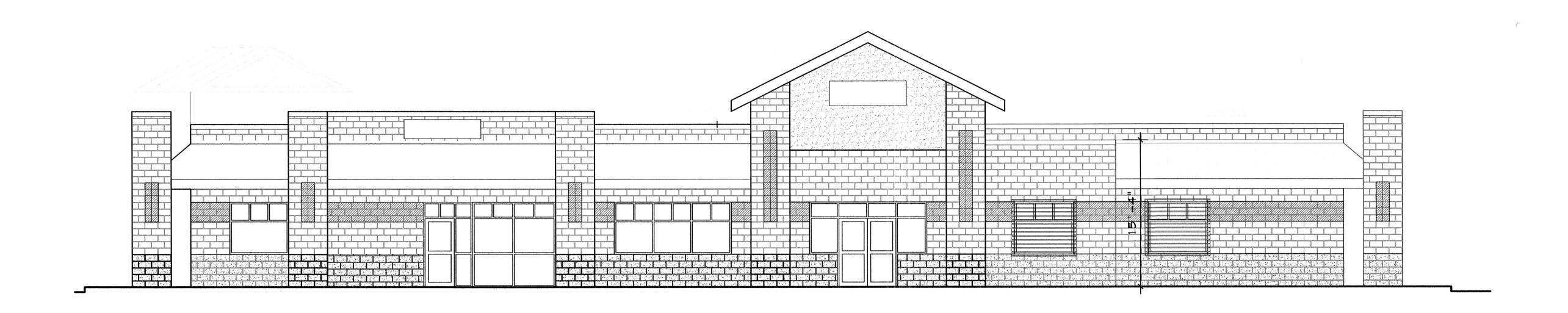
STILLAGUAMISH TRIBAL COURTHOUSE

17014 59TH AVENUE NE, ARLINGTON, WASHINGTON



PROJECT CRITERIA

SCOPE OF WORK

EXISTING BUILDING WILL BE MODIFIED TO ACCOMMODATE A NEW TRIBAL COURTROOM AND ASSOCIATED SUPPORT FACILITIES

TAX ACCOUNT NOS .: 31052700202100

LEGAL DESCRIPTION

SEC 27 TWP 31 RGE 05 QUARTER NW LOT 2 CITY OF ARL SP NO Z-04-062-FSP REC AFN 200501105158 BEING A PTN OF NE1/4 NW1/4.

CODES

2015 INTERNATIONAL BUILDING CODE (IBC)
2015 INTERNATIONAL MECHANICAL CODE (IMC)
2015 INTERNATIONAL FIRE CODE (IFC)
2015 UNIFORM PLUMBING CODE (UPC)

BUILDING CRITERIA

ZONING: GC (GENERAL COMMERCIAL)

CONSTRUCTION TYPE: Y-B (FULLY SPRINKLERED &

MONITORED)

IBC OCCUPANCY: B

UTILITY DISTRICTS

POWER:
WATER:
SEWER:
TELEPHONE:

SNOHOMISH COUNTY PUD CITY OF ARLINGTON CITY OF ARLINGTON VERIZON CASCADE NATURAL GAS

PROJECT CONTACTS

LEGAL OWNER

STILLIGUAMISH TRIBE OF INDIANS 3322 236TH ST NE ARLINGTON, WA 98223 ATTN: JEREMY SMITH

ARCHITECT 2812 ARCHITECTURE

2812 COLBY AVE EVERETT, WA 98201 425-252-2153

STRUCTURAL ENGINEER

QUANTUM CONSULTING ENGINEERING LLC

1511 THIRD AVE, STE 323

SEATTLE, WASHINGTON 98101

MEP

RENSCH ENGINEERING 111 AVE C, SUITE 104 SNOHOMISH, WA 98223 PHN: 360-863-6677

INDEX OF DRAWINGS

ARCHITECTURAL (2812 ARCHITECTURE)

AO.1 COVER DRAWING
A2.0 DEMOLITION PLAN
A2.1 PROPOSED FLOOR PLAN
A2.2 REFLECTED CEILING PLAN
A2.3 ROOF PLAN
A3.1 EXTERIOR FLEVATIONS

A3.1 EXTERIOR ELEVATIONS
A4.1 BUILDING SECTIONS
A5.1 DOOR & FINISH SCHEDULES
A5.2 SCHEDULES AND DETAILS

STRUCTURAL (QUANTUM CONSULTING ENG.) S1.0 GENERAL STRUCTURAL NOTES

S1.1 GENERAL STRUCTURAL NOTES
S2.0 FOUNDATION PLAN
S2.1 ROOF FRAMING PLAN
S3.0 DETAILS
S4.0 TYPICAL MASONRY DETAILS

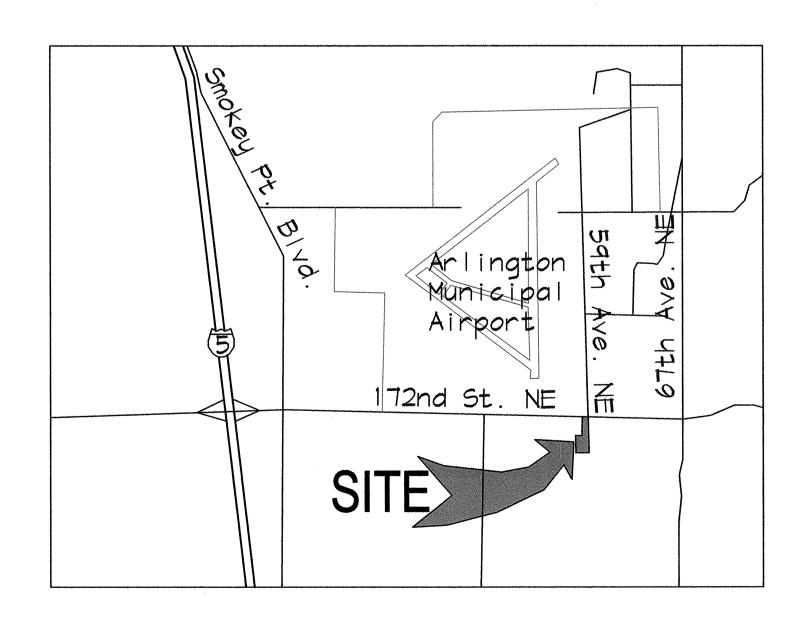
S4.1 DETAILS

S5.0 STEEL DETAILS S7.0 TYPICAL LIGHT GUAGE DETAILS

MEP (RENSCH ENGINEERING)

MO.01 MECHANICAL SPECIFICATIONS
M2.00 MECHANICAL DEMO PLAN
M2.01 MECHANICAL HVAC PLAN
M5.01 MECHANICAL DETAILS
M6.01 MECHANICAL SCHEDULES
E0.01 ELECTRICAL SPECIFICATIONS
E2.00 ELECTRICAL DEMO PLAN
E2.01 ELECTRICAL POWER PLAN
E3.01 ELECTRICAL LIGHTING PLAN
E5.01 ELECTRICAL RISER DIAGRAMS

E6.01 PANEL SCHEDULES
P1.00 PLUMBING PLAN
FP1.01 FIRE SPRINKLER PLAN



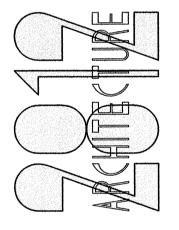


Date: For:

02-11-19 PRELIMINARY
11-15-19 PRELIMINARY DESIGN REV'S
7-22-20 BID SET



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Tenant Improvements for:

Stillaguamish Tribal Courthouse
17014 59th Avenue NE
Arlington, Washington

Drawing:

A 0.1

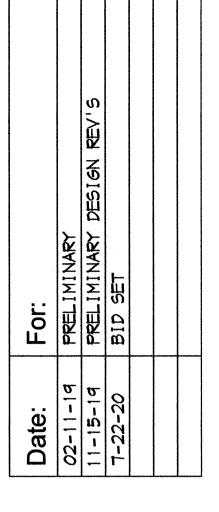
- 1. CONTRACTOR RESPONSIBLE FOR SITE INVESTIGATION PRIOR TO DEMOLITION TO REVEAL FULL SCOPE OF WORK. INVESTIGATE AND VERIFY LOCATIONS OF EXISTING STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING ELEMENTS AND NOTIFY THE ARCHITECT OF RECORD IN WRITING OF ANY AND ALL DISCREPANCIES PRIOR TO PROCEEDING WITH WORK.
- 2. IF DURING DEMOLITION CONDITIONS ARE REVEALED THAT MAY JEOPARDIZE INTEGRITY OF STRUCTURE OR PRECLUDE FOLLOWING DESIGN INTENT, CONTRACTOR SHALL NOTIFY THE ARCHITECT OF RECORD IMMEDIATELY.
- 3. CONTRACTOR TO LOCATE EXISTING WASTE WATER LINES, AND CLEAN OUT LINES PRIOR TO REUSE. VERIFY LINES ARE IN GOOD WORKING CONDITION. REPAIR LINES AS NECESSARY FOR NEW WORK.
- 4. PROTECT ALL EXISTING ITEMS AND CONSTRUCTION TO REMAIN AGAINST DAMAGE DURING DEMOLITION AND CONSTRUCTION.

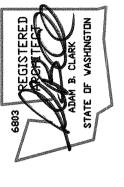
DEMOLITION PLAN NOTES

ITEMS WITHIN EXISTING WALL CONSTRUCTION.

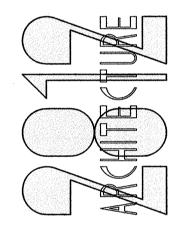
- REMOVE EXISTING MASONRY AND STEEL TOWER COMPLETE.
 REMOVE EXISTING INTERIOR WALL CONSTRUCTION AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION. THIS INCLUDES REMOVAL OF ALL DOOR, RELIGHTS ELECTRICAL AND OTHER INCORPORATED
- 3. REMOVE PORTION OF EXISTING WALL AS REQUIRED FOR INSTALLATION OD NEW DOOR OR RELIGHT. SEE FLOOR PLAN
- 4. REMOVE PORTION OF EXISTING CEILING AS REQUIRED FOR NEW CONSTRUCTION. SEE DWG. A2.2.
- 5. REMOVE EXISTING RELIGHT AND SHELF.
- 6. REMOVE EXISTING STOREFRONT ASSEMBLY COMPLETE
 7. REMOVE EXISTING CASEWORK. CAP ALL PLUMBING & DRAIN
 LINES WITHIN WALL. PROVIDE ACCESS PANEL @ CAPPED LINE
- LOCATIONS.

 8. PEMOVE EXISTING FLOOR COVERINGS THROUGHOUT THIS SPACE.
- 1. REMOVE PORTION OF EXISTING CANOPY.





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ovements for: uamish Tribal Courthouse

Stillaguamish 7

Prawing:
A 2.0

WALL TYPES

- Construct wall from floor to underside of roof structure with 3625125-33 metal studs @ 16" o.c. with 5/8" GWB ea. side. Provide sound insulation in stud cavities.
- B Furr wall from floor to underside of roof structure with 6005125-33 metal studs @ 24" o.c. with 5/8" GWB on interior side. Provide R-19 batt insulation in stud cavities \$ 4 mil vapor barrior @ warm side of furring below GWB.
- c Furr infill portion of wall w/ 6005125-33 metal studs @ 24" o.c. w/ \(\frac{5}{6}\)" GWB @ interior side.

 Provide R-19 batt insulation in stud cavities \$ 4 mil vapor barrior @ warm side of furring below GWB.
- D Infill existing opening w/ studs & gwb to match existing.

SYMBOLS LEGEND

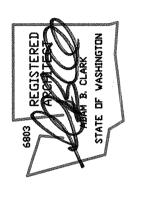
- XXX DOOR NUMBER. SEE DOOR SCHEDULE DWG. A5.1
- XXX ROOM NUMBER. SEE FINISH SCHEDULE DWG. A5.1
- X- WALL TYPE. SEE THIS DRAWING.
- RELIGHT. SEE WINDOW AND RELIGHT SCHEDULE DWG. A5.1

 Date:
 For:

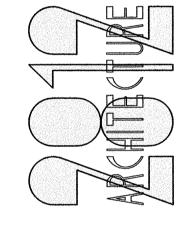
 02-11-14
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 11-15-14
 PRELIMINARY DESIGN REV'S

 7-22-20
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enant Improvements for: Stillaguamish Tribal Courthouse

Tenant Improvements for:

Stillaguamish Trib

17014 59th Avenue NE
Arlington, Washington

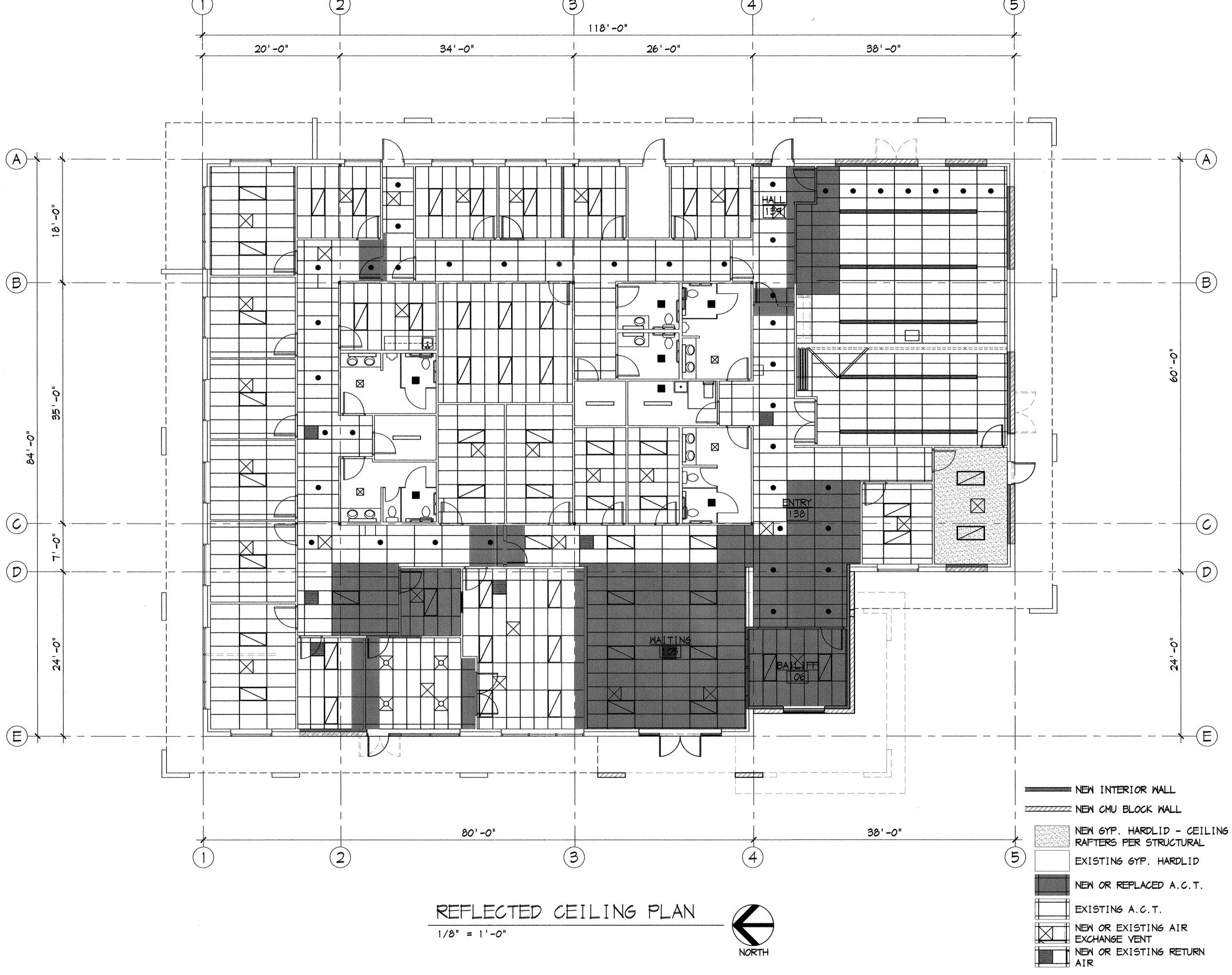
Drawing:
A 2.1

DESIGN CATEGORIES D, E, AND F OF ASCE 7-10.

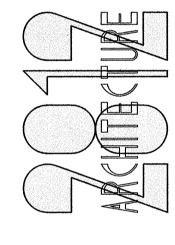
ACOUSTICAL TILE OR LAY-IN PANEL CEILINGS SHALL ALSO COMPLY WITH THE FOLLOWING:

A. THE WIDTH OF THE PERIMETER SUPPORTING CLOSURE SHALL BE NOT LESS THAN 2". IN EACH ORTHOGONAL HORIZONTAL DIRECTION, ONE END OF THE CEILING GRID SHALL BE ATTACHED TO THE CLOSURE ANGLE. THE OTHER END IN EACH HORIZONTAL DIRECTION SHALL HAVE A .75" CLEARANCE FROM THE WALL AND SHALL REST UPON AND BE FREE TO SLIDE UPON A CLOSURE ANGLE OR CHANNEL. B. FOR CEILING AREAS EXCEEDING 2,500 SQUARE FEET, A SEISMIC SEPARATION JOINT OR FULL HEIGHT PARTITION THAT BREAKS THE CEILING INTO AREAS LESS THAN 2,500 SQUARE FEET EACH WITH A RATIO OF THE LONG SHORT DIMENSION LESS THAN OR EQUAL TO 4, SHALL BE PROVIDED UNLESS STRUCTURAL ANALYSES ARE PERFORMED OF THE CEILING BRACING SYSTEM FOR THE PRESCRIBED SEISMIC FORCES THAT DEMONSTRATE THAT CEILING PENETRATIONS AND CLOSURE ANGLES OR CHANNELS PROVIDE SUFFICIENT CLEARANCE TO ACCOMMODATE THE ANTICIPATED LATERAL DISPLACEMENT. EACH AREA SHALL BE PROVIDED WITH CLOSURE ANGLES OR CHANNELS IN ACCORDANCE WITH SECTION 13.5.6.2.2.A AND HORIZONTAL RESTRAINTS OR BRACING. SECTION 13.5.6.2.2.



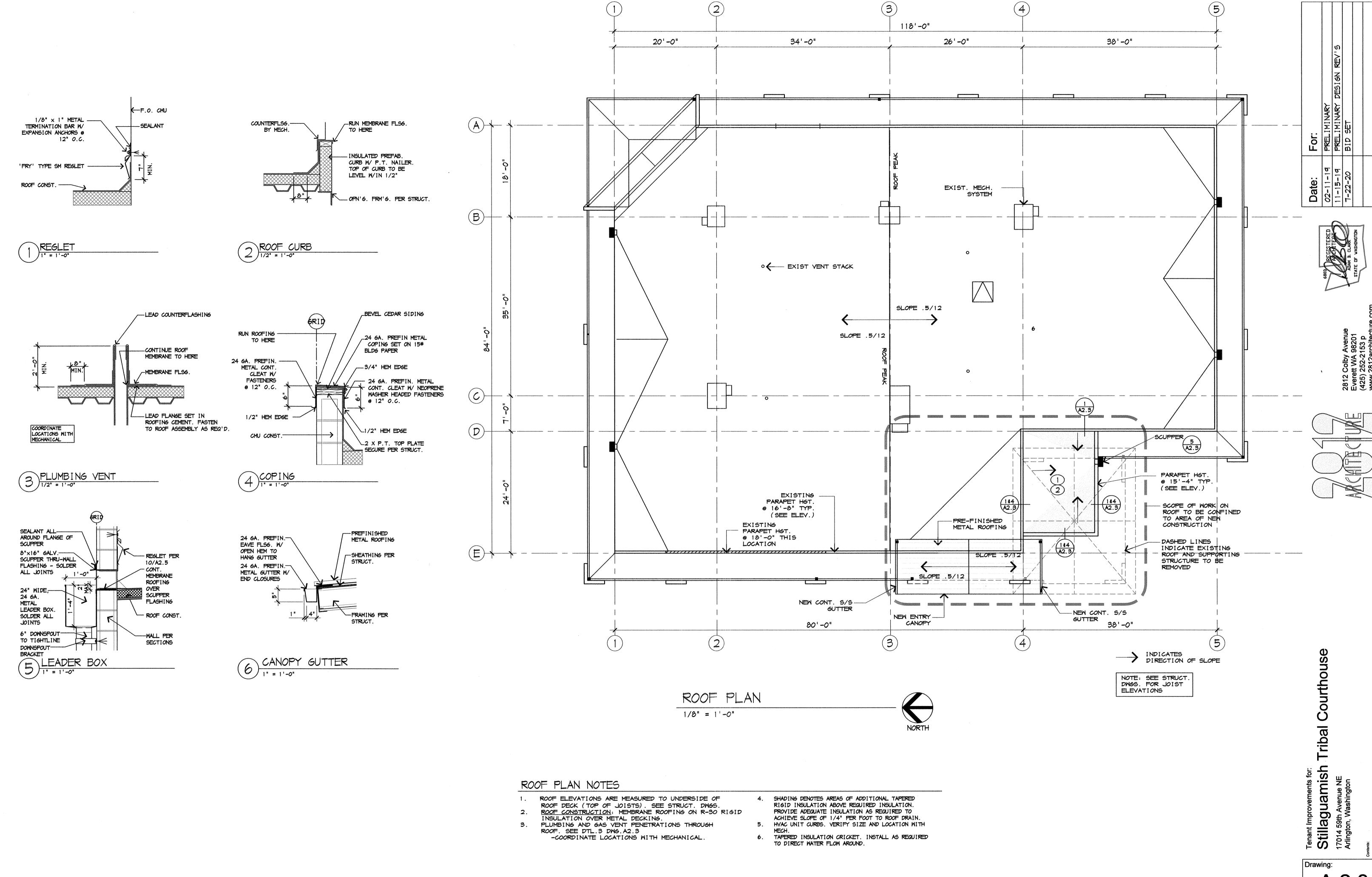




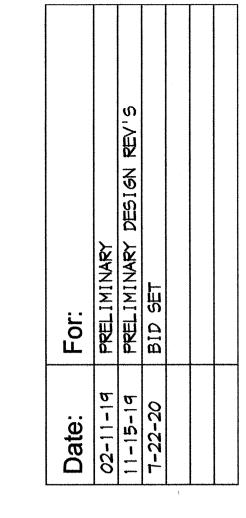


Stillaguamish - 17014 59th Avenue NE Arlington, Washington

Drawing:







ELEVATION NOTES

1. 8 X 8 X 16 SPLIT FACE CMU. COLOR C-2. 2. 8 X 8 X 16 SMOOTH FACE CMU. COLOR C-1. 3. 8 X 8 X 16 SMOOTH FACE CMU. COLOR C-3.

4. 8 X 8 X 16 1 SCORE SMOOTH FACE CMU. COLOR C-3. ROOF LINE.

INSULATED METAL DOOR AND FRAME. MATCH COLOR C-4. METAL CANOPY PER STRUCTURAL. PAINT COLOR C-4. CONT. STAINLESS STEEL GUTTER.

9. STAINLESS STEEL SCUPPER, SEE DET. .

10. 1" INSULATED GLASS IN NATURAL ANODIZED ALUMINUM STOREFRONT FRAMING. SEE WALL SECTIONS. PROVIDE 1"

INSULATED SAFETY GLASS WHERE SHOWN. 11. STOREFRONT ENTRY DOOR. COLOR TO MATCH STOREFRONT FRAMING.
SEE DOOR SCHEDULE.
12. PREFINISHED METAL ROOFING. COLOR C-4.

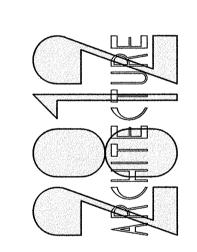
13. PREFINISHED METAL COPING. COLOR C-4.

14. STUCCO FINISH OVER GYPSUM SHEATHING- COLOR C-5. 15. PREFINISHED METAL EAVE. COLOR C-4.

16. PREFINISHED METAL SOFFIT. COLOR C-4.
17. METAL TRUSS- PAINT C-4

ELEVATION COLORS

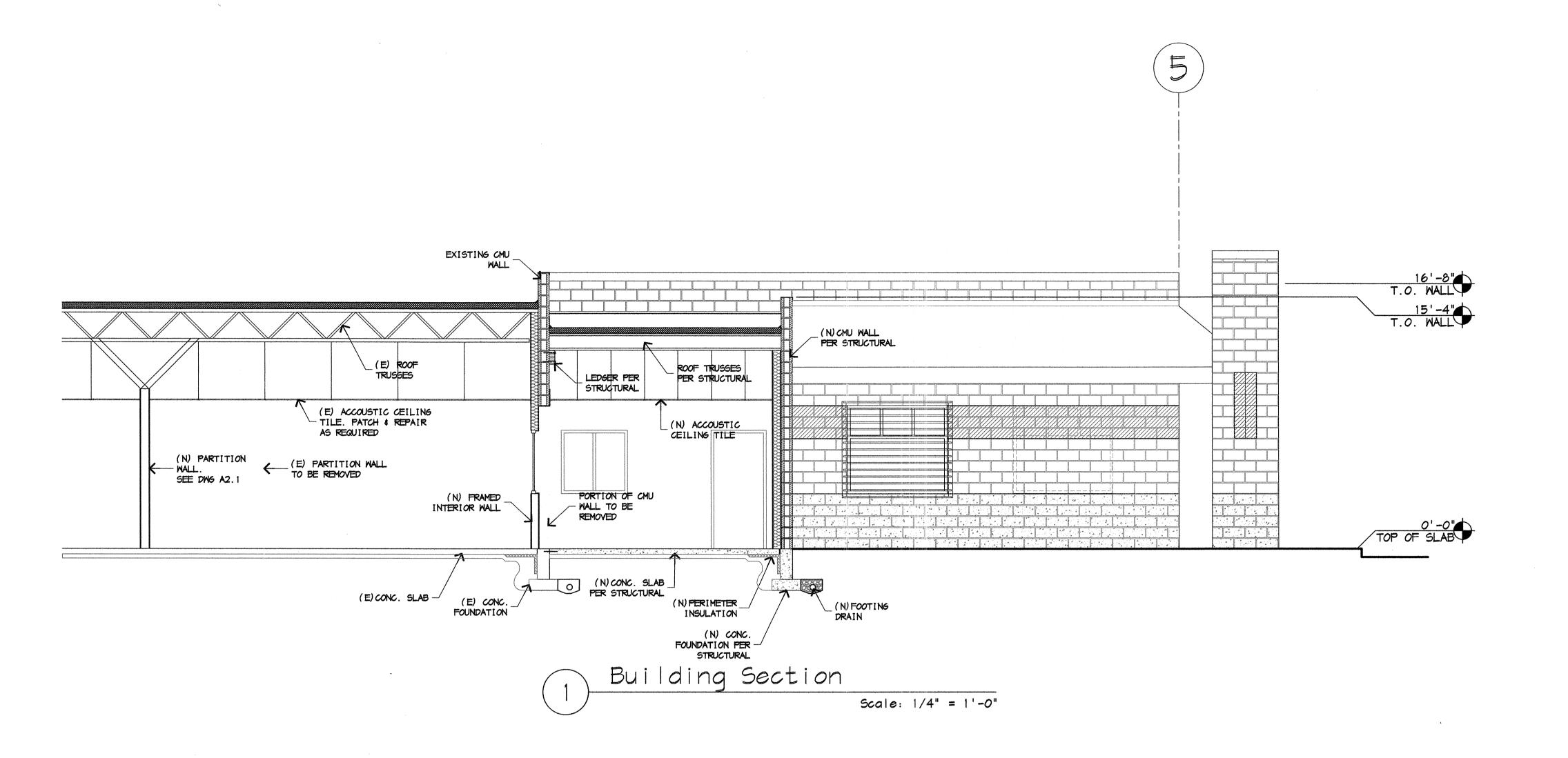
C-1 "MUTUAL MATERIALS" COCOA
C-2 "MUTUAL MATERIALS" MOUNTAIN BROWN
C-3 "MUTUAL MATERIALS" NATURAL
C-4 "AEP SPAN" COOL METALLIC SILVER

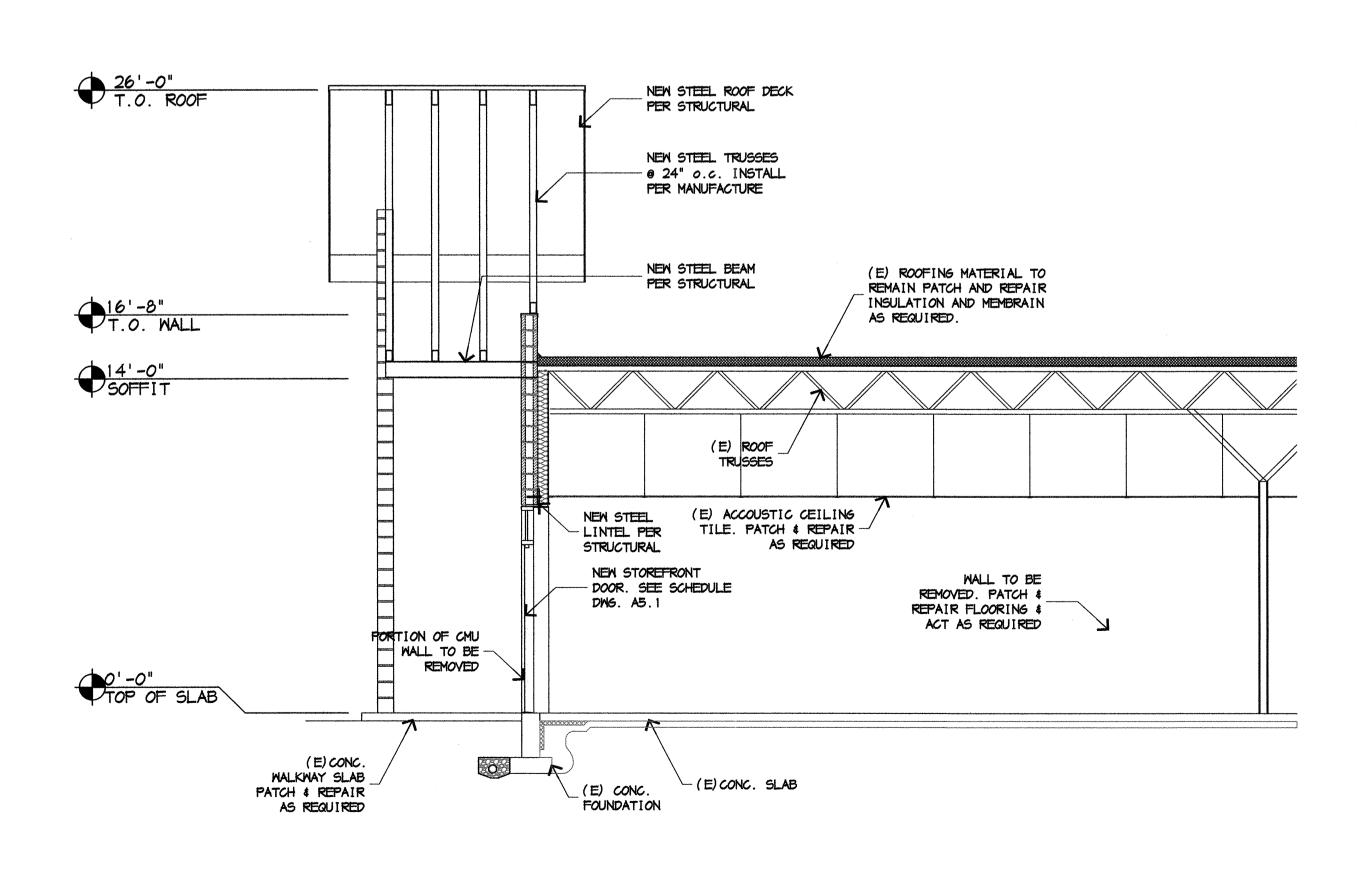


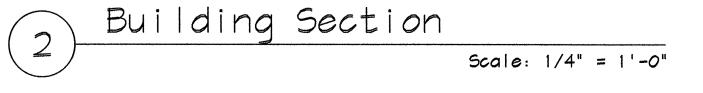
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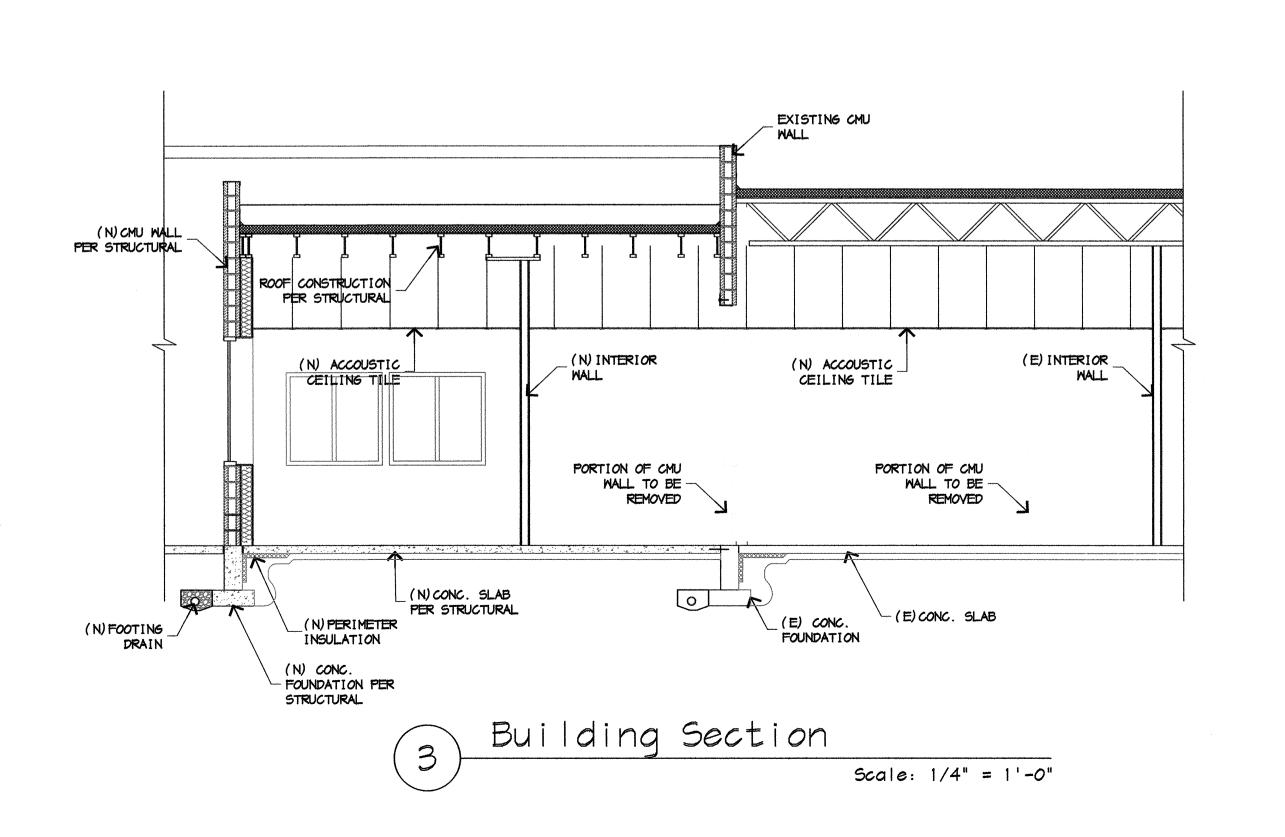
Stillaguamish
17014 59th Avenue NE
Arlington, Washington

A 3.1







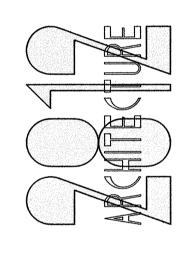


Date: For:

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11-15-19 PRELIMINARY DESIGN REV'S
7-22-20 BID SET



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Tenant Improvements for:

Stillaguamish Tribal Courthouse
17014 59th Avenue NE
Arlington, Washington

Drawing:

A4.1

Job Number: 17c-3827

	DOOR SCHEDULE										
D00R #	DOOR SIZE (W X H)	DOOR TYPE	JAMB TYPE	H.W. GROUP	FIRE RATING	NOTES (1) (2) (3)					
101A	3'-0" X 7'-0"	Α	I	1	***	NOTE: 4,5					
1 <i>0</i> 1B	3'-0" × 7'-0"	C	III	4	-	-					
1 <i>0</i> 2A	3'-0" × 7'-0"	C	III	5	odda.	-					
1 <i>0</i> 3A	3'-0" X 7'-0"	C	III	4	••	-					
1 <i>0</i> 3B	3'-0" × 7'-0"	C	III	4	•	-					
1 <i>0</i> 4A	3'-0" X 7'-0" PAIR	C	III	6	-	NOTES: 6					
1 <i>0</i> 5A	3'-0" X 7'-0" PAIR	A	I	2		NOTES: 4,5					
1 <i>0</i> 6A	3'-0" X 7'-0"	C	III	5	-	NOTES: 6					
1 <i>0</i> 8A	3'-0" X 7'-0"	В	ΙΙ	3	algorito.	ndo					
1 <i>08</i> B	3'-0" X 7'-0"	C	III	4	-	-					
1 <i>0</i> 9A	3'-0" X 7'-0"	C	III	4	-	-					
1 <i>0</i> 9B	3'-0" X 7'-0"	C	III	4	-						
113A	3'-0" X 7'-0"	C	III	5							
138A	3'-0" X 7'-0"	C	III	5		-					
140A	3'-0" X 7'-0"	C	III	5		-					
140B	3'-0" × 7'-0"	C	III	5		-					

DOOR NOTES

DOOR TYPES

-INSULATED

Δ N N N

A

SAFETY GLASS

- 1. ALL HARDWARE FINISHES TO BE US26D.
- 2. FURNISH DOOR STOPS AS REQUIRED AT ALL DOORS.
- 3. PROVIDE LEVER HANDLES ON ALL LOCKSETS AND LATCHSETS.
- 4. ALL PANIC HARDWARE TO BE INSTALLED 30"-44" A.F.F
- 5. ADA EXIT SIGNAGE WITH TACTILE LETTERS AND BRAILLE MOUNTED ON LATCH SIDE OF SINGLE DOOR OR RIGHT OF R.H. DOOR AT ACTIVE DOUBLE DOORS. WHERE THERE IS NO WALL SPACE ON LATCH SIDE OF SINGLE DOOR OR RIGHT SIDE OF DOUBLE DOORS, SIGN SHALL BE ON THE NEAREST ADJACENT WALL. EXCEPTION: DOOR MOUNTED SIGN PERMITTED ON PUSH SIDE OF DOOR W/ CLOSER WITHOUT HOLD OPEN DEVICE. RE: FIXTURE HEIGHT SCHEDULE ON DWG. A5.1.

-SAFETY GLASS

VISION LITE

WHERE NOTED

ON SCHED.

INSULATED HOLLOW

METAL DOOR MAX. U=0.37

6. VISION LITE SIZE TO BE DETERMINED BY OWNER.

HARDWARE GROUPS

- 1. PIVOTS AS REQUIRED
 - 1 LOCKSET 1 PUSH BAR PANIC DEVICES
 - 1 CLOSERS (SIZE TO SUIT DOORS)
 - 1 PULL HANDLES WEATHERSTRIPPING & SWEEP THRESHOLD (FULL WIDTH OF OPENING)
- 2. PIVOTS AS REQUIRED
- 1 LOCKSET
 - 2 PUSH BAR PANIC DEVICE 2 CLOSERS (SIZE TO SUIT DOORS) WEATHERSTRIPPING & SWEEP
 - THRESHOLD (FULL WIDTH OF OPENING)
- 3. 1 1/2 PAIR BUTTS
- 1 LOCKSET 1 CLOSER (SIZE TO SUIT DOOR)
- 1 KICKPLATE (PUSH SIDE OF DOOR) WEATHERSTRIPPING & SWEEP
- THRESHOLD (FULL WIDTH OF OPENING)
- 1 LOCKSET 1 CLOSER (SIZE TO SUIT DOOR)
- 5. 1 1/2 PAIR BUTTS 1 LOCKSET

4. 1 1/2 PAIR BUTTS

- 6. 3 PAIR BUTTS
- 1 LOCKSET FLUSHBOLTS (INACTIVE LEAF) ASTRAGAL

·				FIN	ISH S	CHEDL	JLE				
ROOM #	ROOM NAME	FLOOR	BASE		MAI	LS	*	MAINSCOT	CEILING	CEILING	NOTES (1) TYP
10011	NOOTI TATIL	I LOOK	DAGE	NORTH	EAST	SOUTH	WEST	William		HEIGHT	110123
101	LOBBY	F-2	B-1	W-1	W-1	W-1	W-1		C-1,2	pins suin	NOTE: 2,3
102	OBSERVATION ROOM	F-1	B-1	W-1	W-1	W-1	W-1	acces salars	C-1,2	mailte morpe	NOTE: 2,3
103	HALLWAY	F-3	B-1	1	W-1	W−1	M-1		C-1,2	matrix matrix	NOTE: 2,3
104	SHARED FR & ICM	F-1	B-1	W-1	W-1	W-1	M-1		C-1,2		NOTE: 2,3
1 <i>0</i> 5	WAITING	F-3	B-1	W-1	W-1	W-1	M-1		C-1,2	mile cities	NOTE: 2,3
106	BALIFF	F-1	B-1	W-1	W-1	W-1	M-1		C-1	8'-0"	NOTE: 2,3
107	DEF. ATTORNEY	F-1	B-1	W-1	W-1	W-1	W-1		C-2		NOTE: 2,3
108	HOLDING ROOM	F-1	B-1	W-1	W-1	W-1	M-1		C-2		NOTE: 2,3
109	COURT ROOM	F-1	B-1	W-1	W-1	W-1	W-1	-	C-1,2		NOTE: 2,3
110	PROS. ATTORNEY	F-1	B-1	W-1	W-1	W-1	W-1		C-2		NOTE: 2,3
112	FILE ROOM	F-1	B-1	W-1	W-1	W-1	W-1		C-1,2		NOTE: 2,3
113	CLERK	F-1	B-1	W-1	W-1	W-1	W-1		C-1,2		NOTE: 2,3
121	F.R.	F-1	B-1	W-1	W-1	M-1	W-1	4444 1464	C-2	***	able sum
122	OFFICE	F-1	B-1	W-1	W-1	M-1	W-1	appe appe	C-2		ngan and
125	JANITOR CLOSET	F-4	B-1	W-2	W-2	W-2	W-2	WC-1	C-5		NOTE: 6
138	ENTRY	F-3	B-1	W-1	W-1	W-1	W-1		C-1,2	capina capina	NOTE: 2,3
139	HALLWAY	F-3	B-1	W-1	W-1	W-1	W-1		C-1,2	***	NOTE: 2,3
140	HALLWAY	F-3	B-1	W-1	W-1	W-1	M-1		C-1,2		NOTE: 2,3
141	HALLWAY	F-3	B-1	W-1	W-1	W-1	W-1		C-1,2		NOTE: 2,3

ALUM. EDGE TRIM @ ALL

EXPOSED EDGES

MAINSCOT

FINISH MATERIALS

WALL FINISHES FLOOR MATERIALS F-1 CARPET TILE

- EGGSHELL ENAMEL SEMI-GLOSS ENAMEL WC-1 4'-0" PLASTIC LAMINATE 2.
- F-2 VINYL COMPOSITE TILE W-2 F-3 QUARRY TILE
- F-4 SEALED CONCRETE
- F-5 SEALED PLYWOOD C-1 ACOUSTIC CEILING TILE
- C-2 EXISTING TO REMAIN C-3 SEMI-GLOSS ENAMEL BASE MATERIALS
- C-4 EXPOSED FRAMING B-1 4" VINYL BASE
- B-2 COVE FLOORING 6" UP C-5 PATCH & REPAIR TO MATCH EXISTING

CC GLASS STOPPED IN WOOD FRAME

FINISH NOTES

- 1. ALL WOOD DOORS AND FRAMES TO BE STAINED. ALL METAL DOORS AND FRAMES TO BE PAINTED.
- REUSE EXISTING CEILING TILE & GRID AS FEASIBLE. SEE REFLECTED CEILING PLAN DWG. A2.3

SEE DET. 1 DWG. A2.2 FOR SUSPENDED ACOUSTICAL

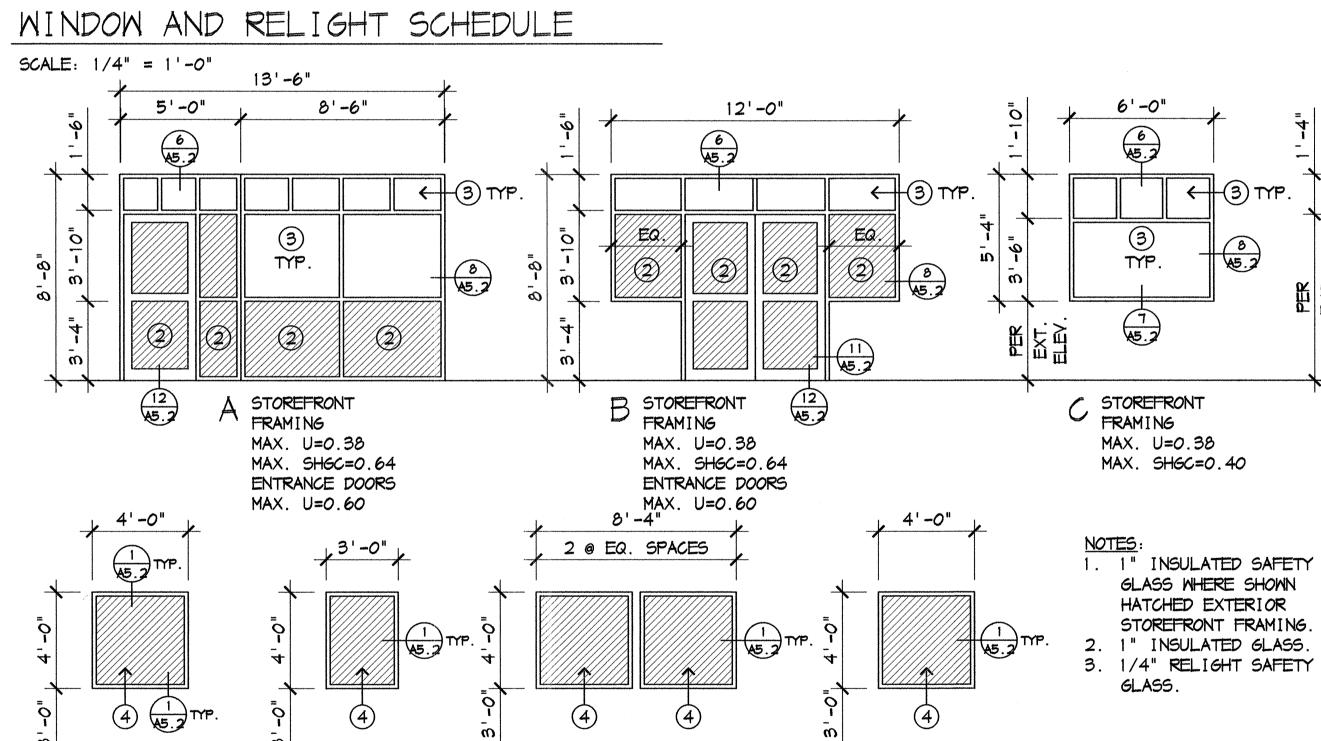
- CEILING SEISMIC BRACING.
- 4. CONSTRUCT CLG. PER STRUCT. W/ 5/8" GWB ATTACHED TO UNDERSIDE OF JOISTS OR STRUCTURE ABOVE.
- 5. CONSTRUCT CLG. W/ 600S125-33 METAL JOISTS @ 16" O.C. W/ 5/8" GMB ATTACHED TO UNDERSIDE OF JOISTS.
- 6. USE WATER RESISTANT GWB AT ALL WALLS WITHIN THIS
- SPACE. SEE FLOOR PLAN FOR LOCATION OF INTERIOR ELEVATIONS.
- 8. PAINT ALL GNB WALLS WITHIN THIS SPACE.
- 9. INSTALL BASE AT ALL WALLS WITH GMB WITHIN THIS
- SPACE.

12'-0"

D STOREFRONT FRAMING

MAX. U=0.38

MAX. SHGC=0.40

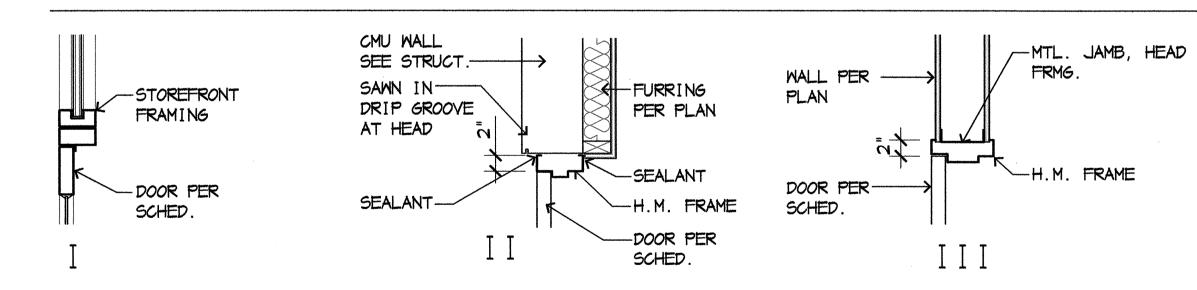


DD GLASS STOPPED IN WOOD FRAME

JAMB TYPES

STOREFRONT ENTRY

DOOR MAX. U=0.60



SOLID CORE

WOOD DOOR

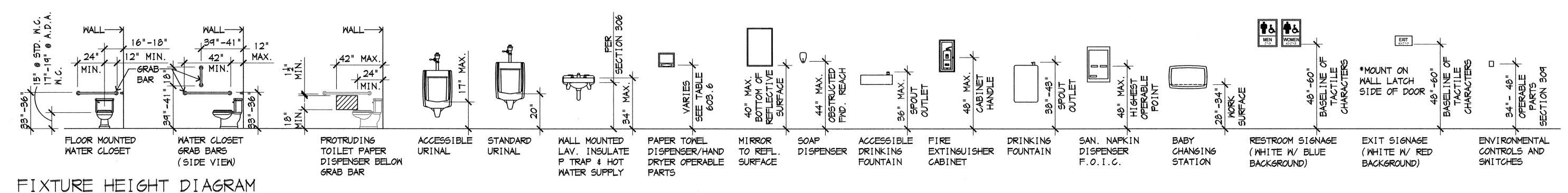
SAFETY GLASS

VISION LITE

WHERE NOTED

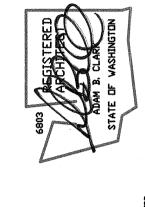
ON SCHED.

NOTE: FOR TABLE AND SECTION REFERENCES SEE ICC A117.1-2009



BB GLASS STOPPED IN WOOD FRAME

AA GLASS STOPPED IN WOOD FRAME

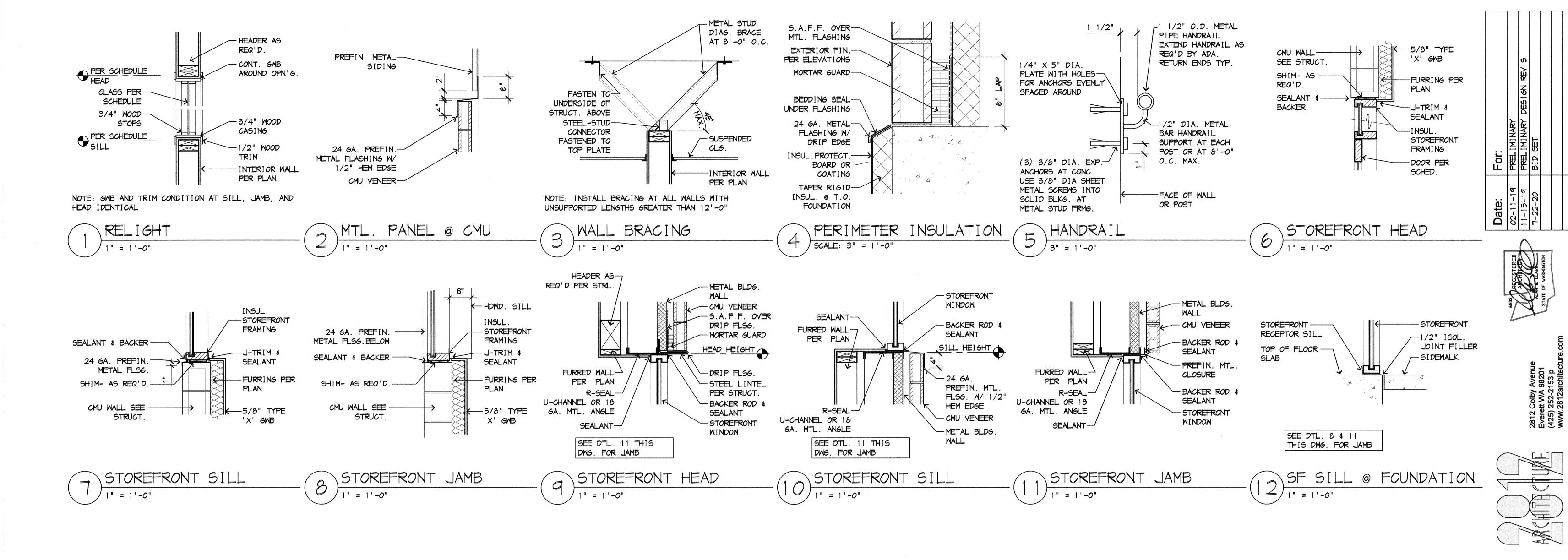


Tenant Improvements 101.

Stillaguamish 7

Drawing:

A5.1



Stillaguamish Tribal Courthouse
17014 59th Avenue NE
Arlington, Washington

Drawing: A5.2

CRITERIA

- ALL MATERIALS, MORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, THE 2015 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC)
- 2. DESIGN LOADING CRITERIA

ROOF SNOW LOAD 25 PSF

ANALYSIS PROCEDURE: ASCE 7-10 CHAPTER 27 "PART II - ENCLOSED SIMPLE DIAPHRAGM" MIND

RISK CATEGORY II 110 MPH

EXPOSURE "B"

TOPOGRAPHIC FACTOR Kzt = 1.0

EARTHQUAKE ANALYSIS PROCEDURE: IBC "EQUIVALENT LATERAL FORCE PROCEDURE"

> SEISMIC DESIGN CATEGORY (SDC) = D RISK CATEGORY = II

> > SEISMIC SITE CLASS = D

IMPORTANCE FACTOR le = 1.0

MAPPED MCE Ss = 1.37; S₁ = 0.53DESIGN ACCELERATION Sds = 0.91; Sd, = 0.53

SEISMIC RESISTING SYSTEM: ORDINARY REINFORCED CMU WALL, R = 2

SEE PLANS FOR ADDITIONAL LOADING CRITERIA

- 3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- 4. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED.
- 5. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.
- 6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THEIR WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES OF THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.
- . CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
- 8. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED. SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER. WHERE INFORMATION ON THE DRAWINGS IS IN CONFLICT WITH THE SPECIFICATIONS, THE MORE STRINGENT SHALL APPLY, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER. DO NOT SCALE THE DRAWINGS.
- 9. ALL STRUCTURAL SYSTEMS WHICH ARE COMPOSED OF FIELD ERECTED COMPONENTS SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.
- IO. SHOP DRAWINGS FOR REINFORCING STEEL (FOR BOTH CONCRETE AND MASONRY CONSTRUCTION), STRUCTURAL STEEL, STEEL ROOF TRUSSES, AND ROOF METAL DECKING, SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS.
- SHOP DRAWING REVIEW: DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD, AND THEREFORE MUST BE VERIFIED BY THE CONTRACTOR. CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY ENGINEER OF RECORD. CONTRACTOR SHALL REVIEW DRAWINGS FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND ALL SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO. A MINIMUM OF TWO WEEKS SHALL BE ALLOWED FOR REVIEW.
- 12. <u>SPECIAL INSPECTION</u>: MASONRY CONSTRUCTION, STRUCTURAL STEEL FABRICATION AND ERECTION (INCLUDING FIELD WELDING AND HIGH-STRENGTH FIELD BOLTING), ROOF METAL DECK INSTALLATION, EXPANSION BOLTS AND THREADED EXPANSION INSERTS, AND EPOXY GROUTED INSTALLATIONS, SHALL BE SUPERVISED IN ACCORDANCE WITH IBC SECTIONS 1704 & 1705 AND THE PROJECT SPECIFICATIONS BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE OWNER. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE OWNER, ARCHITECT, STRUCTURAL ENGINEER, CONTRACTOR AND BUILDING OFFICIAL, ANY MATERIALS WHICH FAIL TO MEET PROJECT SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.

<u>GEOTECHNICAL</u>

13. FOUNDATION NOTES: ALLOWABLE SOIL PRESSURE AND LATERAL EARTH PRESSURE ARE ASSUMED AND THEREFORE MUST BE VERIFIED IN THE FIELD. IF SOILS ARE FOUND TO BE OTHER THAN ASSUMED, NOTIFY THE STRUCTURAL ENGINEER FOR POSSIBLE FOUNDATION REDESIGN.

FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED EARTH (CONTROLLED, COMPACTED STRUCTURAL FILL OR BOTH) AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS (OR IN DETAILS) ARE MINIMUM AND FOR GUIDANCE ONLY; THE ACTUAL ELEVATIONS OF FOOTINGS MUST BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD. UNLESS OTHERWISE NOTED, FOOTINGS SHALL BE CENTERED UNDER COLUMNS OR WALLS ABOVE.

BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING, GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE.

THE STRUCTURAL DESIGN IS BASED ON THE FOLLOWING ASSUMED VALUES:

ALLOWABLE SOIL PRESSURE 1,500 PSF PASSIVE SOIL PRESSURE 350 PCF SOIL COEFFICIENT OF FRICTION 0.35 120 PCF SOIL DENSITY

RENOVATION

- 14. <u>DEMOLITION:</u> VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING ANY DEMOLITION. SHORING SHALL BE INSTALLED TO SUPPORT EXISTING CONSTRUCTION AS REQUIRED AND IN A MANNER SUITABLE TO THE WORK SEQUENCES. EXISTING REINFORCING SHALL BE SAVED WHERE AND AS NOTED ON THE PLANS. SAW CUTTING, IF AND WHERE USED, SHALL NOT CUT EXISTING REINFORCING THAT IS TO BE SAVED. DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURE. LIMIT CONSTRUCTION LOADING (INCLUDING DEMOLITION DEBRIS) ON EXISTING FLOOR SYSTEMS TO 40 PSF.
 - A. ALL NEW OPENINGS THROUGH EXISTING WALLS, SLABS AND BEAMS SHALL BE ACCOMPLISHED BY SAW CUTTING WHEREVER POSSIBLE
 - B. VERIFY ALL EXISTING CONDITIONS AND LOCATION OF MEMBERS PRIOR TO CUTTING ANY OPENINGS.
 - C. SMALL ROUND OPENINGS SHALL BE ACCOMPLISHED BY CORE DRILLING, IF POSSIBLE.
 - D. WHERE NEW REINFORCING TERMINATES AT EXISTING CONCRETE, REBAR DOWELS EPOXIED INTO THE EXISTING CONCRETE SHALL BE PROVIDED TO MATCH HORIZONTAL REINFORCING, UNLESS OTHERWISE NOTED ON PLANS.

CONCRETE

17. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 301. CONSTRUCTION TOLERANCES SHALL NOT EXCEED THOSE LISTED IN ACI 117. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF F'C = 2,500 PSI AND MIX SHALL CONTAIN NOT LESS THAN 5-1/2 SACKS OF CEMENT PER CUBIC YARD AND SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 5" OR LESS (BEFORE THE ADDITION OF ADMIXTURES). THE WATER/CEMENT RATIO SHALL NOT EXCEED 0.55 FOR FOOTINGS AND 0.45 FOR ALL SLABS AND EXPOSED CONCRETE UNLESS OTHERWISE NOTED. EXCEPT FOR FOOTINGS AND SLAB ON GRADE, AGGREGATE SIZE SHALL NOT EXCEED

THE MINIMUM AMOUNT OF CEMENT AND THE MAXIMUM SLUMP MAY BE CHANGED IF A CONCRETE PERFORMANCE MIX IS SUBMITTED TO THE STRUCTURAL ENGINEER AND THE BUILDING DEPARTMENT FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. (THE W/C RATIO LIMITS STILL APPLY). THE PERFORMANCE MIX SHALL INCLUDE THE AMOUNTS OF CEMENT, CEMENTITIOUS MATERIAL, FINE AND COARSE AGGREGATE, WATER AND ADMIXTURES AS WELL AS THE WATER CEMENT RATIO. SLUMP, CONCRETE YIELD AND SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH ACI 301. CHEMICAL ADMIXTURES AND FLY ASH SHALL CONFORM TO ASTM C494 AND C618 RESPECTIVELY. FLY ASH PERCENTAGE OF TOTAL CEMENTITIOUS MATERIAL SHALL NOT EXCEED 20%. THE USE OF A PERFORMANCE MIX REQUIRES BATCH PLANT INSPECTION, THE COST OF WHICH SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER. REVIEW OF MIX SUBMITTALS BY THE ENGINEER OF RECORD INDICATES ONLY THAT INFORMATION PRESENTED CONFORMS GENERALLY TO CONTRACT DOCUMENTS. CONTRACTOR MAINTAINS FULL RESPONSIBILITY FOR SPECIFIED PERFORMANCE.

ALL CONCRETE WITH SURFACES EXPOSED TO STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260. TOTAL AIR CONTENT FOR FROST-RESISTANT CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318-14 TABLE 19.3.3.1. ALL CONCRETE EXPOSED TO THE WEATHER AND SLABS-ON-GRADE SHALL OBTAIN A 28-DAY STRENGTH I'C OF 3,000 PSI IN ACCORDANCE WITH ACI 318 TABLE 19.3.2.1 AND IBC SECTION 1904.1. THIS INCREASE IN REQUIRED STRENGTH IS FOR DURABILITY ONLY (SPECIAL INSPECTION IS NOT REQUIRED). ALL CONCRETE TO RECEIVE A STEEL TROWELED FINISH SHALL NOT BE AIR-ENTRAINED.

- 18. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT SI), GRADE 60, Fy = 60,000 PSI. EXCEPTIONS: ANY BARS SPECIFICALLY SO NOTED ON THE DRAWINGS AS GRADE 40 SHALL HAVE Fy = 40,000 PSI. GRADE 60 REINFORCING STEEL INDICATED ON DRAWINGS TO BE WELDED SHALL CONFORM TO ASTM A706. REINFORCING STEEL COMPLYING WITH ASTM A615 (SI) MAY BE WELDED ONLY IF MATERIAL PROPERTY REPORTS INDICATING CONFORMANCE WITH WELDING PROCEDURES SPECIFIED IN A.W.S. DI.4 ARE SUBMITTED.
- 19. REINFORCING STEEL SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH ACI 315 AND 318. LAP ALL CONTINUOUS REINFORCEMENT #5 AND SMALLER 60 BAR DIAMETERS, 2'-0" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS #5 AND SMALLER 60 BAR DIAMETERS OR 2'-0" MINIMUM. LAPS OF LARGER BARS SHALL BE MADE IN ACCORDANCE WITH ACI 318, CLASS B. PROVIDE (2) #4 MIN. U.N.O. TRIM BARS AROUND ALL OPENINGS IN CONCRETE WALLS OR SLABS EXTENDING 2'-6" PAST CORNERS, TYPICAL.

NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER. NO REINFORCING BARS SHALL BE "WET-SET" INTO THE CONCRETE.

20. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST EARTH FORMED SURFACES EXPOSED TO EARTH (i.e. WALLS BELOW GROUND) OR WEATHER SLABS AND WALLS (INTERIOR FACE)

21. NON-SHRINK GROUT SHALL BE NON-METALLIC CONFORMING TO ASTM CITOT AND BE FURNISHED BY AN APPROVED MANUFACTURER AND SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (5000) PSI MINIMUM).

ANCHORAGE

- 22. <u>EXPANSION BOLTS</u> INTO CONCRETE SHALL BE "KWIK BOLT TZ" EXPANSION ANCHORS AS MANUFACTURED BY HILTI CORP. INSTALLED IN STRICT ACCORDANCE WITH I.C.C. REPORT NO. ESR-1917 INCLUDING STANDARD EMBEDMENT REQUIREMENTS U.O.N. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED FOR REVIEW WITH I.C.C. OR IAPMO UES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. SPECIAL INSPECTION IS REQUIRED FOR ALL EXPANSION BOLT INSTALLATION.
- 23. EXPANSION BOLTS INTO GROUT FILLED CMU SHALL BE "KWIK BOLT 3" EXPANSION ANCHORS AS MANUFACTURED BY HILTI CORP. INSTALLED IN STRICT ACCORDANCE WITH I.C.C. REPORT NO. ESR-1385 INCLUDING STANDARD EMBEDMENT REQUIREMENTS U.O.N. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED FOR REVIEW WITH I.C.C. OR IAPMO UES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. SPECIAL INSPECTION IS REQUIRED FOR ALL EXPANSION BOLT INSTALLATION.
- 24. DRIVE PINS, SHOT PINS AND OTHER POWDER-ACTUATED FASTENERS SHALL BE LOW VELOCITY TYPE FASTENERS AS MANUFACTURED BY HILTI CORPORATION. WHEN CALLED FOR IN THE DRAWINGS, PROVIDE THE APPROPRIATE FASTENER AS NOTED IN THE TABLE BELOW FOR EACH GIVEN APPLICATION. INSTALL IN STRICT ACCORDANCE WITH I.C.C. REPORTS NO. ESR-2269 FOR THE X-U FASTENERS AND ESR-2379 FOR THE X-CP FASTENERS. MINIMUM EMBEDMENT IN CONCRETE SHALL BE I" UNLESS OTHERWISE NOTED. MAINTAIN AT LEAST 3" TO NEAREST CONCRETE EDGE AND 4" CENTER TO CENTER SPACING. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED FOR REVIEW WITH I.C.C OR JAPMO UES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES

ALLOWABLE APPLICATION	ALLOWABLE FASTENER TYPE	SHEAR CAPACITY (LBS,) TENSION CAPACITY (LBS)
LIGHT GAUGE STEEL 33 MILS (20 GA.) MIN. TO CONCRETE (2000 PSI MIN.)	X-U 27 P8 S15	190	165
LIGHT GAUGE STEEL 43 \$ 33 MILS (18 \$ 20 GA.) TO STRUCTURAL STEEL (3/16" MIN. TO 11/16" MAX)	X-U 19 P8 TH	445	360
LIGHT GAUGE STEEL 33 MILS (20 GA.) MIN. TO GROUTED CMU	X-U 32 P8 S15	220	225

- 25. EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) INTO CONCRETE SHALL BE INSTALLED USING "HIT-HY 200" AS MANUFACTURED BY HILTI CORP. INSTALL IN STRICT ACCORDANCE WITH I.C.C. REPORT NO. ESR-3187, INCLUDING STANDARD EMBEDMENT REQUIREMENTS, U.O.N. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED FOR REVIEW WITH I.C.C. OR IAPMO UES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED.
- 26. EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) INTO GROUT FILLED CMU SHALL BE INSTALLED USING "HIT HY 270" AS MANUFACTURED BY HILTI CORP. INSTALL IN STRICT ACCORDANCE WITH I.C.C. REPORT NO. ESR-4143, INCLUDING STANDARD EMBEDMENT REQUIREMENTS, U.O.N. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED FOR REVIEW WITH I.C.C. OR IAPMO UES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED.

MASONRY

27. CONCRETE MASONRY UNIT WALLS SHALL BE CONSTRUCTED OF MEDIUM WEIGHT UNITS CONFORMING TO ASTM C90. LAID IN A RUNNING BOND. CONTACT ENGINEER FOR RE-DESIGN OF REINFORCING WHERE STACK BOND LAYOUT IS REQUIRED. LINEAR SHRINKAGE SHALL NOT EXCEED 0.065%. MORTAR SHALL BE TYPE "S" IN ACCORDANCE WITH ASTM C270. GROUT SHALL CONFORM TO IBC REQUIREMENTS AND ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI AT 28 DAYS, DESIGN F'm = 2,000 PSI. FULL STRESSES ARE REQUIRED. STRENGTH SHALL BE VERIFIED BY THE UNIT STRENGTH METHOD IN ACCORDANCE WITH TMS 602-13.

UNLESS NOTED OTHERWISE, PROVIDE THE FOLLOWING REINFORCEMENT:

MALL THICKNESS VERTICAL BARS HORIZONTAL BARS

8" WALLS #4 @ 24" O.C. (2) #4 @ 48" O.C.

IN ADDITION, PROVIDE (2) #4 VERT. AT EACH SIDE OF OPENINGS, AT WALL CORNERS AND INTERSECTIONS AND AT FREE ENDS OF WALLS AND (2) #4 HORIZ. AT ELEVATED ROOF LEVELS, AT TOPS OF WALLS AND ABOVE AND BELOW ALL OPENINGS. ALL HORIZONTAL REINFORCEMENT SHALL BE PLACED IN BOND BEAMS. EXTEND REINFORCEMENT AROUND OPENINGS 2'-O" BEYOND FACE OF OPENING. IF 2'-O" IS UNAVAILABLE, EXTEND AS FAR AS POSSIBLE AND HOOK. PROVIDE CORNER BARS TO LAP HORIZONTAL REINFORCING AT CORNERS AND INTERSECTIONS. UNLESS NOTED OTHERWISE, LAP ALL REINFORCING STEEL IN CMU 48 BAR DIAMETERS, 2'-O" MINIMUM.

ALL CELLS ARE TO BE SOLID GROUTED. ALL REINFORCEMENT SHALL BE IN PLACE PRIOR TO GROUTING AND SHALL BE HELD AT TOP, BOTTOM AND 192 BAR DIAMETERS (MAX.) O.C. PER ACI 530.1, GROUT POURS SHALL NOT EXCEED 5'-4" IN HEIGHT UNLESS A TEST PANEL IS CONSTRUCTED BY THE MASON AND APPROVED BY THE STRUCTURAL ENGINEER. PROVIDE CLEANOUT HOLES AT BOTTOM OF ALL CELLS CONTAINING REINFORCEMENT FOR ALL GROUT POURS OVER 5'-4" IN HEIGHT. PROVIDE I 1/2 IN. GROUT KEYS BETWEEN EACH POUR.

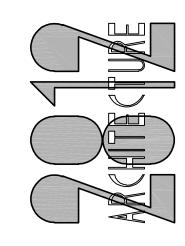
STEEL

- 28. STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON THE LATEST EDITIONS OF THE A.I.S.C. SPECIFICATIONS AND CODES:
 - A. AISC STEEL CONSTRUCTION MANUAL, 14TH EDITION
 - B. CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES
 - C. RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS.

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GENERAL STRUCTURAL NOTES

(The following apply unless shown otherwise on the plans)

30. <u>STRUCTURAL STEEL</u>, WIDE FLANGE (W AND WT) SHAPES SHALL CONFORM TO ASTM A992, Fy = 50 KSI; ALL OTHER ROLLED SHAPES SHALL CONFORM TO ASTM A36, Fy = 36 KSI. STEEL PLATE SHALL CONFORM TO ASTM A36, Fy = 36 KSI. STEEL PIPE SHALL CONFORM TO ASTM A53, TYPE E OR S, GRADE B, Fy = 35 KSI. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B, Fy = 46 KSI. CONNECTION BOLTS SHALL CONFORM TO ASTM A325 ANCHOR BOLTS SHALL CONFORM TO ASTM F1554 GRADE 36, Fy = 36 KSI.

STEEL BEAMS ARE EQUALLY SPACED BETWEEN DIMENSIONED POINTS. ALL STEEL ANCHORS AND TIES AND OTHER MEMBERS EMBEDDED IN CONCRETE OR MASONRY SHALL BE LEFT UNPAINTED. ALL STEEL TO BE FIREPROOFED SHALL BE LEFT UNPAINTED. ALL OTHER STEEL SHALL HAVE ONE COAT OF APPROVED SHOP PAINT.

STRUCTURAL STEEL AND CONNECTIONS EXPOSED TO WEATHER OR EARTH SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN COMPLIANCE WITH ASTM A123. GALVANIZE BOLTS AND SIMILAR THREADED FASTENERS EXPOSED TO MEATHER OR EARTH IN ACCORDANCE WITH ASTM A153. ALL FIELD MELDS EXPOSED TO MEATHER OR EARTH SHALL BE COATED WITH BRUSH APPLIED ZINC RICH PAINT COMPLYING WITH ASTM A780 (Z.R.C. OR EQUIVALENT).

A MINIMUM OF TWO BOLTS ARE REQUIRED FOR ALL CONNECTIONS. ALTERNATE CONNECTIONS TO THOSE SHOWN ON THESE DRAWINGS WILL REQUIRE PRIOR APPROVAL OF THE ENGINEER.

ALL MEMBERS ARE TO BE ERECTED WITH THE NATURAL MILL CAMBER OR INDUCED CAMBER UP, UNLESS OTHERWISE NOTED ON THE DRAWINGS. BEAM CAMBER ON THE DRAWINGS IS THE UPWARD CAMBER REQUIRED IN THE BEAM AS DELIVERED TO THE JOBSITE. CONTRACTOR TO CONSIDER CAMBER LOSS, IF ANY, DUE TO SHIPPING AND HANDLING.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ERECTION AIDS AND JOINT PREPARATIONS THAT INCLUDE, BUT ARE NOT LIMITED TO, ERECTION ANGLES, LIFT HOLES, AND OTHER AIDS, WELDING PROCEDURES, REQUIRED ROOT OPENINGS, ROOT FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPES, SURFACE ROUGHNESS VALUES AND UNEQUAL PARTS.

- 31. ALL A325 CONNECTION BOLTS SHALL BE INSTALLED TO THE SNUG-TIGHT CONDITION PER RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS. ALL NUTS SHALL CONFORM TO ASTM A563. ALL WASHERS SHALL CONFORM TO ASTM F436 OR ASTM F959 TYPE 325. ALL BOLT HOLES SHALL BE STANDARD SIZE UNLESS OTHERWISE NOTED.
- 32. <u>ALL_WELDING</u> SHALL BE IN CONFORMANCE WITH A.I.S.C. AND A.W.S. STANDARDS AND SHALL BE PERFORMED BY M.A.B.O. CERTIFIED WELDERS USING ETO XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY A.W.S.) SHALL BE USED. WELDING OF GRADE 60 REINFORCING BARS (IF REQUIRED) SHALL BE PERFORMED USING LOW HYDROGEN ELECTRODES. WELDING OF GRADE 40 REINFORCING BARS (IF REQUIRED) SHALL BE PERFORMED USING ETOXX ELECTRODES. WELDING WITHIN 4" OF COLD BENDS IN REINFORCING STEEL IS NOT PERMITTED. SEE REINFORCING NOTE FOR MATERIAL REQUIREMENTS OF WELDED BARS. ALL WELDING OF STAINLESS STEEL SHALL USE E309 ELECTRODES WITH A GMAW PROCESS. ALL WELDING SHALL BE PERFORMED BY WELDERS WITH AWS / W.A.B.O. CERTIFICATION WITH THE MATERIAL AND METHOD REQUIRED.

SHOP DRAWINGS SHALL SHOW ALL WELDING WITH AWS A2.4 SYMBOLS. WELDS SHOWN ON DRAWINGS ARE MINIMUM SIZES. INCREASE WELD SIZE TO AWS MINIMUM SIZES BASED ON PLATE THICKNESS. MINIMUM WELDING SHALL BE 3/16-INCH. THE WELDS SHOWN ARE FOR THE FINAL CONNECTIONS. FIELD WELD ARROWS ARE SHOWN WHERE A FIELD WELD IS REQUIRED BY THE STRUCTURAL DESIGN; THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING IF A WELD SHOULD BE SHOP OR FIELD WELDED IN ORDER TO FACILITATE THE STRUCTURAL STEEL DELIVERY AND ERECTION.

33. OPEN WEB STEEL JOISTS (INCLUDING BRIDGING) SHALL CONFORM TO IBC SECTION 2207 AND THE SPECIFICATIONS OF THE STEEL JOIST INSTITUTE (SJI), LATEST EDITION, FOR THE JOIST SERIES DESIGNATED ON THE PLANS AND THE LOADING BELOW (EXCEPT AS SHOWN ON THE LOAD DIAGRAMS DESIGNATED ON THE PLANS):

> LIVE (SNOW) LOAD 25 PSF 10<u>PSF</u> DEAD LOAD 35 PSF TOTAL LOAD

NET WIND UPLIFT (ENCLOSED BUILDINGS) 15 PSF NET WIND UPLIFT (OPEN ROOF / OVERHANGS) 20 PSF

MAXIMUM TOTAL DEFLECTION SHALL BE LESS THAN OR EQUAL TO L/240 OF THE TOTAL SPAN AND MAXIMUM LIVE LOAD DEFLECTION SHALL BE LESS THAN OR EQUAL TO L/360 OF THE TOTAL SPAN. PROVIDE ADDITIONAL TRUSSES (AS REQUIRED) TO CARRY ALL CONCENTRATED LOADS AND MECHANICAL UNITS.

ENDS OF BRIDGING ROWS SHALL BE FIELD WELDED TO STRUCTURAL STEEL MEMBERS OR TO PLATES EMBEDDED IN CONCRETE OR MASONRY UNLESS DETAILED OTHERWISE. JOIST MANUFACTURER SHALL CHECK ROOF JOIST AND PROVIDE UPLIFT BRIDGING AS REQUIRED TO ADEQUATELY BRACE THE BOTTOM CHORD AGAINST LATERAL MOVEMENT UNDER WIND UPLIFT PRESSURES (SEE DESIGN CRITERIA NOTE FOR WIND CRITERIA). JOIST BOTTOM CHORD EXTENSIONS AND TOP CHORD ERECTION BOLT HOLES SHALL BE PROVIDED AT ALL COLUMNS TO MEET OSHA REQUIREMENTS.

THE JOIST MANUFACTURER SHALL BE A MEMBER OF THE SJI AND SHALL FURNISH TO THE BUILDING OFFICIAL A CERTIFICATE INDICATING COMPLIANCE WITH IBC SECTION 2207 AND WHICH ALSO IDENTIFIES THE JOISTS DELIVERED FOR THIS SPECIFIC PROJECT.

DETAILED DRAWINGS INDICATING CHORD AND WEB SIZES AND ALL CONNECTIONS SHALL BE SUBMITTED FOR EACH JOIST TYPE TO THE ENGINEER OF RECORD FOR REVIEW PRIOR TO FABRICATION.

- 34. JOIST MANUFACTURER'S NOTE: THE JOIST CONFIGURATIONS, INCLUDING SPACING, DEPTH AND MEMBER SIZES SHOWN ON THE DRAWINGS, INDICATE THE DESIRED JOIST CONFIGURATIONS AND ARE TO BE COMPLIED WITH WHEREVER POSSIBLE. IF A JOIST MANUFACTURER IS UNABLE TO MEET THE LOAD REQUIREMENTS SPECIFIED WITH THE TRUSS CONFIGURATION INDICATED, THE MANUFACTURER IS TO SUBMIT WRITTEN NOTICE TO THAT AFFECT TO THE ARCHITECT PRIOR TO SUBMITTING A COST PROPOSAL OR BID.
- IF A DIFFERENT SYSTEM IS PROPOSED THAT REQUIRES REVISIONS TO PRESENT STRUCTURAL FRAMING OR DETAILS. SUCH SYSTEM SHALL BE CONSIDERED SUBJECT TO THE APPROVAL OF THE OWNER, ARCHITECT, AND STRUCTURAL ENGINEER.
- IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND JOIST MANUFACTURER TO VERIFY THE WEIGHT AND LOCATIONS OF ALL MECHANICAL EQUIPMENT PRIOR TO SUBMITTING SHOP DRAWINGS. IT SHALL BE NOTED IN THE JOIST MANUFACTURER'S BID WHETHER OR NOT AN ALLOWANCE HAS BEEN MADE FOR MECHANICAL UNITS.

JOIST SHOP DRAWINGS WILL NOT BE REVIEWED WITHOUT CALCULATIONS STAMPED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF WASHINGTON.

- 35. METAL ROOF DECKING PROVIDE SIZE, TYPE, GAUGE, AND ATTACHMENT TO THE SUPPORTING STRUCTURE AS SHOWN ON THE PLANS. ALTERNATES MUST BE CONNECTED ACCORDING TO PUBLISHED I.C.C. OR IAPMO UES CRITERIA FOR DIAPHRAGM SHEARS SHOWN. PROVIDE SHORING WHERE REQUIRED PER MANUFACTURER'S PUBLISHED CRITERIA. ALL DECKING SHALL CONFORM TO THE REQUIREMENTS OF THE STEEL DECK INSTITUTE.
- 36. COLD-FORMED STEEL FRAMING NOTES THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS:
 - A. <u>COLD-FORMED STEEL FRAMING MEMBERS</u> SHALL BE OF THE SHAPE, SIZE, AND GAUGE SHOWN ON THE PLANS. ALL FRAMING MEMBERS SHALL COMPLY WITH I.C.C. REPORT NO. ESR-3064P. NOTATIONS ON THE DRAWINGS, RELATING TO MEMBER TYPES AND SIZES OR MISCELLANEOUS FRAMING ITEMS, REFER TO CATALOG NUMBERS OF MEMBERS MANUFACTURED BY THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA). PRODUCTS BY OTHER MANUFACTURERS MAY BE SUBSTITUTED FOR FRAMING SHOWN, PROVIDED THEY ARE EQUIVALENT IN SHAPE, SIZE STIFFNESS, AND STRENGTH. ALTERNATE FRAMING SHALL BE SUBJECT TO REVIEW BY THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO FABRICATION. ALL COLD-FORMED STEEL FRAMING SHALL CONFORM TO THE A.I.S.I. "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS."

B. MATERIAL:

METAL FRAMING SHALL BE GALVANIZED UNLESS OTHERWISE NOTED, CONFORMING AS FOLLOWS:

ASTM A653 SS GRADE 50, CLASS | OR 3 Fy = 50 KSI 118, 97, 68, AND 54 MIL ASTM A653 SS GRADE 33 Fy = 33 KSI 43 AND 33 MIL

WHERE NOTED, PAINTED STUDS SHALL CONFORM TO:

ASTM AIOII SS GRADE 50

Fy = 50 KSI 118, 97, 68, AND 54 MIL

- C. WELDING OF COLD-FORMED METAL FRAMING SHALL CONFORM TO AWS DI.3 AND SHALL BE PERFORMED BY WELDERS QUALIFIED TO PRODUCE THE SPECIFIED CLASSES OF WELD.
- D. WALL FRAMING: ALL STUD WALLS SHOWN AND NOT OTHERWISE NOTED SHALL BE 4005162-43 @ 16" O.C. AT INTERIOR WALLS AND 600SI62-43 AT 16" O.C. AT EXTERIOR WALLS. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS. TWO 8005162-54 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS UNLESS OTHERWISE NOTED. PROVIDE CONTINUOUS FULL WIDTH BLOCKING AT 1/3 POINTS OF ALL STUD WALLS UNLESS NOTED OTHERWISE. MAXIMUM GAP BETWEEN STUD AND TRACK AT ANY POINT SHALL NOT EXCEED 1/16-INCH. NO SPLICES ARE PERMITTED IN STUDS.

ALL STUD WALLS SHALL HAVE THEIR BOTTOM TRACKS ATTACHED TO CONCRETE WITH 5/32" DIAMETER DRIVE-PINS @ 16" O.C. UNLESS INDICATED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE WELDED OR SCREWED TO EACH OTHER IN ACCORDANCE WITH THE DETAILS. WHEN NOT OTHERWISE NOTED PROVIDE GYPSUM WALLBOARD ON INTERIOR SURFACES AND GYPSUM SHEATHING ON EXTERIOR SURFACES SCREWED TO ALL STUDS, TOP AND BOTTOM TRACKS, AND BLOCKING WITH SCREWS AT 12" O.C. ALL SCREWS SHALL BE "GRABBER" TYPE FASTENERS COMPLYING WITH I.C.C. REPORT NO. ESR-1271. ALL SPECIFIED PNEUMATIC FASTENERS SHALL BE ET&F, COMPLYING WITH I.C.C. REPORT NO. ESR-1777.

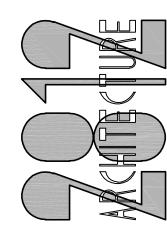
TRACK SECTIONS SHALL BE UNPUNCHED AND HAVE AT LEAST I-I/2" FLANGES AND MATCH STUD THICKNESS.

WALLS WHICH HAVE SHEATHING CONNECTED ON ONE SIDE ONLY SHALL HAVE UNSHEATHED FLANGES LATERALLY SUPPORTED IN ACCORDANCE WITH THE DETAILS.

	ABBREV	IATIONS	
<u> </u>	At	L	Angle
d	Penny (Nails)	LB.	Pound
Φ	Diameter	LL	Live Load
。 #	Degrees Pounds	LLH	Long Leg Horizontal
#	Number	LLV LONGIT.	Long Leg Vertical
		LT. WT.	Longitudinal Lightweight
(A)	Above		
A.B.	Anchor Bolt	MAX.	Maximum
ADD'L ALT.	Additional Alternate	MECH. MEZZ.	Mechanical Mezzanine
APPROX		MF	Moment Frame
ARCH.	Architect	MFR.	Manufacturer
		MIN.	Minimum
(B)	Below	MISC.	Miscellaneous
B/	Bottom of	MK.	Mark
BF BLKG.	Braced Frame	/NI)	Now
BLDG.	Blocking Building	(N) N.	New North
BM.	Beam	N.S.	Near Side
B0T.	Bottom	NOM.	Nominal
BRG.	Bearing	NTS	Not to Scale
BTWN.	Between		
	Canhadia	0.0.	On Center
Q ()	Centerline Camber	0.D. 0.F.	Outside Diameter
CIP	Cast In Place	О.Н.	Outside Face Overhanq
C.J.	Construction Joint or Control Joint	OPNG.	Opening
CJP	Complete Joint Penetration	OPP.	Opposite
CLG.	' Ceiling	CEMO	Open Web Steel Joist
CLR.	Clear	-	'
CMU	Concrete Masonry Unit	PAF	Powder Actuated Fastener
COL.	Concrete	PC PERM	Precast Permanent
CONC.	Concrete Connections	PERM. PERP.	Permanent Perpendicular
CONST.	Construction	PJP	Partial Joint Penetration
CONT.	Continuous	PL or PL	Plate
CSK.	Countersink	PLF	Pounds per linear Foot
		PLYMD	Plymood
DBA	Deformed Bar Anchor	PREFAB.	Prefabricated
DBL. DEG.	Double	PSF PSI	Pounds per Square Foot
DEO.	Degree Doug Fir-Larch	P.T. or PT	Pounds per Square Inch Post-Tensioning
DIA.	Diameter	P/T	Pressure-Treated
DIAG.	Diagonal		
DIAPH.	Diaphragm	RAD.	Radius
DIM.	Dimension	REF.	Reference
DN. DO	Down Ditto	REINF. REQD.	Reinforce or Reinforcement
DTL.	Detail	REV.	Required Revise
DWG.	Drawing	R.O.	Rough Opening
4. 3	•		ر ، ر
(E)	Existing	5.	South
E. EA.	East Each	SCH. or SCHEI SECT.	
E.F.	Each Face	SHT.	Section Sheet
EL.	Elevation	SIM.	Similar
ELEV.	Elevator	50G	Slab On Grade
EMBED.	Embedment Length	SPEC.	Specification
ENGR.	Engineer	SQ.	Square
EQ. E.M.	Equal Each Way	SQ. FT. SQ. IN.	Square Feet Square Inch(es)
EXP.	Expansion	SPF	Spruce-Pine-Fir
EXT.	Exterior	S.S.	Stainless Steel
		STD.	Standard
FDN.	Foundation	STIFF.	Stiffener
FIN.	Finish	STL.	Steel
FLR. FRP	Floor Fiber Reinforced Polymer	STR.	Structural Substitute
F.S.	Fiber Reinforced Polymer Far Side	SUB. SYM.	Symmetrical
FT.	Foot or Feet	= · · · •	
FTG.	Footing	T/	Top of
<i>-</i> .	-	T\$B	Top and Bottom
GA.	Gauge	T\$G	Tongue & Groove
GALV. GL	Galvanized Glue Laminated	TEMP. THRU	Temporary Through
GWB	Give Laminatea Gypsum Wall Board	T.O.C.	Through Top of Concrete
- · ·	2 gp 2 3 m 7 6 m 2 0 0 m 6	T.O.S.	Top of Steel
HDG	Hot Dipped Galvanized	T.O.W.	Top of Wall
HF	Hem Fir	TRANS.	Transverse
HGR.	Hanger	TS TYP	Tube Steel
HORIZ. HSS	Horizontal Hollow Structural Section	TYP.	Typical
HT.	Height	U.O.N.	Unless Otherwise Noted
	-		
I.D.	Inside Diameter	VERT.	Vertical
I.F.	Inside Face	VIF	Verify in Field
IN. INFO.	lnch Information	М.	IAI L
INTO.	Information Interior	n. Worw/	West With
	111101101	W.H.S.	Welded Headed Stud
JT.	Joint	WO	Without
		WP	Work Point
K	Kips	W.T.S.	Welded Threaded Stud
KSF	Kips per Square Foot	MME	Welded Wire Fabric
KSI	Kips per Square Inch	X SECT.	Cross Section
		X-STR	Extra Strong
		XX-STR	Double Extra Strong
			,



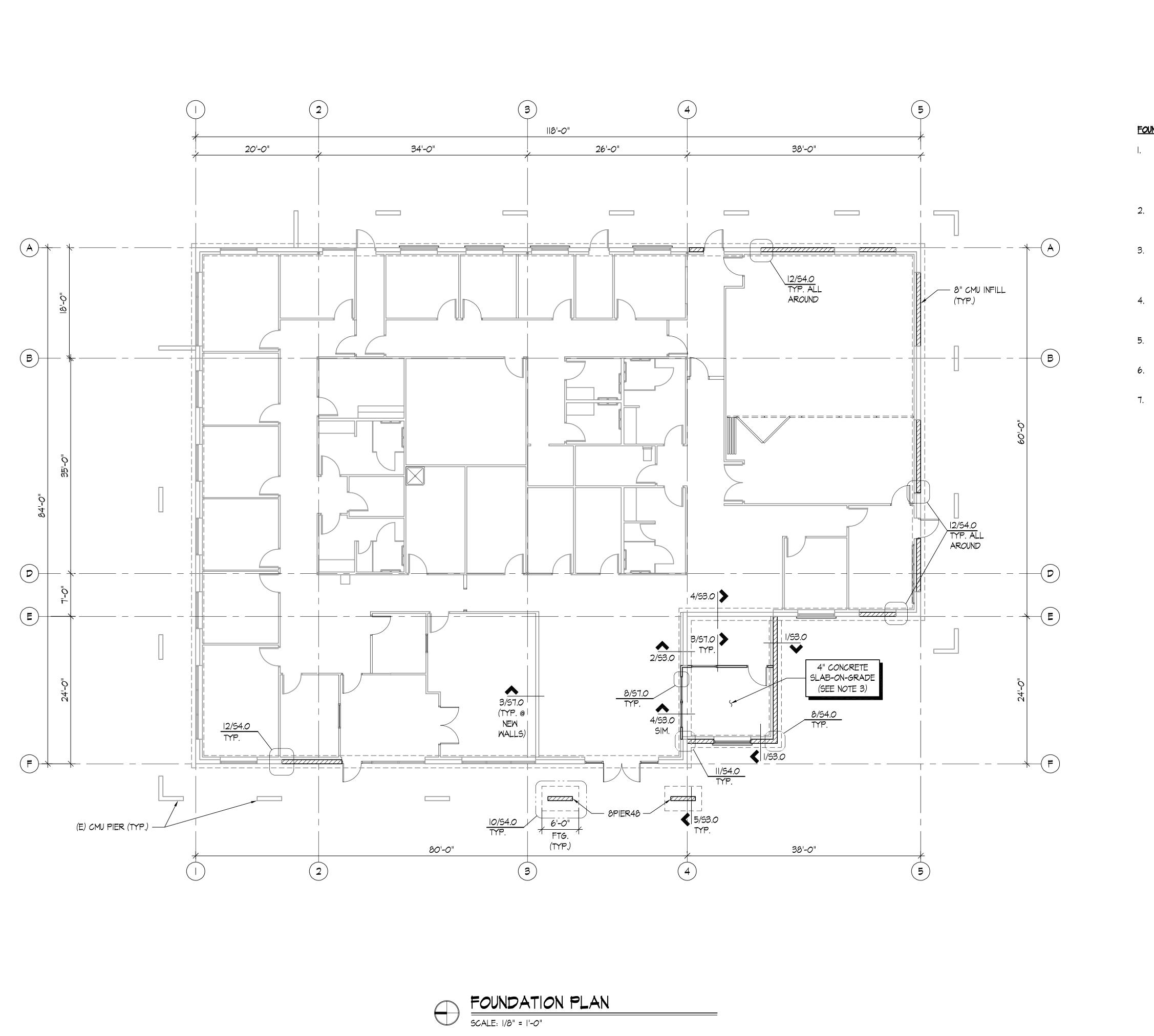




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Stilliaguamish

Drawing: S1.1



FOUNDATION NOTES:

- I. ALL DIMENSIONS AND ELEVATIONS ON THE STRUCTURAL PLANS ARE FOR GENERAL INFORMATION ONLY AND SHALL BE VERIFIED BY THE CONTRACTOR WITH THE ARCHITECTURAL DRAWINGS BEFORE CONSTRUCTION BEGINS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER IMMEDIATELY.
- 2. SEE SHEETS SI.O AND SI.I FOR GENERAL STRUCTURAL NOTES AND ABBREVIATIONS. SEE SHEET S3.0 FOR TYPICAL CONCRETE AND FOUNDATION DETAILS. SEE SHEET S4.0 FOR TYPICAL MASONRY DETAILS.
- 3. SLAB-ON-GRADE SHALL BE 4" THICK CONCRETE REINFORCED WITH #4 @ 16" O.C. EACH WAY AT MID-DEPTH, U.O.N. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION REGARDING SUB-GRADE MOISTURE BARRIER AND ELEVATIONS, ETC.
- 4. WHERE NEW CONCRETE IS CAST AGAINST EXISTING CONCRETE FOUNDATIONS, DRILL AND EPOXY #4 DOWELS x 3'-0" LONG TO LAP WITH THE NEW FOOTING LONGITUDINAL REINFORCING (4" MINIMUM EMBEDMENT).
- 5. FOR LIGHT GAUGE TRACK ATTACHMENT TO CONCRETE FOUNDATION WALLS AND SLABS, SEE DETAIL 3/ST.O.
- 6. ALL BEARING WALLS SHALL BE 400SI62-43 @ I6" O.C. INTERIOR AND 8" CMU EXTERIOR U.O.N.
- 7. POSTS INDICATED ARE AT THIS LEVEL. ALL POSTS NOT SPECIFIED SHALL BE (2) 4005162-43 @ 16" O.C., U.O.N.

<u>LEGEND</u>:

- INDICATES (E) FOOTING

- INDICATES (E) FOUNDATION WALL OR (E) CMU WALL WALL ABOVE FLOOR FRAMING

- INDICATES FOOTING

INDICATES 8" CMU WALL. SEE GENERAL NOTES AND DETAILS FOR REINFORCING REQUIREMENTS

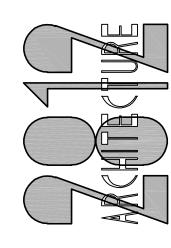
INDICATES LIGHT GAUGE STEEL BEARING OR SHEAR WALL AT THIS LEVEL. SEE PLAN NOTES 5 \$ 6

INDICATES (E) LIGHT GAUGE STEEL WALL AT THIS LEVEL.

Date:



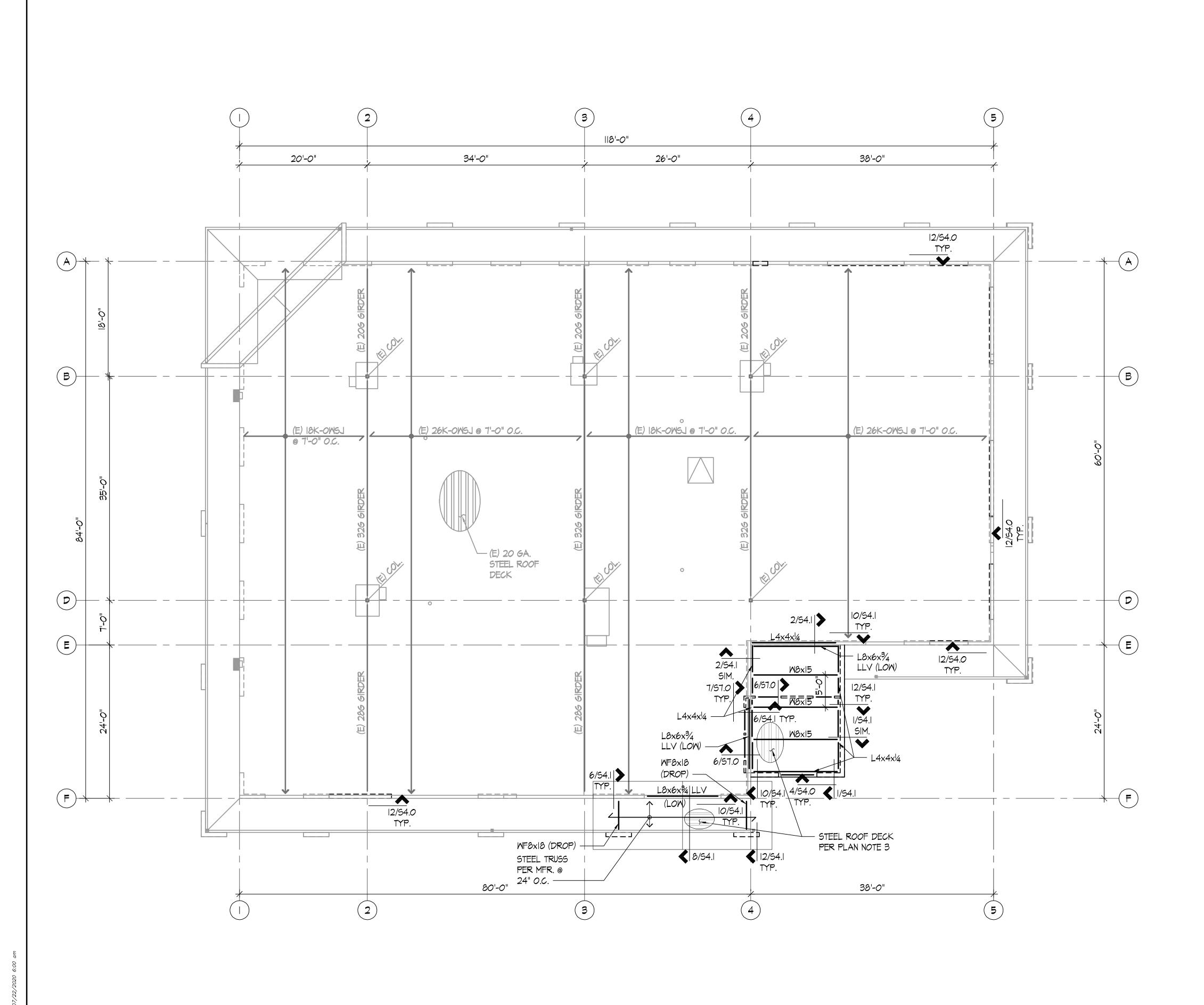




Tenant Improvements for:

Stilliaguamish Tribal Courthouse
17014 59th Avenue NE

Drawing:



ROOF FRAMING NOTES:

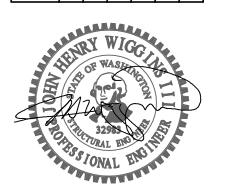
- I. ALL DIMENSIONS AND ELEVATIONS ON THE STRUCTURAL PLANS ARE FOR GENERAL INFORMATION ONLY AND SHALL BE VERIFIED BY THE CONTRACTOR WITH THE ARCHITECTURAL DRAWINGS BEFORE CONSTRUCTION BEGINS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER IMMEDIATELY.
- 2. SEE SHEETS SI.O AND SI.I FOR GENERAL STRUCTURAL NOTES AND ABBREVIATIONS. SEE SHEETS S4.0 & S4.1 FOR TYPICAL MASONRY DETAILS, \$ ST.O FOR TYPICAL LIGHT GAUGE DETAILS.
- 3. TYPICAL ROOF FRAMING CONSISTS OF 20 GA. 1/2" DEEP WIDE TYPE B ROOF DECK LAID OVER WF BEAM & ANGLES W/ 6'-O" MAX. SPAN, U.O.N.
- 4. FASTEN ROOF STEEL PAN DECK TO WF BEAMS W/ PUDDLE WELDS @ 6" O.C. TO ALL SUPPORTS & PUNCHLOK/DELTA GRIP @ 12" O.C. AT SIDE SEAMS PER DETAIL 4/S4.1, U.O.N.
- 5. PROVIDE SOLID OR BUILT-UP POSTS PER 6/ST.O, U.O.N. BENEATH THE ENDS OF ALL ROOF BEAMS FOR FULL BEARING LIGHT GAUGE STEEL HEADERS OR
- 6. FOR TOP TRACK SPLICE SEE DETAIL 11/ST.O.

LEGEND:

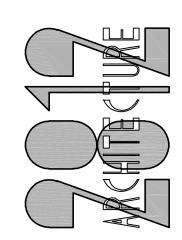
/ INDICATES FRAMING DIRECTION

\$==\$ INDICATES CMU BEARING WALL/PIER

- INDICATES EXTENT OF FRAMING



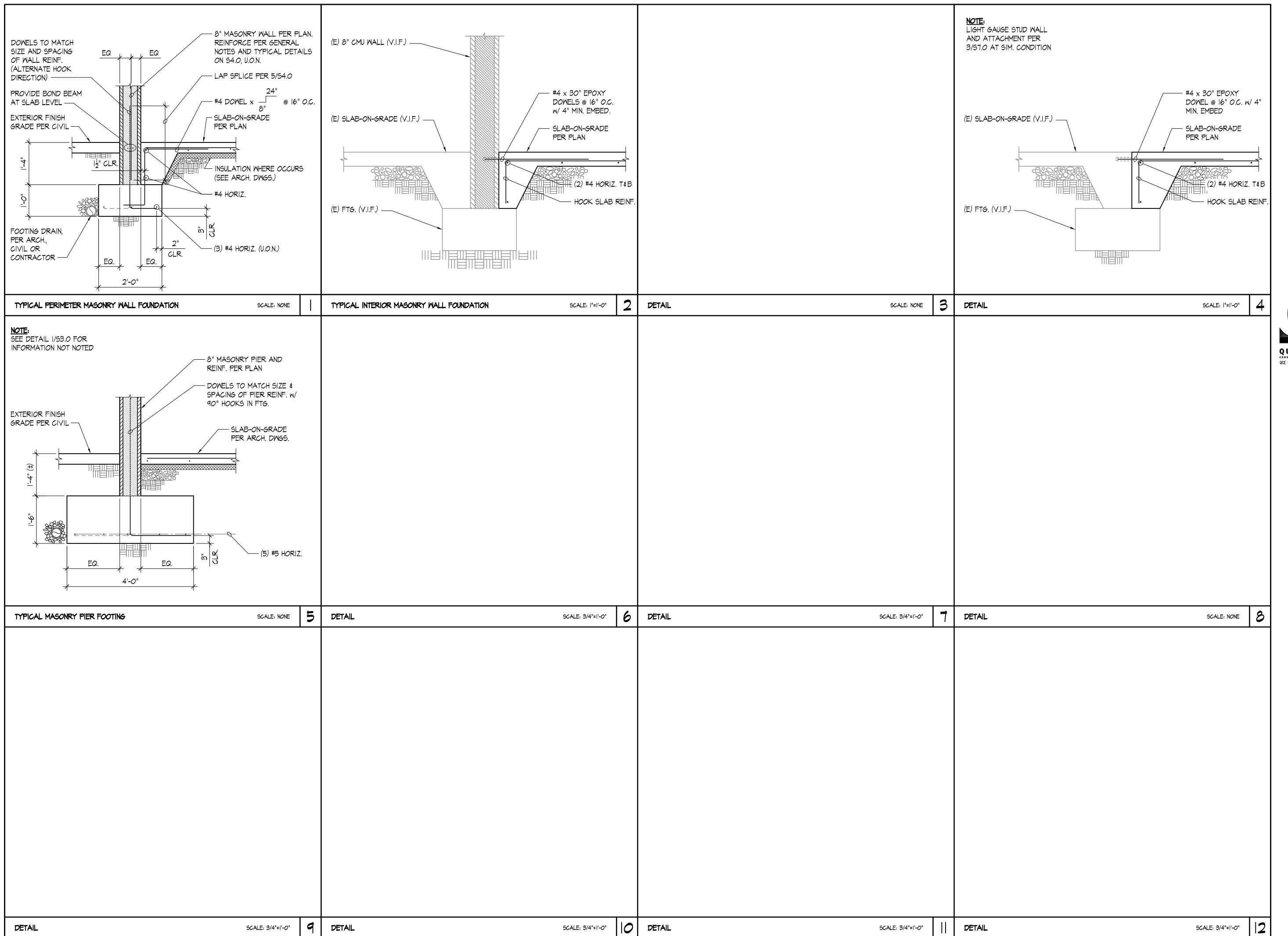




Tenant Improvements for:

Stilliaguamish Tribal Courthouse
17014 59th Avenue NE
Arlington, Washington

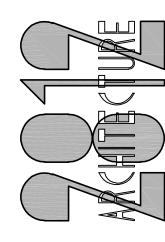
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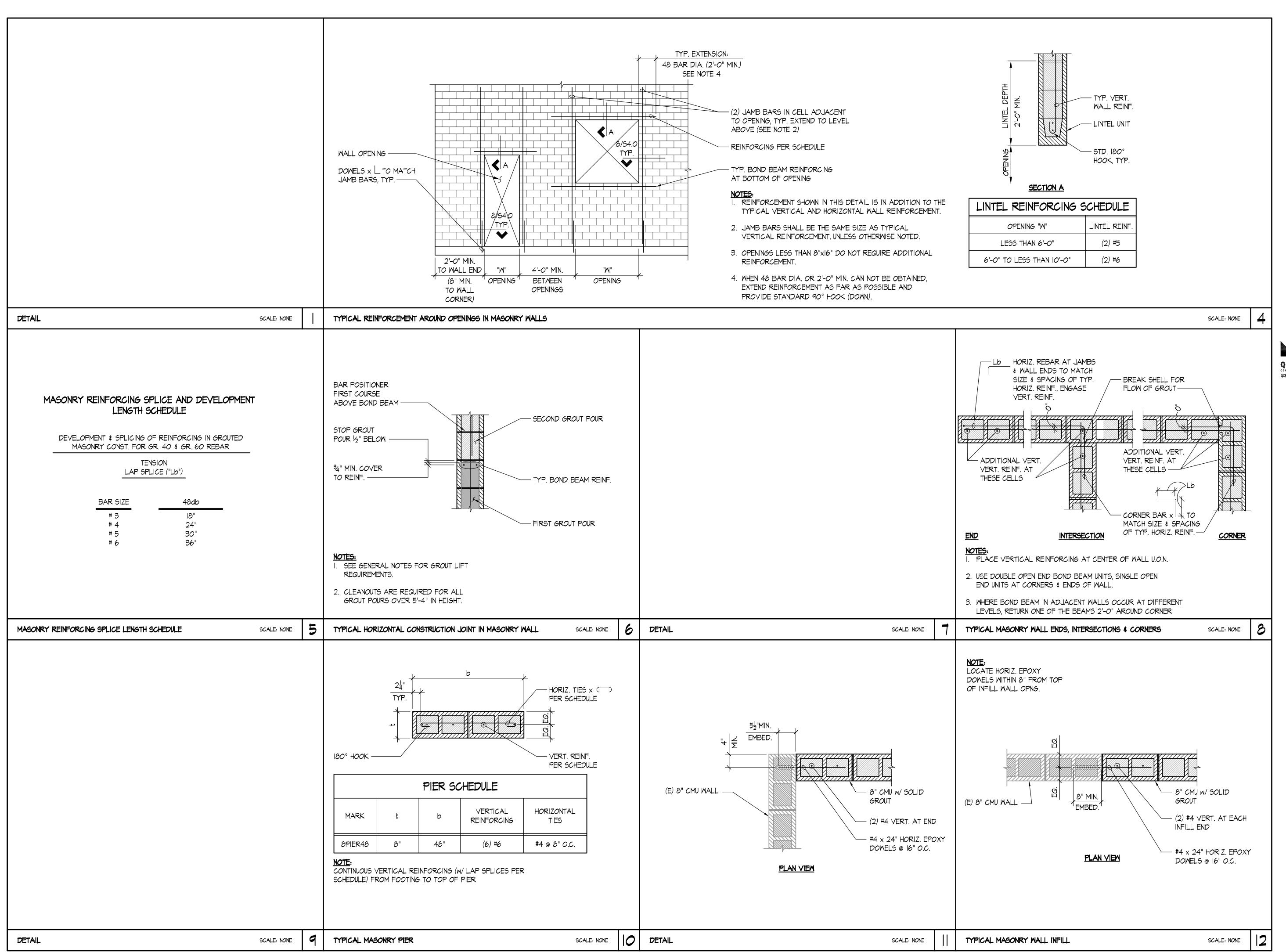


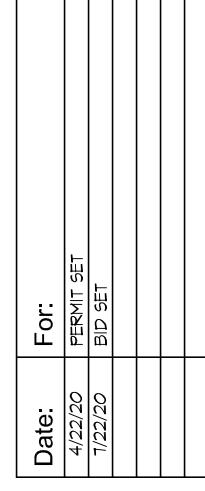




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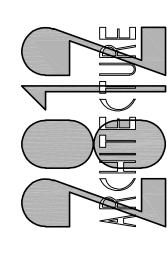
Stilliaguamish Tribal Courthouse
17014 59th Avenue NE
Arlington, Washington





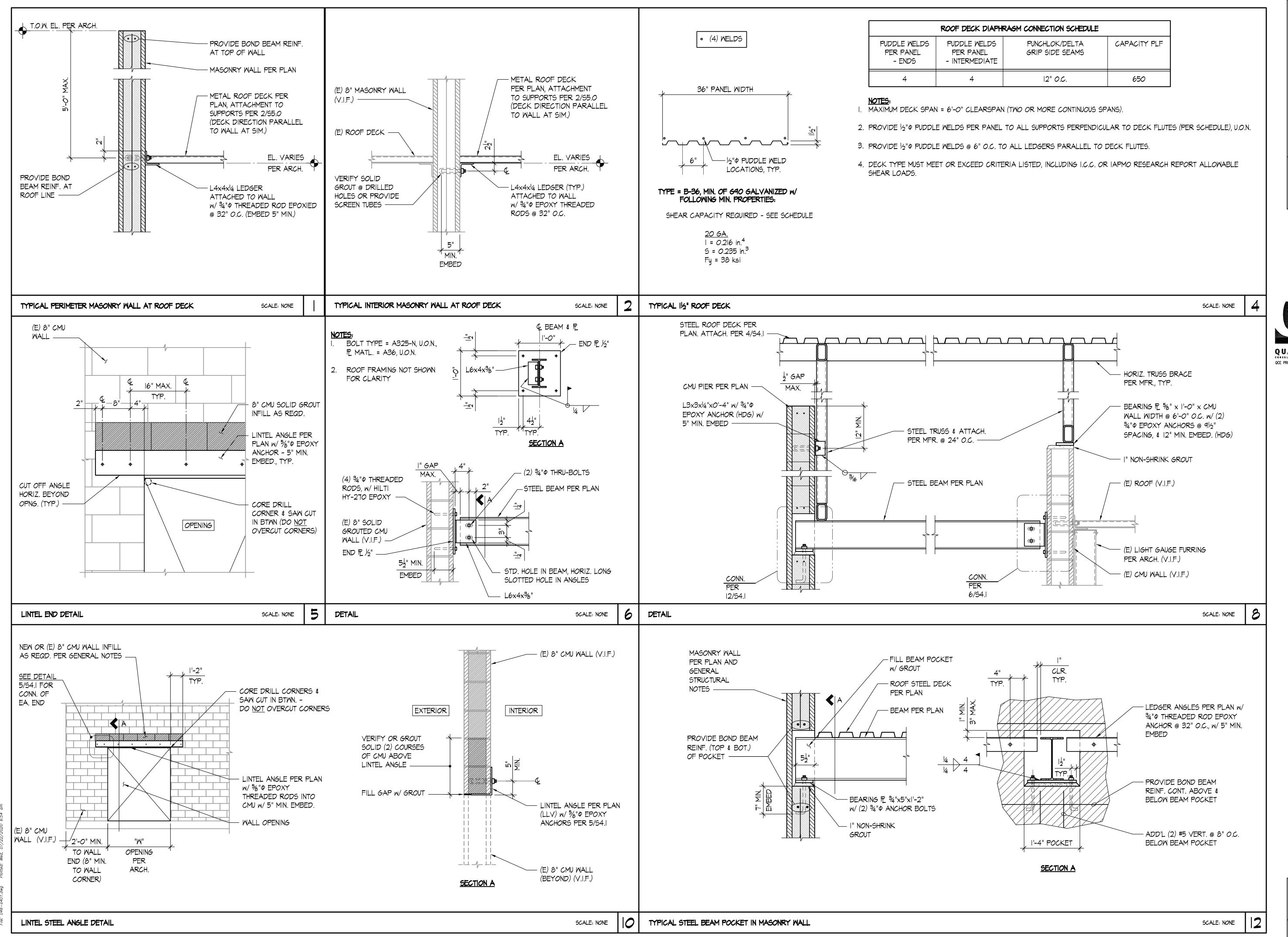






Stilliaguamish 77014 59th Avenue NE

Drawing: **S4.0**



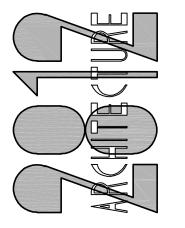
or:



1511 THIRD AVENUE SUITE 323 SEATTLE, WA 98101 QUANTUM
CONSULTING ENGINEERS

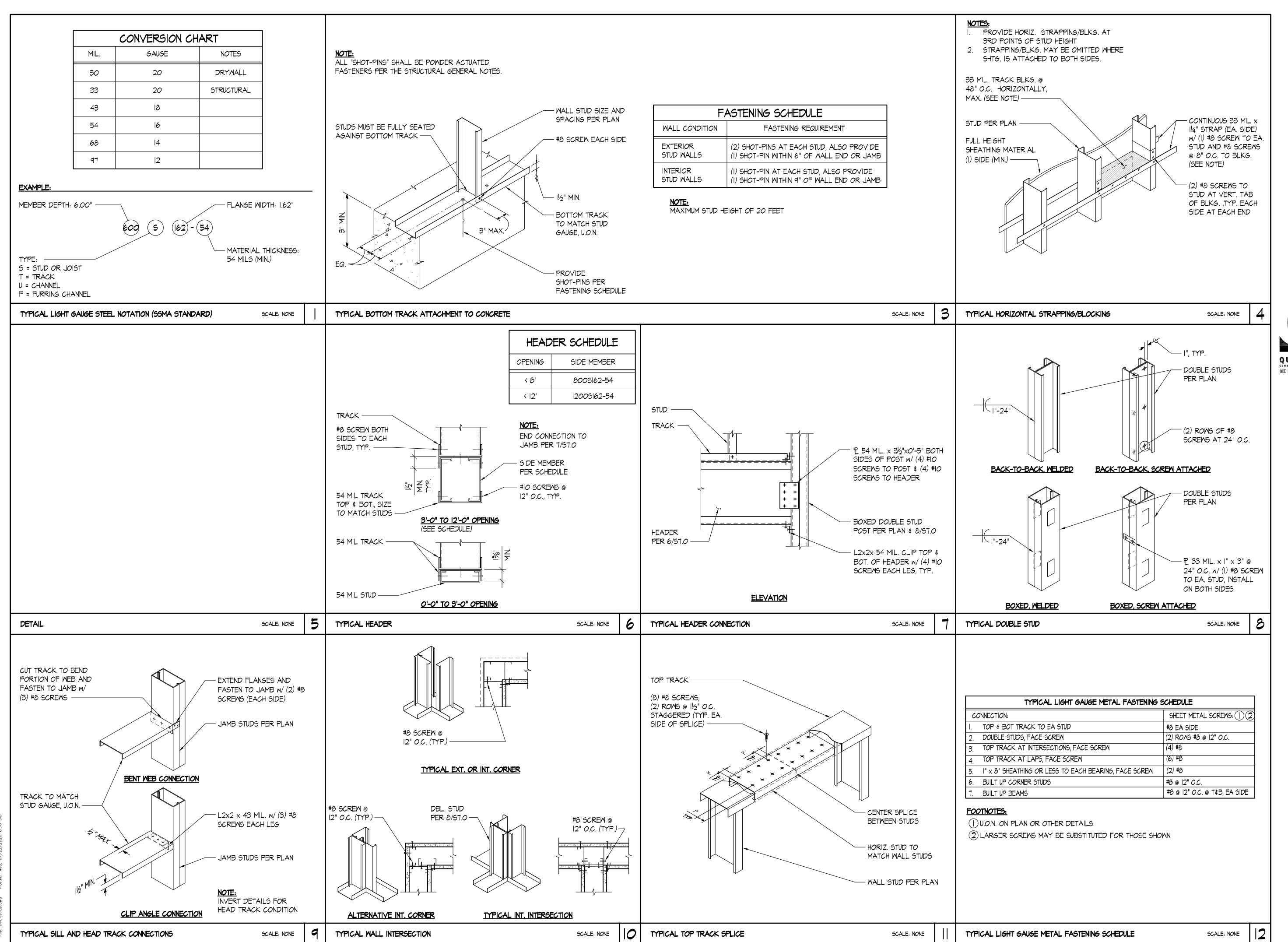
FAX 206.957.3901

www.quantumce.com QCE PROJ.#: 20046.02 DRAWN BY: TA P.M./P.E.: JHW/MDA



Courthouse Tribal Stilliaguamish 7

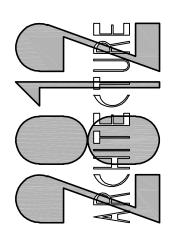
Drawing:



Date:







Courthouse

Tenant Improvements for: Stilliaguamish Drawing:

S7.0

GENERAL MECHANICAL

"CONTRACTOR" MEANS "MECHANICAL CONTRACTOR" WHEN REFERENCED ANYWHERE IN THE MECHANICAL CONSTRUCTION DOCUMENTS, UNLESS WORK AND EQUIPMENT HAS BEEN COORDINATED BETWEEN THE MECHANICAL AND GENERAL CONTRACTORS TO BE PROVIDED BY THE GENERAL CONTRACTOR. "NEEDED", "PROVIDE" AND "INSTALL" MEANS ALL ITEMS CALLED OUT IN THE CONTRACT DOCUMENTS AND ANY ADDITIONAL ITEMS NOT CALLED OUT BUT REQUIRED TO MAKE A COMPLETE AND OPERATIONAL SYSTEM.

SCOPE: THE INTENT OF THE SPECIFICATIONS AND THE DRAWINGS IS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL MECHANICAL SYSTEM. THE MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO COMPLETE THE MECHANICAL WORK.

PERMITS AND FEES: THE MECHANICAL CONTRACTOR SHALL PROCURE AND PAY FOR ALL PERMITS, FEES AND INSPECTIONS NECESSARY TO COMPLETE THE MECHANICAL SCOPE OF WORK.

WARRANTY: THE MECHANICAL CONTRACTOR SHALL UNCONDITIONALLY WARRANT ALL WORK TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE BY ARCHITECT AND WILL REPAIR OR REPLACE ANY DEFECTIVE WORK PROMPTLY, WITHOUT CHARGE AND RESTORE ANY OTHER EXISTING WORK DAMAGED IN THE COURSE OF REPAIRING DEFECTIVE MATERIALS AND **WORKMANSHIP**

CODES: PERFORM ALL WORK IN ACCORDANCE WITH THE CURRENT MECHANICAL CODE, STATE AND LOCAL CODES / ORDINANCES AND AHJ. ALL WORK SHALL ALSO BE IN COMPLIANCE WITH BUILDING OWNER'S CRITERIA. IN CASE OF CONFLICT BETWEEN THE DRAWINGS, SPECIFICATIONS, CODES, ORDINANCES AND AHJ, THE MOST STRINGENT STANDARD (IN THE OPINION OF THE ENGINEER) SHALL APPLY. THE MECHANICAL CONTRACTOR SHALL SATISFY CODE, AHJ, DRÁWINGS AND SPECIFICATIONS, AS A MINIMUM STANDARD, WITHOUT ANY EXTRA COST.

THE MECHANICAL CONTRACTOR SHALL COORDINATE MECHANICAL WORK WITH OTHER TRADES. THE ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER ALL OTHER DRAWINGS. DO NOT SCALE DISTANCES OFF THE MECHANICAL DRAWINGS; USE ACTUAL BUILDING DIMENSIONS

STANDARDS: EQUIPMENT AND MATERIALS SHALL CONFORM WITH APPROPRIATE PROVISIONS OF ARL, ASME, ASTM, UL, NEMA, ANSI, SMACNA, ASHRAE, NFPA, OTHER APPLICABLE AGENCIES AND AHJ, AS APPLICABLE TO EACH INDIVIDUAL UNIT OR ASSEMBLY.

SITE EXAMINATION: THE MECHANICAL CONTRACTOR SHALL THOROUGHLY EXAMINE ALL AREAS WHERE EQUIPMENT, DUCTWORK AND PIPING WILL BE INSTALLED AND SHALL REPORT ANY CONDITION THAT PREVENTS THE PROPER INSTALLATION OF THE MECHANICAL WORK.

SUBMITTALS CONTRACTOR SHALL PROVIDE AN ELECTRONIC SUBMITTAL FOR HVAC EQUIPMENT, FILTERS, CONTROLS, AND AIR CONVEYANCE MATERIALS. ALL SUBMITTALS SHALL BE MARKED TO INDICATE WHERE THEY ARE USED AND WITH THE DESIGNATION IN THESE PLANS.

DUCTWORK AND ACCESSORIES

SHEETMETAL DUCTWORK: ALL DUCTWORK SHALL BE RIGID SHEETMETAL CONSTRUCTED FROM GALVANIZED SHEET STEEL IN ACCORDANCE WITH SMACNA LOW VELOCITY DUCT CONSTRUCTION STANDARDS. FIBERGLASS DUCTBOARD IS NOT ALLOWED. ALL EXPOSED DUCTWORK SHALL BE ROUND, SPIRAL OR RECTANGULAR LOCK-SEAM TYPE, AS SHOWN ON HVAC PLAN. ASSEMBLE AND INSTALL DUCTWORK IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICE FOR ACHIEVING AIR TIGHT (5% LEAKAGE) AND NOISELESS (NO OBJECTIONABLE NOISE) SYSTEMS, CAPABLE OF PERFORMING EACH INDICATED SERVICE. FURNISH ALL REQUIRED DAMPERS, TRANSITIONS, CONNECTIONS TO AIR TERMINALS AND OTHER ACCESSORIES NECESSARY FOR A COMPLETE OPERATING SYSTEM. NO VARIATION OF DUCT CONFIGURATION OR SIZES WILL BE PERMITTED EXCEPT BY PERMISSION FROM THE ENGINEER.

FLEXIBLE DUCTWORK: FLEXIBLE DUCT WORK SHALL ONLY BE INSTALLED AS SHOWN IN PLAN. FLEXIBLE DUCTWORK SHALL BE PULLED TAUT AND APPROPRIATELY FASTENED TO RIGID BRANCH DUCT & DIFFUSER. BENDS SHALL BE MINIMIZED AND WHERE NEEDED BE A FULL RADIUS BEND. SUPPORT BANDS SHALL BE INSTALLED SO AS TO NOT CRIMP FLEX DUCT. FLEXIBLE DUCTWORK SHALL BE UL 181 LISTED AS A CLASS 1 AIR DUCT.

DUCT SEALANT: SEAL ALL LONGITUDINAL AND TRANSVERSE JOINTS WITH A NON-HARDENING, NON-MIGRATING MASTIC OR LIQUID ELASTIC SEALANT OF A TYPE RECOMMENDED BY THE MANUFACTURER FOR SEALING JOINTS AND SEAMS IN SHEET METAL DUCTWORK. COVER ALL FIELD JOINTS, JOINTS AROUND SPIN-IN FITTINGS AND FASTENING SCREWS WITH MASTIC.

SUPPORTS: PROVIDE HOT-DIPPED GALVANIZED STEEL, FASTENERS, ANCHORS, RODS, STRAPS, TRIM AND ANGLES FOR SUPPORT OF DUCTWORK.

DAMPERS: FURNISH AND INSTALL (F&I) DAMPERS IN ACCORDANCE WITH THE FOLLOWING TYPES AND FUNCTIONS:

- BALANCING DAMPERS: SINGLE BLADE LOCKABLE MANUAL SETTING OR ON LARGER DUCTS, MULTI-BLADE RECTANGULAR WITH LOCKABLE MANUAL
- ISOLATION DAMPERS IN ROUND DUCTS: SINGLE BLADE TYPE
- ISOLATION DAMPERS IN RECTANGULAR DUCTS: PARALLEL MULTI-BLADE
- CONTROL DAMPERS IN ROUND DUCTS: NOT ACCEPTED CONTROL DAMPERS IN RECTANGULAR DUCTS: OPPOSED MULTI-BLADE

DAMPER AIR LEAKAGE: DAMPER SHALL BE OF CLASS I LEAKAGE SPECIFICATION AS PER IMC 2015 AND WSEC 2015

GRILLES, REGISTERS & DIFFUSERS: GRILLES, REGISTERS AND DIFFUSERS SHALL BE AS SCHEDULED AND SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. DIFFUSERS SHALL BE INSTALLED AS INDICATED ON THE DRAWINGS AND SCHEDULES. THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL MISCELLANEOUS ITEMS NECESSARY FOR A COMPLETE AND PROPER INSTALLATION IN THE TYPE OF WALLS USED IN THIS PROJECT.

DUCTWORK AND ACCESSORIES (CONT.)

THERMAL INSULATION: PROVIDE EXTERNAL THERMAL INSULATION WITH AN INTEGRAL VAPOR BARRIER FACING OF SUFFICIENT THICKNESS TO MEET LOCAL STATE ENERGY CODE AND A.H.J. REQUIREMENTS. PROVIDE INSULATION ON EXHAUST AND OUTSIDE AIR DUCTS AND ON CONCEALED PORTIONS OF SUPPLY AND RETURN AIR DUCTS. DO NOT INSULATE EXPOSED DUCTWORK WITHIN THE SPACE (UNLESS REQUIRED BY A.H.J.) AND PORTIONS OF DUCTWORK THAT ARE INTERNALLY LINED. THERMAL INSULATION TO COMPLY WITH AN NFPA FLAME SPREAD OF 25 OR LESS AND SMOKE DEVELOPED NO GREATER THAN 50. INSULATE DUCTWORK ON ROOF PER CODE. IF ANY OF THE ABOVE IS CONTRARY TO THE REQUIREMENTS OF THE A.H.J., INSTALL PER A.H.J.

ACOUSTIC DUCT LINER: UNLESS OTHERWISE INDICATED ON THE PLANS, F&I 1" GLASS FIBER ACOUSTICAL DUCT LINER ON SUPPLY AND RETURN DUCTWORK WITHIN 10 FEET OF THE DISCHARGE AND INTAKE OF AIR HANDLING UNITS. INCREASE DUCT SIZED INDICATED ON PLANS 2" IN EACH DIMENSION TO ACCOMMODATE LINER. LINER SHALL BE FASTENED TO DUCT WITH MECHANICAL LINER FASTENERS IN ACCORDANCE WITH SMACNA.

TESTING, ADJUSTING, AND BALANCING

MECHANICAL CONTRACTOR OR AN INDEPENDENT AIR BALANCE CONTRACTOR (HIRED BY MECHANICAL CONTRACTOR) SHALL ACCURATELY BALANCE THE AIR SYSTEMS TO PROVIDE AIR QUANTITIES TO ALL ZONES AS INDICATED ON THE DRAWINGS AND IN THIS SPECIFICATION. THIS SHALL INCLUDE BALANCING AIR FLOWS AT DISCHARGE AND INTAKE TERMINALS AS WELL AS BALANCING FAN SYSTEMS. BALANCING FAN SYSTEMS WILL REQUIRE (AT A MINIMUM) THE MEASURING AND ADJUSTING OF THE FOLLOWING PARAMETERS:

- SUPPLY AND RETURN STATIC PRESSURES
- DRIVE RPM'S • TEMPERATURE DIFFERENTIALS (HEATING AND COOLING
- WHERE QUANTITIES ARE NOT INDICATED BALANCE PER INDUSTRY STANDARD TO PROVIDE A PROPERLY WORKING SYSTEM. OPERATE AUTOMATIC CONTROLS SYSTEM AND VERIFY SET POINTS. A NEBB OR AABE CERTIFIED SUPERVISOR SHALL BE IN CHARGE OF WORK. SUBMIT TWO (2) COPIES OF THE BALANCE REPORT TO THE ENGINEER FOR APPROVAL. INCLUDE A COPY OF THE BALANCE REPORT AS APPROVED BY THE ENGINEER WITH APPLICATION FOR FINAL CONTRACT PAYMENT.

GENERAL NOTES

1. ALL IS NEW UNLESS OTHERWISE NOTED.

ABOVE FINISHED FLOOR

AUTHORITIES HAVING

JURISDICTION

APPROXIMATE

CONSTRUCTION

CEILING DIFFUSER

ELECTRICAL CONTRACTOR

BUILDING

CEILING

DEGREES

DRAWING(S)

FI FCTRICAL

EXTERIOR

EMERGENCY

FOOT / FEET

CONDITIONING

LOW VOLTAGE

LANDLORD

EXHAUST GRILLE

FURNISH & INSTALL

GENERAL CONTRACTOR

HEATING VENTILATING & AIR

DETAIL

DOWN

(E) OR (EX) EXISTING

BLDG

CONST

DEG

DTL DN

ELEC

F&I

HVAC

DWG(S)

- 2. CONTRACTOR SHALL PATCH AND REPAIR ALL EXISTING WALLS, FLOORS, CEILINGS OR OTHER SURFACES IDENTIFIED TO REMAIN THAT MAY BECOME DAMAGED DURING THE COURSE OF WORK.
- DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL INTENT OR ARRANGEMENT OF SYSTEM(S). FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS. MAINTAIN HEADROOM AND SPACE CONDITION. MAKE APPROPRIATE ADJUSTMENTS AT ARCHITECT'S DIRECTION.
- 4. UNLESS OTHERWISE NOTED (SEE ARCH. SHEETS), THE CONTRACTOR SHALL REMOVE ALL EXISTING DUCTWORK AND EQUIPMENT AS DIRECTED BY THE GC THAT IS NOT BEING SALVAGED OR REUSED. EQUIPMENT / DUCTWORK INDICATED ON DRAWINGS TO BE REUSED SHALL BE INSPECTED AND IF DEFECTIVE, REPLACED. COORD. WITH GC AND OWNER.
- 5. ALL NEW HVAC DUCTWORK AND EQUIPMENT SHALL BE SUPPORTED FROM THE STRUCTURAL CEILING OR PLATFORM (CONFIRM). DO NOT SUPPORT FROM THE EXISTING DUCTWORK.
- 6. NEW DUCTWORK AND EQUIPMENT SHALL NOT BE INSTALLED WHERE IT OBSTRUCTS ANY EXISTING AREAS THAT REQUIRE ACCESS (e.g. FIRE/SMOKE ACCESS PANELS, VALVES, ETC.).
- 7. DEMOLISH ALL DUCTWORK AND EQUIPMENT NOT BEING REUSED AND WHERE NOT NEEDED TO MAINTAIN EXISTING SYSTEMS (ALL NOT SHOWN).

MECHANICAL ABBREVIATIONS

MECH

MEP

MFG

NTS

OSA

REQ('D)

SPECS

TEMP

MAXIMUM

MINIMUM

MECHANICAL

AND PLUMBING

MANUFACTURER

NOT TO SCALE

OUTSIDE AIR

REFERENCE

REQUIRE(D)

PROJECT MANAGER

REVISED / REVISION

RETURN GRILLE

SPECIFICATION(S)

STAINLESS STEEL

UNLESS NOTED OTHERWISE

SQUARE FEET

TEMPORARY

WATER HEATER

TYPICAL

MECHANICAL CONTRACTOR

MECHANICAL, ELECTRICAL

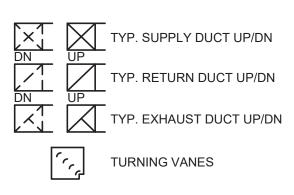
Sheet List Table

Sheet Number	Sheet Title				
M0.01	MECHANICAL SPECIFICATIONS				
M2.00	MECHANICAL DEMO PLAN				
M2.01	MECHANICAL HVAC PLAN				
M5.01	MECHANICAL DETAILS				
M6.01	MECHANICAL SCHEDULES				

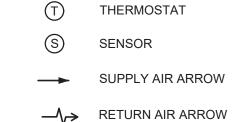
MECHANICAL SHEET INDEX

MECHANICAL LEGEND

NOTE: NOT ALL SYMBOLS MAY BE USED IN THESE DRAWINGS.



THERMOSTAT

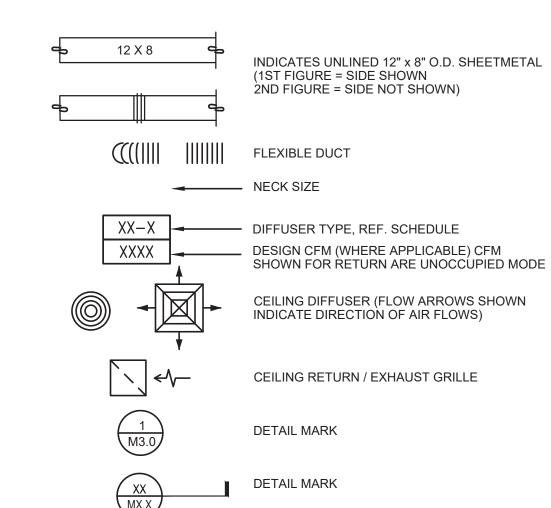


MANUAL VOLUME DAMPER BACK DRAFT DAMPER BAROMETRIC DAMPER **DUCT SMOKE DETECTOR** MOTORIZED DAMPER COMBINATION SMOKE AND FIRE SPIN-IN TAKE-OFF AND VOLUME

DUCT HEATER

UNDERCUT DOOR

DAMPER



SHEET WHERE DETAIL IS SHOWN

EQUIPMENT MARK - SEE SCHEDULE

 $\overline{\mathbf{C}}$ EMENTS FOR I

SCOPE OF WORK

(XXXXX

THE PLANS DEPICT MECHANICAL CHANGES FOR THE RENOVATION AND ADDITION TO THIS BUILDING. THERE ARE NO NEW UNITS, ONLY DUCTWORK AND DIFFUSER CHANGES.

BID SET

MECHANICAL

SPECIFICATIONS

DESIGNER: Tucker Andrews

GENERAL NOTES

A. CONFIRM EXACT DEMOLITION SCOPE IN FIELD.

LEGEND

EXISTING TO REMAIN

---- DEMOLISH DUCTWORK & ASSOCIATED DIFFUSERS/GRILLES

B. EXISTING DUCTWORK & DISTRIBUTION MAY NOT BE COMPLETELY ACCURATE. FIELD VERIFY WHERE IN SCOPE OF REMODEL.

MECHANICAL DEMO PLAN

BID SET

GENERAL NOTES

- A. ALL IS NEW UNLESS NOTED OTHERWISE.
- B. INSULATE DUCTWORK PER CODE AND SPEC REQUIREMENTS (ALL NOT SHOWN). COORD. CLEARANCE REQUIREMENTS FOR ADDED INSULATION.
- C. SEE ARCH. SHEETS FOR PAINTING AND COLORS FOR ALL EXPOSED DUCT WORK, DIFFUSERS, GRILLES, ETC.

SICAL BUILDI

CAL AND ELECTRIC

MECHANICA 111 AVE. C, SUI

SEAL STONAL ENGINE

HSONAL ENGIN

JAMISH TRIBAL COURTHC

TILLAGUAMIS
14 59th Avenue NE

DATE
07/22/2020
SHEET TITLE

MECHANICAL HVAC
PLAN

BID SET

DRAWN BY: Salvador Campo
DESIGNER: Tucker Andrew
CHECKED BY: Chris Rensc

M2.01

MECHANICAL HVAC PLAN

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

0 2' 4' 8'

CONNECT TO
EXISTING EXHAUST
SYSTEM

EXISTING 7.5 TON
ROOFTOP UNIT TO
REMAIN, BALANCE
TO 3,000 CFM
SUPPLU AND 600
CFM OF OUTSIDE

CONNECT TO EXISTING DUCT DROPS FROM RTU (TYP.)

200 (TYP.4)

RELOCATED T-STAT AT 48" AFF

CONNECT TO EXISTING DUCT

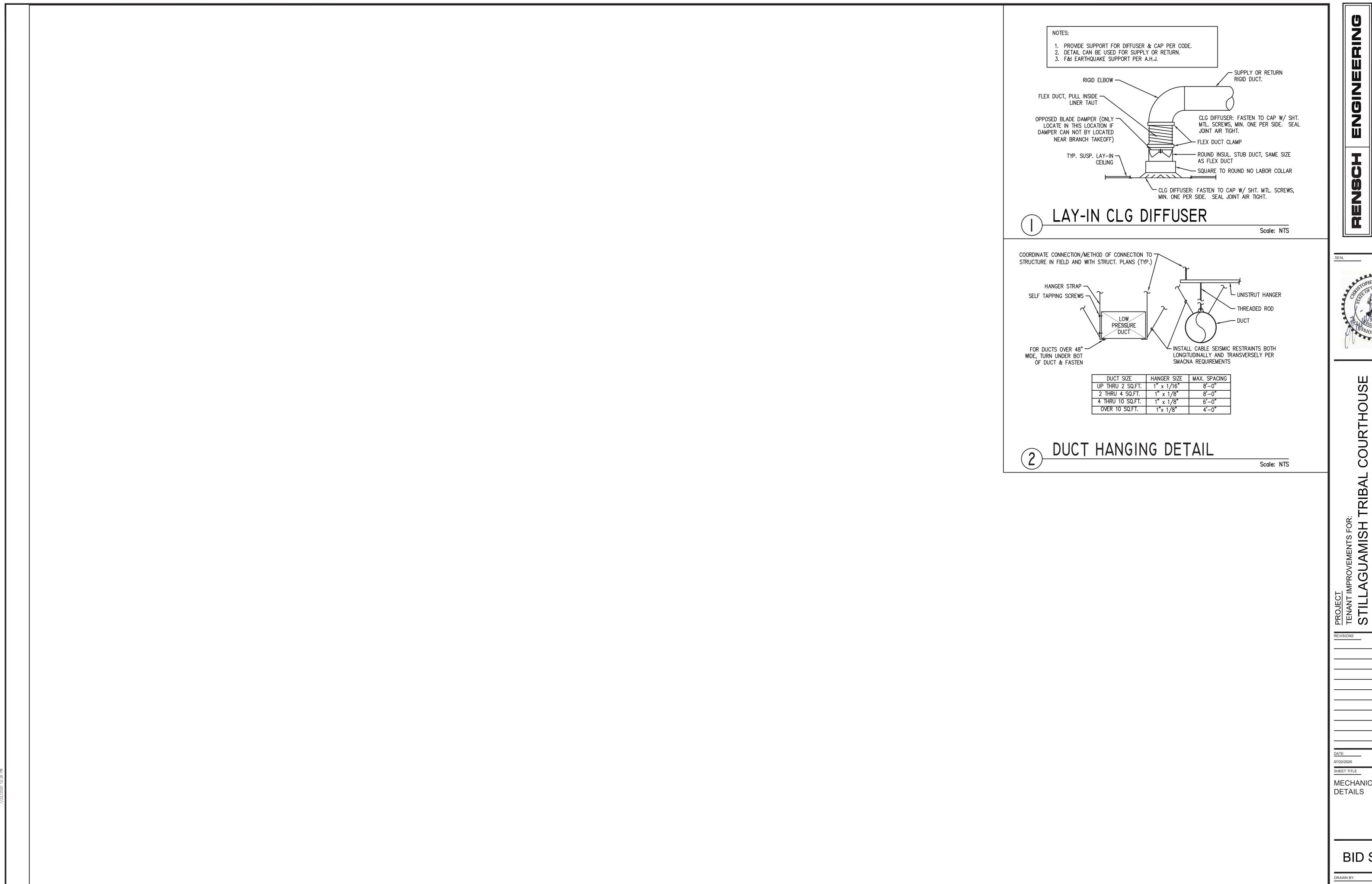
TYP.2) 14"x16" SD-2 300

MOVE EXISTING F T-STAT, MOUNT AT 48"

7/22/2020 12:38 PN

. HVAC PLAN.DWG

HANICAL HVAC PLA



MECHANICAL DETAILS

BID SET

CHECKED BY:	Chris Rensch
DESIGNER:	Tucker Andrews
DRAWN BY:	Salvador Campos

VENTILATION AIR CALCULATION (BASED ON THE 2015 IMC WITH STATE AMENDMENTS AND ASHRAE STANDARD 62.1)

MARK	AREA SERVED	OCCUPANCY CATEGORY	ZONE AREA (Az)	OCCUPANCY DENSITY (P/1000 SF)		OUTDOOR AIR CFM PER PERSON (Rp)	OUTDOOR AIR CFM PER SF (Ra)	ZONE AIR EFFECTIVNESS (Ez)	CALCULATED OUTDOOR AIR (CFM)	MINIMUM [CFM]	% REQUIRED OUTDOOR AIR SUPPLIED TO AREA
	LOBBY (101)	OFFICE - MAIN ENTRY LOBBIES	215	10	3	5	0.06	0.8	35	40	115%
	OBSERVATION ROOM (102)	OFFICE - OFFICE SPACE	85	5	1	5	0.06	0.8	13	15	119%
	SHARED FR&ICW (104)	EDUCATION - DAYCARE	385	25	10	10	0.18	0.8	212	215	102%
	WAITING (105)	OFFICE - RECEPTION AREA	550	30	17	5	0.06	0.8	148	150	102%
RTU-5	HALLWAY (105)	OFFICE - OFFICE SPACE	800	0	0	0	0.06	0.8	60	65	109%
	BAILEF (106)	OFFICE - OFFICE SPACE	170	5	1	5	0.06	0.8	19	20	106%
	ATTORNEY (107)	OFFICE - OFFICE SPACE	120	5	1	5	0.06	0.8	15	15	99%
	HOLDING (108)	CORRECTIONAL FACILITIES -CELLS	185	25	5	5	0.12	0.8	59	60	102%
	OFFICE (122)	OFFICE - OFFICE SPACE	130	5	1	5	0.06	0.8	16	20	125%
	•		•	•	•			TOTAL	576	600	105%

1. HVAC UNITS SHALL BE BALANCED TO PROVIDE THE SELECTED OUTDOOR AIR QUANTITIES INDICATED.

	GRILLES & DIFFUSERS SCHEDULE (1)									
TAG	DESCRIPTION	MOUNTING	NECK SIZE [IN.]	FACE SIZE [IN.]	CFM RANGE	MANUFACTURER & MODEL	NOTES			
SD-1	SUPPLY DIFFUSER	LAY-IN	6Ø	24x24	50-200	TITUS TMS	(2)			
SD-2	SUPPLY DIFFUSER	LAY-IN	8Ø	24x24	201-300	TITUS TMS	(2)			
SD-3	SUPPLY DIFFUSER	LAY-IN	10Ø	24x24	301-425	TITUS TMS	(2)			
SD-4	SUPPLY DIFFUSER	LAY-IN	12Ø	24x24	426-600	TITUS TMS	(2)			
RG-1	RETURN GRILLE	SURFACE	24x24	26x26	2000	TITUS 350RL	(2)			
RG-2	RETURN GRILLE	LAY-IN	6Ø	24x24	50-1500	TITUS 350RL	(2)			
RG-3	RETURN GRILLE	SURFACE	8Ø	24x24	50-1500	TITUS 350RL	(2)			
RG-4	RETURN GRILLE	LAY-IN	10Ø	24x24	50-1500	TITUS 350RL	(2)			
RG-5	RETURN GRILLE	LAY-IN	12Ø	24x24	50-1500	TITUS 350RL	(2)			
RG-6	RETURN GRILLE	SURFACE	10Ø	24x24	50-1500	TITUS 350RL	(2)			
EG-1	EXHAUST GRILLE	LAY-IN	8Ø	24x24	175	TITUS 350RL	(2)			

NOTES

1. SEE PLANS FOR QUANTITIES.

2. CONFIRM FINISH WITH ARCHITECT AND OWNER.

JILDING DESIGI

D ELECTRICAL BUILD

ECHANICAL AND

SEAL STOPHER C. ASSESSIONAL ENGINE

IAMISH TRIBAL COURTHOUSE

PROJECT
TENANT IMPROVEMENTS FOR STILLAGUAMISH

DATE 07/22/2020

SHEET TITLE

MECHANICAL
SCHEDULES

BID SET

DRAWN BY:
DESIGNER:
CHECKED BY:

M6.01

GENERAL ELECTRICAL

"CONTRACTOR" MEANS "ELECTRICAL CONTRACTOR" WHEN REFERENCED ANYWHERE IN THE ELECTRICAL CONSTRUCTION DOCUMENTS UNLESS COORDINATED WITH THE

"NEEDED" MEANS ITEMS CALLED OUT IN THE CONTRACT DOCUMENTS PLUS ANY OTHER ITEMS TO MAKE A COMPLETE AND OPERABLE SYSTEM THAT ARE NOT CALLED

"OWNER" MEANS THE OWNER OR THE OWNER'S REPRESENTATIVE(S).

"ARCHITECT" MEANS THE ARCHITECT OF RECORD OR THEIR REPRESENTATIVE(S).

THE INTENT OF THE SPECIFICATIONS AND THE DRAWINGS IS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL ELECTRICAL SYSTEM. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO COMPLETE THE ELECTRICAL WORK.

PERMITS AND FEES

THE ELECTRICAL CONTRACTOR SHALL PROCURE AND PAY FOR ALL PERMITS, FEES AND INSPECTIONS NECESSARY TO COMPLETE THE ELECTRICAL SCOPE OF WORK PRIOR TO STARTING THE WORK.

THE ELECTRICAL CONTRACTOR SHALL UNCONDITIONALLY WARRANT ALL WORK TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE BY ARCHITECT AND WILL REPAIR OR REPLACE ANY DEFECTIVE WORK PROMPTLY, WITHOUT CHARGE AND RESTORE ANY OTHER EXISTING WORK DAMAGED IN THE COURSE OF REPAIRING DEFECTIVE MATERIALS AND WORKMANSHIP.

TEMPORARY POWER

REUSE EXISTING PANEL (IF IN GOOD CONDITION) AND SERVICE FOR TEMPORARY CONSTRUCTION POWER. ALL RECEPTACLES TO BE USED DURING CONSTRUCTION SHALL BE GFCI PROTECTED.

THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR DEENERGIZING CIRCUITS IN DEMOLITION AREAS TO INSURE A SAFE CONDITION. ELECTRICAL DEVICES AND ASSOCIATED WIRING LOCATED WITHIN THE DEMOLITION AREA THAT WILL NO LONGER BE USED SHALL BE REMOVED AND PROPERLY DISPOSED OF AT CONTRACTORS EXPENSE UNLESS OTHERWISE NOTED.

PERFORM ALL WORK IN ACCORDANCE WITH THE CURRENT NATIONAL ELECTRICAL CODE, STATE CODES, CITY ELECTRICAL CODES AND ALL OTHER APPLICABLE CODES INCLUDING ANY STATE OR LOCAL ENERGY CODES. ALL WORK SHALL ALSO BE IN COMPLIANCE WITH BUILDING OWNER'S CRITERIA. IN CASE OF CONFLICT BETWEEN THE DRAWINGS, SPECIFICATIONS, CODES, ORDINANCES AND AUTHORITIES HAVING JURISDICTION, THE MOST STRINGENT STANDARD (IN THE OPINION OF THE ENGINEER) SHALL APPLY. THE EC SHALL SATISFY CODE, AHJ, DRAWINGS AND SPECIFICATIONS AS A MINIMUM STANDARD WITHOUT ANY EXTRA COST.

THE ELECTRICAL CONTRACTOR SHALL SCHEDULE ALL ELECTRICAL SYSTEM(S) OUTAGES WITH THE GENERAL CONTRACTOR AND LANDLORD/OWNER AT LEAST 24 HOURS IN ADVANCE. UNLESS APPROVED OTHERWISE, ALL OUTAGES SHALL OCCUR BETWEEN 11:00PM AND 5:00AM.

THE ELECTRICAL CONTRACTOR SHALL COORDINATE ELECTRICAL WORK WITH OTHER TRADES. THE ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER ALL OTHER DRAWINGS. DO NOT SCALE DISTANCES OFF THE ELECTRICAL DRAWINGS; USE ACTUAL BUILDING DIMENSIONS.

BASIC MATERIALS AND METHODS

PROVIDE ALL NEW MATERIAL AND EQUIPMENT UNLESS NOTED OTHERWISE. ALL EQUIPMENT SHALL BE UL APPROVED, LABELED AND LISTED OR OTHER APPROVED TESTING ORGANIZATION WHICH HAS ACCEPTANCE BY THE AUTHORITIES HAVING JURISDICTION FOR THE PURPOSE FOR WHICH THEY ARE USED. IN ADDITION, MEETING ALL REQUIREMENTS OF THE CURRENT APPLICABLE CODES AND REGULATIONS. NO SUBSTITUTION OF MATERIALS SPECIFIED WILL BE ALLOWED UNLESS NOTED OTHERWISE. ALL ITEMS ARE NEW UNLESS OTHERWISE NOTED.

CUTTING AND FITTING

PERFORM CUTTING, CORING, FITTING, REPAIRING AND FINISHING OF THE WORK NECESSARY FOR THE INSTALLATION OF THE EQUIPMENT. HOWEVER, NO CUTTING OF THE WORK OF OTHER TRADES OR OF ANY STRUCTURAL MEMBER SHALL BE DONE WITHOUT THE CONSENT OF THE ARCHITECT, CONSTRUCTION MANAGER, GC AND/OR OWNER. PROPERLY FILL, SEAL, FIREPROOF AND WATERPROOF ALL OPENINGS. SLEEVES AND HOLES IN SLABS, WALLS AND CASEWORK.

CONTRACTOR TO VERIFY ALL DIMENSIONS, INCLUDING CLEARANCES REQUIRED BY OTHER TRADES AND NOTIFY OWNER'S REPRESENTATIVES OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK. ALL DIMENSIONS ARE TO THE FACE OF THE FINISHED SURFACE UNLESS NOTED OTHERWISE. ALL DIMENSIONS TO BE TAKEN FROM ACTUAL BUILDING DIMENSIONS.

THE CONTRACTOR SHALL THOROUGHLY EXAMINE ALL AREAS WHERE EQUIPMENT, CONDUIT AND WIRING WILL BE INSTALLED AND WILL REPORT ANY CONDITION THAT PREVENTS THE PROPER INSTALLATION OF THE ELECTRICAL WORK TO THE GC.

ALL ELECTRICAL SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. BALANCE ALL BRANCH CIRCUIT LOADS BETWEEN THE PHASES OF THE SYSTEM TO WITHIN 10% OF THE HIGHEST PHASE LOAD IN EACH PANELBOARD.

EQUIPMENT AND MATERIALS SHALL CONFORM WITH APPROPRIATE PROVISIONS OF NEC, WAC, ASTM, UL, ETL, NEMA, ANSI AND OTHER APPLICABLE AGENCY AS THEY APPLY TO EACH INDIVIDUAL UNIT OR ASSEMBLY.

RACEWAYS

PROVIDE CODE APPROVED WIRING METHODS FOR BRANCH CIRCUITING INDOORS, SUCH AS EMT CONDUIT WITH COPPER CONDUCTORS OR MC CABLE (PROVIDED IT IS CONCEALED AND NOT EXPOSED). ALL ABOVE GROUND CONDUITS SHALL BE EMT OR RIGID, MINIMUM 1/2" IN SIZE (UNO). CONDUITS SHALL BE SIZED PER CODE AND AS NEEDED TO INSTALL CONDUCTORS. CONDUIT CONNECTORS SHALL BE DOUBLE LOCKNUT TYPE, UL LISTED AND LABELED, WITH COMPRESSION OR SET SCREW FITTINGS. PVC CONDUITS ARE NOT ALLOWED ABOVE SLAB UNLESS CODE AND AHJ APPROVED/LISTED FOR THAT USE.

CONDUIT RUNS ON EXTERIOR OF BUILDING SHALL BE CONCEALED AND BE RIGID STEEL CONDUIT WITH WEATHER TIGHT, CORROSION-RESISTANT FITTINGS. CONDUIT SHALL NOT BE RUN EXPOSED WITHOUT SPECIFIC PERMISSION FROM THE CONSTRUCTION MANAGER.

WHERE RACEWAYS ARE INSTALLED FOR OTHERS TO USE, OR FOR FUTURE USE, PROVIDE NYLON PULL STRINGS END TO END WITH A LABEL ON BOTH ENDS STATING USE AND LOCATION OF OTHER STUB (E.G. DATA-FRONT POS).

PENETRATIONS THROUGH FIRE RATED CONSTRUCTION SHALL BE SEALED USING 3M FIRE BARRIER CAULK, NELSON ELECTRIC FLAMESEAL, T&B FLAMESAFE OR OTHER METHOD APPROVED BY THE ARCHITECT AND AHJ.

CONDUIT RUNS CONCEALED IN CONCRETE OR UNDERGROUND SHALL BE 3/4" MINIMUM, UNLESS OTHERWISE NOTED W/RIGID STEEL ELBOWS. CONDUIT CONNECTORS SHALL BE DOUBLE LOCKNUT TYPE, UL LISTED AND LABELED, WITH COMPRESSION OR SET SCREW FITTINGS.

EQUIPMENT

THE ELECTRICAL CONTRACTOR SHALL VERIFY EQUIPMENT LOCATION AND SIZES WITH THE TRADE AND VENDOR SUPPLYING THE EQUIPMENT PRIOR TO ROUGH-IN.

LOW VOLTAGE

ALL LOW VOLTAGE WORK SHALL COMPLY, BE PERMITTED AND INSPECTED PER STATE (AND AHJ) REQUIREMENTS. ALL LOW VOLTAGE WORK SHALL BE INSTALLED BY A LICENSED CONTRACTOR IN ACCORDANCE WITH THE STATE AND AHJ REQUIREMENTS

ALL LOW VOLTAGE CABLING INSTALLED UNDERGROUND SHALL BE ROUTED IN A CONDUIT RACEWAY AND CABLING/CONDUCTORS SHALL BE LISTED FOR USE IN WET LOCATIONS. FOR LOW VOLTAGE APPLICATION AND PER AHJ.

ALL LOW VOLTAGE CABLING ROUTED INDOORS SHALL BE ROUTED CONCEALED IN WALLS/CEILINGS IN A CONDUIT RACEWAY (UNLESS OWNER AND AHJ AUTHORIZE IT TO BE ROUTED EXPOSED THROUGH WALL/CEILING). IF APPROVED BY OWNER & AHJ TO BE ROUTED EXPOSED, CABLING SHALL BE PROPERLY FASTENED/SUPPORTED PER CODE, AHJ AND INDUSTRY STANDARDS. CABLING NOT ROUTED IN CONDUIT SHALL BE PLENUM RATED WHERE REQUIRED BY CODE OR AHJ (CONFIRM WHETHER CEILING SPACE IS BEING USED AS AN AIR PLENUM.)

ALL LOW VOLTAGE CABLING OUTDOORS (E.G. ON ROOF) SHALL BE ROUTED IN CONDUIT PER CODE AND AHJ REQUIREMENTS UNLESS SPECIFICALLY LISTED AND LABELED FOR EXTERIOR USE.

DISCONNECTS AND FUSED SWITCHES

FUSED SWITCHES

HEAVY DUTY TYPE, HORSEPOWER RATED WITH INTERLOCKING COVER. NEMA 1 TYPICAL. OUTDOOR AND WET LOCATION SWITCHES SHALL BE RAIN TIGHT TYPE NEMA 3R. ALL SWITCHES SHALL BE LOCKABLE. FUSES IN CIRCUITS RATED AT 600 AMPERES OR LESS SHALL BE UL CLASS RK1 DUAL-ELEMENT, TIME DELAY, CURRENT LIMITING FUSES. FUSES IN CIRCUITS RATED AT 601 AMPERES OR LARGER SHALL BE UL CLASS L TIME-DELAY, CURRENT LIMITING SWITCHES.

NAMEPLATES

PROVIDE PHENOLIC NAMEPLATES ON ELECTRICAL DEVICES SUCH AS DISCONNECTS AND PANELS WITH THEIR DESIGNATION (E.G. "PANEL A"). PROVIDE DIRECTORY FOR PANELS AND LABEL ALL BREAKERS. IF A TRANSFORMER IS INSTALLED, PROVIDE NAMEPLATE ON TRANSFORMER AS FOLLOWS: "HOT SURFACE, DO NOT PLACE ANY ITEMS ON TOP OR ON SIDES OF TRANSFORMER".

FIRE ALARM

FIRE ALARM SYSTEM SHALL BE, MODIFIED, EXTENDED AND/OR ADDED TO BY A DESIGN BUILD FIRE ALARM CONTRACTOR AS NEEDED (NOT SHOWN). COORDINATE WITH OWNER FOR FIRE ALARM CONTRACTOR REQUIREMENTS.

LIGHTING

INSTALL A NEW (UNO) LIGHTING SYSTEM COMPLETE AND FULLY OPERATIONAL, IN CONFORMANCE WITH CODE AND FIXTURE LISTING REQUIREMENTS. CLEAN ALL FIXTURES AT TIME OF JOB COMPLETION UTILIZING MANUFACTURERS APPROVED OR RECOMMENDED CLEANING SOLUTIONS.

PANELBOARDS

PANELBOARDS SHALL HAVE PLUG-IN OR BOLT ON BREAKERS AND MAIN LUGS ONLY OR MAIN BREAKERS AS NEEDED OR REQUIRED. PANELBOARDS SHALL BE CONSTRUCTED WITH ALUMINUM BUS AND BE ENCLOSED IN NEMA 1 OR 3R TYPE HOUSING AS MANUFACTURED BY "SQUARE D", "CUTLER HAMMER" OR EQUAL AND CAPABLE OF ACCEPTING GFCI BREAKERS. ENCLOSURE(S) SHALL BE COMPLETE WITH A HINGED DOOR, CYLINDER LOCK AND A NEATLY TYPED CIRCUIT BREAKER DIRECTORY UNDER PLASTIC COVER IN EACH PANEL DOOR. ALL MULTIPLE POLE BREAKERS (AND OTHER BREAKERS REQ'D BY CODE) SHALL HAVE A COMMON TRIP HANDLE.

SWITCHES AND RECEPTACLES

LEVITON COMMERCIAL GRADE OR APPROVED EQUAL WITH DURABLE COVERPLATES. COORDINATE WITH OWNER/ARCHITECT FOR COVERPLATE TYPE AND COLOR.

LEVITON COMMERCIAL GRADE OR APPROVED EQUAL DURABLE COVERPLATES. COORDINATE WITH OWNER/ARCHITECT FOR COVERPLATE TYPE AND COLOR. INSTALL RECEPTACLES PLUMB, LEVEL AND SECURE TO J-BOX. PROVIDE GFCI TYPE WHERE INDICATED AND WHERE REQUIRED BY CODE AND AHJ. GFCI RECEPTACLES SHALL BE CLASS 'A' RATED FOR PERSONNEL PROTECTION.

MOUNTING

MOUNT DISCONNECTS TO STRUCTURE, INDEPENDENT OF THE MECHANICAL UNIT HOUSING OR WITH INDEPENDENT UNISTRUT SUPPORT. DISCONNECTS MOUNTED TO UNITS IS ONLY ALLOWED WHERE ACCEPTED BY THE LOCAL CODE AUTHORITY AND LOCATED SO AS TO NOT BLOCK ACCESS OR LABELS OF UNIT.

GROUNDING

ALL MAJOR PARTS NOT CARRYING CURRENT, INCLUDING BUT NOT LIMITED TO SECONDARY FEEDER CIRCUIT, EQUIPMENT AND PANELBOARD ENCLOSURES, PULL AND JUNCTION BOXES AND OTHERS DEFINED BY CODE, SHALL BE PROPERLY GROUNDED. METALLIC RACEWAYS SHALL UTILIZE DOUBLE LOCKNUTS AND OTHER FITTINGS TO PROVIDE GROUND CONTINUITY.

CONDUCTORS AND TERMINATIONS

CONDUCTORS SHALL BE COPPER, INSULATED FOR 600V, TYPE THWN/THHN, NUMBER 12 AWG MINIMUM UNO.

MOTORS AND OTHER WIRING

THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NEEDED CONDUIT, WIRING. CONNECTIONS AND SAFETY SWITCHES FOR ALL MOTORS AND EQUIPMENT, EVEN IF THE MOTORS AND EQUIPMENT ARE SUPPLIED BY OTHERS. MOTORS, CONTROLS, ETC. MAY BE FURNISHED BY THE SUPPLIER OF THE DRIVEN EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL INCLUDE ALL WORK AND CONNECTIONS NEEDED TO MAKE THE SYSTEM COMPLETE AND OPERATIONAL.

ALL CONNECTIONS TO MECHANICAL EQUIPMENT SHALL BE DONE BY THE EC.

COORDINATION WITH LANDLORD REQUIREMENTS

CONTRACTOR SHALL COORDINATE WITH LANDLORD FOR LANDLORD CONSTRUCTION REQUIREMENTS/SPECIFICATIONS. CONTRACTOR SHALL BECOME COMPLETELY FAMILIAR WITH REQUIREMENTS/SPECIFICATIONS AND ADHERE TO THEM. WHERE LANDLORD REQUIREMENTS ARE MORE STRINGENT THAN SHOWN IN THESE PLANS, LANDLORD REQUIREMENTS SHALL GOVERN.

CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO

GENERAL NOTES

CONSTRUCTION.

- CONTRACTOR SHALL PATCH AND REPAIR ALL EXISTING WALLS, FLOORS, CEILINGS OR OTHER SURFACES IDENTIFIED TO REMAIN THAT MAY BECOME DAMAGED DURING THE
- EXPOSED/SURFACE MOUNTED CONDUITS SHALL ONLY BE ALLOWED WHERE NECESSARY IN EXPOSED CEILING AREAS. CONDUITS SHALL BE MIN. 1/2" EMT CONDUIT ROUTED IN AN ORGANIZED LAYOUT, PARALLEL/PERPENDICULAR TO WALLS/STRUCTURE. ROUTING SHALL BE APPROVED BY ARCHITECT PRIOR TO
- VERIFY LOCATION OF OUTLETS AND SWITCHES IN FINISHED ROOMS WITH ARCHITECTURAL DRAWINGS, INTERIOR DETAILS, FINISH SCHEDULES, GENERAL CONTRACTOR, AND OWNER. VERIFY FINAL DOOR HINGE LOCATION PRIOR TO SWITCH INSTALLATION AND ADJUST SWITCH LOCATION IF NEEDED. DO NOT MOUNT RECEPTACLES/SWITCHES IN LOCATIONS THAT WOULD CONFLICT WITH MIRRORS, SEAMS OF WALLS, WAINSCOTS, TILE TRANSITIONS, ETC.
- DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL INTENT OR ARRANGEMENT OF SYSTEM(S). FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADÉS TO VERIFY SPACE CONDITIONS. MAINTAIN HEADROOM AND SPACE CONDITION. MAKE APPROPRIATE ADJUSTMENTS AT ARCHITECT'S DIRECTION.
 - COORDINATE WITH MC FOR ANY NEEDED LOW VOLTAGE CONTROL WIRING AND DEVICES THAT IS NEEDED BUT MAY NOT BE SHOWN IN THESE DRAWINGS.
- UNLESS OTHERWISE NOTED(SEE ARCH, SHEETS), THE CONTRACTOR SHALL REMOVE ALL EXISTING ELECTRICAL EQUIPMENT INCLUDING WIRING. CONDUIT AND ALL OTHER MISC. DEVICES AS DIRECTED BY THE GC THAT IS NOT BEING SALVAGED OR REUSED. EQUIPMENT INDICATED ON DRAWINGS TO BE REUSED SHALL BE INSPECTED AND IF DEFECTIVE, REPLACED. COORD. WITH GC AND OWNER.
- PROVIDE ALL BRANCH CIRCUITING AND DEVICES. EVEN IF NOT SHOWN, PROVIDE ALL WIRING AND WIRE QUANTITIES TO ACCOMPLISH CIRCUITING TO MEET SPEC REQUIREMENTS AND APPLICABLE CODES.
- VERIFY ACTUAL RATINGS/LISTINGS OF EQUIPMENT AND ADJUST BREAKER, OUTLET & CIRCUIT SIZES/RATINGS AS MAY BE NEEDED PER CODE.
- 10. CONDUCTOR QUANTITIES ARE NOT SHOWN. F&I PER CODE WITH SWITCHING AS INDICATED BY LETTER DESIGNATION, NOTE, OR LOCAL SWITCH. CONFIRM WIRING DIAGRAMS AND REQUIREMENTS OF ANY SPECIAL LIGHTING CONTROLS.
- 11. PROVIDE 1" MINIMUM EMT CONDUIT FROM EACH DATA BOX TO ACCESSIBLE CEILING SPACE WITH BUSHINGS. PROVIDE CONDUIT SLEEVES WITH BUSHINGS THROUGH UNACCESSIBLE CEILING SPACES ALONG ROUTE.
- 12. SEE ARCH. SHEETS FOR PAINTING AND COLORS FOR ANY EXPOSED J-BOXES,
- 13. VERIFY ALL EQUIPMENT RATINGS IN FIELD AND ADJUST CIRCUIT BREAKER RATINGS AS MAY BE NEEDED. CONFIRM CIRCUIT VOLTAGE IS AT A VOLTAGE RECOMMENDED BY EQUIPMENT MANUFACTURERS.
- 14. ALL EXISTING ELECTRICAL ITEMS AND WIRING TO REMAIN SHALL BE RECONNECTED.

ELECTRICAL ABBREVIATIONS

MAX

LANDLORD

MAXIMIIM

ABOVE FINISHED FLOOR

AIR HANDLING UNIT

APPROX APPROXIMATE

KILOWATT

AUTHORITIES HAVING JURISDICTION

APPROX AV BLDG	APPROXIMATE AUDIO VIDEO BUILDING	MAX MECH MC MDP	MAXIMUM MECHANICAL MECHANICAL CONTRACTOR MAIN DISTRIBUTION PANEL
CLG CKT CONST CW	CEILING CIRCUIT CONSTRUCTION COLD WATER	MEP MFG MIN MW	MECHANICAL, ELECTRICAL AN PLUMBING MANUFACTURER MINIMUM MICROWAVE
DL DL-X DEG	LIGHTS W/ IN DAYLIGHT ZONE DAYLIGHT ZONE X DEGREES	NL NTS	NIGHTLIGHT NOT TO SCALE
DEG DTL DN/DWN DW DWG(S)	DETAIL DOWN DISHWASHER DRAWING(S)	OCP OHP OS	OVER CURRENT PROTECTION OUTDOOR HEAT PUMP OCCUPANCY SENSOR
EA EC EF ELEC	EACH ELECTRICAL CONTRACTOR EXHAUST FAN ELECTRICAL	PC PE OR PC PM PNL PSE	PLUMBING CONTRACTOR PHOTOELECTRIC CELL PROJECT MANAGER PANEL PUGET SOUND ENERGY
EM (E) OR (EX) EXT	EMERGENCY EXISTING EXTERIOR	REFER REF REQ(D)	REFERENCE REFRIGERATOR REQUIRE(D)
FACP FF F&I	FIRE ALARM CONTROL PANEL FAN FORCED FURNISH & INSTALL	REV RMC	REVISED / REVISION RESIDENTIAL METER CENTER
FLR FT	FLOOR FOOT / FEET	SCL SH SPEC(S)	SEATTLE CITY LIGHT SHEET SPECIFICATION(S)
GC GFCI	GENERAL CONTRACTOR GROUND FAULT CIRCUIT INTERRUPTER	SF SS	SQUARE FEET STAINLESS STEEL
GND	GROUND	TEL TEMP	TELEPHONE TEMPORARY
HP HR	HEAT PUMP HOUR	TYP	TYPICAL
HVAC	HEATING VENTILATION & AIR CONDITIONING	UNO	UNLESS NOTED OTHERWISE
HW	HOT WATER	W WH	WATT WATER HEATER
IHP	INDOOR HEAT PUMP	WP WHF	WEATHER-PROOF WHOLE HOUSE FAN
J-BOX	JUNCTION BOX		

ELECTRICAL SHEET INDEX SYMBOLS LEGEND

NOTE: NOT ALL SYMBOLS MAY BE USED IN PLAN.

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₽

(C)

 \Box

\$

-OPEN

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OR

YFAN READY

120V DOUBLE (QUAD) DUPLEX RECEPTACLE

120V DUPLEX RECEPTACLE

120 V SINGLE RECEPTACLE

CONTROLLED RECEPTACLE

208 OR 240V RECEPTACLE

SINGLE POLE SWITCH

OCCUPANCY SENSOR SWITCH

THREE WAY DIMMER SWITCH

PHONE JACK (CAT5e CABLE)

CEILING MOUNT OCCUPANCY SENSOR

CARBON MONOXIDE W/ SMOKE DETECTOR

FUSED DISCONNECT SWITCH OR MOTOR RATED SNAP SWITCH

(WHERE RATED AND ALLOWED BY CODE). SIZE FOR ACTUAL

MANE PLATE RATING OF EQUIPMENT OR AS REQUIRED BY

DATA JACK (CAT5e CABLE)

SMOKE DETECTOR

PHOTO CELL

CODE (CONFIRM).

FAN-FORCED HEATER

BASEBOARD HEATER

RESIDENTIAL ELECTRICAL PANEL

COMMERCIAL ELECTRICAL PANEL

SURFACE MOUNTED LINEAR FIXTURE

PENDANT MOUNTED LINEAR FIXTURE

SURFACE MOUNTED FIXTURE

PENDANT MOUNTED FIXTURE

PADDLE FAN READY BOX

WALL MOUNTED FIXTURE

RECESSED CAN FIXTURE

WALL MOUNTED FIXTURE

WALL MOUNTED LINEAR FIXTURE

UNDERCOUNTER STRIP FIXTURE

EXIT SIGN W/ BACKUP POWER SOURCE

EQUIPMENT MARK - SEE SCHEDULE

FOR CONTROLS OR OTHER REASONS.

UNDERGROUND CONDUIT WITH GROUND WIRE

CONCEALED RACEWAY (UNO): CONTRACTOR TO F&I

APPROPRIATE QUANTITY OF CONDUCTORS (NOT SHOWN). F&I DEDICATED NEUTRAL FOR ALL GFCI CIRCUITS TO PREVENT FALSE TRIPPING. F&I A NEUTRAL FOR PHASE TO PHASE LOADS IF NEEDED

EMERGENCY LIGHT W/ BACKUP POWER SOURCE

EXIT SIGN W/ EMERGENCY LIGHT & BACKUP POWER SOURCE

TRACK FIXTURE

EXHAUST FAN

HEAT LAMP

HORN STROBE

DETAIL MARK

EX.X SHEET WHERE DETAIL IS SHOWN

WHOLE HOUSE FAN

FIRE DAMPER

MEDIA PANEL

DUCT SMOKE DETECTOR

MANUAL PULL STATION

THREE WAY SWITCH

FOUR WAY SWITCH

TIMER SWITCH

DIMMER SWITCH

THERMOSTAT

CARD READER

TIME CLOCK

TV JACK

JUNCTION BOX

120V SWITCHED RECEPTACLE

120V GFCI PROTECTED RECEPTACLE

120V WEATHERPROOF RECEPTACLE

120V DUPLEX FLOOR RECEPTACLE

HARDWIRED EQUIPMENT CONNECTION

120V USB DUPLEX RECEPTACLE

	Sheet List Table
Sheet Number	Sheet Title
E0.01	ELECTRICAL SPECIFICATION
E2.00	ELECTRICAL DEMO PLAN
E2.01	ELECTRICAL POWER PLAN
E3.01	ELECTRICAL LIGHTING PLAN
E5.01	ELECTRICAL RISER DIAGRAM
E6.01	PANEL SCHEDULES

PROJECT SUMMARY

PORTIONS OF THE BUILDING AND A SMALL ADDITION. NO NEW LOADS WILL BE ADDED, ITEMS WILL ONLY BE RELOCATED OR REPLACED WITH LOADS OF AN EQUAL OR LESSER VALUE. RECEPTACLES WILL BE LOCATED AS NEEDED AND TAMPER PROOF RECEPTACLES WILL BE INCLUDED IN SPACES WHERE CHILDREN WILL BE SUPERVISED.

APPLICABLE CODES

ELECTRICAL WORK SHALL BE GOVERNED BY THE FOLLOWING CODES:

APPLICATION

THIS PROJECT IS A REMODEL INCLUDING WALL CHANGES IN MULTIPLE

2017 NATIONAL ELECTRIC CODE

2015 WASHINGTON STATE ENERGY CODE

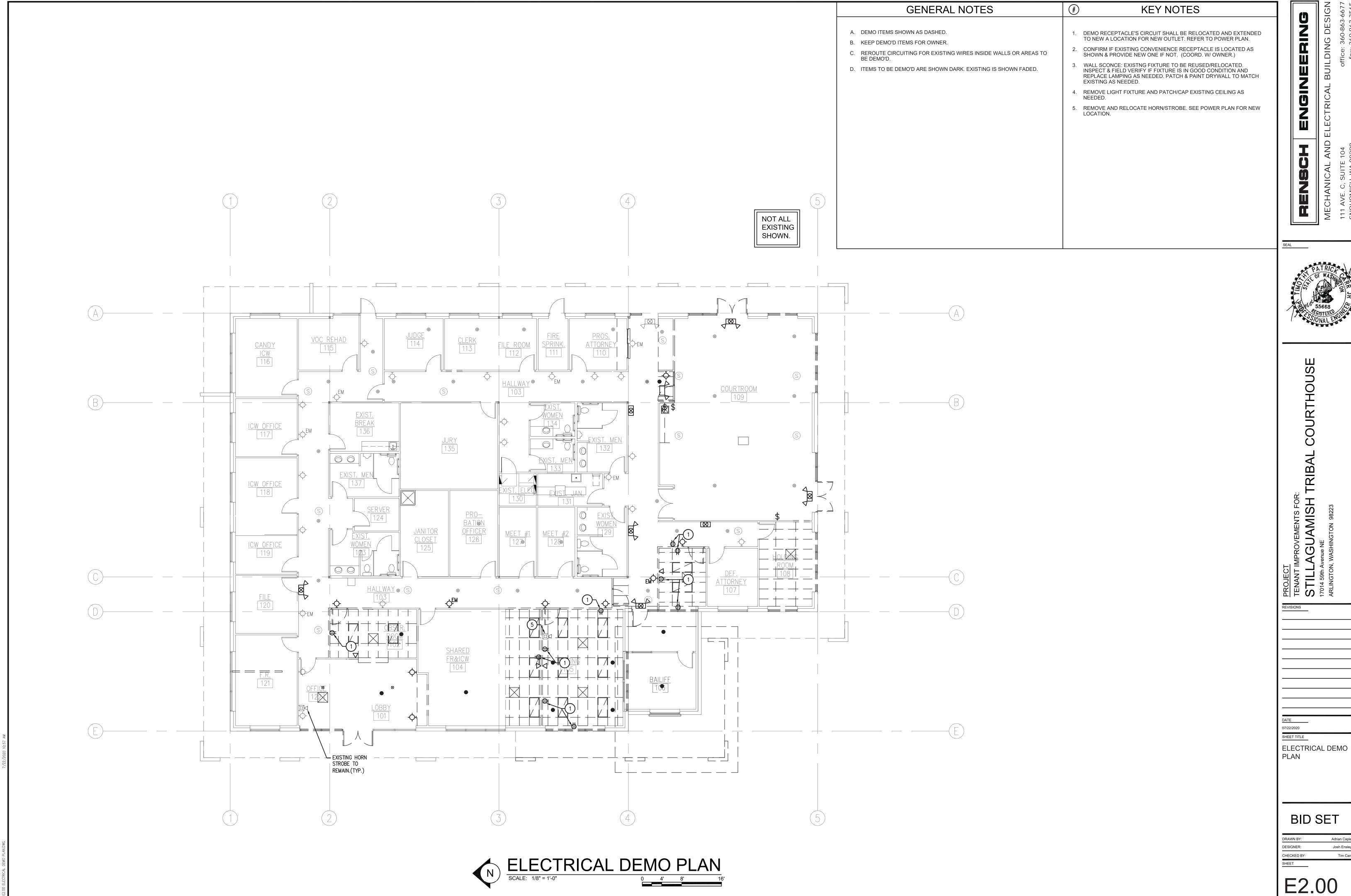
OTHER LOCAL & MUNICIPAL CODES IN EFFECT AT TIME OF PERMIT

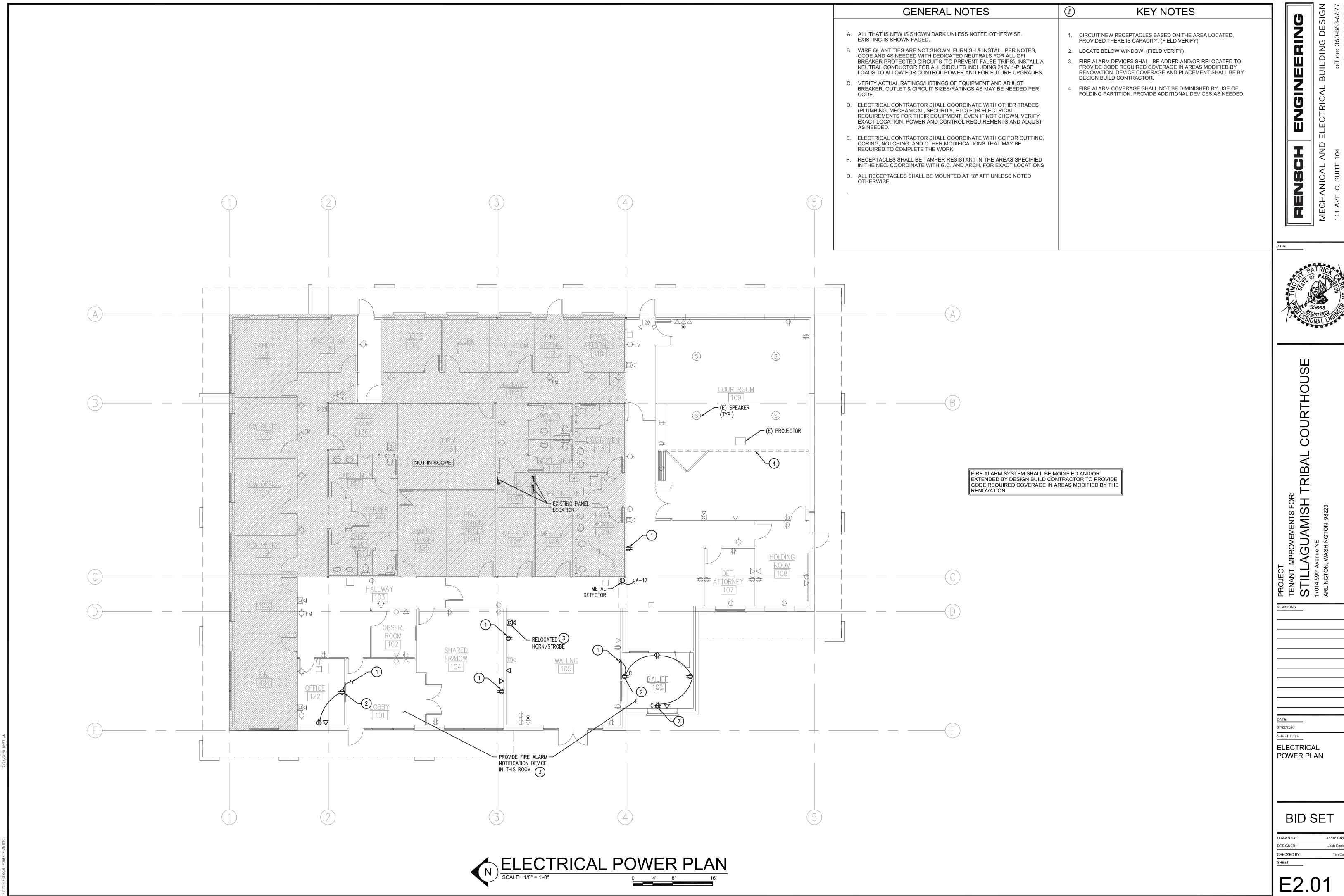
ELECTRICAL

SPECIFICATIONS

BID SET

ESIGNER:

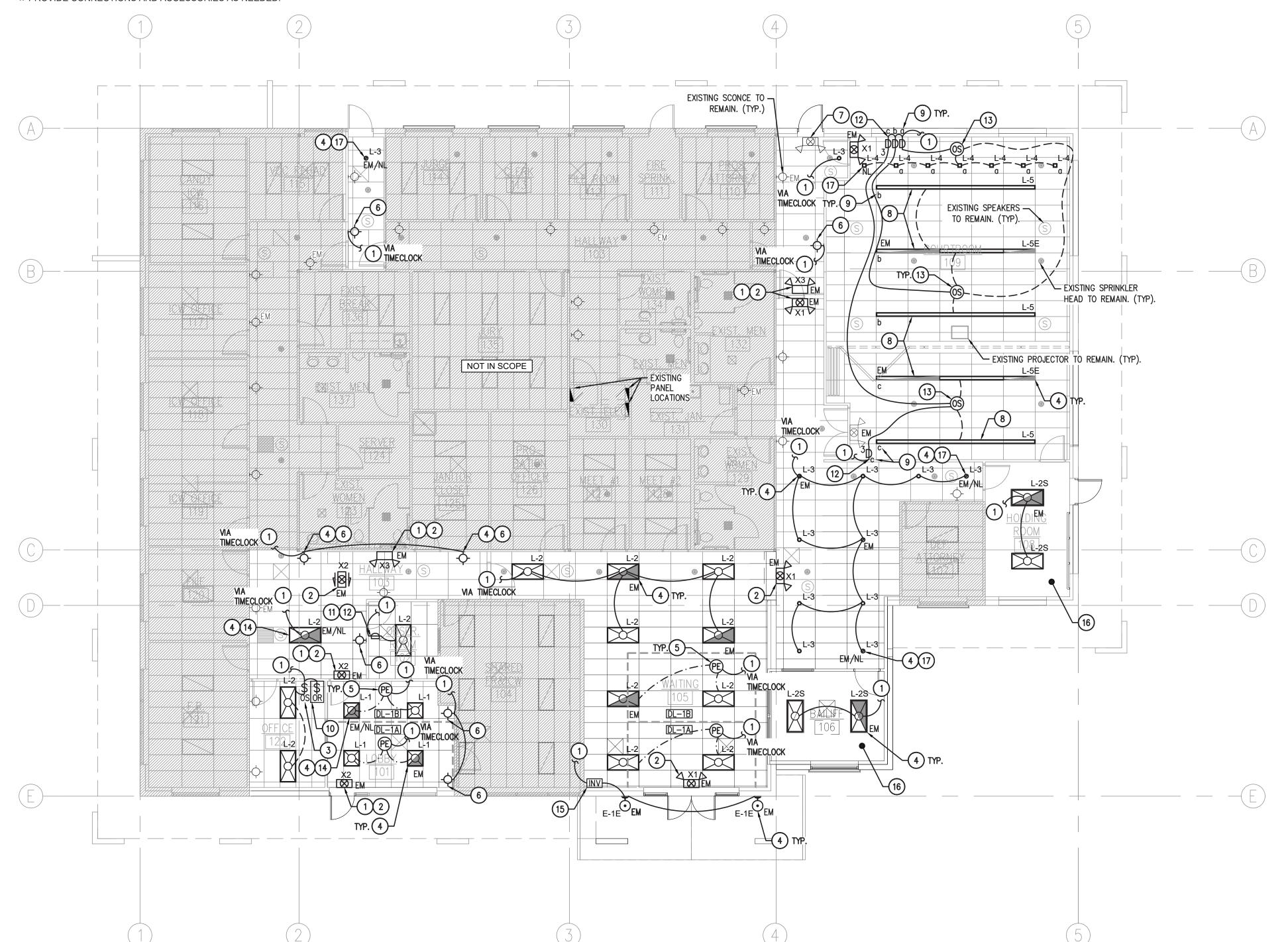




			LIGHT FIXTURE SCHEI	DULE				
MARK	DESCRIPTION	MANUFACTURER	MODEL NO.	VOLTS	DIMMING	INPUT WATTS	LOCATION	REMARKS
L-1	2X2 LED TROFFERS	LITHONIA	2BLT2-33L-ADP-120- EZ1-LP935	120	0-10V	25	LOBBY	BATTERY BACKUP WHERE INDICATED W/ EM
L-2	2X4 LED TROFFERS	LITHONIA	2BLT4-48L-ADP-120 EZ1- LP935	120	0-10V	38	VARIES, SEE PLAN	BATTERY BACKUP WHERE INDICATED W/ EM
L-2S	2X4 LED TROFFERS - SURFACE MOUNT	LITHONIA	2BLTX4-48L-ADP 120 EZ1 -LP935	120	0-10V	38	VARIES, SEE PLAN	BATTERY BACKUP WHERE INDICATED W/ EM
L-3	4" LED RECESSED DOWNLIGHT - ROUND	LITHONIA	LDN4-30/10-L04-AR -LSS 120-GZ1	120	0-10V	11	VARIES, SEE PLAN	BATTERY BACKUP WHERE INDICATED W/ EM
L-4	4" LED RECESSED DOWNLIGHT - SQUARE	LITHONIA	LDN4SQ-30/10-LS4-AR-LSS-120-GZ1	120	0-10V	11	COURT ROOM	BATTERY BACKUP WHERE INDICATED W/ EM
L-5	LED 20LF LINEAR SURFACE MOUNT	FOCAL POINT	SEEM4 FSM4LS-FL-875LF-935K-1C-UNV-L11-SM20'	120	0-10V	185	COURT ROOM	CONFIRM MOUNTING W/ ARCHITECT
L-5 EM	LED 20LF LINEAR SURFACE MOUNT -EMERGENCY BACKUP	FOCAL POINT	SEEM4 FSM4LS-FL-875LF-935K-1C-UNV-L11-SM-2EM-20'	120	0-10V	185	COURT ROOM	CONFIRM MOUNTING W/ ARCHITECT
EXTERIO	OR LIGHTING							
E-1E	EXTERIOR LED WALL SCONCE (35W EA)	LITHONIA	OLLWU-LED-P1-40K-120-DDB	120	N/A	35	EXT ENTRY FAÇADE	
E-1E	INVERTER	DUAL LITE	LPS-32-S OR EQUAL	120	IN/A	35	INTERIOR /ABOVE CEILING	BATTERY BACKUP 35VA INVERTER
			EMERGENCY LIGHTI	NG				
X1	LED EXIT SIGN/LIGHT WITH BATTERY BACKUP	LITHONIA	LHQM-LED (OR EQUAL)	120		<5W	SEE PLAN	MATCH EXISTING
X2	LED EXIT SIGN WITH BATTERY BACKUP	LITHONIA	LQM (OR EQUAL)	120		<5W	SEE PLAN	MATCH EXISTING
Х3	LED EMERGENCY LIGHT WITH BATTERY BACKUP	LITHONIA	ELM2L (OR EQUAL)	120		<5W	SEE PLAN	MATCH EXISTING

GENERAL NOTES

- 1. CONFIRM ALL FIXTURE TYPES AND FINISHES WITH ARCHITECT AND ENSURE FIXTURES INSTALLED DO NOT EXCEED INPUT WATTS INDICATED.
- 2. ALL FINISH/COLOR BY OTHERS
- 3. EC SHALL BE RESPONSIBLE TO INSTALL ALL CONTROL COMPONENTS AND WIRING PER MANUF'S REQUIREMENTS.
- 4. PROVIDE CONNECTIONS AND ACCESSORIES AS NEEDED.



GENERAL NOTES KEY NOTES

A. ALL IS NEW UNLESS NOTED OTHERWISE.

B. WIRE QUANTITIES ARE NOT SHOWN. FURNISH & INSTALL PER NOTES, CODE AND AS NEEDED WITH DEDICATED NEUTRALS FOR ALL GFI BREAKER PROTECTED CIRCUITS (TO PREVENT FALSE TRIPS). INSTALL A NEUTRAL CONDUCTOR FOR ALL CIRCUITS INCLUDING 240V 1-PHASE LOADS TO ALLOW FOR CONTROL POWER AND FOR FUTURE UPGRADES.

- C. VERIFY ACTUAL RATINGS/LISTINGS OF EQUIPMENT AND ADJUST BREAKER, OUTLET & CIRCUIT SIZES/RATINGS AS MAY BE NEEDED PER CODE.
- D. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES (PLUMBING, MECHANICAL, SECURITY, ETC) FOR ELECTRICAL REQUIREMENTS FOR THEIR EQUIPMENT, EVEN IF NOT SHOWN. VERIFY EXACT LOCATION, POWER AND CONTROL REQUIREMENTS AND ADJUST AS NEEDED.
- E. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH GC FOR CUTTING, CORING, NOTCHING, AND OTHER MODIFICATIONS THAT MAY BE REQUIRED TO COMPLETE THE WORK.

CONNECT TO EXISTING CIRCUIT AND SWITCH FOR AREA/TYPE OF LIGHTS (UNO). VERIFY EXISTING CAPACITY OF CIRCUIT AND ONLY CONNECT TO CIRCUITS WITH CAPACITY.

EMERGENCY FIXTURES TO BE CONNECTED TO UNSWITCHED CONSTANT HOT LEG OF AREA LIGHTING CIRCUIT WIRE TO ALLOW EMERGENCY LIGHT TO DRIVE DIMMING TO FULL BRIGHT ON LOSS OF POWER.

MOTION DETECTOR SWITCH MOUNTED 48" AFF AND 7-1/2" FROM OUTSIDE EDGE OF DOOR FRAME UNLESS SHOWN OTHERWISE. COORDINATE LOCATION WITH TILES, STUDS AND OTHER OBJECTS. CONFIRM LOCATION WITH GC.

PROVIDE EMERGENCY OPERATION AT EGRESS DISCHARGE IN CASE POWER IS LOST ON CIRCUIT.

PHOTOCELL TO CONTROL DAYLIGHT ZONES BY DIMMING FIXTURES WITHIN ZONES AS INDICATED TO MEET STATE ENERGY CODE FOR AUTOMATIC DAYLIGHT CONTROL. FIELD ADJUST SENSOR AS NEEDED.

6. RELOCATED LIGHT FIXTURE.

7. EXISTING EXIT SIGN/LIGHT BATTERY BACKUP FIXTURE.

ENDANGER OCCUPANT SAFETY OR FOR SECURITY.

8. REPLACE EXISTING LIGHT WITH NEW ONE & CONNECT TO EXISTING

9. SWITCH SHALL CONTROL LIGHTS AS DESIGNATED. LIGHT SWITCHES SHALL INDICATE ON/OFF IF LIGHTS ARE NOT VISIBLE FROM SWITCH

10. MASTER OVERRIDE SWITCH CONTROLS THE LOBBY AND HALLWAYS.

11. MANUAL CONTROL FOR AREAS WHERE AUTOMATIC 'OFF' WOULD

12. ENSURE DIMMER IS COMPATIBLE W/ DIMMING TYPE FIXTURE.

13. CEILING MOUNTED OCCUPANCY SENSORS TO CONTROL ALL TROFFERS IN THE ROOM. PROVIDE MANUAL CONTROL TO TURN LIGHTS OFF.

14. CONTROLLED NIGHT LIGHT (CNL): FIXTURE CONTROLS TO BE PROGRAMMED TO ALLOW NORMAL DL/DIM CONTROL DURING BUSINESS HOURS & REMAIN ON DURING UNOCCUPIED HOURS.

15. INVERTER: INVERTERS SHALL BE MOUNTED ABOVE T-BAR CEILING.

16. HIGH SECURITY AREA SHALL HAVE LIGHTING ON AT ALL TIME WHILE BUILDING IS OCCUPIED & NO MANUAL OFF CONTROLS IN THE ROOM.

17. NIGHT LIGHT: LIGHT SHALL REMAIN ON DURING UNOCCUPIED TIMES.

Lighting Control Summary											
Room/Space	Zone	Automatic Shut-off Type (See Note 2)	Daylight Control Type (See Note 4)	Notes							
COURTROOM	N/A	CEILING MOUNTED OCCUPANCY SENSOR W/ MANUAL OVERRIDE (MANUAL ON/AUTO OFF)	N/A	2							
WAITING	DL-1A/B	TIMECLOCK LIGHTING CONTROL W/ OVERRIDE	CEILING MOUNTED PE CELL	3							
FR & ICW		NO LIGHTING CHANGE		2							
LOBBY	DL-2A/B	TIMECLOCK LIGHTING CONTROL W/ OVERRIDE	CEILING MOUNTED PE CELL	1,3							
OFFICE	N/A	WALL MOUNTED OCCUPANCY SENSOR (MANUAL ON/AUTO OFF)	N/A	2							
OBSERVATION ROOM	N/A	MANUAL SWITCH W/ DIMMER SWITCH	N/A	4							
HALLWAY	N/A	TIMECLOCK LIGHTING CONTROL W/ OVERRIDE	N/A	1							
BAILIFF, HOLDING ROOM	N/A	TIMECLOCK	N/A	5							
HALLWAY, NORTHEAST		CONNECTS TO EXISTING CONTR	OLS								
EXTERIOR LIGHTING	CONNECTS T	O EXISTING CONTROLS. AT A MINIMUM, EXTERIOR LIGHT	S SHALL BE DUSK TO DAWN OPERATION								

1 Provide Night Light control for fixtures indicated.

2 30-minute delay off delay on Automatic Control.

3 Daylight zones defined by WSEC.

4 Manual control for area where automatic OFF may endanger occupant safety or for security. 5 High security area shall have lights ON during occupied times with no manual OFF control in the room.

SWITCHING CIRCUIT LEGEND

NOTE: CONFIRM ACTUAL SWITCH LEG REQUIREMENTS INCLUDING ANY LOW VOLTAGE OR WIRELESS CONTROL REQUIREMENTS. TIMECLOCK SWITCH LEG(S) OCCUPANCY SENSOR SWITCH LEG

PHOTO SENSOR SWITCH LEG

BID SET

ELECTRICAL LIGHTING PLAN

HECKED BY:

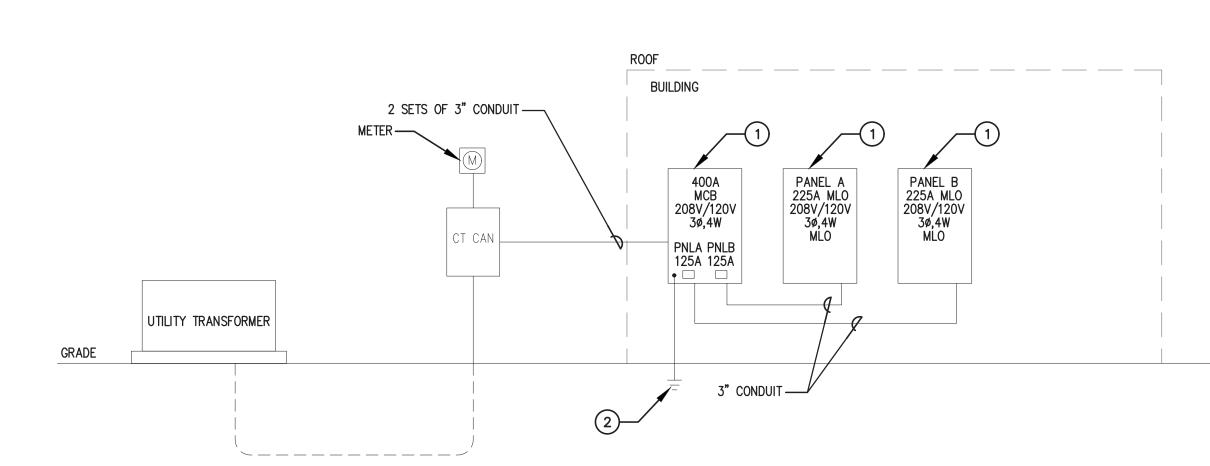
E3.01

) ELECTRICAL LIGHTING PLAN
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

GENERAL NOTES A. ALL IS EXISTING UNLESS OTHERWISE NOTED. 1. SEE PANEL SCHEDULE FOR CIRCUIT DIRECTORY. B. ALL PANELS/EQUIPMENT SHALL BE PERMANENTLY LABELED FOR "ARC FLASH HAZARD" AS REQUIRED BY SEC. 110.16 OF THE NEC. 2. VERIFY GROUNDING SYSTEM INSTALLED PER CODE. C. PANELS ARE EXISTING AND NOT BEING CHANGED. ANY BREAKERS, IF REPLACED, SHALL HAVE THE SAME AIC RATING AS OTHER BREAKERS IN THE PANEL. D. LOADS ON THE PANELS ARE NOT BEING INCREASED. CIRCUITS OF DEMO'D ITEMS ARE BEING RELOCATED.

ALL IS SHOWN FOR REFERENCE ONLY. ALL IS EXISTING.



ELECTRICAL RISER DIAGRAM

KEY NOTES



ELECTRICAL RISER DIAGRAMS

BID SET

ADD NEW 15 AMP — BREAKER AT CIRCUIT NUMBER 17 FOR NEW METAL DETECTOR

						Р	ANEL PA	NEL A (E	EXISTING	i)						
												MA	INS D	EVICE	MLO	\neg
												MAIN OC	PD RA	ATING:	125 AMPS	\neg
	VOLTAGE: 208V / 120V 3 Ph/4 W						OUNTING		7	,	AIC RA	ATING:	SEE RISER	\neg		
	FED FROM: MDP						OPTIONS		1		LOCA	ATION:	EXISTING ELEC ROOM	\neg		
	BUS RATING: 225 AMP										1	FEED	THRU	LUGS	No	
	HIGH LEG? No				# O	F SPACES	4	12		_						
NOTES	SERVES	TYPE	CKT BRI	KR	СКТ	CKT	P	HASE LOAD	S	CKT	СКТ	CKT BR	KR	TYPE	SERVES	NOTES
		LOAD	AMP	POLE	NO.	LOAD	А	В	С	LOAD	NO.	AMP	POLE	LOAD		
	LIGHTING EXTERIOR		20	/1	1		0				2	20	/1		LIGHTING	
	LIGHTING EXTERIOR		20	/1	3			0			4	20	/1		LIGHTING	
	LIGHTING EXTERIOR		20	/1	5				0		6	20	/1		LIGHTING	
	LIGHTING SIGN		20	/1	7		0				8	20	/1		LIGHTING	
	LIGHTING POLE		20	/1	9			0			10	20	/1		LIGHTING	
	LIGHTING POLE		20	/1	11				0		12	20	/1		SPARE	
	CORRIDORS		20	/1	13		0				14	20	/1		FISH TANKS	
	FIRE ALARM		15	/1	15			0			16	20	/1		ROOF RECEPTACLE	
NEW	METAL DETECTOR	NC	20	/1	17	20			20		18					
					19		0				20					
					21			0			22					
					23				0		24					
					25		0				26					
					27			0			28					
					29				0		30					
					31		0				32					
					33			0			34					
					35				0		36					
					37		0				38					
					39			0			40					
					41				0		42					

* IF RECEPTACLE LOAD IS OVER 10KVA THEN THE AMOUNT OVER 10KVA IS COUNTED AS 50% FOR NON-DWELLING UNITS PER NEC 220.44. NEW- NEW BREAKERS. NEW CIRCUIT.

NOTE: PANEL, BREAKERS AND LOADS ARE ALL EXISTING UNLESS NOTED OTHERWISE. IF GFI OR REPLACEMENT BREAKERS ARE NOT AVAILABLE, F&I NEW PANEL.

					F	PANEL PA	EXISTING NEL B (E	XISTING)						
					_		(-		,				EVICE		
					1 .					7				125 AMPS	
	l .		/ 120V 3 F	Ph/4 W	ļ	MOUNTING		SURFACE		1				SEE RISER	
	FED FROM:					OPTIONS				1				EXISTING ELEC ROOM	
	BUS RATING:		ЛР]	FEED	THRU	LUGS	No	
	HIGH LEG?	_	1			F SPACES		12							
NOTES	SERVES	TYPE LOAD	CKT BRKR AMP PO	CKT LE NO.	CKT LOAD	A	PHASE LOAD B	s C	CKT LOAD	CKT NO.	CKT BR	POLE	TYPE LOAD	SERVES	NOTE
	RECEPTACLES		20 /1	1		0				2	20	/1		RECEPTACLES	
	RECEPTACLES		20 /1	3			0			4	20			RECEPTACLES	
	RECEPTACLES		20 /1	5				0		6	20	/1		RECEPTACLES	
	RECEPTACLES		20 /1	7		0				8	20	/1		RECEPTACLES	
	RECEPTACLES		20 /1	9			0			10	20	/1		RECEPTACLES	
	RECEPTACLES		20 /1	11				0		12	20	/1		RECEPTACLES	
	RECEPTACLES		20 /1	13		0				14	20	/1		RECEPTACLES	
	RECEPTACLES		20 /1	15			0			16	20	/1		RECEPTACLES	
	RECEPTACLES		20 /1	17				0		18	20	/1		RECEPTACLES	
	RECEPTACLES		20 /1	19		0				20	20	/1		RECEPTACLES	
	EF-1		20 /1	21			0			22	20	/1		RECEPTACLES	
	EH-1		20 /1	23				0		24	20	/1		WH-1 BLOWER	
	HEATER		20 /1	25		0				26	20	/1		HEAT TRACE	
	COFFEE MAKER - RM 116		20 /1	27			0			28	20	/1		COPIER	
	MICROWAVE - RM 116		20 /1	29				0		30					
	REFRIGERATOR - RM 116		20 /1	31		0				32					
				33			0			34					
				35				0		36					
				37		0				38					
				39			0			40					
				41				0		42					

* IF RECEPTACLE LOAD IS OVER 10KVA THEN THE AMOUNT OVER 10KVA IS COUNTED AS 50% FOR NON-DWELLING UNITS PER NEC 220.44.

NOTE: PANEL, BREAKERS AND LOADS ARE ALL EXISTING UNLESS NOTED OTHERWISE. IF GFI OR REPLACEMENT BREAKERS ARE NOT AVAILABLE, F&I NEW PANEL.

EXISTING PANEL MDP (EXISTING) MAINS DEVICE MCB

MAIN OCPD RATING: 400 AMPS

AIC RATING: SEE RISER

LOCATION: EXISTING ELEC ROOM VOLTAGE: 208V / 120V 3 Ph/4 W
FED FROM: CT CAN
BUS RATING: 400 AMP MOUNTING SURFACE OPTIONS FEED THRU LUGS No

	HIGH LEG?	No				# O	F SPACES	2	24							
NOTES	SERVES	TYPE	CKT BF	RKR	СКТ	CKT	F	HASE LOAD	S	CKT	СКТ	CKT BR	KR	TYPE	SERVES	NOTES
		LOAD	AMP	POLE	NO.	LOAD	Α	В	С	LOAD	NO.	AMP	POLE	LOAD		
	SPACE				1		0				2	40	/3		RTU-3	
					3			0			4					
					5				0		6					
	RTU-5		40	/3	7		0				8	35	/3		RTU-4	
					9			0			10					
					11				0		12					
	CV-1		20	/2	13		0				14	20	/2		RTU-1	
					15			0			16					
	RTU-2		20	/2	17				0		18				SPACE	
					19		0				20					
			·		21			0			22	•	·			
					23				0		24		,			

* IF RECEPTACLE LOAD IS OVER 10KVA THEN THE AMOUNT OVER 10KVA IS COUNTED AS 50% FOR NON-DWELLING UNITS PER NEC 220.44.

LOADS IN THIS PROJECT ARE NOT BEING INCREASED, ONLY MOVED AROUND IN THE SPACE. LIGHTING IS BEING REDUCED BY REPLACING FLOURESCENT WITH LED.



PANEL SCHEDULES

BID SET

Scale: NTS

SHEET INDEX

	Sheet List Table
Sheet Number	Sheet Title
P1.00	PLUMBING PLAN
FP1.01	FIRE SPRINKLER PLAN

GENERAL NOTES

- 1. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- 2. CONTRACTOR SHALL PATCH AND REPAIR ALL EXISTING WALLS, FLOORS, CEILINGS OR OTHER SURFACES IDENTIFIED TO REMAIN THAT MAY BECOME DAMAGED DURING THE COURSE
- 3. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL INTENT OR ARRANGEMENT OF SYSTEM(S). FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS. MAINTAIN HEADROOM AND SPACE CONDITION.
- 4. UNLESS OTHERWISE NOTED(SEE ARCH. SHEETS), THE CONTRACTOR SHALL REMOVE ALL EXISTING PLUMBING FIXTURES INCLUDING PIPING AND ALL OTHER MISC. DEVICES AS DIRECTED BY THE GC THAT IS NOT BEING SALVAGED OR REUSED. EQUIPMENT / FIXTURES INDICATED ON DRAWINGS TO BE REUSED SHALL BE INSPECTED AND IF DEFECTIVE,
- PROVIDE ITEMS AND WORK AS REQUIRED TO COMPLETE THE INSTALLATION OF PLUMBING SYSTEMS TO FIXTURES AND EQUIPMENT: TRAPS, STRAINERS, GAUGES, GAS AND WATER PRESSURE REGULATORS, FLEXIBLE CONNECTIONS, STOP VALVES, UNIONS, ETC. PROVIDE AND CONNECT PLUMBING PIPE FROM ROUGH-INS TO ITEMS AS SHOWN, SPECIFIED AND
- 6. CONTRACTOR IS RESPONSIBLE FOR CONFORMANCE TO ALL LOCAL CODES.
- 7. CLEAN FAUCET AERATORS AND PIPE STRAINERS BEFORE TURNING BUILDING OVER TO OWNER.
- 8. CONTRACTOR SHALL CAMERA SCOPE WASTE LINE TO DETERMINE BEST LOCATION TO CONNECT NEW MOP SINK

GENERAL PLUMBING

"CONTRACTOR" MEANS "PLUMBING CONTRACTOR" WHEN REFERENCED ANYWHERE IN THE PLUMBING CONSTRUCTION DOCUMENTS UNLESS WORK AND EQUIPMENT HAS BEEN COORDINATED BETWEEN THE PLUMBING AND GENERAL CONTRACTORS TO BE PROVIDED BY THE GENERAL CONTRACTOR. "NEEDED", PROVIDE" AND "INSTALL" MEANS ALL ITEMS CALLED OUT IN THE CONTRACT DOCUMENTS AND ANY ADDITIONAL ITEMS NOT CALLED OUT BUT REQUIRED TO MAKE A COMPLETE AND OPERATIONAL SYSTEM.

THE INTENT OF THE SPECIFICATIONS AND THE DRAWINGS IS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL PLUMBING SYSTEM. THE PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO COMPLETE THE PLUMBING WORK.

THE PLUMBING CONTRACTOR SHALL PROCURE AND PAY FOR ALL PERMITS, FEES AND INSPECTIONS NECESSARY TO COMPLETE THE PLUMBING SCOPE OF

WARRANTY

THE PLUMBING CONTRACTOR SHALL UNCONDITIONALLY WARRANT ALL WORK TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE BY ARCHITECT AND WILL REPAIR OR REPLACE ANY DEFECTIVE WORK PROMPTLY, WITHOUT CHARGE AND RESTORE ANY OTHER EXISTING WORK DAMAGED IN THE COURSE OF REPAIRING DEFECTIVE MATERIALS AND WORKMANSHIP

PERFORM ALL WORK IN ACCORDANCE WITH THE CURRENT PLUMBING CODE, STATE AND LOCAL CODES / ORDINANCES AND AHJ. ALL WORK SHALL ALSO BE IN COMPLIANCE WITH BUILDING OWNER'S CRITERIA. IN CASE OF CONFLICT BETWEEN THE DRAWINGS, SPECIFICATIONS, CODES, ORDINANCES AND AHJ, THE MOST STRINGENT STANDARD (IN THE OPINION OF THE ENGINEER) SHALL APPLY. THE PLUMBING CONTRACTOR SHALL SATISFY CODE, AHJ, DRAWINGS AND SPECIFICATIONS AS A MINIMUM STANDARD, WITHOUT ANY EXTRA COST.

THE PLUMBING CONTRACTOR SHALL COORDINATE PLUMBING WORK WITH OTHER TRADES. THE ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER ALL OTHER DRAWINGS. DO NOT SCALE DISTANCES OFF THE PLUMBING DRAWINGS; USE ACTUAL BUILDING DIMENSIONS.

SUBMITTALS: CONTRACTOR SHALL PROVIDE AN ELECTRONIC SUBMITTAL FOR ALL PLUMBING FIXTURES, PUMPS, CONTROLS, INSULATION AND DEVICES. ALL SUBMITTALS SHALL BE MARKED TO INDICATE WHERE THEY ARE USED AND WITH THE DESIGNATION IN THESE PLANS.

PIPING

SOIL. WASTE AND VENT PIPING 10" AND SMALLER SHALL BE SERVICE WEIGHT. HUBLESS, CAST IRON PIPE AND FITTINGS WITH NEOPRENE GASKET, STAINLESS STEEL SHIELD AND CLAMP. SCHEDULE 40 ABS AND FITTINGS WITH SOLVENT WELD MAY BE SUBSTITUTED FOR SOIL, WASTE AND VENT PIPING, HORIZONTAL RUNS SHALL DRAIN AT A GRADE OF 1/4 INCH PER FOOT WHERE POSSIBLE BUT IN NO CASE LESS THAN 1/8" PER FOOT. APPLY TO BUILDING DEPARTMENT FOR VARIANCE IF 1/8" IS NEEDED. DOMESTIC WATER PIPING 2" AND SMALLER SHALL BE COPPER TUBE WITH WROUGHT COPPER SWEAT FITTINGS JOINED WITH LEAD FREE SOLDER. PROVIDE TYPE "L" COPPER TUBE ABOVE GROUND AND TYPE "K" BELOW GROUND.

BASIC MATERIALS AND METHODS

PROVIDE ALL NEW MATERIAL AND FIXTURES UNLESS NOTED OTHERWISE. ALL FIXTURES SHALL BE LABELED AND LISTED WHERE REQUIRED BY CODE AND AHJ.

PERFORM CUTTING, CORING, FITTING, REPAIRING AND FINISHING OF THE WORK NECESSARY FOR THE INSTALLATION OF THE FIXTURE. HOWEVER, NO CUTTING OF THE WORK OF OTHER TRADES OR OF ANY STRUCTURAL MEMBER SHALL BE DONE WITHOUT THE CONSENT OF THE ARCHITECT, CONSTRUCTION MANAGER, GC AND / OR OWNER. PROPERLY FILL, SEAL, FIREPROOF AND WATERPROOF ALL OPENINGS, SLEEVES AND HOLES IN SLABS, WALLS AND CASEWORK.

CONTRACTOR TO VERIFY ALL DIMENSIONS, INCLUDING CLEARANCES REQUIRED BY OTHER TRADES AND NOTIFY OWNER'S REPRESENTATIVES OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK. ALL DIMENSIONS ARE TO THE FACE OF THE FINISHED SURFACE UNLESS NOTED OTHERWISE. ALL DIMENSIONS TO BE TAKEN FROM ACTUAL BUILDING DIMENSIONS.

THE CONTRACTOR SHALL THOROUGHLY EXAMINE ALL AREAS WHERE FIXTURES, EQUIPMENT AND PIPING WILL BE INSTALLED AND SHALL REPORT ANY CONDITION THAT PREVENTS THE PROPER INSTALLATION OF THE PLUMBING WORK TO THE GC.

HANGERS & SUPPORTS: THE PLUMBING CONTRACTOR SHALL F&I ALL PIPE SUPPORTS NEEDED FOR EQUIPMENT AND MATERIAL. ALL HORIZONTAL RUNS OF PIPING SHALL BE SUPPORTED BY PIPE HANGERS SPACED NOT MORE THAN 10 FEET O.C. FOR PIPES 1-1/4" AND LARGER AND 8 FEET O.C. FOR PIPES SMALLER THAN 1-1/4" AND AT EACH JOINT FOR SOIL OR WASTE PIPE. ADDITIONAL SUPPORTS SHALL BE PROVIDED WHERE NEEDED TO PREVENT SAGGING. HANGERS AND PIPE ATTACHMENTS TO BE FACTORY FABRICATED WITH GALVANIZED COATINGS; NONMETALLIC COATED FOR HANGERS IN DIRECT CONTACT WITH COPPER TUBING.

CONNECTIONS: INSTALL UNIONS ADJACENT TO EACH VALVE AND AT FINAL CONNECTION TO EACH PIECE OF EQUIPMENT. INSTALL DIELECTRIC COUPLINGS TO CONNECT PIPING MATERIALS OF DISSIMILAR METALS. SCREW JOINT STEEL PIPING UP TO AND INCLUDING 1-1/2". WELD PIPING USE NON-LEAD, NON-ANTIMONY SOLDER FOR SOLDERING DOMESTIC WATER COPPER PIPE.

INSTALLATION: INSTALL PIPING FREE OF SAGS AND BENDS. PROVIDE BRACKET STANDOFFS FROM MOUNTING SURFACES SUFFICIENT TO ALLOW 1" CLEANING SPACE AROUND ALL PIPING, INCLUDING ANY ADDED PIPING INSULATION. INSTALL FITTINGS FOR CHANGES IN DIRECTION AND BRANCH CONNECTIONS. INSTALL SLEEVES FOR PIPES PASSING THROUGH CONCRETE AND MASONRY WALLS, GYPSUM-BOARD PARTITIONS, CONCRETE FLOOR AND ROOF SLABS / STRUCTURE. SEAL PIPE PENETRATIONS THROUGH RATED CONSTRUCTION WITH FIRE-STOPPING SEALANT MATERIAL MEETING CODE, AHJ AND ARCHITECT'S REQUIREMENTS.

TRENCHES WITH A MINIMUM HORIZONTAL SPACING AS REQUIRED BY CODE AND AHJ. EXCAVATED TO THE PROPER DEPTH AND GRADED TO PRODUCE THE

CLEANOUTS: F&I J.R. SMITH OR EQUIVALENT FLOOR AND WALL CLEANOUTS AS INDICATED ON THE DRAWINGS AND WHERE NEEDED IN ALL SOIL. WASTE AND DRAIN LINES. IN AREAS WITH CERAMIC TILE OR CARPETED FLOORING, PROVIDE CLEANOUTS WITH SQUARE, ADJUSTABLE, NICKEL BRONZE TOP. IN AREAS WITH RESILIENT FLOORING, PROVIDE CLEANOUTS WITH SQUARE, ADJUSTABLE, NICKEL BRONZE TOP WITH TILE RECESS. CLEANOUTS SHALL BE SAME SIZE AS PIPE EXCEPT THAT CLEANOUTS LARGER THAN 4" WILL NOT BE REQUIRED. WHERE CLEANOUTS OCCUR IN WALLS OF FINISHED AREAS, THEY SHALL BE

THEY ARE BACKFILLED OR CONCEALED. AFTER TESTING IS COMPLETE, THE PLUMBING CONTRACTOR SHALL DISINFECT THE POTABLE WATER SYSTEM AS REQUIRED BY AHJ. TEST WATER PURITY ACCORDING TO AHJ AND SUBMIT CERTIFIED TEST RESULTS TO AHJ FOR REVIEW AND APPROVAL.

INSULATION

SELF-SEALING CLOSED CELL FOAM OR JACKETED FIBERGLASS INSULATION WITH MANUFACTURER APPROVED ADHESIVES, SEALERS AND COATINGS. ALL MATERIALS USED SHALL HAVE A FLAME SPREAD INDEX NOT MORE THAN 25 A SMOKE DEVELOPED INDEX NOT MORE THAN 50. UNLESS OTHERWISE REQUIRED BY THE AHJ OR ENERGY CODES, THE MINIMUM INSULATION LEVELS SHALL BE

2" DIA. OR GREATER =

VALVES

GENERAL: PLUMBING CONTRACTOR TO PROVIDE VALVES WHERE INDICATED ON PLANS AND AS NECESSARY FOR PROPER SYSTEM OPERATION AND COMPONENT ISOLATION. INSTALL VALVES FOR EACH FIXTURE AND ITEM OF EQUIPMENT. PROVIDE BRAIDED STAINLESS STEEL HOSE (UNLESS OTHERWISE NOTED) BETWEEN VALVE AND EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. LOCATE SHUT-OFF VALVES ADJACENT TO EQUIPMENT FOR EASY ACCESS SUCH THAT VALVES CAN BE REACHED WITHOUT MOVING EQUIPMENT. PROVIDE STOP VALVES FOR ALL EQUIPMENT WHETHER SHOWN ON THE DRAWINGS OR NOT. ALL VALVES SHALL BE RATED FOR A MINIMUM OF 125 PSI OR GREATER (UNO).

BASIC MATERIALS AND METHODS (CONT.)

UNDERGROUND WATER AND SEWER LINES SHALL BE LAID IN SEPARATE NEEDED FALL

CONCEALED BEHIND CHROME PLATED ACCESS COVERS.

TESTING: ALL PIPES SHALL BE TESTED BY AN APPROVED METHOD BEFORE

WATER PIPING: F&I THERMAL INSULATION ON ALL HOT WATER PIPING, USE

<u>PIPE SIZE</u> LESS THAN OR EQUAL TO 1-1/2" =

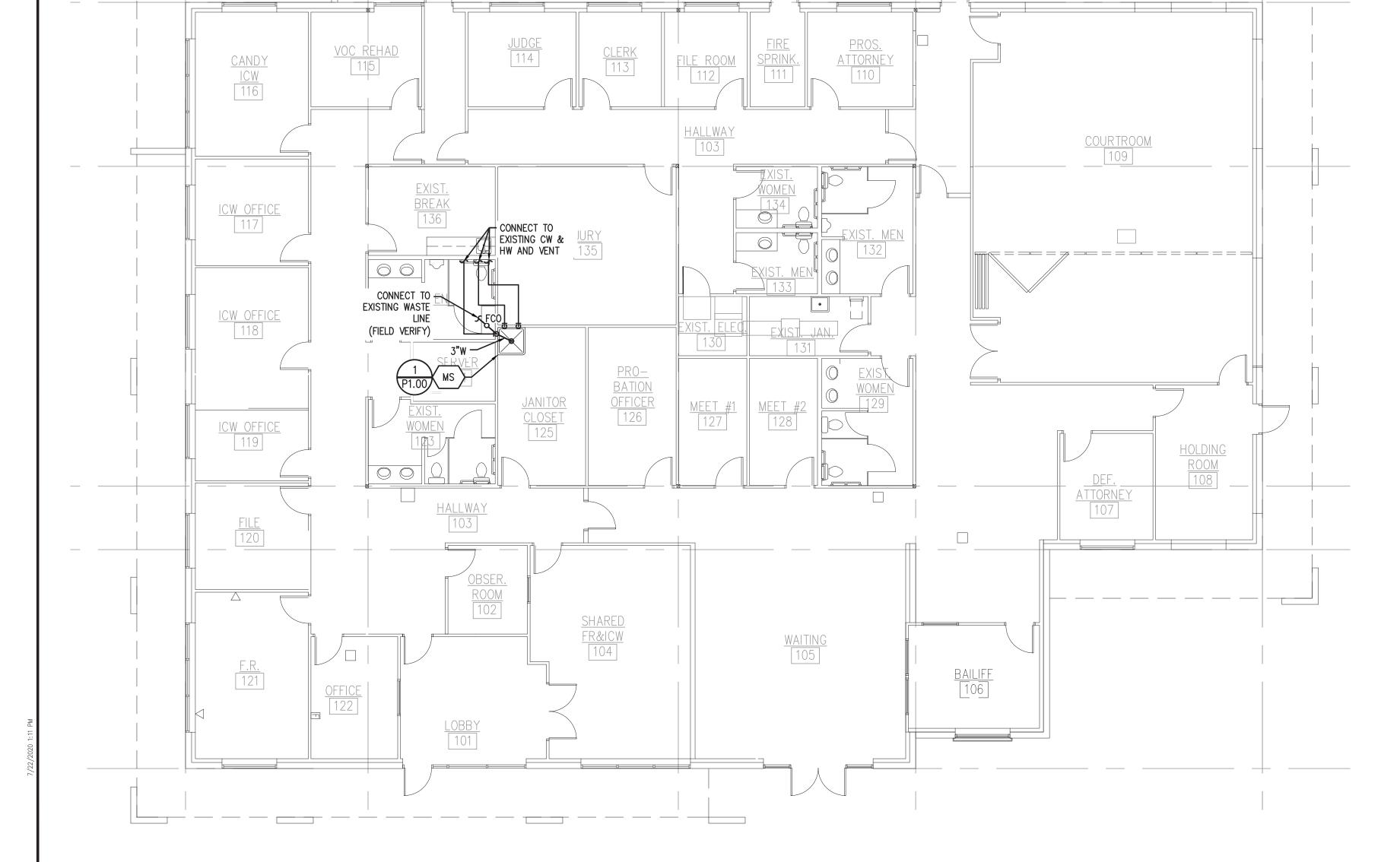
PLUMBING PLAN

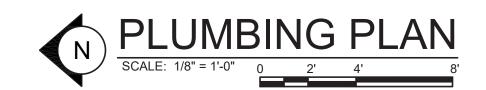
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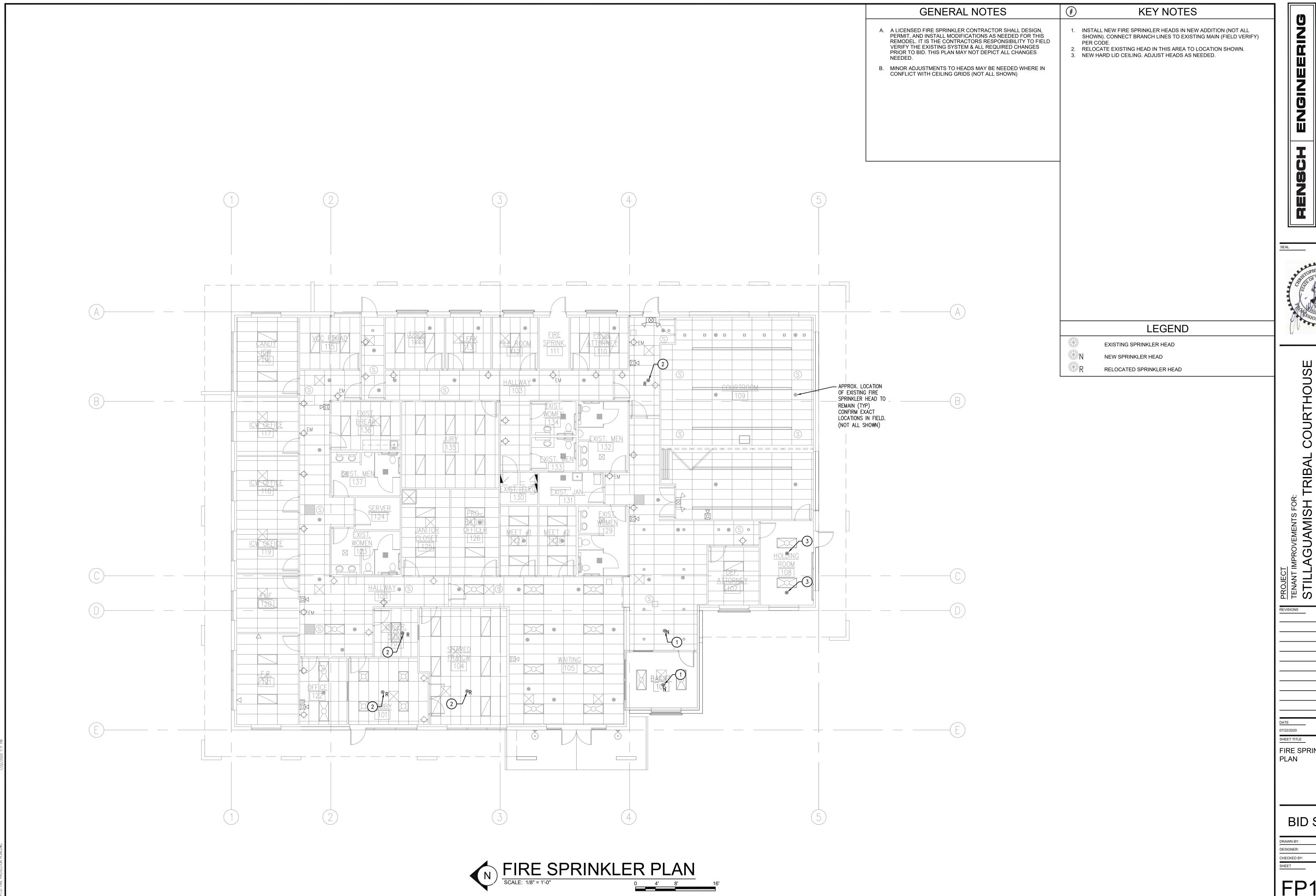
PROJECT
TENANT IMPROVEMENTS FOR:
STILLAGUAMISH 1

BID SET

ESIGNER: Tucker Andrews







FIRE SPRINKLER PLAN

BID SET

FP1.01