CONSULTANT LOGO

alt architecture
1445 W 8660 S
WEST JORDAN, UTAH 84088

WILD OAK RECEPTION CENTER

450 WEST GILLMAN LANE LINDON, UTAH

CONTRACTOR

DESIGN TEAM

OWNER

WILD OAK RECEPTION CENTER
DEREK OLSON

ARCHITECT

alt architecture
1445 WEST 8660 SOUTH
WEST JORDAN, UTAH 84088
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ANDY TONGISH, AIA

STRUCTURAL

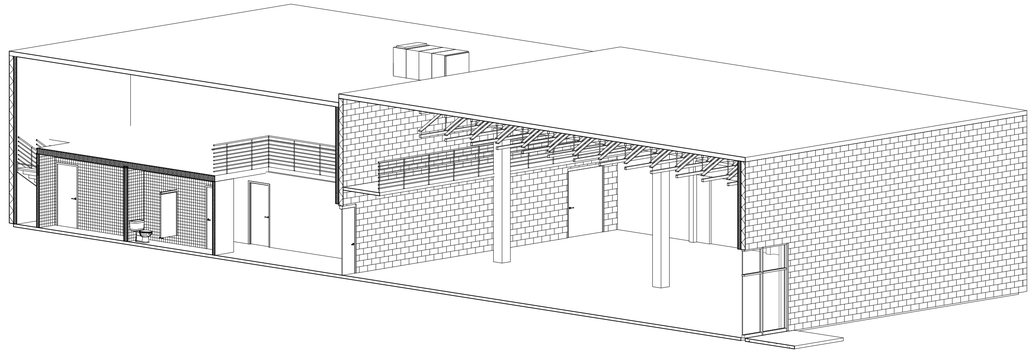
PALMER ENGINEERING
2408 N 1050 W
PLEASANT GROVE, UTAH 84062
PHONE: 801-532-1301
gepalmer.pese@gmail.com
GLEN PALMER, PE

MECHANICAL

WHW ENGINEERING, INC.
8619 SOUTH SANDY PARKWAY #101
SANDY, UTAH 84070
PHONE: 801-466-4021
winp@whw-engineering.com
WIN PACKER, PE

ELECTRICAL

ROCKY MOUNTAIN CONSULTING ENGINEERS
2117 SOUTH 3600 WEST
SALT LAKE CITY, UTAH 84119
PHONE: 801-566-0503
david@rmceut.com
DAVID STEWARD, PE



DRAWING LIST	
GENERAL:	
G001	COVER SHEET
G002	CODE COMPLIANCE
ARCHITECTURAL:	
A101	MAIN FLOOR
A102	UPPER FLOOR
A103	INTERIOR ELEVATIONS
A104	SECTION & EXTERIOR ELEVATIONS
STRUCTURAL:	
S001	GENERAL STRUCTURAL NOTES
S101	OVERALL FRAMING PLAN
S501	DETAILS
MECHANICAL:	
MG001	MECHANICAL GENERAL NOTES
M102	MECHANICAL ROOF PLAN
M501	MECHANICAL DETAILS
M601	MECHANICAL SCHEDULE
ELECTRICAL:	
E101	ROOF POWER PLAN
E601	SCHEDULES

MARK:	DATE:	DESCRIPTION:

WILD OAK RECEPTION CENTER
475 N STATE STREET OREM, UTAH
Derek Olson

PROJECT #:	19-011
DRAWN BY:	act
CHECKED BY:	act

ISSUED: X/XX/2019

COVER SHEET

G001

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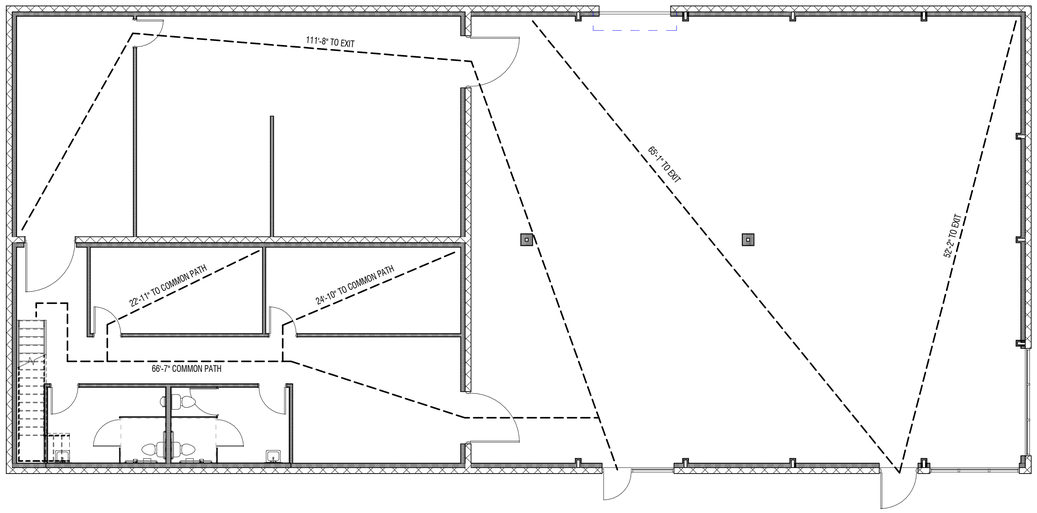
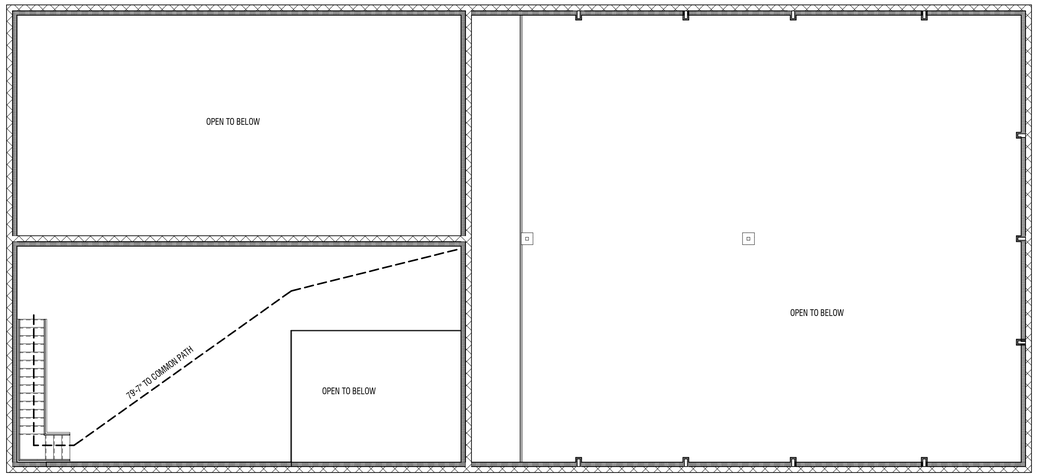


1 MAIN FLOOR - EXITING

1/8" = 1'-0"



2 UPPER FLOOR - EXITING

1/8" = 1'-0"

JURISDICTION
LINDON CITY

CODE
2015 INTERNATIONAL BUILDING CODE
2015 INTERNATIONAL MECHANICAL CODE
2015 INTERNATIONAL PLUMBING CODE
2017 NATIONAL ELECTRICAL CODE
2015 IECC
2015 IFGC
UTAH STATE AMENDMENTS

OCCUPANCY
OCCUPANCY: A2 - 5,940 SF

REQUIRED SEPARATION OF OCCUPANCIES (508.4)
NONE

TYPE OF CONSTRUCTION

IA IB IIA IIB IIIA IIIB IVA IVB VA (VB)

AUTOMATIC SPRINKLER SYSTEM

YES (NO)

BUILDING HEIGHT (504.3)

ALLOWABLE BUILDING HEIGHT	40'
EXISTING BUILDING HEIGHT	20'+/-

NUMBER OF STORIES (504.4)

ALLOWABLE NUMBER OF STORIES	1
PROPOSED NUMBER OF STORIES	1

BUILDING AREA (506.2)
FIRST LEVEL

ALLOWABLE	ACTUAL
(A2) 6,000 SF	5,940 SF

FIRE RESISTIVE REQUIREMENTS FOR VB (TABLE 601)

PRIMARY STRUCTURAL FRAME	0 HR	RATING
BEARING WALLS		
EXTERIOR	0 HR	RATING
INTERIOR	0 HR	RATING
NON BEARING WALLS	0 HR	RATING
FLOOR CONSTRUCTION	0 HR	RATING
ROOF CONSTRUCTION	0 HR	RATING

OCCUPANT LOAD CALCULATION (COMPLETE FACILITY) (TABLE 1004.1.2)
FIRST LEVEL

ACCESSORY AREA	2,660 SF / 300 SF	=	9 OCC.
ASSEMBLY AREA	3,280 SF / 15 NET	=	219 OCC

SECOND LEVEL

ACCESSORY AREA	1,001 SF / 300 SF	=	4 OCC.
TOTAL OCCUPANTS		=	232 OCC.

EGRESS WIDTH (TABLE 1005.1)
OTHER EGRESS 0.2 INCHES PER OCCUPANT

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)
TOTAL OCCUPANTS = 232

		REQUIRED	ACTUAL
FACLILITY			
WATER CLOSETS; 1/500			
M = 116 OCCUPANTS		1/75 M = 2	2 (WC & U)
F = 116 OCCUPANTS		1/75 F = 2	2 (WC)
LAVATORIES			
M = 116 OCCUPANTS	1/200	= 1	1
F = 116 OCCUPANTS	1/200	= 1	1
DRINKING FOUNTAINS			
= 232 OCCUPANTS -	1/500	=1	2 PROVIDED
SERVICE SINKS		=1	1 PROVIDED

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WILD OAK RECEPTION CENTER
Derek Olson

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ISSUED: X/XX/2019

CODE COMPLIANCE

G002

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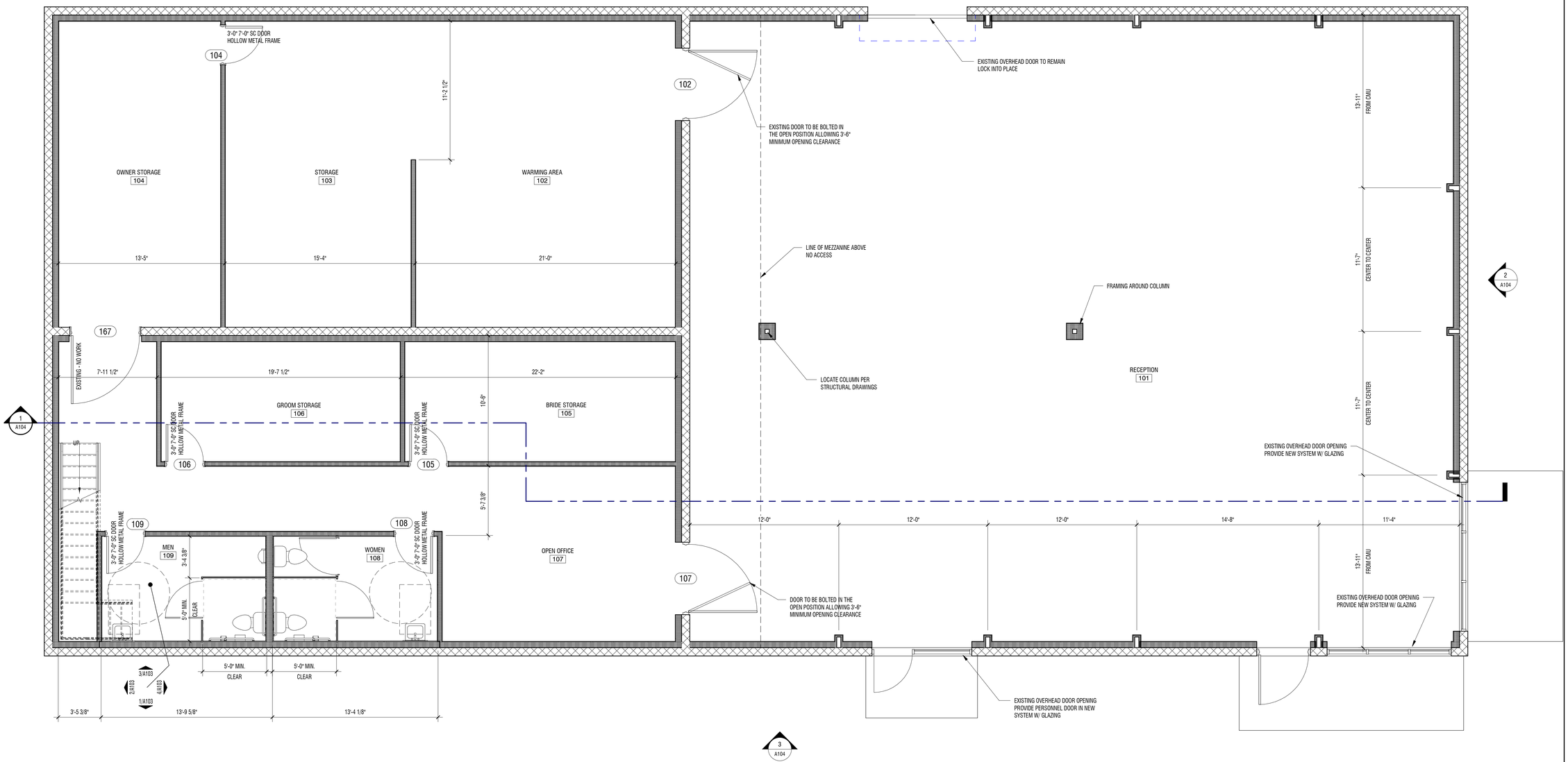

1 FLOOR PLAN

1/4" = 1'-0"

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WILD OAK RECEPTION CENTER
450 WEST GILLMAN LANE
LINDON, UTAH

Derek Olson

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MAIN FLOOR

A101

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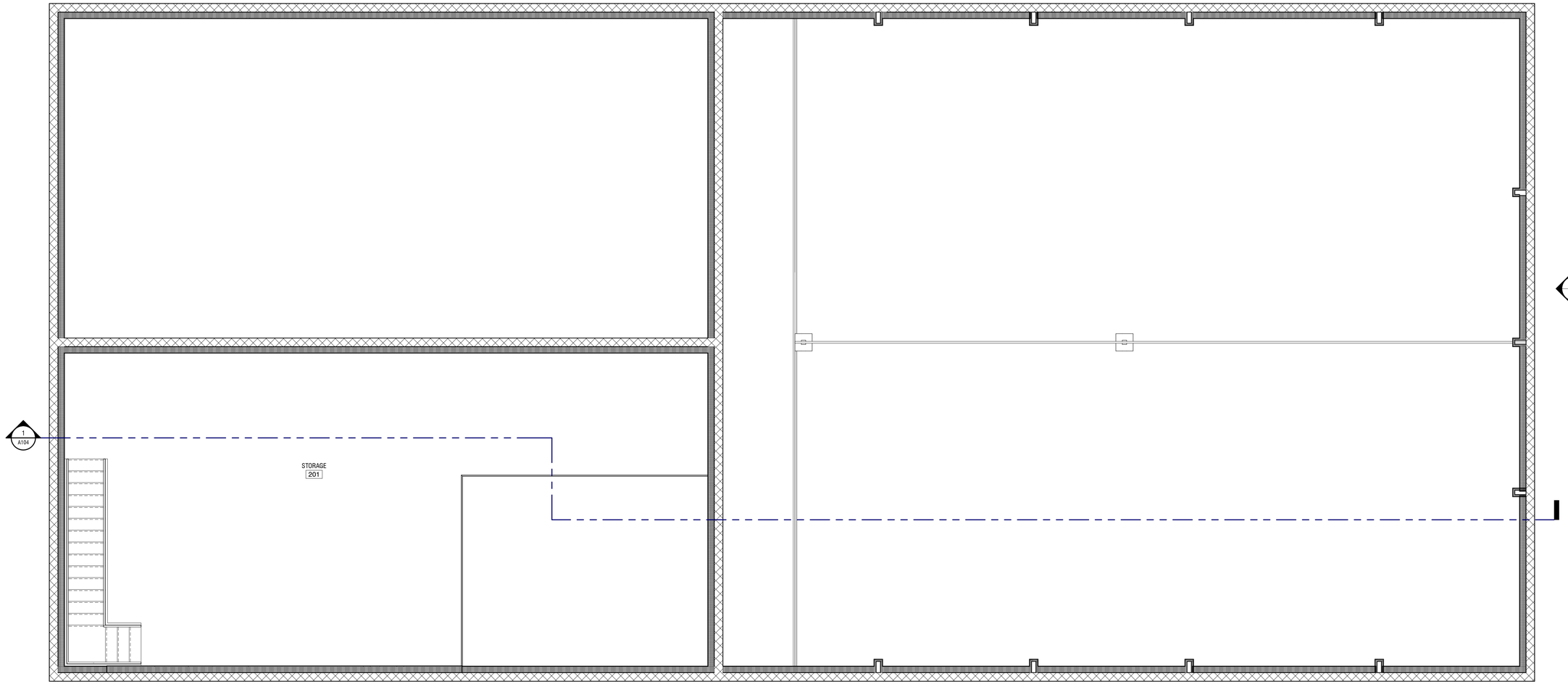

1 UPPER FLOOR

1/4" = 1'-0"

MARK:	DATE:	DESCRIPTION:

WILD OAK RECEPTION CENTER

Derek Olson

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UPPER FLOOR

A102

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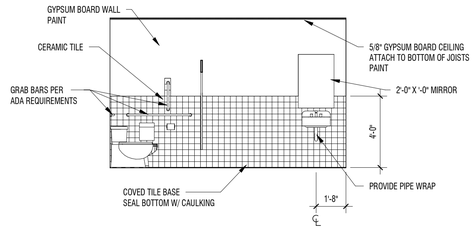
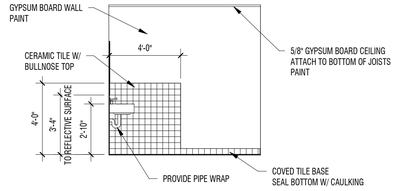


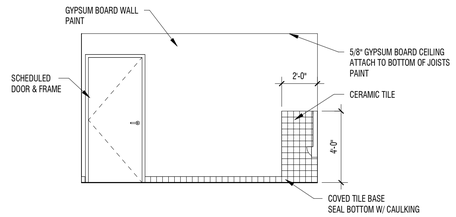
1 MEN 109

1/4" = 1'-0"



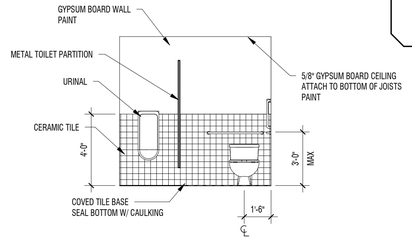
2 MEN 109

1/4" = 1'-0"



3 MEN 109

1/4" = 1'-0"



4 MEN 109

1/4" = 1'-0"

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INTERIOR ELEVATIONS

A103

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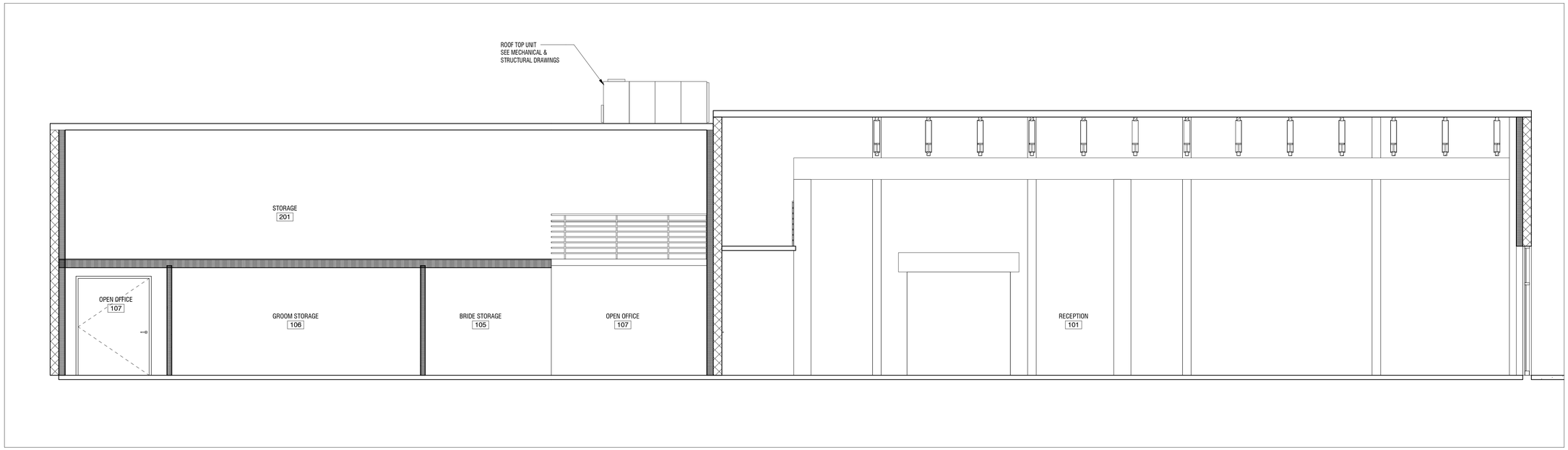
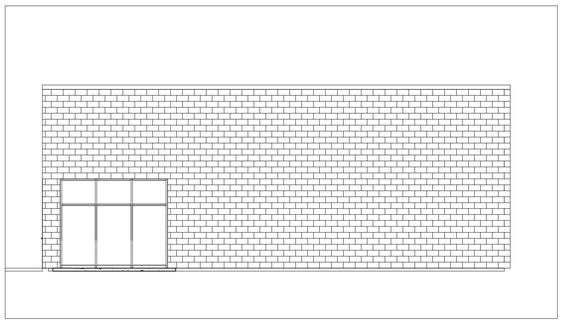


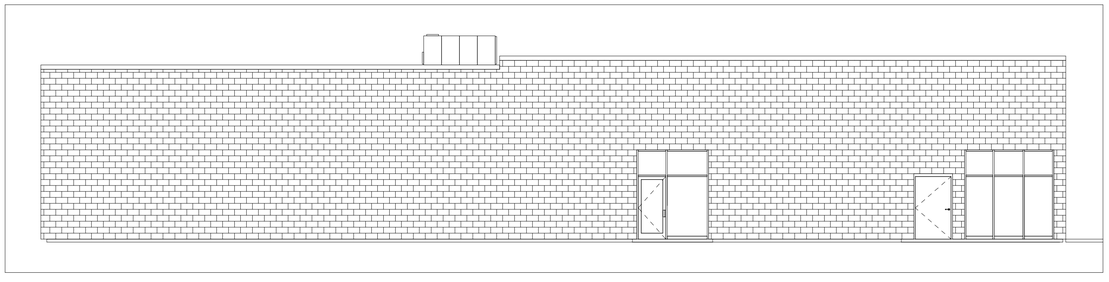
1 BUILDING SECTION

1/4" = 1'-0"



2 EAST ELEVATION

1/8" = 1'-0"



3 SOUTH ELEVATION

1/8" = 1'-0"

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DATE:
MARK:

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SECTION & EXTERIOR ELEVATIONS

A104

GENERAL

1. THE GENERAL CONTRACTOR SHALL:
   A. BECOME FAMILIAR WITH ALL SECTIONS OF THE GENERAL NOTES AND INSURE THAT ALL SUBCONTRACTORS ARE FAMILIAR WITH THOSE SECTIONS PERTAINING TO THEIR AREA OF WORK. NO DEVIATIONS WILL BE ALLOWED UNLESS AGREED UPON BY ALL PARTIES IN WRITING PRIOR TO CONSTRUCTION OR FABRICATION.

   B. VERIFY ALL DIMENSIONS AND COORDINATE DIMENSIONS AND ELEVATIONS WITH THE DRAWINGS.

   C. NOTIFY THE ENGINEER OF RECORD REGARDING CONDITIONS AT THE SITE NOT AS PER THE DRAWINGS.

   D. COORDINATE ALL WORK BETWEEN THE VARIOUS TRADES.

   E. COORDINATE AND VERIFY ALL LOCATIONS AND SIZE OF LOADS FOR MECHANICAL UNITS AND/OR EQUIPMENT OR DEVICES PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY SUPPORTING STRUCTURE. SUCH LOADS SHALL BE REPORTED TO THE STRUCTURAL ENGINEER ENGINEER OF RECORD FOR REVIEW. ADDITIONAL FRAMING MAY BE REQUIRED FOR THE PROPER SUPPORT OF SUCH UNITS OR EQUIPMENT. COORDINATE WITH THE STRUCTURAL ENGINEER.

   F. COORDINATE ALL ROOF AND FLOOR OPENINGS REQUIRED WITH MECHANICAL AND/OR OTHER DRAWINGS TO ACCOMMODATE ALL MECHANICAL AND/OR OTHER UNITS, OPENINGS, ETC.

   G. BE RESPONSIBLE FOR SAFETY AND PROTECTION IN AND AROUND THE JOB SITE AND/OR ADJACENT PROPERTIES.

   H. PROVIDE DRAINAGE AT THE BASE OF RETAINING WALLS AND AT THE BASE OF ALL CONCRETE OR BLOCK BASEMENT WALLS.

   I. BE RESPONSIBLE FOR ADEQUATE TEMPORARY BRACING OF STRUCTURAL AND NON-STRUCTURAL PORTIONS OF THE BUILDING UNTIL THE STRUCTURE IS COMPLETE.

   J. LOCATE CONSTRUCTION AND CONTRACTION JOINTS FOR THE SLAB-ON-GRADE AND HAVE IT APPROVED BY THE ENGINEER BEFORE PROCEEDING.

2. ARCHITECTURAL DRAWINGS: SEE ARCHITECTURAL DRAWINGS OR CHECK WITH OWNER FOR DIMENSIONS, DOORS, WINDOWS, NON-BEARING INTERIOR AND EXTERIOR WALLS, ELEVATIONS, SLOPES, STAIRS, CURBS, DRAINS, RECESSES, DEPRESSIONS, RAILINGS, WATERPROOFING, FINISHES, CHAMFERS, KERFS, ETC.

3. BUILDING CODE COMPLIANCE:
   ALL INSPECTION, CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE 2015 IBC & IRC & STANDARDS. ALL ASTM AND IRC DESIGNATIONS SHALL BE AMENDED TO SUCH DATE UNLESS NOTED OTHERWISE.

4. DEAD AND LIVE LOADS:
   DURING AND AFTER CONSTRUCTION, BUILDER AND/OR OWNER SHALL KEEP LOADS ON THE STRUCTURE WITHIN THE LIMITS OF DESIGN LOADS.

5. DETAILS:
   A. ALL DETAILS, SECTIONS AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO ALL SIMILAR SITUATIONS ELSEWHERE, UNLESS NOTED OR SHOWN OTHERWISE.

6. OMISSIONS AND/OR CONFLICTS:
   ALL OMISSIONS AND/OR CONFLICTS BETWEEN THE VARIOUS STRUCTURAL ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER OF RECORD AND RESOLVED BY THE ENGINEER BEFORE PROCEEDING WITH ANY WORK INVOLVED.

7. PENETRATIONS:
   A. NO PENETRATION SHALL BE ALLOWED THROUGH ANY CONCRETE OR MASONRY BEAM, COLUMN, PIER, OR JAMB, WITHOUT THE STRUCTURAL ENGINEER OF RECORD'S WRITTEN APPROVAL. MECHANICAL AND/OR OTHER PENETRATIONS SHALL BE RE-ROUTED AS REQUIRED AT THESE LOCATIONS.

8. SHORING AND BRACING REQUIREMENTS:
   A. ALL STRUCTURES – THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE METHOD AND SEQUENCE OF ALL STRUCTURAL ERECTION. HE SHALL PROVIDE TEMPORARY SHORING AND BRACING AS HIS METHOD OF ERECTION REQUIRES SO AS TO PROVIDE ADEQUATE VERTICAL AND LATERAL SUPPORT. THIS SHORING AND BRACING SHALL BE ADEQUATELY MAINTAINED UNTIL ALL PERMANENT MEMBERS ARE PLACED AND ALL FINAL CONNECTIONS ARE COMPLETED, INCLUDING ALL ROOF ATTACHMENTS.

   B. FOUNDATION WALLS MUST BE BRACED UNTIL THE COMPLETE HORIZONTAL FRAMING SYSTEM IS COMPLETED FOR THE ELEVATION EQUAL TO THE TOP OF THE WALL. DO NOT BACKFILL UNTIL THIS FLOOR OR ROOF SYSTEM IS IN PLACE.

   C. ALL NON-BEARING WALLS TO HAVE SILL PLATE ANCHORED WITH POWDER ACTUATED FASTENERS AT 32"O.C. HILTI OR EQUAL, AND HAVE A 1" SEPARATION FROM STRUCTURE ABOVE WITH SIMPSON "STC" ANCHORS (O.A.E.).

9. ABBREVIATIONS:
   A. U.N.O. MEANS "UNLESS NOTED OTHERWISE".
   B. O.A.E MEANS "OR APPROVED EQUAL".

10. ADHESIVE ANCHORS:
    A. USE SIMPSON "SET-XP" PRODUCT, OR "AT-XP" PRODUCT, OR APPROVED EQUAL. INSTALL PER ALL MANUFACTURER'S RECOMMENDATIONS & THE FOLLOWING:

    B. DRILL HOLES 1/8" OVERSIZE IN DIAMETER, TO A MINIMUM DEPTH AS AS SHOWN ON THE DRAWINGS. DRILL HOLES VERTICAL, HORIZONTAL OR ANGLED, ACCURATELY AS SHOWN.

    C. CLEAN HOLES THOROUGHLY WITH BOTH MECHANICAL (BRUSH) METHOD AND THEN WITH CLEAN, DRY AIR METHOD.

    D. MIX EPOXY PER MANUFACTURER'S INSTRUCTIONS. EPOXY MAY BE PRE-MIXED WITH UP TO 1:1 RATIO WITH CLEAN, DRY, BAGGED 30 GRIT SILICA SAND. INJECT EPOXY INTO HOLE FROM BOTTOM END OUT TO FRONT, SO THAT HOLE IS SUFFICIENTLY FILLED SO THAT ALL VOIDS ARE FILLED WHEN BOLT AND/OR BAR IS INSERTED. INSERT TO MINIMUM DEPTH REQ'D.

    E. DO NOT ALLOW EXCESS EPOXY TO COAT CONCRETE OR MASONRY SURFACES WHICH WILL BE BONDED TO NEW CONCRETE OR MORTAR.

STRUCTURAL OBSERVATIONS

1. THE STRUCTURAL ENGINEER OF RECORD SHALL PROVIDE "STRUCTURAL OBSERVATION" FOR THE WORK TO ALL STRUCTURAL SYSTEMS, PARTICULARLY ALL ELEMENTS OF THE LATERAL FORCE RESISTING SYSTEM.

2. ALL CONSTRUCTION OR WORK DEFINED IN THESE DOCUMENTS SHALL BE SUBJECT TO OBSERVATION BY THE ENGINEER OF RECORD, AND ALL SUCH WORK SHALL REMAIN ACCESSIBLE AND EXPOSED FOR OBSERVATION UNTIL APPROVED BY THE ENGINEER. IT SHALL BE THE DUTY OF THE GENERAL CONTRACTOR TO PROVIDE ACCESS AND MEANS FOR OBSERVATION.

3. APPROVAL AS A RESULT OF AN OBSERVATION SHALL NOT BE CONSTRUED AS AN APPROVAL OF A VIOLATION OF THE PROVISIONS OF THE CONSTRUCTION STANDARDS, THESE CONSTRUCTION DOCUMENTS, OR ANY OTHER LOCAL, STATE, OR FEDERAL ORDINANCES OR REGULATIONS. ALL SUCH DISCREPANCIES ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER.

4. IT SHALL BE THE DUTY OF THE GENERAL CONTRACTOR TO CAUSE THE WORK TO REMAIN ACCESSIBLE AND EXPOSED FOR OBSERVATION PURPOSES. THE ENGINEER SHALL NOT BE LIABLE FOR THE EXPENSE OR SCHEDULE LOSS ENTAILED IN THE REMOVAL OR REPLACEMENT OF ANY MATERIAL REQUIRED TO ALLOW SUCH OBSERVATION.

5. IT SHALL BE THE DUTY OF THE GENERAL CONTRACTOR TO NOTIFY THE ENGINEER THAT SUCH WORK IS READY FOR OBSERVATION. THE REQUEST SHALL BE SUBMITTED BY FAX AT LEAST TWO WORKING DAYS BEFORE SUCH OBSERVATION IS DESIRED, UNLESS THE SITE DISTANCE IS GREATER THAN 50 MILES FROM THE ENGINEER'S OFFICE, WHEN 5 WORKING DAYS ARE REQ'D.

6. A WRITTEN RECORD OF THE OBSERVATION SHALL BE PROVIDED BY THE ENGINEER, NOTING CONFORMANCE OR NON-CONFORMANCE OF THE WORK. NO WORK SHALL BE DONE BEYOND THE POINT INDICATED IN EACH SUCCESSIVE OBSERVATION WITHOUT FIRST OBTAINING THE WRITTEN APPROVAL OF THE ENGINEER. ANY PORTIONS WHICH DO NOT COMPLY SHALL BE CORRECTED AT THE COST OF THE CONTRACTOR, AND SUCH PORTIONS SHALL NOT BE COVERED OR CONCEALED UNTIL AUTHORIZED BY THE ENGINEER.

7. IF OBSERVED DEFICIENCIES REMAIN UNCORRECTED, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL AND THE OWNER A WRITTEN REPORT THAT THE SITE VISITS HAVE BEEN PERFORMED, IDENTIFYING THE DEFICIENCIES WHICH, TO THE BEST KNOWLEDGE OF THE STRUCTURAL OBSERVER, HAVE NOT BEEN RESOLVED.

SOILS, SITE PREPARATION

1. ALL ORGANIC MATERIALS, RUBBISH, ETC. SHALL BE REMOVED FROM BENEATH LOCATIONS OF PROPOSED FOOTINGS, CONCRETE SLABS AND ASPHALT PAVING.

2. ALL MODERATE TO HIGHLY EXPANSIVE CLAY WITHIN TWO FEET OF BOTTOM OF CONCRETE SHALL BE REMOVED AND REPLACED WITH COMPACTED STRUCTURAL FILL. CONSULT SOILS ENG. ON ALL EXPANSIVE CLAY.

3. EXPOSED MATERIAL SOILS SHALL BE SCARIFIED SIX INCHES MINIMUM, MOISTURE CONDITIONED AND COMPACTED, WHEN REQ'D BY SOILS ENGINEER.

4. SOIL AT SUBGRADE UNDER CONCRETE SHOULD BE KEPT MOIST UNTIL CONCRETE IS PLACED. DRY OR CRACKED MATERIAL SHALL BE REPLACED PER ENGINEERS APPROVAL. ALL FREE WATER SHALL BE REMOVED FROM THE FOUNDATION EXCAVATION PRIOR TO PLACING CONCRETE.

5. ALL BEARING SOIL PREPARATION SHALL BE IN CONFORMANCE TO THE PROJECT SOILS REPORT. IN THE EVENT OF NO SOILS REPORT, THE FOLLOWING SHALL APPLY:
   ALL FOOTINGS AND SLABS SHALL BE PLACED ON UNDISTURBED NATIVE SOIL, LEAN CONCRETE FILL, OR ON STRUCTURAL ENGINEERED FILL. IF NOTED ON PLAN DETAILS FOR OVER EXCAVATION TO BE USED, THE FOUNDATION AREA SHALL BE OVEREXCAVATED TO A DEPTH OF 3'-0" BELOW BOTTOM OF FOOTING, AND OVER EXCAVATION SHALL EXTEND 2'-0" BEYOND FOOTING PERIMETER. THE EXCAVATION ZONE SHALL BE FILLED WITH LEAN CONCRETE OR STRUCTURAL ENGINEERED FILL. STRUCTURAL ENGINEERED FILL SHALL BE COMPACTED TO 95% MAXIMUM RELATIVE DENSITY, BASED ON ASTM D1557, CURRENT REVISION. PLACE FILL IN 8" MAX LOOSE LIFTS PRIOR TO COMPACTION. STRUCTURAL FILL SHALL BE APPROVED BY THE ENGINEER AND CONSIST OF LOW PLASTICITY, NON-GYPSIFEROUS GRANULAR SOILS AND NOT CONTAIN MATERIAL GREATER THAN 3 INCHES NOMINAL DIAMETER, AND HAVE A SOLUBILITY LESS THAN 5%. THE LIQUID LIMIT OF FINES SHALL NOT EXCEED 35 AND THE PLASTICITY INDEX SHALL BE BELOW 6.

FOUNDATIONS

1. CONTINUOUS FOOTINGS: ADD 2-#4 LONGITUDINAL TOP BARS TO ALL CONTINUOUS FOOTINGS WITHOUT FOUNDATION WALLS ABOVE, UNLESS NOTED OTHERWISE. THICKEN FOOTINGS AS REQ'D TO PROVIDE 3" MIN COVER BELOW ALL REQ'D HARDWARE AND HOLD DOWN BOLTS.

2. PENETRATIONS: NO PENETRATIONS SHALL BE ALLOWED THROUGH ANY CONCRETE FOOTING. WHEN CONFLICTS ARISE BETWEEN UNDERGROUND PLUMBING, UTILITIES, ETC, THE FOOTING SHALL BE STEPPED DOWN BELOW THE CONFLICT AND THE WALL, PIER, OR COLUMN SHALL BE EXTENDED TO THE FOOTING AS REQUIRED. COORDINATE WITH THE ARCHITECT AND/OR STRUCTURAL ENGINEER.

CONCRETE

1. CONCRETE SHALL BE AS FOLLOWS:
   A. CEMENT SHALL CONFORM TO ASTM C150, TYPE II. HARD ROCK AGGREGATES SHALL CONFORM TO ASTM C33. AND SHALL BE 1 1/2" MAX. FOR FOOTINGS AND 3/4" MAX. FOR ALL OTHER WORK. ONLY ONE GRADE OF CONCRETE SHALL BE POURED ON THE JOB AT ONE TIME. COPIES OF ALL THE MIX DESIGNS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER FOR REVIEW BEFORE USE. USE A MIX THAT PRODUCES THE LOWEST SLUMP COMPATIBLE WITH PROPER PLACEMENT (SLABS 3" MAX, ALL OTHER 4" MAX, UNLESS APPROVED BY THE STRUCTURAL ENGINEER). ALL CONCRETE SHALL BE VIBRATED DURING PLACEMENT. ALL CONCRETE FOR FOOTINGS SHALL HAVE A MIN. STRENGTH AT 28 DAYS OF 3500 PSI, AND ALL OTHER CONCRETE SHALL HAVE A MINIMUM STRENGTH AT 28 DAYS OF 4500 PSI.

   B. FOOTINGS, FOUNDATION WALLS, AND INTERIOR SLABS SHALL BE AIR ENTRAINED WITH 5% +/- 1%, SHALL HAVE A MIN. OF 5 BAGS OF CEMENT PER CUBIC YARD, AND A MAX WATER/CEMENT RATIO OF 0.45.

   C. EXTERIOR SLABS SHALL BE AIR ENTRAINED WITH 6% +/- 1% AIR, SHALL HAVE A MIN. OF 6 BAGS OF CEMENT PER CUBIC YARD, AND A MAXIMUM WATER/CEMENT RATIO OF 0.45.

   D. ELEVATED SLABS AND FLOOR TOPPING SHALL BE HARD ROCK NORMAL WEIGHT CONCRETE, U.N.O. CONCRETE MIX FOR SLABS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO PLACEMENT.

2. COORDINATION:
   A. BEFORE CONCRETE IS POURED, CHECK WITH ALL TRADES TO INSURE PROPER PLACEMENT OF ALL OPENINGS, SLEEVES, CURBS, CONDUITS, BOLTS, INSERTS, ETC., RELATING TO THE WORK.

   B. ALL EQUIPMENT ANCHOR BOLT SIZES AND LOCATIONS SHALL BE VERIFIED IN THE FIELD WITH THE EQUIPMENT MANUFACTURERS CERTIFIED DRAWINGS, LATEST REVISION, BEFORE PLACING CONCRETE.

3. GROUT:
   A. USE HIGH STRENGTH NON-METALLIC NON-SHRINK LIQUID EPOXY GROUT UNDER ALL STEEL BASE PLATES. MIX GROUT WITH SAND OR PEA GRAVEL AS RECOMMENDED BY MANUFACTURER.

   B. GROUT SHALL BE MIXED WITH JUST ENOUGH WATER TOO ALLOW PLACING. MIN COMPRESSIVE STRENGTH AT 28 DAYS TO BE 5000 PSI.

4. KEY WAYS:
   KEYWAYS IF NOTED SHALL BE 2x4, OTHERWISE SURFACE AT COLD JOINTS TO BE ROUGHENED.

5. OPENINGS:
   AROUND ALL SIDES OF OPENINGS ADD REINFORCEMENT EQUIVALENT TO THE NUMBER OF BARS CUT BY OPENING WITH HALF ON EACH SIDE OF OPENING, OR (2)-#5 BARS, WHICHEVER IS GREATER. BARS PARALLEL TO PRINCIPLE REINFORCING SHALL RUN FULL LENGTH OF SPAN. BARS IN OTHER DIRECTION SHALL RUN 24" BEYOND OPENING OR END WITH A STANDARD HOOK.

6. MAKE ALL CONCRETE SLABS ON GRADE AT LEAST 4" THICK AND REINFORCE WITH #4 AT 24"O.C. BOTH WAYS IN CENTER OF THE SLAB, UNLESS NOTED OTHERWISE. INTERIOR SLABS TO BEAR ON A 4" LAYER OF COMPACTED FREE DRAINING COARSE GRANULAR MATERIAL BELOW A 4 MIL. MIN. VISQUEEN BARRIER, U.N.O. LARGE AREAS OF SLAB ON GRADE SHALL BE PLACED IN STRIPS SUBDIVIDED BY CONSTRUCTION OR CONTRACTION JOINTS INTO ROUGHLY SQUARE WHOSE SIDES SHALL NOT EXCEED 15FT. IN EITHER DIRECTION. CONCRETE SLAB JOINT PLAN SHALL BE SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION

7. WALL REINFORCING:
   UNLESS NOTED OTHERWISE ON THE PLANS, REINFORCE ALL WALLS AS FOLLOWS:

THICKNESS	HORIZONTAL	VERTICAL
6"-WALL	#4 AT 16"O.C.	#4 AT 18"O.C.
8"-WALL	#4 AT 12"O.C.	#5 AT 18"O.C.
10"-WALL	#5 AT 12"O.C.	#5 AT 12"O.C.
12"-WALL	#4 AT 13"O.C. E.F.	#4 AT 13"O.C. E.F.

   STEEL IS TO BE PLACED IN THE CENTER OF THE WALL (EXCEPT WALLS MORE THAN 10" THICK) AND DOWELED TO THE FOOTING BELOW AND TO THE STRUCTURE ABOVE WITH THE SAME DOWEL SIZE AND SPACING AS VERTICAL REINFORCEMENT. PROVIDE CORNER BARS AT ALL INTERSECTION CORNERS, USE SAME BAR SIZE AND SPACING AS HORIZONTAL REINFORCING UNLESS NOTED OTHERWISE. ALL STEEL MUST BE TIED IN PLACE PRIOR TO PLACING CONCRETE. PLACE STEEL WITH PROPER COVER AWAY FROM FACE AGAINST SOIL & DOWEL TO FOOTING WITH SAME DOWEL SIZE AND SPACING AS VERTICAL REINFORCEMENT. ALL DOWELS SHALL HAVE AT LEAST 30 BAR DIAMETERS EMBEDMENT OR 9"., WHICHEVER IS GREATER, AND SHALL HAVE A STANDARD 90 DEGREE HOOK FOR ANCHORAGE.

8. FOR POURING CONCRETE DURING COLD WEATHER:
   A. FOLLOW RECOMMENDATIONS CONTAINED IN PUBLICATION "COLD WEATHER CONCRETING," ACI 306, CURRENT REVISION.
   B. PROTECT CONCRETE WORK FROM PHYSICAL DAMAGE OR REDUCED STRENGTH WHICH COULD BE CAUSED BY FROST, FREEZING, OR LOW TEMPERATURES.
   C. WHEN AIR TEMPERATURES HAS FALLEN TO OR IS EXPECTED TO FALL BELOW 40F OR 4C, UNIFORMLY HEAT WATER AND AGGREGATES BEFORE MIXING TO OBTAIN A CONCRETE MIXTURE TEMPERATURE OF NOT LESS THAN 50F OR 10C, AND NOT MORE THAN 80F OR 27C AT TIME OF PLACEMENT.
   D. CONCRETE SHALL BE AIR-ENTRAINED WITH AIR CONTENT OF 5% BY VOLUME + OR - 1%.
   E. DO NOT USE FROZEN MATERIALS OR MATERIALS CONTAINING ICE OR SNOW. DO NOT PLACE CONCRETE ON FROZEN SUBGRADE OR ON SUBGRADE CONTAINING FROZEN MATERIALS.
   F. DO NOT USE CALCIUM CHLORIDE, SALT OR OTHER MATERIAL CONTAINING ANTIFREEZE AGENTS OR CHEMICAL ACCELERATORS.
   G. COVER AND HEAT CONCRETE AS RECOMMENDED BY ACI 306, CURRENT EDITION.

9. MIX WATER SHALL BE FREE OF ACID ALKALI, OIL OR ANY ORGANIC MATERIAL THAT MAY INTERFERE WITH THE SETTING OF THE CEMENT.

10. IF REQUIRED, WATER AND AGGREGATES SHALL BE COOLED PRIOR TO USE AND AGGREGATE STOCKPILES SHALL BE SHADED FROM THE SUN. USE CHILLED WATER OR CRUSHED ICE AS PART OF THE MIXING WATER WHEN SO REQUIRED TO MAINTAIN TEMPERATURE.

11. CONSOLIDATE CONCRETE BY MEANS OF INTERNAL VIBRATORS, OR FORM VIBRATORS.

12. CURE ALL CONCRETE AS PER LATEST ACI RECOMMENDATIONS. CURE A MIN. OF 7 DAYS, AND INSURE THAT CONCRETE HAS REACHED A MIN. OF 85% OF 28 DAY STRENGTH, BEFORE BACKFILLING OR APPLYING LOADS.

REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL BE:
   A. NEW STOCK DEFORMED BARS AND CONFORMING TO ASTM A615, GRADE 60, EXCEPT AS FOLLOWS: ALL DOWELS TO BE BENT IN THE FIELD DURING CONSTRUCTION MAY BE GRADE 40. BARS TO BE WELDED SHALL CONFORM TO ASTM A706.
   B. FREE OF LOOSE FLAKY RUST, SCALE, GREASE AND OTHER MATERIALS WHICH MIGHT AFFECT OR IMPAIR BOND.
   C. DETAILED, BOLSTERED, AND SUPPORTED IN ACCORDANCE WITH ACI 315, LATEST EDITION.
   D. SECURELY ANCHORED TO THE FORMS.(SEE REINFORCEMENT COVER).

2. BENDS:
   ALL BENDS SHALL BE MADE COLD. ALL BAR FABRICATION TO BE AS PER THE LATEST EDITION OF ACI REQUIREMENTS, SHOP FABRICATED WHEN AT ALL POSSIBLE.

3. CONCRETE REINFORCEMENT COVER:
   CAST AGAINST & PERMANENTLY EXPOSED TO EARTH.......3"
   EXPOSED TO EARTH OR WEATHER:
      #6 & LARGER........2"
      #5 & SMALLER.......1-1/2" (2" WITH CORROSIVE SOILS)
   NOT EXPOSED TO EARTH OR WEATHER:
   SLABS AND WALLS, #11 & SMALLER.......3/4"
   BEAMS AND COLUMNS, MAIN REINF. OR TIES..........1-1/2"
   SLABS ON GRADE, FROM TOP OF SLAB........1" FOR 4" SLABS
   SLABS ON GRADE....CENTERED IN SLAB FOR 5" SLABS AND THICKER, UNO

   MASONRY REINFORCEMENT PLACEMENT:
   A. REINFORCEMENT SHALL BE PLACED AND TIED PRIOR TO GROUTING. REINFORCEMENT SHALL BE SECURED AGAINST DISPLACEMENT PRIOR TO GROUTING AT INTERVALS NOT EXCEEDING 200 BAR DIA. OR 10'.
   B. REINFORCEMENT TO BE LOCATED IN ACCORDANCE WITH THE PLANS.

4. SPLICES:
   CONTINUOUS REINFORCEMENT SHALL BE SPLICED AT POINTS AT MIN. STRESS BY LAPPING 48 BAR DIAMETERS IN CONCRETE AND 60 BAR DIAMETERS IN MASONRY. MINIMUM LAP SHALL BE 2'-0" LONG IN MASONRY, 1'- 6" LONG IN CONCRETE.

5. SHOP DRAWINGS:
   SUBMIT SHOP DRAWINGS FOR REVIEW BY THE STRUCTURAL ENGINEER PRIOR TO FABRICATION.

6. WELDED WIRE FABRIC:
   WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. LAP FABRIC 2 CROSSLINE SPACES AND TIE AT SPLICES. PROVIDE POSITIVE MEANS OF HOLDING OR POSITIONING FABRIC AT REQUIRED DEPTH DURING PLACEMENT OF CONCRETE.

7. WELDING:
   NO REINFORCING SHALL BE WELDED UNLESS IT CONFORMS TO ASTM A706, GRADE 60, "LOW-ALLOY STEEL".

COLD FORMED STEEL FRAMING

1. CONSTRUCTION IS TO FOLLOW CONSTRUCTION PRACTICE CONTAINED IN THE "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" BY AISI AND THE "COLD-FORMED STEEL DESIGN" BY AISI, LATEST EDITIONS, AND THE "LIGHTWEIGHT STEEL FRAMING SYSTEMS MANUAL" BY THE METAL LATH/STEEL FRAMING ASSOCIATION (ML/SFA) AND PER THE STEEL STUD MANUFACTURER'S ASSOCIATION (SSMA) MANUAL.

2. COLD FORMED MEMBERS USED TO BE MANUFACTURED BY A CURRENT MEMBER OF THE STEEL STRUC MANUFACTURER'S ASSOCIATION (SSMA).

3. POWER DRIVEN FASTENERS CALLED OUT IN THE DRAWINGS TO BE "RAMSET" 0.170 SHANK FASTENERS, 3300X SERIES, OR APPROVED EQUAL.

4. ALL MEMBERS SHALL BE CUT TRUE AND SET TO PROVIDE FULL BEARING, AND ALL FLANGES SHALL BE ATTACHED TO END TRACKS WITH AT LEAST (1) #8 SCREW. ALL BEARING POINTS SHALL HAVE FULL WIDTH BEARING UPON SUPPORTING MEMBER.

5. ALL WOOD SHEATHING USED ON FRAMED WALLS TO BE RATED 7/16" OSB, UNO. SHEATHING TO BE ATTACHED USING #8 SCREWS, MIN., SPACED AT 6" OC AT PANEL EDGES AND 12" OC IN FIELD. ALL PANEL EDGES SHALL BE ATTACHED TO FRAMING MEMBERS OR BLOCKING.

6. ALL SHEAR WALL HOLDOWNS TO BE INSTALLED PER ALL MANUFACTURER RECOMMENDATIONS, AND SHALL BE "SIMPSON" OR APPROVED EQUAL.

7. UNO, ALL METAL STUD SHEAR WALL FRAMING MEMBERS SHALL BE 33-MILS MIN., AND SHALL HAVE 1.625" MIN. FLANGE WIDTH AND 3/8" MIN. EDGE STIFFENERS. UNO, TRACKS SHALL ALSO BE 33-MILS MIN. AND SHALL HAVE A MIN. FLANGE WIDTH OF 1.25".

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL FABRICATION AND CONSTRUCTION SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING CODES AND STANDARDS:
   A. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION".
   B. AISC "CODE OF STANDARD PRACTICE" EXCLUDING SECTIONS 1.5.1, 3.3 (1ST SENTENCE), 4.2, 7.5.4, AND 7.11.5.
   C. AMERICAN WELDING SOCIETY (AWS, STRUCTURAL WELDING CODE, EXCLUDING ITEMS CONFLICTING WITH AISC REQUIREMENTS.

2. CONNECTIONS – DETAILING:
   A. BEAM END CONNECTIONS SHALL BE DETAILED FOR THE FORCES SHOWN ON THE DRAWINGS. WHERE NO FORCE IS GIVEN, THE CONNECTIONS SHALL BE DETAILED TO SUPPORT THE TOTAL UNIFORM LOAD CAPACITY OF THE BEAM WITH ITS COMPRESSION FLANGE LATERALLY SUPPORTED FULL LENGTH. WHERE DRAWINGS INDICATE AN AXIAL FORCE IN THE BEAM, ITS END CONNECTIONS SHALL BE DETAILED FOR THIS FORCE IN COMBINATION WITH THE VERTICAL FORCES. MOMENT CONNECTION OF MEMBERS WHERE REQUIRED SHALL DEVELOP FULL MOMENT STRENGTH OF THE MEMBER UNLESS ACTUAL MOMENT IS GIVEN.
   B. BRACING END CONNECTIONS SHALL BE DETAILED FOR THE AXIAL FORCES SHOWN ON THE DRAWINGS. WHERE NO AXIAL FORCE IS GIVEN, BOLTED END CONNECTIONS SHALL BE DETAILED FOR A MINIMUM OF 50 % OF THE MAXIMUM CAPACITY OF THE MEMBER IN TENSION. END CONNECTIONS OF TRUSSES AND TRUSS BENTS WILL BE DETAILED FOR THE AXIAL FORCES SHOWN ON THE DRAWINGS, WHERE NO AXIAL FORCE IS GIVEN THE END CONNECTION SHALL BE DETAILED FOR 100% OF THE EFFECTIVE CAPACITY OF THE MEMBER IN TENSION.

3. CONNECTIONS – BOLTED:
   A. STEEL TO STEEL SHALL BE WITH BOLTS AND NUTS CONFORMING TO ASTM A325, CARRYING THE IDENTIFYING MARK OF (3) RADIAL LINES. BOLTED CONNECTIONS SHALL HAVE A MINIMUM OF (2) BOLTS, UNO.
   B. STAIR AND HANDRAIL CONNECTIONS SHALL BE WITH BOLTS AND NUTS CONFORMING TO ASTM A307 UNLESS NOTED OTHERWISE.
   C. BOLTS SHALL BE 3/4" DIAMETER, UNLESS NOTED OTHERWISE. HOLES TO BE 1/16" OVERSIZE UNLESS NOTED OTHERWISE. EACH A325 BOLT SHALL BE SUPPLIED WITH HARDENED STEEL WASHER AND HIGH STRENGTH NUT. BEVELED WASHERS SHALL BE PROVIDED WHERE SLOPE BETWEEN THE CONNECTION SURFACES EXCEEDS 1:20.
   D. TORCH CUT HOLES ARE NOT ALLOWED.

4. CONNECTIONS – WELDED:
   A. USE E70 ELECTRODES FOR ALL WELDING UNLESS NOTED OTHERWISE. ALL WELDED CONNECTIONS SHALL HAVE A MINIMUM OF 2" OF FILLET WELD ON EACH SIDE OF MEMBER.
   B. ALL WELDERS SHALL BE QUALIFIED ACCORDING TO AWS WITHIN THE LAST 12 MONTHS. PROVIDE WRITTEN CERTIFICATION WHEN REQUESTED.
   C. THE OWNER SHALL TEST OR INSPECT ALL WELDS BY ANY APPROPRIATE PROCEDURE AS DEEMED NECESSARY. DEFICIENT WELDS SHALL BE CORRECTED AT NO ADDITIONAL COST TO THE OWNER.

5. PAINT:
   PROVIDE SHOP COAT OF PAINT ON ALL STEEL ITEMS.

6. SHOP DRAWINGS:
   SUBMIT SHOP DRAWINGS FOR REVIEW BY THE STRUCTURAL ENGINEER PRIOR TO FABRICATION.

7. MATERIAL STRENGTH:
   A. STRUCTURAL STEEL SHAPES & PLATE TO BE NEW & CONFORM TO ASTM A36
   B. HSS SHAPES TO BE NEW & CONFORM TO ASTM A500, GRADE B. FY=46 KSI.

8. STUDS & DBA'S:
   ALL HEADED STUDS AND DEFORMED BAR ANCHORS (DBA) SHALL BE WELDABLE GRADE, AND SHALL CONFORM TO SPECIFICATIONS PROVIDED BY THE MANUFACTURER.

9. GROUT:
   NON-SHRINK, NON-METALLIC GROUT WITH 7000 PSI MIN. @ 28 DAYS.

MASONRY

1. BEAM-SUPPORT INTERFACE:
   MASONRY BEAMS SHALL BE BUILT AS AN INTEGRAL PART OF THE SUPPORT. NO TOOTHING OR DOWELING WILL BE PERMITTED AT SUPPORTS. USE PRE-FORMED BOND BEAM CMU UNITS FOR ALL MASONRY BEAMS TO ALLOW THE GROUT POUR TO BE CONTINUOUS.

2. BEAM AND WALL GROUTING:
   A. GROUT MASONRY BEAMS SOLID FOR FULL DEPTH INDICATED IN MASONRY BEAM SCHEDULE.
   B. GROUT WALL SOLID FOR FULL HEIGHT AND LENGTH AT SIDES AND TOP OF OPENINGS: ONE CELL FOR EACH 4'-0" OF SPAN OR PORTION THEREOF. REINFORCE WITH (2)-#5 BARS IN EACH GROUTED CELL, ONE BAR EACH FACE OF WALL, TYPICAL U.N.O. (EXAMPLE: FOR 6'-0" SPAN, GROUT TWO CELLS EACH SIDE OF OPENING). SEE PLANS FOR OTHER REINFORCEMENT.
   C. FILL ALL UNREINFORCED CAVITIES WITH PERLITE, U.N.O.

3. OPENINGS:
   FOR MECHANICAL OPENINGS NOT SHOWN, USE SIMILAR BEAM AS FOR SIMILAR LENGTH OPENINGS. VERIFY WITH STRUCTURAL ENGINEER.

4. PENETRATIONS:
   NO PENETRATIONS SHALL BE ALLOWED THROUGH ANY MASONRY BEAM WITHOUT THE ARCHITECT'S AND/OR ENGINEER'S WRITTEN APPROVAL.

5. BEAM REINFORCEMENT:
   A. ALL REINFORCING IN MASONRY BEAM SCHEDULE IS IN ADDITION TO TYPICAL WALL REINFORCING.
   B. UNLESS NOTED OTHERWISE IN PLANS OR SCHEDULES, REINFORCE ALL BEAMS AND LINTELS AND HEADERS AS NOTED WITHIN NOTE 2.B. UNDER "MASONRY" NOTES ABOVE ON THIS DRAWING PAGE.
   C. HORIZONTAL REINFORCING BARS IN THE TOP OR BOTTOM OF MASONRY BEAMS SHALL EXTEND THE GREATEST OF 2'-0" OR 60 BAR DIAMETERS BEYOND THE EDGE OF THE OPENING OR SHALL BE HOOKED IF REQUIRED.
   D. VERTICAL REINFORCING BARS IN BEAMS SHALL HOOK AROUND THE BOTTOM HORIZONTAL REINFORCING BARS. THEY SHALL ALSO HOOK AROUND THE TOP HORIZONTAL REINFORCING BARS OR EXTEND INTO WALL ABOVE A MINIMUM OF 48 BAR DIAMETERS.
   E. DO NOT SPLICE HORIZONTAL TOP OR BOTTOM REINFORCING BARS WITHIN BEAMS (TYPICAL), UNLESS NOTED OTHERWISE.

6. WALL REINFORCEMENT:
   A. ALL VERTICAL WALL REINFORCEMENT SHALL BE DOWELED TO SUPPORTING WALLS WITH THE SAME SIZE BAR AND SPACING, U.N.O.
   B. WHERE HORIZONTAL REINFORCING BARS JOIN CONCRETE COLUMNS OR PILASTERS, REINFORCING SHALL BE CONTINUOUS. ALSO, A KEY SHALL BE PROVIDED BETWEEN THE WALL AND COLUMN.
   C. PROVIDE (2)-#5 BARS, IN GROUTED CELLS, ALONG TOP OF WALL AND ALONG EA. FACE OF OPENINGS WHICH EXCEEDS 24 INCHES IN EITHER DIRECTION. BARS SHALL EXTEND 24 INCHES MINIMUM BEYOND THE CORNERS OF THE OPENING (UNLESS NOTED OTHERWISE ON DRAWINGS). ALL CORNERS AND END OF WALLS SHALL HAVE VERT. REINFORCING U.N.O. THIS REINFORCING IS IN ADDITION TO OTHER REINFORCEMENT INDICATED.
   D. HORIZONTAL REINFORCEMENT IN WALLS SHALL HAVE MATCHING DOWELS OR CORNER REBARS AT CORNERS AND AT INTERSECTING WALLS.
   E. ALL MASONRY WALLS SHALL BE REINFORCED AS FOLLOWS, U.N.O.:
      8" CMU 1-#4 VERTICALS @ 24" O.C.
      2-#5 HORIZONTALS @ 48" O.C. (PLACE BARS TO THE INSIDE)

   SEE DRAWINGS & DETAILS FOR OTHER REINFORCING REQUIREMENTS. HORIZ REINFORCEMENT TO BE CONTINUOUS AT ALL INTERSECTING WALL CORNERS.

7. ATLAS BRICK:
   A. ATLAS BRICK AS MANUFACTURED BY INTERSTATE BRICK CO., AND MEET REQUIREMENTS OF ASTM C652M GRADE SW, TYPE HBS, CLASS H40V OR H60V.
   B. PRISM TESTS SHALL NOT BE PROVIDED BEFORE STARTING MASONRY WORK ON THE BUILDING UNLESS REQUIRED BY THE ARCHITECT AND AT INTERVALS AS REQUIRED IN THE SPECIFICATIONS, BUT NOT LESS THAN EVERY 5000 SF OF WALL AREA. MIN. COMPRESSIVE STRENGTH OF TESTS TO BE F'm = 2,500 PSI.

8. MASONRY GROUT:
   A. GROUT TO BE OF A FLUID CONSISTENCY AND SHALL BE 1.0 PART PORTLAND CEMENT, 2.25 TO 3.0 PARTS SAND, AND MAY CONTAIN AN ADDITIONAL 1 TO 2 PARTS PEA GRAVEL IF GROUT SPACES ARE 4" OR MORE IN EACH DIRECTION. ALL MEASUREMENTS ARE PARTS BY VOLUME. DO NOT USE MORTAR AS GROUT. F'c = 4000 PSI MIN. AT 28 DAYS.
   B. GROUT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION DURING PLACING, AND RECONSOLIDATED AFTER EXCESS MOISTURE HAS BEEN ABSORBED (BUT BEFORE WORKABILITY IS LOST) BY MECH. VIBRATION.
   C. GROUT FILL ALL CELLS SOLID WHICH CONTAIN REINFORCING, BOLTS, ANCHORS, EMBEDS, ETC. CELL CAVITIES SHALL BE KEPT CLEAN UNTIL GROUT IS PLACED.

9. MORTAR:
   MORTAR SHALL BE TYPE "S" OR "N" AND TO BE 1.0 PART PORTLAND CEMENT, 1/2 PART HYDRATED LIME OR LIME PUTTY, AND 3.5 TO 4.5 PARTS SAND. ALL MEASUREMENTS ARE PARTS BY VOLUME. NO ADDITIVES WILL BE ALLOWED. ALL MORTAR JOINTS SHALL BE TROWELED CONCAVE.

10. RUNNING BOND:
    ALL CONCRETE BLOCK WALLS SHALL BE CONSTRUCTED UTILIZING COMMON RUNNING BOND UNLESS NOTED OTHERWISE.

11. ALL WALLS SHALL BE BUILT AS AN INTEGRAL UNIT AT CORNERS AND INTERSECTIONS.

12. VERTICAL CONTROL JOINTS SHALL HAVE A 25 FOOT MAX. SPACING. THE LOCATION OF THE JOINTS SHALL BE SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

TIMBER

1. CONSTRUCTION IS TO FOLLOW CONSTRUCTION PRACTICE CONTAINED IN THE IBC, SECTION 2304.

2. CONSTRUCTION PRACTICE SHALL FOLLOW NOTES GIVEN IN THE LATEST EDITION OF THE AITC MANUAL.

3. ALL BEAMS AND STRUCTURAL LUMBER SHALL BE POSITIVELY ANCHORED OR BOLTED IN ACCORDANCE WITH INDUSTRY STANDARDS. STRUCTURAL BEAMS SHALL BE POSITIVELY ANCHORED TO CONCRETE PIERS AND STEEL COLUMNS BY MEANS OF BOLTS PASSING THROUGH THE BEAM AND POSITIVELY ANCHORED THROUGH STEEL PLATES. U.N.O. MINIMUM BOLT SIZE SHALL BE 3/4" DIAMETER. ALL BEAMS SHALL BE ANCHORED TO WOOD POSTS SIMPSON AC OR ACE OR LCE CONNECTORS, U.N.O. JOISTS SHALL BE ANCHORED WITH SIMPSON LUS OR LB HANGERS, U.N.O. ANCHOR WOOD POSTS TO CONC. BELOW WITH SIMPSON CBSQ POST BASES. U.N.O.

4. NAILS USED FOR SHEAR WALL AND DIAPHRAGM SHEATHING TO BE COMMON NAILS, U.N.O. FASTENERS SHALL BE PLACED NOT LESS THAN 3/8" FROM THE EDGE OF PLYWOOD PANELS. STAGGER NAILS EACH SIDE OF PANEL EDG, AND SPACE NAILS AT 6" OC AT PANEL EDGES AND 12" ON IN FIELD, UNO.

5. UNLESS NOTED OTHERWISE, DIMENSIONED STRUCTURAL LUMBER SHALL CONFORM TO DOUG FIR LARCH, #2 AND BETTER FOR 2x & 3x, #1 FOR ALL STUDS USED IN SPECIFIED AND/OR NOTED COLUMNS, AND #1 FOR ALL 4x AND LARGER MEMBERS. GLUED LAMINATED LUMBER TO BE DOUG FIR LARCH, GRADE 24F-V8. TJI AND MICROLAM LAM MATERIAL – TRUS JOIST MACMILLAN OR EQUAL, 1.9E AND 2600 PSI BENDING STRENGTH MIN. AS A MINIMUM, THE USE OF MANUFACTURED TIMBER MEMBERS SHALL CONFORM TO THE PRACTICE SPECIFIED BY THE MANUFACTURER. SHEATHING TO BE STRUCTURALLY RATED OSB, 7/16" MIN AT WALLS AND ROOF AND 3/4" T&G MIN AT FLOORS, UNO.

6. ALL HOLES IN ALL METAL TIMBER CONNECTORS (FRAMING ANCHORS, JOIST HANGERS, PURLIN ANCHORS, ETC.) MUST BE FILLED WITH NAILS AS SPECIFIED BY THE MANUFACTURER. ALL TIMBER CONNECTORS SHALL BE SIMPSON STRONG-TIE OR APPROVED EQUAL.

7. EXTERIOR WALL STUDS SPANNING MORE THAN 12' SHALL BE 2 x 6 DOUG. FIR STUD GRADE AT 12" O.C. MIN.

8. BEAMS AND HEADERS
   A. BEAMS UP TO 3'-6" SPAN TO BE (2) 2x8 AND HAVE SINGLE END SUPPORT CRIPPLER STUDS MIN., WITH FULL 1 1/2" MIN. END BEARING LENGTH, UNO.
   B. BEAMS OVER 3'-6" SPAN TO BE (2) 2x10 & HAVE DBLE END SUPPORT CRIPPLE STUDS W/ MIN. 3" END BEARING LENGTH OR 1" MIN. PER SUPPORT STUD, UNO.
   C. ALL BEARING BEAMS AND HEADERS FOR CONDITIONS OF NOTES A.) AND B.) ABOVE, IF CARRYING ROOF GIRDER TRUSSES, SHALL BE SIMILAR DEPTH TRIPLE 1 3/4" LVL HEADERS WITH (1) ADDITIONAL CRIPPLE STUD EACH END.

9. ALL WOOD POSTS TO BE ANCHORED TO CONCRETE BELOW WITH SIMPSON CBSQ POST BASES, UNO.

10. ALL HUNG JOISTS TO BE HUNG WITH SIMPSON LUS OR LB JOIST HANGERS, UNO.

11. ALL HEADERS AND GIRDER TRUSSES TO BE SUPPORTED BY (2) STUDS MIN., U.N.O.

12. BLOCKING IS REQUIRED AT ALL TRUSS OR JOIST BEARING POINTS AND AT RIDGES.

13. ALL SILL PLATES TO BE REDWOOD, TREATED, OR COMPLETELY ISOLATED FROM CONCRETE. ALL SILL PLATES TO HAVE A MIN. OF (2) BOLTS PER PIECE, WITH A BOLT WITHIN 12" OF EACH END OF EACH PIECE. BOLTS TO BE MIN. 1/2" DIA. AT 32" O.C. MAX, UNO FOR SHEAR WALLS.

14. FASTENERS IN TREATED LUMBER AND ALL FASTENERS EXPOSED TO WEATHER – NAILS TO BE HOT DIP GALVANIZED. BOLTS AND OTHER FRAMING ANCHORS AND CONNECTORS OR FASTENERS TO BE ZINC COATED.

15. WALL BASE PLATES TO BE FASTENED TO WOOD STRUCTURE BELOW WITH 16d NAILS AT 8" O.C. UNO FOR SHEAR WALLS.

WOOD TRUSS NOTES

1 – BOTTOM CHORDS OR TRUSSES, ACTING AS CEILING MEMBERS MUST BE ABLE TO SUPPORT A 10 PSF LIVE LOAD PER IBC REQUIREMENTS

2 – THE TRUSS MANUFACTURER SHALL BE RESPONSIBLE FOR THE DESIGN AND FABRICATION OF THE PRE-ENGINEERED TRUSSES, AND SHALL DESIGN THE TRUSSES PER ATTACHED ENGINEERING SPECS

3 – THE TRUSSES SHALL BE DESIGNED TO CARRY ANY ADDITIONAL LOADS DUE TO MECHANICAL UNITS, OVERHEAD DOORS, ROOF OVERBUIILDS, ETC.

4 – THE TRUSSES SHALL ALSO BE DESIGNED PER THE INTERNATIONAL BUILDING CODE, AND LOCAL ORDINANCES. DESIGN MUST ALSO TAKE INTO ACCOUNT UNBALANCED SNOW LOADS, SNOW DRIFTING, INCREASED SNOW LOADS ON EAVES AND VALLEYS, IMPACT LOADS FROM FALLING SNOW AND ICE, ETC.

5 – ALL MEMBERS SHALL BE DESIGNED FOR COMBINED STRESSES, BASED ON THE WORST LOADING CONDITION

6 – THE TRUSS MANUFACTURER SHALL INDICATE PROPER BRACING OF COMPRESSION CHORD MEMBERS @ 6'-0" LONG (OR LONGER), AS WELL AS BRACING FOR TRUSS ERECTION

7 – ALL DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION

8 – THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE TRUSSES PER THE TRUSS MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS. NO WEB OR CHORD MEMBERS SHALL BE MODIFIED IN THE FIELD

9 – THE PROJECT ENGINEER, OR ENGINEER OR RECORD, IS NOT RESPONSIBLE FOR THE PRE-ENGINEERED TRUSSES, NOR FOR THE INSTALLATION ETC OF THE TRUSSES. TRUSS PLANT SHALL PROVIDE LICENSED, ENGINEERED PLANS

10 – FABRICATE TRUSSES FROM APPROVED SHOP DRAWINGS

11 – FABRICATE TRUSSES IN JIGS WITH MEMBERS ACCURATELY CUT TO PROVIDE GOOD BEARING AT JOINTS. JOINTS SHALL BE ACCEPTABLE IF THE AVERAGE OPENING BETWEEN ENDS OF MEMBERS IMMEDIATELY AFTER FABRICATION IS LESS THE 1/16", EXCEPT THAT TRUSS COMPRESSION CHORD JOINTS AT SPLICES AND RIDGES SHALL HAVE FULL CONTACT BETWEEN MEMBERS.

12 – EACH CHORD SECTION SHALL BE INVOLVED IN TWO PANEL POINTS BEFORE BEING SPLICED

13 – PROVIDE 1/8" CAMBER FOR EACH 6 FEET OF TRUSS UNLESS OTHERWISE INDICATED

14 – TRUSS FABRICATORS USING METAL PLATES SHALL HAVE PLANT INSPECTED FOUR TIMES PER YEAR BY AN INDEPENDENT TESTING LABORATORY IN ACCORDANCE WITH TP1 REGULATIONS AND COPIES OF INSPECTIONS MADE AVAILABLE TO OWNER UPON REQUEST

DESIGN CRITERIA
2015 IBC
ROOF SNOW LOAD – 30 PSF
ROOF DEAD LOAD – 15 PSF
FLOOR LIVE LOAD – 40 PSF
FLOOR DEAD LOAD – 20 PSF

SOIL PARAMETERS:
SOIL SITE CLASS – D ASSUMED
SOIL BEARING PRESSURE – 1500 PSF ASSUMED

WIND PARAMETERS:
WIND SPEED – 115 MPH = V_{ULT}, 90 MPH = V_{ASD},
3 SECOND GUST
EXPOSURE – EXPOSURE B

SEISMIC PARAMETERS:
BUILDING TYPE – WOOD STUD SHEAR WALLS
WITH OSB SHEATHED BRACED WALL PANELS
SEISMIC RISK CATEGORY – III

Fa = 1.02	Fv = 1.50
SMS = 1.228	SM1 = 0.759
SDS = 0.819	SD1 =0.506
R = 6.5	CD = 4.0
Ω = 3.0	
CS = 0.1259	

STATEMENT OF SPECIAL INSPECTIONS:

TESTING OF CONCRETE POURED ON SITE IS TO BE PERFORMED BY TEST LAB AND SHALL INCLUDE (1) SET OF (3) CYLINDERS AND (1) SLUMP AND (1) AIR CONTENT TEST PER EA. 100 CU YDS OR LESS OF EACH CLASS OF CONCRETE PLACED.

PERIODIC SPECIAL INSPECTION IS REQUIRED FOR REBAR PLACEMENT PRIOR TO POUR OF CONCRETE WALLS AND FOOTINGS AS PARTS OF THE SEISMIC LFR SYSTEM.

ALL FIELD WELDING TO BE PERIODIC SPECIAL INSPECTED.

ALL "DEMAND CRITICAL" WELDS ON MOMENT FRAMES TO BE ULTRASONIC TESTED.

EPOXY EMBEDMENT OF ANY HARDWARE SHALL BE APPROVED IN WRITING BY THE PROJECT STRUCTURAL ENGINEER OF RECORD PRIOR TO THE BEGINNING OF ANY WORK, AND ALL SUCH WORK SHALL BE IN CONFORMANCE WITH GENERAL NOTE #10 ON THIS SHEET. CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR EPOXY ANCHORING OF ANCHOR BOLTS, REBAR DOWELS, HEADED STUDS, AND OTHER HARDWARE.

STRUCTURAL DRAWINGS INDEX:

S-1 STRUCTURAL NOTES
S-2 FOOTING AND FOUNDATION PLAN
S-3 UPPER FLOOR FRAMING PLAN AND SHEAR WALLS BELOW
S-4 ROOF FRAMING PLAN AND SHEAR WALLS BELOW
S-5 DETAILS
S-6 DETAILS

PRELIMINARY

07/31/19

NO.	DATE	REVISIONS	BY
1			
2			
3			

Palmer Engineering L.L.C.
Structural Engineers
2408 North 1050 West
Pleasant Grove, Utah 84062
Office: (801) 796-0590

PROJECT: WILD OAK RECEPTION CENTER
450 WEST GILLMAN LANE
LINDON, UTAH

SHEET TITLE: STRUCTURAL NOTES

DRAWN
CBP
CHECKED
GEP
DATE
7/1/2019
SCALE
AS NOTED
JOB NO.
19039

S-1

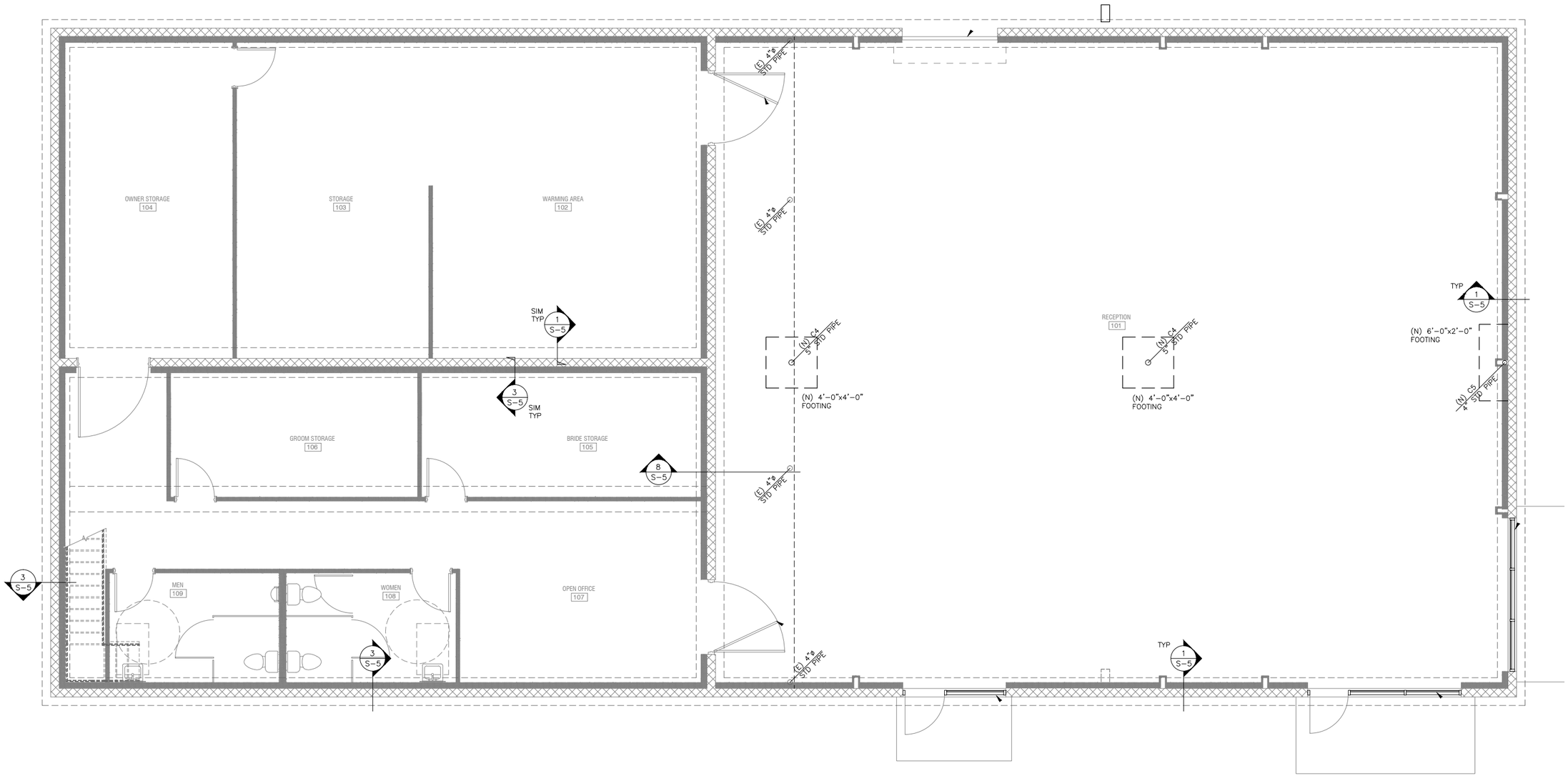
1 OF 1 SHEETS

Palmer Engineering
Structural Engineers
Palmer Engineering L.L.C.
Structural Engineers
CONSULTANT LOGO
2408 North 1050 West
Pleasant Grove, Utah 84062
Office: (801) 796-0590

PROJECT: 19031

alt architecture
1415 W 9800 S
WEST JORDAN, UTAH 84088

DESCRIPTION:
DATE:
MARK:



1/S-2 FOOTING & FOUNDATION PLAN
SCALE: 1/4" = 1'-0" ON 24"x36"
SCALE: 1/8" = 1'-0" ON 12"x18"

PRELIMINARY

WILD OAK RECEPTION CENTER

450 WEST GILLMAN LANE LINDON, UTAH

Derek Olson

PROJECT #:	19-011
DRAWN BY:	act
CHECKED BY:	act

ISSUED: X/XX/2019

FOOTING & FOUNDATION PLAN

S-2

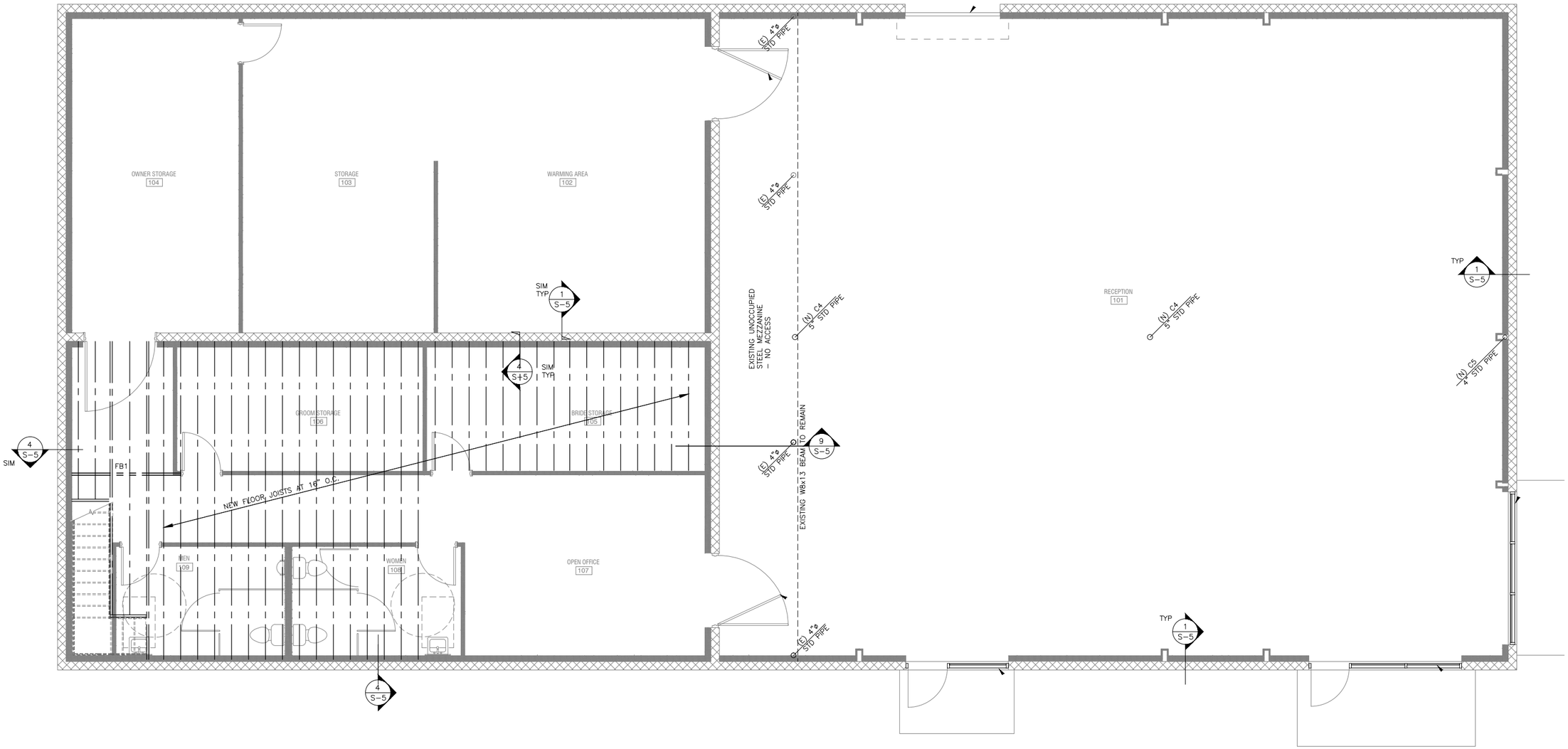
7/25/2019 10:09:39 AM

Palmer Engineering L.L.C.
Structural Engineers
2408 North 1050 West
Pleasant Grove, Utah 84062
Office: (801) 796-0590

PROJECT: 19031

alt architecture
1415 W 9660 S
WEST JORDAN, UTAH 84088

DESCRIPTION:
DATE:
MARK:



1 S-3 UPPER FLOOR FRAMING PLAN
SCALE: 1/4" = 1'-0" ON 24"x36"
SCALE: 1/8" = 1'-0" ON 12"x18"

PRELIMINARY

WILD OAK RECEPTION CENTER

450 WEST GILLMAN LANE LINDON, UTAH

Derek Olson

PROJECT #:	19-011
DRAWN BY:	act
CHECKED BY:	act

ISSUED: X/XX/2019

UPPER FLOOR FRAMING PLAN

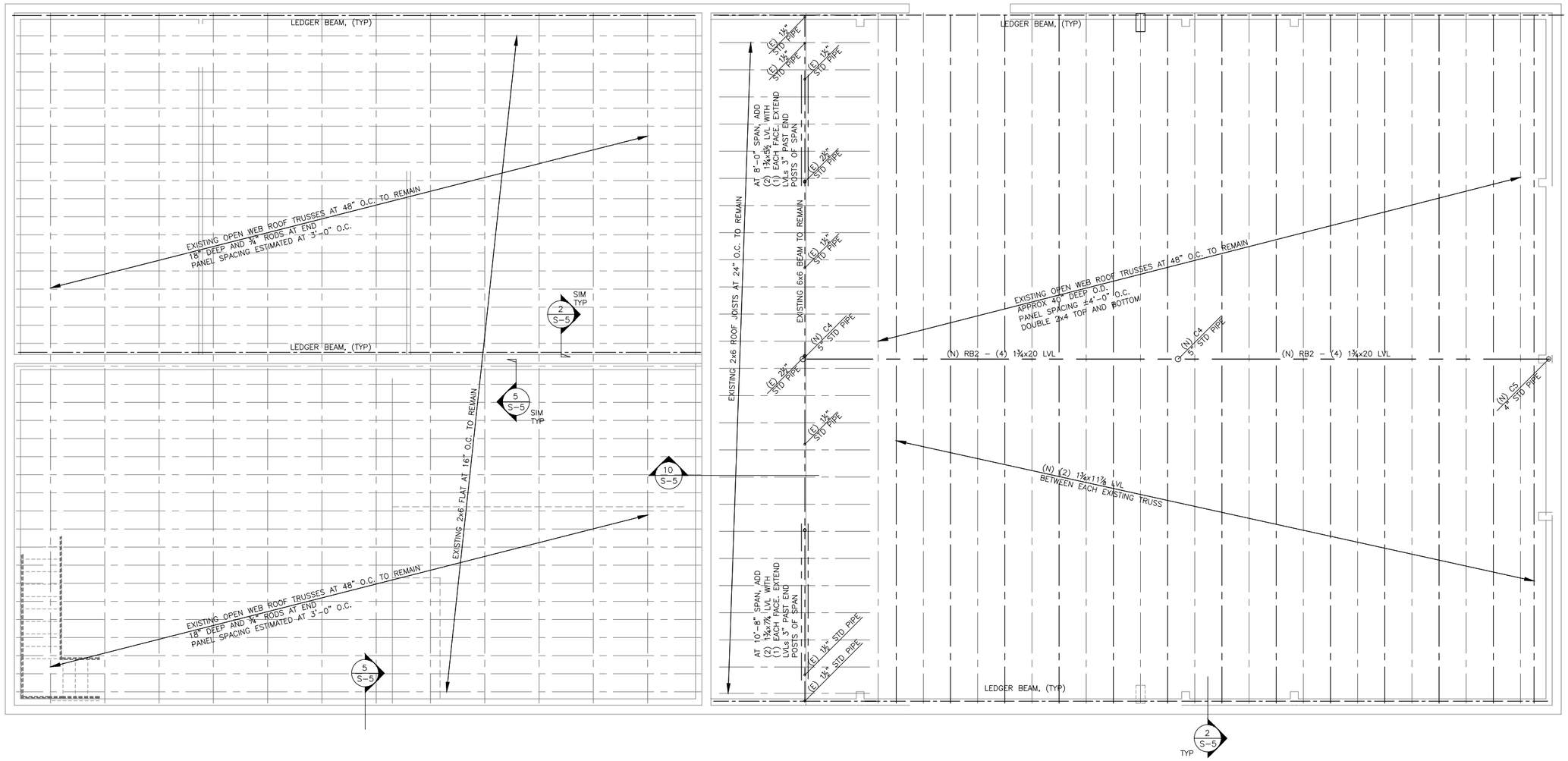
S-3

7/29/2019 10:59:28 AM

Palmer Engineering L.L.C.
Structural Engineers
2408 North 1050 West
Pleasant Grove, Utah 84062
Office: (801) 796-0590

PROJECT: 19031

alt architecture
1415 W 8680 S
WEST JORDAN, UTAH 84088



1 S-4 ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0" ON 24"x36"
SCALE: 1/8" = 1'-0" ON 12"x18"

PRELIMINARY

MARK	DATE	DESCRIPTION

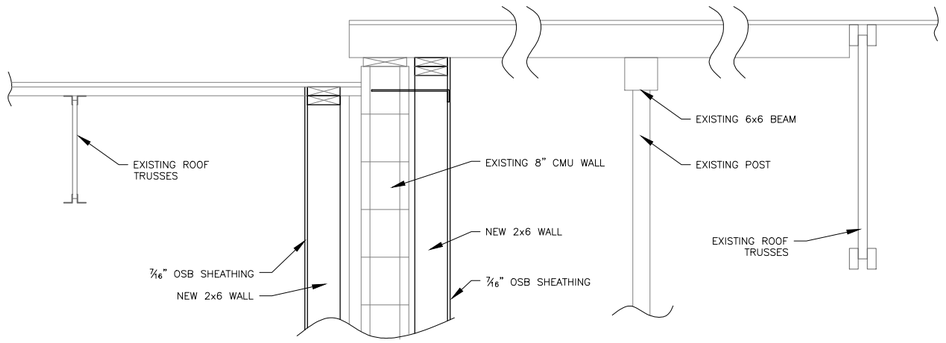
WILD OAK RECEPTION CENTER
450 WEST GILLMAN LANE LINDON, UTAH
Derek Olson

PROJECT #:	19-011
DRAWN BY:	act
CHECKED BY:	act

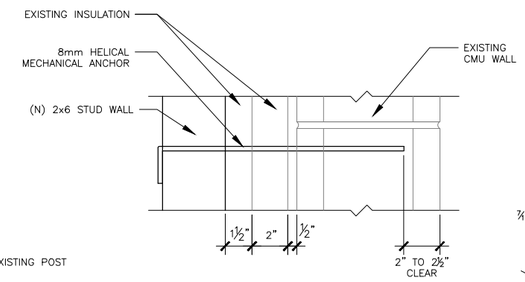
ISSUED: X/XX/2019

ROOF FRAMING PLAN
S-4

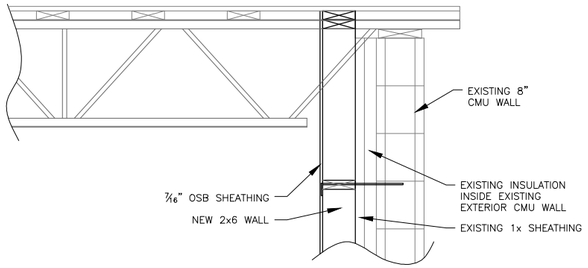
7/25/2019 10:09:29 AM



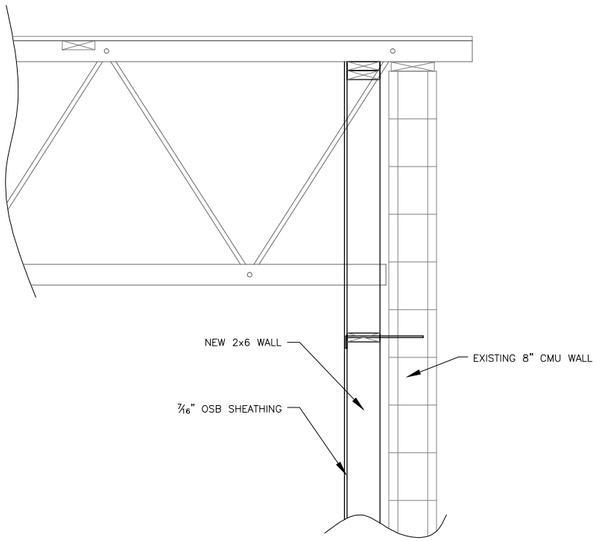
10/S-5 ROOF DETAIL
SCALE: 1" = 1'-0" ON 24"x36"
SCALE: 1/2" = 1'-0" ON 12"x18"



7/S-5 HELICAL MECHANICAL ANCHOR
SCALE: 3" = 1'-0" ON 24"x36"
SCALE: 1 1/2" = 1'-0" ON 12"x18"



5/S-5 ROOF DETAIL
SCALE: 1" = 1'-0" ON 24"x36"
SCALE: 1/2" = 1'-0" ON 12"x18"



2/S-5 ROOF DETAIL
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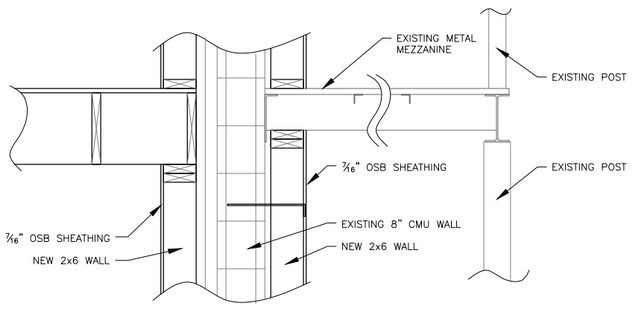
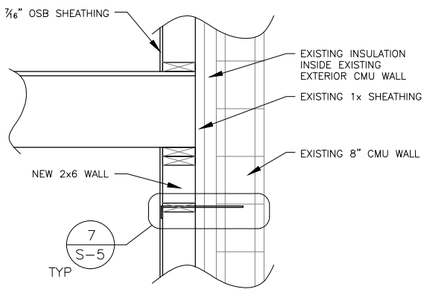
SCALE: 1/2" = 1'-0" ON 12"x18"



9/S-5 ROOF DETAIL
SCALE: 1" = 1'-0" ON 24"x36"
SCALE: 1/2" = 1'-0" ON 12"x18"



4/S-5 WALL DETAIL
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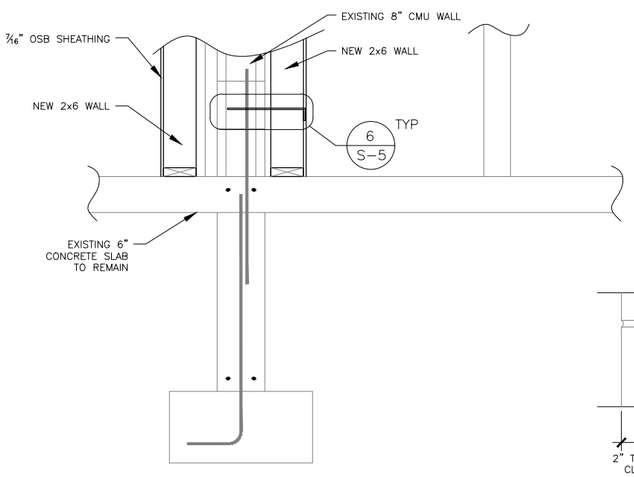
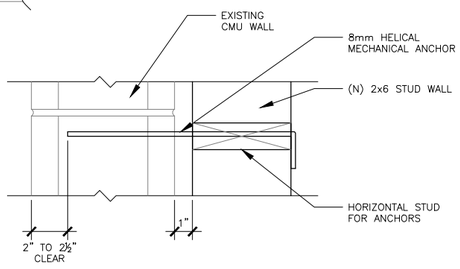
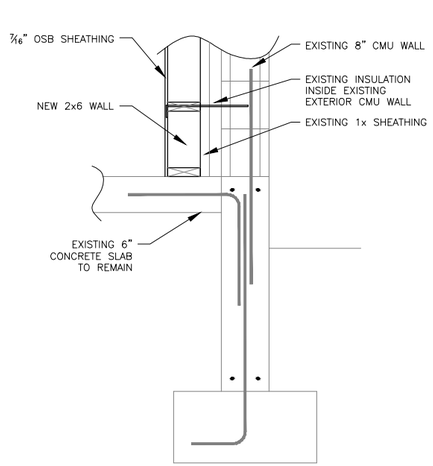
SCALE: 1/2" = 1'-0" ON 12"x18"



8/S-5 FOOTING DETAIL
SCALE: 1" = 1'-0" ON 24"x36"
SCALE: 1/2" = 1'-0" ON 12"x18"



6/S-5 HELICAL MECHANICAL ANCHOR
SCALE: 3" = 1'-0" ON 24"x36"
SCALE: 1 1/2" = 1'-0" ON 12"x18"



3/S-5 FOOTING DETAIL
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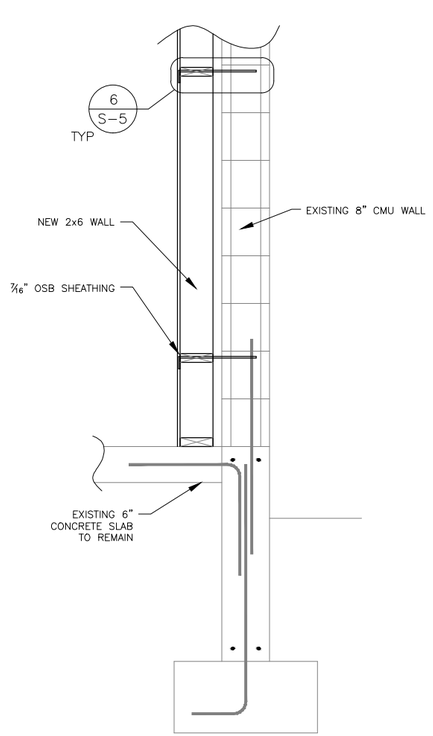

1/S-5 FOOTING DETAIL
SCALE: 1" = 1'-0" ON 24"x36"
SCALE: 1/2" = 1'-0" ON 12"x18"

PRELIMINARY

07/31/19

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1			
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3			

Palmer Engineering L.L.C.
Structural Engineers
2408 North 1050 West
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Office: (801) 796-0590

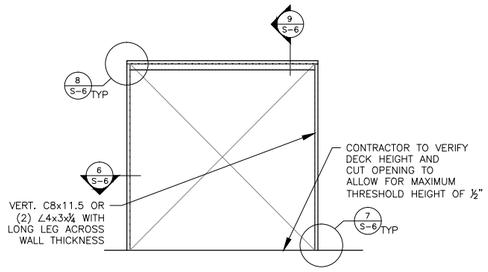
PROJECT:
WILD OAK RECEPTION CENTER
450 WEST GILLMAN LANE
LINDON, UTAH

SHEET TITLE: *DETAILS*

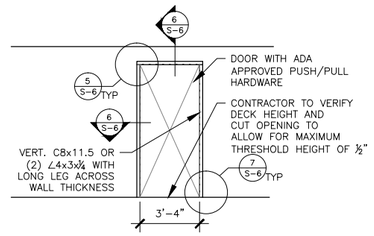
DRAWN	CBP
CHECKED	GEP
DATE	7/1/2019
SCALE	AS NOTED
JOB NO.	19039

S-5

5 OF 1 SHEETS



4 S-6 OVERHEAD DOOR ROUGH OPENING DETAIL
SCALE: 1/4" = 1'- 0" ON 24"x36"
SCALE: 1/8" = 1'- 0" ON 12"x18"



3 S-6 NEW DOOR ROUGH OPENING DETAIL
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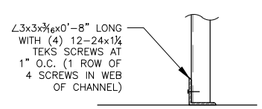
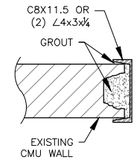


7 S-6 CHANNEL DETAIL
SCALE: 1 1/2" = 1'- 0" ON 24"x36"
SCALE: 3/4" = 1'- 0" ON 12"x18"



6 S-6 CHANNEL DETAIL
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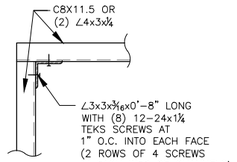
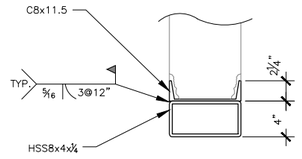
SCALE: 3/4" = 1'- 0" ON 12"x18"



5 S-6 CORNER DETAIL
SCALE: 1 1/2" = 1'- 0" ON 24"x36"
SCALE: 3/4" = 1'- 0" ON 12"x18"



9 S-6 CHANNEL DETAIL
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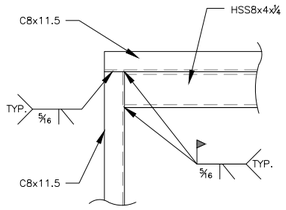
SCALE: 3/4" = 1'- 0" ON 12"x18"



8 S-6 CORNER DETAIL
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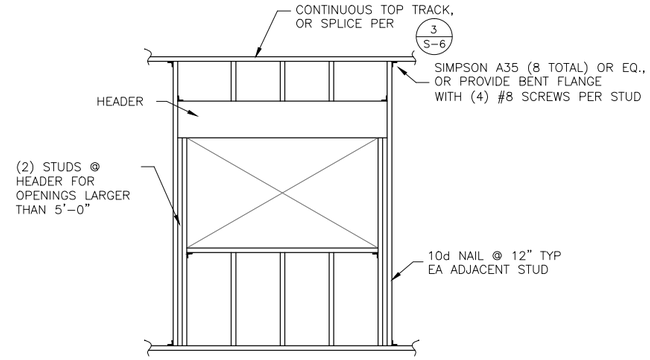
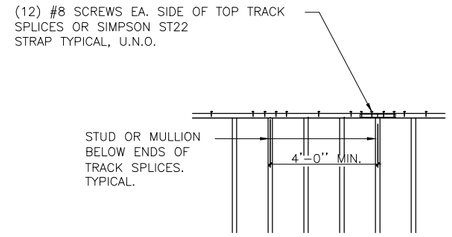


1 S-6 TYP. WALL PENETRATION FOR OPENINGS WIDER THAN 5'-0"
NTS



2 S-6 TYP. PLATE SPLICE
NTS

NO.	DATE	REVISIONS	BY
1			
2			
3			

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PROJECT: *WILD OAK RECEPTION CENTER*
450 WEST GILLMAN LANE
LINDON, UTAH

SHEET TITLE: *DETAILS*

DRAWN	CBP
CHECKED	GEP
DATE	7/1/2019
SCALE	AS NOTED
JOB NO.	19039

S-6

6 OF 1 SHEETS

PRELIMINARY

07/31/19

MECHANICAL LEGEND

SYMBOL	ABR,	DESCRIPTION
GENERAL TERMINOLOGY		
A		SECTION LETTER DESIGNATION
ME101		SECTION DRAWN ON THIS SHEET
A2		DETAIL NUMBER DESIGNATION CORRESPONDING WITH GRID LOCATION
A		MECHANICAL EQUIPMENT DESIGNATION
H 1		EQUIPMENT ITEM DESIGNATION
D-1 CFM		REGISTER, GRILLE OR DIFFUSER DESIGNATION WITH BALANCING CFM LISTED BELOW
R-1		GRILLE OR LOUVER DESIGNATION WHERE BALANCING NOT REQUIRED
1		REVISION DESIGNATOR AND NUMBER
1		KEY NOTE DESIGNATOR AND NUMBER
	POC	POINT OF CONNECTION
	POR	POINT OF REMOVAL
AFF		ABOVE FINISHED FLOOR
AP		ACCESS PANEL
C EL.		CENTERLINE ELEVATION
GC		GENERAL CONTRACTOR
MC		MECHANICAL CONTRACTOR
ATC		CONTROLS CONTRACTOR
EC		ELECTRICAL CONTRACTOR
FPC		FIRE PROTECTION CONTRACTOR
NIC		NOT IN CONTRACT
NTS		NOT TO SCALE
VCP		VITRIFIED CLAY PIPE
C		COMMON
NC		NORMALLY CLOSED
NO		NORMALLY OPEN

SYMBOL	ABR,	DESCRIPTION
AIR SIDE		
		EXISTING AIR DUCT TO BE REMOVED
		EXISTING AIR DUCT TO REMAIN
		NEW AIR DUCT
		RECT TO RECT AIR DUCT TAKE-OFF
		RECT TO RND AIR DUCT TAKE-OFF
		RND TO RND AIR DUCT TAKE-OFF
		MEDIUM PRESSURE TAKE-OFF
		FLEXIBLE AIR DUCT
		LINED DUCT
		RADIUS ELBOW
		ECCENTRIC DUCT TRANSITION
		CONCENTRIC DUCT TRANSITION
		VOLUME DAMPER
		SUPPLY AIR DIFFUSER
		RETURN & TRANSFER AIR GRILLE
		EXHAUST GRILLE OR CEILING EXH. FAN
		RETURN & OUTSIDE AIR DUCT UP/DN
		RETURN & OA ROUND DUCT UP/DN
		SUPPLY AIR DUCT UP/DN
		SUPPLY AIR ROUND DUCT UP/DN
		EXHAUST AIR DUCT UP/DN
		EXHAUST AIR ROUND DUCT UP/DN
	AP	ACCESS PANEL
		EXISTING EQUIPMENT TO BE REMOVED
		EXISTING EQUIPMENT TO REMAIN
		NEW EQUIPMENT
SA		SUPPLY AIR
RA		RETURN AIR
EA		EXHAUST AIR
OA		OUTSIDE AIR
MA		MIXED AIR
RF		RELIEF AIR
FO		FLAT OVAL
M	MVD	MOTORIZED VOLUME DAMPER
BD	BD	BACKDRAFT DAMPER
F	FD	FIRE DAMPER
S	SD	SMOKE DAMPER
FS	FS	FIRE & SMOKE DAMPER
T	T-STAT	WALL MOUNTED THERMOSTAT
S		WALL MOUNTED TEMP. SENSOR
H	H-STAT	WALL MOUNTED HUMIDISTAT
F	F-STAT	WALL MOUNTED FIRESTAT

GENERAL NOTES

GM-1 - MECHANICAL INFORMATION IS NOT LIMITED TO THE MECHANICAL DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR INFORMATION ON ALL OTHER CONSTRUCTION DOCUMENTS INCLUDING DRAWINGS BY OTHER DISCIPLINES AND SPECIFICATIONS.

GM-2 - A - EACH DRAWING SHEET AND THE SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER AND THEY SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH ITEMS SHOWN AND NOTED ON ONE AND NOT THE OTHER BEING FURNISHED AND INSTALLED AS THOUGH SHOWN AND CALLED OUT IN ALL PLACES.

B - THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE INSTALLATION OF THE SYSTEMS ACCORDING TO THE TRUE INTENT AND MEANING OF THE CONTRACT DOCUMENTS.

C - THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT WITH PROPER SERVICE ACCESS AND CLEARANCES ACCORDING TO MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL REVIEW SUPPLIERS BID PACKAGES FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS, SCHEDULES, AND DESIGN INTENT (ALL EQUIPMENT AND METHODS). THE CONTRACTOR SHALL REMOVE AND REINSTALL CORRECTLY AT HIS OWN EXPENSE ANY EQUIPMENT NOT IN COMPLIANCE.

D - THE CONTRACTOR SHALL CONSULT MANUFACTURERS INSTALLATION INSTRUCTIONS FOR SIZES, METHODS, ACCESSORIES, AND CLEARANCES IN SPACE AVAILABLE PRIOR TO BIDDING PROJECT.

E - ANYTHING NOT CLEAR OR IN CONFLICT WILL BE EXPLAINED BY MAKING APPLICATION TO THE ENGINEER IN WRITING.

GM-3 - ANY AND ALL ALTERATIONS TO THE SYSTEM SHOWN SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR. ARCHITECT SHALL BE NOTIFIED IN WRITING PRIOR TO CHANGES.

GM-4 - CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATIONS.

GM-5 - THE WORKING DRAWINGS ARE DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND, OR ELBOW NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. ALL LOCATIONS FOR MECHANICAL EQUIPMENT SHALL BE FIELD VERIFIED AND COORDINATED WITH ALL DRAWINGS. THE CONTRACTOR SHALL PROVIDE OR COORDINATE WITH THE GENERAL CONTRACTOR PROVISIONS FOR BLOCKOUTS OR CORE DRILLS THROUGH STRUCTURE.

GM-6 - THE INSTRUCTION TO "PROVIDE" ALSO INCLUDES INSTALLATION.

GM-7 - MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL SMOKE AND FIRE DAMPERS AS REQUIRED BY LOCAL CODES AND AUTHORITIES.

GM-8 - SHEET METAL DUCT SIZES SHOWN ON DRAWINGS ARE FREE AREA DIMENSIONS.

GM-9 - PROVIDE AND INSTALL BALANCING DAMPERS IN ALL SUPPLY AND EXHAUST AIR BRANCH DUCTS. BALANCE TO CFM SHOWN ON PLAN.

GM-10 -SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF DIFFUSERS AND GRILLES.

GM-11 - PROVIDE TURNING VANES IN ALL ELBOWS OF RECTANGULAR DUCT.

GM-12 - THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY IN HANDLING AND DISPOSING OF REFRIGERANTS, OILS, ETC. ALL SUCH MATERIALS SHALL BE HANDLED, DISPOSED, AND USED ON ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS.

GM-13 - THE MECHANICAL CONTRACTOR SHALL VERIFY MOTOR VOLTAGES WITH THE ELECTRICAL DRAWING BEFORE ORDERING MOTORIZED EQUIPMENT AND CONTROLS.

GM-14 -C.F.M. LISTED IS ACTUAL AIR.

GM-15 - SUPPLIERS SHALL REVIEW ALL DRAWINGS AND THE SPECIFICATIONS PRIOR TO SUBMITTING PRICES TO THE CONTRACTOR. ALL QUESTIONS AND DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO BIDDING.

GM-16 - CONTRACTOR SHALL THOROUGHLY REVIEW AND SIGN SUBMITTALS FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS PRIOR TO ENGINEERS REVIEW. SUPPLIERS SHALL HIGHLIGHT OR MARK ALL INFORMATION REQUIRED TO SHOW COMPLIANCE TO THE SPECIFICATIONS. ALL REQUESTED EXCEPTIONS TO THE SPECIFICATIONS, OR SCHEDULES SHALL BE CLEARLY NOTED AND EXPLAINED. SUBMITTAL REVIEW AND ACCEPTANCE IS FOR DESIGN CONCEPT ONLY, AND DOES NOT AT ANY TIME RELIEVE THE CONTRACTOR OF RESPONSIBILITY TO MEET SPECIFICATIONS, CAPACITIES, OR DESIGN INTENT.

GM-17 - THE MECHANICAL INSTALLATION SHALL CONFORM TO THE 2018 EDITION OF THE IMC WITH UTAH ANNOTATIONS AND LOCAL AUTHORITY REQUIREMENTS

GM-18 - ALL DUCTWORK SHALL BE GALVANIZED STEEL FABRICATED TO SMACNA STANDARDS FOR THE VELOCITY, PRESSURE, AND GEOMETRY INVOLVED. DUCT JOINTS SHALL BE SEALED USING HARD CAST TAPE. TYPE AND APPLICATION TECHNIQUES SHALL BE AS RECOMMENDED BY THE MANUFACTURER FOR THE INTENDED USE AND LOCATION.

GM-19 - DUCT LINER SHALL BE ATTACHED TO INSIDE OF DUCTWORK WITH ADHESIVE COATING BETWEEN THE DUCT AND LINER AND FURTHER SECURED BY PINS MECHANICALLY FASTENED TO DUCT. PINS ADHESIVELY ATTACHED ARE NOT ACCEPTABLE ALL EDGES OF LINER SHALL BE THOROUGHLY COATED WITH ADHESIVE AND TIGHTLY BUTTED. LINER SHALL BE FIBERGLASS WITH BLACK CLOTH FINISH ON SMACNA STANDARDS AND ALL REQUIREMENTS OF THE MANUFACTURER. LINER AND ADHESIVE SHALL MEET ALL REQUIREMENTS OF FEDERAL, STATE, AND LOCAL CODES.

GM-20 - DUCTWORK ROUTED OUTSIDE OF BUILDING SHALL BE INSULATED AS REQUIRED BY ASHRAE/IEES 90.1-2016. INSULATION SHALL BE MADE UP OF DUCT LINER, EXTERNAL DUCT WRAP WITH A WEATHERPROOF COVER OR A COMBINATION THERE OF AS NEEDED TO MEET REQUIREMENTS. INSULATION SYSTEM SHALL MEET UBC, IMC, ASTM, UL, AND NFPA STANDARDS AND REQUIREMENTS.

GM-21 - ALL PIPING FOR HYDRONICS SHALL BE ASTM A-53 BLACK STEEL SCHEDULE 40 PIPE WITH THREADED JOINTS FOR PIPING 2 INCHES AND UNDER AND WELDED FITTINGS FOR 2-1/2 INCHES AND LARGER. WELDERS SHALL BE CERTIFIED AND BY NATIONAL CERTIFICATION AGENCY WITHIN SIX MONTHS OF START OF THIS PROJECT. WELDS SHALL BE SUBJECT TO NON DESTRUCTIVE TESTING AT THE DESGRESSION OF THE OWNER AND ENGINEER. TESTING SHALL BE AT THE CONTRACTOR'S EXPENSE.

GM-22 - PIPE INSULATION SHALL BE HEAVY DUTY FIBERGLASS WITH ASJ JACKET AND VINYL FITTING COVERS OVER INSULATION AT FITTINGS. INSULATION ON PUMP COVERS AND BALANCING VALVES SHALL BE REMOVABLE FOR INSPECTION AND REPAIR. INSULATION SHALL MEET REQUIREMENTS OF THE UBC, IMC, NFPA, AND ASTM WITH REGARDS TO FLAME SPREAD AND SMOKE GENERATION.

GM-23 - INSTALLATION AND SELECTION OF MATERIALS AND EQUIPMENT SHALL ADHERE TO THE REQUIREMENTS OF ASHRAE/IEES 90.1-2016 ENERGY EFFICIENT DESIGN OF NEW BUILDINGS EXCEPT LOW RISE AND ENFORCED BY THE LAWS OF THE STATE OF UTAH AND THE LOCAL AUTHORITY HAVING JURISDICTION.

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alt architecture
1445 W 8660 S
WEST JORDAN, UTAH 84088

DESCRIPTION:
DATE:
MARK:

WILD OAK RECEPTION CENTER
Derek Olson

PROJECT #: 19-011
DRAWN BY: BDL
CHECKED BY: JH

ISSUED: 07/31/19

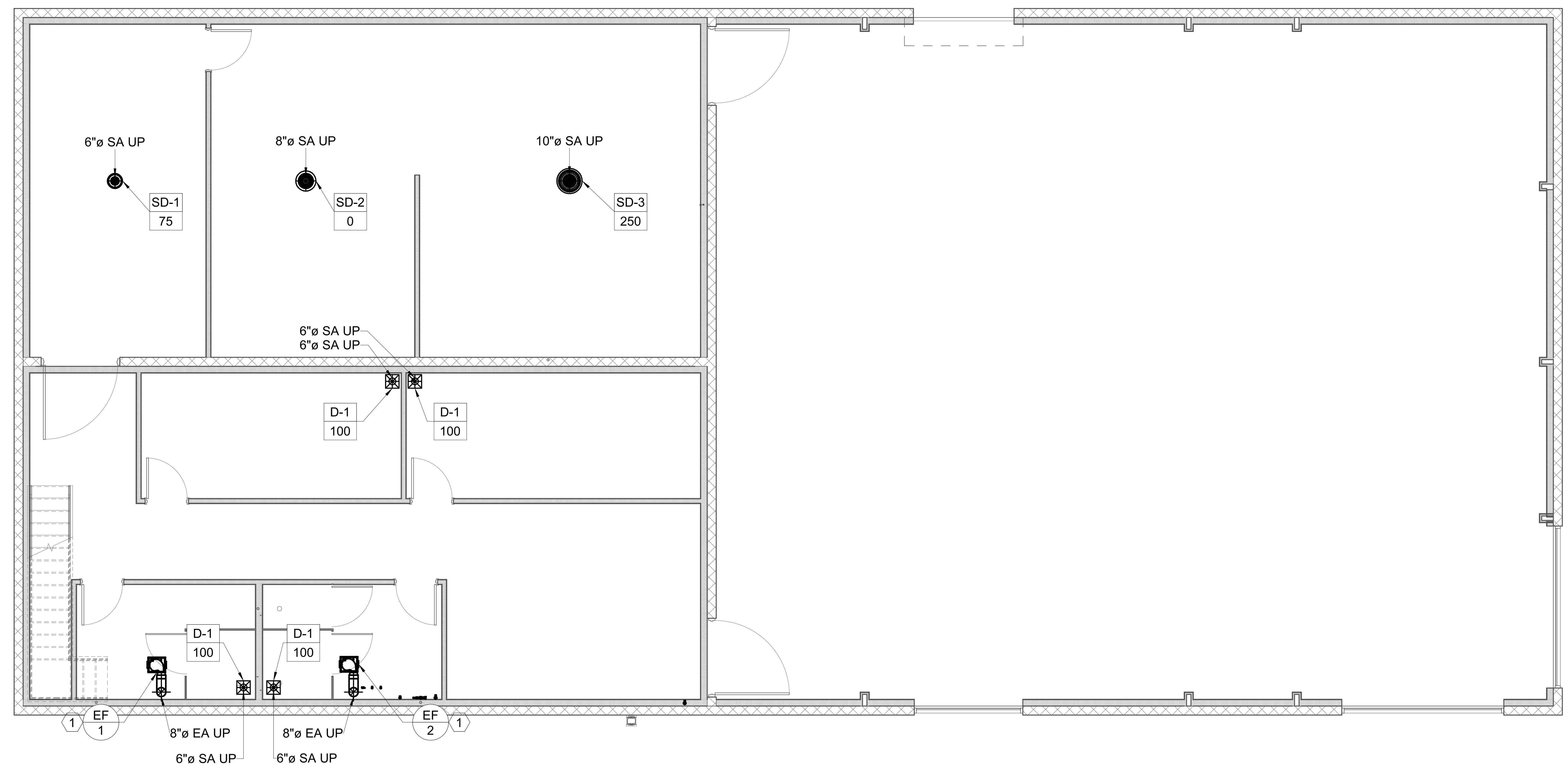
PROFESSIONAL ENGINEER
07.31.19
BRADLEY D. LASH
No. 8681468

MECHANICAL LEGEND AND GENERAL NOTES

MG001

SHEET NOTES

1 PROVIDE CEILING EXHAUST FAN IN THIS APPROXIMATE LOCATION. COORDINATE WITH FLOOR JOISTS. ROUTE DUCTWORK UP THROUGH MEZZANINE AND OUT A SIDEWALL LOUVER.



1 MAIN MECHANICAL PLAN

3/16" = 1'-0"

NORTH

WHW ENGINEERING INC.

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MARK: DATE: DESCRIPTION:

WILD OAK RECEPTION CENTER

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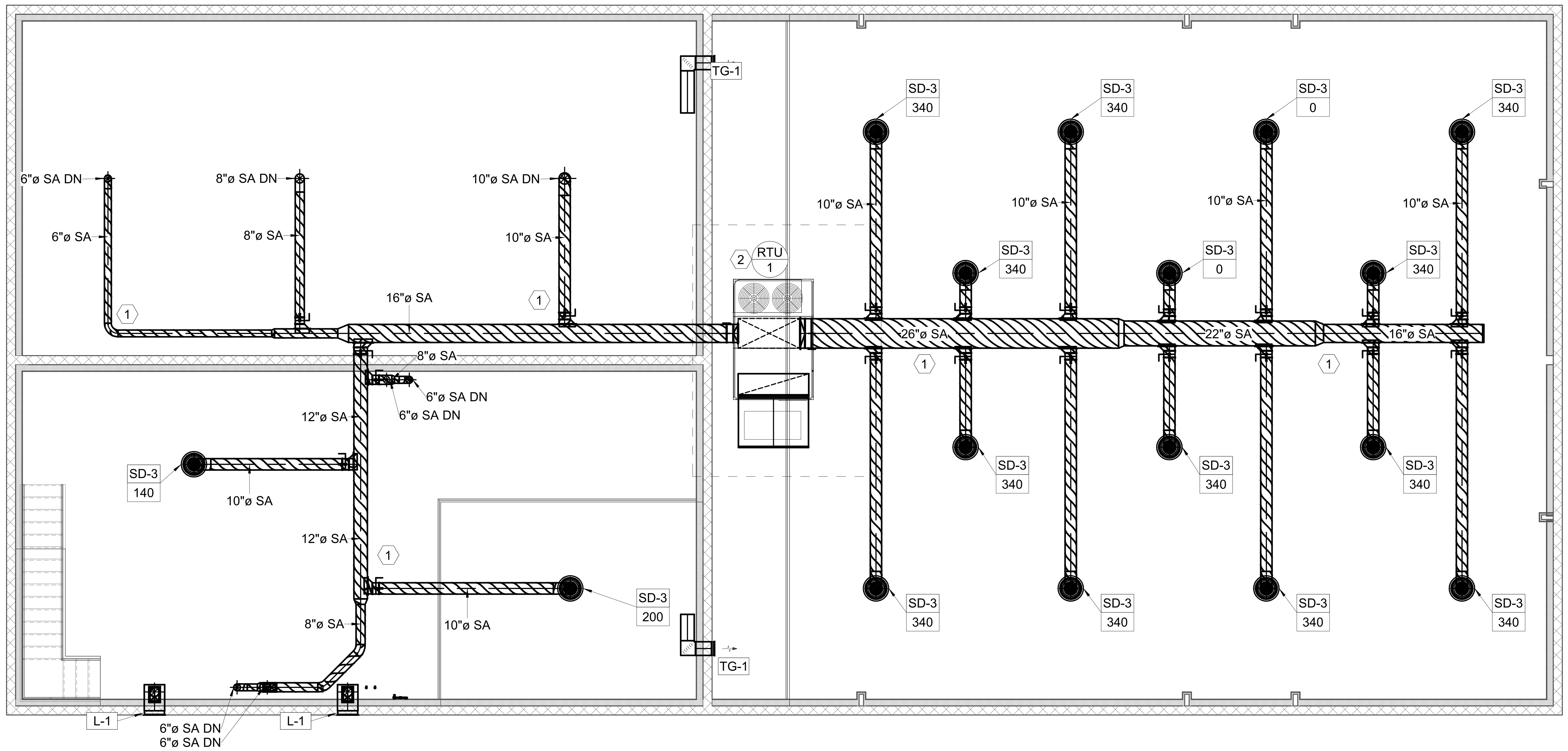
MECHANICAL MAIN FLOOR PLAN

ME101

SHEET NOTES

1. MOUNT DUCTWORK HIGH, TIGHT TO STRUCTURE. ALL EXPOSED PIPING SHALL BE SPIRAL ROUND.
2. PROVIDE ROOF MOUNTED ROOF TOP UNIT IN THIS APPROXIMATE LOCATION. COORDINATE WITH OTHER DISCIPLINES. PROVIDE CURB AND SEISMIC CLIPS PER DETAILS. DROP DOWN THROUGH ROOF. RETURN SHALL HAVE A LINED ELBOW WITH OPENING IN THE TOP OF THE DUCT EQUIVELENT TO THE FREE AREA SIZE OF THE DUCTWORK.



1 UPPER MECHANICAL PLAN

3/16" = 1'-0"

NORTH

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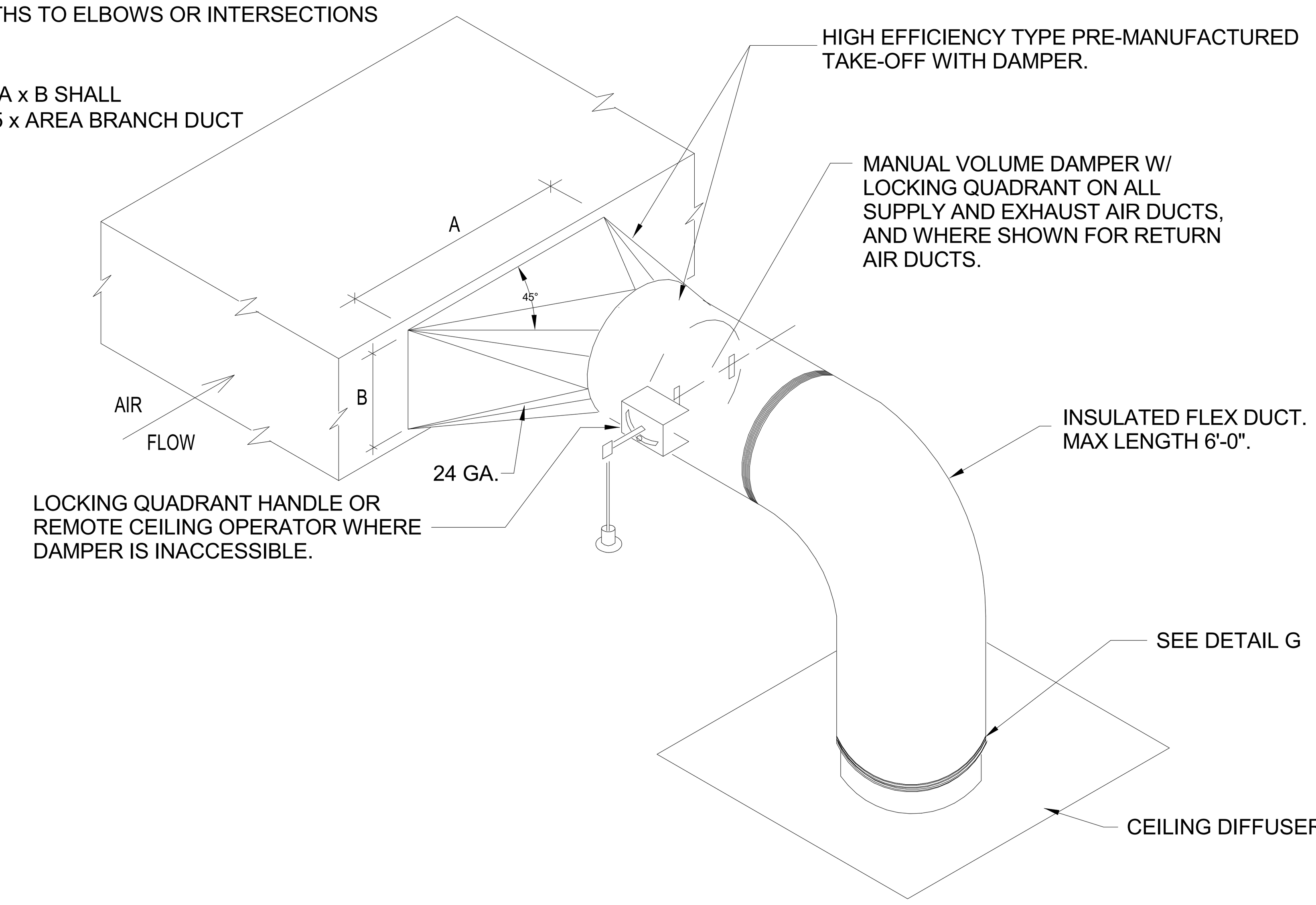
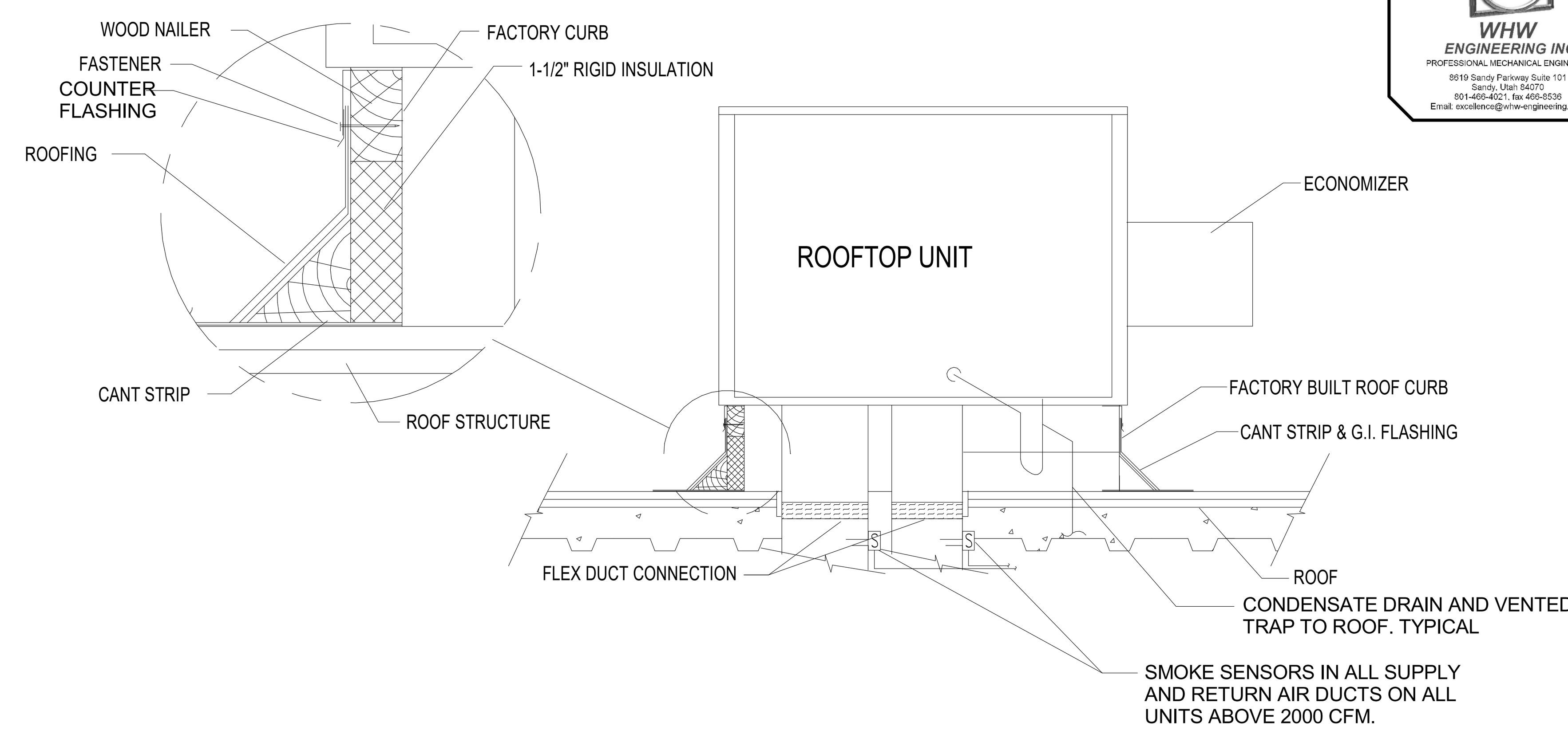
MECHANICAL UPPER FLOOR PLAN

ME102

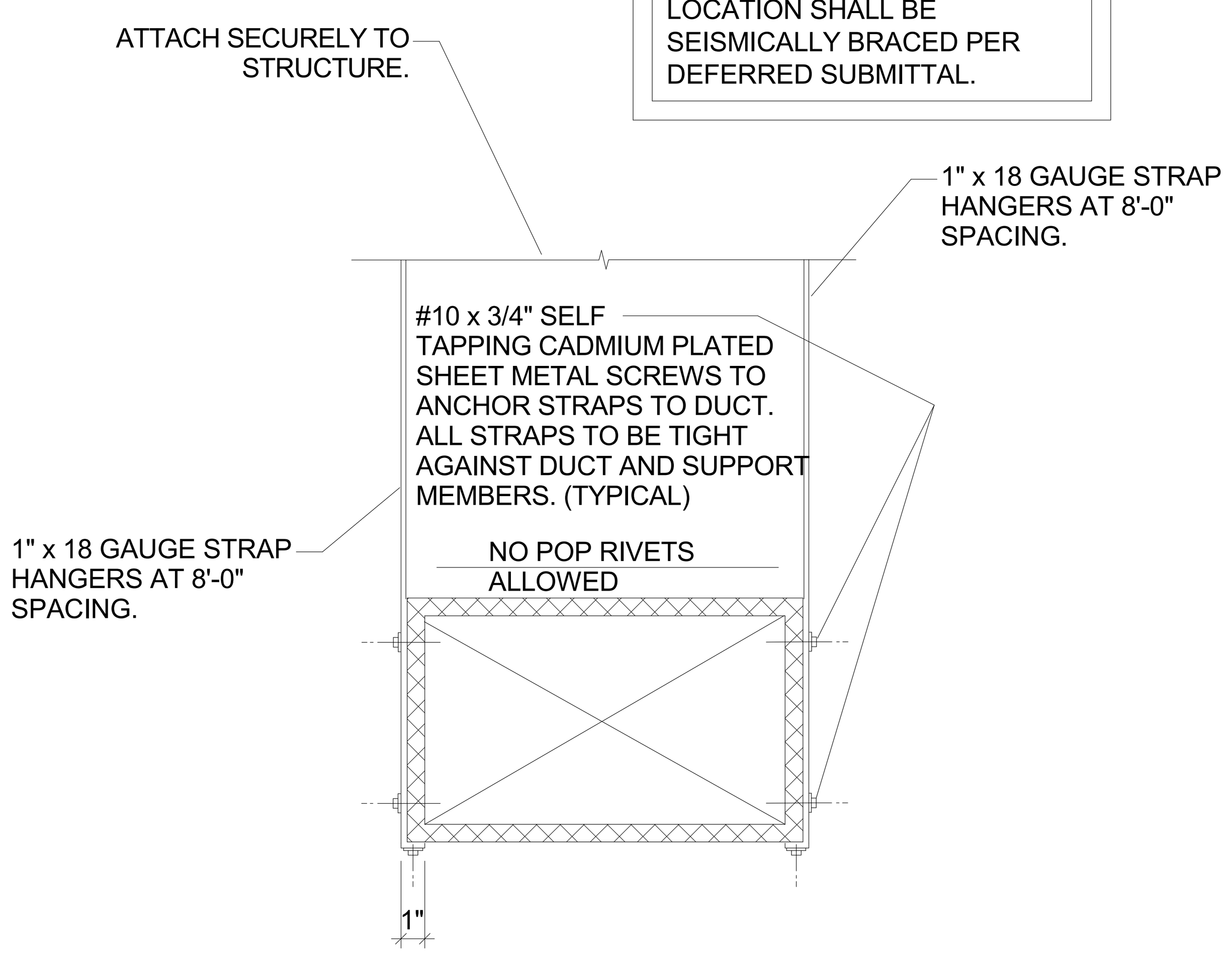


1 SQUARE-TO-ROUND TAKE-OFF DETAIL
SCALE: NONE



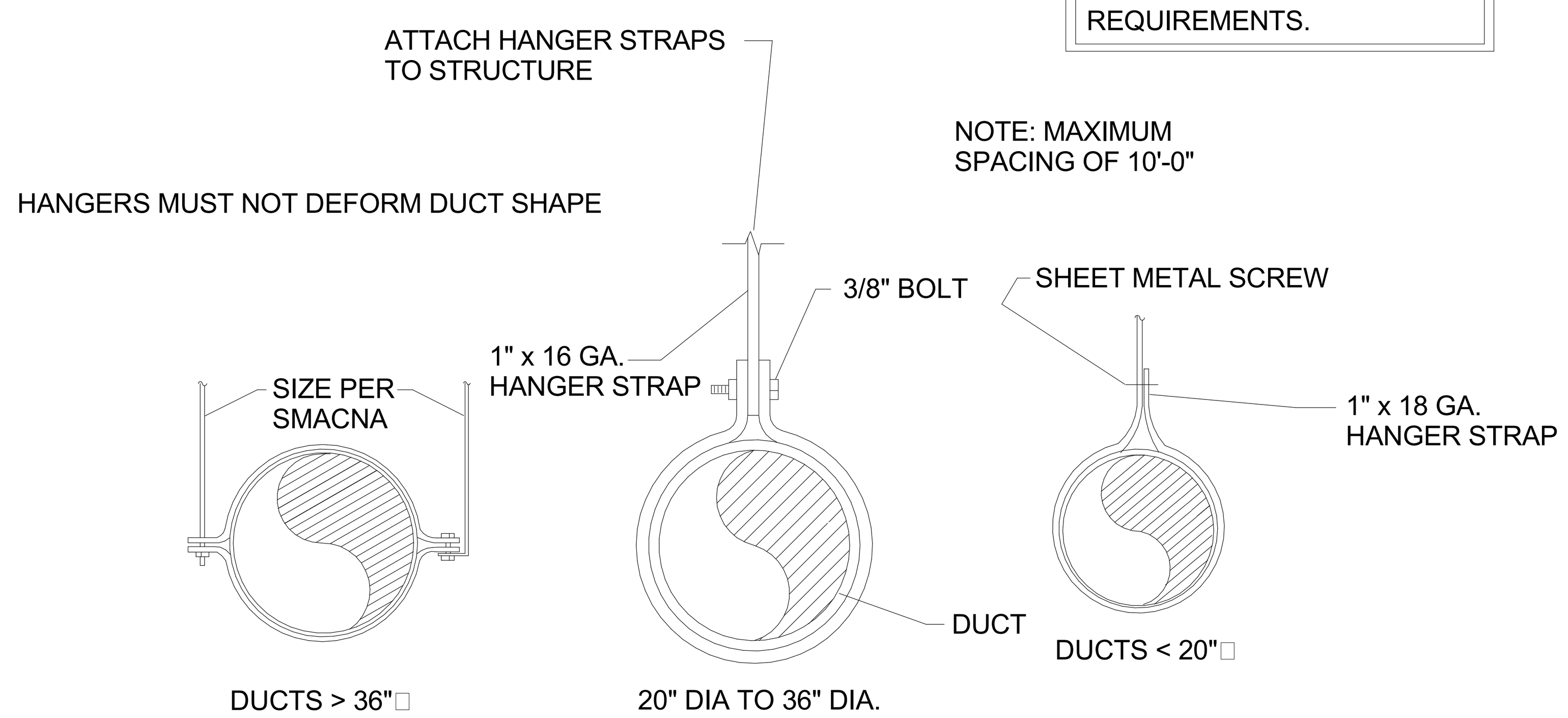
2 ROOFTOP UNIT DETAIL
SCALE: NONE

NOTES:
1. DUCTWORK OVER 6 SQ FT IN CROSS SECTIONAL AREA THAT IS SUPPORTED MORE THAN 12" FROM STRUCTURE AT ANY LOCATION SHALL BE SEISMICALLY BRACED PER DEFERRED SUBMITTAL.



3 DUCT STRAP HANGER DETAIL
SCALE: NONE

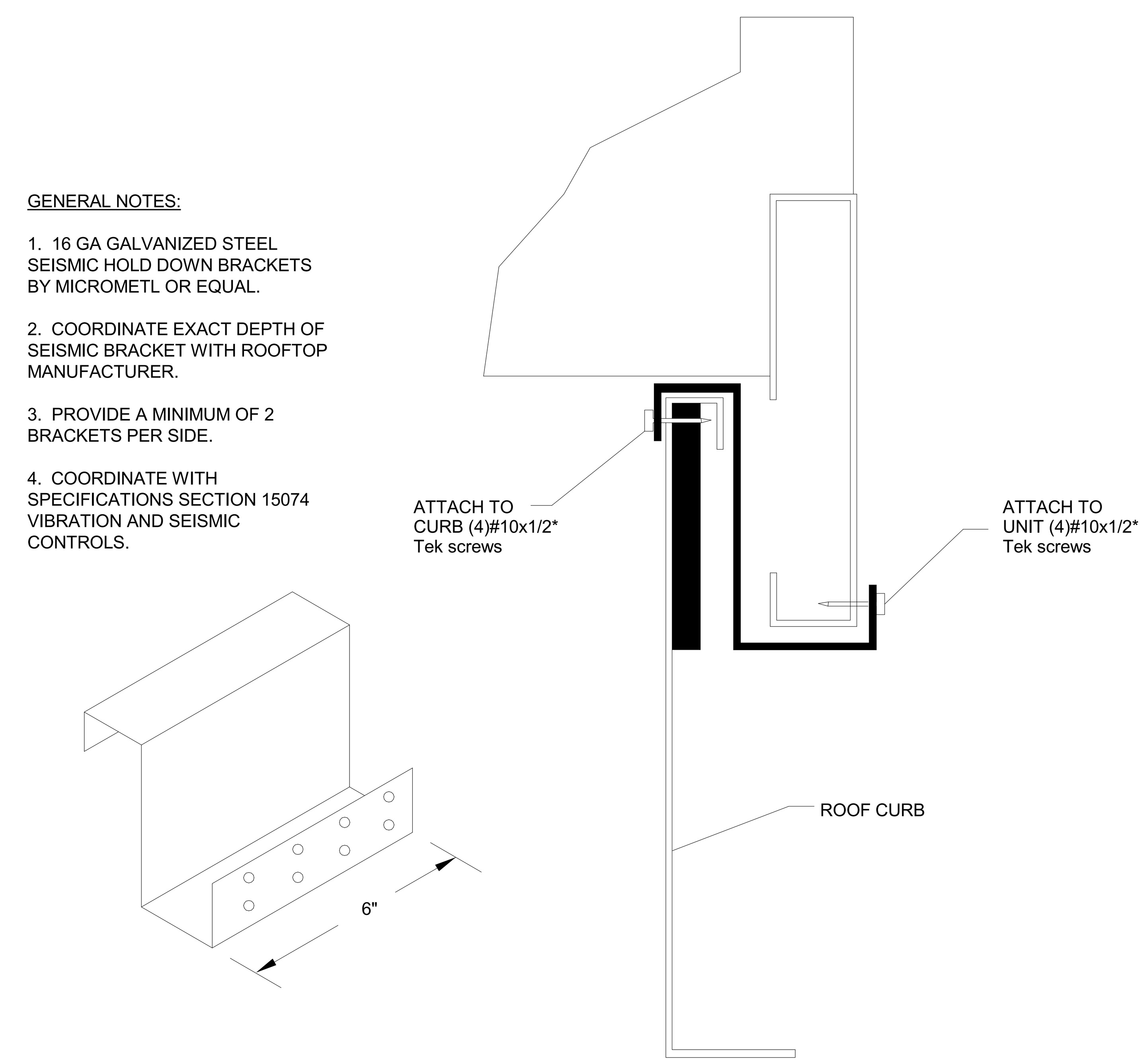
NOTE:
SEE SPECIFICATIONS FOR SEISMIC RESTRAINT REQUIREMENTS.



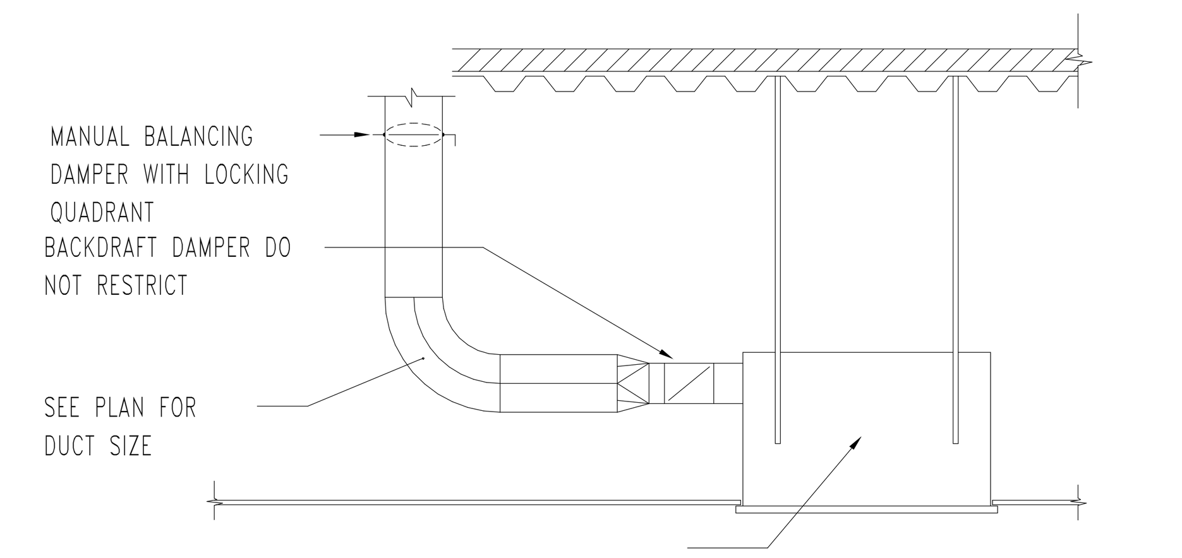
4 ROUND DUCT SUPPORT DETAIL
SCALE: NONE

GENERAL NOTES:

1. 16 GA GALVANIZED STEEL SEISMIC HOLD DOWN BRACKETS BY MICROMETL OR EQUAL.
2. COORDINATE EXACT DEPTH OF SEISMIC BRACKET WITH ROOFTOP MANUFACTURER.
3. PROVIDE A MINIMUM OF 2 BRACKETS PER SIDE.
4. COORDINATE WITH SPECIFICATIONS SECTION 15074 VIBRATION AND SEISMIC CONTROLS.



5 ROOFTOP UNIT SEISMIC BRACKET DETAIL
SCALE: NONE



NOTE:
EXHAUST FAN. SUPPORT FROM ROOF STRUCTURE INDEPENDENT OF SUSPENDED CEILING

6 CEILING EXHAUST FAN DETAIL
SCALE: NONE

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No. 8681468

MECHANICAL DETAILS

ME501

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ROOF TOP UNIT SCHEDULE

TYP #

TAG					HEATING		COOLING			ELECTRICAL									
TYPE	#	CFM	CFM (OUTSIDE AIR)	ESP	INPUT (BTU/HR)	OUTPUT (BTU/HR)	EAT (DB)	EAT (WB)	TOTAL LOAD (BTU/HR)	VOLTAGE	PHASE	FREQUENCY	# OF COMPRESSORS	MCA	MOCP	SEER (3-5 TON) EER (7.5+ TON)	OPERATING WEIGHT	MANUF & MODEL	SCHEDULE NOTES
RTU	1	6,000 CFM	1,500 CFM	0.5 in-wg	300,000 Btu/h	243,000 Btu/h	95 °F	63 °F	180000 Btu/h	208 V	3	60 Hz	2	75 A	100 A	11	2,300 lb	TRANE YSD180	1,2,3,4,5,6,7

1. PROVIDE SMOKE DETECTOR IN SUPPLY AND RETURN AIR FOR ALL UNITS OVER 2,000 CFM.
2. RATED MINIMUM INPUT AT SEA LEVEL.
3. PROVIDE ONE 15 AMP, 120 VOLT, DUPLEX GFCI SERVICE OUTLET. FACTORY INSTALLED, FIELD WIRED.
4. ESP DOES NOT INCLUDE LOSSES THROUGH ACCESSORIES.
5. BELT DRIVE UNIT.
6. PROVIDE 100% OUTSIDE AIR ECONOMIZER.
7. SHALL BE TRANE OR EQUAL BY YORK, CARRIER, DAIKIN MCQUAY, OR PRIOR APPROVED EQUAL.

EXHAUST FAN SCHEDULE

TYP #

TAG					ELECTRICAL								
TYPE	#	AREA SERVED	CFM	ESP	VOLTAGE	PHASE	FREQUENCY	RPM	HP	SONES	OPERATING WEIGHT	MANUF & MODEL	SCHEDULE NOTES
EF	1	MENS RESTROOM	150 CFM	0.40 in-wg	120 V	1	60 Hz	1100	0.08 hp	3.5	15 lb	COOK GC	1,2,3
EF	2	WOMENS RESTROOM	150 CFM	0.40 in-wg	120 V	1	60 Hz	1100	0.08 hp	3.5	15 lb	COOK GC	1,2,3

1. INTERLOCK FAN WITH SWITCH IN RESTROOM. PROVIDE 15 MINUTE TIME DELAY.
2. PROVIDE COOK, GREENHECK, TWIN CITY, BROAN COMMERCIAL, OR PRIOR APPROVED EQUAL.
3. PROVIDE WITH FAN SPEED CONTROLLER.

DIFFUSER AND GRILLE SCHEDULE

TAG CFM | TAG

		FACE SIZE		NECK SIZE							
TAG	MAX FLOW	LENGTH / DIAMETER	WIDTH	LENGTH/ DIAMETER	WIDTH	CEILING TYPE	BLOW PATTERN	THROW @ 50 FPM	MAX NC	MANUF & MODEL	SCHEDULE NOTES
D-1	180 CFM	12"	12"	6"	0"	HARD	4 WAY	10'	25	PRICE SMD	1,2
SD-1	150 CFM	13"	0"	6"	0"	DUCT MTD	4 WAY	7'	25	PRICE RCD	1,2
SD-2	270 CFM	18"	0"	8"	0"	DUCT MTD	4 WAY	9'	25	PRICE RCD	1,2
SD-3	425 CFM	23"	0"	10"	0"	DUCT MTD	4 WAY	10'	25	PRICE RCD	1,2
TG-1	800 CFM	12"	12"	12"	12"	SIDEWALL	N/A/	0'	25	PRICE 535	1,2

1. SHALL BE PRICE OR EQUAL BY TITUS, KRUEGER, OR PRIOR APPROVED EQUAL.
2. FINISH SHALL BE SPECIFIED BY ARCHITECT.

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WILD OAK RECEPTION CENTER

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PROFESSIONAL ENGINEER
07.31.19
BRADLEY D. LASH
No. 8681468

MECHANCIAL SCHEDULES

ME601

GENERAL NOTES:

1. THIS VIEW IS FOR AN OVERALL PROJECT VIEW AND SHALL NOT BE USED FOR ESTIMATING OFFSETS AND TAKE-OFF.

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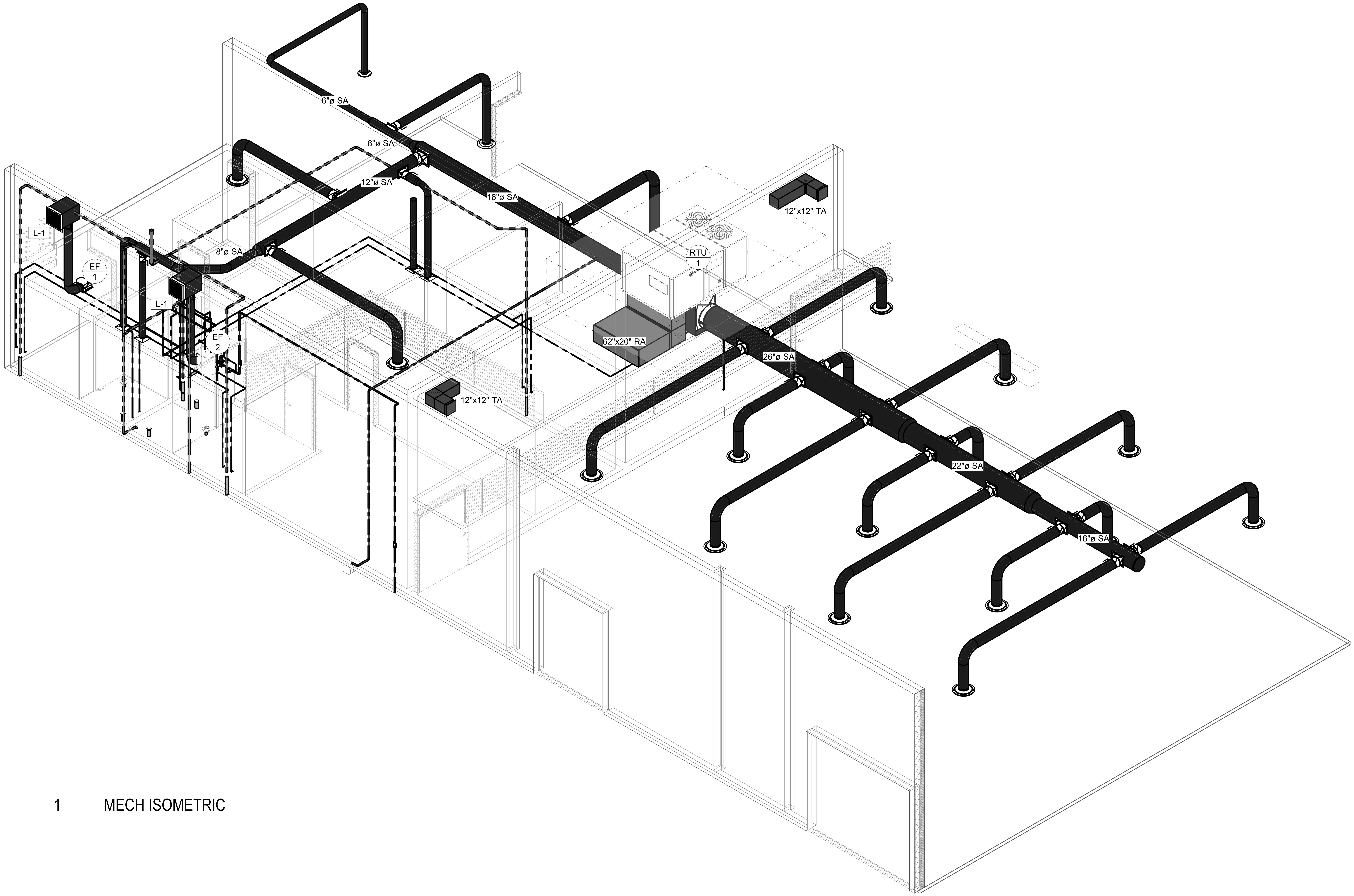

1 MECH ISOMETRIC

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07.31.19
BRADLEY D.
LASH
No. 8681468
STATE OF UTAH

MECHANICAL ISOMETRIC

ME701

PLUMBING LEGEND			
MEANING	SYMBOL OR ABBREVIATION	MEANING	SYMBOL OR ABBREVIATION
HOT WATER LINE	—— HW ——	WALL CLEANOUT	WCO
COLD WATER LINE	—— CW ——	CLEANOUT	CO
HOT WATER RECIRCULATING LINE	—— HWREC ——	CLEANOUT TO GRADE	COTG
VENT LINE	– – – V – – –	FLOOR CLEANOUT	FCO
WASTE LINE	—— SS ——	BALL VALVE	ϕ
GAS LINE	G	UNION	——‖——
VENT THRU ROOF	VTR	CONNECTION TO EXISTING PIPING	⊕
UNDER FLOOR	UF	REGULATOR	®
SANITARY SEWER	SS	SOFT WATER	SW
PRIMARY ROOF DRAIN	PRD	SECONDARY ROOF DRAIN	SRD

PLUMBING GENERAL NOTES

GP-1 - ALL PLUMBING SHALL BE INSTALLED AND CONFORM TO THE 2018 EDITION OF THE INTERNATIONAL PLUMBING CODE (IPC) WITH UTAH ANNOTATIONS AND LOCAL AUTHORITY REQUIREMENTS.

GP-2 - ALL PIPING MATERIALS SHALL MEET ALL REQUIREMENTS OF IPC AND LOCAL AUTHORITY. PLASTIC PIPING SHALL BE ALLOWED ONLY WHERE ALLOWED BY CODE. PLASTIC PIPING SHALL NOT BE ROUTED THROUGH RETURN AIR PLENUMS OR OTHER AREAS PROHIBITED BY THE IMC, IPC OR NFPA CODES OR BY LOCAL AUTHORITY.

GP-3 - GAS PIPING INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH GAS COMPANY REGULATIONS, NFPA CODE REQUIREMENTS, AND LOCAL AUTHORITY.

GP-4 - ALL MATERIALS SHALL BE NEW AND SHALL BE DOMESTIC MADE UNLESS SPECIFICALLY APPROVED OTHERWISE IN WRITING BY ARCHITECT OR OWNER.

GP-5 - HOT AND COLD WATER PIPE SHALL BE TYPE L HARD DRAWN COPPER PIPING WITH WROUGHT COPPER FITTINGS. OUTSIDE PIPING MAY BE COPPER OR PVC PLASTIC CONFORMING TO AWWA STANDARDS WHERE ALLOWED BY LOCAL CODE. TYPE K UNDERGROUND WITH NO JOINTS WITHIN BUILDING. METER SHALL BE AS REQUIRED BY LOCAL UTILITY CO. ALL PIPING AND FITTINGS SHALL BE DOMESTIC MADE. PIPING SHALL BE TESTED AT 125 PSI MINIMUM FOR 6 HOURS AND SHOW NO LEAKS.

GP-6 - PROVIDE VACUUM BREAKERS AND BACKFLOW PREVENTERS WHERE REQUIRED BY CODE OR WHERE THERE MAY BE ANY POSSIBLE CHANCE FOR CROSS CONTAMINATION. PREVENTERS SHALL BE INSTALLED IN ACCORDANCE WITH UTAH CODE.

GP-7 - SOIL, WASTE AND VENT PIPING SHALL BE CAST IRON SERVICE WEIGHT HUB AND SPIGOT CONFORMING TO FEDERAL SPECIFICATION WW-P-401, ASTM A-74, OR ANSI A112.5-1 VENT PIPING AND ABOVE GRADE WASTE PIPING 2-1/2" OR LESS MAY BE GALVANIZED STEEL WITH SCREWED DURHAM TARRED DRAINAGE FITTINGS, HOWEVER, GALVANIZED STEEL VENT PIPES SHALL NOT BE USED FOR UNDER OR WITHIN 6" OF THE GROUND AS PER CODE. JOINTS FOR CAST IRON PIPE SHALL BE TYSEAL, INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. ABOVE GRADE CAST IRON PIPING SHALL BE SERVICE WEIGHT NO-HUB WITH STAINLESS STEEL CINCH BANDS. ALL PIPING AND FITTINGS SHALL BE DOMESTIC MADE. ALL WASTE AND VENT PIPING SHALL BE TESTED BY FILLING SYSTEM TO TOP OF THE VENT PIPE (20 FEET OF HEAD MINIMUM) AND SHOW NO LEAKS FOR 6 HOURS.

GP-7 - SOIL, WASTE AND VENT PIPING SHALL BE CAST IRON SERVICE WEIGHT HUB AND SPIGOT CONFORMING TO FEDERAL SPECIFICATION WW-P-401, ASTM A-74, OR ANSI A112.5-1 VENT PIPING AND ABOVE GRADE WASTE PIPING 2-1/2" OR LESS MAY BE GALVANIZED STEEL WITH SCREWED DURHAM TARRED DRAINAGE FITTINGS, HOWEVER, GALVANIZED STEEL VENT PIPES SHALL NOT BE USED FOR UNDER OR WITHIN 6" OF THE GROUND AS PER CODE. JOINTS FOR CAST IRON PIPE SHALL BE TYSEAL, INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. ABOVE GRADE CAST IRON PIPING SHALL BE SERVICE WEIGHT NO-HUB WITH STAINLESS STEEL CINCH BANDS. ALL PIPING AND FITTINGS SHALL BE DOMESTIC MADE. ALL WASTE AND VENT PIPING SHALL BE TESTED BY FILLING SYSTEM TO TOP OF THE VENT PIPE (20 FEET OF HEAD MINIMUM) AND SHOW NO LEAKS FOR 6 HOURS. FOR BURIED PIPE, OR PIPING NOT EXPOSED TO RETURN PLENUMS, PVC DWV PIPING SHALL BE ALLOWED.

GP-8 - GAS PIPING FROM METER TO EQUIPMENT SHALL BE ASTM A 120-79 SCHEDULE 40 BLACK CARBON STEEL. FITTINGS SHALL BE ASTM A 234-79 WELDED STEEL FITTINGS OR STANDARD WEIGHT MALLEABLE IRON SCREWED FITTINGS. DO NOT USE FLEX PIPING UNLESS REQUIRED BY LOCAL CODE, THEN USE GAS COMPANY APPROVED PIPING INSTALLED BY GAS COMPANY APPROVED INSTALLERS. PIPING CONCEALED IN WALLS OR LARGER THAN 2-1/2" SHALL BE WELDED. ALL PIPING SHALL BE TESTED TO MINIMUM OF 60 PSI AS PER CODE. GAS VALVES SHALL BE UL LISTED BALL VALVES. PIPING AND FITTING MATERIALS SHALL BE AS RECOMMENDED AND ALLOWED BY LOCAL AUTHORITY AND CODES. GAS PIPING WITHIN THE BUILDING SHALL NOT BE ROUTED UNDER FLOOR SLAB. ALL PIPING AND FITTINGS SHALL BE DOMESTIC MADE.

GP-9 - GAS LINE FITTINGS SHALL BE STANDARD WELD FITTINGS WITH TAPERED REDUCERS. DO NOT USE VALVES, UNIONS, OR AUTO CONTROLS IN GAS LINES ROUTED IN INACCESSIBLE CONCEALED SPACES.

GP-10 - THE WORKING DRAWINGS ARE DIAGRAMMATIC. BECAUSE OF THE SMALL SCALE OF THE DRAWING, THEY DO NOT SHOW EVERY OFFSET, BEND OR ELBOW NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. ALL PIPING SHALL BE CHECKED AND COORDINATED WITH THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS.

GP-11 - COORDINATE ALL PIPING AND PLUMBING EQUIPMENT WITH ALL OTHER TRADES AND/OR CONTRACTORS PRIOR TO INSTALLATION.

GP-12 - ANY AND ALL ALTERATION TO THE SYSTEM SHOWN SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR AND ARCHITECT/ENGINEER SHALL BE NOTIFIED IN WRITING PRIOR TO CHANGES.

GP-13 - ALL PLUMBING INFORMATION IS NOT LIMITED TO THE PLUMBING DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR INFORMATION ON ALL OTHER CONSTRUCTION DOCUMENTS INCLUDING ARCHITECTURAL DRAWING, STRUCTURAL DRAWINGS, MECHANICAL DRAWINGS, AND ELECTRICAL DRAWINGS.

GP-14 - CLEANING AND DISINFECTING: ALL PIPING SHALL BE FLUSHED CLEAN BEFORE CONNECTION TO EQUIPMENT. DOMESTIC WATER LINES SHALL BE THOROUGHLY FLUSHED OUT WITH AN ALKALINE DETERGENT SOLUTION TO REMOVE PIPE DOPE, OIL, LOOSE MILL SCALE, AND OTHER EXTRANEOUS MATERIALS. AFTER THE WATER SYSTEM HAS BEEN FLUSHED CLEAN, THE SHUTOFF VALVE TO THE WATER MAIN SHALL BE CLOSED. ALL FIXTURE OUTLETS SHALL BE OPENED SLIGHTLY. A SOLUTION OF SODIUM HYPO CHLORITE AND CLEAN WATER SHALL BE INTRODUCED AT THE NEW TIE-IN TO THE EXISTING WATER PIPES DOWNSTREAM OF NEW VALVE, UNTIL RESIDUAL CHLORINE IS DETECTED AT ALL WATER FAUCETS, OUTLETS, ETC. THE SOLUTION SHALL CONSIST OF 1 GALLON OF 5% SODIUM HYPO CHLORITE (CLOROX OR PUREX) TO 200 GALLONS OF WATER. THE SOLUTION SHALL BE FLUSHED AND ALL AERATORS AND STRAINERS SHALL BE REMOVED, CLEANED AND REPLACED. CARE SHALL BE TAKEN TO NOT ALLOW SOLUTION TO ENTER EXISTING PIPING. AFTER STERILIZATION, FLUSH SOLUTION FROM SYSTEM WITH CLEAN WATER UNTIL RESIDUAL CHLORINE CONTENT IS LESS THAN 0.2 PARTS PER MILLION. WATER SYSTEM WILL NOT BE ACCEPTED UNTIL A NEGATIVE BACTERIOLOGICAL TEST IS MADE ON WATER TAKEN FROM SYSTEM. CHLORINE DOSING SHALL BE REPEATED AS NECESSARY UNTIL SUCH NEGATIVE TEST IS ACCOMPLISHED WHEN CONNECTED INTO EXISTING WATER LINES, CONTRACTOR SHALL PROPERLY PROTECT AND CAP THE EXISTING PIPING OR CONTRACTOR SHALL STAND THE COST OF CLEANING AND DISINFECTING THE EXISTING PIPING SYSTEM TO OWNER'S SATISFACTION. CONTRACTOR SHALL FURNISH TO OWNER AND ARCHITECT A WRITTEN REPORT CERTIFYING THAT PIPE CLEANING AND DISINFECTION HAS BEEN COMPETED AND ACCEPTED.

GP-15 - ALL WATER SYSTEMS SHALL MEET THE REQUIREMENTS OF ANSI/NSF STANDARD 61 SECTION 9 (1998), CONCERNING METAL CONTAMINANTS IN THE WATER SYSTEM.

GP-16 - WATER PIPING SHALL NOT BE ROUTED IN OUTSIDE WALLS OR ON EXTERIOR SIDE OF BUILDING INSULATION ENVELOPE.

GP-17 - WATER HAMMER ARRESTORS SHALL BE INSTALLED IN ALL WATER LINES WITH QUICK OPEN OR QUICK CLOSE VALVES.

WATER HAMMER ARRESTOR SCHEDULE:

TYPE A	1-11 FIXTURE UNITS
TYPE B	12-32 FIXTURE UNITS
TYPE C	33-60 FIXTURE UNITS
TYPE D	61-113 FIXTURE UNITS

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PLUMBING LEGEND AND GENERAL NOTES

PG001

7/31/2019 9:11:08 AM

SHEET NOTES

1. COORDINATE WITH DOMINION ENERGY TO PROVIDE A NATURAL GAS METER. METER SHALL BE A MINIMUM 450 CFH, DESIGN LENGTH 120 FEET, DESIGN PRESSURE 4 OZ.
2. SEE CIVIL SITE UTILITY PLAN FOR CONTINUATION OF WATER AND WASTE PIPING. EXTEND PIPING 5 FEET OUTSIDE THE BUILDING. COORDINATE INVERTS WITH SITE CONTRACTOR AND FOOTINGS. PROVIDE CLEAN OUT TO GRADE ON SANITARY SEWER LINE.
3. PROVIDE SHUT OFF VALVE ON DOMESTIC COLD WATER AS IT ENTERS THE BUILDING.

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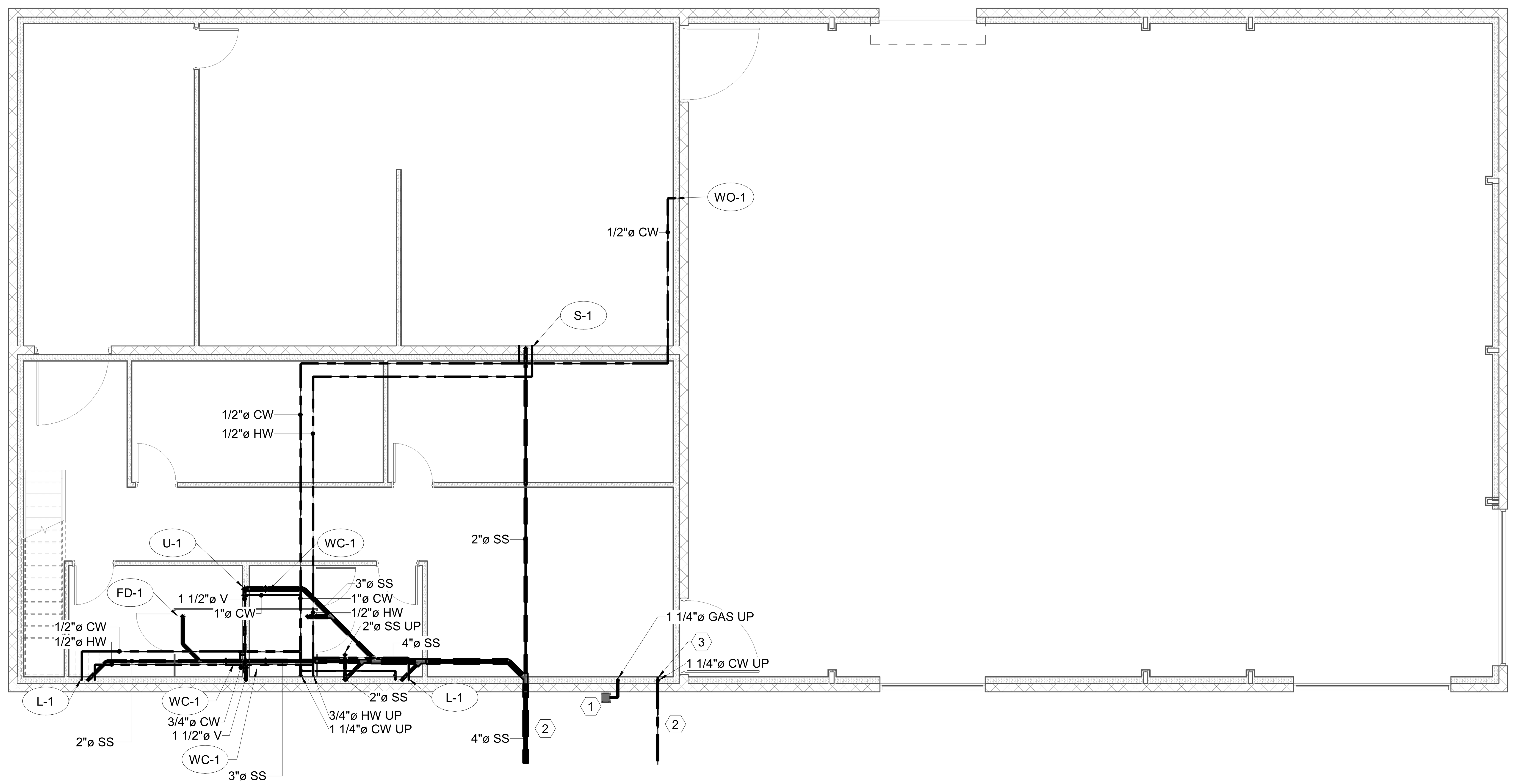

1 MAIN PLUMBING WATER PLAN

3/16" = 1'-0"

NORTH

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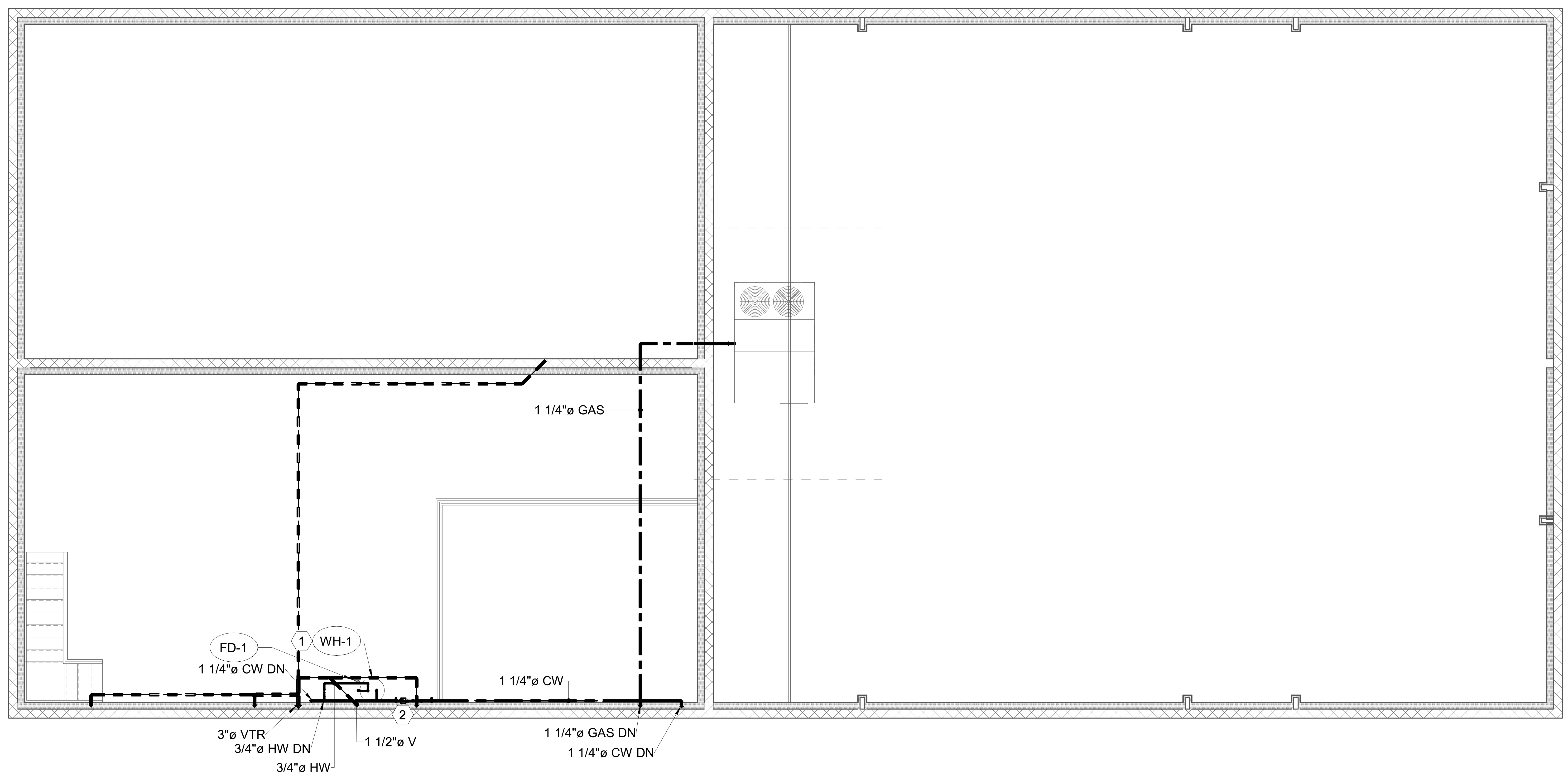
PLUMBING MAIN FLOOR PLAN

PE101

SHEET NOTES

1. PROVIDE ELECTIC WATER HEATER ON THE MEZZANINE. PIPE PER DETAILS AND MANUFACTURERS RECOMMENDATIONS.
2. PROVIDE PRV STATION IN THIS APPROXIMATE LOCATION. SEE DETAIL.



1 UPPER PLUMBING WATER PLAN

3/16" = 1'-0"

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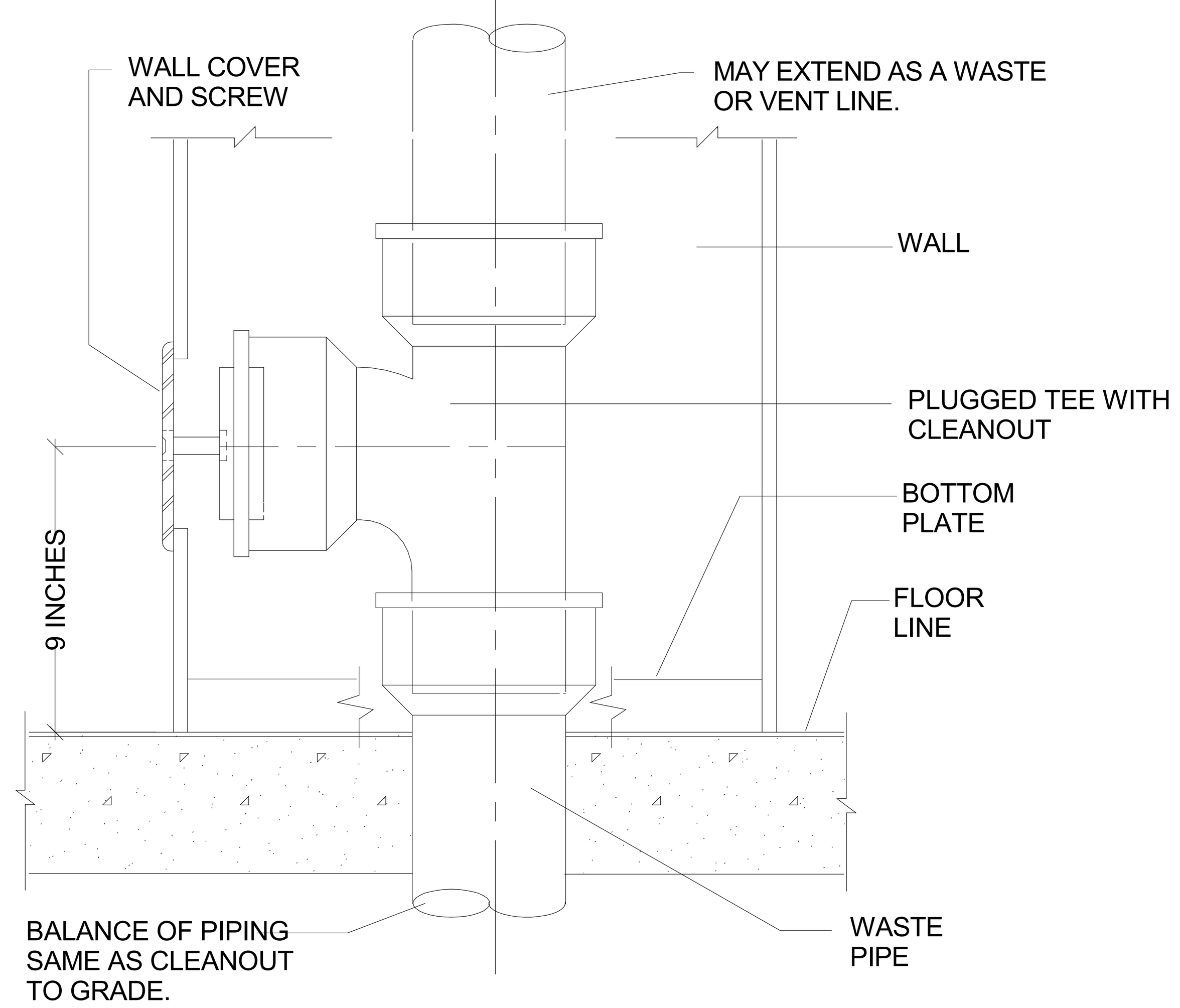
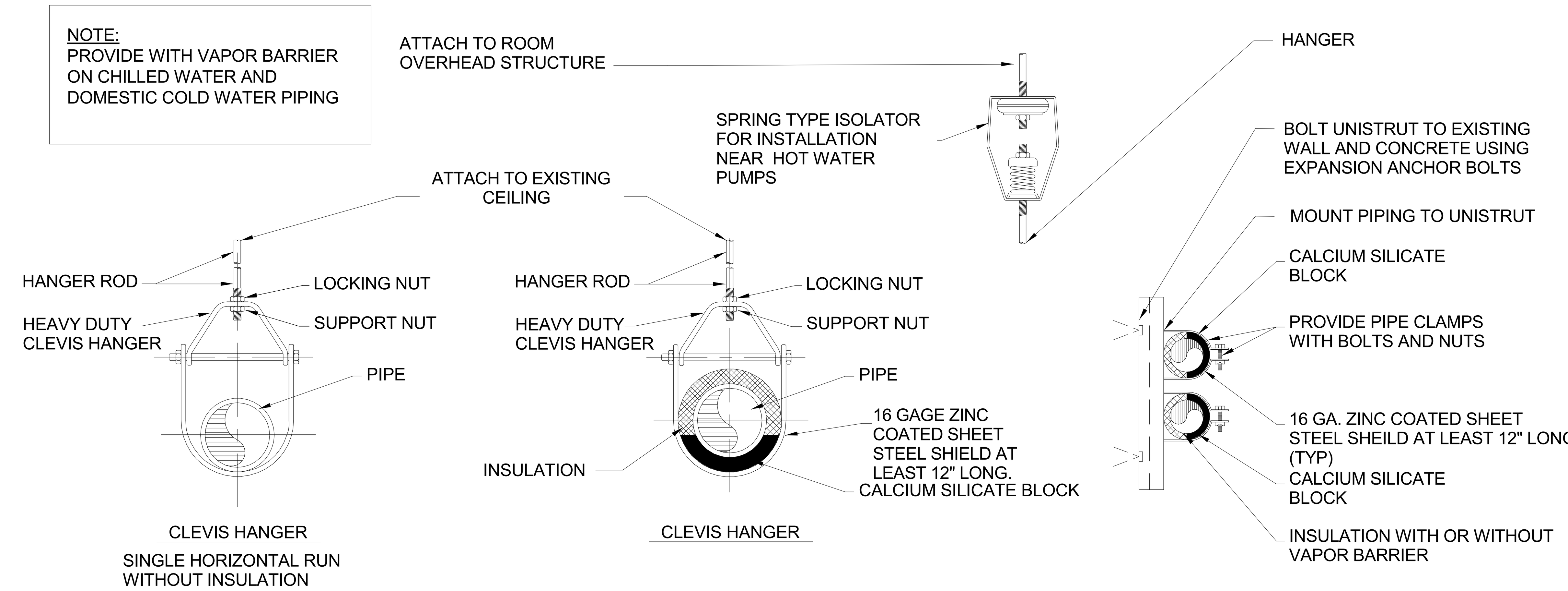
PLUMBING UPPER FLOOR PLAN

PE102

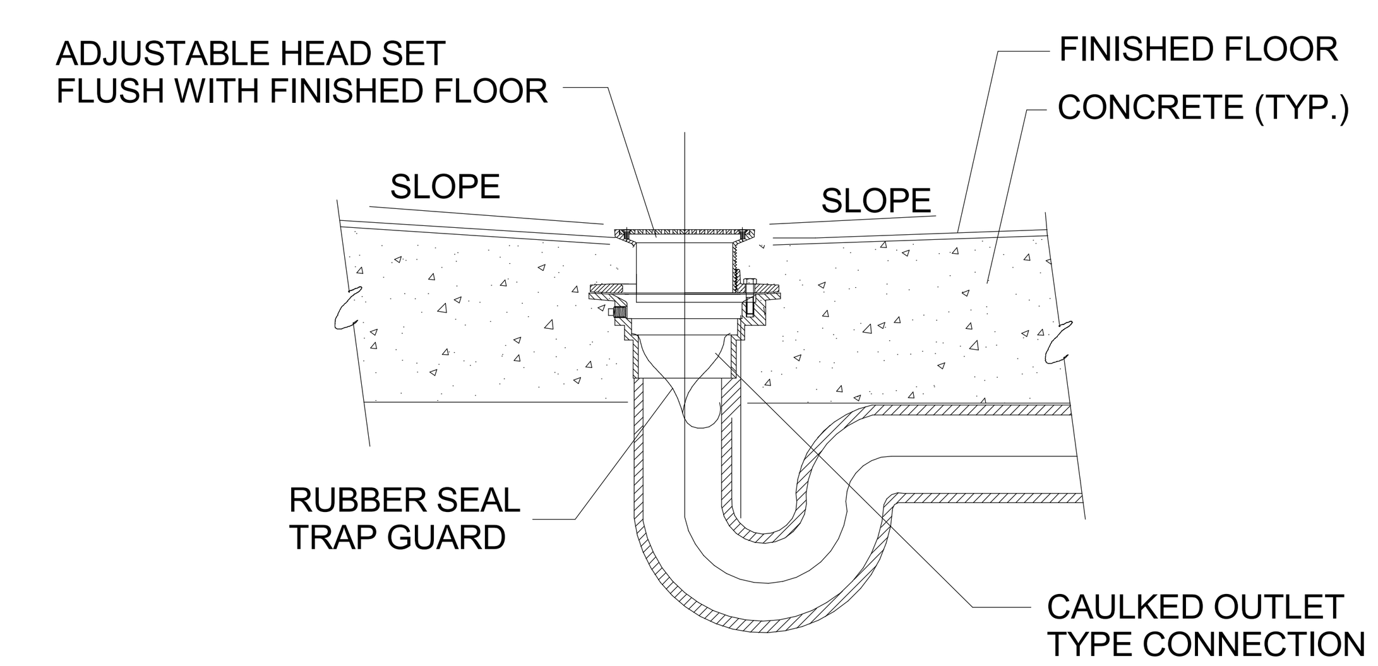


1 WALL CLEAN-OUT DETAIL

SCALE: NONE

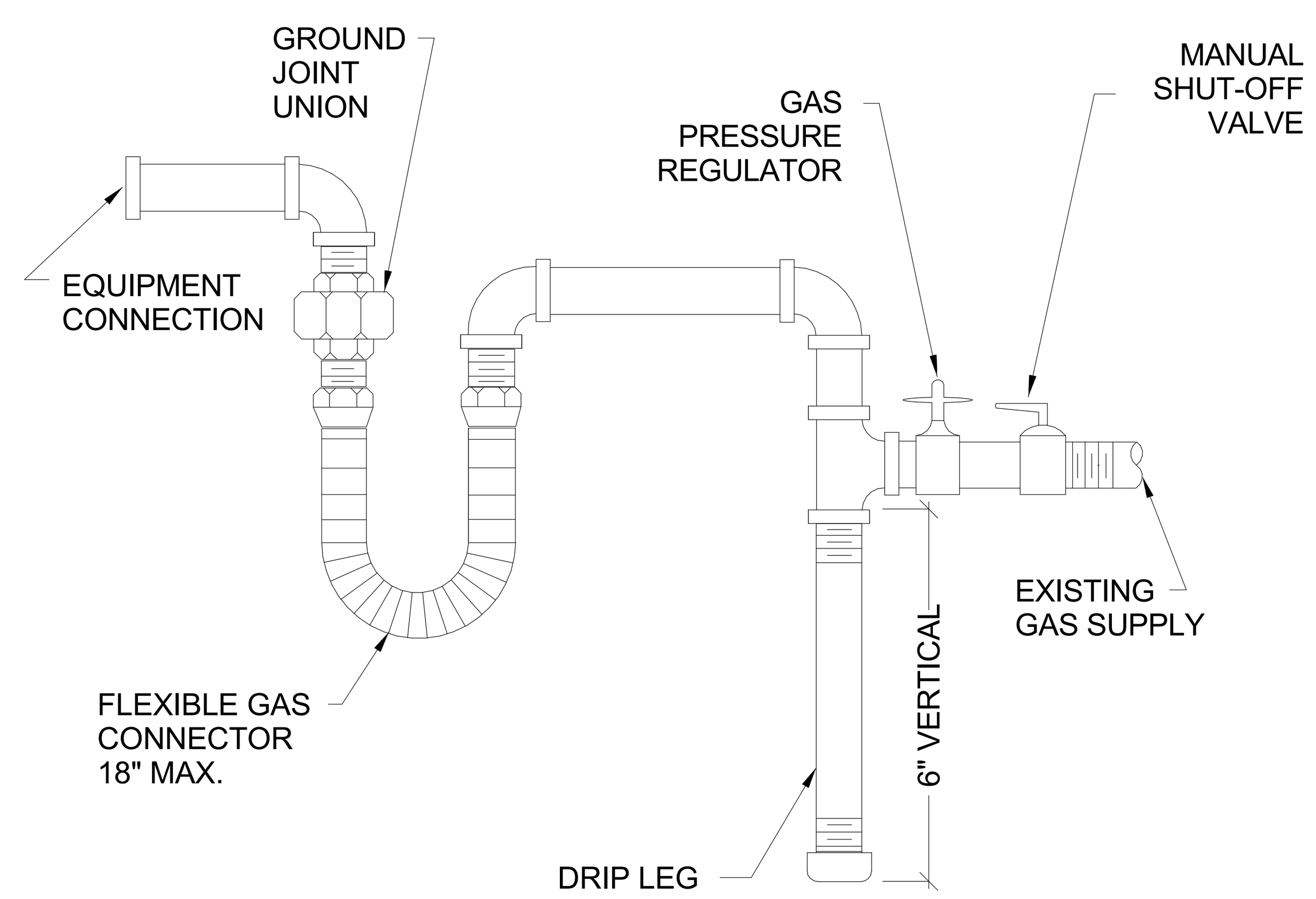


2 PIPE HANGER DETAIL



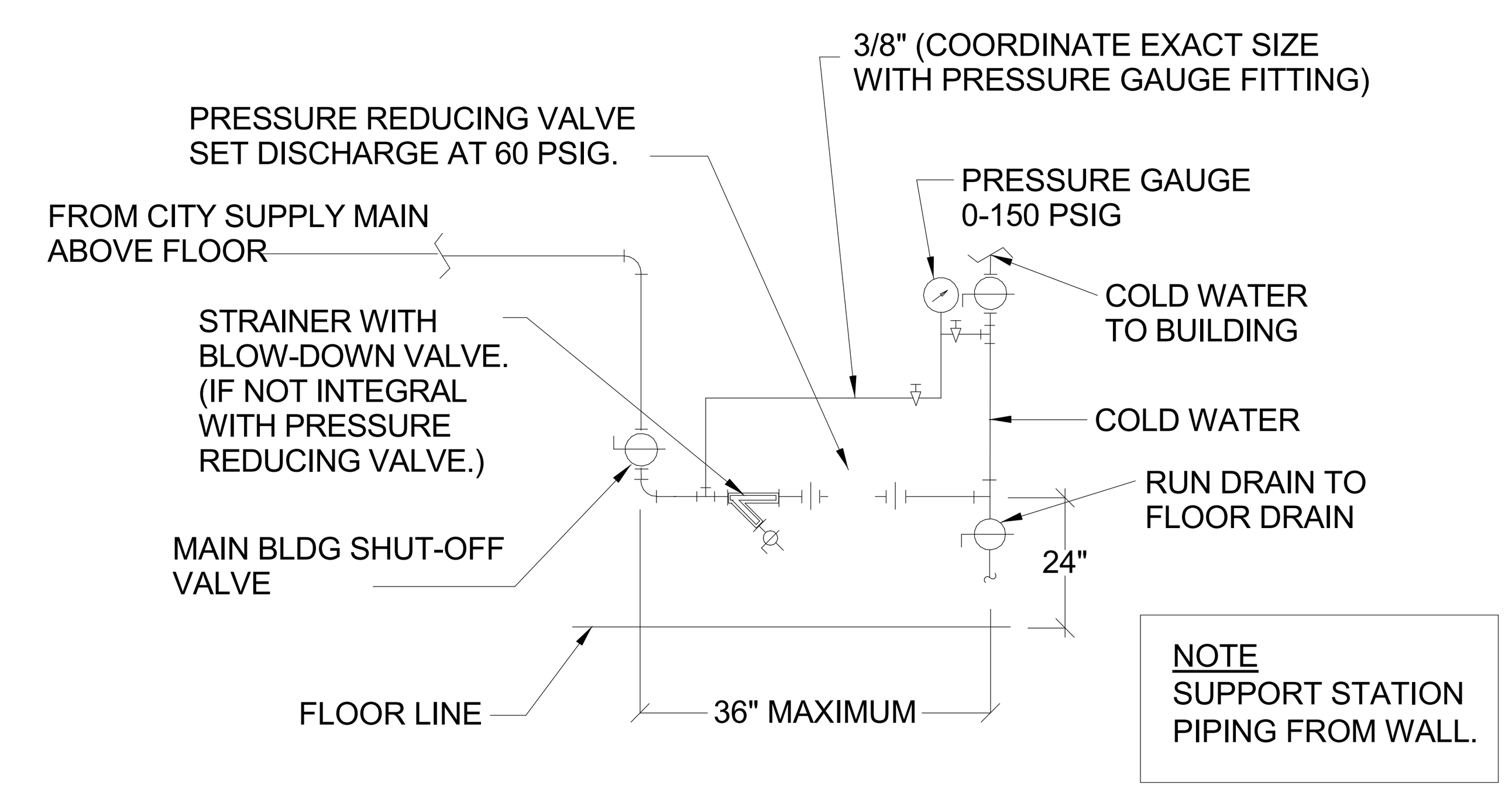
4 FLOOR DRAIN DETAIL

SCALE: NONE



3 GAS LINE CONNECTION DETAIL

SCALE: NONE



NOTE
SUPPORT STATION PIPING FROM WALL.

5 HORIZONTAL WATER PRESSURE REDUCING STATION DETAIL

SCALE: NONE

WHW ENGINEERING INC.
PROFESSIONAL MECHANICAL ENGINEERING

alt architecture

WILD OAK RECEPTION CENTER

Derek Olson

PROJECT #:	19-011
DRAWN BY:	BDL
CHECKED BY:	JH
ISSUED:	07/31/19

PROFESSIONAL ENGINEER 07.31.19 BRADLEY D. LASH No. 8681468

PLUMBING DETAILS

PE501

PLUMBING FIXTURE SCHEDULE

(TAG)

FIXTURE NUMBER	FIXTURE	PLUMBING PIPE SIZES: TRAP	WASTE	VENT	COLD WATER	HOT WATER	REMARKS
FD-1	FLOOR DRAIN	2"	2"	1 1/2"	0"	0"	PROVIDE WITH TRAP GUARD. WATTS FD-100-A OR EQUAL.
L-1	LAVATORY	1 1/2"	1 1/2"	1 1/2"	1/2"	1/2"	COUNTER MOUNTED DROP IN SINK. PROVIDE WITH THERMOSTATIC AND PRESSURE MIXING VALVE. KOHLER K-2196 WITH SYMMONS SS202IPSFR OR EQUAL.
S-1	2 COMP SINK	1 1/2"	1 1/2"	1 1/2"	1/2"	1/2"	COUNTER MOUNTED 2 COMPARTMENT STAINLESS STEEL SINK. PROVIDE WITH THERMOSTATIC AND PRESSURE MIXING VALVE. JUST 18 GAUGE OR EQUAL.
U-1	ADA URINAL	3"	3"	2"	3/4"	0"	ADA COMPLIANT WALL MOUNTED FLUSH VALVE. 1.0 GPF. ELJER MODEL 161 WITH ZURN Z6003-WSI OR EQUAL.
WC-1	WATER CLOSET	0"	3"	2"	3/4"	0"	FLOOR MOUNTED FLUSH TANK WATER CLOSET. 1.6 GPF. AMERICAN STANDARD CADET 3 OR EQUAL.
WO-1	WALL OUTLET	0"	0"	0"	1/2"	0"	WALL BOX FR-12 ICE MACHINE OULTLEX BOX WITH QUARTER TURN VALVE.

1. PROVIDE BASIS OF DESIGN OR PRIOR APPROVED EQUAL.

WATER HEATER (ELECTRIC) SCHEDULE

(TAG)

EQUIPMENT NUMBER	WATTAGE	GPH RECOVERY @ 100 F	STORAGE CAPACITY	RELIEF VALVE BTU / PRESSURE RATING	OPERATING WEIGHT	MANUF & MODEL	SCHEDULE NOTES
WH-1	3 kW	12	20 gal	PER MANUFACTURERS RECOMMENDATIONS	150 lb	AO SMITH DEL 20	1,2

1. PROVIDE AO SMITH OR EQUAL BY STATE, BRADFORD WHITE, LOCHINVAR, OR PRIOR APPROVED EQUAL.
2. 208/1/60. SINGLE ELEMENT.

WHW ENGINEERING INC.
PROFESSIONAL MECHANICAL ENGINEERING

alt architecture
WEST JORDAN, UTAH 84088

DESCRIPTION:
DATE:
MARK:

WILD OAK RECEPTION CENTER

Derek Olson

PROJECT #: 19-011
DRAWN BY: BDL
CHECKED BY: JH

ISSUED: 07/31/19

PROFESSIONAL ENGINEER 07.31.19 BRADLEY D. LASH No. 8681468

PLUMBING SCHEDULES

PE601

GENERAL NOTES:

1. THESE VIEWS ARE FOR AN OVERALL PROJECT VIEW AND SHALL NOT BE USED FOR ESTIMATING OFFSETS AND TAKE-OFF.

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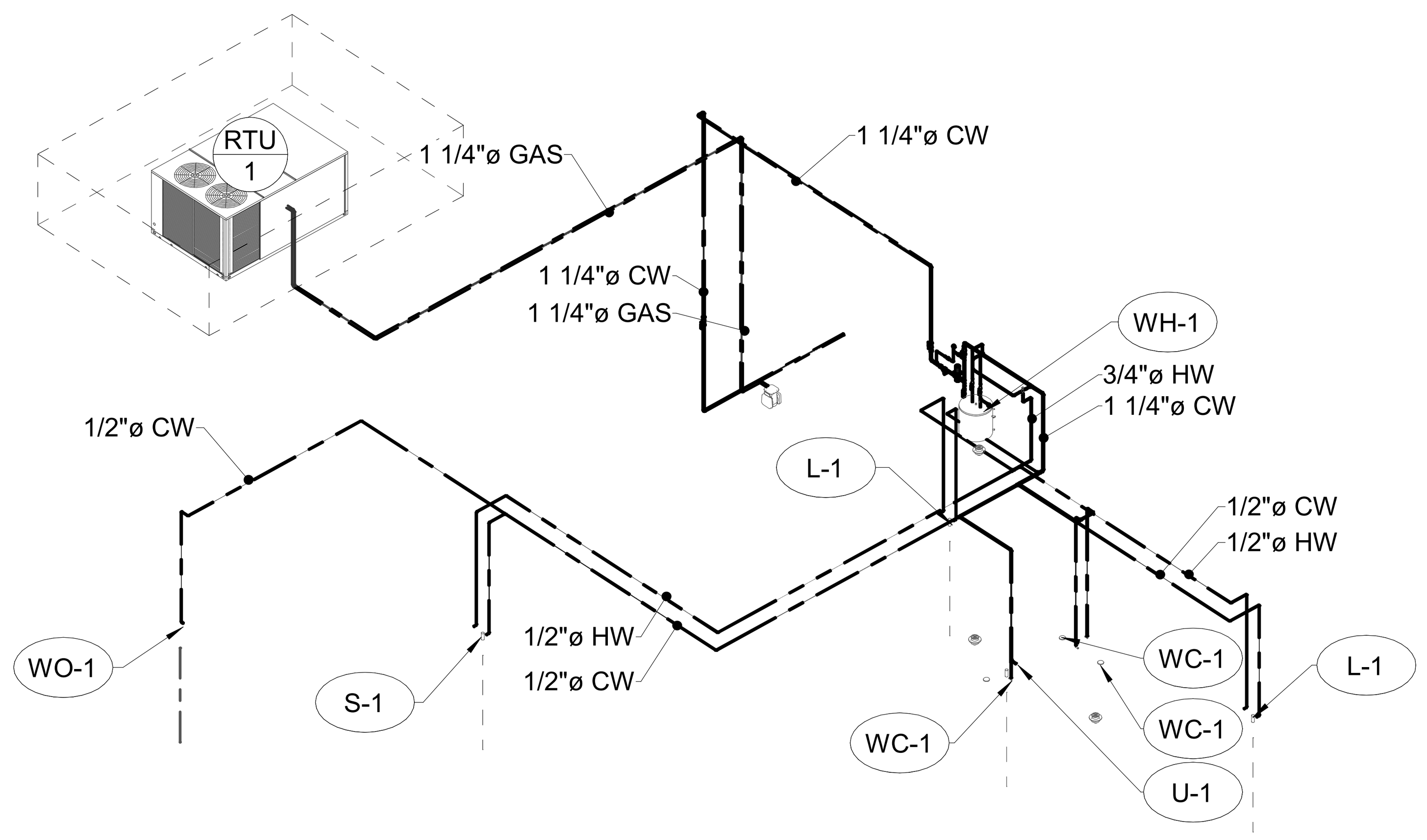
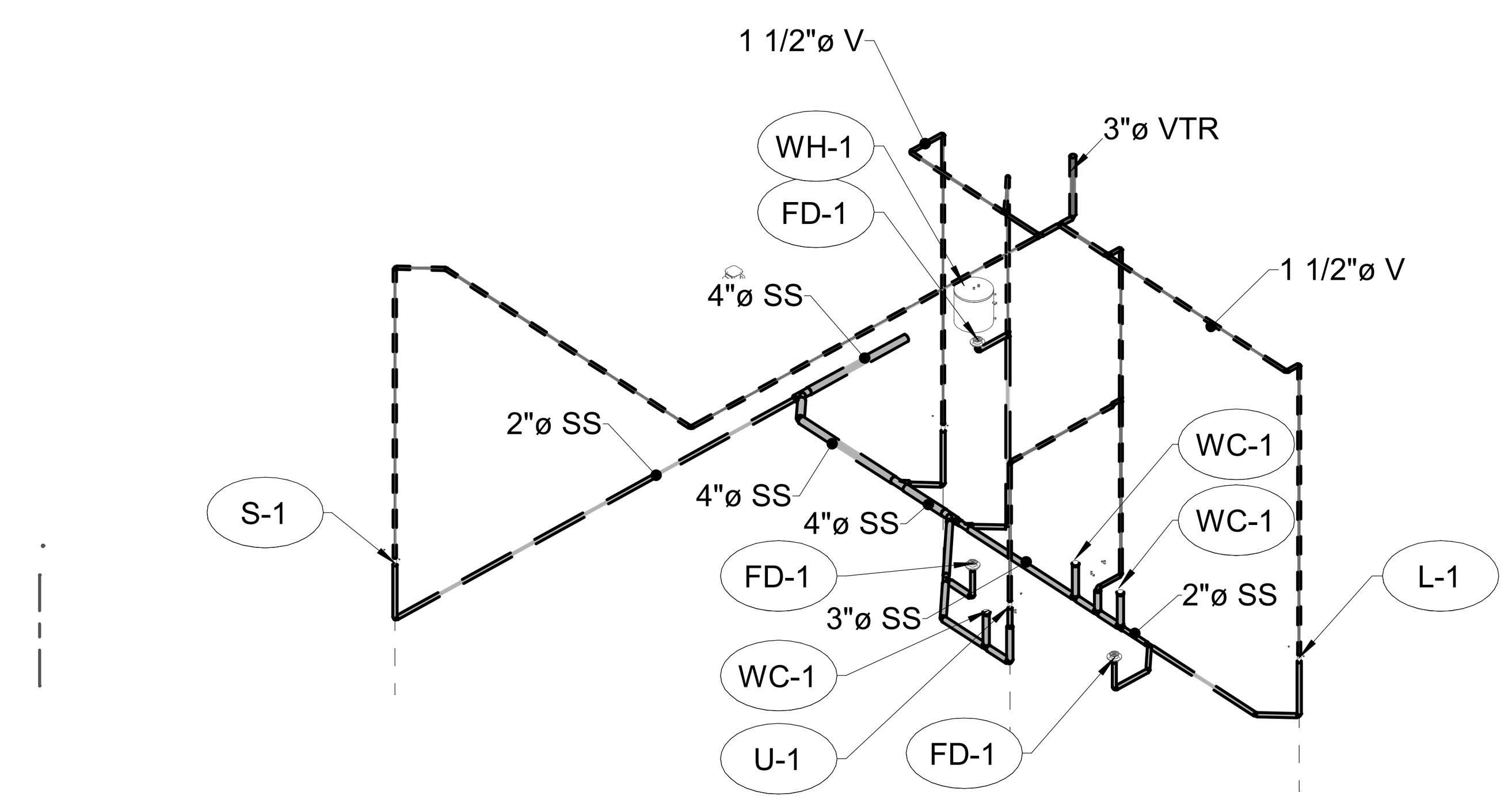


1 GAS AND WATER ISOMETRIC



2 DWV ISOMETRIC Copy 1

MARK:	DATE:	DESCRIPTION:

WILD OAK RECEPTION CENTER

Derek Olson

PROJECT #:	19-011
DRAWN BY:	JH
CHECKED BY:	BDL

ISSUED: 07/31/19

PROFESSIONAL ENGINEER 07.31.19 BRADLEY D. LASH No. 8681468

PLUMBING ISOMETRICS

PE701

7/31/2019 9:11:06 AM

CONSULTANT LOGO

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WEST JORDAN, UTAH 84088

ELECTRICAL GENERAL NOTES

GENERAL NOTES:

1. THE ELECTRICAL SYSTEMS DEFINED BY THESE PLANS AND THE SPECIFICATIONS ARE TO BE CONSTRUCTED AS COMPLETE AND OPERABLE SYSTEMS AND SHALL BE BID WITH THIS INTENT. THE CONTRACTOR SHALL VISIT THE SITE, READ ALL THE RELEVANT DOCUMENTS, AND BECOME FAMILIAR WITH THE TYPE OF CONSTRUCTION AND WORK TO BE ACCOMPLISHED. SHOULD ANY ERROR, OMISSION, OR CONFLICT EXIST IN EITHER THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING BEFORE SUBMITTING THEIR BID PRICE SO A CHANGE CAN BE ISSUED IN A PRE-BID ADDENDUM. OTHERWISE, THE CONTRACTOR AND/OR EQUIPMENT SUPPLIERS SHALL SUPPLY THE PROPER MATERIALS AND LABOR TO INSTALL COMPLETE AND OPERABLE SYSTEMS INCLUSIVE OF THE ORIGINAL BID. WHEN EACH ELECTRICAL SYSTEM IS COMPLETE, THE CONTRACTOR SHALL TEST AND CONFIRM ITS PROPER OPERATION. ANY INCOMPLETE SYSTEM SHALL BE MADE COMPLETE AND OPERABLE PRIOR TO PROJECT CLOSEOUT.
2. THE ARCHITECTURAL AND MECHANICAL PLANS ARE CONSIDERED A PART OF THE ELECTRICAL DOCUMENTS SO FAR AS ANY ELECTRICAL ITEMS THEY MAY CONTAIN. THE ELECTRICAL CONTRACTOR SHALL REFER TO AND COORDINATE WITH THEM. NO EXTRA COST SHALL BE ALLOWED FOR FAILURE TO COORDINATE THE CONTRACT DOCUMENTS WITH OTHER TRADES AND/OR IF EQUIPMENT DIMENSIONS ARE GREATER THAN SPECIFIED AND/OR DIMENSIONED ON THE PLANS.
3. THE ELECTRICAL CONTRACTOR SHALL PROVIDE EQUIPMENT, MATERIALS, AND LABOR FOR THE CONNECTIONS OF ALL EQUIPMENT SHOWN ON THE PLANS - ARCHITECTURAL, MECHANICAL, ETC.
4. THIS PROJECT IS TO BE INSTALLED IN STRICT ACCORDANCE WITH THE MOST RECENT LOCAL, STATE, AND NATIONAL CODES. IF AT ANY TIME DURING OR AFTER CONSTRUCTION SOMETHING IS FOUND TO BE INSTALLED IN VIOLATION OF THESE CODES LISTED ABOVE, IT SHALL BE CORRECTED BY THE CONTRACTOR.
5. WHERE A RACEWAY ENTERS A BUILDING OR STRUCTURE FROM THE OUTSIDE, IT SHALL BE SEALED AS PER NEC 225.27.
6. ALL ELECTRICAL EQUIPMENT THAT IS LIKELY TO REQUIRE EXAMINATION, ADJUSTMENT, SERVICING OR MAINTENANCE WHILE ENERGIZED SHALL BE FIELD OR FACTORY LABELED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS PER NEC 110.16. THE LABEL SHALL ALSO CONTAIN THE MAXIMUM AVAILABLE FAULT CURRENT AND THE DATE THE FAULT CURRENT CALCULATIONS WERE PERFORMED AS PER NEC 110.24.
7. ALL PANELBOARDS AND SWITCHBOARDS SHALL BE PERMANENTLY MARKED TO INDICATED EACH DEVICE OR EQUIPMENT WHERE THEIR POWER ORIGINATES AS PER NEC 408.4B.ALL EQUIPMENT PROVIDED BY THE EC SHALL BE LISTED AND LABELED BY A NATIONALLY RECOGNIZED TESTING AGENCY. ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION, AND BE PROPERLY INSTALLED FOR THE CONDITIONS AND SPACE THAT EQUIPMENT IS BEING INSTALLED WITHIN.
8. THE EC SHALL INSTALL A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN EACH CONDUIT RUN. CONDUIT SHALL NOT BE USED AS AN EQUIPMENT GROUNDING CONDUCTOR. THE EC SHALL GROUND THE ELECTRICAL SYSTEM IN ACCORDANCE WITH LOCAL AND NATIONAL CODES.
9. CONDUIT LAYOUTS SHOWN ON THE PLANS ARE DIAGRAMMATIC, NOT INDICATING THE ROUTING REQUIRED. THE EC SHALL ROUTE THE CONDUITS AS REQUIRED BY THE CONDITIONS OF THE INSTALLATION AND SHALL COORDINATE WITH DUCTWORK, PIPING, EQUIPMENT, BUILDING STRUCTURE, AND OTHER POTENTIAL OBSTRUCTIONS.
10. THE CONTRACTOR SHALL ALLOW THE MOVEMENT, BEFORE ROUGH-IN, OF ANY ELECTRICAL PANEL, DEVICE, LUMINAIRE, ETC. A DISTANCE OF 10 FEET WITHOUT REQUIRING ADDITIONAL COST TO THE PROJECT.
11. THE EC SHALL SECURE ALL CONDUIT TO THE STRUCTURE AS IT IS SET IN PLACE USING INDUSTRY STANDARD METHODS AND PRACTICES. TO ASSURE ALL DEVICES ARE RIGIDLY SET, THE ELECTRICAL CONTRACTOR SHALL SECURE ALL DEVICE BOXES WITH BRACKETS, HANGERS, ETC. DESIGNED FOR THE APPLICATION.
12. MINIMUM SIZE CONDUIT SHALL BE 3/4" UNO. CONDUIT INSTALLED WITHIN THE BUILDING IN DRY LOCATIONS WITHIN WALL, CEILINGS, OR EXPOSED NOT SUBJECT TO PHYSICAL DAMAGE SHALL BE EMT WITH STEEL SET SCREW FITTINGS. IN EXTERIOR LOCATIONS (EXCEPT FOR THE SERVICE ENTRANCE) THE CONDUIT SHALL BE EMT WITH COMPRESSION GLAND TYPE FITTINGS. UNDERGROUND CONDUIT SHALL BE PVC (SCH. 40) WITH GRC ELBOWS AND RISERS WRAPPED IN CORROSION RESISTANT MATERIALS WHERE IN DIRECT CONTACT WITH THE SOIL.
13. FLEXIBLE CONDUIT SHALL BE LIMITED TO CONNECTIONS TO LIGHT FIXTURES AND FINAL CONNECTIONS TO MOTORS OR OTHER EQUIPMENT SUBJECT TO VIBRATION. LENGTHS OF FLEXIBLE OR SEAL-TITE CONDUIT SHALL NOT BE GREATER THAN 72 INCHES.
14. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL EMPTY CONDUITS WITH 200LB RATED NYLON PULL CORD.
15. BEFORE ANY ELECTRICAL CONDUIT, BOXES, ETC. ARE COVERED (FLOOR, CEILINGS, WALLS, ETC.), THEY SHALL BE APPROVED BY THE INSPECTING OFFICER (INSPECTOR).
16. WHERE WIRE SIZE IS NOT SHOWN ON THE DRAWINGS FOR 20A, 120VAC BRANCH CIRCUITS, THE CIRCUIT SHALL CONSIST OF 2#12 (CU,THHN) + 1#12 (CU,THHN) GND IN 3/4" EMT CONDUIT. THIS WIRE SIZE SHALL BE INCREASED TO #10 (CU,THHN) FOR BRANCH CIRCUITS WITH OVERALL LENGTHS EXCEEDING 125' TO ACCOMMODATE FOR VOLTAGE DROP. REFER TO EQUIPMENT SCHEDULES, FEEDER SCHEDULES, AND NOTES ON DRAWINGS FOR ALL OTHER BRANCH CIRCUIT AND FEEDER WIRE/CONDUIT SIZING.
17. CONDUCTORS SHALL BE COPPER, 600VAC RATED, TYPE THHN/THWN-2 UNO. CONDUCTORS UP TO #10AWG SHALL BE SOLID AND CONDUCTORS #8AWG OR LARGER SHALL BE STRANDED.
18. METAL CLAD CABLING MAY BE USED BETWEEN DEVICES SUCH AS LIGHTING, RECEPTACLES, SWITCHES, ETC. UNLESS OTHERWISE REQUIRED BY THE NEC. HOME RUNS SHALL BE INSTALLED IN CONDUIT. MC CABLE SHALL NOT BE INSTALLED EXPOSED.
19. EC SHALL CLEAN THE ENTIRE ELECTRICAL SYSTEM AFTER COMPLETION OF THE INSTALLATION. REMOVE ALL FINGER PRINTS, FOREIGN MATTER, PAINT, DIRT, GREASE, AND UN-NEEDED LABELS OR STICKERS FROM FIXTURES AND EQUIPMENT. REMOVE ALL RUBBISH AND DEBRIS ACCUMULATED DURING INSTALLATION FROM THE PREMISES.
20. IT IS THE INTENT OF THE CONSTRUCTION DOCUMENTS FOR ALL DEVICES TO BE FLUSH MOUNTED AND CONDUIT/CABLING INSTALLED CONCEALED WITHIN WALLS/CEILINGS. IN AREAS WHERE CONDUIT MUST BE INSTALLED EXPOSED IT SHALL BE COORDINATED WITH THE ARCHITECT AND/OR ENGINEER. ALL EFFORTS SHALL BE MADE TO CONCEAL WIRING METHODS.
21. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE SEALED WITH FIRE STOPPING, IE. 3M BRAND CAULK, PUTTY, STRIP AND SHEET FORMS, DOW CORNING 3-6548 SILICONE RTV FOAM.
22. COORDINATE LOCATION OF WALL MOUNTED DEVICES WITH CABINETRY AND OTHER WALL OBSTRUCTIONS. COORDINATE CEILING MOUNTED DEVICES WITH CEILING OBSTRUCTIONS. ANY DEVICES THAT NEED TO BE RELOCATED MUST BE BROUGHT TO THE ATTENTION OF THE ELECTRICAL ENGINEER PRIOR TO ROUGH-IN FOR NEW LOCATION.
23. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE PLACEMENT OF ALL DEVICES INSTALLED WITHIN THE CEILING SUCH AS LIGHTING, SPEAKERS, FIRE SPRINKLERS, SMOKE/HEAT DETECTORS, ETC. ANY EXISTING DEVICES THAT NEED TO BE RELOCATED IN ORDER TO ACCOMMODATE NEW CONSTRUCTION/REMODEL MUST BE BROUGHT TO THE ATTENTION OF THE ELECTRICAL ENGINEER PRIOR TO ROUGH-IN FOR RESOLUTION AND FURTHER DIRECTION.

REMODEL NOTES:

24. THE EC SHALL COORDINATE AND CONFIRM THE EXACT LOCATION OF THE EXISTING POWER PANELS FROM WHICH NEW CIRCUITS ARE BEING FED. VERIFY EXISTING BRANCH CIRCUIT BREAKERS AND PROVIDE NEW BRANCH CIRCUIT BREAKERS AS NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM.
25. THE EC SHALL COORDINATE AND CONFIRM THE EXACT LOCATION OF THE TELECOM ROOM FROM WHICH NEW TELE/DATA OUTLETS WILL BE FED. VERIFY EXISTING PATCH PANEL SPACES AND PROVIDE NEW PATCH PANELS AS NECESSARY TO LAND/TERMINATE NEW TELECOM CABLING.
26. ALL DEVICES NOT SHOWN ON PLANS ARE EXISTING TO REMAIN IN PLACE AND FUNCTIONAL. IN THE EVENT THAT WIRING TO AN EXISTING DEVICE IS DAMAGED, WIRING MUST BE REPLACED AND DEVICE BROUGHT BACK TO FULL OPERATION.

SITE NOTES:

27. THE EC SHALL COORDINATE LOCATION OF TELEPHONE PEDESTAL, ROUTING/SIZE OF TELEPHONE SERVICE CONDUIT, AND THE MAIN TELEPHONE SERVICE BOARD REQUIREMENTS WITH THE TELEPHONE COMPANY PRIOR TO ROUGH-IN. INSTALL A 3/4" CONDUIT WITH (1) #6 BARE COPPER CONDUCTOR FROM TELEPHONE TERMINAL BOARD (TTB) TO THE MAIN BUILDING GROUNDING SYSTEM.
28. UNDERGROUND CONDUIT FOR SITE LIGHTING SHALL BE BURIED 24" B.F.G. AND SHALL HAVE ONE (1) #10 THHN GREEN GROUND CONDUCTOR TO GROUND ALL LUMINAIRES.
29. PRIOR TO TRENCHING IN ANY AREA, THE CONTRACTOR SHALL COORDINATE WITH COMMUNICATIONS/DATA, CABLE TV, GAS, AND WATER UTILITY PROVIDERS (BLUE STAKES), AND HAVE ALL UTILITIES IN THE AREA IDENTIFIED. IN ADDITION, THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A SUBCONTRACTOR SPECIALIZING IN THE LOCATION OF UNDERGROUND STRUCTURES TO IDENTIFY ANY OBSTACLES IN THE PATH OF TRENCHING PRIOR TO COMMENCING WORK. DAMAGE TO ANY UNDERGROUND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR.

LIGHTING NOTES:

30. ALL BATTERY POWERED OR CONTINUOUS BURN LUMINAIRES SHOWN ON THE PLANS, SUCH AS EXIT LIGHTS, NIGHT LIGHTS, OR EMERGENCY LIGHTS, SHALL BE CONNECTED TO THE UN-SWITCHED LEG OF THE LIGHTING CIRCUIT FEEDING THAT AREA.
31. LUMINAIRES INSTALLED IN THE MECHANICAL ROOM SHALL BE PLACED SO THAT ALL EQUIPMENT IS ADEQUATELY ILLUMINATED AFTER THE MECHANICAL EQUIPMENT IS IN PLACE.
32. ALL LUMINAIRES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE AND NOT THE CEILING GRID OR OTHER NONSTRUCTURAL MEMBERS.
33. TO MAINTAIN CONSISTENT LIGHT QUALITY, FOR ANY ONE LAMP TYPE SUPPLIED, LAMPS SHALL BE OF THE SAME MANUFACTURER, SURFACE TEMPERATURE, COLOR RENDERING INDEX, LAMP EFFICACY, LUMEN OUTPUT, AND STARTING CHARACTERISTICS FOR ALL INSTALLED.
34. LIGHT FIXTURES INSTALLED IN DAMP OR WET LOCATIONS SHALL BE UL LISTED FOR INSTALLATION IN THE PROPER ENVIRONMENT. CARE SHOULD BE TAKEN TO ENSURE THAT DIFFUSERS AND LENSES ARE APPROPRIATE FOR THEIR INSTALLED USE AND PREMATURE DISCOLORATION WILL NOT RESULT DUE TO EXPOSURE TO UV LIGHT, CHEMICALS, OR OTHER CONDITIONS.
35. ELECTRICAL CONTRACTOR SHALL PROVIDE LIGHTING CONTROL SHOP DRAWINGS WITH ELECTRICAL SUBMITTAL FOR REVIEW.

POWER NOTES:

36. ELECTRICAL CONTRACTOR SHALL CONFIRM MINIMUM CODE (NEC) WORKING CLEARANCE BEFORE INSTALLING ANY ELECTRICAL PANELS OR CABINETS AND SHALL MOVE THE PANELS IF REJECTED BY AN INSPECTOR. IF CLEARANCE IS NOT POSSIBLE, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY IN WRITING.
37. WIRING DEVICES SHALL BE WHITE IN COLOR WITH NYLON COVER PLATES. EXTERIOR OUTLETS SHALL HAVE CAST COVERS WITH FLIP TYPE LIDS UNO.
38. THE EC SHALL MAINTAIN ELECTRICAL CONTINUITY TO REMAINING EQUIPMENT WHEN ANY EXISTING ELECTRICAL EQUIPMENT IS REMOVED.
39. EC SHALL COORDINATE WITH EQUIPMENT SUPPLIERS ON THE EXACT LOCATIONS OF ALL EQUIPMENT AND ELECTRICAL CONNECTIONS PRIOR TO ROUGH-IN. THE EC SHALL MAKE THE FINAL CONNECTION TO ALL EQUIPMENT UNLESS OTHERWISE DIRECTED BY THE EQUIPMENT SUPPLIER. OBTAIN FROM SUPPLIERS ALL WIRING DIAGRAMS FOR EQUIPMENT PRIOR TO ANY ROUGH-IN. TO ASSURE THAT PROPER CHARACTERISTICS ARE PROVIDED. ANY INCORRECT WIRING OR DEVICES INSTALLED BY THE EC WITHOUT THE WIRING DIAGRAM SHALL BE CORRECTED AT THE EC'S EXPENSE. PROVIDE COPIES OF WIRING DIAGRAMS WITHIN EACH PIECE OF EQUIPMENT AND ADDITIONAL COPIES WITH THE OPERATION AND MAINTENANCE MANUALS.
40. EC SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR TO PROVIDE CONDUIT AND DEVICE MOUNTING BOXES FOR THERMOSTATS AND OTHER MECHANICAL CONTROLS. REFER TO MECHANICAL DRAWINGS FOR THE LOCATION OF THERMOSTATS.
41. EC SHALL PROVIDE A 20AMP, 120VAC RECEPTACLE INSTALLED AT AN ACCESSIBLE LOCATION FOR THE SERVICING OF HEATING, AIR CONDITIONING, AND REFRIGERATION EQUIPMENT PER NEC 210.63. RECEPTACLE SHALL BE OF THE GROUND FAULT CIRCUIT INTERRUPTING TYPE, INSTALLED WITHIN A CAST METAL BOX, AND WITHIN 25' OF ALL REQUIRED EQUIPMENT.

DATA/TELECOM NOTES:

42. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ROUGH-IN ONLY FOR THE TELECOM/CAT6 SYSTEMS. THIS SHALL CONSIST OF A FOUR SQUARE DEVICE MOUNTING BOX WITH CONDUIT TO ABOVE ACCESSIBLE CEILING SPACE OR TO THE CEILING SPACE ABOVE IF OPEN. CABLING, JACKS, FACEPLATES, TESTING AND TERMINATIONS SHALL BE PROVIDED AND INSTALLED BY OTHERS.

ROOF NOTES:

43. ELECTRICAL CONTRACTOR TO INSTALL A ROOF JACK (BOOT) FOR ALL CONDUIT PENETRATIONS THROUGH THE ROOF. ALL ROOF PENETRATION SEALS SHALL BE IN ACCORDANCE WITH THE ROOF WARRANTY AND BE COMPLETELY SEALED WITH ROOF ADHESIVE. UTILIZE PROPER CLAMPING METHODS TO SEAL BOOT AROUND CONDUIT.

ELECTRICAL SYMBOL SCHEDULE

SYMBOL	DESCRIPTION	MOUNTING	NOTES
	LIGHT FIXTURE - SURFACE OR RECESSED	SEE DRAWINGS	1
	EMERGENCY LIGHT FIXTURE - SURFACE OR RECESSED	SEE DRAWINGS	1, 2
	LIGHT FIXTURE - OPEN STRIP	SEE DRAWINGS	1
	EMERGENCY LIGHT FIXTURE - OPEN STRIP	SEE DRAWINGS	1, 2
	LIGHT FIXTURE - WALL MOUNTED	WALL	1
	EMERGENCY LIGHT FIXTURE - WALL MOUNTED	WALL	1, 2
	LIGHT FIXTURE - DOWNLIGHT	CEILING	1
	EMERGENCY LIGHT FIXTURE - DOWNLIGHT	CEILING	1, 2
	LIGHT FIXTURE - WALL WASH DOWNLIGHT	CEILING	1
	LIGHT FIXTURE - CEILING MOUNTED	CEILING	1
	LIGHT FIXTURE - PENDANT/CHANDELIER	CEILING	1
	LIGHT FIXTURE - WALL BRACKET	WALL	1
	EMERGENCY LIGHT FIXTURE - WALL BRACKET	WALL	1, 2
	LIGHT TRACK WITH FIXTURES	SURFACE	1
	EXIT FIXTURE - WALL MOUNT	WALL	1, 2, 3
	EXIT FIXTURE - CEILING MOUNT	CEILING	1, 2, 3
	EXIT FIXTURE W/ EMERGENCY HEADS - WALL MOUNT	WALL	1, 2, 3
	EXIT FIXTURE W/ EMERGENCY HEADS - CEILING MOUNT	CEILING	1, 2, 3
EM	DUAL HEAD EMERGENCY LIGHT FIXTURE	WALL	1, 2
	AREA LIGHT FIXTURE - POLE MOUNTED	POLE	1
	OCCUPANCY SENSOR - CEILING MOUNT	CEILING	1
PC	PHOTO-ELECTRIC CELL WITH RELAY	SURFACE	1
PP	LIGHTING RELAY/POWER PACK	SURFACE	1
TC	TIME CLOCK - 7 DAY	5' - 0"	
$OS	WALL OCCUPANCY SENSOR SWITCH	4' - 0"	
$	SINGLE POLE SWITCH	4' - 0"	
$2	DOUBLE POLE SWITCH	4' - 0"	
$3	THREE WAY SWITCH	4' - 0"	
$4	FOUR WAY SWITCH	4' - 0"	
$D	DIMMER SWITCH	4' - 0"	
$LV	LOW VOLTAGE SWITCH	4' - 0"	
$TH	THERMAL OVERLOAD SWITCH	4' - 0" UNO	
$P	PILOT LIGHT SWITCH	4' - 0"	
	DUPLEX OUTLET, 20A, 120VAC	1' - 6" UNO	
	DUPLEX OUTLET, 20A, 120VAC - GFCI	1' - 6" UNO	
	DUPLEX OUTLET - SPLIT WIRED	1' - 6" UNO	
	DUPLEX OUTLET - ISOLATED GROUND	1' - 6" UNO	
	DUPLEX OUTLET WITH USB PORTS	1' - 6" UNO	
OS	DUPLEX OUTLET - OCCUPANCY SENSOR CONTROLLED	1' - 6" UNO	
	DUPLEX OUTLET, 20A, 120VAC - CEILING	CEILING	
	DUPLEX OUTLET, 20A, 120VAC - FLOOR	FLOOR	
	FOURPLEX OUTLET, 20A, 120VAC	1' - 6" UNO	
	FOURPLEX OUTLET, 20A, 120VAC - GFCI	1' - 6" UNO	
	FOURPLEX OUTLET - ISOLATED GROUND	1' - 6" UNO	
	FOURPLEX OUTLET, 20A, 120VAC - CEILING	CEILING	
	FOURPLEX OUTLET, 20A, 120VAC - FLOOR	FLOOR	
	APPLIANCE OUTLET - 208/240V SINGLE PHASE	18" OR 48"	
	APPLIANCE OUTLET - 208/480V 3-PHASE	18" OR 48"	
	DATA OUTLET	1' - 6" UNO	
	TELEPHONE OUTLET	1' - 6" UNO	
	DUAL TELEPHONE/DATA OUTLET	1' - 6" UNO	
	DATA OUTLET - FLOOR	FLOOR	
	DUAL TELEPHONE/DATA OUTLET - FLOOR	FLOOR	
	CEILING DATA OUTLET/ WIRELESS ACCESS POINT	CEILING	
	CABLE TELEVISION OUTLET	1' - 6" UNO	

	JUNCTION BOX	SURFACE	
	WALL JUNCTION BOX	1' - 6" UNO	
	FLOOR JUNCTION BOX	FLOOR	
	DISCONNECT SWITCH - NON-FUSED	5' - 0" UNO	4
F	DISCONNECT SWITCH - FUSED	5' - 0" UNO	4
	DISCONNECT SWITCH - SHUNT TRIP	5' - 0" UNO	4
	COMBINATION MAGNETIC STARTER/DISCONNECT	5' - 0" UNO	
	MOTOR STARTER	5' - 0" UNO	
	CONTACTOR	5' - 0" UNO	
	MOTOR	SURFACE	
	METER - PLAN VIEW	WALL	
	PUSH BUTTON SWITCH	4' - 0"	
	EMERGENCY POWER SHUTOFF SWITCH	4' - 0"	
	PANELBOARD - SURFACE MOUNTED	6' - 6" TO TOP	
	PANELBOARD - RECESSED	6' - 6" TO TOP	
	TRANSFORMER - PLAN VIEW	PAD/FLOOR	
	TELEPHONE TERMINAL BOARD	WALL	

	CIRCUIT BREAKER	M	METER - ONE-LINE
	MLO PANEL - ONE-LINE		TRANSFORMER - ONE-LINE
	MCB PANEL - ONE-LINE		PAD MOUNT XFMR - ONE-LINE
	AUTOMATIC TRANSFER SWITCH		GROUND SLEEVE - ONE-LINE
	CT ENCLOSURE - ONE-LINE	XXXA TO XXXA XPMR	FUSED DISCONNECT - ONE-LINE
	CURRENT TRANSFORMER		FUSED SWITCH
			GROUND
	OH RISER	XXX	CABLE/WIRE SIZE TAG
X	KEYED NOTE TAG		
XX X	MECHANICAL/ELECTRICAL EQUIPMENT TAG		
X	OTHER EQUIPMENT TAG		

	WIRING / CONDUIT		UNDERGROUND/FLOOR WIRING
	CONDUIT TURNED UP		CONDUIT TURNED DOWN
	CIRCUIT HOME RUN TO PANEL: # OF ARROWHEADS INDICATE # OF CIRCUITS (SEPARATE NEUTRAL PER CIRCUIT). BOTH EX. INCLUDE AN EQUIP. GROUND.		

NOTES

1. SEE LIGHT FIXTURE SCHEDULE FOR TYPE, MOUNTING, AND OTHER SPECIFICS.
2. CONNECT EMERGENCY AND/OR EXIT LIGHTS TO THE UNSWITCHED SIDE OF THE AREA LIGHTING BRANCH CIRCUIT.
3. ARROW DENOTES EXIT DIRECTION.
4. USE HEAVY DUTY FOR 480 VOLT.
5. MOUNT SWITCH AT DOOR JAM PER MANUFACTURER'S INSTRUCTIONS.
6. PROVIDE UL LISTED DEVICE TO BE USED WITH THE FIRE ALARM PANEL/SYSTEM OR PROVIDE A MONITOR MODULE TO CONNECT INTO FIRE ALARM SYSTEM.
7. PROVIDE RACEWAY WITH OUTLETS 12" ON CENTER UNO.

ABBREVIATIONS

AFCI - ARC FAULT CKT INTERRUPTER
AFF - ABOVE FINISHED FLOOR
AFG - ABOVE FINISHED GRADE
AIC - AMPS INTERRUPTING CAPACITY
AL - ALUMINUM
ATS - AUTOMATIC TRANSFER SWITCH
BC - BARE COPPER
BFC - BELOW FINISHED CEILING
BFG - BELOW FINISHED GRADE
CKT - CIRCUIT
CND. OR C. - CONDUIT
CLG - INSTALLED IN CEILING
C.R. - CORD REEL
CT - CURRENT TRANSDUCER
CU - COPPER
(E) - EXISTING TO REMAIN
EC - ELECTRICAL CONTRACTOR
EM - EMERGENCY
(F) - FUTURE
FACP - FIRE ALARM CONTROL PANEL
FLA - FULL LOAD AMPS
FVNR - FULL VOLTAGE NON REVERSING
GC - GENERAL CONTRACTOR
GFCI - GROUND FAULT CKT INTERRUPTER
GND - GROUND
HP - HORSEPOWER
IG - ISOLATED GROUND
KW - KILOWATTS
LCP - LIGHTING CONTROL PANEL
LTG - LIGHTING
LV - LOW VOLTAGE
MC - MECHANICAL CONTRACTOR
MCA - MINIMUM CIRCUIT AMPS
MCB - MAIN CIRCUIT BREAKER
MCC - MOTOR CONTROL CENTER
MDP - MAIN DISTRIBUTION PANEL
MLO - MAIN LUGS ONLY
MOCP - MAX. OVERCURRENT PROTECTION
(N) - NEW
NIC - NOT IN CONTRACT
NEC - NATIONAL ELECTRICAL CODE
NFPA - NATIONAL FIRE PROT. ASSN.
NL - NIGHT LIGHT
NR - NOT REQUIRED
NTS - NOT TO SCALE
PC - PLUMBING CONTRACTOR
PH - PHASE
PNL - PANEL
POC - POINT OF CONNECTION
POS - POINT OF SALE
(R) - RELOCATED
REC - RECEPTACLES
RMC - RIGID METAL CONDUIT
SCA - SHORT CIRCUIT AMPERES
SES - SERVICE ENTRANCE SWITCHGEAR
SPD - SURGE PROTECTIVE DEVICE
TL - TWIST LOCK
TTB - TELEPHONE TERMINAL BOARD
TR - TAMPER RESISTANT
TYP - TYPICAL
UNO - UNLESS NOTED OTHERWISE
VA - VOLTAMPS
VIF - VERIFY IN FIELD
VR - VANDAL RESISTANT
WP - WEATHERPROOF/NEMA 3R
WU - FURNISHED WITH UNIT
XFMR - TRANSFORMER

ELECTRICAL SHEET INDEX

DESCRIPTION:
DATE:
MARK:

WILD OAK RECEPTION CENTER
450 WEST OAKLAWN LANE LINDON, UTAH
Derek Olson

PROJECT #: 19-011
DRAWN BY: SL
CHECKED BY: BK

ISSUED: X/XX/2019

ELECTRICAL GENERAL SHEET
E001

KEYED NOTES

1. PROVIDE A CEILING MOUNT DUAL TECH OCC SENSOR WITH POWER PACK FOR RESTROOM LIGHT AND FAN CONTROL. PROVIDE #CM PDT OR EQUIVALENT.
2. DECORATIVE LIGHT FIXTURE FOR BAR
3. TIME CLOCK TO CONTROL RECEPTION AND KITCHEN LIGHTING. PROVIDE INTERMATIC XXXXX OR EQUIVELENT.

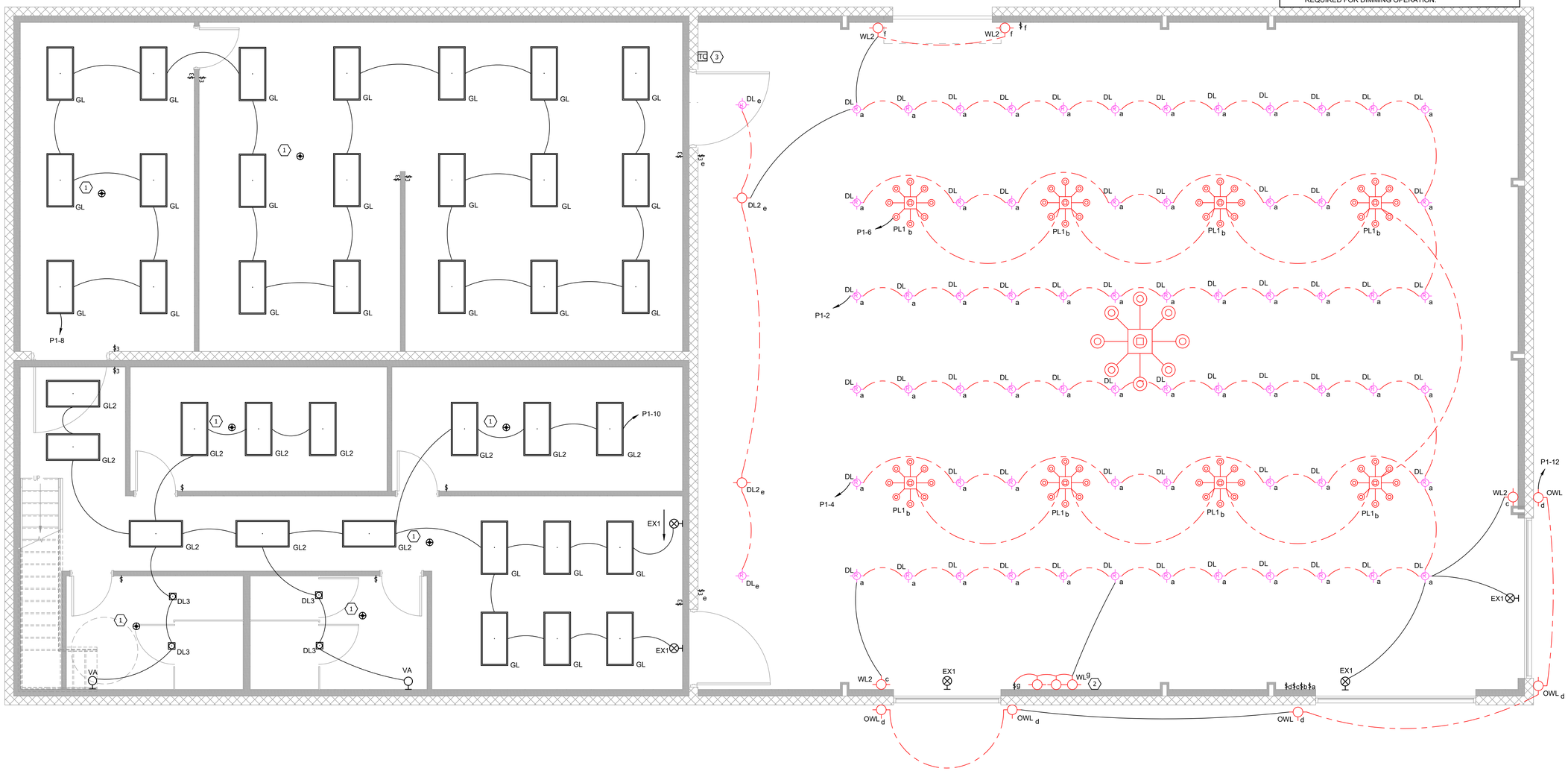
GENERAL NOTES

A. CONNECT ALL EMERGENCY AND EXIT LIGHT FIXTURES TO THE UNSWITCHED SIDE OF THE LIGHTING BRANCH CIRCUIT. LIGHT FIXTURES WITH EMERGENCY DRIVERS SHALL BE NORMALLY SWITCHED WITH THE AREA LIGHTING, BUT HAVE THEIR EMERGENCY DRIVERS CONNECTED AHEAD OF THE LIGHT SWITCH OR LIGHTING CONTROL PANEL RELAY. FIXTURES WILL REMAIN ON FOR NOT LESS THAN 90 MINUTES IN CASE OF POWER LOSS.

B. IT IS THE INTENT OF THE CONSTRUCTION DOCUMENTS THAT CONDUIT IS TO BE INSTALLED WITHIN WALLS AND ABOVE CEILINGS CONCEALED WHERE POSSIBLE.

C. COORDINATE MOUNTING HEIGHTS OF ALL PENDANT AND WALL MOUNTED LIGHT FIXTURES WITH ARCHITECTURAL ELEVATIONS.

D. ELECTRICIAN TO VERIFY FIXTURE DIMMING CONTROLS AND TO PROVIDE THE NECESSARY WIRING AND DEVICES REQUIRED FOR DIMMING OPERATION.



1 / E101 LIGHTING PLAN

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

N

CONSULTANT LOGO

alt architecture
1445 W 8660 S
WEST JORDAN, UTAH 84088

MARK:	DATE:	DESCRIPTION:

WILD OAK RECEPTION CENTER
450 WEST FOLLMAN LANE LINDON, UTAH
Derek Olson

PROJECT #:	19-011
DRAWN BY:	SL
CHECKED BY:	BK

ISSUED: X/XX/2019

LIGHTING PLAN

E101

CONSULTANT LOGO

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1445 W 8660 S
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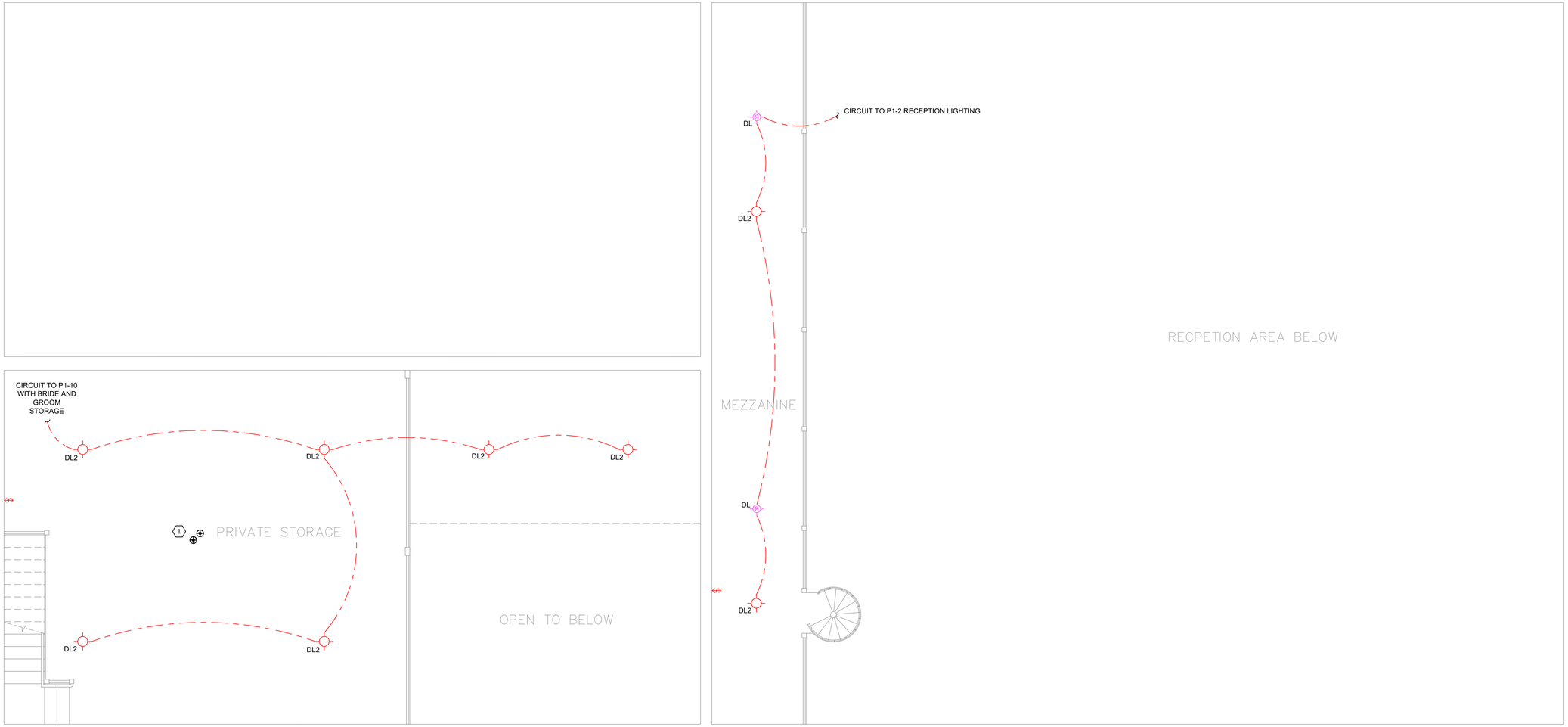
MARK	DATE	DESCRIPTION



1 / E102 LIGHTING PLAN

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

N

WILD OAK RECEPTION CENTER

450 WEST GILLMAN LANE LINDON, UTAH

Derek Olson

PROJECT #:	19-011
DRAWN BY:	SL
CHECKED BY:	BK

ISSUED: X/XX/2019

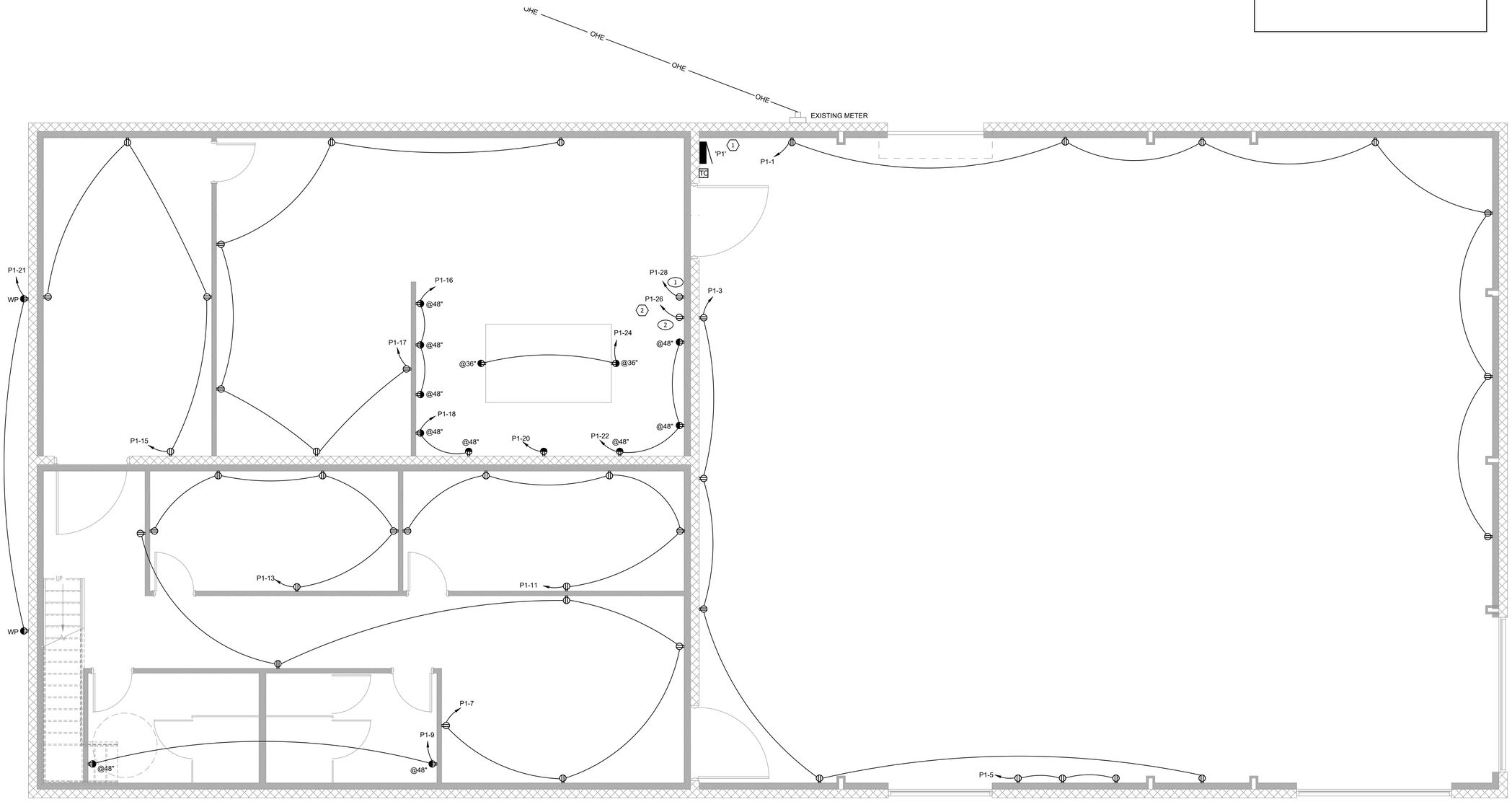
LIGHTING PLAN

E102

#	KEYED NOTES
1.	REMOVE EXISTING ELECTRICAL PANEL AND REPLACE WITH 100A, 3P, 4W, 120/208V, 42CKT PANEL
2.	PROVIDE GFCI BREAKERS FOR ALL RECEPTACLES PLACED BEHIND LARGE EQUIPMENT.

GENERAL NOTES

A. REMOVE ALL UNUSED DISCONNECTS AND CONTROLS.



1 E201 POWER PLAN

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

N

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WEST JORDAN, UTAH 84088

MARK:	DATE:	DESCRIPTION:

WILD OAK RECEPTION CENTER

450 WEST OAKLAWN LANE LINDON, UTAH

Derek Olson

PROJECT #:	19-011
DRAWN BY:	SL
CHECKED BY:	BK

ISSUED: X/XX/2019

POWER PLAN

E201

KEYED NOTES
1.

GENERAL NOTES
A. REMOVE ALL UNUSED DISCONNECTS AND CONTROLS

CONSULTANT LOGO

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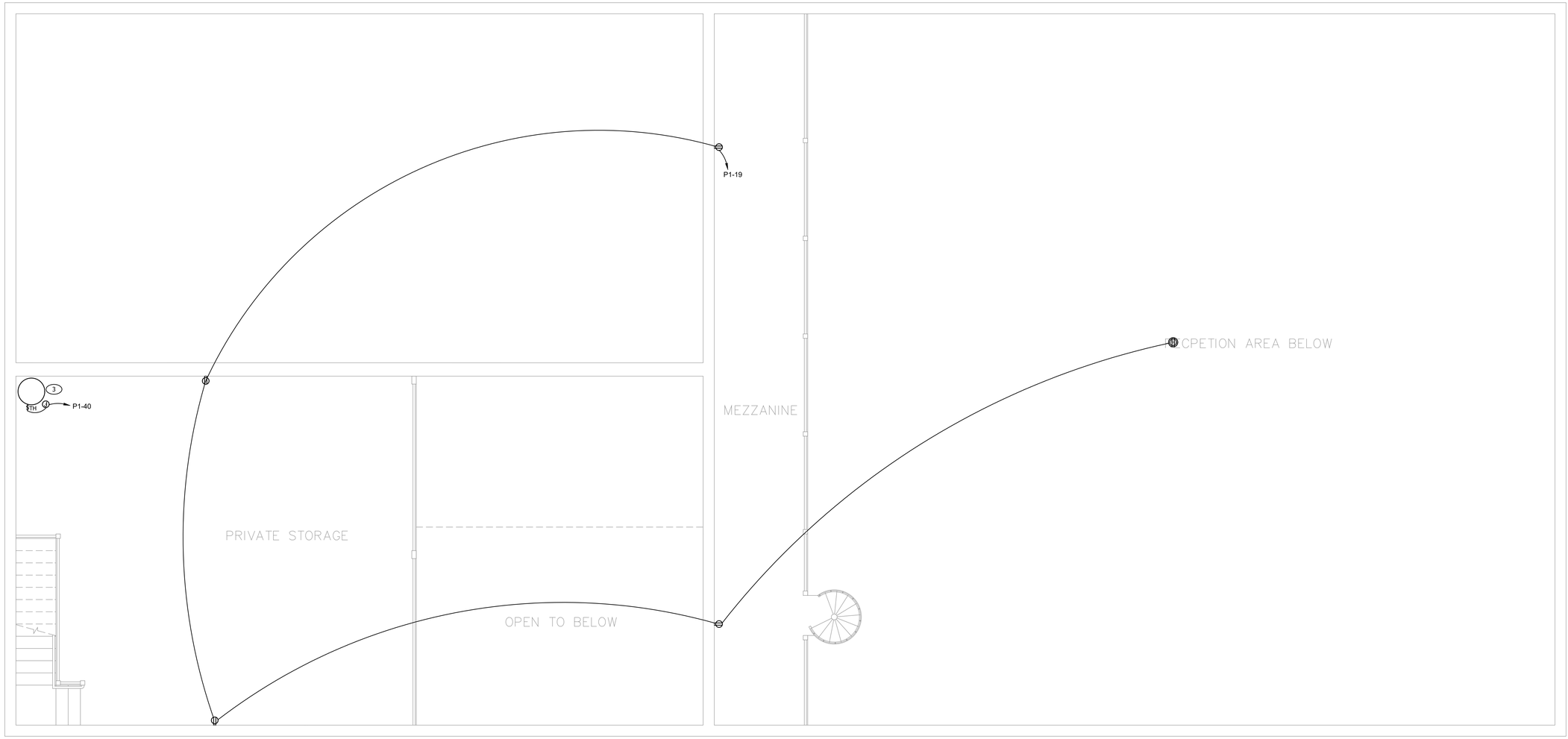
WEST JORDAN, UTAH 84088



1 / E202 POWER PLAN
SCALE: 1/4" = 1'-0"

N

DESCRIPTION:
DATE:
MARK:

WILD OAK RECEPTION CENTER
450 WEST OALLMAN LANE LINDON, UTAH
Derek Olson

PROJECT #: 19-011
DRAWN BY: SL
CHECKED BY: BK

ISSUED: X/XX/2019

POWER PLAN
E202

LIGHT FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NO.	VOLTAGE	LUMEN / COLOR	DIMMING CONTROL	MOUNTING	LOAD(VA)	DESCRIPTION
DL	TO BE DETERMINED	TO BE DETERMINED	MVOLT	2000 L/ 3000 K	-	SUSPENDED	27	SUSPENDED PENDANT CAN LIGHT
DL2	TO BE DETERMINED	TO BE DETERMINED	MVOLT	2000 L/ 3000 K	-	SUSPENDED		SUSPENDED PENDANT CAN LIGHT
DL3	TO BE DETERMINED	TO BE DETERMINED	MVOLT	2000 L/ 3000 K	-	SUSPENDED		RECESSED DOWNLIGHT
GL1	LITHONIA	EPANL 2X4 4000LM 80CRI 35K MIN10 ZT MVOLT 2X4PANLACG72	MVOLT	4000 L/ 3500K	-	SUSPENDED	39	SUSPENDED 2X4 LED FLAT PANEL MOUNTED AT 14'
GL2	LITHONIA	EPANL 2X4 4000LM 80CRI 35K MIN10 ZT MVOLT 2X4SMKSH	MVOLT	4000 L/ 3500K	-	SURFACE	39	SURFACE MOUNTED 2X4 LED FLAT PANEL
PL			MVOLT			SUSPENDED		CHANDELIER
VA	TO BE DETERMINED	TO BE DETERMINED	MVOLT			SURFACE		BATHROOM VANITY LIGHT
WL	TO BE DETERMINED	TO BE DETERMINED	MVOLT			SURFACE		DECROTIVE WALL LIGHT FOR BAR
WL2	TO BE DETERMINED	TO BE DETERMINED	MVOLT			SURFACE		WALL LIGHT
OWL	TO BE DETERMINED	TO BE DETERMINED	MVOLT			SURFACE		OUTSIDE WALL LIGHT
EX1	TO BE DETERMINED	TO BE DETERMINED	MVOLT			SURFACE		EXIT SIGN
EX2	TO BE DETERMINED	TO BE DETERMINED	MVOLT			SURFACE		EMERGENCY BUGEYEZ

NOTES:
1. ALL LIGHT FIXTURES SHOWN HALF SHADED SHALL BE PROVIDED WITH AN EMERGENCY BATTERY PACK CAPABLE OF PROVIDING 90 MIN. OF EGRESS ILLUMINATION.
2. FIXTURES BEING CONSIDERED AS EQUIVALENTS MUST BE SUBMITED FOR APPROVAL NO LESS THAN FIVE DAYS PRIOR TO BID.

PANEL SCHEDULE P1

VOLT/PHASE/WIRE: 120/208V/3PH/4W — AIC RATING: 10,000 AIC — MAIN BREAKER:
MOUNT/ENCLOSURE: SURFACE/NEMA 1 — LOCATION: MAIN FLOOR — MAIN LUGS: 100A

CKT NO	DESCRIPTION	LOAD	AMPS	POLES	A	B	C	POLES	AMPS	LOAD	DESCRIPTION	CKT NO
1	REC - RECEPTION	1260	20	1	2460			1	20	1200	LTG - RECEPTION GENERAL	2
3	REC - RECEPTION	1080	20	1		2112		1	20	1032	LTG - RECEPTION GENERAL	4
5	REC - BAR	1000	20	1			1800	1	20	800	LTG - RECEPTION CHANDELIER	6
7	REC - HALLWAY	1440	20	1	2259			1	20	819	LTG - KITCHEN, STORAGE	8
9	REC - BATHROOMS	360	20	1		1333		1	20	973	LTG - GROOM, BRIDE, UPSTAIRS	10
11	REC - BRIDES STORAGE	1080	20	1			1330	1	20	250	LTG - OUTSIDE	12
13	REC - GROOMS STORAGE	1080	20	1	1080					0	SPACE	14
15	REC - OWNERS STORAGE	720	20	1		1620		1	20	900	REC- KITCHEN	16
17	REC - STORAGE	1260	20	1			1860	1	20	600	REC - KITCHEN	18
19	REC - MEZZANINE	1100	20	1	1600			1	20	500	REC - DISPOSAL	20
21	REC - OUTSIDE	600	20	1		1400		1	20	800	REC - KITCHEN	22
23	SPACE	0					600	1	20	600	REC - KITCHEN	24
25	SPACE	0			1000			1	20	1000	REC - FRIDGE **	26
27	SPACE	0				1000		1	20	1000	REC - FRIDGE **	28
29	SPACE	0					1000	1	20	1000	REC - FREEZER **	30
31	SPACE	0			1000			1	20	1000	REC - FREEZER **	32
33	SPACE	0				0				0	SPACE	34
35	SPACE	0					0			0	SPACE	36
37	SPACE	0			0					0	SPACE	38
39	SPACE	0				1500		2	20	1500	WATER HEATER	40
41	SPACE	0					1500	-	-	1500	----------	42
TOTALS					9,399	8,965	8,090					

TOTAL LOAD: 26,454

LOADS	CONTINUOUS	NON-CONTINUOUS	DEMAND FACTOR/CALCULATION				DEMAND LOAD
EXISTING	0	0	125% x	0			0
LIGHTING	0	5,074	125% x	0	+ 100% x	5074	5,074
RECEPTACLE	0	10,980	100% x	10000	+ 50% x	980	10,490
MOTOR	0	0	125% x	0	+ 100% x	0	0
FIXED HEAT	0	0	100% x	0			0
A/C	0	0	100% x	0			
KITCHEN EQUIP.	0	7,400	100 % x	7400			7,400
MISC	0	3,000	125% X	0	+ 100% x	3000	3,000
					TOTAL DEMAND LOAD:		25,964 VA
							72 A

PANEL NOTES:
** PROVIDE GFCI BREAKER

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