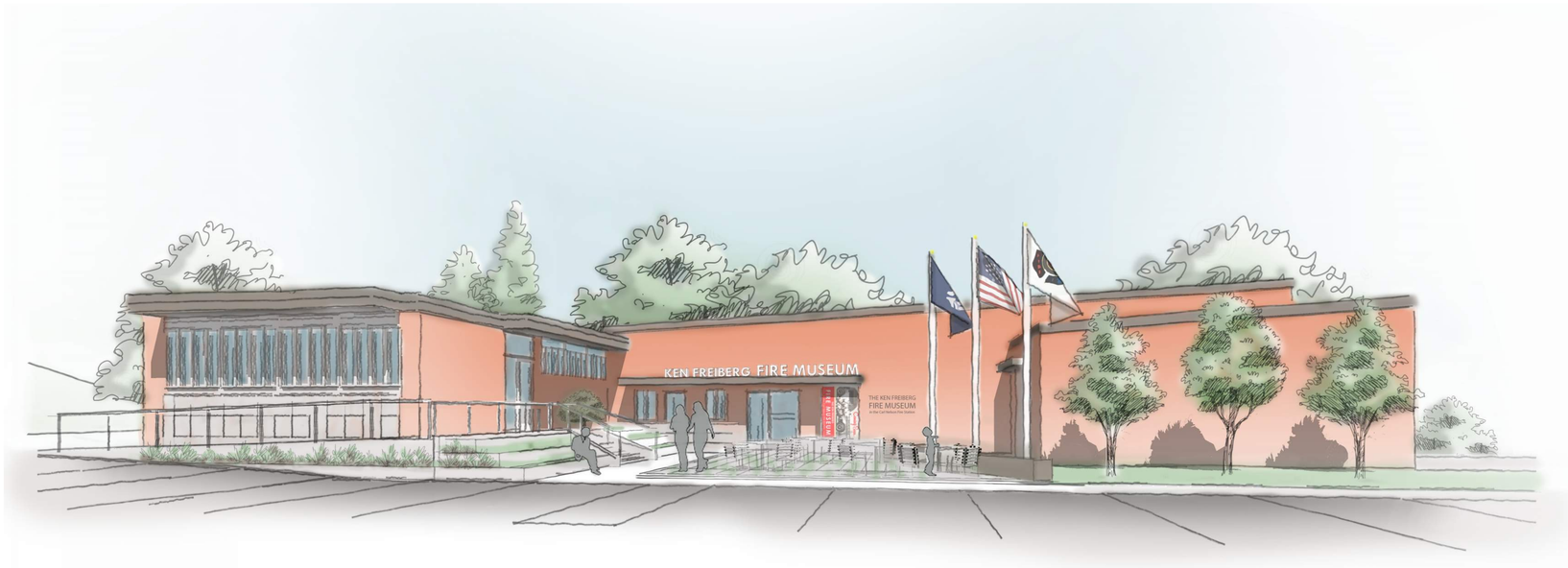

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

PRELIMINARY DESIGN - 70% CONSTRUCTION DOCUMENTS SET

JULY 19TH, 2024

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

PRELIMINARY NOT FOR CONSTRUCTION

LOCATION MAP:

PROJECT LOCATION

CONTACTS:

BUILDING OWNER:	CITY OF THORNTON 12450 WASHINGTON ST THORNTON, CO 80241 303-538-7330 CONTACT: JENNIFER CAHILL, PMP	MEP ENGINEER:	BG BUILDINGWORKS 1626 COLE BLVD., STE. 300 LAKEWOOD, CO 80401 303-278-3820 CONTACT: WES PLOOF
ARCHITECT:	ARCHITECTURAL WORKSHOP 2 KALAMATH ST. DENVER, CO 80223 303-788-1717 CONTACT: MARK BOWERS	MUSEUM LIAISON:	STILLWELL CONSULTANTS FORT COLLINS, CO 970-218-6542 CONTACT: JILL STILLWELL
STRUCTURAL:	JCAA 4100 WADSWORTH BLVD., WHEAT RIDGE, CO 80033 303-985-3260 CONTACT: NICHOLAS ROHR	CIVIL ENGINEER:	PROOF CIVIL ENGINEERING 600 GRANT ST. STE. 210 DENVER, CO 80203 303-325-5709 CONTACT: JASON DEYOUNG
ENERGY CONSULTANT:	GROUP 14 ENGINEERING 1325 E 16TH AVE, DENVER, CO 80218 303-861-2070 CONTACT: TAYLOR ROBERTS	LANDSCAPE DESIGNER:	STACKLOT 5639 SOUTH CURTICE STREET LITTLETON, CO 80120 303-883-2735 CONTACT: JUSTIN HAY
EXHIBIT DESIGN:	STUDIO TECTONIC 400 MARINE STREET BOULDER, CO 80302 720-398-3030 CONTACT: SETH FRANKEL		

PROJECT DESCRIPTION:

RENOVATION AND CODE ALTERATIONS OF EXISTING THORNTON FIRE STATION WITH NEW FINISHES AND EXTERIOR MODIFICATIONS TO SERVE AS AN INTERACTIVE MUSEUM.

ADD ALTS:

#1. OASIS LANDSCAPE DESIGN. RE: LANDSCAPE DRAWINGS

#2. ACCESSIBLE SITE WORK & PAVING NEEDED TO BRING THE EXISTING PARKING LOT INTO CODE COMPLAINCE. RE: CIVIL DRAWINGS

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E-201	ELECTRICAL DIAGRAMS
ED-101	ELECTRICAL DEMO PLAN
ES-101	ELECTRICAL SITE PLAN
L-101	LIGHTING FLOOR PLAN

aw
ARCHITECTURAL WORKSHOP . DENVER, COLORADO

DATE	DESCRIPTION
05.10.2024	PRE-DESIGN (30% CD)
07.19.2024	PRELIMINARY DESIGN (70% CD)

DRAWN BY: GB/JO CHECKED BY: MB
PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

COVER SHEET

G-001

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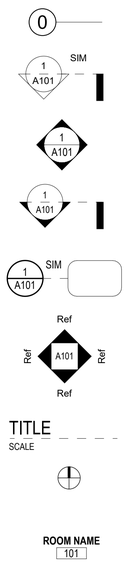
SYMBOLS



COLUMN GRID

DETAIL/WALL SECTION
DETAIL 1 ON SHEET A101

EXTERIOR ELEVATION
DRAWING 1 ON SHEET A101

BUILDING SECTION
DRAWING 1 ON SHEET A101

DETAIL BUBBLE
DETAIL 1 ON SHEET A101

INTERIOR ELEVATION
DRAWING 1 ON SHEET A7.1

DRAWING TITLE AND NUMBER

NORTH ARROW

ROOM NAME AND NUMBER

ROOM NAME
101

ELEVATION MARKER

DOOR NUMBER

WINDOW TYPE

CENTER LINE

OBJECTS ABOVE
SOFFITS, CABINETS, HIGH WINDOWS

HIDDEN OBJECTS

KEYNOTE

ROOM FINISHES

WALL	WAINSCOTING
WALL BASE	FLOOR

ABBREVIATIONS:

A.F.F	ABOVE FINISH FLOOR
A.C.T	ACOUSTIC CEILING TILES
A.C.	AIR CONDITIONING
ADJ.	ADJUSTABLE
AL	ALUMINUM
ALT	ALTERNATE
L	ANGLE
AND	ANODIZED
A.D.	AREA DRAIN
@	AT
B.M.	BENCH MARK
BIT	BITUMINOUS
BLK	BLOCK
BD	BOARD
BLDG	BUILDING
B.B.	BULLETIN BOARD
B.U.R.	BUILT UP ROOF
C.I.P.	CAST-IN-PLACE-CONCRETE
CPT	CARPET
CLK	CAULKING
C.B.	CHALK BOARD
CLG	CEILING
CTR	CENTER
C.T.	CERAMIC TILE
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
C.M.U.	CONCRETE MASONRY UNIT
CONST	CONSTRUCTION
CJ	CONTROL JOINT
CONT	CONTINUOUS/CONTINUE
CONTR	CONTRACTOR
CORR.	CORRIDOR
C.U.H.	CABINET UNIT HEATER
DET/DTL	DETAIL
DIA	DIAMETER
DIM	DIMENSIONS
DR	DOOR
DN	DOWN
D.S.	DOWN SPOUT
DWG	DRAWING
D.F.	DRINKING FOUNTAIN
ELEC	ELECTRICAL
E.W.C.	ELECTRIC WATER COOLER
ELEV	ELEVATION
EQ	EQUAL
EQUIP	EQUIPMENT
EIFS	EXT. INSUL. & FINISH SYSTEM
EXH.	EXHAUST
EXIST/EX	EXISTING
E.J.	EXPANSION JOINT
EXT	EXTERIOR
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
F.B.	FACE BRICK
FT	FEET
FIN	FINISH
F.F.	FINISH FLOOR
F.A.P.	FIRE ALARM PANEL
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CABINET
FL	FLOOR/FLOOR LINE
F.D.	FLOOR DRAIN
FTG	FOOTING
FDN	FOUNDATION
GALV.	GALVANIZED
GA	GAUGE
GEN	GENERAL
G.C.	GENERAL CONTRACTOR
GLAM	GLUE LAMINATED WOOD BEAM
G.B.	GRAB BAR
GR	GRADE
GYP. BD	GYPSUM BOARD
HWD	HARD WOOD
HT	HEIGHT
H.P.	HIGH POINT/HIGH PRESSURE
H.M.	HOLLOW METAL
IN	INCH
I.D.	INSIDE DIAMETER
I.G.	INSULATING GLASS
INSUL	INSULATION
INT.	INTERIOR
INV.	INVERT
JAN	JANITOR
JT	JOINT
KIT	KITCHEN
LAB	LABORATORY
LAM	LAMINATE
LAV	LAVATORY
LGTH	LENGTH
LF	LINEAL FOOT
L.S.D.	LIQUID SOAP DISPENSER
MH	MANHOLE
MFR	MANUFACTURER
M.O.	MASONRY OPENING
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MTL/MET	METAL
MICR	MICROWAVE
MIN	MINIMUM
MISC	MISCELLANEOUS
MOD	MODULE
NONCOM	NON-COMBUSTIBLE
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
NO.	NUMBER
OFF	OFFICE
O.C.	ON CENTER
OPG	OPENING
OPH	OPPOSITE HAND
O.D.	OUTSIDE DIAMETER
PNT	PAINTED/PAINT
PTN	PARTITION
PL	PLASTER
PLT	PLATE
P&H	PLUMBING AND HEATING
PLWD	PLYWOOD
P.I.P.	POURED IN PLACE CONCRETE
PC	PRECAST
PFB	PREFABRICATED
PREFIN	PREFINISHED
P.W.B.	PREFINISHED WALL BOARD
PRELIN	PRELIMINARY
P.L.	PROPERTY LINE
RAD	RADIUS
R.W.R.	RAIN WATER RECEIVER
RECP	RECEPTACLE
REC	RECESS
REF	REFERENCE
REINF	REINFORCE/REINFORCING
REQD	REQUIRED
RESIL	RESILIENT
R.D.	ROOF DRAIN
RM	ROOM
R.O.	ROUGH OPENING
SAN	SANITARY
SCH	SCHEDULE
SECT.	SECTION
SHT	SHEET
SIM	SIMILAR
S.D.	SMOKE DETECTOR
S.C.	SOLID CORE
SPR	SPRINKLER
SF	SQUARE FOOT
S.S.	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STO	STORAGE
STR	STRUCTURAL
SUSP	SUSPENDED
SYM	SYMMETRIC
SYS.	SYSTEM
T.B.	TACK BOARD
TEL	TELEPHONE
THK	THICK
THRES	THRESHOLD
TOIL	TOILET
T.T.D.	TOILET TISSUE DISPENSER
T&G	TONGUE & GROOVE
T.O.C.	TOP OF CONCRETE
T.O.D.	TOP OF DECK
T.O.M.	TOP OF MASONRY
T.O.S.	TOP OF STEEL
TYP	TYPICAL
T.D.R.	TOWEL DISPENSER & RECEPTACLE
UC	UNDER COUNTER
UG	UNDERGROUND
UNFIN	UNFINISHED
V.B.	VAPOR BARRIER
VENT	VENTILATING
V.I.F.	VERIFY IN FIELD
VERT	VERTICAL
V.C.T.	VINYL COMPOSITION TILE
W.C.	WATER CLOSET
WP	WATERPROOFING
W.S.	WEATHER STRIP
WT	WEIGHT
WWF	WELDED WIRE FABRIC
W/	WITH
W/O	WITHOUT
WD	WOOD

GENERAL CONTRACTOR NOTES:

1. PERMITS:
IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO SUBMIT FOR BUILDING PERMIT THROUGH THE CITY OF THORNTON. THE CONTRACTOR SHALL PAY FOR THE PERMIT. THE CONTRACTOR SHALL HAVE A VALID COMMERCIAL LICENSE AND TO PICK UP THE PERMIT.

2. SITE EXAMINATION:
GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VISIT AND EXAMINE THE SITE AND BUILDING IN EVERY DETAIL AS IT PERTAINS TO THE PROJECT PRIOR TO SUBMITTING A BID PROPOSAL.

3. DISCREPANCIES:
ANY DISCREPANCIES DISCOVERED BY THE GENERAL CONTRACTOR OR BY THE SUBCONTRACTORS, BETWEEN DIMENSIONS, OR CONFLICTS UNFORESEEN PREVIOUSLY SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT FOR CLARIFICATION.

4. BUILDING CODE COMPLIANCE:
PERFORM ALL WORK TO COMPLY WITH APPLICABLE BUILDING CODES AND REGULATIONS. FOR BUILDING CONDITIONS THAT ARE NOT CONSTRUCTED TO MEET CURRANT BUILDING CODES, THE GENERAL CONTRACTOR IS TO PROVIDE ALTERNATE PRICING TO BRING ITEMS INTO CODE COMPLIANCE.

5. LONG LEAD ITEMS:
THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR BEING FAMILIAR WITH THE PROJECT SCHEDULE AND DEADLINES, AND FOR ADVISING THE ARCHITECT FOR ALL LONG LEAD ITEMS. ORDER CONFIRMATION SHALL BE SUBMITTED WITH DELIVERY DATES. PROVIDE LEAD TIME ESTIMATES WITH ANY BID PROPOSALS. IT SHALL BE AT THE GENERAL CONTRACTORS EXPENSE IF ANY LONG LEAD ITEMS ARE DISCOVERED AFTER THE PROJECT BEGINS.

6. CLEAN UP:
CLEANING OF EQUIPMENT SHALL BE LIMITED TO AREAS DESIGNATED BY THE BUILDING MANAGER. TRASH SHALL BE REMOVED AND SWEEPING\VACUUMING SHALL BE PROVIDED ON A DAILY AND CONTINUING BASIS THROUGHOUT THE CONSTRUCTION PROCESS. FINAL CLEANING SHALL BE PROVIDED BY THE CONTRACTOR AND INCLUDE WINDOWS, SILLS, WINDOW COVERINGS (BLINDS), CABINETS, LIGHT FIXTURES, SUPPLY AIR DIFFUSERS AND RETURN AIR GRILLS.

7. PROTECTION OF EXISTING ITEMS:
THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT ALL EXISTING CONSTRUCTION ON AND OFF SITE, AND SHALL BE HELD RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE CAUSED BY GENERAL CONTRACTOR OR ANY OF ITS SUBCONTRACTORS.

8. WORK PERFORMED UNDER SEPARATE CONTRACT:
THE GENERAL CONTRACTOR IS TO VERIFY WITH THE BUILDING MANAGER, IF ANY WORK IS TO BE PERFORMED UNDER A SEPARATE CONTRACT.

9. FIRE WALL PENETRATIONS:
ALL PENETRATIONS THROUGH FIRE RESISTIVE CONSTRUCTION SHALL BE CAULKED OR OTHERWISE SEALED WITH AN APPROVED FIRE SEALANT TO MAINTAIN THE REQUIRED FIRE RATING.

10. GC IS TO BE AWARE OF THORNTON COMMUNITY CONNECTIONS SHARING THE BUILDING AND SOME SYSTEMS. SHARED SYSTEMS REQUIRING SHUT DOWN DURING BUSINESS HOURS WILL REQUIRE AFTER HOURS WORK SCHEDULE

SEPARATE CONTRACT:

1. IT, VIDEO TECHNOLOGY & ACCESS CONTROL: THE CONTRACTOR IS RESPONSIBLE TO WORK WITH AND PROVIDE ALL REASONABLE ACCOMMODATIONS TO ALLOW THE IT AND VIDEO CONTRACTOR TO COMPLETE THE WORK. INFASTRUCTURE FOR ALL PROVIDED BY CONTRACTOR AND TO BE COORDINATED WITH THE CITY OF THORNTON.

2. SECURITY: THE CITY OF THORNTON SHALL COORDINATE AND PROVIDE SECURITY SYSTEM TO TIE INTO BUILDING INFRASTRUCTURE. GC TO PROVIDE INFASTRUCTURE AND COORDINATE WITH THE CITY OF THORNTON.

3. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING DBA INFASTRUCTURE FOR EMERGENCY RESPONDER COMMUNICATION COVERAGE PER IFC 510.

GENERAL ACCESSIBILITY NOTES:

1. FLOOR SURFACES SHALL BE SLIP-RESISTANT.

2. ABRUPT CHANGES IN LEVEL ALONG ANY ACCESSIBLE ROUTE SHALL NOT EXCEED 1/2" IN HEIGHT. LEVEL CHANGES NOT EXCEEDING 1/4" MAY BE VERTICAL. BEVEL OTHERS WITH A SLOPE NO GREATER THAN 1:2

3. FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS. LEVER OPERATED, PUSH TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF CLOSING ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.

LIFE SAFETY NOTES:

1. THE FOLLOWING NOTES SHALL BE CONTRACTUALLY BINDING AND APPLY TO ALL DISCIPLINES. IT IS THE CONTRACTORS OBLIGATION TO ENSURE ALL WORK AND ALL SUB CONTRACTORS WORK BE PERFORMED IN COMPLIANCE WITH THE FOLLOWING NOTES IN ADDITION TO THE CONSTRUCTION DOCUMENTS AND PROJECT SPECIFICATIONS.

2. HOT WORK DURING CONSTRUCTION:
THE CONTRACTOR SHALL ENSURE THAT ANY HOT WORK ACTIVITIES DURING CONSTRUCTION, E.G., USING HEAT GUNS, SOLDERING, BRAZING, WELDING, GRINDING, POWDER DRIVEN STUDS, METAL CUTTING USING POWER TOOLS OR OTHER ACTIVITIES INVOLVING FLAMES OR SPARKS ARE PRECEDED BY OBTAINING AND APPROVED HOT WORK PERMIT.

3. ACCESS AND EGRESS OBSTRUCTIONS:
THE CONTRACTOR SHALL CONFIRM THAT THE PROJECT STAGING AREA AND CONSTRUCTION ACTIVITIES DO NOT CAUSE THE OBSTRUCTION OF PATHS OF EGRESS INSIDE THE BUILDING. BLOCK EXIT DISCHARGE FROM THE BUILDING OR IMPEDE EMERGENCY VEHICLE ACCESS TO THE AREA.

4. DUST/FUME GENERATION:
IF THE CONSTRUCTION ACTIVITIES GENERATE DUST OR FUMES INSIDE THE BUILDING, NECESSARY MEASURES ARE TO BE TAKEN TO PREVENT THE NUISANCE ACTUATION OF ANY NEARBY SMOKE OR DUCT DETECTORS. THE CONTRACTOR SHALL CONTACT THE FIRE SYSTEMS GROUP TO TAKE NECESSARY ACTIONS.

5. PENETRATIONS THROUGH FIRE RATED ASSEMBLIES:
THE CONTRACTOR SHALL ENSURE THAT ANY PENETRATIONS THROUGH FIRE RATED ASSEMBLIES (FLOORS, PARTITIONS, WALLS, ETC.) ARE FIRESTOPPED.

6. PEDESTRIAN PROTECTION:
THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ANY NECESSARY PEDESTRIAN PROTECTION MEASURES DURING CONSTRUCTION.

PROJECT NOTES:

1. CONTRACTOR AND SUB-CONTRACTORS ARE RESPONSIBLE TO READ AND UNDERSTAND ALL OF THE DRAWINGS AND THE PROJECT SPECIFICATION BOOK.

2. GENERAL CONTRACTOR (G.C.) IS RESPONSIBLE TO COORDINATE WITH THE BUILDING MANAGER FOR HOURS OF OPERATION, ALLOWABLE CONSTRUCTION TIMES AND CONSTRUCTION ACTIVITIES. THE G.C. SHALL ASSUME ALL RESPONSIBILITY FOR ALL SUB-CONTRACTORS.

3. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE DUMPSTER & PORTA-POTTY. THE G.C. SHALL COORDINATE WITH THE CITY OF DENVER FOR LOCATION AND ALLOWABLE SIZE.

NOTE:
REACH DIMENSIONS TO CONFORM TO REQUIREMENTS, DIMENSIONS, AND LIMITATIONS SET FORTH IN ANSI A117.1-2017, SECTION 308 AND 309 ALONG WITH MANUFACTURERS ADA STANDARD MOUNTING HEIGHTS. COORDINATE WITH ARCHITECT PRIOR TO ANY SWITCH/OUTLET INSTALLATION. MAINTAIN 30" X 48" CLEAR FLOOR SPACE PERPENDICULAR TO WALL WHERE CONTROL IS LOCATED FOR A FORWARD REACH TO CONTROL.

INCLUDES:
LIGHT SWITCHES, ELECTRICAL OUTLETS, ENVIRONMENTAL CONTROLS.

EXCLUDES:
CIRCUIT BREAKERS, APPLIANCE CONTROLS, AND OUTLETS DEDICATED FOR SPECIAL APPLICATIONS.

NOTE:
ACCESSIBLE WATER CLOSETS MUST COMPLY WITH ICC/ANSI A117.1-2017 SECTIONS 603 & 604. DESIGN BASED UPON 2017 ANSI REQUIREMENTS. ALL DIMENSIONS ARE TO FACE OF FINISH UNLESS NOTED OTHERWISE.

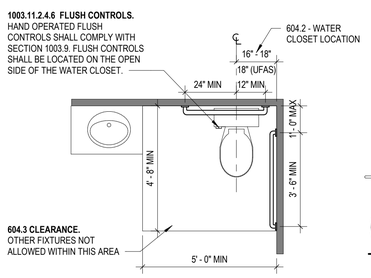
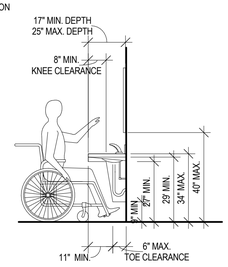
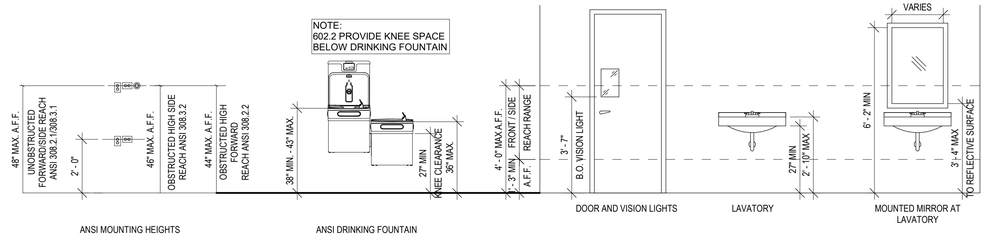


FIG. 604.2 ACCESSIBLE WATER CLOSET
FIG. 604.3 SIZE OF CLEARANCE FOR WATER CLOSET



ACCESSIBLE LAVATORY



ANSI MOUNTING HEIGHTS | ANSI DRINKING FOUNTAIN | DOOR AND VISION LIGHTS | LAVATORY | MOUNTED MIRROR AT LAVATORY

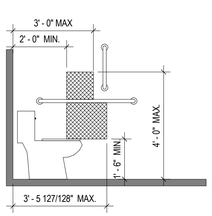


FIG. 604.7.1(C)
DISPENSER OUTLET LOCATION RECESSED DISPENSER

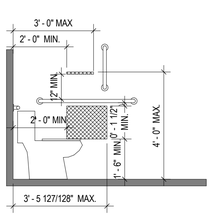


FIG. 604.7.1(A &B)
DISPENSER OUTLET LOCATION PROTRUDING ABOVE/BELOW GRAB BAR

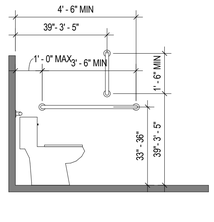


FIG. 604.5.1
SIDE WALL GRAB BAR FOR WATER CLOSET

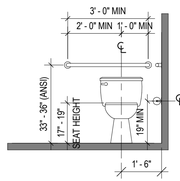
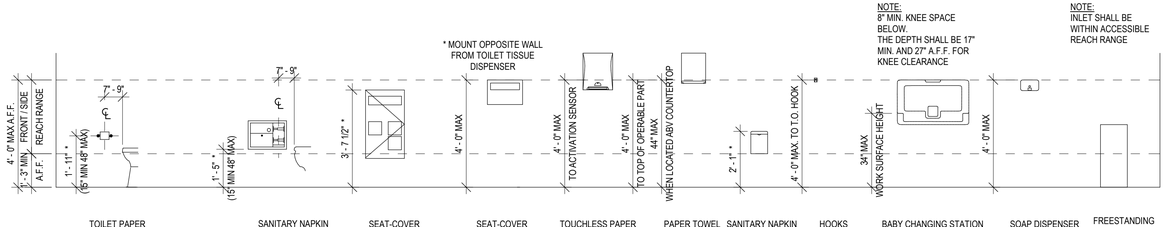


FIG. 604.5.2
REAR WALL GRAB BAR FOR WATER CLOSET



TOILET PAPER ROLL HOLDER | SANITARY NAPKIN DISPOSAL & TOILET TISSUE DISPENSER | SEAT-COVER DISPENSER & TOILET TISSUE DISPENSER (308) | SEAT-COVER DISPENSER (SURFACE MOUNTED) | TOUCHLESS PAPER TOWEL DISPENSER (SEMI-RECESSED) | PAPER TOWEL DISPENSER (SURFACE MOUNTED) | SANITARY NAPKIN DISPOSAL (SURFACE MOUNTED) | HOOKS | BABY CHANGING STATION (WALL MOUNTED) | SOAP DISPENSER (SURFACE MOUNTED) | FREESTANDING WASTE RECEPTACLE

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THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

PRELIMINARY
NOT FOR CONSTRUCTION

aw
ARCHITECTURAL WORKSHOP . DENVER, COLORADO

DATE	DESCRIPTION
05.10.2024	PRE-DESIGN (30% CD)
07.19.2024	PRELIMINARY DESIGN (70% CD)

DRAWN BY: GB/JO CHECKED BY: MB
PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

GEN. NOTES, MOUNTING HEIGHTS, SYMBOLS & ABBREVIATIONS

G-002

CODE DATA:

BUILDING ADDRESS: 9451 DOROTHY BLVD.
THORNTON CO 80229

APPLICABLE BUILDING CODES:
2021 INTERNATIONAL BUILDING CODE
2021 INTERNATIONAL FIRE CODE
2021 INTERNATIONAL MECHANICAL CODE
2021 INTERNATIONAL PLUMBING CODE
2021 INTERNATIONAL ENERGY CONSERVATION CODE
2020 NATIONAL ELECTRICAL CODE
2021 INTERNATIONAL EXISTING BUILDING CODE
CITY OF THORNTON AMENDMENTS TO ADOPTED BUILDING CODES
ICC A117.1-2017 & COLORADO STATE HOUSE BILL 03-1221
CITY OF THORNTON ZONING AND PLANNING REQUIREMENTS

BUILDING CONSTRUCTION: TYPE V-B (EXISTING)

OCCUPANCY GROUP: A-3, B & S-2

SPRINKLER SYSTEM: NOT REQUIRED (NS)

BUILDING HEIGHT: 20'-8" (EXISTING)

CONSTRUCTION AREA:

BASEMENT	540 S.F.
1ST FLOOR	5,440 S.F.
TOTAL:	5,980 S.F.

CHAPTER 5: GENERAL BUILDING HEIGHTS AND AREAS

	ALLOWED	PROVIDED
TABLE 504.3 - MAX. BUILDING HEIGHT ABOVE GRADE PLANE	40'	20'-8" (EXISTING)
TABLE 504.4 - # OF STORIES ABOVE GRADE PLANE	1	1 (EXISTING)
TABLE 506.2 - ALLOWABLE AREA FACTOR	6,000 S.F. (A-3) 9,000 S.F. (B) 13,500 S.F. (S-2)	3,784 S.F. (A-3) 1,418 S.F. (B) 540 S.F. (S-2)

SECTION 508.2.3 ALLOWABLE BUILDING AREA
THE ALLOWABLE AREA OF THE BUILDING SHALL BE BASED ON THE APPLICABLE PROVISIONS OF SECTION 506 FOR THE MAIN OCCUPANCY OF THE BUILDING. AGGREGATE ACCESSORY OCCUPANCIES SHALL NOT OCCUPY MORE THAN 10 PERCENT OF THE FLOOR AREA OF THE STORY IN WHICH THEY ARE LOCATED AND SHALL NOT EXCEED TABULAR VALUES FOR NONDRINKER BUILDINGS IN TABLE 506.2 FOR EACH SUCH ACCESSORY OCCUPANCY.

LEVEL	OCCUPANCY	SQUARE FOOTAGE
BASEMENT	(S-2)	540 S.F.
1ST FLOOR	PRIMARY USE (A-3)	3,934 S.F.
1ST FLOOR	SECONDARY USE (B / S-2)	380 S.F.

TOTAL: 4,854 S.F.

CHAPTER 6: TYPES OF CONSTRUCTION

TABLE 601, FIRE RESISTANCE REQUIREMENTS FOR BUILDING ELEMENTS: TYPE V-B CONSTRUCTION = NO RATINGS REQUIRED

TABLE 602, FIRE RESISTANCE RATING FOR EXTERIOR WALLS
TYPE V-B CONSTRUCTION 5'-0" ≤ X < 10'-0" SEPARATION = 1 HR RATING REQUIRED.
TYPE V-B CONSTRUCTION 10'-0" ≤ X < 30'-0" SEPARATION = NO RATINGS REQUIRED.
TYPE V-B CONSTRUCTION >30'-0" SEPARATION = NO RATINGS REQUIRED.

CHAPTER 9: FIRE PROTECTION SYSTEMS

SECTION 903.2.1.3 GROUP A-3
AN AUTOMATIC SPRINKLER SYSTEM SHALL BE PROVIDED THROUGHOUT STORIES CONTAINING GROUP A-3 OCCUPANCIES AND THROUGHOUT ALL STORIES FROM THE GROUP A-3 OCCUPANCY TO AND INCLUDING THE LEVEL OF EXIT DISCHARGE SERVING THAT OCCUPANCY WHERE ONE OF THE FOLLOWING CONDITIONS EXISTS:
1. THE FIRE AREA EXCEEDS 12,000 SQUARE FEET - NOT APPLICABLE
2. THE FIRE AREA HAS AN OCCUPANT LOAD OF 300 OR MORE - NOT APPLICABLE
3. THE FIRE AREA IS LOCATED ON A FLOOR OTHER THAN A LEVEL OF EXIT DISCHARGE SERVING SUCH OCCUPANCIES - NOT APPLICABLE
AN AUTOMATIC SPRINKLER SYSTEM IS NOT REQUIRED.

SECTION 906.1
PORTABLE FIRE EXTINGUISHERS ARE REQUIRED FOR ALL OCCUPANCIES IN BUILDING.

TABLE 906.3(1) FIRE EXTINGUISHERS FOR CLASS A FIRE HAZARDS
LIGHT (LOW) HAZARD OCCUPANCY
MINIMUM-RATED SINGLE EXTINGUISHER = 2-A
MAXIMUM FLOOR AREA PER UNIT OF A = 3,000 S.F.
MAXIMUM FLOOR AREA FOR EXTINGUISHER = 11,250 S.F.
MAXIMUM DISTANCE OF TRAVEL TO EXTINGUISHER = 75 FEET

CHAPTER 10: MEANS OF EGRESS

SECTION 1005.3.1 STAIRWAYS
EGRESS WIDTH REQ'D STAIRS = 0.3"/OCC. PROVIDED = 37.5"

SECTION 1005.3.2 OTHER EGRESS COMPONENTS
EGRESS WIDTH FOR COMPONENTS OTHER THAN STAIRS = 0.2"/OCC. PROVIDED = 36"

TABLE 1006.2.1 SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY
OCCUPANCY A = 49 MAX OCCUPANT LOAD OF SPACE
OCCUPANCY B = 49 MAX OCCUPANT LOAD OF SPACE
OCCUPANCY S = 29 MAX OCCUPANT LOAD OF SPACE

MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (FEET) - WITHOUT SPRINKLER SYSTEM

OCCUPANT LOAD =	OL <= 30	OL > 30
OCCUPANCY A =	75	75
OCCUPANCY B =	100	75
OCCUPANCY S =	100	75

SECTION 1009.5 PLATFORM LIFTS
PLATFORM LIFTS SHALL BE PERMITTED TO SERVE AS PART OF AN ACCESSIBLE MEANS OF EGRESS WHERE ALLOWED AS PART OF A REQUIRED ACCESSIBLE ROUTE IN SECTION 1110.9 EXCEPT FOR ITEM 10. STANDBY POWER FOR THE PLATFORM LIFT SHALL BE PROVIDED IN ACCORDANCE WITH CHAPTER 27.

SECTION 1010.1.1 SIZE OF DOOR
MIN. 32" CLEAR WIDTH WITH DOOR IN THE 90 DEG. OPEN POSITION.

SECTION 1011.2 WIDTH AND CAPACITY
EXCEPTION #1, STAIRWAYS SERVING AND OCCUPANT LOAD OF LESS THAN 50 SHALL HAVE A WIDTH OF NOT LESS THAN 36 INCHES.

SECTION 1017.2 EXIT ACCESS TRAVEL DISTANCE
MAXIMUM TRAVEL DISTANCE: ALLOWABLE = 200 FEET PROVIDED = RE: LIFE SAFETY PLANS

CHAPTER 11: ACCESSIBLE ROUTE

SECTION 1104.1 SITE ARRIVAL POINTS
ACCESSIBLE ROUTE TO ALL PUBLIC WAYS - PROVIDED

SECTION 1105.1 PUBLIC ENTRANCES
60% OF ALL PUBLIC ENTRANCES SHALL BE ACCESSIBLE - 2 ACCESSIBLE PUBLIC ENTRANCES PROVIDED

SECTION 1106.2 ACCESSIBLE PARKING SPACES

TOTAL PARKING SPACES PROVIDED IN PARKING FACILITIES	REQ'D MIN. NUMBER OF ACCESSIBLE PARKING SPACES
1 - 25	1
26 - 50	2

CHAPTER 29: PLUMBING SYSTEMS

TABLE 2902.1 MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES

ASSEMBLY (A-3) = 127 OCC.
MALE = 64 OCC.
1 WC PER 125 = 0.51
1 LAV PER 200 = 0.32

FEMALE = 64 OCC.
1 WC PER 65 = 0.98
1 LAV PER 200 = 0.32

BUSINESS (B) = 33 OCC.
MALE = 17 OCC.
1 WC PER 25 = 0.68
1 LAV PER 40 = 0.43

FEMALE = 17 OCC.
1 WC PER 25 = 0.68
1 LAV PER 40 = 0.43

STORAGE (S-2) = 3 OCC.
MALE = 2
1 WC PER 100 = 0.02
1 LAV PER 100 = 0.02

FEMALE = 2
1 WC PER 100 = 0.02
1 LAV PER 100 = 0.02

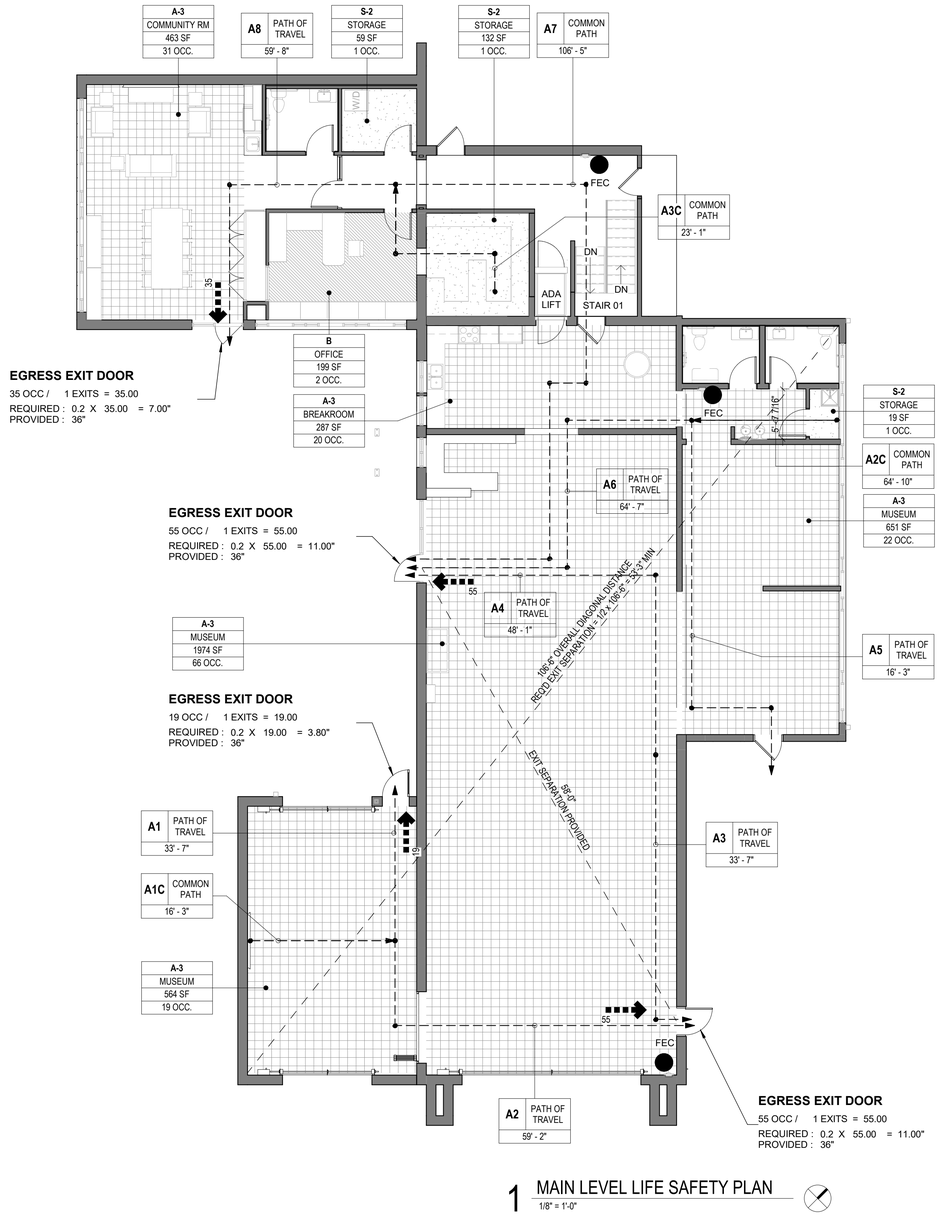
TOTAL
MALE
1.21
0.87

FEMALE
1.68
0.87

PROVIDED
SINGLE USER
WC: 3 PROVIDED
LAV: 3 PROVIDED

DRINKING FOUNTAIN
0.60 REQUIRED | 1 PROVIDED

SERVICE SINK
1 REQUIRED | 1 PROVIDED



1 MAIN LEVEL LIFE SAFETY PLAN
1/8" = 1'-0"

PROJECT NOTES:

1. CONTRACTOR AND SUB-CONTRACTORS ARE RESPONSIBLE TO READ AND UNDERSTAND ALL OF THE DRAWINGS AND THE PROJECT SPECIFICATION BOOK.
2. GENERAL CONTRACTOR (G.C.) IS RESPONSIBLE TO COORDINATE WITH THE BUILDING MANAGER FOR HOURS OF OPERATION, ALLOWABLE CONSTRUCTION TIMES AND CONSTRUCTION ACTIVITIES. THE G.C. SHALL ASSUME ALL RESPONSIBILITY FOR ALL SUB-CONTRACTORS.
3. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE DUMPSTER & PORTA-POTTY. THE G.C. SHALL COORDINATE WITH THE CITY OF DENVER FOR LOCATION AND ALLOWABLE SIZE.

LIFE SAFETY LEGEND:

- A-3 OCCUPANCY (15 S.F. / OCC.)
- B OCCUPANCY (ACCESSORY) (150 S.F. / OCC.)
- S-2 OCCUPANCY (ACCESSORY) (300 S.F. / OCC.)
- 10 — EXIT LOAD AT EGRESS DOOR
- OCCUPANCY / ROOM NAME / AREA (SF) / # OF OCCUPANTS — OCCUPANCY INFORMATION TAG
- PATH OF TRAVEL
- PATH ID / DISTANCE — PATH OF TRAVEL INFORMATION TAG
- FE — FIRE EXTINGUISHER CABINET

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

PRELIMINARY NOT FOR CONSTRUCTION

ARCHITECTURAL WORKSHOP . DENVER, COLORADO

DATE	DESCRIPTION
05.10.2024	PRE-DESIGN (30% CD)
07.19.2024	PRELIMINARY DESIGN (70% CD)

DRAWN BY: JO CHECKED BY: MB
PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

CODE DATA & LIFE SAFETY PLAN

G-003

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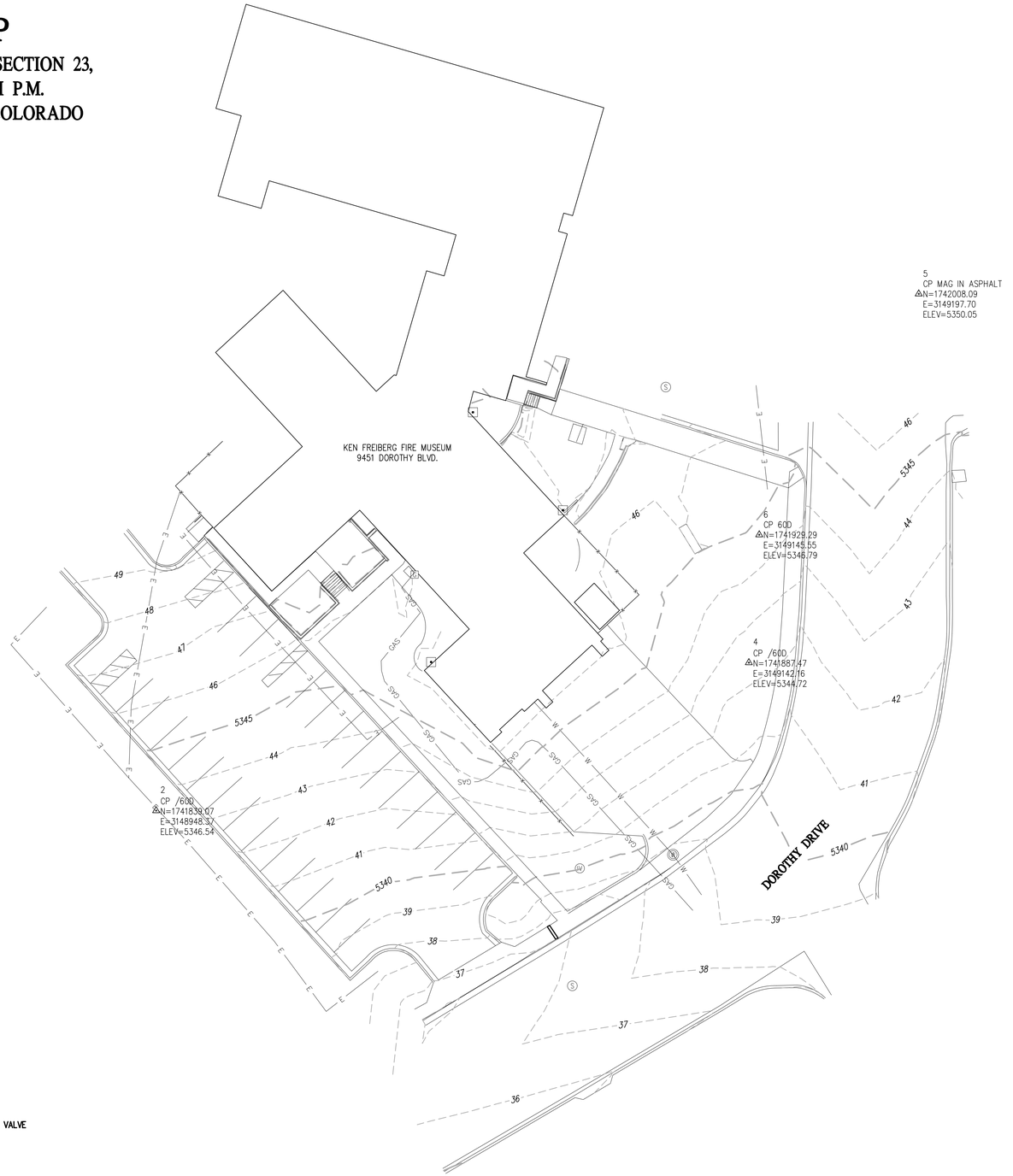
TOPOGRAPHIC SURVEY MAP

BEING A PORTION OF THE NORTHWEST QUARTER OF SECTION 23,
TOWNSHIP 2 SOUTH, RANGE 68 WEST OF THE 6TH P.M.
CITY OF THORNTON, COUNTY OF ADAMS, STATE OF COLORADO



LEGEND

- 81 — MINOR CONTOUR (1' INTERVAL)
- 5280 — MAJOR CONTOUR (5' INTERVAL)
- EDGE OF CONCRETE
- FENCE
- W — WATER LINE
- GAS — GAS LINE
- E — UNDERGROUND ELECTRIC
- CONTROL POINT
- SANITARY MANHOLE
- IRRIGATION CONTROL VALVE
- GAS METER

N

GRAPHIC SCALE
20 0 20 40
(IN FEET)
1 INCH = 20 FT

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

PRELIMINARY
NOT FOR CONSTRUCTION

aw
ARCHITECTURAL WORKSHOP . DENVER, COLORADO

DRAWN BY: CHECKED BY:
PROJECT NO.: INITIAL DATE:

TOPOGRAPHIC SURVEY MAP

TSM-101

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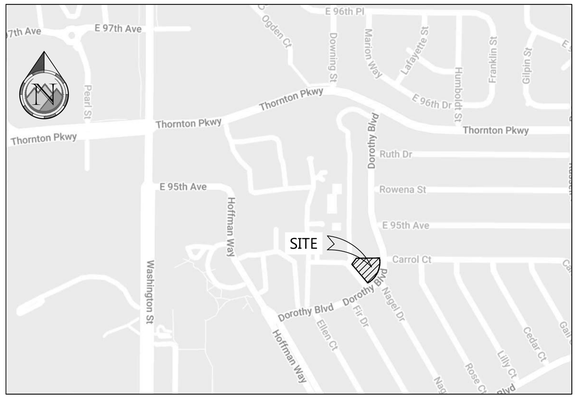
CONSTRUCTION DOCUMENTS
THORNTON FIRE MUSEUM

SITUATED IN THE NORTHWEST 1/4 OF SECTION 23, TOWNSHIP 2 SOUTH, RANGE 68 WEST OF THE 6TH P.M., CITY OF THORNTON, COUNTY OF ADAMS, STATE OF COLORADO.



VICINITY MAP
1"=2000'

SHEET INDEX

SHEET NUMBER	SHEET TITLE
C-100	COVER
C-101	NOTES
C-200	EXISTING CONDITIONS & DEMO PLAN
C-300	HORIZONTAL CONTROL PLAN
C-400	GRADING PLAN
C-500	SWMP - INITAL
C-501	SWMP -INTERIM/FINAL

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JASON DEYOUNG

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303-538-7295

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

PRELIMINARY
NOT FOR CONSTRUCTION

THESE CONSTRUCTION DRAWINGS FOR THORNTON FIRE MUSEUM WERE PREPARED BY ME (OR UNDER MY DIRECT SUPERVISION) IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS OF THE CITY OF THORNTON.

BY: _____
JASON G. DEYOUNG, PE
LICENSED PROFESSIONAL ENGINEER
STATE OF COLORADO
NO. 45332
FOR AND ON BEHALF OF PROOF CIVIL CO.

PROOFCIVIL consulting engineers

aw
ARCHITECTURAL WORKSHOP , DENVER, COLORADO

COLORADO LICENSED PROFESSIONAL ENGINEER
45332
07/19/2024

DATE	DESCRIPTION
05.10.2024	PRE-DESIGN (30% CD)
07.19.2024	PRELIMINARY DESIGN (70% CD)

DRAWN BY: Author CHECKED BY: Checker
PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

COVER

C-100

CITY OF THORNTON CONFORMANCE STATEMENT:
WORK SHALL BE CONSTRUCTED TO CITY OF THORNTON STANDARDS AND SPECIFICATIONS. THIS APPROVAL IS FOR CONFORMANCE TO THESE STANDARDS AND SPECIFICATIONS AND OTHER CITY REQUIREMENTS. THE DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER OR LANDSCAPE PROFESSIONAL.

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GENERAL NOTES:

1. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB SITE; INCLUDING, SAFETY OF PERSONS AND PROPERTY DURING THE PERFORMANCE OF WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CITY CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON, OR NEAR THE CONSTRUCTION SITE.
2. THE TYPE, SIZE, LOCATION, AND NUMBER OF ALL KNOWN UNDERGROUND UTILITIES ARE APPROXIMATE WHEN SHOWN ON THE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY CONTRACTOR PRIOR TO DATE OF CONSTRUCTION. FOR INFORMATION CONTACT: UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) - 1- 800-922-1987. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY SIZE AND HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING FACILITIES PRIOR TO CONSTRUCTION AND NOTIFY THE CITY OF ANY DISCREPANCIES.
3. MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS AND WORK SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY AUTHORIZED CITY OF THORNTON PERSONNEL.
4. ALL TRENCHES SHALL BE ADEQUATELY SUPPORTED AND THE SAFETY OF WORKERS PROVIDED FOR AS REQUIRED BY THE MOST RECENT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION." THESE REGULATIONS ARE DESCRIBED IN SUBPART P, PART 1926 OF THE CODE OF FEDERAL REGULATIONS. SHEETING AND SHORING SHALL BE UTILIZED WHERE NECESSARY TO PREVENT ANY EXCESSIVE WIDENING OR SLOUGHING OF THE TRENCH WHICH MAY BE DETRIMENTAL TO HUMAN SAFETY, TO THE PIPE BEING PLACED, TO TREES, OR TO ANY EXISTING STRUCTURE WHERE EXCAVATIONS ARE MADE UNDER SEVERE WATER CONDITIONS. THE CONTRACTOR MAY BE REQUIRED TO USE AN APPROVED PILING INSTEAD OF SHEETING AND SHORING.
5. THE CONTRACTOR SHALL FURNISH THE ENGINEER THE "AS CONSTRUCTED" LOCATIONS OF FACILITIES INSTALLED AND, THIS IN TURN, SHALL BE SUBMITTED TO THE CITY OF THORNTON ON AS-BUILT MYLAR DRAWINGS AND ELECTRONIC FILES PREPARED BY THE ENGINEER.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING NEARBY PUBLIC STREETS OF MUD OR DEBRIS DUE TO CONSTRUCTION ACTIVITY INITIATED BY SAID CONTRACTOR ON A DAILY BASIS OR AS OTHERWISE DIRECTED BY AUTHORIZED CITY PERSONNEL.
7. PRIOR TO THE BEGINNING OF WORK, A PRECONSTRUCTION CONFERENCE SHALL BE HELD BETWEEN THE CITY, THE RESPONSIBLE PARTY WHO IS SCHEDULED TO PERFORM THE WORK, THE DESIGNATED ON-SITE FIELD REPRESENTATIVE, THE CONSULTING ENGINEER OR LANDSCAPE PROFESSIONAL, AND ANY OTHER ENTITIES INVOLVED IN THE CONSTRUCTION.
8. DEVELOPMENT PHASING OF ANY PROJECT MUST BE SHOWN ON THE CONSTRUCTION PLANS AND MADE A PART OF THE APPLICATION PROCEDURE. NO PHASING SHALL BE PERMITTED UNLESS THIS REQUIREMENT HAS BEEN ADHERED TO.
9. NO WORK SHALL BEGIN UNTIL THE INSTALLING RESPONSIBLE PARTY IS IN POSSESSION OF AN APPROVED SET OF PLANS AND THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS, AND ALL NECESSARY PERMITS FOR THE IMPROVEMENTS HAS BEEN ISSUED BY THE CITY. DEVELOPMENT ENGINEERING'S APPROVAL SHALL BE FOR GENERAL CONFORMITY TO THE UTILITY SPECIFICATIONS AND SHALL NOT CONSTITUTE BLANKET APPROVAL OF ALL DIMENSIONS, QUANTITIES AND DETAILS OF THE MATERIAL OR EQUIPMENT SHOWN. NOR SHALL SUCH APPROVAL RELIEVE THE RESPONSIBLE PARTY, CONSULTING ENGINEER, OR LANDSCAPE ARCHITECT OF THEIR RESPONSIBILITY FOR ERRORS CONTAINED IN THE DRAWINGS. A COPY OF THE APPROVED PLANS AND ALL PERMITS SHALL BE ONSITE AT ALL TIMES.
10. THE RESPONSIBLE PARTY SHALL FURNISH REASONABLE AID AND ASSISTANCE REQUIRED BY DEVELOPMENT ENGINEERING FOR THE PROPER EXAMINATION OF THE MATERIALS AND WORK. WORK SHALL BE PERFORMED IN ACCORDANCE WITH ACCEPTED WORKMANSHIP PRACTICES AND THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS. ANY WORK NOT ACCEPTED BY DEVELOPMENT ENGINEERING SHALL BE REDONE UNTIL COMPLIANCE WITH THESE STANDARDS IS ACHIEVED. INSTRUCTIONS GIVEN BY DEVELOPMENT ENGINEERING RELATING TO QUALITY OF MATERIALS AND WORKMANSHIP MUST BE OBEYED AT ONCE BY THE RESPONSIBLE PARTY. DEVELOPMENT ENGINEERING SHALL NOT SUPERVISE SET OUT WORK, OR GIVE LINE AND GRADE STAKES.
11. THE MATERIALS USED IN PROJECTS SHALL BE NEW AND SUBJECT TO THE INSPECTION AND APPROVAL OF THE INSPECTOR AT ALL TIMES. THE INSPECTOR HAS THE RIGHT TO PERFORM ANY TESTING DEEMED NECESSARY TO ENSURE COMPLIANCE OF THE MATERIAL WITH THESE STANDARDS. NO MATERIAL SHALL BE USED BEFORE BEING INSPECTED AND APPROVED BY THE INSPECTOR. FAILURE OR NEGLECT ON THE PART OF THE INSPECTOR TO CONDEMN OR REJECT INFERIOR MATERIALS OR WORK SHALL NOT BE CONSTRUED TO IMPLY THEIR ACCEPTANCE SHOULD THEIR INFERIORITY BECOME EVIDENT AT ANY TIME PRIOR TO FINAL ACCEPTANCE OF THE WORK. INSPECTORS HAVE THE AUTHORITY TO REJECT DEFECTIVE OR INFERIOR MATERIALS AND/OR DEFECTIVE WORKMANSHIP AND TO SUSPEND WORK UNTIL SUCH TIME AS THE RESPONSIBLE PARTY SHALL CORRECT THE DISCREPANCIES IN QUESTION.
12. WHENEVER DEFECTIVE MATERIALS AND WORK ARE REJECTED, THE RESPONSIBLE PARTY SHALL PROMPTLY REMOVE SUCH DEFECTIVE MATERIALS AND CONSTRUCTION FROM THE JOB SITE AND REPLACE ALL DEFECTIVE PORTIONS TO THE SATISFACTION OF DEVELOPMENT ENGINEERING. IN THE EVENT THE RESPONSIBLE PARTY FAILS TO REMOVE REJECTED ITEMS FROM THE JOB SITE WITHIN A REASONABLE LENGTH OF TIME, DEVELOPMENT ENGINEERING MAY ARRANGE FOR SUCH REMOVAL AT THE EXPENSE OF THE RESPONSIBLE PARTY.
13. INSPECTION SHALL NOT RELIEVE THE RESPONSIBLE PARTY FROM ANY OBLIGATION TO PERFORM THE WORK STRICTLY IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS OR ANY MODIFICATIONS THEREOF. WORK NOT SO CONSTRUCTED SHALL BE REMOVED AND CORRECTED BY THE RESPONSIBLE PARTY AT HIS SOLE EXPENSE, WHENEVER SO ORDERED BY DEVELOPMENT ENGINEERING, WITHOUT REFERENCE TO ANY PREVIOUS ERROR OR OVERSIGHT IN INSPECTION.
14. EXCEPT IN CASES OF EMERGENCY, MAINTENANCE, OR PROTECTION OF WORK ALREADY COMPLETED, NO WORK SHALL BE ALLOWED BETWEEN THE HOURS OF 7 P.M. AND 7 A.M.; NOR ON SATURDAY, SUNDAY, OR LEGAL HOLIDAYS UNLESS APPROVED BY DEVELOPMENT ENGINEERING IN EACH CASE. WHEN ANY INSPECTOR IS REQUIRED TO WORK OUTSIDE THE HOURS OF 7 A.M. TO 4 P.M. ON REGULAR CITY BUSINESS DAYS, OVERTIME SHALL BE CHARGED TO THE RESPONSIBLE PARTY. HOWEVER, SUCH INSPECTORS SHALL REMAIN EMPLOYEES OF THE CITY FOR ALL PURPOSES. REQUESTS FOR OVERTIME SHALL BE MADE TO DEVELOPMENT ENGINEERING AT LEAST 48 HOURS IN ADVANCE. PAYMENT FOR SUCH OVERTIME WORK SHALL BE MADE TO THE CITY PRIOR TO FINAL ACCEPTANCE.
15. IN THE EVENT ONE OR MORE INSPECTORS REPRESENTING PRIVATE CONSULTING ENGINEERING FIRMS ARE ALSO INSPECTING A PROJECT ALONG WITH DEVELOPMENT ENGINEERING, THE INSTRUCTIONS GIVEN BY DEVELOPMENT ENGINEERING SHALL PREVAIL IN THE EVENT OF CONFLICTING INSTRUCTIONS.
16. THE WORK SHALL BE SURVEYED AND STAKED UNDER THE SUPERVISION OF A LICENSED LAND SURVEYOR IN ACCORDANCE WITH THE APPROVED PLANS.
17. IF IRRIGATION DITCHES ARE INVOLVED, AN APPROVAL BLOCK FOR THE DITCH COMPANY SHALL BE PROVIDED.
18. IF A FOUNDATION UNDERDRAIN SYSTEM IS INSTALLED IN THE PUBLIC RIGHT-OF-WAY, THE FOLLOWING STATEMENT SHALL BE INCLUDED IN THE AS-BUILT DRAWINGS: "THE FOUNDATION UNDERDRAIN SYSTEM IS THE RESPONSIBILITY OF THE OWNER/DEVELOPER OR ITS ASSIGNS. THE CITY IS NOT RESPONSIBLE FOR THE MAINTENANCE OR REPAIR OF SAID SYSTEM."
19. CONSTRUCTION SHALL ADHERE TO THE FOLLOWING SEQUENCE UNLESS OTHERWISE SPECIFIED BY THE DEVELOPMENT ENGINEERING MANAGER: SANITARY SEWER INSTALLATION, WATER MAIN INSTALLATION, CURB AND GUTTER INSTALLATION, WATER SERVICE INSTALLATION.
20. COMPACTION OF ALL TRENCHES MUST BE ATTAINED AND COMPACTION TEST RESULTS SUBMITTED TO THE ENGINEER AND THE CITY OF THORNTON PRIOR TO FINAL ACCEPTANCE.
21. ALL WORK, INCLUDING CORRECTION WORK, SHALL BE INSPECTED BY A CITY REPRESENTATIVE WHO SHALL HAVE THE AUTHORITY TO HALT CONSTRUCTION WHEN STANDARD CONSTRUCTION PRACTICES ARE NOT BEING ADHERED TO.
22. DEVELOPER AND BUILDER SHALL REGULARLY PATROL THE PUBLIC LANDS ADJACENT TO THE DEVELOPMENT TO REMOVE CONSTRUCTION DEBRIS AND KEEP THE SITE CLEAN AND SAFE.

GENERAL NOTES CONTINUED:

24. ALL SITE GRADING (EXCAVATION, EMBANKMENT, AND COMPACTION) SHALL CONFORM TO THE RECOMMENDATIONS OF THE LATEST SOILS INVESTIGATION FOR THIS PROPERTY AND SHALL FURTHER BE IN CONFORMANCE WITH THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS", LATEST EDITION. A CDPS GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES SHALL BE OBTAINED PRIOR TO ANY GRADING BEING PERFORMED ON SITES ONE (1) ACRE OR LARGER IN SIZE. THESE PERMITS CAN BE OBTAINED FROM THE STATE WATER QUALITY CONTROL DIVISION.
25. NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED WHEREVER POSSIBLE. EXPOSURE OF SOIL TO EROSION BY REMOVAL OR DISTURBANCE OF VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATION AND FOR THE SHORTEST PRACTICAL PERIOD OF TIME.
26. TOPSOIL SHALL BE STOCKPILED TO THE EXTENT PRACTICABLE ON THE SITE FOR USE ON AREAS TO BE REVEGETATED. ANY AND ALL STOCKPILES SHALL BE LOCATED AND AND PROPER MEASURES TAKEN TO CONTROL EROSION AND SEDIMENT MOVEMENT.
27. AT ALL TIMES, THE PROPERTY SHALL BE MAINTAINED AND/OR WATERED TO PREVENT WIND-CAUSED EROSION. EARTHWORK OPERATIONS SHALL BE DISCONTINUED WHEN DUST SIGNIFICANTLY IMPACTS ADJACENT PROPERTY. IF EARTHWORK IS COMPLETE OR DISCONTINUED AND DUST FROM THE SITE CONTINUES TO CREATE PROBLEMS, THE OWNER/DEVELOPER SHALL IMMEDIATELY INSTITUTE MITIGATIVE MEASURES AND SHALL CORRECT DAMAGE TO ADJACENT PROPERTY.
28. PERMANENT SLOPES SHALL NOT EXCEED 4:1 (H:V) IN AREAS TO BE SEEDED OR SODDED. RETAINING WALLS SHALL BE REVIEWED AND APPROVED BY SEPARATE APPLICATION TO THE DEVELOPMENT ENGINEERING DIVISION.
29. THIS EROSION AND SEDIMENT CONTROL PLAN HAS BEEN SUBMITTED TO THE CITY OF THORNTON AND IS IN GENERAL CONFORMANCE WITH THE CITY'S EROSION CONTROL STANDARDS. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURE MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEM OR IF THE PROPOSED EROSION CONTROL MEASURES DO NOT FUNCTION AS INTENDED. THE REQUIREMENTS OF THIS EROSION CONTROL PLAN AND THE OBLIGATION OF THE LANDOWNER SHALL RUN WITH THE LAND UNTIL SUCH TIME AS THE EROSION CONTROL PLAN IS PROPERLY COMPLETED, OFFICIALLY MODIFIED, OR VOIDED.
30. INSTALLATION OF WATER MAINS SHALL NOT BE PERMITTED UNTIL ALL COMPACTION RESULTS FOR SANITARY SEWERS HAVE BEEN SUBMITTED TO AND APPROVED BY THE CITY, ALL DESIGN SLOPES FOR SANITARY SEWER INSTALLATIONS HAVE BEEN VERIFIED AND APPROVED BY THE CITY, AND ALL APPLICABLE TESTING PROCEDURES HAVE BEEN CONDUCTED AND APPROVED IN WRITING.
31. NEW WATER MAINS 12 INCHES OR LESS SHALL BE AWWA STANDARD C-900-07 PVC DR -25 PRESSURE PIPE. WATER MAINS LARGER THAN 12 INCHES SHALL MEET AWWA C-905 PVC DR-21 OR DR-18 AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER. HYDRANT LEADS SHALL ONLY BE DIP.
32. WATER MAINS SHALL BE LAID IN CONFORMANCE WITH THE LATEST EDITION OF THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS AND SHALL BE SUBJECT TO CITY INSPECTION AND APPROVAL.
33. FIRE HYDRANTS SHALL BE LIMITED TO THE FOLLOWING MANUFACTURERS ONLY AND SHALL BE PAINTED ACCORDING TO THE LATEST EDITION OF THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS PRIOR TO ACCEPTANCE.
    - MUELLER COMPANY – 5-1/4" SUPER CENTURION
    - WATEROUS COMPANY – MODEL WB-250-PACER
34. THERE SHALL BE A MINIMUM OF FOUR AND ONE HALF (4.5) FEET OF COVER FROM FINISHED GRADE TO THE TOP OF WATERLINES.
35. BEDDING AND BACKFILL MATERIALS FOR BOTH WATER AND SEWER SHALL CONFORM TO THE LATEST EDITION OF THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS.
36. THRUSTBLOCKS SHALL BE PLACED AT FITTINGS, TEES, BENDS, CROSSES, PLUGS, ETC., IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS.
37. IN ALL CASES, 10 FEET OF HORIZONTAL DISTANCE, AS MEASURED FROM EDGE OF PIPE TO EDGE OF PIPE, SHALL BE MAINTAINED BETWEEN WATER AND ANY SANITARY OR STORM SEWER.
38. CONTRACTOR SHALL NOTIFY ALL RESIDENTS AND/OR BUSINESSES IN WRITING 48 HOURS PRIOR TO ANY SHUT-OFF IN SERVICE. THE NOTICES MUST HAVE CONTRACTOR'S PHONE NUMBER AND NAME OF CONTACT PERSON, AND EMERGENCY PHONE NUMBER FOR AFTER HOURS CALLS. ALL SHUT-OFF'S MUST BE APPROVED BY THE CITY'S INFRASTRUCTURE DEPARTMENT, AND CITY VALVES AND APPURTENANCES SHALL BE OPERATED BY CITY PERSONNEL, UNLESS WRITTEN PERMISSION IS GIVEN OTHERWISE.
39. RIM ELEVATIONS OF MANHOLE SHOWN ON THE PLAN AND PROFILE SHEETS ARE APPROXIMATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATIONS. THE PIPELINE CONTRACTOR SHOULD ALLOW APPROXIMATELY THE TOP ONE (1) FOOT OF RIM ELEVATION TO BE ADJUSTED EITHER UP OR DOWN IN ORDER TO MATCH FINAL PAVEMENT ELEVATION. THE MAXIMUM ADJUSTMENT TO FINAL GRADE IS 12 INCHES WITH CONCRETE RINGS.
40. DURING CONSTRUCTION, CARE MUST BE TAKEN TO AVOID ANY GROUND WATER, STORM WATER, CONSTRUCTION DEBRIS, SOIL, OR ANY OTHER FOREIGN MATERIALS FROM ENTERING ANY ACTIVE CITY OF THORNTON SEWER. THE USE OF THE SANITARY SEWER SYSTEM FOR THE PURPOSES OF DEWATERING IS STRICTLY PROHIBITED.
41. ALL CONSTRUCTION ACTIVITIES DEWATERING MUST COMPLY WITH THE STATE OF COLORADO PERMITTING PROCESS FOR "STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY." FOR INFORMATION, PLEASE CONTACT COLORADO DEPARTMENT OF HEALTH, WATER QUALITY CONTROL DIVISION.
42. AFTER ANY OVERLAY OF AN EXISTING ROADWAY, WHERE CITY UTILITIES ARE PRESENT, THE DEVELOPER SHALL OPEN ALL MANHOLES AND VALVE BOXES FOLLOWING THE PAVING OPERATION TO ENSURE THAT MANHOLE AND VALVES WERE NOT PAVED OVER NOR FILLED WITH ASPHALT.
43. WHEN AN EXISTING ASPHALT STREET IS CUT, THE STREET MUST BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN ITS ORIGINAL CONDITION. THE EXISTING STREET CONDITION SHALL BE DOCUMENTED BY THE CITY OF THORNTON'S CONSTRUCTION INSPECTOR BEFORE ANY CUTS ARE MADE. PATCHING SHALL BE DONE IN CONFORMANCE WITH THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS. THE FINISHED PATCH SHALL BLEND SMOOTHLY INTO THE EXISTING SURFACE. ALL LARGE PATCHES SHALL BE PAVED WITH AN ASPHALT LAY-DOWN MACHINE. IN STREETS WHERE MORE THAN ONE CUT IS MADE, AN OVERLAY OF THE ENTIRE STREET WIDTH, INCLUDING THE PATCHED AREAS, MAY BE REQUIRED. THE DETERMINATION OF NEED FOR A COMPLETE OVERLAY SHALL BE MADE BY THE DEVELOPMENT ENGINEERING MANAGER.
44. PAVING SHALL NOT START UNTIL A GEOTECHNICAL REPORT AND PAVEMENT DESIGN HAVE BEEN APPROVED BY THE CITY OF THORNTON'S DEVELOPMENT ENGINEERING DIVISION AND SUBGRADE COMPACTION TEST AND PROOF ROLL HAVE BEEN PERFORMED AND THE RESULTS HAVE MET WITH THE APPROVAL OF THE CITY OF THORNTON. THE PAVEMENT DESIGN REPORT MUST BE SUBMITTED THREE (3) WEEKS PRIOR TO THE ANTICIPATED DATE OF PAVING.
45. ALL DAMAGED EXISTING CURB, GUTTER, AND SIDEWALK SHALL BE REPAIRED PRIOR TO ACCEPTANCE OF COMPLETED IMPROVEMENTS.
46. ALL CURB RETURNS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED WITH SIDEWALK RAMPS IN ACCORDANCE WITH THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS. ALL SIDEWALK RAMPS SHALL INCLUDE A TRUNCATED DOME DETECTABLE WARNING PATTERN AS SHOWN ON THE DETAIL SHEETS.
47. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN PROPER TRAFFIC CONTROL DEVICES UNTIL THE SITE IS OPEN TO TRAFFIC. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE CITY OF THORNTON FOR APPROVAL PRIOR TO CONSTRUCTION.
48. REPAIR OF ANY DAMAGE TO EXISTING IMPROVEMENTS OR LANDSCAPING IS THE RESPONSIBILITY OF THE CONTRACTOR.

THORNTON GENERAL EROSION AND SEDIMENT CONTROL NOTES:

1. CONTROL MEASURES SHALL BE INSTALLED BEFORE ANY EARTH DISTURBING ACTIVITIES COMMENCE.
2. THE OWNER/CONTRACTOR SHALL NOTIFY THE THORNTON INSPECTOR ONCE ALL INITIAL CONTROL MEASURES HAVE BEEN INSTALLED FOR AN INITIAL INSPECTION AT LEAST FORTY EIGHT (48) HOURS PRIOR TO THE INSPECTION. CONSTRUCTION ACTIVITY CANNOT BEGIN UNTIL A PASSING INITIAL INSPECTION HAS OCCURRED.
3. STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES SHALL NOT CAUSE, HAVE THE REASONABLE POTENTIAL TO CAUSE, OR MEASURABLY CONTRIBUTE TO EXCEED ANY WATER QUALITY STANDARD.
4. CONSTRUCTION SHALL BE PHASED IN A MANNER TO LIMIT EARTH DISTURBING ACTIVITIES (I.E. THE ENTIRE PROJECT SITE SHOULD NOT BE DISTURBED IF CONSTRUCTION WILL ONLY BE OCCURRING IN ONE PARTICULAR SECTION).
5. SEDIMENT CAUSED BY ACCELERATED SOIL EROSION SHALL BE REMOVED FROM RUNOFF WATER BEFORE IT LEAVES THE CONSTRUCTION SITE.
6. BULK STORAGE STRUCTURES FOR PETROLEUM PRODUCTS AND ANY OTHER CHEMICALS SHALL HAVE SECONDARY CONTAINMENT OR EQUIVALENT PROTECTION TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING THE MS4 OR STATE WATERS.
7. A COPY OF THE SWMP AND EROSION AND SEDIMENT CONTROL (ESC) PLANS MUST BE AVAILABLE AT ALL TIMES ON THE CONSTRUCTION SITE UNLESS OTHERWISE APPROVED BY CDPHE OR THORNTON.
8. THE SWMP AND EC PLAN SHALL BE CONTINUOUSLY UPDATED TO REFLECT NEW OR REVISED CONTROL MEASURES (CM) DUE TO CHANGES IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE OF THE CONSTRUCTION SITE. UPDATES MUST BE MADE WITHIN 72-HOURS FOLLOWING THE CHANGE IN CONTROL MEASURES.
9. THE OWNER/CONTRACTOR SHALL INSPECT THE CONSTRUCTION SITE (INCLUDING ALL CONTROL MEASURES, STORAGE CONTAINERS, AND CONSTRUCTION EQUIPMENT) AT A MINIMUM OF EVERY **7 CALENDAR DAYS OR EVERY 14 CALENDAR DAYS**. IF ON THE 14 DAY FREQUENCY, A 24-HOUR POST STORM INSPECTION MUST BE CONDUCTED AFTER A PRECIPITATION EVENT OR SNOW MELT. INSPECTIONS SHALL CONTINUE UNTIL AN INACTIVATION NOTICE IS FILED WITH CDPHE.
10. THE OWNER/CONTRACTOR SHALL KEEP A RECORD OF ALL INSPECTIONS ON SITE AND AVAILABLE FOR REVIEW BY CDPHE OR CITY STAFF. INSPECTION REPORTS MUST IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT.
11. CONTROL MEASURES REQUIRING MAINTENANCE OR ADJUSTMENT SHALL BE REPAIRED IMMEDIATELY AFTER OBSERVATION OF THE FAILING CONTROL MEASURE.
12. SILT FENCE PATCHING: PATCHING IS ONLY ALLOWED ON THE TOP HALF OF THE FENCE. NOT MORE THAN TWO (2) PATCHES PER SECTION OF FENCE. SILT FENCE WITH HOLES OR DETERIORATION ON THE LOWER HALF OF THE FENCE MUST BE REPLACED. REPAIR TYPICALLY INVOLVES REPLACING THE SILT FENCE TO MAINTAIN THE CMS EFFECTIVENESS TO DRAIN SLOWLY AND FUNCTION AS ORIGINALLY DESIGNED.
13. FOR ALL INSTANCES OF NONCOMPLIANCE BASED ON ENVIRONMENTAL HAZARDS AND CHEMICAL SPILLS AND RELEASES, ALL NEEDED INFORMATION MUST BE PROVIDED ORALLY TO CDPHE SPILL REPORTING LINE (24-HOUR NUMBER FOR ENVIRONMENTAL HAZARDS AND CHEMICAL SPILLS AND RELEASES: 1-877-518-5608) WITHIN **24-HOURS** FROM THE TIME THE OWNER/CONTRACTOR BECOMES AWARE OF THE CIRCUMSTANCES.
14. STRAW BALES **SHALL NOT** BE USED FOR PRIMARY EROSION OR SEDIMENT CONTROL (I.E. STRAW BALES MAY BE USED FOR REINFORCEMENT BEHIND ANOTHER BMP SUCH AS SILT FENCE).
15. CONTROL MEASURES REFERRED TO AS "CUTBACK CURB" ARE **NOT ALLOWED**. THE CUTBACK CURB MAY BECOME INEFFECTIVE AND MAY ALSO COMPROMISE THE INTEGRITY OF THE CURB AND IN MOST CASES DOES NOT PROVIDE ANY WATER QUALITY BENEFIT FOR FILTERING OUT SEDIMENT.
16. INLET PROTECTION AND VEGETATIVE BUFFER CONTROL MEASURES **SHALL NOT** BE USED AS STANDALONE CMS. THESE METHODS MUST BE UTILIZED WITH AT LEAST ONE ADDITIONAL CM.
17. CONTROL MEASURES INTENDED FOR SHEET FLOW SEDIMENT RUNOFF SHALL BE PLACED PARALLEL TO THE SLOPE.
18. ALL CONTROL MEASURES SHALL BE CLEANED WHEN SEDIMENT LEVELS ACCUMULATE TO HALF THE DESIGN OF THE CM UNLESS OTHERWISE SPECIFIED.
19. A VEHICLE TRACKING CONTROL (VTC) SHALL BE PLACED AT ALL ENTRANCES/EXITS FROM THE SITE AS WELL AS ANY EGRESS FROM EXPOSED DIRT TO PAVED AREAS TO PREVENT TRACK-OUT ONTO STREETS. IF TRACK-OUT DOES OCCUR, THE OWNER/CONTRACTOR SHALL IMMEDIATELY SWEEP THE STREET OF DEBRIS. RECYCLED CRUSHED CONCRETE OR ASPHALT **SHALL NOT** BE USED FOR VEHICLE TRACKING PADS.
20. FOR RESIDENTIAL PROJECTS, BACK OF CURB PROTECTION IS REQUIRED ALONG ALL INTERIOR LOTS.
21. ALL SEDIMENT COLLECTED IN CONTROL MEASURES SHALL BE REMOVED UPON INITIAL ACCEPTANCE.
22. WIND EROSION AND DUST CONTROL MEASURES MUST BE UTILIZED TO MINIMIZE AIRBORNE PARTICULATE DUST. CONTROL MEASURES MAY INCLUDE MINIMIZING DISTURBED AREAS, WATERING, AND/OR PROVIDING TEMPORARY STABILIZATION.
23. PERMANENT EROSION CONTROL MEASURES FOR SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED **WITHIN 14 CALENDAR DAYS** AFTER FINAL GRADING OR THE FINAL EARTH DISTURBANCE HAS BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH DISTURBANCE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH DISTURBANCE ACTIVITY CEASES, TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED WITHIN 14 CALENDAR DAYS. TEMPORARY EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION MEASURES ARE IMPLEMENTED.
24. FINAL STABILIZATION HAS BEEN ACHIEVED WHEN ALL EARTH DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED, AND UNIFORM VEGETATIVE COVER HAS BEEN ESTABLISHED WITH AN INDIVIDUAL PLANT DENSITY OF AT LEAST **70 PERCENT** OF PRE-DISTURBANCE LEVELS, OR EQUIVALENT PERMANENT, PHYSICAL EROSION REDUCTION METHODS HAVE BEEN EMPLOYED.
25. ALL TEMPORARY CONTROL MEASURES SHALL BE REMOVED FROM THE SITE UPON SUBMITTING THE INACTIVATION NOTICE.
26. ALL SITE WASTES (INCLUDING TRASH AND BUILDING MATERIALS) MUST BE PROPERLY MANAGED TO PREVENT POTENTIAL POLLUTION DISCHARGES TO THE MS4 OR STATE WATERS.
27. STREET REPAIR OPERATIONS SUCH AS ROTOR MILLING, SLURRY SEAL AND CHIP SEAL. THE MINIMUM CMS REQUIRED ARE; INLET PROTECTION, CURB SOCKS AND STREET SWEEPING.

THIS LIST IS NOT INTENDED TO BE ALL-INCLUSIVE, BUT IS INTENDED TO IDENTIFY THE GENERAL NOTES IDENTIFIED BY THE CITY TO BE INCLUDED AS PART OF THE ESC PLANS/SWMP FOR COMPLIANCE WITH THE CITY'S STORMWATER MANAGEMENT REQUIREMENTS FOR CONSTRUCTION ACTIVITIES.

PROOF CIVIL GENERAL NOTES:

1. WHERE NEW WORK MEETS EXISTING FEATURES TO REMAIN, ALL DIMENSIONS AND ELEVATIONS SHALL BE FIELD VERIFIED BEFORE PROCEEDING WITH CONSTRUCTION. NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES IN WRITING.
2. STREET PAVING AND CURBS TO REMAIN SHALL BE PROTECTED FROM DAMAGE, AND, IF DAMAGED, SHALL BE REPLACED TO MEET CDOT AND/OR MUNICIPAL SPECIFICATIONS IN MATERIALS AND WORKMANSHIP.
3. PROVIDE SMOOTH VERTICAL CURVES THROUGH HIGH AND LOW POINTS INDICATED BY SPOT ELEVATIONS. PROVIDE UNIFORM SLOPES BETWEEN NEW AND EXISTING GRADES. AVOID RIDGES AND DEPRESSIONS.
4. NEW ELEVATIONS INDICATE FINISHED CONDITIONS. FOR ROUGH GRADING ELEVATIONS ALLOW FOR THICKNESS OF NEW PAVING (ROADS, WALKS, DRIVE, ETC.) OR TOPSOIL AS SHOWN.
5. ALL ASPHALT BUTT JOINTS AS SHOWN ON THE PLANS (IF APPLICABLE) AND AS DIRECTED BY THE ENGINEER SHALL BE CONSTRUCTED BY MILLING.
6. ALL APPLICABLE PROVISIONS OF THE CURRENT OCCUPATIONAL SAFETY AND HEALTH ACT ARE HEREIN INCORPORATED BY REFERENCE.
7. ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH THE STATE OF COLORADO PERMITTING PROCESS FOR "STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY "AND ANY JURISDICTIONAL STORMWATER DISCHARGE REQUIREMENTS. FOR INFORMATION CONTACT COLORADO DEPT. OF HEALTH, WATER QUALITY CONTROL DIVISION.
8. IF CONSTRUCTION DEWATERING IS REQUIRED, A STATE CONSTRUCTION DEWATERING DISCHARGE PERMIT IS REQUIRED FOR DISCHARGES TO A STORM SEWER, CHANNEL, IRRIGATION DITCH, ANY STREET THAT IS TRIBUTARY TO THE AFOREMENTIONED FACILITIES, OR ANY WATERS OF THE UNITED STATES. NO DISCHARGES SHALL BE ALLOWED TO THE SANITARY SEWER.
9. ALL UTILITY CONNECTIONS TO EXISTING LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REGULATIONS AND TO THE SATISFACTION OF THE UTILITY OWNER.
10. ANY AREA WITHIN THE MUNICIPAL OR STATE R.O.W. OR OUTSIDE THE PROPERTY L

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

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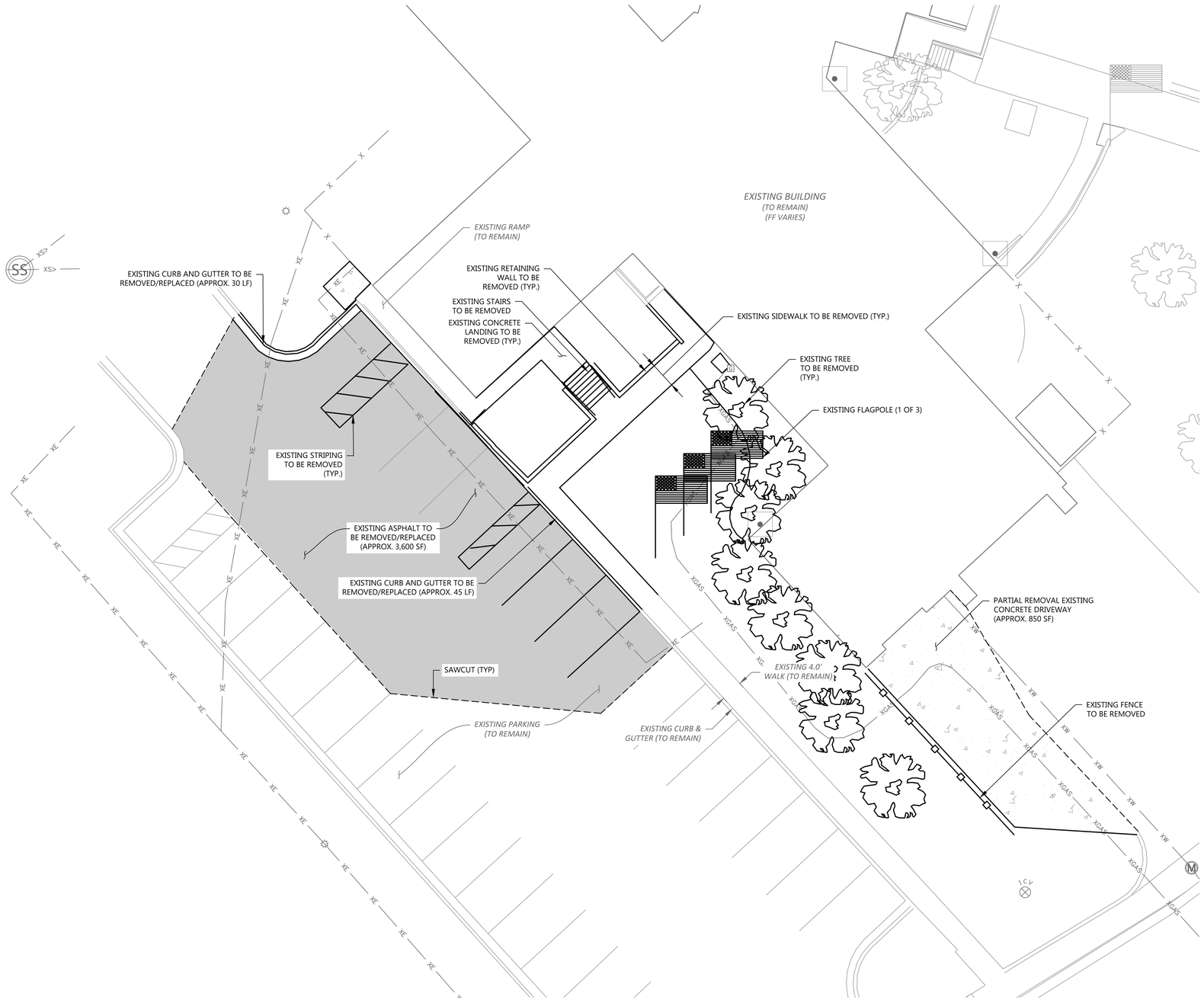

LEGEND:

- PROPERTY LINE
- EXISTING BUILDING TO BE REMOVED
- EXISTING BUILDING TO REMAIN
- EXISTING EASEMENT
- CURB & GUTTER TO BE REMOVED
- EXISTING CURB & GUTTER TO REMAIN
- PROPOSED SAWCUT
- ASPHALT PAVEMENT TO BE REMOVED
- CONCRETE TO BE REMOVED
- XW — EXISTING WATER TO BE REMOVED
- XW — EXISTING WATER LINE TO REMAIN
- HYDRANT & VALVE TO BE REMOVED
- HYDRANT & VALVE TO REMAIN
- XS> — EXISTING SANITARY TO BE REMOVED
- XS> — EXISTING SANITARY TO REMAIN
- XSD> — EXISTING STORM TO BE REMOVED
- XSD> — EXISTING STORM TO REMAIN
- XE — EXISTING ELECTRICAL TO BE REMOVED
- XE — EXISTING ELECTRICAL TO REMAIN
- XFO — EXISTING FIBER OPTIC TO BE REMOVED
- XFO — EXISTING FIBER OPTIC TO REMAIN
- XPHON — EXISTING TELECOMM TO BE REMOVED
- XPHON — EXISTING TELECOMM TO REMAIN
- XGAS — EXISTING GAS/FUEL TO BE REMOVED
- XGAS — EXISTING GAS/FUEL TO REMAIN
- XIRR — EXISTING IRRIGATION TO BE REMOVED
- XIRR — EXISTING IRRIGATION TO REMAIN

NOTES:

1. CONTRACTOR TO NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS SHOWN ON THESE PLANS AND FIELD CONDITIONS.

SAWCUT NOTE:

SAWCUT LIMITS ARE SHOWN AS APPROXIMATES, ALL CONCRETE REMOVAL SHALL BE FULL PANEL/STONE REMOVAL, IE REMOVAL SHALL BE TO NEAREST JOINT.

CITY OF THORNTON CONFORMANCE STATEMENT:

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SCALE: 1" = 30'

PROOFCIVIL consulting engineers

ARCHITECTURAL WORKSHOP . DENVER, COLORADO

COLORADO LICENSED PROFESSIONAL ENGINEER 45332 07/19/2024

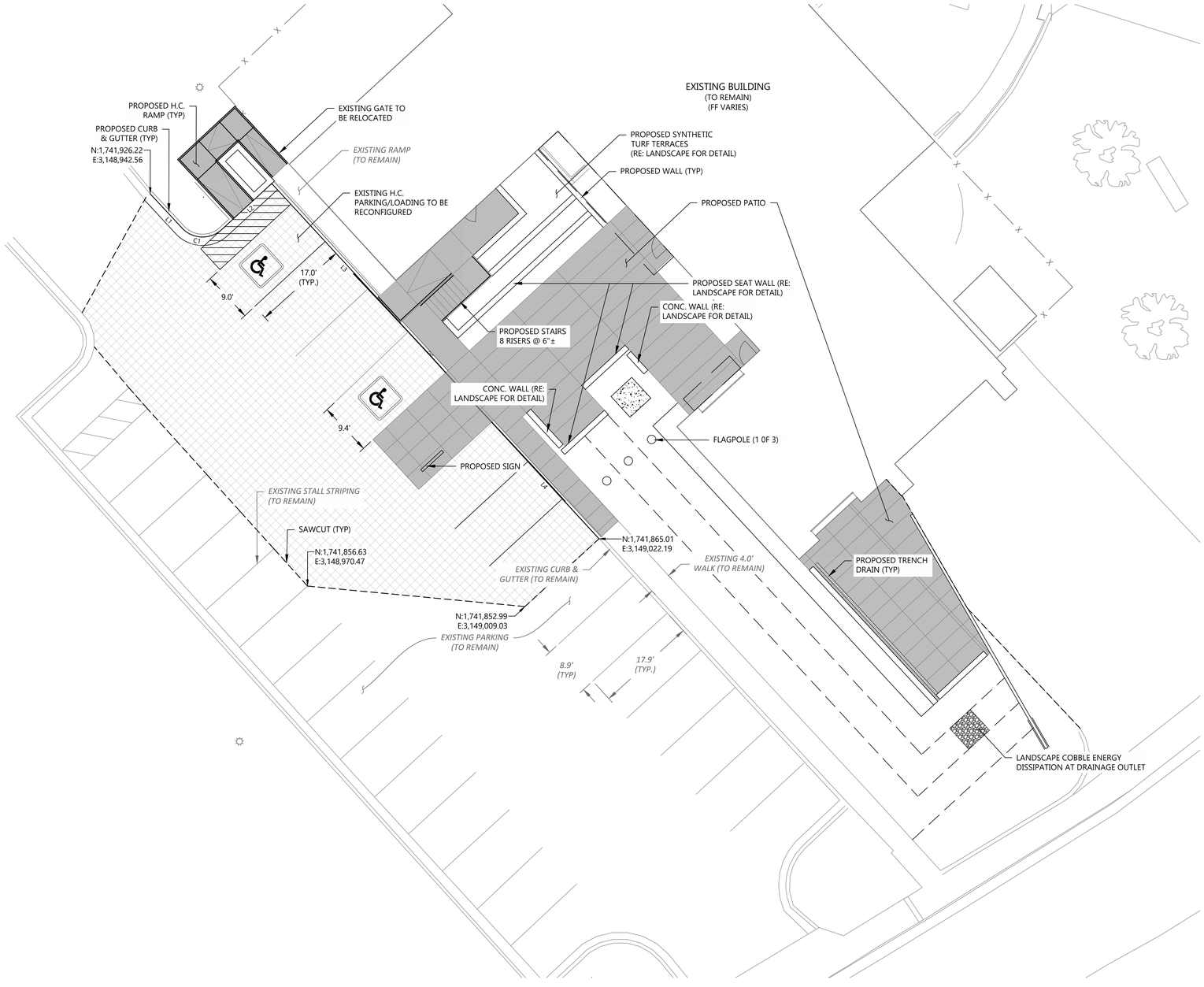
DATE	DESCRIPTION
05.10.2024	PRE-DESIGN (30% CD)
07.19.2024	PRELIMINARY DESIGN (70% CD)

DRAWN BY: Author CHECKED BY: Checker

PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

EXISTING CONDITIONS & DEMO PLAN

C-200



THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

LEGEND:

- PROPERTY LINE
- PROPOSED BUILDING
- EXISTING BUILDING
- PROPOSED EASEMENT
- EXISTING EASEMENT
- PROPOSED CURB & GUTTER
- PROPOSED SPILL CURB
- EXISTING CURB & GUTTER
- PROPOSED SAWCUT
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED WALK
- PROPOSED LIGHT POLE
- EXISTING LIGHT POLE
- PROPOSED SIGN
- EXISTING SIGN
- EXISTING TREE

NOTES:

1. PAVEMENT THICKNESSES ARE SHOWN FOR REFERENCE ONLY. REFER TO CURRENT GEOTECHNICAL STUDY FOR THIS PROJECT FOR PAVEMENT THICKNESS RECOMMENDATIONS.
2. THIS PLAN DOES NOT CONTROL COLOR OR SCORING PATTERNS OF HARDSCAPE SHOWN. SEE HARDSCAPE OR LANDSCAPE PLAN FOR DECORATIVE TREATMENT.
3. ALL DIMENSIONS TO CURBS ARE TO FLOWLINE UNLESS OTHERWISE INDICATED.
4. CONTRACTOR TO NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS SHOWN ON THESE PLANS AND FIELD CONDITIONS.
5. ADD ALTERNATE #2: MODIFICATIONS WITHIN THE DRIVELANE ARE PROPOSED TO ACHIEVE ADA CODE COMPLIANCE AND BUILDING ACCESS.

BUILDING HC NOTE:

HORIZONTAL CONTROL INFORMATION SHOWN FOR THE PROPOSED BUILDING IS BASED ON THE OUTER MOST LIMIT OF THE ARCHITECTURAL BUILDING PLAN PROVIDED AT THE TIME OF DESIGN/APPROVAL OF HORIZONTAL CONTROL PLAN. CONTRACTOR AND SURVEYOR SHALL VERIFY BUILDING CONTROL WITH ARCHITECTURAL AND STRUCTURAL BUILDING LAYOUT INFORMATION PRIOR TO THE STAKING AND CONSTRUCTION OF PROPOSED BUILDING AND NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN ARCHITECTURAL, STRUCTURAL AND INFORMATION SHOWN ON PLANS.

SAWCUT NOTE:

SAWCUT LIMITS ARE SHOWN AS APPROXIMATES, ALL CONCRETE REMOVAL SHALL BE FULL PANEL/STONE REMOVAL, IE REMOVAL SHALL BE TO NEAREST JOINT.

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LINE TABLE		
LINE No.	LENGTH	DIRECTION
L1	8.27'	N42° 57' 38"W
L2	12.03'	S47° 21' 06"W
L3	45.59'	S42° 38' 54"E
L4	28.13'	S42° 38' 54"E

CURVE TABLE					
CURVE No.	LENGTH	RADIUS	DELTA	CHORD DIRECTION	CHORD LENGTH
C1	7.86'	5.00'	90°03'17"	N87° 59' 19"W	7.07'

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HORIZONTAL CONTROL PLAN

C-300

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SCALE: 1" = 10'

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9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

PRELIMINARY NOT FOR CONSTRUCTION

LEGEND:

	PROPERTY LINE
	PROPOSED BUILDING
	EXISTING BUILDING
	PROPOSED EASEMENT
	EXISTING EASEMENT
5400	PROPOSED 5' CONTOUR
5401	PROPOSED 1' CONTOUR
5400	EXISTING 5' CONTOUR
5401	EXISTING 1' CONTOUR
	PROPOSED SWALE
SD>	PROPOSED STORM LINE W/ F.E.S.
XSD>	EXISTING STORM LINE W/ F.E.S.
	PROPOSED SAWCUT
	PROPOSED STORM INLET
	EXISTING STORM INLET
	FLOW DIRECTION
25.25	PROPOSED SPOT GRADE
25.25	EXISTING SPOT GRADE
2.00%	SLOPE AND DIRECTION
HP	HIGH POINT
LP	LOW POINT
GB	GRADE BREAK
GTW	FINISHED GRADE AT TOP OF WALL
GBW	FINISHED GRADE AT BOTTOM FACE OF WALL
FFE	FINISHED FLOOR ELEVATION
M.E.	MATCH EXISTING

NOTES:

1. SPOT ELEVATION VALUES ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) (WITH THE TWO LEADING DIGITS TRUNCATED) AND DO NOT RELATE TO ARCHITECTURAL ELEVATIONS RELATIVE TO FINISHED FLOOR (I.E. +100'-0").
2. UNLESS SPECIFICALLY SHOWN OTHERWISE, ALL SIDEWALKS TO SLOPE 1.8% AWAY FROM BUILDINGS OR STRUCTURES TOWARD PARKING LOTS, DRIVE LANES, ROADS OR LOW POINTS.
3. UNLESS SPECIFICALLY SHOWN OTHERWISE, ALL PROPOSED WALKS AND TRAILS SHALL BE ADA ACCESSIBLE WITH A MAXIMUM LONGITUDINAL SLOPE OF 5.0%.
4. ALL GRADING SHALL CONFORM WITH THE GEOTECHNICAL RECOMMENDATIONS FROM THE CURRENT GEOTECHNICAL STUDY FOR THIS PROJECT.
5. PROPOSED ACCESSIBLE PARKING SPOTS SHALL HAVE 2.0% MAX SLOPE IN ANY DIRECTION.
6. ALL ELEVATION SPOTS ALONG CURB INDICATE FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
7. MAXIMUM FINISHED GRADES SHALL BE 4:1 (H:V).
8. THE CONTRACTOR IS RESPONSIBLE TO LOCATE ALL EXISTING UTILITIES ONSITE PRIOR TO CONSTRUCTION AND PROTECT OR RELOCATE ALL EXISTING UTILITIES DURING GRADING OPERATIONS. THIS PLAN DOES NOT CONSTITUTE A UTILITY LOCATE.
9. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES WITH THESE PLANS.

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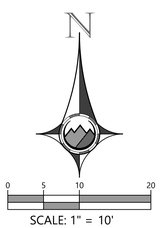

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COLORADO LICENSED 45332 07/19/2024 PROFESSIONAL ENGINEER

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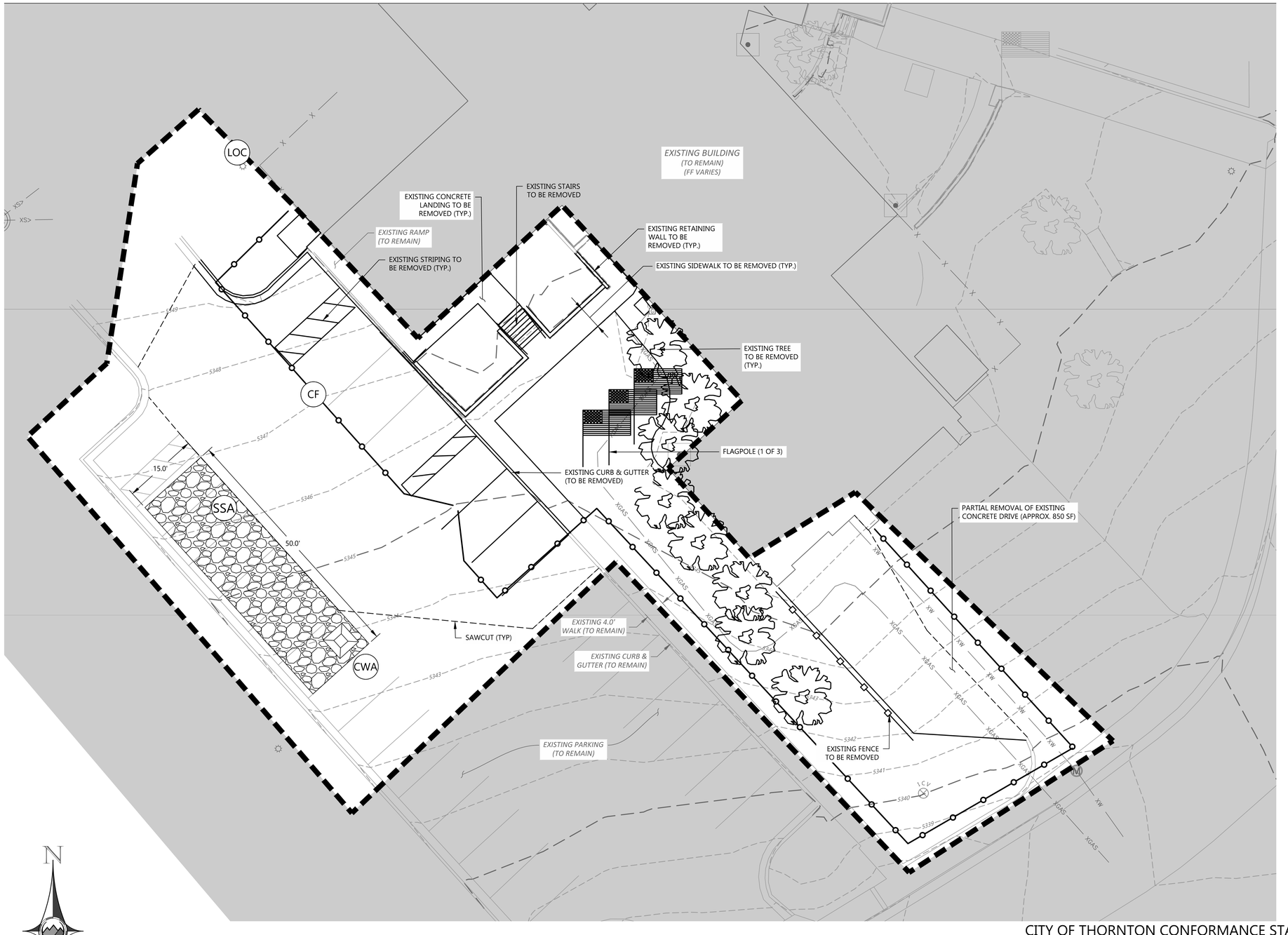
PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

GRADING PLAN

C-400



LEGEND:

- PROPERTY LINE
- PROPOSED BUILDING
- EXISTING EASEMENT
- PROPOSED CURB & GUTTER
- EXISTING CURB & GUTTER
- 5400 PROPOSED 5' CONTOUR
- 5401 PROPOSED 1' CONTOUR
- 5400 EXISTING 5' CONTOUR
- 5401 EXISTING 1' CONTOUR
- LOC LIMITS OF CONSTRUCTION
- CWA CONCRETE WASHOUT AREA
- SSA STABILIZED STAGING AREA
- CF CONSTRUCTION FENCE

NOTES:

1. INSPECTION OF ALL EROSION CONTROL BMP'S SHALL BE REQUIRED AT THE END OF EACH DAY'S WORK, WITH NECESSARY MAINTENANCE AND REPAIRS PROVIDED IMMEDIATELY.
2. STORM DRAIN INLETS SHALL BE PROTECTED FROM THE ENTRY OF SEDIMENT-LADEN WATER UNTIL FINAL STABILIZATION IS COMPLETE.
3. CONSTRUCTION DELINEATOR (T-POST AND ROPE) TO BE POSTS 50 FEET ON CENTER WITH VISIBLE ROPE AND SURVEY FLAGS TO DELINEATE LIMITS OF CONSTRUCTION.

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

PRELIMINARY
NOT FOR CONSTRUCTION

PROOFCIVIL consulting engineers

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ARCHITECTURAL WORKSHOP , DENVER, COLORADO

DATE	DESCRIPTION
05.10.2024	PRE-DESIGN (30% CD)
07.19.2024	PRELIMINARY DESIGN (70% CD)

DRAWN BY: Author CHECKED BY: Checker
PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

EROSION CONTROL PLAN - INITAL

C-500

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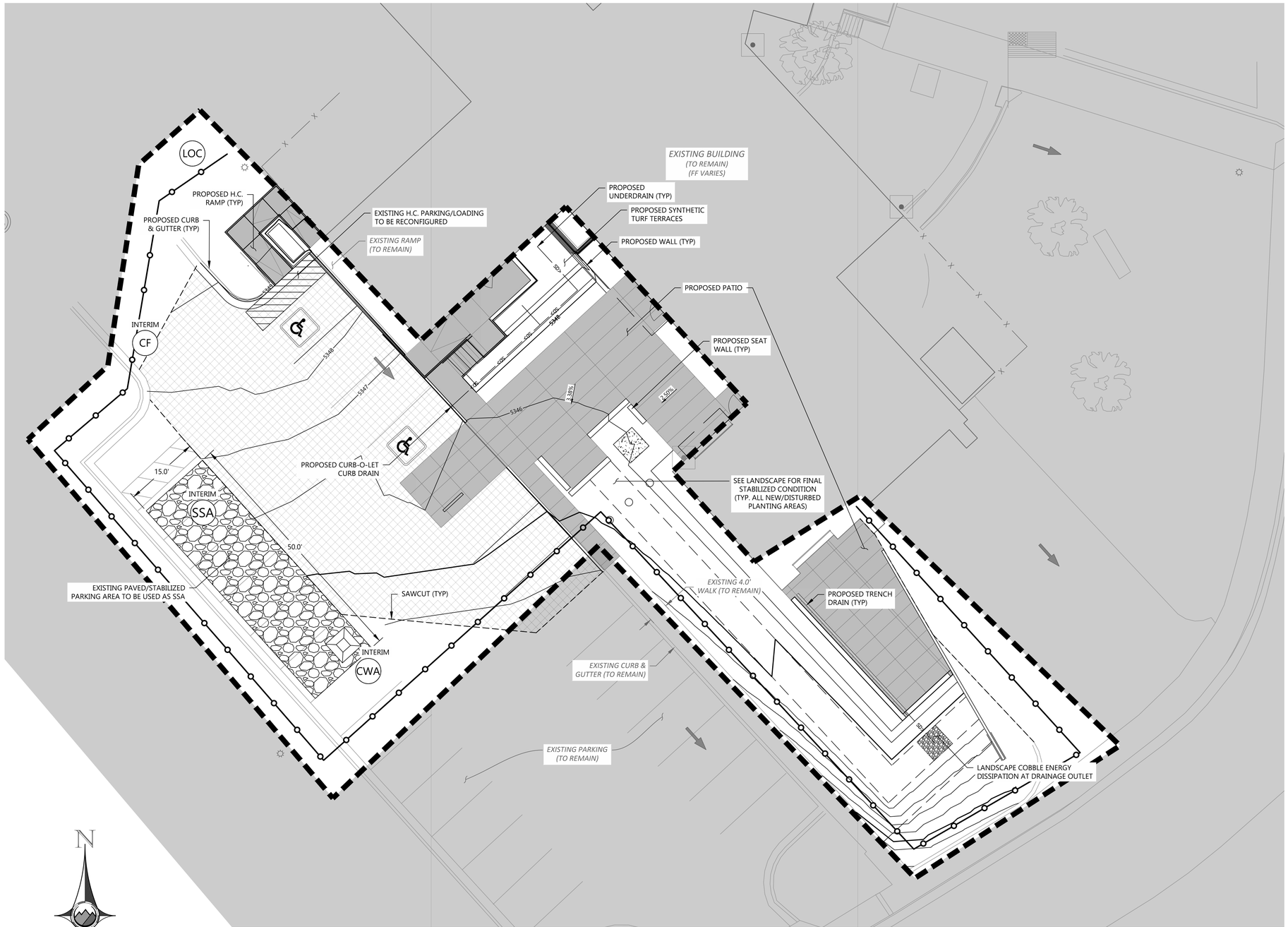
N

0 15 30 60

SCALE: 1" = 30'

CITY OF THORNTON CONFORMANCE STATEMENT:

WORK SHALL BE CONSTRUCTED TO CITY OF THORNTON STANDARDS AND SPECIFICATIONS. THIS APPROVAL IS FOR CONFORMANCE TO THESE STANDARDS AND SPECIFICATIONS AND OTHER CITY REQUIREMENTS. THE DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER OR LANDSCAPE PROFESSIONAL.



N

0 5 10 20

SCALE: 1" = 10'

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LEGEND:

- PROPERTY LINE
- PROPOSED BUILDING
- EXISTING EASEMENT
- PROPOSED CURB & GUTTER
- EXISTING CURB & GUTTER
- 5400 PROPOSED 5' CONTOUR
- 5401 PROPOSED 1' CONTOUR
- 5400 EXISTING 5' CONTOUR
- 5401 EXISTING 1' CONTOUR
- LOC LIMITS OF CONSTRUCTION
- CWA CONCRETE WASHOUT AREA
- SSA STABILIZED STAGING AREA
- CF CONSTRUCTION FENCE

NOTES:

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THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

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DATE	DESCRIPTION
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07.19.2024	PRELIMINARY DESIGN (70% CD)

COLORADO LICENSED 45332 PROFESSIONAL ENGINEER 07/19/2024

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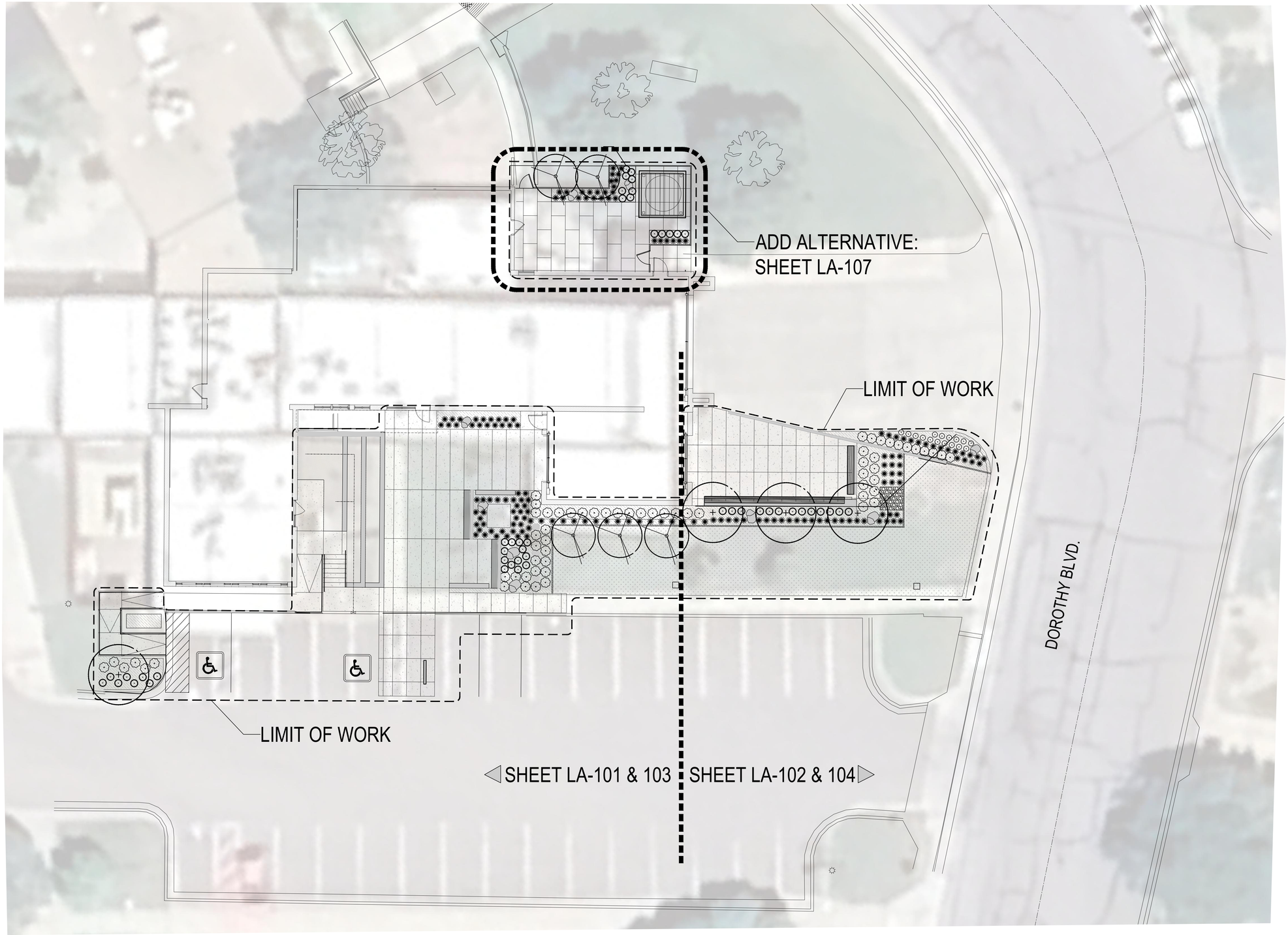
PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

EROSION CONTROL PLAN - INTERIM/FINAL

C-501



CONTEXT LANDSCAPE PLAN

0" 5' 10' 20' 30'

SCALE 1" = 10' - 0"

NORTH

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THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

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CITY OF THORNTON

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DATE	DESCRIPTION
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07.08.2024	PRE-DESIGN (70% CD)
07.19.2024	PRE-DESIGN (70% CD)

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PROJECT NO.: 2402TFM INITIAL DATE: 05/08/2024

CONTEXT LANDSCAPE PLAN

LA-100

LANDSCAPE LEGEND

DECIDUOUS TREE

SHRUBS

ORNAMENTAL GRASSES

STEEL CONCRETE EDGER
14 GAUGE - BLACK

4'-5' BOULDER

NATIVE TURFGRASS MIX

40% LITTLEBLUE STEM (SCHIZACHYRIUM SCOPARIUM)	15lbs / Acre
20% SIDE OATS GRAMMA (BOUTELOUA CURTIPEDULA)	10lbs / Acre
20% BLUE GRAMA (BOUTELOUA GRACILIS)	3lbs / Acre
20% BUFFALO GRASS (BUCHLOE DACTYLOIDES)	12lbs / Acre
Total:	40lbs / Acre

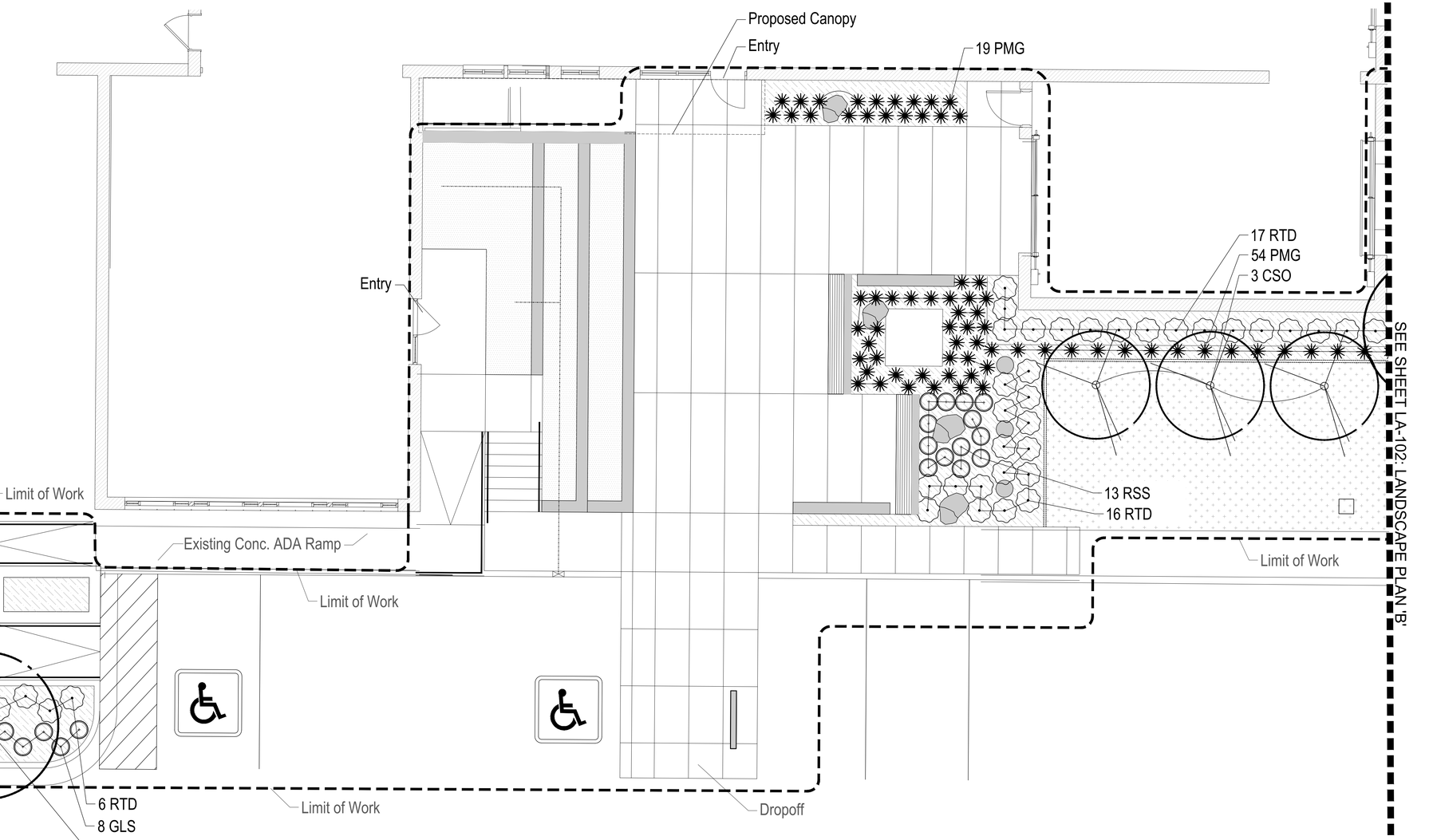
5/16" DARK GRAY BLEND ROUNDED PEBBLE
W/ FILTER FABRIC

SYNTHETIC TURF

5" THICK CONCRETE
SAW-CUT

PLANT SCHEDULE

QUAN.	SYM.	COMMON/BOTANICAL NAME	INSTALLED SIZE	COND.
☐ DECIDUOUS TREES				
3	STG	SKY TOWER GINKGO Ginkgo Biloba 'JN9'	2 1/2" CAL. SINGLE TRUNK	B & B
4	CSO	CRIMSON SPIRE OAK Quercus robur x Quercus alba 'Crimschmidt'	2 1/2" CAL. SINGLE TRUNK	B & B
☐ SHRUBS				
13	MKP	MISS KIM LILAC Syringa Patula 'Miss Kim'	#10	CONT.
50	RTD	RED TWIG DOGWOOD Cornus Sericea 'Baileyi'	#10	CONT.
24	GLS	GRO-LOW FRAGRANT SUMAC Rhus Aromatica 'Grow-Low'	#5	CONT.
13	RSS	RUSSIAN SAGE Perovskia artiplicifolia	6' HT. MIN.	CONT.
☐ GROUND COVER / GRASSES / PERENNIALS / ANNUALS				
59	KFG	FEATHER REED GRASS Calamagostis Acutiflora 'Karl Foerster'	5 GAL.	CONT.
73	PMG	PURPLE MAIDEN GRASS Miscanthus Sinensis 'Purpurascens'	5 GAL.	CONT.



LANDSCAPE PLAN 'A'

SCALE 1" = 5' - 0"

NORTH

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

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DATE	DESCRIPTION
05.10.2024	PRE-DESIGN (30% CD)
07.08.2024	PRE-DESIGN (70% CD)
07.19.2024	PRE-DESIGN (70% CD)

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PROJECT NO.: 2402TFM INITIAL DATE: 05/08/2024

LANDSCAPE PLAN 'A'

LA-101

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LANDSCAPE LEGEND

DECIDUOUS TREE

SHRUBS

ORNAMENTAL GRASSES

STEEL CONCRETE EDGER
14 GAUGE - BLACK

4'-5' BOULDER

NATIVE TURFGRASS MIX

40% LITTLEBLUE STEM (SCHIZACHYRIUM SCOPARIUM)	15lbs / Acre
20% SIDE OATS GRAMMA (BOUTELOUA CURTIPEDULA)	10lbs / Acre
20% BLUE GRAMA (BOUTELOUA GRACILIS)	3lbs / Acre
20% BUFFALO GRASS (BUCHLOE DACTYLOIDES)	12lbs / Acre
Total:	40lbs / Acre

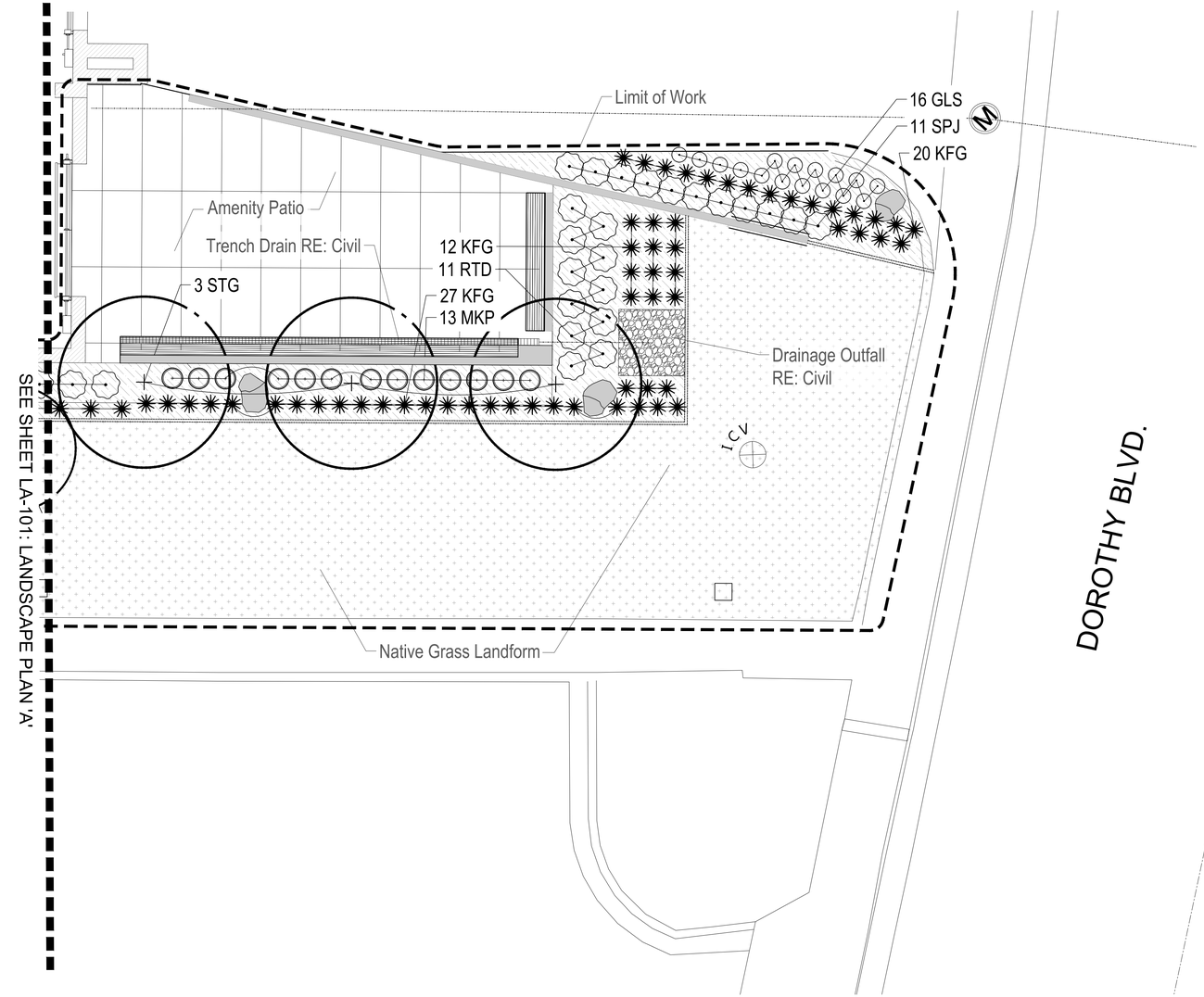
5/16" DARK GRAY BLEND ROUNDED PEBBLE
W/ FILTER FABRIC

SYNTHETIC TURF

5" THICK CONCRETE
SAW-CUT

PLANT SCHEDULE

QUAN.	SYM.	COMMON/BOTANICAL NAME	INSTALLED SIZE	COND.
☐ DECIDUOUS TREES				
3	STG	SKY TOWER GINKGO Ginkgo Biloba 'JN9'	2 1/2" CAL. SINGLE TRUNK	B & B
4	CSO	CRIMSON SPIRE OAK Quercus robur x Quercus alba 'Crimschmidt'	2 1/2" CAL. SINGLE TRUNK	B & B
☐ SHRUBS				
13	MKP	MISS KIM LILAC Syringa Patula 'Miss Kim'	#10	CONT.
50	RTD	RED TWIG DOGWOOD Cornus Sericea 'Baileyi'	#10	CONT.
24	GLS	GRO-LOW FRAGRANT SUMAC Rhus Aromatica 'Grow-Low'	#5	CONT.
13	RSS	RUSSIAN SAGE Perovskia artiplicifolia	6' HT. MIN.	CONT.
☐ GROUND COVER / GRASSES / PERENNIALS / ANNUALS				
59	KFG	FEATHER REED GRASS Calamagostis Acutiflora 'Karl Foerster'	5 GAL.	CONT.
73	PMG	PURPLE MAIDEN GRASS Miscanthus Sinensis 'Purpurascens'	5 GAL.	CONT.



THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

PRELIMINARY
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STACKlot

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ARCHITECTURAL WORKSHOP . DENVER, COLORADO

DATE	DESCRIPTION
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07.08.2024	PRE-DESIGN (70% CD)
07.19.2024	PRE-DESIGN (70% CD)

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PROJECT NO.: 2402TFM INITIAL DATE: 05/08/2024

LANDSCAPE PLAN 'B'

LA-102

0" 2.5' 5' 10' 15'
SCALE 1" = 5' - 0"
NORTH

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LANDSCAPE PLAN 'B'

LANDSCAPE LEGEND

DECIDUOUS TREE

SHRUBS

ORNAMENTAL GRASSES

STEEL CONCRETE EDGER
14 GAUGE - BLACK

4'-5' BOULDER

NATIVE TURFGRASS MIX

40% LITTLEBLUE STEM (SCHIZACHYRIUM SCOPARIUM)	15lbs / Acre
20% SIDE OATS GRAMMA (BOUTELOUA CURTIPEDULA)	10lbs / Acre
20% BLUE GRAMA (BOUTELOUA GRACILIS)	3lbs / Acre
20% BUFFALO GRASS (BUCHLOE DACTYLOIDES)	12lbs / Acre
Total:	40lbs / Acre

5/16" DARK GRAY BLEND ROUNDED PEBBLE
W/ FILTER FABRIC

SYNTHETIC TURF

5" THICK CONCRETE
SAW-CUT

KEYNOTES

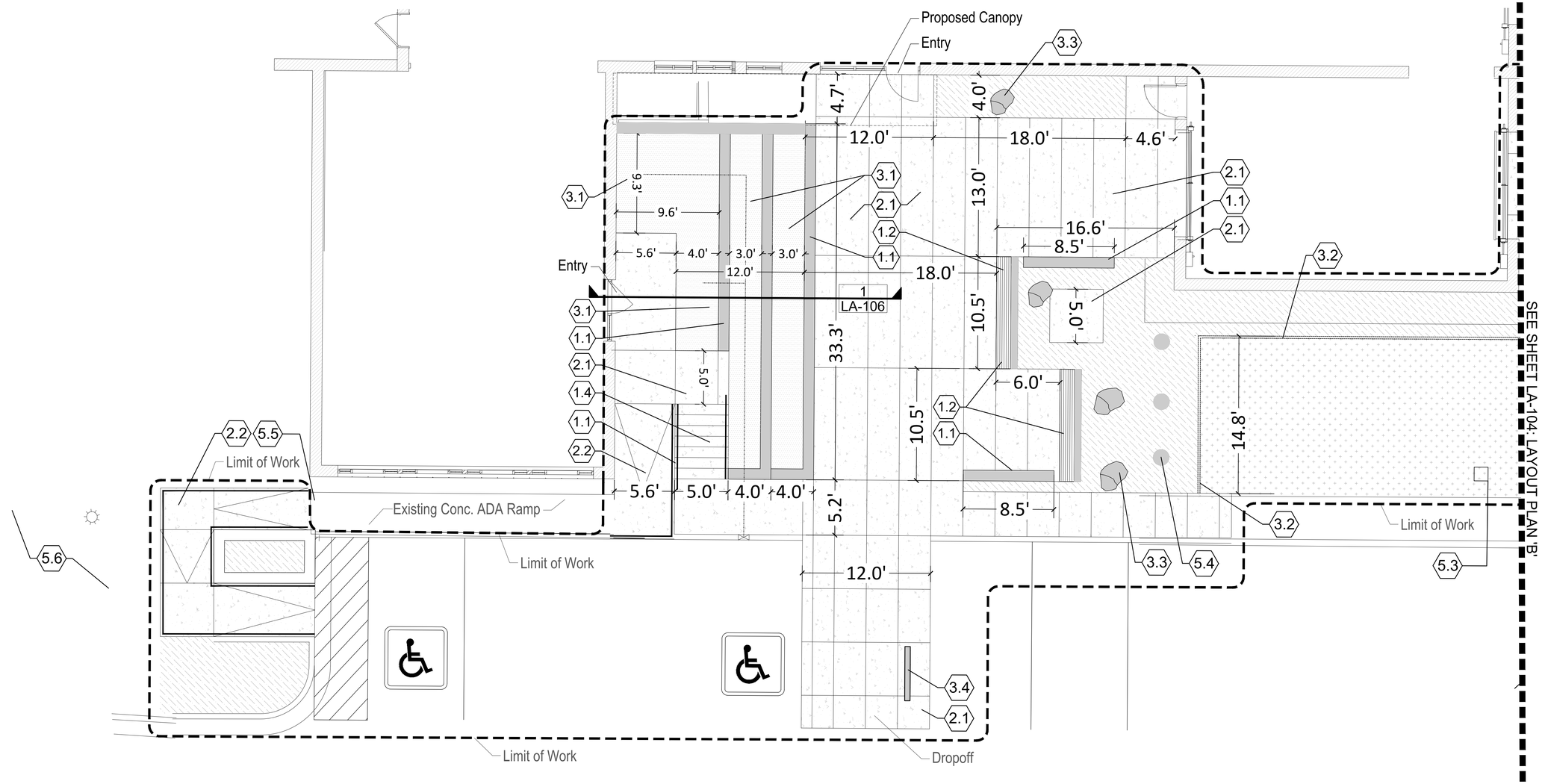
1.0 WALL TYPES
- 1.1 C.I.P. CONCRETE WALL BY OTHERS
- 1.2 C.I.P. CONCRETE SEAT WALL
- 1.3 C.I.P. CONCRETE SCREEN WALL
- 1.4 C.I.P. CONCRETE STAIRS BY OTHERS

2.0 CONCRETE PAVING
- 2.1 5" THICK CONCRETE
- 2.2 ADA RAMP BY OTHERS

3.0 SITE FEATURES
- 3.1 SYNTHETIC TURF TERRACE
- 3.2 STEEL EDGER
- 3.3 3'-4' BOULDERS
- 3.4 SIGNAGE BY OTHERS
- 3.5 6' CEDAR FENCE
- 3.6 SHADE STRUCTURE

4.0 SITE FURNISHINGS
- 4.1 LIGHT TYPE 'A'
- 4.2 LIGHT TYPE 'B'
- 4.3 NOT USED

5.0 EXISTING SITE FEATURES
- 5.1 EXISTING CONCRETE SIDEWALK
- 5.2 EXISTING PARKING LOT
- 5.3 EXISTING LIGHT POLE
- 5.4 EXISTING FLAGPOLE TO BE RELOCATED
- 5.5 MATCH EXISTING
- 5.6 EXISTING LANDSCAPE TO REMAIN



LAYOUT PLAN 'A'

0" 2.5' 5' 10' 15'
SCALE 1" = 5' - 0"

NORTH

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THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

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STACKLot

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ARCHITECTURAL WORKSHOP . DENVER, COLORADO

DATE	DESCRIPTION
05.10.2024	PRE-DESIGN (30% CD)
07.08.2024	PRE-DESIGN (70% CD)
07.19.2024	PRE-DESIGN (70% CD)

DRAWN BY: Author CHECKED BY: Checker
PROJECT NO.: 2402TFM INITIAL DATE: 05/08/2024

LAYOUT PLAN 'A'

LA-103

LANDSCAPE LEGEND

DECIDUOUS TREE

SHRUBS

ORNAMENTAL GRASSES

STEEL CONCRETE EDGER
14 GAUGE - BLACK

4'-5' BOULDER

NATIVE TURFGRASS MIX

40% LITTLEBLUE STEM (SCHIZACHYRIUM SCOPARIUM)	15lbs / Acre
20% SIDE OATS GRAMMA (BOUTELOUA CURTIPEDULA)	10lbs / Acre
20% BLUE GRAMA (BOUTELOUA GRACILIS)	3lbs / Acre
20% BUFFALO GRASS (BUCHLOE DACTYLOIDES)	12lbs / Acre
Total:	40lbs / Acre

5/16" DARK GRAY BLEND ROUNDED PEBBLE
W/ FILTER FABRIC

SYNTHETIC TURF

5" THICK CONCRETE
SAW-CUT

KEYNOTES

1.0 WALL TYPES
- 1.1 C.I.P. CONCRETE WALL BY OTHERS
- 1.2 C.I.P. CONCRETE SEAT WALL
- 1.3 C.I.P. CONCRETE SCREEN WALL
- 1.4 C.I.P. CONCRETE STAIRS BY OTHERS

2.0 CONCRETE PAVING
- 2.1 5" THICK CONCRETE
- 2.2 ADA RAMP BY OTHERS

3.0 SITE FEATURES
- 3.1 SYNTHETIC TURF TERRACE
- 3.2 STEEL EDGER
- 3.3 3'-4' BOULDERS
- 3.4 SIGNAGE BY OTHERS
- 3.5 6' CEDAR FENCE
- 3.6 SHADE STRUCTURE

4.0 SITE FURNISHINGS
- 4.1 LIGHT TYPE 'A'
- 4.2 LIGHT TYPE 'B'
- 4.3 NOT USED

5.0 EXISTING SITE FEATURES
- 5.1 EXISTING CONCRETE SIDEWALK
- 5.2 EXISTING PARKING LOT
- 5.3 EXISTING LIGHT POLE
- 5.4 EXISTING FLAGPOLE TO BE RELOCATED
- 5.5 MATCH EXISTING
- 5.6 EXISTING LANDSCAPE TO REMAIN

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

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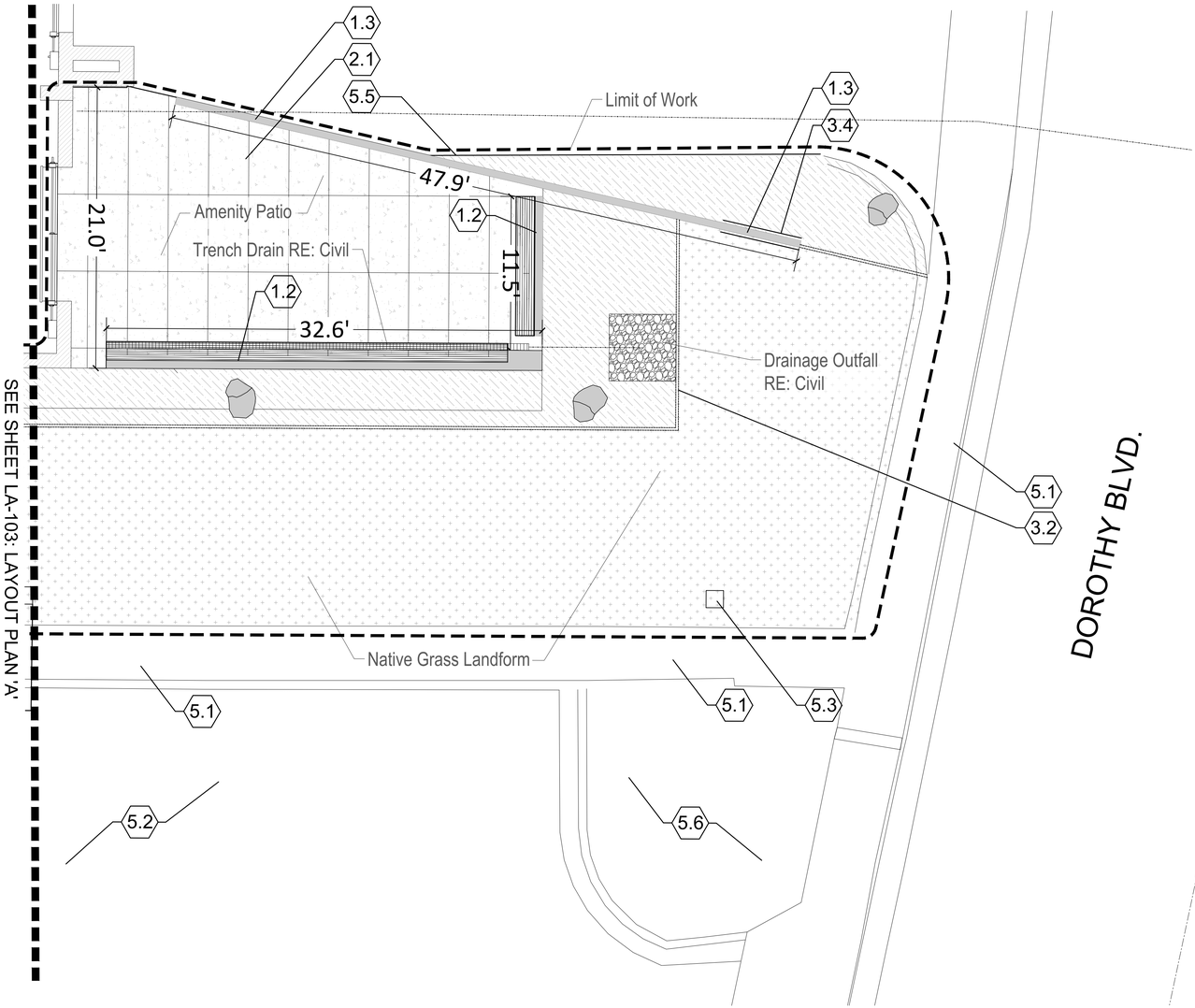

STACK Lot

aw
ARCHITECTURAL WORKSHOP . DENVER, COLORADO

DATE	DESCRIPTION
05.10.2024	PRE-DESIGN (30% CD)
07.08.2024	PRE-DESIGN (70% CD)
07.19.2024	PRE-DESIGN (70% CD)

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LAYOUT PLAN 'B'

LA-104

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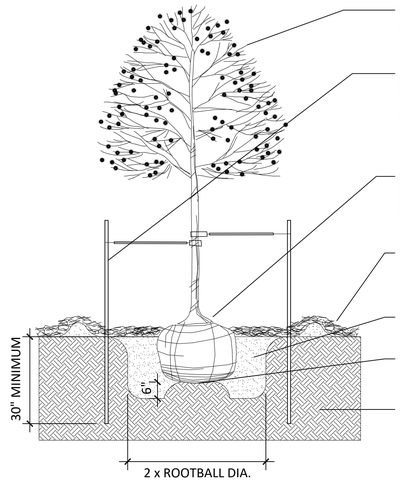
LAYOUT PLAN 'B'

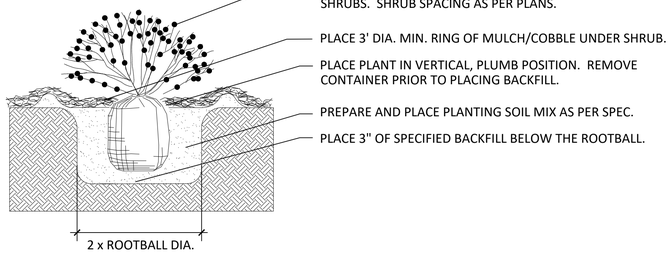
0" 2.5' 5' 10' 15'
SCALE 1" = 5' - 0"

NORTH



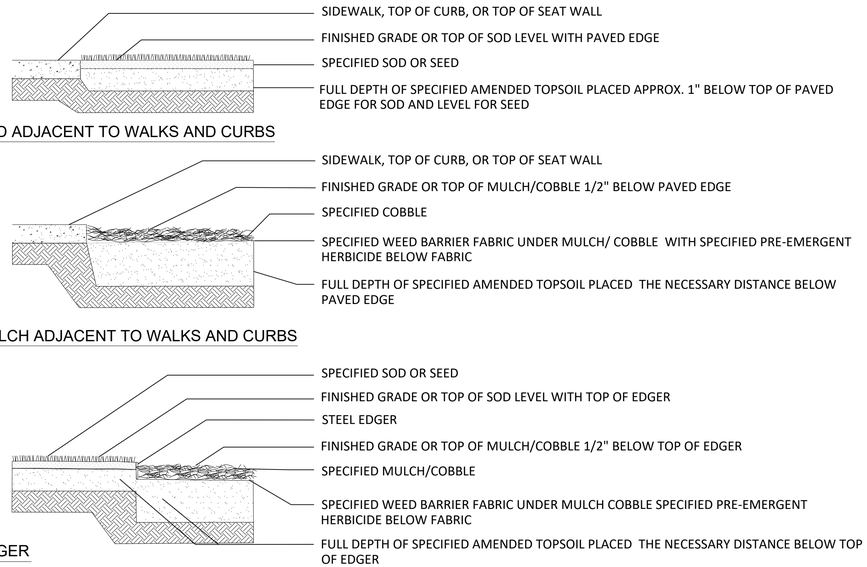
1 DECIDUOUS TREE

NOT TO SCALE



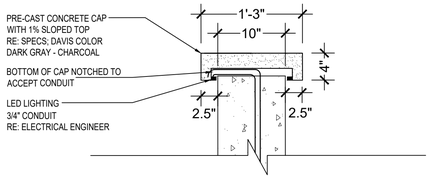
2 SHRUB PLANTING

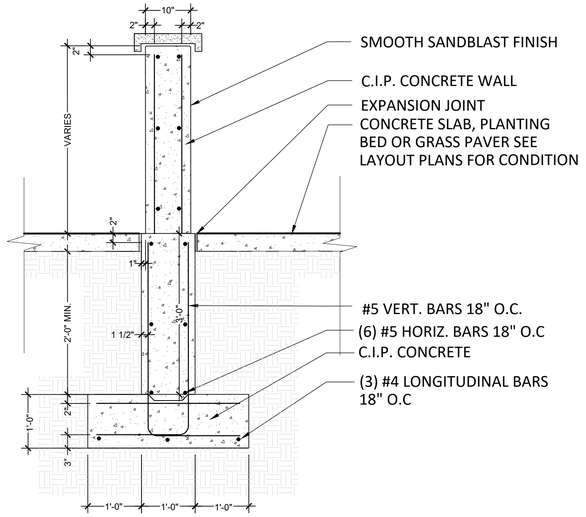
NOT TO SCALE

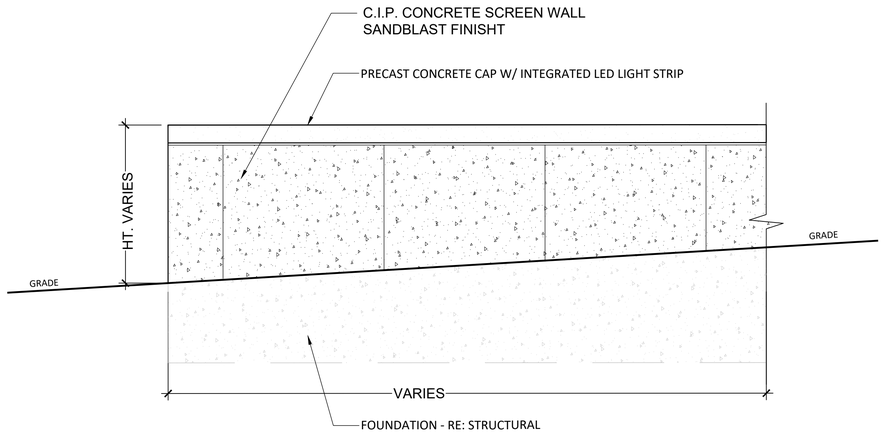


3 EDGE TREATMENT

NOT TO SCALE







4 SCREEN WALL

3/8"=1'-0"

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

PRELIMINARY NOT FOR CONSTRUCTION

STACKlot

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ARCHITECTURAL WORKSHOP . DENVER, COLORADO

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07.19.2024	PRE-DESIGN (70% CD)

DRAWN BY: Author CHECKED BY: Checker

PROJECT NO.: 2402TFM INITIAL DATE: 05/08/2024

LANDSCAPE DETAILS

LA-105

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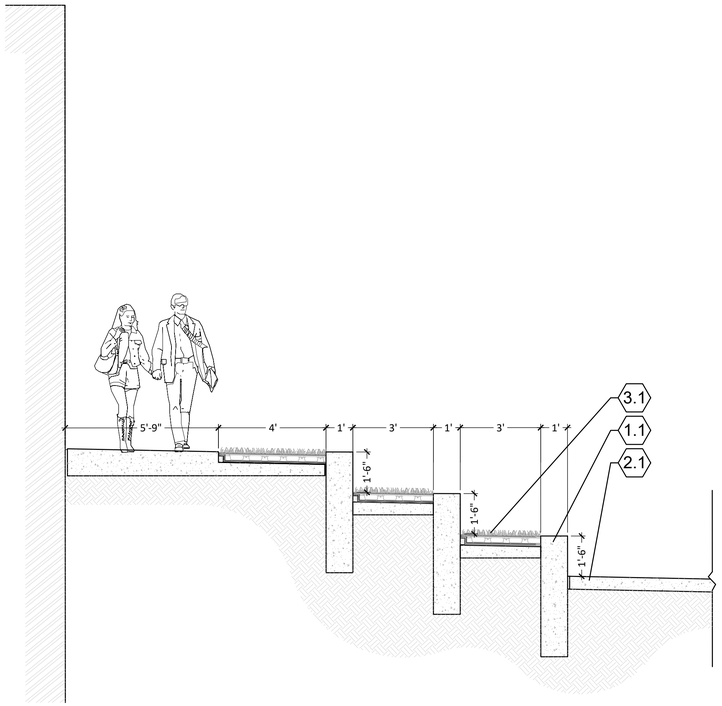
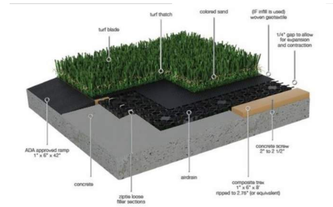
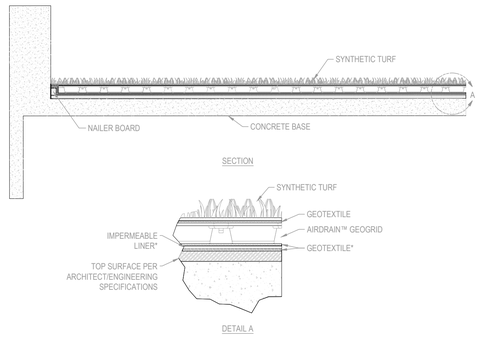
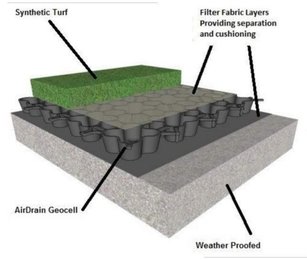


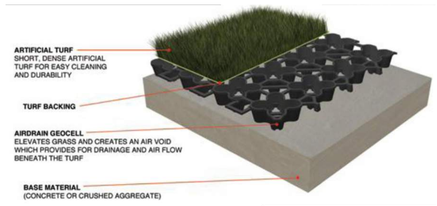
1 PLAZA TERRACE SECTION

3/8"=1'-0"









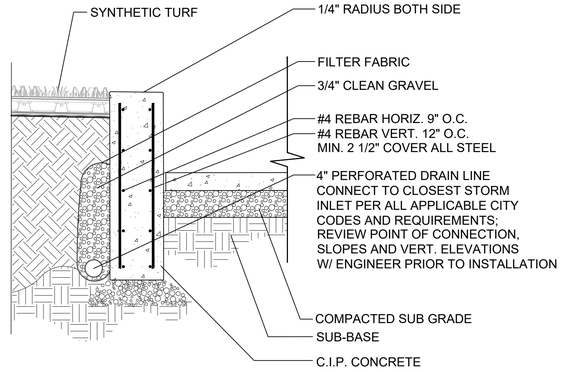
*MATERIALS, AND ADDITIONAL WATERPROOFING MUST BE RECOMMENDED BY QUALIFIED ENGINEER

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWING.
3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 70% Land

3 SYNTHETIC TURF

3/8"=1'-0"

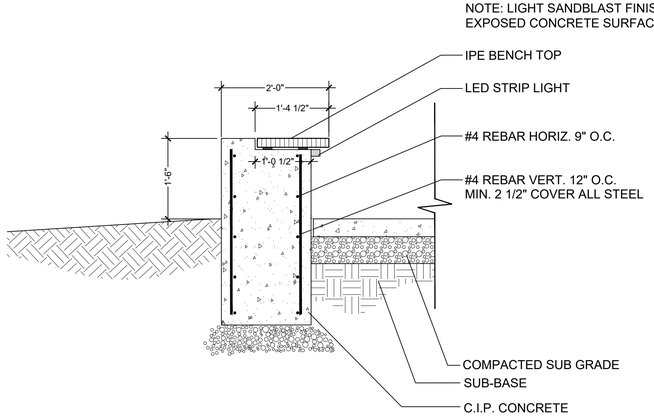
NOTE: LIGHT SANDBLAST FINISH AT ALL EXPOSED CONCRETE SURFACES



2 TERRACE CONCRETE SEAT WALL

3/8"=1'-0"

NOTE: LIGHT SANDBLAST FINISH AT ALL EXPOSED CONCRETE SURFACES



4 CONCRETE SEAT WALL

3/8"=1'-0"

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THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

PRELIMINARY NOT FOR CONSTRUCTION

STACKLot

aw

ARCHITECTURAL WORKSHOP . DENVER, COLORADO

	DESCRIPTION
05.10.2024	PRE-DESIGN (30% CD)
07.08.2024	PRE-DESIGN (70% CD)
07.19.2024	PRE-DESIGN (70% CD)

DRAWN BY:	Author	CHECKED BY:	Checker
PROJECT NO.:	2402TFM	INITIAL DATE:	05/08/2024

LANDSCAPE DETAILS

LA-106

LANDSCAPE LEGEND

DECIDUOUS TREE

SHRUBS

ORNAMENTAL GRASSES

STEEL CONCRETE EDGER
14 GAUGE - BLACK

4'-5' BOULDER

NATIVE TURFGRASS MIX

40% LITTLEBLUE STEM (SCHIZACHYRIUM SCOPARIUM)	15lbs / Acre
20% SIDE OATS GRAMMA (BOUTELOUA CURTIPEDULA)	10lbs / Acre
20% BLUE GRAMA (BOUTELOUA GRACILIS)	3lbs / Acre
20% BUFFALO GRASS (BUCHLOE DACTYLOIDES)	12lbs / Acre
Total:	40lbs / Acre

$\frac{5}{16}$" DARK GRAY BLEND ROUNDED PEBBLE
W/ FILTER FABRIC

SYNTHETIC TURF

5" THICK CONCRETE
SAW-CUT

PLANT SCHEDULE

QUAN.	SYM.	COMMON/BOTANICAL NAME	INSTALLED SIZE	COND.
☐ DECIDUOUS TREES				
3	STG	SKY TOWER GINKGO Ginkgo Biloba 'JN9'	2 1/2" CAL. SINGLE TRUNK	B & B
4	CSO	CRIMSON SPIRE OAK Quercus robur x Quercus alba 'Crimschmidt'	2 1/2" CAL. SINGLE TRUNK	B & B
☐ SHRUBS				
13	MKP	MISS KIM LILAC Syringa Patula 'Miss Kim'	#10	CONT.
50	RTD	RED TWIG DOGWOOD Cornus Sericea 'Baileyi'	#10	CONT.
24	GLS	GRO-LOW FRAGRANT SUMAC Rhus Aromatica 'Grow-Low'	#5	CONT.
13	RSS	RUSSIAN SAGE Perovskia artiplicifolia	6' HT. MIN.	CONT.
☐ GROUND COVER / GRASSES / PERENNIALS / ANNUALS				
59	KFG	FEATHER REED GRASS Calamagostis Acutiflora 'Karl Foerster'	5 GAL.	CONT.
73	PMG	PURPLE MAIDEN GRASS Miscanthus Sinensis 'Purpurascens'	5 GAL.	CONT.

KEYNOTES

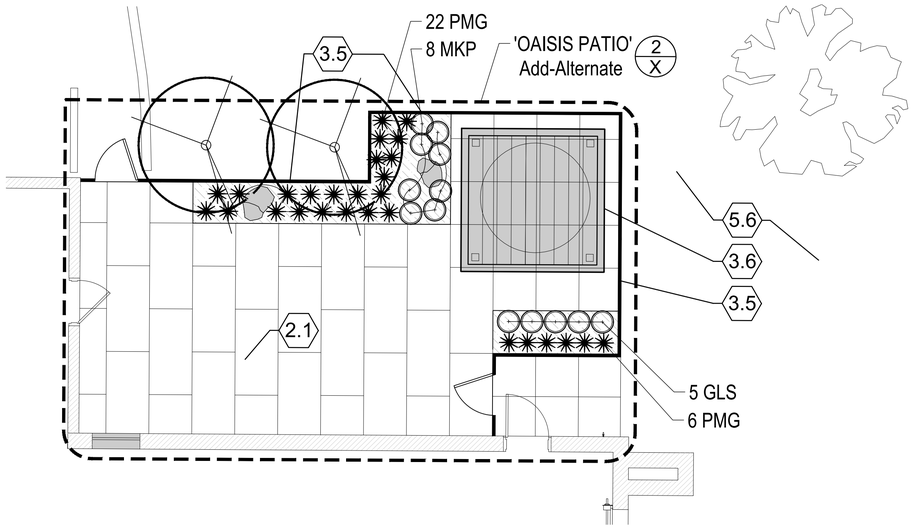
1.0 WALL TYPES
- 1.1 C.I.P. CONCRETE WALL BY OTHERS
- 1.2 C.I.P. CONCRETE SEAT WALL
- 1.3 C.I.P. CONCRETE SCREEN WALL
- 1.4 C.I.P. CONCRETE STAIRS BY OTHERS

2.0 CONCRETE PAVING
- 2.1 5" THICK CONCRETE
- 2.2 ADA RAMP BY OTHERS

3.0 SITE FEATURES
- 3.1 SYNTHETIC TURF TERRACE
- 3.2 STEEL EDGER
- 3.3 3'-4' BOULDERS
- 3.4 SIGNAGE BY OTHERS
- 3.5 6' CEDAR FENCE
- 3.6 SHADE STRUCTURE

4.0 SITE FURNISHINGS
- 4.1 LIGHT TYPE 'A'
- 4.2 LIGHT TYPE 'B'
- 4.3 NOT USED

5.0 EXISTING SITE FEATURES
- 5.1 EXISTING CONCRETE SIDEWALK
- 5.2 EXISTING PARKING LOT
- 5.3 EXISTING LIGHT POLE
- 5.4 EXISTING FLAGPOLE TO BE RELOCATED
- 5.5 MATCH EXISTING
- 5.6 EXISTING LANDSCAPE TO REMAIN



OASIS PATIO PLAN

SCALE 1" = 5' - 0"

MANUFACTURER: PEACEFUL PATIOS MODERN FIBERGLASS PERGOLA W/ FIXED LOUVERS.

COLOR: DARK GRAY
SIZE: 20'X12'

1 SHADE STRUCTURE

2 CEDAR FENCE & GATE

3/8"=1'-0"

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LANDSCAPE OASIS PATIO

LA-107

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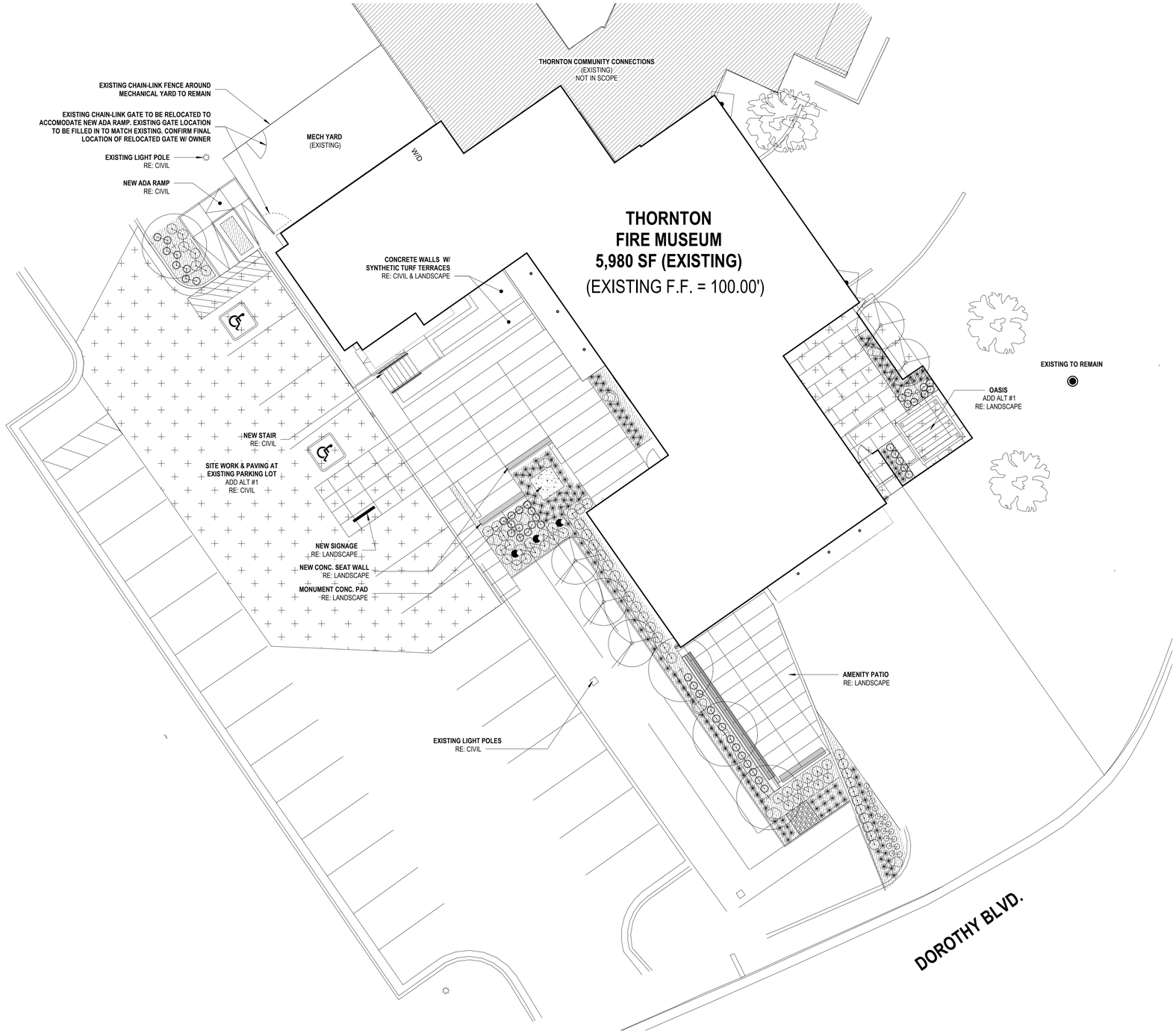

1 ARCHITECTURAL SITE PLAN
3/32" = 1'-0"

GENERAL NOTES:

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3. DOORS IN STUD WALLS THAT ARE NOT SPECIFICALLY LOCATED, PROVIDE A HINGE SIDE JAMB DIMENSION OF 4" FROM DOOR OPENING TO ADJACENT WALL. ALL DOORS TO HAVE KING STUDS (2X) BOTH SIDES.
4. PROVIDE BLOCKING IN THE WALL AS REQUIRED TO SECURE COUNTERTOPS, CABINETRY AND SHELVING. GC TO COORDINATE ADDITIONAL BLOCKING WITH OWNER FOR FF&E.
5. ALL DIMENSIONS ARE FROM FACE OF STUD, CABINETS, ROUGH OPENINGS OR CENTERLINE OF GRID UNLESS NOTED OTHERWISE.
6. ALL INTERIOR WALLS TO BE WALL TYPE 1 UNLESS OTHERWISE NOTED.
7. SUBMIT MILLWORK SHOP DRAWINGS AND FINISH SUBMITTALS TO ARCHITECT FOR APPROVAL BEFORE FABRICATION OR INSTALLATION.
8. ALL ROUGH AND FINISH CONSTRUCTION SHALL BE IN COMPLIANCE WITH GOVERNING CODES AND REGULATIONS AS A MINIMUM STANDARD.
9. EXISTING BUILDING SHOWS NO SIGNS OF ROOF LEAKS. GC IS RESPONSIBLE FOR WATER-TIGHT ROOF LEAK AFTER CONSTRUCTION.
10. INTERNAL ROOF DRAINS TO BE TESTED BEFORE AND AFTER CONSTRUCTION.

SITE PLAN LEGEND

- SITE WALL
- PROPERTY LINE
- CONTOUR LINE (2' - 0")
- SITE SETBACK
- BELOW GRADE CONSTRUCTION
- EXISTING TREE TO REMAIN
- EXTERIOR BUILDING FOOT PRINT
- X X — FENCE
- OH OH — OVERHEAD ELECTRIC LINE
- SPOT ELEVATIONS AT ORIGINAL GRADE
- SET NO.5 REBAR 18" LONG WITH RED PLASTIC CAP STAMPED
- FOUND MONUMENT AS DESCRIBED
- (M) MEASURED
- (P) PLATTED
- NEW CONCRETE
- NEW ASPHALT
- ACCESSIBLE ROUTE
- ADD ALTERNATES

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ARCHITECTURAL SITE PLAN

AS-101

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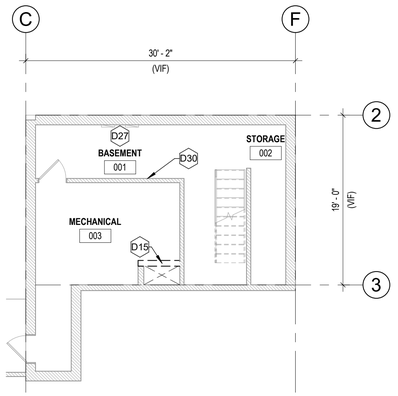
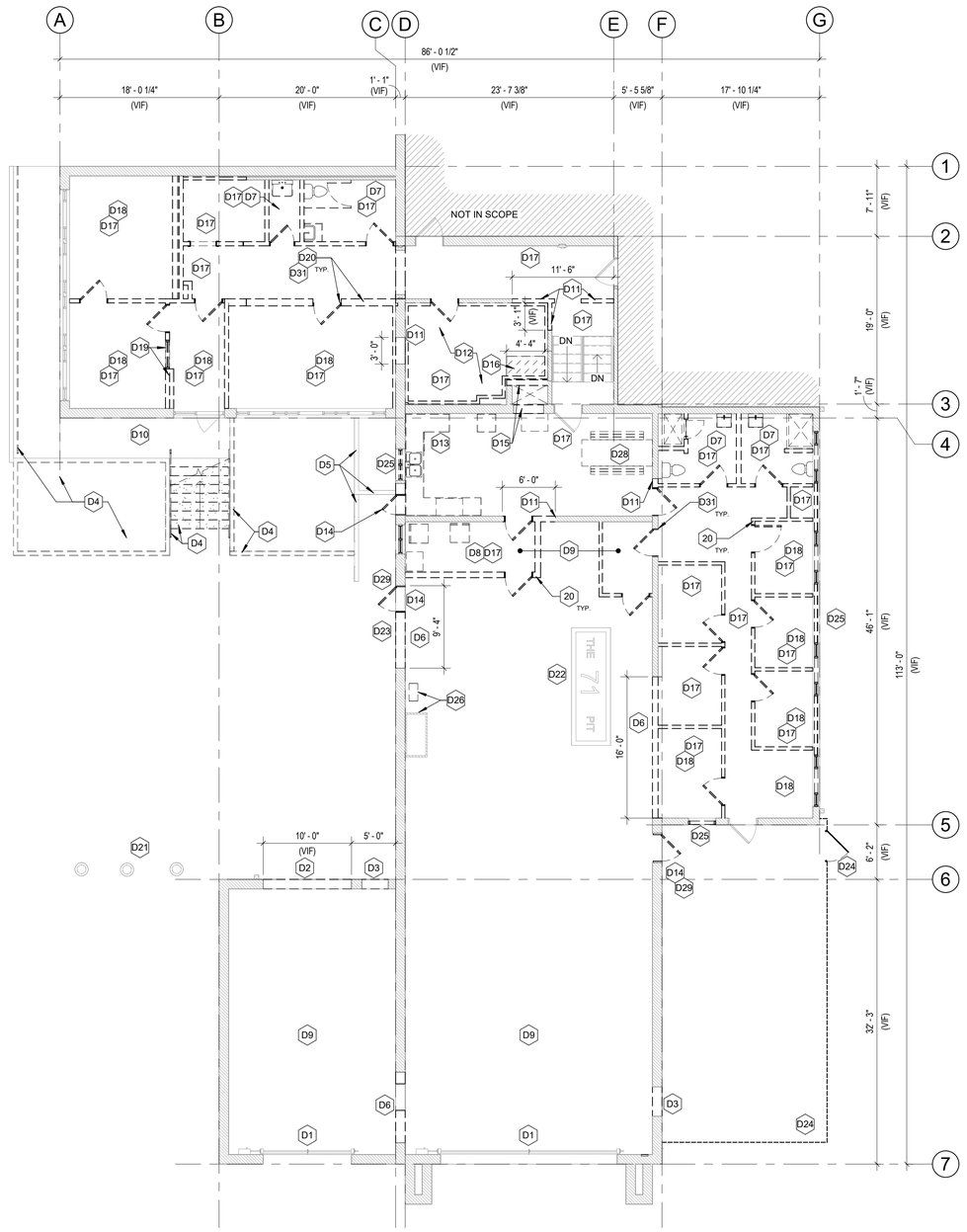


2 BASEMENT LEVEL DEMO PLAN

1/8" = 1'-0"



1 MAIN LEVEL DEMO PLAN

1/8" = 1'-0"

DEMO PLAN KEYNOTES:

NOTE: ANY REMAINING SALVAGE MATERIALS TO BE COORDINATED WITH OWNER FOR ATTIC STOCK OR DISPOSAL.

D1 EXISTING OVERHEAD DOORS TO REMAIN, PROTECT DURING CONSTRUCTION

D2 DEMO PORTION OF EXISTING BRICK WALL FOR NEW OVERHEAD DOOR & SALVAGE BRICKS TO BE USED FOR INFILL NEW DOOR OPENING TO ALIGN W/ EXISTING; RE: STRUC FOR ADDITIONAL INFORMATION

D3 DEMO PORTION OF EXISTING BRICK WALL FOR NEW DOOR & SALVAGE BRICKS TO BE USED FOR INFILL; RE: STRUC FOR ADDITIONAL INFORMATION

D4 DEMO & DISPOSE OF CONCRETE LANDSCAPING WALLS, STAIRS & RAILINGS; RE: LANDSCAPE & CIVIL FOR ADDITIONAL INFORMATION.

D5 EXISTING CONCRETE RETAINING WALLS FOR BASEMENT EGRESS WELL TO REMAIN, PROTECT DURING CONSTRUCTION

D6 DEMO PORTION OF EXISTING WALL FOR NEW WALL OPENING & SALVAGE GLAZED TILE WAINSCOT; RE: STRUC FOR ADDITIONAL INFORMATION

D7 DEMO & DISPOSE OF PLUMBING FIXTURES IN ITS ENTIRETY, CAP / RE-ROUTE AS REQUIRED FOR NEW LAYOUT; RE: MEP & FLOOR PLANS FOR ADDITIONAL INFORMATION

D8 REMOVE LAUNDRY EQUIPMENT AND UTILITY SINK, COORDINATE W/ OWNER ON SALVAGE / DISPOSAL. DEMO & DISPOSE OF ALL ASSOCIATED MEP, CAP AS REQUIRED;RE: MEP & FLOOR PLANS FOR ADDITIONAL INFORMATION

D9 DEMO & DISPOSE OF EXISTING MECHANICAL SYSTEM & DUCTWORK AND ASSOCIATED ELECTRICAL IN ITS ENTIRETY EXCEPT FOR WHOLE BUILDING EXHAUST SYSTEM; RE: MEP & FLOOR PLANS FOR ADDITIONAL INFORMATION

D10 DEMO & DISPOSE OF PORTION OF EXISTING CONCRETE WALKWAY; RE: LANDSCAPE & CIVIL

D11 DEMO & DISPOSE OF PORTION OF EXISTING WALL FOR NEW WALL OPENING; RE: STRUC FOR ADDITIONAL INFORMATION

D12 DEMO & DISPOSE OF FURRED OUT WALL AND WOOD PANELING IN ITS ENTIRETY; RE: FLOOR PLANS FOR ADDITIONAL INFORMATION

D13 DEMO & DISPOSE OF EXISTING CASEWORK / FIXTURES IN ITS ENTIRETY, PATCH ADJACENT SURFACES AS REQUIRED; RE: FLOOR PLANS FOR ADDITIONAL INFORMATION

D14 DEMO & DISPOSE OF EXISTING HM DOOR & FRAME, PROTECT ADJACENT BRICK WALL & PATCH ADJACENT SURFACES AS REQUIRED; RE: FLOOR PLANS FOR ADDITIONAL INFORMATION

D15 DEMO & DISPOSE OF PORTION OF EXISTING CHIMNEY WALLS FOR NEW OPENING; RE: STRUC & FLOOR PLANS FOR ADDITIONAL INFORMATION

D16 DEMO & DISPOSE OF PORTION OF EXISTING FLOOR ASSEMBLY FOR NEW ADA LIFT; RE: STRUC & FLOOR PLANS FOR ADDITIONAL INFORMATION

D17 DEMO & DISPOSE OF EXISTING FLOOR FINISHES & WALL BASE, PATCH / LEVEL CONCRETE SUBFLOOR AS REQUIRED TO RECEIVE NEW FLOOR FINISH; RE: FINISH PLAN FOR ADDITIONAL INFORMATION

D18 DEMO & DISPOSE OF EXISTING BASEBOARD HEATERS IN ITS ENTIRETY. PATCH & REPAIR ADJACENT SURFACES AS REQUIRED AND INFILL BASE OF WALL TO BE FLUSH WITH ADJACENT SURFACES; RE: FLOOR PLANS FOR ADDITIONAL INFORMATION

D19 DEMO & DISPOSE OF EXISTING WALL, WINDOW, & DOOR IN ITS ENTIRETY; RE: STRUC FOR ADDITIONAL INFORMATION

D20 DEMO & DISPOSE OF EXISTING WALL IN ITS ENTIRETY; RE: STRUC FOR ADDITIONAL INFORMATION

D21 EXISTING FLAG POLES TO BE SALVAGED AND REINSTALLED PER NEW LANDSCAPE PLAN, RE: LANDSCAPE

D22 EXISTING PIT GRAPHIC ON FLOOR TO REMAIN, PROTECT DURING CONSTRUCTION

D23 DEMO & RELOCATE EXISTING GAS METER AND ASSOCIATED PIPES; RE: MEP AND CIVIL

D24 DEMO WOOD FENCE PANELS & WOOD GATE IF ADD ALT. #1 IS SELECTED. SALVAGE & COORDINATE WITH OWNER FOR RE-USE

D25 DEMO WINDOW FRAME AND GLAZING. RE: ELEVATIONS FOR NEW WORK

D26 EXISTING WHOLE BUILDING EXHAUST DUCTWORK AND EQUIPMENT TO REMAIN, CONTROL PANEL TO BE RELOCATED AND MOUNTED ON OTHER SIDE OF DUCT; RE: MEP DRAWINGS & FLOOR PLANS FOR ADDITIONAL INFO

D27 EXISTING ELECTRICAL PANELS TO REMAIN, PROTECT DURING CONSTRUCTION; RE: MEP DRAWINGS

D28 RE-LOCATE EXISTING TFD KITCHEN TABLE. RE: FLOOR PLAN. REMOVE & SALVAGE BENCH SEATING COORDINATE WITH OWNER, PROTECT DURING CONSTRUCTION

D29 REMOVE & SALVAGE EXISTING CARD READER TO BE RELOCATED. RE: DOOR SCHEDULE

D30 EXISTING TELECOM SYSTEM TO REMAIN. PROTECT DURING CONSTRUCTION. RE: LOW VOLTAGE

D31 EXISTING DOOR & FRAME TO BE DEMOLISHED, PATCH, & REPAIR ADJACENT SURFACE AS REQUIRED

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4. ALL WORK SHALL BE IN COMPLIANCE WITH THE CONSTRUCTION SPECIFICATION MANUAL WHICH IS PART OF THE PROJECT DOCUMENTS.
5. ALL ABANDONED WIRING, CONDUITS OR MISC. MEP MUST BE REMOVED.
6. ALL DEMOLITION AND DISPOSAL MUST BE DONE TO MEET ALL CODES AND LAWS FOR PROPER DISPOSAL.
7. ALL DEMOLITION IN OCCUPIED SPACES MUST BE COORDINATED WITH OWNER AND TENANT.
8. ALL DEMOLITION IN OCCUPIED SPACES SHALL BE CONDUCTED IN A SAFE MANNER AND LEFT TO MEET CODES FOR OCCUPANCY.
9. ALL RETURN AIR DUCTS MUST BE FILTERED DURING DEMO AND CONSTRUCTION TO PREVENT DEBRIS FROM ENTERING HVAC SYSTEM.
10. REMAINING SALVAGE MATERIALS TO BE COORDINATED WITH OWNER FOR ATTIC STOCK OR DISPOSAL
11. EXISTING CONTROLS, SECURITY SYSTEM, CAMERA, ACCESS CONTROL, AV COMPONENTS TO BE SALVAGED FOR RE-INSTALLATION. GC TO COORDINATE WITH OWNER.

DEMOLITION LEGEND:

(E) WALL TO BE REMOVED

(E) DOOR TO BE REMOVED

(E) FLOOR / CEILING TO BE DEMOLISHED

(E) DOOR TO REMAIN

(E) WALL TO REMAIN

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DEMO FLOOR PLANS

AD-101

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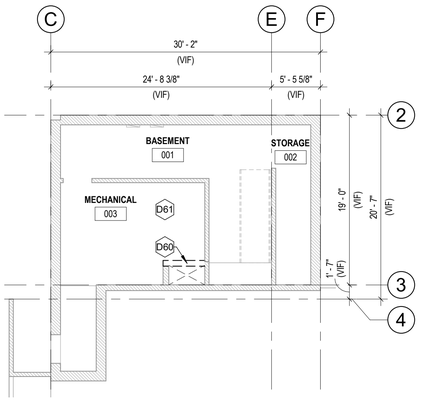
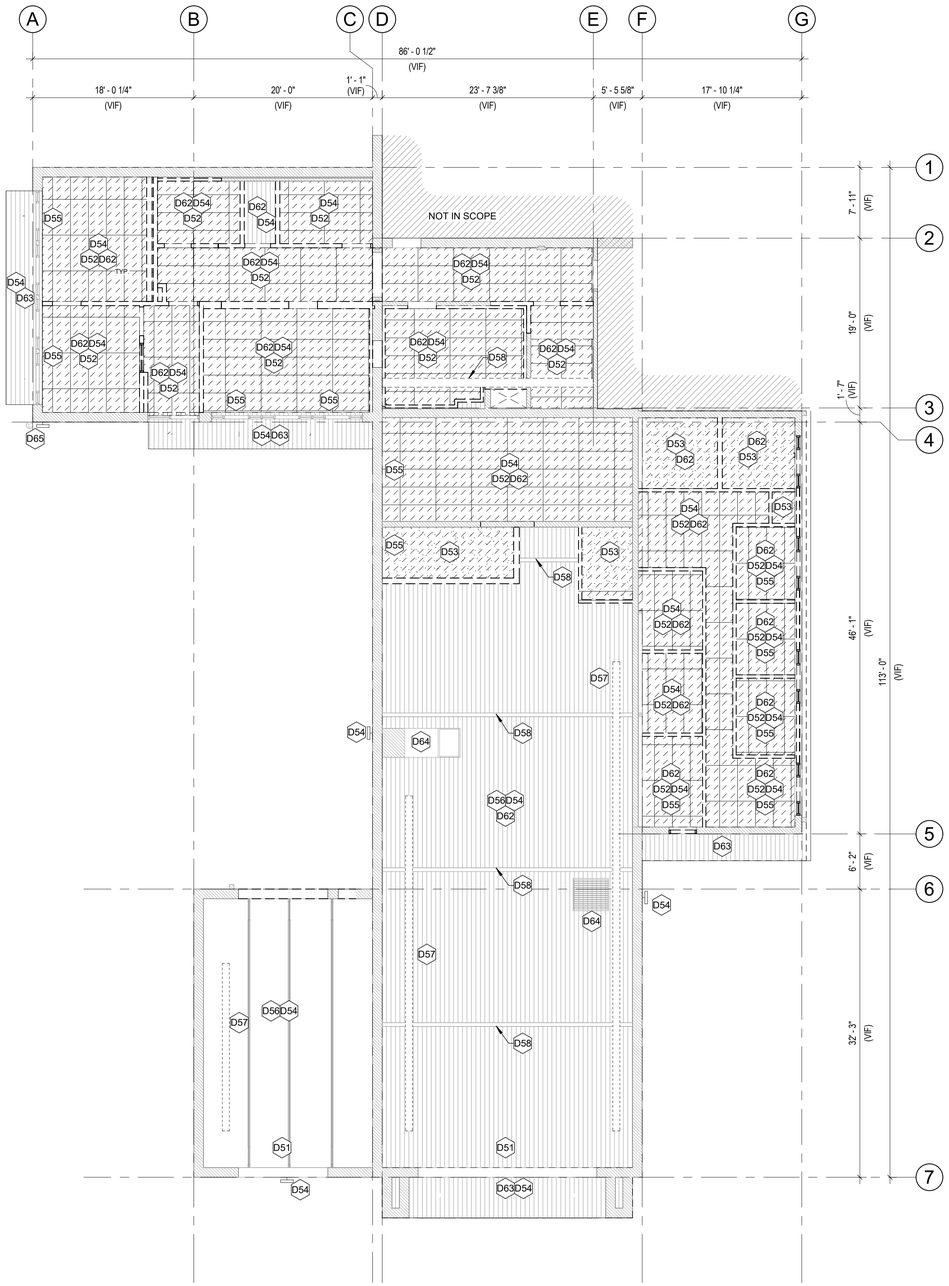


2 BASEMENT LEVEL DEMO CEILING PLAN

1/8" = 1'-0"



1 MAIN LEVEL DEMO CEILING PLAN

1/8" = 1'-0"

CEILING DEMO PLAN KEYNOTES:

NOTE: ANY REMAINING SALVAGE MATERIALS TO BE COORDINATED WITH OWNER FOR ATTIC STOCK OR DISPOSAL.

- D51 EXISTING OVERHEAD TO REMAIN PROTECT DURING CONSTRUCTION
- D52 DEMO & DISPOSE OF LAY-IN CEILING GRID AND TILE. PATCH AND REPAIR ADJACENT SURFACES AS REQUIRED
- D53 DEMO & DISPOSE OF GYP. BD CEILING. PATCH AND REPAIR ADJACENT SURFACES AS REQUIRED
- D54 REMOVE & DISPOSE OF EXISTING LIGHT FIXTURES INCLUDING FIRE ALARMS & EGRESS LIGHTING & AUDIO SYSTEMS INCLUDING SPEAKERS, RE: CEILING PLAN & ELEC.
- D55 REMOVE & DISPOSE OF WINDOW BLINDS. PATCH AND REPAIR ADJACENT SURFACES AS REQUIRED
- D56 DEMO & DISPOSE OF EXISTING MECHANICAL SYSTEM & DUCTWORK AND ASSOCIATED ELECTRICAL IN ITS ENTIRETY EXCEPT FOR WHOLE BLDG EXHAUST SYSTEM; RE: MEP & FLOOR PLANS FOR ADDITIONAL INFORMATION
- D57 REMOVE EXISTING PLYMOVENT RAIL EXHAUST SYSTEM AND SALVAGE FOR OWNER RE-USE
- D58 EXISTING GLU-LAM BEAMS TO REMAIN, PROTECT DURING CONSTRUCTION
- D59 NOT USED
- D60 DEMO & DISPOSE OF PORTION OF EXISTING CHIMNEY WALLS FOR NEW OPENING; RE: STRUC & FLOOR PLANS FOR ADDITIONAL INFORMATION
- D61 DEMO & DISPOSE OF EXISTING MECHANICAL SYSTEM & DUCTWORK AND ASSOCIATED ELECTRICAL IN ITS ENTIRETY. CAP / RE-ROUTE AS REQUIRED FOR NEW LAYOUT; RE: MEP & FLOOR PLANS FOR ADDITIONAL INFORMATION
- D62 EXISTING BEADBOARD ROOF SHEATHING TO REMAIN PROTECT DURING CONSTRUCTION. PATCH / REPAIR HOLES AND DAMAGE FROM REMOVAL OF EXISTING SYSTEMS AS REQUIRED
- D63 EXISTING EXTERIOR CANOPY TO REMAIN, PATCH / REPAIR TO MATCH EXISTING AS REQUIRED. PROTECT DURING CONSTRUCTION.
- D64 INTAKE LOUVER & DUCTWORK FOR THE BUILDING EXHAUST SYSTEM TO REMAIN. PROTECT DURING CONSTRUCTION
- D65 EXISTING SECURITY CAMERA TO REMAIN. PROTECT DURING CONSTRUCTION

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- (E) WALL TO BE REMOVED
- (E) DOOR TO BE REMOVED
- (E) FLOOR / CEILING TO BE DEMOLISHED
- (E) DOOR TO REMAIN
- (E) WALL TO REMAIN

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DEMO CEILING PLAN

AD-102

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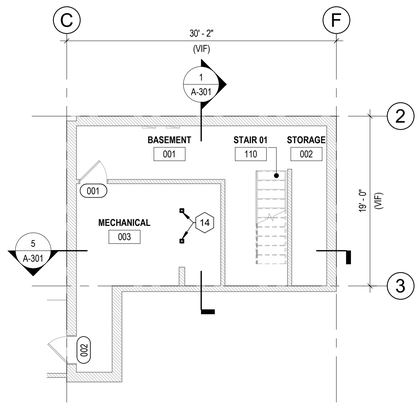
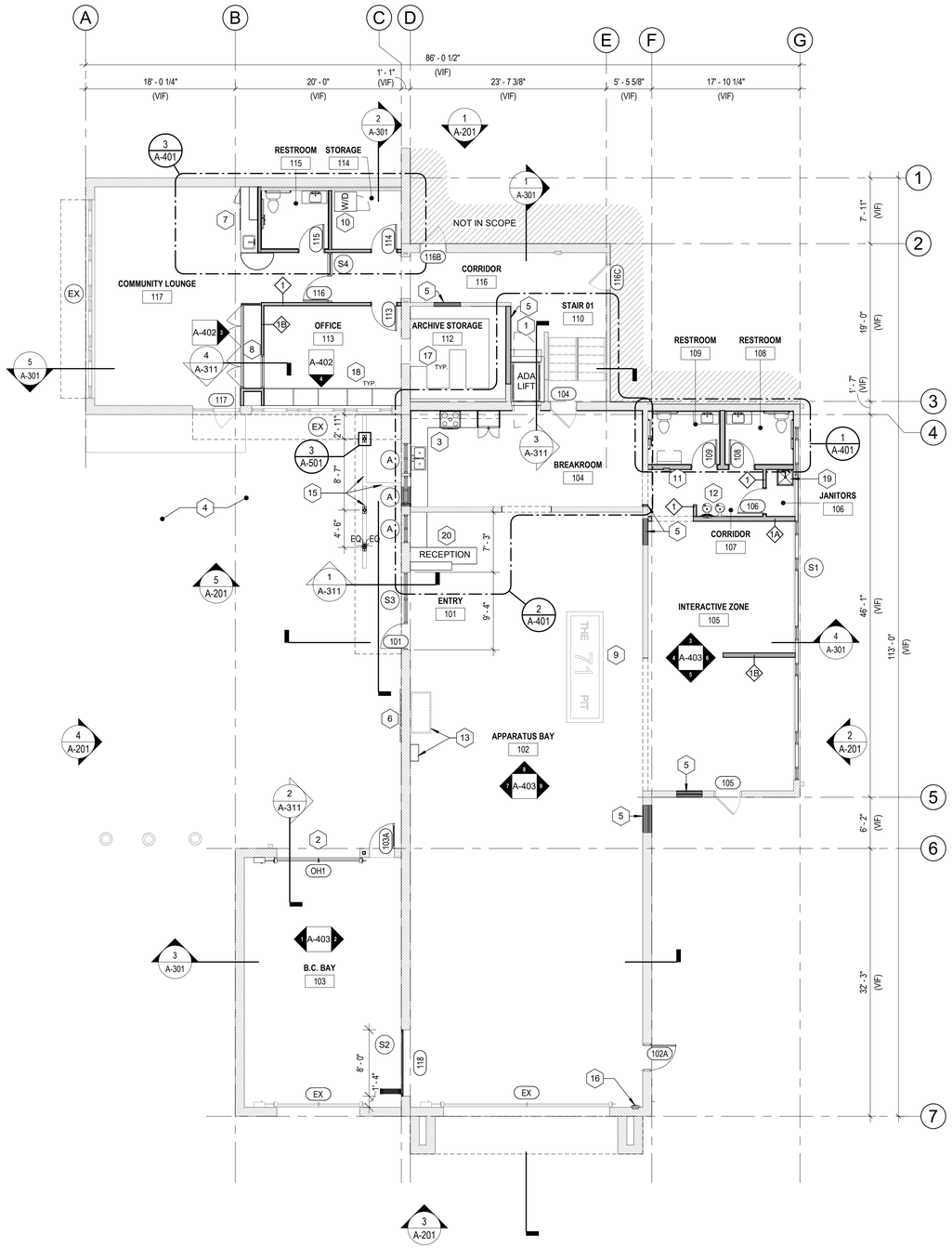


2 BASEMENT LEVEL PLAN

1/8" = 1'-0"



1 MAIN LEVEL PLAN

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9. EXISTING BUILDING SHOWS NO SIGNS OF ROOF LEAKS. GC IS RESPONSIBLE FOR WATER-TIGHT ROOF LEAK AFTER CONSTRUCTION.
10. INTERNAL ROOF DRAINS TO BE TESTED BEFORE AND AFTER CONSTRUCTION.

FLOOR PLAN KEYNOTES:

1. ADA LIFT. RE: DETAILS & MEP DRAWINGS
2. OVERHEAD GLASS DOOR TO MATCH EXISTING; RE: DOOR SCHEDULE FOR DETAIL & FINISHES
3. BREAKROOM CASEWORK & APPLIANCES; RE MEP AND INTERIOR ELEVATIONS / CALLOUTS FOR ADDITIONAL INFORMATION
4. ENTRY PLAZA; RE: LANDSCAPE & CIVIL DRAWINGS
5. INFILL WALL TO MATCH EXISTING ADJACENT WALL CONSTRUCTION INCLUDING THICKNESS & FINISH
6. EXISTING MUSEUM SIGNAGE TO REMAIN, PROTECT DURING CONSTRUCTION
7. KITCHENETTE CASEWORK & APPLIANCES; RE MEP AND INTERIOR ELEVATIONS / CALLOUTS FOR ADDITIONAL INFORMATION
8. ARTIFACT DISPLAY CASE; RE: INTERIOR ELEVATIONS
9. EXISTING PIT GRAPHIC ON FLOOR TO REMAIN, PROTECT DURING CONSTRUCTION
10. COMBO WASHER/DRYER, RE: MEP DRAWINGS
11. 1 1/2 SQUARE SEMI-RECESSED FIRE EXTINGUISHER CABINET PER MANUFACTURER SPECIFICATIONS.
12. DRINKING FOUNTAIN W/ BOTTLE FILLING STATION
13. EXISTING WHOLE BUILDING EXHAUST DUCTWORK AND EQUIPMENT TO REMAIN. CONTROL PANEL TO BE RELOCATED AND MOUNTED ON OTHER SIDE OF DUCT; RE: MEP DRAWINGS
14. STEEL COLUMNS & BEAMS FOR ADA LIFT. RE: STRUCTURAL DRAWINGS
15. EXISTING CONCRETE WALLS TO REMAIN, PATCH / REPAIR WALLS AS NECESSARY AT CHIPPED AREAS AND EXPOSED REBAR. RE: STRUCTURAL DRAWINGS
16. WALL MOUNTED FIRE EXTINGUISHER CABINET
17. ARCHIVE STORAGE SHELVES
18. OFFICE CASEWORK
19. MOP SINK; RE: MEP DRAWINGS
20. RECEPTION DESK W/ PANIC BUTTON; RE: DETAILS & MEP DWGS

FLOOR PLAN LEGEND

- CONCRETE WALL
- NEW WALL
- CABINET / CASEWORK
- ROOF OR STRUCTURE OVERHANG ABOVE
- 101 — DOOR
- 1t — WINDOW
- STOREFRONT WINDOW
- # — WALL PARTITION TYPES (RE: A-600)

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

PRELIMINARY NOT FOR CONSTRUCTION

ARCHITECTURAL WORKSHOP . DENVER, COLORADO

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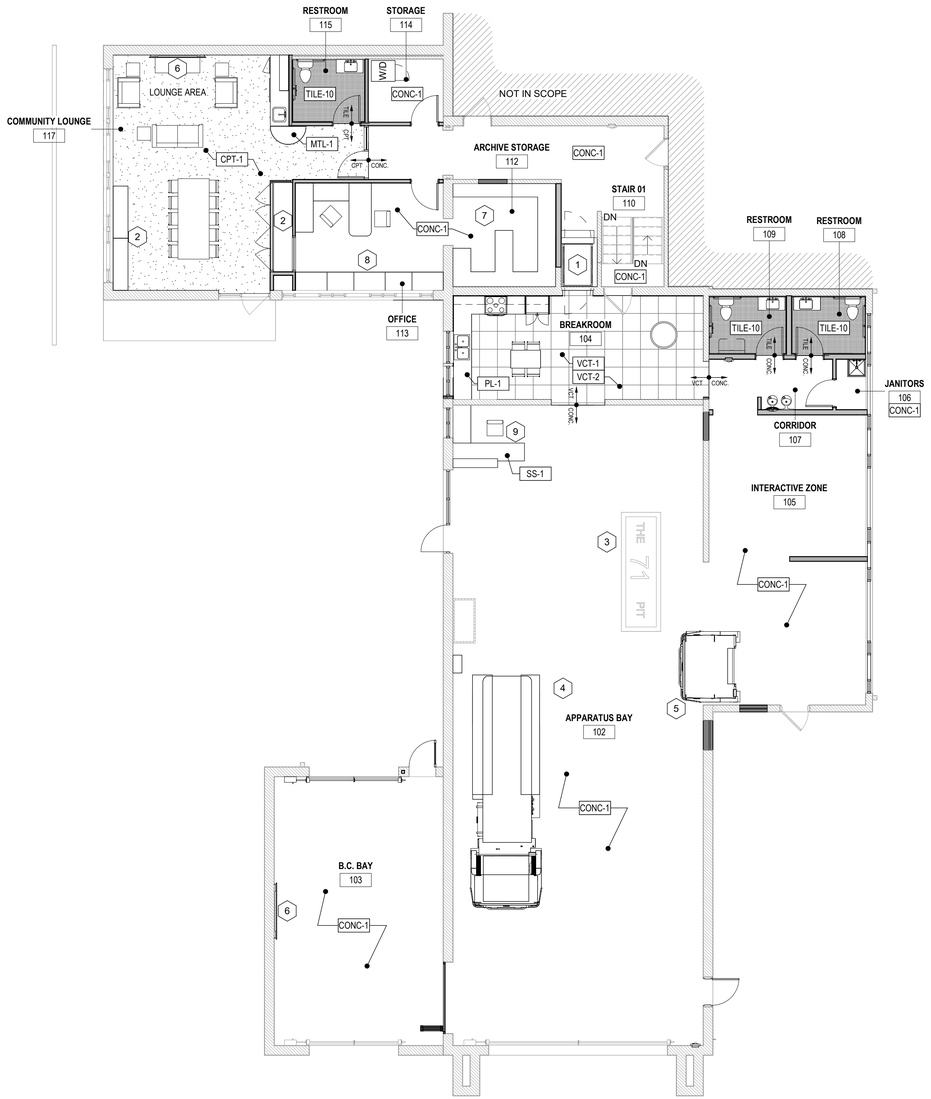
FLOOR PLANS

A-101



1 MAIN LEVEL FINISH PLAN
1/8" = 1'-0"

INTERIOR FINISH LEGEND:

PAINT

P-1	MANUFACTURER:	SHERWIN WILLIAMS
	COLOR:	TBD
	FINISH:	TBD
	LOCATIONS:	RE: INTERIOR ELEVATIONS
P-2	MANUFACTURER:	SHERWIN WILLIAMS
	COLOR:	TBD
	FINISH:	TBD
	LOCATIONS:	RE: INTERIOR ELEVATIONS

WALLCOVERING

WC-1	MANUFACTURER:	SPOONFLOWER
	COLOR:	CEREME
	FINISH:	MATTE
	LOCATIONS:	RE: INTERIOR ELEVATIONS
WC-2	MANUFACTURER:	SPOONFLOWER
	COLOR:	ATOMIC STARBURST BLUE
	FINISH:	MATTE
	LOCATIONS:	RE: INTERIOR ELEVATIONS

COUNTERTOPS

SS-1	MANUFACTURER:	WILSONART
	COLOR:	TBD
	FINISH:	TBD
	LOCATIONS:	RECEPTION DESK
MTL-1	MANUFACTURER:	TBD
	COLOR:	BRUSHED ALUMINUM
	FINISH:	BRUSHED ALUMINUM
	LOCATIONS:	LOUNGE KITCHENETTE
PL-1	MANUFACTURER:	WILSONART
	COLOR:	GLACIER BOOMERANG
	FINISH:	HIGH GLOSS
	LOCATIONS:	BREAKROOM

PLASTIC LAMINATE

PL-2	MANUFACTURER:	FORMICA
	COLOR:	LIQUID GLASS 8240-90
	FINISH:	GLOSS FINISH
	LOCATIONS:	BREAKROOM CABINETS
PL-3	MANUFACTURER:	TBD
	COLOR:	TBD
	FINISH:	MATTE FINISH
	LOCATIONS:	LOUNGE KITCHENETTE CABINETS
PL-4	MANUFACTURER:	TBD
	COLOR:	TBD
	FINISH:	BRUSHED STAINLESS STEEL
	LOCATIONS:	RECEPTION DESK

WALL BASE

WB-1	MANUFACTURER:	JOHNSONITE
	COLOR:	GRAY
	FINISH:	DURACOVE 4"
	LOCATIONS:	RE: FINISH PLAN
WB-2	1X4 WOOD TRIM BASEBOARD PAINTED	

WALL TILE

TL-1	MANUFACTURER:	FIRECLAY TILE
	COLOR/FINISH:	CALCITE - SATIN
	SIZE:	2X2
	LOCATIONS:	RE: INTERIOR ELEVATIONS
TL-2	MANUFACTURER:	FIRECLAY TILE
	COLOR/FINISH:	EMBER - SATIN
	SIZE:	2X2
	LOCATIONS:	INTERIOR ELEVATIONS
TL-3	MANUFACTURER:	FIRECLAY TILE
	COLOR/FINISH:	LICHEN - SATIN
	SIZE:	2X2
	LOCATIONS:	INTERIOR ELEVATIONS
TL-4	MANUFACTURER:	FIRECLAY TILE
	COLOR/FINISH:	DAISY - GLOSS
	SIZE:	2X6
	LOCATIONS:	INTERIOR ELEVATIONS
TL-5	MANUFACTURER:	FIRECLAY TILE
	COLOR/FINISH:	PEWTER - GLOSS
	SIZE:	2X6
	LOCATIONS:	RE: INTERIOR ELEVATIONS
TL-6	MANUFACTURER:	FIRECLAY TILE
	COLOR/FINISH:	TURQUOISE - GLOSS
	SIZE:	2X6
	LOCATIONS:	INTERIOR ELEVATIONS
TL-7	MANUFACTURER:	FIRECLAY TILE
	COLOR/FINISH:	GLACIER BAY - GLOSS
	SIZE:	2X6
	LOCATIONS:	INTERIOR ELEVATIONS
TL-8	MANUFACTURER:	FIRECLAY TILE
	COLOR/FINISH:	EVERGREEN - GLOSS
	SIZE:	2X6
	LOCATIONS:	RE: INTERIOR ELEVATIONS
TL-9	MANUFACTURER:	FIRECLAY TILE
	COLOR/FINISH:	TBD - SATIN
	SIZE:	2X6
	LOCATIONS:	RE: INTERIOR ELEVATIONS

BEADBOARD CEILING

CLG-1	MANUFACTURER:	ARMSTRONG WOODWORKS
	COLOR:	MATCH EXISTING
	LOCATIONS:	RE: CEILING PLAN

FLOORING

CONC-1	MANUFACTURER:	N/A EXISTING
	COLOR:	SEALED CONCRETE FLOOR
	LOCATIONS:	RE: FINISH PLAN
CPT-1	MANUFACTURER:	MOHAWK GROUP - GT405
	COLOR:	BONE 839
	LOCATIONS:	RE: FINISH PLAN
VCT-1	MANUFACTURER:	TARKETTE - VCT II
	COLOR:	STONE GRAY 602
	SIZE:	12X12
	LOCATIONS:	RE: FINISH PLAN
VCT-2	MANUFACTURER:	TARKETTE - VCT II
	COLOR:	SOLID WHITE 060
	SIZE:	12X12
	LOCATIONS:	RE: FINISH PLAN
TL-10	MANUFACTURER:	STONE SOURCE - ICOLORI
	COLOR/FINISH:	BIANCO - MATTE
	SIZE:	2X2
	LOCATIONS:	RE: FINISH PLAN
	NOTE:	THIN GROUT LINES - EPOXY FINISH OVER GROUT

METAL TRIMS / TRANSITIONS

TR-1	MANUFACTURER:	JOHNSONITE
	PROFILE:	REDUCER
	SIZE:	COORDINATE TO TRANSITION CONDITIONS
	FINISH:	TBD
	LOCATIONS:	ALL LVT TO CONCRETE FLOORS
TR-2	MANUFACTURER:	SCHLUTER
	PROFILE:	DILEX-AHK
	SIZE:	10 MM
	FINISH:	SATIN ANODIZED - AE
	LOCATIONS:	TILE WALL TO FLOOR TRANSITIONS IN RESTROOMS
TR-3	MANUFACTURER:	SCHLUTER
	PROFILE:	JOLLY EDGE TRIM 3-4.5MM
	SIZE:	COORDINATE TO TRANSITION CONDITIONS
	FINISH:	BRUSHED CHROME ANODIZED
	LOCATIONS:	RE: INTERIOR ELEVATIONS
TR-4	MANUFACTURER:	EAGLE ALUMINUM
	PROFILE:	E-7364
	SIZE:	.8125" FLUTED FACE
	FINISH:	TBD
	LOCATIONS:	RE: INTERIOR ELEVATIONS

GENERAL NOTES:

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FLOOR PLAN KEYNOTES:

1. ADA LIFT. RE: DETAILS & MEP DRAWINGS
2. ARTIFACT DISPLAY CASE; RE: INTERIOR ELEVATIONS
3. EXISTING PIT GRAPHIC ON FLOOR TO REMAIN, PROTECT DURING CONSTRUCTION
4. EXHIBIT ENGINE FOR DISPLAY ONLY; RE: EXHIBIT DRAWINGS
5. EXHIBIT CLIMB-THRU ENGINE CAB; RE: EXHIBIT DRAWINGS
6. TV MONITOR & AV EQUIPMENT; RE: AV DRAWINGS
7. ARCHIVE STORAGE SHELVES
8. OFFICE CASEWORK
9. RECEPTION DESK CASEWORK

FLOOR PLAN LEGEND

- CONCRETE WALL
- NEW WALL
- CABINET / CASEWORK
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FINISH PLANS

A-102

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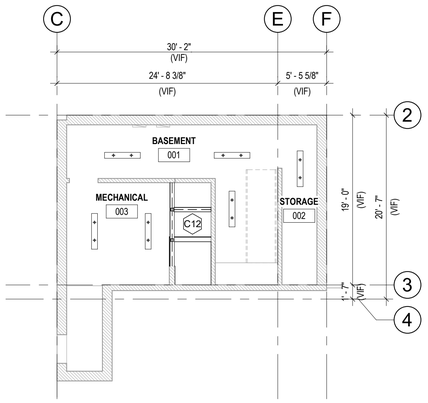
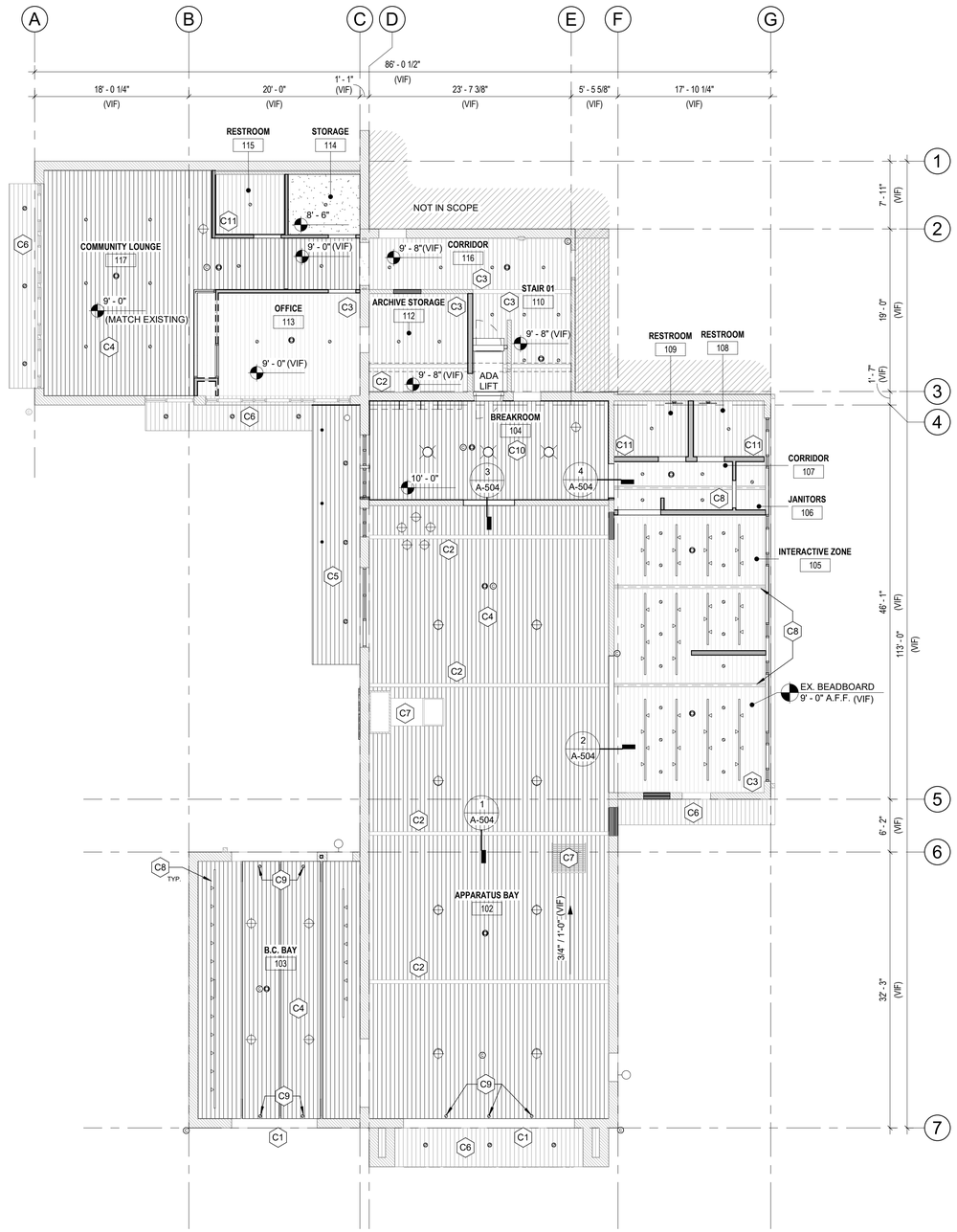


2 BASEMENT LEVEL CEILING PLAN

1/8" = 1'-0"



1 MAIN LEVEL CEILING PLAN

1/8" = 1'-0"

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CEILING PLAN KEYNOTES:

NOTE: FINAL LOCATIONS OF CAMERAS TO BE VIF W/ OWNER PRIOR TO INSTALL. GC TO COORDINATE W/ LOW VOLT DESIGNER FOR POWER REQUIREMENTS

- C1 EXISTING OVERHEAD DOORS TO REMAIN, PROTECT DURING CONSTRUCTION
- C2 EXISTING GLU-LAM BEAM TO REMAIN, PROTECT DURING CONSTRUCTION. PAINT P-X
- C3 EXISTING BEADBOARD ROOF SHEATING TO REMAIN, PATCH & REPAIR ALL PENETRATIONS AND DAMAGED AREAS TO MATCH EXISTING, STAIN TO MATCH EXISTING BEADBOARD FINISH
- C4 BEADBOARD CEILING ON FRAMING W/ R-30 INSULATION, STAIN TO MATCH EXISTING BEADBOARD FINISH
- C5 NEW ENTRY CANOPY
- C6 EXISTING CANOPY TO REMAIN, PROTECT DURING CONSTRUCTION
- C7 EXISTING INTAKE LOUVER & DUCTWORK FOR WHOLE BUILDING EXHAUST SYSTEM
- C8 EXISTING STEEL BEAM/JOISTS, PAINT P-X
- C9 RECESSED CAN LIGHTS TO SERVE AS RED ACCENT LIGHTING FOR AFTER HOURS
- C10 DROPPED BEADBOARD CEILING ON FRAMING, STAIN TO MATCH EXISTING BEADBOARD FINISH
- C11 EXISTING BEADBOARD ROOF SHEATING TO REMAIN, PATCH & REPAIR ALL PENETRATIONS AND DAMAGED AREAS TO MATCH EXISTING, PAINT P-1
- C12 STEEL BEAMS & COLUMNS, PAINTED P-X. RE: STRUCTURAL DRAWINGS

CEILING LEGEND:

- LED PENDANT
- RECESSED CAN LIGHT
- LINEAR LED PENDANT
- WALL SCONCE
- TRACK LIGHTING
- BEADBOARD CEILING
- GYP BD. CEILING
- CAMERA
- SPEAKER
- OCCUPANCY SENSOR

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CEILING PLANS

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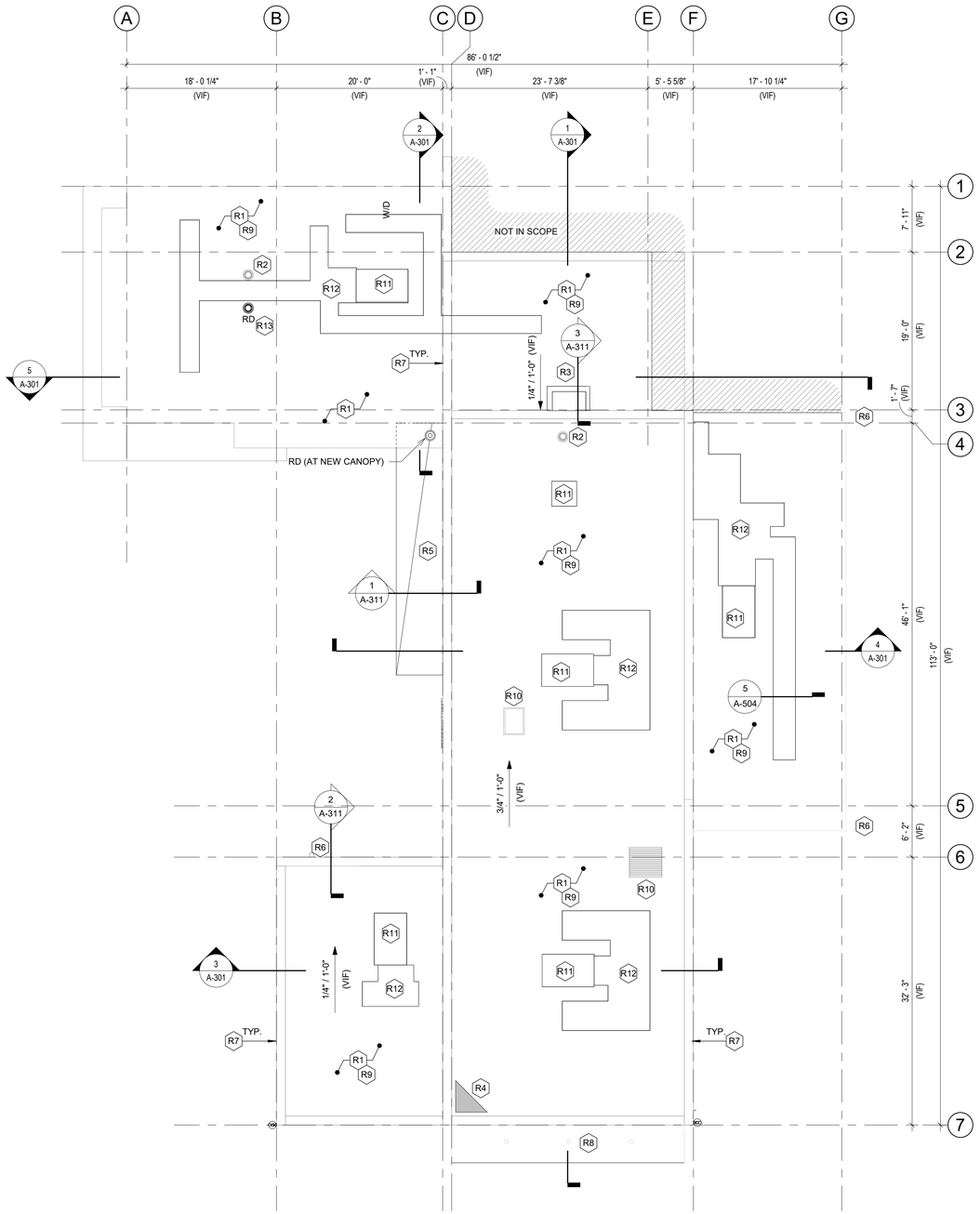

1 ROOF PLAN
1/8" = 1'-0"

GENERAL NOTES:

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ROOF PLAN KEYNOTES:

- R1 EXISTING ROOF MEMBRANE & ASSEMBLY TO REMAIN, PROTECT DURING CONSTRUCTION. PATCH & REPAIR ANY EXISTING DAMAGED AREAS AND ALL PENETRATIONS FROM EXISTING RTU'S AND OTHER EQUIPTMENT THAT IS TO BE DEMOLISHED & DISPOSED OF WITH AN EQUAL OR BETTER MATERIAL; RE: MEP DRAWINGS
- R2 EXISTING ROOF DRAIN TO REMAIN, PROTECT DURING CONSTRUCTION
- R3 EXISTING CHIMNEY TO REMAIN, PROTECT DURING CONSTRUCTION
- R4 EXISTING SIREN TOWER TO REMAIN, PROTECT DURING CONSTRUCTION
- R5 ENTRY CANOPY, RE: EXTERIOR ELEVATIONS
- R6 EXISTING ROOF SCUPPERS / GUTTERS & DOWNSPOUTS TO REMAIN, PROTECT DURING CONSTRUCTION
- R7 EXISTING PARAPET & METAL COPING TO REMAIN, PROTECT DURING CONSTRUCTION
- R8 EXISTING CANOPY TO REMAIN, PROTECT DURING CONSTRUCTION
- R9 EXISTING ROOFTOP MECHANICAL EQUIPTMENT & CURBS TO BE DEMOLISHED & DISPOSED OF IN ITS ENTIRETY, REPAIR TPO ROOF AND PREP AREA FOR NEW RTU RE: MEP
- R10 EXISTING INTAKE LOUVER & DUCTWORK FOR THE BUILDING EXHAUST SYSTEM TO REMAIN. PROTECT DURING CONSTRUCTION
- R11 ROOFTOP MECHANICAL UNITS & CURBS; RE: MEP DRAWINGS
- R12 ENCLOSED & INSULATED ROOFTOP DUCTWORK; RE: MEP DRAWINGS & DETAILS
- R13 ROOF DRAIN, TIE INTO EXISTING ROOF DRAIN LINE; RE: MEP DRAWINGS

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ROOF PLAN

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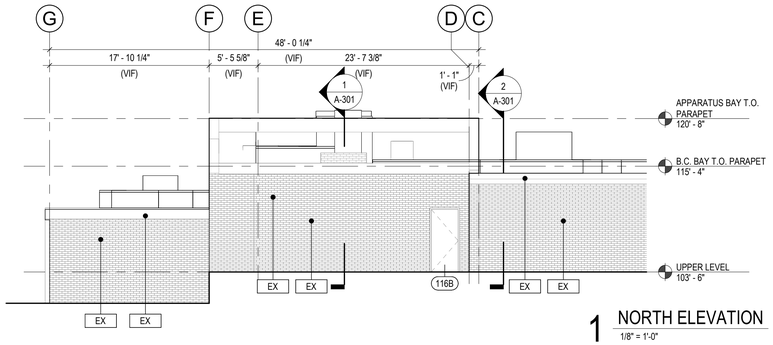
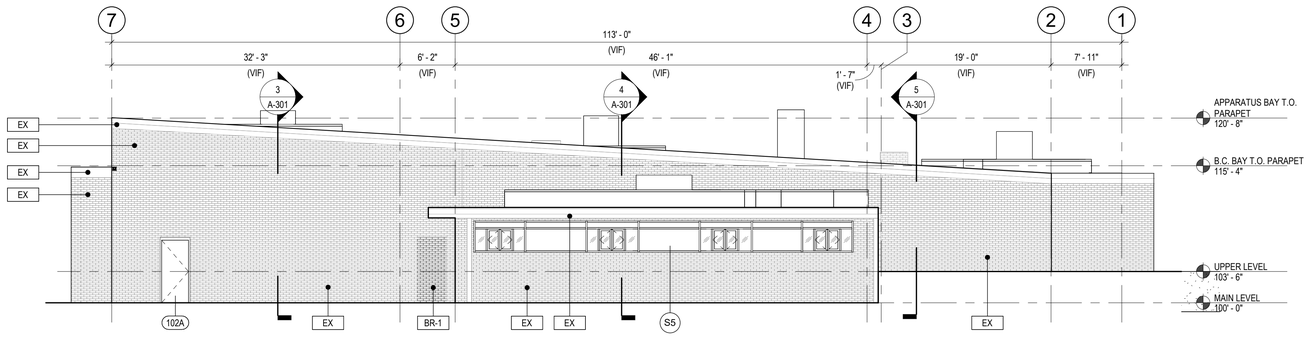
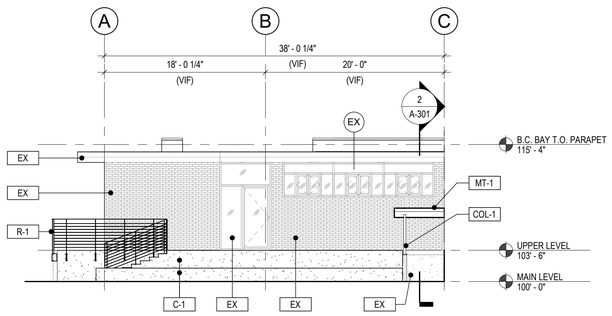


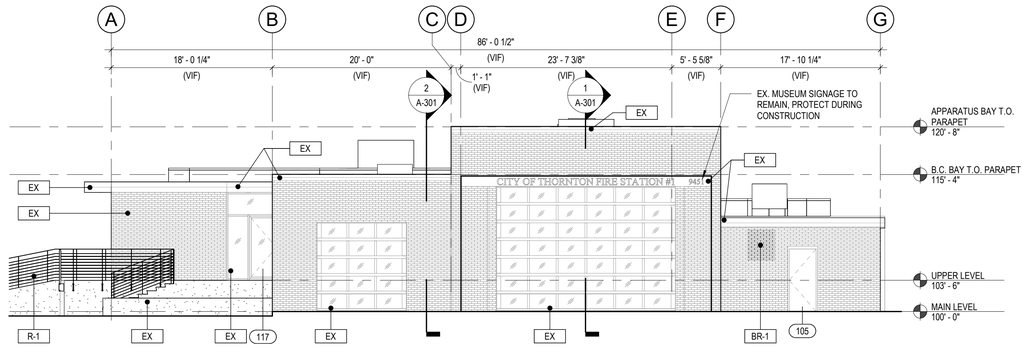
1 NORTH ELEVATION
1/8" = 1'-0"



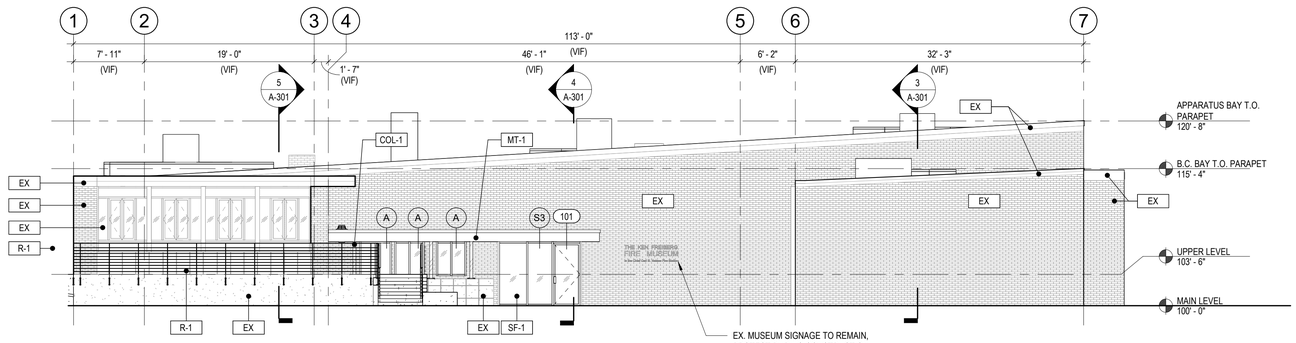
2 EAST ELEVATION
1/8" = 1'-0"



5 SOUTH ENTRY PLAZA ELEVATION
1/8" = 1'-0"



3 SOUTH ELEVATION
1/8" = 1'-0"



4 WEST ELEVATION
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EXTERIOR FINISH LEGEND

- C-1 — **CONCRETE** — FINISH: TBD
- SF-1 — **STOREFRONT SYSTEM** — FINISH: CLEAR ANODIZED ALUMINUM
- MT-1 — **METAL PANEL CANOPY** — FINISH: TBD
- R-1 — **METAL RAILING** — FINISH: PAINTED, COLOR TBD
- BR-1 — **BRICK (SALVAGE FROM NEW OPENINGS IN EXISTING BRICK WALL; RE: DEMO PLAN)** — BRICK FINISH: EXISTING - BOND TO MATCH EXISTING; MORTAR FINISH: COLOR & JOINT STYLE TO MATCH EXISTING
- COL-1 — **COLUMN (STEEL HSS; RE: STRUCTURAL)** — FINISH: TBD

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

PRELIMINARY
NOT FOR CONSTRUCTION

ARCHITECTURAL WORKSHOP . DENVER, COLORADO

DATE	DESCRIPTION
05.10.2024	PRE-DESIGN (30% CD)
07.19.2024	PRELIMINARY DESIGN (70% CD)

DRAWN BY: GB/JO CHECKED BY: MB
PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

EXTERIOR ELEVATIONS

A-201

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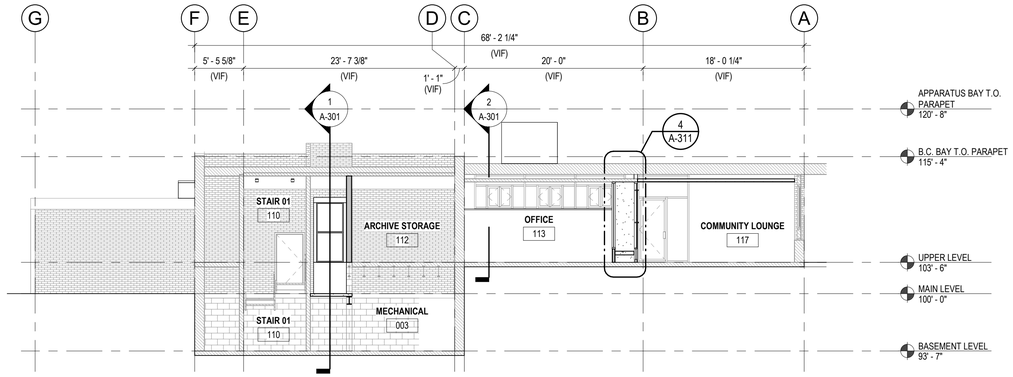
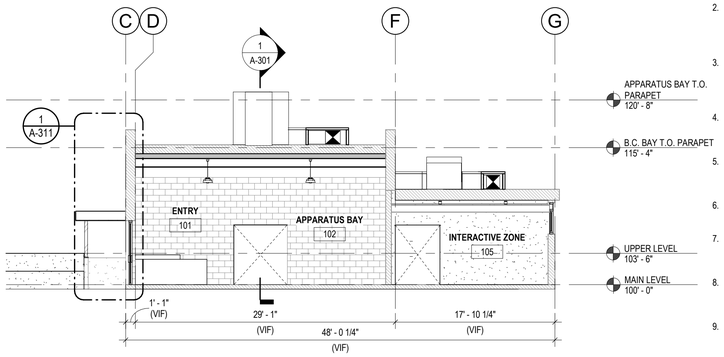
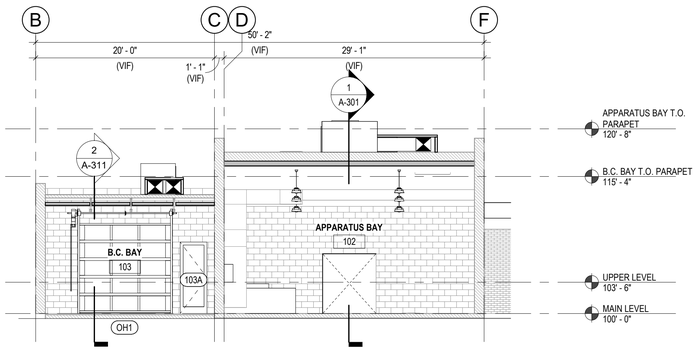


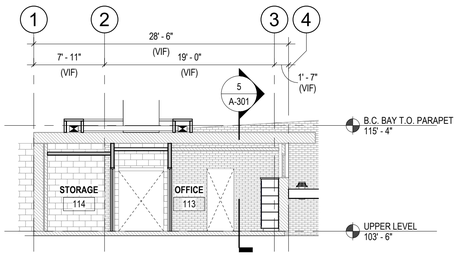
5 BUILDING SECTION
1/8" = 1'-0"



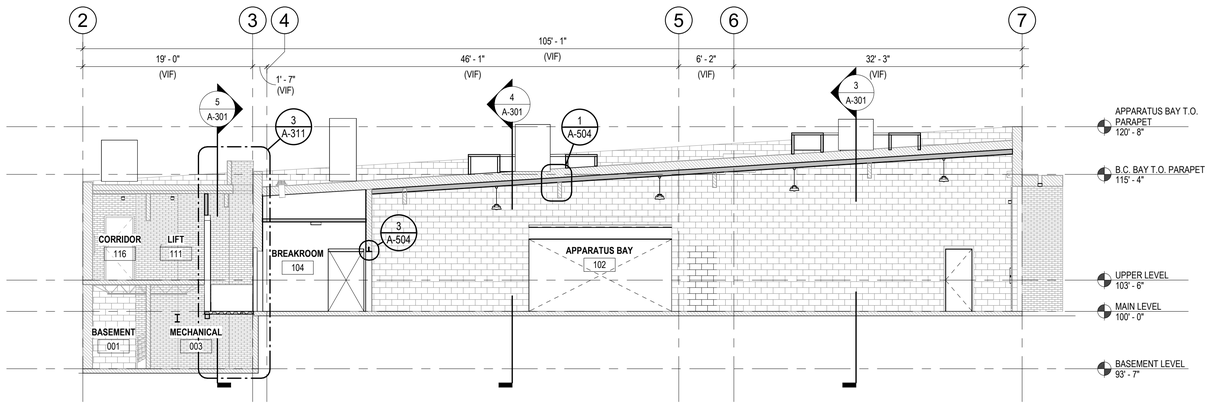
4 BUILDING SECTION
1/8" = 1'-0"



3 BUILDING SECTION - BAY
1/8" = 1'-0"



2 BUILDING SECTION UPPER LEVEL
1/8" = 1'-0"



1 BUILDING SECTION
1/8" = 1'-0"

GENERAL NOTES:

1. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN. ANY DISCREPANCIES IN DRAWINGS AND/OR EXISTING CONDITIONS SHOULD BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT FOR CLARIFICATION.
2. THE ARCHITECT DISCLAIMS ANY RESPONSIBILITIES AND/OR KNOWLEDGE OF ASBESTOS. THE OWNER ACCEPTS ALL RESPONSIBILITY FOR REMOVAL AND DISPOSAL OF ASBESTOS IF DISCOVERED.
3. DOORS IN STUD WALLS THAT ARE NOT SPECIFICALLY LOCATED, PROVIDE A HINGE SIDE JAMB DIMENSION OF 4" FROM DOOR OPENING TO ADJACENT WALL. ALL DOORS TO HAVE KING STUDS (2X) BOTH SIDES.
4. PROVIDE BLOCKING IN THE WALL AS REQUIRED TO SECURE COUNTERTOPS, CABINETRY AND SHELVING. GC TO COORDINATE ADDITIONAL BLOCKING WITH OWNER FOR FF&E.
5. ALL DIMENSIONS ARE FROM FACE OF STUD, CABINETS, ROUGH OPENINGS OR CENTERLINE OF GRID UNLESS NOTED OTHERWISE.
6. ALL INTERIOR WALLS TO BE WALL TYPE 1 UNLESS OTHERWISE NOTED.
7. SUBMIT MILLWORK SHOP DRAWINGS AND FINISH SUBMITTALS TO ARCHITECT FOR APPROVAL BEFORE FABRICATION OR INSTALLATION.
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9. EXISTING BUILDING SHOWS NO SIGNS OF ROOF LEAKS. GC IS RESPONSIBLE FOR WATER-TIGHT ROOF LEAK AFTER CONSTRUCTION.
10. INTERNAL ROOF DRAINS TO BE TESTED BEFORE AND AFTER CONSTRUCTION.

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

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BUILDING SECTIONS

A-301

GENERAL NOTES:

1. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN. ANY DISCREPANCIES IN DRAWINGS AND/OR EXISTING CONDITIONS SHOULD BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT FOR CLARIFICATION.
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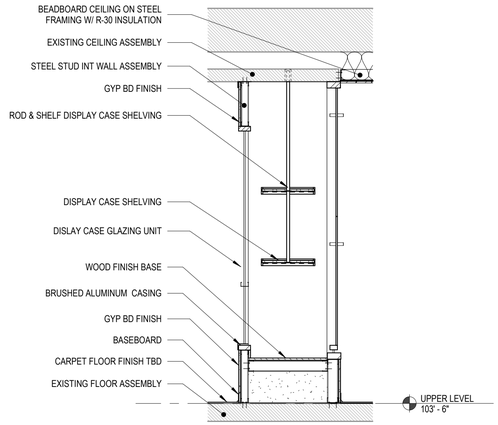
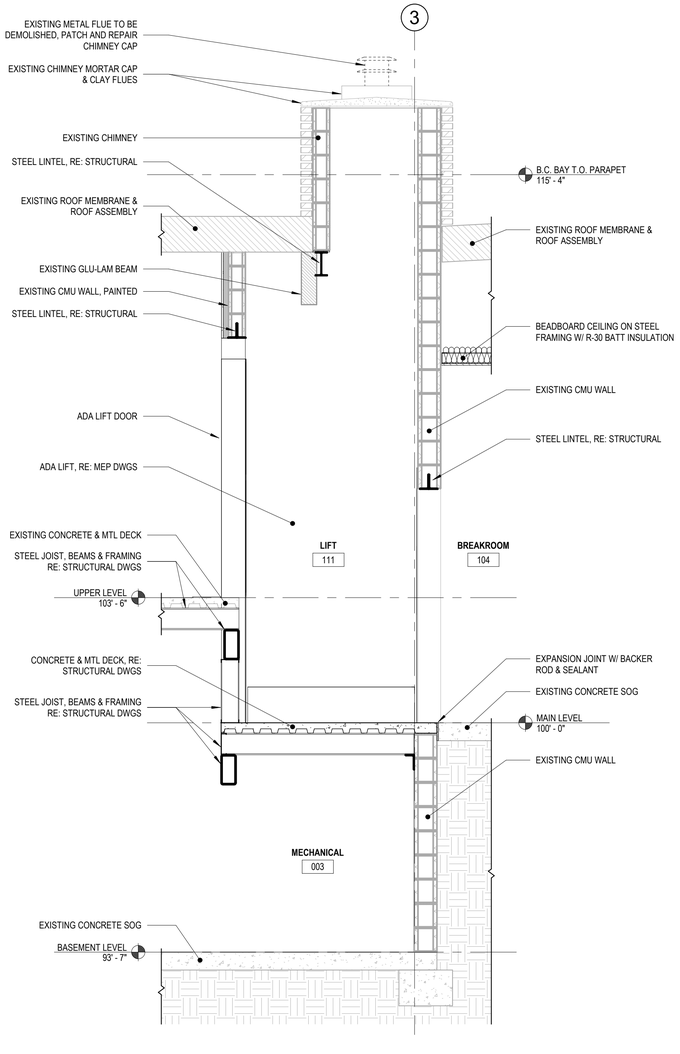
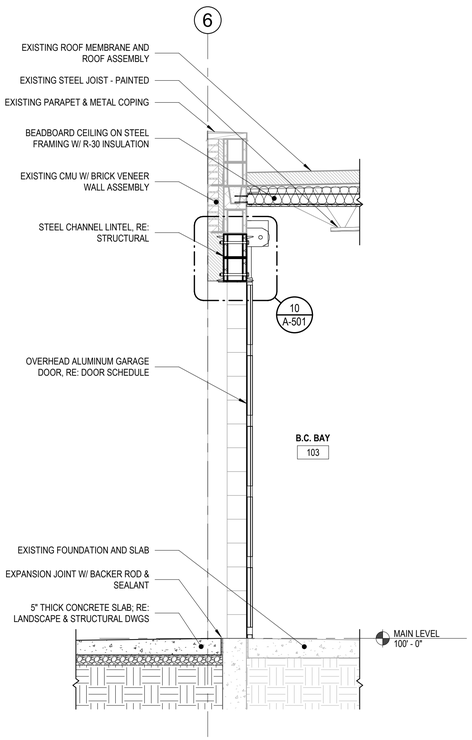


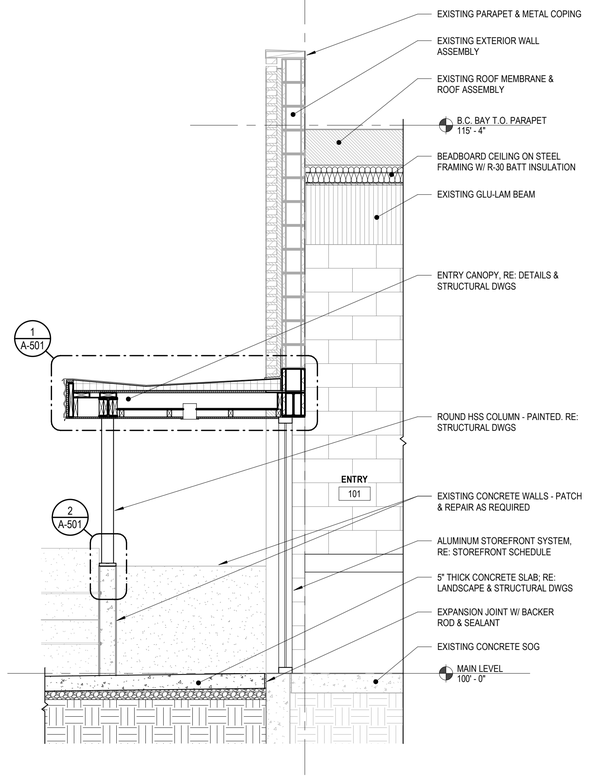
4 WALL SECTION THROUGH DISPLAY CASE
1/2" = 1'-0"



3 WALL SECTION THROUGH ADA LIFT
1/2" = 1'-0"



2 WALL SECTION THROUGH O.H. DOOR
1/2" = 1'-0"



1 WALL SECTION THROUGH ENTRY CANOPY
1/2" = 1'-0"

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aw
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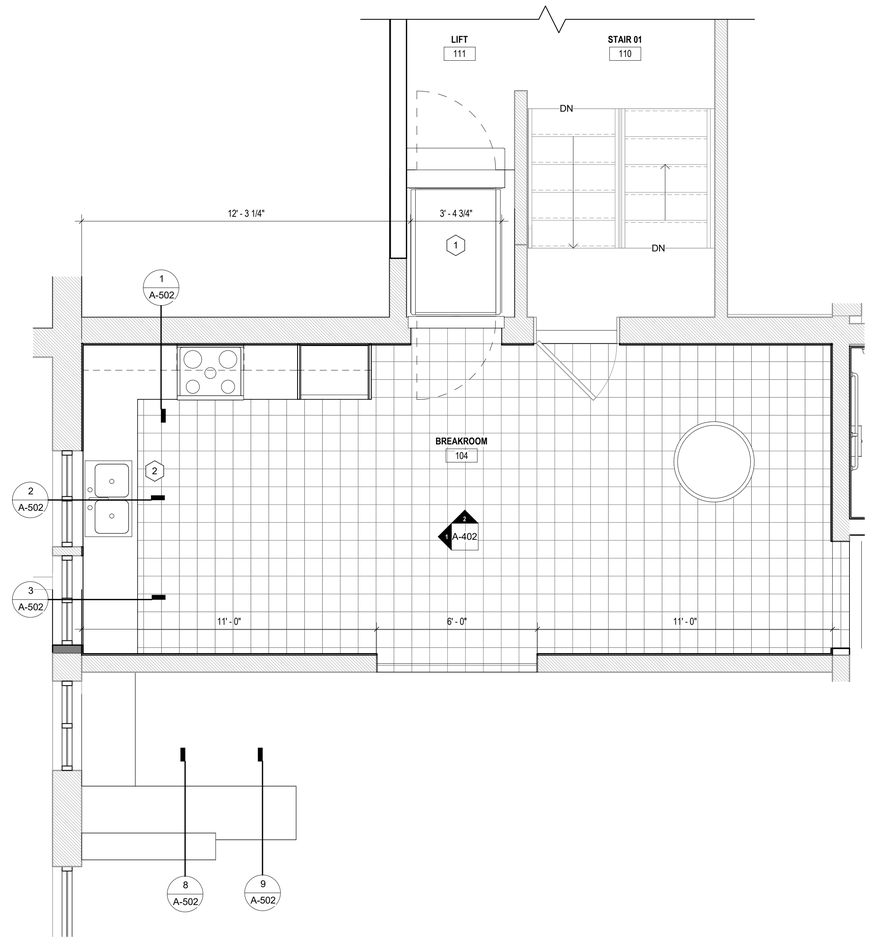
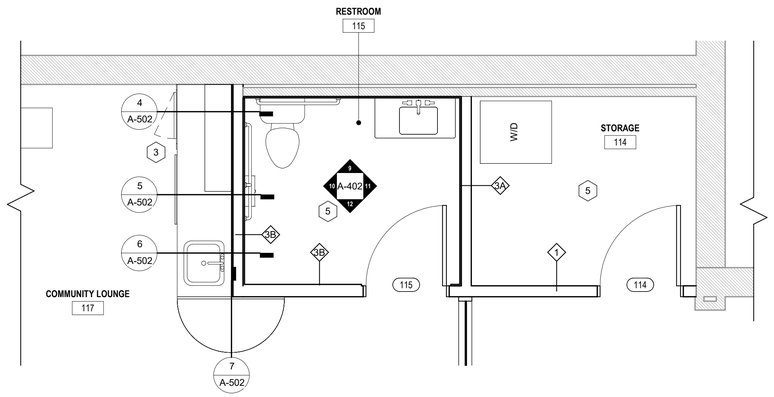
WALL SECTIONS

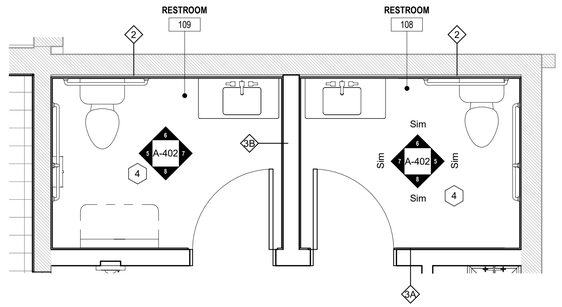
A-311



2 ENLARGED PLAN - KITCHEN
3/8" = 1'-0"



3 ENLARGED PLAN - UPPER LEVEL RESTROOM
3/8" = 1'-0"



1 ENLARGED PLAN - RESTROOM AT MAIN LEVEL
3/8" = 1'-0"

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ENLARGE PLAN KEYNOTES:

1. ADA LIFT. RE: DETAILS & MEP DRAWINGS
2. BREAKROOM CASEWORK & APPLIANCES; RE MEP AND INTERIOR ELEVATIONS / CALLOUTS FOR ADDITIONAL INFORMATION
3. KITCHENETTE CASEWORK & APPLIANCES; RE MEP AND INTERIOR ELEVATIONS / CALLOUTS FOR ADDITIONAL INFORMATION
4. EXISTING FLOOR DRAIN; RE: MEP DRAWINGS
5. NEW FLOOR DRAIN; RE: MEP DRAWINGS

FLOOR PLAN LEGEND

- CONCRETE WALL
- NEW WALL
- CABINET / CASEWORK
- ROOF OR STRUCTURE OVERHANG ABOVE
- DOOR (101)
- WINDOW (1t)
- STOREFRONT WINDOW
- WALL PARTITION TYPES (RE: A-600) (#)

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

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ENLARGED FLOOR PLANS

A-401

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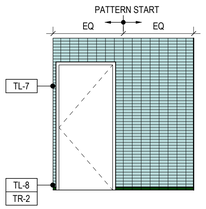
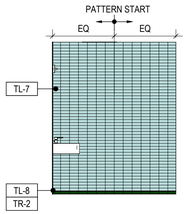
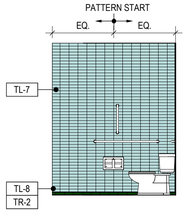


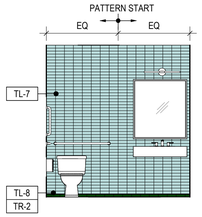
12 RESTROOM - 115
1/4" = 1'-0"



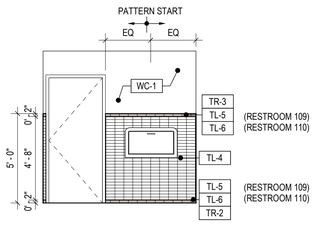
11 RESTROOM - 115
1/4" = 1'-0"



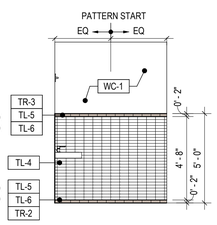
10 RESTROOM - 115
1/4" = 1'-0"



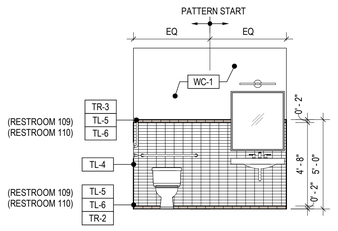
9 RESTROOM - 115
1/4" = 1'-0"



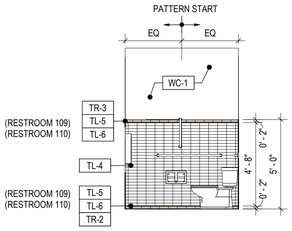
8 RESTROOM
1/4" = 1'-0"



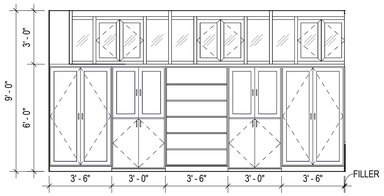
7 RESTROOM
1/4" = 1'-0"



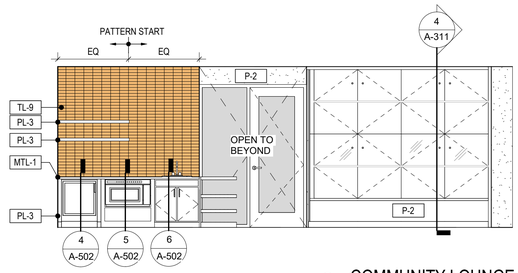
6 RESTROOM
1/4" = 1'-0"



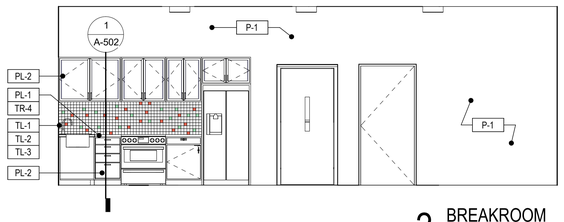
5 RESTROOM
1/4" = 1'-0"



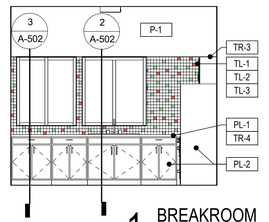
4 ARCHIVE OFFICE
1/4" = 1'-0"



3 COMMUNITY LOUNGE
1/4" = 1'-0"



2 BREAKROOM
1/4" = 1'-0"



1 BREAKROOM
1/4" = 1'-0"

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INTERIOR FINISH LEGEND:

PAINT

P-1	MANUFACTURER:	SHERWIN WILLIAMS
	COLOR:	TBD
	FINISH:	TBD
	LOCATIONS:	RE: INTERIOR ELEVATIONS
P-2	MANUFACTURER:	SHERWIN WILLIAMS
	COLOR:	TBD
	FINISH:	TBD
	LOCATIONS:	RE: INTERIOR ELEVATIONS

WALLCOVERING

WC-1	MANUFACTURER:	SPOONFLOWER
	COLOR:	CEREME
	FINISH:	MATTE
	LOCATIONS:	RE: INTERIOR ELEVATIONS
WC-2	MANUFACTURER:	SPOONFLOWER
	COLOR:	ATOMIC STARBURST BLUE
	FINISH:	MATTE
	LOCATIONS:	RE: INTERIOR ELEVATIONS

COUNTERTOPS

SS-1	MANUFACTURER:	WILSONART
	COLOR:	TBD
	FINISH:	TBD
	LOCATIONS:	RECEPTION DESK
MTL-1	MANUFACTURER:	TBD
	COLOR:	BRUSHED ALUMINUM
	FINISH:	BRUSHED ALUMINUM
	LOCATIONS:	LOUNGE KITCHENETTE
PL-1	MANUFACTURER:	WILSONART
	COLOR:	GLACIER BOOMERANG
	FINISH:	HIGH GLOSS
	LOCATIONS:	BREAKROOM

PLASTIC LAMINATE

PL-2	MANUFACTURER:	FORMICA
	COLOR:	LIQUID GLASS 8240-90
	FINISH:	GLOSS FINISH
	LOCATIONS:	BREAKROOM CABINETS
PL-3	MANUFACTURER:	TBD
	COLOR:	TBD
	FINISH:	MATTE FINISH
	LOCATIONS:	LOUNGE KITCHENETTE CABINETS
PL-4	MANUFACTURER:	TBD
	COLOR:	TBD
	FINISH:	BRUSHED STAINLESS STEEL
	LOCATIONS:	RECEPTION DESK

WALL BASE

WB-1	MANUFACTURER:	JOHNSONITE
	COLOR:	GRAY
	FINISH:	DURACOVE 4"
	LOCATIONS:	RE: FINISH PLAN
WB-2	1X4 WOOD TRIM BASEBOARD PAINTED	

WALL TILE

TL-1	MANUFACTURER:	FIRECLAY TILE
	COLOR/FINISH:	CALCITE - SATIN
	SIZE:	2X2
	LOCATIONS:	RE: INTERIOR ELEVATIONS
TL-2	MANUFACTURER:	FIRECLAY TILE
	COLOR/FINISH:	EMBER - SATIN
	SIZE:	2X2
	LOCATIONS:	INTERIOR ELEVATIONS
TL-3	MANUFACTURER:	FIRECLAY TILE
	COLOR/FINISH:	LICHEN - SATIN
	SIZE:	2X2
	LOCATIONS:	INTERIOR ELEVATIONS
TL-4	MANUFACTURER:	FIRECLAY TILE
	COLOR/FINISH:	DAISY - GLOSS
	SIZE:	2X6
	LOCATIONS:	INTERIOR ELEVATIONS
TL-5	MANUFACTURER:	FIRECLAY TILE
	COLOR/FINISH:	PEWTER - GLOSS
	SIZE:	2X6
	LOCATIONS:	RE: INTERIOR ELEVATIONS
TL-6	MANUFACTURER:	FIRECLAY TILE
	COLOR/FINISH:	TURQUOISE - GLOSS
	SIZE:	2X6
	LOCATIONS:	INTERIOR ELEVATIONS
TL-7	MANUFACTURER:	FIRECLAY TILE
	COLOR/FINISH:	GLACIER BAY - GLOSS
	SIZE:	2X6
	LOCATIONS:	INTERIOR ELEVATIONS
TL-8	MANUFACTURER:	FIRECLAY TILE
	COLOR/FINISH:	EVERGREEN - GLOSS
	SIZE:	2X6
	LOCATIONS:	RE: INTERIOR ELEVATIONS
TL-9	MANUFACTURER:	FIRECLAY TILE
	COLOR/FINISH:	TBD - SATIN
	SIZE:	2X6
	LOCATIONS:	RE: INTERIOR ELEVATIONS

BEADBOARD CEILING

CLG-1	MANUFACTURER:	ARMSTRONG WOODWORKS
	COLOR:	MATCH EXISTING
	LOCATIONS:	RE: CEILING PLAN

FLOORING

CONC-1	MANUFACTURER:	N/A EXISTING
	COLOR:	SEALED CONCRETE FLOOR
	LOCATIONS:	RE: FINISH PLAN
CPT-1	MANUFACTURER:	MOHAWK GROUP - GT405
	COLOR:	BONE 839
	LOCATIONS:	RE: FINISH PLAN
VCT-1	MANUFACTURER:	TARKETTE - VCT II
	COLOR:	STONE GRAY 602
	SIZE:	12X12
	LOCATIONS:	RE: FINISH PLAN
VCT-2	MANUFACTURER:	TARKETTE - VCT II
	COLOR:	SOLID WHITE 060
	SIZE:	12X12
	LOCATIONS:	RE: FINISH PLAN
TL-10	MANUFACTURER:	STONE SOURCE - ICOLORI
	COLOR/FINISH:	BIANCO - MATTE
	SIZE:	2X2
	LOCATIONS:	RE: FINISH PLAN
	NOTE:	THIN GROUT LINES - EPOXY FINISH OVER GROUT

METAL TRIMS / TRANSITIONS

TR-1	MANUFACTURER:	JOHNSONITE
	PROFILE:	REDUCER
	SIZE:	COORDINATE TO TRANSITION CONDITIONS
	FINISH:	TBD
	LOCATIONS:	ALL LVT TO CONCRETE FLOORS
TR-2	MANUFACTURER:	SCHLUTER
	PROFILE:	DILEX-AHK
	SIZE:	10 MM
		SATIN ANODIZED - AE
	FINISH:	TILE WALL TO FLOOR
	LOCATIONS:	TRANSITIONS IN RESTROOMS
TR-3	MANUFACTURER:	SCHLUTER
	PROFILE:	JOLLY EDGE TRIM 3-4.5MM
	SIZE:	COORDINATE TO TRANSITION CONDITIONS
	FINISH:	BRUSHED CHROME ANODIZED
	LOCATIONS:	RE: INTERIOR ELEVATIONS
TR-4	MANUFACTURER:	EAGLE ALUMINUM
	PROFILE:	E-7364
	SIZE:	.8125" FLUTED FACE
	FINISH:	TBD
	LOCATIONS:	RE: INTERIOR ELEVATIONS

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3. DOORS IN STUD WALLS THAT ARE NOT SPECIFICALLY LOCATED, PROVIDE A HINGE SIDE JAMB DIMENSION OF 4" FROM DOOR OPENING TO ADJACENT WALL. ALL DOORS TO HAVE KING STUDS (2X) BOTH SIDES.
4. PROVIDE BLOCKING IN THE WALL AS REQUIRED TO SECURE COUNTERTOPS, CABINETRY AND SHELVING. GC TO COORDINATE ADDITIONAL BLOCKING WITH OWNER FOR FF&E.
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THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

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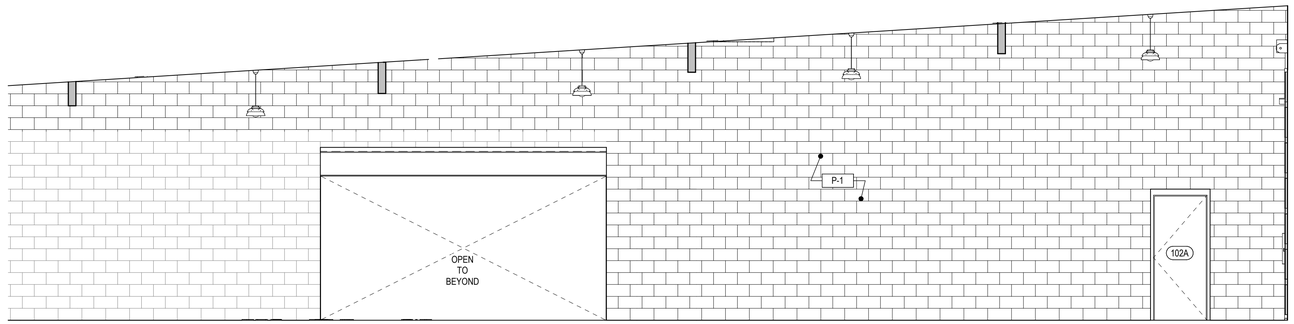
ARCHITECTURAL WORKSHOP . DENVER, COLORADO

DATE	DESCRIPTION
05.10.2024	PRE-DESIGN (30% CD)
07.19.2024	PRELIMINARY DESIGN (70% CD)

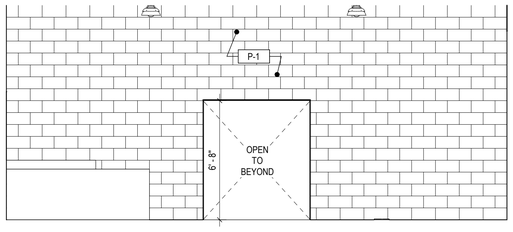
DRAWN BY: GB/JO CHECKED BY: MB
PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

INTERIOR ELEVATIONS

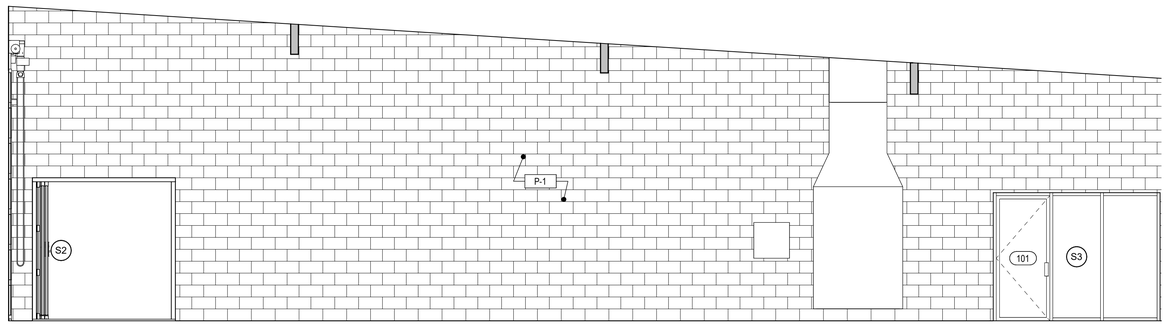
A-402



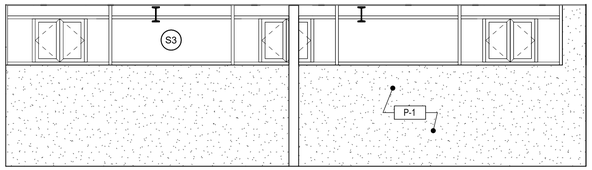
9 APPARATUS BAY EAST
1/4" = 1'-0"



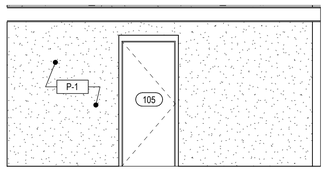
8 APPARATUS BAY NORTH
1/4" = 1'-0"



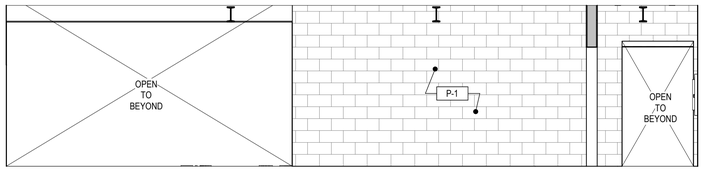
7 APPARATUS BAY WEST
1/4" = 1'-0"



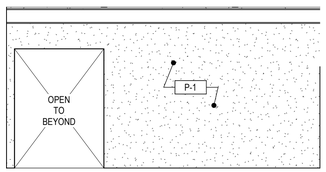
6 INTERACTIVE ZONE EAST
1/4" = 1'-0"



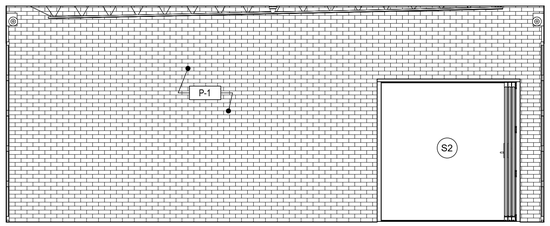
5 INTERACTIVE ZONE SOUTH
1/4" = 1'-0"



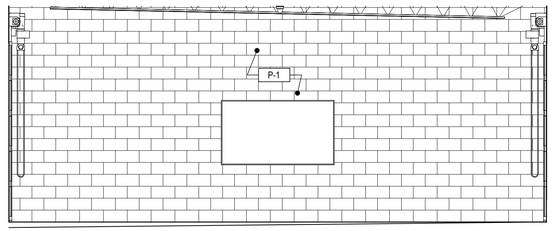
4 INTERACTIVE ZONE WEST
1/4" = 1'-0"



3 INTERACTIVE ZONE NORTH
1/4" = 1'-0"



2 B.C. BAY EAST
1/4" = 1'-0"



1 B.C. BAY WEST
1/4" = 1'-0"

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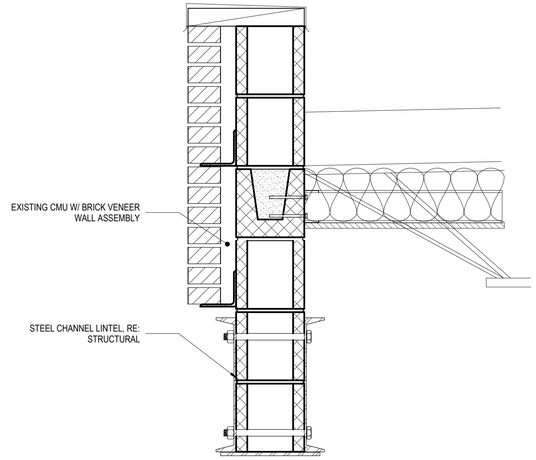
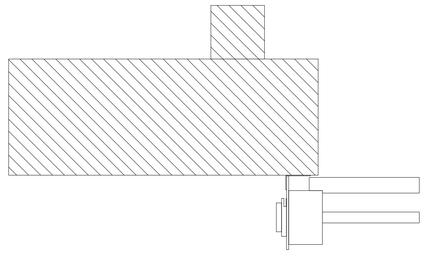
INTERIOR ELEVATIONS

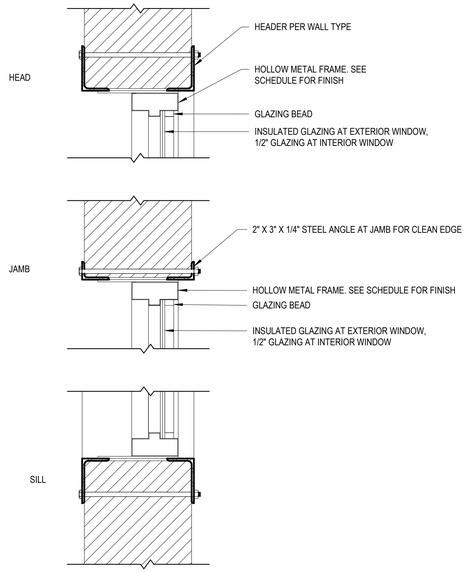
A-403



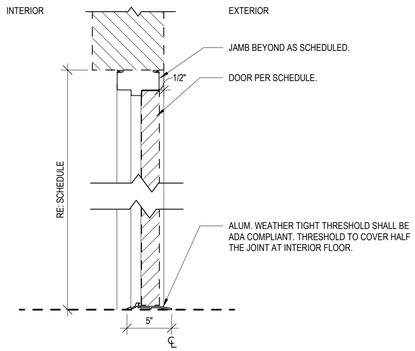
10 GARAGE DOOR HEAD DETAIL
1 1/2" = 1'-0"



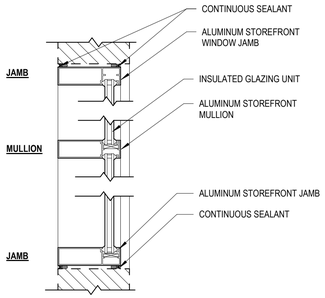
9 GARAGE DOOR JAMB DETAIL
1 1/2" = 1'-0"



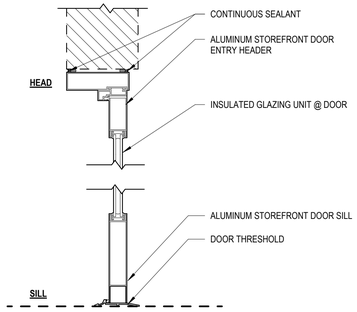
8 H.M. WINDOWS AT MASONRY OPENING
1 1/2" = 1'-0"



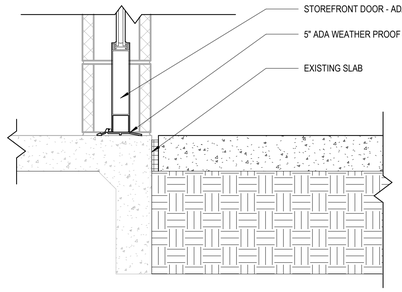
7 H.M. EXTERIOR DOOR DETAILS
1 1/2" = 1'-0"



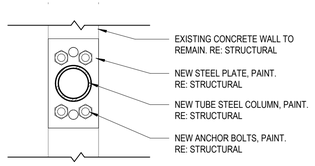
6 ALUMINUM STOREFRONT WINDOW DETAILS
1 1/2" = 1'-0"



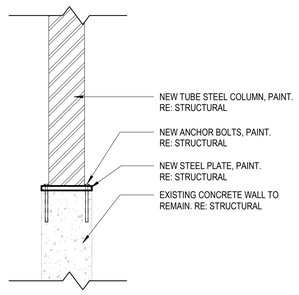
5 ALUMINUM STOREFRONT DOOR DETAILS
1 1/2" = 1'-0"



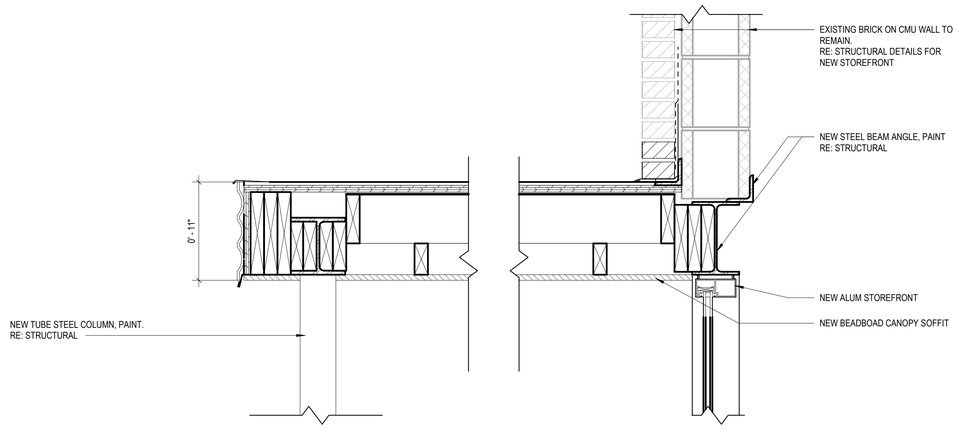
4 EXTERIOR EXPANSION JOINT
1 1/2" = 1'-0"



3 BASE PLATE AT COLUMN
1 1/2" = 1'-0"



2 ENTRY CANOPY COLUMN TO CONCRETE WALL
1 1/2" = 1'-0"



1 ENTRY CANOPY DETAIL
1 1/2" = 1'-0"

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EXTERIOR DETAILS

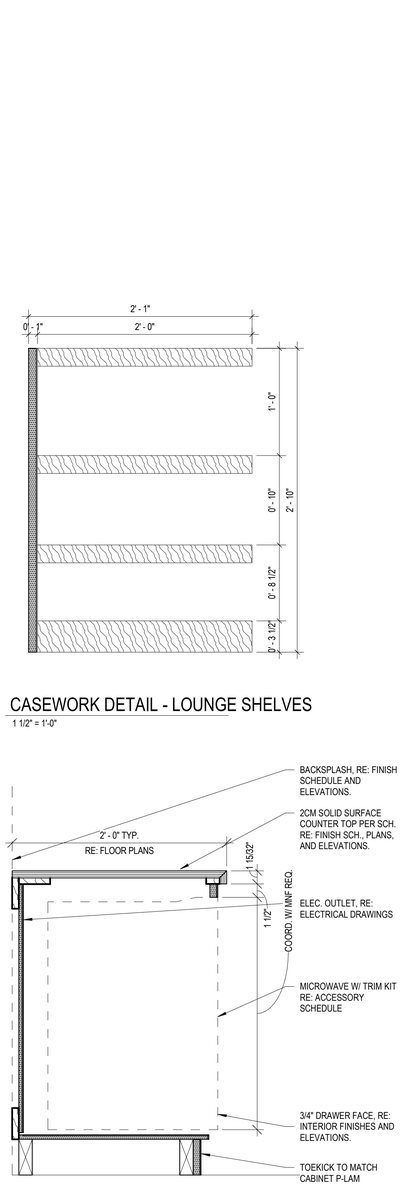
A-501

7 CASEWORK DETAIL - LOUNGE SHELVES
1 1/2" = 1'-0"

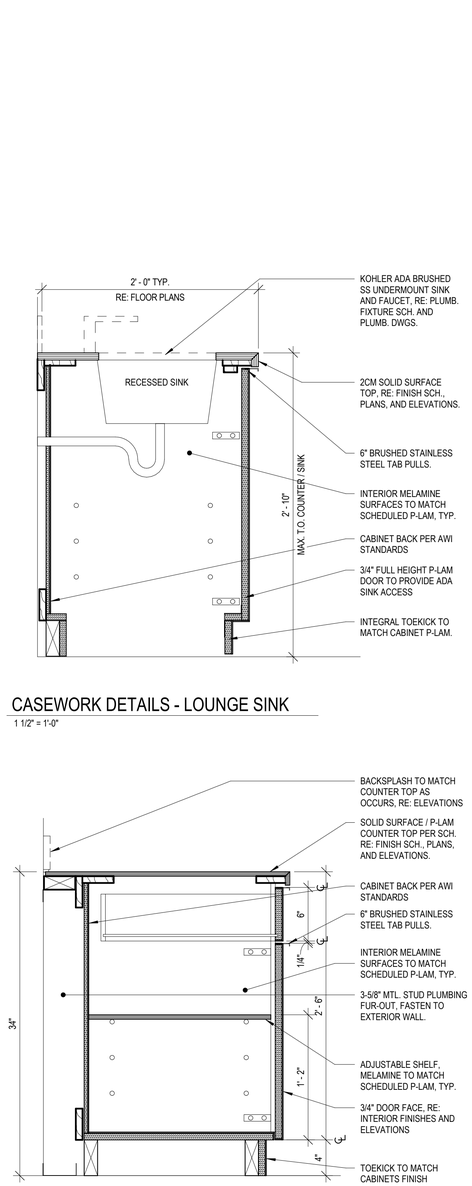
6 CASEWORK DETAILS - LOUNGE SINK
1 1/2" = 1'-0"

5 CASEWORK DETAIL - LOUNGE MICROWAVE
1 1/2" = 1'-0"

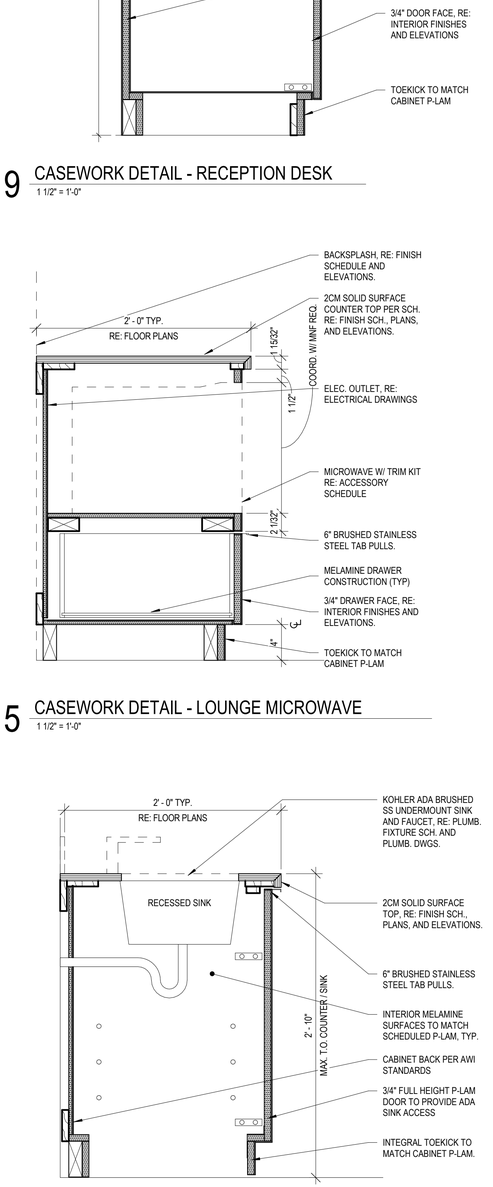
1 CASEWORK DETAIL - BREAKROOM DRAWERS
1 1/2" = 1'-0"



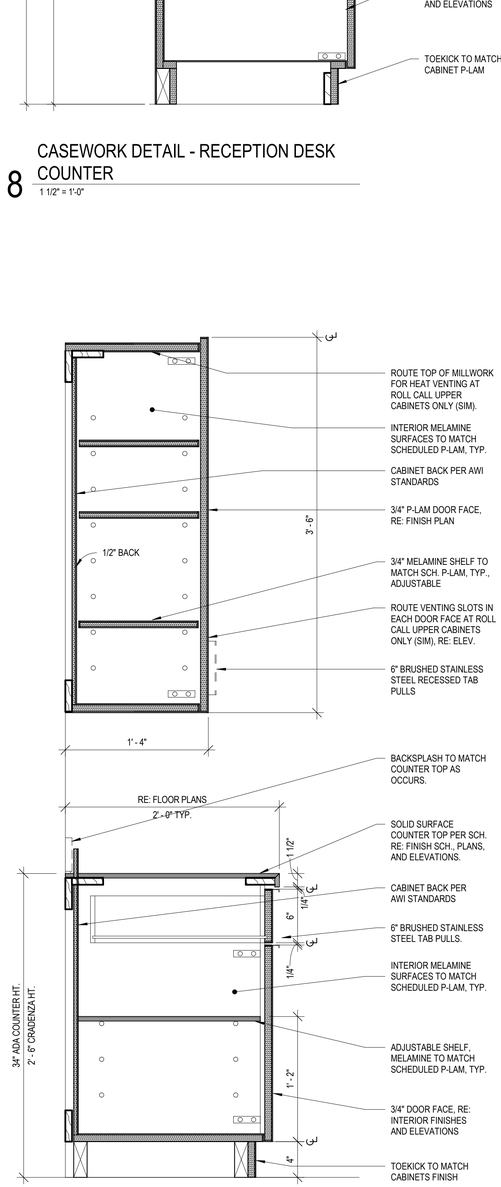
4 CASEWORK DETAIL - LOUNGE FRIDGE
1 1/2" = 1'-0"



3 CASEWORK DETAIL - BREAKROOM BASE CABINET
1 1/2" = 1'-0"



2 CASEWORK DETAILS - BREAKROOM SINK
1 1/2" = 1'-0"



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INTERIOR DETAILS

A-502

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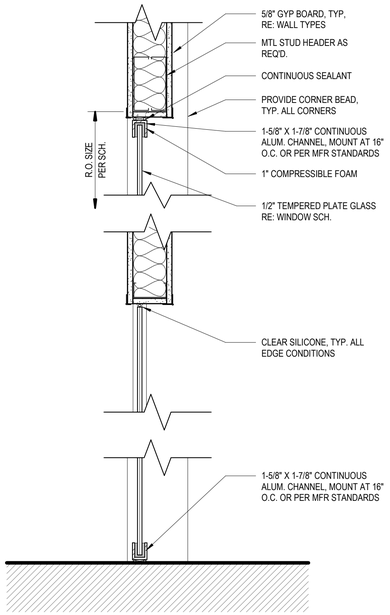
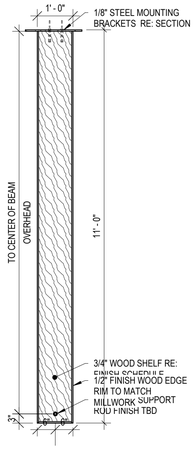
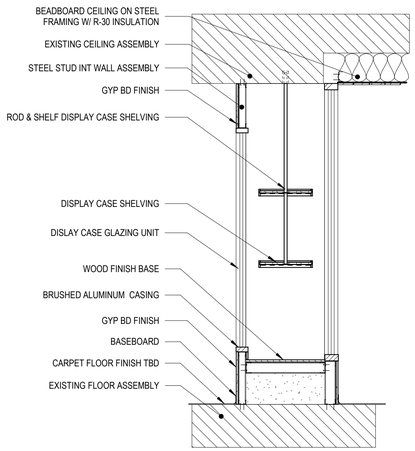


4 DISPLAY CASE HEAD JAMB SILL
1 1/2" = 1'-0"



9 DISPLAY SHELF DETAIL - PLAN
1/2" = 1'-0"



10 DISPLAY CASE SECTION A
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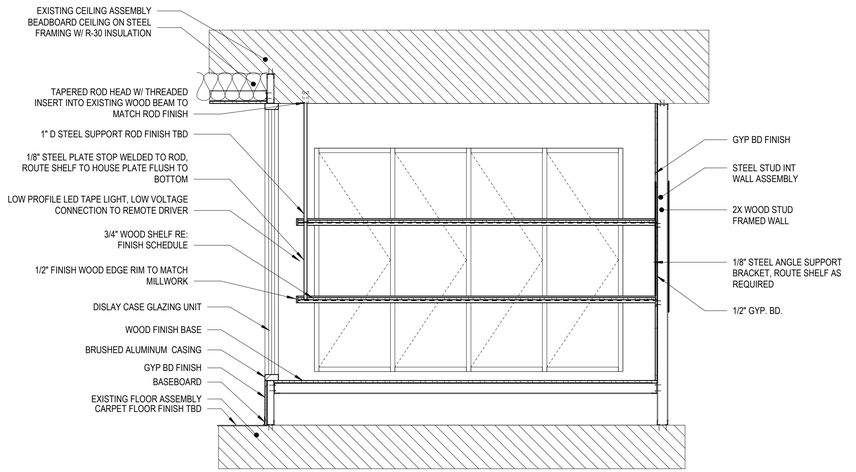
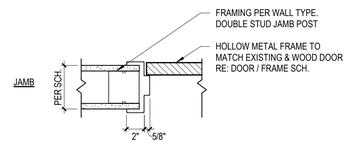
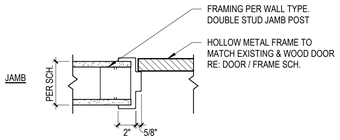
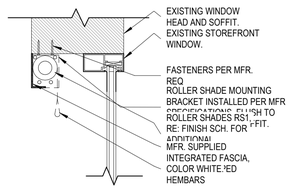


6 DISPLAY CASE DETAIL
1/2" = 1'-0"

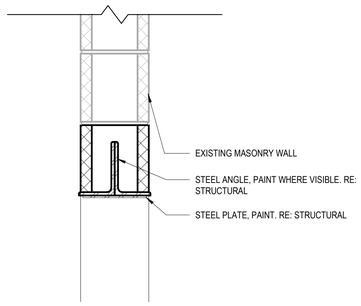




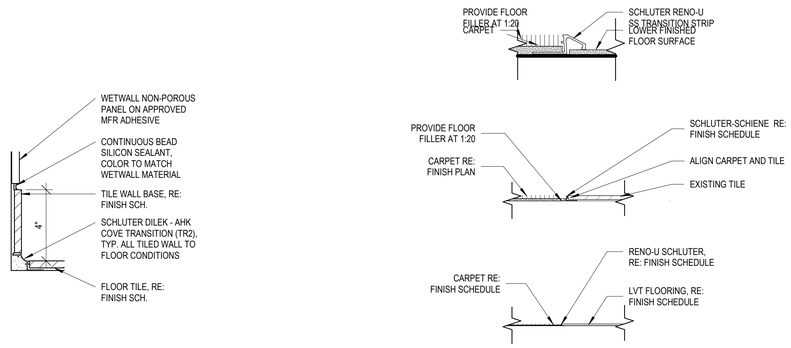
5 H.M. DOOR FRAME DETAILS
1 1/2" = 1'-0"



8 ROLLER SHADE DETAIL
1 1/2" = 1'-0"

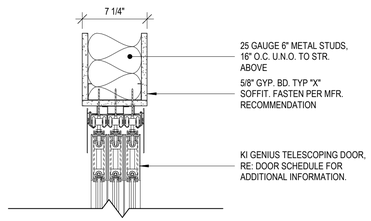


7 MASONRY OPENING DETAILS
1 1/2" = 1'-0"



2 FLOOR TRANSITION DETAILS
1 1/2" = 1'-0"

3 TILE TRANSITION DETAIL
3" = 1'-0"



1 SLIDING GLASS DOOR HEADER DETAIL
1 1/2" = 1'-0"

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INTERIOR DETAILS

A-503

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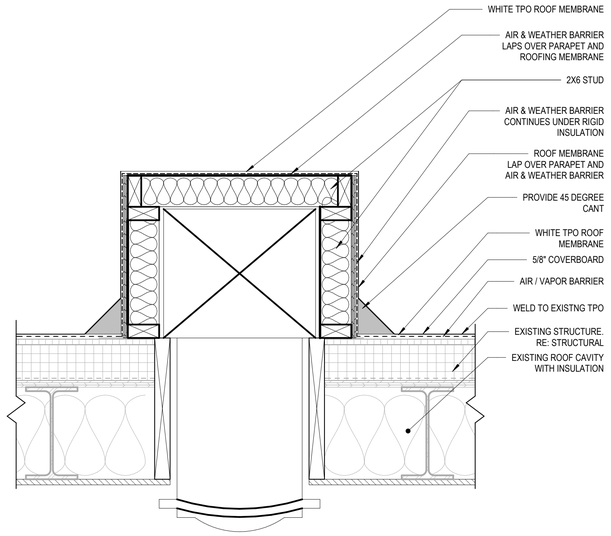
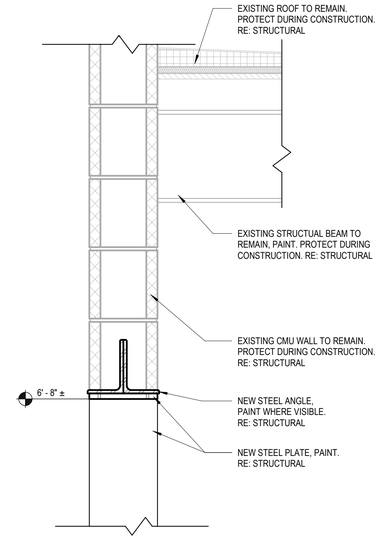
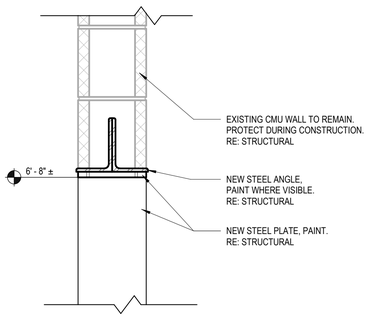


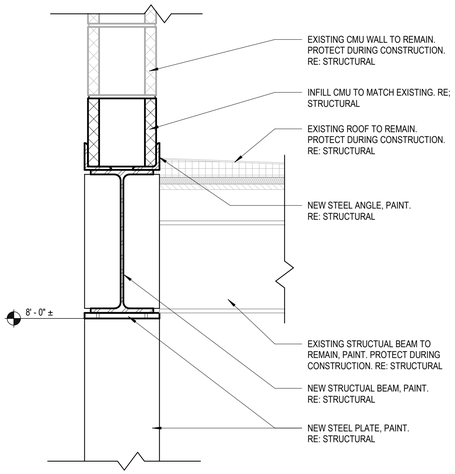
5 ROOF DETAIL_DUCTWORK
1 1/2" = 1'-0"



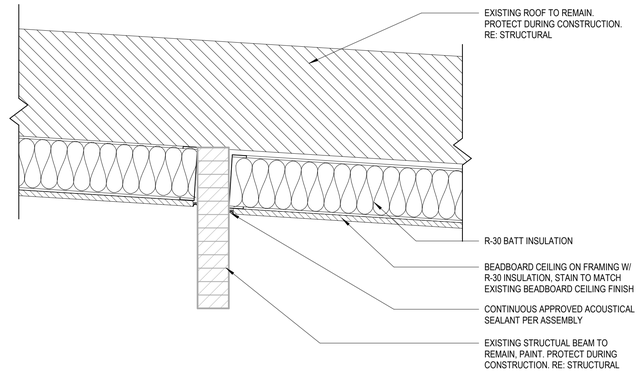
4 KITCHEN OPENING
1 1/2" = 1'-0"



3 KITCHEN OPENING
1 1/2" = 1'-0"



2 APPARATUS BAY OPENING
1 1/2" = 1'-0"



1 APPARATUS BAY CEILING
1 1/2" = 1'-0"

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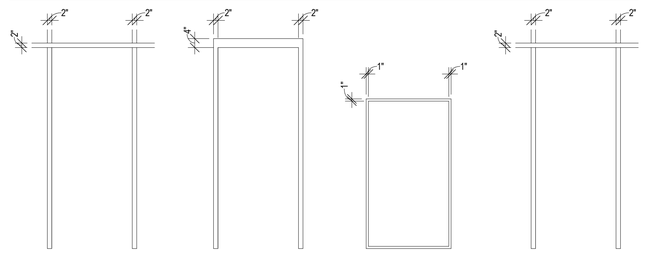
CEILING DETAILS

A-504

FRAME TYPES:



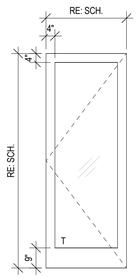
FRAME TYPE 1:
EXTERIOR ALUM. STOREFRONT

FRAME TYPE 2:
HOLLOW METAL
4" FRAME

FRAME TYPE 3:
HOLLOW METAL
1" FRAME

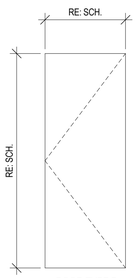
FRAME TYPE 4:
INTERIOR ALUM. STOREFRONT

DOOR TYPES:

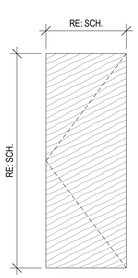


DOOR TYPE A1:
EXTERIOR - ALUM. STOREFRONT W/
FULL GLAZING INSUL. LOW E, SAFETY
GLAZING PER SECTION 2406 IBC

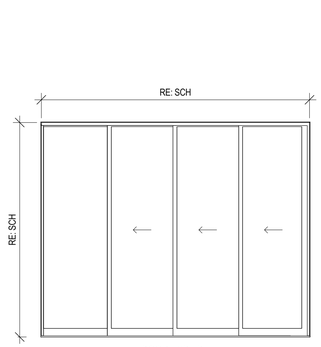
DOOR TYPE A2:
INTERIOR - ALUM. STOREFRONT
W/ FULL GLAZING, SAFETY
GLAZING PER SECTION 2406 IBC



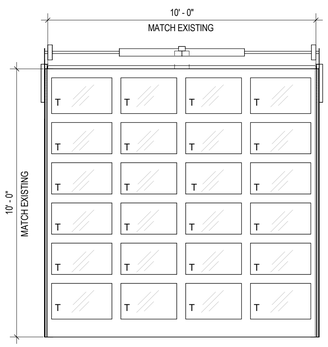
DOOR TYPE B:
INTERIOR - HOLLOW METAL



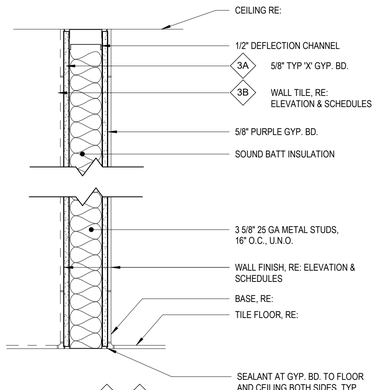
DOOR TYPE C:
INTERIOR DOOR - WOOD
FLUSH SOLID CORE



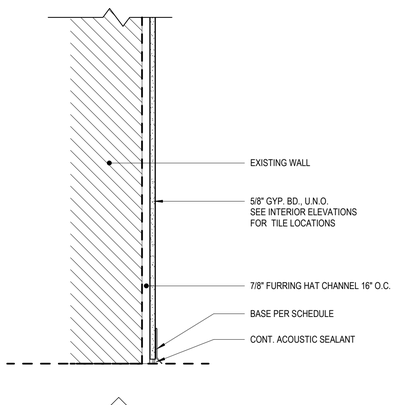
DOOR TYPE D:
INTERIOR DOOR - ACCORDIAN FOLDING DOOR



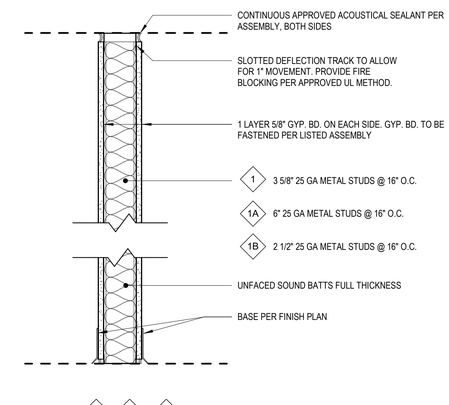
DOOR TYPE E:
MATCH EXISTING
OVERHEAD DOOR



WALL TYPE 3A 3B
1 1/2" = 1'-0"



WALL TYPE 2
1 1/2" = 1'-0"



WALL TYPE 1 1A 1B
1 1/2" = 1'-0"

DOOR & HARDWARE SCHEDULE

MARK	DOOR TYPE	DOOR SIZE	DOOR FINISH	FRAME TYPE	FRAME FINISH	FIRE RATING	HARDWARE	NOTES
001	EX	3' - 0" x 6' - 8"	EX	EX	EX	N/A	EX	
002	EX	3' - 0" x 5' - 0"	EX	EX	EX	N/A	EX	
101	EX	3' - 0" x 7' - 0"	FF	1	FF	N/A		EXISTING CARD READER TO BE REINSTALLED
102A	B	3' - 0" x 7' - 0"	PT	2	PT	N/A		
103A	A1	3' - 0" x 8' - 0"	FF	1	FF	N/A		
104	C	3' - 0" x 6' - 8"	WD	EX	PT	N/A		
105	EX	3' - 0" x 7' - 0"	PT	EX	PT	N/A		
106	C	3' - 0" x 7' - 0"	WD	3	PT	N/A		
108	C	3' - 0" x 7' - 0"	WD	3	PT	N/A		
109	C	3' - 0" x 7' - 0"	WD	3	PT	N/A		
113	C	3' - 0" x 7' - 0"	WD	3	PT	N/A		
114	C	3' - 0" x 7' - 0"	WD	3	PT	N/A		
115	C	3' - 0" x 7' - 0"	WD	3	PT	N/A		
116	A2	3' - 0" x 7' - 10"	FF	4	FF	N/A		CARD READER
116B	EX	3' - 0" x 7' - 0"	PT	EX	PT	N/A		
116C	EX	3' - 0" x 7' - 0"	PT	EX	PT	N/A		CARD READER, REINSTALL SALVAGED CARD READER FROM EXTERIOR DOOR
117	EX	3' - 0" x 7' - 0"	EX	EX	EX	N/A		EXISTING CARD READER
118	D	8' - 0" x 8' - 0"	FF	4	FF	N/A		FOLDING DOOR SYSTEM
EX	EX		EX	EX	EX	N/A	EX	
EX	EX		EX	EX	EX	N/A	EX	
OH1	E		FF	-	FF	N/A		

GENERAL DOOR NOTES

1. COORDINATE LOCK FUNCTIONS WITH OWNER PRIOR TO ORDERING.
2. ALL HARDWARE MUST COMPLY WITH A.D.A REQUIREMENTS AND LOCAL, STATE AND FEDERAL JURISDICTION REQUIREMENTS.
3. ALL WOOD DOORS SHALL BE TBD

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

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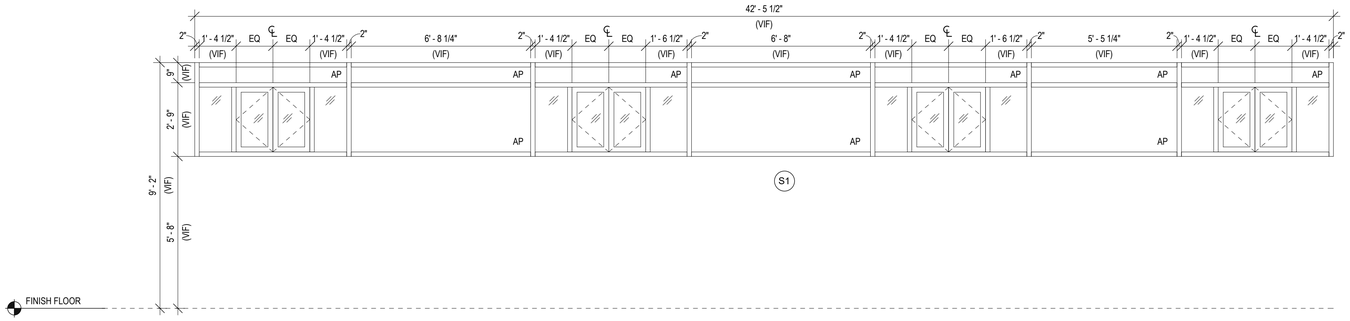
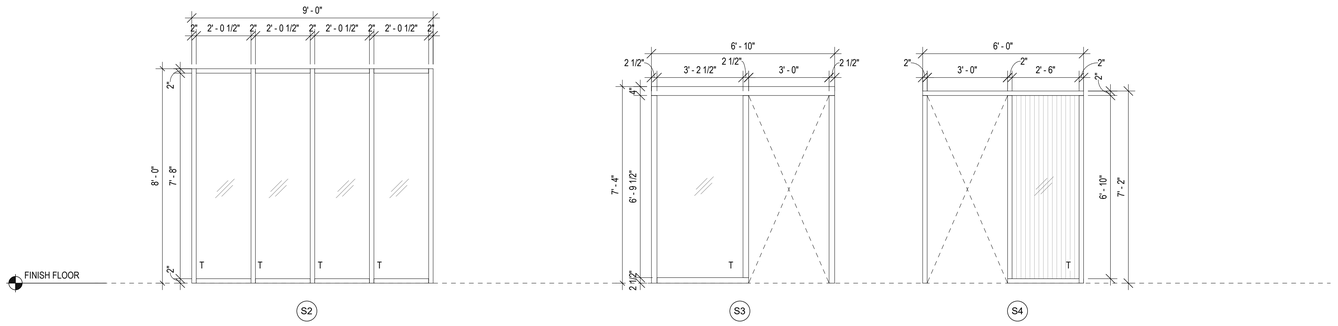
DOOR & HARDWARE SCHEDULE

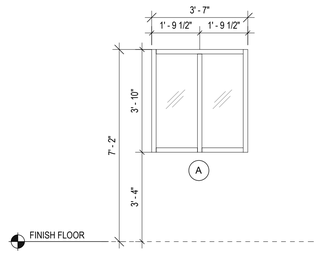
A-600

STOREFRONT TYPES:





WINDOW TYPES:



GENERAL WINDOW NOTES

1. CONTRACTOR IS RESPONSIBLE FOR VERIFYING FINAL WINDOW SIZES AND THE REQUIRED ROUGH OPENINGS BEFORE FRAMING OPENING.
2. ALL GLAZING SHALL MEET LOCAL AND NATIONAL CODE REQUIREMENTS FOR LAMINATED GLAZING WITHIN PROXIMITY OF ADJACENT OPENINGS.

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WINDOW & STOREFRONT ELEVATIONS

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GENERAL NOTES:

1. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN. ANY DISCREPANCIES IN DRAWINGS AND/OR EXISTING CONDITIONS SHOULD BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT FOR CLARIFICATION.
2. THE ARCHITECT DISCLAIMS ANY RESPONSIBILITIES AND/OR KNOWLEDGE OF ASBESTOS. THE OWNER ACCEPTS ALL RESPONSIBILITY FOR REMOVAL AND DISPOSAL OF ASBESTOS IF DISCOVERED.
3. DOORS IN STUD WALLS THAT ARE NOT SPECIFICALLY LOCATED, PROVIDE A HINGE SIDE JAMB DIMENSION OF 4" FROM DOOR OPENING TO ADJACENT WALL. ALL DOORS TO HAVE KING STUDS (2X) BOTH SIDES.
4. PROVIDE BLOCKING IN THE WALL AS REQUIRED TO SECURE COUNTERTOPS, CABINETRY AND SHELVING. GC TO COORDINATE ADDITIONAL BLOCKING WITH OWNER FOR FF&E.
5. ALL DIMENSIONS ARE FROM FACE OF STUD, CABINETS, ROUGH OPENINGS OR CENTERLINE OF GRID UNLESS NOTED OTHERWISE.
6. ALL INTERIOR WALLS TO BE WALL TYPE 1 UNLESS OTHERWISE NOTED.
7. SUBMIT MILLWORK SHOP DRAWINGS AND FINISH SUBMITTALS TO ARCHITECT FOR APPROVAL BEFORE FABRICATION OR INSTALLATION.
8. ALL ROUGH AND FINISH CONSTRUCTION SHALL BE IN COMPLIANCE WITH GOVERNING CODES AND REGULATIONS AS A MINIMUM STANDARD.
9. EXISTING BUILDING SHOWS NO SIGNS OF ROOF LEAKS. GC IS RESPONSIBLE FOR WATER-TIGHT ROOF LEAK AFTER CONSTRUCTION.
10. INTERNAL ROOF DRAINS TO BE TESTED BEFORE AND AFTER CONSTRUCTION.

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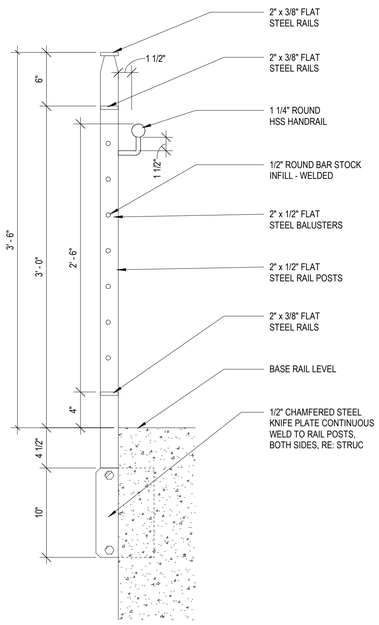
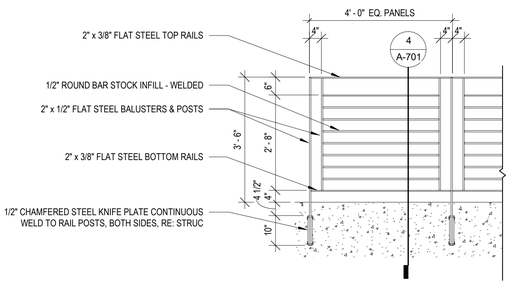
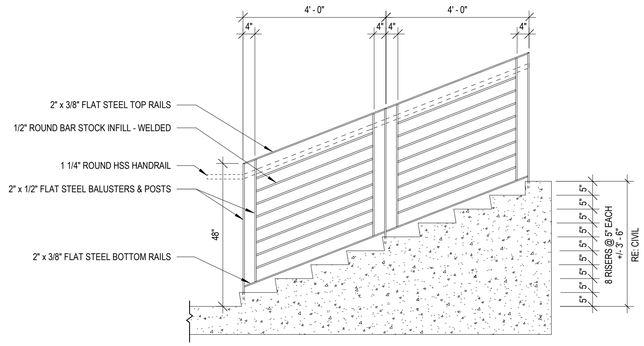


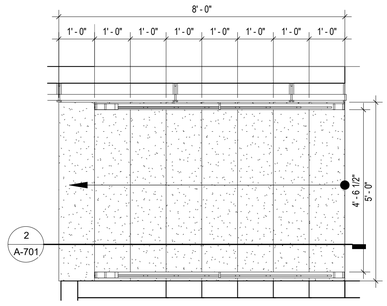
4 GAURD RAIL SECTION
1 1/2" = 1'-0"



3 GUARD RAIL DETAIL - ELEVATION
1/2" = 1'-0"



2 EXTERIOR STAIR DETAIL
1/2" = 1'-0"



1 EXTERIOR STAIR - PLAN
1/2" = 1'-0"

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DETAILS - STAIR & RAMP DETAILS

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STRUCTURAL GENERAL NOTES

GENERAL CRITERIA

1. THESE GENERAL NOTES SHALL APPLY UNLESS SPECIFICALLY NOTED ON THE PLANS AND DETAILS.
2. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE, AND SHALL BE RESPONSIBLE FOR CONDITIONS OF ALL WORK AND MATERIALS, INCLUDING THOSE FURNISHED BY SUBCONTRACTORS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE STRUCTURAL WORK WITH THE ARCHITECTURAL, CIVIL, MEP CONTRACT DOCUMENTS, AS WELL AS ANY OTHER APPLICABLE TRADES
3. DISCREPANCIES AND/OR VARIATIONS SHALL IMMEDIATELY BE REPORTED TO THE ARCHITECT AND ENGINEER.
4. PERFORM ALL CONSTRUCTION IN CONFORMANCE WITH THE BUILDING CODE AND DESIGN CODES REFERENCED WITHIN THESE DOCUMENTS. THE PROJECT CODES REFER TO THE BUILDING CODES AND DESIGN STANDARDS REFERENCED IN "DESIGN CRITERIA" GENERAL NOTES.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE UNTIL THE CONSTRUCTION OF THE STRUCTURE REACHES ITS FINAL CONDITION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, INSTALLATION, AND REMOVAL OF TEMPORARY BRACING AND CONSTRUCTION SUPPORTS, FOR NEW AND EXISTING STRUCTURES, AS NECESSARY TO COMPLETE THE PROJECT. NO PORTION OF THE PROJECT WHILE UNDER CONSTRUCTION IS INTENDED TO BE STABLE IN THE ABSENCE OF THE CONTRACTOR'S TEMPORARY SUPPORTS AND BRACES.
6. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
7. THE DRAWINGS SHOW ONLY REPRESENTATIVE AND TYPICAL DETAILS TO ASSIST THE CONTRACTOR. THE DRAWINGS DO NOT ILLUSTRATE EVERY CONDITION. ALL ATTACHMENTS, CONNECTIONS, FASTENINGS, ETC., SHALL BE PROPERLY SECURED IN CONFORMANCE WITH THE BEST PRACTICE, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING THEM.
8. ASSUME EQUAL SPACING BETWEEN ESTABLISHED DIMENSIONS, IF NOT INDICATED ON DRAWINGS. CENTERLINES OF COLUMNS AND FOUNDATIONS COINCIDE WITH GRID LINE INTERSECTIONS, U.N.O. CENTERLINES OF GRADE BEAMS AND WALLS COINCIDE WITH CENTERLINES OF FOUNDATIONS, U.N.O. CENTERLINES OF FRAMING MEMBERS COINCIDE WITH COLUMN CENTERLINES, U.N.O. THE CONTRACTOR SHALL PROTECT EXISTING FACILITIES, STRUCTURES AND UTILITIES FROM DAMAGE.
9. THE CONTRACTOR SHALL VERIFY THAT CONSTRUCTION LOADS DO NOT EXCEED THE CAPACITY OF THE STRUCTURE AT THE TIME THE LOAD IS APPLIED.
10. THE CONTRACTOR SHALL COORDINATE THE BOTTOM OF BASE PLATE ELEVATIONS WITH THE AS-BUILT TOP OF SUPPORT ELEVATIONS.
11. THE CONTRACT STRUCTURAL DRAWINGS SHALL NOT BE USED IN WHOLE OR IN PART FOR SHOP DRAWING SUBMITTALS.
12. CONTRACTOR SHALL NOTE THAT THE STRUCTURAL ENGINEER OF RECORD (SER) REQUIRES A MINIMUM OF TWO WEEKS TO REVIEW ALL SHOP DRAWING SUBMITTALS.
13. THE GEOTECHNICAL REPORT IS A SEPARATE DOCUMENT (NOT PART OF THE CONTRACT DOCUMENTS) FURNISHED BY THE PROJECT OWNER. THE CONTRACTOR SHALL OBTAIN A COPY OF THE REPORT FOR REFERENCE AS IT DESCRIBES SUB-SURFACE CONDITIONS THAT MAY BE ENCOUNTERED DURING INSTALLATION OF FOUNDATIONS AND CONTAINS OTHER INFORMATION PERTINENT TO CONSTRUCTION DRAWINGS.
14. THE GEOTECHNICAL ENGINEER SHALL BE RETAINED TO REVIEW THE FINAL DESIGN PLANS AND SPECIFICATIONS SO COMMENTS CAN BE MADE REGARDING INTERPRETATION AND IMPLEMENTATION OF THE GEOTECHNICAL RECOMMENDATIONS IN THE DESIGN AND SPECIFICATIONS.
15. THE GEOTECHNICAL ENGINEER SHALL BE RETAINED TO PROVIDE TESTING AND OBSERVATIONS DURING EXCAVATION, GRADING, FOUNDATION INSTALLATION, AND OTHER CONSTRUCTION PHASES OF THE PROJECT.

DESIGN CRITERIA

1. PROJECT CODE:
   - A. BUILDING CODE ..... 2021 INTERNATIONAL BUILDING CODE
   - B. STRUCTURAL CONCRETE ..... ACI 318*
   - C. CONCRETE MASONRY ..... ACI 530*
   - D. STRUCTURAL STEEL AISC-360*
   - E. COLD FORMED STEEL ..... AISI S100*
   - F. WOOD ..... NDS*
     *CODE EDITION AS REFERENCED IN BUILDING CODE
2. GRAVITY LOADS
   - A. DEAD LOADS
     - a. ROOF ..... 20 PSF
     - b. FLOOR
       - CONC (ASSUMED 5") OVER METAL DECK ..... 70 PSF
     - c. WALLS
       - FULL DEPTH MASONRY WALL ..... 70 PSF
   - B. LIVE LOADS
     - a. ROOF ..... 20 PSF
     - b. 1ST FLOOR CORRIDOR/STAIRS ..... 100 PSF
     - c. ELEVATED FLOOR (OFFICE & PARTITION) ..... 65 PSF
   - C. SNOW LOADS
     - a. GROUND SNOW LOAD, Pg ..... 30 PSF
     - b. IMPORTANCE FACTOR, I 1.0
     - c. SNOW EXPOSURE FACTOR, Ce 1.0
     - d. THERMAL FACTOR, Ct 1.0
3. WIND LOADS
   - A. Vult ..... 110 MPH
   - B. RISK CATEGORY II
   - C. EXPOSURE C
   - D. INTERNAL PRESSURE COEFFICIENT ..... +/- 0.18
   - E. IMPORTANCE FACTOR 1.0
   - F. DESIGN WIND PRESSURE - COMPONENTS AND CLADDING REFER TO WIND PRESSURE DIAGRAMS
4. SEISMIC LOADS
   - A. SEISMIC DESIGN CATEGORY ..... B
   - B. SITE CLASS ..... D
   - C. SEISMIC IMPORTANCE FACTOR, Ie 1.0
   - D. RISK CATEGORY II
   - E. Ss 0.202
   - F. S1 ..... 0.057
   - G. Sds 0.215
   - H. Sd1 ..... 0.091
   - I. BASIC SEISMIC FORCE RESISTING SYSTEM ..... LIGHT FRAMED (OTHER MATERIALS)
   - J. Cs 0.0331
   - K. R 6.5
   - L. ANALYSIS PROCEDURE ..... EQUIVALENT LATERAL FORCE PROCEDURE
   - M. SEISMIC BASE SHEAR, V (ULT.) 0.0331W
5. FOUNDATION DESIGN
   - A. FOUNDATION TYPE ..... SHALLOW SPREAD FOOTINGS
   - B. ALLOWABLE BEARING PRESSURE ..... 1,500 PSF (ASSUMED PER IBC 1806.2 TABLE - CLAY)
   - C. MIN. BEARING DEPTH BELOW GRADE ..... 3'-0"
   - D. LATERAL SOIL PRESSURES:
     1. PASSIVE PRESSURE ..... 100 PSF (ASSUMED)
     2. COEFFICIENT OF FRICTION ..... 0.25 (ASSUMED)

EXISTING CONDITIONS

1. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO DEMOLITION. CONTACT ENGINEER IF CONDITIONS ARE DIFFERENT THAN SHOWN.
2. PROVIDE SHORING, BRACING, ETC. OF REMAINING STRUCTURE AS REQ'D. FOR SAFETY AND STRUCTURAL INTEGRITY.
3. PROVIDE WEATHER PROTECTION FOR THE DURATION OF THE DEMOLITION WORK.
4. REF. ARCH'L DRAWINGS FOR ALL OPENING DIMENSIONS AND LOCATIONS TO LOCATE NEW FRAMING AND FOOTING LOCATIONS.
5. REPLACE ANY DAMAGED FRAMING WITH MEMBERS OF SAME SIZE AND SPACING. NOTIFY ENGINEER OF ANY STRUCTURAL DEFICIENCIES FOUND IN EXISTING FRAMING THAT NEED TO BE ADDRESSED (I.E. SPLIT, CUT, OR MEMBERS SHOWING EXCESSIVE DEFLECTIONS.

SUBGRADE PREPARATION

1. REWORK AND COMPACT THE TOP 6" OF THE EXPOSED SUBGRADE TO 95% OF MAXIMUM DRY DENSITY AT 2% TO 3% ABOVE OPTIMUM MOISTURE CONTENT, IN ACCORDANCE WITH ASTM METHOD D 698. DO NOT ALLOW THE EXPOSED SUBGRADE TO DRY OUT PRIOR TO PLACING THE STRUCTURAL FILL.
2. SELECT FILL SHALL BE NON-EXPSANSIVE SAND, SILTY SAND, CLAYEY GRAVEL, CLAYEY SAND, SILTY GRAVEL OR CLAYEY GRAVEL (SW, SP, SM, SC, GM, OR GC) MEETING THE CRITERIA OF THE IBC NOTE: SANDY LOAM IS NOT ACCEPTABLE SELECT FILL MATERIAL OR ANY MATERIAL CONTAINING ANY ORGANIC MATTER.
3. SELECT FILL SHALL BE COMPACTED IN THE FIELD IN LOOSE LIFTS NOT TO EXCEED 8" IN THICKNESS TO A MINIMUM OF 95% OF MAXIMUM LABORATORY DENSITY (FILL SHALL BE WITHIN 2% OF OPTIMUM MOISTURE CONTENT DURING COMPACTION) AS DETERMINED BY ASTM D 698. FIELD DENSITIES SHALL BE CHECKED IN ACCORDANCE WITH ASTM D-2922.
4. LABORATORY MOISTURE-DENSITY CURVE OR CURVES AS REQUIRED AND RESULTS OF AT LEAST 2 FIELD DENSITY CHECKS PER LIFT ARE TO BE SUBMITTED TO THE ARCHITECT OR ENGINEER.
5. ALL FOUNDATION EXCAVATIONS SHALL BE EXTENDED TO FINAL GRADE AND THE FOOTINGS CONSTRUCTED AND POURED AS SOON AS POSSIBLE TO MINIMIZE POTENTIAL DAMAGE (DUE TO WETTING AND/OR DRYING) TO BEARING SOILS. FOUNDATION CONCRETE SHALL NOT BE PLACED ON SOILS THAT HAVE BEEN DISTURBED BY RAINFALL OR SEEPAGE.
6. PROVIDE 10 MIL. VAPOR BARRIER UNDER ALL CONCRETE SLABS. VAPOR BARRIER SHALL CONFORM TO ASTM E 1745 CLASS A REQUIREMENTS. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND ASTM E 1643-98.
7. ANY STANDING WATER ON THE SURFACE OF THE VAPOR BARRIER SHALL BE REMOVED OR DRIED PRIOR TO CONCRETE PLACEMENT.

CONTROLLED BACKFILL BEHIND RETAINING WALLS

1. BACKFILL MATERIAL SHALL MEET THE REQUIREMENTS OF THE IBC BACKFILL MATERIAL "WELL-GRADED, CLEAN GRAVELS; GRAVEL-SAND MIXES - UNIFIED SOIL CLASSIFICATION GW" PER TABLE 1610.1 OR SIMILAR. MAX ACTIVE DESIGN PRESSURE: 30 psf/ft MAX AT-REST DESIGN PRESSURE: 60 psf/ft
2. HEAVY EQUIPMENT SHALL NOT BE USED ABOVE RETAINED SOILS. USE HAND EQUIPMENT ONLY FOR SOILS COMPACTION.
3. BACKFILL MATERIAL SHALL BE PLACED IN HORIZONTAL LOOSE LIFTS NOT TO EXCEED 8" IN THICKNESS.
4. EACH LIFT SHOULD BE COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY BSED ON TXDOT METHOD TEX-113-E.
5. THE MOISTURE CONTENT SHOULD BE WITHIN 3 PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT AT THE TIME OF COMPACTION.
6. BACKFILL MATERIAL SHALL NOT BE PLACED AGAINST WALLS UNTIL ALL SUPPORTING SLABS, BEAMS, STRUTS, ETC., HAVE ATTAINED THEIR 28 DAY DESIGN STRENGTH UNLESS PROPER BRACING IS INSTALLED.
7. WHERE BACKFILL IS REQUIRED ON BOTH SIDES OF A STRUCTURE OR BUILDING ELEMENT, BACKFILL SHALL BE PLACED SIMULTANEOUSLY ALONG BOTH SIDES SO THAT THE BACKFILL HEIGHT ON ONE SIDE DOES NOT EXCEED THE HEIGHT ON THE OPPOSITE SIDE BY MORE THAN 4'-0".
8. COMPACTION AND MOISTURE CONTENT OF SUBGRADE AND EACH LIFT OF STRUCTURAL FILL SHALL BE INSPECTED AND APPROVED BY A QUALIFIED ENGINEERING TECHNICIAN, SUPERVISED BY A GEOTECHNICAL ENGINEER
9. GEOTECHNICAL ENGINEER SHALL BE RETAINED TO VERIFY BACKFILL MATERIAL PRIOR TO PLACEMENT.

MASONRY NOTES

1. MASONRY CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF "SPECIFICATIONS FOR MASONRY STRUCTURES (TMS 601/ACI 530.1/ASCE 6 - CURRENT EDITION)," PUBLISHED BY THE MASONRY SOCIETY, BOULDER, COLORADO; THE AMERICAN CONCRETE INSTITUTE, FARMINGTON HILLS, MICHIGAN; AND THE AMERICAN SOCIETY OF CIVIL ENGINEERS, RESTON, VIRGINIA, EXCEPT AS MODIFIED BY THE REQUIREMENTS OF THESE CONTRACT DOCUMENTS.
2. HOLLOW LOAD BEARING CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C 90. CONCRETE MASONRY BELOW FINISHED FLOOR SHALL BE NORMAL WEIGHT UNITS AND SHALL HAVE ALL CELLS FULLY GROUTED. CONCRETE MASONRY ABOVE FINISHED FLOOR SHALL BE LIGHT WEIGHT OR NORMAL WEIGHT AND SHALL BE GROUTED ONLY AT REINFORCED CELLS AND BOND BEAMS, U.N.O.
3. MORTAR FOR MASONRY SHALL BE IN ACCORDANCE WITH ASTM C 270 TYPE "S" AND ARTICLES 2.1 AND 2.6A OF TMS 602/ACI 530.1/ASCE 6 BY PROPORTION. UNUSED MORTAR SHALL BE DISCARDED WITHIN 2 1/2 HOURS AFTER INITIAL MIXING.
4. ALL GROUT SHALL MEET THE REQUIREMENTS OF ARTICLE 2.2 OF TMS 602/ACI 530.1/ASCE 6 AND ASTM C476. GROUT SHALL MEET THE PROPORTION REQUIREMENTS SPECIFIED. USE COARSE GROUT WITH A SLUMP IN THE RANGE OF 10 TO 11 INCHES. MAXIMUM GROUT POUR HEIGHT IS 12'-8" WHEN MORTAR HAS CURED FOR A MINIMUM OF 4 HOURS AND NO INTERMEDIATE BOND BEAMS ARE PLACED. OTHERWISE MAXIMUM POUR HEIGHT IS 5'-4".
5. THE SPECIFIED DESIGN COMPRESSIVE STRENGTH OF THE CONCRETE MASONRY (F'm) SHALL BE 2,000 PSI AND THE NET AREA COMPRESSIVE STRENGTH OF THE CONCRETE MASONRY UNITS SHALL BE 1,900 PSI AS PER TABLE 2 OF TMS 602/ACI 530.1/ASCE 6.
6. CONCRETE MASONRY SHALL BE LAID IN RUNNING (COMMON) BOND.
7. ALL HEAD AND BEAD JOINTS SHALL BE COMPLETELY FILLED WITH MORTAR. ALL REINFORCEMENT SHALL BE COMPLETELY SURROUNDED BY MORTAR OR GROUT AND SHALL HAVE A MINIMUM MORTAR COVERING OF 5/8" FROM EXTERIOR FACE.
8. ALL VERTICAL CELLS, BOND BEAMS, AND LINTELS CONTAINING REINFORCING BARS SHALL BE COMPLETELY FILLED WITH GROUT. MASONRY WALLS SHALL HAVE CURED TO A SUFFICIENT STRENGTH OR SHALL BE ADEQUATELY BRACED AND SHORED TO RESIST THE LATERAL PRESSURE OF THE GROUT DURING PLACEMENT.
9. ALL HORIZONTAL JOINT REINFORCEMENT SHALL BE HOT-DIPPED GALVANIZED 9 GAGE WIRE REINFORCEMENT (LADDER TYPE) EMBEDDED IN MORTAR JOINTS AT 16" O.C. JOINT REINFORCEMENT SHALL COMPLY WITH ASTM A 951 AND SHALL BE LAPPED 6" WITH AT LEAST ONE CROSS WIRE WITHIN LAP.
10. DEFORMED REINFORCING BARS SHALL CONFORM TO ASTM A 615, GRADE 60.
11. PROVIDE TEMPORARY BRACING AND SHORING FOR ALL MASONRY WALLS TO RESIST ALL LATERAL LOADS DURING CONSTRUCTION UNTIL THE MASONRY HAS BEEN PROPERLY ANCHORED TO THE BUILDING STRUCTURE.

CONCRETE NOTES

1. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST AMERICAN CONCRETE INSTITUTE BUILDING CODE (ACI 318 -CODE ADOPTED EDITION). ALL CONCRETE FLOOR AND SLAB CONSTRUCTION SHALL CONFORM TO ACI 302.1R. ALL CONCRETE WORK SHALL ALSO CONFORM TO "SPECIFICATIONS FOR STRUCTURAL CONCRETE", ACI 301.
2. PROVIDE NORMALWEIGHT CONCRETE WITH CURED DENSITY OF 145 +/- 5 PCF, AND AGGREGATE CONFORMING TO ASTM C33, U.N.O. WHERE INDICATED, PROVIDE LIGHTWEIGHT CONCRETE WITH CURED DENSITY OF 112+/-3 PCF AND AGGREGATE CONFORMING TO ASTM C330
3. CONCRETE STRENGTH SHALL MEET THE FOLLOWING DESIGN SPECIFICATIONS:

CONCRETE USAGE	EXPOSURE CATEGORY	MAXIMUM AGGREGATE	f'c (28 DAY)	MAX WATER/ CEMENT RATIO	MAX AIR CONTENT (%)
STRUCTURAL SLAB ON GRADE	F0, S0, W0, C0	3/4"	3,500 PSI	N/A	1.5 +/- 1.5
STRUCTURAL FOUNDATION WALLS AND GRADE BEAMS	F2, S0, W0, C0	3/4"	4,500 PSI	0.45	6.0 +/- 1.5
FOOTINGS	F2, S0, W0, C0	1"	4,500 PSI	0.45	6.0 +/- 1.5
LEAN CONCRETE	F0, S0, W0, C0	N/A	1,500 PSI	0.65	N/A

4. FLY ASH CAN BE SUBSTITUTED FOR CEMENT UP TO 25% BY WEIGHT. CALCIUM CHLORIDE IS NOT ACCEPTABLE FOR USE IN MIX.
5. FURNISH MIX DESIGNS FOR ALL CLASSES OF CONCRETE. RETAIN A QUALIFIED TESTING LABORATORY TO MAKE CONCRETE CYLINDERS AND PERFORM COMPRESSIVE TESTS.
6. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150 AND ACI 318 TYPE II CEMENT FOR STRENGTH DESIGN METHOD. AGGREGATE SHALL CONFORM TO ASTM C-33.
7. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED IN PLACE BY EXPERIENCED WORKMEN IN ORDER TO CONSOLIDATE THE IN-PLACE CONCRETE. THE CONTRACTOR SHALL AVOID OVERVIBRATION LEADING TO SEGREGATION OF THE CONCRETE COMPONENTS
8. NO ADMIXTURES SHALL BE USED WITOUT PRIOR WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER. ADMIXTURES USING ANY FORM OF CHLORIDES SHALL NOT BE USED.
9. PROVIDE CONTROL JOINTS IN ALL SLABS AT A SPACING NOT TO EXCEED 15'-0" O.C. EACH WAY. JOINT DEPTH SHALL BE A MINIMUM OF 1/4 THE SLAB THICKNESS. IF JOINTS ARE SAW-CUT, THE CUTTING SHALL TAKE PLACE IMMEDIATELY AFTER FINISHING THE SLAB. JOINTS SHALL NOT BE LOCATED IN LINE WITH AND ABOVE GRADE BEAMS IF APPLICABLE. COORDINATE LOCATION OF JOINTS WITH ARCHITECT.
10. SEE ARCHITECTURAL AND MECHANICAL PLANS FOR VERIFICATION OF ALL DEPRESSIONS, OPENINGS, CAST-IN-PLACE ACCESSORIES, ETC.
11. ALL FLOOR SLABS SHALL BE CONSTRUCTED TO HAVE A MINIMUM FLATNESS OF Ff=35 AND A MINIMUM LEVELNESS OF Fl=25 IN ACCORDANCE WITH ASTM E 1155.
12. CURE CONCRETE SURFACE EITHER BY WATER CURING, WET COVERING, OR APPLYING A LIQUID MEMBRANE-FORMING CURING COMPOUND THAT MEETS OR EXCEEDS THE REQUIREMENTS OF ASTM C 309.
13. WHEN WATER CURING OR WET COVERING IS USED PROVIDE 7 DAYS OF UNINTERRUPTED CURING.
14. IF A CURING COMPOUND IS USED, PROVIDE A LETTER OF COMPATIBILITY FROM THE MFR. INSURING THAT THE CURING COMPOUND WILL NOT INTERFERE WITH SUBSEQUENT FLOOR FINISHES.
15. EMBEDDED CONDUITS AND PIPES, AND SLEEVES SHALL MEET THE REQUIREMENTS OF ACI 318-14, INCLUDING THE FOLLOWING REQUIREMENTS:
    - CONDUITS AND PIPES EMBEDDED WITHIN A SLAB, WALL, OR BEAM (OTHER THAN THOSE PASSING THROUGH) SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN 1/3 THE OVERALL THICKNESS OF THE SLAB, WALL, OR BEAM IN WHICH THEY ARE EMBEDDED.
    - CONDUITS, PIPES, AND SLEEVES SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS OR WIDTHS ON CENTER.
    - CONDUITS, PIPES, AND SLEEVES SHALL BE OF UN-COATED OR GALVANIZED IRON OR STEEL NOT THINNER THAN STANDARD SCHEDULE 40 PIPE.

CONCRETE REINFORCING NOTES

1. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, UNLESS OTHERWISE NOTED, MUST FOLLOW THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE", ACI 315 LATEST EDITION.
2. ALL REINFORCING BARS SHALL SHALL CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES, UNO:
   - DEFORMED BARS ..... ASTM A615 (GR 60)
   - WELDED WIRE REINFORCEMENT ..... ASTM A1064
   - WELDABLE DEFORMED BARS ASTMA70
3. STANDARD PROTECTIVE COVER OF REINFORCING BARS UNLESS OTHERWISE NOTED SHALL BE:

CONCRETE EXPOSURE	MEMBER	REINFORCEMENT	SPECIFIED COVER
CAST AGAINST PERMANENTLY IN CONTACT WITH GROUND	ALL	ALL	3 IN
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	ALL	NO 6. THRU NO. 18	2 IN
		NO. 5, W31, OR D31 WIRE OR SMALLER	1 1/2 IN
NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	SLABS, JOISTS, & WALLS	PRIMARY REINFORCEMENT	1 1/2 IN
	BEAMS, COLS. AND TENSION TIES	STIRRUPS, TIES, SPIRALS, AND HOOPS	1 1/2 IN

4. CORNER REINFORCING BARS SHALL BE USED AT ALL CORNERS AND INTERSECTIONS. SEE TYPICAL DETAIL.
5. LAP REINFORCING AT SPLICES PER LAP SPLICE SCHEDULE UNLESS NOTED OR DETAILED OTHERWISE.
6. WELDING OR HEAT BENDING OF REINFORCING BARS SHALL NOT BE PERMITTED, UNLESS APPROVED BY THE ENGINEER.
7. PROVIDE (2) #4 X 4'-6' LONG DIAGONAL BARS AT ALL RE-ENTRANT CORNERS.
8. U.N.O. IN SHEARWALL SCHEDULE- PROVIDE 1/2" DIAMETER X 10" LONG HOT DIPPED GALVANIZED ANCHOR BOLTS AT 4'-0" O.C. IN THE FOUNDATION AT THE LOCATIONS OF ALL EXTERIOR WOOD FRAMED WALLS. REFER TO SHEAR WALL SCHEDULE AT SHEAR WALLS.
9. AT CORNERS AND "T" INTERSECTIONS OF ALL BEAMS EXTEND 4 CORNER BARS EQUAL TO THE SCHEDULED STEEL IN THE ADJACENT BEAMS 2'-0" EACH WAY, 2 BARS TOP AND 2 BARS BOTTOM. PROVIDE CORNER BARS AT ALL INTERMEDIATE REINFORCING BARS IN WALLS AND DEEP BEAMS
10. PROVIDE ACCESSORIES FOR SUPPORT OF ALL REINFORCING.
11. WHERE A 90-DEG, 135-DEG, OR 180-DEG HOOK IS GRAPHICALLY INDICATED, PROVIDE CORRESPONDING ACI STARDARD HOOKS UNO

SYMBOLS LEGEND	
SYMBOL	DESCRIPTION
FOOTING MARK F_ (-x'-x") T.O. FOOTING ELEVATION	SPREAD FOOTING, REF SCHEDULE ON S101
	SLAB OR DECK SPAN DIRECTION
1	KEYNOTE - REFER TO SHEET KEYNOTES
NOTE(S): 1. ITEMS IN LEGEND MAY NOT APPEAR ON ALL PLANS	

STEEL NOTES

1. ALL STRUCTURAL STEEL SHALL BE DESIGNED, DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE LATEST AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATIONS.
2. STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS UNLESS OTHERWISE NOTED ON THE CONTRACT DOCUMENTS:
   - A. WIDE-FLANGE ..... ASTM A-992 (Fy=50 KSI)
   - B. HSS (SQUARE, RECTANGULAR) ..... ASTM A-500, GRADE B (Fy=46 KSI)
   - C. HSS (ROUND) ..... ASTM A-500, GRADE B (Fy=42 KSI)
   - D. PIPE ..... ASTM A-53, GRADE B (Fy=35 KSI)
   - E. ALL OTHER STEEL ..... ASTM A-36 (Fy= 36 KSI).
2. CONNECTION MATERIAL SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS OR AS NEEDED FOR CONNECTION DESIGN:
   - A. ANGLES ..... ASTM A36
   - B. WTS ..... ASTM A992
   - C. PLATES ..... ASTM A36
   - D. BOLTS ..... ASTM A325
   - E. NUTS ..... ASTM A563
   - F. WASHERS ..... ASTM F436
   - G. ANCHOR RODS ..... ASTM F1554 GR 55 WITH WELDABILITY SUPPLEMENT S1
   - H. HEADED STUD ..... ASTM A108, GRADE 1010 THROUGH 1020 HEADED STUD TYPE, COLD-FINISHED CARBON STEEL, AWS D1.1., TYPE B.
   - I. WELD ELECTRODES E70XX
3. ALL BEAMS AND COLUMNS SHALL BE FULL LENGTH WITHOUT SPLICES UNLESS OTHERWISE INDICATED ON PLANS.
4. REFER TO ARCHITECTURAL AND MECHANICAL PLANS FOR VERIFICATION OF ALL BOLTS, BLOCKING, ANCHORS, ETC., FOR THE ANCHORAGE OF THEIR RESPECTIVE ITEMS.
5. ALL SHOP AND FIELD WELDS SHALL BE MADE BY WELDERS WHO HAVE BEEN QUALIFIED AND CERTIFIED TO MAKE THE REQUIRED WELDS IN ACCORDANCE WITH THE LATEST AMERICAN WELDING SOCIETY SPECIFICATIONS A.W.S. D1.1.
6. ALL FILLET WELDS SHALL BE 3/16" UNLESS OTHERWISE NOTED.
7. DESIGN OF ALL CONNECTIONS NOT SHOWN SHALL BE PERFORMED BY THE FABRICATOR UNDER THE SUPERVISION OF A REGISTERED ENGINEER. CONNECTIONS SHALL CONFORM TO AISC SPECIFICATIONS, AND SHALL BE CAPABLE OF SUPPORTING 55% OF THE MAXIMUM LOAD OF THE MEMBER FOR THE SPAN SHOWN AND THE MATERIAL SPECIFIED IN THE AISC HANDBOOK, LATEST EDITION.
8. SHOP DRAWINGS SHALL BE PREPARED FOR ALL MISCELLANEOUS STEEL ITEMS INCLUDING STAIRS AND HANDRAILS FOR REVIEW BY THE ARCHITECT AND ENGINEER. CALCULATIONS SHALL BE SUBMITTED WITH THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE PROJECT STATE
9. ALL STRUCTURAL STEEL, EXCEPT EMBEDDED ITEMS, SHALL BE PAINTED WITH ONE SHOP COAT OF RUST INHIBITIVE PAINT.
10. ALL BOLTS SHALL BE TIGHTENED BY THE AISC "SNUG TIGHT" METHOD UNLESS NOTED OTHERWISE.
11. ALL STRUCTURAL STEEL EXPOSED TO WEATHER SHALL BE HOT DIP GALVANIZED G-90 COATING. ANY DAMAGE TO THE GALVANIC MATERIAL DURING WELDING SHALL BE TOUCHED UP WITH GALVANIZING REPAIR PAINT: HIGH-ZINC-DUST-CONTENT PAINT FOR REGALVANIZING WELDS AND REPAIR PAINTING GALVANIZED STEEL, WITH DRY FILM CONTAINING NOT LESS THAN 93 PERCENT ZINC DUST BY WEIGHT, AND COMPLYING WITH DOD-P-21035A OR SSPC-PAINT 20.

COLD-FORMED STEEL NOTES

1. THE DESIGN, INSTALLATION, AND CONSTRUCTION OF COLD-FORMED CARBON OR LOW-ALLOY STEEL SHALL BE IN ACCORDANCE WITH THE "STANDARD FOR COLD-FORMED STEEL FRAMING - GENERAL PROVISIONS, AMERICAN IRON AND STEEL INSTITUTE (AISI-GENERAL) AND AISI-NASPEC.
2. ALL FRAMING MEMBERS SHALL BE FORMED FROM CORROSION-RESISTANT STEEL, CORRESPONDING TO THE REQUIREMENTS OF ASTM A 653.
3. ALL LOAD-BEARING AND EXTERIOR WALL STUDS SHALL BE 600S162-54 CHANNEL TYPE STEEL SECTIONS WITH A MINIMUM MOMENT OF INERTIA OF 2.86.
4. FABRICATION AND ERECTION OF MEMBERS SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
5. SECURE ALL CONTINUOUS TRACKS TO CONCRETE FOUNDATIONS WITH HILTI X-U 27 P8 TH POWDER ACTUATED FASTENERS (OR APPROVED EQUAL) AT 16" O.C. AND TO STEEL FRAMING MEMBERS WITH X-U 19 P8 TH POWDER ACTUATED FASTENERS (OR APPROVED EQUAL) AT 16" O.C. UNLESS NOTED OTHERWISE.
6. VERTICAL WALL STUDS ABOVE OPENINGS SHALL BE ANCHORED TO CONTINUOUS EDGE ANGLES AT EACH STUD LOCATION WITH LIGHT GAGE CLIP ANGLES CAPABLE OF SUSTAINING A GRAVITY LOAD OF 350 LBS AND A HORIZONTAL WIND LOAD OF 350 LBS, OR PROVIDE A 1/8" X 3" FILLET WELD AT EACH LOCATION. FULL HEIGHT VERTICAL STUDS SHALL BE CONNECTED TO CONTINUOUS EDGE ANGLES WITH LIGHT GAGE CLIP ANGLES ALLOWING FOR VERTICAL MOVEMENT AND A HORIZONTAL WIND LOAD OF 350 LBS.
7. WELDED CONNECTIONS SHALL BE WIRE BRUSHED AND BRUSH-COATED WITH A GALVANIZED PAINT.
8. HORIZONTAL BRIDGING/STRAP BRACING SHALL BE ATTACHED TO LOAD BEARING AND EXTERIOR WALL STUDS AT 48" O.C. MAXIMUM.
9. ALL EXTERIOR AND INTERIOR PLYWOOD SHEAR WALLS AND PLYWOOD DIAPHRAGMS SHALL BE SCREWED WITH A MINIMUM #8 SELF-DRILLING, SELF-TAPPING WAFER HEAD OR BUGLE HEAD SCREW. SCREWS SHALL BE SUFFICIENT LENGTH TO ENSURE PENETRATION INTO THE STEEL STUD BY AT LEAST THREE FULL DIAMETER THREADS.
10. FASTENERS ALONG PANEL EDGES SHALL BE PLACED NO LESS THAN 3/8" FROM PANEL EDGES AND ARE TO BE SPACED AT 6" O.C. ALONG PANEL EDGES AND AT 12" O.C. AT ALL INTERMEDIATE SUPPORTS. ALL PANEL EDGES SHALL BE FULLY BLOCKED.

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

PRELIMINARY NOT FOR CONSTRUCTION

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24.036

ARCHITECTURAL WORKSHOP . DENVER, COLORADO

DATE	DESCRIPTION
07.19.2024	PRELIMINARY DESIGN (70% CD)

DRAWN BY: BC CHECKED BY: NR
PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

GENERAL NOTES

S001

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POST INSTALLED ANCHORS

1. EXCEPT WHERE INDICATED ON THE DRAWINGS, POST-INSTALLED ANCHORS SHALL CONSIST OF THE FOLLOWING ANCHOR TYPES AS PROVIDED BY HILTI, INC. CONTACT HILTI AT (800) 879-8000 FOR PRODUCT RELATED QUESTIONS.

   A. **ANCHORAGE TO CONCRETE**

      1. ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
         a. HILTI HIT-HY 200 SAFE SET SYSTEM WITH THE HILTI HIT-Z ROD PER ICC ESR-3187
         b. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT AND VACUUM SYSTEM WITH HAS-E THREADED ROD PER ICC ESR-3187
         c. HILTI HIT-RE 500v3 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT AND VACUUM WITH HAS-E THREADED ROD PER ICC ESR-3814
         d. HILTI HIT-RE 500v3 SAFE SET SYSTEM WITH HILTI ROUGHENING TOOL (HIT RT) WITH HAS-E THREADED ROD PER ICC ESR-3814 FOR DIAMOND CORED HOLES
      2. MEDIUM DUTY MECHANICAL ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
         a. HILTI KWIK HUS EZ AND KWIK HUS EZ-I SCREW ANCHORS SAFE SET SYSTEM WITH HOLLOW DRILL BIT AND VACUUM SYSTEM PER ICC ESR-3027
         b. HILTI KWIK BOLT-TZ EXPANSION ANCHORS SAFE SET SYSTEM WITH HOLLOW DRILL BIT AND VACUUM SYSTEM AND SI-AT-A22 WITH ADAPTIVE TORQUE PER ICC ESR-1917
         c. HILTI KWIK BOLT 3 EXPANSION ANCHOR SAFE SET SYSTEM WITH HOLLOW DRILL BIT AND VACUUM SYSTEM AND SI-AT-A22 WITH ADAPTIVE TORQUE (UNCRACKED CONCRETE ONLY) PER ICC ESR-2302
      3. HEAVY DUTY MECHANICAL ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
         a. HILTI HDA UNDERCUT ANCHORS PER ICC ESR 1546
         b. HILTI HSL-3 EXPANSION ANCHORS PER ICC ESR 1545

   B. **REBAR DOWELING INTO CONCRETE**

      1. ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
         a. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT AND VACUUM SYSTEM WITH CONTINUOUSLY DEFORMED REBAR PER ICC ESR-3187
         b. HILTI HIT-HY 500v3 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT AND VACUUM SYSTEM WITH CONTINUOUSLY DEFORMED REBAR PER ICC ESR-3814
         c. HILTI HIT-RE 500v3 SAFE SET SYSTEM WITH HILTI ROUGHENING TOOL (HIT RT) WITH CONTINUOUSLY DEFORMED REBAR PER ICC ESR-3814 IN DIAMOND CORED HOLESCC

   C. **ANCHORAGE TO SOLID GROUTED MASONRY**

      1. ADHESIVE ANCHORS USE:
         a. HILTI HIT-HY 270 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT AND VACUUM SYSTEM PER ICC ESR-4143
         b. STEEL ANCHOR ELEMENT SHALL BE HILTI HAS-E CONTINUOUSLY THREADED ROD OR CONTINUOUSLY DEFORMED STEEL REBAR
      2. MECHANICAL ANCHORS USE:
         a. HILTI KWIK BOLT-3 EXPANSION ANCHORS WITH SI-AT-A22 WITH ADAPTIVE TORQUE PER ICC ESR 1385

   D. **ANCHORAGE TO HOLLOW / MULTI-WYTHE MASONRY (NOT ALLOWED UNLESS SPECIFICALLY DETAILS IN STRUCTURAL DRAWINGS)**

      1. ADHESIVE ANCHORS USE:
         a. HILTI HIT-HY 270 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT AND VACUUM SYSTEM PER ICC ESR-4143.
         b. STEEL ANCHOR ELEMENT SHALL BE HILTI HAS-E CONTINUOUSLY THREADED ROD OR CONTINUOUSLY DEFORMED STEEL REBAR
         c. THE APPROPRIATE SIZE SCREEN TUBE SHALL BE USED PER ADHESIVE MANUFACTURER'S RECOMMENDATION

2. ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY HILTI OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. CONTRACTOR SHALL PROVIDE CALCULATIONS DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. SUBSTITUTIONS WILL BE EVALUATED BY THEIR HAVING AN ICC ESR SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE.

3. INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS, AS INCLUDED IN THE ANCHOR PACKAGING.

4. OVERHEAD ADHESIVE ANCHORS MUST BE INSTALLED USING THE HILTI PROFI SYSTEM.

5. THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.

6. ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.

7. EXISTING REINFORCING BARS IN THE CONCRETE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. UNLESS NOTED ON THE DRAWINGS THAT THE BARS CAN BE CUT, THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL DRAWINGS AND SHALL UNDERTAKE TO LOCATE THE POSITION OF THE REINFORCING BARS AT THE LOCATIONS OF THE CONCRETE ANCHORS, BY HILTI FERROSCAN, GPR, X-RAY, CHIPPING OR OTHER MEANS.

SUBMITTALS

SUBMITTAL REVIEW

1. TEN WORKING DAYS PRIOR TO SUBMITTING SHOP DRAWINGS, THE CONTRACTOR SHALL SUBMIT FOR STRUCTURAL ENGINEER' S REVIEW A SCHEDULE WHICH DETAILS THE ESTIMATED QUANTITY OF SHOP DRAWINGS AND THE DATE THE SHOP DRAWINGS WILL BE RECEIVED BY THE STRUCTURAL ENGINEER. THE STRUCTURAL ENGINEER SHALL HAVE THE OPPORTUNITY TO REVIEW THE PROPOSED SCHEDULE AND SUBMIT COMMENTS TO THE CONTRACTOR. THE FINAL SHOP DRAWING SCHEDULE SHALL BE DEVELOPED AND SUBMITTED TO THE STRUCTURAL ENGINEER. IN ACCORDANCE WITH THE SHOP DRAWING SCHEDULE, THE STRUCTURAL ENGINEER WILL RETURN THE SHOP DRAWING ITEMS WITHIN TEN WORKING DAYS AFTER HAVING RECEIVED THE REPRODUCIBLE SHOP DRAWING.

2. THE CONTRACTOR IS TO REVIEW EACH SUBMITTAL PRIOR TO FORWARDING TO ARCHITECT AND STRUCTURAL ENGINEER. THE CONTRACTOR IS TO STAMP EACH SUBMITTAL VERIFYING THAT THE FOLLOWING IS ADDRESSED:
   A. THE SHOP DRAWING IS REQUESTED.
   B. THE SHOP DRAWING IS BASED ON THE LATEST DESIGN.
   C. THE ARCHITECT' S AND STRUCTURAL ENGINEER' S COMMENTS FROM ANY PREVIOUS SUBMITTALS ARE ADDRESSED.
   D. THE WORK IS COORDINATED AMONG ALL CONSTRUCTION TRADES.
   E. REVISIONS FROM PREVIOUS SUBMITTALS ARE CLEARLY MARKED BY CIRCLING OR CLOUDS.
   F. SUBMITTAL IS COMPLETE.
   G. SUBMITTAL DOES NOT INCLUDE SUBSTITUTION REQUEST
   H. SUBMITTAL SHALL INCLUDE A STAMP INDICATING PROJECT NAME AND LOCATION, SUBMITTAL NUMBER, SPECIFICATION SECTION NUMBER.

3. THE STRUCTURAL ENGINEER SHALL RETURN, WITHOUT COMMENT, SUBMITTALS WHICH THE CONTRACTOR HAS NOT STAMPED OR WHICH DO NOT MEET THE ABOVE REQUIREMENTS. THE STRUCTURAL ENGINEER' S REVIEW OF SUBMITTALS SHALL BE FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT. NO WORK SHALL BE STARTED WITHOUT SUCH REVIEW.

4. FOR COMPONENTS THAT REQUIRE ENGINEERING BY THE CONTRACTOR, PROVIDE A NOTE ON EACH SHOP DRAWING, WRITTEN AND SIGNED BY THE SUPPLIER' S ENGINEER, INDICATING THAT THE SHOP DRAWING IS IN CONFORMANCE WITH THE CALCULATIONS OF THE CONTRACTOR' S ENGINEER.

REQUIRED SUBMITTALS

1. THE FOLLOWING ITEMS REQUIRE SUBMITTALS FOR STRUCTURAL REVIEW AS OUTLINED IN THE SPECIFICATIONS:

   1. 03100 - CONCRETE FORMWORK .....CALC
   2. 03200 - CONCRETE REINFORCING LAYOUT
   3. 03300 - CONCRETE MIX DESIGNS
   4. 03300 - CONCRETE CONSTRUCTION JOINT LAYOUT
   5. 05100 - STRUCTURAL STEEL

   CALC = CALCULATIONS TO BE PROVIDED TO ENGINEER OF RECORD
   S/S=SIGNED AND SEALED BY ENGINEER IN PROJECT STATE

DELEGATED DESIGNS

1. THE ITEMS IN THIS SECTION REFER TO LOADS IMPOSED BY CONTRACTOR DESIGNED SYSTEMS, SPECIFICALLY:
   A. ARCHITECTURAL ORNAMENTATION (FLAGPOLES, BANNERS, MASTS, ETC.)
   B. ELEVATOR REACTIONS

2. WHERE CONTRACTOR LOADS IMPOSED DO NOT EXCEED AND/OR CONNECTION CONDITIONS DO NOT DIFFER FROM WHAT IS INDICATED IN THE STRUCTURAL DRAWINGS, SUBMIT FOR RECORD A LETTER SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE IN WHICH THE PROJECT IS LOCATED STATING THE FOLLOWING:

   A. "THE CONTRACTOR DESIGNED SYSTEM HAS BEEN DESIGNED TO IMPOSE LOADS ON THE BASE BUILDING STRUCTURE THAT ARE WITHIN THE LOAD LIMITS AND AT THE LOCATIONS INDICATED ON THE STRUCTURAL DRAWINGS."

3. WHERE CONTRACTOR LOADS IMPOSED FOR THE FOLLOWING ITEMS EXCEED AND/OR CONNECTION CONDITIONS DIFFER FROM WHAT IS SHOWN IN THE STRUCTURAL DRAWINGS, SUBMIT FOR APPROVAL TO SER LOADS IMPOSED ON THE PRIMARY STRUCTURAL FRAME DUE TO THE DEAD, LIVE, AND WIND/SEISMIC LOADS INDICATED ON THE CONTRACT DOCUMENTS.

4. SUBMITTAL SHALL LIST THE DESIGN LOADS USED AND BE SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE IN WHICH THE PROJECT IS LOCATED. SUBMITTAL SHALL INCLUDE LOCATION, MAGNITUDE AND DIRECTION OF UNFACTORED IMPOSED LOADS, GRAPHICALLY REPRESENTED IN THEIR APPROPRIATE LOCATIONS ON A COPY OF THE CONTRACT DOCUMENT STRUCTURAL FRAMING PLANS OR ELEVATIONS AS APPROPRIATE. DETAIL REFERENCES IN THE CONNECTIONS APPLICABLE AT EACH LOCATION SHALL BE NOTED ON THE SUBMITTAL DRAWINGS.

5. FOR EXERIOR WALL ASSEMBLIES, THE LOADS IMPOSED SUBMITTAL SHALL BE COMPREHENSIVE INDICATING THE LOAD IMPOSED ON THE BASE BUILDING STRUCTURE AND SHALL BE THE REACTION BASED ON THE ACTUAL LOADS OF THE ENTIRE ASSEMBLY, INCLUDING BUT NOT LIMITED TO GLAZING, CLADDING, METAL STUD BACKUP, AND MULLIONS.

6. A SUBSTITUTION REQUEST MAY BE REQUIRED WHERE CONTRACTOR LOADS IMPOSED EXCEED AND/OR CONNECTION CONDITIONS DIFFER FROM THE BASIS OF DESIGN.

STEEL METAL DECK

1. ALL METAL DECK AT FLOOR LEVELS SHALL BE 1.0C36-24 GAGE DECK AS MANUFACTURED BY VULCRAFT OR APPROVED EQUAL.

2. DECK SHALL BE ATTACHED TO SUPPORTING MEMBERS AROUND PERIMETER EDGE AND INTERIOR SUPPORTS FOR DIAPHRAGM ACTION WITH #12 TEK SCREWS IN A 36/4 PATTERN.

3. SIDE LAP CONNECTIONS SHALL BE FASTENED WITH (2) #10 TEK SCREWS AT (3) EQUAL SPACES PER SPAN.

4. ALL METAL DECK PANELS SHALL SPAN ACROSS A MINIMUM OF THREE JOISTS OR BEAMS.

5. ALL METAL DECK SHALL BE GALVANIZED AND SHALL CONFORM TO ASTM A924 AND/OR ASTM A653.

6. WELDING OF LIGHTGAGE MATERIALS INDICATED ON DETAILS SHALL BE 1/8 INCH FILLET WELDS, UNLESS NOTED OTHERWISE. USE SPECIAL WELDING EQUIPMENT TO PREVENT BLOW-OUT OR BURNING THROUGH MATERIALS.

TIMBER NOTES

1. WOOD FRAMING SHALL COMPLY WITH THE SOUTHERN PINE INSPECTION BUREAU (SPIB) OR SHALL CONFORM TO SPECIFICATIONS AS PUBLISHED BY THE WESTERN WOODS PRODUCTS ASSOCIATION.

2. ALL LUMBER SHALL BE STAMPED WITH GRADE, SPECIES, AND GRADING AGENCY FOR EACH APPLICATION AS FOLLOWS:

APPLICATION	GRADE AND SPECIES
TOP AND BOTTOM PLATES	NO. 2 - DFL(Fb=850 PSI)
HEADERS	NO. 2 - DFL(Fb=850 PSI
BEAMS AND JOISTS	NO. 2 - DFL(Fb=850 PSI
NON-STRUCTURAL	UTILITY - DFL

3. SOLID 2" BLOCKING SHALL BE PROVIDED AT THE ENDS AND POINTS OF SUPPORT OF ALL JOISTS, RAFTERS, AND PURLINS, AND SHALL BE PLACED BETWEEN SUPPORTS IN ROWS NOT EXCEEDING 8'-0" APART.

4. ALL CONNECTIONS FOR WOOD FRAMING MEMBERS SHALL BE INACCORDANCE WITH THE INTERNATIONAL BUILDING CODE FASTENING SCHEDULE (TABLE 2304.9.1).

5. ALL PLATES IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESERVATIVE-TREATED (USE CATEGORY 2 (UC2) AS SPECIFIED BY AWPA) FOR MOISTURE PROTECTION. ALL WOOD EXPOSED TO WEATHER BUT NOT BEARING ON GROUND SHALL BE PRESERVATIVE-TREATED (USE CATEGORY UC3 AS SPECIFIED BY AWPA). ALL STRUCTURAL TIMBER EXPOSED TO WEATHER AND IN CONTACT WITH GROUND SHALL BE SHALL BE PRESERVATIVE-TREATED (USE CATEGORY UC4A AS SPECIFIED BY AWPA).

6. UNLESS OTHERWISE INDICATED, USE WOOD CONNECTORS AS MANUFACTURED BY THE SIMPSON STRONG-TIE COMPANY OR APPROVED EQUIVALENT. CONNECTOR TYPE SHALL BE AS RECOMMENDED BY THE MANUFACTURER FOR THE PARTICULAR APPLICATION AND INSTALLED WITH MANUFACTURER RECOMMENDED FASTENERS TO DEVELOP THE FULL CAPACITY OF THE CONNECTOR. CONNECTORS EXPOSED TO MOISTURE AND OTHER CORROSIVE ELEMENTS SHALL BE HOT DIPPED GALVANIZED OR Z-MAX WITH HOT DIPPED GALVANIZED FASTENERS.

7. ALKALINE COPPER QUATERNARY (ACQ) PRESERVATIVE-TREATED LUMBER PRODUCTS ARE HIGHLY CORROSIVE TO METAL CONNECTORS AND FASTENERS. ALL FASTENERS AND METAL CONNECTORS USED IN CONJUNCTION WITH THE ACQ PRESERVATIVE-TREATED LUMBER SHALL BE HOT-DIPPED GALVANIZED (MIN. G185 COATING) OR TYPE 304 OR 316 STAINLESS STEEL. THESE LOCATIONS INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
   - ANCHOR BOLTS AT SOLE PLATE TO FOUNDATION
   - MUD SILL ANCHORS AT SOLE PLATE TO FOUNDATION
   - NAILS FROM SOLE PLATE TO WALL STUDS
   - NAILS AT EXTERIOR PLYWOOD SHEATHING TO SOLE PLATE
   - BOLTS AT LEDGER TO CONCRETE
   - JOIST TO TREATED LEDGER CONNECTIONS
   - ALL HANGERS ON TREATED JOISTS
   - PLYWOOD DECKING TO TREATED JOISTS
   - WOOD POSTS TO CONCRETE
   - NAILS AT FLOOR JOISTS AND RIM JOISTS TO SOLE PLATE
   - DECK BOARDS TO TREATED JOISTS

REQUIRED SPECIAL INSPECTIONS	
IN ADDITION TO THE REGULAR INSPECTIONS REQUIRED BY SECTION 110 OF THE INTERNATIONAL BUILDING CODE, THE FOLLOWING ITEMS ALSO REQUIRE SPECIAL INSPECTION IN ACCORDANCE WITH SECTION 1705	
ITEM	**SECTION**
STRUCTURAL STEEL	IBC 1705.2.1 / AISC 360 N5
FIELD WELDING	IBC 1705.2
STRUCTURAL CONCRETE	IBC 1705.3 / ACI 318 17.8
ANCHOR BOLTS, POST INSTALLED ANCHORS IN CONCRETE	ACI 318 17.8
SOILS COMPLIANCE PRIOR TO FOUNDATION INSPECTION	IBC 1705.6
STRUCTURAL MASONRY	TMS 602 SPECIFICATION - TABLE 4 - LEVEL 2 FREQUENCY

1. THE ARCHITECT IS THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE (RDPIRC) FOR THIS PROJECT. SUBMIT ALL INSPECTION REPORTS DIRECTLY TO THE RDPIRC FOR REVIEW. INDIVIDUAL INSPECTION REPORTS SHALL INDICATE IF WORK WAS COMPLETED IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE GC FOR CORRECTION. IF NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND RDPIRC PRIOR TO COMPLETION OF THAT PHASE OF WORK.

2. IN ORDER TO COMPLY WITH THE BUILDING CODE REQUIREMENTS, THE SPECIAL INSPECTORS AND TESTING TECHNICIANS MAY NOT BE EMPLOYED BY THE GENERAL CONTRACTOR (GC), SUBCONTRACTORS OR MATERIAL SUPPLIERS. IN THE CASE OF AN OWNER / CONTRACTOR, THE BUILDING OFFICIAL SHALL BE CONSULTED.

3. THESE INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS IDENTIFIED IN SECTION 110 OF THE IBC. CONSTRUCTION SHALL REMAIN ACCESSIBLE AND EXPOSED FOR INSPECTION PURPOSES UNTIL APPROVED

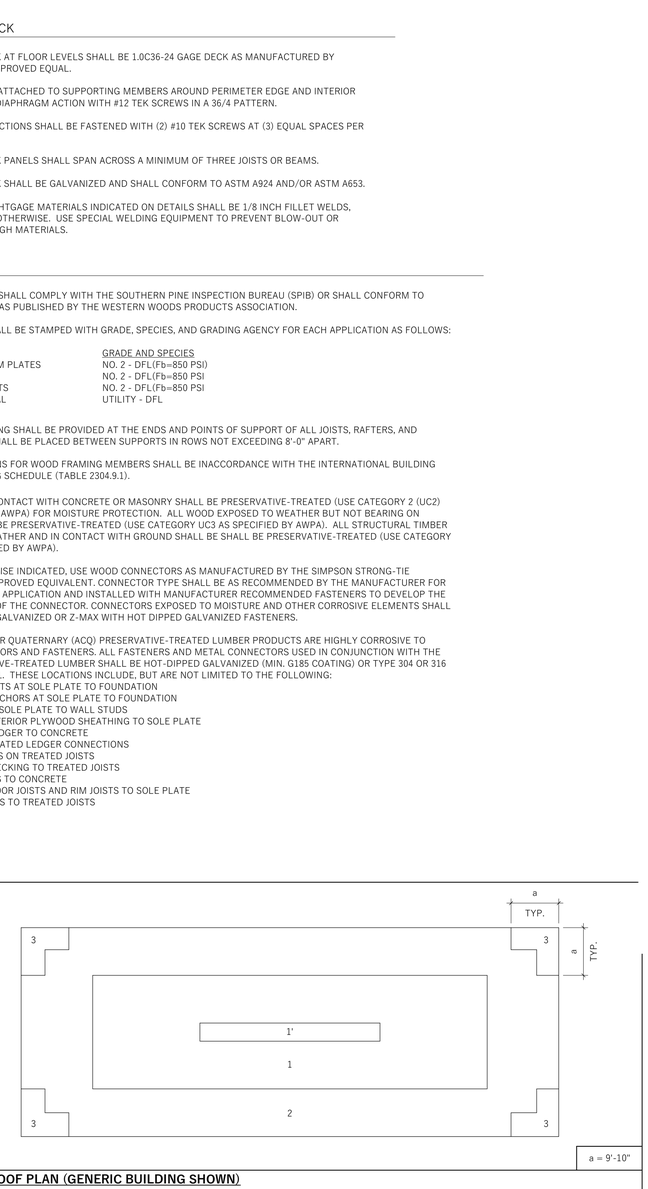
4. SPECIAL INSPECTIONS REPORT REQUIREMENTS 1704.2.4: SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF WORK. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED AT A POINT IN TIME AGREED UPON PRIOR TO THE START OF WORK BY THE APPLICANT AND THE BUILDING OFFICIAL.

1. THE OWNER SHALL EMPLOY THE SERVICES OF ONE OR MORE SPECIAL INSPECTORS TO PROVIDE SPECIAL INSPECTIONS DURING CONSTRUCTION FOR THE FOLLOWING:
   A. SHALLOW FOUNDATIONS:
      1. INSPECT SOILS BELOW FOOTINGS FOR ADEQUATE BEARING CAPACITY AND CONSISTENCY WITH GEOTECHNICAL REPORT.
      2. INSPECT REMOVAL OF UNSUITABLE MATERIAL AND PREPARATION OF SUBGRADE PRIOR TO PLACEMENT OF CONTROLLED FILL.
   B. CONTROLLED STRUCTURAL FILL:
      1. PERFORM SIEVE TESTS (ASTM D422 & D1140) AND MODIFIED PROCTOR TESTS (ASTM D1557) ON EACH SOURCE OF FILL MATERIAL.
      2. INSPECT PLACEMENT, LIFT THICKNESS & COMPACTION OF CONTROLLED FILL.
      3. TEST DENSITY OF EACH LIFT OF FILL BY NUCLEAR METHODS (ASTM D2922).
      4. VERIFY EXTENT AND SLOPE OF FILL PLACEMENT.
   C. STRUCTURAL STEEL:
      1. REVIEW SHOP FABRICATION AND QUALITY CONTROL PROCEDURES.
      2. REVIEW CERTIFIED MILL TEST REPORTS & IDENTIFICATION MARKINGS ON HSS SHAPES.
      3. INSPECT INSTALLATION AND TIGHTENING OF HIGH-STRENGTH BOLTS. VERIFY THAT SPLINES HAVE SEPARATED FROM TENSION CONTROL BOLTS. VERIFY PROPER TIGHTENING SEQUENCE.
      4. INSPECT STEEL FRAME FOR COMPLIANCE WITH STRUCTURAL DRAWINGS, INCLUDING BRACING, MEMBER CONFIGURATIONS AND CONNECTION DETAILS.
      5. INSPECT WELDS IN ACCORDANCE WITH AWS D1.1.
   D. POST-INSTALLED ANCHOR BOLTS:
      1. PERIODIC OR CONTINUOUS INSPECTIONS PER THE REQUIREMENTS OF THE ICC-ES REPORT FOR THE PRODUCT USED.
2. THE INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
3. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
   A. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS. THE INSPECTOR MAY NOT ALTER, MODIFY, ENLARGE OR WAIVE ANY OF THE REQUIREMENTS OF THE DOCUMENTS.
   B. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE PROFESSIONAL OF RECORD, AND THE CONTRACTOR. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, SUBMIT A COMPLETE LIST OF ALL OUTSTANDING DISCREPANCIES ON A WEEKLY BASIS TO THE OWNER, THE BUILDING OFFICIAL, AND THE PROFESSIONAL OF RECORD UNTIL ALL CORRECTIONS HAVE BEEN COMPLETED.
   C. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.
4. STRUCTURAL OBSERVATION BY THE SEOR IS NOT REQUIRED.
5. WHERE INSPECTION REQUIREMENTS DUPLICATE THE REQUIREMENTS OF SPECIFIED QUALITY ASSURANCE TESTING, DUPLICATE INSPECTIONS SHALL NOT BE REQUIRED.

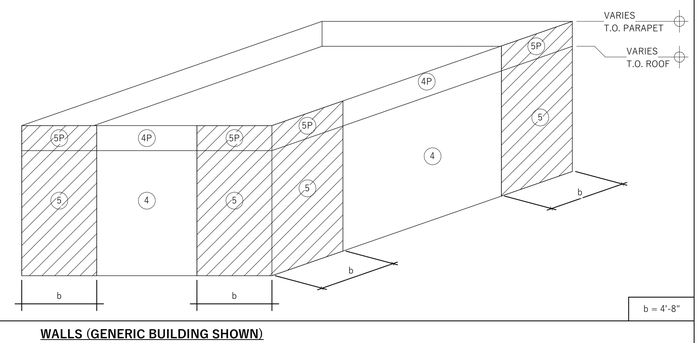
COMPONENT & CLADDING DESIGN WIND PRESSURES (PSF)			
ROOF			
ZONE	10 SF	50 SF	100 SF
1, 1' (+)	16	16	16
2,3 (+)	24.5	22.0	20.9
1	-42.7	-36.2	-33.4
2,3	-56.4	-48.0	-44.3
1'	-24.5	-24.5	-24.5
WALLS			
ZONE	10 SF	50 SF	100 SF
4,5 (+)	24.5	22.0	20.9
4	-26.6	-24.1	-23.0
5	-32.7	-27.7	-25.5
PARAPET			
ZONE	10 SF	50 SF	100 SF
4P,5P(+/-)	80.9	70	65.2

NOTES:

1. TABLE PRESSURES ARE FOR THE SQUARE FOOT (SF) TRIBUTARY AREA SHOWN. FOR OTHER TRIBUTARY AREAS, LINERALY INTERPOLATE BETWEEN VALUES SHOWN ABOVE.
2. POSITIVE PRESSURES ACT TOWARD THE BUILDING. NEGATIVE PRESSURES ACT AWAY FROM THE BUILDING.
3. SEE DIAGRAMS FOR ZONE LOCATIONS.
4. ALL PRESSURES SHOWN ARE GROSS ULTIMATE PRESSURES.



ROOF PLAN (GENERIC BUILDING SHOWN)



WALLS (GENERIC BUILDING SHOWN)

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

PRELIMINARY NOT FOR CONSTRUCTION

JCAA
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Wheat Ridge, CO 80033
p 303.985.3260

24.036

aw
ARCHITECTURAL WORKSHOP . DENVER, COLORADO

DATE	DESCRIPTION
07.19.2024	PRELIMINARY DESIGN (70% CD)

DRAWN BY: BC CHECKED BY: NR
PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

GENERAL NOTES

S002

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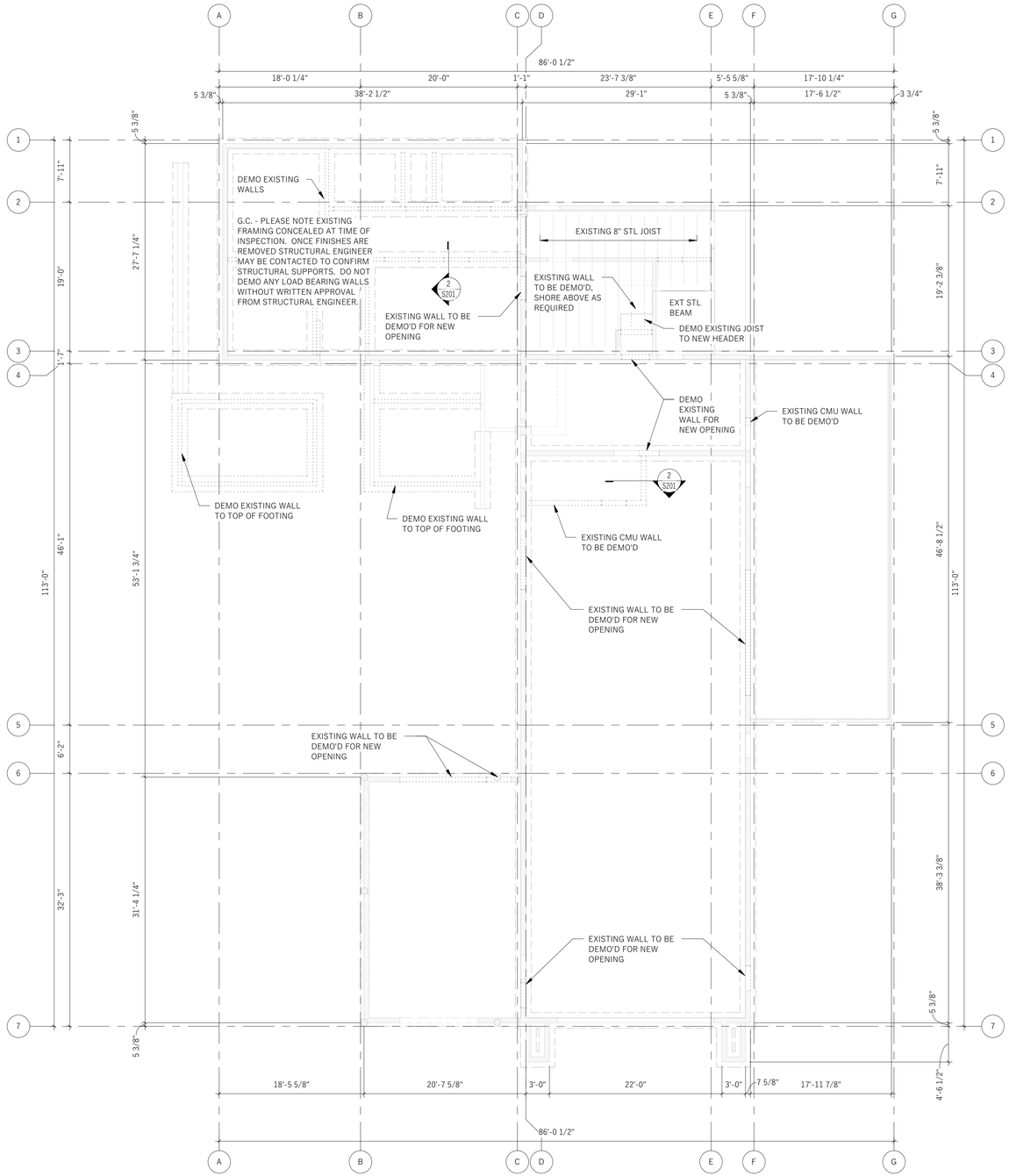
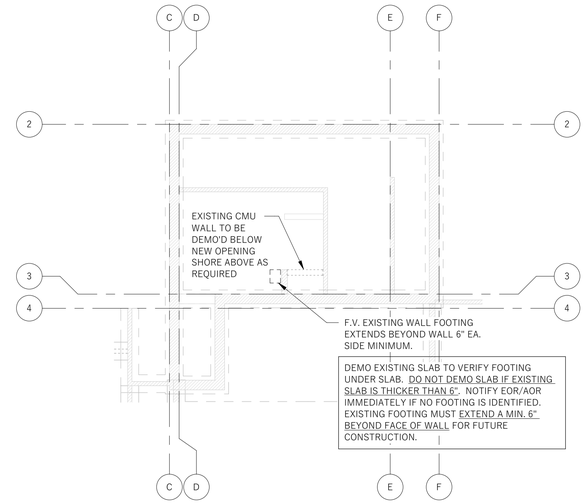


1 S100 FOUNDATION DEMO PLAN

1/8" = 1'-0"



2 S100 BASEMENT DEMO PLAN

1/8" = 1'-0"

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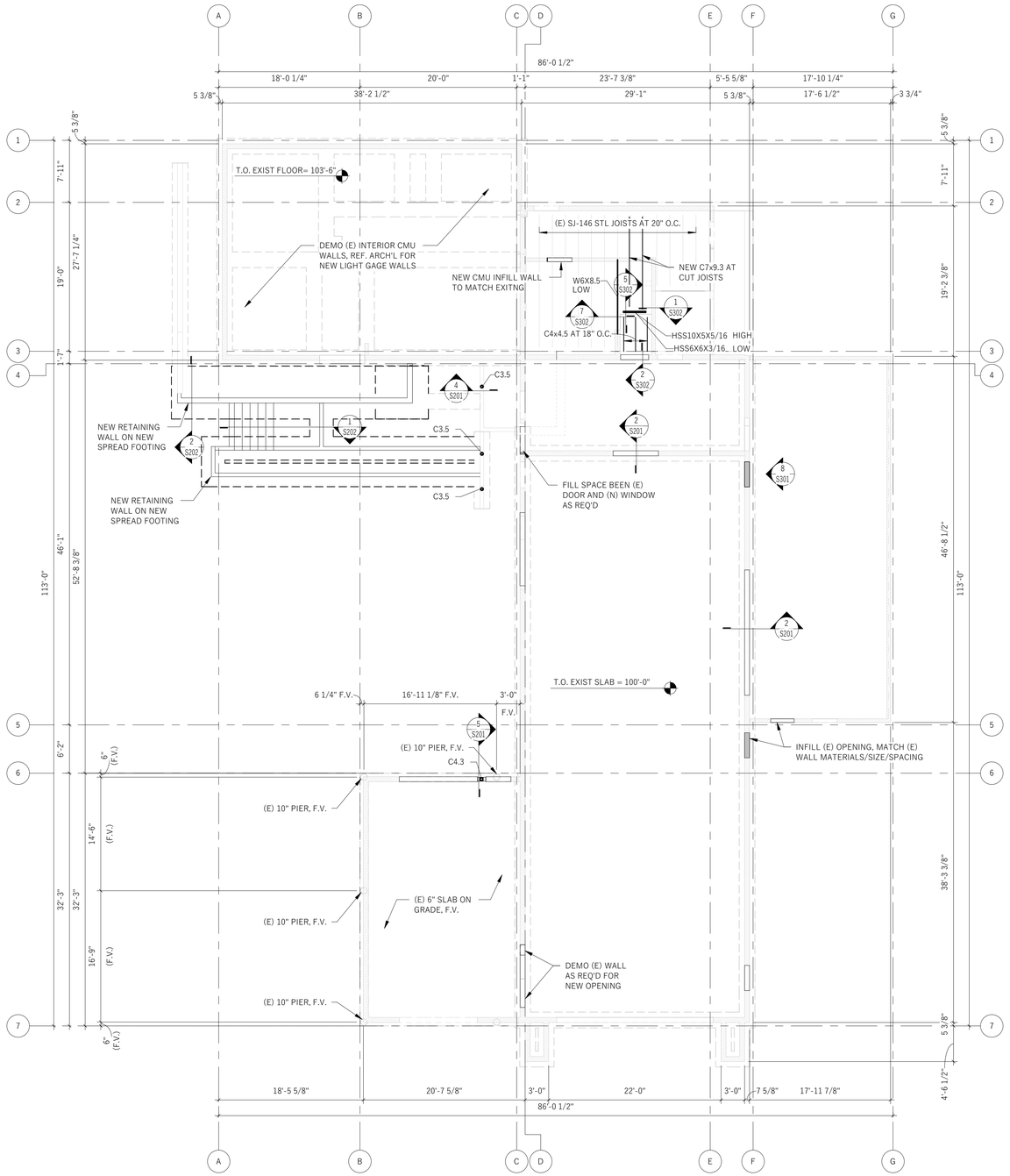
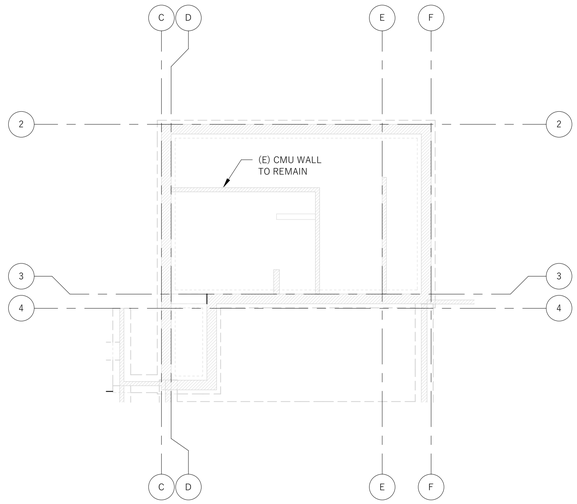
DEMO PLAN

S100



1 S101 FOUNDATION PLAN

1/8" = 1'-0"



2 S101 BASEMENT LEVEL

1/8" = 1'-0"

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COLUMN AND BASE PLATE SCHEDULE

MARK	COLUMN SIZE	BASE PLATE						
		BASE PLATE TYPE	BASE PLATE DIMENSIONS					ANCHOR BOLTS
			L	D	A	B	t	
C3.5	PIPE 3-1/2 STD	BP-B	11"	4 1/2"	4"	0"	3/4"	(2) 3/8" x 4" TANNER SECURE BOLTS "BUTTON HEAD"
C4.3	HSS4x4x3/16	BP-A	1'-0 1/2"	6"	1 1/2"	3 1/4"	3/4"	(4) 1/2" x 4" TITEN HD BOLTS

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FOUNDATION SHEET NOTES

1	REF. S0 SERIES FOR GENERAL NOTES, DESIGN CRITERIA.
2	REF. S3 SERIES FOR FOUNDATION TYPICAL DETAILS.
3	DO NOT SCALE WALL LENGTH ON PLAN. REF. ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
4	REFERENCE ELEVATION - TOP OF CONCRETE SLAB ELEVATION = EL. 100'-0". SEE CIVIL FOR N.A.V.D.
5	TYP. WALL CONSTRUCTION:
6	SLAB-ON-GRADE SHALL BE 5" CONCRETE SLAB REINFORCED WITH #4 BARS AT 18" ON CENTER LOCATED 2" FROM TOP OF SLAB. PLACE 10 MIL VAPOR BARRIER IMMEDIATELY BELOW THE SLAB, OVER A 4 INCH (MIN) THICK BASE COURSE LAYER (REF GEOTECH) OVER THE PREPARED FILL AND SUBGRADE. REF. SHEET S001, AND THE GEOTECHNICAL REPORT FOR SUBGRADE PREPARATION AND SLAB-ON-GRADE NOTES.
7	REF. ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF ALL SLOPED SLABS AND SLAB DEPRESSIONS.
8	SEE APPROVED FINAL GRADING PLAN FOR GRADING INFORMATION. CONTRACTOR SHALL VERIFY THAT BOTTOM OF FOOTING ELEVATIONS MEET THE MINIMUM BEARING REQUIREMENTS GIVEN IN THE SOILS REPORT.
9	VERIFY ALL OPENING DIMENSIONS AND LOCATIONS WITH ARCHITECTURAL DRAWINGS.
10	REFERENCE CIVIL DRAWINGS FOR ALL EXTERIOR SIDEWALKS, RAMPS, AND DOOR STOOPS.

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FOUNDATION PLAN

S101

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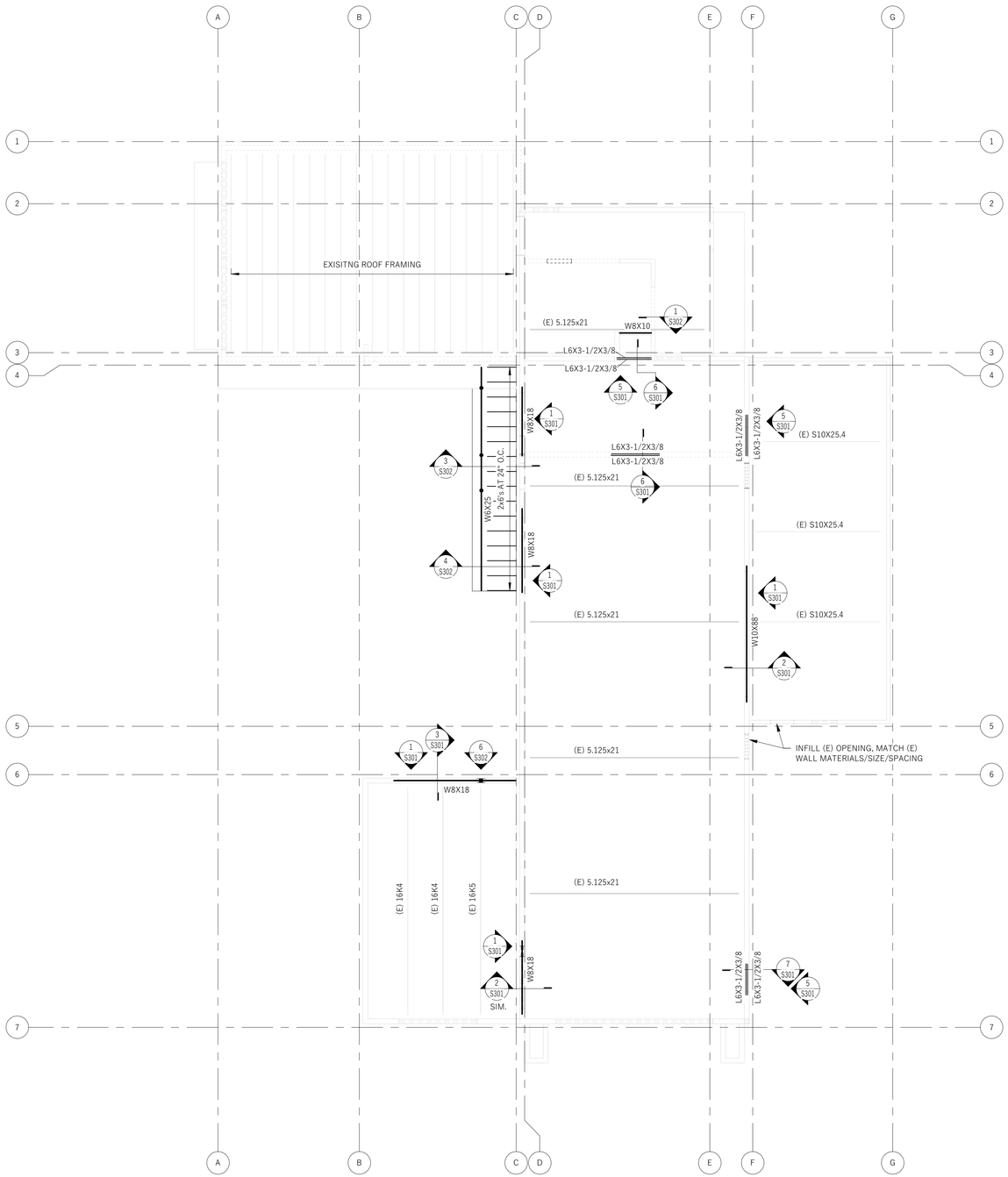

1 S102 ROOF FRAMING PLAN

1/8" = 1'-0"

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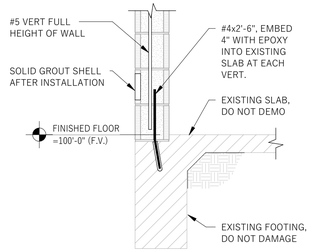
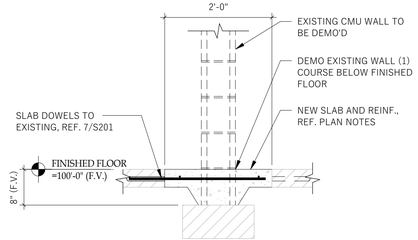
ROOF FRAMING PLAN

S102



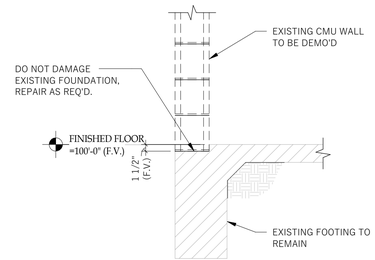
1 S201 SECTION

3/4" = 1'-0"



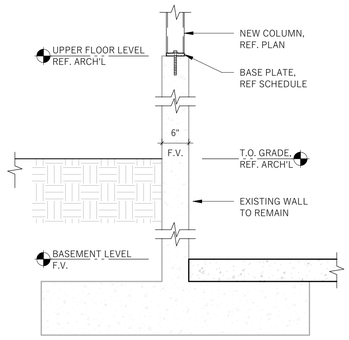
2 S201 SLAB REPAIR AT EXISTING CMU WALL

3/4" = 1'-0"



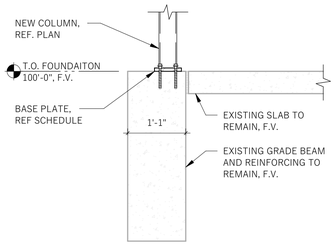
3 S201 NEW OPNG. AT EXT. CMU WALL

3/4" = 1'-0"



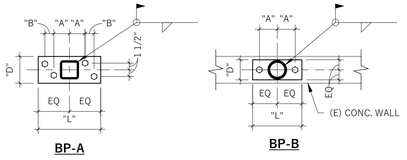
4 S201 SECTION AT PIT

3/4" = 1'-0"



5 S201 SECTION AT NEW COLUMN

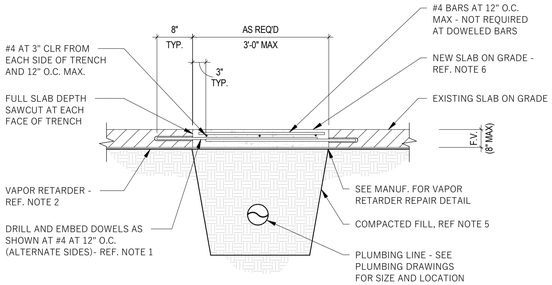
3/4" = 1'-0"



NOTES:
1. WELD TO BE 1/16" SMALLER THAN THICKNESS OF TUBE.
2. COLUMN STABILITY DURING ERECTION IS RESPONSIBILITY OF CONTRACTOR.
3. BASE PLATE THICKNESS SHOWN ON SCHEDULE IS A MIN. DIMENSION AFTER ALL MILLING IS COMPLETED.

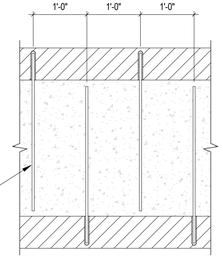
6 S201 BASE PLATE SCHEDULE

3/4" = 1'-0"



NOTES

1. ADHESIVE ANCHORING SYSTEM SHALL BE HILTI "HIT-HY 200" PER GENERAL NOTES
2. VAPOR RETARDER SHALL MEET THE FOLLOWING PROPERTIES:
   A. 10 MIL MINIMUM THICKNESS
   B. MEET ASTM E 1745 CLASS A
   C. WATER VAPOR PERMEANCE PER ASTM E96 SHALL BE 0.01 OR LESS
3. LAP JOINTS IN VAPOR RETARDER 6" MIN. USE MANUFACTURER'S STANDARD ADHESIVE OR PRESSURE SENSITIVE TAPE FOR SEALING MEMBRANE AT SEAMS, PIPE PENETRATIONS, TEARS, ETC.
4. PROVIDE 2-#4x2'-0" DIAGONAL BARS AT RE-ENTRANT CORNERS IN SAWCUT. PLACE AT MID- DEPTH OF SLAB.
5. SOIL REMOVED FOR SLAB TRENCH SHALL BE REPLACED AND RECOMPACTED TO A MINIMUM OF 95% STANDARD PROCTER DENSITY (ASTM D698).
6. PLACE SLAB BACK TO THICKNESS TO MATCH EXISTING WITH A MINIMUM 3,500 PSI NORMAL WEIGHT CONCRETE AND A RATIO OF 0.50 OR LESS.
7. THE CONTRACTOR SHALL ENSURE THAT TRENCHING FOR THE UTILITY LINE IS NOT OVER- EXCAVATED AND THAT NO PORTION OF THE SURROUNDING SLAB-ON-GRADE IS LEFT UNSUPPORTED
8. CONTRACTOR SHALL PROVIDE A COLD JOINT EVERY 30 LINEAR FEET IN THE PORTION OF NEW CONCRETE SLAB THAT IS PLACED DUE TO UNDER-SLAB TRENCHING.



PLAN

CONFIRM LOCATION AND EXTENTS OF ALL CONCRETE WORK WITH ARCHITECT

7 S201 SLAB REPAIR DETAIL

3/4" = 1'-0"

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THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

PRELIMINARY NOT FOR CONSTRUCTION

JCAA
4100 Wadsworth Blvd.
Wheat Ridge, CO 80033
p 303.985.3260
24.036

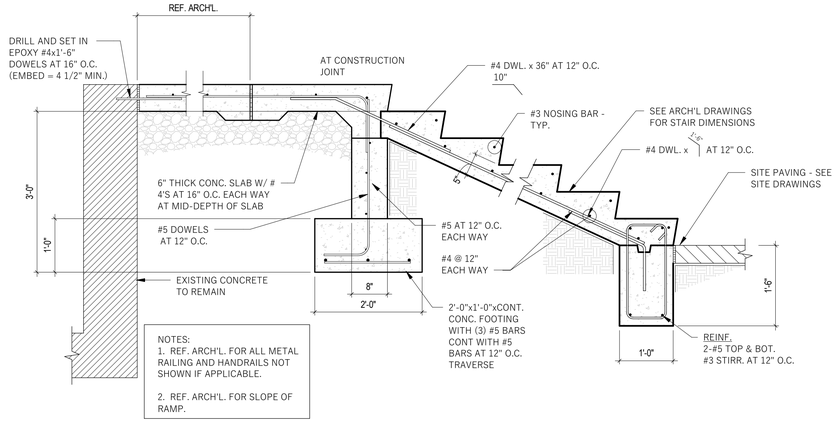
ARCHITECTURAL WORKSHOP . DENVER, COLORADO

DATE	DESCRIPTION
07.19.2024	PRELIMINARY DESIGN (70% CD)

DRAWN BY: BC CHECKED BY: NR
PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

FOUNDATION SECTIONS

S201



1 S202 SECTION AT NEW ENTRY STAIR

3/4" = 1'-0"

RETAINING WALL FACTOR OF SAFETY SCHEDULE

MARK	SLIDING	OVERTURNING	BEARING
RW-1	1.511	5.927	1.396

NOTES:
1. FOOTING SHALL BE PLACED ON UNDISTURBED EXISTING SOIL OR ROCK. FOOTING EXCAVATION SHALL BE INSPECTED BY THE GEOTECHNICAL LABORATORY TO DETERMINE THAT THE PROPER BEARING STRATUM IS OBTAINED AND THAT EXCAVATIONS ARE PROPERLY CLEAN & DRY BEFORE CONCRETE IS PLACED.
2. FOR BACKFILL BEHIND RETAINING WALLS SEE STRUCTURAL NOTES.
3. REFERENCE DETAIL 13 AND 14 THIS SHEET FOR TYPICAL CONTROL AND CONTRACTION JOINT DETAILS.
4. PROVIDE CONTROL JOINTS @ 15'-0" O.C.
5. PROVIDE CONTRACTION JOINTS @ 40'-0" O.C.
6. RETAINING WALL WAS DESIGNED ACCORDING WITH IBC 2012
   A. SAFETY FACTOR FOR SLIDING = SEE RETAINING WALL FACTOR OF SAFETY SCHEDULE BELOW (1.5 MIN. REQUIRED BY IBC 2021)
   B. SAFETY FACTOR FOR OVERTURNING = SEE RETAINING WALL FACTOR OF SAFETY SCHEDULE BELOW (1.5 MIN. REQUIRED BY IBC 2021)
   C. SAFETY FACTOR FOR BEARING = SEE RETAINING WALL FACTOR OF SAFETY SCHEDULE BELOW (1.0 MIN. REQUIRED BY IBC 2021)

2 S202 TYPICAL RETAINING WALL DETAIL

3/4" = 1'-0"

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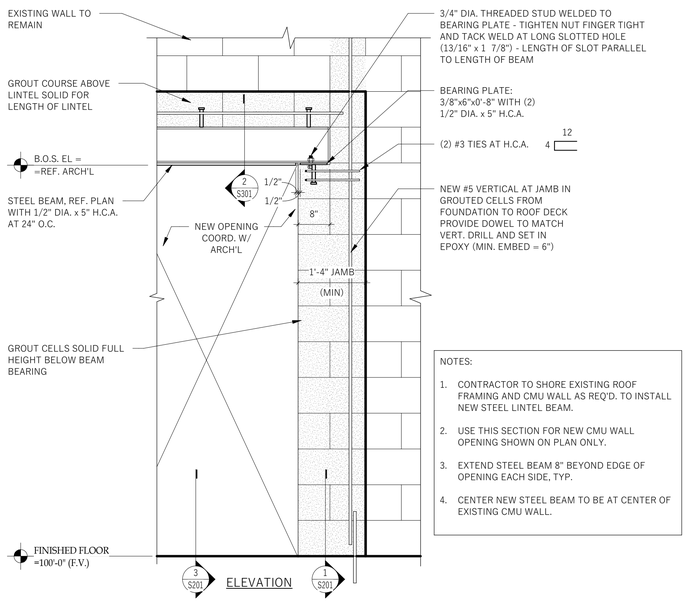
PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

SITE DETAILS

S202

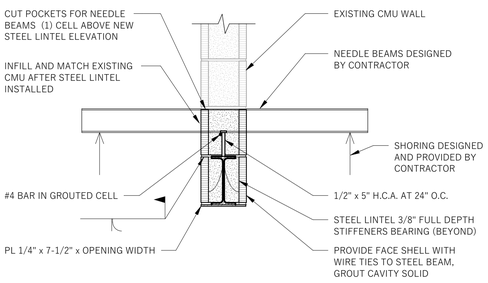


NOTES:

1. CONTRACTOR TO SHORE EXISTING ROOF FRAMING AND CMU WALL AS REQ'D. TO INSTALL NEW STEEL LINTEL BEAM.
2. USE THIS SECTION FOR NEW CMU WALL OPENING SHOWN ON PLAN ONLY.
3. EXTEND STEEL BEAM 8" BEYOND EDGE OF OPENING EACH SIDE, TYP.
4. CENTER NEW STEEL BEAM TO BE AT CENTER OF EXISTING CMU WALL.

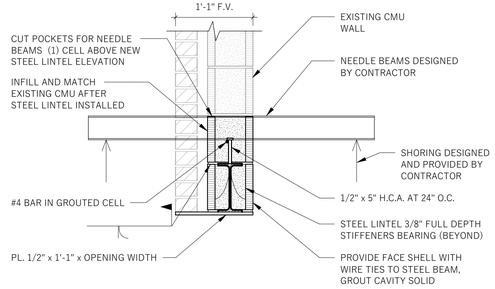
1 S301 NEW OPENING IN EXISTING CMU WALL

3/4" = 1'-0"



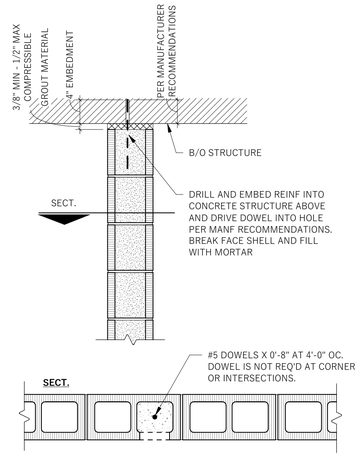
2 S301 SECTION AT NEW STEEL BEAM

1" = 1'-0"



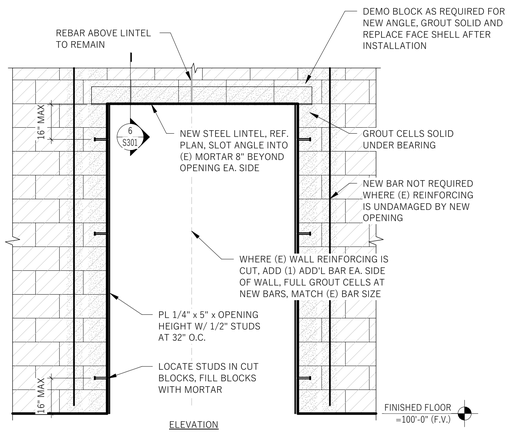
3 S301 SECTION AT NEW STEEL BEAM

1" = 1'-0"



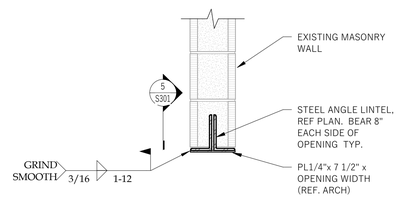
4 S301 CMU CONNECTION DETAIL

1" = 1'-0"



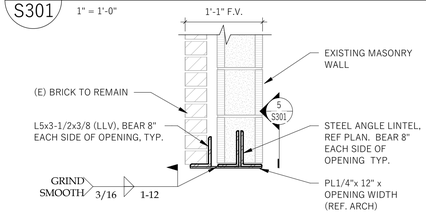
5 S301 ELEVATION AT NEW OPENING

1/2" = 1'-0"



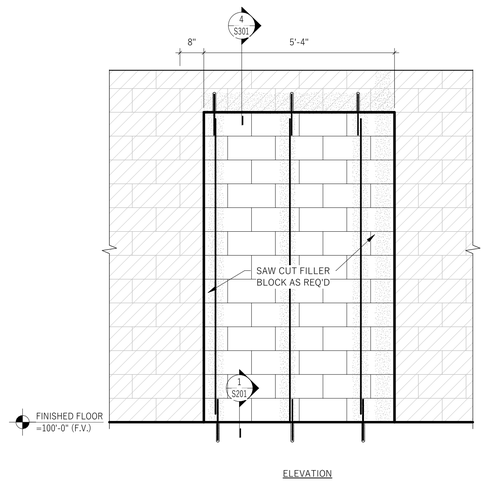
6 S301 STEEL LINTEL AT EXISTING CMU WALL

1" = 1'-0"



7 S301 STEEL LINTEL AT EXISTING CMU WALL

1" = 1'-0"



8 S301 CMU WALL INFILL DETAIL

1/2" = 1'-0"

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ARCHITECTURAL WORKSHOP . DENVER, COLORADO

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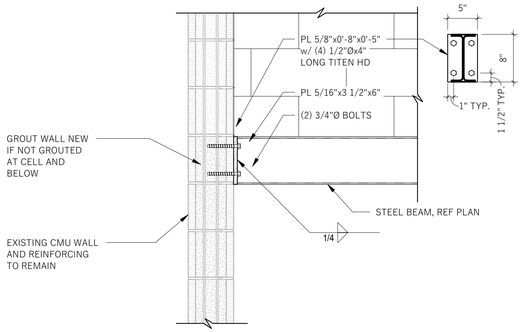
DRAWN BY: Author CHECKED BY: Checker
PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

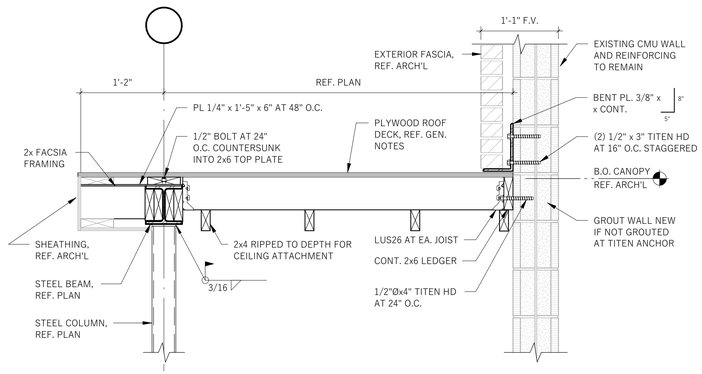
FRAMING SECTIONS

S301



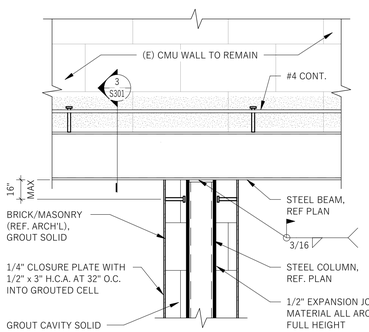
1 S302 WIDE FLANGE CONNX TO CMU

1" = 1'-0"



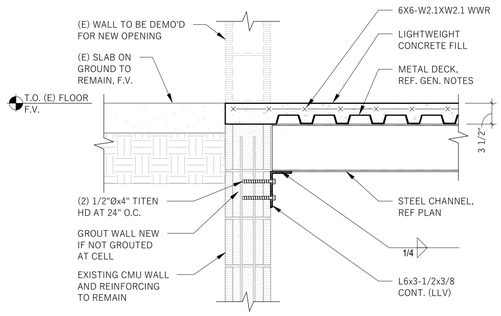
3 S302 SECTION AT CANOPY

1" = 1'-0"



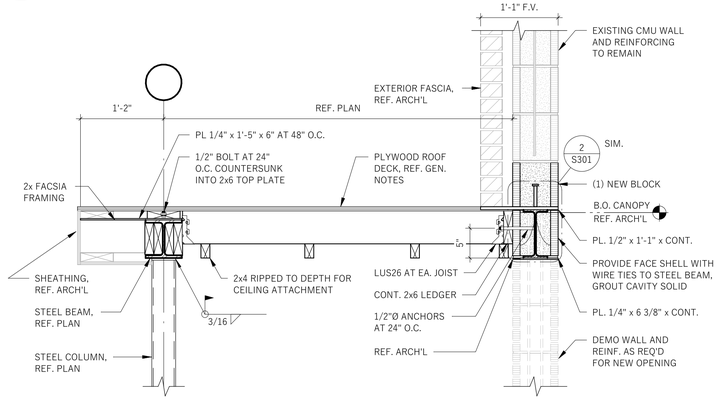
6 S302 ELEVATION AT NEW COLUMN

1" = 1'-0"



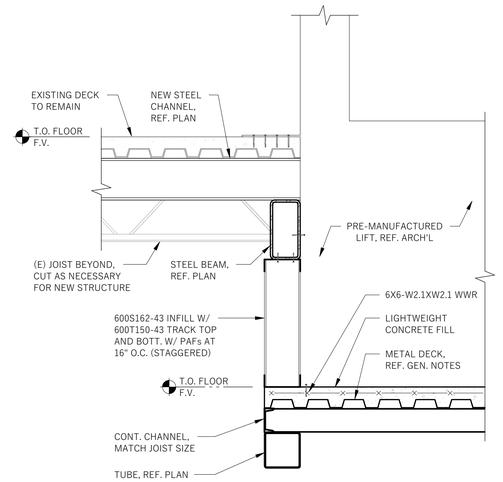
2 S302 CHANNEL JOIST CONNX TO CMU

1" = 1'-0"



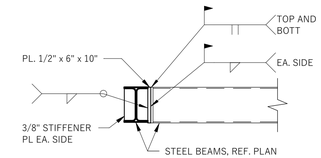
4 S302 SECTION AT CANOPY AT OPENING

1" = 1'-0"



5 S302 SECTION AT LIFT

1" = 1'-0"



7 S302 SECTION AT NEW BEAM

1" = 1'-0"

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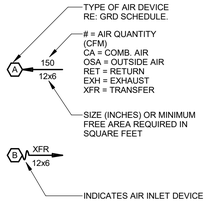
FRAMING SECTIONS

S302

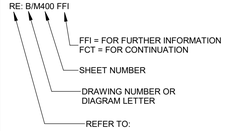
MECHANICAL SYSTEMS LEGEND

AIR DEVICE DESIGNATION KEY



NOTE:
FOR STANDARD MODULE SIZE REGISTERS, SIZE GIVEN IS NECK SIZE. REFER TO GRD SCHEDULE FOR MODULE SIZE.

REFERENCE SAMPLE



NOTES

1. ALL SYMBOLS, ABBREVIATIONS, AND DESIGNATIONS ON LEGEND SHEET ARE NOT NECESSARILY USED ON THIS PROJECT.
2. THIS DRAWING SET CONSISTS OF DATA GENERATED, IN PART, BY OTHER PARTIES. NOT ALL SYMBOLOGIES AND NOTATION CONVENTIONS OCCURRING IN THIS DRAWING SET ARE NECESSARILY DEFINED ON THESE LEGENDS. CONSULT THE ENGINEER IN THE EVENT SYMBOLOGY OR NOTATION INTERPRETATION IS REQUIRED.

FIRE PROTECTION NOTES:

1. *FIRE PROTECTION ELEMENTS SHOWN HEREIN ARE FOR COORDINATION PURPOSES ONLY. THE ENGINEERING SEAL AFFIXED TO ANY PART OF THIS DOCUMENT SET AND ANY RESPONSIBILITY OF ENGINEER OF RECORD EXPRESSLY EXCLUDES ANY AND ALL FIRE PROTECTION ELEMENTS SHOWN HEREIN.*
2. *FIRE PROTECTION PLANS WHICH ARE PART OF THIS DRAWING SET ARE EXPRESSLY NOT FOR CONSTRUCTION.*
3. *THE FIRE PROTECTION CONTRACTOR SHALL BE THE DESIGNER OF RECORD FOR THE FIRE SPRINKLER SYSTEMS. REFER TO REQUIREMENTS WITHIN THE PROJECT MANUAL FOR ADDITIONAL INFORMATION.*
4. *THE FIRE PROTECTION CONTRACTOR WHO IS THE WINNING BIDDER SHALL RETAIN THE SERVICES OF A REGISTERED PROFESSIONAL FIRE PROTECTION ENGINEER. SAID FIRE PROTECTION ENGINEER SHALL PERFORM ALL DESIGN CALCULATIONS, PROVIDE A COMPLETELY DESIGNED FIRE PROTECTION SYSTEM IN A SEPARATE DOCUMENT SET, AND SHALL BE THE ENGINEER OF RECORD FOR THE FIRE PROTECTION SYSTEM.*
5. *THE FIRE PROTECTION SYSTEM SHALL BE DESIGNED IN ACCORDANCE WITH NFPA, LOCAL CODES AND ORDINANCES, AND FACTORY MUTUAL WHERE APPLICABLE.*
6. *CONTRACTOR SHALL MODIFY EXISTING SYSTEMS IN COMPLIANCE WITH NFPA 13 AS NEEDED TO PROVIDE COMPLETE COVERAGE WITHIN THE MODIFIED PROJECT AREA.*
7. *DO NOT RELOCATE OR REUSE EXISTING SPRINKLER HEADS. PROVIDE NEW HEADS TO MATCH EXISTING, UNLESS NOTED OTHERWISE.*
8. *SPRINKLER HEADS SHALL BE LOCATED IN THE CENTER OF ALL 2' X2' CEILING TILES AND ALONG THE CENTERLINES OF 2' X 4' CEILING TILES.*

DUCTWORK LEGEND

ROUND 3D	ROUND PLAN	DESCRIPTION	RECTANGULAR PLAN	RECTANGULAR 3D
		DUCT RISER		
		DUCT DROP		
		90° ELBOW DN. (NEGATIVE PRESSURE)		
		90° ELBOW DN. (POSITIVE PRESSURE)		
		90° ELBOW UP (NEGATIVE PRESSURE)		
		90° ELBOW UP (POSITIVE PRESSURE)		
		SIZE OR SHAPE TRANSITION		
		ROUND FLEXIBLE DUCT CONNECTION		
		90° RADIUS ELBOW		
-	-	90° MITERED ELBOW W/ TURNING VANES		
		90° STRAIGHT TEE		
		90° CONICAL TEE		
		45° BRANCH		
		45° CONICAL BRANCH		
	F/S	COMBINATION FIRE AND SMOKE DAMPER	F/S	
		FIRE DAMPER		
		SMOKE DAMPER		
		MANUAL BALANCING DAMPER		
		MOTORIZED DAMPER		
	BDD	BACKDRAFT DAMPER	BDD	
	D	OFFSET TO CHANGE ELEVATION D = DROP R=RISE	R	
-	14ø	DUCT SIZE TAG: FIRST NUMBER = PLAN WIDTH	14x12	-

FIXTURE CONNECTION SCHEDULE

DESCRIPTION	TAG	HW	CW	WASTE	VENT
WATER CLOSET (FLUSH VALVE)	WC	-	1"	4"	2"
WATER CLOSET (FLUSH TANK)	WC	-	1/2"	4"	2"
URINAL (BLOWOUT)	UR	-	1"	2"	1-1/2"
URINAL (WASHDOWN)	UR	-	3/4"	2"	1-1/2"
URINAL (WATERLESS)	UR	-	-	2"	1-1/2"
LAVATORY	LAV	1/2"	1/2"	1-1/2"	1-1/2"
HAND SINK	HS	1/2"	1/2"	1-1/2"	1-1/2"
SERVICE SINK	SS	1/2"	1/2"	3"	2"
MOP SERVICE BASIN	MSB	3/4"	3/4"	3"	2"
DRINKING FOUNTAIN/WATER COOLER	DF	-	1/2"	1-1/2"	1-1/2"
KITCHEN SINK W/ OR W/O DISPOSAL	KS	1/2"	1/2"	2"	1-1/2"
SHOWER	SH/SHWR	3/4"	3/4"	2"	1-1/2"
SHOWER/BATHTUB	SH/TUB	3/4"	3/4"	2"	1-1/2"
BATHTUB	TUB	3/4"	3/4"	2"	1-1/2"
CLOTHES WASHER OUTLET BOX	CW	1/2"	1/2"	2"	1-1/2"
DISH MACHINE ROUGH-IN	DM	3/4"	3/4"	2"	1-1/2"
DISHWASHER ROUGH-IN	DW	1/2"	-	2"	1-1/2"
BAR SINK	BS	1/2"	1/2"	1-1/2"	1-1/2"
FLOOR SINK	FS	-	-	2"	1-1/2"
REFRIG/ICE MAKER BOX	FRIG	-	1/2"	-	-
FLOOR DRAIN	FD	-	-	2"	1-1/2"
TRENCH DRAIN	TD	-	-	3"	2"
WORK SINK	WS	3/4"	3/4"	2"	1-1/2"
HOSE BIB	HB	-	3/4"	-	-

NOTES:

1. SIZES SHOWN ARE MINIMUM PIPE SIZES TO A SINGLE FIXTURE. LARGER SIZES MAY BE INDICATED ON PLANS WHERE REQUIRED.
2. MINIMUM DOMESTIC PIPE SIZE TO 2 OR MORE FIXTURES IS 3/4".
3. RE: MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR INDIRECT WASTE SIZES.
4. WASTE AND VENT SIZES SHOWN ABOVE APPLY TO INDIVIDUAL VENTING ONLY. WHERE ALLOWED, INDIVIDUAL VENT CONNECTIONS MAY BE OMITTED OR SIZES MAY VARY WHEN CIRCUIT VENTS, COMMON VENTS, WASTE STACK VENTS, WET VENTS, OR COMBINATION DRAIN AND VENT SYSTEMS ARE USED. PRIOR APPROVAL FROM THE ENGINEER IS REQUIRED TO USE THESE ALTERNATIVE VENTING METHODS.
5. PROVIDE TRAP PRIMER FOR ALL FLOOR DRAINS AND FLOOR SINKS NOT LOCATED IN FOOD SERVICE AREAS.
6. MINIMUM SIZE FOR WASTE AND VENT PIPING BENEATH SLAB IS 2".
7. ALL FIXTURES LISTED ARE NOT NECESSARILY USED ON THIS PROJECT.
8. REFER TO APPLIANCE SCHEDULES (BY OTHERS) FOR ADDITIONAL PLUMBING FIXTURE CONNECTIONS SUCH AS INSTA-HOTS, COFFEE MAKERS, AND GARBAGE DISPOSALS.
9. PROVIDE ICE MAKER BOX ROUGH IN W/ 1/2"CW CONNECTION FOR ALL REFRIGERATOR LOCATIONS.
10. DESIGNER TO CONFIRM FLOW RATE OF FLOOR DRAINS, FLOOR SINKS, ETC. WITH ACTUAL SIZE REQUIRED.

EQUIPMENT ABBREVIATIONS

AHU	AIR HANDLING UNIT
AS	AIR SEPARATOR
B	BOILER (HOT WATER)
BB	BASE BOARD
CC	COOLING COIL
CP OR P	CIRC PUMP
CUH	CABINET UNIT HEATER
CV	CONSTANT VOLUME BOX
DC	DUCT COIL
EBH	ELECTRIC BASEBOARD HEATER
ECU	EVAPORATIVE COOLING UNIT
EF	EXHAUST FAN
ERU	ENERGY RECOVERY UNIT
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EWH	ELECTRIC WATER HEATER
F	FURNACE
FC	FAN COIL
GF	GLYCOL FEEDER
H	HUMIDIFIER
HC	HEATING COIL
HP	HEAT PUMP
HX	HEAT EXCHANGER
IN WC	INCHES WATER COLUMN
MAU	MAKE-UP AIR UNIT
MCC	MOTOR CONTROL CENTER
MV	MIXING VALVE
NC	NOISE CRITERIA
P	PUMP (SEE PIPING LEGEND FOR DETAILS)
RF	RETURN (OR RELIEF) AIR FAN
SA	SNOWMELT AREA
SB	SUMP BASIN
SF	SUPPLY FAN
ST	STORAGE TANK
TMV	THERMOSTATIC MIXING VALVE
UH	UNIT HEATER
WH	WATER HEATER

PIPING SYMBOLS

	90° ELBOW DN
	90° ELBOW UP
	TEE DOWN
	TEE UP
	BUTTERFLY VALVE
	SHUT OFF (BALL, GATE, BUTTERFLY)
	GLOBE VALVE
	CHECK VALVE
	FLOW CONTROL VALVE
	BALL VALVE
	PLUG OR BALANCING VALVE
	FLOW BALANCING VALVE
	PLUG VALVE IN RISER
	GATE OR GLOBE VALVE IN RISER
	DRAIN VALVE W/ HOSE END
	TEMPERATURE CONTROL VALVE (2-WAY)
	TEMPERATURE CONTROL VALVE (3-WAY)
	PRESSURE REDUCING VALVE
	SOLENOID VALVE
	VENTURI/FLOW INDICATOR
	PUMP & EQUIPMENT CONNECTOR
	PIPE UNION
	DOUBLE CHECK BACKFLOW PREVENTER
	PIPE ANCHOR
	PIPE EXPANSION JOINT
	FLEXIBLE CONNECTOR
	SAFETY RELIEF VALVE
	AIR VENT
	PRESSURE - TEMP. TAP
	PRESSURE GAUGE W/ PIG TAIL & COCK
	THERMOMETER
	VACUUM BREAKER
	HORIZONTAL CLEANOUT
	VERTICAL CLEANOUT
	FLOOR DRAIN
	FLOOR SINK
	ROOF DRAIN
	STRAINER W/ BLOW-OFF VALVE
	SHOCK ABSORBER
	FLOW SWITCH
H B W H	HOSE BIBB or WALL HYDRANT
	STEAM TRAP: FT-FLOAT & THERMOSTATIC TD-THERMODYNAMIC IB-INVERTED BUCKET TS-THERMOSTATIC BP-BALANCED PRESSURE
ST	STEAM TRAP TEST CHAMBER
TC	TEMPERATURE CONTROLLER OR SENSOR

ABBREVIATIONS

AAV	AIR ADMITTANCE VALVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AUTO	AUTOMATIC
ABV	ABOVE
BCS	BUILDING CONTROL SYSTEM
BDD	BACK DRAFT DAMPER
BLDG	BUILDING
BFG	BELOW FINISHED GRADE
BOP	BOTTOM OF PIPE FROM FINISHED FLOOR
B/N	BETWEEN
C	COMMON
CA	COMBUSTION AIR
CC	CONTROLS CONTRACTOR
CFM	CUBIC FEET PER MINUTE (AIR FLOW RATE)
CIP	CAST IN PLACE
CLG	CEILING (OR COOLING)
CONC	CONCRETE
COND	CONDENSATE
CONN	CONNECT (OR CONNECTION)
CONTR'R	CONTRACTOR
CO	CLEANOUT
COTG	CLEANOUT TO GRADE
CW	DOMESTIC COLD WATER
DN	DOWN
(E)	EXISTING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EXH	EXHAUST
EWT	ENTERING WATER TEMPERATURE
FA	FREE AREA
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OWNER
FCO	FLOOR CLEANOUT
FCT	FOR CONTINUATION
FFI	FOR FURTHER INFORMATION
FSD	COMBINATION FIRE/SMOKE DAMPER
GC	GENERAL CONTRACTOR
GHX	GROUND HEAT EXCHANGER
GPM	GALLONS PER MINUTE (WATER FLOW RATE)
HP	HORSE POWER
HW	DOMESTIC HOT WATER
HWC	HOT WATER RECIRCULATION
KW	KILOWATTS
LAT	LEAVING AIR TEMPERATURE
LF	LINEAR FOOT
LWT	LEAVING WATER TEMPERATURE
MC	MECHANICAL CONTRACTOR
MFR	MANUFACTURER
MOD	MOTOR OPERATED DAMPER
(N)	NEW
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
OA	OUTSIDE AIR
OBD	OPPOSED BLADE VOLUME DAMPER
OC	ON CENTER
OSA	OUTSIDE AIR
RA	RETURN AIR
REQ'D	REQUIRED
RE:	REFER TO:
REQ'MTS	REQUIREMENTS
SA	SUPPLY AIR
SF	SQUARE FOOT (FEET)
SP	STATIC PRESSURE
SS	STAINLESS STEEL
TA	THROW-AWAY (OR TRANSFER AIR)
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VTR	VENT THROUGH ROOF
W/	WITH
W/O	WITHOUT
WCO	WALL CLEANOUT
XFR	TRANSFER

PIPING DESIGNATIONS

HYDRONIC PIPING	
GF	GLYCOL FEED
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
HWS(LT)	HEATING WATER SUPPLY (LOW TEMP)
HWR(LT)	HEATING WATER RETURN (LOW TEMP)
PLUMBING PIPING	
G	NATURAL GAS
MG	MEDIUM PRESSURE GAS
D	DRAIN PIPE
RS	REFRIGERANT SUCTION
RL	REFRIGERANT LIQUID
CW	DOMESTIC COLD WATER (CW)
HW	DOMESTIC HOT WATER (HW)
HWC	HOT WATER RECIRCULATION (HWC)
XX°F HW	DOMESTIC HOT WATER AT SERVICE TEMP
F	FIRE LINE
F(DRY)	DRY FIRE PIPING
PW	PUMPED WASTE
W	WASTE
V	VENT
SD	SECONDARY DRAIN
SO	SAND AND OIL WASTE
ST	STORM DRAIN
ST(OF)	STORM DRAIN OVERFLOW

PLAN SYMBOLS

	CONTROL PANEL/RADIANT MANIFOLD
CO2	CARBON DIOXIDE SENSOR
	CARBON MONOXIDE SENSOR
T	THERMOSTAT
S	REMOTE TEMPERATURE SENSOR
H	HUMIDISTAT
SP	DUCT STATIC PRESSURE SENSOR
P	ROOM PRESSURE SENSOR
EPO	EMERGENCY POWER OFF SWITCH
	PLUMBING RISER
	HEATING WATER RISER
	FIRE RISER
	HVAC RISER
	DIAGRAM CONTINUATION REFERENCE
	SECTION CUT LETTER/SHEET SHOWN ON
	POINT OF DISCONNECTION
	POINT OF NEW CONNECTION
	ACCESS PANEL

PROJECT ALTITUDE

5250' ABOVE SEA LEVEL

MECHANICAL SHEET INDEX

#	TITLE	ISSUE LOG: 30% CD 2024-05-08	70% CD 2024-07-19
M-001	MECHANICAL COVER SHEET	√	√
M-002	MECHANICAL SCHEDULES	√	√
M-003	MECHANICAL SPECIFICATIONS		√
MS-101	MECHANICAL SITE PLAN		
MPD-101	MECHANICAL AND PLUMBING DEMOLITION PLAN	√	√
M-102	MECHANICAL ROOF PLAN		√
P-101	PLUMBING FLOOR PLAN	√	√
M-101	HVAC FLOOR PLAN	√	√
M-201	MECHAINCAL DIAGRAMS		

ISSUE LOG KEY:
'√' ISSUED AS PART OF SET
' ' NOT PART OF SET
'* ' ISSUED FOR INFORMATION ONLY

GENERAL NOTES:

1. DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS ON ARCHITECTURAL DRAWINGS AND IN FIELD PRIOR TO COMMENCEMENT OF WORK.
2. REVIEW ALL PROJECT DRAWINGS (CIVIL, LANDSCAPE, STRUCTURAL, ARCHITECTURAL, LIGHTING, ELECTRICAL, ETC.) PRIOR TO BID.
3. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE ARCHITECT.
4. WORK, MATERIALS, AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE, AND NATIONAL CODES AND ORDINANCES.
5. PROVIDE PERMITS AND INSPECTIONS REQUIRED.
6. CONTRACTOR'S FAILURE TO ORDER OR RELEASE ORDER FOR MATERIALS AND/OR EQUIPMENT WILL NOT BE ACCEPTED AS A REASON TO SUBSTITUTE ALTERNATE MATERIALS, EQUIPMENT, OR INSTALLATION METHODS.
7. VERIFY EXACT LOCATION OF EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN.
8. INSTALL ALL MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ANY DEVIATIONS SHALL BE BROUGHT TO THE ARCHITECT/ENGINEER'S ATTENTION PRIOR TO INSTALLATION.
9. FINAL CONNECTIONS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH MANUFACTURER'S APPROVED PIPING DIAGRAMS, DETAILS, AND INSTRUCTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING EQUIPMENT WHICH IS DAMAGED DURING INSTALLATION.
11. REFER TO MECHANICAL SPECIFICATIONS FOR MECHANICAL EQUIPMENT COMPLIANCE REQUIREMENTS.

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

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CITY OF THORNTON

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ARCHITECTURAL WORKSHOP , DENVER, COLORADO

DATE	DESCRIPTION
05.10.2024	PRE-DESIGN (30% CD)
07.19.2024	PRE-DESIGN (70% CD)

DRAWN BY: MER CHECKED BY: WGP
PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

MECHANICAL COVER SHEET

M-001

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HEAT PUMP - OUTDOOR UNIT SCHEDULE (VRF)

NOTES:
A: REQUIREMENTS ARE BASED ON AHRI STANDARD CONDITIONS.
B: MAXIMUM ALLOWABLE SOUND POWER IN DB RE 10^-12 WATTS OCTAVE BAND CENTER FREQUENCY. PROVIDE WITH SOUND ATTENUATION PACKAGE AS REQUIRED TO MEET SCHEDULED VALUES.
NOTE: BASIS OF DESIGN EQUIPMENT USES 410A REFRIGERANT. EQUIPMENT TO BE PROCURED PRIOR TO DECEMBER 31, 2025.
ALTERNATE MANUFACTURERS: CARRIER, TRANE, DAIKIN, JCI, AAON

MARK	TYPE	MATCHED SYSTEM COMPONENT	CAPACITY @ SL (TONS)	CAPACITY @ ALT (TONS)	EER (SEE NOTE A)	HOT GAS BYPASS CAPACITY	STAGES OF UNLOADING	REFRIGERANT	AMBIENT TEMP DB (°F)	LOW AMBIENT TEMP DB (°F)	ELECTRICAL				MAXIMUM ALLOWABLE SOUND POWER (NOTE B)							OPER. WEIGHT (LBS)	MANUFACTURER* & MODEL #	ACCESSORIES	REMARKS
											VOLTAGE / PHASE	MCA	MOCP (A)	AIC RATING	63 HZ	125 HZ	250 HZ	500 HZ	1000 HZ	2000 HZ	4000 HZ				
CU-1	AIR-COOLED	-	24	-	9.8	-	-	R-410A	93.9	-1.4	208 / 3	104	-	-	-	-	-	-	-	-	-	1630	CARRIER MMY-MUP	-	ALL

FAN COIL SCHEDULE (VRF)

NOTES:
A: PROVIDE 14" TALL ROOF CURB.
B: PROVIDE HORIZONTAL ECONOMIZER.
C: PROVIDE 8.7 kW ELECTRIC HEATER WITH SINGLE POWER POINT CONNECTION.
D: PROVIDE 6.5 kW ELECTRIC HEATER WITH SINGLE POWER POINT CONNECTION.
E: PROVIDE WITH 7-DAY PROGRAMMABLE WIRED REMOTE CONTROLLER.
F: EQUIPMENT TO INCLUDE HEAT RECOVERY.
G: PROVIDE CONDENSATE DRAIN PUMP KIT.
ALTERNATE MANUFACTURERS: MITSUBISHI, CARRIER, JCI, DAIKIN

MARK	SERVICE	TYPE	AIRFLOW (CFM)	MIN. OSA (CFM)	ESP @ ALT. (IN . W.C.)	ELECTRICAL		COOLING				TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	HEATING			FILTER	OPER. WEIGHT (LBS)	MANUFACTURER* & MODEL #	ACCESSORIES	REMARKS
						VOLTAGE/PHASE	MCA	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)			EAT DB (°F)	LAT DB (°F)	SENSIBLE MBH					
FCU-1	BASEMENT	WALL/VRF	230	0	0	208 / 1	0.23	85	65	55	54	12	-	55	90	8	MERV 5	30	CARRIER MMK-UP0091	E,G	-
FCU-2	STORAGE	WALL/VRF	230	0	0	208 / 1	0.23	85	65	55	54	12	-	55	90	4	MERV 5	30	CARRIER MMK-UP0091	E,G	-
FCU-3	MECHANICAL ROOM	WALL/VRF	230	0	0	208 / 1	0.23	85	65	55	54	12	-	55	90	7	MERV 5	30	CARRIER MMK-UP0091	E,G	-
FCU-4	APPARATUS BAY	FLOOR/VRF	525	0	0	208 / 1	1.2	85	65	55	54	24	-	55	90	27	-	65	CARRIER 40VMU024	E,G	-
FCU-5	COMMUNITY LOUNGE	FLOOR/VRF	525	0	0	208 / 1	1.2	85	65	55	54	24	-	55	90	27	-	65	CARRIER 40VMU024	E,G	-
RTU-1	COMMUNITY LOUNGE	ROOFTOP	1350	555	0.6	208 / 1	10	85	65	55	54	48	-	55	90	52	MERV 8	400	CARRIER 40QQ-048	A,B,C,E	F
RTU-2	APPARATUS BAY (NORTH)	ROOFTOP	1350	440	0.6	208 / 1	10	85	65	55	54	60	-	55	90	52	MERV 8	400	CARRIER 40QQ-048	A,B,C,E	F
RTU-3	APPARATUS BAY (SOUTH)	ROOFTOP	1350	475	0.6	208 / 1	10	85	65	55	54	60	-	55	90	52	MERV 8	400	CARRIER 40QQ-048	A,B,C,E	F
RTU-4	B.C. BAY	ROOFTOP	1000	260	0.6	208 / 1	8	85	65	55	54	36	-	55	90	38	MERV 8	370	CARRIER 40QQ-036	A,B,D,E	F
RTU-5	INTERACTIVE ZONE / KITCHEN	ROOFTOP	1000	300	0.6	208 / 1	8	85	65	55	54	36	-	55	90	38	MERV 8	370	CARRIER 40QQ-036	A,B,D,E	F

FAN SCHEDULE

NOTES:
A: PROVIDE DIRECT DRIVE FANS WITH FAN SPEED CONTROL.
B: NO EQUIPMENT SHALL BE SELECTED ABOVE 90% OF MOTOR NAMEPLATE RATING.
ALTERNATE MANUFACTURERS: COOK, GREENHECK, TWIN CITY, PENN, BROAN, PANASONIC

MARK	SERVICE	TYPE	CFM	E.S.P. @ S.L. (IN. W.C.)	E.S.P. @ ALT. (IN. W.C.)	RPM	SONES	ACOUSTICAL DATA								ELECTRICAL				VFD	WEIGHT (LBS.)	MANUFACTURER* & MODEL #	ACCESSORIES	REMARKS
								63 HZ	125 HZ	250 HZ	500 HZ	1000 HZ	2000 HZ	4000 HZ	8000 HZ	BHP	HP	WATTS	VOLTAGE / PHASE					
EF-1	RESTROOMS / JC	CEILING EXHAUST	75	-	-	1300	-	-	-	-	-	-	-	-	-	-	-	-	120 / 1	No	40	GREENHECK CSP-A51-VG	-	-
EF-2	-	ROOF DOWNBLAST	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No	-	-	-	-

WATER HEATER SCHEDULE (ELECTRIC)

NOTES:
A: PROVIDE THERMOSTATIC MODEL AND ADJUST PER MANUFACTURER'S RECOMMENDATIONS.
B: INSTALLATION LOCATION TO MAINTAIN REQUIRED ADA CLEARANCES.
ALTERNATE MANUFACTURERS:
AO SMITH, HUBBELL, LOCHINVAR, RHEEM, BRADFORD WHITE, PVI, STATE

MARK	SERVICE	TYPE	STORAGE CAPACITY (GAL.)	RECOVERY (GPH)	MIN. FLOW (GPM)	ELECTRICAL			MANUFACTURER* & MODEL #	ACCESSORIES	REMARKS
						INPUT (kW)	FLA	VOLTAGE / PHASE			
WH-1	LAVATORY	POINT-OF-USE	0	N/A	-	3.5	30	208 / 1	STIEBEL ELTRON MINI-E 3.5-1	-	A,B
WH-2	SINK	POINT-OF-USE	0	N/A	-	9	43.3	208 / 1	STIEBEL ELTRON DHX PLUS 12-2	-	A,B

GRILLE, REGISTER, DIFFUSER & LOUVER SCHEDULE

NOTES:
A: CONTRACTOR SHALL DETERMINE PROPER MARGIN STYLE TO MATCH CEILING/WALL CONSTRUCTION UNLESS OTHERWISE NOTED. REFER TO ARCHITECTURAL PLAN FOR MORE...
B: PROVIDE REMOTE ACCESS BALANCE DAMPER WHEN LOCATED OVER HARD CEILING. MUST FOLLOW CABLE DAMPER DETAIL.
C: PROVIDE WITH HORIZONTAL AND VERTICAL AIRFLOW ADJUSTABILITY.
D: EXTERIOR LOUVERS SHALL BE POWDER COATED TO MATCH ADJACENT WALL COLOR (FINAL SELECTION BY ARCHITECT).
E: LOUVER SHALL HAVE MIN. 50% FREE AREA AND MAX. 0.1" WC PRESSURE DROP AT SCHEDULE CFM.
ALTERNATE MANUFACTURERS: TITUS, PRICE, NAILOR, KRUEGER, METALAIRE, RUSKIN, GREENHECK

MARK	TYPE	PATTERN	FINISH	FRAME/MOUNTING TYPE	MANUFACTURER* & MODEL#	ACCESSORIES	REMARKS	FACE SIZE
-	WALLCAP	-	-	-	-	BDD	-	-
A	ROUND SUPPLY	RADIAL	-	DUCT	PRICE RCDA	-	C	16" DIA.
B	ROUND SUPPLY	RADIAL	-	DUCT	PRICE RCDA	-	C	18" DIA.
C	EGG CRATE	RETURN	-	SURFACE	PRICE 82	MOUNTING FRAME	A	24"x24"
D	CEILING SUPPLY	22.5 DEG.	-	SURFACE	PRICE 540	MOUNTING FRAME	A	12"x6"
X	<varies>	<varies>	<varies>	-	-	-	-	-

PLUMBING FIXTURE SCHEDULE

NOTES:
A. REFER TO ARCHITECTURAL DRAWINGS.
B. PROVIDE EPA WATER SENSE LISTED AND LABELED FIXTURES PER STATE OF COLORADO REQUIRMENTS.
C: UNDERSINK PROTECTION IN ADA APPLICATIONS.
D: CONFIRM INTERNAL / EXTERNAL P-TRAP WITH FURNISHED UNIT.
ALTERNATE MANUFACTURERS:
FIXTURE: AMERICAN STANDARD, UNIVERSAL RUNDLE, FIAT STERN WILLIAMS
FAUCET: SPEAKMAN, DELTA, AMERICAN STANDARD, CHICAGO
DRAIN: JOSAM, WADE SMITH

MARK	TYPE	ADA	FINISH	DESCRIPTION	MANUFACTURER* & MODEL #	FAUCET TRIM MFR* & MODEL #	GPM/GPF	ACCESSORIES	REMARKS
P1	WATER CLOSET	A	WHITE	FLOOR MOUNTED, FLUSH TANK	KOHLER KINGSTON K-25087	-	1.28	1/4 TURN ANGLE SUPPLY VALVE, FLEX CONNECTOR, SEAT, WAX RING	B
P2	LAVATORY	A	WHITE	WALL MOUNTED	WS BATH COLLECTIONS SIMPLE 70.50A	BRIZO LITZE 65332LF	-	1/4 TURN ANGLE STOP VALVE, FLEX. CONN., P-TRAP	B,C
P3	SINK, BAR	A	STAINLESS STEEL	FAUCET: SINGLE HANDLE PULL DOWN	KOHLER STRIVE K-5286	BRIZO LITZE 640_ _LF		1/4 TURN ANGLE STOP VALVES, FLEX HOSE, P-TRAP	B
P4	SINK, KITCHEN	A	STAINLESS STEEL	FAUCET: TWO HANDLE WIDESPREAD DECK MOUNT	KOHLER VAULT K-3839-4	BRIZO LITZE 640_ _LF	-	1/4 TURN ANGLE SUPPLIES, FLEX HOSE, P-TRAP, STRAINER	B
P5	MOP SINK	-	TERRAZO	STAINLESS STEEL DRAIN WITH COMBINATION DOME STRAINER AND LINT BASKET, 3" OUTLET, VYNL BUMPER GUARD ON EXPOSED SIDES; EXPOSED TWO HANDLE MIXING FAUCET, BRASS CONSTRUCTION, CHROME PLATED FINISH, SINGLE FAUCET OUTLET	FIAT MSB	CHICAGO FAUCETS 897		MOP HANGER, HOSE AND HOSE BRACKET, DEEP SEAL TRAP, REMOVEABLE STRAINER, WALL BRACE, PAIL HOOK, CHECK STOPS, WALL SPLASH GUARD.	B
P6	DRINKING FOUNTAIN	A	STAINLESS STEEL	DUAL HEIGHT WITH BOTTLE FILLER, RECESSED DESIGN	OASIS MODEL MMRSL2EEBF			BOTTLE FILLER, WALL CARRIER	B,D
P7	CLOTHES WASHER WALLBOX		WHITE				-	1/4 TURN, BRASS STOP VALVES	
P8	FLOOR DRAIN	A	CAST IRON		JOSAM 30000-6AD	-	-	TRAP SEALGUARD IN ROOMS WITHOUT FIXTURES	-
P9	ROOF DRAIN	-	CAST IRON		JOSAM 21500	-	-	15" DIAMETER, BOTTOM OUTLET, FLASHING CLAMP, GRAVEL STOP, UNDERDECK CLAMP, BEARING PAN, SECURED CAST IRON DOME, ADJUSTABLE EXTENSION TO MATCH INSULATION THICKNESS, OUTLET SIZE AS SHOWN ON DRAWINGS	

SCHEDULE NOTES:

1. *ALL STARTERS FOR MECHANICAL EQUIPMENT SHALL BE FURNISHED UNDER THIS CONTRACT AND SET IN PLACE AND WIRED BY EC. VFD'S NOT INCLUDED AS PART OF THE EQUIPMENT WIRING PACKAGE SHALL BE FURNISHED BY THE MC, AND SET IN PLACE AND WIRED BY THE EC, U.N.O.*
2. *NOT ALL EQUIPMENT REQUIRED UNDER THIS CONTRACT IS NECESSARILY SPECIFIED ON THE SCHEDULE SHEETS. PLAN & DIAGRAM NOTATIONS AND PROJECT MANUAL CONTAIN EQUIPMENT SPECIFICATIONS AS WELL.*
3. *(ASHRAE 90.1) MECHANICAL EQUIPMENT THAT IS NOT COVERED BY THE U.S. NATIONAL APPLIANCE ENERGY CONSERVATION ACT (NAECA) OF 1987 SHALL CARRY A PERMANENT LABEL INSTALLED BY THE MANUFACTURER STATING THAT THE EQUIPMENT COMPLIES WITH THE REQUIREMENTS OF STANDARD 90.1.*
4. *(ASHRAE 62.1) ALL AIR MOVING EQUIPMENT SUBJECT TO THE SCOPE OF ASHRAE 62.1 AND SHALL COMPLY WITH CONSTRUCTION REQ'MTS THEREIN.*
5. *NOT ALL CAPACITIES, CHARACTERISTICS, AND CONSTRUCTION FEATURES REQUIRED ARE NECESSARILY INDICATED IN THE EQUIPMENT SCHEDULES. RE: PLANS AND SPECIFICATIONS FOR ADDITIONAL REQ'MTS.*
6. *CAPACITIES, CHARACTERISTICS, AND CONSTRUCTION FEATURES OF THE SCHEDULED EQUIPMENT ARE HEREBY INCORPORATED INTO THE PROJECT REQUIREMENTS. EQUIVALENT PRODUCTS PERFORMANCE AND CONSTRUCTION FEATURES SHALL MEET OR EXCEED THAT OF THE SPECIFIED EQUIPMENT WHETHER SCHEDULED OR NOT.*
7. *NOT ALL EQUIPMENT AVAILABLE FROM LISTED "EQUIVALENT" MANUFACTURERS LISTED IS NECESSARILY EQUIVALENT TO THE BASIS OF DESIGN EQUIPMENT SPECIFIED. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY COSTS, RESULTANT CHANGES TO OTHER DIVISIONS, AND SPATIAL REQ'MTS FOR EQUIPMENT OTHER THAN SCHEDULED.*
8. *ALL MANUFACTURERS REPRESENTATIVES SHALL READ AND UNDERSTAND THE CONTROL DIAGRAMS AND COORDINATE WITH TCC TO PROVIDE A FULLY FUNCTIONING SYSTEM AS DESCRIBED IN THE CONTROL DIAGRAMS.*

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

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ARCHITECTURAL WORKSHOP . DENVER, COLORADO

DATE	DESCRIPTION
05.10.2024	PRE-DESIGN (30% CD)
07.19.2024	PRE-DESIGN (70% CD)

DRAWN BY: MER CHECKED BY: WGP
PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

MECHANICAL SCHEDULES

M-002

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MECHANICAL SPECIFICATIONS:

1. DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS IN FIELD PRIOR TO COMMENCEMENT OF WORK. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.

2. ALL SUBCONTRACTORS SHALL BE LICENSED, EXPERIENCED, AND THOROUGHLY KNOWLEDGEABLE IN THEIR RESPECTIVE AREAS OF THE CONSTRUCTION INDUSTRY AND SHALL PERFORM IN A RESPONSIBLE MANNER WITH ESTABLISHED CONSTRUCTION SEQUENCE, SHALL RECOGNIZE THE PRIORITY OF THE CONSTRUCTION ADJOINMENTS, AND SHALL INFORM THE PRIME CONTRACTOR OF POTENTIAL PROBLEMS WHEN THE CONSTRUCTION DOCUMENTS ARE UNCLEAR OR INCONSISTENT.

3. SUBCONTRACTORS SHALL BE RESPONSIBLE FOR NOTIFYING THE PRIME CONTRACTOR OF DISCREPANCIES OR CONFLICTS IN THE CONSTRUCTION DOCUMENTS FOUND DURING BIDDING AND/OR PRIOR TO PERFORMING THE WORK.

4. EXAMINATION OF BIDDING DOCUMENTS.

   A. EACH BIDDER SHALL EXAMINE THE BIDDING DOCUMENTS CAREFULLY, AND NOT LATER THAN SEVEN (7) DAYS PRIOR TO THE DATE OF RECEIPT OF BIDS, SHALL MAKE WRITTEN REQUEST FOR ARCHITECTURAL INTERPRETATION OR CORRECTION OF ANY DISCREPANCIES, AMBIGUITIES, INCONSISTENCIES, OR ERRORS THEREIN WHICH THEY MAY DISCOVER. THE ARCHITECT WILL ISSUE ANY INTERPRETATION OR CORRECTION AS AN ADDENDUM. ONLY WRITTEN INTERPRETATION OR CORRECTION BY ADDENDUM SHALL BE BINDING. NO BIDDER SHALL RELY UPON INTERPRETATIONS OR CORRECTIONS GIVEN BY ANY OTHER METHOD. IF DISCREPANCIES, AMBIGUITIES, INCONSISTENCIES, OR ERRORS ARE NOT COVERED BY ADDENDUM OR WRITTEN DIRECTIVE, CONTRACTOR SHALL INCLUDE IN HIS BID, LABOR MATERIALS AND METHODS OF CONSTRUCTION RESULTING IN HIGHER COST. AFTER AWARDING OF CONTRACT, NO ALLOWANCE OR EXTRA COMPENSATION WILL BE MADE ON BEHALF OF THE CONTRACTOR DUE TO HIS FAILURE TO MAKE THE WRITTEN REQUESTS AS DESCRIBED ABOVE.

   B. FAILURE TO REQUEST CLARIFICATION DURING THE BID PERIOD OF ANY INADEQUACY, OMISSION, OR CONFLICT WILL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES. THE SIGNING OF THE CONTRACT WILL BE CONSIDERED AS IMPLICITLY DENOTING THAT THE CONTRACTOR HAS A THOROUGH COMPREHENSION OF THE FULL INTENT AND SCOPE OF THE CONSTRUCTION CONTRACT DRAWINGS AND SPECIFICATIONS.

5. PROVIDE A BASE BID WHICH SHALL INCLUDE ONLY SPECIFIED EQUIPMENT OR EQUIPMENT LISTED AS EQUIVALENT. NO SUBSTITUTIONS FOR THE LISTED EQUIPMENT SHALL BE INCLUDED IN THE BASE BID.

   A. THE MANUFACTURER OF EQUIPMENT OR MATERIALS FIRST NAMED ON THE DRAWINGS IS THE BASIS OF DESIGN. OTHER MANUFACTURERS LISTED ARE CONSIDERED GENERAL EQUIVALENTS ONLY.

   B. COORDINATION OF GENERAL EQUIVALENTS AND SUBSTITUTIONS: WHERE CONTRACT DOCUMENTS PERMIT SELECTION FROM SEVERAL GENERAL EQUIVALENTS, OR WHERE SUBSTITUTIONS ARE AUTHORIZED, COORDINATE CLEARANCE AND OTHER INTERFACE REQUIREMENTS WITH MECHANICAL AND OTHER WORK.

      1) PROVIDE NECESSARY ADDITIONAL ITEMS SO THAT SELECTED OR SUBSTITUTED ITEM OPERATES EQUIVALENT TO THE BASIS OF DESIGN AND PROPERLY FITS IN THE AVAILABLE SPACE ALLOCATED FOR THE BASIS OF DESIGN.

      2) PROVIDE ALL FEATURES WHICH ARE STANDARD BASED ON DESIGN PLUS ANY SPECIFIED OPTIONS.

      3) BE RESPONSIBLE FOR ASSURING THAT PIPING, CONDUIT, DUCT, FLUE, AND OTHER SERVICE LOCATIONS FOR GENERAL EQUIVALENTS OR SUBSTITUTIONS DO NOT CAUSE ACCESS, SERVICE, OR OPERATIONAL DIFFICULTIES ANY GREATER THAT WOULD BE ENCOUNTERED WITH THE BASE DESIGN.

6. INASMUCH AS DESIGN FOR REMODEL AND/OR REHABILITATION REQUIRES THAT CERTAIN ASSUMPTIONS BE MADE REGARDING [EXISTING] CONDITIONS, AND BECAUSE SOME OF THESE ASSUMPTIONS CANNOT BE VERIFIED WITHOUT DESTROYING OTHERWISE ADEQUATE OR SERVICEABLE PORTIONS OF THE BUILDING, THE ENGINEER CANNOT ASSUME THE OWNER OR CONTRACTOR THAT THE PROFESSIONAL CONSULTING SERVICES HEREIN ENCOMPASS ALL CONTINGENCIES. FIELD COORDINATION DURING CONSTRUCTION IS IMPERATIVE. MAKE REASONABLE ALLOWANCES FOR UNSEEN CONDITIONS.

7. BE RESPONSIBLE TO FIELD VERIFY EXISTING EQUIPMENT OR DUCTWORK REMAINING TO BE CONNECTED TO NEW OR EXISTING SYSTEMS. PROVIDE DUCTWORK, PIPING, CONTROLS, DIFFUSERS, ETC., AS REQUIRED TO RESTORE CONTINUITY OF SYSTEM (S), OR TO MAKE NEW WORK MEET EXISTING CONDITIONS, WHETHER INDICATED OR NOT.

8. SUBCONTRACTOR SHALL VERIFY EXISTENCE AND LOCATION OF ALL UTILITY SERVICES AND COORDINATE AS REQUIRED BY THEIR RESPECTIVE AREA OF THE CONSTRUCTION, NOTIFYING THE PRIME CONTRACTOR OF VARIATIONS OR CONFLICTS.

9. IF NOT SPECIFICALLY DEFINED IN THESE CONSTRUCTION DOCUMENTS, MATERIALS AND/OR EQUIPMENT SHALL BE IDENTIFIED BY THE SUBCONTRACTOR WITH SUFFICIENT TIME TO ALLOW SELECTION, PURCHASE, AND DELIVERY TO MAINTAIN CONSTRUCTION SCHEDULE.

10. PROVIDE MECHANICAL DEMOLITION AS REQUIRED. REFER TO ARCHITECTURAL DEMOLITION DRAWINGS FOR LOCATION AND EXTENT OF DEMOLITION REQUIRED. VISIT SITE PRIOR TO BID TO DETERMINE EXTENT OF WORK INVOLVED. [EXISTING] FIXTURES, MECHANICAL EQUIPMENT, ETC., BEING REMOVED SHALL BE RETURNED TO THE OWNER. DISPOSE OF ALL REMOVED PIPING, DUCTWORK, ETC. UNLESS NOTED OTHERWISE. PIPES, DUCTWORK, EQUIPMENT, ETC. TO BE REMOVED ARE SHOWN HATCHED, UNLESS OTHERWISE NOTED.

11. ALL DUCTWORK, DIFFUSERS, PIPING, FIXTURES, AND EQUIPMENT SHOWN IN LIGHT LINE WEIGHT IS EXISTING, NEW INDICATED BY HEAVIER LINE WEIGHT, EXCEPT WHERE NOTED. PIPES, DUCTWORK, EQUIPMENT, ETC. TO BE REMOVED, ARE SHOWN HATCHED.

12. OFFSET PIPING, DUCTWORK, ETC. AS NECESSARY TO ACCOMMODATE STRUCTURE, BEAMS, AND COLUMNS, AND EXISTING EQUIPMENT.

13. ALL EXISTING SUPPORT RODS AND STRAPS NOW SUPPORTING DUCTS, PIPES, AIR TUBING, ELECTRICAL CONDUIT, ETC. THAT ARE REMOVED TO ALLOW ROOM FOR INSTALLATION OF NEW EQUIPMENT SHALL BE RELOCATED AND REINSTALLED, OR REPLACED IF DAMAGED.

14. ALL "CAPPED" SANITARY AND VENT LINES SHALL BE RECONNECTED OR RE-ROUTED AS NECESSARY TO PREVENT "DEAD-ENDS" IN THE PIPING. ALL PIPING SHALL DRAIN TO ACTIVE SANITARY WASTE LINES AND ALL BRANCHES WITH TRAPS SHALL BE ADEQUATELY VENTED.

15. CAP ALL DEMOLISHED AND ABANDONED DUCT TAKE-OFFS AT TRUNK DUCT.

16. WORK SHALL BE PERFORMED IN A PROFESSIONAL MANNER CONSISTENT WITH INDUSTRY STANDARDS AND TO THE SATISFACTION OF THE ARCHITECT, OWNER, AND ENGINEER.

17. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM HIS/HER WORK IN CONFORMANCE WITH ALL APPLICABLE CODES, ORDINANCES AND LIFE SAFETY FEATURES AS REQUIRED BY LOCAL, STATE, OR NATIONAL AUTHORITIES. THE CONTRACTOR SHALL VERIFY WITH THE ARCHITECT IF MODIFICATION OF HIS/HER WORK IS REQUIRED FOR COMPLIANCE.

18. ALL WORK OF ALL TRADES MUST BE IN STRICT COMPLIANCE, OR EXCEED THE MINIMUM MATERIAL AND METHOD REQUIREMENTS OF THE 2021 VERSION OF THE INTERNATIONAL BUILDING, MECHANICAL, PLUMBING, ENERGY CONSERVATION, AND FIRE CODES AND THE 2020 NATIONAL ELECTRICAL CODE, MOST CURRENT NFPA, ALL LOCAL ORDINANCES AND AMENDMENTS AND MANUFACTURER'S INSTALLATION RECOMMENDATIONS. IF A CONFLICT BETWEEN THOSE PUBLICATIONS EXISTS, THE MOST STRINGENT REQUIREMENT SHALL APPLY.

19. PAY FOR AND SECURE ALL REQUIRED PERMITS AND INSPECTIONS. PRIOR TO FINAL PAYMENT, TURN OVER TO ARCHITECT ALL CERTIFICATES OF COMPLETION.

20. WARRANTY THE INSTALLATION AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP. THE WARRANTY SHALL BE FOR A PERIOD OF ONE YEAR AFTER OWNER'S ACCEPTANCE. DEFECTS SHALL BE PROMPTLY REMEDIED WITHOUT COST TO THE OWNER.

21. SUBMIT O&M MANUALS WITHIN 90 DAYS OF ACCEPTANCE IN ACCORDANCE WITH DIVISION 1 REQUIREMENTS. IN THE ABSENCE OF DIVISION 1 REQUIREMENTS, O&M MANUALS SHALL INCLUDE: SUBMITTAL DATA STATING SIZES AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE, MANUFACTURER'S OPERATING MANUALS AND MAINTENANCE MANUALS WITH REQUIRED ROUTINE MAINTENANCE ACTIONS IDENTIFIED, NAME AND ADDRESS OF AT LEAST ONE SERVICE AGENCY, HVAC CONTROLS AND SYSTEM MAINTENANCE, RECOMMENDED SENSOR CALIBRATION SCHEDULE, WIRING DIAGRAM AND SYSTEM SCHEMATICS, AND A NARRATIVE OF HOW EACH SYSTEM IS TO OPERATE INCLUDING RECOMMENDED SETPOINTS.

22. SUBMIT RECORD DOCUMENTS TO ARCHITECT WITHIN 90 DAYS OF COMPLETION. DOCUMENTS SHALL INCLUDE ALL ADDENDUM ITEMS, CHANGE ORDERS, ALTERATIONS, REROUTING, ETC.

23. SYSTEMS SHALL BE COMPLETE, OPERABLE, AND READY FOR CONTINUOUS OPERATION PRIOR TO ACCEPTANCE BY THE OWNER.

24. SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. PERFORM AT A MINIMUM ALL CODE REQUIRED TESTS OR SYSTEMS. IF TESTS OF WORK ARE DEFECTIVE, CONTRACTOR SHALL MAKE CORRECTIONS NECESSARY AT NO ADDITIONAL COST TO OWNER.

25. ALL MATERIALS AND/OR EQUIPMENT SHALL BE HANDLED AND INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

26. SUBMIT ALL MECHANICAL DIVISION SHOP DRAWING AND PRODUCT DATA AT ONE TIME. PARTIAL SUBMITTALS WILL BE REJECTED.

27. SHOP DRAWING SUBMITTALS SHALL STATE CAPACITIES, SIZES, ETC., OF ALL EQUIPMENT AND SHALL BE CERTIFIED AND INCLUDE COMPUTER BASED PROJECT SPECIFIC SELECTIONS WHERE APPLICABLE. CLEARLY MARK EACH SHOP DRAWING, CATALOG CUT AND/OR SPECIFICATION SHEET TO INDICATE THOSE PRODUCTS AND FEATURES WHICH ARE INTENDED TO BE FURNISHED. SPECIFICALLY INDICATE ANY DEVIATIONS FROM THE DESIGN INTENT. ENGINEER RESERVES THE RIGHT TO REQUIRE CORRECTION AT NO COST TO OWNER FOR DEVIATIONS NOT SPECIFICALLY INDICATED IN THE SUBMITTALS. REVIEW AND APPROVAL OF SHOP DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF FURNISHING EQUIPMENT AND MATERIALS OF PROPER DIMENSION, SIZE, QUANTITY, QUALITY AND ALL PERFORMANCE CHARACTERISTICS TO EFFICIENTLY PERFORM THE REQUIREMENTS AND INTENT OF THE CONTRACT DOCUMENTS. SUBMITTAL SHALL BE BOUND AND INDEXED IN A NEAT AND ORDERLY MANNER.

28. SUBMITTALS SHALL INCLUDE, BUT NOT BE LIMITED TO: EQUIPMENT, FIXTURES, INSULATION, DIFFUSERS, FANS, PIPING, VALVES, CONTROLS, AND FIRE PROTECTION.

29. FAILURE TO ORDER, OR RELEASE ORDER FOR MATERIALS AND/OR EQUIPMENT WILL NOT BE ACCEPTED AS A REASON TO SUBSTITUTE ALTERNATE MATERIALS, EQUIPMENT, OR INSTALLATION METHODS.

30. REPAIR ALL ACCIDENTAL OR INTENTIONAL DAMAGE TO MATCH EXISTING CONSTRUCTION WITH NO NOTICEABLE DIFFERENCE IN CONTINUITY, APPEARANCE OR FUNCTION.

31. TEMPORARY HEAT SHALL BE FURNISHED BY THE GENERAL CONTRACTOR. USE OF THE PERMANENT HEATING SYSTEM WILL NOT BE ALLOWED.

32. COORDINATE ALL PENETRATIONS OF THE FLOOR SLAB PRIOR TO COMMENCING WORK. COORDINATE ALL NEW PENETRATIONS WITH OTHER DIVISIONS OF THE WORK. ALL CONTRACTORS ARE INDIVIDUALLY RESPONSIBLE FOR ALL PENETRATIONS REQUIRED BY THEIR DIVISIONS.

33. PROVIDE 4" HIGH CONCRETE EQUIPMENT PADS BENEATH FLOOR MOUNTED MECHANICAL EQUIPMENT, IN ADDITION TO ANY BASE ASSEMBLIES REQUIRED OR RECOMMENDED BY THE MANUFACTURER.

34. FIRE STOPPING REQUIREMENT. PENETRATIONS THROUGH RATED WALLS AND FLOORS SHALL BE SEALED WITH A MATERIAL CAPABLE OF PREVENTING THE PASSAGE OF FLAMES AND HOT GASSES WHEN SUBJECTED TO THE REQUIREMENTS OF THE TEST STANDARD SPECIFIC FOR FIRE STOPS ASTM-E-814. ACCEPTABLE MATERIALS INCLUDE: DOW CORNING RTV FIRE STOP FOAM FOR BARE PIPE, METAL CONDUIT, AND ELECTRICAL CABLE; 3M FIRE DAM 150 CAULK FOR BARE PIPE, METAL CONDUIT, AND BUILDING CONSTRUCTION GAPS; 3M CP-25 CAULK AND FS-195 INTUMESCENT STRIPS FOR INSULATED PIPES, PLASTIC PIPE OR CONDUIT, AND ELECTRICAL CABLE. SUBMIT UL LISTED APPLICATION DATA FOR EACH TYPE OF PENETRATION ENCOUNTERED.

35. DUCTS, PIPING, AND CONDUITS PENETRATING THROUGH ROOF SHALL HAVE ROOF FLASHING COMPATIBLE WITH THE ROOFING SYSTEM. SEE ARCHITECTURAL DRAWINGS. IN THE ABSENCE OF ANY OTHER REQUIREMENTS, PROVIDE SHEET LEAD TYPE FLASHING FOR PLUMBING VENTS IN BUILT-UP ROOFS, TALL CONE WITH EPDM BOOT FOR PIPE AND CONDUIT IN SINGLE PLY MEMBRANE ROOFS, AND CURBED ROOF PENETRATIONS IN ALL TYPES OF ROOF. INSTALLATION SHALL BE WATERTIGHT.

36. ALL FLOOR DRAINS, FLOOR SINKS, TROUGH DRAINS, SAND OIL SEPARATORS, AND ELEVATOR SUMP HUB RECEPTORS CONNECTED TO THE SEWER SYSTEM SHALL BE EQUIPPED WITH TRAP SEAL GUARDS.

37. SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR ALL CEILING PENETRATIONS AND AIR DEVICE LOCATIONS.

38. COORDINATE ARCHITECTURAL, STRUCTURAL, MECHANICAL, FIRE PROTECTION, ELECTRICAL, LANDSCAPING, AND INTERIOR DESIGN DRAWINGS PRIOR TO INSTALLATION.

39. CAREFULLY VERIFY ELECTRICAL SERVICE VOLTAGE AND PHASE AVAILABLE.

40. MOUNT ALL STATS AT 48" AFF IN "ACCESSIBLE" AREAS, 4'6" AFF IN OTHER AREAS, UNLESS NOTED OTHERWISE. COORDINATE LOCATION WITH WALL FINISH, AND TO AVOID CASEWORK, FURNITURE, DOOR SWINGS, HEAT SOURCES, AND EXTERIOR WALLS. NOTIFY ENGINEER OF ANY CONFLICTS FOR RESOLUTION BEFORE INSTALLATION.

41. SUBMIT A WRITTEN BALANCE REPORT BY A NEBB OR AABC CERTIFIED BALANCING CONTRACTOR. BALANCING PROCEDURES SHALL BE IN ACCORDANCE WITH NEBB OR AABC GUIDELINES FOR PROPORTIONAL BALANCE. SUBMIT REPORT ON STANDARD NEBB FORMS OR SUBMIT FORMS FOR REVIEW PRIOR TO BALANCING. MEASUREMENTS SHALL INCLUDE ALL MOTOR AMPERAGE AND VOLTAGE READINGS; MOTOR AND FAN RPMS; STATIC PRESSURE AT INLET AND OUTLET OF ALL PACKAGED EQUIPMENT, FANS, COILS, AND FILTERS; PITOT TUBE MEASUREMENT OF SUPPLY, EXHAUST, RETURN, AND OUTSIDE AIR MAIN DUCTS, AT MINIMUM OUTSIDE AIR, AND 100% (ECONOMIZER) OUTSIDE AIR; AIR SET AND BALANCE.

   A. PROVIDE BELTS AND SHEAVES AS REQUIRED FOR DRIVE CHANGES TO ADJUST FAN SPEED.

   B. ADJUST FLOWS TO WITHIN 10% OF REQUIRED QUANTITY. WHERE ROOM AIR PRESSURE RELATIONSHIP ARE REQUIRED TO BE MAINTAINED AS SHOWN BY A DIFFERENTIAL OF SUPPLY AND EXHAUST/RETURN OR BY NOT, ADJUST SUPPLY TO WITHIN 10% AND THEN ADJUST EXHAUST/RETURN TO PROVIDE THE INDICATED ROOM PRESSURE. IF ACTUAL QUANTITY IS LESS THAN 90%, INVESTIGATE CAUSE, ATTEMPT TO RECTIFY AND NOTIFY ENGINEER. SUBMITTAL OF BALANCE REPORT WITH LESS THAN REQUIRED FLOWS WITHOUT EXPLANATION IS CAUSE FOR REJECTION OF REPORT.

   C. SUBMIT IN ELECTRONIC PDF FORMAT.

42. DUCTWORK: (LOW VELOCITY)

   A. FLEXIBLE DUCTWORK SHALL HAVE AN OUTER JACKET OF FIRE RETARDANT POLYETHYLENE VAPOR BARRIER MATERIAL, UNIFORM LAYER OF FIBERGLASS INSULATION, HIGH-STRENGTH GALVANIZED STEEL HELIX ENCAPSULATED IN REINFORCED "RP STOP" ALUMINUM LAMINATE BEGINNING AT THE CONNECTION AND LABELED, CLASS 1 AIR DUCT. WORKING PRESSURE RATING: POSITIVE 6", NEGATIVE 4". FLEXMASTER TYPE 5 OR EQUIVALENT. SUBMIT SAMPLES TO DETERMINE EQUIVALENCE.

   B. FLEXIBLE CONNECTION: EQUIVALENT TO VENTFAB, FIREPROOF GLASS CLOTH, 10" W.C. RATED.

   C. ROUND DUCT: SPIRAL SEAM, GALVANIZED STEEL. DIE STAMPED OR 5 GORE ELBOWS. "SNAP-LOCK", LONGITUDINAL SEAM DUCT, OR ADJUSTABLE FITTINGS ARE ACCEPTABLE ON INDIVIDUAL GRILLE/DIFFUSER RUNOUTS ONLY.

   D. LINER:

      1) LINE ALL SUPPLY, OUTSIDE AIR, RETURN AIR DUCTS, EXHAUST AIR RISERS, AND MAKE UP AIR RISERS WITH 1", 1.5 LB/CF, BLACK MATTE COATED INSULATING DUCT LINER.

      2) INSULATION CONDUCTIVITY VALUE NOT EXCEEDING 0.27 BTU*IN/(HR*FT^2*F).

      3) LINER SHALL BE COATED AND SEALED AND SHALL MEET ASTM C1071.

      4) MATERIAL SHALL MEET ALL REQUIREMENTS OF NFPA-90.

      5) INSTALL WITH ADHESIVE AND WELDED PINS IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS".

      6) EXTERNALLY WRAP ALL ROUND SUPPLY AIR DUCTS WITH FLEXIBLE GLASS FIBER, ANSI/ASTM C612; 0.002 INCH FOIL SCRIM FACING.

      7) ALL RAW EDGES OF INSULATION SHALL BE NEATLY TRIMMED AND SEALED WITH MASTIC.

   E. DUCTWORK: G60 GALVANIZED SHEET STEEL; LOCK FORMING QUALITY; CONSTRUCTED TO THE LATEST EDITION OF SMACNA "HVAC DUCT CONSTRUCTION STANDARDS"; +/- 1" WC PRESSURE CLASSIFICATION, SEAL CLASS "C"; WITH GALVANIZED STEEL FASTENERS, ANCHORS, ANGLES, STRAPS, ETC.

   F. SEAL ALL SEAMS (LONGITUDINAL AND TRANSVERSE) AIRTIGHT WITH UNITED MCGILL "UNI-GRIP" UL LISTED, WATER BASED, NONFLAMMABLE, ELASTIC SEALANT OR EQUIVALENT. TAPE NOT ALLOWED.

43. PROVIDE ½" GALVANIZED MESH SCREEN ON ALL COMBUSTION AIR DUCTS OR OPENINGS, AND ALL OPEN END RETURN AND EXHAUST DUCTS.

44. ALL DUCTWORK DIMENSIONS ARE OUTSIDE SHEET METAL DIMENSIONS. DUCT LINER HAS BEEN ACCOUNTED FOR WITHIN RECTANGULAR DUCTWORK.

45. DUCTWORK NOTES:

   A. DIFFUSER NECK SIZE IS SAME AS FLEXIBLE DUCT SIZE.

   B. UNLESS OTHERWISE NOTED, ALL CHANGES IN DIRECTION SHALL BE MADE WITH RADIUS ELBOWS WITH RADIUS TO CENTERLINE EQUAL TO 1.5 DUCT WIDTH.

      1) WHERE REQUIRED FOR SPACE CONSTRAINTS, PROVIDE SQUARE THROAT ELBOWS WITH SINGLE WIDTH (NON-AIRFOIL) TURNING VANES.

      2) FOR DUCT DEPTHS OF 36" OR LESS, PROVIDE MANUFACTURED SINGLE WIDTH (NON-AIRFOIL) TURNING VANES, WITH SPACING IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS FOR "STANDARD SPACING". USE NO TRAILING EDGES.

   C. EXTERIOR DUCTWORK: PROVIDE EXTERIOR DUCTWORK TO THESE SPECIFICATIONS WHERE EXPOSED TO WEATHER.

      1) DUCTWORK SUPPORT MATERIALS: EXCEPT AS OTHERWISE INDICATED, PROVIDE GALVANIZED STEEL FASTENERS, ANCHORS, RODS, STRAPS, TRIM AND ANGLES FOR SUPPORT OF DUCTWORK. PROVIDE EQUIPMENT SUPPORT RAIL TYPE OR EQUIVALENT ROOF SYSTEM COMPATIBLE WEATHERPROOF INTERFACE AT ALL ROOF SUPPORTS.

      2) DUCT SEALING SYSTEM: EQUIVALENT TO UNITED MCGILL "UNI-WEATHER" UL LISTED OUTDOOR SEALANT. FIRE RATING: UL LISTED. CONTRACTOR MAY PROPOSE ALTERNATE SEALING SYSTEMS. "DUCTMATE" AND SIMILAR FLANGED JOINING SYSTEMS ARE ACCEPTABLE IF AN ADDITIONAL BEAD OF SILICONE BASED OUTDOOR SEALANT IS APPLIED ALL AROUND EACH JOINT, AND THE TOP FLANGE IS PROTECTED BY A SHEET METAL SHIELD.

      3) CONSTRUCT AND SEAL DUCTS TO 3" STATIC PRESSURE STANDARDS.

      4) DO NOT LINE EXTERIOR DUCT. INSULATE SUPPLY AND RETURN DUCT WITH TWO LAYERS OF 1-1/2" THICK, MIN. R-12 (CLIMATE ZONES 5-8) CLOSED CELL ELASTOMERIC INSULATION. STAGGER SEAMS AND JOINTS. PROVIDE FULL ADHESIVE COAT ON DUCT SURFACE AND BETWEEN INSULATION LAYERS. COAT FINISHED SURFACE WITH WHITE PROTECTIVE COATING AS RECOMMENDED BY THE INSULATION MANUFACTURER. INSTALL 18GA. GALVANIZED, PITCHED, SHEET METAL CAP SECURED TO DUCT AND SUPPORTS OVER TOP OF INSULATION FOR POSITIVE DRAINAGE OFF HORIZONTAL DUCT SURFACE.

46. DUCTWORK SPECIALTIES

   A. VOLUME AND SPLITTER DAMPERS: GALVANIZED SHEET METAL WITH VENTFABRICS, INC., VENTLOCK OR EQUAL OPERATING HARDWARE. FOR ACCESSIBLE DAMPERS, PROVIDE NO. 620, 635 OR 637 DIAL REGULATORS, NO. 635 OR 637 SQUARE END BEARING, AND NO. 635 SPRING END BEARING, AS APPLICABLE. FOR INACCESSIBLE DAMPERS, PROVIDE NO. 666 CONCEALED DAMPER REGULATOR, WITH PAINTED COVER (COLOR BY ARCHITECT) AND BEARINGS AS ABOVE. FOR MEDIUM PRESSURE DUCTS, PROVIDE NO. 635 HIVEL DIAL REGULATOR AND NO. 609 HIVEL END BEARING FOR ACCESSIBLE DAMPERS.

   B. MULTI-LOUVER VOLUME DAMPERS: TITUS AG-35-B OPPOSED BLADE, ANEMOSTAT OR EQUAL. SEE DETAIL REGARDING REMOTE ACCESS TO VOLUME DAMPERS.

   C. TURNING VANES FOR LOW PRESSURE DUCTS. SMACNA SMALL DOUBLE VANE, PLATE NO. 22B OR EQUAL, WITH AIRFOIL BLADES FOR DUCTS 36" OR LESS IN WIDTH; SMACNA FIG. 3.23 FOR DUCTS GREATER THAN 36" WIDE.

   D. ACCESS PANELS:
      1) REINFORCED, GALVANIZED SHEET METAL WITH AIRTIGHT GASKETS RATED FOR PRESSURES AND SERVICE INTENDED. MILCOR OR EQUAL. PROVIDE HINGES AND VENTFABRICS, INC. VENTLOCK LATCHES.
      2) DUCT ACCESS PANELS FOR HAND ENTRY ONLY: NO. 90 SASH TYPE LATCH. MINIMUM SIZE: 18" X 18".
      3) DUCT AND PLENUM ACCESS DOORS FOR BODY ENTRY: NO. 310 LATCH, OPERABLE FROM BOTH SIDES OF DOOR. MINIMUM SIZE: 18" X 18".
      4) REFERENCE OTHER SECTIONS FOR CEILING/ WALL ACCESS PANELS.

   E. BACKDRAFT DAMPERS: PROVIDE COUNTER WEIGHT TYPE BACKDRAFT DAMPERS IN ALL DUCTS OPENING TO THE OUTSIDE RUSKIN MODEL CBS-7 OR APPROVED EQUAL.

47. SUPPORT PIPE WITH ROD AND CLEVIS, RING HANGERS, TRAPEZE, OR CLAMPS. NO PIPE TAPE OR STRAPPING ALLOWED. ALL HANGERS SHALL BE SIZED FOR OD OF INSULATION, IF ANY. PROTECT INSULATED LINES WITH 20 GA SHEET METAL SHIELDS AND PROVIDE CALCIUM SILICATE INSULATION INSERTS FOR ALL INSULATED PIPING. MAINTAIN VAPOR BARRIER ON ALL COLD LINES. ISOLATE BARE COPPER LINES FROM HANGERS WITH VIBRASORB OR EQUIVALENT, COPPER COATED HANGERS ARE NOT SUFFICIENT, WRAPPING PIPE WITH TAPE NOT ACCEPTABLE.

48. NEW HOT AND COLD WATER BRANCHES TO BE ROUTED FROM NEAREST HOT WATER AND COLD WATER OF LINE SIZE EQUAL TO OR GREATER THAN NEW BRANCH--TYPICAL.

49. REFER TO PLUMBING FIXTURE CONNECTIONS SCHEDULE FOR PIPE SIZES TO INDIVIDUAL PLUMBING FIXTURES.

50. PROVIDE SHOCK ARRESTERS AT ALL DOMESTIC HOT AND COLD WATER BRANCHES SERVING FIXTURES AND EQUIPMENT WITH QUICK CLOSING VALVES. SUCH FIXTURES AND EQUIPMENT INCLUDES FLUSH VALVE WATER CLOSETS, DISHWASHERS, ICE MACHINES, AND CLOTHES WASHERS. SHOCK ARRESTERS SHALL BE CONSTRUCTED WITH A PISTON IN A SEALED COPPER TUBE CHAMBER, AND APPROVED FOR INSTALLATION WITHIN WALLS WITHOUT ACCESS PANELS. SIOUX CHIEF OR EQUIVALENT. BELLOWS TYPE NOT ACCEPTABLE.

51. DOMESTIC HOT AND COLD PIPING INSIDE BUILDING--BURIED LINES, TYPE "K" SOFT ANNEALED COPPER WATER TUBE, SINGLE LENGTH TO AVOID FITTINGS, (WROUGHT COPPER FITTINGS WHERE UNAVOIDABLE) AND 1100°F SOLDER. NON-BURIED LINES, TYPE "L" HARD COPPER WATER TUBE, WROUGHT COPPER FITTINGS AND NO LEAD 95-5 SOLDER.

52. COPPER PIPE VALVES AND SPECIALTIES

   A. GATE VALVES - BRONZE, CLASS 125, 200 LB. W.O.G.
   B. BALL VALVES - BRONZE, CLASS 125, 600 LB. W.O.G.
   C. CHECK VALVES - BRONZE, CLASS 125, 200 LB. W.O.G.
   D. BALANCING VALVES - 125 PSI W.P. FOR 250 DEGREE FAHRENHEIT SERVICE TIGHT SHUTOFF, TOUR AND ANDERSON STA. ARMSTRONG CBV, GERAND, OR FLOWSET, B&G CIRCUIT SETTER.
   E. DIRECT UNIONS: FURNISH AND INSTALL A DIELECTRIC UNION AT EACH CONNECTION BETWEEN DISSIMILAR METALS.

53. MATERIALS; SOIL, WASTE, AND VENT PIPING (INSIDE BUILDING)

   A. LINES BURIED BELOW GROUND: SCHEDULE 40 SOLID CORE PVC PIPE ACCORDING TO ASTM D 2665 DRAIN, WASTE AND VENT AND PVC SOCKET FITTINGS ACCORDING TO ASTM D 2665 AND ASTM D 3311 DWV PATTERNS AND TO FIT SCHEDULE 40 PIPE. ASSEMBLED WITH ASTM F 656 ADHESIVE PRIMER AND ASTM D 2564 SOLVENT CEMENT.

   B. LINES ABOVE GROUND: STANDARD WEIGHT, CAST IRON SOIL PIPE, AND FITTINGS. HUB AND SPIGOT WITH NEOPRENE GASKETS, OR NO HUB WITH STANDARD CLAMPS. UP THROUGH 2-1/2" MAY BE STANDARD WEIGHT, GALVANIZED STEEL PIPE WITH BLACK, WROUGHT IRON DRAIN FITTINGS, OR DWV COPPER TUBE WITH DWV FITTINGS AND 95-5 NO LEAD SOLDER.

   C. PRESSURIZED WASTE: SCHEDULE 40 SOLID CORE PVC PIPE FOR PRESSURE APPLICATIONS ACCORDING TO ASTM D 2665 AND ASTM D 1785 AND PVC SOCKET FITTINGS ACCORDING TO ASTM D 2665 AND ASTM D 3311 DWV PATTERNS AND TO FIT SCHEDULE 40 PIPE. ASSEMBLED WITH ASTM F 656 ADHESIVE PRIMER AND ASTM D 2564 SOLVENT CEMENT. MINIMUM WORKING PRESSURE RATING SHALL BE 150 PSI AT 73 DEG F FOR NPS 6 AND SMALLER.

54. DRAIN PAN PIPING: NOT BURIED: TYPE "M" COPPER, WROUGHT COPPER FITTINGS, AND 95-5 SOLDER;

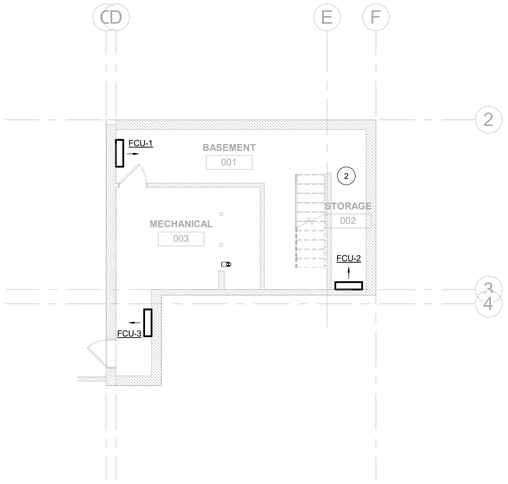
55. REFRIGERATION PIPING--TYPE "L", ACR GRADE COPPER, CLEANED, DEHYDRATED, AND CAPPED AT THE FACTORY. USE WROUGHT COPPER FITTINGS AND HARD SOLDER HAVING A MINIMUM MELTING POINT OF 1100 DEGREE F FOR BURIED LINES, 95-5 SOLDER FOR NON-BURIED LINES. VALVES AND SPECIALTIES SHALL BE STANDARD BRASS OR BRONZE VALVES FOR REFRIGERATION SERVICE. BURIED PIPE SHALL BE SURROUNDED BY 4" CLEAN SAND.

56. SUPPORT EACH AIR OR REFRIGERATION COMPRESSOR, AIR HANDLING UNIT AND FAN BY MASON INDUSTRIES OR EQUIVALENT SPRING TYPE VIBRATION ISOLATORS.

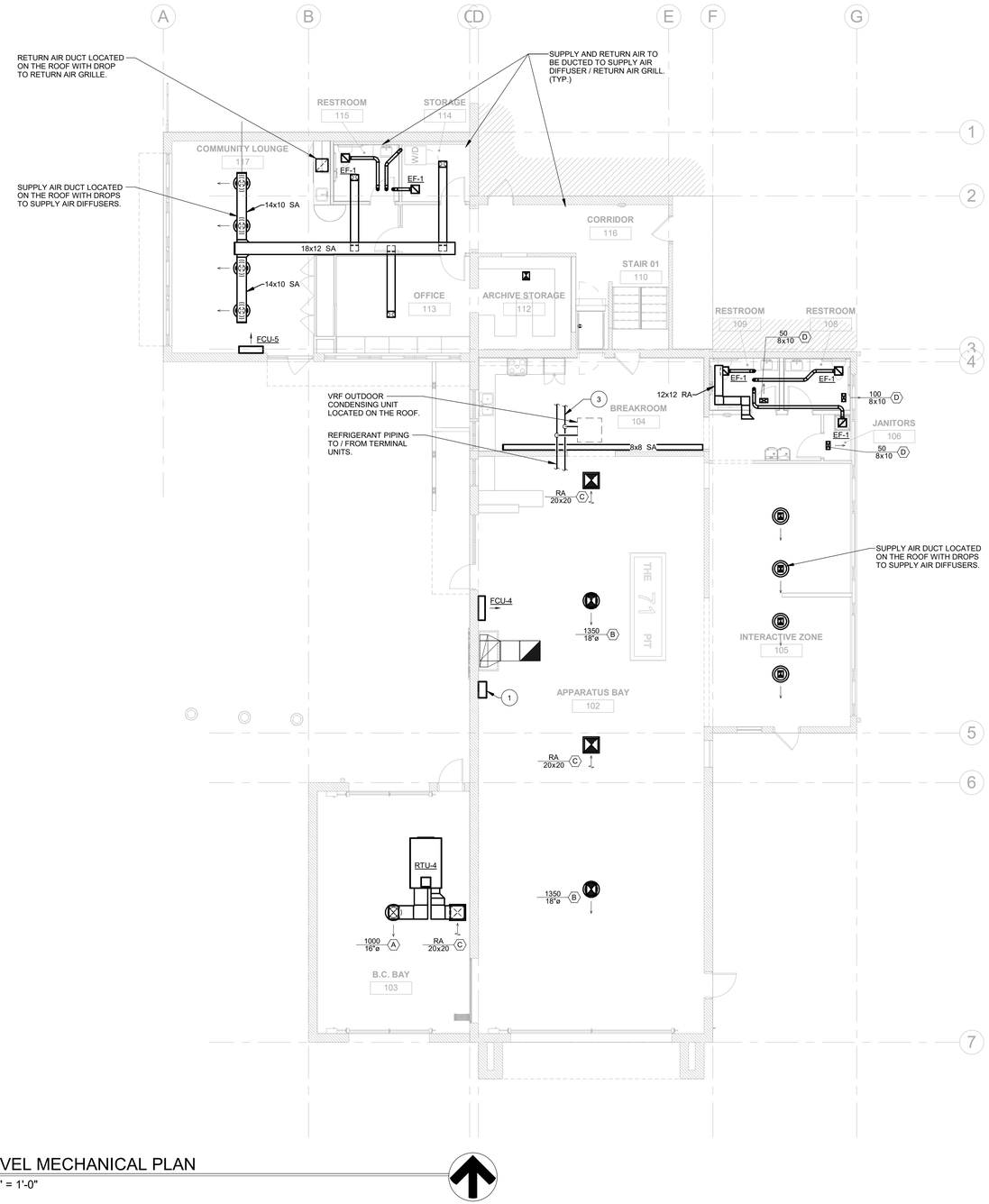
57. INDOOR PIPING INSULATION - INSULATE ALL NEW REFRIGERANT, DOMESTIC WATER, DOMESTIC HOT WATER, AND DOMESTIC HOT WATER RECIRCULATION PIPING WITH UL APPROVED, WHITE, ALL SERVICE, MINERAL FIBER, SNAP-ON, PIPE INSULATION. INSULATE FITTINGS WITH MINERAL FIBER BLANKET INSULATION AND PRE-MOLDED PVC COVERS. ALL MATERIALS SHALL HAVE A SMOKE DEVELOPED RATING OF 50 OR LESS AND A FLAME SPREAD RATING OF 25 OR LESS. PROVIDE CALCIUM SILICATE THERMAL INSERT AT HANGERS AND SUPPORTS. INSULATION SHALL PASS UNINTERRUPTED THROUGH HANGERS. VAPOR BARRIERS SHALL BE CONTINUOUS, AND SEALED WITH "NON-BREATHING" VAPOR BARRIER MASTIC ON PIPING OPERATING AT TEMPERATURES BELOW AMBIENT. ALL RAW EDGES OF INSULATION SHALL BE NEATLY TRIMMED AND SEALED WITH MASTIC.

   A. INSULATION THICKNESS BELOW BASED ON INSULATION CONDUCTIVITY VALUE NOT EXCEEDING 0.27 BTU*IN/(HR*FT^2*F):

      1) BRINE AND REFRIGERANT (NOT LESS THAN 40°F) - NPS



2 BASEMENT LEVEL MECHANICAL PLAN
SCALE: 1/8" = 1'-0"



1 MAIN LEVEL MECHANICAL PLAN
SCALE: 1/8" = 1'-0"

MECHANICAL NOTES:

1. *THE SPACE ABOVE CEILING IS BEING UTILIZED AS A RETURN AIR PLENUM. ALL RETURN GRILLES SHALL BE PROVIDED WITH SOUND BOOTS AND A DIRECT PATH TO THE AIR HANDLING SYSTEM RETURN DUCT. OPEN TO PLENUM. WHERE FULL HEIGHT WALLS ARE INSTALLED AND THE RETURN AIR PATH IS COMPROMISED, THE SOUND BOOT SHALL EXTEND THROUGH THE WALL OR TRANSFER AIR DUCTS SHALL BE PROVIDED. OTHERWISE, PROVIDE 2- OR U- DUCT TRANSFER THROUGH WALL. TRANSFER DUCTS AND SOUND BOOTS SHALL BE LINED SHEET METAL. NON-METAL DUCT NOT PERMITTED.*
2. *MAINTAIN MIN. 3 FT BETWEEN ENVIRONMENTAL EXH TERMINATIONS AND OPENINGS INTO BUILDING.*
3. *PIPING ON EXTERIOR WALLS, PRE-CAST CONCRETE WALLS, IMMEDIATELY BELOW ROOFS OR WITHIN CANTILEVERED FLOORS TO BE ROUTED FULLY ON INTERIOR/WARM SIDE OF INSULATION. PROVIDE FURRED/FRAMED SPACE AS REQUIRED.*
4. *ALL VALVES SHALL BE INSTALLED ABOVE DROP-IN CEILINGS IN ACCESSIBLE LOCATIONS, OR WITH ACCESS PANELS IN HARD-LID CEILINGS.*
5. *REFER TO THE PLUMBING FIXTURE CONNECTION SCHEDULE FOR PIPE SIZES TO INDIVIDUAL FIXTURES.*
6. *NOT ALL REQUIRED CLEANOUTS ARE NECESSARILY SHOWN ON THESE PLANS. PROVIDE CLEANOUTS ON WASTE, VENT AND STORM PIPING AS REQUIRED BY CODE AND FOR REASONABLE MAINTENANCE BASED ON ACTUAL FIELD INSTALLATION. COORDINATE LOCATIONS WITH ARCHITECT/ENGINEER.*
7. *INSTALL THERMOSTATIC MIXING VALVES, ASSE 1070 LISTED, AT EACH PUBLIC HANDWASHING LAVATORY/SINK. SIZE TO MATCH HW PIPE SIZE.*
8. *TERMINATE PLUMBING VENTS NOT LESS THAN 12" ABOVE ROOF.*
9. *ROUTE DOMESTIC HOT WATER RECIRC TO ALL HOT WATER FIXTURES IN ACCORDANCE WITH 20XX IECC. DISTANCE BASED ON PIPE SIZE AND FIXTURE TYPE.*
10. *CONDENSATE LINES - MUST STAND OFF OF THE WALL NO LESS THAN ONE HALF OF AN INCH TO FACILITATE CLEANING OR BE SEALED TO THE WALL.*

(#) FLAG NOTES:

1 INSTALL EXHAUST SYSTEM CONTROL PANEL ON OTHER SIDE OF EXISTING VERTICAL EXHAUST DUCT. CONNECT CONTROL PANEL TO (N) ROOF MOUNTED EXHAUST FAN AND (E) ROOF INTAKE HOOD CONTROL DAMPER. COORDINATE CONTROL PANEL INSTALLATION LOCATION WITH THE ARCHITECT.

2 PRE REVIEW OF SITE PHOTOS. WATER PIPING IS ROUTED OVER ELECTRICAL PANEL. CARRY IN BID COST TO FABRICATE DRAIN PAN UNDER PIPING WITH FLOAT SWITCH TO AUDIBLE ALARM (OR RELOCATE PIPING FROM OVER ELECTRICAL PANEL AND ELECTRICAL PANEL SERVICE CLEARANCE.

3 REFRIGERANT DISTRIBUTION PIPING ON ROOF TO EQUIPMENT SERVING INDOOR SPACES.

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

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HVAC FLOOR PLAN

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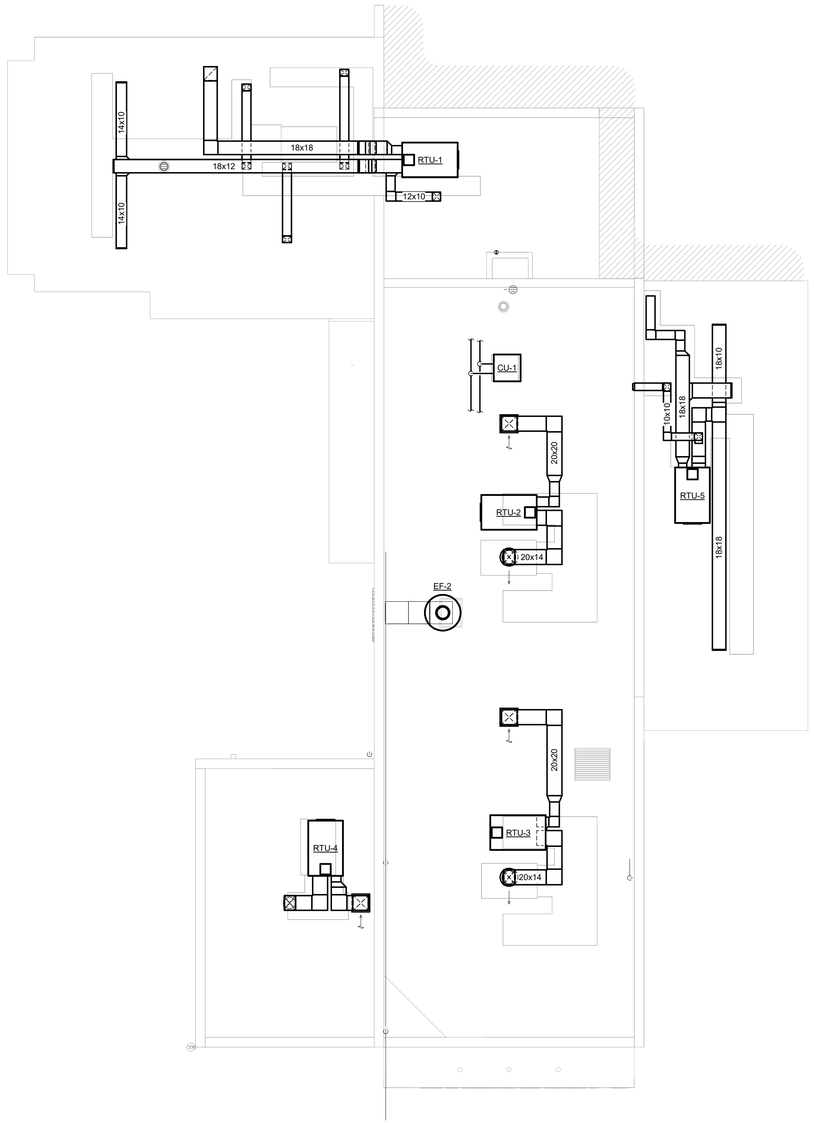

ROOF MECHANICAL PLAN

SCALE: 1/8" = 1'-0"

MECHANICAL NOTES:

1. *THE SPACE ABOVE CEILING IS BEING UTILIZED AS A RETURN AIR PLENUM. ALL RETURN GRILLES SHALL BE PROVIDED WITH SOUND BOOTS AND A DIRECT PATH TO THE AIR HANDLING SYSTEM RETURN DUCT. OPEN TO PLENUM. WHERE FULL HEIGHT WALLS ARE INSTALLED AND THE RETURN AIR PATH IS COMPROMISED, THE SOUND BOOT SHALL EXTEND THROUGH THE WALL OR TRANSFER AIR DUCTS SHALL BE PROVIDED. OTHERWISE, PROVIDE 2- OR U- DUCT TRANSFER THROUGH WALL. TRANSFER DUCTS AND SOUND BOOTS SHALL BE LINED SHEET METAL. NON-METAL DUCT NOT PERMITTED.*
2. *MAINTAIN MIN. 3 FT BETWEEN ENVIRONMENTAL EXH TERMINATIONS AND OPENINGS INTO BUILDING.*
3. *PIPING ON EXTERIOR WALLS, PRE-CAST CONCRETE WALLS, IMMEDIATELY BELOW ROOFS OR WITHIN CANTILEVERED FLOORS TO BE ROUTED FULLY ON INTERIOR/WARM SIDE OF INSULATION. PROVIDE FURRED/FRAMED SPACE AS REQUIRED.*
4. *ALL VALVES SHALL BE INSTALLED ABOVE DROP-IN CEILINGS IN ACCESSIBLE LOCATIONS, OR WITH ACCESS PANELS IN HARD-LID CEILINGS.*
5. *REFER TO THE PLUMBING FIXTURE CONNECTION SCHEDULE FOR PIPE SIZES TO INDIVIDUAL FIXTURES.*
6. *NOT ALL REQUIRED CLEANOUTS ARE NECESSARILY SHOWN ON THESE PLANS. PROVIDE CLEANOUTS ON WASTE, VENT AND STORM PIPING AS REQUIRED BY CODE AND FOR REASONABLE MAINTENANCE BASED ON ACTUAL FIELD INSTALLATION. COORDINATE LOCATIONS WITH ARCHITECT/ENGINEER.*
7. *INSTALL THERMOSTATIC MIXING VALVES, ASSE 1070 LISTED, AT EACH PUBLIC HANDWASHING LAVATORY/SINK. SIZE TO MATCH HW PIPE SIZE.*
8. *TERMINATE PLUMBING VENTS NOT LESS THAN 12" ABOVE ROOF.*
9. *ROUTE DOMESTIC HOT WATER RECIRC TO ALL HOT WATER FIXTURES IN ACCORDANCE WITH 20XX IECC. DISTANCE BASED ON PIPE SIZE AND FIXTURE TYPE.*
10. *CONDENSATE LINES - MUST STAND OFF OF THE WALL NO LESS THAN ONE HALF OF AN INCH TO FACILITATE CLEANING OR BE SEALED TO THE WALL.*

(#) FLAG NOTES:

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MECHANICAL ROOF PLAN

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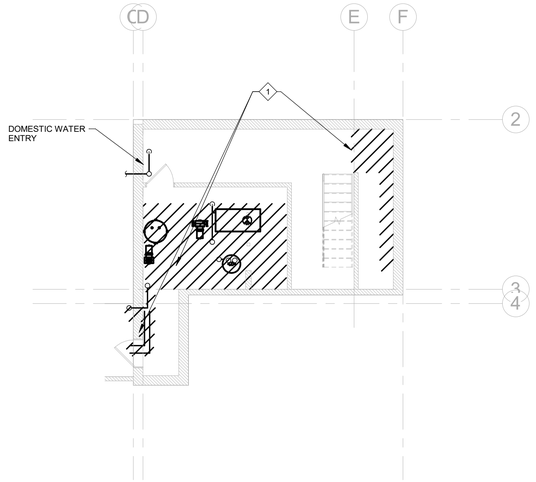
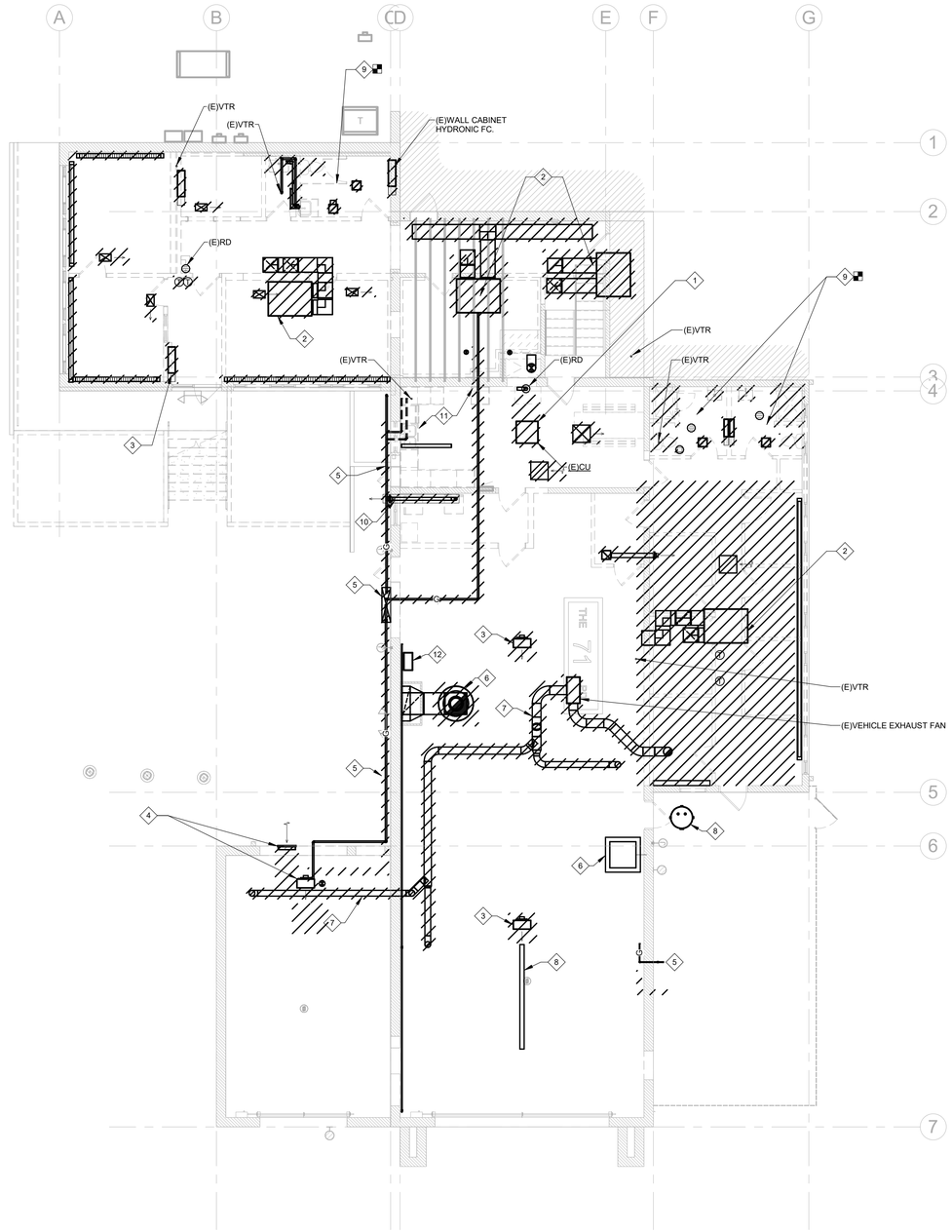


BASEMENT LEVEL MECHANICAL AND PLUMBING DEMOLITION PLAN

SCALE: 1/8" = 1'-0"



MECHANICAL AND PLUMBING DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

DEMOLITION NOTES:

1. ADDITIONAL SYSTEMS AND STORM, HYDRONIC, DOMESTIC, WASTE AND VENT PIPING MAY BE ROUTED IN SPACE THAT IS NOT REPRESENTED. MODIFICATIONS TO THESE SYSTEMS ARE ANTICIPATED AS DESCRIBED IN THIS SET OF CONSTRUCTION DOCUMENTS.
2. FIELD VERIFY ALL COMPONENTS PRIOR TO DEMOLITION. ONLY PORTIONS OF THE SYSTEMS WERE ACCESSIBLE FOR VISUAL CONFIRMATION DURING DESIGN PROCESS.
3. REMOVE ALL MECHANICAL ITEMS INDICATED.
4. TEMPORARILY SEAL OR CAP PIPING TO BE RE-USED FOR LATER CONNECTION.
5. SEAL ALL OPEN DUCTS DURING CONSTRUCTION TO MITIGATE DUST AND DEBRIS FROM SYSTEM. CAP DUCTWORK IN LOCATIONS THAT ARE NOT BEING RECONNECTED.
6. REMOVE ALL DEMOLISHED COLD WATER, HOT WATER AND HOT WATER RECIRCULATION PIPING BACK TO BRANCH FROM MAIN TO ELIMINATE ALL DEAD ENDS IN DOMESTIC WATER PIPING.
7. NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES OF INFORMATION REPRESENTED IN THE DOCUMENTS VERSUS WHAT IS FOUND IN THE FIELD.
8. COORDINATE PATCHING AND REPAIRS OF WALLS, CEILINGS AND FLOORS WITH ARCHITECT.

DEMO NOTES

1 REMOVE ALL EXISTING HVAC EQUIPMENT SERVING PROJECT AREA. NEW HVAC SYSTEM TO BE PROVIDED THROUGHOUT MODIFIED PROJECT AREA. REMOVE EXISTING DUCTWORK, EQUIPMENT, PIPING, CONTROLS, ETC.. REMOVE EXISTING EQUIPMENT CURBS, HANGERS, AND MOUNTS. COORDINATE PATCHING AND SEALING OF WALLS WITH GENERAL CONTRACTOR.

2 EXISTING EQUIPMENT ON ROOF AND DUCT DISTRIBUTION SYSTEMS ABOVE AND BELOW ROOF INCLUDING AIR INLETS/OUTLETS, SUPPORTS, AND CONTORLS BEING REMOVED.

3 EXISTING CABINET / UNIT HEATERS, PIPING, AND CONTROLS TO BE REMOVED. COORDINATE PATCHING OF ALL FLOOR, WALL, AND CEILING OPENINGS WHERE SYSTEMS ARE REMOVED. RETURN EQUIPMENT TO OWNER.

4 EXISTING GAS UNIT HEATER AND WALL LOUVER BEING REMOVED.

5 EXISTING GAS PIPING ON EXTERIOR BUILDING WALL AND ACROSS ROOF TO BE REMOVED. COORDINATE REMOVAL/ABANDONMENT OF GAS UTILITY SERVICE WITH UTILITY COMPANY.

6 ROOFTOP EXHAUST FAN, INTAKE HOOD, AND DUCTWORK FROM BAY VENTILATION SYSTEM TO BE REFURBISHED SO IT CAN BE USED AS THE PRIMARY VENTILATION SYSTEM. REUSE EXISTING RAIL EXHAUST CONTROLS AND REFURBISH TO USE WITH THE REVISED VENTILATION SYSTEM. REMOVE EXHAUST FAN AND PREPARE CURB FOR RECONNECTION.

7 REMOVE AND SALVAGE VEHICULAR RAIL EXHAUST SYSTEM INCLUDING EQUIPMENT, DISTRIBUTION, AND SUPPORTS. RETURN TO OWNER. COORDINATE PATCHING OF WALLS WITH GENERAL CONTRACTOR.

8 EXISTING BAY TRENCH DRAIN AND SAND AND OIL INTERCEPTOR SYSTEM TO REMAIN.

9 SHOWERS BEING REMOVED. WATER CLOSET AND LAVATORY TO BE REPLACED/REPOSITIONED. DEMO EXISTING BRANCH PIPING BACK TO POINT OF CONNECTION TO EXISTING BUILDING CW/HW/W/AND VENT PIPING SYSTEMS. EXISTING SYSTEMS TO BE UPDATED/ADAPTED FOR NEW FIXTURES/FIXTURES LOCATIONS.

10 DEMOLISH (E) DRYER VENT, WALL BOX AND WALL CAP. COORDINATE WORK AND REPAIR OF WALLS WITH GENERAL CONTRACTOR.

11 (E) CW SERVING THE KITCHEN SINK AND REFRIGERATOR TO REMAIN.

12 REMOVE THE EXHAUST SYSTEM CONTROL PANEL. PREPARE AREA FOR INSTALLATION OF THIS CONTROL PANEL ON THE OTHER SIDE OF THE (E) VERTICAL EXHAUST DUCT.

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MECHANICAL AND PLUMBING DEMOLITION PLAN

MPD-101

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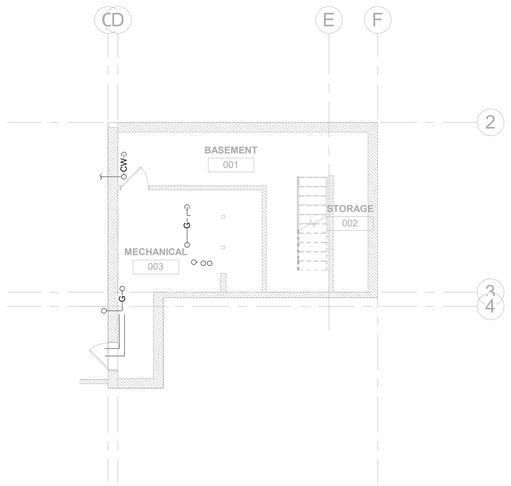
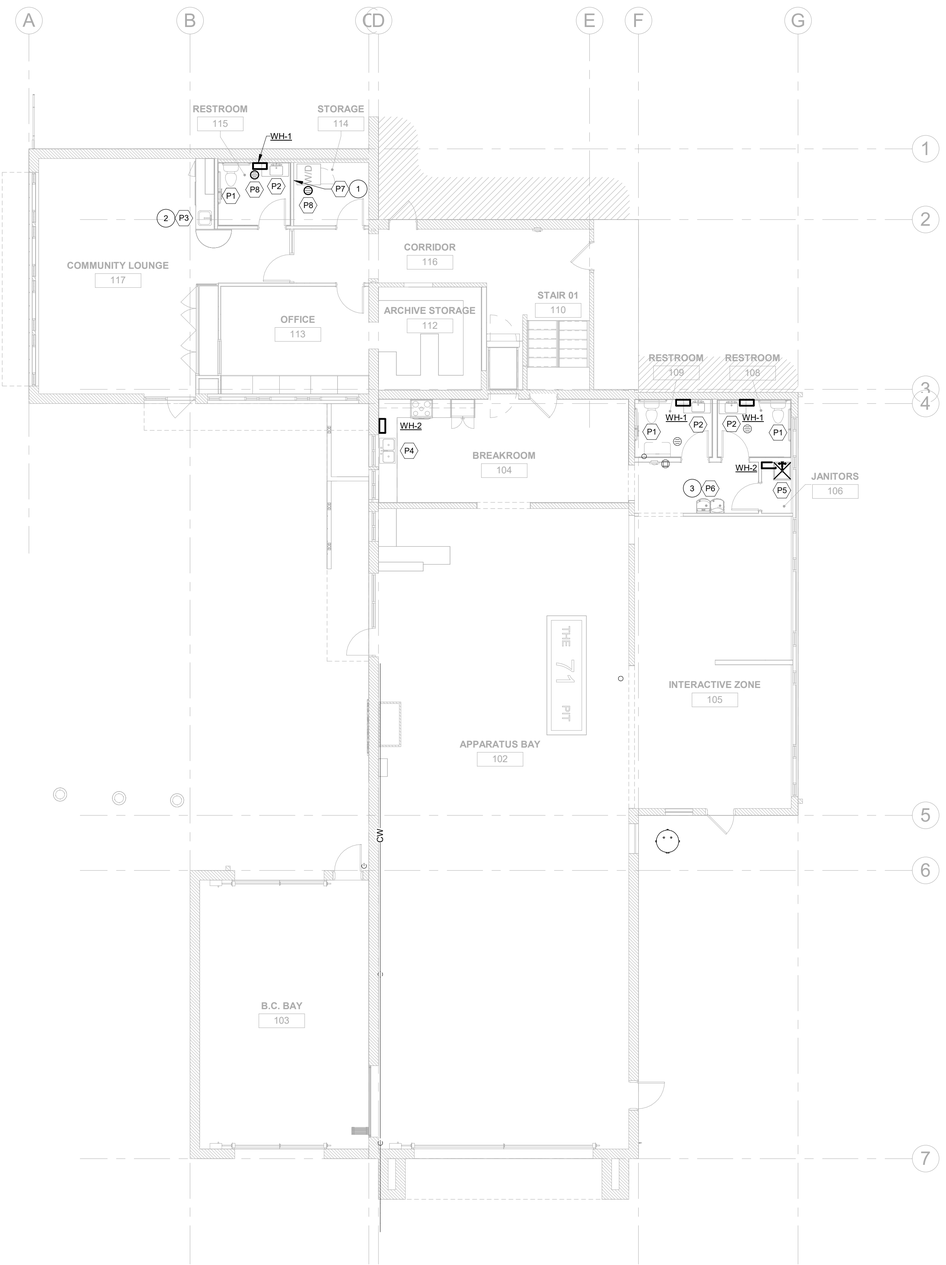


2 BASEMENT LEVEL PLUMBING PLAN
SCALE: 1/8" = 1'-0"



1 MAIN LEVEL PLUMBING PLAN
SCALE: 1/8" = 1'-0"

MECHANICAL NOTES:

1. THE SPACE ABOVE CEILING IS BEING UTILIZED AS A RETURN AIR PLENUM. ALL RETURN GRILLES SHALL BE PROVIDED WITH SOUND BOOTS AND A DIRECT PATH TO THE AIR HANDLING SYSTEM RETURN DUCT, OPEN TO PLENUM. WHERE FULL HEIGHT WALLS ARE INSTALLED AND THE RETURN AIR PATH IS COMPROMISED, THE SOUND BOOT SHALL EXTEND THROUGH THE WALL OR TRANSFER AIR DUCTS SHALL BE PROVIDED. OTHERWISE, PROVIDE Z- OR U- DUCT TRANSFER THROUGH WALL. TRANSFER DUCTS AND SOUND BOOTS SHALL BE LINED SHEET METAL. NON-METAL DUCT NOT PERMITTED.
2. MAINTAIN MIN. 3 FT BETWEEN ENVIRONMENTAL EXH TERMINATIONS AND OPENINGS INTO BUILDING.
3. PIPING ON EXTERIOR WALLS, PRE-CAST CONCRETE WALLS, IMMEDIATELY BELOW ROOFS OR WITHIN CANTILEVERED FLOORS TO BE ROUTED FULLY ON INTERIOR/WARM SIDE OF INSULATION. PROVIDE FURRED/FRAMED SPACE AS REQUIRED.
4. PROTECT PIPING ROUTED ALONG COLUMNS, WALLS, ETC. FROM DAMAGE AS NECESSARY WITH CAGES. COORDINATE WITH ARCHITECT.
5. ALL VALVES SHALL BE INSTALLED ABOVE DROP-IN CEILINGS IN ACCESSIBLE LOCATIONS, OR WITH ACCESS PANELS IN HARD-LID CEILINGS.
6. REFER TO THE PLUMBING FIXTURE CONNECTION SCHEDULE FOR PIPE SIZES TO INDIVIDUAL FIXTURES.
7. NOT ALL REQUIRED CLEANOUTS ARE NECESSARILY SHOWN ON THESE PLANS. PROVIDE CLEANOUTS ON WASTE, VENT AND STORM PIPING AS REQUIRED BY CODE AND FOR REASONABLE MAINTENANCE BASED ON ACTUAL FIELD INSTALLATION. COORDINATE LOCATIONS WITH ARCHITECT/ENGINEER.
8. INSTALL THERMOSTATIC MIXING VALVES, ASSE 1070 LISTED, AT EACH PUBLIC HANDWASHING LAVATORY/SINK. SIZE TO MATCH HW PIPE SIZE.
9. TERMINATE PLUMBING VENTS NOT LESS THAN 12" ABOVE ROOF.
10. ROUTE DOMESTIC HOT WATER RECIRC TO ALL HOT WATER FIXTURES IN ACCORDANCE WITH 20XX IECC, DISTANCE BASED ON PIPE SIZE AND FIXTURE TYPE.
11. CONDENSATE LINES - MUST STAND OFF OF THE WALL NO LESS THAN ONE HALF OF AN INCH TO FACILITATE CLEANING OR BE SEALED TO THE WALL.

(#) FLAG NOTES:

1 (N) WASHER WALL BOX PROVIDE NEW CW, W, AND VENT PIPING AND CONNECT TO EXISTING SYSTEMS.

2 (N) SINK: PROVIDE (N) CW, W, AND VENT PIPING AND CONNECT TO EXISTING SYSTEMS
PROVIDE (N) HW PIPING FROM RESTROOM 115 WH-1.
UNDER COUNTER REFRIGERATOR: PROVIDE NEW ICE MAKER WALL BOX AND CONNECT CW TO EXISTING SYSTEMS.

3 (N) DRINKING FOUNTAIN
PROVIDE NEW CW, W, AND VENT PIPING AND CONNECT TO EXISTING SYSTEMS.

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PLUMBING FLOOR PLAN

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ELECTRICAL SYSTEMS LEGEND

NOTE:
ALL SYMBOLS SHOWN ON LEGEND ARE NOT NECESSARILY USED.

LIGHTING FIXTURE SYMBOLS

	RECESSED FIXTURE
	RECESSED WALL WASHER
	RECESSED ADJUSTABLE ACCENT
	RECESSED INGRADE UPLIGHT
	SURFACED MOUNTED LINEAR TROFFER / UNDERCABINET LIGHT
	RECESSED LINEAR TROFFER
	RECESSED LINEAR WALL WASH/GRAZE
	RECESSED INGRADE LINEAR UPLIGHT
	RECESSED INGRADE LINEAR WALL WASH/GRAZE
	LINEAR PENDANT MOUNTED LIGHT
	STRIP LIGHT
	SURFACE MOUNTED LED PANEL
	SURFACE MOUNTED LIGHT
	PENDANT MOUNTED LIGHT
	WALL MOUNTED LIGHT
	WALL MOUNTED DECORATIVE SCONCE
	WALL MOUNTED ADJUSTABLE LIGHT
	WALL MOUNTED UPLIGHT
	WALL MOUNTED READING LIGHT
	WALL MOUNTED SWING ARM LIGHT
	WALL MOUNTED LINEAR LIGHT
	ILLUMINATED MIRROR
	ADJUSTABLE MULTIHEAD LIGHT
	CEILING/PENDANT MOUNTED TRACK WITH ADJUSTABLE TRACK HEAD
	LINEAR TAPELIGHT OR COVE LIGHT
	LINEAR CLOSET ROD FIXTURE
	LINEAR LIGHTING (VERTICAL)
	RECESSED STEP LIGHT
	MONO-POINT LIGHTING FIXTURE
	MONO-POINT STAKE MOUNT ACCENT
	TABLE LAMP
	FLOOR LAMP
	CEILING MOUNTED EXIT SIGN W/ FACES & ARROWS AS SHOWN
	WALL MOUNTED EXIT SIGN W/ FACES & ARROWS AS SHOWN
	WALL MOUNTED COMBO EXIT SIGN / EGRESS LIGHT
	EMERGENCY LIGHTS
	EXTERIOR POLE MOUNTED LIGHT
	EXTERIOR POST (BOLLARD) MOUNTED LIGHT
	CEILING FAN
	CEILING FAN WITH LIGHT
	FIXTURE WITH EMERGENCY BACKUP OR ON EM CIRCUIT

LIGHTING CONTROL SYMBOLS

$	LINE VOLTAGE WALL MOUNTED SWITCH
$3	THREE-WAY SWITCH
$4	FOUR-WAY SWITCH
$J	DOOR JAMB SWITCH
$K	KEY SWITCH
$D	DIMMER SWITCH
XXX	WALL MOUNTED DEVICE
XXX	WIRELESS WALL MOUNTED DEVICE
RA	ROOM CONTROLLER
RL	PLUG LOAD CONTROLLER
	OCCUPANCY/VACANCY PROGRAMMED SENSOR - CEILING MOUNTED
	WIRELESS OCCUPANCY/VACANCY PROGRAMMED SENSOR - CEILING MOUNTED
	OCCUPANCY/VACANCY PROGRAMMED SENSOR - CORNER MOUNTED
	WIRELESS OCCUPANCY/VACANCY PROGRAMMED SENSOR - CORNER MOUNTED
	DAYLIGHT PHOTO SENSOR
	WIRELESS DAYLIGHT PHOTO SENSOR

LIGHTING DRAWING SYMBOLS

	ALIGNMENT LINE
CL OBJECT	CENTER LINE DESIGNATION
	DAYLIGHT ZONE

NOTE: SEE CONTROLS SCHEDULE FOR FURTHER SPECIFCATION INFORMATION

POWER SYMBOLS

	SINGLE RECEPTACLE - WALL MOUNTED
	DUPLEX RECEPTACLE - WALL MOUNTED
USB	DUPLEX RECEPTACLE WITH USB PORTS - WALL MOUNTED
C	DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER - WALL MOUNTED
	QUADPLEX RECEPTACLE - WALL MOUNTED
	DUPLEX RECEPTACLE; GFCI - WALL MOUNTED
	DUPLEX RECEPTACLE; HALF SWITCHED - WALL MOUNTED
	DUPLEX RECEPTACLE; ISOLATED GROUND - WALL MOUNTED
D	DUPLEX RECEPTACLE; HALF DIMMED - WALL MOUNTED
D	DUPLEX RECEPTACLE; FULL DIMMED - WALL MOUNTED
	SPECIAL OUTLET AS NOTED - WALL MOUNTED
	DUPLEX RECEPTACLE - CEILING MOUNTED; TYP. ALL TYPES
	DUPLEX RECEPTACLE - FLUSH FLOOR MOUNTED; TYP. ALL TYPES
	FLUSH FLOOR MOUNTED DUPLEX RECEPTACLE AND TELECOM
	JUNCTION BOX - WALL MOUNTED
	JUNCTION BOX - FLUSH FLOOR MOUNTED
	JUNCTION BOX - CEILING MOUNTED
	MULTI-OUTLET PLUG STRIP
	POWER/TELECOM POLE
	MECHANICAL EQUIPMENT POWER CONNECTION
	KITCHEN EQUIPMENT POWER CONNECTION
	POOL EQUIPMENT POWER CONNECTION
TS	TIMER SWITCH
	FUSED DISCONNECT
N	NON FUSED DISCONNECT
	MOTOR STARTER
CB	ENCLOSED CIRCUIT BREAKER
PB	PULL BOX
	PUSH BUTTON
TC	TIME CLOCK
PC	PHOTO-CELL
T	TRANSFORMER
	PANELBOARD OR LOADCENTER
C	CONTACTOR
	ELECTRIC MOTOR
	METER
T	THERMOSTAT
ATS	AUTOMATIC TRANSFER SWITCH
	CIRCUIT HOMERUN
	CONDUIT RUN
	CONDUIT RUN BELOW GRADE
	CONDUIT UP
	CONDUIT DOWN
$	SWITCH
$T	THERMAL OVERLOAD SWITCH
$V	VARIABLE SPEED SWITCH
$K	KEY SWITCH

ONE-LINE DIAGRAM SYMBOLS

	DISCONNECT SWITCH
	FUSE
	CIRCUIT BREAKER
	CURRENT TRANSFORMER
	POTENTIAL TRANSFORMER
M	METER
V	VOLT-METER
A	AMP-METER
SPD	SURGE PROTECTION DEVICE
	SELECTOR SWITCH
GF	GROUND FAULT PROTECTION
ST	SHUNT TRIP
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
	GROUND
	COLD WATER GROUND CONNECTION
	BUILDING STEEL GROUND CONNECTION
T	TRANSFORMER
	DISCONNECT
	AUTOMATIC TRANSFER SWITCH

ABBREVIATIONS

AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AL	ALUMINUM
AP	ACCESS POINT
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BFG	BELOW FINISH GRADE
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT
CATV	COMMUNITY (CABLE) ANTENNA TELEVISION SYSTEM
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CPU	CENTRAL PROCESSING UNIT
CT	CURRENT TRANSFORMER
DISP	GARBAGE DISPOSAL
DW	DISHWASHER
(E)	EXISTING
EM	EMERGENCY
EWC	ELECTRIC WATER COOLER
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GRD	GROUND
IAW	IN ACCORDANCE WITH
IC	INTERMEDIATE CROSS-CONNECT
IDF	INTERMEDIATE DISTRIBUTION FRAME
IG	ISOLATED GROUND
IR	INFRARED
LAN	LOCAL AREA NETWORK
MDF	MAIN DISTRIBUTION FRAME
(N)	NEW
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NTS	NOT TO SCALE
OC	ON CENTER
PA	PUBLIC ADDRESS
REF	REFRIGERATOR
SPD	SURGE PROTECTION DEVICE
T	TAMPER RESISTANT
TTB	TELECOMMUNICATIONS TERMINAL BOARD
TVTB	TELEVISION TERMINAL BOARD
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
V	VOLT
W	WATT
WAN	WIDE AREA NETWORK
WAP	WIRELESS ACCESS POINT
WLAN	WIRELESS LOCAL AREA NETWORK
WP	WEATHERPROOF
XP	EXPLOSIONPROOF
+18"	MOUNTING HEIGHT TO CENTERLINE OF DEVICE ABOVE FINISH FLOOR (VERIFY W/ ARCH ELEVATIONS)

NOTES:

- LIGHT LINEWEIGHT INDICATES EXISTING.
- HATCHED AREAS INDICATE DEMOLITION.
- "C" ADJACENT TO A DEVICE INDICATES MOUNTING ABOVE COUNTERTOP.

MECHANICAL EQUIPMENT WIRING AND CONNECTIONS

	ITEM	FURNISHED UNDER	SET IN PLACE OR MTD. UNDER	WIRED/ CONNECTED UNDER
1.	EQUIPMENT MOTORS AND THERMAL OVERLOADS, RESISTANCE HEATERS.	MD	MD	ED
2.	VFD'S, MOTOR CONTROLLERS; MAGNETIC STARTERS, REDUCED VOLTAGE STARTERS AND OVERLOAD RELAYS.	MD	ED(a)	ED
3.	DISCONNECT SWITCHES (FUSED OR NON-FUSED), HP RATED SWITCHES, THERMAL OVERLOAD SWITCHES AND FUSES AND MANUAL OPERATING SWITCHES.	ED(a)	ED(a)	ED
4.	PUSHBUTTON STATIONS, PILOT LIGHTS, MULTI-SPEED SWITCHES, FLOAT SWITCHES, THERMOSTATS, CONTROL RELAYS, TIMECLOCKS, CONTROL TRANSFORMERS, CONTROL PANELS, MOTOR VALVES, DAMPER ACTUATORS, SOLENOID VALVES, EP AND PE SWITCHES AND INTERLOCKS.	MD	MD	ED
5.	120 VOLT POWER FOR BAS PANELS, FIRE PROTECTION AND BOILER CONTROLS.	ED	ED	ED
6.	FIRE/SMOKE DAMPERS AND ELEVATOR VENT DAMPERS.	MD	MD	ED(c)

MD = MECHANICAL DIVISION

ED = ELETRICAL DIVISION

NOTES:

(a) IF FURNISHED AS PART OF FACTORY-WIRED EQUIPMENT, THEN WIRING AND CONNECTIONS ONLY BY ED.

(b) IF ANY OF THESE DEVICES CARRY THE FULL LOAD CURRENT TO ANY MOTOR THEY SHALL BE CONNECTED BY ED. CONTROL DEVICES CARRYING FULL LOAD CURRENT FURNISHED BY MD AND WIRED BY ED SHALL BE LOCATED AT THE DEVICE BEING CONTROLLED, UNLESS SHOWN ON DRAWINGS OR MUTUAL AGREEMENT IS MADE BETWEEN THE CONTRACTORS WITH NO CHANGE IN THE CONTRACT PRICE.

(c) WIRING FROM ALARM CONTACTS TO ALARM SYSTEM BY ED; ALL CONTROL FUNCTION WIRING BY MD. DUCT DETECTORS FURNISHED BY ED, SET IN PLACE BY MD.

GENERAL NOTES: THE ABOVE LIST DOES NOT ATTEMPT TO INCLUDE ALL COMPONENTS. ALL ITEMS NECESSARY FOR A COMPLETE SYSTEM SHALL BE INCLUDED IN THE BASE...

ELECTRICAL SHEET INDEX

#	TITLE	05.10.2024-PRE-DESIGN (30%CD)	07.19.2024-70% CD							
		ISSUE LOG								
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E-002	ELECTRICAL ONE-LINE DIAGRAM	√	√							
E-003	ELECTRICAL SCHEDULES		√							
E-004	ELECTRICAL SPECIFICATIONS		√							
ES-101	ELECTRICAL SITE PLAN		√							
ED-101	ELECTRICAL DEMOLITION PLAN	√	√							
E-101	ELECTRICAL FLOOR PLAN	√	√							
E-102	ELECTRICAL ROOF PLAN		√							
L-101	LIGHTING FLOOR PLAN	√	√							
E-201	ELECTRICAL DIAGRAMS	√	√							

ISSUE LOG KEY:
"√" ISSUED AS PART OF SET
" " NOT PART OF SET
"*" ISSUED FOR INFORMATION ONLY

GENERAL NOTES:

1. THESE DRAWINGS ACCOMPANY THE PUBLISHED CONSTRUCTION DOCUMENT SPECIFICATION BOOK (PROJECT MANUAL).
2. DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS ON ARCHITECTURAL DRAWINGS AND IN FIELD PRIOR TO COMMENCEMENT OF WORK.
3. VISIT SITE PRIOR TO BID AND VERIFY THAT CONDITIONS ARE AS INDICATED. CONTRACTOR SHALL INCLUDE IN HIS BID COSTS REQUIRED TO MAKE HIS WORK MEET EXISTING CONDITIONS.
4. SYSTEM OUTAGES SHALL BE PERMITTED ONLY AT TIMES APPROVED BY OWNER – IN WRITING. WORK WHICH COULD RESULT IN AN ACCIDENTAL OUTAGE (BEYOND BRANCH CIRCUITS) SHALL BE PERFORMED WITH THE OWNER'S MAINTENANCE PERSONNEL ADVISED OF SUCH WORK.
5. SERVICE SHALL BE MAINTAINED TO EXISTING AREAS DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE PORTABLE GENERATORS, CABLES, OUTLETS, ETC. AS REQUIRED TO MAINTAIN CONTINUITY OF SERVICE. PLACEMENT OF SUCH PORTABLE EQUIPMENT SHALL BE SUBJECT TO OWNER APPROVAL.
6. REVIEW ARCHITECTURAL, MECHANICAL AND OTHER DRAWINGS PRIOR TO BID.
7. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE ARCHITECT.
8. WORK, MATERIALS, AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE, AND NATIONAL CODES AND ORDINANCES.
9. PROVIDE PERMITS AND INSPECTIONS REQUIRED.
10. PROVIDE 1/4" SCALE LAYOUT DRAWINGS OF ROOMS WITH ELECTRICAL SWITCHBOARDS AND TRANSFORMERS WITH SHOP DRAWING SUBMITTAL. LAYOUTS SHALL SHOW LOCATIONS OF, AND SHALL BE COORDINATED WITH MECHANICAL EQUIPMENT. ALL EQUIPMENT SHALL BE DRAWN TO SCALE.
11. CONTRACTOR'S FAILURE TO ORDER OR RELEASE ORDER FOR MATERIALS AND/OR EQUIPMENT WILL NOT BE ACCEPTED AS A REASON TO SUBSTITUTE ALTERNATE MATERIALS, EQUIPMENT, OR INSTALLATION METHODS.
12. VERIFY EXACT LOCATIONS OF EXISTING AND NEW UNDERGROUND UTILITIES, PIPING AND RACEWAY SYSTEMS PRIOR TO TRENCHING. PROVIDE NECESSARY TRENCHING, BACKFILL, EXCAVATION, SUPPORTS, SERVICE FEEDERS (CONDUIT AND/OR WIRE), PULLBOXES, TRANSFORMER PADS, SAWCUTTING AND PATCHING, CONCRETE/PAVING, ETC. REQUIRED. BACKFILL TRENCHES TO 90 PERCENT COMPACTION AND PATCH TO MATCH EXISTING. CONTRACTOR SHALL OBTAIN AND VERIFY EXACT UTILITY COMPANY DRAWINGS AND REQUIREMENTS. ELECTRICAL CONTRACTOR IS TO SUBMIT A COMPLETE CONSTRUCTION DRAWING SET TO THE ELECTRICAL UTILITY COMPANY WITH-IN 10 DAYS OF AWARD OF CONTRACT. COORDINATE TIMELINE OF THEIR REVIEW, APPROVAL, CONSTRUCTION SCHEDULING AND INSTALLATION OF THE UTILITY TRANSFORMER WITH THE UTILITY COMPANY. NOTIFY OWNER OF ANY SCHEDULING CONFLICTS.
13. EXISTING SYSTEMS AND CONDITIONS SHOWN ON DRAWINGS FOR EXISTING BUILDINGS ARE TO BE NOTED "FOR GUIDANCE ONLY". THE ELECTRICAL CONTRACTOR TO FIELD CHECK ALL EXISTING CONDITIONS PRIOR TO BIDDING AND TO INCLUDE IN HIS BID AN ALLOWANCE FOR REMOVAL AND/OR RELOCATION OF EXISTING CONDUITS, WIRES, DEVICES, FIXTURES, OR OTHER EQUIPMENT AS INDICATED ON THE PLANS OR AS REQUIRED TO COORDINATE AND ADAPT NEW AND EXISTING ELECTRICAL SYSTEM TO ALL OTHER WORK AS REQUIRED
14. PROVIDE ELECTRICAL DEMOLITION REQUIRED. REFER TO ARCHITECTURAL AND ELECTRICAL DEMOLITION DRAWINGS FOR LOCATION AND EXTENT OF DEMOLITION REQUIRED. CONTRACTOR SHALL VISIT SITE PRIOR TO BID TO DETERMINE EXTENT OF WORK INVOLVED.
15. PROVIDE ALL NECESSARY DEMOLITION TO REMOVE EXISTING UNUSED CONDUIT, WIRE, CABLE, J-BOXES, RECEPTACLES, SWITCHES, LIGHTS, FIRE ALARMS DEVICES, ETC. COMPLETE WITH ASSOCIATED CIRCUITING TO SOURCE. WHERE IT IS NOT FEASIBLE TO REMOVE THE ABOVE, OUTLET SHALL BE ABANDONED, WIRE REMOVED, AND BLANK COVER PLATES PROVIDED.
16. ALL (E) EQUIPMENT, LAMPS, BALLASTS, ETC. BEING REMOVED SHALL BE DISCARDED IN ACCORDANCE WITH APPLICABLE EPA REQUIREMENTS.
17. EXISTING LIGHT FIXTURES, ELECTRICAL EQUIPMENT, ETC. BEING REMOVED SHALL BE RETURNED TO THE OWNER, EXCEPT FOR THOSE ITEMS BEING RELOCATED.
18. VERIFY EXACT LOCATION OF EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN.
19. INSTALL ALL MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ANY DEVIATIONS SHALL BE BROUGHT TO THE ARCHITECT/ENGINEER'S ATTENTION PRIOR TO INSTALLATION.
20. FINAL CONNECTIONS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH MANUFACTURER'S APPROVED WIRING DIAGRAMS, DETAILS, AND INSTRUCTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED.
21. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING EQUIPMENT WHICH IS DAMAGED DUE TO INCORRECT FIELD WIRING PROVIDED UNDER THIS SECTION, OR FACTORY WIRING IN EQUIPMENT PROVIDED UNDER THIS SECTION.
22. ALL ELECTRICAL SYSTEMS COMPONENTS SHALL BE LISTED OR LABELED BY U.L. OR OTHER RECOGNIZED TESTING FACILITY.
23. WIRING DEVICES SHALL BE SPECIFICATION GRADE AND RATED AT 20 AMPERES FOR LIGHT SWITCHES, AND 20 AMPERES FOR DUPLEX RECEPTACLES. THE COLOR OF THE DEVICES AND COVER PLATES SHALL BE AS DIRECTED BY ARCHITECT.
24. ALL WIRING SHALL BE INSTALLED IN LISTED METALLIC RACEWAYS. EMT FITTINGS SHALL BE MALLEABLE IRON OR STEEL. CONNECTORS SHALL BE INSULATED THROAT TYPE. MINIMUM CONDUIT SIZE IS 3/4". FOLLOW NEC FOR MAXIMUM NUMBER OF CONDUCTORS PER CONDUIT. CONDUIT SHALL BE OF SUFFICIENT SIZE AND CONDUCTOR QUANTITY SHALL BE LIMITED TO ELIMINATE THE NEED TO DE-RATE CONDUCTORS. METAL CLAD CABLE IS **[NOT]** PERMITTED.
25. ALL EMPTY RACEWAY SYSTEMS SHALL HAVE A 200LB NYLON PULL STRING OR EQUAL, AND SHALL BE IDENTIFIED AT ALL JUNCTION, PULL AND TERMINATION POINTS, USING PERMANENT METALLIC TAGS. TAG SHALL INDICATE INTENDED USE OF CONDUIT, ORIGINATION, AND TERMINATION POINTS OF EACH INDIVIDUAL CONDUIT.
26. WIRE SHALL BE COPPER, 75 DEGREE CELSIUS RATED FOR GENERAL USE. WIRING WITHIN 3 INCHES OF FLUORESCENT BALLASTS WIRE SHALL BE COPPER, MINIMUM 90 DEGREE CELSIUS RATED. SIZES INDICATED ARE FOR INSTALLATION IN A MAXIMUM 30 DEGREE CELSIUS AMBIENT. CONDUCTOR AMPACITY SHALL BE DERATED FOR HIGHER AMBIENT INSTALLATIONS.
27. PROVIDE NEW UPDATED PANELBOARD DIRECTORIES FOR EXISTING AND NEW CIRCUITS BEING UTILIZED FOR COMPLETION OF PROJECT.
28. PANEL DIRECTORIES SHALL BE REMOVABLE. ROOM NAMES AND NUMBERS SHALL BE AS DIRECTED BY OWNER. DIRECTORIES SHALL BE TYPED AND INSTALLED UNDER CLEAR PLASTIC COVERS.
29. FINAL CONNECTIONS TO MOTORS, TRANSFORMERS, AND OTHER VIBRATING EQUIPMENT SHALL BE SEAL TITE FLEX AND APPROVED FITTINGS. DO NOT SECURE CONDUITS, DISCONNECTS, OR DEVICES TO DUCTWORK OR MECHANICAL EQUIPMENT.
30. SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW THAT WORK IS DEFECTIVE, CONTRACTOR SHALL MAKE CORRECTIONS NECESSARY AT NO COST TO OWNER.
31. GUARANTEE THE INSTALLATION AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP WHICH MAY OCCUR UNDER NORMAL USAGE FOR A PERIOD OF ONE YEAR AFTER OWNER'S ACCEPTANCE. DEFECTS SHALL BE PROMPTLY REMEDIED WITHOUT COST TO THE OWNER.
32. SYSTEMS SHALL BE COMPLETE, OPERABLE, AND READY FOR CONTINUOUS OPERATION. LIGHTS, SWITCHES, RECEPTACLES, MOTORS, ETC. SHALL BE CONNECTED AND OPERABLE.

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

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DATE	DESCRIPTION
05.10.2024	PRE-DESIGN (30% CD)
07.19.2024	PRE-DESIGN (70% CD)

DRAWN BY: Author CHECKED BY: Checker
PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

ELECTRICAL COVER SHEET

E-001

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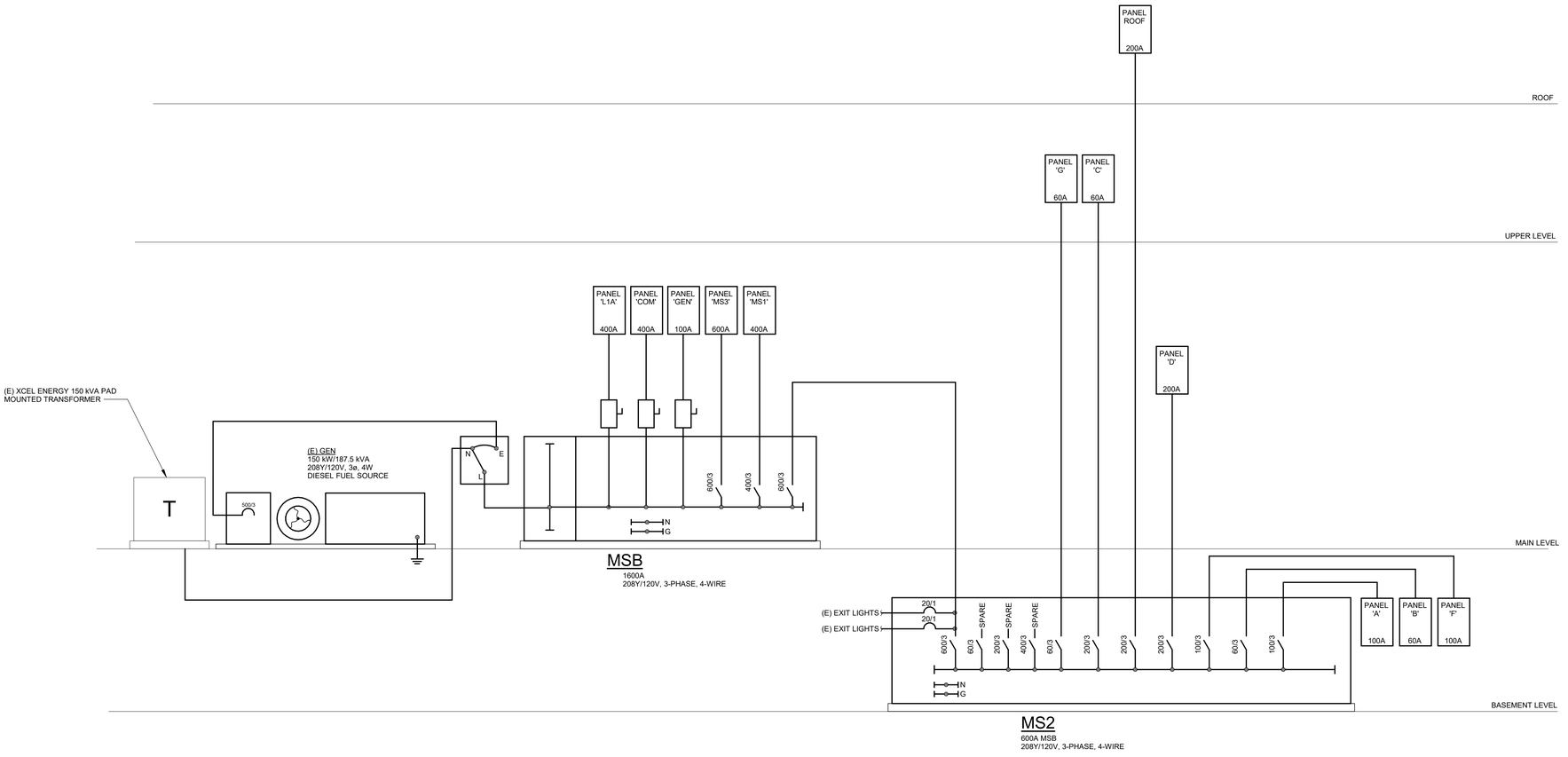

1 PARTIAL EXISTING ELECTRICAL ONE-LINE DIAGRAM
SCALE: NONE

ONE-LINE NOTES:

1. REFERENCE WIRING SCHEDULE THIS SHEET FOR WIRING CONFIGURATIONS.
2. REFERENCE MECHANICAL EQUIPMENT SCHEDULE FOR CONNECTION REQUIREMENTS OF MECHANICAL EQUIPMENT IDENTIFIED ON THIS SHEET.
3. REFERENCE PANEL SCHEDULES FOR PANEL CONFIGURATION AND DEMAND LOAD CALCULATIONS.
4. REFERENCE TRANSFORMER SCHEDULE FOR FEEDERS, GROUNDING, AND OVERCURRENT PROTECTION SIZES FOR DRY-TYPE TRANSFORMERS.
5. UNLESS OTHERWISE NOTED, FEEDER SIZES NOTED ARE BASED ON COPPER CONDUCTORS, 75°C. CONTRACTOR SHALL ADJUST FEEDER SIZES AND CONFIRM VOLTAGE DROP AND FAULT CURRENT CALCULATIONS FOR ALUMINUM CONDUCTORS.
6. PROVIDE ARC ENERGY REDUCTION METHOD OR SWITCH IN COMPLIANCE WITH NEC 240.87 FOR ALL CIRCUIT BREAKERS FRAME-RATED FOR 1200A AND LARGER.
7. ALL FEEDER SIZES IDENTIFIED WITH "---V1", "---V2", OR "---V3" HAVE BEEN UPSIZED FOR VOLTAGE DROP. CONFIRM APPROXIMATE FEEDER LENGTH IN FIELD WITH ENGINEER PRIOR TO INSTALLATION.
8. EQUIPMENT ENCLOSURES FOR CIRCUIT BREAKERS OR FUSES THAT UTILIZE SERIES COMBINATION RATINGS SHALL BE PERMANENTLY LABELED IN ACCORDANCE WITH NEC SECTION 110.22. LABEL SHALL READ "CAUTION - SERIES COMBINATION SYSTEM RATED _____AMPERES. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED.

(#) FLAG NOTES:

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DATE	DESCRIPTION
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07.19.2024	PRE-DESIGN (70% CD)

DRAWN BY: Author CHECKED BY: Checker
PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

ELECTRICAL ONE-LINE DIAGRAM

E-002

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PANEL:	(E) A
LOCATION:	BASEMENT
MOUNTING:	SURFACE

VOLTAGE:	120/208V, 3PH, 4W
MINIMUM BUS:	225
MAIN:	MLO
MINIMUM AIC:	

NO.	LOAD A	LOAD B	LOAD C	TYPE	LOAD DESCRIPTION	BREAKER POLE	BREAKER TRIP	BUS A	BUS B	BUS C	BREAKER TRIP	BREAKER POLE	TYPE	LOAD DESCRIPTION	LOAD A	LOAD B	LOAD C	NO.
1					(E) RCPT. N. GARAGE	1	20	+			20	2		(E) RCPT ENGINE RM				2
3					(E) N. GAR OVERHEAD DOOR	1	20		+									4
5					(E) GUH. LIGHTS N. GARAGE	1	20			+	20	1		(E) FURNACE/BOILER				6
7					(E) EXISTING LOAD	1	20	+			30	2		(E) HOSE DRYER				8
9					(E) WEST NET MONITORS	1	20		+									10
11					(E) POP MACHINE (STAIRS)	1	20			+	50	2		(E) RANGE				12
13								+										14
15					(E) DISCONNECT BY STAIR	3	20		+									16
17										+	30	3		(E) EXISTING LOAD				18
19						1	30	+										20
21						1	30		+									22
23										+								24
25								+										26
27									+									28
29										+								30

LOAD TYPE	PANEL TOTAL	FEED THRU TOTAL	SUBFEED TOTAL	FEEDER SUBTOTAL	DEMAND	FEEDER TOTAL
(L) LIGHTING	0			0	125%	0
(R) RECEPTACLES	0			0	NEC 220	0
(LM) LARGEST MOTOR	0			0	25%	0
(M) MOTORS (ALL)	0			0	100%	0
(E) EQUIPMENT	0			0	100%	0
(A) APPLIANCES	0			0	0	0
					PANEL TOTAL (KVA):	0.0
					PANEL TOTAL (A):	0

GENERAL NOTES:

A.	GE A SERIES PANELBOARD.
B.	GE CIRCUIT BREAKERS.
C.	
D.	
E.	

SPECIFIC NOTES:

(1)	
(2)	
(3)	
(4)	
(5)	

PANEL:	(E) B
LOCATION:	BASEMENT
MOUNTING:	SURFACE

VOLTAGE:	120/208V, 3PH, 4W
MINIMUM BUS:	225
MAIN:	MLO
MINIMUM AIC:	

NO.	LOAD A	LOAD B	LOAD C	TYPE	LOAD DESCRIPTION	BREAKER POLE	BREAKER TRIP	BUS A	BUS B	BUS C	BREAKER TRIP	BREAKER POLE	TYPE	LOAD DESCRIPTION	LOAD A	LOAD B	LOAD C	NO.
1					(E) PANEL OUTLET	1	20	+			20	3		(E) DOOR OPERATOR				2
3					(E) PHONE OUTLET	1	20		+									4
5					(E) WALL HEATER MENS	1	20			+	50	3		(E) FIRE SIGNAL				6
7					(E) WALL HEATER WOMENS	1	20	+										8
9					(E) LTG SLEEPING AREA	1	20		+									10
11					(E) BATH OUTLETS	1	20			+								12
13					(E) SLEEPING AREA OUTLETS	1	20	+						SPACE				14
15					SPACE				+					SPACE				16
17					SPACE					+				SPACE				18
19					SPACE			+						SPACE				20
21					SPACE				+					SPACE				22
23					SPACE					+				SPACE				24
25					SPACE			+						SPACE				26
27					SPACE				+					SPACE				28
29					SPACE					+				SPACE				30

LOAD TYPE	PANEL TOTAL	FEED THRU TOTAL	SUBFEED TOTAL	FEEDER SUBTOTAL	DEMAND	FEEDER TOTAL
(L) LIGHTING	0			0	125%	0
(R) RECEPTACLES	0			0	NEC 220	0
(LM) LARGEST MOTOR	0			0	25%	0
(M) MOTORS (ALL)	0			0	100%	0
(E) EQUIPMENT	0			0	100%	0
(A) APPLIANCES	0			0	0	0
					PANEL TOTAL (KVA):	0.0
					PANEL TOTAL (A):	0

GENERAL NOTES:

A.	GE A SERIES PANELBOARD.
B.	GE CIRCUIT BREAKERS.
C.	
D.	
E.	

SPECIFIC NOTES:

(1)	
(2)	
(3)	
(4)	
(5)	

PANEL:	(N) LM1
LOCATION:	STORAGE #114
MOUNTING:	SURFACE

VOLTAGE:	120/208V, 3PH, 4W
MINIMUM BUS:	225
MAIN:	MLO
MINIMUM AIC:	

NO.	LOAD A	LOAD B	LOAD C	TYPE	LOAD DESCRIPTION	BREAKER POLE	BREAKER TRIP	BUS A	BUS B	BUS C	BREAKER TRIP	BREAKER POLE	TYPE	LOAD DESCRIPTION	LOAD A	LOAD B	LOAD C	NO.
1					SPARE	1	20	+			15	2	M	FCU-1				2
3					SPARE	1	20		+				M	–				4
5					SPARE	1	20			+	15	2	M	FCU-2				6
7					SPARE	1	20	+					M	–				8
9					SPARE	1	20		+		15	2	M	FCU-3				10
11					SPARE	1	20			+			M	–				12
13					SPARE	1	20	+			15	2	M	FCU-4				14
15					SPARE	1	20		+				M	–				16
17					SPARE	1	20			+	15	2	M	FCU-5				18
19					SPARE	1	20	+					M	–				20
21					SPARE	1	20		+		15	2	M	RTU-1				22
23					SPARE	1	20			+			M	–				24
25					SPARE	1	20	+			15	2	M	RTU-2				26
27					SPARE	1	20		+				M	–				28
29					SPARE	1	20			+	15	2	M	RTU-3				30
31					SPARE	1	20	+					M	–				32
33					SPARE	1	20		+		15	2	M	RTU-4				34
35					SPARE	1	20			+			M	–				36
37					SPARE	1	20	+			15	2	M	RTU-5				38
39					SPARE	1	20		+				M	–				40
41					SPARE	1	20			+	25	2	E	WH-1				42
43					SPARE	1	20	+					E	–				44
45					SPARE	1	20		+		60	2	E	WH-2				46
47					SPARE	1	20			+			E	–				48
49					SPACE			+						SPACE				50
51					SPACE				+					SPACE				52
53					SPACE					+				SPACE				54
55					SPACE			+						SPACE				56
57					SPACE				+					SPACE				58
59					SPACE					+				SPACE				60

LOAD TYPE	PANEL TOTAL	FEED THRU TOTAL	SUBFEED TOTAL	FEEDER SUBTOTAL	DEMAND	FEEDER TOTAL
(L) LIGHTING	0			0	125%	0
(R) RECEPTACLES	0			0	NEC 220	0
(LM) LARGEST MOTOR	0			0	25%	0
(M) MOTORS (ALL)	0			0	100%	0
(E) EQUIPMENT	0			0	100%	0
(A) APPLIANCES	0			0	0	0
					PANEL TOTAL (KVA):	0.0
					PANEL TOTAL (A):	0

GENERAL NOTES:

A.	
B.	
C.	
D.	
E.	

SPECIFIC NOTES:

(1)	PROVIDE WITH FEED THROUGH LUGS.
(2)	
(3)	
(4)	
(5)	

PANEL:	(N) LP1
LOCATION:	STORAGE #114
MOUNTING:	SURFACE

VOLTAGE:	120/208V, 3PH, 4W
MINIMUM BUS:	225
MAIN:	MLO
MINIMUM AIC:	

NO.	LOAD A	LOAD B	LOAD C	TYPE	LOAD DESCRIPTION	BREAKER POLE	BREAKER TRIP	BUS A	BUS B	BUS C	BREAKER TRIP	BREAKER POLE	TYPE	LOAD DESCRIPTION	LOAD A	LOAD B	LOAD C	NO.
1					SPARE	1	20	+			20	1		SPARE				2
3					SPARE	1	20		+		20	1		SPARE				4
5					SPARE	1	20			+	20	1		SPARE				6
7					SPARE	1	20	+			20	1		SPARE				8
9					SPARE	1	20		+		20	1		SPARE				10
11					SPARE	1	20			+	20	1		SPARE				12
13					SPARE	1	20	+			20	1		SPARE				14
15					SPARE	1	20		+		20	1		SPARE				16
17					SPARE	1	20			+	20	1		SPARE				18
19					SPARE	1	20	+			20	1		SPARE				20
21					SPARE	1	20		+		20	1		SPARE				22
23					SPARE	1	20			+	20	1		SPARE				24
25					SPARE	1	20	+			20	1		SPARE				26
27					SPARE	1	20		+		20	1		SPARE				28
29					SPARE	1	20			+	20	1		SPARE				30
31					SPARE	1	20	+			20	1		SPARE				32
33					SPARE	1	20		+		20	1		SPARE				34
35					SPARE	1	20			+	20	1		SPARE				36
37					SPARE	1	20	+			20	1		SPARE				38
39					SPARE	1	20		+		20	1		SPARE				40
41					SPARE	1	20			+	20	1		SPARE				42
43					SPARE	1	20	+			20	1		SPARE				44
45					SPARE	1	20		+		20	1		SPARE				46
47					SPARE	1	20			+	20	1		SPARE				48
49					SPACE			+						SPACE				50
51					SPACE				+					SPACE				52
53					SPACE					+				SPACE				54
55					SPACE			+						SPACE				56
57					SPACE				+					SPACE				58
59					SPACE					+				SPACE				60

LOAD TYPE	PANEL TOTAL	FEED THRU TOTAL	SUBFEED TOTAL	FEEDER SUBTOTAL	DEMAND	FEEDER TOTAL
(L) LIGHTING	0			0	125%	0
(R) RECEPTACLES	0			0	NEC 220	0
(LM) LARGEST MOTOR	0			0	25%	0
(M) MOTORS (ALL)	0			0	100%	0
(E) EQUIPMENT	0			0	100%	0
(A) APPLIANCES	0			0	0	0
					PANEL TOTAL (KVA):	0.0
					PANEL TOTAL (A):	0

GENERAL NOTES:

A.	
B.	
C.	
D.	
E.	

SPECIFIC NOTES:

(1)	PROVIDE WITH FEED THROUGH LUGS.
(2)	
(3)	
(4)	
(5)	

MECHANICAL EQUIPMENT SCHEDULE

MARK	DESCRIPTION	VOLT / PHASE	HP	WATTS	FLA	MCA	MOCP	AIC RATING	STARTER	DISCONNECT/ FUSE SIZE	FEEDER	CIRCUIT	SPECIFIC NOTES
CU-1	CONDENSING UNIT #1	208/3						N/A	N/A				
EF-1	EXHAUST FAN #1	120/1						N/A	N/A				
FCU-1	FAN COIL UNIT #1 (BASEMENT)	208/1	N/A	37.4 WATTS	0.18	0.23	15A2P	N/A	N/A	20A2P MOTOR RATED SWITCH	20(2WG)	LM1-2,4	
FCU-2	FAN COIL UNIT #2 (STORAGE)	208/1	N/A	37.4 WATTS	0.18	0.23	15A2P	N/A	N/A	20A2P MOTOR RATED SWITCH	20(2WG)	LM1-6,8	
FCU-3	FAN COIL UNIT #3 (MECH ROOM)	208/1	N/A	37.4 WATTS	0.18	0.23	15A2P	N/A	N/A	20A2P MOTOR RATED SWITCH	20(2WG)	LM1-10,12	
FCU-4	FAN COIL UNIT #4 (APPARATUS BAY)	208/1	N/A	200 WATTS	0.96	1.20	15A2P	N/A	N/A	20A2P MOTOR RATED SWITCH	20(2WG)	LM1-14,16	
FCU-5	FAN COIL UNIT #5 (COMMUNITY LOUNGE)	208/1	N/A	200 WATTS	0.96	1.20	15A2P	N/A	N/A	20A2P MOTOR RATED SWITCH	20(2WG)	LM1-18,20	
RTU-1	ROOF TOP UNIT #1 (COMMUNITY LOUNGE)	208/1	N/A	1,768 WATTS	8.5	10.0	15A2P		N/A	WITH ROOF TOP UNIT	20(2WG)	LM1-22,24	
RTU-2	ROOF TOP UNIT #2 (APPARATUS BAY - NORTH)	208/1	N/A	1,768 WATTS	8.5	10.0	15A2P		N/A	WITH ROOF TOP UNIT	20(2WG)	LM1-26,28	
RTU-3	ROOF TOP UNIT #3 (APPARATUS BAY - SOUTH)	208/1	N/A	1,768 WATTS	8.5	10.0	15A2P		N/A	WITH ROOF TOP UNIT	20(2WG)	LM1-30,32	
RTU-4	ROOF TOP UNIT #4 (B.C. BAY)	208/1	N/A	1,394 WATTS	6.7	8.0	15A2P		N/A	WITH ROOF TOP UNIT	20(2WG)	LM1-34,36	
RTU-5	ROOF TOP UNIT #5 (INTERACTIVE ZONE / KITCHEN)	208/1	N/A	1,394 WATTS	6.7	8.0	15A2P		N/A	WITH ROOF TOP UNIT	20(2WG)	LM1-38,40	
WH-1	ELECTRIC WATER HEATER (LAVATORY)	208/1	N/A	3,500 WATTS	16.8	21.0	25A2P	N/A	N/A	WITH WATER HEATER	25(2WG)	LM1-42,44	
WH-2	ELECTRIC WATER HEATER (KITCHEN)	208/1	N/A	9,000 WATTS	43.3	54.0	60A2P	N/A	N/A	WITH WATER HEATER	60(2WG)	LM1-46,48	
VRF-1	VARIABLE REFRIGERANT FLOW HEAT PUMP	208/3	N/A	34,416 WATTS	95.6	104.0	110A3P		N/A		110(4WG)	ONE-LINE	

GENERAL NOTES:

A. SEE SPECIFICATIONS FOR ELECTRICAL DIVISION AND MECHANICAL DIVISION MOTOR STARTER COORDINATION.
B. PROVIDE PHASE PROTECTION FOR ALL THREE PHASE MOTORS ABOVE 7-1/2 HP.
C. PROVIDE ALL EXTERIOR DISCONNECTS WITH NEMA 3R RATING.
D. WHEN EQUIPMENT IS LISTED WITH ONLY A HORSEPOWER RATING THE DISCONNECT AND FEEDER ARE SIZED PER THE N.E.C.

SPECIFIC NOTES:

(1)
(2)
(3)
(4)

LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	MOUNTING	LAMP / LIGHT SOURCE: LAMP QTY	LAMP TYPE	LUMENS	CRI	CCT	INPUT WATTS	DIMMING	VOLTAGE	MANUFACTURER	CATALOG NUMBER	SPECIFIC NOTES
P1	LED PENDANT MOUNTED FIXTURE FOR USE IN APPERATUS BAY	PENDANT	1	LED	TBD	90	3000	TBD	0-10	120	PEACHTREE LIGHTING	HBB-16A-XX-D25-30K-90-O-CAB-C-10-120/277	
P2	PENDANT MOUNTED DECORATIVE FIXTURE FOR COMMUNITY LOUNGE COFFEE BAR	PENDANT	1	LED	286	90	3000	9	PHASE	120	LOUIS POULSEN	PH2/1 -CHROME PLATED-WHITE FABRIC CORD-LED-120V	
P3	PENDANT MOUNTED DECORATIVE FIXTURE FOR KITCHEN AREA	PENDANT	1	LED	1500	90	3000	14	PHASE	120	LOUIS POULSEN	PH3/4 -CHROME PLATED-WHITE FABRIC CORD-LED-120V	
P4	DECORATIVE PENDANT FIXTURE TO BE INSTALLED OVER RECEPTION DESK	PENDANT	1	LED	100	80	3000	12	NONE	120	SATCO	S11292	#2
R1	4" LED DOWNLIGHT WITH CLEAR REFLECTOR AND (0-10) DIMMING	RECESSED	1	LED	TBD	90	3000	TBD	0-10	120	COOPER LIGHTING	HC4XXDO10HB128APK-HM43040930-MDC	
R1e	SAME AS R1 EXCEPT WITH INTEGRAL BATTERY PACK	RECESSED	1	LED	TBD	90	3000	TBD	0-10	120	COOPER LIGHTING	HC4XXREM14DO10HB128APK-HM43040930-MDC	
R2	LED DOWNLIGHT WITH CLEAR REFLECTOR AND (0-10) DIMMING AND RED LENS	RECESSED	1	LED	TBD								
S1	SURFACE MOUNTED LED FIXTURE IN SATIN NICKEL FINISH	SURFACE	1	LED	1033	90	3000	23	0-10	120	VISUAL COMFORT COMPANY	700CQLS-LED3	
S2	LED SURFACE MOUNTED STRIP FIXTURE FOR BACK OF HOUSE SPACES	SURFACE	1	LED	4209	90	3000	26.3	0-10	UNV	METALUX	4SNX-41SL-LN-UNV-L930-CD1	
T1	SURFACE MOUNTED TRACK WITH CURRENT LIMITERS	SURFACE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	HALO	L (SERIES)-P-XX-XX-LC901CBXXX-P WITH HALO L81211NF90930P (HEAD)	#1
W1	WALL MOUNTED LED VANITY FIXTURE WITH BRUSHED STEEL FINISH	SURFACE	1	LED	1218	90	3000	16	ELV	120	ACCESS LIGHTING	62530LEDD-BS-OPL	
X1	LED EXIT SIGN WITH INTEGRAL BATTERY BACKUP	SURFACE	1	LED	N/A	N/A	N/A	3.1	N/A	UNV	SURE-LITE	SCX-7-0-G	
X2	WALL MOUNTED BATTERY PACK "FROG-EYES"	SURFACE	1	LED	N/A	N/A	N/A	0.6	N/A	UNV	SURE-LITE	SEL25	
ZR1	LED EXTERIOR SOFFIT LIGHT FIXTURE	RECESSED	1	LED	TBD	90	3000	TBD	0-10	120	COOPER LIGHTING	HC4XXDO10HB128APK-HM43040930-MDC	
ZR1E	LED EXTERIOR SOFFIT LIGHT FIXTURE WITH INTEGRAL BATTERY PACK	RECESSED	1	LED	TBD	90	3000	TBD	0-10	120	COOPER LIGHTING	HC4XXREM14DO10HB128APK-HM43040930-MDC	
ZW1E	LED EXTERIOR WALL MOUNTED DECORATIVE FIXTURE WITH INTEGRAL BATTERY PACK	SURFACE	1	LED	3000	90	3000	26	ELV	120	BOCK LIGHTING	512-LVEV1-3000-XXX-EM-LAC02-XX-GNX-1008	

GENERAL NOTES:

BOF = BOTTOM OF FIXTURE, RFD = RECESSED FIXTURE DEPTH, OFD = OVERALL FIXTURE DEPTH, OFH = OVERALL FIXTURE HEIGHT, TOP = TOP OF POLE, AFF = ABOVE FINISHED FLOOR
F=FORWARD PHASE, R=REVERSE PHASE/ELV, 0-10=1-10V, 3=3 WIRE, DALI = DALI, DMX=DMX512, STEP=STEP DIMMING, ND=NON DIM, NA=NON APPLICABLE

A. THE LUMINAIRE SCHEDULE CAN NOT BE USED INDEPENDENTLY OF THE DRAWINGS AND SPECIFICATIONS TO OBTAIN LUMINAIRE COSTS. THE INDIVIDUAL ESTABLISHING LUMINAIRE COSTS SHALL NOT QUOTE PRICING WITHOUT FIRST SEEING APPLICABLE ELECTRICAL DRAWINGS AND ELECTRICAL DIVISION SPECIFICATIONS. THE CONTRACTOR IS REPONSIBLE FOR PROVIDING NECESSARY DRAWINGS AND SPECIFICATIONS TO THE INDIVIDUAL QUOTING LUMINAIRE PRICING.

SPECIFIC NOTES:

(1) PROVIDE ALL REQUIRED HARDWARE FOR A COMPLETE AND OPEATIONAL ASSEMBLY.
(2) VERIFY PENDANT LENGTH WITH ARCHITECT.

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

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ARCHITECTURAL WORKSHOP . DENVER, COLORADO

DATE	DESCRIPTION
05.10.2024	PRE-DESIGN (30% CD)
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DRAWN BY: Author CHECKED BY: Checker
PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

ELECTRICAL SCHEDULES

E-003

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ELECTRICAL SPECIFICATIONS:

ELECTRICAL SHORT SPECIFICATION

DIVISION 26 - ELECTRICAL SPECIFICATIONS

SECTION 26 00 10 - GENERAL PROVISIONS

PART 1 - GENERAL

1.01 PROJECT DESCRIPTION

A. THIS PROJECT IS A REMODEL OF A COMMERCIAL BUILDING. THE PROJECT IS APPROXIMATELY 5,600 SQUARE FEET LOCATED AT 2302 THORNTON PKWY IN THORNTON COLORADO.

1.02 PROVISIONS

A. WORK PERFORMED UNDER THIS DIVISION OF THE SPECIFICATIONS SHALL CONFORM TO THE REQUIREMENTS OF DIVISION 1, AND THE ELECTRICAL DRAWINGS AND ALL ITEMS HEREINAFTER SPECIFIED.

1. THE DRAWINGS AND SPECIFICATIONS FOR THE ELECTRICAL WORK ARE INTENDED TO DESCRIBE A COMPLETE ELECTRICAL SYSTEM; OMISSION OF MINOR ITEMS OBVIOUSLY NECESSARY TO ACCOMPLISH THE ABOVE INTENT SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING SAME.
2. PRIOR TO ANY WORK BEING PERFORMED UNDER THIS DIVISION EXAMINE ARCHITECTURAL, STRUCTURAL, MECHANICAL, MUSEUM EXHIBIT AND INTERIOR DESIGN DRAWINGS AND SPECIFICATIONS AND IF ANY DISCREPANCIES OCCUR BETWEEN THEM AND THE ELECTRICAL DRAWINGS AND SPECIFICATIONS, REPORT SAME TO THE ARCHITECT IN WRITING AND OBTAIN WRITTEN INSTRUCTIONS FOR THE WORK.
3. ELECTRICAL DRAWINGS ARE DIAGRAMATIC BUT SHALL BE FOLLOWED AS CLOSELY AS ACTUAL CONSTRUCTION OF THE BUILDING WILL PERMIT. ALL CHANGES FROM DRAWINGS NECESSARY TO MAKE THE ELECTRICAL WORK CONFORM TO THE BUILDING AS CONSTRUCTED SHALL BE MADE WITHOUT COST TO THE OWNER.
4. COORDINATE THE ELECTRICAL WORK WITH THE GENERAL CONTRACTOR AND BE RESPONSIBLE TO HIM FOR SATISFACTORY PROGRESS OF SAME. COORDINATE ELECTRICAL WORK WITH ALL OTHER TRADES ON THE PROJECT WITHOUT COST TO THE OWNER.
5. DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS ON ARCHITECTURAL DRAWINGS AND IN FIELD PRIOR TO COMMENCEMENT OF WORK.
6. ALL WORK AND MATERIALS COVERED BY DRAWINGS AND SPECIFICATIONS SHALL BE SUBJECT TO REVIEW AT ANY TIME BY REPRESENTATIVES OF THE ARCHITECT AND OWNER. IF THE ARCHITECT OR OWNER'S AGENT FINDS ANY MATERIAL OR INSTALLATION THAT DOES NOT CONFORM TO THESE DRAWINGS AND SPECIFICATIONS, CONTRACTOR SHALL REMOVE THE MATERIAL FROM THE PREMISES AND CORRECT THE INSTALLATION TO THE SATISFACTION OF THE AGENT.
7. IN ACCEPTANCE OR REJECTION OF INSTALLED ELECTRICAL SYSTEMS, NO ALLOWANCE WILL BE MADE FOR LACK OF SKILL ON THE PART OF THE INSTALLERS.

1.03 WORK INCLUDED

A. THE ELECTRICAL SYSTEM REQUIRED FOR THIS WORK TO INCLUDE, BUT IS NOT NECESSARILY LIMITED TO

1. SECONDARY ELECTRICAL SERVICE TO A POINT OF CONNECTION WITH THE SERVING UTILITY COMPANY AND ALL NECESSARY METERING EQUIPMENT.
2. COMPLETE FEEDER SYSTEM TO BRANCH CIRCUIT PANELS.
3. COMPLETE BRANCH CIRCUIT WIRING FOR LIGHTING, MOTORS, RECEPTACLES, JUNCTION BOXES, AND SIMILAR USES.
4. LIGHTING FIXTURES, WALL SWITCHES, RECEPTACLES AND SIMILAR ITEMS.
5. LIGHTING CONTROL SYSTEM.
6. WIRING AND OUTLETS FOR DATA SYSTEMS.
7. SECURITY SYSTEM IS REQUIRED. COORDINATE WITH OWNER AND ARCHITECT.
8. POWER OWNER FURNISHED EQUIPMENT.

1.04 CODES AND STANDARDS

A. THE APPLICABLE AND ENFORCED EDITIONS OF THE FOLLOWING CODES AND PUBLISHED STANDARDS (INCLUDING SUPPLEMENTS AND OFFICIAL INTERPRETATIONS) ARE MINIMUM REQUIREMENTS

1. NFPA 70 - NATIONAL ELECTRICAL CODE (NEC).
2. NFPA 101 - LIFE SAFETY CODE.
3. NFPA 110 - EMERGENCY POWER SYSTEMS
4. CONFORM TO ALL APPLICABLE STATE AND LOCAL CODES.
5. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI).
6. NATIONAL ELECTRICAL SAFETY CODE (NESC).
7. AMERICANS WITH DISABILITIES ACTS (ADA) AND AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) 117.
8. NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA).
9. UNDERWRITER'S LABORATORIES (UL).
10. INSULATED CABLE ENGINEERS ASSOCIATION (ICEA).
11. INTERNATIONAL BUILDING CODE.
12. INTERNATIONAL MECHANICAL CODE.
13. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE).
14. SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA).

B. COMPLY WITH REQUIREMENTS OF UNDERWRITERS LABORATORIES FOR ALL ITEMS INSTALLED FOR WHICH U.L. STANDARDS HAVE BEEN ESTABLISHED.

C. THE CONTRACTOR SHALL COMPLY WITH REQUIREMENTS OF THE UTILITY COMPANY FURNISHING SERVICE TO THIS INSTALLATION.

D. THE DRAWINGS AND SPECIFICATIONS TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT THAN CODES, STATUTES, OR ORDINANCES IN EFFECT. APPLICABLE CODES, ORDINANCES, STANDARDS AND STATUTES TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT OR CONFLICT WITH THE DRAWINGS AND SPECIFICATIONS.

1.05 EXAMINATION OF BIDDING DOCUMENTS

A. EACH BIDDER SHALL EXAMINE THE BIDDING DOCUMENTS CAREFULLY, AND NOT LATER THAN SEVEN DAYS PRIOR TO THE DATE OF RECEIPT OF BIDS, SHALL MAKE WRITTEN REQUEST TO THE ARCHITECT FOR INTERPRETATION OR CORRECTION OF ANY DISCREPANCIES, AMBIGUITIES, INCONSISTENCIES, OR ERRORS THEREIN WHICH HE MAY DISCOVER. THE ARCHITECT WILL ISSUE ANY INTERPRETATION OR CORRECTION AS AN ADDENDUM. ONLY A WRITTEN INTERPRETATION OR CORRECTION BY ADDENDUM SHALL BE BINDING. NO BIDDER SHALL RELY UPON INTERPRETATIONS OR CORRECTIONS GIVEN BY ANY OTHER METHOD. IF DISCREPANCIES, AMBIGUITIES, INCONSISTENCIES, OR ERRORS ARE NOT COVERED BY ADDENDUM OR WRITTEN DIRECTIVES, CONTRACTOR SHALL INCLUDE IN HIS BID, LABOR, MATERIALS AND METHODS OF CONSTRUCTION RESULTING IN HIGHER COST. AFTER AWARD OF CONTRACT, NO ALLOWANCE OR EXTRA COMPENSATION WILL BE MADE ON BEHALF OF THE CONTRACTOR DUE TO HIS FAILURE TO MAKE THE WRITTEN REQUESTS AS DESCRIBED ABOVE.

B. FAILURE TO REQUEST CLARIFICATION DURING THE BID PHASE OF ANY INADEQUACY, OMISSION, OR CONFLICT WILL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES. THE SIGNING OF THE CONTRACT WILL BE CONSIDERED AS IMPLICITLY DENOTING THAT THE CONTRACTOR HAS A THOROUGH COMPREHENSION OF THE FULL INTENT AND SCOPE OF THE WORKING DRAWINGS AND SPECIFICATIONS.

1.06 EXAMINATION OF PREMISES

A. VISIT SITE PRIOR TO BID AND VERIFY THAT CONDITIONS ARE AS INDICATED. CONTRACTOR SHALL INCLUDE IN HIS BID COSTS REQUIRED TO MAKE HIS WORK MEET EXISTING CONDITIONS.

1.07 EXISTING CONDITIONS

A. EXISTING SYSTEMS AND CONDITIONS SHOWN ON DRAWINGS FOR EXISTING BUILDINGS ARE TO BE NOTED "FOR GUIDANCE ONLY". THE ELECTRICAL CONTRACTOR SHALL FIELD CHECK ALL EXISTING CONDITIONS PRIOR TO BIDDING AND IS TO INCLUDE IN HIS BID AN ALLOWANCE FOR EXTENSION, REMOVAL AND/OR RELOCATION OF EXISTING CONDUITS, WIRES, DEVICES, FIXTURES, OR OTHER EQUIPMENT AS INDICATED ON THE PLANS OR AS REQUIRED TO COORDINATE AND ADAPT NEW AND EXISTING ELECTRICAL SYSTEM TO ALL OTHER WORK.
B. SYSTEM OUTAGES SHALL BE PERMITTED ONLY AT TIMES APPROVED BY OWNER IN WRITING. WORK WHICH COULD RESULT IN AN ACCIDENTAL OUTAGE (BEYOND BRANCH CIRCUITS) SHALL BE PERFORMED WITH THE OWNER'S MAINTENANCE PERSONNEL ADVISED OF SUCH WORK.
C. SERVICE SHALL BE MAINTAINED TO EXISTING AREAS DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE PORTABLE GENERATORS, CABLES, OUTLETS, ETC. AS REQUIRED TO MAINTAIN CONTINUITY OF SERVICE. PLACEMENT OF SUCH PORTABLE EQUIPMENT SHALL BE SUBJECT TO OWNER APPROVAL. GENERATOR SYSTEM SHALL BE COMPLETE AND OPERABLE AND SHALL INCLUDE REQUIRED ACCESSORIES; FUEL TANKS, PIPING, MUFFLER, BLOCK HEATER, BATTERY CHARGER, ETC.
D. PROVIDE NEW UPDATED PANELBOARD DIRECTORIES FOR EXISTING AND NEW CIRCUITS BEING UTILIZED FOR COMPLETION OF PROJECT.

1.08 PERMITS, FEES & NOTICES

A. OBTAIN AND PAY FOR ALL NECESSARY PERMITS, INSPECTIONS AND CERTIFICATES THAT MAY BE NECESSARY FOR THE FULL COMPLETION OF THE WORK. FURNISH THE ARCHITECT WITH A CERTIFICATE OF FINAL INSPECTION AND APPROVAL FROM THE AHJ OVER THE ELECTRICAL INSTALLATION.
B. NOTIFY PROPER AUTHORITIES WHEN WORK IS READY FOR INSPECTIONS REQUIRED BY APPLICABLE CODES, RULES AND REGULATIONS, ALLOWING SUFFICIENT TIME FOR INSPECTIONS TO BE MADE WITHOUT HINDERING PROGRESS OF THE WORK. FURNISH TO THE OWNER COPIES OF INSPECTION CERTIFICATES OF ACCEPTANCE.

1.09 TESTS

A. UPON COMPLETION OF ALL WORK AND ADJUSTMENT OF ALL EQUIPMENT, PROVIDE COMPLETE OPERATIONAL TESTS OF ALL ELECTRICAL EQUIPMENT PROVIDED UNDER THIS DIVISION.

1.10 WARRANTY

A. GUARANTEE THAT ALL WORK GOVERNED BY THIS DIVISION SHALL BE FREE OF DEFECTS IN WORKMANSHIP, MATERIALS AND PARTS FOR A PERIOD OF ONE (1) YEAR AFTER ACCEPTANCE. PROMPTLY REPAIR, REVISE, AND REPLACE DEFECTS AS DIRECTED WITH NO ADDITIONAL COST TO THE OWNER (LAMPS AND FUSES ARE EXEMPT).

1.11 RECORD DRAWINGS

A. DURING THE PROGRESS OF THE WORK, MAINTAIN AN ACCURATE RECORD OF THE INSTALLATION OF THE ELECTRICAL SYSTEM. UPON COMPLETION OF THE ELECTRICAL INSTALLATION, TRANSFER ALL RECORD DATA TO PRINTS OF THE ORIGINAL DRAWINGS. DRAWINGS SHALL INCLUDE ALL ADDENDUM ITEMS, CHANGE ORDERS, ALTERNATES, REROUTINGS, ETC. AS A CONDITION OF ACCEPTANCE OF THE PROJECT, DELIVER TO THE ARCHITECT ONE COPY OF THE RECORD DRAWINGS.

1.12 PROTECTION

A. OF PEOPLE: ARRANGE BARRIERS, SIGNS, ETC. AS REQUIRED TO MINIMIZE THE HAZARD OF PEOPLE. COMPLY WITH APPLICABLE SAFETY AND HEALTH REGULATIONS. COORDINATE AS NECESSARY WITH THE OWNER AND THE GENERAL CONTRACTOR.
B. OF WORK: TAKE ALL MEASURES NECESSARY TO PROTECT THE WORK BOTH BEFORE AND AFTER INSTALLATION, TO ASSURE THAT IT WILL BE IN CLEAN, UNDAMAGED, UNBLEMISHED CONDITION WHEN TURNED OVER TO THE OWNER. REPAIR/REPLACE WORK DAMAGED DURING CONSTRUCTION.

PART 2 - PRODUCTS

2.01 STANDARD FOR MATERIALS

A. *ALL ELECTRICAL MATERIAL SHALL BE NEW AND OF THE QUALITY AND TYPE SPECIFIED.*
B. *MANUFACTURER AND CATALOG NUMBER SHOWN IN THESE SPECIFICATIONS OR ON DRAWINGS ARE INTENDED AS A GUIDE TO QUALITY. EQUIVALENT MATERIALS AND EQUIPMENT OF OTHER MANUFACTURERS WILL BE CONSIDERED PROVIDED SUCH SUBSTITUTIONS ARE REQUESTED IN ACCORDANCE WITH THE PROVISIONS OF PARAGRAPH 2.03 AND SHALL INCLUDE ALL INFORMATION NECESSARY TO SUPPORT THE CLAIM OF EQUIVALENCY.*
C. *NO EXTENSION OF COMPLETION DATE SHALL BE ALLOWED FOR TIME LOST IN CONSIDERATION, SHIPPING, OR INSTALLATION OF APPROVED SUBSTITUTIONS. REVIEW OF SUBSTITUTIONS SIGNIFIES GENERAL EQUALITY OF MATERIALS AND EQUIPMENT ONLY. THIS REVIEW DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PROPER OPERATION OF THE SYSTEM, COMPLIANCE WITH SPECIFICATIONS AND NECESSARY CHANGES DUE TO DIMENSIONAL DIFFERENCES OR SPACE REQUIREMENTS.*

2.02 *SHOP DRAWINGS*

A. *SHOP DRAWINGS REQUIRED FOR THIS PROJECT ARE AS FOLLOWS:*
1. *LIGHTING FIXTURES*
2. *LIGHTING CONTROL DEVICES AND/OR SYSTEM*
3. *SERVICE EQUIPMENT*
4. *PANELBOARDS*
5. *SWITCHBOARDS*
6. *WIRING DEVICES*
7. *DISCONNECTS*
8. *FUSES*
9. *CONDUIT*
10. *CONDUIT FITTINGS*
B. *PRESENT SHOP DRAWING SUBMITTAL DATA AT ONE TIME, IN ELECTRONIC (PDF) FORMAT., INDEXED IN A NEAT AND ORDERLY MANNER. PARTIAL SUBMITTALS WILL NOT BE ACCEPTED. PROVIDE FOUR SETS OF SUBMITTAL DATA, UNLESS NOTED OTHERWISE IN DIVISION I.*
C. *PLACE ORDERS FOR ALL EQUIPMENT IN TIME TO PREVENT ANY DELAY IN CONSTRUCTION SCHEDULE OR COMPLETION OF PROJECT. IF ANY MATERIALS OR EQUIPMENT ARE NOT ORDERED IN TIME, ADDITIONAL CHARGES MADE BY EQUIPMENT MANUFACTURERS TO COMPLETE THEIR EQUIPMENT IN TIME TO MEET CONSTRUCTION SCHEDULE, TOGETHER WITH ANY SPECIAL HANDLING CHARGES, SHALL BE BORNE BY THE CONTRACTOR.*
D. *SHOP DRAWINGS: CONTRACTOR AGREES THAT SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS; THAT THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT; THAT UNDERSTANDING OF THE DESIGN CONCEPT IS DEMONSTRATED BY HIS INDICATING WHICH EQUIPMENT AND MATERIALS THE CONRACTOR INTENDS TO PROVIDE AND BY DETAILING THE FABRICATION AND INSTALLATION METHODS THE CONTRACTOR INTENDS TO USE. CONTRACTOR FURTHER AGREES THAT IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND CONTRACT DOCUMENTS IN THE FORM OF DESIGN DRAWINGS AND SPECIFICATIONS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.*

2.03 *BID ALTERNATE(S)*

A. *REFER TO DIVISION 1 FOR ADDITIONAL INFORMATION.*
B. *ALTERNATE(S) FOR MATERIAL AND EQUIPMENT*
1. *EQUIPMENT AND MATERIAL BID ALTERNATE(S) SHALL BE PROPOSED AS ADDITIVE OR DEDUCTIVE ALTERNATE(S) TO SPECIFIED ITEMS BY SUBMITTING IT AS A SEPARATE LINE ITEM FROM THE BASE BID ON THE BIDDER'S LETTERHEAD.*
2. *SUCH BID ALTERNATE PROPOSALS SHALL NOT BE SUBSTITUTED OR INCLUDED IN THE BASE BID. BID ALTERNATE PROPOSALS MUST BE ACCOMPANIED BY FULL DESCRIPTIVE DATA ON THE PROPOSED EQUIPMENT, TOGETHER WITH A STATEMENT OF THE COST TO BE ADDED OR DEDUCTED FOR EACH ITEM. THE BID ALTERNATE SHALL INCLUDE ALL MATERIALS, EQUIPMENT, LABOR, CONNECTIONS, COORDINATION WITH ALL OTHER TRADES, ETC. FOR A COMPLETE AND OPERATIONAL SYSTEM.*
3. *THE CONTRACTOR SHALL SUBMIT THE BID ALTERNATES AT THE TIME THE BASE BIDS ARE DUE.*

2.04 *SUBSTITUTIONS*

A. *BIDDER'S CHOICE: MATERIAL OR EQUIPMENT LISTED BY SEVERAL MANUFACTURERS' NAMES ARE INTENDED TO BE BIDDER'S CHOICE, AND ANY OF THE LISTED MANUFACTURERS MAY BE USED IN THE BASE BID.*
B. *PERFORMANCE SPECIFICATIONS: WHEN ANY ITEM IS SPECIFIED BY REQUIREMENTS TO MEET A PERFORMANCE, INDUSTRY OR REGULATING BODY STANDARD, OR IS SPECIFIED BY MANUFACTURER SPEC, (NO MANUFACTURER'S NAME LISTED) NO PRIOR REVIEW BY THE ENGINEER IS NEEDED UNLESS SPECIFICALLY CALLED FOR IN THESE SPECIFICATIONS.*
C. *CONTRACTOR TO BE RESPONSIBLE FOR ANY CHANGES AND COSTS TO ACCOMMODATE ANY EQUIPMENT EXCEPT THE FIRST NAMED IN THE SPECIFICATION.*
D. *SUBSTITUTIONS OF MATERIAL (CONTRACTOR AND OWNER INITIATED)*
1. *OTHER ITEMS OF MATERIAL AND EQUIPMENT NOT LISTED AS EQUIVALENTS MAY BE OFFERED (AT THE CONTRACTOR'S OPTION) AS SUBSTITUTIONS TO SPECIFIED ITEMS BY SUBMITTING IT AS A SEPARATE PRICE WITH HIS BASE BID ON THE BIDDER'S LETTERHEAD.*
2. *SUCH SUBSTITUTE PROPOSALS SHALL NOT BE INCLUDED UNDER THE BASE BID AND MUST BE ACCOMPANIED BY FULL DESCRIPTIVE DATA ON THE PROPOSED EQUIPMENT, TOGETHER WITH A STATEMENT OF THE COST TO BE DEDUCTED FOR EACH ITEM AND ALL DEVIATIONS FROM SPECIFIED ITEMS. HIGHLIGHT ANY DIFFERENCE FROM SPECIFIED EQUIPMENT. IF ANY SUCH SUBSTITUTIONS ARE TO BE CONSIDERED, THE CONTRACTOR SHALL SUBMIT A LIST OF THE PROPOSED SUBSTITUTION ITEMS WITHIN 14 DAYS OF AWARD OF CONTRACT. LATE REQUESTS FOR PROPOSED SUBSTITUTIONS SHALL NOT BE ACCEPTED BY THE ENGINEER DUE TO SCHEDULING OR DELIVERY CONCERNS.*
3. *IF SUBSTITUTIONS ARE REJECTED, ELECTRICAL CONTRACTOR SHALL SUPPLY BASE BID ITEM AS SPECIFIED.*

2.05 *PRODUCT HANDLING*

A. *USE ALL MEANS NECESSARY TO PROTECT ELECTRICAL SYSTEM MATERIALS BEFORE, DURING AND AFTER INSTALLATION AND TO PROTECT THE INSTALLED WORK AND MATERIALS OF ALL OTHER TRADES.*
B. *IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE APPROVAL OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.*
C. *UPON COMPLETION OF ALL INSTALLATIONS, LAMPING AND TESTING, THOROUGHLY INSPECT ALL EXPOSED PORTIONS OF THE ELECTRICAL INSTALLATION AND COMPLETELY REMOVE ALL EXPOSED LABELS, SOIL, MARKINGS, AND FOREIGN MATERIALS.*

PART 3 - EXECUTION

3.01 *WORKMANSHIP AND COMPLETION OF INSTALLATION*

A. *CONTRACTOR'S PERSONNEL AND SUBCONTRACTORS SELECTED TO PERFORM THE WORK SHALL BE WELL VERSED AND LICENSED IN THE TRADES INVOLVED.*
B. *COORDINATE ELECTRICAL EQUIPMENT AND MATERIALS INSTALLATION WITH OTHER BUILDING COMPONENTS.*
C. *SEQUENCE, COORDINATE, AND INTEGRATE INSTALLATIONS OF ELECTRICAL MATERIALS AND EQUIPMENT FOR EFFICIENT FLOW OF THE WORK. GIVE PARTICULAR ATTENTION TO LARGE EQUIPMENT REQUIRING POSITIONING PRIOR TO CLOSING-IN THE BUILDING.*
D. *ANY CHANGES OR DEVIATIONS FROM THE DRAWINGS AND SPECIFICATIONS MUST BE ACCEPTED IN WRITING BY THE ARCHITECT/ENGINEER. ALL ERRORS IN INSTALLATION SHALL BE CORRECTED AT THE EXPENSE OF THE CONTRACTOR. ALL SPECIALTIES SHALL BE INSTALLED AS DETAILED ON THE DRAWINGS. WHERE DETAIL OR CONFLICTING INFORMATION IS NOT PROVIDED, MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED.*
E. *UPON COMPLETION OF INSTALLATION AND MATERIALS SHALL BE INSTALLED COMPLETE, THOROUGHLY CHECKED, CORRECTLY ADJUSTED, AND LEFT READY FOR INTENDED USE OR OPERATION. ALL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. REMOVE FROM SURFACES. EXTERIOR SURFACES OF ALL MATERIAL AND EQUIPMENT SHALL BE DELIVERED IN A PERFECT, UNBLEMISHED CONDITION.*
F. *CONTRACTOR SHALL PROVIDE A COMPLETE INSTALLATION, INCLUDING ALL REQUIRED LABOR, MATERIAL, CARTAGE, INSURANCE, PERMITS, AND TAXES.*

3.02 *PROGRESS OF WORK*

A. *ORDER THE PROGRESS OF ELECTRICAL WORK TO CONTRACT TO THE PROGRESS OF THE WORK OF THE OTHER TRADES. COMPLETE THE ENTIRE INSTALLATION AS SOON AS THE CONDITION OF THE BUILDING WILL PERMIT. ANY COST RESULTING FROM DEFECTIVE OR ILL-TIMED WORK PERFORMED UNDER THIS SECTION SHALL BE BORNE BY THIS CONTRACTOR.*

3.03 *TRENCHING AND BACKFILLING*

A. *PERFORM ALL TRENCHING AND BACKFILLING REQUIRED BY WORK PERFORMED UNDER THIS SECTION IN ACCORDANCE WITH THE EXCAVATING AND GRADING SPECIFICATIONS AS HEREIN SPECIFIED. THIS WORK SHALL COMPLY WITH THE REQUIREMENTS OF TABLE 300.5 OF THE NATIONAL ELECTRICAL CODE.*
B. *EXCAVATE TRENCHES TO THE DEPTH REQUIRED FOR THE UTILITIES INVOLVED. THE TRENCH BOTTOM SHALL BE GRADED TRUE AND FREE FROM STONES OR SOFT SPOTS. TRENCHES THROUGH SPECIALLY TREATED OR SURFACED AREAS, SUCH AS PAVING OR BLACKTOP, SHALL HAVE THE WIDTH OF THE SURFACE CUTTING EXTENDED FOR A WIDTH OF EIGHT INCHES (8") ON EACH SIDE OF THE OPEN TRENCH, UNLESS OTHERWISE NOTED. THE DISTURBED SURFACES SHALL BE REPLACED EQUAL TO THE ORIGINAL CONSTRUCTION, TO THE ORIGINAL GRADE WITH THE SAME TYPE OF MATERIAL, AND TO THE SAME DEPTH AND LIMITS AS THE MATERIALS REMOVED. AFTER ACCEPTANCE OF THE INSTALLATION, BACKFILL, TAMP, AND COMPACT TO INSURE AGAINST THE POSSIBILITY OF DIFFERENTIAL SETTLING, IN CONFORMITY WITH DIVISION 2 SPECIFICATIONS. VERIFY LOCATION OF EXISTING OR NEW UTILITIES AND, IF DAMAGED BY THIS CONTRACTOR, REPLACE OR REPAIR.*
C. *UNDERGROUND UTILITY IDENTIFICATION: PROVIDE A SIX-INCH (6") WIDE, YELLOW COLORED PLASTIC TAPE, INSTALL THE TAPE FOR THE CONTINUOUS LENGTH OF ALL UNDERGROUND PRIMARY RACEWAYS PROVIDED UNDER THIS CONTRACT. TAPE SHALL BE BURIED NOT LESS THAN TWELVE INCHES (12") BELOW FINISHED GRADE. TAPE SHALL BE BRADY IDENTLINE, PART #91706 ALTERNATE OR APPROVED AND IMPRINTED IN LARGE, LEGIBLE, BLACK LETTERS "CAUTION - ELECTRICAL UTILITIES BELOW".*

3.04 *CUTTING AND PATCHING*

A. *PROVIDE ALL CUTTING, TRENCHING, BACKFILLING, PATCHING AND REFINISHING OR RESURFACING REQUIRED FOR ELECTRICAL WORK IN A MANNER MEETING THE APPROVAL OF THE ENGINEER AND AT NO ADDITIONAL COST TO THE OWNER.*
B. *ALL OPENINGS MADE IN FIRE-RATED WALLS, FLOORS, OR CEILINGS SHALL BE PATCHED AND MADE TIGHT IN A MANNER TO CONFORM TO THE FIRE RATING FOR THE SURFACE PENETRATED.*

3.05 *DELIVERY AND STORAGE OF MATERIALS*

A. *ARRANGE AND BE HELD RESPONSIBLE FOR DELIVERY AND SAFE STORAGE OF MATERIALS AND EQUIPMENT FOR ELECTRICAL INSTALLATION.*
B. *CAREFULLY CHECK MATERIALS FURNISHED TO THIS CONTRACTOR FOR INSTALLATION, AND PROVIDE RECEIPT ACKNOWLEDGING ACCEPTANCE OF DELIVERY AND CONDITION OF THE MATERIALS RECEIVED THEREAFTER, ASSUME FULL RESPONSIBILITY FOR ITS SAFEKEEPING UNTIL THE FINAL INSTALLATION HAS BEEN REVIEWED AND ACCEPTED.*

3.06 *PROTECTION OF WORK AND PROPERTY*

A. *WHERE THERE ARE EXISTING FACILITIES, BE RESPONSIBLE FOR THE PROTECTION THEREOF, WHETHER OR NOT SUCH FACILITY IS TO BE REMOVED OR RELOCATED. MOVING OR REMOVING ANY FACILITY MUST BE DONE SO AS NOT TO CAUSE INTERRUPTION OF THE WORK OF OWNER'S OPERATION.*
B. *CLOSE ALL CONDUIT OPENINGS WITH CAPS OR PLUGS DURING INSTALLATION. COVER ALL FIXTURES AND EQUIPMENT AND PROTECT AGAINST INJURY. AT THE FINAL COMPLETION, CLEAN ALL WORK AND DELIVER IN AN UNBLEMISHED CONDITION. OR REFINISH AND REPAINT AT THE DISCRETION OF THE ARCHITECT.*
C. *ANY EQUIPMENT OR CONDUIT SYSTEMS FOUND TO HAVE BEEN DAMAGED OR CONTAMINATED ABOVE "MIL" OR "SHOP" CONDITIONS SHALL BE REPLACED OR CLEANED TO THE ENGINEER'S SATISFACTION.*

3.07 *FINAL ACCEPTANCE*

A. *FINAL ACCEPTANCE BY THE OWNER WILL NOT OCCUR UNTIL ALL OPERATING INSTRUCTIONS ARE RECEIVED AND OWNER'S PERSONNEL HAVE BEEN THOROUGHLY INDOCTRINATED IN THE MAINTENANCE AND OPERATION OF ALL EQUIPMENT.*
B. *OPERATING MANUAL, PARTS LISTS, AND INDOCTRINATION OF OPERATING AND MAINTENANCE PERSONNEL. FURNISH THE SERVICES OF A QUALIFIED REPRESENTATIVE OF THE SUPPLIER FOR EACH ITEM OR SYSTEM ITEMIZED BELOW WHO SHALL INSTRUCT SPECIFIC PERSONNEL, AS DESIGNATED BY THE OWNER, IN THE OPERATION AND MAINTENANCE OF THAT ITEM OR SYSTEM.*
C. *INSTRUCTION SHALL BE MADE WHEN THE PARTICULAR SYSTEM IS COMPLETE AND SHALL BE OF THE NUMBER OF HOURS INDICATED BELOW AND SHALL BE GIVEN BY A COMPETENT, QUALIFIED REPRESENTATIVE OF THE ELECTRICAL CONTRACTOR SHALL BE PRESENT FOR ALL DEMONSTRATIONS.*

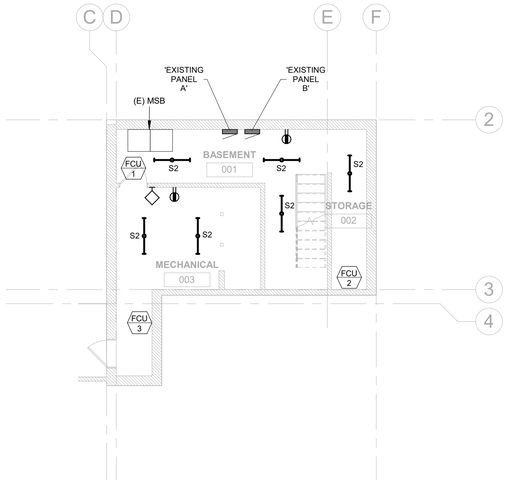
SYSTEM/ITEMS OF INSTRUCTION/1 LIGHTING CONTROL SYSTEMS32 ELECTRICAL DISTRIBUTION EQUIPMENT (UNDER 600 VOLTS) INCLUDING MOTOR CONTROL CENTERS3D. DELIVER A COMPLETE DIGITAL OPERATING MANUAL AND PARTS LISTS TO THE OWNER (OR HIS DESIGNATED REPRESENTATIVE) AT THE TIME OF THE DEMONSTRATIONS. SUCH MANUALS SHALL FULLY EXPLAIN THE CONTENTS OF THE MANUALS AS PART OF REQUIRED INDOCTRINATION AND INSTRUCT THE OWNER'S PERSONNEL IN THE CORRECT PROCEDURE IN OBTAINING SERVICE, BOTH DURING AND AFTER THE GUARANTEE PERIOD. THE OPERATING MANUAL AND PARTS LISTS SHALL GIVE COMPLETE INFORMATION AS TO WHOM THE OWNER SHALL CONTACT FOR SERVICE AND PARTS, INCLUDING THE ADDRESS AND PHONE NUMBER. FURNISH EVIDENCE THAT AN AUTHORIZED SERVICE ORGANIZATION REGULARLY CARRIES A COMPLETE STOCK OF REPAIR PARTS FOR THESE ITEMS (OR SYSTEMS), AND THAT THE ORGANIZATION IS AVAILABLE FOR SERVICE. SERVICE SHALL BE FURNISHED WITHIN TWENTY FOUR (24) HOURS AFTER REQUESTED.

E. *CLEAN UP: REMOVE ALL MATERIALS, SCRAP, ETC., RELATIVE TO THE ELECTRICAL INSTALLATION AND LEAVE THE PREMISES AND ALL EQUIPMENT, LAMPS, FIXTURES, ETC. IN A CLEAN, ORDERLY CONDITION. ANY COSTS TO THE OWNER FOR CLEAN UP OF THE SITE WILL BE CHARGED AGAINST THE CONTRACTOR.*
F. *ACCEPTANCE DEMONSTRATION: UPON COMPLETION OF THE WORK, AT A TIME TO BE DESIGNATED BY THE ARCHITECT, THE CONTRACTOR SHALL DEMONSTRATE FOR THE OWNER THE OPERATION OF THE ENTIRE INSTALLATION, INCLUDING ALL SYSTEMS PROVIDED UNDER THIS CONTRACT.*
G. *OPERATING AND MAINTENANCE MANUALS: FURNISH ONE SET OF ALL EQUIPMENT FOR THE PERFORMANCE OF TESTS AS SPECIFIED. SUBMIT THREE (3) COPIES OF A TYPEWRITTEN REPORT FOR THE APPROVAL OF THE ARCHITECT FOR HIS APPROVAL.*
1. *PERFORM A CAREFUL INSPECTION OF THE MAIN SWITCHBOARD BUS STRUCTURE AND CABLE CONNECTIONS TO VERIFY THAT ALL CONNECTIONS ARE MECHANICALLY AND ELECTRICALLY TIGHT.*
2. *MEASURE THE RESISTANCE TO GROUND FOR THE SERVICE GROUND, WHICH SHALL NOT EXCEED TEN (10) OHMS UNDER NORMAL DRY, SOIL MOISTURE CONDITIONS. IF REQUIRED, INSTALL ADDITIONAL GROUND PROVISIONS IN A MANNER ACCEPTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.*

3.12 *ELECTRICAL DEMOLITION*

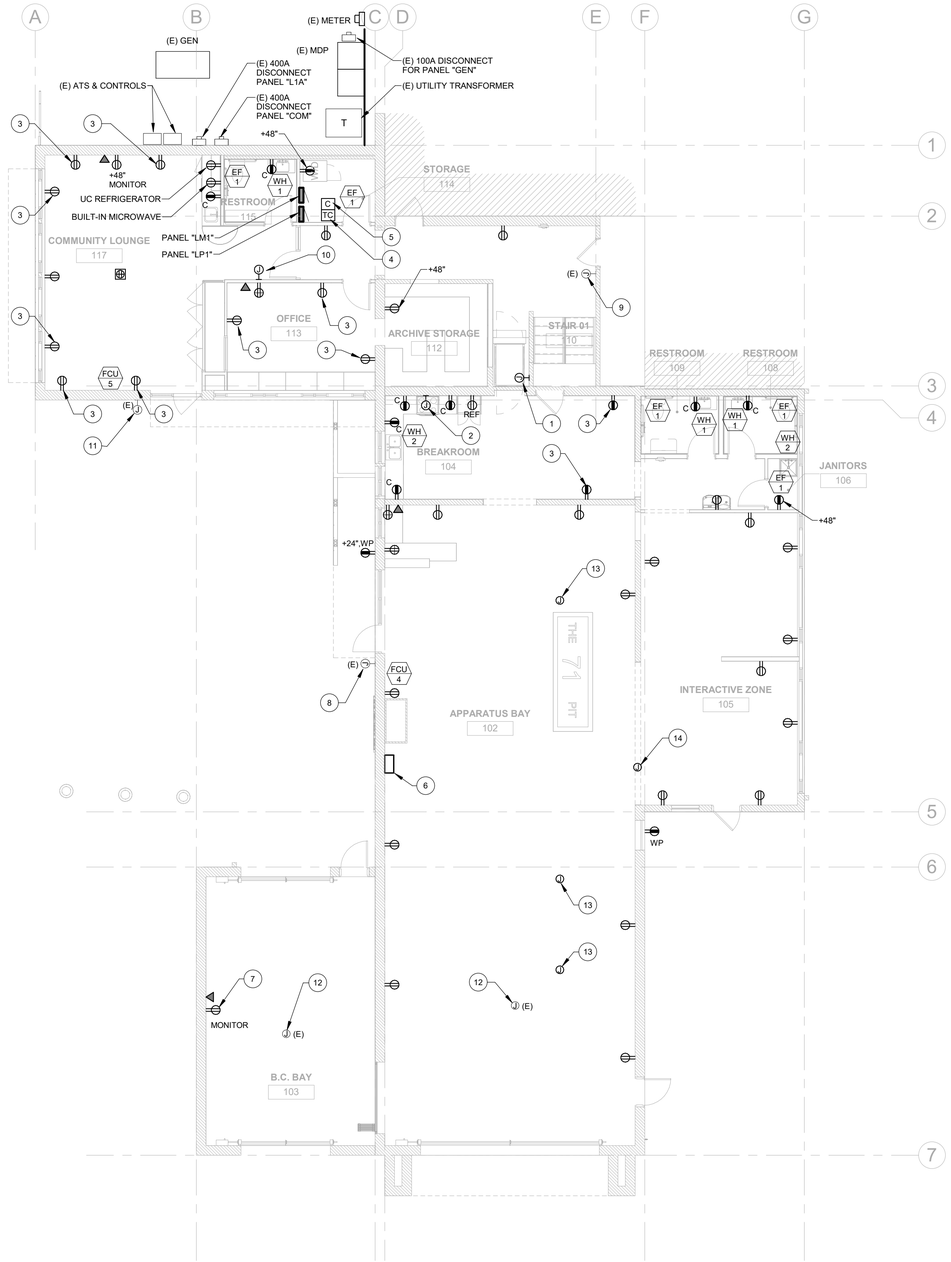
A. *EXAMINATION*
1. *VERIFY FIELD MEASUREMENTS AND EXISTING CIRCUITING ARE AS INDICATED ON DRAWINGS.*
2. *VERIFY THAT ABANDONED WIRING AND EQUIPMENT SERVE ONLY ABANDONED FACILITIES.*
3. *DEMOLITION DRAWINGS ARE BASED ON FIELD OBSERVATION AND EXISTING RECORD DOCUMENTS AND MAY NOT BE COMPREHENSIVE. CONTRACTOR TO VERIFY EXISTING CONDITIONS AND REPORT DISCREPANCIES TO ARCHITECT BEFORE DISTURBING EXISTING INSTALLATION.*
4. *BEGINNING OF DEMOLITION MEANS INSTALLER ACCEPTS EXISTING CONDITIONS.*

B. *PREPARATION*
1. *DISCONNECT ELECTRICAL SYSTEMS IN WALLS, FLOORS, AND CEILINGS SCHEDULED FOR REMOVAL.*
2. *COORDINATION OUTAGES WITH ARCHITECT/OWNER.*
3. *PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. WHEN WORK MUST BE PERFORMED ON ENERGIZED EQUIPMENT OR CIRCUITS, USE PERSONNEL EXPERIENCED IN SUCH OPERATIONS.*
4. *FIRE PROTECTION, FIRE ALARM, AND DETECTION SYSTEMS SHALL BE MAINTAINED AND CAPABLE OF PROPER OPERATION DURING CONSTRUCTION. THE LOCAL FIRE MARSHALL SHALL BE NOTIFIED BEFORE CONSTRUCTION STARTS. WHEN SCHEDULED INTERRUPTIONS ARE EXPECTED AND AFTER CONSTRUCTION IS COMPLETE. PROTECT AND SUPPORT LIFE SAFETY SYSTEMS ROUTED THROUGH AREAS OF DEMOLITION.*
5. *EX



2 BASEMENT LEVEL ELECTRICAL PLAN

SCALE: 1/8" = 1'-0"



1 MAIN LEVEL ELECTRICAL PLAN

SCALE: 1/8" = 1'-0"

POWER NOTES:

1. REFER TO ARCHITECTURAL PLANS AND INTERIOR ELEVATIONS FOR FINAL RECEPTACLE AND DEVICE PLACEMENT. COORDINATE ALL RECEPTACLE MOUNTING LOCATIONS WITH FIXTURES, APPLIANCES, FURNITURE, CABINETRY, AND OTHER EQUIPMENT PRIOR TO ROUGH-IN.
2. REFER TO MECHANICAL EQUIPMENT SCHEDULE FOR CIRCUIT, DISCONNECT, AND CONDUCTORS FOR MECHANICAL EQUIPMENT.
3. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FIELD COORDINATING THE LOCATION OF ELECTRICAL EQUIPMENT, JUNCTION BOXES, DISCONNECTS, ETC. EC SHALL BE RESPONSIBLE FOR COORDINATION AND THE ROUTING OF FEEDERS, AND BRANCH CIRCUITS.
4. COORDINATE POWER CONNECTIONS FOR OWNER PROVIDED EQUIPMENT AND APPLIANCES, AND ALL OTHER EQUIPMENT PROVIDED BY OTHER DIVISIONS WITH SUBMITTAL DATA CUT SHEETS, WIRING DIAGRAMS, AND MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS. FIELD COORDINATE FINAL LOCATIONS OF EQUIPMENT AND POWER CONNECTIONS WITH GENERAL CONTRACTOR AND OTHER DIVISIONS/CONTRACTORS PRIOR TO ROUGH-IN. PROVIDE READILY ACCESSIBLE GROUND-FAULT CIRCUIT-INTERRUPTER (GFCI) PROTECTION FOR RECEPTACLES FOR APPLIANCES LISTED AND IN LOCATIONS REQUIRED IN NEC 210.8.

(#) FLAG NOTES:

1 POWER FOR LIFT. VERIFY ELECTRICAL REQUIREMENTS PRIOR TO ROUGH-IN.

2 PROVIDE 50(3WG) ELECTRICAL CONNECTION TO ELECTRIC STOVE.

3 RECEPTACLE SHALL BE CONTROLLED BY TIME CLOCK (AUTOMATIC OFF) AND SHALL BE PERAMENTLY MARKED WITH THE CONTROLLED RECEPTACLE MARKING SYMBOL PER NEC 406.3.

4 PROVIDE A 14-POLE CONTACTOR IN A NEMA 1 ENCLOSURE FOR CONTROL OF TIME CLOCK CONTROLLED RECEPTACLES. SEE PANEL SCHEDULE FOR CIRCUIT NUMBERS TO ROUTE BRANCH CIRCUITS THROUGH CONTACTOR FOR ON/OFF CONTROL.

5 PROVIDE TORK #EWZ-101 LIGHTING CONTROL TIME CLOCK FOR CONTROL OF LIGHTING CONTACTOR THAT WILL CONTROL RECEPTACLES PER IECC C405.11.

6 EXISTING RACEWAY AND CONDUITS FOR VEHICLE EXHAUST SYSTEM TO BE RELOCATED TO THIS LOCATION. REFER TO ARCHITECTURAL DRAWINGS FOR NEW LOCATION.

7 COORDINATE LOCATION FOR MONITOR WITH ARCHITECT PRIOR TO ROUGH-IN.

8 EXISTING CARD READER TO BE RELOCATED TO THIS LOCATION. REFER TO ARCHITECTURAL DRAWINGS FOR NEW LOCATION.

9 EXISTING CARD READER FROM OASIS DOOR TO BE RELOCATED TO THIS LOCATION. REFER TO ARCHITECTURAL DRAWINGS FOR NEW LOCATION.

10 PROVIDE 20(2WG) TO JUNCTION BOX FOR CARD READER. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.

11 EXISTING CARD READER TO REMAIN.

12 EXISTING JUNCTION BOX FOR GARAGE DOOR MOTOR TO REMAIN. RECIRCUIT AS INDICATED.

13 PROVIDE POWER IN CEILING FOR KOISK. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.

14 PROVIDE POWER IN CEILING FOR FIRE ENGINE CAB LIGHTING. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

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ELECTRICAL FLOOR PLAN

E-101

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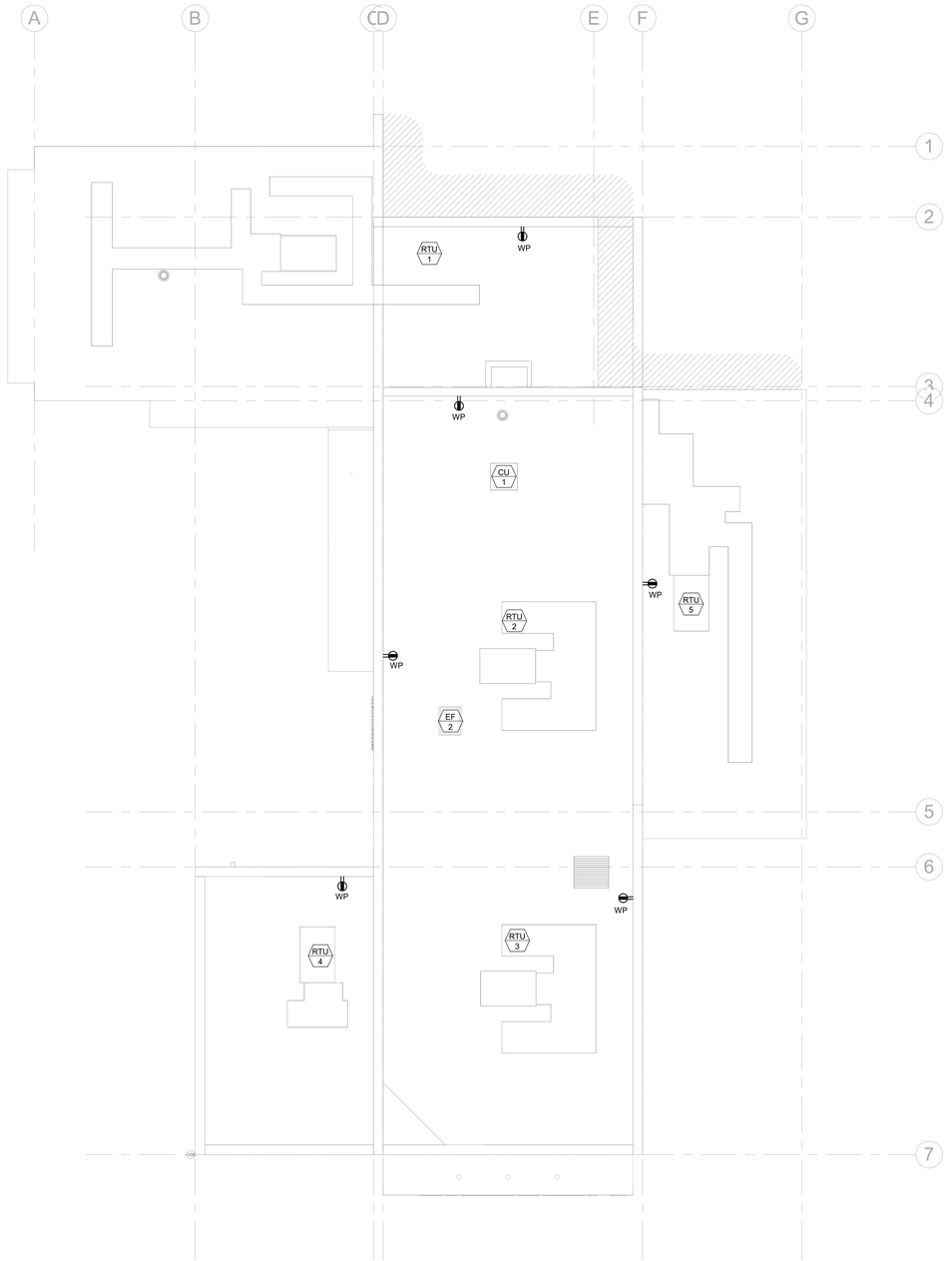

POWER NOTES:

1. REFER TO ARCHITECTURAL PLANS AND INTERIOR ELEVATIONS FOR FINAL RECEPTACLE AND DEVICE PLACEMENT. COORDINATE ALL RECEPTACLE MOUNTING LOCATIONS WITH FIXTURES, APPLIANCES, FURNITURE, CABINETRY, AND OTHER EQUIPMENT PRIOR TO ROUGH-IN.
2. REFER TO MECHANICAL EQUIPMENT SCHEDULE FOR CIRCUIT, DISCONNECT, AND CONDUCTORS FOR MECHANICAL EQUIPMENT.
3. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FIELD COORDINATING THE LOCATION OF ELECTRICAL EQUIPMENT, JUNCTION BOXES, DISCONNECTS, ETC. EC SHALL BE RESPONSIBLE FOR COORDINATION AND THE ROUTING OF FEEDERS, AND BRANCH CIRCUITS.
4. COORDINATE POWER CONNECTIONS FOR OWNER PROVIDED EQUIPMENT AND APPLIANCES, AND ALL OTHER EQUIPMENT PROVIDED BY OTHER DIVISIONS WITH SUBMITTAL DATA CUT SHEETS, WIRING DIAGRAMS, AND MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS. FIELD COORDINATE FINAL LOCATIONS OF EQUIPMENT AND POWER CONNECTIONS WITH GENERAL CONTRACTOR AND OTHER DIVISIONS/CONTRACTORS PRIOR TO ROUGH-IN. PROVIDE READILY ACCESSIBLE GROUND-FAULT CIRCUIT-INTERRUPTER (GFCI) PROTECTION FOR RECEPTACLES FOR APPLIANCES LISTED AND IN LOCATIONS REQUIRED IN NEC 210.8.

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ELECTRICAL ROOF PLAN

E-102

ROOF ELECTRICAL PLAN

SCALE: 1/8" = 1'-0"

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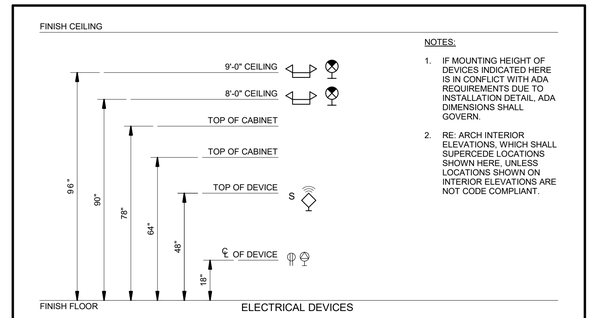
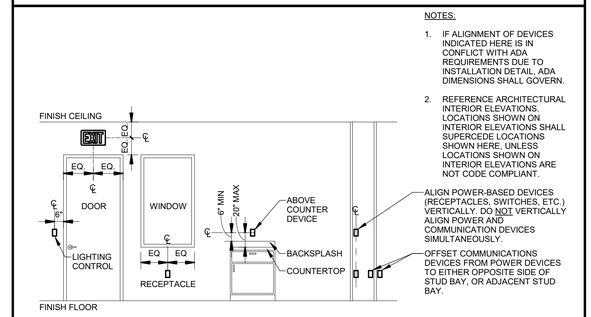


NOTES:

1. IF MOUNTING HEIGHT OF DEVICES INDICATED HERE IS IN CONFLICT WITH ADA REQUIREMENTS DUE TO INSTALLATION DETAIL, ADA DIMENSIONS SHALL GOVERN.
2. RE: ARCH INTERIOR ELEVATIONS, WHICH SHALL SUPERCEDE LOCATIONS SHOWN HERE, UNLESS LOCATIONS SHOWN ON INTERIOR ELEVATIONS ARE NOT CODE COMPLIANT.

TYPICAL DEVICE MOUNTING HEIGHTS

SCALE: NONE



NOTES:

1. IF ALIGNMENT OF DEVICES INDICATED HERE IS IN CONFLICT WITH ADA REQUIREMENTS DUE TO INSTALLATION DETAIL, ADA DIMENSIONS SHALL GOVERN.
2. REFERENCE ARCHITECTURAL INTERIOR ELEVATIONS. LOCATIONS SHOWN ON INTERIOR ELEVATIONS SHALL SUPERCEDE LOCATIONS SHOWN HERE, UNLESS LOCATIONS SHOWN ON INTERIOR ELEVATIONS ARE NOT CODE COMPLIANT.

TYPICAL DEVICE ALIGNMENT

SCALE: NONE

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ELECTRICAL DIAGRAMS

E-201

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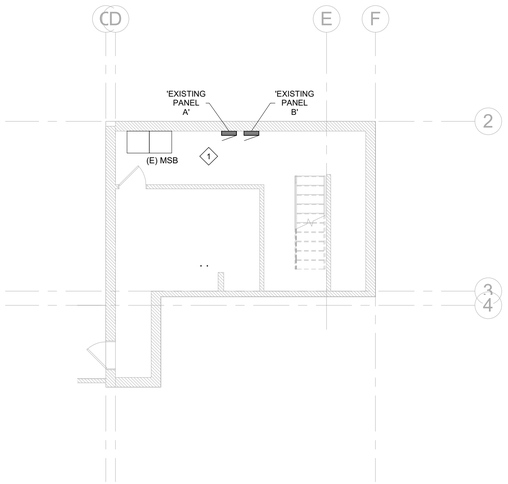
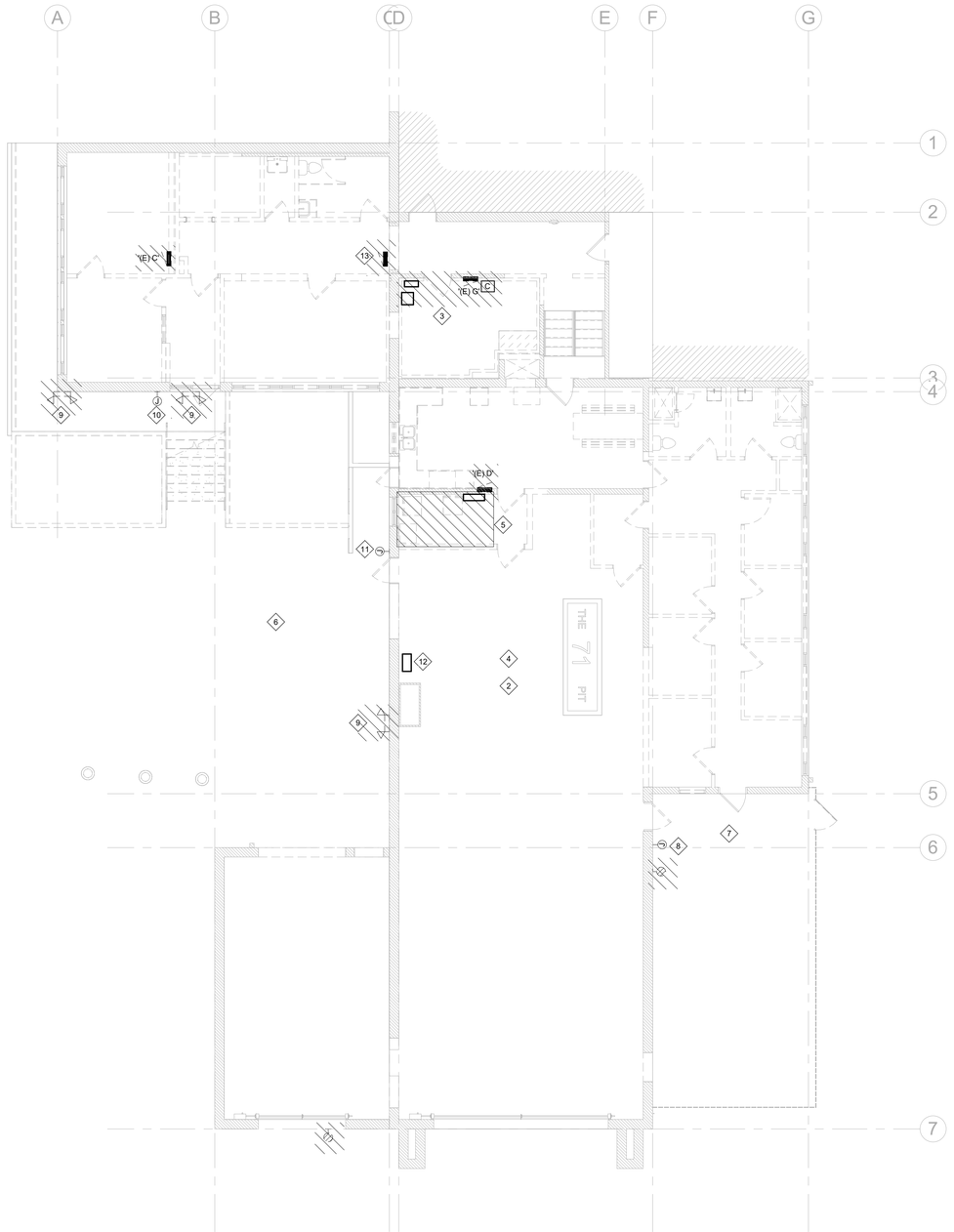


2 BASEMENT LEVEL ELECTRICAL DEMOLITION PLAN

SCALE: 1/8" = 1'-0"



1 MAIN LEVEL ELECTRICAL DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

DEMOLITION NOTES:

1. DEMOLITION PLAN INDICATES A DESIRED SCOPE OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY IN FIELD PRIOR TO START OF WORK.
2. CONDITIONS MAY EXIST WHERE (E) CABLING AND/OR EQUIPMENT IS INSTALLED WITHIN AN AREA OF DEMOLITION THAT IS INTENDED TO REMAIN IN ORDER TO KEEP SYSTEMS OUTSIDE OF THE AREA OF DEMOLITION IN OPERABLE CONDITION. CONTRACTOR SHALL PROVIDE APPROPRIATE PROTECTION AND EXERCISE CARE WHEN PERFROMING DEMOLITION AROUND SUCH CABLING AND EQUIPMENT.
3. ALL SYSTEMS LOCATED OUTSIDE THE AREA OF DEMOLITION ARE INTENDED TO REMAIN OPERABLE.
4. FOR ALL ITEMS TO BE DEMOLISHED REMOVE CIRCUIT BACK TO POINT OF CONNECTION. MAKE BRANCH CIRCUIT WITH REMAINING DEVICES CONTINUOUS.
5. ELECTRICAL CONTRACTOR SHALL REMOVE ALL DEMOLISHED ITEMS FROM SITE UNLESS OWNER WISHES TO RETAIN. ITEMS REMOVED FROM SITE SHALL BE DISPOSED OF IN A LEGAL MANNER.
6. EVERY ATTEMPT WAS MADE TO LOCATE ALL ITEMS TO BE INCLUDED IN THE DEMOLITION SCOPE IN THIS OCCUPIED SPACE. ELECTRICAL CONTRACTOR SHALL PROVIDE A REASONABLE ALLOWANCE TO INCLUDE THE REMOVAL OF ITEMS NOT INDICATED ON THE ELECTRICAL DEMOLITION PLAN.

DEMO NOTES

1 EXISTING ELECTRICAL EQUIPMENT TO REMAIN IN THIS AREA.

2 REMOVE ALL EXISTING INTERIOR FIXTURES AND DEVICES IN ALL ROOMS.

3 REMOVE ALL EXISTING ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT IN THIS ROOM.

4 REMOVE ALL EXISTING ELECTRICAL DEVICES AND EQUIPMENT ON THE MAIN AND UPPER LEVELS.

5 REMOVE ALL EXISTING ELECTRICAL EQUIPMENT, WIREWAY, ND CONDUIT IN THIS ROOM.

6 REMOVE ALL EXISTING EXTERIOR ELECTRICAL DEVICES.

7 REMOVE ALL EXISTING ELECTRICAL DEVICES AND LIGHTING FIXTURES IN EXTERIOR PATIO SPACE EXCEPT CARD READER, AS NOTED.

8 EXISTING CARD READER TO BE PRESERVED AND RE-LOCATED. REFER TO SHEET E-101 FOR NEW LOCATION.

9 EXISTING FLOOD LIGHT FIXTURE TO BE REMOVED.

10 EXISTING CARD READER TO BE REMAIN.

11 EXISTING CARD READER TO BE RE-LOCATED. SEE SHEET E-101 FOR NEW LOCATION.

12 EXISTING RACEWAY AND CONDUITS FOR VEHICLE EXHAUST SYSTEM TO BE REMMOVED AND RE-LOCATED. SEE SHEET E-101 FOR NEW LOCATION.

13 EXISTING ROOF PANEL TO BE REMOVED.

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ELECTRICAL DEMOLITION PLAN

ED-101

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ELECTRICAL SITE PLAN

SCALE: 3/32" = 1'-0"

SITE POWER NOTES:

1. REFER TO ARCHITECTURAL PLANS AND INTERIOR ELEVATIONS FOR FINAL RECEPTACLE AND DEVICE PLACEMENT. COORDINATE ALL RECEPTACLE MOUNTING LOCATIONS WITH FIXTURES, APPLIANCES, FURNITURE, CABINETRY, AND OTHER EQUIPMENT PRIOR TO ROUGH-IN.
2. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FIELD COORDINATING THE LOCATION OF ELECTRICAL EQUIPMENT, JUNCTION BOXES, DISCONNECTS, ETC. EC SHALL BE RESPONSIBLE FOR COORDINATION AND THE ROUTING OF FEEDERS, AND BRANCH CIRCUITS.

(#) FLAG NOTES:

1 PROVIDE LIGHTING FOR SCULPTURE. COORDINATE LIGHTING LOCATION WITH ARCHITECT.

2 INTEGRATED LED STRIP LIGHTING UNDER BENCH. COORDINATE EXACT LOCATION AND QUANTITY WITH ARCHITECT.

3 PROVIDE WEATHERPROOF IN-GRADE RECEPTACLE FOR LIT SIGN POWER. COORDINATE EXACT LOCATION WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.

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ELECTRICAL SITE PLAN

ES-101

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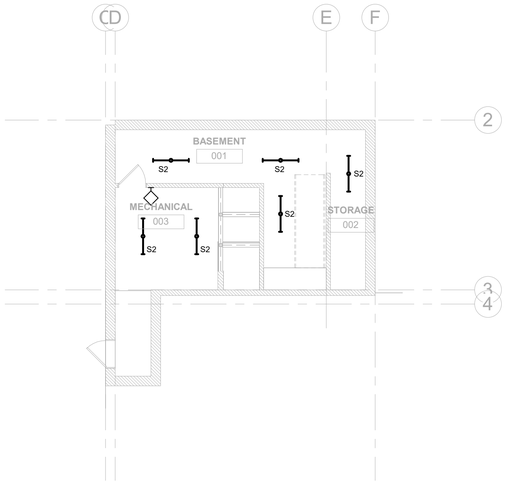
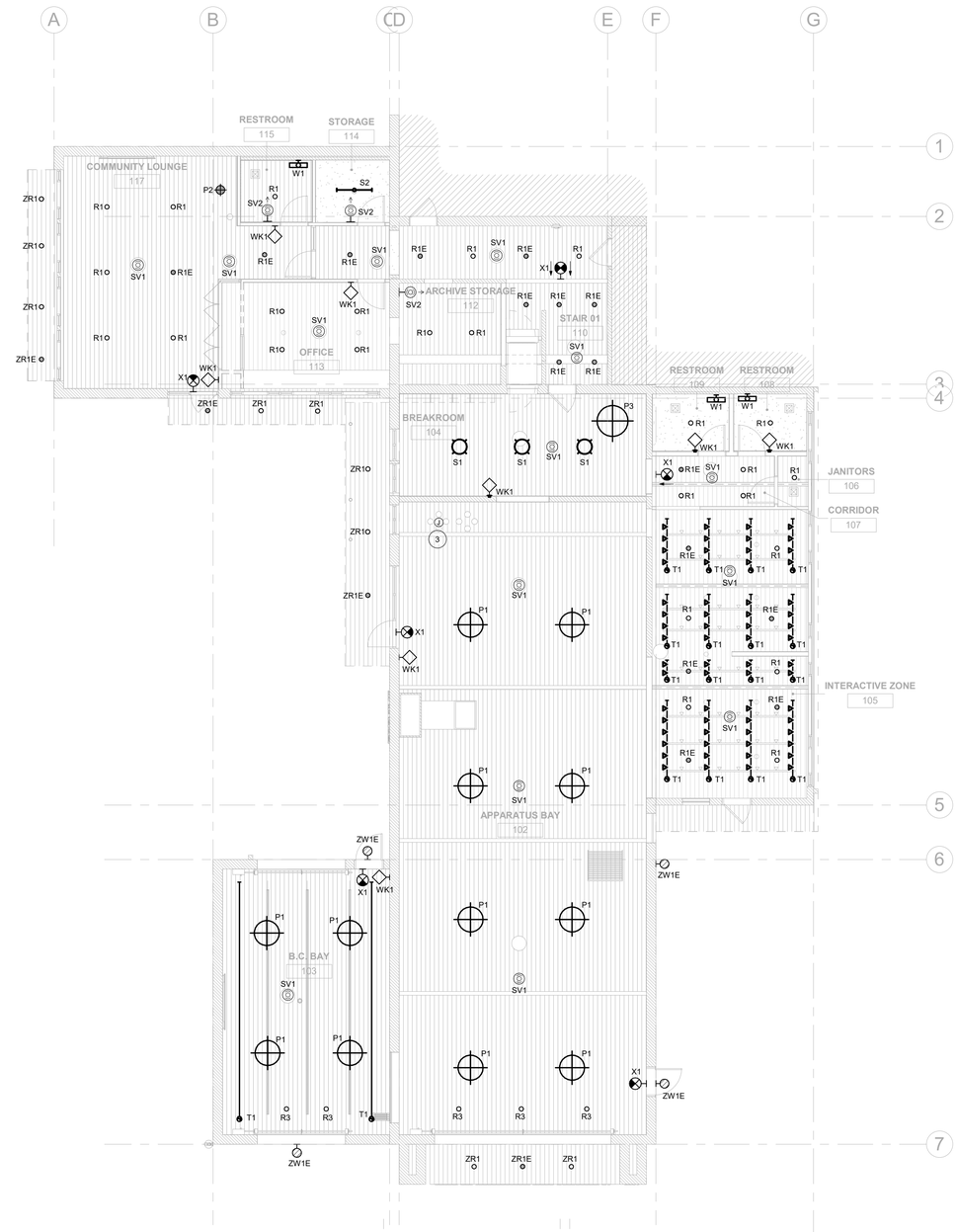


2 BASEMENT LEVEL LIGHTING PLAN
SCALE: 1/8" = 1'-0"



1 MAIN LEVEL LIGHTING PLAN
SCALE: 1/8" = 1'-0"

FLAG NOTES:

LIGHTING NOTES:

1. CIRCUIT ALL EMERGENCY LIGHTING AND EXIT SIGNS TO THE NEAREST LIGHTING BRANCH CIRCUIT AHEAD OF LOCAL SWITCHLEG.
2. LIGHT FIXTURES THAT APPEAR TO BE CENTERED IN A SPACE OR CEILING PANEL SHALL BE CENTERED UNLESS OTHERWISE NOTED.
3. CONTRACTOR IS RESPONSIBLE FOR PROVIDING MOUNTING HARDWARE REQUIRED FOR INSTALLING ALL LIGHT FIXTURES. VERIFY ALL CEILING FINISHES, CEILING TYPES, AND CEILING THICKNESS PRIOR TO FINAL FIXTURE PURCHASE AND PROCUREMENT.
4. INTERRUPT POWER SUPPLY TO DEMONSTRATE PROPER OPERATION OF ALL EMERGENCY LIGHTING PRIOR TO JOB COMPLETION.
5. ALL DIMMED LIGHTING CIRCUITS ARE TO RECEIVE DEDICATED NEUTRALS. DO NO SHARE NEUTRALS ON DIMMED LIGHTING CIRCUITS.
6. CONTRACTOR SHALL CONDUCT FUNCTIONAL TESTING OF LIGHTING CONTROLS EQUIPMENT AS REQUIRED BY IECC 2021 SECTION C408.3. AFTER THIS TESTING IS OBSERVED AND COMPLETED, COMMISSIONING AUTHORITY OR APPROVED AGENCY SHALL PROVIDE DOCUMENTATION TO THE AHJ THAT CERTIFIES THAT THE INSTALLATION MEETS THE DOCUMENTED PERFORMANCE CRITERIA OF SECTION C405.A. COMMISSIONING AUTHORITY OR APPROVED AGENCY SHALL PROVIDE THIS FUNCTIONAL TESTING REPORT TO THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT WITHIN 90 DAYS OF THE DATE OF RECEIPT OF THE CERTIFICATE OF OCCUPANCY.
7. ALL LIGHT SWITCHES SHALL BE SPECIFICATION GRADE, QUIET OPERATION RATED 120/277VOLT, 20 AMPS, UNLESS OTHERWISE NOTED.
8. ALL FACE PLATE AND DEVICE COLORS SHALL BE APPROVED BY ARCHITECT PRIOR TO ORDER.
9. PROVIDE A SINGLE SURGE PROTECTION DEVICE (SPD) AT ALL PANELS SERVING SITE LIGHTING CIRCUITS.
10. EXIT SIGNS SHALL HAVE INTEGRAL EMERGENCY BATTERY BACK-UP.
11. PROVIDE LUMINAIRES SHOWN AS SHADED WITH EMERGENCY BATTERY BALLASTS. EMERGENCY LUMINAIRES SHALL SENSE UNSWITCHED POWER TO THE SPACE AND OPERATE AUTOMATICALLY UPON LOSS OF NORMAL POWER. ALL SHADED LUMINAIRES SHALL HAVE ONE (1) 90 MINUTE EMERGENCY BALLAST. ALL EMERGENCY LUMINAIRES SHALL HAVE INTEGRAL TEST SWITCHES AND VISIBLE INDICATING LIGHTS. CONNECT THE EMERGENCY BATTERY BALLAST TO THE UN-SWITCHED LEG OF THE LIGHTING CIRCUIT INDICATED.
12. CONTRACTOR SHALL VERIFY AND PROVIDE LIGHT FIXTURES EQUIPPED WITH ALL REQUIRED RATINGS, INCLUDING BUT NOT LIMITED TO WET RATED, DAMP RATED, COLD WEATHER RATED, CLOSET RATED, 1 HOUR FIRE RATED, 2 HOUR FIRE RATED, SPRAY FOAM INSULATION RATED, INSULATION CONTACT RATED, WALK OVER RATED FIXTURES WHEREVER REQUIRED.
13. COORDINATE EXACT LOCATION OF SECURITY CAMERAS WITH AV CONTRACTOR PRIOR TO ROUGH-IN.

THE KEN FREIBERG FIRE MUSEUM IN THE CHIEF CARL R. NELSON FIRE STATION

9451 DOROTHY BLVD, THORNTON CO 80229

CITY OF THORNTON

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ARCHITECTURAL WORKSHOP , DENVER, COLORADO

DATE	DESCRIPTION
05.10.2024	PRE-DESIGN (30% CD)
07.19.2024	PRE-DESIGN (70% CD)

DRAWN BY: Author CHECKED BY: Checker
PROJECT NO.: 2402TFM INITIAL DATE: 04/10/2024

LIGHTING FLOOR PLAN

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