTECTED WITH ZINC COATING.
- B. SLEEVES SHALL BE SCHEDULE 40 GALVANIZED STEEL PIPE.
- C. CONFORM TO MANUFACTURER'S RECOMMENDATIONS FOR SELECTION AND INSTALLATION OF SUPPORTS AND CONFORM TO THE FOLLOWING:
  1. SUPPORT INDIVIDUAL HORIZONTAL RACEWAYS BY SEPARATE PIPE HANGERS.
  2. SUPPORT RACEWAY WITHIN ONE FOOT OF ANY UNSUPPORTED BOX.
- D. INSTALL SLEEVES IN CONCRETE SLABS AND WALLS, AND FIRE RATED WALLS AND FLOORS. APPLY UL LISTED FIRE STOPPING MATERIAL WHERE REQUIRED.

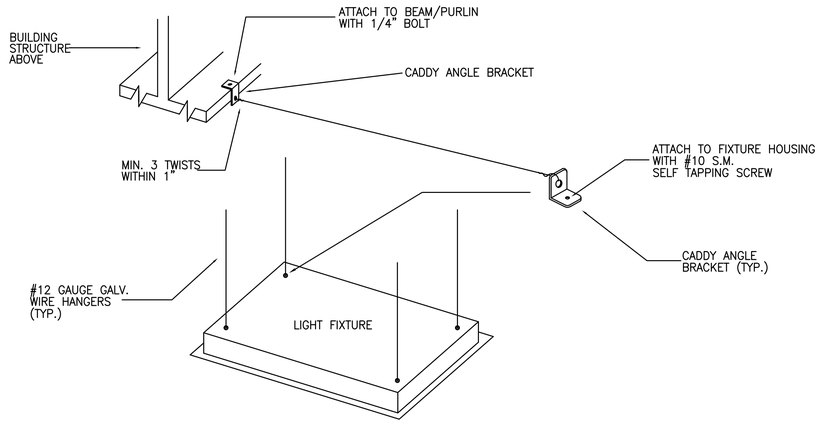
V. ELECTRICAL IDENTIFICATION
- A. PROVIDE EQUIPMENT IDENTIFICATION LABELS OF ENGRAVED PLASTIC LAMINATE FOR METER SOCKETS, PANELBOARDS & DISCONNECTS.
- B. CONDUCTORS SHALL BE COLOR CODED IN ACCORDANCE WITH NFPA 70 AND ANSI A13.1.
- C. PROVIDE TYPED PANELBOARD CIRCUIT DIRECTORY FOR EACH PANELBOARD.
- D. PROVIDE UNDERGROUND WARNING TAPE FOR ALL BURIED ELECTRICAL SERVICES.

VI. PANELBOARDS
- A. PANELBOARDS ARE EXISTING. PROVIDE NEW BREAKERS FOR BRANCH CIRCUITS INDICATED. NEW BREAKERS SHALL BE LISTED FOR USE IN EXISTING UNITS.
- B. PROVIDE NEW TYPED DIRECTORIES TO INDICATE FINAL CIRCUIT ARRANGEMENTS.

VII. LIGHT FIXTURES
- A. MANUFACTURERS:
  1. LITHONIA
  2. COOPER
  3. COLUMBIA
  4. OTHERS AS SPECIFIED OR ALLOWED BY EQUAL SUBSTITUTION.
- B. PRODUCTS: REFER TO LIGHT FIXTURE SCHEDULE.
- C. PROVIDE PRODUCT DATA SUBMITTALS.

VIII. WIRING DEVICES
- A. MANUFACTURERS:
  1. LEVITON
  2. HUBBELL
  3. BRYANT
- B. WIRING DEVICES SHALL CONFORM TO NEMA WD 1.
- C. WALL SWITCHES SHALL BE NEMA WD 1 GENERAL DUTY, AC ONLY GENERAL USE SNAP SWITCH. RATED FOR 120/277 VOLTS/20 AMPS.
- D. RECEPTACLES SHALL BE NEMA WD 1, GENERAL DUTY, PLASTIC BODY, 120 VOLTS, 20 AMPS, TYPE 5–20 GENERAL USE RECEPTACLE.
- F. GFCI RECEPTACLES SHALL BE EQUIPPED WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER.
- G. COVER PLATES SHALL BE BRUSHED STAINLESS UNLESS OTHERWISE DIRECTED BY OWNER.
- H. COORDINATE DEVICE COLORS WITH OWNER PRIOR TO ORDERING MATERIALS.
- I. PROVIDE PRODUCT DATA SUBMITTALS.

IX. FIRE ALARM
- A. MANUFACTURERS: COMPATIBLE WITH EXISTING EQUIPMENT.
- B. FURNISH PANEL MODIFICATIONS FOR SERVING ALL COMPONENTS SHOWN.
- C. INSTALLED SYSTEM SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF NFPA 72, NFPA 70, ADA, AND CONNECTICUT FIRE SAFETY CODE.
- D. FIRE ALARM CABLE SHALL BE INSTALLED IN DEDICATED CONDUIT WHERE EXPOSED. CONCEALED CABLE MAY BE RUN WITHOUT CONDUIT.
- E. COMPLETED SYSTEM SHALL BE FULLY TESTED IN ACCORDANCE WITH NFPA–72H BY CONTRACTOR IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE AND THE LOCAL FIRE MARSHAL.
- F. PROVIDE PRODUCT DATA SUBMITTALS.
- G. VERIFY EXISTING NOTIFICATION CIRCUIT SPARE CAPACITY AND FURNISH BOOSTER POWER SUPPLY (NAC) IF REQUIRED.



TYPICAL LAY-IN GRID LIGHTING FIXTURE SUPPORT/MOUNTING DETAIL

NOT TO SCALE

1. ALL LIGHTING FIXTURES SHALL BE SECURED TO THE STRUCTURE BY THE ELECTRICAL CONTRACTOR.
2. FLUSH OR RECESSED LIGHT FIXTURES LESS THAN 56 POUNDS SHALL HAVE 2 – 12 GA. SLACK SAFETY WIRES FROM DIAGONAL CORNERS TO BUILDING STRUCTURE BY TRADE CONTRACTOR.
3. FLUSH OR RECESSED LIGHT FIXTURES MORE THAN 56 POUNDS SHALL HAVE 4 – 12 GA. SLACK SAFETY WIRES FROM DIAGONAL CORNERS TO BUILDING STRUCTURE BY TRADE CONTRACTOR.
4. SECURE SURFACE MOUNTED LIGHT FIXTURES W/ MINIMUM OF 2 – POSITIVE CLAMPING DEVICES OF 14 GA. MINIMUM STEEL AND W/ 12 GA. WIRE TO BUILDING STRUCTURE.

Project Title:
Darien Board of Education Copy Center

34 Leroy Ave.
Darien, CT 06820

Electrical Specs and Details — AS NOTED — E104

SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06519-2340
One Post Hill Place, New London, CT 06320
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	Description:	Date:	Revised By:
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----

Drawing Title:
Electrical Specs and Details

Date: August 24, 2021
Scale: AS NOTED
Drawn By: MOB
Project Number: 20.120
Drawing Number: E104