FLEET BRANCH RENOVATION AND EXPANSION

Bid & Permit

ABBREVIATIONS

a.b.	anchor bolt	dia	diameter	horiz	horizontal(ly)	psi	pounds per square inch
abv	above	dim	dimension	hr	hour; handrail	ptd	painted
a/c	air conditioning	div	division	ht	height	prefin	prefinished
acoust	acoustical	dn	down	hw	hardwood	pvc	polyvinyl chloride
a.c.t.	acoustical ceiling tile	d.o.	daylight opening	hvac	heating, ventilating & air conditioning	r.	radius; riser
a.d.	area drain	dr	door			ra	return air
A.D.A	Americans with Disabilities Act	d.s.	downspout	hyd	hydrant	r.d.	roof drain
adj	adjustable; adjacent	dtl	detail	i.d.	inside diameter	ref	refer(ence)
adh	adhesive	dwg	drawing	iic	impact insulation class	rev	revise; revision
a.f.f.	above finished floor	E	east	insul	insulation	r.j.	reveal joint
ahj	authority having jurisdiction	ea	each	int	interior	r.l.	roof leader
ahu	air handling unit	e.b.	expansion bolt	inv	invert	rm	room
air-wrb	air- and water-restive barrier	e.f.	exhaust fan	jst	joist(s)	r.o.	rough opening
alt	alternate	elec	electric(al)	jt	joint	S	south
alum	aluminum	el	elevation	lam	laminated	sc	solid core
anc	anchor; anchorage	elev	elevator	lav	lavatory	sch	schedule
arch	architect(ural)	eq	equal	lf	linear foot	sect	section
asph	asphalt	e.j.	expansion joint	llh	long leg horizontal	sf	square foot
atten	attenuation	e.t.r.	existing to remain	llv	long leg vertical	sht	sheet
bd	board	e.t.s.	exposed to structure	lt	light	sim	similar
bldg	building	e.w.c.	electrical water cooler	lwc	lightweight concrete	sip	structural insulated panel
blk'g	blocking	exh	exhaust	mas	masonry	spec	specification
bm	beam	exist	existing	matl	material	sq	square
b.o.	bottom of	exp	exposed	max	maximum	s.s.	stainless steel
bpl	bearing plate	ext	exterior	mech	mechanical	ssg	structural sealant glazing
brg	bearing	f.d.	floor drain	mfr	manufacturer	stc	sound transmission coefficient
btm	bottom	fdn	foundation	min	minimum or minute	std	standard
btw	between	f.e.	fire extinguisher	misc	miscellaneous	stl	steel
b.w.	both ways	f.e.c.	fire extinguisher cabinet	m.o.	masonry opening	struct	structural
c	channel	f.f.	finish floor	mtd	mounted	susp	suspended
c.b.	catch basin	fin	finish	mtl	metal	sym	symmetrical
cbt	cabinet	fxt	fixture	N	north	sys	system
c-c	center to center	flg	flashing	n.i.c.	not in contact	t.	tread; tempered
cf	cubic feet	flr	floor	no.	number	t.c.	top of curb
cfmf	cold formed metal framing	flur	fluorescent	nom	nominal	tel	telephone
c.i.p.	cast in place	frm'g	framing	n.t.s.	not to scale	t&g	tongue and groove
ci	continuous rigid insulation	f.r.p.	fiberglass reinforced plastic	o/	over	thk	thick(ness)
c.j.	control joint	f.r.t.	fire retardant treated	o.c.	on center(s)	t.o.	top of
clg	ceiling	ft	foot	o.d.	outside diameter; overflow drain	typ	typical
clr	clear(ance)	ftg	footing	ofci	owner furnished contractor installed	u.h.	unit heater
cmu	concrete masonry unit(s)	fur	furring; furred	ofoi	owner furnished owner installed	u.n.o.	unless noted otherwise
c.o.	clean out; company	furn	furnace	o.h.	opposite hand	vert	vertical(ly)
col	column	galv	galvanized	ohg	overhang	vct	vinyl composition tile
conc	concrete	ga	gauge; gage	opg	opening	vwc	vinyl wall covering
cont	continuous; continue(d)	g.c.	general contractor	opp	opposite	vwb	vinyl wall base
corr	corrugated	g.f.r.c.	glass fiber reinforced concrete	ord	overflow roof drain	w	west
cpt	carpet	gl	glass	otb	open to below	w/	with
crs	course(s)	gr	grade	pcc	precast concrete	w.c.	water closet
csk	countersink	g.r.c.	glass reinforced concrete	pfb	prefabricated	wd	wood
c.t.	ceramic tile	g.r.g.	glass reinforced gypsum	pl	plate; property line	w.h.	wall hydrant
cuh	cabinet unit heater	gwb	gypsum wall board	plam	plastic laminate	wp	waterproof
cy	cubic yard	gyp	gypsum	plywd	plywood	w.p.c.	wood-plastic composite lumber
dbl	double	hc	hollow core	pnl	panel	wwf	welded wire fabric
dept	department	hdw	hardware	pr	pair		
d.f.	drinking fountain	hm	hollow metal	psf	pounds per square foot		

GRAPHIC LEGEND

- section reference / SECTION MARK (5 / A100) / sheet number reference
- plan or detail reference / DETAIL MARK (1 / A100) / sheet number reference
- NEW GRID REFERENCE (A)
- WINDOW AND FRAME TAG (SF-1)
- DOOR REFERENCE (123A)
- section reference / BUILDING SECTION MARK (2 / A101) / sheet number reference
- KEY NOTE REFERENCE (1 / A)
- BREAK LINE
- ELEV. LOCATION 100'-0" / ELEVATION TARGET / reference elevation
- NORTH ARROW
- elevation reference / ELEVATION MARK (1) / sheet number reference
- elevation reference / INTERIOR ELEVATION MARK (1 / 2 / A101 / 3) / sheet number reference
- ROOM NUMBER REFERENCE (101)
- REVISION IDENTIFICATION (5)
- WALL TYPE KEY NOTE (SEE WALL TYPE LEGEND) (A)

GENERAL CONDITIONS

1. The project design intent complies with applicable laws, statutes, codes, rules, ordinances, and regulations adopted by local authorities having jurisdiction in force at the time of contract award. Execute the Work accordingly. Promptly report to the Architect any nonconformity discovered or made known.
2. Perform all Work indicated by the Contract Documents, unless specifically noted otherwise.
3. The Contract Documents consist of these drawings, specifications on sheets, and specifications in 8-1/2" x 11" book form. Refer to both drawings and specifications as an integrated whole; what is required by one is as binding as if required by all.
4. The arrangement of drawings by discipline and the organization of specifications into divisions and sections does not establish the scope or extent of work to be performed by any trade or sub-contractor.
5. The existence and location of utilities and construction indicated as existing is not guaranteed. Before proceeding with each component of Work, investigate, verify, and record the existence and location of in-place construction, utilities, mechanical and electrical systems, substrates, and other conditions affecting the Work.
6. Verify dimensions and space requirements of items shown diagrammatically on the Drawings. Coordinate construction procedures to resolve potential conflicts. Note conditions that affect the Work and record field measurements as required to fit the Work properly before fabrication.
7. Promptly notify the Architect of apparent discrepancies, inconsistencies, or conflicts between the Contract Documents and the site, defects of products or in-place construction, and any other unsatisfactory field condition. Contractor's failure to notify the Architect before proceeding with the Work indicates knowledge of existing conditions, surfaces, and in-place construction, and acceptance that they are fit and proper to receive the Work.
8. Products, materials and equipment furnished under the Contract are to be new whether labeled with the term "new" or not.
9. Do not cut and patch construction in a manner that results in visual evidence of cutting and patching or that would, in Architect's opinion, diminish any aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
10. Perform quality-control and assurance activities, inspections, and tests, to verify and document that Work complies with Contract Document requirements. All Special Inspections required by authorities having jurisdiction are assigned to the Owner. Coordinate the sequence of activities to accommodate required tests, inspections, and related services. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-related services.

BUILDING CODE DATA

Applicable Codes:
- 2024 Ohio Building Code
- 2024 Existing Building Code
- 2024 Ohio Mechanical Code
- 2024 Ohio Plumbing Code
- 2023 National Electrical Code
- 2025 Ohio Fire Code
- 2021 Ohio Energy Code
- 2021 IECC

Project Description: The project consists of the full interior renovation of, and addition to the existing Fleet Branch Library of the Cleveland Public Library system.

Use Group: A-3 - Assembly (Libraries)

Construction Type: Type IIB Construction

Fire Suppression: Unprotected

Building Area: 10,000 sqft

Occupants Load: 287 occupants

SEE LIFE SAFETY PLAN SHEET, LS101, FOR MORE INFORMATION



LOCATION MAP



PERSPECTIVE

SHEET INDEX

		Sheet Issue Date	Current Revision Date
TITLE SHEET			
TS100	TITLE SHEET	02.27.26	4.16.2026
LS101	FIRST FLOOR LIFE SAFETY PLAN	02.27.26	4.16.2026
CIVIL			
C001	SURVEY	02.27.26	
C002	SURVEY	02.27.26	
C003	SURVEY	02.27.26	
C004	SURVEY	02.27.26	
C005	SURVEY	02.27.26	
C100	CIVIL NOTES	02.27.26	
C200	CIVIL DEMO PLAN	02.27.26	8.20.2026
C300	CIVIL SITE PLAN	02.27.26	8.20.2026
C400	CIVIL GRADING PLAN	02.27.26	8.20.2026
C500	CIVIL UTILITY PLAN	02.27.26	8.20.2026
C600	CIVIL CONSTRUCTION DETAIL	02.27.26	
C601	CIVIL CONSTRUCTION DETAIL	02.27.26	
C602	CIVIL CONSTRUCTION DETAIL	8.20.2026	
LANDSCAPE			
L100	SITE PLANS & FURNISHINGS PLAN	02.27.26	3.18.2026
L200	PAVER DETAILS & LAYOUT PLAN	02.27.26	8.20.2026
L300	PLANTING PLAN - TREES & SHRUBS	02.27.26	
ARCHITECTURAL			
D101	DEMOLITION PLANS	02.27.26	9.18.2026
D102	ROOF DEMOLITION PLAN	02.27.26	
D301	FIRST FLOOR DEMOLITION RCP	02.27.26	
D400	DEMOLITION ELEVATIONS	02.27.26	
D600	DEMOLITION SECTIONS	02.27.26	
A001	TYPICAL WALL TYPES & DETAILS	02.27.26	9.18.2026
A101	FLOOR PLANS	02.27.26	9.18.2026
A102	FIRST FLOOR DIMENSION PLAN	02.27.26	9.18.2026
A103	ROOF PLAN & DETAILS	02.27.26	8.20.2026
A200	ENLARGED PLAN DETAILS	02.27.26	
A201	ENLARGED ENTRY PLAN & DETAILS	02.27.26	
A301	REFLECTED CEILING PLANS	02.27.26	3.18.2026
A310	CEILING DETAILS	02.27.26	
A400	BUILDING AXONOMETRICS	02.27.26	
A401	EXTERIOR ELEVATIONS	02.27.26	
A500	NORTH-SOUTH BUILDING SECTIONS	02.27.26	
A501	EAST-WEST BUILDING SECTIONS	02.27.26	
A600	WALL SECTIONS	02.27.26	
A601	WALL SECTIONS	02.27.26	
A602	WALL SECTIONS	02.27.26	8.20.2026
A603	WALL SECTIONS	02.27.26	8.20.2026
A610	ENLARGED SECTION DETAILS	02.27.26	8.20.2026
A611	ENLARGED SECTION DETAILS	02.27.26	
A800	ENLARGED RESTROOM PLANS AND ELEVATIONS	02.27.26	
A801	INTERIOR ELEVATIONS	02.27.26	3.18.2026
A802	INTERIOR ELEVATIONS	02.27.26	3.18.2026
A811	MILLWORK PLAN	02.27.26	
A820	CASEWORK DETAILS	02.27.26	
A901	DOOR & GATE SCHEDULE & DETAILS	02.27.26	8.20.2026
A902	GLAZING ELEVATIONS	02.27.26	
A903	GLAZING DETAILS	02.27.26	
A910	FINISH SELECTIONS & DETAILS	02.27.26	8.20.2026
A911	FINISH PLANS	02.27.26	8.20.2026
A921	FIRST FLOOR FURNITURE PLAN	02.27.26	
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S002	SPECIAL INSPECTIONS	02.27.26	
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S102	LOW ROOF FRAMING PLANS	02.27.26	8.20.2026
S103	NEW ROOF FAMING PLAN	02.27.26	
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		Sheet Issue Date	Current Revision Date
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MD101	FIRST FLOOR MECHANICAL DEMO	02.27.26	
MD102	PENTHOUSE & ROOF MECHANICAL DEMO	02.27.26	3.18.2026
~~M0101~~	~~REMOVED~~		
M100	UNDERGROUND MECHANICAL PIPING	02.27.26	8.20.2026
M101A	FIRST FLOOR DUCTWORK	02.27.26	3.18.2026
M101B	FIRST FLOOR MECHANICAL PIPING	02.27.26	8.20.2026
M102A	PENTHOUSE & ROOF DUCTWORK	02.27.26	8.20.2026
M102B	PENTHOUSE & ROOF MECHANICAL PIPING	03.11.26	8.20.2026
M501	MECHANICAL DETAILS	02.27.26	3.18.2026
M502	MECHANICAL DETAILS	02.27.26	3.18.2026
M503	MECHANICAL DETAILS	02.27.26	3.18.2026
M601	MECHANICAL SCHEDULES	02.27.26	8.20.2026
M602	MECHANICAL SCHEDULES	03.11.26	8.20.2026
M603	MECHANICAL DIAGRAMS	03.18.26	8.20.2026
M701	MECHANICAL CONTROLS	02.27.26	8.20.2026
M702	MECHANICAL CONTROLS	02.27.26	8.20.2026
M703	MECHANICAL CONTROLS	02.27.26	8.20.2026
M704	MECHANICAL CONTROLS	03.11.26	8.20.2026
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PD101	FIRST FLOOR PLUMBING DEMO	02.27.26	8.20.2026
P100	UNDERGROUND PLUMBING	02.27.26	8.20.2026
P101	FIRST FLOOR PLUMBING	02.27.26	8.20.2026
P102	PENTHOUSE PLUMBING	02.27.26	8.20.2026
P103	ROOF PLUMBING	02.27.26	
P401	PLUMBING ELEVATIONS	02.27.26	
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P801	PLUMBING ISOMETRIC	02.27.26	
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ED101	SITE ELECTRICAL DEMO	02.27.26	
ED101	FIRST FLOOR POWER DEMO PLAN	02.27.26	
ED102	PENTHOUSE & ROOF POWER DEMO PLAN	02.27.26	
ES101	SITE ELECTRICAL	02.27.26	8.20.2026
ES101A	SITE PHOTOMETRIC	03.11.26	3.18.2026
E101	FIRST FLOOR POWER NEW PLAN	02.27.26	9.18.2026
E102	PENTHOUSE AND ROOF POWER NEW PLAN	02.27.26	8.20.2026
E201	FIRST FLOOR LIGHTING NEW PLAN	02.27.26	3.18.2026
ES01A	FIRST FLOOR PHOTOMETRIC PLAN	03.11.26	3.18.2026
E202	PENTHOUSE AND ROOF LIGHTING NEW PLAN	02.27.26	
E401	ELECTRICAL ELEVATIONS	03.18.26	
E501	ELECTRICAL DETAILS	02.27.26	3.18.2026
E502	ELECTRICAL DETAILS	02.27.26	
E503	ELECTRICAL DETAILS	02.27.26	3.18.2026
E601	ELECTRICAL ONELINE DIAGRAM	02.27.26	8.20.2026
E602	ELECTRICAL SCHEDULES	02.27.26	8.20.2026
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T102	PENTHOUSE TECHNOLOGY NEW PLAN	02.27.26	
T501	TECHNOLOGY DETAILS	02.27.26	4.09.2026
FIRE ALARM			
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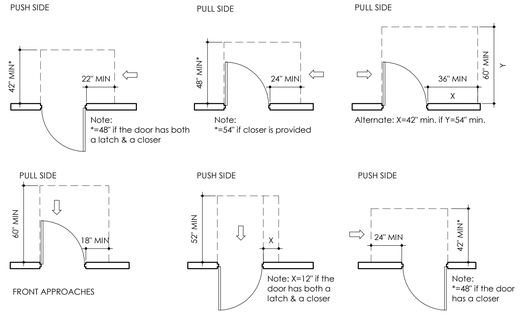
FP102	PENTHOUSE FIRE ALARM NEW PLAN	02.27.26	
FP501	FIRE ALARM DETAILS	02.27.26	3.18.2026
FIRE PROTECTION			
FP001	FIRE PROTECTION GENERAL ENGINEERING + DETAILS	02.27.26	
FP102	PENTHOUSE FIRE PROTECTION DEMO + NEW	02.27.26	

MATERIAL LEGEND

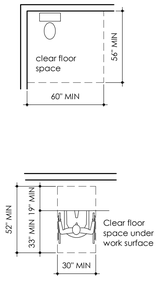
GRAVEL · CONCRETE · BRICK · CMU · METAL CLADDING · PRECAST OR CAST STONE · STEEL · PLASTIC OR SOLID SURFACE MATERIAL · WOOD · FIRE SAFING · RIGID INSULATION · GYPSUM BOARD · CLOSED CELL SPRAY INSULATION

ACCESSIBILITY STANDARDS

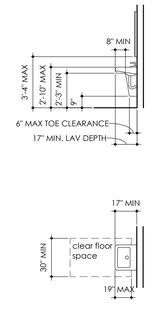
MANEUVERING CLEARANCES AT DOORS



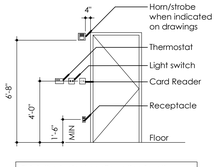
WATER CLOSET CLEARANCES



LAVATORY CLEARANCES



RECEPTACLE AND DEVICE LOCATIONS



This is the typical configuration for all switches, cardreaders, thermostats and horn/strobes at doorways unless shown otherwise on interior elevations. All devices are to be justified 4" along side of the door frame. Coordinate in conjunction with all electrical, mechanical, and fire protection drawings.

48" is the maximum height above the finished floor for all operable devices as per the A.D.A.

PROJECT TEAM

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Project No: 25-25
Drawn / Checked: JPH / BG

Issue:
- Bid & Permit 2.27.2026
- 1 Addendum #1 3.11.2026
- 2 Addendum #2 3.18.2026
- 3 Addendum #3 4.09.2026
- 4 Addendum #4 4.16.2026
- 5 Addendum #5 5.05.2026
- 6 Bulletin #1 8.20.2026
- 7 Bulletin #2 9.18.2026

TITLE SHEET

TS100

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BUILDING CODE DATA:

Applicable Codes:

Building:	2024 Ohio Building Code
	2024 Existing Building Code
Mechanical:	2024 Ohio Mechanical Code
Plumbing:	2024 Ohio Plumbing Code
Electrical:	2023 National Electrical Code (NFPA 70)
Fire:	2025 Ohio Fire Code
Energy:	2021 Ohio Energy Code
	International Energy Conservation Code 2021
Accessibility:	2024 Ohio Building Code Chapter 11, 2017 ICC A117.1

Ohio Building Code Analysis:

Use Group Classification
A-3 - Assembly (Libraries)
Accessory Occupancies: Business, Storage

Method of compliance for alteration of an existing building (OEBC 301.3.1)
Prescriptive Compliance Method: Addition & Alteration (OBEC 502 & 503)

Type of Construction Classification (Existing)
(OBC 601) Type IIB Noncombustible
Fire Suppression: Unprotected

Fire Resistance Rating Construction (OBC Table 601) (Existing)

Structural Frame:	0 hours
Bearing Walls Interior:	0 hours
Bearing Walls Exterior:	0 hours
Non-bearing Partitions:	0 hours
Floor Construction:	0 hours
Roof Construction:	0 hours

Height and Area Limitations (OBC Tables 504.3 & 506.2)

	Allowable:	Actual:
Height:	55'-0"	1-story with penthouse @ 31'-8" (Existing)
Area:	9,500 sqft	9,234 sqft (Existing + Additions)
		766 sqft (Existing Penthouse)

Area Modifications:
Frontage Increase: $A_u = A_t + (NS * I_f) = 9,500 + (9,500 * 0.50)$
Total Allowable Area: 14,250 sqft
Actual Area: 9,234 + 766 = 10,000 sqft < 14,250 sqft

Interior Wall & Ceiling Finish Requirements by Occupancy (OBC Table 803.13)

Interior exit stairways, ramps & exit passageways:	A
Corridors & enclosures for exit access stairways & ramps:	A
Rooms & enclosed spaces:	C

Fire Protection and Life Safety Systems (OBC Chapter 9)
Automatic Sprinkler Systems is not required if: (OBC 903)
Use Group A-3 (OBC 903.2.1.3)
- Fire area < 12,000 square feet
- Fire area occupant load < 300 occupants
- Fire area is on level other than level of exit discharge

Automatic sprinkler system is not required.
Existing automatic sprinkler system is provided for Mechanical Penthouse

Assembly & Accessory Areas: (OBC Table 906.3 (1)):

Minimum rated single extinguisher:	2A
Minimum floor area per unit of A:	3,000 sqft
Maximum floor area for extinguisher:	11,250 sqft
Maximum distance of travel to extinguisher:	75 feet

Number of Exits Required (OBC Table 1006.2.1):
2 Required if: max. occupant load > 49
max. occupant load < 501

2 Exits Required / 3 Exits Provided

Means of Egress (OBC Table 1005)

Number of Occupants:	287 occupants
Egress Capacity (OBC 1005.3.2):	0.20"
Total Egress Width Required:	57.4" < 180" Total Provided

Single story building, no stairs.

(OBC 1006.2.1)	Max. Common Path of Egress Travel:	75'-0"
(OBC 1015.3)	Guardrail Height:	42" min.
(OBC 1017.2)	Max. Length of Travel w/o sprinkler system:	200'-0"
(OBC 1020.3)	Min. Corridor Width:	44 in.
(OBC 1020.5)	Max. Dead End Corridor:	20'-0"

Plumbing Systems (OBC Table 2902.1)
Use Group A-3: 287 Occupants (143 Male, 144 Female)

Fixture type	Requirement	Calculated	Provided
Water closet male	1 per 125	1.144	4 total (unisex)
Water closet female	1 per 65	2.216	-
Lavatories male	1 per 200	0.715	4 total (unisex)
Lavatories female	1 per 200	0.72	-
Drinking fountains	1 per 500	1	2 (high/low)
Service sink	1	1	1

LIFE SAFETY PLAN LEGEND

EGRESS PATH

Verify locations of fire extinguishers with local fire department official and Architect prior to final placement. All extinguishers to be semi recessed cabinet mounted type (FEC-S), unless otherwise noted. See specifications for more information.

TYPICAL EGRESS SYMBOL:

LOCATION | XXX | XXX | XXX
PROVIDED EGRESS WIDTH
REQUIRED EGRESS WIDTH
OCCUPANT LOAD

EGRESS DOOR:

FIRE EXTINGUISHERS:

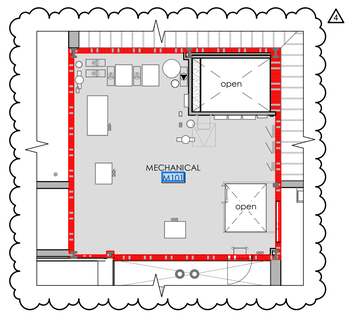
FE	Open fire extinguisher
FEC	Surface mounted fire extinguisher cabinet
FEC-S	Semi-recessed fire extinguisher cabinet
FEC-R	Fully-recessed fire extinguisher cabinet

1 WALL RATINGS:
1 HR FIRE RATED CONSTRUCTION

OCCUPANCY USE GROUP LEGEND

- Unconcentrated Assembly (15 net per occupant) 705/15 = 47 occupants
- Concentrated Assembly (7 net per occupant) 849/7 = 122 occupants
- Business areas (150 gross per occupant) 520/150 = 4 occupants
- Classroom areas (20 net per occupant) 338/20 = 18 occupants
- Reading Rooms (50 net per occupant) 4,144/50 = 83 occupants
- Stack areas (100 gross per occupant) 976/100 = 10 occupants
- Accessory storage, mechanical and equipment rooms (300 gross per occupant) 935/300 = 3 occupants

Total Occupant Load: 287 occupants



2 M101 MECHANICAL PENTHOUSE PLAN
1/8" = 1'-0"



1 LS101 FIRST FLOOR LIFE SAFETY PLAN
1/8" = 1'-0"

Project North
True North

Project:
FLEET BRANCH RENOVATION AND EXPANSION
7224 Broadway Ave Cleveland, OH 44105

Landscape Architect:
LayerCake Design
www.layercakedesign.com
asargeant@layercakedesign.com
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Civil Engineer:
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520 S. Main Street, Suite 2531
Akron, OH 44311
t: 330.631.3654

MEP AV/IT Engineer:
Algebra Engineering
11625 Euclid Ave
Cleveland, OH 44106
t: 216.714.2542

Structural Engineer:
Barber & Hoffman
2217 E. 9th Street, Suite 350
Cleveland, OH 44115
t: 216.875.0100

Seal:

STATE OF OHIO
AARON G. HILL 814786
REGISTERED ARCHITECT

Aaron G. Hill, License # 814786
Expiration Date 12/31/2026

BIALOSKY
6555 Carnegie Avenue, Suite 200
Cleveland, Ohio, 44103
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f. 216.752.9437
www.bialosky.com

Project No: 25-25
Drawn / Checked: JPH / BG

Issue:

	Bid & Permit	2.27.2026
2	Addendum #2	3.18.2026
4	Addendum #4	4.16.2026

FIRST FLOOR LIFE SAFETY PLAN
LS101

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ALTA / NSPS LAND TITLE SURVEY

OF

7224 BROADWAY AVENUE
P.P.N. 133-21-007,
133-21-008, 133-21-009,
133-21-010, 133-21-043
CITY OF CLEVELAND
COUNTY OF CUYAHOGA
STATE OF OHIO

FOR

BOARD OF TRUSTEES OF THE
CLEVELAND PUBLIC LIBRARY

SURETY TITLE AGENCY, INC.

COMMONWEALTH LAND TITLE
INSURANCE COMPANY

LEGAL DESCRIPTION

COMMONWEALTH LAND TITLE INSURANCE COMPANY
SURETY TITLE AGENCY, INC.
Commitment No. 25-132N, Effective July 11, 2025

Parcel No. 1

Situated in the City of Cleveland, County of Cuyahoga and State of Ohio and known as being part of Original One Hundred Acre Lot No. 319, bounded and described as follows: Beginning at a point in the center line of Broadway Avenue S.E., which point is 66 feet Southeasterly from the Southeasterly corner of 1 acre of land conveyed by L.S. Brown and Julia F. Brown to Jane E. Foote by deed dated March 6, 1871 and recorded in Volume 184, Page 350 of Cuyahoga County Records; thence South 40° 55' East along the center of said Broadway S.E., 60 feet; thence being a stake at a point 6 feet distant South 40° 55' East in the center of said Broadway S.E.; thence Southwesterly at right angles with the last mentioned line 202.30 feet to a point; thence Northerly 70.65 feet to the Northwesterly corner of a parcel of land conveyed to August A. Honsberg by deed recorded in Volume 451, Page 446 of Cuyahoga County Records; thence Northeasterly and at right angles to Broadway S.E., 165 feet to the place of beginning, be the same more or less, but subject to all legal highways.

PPN: 133-21-007

Parcel No. 2

Situated in the City of Cleveland, County of Cuyahoga and State of Ohio and known as being part of Original One Hundred Acre Lot No. 319 and bounded and described as follows: Beginning at the Northwesterly corner of a parcel of land conveyed by John Jackson to August Braukman by deed dated April 15, 1878 and recorded in Volume 295, Page 249 of Cuyahoga County Records; thence Northeasterly along the Northwesterly line of said land 235 feet to a point in the center line of Broadway S.E., which point is 495.77 feet Southeasterly from the intersection of the center line of Broadway S.E. with the center line of East 71st Street (formerly Marcelline Avenue); thence Northwesterly along the center line of Broadway S.E., 52.64 feet to the Southeasterly corner of land conveyed to Antoni Michalski by deed dated March 2, 1920, and recorded in Volume 2334, Page 511 of Cuyahoga County Records; thence Southwesterly at right angles to the center line of Broadway S.E. and along the Southerly line of said land conveyed to Antoni Michalski about 202.3 feet to the Southwesterly corner of said Michalski's land; thence Southerly in a straight line to the place of beginning, be the same more or less, but subject to all legal highways.

PPN: 133-21-008

Parcel No. 3

Situated in the City of Cleveland, County of Cuyahoga and State of Ohio, and known as being part of Original One Hundred Acre Lot No. 319 and bounded and described as follows: Beginning on the Southwesterly line of Broadway S.E. at its point of intersection with the Southeasterly line of land conveyed to Felix Majewski and Maryanna Majewski by Deed dated March 9, 1911, and recorded in Volume 1300, Page 332 of Cuyahoga County Records; thence Southeasterly along said Southwesterly line of Broadway S.E., 80 feet to the Northerly corner of land conveyed to Mary F. Jackson by Deed dated November 2, 1916, and recorded in Volume 1876, Page 481 of Cuyahoga County Records; thence Southwesterly along the Northwesterly line of land so conveyed to Mary F. Jackson, about 205 feet to the Northeasterly line of land conveyed to Vinc F. Hlavin and Louisa Hlavin by Deed dated May 19, 1913, and recorded in Volume 1465, Page 415 of Cuyahoga County Records; thence Northwesterly along said Northeasterly line of land so conveyed to Vinc F. Hlavin and Louisa Hlavin, 80 feet to the most Southerly corner of land conveyed to Felix Majewski and Maryanna Majewski, as aforesaid; thence Northeasterly along the Southeasterly line of land so conveyed to Felix Majewski and Maryanna Majewski, about 205 feet to the place of beginning, be the same more or less, but subject to all legal highways.

PPN: 133-21-009

Parcel No. 4

Situated in the City of Cleveland, County of Cuyahoga and State of Ohio, and known as being part of Original 100 Acre Lot No. 319, and bounded and described as follows: Beginning on the Southwesterly line of Broadway S.E., 66 feet wide at its intersection with the Northwesterly line of Fleet Avenue, S.E., 80 feet wide; thence Northwesterly along said Southwesterly line of Broadway S.E. about 65-99/100 feet to its intersection with the Southeasterly line of land conveyed to Lorin S. Sheets by deed dated April 2, 1902 and recorded in Volume 830, Page 29 of Cuyahoga County Records; thence Southwesterly along the Southeasterly line of land so conveyed to Lorin S. Sheets, about 202-26/100 feet to the Northeasterly line of land conveyed to Vinc F. Hlavin and Louisa Hlavin by deed dated May 19, 1913, and recorded in Volume 1465, Page 415 of Cuyahoga County Records; thence Southeasterly along the Northeasterly line of land so conveyed about 62-81/100 feet to the Northwesterly line of Fleet Avenue, S.E.; thence Northeasterly along said Northwesterly line of Fleet Avenue, S.E., about 202-29/100 feet to the place of beginning, be the same more or less, but subject to all legal highways.

PPN: 133-21-010

Parcel No. 5

Situated in the City of Cleveland, County of Cuyahoga and State of Ohio, and known as being part of Original One Hundred Acre Lot No. 319, bounded and described as follows: Beginning in the Northwesterly line of Fleet Avenue, S.E. (80 feet wide) as dedicated by plat recorded in Volume 120 of Maps, Page 40 of Cuyahoga County Records at the most Southerly corner of a parcel of land conveyed to Ladislaus J. Sternicki by deed dated October 19, 1935 and recorded in Volume 4560, Page 237 of Cuyahoga County Records; thence South 49° 56' 45" West along said Northwesterly line, 65.94 feet to a point of curvature; thence Southwesterly along said Northwesterly line being a curved line deflecting to the right having a radius of 259.22 feet; a chord which bears South 54° 12' 27" West 38.53 feet, an arc distance of 38.56 feet to the Easterly line of a parcel of land conveyed to Anton Kotkowski and Agnes Kotkowski by deed dated May 7, 1923 and recorded in Volume 2801, Page 498 of Cuyahoga County Records; thence North 3° 55' 23" West along said Easterly line and along the Easterly line of a parcel of land conveyed to Leon Slabowski and Franciszka Slabowski by deed dated July 24, 1920 and recorded in Volume 2446, Page 395 of Cuyahoga County Records, and along the Easterly line of a parcel of land conveyed to Michael Wpyszak by deed dated September 22, 1923 and recorded in Volume 2952, Page 428 of Cuyahoga County Records, and along the Easterly line of a parcel of land conveyed to Josef F. Szostek and Maryanna Szostek by deed dated July 6, 1936 and recorded in Volume 4634, Page 242 of Cuyahoga County Records and along the Easterly line of a parcel of land conveyed to Mary Janka by deed dated August 28, 1920 and recorded in Volume 2441, Page 344 of Cuyahoga County Records and along the Easterly line of a parcel of land conveyed to Paulina Piotrowski by deed dated April 20, 1908 and recorded in Volume 1151, Page 101 of Cuyahoga County Records, 173.25 feet to a stone at an angle in said parcel last aforesaid; said stone being at the most Westerly corner of a parcel of land conveyed to John Kornatowski and Mary Kornatowski by deed dated April 19, 1919 and recorded in Volume 2184, Page 375 of Cuyahoga County Records; thence Southeasterly along the Southwesterly line of said parcel so conveyed to John Kornatowski and Mary Kornatowski and along the Southwesterly line of the parcel of land conveyed to Ladislaus J. Sternicki, as aforesaid, 142.81 feet to the place of beginning, be the same more or less, but subject to all legal highways.

PPN: 133-21-043

SCHEDULE B, PART II ITEMS

Table of Exceptions
COMMONWEALTH LAND TITLE INSURANCE COMPANY
SURETY TITLE AGENCY, INC.
Commitment No. 25-132N, Effective July 11, 2025

1 – 9 AFFECT SUBJECT PARCEL Nos. 1-5 BUT NOT A SURVEY MATTER, AND NOT SHOWN HEREON.

10 Deed from Gloria S. Babcock aka Gloria Babcock et al, Grantor, to Board of Trustees of The Cleveland Public Library, Grantee recorded in Volume 15211, Page 109 of Cuyahoga County Records, contains no dower release for the spouse of the Grantor Ronald Sternicki.
(AFFECTS SUBJECT PARCEL No. 4, BUT IS NOT A SURVEY MATTER AND IS NOT SHOWN HEREON.)

11 Subject to the rights of the public and others in and to that portion of the land described in Schedule A, that lies within the bounds of Broadway a dedicated highway.
(AFFECTS SUBJECT PARCEL Nos. 1 AND 2)

DEEDS OF RECORD

Land conveyed to Board of Trustees of the Cleveland Public Library by deed dated October 2, 1979 and recorded in Volume 15091, Page 471 of Cuyahoga County Records, and by deed dated December 4, 1979 and recorded in Volume 15211, Page 109 of Cuyahoga County Records.

UTILITY PROVIDERS

2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE 800-362-2764 or 811
OHIO UTILITIES PROTECTION SERVICE

OUPS Reference Nos.
A522702375, A522702378
Date: August 15, 2025

(CEI) The Illuminating Company
6896 Miller Road, Suite 101
Brecksville, Ohio 44141
Phone: 1-800-589-9800
Plans Received - GIS facilities map, onsite electric utility markings, Overhead Lines

City of Cleveland Division of Traffic
601 Lakeside Avenue, Suite 518
Cleveland, Ohio 44114
Phone: (216) 664-3196
Plans Not Received

First Energy Fiber
Plans Not Received

City of Cleveland Division of Water
2nd Floor Engineering / Mapping Unit
1201 Lakeside Avenue
Cleveland, Ohio 44114
Phone: (216) 664-2444 Ext. 5558
Plans Received - Water line records
Roll Maps 732-C and 2027-A
CWD Drawing Nos. 015 and 051

Enbridge Gas
(Formerly Dominion East Ohio Gas)
1201 East 55th Street
Cleveland, Ohio 44103
Phone: (877) 542-2630
Plans Received - GIS facilities map, onsite gas utility markings

Windstream Enterprises
Plans Received - GIS facilities map

City of Cleveland Public Power
1300 Lakeside Avenue
Cleveland, Ohio 44114
Phone: (216) 664-4277
Plans Not Received

City of Cleveland Division of Water Pollution Control
12302 Kirby Avenue
Cleveland, Ohio 44108
Phone: (216) 664-3785
Plans Received - See Survey Sheet 3 of 3

Lumen (Level 3 Communications)
Plans Received - GIS facilities map (Centurylink), Overhead Lines

Northeast Ohio Regional Sewer District
4747 East 49th Street
Cuyahoga Heights, OH 44125
Phone: (216) 641-6000
Plans Received - See Survey Sheet 3 of 3

Charter Communications
(Spectrum/Time Warner)
Plans Not Received

Zayo Fiber Solutions
Plans Not Received

AT&T Ohio
13630 Lorain Road, Room #200
Cleveland, OH 44111
Phone: (216) 476-6148
Plans Not Received

MCI Communications Inc.
Plans Not Received

UTILITY NOTE

Utility Provider source information from plans provided by the client, the title company and the utility provider and on ground utility markings will be combined with observed evidence of utilities to develop a view of those underground utilities. However, lacking excavation, the exact location of underground features cannot be accurately, completely and reliably depicted. The centerline of known utility lines shown hereon do not represent the true width of the utility line.

FLOOD NOTE

The Subject property appears to be situated in Zone "X", a minimum flood zone, and is not in a Special Flood Hazard Area as shown on the Federal Flood Map Community Number 390104 and Community Panel No. 39035C0184E, Effective: December 3, 2010.

FLOOD ZONE SHOWN HEREON IS BASED ON HISTORICAL FEMA FLOOD PLAIN MAPS. TO DETERMINE ACTUAL LOCATION WITHIN FLOOD ZONE A TOPOGRAPHIC SURVEY IS NEEDED.

PROPERTY AREA

Parcel Nos. 1-5
1.3607 Acre 59,271 Sq. Ft.

ZONING INFORMATION AND NOTES

CITY OF CLEVELAND
601 Lakeside Avenue, #501
Cleveland, Ohio 44114
216-664-2581

GENERAL DESCRIPTION
LR-C2 – Local Retail Business,
Broadway Design Review District

ADJACENT PROPERTY ZONING DISTRICT
LR-C2 – Local Retail Business
MF-C1 – Multi-Family

USES PERMITTED
REFER TO CHAPTER 343

MINIMUM LOT AREA
REFER TO CHAPTER 355

HEIGHT RESTRICTIONS
REFER TO CHAPTER 353

SETBACK REQUIREMENTS
REFER TO CHAPTER 357

PARKING REQUIREMENTS
REFER TO CHAPTER 349

ZONING REQUIREMENTS ARE SUBJECT TO INTERPRETATION, FOR FURTHER VERIFICATION OF ZONING INFORMATION CONTACT THE CITY OF CLEVELAND. **THE RIVERSTONE COMPANY WAS NOT PROVIDED A PLANNING AND ZONING REPORT AT THE DATE OF THE SURVEY.**

OBSERVED USE
Public Library

OBSERVED AREA
1.3607 Acre 59,271 Sq. Ft.

OBSERVED HEIGHT
Approximately 18.6 Feet

OBSERVED SETBACKS
Front- 35.2 feet
Side- 56.1 feet, 82.7 feet
Rear- 68.1 feet

OBSERVED STRIPED PARKING
Regular- 25
H/C- 3
Total- 28

SURVEYORS NOTES

1. All of the various survey monuments shown on this survey as found and/or used are in good condition, undisturbed, unless otherwise noted. 5/8" iron pins shown hereon as set will be set upon closing. (Table A, Item 1)
2. The Riverstone Company was not provided a Planning and Zoning Report (PZR) at the date of the survey. (Table A, Item 6a)
3. At the time of the field surveying there was no observable evidence of earth moving work, building construction or building additions within recent months. (Table A, Item 16)
4. At the time of the field surveying there was no observable evidence of changes in street right of way lines. (Table A, Item 17)
5. At the time of the field surveying there was no observable evidence of recent sidewalk construction or repairs. (Table A, Item 17)
6. At the time of the field surveying there was no observed evidence of site use as a solid waste dump, sump or sanitary landfill.
7. At the time of the field surveying there was no observable evidence of cemeteries or burial grounds.
8. Ownership of fences are unknown unless otherwise noted.
9. Dimensions on this plat are expressed in feet and decimal parts thereof unless otherwise noted.
10. This plat was prepared from a field survey, analysis of recorded plats, recorded deeds, and city survey records. Bearings shown hereon are to an assumed meridian and are intended to indicate angles only. Distances are given in feet and decimal parts thereof. All of which I certify to be correct to the best of my knowledge. I hereby certify I have surveyed the subject premises and prepared this drawing in accordance with the provisions of Chapter 4733-37 of the Ohio Administrative Code.

DRAWN BY

REM, BDK

SURVEYORS

BS

APPROVED

BS PS NO. 8740

2021 ALTA/NSPS CERTIFICATION

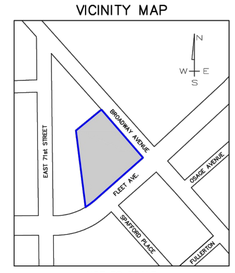
To The Board of Trustees of the Cleveland Public Library, Surety Title Agency, Inc., and Commonwealth Land Title Insurance Company:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 5, 6(a), 7(a), 7(b)(1), 7(b)(2), 8, 9, 11, 13, 14, 16, 17 and 19 of Table A thereof. The fieldwork was completed on August 22, 2025.

Brian Siebenthal — P.S. No. 8740 — September 8, 2025
Brian Siebenthal — P.S. No. 8740 — Date

STATE OF OHIO
BRIAN SIEBENTHAL
8740
REGISTERED
PROFESSIONAL SURVEYOR

VICINITY MAP



NOT TO SCALE

RIVERSTONE
LAND SURVEYING - ENGINEERING - DESIGN
3800 LAKESIDE AVENUE - SUITE 100
CLEVELAND - OHIO - 44114
PHONE: (216) 491-2000 FAX: (216) 491-9640
WWW.RIVERSTONESURVEY.COM

2025-235, PAGE 1 OF 3

7224 BROADWAY AVENUE

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Project:
FLEET BRANCH
RENOVATION AND
EXPANSION
7224 Broadway Ave Cleveland, OH 44105

Landscape Architect:
LayerCake Design
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Project No: 25-25
Drawn / Checked: KR/HJC

Issue: Bid & Permit 02.27.2026

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SURVEY
C001

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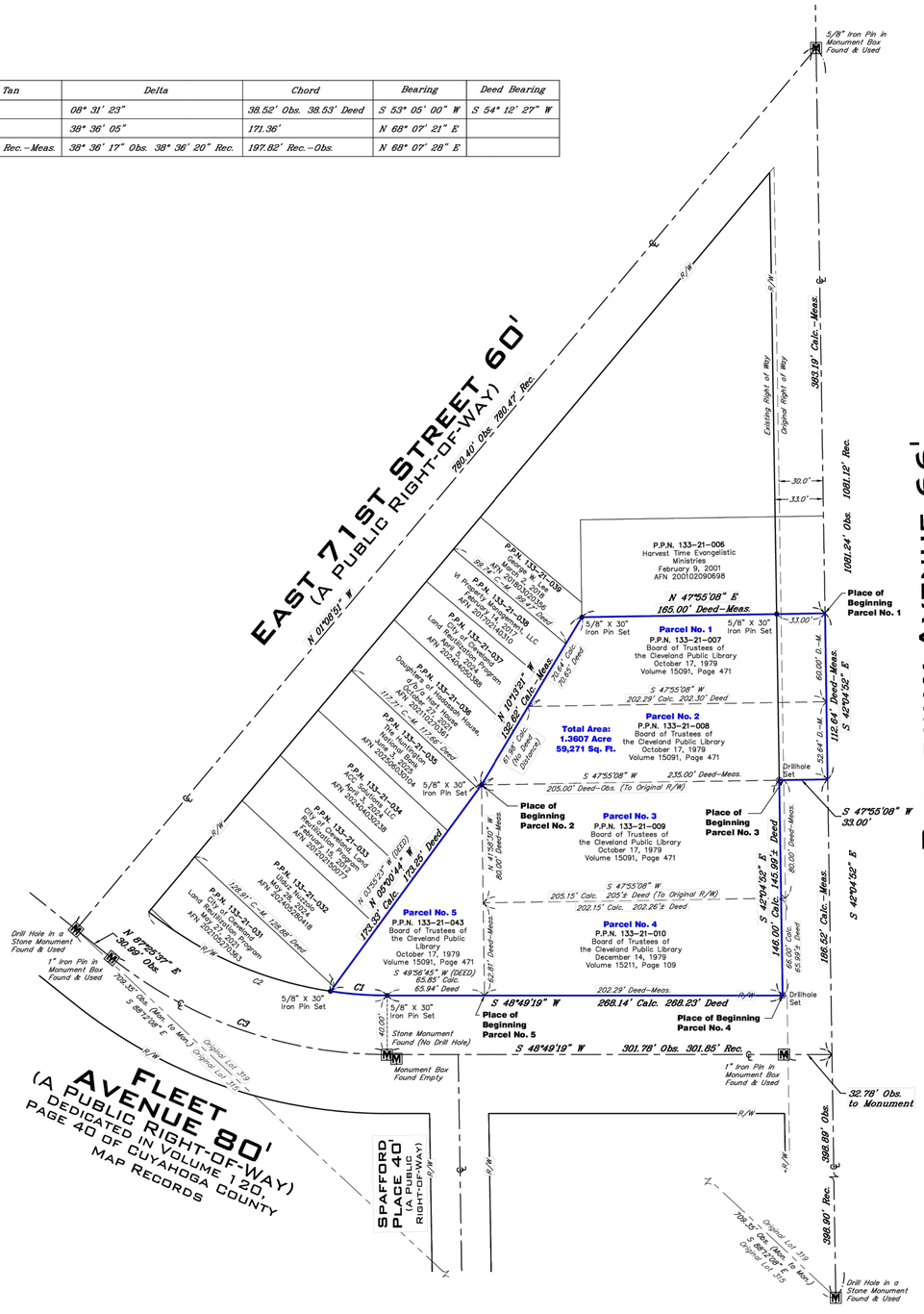
Curve Table

Curve #	Length	Radius	Tan	Delta	Chord	Bearing	Deed Bearing
C1	38.56' Deed-Meas.	259.22' Deed-Meas.	19.32'	08° 31' 23"	38.52' Obs. 38.53' Deed	S 53° 05' 00" W	S 54° 12' 27" W
C2	174.64'	259.22'	90.78'	38° 36' 05"	171.36'	N 68° 07' 21" E	
C3	201.61' Rec.-Meas.	299.22' Rec.-Meas.	104.80' Rec.-Meas.	38° 36' 17" Obs. 38° 36' 20" Rec.	197.82' Rec.-Obs.	N 68° 07' 28" E	



Legend

- = Monument Box Found
- o = Iron Pin Found
- = Iron Pipe Found
- = 5/8"x30" Iron Pin Set
- = Spike Set on P/L
- = Drill Hole Set / Found
- = Mag Nail Set / Found
- = Centerline

ALTA / NSPS LAND TITLE SURVEY

OF

7224 BROADWAY AVENUE
P.P.N. 133-21-007,
133-21-008, 133-21-009,
133-21-010, 133-21-043

(BOUNDARY CONTROL)

Basis of Bearings

Bearings shown hereon are based on Ohio State Plane Coordinate System, North Zone, NAD 1983, US Feet

Note

Some legal descriptions within Schedule A of the title commitment read in a counterclockwise direction. For the sake of clarity, perimeter survey bearings on this map are shown in a clockwise direction.

Survey References

1. Subject and adjoining deeds as shown
2. Fleet Ave. S.E. and Spafford Pl. S.E. Dedication, Volume 120, Page 40 of Cuyahoga County Map Records

GRAPHIC SCALE

40 0 20 40

(IN FEET)
1 inch = 40 ft.

7224 BROADWAY AVENUE

RIVERSTONE
LAND SURVEYING - ENGINEERING - DESIGN
3800 LAKESIDE AVENUE - SUITE 100
CLEVELAND - OHIO - 44114
PHONE: (216) 491-2000 FAX: (216) 491-9640
WWW.RIVERSTONESURVEY.COM

2025-235, PAGE 2 OF 3

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Project:
FLEET BRANCH RENOVATION AND EXPANSION
7224 Broadway Ave Cleveland, OH 44105

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www.bialosky.com

Project No: 25-25
Drawn / Checked: KR/HJC

Issue: Bid & Permit 02.27.2026

SURVEY
C002

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ALTA / NSPS LAND TITLE SURVEY

OF

7224 BROADWAY AVENUE
P.P.N. 133-21-007, 133-21-008, 133-21-009, 133-21-010, 133-21-043

(EXISTING CONDITIONS, TOPOGRAPHY AND UTILITIES)

LEGEND

- M = Monument Box Found
- = Iron Pin Found
- = Iron Pipe Found
- = 5/8"x30" Iron Pin Set
- = Spike Set on P/L
- = Drill Hole Set / Found
- = Mag Nail Set / Found
- = Gas Meter
- = Gas Valve / Shut Off
- = Utility Pole
- = Light Pole
- = Traffic Pole
- = Ground Light
- = Guy Anchor & Line
- = Flag Pole
- = Electric Meter
- = Electric Manhole
- = Electric Box
- = Transformer
- = Air Conditioning Unit
- = Telephone Box / Manhole
- = Cable Box / Manhole
- = Traffic Control Box
- = Tree
- E(1) = Encroachments
- V(1) = Violations
- 722.71 = Existing Spot Elevation Tag
- PROPOSED 722.71 = Proposed Spot Elevation Tag
- = Hydrant
- = Stand Pipe
- = Water Service Valve
- = Water Line Valve
- = Water Meter
- = Water Manhole
- = Sanitary Manhole
- = Clean Out
- (UM) = Unknown Manhole
- = Storm Manhole
- = Catch Basin
- = Yard Basin
- = Curb Inlet
- = Trench Drain
- = Traffic Flow/Access
- = Sign Post
- = Bollard
- = Handicap Parking
- (M) = Monitoring Well
- = Centerline
- = Property Line
- 1 = Easement No.

Parcel / Sublot line
Original Parcel / Sublot Line
Original Lot / Section Line
Centerline
Subject Property Line
Right-of-way Line
Easement Line
Waterline — W — Water Line
Gas Line — G — Gas Line
Overhead Utility Line — OH — Overhead Lines
Electric Line — UE — Electric Line
Sanitary Sewer — San — Sanitary Line
Storm Sewer — Strm — Storm Line
Telephone Line — T — Telephone
Railroad Tracks
Chain Link Fence
Ornamental Fence
Split Rail Fence
Vinyl Fence
Wood Fence
Guardrail
Tree or Brush Line

ABBREVIATIONS

A	Arc Length	N.	North
Adj.	Adjacent	N/A	Not Available
Asph.	Asphalt Pavement	O.D.O.T	Ohio Department of Transportation
BSMT. F.	Basement Floor	O.U.P.S.	Ohio Utility Protection Service
B.N.	Building Number		
Bldg.	Building		
B/W	Bottom of Wall	O.L.	Original Lot
C.C.M.R.	Cuyahoga County Map Records	O.R.	Official Record
		Obs.	Observed
C.L.F.	Chain Link Fence	Ord.	Ordinance
Calc./C.	Calculated	P.C.	Point of Curvature
CB	Catch Basin	P.I.	Point of Intersection
Cl.	Class	P.T.	Point of Tangency
CH	Chord	P.O.B.	Place of Beginning
Clr.	Clears	P.P.N.	Permanent Parcel Number
CMP	Corrugated Metal Pipe	P.P.O.B.	Principal Place of Beginning
Conc.	Concrete		
Conn.	Connection	Pcl.	Parcel
CPP	Corrugated Plastic Pipe	P/L	Property Line
		Prop.	Proposed
D.H.	Drill Hole	PVC	Polyvinyl Chloride Pipe
D.I.W.M.	Ductile Iron Water Main	R/W	Right-of-Way
		RCP	Reinforced Concrete Pipe
D.V.	Deed Volume		
Doc.	Document	Rec./R.	Record
E.	East	Res.	Residence
Elec.	Electric	S.	South
Elev.	Elevation	S/L	Sublot
Encr.	Encroachment	San.	Sanitary
Ex.	Existing	Sp.	Parking Spaces
F.F.	Finished Floor	Sq.Ft.	Square Feet
G.F.	Garage Floor	Sta.	Station
Gar.	Garage	Stm.	Storm
Gut	Gutter	Sty.	Story
H.N.	House Number	T/Tele.	Telephone
Inst.	Instrument	T.F.	Top of Footer
Inv.	Invert Elevation	T/C	Top of Curb
L.C.A.	Limited Common Area	TBM	Temporary Benchmark
		TBR	To Be Removed
L.F.	Linear Feet	T/W	Top of Wall
L/S	Landscape	Typ.	Typical
Meas./M.	Measured	VCP	Vitrified Clay Pipe
MH	Manhole	V/Vol.	Volume
		W.	West

NOTE

N1 Overhead utility wires cross the westerly line of subject premises without benefit of any known easement or right of way.

POSSIBLE ENCROACHMENTS

E1 Chain link fence extends over the westerly line of subject premises by approximately 1.9 foot.

E2 Chain link fence extends over the westerly line of subject premises by approximately 4.3 feet.

E3 Public concrete pad and bus shelter extend over the southwesterly right of way of Broadway Avenue and onto the subject premises by approximately 7.0 feet.

E4 Public concrete walk extends over the southwesterly right of way of Broadway Avenue and northwesterly right of way of Fleet Avenue, and onto the subject premises, by approximately 3.4 feet.

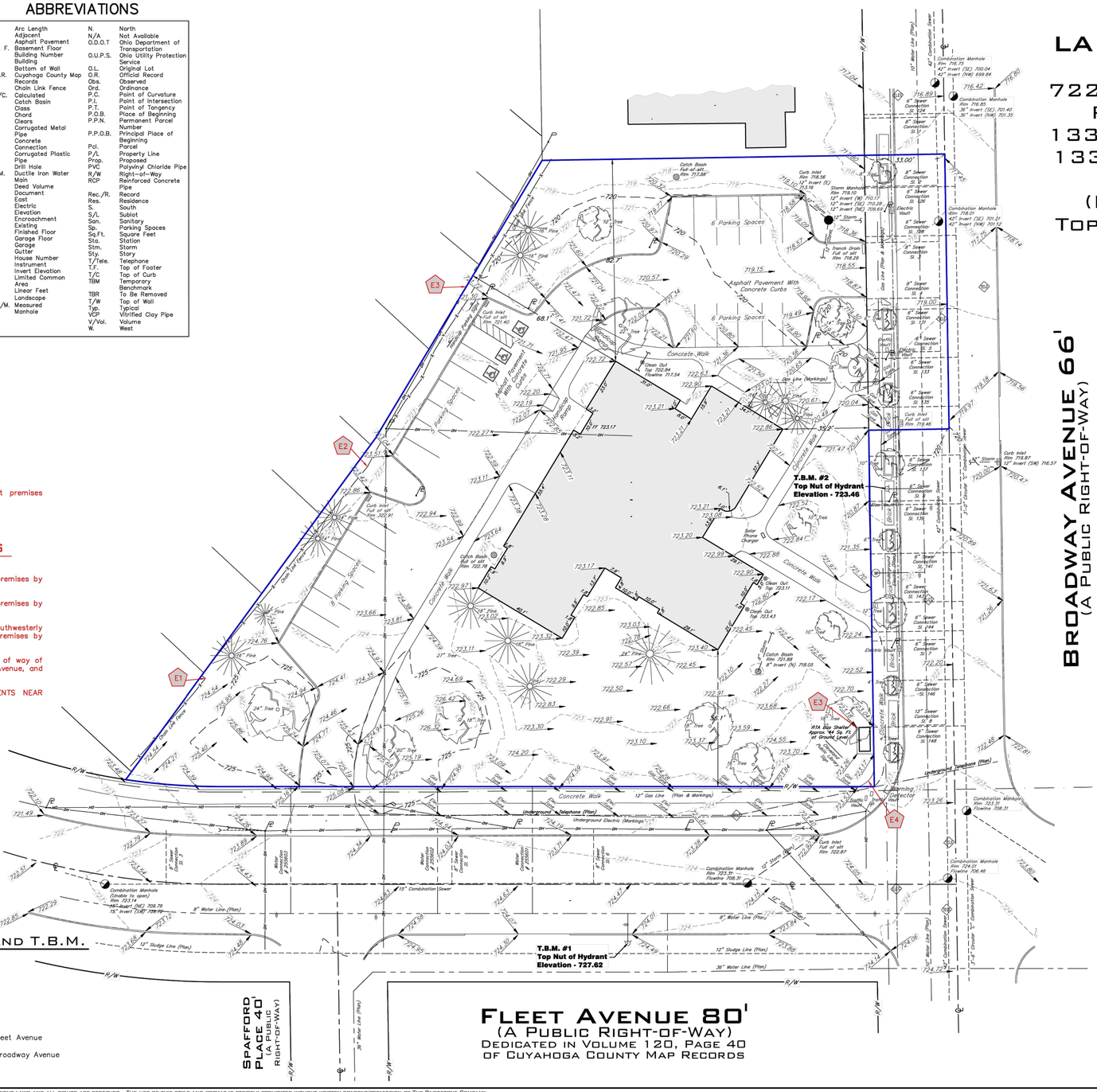
PLEASE NOTE – CERTAIN LOCATIONS AND ENCROACHMENTS NEAR PROPERTY LINES HAVE BEEN EXAGGERATED

VERTICAL CONTROL MONUMENT AND T.B.M.

(VRS Virtual Reference Station August 22, 2025)

The horizontal component of the VRS network is based on the NAD83 (CORS96) reference frame;
The vertical component of the VRS network is based on NAVD88 as determined by the NGS (National Geodetic Survey).

T.B.M. No. 1	Elevation: 727.62' (NAVD 1988) Top nut of hydrant on southeast side of Fleet Avenue
T.B.M. No. 2	Elevation: 723.46' (NAVD 1988) Top nut of hydrant on southwest side of Broadway Avenue
Definitions	NAVD– North American Vertical Datum



SEWER REFERENCE

Sewer Connection Data:
City of Cleveland Division of Water Pollution Control (WPC)
Northeast Ohio Regional Sewer District (NEORSD)

Fleet Avenue:
Connection Book 39, Page 192
Slant 3, 75 feet East from Manhole 3
Depth of Slant: 11 feet
Slant 5, 142 feet East from Manhole 3
Depth of Slant: 10 feet
Slant 6, 200 feet East from Manhole 3
Depth of Slant: 9.5 feet

WPC Drawing No. 18445
WPC Drawing L–2526
Plan & Profile – Fleet Avenue STA. 82+50 to Ending (Sheet 93 of 270)

Broadway Avenue:
Connection Book 6, Page 272
Slant 126, 37 feet South from Manhole 8
Slant 128, 57 feet South from Manhole 8
Slant 131, 87 feet South from Manhole 8
Slant 133, 107 feet South from Manhole 8
Slant 135, 127 feet South from Manhole 8
Slant 137, 147 feet South from Manhole 8
Slant 139, 167 feet South from Manhole 8
Slant 141, 187 feet South from Manhole 8
Slant 143, 207 feet South from Manhole 8
Slant 144, 219 feet South from Manhole 8
Slant 146, 239 feet South from Manhole 8
Slant 148, 258 feet South from Manhole 8
Depths of Slant not specified in Connection Book

Connection Book 46, Pages 105–106
Slant 1, 14 feet East from Manhole 2
Slant 2, 42 feet East from Manhole 2
Slant 3, 65 feet East from Manhole 2
Slant 4, 88 feet East from Manhole 2
Slant 5, 110 feet East from Manhole 2
Slant 6, 171 feet East from Manhole 2
Slant 7, 228 feet East from Manhole 2
Slant 8, 263 feet East from Manhole 2
All Depths of Slant: 14 feet

WPC Drawing A–831, Sheet 1 of 3
WPC Drawing L–10758
WPC Drawing L–3215B
NEORSD Drawing – Southerly Interceptor, Broadway Branch Sheets C–004 and C–005

GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 inch = 20 ft.

RIVERSTONE
LAND SURVEYING - ENGINEERING - DESIGN
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CLEVELAND, OHIO - 44114
PHONE: (216) 491-2000 FAX: (216) 491-9640
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2025-235, PAGE 3 OF 3

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Drawn / Checked: KR/HJC

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LEGEND

SCAN AREA			
C	COMM	SS	SANITARY
C◊	COMM MULTI	ST	STORM
E	ELECTRICAL	U	UNKNOWN
E◊	ELEC MULTI	W	WATER
SL	SITE LIGHT		CONDUIT
G	GAS		SEAMS/JOINTS
V	COMM VAULT	SC	SAN CLEANOUT
B	ELEC BOX	S	SAN MANHOLE
	POWERPOLE	CB	CATCH BASIN
LP	SITE LIGHT	CB	CATCH BASIN
T	TRANSFORMER	SC	STRM CLEANOUT
	UTILITYPOLE	ST	STRM MISC
M	GAS METER	D	ROOFDRAIN
	GAS VALVE	U	UNKN MISC
X	END OF INFO	H	HYDRANT
	LINE CONTINUES	M	WATER METER
D=	DEPTH	Ø=	DIAMETER

0 30' 60'

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FOR INFORMATION ONLY

GPRS UTILITY FINDINGS MAP

PREPARED FOR:
CLEVELAND PUBLIC LIBRARY - FLEET BRANCH

LOCATION:
CLEVELAND PUBLIC LIBRARY - FLEET BRANCH
7224 BROADWAY AVE
CLEVELAND, OH 44105

DRAWN BY: BRYCE.STEER

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DRAWING NO.	1	REV.	0

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LEGEND

SCAN AREA	
C — COMM	SS — SANITARY
C◊ — COMM MULTI	ST — STORM
E — ELECTRICAL	U — UNKNOWN
E◊ — ELEC MULTI	W — WATER
SL — SITE LIGHT	— — CONDUIT
G — GAS	SEAMS/JOINTS
V — COMM VAULT	SC — SAN CLEANOUT
B — ELEC BOX	S — SAN MANHOLE
POWERPOLE	CB — CATCH BASIN
SL — SITE LIGHT	CB — CATCH BASIN
T — TRANSFORMER	CA — STRM CLEANOUT
UTILITYPOLE	ST — STRM MISC
M — GAS METER	D — ROOFDRAIN
GAS VALVE	U — UNKN MISC
X — END OF INFO	F — HYDRANT
LINE CONTINUES	M — WATER METER
D= DEPTH	Ø= DIAMETER

0 15' 30'

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GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ANY REQUIRED PERMITS AND APPROVALS PRIOR TO STARTING CONSTRUCTION. AN ORIGINAL PERMIT WITH SIGNATURES SHALL BE KEPT ONSITE AT ALL TIMES.

2. ALL CONSTRUCTION SHALL COMPLY WITH LOCAL MUNICIPALITY AND COUNTY CODES AND STANDARDS. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE OSHA, FEDERAL STATE, AND LOCAL REGULATIONS.

3. THE CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS IN THE FIELD AND CONTACT THE OWNER IF THERE ARE ANY QUESTIONS OR CONFLICTS REGARDING THE CONSTRUCTION DOCUMENTS AND/OR FILED CONDITIONS SO THAT APPROPRIATE REVISIONS CAN BE MADE PRIOR TO CONSTRUCTION.

4. INFORMATION ON EXISTING UTILITIES HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY COMPANY, MUNICIPALITY RECORDS, AND FIELD SURVEY, AND IS NOT GUARANTEED CORRECT OR COMPLETE. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AS WELL AS THE ACTUAL LOCATION, ALIGNMENT, AND ELEVATIONS OF ALL EXISTING UTILITIES WITHIN AND ADJACENT TO THE GENERAL LIMITS OF THESE IMPROVEMENTS INCLUDING WATERLINES, SANITARY AND STORM SEWERS, GAS LINES, COMMUNICATION LINES/BANKS, ELECTRIC LINES, ETC. THIS MAY REQUIRE EXPLORATORY EXCAVATIONS TO BE PERFORMED BY THE CONTRACTOR FOR WHICH HE WILL NOT BE REIMBURSED. THE CONTRACTOR SHALL NOT ASSUME EXISTING UTILITIES WERE INSTALLED AT TYPICAL DEPTHS OR AT UNIFORM SLOPES, GRADES OR DEPTHS BETWEEN ACCESS POINTS (I.E. CATCH BASINS, MANHOLES).

5. THE CONTRACTOR SHALL DOCUMENT ANY UTILITY NOT SHOWN OR DIFFERING FROM THE CONSTRUCTION PLANS, AND PROVIDE THE INFORMATION TO THE OWNER SHOWING LOCATIONS WITH MEASUREMENTS TO REFERENCE POINTS. ANY RESULTING UTILITY CONFLICTS WITH PROPOSED IMPROVEMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNER AND DESIGN ENGINEER.

6. CONTRACTOR SHALL VERIFY ALL DIMENSIONS TO THE PROJECT PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LAYOUT WORK. THE CONTRACTOR SHALL NOTIFY THE ENGINEER SHOULD ANY DISCREPANCY REGARDING THE PROPOSED WORK OR UNFORESEEN CONDITIONS ARISE PRIOR TO PROCEEDING ANY FURTHER WITH THE AFFECTED WORK. ALL MODIFICATIONS TO THE NOTES OR THE WORK SHOWN IN THE PLANS MUST HAVE PRIOR WRITTEN APPROVAL FROM THE ENGINEER.

7. CONTRACTOR SHALL USE CAUTION WHILE WORKING NEAR EXISTING UNDERGROUND UTILITIES.

8. THE CONTRACTOR SHALL NOT INTERRUPT ANY EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE OWNER OR OTHERS EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER, LOCAL MUNICIPALITY AND/OR UTILITY COMPANY. IF ANY UTILITIES ARE AFFECTED TEMPORARILY WITH APPROVAL, THE CONTRACTOR SHALL COORDINATE WITH THE OWNER, LOCAL MUNICIPALITY AND/OR UTILITY COMPANY IN NO LESS THAN 72 HOURS PRIOR TO PLANNED OUTAGE. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THE EXISTING UTILITIES SUCH AS WATER, STORM, OR SANITARY SYSTEMS RESULTING FROM NON-CONFORMANCE WITH THE APPLICABLE STANDARD OR GENERAL NEGLIGENCE. FAILURE BY THE CONTRACTOR TO VERIFY AND/OR DETERMINE EXISTING INFORMATION WILL RESULT IN THE CONTRACTOR BEING RESPONSIBLE FOR ANY CHANGES OR REPAIRS NECESSARY TO COMPLETE THE WORK SPECIFIED WITHOUT ADDITIONAL COMPENSATION.

9. THE CONTRACTOR SHALL REPLACE OR CORRECT ANY DEFECTS IN THE CONSTRUCTION, INCLUDING MATERIALS OR WORKMANSHIP, BY REMOVAL AND REPLACEMENT OR OTHER APPROVED METHODS PRIOR TO ACCEPTANCE WITH NO ADDITIONAL COMPENSATION.

10. THE BUILDING WILL REMAIN IN USE DURING THE COURSE OF THIS WORK. SAFE PEDESTRIAN ACCESS AROUND, IN AND OUT OF THE BUILDING MUST BE MAINTAINED. THE CONTRACTOR SHALL PROVIDE BARRIERS AND ENCLOSURE NECESSARY TO ENSURE SAFE ACCESS.

11. ANY EXISTING ROADWAY, PAVEMENT, CURB, SIDEWALK, WALKWAY, LAWN, SIGN, FENCE, LANDSCAPING, LIGHT POLES, LANDSCAPE ISLANDS, UNDERGROUND UTILITIES, FIRE HYDRANTS, DRAINAGE STRUCTURES, OR OTHER SITE FEATURES DISTURBED DURING DEMOLITION AND/OR CONSTRUCTION, BUT NOT SPECIFICALLY DESIGNATED ON THE PLANS FOR REMOVAL OR RELOCATION, SHALL REMAIN IN PLACE AND BE PROTECTED BY THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO THESE ITEMS. ANY SUCH FEATURES DISTURBED OR DAMAGED SHALL BE RESTORED, REPAIRED, OR REPLACED BY THE CONTRACTOR, AT NO ADDITIONAL COST TO THE OWNER, TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO CONSTRUCTION, AND TO THE SATISFACTION OF THE OWNER AND APPLICABLE LOCAL AND STATE AUTHORITIES.

12. APPROPRIATE BARRICADES, SIGNS, FENCING, ETC, SHALL BE ERECTED AROUND THE CONSTRUCTION AREA DURING ALL NON-WORKING HOURS TO ALERT PERSONS OF THE POTENTIAL DANGER ASSOCIATED WITH THE AREA UNDER CONSTRUCTION.

13. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN ACCESS TO THE FACILITY AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING TRAFFIC CONTROL DEVICES AS REQUIRED OR DIRECTED BY THE ENGINEER, OWNER, AND/OR LOCAL GOVERNING AUTHORITIES. NO TEMPORARY TRAFFIC CONTROL DEVICES SHALL INTERFERE WITH OTHER EXISTING DRIVE APPROACHES OR SIGNAGE.

14. THE CONTRACTOR SHALL MAINTAIN A SAFE WORKING ENVIRONMENT AT ALL TIMES AND IS SOLELY RESPONSIBLE FOR DESIGN AND CONSTRUCTION OF STABLE, TEMPORARY EXCAVATIONS PER LOCAL, STATE, AND FEDERAL REGULATIONS INCLUDING OSHA (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION), NEITHER THE OWNER OR DESIGN ENGINEER ASSUME RESPONSIBILITY FOR CONSTRUCTION SAFETY OF THE CONTRACTOR'S OR OTHER PARTIES' COMPLIANCE WITH SAFETY REGULATIONS; SUCH RESPONSIBLY IS NOT BEING IMPLIED AND SHOULD NOT BE INFERRED.

15. ALL WORK WITHIN AND OUTSIDE THE PUBLIC RIGHT-OF-WAY IS SUBJECT TO INSPECTION BY THE CITY, COUNTY, AND OWNER. THE CITY, COUNTY, AND OWNER RESERVE THE RIGHT TO HALT CONSTRUCTION ACTIVITY FOR NONCONFORMANCE OF CONSTRUCTION PLANS, SPECIFICATIONS OR OTHER APPLICABLE STANDARDS OR REGULATIONS. NO WORK SHALL BE PERFORMED WITHOUT AN AUTHORIZED INSPECTOR PRESENT, UNLESS OTHERWISE APPROVED.

16. THE CONTRACTOR SHALL STAY WITHIN THE DESIGNATED PROPERTIES, EASEMENTS, RIGHT-OF-WAYS AND WORK AGREEMENTS PROVIDED FOR THE PROJECT AT ALL TIMES. NO MATERIAL SHALL BE STORED NOR ANY WORK PERFORMED ON PRIVATE PROPERTY UNLESS OTHERWISE APPROVED IN WRITING.

17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT STAKING INCLUDING HORIZONTAL AND VERTICAL CONTROL. ANY DISCREPANCIES DISCOVERED IN THE CONSTRUCTION PLAN INFORMATION, OR BETWEEN THE CONSTRUCTION PLAN AND ELECTRONIC DATA, SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE DESIGN ENGINEER SO THE APPROPRIATE ADJUSTMENTS MAY BE MADE PRIOR TO THE START OF CONSTRUCTION OR THE CONTINUATION OF THE SAME.

18. THE CONTRACTOR SHALL PRESERVE BENCHMARKS, PROPERTY LINE REFERENCES (E.G., PINS, MONUMENTS) AND CONTROL POINTS. IF DISTURBED, THE CONTRACTOR SHALL REPLACE THEM AT HIS EXPENSE. BE RESPONSIBLE FOR ERRORS CAUSED BY THEIR DISTURBANCE, AND FURNISH A CERTIFICATION BY A REGISTERED SURVEYOR THEY HAVE BEEN RESTORED.

19. THE CONTRACTOR SHALL MAINTAIN A CURRENT SET OF CONSTRUCTION PLANS ON SITE AT ALL TIMES.

CONCRETE NOTES AND SPECIFICALTION

1. ALL EXTERIOR SITE SPECIFIC PORTLAND CEMENT CONCRETE (PCC) (I.E. SIDEWALK, PAVEMENT OR CURBING) SHALL MEET THE MINIMUM REQUIREMENTS OF THE LATEST EDITIONS OF THE STATE DEPARTMENT OF TRANSPORTATION (DOT) AND THE AMERICAN CONCRETE INSTITUTE (ACI) SPECIFICATIONS USING THE RESPECTIVE ASTM STANDARDS FOR MATERIALS USED, MIXING, TRANSPORTATION, FORMING, PLACEMENT, CURING, AND SEALING. THE MINIMUM STRENGTH FOR NORMAL WEIGHT CONCRETE IS 4000 PSI AT 28 DAY STRENGTH. CONTRACTOR SHALL REFER TO DETAILS, NOTES, AND SPECIFICATIONS WITHIN THE CONSTRUCTION DOCUMENTS FOR VARIATIONS TO THIS SPECIFICATION. MIX DESIGN SHOP DRAWINGS SHALL BE TAILORED TO THE ACTUAL FIELD PLACEMENT CONDITIONS AND BE SUBMITTED TO THE CONSTRUCTION/PROJECT MANAGER IN ACCORDANCE WITH THE PROJECT REQUIREMENTS.

2. ALL JOINTS, INCLUDING SAWED JOINTS, SHALL BE SEALED. JOINTS SHALL BE CLEANED AND DRIED PRIOR TO SEALING. JOINT SEALING MATERIALS SHALL COMPLY WITH ASTM D 6690 FOR HOT APPLIED ELASTOMERIC, ASTM D 5893 TYPE NS FOR SILICONE RUBBER, AND TT-S-00230C FOR SINGLE COMPONENT ELASTOMERIC. SEALER WIDTH, DEPTH, AND PREPARED APPLICATION SURFACES SHALL BE PER MANUFACTURES RECOMMENDATIONS. JOINT FILLER MATERIAL SHALL CONFORM TO ASTM D1751 OR ASTM D8139 AND EXTEND THE FULL DEPTH OF CONTACTING SURFACE.

3. ALL CONCRETE PANELS SHALL BE SQUARE WITH A LENGTH TO WIDTH RATIO NO GREATER THAN 1.25 TO 1 AND HAVE A MEDIUM BROOM FINISH (TRANSVERSE, SLIP RESISTANT FOR PEDESTRIAN PATHWAYS) WHICH SHALL BE TO MINIMUM STRENGTH PRIOR TO OPENING FOR VEHICULAR TRAFFIC AREAS. STAGGERED/OFFSET JOINT, INTERIOR CORNERS, ANGLES LESS THAN 60 DEGREES, SLABS LESS THAN 18-INCHES WIDE, AND ODD SHAPES SHALL NOT BE PERMITTED. BLOCKOUTS AROUND ALL PAVEMENT CASTINGS SHALL BE PROVIDED IN ACCORDANCE WITH ACI RECOMMENDATIONS.

4. REFER TO ACI INDUSTRY STANDARDS FOR CONCRETE PLACEMENT AND INSTALLATION. CONTRACTOR SHALL INCLUDE PROVISIONS IN ACCORDANCE WITH ACI 305R AND 306R FOR HOT AND COLD WEATHER PLACEMENT WHEN PROJECT SCHEDULE TIMING FALLS WITHIN THE REQUIRED TEMPERATURE RANGES PER ACI AND THE LOCAL DOT.

DEMOLITION NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL LOCAL AND STATE PERMITS FOR DEMOLITION WORK.

2. CONTRACTOR SHALL PERFORM ALL CLEARING, GRUBBING, REMOVALS OF TREES, STUMPS, VEGETATION, AND DEBRIS NECESSARY TO PERFORM THE WORK INDICATED IN THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL LIMIT LAND DISTURBANCE TO ONLY THE REQUIRED TO COMPLETE THE PROPOSED IMPROVEMENTS.

3. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL TRASH, DEBRIS AND ORGANIC MATERIAL IN ACCORDANCE WITH THE CITY, STATE AND FEDERAL REGULATIONS.

4. ALL MATERIALS THAT ARE REMOVED AND DEMOLITIONS SHALL BE REMOVED FROM THE SITE AND DISPOSED OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE LAWS, REGULATIONS, AND ORDINANCES. NO CLEARED OR GRUBBED MATERIAL SHALL BE BURNED, BURIED OR LEFT ON THE SITE.

5. MATERIALS TO BE SALVAGED AS NOTED IN THE PLANS SHALL BE STORED TO THE OWNER'S SATISFACTION, AS APPLICABLE.

6. ALL ITEMS THAT ARE INDICATED TO REMAIN IN THE PLANS SHALL BE PROTECTED FROM DAMAGE AND/OR SOILING THROUGHOUT CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH THE OWNER AS NEEDED FOR THE SUITABLE STORAGE OF ITEMS THAT ARE PERMITTED TO BE REMOVED DURING THE CONSTRUCTION AND THEN REINSTALLED IN THEIR ORIGINAL LOCATIONS.

7. ALL UTILITIES INDICATED TO REMAIN IN SERVICE SHALL BE PROTECTED AGAINST DAMAGE THROUGHOUT DEMOLITION AND CONSTRUCTION.

8. ANY UTILITY TO BE REMOVED, RELOCATED, SHUT-OFF, AND/OR RECONNECTED BY THE RESPECTIVE UTILITY COMPANY SHALL BE COORDINATED BY THE CONTRACTOR.

9. ALL EXCAVATIONS RESULTING FROM UTILITY REMOVAL SHALL BE BACKFILLED WITH PREMIUM GRANULAR MATERIAL MEETING ODOT ITEM 304.

10. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE RESPECTIVE UTILITY COMPANY AND/OR LOCAL AUTHORITIES FOR ANY UTILITY TO BE REMOVED, RELOCATED, SHUT-OFF, AND/OR RECONNECTED.

11. EXISTING ASPHALT AND CONCRETE PAVEMENT, SIDEWALK CURB, GUTTER ETC, TO BE REMOVED ADJACENT TO AREAS TO REMAIN SHALL BE WET SAW CUT IN A NEAT AND STRAIGHT LINE PRIOR TO EXCAVATION AND REMOVED FULL DEPTH AT NEAREST EXISTING JOINTS OR AT LIMITS AS SHOWN ON THE CONSTRUCTION PLANS. PAVEMENT SHALL BE REMOVED WITHOUT DAMAGING OR UNDERMINING THE PAVEMENT TO REMAIN. IF ADJACENT PAVEMENT IS DAMAGED, THE CONTRACTOR SHALL MAKE ADDITIONAL SAW CUTS, REMOVE THE DAMAGED AREAS AND REPAIR AS NECESSARY WITH NO ADDITIONAL COMPENSATION.

12. CONTRACTOR SHALL USE SUITABLE METHODS TO LIMIT DUST AND DIRT TO ADJACENT STRUCTURES OR PROPERTY. CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL ADJACENT AREAS TO EXISTING CONDITIONS.

13. ALL EXISTING TREES TO REMAIN SHALL BE PROTECTED AT ALL TIMES.

14. CONTRACTOR TO REFER TO SPECIFICATIONS 01 22 00 - UNIT PRICES FOR COMPENSATION FOR UNDERCUT AND BACKFILL OF UNSUITABLE SOILS

GRADING NOTES

1. THE CONTRACTOR SHALL PROTECT STRUCTURES, UTILITIES, PAVEMENTS AND WALKS TO REMAIN FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING OR WASHOUT CREATED BY EARTH MOVING OPERATIONS. RUNOFF FROM DISTURBED AREAS SHALL BE DIVERTED AWAY FROM DAMAGING ANY DRAINAGE FACILITIES.

2. EXPOSED PAVEMENT SUBGRADE AREAS SHALL BE MAINTAINED IN CONDITIONS TO PREVENT PONDING OF WATER AFTER RAINS.

3. THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION WHERE POSSIBLE AND/OR AS NOTED ON DRAWINGS.

4. SUITABLE TOPSOIL SHALL BE STRIPPED AND STOCKPILED TO WHATEVER DEPTH ENCOUNTERED AND IN A MANNER TO PREVENT INTERMINGLING WITH UNDERLYING SUBSOIL FOR USE IN FINAL LANDSCAPING AREAS.

5. SOIL SHALL NOT BE STOCKPILED NEAR THE EDGE OF EXCAVATIONS OR WITHIN DRIP LINES OF TREES TO REMAIN.

6. CONTRACTOR SHALL OBTAIN APPROVED BORROW SOIL MATERIALS OFF-SITE, IF THERE IS INSUFFICIENT SUITABLE SOIL MATERIAL PRESENT ON-SITE.

7. CONTRACTOR SHALL PERFORM ALL PAVEMENT EXCAVATION AND EMBANKMENT.

8. MANHOLE RIMS AND CATCH BASINS SET TO REMAIN SHALL BE ADJUSTED TO THE ELEVATIONS SHOWN WHEN APPLICABLE. ALL EXISTING MANHOLE FRAMES AND COVERS, CATCH BASIN GRATES, VALVE BOXES, SHALL BE RAISED/OR LOWERED, TO THE PROPOSED FINISH GRADE, FLUSH WITH THE ADJACENT GRADE.

9. FROST SLABS, LANDING, DRIVEWAYS AND SIDEWALKS THAT ABUT BUILDINGS SHALL SLOPE AWAY FROM THE BUILDING AT 1.00% MINIMUM, OR AS SHOWN ON THE GRADING PLANS.

10. THE CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTING THE LINES AND GRADES ILLUSTRATED WITHIN THE PLAN SET. THE CONTRACTOR TO INCLUDE ALL SOIL IMPORT OR EXPORT NECESSARY TO ATTAIN THE LINES AND GRADES ILLUSTRATED HEREIN WITHIN THE BASE BID OF THE PROJECT WITH NO ADDITIONAL COST FOR SOIL IMPORT OR EXPORT.

11. ADA GRADING NOTES (WERE APPLICABLE):

    11.1 MAX. CONSTRUCTED WALK CROSS SLOPE SHALL NOT BE MORE THAN 2.0%.
    11.2 MAX. CONSTRUCTED WALK RUNNING SLOPE SHALL NOT BE MORE THAN 5.0%.
    11.3 MAX. CONSTRUCTED SLOPE IN ANY DIRECTION WITHIN ADA PARKING, RAMP LANDINGS, AND LOADING AREAS SHALL NOT BE MORE THAN 2.0%.
    11.4 CONTRACTOR SHALL VERIFY ALL GRADES IN THE ADA AREAS PRIOR TO CONSTRUCTION AND NOTIFY THE CONSTRUCTION/PROJECT MANAGER IF THEY DONT MEET ABOVE REQUIREMENTS.
    11.5 ANY CONSTRUCTED AREAS WITH SLOPES MORE THAN CODE ALLOWABLE WILL NOT BE ACCEPTED AND WILL REQUIRE THE CONTRACTOR TO REMOVE AND REPLACE AT NO ADDITIONAL COST TO THE PROJECT IN ORDER TO BE IN ACCORDANCE WITH CURRENT ADA REQUIREMENT.
    11.6 GAPS OR OPENINGS ALONG THE ACCESSIBLE ROUTE MUST NOT EXCEED ½ INCH WIDTH, PERPENDICULAR TO THE PREDOMINATE FLOW OF PEDESTRIAN TRAFFIC.
    11.7 CONTRACTOR SHALL ENSURE ALL ADA ACCESSIBLE PATHWAYS DO NOT EXCEED ¼ INCH IN VERTICAL DIFFERENCE PER ADA REQUIREMENTS.

UTILITY NOTES

1. EXISTING SITE UNDERGROUND UTILITIES SHOWN ARE BASED ON GPRS UTILITY FINDINGS, SURVEY INFORMATION, AND EXISTING PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES IN THE FIELD PRIOR TO COMMENCING ANY WORK.

2. THE CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO ADJOINING PROPERTIES WITHOUT INTERRUPTION. IF SERVICE IS DISRUPTED, THE CONTRACTOR SHALL IMMEDIATELY RECTIFY THE SITUATION WITH NO ADDITIONAL COMPENSATION.

3. THE CONTRACTOR SHALL PROTECT, SUPPORT AND SHORE UP ANY UTILITY ENCOUNTERED AND COORDINATE ALL WORK TO BE PERFORMED WITH EACH RESPECTIVE UTILITY COMPANY, INCLUDING WORK BEING PERFORMED DIRECTLY BY THE UTILITY COMPANIES, FOR MAIN OR SERVICE CONNECTIONS, DISCONNECTED, RELOCATIONS, DEMOLITION AND INSPECTIONS. THE CONTRACTOR SHALL SECURE AND PAY FOR ANY PERMITS, FEES AND UTILITY COMPANY CHARGES.

4. THE CONTRACTOR SHALL INSTALL PROXIMITY WARNING DEVICES ON ALL EXISTING, TEMPORARY AND PERMANENT OVERHEAD WIRES LOCATED AT THE SITE PRIOR TO START OF ANY WORK AND REMOVE UPON COMPLETION ON THE WORK.

5. THE CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE THE NECESSARY LEVELS OF PROTECTION AND SAFEGUARDING OF OPEN TRENCHES WHEN WORK IS ACTIVE, COMPLETED AT END OF DAY OR SUSPENDED. THIS INCLUDES TRENCH PROTECTION SUCH AS TRENCH BOXES, WOOD SHEETING AND BRACING, OR ANY OTHER METHOD DETERMINED BY THE CONTRACTOR TO MAINTAIN A SAFE WORKING ENVIRONMENT. ALL EXCAVATIONS SHALL COMPLY WITH APPLICABLE LAWS AND REGULATIONS.

6. WHERE A NEW CONDUIT IS TO BE CONNECTED TO OR CROSS OVER OR UNDER AN EXISTING UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING UTILITY BOTH AS TO LINE AND GRADE BEFORE BEGINNING TO LAY THE NEW CONDUIT.

7. ADJUST TO GRADE WORK FOR MANHOLE OR CATCH BASIN INCLUDES BUILDING THE STRUCTURE UP TO GRADE OR REMOVING AND REBUILDING A PORTION OF THE STRUCTURE WITH IN 12 IN. ELEVATION CHANGE INCLUDING REMOVAL AND RESETTING OF CASTING. RECONSTRUCT TO GRADE WORK INCLUDES REMOVING AND REBUILDING A PORTION OF THE STRUCTURE GREATER THAN 12 IN.

8. THE CONTRACTOR SHALL CLEAN ALL NEW STORM SEWERS AND VACUUM CLEAN ALL MANHOLES AND CATCH BASINS WITHIN THE PROJECT LIMITS BEFORE ACCEPTANCE.

9. A STORM SERVICE LATERAL CONNECTION TO A NEW OR EXISTING STORM MAIN SEWER SHALL USE A BOOT INSTALLED IN A CORED HOLE IN THE STORM SEWER.

10. ROOF DRAINS, FOUNDATION DRAINS AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.

11. CONTRACTOR IS RESPONSIBLE FOR CONTACTING OUPS BEFORE BEGINNING ANY WORK, AND COORDINATING WITH ANY IMPACTED UTILITY COMPANIES AS NEEDED.

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Project No: 25-25
Drawn / Checked: KR/HJC

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Bid & Permit 02.27.2026

CIVIL NOTES
C100

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CODED NOTES

1. CONTRACTOR SHALL MILL AND RESURFACE EXISTING ASPHALT PAVEMENT. PAVEMENT RESURFACING IS BASED ON ASSUMED EXISTING PAVEMENT THICKNESS AND COMPOSITION. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND NOTIFY THE OWNER/ENGINEER IF CONDITIONS ARE NOT SUITABLE PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL REMOVE ALL TREES, STUMPS ROOTS AND VEGETATION MARKED TO BE REMOVED.
3. CONTRACTOR SHALL PROTECT THE CRITICAL ZONE (CRZ) OF THE EXISTING TREES TO REMAIN THROUGHOUT CONSTRUCTION. THE CRZ IS DEFINED TO BE EQUAL TO 1-FT OF RADIUS FOR EVERY 1-INCH OF TRUNK DIAMETER. NO FILLING OR EXCAVATION SHALL BE DONE WITHIN THE 1/4 OF THE CRZ. MINIMAL IMPACT SHALL OCCUR WITHIN 1/2 OF THE CRZ. AR LEAST 50% OF THE ROOTS SHALL BE PRESERVED WITHIN THE CRZ.
4. CONTRACTOR SHALL PROTECT EXISTING UTILITIES THAT ARE TO REMAIN THROUGHOUT CONSTRUCTION.
5. CATCH BASIN TO BE CLEANED TO REMAIN IN SERVICE.
6. CONTRACTOR SHALL REMOVE EXISTING CLEVELAND LIBRARY SIGN AND SALVAGE FOR OWNER.
7. CONTRACTOR SHALL REMOVE EXISTING BIKE RACK AND SALVAGE FOR THE OWNER.
8. CONTRACTOR SHALL REMOVE EXISTING SOLAR PHONE CHARGER.
9. CONTRACTOR SHALL REMOVE EXISTING CLEANOUTS.
10. CONTRACTOR SHALL REMOVE AND REPLACE EXISTING ADA PARKING SIGN.
11. CHAIN LINK FENCE TO REMAIN AND BE PROTECTED.
12. CONTRACTOR SHALL REMOVE AND REPLACE THE EXISTING GAS SERVICE LINE AND COORDINATE AS NECESSARY WITH ENBRIDGE FOR NEW METER SET.
13. CONTRACTOR SHALL SAWCUT AND REMOVE EXISTING SIDEWALK TO A CLEAN, NEAT EDGE IN LOCATION SHOWN OR TO THE NEAREST CONTROL JOINT.
14. EXISTING SIDE WALK TO REMAIN AND BE PROTECTED.
15. EXISTING CURB/CURB RAMP TO REMAIN AND BE PROTECTED.
16. CONTRACTOR TO VERIFY LOCATION OF EXISTING WATERLINE BENEATH PROPOSED ADDITION. WATERLINE RELOCATION MAY BE REQUIRED DEPENDING ON FIELD CONDITIONS. REFER TO UNIT PRICE NO. 2 IN THE SPECIFICATION FOR RELOCATION.

GENERAL NOTES

1. EXISTING CONDITIONS SHOWN PER TOPOGRAPHIC SURVEY PERFORMED BY RIVERSTONE.
2. PARCEL BOUNDARY SURVEY IS PER BOUNDARY SURVEY PREPARED BY RIVERSTONE.
3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL LOCAL AND STATE PERMITS REQUIRED FOR DEMOLITION WORK.
4. CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL TRASH, DEBRIS, AND ORGANIC MATERIAL IN A LAWFUL MANNER.
5. CONTRACTOR TO USE CAUTION WHILE WORKING NEAR EXISTING UNDERGROUND UTILITIES.
6. CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY ONSITE AND OFFSITE ITEMS DAMAGED DURING CONSTRUCTION IN THE SAME OR BETTER CONDITION THAN THEY WERE PRIOR TO CONSTRUCTION.
7. CONTRACTOR SHALL LOCATE CONSTRUCTION FENCING AS NEEDED ON SITE.
8. EXISTING SITE UNDERGROUND UTILITIES SHOWN FROM GPRS UTILITY FINDINGS MAP [C105]. CONTRACTOR SHALL VERIFY LOCATION PRIOR TO ANY WORK.

LEGEND

- EXISTING ASPHALT PAVEMENT TO BE MILLED AND RESURFACED (1.5")
- EXISTING ASPHALT TO BE REMOVED
- CONCRETE WALK TO BE REMOVED
- EXISTING STORM/SANITARY SEWER PIPE TO BE REMOVED
- CONCRETE WALK TO BE RELEVELED
- EXISTING SHRUBS TO BE REMOVED

0 20 40 Feet

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- 6 Bulletin #1 08.20.2026

CIVIL DEMO PLAN
C200

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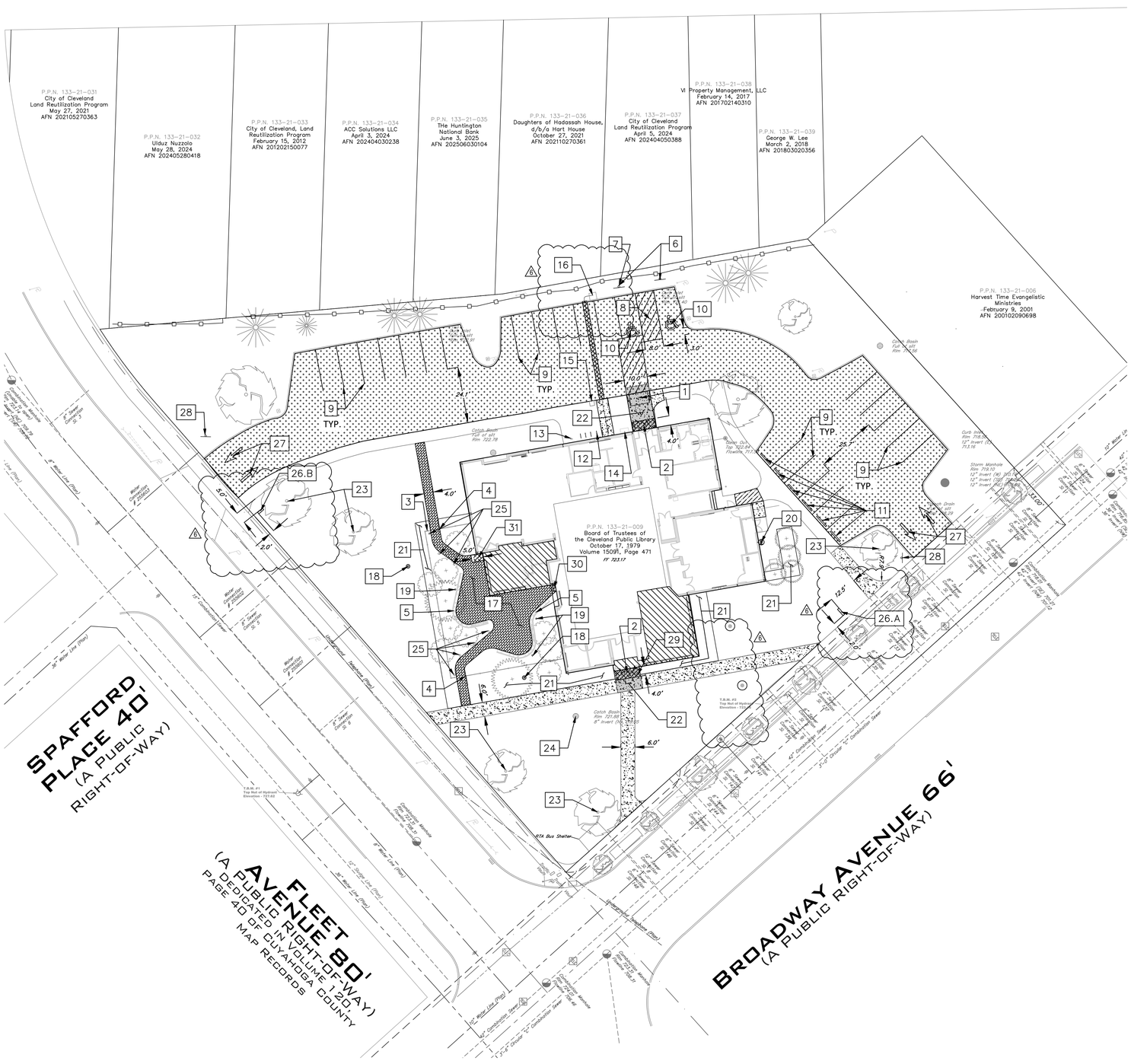


0 20 40 Feet

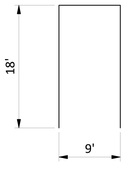
CODED NOTES

1. CURB RAMP, SEE SHEET C600.
2. FROST SLAB, SEE SHEET S301.
3. PROPOSED 6' DECORATIVE FENCE. SEE ARCH ELEVATION, SHEET 2/A901.
4. PROPOSED 4' OPENING GATES. SEE ARCH ELEVATION, SHEET 3/A901.
5. PROPOSED BENCH SEATING. SEE LANDSCAPING PLAN LAYOUT, SHEET 2/L100.
6. STANDARD HANDICAP PARKING SIGN, SEE SHEET C600.
7. VAN ACCESSIBLE HANDICAP PARKING SIGN, SEE SHEET C600.
8. PROPOSED PAINTED TRANSVERSE STRIPING, SEE SHEET C600.
9. PROPOSED PAINTED 4" WIDE SOLID STRIPE - WHITE ON ASPHALT, BLUE IN ALL ADA.
10. PROPOSED PAINTED ADA PAVEMENT SYMBOL PER SHEET C600.
11. PROPOSED CURB STOPS, SEE SHEET C600.
12. PROPOSED BICYCLE RACK. OWNER FURNISHED, CONTRACTOR INSTALLED.
13. PROPOSED BICYCLE FIX-IT STATION.OWNER FURNISHED, CONTRACTOR INSTALLED.
14. PROPOSED BOOK LOCKERS. OWNER FURNISHED, CONTRACTOR INSTALLED.
15. PROPOSED BOOK DROP. OWNER FURNISHED, CONTRACTOR INSTALLED.
16. PROVIDE 3'X3' CONCRETE PAD FOR FUTURE ELECTRIC VEHICLE CHARGER AND FUTURE BOLLARD FRONT. SEE ELECTRICAL PLANS, SHEET ES101.
17. PROPOSED PAVER PATIO, SEE SHEET L200.
18. PROPOSED INLET
19. PROPOSED POWER PEDESTAL, SEE SHEET ES101.
20. REPLACED GAS METER.
21. PROPOSED LANDSCAPING AREA, SEE LANDSCAPING PLANS 2/L300.
22. NOT USED.
23. EXISTING TREE TO REMAIN AND BE PROTECTED.
24. EXISTING CATCH BASIN TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.
25. PROPOSED ILLUMINATED BOLLARD, SEE SHEET E501.
26. A. OWNER FURNISHED, CONTRACTOR INSTALLED DOUBLE FACED, ILLUMINATED MONUMENT TYPE A. SIGN FOUNDATION IN PROJECT SCOPE. PROVIDE 10" WIDE, 3'-7" LONG FOUNDATION WALL. SEE S301 FOR DETAILS. COORDINATE THE POWER REQUIREMENTS WITH THE OWNER.
26. B. OWNER FURNISHED, CONTRACTOR INSTALLED DOUBLE FACED, ILLUMINATED MONUMENT TYPE B. SIGN FOUNDATION IN PROJECT SCOPE. PROVIDE 10" WIDE, 2'-7" LONG FOUNDATION WALL. SEE S301 FOR DETAILS. COORDINATE THE POWER REQUIREMENTS WITH THE OWNER.
27. WHITE DIRECTIONAL ARROWS, SEE SHEET C600.
28. OWNER FURNISHED, CONTRACTOR INSTALLED TOW-AWAY SIGN.
29. PROPOSED ADA PEDESTAL.
30. PROPOSED FROST SLAB, SEE SHEET 1/A501.
31. PROPOSED FROST SLAB, SEE SHEET 4/A501.

LEGEND

- RESURFACED EXISTING ASPHALT PAVEMENT
- PROPOSED CONCRETE WALK
- CONCRETE WALK TO BE RELEVELED
- FROST SLAB
- PROPOSED PAVER
- SNOW MELT, SEE SHEET MS101
- FULL DEPTH PAVEMENT REPLACEMENT
- BULDING ADDITION

PARKING STALL DETAIL



PARKING SPACES		
NUMBER OF SPACES	REQUIRED	PROVIDED
	11 MIN	27
PARKING REQUIREMENTS		
1 FOR EACH 4 EMPLOYEES, PLUS		
1 SPACE PER 1200 SF OF GROSS FLOOR AREA		
THEREFORE: (12/4)+ (9270/1200) = 11 MINIMUM SPACES REQUIRED.		

CURRENT ZONING: PUBLIC LIBRARY AND MUSEUMS

GENERAL NOTES

1. ALL PAVEMENT MARKING SHALL BE ODOT ITEM-642 TRAFFIC PAINT.

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2 Addendum 2	03.18.2026
6 Bulletin #1	08.20.2026

CIVIL
SITE PLAN
C300

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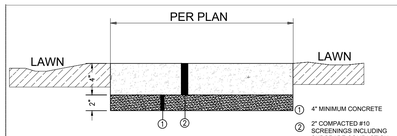
SPAFFORD PLACE 40' (A PUBLIC RIGHT-OF-WAY)
FLEET AVENUE 80' (A PUBLIC RIGHT-OF-WAY) (A DEDICATED IN VOLUME 120, PAGE 40 OF CUYAHOGA COUNTY MAP RECORDS
BROADWAY AVENUE 66' (A PUBLIC RIGHT-OF-WAY)
SWG
SW
1
2
724.20
724.30
724.34
724.29
720.97
720.60
719.35
719.43
720.39
720.48
722.93
722.80
30" Water Line (Plan)
8" Water Line (Plan)
12" Storm Line (Plan)
Telephone Manhole (Plan)
Telephone Manhole (Plan)
Telephone Manhole


P.P.N. 133-21-031
City of Cleveland
Land Reutilization Program
May 27, 2021
AFN 202105270363
P.P.N. 133-21-032
Ulduz Nuzzolo
May 28, 2024
AFN 202405280418
P.P.N. 133-21-033
City of Cleveland, Land
Reutilization Program
February 15, 2012
AFN 201202150077
P.P.N. 133-21-034
ACC Solutions LLC
April 3, 2024
AFN 202404030238
P.P.N. 133-21-035
The Huntington
National Bank
June 3, 2025
AFN 202506030104
P.P.N. 133-21-036
Daughters of Hadassah House,
d/b/a Hart House
October 27, 2021
AFN 202110270361
P.P.N. 133-21-037
City of Cleveland
Land Reutilization Program
April 5, 2024
AFN 202404050388
P.P.N. 133-21-038
VI Property Management, LLC
February 14, 2017
AFN 201702140310
P.P.N. 133-21-039
George W. Lee
March 2, 2018
AFN 201803020356
P.P.N. 133-21-008
Harvest Time Evangelistic
Ministries
February 9, 2001
AFN 200102090698
P.P.N. 133-21-009
Board of Trustees of
the Cleveland Public Library
October 17, 1979
Volume 15091, Page 471
MH-P1
CB-E1
CB-P1
CB-P2
MH-P2
MH-P3
CB-E2
RTA Bus Shelter
Curb Inlet
Rim 722.78
Curb Inlet
Rim 722.49
Curb Inlet
Rim 722.01
Curb Inlet
Rim 718.87
12" Invert (SW) 716.57
Storm Manhole
Rim 718.10
12" Invert (W) 710.16
12" Invert (SE) 710.16
12" Invert (NE) 710.16
Curb Inlet
Rim 713.16
Curb Inlet
Rim 719.49
Curb Inlet
Rim 719.65
Catch Basin
Rim 720.20
Catch Basin
Rim 720.20
Catch Basin
Rim 720.20

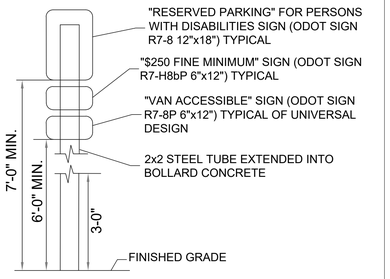


NOTES:

1. WALK TO BE DIVIDED INTO EQUALLY SPACED BLOCKS AT APPROXIMATELY 5' INTERVALS. EXPANSION JOINT FILLER
   $\frac{1}{2}$" THICK SHALL BE INSTALLED BETWEEN WALK AND ANY FIXED STRUCTURE. EXPANSION JOINT FILLER SHALL EXTEND FOR THE FULL DEPTH OF THE WALK. EXPANSION JOINT FILLER SHALL BE 1" THICK WHERE WALK INSTALLED AGAINST BACK OF THE CURB.
2. SAW CUT OR HAND TOOL JOINT $\frac{1}{8}$" WIDE BY $\frac{1}{4}$ OF THE THICKNESS OF THE SLAB.
3. ROUND ALL EDGES AND JOINTS WITH $\frac{1}{4}$" RADIUS TOOL.

WALK DETAIL

NOT TO SCALE

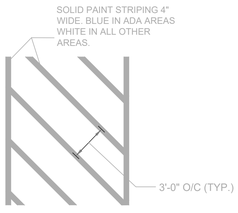


NOTES:

1. CRASH RATED BOLLARD SHALL ONLY BE INSTALLED WHERE CALLED OUT ON THE SITE LAYOUT PLAN.CRASH RATED BOLLARD COVER SHALL BE PVC BLUE.

ACCESSIBLE PARKING SIGN DETAIL

NOT TO SCALE

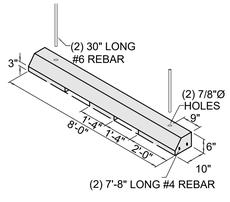


NOTES:

1. THIS DETAIL IS FOR REFERENCE ONLY. SEE LAYOUT PLAN FOR ACTUAL DIMENSIONS AND CONFIGURATION.
2. STRIPPING SHALL BE 45°

TRANSVERSE PAVEMENT MARKING DETAIL

NOT TO SCALE

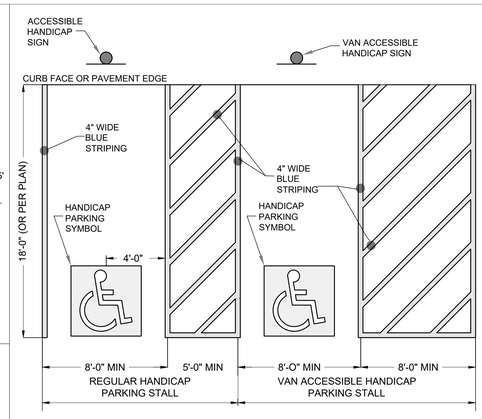


NOTES:

1. REBAR SHALL BE DRIVEN FLUSH TO TOP OF WHEEL STOP AND HOLES FILLED WITH SEALANT.
2. ALL MATERIALS USED TO MANUFACTURE THE CONCRETE SHALL BE IN ACCORDANCE WITH ODOT ITEM 499 - CLASS QC1.
3. THE MATERIAL REQUIREMENTS FOR THE ANCHOR PIN SHALL BE IN ACCORDANCE WITH CMS 509.02.
4. ALL #4 BARS SHALL BE EPOXY COATED AS PER CMS 509.
5. REINFORCING STEEL SHALL BE PLACED 2" CLEAR FROM THE SURFACE OF THE CONCRETE.

CURB STOP DETAIL

NOT TO SCALE

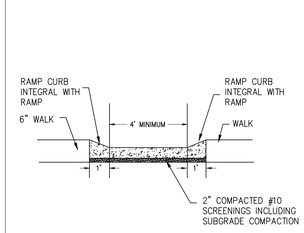


NOTES:

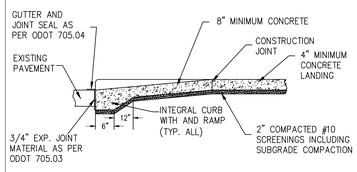
1. THIS DETAIL IS FOR REFERENCE ONLY. SEE LAYOUT PLAN FOR ACTUAL DIMENSIONS AND CONFIGURATION.
2. ACCESSIBLE SYMBOL: FOLLOW OHIO 2012 MUTCD FIG. 3B-22 GUIDELINES: INTERNATIONAL SYMBOL OF ACCESSIBILITY PARKING SPACE MARKING. BLUE BACKGROUND AND WHITE BORDER.
3. ADA PARKING SPACES SHALL BE 1:48 MAXIMUM SLOPE IN ALL DIRECTIONS.
4. ALL PAINTED AREAS SHALL RECIEVE (2) 15 MIL COATS OF PAINT WITH 4 WEEK MIN BETWEEN COATS.
5. SEE SEPRATE DETAILS FOR SIGNS.

HANDICAP PARKING LAYOUT DETAIL

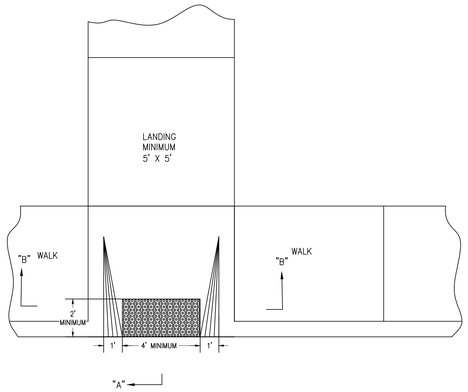
NOT TO SCALE



SECTION "B–B"



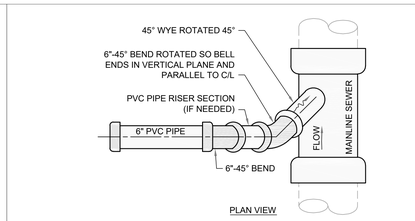
SECTION "A–A"



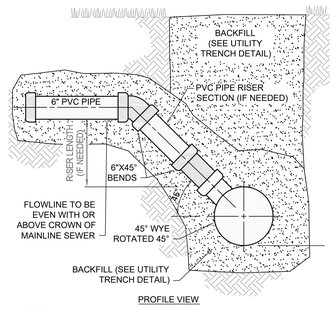
NOTE:
1. THE BOTTOM EDGE OF THE CURB RAMP SHALL BE FLUSH WITH THE EDGE OF THE ADJACENT PAVEMENT AND GUTTER LINE.
2. SURFACE TEXTURE OF ALL RAMPS SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE TAME SLOPES AS DIRECTED B THE ENGINEER AND SHALL BE ROUGHER THAN ADJACENT WALK.
3. GUTTER SEAL, 705.04, 4" WDE THE BOTTOM EDGE OF THE ADJACENT PAVEMENT AND GUTTER LINE.

RAMP DETAIL

NOT TO SCALE



PLAN VIEW



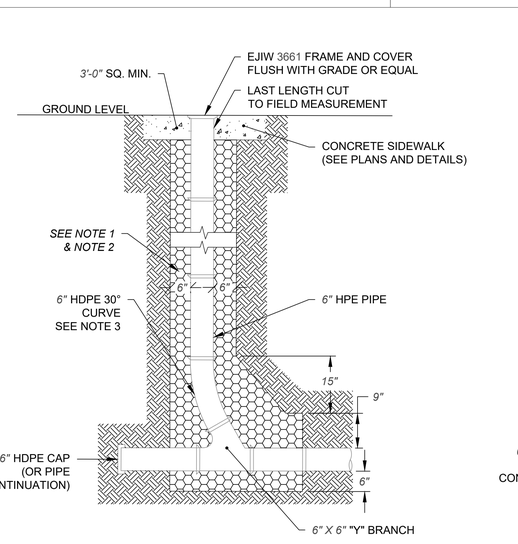
PROFILE VIEW

NOTES:

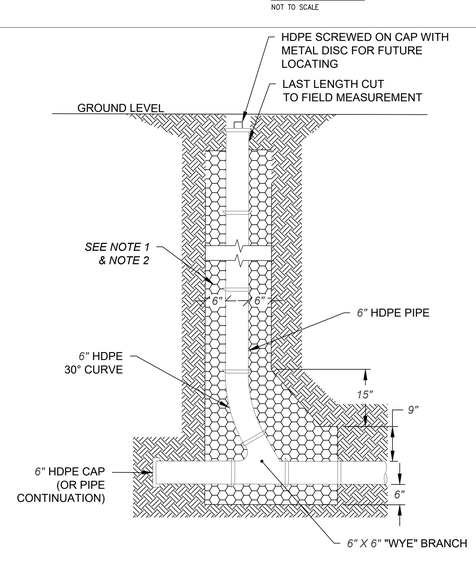
1. THIS DETAILS SHOWS 6" AND 12" DIA. PIPES FOR REFENCES. SEE UTILITY PLAN FOR ACTUAL SIZES.

STORM & SANITARY LATERAL CONNECTION DETAIL

NOT TO SCALE



CLEANOUT DETAIL IN SIDEWALK
SCALE: NONE



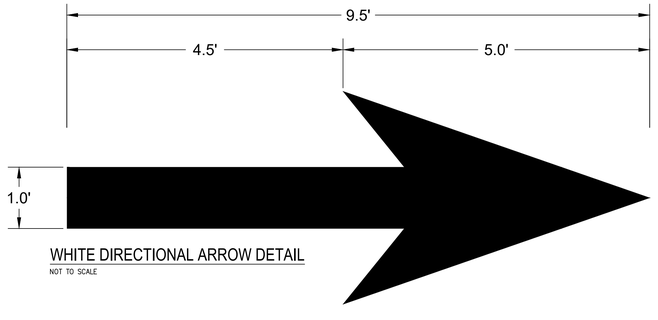
CLEANOUT DETAIL IN GRASS
SCALE: NONE

NOTES:

1. CONCRETE (4000 PSI) ENCASEMENT FOR CLEANOUT IS OPTIONAL WITHIN LANDSCAPE. CONSULT ENGINEER BEFORE PROCEEDING.
2. CONCRETE (4000 PSI) ENCASEMENT FOR CLEANOUT IS REQUIRED WHEN SUBJECT TO TRAFFIC.
3. CAN USE 45° BEND WITH RESPECTIVE BRANCH
4. 8" CLEANOUT SHALL BE USED FOR 8" SEWER AND LARGER.
5. SMALLER SIZE SEWERS AND LAMP HOLES SHALL HAVE SAME SIZE PIPE.
6. CLEANOUT TO HAVE A WATERTIGHT CAP ON RISER.
7. RISER IS TO BE TERMINATED JUST BELOW GRADE. USE C.I. LAMPHOLE FRAME AND COVER WHEN SUBJECT TO TRAFFIC.
8. INSTALL CLEANOUTS ON ALL STORM & SANITARY LINES LEAVING THE BUILDING. LOCATIONS TO BE FIELD DETERMINED.

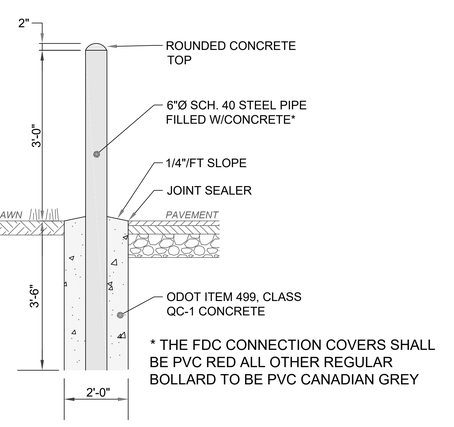
STORM & SANITARY CLEANOUT DETAIL

NOT TO SCALE



WHITE DIRECTIONAL ARROW DETAIL

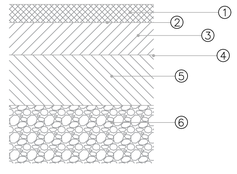
NOT TO SCALE



* THE FDC CONNECTION COVERS SHALL BE PVC RED ALL OTHER REGULAR BOLLARD TO BE PVC CANADIAN GREY

6" STEEL BOLLARD DETAIL

NOT TO SCALE



① 1.5" ODOT 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1
② ODOT 407 - TACK COAT (0.05 TO 0.06 gal/yd²)
③ 2.5" ODOT 441 - ASPHALT CONCRETE INTERMEDIATE COURSE TYPE 2
④ ODOT 408 - PRIME COAT
⑤ 6" ODOT 304 - AGGREGATE BASE
⑥ ODOT 204 - COMPACTED SUBGRADE

SURFACE COURSE NOTE
INSTALL ASPHALT CONCRETE SURFACE COURSE FOR FULL DEPTH PAVEMENT REPLACEMENT AND ASPHALT RESURFACING IN THE SAME OPERATION.

FULL DEPTH ASPHALT DETAIL

NOT TO SCALE



① 1.5" ODOT 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1
② 1.5" ODOT 254 - PAVEMENT PLANING
③ ODOT 407 - TACK COAT (0.08 TO 0.09 gal/yd²)
④ EXISTING ASPHALT CONCRETE TO REMAIN AFTER ODOT 254 PAVEMENT PLANING

ASPHALT RESURFACING DETAIL

NOT TO SCALE

Project:
FLEET BRANCH RENOVATION AND EXPANSION

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Project No: 25-25
Drawn / Checked: KR/HJC

Issue: Bid & Permit 02.27.2026

CIVIL CONSTRUCTION DETAIL

C600

OHIO811.org Before You Dig

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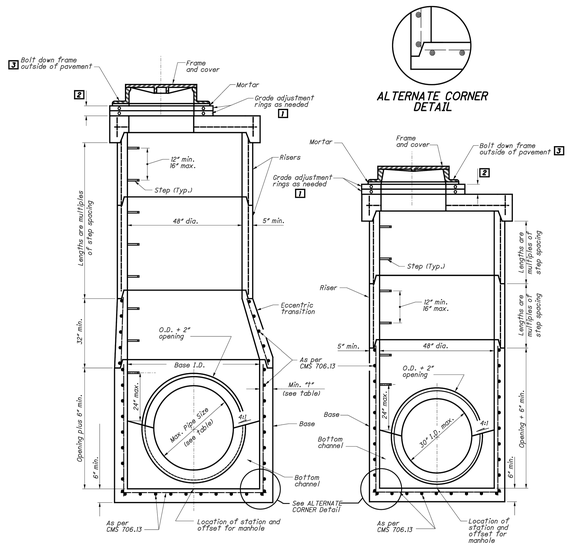


ALTERNATE CORNER DETAIL

60" to 108" PRECAST BASE
SEE TABLE FOR MAXIMUM PIPE SIZES

48" PRECAST BASE
FOR 30" AND SMALLER PIPE

SECTION VIEWS OF REINFORCED PRECAST MANHOLES

NOTES

GENERAL: With normal soil and site conditions, this standard precast manhole may be used for any required manhole depth.

Cast and assemble sections of the precast manhole with either all tongue or all groove ends up. Lift holes may be provided in each section for handling.

Leave handling device for the flat slab in place.

TOP: Provide a flat slab for this section unless an eccentric cone is specified.

TRANSITION (OR REDUCER): This section can be either eccentric cone or flat slab.

BASE: Manhole No. 3 is shown with a monolithic floor and riser which may be cast in one or two operations. A permissable alternate is to cast and ship the floor and barrel separately. Provide openings for inlet and outlet pipes, either when the unit is cast or later, to meet project requirements. Bottom channels may be formed of concrete, precast in the base or field constructed as shown on **SCD MH-1 and MH-2.**

RISER SECTIONS: Openings for 18" and smaller inlet pipes may be either preformed or cut in the field provided the sides of the pipe of the springline do not project into the manhole.

CONNECTIONS: Connections between precast manhole sections and pipes on sanitary sewers may be sealed with resilient connectors conforming to ASTM C 923.

JOINT SEAL: Furnish resilient seal between precast manhole sections on sanitary sewers and flexible gasket joints per CMS 706.11.

OPENINGS: Ensure pipe openings are the O.D. of the pipe being supplied plus 2" when fabricated or field cut. Fill any voids per CMS 611.

MATERIALS: Provide materials for bases and other precast sections, including reinforcement not specified here, that meet the requirements of CMS 706.13.

DROP PIPE: When specified on the plans, construct drop pipe as shown on **SCD MH-2.**

STEPS, FRAMES AND COVERS: Meet the requirements shown on **SCD MH-1.**

TOP SLAB REBAR: Use epoxy coated reinforcing steel within the top slab.

LEGEND

[7] Approved materials are kept on file by the Office of Materials Management.

[2] Grade rings cannot exceed 12" height when adjusting Drainage Structures to Grade per 611.10 D.

Grade rings cannot exceed 6" height when reconstructing Drainage Structures to Grade per 611.10 C.

Grade rings cannot exceed 6" height when constructing new Drainage Structures to Grade per 611.10 A&B.

[3] Where frames are outside of the pavement, mechanically connect the frame to the manhole top slab through the four bolt holes using 5/8" minimum stainless steel wedge anchor bolts. Embed the bolts a minimum of 3" into the slab. Secure the frame with stainless steel nuts and washers.

MAXIMUM PIPE SIZES		
BASE I.D.	**MIN. "t"**	**MAX. PIPE SIZE**
60"	5"	36"
72"	6"	48"
84"	7"	54"
90"	7½"	60"
96"	8"	66"
108"	9"	72"

OFFICE OF HYDRAULIC ENGINEERING

REVISIONS: 1-20-2006, 1-16-2009, 1-18-2013, 1-15-2016, 7-16-2021, 7-21-2023, 1-19-2024, 7-19-2024

STATE ENGINEER: K. Brandon

STATE OF OHIO DEPARTMENT OF TRANSPORTATION ENGINEERING MANAGEMENT: Jeffery E. Syar

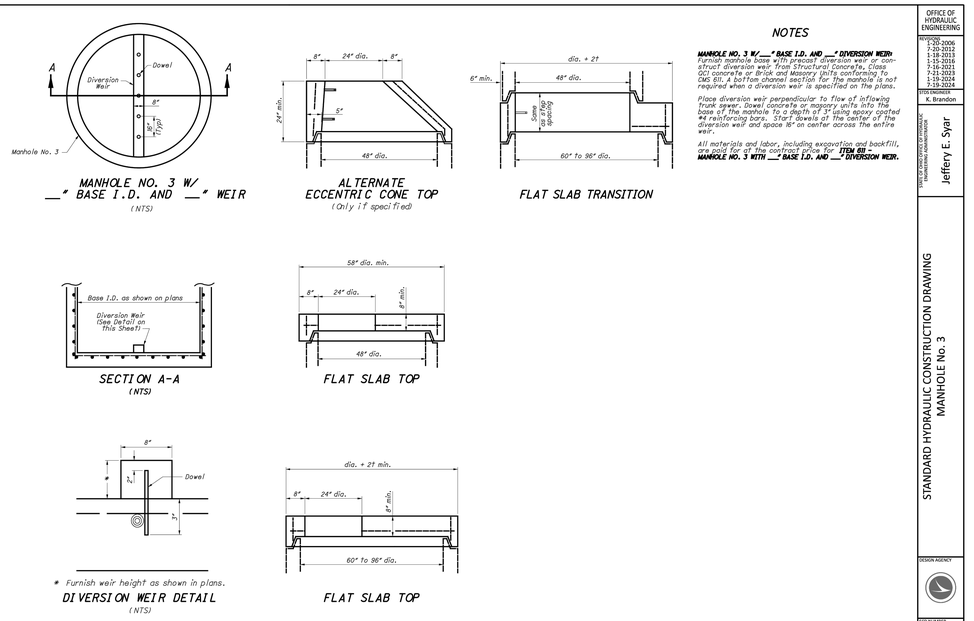
STANDARD HYDRAULIC CONSTRUCTION DRAWING
MANHOLE No. 3

DESIGN AGENCY

SCD NUMBER: MH-3

SHEET P.1 | TOTAL 2

MH-3



MANHOLE NO. 3 W/ __" BASE I.D. AND __" WEIR
(NTS)

ALTERNATE ECCENTRIC CONE TOP
(Only if specified)

FLAT SLAB TRANSITION

SECTION A-A
(NTS)

FLAT SLAB TOP

* Furnish weir height as shown in plans.

DIVERSION WEIR DETAIL
(NTS)

FLAT SLAB TOP

NOTES

MANHOLE NO. 3 W/___" BASE I.D. AND ___" DIVERSION WEIR: Furnish manhole base with precast diversion weir or construct diversion weir from Structural Concrete, Class QC1 concrete or Brick and Masonry Units conforming To CMS 611. A bottom channel section for the manhole is not required when a diversion weir is specified on the plans.

Place diversion weir perpendicular to flow of inflowing trunk sewer. Dowel concrete or masonry units into the manhole base, number to depth indicated using epoxy coated #4 reinforcing bars. Stagger dowels at the center of the diversion weir and space 16" on center across the entire weir.

All materials and labor, including excavation and backfill, are paid for at the contract price for **ITEM 611 - MANHOLE NO. 3 WITH ___" BASE I.D. AND ___" DIVERSION WEIR.**

OFFICE OF HYDRAULIC ENGINEERING

REVISIONS: 1-20-2006, 1-16-2009, 1-18-2013, 1-15-2016, 7-16-2021, 7-21-2023, 1-19-2024, 7-19-2024

STATE ENGINEER: K. Brandon

STATE OF OHIO DEPARTMENT OF TRANSPORTATION ENGINEERING MANAGEMENT: Jeffery E. Syar

STANDARD HYDRAULIC CONSTRUCTION DRAWING
MANHOLE No. 3

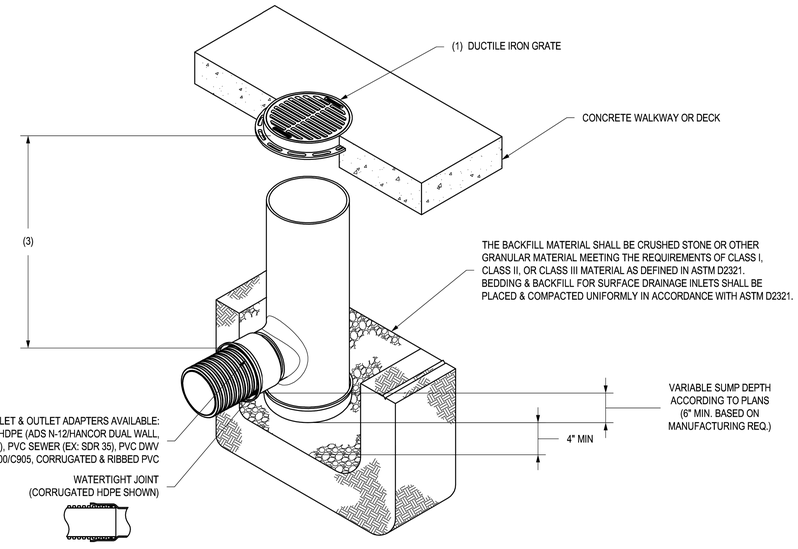
DESIGN AGENCY

SCD NUMBER: MH-3

SHEET P.2 | TOTAL 2

MH-3

NYLOPLAST 10" DRAIN BASIN: 2810AG _ _ X



1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, WITH THE EXCEPTION OF THE BRONZE GRATE.
2 - CUSTOM DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065.
3 - STANDARD DRAIN BASIN HAS FIXED ADAPTER LOCATIONS OF 0° & 180°. CUSTOM DRAIN BASIN ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL) & PVC SEWER (4" -10").

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DRAWN BY	NMH	MATERIAL		ADS Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE	6-25-18				
APPD BY	NMH	PROJECT NO./NAME		TITLE	10 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL
DATE	6-25-18				
DWG SIZE	A	SCALE 1:12	SHEET 1 OF 1	DWG NO. 7001-110-273	REV F

Project:
FLEET BRANCH RENOVATION AND EXPANSION

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Project No: 25-25
Drawn / Checked: KR/HJC

Issue: Bid & Permit 02.27.2026

CIVIL CONSTRUCTION DETAIL
C601

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DEVELOPERS, ENGINEERS, AND CONTRACTORS ARE TO ABIDE BY THE MOST CURRENT VERSION OF THE CLEVELAND WATER NOTES AND DETAILS. THE MOST UP-TO-DATE VERSION CAN BE FOUND AT WWW.CLEVELANDWATER.COM/CONSTRUCTION/ OR AS PROVIDED BY CLEVELAND WATER *STAFF.*

REFERENCE STANDARDS

1. AWWA C600 - INSTALLATION OF DUCTILE-IRON MAINS AND THEIR APPURTENANCES
2. AWWA C605- UNDERGROUND INSTALLATION OF POLYVINYL CHLORIDE (PVC) PRESSURE PIPE AND FITTINGS
3. AWWA C651- DISINFECTING WATER MAINS
3. ASTM D2774- STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PRESSURE PIPING
4. ASTM F1668- STANDARD GUIDE FOR CONSTRUCTION PROCEDURES FOR BURIED PLASTIC PIPE

OVERALL PIPE PREPARATION AND EXECUTION

1. ALL DUCTILE IRON PIPE SHALL BE INSTALLED PER THE MOST CURRENT REVISION OF AWWA C600, AWWA MANUAL M41, DIPRA'S "INSTALLATION GUIDE FOR DUCTILE IRON PIPE" (ISBN 0-9642194-0-9) AND "DIRECT TAPPING OF DUCTILE IRON PIPING ENCASED IN POLYETHYLENE", AS WELL AS THE MANUFACTURER'S INSTRUCTIONS.
2. ALL DUCTILE IRON BURIED WATER MAINS, FITTINGS, VALVES, FIRE HYDRANT BRANCH PIPING AND APPURTENANCES SHALL BE ENCASED WITH V-BIO® ENHANCED POLYETHYLENE ENCASEMENT INSTALLED IN ACCORDANCE WITH THE MOST CURRENT REVISION OF ANSI/AWWA C-105/A21.5 MODIFIED METHOD "A" AND ASTM A674.
3. PIPE AND ACCESSORIES SHOULD BE INSPECTED FOR DEFECTS AND CLEANLINESS BEFORE THEY ARE LOWERED INTO THE TRENCH. ANY DEFECTIVE OR DAMAGED MATERIAL SHOULD BE REPAIRED OR REPLACED, AND ALL FOREIGN MATTER OR DIRT REMOVED FROM THE INTERIOR OF THE PIPE AND ACCESSORIES BEFORE LOWERING INTO TRENCH.
4. ALL PVC PIPE SHALL BE INSTALLED PER AWWA, C605, ASTM D2774, ASTM F1668, AND MANUFACTURER'S INSTRUCTIONS.
5. ONCE DELIVERED, ALL PVC PIPE MUST BE PROTECTED FROM DIRECT SUN EXPOSURE UNTIL THE PIPE IS INSTALLED AND BACKFILLED.
6. ANY PIPE JOINT THAT HAS BEEN OVER-INSERTED SHALL HAVE BOTH THE BELL PIPE AND THE SPIGOT PIPE REMOVED AND DISCARDED.
7. IN NO CASE SHALL MAINS BE LAID WITH LESS THAN 3'-6" OF COVER IN UNPAVED AREAS AND 3'-0" TO BOTTOM OF SLAB IN PAVED AREAS. MAINS SHALL BE LAID AT A BURY DEPTH OF 6 FT MIN. UNLESS WRITTEN PERMISSION IS PROVIDED BY CLEVELAND WATER.
8. ALL MATERIALS, INCLUDING BUT NOT LIMITED TO WATER MAINS, FIRE HYDRANTS, VALVES, CONNECTION MATERIALS AND OTHER WATER APPURTENANCES, SHALL BE NEW AND UNUSED AND SHALL CONFORM TO THE MOST CURRENT CLEVELAND WATER SPECIFICATIONS. ALL MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH CLEVELAND DIVISION OF WATER STANDARDS.
9. TWO FEET ABOVE THE MAIN, DETECTABLE TRACER TAPE NOTING THE PRESENCE OF A WATER MAIN SHALL BE INSTALLED FOR THE ENTIRE LENGTH OF THE MAIN, INCLUDING HYDRANT LATERALS AND OPEN CUT INSTALLED SERVICE CONNECTIONS.
10. ALL MATERIALS USED SHALL ABIDE BY REQUIREMENTS LISTED ON MATERIAL SPECIFICATION LIST (GEN-000A).

TRACER WIRE FOR PVC PIPE

1. ALL NEW TRACER WIRE INSTALLATIONS SHALL HAVE THEIR FUNCTION VERIFIED BY BEING LOCATED USING TYPICAL LOW FREQUENCY (512HZ) LINE TRACING EQUIPMENT. THE LOCATING FIRM SHALL PROVIDE WRITTEN CERTIFICATIONS THAT THE SYSTEM IS COMPLETELY FUNCTIONAL AT TEST COMPLETION.
2. MAGNESIUM GROUND ANODE RODS ARE TO BE INSTALLED AT EACH DEAD END PER THE MANUFACTURER'S INSTRUCTIONS.
3. TRACER LINES SHALL TERMINATE AT A DEDICATED AT-GRADE ACCESS POINT/TEST STATION IDENTIFIED WITH "WATER" ON THE CAP. AT LEAST 2 FEET OF SLACK WIRE SHALL BE PROVIDED AT EACH TERMINATION POINT.
4. LATERAL TRACER LINES ON HYDRANTS, TEES, AND CROSSES ARE NOT TO CUT THE MAIN TRACER WIRE.

HYDROSTATIC PRESSURE TESTING

1. CLEAN PIPE PRIOR TO CONDUCTING HYDROSTATIC PRESSURE TESTING. CLEANING MAY BE COMPLETED VIA FLUSHING OR SWABBING EXCEPT IF DISINFECTION IS CONDUCTED USING THE TABLET METHOD.
2. FILL WATER MAIN AT A CONTINUOUS RATE, 1 FT/SEC MAXIMUM. ONCE FULL, FLUSH THE LINE NOT LESS THAN 3 FT/SEC UNLESS DIRECTED BY CLEVELAND WATER THAT CONDITIONS DO NOT PERMIT THE REQUIRED FLOW RATE TO BE ACHIEVED. FLUSHING SHALL CONTINUE UNTIL THE VOLUME OF WATER IN THE NEWLY INSTALLED MAIN HAS TURNED OVER AT LEAST ONE TIME.
3. THE HYDROSTATIC TEST PRESSURE SHALL BE 75 PSI ABOVE THE STATIC PRESSURE PREVAILING AT THE SITE, BUT IN NO CASE LESS THAN 150 PSI.
4. DURATION: 2 HOURS (WITH PRESSURE MAINTAINED WITHIN 5 PSI OF THE REQUIRED TEST PRESSURE).
5. SHOULD THE PRESSURE TEST FAIL, THE CONTRACTOR SHALL IDENTIFY THE SOURCE(S) AND CORRECT THE DEFICIENCY. THE HYDROSTATIC PRESSURE TEST SHALL BE REPEATED FOR THE PRESCRIBED DURATION TO VERIFY THAT THE NEW WATER MAIN MEETS THE TEST CRITERIA. WORK PERFORMED TO IDENTIFY AND CORRECT FAILURE SOURCE(S) AND THEIR REMEDIATION MUST BE COMPLETED TO THE SATISFACTION OF CLEVELAND WATER AT NO ADDITIONAL COST.

DISINFECTION

1. DISINFECTION FOR WATER MAINS SHALL ADHERE TO THE REQUIREMENTS SET FORTH IN THE MOST CURRENT REVISION OF AWWA C651.

SERVICE CONNECTIONS

1. SADDLE TAPPING SHALL BE PERFORMED FOR PIPES OF ANY NOMINAL SIZE AND PRESSURE CLASS. TAP SIZE IS LIMITED TO 2-INCHES MAXIMUM.
2. TAPPING SLEEVE AND VALVE IS REQUIRED FOR SERVICE CONNECTIONS LARGER THAN 2-INCHES. THRUST RESTRAINT IS REQUIRED.
3. SERVICE CLAMPS OF SADDLES SHALL PROVIDE FULL SUPPORT AROUND THE CIRCUMFERENCE OF THE PIPE AND PROVIDE A BEARING AREA OF SUFFICIENT WIDTH ALONG THE AXIS OF THE PIPE TO PREVENT DISTORTION WHEN THE SADDLE IS TIGHTENED. NARROW U-BOLT-TYPE STRAPS AND SADDLES HAVING LUGS ARE PROHIBITED.

PIPE JOINTS

1. PIPE JOINTS SHALL ADHERE TO ANSI/AWWA C110/A21.10, C111/A21.11, C153/A21.53, C900, C905, C907 AND C909 REQUIREMENTS AND PROCEDURES FOR JOINT METHODS AND MATERIALS.
4. RESTRAINED JOINTS, AS INDICATED ON THE PLANS, SHALL COMPLY WITH ANSI/AWWA C111/A21.11.

FITTINGS AND APPURTENANCES

1. ALL FITTINGS SHALL BE APPROVED DUCTILE IRON CLASS 350, CEMENT LINED AND FUSION BOND EPOXY COATED CONFORMING TO THE REQUIREMENTS OF ANSI/AWWA C110/A21.10 OR ANSI/AWWA C153/A21.53.
2. ALL FITTINGS AND PIPES CONNECTED TO FITTINGS SHALL BE RESTRAINED USING A "RETAINED" MECHANICAL JOINT. JOINTS SHALL COMPLY WITH ANSI/AWWA C111/A21.11.
3. ALL FITTINGS MUST HAVE BELL ENDS UNLESS APPROVED BY CLEVELAND WATER.
4. PROVIDE PROPER SUPPORT FOR VALVES, HYDRANTS, AND FITTINGS SUCH THAT THE WEIGHT IS NOT APPLIED TO THE PIPE.

FIELD QUALITY CONTROL

1. PIPE SPIGOT END, BELL END, COUPLER OR FITTING, AND ELASTOMERIC GASKET SHALL BE CLEANED IMMEDIATELY BEFORE ASSEMBLY. DO NOT REMOVE FACTORY INSTALLED GASKETS. APPROVED LUBRICANTS SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
2. PIPE CUTTING SHALL BE CONDUCTED IN ACCORDANCE WITH AWWA C600, C900, AND MANUFACTURER REQUIREMENTS. PIPE SHALL BE MARKED AROUND ITS ENTIRE CIRCUMFERENCE TO ENSURE A SQUARE CUT.
3. CUT ENDS OF PIPE SHALL BE BEVELED TO ENSURE PROPER JOINT ASSEMBLY. USE FACTORY-FINISHED PIPE END AS A GUIDE TO DETERMINE THE ANGLE AND LENGTH OF THE BEVEL. DEBURR AND CLEAN CUT PIPE END PRIOR TO BELL INSERTION.
4. AT THE END OF EACH WORKDAY, THE CONTRACTOR SHALL PLUG ALL OPEN PIPE ENDS WITH WATERTIGHT PLUGS AS PER THE "PREVENTATIVE AND CORRECTIVE MEASURES DURING CONSTRUCTION" SECTION OF THE MOST CURRENT REVISION OF AWWA C-651 AS TO PREVENT THE INFILTRATION OR INTRUSION OF ANY FOREIGN OBJECTS OR MATERIALS. DATE STAMPED DIGITAL PHOTOS SHALL BE PROVIDED FOR EACH WORKDAY DEMONSTRATING THAT PROPER AWWA C-651 METHODS WERE USED TO PLUG ALL OPEN WATER MAIN ENDS. EACH PHOTO SHALL CLEARLY IDENTIFY THE STATION AT WHICH THE PIPE IS PLUGGED BY USE OF A STATION MARKER PLACED AT THE PLUGGED PIPE END. PHOTOS SHALL BE SUBMITTED ON A DAILY BASIS UNLESS OTHERWISE DEFINED BY THE CLEVELAND WATER INSPECTOR OR ENGINEER. ALL PHOTOS TAKEN OVER THE COURSE OF THE PROJECT SHALL BE SUBMITTED BY THE CONTRACTOR AS PART OF THE AS-BUILT SUBMITTAL. PHOTOS ARE TO INCLUDE STATIONING MARKERS. AS-BUILTS SHALL BE DEEMED INCOMPLETE WITHOUT SAID COLLECTION OF DIGITAL PHOTOS.
5. CLEVELAND WATER INSPECTORS SHALL BE INVITED TO WITNESS TRACER WIRE VERIFICATION FOR PVC PIPE INSTALLATIONS. THIS VERIFICATION SHALL BE PERFORMED UPON COMPLETION OF ROUGH GRADING AND AGAIN PRIOR TO THE FINAL ACCEPTANCE OF THE PROJECT. CONTINUITY TESTING IN LIEU OF ACTUAL LINE TRACING SHALL NOT BE ACCEPTED. CLEVELAND WATER WILL REQUIRE COMPLETION OF THE FIRST VERIFICATION PRIOR TO CHLORINATION, WITH CERTIFICATION SUBMITTED ALONG WITH RED LINE DRAWINGS. CERTIFICATION OF THE SECOND VERIFICATION SHALL BE PROVIDED WITH AS-BUILT DRAWINGS.

CITY OF CLEVELAND DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER (CWD)	REVISIONS			GUIDELINES FOR WATER MAIN INSTALLATION AND REPLACEMENT
	NO.	DATE	BY	DETAIL NO.: GEN-000B
				SCALE: N.T.S. DATE: 5/31/2024

REFERENCE STANDARDS

1. ASTM A276- STAINLESS STEEL BARS AND SHAPES
2. ASTM A193/A194- ALLOY-STEEL AND STAINLESS-STEEL BOLTING FOR HIGH TEMPERATURE OR HIGH-PRESSURE SERVICE AND OTHER SPECIAL PURPOSE APPLICATIONS
3. ASTM A536- DUCTILE IRON CASTINGS
4. ASTM A1097- STEEL CASING PIPE, CARBON, ELECTRIC-FUSION (ARC)-WELDED (NPS 10 AND LARGER)
5. ASTM D2774- STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PRESSURE PIPING
6. ASTM F1668- STANDARD GUIDE FOR CONSTRUCTION PROCEDURES FOR BURIED PLASTIC
7. ANSI/AWWA C111- RUBBER-GASKET JOINTS FOR DUCTILE IRON PRESSURE PIPE AND FITTINGS
8. ANSI/AWWA C151-DUCTILE-IRON PIPE, CENTRIFUGALLY CAST
9. ANSI/AWWA C153- DUCTILE IRON COMPACT FITTINGS
10. ANSI/AWWA C110- DUCTILE IRON FLANGED FITTINGS
11. AWWA C219- BOLTED SLEEVE-TYPE COUPLINGS FOR PLAIN-END PIPE
12. AWWA C509- RESILIENT-SEATED GATE VALVES FOR WATER SUPPLY SERVICE
13. AWWA C515- REDUCED-WALL, RESILIENT-SEATED GATE VALVES FOR WATER SUPPLY SERVICE
14. AWWA C900- POLYVINYL CHLORIDE PVC PRESSURE PIPE AND FABRICATED FITTINGS
15. AWWA C909- MOLECULARLY ORIENTED POLYVINYL CHLORIDE
16. ODOT 499- CONCRETE

DUCTILE IRON PIPE

1. ALL PIPE SHALL BE AWWA C151 DUCTILE IRON, MINIMUM CLASS 52, WITH A CEMENT MORTAR LINING, HAVING PUSH-ON JOINTS WITH RADIALLY COMPRESSED RUBBER RING GASKET. MAINS 36" AND LARGER SHALL BE MINIMUM PRESSURE CLASS 350.

PVC PIPE

1. AWWA C900 CLASS 235 PSI (DR18) *OR* AWWA C909 CLASS 235 PSI (DR18)
2. INSIDE DIAMETER: NO LARGER THAN 12", NO SMALLER THAN 4".

GATE VALVES

1. AWWA C509 *OR* C515 APPROVED MODEL RESILIENT SEATED GATE VALVES
2. VALVE OPERATING NUTS: TAPERED (1 7/8" TO 2" FROM TOP TO BOTTOM) AND 2" DEEP
3. MIDDLE RING AND FOLLOWER GLANDS TO BE DUCTILE IRON ASTM A536

AIR RELIEF VALVES

1. AIR RELIEF VALVE COMPONENT PARTS SHALL CONFORM TO AWWA C800 AND ASTM B584 FOR MATERIALS THAT COME INTO CONTACT WITH POTABLE WATER.
2. VALVE INLET AND OUTLET SIZE SHALL BE 2". INSTALL ***ONLY*** CLEVELAND WATER-APPROVED AIR RELIEF VALVE PRODUCTS.

HYDRANTS

1. INSTALL ***ONLY*** CLEVELAND WATER-APPROVED HYDRANT MODELS .
2. HYDRANTS SHALL BE FACTORY EQUIPPED WITH THE APPROPRIATE HYDRANT NOZZLE, INCLUDING STORZ IF REQUESTED BY THE LOCAL MUNICIPALITY.
3. INSTALL ALL HYDRANTS WITH APPROVED PVC PIPE (ITEM 2) AND AWWA C509 6" RW GATE VALVES .
4. HYDRANT CONNECTIONS ARE TO BE MADE WITH RETAINED MECHANICAL JOINT SOLID SLEEVES (SHORT OR LONG PATTERN) DUCTILE IRON CLASS 350 OR CAST IRON CLASS 250 OR COMPRESSION COUPLINGS WITH ROD AND CLAMPS AS DIRECTED BY CLEVELAND WATER.
5. HYDRANT BRANCHES TO BE FULLY RESTRAINED. IF BRANCH IS SHORTENED, USE ONLY 1 SLEEVE OR COUPLING WITH NO NEW PIPE REQUIRED.
6. MIDDLE RING AND FOLLOWER GLANDS TO BE EITHER STEEL OR DUCTILE IRON ASTM A536.
7. FLUSHING HYDRANTS SHALL CONSIST OF 2" FIP VERTICAL INLET, 2" MIP OUTLET AND BE SELF-DRAINING. FLUSHING HYDRANT SHALL BE FULLY OPERABLE AND SERVICEABLE FROM ABOVE GROUND. EQUAL TO KUPERFERLE TRUFLO MODEL NO. TF500.

COMPRESSION COUPLINGS - VALVES AND HYDRANTS

1. CLASS 250 AWWA C219 GASKETED, SLEEVE TYPE WITH DIAMETERS TO PROPERLY FIT PLAIN END PIPE
2. MINIMUM WORKING PRESSURE: 250 PSI
3. EQUAL TO DRESSER STYLE NO. 38, 138, OR 162 (TRANSITION TYPE) OR ROMAC 501/ SMITH-BLAIR 441 STRAIGHT AND TRANSITION COUPLINGS.
4. EACH COUPLING TO CONSIST OF 1 DUCTILE IRON MIDDLE RING WITHOUT STOPS (ASTM-A536) 2 DUCTILE IRON FOLLOWER GLANDS (ASTM A536), 2 RUBBER COMPOUND BUNA-N BLEND, WEDGE SECTION GASKETS, AND SUFFICIENT TRACKHEAD STAINLESS STEEL BOLTS AND NUTS OF ASTM A276/A193/194 TYPE 304 EXTRA HEAVY HEX TO PROPERLY COMPRESS THE GASKETS.

FITTINGS/JOINTS

1. ALL FITTINGS/JOINTS TO BE APPROVED DUCTILE IRON, CLASS 350, CEMENT LINED, OR FUSION BONDED EPOXY COATED (UNLESS OTHERWISE CALLED FOR ON PLANS) .
2. ALL FITTINGS TO BE RESTRAINED USING A "RETAINED" MECHANICAL JOINT CONFORMING TO THE MATERIAL AND PERFORMANCE REQUIREMENTS OF ANSI/AWWA C110/A21.10 AND ANSI/AWWA C111/A21.11, OR "COMPACT" FITTINGS IN ACCORDANCE WITH ANSI/AWWA C153/A21.53.
3. MUST HAVE APPROVED "TYPE I" OR "TYPE II" BOLTLESS RESTRAINED PUSH-ON JOINTS TO THE LIMITS SHOWN ON THE DRAWINGS.
4. ALL FITTINGS ARE TO HAVE BELL ENDS.

GASKETS AND LUBRICANTS

1. ELASTOMERIC GASKETS SHALL MEET THE REQUIREMENTS OF ASTM F477 FOR HIGH-HEAD APPLICATIONS.
2. GASKETS AND LUBRICANTS INTENDED FOR USE WITH POTABLE WATER SHALL BE CERTIFIED BY AN ACCREDITED TESTING AGENCY FOR COMPLIANCE WITH NSF/ANSI 61.

ANODE PROTECTION

1. MAGNESIUM ALLOY ANODES SHALL MEET ASTM B843 AND ASTM G97.
2. THERMITE WELDS ARE TO BE COATED WITH A PREFABRICATED ONE-PIECE PLASTIC CAP.
3. COPPER SLEEVES ARE REQUIRED FOR THERMITE WELD WIRE CONNECTIONS USING #10 AWG WIRE OR SMALLER.

WATER MAIN TRENCH

1. BEDDING, INITIAL, AND PREMIUM BACKFILL MATERIAL: # 57 OR #67 COARSE LIMESTONE AGGREGATE COMPLYING WITH ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS SECTION 703.11; WRITTEN APPROVAL REQUIRED BY CWD FOR SAND BEDDING FOR DUCTILE IRON PIPE.
2. SUITABLE BACKFILL: EXCAVATED MATERIAL FREE OF ROCK LARGER THAN 1.5", FROZEN MATERIALS, ORGANIC MATERIAL, AND DEBRIS.
3. TYPE 2 CONTROLLED LOW-STRENGTH MORTAR (CLSM) SHALL CONFORM TO ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS SECTION 613.03. CLSM MAY BE USED AS DIRECTED BY CLEVELAND WATER.

CASING

1. CASING SPACER: 8" WIDE STAINLESS STEEL WITH EPDM LINER AND REINFORCED PLASTIC RUNNERS
2. CASING PIPE: ASTM A1097 COATED OR UNCOATED STEEL WITH A MIN. 35,000 PSI SMYS.
3. FOR 8" WATER MAIN USE 16" CASING
4. FOR 12" WATER MAIN USE 20" CASING

TRACER WIRE

1. MUST BE INSTALLED WITH A CONTINUOUS RUN OF 12-GAUGE COPPER-CLAD STEEL WIRE.
2. BREAKING LOAD: MIN. 450 POUNDS
3. MIN. 30 MILS OF BLUE HDPE INSULATION CERTIFIED FOR DIRECT BURIAL
4. GROUND ROD: MIN 1.5 LB MAGNESIUM DRIVE-IN ANODE ROD WITH CONNECTED GROUND WIRE.
5. CONNECTORS: WATERPROOF, CONTAIN DIELECTRIC SILICONE AND RATED FOR DIRECT BURIAL.
6. NON-LOCKING FRICTION FIT, TWIST-ON, AND TAPED CONNECTIONS ARE NOT PERMITTED.

SERVICE CONNECTIONS

1. ALL SERVICE CONNECTIONS SHALL BE A MINIMUM OF 1"
2. FOR CONNECTIONS 2" AND SMALLER: USE TYPE K COPPER
3. FOR CONNECTIONS 3" AND LARGER: USE CLASS 52 DUCTILE IRON WRAPPED IN V-BIO® ENHANCED POLYETHYLENE ENCASEMENT.

BOLTS AND NUTS

1. ALL BOLTS AND NUTS ON ALL RETAINED MECHANICAL JOINTS SHALL HAVE FIELD APPLIED ONE 1 COAT OF BITUMASTIC PAINTING FOLLOWED BY AN ENCASEMENT OF V-BIO® POLYETHYLENE WRAP OR APPROVED EQUAL WRAPPING IN ACCORDANCE WITH ANSI/AWWA C105/A21.5 MODIFIED METHOD "A" .

CONCRETE

1. FOR BULKHEAD: CLASS QC 1 OR 4,000 PSI HIGH STRENGTH BAGGED CONCRETE MIX
2. FOR THRUST BLOCK: CLASS QC 1 WITH 4,000 PSI 28 DAY COMPRESSIVE STRENGTH (ODOT 499)

FROST PROOFING

1. USE PRE-FORMED CELLULAR CONCRETE FOAM "GILSULATE 500 XR" AS MANUFACTURED BY GILSULATE INTERNATIONAL, INC. OR APPROVED EQUAL.

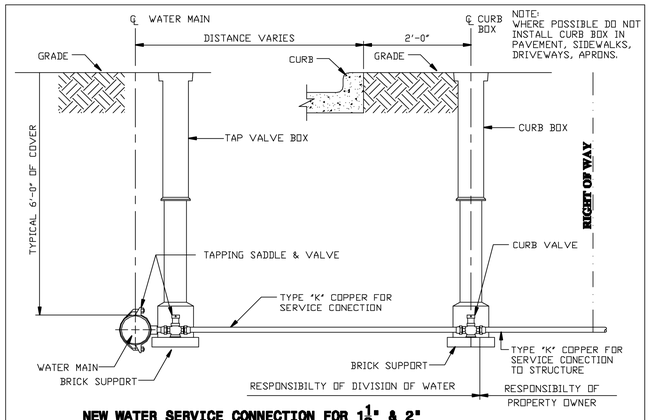
LOWERING

1. PIPE USED SHALL BE 8" (MIN.) AND 12" (MAX.) IN DIAMETER.
2. MAXIMUM BEND ALLOWED TO BE 22.5 DEGREES.

TEE

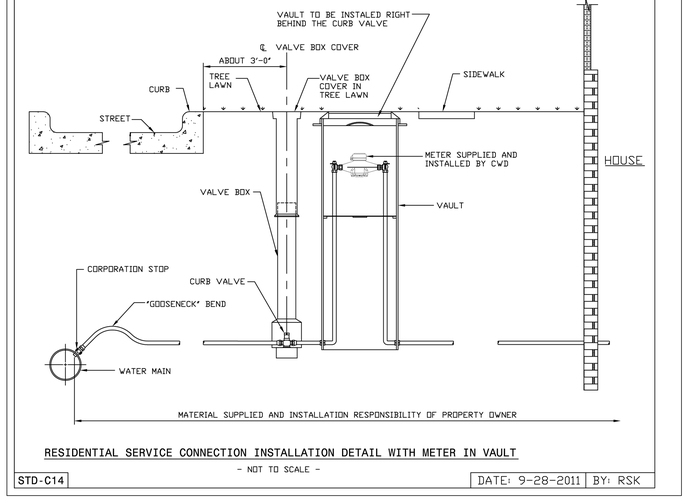
1. PIPE TO BE USED ON TEE- 8" (MIN.) AND 12" (MAX)
2. AWWA C110 OR C153 DI CLASS 350 MJ FITTINGS WITH FBE COATING, CEMENT LINING, POLYETHYLENE ENCASEMENT
3. AWWA C219 PIPE COUPLINGS- ROMAC 501 OR SMITH BLAIR 441 DI ONLY
4. AWWA C509 DUCTILE IRON RESILIENT WEDGE GATE VALVE (MJ X MJ)
5. MECHANICAL JOINT RETAINER GLAND FOR PVC PIPE-TYLER UNION OR APPROVED EQUAL

CITY OF CLEVELAND DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER (CWD)	REVISIONS			MATERIAL CRITERIA FOR WATER MAIN INSTALLATION AND REPLACEMENT
	NO.	DATE	BY	DETAIL NO.: GEN-000A
				SCALE: N.T.S. DATE: 7/12/2024



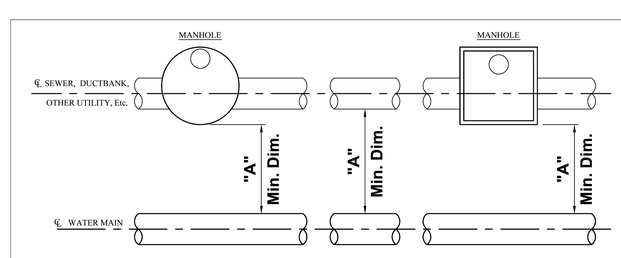
NEW WATER SERVICE CONNECTION FOR 1½" & 2"

STD-C10 — – NOT TO SCALE – — DATE: 6-21-2000 — BY: RSK



RESIDENTIAL SERVICE CONNECTION INSTALLATION DETAIL WITH METER IN VAULT

STD-C14 — – NOT TO SCALE – — DATE: 9-28-2011 — BY: RSK

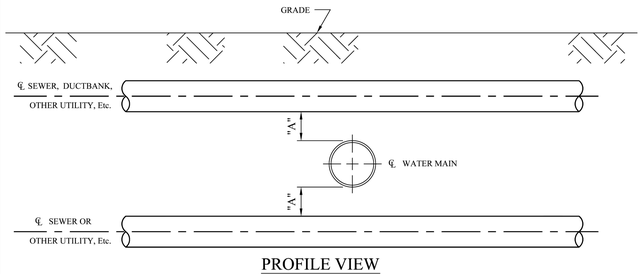


PLAN VIEW
- SEE STD-018 FOR PROFILE VIEW -

HORIZONTAL CLEARANCE	STORM SEWER	SANITARY SEWER	GAS, DUCTBANK, OTHER UTILITY, Etc.
"A"	10'-0" MIN.	10-0" MIN.	5'-0" MIN.

HORIZONTAL CLEARANCE FOR UTILITIES
NOT TO SCALE

STD-017 — DATE: 7-02-2014 — BY: MTA



PROFILE VIEW
- SEE STD-017 FOR PLAN VIEW -

VERTICAL CLEARANCE	SANITARY SEWER LESS THAN 24"	SANITARY SEWER 24" & LARGER	STORM SEWER, DUCTBANK, GAS, OTHER UTILITY LESS THAN 24"	STORM SEWER, DUCTBANK, GAS, OTHER UTILITY 24" & LARGER	REMARKS
"A"	18" Min.	18" Min.	18" Min.	18" Min.	IF CANNOT ACHIEVE MIN. CLEARANCE WATER MAIN TO BE LOWERED

VERTICAL CLEARANCE FOR UTILITIES
NOT TO SCALE

STD-018 — DATE: 7-02-2014 — BY: MTA

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Project No: 25-25
Drawn / Checked: KR/HJC

Issue: 6 Bulletin #1 08.20.2026

CIVIL CONSTRUCTION DETAIL

C602

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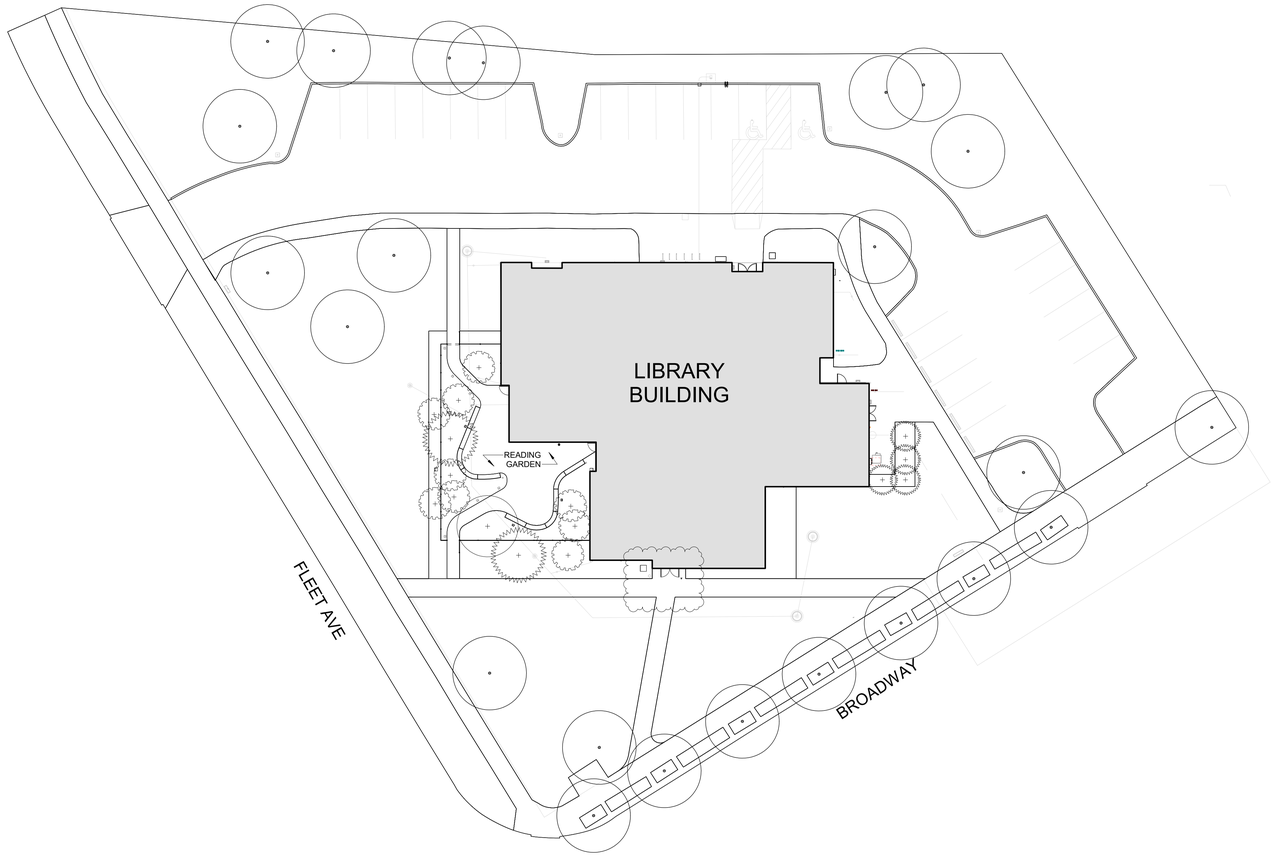
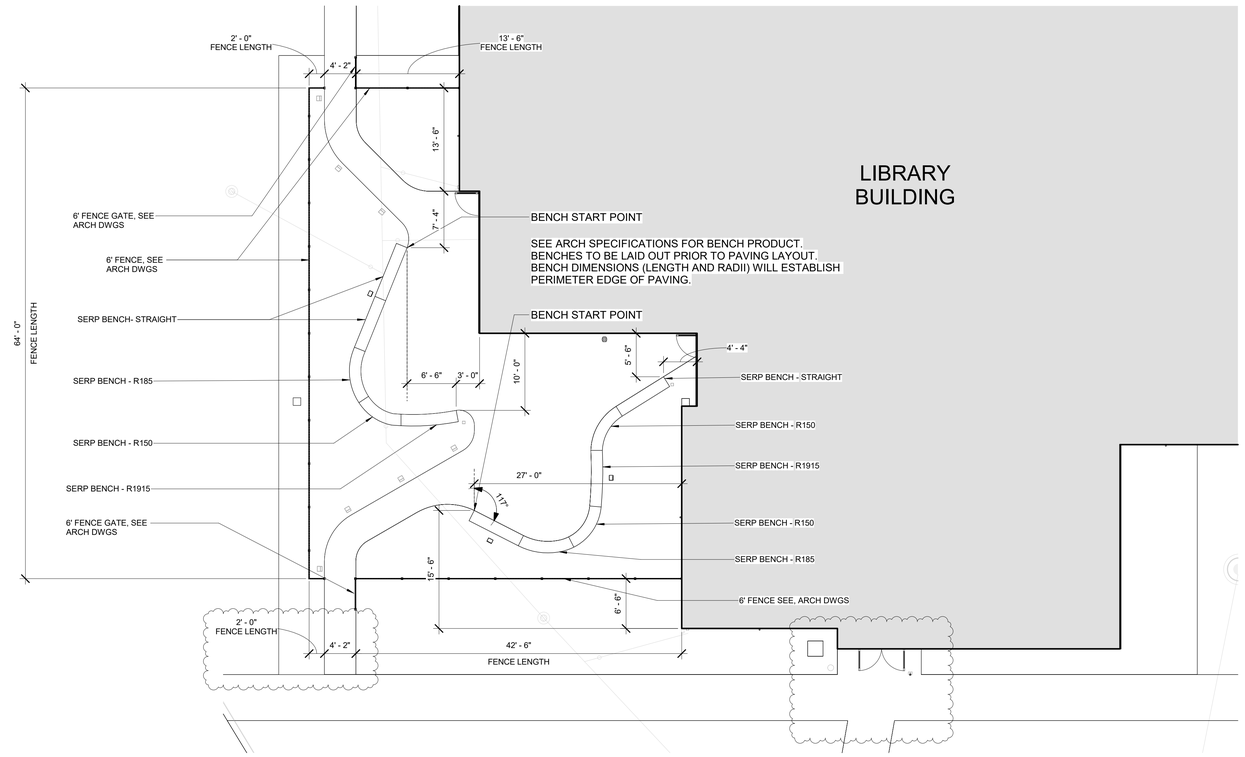


1 | L100 SITE PLAN
REF: 1" = 20'-0"



2 | L100 READING GARDEN FURNISHINGS PLAN
REF: 1/8" = 1'-0"

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Project No: 25-25
Drawn / Checked: AS / AS

Issue:

	Bid & Permit	2.27.2026
2	Addendum 2	3.18.2026

SITE PLANS & FURNISHINGS PLAN

L100

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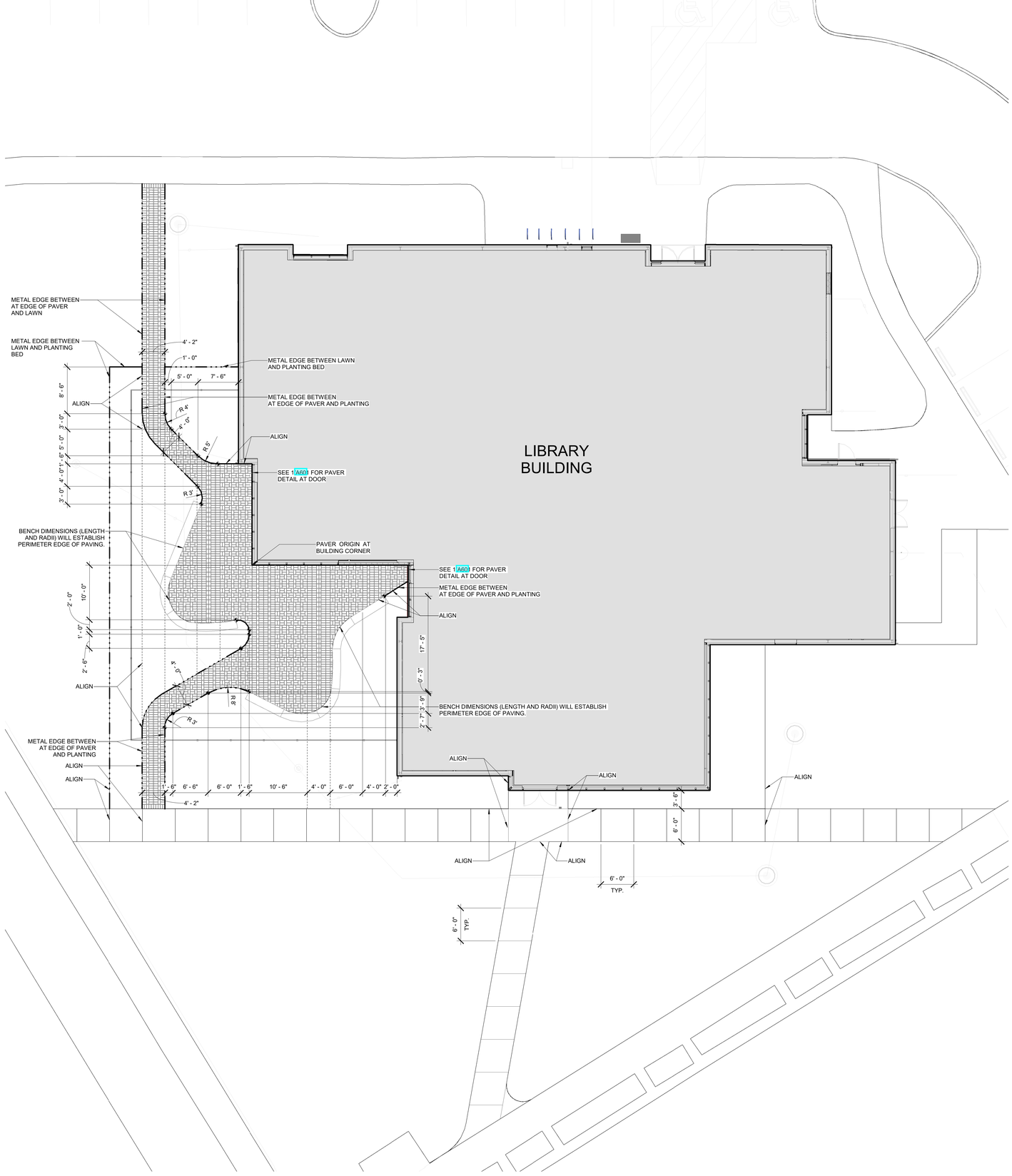
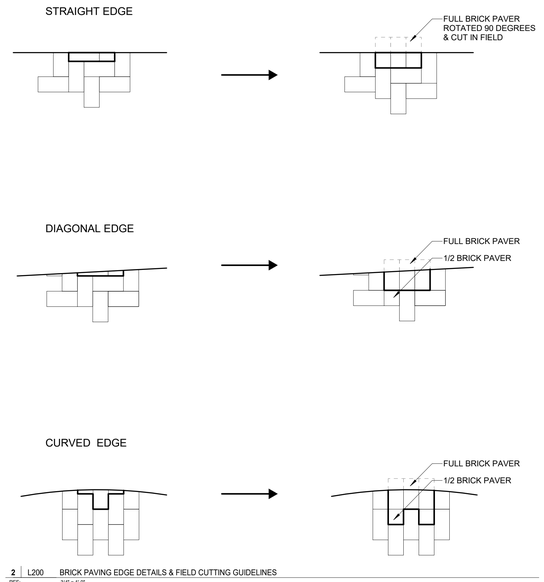
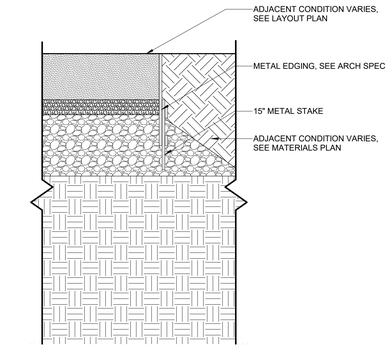


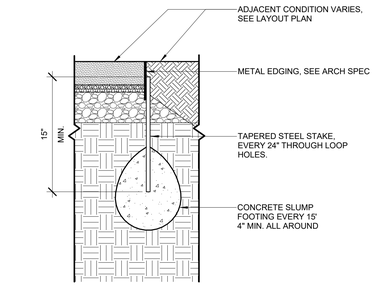
1 | L200 READING GARDEN FURNISHINGS PAVER LAYOUT PLAN
REF: 1/8" = 1'-0"



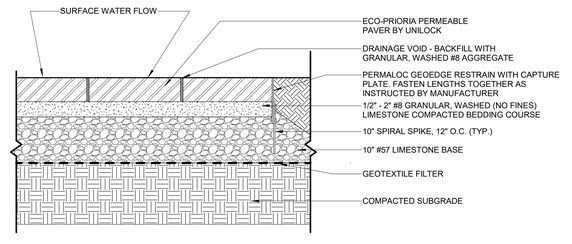
2 | L200 BRICK PAVING EDGE DETAILS & FIELD CUTTING GUIDELINES
REF: 3/4" = 1'-0"



3 | L200 METAL EDGING
REF: 3" = 1'-0"



4 | L200 METAL EDGING WITH CIP CONCRETE FOOTING
REF: 1 1/2" = 1'-0"



5 | L200 PERMEABLE PAVER
REF: 1 1/2" = 1'-0"

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2	Addendum 2	3.18.2026
6	Bulletin 1	8.20.2026

PAVER DETAILS & LAYOUT PLAN
L200

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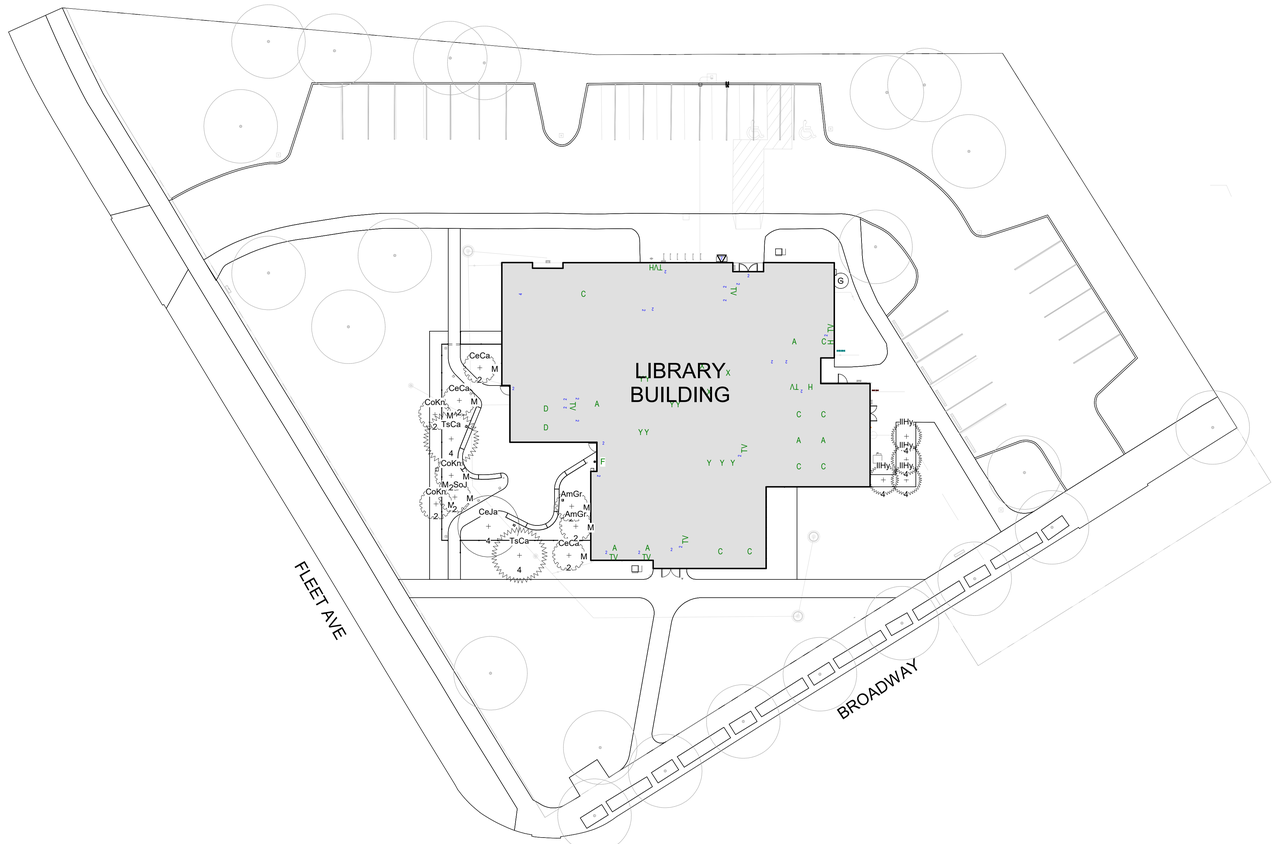
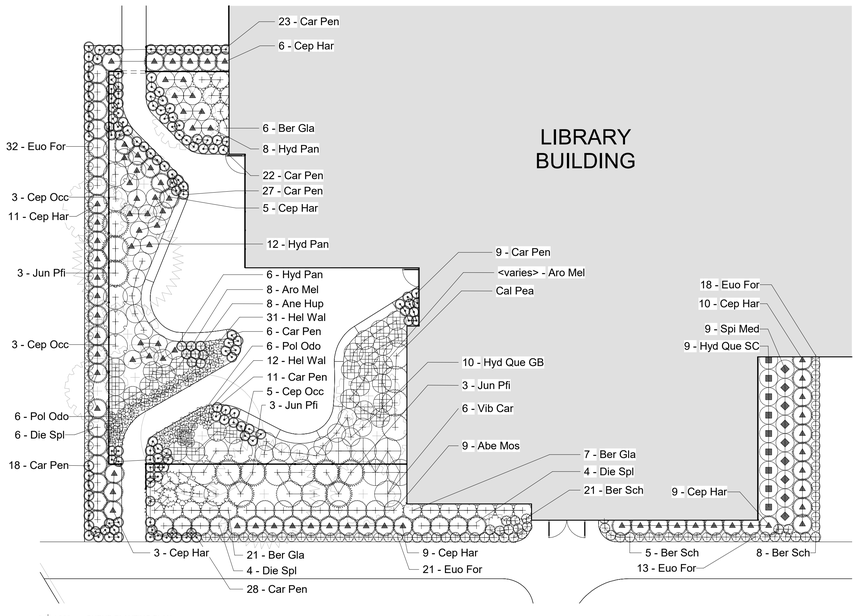


1 | L900 TREE PLANTING PLAN
REF: 1" = 20'-0"



2 | L900 SHRUB PLANTING PLAN
REF: 1" = 10'-0"

LEGEND

- EXISTING TREE
- PROPOSED TREE
- PROPOSED CONIFER TREE
- PROPOSED UNDERSTORY TREE

NOTES

1. ALL AREAS NOT COVERED BY BUILDINGS OR PAVEMENT AND WHICH HAVE BEEN GRADED OR OTHERWISE DISTURBED SHALL BE TOPSOILED AND SEEDED, UNLESS SHOWN OTHERWISE.
2. ALL TREES OUTSIDE THE BUILDING AND PAVED AREAS SHALL REMAIN AND BE PROTECTED DURING CONSTRUCTION, UNLESS SPECIFICALLY DESIGNATED TO BE REMOVED. PRIOR TO REMOVAL, THE CONTRACTOR SHALL ARRANGE AN ON-SITE MEETING WITH THE LANDSCAPE ARCHITECT TO REVIEW THE CLEARING LIMITS, VISUAL LOCATIONS OF ALL UTILITIES AND ANY EXCEPTIONAL TREES.
3. P.B. = PLANT BED. MULCH ALL PLANT BEDS TO A DEPTH OF 3". BEDS SHALL BE KEPT 1" MIN AWAY FROM TRUNK OF ALL TREES, SHRUBS, TREE FERNS, AND FOLIAGE OF ALL PERENNIALS.
4. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN IN THE DRAWINGS.
5. CONTRACTOR SHALL REMOVE ALL HARD LUMPS OF CLAY, STONES OVER 1" IN DIAMETER, AND ALL CONSTRUCTION DEBRIS INCLUDING GRAVEL, ROOTS, LIMBS AND OTHER DELETERIOUS MATTER WHICH WOULD BE HARMFUL, OR PREVENT PROPER GRADING, SEEDING AND/OR MAINTENANCE OF LAWN AND PLANTING AREAS.
6. ALL TREES SHALL CONFORM TO GUIDELINES ESTABLISHED BY "THE AMERICAN STANDARD FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN (LATEST EDITION).
7. NO TREES SHALL BE PLANTED BEFORE ACCEPTANCE OF ROUGH GRADING. TREES SHALL BEAR SAME RELATIONSHIP TO FINISHED GRADE AS TO ORIGINAL GRADE PRIOR TO DIGGING.
8. ALL PLANTS SHALL BE BALLED IN BURLAP OR CONTAINER GROWN UNLESS OTHERWISE NOTED IN THE PLANTING SCHEDULE.
9. ALL PLANTS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO THEIR ARRIVAL ON THE SITE
10. THE CONTRACTOR SHALL LOCATE AND VERIFY UTILITY LINE LOCATIONS PRIOR TO PLANTING AND REPORT ANY CONFLICTS TO THE LANDSCAPE ARCHITECT
11. THE LAYOUT OF PLANTS IN THE FIELD IS TO BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.

Tree Schedule

Plant Common Name	Plant Scientific Name	Plant Code	Count	Plant Caliper Size (Inches)	Specified Height
Ace of Hearts Redbud	Cercis canadensis 'Ace of Hearts'	CeCa	3	2	N/A
Apple Serviceberry	Amelanchier grandiflora "Autumn Brilliance"	AmGr	2	2	N/A
Black Tulip Magnolia	Magnolia x soulangiana 'Jurmag1'	MaSoJ	1	2	N/A
Katsura Tree	Cercidiphyllum japonicum	CeJa	1	4	N/A
Oakland Holly	Ilex hybrid 'Magland'	IlHy	4	4	8'
Venus Dogwood	Cornus x 'KN30-8'	CoKn	3	2	N/A
Weeping Alaskan Cedar	Chamaecyparis nootkatensis	TsCa	2	4	12'

Shrub and Groundcover Schedule

Plant Common Name	Plant Scientific Name	Plant Code	Count	Plant Size
Double Play® Blue Kazoo® Spirea	Spiraea media 'SMSMBK'	Spi Med	9	3 Gal
Early Evolution Hydrangea	Hydrangea paniculata 'AJ14'	Hyd Pan	26	3 Gal
Gatsby Glow Ball Oakleaf Hydrangea	Hydrangea quercifolia 'Gatsby Glow Ball'	Hyd Que GB	15	3 Gal
Ivory Prince Hellebore	Helleborus x 'Walhelivor' PP16199	Hel Wal	42	1 Gal
Japanese Anemone	Anemone hupehensis var japonica 'Honorine Jobert'	Ane Hup	8	1 Gal
Kodiak Red 2.0 Diervilla	Diervilla × splendens	Die Spl	21	3 Gal
Low Scape Snowfire	Aronia melonacarpa	Aro Mel	28	1 Gal
Pearl Glam Beautyberry	Callicarpa x 'NCCX2' Pearl Glam	Cal Pea	8	5 Gal
Pennsylvania Sedge	Carex pensylvanica	Car Pen	142	1 Gal
Schmidt Elephant Ears	Bergenia x schmidtii	Ber Sch	34	1 Gal
Sea Green Juniper	Juniperus x pfitzeriana 'Sea Green'	Jun Pfi	9	5 Gal
Snowcicle Oakleaf Hydrangea	Hydrangea quercifolia 'Snowcicle'	Hyd Que SC	9	5 Gal
Solomon Seal	Polygonatum odoratum	Pol Odo	12	1 Gal
Spice Cowboy Koreanspice Viburnum	Virbum carlesii	Vib Car	6	5 Gal
Spreading Japanese Plum Yew	Cephalotaxus harringtonia 'Prostrata'	Cep Har	54	3 Gal
Sugar Shack Button Bush	Cephalanthus occidentalis 'Sugar Shack'	Cep Occ	11	5 Gal
Sweet Emotion Blaze Hard Abelia	Abelia mosanensis	Abe Mos	9	3 Gal
William Penn Barberry	Berberis x gladwynensis 'William Penn'	Ber Gla	23	5 Gal
Wintercreeper Euonymus	Euonymus fortunei 'Wolong Ghost'	Euo For	84	1 Gal

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Project No: 25-25
Drawn / Checked: Author / Checker

Issue:

1	80% CD Progress	02/13/2026
2	100% CD	02/27/2026

PLANTING PLAN - TREES & SHRUBS

L900

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LEGEND

- Existing construction to remain
- Existing construction to be demolished
- Concrete slab to be demolished
- Remove existing ceramic tile and mortar bed. Prep floor smooth and flat for new floor finishes.

DEMOLITION GENERAL NOTES

A. Field verify all existing conditions prior to demolition. Notify Architect immediately of any discrepancies between actual existing conditions and the construction documents.

B. All dimensions are assumed to be +/- VIF, uno.

C. Existing gyp. bd. on inside face of exterior walls is to remain except where noted for removal. Remove coverings, trim, base and wall mounted equipment, uno. Prep surfaces for new finishes.

D. Coordinate limits of demolition of existing elements to remain with new elements to be constructed.

E. Protect existing elements indicated to remain. Provide temporary moisture protection for elements during demolition and repair damage to elements. Patch existing walls, columns, floors, and ceilings where demolished construction intersects existing construction to remain and prep surfaces for new finishes.

F. Provide temporary structural bracing in coordination with structural drawings during demolition and construction.

G. Where elements in slab have been demolished or removed, ensure slab is properly prepared for new finish.

H. Notify the Architect immediately of structural or MEPT elements which are uncovered during the course of rehabilitation and if elements are found to be unsound or otherwise deficient.

I. See civil, MEPT & structural drawings for demolition scope of work otherwise not indicated.

J. Preserve and store all existing fire extinguishers for future reuse.

K. Repair or replace and tuckpoint existing masonry damaged during demolition.

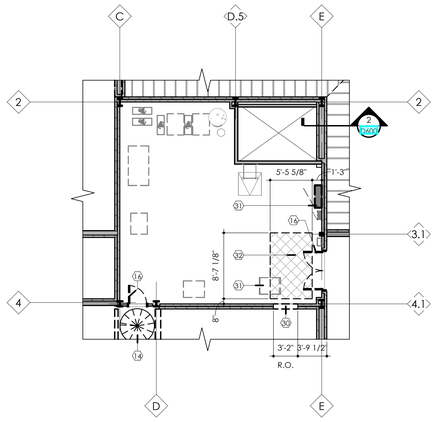
L. Salvage existing brick indicated to be removed and reuse for repair or retoothing as identified in drawings. Any extra to be returned Owner.

M. Disconnect and cap off all utilities and equipment associated with new construction prior to the commencement of work. Coordinate with MEPT drawings.

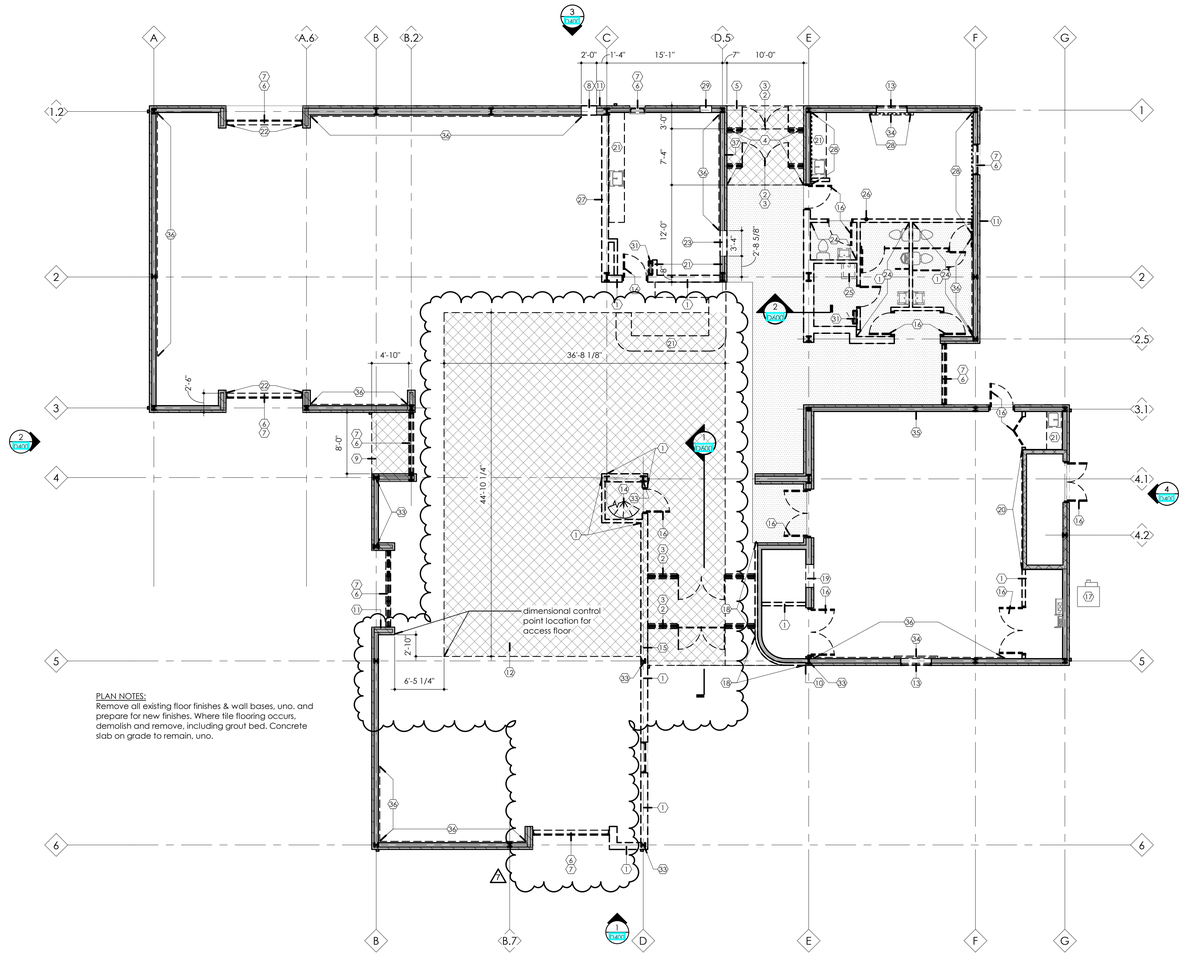
N. Complete remediation of hazardous materials from qualified abatement contractor in accordance with all EPA and regulatory requirements prior to any subsequent demolition in the same area. Owner to provide hazardous material testing. Coordinate testing and remediation schedule with Owner.

DEMOLITION KEY NOTES (#)

1. Wall to be removed from T.O. foundation to T.O. wall, uno.
2. Demolish and remove storefront framing, glazing, doors & window guards complete. Remove soffit & wall above to B.O. structure.
3. Demolish brick sill; face brick and back-up, below window to T.O. foundation.
4. Demolish and remove concrete slab and foundation down to grade beam in area of new vestibule. Coordinate with structural drawings for depth of new depressed slab.
5. Demolish and remove concrete slab and foundation. Coordinate with civil drawings for area of new snow melt.
6. Remove window, framing and glazing. Remove & clean sealant from brick jambs.
7. Demolish wall panel, wall & brick sill/curb below window system to T.O. concrete slab on grade.
8. Demolish portion of wall from T.O. concrete slab on grade to allow for new construction. See demolition elevations for height AFF.
9. Demolish and remove portion of concrete slab and foundation. Coordinate with structural drawings for new slab.
10. Hose bib connection to be relocated. Coordinate with plumbing drawings for relocation.
11. Remove Hose bib, disconnect and cap off lines & prep for new. Coordinate with plumbing drawings for new work.
12. Demolish and remove portion of concrete slab on grade and sub-base to accommodate installation of new raised access flooring system. Coordinate with structural drawings.
13. Remove window glazing. Window frame to remain.
14. Demolish and remove spiral stair system.
15. Within wall to be demolished, limestone '1981' date stone to be salvaged, removed and returned to Owner. Coordinate with Owner to ensure proper care during demolition and return undamaged.
16. Demolish and remove door, frame, closer, operating devices, and hardware complete, coordinate with A901, door schedule.
17. Utility transformer to remain.
18. Demolish and remove face brick and sheathing; metal framing and gyp. bd to remain.
19. Demolish and remove cased opening frame. Prep opening for new door. Coordinate with A901.
20. Demolish and remove gypsum board finish and wall furring back to cmu wall to remain.
21. Demolish and remove casework and upper cabinets including plumbing fixtures, electrical, hardware, and all related elements. Demolish and remove lockers.
22. Remove recessed unit heater, coordinate with mechanical drawings.
23. Demolish portion of wall from T.O. concrete slab on grade up to 7'-2" AFF and prep opening for new door. Coordinate with A901.
24. Demolish and remove toilet partitions, toilet accessories, plumbing fixtures, casework, tile flooring and wall base.
25. Demolish and remove mop sink.
26. Demolish and remove column and base plate. Remove portion of slab as required. Patch to match adjacent slab. Coordinate with structural drawings.
27. Wall to be removed from T.O. foundation to B.O. brick ledge steel plate below beam.
28. In area of dotted line & where new wall tile is specified in new restrooms, remove gyp bd back to studs full height. Prep surfaces for new moisture resistant backer board. Coordinate with floor plans and interior elevations for extents of new tiled walls.
29. Demolish and remove existing thru-wall book-drop and rain cover above. Re-tooth opening with salvaged brick.
30. Demolish portion of wall from above penthouse floor and prep opening for new access hatch. Coordinate opening with S/A402.1.
31. See MEPT drawings for scope of electrical and mechanical equipment to be removed.
32. Demolish and remove portion of concrete slab/penthouse floor & supporting structure in area of new opening. Coordinate with structural drawings for new work and shoring requirements.
33. Remove portion of structure around existing column to remain to reinforce column and base plate as required, see structural drawings for reinforcing details.
34. Demolish and remove wood trim window surround, shade and valance complete.
35. Demolish and remove white board and trim. Demolish and remove surface mounted devices, conduit and wiremold.
36. In area of dashedd line remove gyp bd back to studs from floor to 2'-0" AFF. Gyp bd above 2'-0" AFF to remain.
37. Remove portion of brick for new monitor & back box. Coordinate with electrical drawings for new work in this area.



2 D101 PENTHOUSE DEMOLITION PLAN
1/8" = 1'-0"



1 D101 FIRST FLOOR DEMOLITION PLAN
1/8" = 1'-0"

Project North
True North

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Project No: 25-25
Drawn / Checked: JPH / BG

Issue:

	Bid & Permit	2.27.2026
7	Bulletin #2	9.18.2026

DEMOLITION PLANS

D101

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LEGEND

- Existing construction to remain
- Existing construction to be demolished
- Roofing material to be demolished
- Roofing material, decking & structure to be demolished

DEMOLITION GENERAL NOTES

A. Field verify all existing conditions prior to demolition. Notify Architect immediately of any discrepancies between actual existing conditions and the construction documents.

B. All dimensions are assumed to be +/- VIF, uno.

C. Existing gyp. bd. on inside face of exterior walls is to remain except where noted for removal. Remove coverings, trim, base and wall mounted equipment, uno. Prep surfaces for new finishes.

D. Coordinate limits of demolition of existing elements to remain with new elements to be constructed.

E. Protect existing elements indicated to remain. Provide temporary moisture protection for elements during demolition and repair damage to elements. Patch existing walls, columns, floors, and ceilings where demolished construction intersects existing construction to remain and prep surfaces for new finishes.

F. Provide temporary structural bracing in coordination with structural drawings during demolition and construction.

G. Where elements in slab have been demolished or removed, ensure slab is properly prepared for new finish.

H. Notify the Architect immediately of structural or MEPT elements which are uncovered during the course of rehabilitation and if elements are found to be unsound or otherwise deficient.

I. See civil, MEPT & structural drawings for demolition scope of work otherwise not indicated.

J. Preserve and store all existing fire extinguishers for future reuse.

K. Repair or replace and tuckpoint existing masonry damaged during demolition.

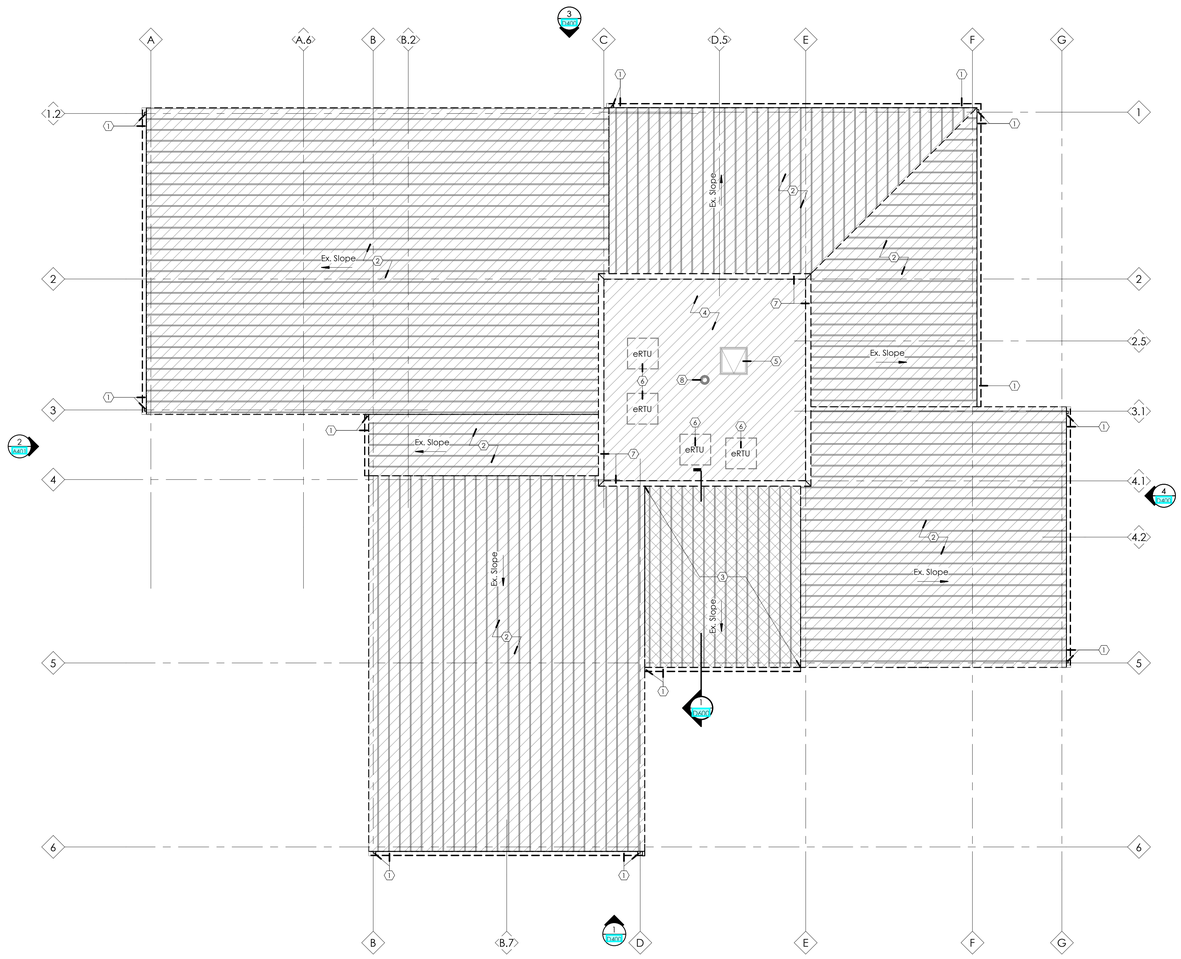
L. Salvage existing brick indicated to be removed and reuse for repair or retoothing as identified in drawings. Any extra to be returned Owner.

M. Disconnect and cap off all utilities and equipment associated with new construction prior to the commencement of work. Coordinate with MEPT drawings.

N. Complete remediation of hazardous materials from qualified abatement contractor in accordance with all EPA and regulatory requirements prior to any subsequent demolition in the same area. Owner to provide hazardous material testing. Coordinate testing and remediation schedule with Owner.

DEMOLITION ROOF KEY NOTES

1. Demolish and remove gutter and downspout system; disconnect from storm system and cap. See plumbing drawings.
2. In area of hatch, demolish and remove standing seam roof down to the decking material. This includes full membrane, insulation, termination/flashing, vapor barrier, snow melt system, and substrate boards. Assume 5% of metal decking to be replaced until an assessment of the exposed deck can be accomplished.
3. In hatched area, demolish and remove standing seam roof, membrane, insulation, termination/flashing, vapor barrier, substrate boards, snow melt system, roof deck and structural framing members. See roof framing plan, S102 for demolished and new structural members in this area.
4. Demolish and remove built-up roofing, flashing, cants and any other components down to concrete roof on metal deck. Assume 5% of concrete to be infilled until an assessment of the exposed concrete can be accomplished. Maintain roof top penetrations not marked for demolition.
5. Roof top hatch to remain. Tie into new roofing system.
6. Roof top equipment to be demolished and removed or salvaged and relocated, coordinate with mechanical drawings. Associated curbs to be demolished and removed. Coordinate roof top penetrations with new mechanical equipment & new roofing system.
7. Demolish and remove coping cap down to 2x nailer below.
8. Remove roof drain, coordinate with plumbing drawings for new roof drain assembly & required penetrations.



1 D102 ROOF DEMOLITION PLAN
1/8" = 1'-0"

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True North

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ROOF DEMOLITION PLAN

D102

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LEGEND

- Existing construction to remain
- Existing construction to be demolished

DEMOLITION GENERAL NOTES

A. Field verify all existing conditions prior to demolition. Notify Architect immediately of any discrepancies between actual existing conditions and the construction documents.

B. All dimensions are assumed to be +/- VIF, uno.

C. Existing gyp. bd. on inside face of exterior walls is to remain except where noted for removal. Remove coverings, trim, base and wall mounted equipment, uno. Prep surfaces for new finishes.

D. Coordinate limits of demolition of existing elements to remain with new elements to be constructed.

E. Protect existing elements indicated to remain. Provide temporary moisture protection for elements during demolition and repair damage to elements. Patch existing walls, columns, floors, and ceilings where demolished construction intersects existing construction to remain and prep surfaces for new finishes.

F. Provide temporary structural bracing in coordination with structural drawings during demolition and construction.

G. Where elements in slab have been demolished or removed, ensure slab is properly prepared for new finish.

H. Notify the Architect immediately of structural or MEPT elements which are uncovered during the course of rehabilitation and if elements are found to be unsound or otherwise deficient.

I. See civil, MEPT & structural drawings for demolition scope of work otherwise not indicated.

J. Preserve and store all existing fire extinguishers for future reuse.

K. Repair or replace and tuckpoint existing masonry damaged during demolition.

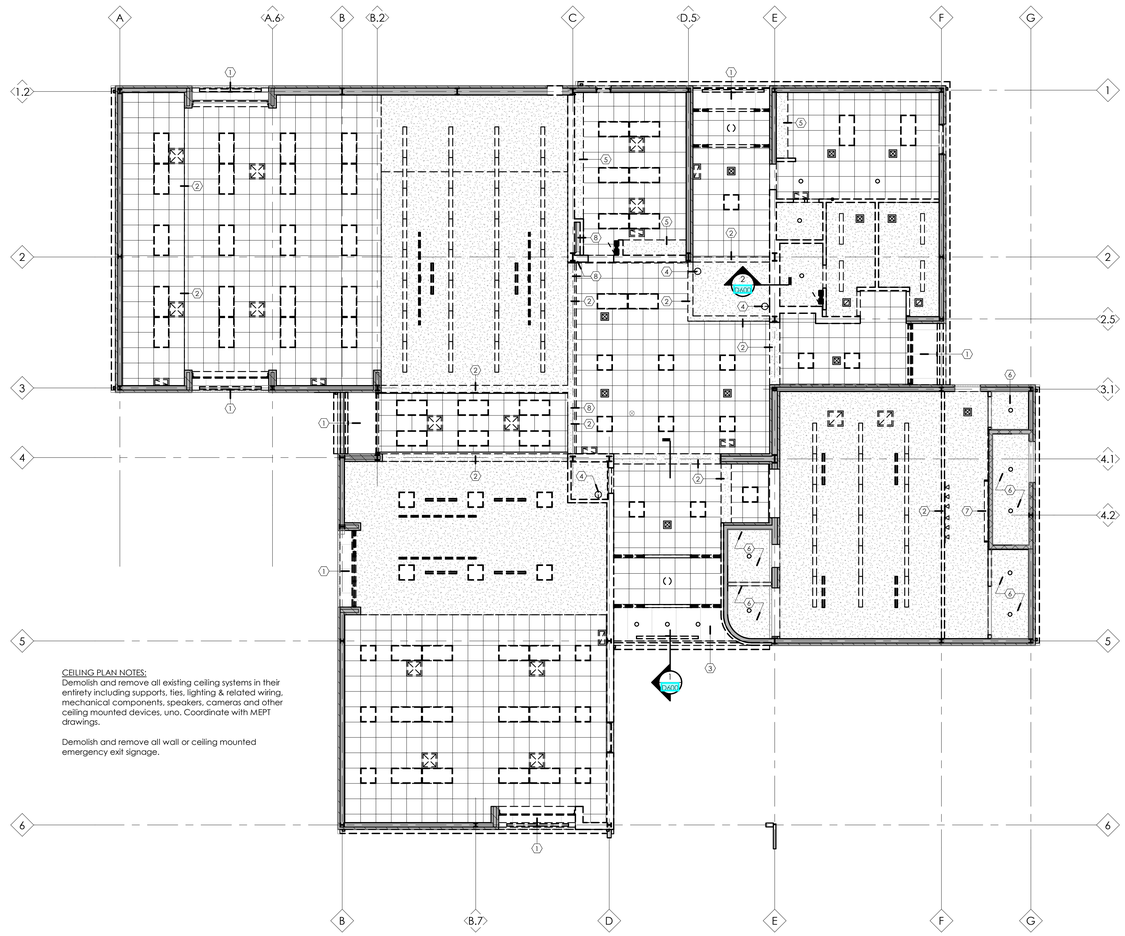
L. Salvage existing brick indicated to be removed and reuse for repair or retoothing as identified in drawings. Any extra to be returned Owner.

M. Disconnect and cap off all utilities and equipment associated with new construction prior to the commencement of work. Coordinate with MEPT drawings.

N. Complete remediation of hazardous materials from qualified abatement contractor in accordance with all EPA and regulatory requirements prior to any subsequent demolition in the same area. Owner to provide hazardous material testing. Coordinate testing and remediation schedule with Owner.

RCP DEMOLITION KEY NOTES (#)

1. Demolish and remove exterior soffit and vent, sheathing and studs. Coordinate with 1/AA01 & 8/AA10 for typical soffit design intent.
2. Demolish and remove bulkhead including gyp. bd. framing and any wall mounted devices and associated wiring.
3. Demolish and remove exterior soffit, vent, sheathing, studs and lighting complete. Structure removed in this area to accommodate new building addition.
4. Demolish wall sconce and associated wiring.
5. Demolish and remove gyp. bd. soffit including soffit framing and any wall mounted devices and associated wiring.
6. Ceiling to remain, demolish and remove light fixtures.
7. Demolish and remove projection screen & housing.
8. Demolish and remove security gate, housing, door, track and all associated components, complete.



CEILING PLAN NOTES:
Demolish and remove all existing ceiling systems in their entirety including supports, ties, lighting & related wiring, mechanical components, speakers, cameras and other ceiling mounted devices, uno. Coordinate with MEPT drawings.

Demolish and remove all wall or ceiling mounted emergency exit signage.

1 D301 FIRST FLOOR DEMOLITION RCP
1/8" = 1'-0"

Project North
True North

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FIRST FLOOR DEMOLITION RCP

D301

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LEGEND

- Existing construction to remain
- Existing construction to be demolished
- Roofing material to be demolished
- Portion of existing structure to be demolished

DEMOLITION GENERAL NOTES

A. Field verify all existing conditions prior to demolition. Notify Architect immediately of any discrepancies between actual existing conditions and the construction documents.

B. All dimensions are assumed to be +/- VIF, uno.

C. Existing gyp. bd. on inside face of exterior walls is to remain except where noted for removal. Remove coverings, trim, base and wall mounted equipment, uno. Prep surfaces for new finishes.

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F. Provide temporary structural bracing in coordination with structural drawings during demolition and construction.

G. Where elements in slab have been demolished or removed, ensure slab is properly prepared for new finish.

H. Notify the Architect immediately of structural or MEPT elements which are uncovered during the course of rehabilitation and if elements are found to be unsound or otherwise deficient.

I. See civil, MEPT & structural drawings for demolition scope of work otherwise not indicated.

J. Preserve and store all existing fire extinguishers for future reuse.

K. Repair or replace and tuckpoint existing masonry damaged during demolition.

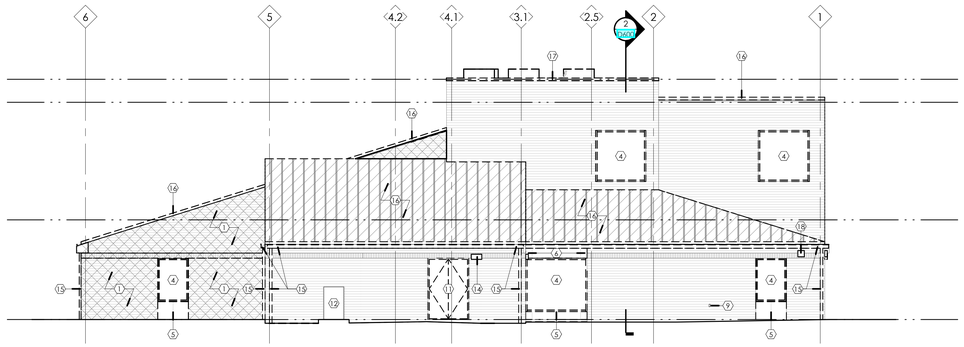
L. Salvage existing brick indicated to be removed and reuse for repair or retoothing as identified in drawings. Any extra to be returned Owner.

M. Disconnect and cap off all utilities and equipment associated with new construction prior to the commencement of work. Coordinate with MEPT drawings.

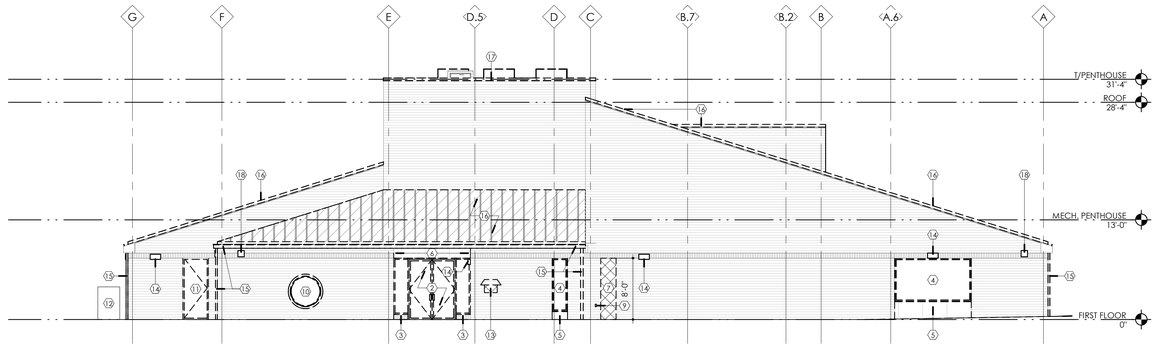
N. Complete remediation of hazardous materials from qualified abatement contractor in accordance with all EPA and regulatory requirements prior to any subsequent demolition in the same area. Owner to provide hazardous material testing. Coordinate testing and remediation schedule with Owner.

DEMO ELEVATION KEY NOTES

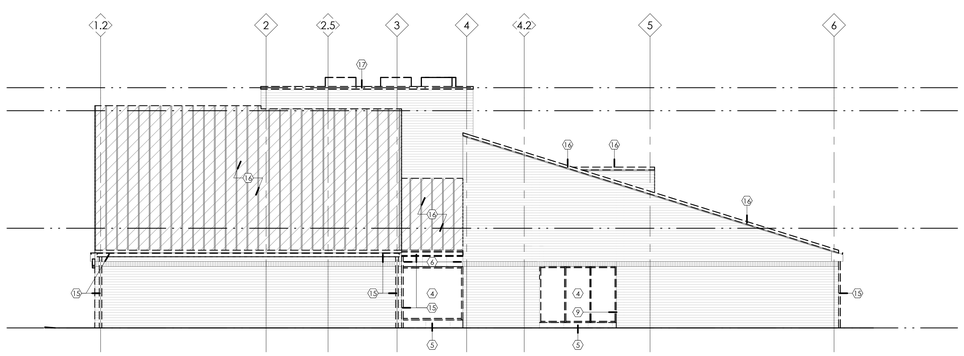
1. Wall to be removed from T.O. foundation to T.O. wall, uno.
2. Demolish and remove storefront framing, glazing, doors & window guards complete. Remove soffit & wall above to B.O. structure.
3. Demolish brick sill; face brick and back-up, below window to T.O. foundation.
4. Remove window, framing and glazing. Remove & clean sealant from brick jambs.
5. Demolish wall panel, wall & brick sill/curb below window system to T.O. concrete slab on grade.
6. Demolish and remove exterior soffit and vent, sheathing and studs.
7. Demolish portion of wall from T.O. concrete slab on grade to allow for new construction.
8. Hose bib connection to be relocated. Coordinate with plumbing drawings for relocation.
9. Remove Hose bib, disconnect and cap off lines & prep for new. Coordinate with plumbing drawings for new work.
10. Remove window glazing. Window frame to remain.
11. Demolish and remove door, frame, closer, operating devices, and hardware complete. coordinate with A901, door schedule.
12. Utility transformer to remain.
13. Demolish and remove existing thru-wall book-drop and rain cover above. Re-tooth opening with salvaged brick.
14. Demolish wall pack. Preserve associated wiring for new wall packs, see electrical drawings.
15. Demolish and remove gutter and downspout system, see demolition roof plan for more information.
16. Demolish and remove standing seam roof, see demolition roof plan for more information.
17. Demolish and remove coping cap, see demolition roof plan for more information.
18. Demolish security device. Reuse existing penetrations for new security devices, see technology drawings.



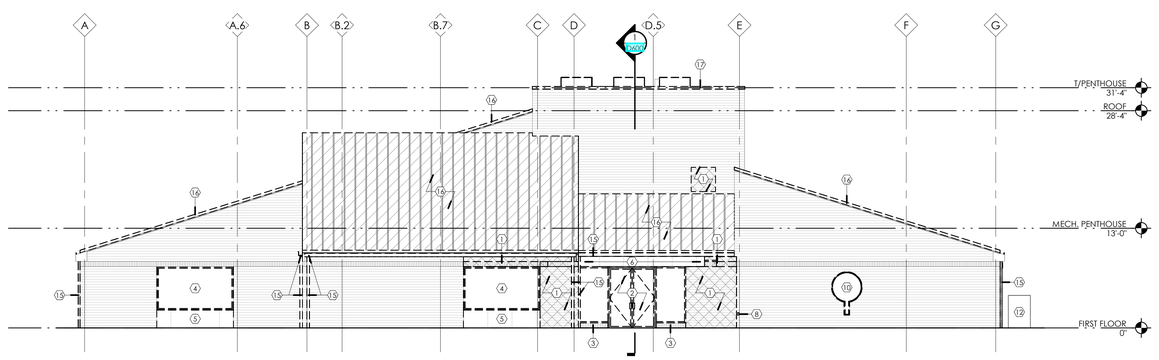
4 D400 NORTH ELEVATION - DEMO
1/8" = 1'-0"



3 D400 WEST ELEVATION - DEMO
1/8" = 1'-0"



2 D400 SOUTH ELEVATION - DEMO
1/8" = 1'-0"



1 D400 EAST ELEVATION - DEMO
1/8" = 1'-0"

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DEMOLITION ELEVATIONS
D400

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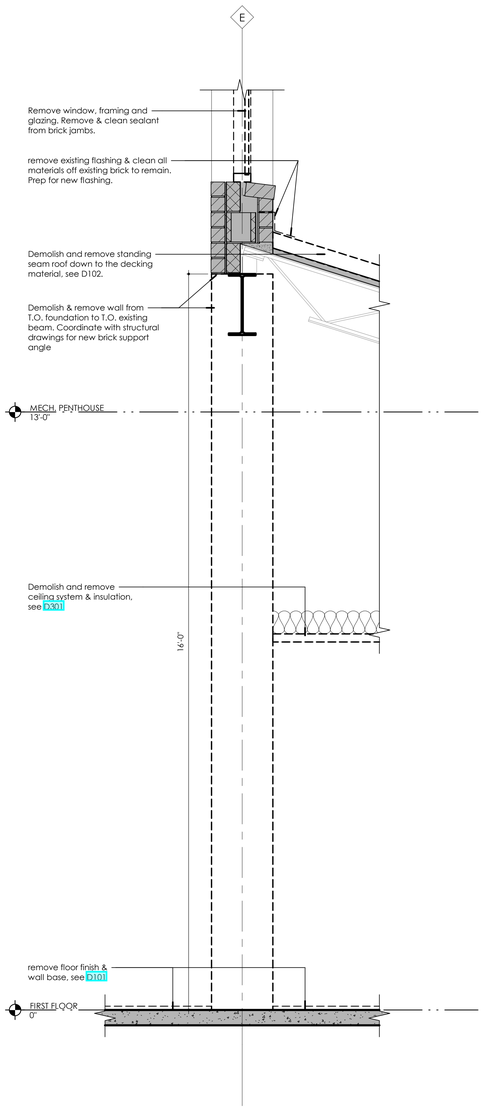
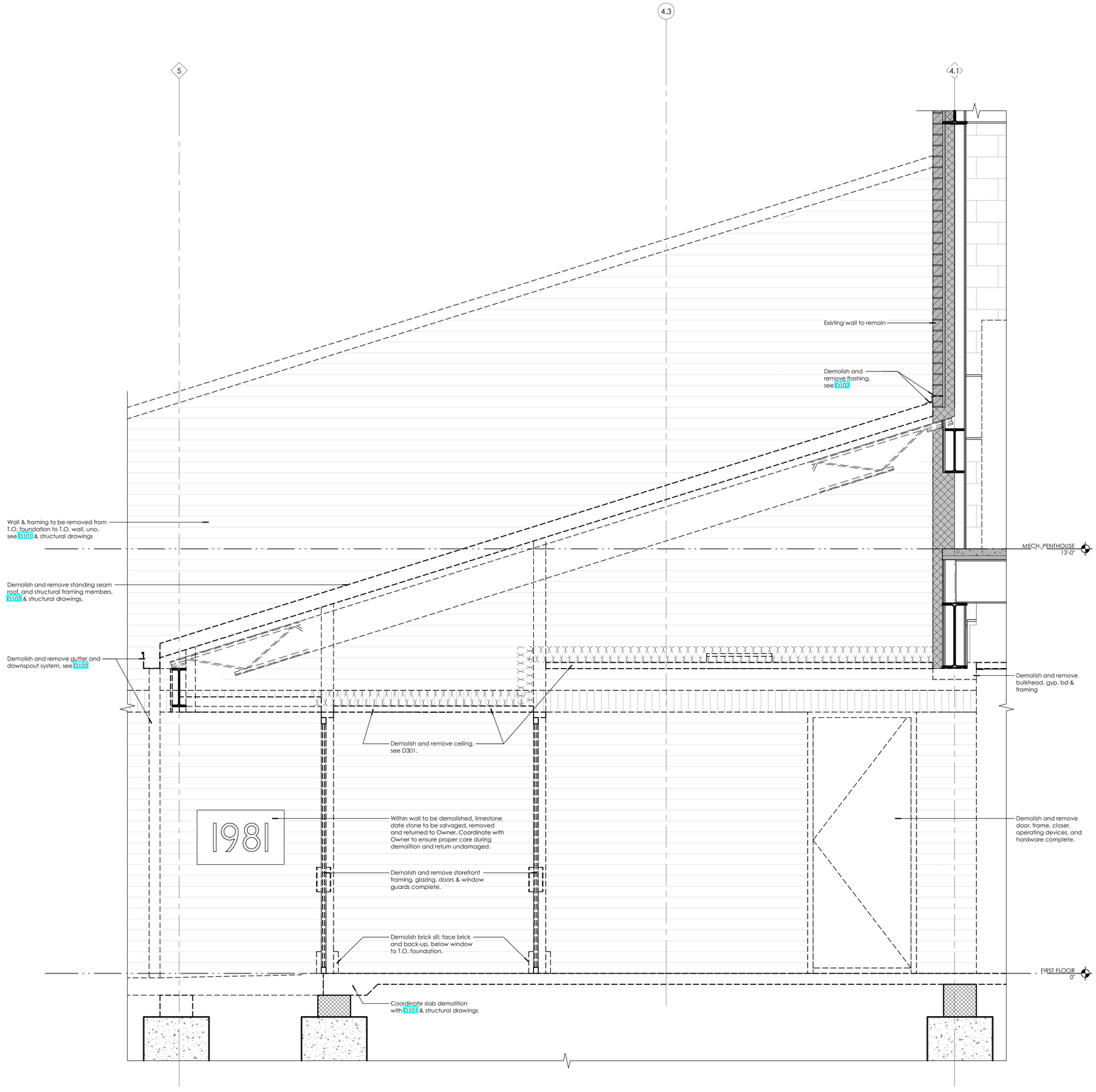


2 D600 DEMOLITION SECTION
3/4" = 1'-0"



1 D600 DEMOLITION SECTION
3/4" = 1'-0"

Project:
FLEET BRANCH RENOVATION AND EXPANSION

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Expiration Date 12/31/2026

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Project No: 25-25
Drawn / Checked: JPH / BG

Issue: Bid & Permit 2.27.2026

DEMOLITION SECTIONS

D600

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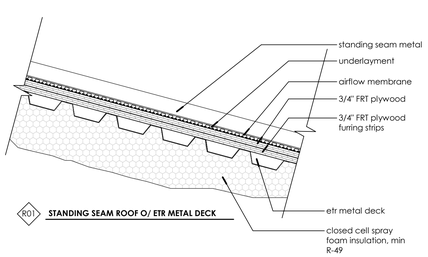
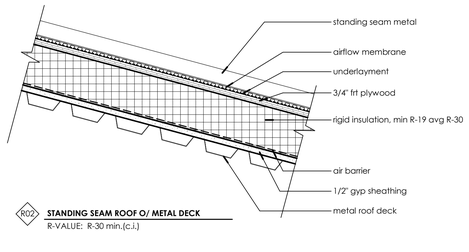
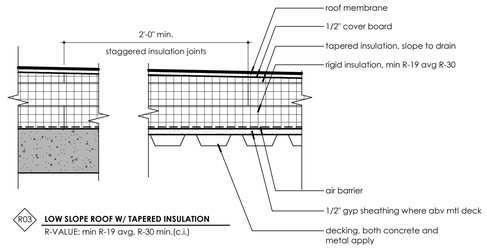
CONSTRUCTION TYPES - ROOF



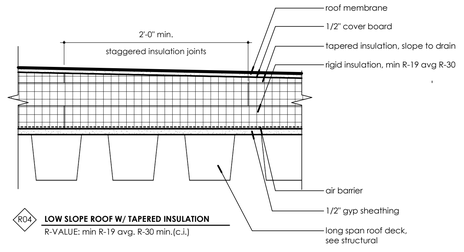
R01 **STANDING SEAM ROOF O/ ETR METAL DECK**



R02 **STANDING SEAM ROOF O/ METAL DECK**
R-VALUE: R-30 min.(c.i.)

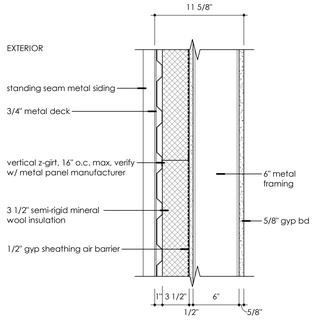


R03 **LOW SLOPE ROOF W/ TAPERED INSULATION**
R-VALUE: min R-19 avg. R-30 min.(c.i.)

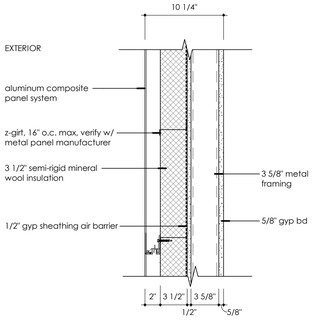


R04 **LOW SLOPE ROOF W/ TAPERED INSULATION**
R-VALUE: min R-19 avg. R-30 min.(c.i.)

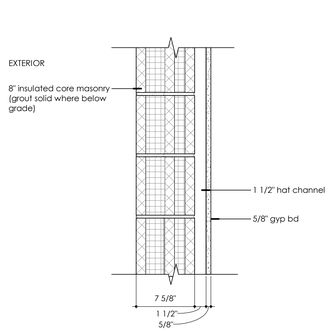
CONSTRUCTION TYPES - EXTERIOR WALL



X01 **STANDING SEAM METAL SYSTEM ON METAL STUD**

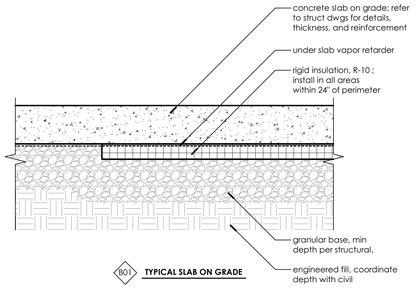


X02 **METAL COMPOSITE MATERIAL SYSTEM ON METAL STUD**

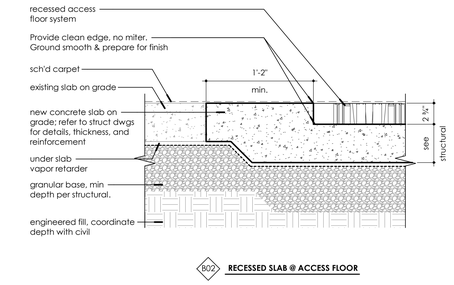


X03 **MASONRY TYPE 1**

CONSTRUCTION TYPES - SLAB

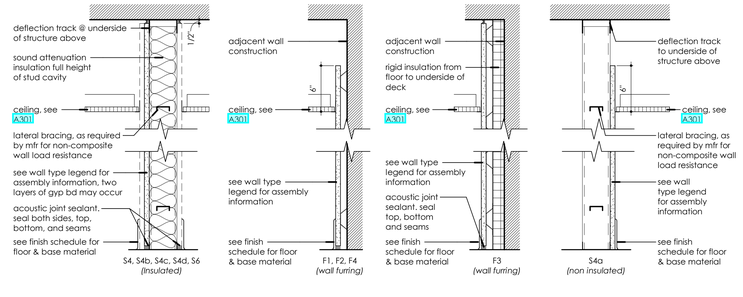


B01 **TYPICAL SLAB ON GRADE**



B02 **RECESSED SLAB @ ACCESS FLOOR**

TYPICAL WALL TERMINATION DETAILS



WALL TAG KEY

S4 / G — wall type variation

See sheet A001 for typical wall termination details.

See finish plans and specifications for additional information on finish installation requirements.

WALL TYPE GENERAL NOTES:

1. All new walls are S4 unless noted otherwise.
2. Provide moisture resistant backer board at all wet wall locations & behind tile locations, uno. Coordinate with interior elevations.
3. Provide firestop assemblies at all penetrations through fire-rated assemblies.
4. Refer to UL design listing for full requirements. Materials and notes listed are descriptive only.

WALL TYPE LEGEND

S4 — 4 7/8" — **Typical Partition Wall - STC 45**
(1) layer 5/8" gypsum board on both sides of 3 5/8" metal studs at 16" o.c. with acoustic batt insulation. Seal wall @ top and bottom per termination details.

S4 G — 4 1/4" — (1) layer 5/8" gypsum board on one side of 3 5/8" metal studs at 16" o.c.

S4 G — 5 1/2" — **Acoustic Restroom Wall - STC 50**
(2) layers 5/8" gypsum board on restroom side and (1) layer on the opposite side of 3 5/8" metal studs at 16" o.c. with acoustic batt insulation. Seal wall @ top and bottom per termination details.

S4 G — 4 7/8" — **Acoustic Restroom Wall - STC 50**
(2) layers 5/8" gypsum board on restroom side of 3 5/8" metal studs at 16" o.c. with acoustic batt insulation. Seal wall @ top and bottom per termination details.

S4 G — 6 1/8" — **Partition Wall - STC 54**
(2) layer 5/8" gypsum board on both sides of 3 5/8" metal studs at 16" o.c. with acoustic batt insulation. Seal wall @ top and bottom per termination details.

S6 — 7 1/4" — **Typical Partition Wall - STC 45**
(1) layer 5/8" gypsum board on both sides of 6" metal studs at 16" o.c. with acoustic batt insulation. Seal wall @ top and bottom per section details.

S6 G — 8 1/2" — **Partition Wall - STC 54**
(2) layer 5/8" gypsum board on both sides of 6" metal studs at 16" o.c. with acoustic batt insulation. Seal wall @ top and bottom per termination details.

F1 — 1 1/2" — (1) layer 5/8" gypsum board on 7/8" metal hat channel furring at 16" o.c.

F2 — 3 1/8" — (1) layer 5/8" gypsum board on 2 1/2" metal furring at 16" o.c.

F3 — 3" — (1) layer 5/8" gypsum board on 7/8" metal hat channel furring at 16" o.c. on 1 1/2" horizontal z-girts at 16" o.c. with 1 1/2" XPS insulation between z-girts. Seal wall @ top and bottom per termination details.

F4 — 2 1/8" — (1) layer 5/8" gypsum board on 1 1/2" metal hat channel furring at 16" o.c.

F5 — (1) layer 5/8" gypsum board from 0'-0" up to 2'-0" AFF on existing metal studs.

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TYPICAL WALL TYPES & DETAILS

A001

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PLAN LEGEND

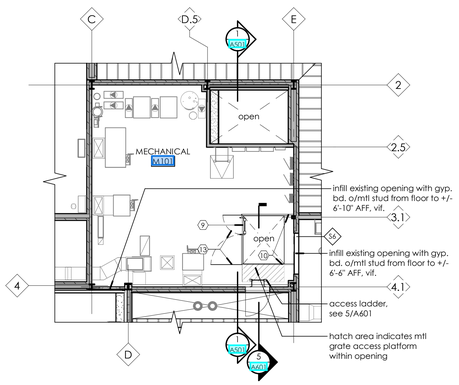
- Existing construction to remain
- New wall construction

KEYED NOTES

1. Provide level 5 wall finish for wall graphic install.
2. Depressed slab within vestibule for entry mat.
3. Wall mounted monitor.
4. Infill existing opening with salvaged brick, retooth and tuckpoint.
5. 4'-0" high Access control pedestal w/ ADA switch & card reader. Provide 8" round, 42" deep foundation, see door hardware specifications for more information.
6. Existing utility transformer.
7. Electrical equipment, see electrical drawings.
8. Exposed structural steel pipe column, see structural. Orient vertical welded joint in pipe toward exterior of building in each instance.
9. 13'-0" tall flat rung metal ladder with (13) equally spaced rungs.
10. 1 1/2" dia. metal pipe guardrail, see section 5/A601.
11. Provide new 5/8" gyp. bd. over existing stud wall up to 6" above new ceiling. Provide new cripple wall above existing wall up to new deck above. Align new studs to existing.
12. Relocated hose bib. Patch in with salvaged brick. Final location to be determined by Owner, see plumbing drawings for additional information.
13. metal pipe swing gate for access to chain hoistway.

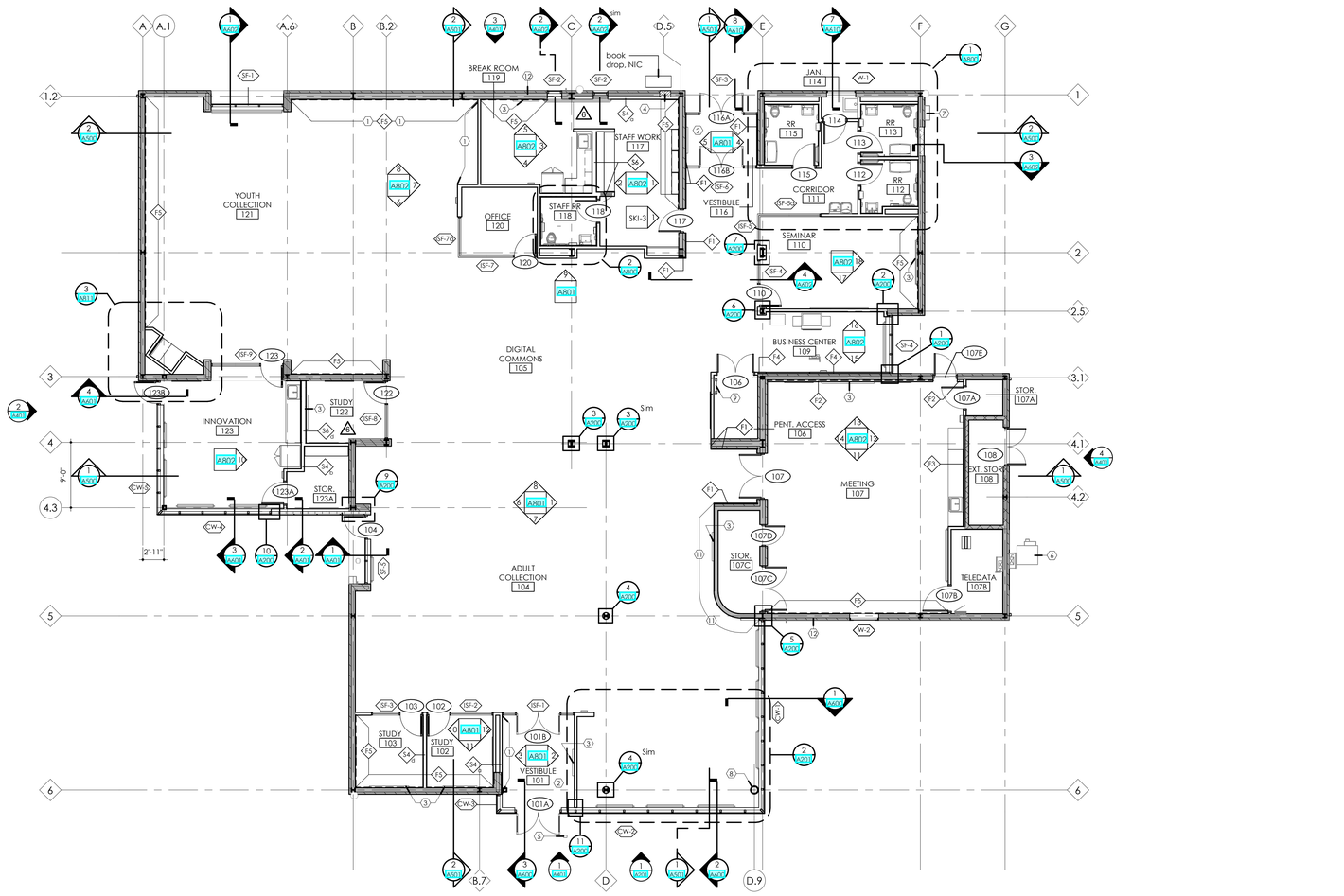
GENERAL PLAN NOTES

1. See the Title Sheet for the General Conditions. It is the Contractor's responsibility to familiarize themselves with and to comply with these general requirements for construction.
2. Civil ground floor finish floor elev.= 723.17' Architectural finish floor elev. = 0'-0".
3. Cut in-place construction for installation of components or for performance of the work. Patch in a manner that restores enclosures to a weathertight condition, surfaces to their original appearance, and fire rated assemblies to their required hourly rating.
4. Cut in-place construction required for new mechanical radiators & piping installation adjacent to existing construction to remain is to be patched in a manner consistent with General note 3.
5. Accurately locate mechanical, electrical, and plumbing rough-ins according to layout shown. Architectural dimensions govern equipment, fixture, and service locations.
6. Work to the numeric dimensions indicated. Do not scale drawings to obtain dimensions.
7. Openings are dimensioned to the finished opening unless identified with (R.O.) rough opening or (M.O.) masonry opening.
8. When a door opening is shown near an inside corner of any room, locate hinge side of the rough opening 4" from finish face of adjacent perpendicular wall u.n.o.
9. Plan dimensions indicate finish face to finish face of walls, u.n.o. See wall type legend and plan details for each complete wall assembly.
10. Provide concrete infill for areas of existing depressed slab or removed in-slab electrical devices to create level surface with finish floor elevation. Final floor finish per finish plans.
11. Provide head-of-wall deflection track where fastening non-load-bearing wall framing to overhead structure or decks.
12. Provide tear away "L" bead at drywall intersections with dissimilar surfaces and at finished exposed gypsum board edges.
13. Provide blocking, strapping, misc. steel, unistrut, etc. as required to fully support fixtures, equipment, accessories, specialties, casework, and other products indicated.
14. Use PT (preservative treated) wood products for concealed lumber that is in contact with masonry/concrete, and for members in connection with weathertight enclosures: roofing, waterproofing, air-wrb, flashing, etc.
15. Use FRT (fire retardant treated) wood where framing with dimensional lumber is indicated. Concealed wood blocking need not be FRT.
16. Where existing cementitious, spray applied fireproofing occurs on existing structural elements, do not disturb fireproofing and repair where damaged.
17. Notify Architect immediately of any discrepancies between actual existing conditions and the construction documents.



2 A101 MECHANICAL PENTHOUSE PLAN
1/8" = 1'-0"

Project North
True North



1 A101 FIRST FLOOR PLAN
1/8" = 1'-0"

Project North
True North

WALL TAG KEY

S4 — wall type variation

See sheet A011 for typical wall termination details.

See finish plans and specifications for additional information on finish installation requirements.

WALL TYPE GENERAL NOTES:

1. All new walls are S4 unless noted otherwise.
2. Provide moisture resistant backer board at all wet wall locations & behind tile locations, uno. Coordinate with interior elevations.
3. Provide firestop assemblies at all penetrations through fire-rated assemblies.
4. Refer to UL design listing for full requirements. Materials and notes listed are descriptive only.

WALL TYPE LEGEND

S4 — 4 7/8" — **Typical Partition Wall - STC 45**
(1) layer 5/8" gypsum board on both sides of 3 5/8" metal studs at 16" o.c. with acoustic batt insulation. Seal wall @ top and bottom per termination details.

S4a — 4 1/4" — (1) layer 5/8" gypsum board on one side of 3 5/8" metal studs at 16" o.c.

S4b — 5 1/2" — **Acoustic Restroom Wall - STC 50**
(2) layers 5/8" gypsum board on restroom side and (1) layer on the opposite side of 3 5/8" metal studs at 16" o.c. with acoustic batt insulation. Seal wall @ top and bottom per termination details.

S4c — 4 7/8" — **Acoustic Restroom Wall - STC 50**
(2) layers 5/8" gypsum board on restroom side of 3 5/8" metal studs at 16" o.c. with acoustic batt insulation. Seal wall @ top and bottom per termination details.

S4d — 6 1/8" — **Partition Wall - STC 54**
(2) layer 5/8" gypsum board on both sides of 3 5/8" metal studs at 16" o.c. with acoustic batt insulation. Seal wall @ top and bottom per termination details.

S6 — 7 1/4" — **Typical Partition Wall - STC 45**
(1) layer 5/8" gypsum board on both sides of 6" metal studs at 16" o.c. with acoustic batt insulation. Seal wall @ top and bottom per section details.

S6 — 5 1/2" — **Partition Wall - STC 54**
(2) layer 5/8" gypsum board on both sides of 6" metal studs at 16" o.c. with acoustic batt insulation. Seal wall @ top and bottom per termination details.

F1 — 1 1/2" — (1) layer 5/8" gypsum board on 7/8" metal hat channel furring at 16" o.c.

F2 — 3 1/8" — (1) layer 5/8" gypsum board on 2 1/2" metal furring at 16" o.c.

F3 — 3" — (1) layer 5/8" gypsum board on 7/8" metal hat channel furring at 16" o.c. on 1 1/2" horizontal z-girts at 16" o.c. with 1 1/2" XPS insulation between z-girts. Seal wall @ top and bottom per termination details.

F4 — 2 1/8" — (1) layer 5/8" gypsum board on 1 1/2" metal hat channel furring at 16" o.c.

F5 — (1) layer 5/8" gypsum board from 0'-0" up to 2'-0" AFF on existing metal studs.

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FLOOR PLANS
A101

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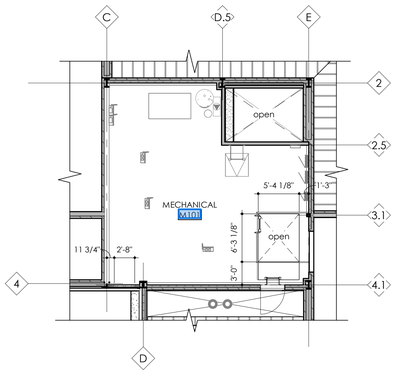
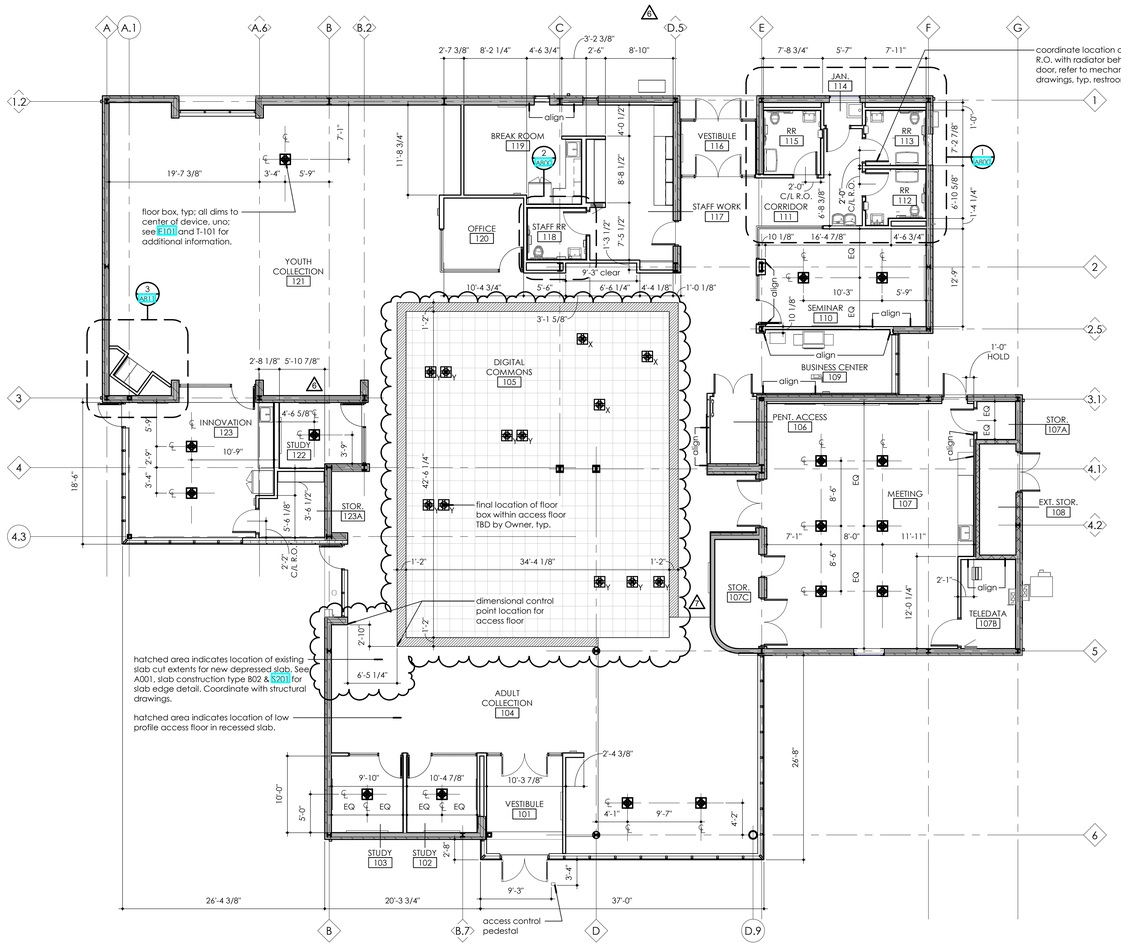


2 A102 MECHANICAL PENTHOUSE PLAN
1/8" = 1'-0"

Project North
True North



1 A102 FIRST FLOOR DIMENSION PLAN
1/8" = 1'-0"

Project North
True North

WALL TAG KEY

S4 — wall type variation

See sheet A001 for typical wall termination details.

See finish plans and specifications for additional information on finish installation requirements.

WALL TYPE GENERAL NOTES:

1. All new walls are S4 unless noted otherwise.
2. Provide moisture resistant backer board at all wet wall locations & behind tile locations, uno. Coordinate with interior elevations.
3. Provide firestop assemblies at all penetrations through fire-rated assemblies.
4. Refer to UL design listing for full requirements. Materials and notes listed are descriptive only.

WALL TYPE LEGEND

S4 — 4 7/8" — **Typical Partition Wall - STC 45**
(1) layer 5/8" gypsum board on both sides of 3 5/8" metal studs at 16" o.c. with acoustic batt insulation. Seal wall @ top and bottom per termination details.

S4a — 4 1/4" — (1) layer 5/8" gypsum board on one side of 3 5/8" metal studs at 16" o.c.

S4b — 5 1/2" — **Acoustic Restroom Wall - STC 50**
(2) layers 5/8" gypsum board on restroom side and (1) layer on the opposite side of 3 5/8" metal studs at 16" o.c. with acoustic batt insulation. Seal wall @ top and bottom per termination details.

S4c — 4 7/8" — **Acoustic Restroom Wall - STC 50**
(2) layers 5/8" gypsum board on restroom side of 3 5/8" metal studs at 16" o.c. with acoustic batt insulation. Seal wall @ top and bottom per termination details.

S4d — 6 1/8" — **Partition Wall - STC 54**
(2) layer 5/8" gypsum board on both sides of 3 5/8" metal studs at 16" o.c. with acoustic batt insulation. Seal wall @ top and bottom per termination details.

S6 — 7 1/4" — **Typical Partition Wall - STC 45**
(1) layer 5/8" gypsum board on both sides of 6" metal studs at 16" o.c. with acoustic batt insulation. Seal wall @ top and bottom per section details.

S4d — 8 1/2" — **Partition Wall - STC 54**
(2) layer 5/8" gypsum board on both sides of 6" metal studs at 16" o.c. with acoustic batt insulation. Seal wall @ top and bottom per termination details.

F1 — 1 1/2" — (1) layer 5/8" gypsum board on 7/8" metal hat channel furring at 16" o.c.

F2 — 3 1/8" — (1) layer 5/8" gypsum board on 2 1/2" metal furring at 16" o.c.

F3 — 3" — (1) layer 5/8" gypsum board on 7/8" metal hat channel furring at 16" o.c. on 1 1/2" horizontal z-girts at 16" o.c. with 1 1/2" XPS insulation between z-girts. Seal wall @ top and bottom per termination details.

F4 — 2 1/8" — (1) layer 5/8" gypsum board on 1 1/2" metal hat channel furring at 16" o.c.

F5 — (1) layer 5/8" gypsum board from 0'-0" up to 2'-0" AFF on existing metal studs.

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FIRST FLOOR DIMENSION PLAN

A102

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GENERAL PLAN NOTES

1. See the Title Sheet for the General Conditions. It is the Contractor's responsibility to familiarize themselves with and to comply with these general requirements for construction.
2. Civil ground floor finish floor elev.= 723.17' Architectural finish floor elev. = 0'-0".
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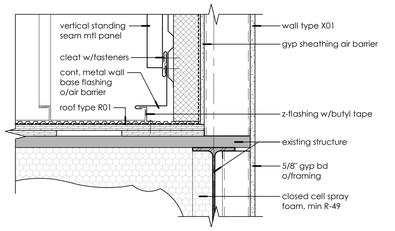
5. Accurately locate mechanical, electrical, and plumbing rough-ins according to layout shown. Architectural dimensions govern equipment, fixture, and service locations.
6. Work to the numeric dimensions indicated. Do not scale drawings to obtain dimensions.
7. Openings are dimensioned to the finished opening unless identified with (R.O.) rough opening or (M.O.) masonry opening.
8. When a door opening is shown near an inside corner of any room, locate hinge side of the rough opening 4" from finish face of adjacent perpendicular wall u.n.o.
9. Plan dimensions indicate finish face to finish face of walls, u.n.o. See wall type legend and plan details for each complete wall assembly.
10. Provide concrete infill for areas of existing depressed slab or removed in-slab electrical devices to create level surface with finish floor elevation. Final floor finish per finish plans.
11. Provide head-of-wall deflection track where fastening non-load-bearing wall framing to overhead structure or decks.
12. Provide tear away "L" bead at drywall intersections with dissimilar surfaces and at finished exposed gypsum board edges.
13. Provide blocking, strapping, misc. steel, unistrut, etc. as required to fully support fixtures, equipment, accessories, specialties, casework, and other products indicated.
14. Use PT (preservative treated) wood products for concealed lumber that is in contact with masonry/concrete, and for members in connection with weathertight enclosures: roofing, waterproofing, air-wrb, flashing, etc.
15. Use FRT (fire retardant treated) wood where framing with dimensional lumber is indicated. Concealed wood blocking need not be FRT.
16. Where existing cementitious, spray applied fireproofing occurs on existing structural elements, do not disturb fireproofing and repair where damaged.
17. Notify Architect immediately of any discrepancies between actual existing conditions and the construction documents.

GENERAL ROOF NOTES:

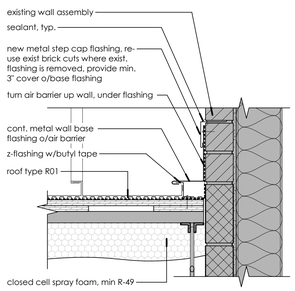
1. Contractor shall supply all tapered insulation as required to achieve roof slopes as detailed on drawing. Roof to maintain a minimum R19 at low points and an overall roof average of R30 at all locations.
2. Coordinate rooftop equipment such as fans, vent pipe penetrations, roof drains, and other misc. roof penetrations with MEPT & structural drawings.
3. Patch roof deck as required by welding new roof deck to existing.
4. Slope all rigid insulation positively to drain, minimum slope 1/4" per foot. Slope all roof crickets a minimum of 1/2" per foot. Provide tapered insulation as necessary.
5. Coordinate roof plan with plumbing drawings for new roof drains and associated piping. (RD) indicates new roof drain locations, (OD) indicates new overflow roof drain locations.

ROOF LEGEND:

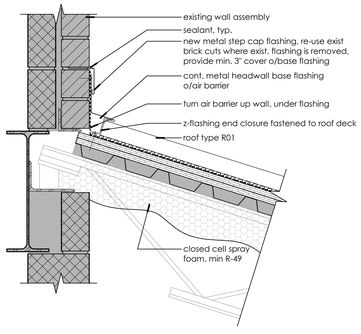
- NEW ROOF SYSTEM
- CRICKET/ TAPERED ROOF INSULATION
- HEAT TRACE SYSTEM
- ROOF WALKWAY PADS
- RD ROOF DRAIN
- OD OVERFLOW ROOF DRAIN
- DS DOWN SPOUT



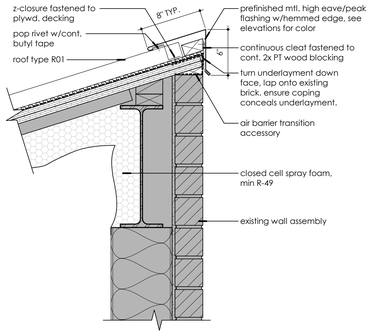
10 A103 — MTL ROOF SIDEWALL DETAIL AT MTL SIDING
1 1/2" = 1'-0"



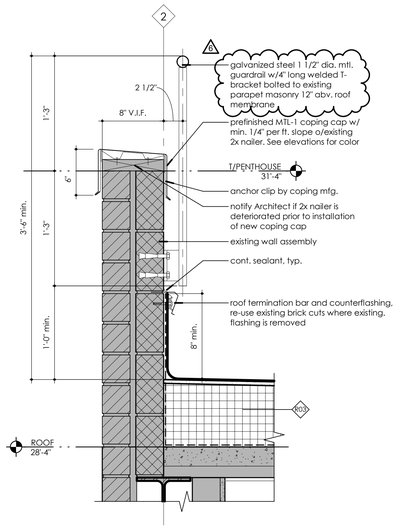
9 A103 — METAL ROOF SIDEWALL DETAIL AT BRICK MASONRY
1 1/2" = 1'-0"



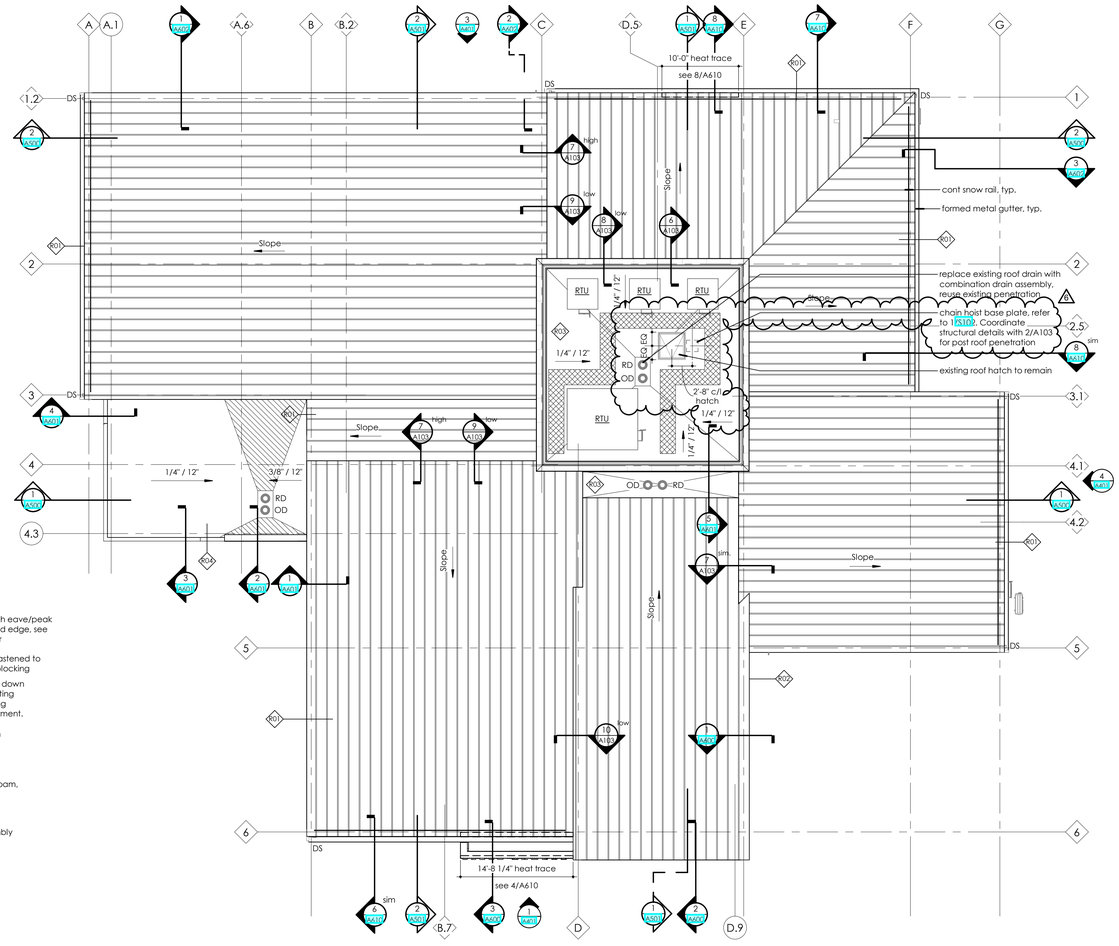
8 A103 — MTL ROOF HEADWALL DETAIL
1 1/2" = 1'-0"



7 A103 — MTL ROOF RIDGE DETAIL
1 1/2" = 1'-0"

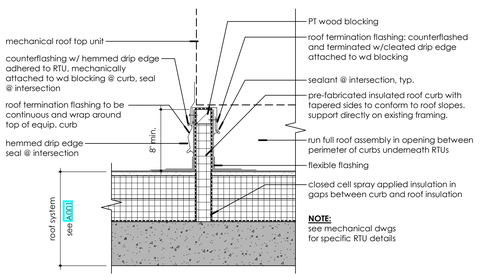


6 A103 — MEMBRANE ROOF PARAPET DETAIL
1 1/2" = 1'-0"

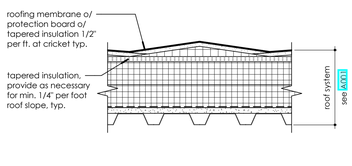


1 A103 — ROOF PLAN
1/8" = 1'-0"

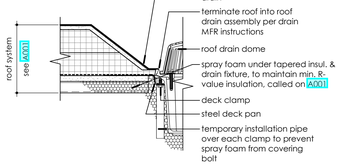
Project North
True North



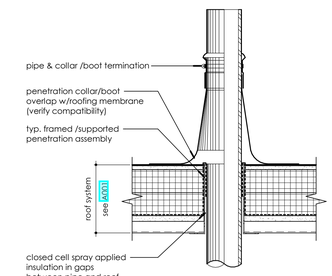
4 A103 — TYP. EQUIPMENT CURB DETAIL
1 1/2" = 1'-0"



5 A103 — TYP. CRICKET DETAIL
1 1/2" = 1'-0"



3 A103 — TYP. ROOF DRAIN DETAIL
1 1/2" = 1'-0"



2 A103 — TYP. PIPE PENETRATIONS
1 1/2" = 1'-0"

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ROOF PLAN & DETAILS
A103

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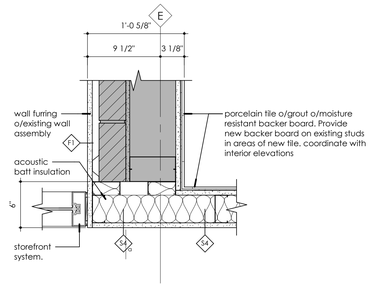
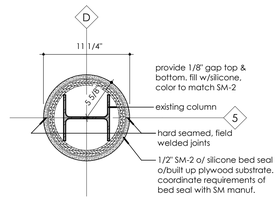


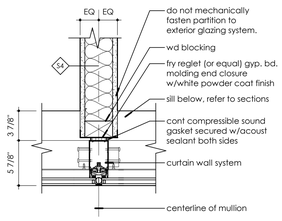
PLAN DETAIL
VESTIBULE 116

8 A200 — 1 1/2" = 1'-0"



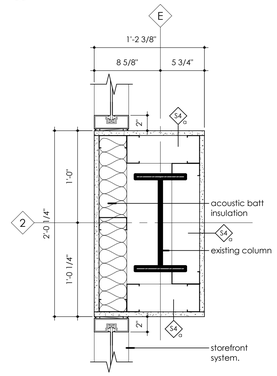
PLAN DETAIL
COLUMN WRAP

4 A200 — 1 1/2" = 1'-0"



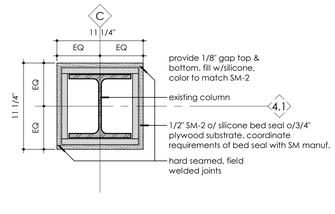
PLAN DETAIL
PARTITION TO MULLION

11 A200 — 1 1/2" = 1'-0"



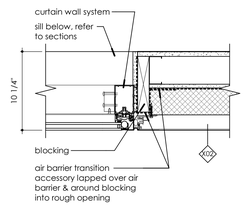
PLAN DETAIL
COLUMN WRAP

7 A200 — 1 1/2" = 1'-0"



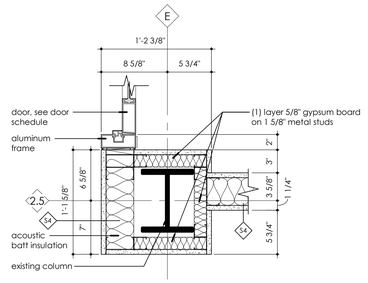
PLAN DETAIL
COLUMN WRAP

3 A200 — 1 1/2" = 1'-0"



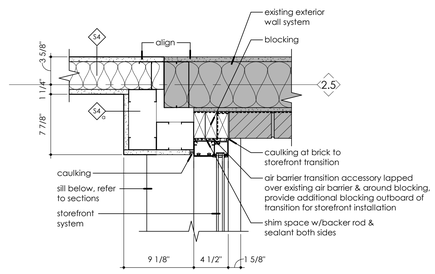
PLAN DETAIL
CURTAIN WALL TO PANEL

10 A200 — 1 1/2" = 1'-0"



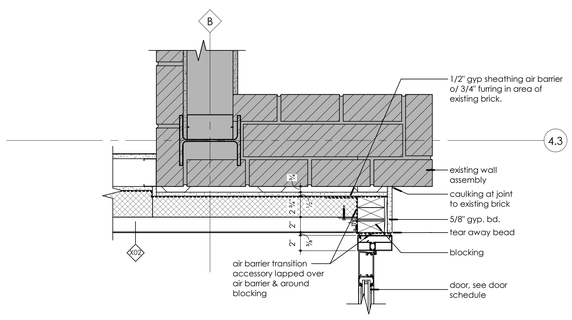
PLAN DETAIL
COLUMN WRAP

6 A200 — 1 1/2" = 1'-0"



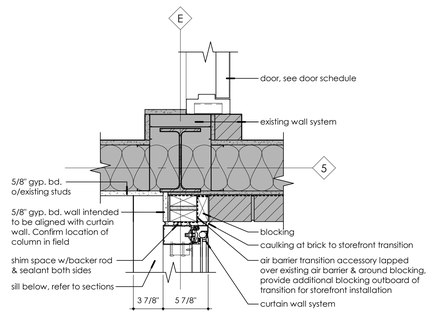
PLAN DETAIL

2 A200 — 1 1/2" = 1'-0"



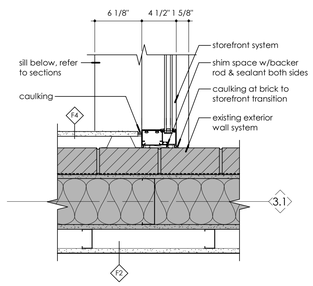
PLAN DETAIL
MTL PANEL @ DOOR JAMB

9 A200 — 1 1/2" = 1'-0"



PLAN DETAIL

5 A200 — 1 1/2" = 1'-0"



PLAN DETAIL

1 A200 — 1 1/2" = 1'-0"

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- Bid & Permit 2.27.2026

ENLARGED PLAN DETAILS

A200

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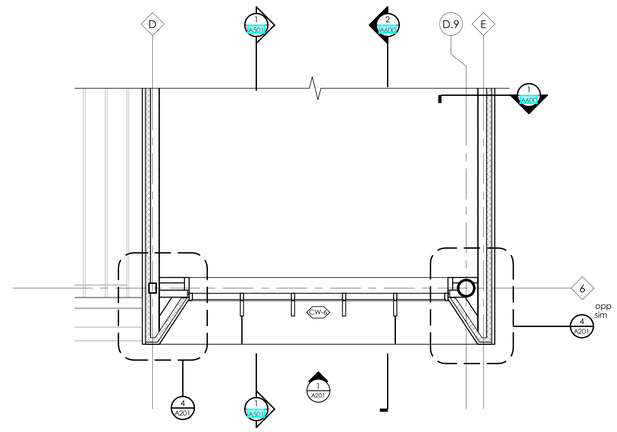
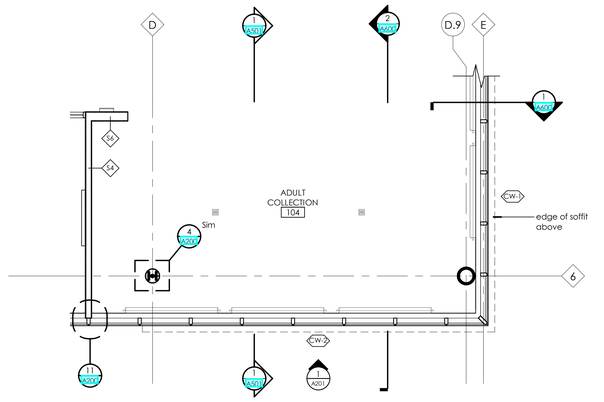
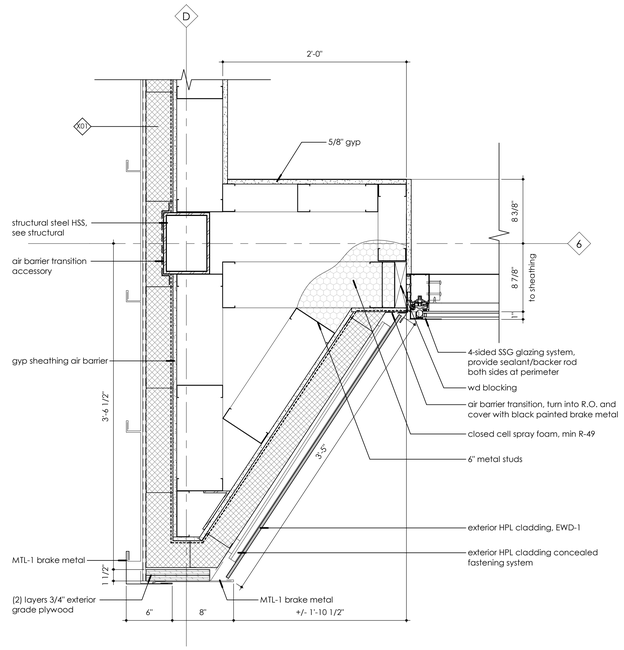


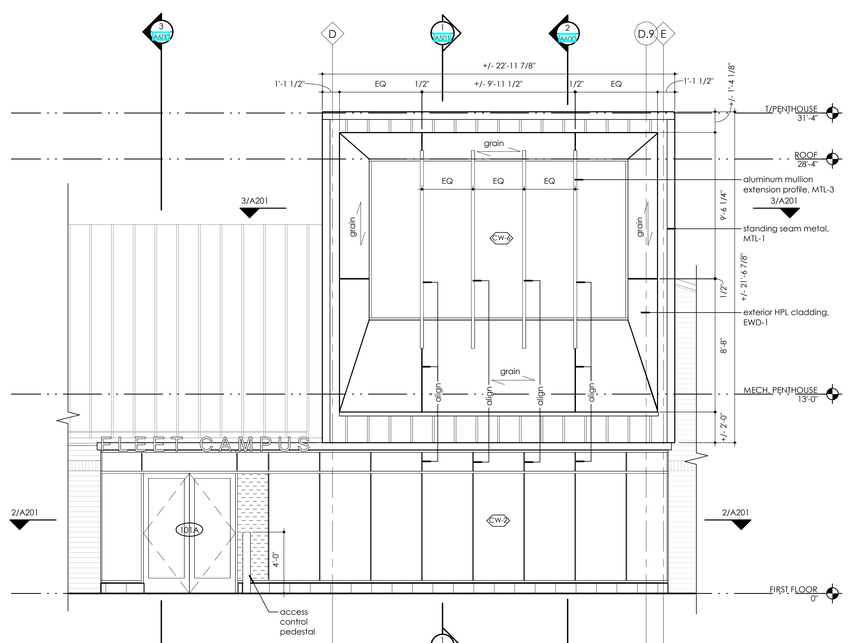
3 A201 ENLARGED PLAN - HIGH
1/4" = 1'-0"



2 A201 ENLARGED PLAN - LOW
1/4" = 1'-0"



4 A201 PLAN DETAIL
1 1/2" = 1'-0"



1 A201 ENLARGED EAST ELEVATION
1/4" = 1'-0"

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ENLARGED ENTRY PLAN & DETAILS

A201

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GENERAL CEILING PLAN NOTES

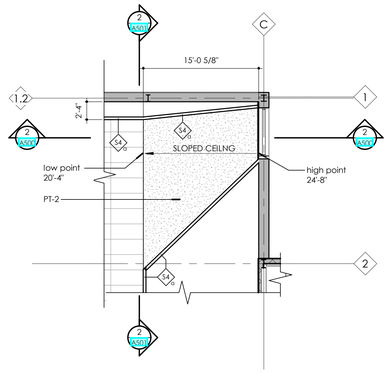
1. Coordinate all air diffusers and return air grill locations with mechanical drawings. Coordinate location with Architect prior to final placement.
2. See elevations and details for all ceiling heights not indicated on reflected ceiling plans.
3. All new ceilings to be centered in rooms, u.n.o.
4. Refer to electrical drawings for all emergency lighting, fire detection, and signaling system components. Coordinate location with Architect prior to final placement
5. All recessed downlights to be centered on ceiling tiles and soffits, u.n.o.
6. Verify all lighting layout dimensions with Architect prior to installation.
7. All ceiling elevations are in reference to finish floor elevation.

CEILING KEY NOTES

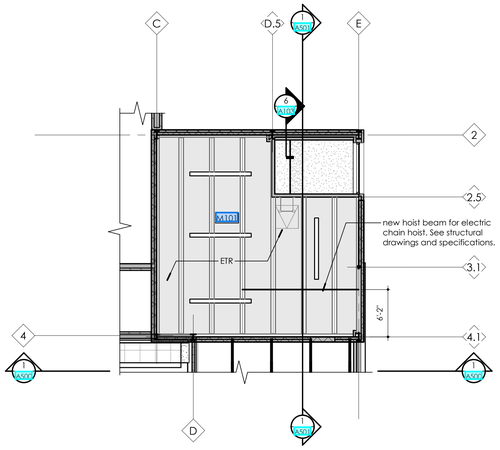
1. Patch ceiling, match height and construction of adjacent ceiling.
2. 24" x 36" Access panel in ceiling for mechanical equipment.
3. Undercabinet lighting, refer to casework details and electrical drawings
4. Tape light at existing window. Refer to detail 7 / A610 and electrical drawings.

CEILING LEGEND

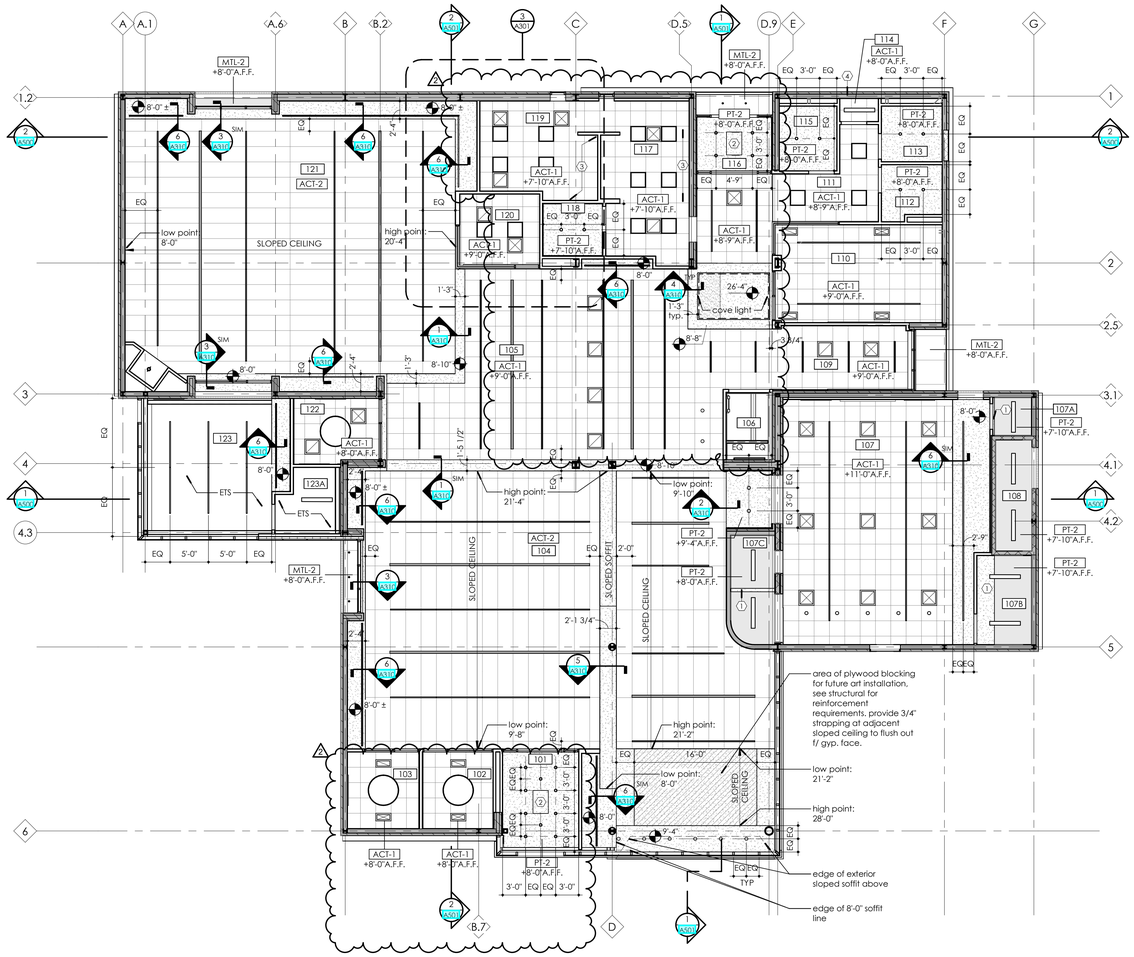
- Exposed Structure (ETS)
- ACT-1 - 2'-0" X 2'-0" Suspended acoustical ceiling system
- ACT-2 - 2'-0" X 6'-0" Suspended acoustical ceiling system
- Gypsum board ceiling
- Existing ceiling to remain
- Linear light fixture, recessed
- Linear light fixture
- Utility light fixture
- Cove light
- Air supply diffuser
- Air return
- 2x2 Light fixture
- Can downlights
- Surface mounted light fixture
- Linear air supply diffuser



3 A301 FIRST FLOOR CEILING PLAN
1/8" = 1'-0"
CUT PLANE SET TO 18'-0"
Project North
True North



2 A301 MECHANICAL PENTHOUSE CEILING PLAN
1/8" = 1'-0"
Project North
True North



1 A301 FIRST FLOOR CEILING PLAN
1/8" = 1'-0"
Project North
True North

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2	Addendum #2	3.18.2026

REFLECTED CEILING PLANS

A301

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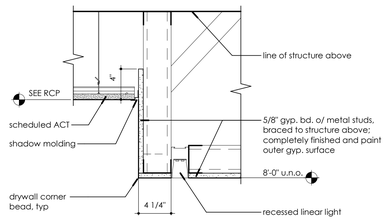
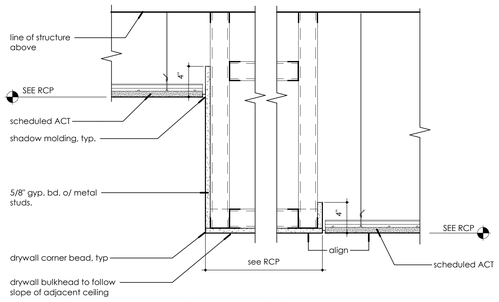


6 A310 CEILING DETAIL
1 1/2" = 1'-0"



5 A310 CEILING DETAIL
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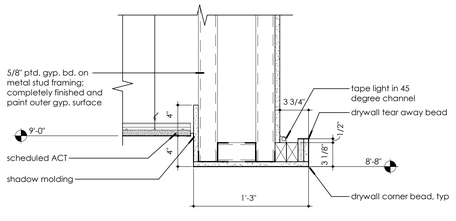

4 A310 CEILING DETAIL
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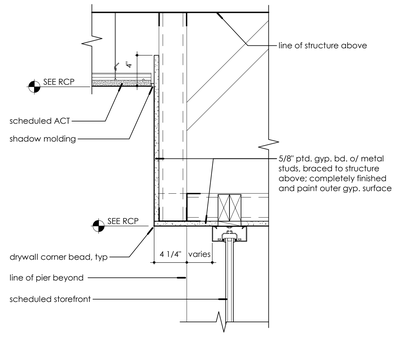

3 A310 CEILING DETAIL
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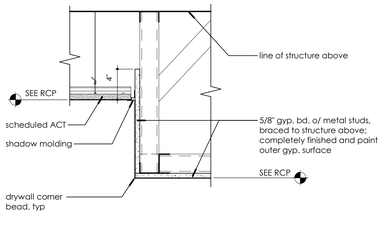

2 A310 CEILING DETAIL
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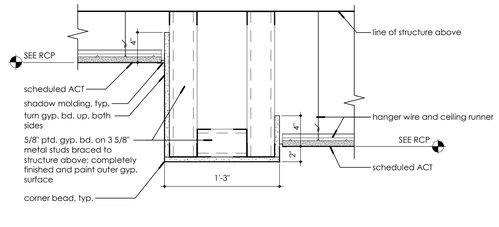

1 A310 CEILING DETAIL
1 1/2" = 1'-0"

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CEILING DETAILS
A310

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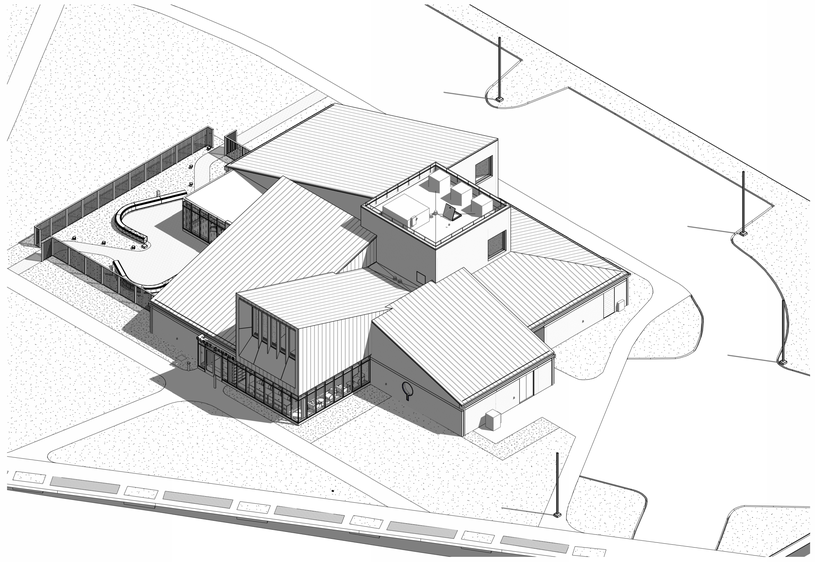
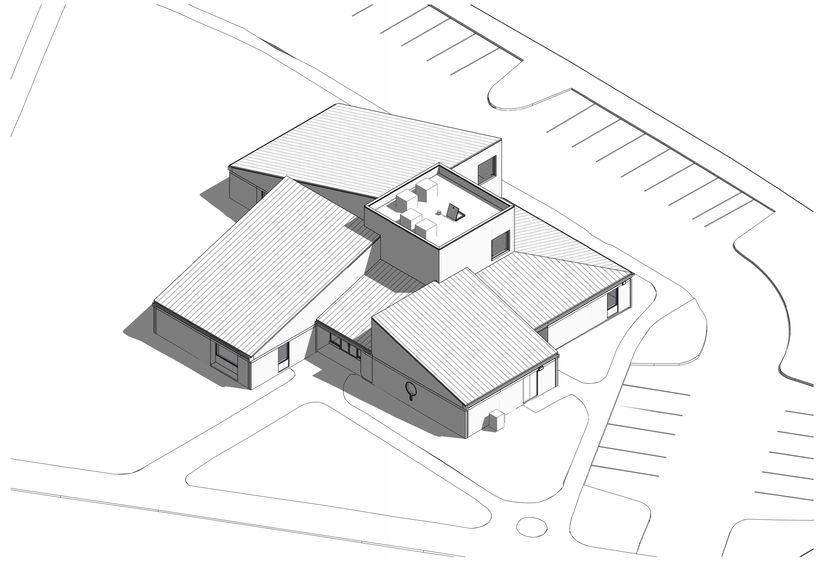


4 A400 NE AXON - NEW



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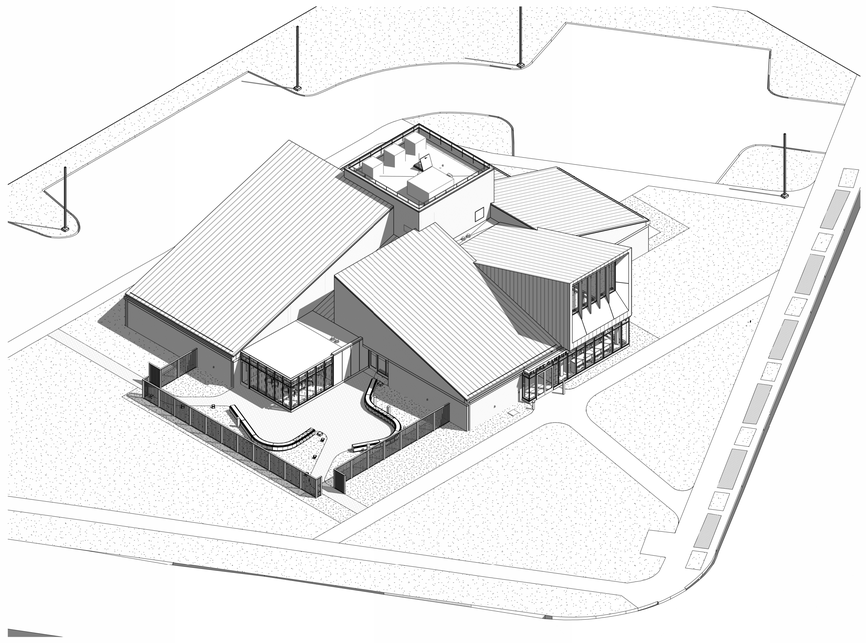

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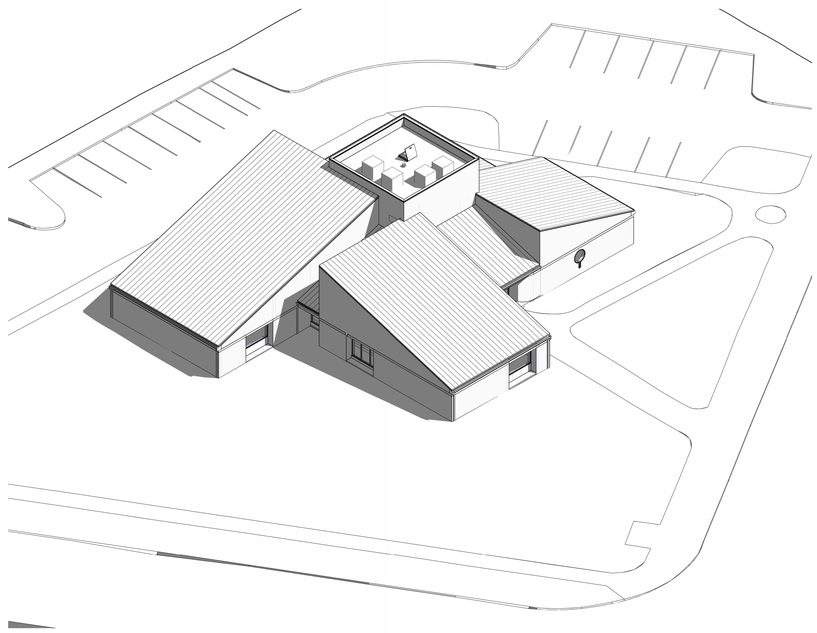

1 A400 SE AXON - EXISTING

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BUILDING AXONOMETRICS

A400

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EXTERIOR ELEVATION NOTES:

1. All elevations shall be inspected and repointed where failing joints indicate need for repair. An estimated 10% of each facade is to be repointed. 100% of joints at the SW and SE corners of the south wing of the building and 100% of the bottom 18" of masonry are to be repointed. Repair any loose brick.
2. Blank off exterior roof attic vents in brick facade. Assume quantity of (7) seven.
3. Where new downspouts are indicated, cast iron receivers below are to remain. Provide galvanic separator between metal downspout and existing cast iron receiver.

Glazing Hatches (See A901, Glazing Elevations, for more information)

= Hatch indicates IG-1

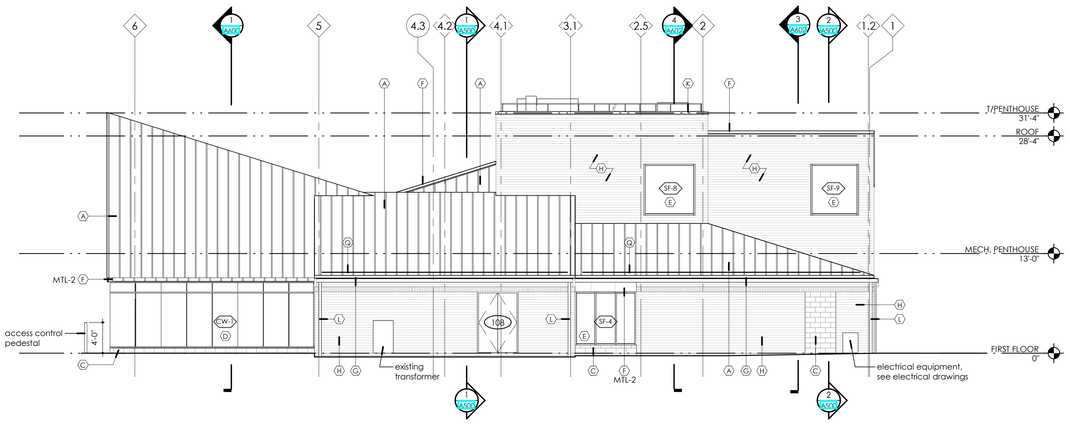
= Hatch indicates IG-3

IG-2 - Not Used

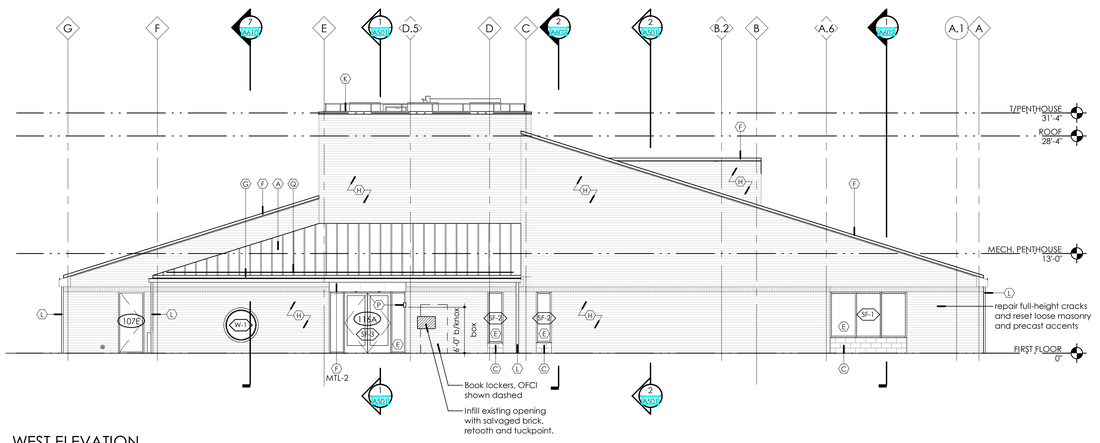
= Hatch indicates GF-2

EXTERIOR FINISH LEGEND

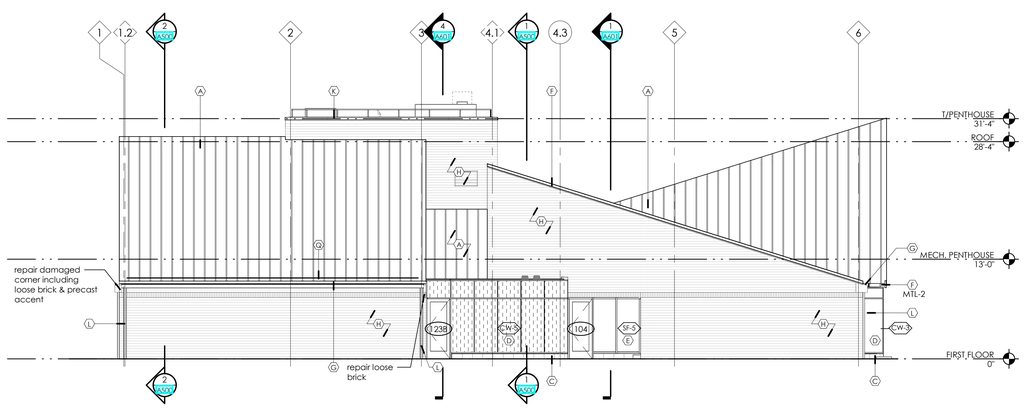
KEY	ITEM/MATERIAL	COLOR
A	Standing Seam Metal	MTL-1
B	Metal Panel Type 1	MTL-2
C	Masonry Type 1	MAS-1
D	Curtain Wall	MTL-3
E	Exterior Storefront	MTL-3
F	Metal Fascia	MTL-1, u.n.o.
G	Formed Metal Gutter	MTL-1, u.n.o.
H	Existing Masonry Veneer	MAS-2
J	Exterior HPL Cladding	EWD-1
K	Metal Coping	MTL-1
L	Formed Metal Square Downspout	MTL-1
M	Metal Letter Signage	-
N	Alum Mullion Extension Profile	12" x 2.5", MTL-3
P	Knox Box	-
Q	Snow Rail	MTL-1 (Color Only)



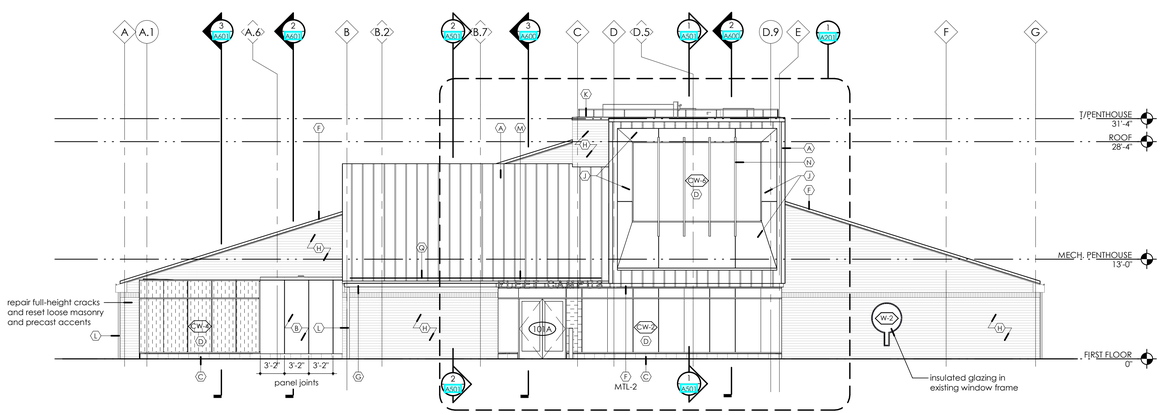
4 A401 NORTH ELEVATION
1/8" = 1'-0"



3 A401 WEST ELEVATION
1/8" = 1'-0"



2 A401 SOUTH ELEVATION
1/8" = 1'-0"



1 A401 EAST ELEVATION
1/8" = 1'-0"

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EXTERIOR ELEVATIONS

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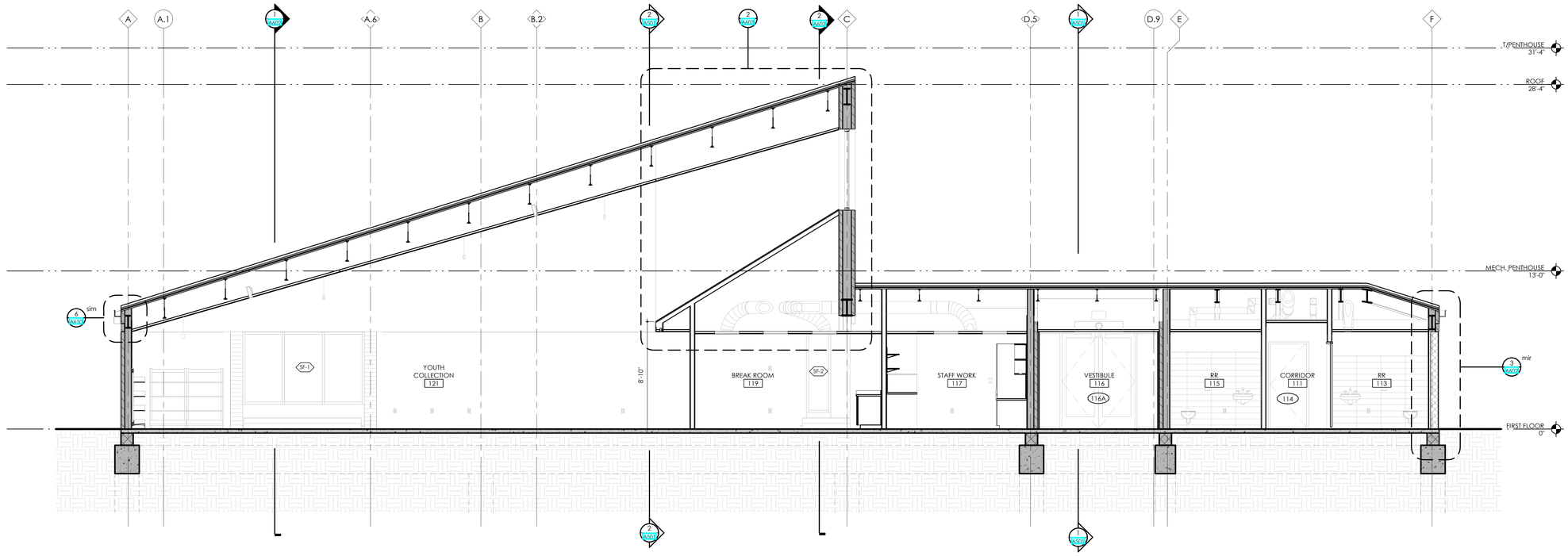
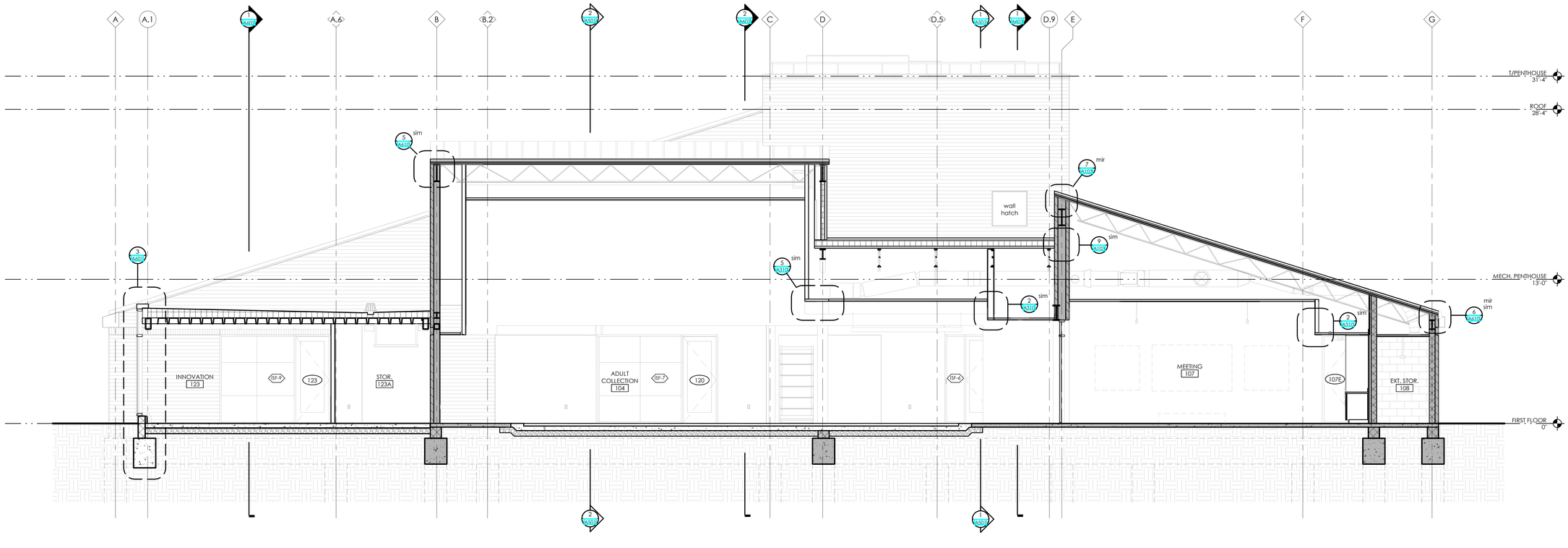


2 A500 BUILDING CROSS SECTION
1/4" = 1'-0"



1 A500 BUILDING CROSS SECTION
1/4" = 1'-0"

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NORTH-SOUTH BUILDING SECTIONS

A500

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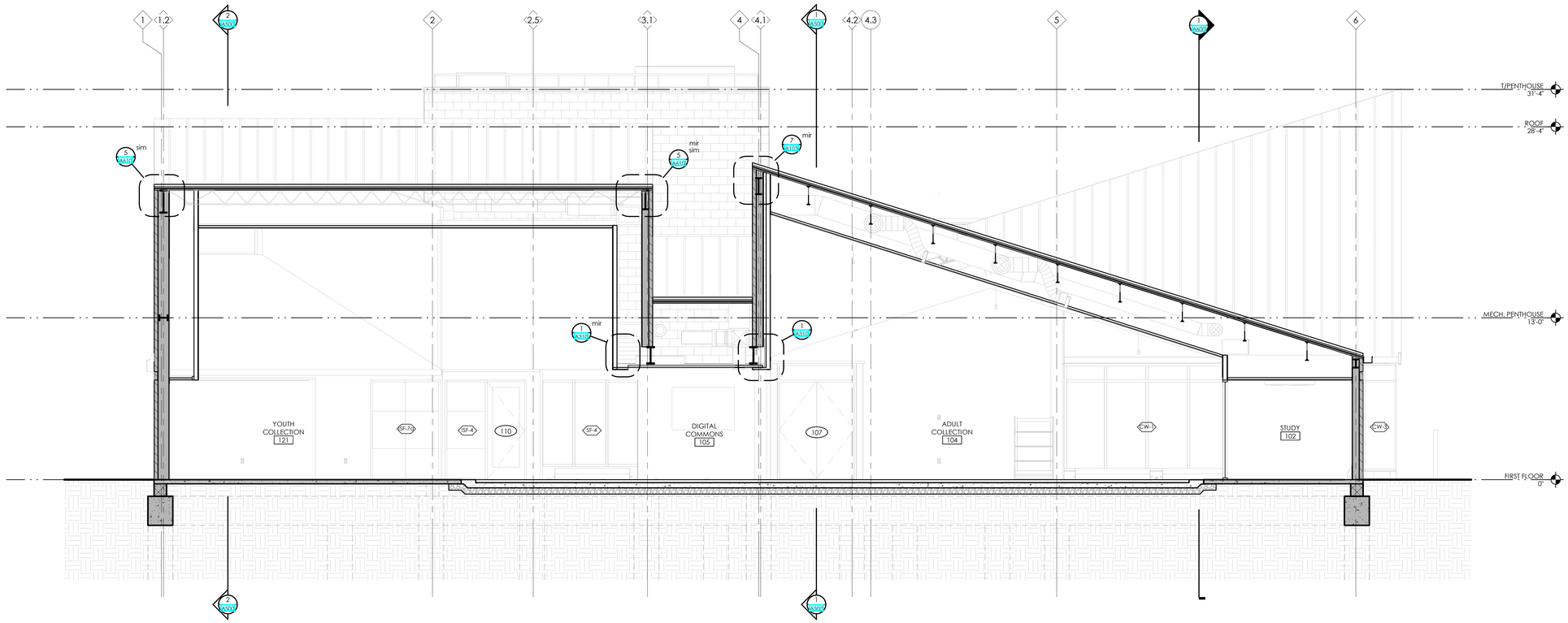
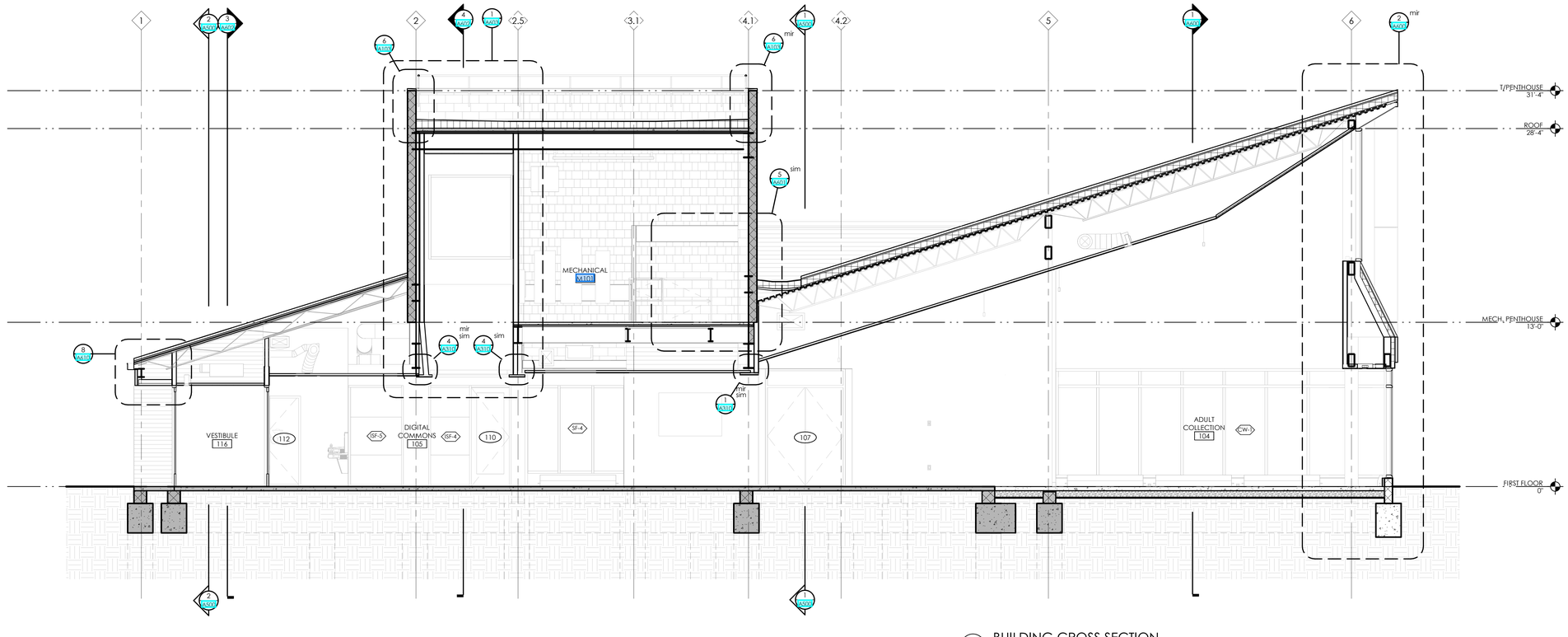


2 BUILDING CROSS SECTION
1/4" = 1'-0"



1 BUILDING CROSS SECTION
1/4" = 1'-0"

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EAST-WEST BUILDING SECTIONS

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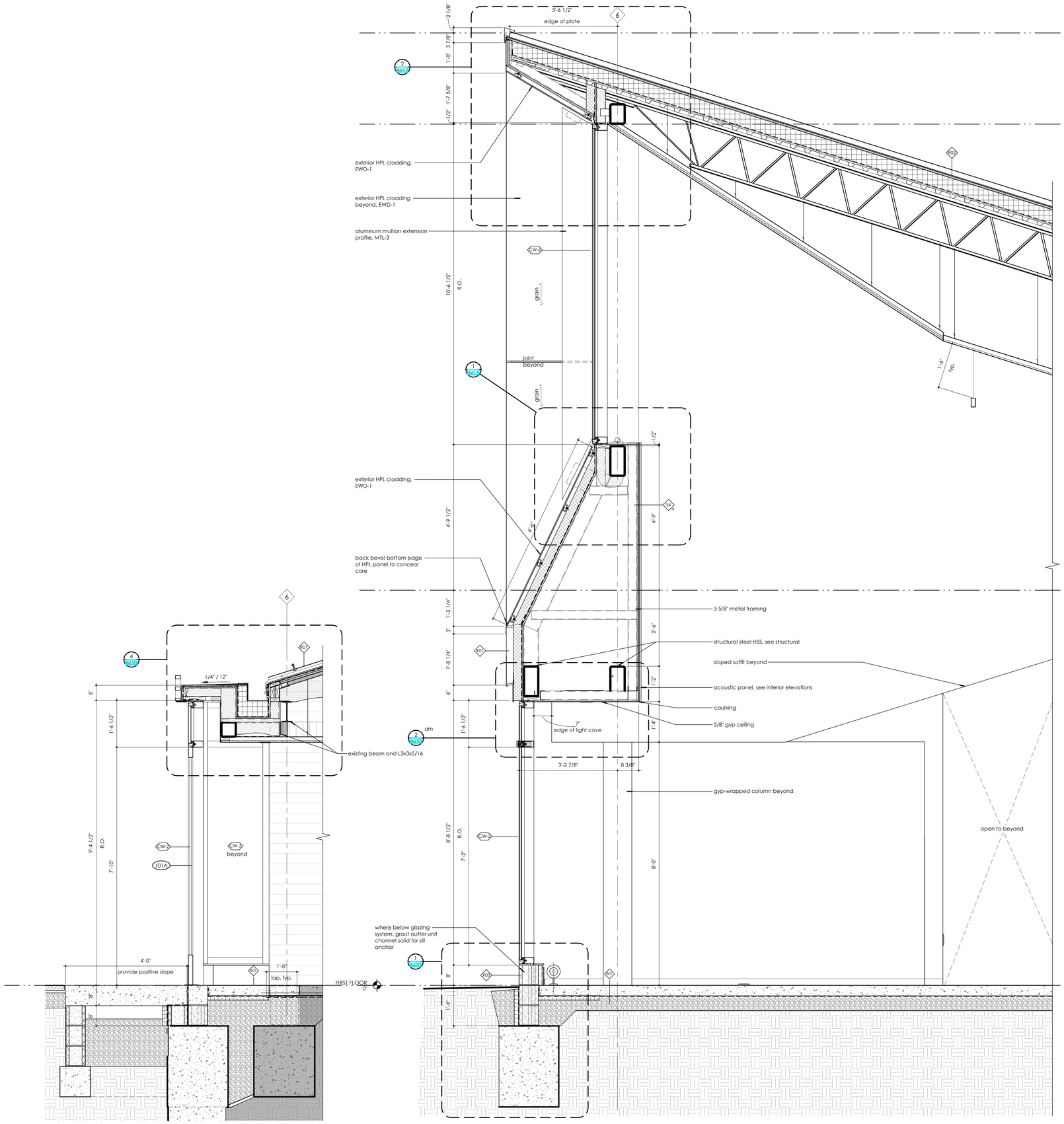

3 A600 WALL SECTION
3/4" = 1'-0"

2 A600 WALL SECTION
3/4" = 1'-0"

1 A600 WALL SECTION
3/4" = 1'-0"

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WALL SECTIONS
A600

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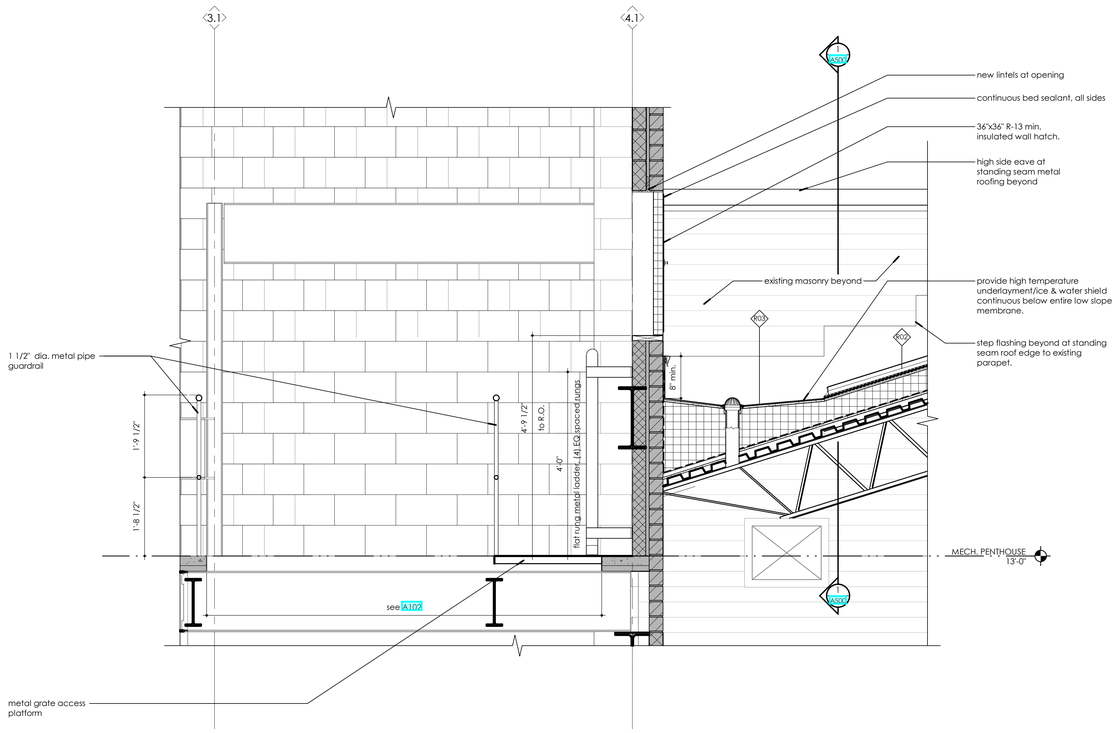
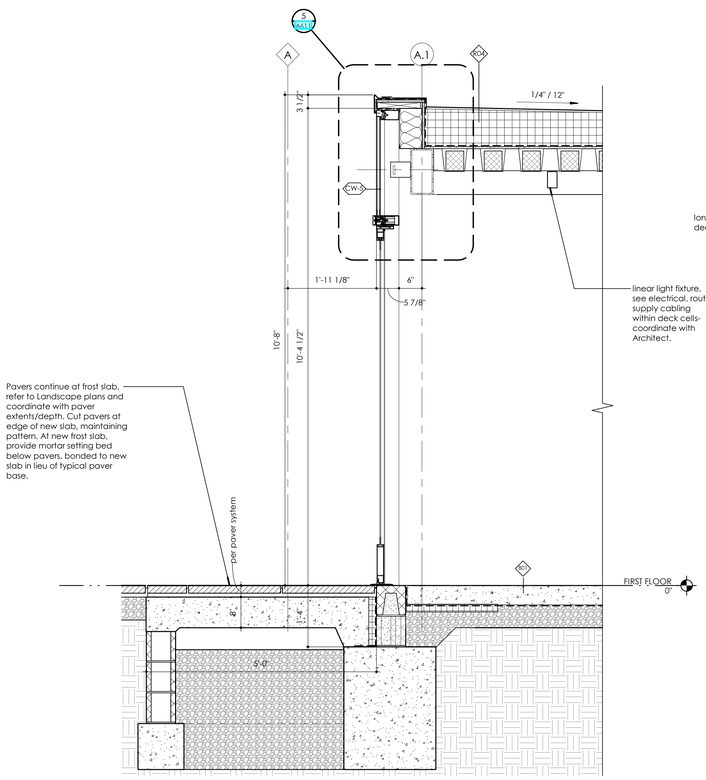
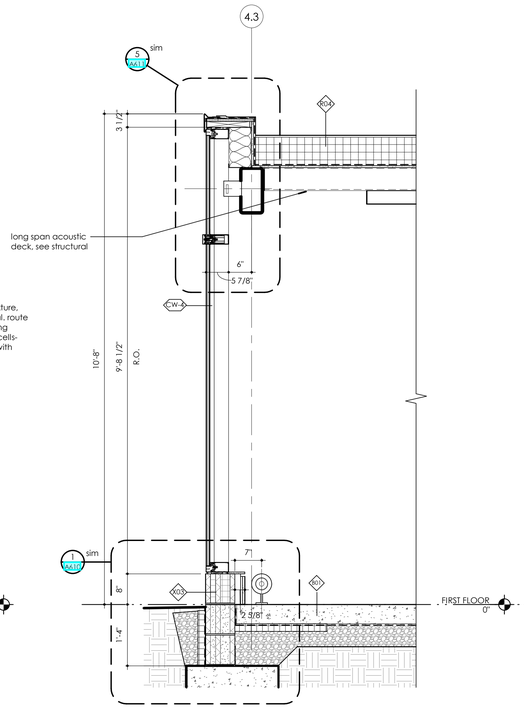


5 A601 WALL SECTION - PENTHOUSE
3/4" = 1'-0"



4 A601 WALL SECTION
3/4" = 1'-0"



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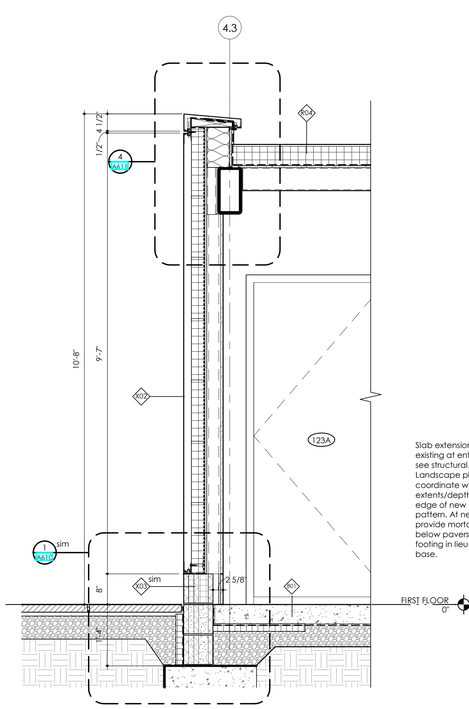

2 A601 WALL SECTION
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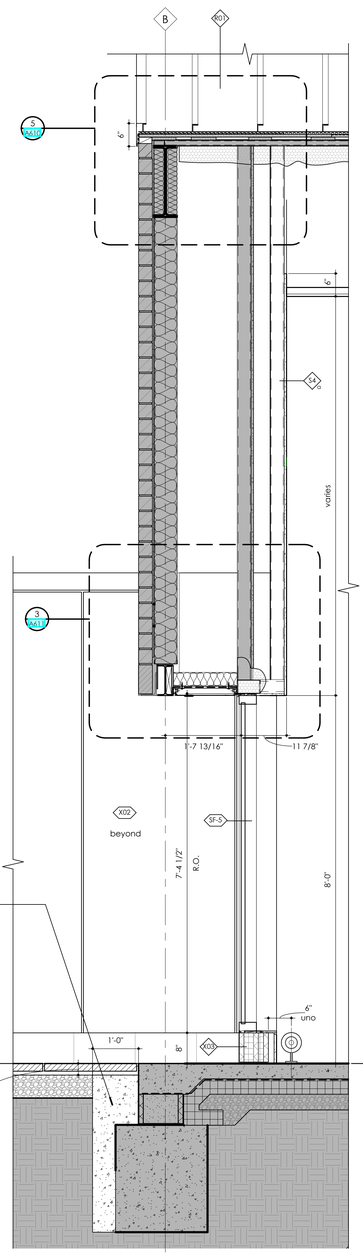

1 A601 WALL SECTION
3/4" = 1'-0"

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WALL SECTIONS
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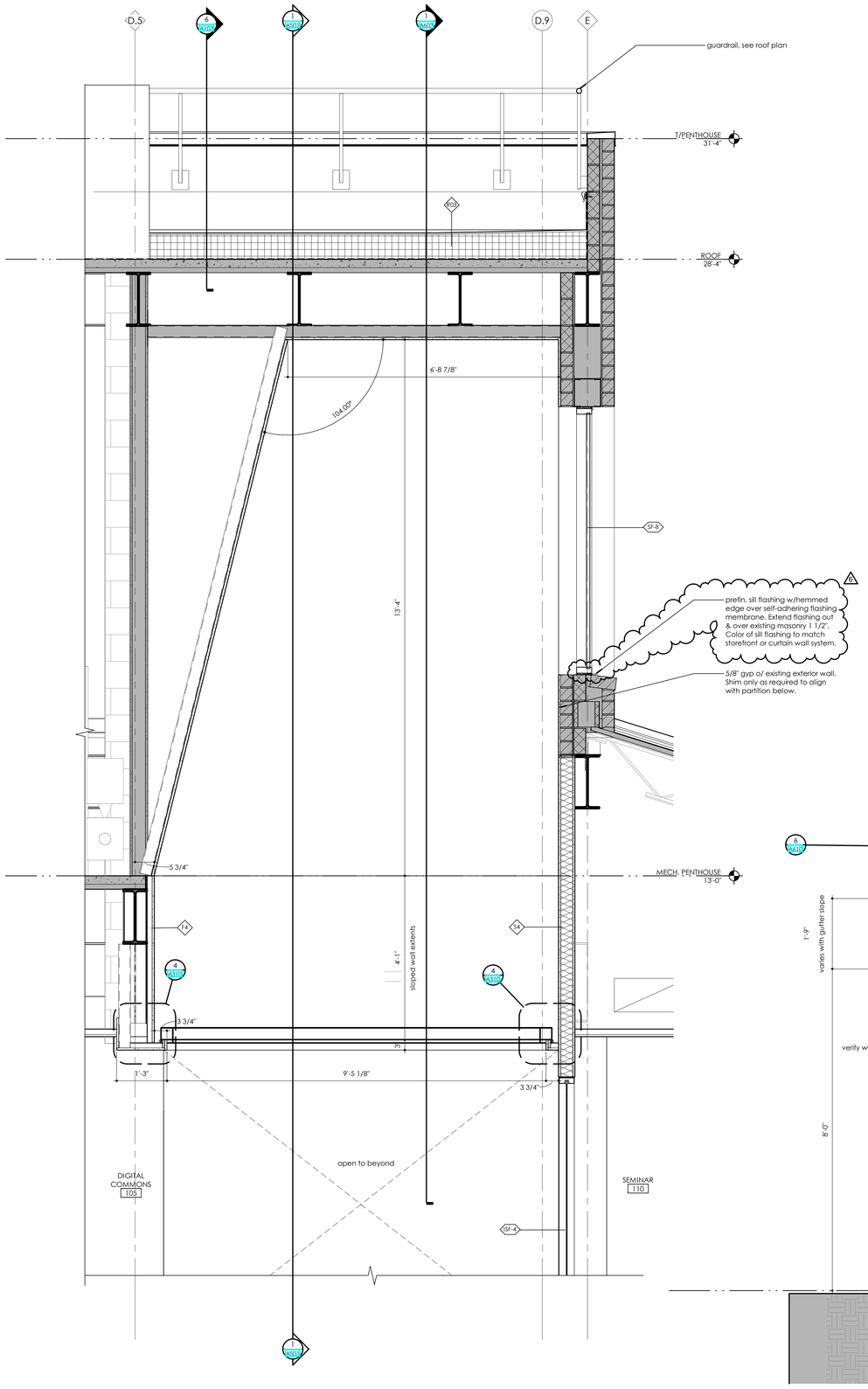

4 A602 WALL SECTION
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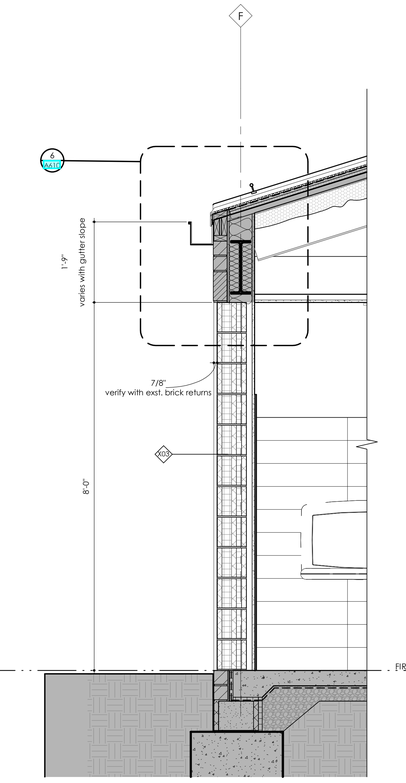
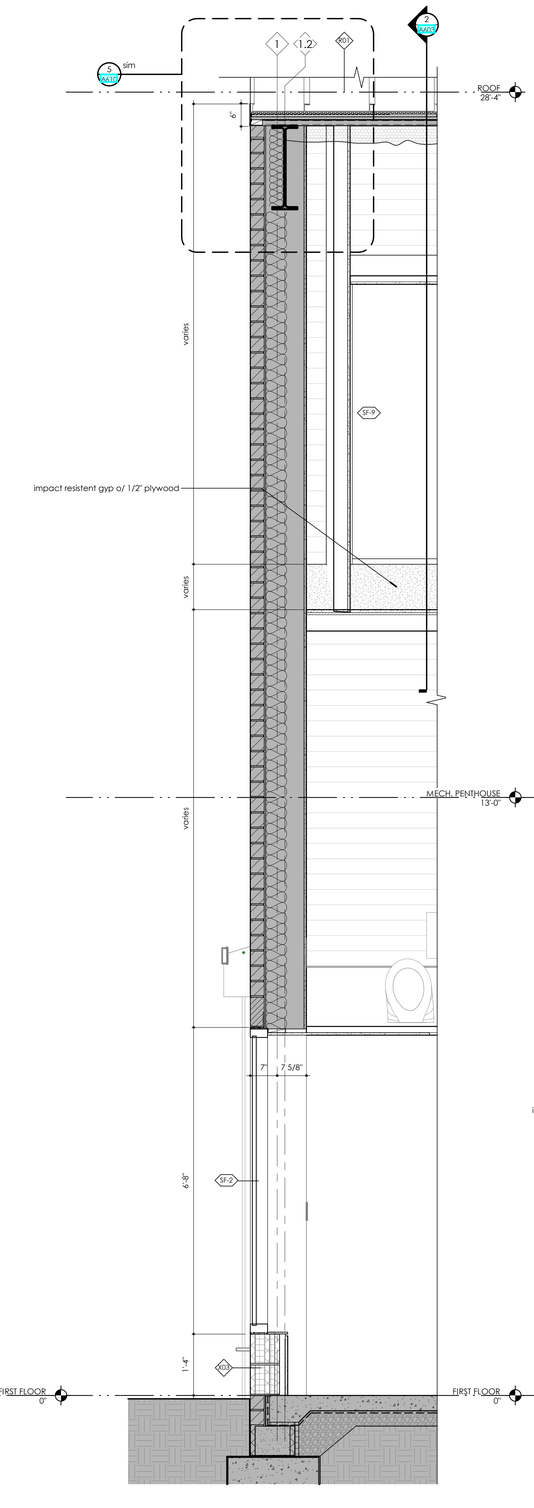
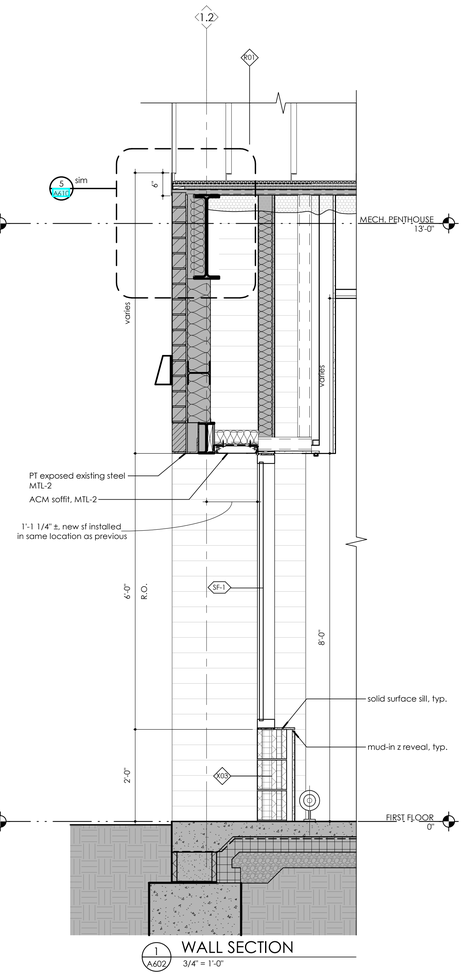


3 A602 WALL SECTION
3/4" = 1'-0"



2 A602 WALL SECTION
3/4" = 1'-0"



1 A602 WALL SECTION
3/4" = 1'-0"

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WALL SECTIONS
A602

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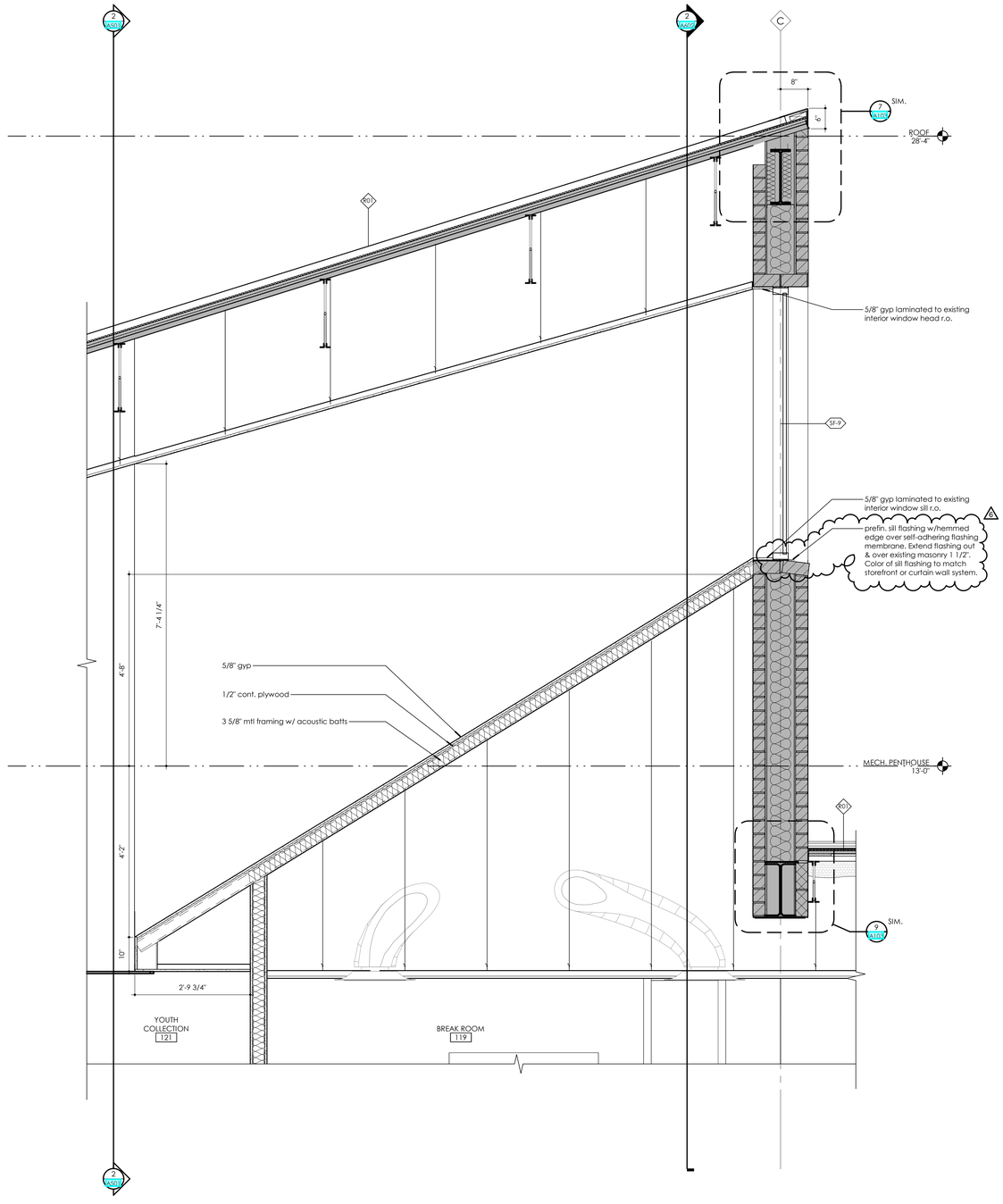
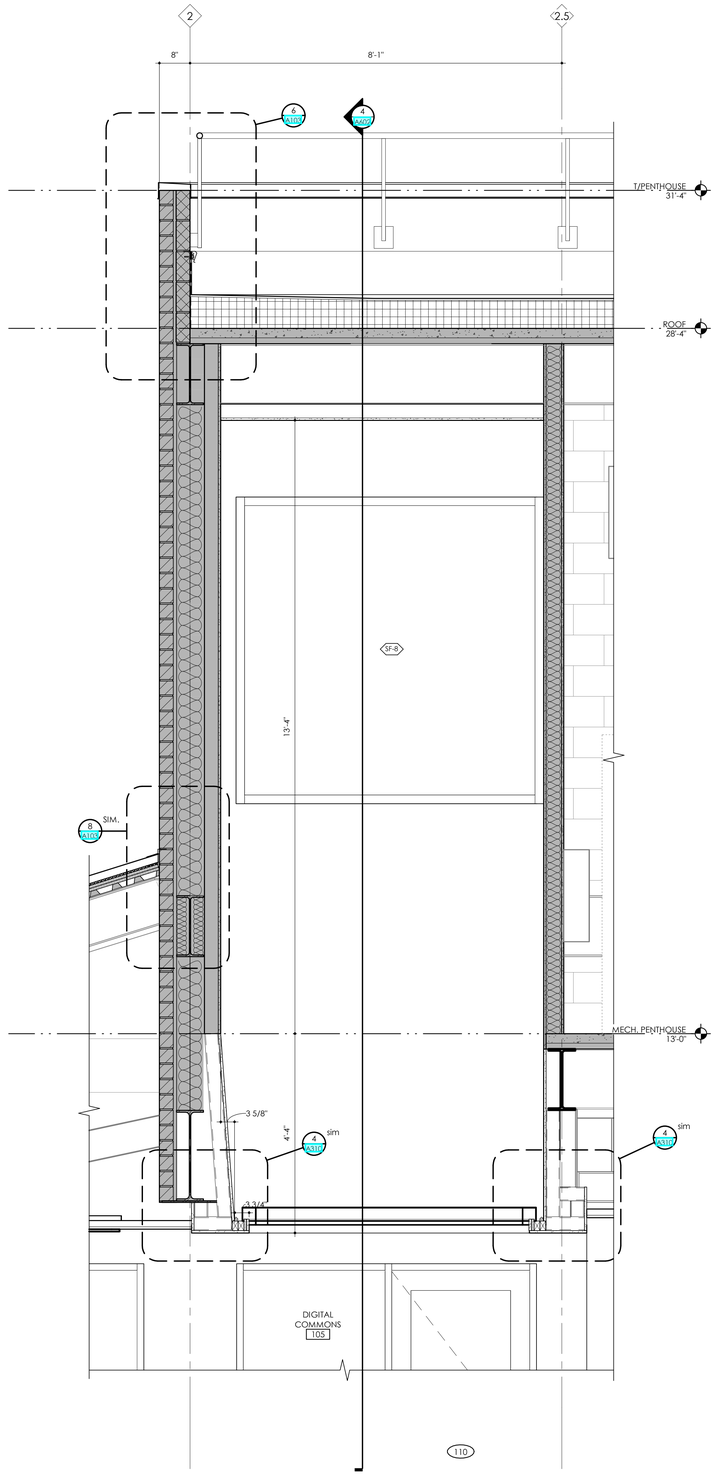


2 WALL SECTION
A603 3/4" = 1'-0"



1 WALL SECTION
A603 3/4" = 1'-0"

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WALL SECTIONS
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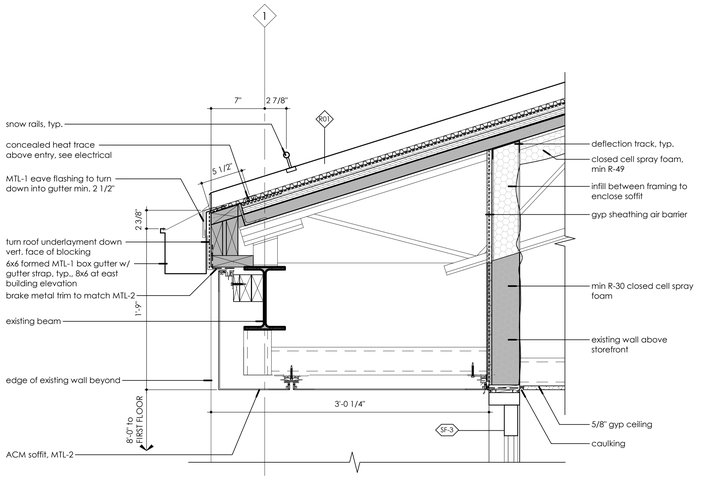
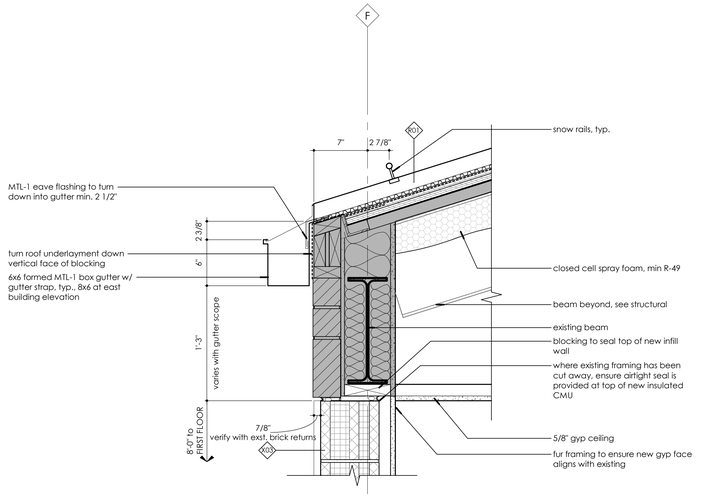


8 A610 SECTION DETAIL
1 1/2" = 1'-0"



6 A610 SECTION DETAIL
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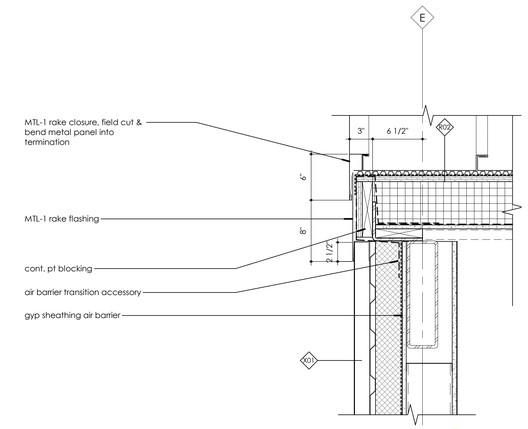
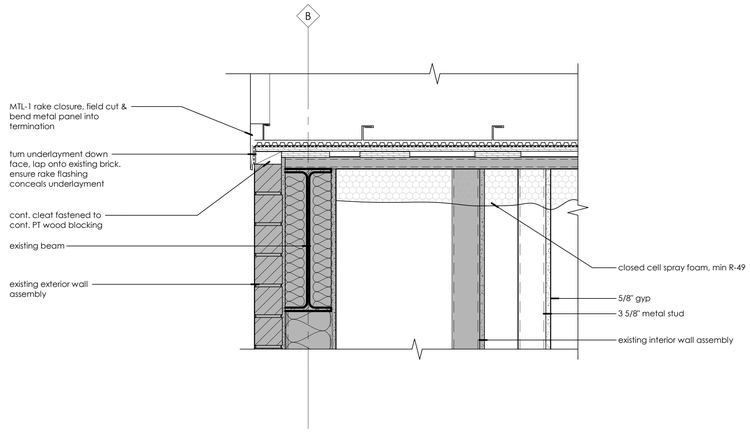
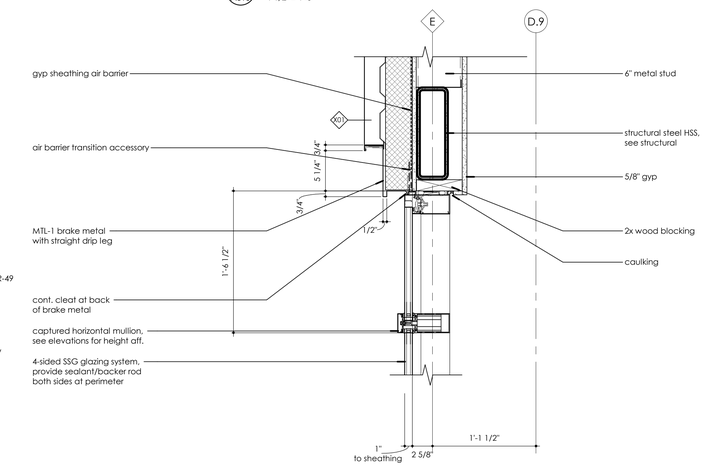


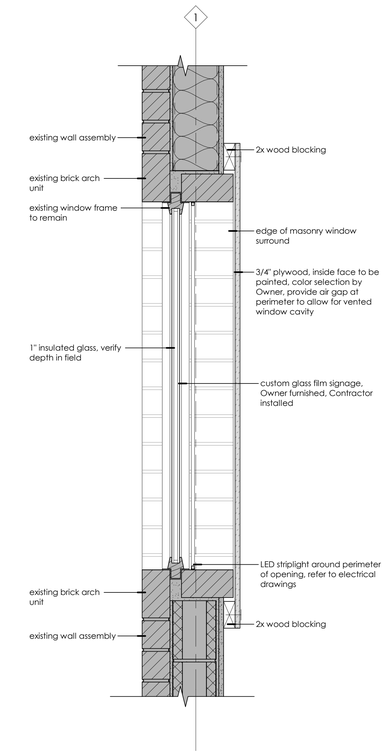
3 A610 SECTION DETAIL
1 1/2" = 1'-0"



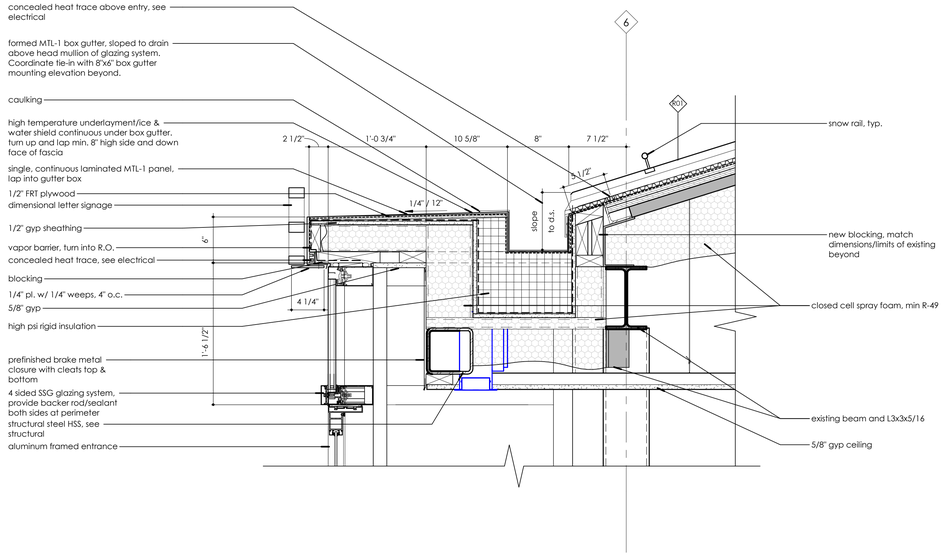
5 A610 SECTION DETAIL
1 1/2" = 1'-0"



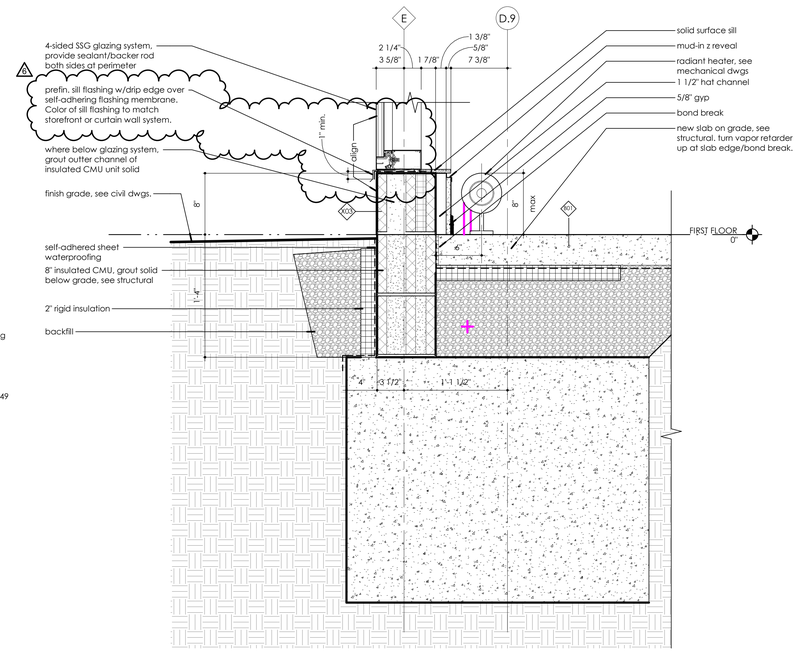
2 A610 SECTION DETAIL
1 1/2" = 1'-0"



7 A610 SECTION DETAIL
1 1/2" = 1'-0"



4 A610 SECTION DETAIL
1 1/2" = 1'-0"



1 A610 SECTION DETAIL
1 1/2" = 1'-0"

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6 Bulletin #1 8.20.2026

ENLARGED SECTION DETAILS

A610

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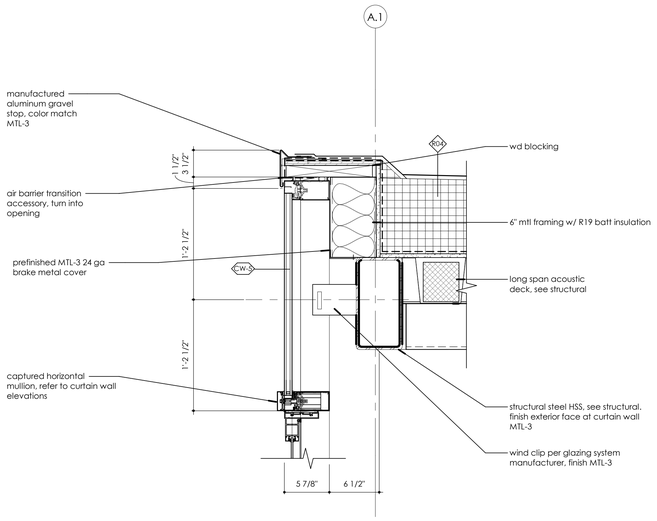
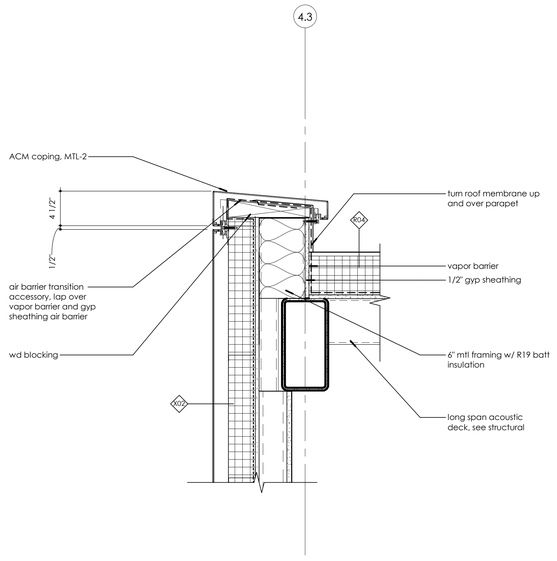
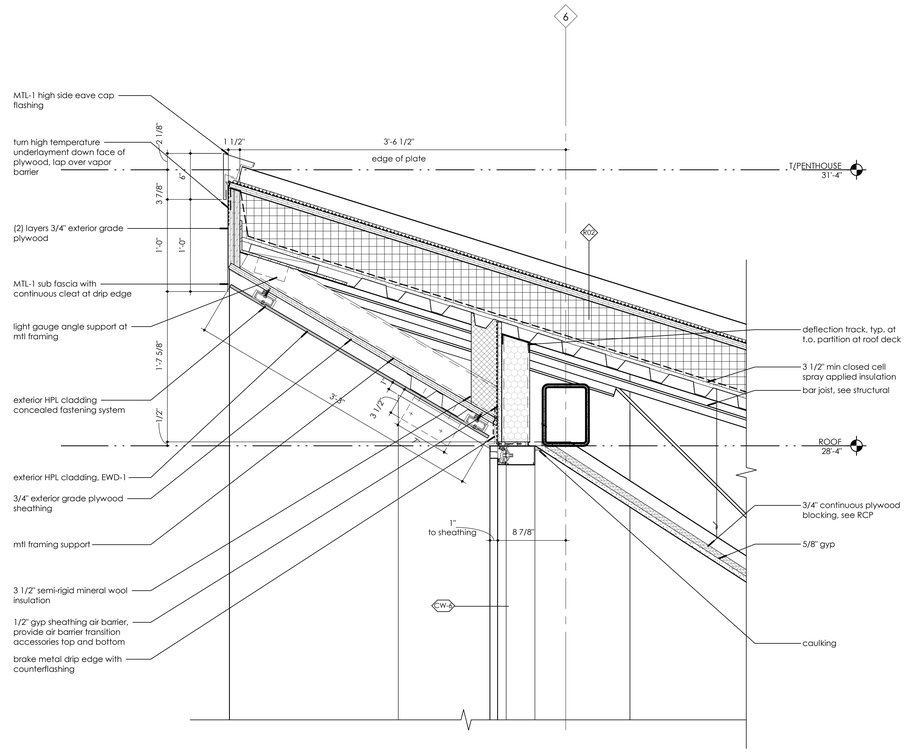


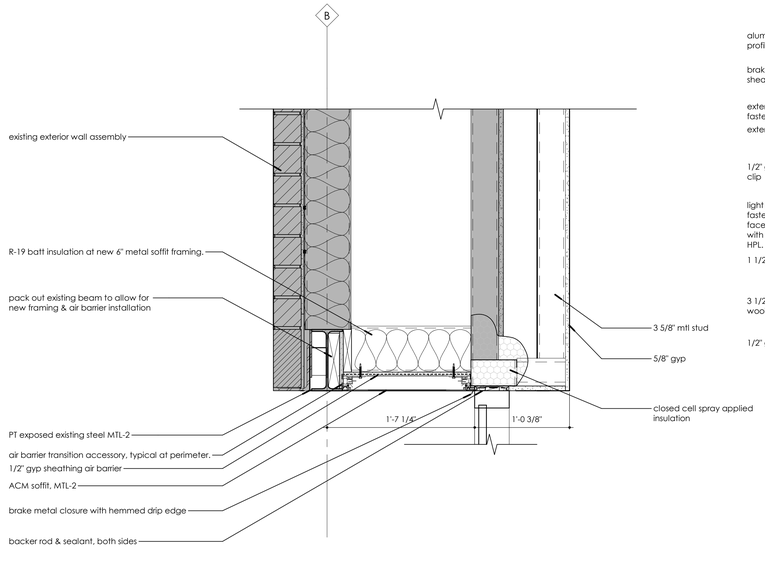
5 A611 SECTION DETAIL
1 1/2" = 1'-0"



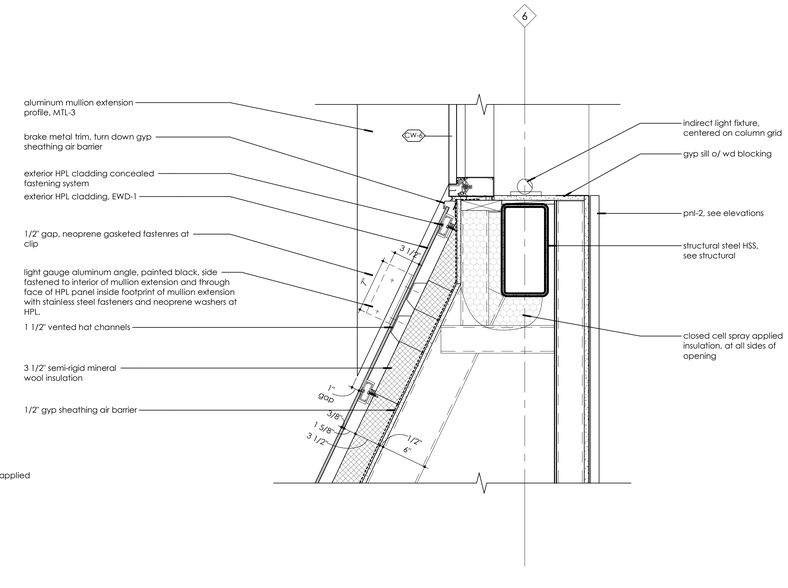
4 A611 SECTION DETAIL
1 1/2" = 1'-0"



2 A611 SECTION DETAIL
1 1/2" = 1'-0"



3 A611 SECTION DETAIL
1 1/2" = 1'-0"



1 A611 SECTION DETAIL
1 1/2" = 1'-0"

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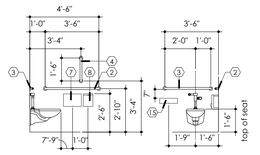
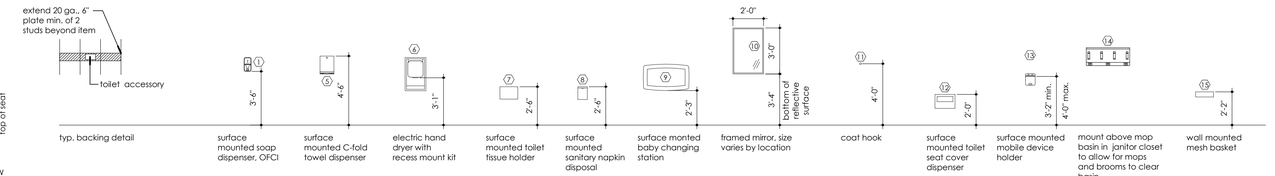
TOILET ROOM ACCESSORY LEGEND

1. Wall Mounted Soap Dispenser, OFCI
2. Grab Bar - 42"
3. Grab Bar - 36"
4. Grab Bar - 18" Vertical
5. Surface Mounted C-fold Towel Dispenser
6. Electric Hand Dryer with Recess Mount Kit
7. Surface Mounted Toilet Tissue Dispenser
8. Surface Mounted Napkin Disposal
9. Surface Mounted Baby Changing Station
10. Lavatory Mirror
11. Coat Hook
12. Surface Mounted Toilet Seat Cover Dispenser
13. Mobile Device Holder
14. Mop Rack / Hooks
15. Wall Mounted Wire Basket

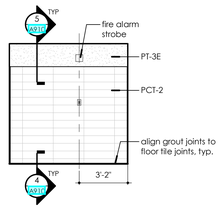
TOILET ACCESSORY MOUNTING HEIGHTS



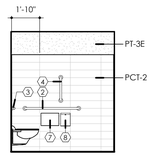
ACCESSIBLE SIDE VIEW ACCESSIBLE FRONT VIEW



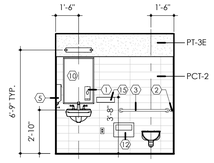
NOTE: Installer to confirm accessible mounting heights of all toilet accessories if alternates are submitted and accepted. Confirm size and location of toilet tissue dispenser prior to mounting sanitary napkin disposal.



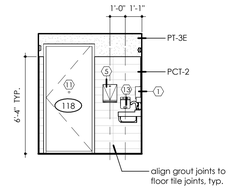
14 A800 118 STAFF RR - WEST
1/4" = 1'-0"



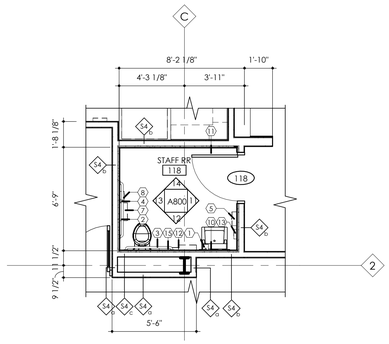
13 A800 118 STAFF RR - SOUTH
1/4" = 1'-0"



12 A800 118 STAFF RR - EAST
1/4" = 1'-0"

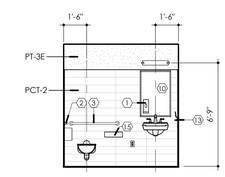


11 A800 118 STAFF RR - NORTH
1/4" = 1'-0"

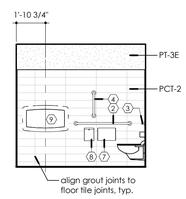


2 A800 ENLARGED STAFF RESTROOM PLAN
1/4" = 1'-0"

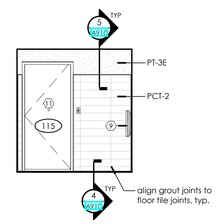
Project North
True North



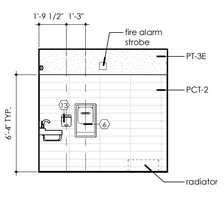
10 A800 115 RR- WEST
1/4" = 1'-0"



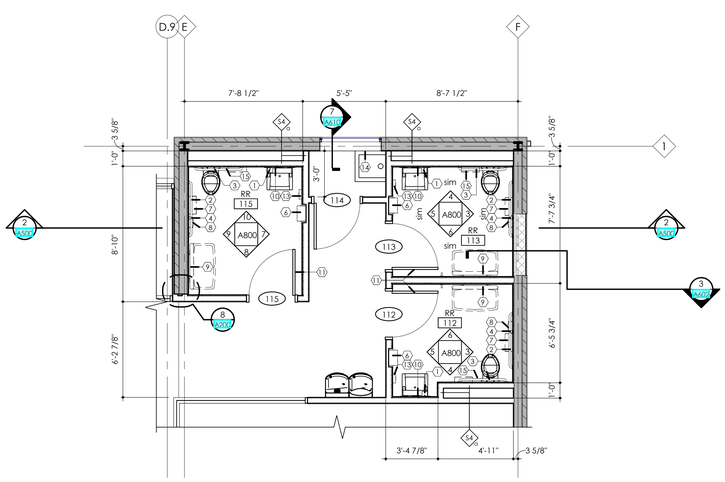
9 A800 115 RR - SOUTH
1/4" = 1'-0"



8 A800 115 RR - EAST
1/4" = 1'-0"

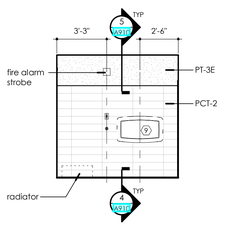


7 A800 115 RR - NORTH
1/4" = 1'-0"

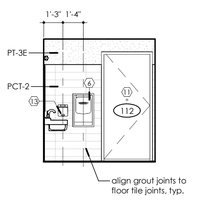


1 A800 ENLARGED RESTROOM PLAN
1/4" = 1'-0"

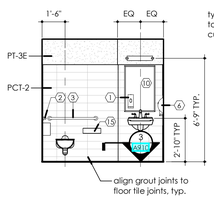
Project North
True North



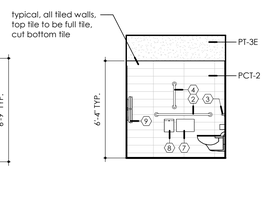
6 A800 112 RR - WEST
1/4" = 1'-0"



5 A800 112 RR - SOUTH
1/4" = 1'-0"



4 A800 112 RR - EAST
1/4" = 1'-0"



3 A800 112 RR - NORTH
1/4" = 1'-0"

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ENLARGED RESTROOM PLANS AND ELEVATIONS

A800

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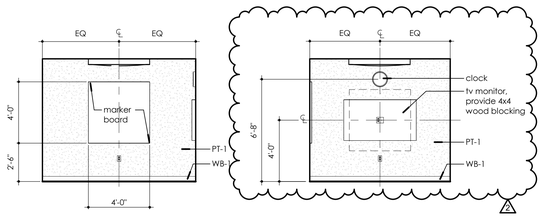
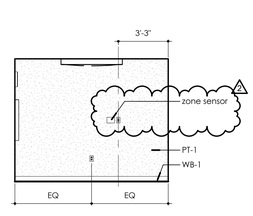
INTERIOR ELEVATION NOTES

1. Refer to sheet A821 for typical casework details.
2. MEPT components shown in elevations are for location coordiantion, refer to MEPT drawings for device information.



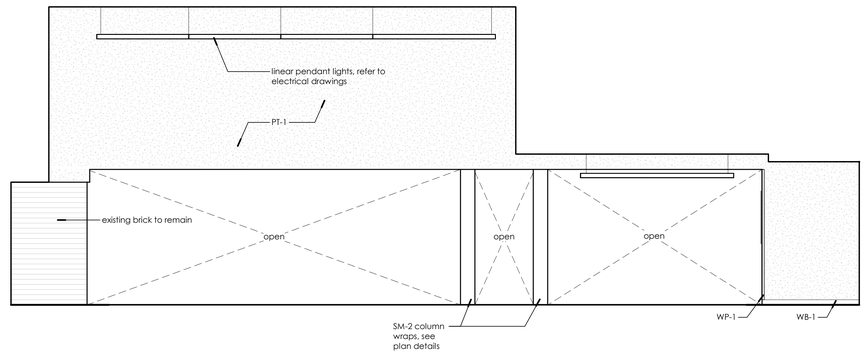
12 A801 102 STUDY - NORTH
1/4" = 1'-0"

11 A801 102 STUDY - EAST
1/4" = 1'-0"

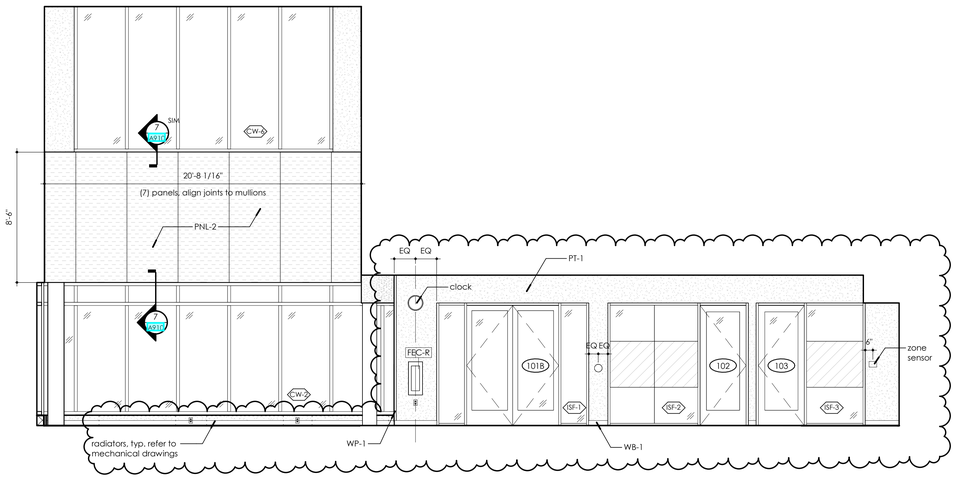


10 A801 102 STUDY - SOUTH
1/4" = 1'-0"

9 A801 105 DIGITAL COMMONS - WEST_HOLDS
1/4" = 1'-0"



8 A801 105 DIGITIAL COMMONS - WEST
1/4" = 1'-0"



7 A801 104 ADULT COLLECTION - EAST
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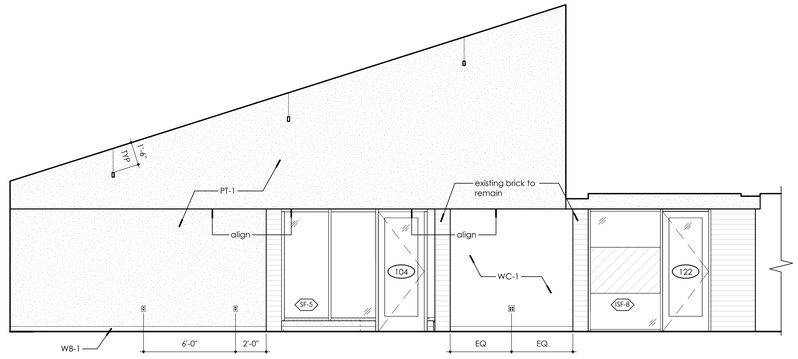
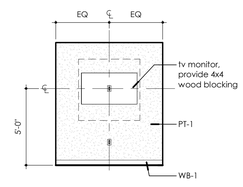
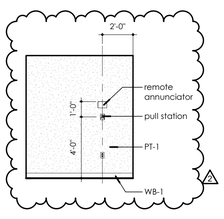


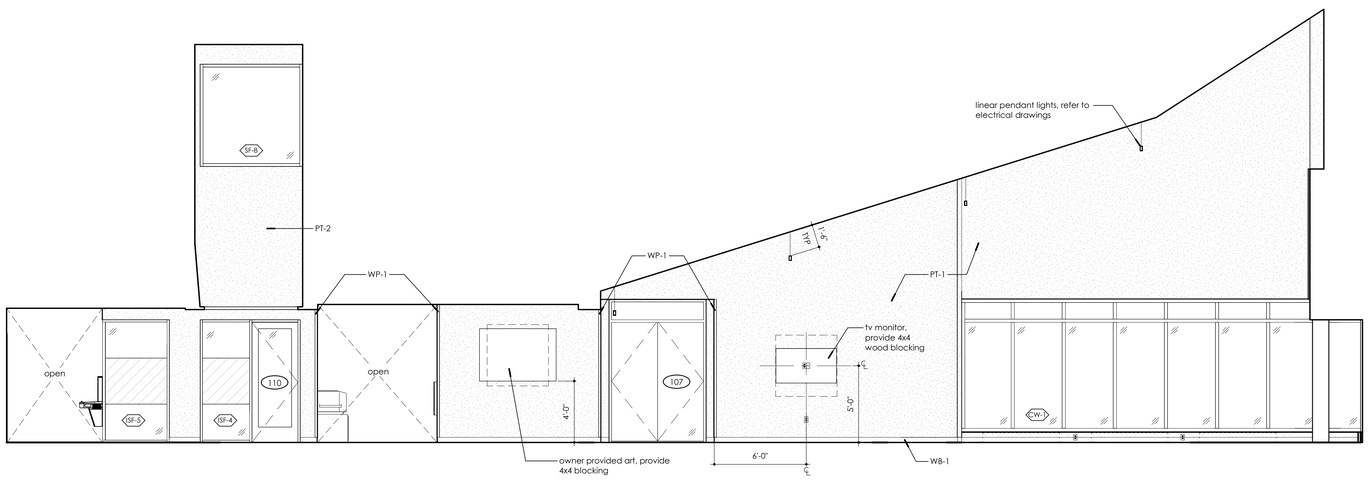
6 A801 104 ADULT COLLECTION - SOUTH
1/4" = 1'-0"



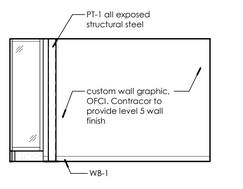
5 A801 116 VESTIBULE - SOUTH
1/4" = 1'-0"



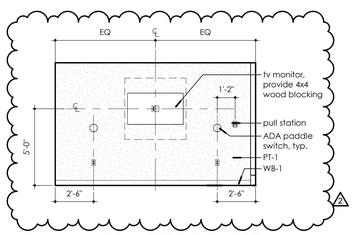
4 A801 116 VESTIBULE - NORTH
1/4" = 1'-0"



1 A801 104 ADULT COLLECTION - NORTH
1/4" = 1'-0"



3 A801 101 VESTIBLUE - SOUTH
1/4" = 1'-0"



2 A801 101 VESTIBULE - NORTH
1/4" = 1'-0"

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INTERIOR ELEVATIONS
A801

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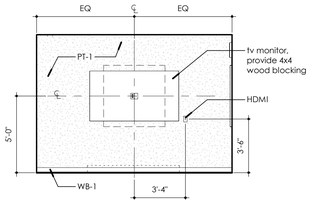
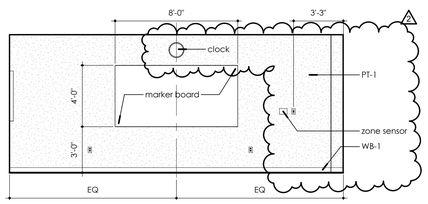
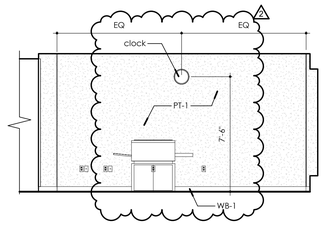


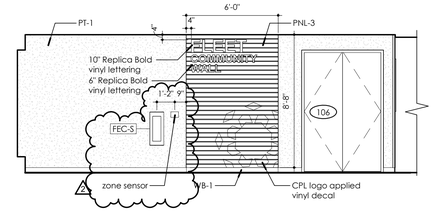
18 A802 110 SEMINAR - NORTH
1/4" = 1'-0"



17 A802 110 SEMINAR - EAST
1/4" = 1'-0"



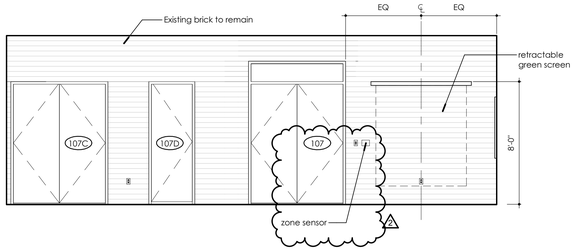
16 A802 109 BUSINESS CENTER - WEST
1/4" = 1'-0"



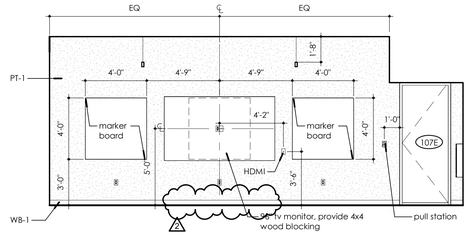
15 A802 109 BUSINESS CENTER - EAST
1/4" = 1'-0"

INTERIOR ELEVATION NOTES

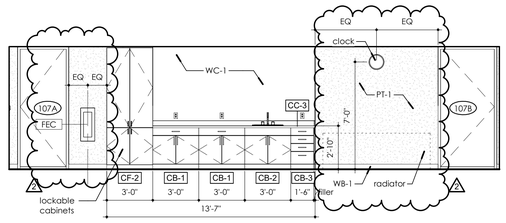
1. Refer to sheet A821 for typical casework details.
2. MEPT components shown in elevations are for location coordiantion, refer to MEPT drawings for device information.



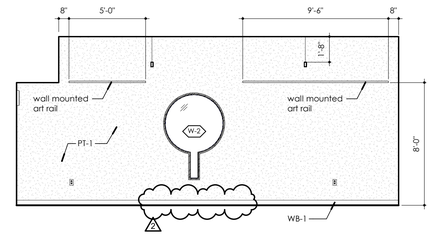
14 A802 107 MEETING - SOUTH
1/4" = 1'-0"



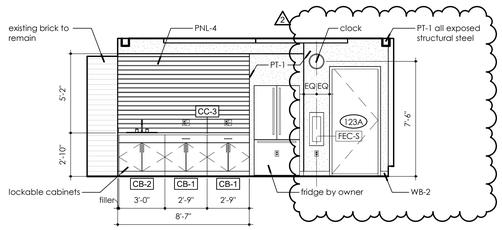
13 A802 107 MEETING - WEST
1/4" = 1'-0"



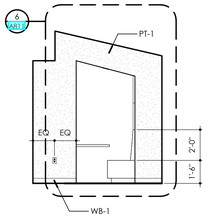
12 A802 107 MEETING - NORTH
1/4" = 1'-0"



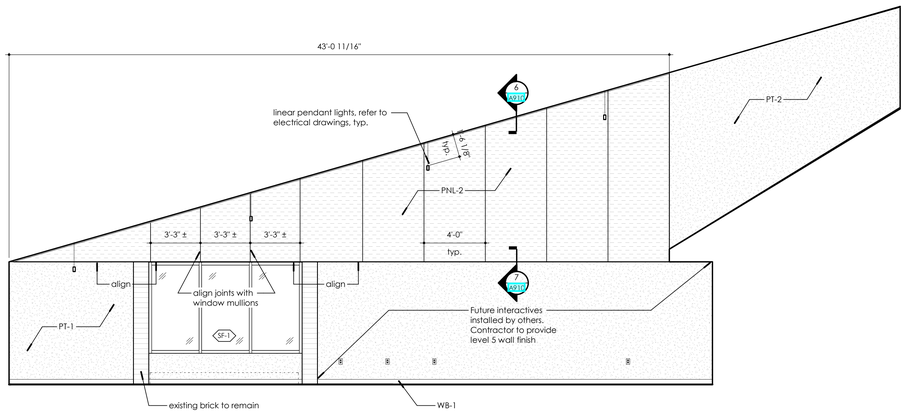
11 A802 107 MEETING - EAST
1/4" = 1'-0"



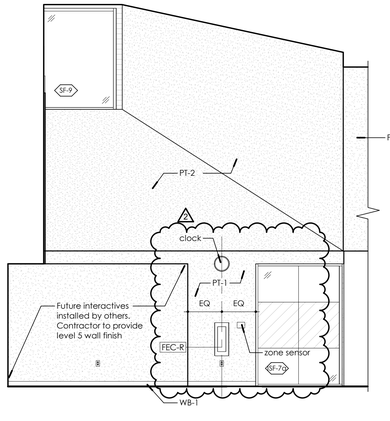
10 A802 123 STEAM - NORTH
1/4" = 1'-0"



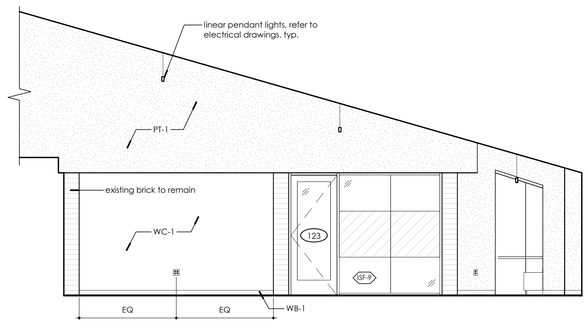
9 A802 121 YOUTH COLLECTION - SOUTHEAST
1/4" = 1'-0"



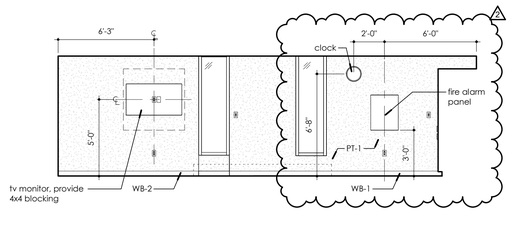
8 A802 121 YOUTH COLLECTION - WEST
1/4" = 1'-0"



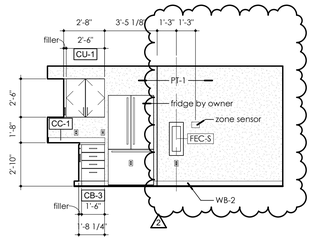
7 A802 121 YOUTH COLLECTION - NORTH
1/4" = 1'-0"



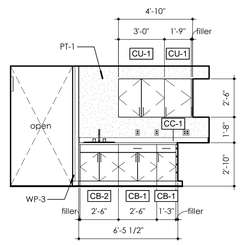
6 A802 121 YOUTH COLLECTION - EAST
1/4" = 1'-0"



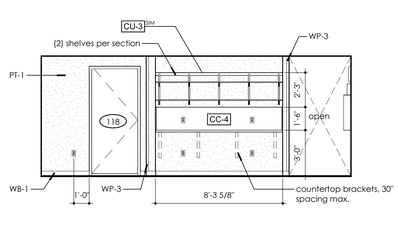
5 A802 119 BREAK ROOM - WEST
1/4" = 1'-0"



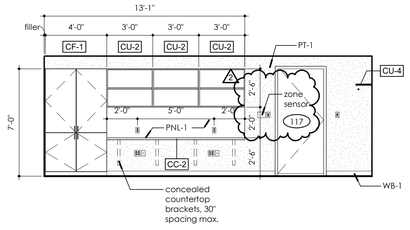
4 A802 119 BREAK ROOM - EAST
1/4" = 1'-0"



3 A802 119 BREAK ROOM - NORTH
1/4" = 1'-0"



2 A802 117 STAFF WORK - SOUTH
1/4" = 1'-0"



1 A802 117 STAFF WORK - NORTH
1/4" = 1'-0"

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Project No: 25-25
Drawn / Checked: ST / BG

Issue:
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2 Addendum #2 3.18.2026

INTERIOR ELEVATIONS
A802

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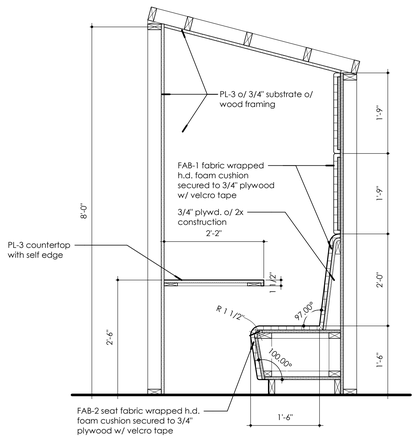
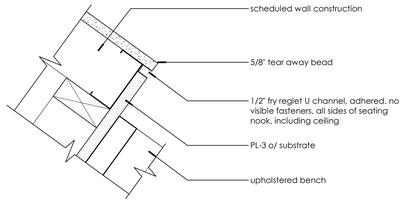
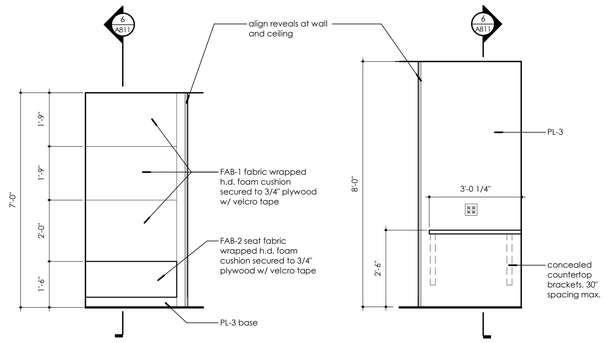


6 A811 STUDY NOOK SECTION
3/4" = 1'-0"

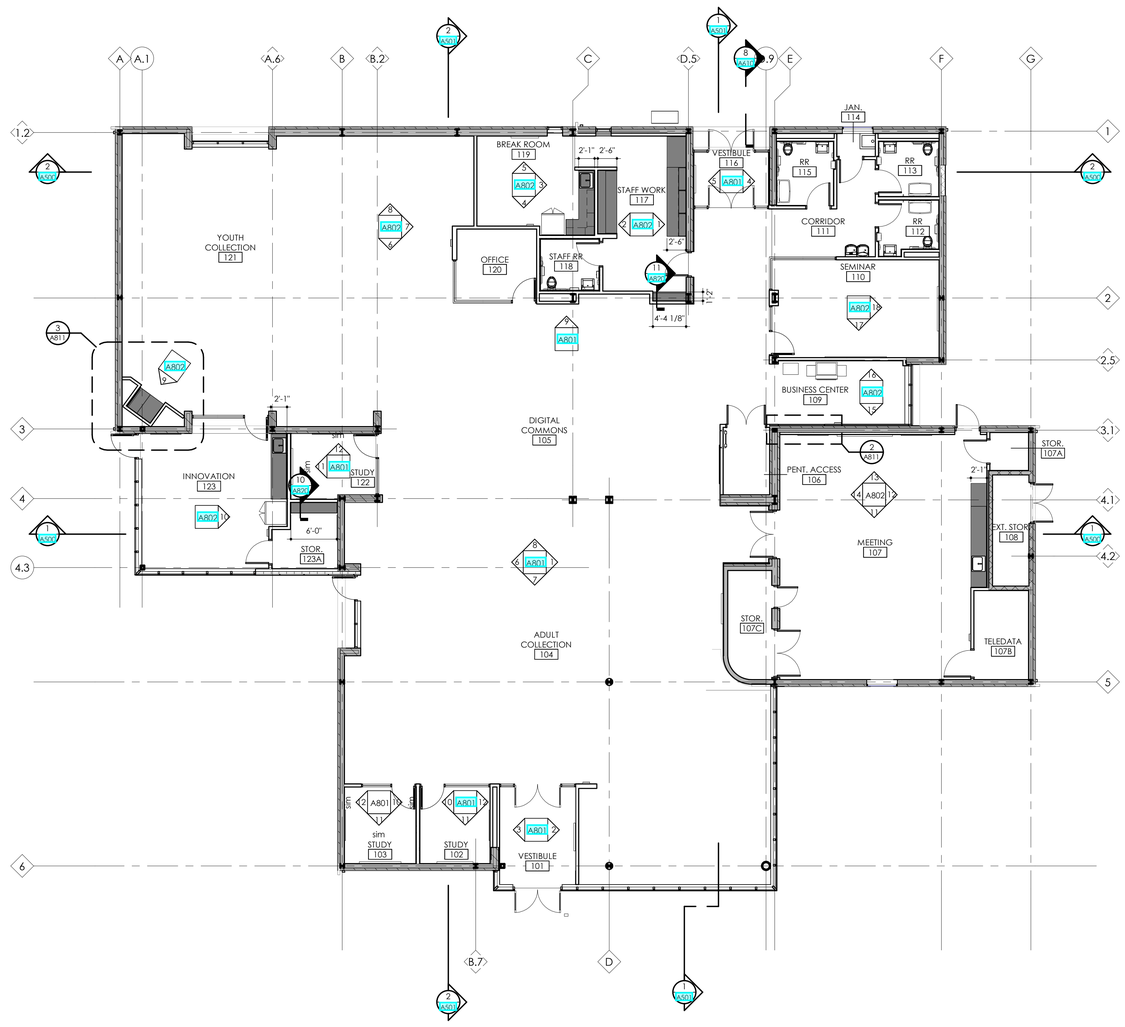


7 A811 STUDY NOOK CORNER
3" = 1'-0"



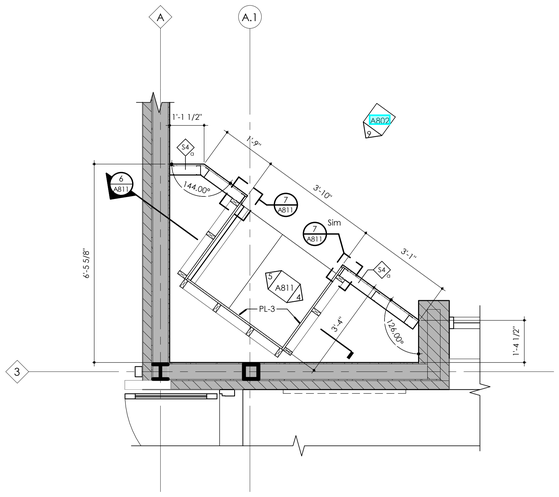
5 A811 STUDY NOOK ELEVATION - WEST
1/2" = 1'-0"

4 A811 STUDY NOOK ELEVATION - EAST
1/2" = 1'-0"

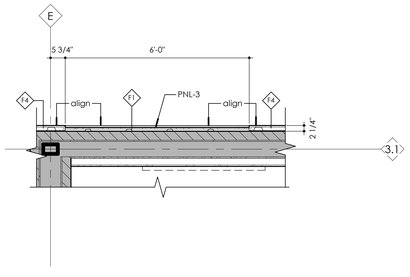


1 A811 FIRST FLOOR MILLWORK PLAN
1/8" = 1'-0"

Project North
True North



3 A811 STUDY NOOK - ENLARGED PLAN
1/2" = 1'-0"



2 A811 SLAT WALL - ENLARGED PLAN
1/2" = 1'-0"

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MILLWORK PLAN

A811

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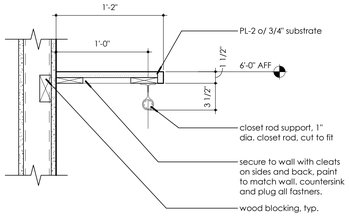
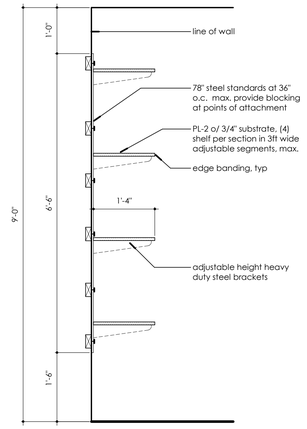
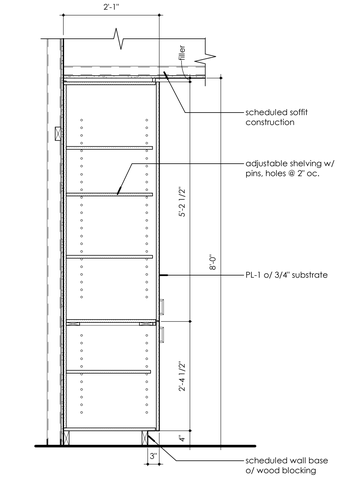


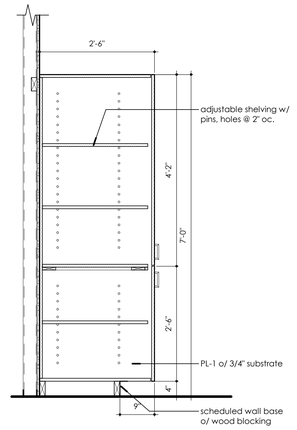
11 A820 SHELF & ROD DETAIL - CU-4
1 1/2" = 1'-0"



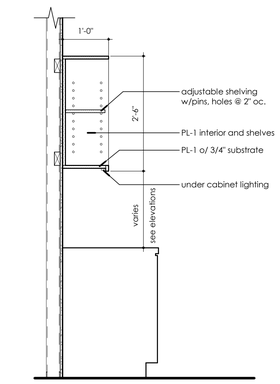
10 A820 SHELF - STANDARDS & BRACKETS - CU-3
3/4" = 1'-0"



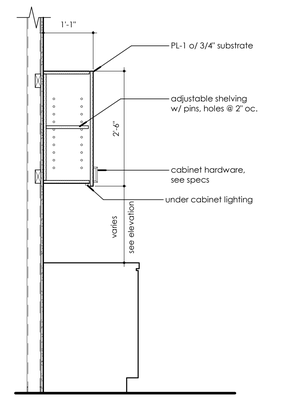
13 A820 CASEWORK FULL-HEIGHT - CF-2
3/4" = 1'-0"



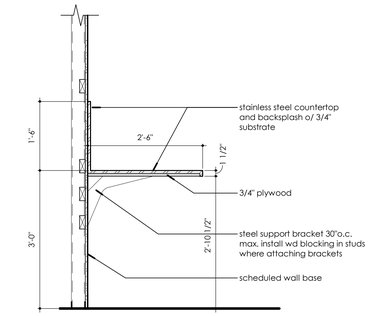
12 A820 CASEWORK FULL-HEIGHT - CF-1
3/4" = 1'-0"



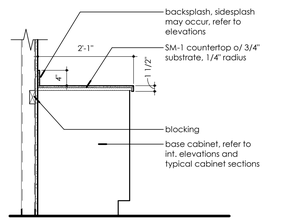
9 A820 CASEWORK UPPER - CU-2
3/4" = 1'-0"



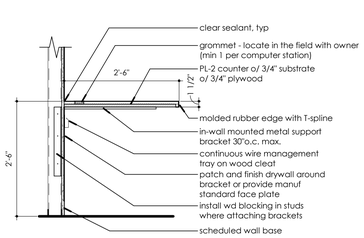
8 A820 CASEWORK UPPER - CU-1
3/4" = 1'-0"



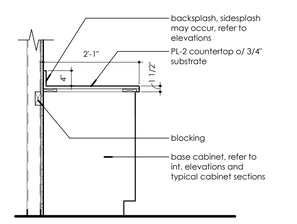
7 A820 CASEWORK COUNTERTOP - CC-4
3/4" = 1'-0"



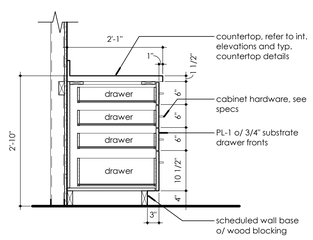
6 A820 CASEWORK COUNTERTOP - CC-3
3/4" = 1'-0"



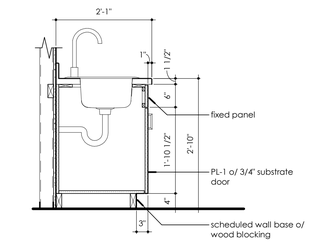
5 A820 CASEWORK COUNTERTOP - CC-2
3/4" = 1'-0"



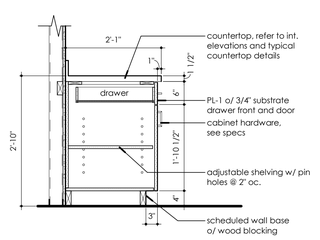
4 A820 CASEWORK COUNTERTOP - CC-1
3/4" = 1'-0"



3 A820 CASEWORK BASE - CB-3
3/4" = 1'-0"



2 A820 CASEWORK BASE - CB-2
3/4" = 1'-0"



1 A820 CASEWORK BASE - CB-1
3/4" = 1'-0"

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CASEWORK DETAILS

A820

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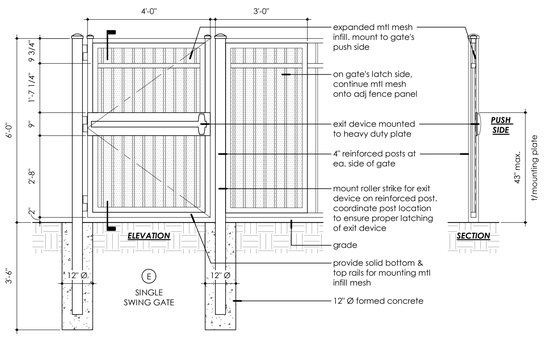
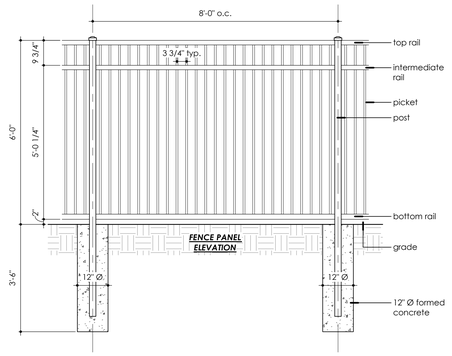


3 A901 GATE ELEVATION

1/2" = 1'-0"



2 A901 FENCE ELEVATION

1/2" = 1'-0"

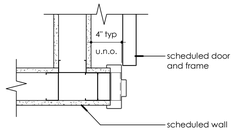
GENERAL NOTES

1. All exit doors shall operate in the direction of egress travel, without the use of keys or special knowledge.
2. All doors shall have a minimum clear opening width of 32".
3. All door latches shall be equipped with lever-type handles or panic bars - see specs. Door opening hardware shall be mounted between 34" and 48" above finish floor.
4. Door levels at each side of all doors shall be clear and level. Maximum threshold height shall be 1/2" unless noted otherwise.
5. Door thresholds to be provided at all exterior doors.
6. All glass lites to be laminated IGU's unless noted otherwise - see specifications.
7. Floor transition strips to be provided at all floor material transitions per A910.
8. HM door and frame finishes indicated to be painted, 'PT', are to match adjacent wall color. Refer to interior elevations and Finish Plan for more information.

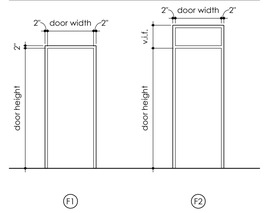
DOOR SCHEDULE

		Door							Frame							
No.	Location	Type	Door Pair	Width	Height	Thickness	Material	Finish	Type	Material	Finish	Jamb Detail	Head Detail	Hardware Set	Comments	No.
FIRST FLOOR																
101A	VESTIBULE	D	PR	6'-0"	7'-10"	1 3/4"	ALUM	MTL-3	STFT	ALUM	MTL-3	J-9	H-9	001	provide panic button tied to security system	101A
101B	VESTIBULE	D	PR	6'-0"	7'-10"	1 3/4"	ALUM	MTL-3	STFT	ALUM	MTL-3	J-2b	H-2	002		101B
102	STUDY	C	SGL	3'-0"	7'-10"	1 3/4"	ALUM	MTL-3	STFT	ALUM	MTL-3	J-2b	H-2	003		102
103	STUDY	C	SGL	3'-0"	7'-10"	1 3/4"	ALUM	MTL-3	STFT	ALUM	MTL-3	J-2b	H-2	003		103
104	EXTERIOR	C	SGL	3'-0"	7'-10"	1 3/4"	ALUM	MTL-3	STFT	ALUM	MTL-3	9/A2OD	H-8	004		104
106	PENT. ACCESS	B	PR	5'-0"	7'-10"	1 3/4"	H.M.	PT	F1	H.M.	PT	J-1	H-1	005		106
107	MEETING	B	PR	6'-0"	7'-10"	1 3/4"	SCW	WD-1	F2	H.M.	PT	J-3	H-3	006	vif existing opening for new door & frame	107
107A	STOR.	A	SGL	3'-0"	7'-10"	1 3/4"	SCW	WD-1	F1	H.M.	PT	J-1	H-1	007		107A
107B	TELEDATA	A	SGL	3'-6"	7'-10"	1 3/4"	H.M.	PT	F1	H.M.	PT	J-1	H-1	008		107B
107C	STOR.	B	PR	6'-0"	7'-10"	1 3/4"	SCW	WD-1	F1	H.M.	PT	J-4	H-4	009	vif existing opening for new door & frame	107C
107D	STOR.	A	SGL	2'-8"	7'-10"	1 3/4"	SCW	WD-1	F1	H.M.	PT	J-4	H-4	010	vif existing opening for new door & frame	107D
107E	EXTERIOR	A	SGL	3'-0"	7'-10"	1 3/4"	FRP	FRP-1	F1	FRP	FRP-1	J-6	H-6	011	vif existing opening for new door & frame	107E
108	EXT. STOR.	B	PR	5'-0"	7'-10"	1 3/4"	FRP	FRP-1	F1	FRP	FRP-1	J-7	H-7	012	vif existing opening for new door & frame	108
110	SEMINAR	C	SGL	3'-0"	7'-10"	1 3/4"	ALUM	MTL-3	STFT	ALUM	MTL-3	J-2a (sim)	H-2	003		110
112	RR	A	SGL	3'-0"	7'-0"	1 3/4"	SCW	WD-1	F1	H.M.	PT	J-1	H-1	013		112
113	RR	A	SGL	3'-0"	7'-0"	1 3/4"	SCW	WD-1	F1	H.M.	PT	J-1	H-1	014		113
114	JAN.	A	SGL	3'-0"	7'-0"	1 3/4"	SCW	WD-1	F1	H.M.	PT	J-1	H-1	023		114
115	RR	A	SGL	3'-0"	7'-0"	1 3/4"	SCW	WD-1	F1	H.M.	PT	J-1	H-1	014		115
116A	VESTIBULE	D	PR	6'-0"	7'-10"	1 3/4"	ALUM	MTL-3	STFT	ALUM	MTL-3	J-8	H-8	001	provide panic button tied to security system	116A
116B	VESTIBULE	D	PR	6'-0"	7'-10"	1 3/4"	ALUM	MTL-3	STFT	ALUM	MTL-3	J-2b	H-2	002		116B
117	STAFF WORK	A	SGL	3'-0"	7'-0"	1 3/4"	SCW	WD-1	F1	H.M.	PT	J-4	H-4	015		117
118	STAFF RR	A	SGL	3'-0"	7'-0"	1 3/4"	SCW	WD-1	F1	H.M.	PT	J-1	H-1	016		118
120	OFFICE	C	SGL	3'-0"	7'-10"	1 3/4"	ALUM	MTL-3	STFT	ALUM	MTL-3	J-2a	H-2	017		120
122	STUDY	C	SGL	3'-0"	7'-10"	1 3/4"	ALUM	MTL-3	STFT	ALUM	MTL-3	J-5	H-2	003		122
123	INNOVATION	C	SGL	3'-0"	7'-10"	1 3/4"	ALUM	MTL-3	STFT	ALUM	MTL-3	J-5 (sim)	3/A3ID (sim)	019		123
123A	STOR.	A	SGL	3'-0"	7'-0"	1 3/4"	SCW	WD-1	F1	H.M.	PT	J-1	H-1	018		123A
123B	EXTERIOR	C	SGL	3'-0"	7'-10"	1 3/4"	ALUM	MTL-3	STFT	ALUM	MTL-3	J-9a	H-9	021		123B
GATE-1	EXTERIOR	E	SGL	4'-0"	6'-0"	1 3/4"	STL	MTL-4	-	-	-	-	-	022	mounting details per fence manuf & 3/A901	GATE-1
GATE-2	EXTERIOR	E	SGL	4'-0"	6'-0"	1 3/4"	STL	MTL-4	-	-	-	-	-	022	mounting details per fence manuf & 3/A901	GATE-2

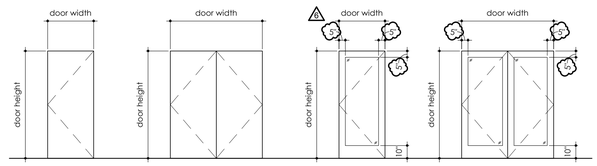
TYPICAL DOOR JAMB PLAN DETAIL



FRAME TYPES

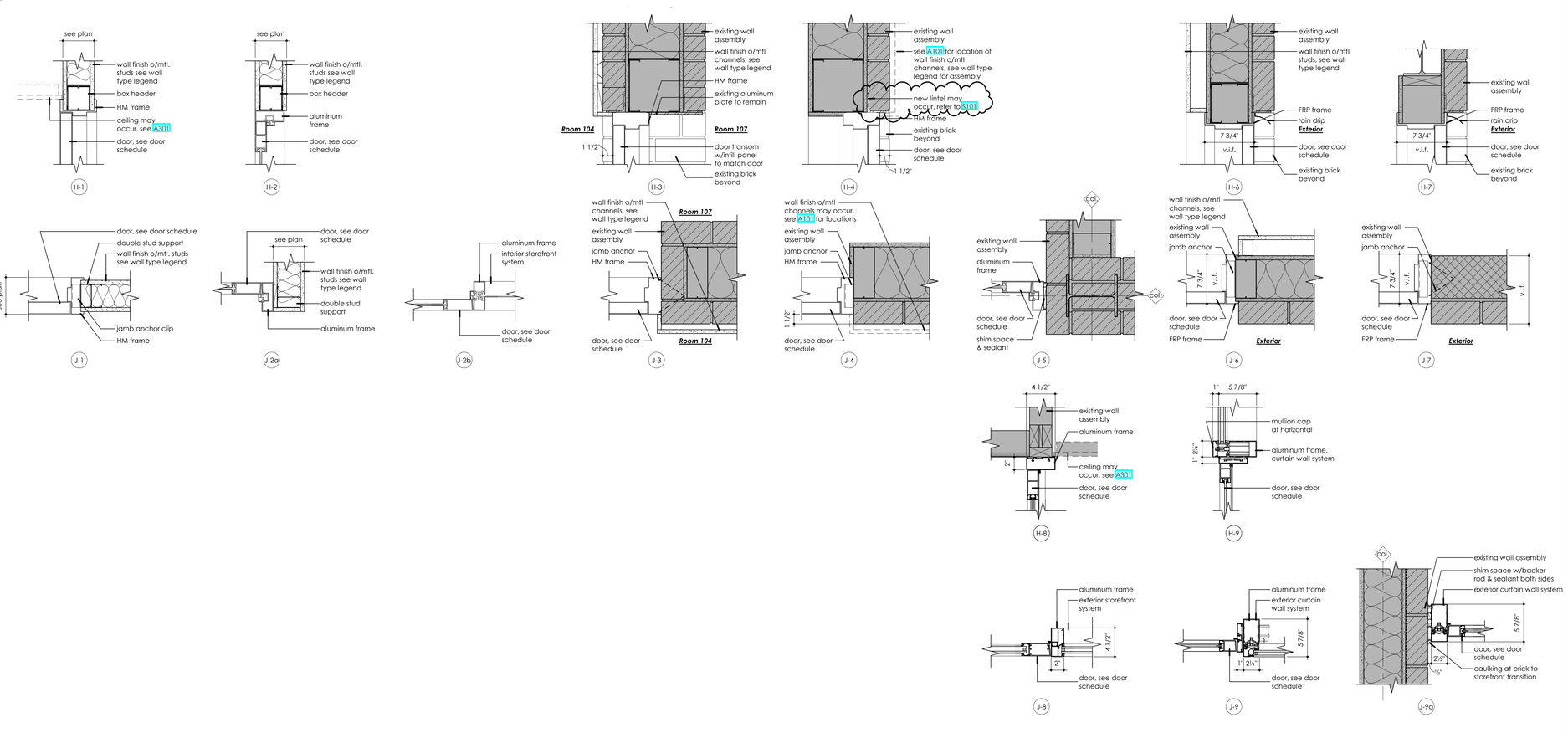


DOOR TYPES



1 A901 HEAD & JAMB DETAILS

1 1/2" = 1'-0"



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Drawn / Checked: JPH / BG

Issue:

	Bid & Permit	2.27.2026
6	Bulletin #1	8.20.2026

DOOR & GATE SCHEDULE & DETAILS

A901

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EXTERIOR CURTAIN WALL GLAZING ELEVATIONS

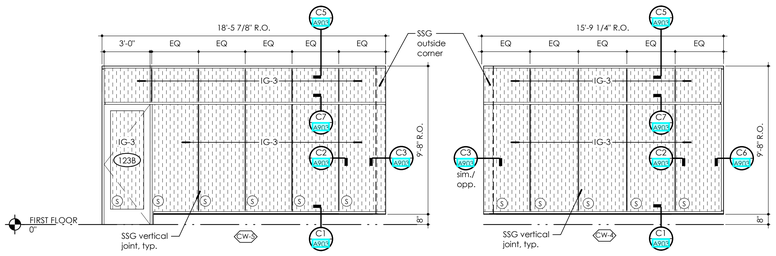
NOTES:
1. All glazing in exterior curtain walls shall be IG-1 u.n.o.
2. Coordinate R.O. dimensions with plans, sections and details

(S) = safety glazing (all door glass /any glass directly adjacent to doors /any glass framed to ground level)

IG-2 - Not Used

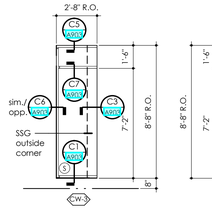
= Hatch indicates IG-3

= Hatch indicates GF-2

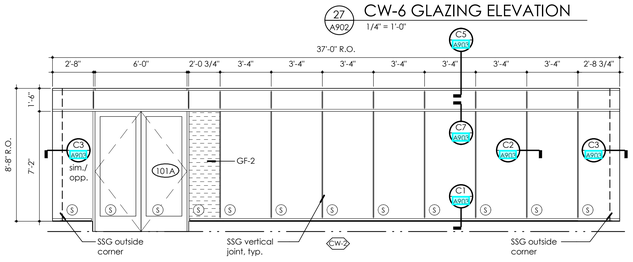


25 A902 CW-5 GLAZING ELEVATION
1/4" = 1'-0"

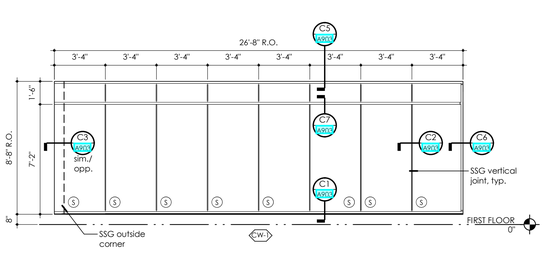
26 A902 CW-4 GLAZING ELEVATION
1/4" = 1'-0"



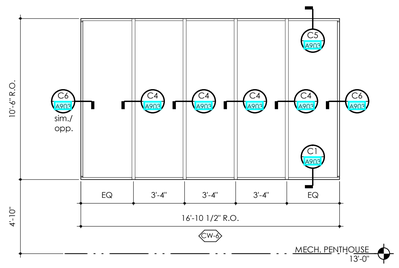
24 A902 CW-3 GLAZING ELEVATION
1/4" = 1'-0"



23 A902 CW-2 GLAZING ELEVATION
1/4" = 1'-0"



22 A902 CW-1 GLAZING ELEVATION
1/4" = 1'-0"

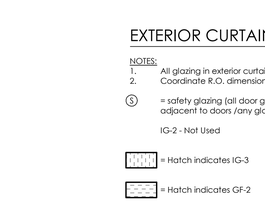


27 A902 CW-6 GLAZING ELEVATION
1/4" = 1'-0"

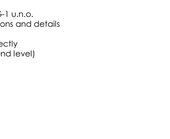
GLAZING IN ETR WINDOW FRAMES

NOTES:
1. All new glazing in existing window frames shall be IG-1 u.n.o.
2. Verify window sizes in field prior to procurement and construction

(S) = safety glazing (all door glass /any glass directly adjacent to doors /any glass framed to ground level)



19 A902 W-2 GLAZING ELEVATION
1/4" = 1'-0"

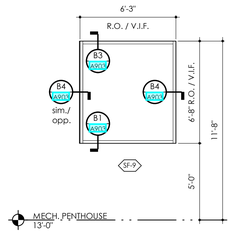


18 A902 W-1 GLAZING ELEVATION
1/4" = 1'-0"

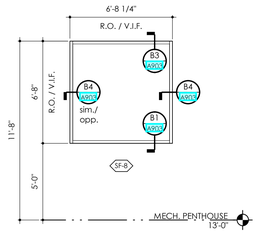
EXTERIOR STOREFRONT GLAZING ELEVATIONS

NOTES:
1. All glazing in exterior storefront shall be IG-1 u.n.o.
2. Coordinate R.O. dimensions with plans, sections and details

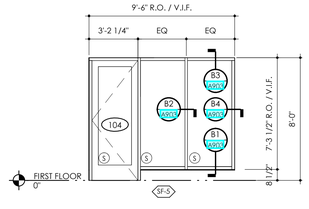
(S) = safety glazing (all door glass /any glass directly adjacent to doors /any glass framed to ground level)



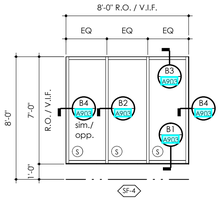
21 A902 SF-9 GLAZING ELEVATION
1/4" = 1'-0"



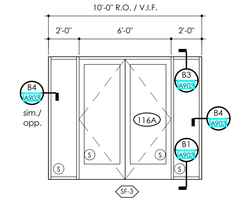
20 A902 SF-8 GLAZING ELEVATION
1/4" = 1'-0"



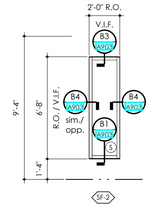
17 A902 SF-5 GLAZING ELEVATION
1/4" = 1'-0"



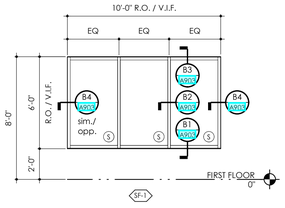
16 A902 SF-4 GLAZING ELEVATION
1/4" = 1'-0"



15 A902 SF-3 GLAZING ELEVATION
1/4" = 1'-0"



14 A902 SF-2 GLAZING ELEVATION
1/4" = 1'-0"



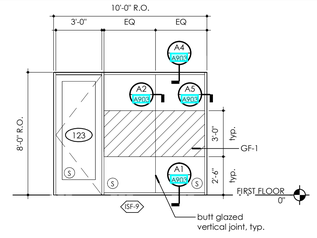
13 A902 SF-1 GLAZING ELEVATION
1/4" = 1'-0"

INTERIOR STOREFRONT GLAZING ELEVATIONS

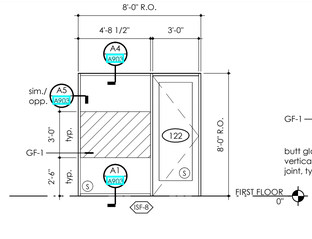
NOTES:
1. All glazing in interior storefront shall be GL-1 u.n.o.
2. Coordinate R.O. dimensions with plans, sections and details
3. All joints in interior storefront noted as 'butt glazed' shall have clear glazing gaskets, see specifications

(S) = safety glazing (all door glass /any glass directly adjacent to doors /any glass framed to ground level)

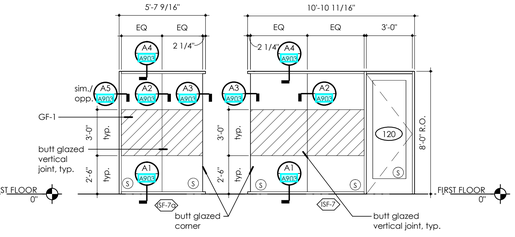
= Hatch indicates GF-1



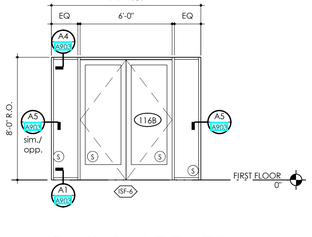
9 A902 ISF-9 GLAZING ELEVATION
1/4" = 1'-0"



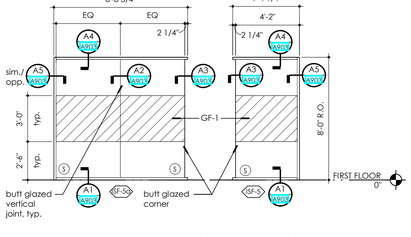
8 A902 ISF-8 GLAZING ELEVATION
1/4" = 1'-0"



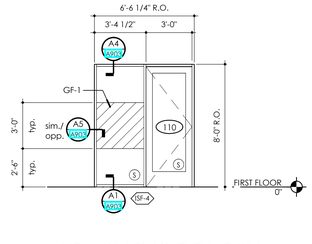
7 A902 ISF-7 GLAZING ELEVATION
1/4" = 1'-0"



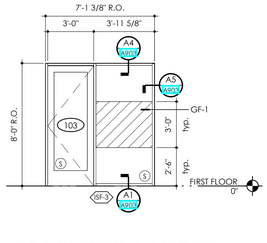
6 A902 ISF-6 GLAZING ELEVATION
1/4" = 1'-0"



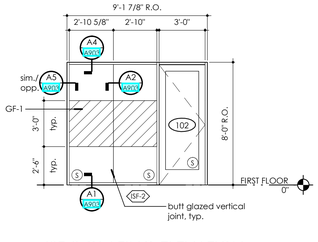
5 A902 ISF-5 GLAZING ELEVATION
1/4" = 1'-0"



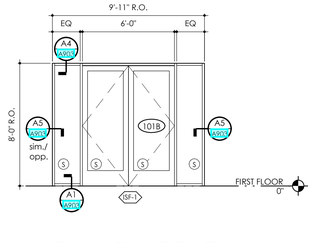
4 A902 ISF-4 GLAZING ELEVATION
1/4" = 1'-0"



3 A902 ISF-3 GLAZING ELEVATION
1/4" = 1'-0"



2 A902 ISF-2 GLAZING ELEVATION
1/4" = 1'-0"



1 A902 ISF-1 GLAZING ELEVATION
1/4" = 1'-0"

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GLAZING ELEVATIONS

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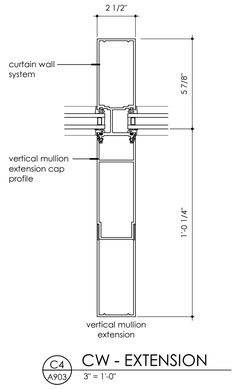
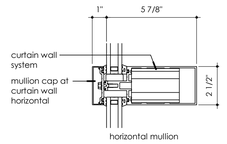
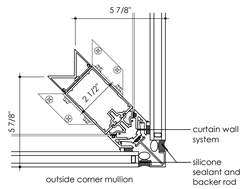


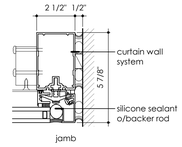
C4 A903 CW - EXTENSION
3" = 1'-0"



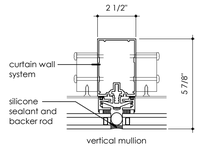
C7 A903 CW - HORIZONTAL
3" = 1'-0"



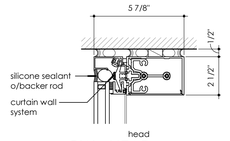
C3 A903 CW - CORNER
3" = 1'-0"



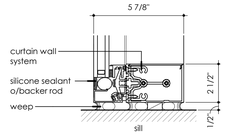
C6 A903 CW - JAMB
3" = 1'-0"



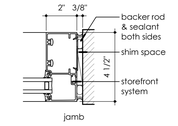
C2 A903 CW - VERTICAL
3" = 1'-0"



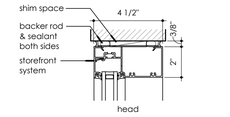
C5 A903 CW - HEAD
3" = 1'-0"



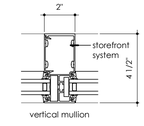
C1 A903 CW - SILL
3" = 1'-0"



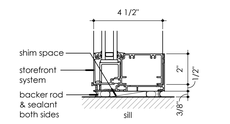
B4 A903 SF - JAMB
3" = 1'-0"



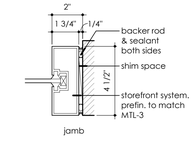
B3 A903 SF - HEAD
3" = 1'-0"



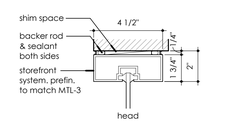
B2 A903 SF - VERTICAL
3" = 1'-0"



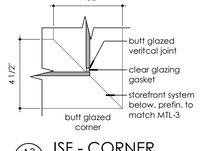
B1 A903 SF -SILL
3" = 1'-0"



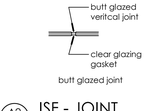
A5 A903 ISF - JAMB
3" = 1'-0"



A4 A903 ISF - HEAD
3" = 1'-0"



A3 A903 ISF - CORNER
3" = 1'-0"



A2 A903 ISF - JOINT
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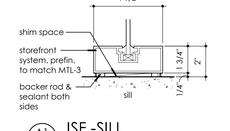

A1 A903 ISF -SILL
3" = 1'-0"

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Project No:	25-25
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GLAZING DETAILS
A903

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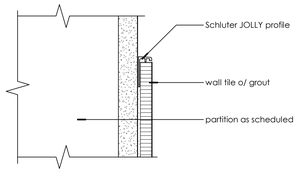
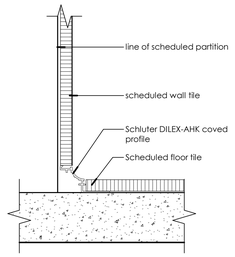
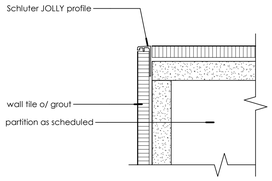


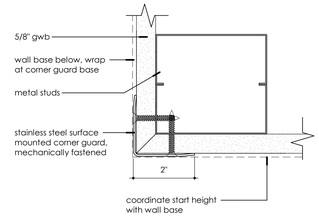
5 A910 WALL CAP TILE DETAIL
6" = 1'-0"



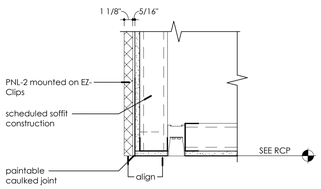
4 A910 WALL BASE DETAIL
6" = 1'-0"



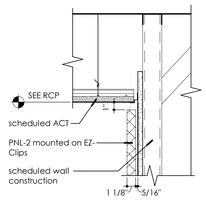
3 A910 TILE CORNER DETAIL
6" = 1'-0"



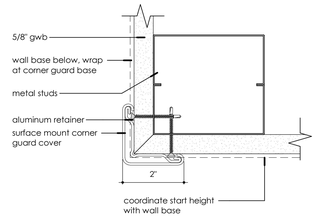
2 A910 CORNER GUARD DETAIL
6" = 1'-0"



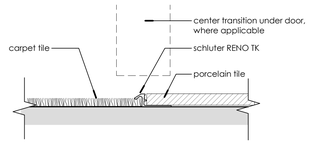
7 A910 PNL-2 DETAIL
1 1/2" = 1'-0"



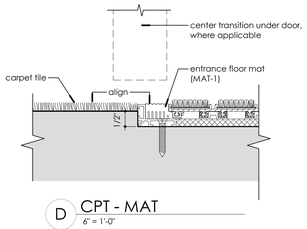
6 A910 PNL-2 DETAIL
1 1/2" = 1'-0"



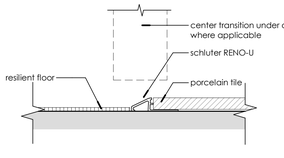
1 A910 CORNER GUARD DETAIL
6" = 1'-0"



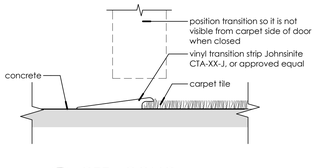
E PCT - CPT
6" = 1'-0"



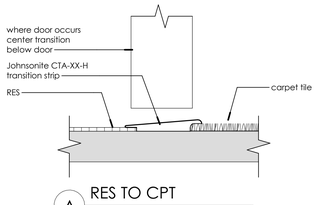
D CPT - MAT
6" = 1'-0"



C PCT - RES
6" = 1'-0"



B CPT - CONC
6" = 1'-0"



A RES TO CPT
6" = 1'-0"

FLOOR TRANSITION DETAILS

FINISH SELECTIONS							
CODE	**DESCRIPTION**	**MANUFACTURER SPECIFICATION**	**CONTACT**	**CODE**	**DESCRIPTION**	**MANUFACTURER SPECIFICATION**	**CONTACT**
ACT-1	Acoustic Ceiling Tile	Armstrong Tile: Optima Lay-In, High NRC #3150 Size: 24" x 24" x 3/4" thick Grid: 15/16"	Paige Kosmider e: pakosmider@armstrongceilings.com p: 877.276.7876	PL-1	Plastic Laminate - Vertical Casework	Wilsonart Color: White Oak PB Natural 8281K-05	David Herzberg e: davidh@bennettsupply.com p: 216.387.2274
ACT-2	Acoustic Ceiling Tile	Armstrong Tile: Optima Lay-In, High NRC #3161 Size: 24" x 72" x 3/4" thick Grid: 15/16		PL-2	Plastic Laminate - Countertops	Formica Color: 6698-58 Paloma Polar	Name: Greta Leas e: great.leas@formica.com p: 740.433.8758
CONC	Concrete	Existing to remain refer to specifications		PL-3	Plastic Laminate - Seating Nook	Abet Laminati Color: 1944 Squalo Finish: SEI	Erin Steik e: erin.steik@abetlaminati.com p: 312.898.6019
CPT-1	Carpet Tile - Field	J+J Kinetex Pattern: Synergy 1861 Color: Distant 3709 Size: 24" x 24" Installation Method: Quarter Turn Thickness: .205"	Erica Loeser e: erica.loeser@flooringgroup.com p: 440.645.1105	PNL-1	Fabric Wrapped panel	Conwed Product: Fabric Wall Panels Finish: Fabric A Size: 1/2" thick, see elevations Fabric Manf.: Maharam Pattern: Messenger 458640 Color: Capri 061	Cody Martell e: cmartell@conwed.com p: 734.773.9429
CPT-2	Carpet Tile - Accent	J+J Kinetex Pattern: Pop 1816 Color: Turquesa 1718 Size: 24" x 24" Installation Method: Quarter Turn Thickness: .205"		PNL-2	Acoustic Panel	Conwed Product: New Dimensions, square edge Finish: Paintable Color: PT-1 Size: 1 1/8" thick, see elevations	
CPT-3	Carpet Tile - Walkoff	Shaw Collection: Swift Tile 5T414 Color: Traverse 14557 Size: 24" x 24" Installation Method: Monolithic	Michele Minger e: michele.minger@shawcontract.com p:	PNL-3	Slat Wall	Marlite Finish: 2047 Sky Sabbia Trim: Vinyl Color Snaps, Black	Craig Stein e: cstein@marlite.com p: 330.243.7187
EPX-1	Epoxy	See specifications		PNL-4	Metal Slat Wall	See specifications	
FAB-1	Fabric	LUUM Pattern: Synaptic Color: Sensory 4030-05 Roll Width: 54"	Elle Neyland e: elle@ellanalauren.com p: 513.680.3553	PT-1	Paint - Field	Color: Benjamin Moore OC-46 Halo	Dorothy Hazinski e: dorothy.hazinski@benjaminmoore.com p: 330.353.3850
				PT-2	Paint - Ceilings, Soffits	Color: Benjamin Moore 2121-60 Chantilly Lace	
				PT-3	Paint - Restroom Accent	Color: Benjamin Moore Rendezvous Bay 726	
				PT-4	Paint - Door frames, at brick walls	Color: Benjamin Moore Long Valley Birch 1021	
FAB-2	Fabric	Momentum Pattern: EVO CV Color: Cypress Roll Width: 54"	Courtney Bell e: cbell@momtex.com p: 949.833.8866 X867	SM-1	Solid Surface - Countertops	Corian Color: Rice Paper Thickness: 1/2"	Parksite Lindsey Moore e: lindsey.moore@parksite.com p: 216.372.4009
				SM-2	Solid Surface - Window sills, column wraps	Corian Color: Bisque Thickness: 1/2"	
				WB-1	Wall Base - Carpet	Johnsonite Style: 4" straight rubber base Color: 29 Moon Rock	Laurie Baatz e: laurie.baatz@tarkett.com p: 330.810.4731
GF-1	Window Film	Skyline Design Film Studio Pattern: Scatter Color: White	Pete D'Amico e: pete@timoneilassociates.com p: 614.794.5952	WB-2	Wall Base - Resilient	Johnsonite Style: 4" coved rubber base Color: 29 Moon Rock	
GF-2	Custom Printed Window Film	3M Film or equal Graphics for printing provided by owner		WC-1	Wallcovering - Vinyl	Momentum Pattern: All around Color: Highlighter LLN-AR-06 Width: 52/54" Repeat: 26" H Installation: Non-reverse hang, straight-across match	Courtney Bell e: cbell@momtex.com p: 949.833.8866 X867
MAT-1	Entrance Mat	Construction Specialties Collection: Peditred G3 Insert: Heavy Duty Carpet Color: Castle Gray 7323 Installation Method: Recessed	Engineered Systems Katherine Cruzado e: katherine@engineeredsys.com p: 440.488.3596	WC-2	Wallcovering - Vinyl	Knoll Textiles Pattern: Fraction WC2384/2 Color: Figure 300189-002 Width: 52" Repeat:120" V, 52" H Installation: Reference installation diagram	Jacob Kirby e: jkirby@maharam.com p: 614.329.7211
RES-1	Rubber Flooring	Nora Collection: Norament Pado Color: 5502 Coral Size: 39.53" x 39.53" Installation Method: Directional Thickness: 3.5mm	Amy Todd e: amy.todd@nora.com p: 603.952.0439	WP-1	Wall Protection Surface Mounted Corner Guard	Acrovyn Wall Protection Product: SSM20AN Size: 2" leg, Full Height Color: 934 Pearl Refer to 1/A910 for install detail	Engineered Systems Katherine Cruzado e: katherine@engineeredsys.com p: 440.488.3596
PCT-1	Porcelain Tile	Marazzi Collection: Modern Formation Color: Headland Fog MF04 Finish: Matte Size: 12x24 Thickness: 3/8" Grout: MAPEI 02 Pewter	Daltile Erin Clark e: erin.clark@daltile.com p: 216.661.4994	WP-2	Wall Protection	Panolam FRP Pattern: Smooth Size: Full Height Color: White J-trim at door frames, wainscot top, H-trim at panel joints	Amy Wheeler e: awheeler@alleghenyplywood.com p: 216.372.5967
PCT-2	Porcelain Tile	Caesar Ceramics Collection: Run Color: Salt Size: 6x24 Finish: Matte Thickness: 9mm Grout: MAPEI 01 Alabaster	Virginia Tile Brandy Broa e: brandy.broa@virginiatile.com p: 216.741.8400	WP-3	Wall Protection Surface Mounted Corner Guard	Acrovyn Wall Protection Product: CO-8 Color: Stainless Steel Size: 2" leg, Full Height Refer to 2/A910 for install detail	Engineered Systems Katherine Cruzado e: katherine@engineeredsys.com p: 440.488.3596
				WT-1	Manual Roller Shade	Mecho Soho Collection 1600 Series Color: 1612 Charcoal Openness: 3%	Natasha Catlin e: ncatlin@kma.bz p: 440.222.8279

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Expiration Date 12/31/2026

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Project No: 25-25
Drawn / Checked: ST / BG

Issue:
Bid & Permit 2.27.2026
6 Bulletin #1 8.20.2026

FINISH SELECTIONS & DETAILS

A910

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ROOM FINISH LEGEND

CODE	FINISH DESCRIPTION
ACT	Acoustical Ceiling Tile
AP	Acoustical Plaster
CMU	Concrete Masonry Unit
CPT	Carpet
CT	Ceramic Tile
ETR	Existing to Remain
ETS	Exposed to Structure
FRP	Fiberglass Reinforced Plastic
GWB	Gypsum Wall Board
N.I.C	Not in Contract
PART	Toilet Partitions
PCT	Porcelain Tile
PCTB	Porcelain Tile Base
PL	Plastic Laminate

PT	Paint
PT-E	Epoxy Paint
RES	Resilient Flooring
SC	Sealed Concrete
SM	Surface Material
STR	Stair Tread/Riser Combination
SWD	Structural Wood Decking
TAC	Tackable Surface
TB	Tile Backer
TRZ	Terrazzo
WB	Wall Base
WD	Wood Plank Flooring
WP	Wall Protection
WRGWB	Water Resistant Gypsum Wall Board

FINISH GENERAL NOTES

1. Refer to sheet A910 for the Finish Selections.
2. Refer to Door Schedule for painted HM door and frame paint colors.
3. Transition strips are based on Johnsonite or Schluter. Submit alternates to Architect for approval. Architect requires resilient molding accessory from same source as resilient base manufacturer.
4. All painted walls to be PT-1 unless noted otherwise on drawings.
5. Paint sheen u.n.o.:
   Walls: eggshell
   Ceilings: flat
   HM Door/Frames: semi-gloss
   Misc. Metal: semi-gloss
   "E": epoxy eggshell
6. Tile joints to align with control joints in slab. Provide crack insolation membrane as specified below floor tile where tile joints are indicated to not align with slab control joints.
7. Grout all thresholds over tile solid.
8. For ceiling soffit heights, see reflected ceiling plans.

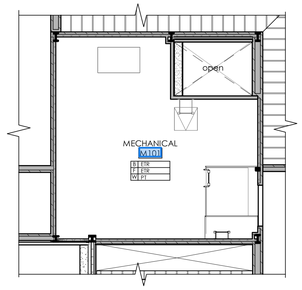
KEYED NOTES

1. Manual roller shades, WT-1, Mullion mount
2. Paint all exposed structural steel PT-1.
3. Acoustic wall panels on soffit above, PNL-2. Refer to elevations.
4. 4'x 8' porcelain markerboard
5. 4'x 4' porcelain markerboard
6. Slat wall display, PNL-3
7. Retractable green screen
8. Corner guard, WP-1
9. Stainless steel corner guard, WP-3
10. Custom wall graphic, OFCI.
11. Art rail, wall mounted
12. Area of existing brick to be cleaned, see specifications for maintenance of masonry.

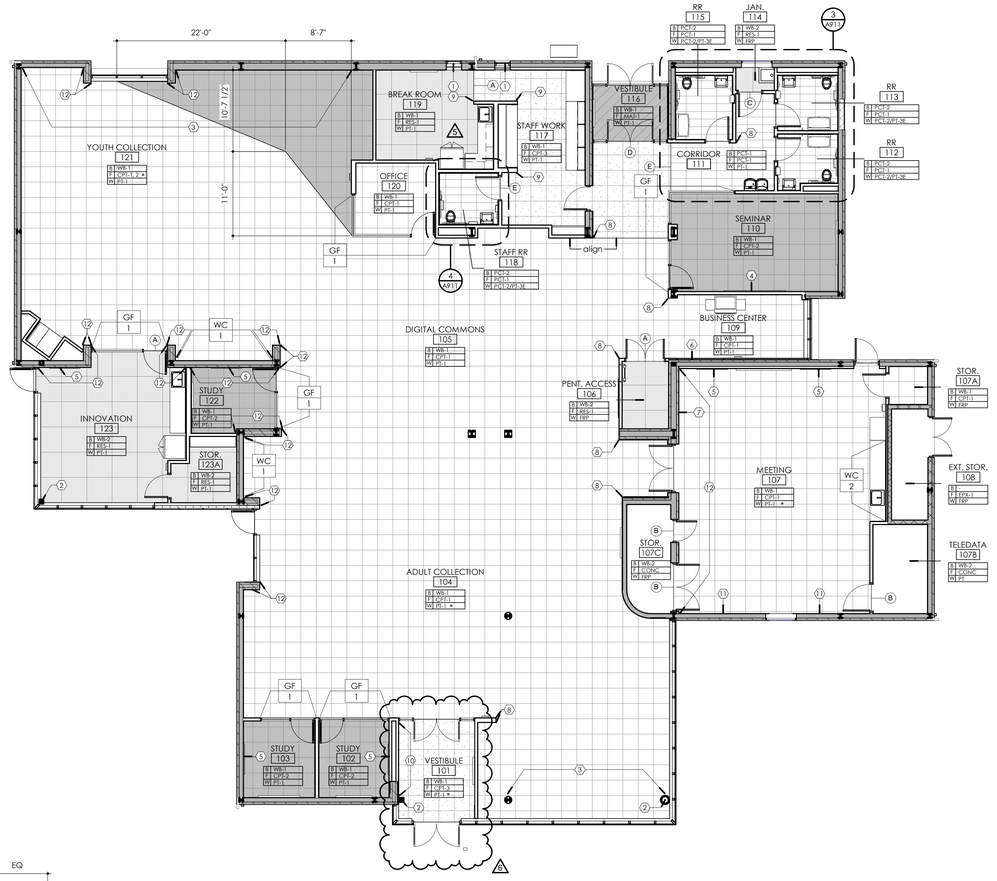
FINISH PLAN LEGEND

- B | Rb-X / F | FDP-X / Wl |PT-1 — Denotes wall base / Denotes floor finish / Denotes wall finish
- XX / # — Denotes accent or special wall finish. Refer to finish selections for description.
- # — Denotes transition detail. Refer to details on sheet
- * — Denotes more than one wall or floor finish occurs. Refer to plan and elevations.
- Denotes flooring direction.

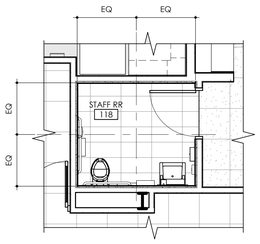
- Concrete
- CPT-1, Carpet tile
- CPT-2, Carpet tile
- CPT-3, Carpet tile
- MAT-1, Entry mat
- PCT-1, Porcelain tile
- RES-1, Rubber floor tile



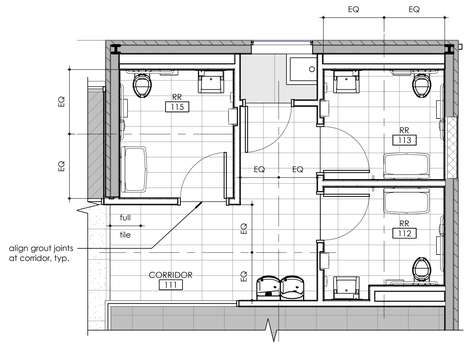
2 A911 MECHANICAL MEZZANINE PLAN
1/8" = 1'-0"



1 A911 FIRST FLOOR FINISH PLAN
1/8" = 1'-0"



4 A911 ENLARGED STAFF RESTROOM FINISH PLAN
1/4" = 1'-0"



3 A911 ENLARGED RESTROOM FINISH PLAN
1/4" = 1'-0"

Project North
True North

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5	Addendum #5	5.05.2026
6	Bulletin #1	8.20.2026

FINISH PLANS
A911

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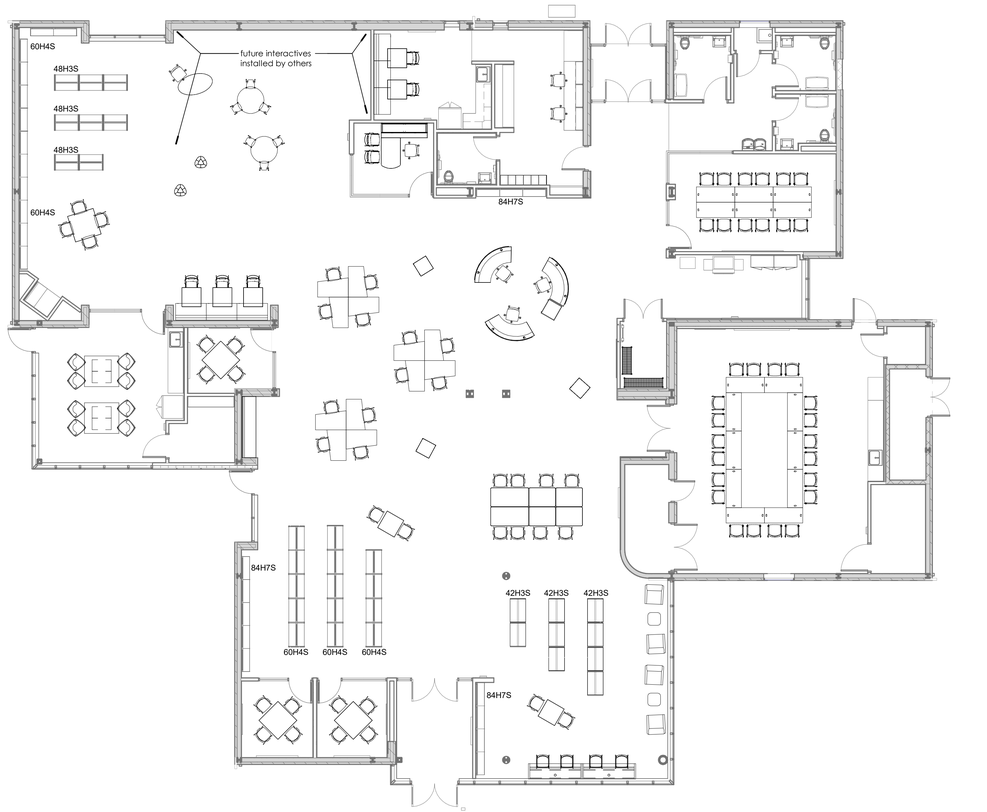
Location	Type Mark	Type	Height	Shelf Width	Count	Shelf Total
ADULT	42H3S	DF	42	36"	9	54
ADULT	60H4S	DF	60	36"	14	112
ADULT	84H7S	SF	84	36"	9	63
						229
CHILDRENS	48H3S	DF	48	36"	6	36
CHILDRENS	60H4S	SF	60	36"	7	28
						64
HOLDS	84H7S	SF	84	36"	3	21
						21
YOUNG ADULT	48H3S	DF	48	36"	2	12
YOUNG ADULT	60H4S	SF	60	36"	5	20
						32
Grand total: 55						346



1 A921 FIRST FLOOR FURNITURE PLAN
1/8" = 1'-0"

Project North
True North

FOR REFERENCE ONLY

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FIRST FLOOR FURNITURE PLAN

A921

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CODES AND STANDARDS

1. New construction has been designed to, and shall be constructed in accordance with the following building codes and standards:
   - A. 2024 Ohio Building Code (OBC 2024)
   - B. 2024 Ohio Existing Building Code (OEBC 2024)
   - C. City of Cleveland, Ohio, Code of Ordinances
   - D. ASCE 7-16, Minimum Design Loads and Associated Criteria for Buildings and Other Structures
2. Unless explicitly modified in the Contract Drawings and Specifications, the Contractor shall comply with provisions of:
   - A. ACI 301-20, Specifications for Structural Concrete
   - B. ACI 318-19, Building Code Requirements for Structural Concrete
   - C. ACI 563-18, Specifications for Repair of Concrete in Buildings
   - D. TMS 402-16, Building Code Requirements for Masonry Structures
   - E. TMS 602-16, Specification for Masonry Structures
   - F. AISC 303-16, Code of Standard Practice for Steel Buildings and Bridges
   - G. AISC 360-16, Specification for Structural Steel Buildings
   - H. AWS D1.1-15, Structural Welding Code - Steel
   - I. SDI SD-2022, Standard for Steel Deck
   - J. SJI 100-20, Standard Specification, Load Tables and Weight Tables for K-Series

DESIGN LOADS

Floor live load (unless otherwise noted)

First floor	100 psf
Library	150 psf

Roof loads

Roof live load	20psf

Roof snow load data

Minimum roof snow load (City of Cleveland)	30 psf
Ground snow load (OBC 1608.2)	p_g = 20 psf
Flat-roof snow load (ASCE 7, 7.3)	p_f = 14•5 psf (1)
Rain-on-snow surcharge (ASCE 7, 7.10)	5 psf
Snow exposure factor (ASCE 7, Table 7.3-1)	C_e = 1.0
Snow importance factor (ASCE 7, Table 1.5-2)	I_s = 1.0
Thermal factor (ASCE 7, Table 7.3-2)	C_t = 1.0
Slope Factor (ASCE 7, Figure 7.4-1)	C_s =1.0

(1) Increased for snow buildup / unbalanced per ASCE 7, 7.6 to 7.9

Wind design data

Minimum wind load (City of Cleveland - Allowable Loads)	
Less than 50'	20 psf
Basic design wind speed (OBC Figure 1609.3)	V = 109 mph
Allowable stress design wind speed (OBC 1609.3.1)	V_{asd} = 85 mph
Risk category (OBC, Table 1604.5)	II
Exposure category (OBC 1609.4)	B
Internal pressure coefficient (ASCE 7, Table 26.13-1)	GCpi = ±0.18
Components and Cladding	
Effective Wind Area	10 ft² (2)
Zone 1 (Roof Interior)	+20.0, -39.5 psf
Zone 2 (Roof Edge)	+20.0, -57.7 psf
Zone 3 (Roof Corner)	+20.0, -68.5 psf
Zone 4 (Wall Interior)	+21.4, -23.2 psf
Zone 5 (Wall Corner)	+21.4, -28.6 psf

(+) Indicates pressure acting toward the surface
(-) Indicates pressure acting away from the surface
Edge and corner zones are areas within 4'-0" of edges and 4'-0" of corners

(2) Components and cladding engineer may calculate wind loads based on actual effective wind area per ASCE 7

Earthquake design data

Risk category (OBC, Table 1604.5)	II
Seismic importance factor (ASCE 7, Table 1.5-2)	I_e = 1.0
Mapped spectral response acceleration parameters	
Short period	S_s = 0.144 g
1-second period	S_1 = 0.05 g
Site class	D
Design spectral response acceleration parameters	
Short period	S_{DS} = 0.153 g
1-second period	S_{d1} = 0.079 g
Seismic design category	B

Addition is structurally dependent on the existing building; the proposed structural addition does not increase the seismic force in any existing structural element by more than 10% meeting Exception 1 of OEBC Section 502.5.

Special loads

Handrails and guards (OBC 1607.9)	200 lb.
Interior walls and partitions (OBC 1607.16) Horizontal	5 psf min.

Construction loads

Construction loads, including equipment and material staging shall not exceed design live loads listed. The Contractor shall be responsible for design required to support construction equipment used in constructing this project. Shoring and reshoring is the responsibility of the Contractor and shall be designed by the Contractor's Engineer.

The use of construction equipment and material staging are Contractor means and methods. Loading applied to the structure during construction shall not exceed the safe load-carrying capacity of the structural members at the time of loading. The Contractor's Engineer shall be responsible for investigation and analysis of the structure for the support of construction loads.

GENERAL

1. New construction shall comply with the Contract Documents and the Building Code.
2. Do not start work without appropriate permits from Authority Having Jurisdiction (AHJ).
3. Drawings are not to be scaled.
4. Typical details and general notes apply to all parts of the work except where specifically detailed or unless otherwise noted.
5. The structural drawings illustrate structural members. Refer to Contract Documents for non-structural items which require coordination with structural members.
6. No items shall be embedded into structural members unless shown on the structural drawings or approved by the Structural Engineer of Record (SEoR).
7. No structural elements shall be cut unless specifically approved by the SEoR.
8. Sleeves and openings shall be located in a manner that will maintain structural integrity of the element.
9. The Contractor shall verify and be responsible for dimensions and conditions which impact the work. Field verify sizes, elevations, hole locations, etc., prior to fabrication.
10. The Contractor shall carefully review the drawings to identify the scope of work required, visit the site to relate the scope of work to existing conditions and determine the extent to which those conditions and physical surroundings will impact the work.
11. Locate existing utilities in areas of construction. Coordinate with utility companies for any requirements of active lines.
12. The Contractor shall resolve any conflicts on the drawings or in the specifications with the design team before proceeding with the work.
13. Any deviation, modification, or substitution from the approved set of structural documents shall be submitted to the Owner and design team for review/approval prior to its use or inclusion on the shop drawings.
14. The Contractor shall review shop drawings for completeness and compliance with Contract Documents and stamp shop drawings prior to submission to the design team.
15. Review of the shop drawings by the design team shall not be construed as an authorization to deviate from the Contract Documents.
16. Shop drawings will not be processed if incomplete, lack coordination with relevant portion of Contract Documents, lack calculations if required, or if deviations, modifications, and substitutions are indicated without prior written approval from the Architect/SEoR.
17. The Contractor's Engineers and the Delegated Design Engineers hired by the Contractor shall be Professional Engineers licensed in the jurisdiction where the project is located.

DEFERRED STRUCTURAL SUBMITTALS

1. Systems defined as vendor-designed components per the Construction Documents are deferred submittal components and have not been permitted under the base building application. The Contractor is required to submit the sealed component system documents to the building official for approval.
2. Documents for deferred submittal items shall be submitted to the design team, who shall review them for general conformance with the design intent of the building.
3. Refer to all Contract Documents for additional deferred submittal components.
4. The following items are defined as deferred structural submittal components:
   - A. Structural steel connections (other than simple shear connections)
   - B. Misc. Metals for sculpture support.

MEANS AND METHODS OF CONSTRUCTION

1. Structure is designed to be self-supporting and stable after the building is completed. The design did not evaluate partially completed construction stages.
2. The Contractor shall be responsible for the control of all aspects of construction sequencing, unless specifically indicated. Considerations shall include, but not be limited to, erection procedures, concrete placement, formwork, shoring/reshoring, bracing for stability or temporary construction loads, safety procedures, temperature differentials, and moisture effects.
3. Contractor shall be responsible for erection procedures and sequences, shall maintain stability of the building and its component parts, and shall be responsible for adequacy of temporary or incomplete construction and connections during erection. Such responsibilities include, but are not limited to: addition of shoring as required to support forms, decks, columns, walls, and other elements as required during construction, sheeting, temporary connections, bracing, guys, or tie-downs necessary to maintain stability of parts, subassemblies, or all of the structure. The Contractor shall evaluate the need for and retain, as necessary, a Professional Engineer to review stages of construction sequencing, validate temporary construction loads, and prepare a comprehensive construction/erection plan to address stability and resistance to imposed loads until the structure is complete.
4. Temporary shoring and bracing shall be designed and sealed by a Professional Engineer.
5. Temporary supports, connections, and erection aids shall be removed after they are no longer required.
6. The Contractor shall protect work, materials, and equipment from damage and shall provide proper storage facilities for materials and equipment during construction.
7. Site visits performed by the Engineer do not constitute inspections of means and methods of construction performed by the Contractor.

EXISTING CONSTRUCTION

1. Existing drawings, titled CPL Fleet Branch prepared by Gensert Peller Assoc. and dated August 26, 1980 were used in the preparation of the structural drawings. The existing conditions provided are for reference as the basis of design. The SEoR is not responsible or liable for the accuracy of information presented in the existing drawings.
2. Existing structural dimensions and member sizes are for reference only. The Contractor shall verify dimensions in the field prior to submittal of shop drawings and fabrication. The Contractor shall verify the actual configuration of existing construction and the condition of the structure before beginning work. Any discrepancies or unsound conditions shall be reported to the design team for resolution before beginning work.
3. Temporary shoring and bracing may be necessary in order to perform the necessary structural modifications to the existing structure. The Contractor's Engineer shall investigate where the temporary shoring/bracing is required and shall design the temporary shoring/bracing.
4. The Contractor shall verify the delivery path of construction components within the existing building. Structural steel members may be spliced in the field with complete joint penetration welds. The locations of splices shall be approved by the SEoR.

DEMOLITION

1. Demolition procedures, shoring requirements, sequence techniques, *etc.*, either given in or implied by these drawings, are suggestions only. Contractor shall retain a Professional Engineer to determine demolition and shoring requirements. Contractor shall submit sealed drawings to the Owner and design team for concept review and record purposes. Contractor shall be responsible for the protection, stability, etc., of existing and new construction during execution of the work.
2. Before undertaking any demolition work, ascertain the existing conditions of the properties and buildings adjoining or in close proximity to the premises by survey.
3. Do not cut or alter any structural members without written authorization of the SEoR unless indicated on the structural drawings.
4. Do not allow debris to accumulate to a weight greater than the design live load. Dispose of material in a legal manner.
5. Contractor shall perform work in such a manner as to protect existing and adjacent structures and be responsible for properly repairing damage that occurs as a result of their work. Contractor shall repair damage to public and private properties resulting from the execution of the work.
6. Cease operations and notify Owner and SEoR immediately if safety or integrity of structure appears to be endangered. Properly brace and support structure before resuming operations.
7. Notify Owner and Engineer immediately if any portion of existing structure which is not to be demolished is damaged. Contractor shall pay for repair costs, including design and inspection expenses.

FOUNDATIONS AND SLABS ON GROUND

1. Ground supported building components including foundations, slabs on ground, foundation walls, and retaining walls are designed in accordance with recommendations provided in the Geotechnical Report prepared by Professional Service Industries, Inc. Geotechnical Engineers, Report #0142-2962, dated December 5th 2025. The Geotechnical Report is provided for reference as the source of information used to design ground supported building components. The SEoR is not responsible or liable for the accuracy of information presented in the Geotechnical Report.
2. The building has been designed to meet the following parameters:
   - A. Foundations:
     - a. Allowable Soil Bearing Pressure on (Stiff Clay) ---------- 6,000 psf
     - b. Maximum Total Settlement ---------- 0.5 in.
     - c. Maximum Differential Settlement ---------- 0.25 in.
   - B. Modulus of subgrade reaction ---------- 100 pci
3. Where additional excavation is required to attain the design bearing pressure, backfill the over-excavated area with CLSM or lean concrete up to the designated bearing elevation.
4. Controlled Low Strength Material (CLSM) used for over-excavations shall meet the following requirements:
   - A. Unit weight between 90 pcf and 120 pcf per ASTM D6023.
   - B. Flowability of a minimum of 8" per ASTM D6103.
   - C. Unconfined compression strength shall be 200 psi per ASTM D4832.
   - D. Protected and not loaded until meeting ASTM D6024.
5. Compact engineered fills to 95% of the maximum dry density per ASTM D1557 Modified Proctor Method, unless otherwise noted.
6. When excavations approach the ground water level, the water level shall be lowered by an acceptable dewatering system so that the water level is maintained continuously a minimum of 2'-0" below the excavation.
7. The bottom of foundations shall be protected against freezing until backfill or other permanent protective cover is in place.
8. Existing foundations, unless otherwise noted:
   - A. New foundations shall not bear below existing foundations. Step new foundation at a ratio of 2 horizontal to 1 vertical away from existing foundations.
   - B. At interfaces with new construction, the existing foundations shall be cleaned and free of dirt and laitances.
9. Slabs on ground shall have a 15 mils vapor retarder per ASTM E1745, Class A installed per manufacturer's requirements, unless otherwise noted.
10. Structural fill provided to support slabs on ground shall consist of well graded, granular material approved by the Geotechnical Engineer and shall be placed on sound native material. Proof-roll cut areas beneath the structure. Areas which are excessively yielding, as determined by the Geotechnical Engineer shall be over-excavated and replaced with engineered fill.

DRILLED PIER CONSTRUCTION

1. Drilled pier construction shall conform to ACI 336.1, Specification for the Construction of Drilled Piers.
2. Elevations noted for bottom of drilled piers are approximate and are for base bid purposes only. Final bearing elevations shall be adjusted to meet the following criteria:
   - A. Drilled piers shall bear level with a minimum embedment of 20'-0" into lean clay soils and limited end bearing in stiff clay immediately above the shale. Bottom of pier shall have a bearing capacity of 6,000 psf.
3. If drilled piers will encroach upon existing utilities or structures, the Contractor shall contact the SEoR for direction prior to drilling.
4. Location of existing foundations shown on the Construction Documents are approximate and are based upon available existing documents. They are to identify possible obstructions encountered during drilling. Drilling through obstructions shown on the drawings is the responsibility of the Contractor under base bid.
5. The bottom of drilled piers shall be leveled and cleaned of loose material before concrete placement.
6. No concrete shall be placed until the bottom of excavation has been inspected and approved by the special inspector or Geotechnical Engineer.
7. Concrete shall be placed the same day as the final clean out of the excavation.
8. Contractor shall verify installed dimensions of drilled piers based on volume of concrete placed in each drilled pier.
9. Spoils and drilling fluid shall be removed from the site and not used as fill.
10. Corrective measures required because of deviation from acceptable installation tolerances is the responsibility of the Contractor.
11. Submittals shall include:
    - A. Drilled pier placement plan with designation, number, and location of piers.
    - B. Concrete mix design.
    - C. Concrete reinforcement drawings, showing location, size, and bends of reinforcing.
    - D. Product data for items used, including permanent or temporary casings, liners, drilling fluids, etc.
    - E. Proposed drilled pier installation method, including equipment, method of spoil/drilling fluid disposal, excavation, concreting, casing removal (if applicable), and quality control program.
    - F. Final report with as-built location, alignment, elevations, and dimensions of drilled piers. Specifically identify those not in accordance with Contract Documents.
    - G. Graphical plot of theoretical concrete volume and actual volume per depth for each drilled pier constructed by the slurry displacement method.

CONCRETE CONSTRUCTION

1. Concrete construction shall be in accordance with:
   - A. ACI 301 Specifications for Concrete Construction.
   - B. ACI 117 Specification for Tolerances for Concrete Construction and Materials.
   - C. ACI 305.1 Specification for Hot Weather Concreting.
   - D. ACI 306.1 Standard Specification for Cold Weather Concreting.
   - E. ACI 308.1 Specification for Curing Concrete.
2. Tolerances of concrete construction shall be per ACI 117. Where other trades' tolerances are more restrictive, tolerances shall meet the requirements of that trade.
3. Design of formwork, removal of forms, shoring and reshoring shall be by the Contractor's Engineer.
4. Construction joints shall be positioned so as not to change the structural design requirements and shall be approved by the SEoR. Framed slabs shall have construction joints so that the ratio of length to width of a single placement shall not exceed 2:1.
5. Provide horizontal keyways in construction joints in beams, joists, supported slabs, walls, and wall footings; minimum 1 1/2" depth with height equal to one-third of member depth, unless otherwise noted.
6. Exposed corners of concrete beams, columns, walls, and steel members encased in concrete are to be chamfered 1/2" minimum at 45°.
7. Discharge concrete within 90 minutes after water has been introduced to the mix.
8. Deposit and consolidate concrete in a continuous layer. Do not cause seams or planes of weakness.
9. Cure concrete according to ACI 308.1 with:
   - A. Evaporation retarder: waterborne, monomolecular film forming, manufactured for application to fresh concrete.
   - B. Moisture-retaining cover per ASTM C171, polyethylene film or white burlap-polyethylene sheets.
   - C. Water: Potable.
   - D. Clear, waterborne, membrane-forming curing compound per ASTM C309, Type 1, Class B, dissipating.
10. Finish floor surfaces to the following tolerances, per ASTM E1155, for randomly trafficked floor surfaces:
    - A. Overall value of flatness, SOF(F) 35; and of levelness, SOF(L) 25; with minimum local values of flatness, MLF(F) 21; and of levelness, MLF(L) 15.
11. Formed surfaces shall meet the requirements of surface finish SF-2 per ACI 301.
12. Submittals shall include:
    - A. Product data for all materials used.
    - B. Construction joint layout drawing.
    - C. Saw-cut control joint layout drawing.

CONCRETE MIX DESIGN

1. Concrete construction shall conform to ACI 301, Specifications for Concrete Construction.
2. Concrete supplier shall be certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities" and comply with ASTM C94.
3. Concrete materials, see specifications.
4. Concrete mixtures:
   - A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, according to ACI 301.
     - a. Trial batch and field experience tests shall have been performed within 24 months of the submittal date.
   - B. Submit written reports of each proposed mix for each class of concrete at least 15 days prior to start of work. Do not begin concrete production until proposed mix designs have been reviewed and approved.
   - C. Do not modify the approved mix designs without written approval from the SEoR.
   - D. Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:
     - a. Fly ash: 25%.
     - b. Combined fly ash and pozzolan: 25%.
     - c. Slag cement: 50%.
   - E. Concrete mix designs shall meet the following (See Concrete Mix Design Table):
     - a. Maximum water/cementitious material ratio (w/c ratio).
     - b. Air content shall be added to achieve listed amount ±1.5% at point of placement.
     - c. Do not air-entrain interior trowel-finished concrete, including light-weight concrete. Do not allow entrapped air content to exceed 3%.
     - d. Slump indicated is before and after plasticizers and may be modified by the concrete subcontractor, as required for placement (pumping, conveying, etc.) and workability.
     - e. ACI exposure class is as defined by ACI 301.
5. Submittals shall include:
   - A. Product data for all materials used.
   - B. Design mixtures for each concrete mixture per ACI 301.

Concrete Mix Design Table

Location	28-day Strength	Maximum w/c Ratio	Air Content	Slump	ACI Exposure Class
Foundations	4,500 psi	0.45	6%	4"	F2,S0,W1,C1
Grade Beams	4,500 psi	0.45	6%	4"	F2,S0,W1,C1
Drilled Piers	4,000 psi	0.45	0%	4"-6"	F0,S0,W1,C1
Int. Slabs on Ground	4,000 psi	0.42	0%	2"-4" / 8"	F0,S0,W0,C0
Exterior Concrete	5,000 psi	0.40	6%	2"-4" / 8"	F3,S0,W2,C2
Lean Concrete	1,500 psi	-	0%	-	-

CONCRETE REINFORCEMENT AND ACCESSORIES

1. Concrete reinforcement shall be in accordance CRSI Manual of Standard Practice.
2. Reinforcement shall meet ASTM A615, Grade 60.
3. Welded Wire Reinforcement (WWR) shall meet ASTM A1064, Grade 70.
4. Reinforcement and WWR shall be positively supported and maintained in the correct position by bar supports prior to and during the placement of concrete. The Contractor shall not lift, push, drop, etc. reinforcement after the placement of concrete.
5. Welding of reinforcing bars (including tack welding) is not permitted without permission of the SEoR in writing. Where and when permitted, welded rebar shall comply with ASTM A706 (F_y=60 ksi) and welding shall conform to AWS D1.4. Welding shall be performed by certified welders.
6. Reinforcing steel shall have the following minimum coverage in accordance with the following table. Place bars as near to the concrete surface as these minima permit wherever possible, unless noted otherwise:

Concrete Exposure	Member	Reinforcement	Specified cover
Cast against and permanently in contact with ground	All	All	3"
Exposed to weather or in contact with ground	All	#6 through #18	2"
		#5 and smaller	1 1/2"
Not exposed to weather or in contact with ground	Slabs, joists and walls	#14 and #18	1 1/2"
		#11 and smaller	3/4"
	Beams, piers, and columns	Primary reinforcement, stirrups, ties, and spirals	1 1/2"

7. WWR for slabs on ground shall have a minimum top coverage of 1" and a maximum top coverage of 1 1/2", unless otherwise noted, and be in flat sheets only.
8. Provide plastic-coated (not plastic-tipped) or stainless steel chairs in concrete exposed to view in completed structure.
9. Provide pipe sleeves and inserts in concrete work where required.
10. Obtain approval of SEoR before locating sleeves, holes, or inserts in slabs within 2'-0" of face of columns or anywhere in beams, joists, drop panels, or columns.
11. All bars interrupted by structural steel shall extend to within 1" of structural steel flange or web and have a 90° hook unless otherwise shown.
12. Bar bends shall be made cold. Bars shall not be bent after any portion of the bar is encased in concrete.
13. Provide foundation dowels for walls, piers, and columns same size and spacing as vertical reinforcement.
14. At wall and footing corners, innermost reinforcing shall have 1'-0" long hook at far face. For outer reinforcing, provide corner bars with lap length of 36 bar diameters (2'-0" minimum).
15. Submittals shall include:
    - A. Product data for all materials used.
    - B. Steel reinforcing shop drawings including detailed placement drawings showing quantity, spacing, sizes, laps, intersections, supports and coverage requirements.
16. Splices (grade 60 deformed bars):
    - A. All development and lap splices shall be in accordance with the following tables.
    - B. Increase tension or compression splice lengths by the following factors. Increases are Cumulative:
      1. Epoxy-coated top bars: 1.3
      2. Epoxy-coated other bars: 1.5
    - C. Top bars are defined as horizontal bars with more than 12" of fresh concrete below.

Class B Lap Splice, l_{st}

Bar	f'_c = 3,000 psi		f'_c = 4,000 psi		f'_c = 5,000 psi		f'_c = 6,000 psi	
Size	Top	Other	Top	Other	Top	Other	Top	Other
#3	28"	22"	25"	19"	22"	17"	20"	16"
#4	38"	29"	33"	25"	29"	23"	27"	21"
#5	47"	36"	41"	31"	36"	28"	33"	26"
#6	56"	43"	49"	37"	44"	34"	40"	31"
#7	81"	63"	71"	54"	63"	49"	58"	45"
#8	93"	72"	81"	62"	72"	56"	66"	51"
#9	105"	81"	91"	70"	81"	63"	74"	57"
#10	118"	91"	102"	79"	92"	71"	84"	64"
#11	131"	101"	114"	87"	102"	78"	93"	71"

Development Length, l_d

Bar	f'_c = 3,000 psi		f'_c = 4,000 psi		f'_c = 5,000 psi		f'_c = 6,000 psi	
Size	Top	Other	Top	Other	Top	Other	Top	Other
#3	22"	17"	19"	15"	17"	13"	16"	12"
#4	29"	22"	25"	19"	23"	17"	21"	16"
#5	36"	28"	31"	24"	28"	22"	26"	20"
#6	43"	33"	37"	29"	34"	26"	31"	24"
#7	63"	48"	54"	42"	49"	38"	45"	34"
#8	72"	55"	62"	48"	56"	43"	51"	39"
#9	81"	62"	70"	54"	63"	48"	57"	44"
#10	91"	70"	79"	61"	71"	54"	64"	50"
#11	101"	78"	87"	67"	78"	60"	71"	55"

MASONRY CONSTRUCTION

1. Masonry construction shall conform to TMS 602, Specifications for Masonry Structures.
2. Compressive strength of masonry f'_m= 2,000 psi, determined by the unit strength method.
   - A. Concrete Masonry Units shall meet the requirements of ASTM C90, normal-weight with a minimum compressive strength f'_{cmu} = 2,000 psi.
   - B. Mortar shall meet the requirements of ASTM C270, Type S and meet the proportion specification requirements.
   - C. Grout shall meet ASTM C476 strength requirements, f'_g = 2,000 psi. The strength of grout shall be determined by tests in accordance with ASTM C1019.
3. Intersecting walls shall be built in running bond or shall be anchored by one of the following methods (does not apply at control joints):
   - A. Fifty percent of the units at the intersection shall be laid in an overlapping masonry bonding pattern, with alternate units having a bearing of not less than 3" on the unit below.
   - B. Walls shall be tied by galvanized steel straps 1 1/2" x 1/4" x 24" with 2" bend at 90° each end. Grout straps solid into cores of block at 24" maximum vertical spacing.
4. Horizontal reinforcement shall have lapped corner bars at intersecting walls and corners. Corner bars shall match reinforcement size and quantity.
5. Provide a minimum depth of solid masonry under the bearing ends of the following:
   - A. 24" depth under beams and beam lintels.
   - B. 8" depth under loose lintels.
   - C. 16" depth under K series joists and slabs.
6. Unless otherwise noted, provide 9 gauge, ladder type joint reinforcement at 16" on center vertically per ASTM A951, galvanized per ASTM A153, and lapped a minimum of 8".
7. Welding of reinforcing bars (including tack welding) is not permitted.
8. Vertical wall reinforcing shall be positively supported at 48" maximum during grouting using galvanized "RB rebar positioners" by Hohmann & Barnard, or other approved.
9. For reinforcing at face of wall, maintain 1/2" clearance from inside face of CMU to reinforcing.
10. Submittals shall include:
    - A. Product data for each type of product.
    - B. Statement(s) of compressive strength of masonry.
    - C. Mix designs for mortar and grout.
    - D. Reinforcement bar placement elevation drawings, bend details, lap lengths, control joint and opening dimensions, and bar layout.

f'_m = 2,000 psi	Reinforcement Centered in Wall Nominal Wall Width					Bond Beams and Reinforcing at Face (2" clear cover)
Bar Size	6"	8"	10"	12"	16"	
#3	15"	15"	15"	15"	15"	15"
#4	20"	20"	20"	20"	20"	22"
#5	28"	25"	25"	25"	25"	35"
#6	53"	38"	30"	30"	30"	64"
#7		52"	40"	35"	35"	87"
#8			61"	50"	40"	131"
#9				64"	46"	166"

LINTELS

1. Lintels within interior walls shall be shop painted. Lintels within exterior walls shall be hot-dip galvanized per ASTM A123. Lintel / plate assemblies shall be fabricated prior to hot-dip galvanizing completed assembly.
2. Bottom plates in beam/plate assemblies shall be 1/2" less in width than the supported masonry wall. Stop end of bottom plates 1/2" from face of opening.
3. Weld bottom plates to lintels with continuous fillet welds on exterior side and intermittent fillet welds on interior side.
4. Lintels shall have minimum bearing at each end of 1" per foot of opening (6" minimum), except as detailed.
5. Lintels shall have 8" minimum solid masonry below bearing elevation and shall extend the full bearing area.
6. Lintel bearing plates shall be held back 1/2" minimum from face of masonry at opening.
7. The following schedules apply to lintels not indicated on the structural drawings:
   - A. For 4", 8", 12", and 16" walls, provide one angle (ASTM A570/72, Grade 50) for each 4" width of masonry wall thickness with 3 1/2" leg horizontal as follows:

Span Limits	Interior Wall Angle Size	Exterior Wall Angle Size
0'-0" to 4'-1"	L3 x 3 1/2 x 1/4	L3 x 3 1/2 x 3/8
4'-1" to 5'-7"	L4 x 3 1/2 x 5/16	L4 x 3 1/2 x 3/8
5'-7" to 7'-7"	L5 x 3 1/2 x 5/16	L5 x 3 1/2 x 3/8
7'-7" to 9'-6"	L6 x 3 1/2 x 3/8	L6 x 3 1/2 x 3/8

   - B. For 6" walls provide one WT shape (ASTM A992, Grade 50):

Span Limits	Interior Wall Lintel Size	Exterior Wall Lintel Size
0'-0" to 4'-1"	WT5x6	WT5x6
4'-1" to 5'-7"	WT5x8.5	WT5x8.5
5'-7" to 9'-6"	WT7x11	WT7x13

STRUCTURAL STEEL CONSTRUCTION

1. Structural steel detailing, fabrication, and erection shall conform to:
   - A. AISC 303, Code of Standard Practice for Steel Buildings and Bridges.
   - B. RCSC's Specification for Structural Joints Using High-Strength Bolts.
   - C. AWS D1.1, Structural Welding Code.
2. Fabricator shall be an AISC-Certified Plant, Category BU.
3. Erector shall be an AISC-Certified Erector, Category CSE.
4. Structural Steel shall meet the following:
   - A. W, WT, C, and MC shapes per ASTM A992, Grade 50.
   - B. M, S, and L shapes per ASTM A572, Grade 50.
   - C. HSS Round and Rectangular per ASTM A500, Grade C, 50 ksi.
   - D. Plates and bars per ASTM A572, Grade 50.
   - E. Anchor rods per ASTM F1554, Grade 55 with S1 supplement.
5. The full design and load-carrying capacity of the steel shall not be impaired due to fabrication, shipment, or erection procedures. Throughout the complete process, the stability of individual members and assemblies shall be maintained.
6. See Construction Documents for miscellaneous steel requirements.
7. Connections - high–strength bolted or welded:
   - A. Bolted Connections:
     - a. Bolts shall meet ASTM F3125, with ASTM F436 hardened washers and ASTM A563 nuts.
     - b. Provide slip critical bolts for moment connections, wind connections, hangers, and other connections as noted on drawings.
     - c. Provide bearing type connections with thread included in the shear plane for connections other than slip critical connections.
     - d. Bolts shall be tightened to full pretensioning load, except slip connections and other connections noted shall be snug tight.
     - e. Slip connections and connections noted as finger-tight shall be provided with a means of preventing the nuts from unthreading.
     - f. Use standard holes with the following exceptions: oversize holes are permitted when bolts are loaded in tension; short slotted holes are permitted for shear loading perpendicular to the slot.
     - g. Provide beveled washers on connections to sloping flanges of beams where slope exceeds 1:20.
   - B. Welded Connections:
     - a. Welding electrodes shall be E70XX except where other electrodes are required for compatibility with material being welded.
     - b. Where minimum AISC fillet weld thickness requirement exceeds welds shown on details, or weld size is not specified, provide minimum AISC weld.
     - c. All shop and field welding shall be performed by a welder with current valid certificate in the type of weld specified.
   - C. Length of connection shall not be less than one-half of the T distance of the beam.
   - D. Copes and cut openings where specified shall have a 1/2" radius minimum.
   - E. Where beam reaction is noted, develop same. Where not noted, for non-composite beams, connections shall develop one-half of the total uniform load capacity of the beam; for composite beams, see table listed in typical details.
8. Grout under base plates and bearing plates shall be non-metallic, non-shrink grout conforming to ASTM C 107.
9. Protective coatings, see specifications.
10. Provide fills at splices of parts differing by more than 1/8" in thickness.
11. Provide 1/4" closure plates at open ends of HSS members.
12. Miscellaneous hanging loads such as stair stringers, pipes, mechanical units, etc., supported by steel members shall be applied in such a manner that no torsional forces are induced in the steel members, i.e., loads shall pass through the centerline of wide flange sections and through the shear center of channels.
13. Submittals shall include:
    - A. Product data, mill test reports, and material certificates for all materials.
    - B. Embedment drawings with details and locations of each embedment.
    - C. Design calculations sealed by a Professional Engineer for connections other than simple shear connections.
    - D. Shop drawings with erection drawings, details of cuts, connections, splices, camber, holes, bolts, welds, coatings, and other pertinent data.

STEEL JOIST CONSTRUCTION

1. Steel joist construction shall conform to the SJI's Standard Specification (SJI 100) and Code of Standard Practice for Steel Joists and Joist Girders (SJI COSP).
2. Manufacturer shall be certified by the Steel Joist Institute.
3. Steel joists, girders, bridging, and attachments shall be designed to resist uplift loads.
4. Steel joists and girders shall be cambered per SJI, unless otherwise noted. Joists with spans over 40'-0" adjacent to masonry shall be fabricated with one-half SJI camber.
5. Provide standard beveled ends or sloped seats where required by SJI.
6. Weld joists to steel supports/bearing plates per SJI minimum weld, unless otherwise noted.
7. Provide "R"-type top chord extensions unless otherwise noted.
8. Joist Accessories:
   - A. Provide bridging anchors and number of rows of horizontal or diagonal bridging of material, size, and type required by SJI's Specification for type of joist, chord size, spacing, and span. Provide additional erection bridging if required for stability.
   - B. When horizontal bridging is used at the top and bottom chords of steel joists, provide additional angle x-bridging as follows:
     - a. For bridging attached to masonry walls, provide additional angle x-bridging between the second, third, and fourth joists from walls terminating bridging (second and third joist spaces).
     - b. For bridging attached to steel beams, provide additional angle x-bridging between the beam and first joist from spandrel beams terminating bridging (first joist space).
     - c. Hanging from joist bridging is not permitted.
   - C. Point loads shall occur at joist panel points or have additional field installed reinforcement added.
9. Submittals shall include:
   - A. Joist placement plan with designation, number, type, location, and spacing of joists.
   - B. Bridging size, location, and connections.
   - C. Joist and girder profiles, bracing requirements, and joist accessories.
   - D. Connection requirements for joist and girder supports and field splices.
   - E. Comprehensive engineering analysis signed and sealed by a Professional Engineer for joist and girder configurations that differ from those defined by SJI Specification, including live load, total load, and deflection criteria.

STEEL DECK CONSTRUCTION

1. Steel deck construction shall conform to SDI's Standard for Steel Deck, and SDI QA/QC.
2. Steel decking, accessories and screws shall be manufactured with galvanized sheet steel per ASTM A653 and zinc-coated conforming to ASTM A924, Class G60:
   - A. Roof deck shall have a minimum F_y = 50,000 psi.
3. Deck units shall be continuous over three or more supports.
4. Deck manufacturer shall supply pour stops, screed angles, flat pans, ties, flute closures, etc. for a complete system and finish surface for installation of the floor or roof assembly.
5. Provide supplemental reinforcement and closure pieces at openings as required for strength, deck continuity, and support of other work.
6. Provide 6" wide continuous cover plates at changes in roof deck direction (including ridges and valleys) with thickness to match roof deck, and attach with #10 screws at 6"o.c. to each deck edge.
7. Hanging directly from roof deck is not permitted.
8. Attachment of steel deck:
   - A. Welding of steel deck shall be in accordance with AWS D1.3 and shall be performed by qualified welders experienced in welding light-gauge steel, and using prequalified procedures.
   - B. Where approved, mechanical fasteners shall be installed per manufacturer's requirements.
9. Submittals shall include:
   - A. Deck placement plan indicating types of deck panels, anchorage details, reinforcing channels, pans, cut deck openings, special jointing, accessories, and attachments to other construction.
   - B. Product data for deck types, welding consumables, and mechanical fasteners.

POST-INSTALLED ANCHORS

1. Anchorage to hardened concrete or masonry shall include torque controlled expansion anchors and adhesive anchors of size, number, and spacing as shown on the drawings.
2. All anchors shall be installed in accordance with the Manufacturer's Printed Installation Instructions (MPII).
3. Existing reinforcing bars in the concrete or masonry may conflict with specific anchor locations. Reinforcing bars shall not be cut unless specifically noted on the drawings or approved by the SEoR. The Contractor shall review the structural drawings and shall locate the position of reinforcing bars in the vicinity of the anchors, by ground penetrating radar (GPR) or other means.
4. Anchors shall be installed in holes drilled with a rotary impact hammer drill. Core drilling of holes is not permitted. Holes and anchor shall be thoroughly cleaned per the MPII prior to installation of the anchor.
5. Stainless steel anchors shall be used at exterior locations and where specifically noted on the Contract Documents.
6. Remove and replace misplaced or malfunctioning anchors. Patch failed anchor locations with high-strength, non-shrink, non-metallic grout.
7. Installed adhesive anchors shall be securely held in-place to prevent displacement while the adhesive cures.
8. All anchors supporting structural elements shall be enclosed with a fire-resistance rated envelope or protected by approved fire-resistance rated materials.
9. Quality Control:
   - A. All anchors shall be periodically inspected to meet the requirements of MPII and the ICC-ES ESR report for the product.
   - B. All anchors shall be trained by the manufacturer or manufacturer's representative for each individual product being installed.
10. Submittals shall include:
    - A. Technical product literature, highlighting each anchor and size to be used on the project.
    - B. Manufacturer

STRUCTURAL TESTING AND SPECIAL INSPECTIONS

Structural testing and special inspections are required. The Owner shall engage a qualified independent testing agency to conduct structural testing and special inspections. Special inspectors shall be employed or retained by the approved testing agency and have the recommended experience and certifications as summarized in Appendix C of the current International Code Counsel (ICC) Special Inspection Manual. The testing agency may employ or retain multiple special inspectors with differing areas of expertise as required for the project.

Structural observations performed by the Architect/SEoR during construction are not special inspection services and do not waive the responsibility of the inspections required of the Building Department Inspector or the testing agency. Observations by the Architect/SEoR do not guarantee the Contractor's performance and shall not be considered as supervision of construction.

The qualified testing agency shall submit a written summary statement indicating that applicable structural testing and special inspections have been completed. The summary statement shall clearly identify non-compliant test and inspection results. The written summary statement shall be sealed by the testing agencies supervising Professional Engineer and be submitted to the Owner, Contractor, building official, and design professionals. The required testing and inspections are indicated in the following table:

Description of Structural Special Inspection & Testing Requirements

Verification and Inspection	Frequency	Referenced Standard	BC Reference	Additional Notes
Soils: Foundation Bearing & Engineered Fill Placement				
Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	Periodic	Geotechnical Report	N/A	
Verify excavations are extended to proper depth and have reached proper material.	Periodic	Geotechnical Report	N/A	
Perform classification and testing of compacted fill materials.	Periodic	Geotechnical Report	N/A	
Verify use of proper materials and procedures, densities and lift thicknesses during placement and compaction of compacted fill.	Continuous	Geotechnical Report	N/A	
Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly.	Periodic	Geotechnical Report	N/A	
Verify all requirements of geotechnical report are met.	Periodic	Geotechnical Report	N/A	
Controlled Low-Strength Material (CLSM) Placement				
Verify excavations are extended to proper depth and have reached proper material.	Periodic	Geotechnical Report	N/A	
Verify materials below CLSM are adequate to achieve the design bearing capacity.	Periodic	Geotechnical Report	N/A	
Sample fresh CLSM: One composite sample shall include four 6" diameter cylinders for strength, one flowability test, one air content test, and one unit weight test.	Obtain composite samples not less than once a day, nor less than once for each 150 cy.	ASTM D 5971	1803.5.9	
Obtain test cylinders of CLSM.	One set of four 6" diameter cylinders for each composite sample.	ASTM D 4832	1803.5.9	
Perform slump / flowability tests of CLSM.	One test at point of discharge for each composite sample.	ASTM D 6103	1803.5.9	
Perform air content tests of CLSM.	One test at point of discharge for each composite sample.	ASTM D6023	1803.5.9	
Determine the unit weight of fresh CLSM.	One test at point of discharge for each composite sample.	ASTM D6023	1803.5.9	
Laboratory test CLSM cylinders for compressive strength.	Two specimen tested at 7 days, two specimens tested at 28 days.	ASTM D 4832	1803.5.9	
Field test CLSM for suitability of load application.	Periodic	ASTM D 6024	1803.5.9	
Cast-In-Place Concrete				
Inspect reinforcing steel including prestressing tendons: a. Verify reinforcing bar grade. b. Verify reinforcing bars are free of dirt, excessive rust, and damage. c. Verify reinforcing bars are adequately tied, chaired, and supported to prevent displacement during concrete placement. d. Verify proper clear distances between bars and to surfaces of concrete. e. Verify reinforcing bar size and placement. f. Verify bar laps for proper length and stagger. g. Verify mechanical splices placement and attachment. h. Verify epoxy or galvanized coating and coating damage is repaired.	Periodic - Prior to each pour.	ACI 318: Ch 20, 25.2, 25.3, 26.1-26.6.3		
Inspection of reinforcing steel welding: a. Verify weldabilty of reinforcing steel. b. Verify proper electrodes and storage of electrodes. c. Verify proper joint preparation. d. Inspect single- pass fillet welds, maximum 5/16". e. Inspect all other welds. f. Review welder certifications for both fabricator's shop staff and field erectors.	Periodic Periodic Continuous Periodic Continuous Each welder	AWS D1.4 ACI 318: 26.6.4		
Inspect embedments, bolts, headed bolts, and headed studs to be installed in concrete prior to and during concrete placement.	Periodic	ACI 318: 26.7, 26.8	N/A	
Verify use of required mix design: a. Verify mixer truck trip ticket conforms to approved mix design. b. Verify that total water added to mix on site does not exceed that allowed by the concrete mix design. c. Verify that concrete quality is indicative of adequate mixing time, consistency, and relevant time limits.	Periodic - Prior to each pour.	ACI 318: 26.4.3 and 26.4.4 ACI 301	1904.1 1904.2	
Inspect formwork for cleanliness, shape, location and dimensions of the concrete member being formed.	Periodic - Prior to each pour.	ACI 318: 26.11.1.2(b)	N/A	
Inspect concrete and shotcrete placement for proper application techniques, including proper consolidation, reinforcement remains at proper location, and conveyance and depositing avoid segregation and contamination.	Continuous	ACI 318: 26.5		
Sample fresh concrete:	Obtain one composite sample of each class of concrete placed each day shall be taken not less than once a day, nor less than once for each 150 cy. of concrete nor less than once for each 5,000 sqft. of surface area for slabs or walls. If the total volume of concrete is such that frequency of testing required would provide less than five composite samples for a given class of concrete, tests shall be made from at least five randomly selected batches (per ASTM D3665) or from each batch if fewer than five batches are used.	ACI 318: 26.4 ASTM C 172		A composite sample shall consist of the following: five 4" diameter cylinders, or four 6" diameter cylinders.
Obtain test cylinders of concrete.	One set of five 4" diameter cylinders or four 6" diameter cylinders for each composite sample.	ACI 318: 26.12 ASTM C 31	N/A	Cast additional cylinders at contractor's request and expense for field cured specimens to determine shoring removal, early strength for post-tensioning, etc.
Obtain grout cubes for deferred placed concrete toppings	One set of three 2" molded-cube for each composite sample.	ASTM C 109	N/A	
Perform slump tests.	One test at point of discharge for each composite sample.	ASTM C 143	N/A	
Perform air content tests.	One test at point of discharge for each composite sample.	ASTM C 231, pressure method for normalweight concrete; ASTM C 173, volumetric method for lightweight concrete	N/A	
Determine the temperature of fresh concrete.	One test for each composite sample, and test hourly and when air temperature is below 40°F or when above 80°F.	ASTM C 1064	N/A	
Determine the unit weight of fresh lightweight concrete.	One test at point of discharge for each composite sample of lightweight concrete.	ASTM C567	N/A	
Review and inspect cold weather concrete procedures and placement.	Periodic - Prior to each pour.	ACI 306.1 ACI 318 26.5.4		
Review and inspect hot weather concrete procedures and placement.	Periodic - Prior to each pour.	ACI 305.1 ACI 318 26.5.5		
Inspect for maintenance of specified curing temperature and techniques.	Periodic - After each pour.	ACI 318: 26.5.3-26.5.5	1908.9	
Laboratory test concrete cylinders for compressive strength.	One specimen tested at 7 days, two specimens tested at 28 days, and one specimen retained in reserve for later testing if required.	ACI 318: 26.12 ASTM C 39	N/A	Three specimens shall be tested at 28 days if using 4" diameter cylinders. Test additional cylinders at contractor's request and expense.
Laboratory test concrete cubes for compressive strength for deferred placement toppings.	Test one set of three specimens at 28 days.	ASTM C 109	N/A	
Inspect anchors post- installed into hardened concrete a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads. b. All other Mechanical anchors and adhesive anchors not defined in a.	Continuous Periodic	ACI 318: 17.8.2.4 ACI 318: 17.8.2	N/A	
Measure & report floor slab flatness (F_F) for all suspended slabs and slabs-on-ground.	Measure all floors within 24 hours of finishing.	ACI 117 4.8.5 ASTM E1155	N/A	
Measure & report floor slab levelness (F_L) for shored, non-cambered, and non-inclined slabs, and level slabs-on-ground.	Measure all floors within 24 hours of finishing.	ACI 117 4.8.5 ASTM E1155	N/A	
Measure & report floor slab flatness for cambered, unshored, and inclined surfaces.	Measure the gap under a freestanding (unleveled) 10 ft. straightedge.	ACI 117: 4.8.6	N/A	
Deferred placement floor toppings shall be tested for delamination by dragging a steel chain over the surface.	All floor areas after 28 days.	N/A	N/A	

Description of Structural Special Inspection & Testing Requirements

Verification and Inspection	Frequency	Referenced Standard	BC Reference	Additional Notes
Structural Steel				
Inspection Tasks Prior to Welding:		AISC 360 Table N5.4-1	2204.1	
Welder qualification records and continuity records	Observe	AISC 360 Section N5.4		
Verify welding procedure specifications (WPS) available	Perform	AISC 360 Section N5.4		
Manufacturer certifications for welding consumables available	Perform	AISC 360 Section N5.4		
Material identification (type/grade)	Observe	AISC 360 Section N5.4		
Welder identification system	Observe	AISC 360 Section N5.4		
Fit up of groove welds and CJP welds of HSS joints (including joint geometry) a. Joint preparation b. Dimensions (alignment, root opening, root face, bevel) c. Cleanliness (condition of steel surface) d. Tacking (tack weld quality and location) e. Backing type and fit (if applicable)	Observe	AISC 360 Section N5.4		
Configuration and finish of access holes	Observe	AISC 360 Section N5.4		
Fit up of fillet welds a. Dimensions (alignment,gaps at root) b. Cleanliness (condition of steel surface) c. Tacking (tack weld quality and location)	Observe			
Inspection Tasks During Welding:		AISC 360 Table N5.4-2	2204.1	
Control and handling of welding consumables a. Packing b. Exposure control	Observe	AISC 360 Section N5.4		
No welding over cracked tack welds	Observe	AISC 360 Section N5.4		
Environmental conditions a. Wind speed within limits b. Precipitation and temperature	Observe	AISC 360 Section N5.4		
WPS followed a. Settings on welding equipment b. Travel speed c. Selected welding material d. Shielding gas type/flow rate e. Preheat applied f. Interpass temperature maintained g. Proper position (F,V,H,OH)	Observe	AISC 360 Section N5.4		
Welding techniques a. Interpass and final cleaning b. Each pass within profile limitations c. Each pass meets quality requirements	Observe	AISC 360 Section N5.4		
Inspection Tasks After Welding:		AISC 360 Table N5.4-3	2204.1	
Welds cleaned	Observe	AISC 360 Section N5.4		
Size,length and location of welds	Perform	AISC 360 Section N5.4		
Welds meet visual acceptance criteria a. Crack prohibition b. Weld/base-metal fusion c. Crater cross section d. Weld profiles e. Weld size f. Undercut g. Porosity	Perform	AISC 360 Section N5.4		
Arc strikes	Perform	AISC 360 Section N5.4		
k-Area (When welding of doubler plate, continuity plates or stiffeners in k-area, visually inspect the weld k-area for crack with in 3 in.)	Perform	AISC 360 Section N5.4		
Weld access holes in rolled heavy shapes and built-up heavy shapes (visually inspect the weld access hole for cracks)	Perform	AISC 360 Section N5.4		
Backing removed and weld tabs removed (if required)	Perform	AISC 360 Section N5.4		
Repair activities	Perform	AISC 360 Section N5.4		
Document acceptance or rejection of welded joint or member	Perform	AISC 360 Section N5.4		
No prohibited welds have been added without the approval of the EOR	Observe	AISC 360 Section N5.4		
Inspection of Welding in Field and in Non AISC Certified Shops: a. Complete joint penetration groove welds subject to transversely applied tension loading in butt, T and corner joints with materials 5/16 inches or thicker. b. Welder qualifications.	Test 100% of welds by ultrasonic testing for risk category III or IV. Test 10% of welds by ultrasonic testing for risk category II.	AISC 360 Section N5.5		All welds subject to non-destructive testing shall also meet visual acceptance criteria per AWS Table 6.1.
Inspection Tasks Prior to Bolting:		AISC 360 Table N5.6-1	2204.2	
Manufacturer's certifications available for fastener materials	Perform	AISC 360 Section N5.6		
Fasteners marked in accordance with ASTM requirements	Observe	AISC 360 Section N5.6		
Correct fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane)	Observe	AISC 360 Section N5.6		
Correct bolting procedure selected for joint detail	Observe	AISC 360 Section N5.6		
Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements	Observe	AISC 360 Section N5.6		
Pre-Installation verification testing by installation personnel observed and documented for fastener assemblies and methods used	Observe	AISC 360 Section N5.6		
Protected storage provided for bolts,nuts washers and other fastener components	Observe	AISC 360 Section N5.6		
Inspection Tasks During Bolting:		AISC 360 Table N5.6-2	2204.2	
Fastener assemblies, of suitable condition, placed in all holes and washers (if required) are positioned as required	Observe	AISC 360 Section N5.6		
Joint brought to the snug- tight condition prior to the pretensioning operation	Observe	AISC 360 Section N5.6		
Fastener component not turned by the wrench prevented from rotating	Observe	AISC 360 Section N5.6		
Fasteners are pretensioned in accordance with the RCSC specification, progressing systematically from the most rigid point toward the free edges	Observe	AISC 360 Section N5.6 AISC 348		
Inspection Tasks After Bolting:		AISC 360 Table N5.6-3	2204.2	
Document acceptance or rejection of bolted connections	Perform	AISC 360 Section N5.6		
Inspection of Steel Frame: a. Verify installation of all members. b. Verify proper application of details to each joint and connection. c. Verify bracing and stiffening of framing members. d. Verify members and detail critical to frame stability.	Perform	AISC 360 Section N5.8		
Verify Material Grade of Structural Steel: a. Verify identification markings conform to AISC 360 for materials specified in the approved construction documents. b. Manufacturer's certificate of compliance required.	Observe	AISC 360 Section N5.8		
Inspection of anchor rods and other embedments supporting structural steel: a. Verify the diameter, grade, type and length of anchor rod or embedded item b. Verify the extent or depth of embedment into concrete prior to placement of concrete.	Observe	AISC 360 Section N5.8		
Inspection of Welding and Bolting in AISC Certified Shop: a. Review Fabricator's Certificate of Compliance for certified fabricators shop.	Once for Each Fabricator	AISC 360 Section N6	1704.2	
Visually inspect exposed cut surfaces of galvanized structural steel main members and exposed corners of rectangular HSS for cracks subsequent to galvanizing.	Perform	AISC 360 Section N5.7		
Placement and installation of steel headed stud anchors	Perform	AISC 360 Section N5.4		

Description of Structural Special Inspection & Testing Requirements

Verification and Inspection	Frequency	Referenced Standard	BC Reference	Additional Notes
Open-Web Steel Joists				
Review manufacturer's Certificate of Compliance for certified fabricators.	Once per manufacturer.	N/A	1704.2	Joist Manufacturer to be SJI Certified Manufacturer, or shop inspection is required.
Inspection of Welding in Field: a. Welder qualifications. b. Joist and Joist Girder welding.	Each Welder Requirements same as structural steel welding.	AWS D1.1 AWS D1.1	1704.3.1 1704.3.1	
End connections welded or bolted	Periodic	SJI specs listed in section 2207.1.	1705.2.3	
Bridging horizontal or diagonal: a. Standard bridging. b. Bridging that differs from SJI specs listed in section 2207.1.	Periodic Periodic	SJI specs listed in section 2207.1	1705.2.3	
Metal Decking				
Review manufacturer's Certificate of Compliance for certified fabricators.	Once per manufacturer.	N/A	1704.2	Deck Manufacturer shall be SDI Certified Manufacturer, or shop inspection is required.
Inspection or Execution Tasks Prior to Deck Placement: a. Verify compliance of materials (deck and all deck accessories) with construction documents, including profiles, material properties, and base metal thickness b. Document acceptance or rejection of deck and deck accessories	Perform Perform	SDI QA/QC 2017 Table 1.1	N/A	
Inspection or Execution Tasks After Deck Placement: a. Verify compliance of deck and all deck accessories with construction documents, b. Verify deck materials are represented by mill certifications that comply with the construction documents. c. Document acceptance or rejection of installation of deck and deck accessories.	Perform Perform Perform	SDI QUA/QC 2017 Table 1.2	N/A	
Inspection or Execution Tasks Prior to Welding: a. Verify welding procedure specifications (WPS) available. b. Manufacturer certifications for welding consumables available. c. Material identification (type/grade) d. Check welding equipment	Observe Observe Observe Observe	SDI QA/QC 2017 Table 1.3	N/A	
Inspection or Execution Tasks During Welding: a. Use of qualified welders b. Control and handling of welding consumables c. Environmental conditions (wind speed, moisture, temperature) d. WPS followed	Observe Observe Observe Observe	SDI QA/QC 2017 Table 1.4	N/A	
Inspection or Execution Tasks After Welding: a. Verify size and location of weld, including support, sidelap, and perimeter welds. b. Welds meet visual acceptance criteria c. Verify repair activities d. Document acceptance or rejection of welds	Perform Perform Perform Perform	SDI QA/QC 2017 Table 1.5	N/A	
Inspection or Execution Tasks Prior to Mechanical Fastening: a. Manufacturer installation instructions available for mechanical fasteners b. Proper tools available for fastener installation c. Proper storage for mechanical fasteners	Observe Observe Observe	SDI QA/QC 2017 Table 1.6	N/A	
Inspection or Execution Tasks During Mechanical Fastening: a. Fasteners are positioned as required b. Fasteners are installed in accordance with manufacturer's instructions	Observe Observe	SDI QA/QC 2017 Table 1.7	N/A	
Inspection or Execution Tasks After Mechanical Fastening: a. Check spacing, type, and installation of support fasteners b. Check spacing, type, and installation of sidelap fasteners c. Check spacing, type, and installation of perimeter fasteners d. Verify repair activities e. Document acceptance or rejection of mechanical fasteners	Perform Perform Perform Perform Perform	SDI QA/QC 2017 Table 1.8	N/A	
Deep Foundations - Drilled Shafts (Caissons)				
Inspect drilling operations and maintain complete and accurate records for each element.	Continuous	N/A	1705.8	
Observe and record the following: a. Actual top and bottom elevations. b. Actual drilled-pier diameter at top, bottom, and bell. c. Top of rock elevation. d. Description of soil materials. e. Description, location, and dimensions of obstructions. f. Final top centerline location and deviations from requirements. g. Variation of shaft from plumb. h. Shaft excavating method. i. Design and tested bearing capacity of bottom. j. Depth of rock socket. k. Levelness of bottom and adequacy of cleanouts. l. Ground-water conditions and water-infiltration rate, depth, and pumping. m. Description, purpose, length, wall thickness, diameter, tip, and top and bottom elevations of temporary or permanent casings. Include anchorage and sealing methods used and condition and weather tightness of splices if any. n. Position and condition of reinforcing steel and splices. o. Concrete placing method, including elevation of consolidation and delays. p. Elevation of concrete during removal of casings. q. Locations of construction joints. r. Concrete volume. s. Concrete testing results.	Continuous - For each drilled shaft	N/A	1705.8	
For concrete elements, perform additional inspections in accordance with the concrete section of the special inspection matrix.	Continuous - For each drilled shaft	N/A	1705.8	
Verify all requirements of geotechnical report are met.	Periodic	Geotechnical Report	N/A	

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SPECIAL INSPECTIONS

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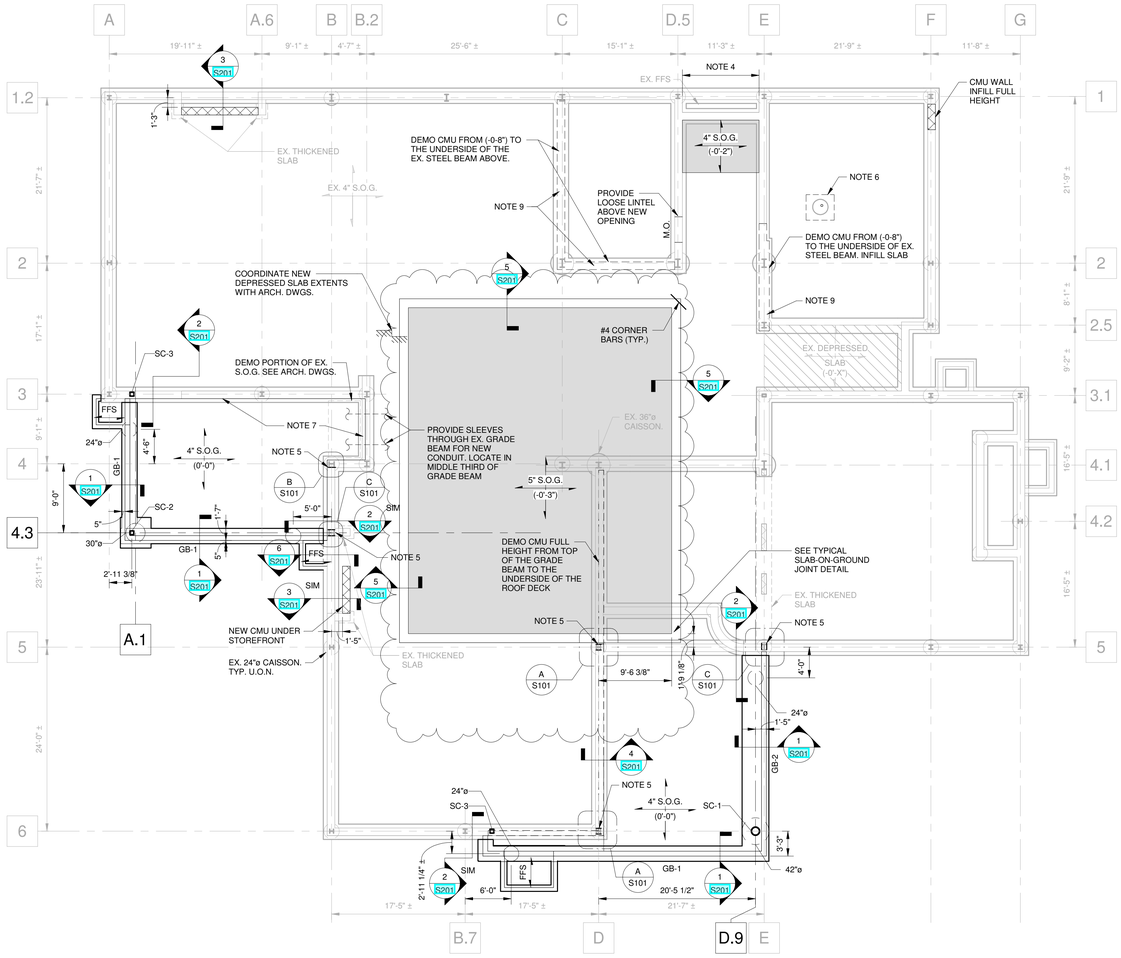


FOUNDATION PLAN

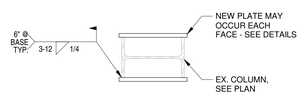
1/8" = 1'-0"

NOTES:

1. EXISTING FIRST FLOOR ELEVATION = +723.50'± = REFERENCE ELEVATION (0'-0").
2. ELEVATIONS GIVEN ARE TO TOP OF FOOTING OR GRADE BEAM AND ARE AT (-1'-4") UNLESS OTHERWISE NOTED.
3. FOUNDATION THICKNESS NOTED ARE MINIMUM. BOTTOM OF FOOTING SHALL BE AT A MINIMUM OF 3'-6" BELOW FINAL GRADE AT EXTERIOR FOOTINGS.
4. COORDINATE FINISHED FLOOR ELEVATIONS, DIMENSIONS, SLAB DEPRESSIONS, AND SLOPES WITH ARCHITECTURAL DRAWINGS.
5. REINFORCE EXISTING COLUMN, SEE TYPICAL DETAIL. DEMO PORTION OF EXISTING SLAB AS REQUIRED TO INSTALL REINFORCING PLATES TO EXISTING BASE PLATE.
6. DEMO PORTION OF EXISTING SLAB AS REQUIRED TO REMOVE EXISTING COLUMN AND BASE PLATE. SEE TYPICAL SLAB REPAIR DETAIL.
7. POUR DOWN NEW S.O.G. TO TOP OF EX. CMU WALL (-0'-8"±) AT DOOR OPENINGS.
8. DIMENSIONS ARE TO THE EXTERIOR FACE OF CMU WALL/CURB.
9. INFILL CMU CAVITY WITH CONCRETE. PRIOR TO SLAB INFILL CONTRACTOR TO FIELD VERIFY EXISTING S.O.G. ELEVATION. NEW SLAB TO BE LEVEL WITH EXISTING TYP.

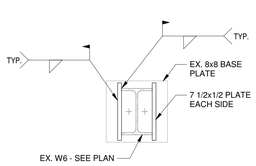
LEGEND:

EX. 4" S.O.G.	EXISTING 4" SLAB ON GROUND. SEE PLAN.
X" S.O.G.	X" SLAB ON GROUND WITH 6x6-W2.9xW2.9 WELDED WIRE REINFORCEMENT. SEE DETAILS FOR ADDITIONAL REINFORCING REQUIREMENTS.
FFS	FROST FREE SLAB. SEE DETAIL. COORDINATE DIMENSIONS WITH ARCHITECTURAL, LANDSCAPE AND CIVIL DRAWINGS.
	8" OMNIBLOCK CMU WALL WITH #4@24" O.C. VERTICAL REINFORCEMENT WITH (2) #4 AT ENDS OF WALLS, JAMBS, AND CORNERS. GROUT ALL UN-INSULATED CELLS SOLID.
SC-1	HSS12.75X.375 COL. WITH BASE PLATE 1 1/2"x20x1'-8" WITH (4) 1"ø ANCHOR RODS. SEE COLUMN BASE PLATE DETAIL.
SC-2	HSS6x6x3/8 COLUMN WITH BASE PLATE 1"x14"x1'-2" WITH (4) 1"ø ANCHOR RODS. SEE COLUMN BASE PLATE DETAIL.
SC-3	HSS6x6x3/8 COLUMN WITH BASE PLATE 1"x7"x1'-2" WITH (2) 3/4"ø POST INSTALLED ANCHOR RODS (6" EMBEDMENT).
	24"ø CAISSON, UNLESS OTHERWISE NOTED WITH CAISSON TOP ELEVATION = (-4'-0") AND CAISSON BOTTOM ELEVATION = (-26'-0").
GB-X	GRADE BEAM, SEE SCHEDULE ON SHEET S-301.
M.O.	MASONRY OPENING. SEE ARCHITECTURAL DRAWINGS FOR LOCATION AND SIZE OF OPENING.



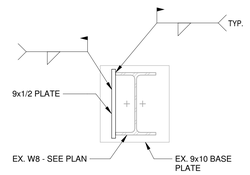
TYPICAL COLUMN REINFORCING DETAIL

1 1/2" = 1'-0"



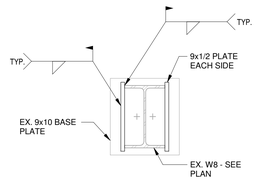
DETAIL - A

1 1/2" = 1'-0"



DETAIL - B

1 1/2" = 1'-0"



DETAIL - C

1 1/2" = 1'-0"

NOTE:

1. DEMO PORTION OF EXISTING S.O.G. AS REQUIRED TO INSTALL REINFORCING PLATES AND WELD TO EXISTING BASE PLATE.

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Project No: 25-25
Drawn / Checked: CAH / DWD

Issue:

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6	Bulletin 1	8.20.2026
7	Bulletin 2	9.18.2026

FOUNDATION PLAN

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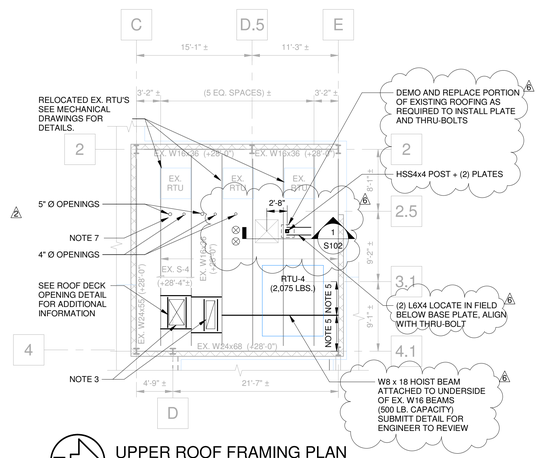
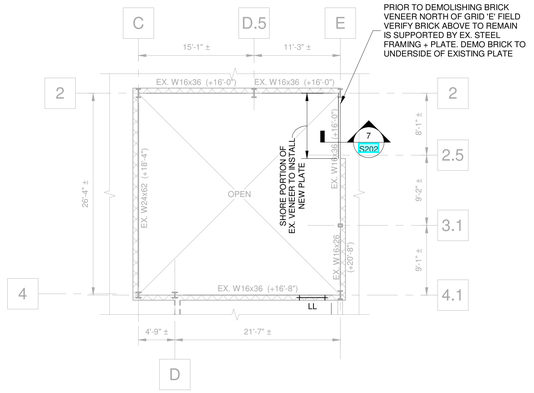
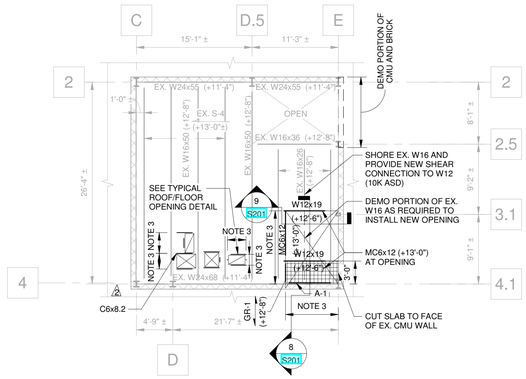


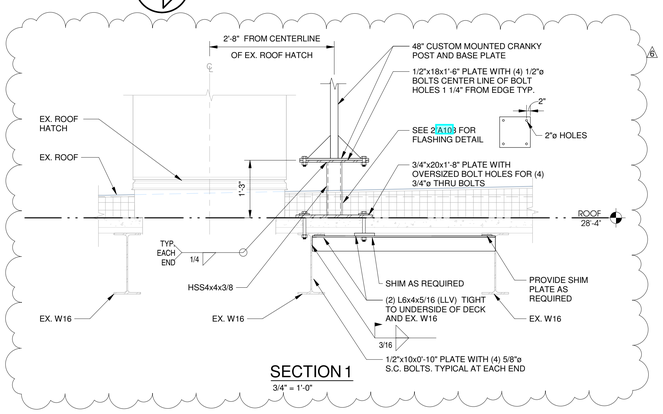
UPPER ROOF FRAMING PLAN
1/8" = 1'-0"



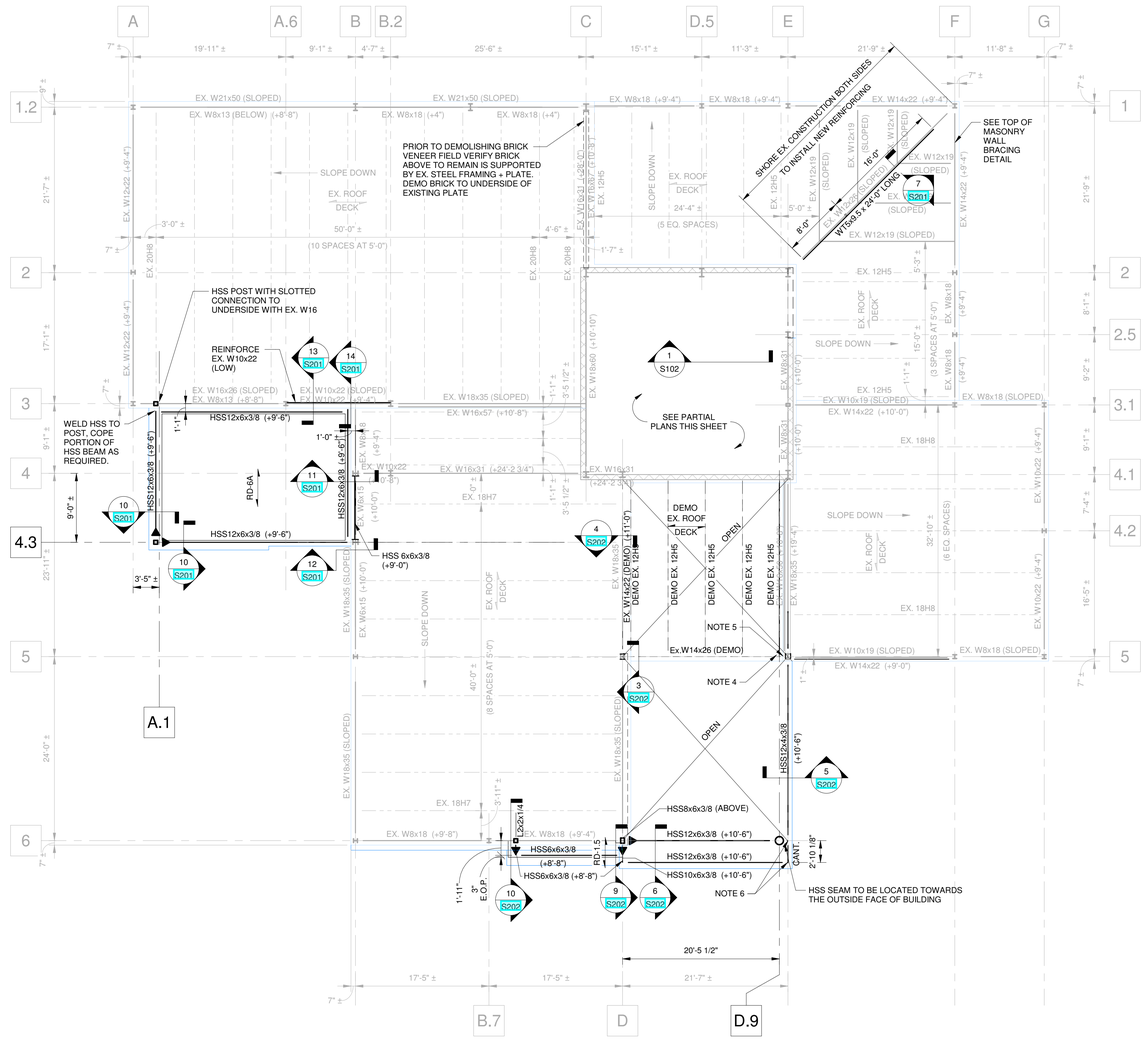
INTERMEDIATE FRAMING PLAN
1/8" = 1'-0"



MEZZANINE FRAMING PLAN
1/8" = 1'-0"



SECTION 1
3/4" = 1'-0"



ROOF FRAMING PLAN
1/8" = 1'-0"

NOTES:

1. EXISTING FIRST FLOOR ELEVATION = +723.50'± = REFERENCE ELEVATION (0'-0").
2. TOP OF STEEL SLOPES UNIFORMLY BETWEEN GIVEN ELEVATIONS.
3. COORDINATE LOCATION AND SIZE OF ALL FLOOR AND ROOF OPENINGS WITH ARCHITECTURAL DRAWINGS AND MECHANICAL CONTRACTOR. SEE OPENING DETAILS.
4. VERIFY EXISTING W16 CONNECTION TO COLUMN BEFORE DEMOLISHING W14. NEW CONNECTION MAY BE REQUIRED R=15KIPS.
5. COORDINATE HOIST LOCATION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
6. PROVIDE ALL AROUND WELDED CONNECTION TO HSS BEAM.
7. COORDINATE NEW OPENINGS WITH PLUMBING DRAWINGS. NEW OPENINGS TO BE CORE DRILLED. PROVIDE MINIMUM 3x DIAMETER SPACING BETWEEN OPENINGS.
8. ALL EXPOSED STEEL AND CONNECTION MATERIAL TO BE GALVANIZED.

LEGEND:

EX. ROOF DECK	EXISTING 1 1/2", 20 GA., GALV. WIDE RIB METAL ROOF DECK.
RD-1.5	1 1/2", 20 GA., GALV. WIDE RIB METAL ROOF DECK. ATTACH WITH 5/8"ø PUDDLE WELDS WITH 36/4 PATTERN AND (2) #10 SCREW SIDE LAP FASTENERS EACH SPAN. AT EDGE CONDITION, ATTACH WITH 3/4"ø PUDDLE WELDS AT 6" O.C.
RD-6A	6", 18/18 GA., GALV. WP(A) WIDECK METAL ACOUSTIC ROOF DECK. ATTACH WITH 3/4"ø PUDDLE WELDS WITH 36/3 PATTERN AND (8) #12 SCREW SIDE LAP FASTENERS EACH SPAN. AT EDGE CONDITION, ATTACH WITH 3/4"ø PUDDLE WELDS AT 12" O.C.
CANT.	CANTILEVERED BEAM TO MATCH SIZE OF BACK SPAN MEMBER.
A-X	DECK SUPPORT ANGLE. SEE DETAIL.
GR-1	1 1/2" STEEL GRATING.
	MOMENT CONNECTION. SEE NOTES AND DETAILS.

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2	Addendum 2	3.18.2026
1	Bulletin 1	8.20.2026

LOW ROOF FRAMING PLANS
S102

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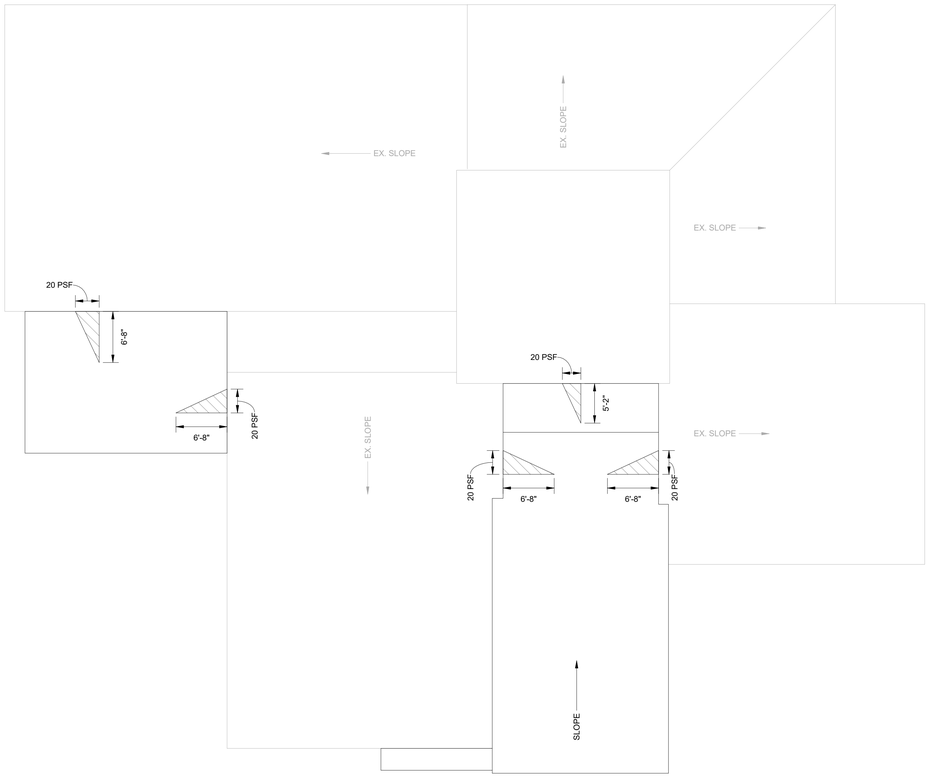
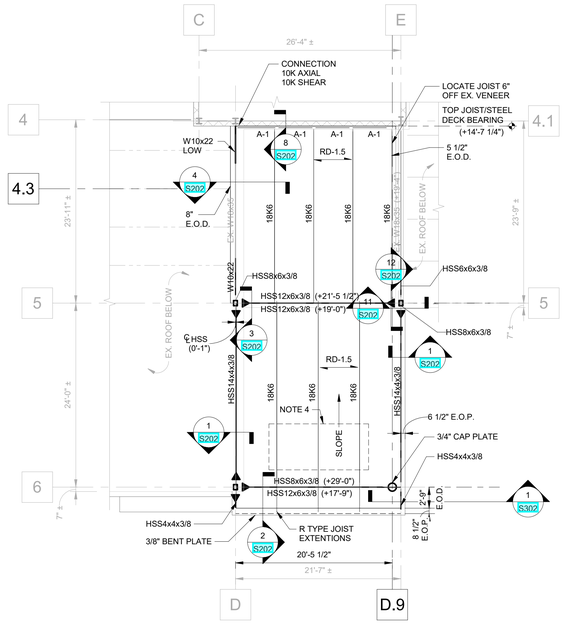


SNOW DRIFT PLAN
1/8" = 1'-0"



HIGH ROOF FRAMING PLAN
1/8" = 1'-0"

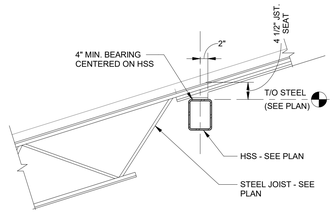
NOTES:

1. EXISTING FIRST FLOOR ELEVATION = +723.50'± = REFERENCE ELEVATION (0'-0").
2. TOP OF STEEL SLOPES UNIFORMLY BETWEEN GIVEN ELEVATIONS.
3. COORDINATE LOCATION AND SIZE OF ALL FLOOR AND ROOF OPENINGS WITH ARCHITECTURAL DRAWINGS AND MECHANICAL CONTRACTOR. SEE OPENING DETAILS.
4. ATTACHMENT TO JOIST PANEL POINTS FOR SCULPTURE IS DELEGATED DESIGN. MAX LOAD 100 LBS. PER ATTACHMENT. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.

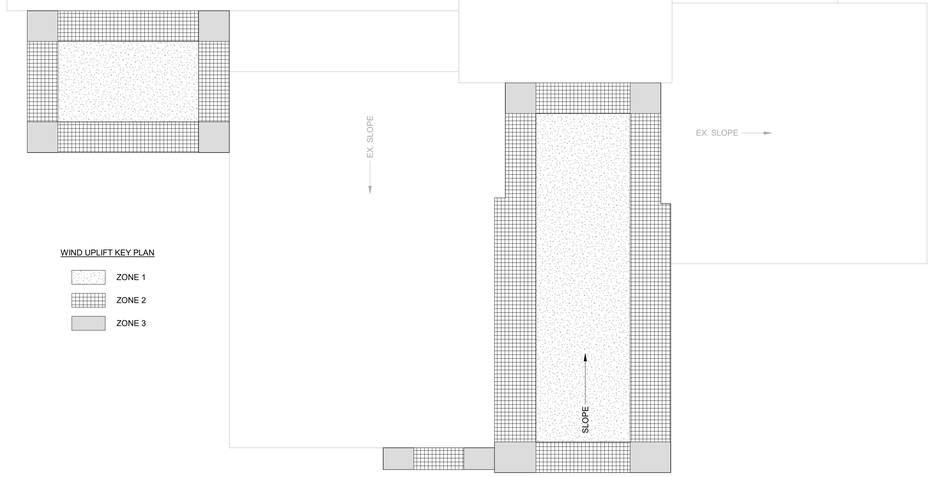
LEGEND:

RD-1.5 — 1 1/2", 20 GA., GALV. WIDE RIB METAL ROOF DECK. ATTACH WITH 5/8"ø PUDDLE WELDS WITH 36/7 PATTERN AND (2) #10 SCREW SIDE LAP FASTENERS EACH SPAN. AT EDGE CONDITION, ATTACH WITH 5/8"ø PUDDLE WELDS AT 6" O.C.

A-X — DECK SUPPORT ANGLE. SEE DETAIL.



DETAIL A
3/4" = 1'-0"



WIND UPLIFT KEY PLAN

ZONE 1
ZONE 2
ZONE 3

WIND UPLIFT PLAN
1/8" = 1'-0"

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NEW ROOF FRAMING PLAN

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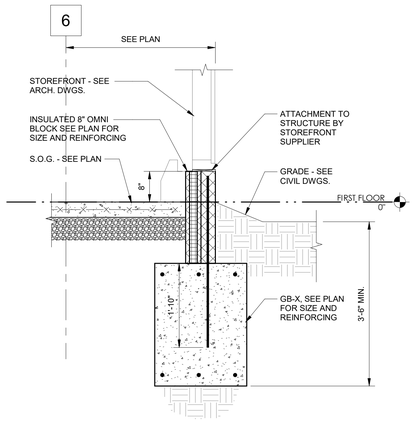

SECTION 1
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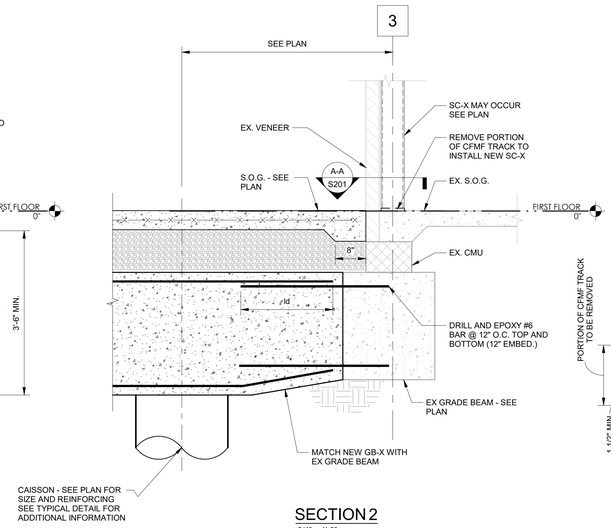

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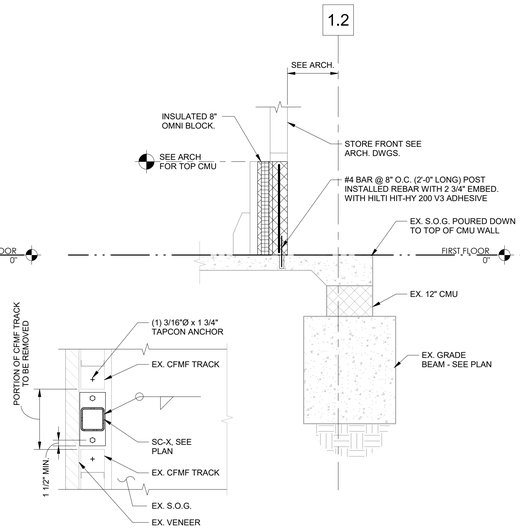
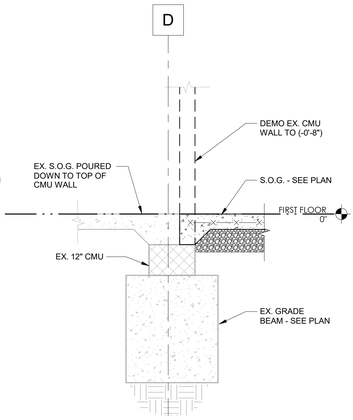


DETAIL A-A
3/4" = 1'-0"

SECTION 3
3/4" = 1'-0"



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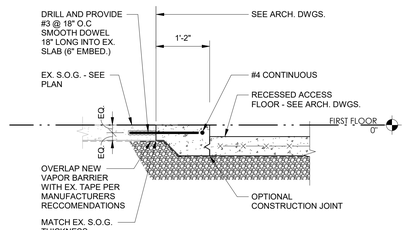

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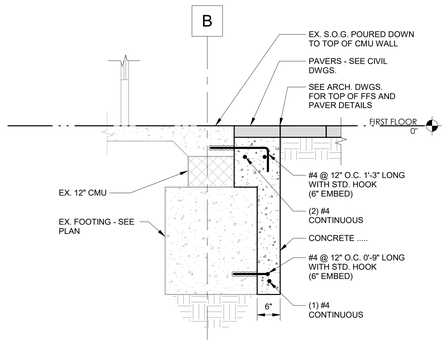

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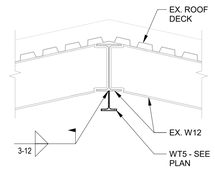

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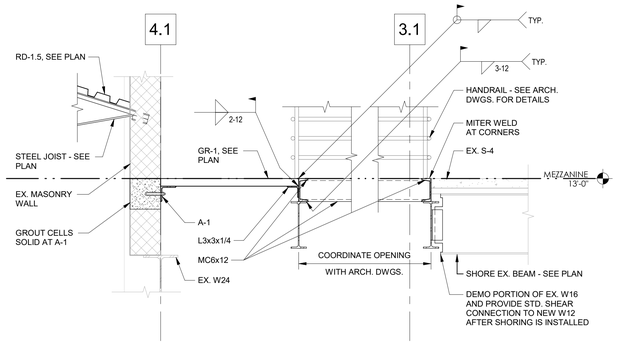
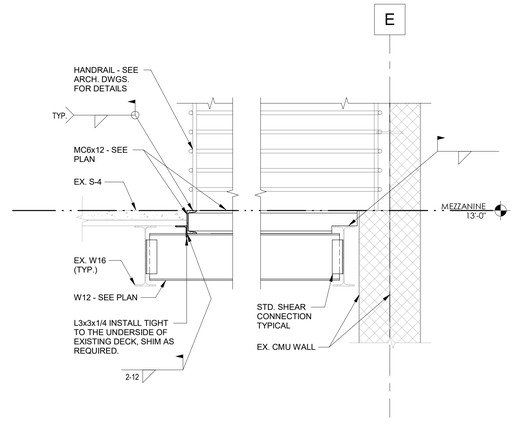


SECTION 8
3/4" = 1'-0"



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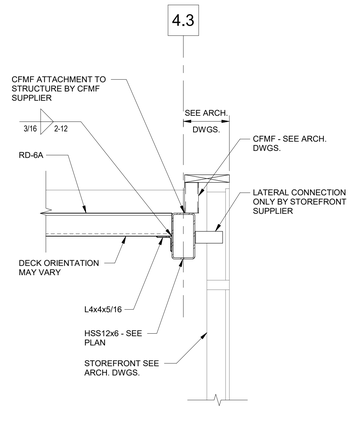

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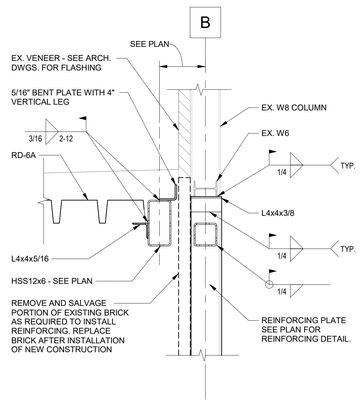

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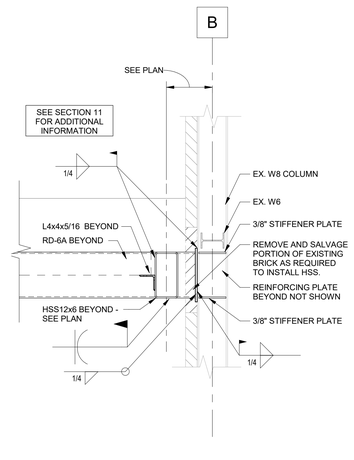

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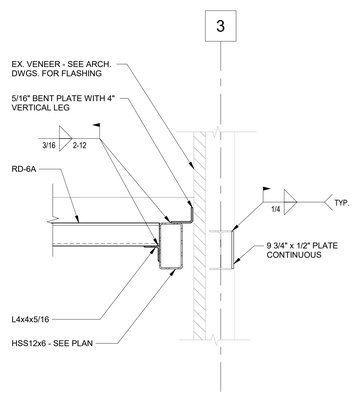

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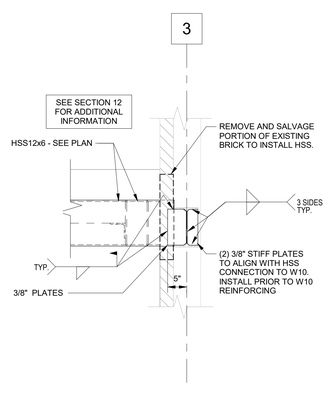

SECTION 14
3/4" = 1'-0"

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SECTIONS
S201

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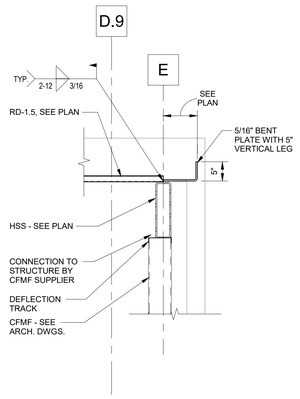
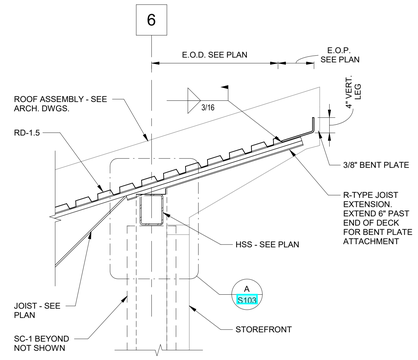


SECTION 1
3/4" = 1'-0"



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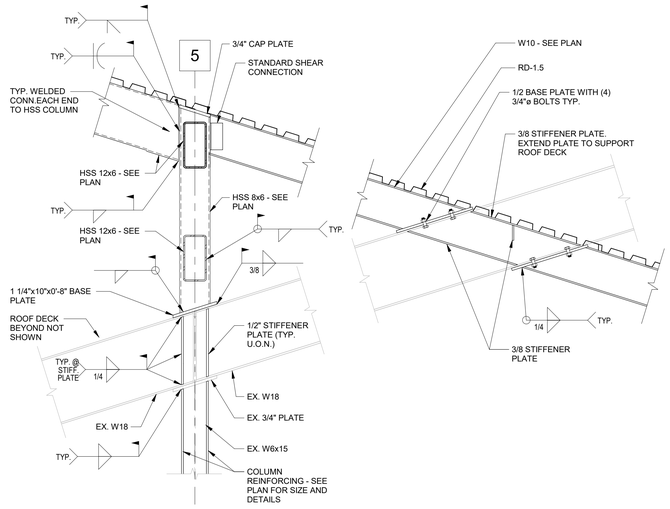
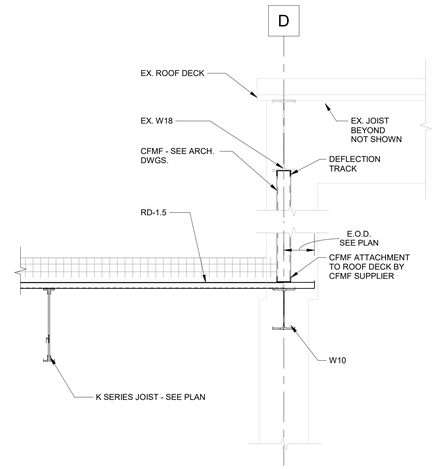
3/4" = 1'-0"



SECTION 3
3/4" = 1'-0"



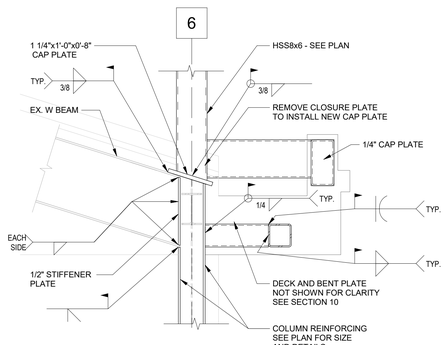
SECTION 4
3/4" = 1'-0"

SECTION 5
3/4" = 1'-0"

SECTION 6
3/4" = 1'-0"

SECTION 7
3/4" = 1'-0"

SECTION 8
3/4" = 1'-0"



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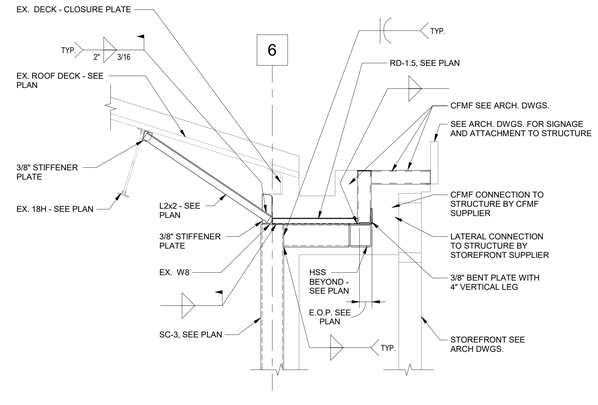
3/4" = 1'-0"



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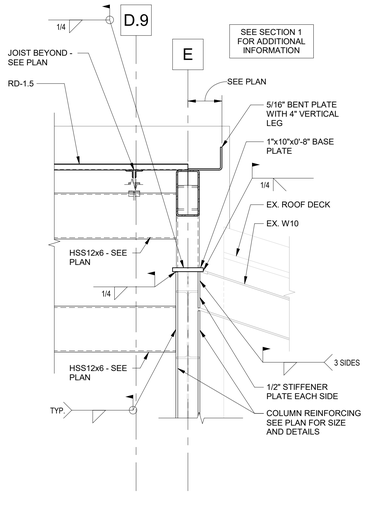
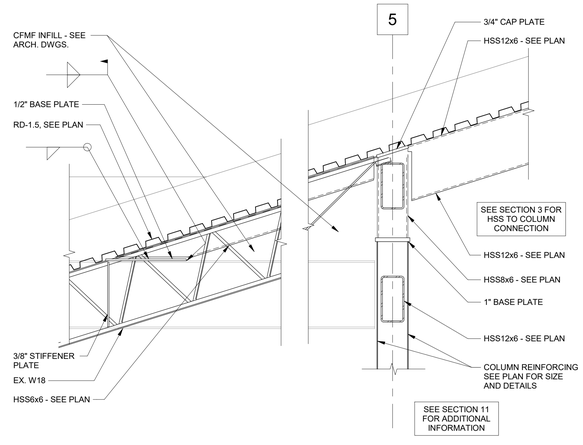


SECTION 11
3/4" = 1'-0"



SECTION 12
3/4" = 1'-0"

Project:
FLEET BRANCH RENOVATION AND EXPANSION

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Seal:

STATE OF OHIO
JON T. LEUTHAEUSER
E-65601
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Project No:	25-25
Drawn / Checked:	CAH / DWD
Issue: BID & PERMIT	2.27.2026

SECTIONS
S202

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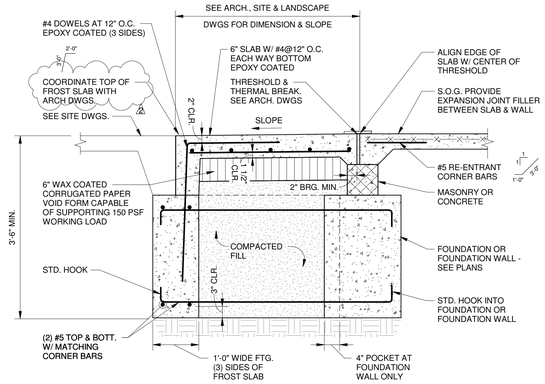
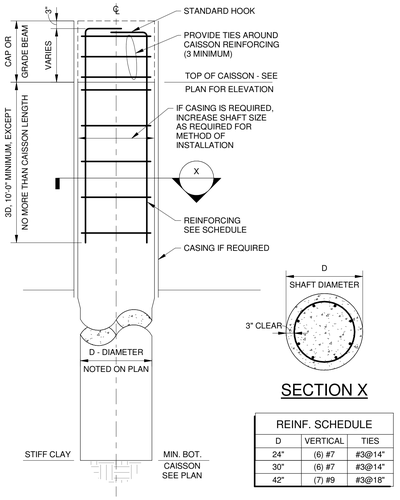
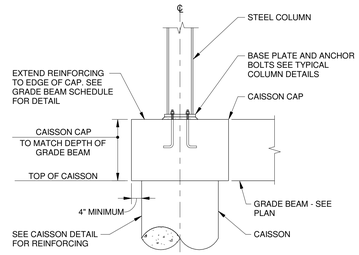


FROST FREE SLAB DETAIL

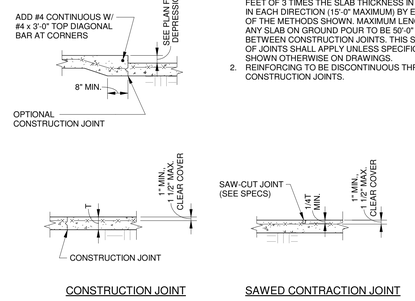


REINF. SCHEDULE		
D	VERTICAL	TIES
24"	(6) #7	#3@14"
30"	(6) #7	#3@14"
42"	(7) #9	#3@18"

CAISSON DETAIL



CAISSON CAP DETAIL AT STEEL COLUMN

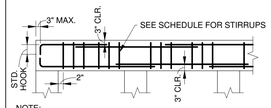


NOTES:
1. CONTRACTION JOINTS SHALL BE INSTALLED IN SLABS ON GROUND AT A MAXIMUM SPACING IN FEET OF 3 TIMES THE SLAB THICKNESS IN INCHES IN EACH DIRECTION (15'-0" MAXIMUM) BY EITHER OF THE METHODS SHOWN. MAXIMUM LENGTH OF ANY SLAB ON GROUND POUR TO BE 50'-0" BETWEEN CONSTRUCTION JOINTS. THIS SPACING OF JOINTS SHALL APPLY UNLESS SPECIFICALLY SHOWN OTHERWISE ON DRAWINGS.
2. REINFORCING TO BE DISCONTINUOUS THROUGH CONSTRUCTION JOINTS.

CONSTRUCTION JOINT | SAWED CONTRACTION JOINT

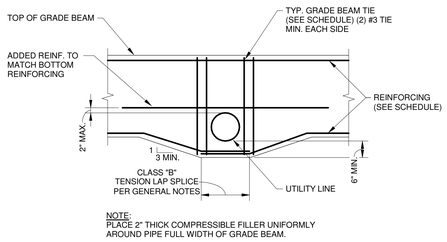
SLAB ON GROUND JOINTS

GRADE BEAM SCHEDULE



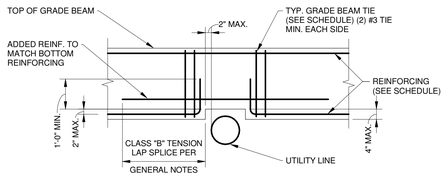
NOTE:
ALL BARS TO BE CONTINUOUS WITH CLASS "A" SPLICES. SPLICE BOTT. BARS AT SUPPORTS. SPLICE TOP BARS AT MID-SPAN. CONTR. MAY PROVIDE FULL LENGTH BARS IN LIEU OF SPLICES.

MARK	WIDTH	DEPTH	BOTTOM BARS	TOP BARS	STIRRUPS
MARK	WIDTH	DEPTH	BOTTOM	TOP	REMARKS
GB-1	2'-0"	2'-8"	(3) #8	(3) #8	#4 @ 48" O.C.
GB-2	3'-6"	2'-8"	(3) #8	(3) #8	#4 @ 48" O.C.



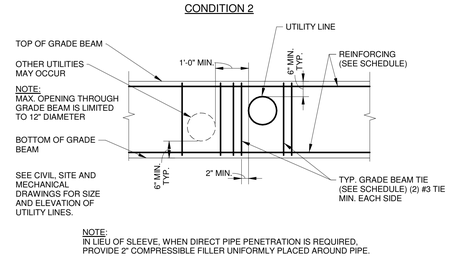
NOTE:
PLACE 2" THICK COMPRESSIBLE FILLER UNIFORMLY AROUND PIPE FULL WIDTH OF GRADE BEAM.

CONDITION 1



NOTE:
PLACE 2" THICK COMPRESSIBLE FILLER UNIFORMLY AROUND PIPE FULL WIDTH OF GRADE BEAM.

CONDITION 2

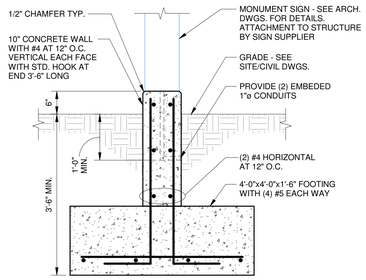


NOTE:
IN LIEU OF SLEEVE, WHEN DIRECT PIPE PENETRATION IS REQUIRED, PROVIDE 2" COMPRESSIBLE FILLER UNIFORMLY PLACED AROUND PIPE.

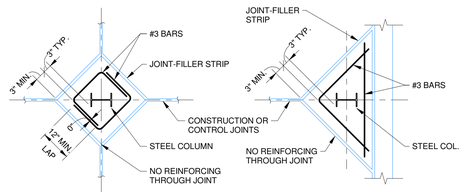
CONDITION 3

NOTE:
1. IF LINE IS COMPLETELY BELOW GRADE BEAM. PROVIDE A MINIMUM OF 2" COMPRESSIBLE FILLER ALL AROUND LINE IN THE AREA WHERE THE LINE CROSSES THE GRADE BEAM.
2. CONDITIONS 1 AND 2 SHOULD BE AVOIDED AS MUCH AS POSSIBLE. WHERE POSSIBLE, RAISE PIPE TO MEET CONDITION 3 OR LOWER PIPE TO COMPLETELY AVOID PENETRATING GRADE BEAM.

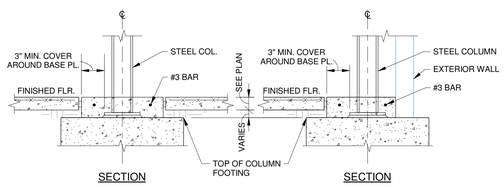
GRADE BEAM REINFORCING DETAIL FOR PENETRATIONS



MONUMENT SIGN FOUNDATION DETAIL



PLAN | PLAN

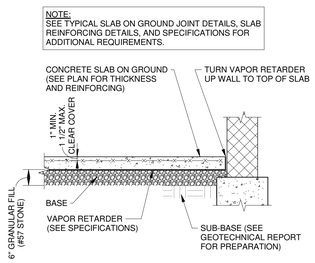


SECTION | SECTION

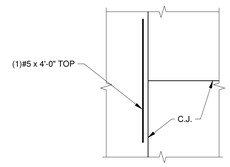
TYPICAL INTERIOR COLUMN | TYPICAL EXTERIOR COLUMN

SLAB ON GROUND - ISOLATION JOINTS WITH STEEL COLUMNS

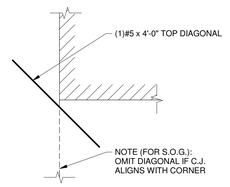
NOTE:
SEE TYPICAL SLAB ON GROUND JOINT DETAILS, SLAB REINFORCING DETAILS, AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.



SLAB ON GROUND DETAIL

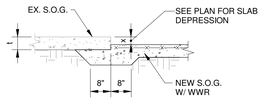


AT DISCONTINUOUS JOINTS



AT INSIDE CORNERS

SLAB REINFORCING DETAILS



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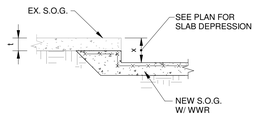

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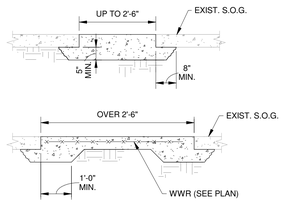
EXISTING S.O.G. NEW DEPRESSION DETAIL



EXISTING S.O.G. CUT AND REPLACE DETAIL

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Project No:		25-25
Drawn / Checked:		CAH / DWD
Issue:	BID & PERMIT	2.27.2026
	⚠ Addendum 2	3.18.2026

TYPICAL DETAILS

S301

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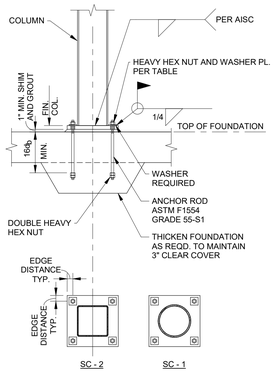
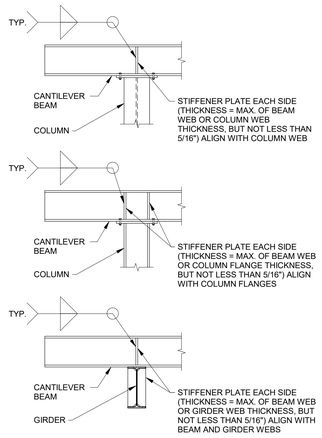


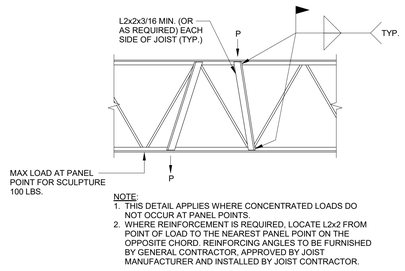
NOTES:
1. GROUT TO BE 5000 psi MIN., NON-SHRINK, NON-METALLIC.
2. LEVELING PLATES OR LEVELING NUTS CAN BE USED AT CONTRACTOR'S DISCRETION.
3. SEE COLUMN SCHEDULE FOR BASE PLATE AND ANCHOR RODS.

ROD ø	BASE PLATE HOLE ø	WASHER PLATE	EDGE DISTANCE
3/4"	1 5/16"	2"x2"x1/4"	1 3/4"
7/8"	1 9/16"	2 1/2"x2 1/2"x5/16"	2"
1"	1 13/16"	3"x3"x3/8"	2 1/4"
1 1/4"	2 1/16"	3"x3"x1/2"	2 1/4"
1 1/2"	2 5/16"	3 1/2"x3 1/2"x1/2"	2 1/2"
1 3/4"	2 3/4"	4"x4"x5/8"	3"
2"	3 1/4"	5"x5"x3/4"	3 1/2"
2 1/2"	3 3/4"	5 1/2"x5 1/2"x7/8"	4"

COLUMN BASE PLATE DETAIL

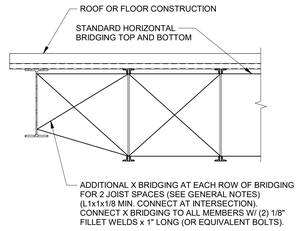


DETAILS AT CANTILEVER BEAMS

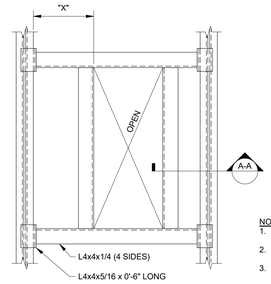


NOTE:
1. THIS DETAIL APPLIES WHERE CONCENTRATED LOADS DO NOT OCCUR AT PANEL POINTS.
2. WHERE REINFORCEMENT IS REQUIRED, LOCATE L2x2 FROM POINT OF LOAD TO THE NEAREST PANEL POINT ON THE OPPOSITE CHORD. REINFORCING ANGLES TO BE FURNISHED BY GENERAL CONTRACTOR, APPROVED BY JOIST MANUFACTURER AND INSTALLED BY JOIST CONTRACTOR.

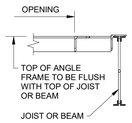
JOIST REINFORCEMENT DETAIL AT CONCENTRATED LOADS



JOIST BRIDGING AT EDGE BEAM



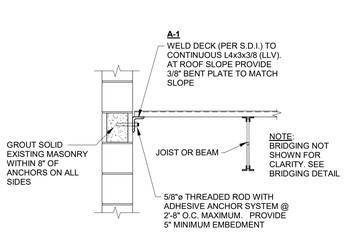
PLAN



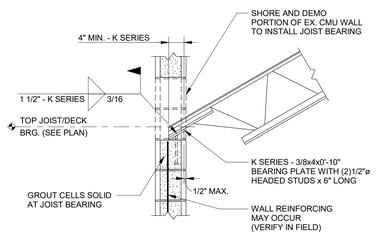
SECTION A-A

NOTES:
1. IF "X" IS 4" OR LESS, ELIMINATE ANGLE PARALLEL TO JOIST OR BEAM.
2. PROVIDE ANGLE FRAME FOR ALL OPENINGS GREATER THAN 10" DIA. OR 10" SQUARE.
3. CONTRACTOR TO VERIFY SIZE AND LOCATION OF ALL OPENINGS. SEE ARCHITECTURAL, MECHANICAL, ETC. DRAWINGS FOR OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS.

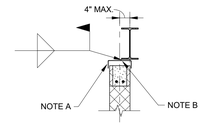
ROOF DECK OPENING DETAIL



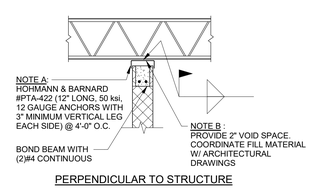
ROOF DECK SUPPORT DETAIL WITH PARAPET



ROOF JOIST BEARING DETAIL



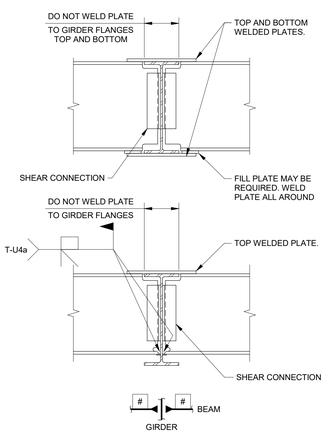
PARALLEL TO STRUCTURE



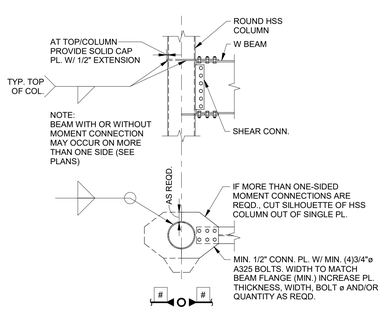
PERPENDICULAR TO STRUCTURE

TOP OF MASONRY WALL BRACING DETAILS

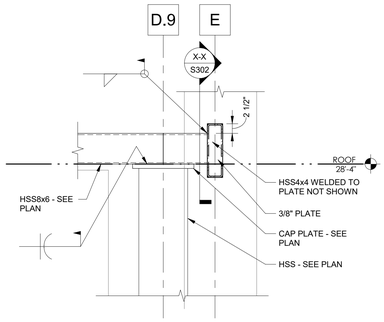
NOTES:
1. COORDINATE TOP/WALL LOCATIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
2. PROVIDE SIMILAR CONNECTION DETAILS FOR BEAMS, JOISTS, OR LIGHT GAUGE MEMBERS.
3. SIZE AND ORIENTATION OF FRAMING MEMBERS AND/OR DECK MAY VARY.



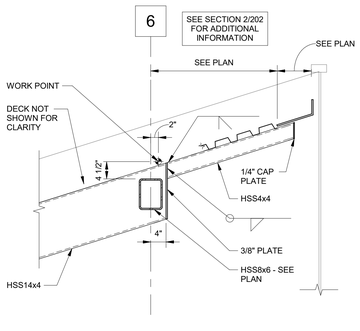
TYPICAL MOMENT CONNECTION DETAIL - BEAM TO GIRDER



TYPICAL MOMENT CONNECTION DETAIL - W-BEAM TO ROUND COLUMN



SECTION 1
3/4" = 1'-0"



SECTION X-X
3/4" = 1'-0"

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Seal:

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Project No: 25-25
Drawn / Checked: CAH / DWD

Issue: BID & PERMIT 2.27.2026

TYPICAL DETAILS

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Components, Systems, and Scope to additionally include in the project:

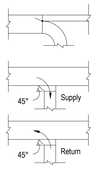
1. Contractor shall conduct an airflow test of the fan for HVAC-1, 2, and 3 and testing of the condensing and evaporator coils for HVAC-1, 2, and 3. The test should document the temperatures the existing AHUs are able to achieve at full cooling, and the CFM each AHU is able to achieve.

Mechanical Symbol Legend

Symbol	Description
20 x 12	Ductwork
20	Supply duct section
20	Return duct section
20	Exhaust duct section
	Flexible ductwork
	Connect to existing
	Demolish to the point
$T_{Equipment Control}$	Thermostat
$CO2_{Equipment Control}$	CO2 sensor
$TH_{Equipment Control}$	Thermostat combined with humidity sensor
$TCH_{Equipment Control}$	Thermostat, CO2 and humidity combined sensor
	Supply diffuser
	Linear supply diffuser
	Eggcrate return grille
	Fire damper
	Balance damper
	Transfer duct
	Round, oval, or rectangular duct work. Uninsulated.
	Round, oval, or rectangular insulated duct work
	Round, oval, or rectangular double wall insulated duct work.
	Control Wire

Notes:
Certain items in this legend may not apply to this project.
Dark piping indicated new piping and light piping indicated existing.

Ductwork Symbols



Manual splitter damper

Standard branch supply
or return, no splitter (45° tap)

Mechanical Piping System Legend

Symbol	Description
#" STM-LP	Steam - Low Pressure
#" STM-IP	Steam - Intermediate Pressure
#" STM-HP	Steam - High Pressure
#" CND-HP	Condensate High Pressure
#" CND-LP	Condensate Low Pressure
#" HHTHHWS	Hydronic High Temp. Heating Hot Water Supply
#" HHTHHWR	Hydronic High Temp. Heating Hot Water Return
#" HHWS	Hydronic Heating Hot Water Supply
#" HHWR	Hydronic Heating Hot Water Return
#" HHWS-SM	Hydronic Heating Hot Water Supply - Snow Melt
#" HHWR-SM	Hydronic Heating Hot Water Return - Snow Melt
#" CCWS	Hydronic Cooling Chilled Water Supply
#" CCWR	Hydronic Cooling Chilled Water Return
#" CWS	Hydronic Condenser Water Supply
#" CWR	Hydronic Condenser Water Return
#" CWS	Hydronic Chilled Beam Water Supply
#" CWR	Hydronic Chilled Beam Water Return
#" NG	Natural Gas

Notes:
Certain items in this legend may not apply to this project.
Dark piping indicated new piping and light piping indicated existing.

Project General Notes

1	Whenever the contract documents indicate conflicting or inconsistent options, the contractor shall include the higher cost option in their base bid and shall submit an RFI to the Engineer for clarification.
2	The term "provide" is defined within the contract documents to mean "furnish and install".
3	All equipment, piping, and all other mechanical, electrical, plumbing, technology, and fire protection related accessories and equipment shall be furnished and installed on this project per the contract document drawings and specifications. Contractor shall be familiar with existing drawings, existing conditions, site, and the work of all trades.
4	All concrete pads required for work shall be provided and paid for by the contractor. See structural drawings for details.
5	All work shall comply with all federal, state, and local codes and authorities having jurisdiction.
6	Contractor shall conform to OSHA, fire marshal, local building department, and all other applicable codes and regulations and authorities having jurisdiction. Contractor shall verify exact sizes, locations and quantities of all items in field intended to be removed, replaced and remain, as well as all existing equipment and existing conditions that require coordination with new work and demolition.
7	Contractor shall verify exact sizes, locations and quantities of all items in field intended to be removed, replaced, or to remain.
8	Contractor shall obtain permits, pay all fees, and arrange for required inspections.
9	All piping/ductwork, and electrical work which are disconnected, shall be temporarily capped till new connections are made. This includes capping drains in areas of construction to prohibit debris from entering sanitary and storm system during construction.
10	All openings remaining in walls/floor/roof after openings are made shall be patched by the contractor with materials so as to match existing finishes and structural integrity, unless finishes are shown otherwise on architectural or structural drawings and specifications.
11	For all cutting and patching requirements in walls/floors/roof, see specifications and coordinate with structural engineer.
12	Contractor shall coordinate all phasing of demolition and new construction with all trades and provide phasing plan to owner at time of bid.
13	Where MEP systems interfere with new work to maintain minimum elevations requirements for this project, the contractor shall relocate, reroute and raise or drop existing and/or new systems as required. All such cost shall be included in base bid.
14	The contractor shall be responsible for all cutting and patching required to install new work within their scope. Cutting of structural members is prohibited without written permission from the architect by direction of the structural engineer. All cutting and patching shall be performed by qualified personnel.
15	Contractor is solely responsible for construction means, methods, construction sequences, and workmen safety.
16	Contractor shall conform and work around all existing conditions or adjust existing conditions as needed (with owner's approval) to meet the contract documents. All work required to accommodate existing conditions shall be included in the base bid pricing.
17	Contractor shall be certified in lead and lead-based paint awareness, and safety in accordance with OSHA lead standard (29 CFR 1926.62).
18	Systems are to be complete and workable in all respects. Install all equipment per manufacturer's recommendations. Adjust and startup all equipment per manufacturer's recommendations.
19	The CMR shall manage the BIM coordination drawing process. All subcontractors shall draw all systems and architectural elements in three dimensions using 3-D modeling software. Two-dimensional coordination drawings shall be rejected. All engineering systems shall be drawn with constructible elements. Using the engineer's own 3-D elements and returning them as "coordination drawings" is unacceptable and shall be rejected immediately. Elements which shall be modeled and coordinated include but are not limited to: walls, floors, fences, windows, doors, casework, fan powered boxes, rigid ductwork, diffusers, casework, floor clean outs, floor drains, floor sinks, air handlers, refrigerant piping, plumbing and hydronic piping, panelboards, switchboards, transfer switches, tap boxes, in-grade handhole enclosures, pulling pits, all site conduits and trenches, all interior conduit of trade size larger than 1-1/4", conduit slab penetrations, required clearances around all equipment, equipment pads or curbs, all plumbing elements, all mechanical elements, all electrical lighting and power elements, all IT /AV elements, all security elements, all fire alarm elements.
20	It is the responsibility of the contractor to investigate the location of all existing underground utilities prior to performing any site work. Contact the Ohio Utilities Protection Service (OUPS) 811 Call Before You Dig service in accordance with Section 153.64 of the Ohio Revised Code.

Demolition General Notes

1	On demo plans, unless noted otherwise, equipment or fixtures which are existing to remain are indicated in half-tone solid lines, and equipment or fixtures which are to be removed are indicated in red dashed lines. Half-tone dashed lines indicate removal of equipment from an alternate discipline (e.g., walls). Coordinate with architectural demo plans.
2	All fixtures (including receptacles, light fixtures, data faceplates, wall switches, wireless access, points, sinks etc.) within the scope area shall be removed by the contractor. The contractor shall be retain these fixtures and offer them to the owner. If the owner chooses not to accept these items, the contractor shall dispose of them properly at the contractor's cost. All costs associated with this shall be included in the base bid.
3	Any items intended to be removed but not indicated in the contract documents shall be verified and removed by the contractor at no additional cost to the owner, and included in base bid.
4	Contractor shall check with owner for all items to be saved and return such items to the owner, prior to any work. All other items shall be hauled away from site and disposed of appropriately.
5	Contractor shall carefully remove controls components (actuators, sensors, thermostats, controllers, etc) and save in a location for the owner to inspect components and take them if they desire. The base bid shall include the contractor to dispose of the controls components if the owner does not want to keep them. Controls components may likely not be required back by the owner, coordinate with the Owner prior to demolition of the unit to understand if the controls componenets will likely be repurposed and taken back by the owner or if they should be discarded by the contractor.

Mechanical General Notes

1	No more than 5' of flex duct shall be used from diffusers to connection to ridgid ductwork.
2	Each diffuser to have a balance damper installed upstream to balance diffuser flow unless the diffuser is the only one downstream of the terminal unit. For diffusers and ductwork which are above gyp or hard ceilings, a damper with remote access shall be installed and the remote access cable shall be accessible through the face of the diffuser.
3	All rectangular mitered duct elbows shall have single turning vanes.
4	All terminal equipment that receives hydronic piping shall have a shutoff valve before and after the equipment and shall have a balance valve and two way control valve on the discharge of the hydronic hot water from the equipment.
5	All diffusers off ducts in open ceiling areas shall be installed at 45° downward from side of ducts unless otherwise noted.
6	All ductwork shall be installed as high as possible.
7	Contractor shall install balance dampers ahead of each diffuser at the trunk / main. For diffusers and ductwork which are above gyp or hard ceilings, a damper with remote access should be installed and the remote access cable should be accessible in the remote ceiling behind a white cover.
8	All return ducts open to plenum shall have a damper installed on them for balancing the return air from the plenum.
9	The mechanical contractor shall provide and install all required weldolets and other accessories for piping and ductwork as needed by the controls contractor to provide a fully functioning system.

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Issue:

	Bid & Permit	2.27.2026
1	Addendum 1	3.11.2026
7	Bulletin 2	9.18.2026

GENERAL MECHANICAL

M001

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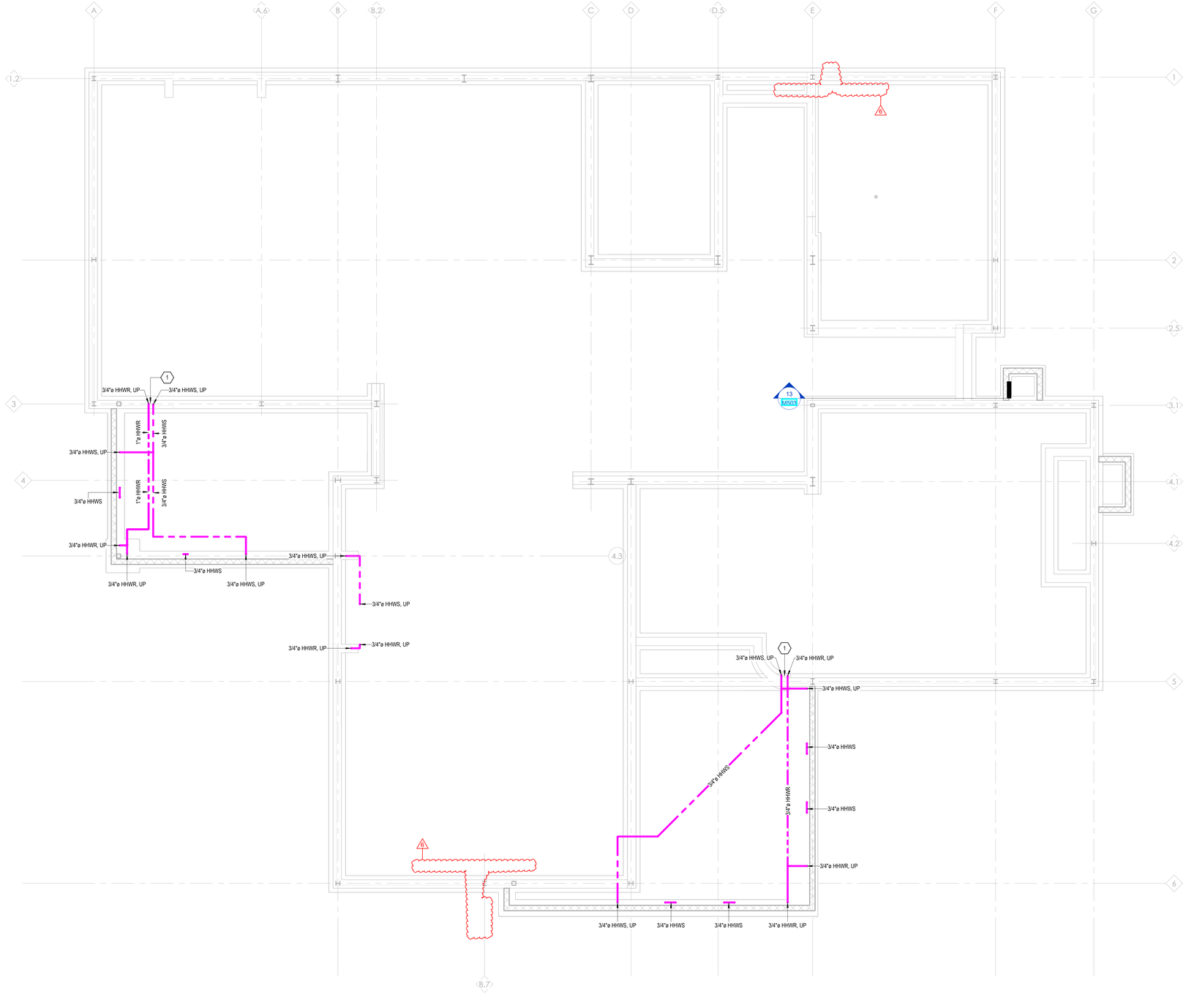
Sheet Notes - M100	
#	Note
1	Route pipes down wall to beneath slab.



1 Underground Plumbing
3/16" = 1'-0"

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UNDERGROUND MECHANICAL PIPING

M100

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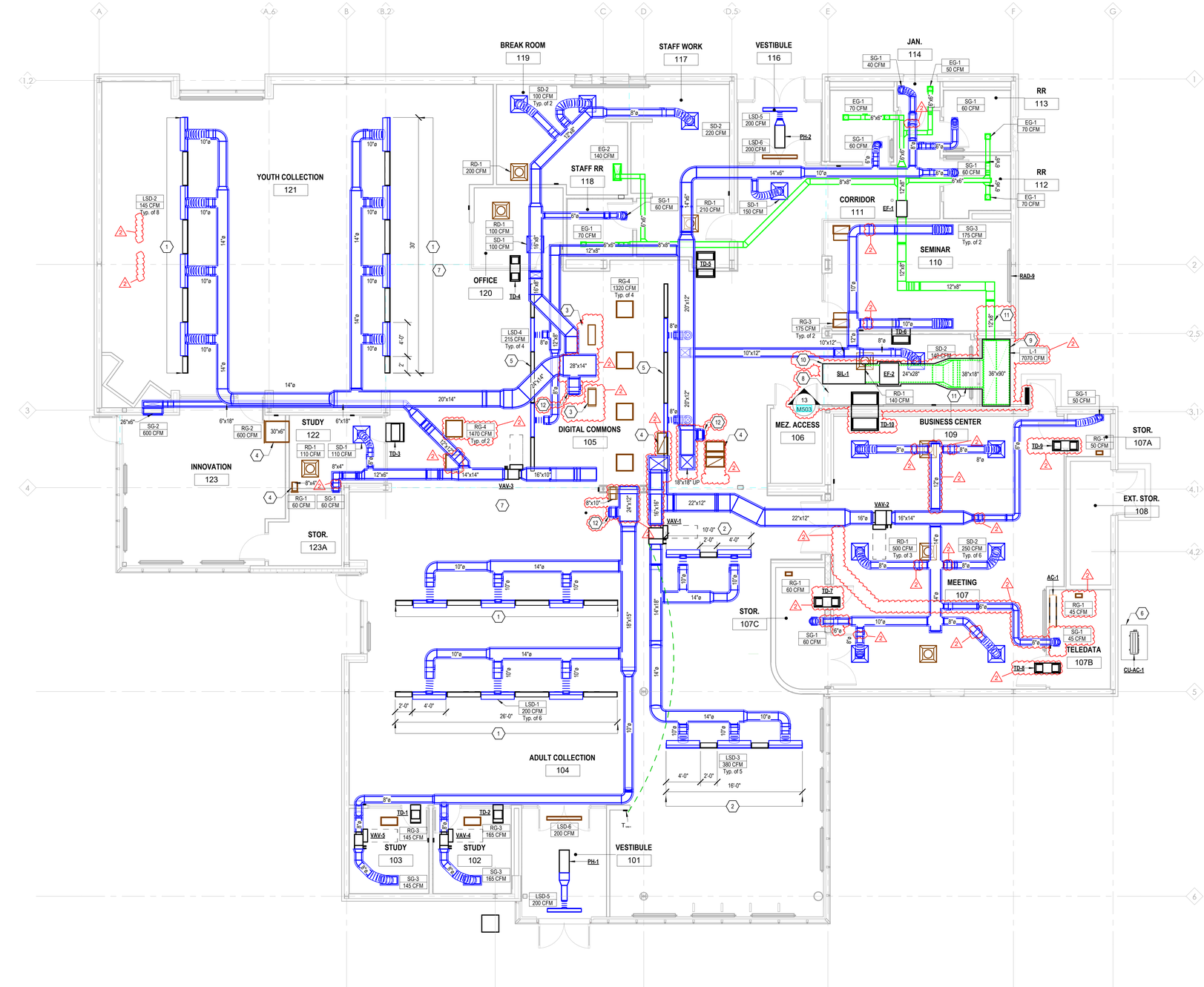
Sheet Notes - M101A	
#	Note
1	Provide 2' or 4' blank-offs to provide continuous linear slot diffuser as shown on plan.
2	Provide 2' blank-offs to provide continuous linear slot diffuser as shown on plan.
3	Provide wire mesh screen for duct opening to plenum.
4	Provide 1" of acoustic insulation on inside of duct.
5	Provide blank off panels to create a 22' long continuous slot diffuser, 4' blank offs at each end, with a 6' blank off in the middle.
6	General contractor to provide 4" concrete base for condensing unit of AC-1.
7	Controls contractor to route condute to a junction box above the ceiling at this location. Install two MSTP wire pair from box back to BMS panel. Leave 20' of additional wire for each pair in ceiling Do not connect wire to BMS controller in panel. Wire is for connection to future destratification fans.
8	Provide a 5 ft SQ free area for return air pathway along the above ceiling wall located here.
9	Contractor shall create plenum box for L-1, and adjust dimensions as needed to allow connections from exhaust and relief fans, while fitting within pitched roof.
10	Contractor shall apply B-20 Lag / QFA-9 lagging (or equivalent) to relief ductwork, EF-2 and relief plenum. Lagging shall be 2.4 pounds per square foot, reinforced foil faced loaded vinyl barrier bonded to 2" thick nominal 2 pound density quilted fiberglass absorber. Lagging shall be plenum rated. Attenuation at frequencies of 125, 250, 500, 1000, 2000, 4000 shall be 21, 24, 29, 41, 54, and 68 db, respectively. Note this lagging is heavy, thick, and made of roughly 1/4" rubber with a fiber component to it also, and can not be heald in place by standard means like adheasive, however bands can work.
11	Install motorized isolation control damper in this location.
12	Provide bleeder duct with damper for balance contractor to balance unit.



1 First Floor Ductwork
3/16" = 1'-0"

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FIRST FLOOR DUCTWORK

M101A

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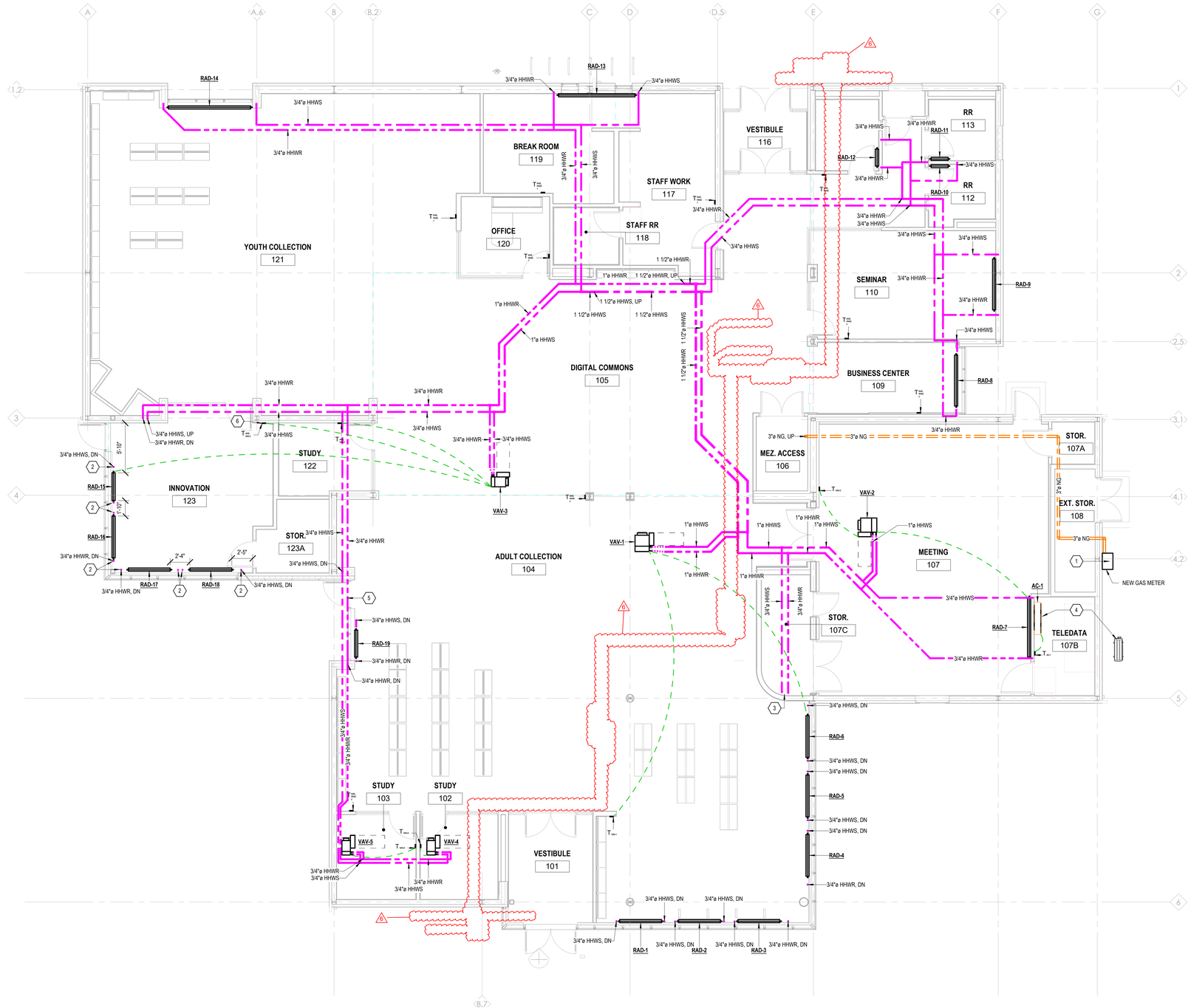
Sheet Notes - M101B	
#	Note
1	Contractor to install new gas meter, regulator, and gas line to building. See civil plans for new site gas line.
2	All piping for radiators shall be ran beneath the slab for both the supply and return connection for the radiators. Contractor shall coordinate exact location with architect and engineer and identify the exact location +/- 1/4" prior to pouring concrete.
3	Piping down to beneath slab to serve radiators.
4	Contractor shall size refrigerant lines as per manufacturer's instructions, and ensure that total equivalent length of refrigerent piping is below the manufacturer's allowance.
5	Install differential pressure transmitter in this location. Install shutoff valves on the taps to the pipes for the DPT.
6	Contractor shall route all wiring for thermostat in stud wall, no wall mounted conduit will be accepted.



1 First Floor Mechanical Piping
3/16" = 1'-0"

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6	Bulletin 1	8.20.2026

FIRST FLOOR MECHANICAL PIPING

M101B

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Sheet Notes - M102

#	Note
1	Maintenance clearances provided for unit.
2	Contractor shall field verify water heater exhaust diameter and provide new flue based on field measured diameter.
3	Mechanical contractor shall temporarily remove condensing unit from roof until the new roof is installed, and mark each condensing unit and its corresponding AHU that it serves with a unique indentifier to ensure unit is reinstalled with correct connections back to its original AHU. The mechanical contractor shall provide new refrigerant lines back to the AHUs they serve at the line sizes they were originally installed at. The mechanical contractor shall weigh the original charge in the unit at the time of relocation, and record the weight as well as the original refrigerant line lengths and submit to the Engineer of Record. During reinstall, the mechanical contractor shall check the new refrigerant line install lengths and in combination with the original weighed refrigerant charge, provide a new charge for the system with these considerations.



1 Roof Mechanical
3/16" = 1'-0"

2 Penthouse Mechanical
3/16" = 1'-0"

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PENTHOUSE & ROOF MECHANICAL
M102

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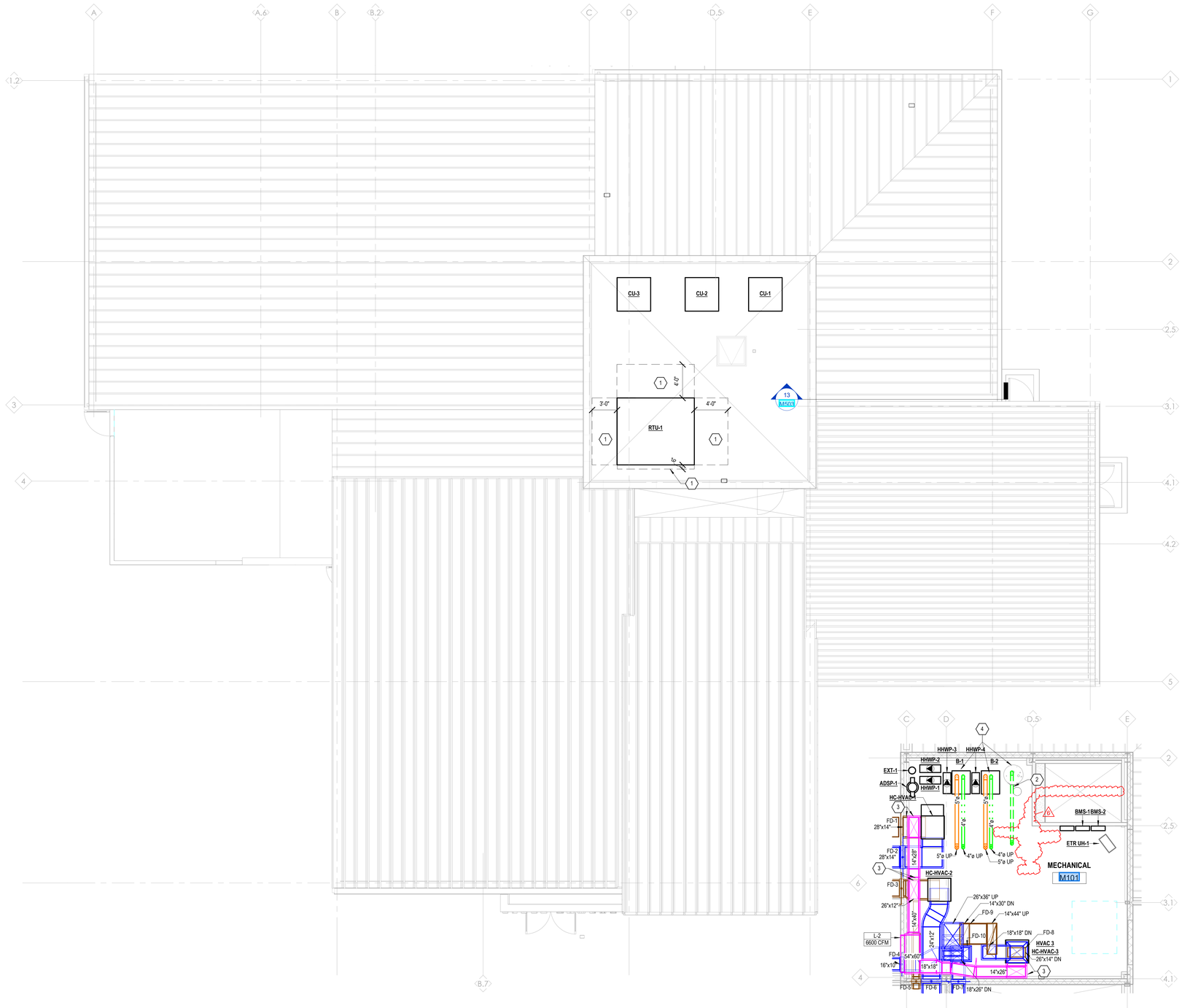
Sheet Notes - M102A

#	Note
1	Maintenance clearances provided for unit.
2	Contractor shall field verify water heater exhaust diameter and provide new flue based on field measured diameter.
3	Install control damper on return and outdoor air with actuators.
4	Combustion air duct shall be CPVC. Material of exhaust stack and flue duct shall be: CPVC, 316LSS or AL2904C



1 Roof Mechanical
3/16" = 1'-0"

2 Penthouse Mechanical
3/16" = 1'-0"

Project:
FLEET BRANCH RENOVATION AND EXPANSION

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3	Addendum 3	4.9.2026
6	Bulletin 1	8.20.2026

PENTHOUSE & ROOF DUCTWORK

M102A

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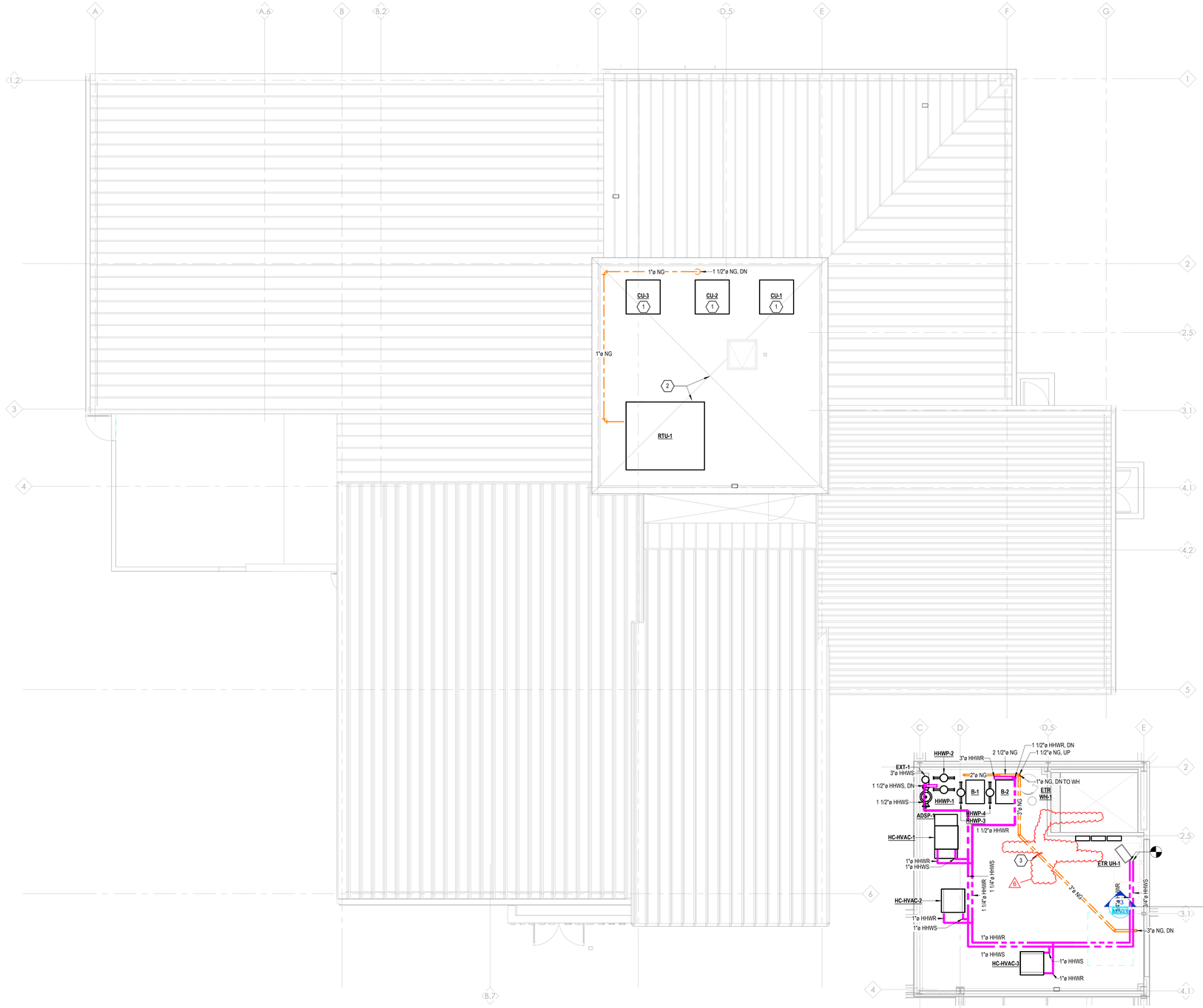
Sheet Notes - M102B

#	Note
1	Mechanical contractor shall temporarily remove condensing unit from roof until the new roof is installed, and mark each condensing unit and its corresponding AHU that it serves with a unique indentifier to ensure unit is reinstalled with correct connections back to its original AHU. The mechanical contractor shall provide new refrigerant lines back to the AHUs they serve at the line sizes they were originally installed at. The mechanical contractor shall weigh the original charge in the unit at the time of relocation, and record the weight as well as the original refrigerant line lengths and submit to the Engineer of Record. During reinstall, the mechanical contractor shall check the new refrigerant line install lengths and in combination with the original weighed refrigerant charge, provide a new charge for the system with these considerations.
2	Route condensate piping from cooling coil to nearby roof drain.
3	Siemens to provide natural gas meter, mechanical contractor to install meter inlocation upstream of all natural gas uses.



1 Roof Mechanical Piping
3/16" = 1'-0"

2 Penthouse Mechanical
3/16" = 1'-0"

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PENTHOUSE & ROOF MECHANICAL PIPING

M102B

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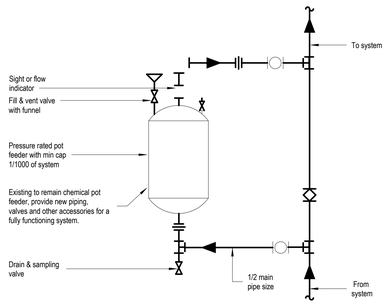
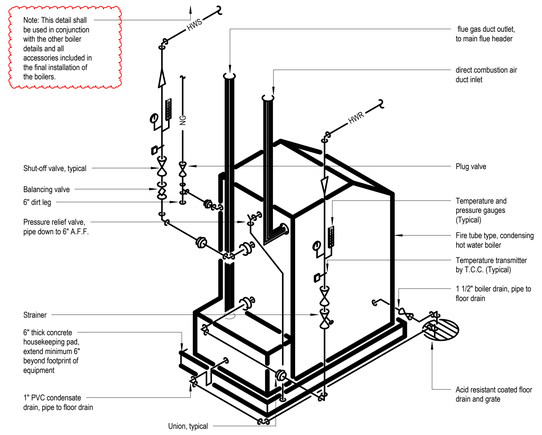
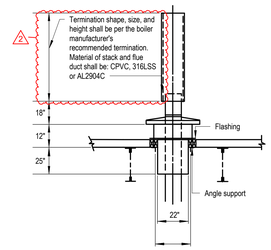


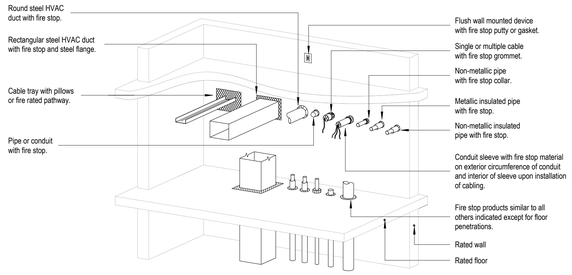
5 Chemical Pot Feeder
NTS



4 Condensing Boiler Detail
NTS

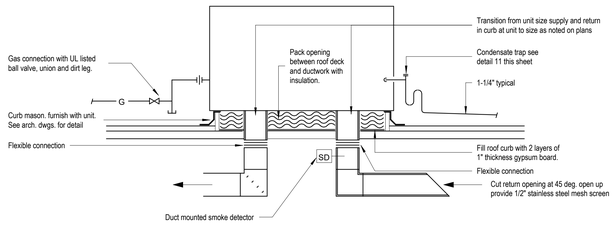


3 Boiler Stack Detail
NTS

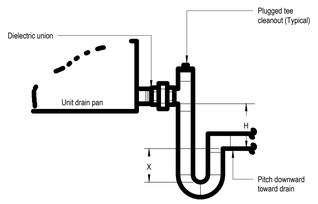


Notes:
1. Refer to UL fire resistance directory for complete installation requirements.

1 Firestopping detail
NTS



2 Roof Top Unit Detail
NTS



Casing pressure = 4 IN WC (Negative)

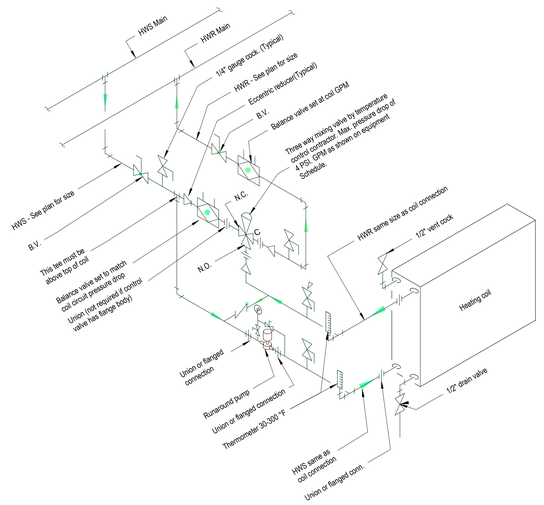
X = 1/2 x H

H = 1 inch + Casing pressure

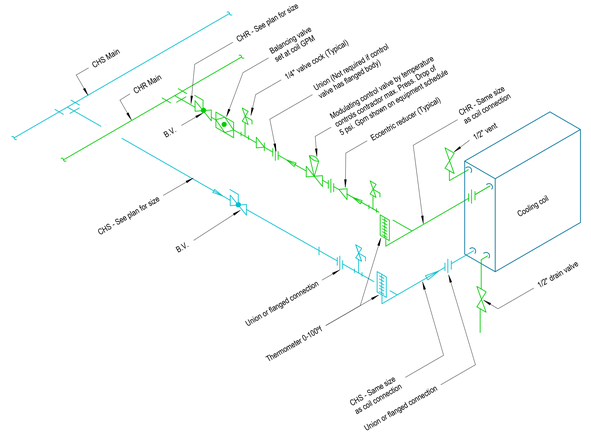
Notes:

1. Locate trap as close as possible to AHU drain outlet with bottom below support structure.
2. Size of trap piping to be larger of equipment outlet size or dimension on plans.
3. See specifications for insulation requirements.
4. Notify engineer before fabricating if physical conditions prohibit installation of depth shown.

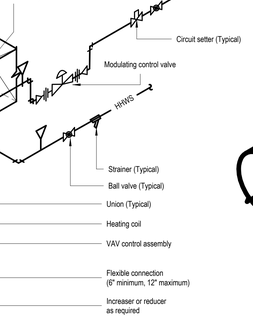
8 Cooling Coil Condensate Trap W/ Negative
NTS



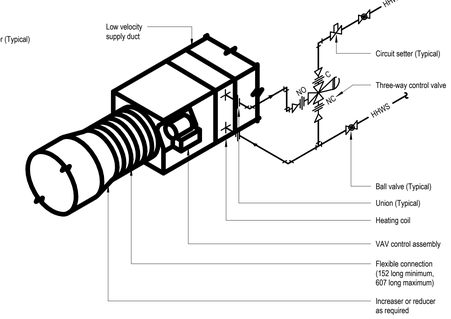
7 3-Way AHU Heating Coil Detail
NTS



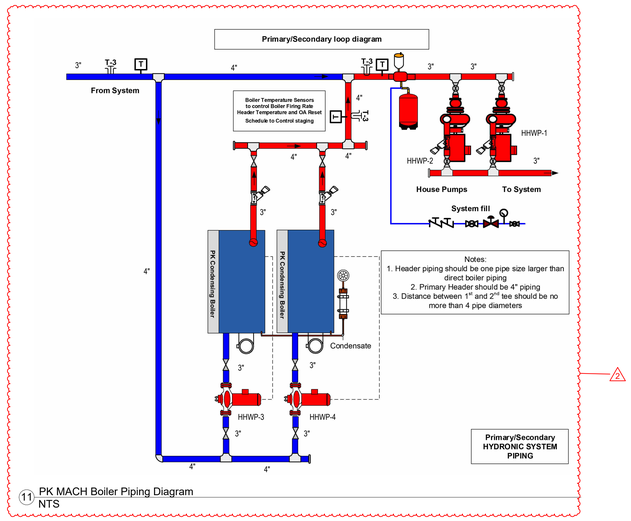
6 2-Way Heating Coil Piping Detail
NTS



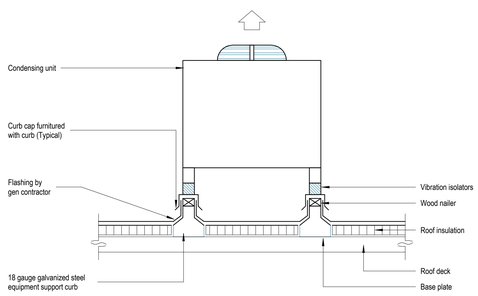
13 VAV with Strainer - 2-Way
NTS



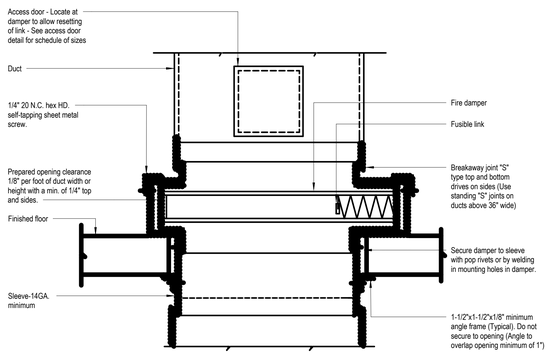
9 VAV Box Reheat Coil Piping Schematic- 3-way
NTS



11 PK MACH Boiler Piping Diagram
NTS



10 Condensing Unit Mounting Detail
NTS



12 Mech-Damper - Floor Fire Damper Horizontal Type B
NTS

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Project No: 25-25
Drawn / Checked: Author / Checker

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2	Addendum 2	3.19.2026

MECHANICAL DETAILS

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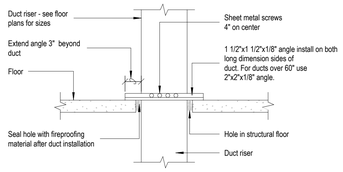
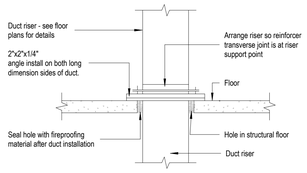


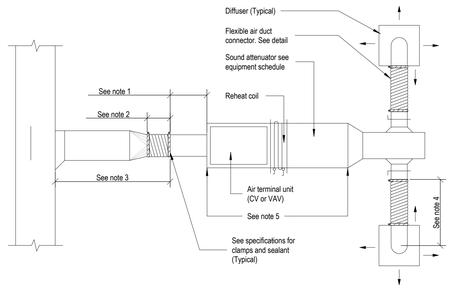
0.5 Inch WG to 2 Inches WG Duct Riser Support



2 Inches WG to 4 Inches WG Duct Riser Support

Note:
All duct work risers which are run exposed, such as thru attic floors and fan room floors shall be provided with a 3" high concrete curb around opening for duct.

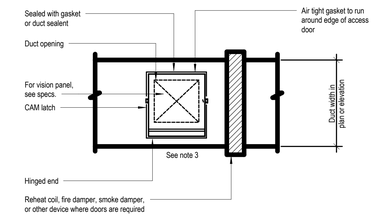
10 Duct Riser Supports
NTS



Note:
1. Rigid straight terminal unit inlet length shall be a minimum of 3 times the diameter of inlet
2. A flexible air duct connector is not mandatory for inlet to this box, but allowed to accommodate minor offsets. maximum length 3'-0".
3. A branch duct serving an individual box may be the same size as the box inlet, provided the equivalent length of the branch duct, as shown, does not exceed 10 feet. For longer lengths, increase the duct size and provide a duct transition to maintain the duct static pressure drop at or below 0.2"/100'.
4. Flexible air duct connectors, when used from terminal unit supply air duct to diffuser, shall not exceed 5'-0". Use rigid elbows for change of direction greater than 45°.
5. Component arrangement may vary by manufacturer. Provide insulation with vapor barrier for connecting duct sections.

Designer's note:
1.Indicate sound attenuator as required by acoustical analysis.

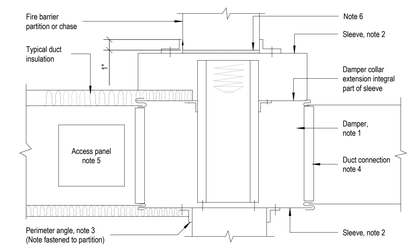
8 Duct Connection - Air Terminal Units
NTS



Access Door Size Schedule	
Duct width	Access door size
6" TO 10"	6" x 6" Minimum
10" TO 12"	8" x 8" Minimum
12" TO 21"	12" x 12" minimum, see note 1
21" & above	18" x 18" minimum, see note 2

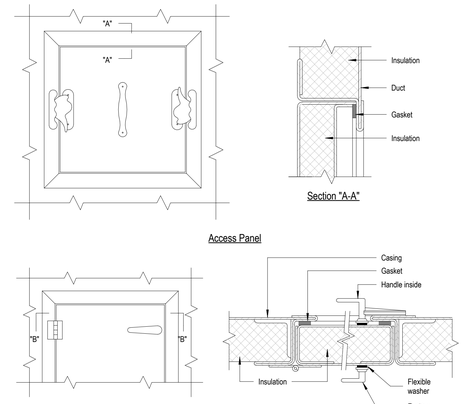
Note:
1. Access doors to 16"x16" where duct size and spaces allows
2. Four CAM latches are required.
3. Doors to be installed on side or bottom of duct with best access .

7 Duct Access Door Detail
NTS



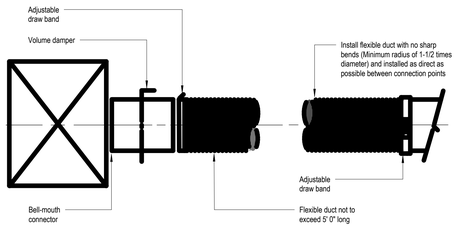
Note:
1. A vertical damper is shown. Horizontal damper installation, 1s similar. Follow damper manufacturer's instructions, including fastener options and gages for sleeve and perimeter angles. Fire dampers must be installed in the partition or floor and not outside the penetration.
2. Galvanized sleeve: Gage not less than connecting duct. Fasten sleeve to damper frame and to perimeter angles.
3. Perimeter angels: Galvanized steel, not less than 1 1/2"x1 1/2", 14 gage, to provide 1" minimum overlap of opening on all 4 sides.
4. Breakaway duct connection: Contractor's option of types shown in SMACNA.
5. Access panels: Size and location to permit servicing the fusible link or Links.
6. Provide 1/4" to 1/2" clearance on height and width. Fill Open space with rock wool firestop fiber.
7. All duct work risers which are run exposed, such as thru attic floors and mechanical room floors, shall be provided with 3" high concrete curb around opening for duct.

1 Section Thru Fire Damper Installation
NTS



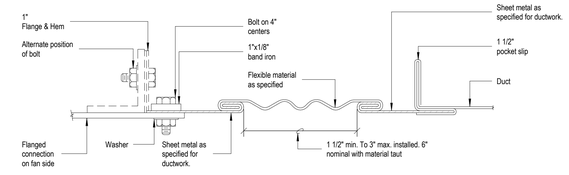
Notes:
1. Latches shall be of the wedge type to close doors tightly.
2. Hinges on the access doors shall have non-corrosive pins.
3. See SMACNA 2005, figure 9-15.

5 Access Panel and Door Detail
NTS

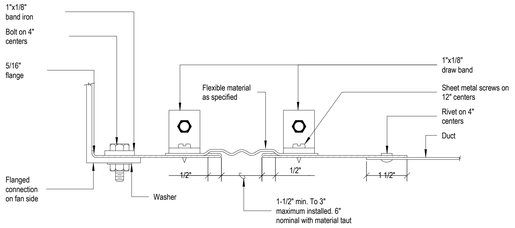


Note:
Flexible ducts shall only be used where indicated on plans and may not be used to replace sheet metal ducts or fittings indicted on plans.

15 Flexible Duct Detail
NTS

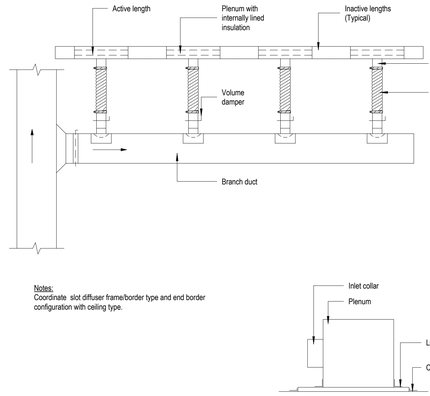


Rectangular Flexible Connection



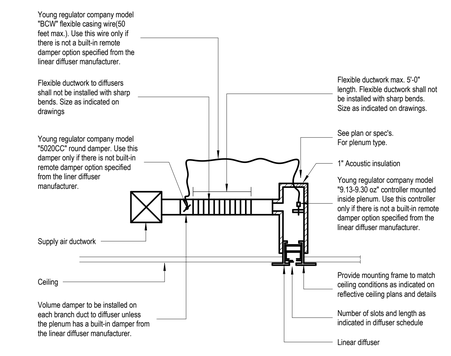
Round Flexible Connection

14 Flexible Duct Connections
NTS

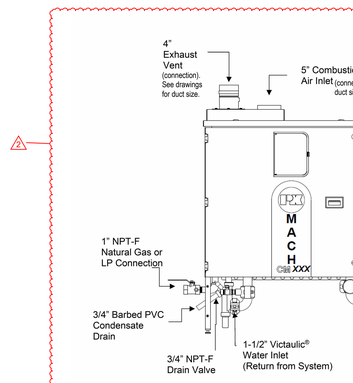


Notes:
Coordinate slot diffuser frame/border type and end border configuration with ceiling type.

4 Linear Slot Diffuser
NTS



3 Linear Diffuser Plenum Detail
NTS

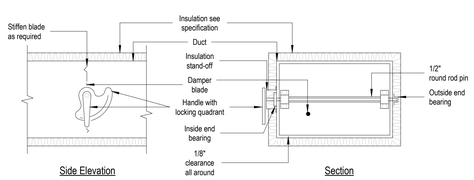


NOTICE!
Condensate Trap must be piped to condensate neutralization tank & floor drain in accordance with all national, state and local codes. Heat trace may be required to prevent freezing in un-insulated spaces.

NOTICE!
The boiler is furnished with 1-1/2" grooved connections and Victaulic Style 107 Couplings. These couplings must be used with the EPDM Victaulic seals. Isolating valves must be installed in both water connections.

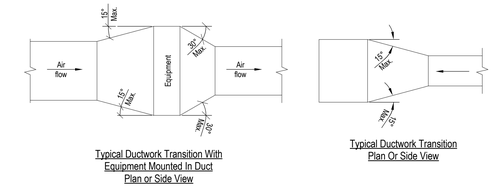
Contractor shall route boiler drain to condensate neutralization trap.

16 PK MACH Boiler Connections
3/4" = 1'-0"



Note:
1. Delete insulation stand-off on ductwork without exterior insulation.
2. Detail shows single blade damper. Damper installation shall be similar for multi-blade dampers & round dampers.

2 Volume Damper Detail
NTS

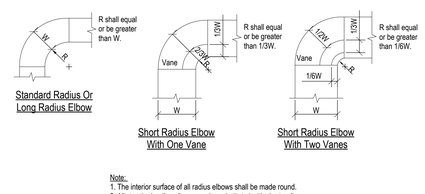


Typical Ductwork Transition With Equipment Mounted In Duct Plan or Side View

Typical Ductwork Transition Plan Or Side View

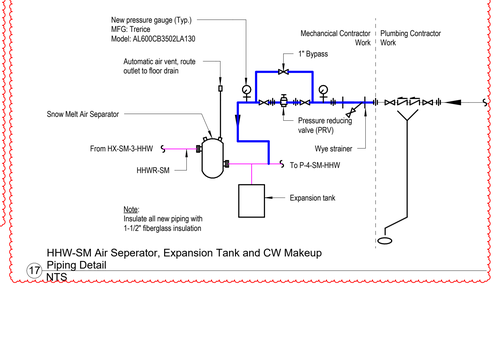
Note:
Unless otherwise indicated on plans, maximum angles shown shall apply.

13 Ductwork Transitions (with Equipment Mounted in Duct)
NTS



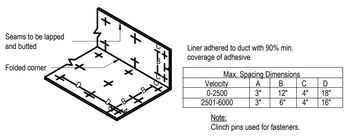
Note:
1. The interior surface of all radius elbows shall be made round.
2. All standard radius elbows can be substituted with short radius elbows. All short radius elbows shall have vanes. Vanes shall be constructed, supported and fastened as recommended by SMACNA.

11 Ductwork Radius Elbows
NTS



HHW-SM Air Seperator, Expansion Tank and CW Makeup Piping Detail
NTS

17



Max. Spacing Dimensions				
Velocity	A	B	C	D
0-2500	3"	12"	4"	18"
2501-6000	3"	6"	4"	16"

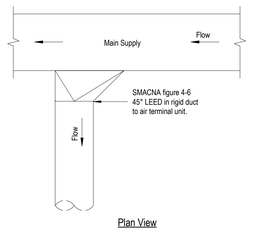
Note:
Clinch pins used for fasteners.

9 Duct Linear Installation Detail
NTS



Note:
1. All vane elbows shall be constructed and installed as detailed by SMACNA.
2. When W1 does not equal W2, vane shall be single thickness vane type regardless of W dimension.
3. All single thickness vanes shall have a 2" radius, 1 1/2" maximum space between vanes and a 3/4" trailing edge.
4. When W equals W2 and W1 is greater than 20" vanes shall be double vane type.

12 Ductwork Square Vane Elbows
NTS



Plan View

6 Supply Duct Takeoff - Air Terminal Units
NTS

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1	Addendum 1	3.11.2026
2	Addendum 2	3.19.2026

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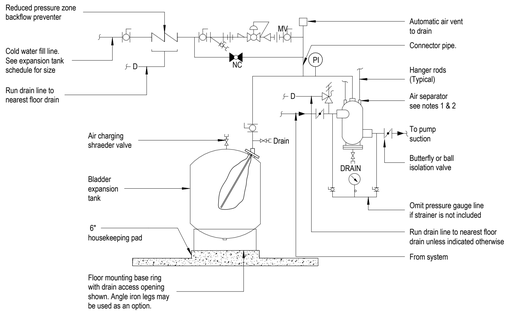
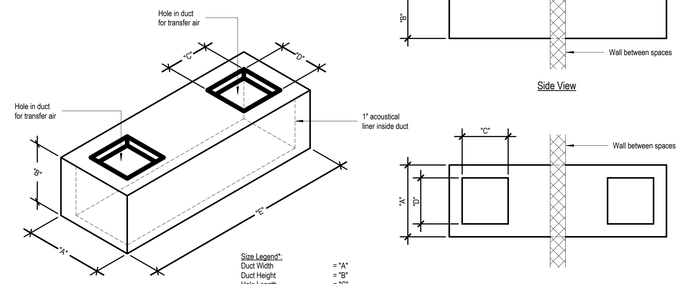


Designer's note:
Gate valves shall be indicated on either side of air separator as required by closeness of valves serving adjacent equipment. Where charging of tank is proposed, provide necessary tappings. Provide and show a low water alarm on charged systems to Indicate no water in tank.

Notes:
1. See expansion tank system schedule for component sizes.
2. For hot water system 2" and smaller and chilled water systems use in-line air purger in lieu of air separator.
3. Set pressure reducing valve so pressure at highest point in system has a minimum of 4 PSIG.
4. Provide strainer in air separator if indicated in expansion tank schedule.
5. Relief valve for chilled water system is shown. Omit when relief valve is shown on heat exchanger detail and system is used only for hot water heating.

2 Air Seperator, Expansion Tank and Make-Up Water Piping Detail
NTS



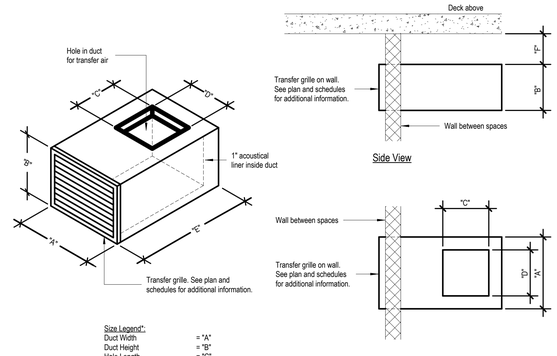
Size Legend*:
Duct Width = "A"
Duct Height = "B"
Hole Length = "C"
Hole Width = "D"
Duct Length = "E" = varies, see instances in drawings
Distance from deck = "F" = as high as possible, minimum 6"

*See Transfer Duct Schedule for sizes not listed here.

Notes:
Acoustical lining shall be manufactured by acoustical surfaces, inc., model: B 20-series.
Interior of ductwork and grilles shall be painted black.
Exterior of ductwork shall be painted to match wall/ceiling. See architectural RCP.

Transfer duct detail

1 Transfer Duct Details
NTS



Size Legend*:
Duct Width = "A"
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Hole Length = "C"
Hole Width = "D"
Duct Length = "E" = varies, see instances in drawings
Distance from deck = "F" = as high as possible, minimum 6"

*See Transfer Duct Schedule for sizes not listed here.

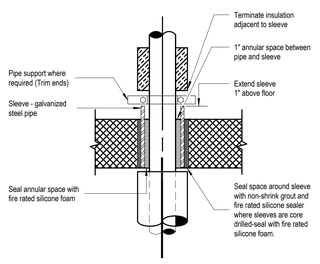
Notes:
Acoustical lining shall be manufactured by acoustical surfaces, inc., model: B 20-series.
Interior of ductwork and grilles shall be painted black.
Exterior of ductwork shall be painted to match wall/ceiling. See architectural RCP.

Side wall transfer duct detail

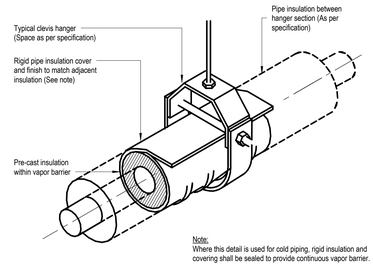
12 Vibration Isolation Curb Details
NTS

9 Typical Hanger From Steel For Pipes 4" and Smaller
NTS

3 Baseboard Radiator Piping Detail
NTS

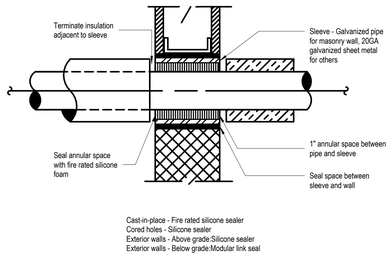


4 Floor Pipe Sleeve Detail
NTS



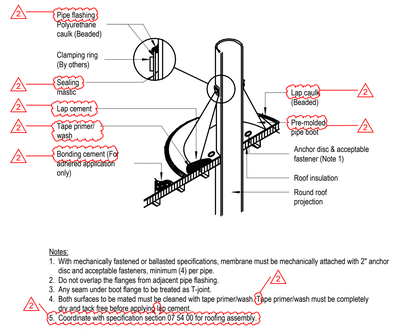
Note:
Where this detail is used for cold piping, rigid insulation and covering shall be sealed to provide continuous vapor barrier.

6 Rigid Insulation Hanger Detail
NTS



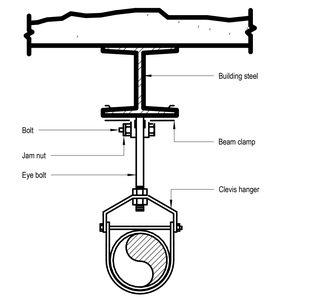
Cast-in-place - Fire rated silicone sealer
Cored holes - Silicone sealer
Exterior walls - Above grade:Silicone sealer
Exterior walls - Below grade:Modular link seal

5 Wall Sleeve Detail
NTS



Notes:
1. With mechanically fastened or ballasted specifications, membrane must be mechanically attached with 2" anchor disc and acceptable fasteners, minimum (4) per pipe.
2. Do not overlap the flanges from adjacent pipe flashing.
3. Any seam under boot flange to be treated as T-joint.
4. Both surfaces to be mated must be cleaned with tape primer/wash. (Tape primer/wash must be completely dry and tack free before applying lap cement.
5. Coordinate with specification section 07 54 00 for roofing assembly.

8 Single Roof Pipe Penetration Detail
NTS



10 Typical Hanger From Steel For Pipes 6" and Larger
NTS

13 Business Center 109 Relief Fan & Ductwork
1/8" = 1'-0"

Notes:
Support pump from piping only. Do not support pump from motor.

11 In-Line Pumps - Connections
NTS

7 Roof Curb Detail - Pipe Penetrations
NTS

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Project No: 25-25
Drawn / Checked: Author / Checker

Issue:

Bid & Permit		2.27.2026
2	Addendum 2	3.19.2026

MECHANICAL DETAILS

M503

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Roof Top Unit Schedule 1

Mark	Manufacturer and Model Number	Service	Max CFM	OA Min CFM	Fan Information																Electrical Information					Final Filter	
					Supply									Return/Exhaust													
					Motor Quantity	RPM	Type	Diameter	Drive	TSP	ESP	Motor HP(s)	BHP	Fan Quantity	RPM	Type	Diameter	Drive	TSP	ESP	Motor HP	BHP	Voltage	FLA	MCA	MOCP	SCCR*	Clean APD (or total clean APD for combo rack	Dirty APD (or total dirty APD from combo rack)
RTU-1	AAON : RNA-013-B-A-B-GAA0C-CB1L0-00-0FEAH-G00-00000-ABGBG-EC-000A-00-E0-0-AN0-E0-N000-00-000-A00A00-E0000B-000000B	First Floor Expansion	4000 CFM	1200 CFM	1	1618		22.0 in	Direct	3.25 in-wg	2.00 in-wg	5.00 hp	3.03 hp	1	851		11.0 in	Direct	0.51 in-wg	0.51 in-wg	2.00 hp	1.18 hp	208 V / 3	76.0 A	82.0 A	100 A		0.11 in-wg	0.35 in-wg

Roof Top Unit Schedule 2

Mark	Heating													Cooling											Weight	Remarks
	Gas Heating									Hot Gas Reheat						Airside Performance						DX Performance				
	Heating Capacity Output	Input Capacity	Heat Exchanger Material	Pressure Minimum	Pressure Maximum	Modulation	Heating CFM	EAT	LAT	APD	Type	Air Pressure Drop	Total Capacity	EAT DB	LAT DB	Total Cooling Capacity	Sensible Cooling Capacity	Cooling CFM	EAT DB	EAT WB	LAT DB	LAT WB	Face Velocity	APD	Refrigerant Type	Rows	FPI		
RTU-1	158000 Btu/h	195000 Btu/h	Stainless Steel	4.00 in-wg	14.00 in-wg	10:1	4000 CFM	49.0 °F	85.3 °F	0.050 in-wg		0.05 in-wg	94300 Btu/h	49.0 °F	74 °F	161900 Btu/h	117100 Btu/h	4000 CFM	79.2 °F	65.6 °F	51.9 °F	51.4 °F	274.30 FPM	0.23 in-wg	R-454B	4	14	2075 lb	All

Remarks:
1. Provide Vibrocurb III Insulated Top Duct Supports by Thybar Corporation, with the weight of the curb being 267 lbs.
2. *The contractor may reduce the equipment SCCR requirement based upon the results of the short circuit power system study (see Section 26 05 73 of the Project Manual).
3. Unit to include hot gas bypass and power exhaust fan
4. RTU shall include R-454 leak detection system and sequence integrated into unit.
5. RTU to come with terminal strip and no controls. Controls and sensors (other than the R-454 leak detection system and sequence) shall be by the controls contractor.

RTU Condensing Unit Schedule

Mark	Service	Efficiency (EER)	Efficiency (IEER)	Compressor Data				Condenser Motor Quantity
				Total Capacity	Refrigerant Type	Compressor Quantity	Compressor Type	
RTU-1	First Floor Expansion	11.95	14.9	146000 Btu/h	R-454B	2	Variable Capacity Scroll	2

VAV Schedule

Mark	Manufacturer and Model Number	Unit Location	CFM Range			Unit Size	Inlet Connection Size		Box & Coil APD	Max Discharge NC	Coil Side	Reheat Coil										Control Type	Remarks
			Max CFM	Reheat CFM	Min. Primary CFM		Round	Rectangular				Width	Height	Air Side		Water Side							
														EAT	LAT	EWT	LWT	MBH Capacity	Max GPM	Fluid Type	Glycol Percent	FPD	Number of Rows		
VAV-1	Price SDV	104 ADULT COLLECTION	1900 CFM	1265 CFM	910 CFM	14	14"		0.42 in-wg	20	Left Hand	20"	17 1/2"	55 °F	90 °F	140 °F	115.30 °F	48.0	3.95 GPM	Water	0%	2.04 ftH2O	2L	DDC	1,2,3,4,5,6
VAV-2	Price SDV	107 MEETING	1925 CFM	1185 CFM	1185 CFM	14	14"		0.43 in-wg	20	Right Hand	20"	17 1/2"	55 °F	90 °F	140 °F	113.60 °F	45.0	3.46 GPM	Water	0%	1.62 ftH2O	2L	DDC	1,2,3,4,5,7
VAV-3	Price SDV	105 DIGITAL COMMONS	770 CFM	615 CFM	615 CFM	10	10"		0.28 in-wg	20	Right Hand	14"	12 1/2"	55 °F	90 °F	140 °F	117.10 °F	23.4	2.07 GPM	Water	0%	1.17 ftH2O	2L	DDC	1,2,3,4,5,6
VAV-4	Price SDV	102 STUDY	165 CFM	125 CFM	125 CFM	8	8"		0.04 in-wg	20	Left Hand	12"	10"	55 °F	90 °F	140 °F	98.10 °F	4.8	0.23 GPM	Water	0%	0.02 ftH2O	2L	DDC	1,2,3,4,5,7
VAV-5	Price SDV	103 STUDY	145 CFM	125 CFM	125 CFM	8	8"		0.03 in-wg	20	Left Hand	12"	10"	55 °F	90 °F	140 °F	98.10 °F	4.8	0.23 GPM	Water	0%	0.02 ftH2O	2L	DDC	1,2,3,4,5,6

Remarks
1. Provide fiber free liner.
2. Provide access panel before the heating coil on the VAV box.
3. Provide controls and valve package on VAV from manufacturer.
4. VAV shall be capable of full shutoff (0 CFM)
5. Provide FF1 terminal liner.
6. Provide 2-way control valve.
7. Provide 3-way control valve.

Boiler Schedule

Tag	Manufacturer and Model Number	Fuel			Safety Valve	Voltage	Flue Outlet Dia	Combustion Air Inlet Dia	Water						Operating Weight	Remarks
		Type	Input	Output					Volume	Inlet Temp	Outlet Temp	Max Water PD (ft)	Flow Min	Flow Max		
B-1	P-K MACH CM-399	Fire Tube	399000 Btu/h	371000 Btu/h	75.00 psi	120 V/1	4"	5"	1.58 gal	100 °F	140 °F	11.5	7 GPM	37 GPM	313 lb	All
B-2	P-K MACH CM-399	Fire Tube	399000 Btu/h	371000 Btu/h	75.00 psi	120 V/1	4"	5"	1.58 gal	100 °F	140 °F	11.5	7 GPM	37 GPM	313 lb	All

Remarks
1. Provide BACNet communication card, header sensor, outdoor air sensor, and all accessories necessary to provide a fully functional system.
2. Boiler shall be commercial grade and not for residential applications.
3. Boiler shall be floor mounted.

Exhaust Fan Schedule

Mark	Manufacturer and Model Number	Actual Volume	TSP	ESP	Motor HP	BHP	Discharge Position	Operating RPM	Fan Energy Index (FEI)	Electrical Data				Remarks
										Voltage	FLA	MCA	MOCP	
EF-1	GREENHECK : SQ-98-VG	470 CFM	0.75 in-wg	0.75 in-wg	1.00 hp	0.23 hp	Inline	1760	1.04	120 V/1	12.6 A	20.0 A	30 A	1,2
EF-2	GREENHECK : SQ-20-VG	6600 CFM	1.30 in-wg	1.25 in-wg	5.00 hp	2.28 hp	Inline	1323	1.36	208 V/3	12.6 A	20.9 A	30 A	2,3

Remarks
1. Provide the following options and accessories:
   A. Vari-Green EC motor.
   B. Vari-Green dial on exterior of fan housing, mounted and wired.
   C. Junction box mounted and wired.
   D. Switch, NEMA-1, toggle, shipped separate.
   E. Galvanized housing.
   F. Aluminum centrifugal wheel.
   G. Composite inlet cone.
   H. Neoprene hanging isolator PN: 855837, including 4 isolators and 4 brackets.
   I. Damper shipped loose, inline, BD-330-PB-12X12, gravity operated, not coated.
   J. Provide integral overload protection.
2. Fan shall meet or exceed scheduled FEI value and be licensed to bear the AMCA CRP seal for FEI.

Remarks (Continued)
3. Provide the following options and accessories:
   A. Motor with Shaft Grounding
   B. Vari-Green EC motor.
   C. Control - 0-10 VDC input (no control provided, signal supplied by others)
   D. UL/cUL 705 Listed - "Power Ventilators"
   E. Junction box mounted and wired.
   F. Switch, NEMA-1, toggle, shipped separate.
   G. Galvanized housing.
   H. Aluminum mixed flow wheel.
   I. Galvanized inlet cone.
   J. Neoprene hanging isolator PN: 855838, including 4 isolators and 4 brackets.
   K. Provide integral overload protection.

Hydronic Pumps

Mark	Manufacturer and Model Number	Type	Location	Total Head	Flow Rated	Fluid Type	Glycol Percent	Operating Power	Motor HP	Electrical Information					Remarks
										Voltage	FLA	MCA	MOCP	SCCR*	
HHWP-1	GRUNDFOS : TPE3 40-200 S-A-G-A-BQQE-GYC	Inline	MECHANICAL M101	54.00 ftH2O	74 GPM	Water	0%	1.33 hp	1.50 hp	208 V/1	7	14	30	8 kA	All
HHWP-2	GRUNDFOS : TPE3 40-200 S-A-G-A-BQQE-GYC	Inline	MECHANICAL M101	54.00 ftH2O	74 GPM	Water	0%	1.33 hp	1.50 hp	208 V/1	7	14	30	8 kA	All
HHWP-3	GRUNDFOS : MAGNA3 32-120 GF	Inline	MECHANICAL M101	12.00 ftH2O	37 GPM	Water	0%	0.21 hp	0.25 hp	120 V/1	1	2	20	8 kA	All
HHWP-4	GRUNDFOS : MAGNA3 32-120 GF	Inline	MECHANICAL M101	12.00 ftH2O	37 GPM	Water	0%	0.21 hp	0.25 hp	120 V/1	1	2	20	8 kA	All

Remarks:
1. Include BACNet card and communication capability with in pump.
2. TPE3 and MAGNA pumps shall include pressure sensors, temperature sensors, and flow sensors within the pump from the manufacturer.
3. The contractor may reduce the equipment SCCR requirement based upon the results of the short circuit power system study (see Section 26 05 73 of the Project Manual).
4. Provide pumps with integral overload protection.

Radiator Schedule

Mark	Manufacturer and Model Number	Servicing		Radiator Dimensions			Mounting Position	Performance Per Radiator				Radiator Group	Control Valve	Remarks
		Name	Number	Length	Width	Height		EWT Heating	LWT Heating	BTUH Per Linear Foot	Total Heating Load (BTUH)	GPM		
RAD-1	Runtals : XFF-150	ADULT COLLECTION	104	4' - 11 13/128"	5 1/4"	7 1/2"	Floor Mounted	140 °F	100 °F	1490	7338	0.37	A	No	1,2,3
RAD-2	Runtals : XFF-150	ADULT COLLECTION	104	4' - 11 13/128"	5 1/4"	7 1/2"	Floor Mounted	140 °F	100 °F	1490	7338	0.37	A	No	1,2,3
RAD-3	Runtals : XFF-150	ADULT COLLECTION	104	4' - 11 13/128"	5 1/4"	7 1/2"	Floor Mounted	140 °F	100 °F	1490	7338	0.37	A	No	1,2,3
RAD-4	Runtals : XFF-150	ADULT COLLECTION	104	4' - 11 13/128"	5 1/4"	7 1/2"	Floor Mounted	140 °F	100 °F	1490	7338	0.37	A	No	1,2,3
RAD-5	Runtals : XFF-150	ADULT COLLECTION	104	4' - 11 13/128"	5 1/4"	7 1/2"	Floor Mounted	140 °F	100 °F	1490	7338	0.37	A	No	1,2,3
RAD-6	Runtals : XFF-150	ADULT COLLECTION	104	4' - 11 13/128"	5 1/4"	7 1/2"	Floor Mounted	140 °F	100 °F	1490	7338	0.37	A	Yes	1,2,3
RAD-7	Runtals : R2F-10	MEETING	107	7' - 0"	5"	29"	Floor Mounted	140 °F	100 °F	1250	8750	0.44	B	Yes	1,2,3
RAD-8	Runtals : R2F-2	BUSINESS CENTER	109	6' - 0"	5"	5 3/4"	Floor Mounted	140 °F	100 °F	427	2562	0.13	C	Yes	1,2,3
RAD-9	Runtals : R2F-2	SEMINAR	110	6' - 0"	5"	5 3/4"	Floor Mounted	140 °F	100 °F	427	2562	0.13	D	Yes	1,2,3
RAD-10	Runtals : RF-5	RR	112	2' - 0"	2"	14 3/8"	Floor Mounted	140 °F	100 °F	461	922	0.05	E	Yes	1,2,3
RAD-11	Runtals : RF-5	RR	113	2' - 0"	2"	14 3/8"	Floor Mounted	140 °F	100 °F	461	922	0.05	F	Yes	1,2,3
RAD-12	Runtals : RF-5	RR	115	2' - 0"	2"	14 3/8"	Floor Mounted	140 °F	100 °F	461	922	0.05	G	Yes	1,2,3
RAD-13	Runtals : R2F-3	BREAK ROOM	119	9' - 0"	5"	8 5/8"	Floor Mounted	140 °F	100 °F	542	4878	0.24	H	Yes	1,2,3
RAD-14	Runtals : R2F-2	YOUTH COLLECTION	121	9' - 8"	5"	5 3/4"	Floor Mounted	140 °F	100 °F	427	4126	0.21	I	Yes	1,2,3,4
RAD-15	Runtals : XFF-100	INNOVATION	123	3' - 3 51/128"	5 1/4"	7 1/2"	Floor Mounted	140 °F	100 °F	971	3188	0.16	J	Yes	1,2,3
RAD-16	Runtals : XFF-150	INNOVATION	123	4' - 11 13/128"	5 1/4"	7 1/2"	Floor Mounted	140 °F	100 °F	1490	7338	0.37	J	No	1,2,3
RAD-17	Runtals : XFF-150	INNOVATION	123	4' - 11 13/128"	5 1/4"	7 1/2"	Floor Mounted	140 °F	100 °F	1490	7338	0.37	J	No	1,2,3
RAD-18	Runtals : XFF-150	INNOVATION	123	4' - 11 13/128"	5 1/4"	7 1/2"	Floor Mounted	140 °F	100 °F	1490	7338	0.37	J	No	1,2,3
RAD-19	Runtals : R2F-2	ADULT COLLECTION	104	3' - 2"	5"	5 3/4"	Floor Mounted	140 °F	100 °F	427	1352	0.07	K	Yes	1,2,3

Notes: Control valve shall be sized to handle the combined flow of each radiator within the specified "Radiator Group".

Remarks:
1. Final color selection to be determined by architect with physical color sample submitted to architect for review.
2. Piping configuration shall be selected to match the piping layout shown on drawings.
3. Provide "HIGH" working pressure, 128 PSI maximum, test pressure 184 PSI maximum.
4. Provide 3-way control valve.

Air Device Schedule

Tag	Basis of Design			Slot Quantity	Slot Width	Neck Size		Max Noise Criteria (NC)	Border Type	Remarks
	Manufacturer and Model Number	Type	Overall Size			Round/Oval	Rectangular			
EG-1	Price : 81	Exhaust Grille	8" x 8"				6" x 6"	15	Surface Mount, F	
EG-2	Price : 81	Exhaust Grille	12" x 24"				10" x 22"	15	Flat Lay-in (15/16"), F	
L-1	Greenheck : EDK-430	Louvered Exhaust Grille	36 1/16" x 90 1/16"				36" x 90"	N/A	N/A	1
L-2	Greenheck : ESD-635	Louvered Intake Grille	54" x 60"				54" x 60"	N/A	N/A	1
LSD-1	Price : SDB150	Linear Slot Diffuser	48" x 6 7/8"	3	1 1/2"	10"		20	Flat Lay-in (15/16")	
LSD-2	Price : SDB150	Linear Slot Diffuser	48" x 6 7/8"	3	1 1/2"	10"		20	Flat Lay-in (15/16")	
LSD-3	Price : SDB150	Linear Slot Diffuser	48" x 6 7/8"	3	1 1/2"	10"		21	Flat Lay-in (15/16")	
LSD-4	Price : SDB150	Linear Slot Diffuser	48" x 4 5/8"	2	1 1/2"	8"		17	Flat Lay-in (15/16")	
LSD-5	Price : SDB150	Linear Slot Diffuser	48" x 3 5/8"	2	1"	7"		20	Concealed Plaster Frame, 8A	
LSD-6	Price : SDR100	Linear Slot Diffuser	48" x 3 5/8"	2	1"	7"		24	Concealed Plaster Frame, 8A	
RD-1	Price : SPD	Return Square Plaque Diffuser	24" x 24"			12"		21	Flat Lay-in (15/16"), 31	
RG-1	Price: 630	Return Grille	10" x 6"				8" x 4"	15	Surface Mount, F	
RG-2	Price: 610Z	Return Grille	32" x 8"				30" x 6"	25	Surface Mount, F	
RG-3	Price: 630	Return Grille	24" x 12"				22" x 10"	15	Flat Lay-in (15/16"), F	
RG-4	Price: 81	Return Eggcrate Grille	24" x 24"				22" x 22"	15	Flat Lay-in (15/16"), F	
SD-1	Price : SPD	Supply Square Plaque Diffuser	24" x 24"			6"		15	Flat Lay-in (15/16"), 31	
SD-2	Price : SPD	Supply Square Plaque Diffuser	24" x 24"			8"		15	Flat Lay-in (15/16"), 31	
SG-1	Price : 620	Supply Grille	9 11/16" x 5 11/16"				8" x 4"	15	Surface Mount, F	
SG-2	Price : 620	Supply Grille	27 11/16" x 7 11/16"				26" x 6"	23	Surface Mount, F	
SG-3	Price : 620	Supply Grille	24" x 12"				22" x 10"	15	Flat Lay-in (15/16"), F	

Remarks:
1. Final color selection to be determined by architect with physical color sample submitted to architect for review.

Plenum Heater Schedule

Mark	Manufacturer and Model Number	CFM Range		Heater KW	Electrical Data				Remarks
		Max	Min		Voltage	FLA	MCA	MOCP	
PH-1	F3G7203	270 CFM	70 CFM	EPFN-Class II	208 V/3	9	15	20	1
PH-2	F3G7203	270 CFM	70 CFM	EPFN-Class II	208 V/3	9	15	20	1

Remarks:
1. Unit shall be furnished with electric control panel containing integral disconnect switch. Include all control options to operate control sequence. See control sequence for details.

Transfer Duct Schedule

Mark	Transfer Duct Type	Duct Dimensions		Hole Dimensions		Max CFM	Remarks
		Duct Width ("A")	Duct Height ("B")	Hole Length ("C")	Hole Width ("D")		
TD-1	"L" Type	14"	14"	12"	12"	300 CFM	All
TD-2	"L" Type	14"	14"	12"	12"	300 CFM	All
TD-3	"L" Type	26"	14"	12"	24"	600 CFM	All
TD-4	"U" Type	14"	14"	12"	12"	300 CFM	All
TD-5	"U" Type	26"	14"	12"	24"	600 CFM	All
TD-6	"U" Type	26"	14"	12"	24"	600 CFM	All
TD-7	"U" Type	14"	14"	12"	12"	300 CFM	All
TD-8	"U" Type	14"	14"	12"	12"	300 CFM	All
TD-9	"U" Type	14"	14"	12"	12"	300 CFM	All
TD-10	"U" Type	38"	26"	24"	36"	1800 CFM	All

Remarks:
1. See associated transfer duct detail for construction, lining, potential need for grilles, etc.

Unit	Space Number	Level	Space Name	Floor Area (ft2) "Ac"	Occupancy Classification	Occupant Density (#/1000 ft2) (Ab1000 ft2) (Aa)	Population "Pz"	Exhaust Airflow for Code Ventilation (CFM) = (a*Aa)	Outside Air Supply
ETR HVAC 2	101	FIRST FLOOR	VESTIBULE	137.72	Corridors	0	0	-	10.33
	102	FIRST FLOOR	STUDY	93.43	Conference/meeting	50	1	-	18.26
	103	FIRST FLOOR	STUDY	93.43	Conference/meeting	50	1	-	18.26
	104	FIRST FLOOR	ADULT COLLECTIONS	1368.156	Libraries	10	14	-	302.72
						TOTALS:	28	-	390.99
ETU-1	M101	MECHANICAL, MEZZANINE	MECHANICAL	674.11	Storage rooms	0	0	-	84.13
	104	FIRST FLOOR	ADULT COLLECTIONS	819.104	Libraries	10	10	-	201.83
	106	FIRST FLOOR	MEZ ACCESS	92.61	Corridors	0	0	-	7.82
	107	FIRST FLOOR	MEETING	1925.00	Conference/meeting	50	39	-	347.50
	107A	FIRST FLOOR	STOR	23.87	Storage rooms	0	0	-	1.83
	107B	FIRST FLOOR	ELEC	56.28	Storage rooms	0	0	-	8.44
	107C	FIRST FLOOR	STOR	79.44	Storage rooms	0	0	-	11.92
	108	FIRST FLOOR	EXT. STOR	66.88	Storage rooms	0	0	-	10.33
	122	FIRST FLOOR	RR	92.89	Toilet rooms - public (g)	50	2	-	100.00
	123	FIRST FLOOR	INNOVATION	337.09	Libraries	10	8.0	-	32.92
	123A	FIRST FLOOR	STOR	62.37	Storage rooms	0	0	-	10.26
						TOTALS:	68	-	825.00
HVAC 3	105	FIRST FLOOR	DIGITAL COMMONS	1363.05	Libraries	10	14	-	204.95
	109	FIRST FLOOR	BUSINESS CENTER	147.41	Copy, printing rooms	4	1	73.71	17.31
	110	FIRST FLOOR	SEMINAR	147.41	Conference/meeting	50	7	-	52.34
	111	FIRST FLOOR	CORRIDOR	115.25	Corridors	0	0	-	8.84
	112	FIRST FLOOR	RR	92.89	Toilet rooms - public (g)	50	2	70.00	-
	113	FIRST FLOOR	RR	96.96	Toilet rooms - public (g)	50	2	70.00	-
	114	FIRST FLOOR	JAN	15.03	Storage rooms	0	0	-	2.35
	115	FIRST FLOOR	RR	91.61	Toilet rooms - public (g)	50	2	70.00	-
	116	FIRST FLOOR	VESTIBULE	73.33	Corridors	0	0	-	5.52
						TOTALS:	29	295.00	440.00
ETR HVAC 1	117	FIRST FLOOR	STAFF WORK	232.78	Office spaces	5	2	-	20.56
	118	FIRST FLOOR	STAFF RR	52.81	Toilet rooms - public (g)	50	2	70.00	-
	119	FIRST FLOOR	BREAK ROOM	188.48	Office spaces	5	2	-	24.83
	120	FIRST FLOOR	COPY	77.45	Office spaces	5	1	-	10.20
	121	FIRST FLOOR	YOUTH COLLECTION	5483.19	Libraries	10	56	-	737.53
						TOTALS:	67	70.00	793.12
			TOTALS:	9065.34			143	365.00	2,049.99

Air Balance	
ΔP at .06 [ft/min²]	543.92
Outside Air [cfm]	2,034.22
Supply Air	2,034.22
Relief Air	1,136.59
Relief Air %	55.87
Total Exhaust	1,490.30

Project: FLEET BRANCH RENOVATION AND EXPANSION
7224 Broadway Ave Cleveland, OH 44105

Algebra AEC
Engineering and Sustainability Consulting

Landscape Architect:
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Project No: 25-25
Drawn / Checked: PDV / SSA

Issue:

Bid & Permit		2.27.2026
1	Addendum 1	3.11.2026
2	Addendum 2	3.19.2026
6	Bulletin 1	8.20.2026

MECHANICAL SCHEDULES

M601

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Water Heating Coil Schedule

Mark	Manufacturer and Model Number	Heating Capacity (MBH)	Airside Performance					Waterside Performance					Coil Rows	Fin Size and Material	FPI	Coil Height	Coil Width	Coil Depth	Weight	Remarks
			Heating Airflow	EAT DB	LAT DB	Face Velocity	APD	Fluid Type	EWT	LWT	Max GPM	WPD (Ft of H2O)								
HC-HVAC-3	Precision Coils : HWS8S02B11-30x30-RH	120.2	17050 CFM	55 °F	92.0 °F	480 FPM	0.23 in-wg	Water	140 °F	100 °F	6.1	8.1	2	0.006" Aluminum	11	30"	30"	6 1/2"	57.0 lbf	None
HC-HVAC-2	Precision Coils : HWS8S02B11-30x30-RH	92.5	17050 CFM	55 °F	97.7 °F	320 FPM	0.12 in-wg	Water	140 °F	100 °F	4.7	5	2	0.006" Aluminum	11	30"	30"	6 1/2"	57.0 lbf	None
HC-HVAC-1	Precision Coils : HWS8S02B09-30x30-RH	77.9	17050 CFM	55 °F	91.0 °F	320 FPM	0.10 in-wg	Water	140 °F	100 °F	3.9	3.7	2	0.006" Aluminum	11	30"	30"	6 1/2"	54.0 lbf	None

Condensing Unit Schedule

Mark	Manufacturer and Model Number	Service	Efficiency (EER)	Efficiency (SEER)	Total Capacity	Compressor Data			Condenser Data		Electrical Data					Weight (lbs.)	Remarks
						Refrigerant Type	Compressor Quantity	Compressor Type	Fan Quantity	Airflow (CFM)	Voltage	FLA	MCA	MOCP	Hertz		
CU-AC-1	Samsung : RXX12AMD	AC-1	13.25	24	12000 Btu/h	R-32	1	Inverter Driven, Twin BLDC Rotary	1	1589 CFM	208 V/1	12.0 A	15.0 A	20 A	60 Hz	69.20 lbf	All

Remarks
1. Provide low ambient capabilities.
2. Provide front and back wind baffels.

Air Conditioning (AC) Unit Schedule

Mark	Manufacturer and Model Number	Location	Service	CFM Range	Total Capacity MBH	Electrical Data				Weight (lbs.)	Remarks
						Voltage	FLA	MCA	MOCP		
AC-1	Daikin : FXAQ18PVJU	TELEDATA 107B	MDF 106	400 CFM - 500 CFM	18000 Btu/h	208 V/1	12.0 A	15.0 A	20 A		1

Remarks
1. Provide and install integral condensate pump with unit which is powered from the split system.
2. Power provided by outdoor unit.

Fire and Fire-Smoke Damper Schedule

Mark	Damper Size		Fire Rated
	Width	Height	
FD-1	2' - 4"	1' - 2"	2.0 h
FD-2	2' - 4"	1' - 2"	2.0 h
FD-3	1' - 10"	1' - 0"	2.0 h
FD-4	1' - 4"	0' - 10"	2.0 h
FD-5	0' - 8"	0' - 10"	2.0 h
FD-6	2' - 0"	1' - 0"	2.0 h
FD-7	1' - 4"	1' - 4"	2.0 h
FD-8	2' - 2"	1' - 2"	2.0 h
FD-9	1' - 2"	2' - 6"	2.0 h
FD-10	1' - 6"	2' - 2"	2.0 h

Expansion Tank Schedule

Tag	Manufacturer and Model Number	Volume	Dimensions		Secondary Pipe Connection Size	Weight	Max Op. Pressure	Max Op. Temperature	Remarks
			Diameter	Height					
EXT-1	Amtrol 35LBC	10 gal	10"	37"	1"	67 lb	125 psi	240 °F	1,2

6

Remarks:
1. Piping connections to be flanged or threaded.
2. Include 3/4" NPT top vent connection and 1" NPT bottom drain.

Air Separator Schedule

Tag	Manufacturer and Model Number	Pressure Drop	Height	Port-to-Port	System Connection Pipe Dia.	Drain Pipe Dia.	Weight	Remarks
ADSP-1	SPIROTHERM : VDN200	1.50 ftH2O	25.3"	15.2"	2"	1"	107 lb	1,2,3

6

Remarks:
1. Fabricated in accordance with ASME Section VIII, Division 1.
2. Standard rating is 150 PSI at 270F.
3. Unit shall be selected at a velocity of 6 ft. per second or less inlet velocity.

6

Silencer Schedule

Tag	Qty	Model	Silencer Information: Width (in)	Height (in)	Duct Dia. (in)	Length (in)	LegA (in)	LegB (in)	Duct System Information: Air Direction	Flow (CFM)	Velocity (FPM)	PD (in. w.g.)	PD w/SE (in. w.g.)	Dynamic Insertion Loss (dB) / Generated Noise (dB): 63	125	250	500	1k	2k	4k	8k
SIL-1	1	RWT1235	30.00	30.00		72.00			Reverse	6600	1056	0.25		9	16	29	45	49	42	27	18
Cond Notes: Galvanized, CLI (22 GA), 2/G4 Perf Liner, Fiberglass, Inlet: 2" Slip, Outlet: 2" Slip														48	25	29	41	45	46	46	38

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MECHANICAL SCHEDULES

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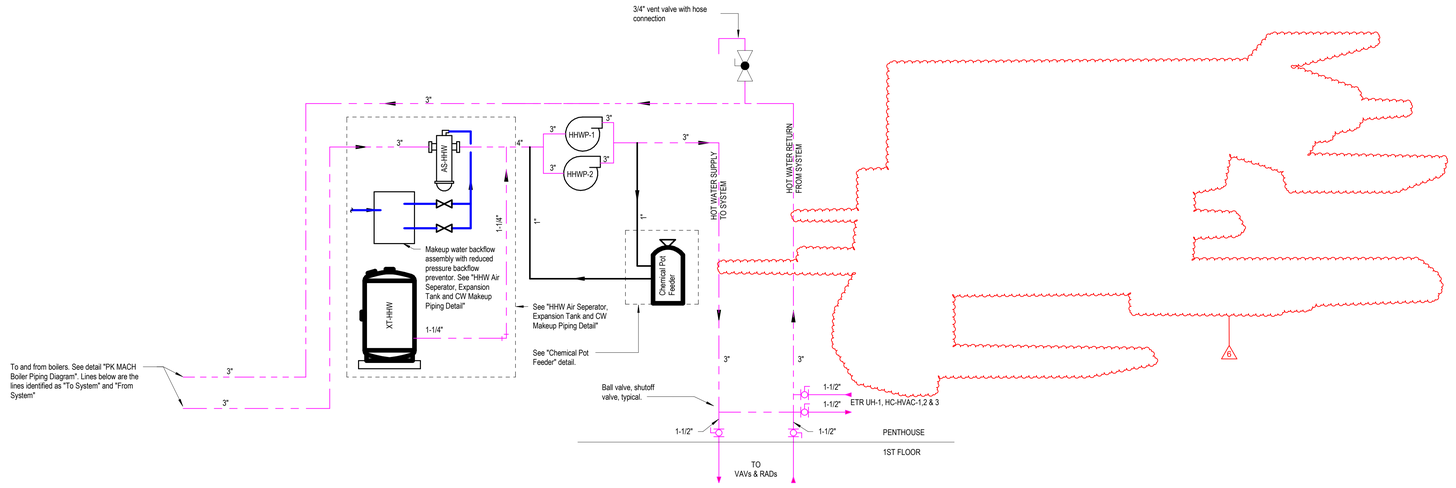

1 Hydronic One-Line Diagram
NTS

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MECHANICAL DIAGRAMS

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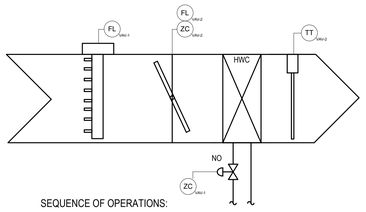
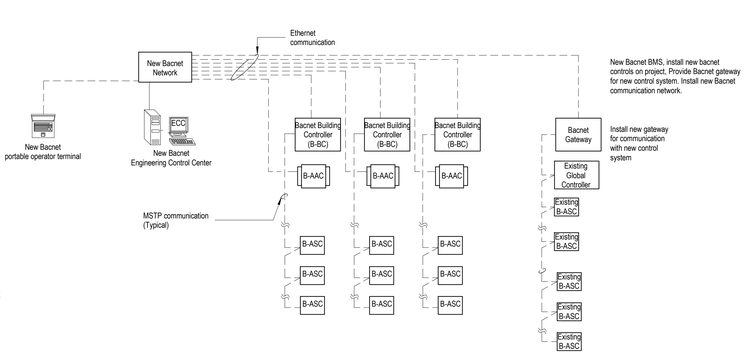


SEQUENCE OF OPERATIONS:

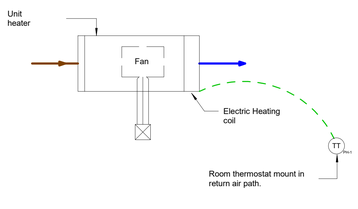
1. GENERAL
   - A. THIS SEQUENCE APPLIES TO ALL SUPPLY VOLUME CONTROL BOXES NOT SPECIFICALLY LISTED IN ANY OTHER
   - B. SEQUENCE OF OPERATION.
   - C. AIR FLOW CONTROL DEVICE SHALL MAINTAIN REQUIRED AIR FLOW REGARDLESS OF UPSTREAM STATIC PRESSURE (PRESSURE INDEPENDENT).
   - D. SEQUENCE OF OPERATION SHALL BE CONTROLLED BY LOCAL TERMINAL CONTROL UNITS MOUNTED ON EACH VOLUME CONTROL BOX, AND COMMUNICATING OVER THE BMS NETWORK.
   - E. OCCUPIED / UNOCCUPIED, AIRFLOW & TEMPERATURE SETPOINTS, AND OCCUPANCY SCHEDULING SHALL BE
   - F. ADJUSTABLE FROM THE BMS WITHOUT HARDWARE OR SOFTWARE REVISIONS. THE BCS SHALL BE CAPABLE OF CHANGING SETPOINTS AND STATUS GLOBALLY AS WELL AS ON AN INDIVIDUAL BOX BASIS.
   - G. LOCAL SPACE TEMPERATURE TRANSMITTER SHALL BE CAPABLE OF SETPOINT ADJUSTMENT WITHIN A BMS DEFINED ADJUSTABLE RANGE.
   - H. TRANSMITTER SHALL ALSO BE CAPABLE OF OVERRIDING THE BMS OCCUPANCY SCHEDULING TO COMMAND THE TERMINAL BOX INTO A TEMPORARY OCCUPIED MODE FOR A BMS DEFINED, ADJUSTABLE TIME PERIOD (MAX. 2 HOURS.)
2. OCCUPIED MODE
   - A. OCCUPANCY SCHEDULE SHALL BE CONTROLLED BY THE BMS (ADJUSTABLE).
   - B. COOLING
     - a. IN THE OCCUPIED MODE, THE VOLUME CONTROL DEVICE SHALL OPEN TO THE MINIMUM DAMPER POSITION AND MODULATE TO MAINTAIN THE APPROPRIATE ROOM SPACE TEMPERATURE.
     - b. THE REHEAT VALVE SHALL MODULATE TO MAINTAIN SPACE SETPOINT (ADJUSTABLE)
       - A COOLING MINIMUM AND MAXIMUM VALUE SHALL BE SET IN THE BMS
   - C. HEATING
     - a. IN THE OCCUPIED MODE, THE VOLUME CONTROL DEVICE SHALL OPEN TO THE MINIMUM DAMPER POSITION AND MODULATE TO MAINTAIN THE APPROPRIATE ROOM SPACE TEMPERATURE.
     - b. THE REHEAT VALVE SHALL MODULATE TO MAINTAIN SPACE SETPOINT (ADJUSTABLE)
       - A HEATING MINIMUM AND MAXIMUM VALUE SHALL BE SET IN THE BMS
3. UNOCCUPIED MODE
   - A. FOR THOSE UNITS WITH REHEAT, IF THE SPACE TEMPERATURE FALLS BELOW 60°F, THE VOLUME CONTROL DEVICE SHALL OPEN TO ITS MINIMUM POSITION AND THE HOT WATER VALVE SHALL MODULATE TO MAINTAIN 60°F.
   - B. MORNING WARMUP SHALL BEGIN 1 HOUR BEFORE THE START OF THE OCCUPIED PERIOD. THE VOLUME CONTROL DEVICE SHALL BE FULL OPEN AND THE HOT WATER CONTROL VALVE SHALL MODULATE TO RAISE THE TEMPERATURE TO THE OCCUPIED SETPOINT.a
4. SAFE MODE
   - A. UPON LOSS OF POWER ALL CONTROLS SHALL GO TO THEIR FAIL SAFE POSITION.
   - B. UPON RESTORATION OF NORMAL POWER, ALL EQUIPMENT SHALL AUTOMATICALLY RESTART AND OPERATE AS SPECIFIED ABOVE.
5. ALARMS AND SAFETIES
   - A. THE BUILDING CONTROLS SYSTEM SHALL ISSUE AN ALARM FOR ANY OF THE FOLLOWING:
     - a. SPACE TEMPERATURE IS ABOVE OR BELOW SETPOINT FOR MORE THAN 5 CONSECUTIVE MINUTES.
     - b. REHEAT VALVE IS COMMANDED OPEN BUT NO INCRESAE IN SUPPLY AIR TEMPERATURE IS DETECTED.
     - c. VAV DAMPER IS COMMANDED TO CHANGE POSITION BUT NO CHANGE IN AIRFLOW IS DETECTED WITHIN 5 MINUTES.
6. WHEN MULTIPLE THERMOSTATS HAVE WIRES GOING TO A DEVICE, OR A DEVICE IS RECEIVING WIRES FROM MULTIPLE THERMOSTATS, THE CONTROLS FOR THAT THERMOSTAT AND DEVICE SHALL BE AVERAGING.

6 Controls-VAV Terminal with Reheat
NTS



Notes:
1. Install new bacnet (b-aws) Engineering Control Center (ECC).
2. Install new controllers.
3. Install new bacnet gateway with full communication to existing controllers.
4. Install new bacnet communication network.
5. Install multiple building controllers as required.
6. Install new controllers (B-AAC/B-ASC) as required.
7. Provide new portable operators terminal.

8 BACnet System for Architecture Option 2
NTS

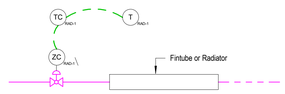


General
1. See control points list for alarm, trend, type, fail safe, graphical and other requirements for points in this diagram.
2. All points shall be easily adjustable through the BMS graphical interface on the main screen for the space.

Hot Water Cabinet Unit Heater Sequence:
1. Plenum heater shall operate on a schedule as set by the controls contractor.
2. The room temp set point will be 60° (Adj).
3. Heat will be enabled as required to maintain space temp set point.
4. Fan shall operate every 10 minutes for 1 when outdoor temperature is below 50 F to mix air in vestibules and test air temperature of vestibule as the thermostat should be mounted within the return air section of the unit.
5. Fan and electric heating coil shall continue to operate to maintain temperature set point of space..

Alarms
1. Room temperature is below setpoint for more than 15 consecutive minutes.

15 Plenum Heater Controls
1" = 1'-0"

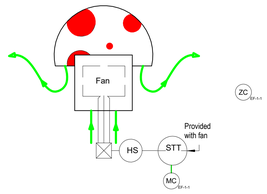


General
1. See control points list for alarm, trend, type, fail safe, graphical and other requirements for points in this diagram.
2. All points shall be easily adjustable through the BMS graphical interface on the main screen for the space.

Fintube and Radiator Sequence of Operation (Heating Only):
1. Fintube unit shall operate on a schedule as set by the BMS.
2. Modulate valve ZC to maintain space set point and fan shall cycle with temperature as sensed in the rooms by space temperature sensor T. Modulate proportionally, when the space temperature is off from setpoint by more than 5F (adjustable) the valve shall be 100% open. When the space temperature is satisfied the valve shall be 0% open. The valve shall modulate frfom 0% to 100% open between these values.
3. See control points list for alarm, trend, type, fail safe, graphical and other requirements for points in this diagram.
4. All points shall be easily adjustable through the BMS graphical interface on the main screen for the space.

Alarms
1. Room temperature is below setpoint for more than 30 consecutive minutes.

7 Fintube and Radiator Heating Only Controls
NTS

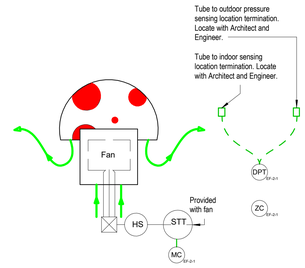


General
1. See control points list for alarm, trend, type, fail safe, graphical and other requirements for points in this diagram.
2. All points shall be easily adjustable through the BMS graphical interface on the main screen for the space.
3. This sequence applies to all exhaust fans in the project.

Exhaust Fan Sequence:
1. When enabled, the isolation control damper downstream of the exhaust fan shall open.
2. Once fan proves open, the Exhaust Fan shall operate continuously on a schedule as set by the BMS. Contractor shall coordinate with the Owner to determine exact schedule. Initial schedule shall be 8AM to 5PM (adj).

Alarms
1. Room temperature is below set point for more than 30 consecutive minutes.
2. If fan is commanded to run and no current is sensed after 2 minutes.

16 CONTROL DIAGRAM - EF-1 - Restroom
NTS



General
1. See control points list for alarm, trend, type, fail safe, graphical and other requirements for points in this diagram.
2. All points shall be easily adjustable through the BMS graphical interface on the main screen for the space.
3. This sequence applies to all exhaust fans in the project.

Exhaust Fan Sequence:
1. When enabled, the isolation control damper downstream of the exhaust fan shall open.
2. Once fan proves open, the Exhaust Fan shall operate continuously to maintain proper air balance in the library. The library should maintain a slightly positive pressure.

Alarms
1. Room temperature is below set point for more than 30 consecutive minutes.
2. If fan is commanded to run and no current is sensed after 2 minutes.

17 CONTROL DIAGRAM - EF-2 - Relief
NTS

Control Contractors / Vendors

The controls contractor for the project is to be bid by Siemens only.

A. GENERAL
   a. INTEGRATE THE POWER SURGE COUNTER ON THE SURGE PROTECTION DEVICE (SEE POWER PLANS) INTO THE BMS AND INDICATE TOTAL NUMBER OF SURGES WITHIN THE BMS GRAPHICS, WEEKLY MONTHLY, AND YEARLY.
   b. NOTE THE POWER SURGE COUNTER IS PROVIDED BY THE EC, INTEGRATION INTO THE BMS IS BY THE CONTROLS CONTRACTOR.

13 Controls - Power Surge Counter
NTS

A. GENERAL
   a. INTEGRATE THE LIGHTING CONTROL SYSTEM INTO THE BMS. BASIS OF DESIGN SYSTEM IS LUTRON VIVE PREMIUM WIRELESS HUB. SEE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR DETAILS.
   b. THE BMS SHALL BE ABLE TO SEE WHICH LIGHTING ZONES ARE ON, OFF, AND AT WHAT PERCENTAGE POWER THEY ARE AT.
   c. THE BMS SHALL BE ABLE TO TURN LIGHTS ON AND OFF, SCHEDULE LIGHTING, AND SET POWER LEVEL FOR DIMMABLE LIGHTS THROUGH THE INTEGRATION WITH THE LIGHTING SYSTEM.

12 Controls - Lighting Control System Integration
NTS

A. GENERAL
   a. INTEGRATE THE POWER METER (ELECTRICITY) INTO THE BMS AND INDICATE TOTAL ENERGY USAGE WITHIN THE BMS. WEEKLY MONTHLY, AND YEARLY.
   b. NOTE THE ELECTRIC POWER METER IS PROVIDED BY THE EC, INTEGRATION INTO THE BMS IS BY THE CONTROLS CONTRACTOR.

11 Controls - Power Meter
NTS

A. GENERAL
   a. THE CONTROLS CONTRACTOR SHALL PURCHASE A DOMESTIC COLD WATER METER AND PROVIDE IT TO THE PLUMBING CONTRACTOR FOR INSTALLATION.
   b. INTEGRATE THE WATER METER INTO THE BMS AND INDICATE TOTAL WATER USAGE WITHIN THE BMS, WEEKLY MONTHLY, AND YEARLY.

10 Controls - Domestic Cold Water Meter
NTS

A. GENERAL
   a. THE CONTROLS CONTRACTOR SHALL PURCHASE A NATURAL GAS METER AND PROVIDE IT TO THE MECHANICAL CONTRACTOR FOR INSTALLATION.
   b. INTEGRATE THE NATURAL GAS METER INTO THE BMS AND INDICATE TOTAL ENERGY USAGE WITHIN THE BMS, WEEKLY MONTHLY, AND YEARLY.

4 Controls - Natural Gas Meter
NTS

A. GENERAL
   a. THE HOT WATER DIFFERENTIAL PRESSURE TRANSMITTER (DPT) SHALL BE AVAILABLE AND VISIBLE IN THE BMS.
   b. THE DPT SHALL BE TRENDED AT AN INTERVAL OF 15 MINUTES FOR A PERIOD OF 2 YEARS CONTINUOUSLY.
   c. SEE M101R FOR LOCATION OF HOT WATER DPT SENSOR.

5 Controls - Hot Water DPT
NTS

A. GENERAL
   a. INTEGRATE THE ROOF SNOW MELT (SEE POWER PLANS, AND DETAIL 5 ON E503) INTO THE BMS.
   b. CONTROL CONTRACTOR TO PROVIDE
      - CTS TO MEASURE POWER.
      - PROVIDE OUTPUT RELAYS TO OVERRIDE AND FORCE THE SYSTEM ON IF COMMANDED TO FROM THE BMS.
      - PROVIDE INPUT RELAYS TO DETECT SNOW SENSOR
      - PROVIDE INPUT FOR AMBIENT TEMPERATURE SENSOR.
   c. SHOW ALL POINTS ON GRAPHICS

14 Controls - Roof Snow Melt
NTS

Controls Symbols

- T — Room thermostat/Transmitter - Wall mount
- S BMS — Room temperature sensor / transmitter - wall mount
- M — Room humidistat (Moisture)/Transmitter - Wall mount
- TT — Temperature Transmitter
- TT — Temperature transmitter, Averaging element
- MT — Moisture (Humidity) Transmitter
- PT — Pressure Transmitter
- SPS — Static Pressure Sensor
- FT — Flow Transmitter
- IT — Current Transmitter
- CT — Conductivity Transmitter
- SD — Smoke Detector
- PDT — Pressure Differential Transmitter
- PDS — Pressure Differential Switch
- HS — Hand Switch (Hand-off-auto Switch)
- ZC — Valve or damper position controller
- KR — Local recording time clock (Runtime)
- TSL — Temperature switch, Low (Freezestat)
- TSH — Temperature switch, High (Freezestat)
- LC — Level Controller
- LT — Level Transmitter
- PSH — Pressure Switch High
- PSL — Pressure Switch Low
- EPT — Electronic to Pneumatic Transducer
- AT CO2 — Carbon dioxide Transmitter
- AT CO — Carbon monoxide Transmitter
- AT OC — Occupancy Sensor
- LTCP — Local Temperature Control Panel
- HVAC — HVAC Control Panel
- VSMC — Variable Speed Motor Controller
- ECC — Integrate control point on remote graphics workstation at Energy Control Center
- TC — Temperature Controller for room, group of rooms, or group of equipment. See sequence of operation
- PC — Pressure Controller. See sequence of operation
- SC — Speed Controller. See sequence of operation
- FC — Flow Controller. See sequence of operation
- FSH — Flow Switch High
- FSL — Flow Switch Low
- KC — Time Clock controlling equipment on a schedule
- DS — Door Switch
- PO — Posotion Transmitter
- SST — Starter (Start / Stop)
- SS — System / Variable Setpoint
- End Switch



Control Point Nomenclature

Controls Symbols

- Temperature sensing element for transmitting temperature to EMCS (Provide 12 inches [200mm] minimum length in duct when space permits.)
- A — Sensor with averaging element to transmit temperature to EMCS
- Motor Starter
- M — Electric Operated Control Damper/or Valve

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MECHANICAL CONTROLS

M701

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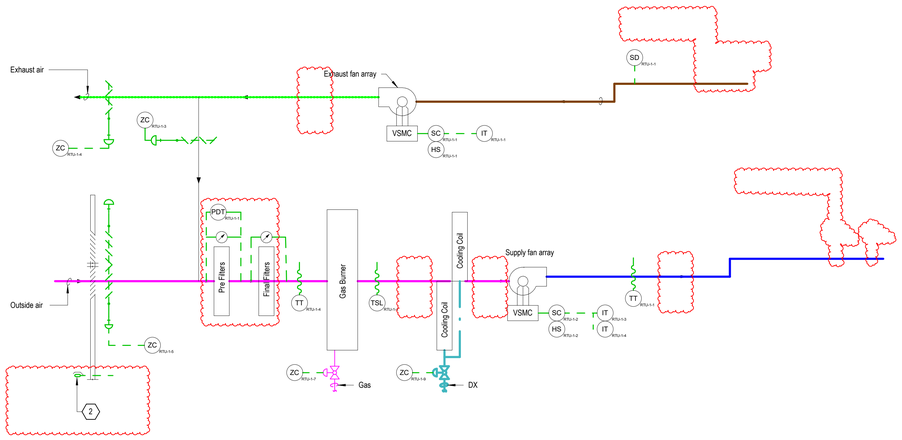
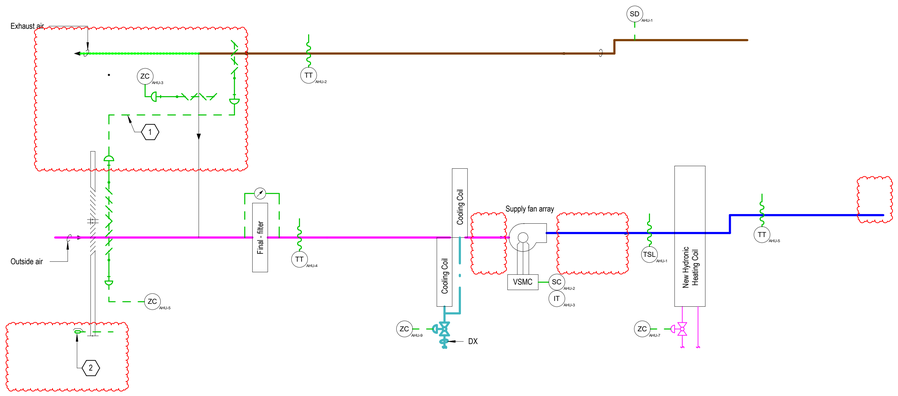
Sheet Notes - M702

#	Note
1	Mechanically link the RA damper to the OA damper.
2	OA DB and Humidity from existing OA and Humidity sensor to be reused. Contractor to verify, recalibrate and integrate into the BMS as a shared point.



1 VAV RTU Unit Control Points Diagram
NTS



3 CV AHU Unit Control Points Diagram
NTS

A. GENERAL
1. THIS CONTROL SEQUENCE APPLIES TO EXISTING CONSTANT VOLUME AHUs, HVAC-1, HVAC-2, AND HVAC-3. SEE LOCATIONS OF EXISTING UNITS IN PENTHOUSE PLANS
2. ALL CONTROLS DESCRIBED HEREIN SHALL BE PERFORMED BY THE BMS. PROVIDE DDC INTERFACE, WIRING, RELAYS, CONTROLS, AND PROGRAMMING AS REQUIRED.
3. WHEN THE AHU IS OFF-LINE VIA THE START/STOP COMMAND, THE SERVICE DISCONNECT(S), OR THE SAFETIES; COMPONENTS SHALL GO TO THEIR FAIL-SAFE POSITIONS. ALL SET POINTS SHALL BE ADJUSTABLE VIA THE BMS.
4. FILTER STATUS SHALL BE MONITORED BY DIFFERENTIAL PRESSURE INDICATORS ACROSS THE FILTERS. INDICATORS SHALL BE DWYER MAGNEHELICS OR EQUAL.
5. THE CONTROL SYSTEM SHALL MONITOR THE SUPPLY AND RETURN FAN STATUS VIA CURRENT SENSING RELAYS.
6. ALL SET POINTS SHALL BE ADJUSTABLE THROUGH THE BMS WITHOUT SOFTWARE OR HARDWARE MODIFICATIONS.

B. FAN CONTROL AND STARTUP
1. THE AHU SHALL OPERATE DURING THE OCCUPIED PERIOD AS DEFINED BY THE BMS SYSTEM (ADJUSTABLE).
2. UPON STARTUP THE OA DAMPER (WITH ITS LINKED RELIEF DAMPER) SHALL BE COMMANDED OPEN TO MINIMUM POSITION; ONCE PROVEN OPEN, THE SUPPLY FAN SHALL BE COMMANDED ON (ADJUSTABLE).
3. ONCE THE DAMPERS PROVE OPEN, THE SUPPLY AND RETURN FANS SHALL BE COMMANDED ON.
4. THE SPEED SHALL BE CONSTANT

C. OPTIMAL STARTUP
1. THE UNIT SHALL START PRIOR TO SCHEDULED OCCUPANCY BASED ON THE TIME NECESSARY FOR THE ZONES TO REACH THIER OCCUPIED SETPOINTS. THE START TIME SHALL AUTOMATICALLY ADJUST BASED ON CHANGES IN THE OUTSIDE AIR TEMPERATURE AND ZONE TEMPERATURE. OUTSIDE AIR TEMPERATURE FOR OPTIMAL START SHALL BE TAKEN FROM THE EXISTING SHARED OA SENSOR.

D. UNOCCUPIED MODE
1. THE SYSTEM SHALL BE OPERATED AT A SETBACK MODE DURING UNOCCUPIED MODE. THE OUTSIDE AIR DAMPER AND RELIEF AIR DAMPER SHALL BE CLOSED.
2. UPON A CALL FOR HEAT DURING THE UNOCCUPIED PERIOD, UNIT SHALL KEEP THE MECHANICALLY LINKED OUTDOOR AIR DAMPER CLOSED AND RETURN AIR DAMPER OPEN 100%, THEN THE UNIT SHALL BE COMMANDED ON.

D2. MORNING WARM UP AND COOL DOWN
1. THE UNIT SHALL BE COMMANDED ON, AND SHALL OPERATE AS DESCRIBED ABOVE, UPON A CALL FOR MORNING WARMUP/COOL-DOWN OR FOR ECONOMIZER OPERATION.
2. THE SUPPLY AND RETURN FANS SHALL HAVE A MINIMUM OF 3 MINUTES RUNTIME (ADJUSTABLE) TO PREVENT SHORT CYCLING.

E. SUPPLY AIR PRESSURE CONTROL
1. SUPPLY FAN SPEED SHALL RUN AT A CONSTANT VOLUME.

F. DISCHARGE CONDITIONS CONTROL
1. PROVIDE ADEQUATE DEADBANDS TO PREVENT SIMULTANEOUS HEATING AND COOLING.
2. PROVIDE SUPPLY AIR TEMPERATURE RESET BASED UPON DEMAND BETWEEN 55°F AND 62°F ONCE THE SUPPLY FAN HAS BEEN MODULATED TO MINIMUM SPEED.
3. THE BMS SHALL MODULATE THE HEATING WATER CONTROL VALVES OR THE DX COOLING TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SET POINT FOR THE AHU.
4. ALL DISCHARGE AIR TEMPERATURE CONTROL FROM TT-AHU-5

J. ECONOMIZER
1. UPON A CALL FOR COOLING FROM THE BUILDING AUTOMATION, WHEN THE OUTDOOR AIR ENTHALPY IS WITHIN THE SPECIFIED RANGE, THE BMS SHALL CLOSE THE RETURN DAMPER / OPEN THE OUTSIDE AIR DAMPER 100% (TRACKED DAMPERS VIA MECHANICAL LINKAGE), OPEN THE RELIEF DAMPER 100%, AND SUPPLY 100% OUTSIDE AIR TO THE BUILDING

K. NOT USED

L. SAFETIES / ALARMS:
1. THE FOLLOWING SAFETIES, EACH WITH ITS OWN MANUAL RESET WITHIN THE BMS, SHALL SHUT DOWN ITS RESPECTIVE UNIT, AND INITIATE A SPECIFIC ALARM.
   A. FREEZE-STAT INDICATES A TEMPERATURE OF 37°F (ADJUSTABLE) OR BELOW-DELAY: NONE.
   B. A SMOKE DETECTOR OR INDICATES SMOKE IN THE AIR STREAM - DELAY: NONE. DRY CONTACTS ON THE SMOKE DETECTOR INITIATES THE SHUTDOWN OF THE RTU VIA THE VFD SAFTEY CIRCUIT(S). SECOND (DRY) CONTACT NOTIFIES THE BUILDING FIRE ALARM SYSTEM WHICH SHALL INITIATE AN APPROPRIATE RESPONSE (BY THE FIRE ALARM CONTRACTOR).
   C. NOT USED
   D. NOT USED
   E. CONTROLS SHALL BE INSTALLED IN THE EVENT A REFRIGERANT LEAK IS DETECTED. IF DETECTED THE UNIT'S OPERATION SHALL OPERATE AS DEFINED BY CODE AND THE RTU AND ALL AHUS SHALL GO INTO ECONOMIZER MODE TO DILUTE THE REFRIGERANT AT A REDUCED AIRFLOW VOLUME.
2. THE CONTROL SYSTEM SHALL INITIATE AN ALARM FOR AN AHU, AND DESCRIBE THE ALARM IF ANY OF THE FOLLOWING CONDITIONS ARE MET:
   A. SUPPLY OR RETURN FAN IS COMMANDED TO START AND ANYTIME AFTER A 15 SECOND DELAY THE BMS SENSES NO STATUS OR THE INTERNAL DIAGNOSTICS ON THE VFD INDICATE THERE IS A FAULT.
   B. SUPPLY OR RETURN FAN IS OPERATING AND CURRENT SENSOR IS OUT OF RANGE.
   C. TEMPERATURE SENSOR INDICATES A DISCHARGE TEMPERATURE MORE THAN 5°F (ADJUSTABLE) ABOVE OR BELOW SET POINT FOR 5 CONSECUTIVE MINUTES (ADJUSTABLE) WHEN AHU STATUS IS ON, AS MEASURED AT TT-AHU-5
   D. NOT USED.
   E. NOT USED.
   F. OUTDOOR AIR OR RELIEF AIR DAMPER IS COMMANDED TO OPEN AND DAMPER END POSITION SWITCHES INDICATE DAMPER IS NOT OPEN.
   G. OUTDOOR AIR OR RELIEF AIR DAMPER IS COMMANDED TO CLOSE AND DAMPER END POSITION SWITCHES INDICATE DAMPER IS NOT CLOSED.
3. WHENEVER A UNIT IS SHUT DOWN BECAUSE OF ONE OF THE SAFETIES, THE CONTROL SYSTEMS SHALL RETAIN IN MEMORY THE READING AND SET POINT OF EACH DEVICE TO HELP THE OPERATOR IN ISOLATING THE REASON FOR THE PROBLEM.

M. SAFE MODE
1. NOT USED.

N. RESILIENCY MODE
1. WHEN OUTDOOR AIR TEMPERATURES ARE BELOW 10F, AS MEASURED FROM THE EXISTING SHARED OA SENSOR, THE OUTDOOR AIR DAMPER SHALL BE SHUT, RETURN AIR DAMPER SHALL BE OPENED AND ALL ROOMS IN THE BUILDING SHALL, AT A MINIMUM, MAINTAIN 70F, DESPITE THE BUILDING BEING OCCUPIED, UNOCCUPIED, OR ON A SETBACK.

4 CONTROL SEQUENCE - CV AHU
12" = 1'-0"

A. GENERAL
1. THIS CONTROL SEQUENCE APPLIES TO RTU-1
2. ALL CONTROLS DESCRIBED HEREIN SHALL BE PERFORMED BY THE BMS. PROVIDE DDC INTERFACE, WIRING, RELAYS, CONTROLS, AND PROGRAMMING AS REQUIRED.
3. WHEN THE AHU IS OFF-LINE VIA THE START/STOP COMMAND, THE SERVICE DISCONNECT(S), OR THE SAFETIES; COMPONENTS SHALL GO TO THEIR FAIL-SAFE POSITIONS. ALL SETPOINTS SHALL BE ADJUSTABLE VIA THE BMS.
4. FILTER STATUS SHALL BE MONITORED AT THE BMS BY DIFFERENTIAL PRESSURE TRANSMITTER ACROSS THE PRE-FILTER. THE FINAL FILTER SHALL BE PROVIDED WITH A LOCAL DIFFERENTIAL
5. THE CONTROL SYSTEM SHALL MONITOR THE SUPPLY AND RETURN FAN STATUS VIA CURRENT SENSING RELAYS.
6. ALL SETPOINTS SHALL BE ADJUSTABLE THROUGH THE BMS WITHOUT SOFTWARE OR HARDWARE MODIFICATIONS.

B. FAN CONTROL AND STARTUP
1. THE AHU SHALL OPERATE DURING THE OCCUPIED PERIOD AS DEFINED BY THE BMS SYSTEM (ADJUSTABLE).
2. UPON STARTUP THE EXHAUST AIR DAMPER AND OUTDOOR AIR DAMPER SHALL BE COMMANDED OPEN TO THEIR MINIMUM POSITIONS (ADJUSTABLE).
3. ONCE THE EXHAUST AND OUTDOOR AIR DAMPERS DAMPERS ARE OPEN, THE SUPPLY AND RETURN FANS SHALL BE COMMANDED ON.
4. THE SPEED SHALL BE MODULATED IN UNISON BY THE BMS WITH A RAMP TIME OF 3 MINUTES (ADJUSTABLE) TO REACH FULL OPERATING SPEED.
5. THE RETURN AIR FAN VFD SHALL TRACK THE SUPPLY FAN VFD AT 90% (ADJUSTABLE) OF THE SUPPLY FAN VFD SPEED. RETURN FAN TRACKING IS OPEN LOOP. NO RETURN DUCT STATIC PRESSURE FEEDBACK IS PROVIDED. TRACKING PERCENTAGE SHALL BE FIELD ADJUSTED DURING TEST AND BALANCE AND THE FINAL VALUE RECORDED IN THE BMS.

C. OPTIMAL STARTUP
1. THE UNIT SHALL START PRIOR TO SCHEDULED OCCUPANCY BASED ON THE TIME NECESSARY FOR THE ZONES TO REACH THIER OCCUPIED SETPOINTS. THE START TIME SHALL AUTOMATICALLY ADJUST BASED ON CHANGES IN THE OUTSIDE AIR TEMPERATURE AND ZONE TEMPERATURE. OUTSIDE AIR TEMPERATURE MEASURED FROM THE EXISTING SHARED OA SENSOR.

D. UNOCCUPIED MODE
1. THE UNIT SHALL START PRIOR TO SCHEDULED OCCUPANCY BASED ON THE TIME NECESSARY FOR THE ZONES TO REACH THIER OCCUPIED SETPOINTS. THE START TIME SHALL AUTOMATICALLY ADJUST BASED ON CHANGES IN THE OUTSIDE AIR TEMPERATURE AND ZONE TEMPERATURE. OUTSIDE AIR TEMPERATURE MEASURED FROM THE EXISTING SHARED OA SENSOR.

D2. MORNING WARM UP AND COOL DOWN
1. THE UNIT SHALL BE COMMANDED ON, AND SHALL OPERATE AS DESCRIBED ABOVE, UPON A CALL FOR MORNING WARMUP/COOL-DOWN OR FOR ECONOMIZER OPERATION.
2. THE SUPPLY AND RETURN FANS SHALL HAVE A MINIMUM OF 3 MINUTES RUNTIME (ADJUSTABLE) TO PREVENT SHORT CYCLING.

E. SUPPLY AIR PRESSURE CONTROL
1. SUPPLY FAN SPEED SHALL MODULATE TO MAINTAIN SUPPLY AIR DUCT STATIC PRESSURE AT SETPOINT AS MEASURED.
2. THE SUPPLY AIR DUCT STATIC PRESSURE SETPOINT SHALL BE RESET BASED ON THE ZONE REQUIRING THE MOST PRESSURE. I.E. THE SETPOINT IS RESET LOWER IN 0.1" WG INCREMENTS UNTIL ONE ZONE DAMPER IS NEARLY WIDE OPEN.
3. HIGH STATIC LIMIT — SHOULD SUPPLY DUCT STATIC PRESSURE AT PT-RTU-1-3 EXCEED THE DUCT PRESSURE CLASS LIMIT (ADJUSTABLE), THE BMS SHALL COMMAND THE SUPPLY AND RETURN FANS OFF, INITIATE AN ALARM AND REQUIRE MANUAL RESET AT THE BMS.

F. DISCHARGE CONDITIONS CONTROL
1. PROVIDE ADEQUATE DEADBANDS TO PREVENT SIMULTANEOUS HEATING AND COOLING.
2. PROVIDE SUPPLY AIR TEMPERATURE RESET BASED UPON DEMAND BETWEEN 55°F AND 62°F ONCE THE SUPPLY FAN HAS BEEN MODULATED TO MINIMUM SPEED.
3. THE BMS SHALL MODULATE THE HEATING WATER CONTROL VALVES OR THE DX COOLING TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT FOR THE AHU. DISCHARGE AIR TEMPERATURE CONTROL FROM TT-RTU-1-1 FOR BOTH THE GAS BURNER AND THE DX COOLING.

J. ECONOMIZER
1. UPON A CALL FOR COOLING FROM THE BUILDING AUTOMATION, WHEN THE OUTDOOR AIR ENTHALPY IS WITHIN THE SPECIFIED RANGE, THE BMS SHALL CLOSE THE RETURN DAMPER, OPEN THE RELIEF DAMPER 100%, OPEN THE OUTSIDE AIR DAMPER 100% AND SUPPLY 100% OUTSIDE AIR TO THE BUILDING. OA ENTHALPY AND DRY BULB FROM THE EXISTING SHARED OA TEMPERATURE / HUMIDITY SENSOR.

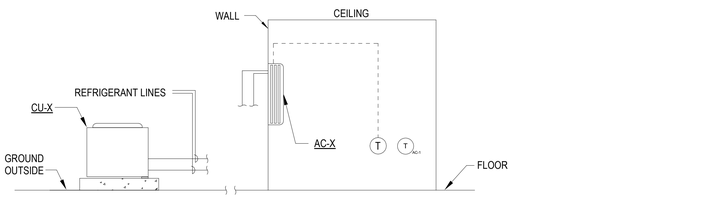
K. NOT USED

L. SAFETIES / ALARMS:
1. THE FOLLOWING SAFETIES, EACH WITH ITS OWN MANUAL RESET WITHIN THE BMS, SHALL SHUT DOWN ITS RESPECTIVE UNIT, AND INITIATE A SPECIFIC ALARM.
   A. FREEZE-STAT INDICATES A TEMPERATURE OF 37°F (ADJUSTABLE) OR BELOW-DELAY: NONE.
   B. A SMOKE DETECTOR OR INDICATES SMOKE IN THE AIR STREAM - DELAY: NONE. DRY CONTACTS ON THE SMOKE DETECTOR INITIATES THE SHUTDOWN OF THE RTU VIA THE VFD SAFTEY CIRCUIT(S). SECOND (DRY) CONTACT NOTIFIES THE BUILDING FIRE ALARM SYSTEM WHICH SHALL INITIATE AN APPROPRIATE RESPONSE (BY THE FIRE ALARM CONTRACTOR).
   C. NOT USED.
   D. NOT USED.
   E. CONTROLS SHALL BE INSTALLED IN THE EVENT A REFRIGERANT LEAK IS DETECTED. IF DETECTED THE UNIT'S OPERATION SHALL OPERATE AS DEFINED BY CODE AND THE RTU AND ALL AHUS SHALL GO INTO ECONOMIZER MODE TO DILUTE THE REFRIGERANT AT A REDUCED AIRFLOW VOLUME.
2. THE CONTROL SYSTEM SHALL INITIATE AN ALARM FOR AN RTU, AND DESCRIBE THE ALARM IF ANY OF THE FOLLOWING CONDITIONS ARE MET:
   A. SUPPLY OR RETURN FAN IS COMMANDED TO START AND ANYTIME AFTER A 15 SECOND DELAY THE BMS SENSES NO STATUS OR THE INTERNAL DIAGNOSTICS ON THE VFD INDICATE THERE IS A FAULT.
   B. SUPPLY OR RETURN FAN IS OPERATING AND CURRENT SENSOR IS OUT OF RANGE.
   C. TEMPERATURE SENSOR INDICATES A DISCHARGE TEMPERATURE MORE THAN 5°F (ADJUSTABLE) ABOVE OR BELOW SETPOINT FOR 5 CONSECUTIVE MINUTES (ADJUSTABLE) WHEN RTU STATUS IS ON.
   D. SUPPLY DIFFERENTIAL PRESSURE IS ABOVE OR BELOW SETPOINT BY MORE THAN 0.25" W.C. (ADJUSTABLE) FOR MORE THAN 5 CONSECUTIVE MINUTES.
   E. NOT USED.
   F. SUPPLY OR EXHAUST AIR DAMPER IS COMMANDED TO OPEN AND DAMPER END POSITION SWITCHES INDICATE DAMPER IS NOT OPEN.
   G. SUPPLY OR EXHAUST AIR DAMPER IS COMMANDED TO CLOSE AND DAMPER END POSITION SWITCHES INDICATE DAMPER IS NOT CLOSED.
3. WHENEVER A UNIT IS SHUT DOWN BECAUSE OF ONE OF THE SAFETIES, THE CONTROL SYSTEMS SHALL RETAIN IN MEMORY THE READING AND SETPOINT OF EACH DEVICE TO HELP THE OPERATOR IN ISOLATING THE REASON FOR THE PROBLEM.

M. SAFE MODE
1. IN THE EVENT THE DUCT STATIC PRESSURE SENSOR SENDS A SIGNAL OUT OF RANGE, OR BECOMES DAMAGED, THE BMS SHALL LIMIT THE FAN SPEEDS TO 70% OF THE MAXIMUM OPERATING SPEEDS TO ATTAIN THE DESIGNED CFM AND GENERATE AN ALARM. IN NO EVENT SHALL THE UNIT'S FAN SPEEDS EVER EXCEED THESE SPEEDS.

N. RESILIENCY MODE
1. WHEN OUTDOOR AIR TEMPERATURES ARE BELOW 10F, THE OUTDOOR AIR DAMPER SHALL BE SHUT, RETURN AIR DAMPER SHALL BE OPENED AND ALL ROOMS IN THE BUILDING SHALL, AT A MINIMUM, MAINTAIN 70F, DESPITE THE BUILDING BEING OCCUPIED, UNOCCUPIED, OR ON A SETBACK. OA TEMPERATURE FROM THE EXISTING SHARED OA SENSOR.

2 CONTROL SEQUENCE - VAV RTU
12" = 1'-0"



SEQUENCE OF OPERATION

SEE CONTROL POINTS LIST FOR ALARM, TREND, TYPE, FAIL SAFE, GRAPHICAL AND OTHER REQUIREMENTS FOR POINTS IN THIS DIAGRAM. ALL POINTS SHALL BE EASILY ADJUSTABLE THROUGH THE BMS GRAPHICAL INTERFACE ON THE MAIN SCREEN FOR THE SPACE.

DUCTLESS SPLIT SYSTEM AIR CONDITIONER (AC-1 AND CU-1):
1. AIR COOLED CONDENSING UNIT:
   a. GENERAL: THE AIR COOLED CONDENSING UNIT SHALL BE PROVIDED WITH FACTORY INSTALLED CONTROLS AND SHALL COMMUNICATE WITH ITS ASSOCIATED INDOOR UNIT.
   b. COOLING CONTROL: WHEN THE ASSOCIATED AC UNIT IS NOT CALLING FOR COOLING, THE CU SHALL BE OFF. WHEN THE ASSOCIATED AC UNIT SENDS A CALL FOR COOLING SIGNAL TO THE CU, THE CU UNIT'S CONTROLLER SHALL ACTIVATE THE CU. THE CU'S CONTROLLER SHALL START AND STOP THE CU'S SCROLL COMPRESSOR AND THE CU'S FAN TO MAINTAIN THE REQUIRED COOLING CAPACITY.
2. AIR CONDITIONING UNITS:
   a. GENERAL: THE AIR CONDITIONING UNIT SHALL BE PROVIDED WITH FACTORY INSTALLED CONTROLS AND A SPACE THERMOSTAT WITH INTERFACE FOR SET POINT AND AUTOMATIC/ON/OFF FAN CONTROL SELECTION.
   b. COOLING CONTROL: THE AC UNIT'S CONTROLLER, USING A REFRIGERANT CONTROL VALVE, SHALL CYCLE ON AND OFF COOLING TO MAINTAIN THE SPACE TEMPERATURE AT OR BELOW THE COOLING SET POINT. THE COOLING SET POINT SHALL BE INITIALLY SET AT 75°F. WHEN THE FAN IS OFF, COOLING SHALL BE DISABLED.
   c. WHEN THERE IS A DEMAND FOR COOLING, THE AC UNIT'S CONTROLLER SHALL SEND A CALL FOR COOLING SIGNAL TO THE ASSOCIATED CU'S CONTROLLER. WHEN THE COOLING DEMAND IS SATISFIED, THE AC UNIT'S CONTROLLER SHALL DISCONTINUE THE CALL FOR COOLING SIGNAL.
3. T- (AC-1)
   A. SEE CONTROL POINTS LIST FOR ALARM, TREND, TYPE, FAIL SAFE, GRAPHICAL AND OTHER REQUIREMENTS FOR POINTS IN THIS DIAGRAM.
   B. THIS INFORMATION AND SEQUENCE SHALL BE ESTABLISHED BY THE CONTROLS CONTRACTOR. AN ALARM SHALL BE GENERATED IN THE BMS IF THE TEMPERATURE EXCEEDS 85 F (ADJUSTABLE). ALL ALARMS SHALL BE TRENDED.
3. ALARMS
   A. THE CONTROL SYSTEM SHALL INITIATE AN ALARM DESCRIBING THE ALARM IF ANY OF THE FOLLOWING CONDITIONS ARE MET:
      a. SPACE TEMPERATURE IS OFF SETPOINT (>3°F), DELAY: 5 MINUTES.

5 CONTROL DIAGRAM - SPLIT SYSTEM AIR CONDITIONER
NTS

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1	Addendum 1	3.11.2026
2	Addendum 2	3.19.2026
4	Addendum 4	4.16.2026
6	Bulletin 1	8.20.2026

MECHANICAL CONTROLS
M702

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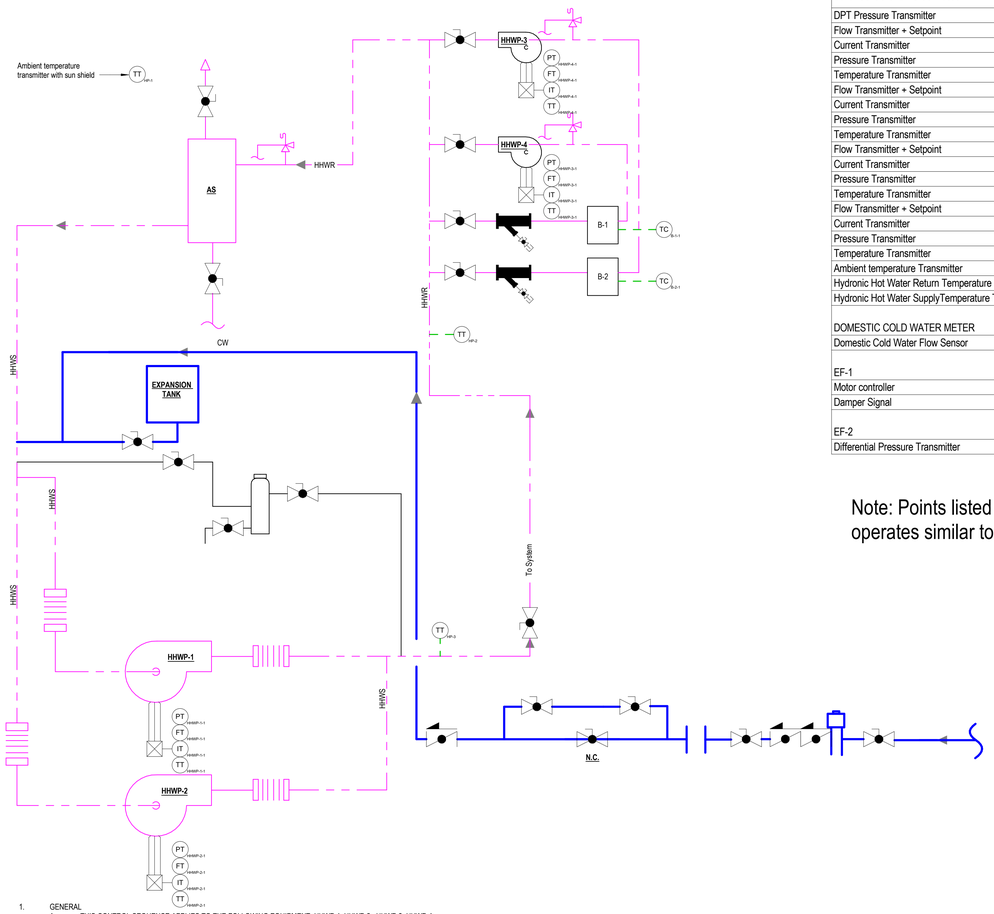
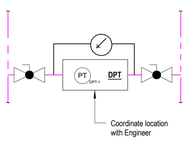


1. GENERAL
   A. THIS CONTROL SEQUENCE APPLIES TO THE FOLLOWING EQUIPMENT: HHWP-1, HHWP-2, HHWP-3, HHWP-4
   B. THE BUILDING CONTROL SYSTEM SHALL RESET WATER TEMPERATURE AND ISSUE ALARMS.
   C. CONTROL AND SEQUENCING OF PRIMARY PUMPS, AND BOILERS SHALL BE VIA THE INTEGRATED BOILER CONTROLLERS.
   D. THE BMS SHALL INTEGRATE THE BOILER CONTROLLERS AND SHALL MONITOR ALL SAFETIES AND INITIATE SHUT-DOWN OF THE AFFECTED BOILER(S).
   E. ALL SET POINTS SHALL BE ADJUSTABLE THROUGH THE BMS WITHOUT SOFTWARE OR HARDWARE REVISIONS.
   F. THE BMS SHALL MONITOR EQUIPMENT STATUS AND GENERATE ALARMS.
   G. THE BMS SHALL MONITOR ALL PUMP STATUS BY CURRENT TRANSMITTER, AND SHALL READ FAULTS AND ALARMS FROM ALL PUMP.
2. THE BOILERS INTEGRATED CONTROLLER SHALL OPERATE THE BOILER AND THE PRIMARY PUMPS.
3. HEATING PLANT (HP) SEQUENCE OF OPERATION:
   A. THE HEATING SYSTEM SHALL BE ENABLED UPON A CALL FOR HEAT THROUGH THE BMS. HEATING WATER SHALL BE AVAILABLE AT ALL TIMES.
   B. WHEN HEAT IS NEEDED THE ASSOCIATED BOILER AND PUMP SHALL BE ENABLED. ONCE WATER FLOW IS PROVEN FOR THE BUILDING HOT WATER, THE BOILER AND ITS PRIMARY PUMP SHALL MODULATE TO HEAT THE SECONDARY LOOP.
   C. NOT USED.
   D. THE LEAVING HOT WATER TEMPERATURE SHALL BE RESET INVERSELY WITH THE OUTDOOR TEMPERATURE AS BELOW:
      a. 30F OUTDOORS : 140F (ADJUSTABLE)
      b. 50F OUTDOORS : 100F (ADJUSTABLE)
      - VARY LINEARLY BETWEEN 30F AND 50F OUTDOORS
   E. BOILER RUN TIME SHALL BE EQUALIZED BY THE BOILER CONTROLLER AND THE USE OF THE BOILERS ALTERNATED MONTHLY.
4. PUMP CONTROL
   A. THE LEAD HEATING WATER SECONDARY SYSTEM PUMP SHALL BE ENABLED WHENEVER THERE IS A CALL FOR HEAT (ACCORDING TO THE OUTDOOR AIR TEMPERATURE RESET SCHEDULE.)
   B. UPON STARTUP, THE LEAD SYSTEM PUMP SHALL BE ENABLED AND THE ASSOCIATED PUMP VFD (OR ECM MOTOR) AND BOILER BURN RATE AND SECONDARY PUMP SPEED SHALL MODULATE TO MAINTAIN THE ADJUSTABLE HHWS DIFFERENTIAL PRESSURE SET POINT AT THE HOT WATER DPT (SEE ONELINE).
   C. THE PUMPS SHALL OPERATE TO MAINTAIN A BUILDING RETURN TEMPERATURE WITHIN 3F (ADJUSTABLE) OF THE SUPPLY TEMPERATURE.
   D. THE SECONDARY PUMP SHALL OPERATE CONTINUOUSLY 24 / 7 / 365. MINIMUM FLOW CONDITIONS WILL BE CAPABLE OF BEING HANDLED BY THE THREE WAY VALVES ON VAVS AT THE END OF THE REHEAT HOT WATER LOOPS AND RADIATORS.
   E. UPON FAILURE OF THE LEAD PUMP, THE LAG PUMP SHALL BE ENABLED.
   F. THE BMS SHALL ROTATE STATUS OF THE LEAD AND LAG PUMP MONTHLY TO EQUALIZE RUN TIME.
5. SAFETY
   A. IN THE EVENT THE DISCHARGE TEMPERATURE RISES 15F (ADJUSTABLE) ABOVE SETPOINT FOR MORE THAN 2 MINUTES (ADJUSTABLE) THE BMS SHALL GENERATE AN ALARM AND SHUTDOWN THE BOILER AND ASSOCIATED PUMP.
6. **HARD WIRED SAFETIES**
   A. HIGH LIMIT TEMPERATURE
   B. LOW WATER LEVEL.
7. ALARMS
   A. IN THE EVENT A BOILER OR PUMP FAILS TO START WITHIN 30 SECONDS, AN ALARM SHALL BE INITIATED AND THE SECOND PUMP SHALL START AUTOMATICALLY
   B. PUMP CURRENT TRANSMITTER INDICATES NO STATUS, DELAY: 30 SECONDS.
   C. HEATING WATER TEMPERATURE IS OFF SETPOINT (>5°F), DELAY: 5 MINUTES.

1 Controls - Heating Plant
NTS

NOTES:
1. See drawings for pipe sizes not listed.
2. Pipe all relief vents to nearest floor drain with 3/4" copper piping



Control Point Lists 1

Point Name	Point Abbreviation	Sensor Number	Equipment Tag	Location	System Input: Analog	System Input: Digital Input	System Input: Digital Status	System Output: Analog	System Output: Digital Output	System Output: Digital Open/Close	System Output: Digital Start / Stop	Fail Safe Position	Software / Control Alarm: High Level	Software / Control Alarm: Low Level	Software / Control Alarm: Local Panel	Software / Control Alarm: Master + BMS Alarm	Trending: Trend	Trending: Trend Intervals (Minutes)	Trending: Trend Period (Years)	Shown on Graphics
AC																				
Room temperature sensor	T	1	AC	In Room	Yes	No	No	No	No	No	No	N/A	90	45	No	Yes	Yes	15	2	Yes
AHU																				
Current Transmitter	IT	3	AHU	Supply Fan Array	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
NOT USED	MT	1	AHU	NOT USED	Yes	No	No	No	No	No	No		70% RH		No	Yes	Yes	15	2	Yes
NOT USED	MT	2	AHU	NOT USED	Yes	No	No	No	No	No	No		70% RH		No	Yes	Yes	15	2	Yes
NOT USED	PT	3	AHU	NOT USED	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
Supply Fan Enable (ON/OFF)	SC	2	AHU	Supply Fan VFD	No	No	No	No	Yes	No	No	Safe Mode			No	Yes	Yes	15	2	Yes
Smoke Detector	SD	1	AHU	Return air duct	No	Yes	No	No	No	No	No				No	Yes	Yes	Each event	2	Yes
Freeze Stat	TSL	1	AHU	Between Heating and Cooling Sections	Yes	No	No	No	No	No	No			37 F	No	Yes	Yes	Each event	2	Yes
NOT USED	TT	1	AHU	NOT USED	Yes	No	No	No	No	No	No		105F	45F	No	Yes	Yes	15	2	Yes
Return Air Temperature Transmitter	TT	2	AHU	Return Air Section	Yes	No	No	No	No	No	No				No	No	Yes	15	2	Yes
NOT USED	TT	3	AHU	NOT USED	Yes	No	No	No	No	No	No				No	No	Yes	15	2	Yes
Mixed Air Temperature Transmitter	TT	4	AHU	Mixed Air Section	Yes	No	No	No	No	No	No				No	No	Yes	15	2	Yes
Discharge Air Temperatuire Transmitter	TT	5	AHU	Supply Air Section, downstream of HW Coil	Yes	No	No	No	No	No	No		105	45	No	No	Yes	15	2	Yes
NOT USED	TT	6	AHU	NOT USED	Yes	No	No	No	No	No	No				No	No	Yes	15	2	Yes
Return Air Damper	ZC	3	AHU	Mixing box	No	No	No	Yes	No	No	No	Open			No	Yes	Yes	15	2	Yes
NOT USED	ZC	4	AHU	NOT USED	No	No	No	Yes	No	No	No	Closed			No	Yes	Yes	15	2	Yes
Outdoor Air Damper	ZC	5	AHU	Mixing box	No	No	No	Yes	No	No	No	Closed			No	Yes	Yes	15	2	Yes
Valve Actuator	ZC	7	AHU	Heating Coil	No	No	No	Yes	No	No	No	Open			No	Yes	Yes	15	2	Yes
Valve Actuator	ZC	9	AHU	Cooling Coil	No	No	No	Yes	No	No	No	Closed			No	Yes	Yes	15	2	Yes
BOILER PLANT																				
Boiler Controller BMS Connection	TC	1	B-1	Connection to boiler's integrated controller	Yes	Yes	No	Yes	Yes	No	Yes		190	60	No	Yes	Yes	15	2	Yes
Boiler Controller BMS Connection	TC	1	B-2	Connection to boiler's integrated controller	Yes	Yes	No	Yes	Yes	No	Yes		190	60	No	Yes	Yes	15	2	Yes
DPT Pressure Transmitter	PT	1	DPT	Between HHWS and HHWR piping	Yes	No	No	No	No	No	No		45 PSI		No	Yes	Yes	15	2	Yes
Flow Transmitter + Setpoint	FT	1	HHWP-1	On P-3	Yes	No	No	Yes	No	No	No				No	Yes	Yes	15	2	Yes
Current Transmitter	IT	1	HHWP-1	On P-3	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
Pressure Transmitter	PT	1	HHWP-1	On P-3	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
Temperature Transmitter	TT	1	HHWP-1	On P-3	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
Flow Transmitter + Setpoint	FT	1	HHWP-2	On P-4	Yes	No	No	Yes	No	No	No				No	Yes	Yes	15	2	Yes
Current Transmitter	IT	1	HHWP-2	On P-4	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
Pressure Transmitter	PT	1	HHWP-2	On P-4	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
Temperature Transmitter	TT	1	HHWP-2	On P-4	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
Flow Transmitter + Setpoint	FT	1	HHWP-3	On HHWP-3	Yes	No	No	Yes	No	No	No				No	Yes	Yes	15	2	Yes
Current Transmitter	IT	1	HHWP-3	On HHWP-3	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
Pressure Transmitter	PT	1	HHWP-3	On HHWP-3	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
Temperature Transmitter	TT	1	HHWP-3	On HHWP-3	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
Flow Transmitter + Setpoint	FT	1	HHWP-4	On HHWP-4	Yes	No	No	Yes	No	No	No				No	Yes	Yes	15	2	Yes
Current Transmitter	IT	1	HHWP-4	On HHWP-4	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
Pressure Transmitter	PT	1	HHWP-4	On HHWP-4	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
Temperature Transmitter	TT	1	HHWP-4	On HHWP-4	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
Ambient temperature Transmitter	TT	1	HP	Outside Mechanical Room	Yes	No	No	No	No	No	No				No	No	Yes	15	2	Yes
Hydronic Hot Water Return Temperature Transmitter	TT	2	HP	On return hot water line	Yes	No	No	No	No	No	No		190	60	No	Yes	Yes	15	2	Yes
Hydronic Hot Water SupplyTemperature Transmitter	TT	3	HP	On supply hot water line	Yes	No	No	No	No	No	No		190	60	No	Yes	Yes	15	2	Yes
DOMESTIC COLD WATER METER																				
Domestic Cold Water Flow Sensor	FT	1	DOM CW	On cold water line.	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
EF-1																				
Motor controller	MC	1	EF-1	In penthouse	Yes	No	No	Yes	No	No	No				No	Yes	Yes		1	No
Damper Signal	ZC	1	EF-1	Control damper	No	No	No	No	Yes	No	Yes	Closed			No	Yes	Yes	15	2	Yes
EF-2																				
Differential Pressure Transmitter	DPT	1	EF-2	In penthouse	Yes	No	No	No	No	No	No				No	Yes	Yes		1	No

Note: Points listed in controls points list are not all encompasing. Contractor shall provide a fully functioning system which follows the controls sequences listed and operates similar to the standard of care for all equipment controlled by the control system.

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6	Bulletin 1	8.20.2026

MECHANICAL CONTROLS

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Control Point Lists 1

Point Name	Point Abbreviation	Sensor Number	Equipment Tag	Location	Systen Input			System Output				Fail Safe Position	Software / Control Alarm				Trending			Shown on Graphics
					Analog	Digital Input	Digital Status	Analog	Digital Output	Digital Open/Close	Digital Start / Stop		High Level	Low Level	Local Panel	Master + BMS Alarm	Trend	Trend Intervals (Minutes)	Trend Period (Years)	
Motor controller	MC	1	EF-2	In penthouse	Yes	No	No	Yes	No	No	No				No	Yes	Yes		1	No
Damper Signal	ZC	1	EF-2	Control damper	No	No	No	No	Yes	No	Yes	Closed			No	Yes	Yes	15	2	Yes
HEATING HOT WATER DP SENSOR																				
Heating Hot Water Differential Pressure	PT	1	HHWS	Between HHWS and HHWR piping	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
NATURAL GAS METER																				
Natural Gas Flow Sensor	FT	1	NAT GAS	On natural gas line.	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
PLENUM HEATER																				
Room temperature sensor	TT	1	PH	In return air duct	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
POWER METER																				
Power Meter	IT	1	ELEC METER	In panel	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
Lighting Controller	ECC	1	LIGHTING	In panel	Yes	Yes	No	Yes	Yes	No	No				No	Yes	Yes	15	2	Yes
POWER SURGE COUNTER																				
Power Surge Counter	ECC	1	Surge Counter	In panel	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
RAD																				
Room temperature sensor	T	1	RAD	In room	No	No	No	Yes	No	No	No			45 F	No	Yes	Yes	15	2	Yes
Temperature controller	TC	1	RAD	In plenum	Yes	No	No	Yes	No	No	No				No	Yes	Yes			No
Modulating Valve	ZC	1	RAD	In ceiling and plenum space	Yes	No	No	No	No	No	No	Open			No	No	Yes	15	2	Yes
ROOF SNOW MELT																				
Roof Snow Melt	ECC	1	Roof Snow Melt	In panel	Yes	Yes	Yes	Yes	Yes	Yes	Yes				No	Yes	Yes	15	2	Yes
RTU																				
Return VFD Status (Hand - Off - Auto)	HS	1	RTU-1	Return Fan VFD	No	No	Yes	No	No	No	No	Safe Mode			No	Yes	Yes	15	2	Yes
Supply VFD Status (Hand - Off - Auto)	HS	2	RTU-1	Supply Fan VFD	No	No	Yes	No	No	No	No	Safe Mode			No	Yes	Yes	15	2	Yes
Current Transmitter	IT	1	RTU-1	Return Fan Array	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
Current Transmitter	IT	3	RTU-1	Supply Fan Array	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
Current Transmitter	IT	4	RTU-1	Supply Fan Array	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
NOT USED	MT	1	RTU-1	NOT USED	Yes	No	No	No	No	No	No		70% RH		No	Yes	Yes	15	2	Yes
NOT USED	MT	2	RTU-1	NOT USED	Yes	No	No	No	No	No	No		70% RH		No	Yes	Yes	15	2	Yes
Differential Pressure Transmitter	PDT	1	RTU-1	Filters	Yes	No	No	No	No	No	No		Dirty Filter IN WC		No	Yes	Yes	Each event	2	Yes
NOT USED	PDT	2	RTU-1	NOT USED	Yes	No	No	No	No	No	No		Dirty Filter IN WC		No	Yes	Yes	Each event	2	Yes
NOT USED	PSH	1	RTU-1	NOT USED	No	Yes	No	No	No	No	No		Setpoint + 0.25 IN. WC.		No	Yes	Yes	Each event	2	Yes
NOT USED	PSL	1	RTU-1	NOT USED	No	Yes	No	No	No	No	No			Setpoint - .25 IN. WC.	No	Yes	Yes	Each event	2	Yes
NOT USED	PT	1	RTU-1	NOT USED	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
NOT USED	PT	3	RTU-1	NOT USED	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
Return Fan Speed	SC	1	RTU-1	Return Fan VFD	No	No	No	Yes	No	No	No	Safe Mode			No	Yes	Yes	15	2	Yes
Supply Fan Speed	SC	2	RTU-1	Supply Fan VFD	No	No	No	Yes	No	No	No	Safe Mode			No	Yes	Yes	15	2	Yes
Smoke Detector	SD	1	RTU-1	Return air duct	No	Yes	No	No	No	No	No				No	Yes	Yes	Each event	2	Yes
Freeze Stat	TSL	1	RTU-1	Between Heating and Cooling Sections	Yes	No	No	No	No	No	No			37 F	No	Yes	Yes	Each event	2	Yes
Discharge Temperature Transmitter	TT	1	RTU-1	Supply Air Section	Yes	No	No	No	No	No	No		105F	45F	No	Yes	Yes	15	2	Yes
NOT USED	TT	2	RTU-1	NOT USED	Yes	No	No	No	No	No	No				No	No	Yes	15	2	Yes
NOT USED	TT	3	RTU-1	NOT USED	Yes	No	No	No	No	No	No				No	No	Yes	15	2	Yes
Mixed Air Temperature Transmitter	TT	4	RTU-1	Mixed Air Section	Yes	No	No	No	No	No	No				No	No	Yes	15	2	Yes
NOT USED	TT	5	RTU-1	NOT USED	Yes	No	No	No	No	No	No				No	No	Yes	15	2	Yes
NOT USED	TT	6	RTU-1	NOT USED	Yes	No	No	No	No	No	No				No	No	Yes	15	2	Yes
Return Air Damper	ZC	3	RTU-1	Mixing box	No	No	No	Yes	No	No	No	Open			No	Yes	Yes	15	2	Yes
Relief Air Damper	ZC	4	RTU-1	Mixing box	No	No	No	Yes	No	No	No	Closed			No	Yes	Yes	15	2	Yes
Outdoor Air Damper	ZC	5	RTU-1	Mixing box	No	No	No	Yes	No	No	No	Closed			No	Yes	Yes	15	2	Yes
Heating Control	ZC	7	RTU-1	Control of Natural Gas Burner	No	No	No	Yes	No	No	No	Open			No	Yes	Yes	15	2	Yes
Cooling Control	ZC	9	RTU-1	Control of DX Cooling Coil	No	No	No	Yes	No	No	No	Closed			No	Yes	Yes	15	2	Yes
VAV																				
Airflow Measurment Station	FL	1	VAV	On VAV box	Yes	No	No	No	No	No	No	Open			No	Yes	Yes	15	2	Yes
Supply Airflow Setting	FL	2	VAV	On VAV box	No	No	No	Yes	No	No	No				No	Yes	Yes	15	2	Yes
Room temperature sensor	TT	1	VAV	In Room	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
VAV Discharge Air Temperature Sensor	TT	2	VAV	On VAV box	Yes	No	No	No	No	No	No				No	Yes	Yes	15	2	Yes
Reheat Coil Control Valve	ZC	1	VAV	At reheat coil	No	No	No	Yes	No	No	No	Open			No	Yes	Yes	15	2	Yes
VAV Air Valve Actuator	ZC	2	VAV	On VAV box	No	No	No	Yes	No	No	No	Open			No	Yes	Yes	15	2	Yes

Note: Points listed in controls points list are not all encompasing. Contractor shall provide a fully functioning system which follows the controls sequences listed and operates similar to the standard of care for all equipment controlled by the control system.

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Project No: 25-25
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1	Addendum 1	3.11.2026
2	Addendum 2	3.19.2026
4	Addendum 4	4.16.2026
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MECHANICAL CONTROLS

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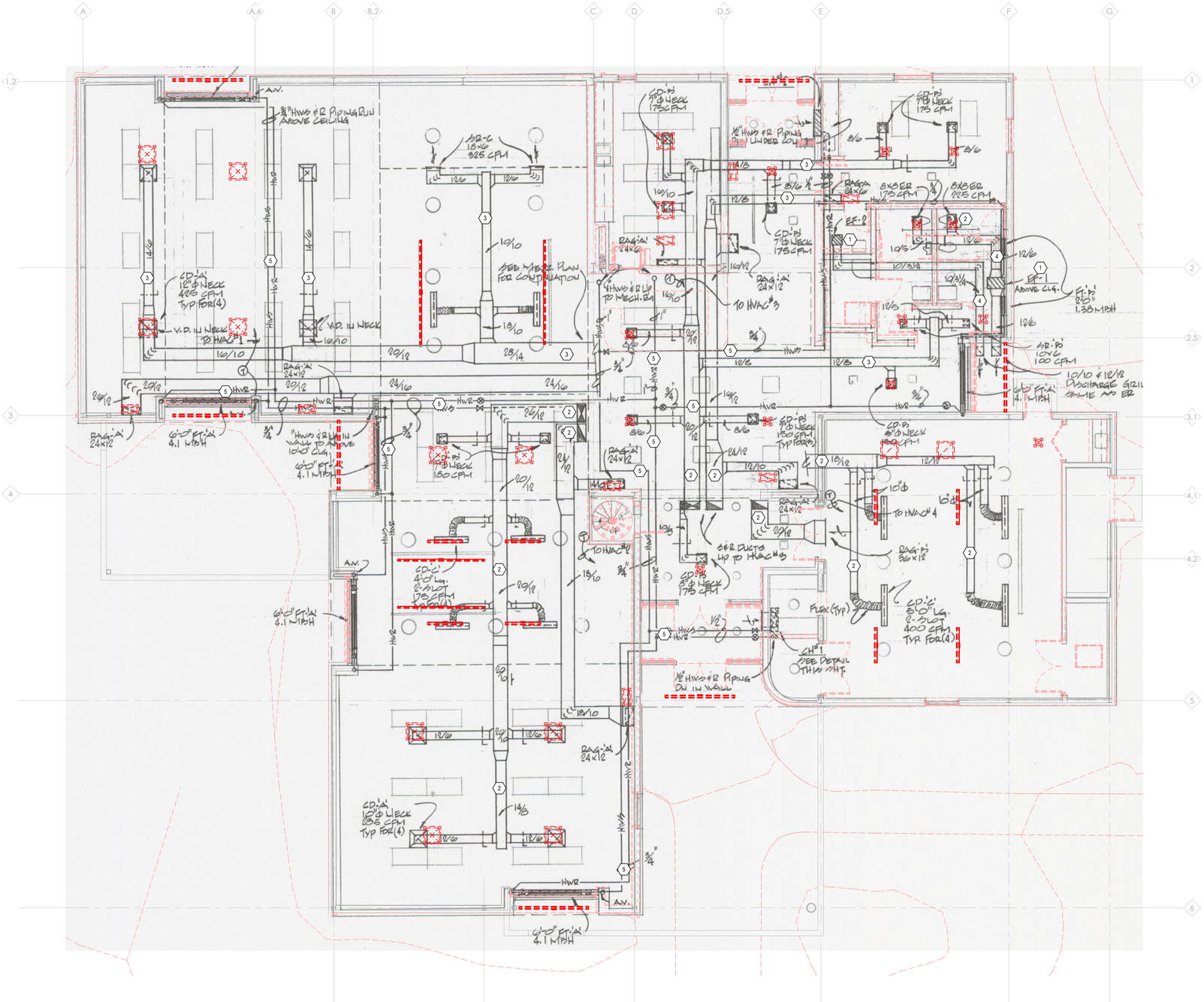

1 First Floor Mechanical Demo
3/16" = 1'-0"

Sheet Notes - MD101

#	Note
1	Demolish exhaust fan and associated ductwork.
2	Demolish all diffusers and associated terminal ductwork to "Connect to existing" point indicated on new ductwork plans.
3	Demolish all ductwork back to "connect to existing" point shown on drawings for new work.
4	Demolish exhaust ductwork.
5	Demolish hydronic piping to boiler.

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FIRST FLOOR MECHANICAL DEMO

MD101

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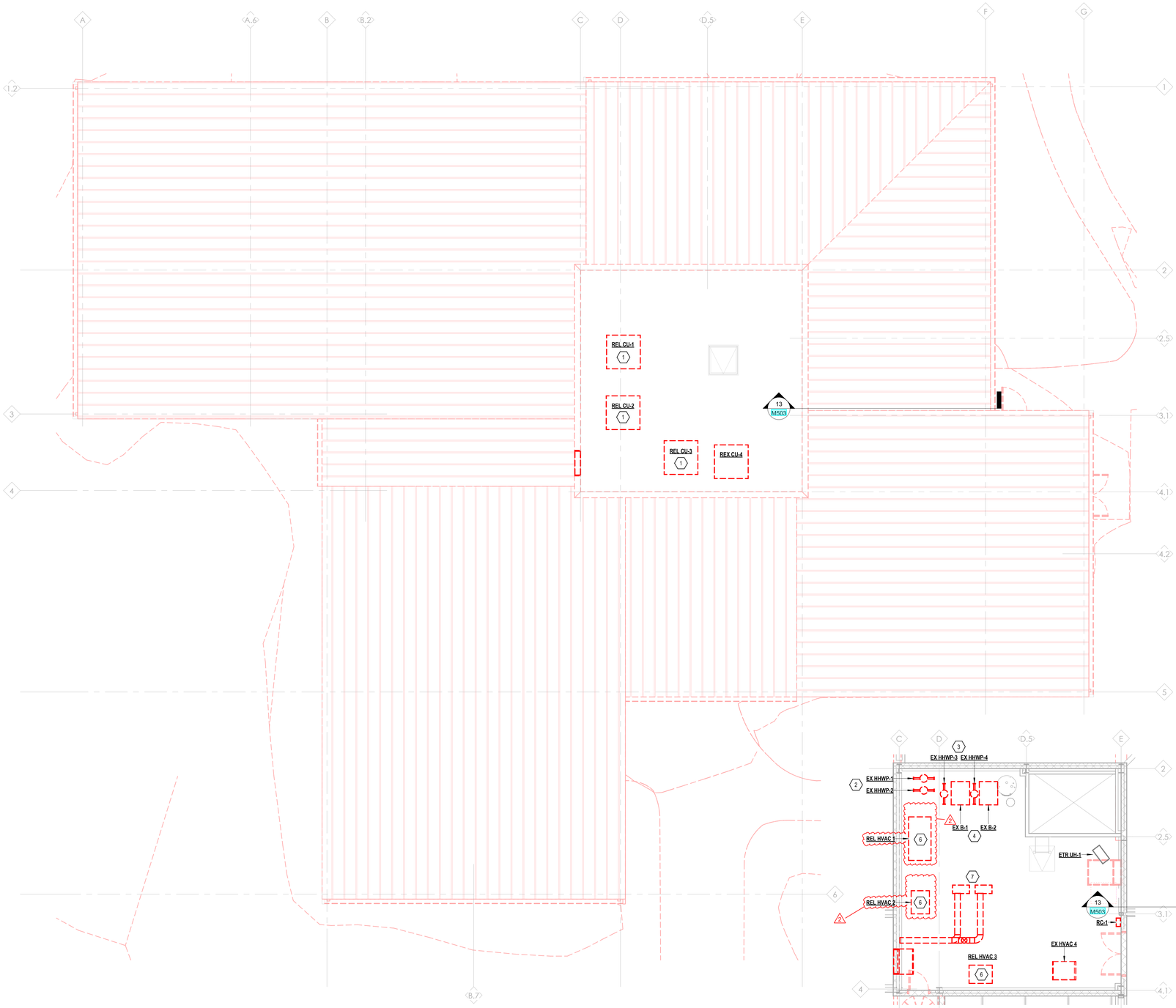
Sheet Notes - MD102	
#	Note
1	Mechanical contractor shall temporarily remove condensing unit from roof until the new roof is installed, and mark each condensing unit and its corresponding AHU that it serves with a unique indentifier to ensure unit is reinstalled with correct connections back to its original AHU. The mechanical contractor shall provide new refrigerant lines back to the AHUs they serve at the line sizes they were originally installed at. The mechanical contractor shall weigh the original charge in the unit at the time of relocation, and record the weight as well as the original refrigerant line lengths and submit to the Engineer of Record. During reinstall, the mechanical contractor shall check the new refrigerant line install lengths and in combination with the original weighed refrigerant charge, provide a new charge for the system with these considerations.
2	Demolish system pumps and associated piping.
3	Demolish boiler pumps and associated piping.
4	Demolish boilers and associated piping and flues.
5	Sheet note no longer in use.
6	Existing AHU to be relocated. Contractor shall carefully preserve AHU for reuse and reconnection of ductwork and piping durring constrction. Contractor shall take photos of existing unit to document existing conditions prior to construction or demolition beggining and submit photos of the unit to the architect and engineer as a submittal.
7	Demolish heaters and associated ductwork.



1 Roof Mechanical Demo
3/16" = 1'-0"

2 Penthouse Mechanical Demo
3/16" = 1'-0"

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PENTHOUSE & ROOF MECHANICAL DEMO

MD102

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Plumbing System Legend

Symbol	Description
#" GW	Grease Waste
#" SAN	Sanitary
#" STM-LP	Steam - Low Pressure
#" STM-IP	Steam - Intermediate Pressure
#" STM-HP	Steam - High Pressure
#" CND-HP	Condensate High Pressure
#" CND-LP	Condensate Low Pressure
#" HHTHWS	Hydronic High Temp. Heating Hot Water Supply
#" HHTHWR	Hydronic High Temp. Heating Hot Water Return
#" HHWS	Hydronic Heating Hot Water Supply
#" HHWR	Hydronic Heating Hot Water Return
#" HHWS-SM	Hydronic Heating Hot Water Supply - Snow Melt
#" HHWR-SM	Hydronic Heating Hot Water Return - Snow Melt
#" CCWS	Hydronic Cooling Chilled Water Supply
#" CCWR	Hydronic Cooling Chilled Water Return
#" CWS	Hydronic Condenser Water Supply
#" CWR	Hydronic Condenser Water Return
#" CWS	Hydronic Chilled Beam Water Supply
#" CWR	Hydronic Chilled Beam Water Return
#" HWS	Domestic Hot Water Supply
#" HWR	Domestic Hot Water Return
#" CW	Domestic Cold Water
#" PRISTM	Primary Storm
#" SECSTM	Secondary Storm
#" NG	Natural Gas
#" V	Vent
#" PD	Pump Discharge
#" FP	Fire Protection
#" CA	Lab Compressed Air

1

Notes:
Certain items in this legend may not apply to this project.
Dark piping indicated new piping and light piping indicated existing.

Project General Notes

1	Whenever the contract documents indicate conflicting or inconsistent options, the contractor shall include the higher cost option in their base bid and shall submit an RFI to the Engineer for clarification.
2	The term "provide" is defined within the contract documents to mean "furnish and install".
3	All equipment, piping, and all other mechanical, electrical, plumbing, technology, and fire protection related accessories and equipment shall be furnished and installed on this project per the contract document drawings and specifications. Contractor shall be familiar with existing drawings, existing conditions, site, and the work of all trades.
4	All concrete pads required for work shall be provided and paid for by the contractor. See structural drawings for details.
5	All work shall comply with all federal, state, and local codes and authorities having jurisdiction.
6	Contractor shall conform to OSHA, fire marshal, local building department, and all other applicable codes and regulations and authorities having jurisdiction. Contractor shall verify exact sizes, locations and quantities of all items in field intended to be removed, replaced and remain, as well as all existing equipment and existing conditions that require coordination with new work and demolition.
7	Contractor shall verify exact sizes, locations and quantities of all items in field intended to be removed, replaced, or to remain.
8	Contractor shall obtain permits, pay all fees, and arrange for required inspections.
9	All piping/ductwork, and electrical work which are disconnected, shall be temporarily capped till new connections are made. This includes capping drains in areas of construction to prohibit debris from entering sanitary and storm system during construction.
10	All openings remaining in walls/floor/roof after openings are made shall be patched by the contractor with materials so as to match existing finishes and structural integrity, unless finishes are shown otherwise on architectural or structural drawings and specifications.
11	For all cutting and patching requirements in walls/floors/roof, see specifications and coordinate with structural engineer.
12	Contractor shall coordinate all phasing of demolition and new construction with all trades and provide phasing plan to owner at time of bid.
13	Where MEP systems interfere with new work to maintain minimum elevations requirements for this project, the contractor shall relocate, reroute and raise or drop existing and/or new systems as required. All such cost shall be included in base bid.
14	The contractor shall be responsible for all cutting and patching required to install new work within their scope. Cutting of structural members is prohibited without written permission from the architect by direction of the structural engineer. All cutting and patching shall be performed by qualified personnel.
15	Contractor is solely responsible for construction means, methods, construction sequences, and workmen safety.
16	Contractor shall conform and work around all existing conditions or adjust existing conditions as needed (with owner's approval) to meet the contract documents. All work required to accommodate existing conditions shall be included in the base bid pricing.
17	Contractor shall be certified in lead and lead-based paint awareness, and safety in accordance with OSHA lead standard (29 CFR 1926.62).
18	Systems are to be complete and workable in all respects. Install all equipment per manufacturer's recommendations. Adjust and startup all equipment per manufacturer's recommendations.
19	The CMR shall manage the BIM coordination drawing process. All subcontractors shall draw all systems and architectural elements in three dimensions using 3-D modeling software. Two-dimensional coordination drawings shall be rejected. All engineering systems shall be drawn with constructible elements. Using the engineer's own 3-D elements and returning them as "coordination drawings" is unacceptable and shall be rejected immediately. Elements which shall be modeled and coordinated include but are not limited to: walls, floors, fences, windows, doors, casework, fan powered boxes, rigid ductwork, diffusers, casework, floor clean outs, floor drains, floor sinks, air handlers, refrigerant piping, plumbing and hydronic piping, panelboards, switchboards, transfer switches, tap boxes, in-grade handhole enclosures, pulling pits, all site conduits and trenches, all interior conduit of trade size larger than 1-1/4", conduit slab penetrations, required clearances around all equipment, equipment pads or curbs, all plumbing elements, all mechanical elements, all electrical lighting and power elements, all IT /AV elements, all security elements, all fire alarm elements.
20	It is the responsibility of the contractor to investigate the location of all existing underground utilities prior to performing any site work. Contact the Ohio Utilities Protection Service (OUPS) 811 Call Before You Dig service in accordance with Section 153.64 of the Ohio Revised Code.

Demolition General Notes

1	On demo plans, unless noted otherwise, equipment or fixtures which are existing to remain are indicated in half-tone solid lines, and equipment or fixtures which are to be removed are indicated in red dashed lines. Half-tone dashed lines indicate removal of equipment from an alternate discipline (e.g., walls). Coordinate with architectural demo plans.
2	All fixtures (including receptacles, light fixtures, data faceplates, wall switches, wireless access, points, sinks etc.) within the scope area shall be removed by the contractor. The contractor shall be retain these fixtures and offer them to the owner. If the owner chooses not to accept these items, the contractor shall dispose of them properly at the contractor's cost. All costs associated with this shall be included in the base bid.
3	Any items intended to be removed but not indicated in the contract documents shall be verified and removed by the contractor at no additional cost to the owner, and included in base bid.
4	Contractor shall check with owner for all items to be saved and return such items to the owner, prior to any work. All other items shall be hauled away from site and disposed of appropriately.
5	Contractor shall carefully remove controls components (actuators, sensors, thermostats, controllers, etc) and save in a location for the owner to inspect components and take them if they desire. The base bid shall include the contractor to dispose of the controls components if the owner does not want to keep them. Controls components may likely not be required back by the owner, coordinate with the Owner prior to demolition of the unit to understand if the controls componenets will likely be repurposed and taken back by the owner or if they should be discarded by the contractor.

Plumbing General Notes

1	The construction documents are diagrammati, it is the contractors responsibility to route all piping adjacent to walls and above the minimum height specified, route lines around existing conditions and provide a fully functional system to the owner.
2	The contractor shall rise up or drop down piping to make the systems fit. The contractor shall rise and drop down piping under beams and in-between beams as required. All plumbing systems shall be coordinated with existing and new conditions of structural, HVAC, fire protection, general, and electrical trades. All such costs shall be included in the base bid.
3	Plumbing contractor shall patch all holes left behind by demolished piping unless there is new piping to be installed using the existing penetrations. Excess cutting beyond the opening area required shall be sealed with sleeve-seal systems.
4	Provide pipe sleeves for all penetrations. See drawings for details & refer to specifications.
5	The contractor shall install a trap primer at all floor drains. All trap primers shall be electronic. Note that trap primers may not all be shown on the plans and are the contractor's responsibility to install and connect to the nearest cold water line with a double beck backflow device ahead of the trap primer cold water line connection.
6	A floor cleanout shall be installed at every floor drain and at the end of each sanitary run. Cleanouts may not be explicitly shown on the plans. Floor cleanouts shall also be installed in the floor slab at the equivalent of 90 degree bends or greater. All cleanouts are not shown on the plans and it is the responsibility of the contractor to include all cleanouts necessary within their base bid.
7	Wall cleanouts shall be installed at every vertical storm and sanitary line. The contractor shall also include the cost in their base bid for a access panel in the drywall. When the access panel is within a rated wall it shall also cary the same fire rating as the wall.
8	The contractor shall make all final connections to all plumbing fixtures which are connected to new and existing piping and provide shutoff valves, flexible pipe connectors, and ADA pipe covers (where required by code).
9	The contractor shall install shutoff valves to water lines serving groups of fixtures within each room which uses water. This includes bathrooms, individual sinks, and kitchenettes.
10	All piping shall be concealed in chase, wall, ceiling, flooring, etc. Unless otherwise noted. Piping shown outside of wall for clarity only.
11	All shutoff valves shall be accessible.If location is not readily accessible, coordinate access panel requirements with general contractor.
12	Locations of floor drains, floor sinks, trench drains, etc. Indicated on these drawings are considered approximate. This contractor shall be responsible for coordination of final and exact locations with all other trades and equipment suppliers prior to installation. Drains, etc. Not correctly located as determined by the architect/engineer/owner, shall be removed and relocated at this contractor's expense.
13	Contractor shall install thermostatic mixing valves at all faucets for lavatories and sinks, public and private, and install insulation on hot water piping beneath the faucets. The contractor shall set the hot water temperature of all mixing valves to the desired temperature of the Owner prior to the close-out and punch list walk by the architects and engineers.
14	Contractor shall connect the return hot water line to the 3/8" line to the plumbing fixture. NO EXCEPTIONS OF THIS ROUTING WILL BE ACCEPTED.

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1	Addendum 1	3.11.2026

GENERAL PLUMBING

P001

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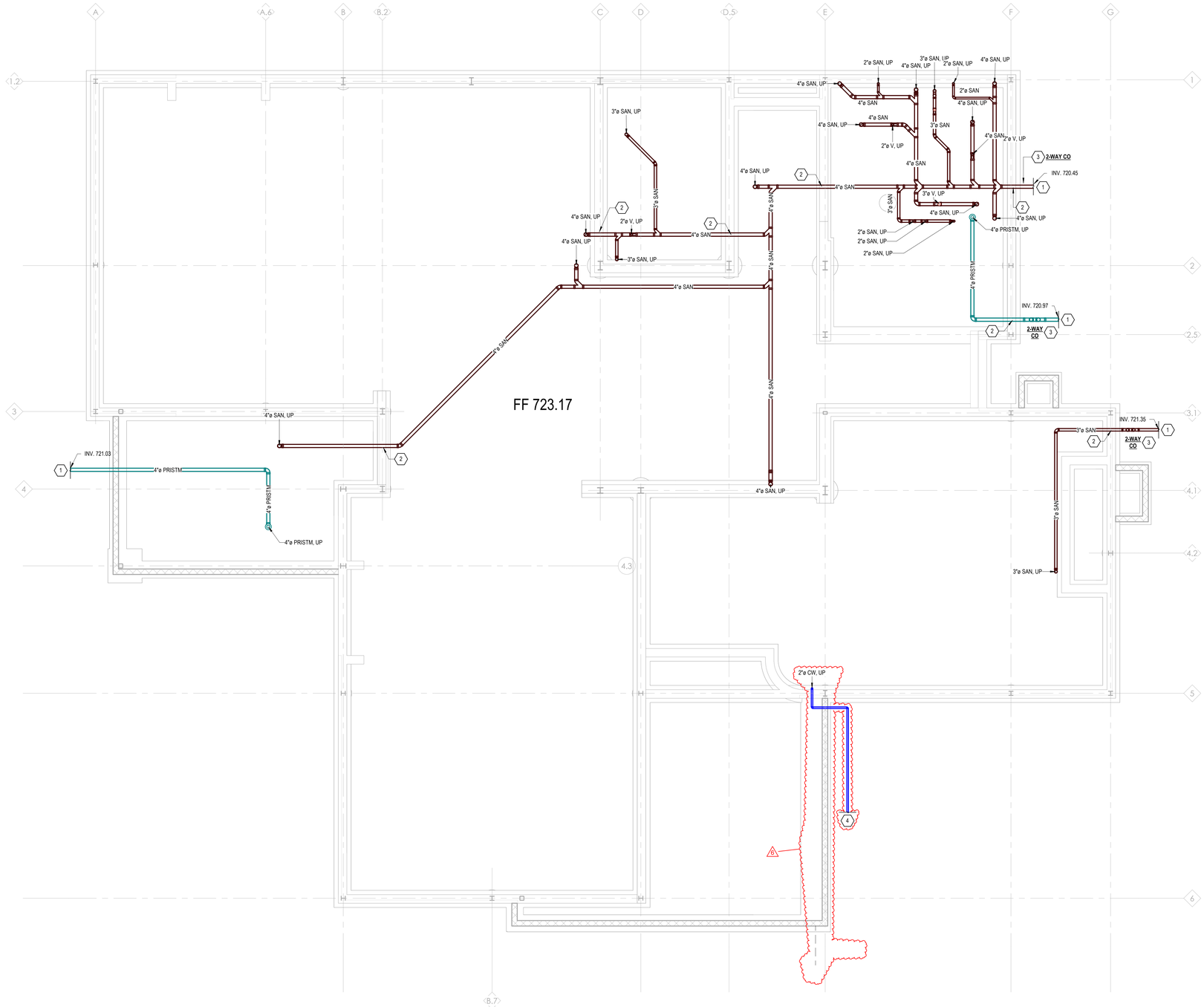
Sheet Notes - P100	
#	Note
1	See civil site plans for continuation.
2	Contractor shall penetrate through center third of grade beam at this location.
3	See Civil sheet C200 for details of cleanouts outside the building perimeter.
4	See civil site plans for continuation and minimum depth.



1 Underground Plumbing
3/16" = 1'-0"

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UNDERGROUND PLUMBING

P100

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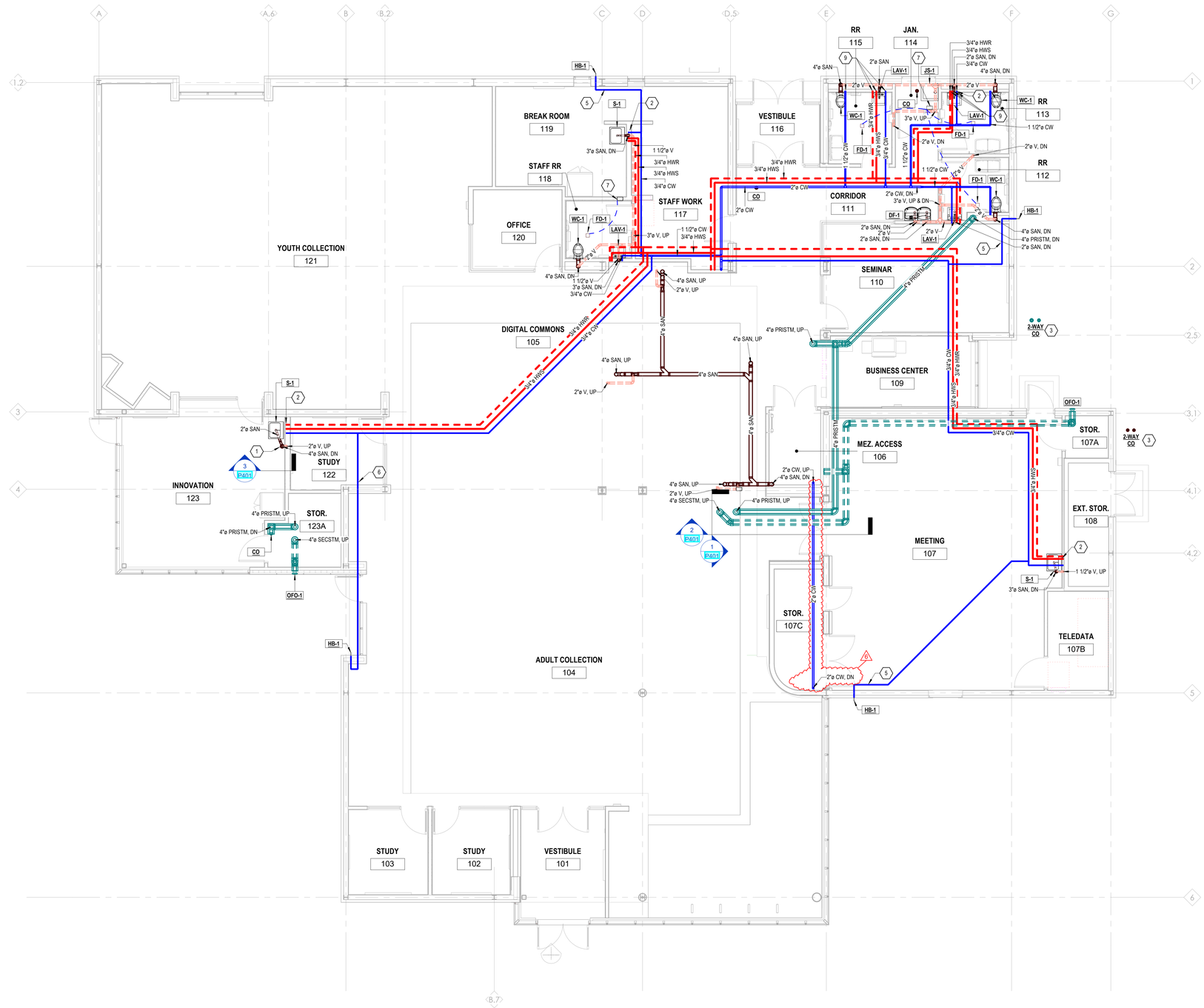
Sheet Notes - P101	
#	Note
1	Contractor shall route sanitary piping down through cabinet, hiding piping within casework.
2	Provide balancing valve under sink at this location for domestic hot water loop.
3	See Civil sheet C001 for details of cleanouts outside the building perimeter.
4	Sheet Note 4 no longer in use.
5	Provide shutoff valve for hose-bib at this location accessible above the ceiling.
6	Provide shutoff valve for hose-bib at this location accessible above the 2'x2' ceiling. Contractor shall slope the domestic cold water line downstream of this valve towards HB-1 to allow for entire line to drain.
7	Install trap primer mounted to wall in an accessible location. Route cold water to trap primer and route lines from trap primer to floor drains.
9	Contractor shall install heat trace on all potable water pipes in chase. See specifications and electrical drawings for details.



1 First Floor Plumbing
3/16" = 1'-0"

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FIRST FLOOR PLUMBING
P101

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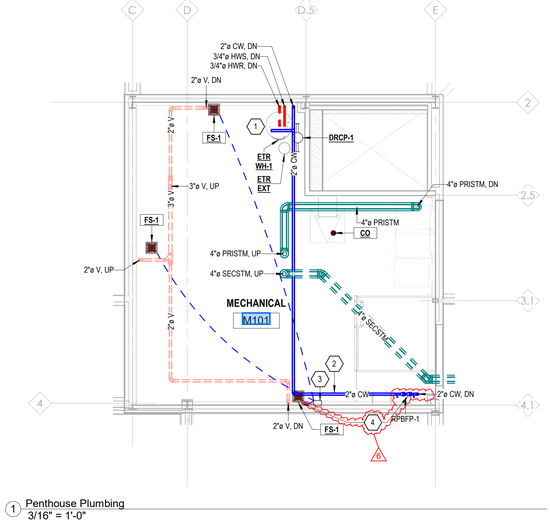
Sheet Notes - P102	
#	Note
1	Reinstall existing water heater.
2	Siemens to provide domestic cold water meter, plumbing contractor to install meter inlocation upstream of all fixtures and equipment.
3	Install trap primer mounted to wall in an accessible location. Route cold water to trap primer and route lines from trap primer to floor drains.
4	Route drain line from reduced pressure backflow preventor (RPBFP-1) to nearest drain indicated on plan. Contractor shall ensure that no building branches are connected upstream of reduced pressure backflow preventor.



1 Penthouse Plumbing
3/16" = 1'-0"

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PENTHOUSE PLUMBING

P102

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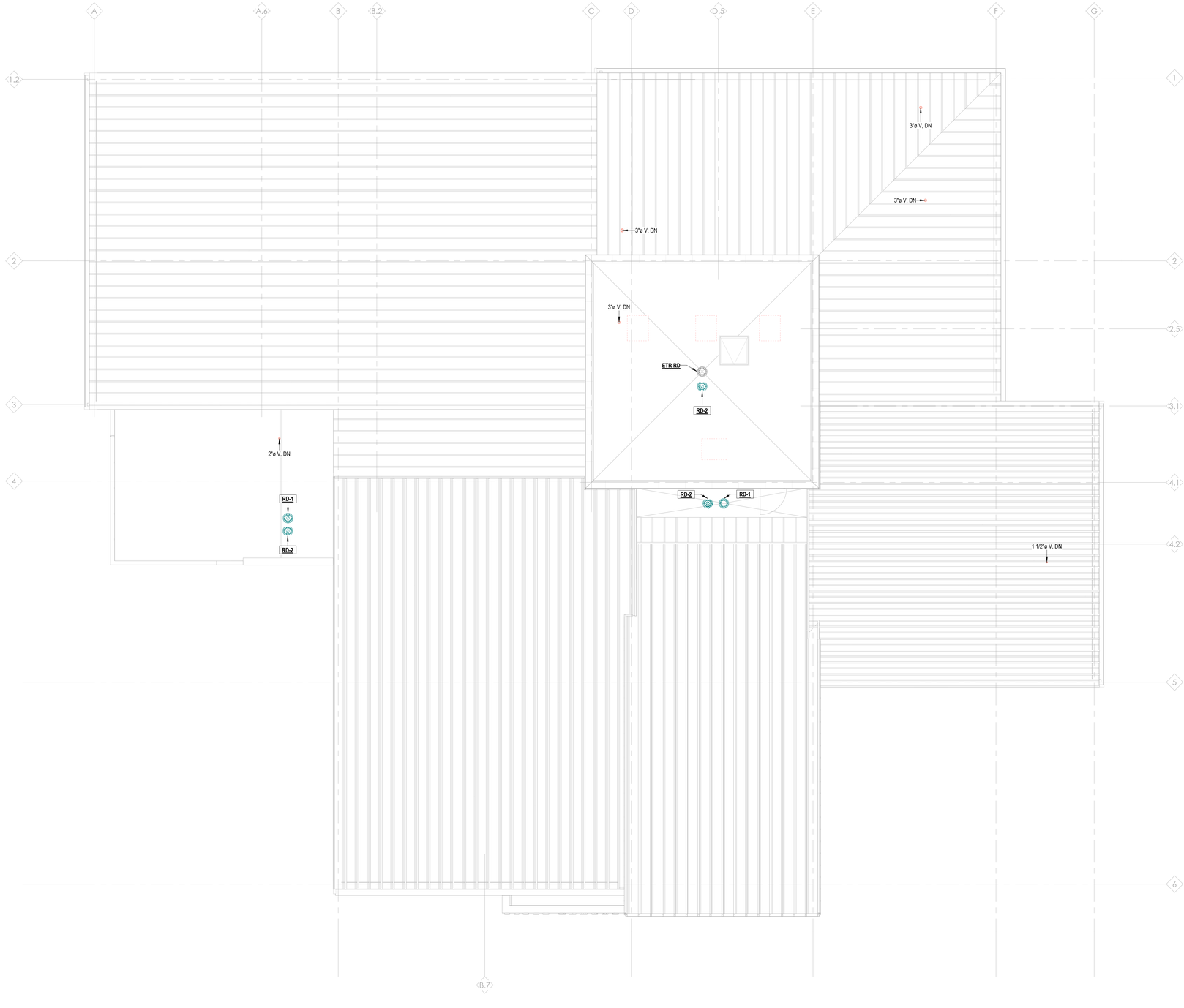
Sheet Notes - P103	
#	Note



1 3 - Roof Plumbing
3/16" = 1'-0"

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ROOF PLUMBING
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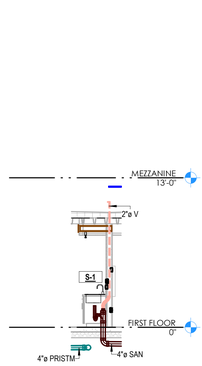
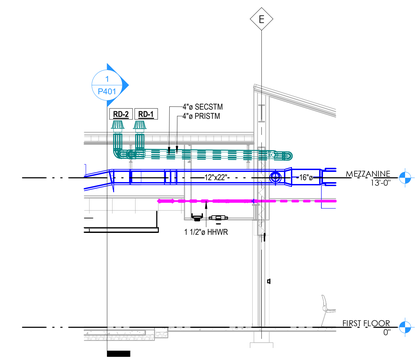
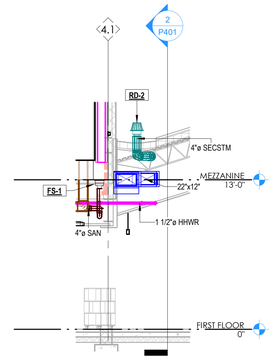


3 Plumbing Section 3
3/16" = 1'-0"



2 Plumbing Section 2
3/16" = 1'-0"



1 Plumbing Section 1
3/16" = 1'-0"

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PLUMBING ELEVATIONS

P401

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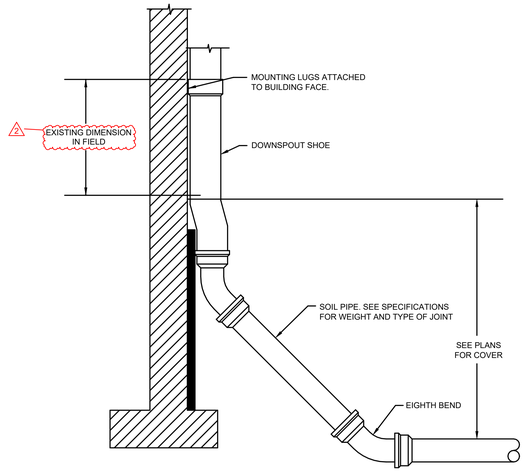
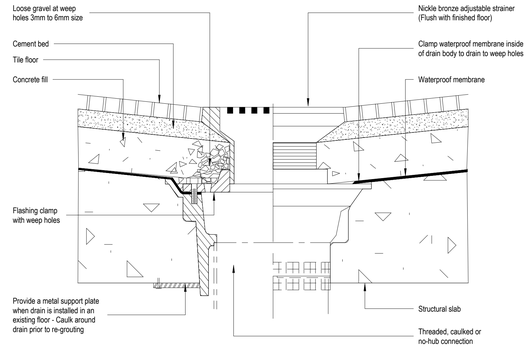
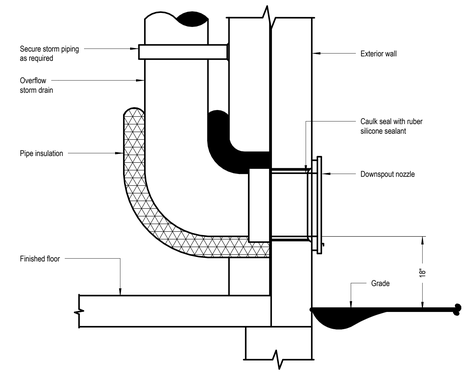


4 Downspout Shoe Detail
12" = 1'-0"

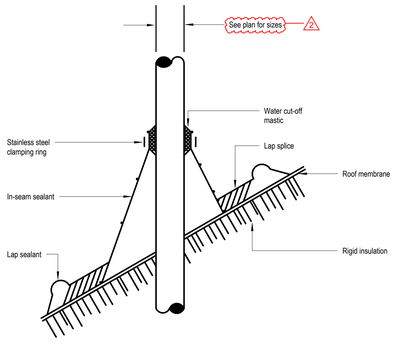


Note:
Slope membrane liner 2% to drain.

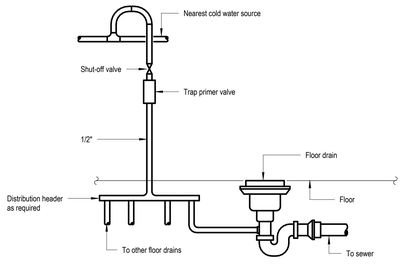
2 Type C Floor Drain Detail
NTS



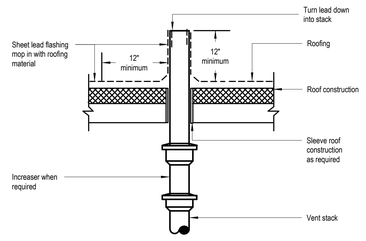
3 Storm Overflow Drain Outlet Detail
NTS



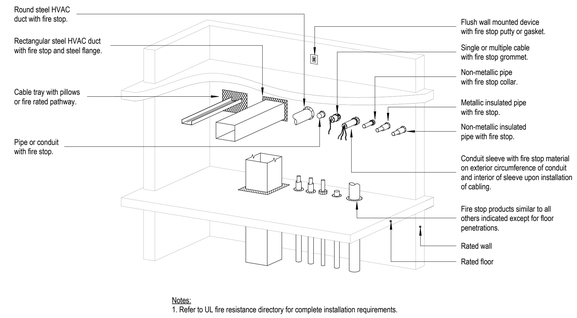
6 Vent Through Roof Detail (For Sloped Roof)
NTS*



9 Trap Primer Detail
NTS

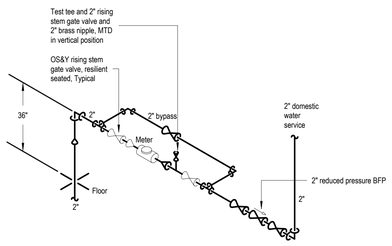


8 Vent Thru Roof Detail
NTS



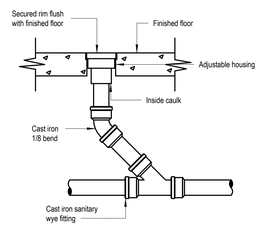
Notes:
1. Refer to UL fire resistance directory for complete installation requirements.

7 Firestopping Detail
NTS

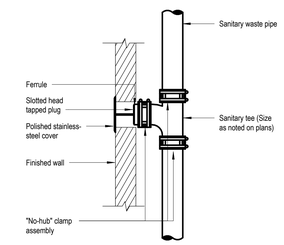


Note:
1. Install meter and BFP's per City of Cleveland's public utilities bureau standards located on this sheet.
2. Install domestic water reduced pressure back flow assembly with 12" wall clearance.

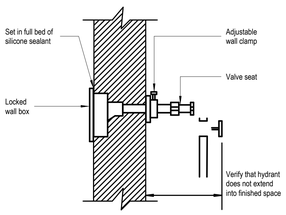
5 Domestic Water Entry Piping Detail
NTS



1 Floor Cleanout Detail
NTS



20 Wall Cleanout Detail
NTS



11 Non-Freeze Wall Hydrant Detail
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PLUMBING DETAILS
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Plumbing Fixture Schedule

Mark	Manufacturer and Model Number	Description, Options, & Accessories	Min. Individual Connection Size				Remarks
			CW	HW	Vent	Waste	
DF-1	ELKAY : LZSTL8WSLP	FIXTURE: Elkay Enhanced ezH20(R) Bottle Filling Station & Versatile Bi-level ADA Cooler Filtered Refrigerated Light Gray. Chilling Capacity of 8.0 GPH of 50 F drinking water. ACCESSORIES: WaterSentry (R) Lead + Microplastics NSF/ANSI Certified High-Capacity Filder (Enhanced Bottle Fillers), Elkay 51600C. Provide in-wall carrier for bi-level On-wall Bottle Fillers Coolers & Fountains, Elkay MLP200.	1/2"		1 1/2"	2"	
FD-1	Jay R. Smith : 2005Y-03-06-P050-U-SS(B)	FIXTURE: Jay R. Smith Floor Drain, 2005Y-03-06-P050-U-SS(B). No-Hub outlet, 03 outlet size, 06 stainer head SQ, 1/2" trap primer connection, vandal proof screws, with stainless steel strainer.				3"	
FS-1	Jay R. Smith : 325-Y04	FIXTURE: Jay R. Smith Floor Sink, 325-Y04, 12" Square Body Less Flange, 6" Deep, No-Hub Outlet Type, 4" Outlet Size.				4"	
HB-1	Jay R Smith : 5609QT	FIXTURE: Jay R. Smith, Quarterhorse 1/4 Turn Non-Freeze Wall Hydrant with Integral Vacuum Breaker.	3/4"				
JS-1	FIAT : MSB2424	FIXTURE: Fiat Products, MSB2424 molded stone mop service basin. Nominal dimensions of 24"x24"x10" with stainless steel strainer included. FAUCET: Zurn, AquaSpec Z843M4-XL, polished chrome-plated cast brass 8" sink faucet with quarter turn ceramic disc cartridges with adjustable centers. Chemical resistant vacuum breaker, 3/4" hose threaded outlet, pail hood and adjustable wall brace included. ACCESSORIES: 3" Quick drain connector, mop hanger, hose & hose bracket.	1/2"	1/2"	1 1/2"	3"	
LAV-1	AMERICAN STANDARD : 0355.012	FIXTURE: American Standard Lucerne wall-hung lavatory, 0355.012. Composed of vitreous china, 4" centers, front overflow, self-draining deck area and is ADA compliant. FAUCET: Delta 3 hole 4" single push button metering faucet with brass cover plate, model 86T0104. Provided with vandal resistant outlet, slow close cartridge, and polished chrome plate finish.	1/2"	1/2"	1 1/2"	1 1/2"	
OFO-1	Jay R Smith : Special Purpose Downspout Cover D-1775	Fabricated Type 304 Stainless Steel, Downspout Cover with Hinged Perforated, Cover, 4" Diameter				4"	
RD-1	Jay R Smith : Special Purpose Roof Drain	Over Flow Standpipe Type, Adjustable Extension, "L" Shaped Underdeck Clamp, Underdeck Clamp-C, Vandal Proof Dome-U, 3"(76) High Standpipe-SP3, Aluminum Dame-AD, Bronze Standpipe, Galvanized Cast Iron Body and Collar-G				4"	
RD-2	Jay R Smith : General Purpose Roof Drain	ROOF DRAIN WITH ADJUSTABLE EXTENSION, Underdeck Clamp-C, Vandal Proof Dome-U, Cast Iron Dome-CID				4"	
S-1	PROFLO : PFSR25227	FIXTURE: ProFlo Bealeton stainless steel sink, model PFSR25227SA with 3 faucet holes. Overall size is 25"x22"x7" with sink clips included. FAUCET: Cleveland Faucet Group, model CA47511, metal construction with chrome-plated finish, aerator linted to 1.5 gpm, and ceramic disc cartridges. ADA compliant. ACCESSORIES: Provide stainless steel strainer for sink.	1/2"	1/2"	1 1/2"	1 1/2"	
WC-1	AMERICAN STANDARD : 3351.101	FIXTURE: American Standard Afwall water closet model 3351.101, vitreous china, top spud, wall mounted with elongated bowl. Color to be white. FLUSH VALVE: Sloan 111-1.6 single flush exposed manual water closet flushometer, 1.6 gpf, polished chrome finish, top spud, vacuum breaker with flush connection, chloramine resistant. SEAT: American Standard elongated heavy duty open front seat model 5901.100. Color to be white with seat height per ADA requirements.	1"		2"	4"	

Notes:
1. See spec section 22 13 19 SANITARY WASTE PIPING SPECIALTIES for cleanout requirements.

Pump Schedule

Mark	Manufacturer and Model Number	System	Type	Max GPM	Total Head	Discharge Size	Electrical Data				Remarks
							Voltage	FLA	MCA	MOCP	
DRCP-1	GRUNDFOS : ALPHA HWR 15-55 SF/T	Domestic Hot Water Return	Inline	8 GPM	12.00 Feet	1 1/2"	115 V	1	6	20	1

Remarks:
1. Provide integral overload protection.

Project:
FLEET BRANCH
RENOVATION AND
EXPANSION

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Drawn / Checked: PDV / SSA

Issue:

	Bid & Permit	2.27.2026
1	Addendum 1	3.11.2026
2	Addendum 2	3.19.2026
6	Bulletin 1	8.20.2026

PLUMBING SCHEDULES

P601

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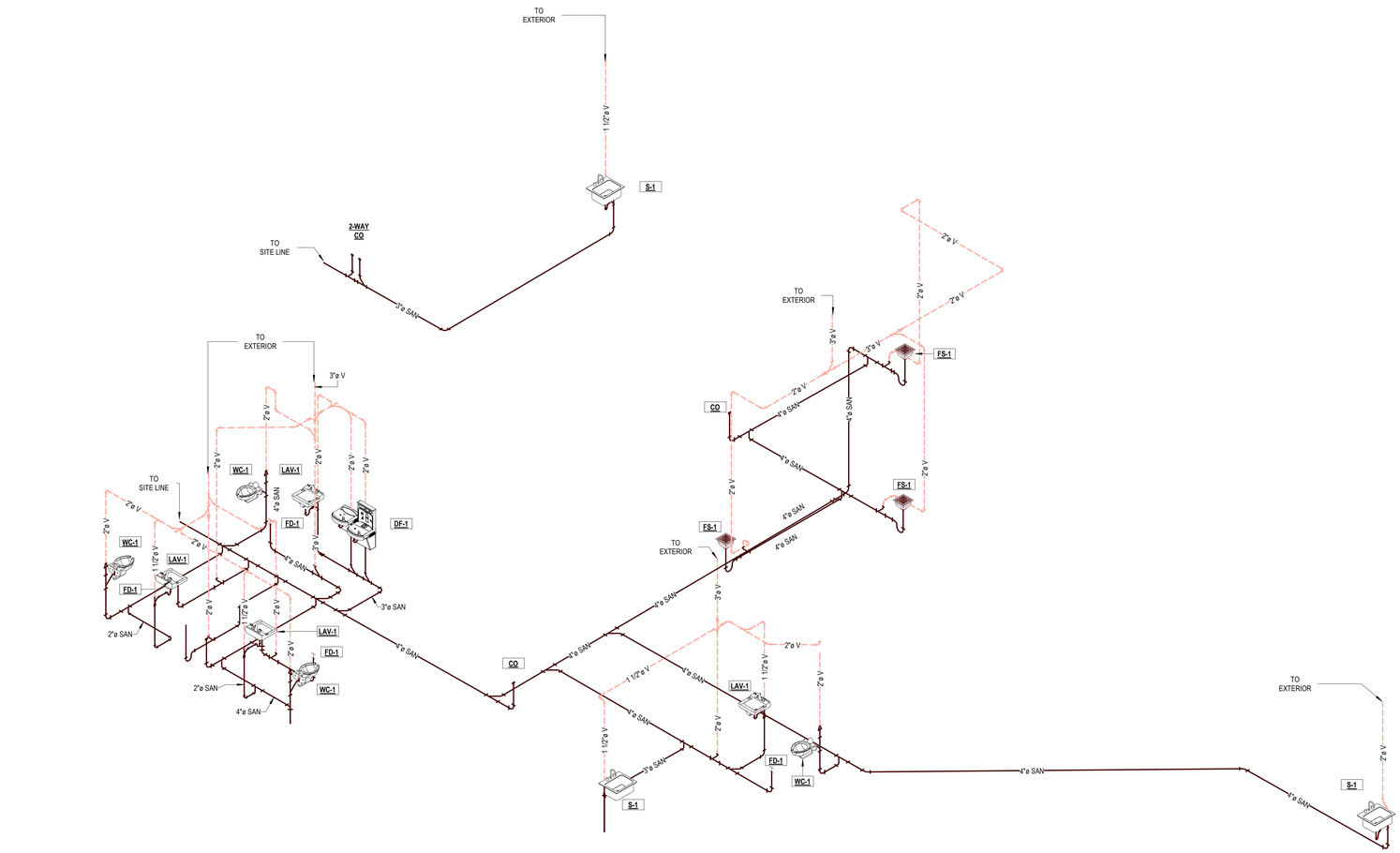

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PLUMBING ISOMETRIC

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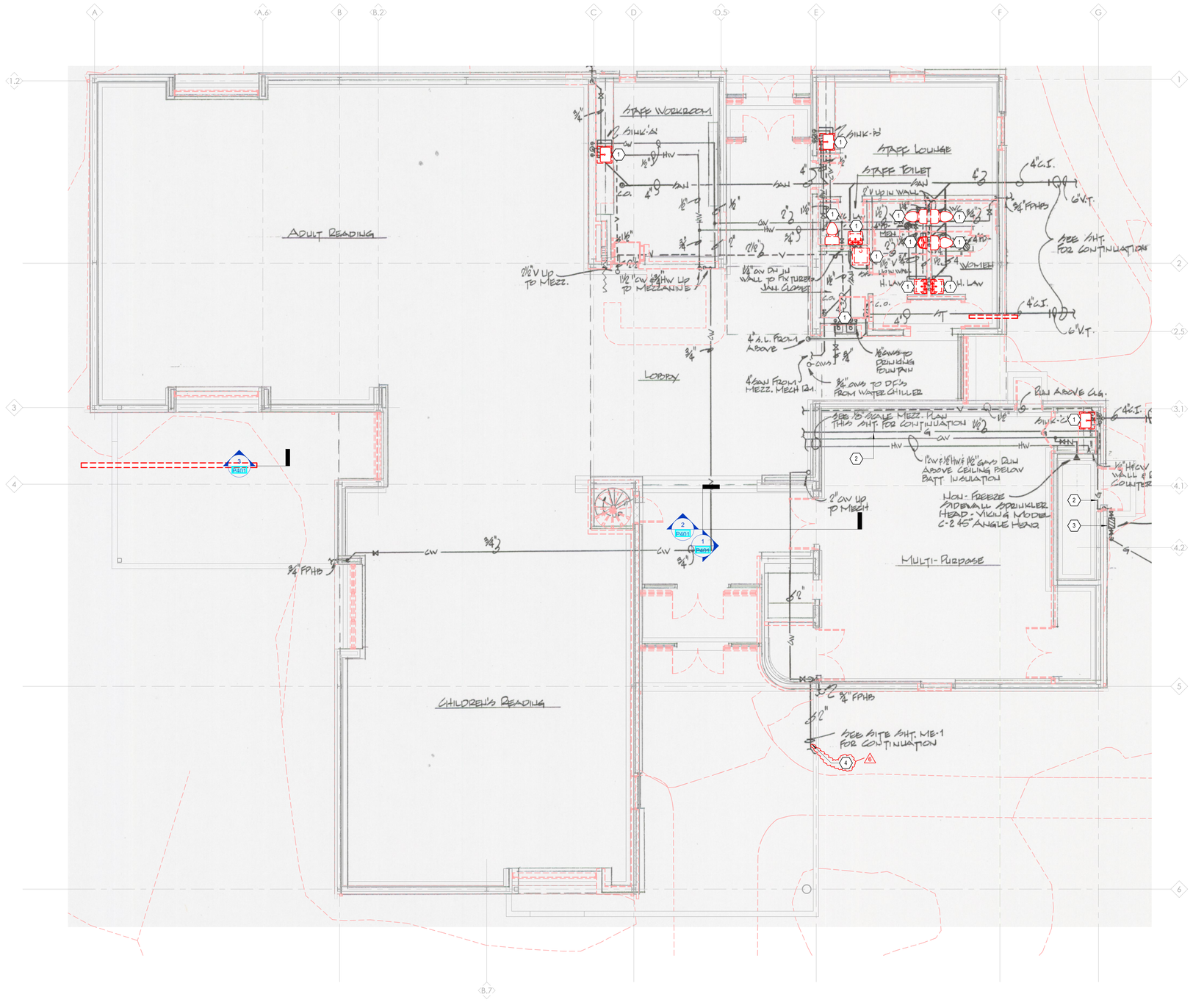
Sheet Notes - PD101	
#	Note
1	Demolish all plumbing fixtures and piping back to source unless otherwise noted.
2	Demolish existing gas line from meter to equipment in mechanical penthouse.
3	Contractor shall coordinate with utility to remove meter and regulator and install new meter and regulator for additional gas load added to the building.
4	Demolish underground CW line shown here, see civil plan for continuation.



1 First Floor Plumbing Demo
3/16" = 1'-0"

Project:
FLEET BRANCH RENOVATION AND EXPANSION

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FIRST FLOOR PLUMBING DEMO

PD101

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Electrical and Technology Responsibility Matrix

Task	AV Furnish	AV Install/Perform	Controls Furnish	Controls Install/Perform	Electrical Furnish	Electrical Install/Perform	General Furnish	General Install/Perform	Teledata Furnish	Teledata Install/Perform	CLEVNET Furnish	CLEVNET Install/Perform	IPS Furnish	IPS Install/Perform	Fire Alarm Furnish	Fire Alarm Install/Perform	Owner Furnish	Owner Install/Perform	Utilities Furnish	Utilities Install/Perform
Audio/Visual																				
Backboxes (in-wall and in-ceiling)					X	X														
Blocking, bracketing, and mounting							X	X												
Category cabling & jacks (U/UTP) back to network closet									X	X										
Conduit					X	X														
Digital signage																	X	X		
HDBaseT devices	X	X																		
Mudrings and outlet boxes					X	X														
Non-category A/V cabling	X	X																		
Speakers	X	X																		
TV and monitor mounting hardware	X	X																		
TVs and monitors																	X	X		
Clock System																				
Clock system cabling									X	X										
Clocks									X	X							X	X		
Master clock station									X	X										
Controls																				
BMS data drops and jacks									X	X										
BMS panels and accessories			X	X																
Conduit & line voltage wiring					X	X														
Controls cabling			X	X																
Mechanical starters, disconnects, relays, etc.					X	X														
Programming				X													X			
VFD (includes motor protection as needed)			X	X																
VFD cabling between drive and motor					X	X														
Data																				
Active network hardware (switches, gateways, routers, etc.)											X	X								
Cable tray, conduit, boxes, and pathways					X	X														
Demolition of old teledata service entrance										X										X
Demolition of raceways and pathways						X														
Demolition of structured cabling										X										
Labelling									X	X										
Patch cords									X	X										
Patch panels									X	X										
Phone handsets																	X	X		
Plywood backboards							X	X												
Rack and patch panel layout									X											
Racks & wire management									X	X										
Structured cabling, terminations, and testing									X	X										
Telecom grounding busbars and bonding jumpers					X	X														
UPS, rackmount, cord and plug									X	X										
WAP enclosures, antennas, or other accessories									X	X										
Wireless access points											X	X								
Electrical																				
Access floor boxes					X	X				X										
Access floor power distribution modules					X	X														
Access floor system							X	X												
Branch circuit and feeder conductors (THHN, XHHW-2)					X	X														
Contactor Panels					X	X														
Disconnect Switches					X	X														
Electrical demolition						X														
Floorboxes					X	X				X										
Light fixtures					X	X														
Lighting control devices					X	X														
Panelboards					X	X														
Wiring devices					X	X														
Fire Alarm																				
Cabling													X	X						
Conduit					X	X														
Control Unit													X	X						
FXS telephone connection									X	X										
Initiating Devices													X	X						
Notification Appliances													X	X						
Relay Modules						X							X	X						
PA System																				
Cabling to paging equipment									X	X										
Paging headend									X	X										
Paging speakers									X	X										
People Counting																				
Cabling, patch panel, patch cable, testing, terminations, labeling									X	X										
Field and headend devices																	X	X		
IP address and ports for people counting devices											X	X								
Programming, setup, training, license, and warranty																	X	X		
Security																				
Access control box rough-in					X	X								X	X					
Access control cabling, patch panel, patch cable, testing, terminations, labeling									X	X										
Access control programming, setup, training, license, and warranty														X	X					
Access control system and headend devices														X	X					
4 Card readers														X	X					
Conduit					X	X														
Door contacts for access control							X								X					
Door contacts for intrusion detection system														X	X					
Electric strikes, EU mortise locksets, power transfer hinges							X	X												
FSX telephone connection									X	X										
Intrusion detection cabling, patch panel, patch cable, testing, terminations, labeling									X	X										
Intrusion detection cellular radio panel														X	X					
Intrusion detection programming, setup, training, license, and warranty														X	X					
Intrusion detection system and headend devices														X	X					
IP address and ports for security panel													X	X						
Motion detectors														X	X					
Remote door unlock														X	X					
Video surveillance camera PoE jacks									X	X										
Video surveillance cameras														X	X					
Video surveillance headend														X	X					
Video surveillance programming, setup, training, license, and warranty														X	X					
Video surveillance WAN for video transfer											X	X								

Project General Notes

1. Whenever the contract documents indicate conflicting or inconsistent options, the contractor shall include the higher cost option in their base bid and shall submit an RFI to the Engineer for clarification.
2. The term "provide" is defined within the contract documents to mean "furnish and install".
3. All equipment, piping, and all other mechanical, electrical, plumbing, technology, and fire protection related accessories and equipment shall be furnished and installed on this project per the contract document drawings and specifications. Contractor shall be familiar with existing drawings, existing conditions, site, and the work of all trades.
4. All concrete pads required for work shall be provided and paid for by the contractor. See structural drawings for details.
5. All work shall comply with all federal, state, and local codes and authorities having jurisdiction.
6. Contractor shall conform to OSHA, fire marshal, local building department, and all other applicable codes and regulations and authorities having jurisdiction. Contractor shall verify exact sizes, locations and quantities of all items in field intended to be removed, replaced and remain, as well as all existing equipment and existing conditions that require coordination with new work and demolition.
7. Contractor shall verify exact sizes, locations and quantities of all items in field intended to be removed, replaced, or to remain.
8. Contractor shall obtain permits, pay all fees, and arrange for required inspections.
9. All piping/ductwork, and electrical work which are disconnected, shall be temporarily capped till new connections are made. This includes capping drains in areas of construction to prohibit debris from entering sanitary and storm system during construction.
10. All openings remaining in walls/floor/roof after openings are made shall be patched by the contractor with materials so as to match existing finishes and structural integrity, unless finishes are shown otherwise on architectural or structural drawings and specifications.
11. For all cutting and patching requirements in walls/floors/roof, see specifications and coordinate with structural engineer.
12. Contractor shall coordinate all phasing of demolition and new construction with all trades and provide phasing plan to owner at time of bid.
13. Where MEP systems interfere with new work to maintain minimum elevations requirements for this project, the contractor shall relocate, reroute and raise or drop existing and/or new systems as required. All such cost shall be included in base bid.
14. The contractor shall be responsible for all cutting and patching required to install new work within their scope. Cutting of structural members is prohibited without written permission from the architect by direction of the structural engineer. All cutting and patching shall be performed by qualified personnel.
15. Contractor is solely responsible for construction means, methods, construction sequences, and workmen safety.
16. Contractor shall conform and work around all existing conditions or adjust existing conditions as needed (with owner's approval) to meet the contract documents. All work required to accommodate existing conditions shall be included in the base bid pricing.
17. Contractor shall be certified in lead and lead-based paint awareness, and safety in accordance with OSHA lead standard (29 CFR 1926.62).
18. Systems are to be complete and workable in all respects. Install all equipment per manufacturer's recommendations. Adjust and startup all equipment per manufacturer's recommendations.
19. The CMR shall manage the BIM coordination drawing process. All subcontractors shall draw all systems and architectural elements in three dimensions using 3-D modeling software. Two-dimensional coordination drawings shall be rejected. All engineering systems shall be drawn with constructible elements. Using the engineer's own 3-D elements and returning them as "coordination drawings" is unacceptable and shall be rejected immediately. Elements which shall be modeled and coordinated include but are not limited to: walls, floors, fences, windows, doors, casework, fan powered boxes, rigid ductwork, diffusers, casework, floor clean outs, floor drains, floor sinks, air handlers, refrigerant piping, plumbing and hydronic piping, panelboards, switchboards, transfer switches, tap boxes, in-grade handhole enclosures, pulling pits, all site conduits and trenches, all interior conduit of trade size larger than 1-1/4", conduit slab penetrations, required clearances around all equipment, equipment pads or curbs, all plumbing elements, all mechanical elements, all electrical lighting and power elements, all IT /AV elements, all security elements, all fire alarm elements.
20. It is the responsibility of the contractor to investigate the location of all existing underground utilities prior to performing any site work. Contact the Ohio Utilities Protection Service (OUPS) 811 Call Before You Dig service in accordance with Section 153.64 of the Ohio Revised Code.

Demolition General Notes

1. On demo plans, unless noted otherwise, equipment or fixtures which are existing to remain are indicated in half-tone solid lines, and equipment or fixtures which are to be removed are indicated in red dashed lines. Half-tone dashed lines indicate removal of equipment from an alternate discipline (e.g., walls). Coordinate with architectural demo plans.
2. All fixtures (including receptacles, light fixtures, data faceplates, wall switches, wireless access points, sinks etc.) within the scope area shall be removed by the contractor. The contractor shall be retain these fixtures and offer them to the owner. If the owner chooses not to accept these items, the contractor shall dispose of them properly at the contractor's cost. All costs associated with this shall be included in the base bid.
3. Any items intended to be removed but not indicated in the contract documents shall be verified and removed by the contractor at no additional cost to the owner, and included in base bid.
4. Contractor shall check with owner for all items to be saved and return such items to the owner, prior to any work. All other items shall be hauled away from site and disposed of appropriately.
5. Contractor shall carefully remove controls components (actuators, sensors, thermostats, controllers, etc) and save in a location for the owner to inspect components and take them if they desire. The base bid shall include the contractor to dispose of the controls components if the owner does not want to keep them. Controls components may likely not be required back by the owner, coordinate with the Owner prior to demolition of the unit to understand if the controls componenets will likely be repurposed and taken back by the owner or if they should be discarded by the contractor.

Electrical Wall Switch Key

Label	Type	Mounting Height (to Centerline)
(none)	SPST	4' 0" AFF
A	ADA Paddle Actuator Switch	3' 6" AFF
D	Dimmer wall pod capable of controlling all zones in given space.	4' 0" AFF
DOS	Dimmer wall pod with integral dual technology vacancy sensor.	4' 0" AFF
E	Emergency pushbutton	4' 0" AFF
GR	GFCI reset switch	4' 0" AFF
OS	Wall pod with integral dual technology vacancy sensor.	4' 0" AFF
SC	Scene Controller	4' 0" AFF
WS	Roller shade raise/lower	4' 0" AFF

Electrical Receptacle Key

Label	Type	Mounting Height (to Centerline)
(none)	Standard receptacle	1' 6" AFF
C	Countertop	8" above countertop
CG	Countertop GFCI	8" above countertop
CU	Countertop tamper resistant standard receptacle with USB Type A and Type C	8" above countertop
E	Standby power receptacle (red)	1' 6" AFF
G	GFCI receptacle	1' 6" AFF
RG	Standard receptacle with remote GFCI	1' 6" AFF
TR	Tamper resistant standard receptacle	1' 6" AFF
TV	Standard receptacle in TV backbox	Refer to Architectural
U	Tamper resistant standard receptacle with USB Type A and Type C	1' 6" AFF
WP	Weather protective	1' 6" AFF
WU	Weather protective tamper resistant standard receptacle with USB Type A and Type C	1' 6" AFF

Data Drop Key

Label	Type	Mounting Height
(none)	Standard data drop	1'0" AFF
C	PoE data drop for clock	8'0" AFF U.N.O.
H	HDMI wallplate	As indicated
TV	Television	Within backbox

Floorbox Schedule

Label	Power	Data	Audio/Visual	Remarks
A	Double duplex	(2) Cat6A	HDMI faceplate	Provide 2" conduit HDMI passthrough to TV backbox within the same space.
C	Double duplex	(2) Cat6A		
D	Four duplex	(2) Cat6A		
X	Double duplex	(2) Cat6A		Raised floor module.
Y	Double duplex	(4) Cat6A		Raised floor module.

Surveillance Camera Schedule

Label	Manufacturer	Model
A	Axis Communications	P3818-PVE
B	Axis Communications	P3747-PLV with Corner Mounting Kit
C	Axis Communications	P3288-LVE
D	Axis Communications	M4317-PLVE
E	Axis Communications	P3277-LV
F	Axis Communications	P3747-PLVE with Ceiling Mounting Kit

Power General Notes

1. The electrical trades shall coordinate with all other trades to maintain required electrical clearances in front of equipment and required dedicated space above equipment per NEC.
2. Circuit wiring is only a schematic representation, and the actual wiring and conduit paths are not shown. All devices connected to a home run bearing the same circuit number shall be connected to that same circuit. Fixture positions on electrical plans are a schematic representation only for the purpose of circuiting. Unless explicitly dimensioned in these drawings, the exact dimensioned placement of fixtures shall be taken from architectural plans, elevations, and details.
3. Contractor shall provide each panelboard with at least as many slots as are shown in the corresponding panel schedule. All panels shall be fully bussed. Panel schedules do not show spare breakers. For each new panelboard, unless otherwise noted, provide single-pole 20A circuit breakers in all remaining slots.
4. Unless noted otherwise, all circuits are served by phase conductor(s), a neutral conductor, and an equipment grounding conductor each having a gauge not smaller than AWG #12. Derate multiple conductors in raceways & wireways per requirements for 75°C-rated copper conductors in Article 310 of NEC.
5. Exposed conduit shall be routed tight to underside of deck above. Coordinate with mechanical piping and ductwork. Coordinate ceiling layering and conduit routing with other trades prior to installation.
6. Perform work and coordination as indicated in specifications for items provided by mechanical trades and requiring installation of branch circuiting. Refer to plans and specifications for extent of work.
7. Coordinate all relevant work with audio/visual contractor, security system contractor, and/or IT contractor.
8. Where practicable, power, feeder and branch circuit conduit and wiring shall be separated from raceway systems intended for routing voice or data wiring by no less than 3' 6". Where this separation cannot be achieved due to work of other trades, obstructions or interference, contractor shall route conduits/raceways at their own discretion in an effort to achieve as much separation as practicable.
9. Seal raceway systems at boundary of building interior/exterior to mitigate condensation in raceways. Contractor shall cut/patch/repair and fire-caulk all penetrations into building made to run electrical conduit.
10. Provide lock-on devices for circuit breakers serving loads which are part of the fire alarm system.
11. Coordinate power for VAV and terminal boxes with mechanical trades. Circuit shall be to a central control unit which distributes 24 V power to each individual box. This circuiting is not indicated in electrical floorplans.
12. Where multiple switches or other wiring devices are shown next to each other, the contractor shall consider them to be ganged together in the same outlet box if possible. When a single switch symbol is indicated to control multiple zones, the contractor shall provide a ganged switchbank with as many switches as are required to control those zones.
13. Coordinate site ductbank requirements for service lateral with utility. Do not begin work on site ductbank without approval from utility and other stakeholders.
14. Where multiple switches or other wiring devices are shown next to each other, the contractor shall consider them to be ganged together in the same outlet box if possible. When a single switch symbol is indicated to control multiple zones, the contractor shall provide a ganged switchbank with as many switches as are required to control those zones.
15. The contractor shall ensure there is no conflict with existing utility lines for any site electrical components. If such a conflict is discovered during an OUPS investigation, the contractor shall submit an RFI to the Engineer.
16. Confirm all floorbox locations with Owner prior to pouring concrete.
17. Receptacles installed in public areas shall be tamper-resistant type (in addition to other requirements).

Lighting General Notes

1. All applicable notes from "Power General Notes" apply.
2. Circuit wiring is only a schematic representation, and the actual wiring and conduit paths are not shown. All luminaires connected to a power pack shall be powered, switched, and dimmed via that power pack. Wall pod switches shown connected to a power pack shall provide local zoned control of the luminaires on that power pack. Some zones may require an additional power pack for emergency lighting.
3. All luminaire finish and trim options shall be selected by architect. Coordinate all luminaire mounting heights with architect.
4. A prefix of "E" shall indicate emergency type lighting device or fixture, which shall be identical to the non-emergency variant in every way except for switching to emergency mode upon detection of main power loss (regardless of local control setting).
5. The contractor shall coordinate the installation of pendant light fixtures with ductwork and piping as part of the BIM coordination process. Any conflicts or potential interferences must be addressed and resolved prior to purchase or installation. For example if a linear pendant is below an HVAC duct, then the points of suspension for the fixture shall be chosen such that the aircraft cable supports of the pendant straddle the ductwork.
6. Furnish all required power packs and accessories to satisfy requirements for switching zones as indicated. General purpose switching zones which require time of day or other program settings (such as exterior lights, lobby lights, etc.) shall be controlled by the LCP-1.
7. Substitutions for basis-of-design lighting fixtures shall be reviewed by Architect, Engineer and Owner for acceptance. Contractor shall provide photometric calculations demonstrating that substituted fixtures meet or exceed the illumination levels as required by basis-of-design fixtures in all spaces of the project. (Refer to photometric calculations for basis-of-design fixtures provided in the drawings.) The Architect, Engineer and Owner may deny a substitution request for other reasons besides illumination levels and/or photometrics. The build quality, aesthetics and wattage of any substitution shall be similar to the basis of design unit.
8. Lighting alternates shall not be permitted after bidding. If any alternates are propose, they shall be presented during bidding and a substitution request shall be submitted for evaluation during the bidding phase.

Technology General Notes

1. Voice and/or data connections to mechanical, electrical, or other equipment provided by others shall be verified with the manufacturers prior to installation. Installations as indicated on the drawings shall be adapted to accommodate manufacturer required or suggested installation practices but shall be done to allow all required testing and certification. Installation as indicated on drawings shall also be completed in compliance with all codes and requirements of the authority having jurisdiction.
2. Contractor shall ensure technology fixtures are procured, furnished, roughed-in, and installed separately from electrical fixtures. Note that data outlet boxes are usually deeper than electrical boxes.
3. If not otherwise specified, the final locations for visible items shall be vertically and horizontally aligned with existing similar items and devices. Contractor shall similarly coordinate device locations of other trades whenever possible. This may include, but is not limited to, coordination with any device having a faceplate such as receptacles, switches, technology outlets, etc.
4. All cable and terminations for IT shall be plenum rated and shall be by the contractor. The contractor shall provide verified testing results that each cable has connectivity.
5. Rough-in all data drops indicated on plan. Provide conduit pathways to IT rack in Electrical 107B. Provide pullstring for each pathway. Owner shall determine quantity of Category cables pulled to each data drop. Confirm quantity with Owner prior pulling any Category cabling.

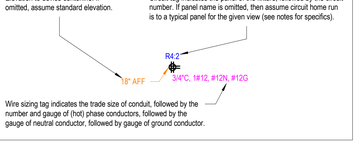
Fire Alarm General Notes

1. Fire alarm system design is a delegated design. The contractor shall hire a NICET-certified fire-alarm technician, Level III, to design the upgrades to the fire alarm system to bring it into code compliance. The design shown on the drawings herein is for reference only. See fire alarm specifications for additional details.
2. Contractor must provide and place adequate number of audio/visual horn and strobe devices to meet requirements of NFPA 72.
3. Flash rate for new audio/visual appliances must be synchronized with existing system. Contractor shall upgrade fire alarm control panel if necessary to accommodate synchronized stobe.
4. Contractor shall field-adjust audio device levels to provide 15 dBA above ambient noise level or 5 dBA above maximum noise level to meet requirements of NFPA 72.
5. Contractor shall perform a battery load calculation and a voltage drop calculation for entire system.
6. Prior to new work, hold a pre-installation conference with owner and architect to clarify appliance placement.
7. The building fire alarm system shall be integrated with the clean agent fire suppression system control panels. Activation of the clean agent system shall activate a supervisory trouble/fault signal to the building fire alarm system. All clean agent system components, including smoke detectors, alarm bells, manual pull stations, abort buttons, canisters, and discharge nozzles, shall be connected to a self-contained independent system with its own control panel (one panel in each room employing a clean agent system).
8. The initiating devices for the clean agent system shall be programmed in a cross-zone configuration, where each zone circuit consists of smoke detectors of a given type (i.e., all photoelectric clean agent smoke detectors in a single room constitute one zone circuit, and all ionizing clean agent smoke detectors in that room constitute the second zone circuit). The release of clean agent will require actuation of both zone circuits (refer to specifications).
9. Salvage existing duct smoke detectors prior to demolition and retain for re-installation during New Work. Re-install duct smoke detectors in their previous location and integrate into new fire alarm system. Inlcude in base bid all components required to integrate existing duct smoke detectors into the new fire alarm system.

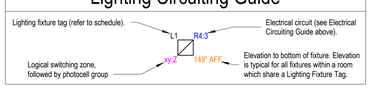
Electrical, Fire Alarm And Technology Legend

Symbol	Description
	Duplex receptacle (See key)
	Quadruplex receptacle (See key)
	Specialty receptacle (NEMA configuration and height as indicated on drawings)
	Ceiling-mounted receptacle (duplex)
	Floor box with power and/or data (See key)
	Wiremold raceway containing receptacles (2' spacing)
J	Junction box
	Disconnect switch (non-fusible)
	Disconnect switch (fusible)
	Grounding Bar
G	Grounding Rod
	Electrical panelboard - 208/120V
S	Wall switch (See key)
OS	Ceiling-mounted occupancy sensor (dual technology)
OS	Ceiling-mounted occupancy sensor (high bay)
PC	Ceiling-mounted photocell for daylight harvesting
	Site pole light (existing to remain)
H	Wireless lighting control hub
	Snowmelt cables in concealed extrusion (two linear runs of cable within extrusion)
	Snowmelt cable housed within cable cover bracket (for installation in gutters)
	Snowmelt cable descending within downspout (from height of gutter to bottom of downspout)
M	Fire alarm manual pull station
D	Fire alarm visual device - Wall mounted (candelas as indicated)
D	Fire alarm audio/visual device - Wall mounted (candelas as indicated)
D	Fire alarm audio/visual device - Ceiling mounted (candelas as indicated)
FACP	Fire alarm control panel
S	Smoke detector
	Duct smoke detector
D	Magnetic hold-open (furnished by others)
	Data faceplate. See key for the meaning of green subscript. A blue numerical value within the triangle indicates the quantity of Category 6A jacks. For a non-numerical value within the triangle, refer to the auxiliary key.
	Network rack
CR	Card reader
KP	Keypad for intrusion detection system
MD	Motion detector for intrusion detection system
GB	Glass break detector for intrusion detection system
DC	Door contact for intrusion detection system (distinct from the door position switches to be furnished by door hardware vendor for the access control system)
	Ceiling-mounted data connection for access point
?	Ceiling-mounted security camera (Fixed Direction or Multi-Directional)
?	Wall-mounted security camera (Fixed Direction or Multi-Directional)

Electrical Circuiting Guide



Lighting Circuiting Guide



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2	Addendum 2	3.19.2026
3	Addendum 3	4.9.2026

GENERAL ELECTRICAL

E001

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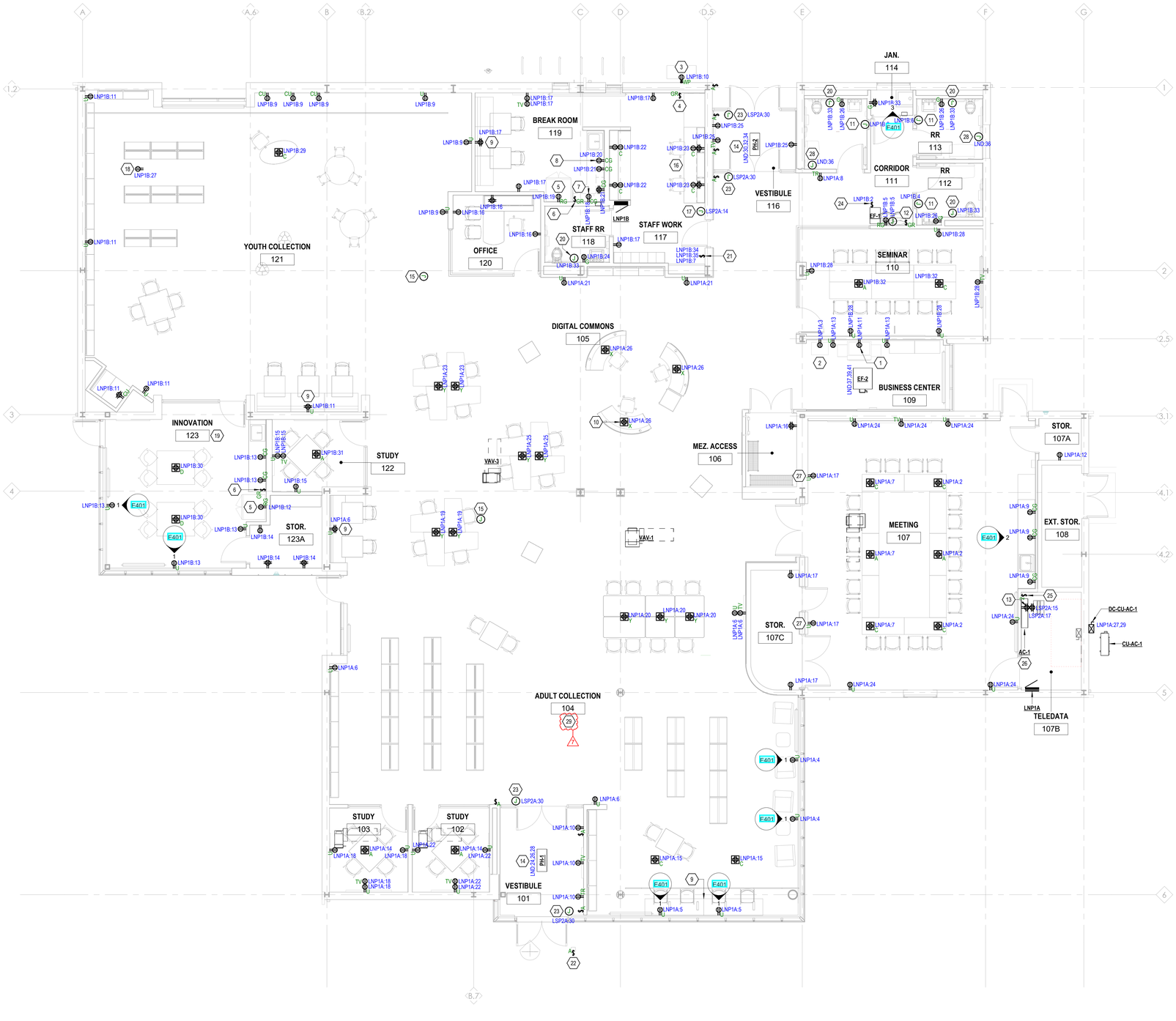

1 First Floor Power
3/16" = 1'-0"

Sheet Notes - E101

#	Note
1	Provide dedicated receptacle for copy machine. Coordinate location with architectural.
2	Provide dedicated receptacle for pay station. Coordinate location with architectural.
3	Provide a dedicated remote GFCI receptacle for book locker with weatherproof cover. Coordinate location with architectural.
4	Provide remote GFCI test switch for book locker. Label the test swith "Book Locker". Coordinate location with architectural.
5	Provide a dedicated remote GFCI receptacle for refrigerator. Coordinate location with architectural.
6	Provide remote GFCI test switch for refrigerator. Coordinate location with architectural.
7	Provide dedicated receptacle for microwave. Coordinate location with architectural.
8	Provide dedicated receptacle for coffee machine. Coordinate location with architectural.
9	Vendor provided receptacles integral to funiture shall be powered via cord-and-plug connection via wall receptacle.
10	Provide quantity (14) raised floor floorbox modules. Only known locations of floorbox modules are shown. Remaining locations shall be coordinated with Architect and Owner. Provide excess cabling such that floorbox modules can be relocated within the raised floor area.
11	Provide dedicated circuit for hand dryer.
12	Provide remote GFCI test switch for drinking fountain. Coordinate location with architectural.
13	Provide dedicated receptacle for IT rack.
14	Plenum heater shall be furnished with an integral disconnect switch.
15	Provide above-ceiling power feed for future Owner-furnished, Owner-installed ceiling fan. Provide 3/4" conduit pathway, 2#12 AWG conductors and 1#12 AWG ground to the indicated panel. Do not terminate the conductors in this panel, conductors will be terminated during fan installation. Coordinate junction box location with Architect.
16	Coordinate location of undercounter receptacles to align with grommets in furniture.
17	Provide hardwired connection for fire alarm power supply. Coordinate exact location with fire alarm integrator.
18	Provide power feed in accessible location above ceiling for future power in Children's Center. Exact location of loads shall be coordinated with Owner.
19	Conduit and cabling in this space shall be routed above perforated layer of deck and through flutes in deck system. Coordinate with architectural drawings.
20	Provide power to trap primer. Coordinate location with plumbing contractor.
21	Provide switch bank along with dedicated indicator pilot light to control the mentioned exterior power circuits. Refer ES101 for controlled fixtures locations.
22	Provide pedestal mounted type ADA paddle actuator switch.
23	Provide junction box in accessible location above ceiling to power motorized ADA door opener.
24	EC shall provide 30A SPST toggle switch for exhaust fan in an accessible location. Coordinate with mechanical.
25	Provide two-pole heavy duty toggle switch to disconnect all phase conductors from AC unit.
26	Power supplied by outdoor unit. Provide pathway and conductors from associated CU to AC unit.
27	Provide new receptacle within existing outlet box recessed into existing-to-remain brick wall. Provide extension ring as required and re-use existing conduit pathway.
28	Provide power to heat trace cabling. Coordinate location and routing with mechanical contractor.
29	Provide (2) in-slab floorboxes in this space. Coordinate the location and type with the Architect and Owner, as these locations are not shown in the plan. Provide circuiting and cabling for the power and data systems accordingly.

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2	Addendum 2	3.19.2026
5	Addendum 5	5.4.2026
7	Bulletin 2	9.18.2026

FIRST FLOOR POWER NEW PLAN
E101

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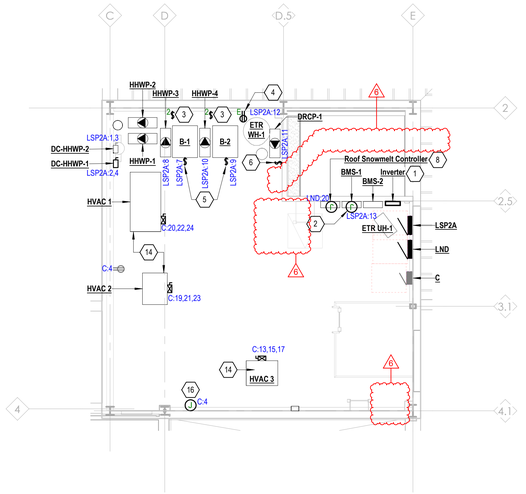
Sheet Notes - E102	
#	Note
1	Provide inverter Isolite E3 series or engineer's approved equal for emergency lighting. Refer detail on E501
2	Provide dedicated circuit for BMS panels. Coordinate with mechanical.
3	Provide double-pole heavy-duty toggle switch as disconnecting means for boiler pump.
4	Provide new standby-power receptacle for existing-to-remain water heater.
5	Provide heavy-duty SPST toggle switch as disconnecting means for boiler. Coordinate with mechanical.
6	Provide heavy-duty toggle switch as disconnecting means for DRCP-1. Coordinate location with mechanical contractor.
7	Sheet Note 7 no longer in use.
8	Provide circuit for roof snow-melt controller and associated contactor. See detail 5/E503 for wiring schematic.
9	Provide rooftop snowmelt cable for the portion of the west roof, gutter, and downspouts where shown. Provide snow owl at roof and provide gutter ice center within the gutter. Coordinate exact location of penetrations, junction boxes, and wire connection kits with Architectural. See 8/A610 and 5/E503 for detail.
10	Provide rooftop snowmelt cable for the portion of the east roof, gutter, and downspout where shown. Provide snow owl at roof and provide gutter ice center within the gutter. Coordinate exact location of penetrations, junction boxes, and wire connection kits with Architectural. See 4/A610 and 5/E503 for detail.
11	Provide rooftop snowmelt cable for the fascia of the canopy as shown. Coordinate exact location of penetrations, junction boxes, and wire connection kits with Architectural. See 4/A610 and 5/E503 for detail.
12	Provide ambient RTD sensor for roof snowmelt located in a convenient location at rooftop.
13	Sheet Note 13 no longer in use.
14	This existing mechanical unit and its existing disconnect switch shall be relocated from their previously installed location. Coordinate with mechanical. The EC shall reconnect the disconnect switch to the circuit indicated.
15	Sheet Note 15 no longer in use.
16	Provide power to trap primer. Coordinate location with plumbing contractor.



2 Roof Power
3/16" = 1'-0"



1 Penthouse Power
3/16" = 1'-0"

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PENTHOUSE AND ROOF POWER NEW PLAN

E102

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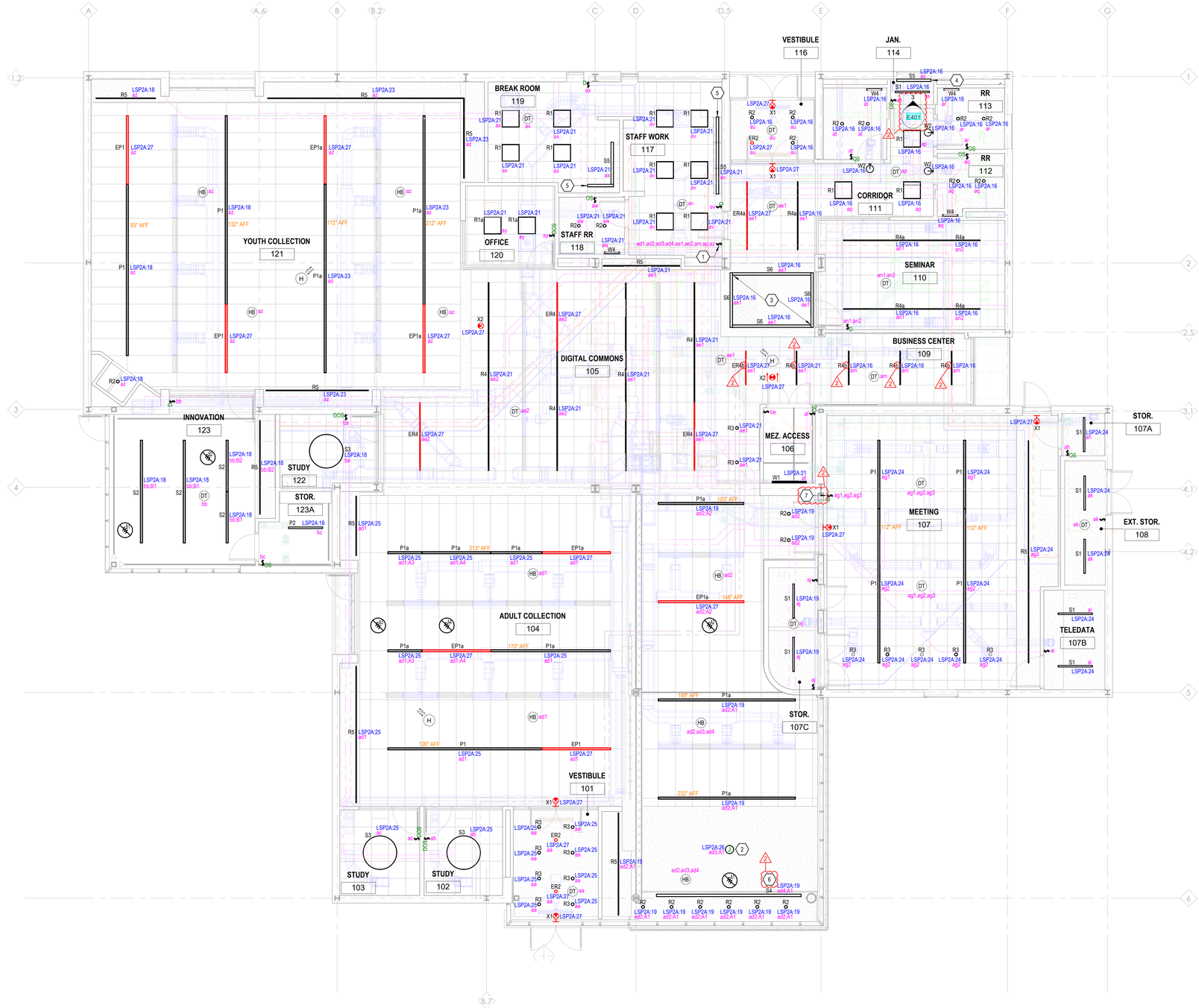
Sheet Notes - E201	
#	Note
1	Provide switch bank for the controls of mentioned zones. Refer switching zone sequence schedule on E602.
2	Provide dedicated circuit and switching zone for illuminated sculpture.
3	Provide power and lighting control for this cove lighting. Refer architecture plans for detail.
4	Provide perimeter lighting for window W-1. Refer to elevation E401/5. Coordinate with architectural details.
5	Provide power and lighting control for this undercabinet lighting. Refer architecture plans for detail.
6	Provide lighting for the windowsill. Coordinate with the architectural details.
7	Provide new wiring devices within existing outlet box recessed into existing-to-remain brick wall. Provide extension ring as required and re-use existing conduit pathway.



1 First Floor Lighting
3/16" = 1'-0"

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FIRST FLOOR LIGHTING NEW PLAN

E201

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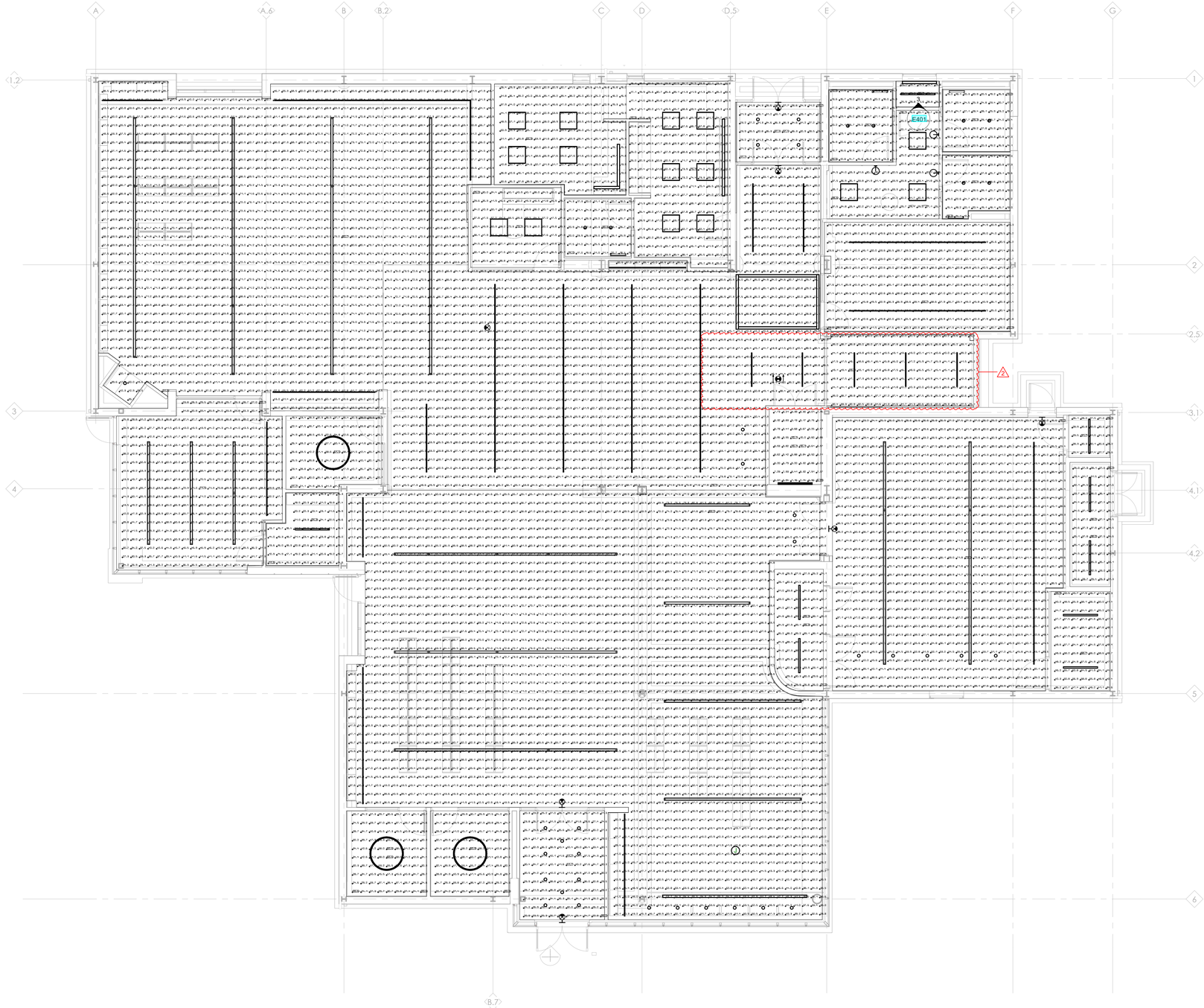
Sheet Notes - E201A

#	Note
1	Substitutions for basis-of-design lighting fixtures shall be reviewed by Architect, Engineer and Owner for acceptance. Contractor shall provide photometric calculations demonstrating that substituted fixtures meet or exceed the illumination levels as required by basis-of-design fixtures in all spaces of the project. (Refer to photometric calculations for basis-of-design fixtures provided in the drawings.) The Architect, Engineer and Owner may deny a substitution request for other reasons besides illumination levels and/or photometrics. The build quality, aesthetics and wattage of any substitution shall be similar to the basis of design unit.
2	Photometric calculations do not include contribution from undercabinet tape lighting in Staff Work 117 and Break Room 119 and perimeter tape lighting in Janitorial 114.



2
1 2 1 First Floor Photometrics
3/16" = 1'-0"

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FIRST FLOOR PHOTOMETRIC PLAN

E201A

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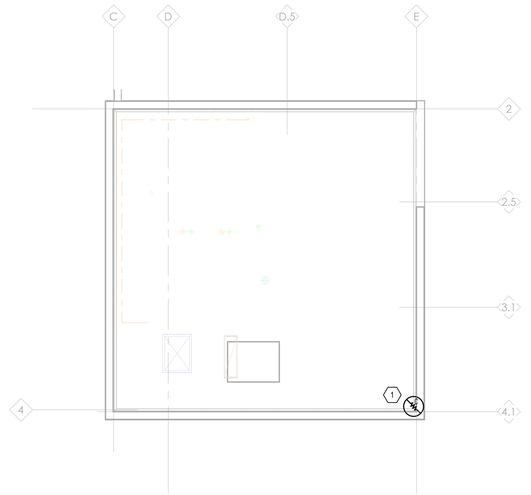
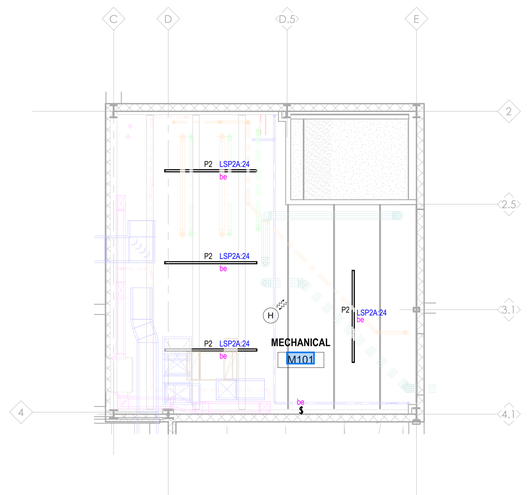
Sheet Notes - E202

#	Note
1	Provide exterior stem-mounted photocell for dusk-to-dawn control of site lighting.



② Roof Lighting
3/16" = 1'-0"



① Penthouse Lighting
3/16" = 1'-0"

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PENTHOUSE AND ROOF LIGHTING NEW PLAN

E202

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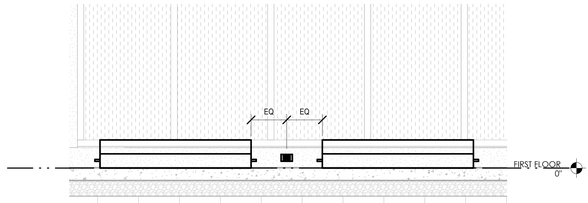
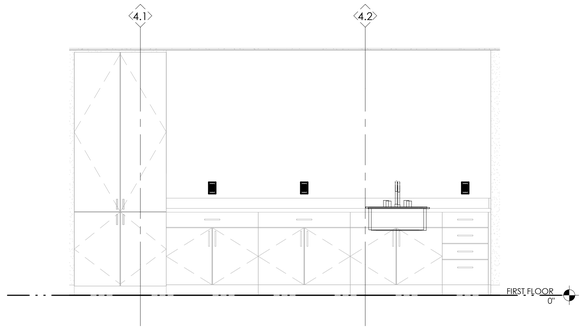
Sheet Notes - E401

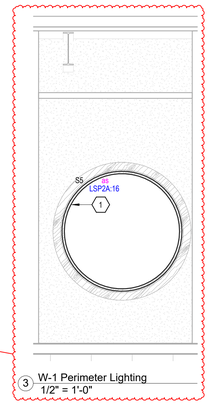
#	Note
1	Provide perimeter tapelight for window W-1. Coordinate installation with architectural.



1 Receptacle Placement near Radiators, Typical
1/2" = 1'-0"



2 Meeting 107 Kitchenette
1/2" = 1'-0"



3 W-1 Perimeter Lighting
1/2" = 1'-0"

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ELECTRICAL ELEVATIONS

E401

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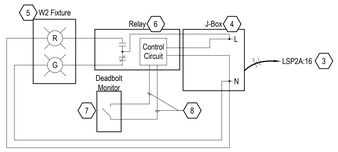
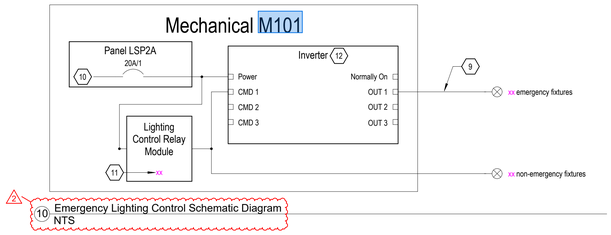
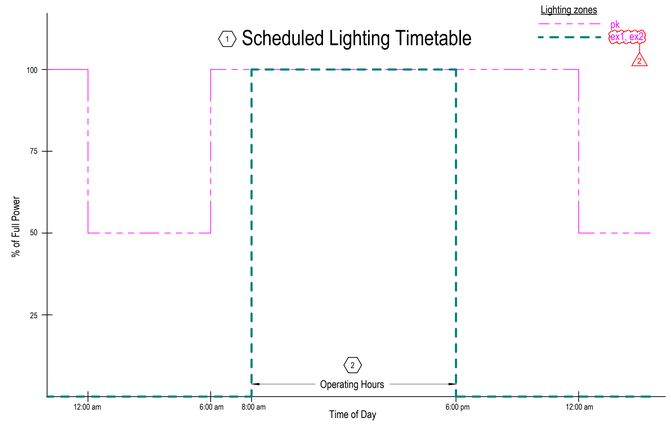


11 W2 Wiring Schematic
NTS



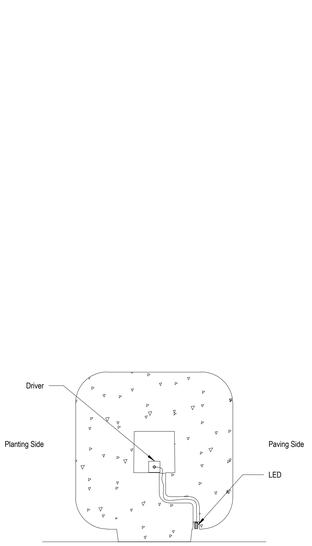
2
10 Emergency Lighting Control Schematic Diagram
NTS



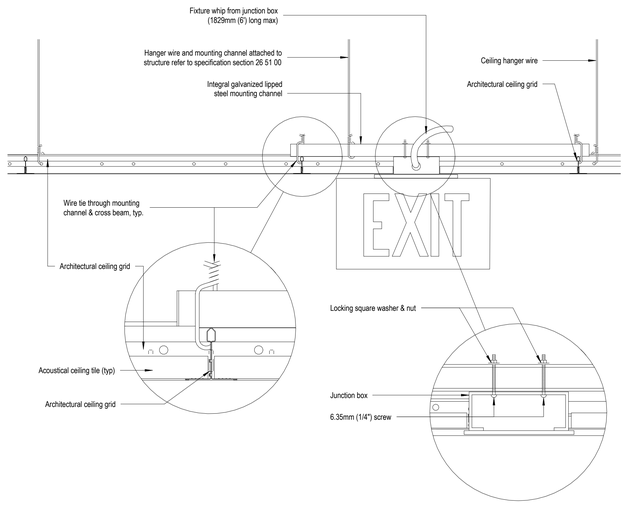
7 Scheduled Lighting Timetable
NTS

Sheet Notes - E501	
#	Note
1	All exterior lighting controls shall be overridden by photocell. Photocell shall lower power to 0% in all exterior switching zones upon reaching daylight threshold.
2	This plot assumes operating hours are 8am to 6pm. This timespan shall be coordinated with the owner.
3	All W2 fixtures shall be on the same 120V circuit.
4	For each restroom door, provide junction box in accessible ceiling location (above Work Room 220). Clearly label J-box with its corresponding restroom door.
5	Furnish LED indicator light (Rockwell Automation 855W-G10Y3Y4 or approved equal) and install mounted to wall above each restroom door.
6	Provide SPDT relay with dry contact actuation (Functional Devices RIB01BDC or approved equal) to switch between normally closed (green) and normally open (red) indicator lights.
7	The restroom door mortise lock (Schlage L9485L DM) comes with a deadbolt monitor which indicates extension of the thumbturn deadbolt. The normally open pair of wires coming from this switch shall be pink and orange.
8	Connect the dry-contact input wires from relay (white/red and white/blue wires of the RIB) to the deadbolt monitor (the pink and orange wires). These shall be wired as a Class 2 wiring method. In particular, keep separated from line voltage conductors by at least 1/4" in the first junction box, and do not share any other raceway or boxes with line voltage conductors.
9	Provide 2#10,#10G XHHW-2 conductors for emergency site lighting fixtures.
10	Circuit as indicated on drawings.
11	Switching zone as indicated on drawings.
12	Provide Isolite E3 Series inverter or engineer's approved equal. Provide size and quantity of inverters necessary to power all emergency lighting loads as indicated on drawings. Further, provide quantity of inverters necessary to achieve the quantity of switching zones indicated on drawings and Switching Zone Sequence Schedule. Inverters shall be installed in a single location to facilitate maintenance.

2

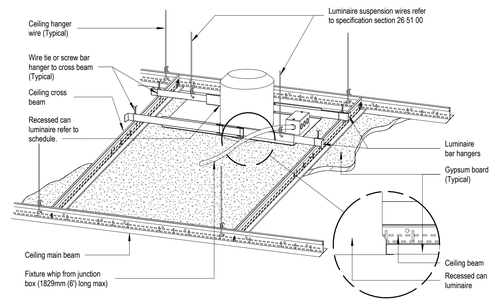


9 Integral Bench Lighting - Electrical Box Section
NTS



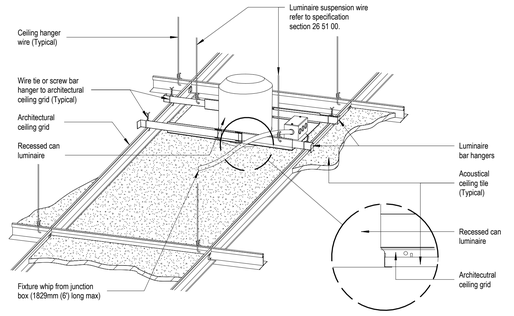
General note:
1. Install in accordance with manufacturer's mounting instructions and using the recommended mounting hardware.

5 Exit Sign Mounting - Lay-In Ceiling
NTS



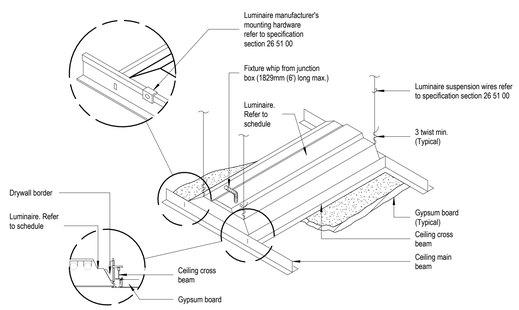
General Note:
1. Install in accordance with manufacturer's mounting instructions and using the recommended mounting hardware.

1 Downlight Mounting - Gypboard Ceiling
NTS



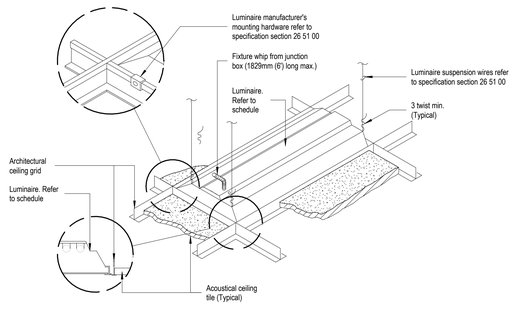
General Note:
1. Install in accordance with manufacturer's mounting instructions and using recommended mounting hardware.

2 Downlight Mounting - Lay-In Ceiling
NTS



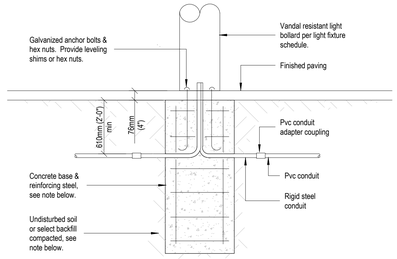
General Note:
1. Install in accordance with manufacturer's mounting instructions and using the recommended mounting hardware.

3 Luminaire Mounting - Gypboard Ceiling
NTS



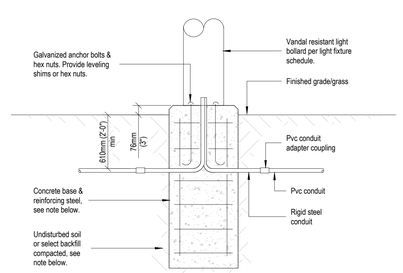
General Note:
1. Install in accordance with manufacturer's mounting instructions and using the recommended mounting hardware.

4 Luminaire Mounting - Lay-In Ceiling
NTS



General Notes:
1. Backfill, concrete, reinforcing steel, and anchor bolts are shown for reference only. Structural design is shown on structural drawings.
2. Refer to specification section 26 56 00 for mounting and leveling requirements.
3. Refer to landscape details for installation of pavers and interface between pavers and pole base.

6 Bollard Base Detail (Paved Areas)
NTS



General Notes:
1. Backfill, concrete, reinforcing steel, and anchor bolts are shown for reference only. Structural design is shown on structural drawings.
2. Refer to specification section 26 56 00 for mounting and leveling requirements.

8 Bollard Base Detail (Grass Areas)
NTS

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Drawn / Checked: SA / ARH

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2 Addendum 2 3.19.2026

ELECTRICAL DETAILS

E501

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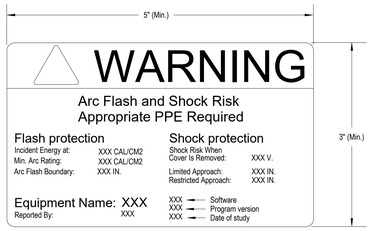
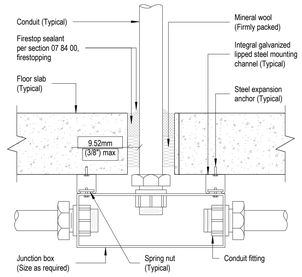
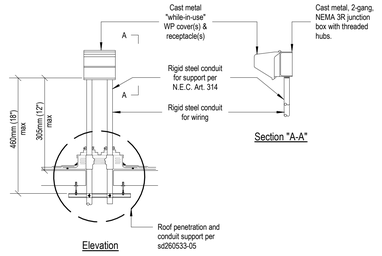


Notes:
1. Per NEC 110.16, electrical contractor shall provide flash protection marking on all panels, switchboards, individual control panels and motor control centers.
2. Warning label shall be pre-assembled by a label manufacturer and shall conform to ANSI standards.

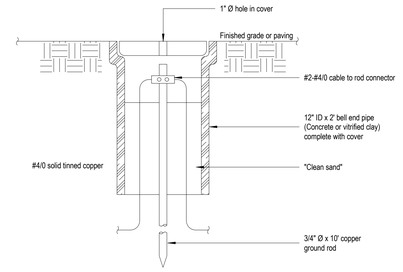
1 Arc Flash Label
NTS



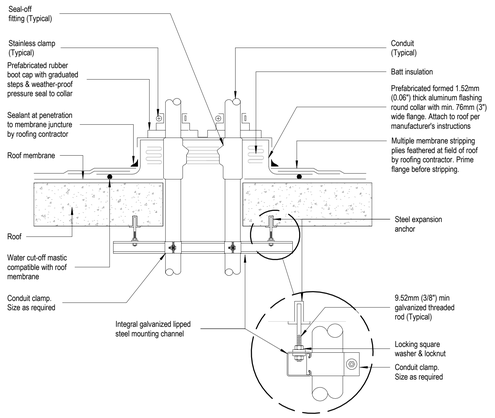
2 Floor Slab Penetration Detail
NTS



5 Receptacle Roof Mounting Detail
NTS

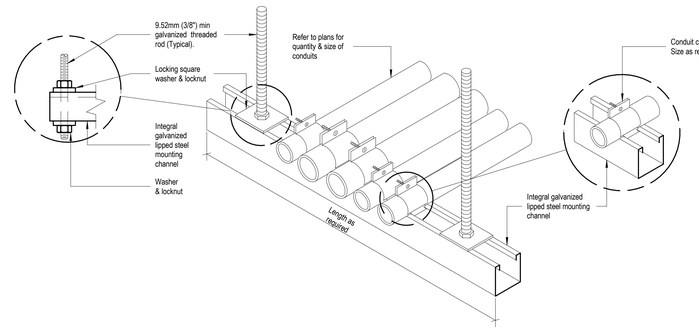


9 Ground Test Well
NTS



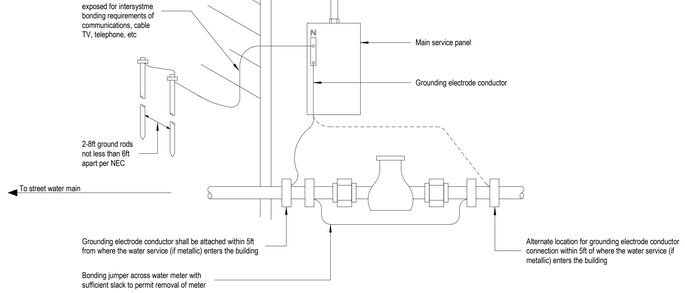
General Notes:
1. Maintain a minimum clearance of 305mm (12") on all sides of roof penetration from walls, curbs, and other projections to facilitate proper flashing.
2. Flanges of adjacent flashings shall not be cut or overlapped.
3. Verify roof & structural system with architect.
4. Coordinate flashing installation with roofing contractor to ensure proper methods & materials are used to maintain roof warranty.

3 Conduit Roof Penetration Detail
NTS

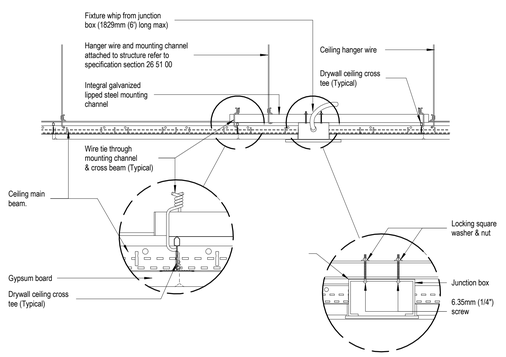


General Notes:
1. Integral galvanized lipped steel mounting channel longer than 915mm (36") shall be installed with a center support rod.
2. Fasten threaded rod to structure by approved method per specification 26 05 33, raceway and boxes for electrical systems. Field verify exact conditions.
3. For trapeze installations in seismic areas refer to specification section 13 05 41, seismic restraint requirements for non-structural components.

4 Conduit Trapeze Mounting Detail
NTS

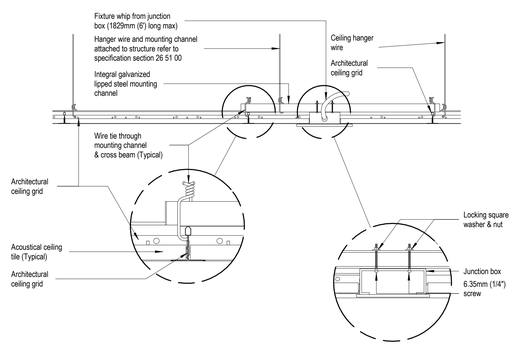


10 Grounding Detail
NTS



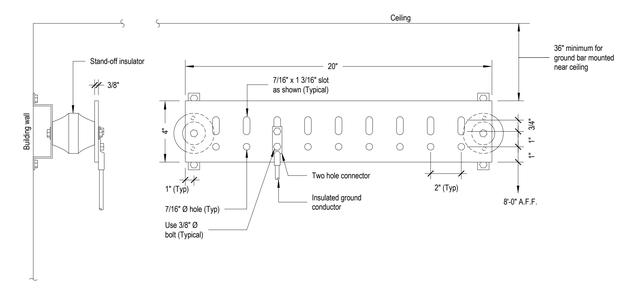
General Note:
1. Install in accordance with manufacturer's mounting instructions and using the recommended mounting hardware.

6 T - Grid Mounted Electrical Box - Gypboard Ceiling
NTS



General Note:
1. Install in accordance with manufacturer's mounting instructions and using the recommended mounting hardware.

7 T - Grid Mounted Electrical Box - Lay-In Ceiling
NTS



Note:
Ground bar shall be mounted on wall with minimum 2" clearance between back of ground bar and mounting surface.

8 Ground Bar
NTS

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Issue: Bid & Permit 2.27.2026

ELECTRICAL DETAILS
E502

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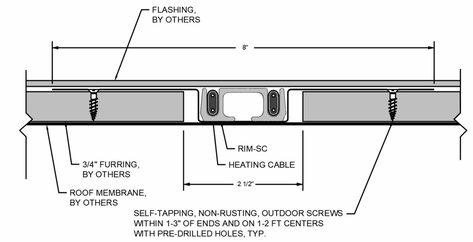
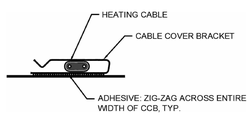
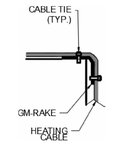


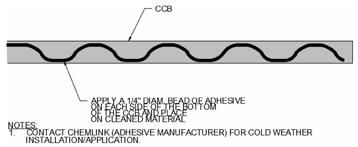
1 Roof Snowmelt Concealed Panel
NTS



2 Roof Snowmelt Cable Cover Bracket
NTS

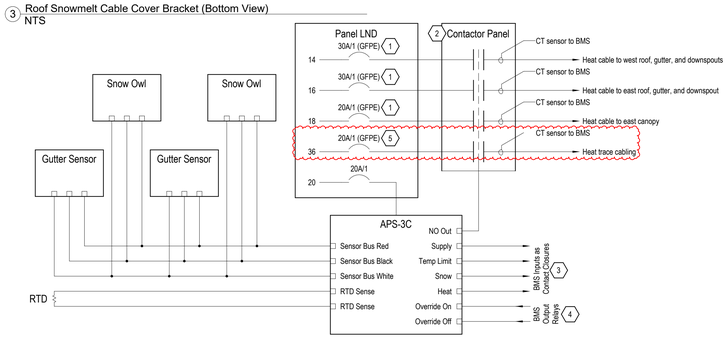


4 Roof Snowmelt Rake
NTS

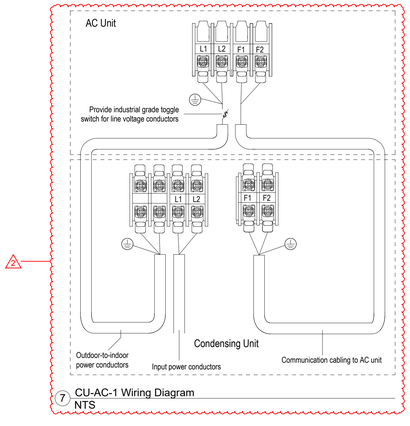


NOTES:
1. CONTACT CHEMLINK (ADHESIVE MANUFACTURER) FOR COLD WEATHER INSTALLATION/APPLICATION.

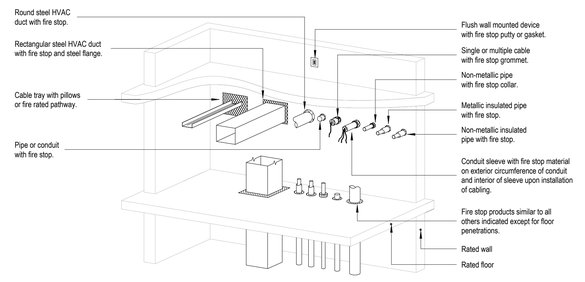
3 Roof Snowmelt Cable Cover Bracket (Bottom View)
NTS



5 Roof Snowmelt and Heat Trace Schematic Diagram
NTS



7 CU-AC-1 Wiring Diagram
NTS



Notes:
1. Refer to UL fire resistance directory for complete installation requirements.

6 Firestopping Electrical
NTS

Sheet Notes - E503	
#	Note
1	Provide a GFPE-type breaker for all rooftop snowmelt cable loads.
2	The EC shall provide a 3-pole contactor to control the rooftop snowmelt cables. Neutral conductors have been omitted from the schematic for clarity. The contactor coil shall be actuated by the APS controller (which acts as a pilot relay). The controls contractor shall furnish a CT sensor as well as a voltage probe for each heat cable, and these shall be programmed to record data for power consumption.
3	Controls contractor shall provide at least four BMS inputs. These shall be connected to the APS and shall be actuated as contact closures to report the status of the various states of the controller.
4	Controls contractor shall provide at least two BMS output relays to forcibly override or inhibit the state of the APS-3C (regardless of the sensor states).
5	Provide a GFPE-type breaker for heat trace cable loads.

2

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2	Addendum 2	3.19.2026

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E503

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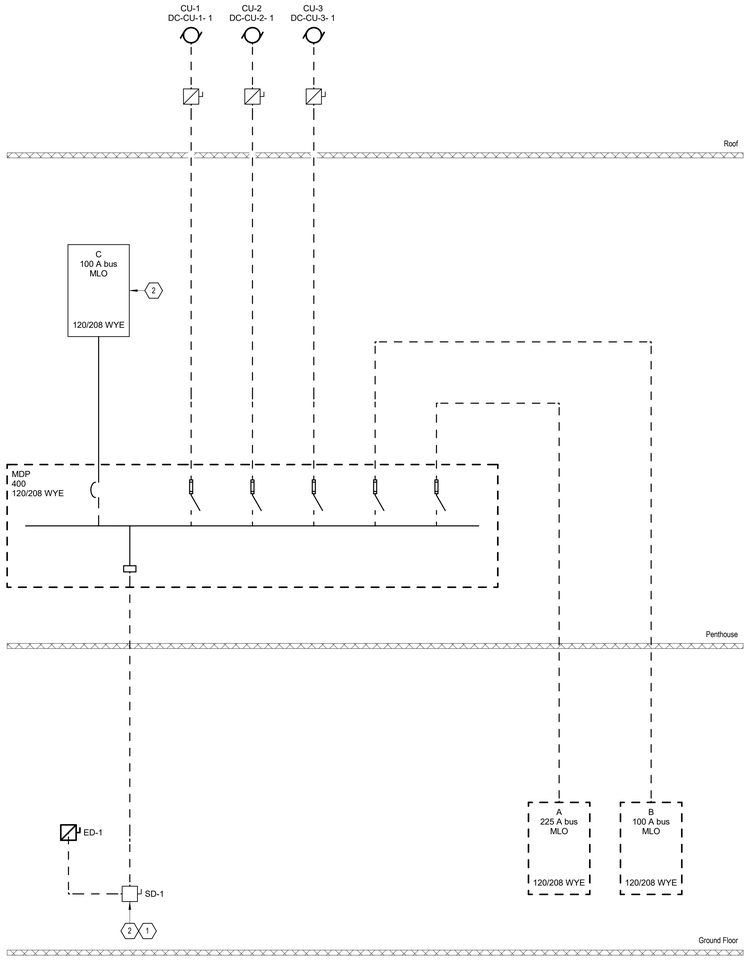
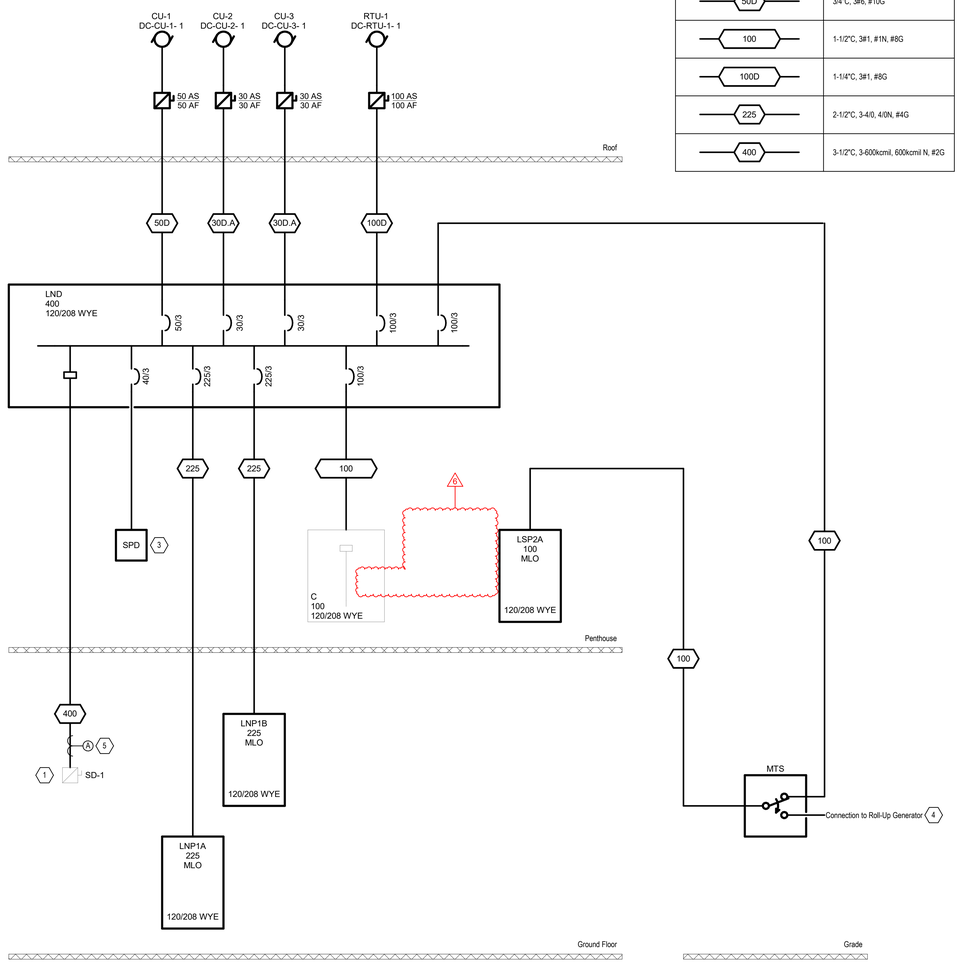
Sheet Notes - E601	
#	Note
1	The available fault current for the service disconnect is 7057A
2	This equipment is existing-to-remain and shall remain intact and in-place for re-use during New Work.
3	Provide surge protection device for distribution panelboard LND.
4	Contractor shall verify functionality of the transfer switch. Include in base bid roll-up generator rental, which shall be used to test the system. Open the service entrance disconnect to turn off utility power to the building. (Coordinate shutdown timing with the Owner, provide minimum 24 hours notice.) Connect the roll-up generator to the MTS and use the MTS to transfer to generator power. Verify power that that the following equipment/system are fully functional: • Network rack and IT systems (ensure power is not being provided by local/integral UPS) • Security systems (ensure power is not being provided by local/integral UPS) • All lighting and lighting controls throughout the building • HHWP-1 • HHWP-2 • B-1 • B-2 • DRCP-1 • All other equipment, devices, or appliances powered by circuits from panel LSP2A Submit a report to Owner, Architect and Engineer detailing testing procedure and successful operation of the above equipment/systems. Contractor shall include in base bid all corrections necessary for the listed systems to function correctly when powered by generator.
5	Provide an current/energy meter capable of reporting to BMS system. Basis of design is SOCOMEC DIRIS A-40 or engineer's approved equal.
6	Sheet Note 6 no longer in use.

6

FEEDER SCHEDULE	
30D,A	3/4"C, 3#10, #10G
50D	3/4"C, 3#6, #10G
100	1-1/2"C, 3#1, #1N, #8G
100D	1-1/4"C, 3#1, #8G
225	2-1/2"C, 3-4/0, 4/0N, #4G
400	3-1/2"C, 3-600kcmil, 600kcmil N, #2G



2 Demolition Single-Line Diagram
NTS



1 Electrical One-Line Diagram
NTS

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1	Addendum 1	3.11.2026
2	Addendum 2	3.19.2026
6	Bulletin 1	8.20.2026

ELECTRICAL ONELINE DIAGRAM

E601

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PANELBOARD: LSP2A

LOCATION: MECHANICAL M101
SUPPLY FROM: MTS
MOUNTING: Surface
ENCLOSURE: Type 1

VOLTS: 120/208 WYE
PHASES: 3
WIRES: 4

A.I.C.:
MAINS TYPE: Main Lugs Only
MAINS RATING: 100 A

NOTES:

CKT	DESCRIPTION	BKR	A	B	C	BKR	DESCRIPTION	CKT
1	DC-HHWP-1	30/2	684 VA			30/2	DC-HHWP-2	2
3			684 VA	684 VA				4
5	Spare	20/1			0 VA	0 VA	Spare	6
7	B-1, MECHANICAL M101	20/1	600 VA	121 VA		15/1	HHWP-3, MECHANICAL M101	8
9	B-2, MECHANICAL M101	20/1		600 VA	121 VA	15/1	HHWP-4, MECHANICAL M101	10
11	DRCP-1, MECHANICAL M101	15/1			82 VA	180 VA	20/1 Receptacle, MECHANICAL M101	12
13	Receptacle, MECHANICAL M101	20/1	180 VA	180 VA			20/1 FACP	14
15	Receptacle, TELEDATA 107B	20/1		180 VA	945 VA		20/1 Lighting, Room 105, 109, 110, 111, 112, 11...	16
17	Receptacle, TELEDATA 107B	20/1				180 VA	939 VA	20/1 Lighting, Room 121, 122, 123, 123A	18
19	Lighting, Room 104, 107C	20/1	974 VA	500 VA				20/1 Lighting	20
21	Lighting, Room 105, 106, 117, 118, 119, 120	20/1			998 VA	419 VA		20/1 Lighting	22
23	Lighting, YOUTH COLLECTION 121	20/1					812 VA 1226 VA	20/1 Lighting, Room 107, 107A, 107B, 108, M101	24
25	Lighting, Room 101, 102, 103, 104	20/1	1037 VA	180 VA				20/1 Lighting, ADULT COLLECTION 104	26
27	Lighting, Room 101, 104, 105, 107, 116, 121	20/1			1264 VA	33 VA		20/1 Lighting	28
29	Lighting	20/1					172 VA 720 VA	20/1 Receptacle, Room 101, 104, 105, 116	30
31	Spare	20/1	0 VA	0 VA				20/1 Spare	32
33	Spare	20/1		0 VA	0 VA			20/1 Spare	34
35	Spare	20/1				0 VA	0 VA	20/1 Spare	36
37	Spare	20/1	0 VA	0 VA				20/1 Spare	38
39	Spare	20/1		0 VA	0 VA			20/1 Spare	40
41	Spare	20/1				0 VA	0 VA	20/1 Spare	42
			5141 VA	5923 VA	4310 VA				
			44 A	50 A	36 A				

LOAD CLASSIFICATION	CONNECTED	DEMAND FACTOR	DEMAND	TOTALS
HVAC	4261 VA	100.00%	4261 VA	TOTAL CONN. LOAD: 15372 VA
Receptacle	1440 VA	100.00%	1440 VA	TOTAL EST. DEMAND: 15372 VA
Power	180 VA	100.00%	180 VA	TOTAL CONN. CURRENT: 43 A
Lighting	9492 VA	100.00%	9492 VA	TOTAL DEMAND CURRENT: 43 A

PANELBOARD: LND

LOCATION: MECHANICAL M101
SUPPLY FROM: SD-1
MOUNTING: Surface
ENCLOSURE: Type 1

VOLTS: 120/208 WYE
PHASES: 3
WIRES: 4

A.I.C.:
MAINS TYPE: Main Lugs Only
MAINS RATING: 400 A

NOTES:

CKT	DESCRIPTION	BKR	A	B	C	BKR	DESCRIPTION	CKT
1			7200 VA	2414 VA				2
3	LNP1A	225/3		4848 VA	2594 VA	100/3	C	4
5					7128 VA	2234 VA		6
7			8052 VA	5141 VA				8
9	LNP1B	225/3		6480 VA	5923 VA	100/3	MTS	10
11					8340 VA	4310 VA		12
13			9127 VA	1620 VA			30/1 Snowmelt - West Roof	14
15	DC-RTU-1	100/3		9127 VA	1440 VA		30/1 Snowmelt - East Roof	16
17					9127 VA	540 VA	20/1 Snowmelt - East Canopy	18
19			4083 VA	180 VA			20/1 Roof Snowmelt Controller	20
21	DC-CU-1	50/3		4083 VA	0 VA		20/1 Spare	22
23					4083 VA	1119 VA		24
25			2210 VA	1119 VA			20/3 PH-1	26
27	DC-CU-2	30/3		2210 VA	1119 VA			28
29					2210 VA	1119 VA		30
31			1741 VA	1119 VA			20/3 PH-2	32
33	DC-CU-3	30/3		1741 VA	1119 VA			34
35					1741 VA	500 VA	20/1 Receptacle, Room 113, 115	36
37			1513 VA	0 VA				38
39	EF-2	30/3		1513 VA	0 VA		30/3 Spare	40
41					1513 VA	0 VA		42
			45518 VA	42195 VA	43964 VA			
			382 A	352 A	369 A			

LOAD CLASSIFICATION	CONNECTED	DEMAND FACTOR	DEMAND	TOTALS
HVAC	70992 VA	100.00%	70992 VA	TOTAL CONN. LOAD: 131678 VA
Heating	6715 VA	100.00%	6715 VA	TOTAL EST. DEMAND: 118548 VA
Other	0 VA	0.00%	0 VA	TOTAL CONN. CURRENT: 366 A
Receptacle	36260 VA	63.79%	23130 VA	TOTAL DEMAND CURRENT: 329 A
Power	7860 VA	100.00%	7860 VA	
Lighting	9852 VA	100.00%	9852 VA	

PANELBOARD: LNP1A

LOCATION:
SUPPLY FROM: LND
MOUNTING: Surface
ENCLOSURE: Type 1

VOLTS: 120/208 WYE
PHASES: 3
WIRES: 4

A.I.C.:
MAINS TYPE: Main Lugs Only
MAINS RATING: 225 A

NOTES:

CKT	DESCRIPTION	BKR	A	B	C	BKR	DESCRIPTION	CKT
1	Lighting	20/1	180 VA	1080 VA			20/1 Floorbox, MEETING 107	2
3	Pay Station, BUSINESS CENTER 109	20/1		180 VA	360 VA		20/1 Floorbox, ADULT COLLECTION 104	4
5	Floorbox, ADULT COLLECTION 104	20/1				360 VA 900 VA	20/1 Receptacle, ADULT COLLECTION 104	6
7	Floorbox, MEETING 107	20/1	1080 VA	180 VA			20/1 Receptacle, CORRIDOR 111	8
9	Receptacle, MEETING 107	20/1			540 VA	540 VA	20/1 Receptacle, VESTIBULE 101	10
11	Copy Machine, BUSINESS CENTER 109	20/1				1200 VA 180 VA	20/1 Receptacle, STOR. 107A	12
13	Receptacle, BUSINESS CENTER 109	20/1	360 VA	720 VA			20/1 Receptacle, Room 102, 103	14
15	Floorbox, ADULT COLLECTION 104	20/1			720 VA	180 VA	20/1 Receptacle, MEZ. ACCESS 106	16
17	Receptacle, Room 107, 107C	20/1				720 VA 720 VA	20/1 Receptacle, STUDY 103	18
19	Receptacle, ADULT COLLECTION 104	20/1	720 VA	1080 VA			20/1 Receptacle, ADULT COLLECTION 104	20
21	Receptacle, DIGITAL COMMONS 105	20/1		360 VA	720 VA		20/1 Receptacle, STUDY 102	22
23	Receptacle, DIGITAL COMMONS 105	20/1				720 VA 1080 VA	20/1 Receptacle, MEETING 107	24
25	Receptacle, DIGITAL COMMONS 105	20/1	720 VA	1080 VA			20/1 Receptacle, DIGITAL COMMONS 105	26
27	CU-AC-1	20/2		1248 VA	0 VA		20/1 Spare	28
29					1248 VA	0 VA	20/1 Spare	30
31	Spare	20/1	0 VA	0 VA			20/1 Spare	32
33	Spare	20/1		0 VA	0 VA		20/1 Spare	34
35	Spare	20/1				0 VA 0 VA	20/1 Spare	36
37	Spare	20/1	0 VA	0 VA			20/1 Spare	38
39	Spare	20/1		0 VA	0 VA		20/1 Spare	40
41	Spare	20/1				0 VA 0 VA	20/1 Spare	42
			7200 VA	4848 VA	7128 VA			
			63 A	40 A	62 A			

LOAD CLASSIFICATION	CONNECTED	DEMAND FACTOR	DEMAND	TOTALS
HVAC	2496 VA	100.00%	2496 VA	TOTAL CONN. LOAD: 19176 VA
Receptacle	15120 VA	83.07%	12560 VA	TOTAL EST. DEMAND: 16616 VA
Power	1380 VA	100.00%	1380 VA	TOTAL CONN. CURRENT: 53 A
Lighting	180 VA	100.00%	180 VA	TOTAL DEMAND CURRENT: 46 A

PANELBOARD: LNP1B

LOCATION: STAFF WORK 117
SUPPLY FROM: LND
MOUNTING: Recessed
ENCLOSURE: Type 1

VOLTS: 120/208 WYE
PHASES: 3
WIRES: 4

A.I.C.:
MAINS TYPE: Main Lugs Only
MAINS RATING: 225 A

NOTES:

CKT	DESCRIPTION	BKR	A	B	C	BKR	DESCRIPTION	CKT
1	Spare for future EVSE	40/2	0 VA	1512 VA			30/1 EF-1	2
3				0 VA	180 VA		20/1 Hand Dryer, RR 112	4
5	DF-1, CORRIDOR 111	20/1			1200 VA	180 VA	20/1 Hand Dryer, RR 113	6
7	Power, STAFF WORK 117	20/1	360 VA	180 VA			20/1 Hand Dryer, RR 115	8
9	Receptacle, YOUTH COLLECTION 121	20/1		1080 VA	180 VA		20/1 Book Locker	10
11	Receptacle, YOUTH COLLECTION 121	20/1			900 VA	1200 VA	20/1 Refrigerator, INNOVATION 123	12
13	Receptacle, INNOVATION 123	20/1	900 VA	540 VA			20/1 Receptacle, STOR. 123A	14
15	Receptacle, STUDY 122	20/1		540 VA	540 VA		20/1 Receptacle, OFFICE 120	16
17	Receptacle, Room 117, 119	20/1			1080 VA	180 VA	20/1 Microwave, BREAK ROOM 119	18
19	Refrigerator, BREAK ROOM 119	20/1	1200 VA	1200 VA			20/1 Coffee Machine, BREAK ROOM 119	20
21	Power, Receptacle, BREAK ROOM 119	20/1		360 VA	720 VA		20/1 Receptacle, STAFF WORK 117	22
23	Receptacle, STAFF WORK 117	20/1			720 VA	180 VA	20/1 Receptacle, STAFF RR 118	24
25	Receptacle, VESTIBULE 116	20/1	540 VA	540 VA			20/1 Receptacle, Room 112, 113, 115	26
27	Power, Children's Center	20/1		180 VA	900 VA		20/1 Receptacle, SEMINAR 110	28
29	Receptacle, YOUTH COLLECTION 121	20/1			360 VA	720 VA	20/1 Floorbox, INNOVATION 123	30
31	Floorbox, STUDY 122	20/1	360 VA	720 VA			20/1 Floorbox, SEMINAR 110	32
33	Receptacle, Room 112, 113, 114, 115, 118	20/1		900 VA	900 VA		20/1 Power, Receptacle, STAFF WORK 117	34
35	Power, STAFF WORK 117	20/1			1440 VA	180 VA	20/1 Lighting	36
37	Spare	20/1	0 VA	0 VA			20/1 Spare	38
39	Spare	20/1		0 VA	0 VA		20/1 Spare	40
41	Spare	20/1			0 VA	0 VA	20/1 Spare	42
			8052 VA	6480 VA	8340 VA			
			69 A	54 A	72 A			

LOAD CLASSIFICATION	CONNECTED	DEMAND FACTOR	DEMAND	TOTALS
HVAC	1512 VA	100.00%	1512 VA	TOTAL CONN. LOAD: 22872 VA
Other	0 VA	0.00%	0 VA	TOTAL EST. DEMAND: 20432 VA
Receptacle	14880 VA	83.60%	12440 VA	TOTAL CONN. CURRENT: 63 A
Power	6300 VA	100.00%	6300 VA	TOTAL DEMAND CURRENT: 57 A
Lighting	180 VA	100.00%	180 VA	

PANELBOARD: C

LOCATION: MECHANICAL M101
SUPPLY FROM: LND
MOUNTING: Surface
ENCLOSURE: Type 1

VOLTS: 120/208 WYE
PHASES: 3
WIRES: 4

A.I.C.:
MAINS TYPE: Main Lugs Only
MAINS RATING: 100 A

NOTES:
Panel schedule for existing panelboard shows only estimates for new loads in of this project.

CKT	DESCRIPTION	BKR	A	B	C	BKR	DESCRIPTION	CKT
1	Mezzanine Heater	20/1	0 VA	180 VA		20/1	**Receptacle**	2
3	Damper Motor Units 1 & 2	20/1		0 VA	360 VA	20/1	Mezzanine Receptacles	4
5	Spare	20/1			0 VA	0 VA	15/1 Spare	6
7	Spare	20/1	0 VA	0 VA		20/1	Water Chiller	8
9	Spare	20/1		0 VA	0 VA	20/2	Spare	10
11	Spare	20/1			0 VA	0 VA		12
13	DC-HVAC-3	20/3	733 VA	0 VA			20/3 Spare	14
15				733 VA	0 VA			16
17					733 VA	0 VA		18
19			733 VA	769 VA				20
21	DC-HVAC-1	15/3		733 VA	769 VA	15/3	DC-HVAC-2	22
23					733 VA	769 VA		24
			2414 VA	2594 VA	2234 VA			
			20 A	22 A	19 A			

LOAD CLASSIFICATION	CONNECTED	DEMAND FACTOR	DEMAND	TOTALS
HVAC	6701 VA	100.00%	6701 VA	TOTAL CONN. LOAD: 7241 VA
Receptacle	540 VA	100.00%	540 VA	TOTAL EST. DEMAND: 7241 VA
				TOTAL CONN. CURRENT: 20 A
				TOTAL DEMAND CURRENT: 20 A

Sheet Notes - E602	
#	Note
1	These breakers shall be of GFPE type.

Switching Zone Sequence Schedule

Zone	Schedule On/Off	Sensor: Auto On	Sensor: Auto Off/Dim	Local Control	Emergency	Spaces Controlled by Zone	Remarks
aa	X	Full	20 minutes	Ceiling occupancy sensor		Vestibule 101	1
ab		50%	20 minutes	Dimmer switch with integral occupancy sensor		Study 102	
ac		50%	20 minutes	Dimmer switch with integral occupancy sensor		Study 103	
ad1			20 minutes	Dimming switch with ceiling occupancy sensor		Adult Collection 104	2,3
ad2			20 minutes	Dimming switch with ceiling occupancy sensor		Adult Collection 104	2,3
ad3			20 minutes	Dimming switch with ceiling occupancy sensor		Adult Collection 104	2,3
ad4			20 minutes	Dimming switch with ceiling occupancy sensor		Adult Collection 104	2,3
ae1			20 minutes	Dimming switch with ceiling occupancy sensor		Digital Commons 105	2,3
ae2			20 minutes	Dimming switch with ceiling occupancy sensor		Digital Commons 105	2,3
af			20 minutes	Occupancy sensing switch		Mez. Access 106	
ag1		50%	20 minutes	Dimming switch with ceiling occupancy sensor		Meeting 107	
ag2		50%	20 minutes	Dimming switch with ceiling occupancy sensor		Meeting 107	
ag3		50%	20 minutes	Dimming switch with ceiling occupancy sensor		Meeting 107	
ah			20 minutes	Occupancy sensing switch		Stor. 107A	
ai				On/off switch		Elec. 107B	
aj			20 minutes	On/off switch with ceiling occupancy sensor		Stor. 107C	
ak			20 minutes	On/off switch with ceiling occupancy sensor		Ext. Stor. 108	
am			20 minutes	Dimming switch with ceiling occupancy sensor		Business Center 109	2,3
an1		50%	20 minutes	Dimming switch with ceiling occupancy sensor		Seminar 110	
an2		50%	20 minutes	Dimming switch with ceiling occupancy sensor		Seminar 110	
ap		Full	20 minutes	On/off switch with ceiling occupancy sensor		Corridor 111	2
aq		Full	20 minutes	Occupancy sensing switch		RR 112	
ar		Full	20 minutes	Occupancy sensing switch		RR 113	
as		Full	20 minutes	Occupancy sensing switch		Jan. 114	
at		Full	20 minutes	Occupancy sensing switch		RR 115	
au	X	Full	20 minutes	Ceiling occupancy sensor		Vestibule 116	1
av		50%	20 minutes	Dimming switch with ceiling occupancy sensor		Staff Work 117	
aw		Full	20 minutes	Occupancy sensing switch		Staff RR 118	
ax		50%	20 minutes	Dimming switch with ceiling occupancy sensor		Break Room 119	
ay		50%	20 minutes	Dimmer switch with integral occupancy sensor		Office 120	
az			20 minutes	Dimming switch with ceiling occupancy sensor		Youth Collection 121	2,3
ba		50%	20 minutes	Dimmer switch with integral occupancy sensor		Study 122	
bb		50%	20 minutes	Dimming switch with ceiling occupancy sensor		Innovation 123	
bc			20 minutes	Occupancy sensing switch		Stor. 123A	
be				On/off switch		Mechanical M101	
ex1	See sheet E501					Exterior Facade and Landscape	
ex2	See sheet E501					Fenced garden and patio area	
ex3						Exterior Signage	4
pk	See sheet E501					Driveway and Parking	

Switching Zone Sequence Schedule Remarks:
1. This zone shall dim to 50% upon vacancy detection.
2. Provide 3-button wall control device with indicator pilot light in Staff Work 117 as indicated on plans. Buttons shall raise or dim fixtures to 100% (full), 50% and 0% (off).
3. This zone shall be scheduled ON during business hours and OFF during non-business hours. Coordinate business hours with Owner. During business hours, fixtures within this zone shall dim to 50% after detecting vacancy for 20 minutes. During non-business hours, fixtures within this zone shall turn ON to 50% brightness upon detection of occupancy, and shall turn OFF after detecting vacancy for 20 minutes.
4. This zone shall control all the exterior signages.

Lighting Fixtures Schedule

Tag	Manufacturer	Model	CRI	CCT	Capacity Values: Nominal Flux	Capacity Values: Power	Capacity Values: Reported Per Foot	Dimmability	Description	Remarks
B1	Bega	B77735-K35-*-*	80	3500 K	648 lm	16 VA	No	0-10V	On-ground luminaire	5
B2	Cooper Lighting	BRT6-A1-740-U-T5-30-*	70	4000 K	1149 lm	9 VA	No		Round LED Pedestrian Luminaire	5
P1	Coronet	CRD3.UPDN-XX-35-LOW-MED-UNV-DB.1%-*-*-AVI.BAT-SD-*-*-*	90	3500 K	1189 lm	12 VA	Yes	0-10V	Direct/Indirect continuous linear LED pendant	1,5
P1a	Coronet	CRD3.UPDN-XX-35-LOW-CUST.1200-UNV-DB.1%-*-*-AVI.BAT-SD-*-*-*	90	3500 K	1705 lm	15 VA	Yes	0-10V	Direct/Indirect continuous linear LED pendant	1,4,5
P2	Columbia Lighting	CSL-A-*-LSCS	80	3500 K	1213 lm	9 VA	Yes		LED striplight pendant	
R1	Columbia Lighting	LCAT22-S-9-35L031G-ED1-U-*-*-*	90	3500 K	3154 lm	22 VA	No	0-10V	Recessed 2'x2' LED troffer	
R1a	Columbia Lighting	LCAT22-S-9-35L044G-ED1-U-*-*-*	90	3500 K	4430 lm	30 VA	No	0-10V	Recessed 2'x2' LED troffer	
R2	Alphabet	NU4-RD-SW-10LM-35K-90-65D-CL-*-*-*-UNV-DIM10-*	90	3500 K	871 lm	9 VA	No	0-10V	Recessed 4" round LED downlight	
R3	Alphabet	NU4-RW-SW-10LM-35K-90-WW-*-*-*-UNV-DIM10-*	90	3500 K	748 lm	9 VA	No	0-10V	Recessed 4" round LED wallwasher	3
R4	Focal Point	FSM2L-PD15-625LF-935K-1C-UNV-L11-*-*-WH-XX-*	90	3500 K	625 lm	7 VA	Yes	0-10V	Recessed continuous linear LED downlight	
R4a	Focal Point	FSM2L-PD15-875LF-935K-1C-UNV-L11-*-*-WH-XX-*	90	3500 K	875 lm	10 VA	Yes	0-10V	Recessed continuous linear LED downlight	
R4b	Focal Point	FSM2L-PD15-1000LF-935K-1C-UNV-L11-*-*-WH-XX-*	90	3500 K	1000 lm	11 VA	Yes	0-10V	Recessed continuous linear LED downlight	
R5	Mojo Illumination	L62R-D-375F-35K-010-M-*-*-XX-*	80	3500 K	375 lm	3 VA	Yes	0-10V	Recessed continuous linear LED downlight	
R6	Alphabet	NU2-RD-SW-20LM-35K-90-55D-CL-BZ-NC-UNV-DIM10	90	3500 K	2080 lm	20 VA	No	0-10V	Recessed 2" round LED downlight exterior rated	5
S1	Columbia Lighting	CSL-A-*-LSCS	80	3500 K	1213 lm	9 VA	Yes		Surface mounted LED striplight	
S2	Finelite	HP-3-SM-D-XX-B-935-F-*-120-SC-FC-1%-*-*-*-*	90	3500 K	723 lm	7 VA	Yes	0-10V	Surface mounted continuous linear LED downlight	
S3	Lumenwerx	PCROS-48IN-ULO-FH-SW-90-7000-35-UNV-D1-1-SUR-RAL1028-*	90	3500 K	7000 lm	65 VA	No	0-10V	Surface mounted 48" circular downlight with yellow finish	
S4	Moda Light	MMCI-H-S-0-35H-1	90	3500 K	946 lm	9 VA	Yes	0-10V	Surface mounted continuous linear LED sits on the sill of window to illuminate the sculpture	
S5	WAC Lighting	LED-TX2435-XX-*-* with linear channel having frosted lens	90	3500 K	330 lm	4 VA	Yes	0-10V	LED tape light with linear channel having frosted lens	2
S6	WAC Lighting	LED-TX2435-XX-*-* with LED-T-CH2 channel	90	3500 K	330 lm	4 VA	Yes	0-10V	LED tape light with 45degree angled aluminium channel	2
W1	Columbia Lighting	CSL-A-*-LSCS	80	3500 K	1213 lm	9 VA	Yes		Wall mounted LED striplight	
W2	Rockwell Automation	855W-G10Y3Y4				5 VA			Wall-mount red/green signal indicator	
W3	Bega	B33814-K35-*-*	80	3500 K	775 lm	11 VA	No	0-10V	Surface wall with cutoff optics	5
W4	WAC Lighting	WS-79622-35-PN	90	3500 K	1500 lm	31 VA	No		Bathroom sconce	
X1	Dual Lite	LE-W-S-*-*-*-E-*-*				4 VA			Wall mounted single face exit sign	
X2	Dual Lite	LE-C-D-*-*-*-E-*-*				5 VA			Ceiling recessed double face exit sign	

Substitutions for basis-of-design lighting fixtures shall be reviewed by Architect, Engineer and Owner for acceptance. Contractor shall provide photometric calculations demonstrating that substituted fixtures meet or exceed the illumination levels as required by basis-of-design fixtures in all spaces of the project. (Refer to photometric calculations for basis-of-design fixtures provided in the drawings.) The Architect, Engineer and Owner may deny a substitution request for other reasons besides illumination levels and/or photometrics. The build quality, aesthetics and wattage of any substitution shall be similar to the basis of design unit.

Lighting alternates shall not be permitted after bidding. If any alternates are propose, they shall be presented during bidding and a substitution request shall be submitted for evaluation during the bidding phase.

Remarks:
1. Direct and indirect LEDs shall be powered by separate power packs so that the maximum trim for each LED can be set independently. A power pack may power the direct LEDs or the indirect LEDs of multiple fixtures, up to the power pack's rated load. After the maximum trim of each component has been set, the both direct and indirect LEDs shall be switched and dimmed as part of the same switching zone as indicated on drawings. Each LED shall dim proportionally to its maximum trim setpoint.
2. This fixture contains 24V LED tape light. Provide power pack per manufacturer's recommendation.
3. The wall wash fixture shall be oriented so that its aperture aims toward the wall.
4. The direct lumen output for this pendant fixture is customized. The nominal flux capacity for the customized direct output shall be at least 1200 lumens/foot.
5. The emergency power for this fixture shall be provided by a remote battery inverter rather than integral battery pack.

Project:
FLEET BRANCH RENOVATION AND EXPANSION
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Drawn / Checked: ARR / ARH

Issue:

	Bid & Permit	2.27.2026
1	Addendum 1	3.11.2026
2	Addendum 2	3.19.2026
6	Bulletin 1	8.20.2026

ELECTRICAL SCHEDULES

E602

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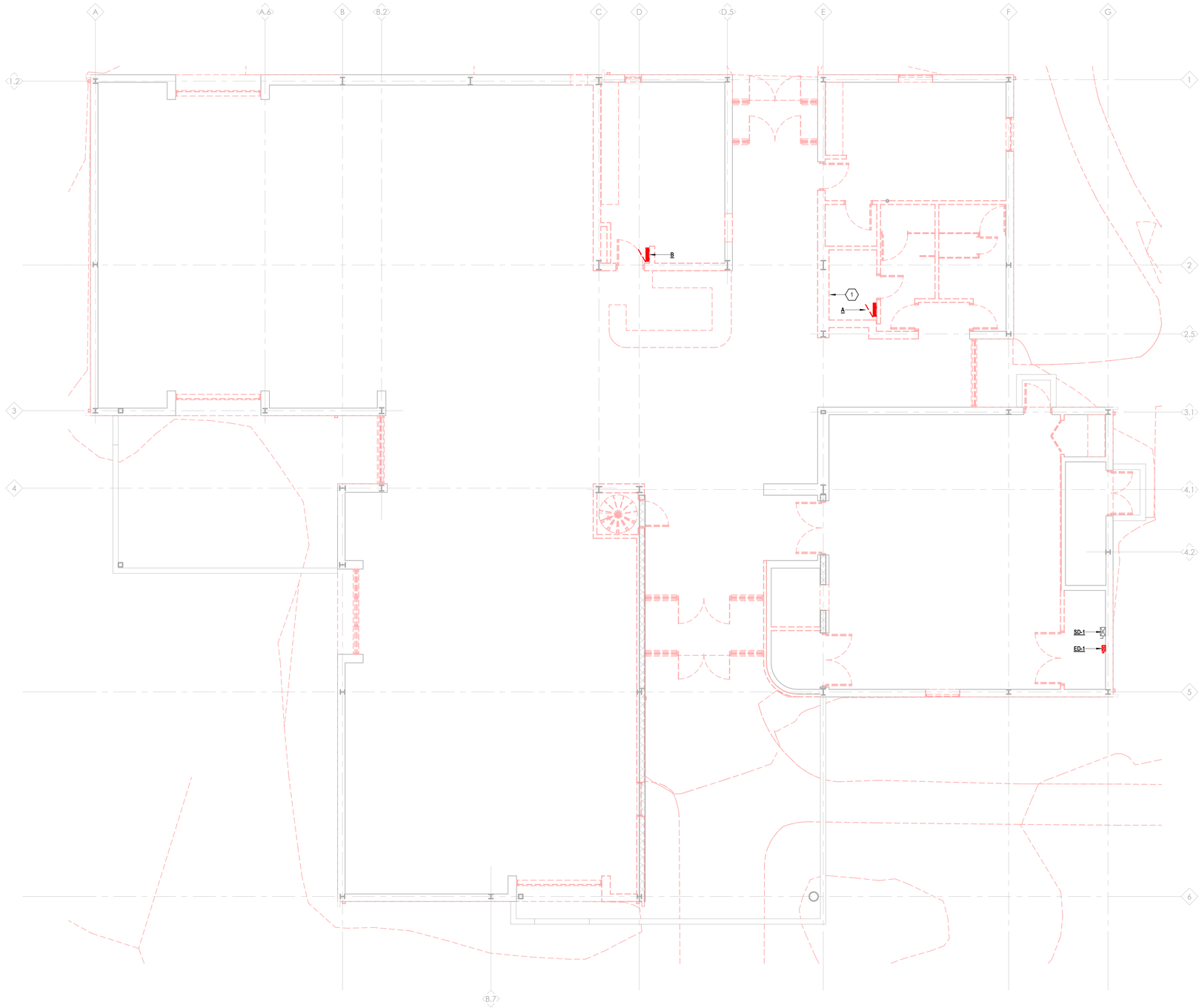
Sheet Notes - ED101	
#	Note
1	Remove time-clock in this location.



1 First Floor Power Demo
3/16" = 1'-0"

Project:
FLEET BRANCH
RENOVATION AND
EXPANSION

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FIRST FLOOR POWER DEMO PLAN

ED101

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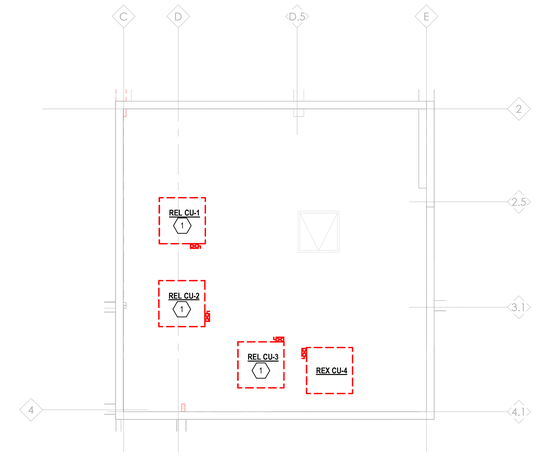
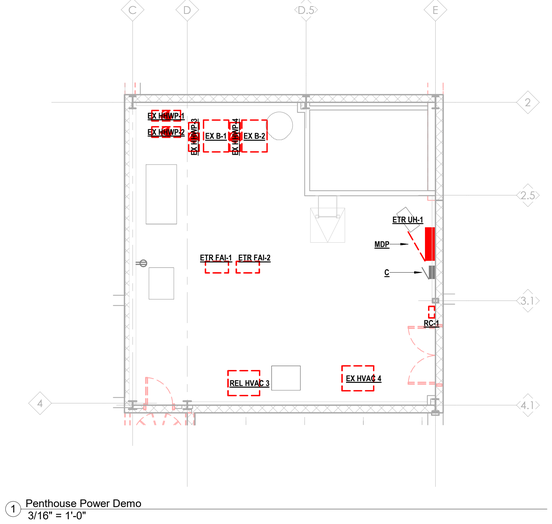
Sheet Notes - ED102

#	Note
1	This existing mechanical equipment and its existing disconnect switch shall be relocated. The EC shall disconnect the existing circuit, salvage the unit for relocation, and shall re-install in the new location as indicated in the corresponding new work plan.



2 Roof Power Demo
3/16" = 1'-0"



1 Penthouse Power Demo
3/16" = 1'-0"

ETR HVAC 2 ETR HVAC 1

Project:
FLEET BRANCH RENOVATION AND EXPANSION

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PENTHOUSE AND ROOF POWER DEMO PLAN

ED102

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Sheet Notes - ES101

#	Note
1	Provide a dedicated circuit for monumental sign. Circuit shall be switched by the lighting controls system. Coordinate location with architectural.
2	This existing pole light is non-functional. The suspected cause is a fault in branch circuit cabling. Re-power fixtures from the indicated circuit, which shall be controlled by the premises lighting controls system as part of the indicated switching zone. Power the fixture from the indicated new circuit. Contractor shall verify the integrity of the existing conduit pathway before re-use.
3	Provide power for bench integral lighting. Refer detail on E501
4	Provide power to this power pedestal Landscape Forms BM-PP-*-*. Coordinate final selection with landscape.
5	Provide pull box to power the electrical and lighting fixtures in the garden/patio area. Populate with at least (1) spare conduit of the same size for future. Coordinate exact location with landscape.
6	Existing opening in the brick wall shall be used for the installation of this new wall pack.
7	Provide a pathway, including a pull box and pullstring for future EVSE up to panelboard LNP1B. The conduit shall be atleast 1" to accommodate the 2#6,#10G conductors. Refer to the panel schedule on ES101 to determine the breaker size for the future EVSE.



1 Site Electrical
1" = 10'-0"

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Project No: 25-25
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	Bid & Permit	2.27.2026
1	Addendum 1	3.11.2026
2	Addendum 2	3.19.2026
3	Addendum 3	4.9.2026
5	Addendum 5	5.4.2026
6	Bulletin 1	8.20.2026

SITE ELECTRICAL
ES101

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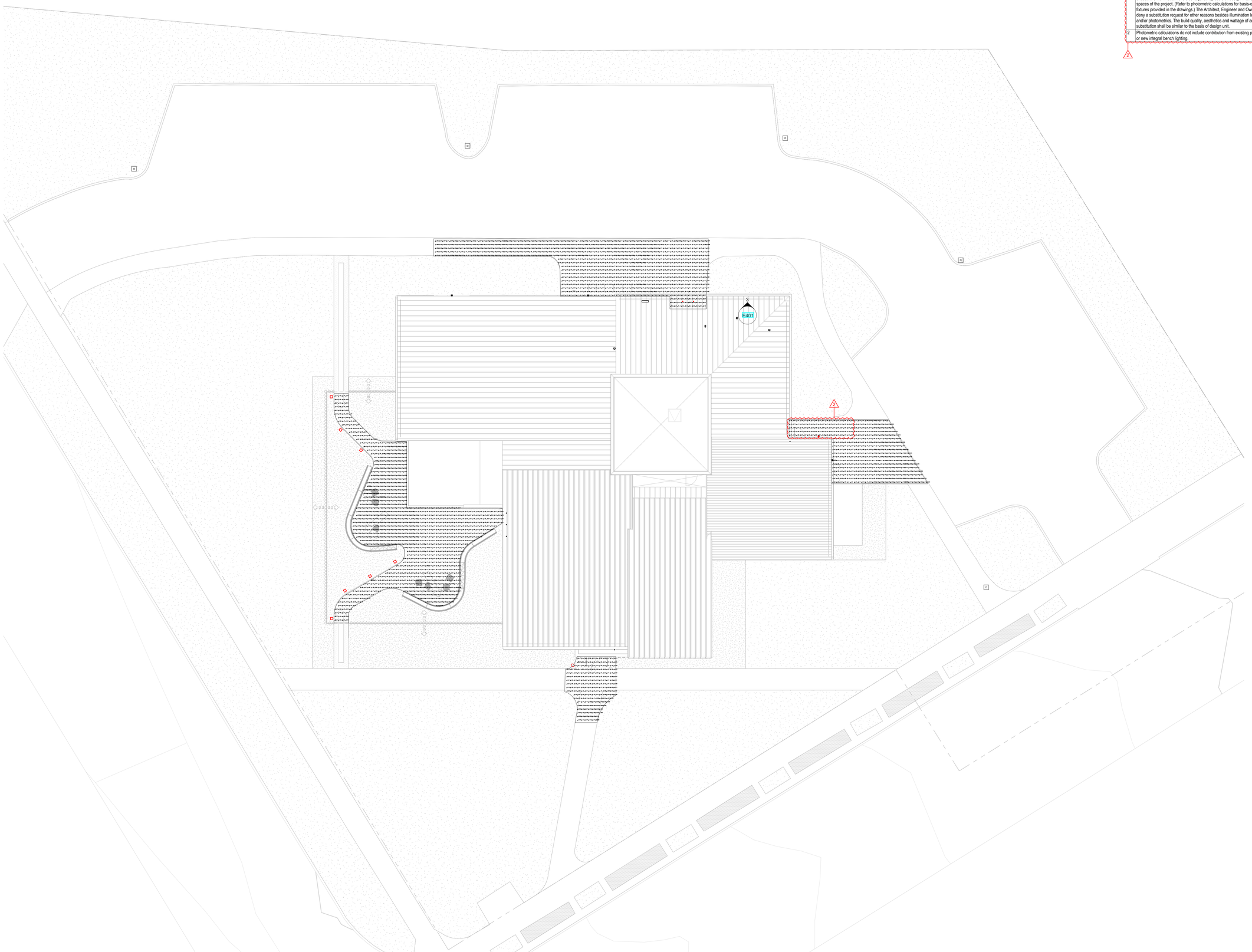
Sheet Notes - ES101A

#	Note
1	Substitutions for basis-of-design lighting fixtures shall be reviewed by Architect, Engineer and Owner for acceptance. Contractor shall provide photometric calculations demonstrating that substituted fixtures meet or exceed the illumination levels as required by basis-of-design fixtures in all spaces of the project. (Refer to photometric calculations for basis-of-design fixtures provided in the drawings.) The Architect, Engineer and Owner may deny a substitution request for other reasons besides illumination levels and/or photometrics. The build quality, aesthetics and wattage of any substitution shall be similar to the basis of design unit.
2	Photometric calculations do not include contribution from existing pole lighting or new integral bench lighting.



1 2 1 Site Photometrics
1" = 10'-0"

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SITE PHOTOMETRIC
ES101A

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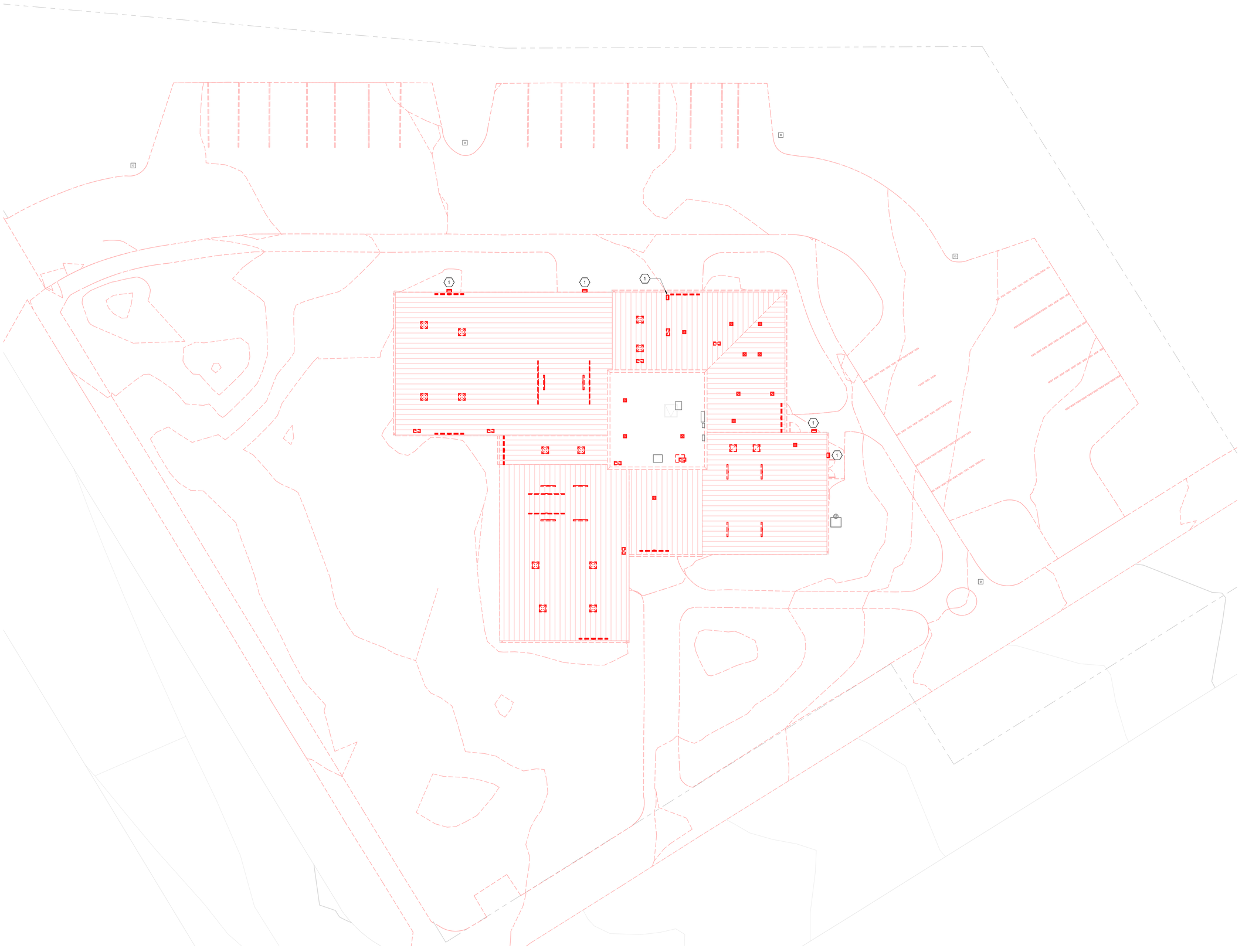
Sheet Notes - ESD101

#	Note
1	Demolish this existing wall light fixture.



1 Site Electrical Demo
1" = 10'-0"

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SITE ELECTRICAL DEMO

ESD101

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Sheet Notes - T101

#	Note
1	Provide data drop for copy machine. Coordinate location with architectural.
2	Provide data drop for pay station. Coordinate location with architectural.
3	Provide quantity (16) raised floor floorbox modules. Only known locations of floorbox modules are shown. Remaining locations shall be coordinated with Architect and Owner. Provide excess cabling such that floorbox modules can be relocated within the raised floor area.
4	Provide data biscuit jack in accessible location above ceiling for people counter. Homerun to PoE port to power people counter.
5	Provide data faceplate for book locker in weatherproof enclosure. Coordinate location with architectural.
6	Provide antennae from this access point on the exterior of the building to provide coverage for Reading Garden.
7	Provide remote unlock for Restrooms 112, 113 and 115 and exterior doorway of Vestibules 101 and 116 from this location.
8	Provide panic button at this location.
9	This teledata rack shall serve as the MDF. All Category cabling shall homerun to this location.
10	Coordinate with utility to relocate the telecomm service entrance to this location.
11	Locate the access control head, video surveillance head-end, master clock system, and public address headend at this location.
12	Provide Category cabling connection from lighting controls hub to patch panel.
13	Provide pathway from TDR to accessible location above ceiling for future data drop in Children's Center. Do not pull cabling, instead provide pullstring to pull Category cabling in the future. Exact location of data drop(s) shall be coordinated with Owner.
14	Conduit and cabling in this space shall be routed above perforated layer of deck and through flutes in deck system. Coordinate with architectural drawings.
15	Sheet Note 15 is no longer used.
16	Provide HDMI wallplate with pathway to TV backbox in this space.
17	Provide a combination clock and PA speaker at this location.



1 First Floor Technology
3/16" = 1'-0"

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FIRST FLOOR TECHNOLOGY NEW PLAN

T101

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Sheet Notes - T102

#	Note
1	Provide data faceplate for BMS panel.
2	Provide Category cabling connection from lighting controls hub to patch panel.

1 Penthouse Technology
3/16" = 1'-0"

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PENTHOUSE TECHNOLOGY NEW PLAN

T102

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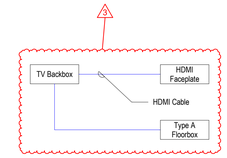
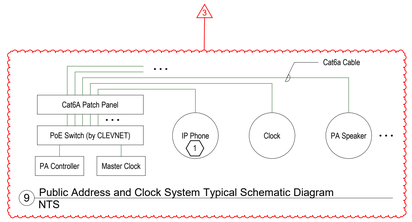
Sheet Notes - T501

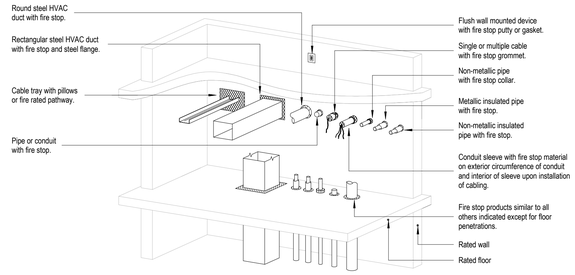
#	Note
1	IP phones shall be provided by Owner. Coordinate with Owner and with CLEVNET to configure VLAN/ring segregation and firewall to enable the IP phone to place a SIP call to the PA controller, and configure the PA controller to broadcast to all speakers.
2	Provide Cat5A surge protection (Ditek DTK-RM12NETS or approved equal) for the corner-mounted exterior cameras (tagged as type "B").



10 A/V Connection Diagram
NTS

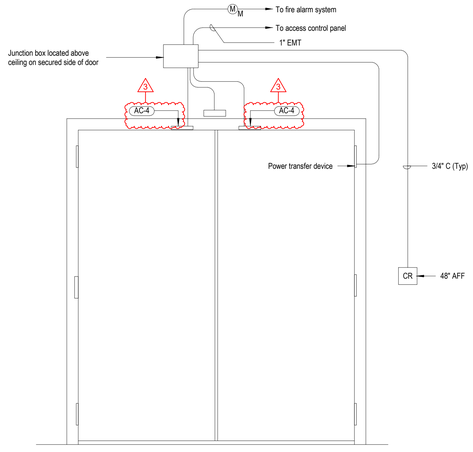


9 Public Address and Clock System Typical Schematic Diagram
NTS

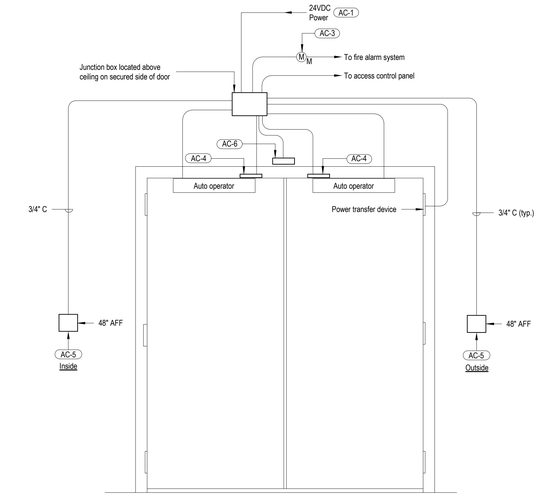


Notes:
1. Refer to UL fire resistance directory for complete installation requirements.

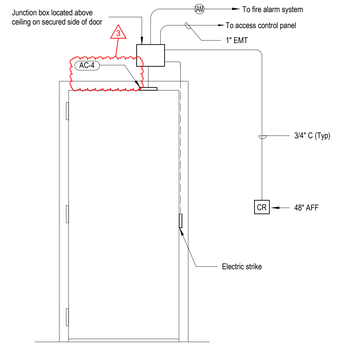
7 Firestopping Technology
NTS



5 Double Door Access Control
NTS



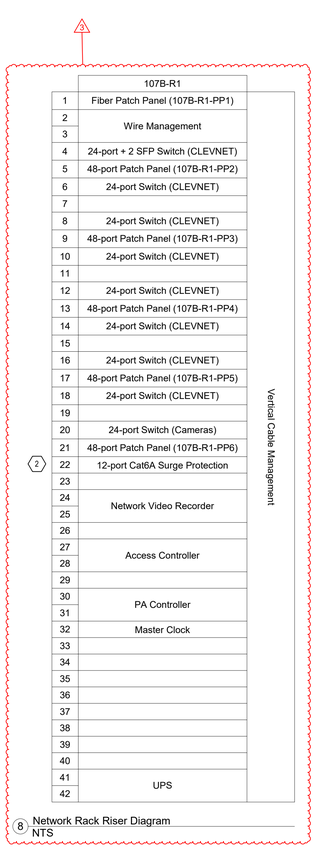
4 Typical Double Door Access Control
NTS



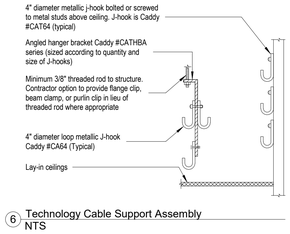
Access Control Notes:
1. Access control details are of a typical system.
2. Refer to door hardware schedule for specific door strike door information.
3. Upon activation from the fire alarm control panel, all power shall be disabled to all secured doors. All secured doors shall release.
4. All access control wiring shall be in 3/4" (minimum) conduit, unless directed otherwise in project drawings.
5. All conduit and junction boxes by EC unless otherwise directed.
6. Details are conceptional. Verify exact location of devices with architectural elevations prior to rough-in.
7. Refer to floor plans for quantity and location of devices.

Access Control Material Notes:
1. Power supply, 120V input, 24V output. Unless noted otherwise, all access control power supplies shall be located in Teledata Room 107B with low voltage cabling to each controlled door location.
2. Card reader.
3. Relay IAM. Wire addressable relay module to fire alarm panel per manufacturer specifications.
4. Two door position switches per door leaf. One switch shall be connected to the access control system, one shall be connected to the intrusion detection set.
5. Actuator.
6. Request to exit sensor.

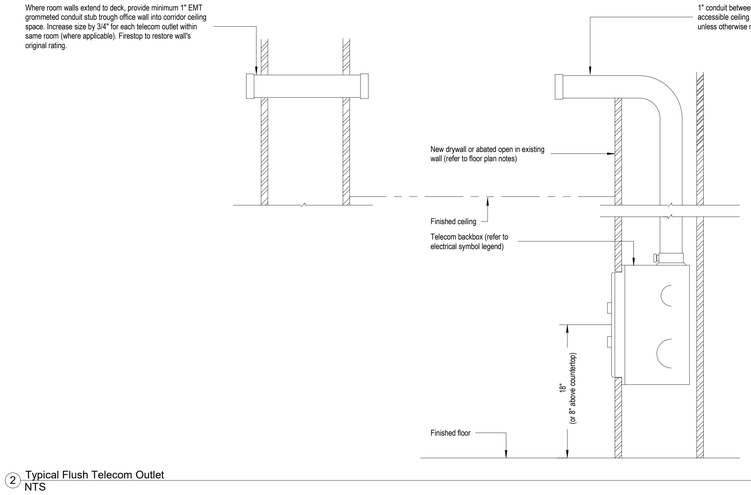
3 Typical Single Door Access Control
NTS



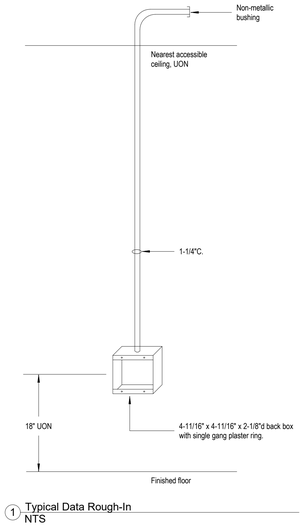
8 Network Rack Riser Diagram
NTS



6 Technology Cable Support Assembly
NTS



2 Typical Flush Telecom Outlet
NTS



1 Typical Data Rough-In
NTS

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TECHNOLOGY DETAILS
T501

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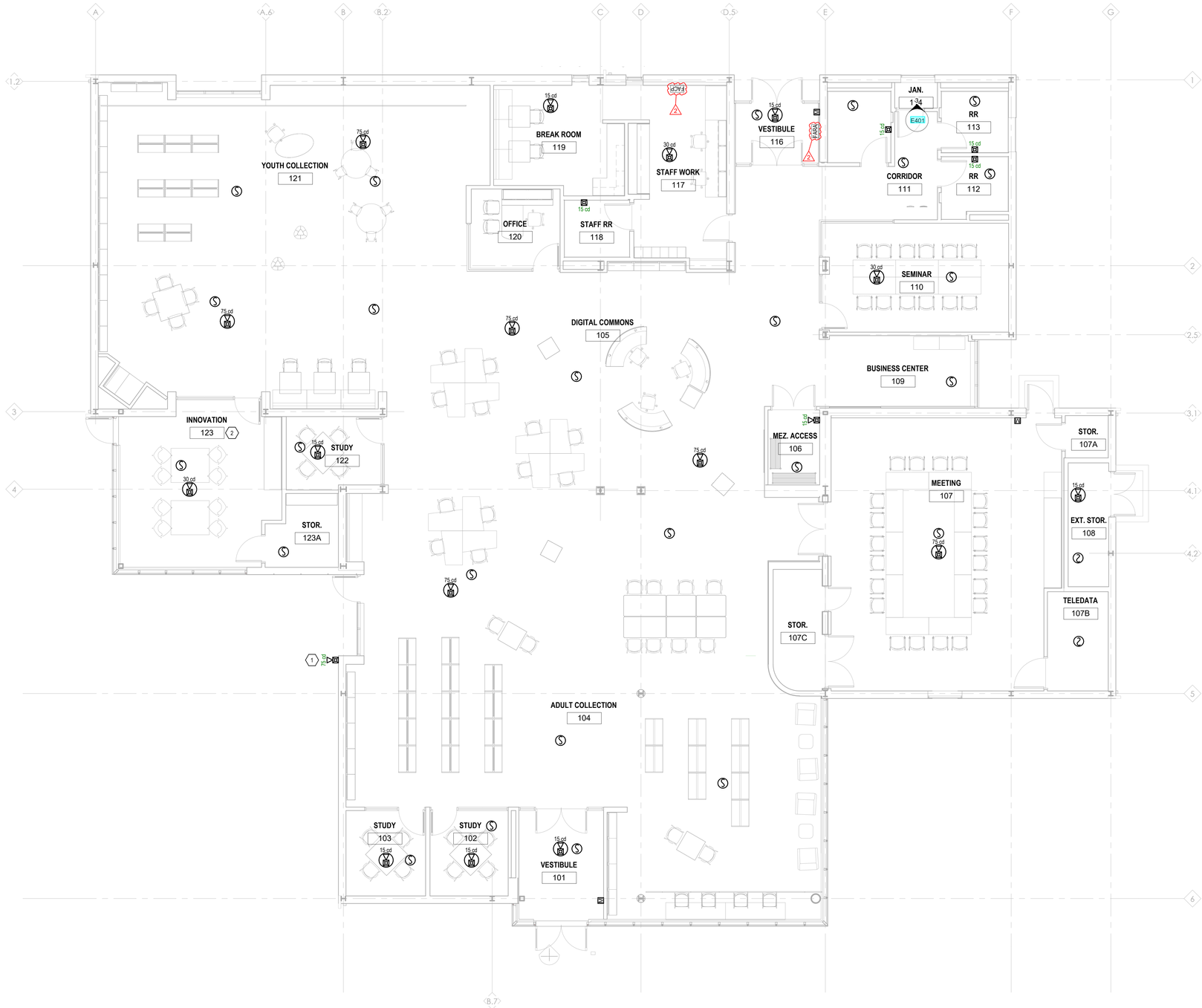
Sheet Notes - EF101	
#	Note
1	Provide this horn strobe with outdoor rating.
2	Conduit and cabling in this space shall be routed above perforated layer of deck and through flutes in deck system. Coordinate with architectural drawings.



1 First Floor Fire Alarm
3/16" = 1'-0"

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FIRST FLOOR FIRE ALARM NEW PLAN

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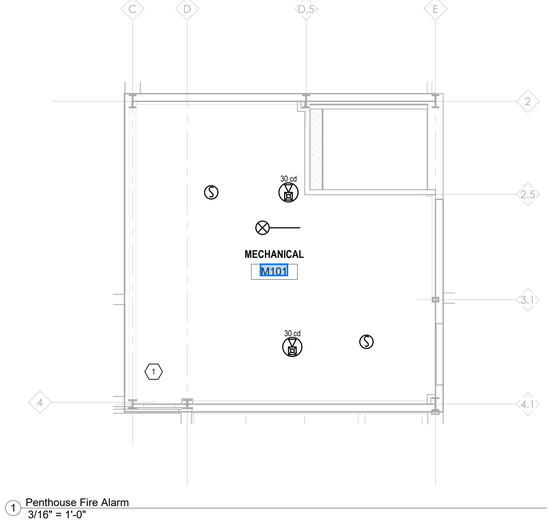
Sheet Notes - EF102

#	Note
1	The contractor shall reconnect the existing tamper and flow switches to the new fire alarm system.



1 Penthouse Fire Alarm
3/16" = 1'-0"

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PENTHOUSE FIRE ALARM NEW PLAN

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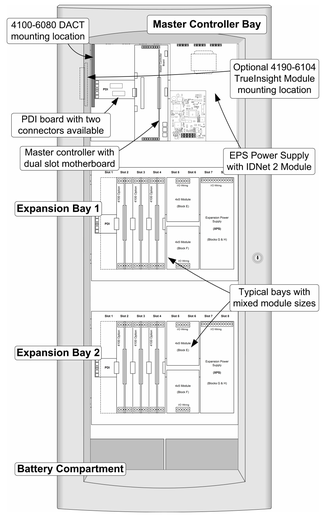
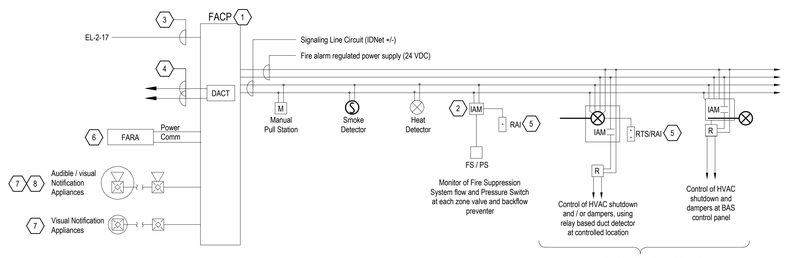


3 Fire Alarm Control Panel
NTS

Fire Alarm System Riser Notes:

1. The riser diagram shows the intent of these specifications and shall be used as a basis of design. The conduit sizing, types and quantity of wires, shall be verified with the manufacturer, prior to submitting a bid and prior to Installation.
2. Unless wired using a Class D circuit pathway, addressable control relays and monitor modules shall be installed within 36" of the controlled or monitored device. Unless otherwise noted, addressable control relays shall not activate the required emergency control function on loss of addressable control relay's operational power. Addressable control relays used to switch any voltage greater than 24VDC, regardless of contact rating, shall use a listed isolation relay between the addressable control relay and the switched voltage. The isolation relay shall be powered by regulated 24VDC and its contacts shall be rated for the specific control application. When controlling an isolation relay from an addressable device, the isolation relay becomes the controlled device and must be within 36" of the addressable device. The interface from the isolation relay to the controlled system or device has no code driven distance limitations.
3. All control cabinets shall be grounded, per NEC requirements.
4. Smoke detectors shall not be placed in areas where airflow prevents proper operation: Detectors should not be located closer than 36" from an air supply diffuser or return air opening.
5. Contractor shall perform a battery load calculation and voltage drop calculation for all devices, allowing for safety factors as indicated in the specifications. Contractor shall furnish and install as many remote power supplies, NAC extenders, or any other similar devices as are deemed necessary by these calculations to create a fully functioning system. All such devices shall be included in base bid.
6. Refer to fire alarm specifications for additional requirements. Refer to drawings for device locations.
7. Remote alarm test station (RTS): Provide combination remote alarm test key switch and visual alarm indicator for all duct detectors that are used for damper control. For duct detectors provide black text on white, brady style labeling, on RTS faceplate, indicating the duct detector's unique SLC address and the descriptor for the controlled damper. Unless noted otherwise on architectural or fire alarm plans mounting requirements shall be as follows:
   A. Finished accessible ceiling: Flush mount on accessible ceiling.
   B. Finished inaccessible ceiling: Flush mount on adjacent wall At 7'6" AFF.
   C. Unfinished areas: Surface mount on adjacent wall at 7'6" AFF.
   D. Coordinate installation in finished areas with Architect/Owner.
8. Duct detectors: Provide individual addressable relay-based duct detector for each rated damper and/or HVAC shutdown control location. Coordinate connection and damper locations with mechanical contractor. See note above for isolation relay requirements. For damper control, duct detector shall be installed within 5' of protected damper, with no air inlets or outlets between detector and controlled rated damper. At each damper control duct detector, also provide monitor IAM(s) to monitor the open and closed end-switches of the controlled damper for status.
9. HVAC control: Provide individual addressable module at each controlled HVAC unit or rated damper location. Coordinate connections and damper locations with mechanical and controls contractors. See note above for isolation relay requirements.
10. Building automation system interface (BAS): Provide individual addressable module relay(s), adjacent to each BAS and damper control center panel location. Coordinate with quantities and locations with controls contractor.
11. Elevator interface: Provide three (3) relay IAMs to each elevator controller for elevator primary, alternate recall, and cab fire fighters' hat illumination control.



4 Fire Alarm System Riser
NTS

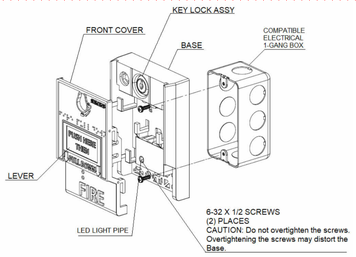
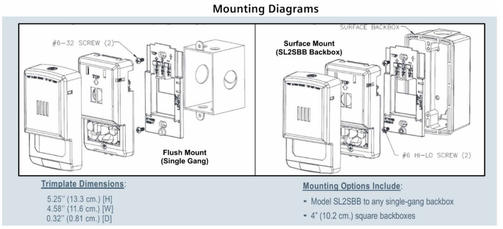
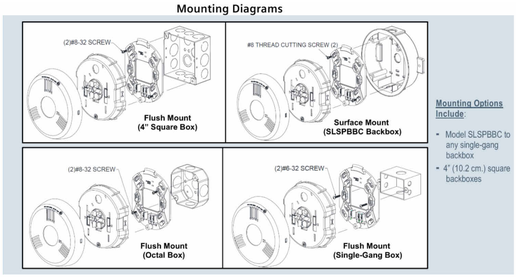


Figure 5
Mounting the XMS Series (Dual Action)

5 Manual Pull Station
NTS



2 Horn Strobe (Wall Mounted)
NTS



1 Horn Strobe (Ceiling Mounted)
NTS

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Project No: 25-25
Drawn / Checked: Author / Checker

Issue:

Bid & Permit		2.27.2026
2	Addendum 2	3.19.2026

FIRE ALARM DETAILS

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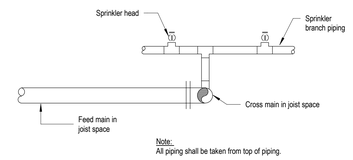
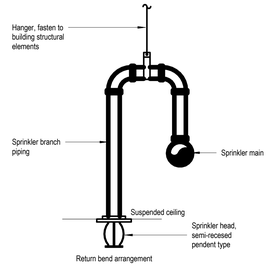


2 Sprinkler Heads
NTS



1 Sprinkler Head Detail
NTS

Project General Notes

1	Whenever the contract documents indicate conflicting or inconsistent options, the contractor shall include the higher cost option in their base bid and shall submit an RFI to the Engineer for clarification.
2	The term "provide" is defined within the contract documents to mean "furnish and install".
3	All equipment, piping, and all other mechanical, electrical, plumbing, technology, and fire protection related accessories and equipment shall be furnished and installed on this project per the contract document drawings and specifications. Contractor shall be familiar with existing drawings, existing conditions, site, and the work of all trades.
4	All concrete pads required for work shall be provided and paid for by the contractor. See structural drawings for details.
5	All work shall comply with all federal, state, and local codes and authorities having jurisdiction.
6	Contractor shall conform to OSHA, fire marshal, local building department, and all other applicable codes and regulations and authorities having jurisdiction. Contractor shall verify exact sizes, locations and quantities of all items in field intended to be removed, replaced and remain, as well as all existing equipment and existing conditions that require coordination with new work and demolition.
7	Contractor shall verify exact sizes, locations and quantities of all items in field intended to be removed, replaced, or to remain.
8	Contractor shall obtain permits, pay all fees, and arrange for required inspections.
9	All piping/ductwork, and electrical work which are disconnected, shall be temporarily capped till new connections are made. This includes capping drains in areas of construction to prohibit debris from entering sanitary and storm system during construction.
10	All openings remaining in walls/floor/roof after openings are made shall be patched by the contractor with materials so as to match existing finishes and structural integrity, unless finishes are shown otherwise on architectural or structural drawings and specifications.
11	For all cutting and patching requirements in walls/floors/roof, see specifications and coordinate with structural engineer.
12	Contractor shall coordinate all phasing of demolition and new construction with all trades and provide phasing plan to owner at time of bid.
13	Where MEP systems interfere with new work to maintain minimum elevations requirements for this project, the contractor shall relocate, reroute and raise or drop existing and/or new systems as required. All such cost shall be included in base bid.
14	The contractor shall be responsible for all cutting and patching required to install new work within their scope. Cutting of structural members is prohibited without written permission from the architect by direction of the structural engineer. All cutting and patching shall be performed by qualified personnel.
15	Contractor is solely responsible for construction means, methods, construction sequences, and workmen safety.
16	Contractor shall conform and work around all existing conditions or adjust existing conditions as needed (with owner's approval) to meet the contract documents. All work required to accommodate existing conditions shall be included in the base bid pricing.
17	Contractor shall be certified in lead and lead-based paint awareness, and safety in accordance with OSHA lead standard (29 CFR 1926.62).
18	Systems are to be complete and workable in all respects. Install all equipment per manufacturer's recommendations. Adjust and startup all equipment per manufacturer's recommendations.
19	The CMR shall manage the BIM coordination drawing process. All subcontractors shall draw all systems and architectural elements in three dimensions using 3-D modeling software. Two-dimensional coordination drawings shall be rejected. All engineering systems shall be drawn with constructible elements. Using the engineer's own 3-D elements and returning them as "coordination drawings" is unacceptable and shall be rejected immediately. Elements which shall be modeled and coordinated include but are not limited to: walls, floors, fences, windows, doors, casework, fan powered boxes, rigid ductwork, diffusers, casework, floor clean outs, floor drains, floor sinks, air handlers, refrigerant piping, plumbing and hydronic piping, panelboards, switchboards, transfer switches, tap boxes, in-grade handhole enclosures, pulling pits, all site conduits and trenches, all interior conduit of trade size larger than 1-1/4", conduit slab penetrations, required clearances around all equipment, equipment pads or curbs, all plumbing elements, all mechanical elements, all electrical lighting and power elements, all IT /AV elements, all security elements, all fire alarm elements.
20	It is the responsibility of the contractor to investigate the location of all existing underground utilities prior to performing any site work. Contact the Ohio Utilities Protection Service (OUPS) 811 Call Before You Dig service in accordance with Section 153.64 of the Ohio Revised Code.

Demolition General Notes

1	On demo plans, unless noted otherwise, equipment or fixtures which are existing to remain are indicated in half-tone solid lines, and equipment or fixtures which are to be removed are indicated in red dashed lines. Half-tone dashed lines indicate removal of equipment from an alternate discipline (e.g., walls). Coordinate with architectural demo plans.
2	All fixtures (including receptacles, light fixtures, data faceplates, wall switches, wireless access, points, sinks etc.) within the scope area shall be removed by the contractor. The contractor shall be retain these fixtures and offer them to the owner. If the owner chooses not to accept these items, the contractor shall dispose of them properly at the contractor's cost. All costs associated with this shall be included in the base bid.
3	Any items intended to be removed but not indicated in the contract documents shall be verified and removed by the contractor at no additional cost to the owner, and included in base bid.
4	Contractor shall check with owner for all items to be saved and return such items to the owner, prior to any work. All other items shall be hauled away from site and disposed of appropriately.
5	Contractor shall carefully remove controls components (actuators, sensors, thermostats, controllers, etc) and save in a location for the owner to inspect components and take them if they desire. The base bid shall include the contractor to dispose of the controls components if the owner does not want to keep them. Controls components may likely not be required back by the owner, coordinate with the Owner prior to demolition of the unit to understand if the controls componenets will likely be repurposed and taken back by the owner or if they should be discarded by the contractor.

Fire Protection General Notes

1	The sprinkler system is a delegated design and shall be built conforming to NFPA 13 and NFPA 2001, and under the enforced codes of the state of Ohio, insurance underwriter and owner standards. The contractor shall contract a professional fire protection engineer who is nicet level 3 certified to design the fire protection for the facility. The system design and calculations shall be submitted for review to the architect. The design details shown and head location are diagrammatic and for reference only.
2	Only the mechanical mezzanine is currently sprinkled. No additional sprinkler coverage will be added to the building beyond what is currently present.
3	Contractor shall conduct a water main flow test. Hydraulically calculate and design the modifications to the automatic wet pipe sprinkler system in accordance with the flow test data.
5	Coordinate sprinkler head locations with existing conditions
6	Refer to architectural plans for ceiling types, locations, and heights. Coordinate all work with mechanical, plumbing, electrical, structural, and architectural plans.
9	Unless noted otherwise provide upright heads, 155°F rated in areas of no ceilings.
10	Sprinkler densities shall be as defined by NFPA 13 for Ordinary Hazard Group 2.
11	All valves and switches shall be accessible.
12	Label all tamper switches, alarm address points, and drains with a permanent aluminum sign that describes what the zone serves.
13	Provide drains at low points.
15	Contractor to coordinate sprinkler heads with ductwork and adjacent obstructions. All obstructions over 4 feet shall be sprinkled above, below, and around per code. Contractor shall review all architectural and engineering plans, and field conditions, to determine if obstructions are being caused by equipment from the installation of equipment from multiple disciplines which are adjacent to each-other.
16	All fire protection lines shall be schedule 40.
17	All fire protection sprinkler heads shall be at least 4" from any wall.

Scope of Work

1. Currently the mechanical mezzanine is fire protected.
2. No new fire protection areas are being added as a part of this project.
3. The fire protection system in the mechanical mezzanine will be demolished / removed only to the extent needed to accommodate the installation of the scope from other disciplines on the mechanical mezzanine.
4. Once other systems have been installed, the fire protection contractor shall install fire protection system components, as necessary, to provide a fully functional system within the mechanical mezzanine.

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FIRE PROTECTION GENERAL ENGINEERING + DETAILS

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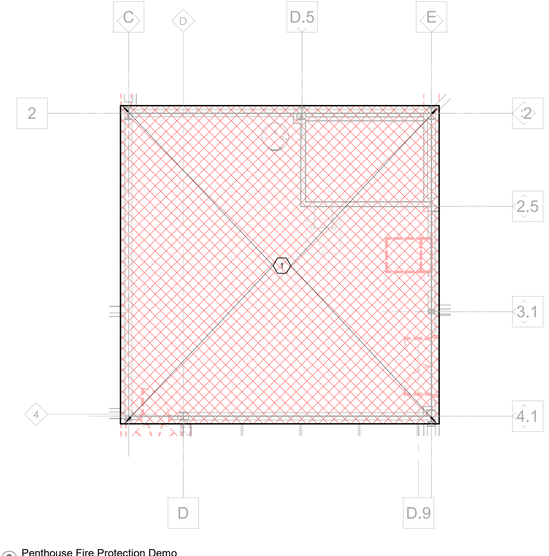
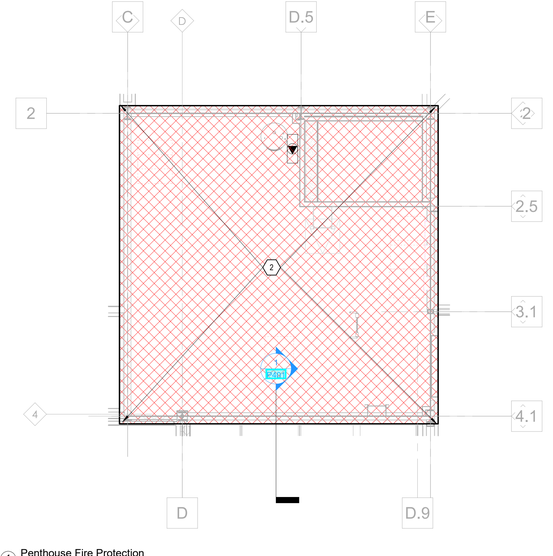
Sheet Notes - FP102

#	Note
1	Contractor shall demo the fire protection system to the extent needed to accomodate the installation of the systems and equipment within the project. Do not demolish the entire system or all of its components unless needed to accomodate the installation of other equipment.
2	Contractor shall reinstall lines, arm overs, heads, etc, as necessary to provide a fully functional system.



2 Penthouse Fire Protection Demo
3/16" = 1'-0"



1 Penthouse Fire Protection
3/16" = 1'-0"

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PENTHOUSE FIRE PROTECTION DEMO + NEW

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