WILMA P. MANKILLER HEALTH CENTER EXPANSION

BID PACKAGE 02

(CIVIL / ARCHITECTURAL / STRUCTURAL / MEP)

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Grand total: 226

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MECHANICAL / ELECTRICAL / PLUMBING ENGINEER

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EQUIPMENT PLANNER

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PROFESSIONAL SEAL:

STATE OF OKLAHOMA — JAMES R. CHILDERS — REGISTERED ARCHITECT

12-06-2019

CONSULTANT LOGO:

CLIENT:

THE CHEROKEE NATION — SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS:

#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: G0.02
COVER / INDEX

GENERAL NOTES

1. THE CONTRACTOR SHALL HAVE EXISTING UTILITIES LOCATED PRIOR TO CONSTRUCTION. CONTRACTOR SHALL CALL "OKIE" 1-800-522-6543 IN ADDITION TO DIRECT NOTIFICATION. CONTRACTOR SHALL BRACE UTILITY POLES AS NECESSARY. UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED TO THE UTILITY OWNER'S SPECIFICATIONS BY THE CONTRACTOR AT NO COST TO THE OWNER.
2. THE CONTRACTOR SHALL ESTABLISH, INSTALL, OPERATE, AND MAINTAIN COMPLETE AND ADEQUATE AND SAFE TRAFFIC CONTROLS DURING THE ENTIRE CONSTRUCTION PERIOD. ALL TRAFFIC CONTROL DEVICES SHALL BE APPROVED BY THE ENGINEER.
3. ALL DIMENSIONS OR ELEVATIONS WITH ± SHALL BE CONFIRMED BY THE CONTRACTOR.
4. ALL DIMENSIONS OF EXISTING STRUCTURES AND EQUIPMENT SHALL BE VERIFIED BY THE CONTRACTOR. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER & OWNER.
5. TOPSOIL IN THE DISTURBED AREAS SHALL BE REMOVED, STOCKPILED, AND RESTORED AFTER CONSTRUCTION OPERATIONS, IN ACCORDANCE WITH PROJECT SPECIFICATIONS. ALL EXCESS TOPSOIL SHALL BE CONSIDERED WASTE AND STOCKPILED ON-SITE BY THE CONTRACTOR, UNLESS OTHERWISE NOTED.
6. ALL DISTURBED ROADWAY AND DRIVEWAY SURFACES SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITION.
7. FALL PROTECTION AROUND ALL OPENINGS AND EXCAVATION SHALL BE MAINTAINED AT ALL TIMES.
8. NORTH ARROWS SHOWN ON DRAWINGS INDICATE LOCAL COORDINATE SYSTEM ESTABLISHED BY THE SURVEYOR, UNLESS OTHERWISE NOTED.
9. TRENCH SAFETY AND SHORING IN ACCORDANCE WITH CURRENT OSHA REGULATIONS SHALL BE EMPLOYED BY CONTRACTOR AT ALL TIMES.
10. IF AT ANY POINT CONSTRUCTION ACTIVITIES EXPOSE ARCHEOLOGICAL MATERIALS SUCH AS CHIPPED STONE, TOOLS, POTTERY, BONE, HISTORIC CROCKERY, GLASS, METAL ITEMS OR BUILDING MATERIALS, THE CHEROKEE NATION ARCHEOLOGIST SHALL BE CONTACTED IMMEDIATELY.
11. ALL STATIONS SHOWN ON THE PLANS ARE CENTERLINE STATIONS UNLESS NOTED OTHERWISE.
12. THE TOPOGRAPHIC SURVEY WAS COMPLETED BY NATIVE PLAINS SURVEYING & MAPPING, LLC. ALL EXISTING INFORMATION IS SHOWN AS ACCURATELY AS POSSIBLE BASE UPON FIELD RECONNAISSANCE AND RESEARCH. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING INFORMATION. IF CONTRACTOR BELIEVES EXISTING INFORMATION IS INACCURATE, THE CONTRACTOR MAY HAVE A NEW SURVEY COMPLETED AT NO ADDITIONAL COST TO THE OWNER, ARCHITECT, OR ENGINEER.
13. DIMENSIONS SHOWN ARE TO BACK OF CURB OR CENTERLINE OF PIPE UNLESS NOTED OTHERWISE.
14. CONTRACTOR SHALL REVIEW & COORDINATE W/ ARCHITECTURAL, MECH., ELEC., & PLUMBING DISCIPLINES DRAWINGS, SPEC'S & DETAILS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. IN THE EVENT THAT THE ARCH. &/OR CONTRACTOR DEVIATES CONSTRUCTION FROM THESE PLANS W/O THE EXPRESS WRITTEN APPROVAL OF THE ENGINEER, THE ARCH. &/OR CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR THOSE MODIFICATIONS.

EROSION CONTROL NOTES:

1. SILT FENCE SHALL BE MAINTAINED AND SEDIMENT BUILDUP REGULARLY REMOVED UNTIL PAVING OPERATIONS ARE COMPLETE AND/OR SEEDING IS IN PLACE AND 75% VEGETATION STABILIZATION IS OBTAINED.
2. ALL TREES, BRUSH, AND OTHER DEBRIS THAT MIGHT INTERFERE WITH THE FLOW OF WATER IS TO BE CLEANED OUT TO THE RIGHT-OF-WAY LINE AT EACH STRUCTURE, IN A MANNER APPROVED BY THE ENGINEER.
3. ALL FLOW LINES THAT ARE TO BE FILLED SHALL BE THOROUGHLY COMPACTED TO 95% STANDARD PROCTOR DENSITY BEFORE CONSTRUCTION OR EXTENSION OF DRAINAGE STRUCTURES.
4. IN ORDER TO ALLEVIATE DUST CONDITIONS DURING GRADING OPERATIONS, AND AFTER GRADING OPERATIONS ARE COMPLETED, BUT BEFORE PAVEMENT AND/OR PERMANENT EROSION CONTROL WORK IS COMPLETED, THE CONTRACTOR SHALL SPRINKLE GRADING AT INTERVALS APPROVED BY THE OWNERS REPRESENTATIVE.
5. ALL UNPAVED DISTURBED AREAS SHALL RECEIVE SLAB SOD FOR PERMANENT EROSION CONTROL, UNLESS NOTED OTHERWISE. THIS SHALL INCLUDE FERTILIZER, WATERING & MOWING AS REQUIRED TO ESTABLISH A VIABLE TURF.
6. AT THE BEGINNING OF THE TURF OPERATIONS, ANY AREAS INCLUDED IN PLANNED QUANTITIES THAT HAVE GROWN A SATISFACTORY VOLUNTEER TURF OF PERENNIAL GRASS AS DETERMINED BY THE OWNER'S REPRESENTATIVE, SHALL BE FERTILIZED AND WATERED BUT SHALL NOT BE SEEDED, SODDED OR SPRIGGED.
7. VEGETATIVE MULCH AND SEEDING SHALL BE UTILIZED FOR TEMPORARY EROSION CONTROL.
8. SEED: THE FOLLOWING KINDS OF SEEDS, AT ACRES-RATES INDICATED BELOW, SHALL BE PLANTED ON THE AREAS DESIGNATED FOR SEEDING.

TEMPORARY SEEDING

KINDS OF SEED TO BE FURNISHED	QUANTITY PER ACRE
COOL SEASON MIX-	
PERENNIAL RYEGRASS (LOLIUM PERENNE)	20 LBS. OF SEED
CRIMSOM CLOVER (TRIFOLIUM INCARNATUM)	12 LBS. OF SEED
WARM SEASON MIX-	
KOREAN LESPEDEZA (LESPEDEZA STRIATA)	12 LBS. OF SEED
CRIMSOM CLOVER (TRIFOLIUM INCARNATUM)	20 LBS. OF SEED
LITTLE BLUESTEM (ANDROPOGON SCOPARIUS)	12 LBS. OF SEED
COMMON BERMUDA (CYNODON DACYLON)	4 LBS. OF SEED

VEGETATIVE MULCHING: THE VEGETATIVE MULCH SHALL BE ANCHORED IN ACCORDANCE WITH THE "ADHESIVE SPRAY METHOD", AS SPECIFIED IN 233.04(b) OF THE ODOT STANDARD SPECIFICATIONS.

SEASONAL PLANTING RESTRICTIONS

THE PLANTING OF SPRIGGING SHALL BE RESTRICTED TO THE PERIOD FROM APRIL 1ST TO JUNE 30TH.

THE PLANTING OF TEMPORARY SEEDS (COOL SEASON MIX) SHALL BE RESTRICTED TO THE PERIOD FROM SEPTEMBER 1ST TO NOVEMBER 15TH.

THE PLANTING OF TEMPORARY SEEDS (WARM SEASON MIX) SHALL BE RESTRICTED TO THE PERIOD FROM MARCH 15TH TO JUNE 30TH.

AREAS ON WHICH SALVAGED TOPSOIL IS TO BE REPLACED SHALL HAVE 0-46-0 FERTILIZER APPLIED, AT THE RATE OF 150 LBS. PER ACRE, JUST PRIOR TO THE REPLACEMENT OF SALVAGED TOPSOIL.

SITE WORK NOTES

1. ALL EARTHWORK & PAVING MATERIALS & METHODS SHALL CONFORM WITH OKLAHOMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST REVISION, UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL REVIEW GEOTECHNICAL REPORT PREPARED BY BUILDING & EARTH, DATED AUGUST 30, 2018. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.THIS REPORT SHOULD BE CONSIDERED A PART OF THESE CONSTRUCTION DOCUMENTS.
3. ONLY REMOVE TREES THAT DIRECTLY INTERFERE WITH CONSTRUCTION. CONTRACTOR SHALL LIMIT CLEARING & GRUBBING TO BUILDING & PARKING AREA FOOTPRINT, AS MUCH AS POSSIBLE.
4. CONTRACTOR SHALL DISPOSE OF TREES, STUMPS, DEBRIS, ETC. OFF SITE IN A MANNER APPROVED BY THE OWNER.
5. ALL AREAS TO RECEIVE PAVING SHALL BE STRIPPED OF VEGETATION, TOPSOIL, SOFT OR OTHERWISE SUITABLE MATERIAL. THIS WOULD INCLUDE AREAS IDENTIFIED FOR UNDERCUT, AREA SHALL BE SCARIFIED TO A DEPTH OF 8 INCHES, MOISTURE CONDITIONED TO A RANGE OF 1% BELOW TO 3% ABOVE THE MATERIAL'S OPTIMUM MOISTURE CONTENT, & COMPACTED TO A DENSITY OF AT LEAST 95% OF THE STANDARD PROCTOR (ASTM D 698) MAXIMUM DRY DENSITY. SUBGRADE SHALL BE PROOF ROLLED WITH A ROLLER OR TRUCK (GROSS WEIGHT OF 25 TONS OR MORE). SOFT AREAS SHALL BE EXCAVATED & REPLACED WITH SUITABLE MATERIAL. PROOF ROLLING SHALL BE WITNESSED BY OWNER'S REPRESENTATIVE. OWNER SHALL DETERMINE SUITABILITY OF SUBGRADE. REFER TO GEOTECHNICAL RECOMMENDATIONS.
6. WHERE LIMESTONE IS EXPOSED AT FINISHED SUBGRADE, IT IS RECOMMENDED TO UNDERCUT THE LIMESTONE ROCK TO A LEVEL THAT WILL ALLOW FOR PLACEMENT OF AT LEAST 8" OF STRUCTURAL FILL TO PROVIDE FOR UNIFORM SUBGRADE CONDITIONS ACROSS PAVEMENT AREAS,
7. REMOVE ANY STUMPS, ROOTS LARGER THAN 2 INCHES IN DIAMETER, ROCKS LARGER THAN 3 INCHES AND ANY MATTED ROOTS, TO A DEPTH OF 18 INCHES BELOW ORIGINAL GROUND SURFACE.
8. SELECT FILL SHALL BE COMPOSED OF MATERIAL WITH MAXIMUM DRY DENSITY IN EXCESS OF 100 POUNDS PER CUBIC FOOT, PLASTICITY INDEX (PI) LESS THAN 18, AND A LIQUID LIMIT (LL) LESS THAN 40. STRUCTURAL FILL SHOULD BE FREE OF ANY ORGANICS, SHOULD NOT CONTAIN ROCK FRAGMENTS GREATER THAN 3 INCHES IN ANY DIMENSION, AND SHOULD BE PROPERLY MOISTURE CONDITIONED PRIOR TO USE AS SELECT FILL. SELECT FILL SHOULD BE COMPACTED TO A MINIMUM OF 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY AND WITHIN ±2% OF THE OPTIMUM MOISTURE AS DETERMINED BY ASTM D 698. THE FILL MATERIAL SHOULD BE SPREAD IN HORIZONTAL LIFTS STARTING AT THE LOWEST ELEVATION. THE LIFTS SHOULD NOT EXCEED 8 TO 12 INCHES IN LOOSE LIFT THICKNESS.
9. REUSE OF ON SITE SOILS AS FILL IS NOT RECOMMENDED BELOW PLANNED BUILDING OR PAVEMENT AREAS.
10. ALL DISTURBED AREAS THAT ARE NOT PAVED ARE TO RECEIVE SLAB SODDING.
11. EARTHWORKS SHALL BE PERFORMED IN SUCH A MANNER TO MINIMIZE PONDING WATER ON THE SUBGRADE. SITE SHALL MAINTAIN DRAINAGE AT ALL TIMES. MOISTURE CONTENT OF SOIL SHOULD BE MAINTAINED NEAR OPTIMUM DURING CONSTRUCTION.
12. ALL ROCKS AND DEBRIS SHALL BE REMOVED FROM ALL DRAINS PRIOR TO FINAL INSPECTION.
13. ROADSIDE HAZARDS SHALL BE COMPLETELY BARRICADED AROUND THEIR PERIMETER FOR THE SAFETY OF PEDESTRIANS AND VEHICLES.
14. ONLY THE AMOUNT OF TRENCH THAT CAN BE BACK FILLED OR SURFACED IN (2) DAYS SHALL BE ALLOWED OPEN UNLESS APPROVED BY OWNER'S REPRESENTATIVE.
15. ANY EXISTING FOUNDATIONS OR FOOTINGS SHALL BE REMOVED FULL DEPTH, & BACKFILLED WITH APPROVED COMPACTED MATERIAL.
16. THIS BID PACKAGE IS INTENDED TO INCLUDE FULL CONSTRUCTION DOCUMENTS THAT INCLUDE, SITE GRADING, RETAINING WALLS, RAMPS & STAIRS, PAVING & STRIPING, AND UTILITIES INCLUDING STORM NETWORK AND STRUCTURES. STORM WATER DETENTION AND POND GRADING WILL BE DONE ON FUTURE BID PACKAGE. REFER TO BID PACKAGE 1 FOR EROSION CONTROL AND DEMOLITION .

MATERIALS NOTES

1. ALL NEW WATER LINE PIPING SHALL BE AWWA C900, DR 14 PVC FOR 6" AND LARGER AND ASTM D2241 SDR 21 FOR 4" AND SMALLER OR APPROVED EQUAL.
2. GRAVITY SANITARY SEWER PIPE SHALL BE PVC SDR 35 ASTM 3034, OR APPROVED EQUAL.
3. ALL FITTINGS (TEES, BENDS, VALVES, ETC.) SHALL BE DUCTILE IRON MECHANICAL JOINTS (MJ) AND RESTRAINED (RJ). RESTRAINTS SHALL BE "MIDCO" AS MANUFACTURED BY MIDLAND MANUFACTURING COMPANY OR APPROVED EQUAL. THRUST BLOCKING SHALL ALSO BE REQUIRED. ALL FITTINGS TO BE POLY WRAPPED.
4. TAPPING SLEEVES SHALL BE SMITH-BLAIR 665 STAINLESS STEEL OR EQUAL. 200PSI.
5. STORM SEWER PIPING SHALL BE EITHER SDR 35 PVC PIPE (UP TO 15" DIAMETER) OR CORRUGATED HDPE (ADS N-12 OR EQUAL) UNLESS NOTED OTHERWISE ON PLANS. PIPES AND PIPE FITTINGS SHALL BE WATER AND SOIL TIGHT.

UTILITY CONTACTS			
WATER/SEWER	STILWELL UTILITIES	JEREMY JOHNSON	918-696-5084
ELECTRIC	STILWELL UTILITIES	JEREMY JOHNSON	918-696-5084
NATURAL GAS	NOPFA	JOHN WALKER	918-696-4177

UTILITY NOTES

1. ALL SANITARY SEWER AND PUBLIC WATER SUPPLY IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY STANDARD CONSTRUCTION SPECIFICATIONS.
2. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES AND SERVICES FROM DAMAGE. UTILITIES SHALL REMAIN IN SERVICE AT ALL TIMES, AND ANY DISRUPTION OF SERVICE SHALL BE AT THE CONTRACTOR'S SOLE EXPENSE.
3. ALL STRUCTURES AND MANHOLES SHALL BE CONSTRUCTED ON A MINIMUM THICKNESS OF 4" OF CLEAN COMPACTED CRUSHED ROCK UNLESS OTHERWISE NOTED. SUCH BEDDING SHALL BE APPROVED PRIOR TO PLACEMENT.
4. CONTRACTOR SHALL VERIFY PROPOSED WATER LINE ELEVATIONS TO INSURE NO CONFLICTS WITH EXISTING UTILITIES. MINOR FIELD ADJUSTMENTS NECESSARY TO AVOID CONFLICTS SHALL BE COORDINATED WITH THE APPROVAL OF THE ENGINEER.
5. CONTRACTOR SHALL VERIFY EXISTING PIPE SIZE, TYPE AND LOCATION TO INSURE PROPER CONNECTION.
6. ALL BURIED FITTINGS, SUCH AS BENDS, TEES, ETC., SHALL BE BLOCKED FOR THRUST, AS SHOWN ON THE STANDARD DETAIL DRAWING. THIS REQUIREMENT SHALL INCLUDE ALL PRESSURE PIPING AND LOW HEAD (GRAVITY) PIPING. COST SHALL BE INCLUDED IN OTHER ITEMS OF WORK.
7. MINIMUM DEPTH OF COVER SHALL BE 30-INCHES UNLESS OTHERWISE NOTED.
8. THE PLANS HAVE BEEN PREPARED TO SHOW THE APPROXIMATE LOCATION OF EXISTING KNOWN UTILITIES. THE CONTRACTOR SHALL CONTACT OKIE, EACH RESPECTIVE UTILITY COMPANY AND THE PROJECT OWNER TO DETERMINE THE EXACT LOCATION OF UNDERGROUND UTILITIES PRIOR TO EXCAVATION. ANY CHANGE IN ALIGNMENT OR GRADE CAUSED BY INTERFERING UTILITIES SHALL BE MADE BY THE CONTRACTOR AT NO COST TO THE OWNER AND THE ENGINEER NOTIFIED.
9. DEPTHS OF ANY EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. CONTRACTOR SHALL AT HIS OWN EXPENSE UNCOVER AND VERIFY THE LOCATION AND ELEVATION OF EXISTING UTILITIES IN ADVANCE OF THE CONSTRUCTION.
10. UTILITY PENETRATIONS INTO OR UNDER BUILDING FOUNDATION SHALL BE SEALED OR PLUGGED PER DETAIL PROVIDED.
11. CONTRACTOR SHALL CONTACT RESPECTIVE UTILITIES TO CONFIRM OR DETERMINE COSTS ASSOCIATED WITH OBTAINING OR EXTENDING UTILITIES FOR SERVICE. THIS MAY INCLUDE, BUT NOT LIMITED TO TAP FEES, SERVICE FEES, LINE EXTENSIONS FEES, METER FEES, ECT.

PROPOSED SITE LEGEND

- STORM PERFORATED PVC PIPE
- SD — SD — STORM WATER LINE
- W — W — WATER LINE
- UGE — UGE — UNDERGROUND ELECTRIC LINE
- GAS — GAS — GAS LINE
- SS — SS — SANITARY SEWER LINE
- CENTER LINE OF DRIVES
- XXX PROPOSED CONTOURS
- XXX EXISTING CONTOURS
- WM WATER METER
- GATE VALVE
- CLEAN OUT
- FIRE HYDRANT ASSEMBLY
- SIGNAGE
- DROP INLET
- SS SEWER MANHOLE
- MH EXISTING INLET MANHOLE ADJUSTMENT
- STORM MANHOLE
- SIDEWALK AREA
- GRAVEL PARKING

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PROFESSIONAL SEAL:

REGISTERED PROFESSIONAL ENGINEER — H. WAYNE BARKER — 12-6-19 — 11513 — OKLAHOMA

CONSULTANT LOGO:

Barker & Associates
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Durant, OK 74701
580.931.9045
OK. CA. 3590
EXP. 06/30/2020

CLIENT:

THE CHEROKEE NATION — TRIBE OF INDIANS — SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: C003

GENERAL NOTES

FOUNDATION NOTES

GENERAL:

THE FOUNDATION NOTES INCLUDED HEREIN ARE A SUMMARY OF THE REQUIREMENTS OF THE PROJECT GEOTECHNICAL REPORT. THESE NOTES ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY.

IF THERE ARE DISCREPANCIES BETWEEN THE FOUNDATION NOTES AND THE PROJECT GEOTECHNICAL REPORT, THE PROJECT GEOTECHNICAL REPORT SHALL GOVERN.

A SUBSURFACE SOIL INVESTIGATION HAS BEEN MADE BY BUILDING & EARTH GEOTECHNICAL, ENVIRONMENTAL, AND MATERIALS ENGINEERS, PROJECT NO. OK180172.

A REPORT OF THAT INVESTIGATION DATED AUGUST 30, 2018 ALONG WITH ADDENDUM NO. 1 DATED JANUARY 15, 2019 IS AVAILABLE FOR VIEWING IN THE PROJECT MANUAL.

THE FOUNDATION SYSTEM FOR THIS PROJECT IS SPREAD FOOTINGS OVER ENGINEERED FILL.

ADDITIONAL INFORMATION CONCERNING THE SPECIFIC SITE SOIL CONDITIONS TO BE ENCOUNTERED ARE IN THE PROJECT SOILS REPORT AND SHALL BE REVIEWED AND FULLY UNDERSTOOD BY THE CONTRACTOR.

IF THERE ARE ANY QUESTIONS REGARDING THE REQUIREMENTS OF THE PROJECT GEOTECHNICAL REPORT, THE CONTRACTOR SHALL ISSUE RFI'S (REQUESTS FOR INFORMATION) TO THE ARCHITECT FOR CLARIFICATION. NO EARTHWORK SHALL PROCEED UNTIL THE REQUIREMENTS OF THE PROJECT GEOTECHNICAL REPORT ARE FULLY UNDERSTOOD BY THE CONTRACTOR.

FIELD OBSERVATION AND TESTS:

THE OWNER SHALL EMPLOY THE SERVICES OF A REGISTERED, LICENSED GEOTECHNICAL ENGINEER TO OBSERVE ALL CONTROLLED EARTHWORK. THE GEOTECHNICAL ENGINEER SHALL PROVIDE CONTINUOUS ON-SITE OBSERVATION BY EXPERIENCED PERSONNEL DURING CONSTRUCTION OF CONTROLLED EARTHWORK. THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER AT LEAST TWO WORKING DAYS IN ADVANCE OF ANY FIELD OPERATIONS OF THE CONTROLLED EARTHWORK.

TESTS OF MATERIALS SHALL BE MADE AT THE FOLLOWING MINIMUM RATES. THE ON-SITE GEOTECHNICAL ENGINEER SHALL DETERMINE THE ACTUAL TESTING RATES:

ONE FIELD DENSITY TEST PER 2500 SQUARE FEET OF COMPACTED SUBGRADE, PRIOR TO PLACING STRUCTURAL FILL, WITH A MINIMUM OF 3 TESTS.

ONE FIELD DENSITY TEST PER 2500 SQUARE FEET OF STRUCTURAL FILL PLACED OR EACH HORIZONTAL LAYER OF STRUCTURAL FILL, WHICHEVER IS THE GREATER FREQUENCY.

ONE MOISTURE-DENSITY CURVE FOR EACH TYPE OF MATERIAL USED, AS INDICATED BY THE SIEVE ANALYSIS AND THE PLASTICITY INDEX.

THE GEOTECHNICAL ENGINEER SHALL SUBMIT THE RESULTS OF ALL REQUIRED TESTS.

CLEARING AND GRUBBING:

REMOVE ALL BRUSH, RUBBISH, GRASS, AND GRASS ROOTS FROM THE CONSTRUCTION AREA.

REMOVE STUMPS, MATTED ROOTS AND ROOTS LARGER THAN 2 INCHES IN DIAMETER WITHIN 6 INCHES OF THE SURFACE OF AREAS ON WHICH FILL AND/OR FOOTINGS ARE TO BE CONSTRUCTED.

REMOVE ALL TOPSOIL FROM THE CONSTRUCTION AREA. THIS MATERIAL SHALL NOT BE USED AS FILL MATERIAL, BUT MAY BE STOCKPILED AND LATER USED IN THE TOP 6 INCHES OF FILL OUTSIDE THE BUILDING PAD.

SITE, SUBFLOOR AND BEARING SURFACE PREPARATION:

A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHALL BE PRESENT TO CONFIRM COMPLETE EXCAVATION OF ANY UNCONTROLLED FILL AND TO ENSURE SOIL CONDITIONS ARE SIMILAR TO THOSE ANTICIPATED FROM THE SOIL BORINGS. RETAINING WALL FOOTINGS ARE TO BEAR IN EXISTING FILL OF LOWER CONSISTENCY SOIL AND OVER-SIZED ROCK FRAGMENTS.

THE CONTRACTOR SHALL BE PREPARED TO OVEREXCAVATE ALL SOILS UNDERLYING RETAINING WALL FOOTINGS, ALL UNCONTROLLED FILL, SOFT AND OVERSIZED MATERIALS GREATER THAT 6 INCHES TO A MINIMUM DEPTH OF 3 FEET. ADDITIONAL REMOVAL AS REQUIRED BY THE GEOTECHNICAL ENGINEER SHALL BE PROVIDED AS A UNIT COST BY THE CONTRACTOR.

SCARIFY ALL EXPOSED SUBGRADE SOILS TO A DEPTH OF 12 INCHES, MOISTEN TO OPTIMUM MOISTURE CONTENT +/- 2% AND COMPACT TO THE DENSITY SPECIFIED HEREINAFTER.

RETAINING WALLS SHALL BE BACKFILLED WITH PROPERLY COMPACTED AND APPROVED LOWER PLASTICITY STRUCTURAL FILL.

PLACE ALL STRUCTURAL FILL IN APPROXIMATELY HORIZONTAL LAYERS NOT GREATER THAN 8 INCHES IN LOOSE THICKNESS, MOISTEN TO OPTIMUM MOISTURE CONTENT +/- 2% AND COMPACT TO DENSITY SPECIFIED HEREINAFTER.

ALL EARTHWORK FOR THE RETAINING WALLS SHALL EXTEND A MINIMUM OF 1:2, HORIZONTAL TO VERTICAL, FEET BEYOND THE PERIMETER FOOTINGS. FOR EXAMPLE, A MINIMUM OF 1 FOOT 6 INCHES IS REQUIRED FOR THE 3 FOOT MINIMUM OF OVEREXCAVATION. ADDITIONAL EXTENSION BEYOND THE EDGE OF FOOTING MAY BE REQUIRED AS A RESULT OF THE GEOTECHNICAL ENGINEER'S OR THEIR REPRESENTATIVE DURING FIELD VERIFICATION. THIS ADDITIONAL EXTENSION SHALL BE PROVIDED AT A UNIT COST.

STRUCTURAL FILL REQUIREMENTS:

GRADATION (ASTM D422):

SIEVE SIZE	PERCENT PASSING BY WEIGHT
3"	100
NO.200	>15

PLASTICITY INDEX (ASTM D4318): 18 MAXIMUM
LIQUID LIMIT (ASTM D4318): 40 MAXIMUM

MATERIAL LARGER THAN 3 INCHES SHALL NOT BE PLACED IN THE STRUCTURAL FILL.

OR FLOWABLE CONCRETE FILL (300PSI)

NO BRUSH, SOD, FROZEN MATERIAL OR OTHER UNSUITABLE MATERIAL SHALL BE PLACED IN THE STRUCTURAL FILL. MATERIAL SHALL BE PLACED IN SUCH A MANNER AS TO RESULT IN A UNIFORMLY COMPACTED FILL.

1. BASED ON THE REQUIREMENTS FOR THE STRUCTURAL FILL AND THE DESCRIPTION OF THE EXISTING SITE SOILS IN THE PROJECT GEOTECHNICAL REPORT, THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE MOST APPROPRIATE METHOD FOR PROVIDING THE REQUIRED STRUCTURAL FILL. SITE SOILS ARE NOT SUITABLE FOR USE AS STRUCTURAL FILL BELOW THE RETAINING WALLS. FILL BELOW RETAINING WALL FOOTINGS SHALL CONSIST OF PROPERLY COMPACTED STRUCTURAL FILL OR FLOWABLE FILL.

GRANULAR FILL REQUIREMENTS:

OPEN GRADED GRANULAR FILL SHALL BE ASTM NO. 57 STONE OR APPROVED SIMILAR MATERIAL.

COMPACTION REQUIREMENTS:

EXCESSIVE HEAVY GRADING EQUIPMENT SHALL NOT BE ALLOWED WITHING 5 FEET (HORIZONTALLY) OF WALLS. COMPACTION IN THESE AREAS SHALL BE WITH SMALLER COMPACTION EQUIPMENT AND CARE SHOULD BE EXCERCISED TO NOT OVERLOAD OR DAMAGE THE WALLS OR FOUNDATIONS.

IN ACCORDANCE WITH ASTM D698 (STANDARD PROCTOR), SUBGRADE SOILS AND STRUCTURAL FILL MATERIALS SHALL BE COMPACTED TO THE FOLLOWING PERCENTAGES OF THE MAXIMUM DRY DENSITY AT +/- 2% OPTIMUM MOISTURE CONTENT:

MATERIAL	MINIMUM PERCENT COMPACTION
STRUCTURAL FILL BELOW RETAINING WALL FOOTINGS	95
SUBBASE FOR SLAB SUPPORT	95
SUBGRADE BELOW STRUCTURAL FILL	95
MISCELLANEOUS BACKFILL	90

SITE RETAINING WALL DESIGN CRITERIA:

LOADING CONDITION	EQUIVALENT FLUID PRESSURE
ACTIVE EARTH PRESSURE	40 PCF
PASSIVE EARTH PRESSURE	250 PCF
EARTH PRESSURE AT REST	60 PCF
SOIL FRICTION FACTOR	0.35
SOIL BEARING CAPACITY	1500 PSF
UNIT WEIGHT	120PCF

CODES AND MANUALS:

IBC-15 INTERNATIONAL BUILDING CODE 2015
ASCE/SEI 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
ACI 318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
ACI 530-13 BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES

DESIGN CRITERIA:

VERTICAL:

LIVE LOAD
VEHICLE SURCHARGE 40 PSF

SNOW LOAD
GROUND SNOW LOAD PG=15 PSF
**INCLUDES 5 PSF RAIN-ON SNOW SURCHARGE LOAD

HORIZONTAL:

WIND
ULTIMATE DESIGN WIND SPEED 115 MPH
RISK CATEGORY II
EXPOSURE C

SEISMIC
SEISMIC IMPORTANCE FACTOR IE = 1.0
MAPPED SPECTRAL RESPONSE ACCELERATIONS
SHORT PERIOD SS=0.161G
1 SECOND PERIOD S1=0.086G
SITE CLASS C
SPECTRAL RESPONSE COEFFICIENTS
SHORT PERIOD SDS=0.129G
1 SECOND PERIOD SD1=0.097G
SEISMIC DESIGN CATEGORY B
BASIC SEISMIC FORCE RESISTING SYSTEM:
BUILDING FRAMING SYSTEM - ORDINARY STEEL CONCENTRICALLY BRACED FRAMES
SEISMIC RESPONSE COEFFICIENT CS=0.010
RESPONSE MODIFICATION FACTOR R = 3
DESIGN BASE SHEAR V = 0.010W
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

ALLOWABLE SOIL BEARING PRESSURE = 1500 PSF (RETAINING WALL FOUNDATIONS)

FROST DEPTH = 24 INCHES

FUTURE BUILDING EXPANSION: NONE

GENERAL:

STRUCTURAL DRAWINGS ARE NOT STAND-ALONE DOCUMENTS AND ARE INTENDED TO BE USED IN CONJUNCTION WITH CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND DRAWINGS FROM OTHER DISCIPLINES. THE CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS INTO THE SHOP DRAWINGS AND FIELD WORK.

COORDINATE DIMENSIONS OF ALL OPENINGS, DEPRESSIONS, BLOCKOUTS, ETC. WITH ARCHITECTURAL DRAWINGS, DRAWINGS FROM OTHER DISCIPLINES, PROJECT SHOP DRAWINGS, AND FIELD CONDITIONS PRIOR TO SHOP DRAWING SUBMITTAL. THE STRUCTURAL DRAWINGS ONLY REPRESENT A PORTION OF THE REQUIREMENTS FOR THE PROJECT.

CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD.

SHOP DRAWINGS SHALL BE FURNISHED AND REVIEWED BEFORE ANY FABRICATION OR ERECTION IS STARTED. THE CONTRACTOR SHALL REVIEW AND APPROVE SHOP DRAWINGS PRIOR TO SUBMITTAL TO THE ARCHITECT FOR REVIEW. POORLY EXECUTED SHOP DRAWINGS WILL BE REJECTED AND SHALL BE RESUBMITTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE AND ADEQUATE SHORING FOR ALL PARTS OF THE STRUCTURE DURING CONSTRUCTION.

TEMPORARY PROVISIONS SHALL BE MADE FOR STRUCTURAL STABILITY DURING CONSTRUCTION. THE STRUCTURE SHOWN ON THE DRAWINGS HAS BEEN DESIGNED FOR STABILITY UNDER FINAL CONFIGURATION.

NOTCHING OR CUTTING ANY STRUCTURAL MEMBER IN THE FIELD IS PROHIBITED.

THE CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF FOUNDATIONS UNDER MECHANICAL AND ELECTRICAL EQUIPMENT AS REQUIRED. NO CONCRETE PADS SHALL BE LOCATED ON ROOF UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.

BACKFILL SHALL NOT BE PLACED BEHIND RETAINING WALLS UNTIL CONCRETE HAS ATTAINED 100 PERCENT OF DESIGN STRENGTH.

REMOVAL OF FORMS AND SHORING SHALL BE IN ACCORDANCE WITH ACI 347. WHERE CONCRETE MUST SUPPORT SUPERIMPOSED LOADS PRIOR TO ATTAINING THE SPECIFIED DESIGN STRENGTH, RESHORE CONCRETE IN ACCORDANCE WITH ACI 347. RESHORING SHALL NOT BE REMOVED SOONER THAN 28 DAYS FROM THE DATE OF POUR OR UNTIL CONCRETE HAS ATTAINED THE SPECIFIED DESIGN STRENGTH.

THE CONTRACTOR SHALL SUBMIT FOR PRIOR APPROVAL THE END OF POUR LOCATIONS FOR CONCRETE FOOTINGS AND WALLS.

PROTECTION: PROPER PRECAUTIONS SHALL BE TAKEN AT ALL TIMES TO PROTECT VEHICULAR AND PEDESTRIAN TRAFFIC FROM ANY DAMAGE OR INJURY WHICH MAY BE CAUSED, EITHER DIRECTLY OR INDIRECTLY, BY THE WORK INCLUDED ON THESE DRAWINGS. SUCH PRECAUTIONS SHALL INCLUDE THE ERECTION AND MAINTENANCE OF FENCES, BARRICADES, RAILINGS, GUARDS, SIGNS, COVERINGS, LIGHTS, AND OTHER PRECAUTIONS AS MAY BE REQUIRED. IF AT ANY TIME, IN THE OPINION OF THE OWNER OR THE OWNER'S REPRESENTATIVE, PROPER PRECAUTIONS ARE NOT BEING TAKEN TO SECURE THIS PROTECTION, THE CONTRACTOR SHALL AT NO ADDITIONAL COST TO THE OWNER, INSTALL AND MAINTAIN SUCH ADDITIONAL PROTECTION AS MAY BE DIRECTED BY THE OWNER.

POLLUTION CONTROLS: USE WATER SPRINKLING, TEMPORARY ENCLOSURES, AND OTHER SUITABLE METHODS TO LIMIT DUST AND DIRT RISING AND SCATTERING IN THE AIR TO LOWEST PRACTICAL LEVEL. COMPLY WITH GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.

DRAWINGS:

DO NOT SCALE DRAWINGS.

WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN. DETAILS ON DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. DETAILS NOTED "TYPICAL" APPLY TO ALL SIMILAR CONDITIONS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ELSEWHERE ON THE PROJECT.

FAST-TRACK/PHASED CONSTRUCTION:

THE STRUCTURAL PORTION OF THIS PROJECT IS BEING DESIGNED, BID, PERMITTED, AND CONSTRUCTED PRIOR TO THE COMPLETION OF ARCHITECTURAL, ENGINEERING, AND OTHER DESIGN TEAM CONSTRUCTION DOCUMENTS. THE OWNER, ARCHITECT, AND CONTRACTOR SHALL BE AWARE THAT THIS ACCELERATED STRUCTURAL SCHEDULE CREATES INHERENT RISK OF FUTURE CHANGES DUE TO DESIGN COORDINATION WITH OTHER DISCIPLINES. WHILE EVERY EFFORT HAS BEEN MADE TO MINIMIZE THESE CHANGES, THE RISK OF ADDED COSTS DUE TO THESE CHANGES SHALL BE UNDERSTOOD AND ACCEPTED BY ALL PARTIES.

DRAWINGS THAT DO NOT HAVE AN ENGINEERING SEAL BY THE STRUCTURAL ENGINEER OF RECORD OR NOT LABELED AS CONSTRUCTION DRAWINGS ARE PRELIMINARY AND SUBJECT TO CHANGE. IF THESE DOCUMENTS ARE BEING USED FOR PRICING, BIDDING, STEEL MILL ORDER, OR PREPARATION OF SHOP DRAWINGS, THE CONTRACTOR SHALL ANTICIPATE FUTURE DRAWING REVISIONS THAT MAY AFFECT THIS WORK OR INCREASE CONSTRUCTION COSTS. THE STRUCTURAL ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY CHANGE ORDER COSTS INCURRED DUE TO THESE DRAWING REVISIONS, AND THE CONTRACTOR SHALL CONSIDER THESE ANTICIPATED COSTS IN ANY BIDS OR PRICE GUARANTEES TO THE OWNER.

USE THE MOST CURRENT SET OF DRAWINGS IN PREPARATION OF ALL SUBMITTALS. ALL SUBMITTALS SHALL LIST THE DATE OF THE DRAWINGS USED TO PREPARE THE SUBMITTAL. SUBMITTALS PREPARED FROM OUTDATED DRAWINGS MAY BE REJECTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING THE LATEST SET OF CONSTRUCTION DRAWINGS AND DISTRIBUTING TO THE APPROPRIATE PARTIES.

CAST-IN-PLACE CONCRETE:

ALL CONCRETE SHALL CONFORM TO THE SPECIFICATIONS FOR STRUCTURAL CONCRETE, ACI 301-10.

ALL EXPOSED EDGES OF CONCRETE SHALL HAVE A 3/4" CHAMFER UNLESS NOTED OTHERWISE.

NORMALWEIGHT CONCRETE:

A. F'C = 3500 PSI @ 28 DAYS - ALL CONCRETE EXPOSED TO FREEZE/THAW CYCLES AND OCCASIONAL MOISTURE, INCLUDING CONCRETE FLAT WORK, EXPOSED BUILDING STEM WALLS, SITE WALLS, ETC...
EXTERIOR CONCRETE SHALL MEET EXPOSURE CATEGORY AND CLASS F1 ACCORDING TO ACI 318 TABLE 19.3.1.1.
B. F'C = 3000 PSI @ 28 DAYS - ALL FOOTING CONCRETE (I.E. FOOTINGS, ETC.).

CONCRETE MIX DESIGNS (INCLUDING AIR CONTENT, WATER TO CEMENT RATIOS, AND OTHER CRITERIA) SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN ACI 318 TABLE 19.3.2.1, BASED ON THE EXPOSURE CATEGORIES AND CLASSES DEFINED IN ACI 318 TABLE 19.3.1.1. USE AIR ENTRAINING ADMIXTURE IN ALL EXTERIOR CONCRETE. AIR CONTENT IN FIRE RATED SLABS SHALL ALSO COMPLY WITH THE REQUIREMENTS IN THE SPECIFIED UL LISTING.

COLD WEATHER CONCRETING: PROTECT CONCRETE WORK FROM PHYSICAL DAMAGE OR REDUCED STRENGTH CAUSED BY FROST, FREEZING OR LOW TEMPERATURES. COMPLY WITH ACI 306.1.

HOT WEATHER CONCRETING: WHEN HOT WEATHER CONDITIONS EXIST THAT WOULD IMPAIR THE QUALITY AND STRENGTH OF THE CONCRETE, REDUCE DELIVERY TIME OF READY-MIX CONCRETE, LOWER THE TEMPERATURE OF MATERIALS, OR ADD RETARDER TO ENSURE THAT THE CONCRETE IS PLASTIC. RETEMPERING WITH WATER IS NOT ALLOWED. COMPLY WITH ACI 305R.

THE CONTRACTOR IS ALLOWED TO CAST FOUNDATIONS AGAINST EXCAVATED SOIL SURFACES, PROVIDED THE FOLLOWING IS ADHERED TO:

A. THE SIDE SLOPES OF THE EXCAVATION SHALL BE ABLE TO MAINTAIN VERTICAL SLOPE WITHOUT SOIL SLOUGHAGE.
B. THE BOTTOM WIDTH OF THE EXCAVATION SHALL BE ONE INCH WIDER MINIMUM ON EACH SIDE THAN THE SPECIFIED FOOTING WIDTH.
C. THE SIDE WALLS OF THE EXCAVATION SHALL BE BATTERED A MINIMUM OF ONE INCH HORIZONTAL TO TWELVE INCHES VERTICAL.
D. IF SANDY OR LOOSE MATERIALS ARE ENCOUNTERED, THE FOOTING MUST BE FORMED.
E. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ANY SOIL SLOUGHAGE FROM THE WET CONCRETE DURING THE CASTING OPERATION.
F. THE CONTRACTOR AGREES TO REMOVE AND RECAST ANY FOOTING WHERE THE ABOVE CONDITIONS ARE NOT MET.

EXPOSED SITE WALLS, RETAINING WALLS, AND STEM WALLS GREATER THAN 30 FEET IN LENGTH SHALL HAVE CONTROL JOINTS INSTALLED AT THE FOLLOWING MAXIMUM SPACING:

12'-0" ON CENTER FOR WALLS 6'-0" MAXIMUM HEIGHT
10'-0" ON CENTER FOR WALLS 10'-0" MAXIMUM HEIGHT
20'-0" ON CENTER FOR WALLS GREATER THAN 10'-0" IN HEIGHT

ALL CONCRETE EXPOSED TO GROUND SHALL BE MANUFACTURED WITH PORTLAND CEMENT TYPE II OR TYPE V.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE FABRICATED AND PLACED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-14), AND DETAILS AND DETAILING OF CONCRETE REINFORCEMENT (ACI 315-99).

ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60; EXCEPT STIRRUPS, TIES AND INDICATED FIELD-BENT BARS, WHICH SHALL CONFORM TO ASTM A615 GRADE 40.

ALL WELDED WIRE FABRIC SHALL BE DEFORMED AND SHALL CONFORM TO ASTM A479. PROVIDE IN FLAT SHEETS ONLY.

TENSION AND COMPRESSION LAPS IN REINFORCING SHALL CONFORM TO THE LAP SPLICE SCHEDULE ON SHEET [S-601] AND BE IN ACCORDANCE WITH ACI 318, CHAPTER 12, UNLESS NOTED OTHERWISE.

ALL HORIZONTAL REINFORCING IN FOOTINGS, WALLS AND BEAMS SHALL BE CONTINUOUS AROUND CORNERS OR HAVE BENT (CORNER) BARS OF THE SAME SIZE AND SPACING AS THE HORIZONTAL BARS AND LAP 30 BAR DIAMETERS (24" MINIMUM).

CONCRETE COVER FOR REINFORCING SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:

A. CONCRETE FOR FOUNDATIONS CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:3"
B. CONCRETE CAST AGAINST FORMS BUT EXPOSED TO EARTH OR WEATHER:
1. BARS LARGER THAN NO. 5:2"
2. BARS NO. 5 OR SMALLER:1 1/2"

FORM TIES SHALL BE EITHER OF THE THREADED OR SNAP-OFF TYPE SO THAT NO METAL WILL BE LEFT WITHIN 1 INCH OF THE SURFACE OF THE WALL. FOLLOWING REMOVAL OF FORM TIES, RECESSES ARE TO BE CAREFULLY FILLED AND POINTED WITH MORTAR. COORDINATE RUB REQUIREMENTS WITH ARCHITECTURAL FOR ANY COLOR REQUIREMENTS.

REINFORCING SHALL NOT BE TACK WELDED OR WELDED IN ANY MANNER UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL PLANS.

BAR SUPPORTS AND SPACERS FOR REINFORCING SHALL BE PROVIDED IN ACCORDANCE WITH ACI 315-99. REINFORCING SHALL BE SECURELY TIED TO SUPPORTS.

SPECIAL INSPECTION:

THE OWNER SHALL PROVIDE FOR SERVICES OF A CERTIFIED INSPECTOR (APPROVED BY THE BUILDING OFFICIAL OR THE ENGINEER OF RECORD) IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE FOR THE SPECIAL INSPECTION ITEMS NOTED AS FOLLOWS:

SOIL EXCAVATION AND BEARING MATERIAL APPROVAL
CONCRETE FOOTING AND WALL REINFORCING
CONCRETE AND CONCRETE PLACEMENT

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EXP. 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

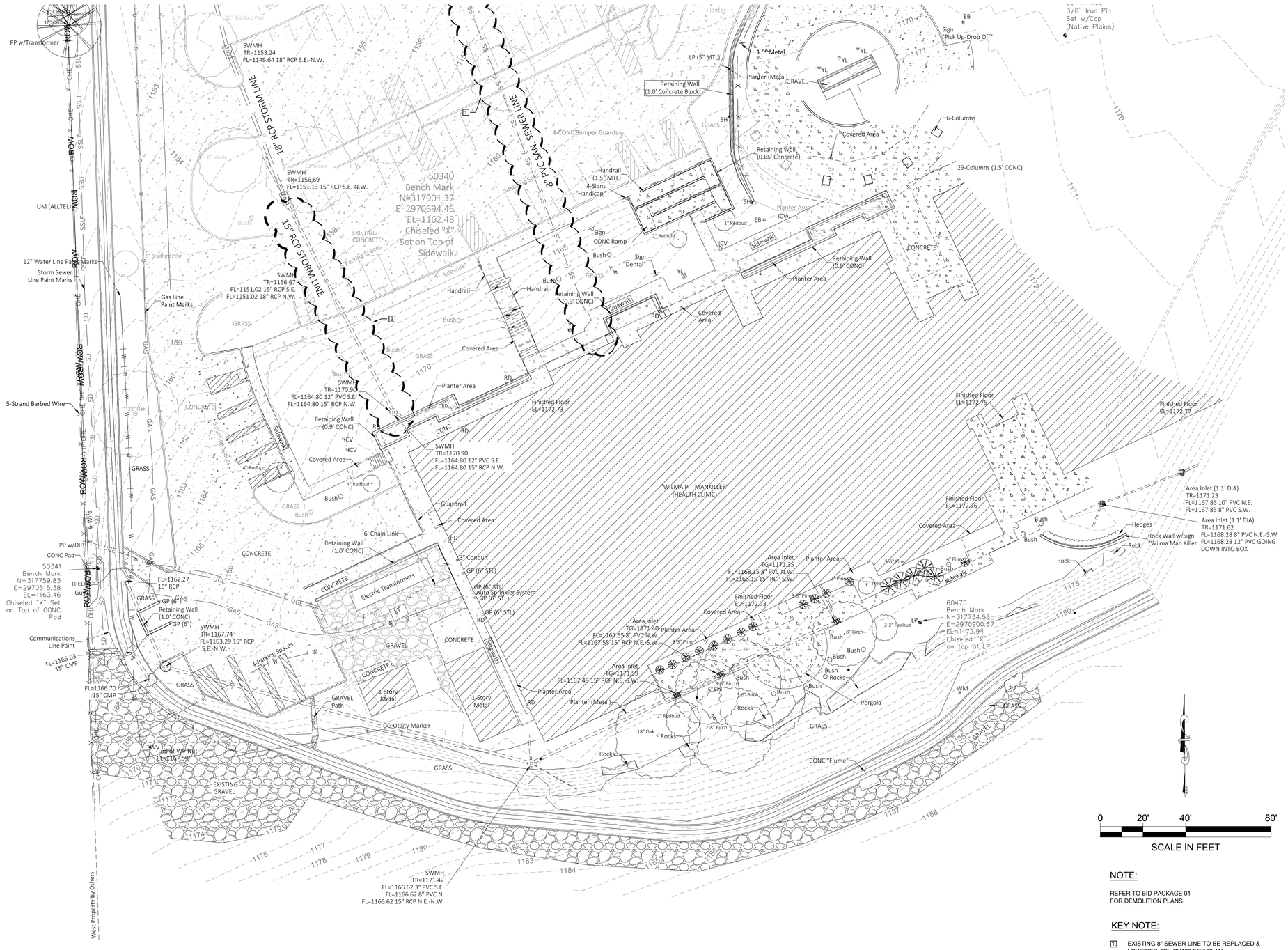
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
C004

WALL GENERAL NOTES



NOTE:

REFER TO BID PACKAGE 01
FOR DEMOLITION PLANS.

KEY NOTE:

[1] EXISTING 8" SEWER LINE TO BE REPLACED & LOWERED. RE: CU100 FOR PLAN.

[2] EXISTING 15" Ø RCP PIPE TO BE REPLACED & LOWERED. RE: CU101 & CU102 FOR PLAN.

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EXP. 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER:

CS103

ENLARGED EXISTING SITE PLAN

KEY NOTE:

1 EXISTING 8" SEWER LINE TO BE REPLACED & LOWERED. RE: CU100 FOR PLAN.

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

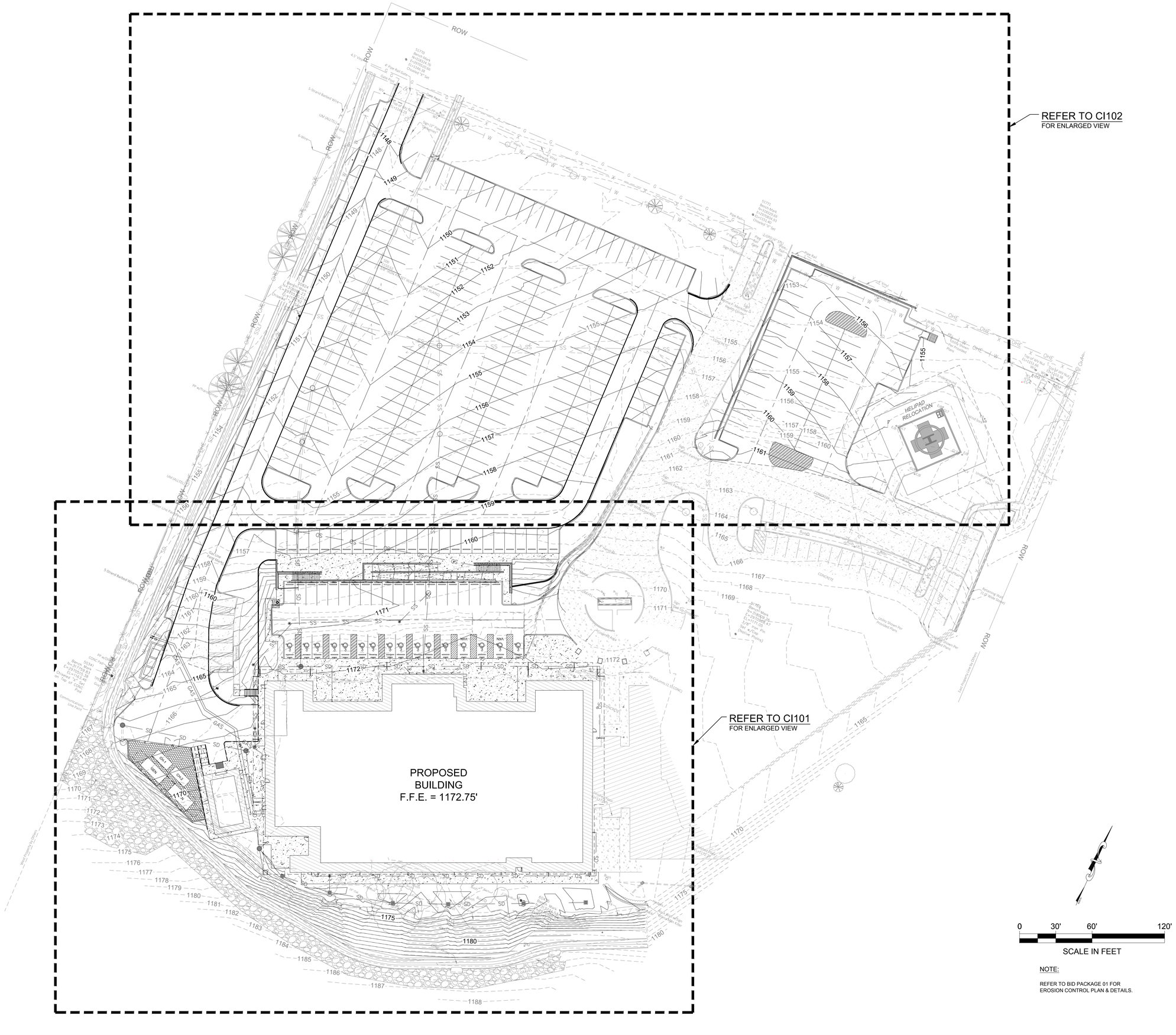
REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: CS104

ENLARGED EXISTING SITE PLAN



NOTE:

REFER TO BID PACKAGE 01 FOR EROSION CONTROL PLAN & DETAILS.

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: CI100

OVERALL PROPOSED SITE PLAN

PROPOSED CURB, RE: CP101 FOR PLAN & CP500 FOR DETAILS

PROPOSED RETAINING WALL RE: CG300 FOR PLAN & CG301 FOR PROFILE RE: CG504 FOR DETAILS

PROPOSED DUMPSTER AREA

PROPOSED WHEEL STOPS (TYP) RE: CP501 & FOR DETAILS

PROPOSED STAIRS & RAMPS AREA RE: CG302-CG304 FOR WALL PLAN & PROFILES RE: CG500 FOR WALL DETAILS & DIMENSION RE: CG501-CG502 FOR SECTION DETAILS

PROPOSED HANDICAP PARKING RE: CP103 FOR PLAN & CP501 FOR DETAILS

PROPOSED STAIRS RE: CG500 FOR DETAILS

PROPOSED DOCK WALL RE: CP101 FOR PLAN & CG503 FOR DETAILS

PROPOSED SIDEWALK SECTION @ DOOR OPENING RE: CP500 FOR DETAIL

PROPOSED MECHANICAL YARD RE: MEP FOR LAYOUT & DETAILS

PROPOSED BUILDING F.F.E. = 1172.75'

F.F.E. = 1172.75'

PROPOSED SIDEWALK RE: CP100 FOR PLAN & CP500 FOR DETAILS

PROPOSED PRE-ENGINEERED METAL BUILDING. RE: ARCH. FOR DETAILS

BUILDING CONTROL POINT

0 20' 40' 80'

SCALE IN FEET

DEMOLITION LEGEND:

- A PROPOSED CONCRETE RAMPS. RE: CG300 FOR PLAN & CG501 FOR DETAILS.
- B ROOF DRAIN CONNECTIONS RE: ARCH (TYP.)
- C PROPOSED 3" WATER LINE RE: CU100 FOR PLAN & CU500 FOR DETAILS.
- D PROPOSED 6" FIRE LINE RE: CU100 FOR PLAN & CU500 FOR DETAILS.
- E PROPOSED STORM LINE RE: CU101-CU102 FOR PLAN & CU501-CU503 FOR DETAILS.
- F PROPOSED 4" SEWER LINE RE: CU100 FOR PLAN & CU504 FOR DETAILS.
- G PROPOSED 2" GAS LINE RE: CU100 FOR PLAN.

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: CI101

ENLARGED PROPOSED SITE PLAN

PROPOSED DETENTION POND TO BE PROVIDED IN FUTURE BID PACKAGE.

PROPOSED CONCRETE FLUME & STORM PIPE OUTLET.

PROPOSED CURB, RE: CP102 FOR PLAN & CP500 FOR DETAILS

PROPOSED STRIPPED ISLAND RE: CP104 FOR PLAN & CP501 FOR DETAILS

PROPOSED CONCRETE FLUME WITH RIP/RAP RE: CP102 FOR PLAN & CP500 FOR DETAIL

PROPOSED DETENTION POND TO BE PROVIDED IN FUTURE BID PACKAGE.

HELIPAD RELOCATION

0 20' 40' 80'

SCALE IN FEET

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CLIENT:

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: CI102

ENLARGED PROPOSED SITE PLAN

RE: CP102 FOR ENLARGED PAVING PLAN.
RE: CP104 FOR ENLARGED STRIPING PLAN.

RE: CP101 FOR ENLARGED PAVING PLAN.
RE: CP103 FOR ENLARGED STRIPING PLAN.

0 30' 60' 120'
SCALE IN FEET

PROPOSED BUILDING
F.F.E. = 1172.75'

F.F.E. = 1172.75'

HELIPAD RELOCATION

ROW

N87° 57' 08.10"E
302.24'

N87° 57' 08.10"E
16.02'

L=34.562, R=22.048
Δ=89.8130

L=34.721, R=21.999
Δ=90.4280

N2° 02' 51.90"W
398.86'

N2° 02' 51.90"W
135.01'

N2° 02' 44.41"W
176.82'

S2° 02' 54.70"E
120.92'

277.40'
S2° 02' 51.90"E

250.23'
S2° 02' 51.90"E

223.06'
S2° 02' 51.90"E

N64° 56' 56.70"E
259.58'

L=33.285, R=28.000
Δ=68.1106

N64° 56' 56.70"E
238.64'

N6° 09' 26.34"W
137.73'

428.58'

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

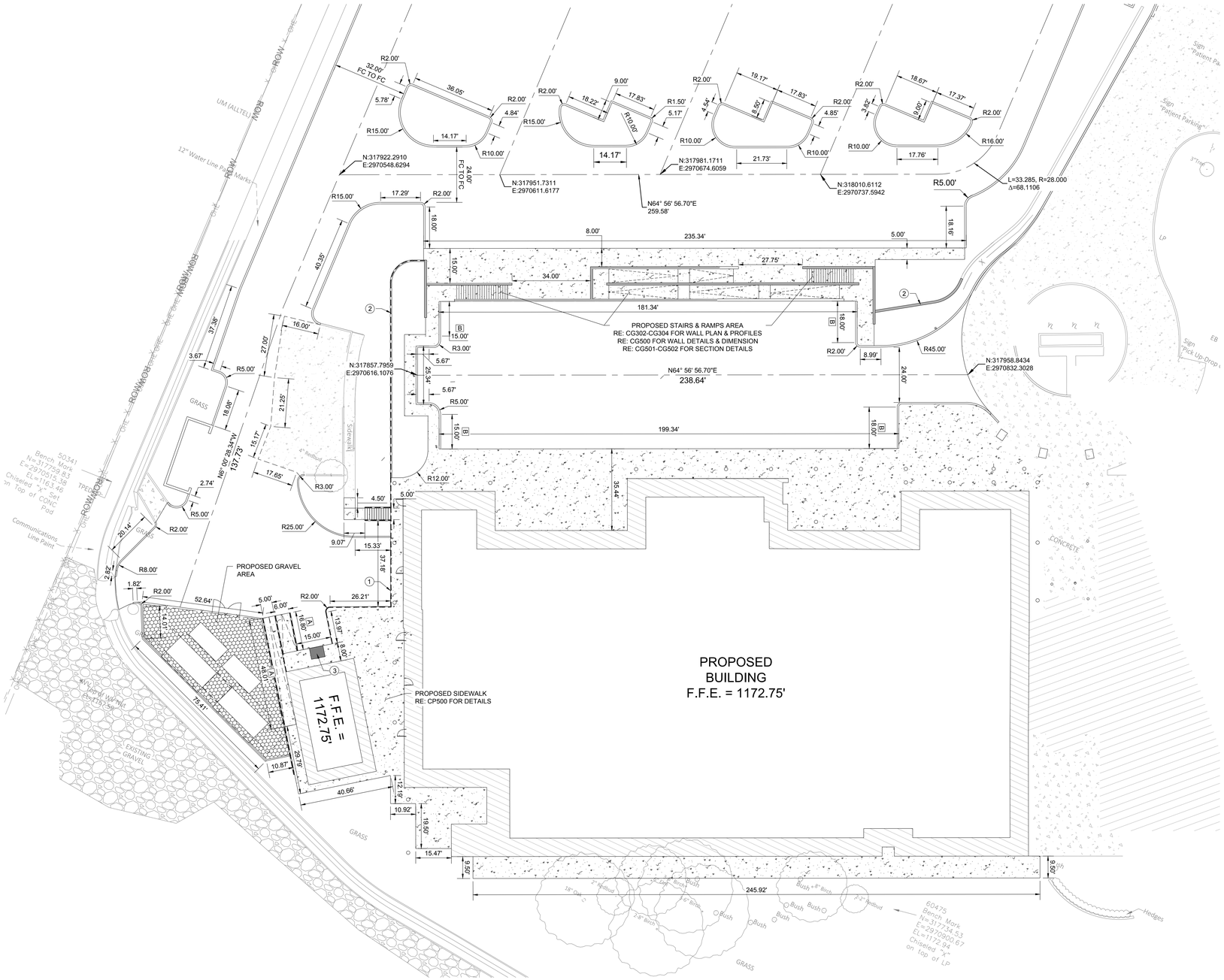
KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: CP100

OVERALL PAVING & STRIPING PLAN



0 20' 40' 80'

SCALE IN FEET

KEY NOTE:

1. PROPOSED DOCK RETAINING WALL
   RE: CP101 FOR PLANS FOR PROFILES
   RE: CG503 FOR DETAIL.
2. PROPOSED RETAINING WALL "A-C"
   RE: CG300 FOR PLAN & CG301-CG302
   PROFILE RE: CG503 FOR DETAILS.
3. PROPOSED DOCK LEVELER
   RE: ARCH. FOR PLAN & DETAILS.

A. PROPOSED LOADING RAMP
   RE: CG500 FOR PLAN CG501 FOR DETAIL.

B. PROPOSED TRANSITION CURB
   6" HIGH TO 0" HIGH RE: CP500
   FOR DETAIL.

NOTE:

1. ALL DIMENSIONS ARE TO BACK OF CURB UNLESS NOTED OTHERWISE.

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TRIBE OF OKLAHOMA
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

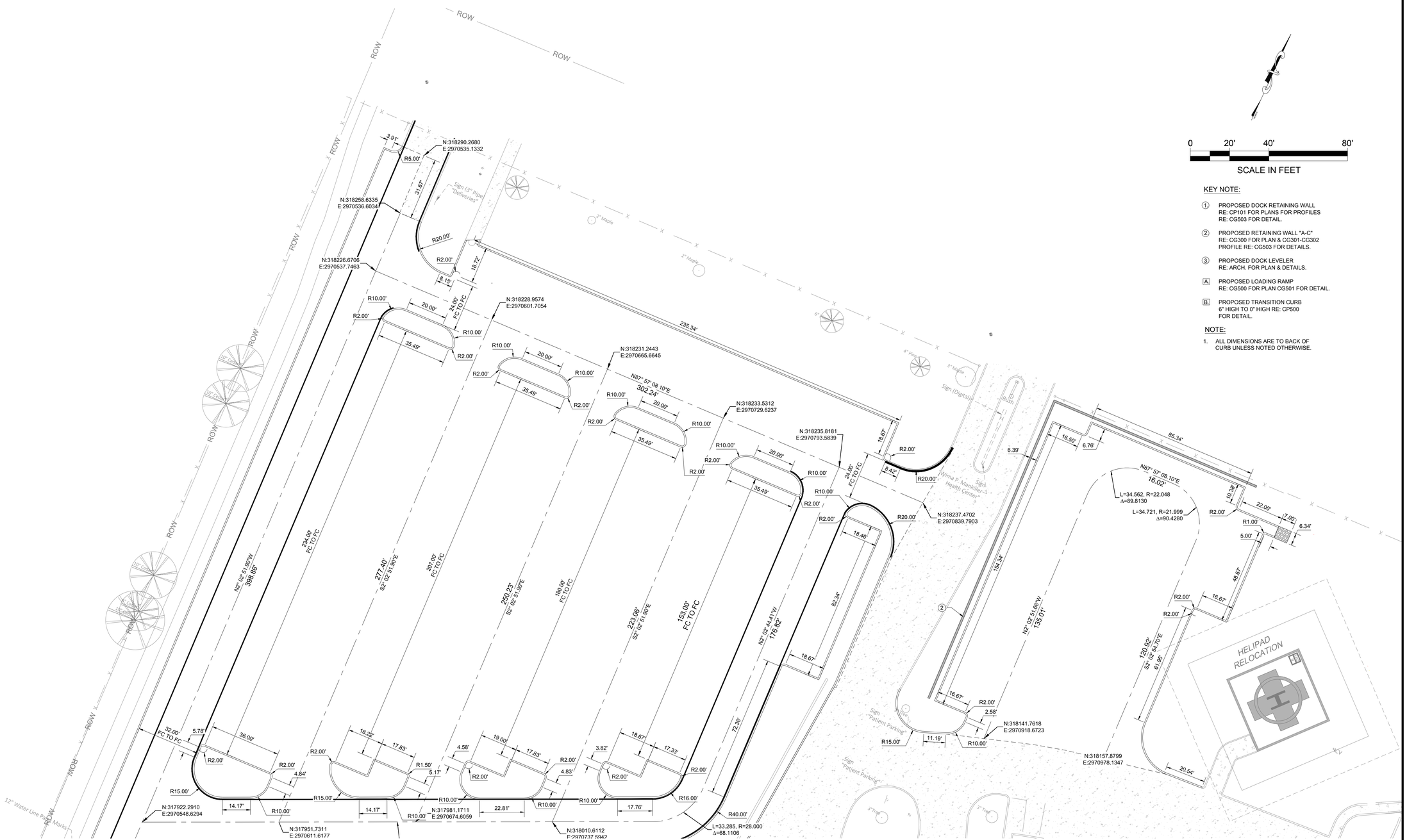
REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: CP101

ENLARGED PAVING PLAN



KEY NOTE:

1. PROPOSED DOCK RETAINING WALL
   RE: CP101 FOR PLANS FOR PROFILES
   RE: CG503 FOR DETAIL.
2. PROPOSED RETAINING WALL "A-C"
   RE: CG300 FOR PLAN & CG301-CG302
   PROFILE RE: CG503 FOR DETAILS.
3. PROPOSED DOCK LEVELER
   RE: ARCH. FOR PLAN & DETAILS.

A. PROPOSED LOADING RAMP
   RE: CG500 FOR PLAN CG501 FOR DETAIL.

B. PROPOSED TRANSITION CURB
   6" HIGH TO 0" HIGH RE: CP500
   FOR DETAIL.

NOTE:

1. ALL DIMENSIONS ARE TO BACK OF CURB UNLESS NOTED OTHERWISE.

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CLIENT:

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

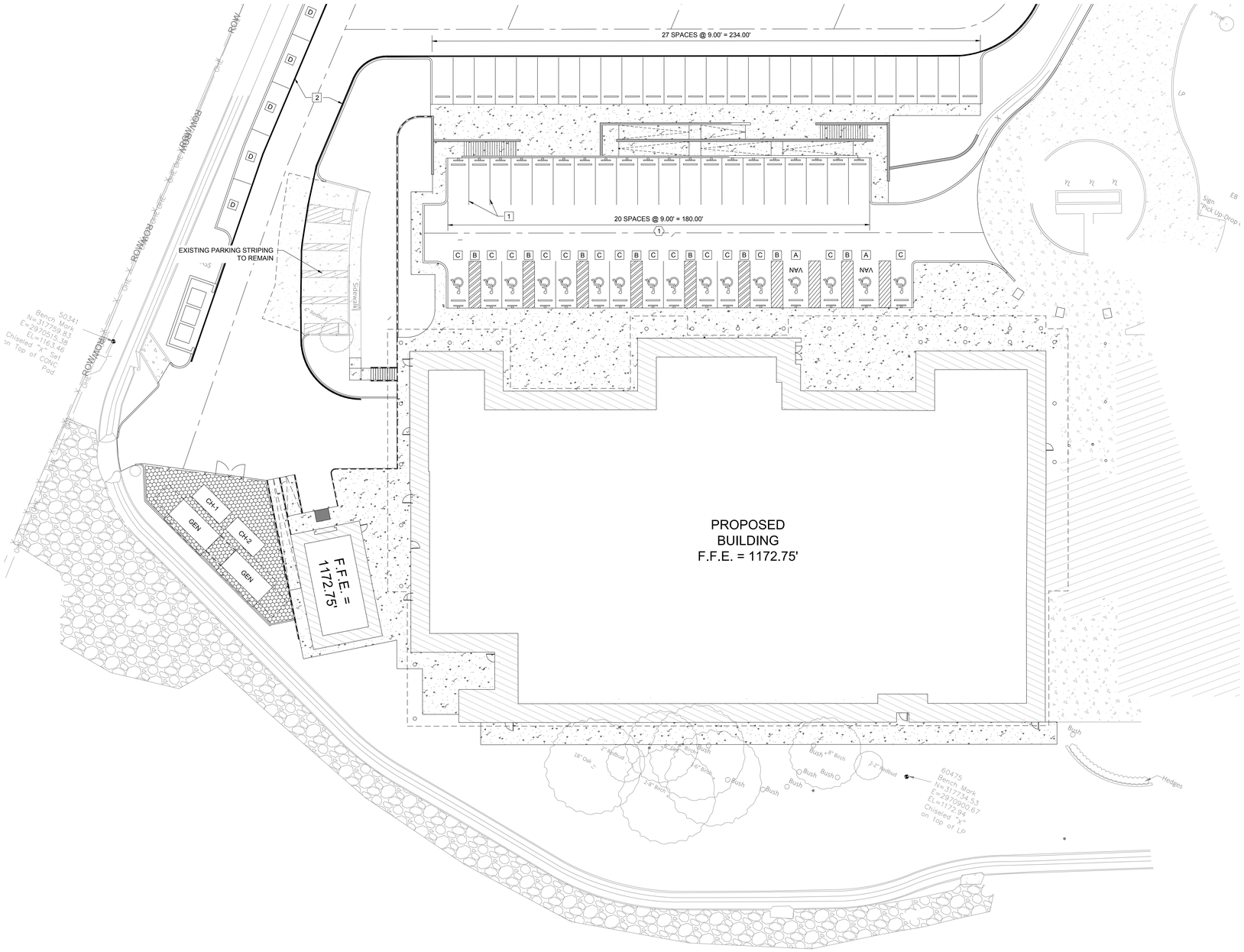
DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER:

CP102

ENLARGED PAVING PLAN



0 20' 40' 80'

SCALE IN FEET

HANDICAP ACCESSIBLE PARKING SPACES

A 11.00'W HANDICAP VAN ACCESSIBLE PARKING

B 5.00'W HANDICAP ACCESSIBLE WALKWAY TYP. RE: CP501 FOR DETAILS

C 9.00'W HANDICAP ACCESSIBLE PARKING

D 8.00'W x 22.00'L PARALLEL PARKING

NOTE:

1. PROPOSED ELDERLY AND TIMED PARKING SIGNS, TO BE PROVIDED BY OWNER. CONTRACTOR TO FURNISH & INSTALL SIGN POST, FOOTING & MISC. HARDWARE.

KEY NOTE:

1. 4" WIDE WHITE PAVING STRIPE (TYP) RE: CP501 FOR DETAIL
2. 6" WIDE FIRE LINE STRIPE RE: CP501 FOR DETAILS

PARKING SUMMARY	
ELDERLY & TIMED PARKING	20
HANDICAP PARKING	16
REGULAR PARKING	306
TOTAL SPACES	342

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EXP: 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: CP103

ENLARGED STRIPING PLAN

HANDICAP ACCESSIBLE PARKING SPACES

- A 11.00'W HANDICAP VAN ACCESSIBLE PARKING
- B 5.00'W HANDICAP ACCESSIBLE WALKWAY TYP. RE: CP501 FOR DETAILS
- C 9.00'W HANDICAP ACCESSIBLE PARKING
- D 8.00'W x 22.00'L PARALLEL PARKING

KEY NOTE:

- 1 4" WIDE WHITE PAVING STRIPE (TYP) RE: CP501 FOR DETAIL
- 2 6" WIDE FIRE LINE STRIPE RE: CP501 FOR DETAILS

PARKING SUMMARY	
ELDERLY & TIMED PARKING	20
HANDICAP PARKING	16
REGULAR PARKING	306
TOTAL SPACES	342

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER:

CP104

ENLARGED STRIPING PLAN

LEGEND

CONTRACTION JOINT

EXPANSION JOINT

ISOLATION JOINT

PROPOSED HEAVY DUTY (CONCRETE) PAVEMENT
RE: CP500 FOR DETAIL

PROPOSED EXTRA HEAVY DUTY (CONCRETE) PAVEMENT
RE: CP500 FOR DETAIL

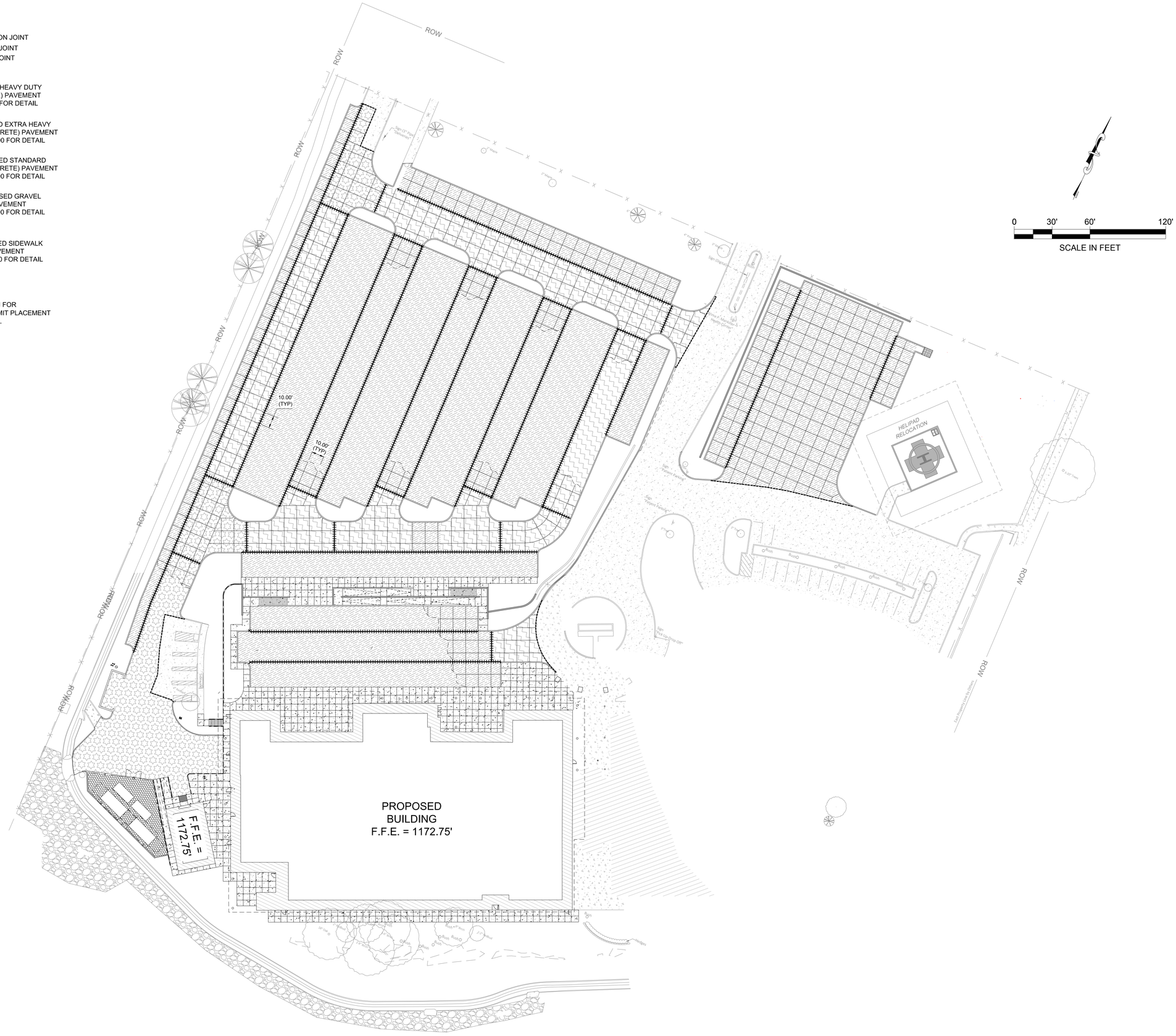
PROPOSED STANDARD DUTY (CONCRETE) PAVEMENT
RE: CP500 FOR DETAIL

PROPOSED GRAVEL PAVEMENT
RE: CP500 FOR DETAIL

PROPOSED SIDEWALK PAVEMENT
RE: CP500 FOR DETAIL

NOTE:

1. NOT ALL JOINT LINES ARE SHOWN FOR CLARITY. CONTRACTOR TO SUBMIT PLACEMENT & JOINTING PLAN FOR APPROVAL.
   RE: CP502 FOR DETAILS



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STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

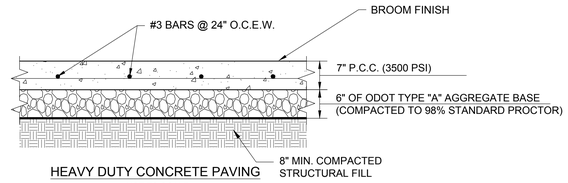
REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

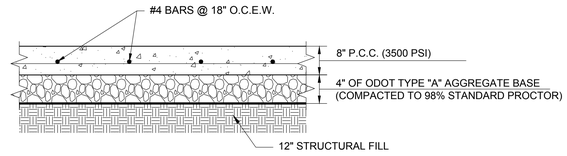
SHEET NUMBER: CP105

OVERALL JOINTING PLAN



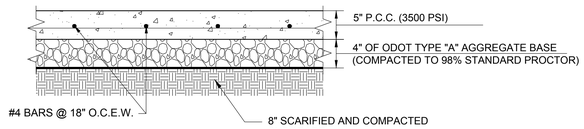
HEAVY DUTY CONCRETE PAVING

NOT TO SCALE



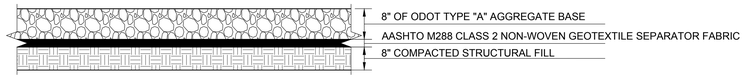
EXTRA HEAVY DUTY CONCRETE PAVING

NOT TO SCALE



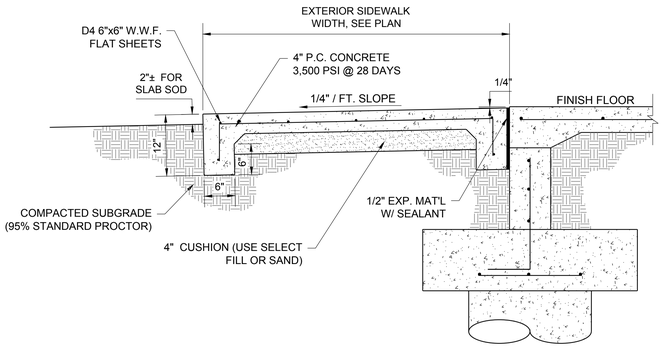
STANDARD DUTY CONCRETE PAVING

NOT TO SCALE



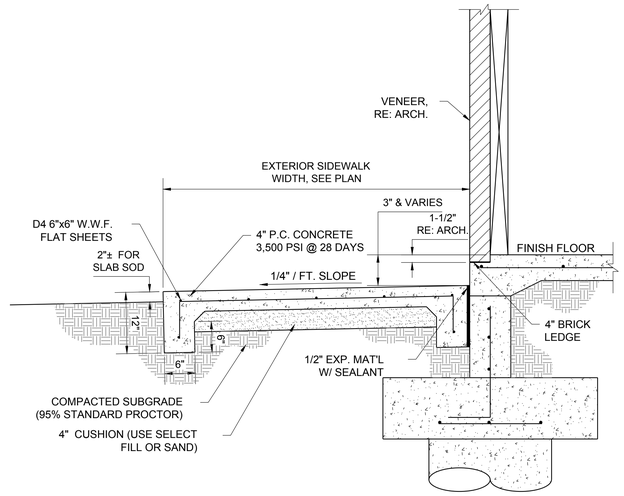
GRAVEL PAVING SECTION

N.T.S



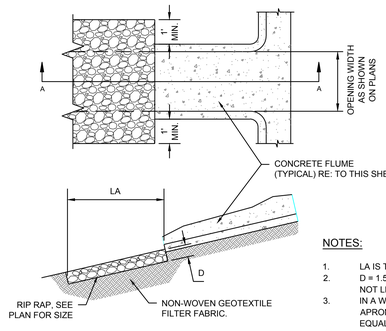
SIDEWALK SECTION @ DOOR OPENING

NOT TO SCALE



SIDEWALK SECTION @ BUILDING

NOT TO SCALE

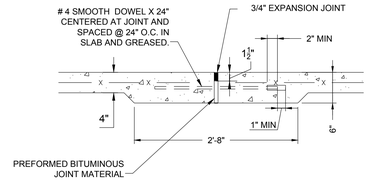


CONCRETE FLUME
W/ RIP RAP PROTECTION

NOT TO SCALE

NOTES:

1. LA IS THE LENGTH OF RIPRAP APRON SEE PLAN.
2. D = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6 INCHES.
3. IN A WELL - DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION EQUAL TO THE TOP OF THE BANK.
4. A FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIP RAP AND SOIL FOUNDATION. AASHTO M-288-97 CLASS 2.
5. OVER LAP FILTER FABRIC 3' MIN.

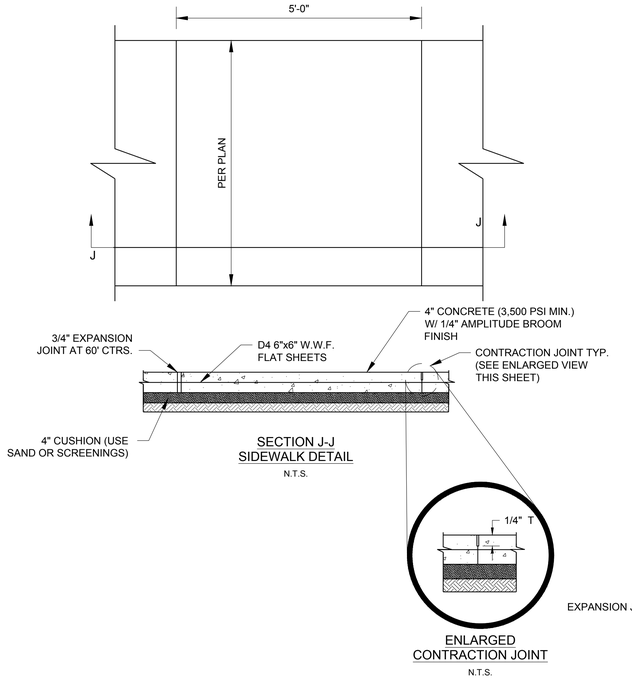


SIDEWALK EXPANSION JOINT DETAIL

NOT TO SCALE

NOTE:

1. JOINT SEALANT SHALL BE A ONE-PART POLYURETHANE SEALANT. SEALANT SHALL BE MANUFACTURED AND APPROVED FOR SEALING JOINTS IN CONCRETE, EXPOSURE TO WEATHER AND SUBJECT TO TRAFFIC. SEALANT SHALL MEET OR EXCEED ASTM C920 TYPE S, GRADE NS, CLASS 25. SEALANT SHALL BE VULKEM 116 OR APPROVED EQUAL.
2. JOINT SEALANT SHALL BE PLACED OVER BACKER ROD AS REQUIRED AND RECOMMENDED BY MANUFACTURER.
3. JOINT SEALANT AND FILLER SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.

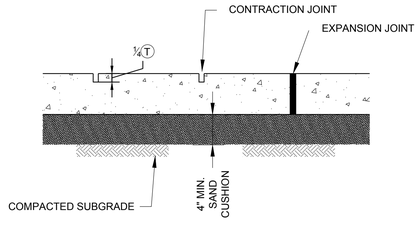


SECTION J-J
SIDEWALK DETAIL

N.T.S.

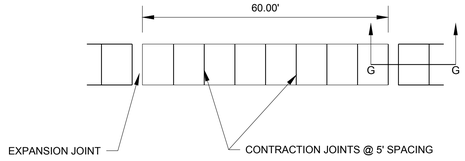
ENLARGED
CONTRACTION JOINT

N.T.S.



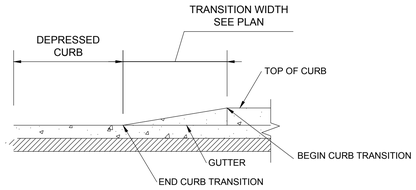
SECTION G-G

NOT TO SCALE



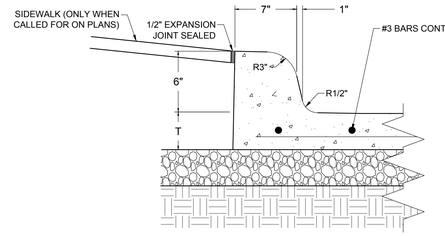
SIDEWALK JOINT DETAIL

NOT TO SCALE



CURB TERMINATION DETAIL

NOT TO SCALE



INTEGRAL CURB & GUTTER DETAIL

N.T.S. (FOR CONCRETE PAVING)

NOTES:

1. CURB AND SHALL BE 3,500 PSI CONCRETE.
2. T = THICKNESS OF PAVING SECTION, (6" MIN.).
3. CURB SHOULD BE PLACED INTEGRAL W/ CONCRETE PAVEMENT.

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EXP. 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

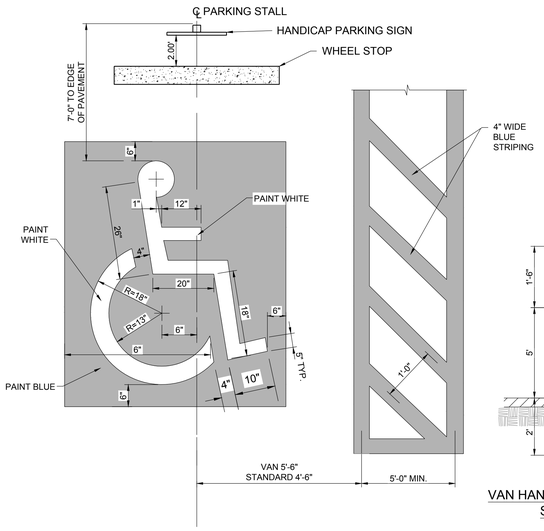
REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: CP500

PAVING DETAILS



UNIVERSAL HANDICAP PARKING SPACE PAINT DETAIL

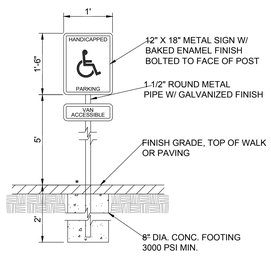
NOT TO SCALE

GENERAL NOTES

A. PAVEMENT MARKING SHALL BE WHITE RETROREFLECTORIZED PLASTIC UNLESS OTHERWISE SPECIFIED. WHEN THE MESSAGE CONSISTS OF MORE THAN ONE WORD, IT SHOULD READ "UP" I.E. THE FIRST WORD SHOULD BE NEAREST THE DRIVER. THE SPACE BETWEEN LINES SHOULD BE AT LEAST FOUR TIMES THE HEIGHT OF THE CHARACTERS.

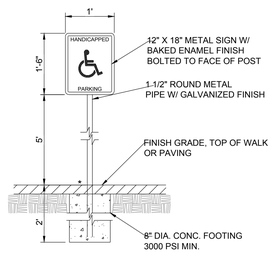
B. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST REVISION).

C. ALL DIMENSIONS ARE TYPICAL FOR SINGLE LANE UNLESS OTHERWISE NOTED.



VAN HANDICAPPED PARKING SIGN DETAIL

N.T.S.

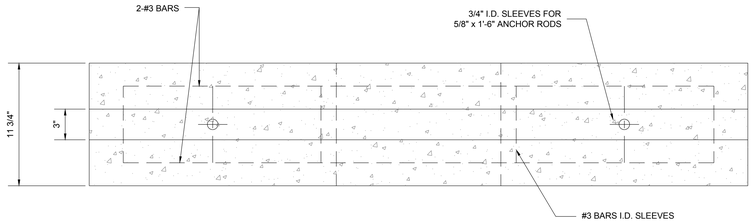


STANDARD HANDICAPPED PARKING SIGN DETAIL

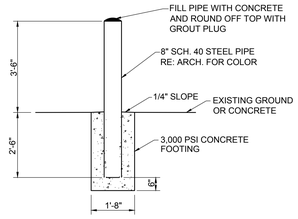
N.T.S.

NOTES:

* LEAVE FOOTING BELOW GRADE WHERE PLACED IN SIDEWALK OR PAVEMENT.

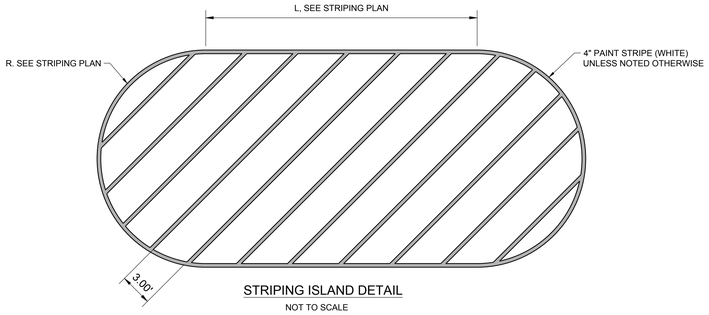


PLAN



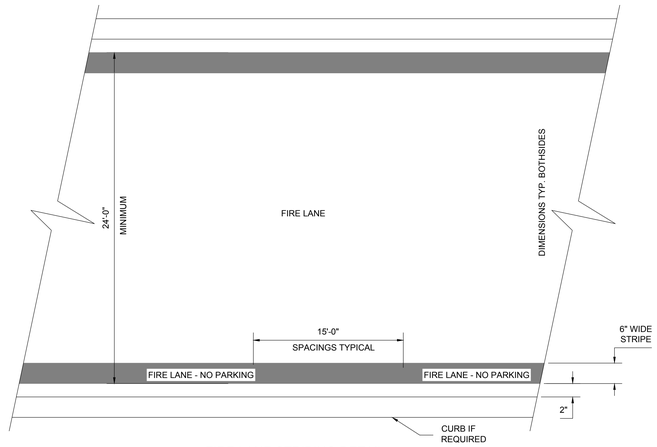
PIPE BOLLARD

N.T.S



STRIPING ISLAND DETAIL

NOT TO SCALE



FIRE LANE STRIPING DETAIL

NOT TO SCALE

FIRE LANE DESIGN SPECIFICATION:

DESIGNATED FIRE LANES:

TO MEET THE REQUIREMENTS OF THE FIRE DEPARTMENT FOR ADEQUATE HORIZONTAL EMERGENCY ACCESS, ALL PARTS OF ALL BUILDINGS MUST BE WITHIN ONE HUNDRED FIFTY(150) FEET OF A PUBLIC STREET OR A DESIGNATED FIRE LANE.

1. FIRE LANE WIDTH:
MINIMUM FIRE LANE WIDTH SHALL BE AT LEAST TWENTY-FOUR(24) FEET CLEAR (FACE TO FACE OF CURBS) WITHOUT HORIZONTAL OBSTRUCTIONS.

2. FIRE LANE VERTICAL CLEARANCE:
MINIMUM FIRE LANE VERTICAL CLEARANCE SHALL BE AT LEAST FOURTEEN FEET ZERO INCHES (14'-0").

3. INTERSECTION:
THE FIRE LANE MUST INTERSECT WITH A DEDICATED STREET R.O.W. IN ADDITION IF THIS FIRE LANE EXCEED ONE HUNDRED FIFTY(150) FEET IN LENGTH, IT MUST INTERSECT WITH A DEDICATED STREET R.O.W. AT EACH END OF THE FIRE LANE OR TERMINATE IN A CONFIGURATION TO ALLOW ADEQUATE TRUCK TURN AROUND.

4. PAVING SURFACE:
THE FIRE LANE SHALL BE PAVED IN ACCORDANCE WITH THE STANDARDS AS HEREIN DETAILED.

FIRE LANE STRIPING DETAILS AND SPECIFICATION:

A. PAINT:

1. STRIPE SHALL BE SIX(6) INCHES HIGH PAINTED WITH AN EXTERIOR ACRYLIC PAINT. COLOR SHALL BE "TRAFFIC RED" GLIDDEN NO. 63251 OR EQUAL.

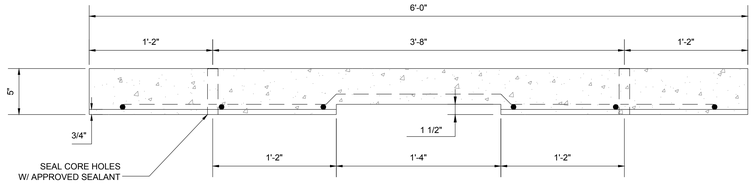
2. LETTERS SHALL BE FOUR(4) INCHES HIGH PAINTED WITH AN EXTERIOR ACRYLIC PAINT. COLOR SHALL BE "TRAFFIC WHITE" GLIDDEN NO. 563245 OR EQUAL.

B. APPLICATION:

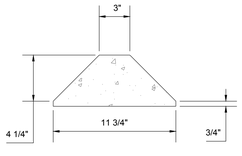
1. PAVEMENT SHALL BE PREPARED BY SAND BLASTING OR GRINDING FOLLOWED BY HIGH PRESSURE AIR TO BLOW OFF DEBRIS. ALL CURE SHALL BE REMOVED FROM NEW PAVEMENT TO ALLOW PROPER BONDING OF PAINT.

2. STRIPE MAY BY BRUSHED OR SPRAYED, ONE COAT TO FINISH.

3. LETTERS SHALL BE STENCIL FORM, BRUSH APPLIED AND SPACED AS DETAILED ON THIS SHEET.



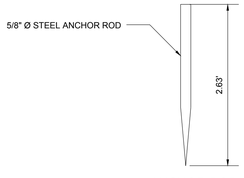
ELEVATION



END VIEW

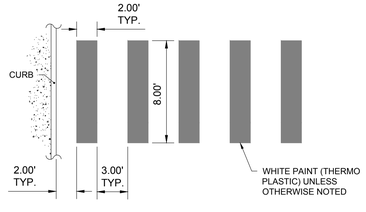
WHEEL STOP DETAILS

NOT TO SCALE



ANCHOR ROD

R1-1



TYP. CROSSWALK INSTALLATION

NOT TO SCALE

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EXP. 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: CP501

STRIPING & HANDICAP DETAILS

1. EXPANSION JOINTS:
   A. FULL DEPTH ½ INCH THICK JOINT FILLER MATERIAL. SET TOP OF FILLER FLUSH WITH SURFACE OF CONCRETE.

   B. EXPANSION JOINTS ARE NOT REQUIRED IN SLIP FORMWORK EXCEPT AT THE START OR END OF THE INSTALLATION ACTIVITY.

   C. USE DOWEL BASKETS TO INSURE ALIGNMENT.

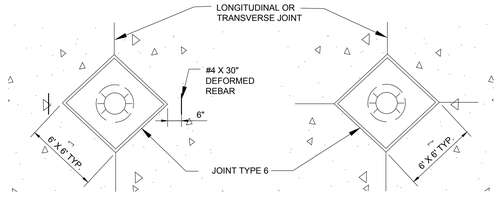
2. CONTRACTION JOINTS: MAKE CONTRACTION JOINTS VERTICAL
   A. MAKE JOINTS AT LEAST ⅛ INCH WIDE AND 1 INCH DEEP OR ¼ SLAB THICHNESS IF THE SLAB IS GREATER THAN 4 INCHES THICK.

   B. PROVIDE A ½ INCH RADIUS TOOLED TOP.

   C. MAXIMUM LENGTH TO WIDTH RATIO FOR NON-SQUARE PANELS IS 1.25 TO 1.

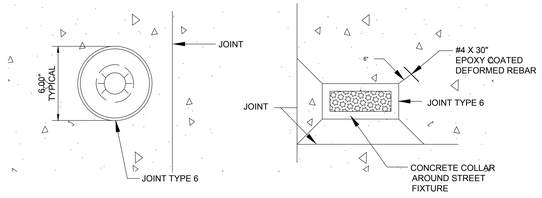
   D. MAXIMUM PANEL LENGTH IS 10 FEET FOR PAVEMENT THICKNESS LESS THAN 5 INCHES AND 12 FEET FOR PAVEMENT THICKNESS 5 INCHES AND GREATER, UNLESS NOTED OTHERWISE.

3. FINISH: FINE HAIR BROOM ON LONGITUDINAL GRADES UNDER 6% AND ROUGH HAIR BROOM ON LONGITUDINAL GRADES OVER 6%.



REBAR AT ALL CORNERS OF ISOLATION JOINTS THAT DO NOT INTERSECT A LONGITUDINAL OR TRANSVERSE JOINT

EXAMPLE 1 EXAMPLE 2



EXAMPLE 1 EXAMPLE 2

TYPICAL STREET FIXTURE ISOLATION JOINTS

CONSTRUCTION NOTES

A. JOINT SEALANT SHALL BE A ONE-PART POLYURETHANE SEALANT. SEALANT SHALL BE MANUFACTURED AND APPROVED FOR SEALING JOINTS IN CONCRETE, EXPOSURE TO WEATHER AND SUBJECT TO TRAFFIC. SEALANT SHALL MEET OR EXCEED ASTM C920 TYPE S, GRADE NS, CLASS 25. SEALANT SHALL BE VULKEM 116 OR APPROVED EQUAL.

JOINT SEALANT SHALL BE PLACED OVER BACKER ROD AS REQUIRED AND RECOMMENDED BY MANUFACTURER.

JOINT SEALANT AND FILLER SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.

B. 5" AND LESS THICK PAVING - ⅝"Ø x12" SMOOTH DOWEL BAR @ 12" O.C., ½ GREASED ½ PAINTED.

6" THICK PAVING - ¾"Ø x14" SMOOTH DOWEL BAR @ 12" O.C., ½ GREASED ½ PAINTED.

7" THICK PAVING -⅞"Ø x14" SMOOTH DOWEL BAR @ 12' O.C., ½ GREASED ½ PAINTED.

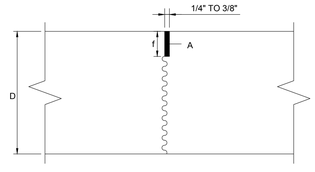
8" THICK PAVING - 1"Ø x14" SMOOTH DOWEL BAR @ 12" O.C., ½ GREASED ½ PAINTED.

9" THICK PAVING -1⅛"Ø x16" SMOOTH DOWEL BAR @ 12' O.C., ½ GREASED ½ PAINTED.

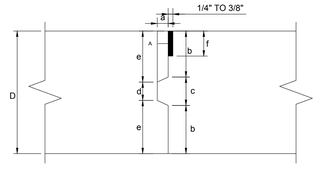
C. NO. 4 DEFORMED BARS, 3'-0" LONG AT 2'-0" O.C.

D. THICKNESS OF SLAB.

E. PREFORMED BITUMINOUS JOINT MATERIAL.



TYPE 1
SAWED JOINT / CONTRACTION
(LONGITUDINAL OR TRANSVERSE)



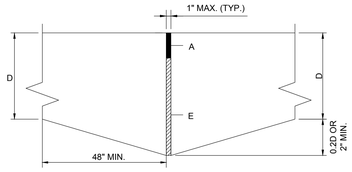
TYPE 3
KEYED JOINT
(LONGITUDINAL OR TRANSVERSE)

JOINT DIMENSIONS								
TRANS. JOINTS						LONG. JOINTS		
D	a	b	c	d	e	f-min.	f-min.	g
4.5"	1"	1½"	1½"	1"	1¾"	¼ D	⅓ D	½ D
5"	1"	1¾"	1½"	1"	2"	¼ D	⅓ D	½ D
5.5"	1"	2"	1½"	1"	2¼"	¼ D	⅓ D	½ D
6"	1"	2¼"	1½"	1"	2½"	¼ D	⅓ D	½ D
7"	1"	2½"	2"	1¼"	2⅞"	¼ D	⅓ D	½ D
8"	1"	3"	2"	1½"	3¼"	¼ D	⅓ D	½ D

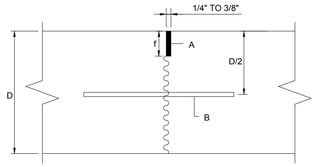
GENERAL NOTES

THICKNESS OF SLAB SHALL BE AS INDICATED ON DRAWINGS. SEE TABLE BELOW.

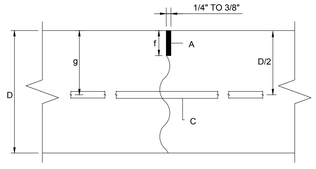
DAILY CONCRETE PLACEMENT SHALL TERMINATE AT A JOINT.



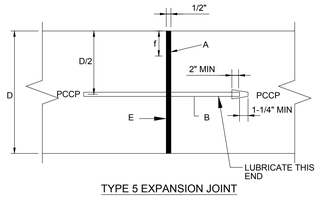
TYPE 6
ISOLATION JOINT
(TRANSVERSE)



TYPE 2
DOWELED JOINT (CONTRACTION / CONSTRUCTION)
(TRANSVERSE)



TYPE 4
TIED JOINT (CONTRACTION / CONSTRUCTION)
(LONGITUDINAL OR TRANSVERSE)



TYPE 5 EXPANSION JOINT

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EXP. 06/30/2020

CLIENT:

SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

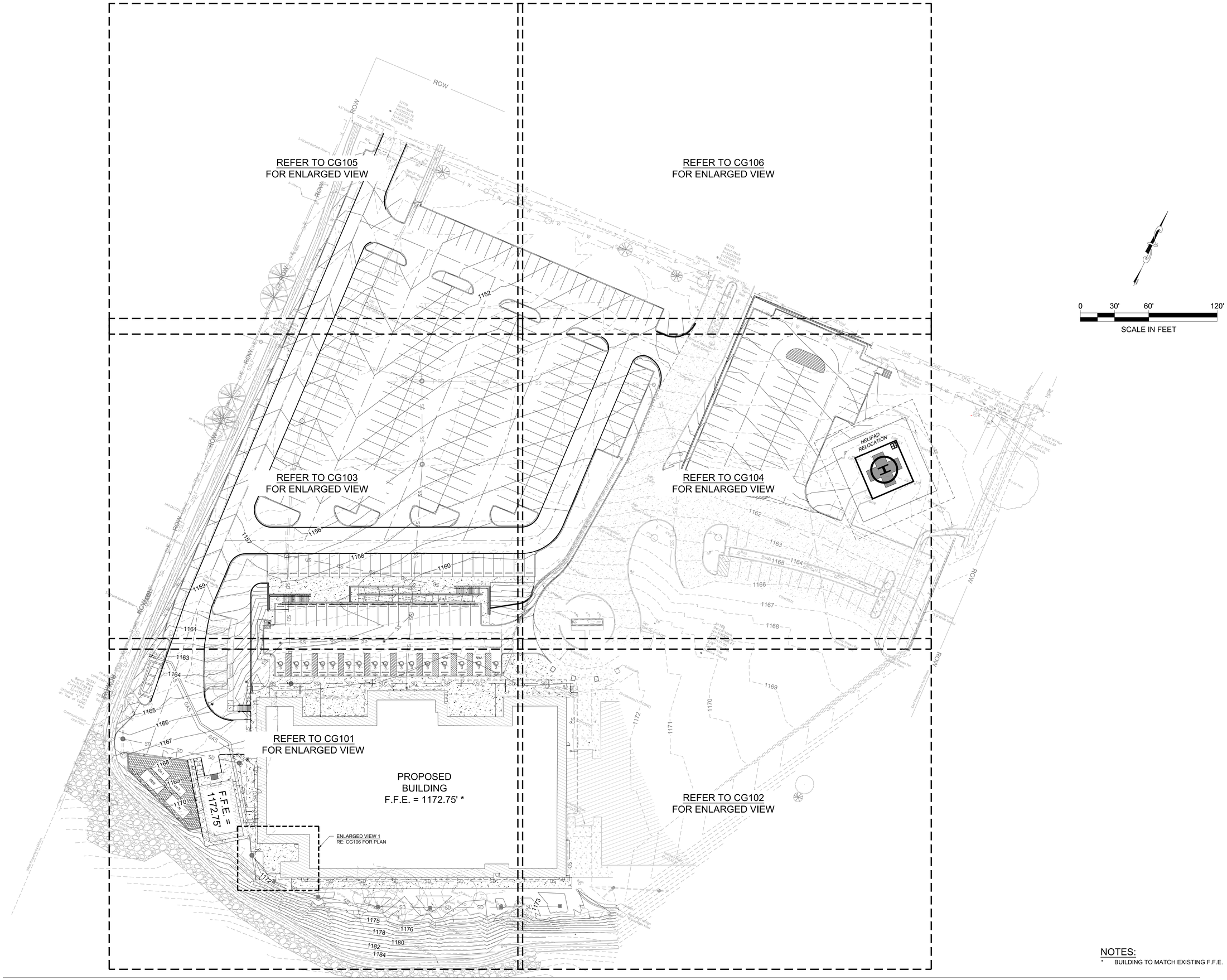
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
CP502

JOINTING DETAILS



NOTES:

* BUILDING TO MATCH EXISTING F.F.E.

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EXP: 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: CG100

OVERALL
GRADING PLAN

PROPOSED
BUILDING
F.F.E. = 1172.75'

PROPOSED
BUILDING
F.F.E. = 1172.75'

0 10' 20' 40'
SCALE IN FEET

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THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: CG101

ENLARGED
GRADING PLAN

PROPOSED
BUILDING
F.F.E. = 1172.75'

Covered Area
6-Columns
29-Columns (1.5' CONC)
CONCRETE
Finished Floor
EL=1172.75
Finished Floor
EL=1172.77
Utilities Shown Per Provided Plans
East Property Line by Others
ROW
Bush
Rock
Hedges
Rock Wall w/Sign
"Wilma Man killer
GRASS
EL=1171.05
3/8" Iron Pin
Set w/Cap
(Native Plains)
SD
OS
ME
TG EL. 1171.03
EL. 1172.75
EL. 1172.73
EL. 1172.64
EL. 1172.50
EL. 1172.63
EL. 1172.31
EL. 1172.45
EL. 1172.72
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1185

0 10' 20' 40'
SCALE IN FEET

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THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: CG102

ENLARGED
GRADING PLAN

0 10' 20' 40'

SCALE IN FEET

James R. Childers Architect, Inc.
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www.childersarchitect.com

PROFESSIONAL SEAL:

REGISTERED PROFESSIONAL ENGINEER
H. WAYNE BARKER
12-6-19
11553
OKLAHOMA

CONSULTANT LOGO:

Barker & Associates
3900 UNIVERSITY BLVD
Durant, OK 74701
580.931.9045
OK. CA. 3590
Exp. 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

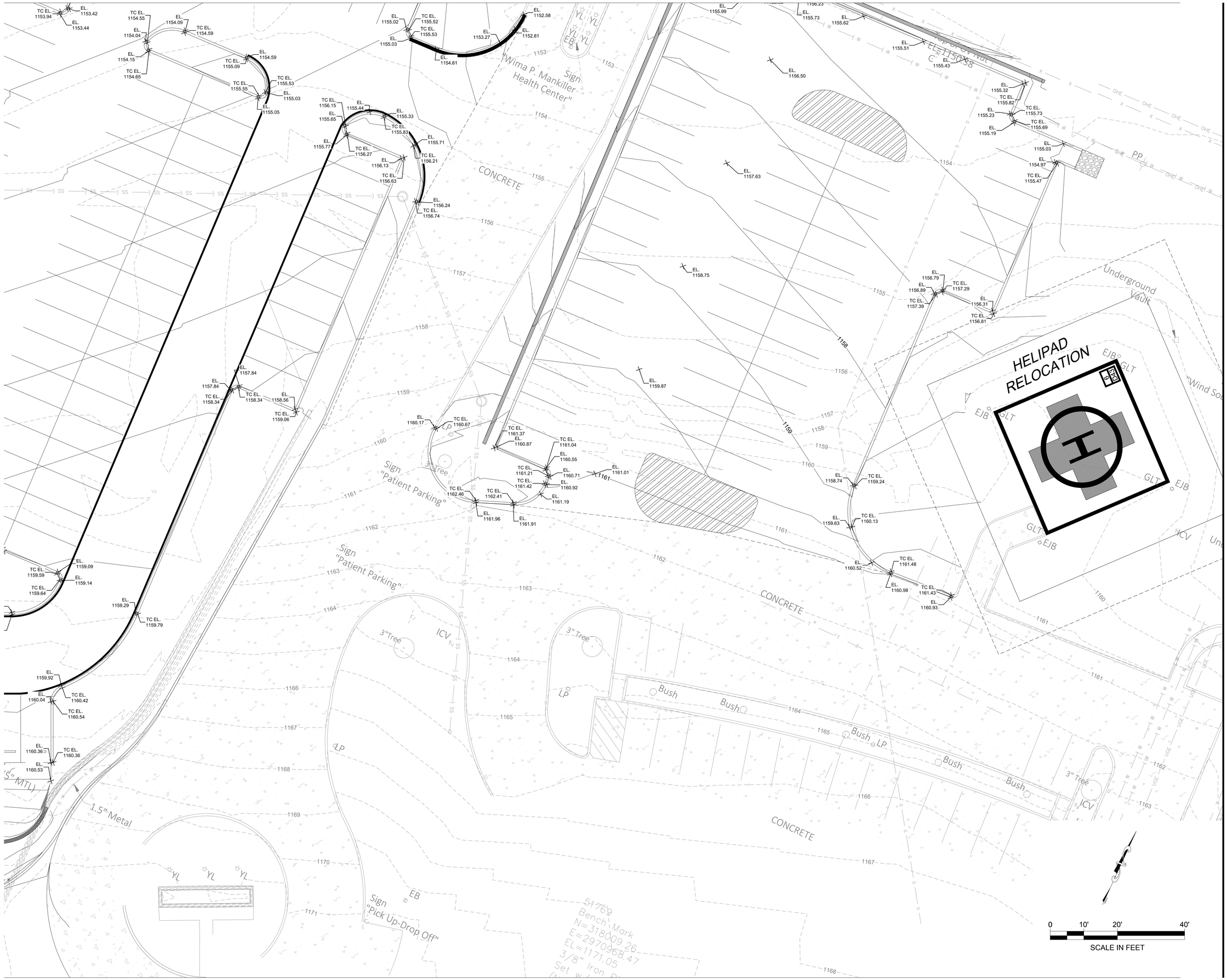
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER: CG103

ENLARGED GRADING PLAN



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CA: 3591
EXP: 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

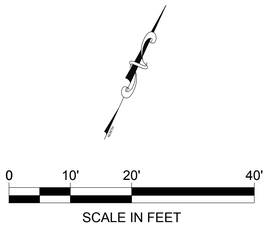
PROJECT PHASE:
BID PACKAGE 02

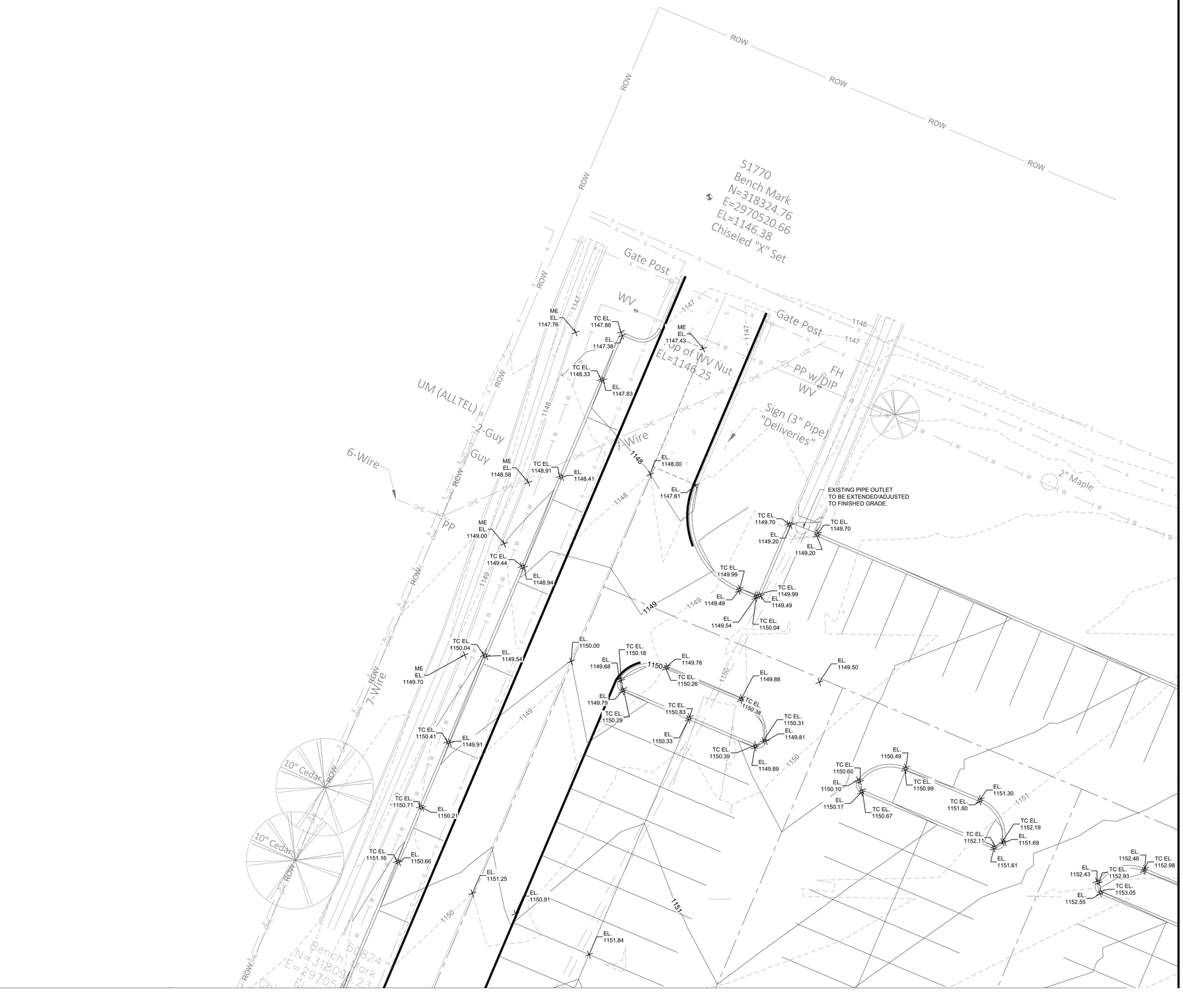
REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
CG104

ENLARGED GRADING PLAN





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CA. OFF. 3596
EXP. 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

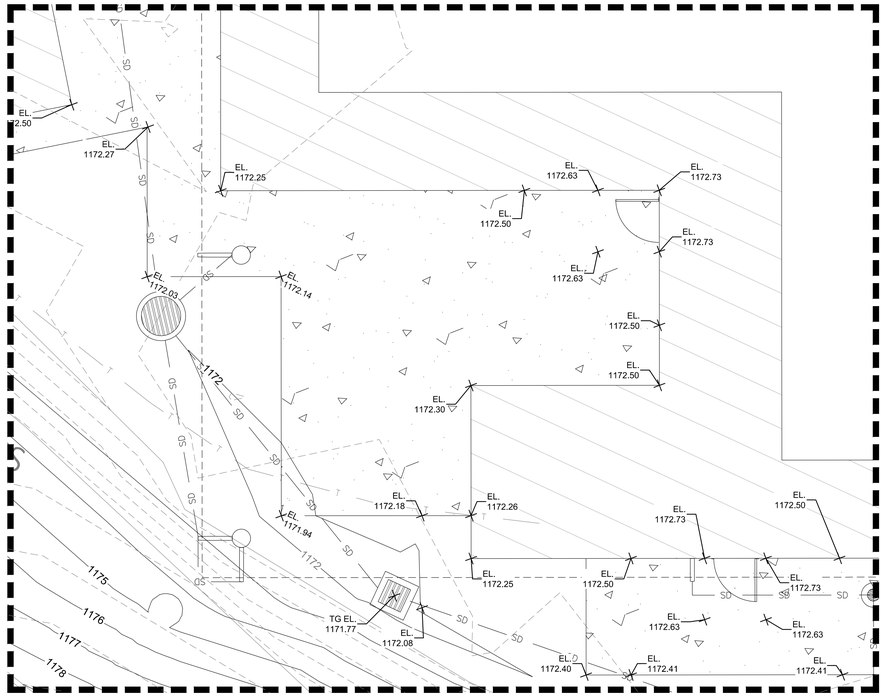
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
CG105

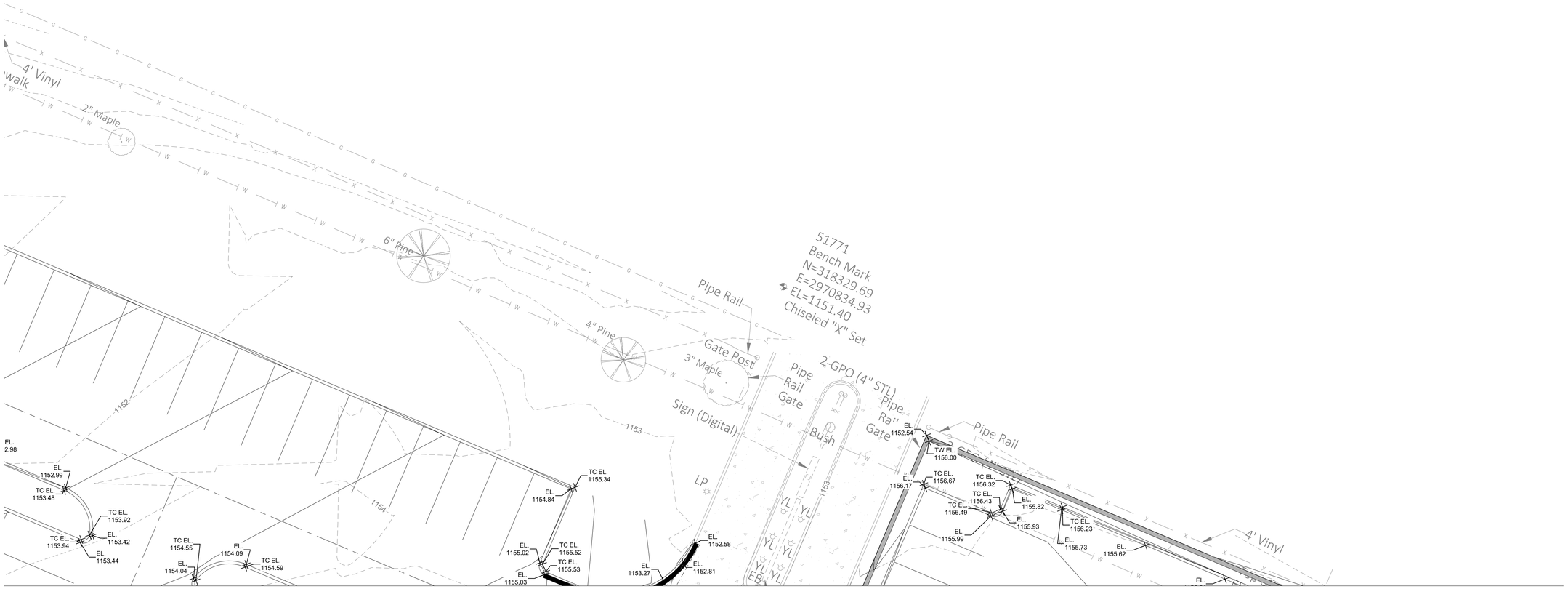
ENLARGED GRADING PLAN



ENLARGED VIEW 1
REFER TO CG101
FOR LOCATION
1" = 5' SCALE

0 10' 20' 40'

SCALE IN FEET



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EXP. 06/30/2020

CLIENT:

THE CHEROKEE NATION
1839
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

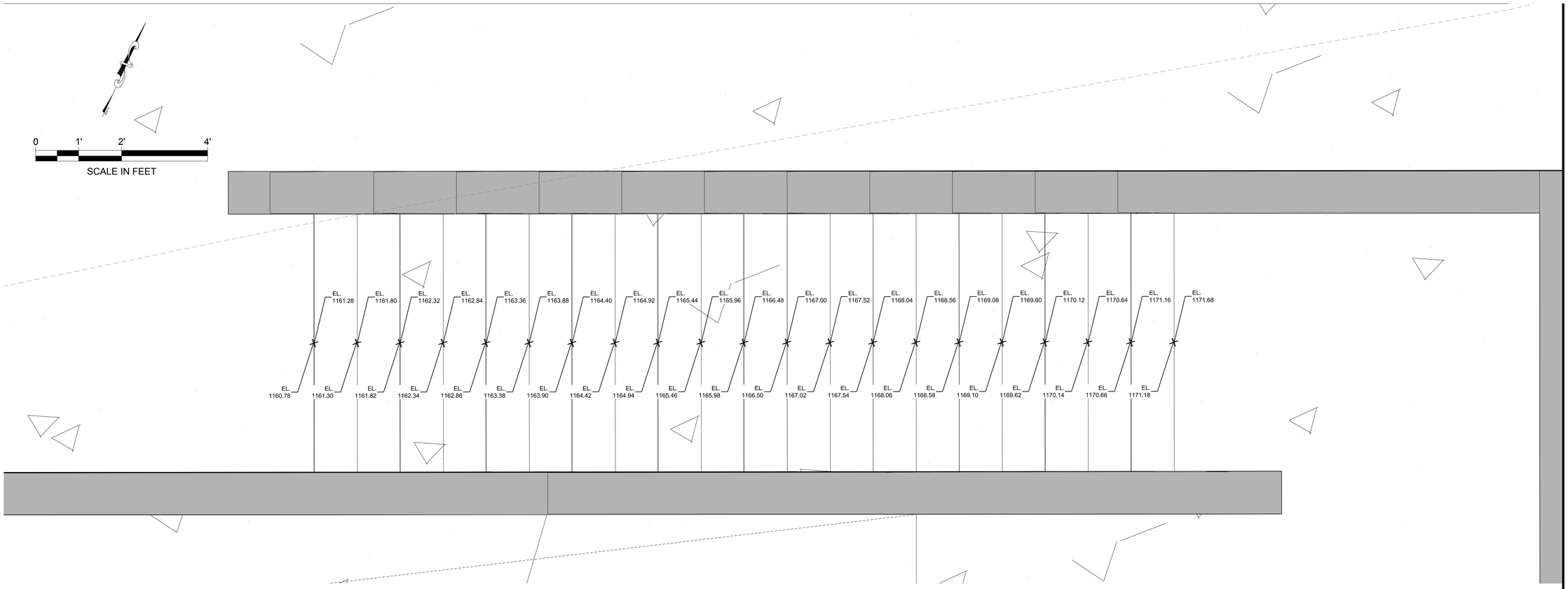
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

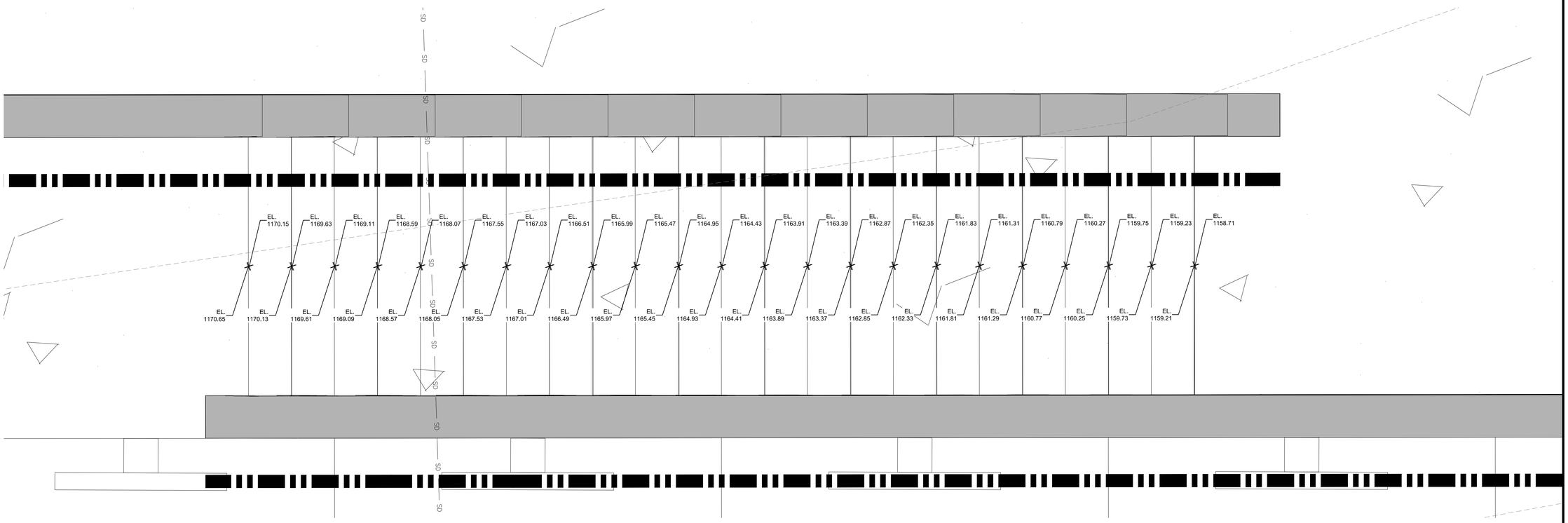
DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
CG106

ENLARGED GRADING PLAN



EAST STAIRWAY
ENLARGED VIEW
1" = 5' SCALE



WEST STAIRWAY
ENLARGED VIEW
1" = 5' SCALE

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Barker & Associates
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Durant, OK 74701
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OK. CA. 3590
EXP. 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

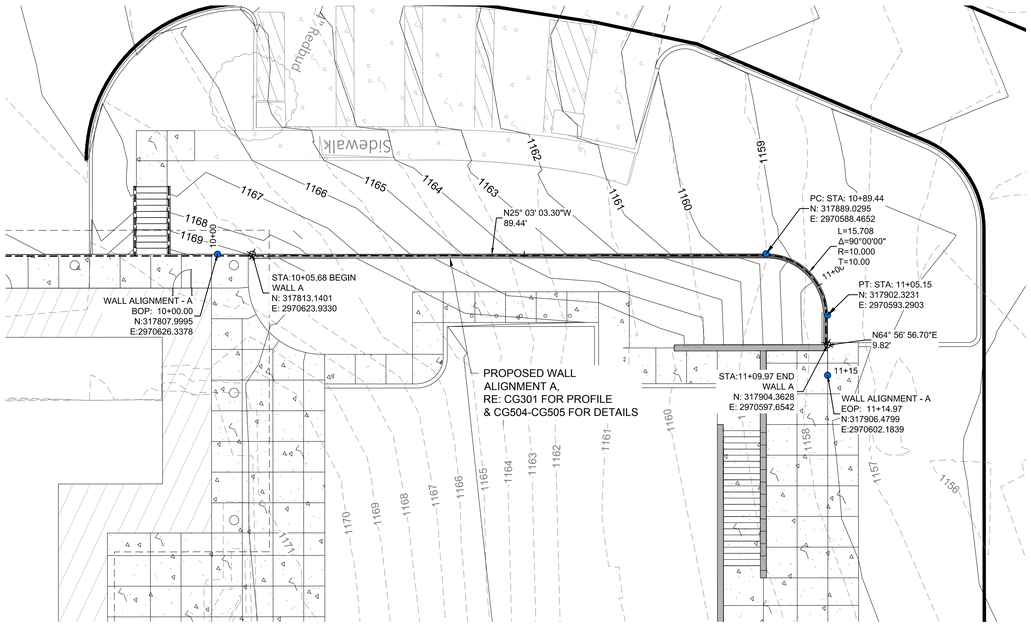
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

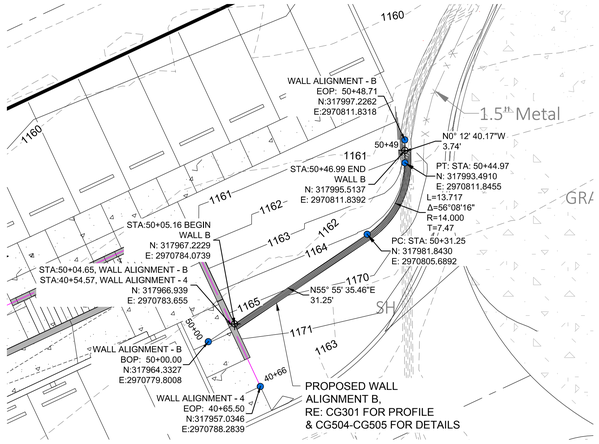
DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
CG107

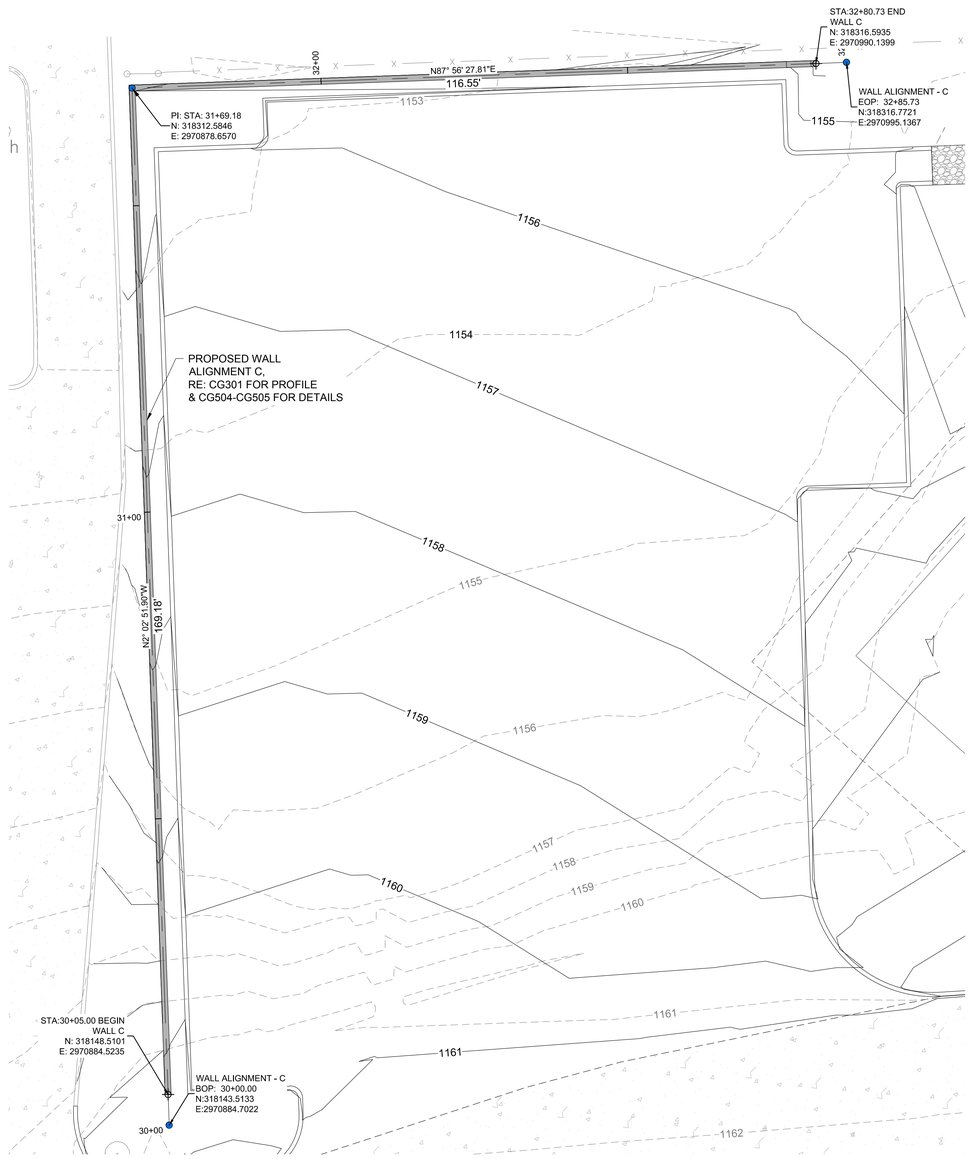
ENLARGED GRADING PLAN



WALL ALIGNMENT - A
ENLARGED VIEW
1" = 10' SCALE



WALL ALIGNMENT - B
ENLARGED VIEW
1" = 10' SCALE



WALL ALIGNMENT - C
ENLARGED VIEW
1" = 10' SCALE

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CONSULTANT LOGO:

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OK. CA. 3990
EXP. 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

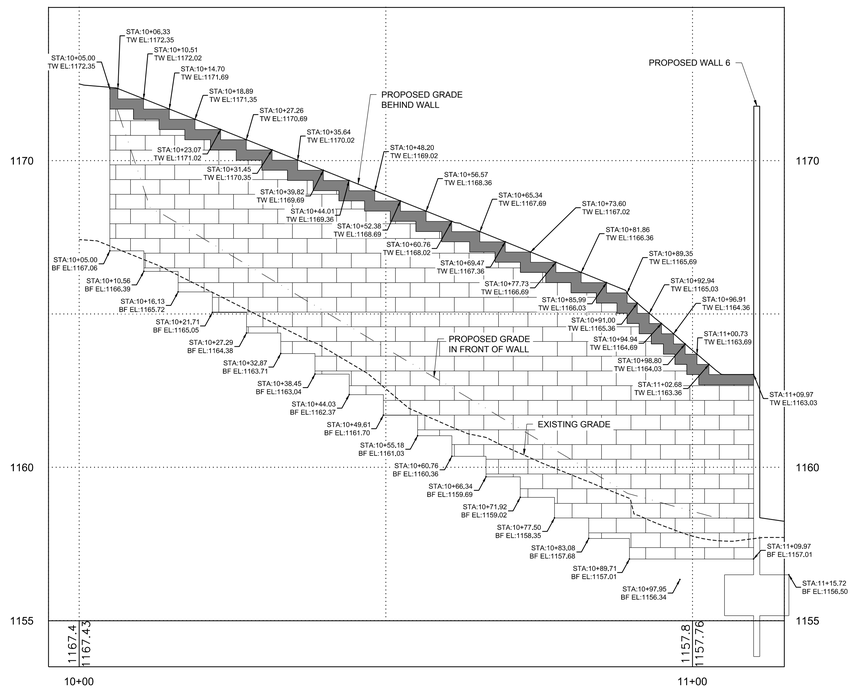
REVISIONS

#	DATE	DESCRIPTION

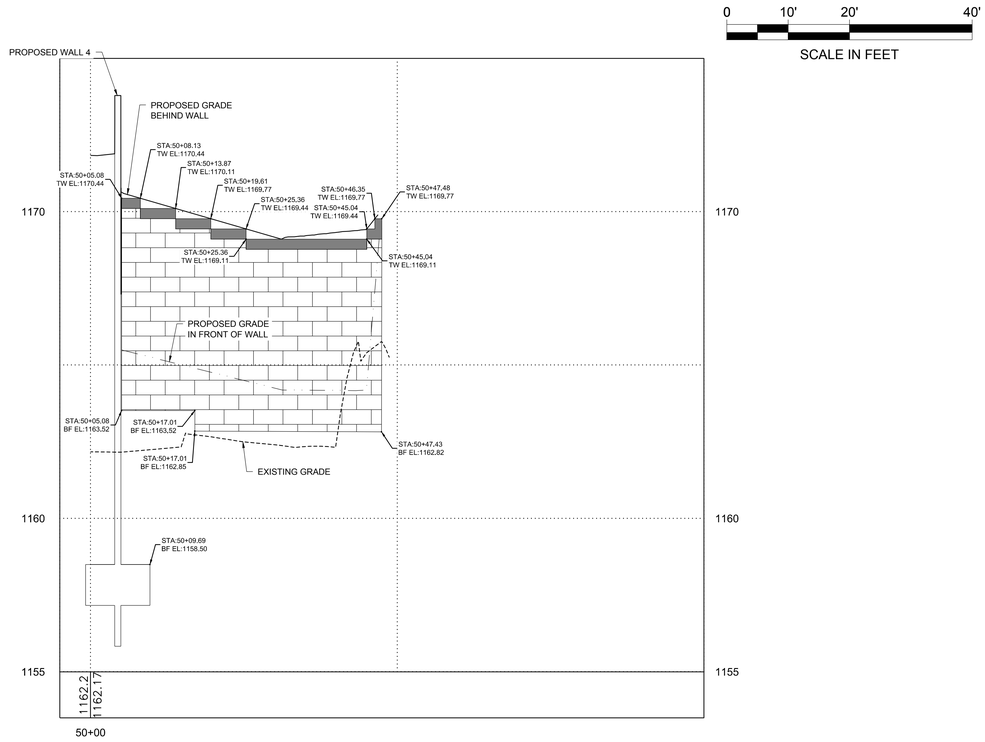
DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
CG300

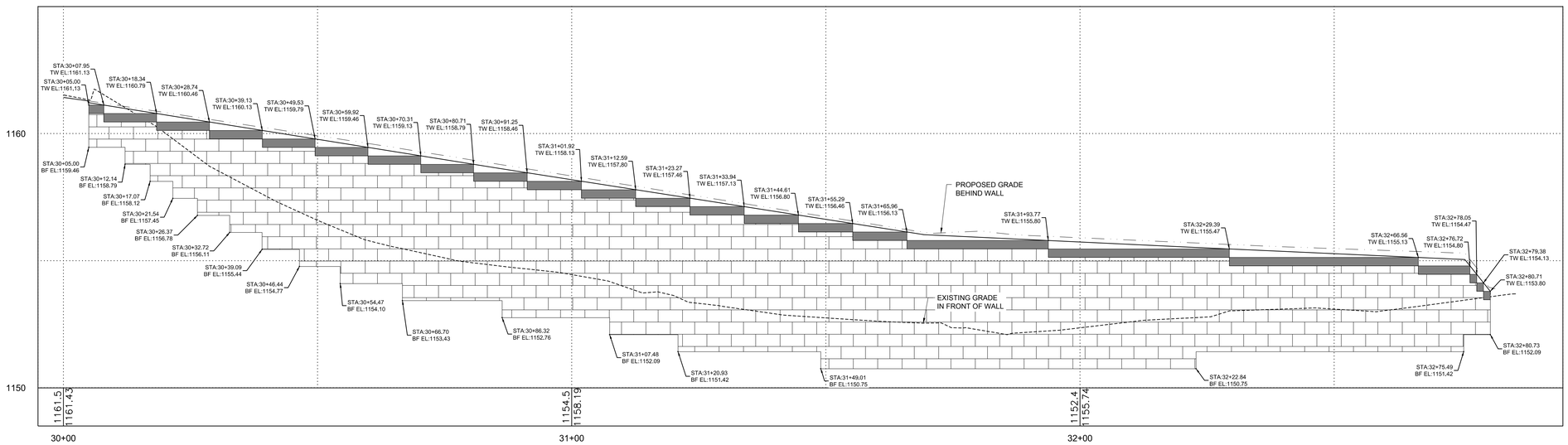
RETAINING WALL PLAN



WALL ALIGNMENT - A PROFILE
(STA. 9+95 - STA. 1+14.97)



WALL ALIGNMENT - B PROFILE
(STA. 49+95 - STA. 50+47.48)



WALL ALIGNMENT - C PROFILE
(STA. 29+95 - STA. 32+95)

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EXP. 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

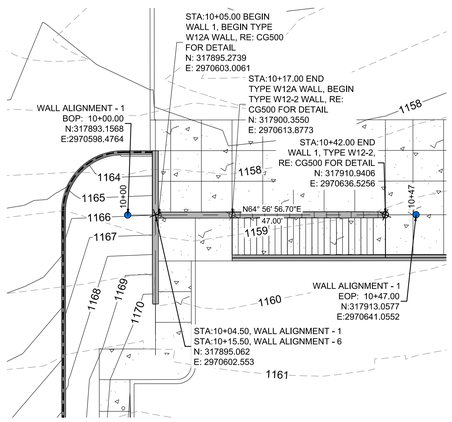
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

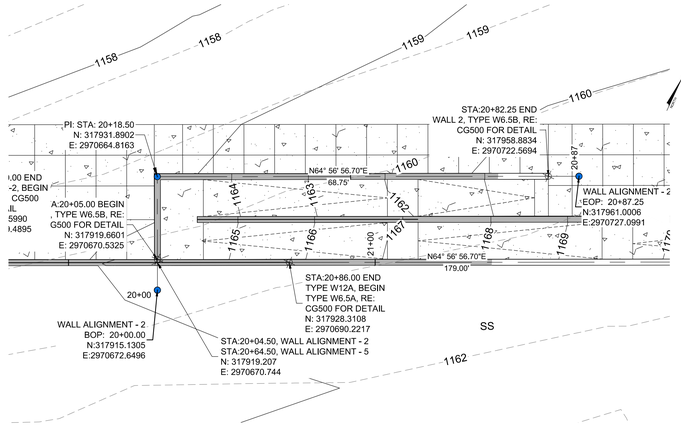
DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
CG301

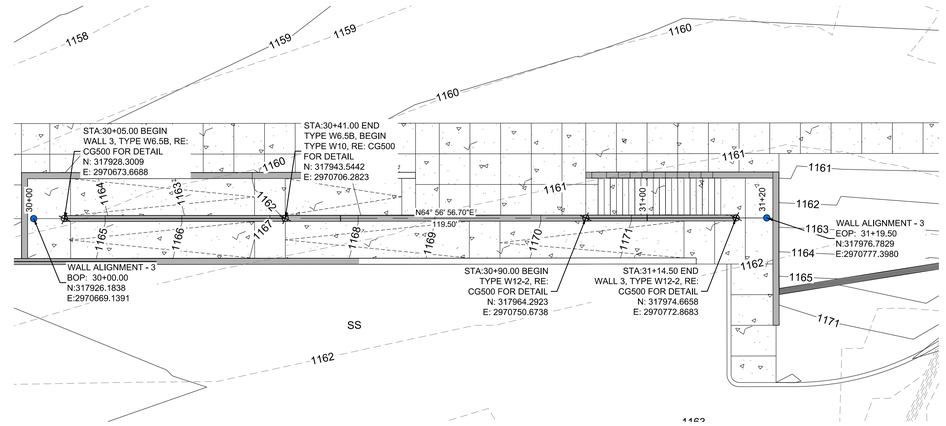
RETAINING WALL PROFILES



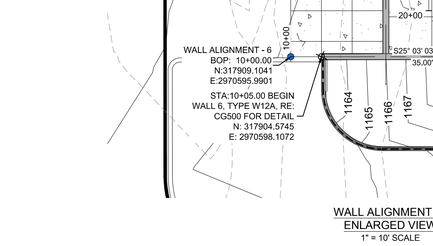
WALL ALIGNMENT - 1
ENLARGED VIEW
1" = 10' SCALE



WALL ALIGNMENT - 2
ENLARGED VIEW
1" = 10' SCALE

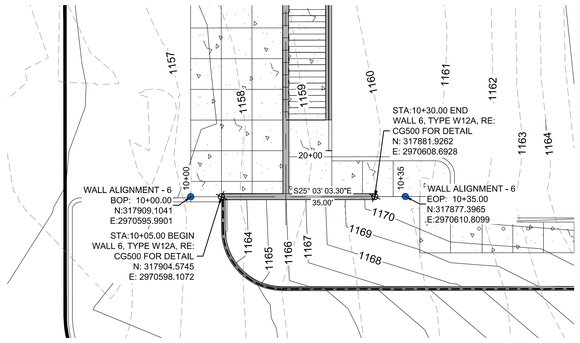


WALL ALIGNMENT - 3
ENLARGED VIEW
1" = 10' SCALE



WALL ALIGNMENT - 4
ENLARGED VIEW
1" = 10' SCALE

WALL ALIGNMENT - 5
ENLARGED VIEW
1" = 10' SCALE



WALL ALIGNMENT - 6
ENLARGED VIEW
1" = 10' SCALE

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CONSULTANT LOGO:

Barker
CERTIFICATE OF AUTHORITY

Barker & Associates
3502 UNIVERSITY BLVD
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CA. OFL 3596
EXP. 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

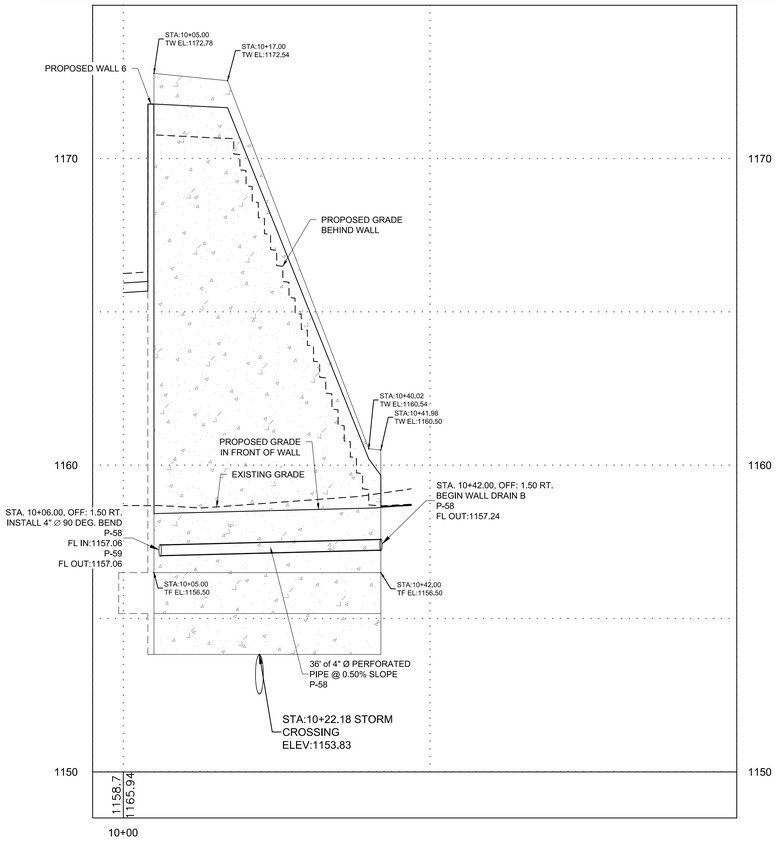
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

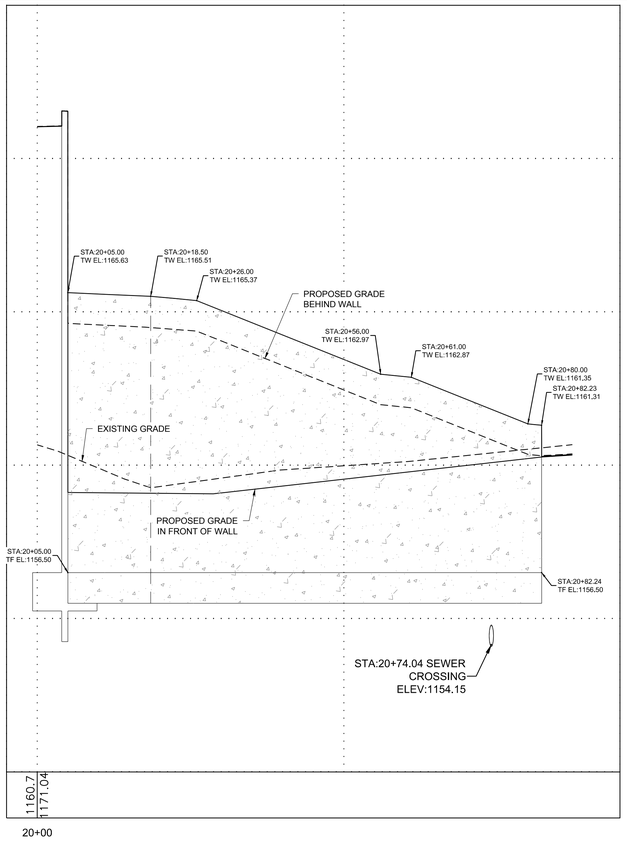
DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
CG302

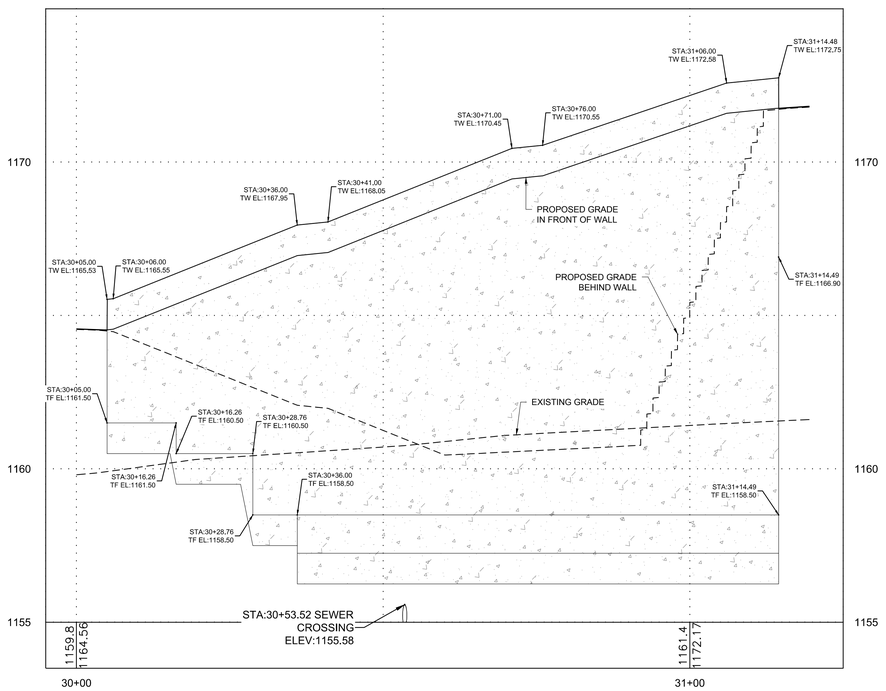
RETAINING WALL PLAN



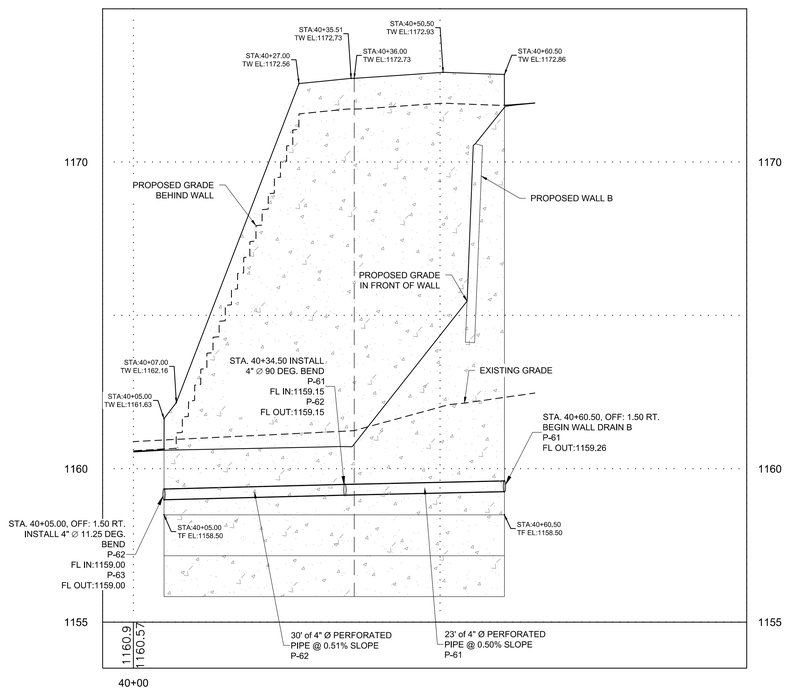
WALL ALIGNMENT - 1 PROFILE
(STA. 9+95 - STA. 11+00)



WALL ALIGNMENT - 2 PROFILE
(STA. 19+95 - STA. 20+95)



WALL ALIGNMENT - 3 PROFILE
(STA. 29+95 - STA. 31+25)



WALL ALIGNMENT - 4 PROFILE
(STA. 39+95 - STA. 41+00)

0 10' 20' 40'

SCALE IN FEET

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EXP. 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

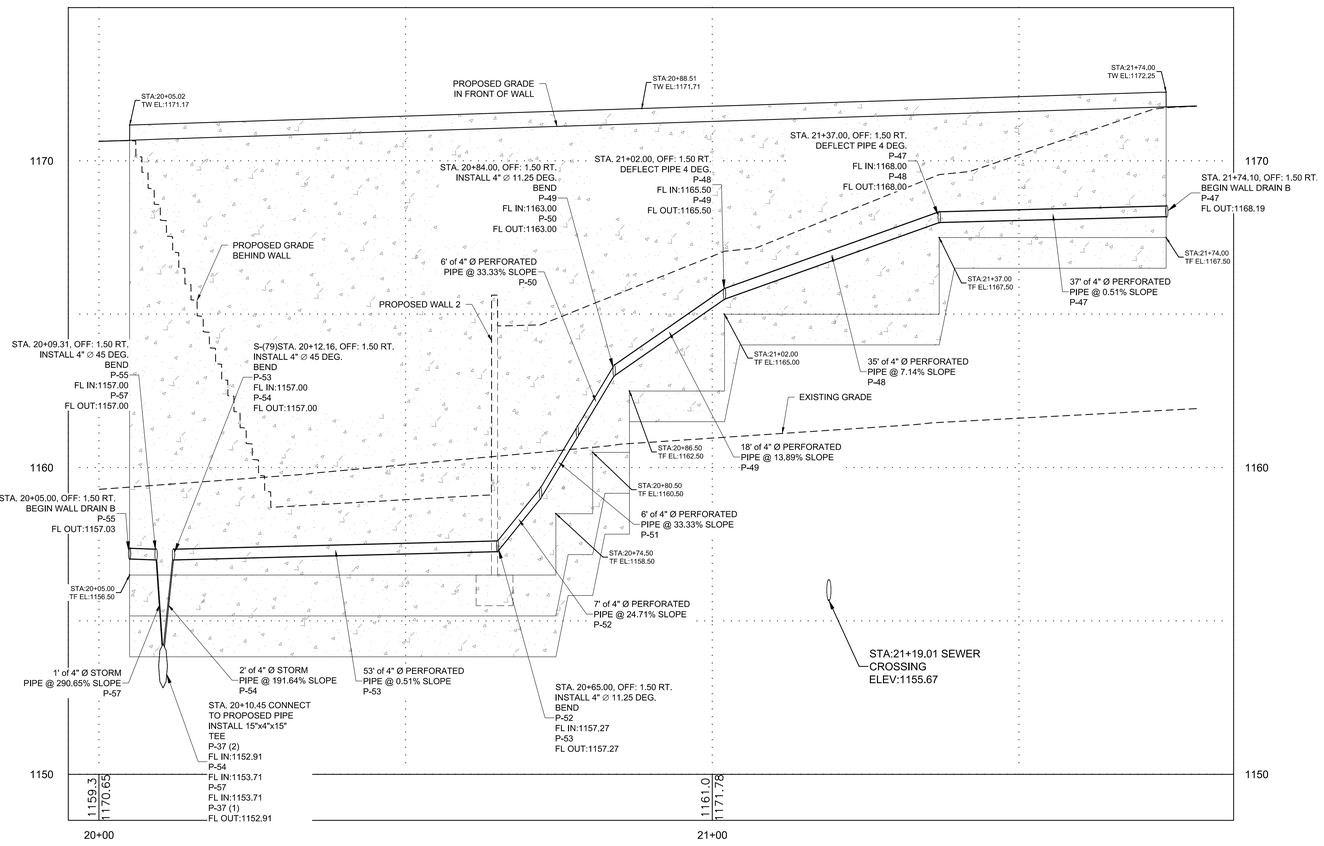
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

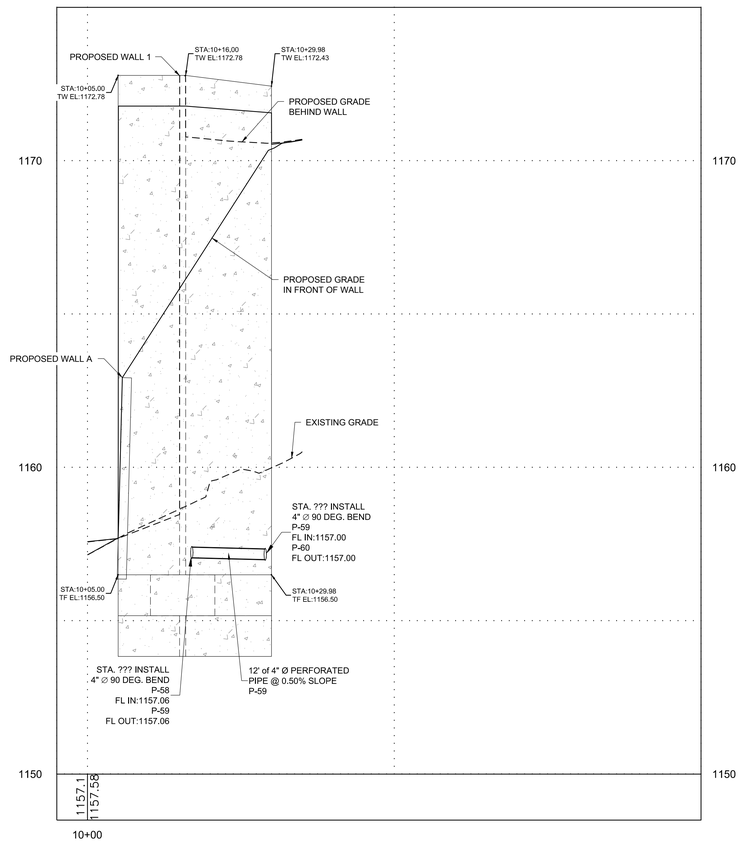
DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
CG303

RETAINING WALL PROFILES



WALL ALIGNMENT - 5 PROFILE
(STA. 19+95 - STA. 21+85)



WALL ALIGNMENT - 6 PROFILE
(STA. 9+95 - STA. 11+00)

0 10' 20' 40'

SCALE IN FEET

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EXP. 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

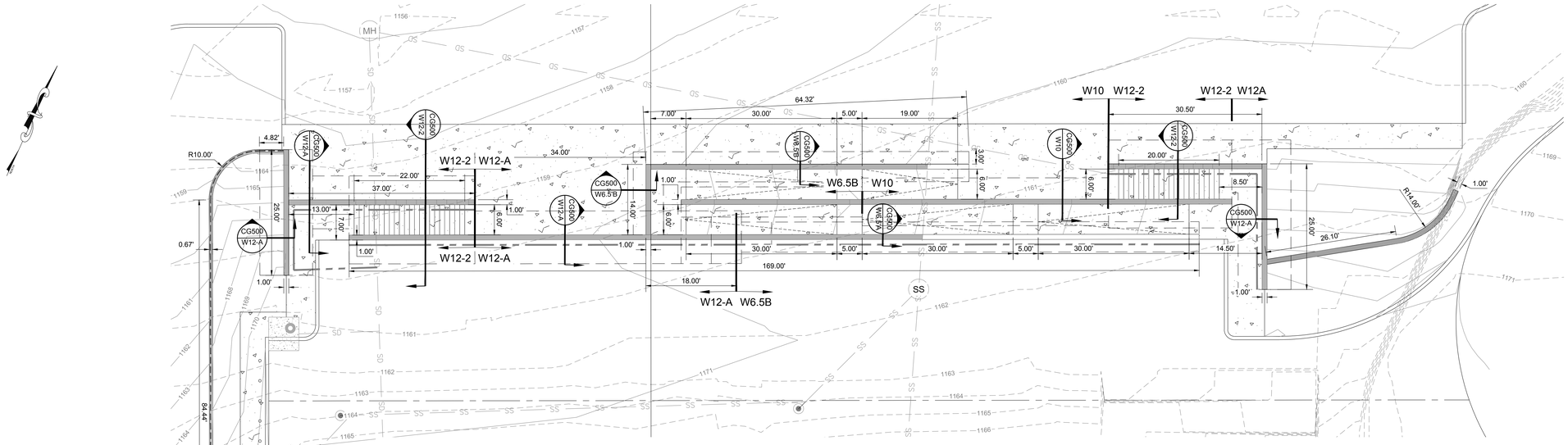
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
CG304

RETAINING WALL PROFILES

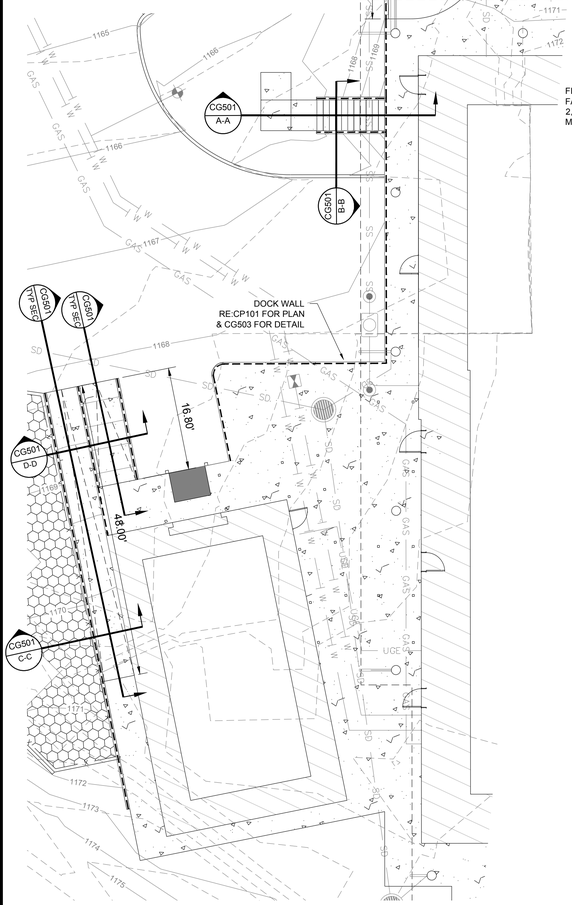


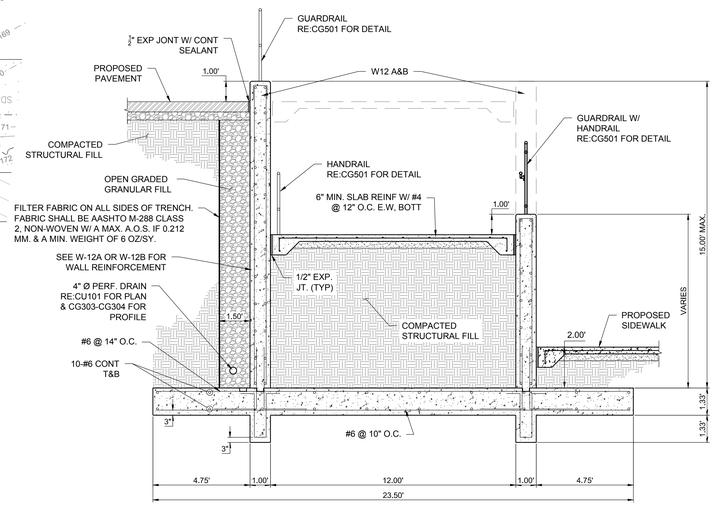
ENLARGED VIEW - A
1" = 10' SCALE

NOTE:

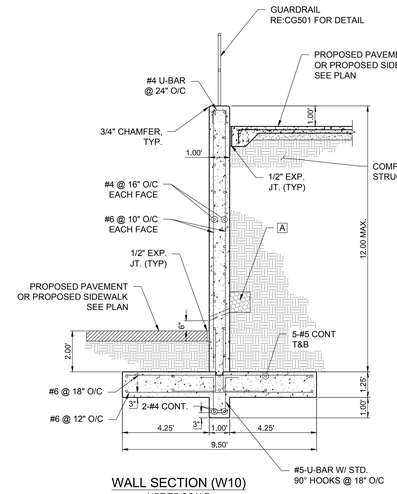
A. 1 ½" DIA PVC WEEP PIPE @ 6'-0" OC MAX. PROVIDE 12"x12"x12" GRAVEL & MIRAFI 140IN GEOTEXTILE FILTER FABRIC BETWEEN SOIL & GRAVEL @ EA WEEP HOLE.

B. CONTINUOUS REINFORCEMENT ON FOOTINGS TO EXTEND TO ADJACENT WALL.

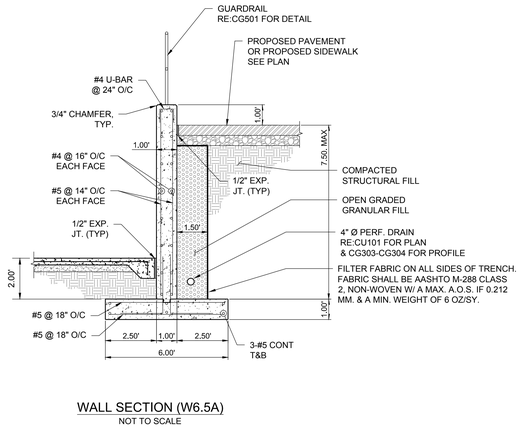




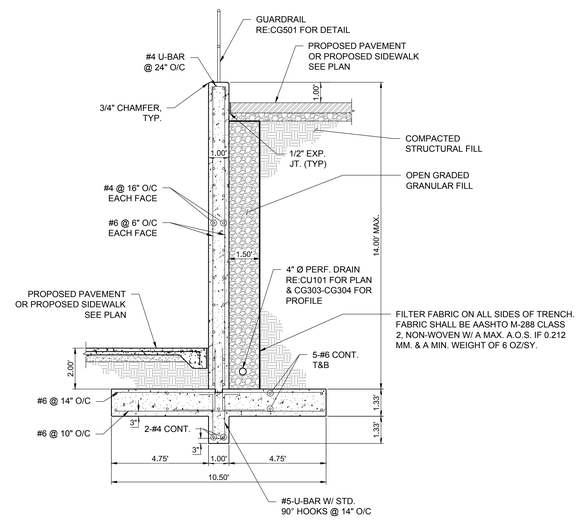
WALL SECTION (W12-2)
NOT TO SCALE



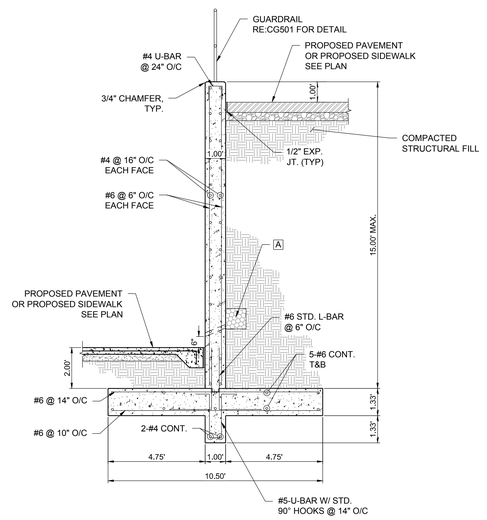
WALL SECTION (W10)
NOT TO SCALE



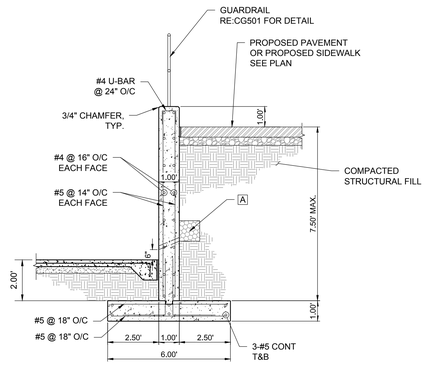
WALL SECTION (W6.5A)
NOT TO SCALE



WALL SECTION (W12-A)
NOT TO SCALE



WALL SECTION (W12-B)
NOT TO SCALE



WALL SECTION (W6.5B)
NOT TO SCALE

NOTE:

REFER TO C004 WALL GENERAL NOTES FOR FOUNDATION NOTES & DESIGN CRITERIA.

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EXP. 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

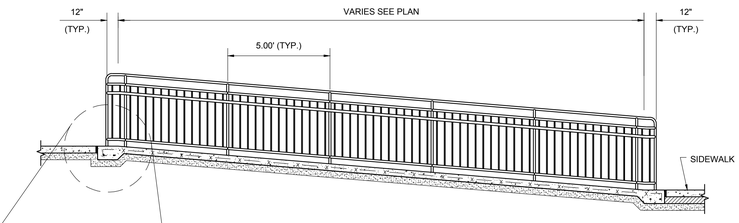
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

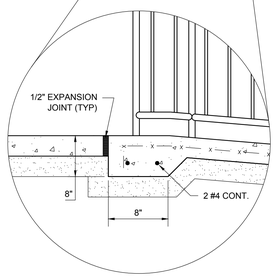
DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
CG500

RAMP & STAIR WALL DETAILS



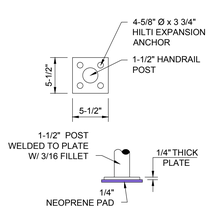
RAMP SECTION VIEW (TYP)
N.T.S.



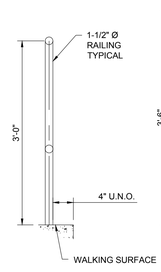
ENLARGED VIEW
N.T.S.

NOTE:

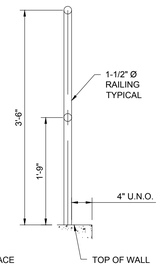
1. SEE SITE PLAN FOR MOW STRIP LOCATION, WIDTH, AND ELEVATION.
2. 12" WIDE, 3" THICK CONCRETE MOW STRIP @ SIDEWALK. PROVIDE 1/2" EXP. MATERIAL BETWEEN SIDEWALK AND MOW STRIP. PROVIDE CONTROL JOINTS @ 48" O.C. AND EXP. JOINTS @ 20'-0" O.C.



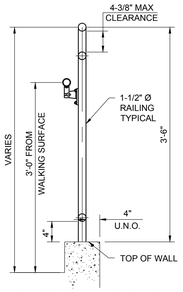
MOUNTING PLATE DETAIL
SCALE: NTS



HORI. HANDRAIL SPACING
SCALE: NTS



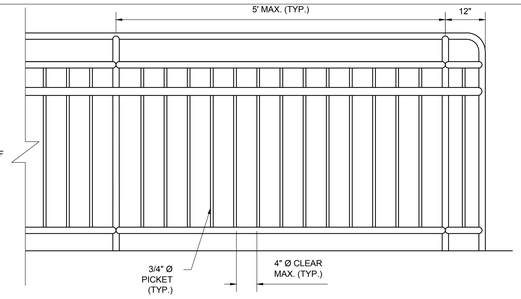
HORI. GUARDRAIL SPACING
SCALE: NTS



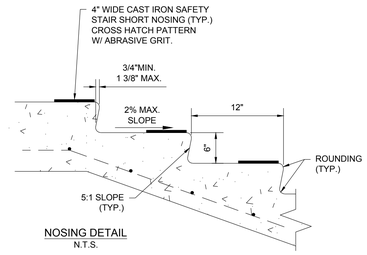
HORI. GUARDRAIL SPACING W/ HANDRAIL
SCALE: NTS

HANDRAIL GENERAL NOTES:
PAINTED STEEL

1. ALL RAILS WHEN PROPERLY INSTALLED SHALL MEET OR EXCEED ADA REQUIREMENTS.
2. GRIND WELD JOINTS SMOOTH
3. ALL RAIL, POSTS, AND COMPONENTS ARE TO BE STEEL-SCH. 40.
4. PRIME W/ RED OXIDE CORROSION INHIBITING PRIMER.
5. ALL RAILING SURFACES IN CONTACT WITH CONCRETE OR DISSIMILAR METALS SHALL RECEIVE ONE COAT OF ZINC CHROMATE.
6. USE 4-BOLT MOUNTING PLATE
7. ALL RAILS AND POSTS TO BE 1-1/2" SCH. 40 PIPE.
8. FINISH TO BE PAINT RE:ARCH.
9. MAX POST SPACING IS 5'-0" MAX. O.G.
10. ALL BENDS TO BE FIELD CUT.
11. CONTRACTOR SHALL FOLLOW ADA HANDRAIL AND GUARDRAIL SPECIFICATIONS. SHOP DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED FOR APPROVAL.
12. CROSS SLOPE 2% MAX.



GUARDRAIL DETAIL
N.T.S.

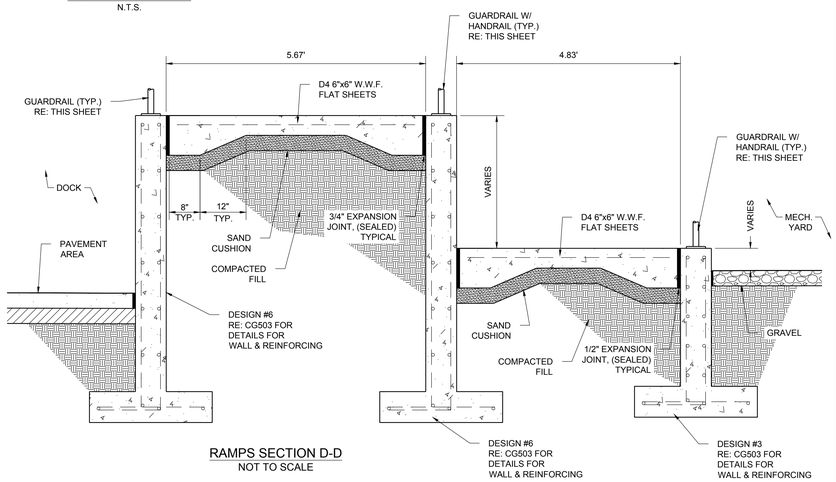


NOSING DETAIL
N.T.S.

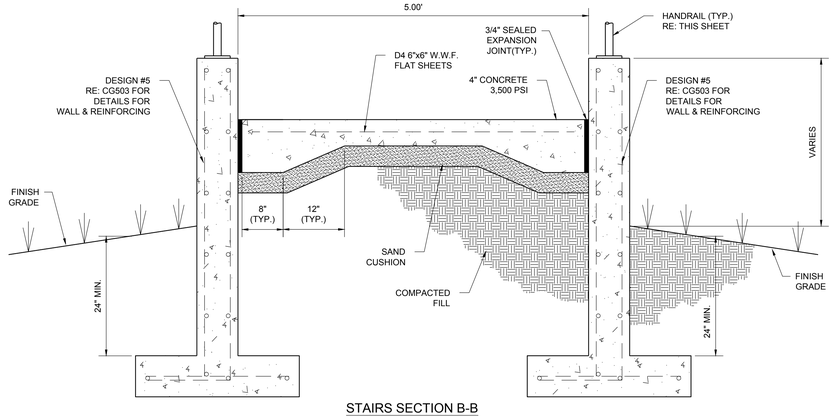
ALL RISERS SHALL BE OF EQUAL HEIGHT AND ALL TREADS SHALL BE OF EQUAL DEPTH ON ANY SET OF STAIRS.

HANDRAIL GENERAL NOTES:
PAINTED STEEL

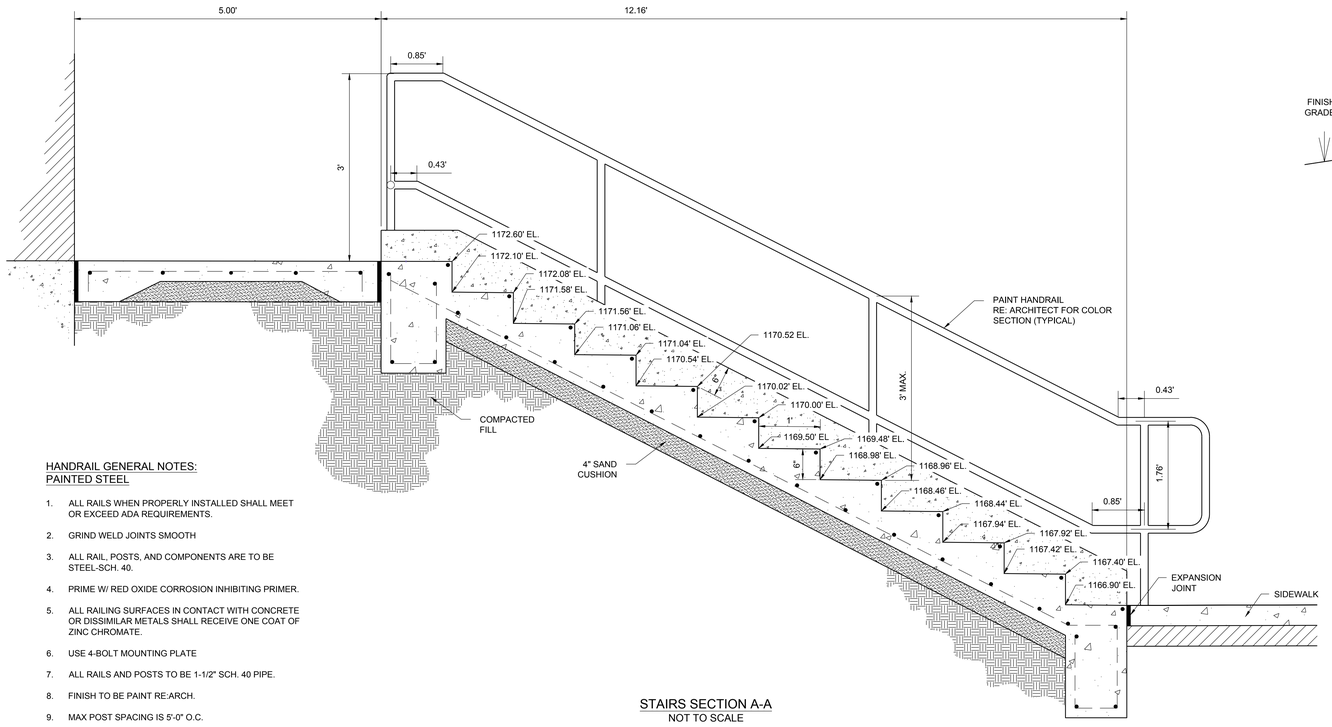
1. ALL RAILS WHEN PROPERLY INSTALLED SHALL MEET OR EXCEED ADA REQUIREMENTS.
2. GRIND WELD JOINTS SMOOTH
3. ALL RAIL, POSTS, AND COMPONENTS ARE TO BE STEEL-SCH. 40.
4. PRIME W/ RED OXIDE CORROSION INHIBITING PRIMER.
5. ALL RAILING SURFACES IN CONTACT WITH CONCRETE OR DISSIMILAR METALS SHALL RECEIVE ONE COAT OF ZINC CHROMATE.
6. USE 4-BOLT MOUNTING PLATE
7. ALL RAILS AND POSTS TO BE 1-1/2" SCH. 40 PIPE.
8. FINISH TO BE PAINT RE:ARCH.
9. MAX POST SPACING IS 5'-0" O.C.
10. ALL BENDS TO BE FIELD CUT.
11. CONTRACTOR SHALL FOLLOW ADA HANDRAIL AND GUARDRAIL SPECIFICATIONS. SHOP DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED FOR APPROVAL.



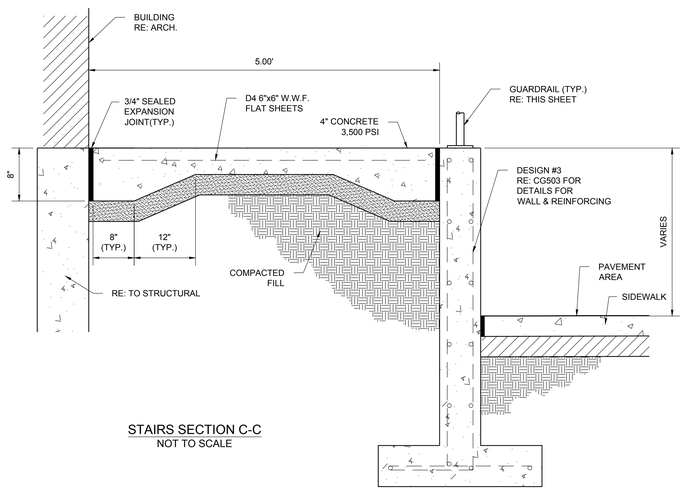
RAMPS SECTION D-D
NOT TO SCALE



STAIRS SECTION B-B
NOT TO SCALE



STAIRS SECTION A-A
NOT TO SCALE



STAIRS SECTION C-C
NOT TO SCALE

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EXP. 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

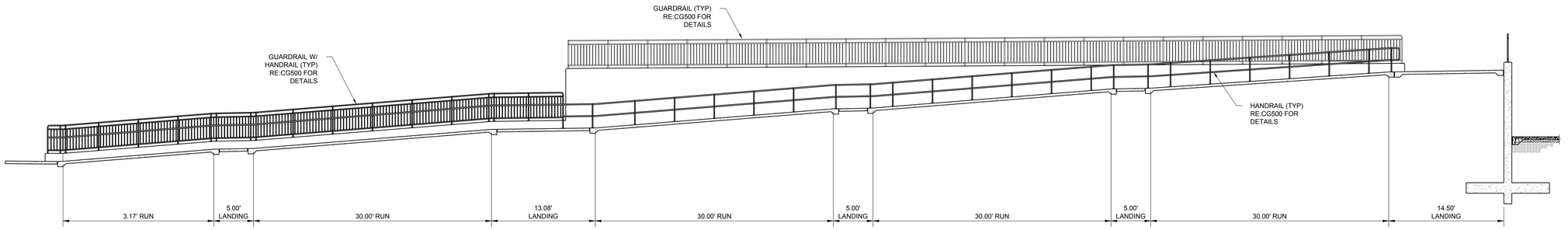
KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

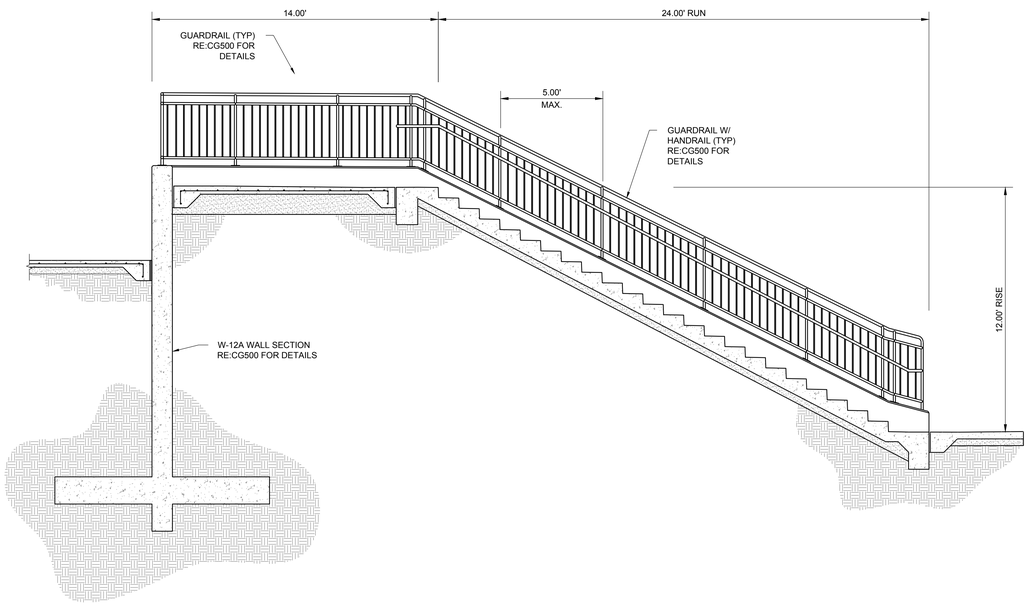
REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: CG501

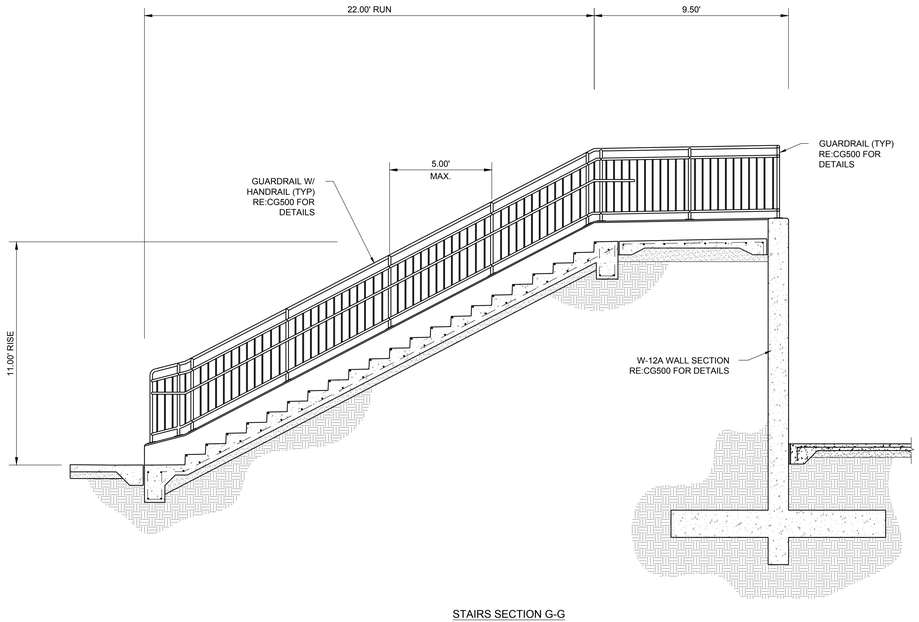
STAIR DETAILS



RAMP SECTION E-E
SCALE: NTS



STAIRS SECTION F-F
SCALE: NTS



STAIRS SECTION G-G
SCALE: NTS

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CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

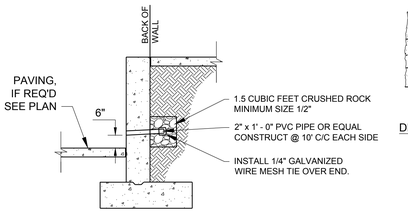
REVISIONS

#	DATE	DESCRIPTION

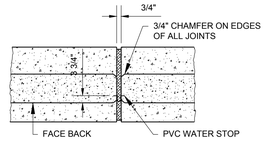
DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
CG502

STAIRS & RAMP DETAILS

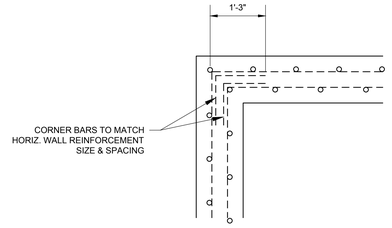


DETAIL OF WEEP HOLES & CONSTRUCTION JOINT

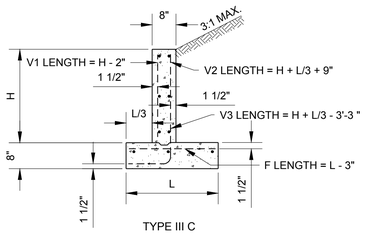


DETAIL OF EXPANSION & CONSTRUCTION JOINT

PLACE JOINTS @ 30' INTERVALS "MAXIMUM"

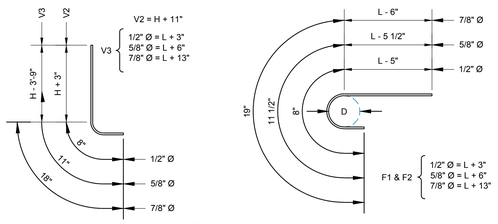


CONCRETE WALL CORNER REINFORCEMENT DETAIL
SCALE: N.T.S.

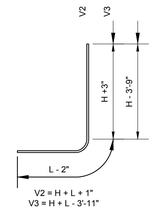


TYPE III C

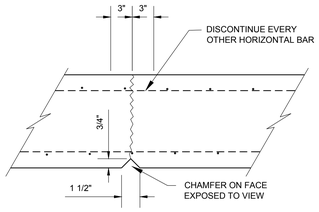
DESIGN NUMBER	H	L	F BAR	C BAR	V1 BAR	V2 BAR	V3 BAR	QUANTITIES	
			SIZE SPC.	# REQ'D	SIZE SPC.	SIZE SPC.	SIZE SPC.	REINF STEEL LBS. PER L.F.	CONC. C.Y. PER LF.
2	2' - 0"	2' - 0"	1/2" Ø @ 12"	6	1/2" Ø @ 18"	1/2" Ø @ 12"	-------	8.28	0.105
3	3' - 0"	2' - 0"	1/2" Ø @ 12"	8	1/2" Ø @ 18"	1/2" Ø @ 12"	-------	11.95	0.164
4	4' - 0"	2' - 7"	1/2" Ø @ 12"	9	1/2" Ø @ 18"	1/2" Ø @ 12"	-------	13.56	0.198
~~5~~	~~5' - 0"~~	~~3' - 2"~~	~~1/2" Ø @ 12"~~	~~11~~	~~1/2" Ø @ 18"~~	~~1/2" Ø @ 12"~~		~~19.16~~	~~0.244~~
6	6' - 0"	3' - 9"	5/8" Ø @ 12"	13	1/2" Ø @ 18"	1/2" Ø @ 12"	1/2" Ø @ 12"	25.64	0.298
~~7~~	~~7' - 0"~~	~~4' - 5"~~	~~3/4" Ø @ 12"~~	~~14~~	~~1/2" Ø @ 18"~~	~~1/2" Ø @ 12"~~	~~5/8" Ø @ 12"~~	~~36.83~~	~~0.335~~
~~8~~	~~8' - 0"~~	~~5' - 0"~~	~~1" Ø @ 12"~~	~~16~~	~~1/2" Ø @ 18"~~	~~1/2" Ø @ 12"~~	~~7/8" Ø @ 12"~~	~~54.07~~	~~0.380~~



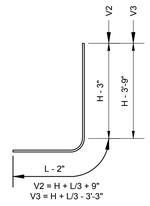
TYPES I A, I B & I C



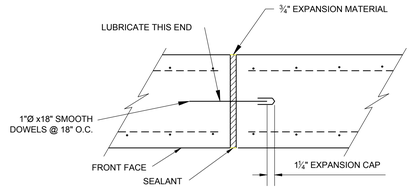
TYPES II A, II B & II C



WALL CONTROL JOINT DETAIL
SCALE: N.T.S.



TYPES III A, III B & III C

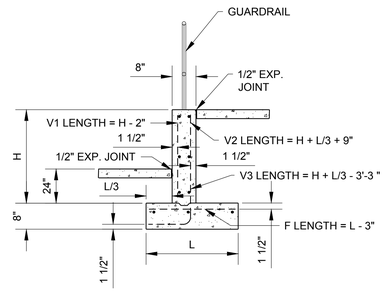


WALL EXPANSION JOINT DETAIL
SCALE: N.T.S.

TYPICAL CAST-IN-PLACE RAMP WALL DETAILS
N.T.S

SITE STRUCTURAL NOTES:

1. ALL EXPOSED CONCRETE EDGES SHALL HAVE A 3/4" CHAMFER.
2. ALL CONCRETE SHALL BE CLASS "A" CONCRETE 3500 PSI.
3. EXPANSION JOINTS SHALL BE AT A MAXIMUM OF 30'-0" INTERVALS.
4. ALL REINFORCING STEEL BARS SHALL BE DEFORMED BARS COLD BENT, NO WELDS PERMITTED GRADE 60.
4. ALL EXPOSED CONCRETE SURFACES SHALL HAVE A CARBORUNDUM FINISH.
5. MINIMUM SLOPE TO VARY AS REQUIRED TO PROVIDE POSITIVE DRAINAGE OF DRAIN PIPE
6. MINIMUM CONCRETE COVER FOR REINFORCEMENT:
   - A. SLABS AND JOINTS:
     - TOP AND BOTTOM BARS FOR DRY CONDITIONS
     - #14 AND #18 BARS — 1½"IN.
     - #11 BARS AND SMALLER — 3/4 IN.
     - FORMED CONCRETE SURFACES EXPOSED TO EARTH, WATER OR WEATHER, AND OVER OR IN CONTACT WITH SEWAGE AND FOR BOTTOMS BEARING ON WORK MAT. OR SLABS SUPPORTING EARTH COVER:
     - #5 BARS AND SMALLER — 1 1/2 IN.
     - #6 THROUGH #18 BARS — 2 IN.
   - B. BEAMS AND COLUMNS:
     - FOR DRY CONDITIONS:
     - STIRRUPS SPIRALS AND TIES — 1 1/2 IN.
     - PRINCIPAL REINFORCEMENT — 2 IN.
     - EXPOSED TO EARTH, WATER, SEWAGE, OR WEATHER:
     - STIRRUPS SPIRALS AND TIES — 2 IN.
     - PRINCIPAL REINFORCEMENT — 2 1/2 IN.
   - C. WALLS:
     - FOR DRY CONDITIONS:
     - #11 BARS AND SMALLER — 3/4 IN.
     - #14 AND #18 BARS — 1 1/2 IN.
     - FORMED CONCRETE SURFACES EXPOSED TO EARTH, WATER, SEWAGE, WEATHER, OR IN CONTACT WITH GROUND:
     - CIRCULAR TANKS WITH RING TENSION — 2 IN.
     - ALL OTHERS — 2 IN.
   - D. FOOTINGS AND BASE SLABS:
     - AT FORMED SURFACES AND BOTTOMS BEARING ON CONCRETE WORK MAT — 2 IN.
     - AT UNIFORMED SURFACES AND BOTTOMS IN CONTACT WITH EARTH — 3 IN.
     - TOP OF FOOTINGS - SAME AS SLABS
     - OVER TOP OF PILES — 2 IN.
7. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS, INSERTS, ETC. SHALL BE WELL SECURED IN PLACE BEFORE PLACING CONCRETE. NO CONDUIT SHALL BE PLACED BETWEEN THE BOTTOM REINFORCING AND THE BOTTOM OF THE SLAB.
8. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4" UNLESS DETAILED OTHERWISE.



LOADING DOCK DESIGN #6

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PROFESSIONAL SEAL:

REGISTERED PROFESSIONAL ENGINEER — H. WAYNE BARKER — 12-6-19 — 18533 — OKLAHOMA

CONSULTANT LOGO:

Barker & Associates, 3902 UNIVERSITY BLVD, Durant, OK 74701, 580.931.9045, OK. CA. 3936, Exp. 06/30/2020

CLIENT:

THE CHEROKEE NATION — SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

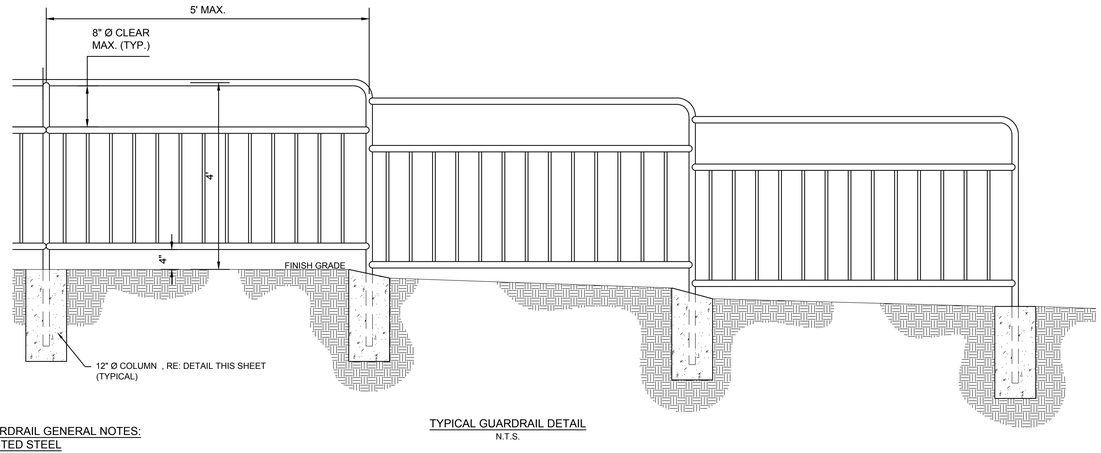
REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: CG503

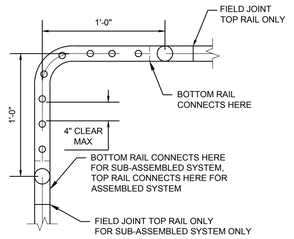
DOCK WALL DETAILS



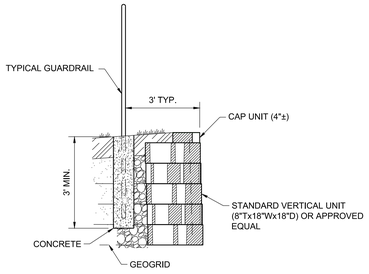
TYPICAL GUARDRAIL DETAIL
N.T.S.

GUARDRAIL GENERAL NOTES:
PAINTED STEEL

1. ALL RAILS WHEN PROPERLY INSTALLED SHALL MEET OR EXCEED ADA/OSHA REQUIREMENTS.
2. GRIND WELD JOINTS SMOOTH
3. ALL RAIL, POSTS, AND COMPONENTS ARE TO BE STEEL-SCH. 40.
4. PRIME W/ RED OXIDE CORROSION INHIBITING PRIMER.
5. ALL RAILING SURFACES IN CONTACT WITH CONCRETE OR DISSIMILAR METALS SHALL RECEIVE ONE COAT OF ZINC CHROMATE.
6. FINISH TO BE PAINT RE:ARCH.
7. MAX POST SPACING IS 5'-0" O.C.
8. ALL BENDS TO BE FIELD CUT.
9. CONTRACTOR SHALL FOLLOW ADA/OSHA HANDRAIL AND GUARDRAIL SPECIFICATIONS. SHOW DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED FOR APPROVAL.

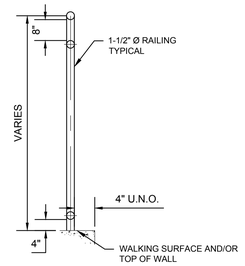


TYPICAL CORNER DETAIL U.N.O.
3" RAD. BEND
N.T.S.

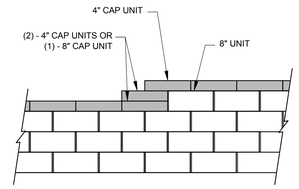


FENCE SECTIONDETAIL
NEAR VERTICAL SETBACK
N.T.S.

NOTE:
CONCRETE FILLED TUBE OR FORM TO BE SET DURING THE WALL CONSTRUCTION,



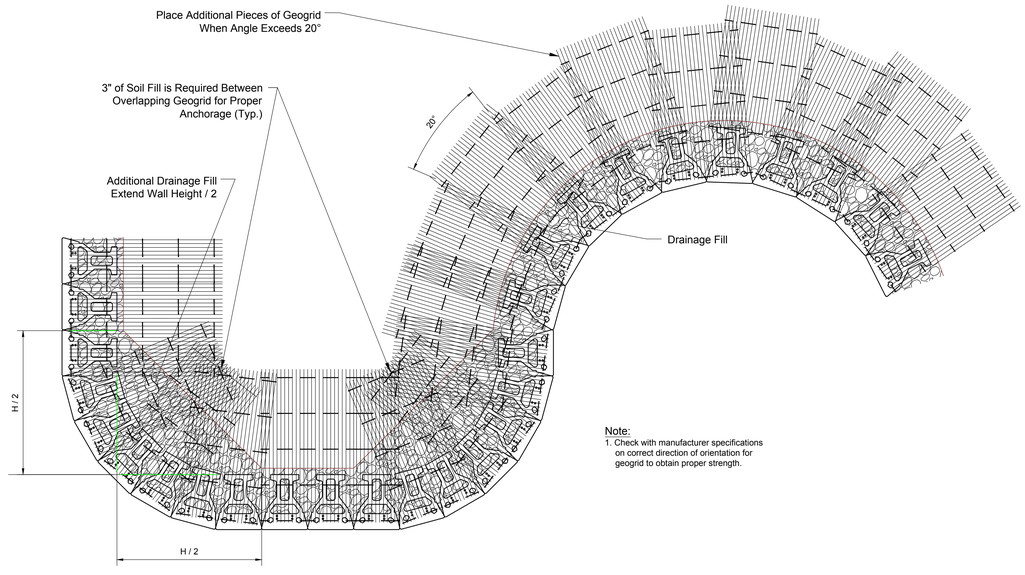
HORI. GUARDRAIL SPACING
N.T.S.



TOP OF WALL STEPS
N.T.S.

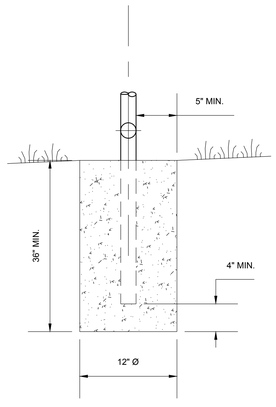
NOTE:

1. SECURE ALL CAP UNITS WITH MANUFACTURE APPROVED SEALANT OR METHODS.
2. FACADE TO MATCH EXISTING RETAINING WALL. CONTRACTOR TO COORDINATE WITH ARCH. & OWNER FOR PREFERENCE.

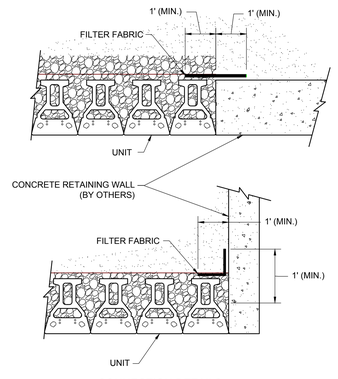


Note:
1. Check with manufacturer specifications on correct direction of orientation for geogrid to obtain proper strength.

Geogrid Installation on Curves
N.T.S.



CONCRETE FOOTING
N.T.S.



CONNECTION DETAILS
AT WALL PANEL
N.T.S.

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Exp. 06/30/2020

CLIENT:
THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER
EXPANSION
STILWELL, OKLAHOMA

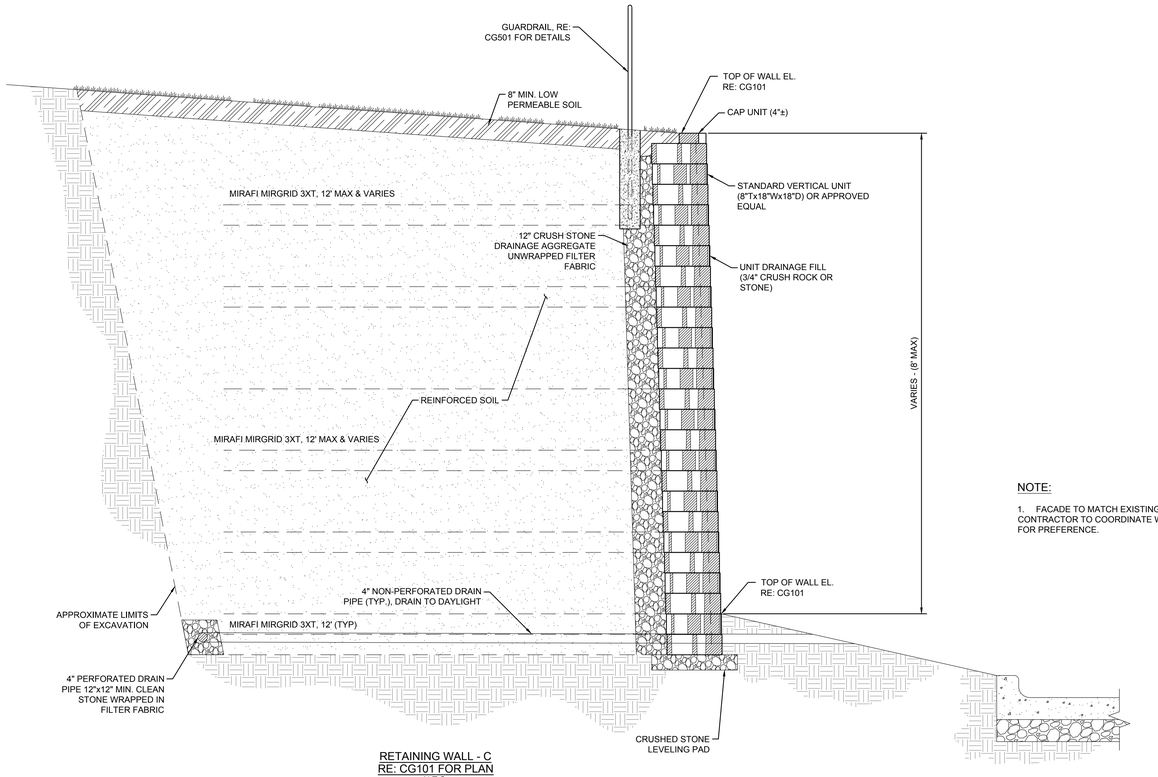
KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: CG504

WALL A, B & C
DETAILS



RETAINING WALL - C
RE: CG101 FOR PLAN
N.T.S.

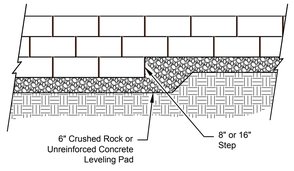
NOTE:

1. FACADE TO MATCH EXISTING RETAINING WALL. CONTRACTOR TO COORDINATE WITH ARCH. & OWNER FOR PREFERENCE.

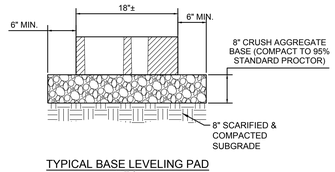
NOTE:

DAYLIGHT RETAINING WALL DRAINS AT EACH END OF WALL AND AT 100 FT. INTERVALS. INSTALL RODENT SCREEN AT OUTLETS. SUBMIT WALL DRAIN PLAN W/SHOP DRAWINGS.

REFER TO PROFILES FOR THE PANELS OF EACH RETAINING WALL. SHEETS CG300 AND CG301.



ELEVATION
N.T.S.



TYPICAL BASE LEVELING PAD
N.T.S.

NOTE:

1. CRUSHED AGGREGATE BASE SHALL BE ASTM D448.

SIEVE SIZE	% PASSING
1"	100
#4	35-70
#40	10-35
#200	3-10

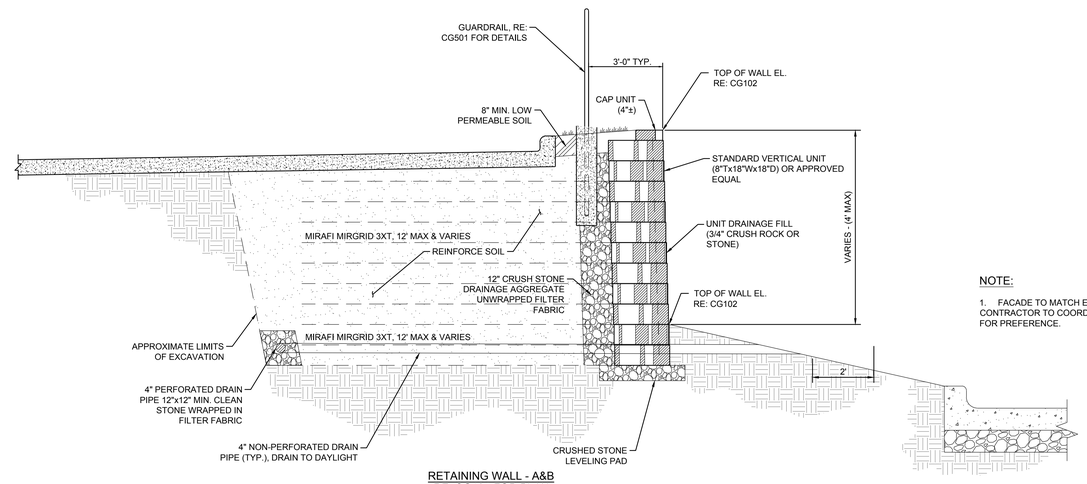
2. DRAINAGE AGGREGATE SHALL BE ASTM D448.

SIEVE SIZE	% PASSING
1"	100
¾"	75-100
#4	0-60
#40	0-60
#200	0-5

3. BACKFILL SOIL SHALL HAVE MAXIMUM <2" & A PLASTICITY INDEX <20.

4. ADJUST WALL HEIGHT IN THE FIELD IF NECESSARY TO FIT EXISTING GRADE. ±2 BLOCKS IN HEIGHT

5. COMPACT FILL WITHIN REINFORCED ZONE TO 95% STANDARD PROCTOR DENSITY, WITHIN +/- 2% OPTIMUM MOISTURE.



RETAINING WALL - A&B
RE: CG101 FOR PLAN
N.T.S.

NOTE:

1. FACADE TO MATCH EXISTING RETAINING WALL. CONTRACTOR TO COORDINATE WITH ARCH. & OWNER FOR PREFERENCE.

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EXP. 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
CG505

WALL A, B & C DETAILS

MATCH LINE
STA. 3+25.07

0 20' 40' 80'

SCALE IN FEET

KEY NOTE:

① INSTALL 3-WAY FIRE HYDRANT ASSEMBLY. ENSURE THERE IS A FUNCTIONAL FIRE HYDRANT ASSEMBLY DURING CONSTRUCTION, NEW FIRE HYDRANT ASSEMBLY NEEDS TO BE INSTALLED PRIOR TO REMOVING EXISTING FIRE HYDRANT UTILIZE TEMPORARY HYDRANT IF NEEDED OR PHASING DOES NOT ALLOW INSTALLATION OF PERMANENT FIRE HYDRANT ASSEMBLY. RE: CU500 FOR DETAIL

② INSTALL POST INDICATOR VALVE RE: CU500 FOR DETAIL

FIRE LINE
STA. 20+00.00 CONNECT TO 6" Ø WATER LINE INSTALL 6" ∅ TAPPING SADDLE, & 6" GATE VALVE, BOX & COVER
S-(13)
N:317803.6564
E:2970530.4820

DOMESTIC WATER LINE
STA. 10+00.00 CONNECT TO 6" ∅ WATER LINE. INSTALL 6"x3" TAPPING SADDLE W/ 3" GATE VALVE BOX & COVER
S-(6)
N:317802.1578
E:2970530.6384

DOMESTIC WATER LINE
STA. 10+04.96 INSTALL 3" WATER METER W/ BOX
RE:CU500 FOR DETAILS

21' of 6" Ø WATER LINE PIPE

FIRE LINE
STA. 20+20.89
INSTALL 6" Ø 45° BEND
S-(14)
N:317805.8245
E:2970551.2592

15' of 3" Ø WATER LINE PIPE

DOMESTIC WATER LINE
STA. 10+20.26
INSTALL 3" ∅ 45° BEND
S-(8)
N:317804.2607
E:2970550.7917

49' of 6" Ø WATER LINE PIPE

59' of 3" Ø WATER LINE PIPE

186± LF OF 2" GAS LINE

FIRE LINE
STA. 20+69.54
INSTALL 6" ∅ TEE & FIRE HYDRANT ASSEMBLY
RE:CU500 FOR DETAIL
S-(15)
N:317775.0457
E:2970588.9338

FIRE LINE
STA. 20+80.52
INSTALL 6" ∅ 22.5° BEND
S-(16)
N:317768.1014
E:2970597.4339

11' of 6" Ø WATER LINE PIPE

DOMESTIC WATER LINE
STA. 10+79.68
INSTALL 3" ∅ 22.5° BEND
S-(9)
N:317766.6703
E:2970596.8040

29' of 3" Ø WATER LINE PIPE

31' of 6" Ø WATER LINE PIPE

FIRE LINE
STA. 21+11.24
INSTALL 6" ∅ 45° BEND
S-(17)
N:317763.6828
E:2970627.8426

DOMESTIC WATER LINE
STA. 11+08.95
INSTALL 3" ∅ 45° BEND
S-(10)
N:317762.4613
E:2970625.7704

71' of 3" Ø WATER LINE PIPE

56' of 6" Ø WATER LINE PIPE

UNDER GROUND ELECTRIC LINE

UGE

10' of 6" Ø WATER LINE PIPE

FIRE LINE
STA. 21+80.30
INSTALL 6" ∅ 45° W/ 22.50° W/ 11.25° BEND
S-(19)
N:317708.0522
E:2970668.7593

DOMESTIC WATER LINE
STA. 11+80.30
INSTALL 3" ∅ 45° W/ 22.50° W/ 11.25° BEND
S-(11)
N:317704.9848
E:2970668.0448

12' of 3" Ø WATER LINE PIPE

CONNECT TO BUILDING STUB OUT RE: MEP FOR LOCATIONS & ELEVATIONS

F.F.E. = 1172.75'

SEWER
STA. 1+22.12 4" ∅ 2 WAY CLEANOUT S-(11)
TOP OF GRATE EL: 1170.80
P-8
FL IN:1163.92
P-9
FL OUT:1163.92

91' of 4" ∅ PIPE @ 1.00%
P-9

45' of 4" ∅ PIPE @ 1.00%
P-8

SEWER
STA. 0+77.34 4" ∅ 1 WAY CLEANOUT W/ WYE S-(10)
TOP OF GRATE EL: 1167.68
P-7
FL IN:1164.37
P-8
FL OUT:1164.37

54' of 4" ∅ PIPE @ 1.00%
P-7

SEWER
STA. 0+23.26 4" ∅ 2 WAY CLEANOUT S-(9)
TOP OF GRATE EL: 1168.20
P-6
FL IN:1164.91
P-7
FL OUT:1164.91

STA. 0+18.61 PROPOSED GREASE TRAP
RE: MEP FOR DETAILS
S-(8)
P-5
FL IN:1164.95
P-6
FL OUT:1164.96

BEGIN SEWER LINE ALIGNMENT CONNECT TO BUILDING STUBOUT RE: MEP FOR CONNECTION

SEWER
STA. 0+08.02 4" ∅ 1 WAY CLEANOUT W/ WYE S-(7)
TOP OF GRATE EL: 1172.38
P-4
FL IN:1166.12
P-5
FL OUT:1166.12

SEWER
STA. 2+12.66 4" ∅ 1 WAY CLEANOUT W/ WYE S-(21)
TOP OF GRATE EL: 1171.30
RE:CU504 FOR DETAIL (TYP.)
P-9
FL IN:1163.02
P-9 (1)
FL OUT:1163.01

32' of 4" ∅ PIPE @ 0.97%
P-9 (1)

SEWER
STA.:2+44.36 = SEWER FRONT STA.:0+67.14 INSTALL 4' ∅ INSIDE DROP MANHOLE
RE: CU503 FOR DETAIL
S-(16)
TOP OF RIM EL: 1171.36
N:317932.5455
E:2970723.8341
P-12
FL IN:1156.84
P-9 (1)
FL IN:1162.70
P-13
FL OUT:1156.84

25' of 8" ∅ PIPE @ 11.16%
P-13

65' of 8" ∅ PIPE @ 16.37%
P-12

SEWER FRONT
STA. 0+02.52 4" ∅ 2 WAY CLEANOUT S-(15)
TOP OF GRADE EL: 1172.33
P-11
FL IN:1167.41
P-12
FL OUT:1167.41

CONNECT TO BUILDING STUBOUT RE: MEP FOR CONNECTION

PROPOSED BUILDING
F.F.E. = 1172.75'

CH-1
CH-2
GEN
GEN

Sidewalk
4" Redbud
Gas Line Paint Marks
5-Strand Barbed Wire
of WV Nut 67.59

SEWER
STA. 3+76.32 CONNECT TO EXISTING 4' Ø MANHOLE, CONTRACTOR TO ADJUST EXISTING MANHOLE TOP OF RIM ELEVATION TO FINISHED GRADE
S-(18)
TOP OF RIM EL: 1156.25
RE: CU503 FOR MANHOLE HEIGHT ADJUSTMENT DETAIL.
P-14
FL IN:1151.94

107' of 8" ∅ PIPE @ 1.93%
P-14

MATCH LINE
STA. 3+25.07

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EXP. 06/30/2020

CLIENT:
TRIBAL SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

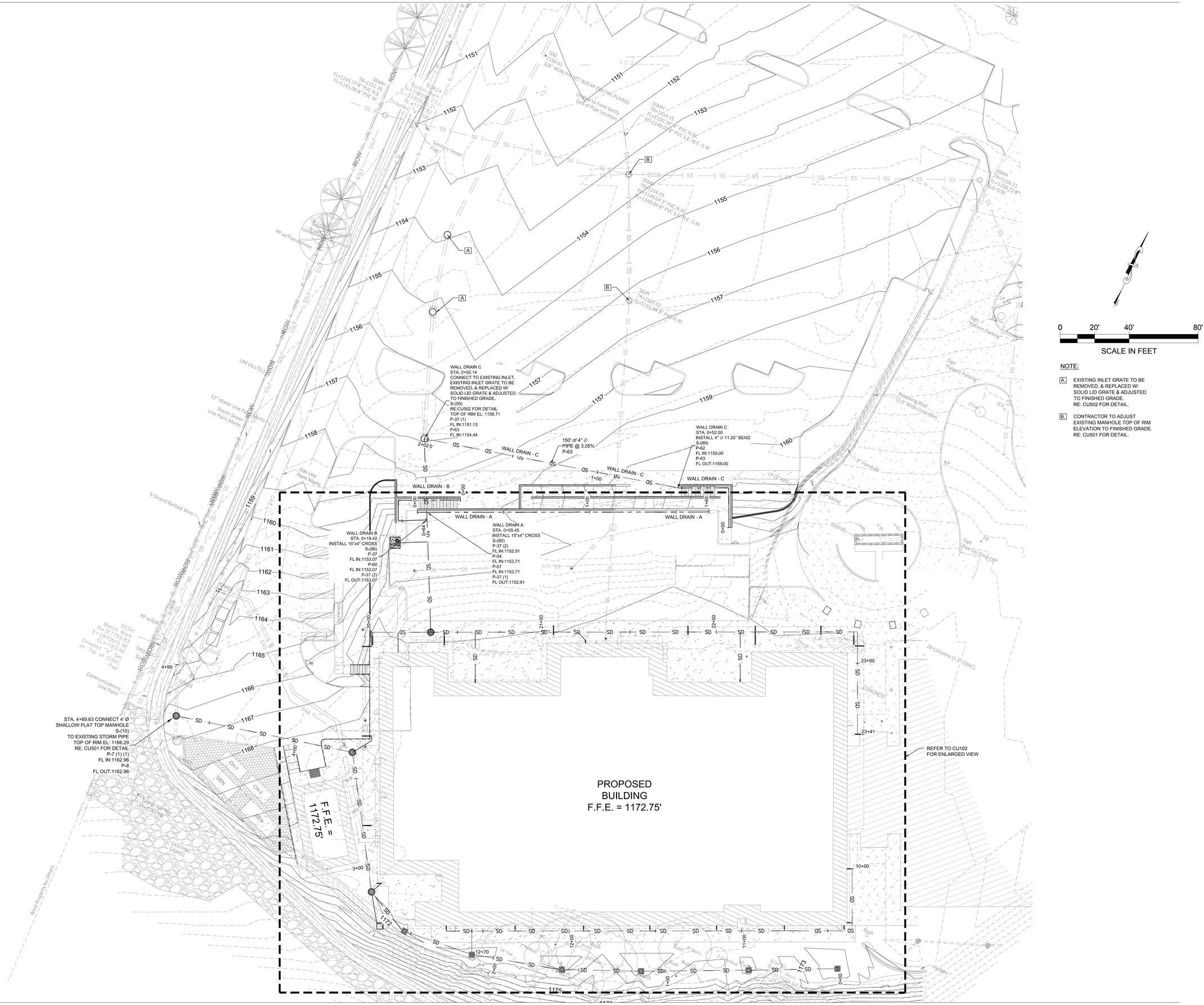
KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: CU100

UTILITY PLAN



NOTE:

A. EXISTING INLET GRATE TO BE REMOVED, & REPLACED W/ SOLID LID GRATE & ADJUSTED TO FINISHED GRADE. RE: CU502 FOR DETAIL.

B. CONTRACTOR TO ADJUST EXISTING MANHOLE TOP OF RIM ELEVATION TO FINISHED GRADE. RE: CU501 FOR DETAIL.

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CLIENT:

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: CU101

OVERALL STORM PLAN

NOTE:

A. CONNECT DOWNSPOUT TO 6" STORM LINE.
RE: ARCH FOR DETAILS.

B. 10" Ø ROOF DRAIN
RE: MEP FOR LOCATION.

0 10' 20' 40'

SCALE IN FEET

STORM LINE - C
STA. 20+13.83 INSTALL
5' CURB INLET
RE: CU502 FOR DETAIL
S-(58)
TOP OF RIM EL: 1170.90
N:317871.0789
E:2970613.2602
P-39
FL OUT:1165.00

19' of 10" Ø
PIPE @ 51.00%
P-39

STORM LINE - C
STA. 20+32.76 OFF. -52.42L
INSTALL 18"x10" TEE
S-(54)
P-35
FL IN:1155.34
P-39
FL IN:1155.34
P-37
FL OUT:1155.34

52' of 15" Ø
PIPE @ 18.03%
P-35

STORM LINE - C
STA. 20+34.46 CONNECT TO
EXISTING MANHOLE, EXISTING
TOP OF RIM TO BE ADJUSTED
TO PROPOSED GRADE.
S-(53)
TOP OF RIM EL: 1171.75
RE: CU501 FOR DETAILS
P-34
FL IN:1164.80
P-22
FL IN:1167.72
P-36 (1)
FL IN:1167.72
P-35
FL OUT:1164.80

8' of 12" Ø
PIPE @ 1.05%
P-22

STORM LINE - C
STA. 20+00.75
INSTALL 6" TEE
S-(34)
P-22 (1)
FL IN:1170.38
P-36
FL OUT:1170.38

STORM LINE - C
STA. 20+00.00
INSTALL 6" Ø 90° BEND
S-(35)
P-22 (1)
FL OUT:1170.48

15' of 6" Ø
PIPE @ 9.20%
P-36

STORM LINE - C
STA. 20+15.55 INSTALL
12"x10" TEE W/
12"x6" ADAPTOR
S-(33)
P-36
FL IN:1169.02
P-36 (1)
FL OUT:1168.51

18' of 12" Ø
PIPE @ 1.00%
P-21 (1)

STORM LINE - C
STA. 20+42.31
INSTALL 12"x6" TEE
S-(33)
P-21 (1)
FL IN:1167.80
P-22
FL OUT:1167.80

STORM LINE - C
STA. 20+60.22 INSTALL
12"x6" TEE W/
12"x10" ADAPTOR
S-(64)
P-21
FL IN:1167.98
P-21 (1)
FL OUT:1167.98

45' of 10" Ø
PIPE @ 1.00%
P-21

STORM LINE - C
STA. 21+05.62
INSTALL 10"x6" TEE
S-(32)
P-20 (1)
FL IN:1168.43
P-21
FL OUT:1168.43

P-20 (1)
14' of 10" Ø
PIPE @ 1.00%

STORM LINE - C
STA. 21+19.79
INSTALL 10"x6" TEE
S-(70)
P-20
FL IN:1168.57
P-20 (1)
FL OUT:1168.57

P-20
64' of 10" Ø
PIPE @ 1.00%

STORM LINE - C
STA. 21+83.56
INSTALL 10"x6" TEE
S-(31)
P-19 (1)
FL IN:1169.21
P-20
FL OUT:1169.21

P-19 (1)
30' of 10" Ø
PIPE @ 1.01%

9' of 10" Ø
PIPE @ 1.01%
P-19

STORM LINE - C
STA. 22+13.79
INSTALL 10"x6" TEE
S-(71)
P-19
FL IN:1169.52
P-19 (1)
FL OUT:1169.52

STORM LINE - C
STA. 22+22.55 INSTALL
10"x6" TEE W/
10"x8" ADAPTOR
S-(30)
P-18
FL IN:1169.61
P-19
FL OUT:1169.61

P-18
38' of 8" Ø
PIPE @ 0.99%

STORM LINE - C
STA. 22+60.59
INSTALL 8"x6" TEE
S-(29)
P-17
FL IN:1169.98
P-18
FL OUT:1169.98

STORM LINE - C
STA. 22+79.63 INSTALL
8"x6" TEE W/
8"x6" ADAPTOR
S-(28)
P-16
FL IN:1170.17
P-17
FL OUT:1170.17

P-17
19' of 8" Ø
PIPE @ 0.99%

2' of 6" Ø
PIPE @ 1.28%
P-16

STORM LINE - C
STA. 22+81.78
INSTALL 6" Ø 90° BEND
S-(27)
P-15
FL IN:1170.20
P-16
FL OUT:1170.20

8' of 6" Ø
PIPE @ 1.55%
P-15

STORM LINE - C
STA. 22+89.96
INSTALL 6" TEE
S-(26)
P-14
FL IN:1170.33
P-15
FL OUT:1170.33

51' of 6" Ø
PIPE @ 1.54%
P-14

STORM LINE - C
STA. 23+41.14
INSTALL 6" Ø 90° BEND
S-(25)
P-14
FL OUT:1171.12

STORM LINE - A
STA. 3+65.38
INSTALL 6" Ø 90° BEND
S-(23)
P-13
FL OUT:1170.74

3' of 6" Ø
PIPE @ 14.18%
P-13

STORM LINE - A
STA. 3+65.38
INSTALL 6" Ø 45° BEND
S-(59)
P-13
FL IN:1170.34
P-40
FL OUT:1170.34

13' of 6" Ø
PIPE @ 12.74%
P-40

STORM LINE - A
STA. 3+65.38 4' Ø
MANHOLE S-(12)
TOP OF RIM EL: 1172.29
P-7 (2)
FL IN:1164.23
P-40
FL IN:1168.71
P-7 (1)
FL OUT:1164.23

P-7 (1)
46' of 15" Ø
PIPE @ 1.25%

43' of 15" Ø
PIPE @ 2.10%
P-7 (2)

STORM LINE - A
STA. 3+22.43
INSTALL 15"x6" TEE
S-(67)
P-7
FL IN:1165.13
P-7 (2)
FL OUT:1165.13

39' of 15" Ø
PIPE @ 2.10%
P-7

F.F.E. = 1172.75'

PROPOSED
BUILDING
F.F.E. = 1172.75'

STA. 2+83.72 4' Ø
PRE-CAST FLAT TOP
MANHOLE S-(9)
TOP OF RIM EL: 1172.04
P-6 (1)
FL IN:1165.94
P-45
FL IN:1168.60
P-46
FL IN:1168.60
P-7
FL OUT:1165.94

8' of 6" Ø
PIPE @ 15.00%
P-45

30' of 15" Ø
PIPE @ 1.00%
P-6 (1)

18' of 6" Ø
PIPE @ 6.26%
P-46

STORM LINE - B
STA. 12+56.39 OFF. -14.77L
INSTALL 10"x6" TEE
S-(41)
P-28 (1)
FL IN:1168.90

STORM LINE - B
STA. 12+56.39 INSTALL
10" TEE W/
10"x6" ADAPTOR
S-(42)
P-28
FL IN:1167.91
P-28 (1)
FL OUT:1167.91
P-29
FL OUT:1167.91

STA. 2+54.04 INSTALL
DROP INLET TYPE "A"
RE: CU501 FOR DETAILS
S-(21)
TOP OF RIM EL: 1171.77
P-6
FL IN:1166.24
P-6 (1)
FL OUT:1166.24

41' of 15" Ø
PIPE @ 1.00%

STA. 2+12.87 INSTALL
DROP INLET TYPE "A" RE: CU501
FOR DETAILS S-(8)
TOP OF RIM EL: 1171.60
P-5
FL IN:1166.65
P-29
FL IN:1167.78
P-6
FL OUT:1166.65

53' of 15" Ø
PIPE @ 1.00%

STORM LINE - B
STA. 12+31.25
INSTALL 10"x6" TEE
S-(40)
P-27
FL IN:1168.17
P-28
FL OUT:1168.17

STORM LINE - B
STA. 11+91.58
INSTALL 10"x6" TEE
S-(39)
P-26
FL IN:1168.56
P-27
FL OUT:1168.56

P-4
46' of 15" Ø
PIPE @ 1.00%

STA. 1+59.70 INSTALL
DROP INLET TYPE "A"
RE: CU501 FOR DETAILS
S-(7)
TOP OF RIM EL: 1171.75
P-4
FL IN:1167.18
P-5
FL OUT:1167.18

STA. 1+13.76 INSTALL
DROP INLET TYPE "A"
RE: CU501 FOR DETAILS
S-(6)
TOP OF RIM EL: 1171.57
P-12
FL IN:1167.64
P-4
FL OUT:1167.64

P-12
62' of 15" Ø
PIPE @ 1.00%

STORM LINE - B
STA. 11+53.21 INSTALL
10"x6" TEE W/
10"x6" ADAPTOR
S-(38)
P-25
FL IN:1168.94
P-26
FL OUT:1168.94

STORM LINE - B
STA. 11+14.46
INSTALL 8"x6" TEE
S-(37)
P-24
FL IN:1169.33
P-25
FL OUT:1169.33

STA. 0+51.53 INSTALL
DROP INLET TYPE "A"
RE: CU501 FOR DETAILS
S-(20)
TOP OF RIM EL: 1171.78
P-11
FL IN:1168.27
P-12
FL OUT:1168.27

P-11
52' of 15" Ø
PIPE @ 1.01%

STORM LINE - B
STA. 10+75.25 INSTALL
8"x6" TEE W/
8"x6" ADAPTOR
S-(36)
P-43
FL IN:1169.73
P-24
FL OUT:1169.72

STORM LINE - B
STA. 10+40.61
INSTALL 6" TEE
S-(62)
P-42
FL IN:1170.07
P-43
FL OUT:1170.07

STA. 0+00.00 INSTALL
DROP INLET TYPE "B"
RE: CU501 FOR DETAILS
S-(19)
TOP OF RIM EL: 1171.03
P-11
FL OUT:1168.79

STORM LINE - B
STA. 10+00.00
INSTALL 15"x6" TEE
S-(60)
P-41
FL OUT:1170.47

STORM LINE - B
STA. 10+31.38
INSTALL 6" TEE
S-(63)
P-41
FL IN:1170.16
P-41 (1)
FL OUT:1170.16

STORM LINE - B
STA. 10+35.92
INSTALL 6" Ø 90° BEND
S-(61)
P-41 (1)
FL IN:1170.12
P-42
FL OUT:1170.12

Sidewalk
Redbud
CONCRETE
GRASS
UCE
GAS
WM
LP
2" Redbud
18" Oak
3-6" Birch
6" Elm
2-8" Birch
Bush
8" Birch
2-2" Redbud

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OK. CA. 3936
EXP. 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

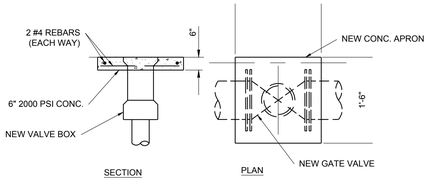
PROJECT PHASE:
BID PACKAGE 02

#	DATE	REVISIONS DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01

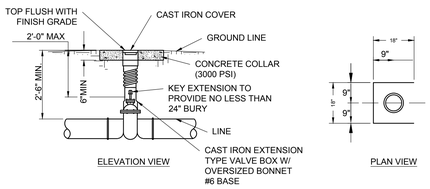
SHEET NUMBER:
CU102

ENLARGED
STORM PLAN



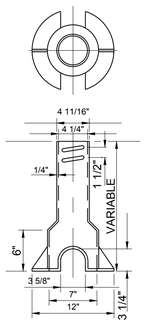
GATE VALVE APRON

SCALE: 1"=1'-0"

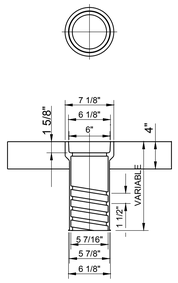


TYPICAL GATE VALVE AND BOX

NOT TO SCALE

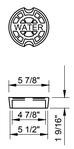


BOTTOM

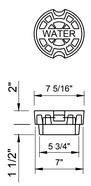


TOP

2" - 3" VALVE BOX DETAIL



LID



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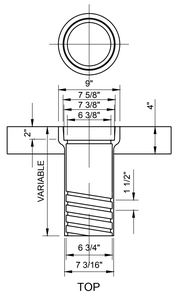
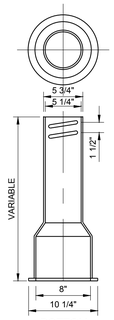


TOP

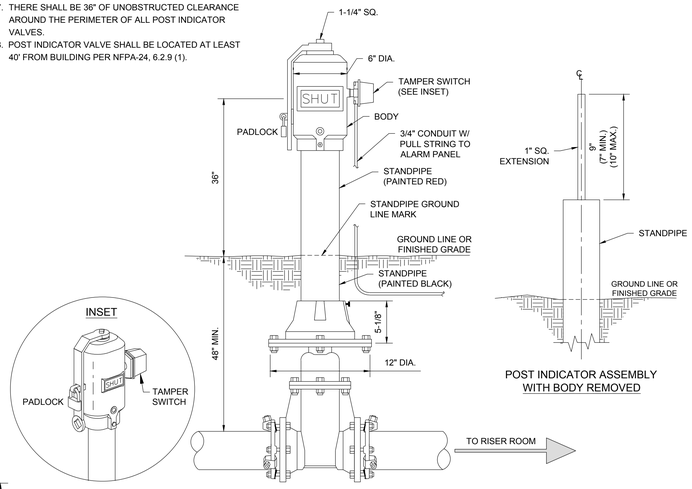
4" - 12" VALVE BOX DETAIL



BOTTOM

FIELD ADJUSTMENT INSTRUCTIONS

1. REMOVE THE BODY FROM THE TOP OF THE INDICATOR POST ASSEMBLY.
2. CUT THE REQUIRED LENGTH OFF THE BOTTOM OF THE STANDPIPE FOR THE GROUND LINE TO MATCH UP WITH STANDPIPE GROUND LINE MARK.
3. CUT THE 1" SQ. EXTENSION AT A DISTANCE OF 9" ABOVE THE TOP OF THE STANDPIPE.
4. SET THE "OPEN" AND "SHUT" TARGETS FOR THE APPROPRIATE VALVE SIZE.
5. RE-ATTACH THE BODY TO THE TOP OF THE INDICATOR POST ASSEMBLY.
6. ALL POST INDICATOR VALVES SHALL BE INSTALLED WITH AN ELECTRONIC UL LISTED TAMPER SWITCH.
7. THERE SHALL BE 36" OF UNOBSTRUCTED CLEARANCE AROUND THE PERIMETER OF ALL POST INDICATOR VALVES.
8. POST INDICATOR VALVE SHALL BE LOCATED AT LEAST 40' FROM BUILDING PER NFPA-24, 6.2.9 (1).



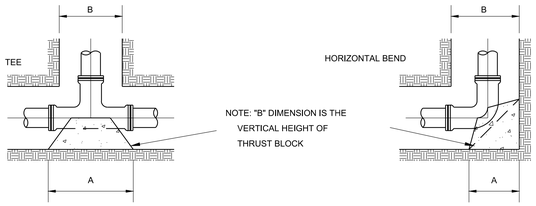
TYPICAL POST INDICATOR
VALVE DETAIL

NOT TO SCALE

POST INDICATOR ASSEMBLY
WITH BODY REMOVED

NOTES:

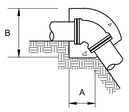
1. IN PAVED AREAS, WATER LINE CONTRACTOR TO PLACE 2 FOOT SQUARE CONCRETE PAD AROUND EACH WATER VALVE AFTER PAVING IS COMPLETE. THE PAVEMENT SHALL BE SAW-CUT FOR PAD PLACEMENT.
2. VALVE BOXES REQUIRING OVER 2 ADDITIONAL BOTTOM SECTIONS SHALL BE EXTENDED USING PVC PIPE WITH A BOTTOM AND TOP SECTION PLACED ON TOP OF THE PVC PIPE.



PIPE SIZE	TEES		BENDS							
			90		45		22 1/2		VERT.	
	A	B	A	B	A	B	A	B	A	B
4"	16"	14"	16"	16"	12"	8"	8"	8"	12"	14"
6"	24"	21"	24"	24"	18"	12"	12"	12"	18"	21"
8"	39"	24"	24"	26"	21"	15"	15"	15"	18"	24"
10"	48"	30"	30"	32"	26"	24"	18"	18"	18"	24"
12"	48"	30"	32"	34"	28"	30"	18"	18"	20"	28"
14"	54"	36"	36"	39"	30"	30"	21"	21"	20"	28"
16"	54"	38"	38"	41"	32"	32"	24"	24"	21"	30"

TYPICAL GATE VALVE BOXES

NOT TO SCALE



VERTICAL BENDS

TYPICAL THRUST BLOCK DETAILS

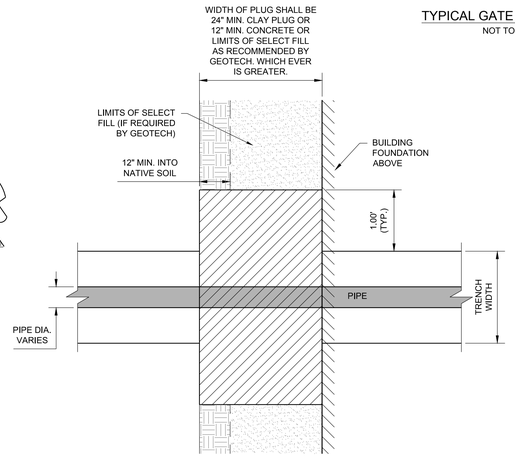
NOT TO SCALE

NOTES:

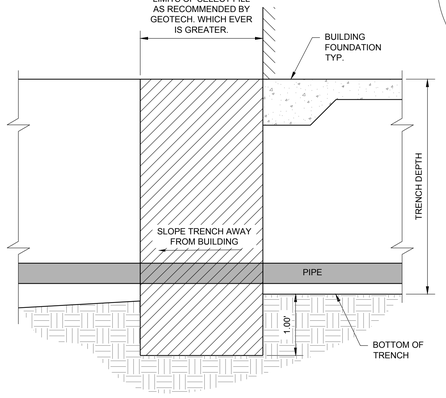
1. USE 2000 P.S.I. CONCRETE ON ALL BLOCKING
2. ALL BEARING AREAS SHALL BE ON UNDISTURBED EARTH
3. BLOCKING SHALL BE PLACED SO THAT PIPE AND FITTING WILL BE ACCESSIBLE FOR REPAIRED.
4. USE THRUST BLOCKS FOR CHANGES IN DIRECTION OF 22 1/2° OR GREATER (I.E,TEES,BENDS AND CROSSES) CHANGE IN SIZE (I.E. REDUCERS). STOPS (I.E.DEAD ENDS) AND VALVES WHERE THRUST DEVELOPS WHEN CLOSED

STANDARD TRENCH WIDTH		
RIGID PIPE		FLEXIBLE PIPE
<2"	6"	6"
2"-3"	12"	12"
4"-6"	18"	18"
8"	24"	30"
10"-12"	30"	36"
14"-18"	36"	45"
20"-24"	42"	54"
26"-30"	54"	66"
32"-36"	60"	75"
38"-42"	66"	81"
44"-48"	72"	90"
50"-54"	78"	96"
56"-60"	84"	108"

NOTE:
REMOVE ALL STONES AND DEBRIS FOUND IN TRENCH TO A DEPTH OF AT LEAST 6 INCHES BELOW THE BOTTOM OF THE PIPE.



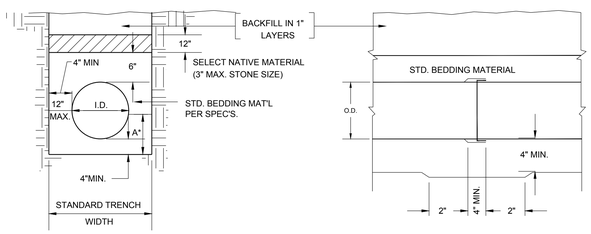
UTILITY TRENCH PLUG DETAIL
PLAN



UTILITY TRENCH PLUG DETAIL
PROFILE

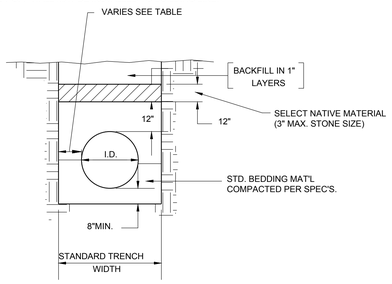
NOTES:

UTILITY TRENCHES AT BUILDING LINES SHALL BE BACKFILLED WITH A CLAY PLUG. CLAY SHALL BE RELATIVELY IMPERVIOUS, IN LIEU OF PLUG, CONCRETE CUT OFF WALL MAY BE INSTALLED TO BUILDING LINE.



CROSS SECTION
RIGID PIPE

LONGITUDINAL SECTION



CROSS SECTION
FLEXIBLE PIPE

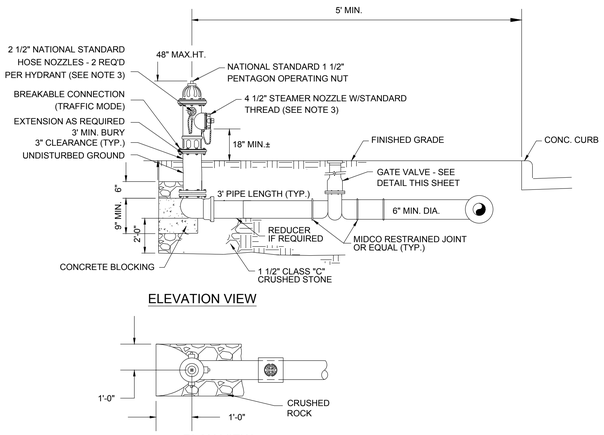
STANDARD BEDDING MATERIAL

DEPTH	PVC	ABS	VCP	PRESSURE
LESS THAN 4'	*	**	*	*
4' - 9'	*	*	*	*
9' - 12'	**	*	*	*
ABOVE 12'	**	**	**	**

* ASTM D-2321, CLASS I, II, OR III PLACED PER SPECS.
** ASTM D-2321, CLASS I (CRUSHED STONE) ONLY, PER SPECS.

TRENCH CONDITIONS

NOT TO SCALE



ELEVATION VIEW

PLAN VIEW

NOTES

1. HYDRANT DRAIN MUST REMAIN CLEAR AFTER POURING CONCRETE BLOCKING.
2. UNLESS OTHERWISE SPECIFIED, ALL HYDRANTS WILL BE LOCATED INSIDE OF R/W FENCES ON PUBLIC R/W. UNLESS SEPARATE QUANTITIES ARE SHOWN, THE CONTRACTOR WILL INCLUDE THE COST OF ALL PIPE & FITTINGS FOR THE HYDRANT FROM THE LINE TEE TO THE HYDRANT.
3. CONTRACTOR TO CONFIRM WITH OWNER THE NUMBER, SIZE AND THREAD TYPES OF ALL HYDRANT CONNECTIONS.
4. MUELLER, KENNEDY OR AMERICAN-DARLING (OR EQUAL)
5. HYDRANTS SHALL HAVE 5 1/4" MAIN VALVE, AND 6" MJ, RJ CONNECTION.

TYPICAL FIRE HYDRANT ASSEMBLY INSTALLATION

NOT TO SCALE

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Exp. 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

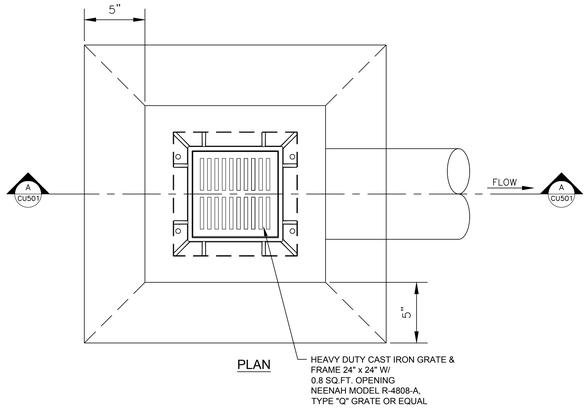
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

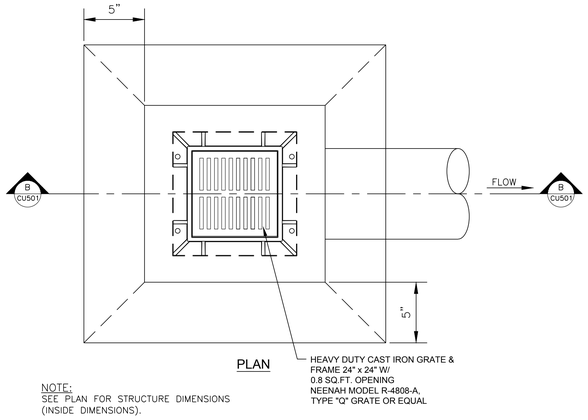
DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
CU500

WATER
DETAILS

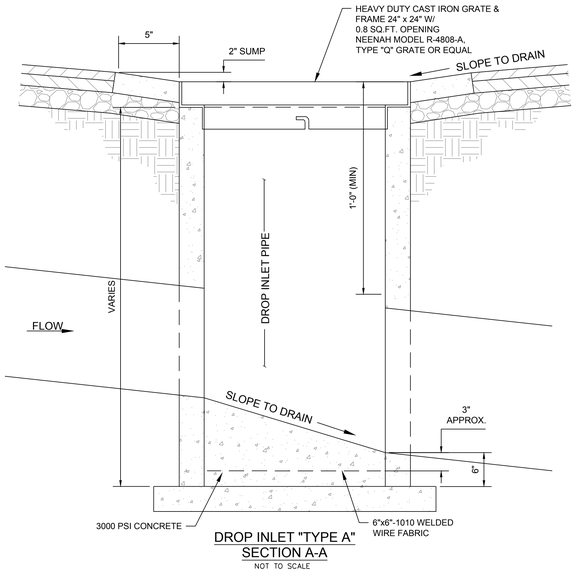


PLAN

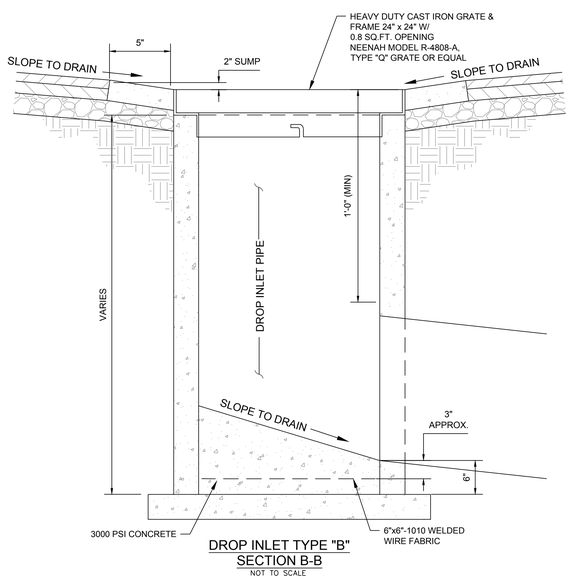


PLAN

NOTE:
SEE PLAN FOR STRUCTURE DIMENSIONS (INSIDE DIMENSIONS).



DROP INLET "TYPE A"
SECTION A-A
NOT TO SCALE



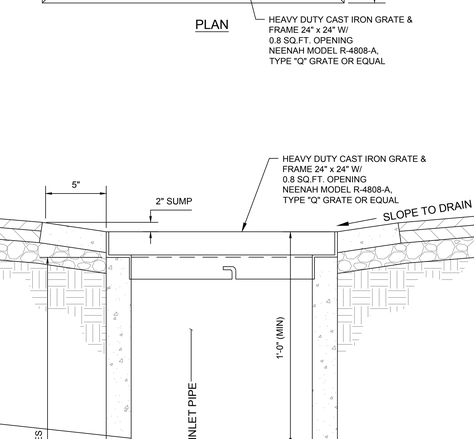
DROP INLET TYPE "B"
SECTION B-B
NOT TO SCALE

GENERAL NOTES:

1. ALL DRAINAGE STRUCTURES SHALL BE PRE-CAST OR APPROVED EQUAL BY THE ENGINEER.
2. DURING CONSTRUCTION OF ROADWAY/PARKING AREA, THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.

GENERAL NOTES:

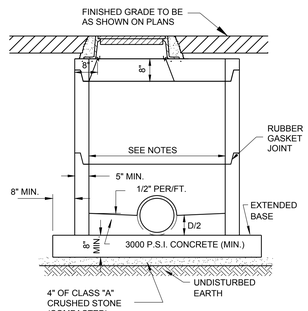
1. ALL DRAINAGE STRUCTURES SHALL BE PRE-CAST OR APPROVED EQUAL BY THE ENGINEER.
2. DURING CONSTRUCTION OF ROADWAY/PARKING AREA, THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.



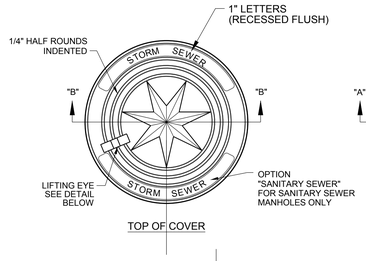
MANHOLE HEIGHT
ADJUSTMENT DETAIL
NOT TO SCALE

NOTES:

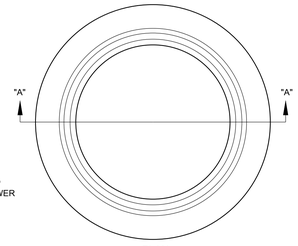
1. EXISTING MANHOLE & DETAILS UNKNOWN. CONTRACTOR TO FIELD VERIFY & DETERMINE IF CONCENTRIC RINGS ARE PRESENT & CAN BE REMOVED OR IF A SHORTER FRAME CAN BE USED.
2. ALTERNATIVE: CONTRACTOR CAN REMOVE AND REPLACE TOP SECTION OF MANHOLE.



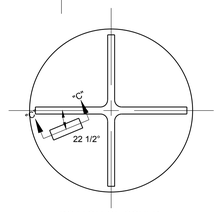
SHALLOW PRECAST FLATTOP
MANHOLE DETAIL
NOT TO SCALE



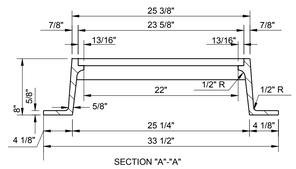
TOP OF COVER



PLAN

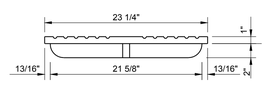


BOTTOM OF COVER

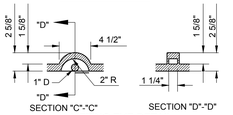


SECTION "A"-"A"

MANHOLE FRAME



SECTION "B"-"B"
MANHOLE COVER



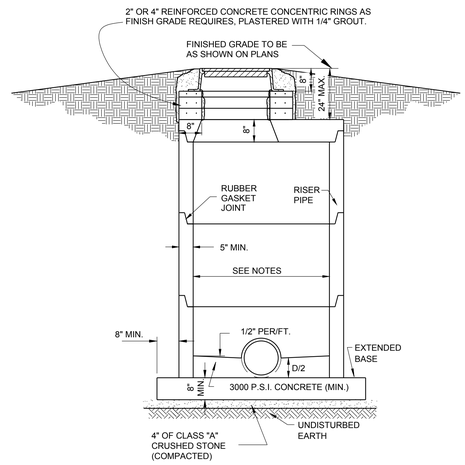
SECTION "C"-"C" SECTION "D"-"D"
LIFTING EYE DETAIL

22"Ø MANHOLE FRAME AND SOLID COVER, HEAVY DUTY, CAST IRON FRAME AND COVER, WITH 1-INCH LETTERING (SANITARY SEWER) LOCATED ON THE ARC OF THE SOLID COVER, DEETER CASTING NUMBER 1265 BY DEETER FOUNDRY, INC., OR APPROVED EQUIVALENT.

TYPICAL MANHOLE FRAME
AND COVER DETAIL
NOT TO SCALE

GENERAL NOTES

1. FOR LOCATION, ORIENTATION, AND ELEVATIONS, SEE CONSTRUCTION DRAWING PLAN SHEETS AND/OR PLAN AND PROFILE SHEETS.
2. PRIOR TO EXCAVATION AND/OR TRENCHING FOR ALL THE NEW SANITARY SEWER LINE, MANHOLES, SERVICE CONNECTIONS ETC., THE CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THESE EXISTING UTILITIES. FORTY EIGHT (48) HOURS BEFORE YOU DIG CALL OKIE 1-800-522-6543.
3. ALL MATERIALS, CONSTRUCTION ACTIVITIES, TESTING PROCEDURES, ETC. SHALL COMPLY WITH THE APPLICABLE SECTIONS OF THE MOST CURRENT EDITION OF OKLAHOMA DEPARTMENT OF ENVIRONMENTAL



TYPICAL PRECAST FLATTOP
MANHOLE DETAIL
NOT TO SCALE

NOTES:

1. SHALL CONFORM TO CURRENT ASTM C478.
2. 8" TO 18" PIPE, 4' ID MANHOLE REQUIRED.
3. 21" TO 27" PIPE, 5' ID MANHOLE REQUIRED.
4. OVER 27" PIPE MANHOLE ID AS SPECIFIED BY ENGINEER.
5. MANHOLES LESS THAN 4'-6" IN HEIGHT SHALL HAVE A FULL 4'-0" ID OR LARGER FROM TOP TO BOTTOM.

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CA: OR: 3996
Exp: 06/30/2020

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

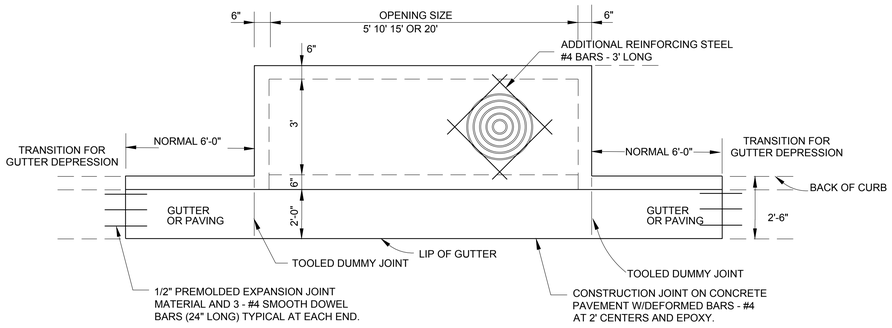
PROJECT PHASE:
BID PACKAGE 02

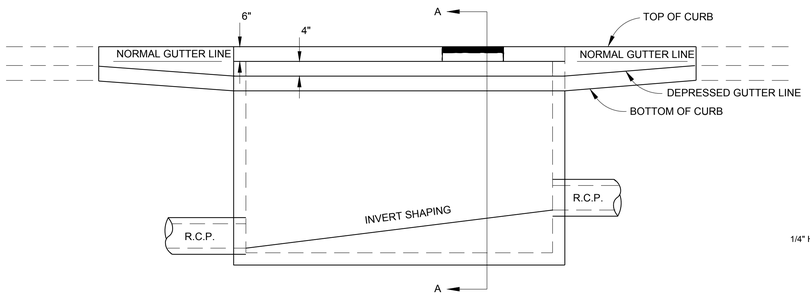
REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01

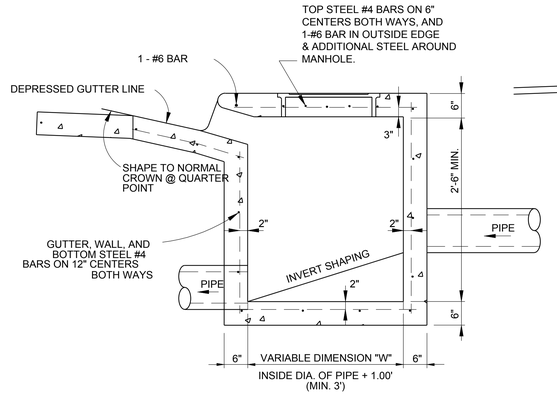
SHEET NUMBER:
CU501

STORM
DETAILS

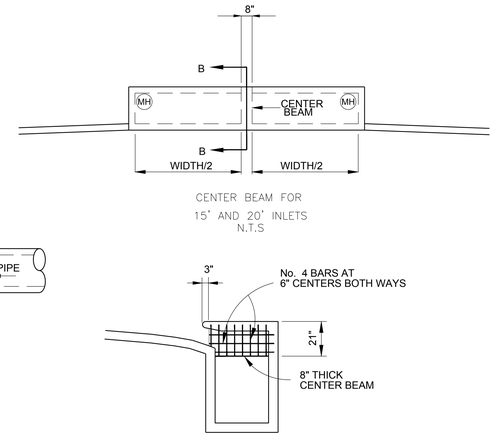




CURB INLET
N.T.S.



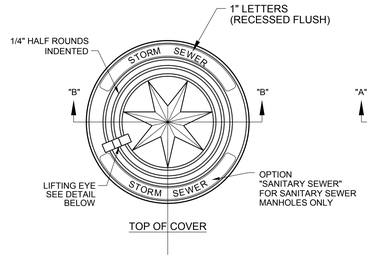
CURB INLET
CROSS SECTION A-A
N.T.S

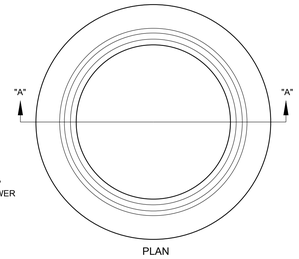


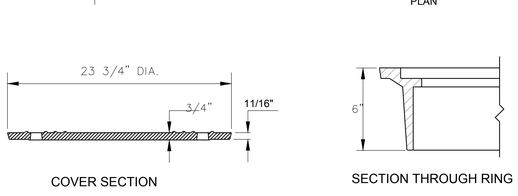
SECTION B-B
N.T.S.

NOTES:

1. REINFORCING STEEL SHALL BE #4 BARS ON 12" CENTERS BOTH WAYS FOR GUTTER, BOTTOM SLAB, ENDS, FRONT AND BACK WALLS, AND #4 BARS ON 6" CENTERS BOTH WAYS FOR TOP SLAB. AN ADDITIONAL #6 BAR SHALL BE PLACED IN THE FRONT EDGE OF THE TOP SLAB IN THE INLETS AND ADDITIONAL REINFORCING STEEL SHALL BE PLACED AROUND MANHOLES AS SHOWN.
2. ALL REINFORCING STEEL SHALL BE GRADE 60.
3. ALL CONCRETE SHALL BE CLASS "A".
4. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4"
5. ALL REINFORCING STEEL SHALL HAVE A MINIMUM COVER OF 2"
6. ALL BACKFILLING SHALL BE PERFORMED BY MECHANICAL TAMPING TO 95% STANDARD PROCTOR DENSITY.
7. IF MODIFYING AN INLET, i.e. CREATING AN OPEN BACK INLET, THE TOP SHALL BE REMOVED AND RECONSTRUCTED.
8. LOCATION OF MANHOLE OPENING TO BE AT OUTFALL END.
9. ALL 15' AND 20' INLETS WILL REQUIRE TWO MANHOLES ONLY IF THE INSIDE HEIGHT (UNDER THE CENTER BEAM) IS LESS THAN FOUR FEET.
10. LIGHT BROOM FINISH ON ALL SURFACES.
11. PRECAST INLETS WITH EQUIVALENT STRUCTURAL CAPACITY MAY BE FURNISHED. SEALED ENGINEERING CALCULATIONS AND DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO CONSTRUCTION. WHEN APPROVED BY THE ENGINEER, OPENING CONFIGURATIONS OF EQUIVALENT HYDRAULIC DESIGN MAY BE FURNISHED.
12. IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL, BLOCKOUTS, PIPES, ANCHOR BOLTS OR OTHER REINFORCING STEEL, THE REINFORCEMENT SHALL BE BENT OR ADJUSTED T CLEAR AS DIRECTED BY ENGINEER.
13. REQUIREMENTS OF AASHTO M306, STANDARD SPECIFICATIONS FOR DRAINAGE STRUCTURE CASTINGS. MATERIALS SHALL CONFORM TO ASTM A48, CLASS 35B FOR GRAY IRON CASTINGS OR ASTM A536, GRADE 65-45-12 FOR DUCTILE IRON CASTINGS. ALUMINUM ALLOY CASTINGS SHALL NOT BE PERMITTED.
14. ALL 15' AND 20' INLETS WILL REQUIRE A CENTER SUPPORT BEAM.
15. ALL OPEN BACK INLETS WILL REQUIRE A CENTER BEAM, REGARDLESS OF INLET TYPE OR SIZE.
16. CONCRETE SHALL BE 3,000 PSI (MIN.).



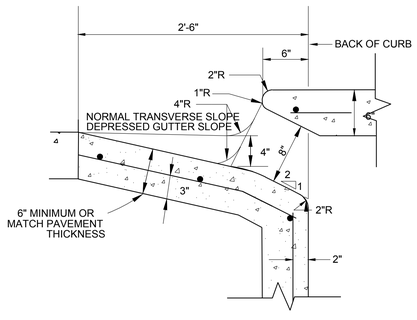




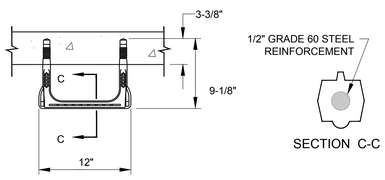
MANUFACTURER	REFERENCE NUMBER	APPROX. WEIGHT
EAST JORDAN	106-6C	175 lb
BASS & HAYS	226	175 lb
OR APPROVED EQUAL		

COVER WILL BE NON-LOCKING TYPE. SPOT WELD INLET COVER TO RING IN AT LEAST 4 LOCATIONS TO PREVENT THEFT.

LOGO MANHOLE COVER & FRAME
N.T.S.



THROAT DETAIL FOR STANDARD INLETS
ON CONCRETE STREETS
N.T.S.

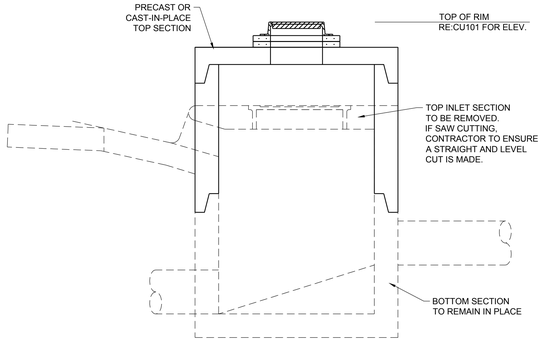


SECTION C-C

NOTES:

1. STEPS SHALL CONFORM TO ASTM C478-88a.
2. M.A. IND. INC. NUMBER "PS1-PF" STEPS OR AMERICAN STEP CO., INC. NUMBER ML-10 OR APPROVED EQUAL TO BE INSTALLED PER MANUFACTURERS DIRECTION.
3. STEPS ARE REQUIRED FOR ALL INLETS 4' AND DEEPER.
4. STEPS SHALL BE PLACED 12" ON CENTERS VERTICALLY AND STAGGERED 12" ON CENTERS HORIZONTALLY.
5. THE TOP STEP SHALL BE NO GREATER THAN 1' BELOW THE INSIDE OF THE TOP OF THE INLET, AND THE BOTTOM STEP SHALL BE NO HIGHER THAN 2' FROM THE FLOOR.
6. STEPS SHALL BE PLACED ON A WALL WHICH WILL NOT CONFLICT WITH THE PIPE(S) AND SHALL BE EASILY ACCESSIBLE FROM THE MANHOLE OPENING.

NON-CORROSIVE STEPS
N.T.S.



CURB INLET BOX
MODIFICATION DETAIL
N.T.S.

SEQUENCE OF MODIFICATION:

1. CONTRACTOR TO FIELD VERIFY INLET BOX SIZE & CONSTRUCTION TYPE.
2. CONTRACTOR SHALL REMOVE OR SAW CUT IF NECESSARY THE TOP INLET SECTION.
3. CONTRACTOR SHALL INSTALL TOP SECTION ON TOP OF THE BOTTOM SECTION. JOINT SHALL BE PLASTERED WITH 1/4" GROUT.
4. CONTRACTOR SHALL ADJUST MANHOLE RIM TO PROVIDE A SMOOTH TRANSITION FROM PROPOSED PAVING AND TOP OF RIM.

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WILMA P. MANKILLER HEALTH CENTER
EXPANSION
STILWELL, OKLAHOMA

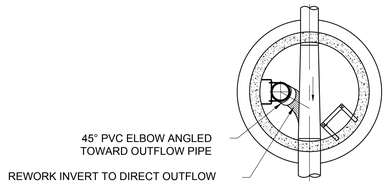
KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: CU502

CURB INLET DETAILS



SECTION A-A
NOT TO SCALE

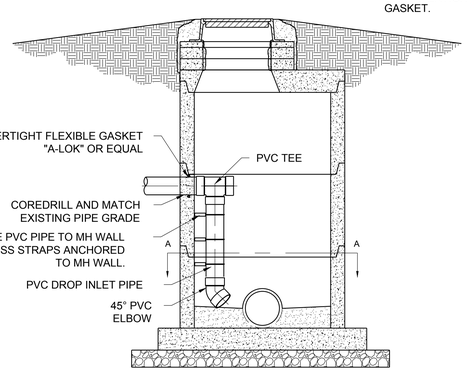
NOTES:

1. INSIDE DROP CONNECTION ONLY ALLOWED WITH PUBLIC WORKS DEPT. APPROVAL, WHEN PW DEPT. DEEMS UNFEASIBLE, UNPRACTICAL OR DANGEROUS TO PROVIDE OUTSIDE DROP.

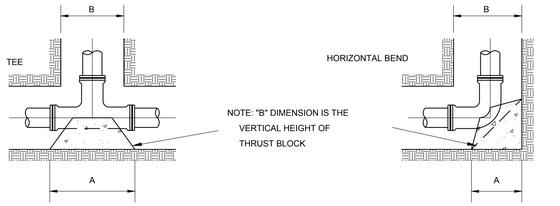
2. DROP INLET PIPE TO BE SAME SIZE AND MATERIAL AS SEWER LINE.

3. ALIGNMENT OF TEE: DROP INLET PIPE MAY BE ADJUSTED TO A MAXIMUM OF 5% DEFLECTION.

4. ANNULAR SPACE AROUND NEW PIPE TO BE SEALED WITH NON-SHRINK GROUT, LINK SEAL, OR WATERTIGHT AND FLEXIBLE GASKET.



TYPICAL INSIDE DROP MANHOLE DETAIL
NOT TO SCALE



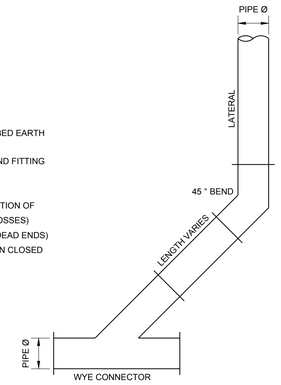
VERTICAL BENDS

PIPE SIZE	TEES		BENDS							
			90		45		22 1/2		VERT.	
	A	B	A	B	A	B	A	B	A	B
4"	16"	14"	16"	16"	12"	8"	8"	8"	12"	14"
6"	24"	21"	24"	24"	18"	12"	12"	12"	18"	21"
8"	39"	24"	24"	26"	21"	15"	15"	15"	18"	24"
10"	48"	30"	30"	32"	26"	24"	18"	18"	18"	24"
12"	48"	30"	32"	34"	28"	30"	18"	18"	20"	28"
14"	54"	36"	36"	39"	30"	30"	21"	21"	20"	28"
16"	54"	38"	38"	41"	32"	32"	24"	24"	21"	30"

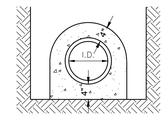
TYPICAL THRUST BLOCK DETAILS
NOT TO SCALE

NOTES:

1. USE 2000 P.S.I. CONCRETE ON ALL BLOCKING
2. ALL BEARING AREAS SHALL BE ON UNDISTURBED EARTH
3. BLOCKING SHALL BE PLACED SO THAT PIPE AND FITTING WILL BE ACCESSIBLE FOR REPAIRED.
4. USE THRUST BLOCKS FOR CHANGES IN DIRECTION OF 22 1/2" OR GREATER (I.E,TEES,BENDS AND CROSSES) CHANGE IN SIZE (I.E. REDUCERS). STOPS (I,E.DEAD ENDS) AND VALVES WHERE THRUST DEVELOPS WHEN CLOSED

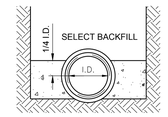


PVC WYE CONNECTOR DETAIL
SCALE: NTS



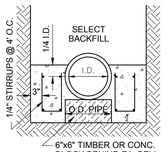
CONCRETE ENCASEMENT
CONCRETE PER LF

8" I.D.	DIP, RCP	1.41 CF
10" I.D.	DIP, RCP	1.67 CF
12" I.D.	DIP, RCP	1.93 CF
15" I.D.	DIP, RCP	2.36 CF
18" I.D.	DIP, RCP	2.81 CF
21" I.D.	DIP, RCP	3.27 CF
24" I.D.	DIP, RCP	3.76 CF
27" I.D.	DIP, RCP	4.26 CF
30" I.D.	DIP	4.78 CF
30" I.D.	RCP	5.09 CF
36" I.D.	DIP, RCP	5.80 CF
36" I.D.	RCP	6.20 CF



CONCRETE CRADLE
CONCRETE PER LF

8" I.D.	DIP, RCP	1.09 CF
10" I.D.	DIP, RCP	1.23 CF
12" I.D.	DIP, RCP	1.33 CF
15" I.D.	DIP, RCP	1.66 CF
18" I.D.	DIP, RCP	2.00 CF
21" I.D.	DIP, RCP	1.96 CF
24" I.D.	DIP, RCP	2.69 CF
27" I.D.	DIP, RCP	3.52 CF
30" I.D.	DIP	3.38 CF
30" I.D.	RCP	4.40 CF
36" I.D.	DIP, RCP	4.12 CF
36" I.D.	RCP	5.26 CF



8" I.D.	DIP, RCP	2.34 CF
10" I.D.	DIP, RCP	2.48 CF
12" I.D.	DIP, RCP	2.58 CF
15" I.D.	DIP, RCP	3.04 CF
18" I.D.	DIP, RCP	3.50 CF
21" I.D.	DIP, RCP	3.46 CF
24" I.D.	DIP, RCP	4.44 CF
27" I.D.	DIP, RCP	5.52 CF
30" I.D.	DIP	5.38 CF
30" I.D.	RCP	6.65 CF
36" I.D.	DIP, RCP	6.37 CF
36" I.D.	RCP	7.76 CF

WATER TABLE CRADLE
CONCRETE PER LF

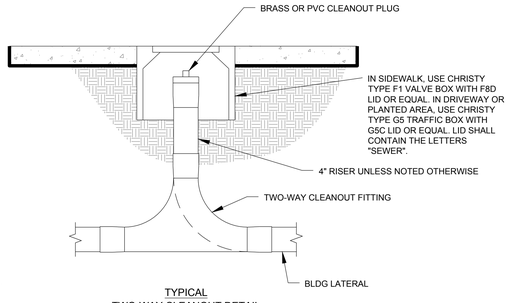
NOTES:

1. ALL FINISHED SUBGRADES SHALL BE PREPARED ACCURATELY BY MEANS OF HAND TOOLS.
2. TRENCH WIDTHS ARE DETAILED IN SPECIFICATION EXCAVATION.

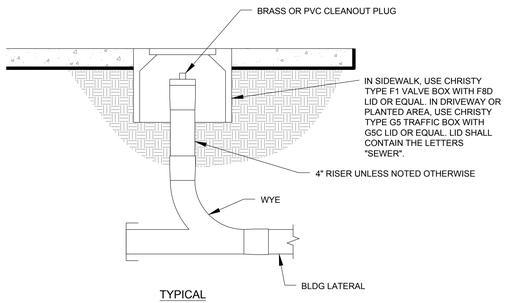
TYPICAL DETAIL
CONCRETE ENCASEMENT AND CRADLES
NOT TO SCALE

TRENCH CONDITIONS

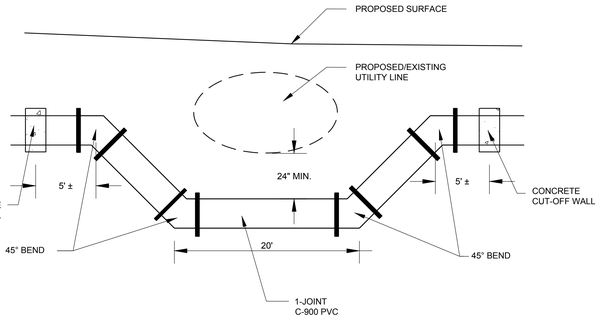
1. SELECT FILL CONSIST OF EXCAVATED MATERIALS CONTAINING NO ROCKS LARGER THAN 2 INCHES.
2. CRUSHED ROCK SHALL BE ODOT TYPE "A" BASE. UNDER ALL STREET X-INGS.
3. COMPACTION REQUIREMENTS:
   (a) NON-PAVED AREAS 90% MAXIMUM STANDARD PROCTOR DENSITY FOR COHESIONLESS SOILS AND 85% FOR COHESIVE SOILS.
   (b) PAVED AREAS 95% MAXIMUM STANDARD PROCTOR DENSITY FOR COHESIONLESS SOIL.
4. FILLS OVER 10 FEET DEEP - MATERIAL IN THE AREA FROM SELECT FILL TO BEDDING SHALL BE 3/4" CRUSHER RUN WELL GRADED.
5. FLOWABLE FILL MAY BE SUBSTITUTED FOR ALL MATERIALS IN ROAD CROSSING.
6. IN AREAS WHERE WATER INFILTRATION CANNOT BE CONTROLLED BEDDING AND INITIAL BACKFILL SHALL BE MATERIAL CONFORMING TO ODOT SECTION 703.04(A).
7. PIPE IN PROXIMITY TO WATER LINES SHALL COMPLY WITH O.D.E.Q. STANDARDS.



TYPICAL
TWO-WAY CLEANOUT DETAIL
NOT TO SCALE

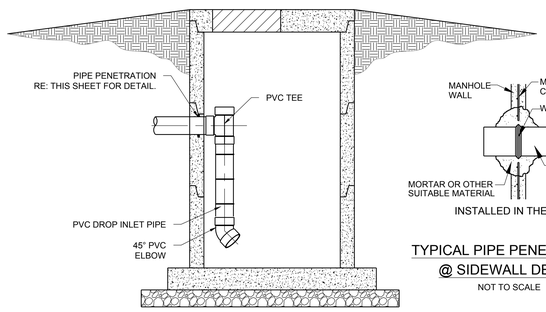


TYPICAL
ONE-WAY CLEANOUT DETAIL
NOT TO SCALE

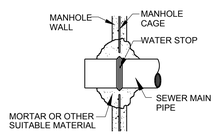


NOTES:
1. PIPE BENDING TO AVOID CONFLICTING UTILITIES MAY ACCOMPLISHED IN LIEU OF FITTINGS.
2. CENTER 1-20' JOINT C-900 PVC UNDER WASTE WATER UTILITIES.
3. MINIMUM CLEAREANCE BETWEEN PROPOSAL WATER MAIN AND OTHER UTILITIES (EXCLUDING WASTE WATER) MAY BE REDUCED AT THE DISCRETION AT THE ENGINEER.
4. ALTERNATE METHOD OF JOINT RESTAINT SHALL BE CONSIDERED IN A CASE BY CASE BASIS.

INSTALL PROPOSED WATER MAIN
UNDER EXISTING / PROPOSED UTILITY



TYPICAL PIPE PENETRATION @ LIFT STATION
WET WELL DETAIL
NOT TO SCALE



INSTALLED IN THE FIELD

TYPICAL PIPE PENETRATION
@ SIDEWALL DETAIL
NOT TO SCALE

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THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
CU503

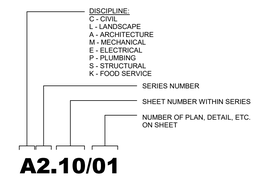
SEWER DETAILS

ABBREVIATIONS

@	AT
A/C	AIR CONDITIONING
AB	ANCHOR BOLT
ABC	AGGREGATE BASE COURSE
AC	ACOUSTICAL CEILING
ADJ	ADJACENT
AFF	ABOVE FINISH FLOOR
AGG	AGGREGATE
ALT	ALTERNATE
ALUM	ALUMINUM
ANCH	ANCHOR, ANCHORAGE
ANOD	ANODIZED
AP	ACCESS PANEL
BD	BOARD
BFF	BELOW FINISH FLOOR
BLDG	BUILDING
BLK(G)	BLOCK(ING)
BM	BENCH MARK
BO	BOTTOM OF
BOT	BOTTOM
BRG	BEARING
BRK	BRICK
BSMT	BASEMENT
BU	BUILT UP
CMWP	COMPOSITE METAL WALL PANEL (SYSTEM)
C	CHANNEL
C/C	CENTER TO CENTER
CAB	CABINET
CB	CHALK BOARD, CATCH BASIN
CEM	CEMENT
CG	CORNER GUARD
CI	CAST IRON
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CLG	CEILING
CLR	CLEAR FLOOR SPACE
CMP	CORRUGATED METAL PIPE
CMTS	COMMENTS
CMU	CONCRETE MASONRY UNIT
CO	CASED OPENING
COL	COLUMN
COMB	COMBINATION
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS OR CONTINUE
CORR	CORRIDOR, CORRUGATED
CT	CARPET TILE
CR	CARD READER
CSK	COUNTERSINK
CTB	CERAMIC TILE - BASE
CTF	CERAMIC TILE - FLOOR
CTW	CERAMIC TILE - WALL
CU	CUBIC
CU FT	CUBIC FOOT (FEET)
CW	COLD WATER
D	DEPTH
DEMO	DEMOLISH, DEMOLITION
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DISP	DISPENSER
DN	DOWN
DO	DITTO
DP	DAMPPROOFING
DR	DOOR
DS	DOWNSPOUT
DTL	DETAIL
DWG	DRAWING
DWC	DRYWALL CHANNELS (HAT)
E	EAST
EA	EACH
EF	EACH FACE
EG	END GUARD
EJ	EXPANSION JOINT
ELEC	ELECTRIC(AL)
ELEV	ELEVATION, ELEVATOR
EMER	EMERGENCY
EP	EPOXY PAINT
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EXPOSED STRUCTURE
EST	ESTIMATE
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXC	EXCAVAT(E)(ION)
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION, EXPOSED
EXT	EXTERIOR
EIFS	EXT. INSULATION FINISH SYSTEM
F	FAHRENHEIT
FA	FIRE ALARM
FAB	FABRICATE
FD	FURR-DOWN
FDN	FOUNDATION
FE(C)	FIRE EXTINGUISHER (CABINET)
FF	FINISH FLOOR
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK
FIN	FINISH(ED)
FL	FLOOR
FLA	FLASHING
FLEX	FLEXIBLE
FLUOR	FLUORESCENT
FO	FACE OF
FP	FIREPROOF
FRP	FIBER REINFORCED PLASTIC
FT	FOOT, FEET
FTG	FOOTING
FUR	FURRED(ING)
FUT	FUTURE
GA	GAGE, (GAUGE)
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GD	GRADE
GL	GLASS, GLAZING
GWB	GYPSUM WALLBOARD
GYP	GYPSUM
H(T)	HEIGHT
HB	HOSE BIB
HC	HOLLOW CORE
HDBD	HARDBOARD
HD	HEAVY DUTY
HDWD	HARDWOOD
HDWR	HARDWARE
HM	HOLLOW METAL
HORZ	HORIZONTAL
HP	HIGH POINT
HR	HOUR
HVAC	HEATING/ VENTILATING/ AIR CONDITIONING
HW	HOT WATER
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH(ES)
INCL	INCLUDING
INSUL	INSULATION
INT	INTERIOR
JC	JANITORS CLOSET
JST	JOIST
JT	JOINT
KD	KNOCKED DOWN
KIT	KITCHEN
KO	KNOCK OUT
KP	KICK PLATE
L	LENGTH, LONG
LAB	LABORATORY
LAM	LAMINATE
LAV	LAVATORY
LF	LINEAL FEET
LH	LEFT HAND
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LOW POINT
LT	LIGHT
LTWT	LIGHTWEIGHT
LVR	LOUVER
MAS	MASONRY
MAX	MAXIMUM
MATL	MATERIAL
MED	MEDIUM
MECH	MECHANICAL
MET	METAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MH	MANHOLE
MIRR	MIRRORED
MM	MILLIMETER
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MOD	MODULAR
MOV	MOVABLE
MTD	MOUNTED
MWP	METAL WALL PANEL (SYSTEM)
N	NORTH
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NOM	NOMINAL
NRC	NOISE REDUCTION COEFFICIENTS
NTS	NOT TO SCALE
NO	NUMBER
OA	OVERALL
OC	ON CENTER(S)
OD	OUTSIDE DIAMETER
OFF	OFFICE
OH	OVERHEAD, OPPOSITE HAND
OPG	OPENING
OPP	OPPOSITE
ORD	OVERFLOW ROOF DRAIN
P(#)	PARTITION TYPE
P	PAINT(ED)
PAR	PARALLEL
PART	PARTITION
PART BD	PARTICLE BOARD
PC	PIECE
PCC	PRECAST CONCRETE
PCF	POUNDS PER CUBIC FOOT
PERIM	PERIMETER
PERP	PERPENDICULAR
PF	PERFORATE(D)
PJ	PANEL JOINT
PL	PLASTER, PLATE, PROPERTY LINE
PLBG	PLUMBING
PLAM	PLASTIC LAMINATE
PLF	POUNDS PER LINEAL FOOT
PNL	PANEL
PO	POWER OPERATED
PR	PAIR
PREFAB	PREFABRICATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT
PTD	PAPER TOWEL DISPENSER
PTR	PAPER TOWEL RECEPTOR
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PWD	PLYWOOD
QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY
(R)	RECESSED
R	RADIUS, RISER ROUND
RA	RETURN AIR
RB	RESILIENT BASE
RCP	REINFORCED CONCRETE PIPE, REFLECTED CEILING PLAN
RD	ROOF DRAIN
RE(F)	REFERENCE
RELO	RELOCATION
REPL	REPLACE
RES	RESILIENT
REV	REVISION(S), REVISED
RF	RIGID FIBERGLASS
RFG	ROOFING
RH	RIGHT HAND
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
REQ'D	REQUIRED
RWL	RAINWATER LEADER
S	SEALED, SOUTH
(S)	SURFACE MOUNTED
SC	SOLID CORE, SEALED CONCRETE
SCHED	SCHEDULE
SECT	SECTION
SD	STORM DRAIN
SDG	SIDING
SF	SQUARE FEET
SHT	SHEET
SHWR	SHOWER
SIM	SIMILAR
SL	SHEET LINOLEUM
SM	SHEET METAL
SP	SOUNDPROOF
SPECS	SPECIFICATIONS
SPKR	SPEAKER
SPL	SPECIAL
SQ	SQUARE
SS	SERVICE SINK
SST	STAINLESS STEEL
ST	STEEL, STREET
STC	SOUND TRANSMISSION COEFFICIENT
STD	STANDARD
STOR	STORAGE
STRUC	STRUCTURAL
SUSP	SUSPENDED
SV	SEAMLESS VINYL
SW	SWITCH
SWR	SEWER
SYM	SYMMETRY(ICAL)
T	THICKNESS, TEE
TD	TRENCH DRAIN
T&G	TONGUE & GROOVE
TB	TACKBOARD
TEL	TELEPHONE
TEMP	TEMPERATURE, TEMPORARY
TERR	TERRAZZO
THK	THICK(NESS)
TO	TOP OF
TOC	TOP OF CONCRETE
TOIL	TOILET
TOP	TOP OF PARAPET
TOS	TOP OF STEEL
TOW	TOP OF WALL
TPD	TOILET PAPER DISPENSER
TV	TELEVISION
TYP	TYPICAL
U	URINAL
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORY
UNF	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
VB	VAPOR BARRIER
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VNR	VENEER
VPL	VENEER PLASTER
VWC	VINYL WALL COVERING
W	WIDTH, WIDE, WEST
W/	WITH
W/O	WITHOUT
W/W	WALL TO WALL
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WH	WALL HUNG, WATER HEATER
WI	WROUGHT IRON
WM	WIRE MESH
WP	WATERPROOFING
WR	WATER REPELLENT
WS	WEATHER-STRIP
WSCT	WAINSCOT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
YD	YARD

INDEX OF DRAWINGS

NUMBERING SYSTEM:



LEGEND

MATERIALS

- CONCRETE/ PRECAST CONCRETE
- SOIL
- SAND, EIFS FINISH COAT, OR CEMENT PLASTER
- BRICK
- CMU
- STONE
- GLASS MINERAL FIBER BATT INSULATION
- GLASS MINERAL FIBER SEMI RIGID INSULATION
- MINERAL WOOL SEMI RIGID INSULATION
- EXPANDED POLYSTYRENE RIGID INSULATION
- EXTRUDED POLYSTYRENE RIGID INSULATION
- POLYISOCYANURATE RIGID INSULATION
- GYPSUM BOARD
- EXTERIOR GYPSUM SHEATHING
- EXTERIOR CEMENT BOARD
- COATED GLASS MAT WATER RESISTANT GYP BD
- PLYWOOD
- COVER BOARD

DRAWING SYMBOLS

- ROOM NAME / XXXXX — ROOM NAME/NUMBER
- X — EXISTING COLUMN CENTERLINE
- X — COLUMN CENTERLINE
- SF — INTERIOR STOREFRONT
- 01 / A0.XX — BUILDING WALL SECTION
- A0.XX — ELEVATION
- A0.XX — SECTION DETAIL
- 01 / A0.XX — PLAN, BLOW-UP DETAIL
- 9'-0" — CEILING HEIGHT
- MEDICAL GAS
- CORNER GUARDS
- WALL PROTECTION
- CUBICLE CURTAIN TRACK
- A3 — PARTITION TYPE
- BUILDING EXPANSION JOINT
- CMU WALL
- NEW WALL
- EXISTING WALL
- DEMO WALL

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WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

API

PROJECT INFORMATION

CODE SUMMARY

The following information summarizes the fire and life safety code compliance approach for the William P. Mankiller Health Center Expansion (Building/Project) located in Stilwell, Oklahoma.

PROJECT DESCRIPTION

The Project involves a two-story and approximately 77,000 square feet expansion to an existing single-story and approximately 30,000 square feet medical office building. The combined area of the ground level is approximately 70,000 square feet. The Building is comprised of out-patient exam rooms, waiting areas, conference rooms, fitness spaces, a pharmacy, office spaces, and supporting spaces, such as restrooms, storage rooms, and mechanical and electrical rooms. The Building is protected throughout with an automatic sprinkler system and a fire alarm system.

CODES & STANDARDS

The Authority Having Jurisdiction (AHJ) for the project is the Cherokee Nation and the Indian Health Service. This summary reflects the requirements established by both entities:

The following applicable codes and standards apply to the design and construction:

- International Building Code, 2015 edition (IBC)
- International Fire Code, 2015 edition (IFC)
- International Mechanical Code, 2015 edition (IMC)
- NFPA 10, *Standard for Portable Fire Extinguishers*, 2013 edition
- NFPA 13, *Standard for the Installation of Sprinkler Systems*, 2013 edition
- NFPA 20, *Standard for the Installation of Stationary Pumps for Fire Protection*, 2013 edition
- NFPA 70, *National Electrical Code,* 2014 edition
- NFPA 72, *National Fire Alarm and Signaling Code,* 2013 edition
- All codes referenced within the aforementioned documents.

OCCUPANCY CLASSIFICATIONS

The Building is classified as nonseparated mixed-use, in accordance with IBC §508.3. Table 1 identifies the Building's primary occupancies.

Table 1: Occupancy Classifications

Occupancy	Description	IBC
Group B	Offices, Out-Patient Exam Rooms, Waiting Areas (less than 750 ft²), Conference Rooms (less than 750 ft²)	§304
Group A-3	Fitness Rooms, Conference Rooms (750 ft² and greater)	§§ 303.1 and 303.4
Group S-2	Storage Rooms, Mechanical Rooms, Electrical Rooms	§311.3

The total area of Group A-3 occupancies on Level 1 and Level 2 does not and shall not exceed 10 percent of the floor area. Therefore, the main occupancy of the Building is Group B and Groups A-3 and S-2 are accessory occupancies in accordance with IBC §508.2.

HEIGHT, AREA, & CONSTRUCTION CLASSIFICATION

Construction Classification

The existing building is and the new expansion will be constructed as Type IIB construction in accordance with IBC Chapters 5 and 6. The construction classification supports the most restrictive occupancy classification and the building height and area required to accommodate the project program.

The Building is a Risk Category III, in accordance with IBC Table 1604.5.

Allowable Height, Stories, & Area

Using the most restrictive occupancy classification (i.e., Group B), construction classification, and considering the Building is protected throughout with an automatic sprinkler system, the Building is limited to the allowable height, stories, and area per story defined in Table 2.

Table 2: Actual/Allowable Height, Stories, and Area

Description	Actual	Maximum Allowable	IBC
Height (Above Grade)	75 ft.	75 ft.	Table 504.3
Stories (Above Grade)	2	4	Table 504.4
Greatest Floor Area	70,000 ft²	120,750 ft²*	Table 506.2

*Includes 75 percent frontage increase in accordance with IBC §506.3 where the building perimeter is bordered by no less than 30 feet of open space or public way.

FIRE-RESISTANCE RATING & FIRE SEPARATION

Building Elements

Type IIB construction shall be of noncombustible materials complying with the fire-resistance rating requirements for building elements defined in Table 3.

Table 3: Fire-Resistance Rating of Building Elements

Building Element	Description	FR Rating	IBC
Primary Structural Frame	Columns, Girders, Trusses, Etc.	0-hour	Table 601
Bearing Walls	Interior | Exterior	0-hour	Table 601
Nonbearing Walls	Interior	0-hour	Table 601
Floor Construction & Secondary Members	Joists, Beams, Deck, Etc.	0-hour	Table 601
Roof Construction & Secondary Members	Joists, Beams, Deck, Etc.	0-hour	Table 601

Nonbearing Exterior Walls

Nonbearing exterior walls shall comply with the fire-resistance rating requirements defined in Table 4 based on fire separation distances. Fire separation distance is measured at a right angle from the building face to the closest interior lot line, centerline of a street, alley, or public way, or to an imaginary line between two buildings on the same lot.

Table 4: Fire-Resistance Rating of Nonbearing Exterior Walls

Fire Separation (ft.)	FR Rating	IBC
X < 5	1-hour	Table 602
5 ≤ X < 10	1-hour	Table 602
10 ≤ X < 30	1-hour	Table 602
X ≥ 30	0-hour	Table 602

Exterior Wall Openings

Unprotected exterior walls openings are limited to a maximum area for a sprinklered building based on fire separation distances, as defined in Table 5.

Table 5: Allowable Area of Exterior Wall Openings

Fire Separation (ft.)	Allowable Area*	IBC
X < 3	Not Permitted	Table 705.8
3 ≤ X < 5	15%	Table 705.8
5 ≤ X < 10	25%	Table 705.8
10 ≤ X < 15	45%	Table 705.8
15 ≤ X < 20	75%	Table 705.8
20 ≤ X < 25	No Limit	Table 705.8
25 ≤ X < 30	No Limit	Table 705.8
X ≥ 30	No Limit	Table 705.8

*Percentage of the area of the exterior wall per story

Interior Separation

Specific spaces and rooms shall be separated from the remainder of the building with fire-resistance rated fire barriers or smoke-tight construction capable of resisting the passage of smoke, in accordance with Table 6.

Table 6: Interior Separation for Specific Spaces and Rooms

Room or Space	FR Rating	Separation	Reference
Interior Exit Enclosures, connecting 3 or less stories	1-hour	FB	IBC §1023.2
Interior Exit Enclosures, connecting 4 or more stories	2-hour	FB	IBC §1023.2
Vertical Shaft Enclosures (Mechanical, Elevator, Dumbwaiter), connecting 3 or less stories	1-hour	FB	IBC §713.4
Vertical Shaft Enclosures (Mechanical, Elevator, Dumbwaiter), connecting 4 or more stories	2-hour	FB	IBC §713.4
Laundry Rooms	1-hour	FB	IBC Table 509
Waste & Linen Collection	0-hour	ST	IBC Table 509
Furnace (Equip. ≥ 200,000 Btu/hr)	0-hour	ST	IBC Table 509
Boiler (Equip. > 15 psi & 10 hp)	0-hour	ST	IBC Table 509
Fire Pump Room	1-hour	FB	NFPA 20 §4.13.1.1
Electrical (Transformer > 112½ kV)	1-hour	FB	NFPA 70 Article 450.21(B)

FB – Fire Barrier | ST – Smoke-Tight

Fire-Resistant Joint Systems

Joints installed in or between fire-resistance rated construction shall be protected by an approved fire-resistant joint system designed to resist the passage of fire for a period not less than the required fire-resistance rating of the associated construction, in accordance with IBC §715.

Opening Protection

Doors and/or other openings in enclosures and separations require protection in accordance with the following:

- **Smoke-Tight Construction:** Doors shall be self-closing or automatic-closing, upon detection of smoke, positive latching, shall have no air transfer openings, and shall not have undercuts exceeding the clearance defined in NFPA 80. All necessary air transfer openings shall be protected with smoke dampers. (IBC §509.4.2)
- **1-hour Fire Barrier:** Doors shall be self-closing or automatic-closing, upon detection of smoke, positive latching, minimum 45-minute fire-resistance rating, and shall have no louvers. Where a door is installed in an elevator lobby, the door shall have a minimum 1-hour fire-resistance rating. Ducts and air transfer openings shall be protected with minimum 90-minute fire-resistance rated fire dampers. (IBC §§ 716.5 and 717.5.2)
- **2-hour Fire Barrier:** Doors shall be self-closing or automatic-closing, upon detection of smoke, positive latching, minimum 90-minute fire-resistance rating, and shall have no louvers. Ducts and air transfer openings shall be protected with minimum 90-minute fire-resistance rated fire dampers, unless the fire barrier encloses a shaft, then the duct or air transfer opening shall be protected with fire/smoke damper having a Class I or II leakage rating and rated for no less than 250°F. (IBC §§ 716.5, 717.5.2, and 717.5.3)

INTERIOR FINISH

Interior wall and ceiling finishes shall be classified for fire performance and smoke development, in accordance with ASTM E84 or UL 723, and grouped into the classes defined in Table 7:

Table 7: Interior Finish Classifications

Flame Spread Index	Smoke-Developed Index	Class
0-25	0-450	A
26-75	0-450	B
76-200	0-450	C

IBC §803.1.1

Interior wall and ceiling finishes in the Building are limited to the classifications defined in Table 8 for specific rooms, spaces, and means of egress.

Table 8: Component Interior Finish Classifications

Component	Class
Exit Enclosures	B
Exit Access	C
Other Rooms/Enclosed Spaces	C

IBC Table 803.11

Interior floor finishes and covering materials shall comply with DOC FF-1 "Pill Test", in accordance with IBC §804.4.

Combustible decorative materials shall comply with NFPA 701 Flame Propagation Criteria, in accordance with IBC §806.4. Where combustible decorative materials are attached to a wall or ceiling the combustible materials shall not exceed 10 percent of the aggregate wall or ceiling area, in accordance with IBC §806.3.

Interior trim shall have a minimum flame spread and smoke-developed index equivalent to a Class C interior finish, in accordance with IBC §806.7.

Cellular or foamed plastics, where applied to a wall or ceiling, shall not exceed 10 percent of the aggregate wall or ceiling area, shall have a minimum 20 lb/ft³ density, shall have a maximum ½ in. thickness and 4 in. width, and shall comply with the Class A or B interior finish requirements, in accordance with IBC §§ 806.5 and 2604.2.

MEANS OF EGRESS

General

Means of egress shall be designed and maintained to provide headroom (ceiling) with a minimum height of 90 inches above the walking surface with projections from the ceiling no less than 80 inches above the walking surface, in accordance with IBC §§ 1003.2 and 1003.3.

Walking surfaces in the means of egress shall be nominally level, having a slope no greater than 1 in 20, and shall have a slip-resistant surface, in accordance with IBC §1003.4. Where the walking surface has a change in elevation less than 12 in. the surface shall be sloped, and where the slope exceeds 1 in 20, a ramp shall be used, in accordance with IBC §1003.5. In addition, if the change in elevation is greater than 12 in. a ramp or stair shall be used, in accordance with IBC §1003.5. Guards shall be installed along open sides of means of egress that exceed 30 in. above the floor or ground below, in accordance with IBC §1015.2.

IBC §1003.7, elevators, escalators, and moving walks shall not be used as component of a required means of egress.

Egress Capacity

Means of egress components shall be sized using egress capacity factors defined in Table 9 to accommodate the occupant load for the building, floor, room, or space served.

Table 9: Egress Capacity Factors

Component	Factor (in./occupant)
Stairways	0.3
Other Egress Components	0.2

IBC §1005.3.2

Occupant Load

The occupant loads for the building, floors, rooms, and spaces are determined using the occupant load factors defined in Table 10, in accordance with IBC Table 1004.1.2.

Table 10: Occupant Load Factors

Occupancy or Use	Factor (ft²/occupant)
Assembly - Concentrated	7 net
Assembly - Standing Space	5 net
Assembly - Unconcentrated	15 net
Business	100 gross
Exercise Rooms	50 gross
Storage | Mechanical (Accessory)	300 gross

Number of Means of Egress & Separation

Means of egress serving a story or occupied roof shall have a minimum number of exits or access to exits dependent on the occupant load served, in accordance with Table 11.

Table 11: Minimum Number of Exits or Access to Exits per Story

Occupant Load (per Story)	Minimum # of Exits (per Story)
1-500	2
501-1,000	3
Greater than 1,000	4

IBC Table 1006.3.1

A minimum of two means of egress shall be accessible from every room or space where either the minimum required occupant load or common path of travel is exceeded, dependent on the occupancy or use, in accordance with Table 12.

Table 12: Spaces or Rooms Permitted to have One Exit or Exit Access Doorway

Occupancy or Use	Max. Occupant Load	Max. Common Path of Travel
Group B	49	100 ft.
Group A-3	49	75 ft.
Group S-2	29	100 ft.

IBC Table 1006.2.1

Where more than one exit, exit accesses, or exit discharges are required, they shall be arranged and separated to minimize the possibility of having more than one blocked by one fire or other emergency condition. Therefore, IBC §1007.1.1 Exception 2 requires the exits, exit accesses, or exit discharges to be separated a minimum distance, equal to one-third the overall maximum diagonal dimension of the building or space, measured in a straight line to the nearest edge of each means of egress component.

Travel, Common Path, & Dead-End Distances

Means of egress shall be arranged to provide exit access travel distances no greater than the distances defined in Table 13, in accordance with IBC Table 1017.2 regarding maximum travel distances, IBC §1020.4 regarding dead-end corridors, and IBC §§ 1006.2.1 and 1029.8 regarding common paths of travel.

Table 13: Maximum Exit Access Travel Distances

Occupancy or Use	Travel Distance (ft.)	Dead-End Corridor (ft.)	Common Path (ft.)
Business/Storage/Mech.	300	50	100
Assembly (Occupant Load ≥ 50)	250	20	30
Assembly (Occupant Load < 50)	250	20	75

Doors

Doors shall have a clear width no less than 32 inches or no less than the minimum egress width required to accommodate the occupant load served, calculated using the applicable egress capacity factor, whichever is greater, in accordance with IBC §1010.1.1. The maximum width of a swinging door leaf shall not exceed 48 inches (IBC §1010.1.1), and the minimum door height shall be no less than 80 inches above the walking surface (IBC §1010.1.1).

Egress doors shall be pivoted or side-hinged swinging type and shall swing in the direction of egress travel where serving an exit enclosure or an occupant load exceeding 49 occupants, in accordance with IBC §1010.1.2.1.

Doors serving an occupant load exceeding 49 shall not be provided with a latch or lock other than panic hardware or fire exit hardware (IBC §1010.1.10).

Stairs

Stairs shall conform to the dimensional requirements defined in Table 14, in accordance with IBC §1011.

Table 14: Stair Required Dimensions

Description	IBC
Minimum Width* (Occupant Load < 50)	36 in.
Minimum Width* (50 ≤ Occupant Load < 2,000)	44 in.
Minimum Width* (Occupant Load ≥ 2,000)	44 in.
Minimum Headroom	80 in.
Max. Height Between Landings	12 ft.
Minimum Tread Depth	11 in.
Riser Height (Min. - Max.)	4 in. - 7in.

*Unless the calculated egress capacity required is greater

Ramps

Ramps shall conform to the dimensional requirements defined in Table 15, in accordance with IBC §1012.

Table 15: Ramp Required Dimensions

Description	IBC
Minimum Width* (Occupant Load < 50)	36 in.
Minimum Width* (Occupant Load ≥ 50)	44 in.
Maximum Slope	1 in 12
Maximum Cross Slope	1 in 48
Maximum Single Run Rise	30 in.

*Unless the calculated egress capacity required is greater

Area of Refuge

Area of refuge are not required in buildings protected throughout with a supervised automatic sprinkler system, in accordance with IBC §1009.4 Exception 2.

Corridors

Exit access corridors serving an occupant load less than 50 occupants shall have a minimum width of 36 inches, and where serving an occupant load equal to or greater than 50 occupants the minimum width shall be 44 inches, unless the calculated egress capacity is greater. (IBC §1020.2)

Handrails

Stairs, ramps, and stepped/ramped aisles shall be provided with handrails limited to a minimum height of 34 inches and a maximum height of 38 inches. The handrail shall be continuous without obstruction for the full length and shall terminate to a wall, guard, or walking surface. Where not continuous between flights, the handrail shall extend a minimum 12 inches horizontally beyond the top riser and shall continue to slope for the depth of one tread beyond the bottom riser. (IBC §1014)

The graspable portion of the handrail shall have a minimum diameter of 1¼ inches, a maximum diameter of 2 inches, shall have a minimum clearance of 2½ inches from a wall or guard, and shall not project into the required egress width more than 4½ inches. (IBC §1014)

Where the distance to a handrail exceeds 30 inches, an intermediate handrail shall be provided. (IBC §1014.9)

Guards

Guards are required along open-sided walking surfaces, including mezzanines and equipment platforms, stairs, ramps and landings that are located more than 30 inches to the floor or grade below. (IBC §1015.2)

Guards shall not be less than 42 inches in height measured from the walking surface, a line connecting the leading edges of stair tread nosings, or the ramp surface served, in accordance with IBC §1015.3.

Openings in guards shall prevent the passage of a 4-inch sphere from the walking surface up to the guard height, and from 36 inches to 42 inches in height, guards shall resist the passage of a 4-3/8-inch sphere, and the triangular openings formed between stair tread and risers and the guard shall resist the passage of a 6-inch sphere. (IBC §1015.4)

Means of Egress & Emergency Lighting

The means of egress shall be equipped with artificial lighting facilities to provide a continuous light intensity no less than 1 ft-candle at the walking service (IBC §1008.2.1).

In the event of power supply failure, emergency electrical system shall automatically illuminate all the following areas, in accordance with IBC §1008.3.

- Aisles and unenclosed egress stairways in rooms and spaces that require two or more means of egress.
- Corridors, interior exit stairs, ramps, aisles, and exit passageways.
- Exterior egress components at other than their levels of exit discharge until exit discharge.
- Vestibules and areas on the level of discharge used for exit discharge.
- Exterior landings required for exit discharge doorways that lead directly to the exit discharge.
- Electrical equipment rooms.
- Public restrooms with an area greater than 300 ft².
- Fire pump room.

The emergency power system shall provide power for a duration of not less than 90 minutes and shall consist of storage batteries, unit equipment, or an on-site generator (IBC §1008.3.4). The installation of the emergency power system shall be in accordance with IBC §2702.

Emergency lighting facilities shall be arranged to provide initial illumination that is at least an average of 1 ft-candle (11 lux) and a minimum 0.1 ft-candle (1 lux) measured at floor level along the path of egress. Illumination levels shall be permitted to decline to 0.6 ft-candle (6 lux) average and a minimum 0.06 ft-candle (0.6 lux) at the end of the emergency lighting time duration. A maximum-to-minimum illumination uniformity ratio of 40 to 1 shall not be exceeded. (IBC §1008.3.5)

Exit Signs

All rooms and spaces requiring more than one exit or exit access, the means of egress shall be indicated with approved exit signs reading "EXIT". Access to exits shall be marked by readily visible exit signs in cases where the exit or the path of egress travel is not immediately visible to the occupants. Exit sign placement shall be such that no point along the path of egress is more than 100 ft. from the nearest visible exit sign. (IBC §1013)

Exit signs shall be illuminated by a source providing not less than 5 ft-candles at the illuminated surface (IBC §1013.6.2). Exit signs shall be connected to emergency power or local batteries to assure continued illumination for at least 90 minutes in conditions of primary power loss (IBC §1013.6.3).

Exit Discharge

Exits shall discharge directly to the exterior of the building, at grade or shall provide direct access to grade, and shall not re-enter the building. The exit discharge shall provide a direct and unobstructed access to a public way. (IBC §1028.1)

IBC §1028.1 Exception1, permits a maximum of 50 percent of the number and required capacity of interior exit stairways and ramps to discharge into the interior of the building on the level of exit discharge, provided all the following are met:

- A free and unobstructed path of travel to an exterior exit door is readily visible and identifiable from the point of termination of the enclosure.
- The entire area of the level of exit discharge is separated from areas below by construction conforming to the fire-resistance rating for the enclosure.
- The egress path from the point of termination of the enclosure on the level of exit discharge is protected throughout by an automatic sprinkler system.

FIRE PROTECTION & LIFE SAFETY SYSTEMS

Detection, Alarm, and Communications Systems

IBC §907.2.2 requires a fire alarm system that is designed and installed in accordance with IBC §§ 907.4, 907.5 and 907.6 and NFPA 72. This requirement is based on the Building consisting of a Group B occupancy and an occupant load exceeding 500 occupants.

The fire alarm system shall initiate an alarm signal as a 3-pulse temporal tone and visibly upon activation of a single manual fire alarm box located in an approved location, detection of sprinkler water flow, or a system smoke detector, where applicable. Automatic smoke detection is not required throughout the Building, except where required for panel protection in accordance with IBC §907.4.1 and emergency control functions, such as elevator recall and door release.

Duct smoke detectors shall be provided in ducts in accordance with the IMC, where the air handler is rated greater than 2,000 cfm, and shall be connected to the building fire alarm system. Initiation of a duct detector shall activate a supervisory signal at the fire alarm control unit (FACU).

The Building automatic sprinkler system and fire pump shall be supervised by the fire alarm system.

Two-Way Emergency Communication Systems

IBC §1009.8 requires a two-way emergency communication system to be provided at each elevator lobby on each level, except the level of exit discharge. The two-way emergency communication system risers shall be provided with Level 2 survivability (i.e., 2-hour cable systems) and shall communicate with a central control point. Instructions explaining the use of the system and written identification of the location shall be posted adjacent to the two-way emergency communication system at each elevator landing. The signage visual characters shall comply with ICC A117.1. The system shall include both audible and visible signals

Automatic Sprinkler Systems

The Building shall be protected throughout with a supervised automatic sprinkler system in accordance with IBC §903.3.1.1 and NFPA 13 to qualify for the building height and area allowances defined in IBC Chapter 5. The automatic sprinkler systems shall be wet-pipe, unless areas requiring protection are subject to temperatures less than 40°F, then a dry-pipe sprinkler system shall be installed.

Fire Pump

If the municipal water supply can adequately supply the greatest automatic sprinkler system hydraulic demand, a fire pump is not required.

In the case where the municipal water supply cannot adequately supply the greatest automatic sprinkler system hydraulic demand, a fire pump is required and shall have a rated pressure and flow able to provide the greatest automatic sprinkler system hydraulic demand.

The fire pump and associated features shall be designed and installed in accordance with NFPA 20, and located in a minimum 1-hour fire-resistance rated room with access directly to the outside or through a minimum 1-hour fire-resistance rated enclosed passageway leading to the outside.

Portable Fire Extinguishers

IBC §906.1 requires portable fire extinguishers to be located throughout the building in accordance with NFPA 10.

Elevators & Conveying Systems

IBC §3001.2 requires elevators and conveying systems to comply with ASME A17.1, including the fire fighter's emergency operations.

Where four elevator cars serve all or a portion of a building, the elevators shall be located in no fewer than two separate hoistways, and where more than four elevator cars, not more than four elevators shall be located in a hoistway (IBC §3002.2).

Elevator hoistways shall not be located within a common enclosure with stairways, nor shall an elevator open into a stair enclosure (IBC §3002.7).

Standby & Emergency Power

IBC §2702 requires the standby power electrical components, equipment, and systems to by designed and constructed in accordance with the IFC, NFPA 70, NFPA 110, and NFPA 111. The standby power system shall have capacity and a rating sufficient to supply power to all required equipment, including:

- Electric fire pump, if provided
- Jockey pump, if provided
- Air compressor serving dry-pipe and pre-action systems, if provided
- Elevators
- Means of egress illumination
- Exit signs
- Emergency voice/alarm communication system

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www.wsp.com
TBPE Registration Number F-2487

PROJECT NO. 18068R
ISSUED FOR CONSTRUCTION: COMPLETE

CLIENT:

THE CHEROKEE NATION
TRUST
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: AL0.00

LIFE SAFETY CODE COMPLIANCE INFORMATION

KEYED NOTES:

1. STRUCTURAL MEMBERS SUPPORTING EXIT STAIRS THAT ARE EITHER LOCATED OUTSIDE OF THE RATED ENCLOSURE OR PENETRATING THROUGH THE RATED ENCLOSURE SHALL BE PROTECTED WITH MINIMUM 1-HOUR FIRE RESISTANCE RATING. REFER TO STRUCTURAL DRAWINGS FOR STRUCTURAL MEMBERS REQUIRING FIREPROOFING.

LIFE SAFETY PLAN LEGEND

- SMOKE PARTITION
- 1 HOUR FIRE BARRIER
- ACTUAL - X'-X" / MAX. - X'-X" — DEAD-END CORRIDOR
- ACTUAL - X'-X" / MAX. - X'-X" — COMMON PATH OF TRAVEL
- ACTUAL - X'-X" / MAX. - X'-X" — EXIT ACCESS TRAVEL DISTANCE
- UNCONCENTRATED ASSEMBLY @ 1 OCCUPANT PER 15 SQ. FT.
- BUSINESS @ 1 OCCUPANT PER 100 SQ. FT.
- EXCERCISE @ 1 OCCUPANT PER 50 SQ. FT.
- STORAGE/SUPPORT @ 1 OCCUPANT PER 300 SQ. FT.

EXIT NAME	
EXIT CAPACITY	OCCUPANTS USING EXIT

FIRST FLOOR USE	AREA (SQ. FT.)	OCCUPANT LOAD FACTOR (PERSON/SQ.FT.)	OCCUPANT LOAD
ASSEMBLY FIRST FLOOR	4,034 SQ. FT.	1/15	269
BUSINESS FIRST FLOOR	30,830 SQ. FT.	1/100	309
EXCERCISE FIRST FLOOR	1,957 SQ. FT.	1/50	40
STORAGE FIRST FLOOR	3,645 SQ. FT.	1/300	13
TOTAL	40,466 SQ. FT.		631

FIRST FLOOR EXIT NAME	WIDTH (INCHES)		LIMITING FACTOR	WIDTH FACTOR INCH/PERSON		OCCUPANT CAPACITY
	DOOR	STAIR		DOOR	STAIR	
EXIT 1-1	68(-4)	N/A	DOOR	0.2	N/A	320
EXIT 1-2	42(-2)	N/A	DOOR	0.2	N/A	200
EXIT 1-3	36(-2)	N/A	DOOR	0.2	N/A	170
EXIT 1-4	42(-2)	N/A	DOOR	0.2	N/A	200
EXIT 1-5	42(-2)	N/A	DOOR	0.2	N/A	200
EXIT 1-6	42(-2)	N/A	DOOR	0.2	N/A	200
EXIT 1-7	42(-2)	N/A	DOOR	0.2	N/A	200
EXIT 1-8	36(-2)	N/A	DOOR	0.2	N/A	170
					TOTAL	1660*

* EGRESS CALCULATIONS DO NOT INCLUDE AVAILABLE CAPACITIES FROM EXISTING BUILDING.

TRUE NORTH / PLAN NORTH

1 01 OVERALL FIRST FLOOR LIFE SAFETY PLAN
1" = 10'-0"

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Hillard Goldfarb
TBPE Registration Number F-2487

PROJECT NO. 18068R
ISSUED COMPLETE FOR CONSTRUCTION

CLIENT:

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
AL1.01

LIFE SAFETY PLAN LEVEL 01

KEYED NOTES:

1. STRUCTURAL MEMBERS SUPPORTING EXIT STAIRS THAT ARE EITHER LOCATED OUTSIDE OF THE RATED ENCLOSURE OR PENETRATING THROUGH THE RATED ENCLOSURE SHALL BE PROTECTED WITH MINIMUM 1-HOUR FIRE RESISTANCE RATING. REFER TO STRUCTURAL DRAWINGS FOR STRUCTURAL MEMBERS REQUIRING FIREPROOFING.

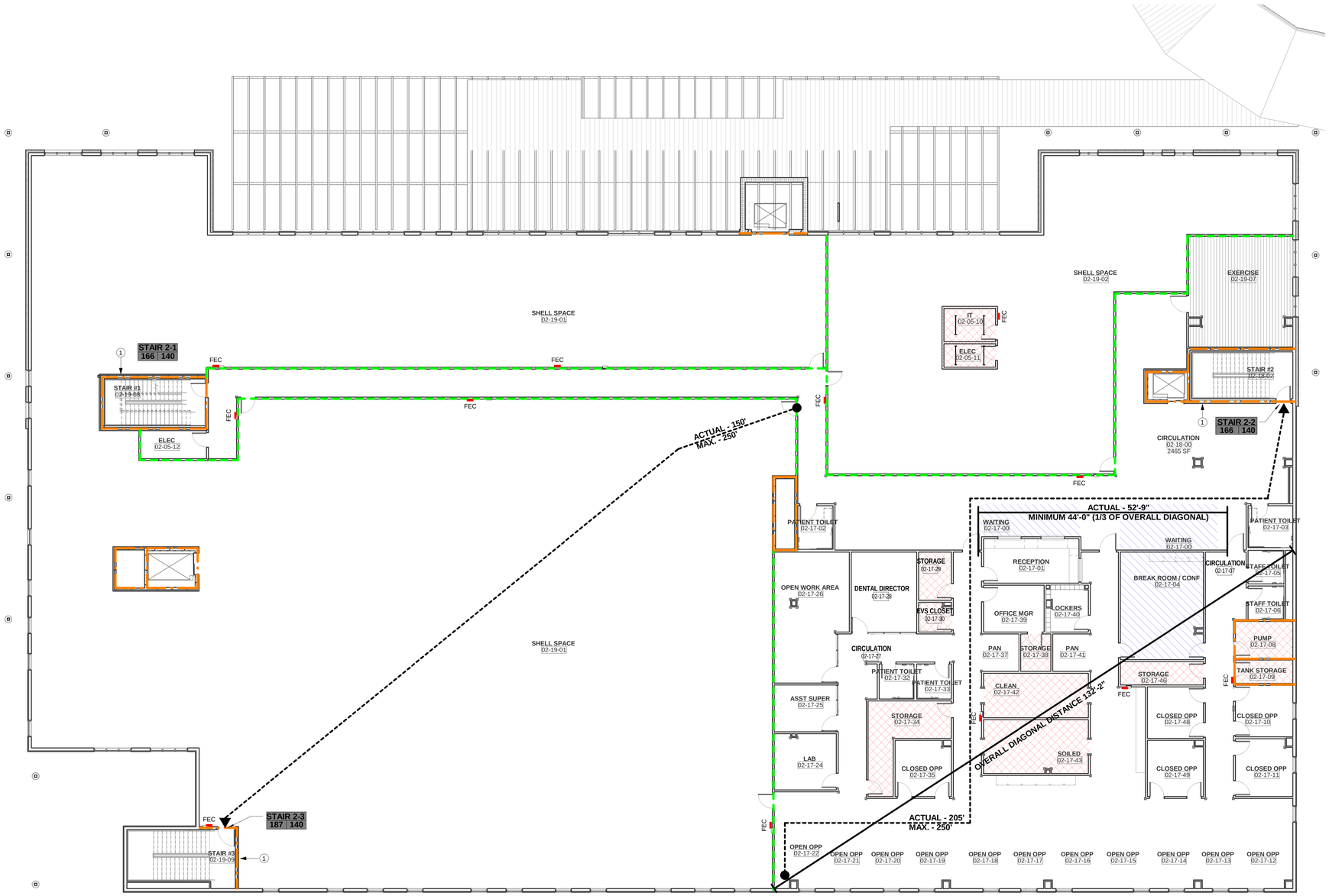
LIFE SAFETY PLAN LEGEND

- SMOKE PARTITION
- 1 HOUR FIRE BARRIER
- ACTUAL - X'-X" / MAX. - X'-X" — DEAD-END CORRIDOR
- ACTUAL - X'-X" / MAX. - X'-X" — COMMON PATH OF TRAVEL
- ACTUAL - X'-X" / MAX. - X'-X" — EXIT ACCESS TRAVEL DISTANCE
- UNCONCENTRATED ASSEMBLY @ 1 OCCUPANT PER 15 SQ. FT.
- BUSINESS @ 1 OCCUPANT PER 100 SQ. FT.
- EXCERCISE @ 1 OCCUPANT PER 50 SQ. FT.
- STORAGE/SUPPORT @ 1 OCCUPANT PER 300 SQ. FT.

EXIT NAME	
EXIT CAPACITY	OCCUPANTS USING EXIT

SECOND FLOOR USE	AREA (SQ. FT.)	OCCUPANT LOAD FACTOR (PERSON/SQ.FT.)	OCCUPANT LOAD
ASSEMBLY SECOND FLOOR	754 SQ. FT.	1/15	51
BUSINESS SECOND FLOOR	35,237 SQ. FT.	1/100	353
EXCERCISE SECOND FLOOR	550 SQ. FT.	1/50	11
STORAGE SECOND FLOOR	1,201 SQ. FT.	1/300	5
TOTAL	37,742 SQ. FT.		420

SECOND FLOOR EXIT NAME	WIDTH (INCHES)		LIMITING FACTOR	WIDTH FACTOR INCH/PERSON		OCCUPANT CAPACITY
	DOOR	STAIR		DOOR	STAIR	
STAIR 2-1	36(-2)	50	STAIR	0.2	0.3	166
STAIR 2-2	36(-2)	50	STAIR	0.2	0.3	166
STAIR 2-3	42(-2)	56	STAIR	0.2	0.3	187
					TOTAL	519



TRUE N / PLAN N — 1 02 OVERALL SECOND FLOOR LIFE SAFETY PLAN
1" = 10'-0"

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TBPE Registration Number F-14807

PROJECT NO. 18068R
ISSUED FOR CONSTRUCTION: COMPLETE

CLIENT:

SEAL OF THE CHEROKEE NATION — DEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

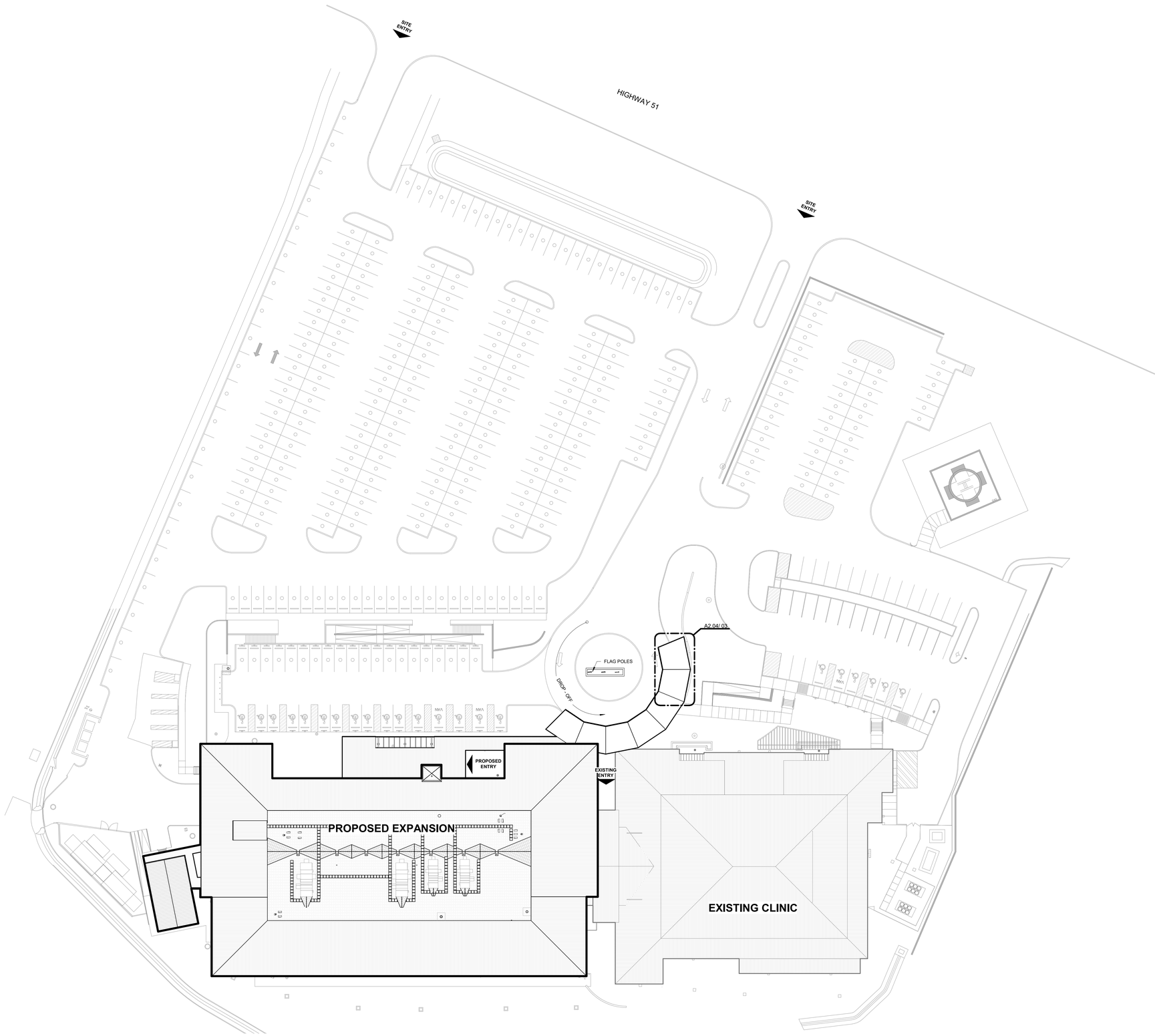
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER: AL2.01

LIFE SAFETY PLAN LEVEL 02



PLAN NORTH

TRUE NORTH

01 SITE PLAN

1" = 30'-0"

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

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REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

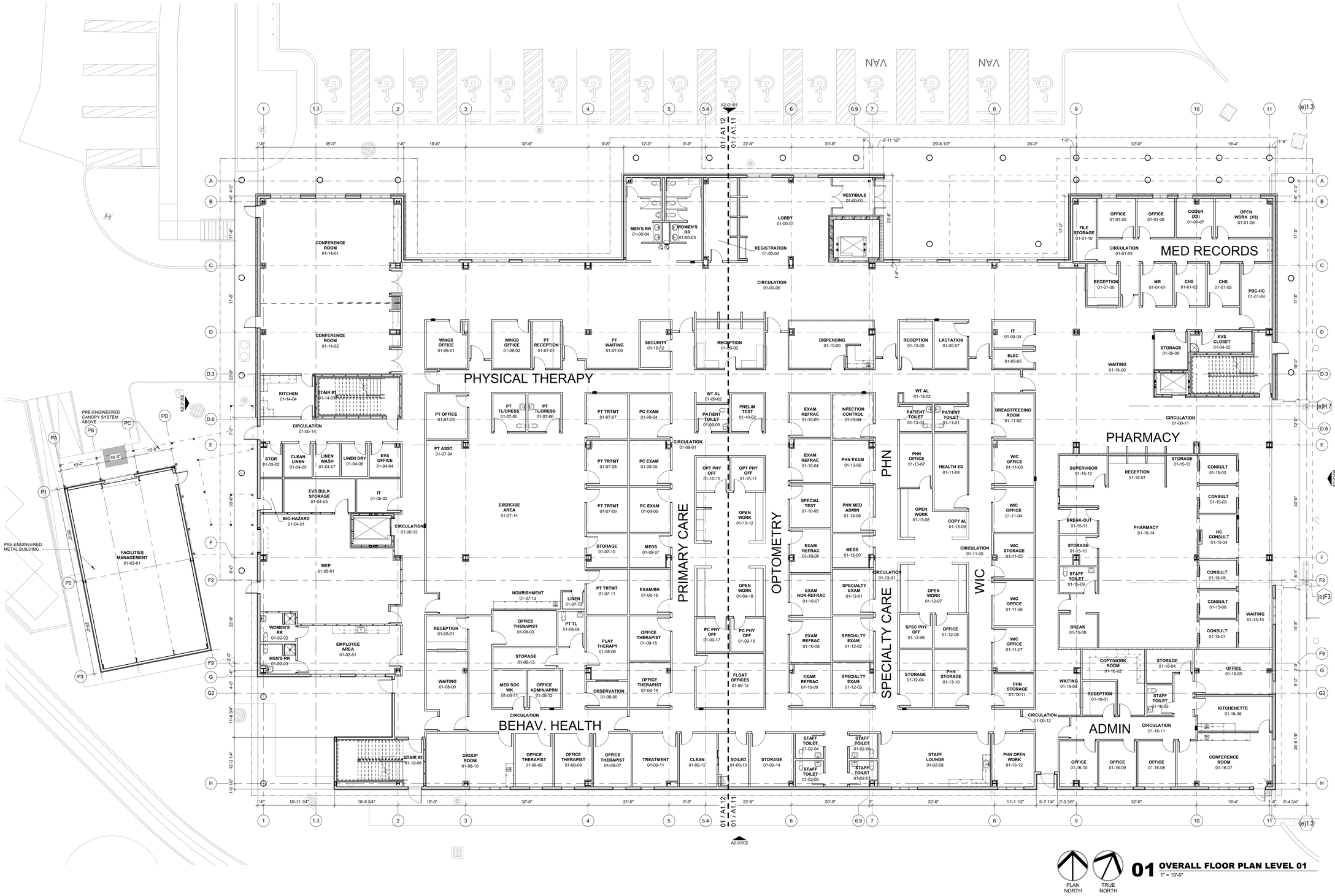
JOB NUMBER: 18-01.01

SHEET NUMBER: AS01

SITE PLAN

GENERAL NOTES - FLOOR PLAN

1. INTERIOR DIMENSIONS ARE TO THE FACE OF DRYWALL OR FINISH.
2. ALL EXTERIOR DIMENSIONS ARE TO THE FACE OF EXTERIOR SHEATHING, UNLESS OTHERWISE NOTED.
3. REFER TO SHEET A2 FOR SERIES FOR EXTERIOR ELEVATIONS.
4. REFER TO SHEET A6.01 - A6.02 FOR PARTITION TYPES AND FRAMING DETAILS.
5. REFER TO SHEET A6.10 FOR DOOR SCHEDULE.
6. REFER TO SHEET A6.20 SERIES FOR TOILET & ACESSORY INFORMATION.
7. REFER TO SHEET A8 SERIES FOR MILLWORK AND INTERIOR ELEVATIONS.



01 OVERALL FLOOR PLAN LEVEL 01
1" = 10'-0"

PLAN NORTH

TRUE NORTH

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PROFESSIONAL SEAL:

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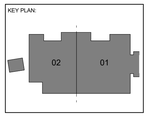
CONSULTANT LOGO:

CLIENT:

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

#	DATE	REVISIONS DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

A1.01

OVERALL FLOOR PLAN LEVEL 01

GENERAL NOTES - FLOOR PLAN

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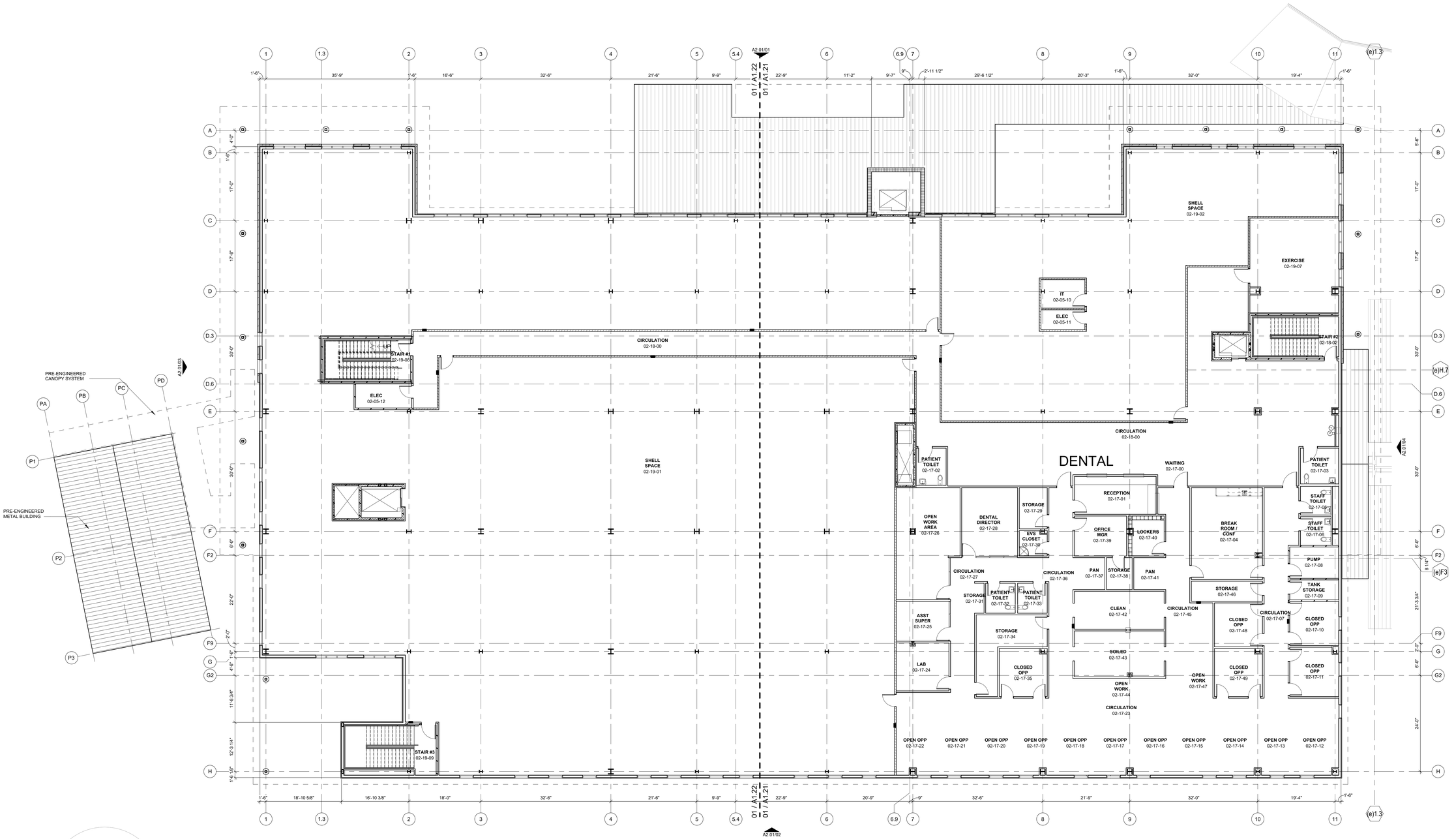

PLAN NORTH

TRUE NORTH

01 OVERALL FLOOR PLAN LEVEL 02

1" = 10'-0"

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

02 01

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

A1.02

OVERALL FLOOR PLAN LEVEL 02

GENERAL NOTES - FLOOR PLAN

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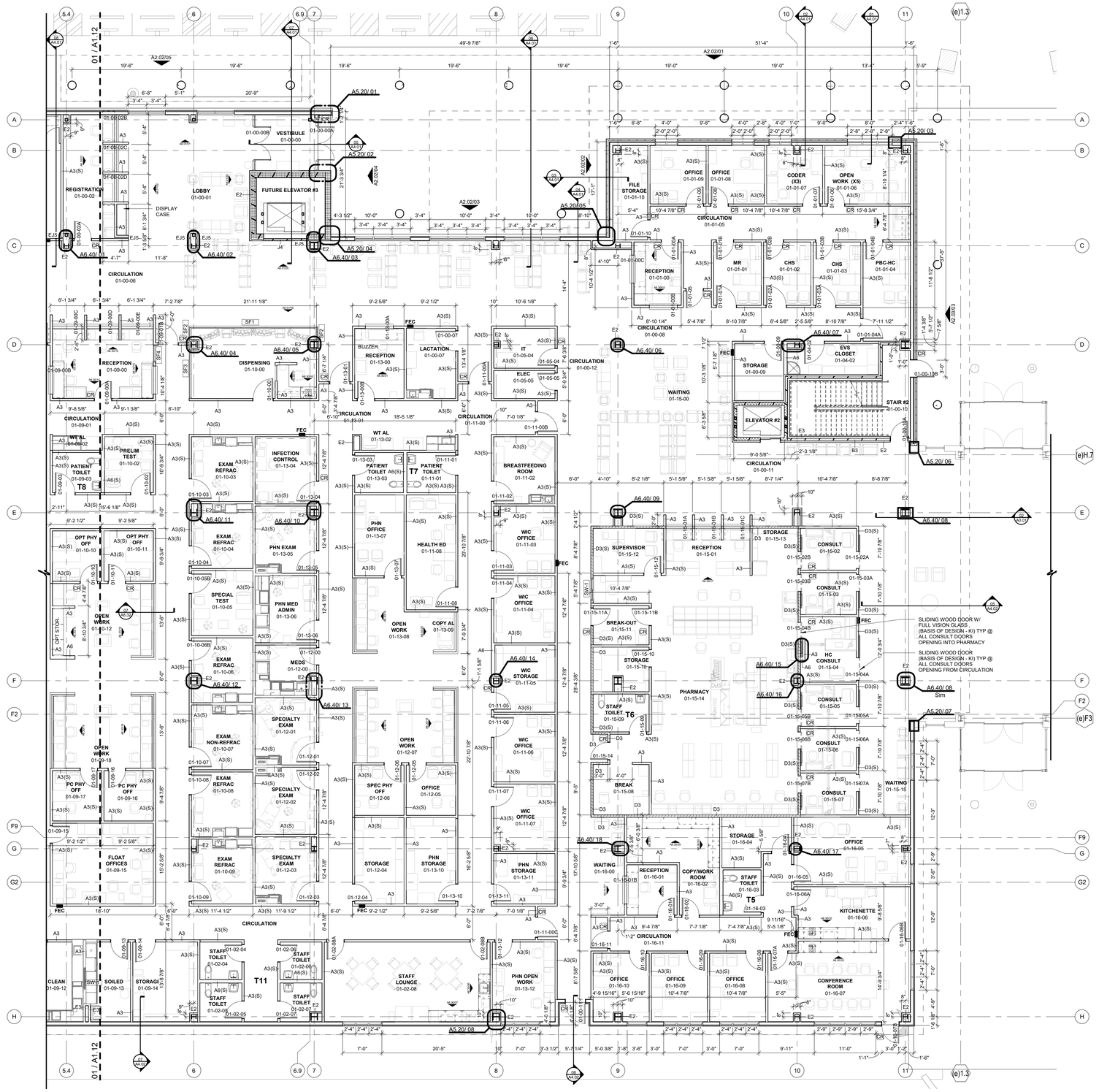

01 FLOOR PLAN LEVEL 01 SECTOR 01
1/8" = 1'-0"

PLAN NORTH
TRUE NORTH

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

A1.11

FLOOR PLAN LEVEL 01 SECTOR 01

GENERAL NOTES - FLOOR PLAN

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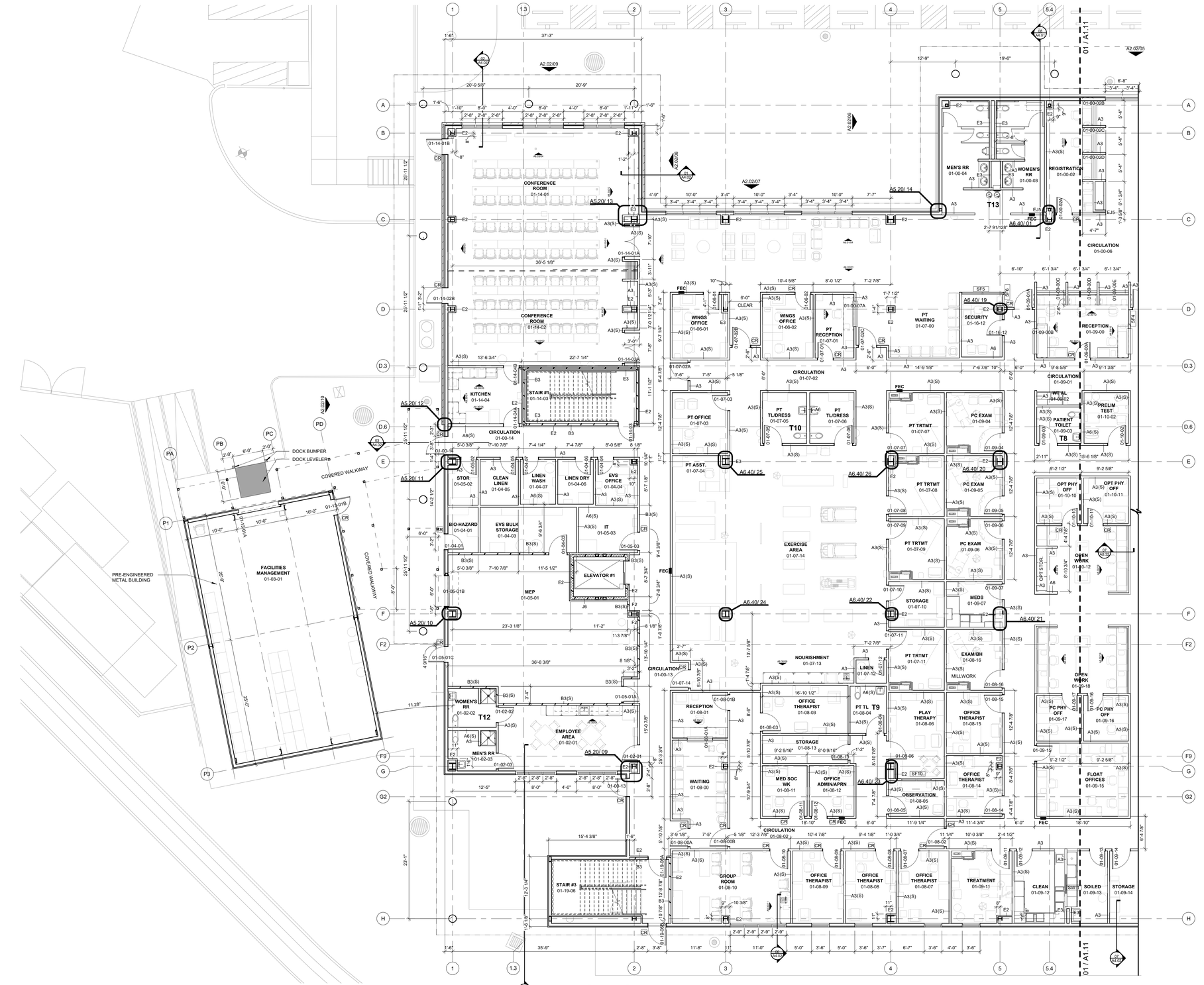

01 FLOOR PLAN LEVEL 01 SECTOR 02
1/8" = 1'-0"

PLAN NORTH / TRUE NORTH

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12-06-2019

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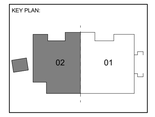
THE CHEROKEE NATION — TRUST OF THE CHEROKEE NATION — SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

A1.12

FLOOR PLAN LEVEL 01 SECTOR 02

GENERAL NOTES - FLOOR PLAN

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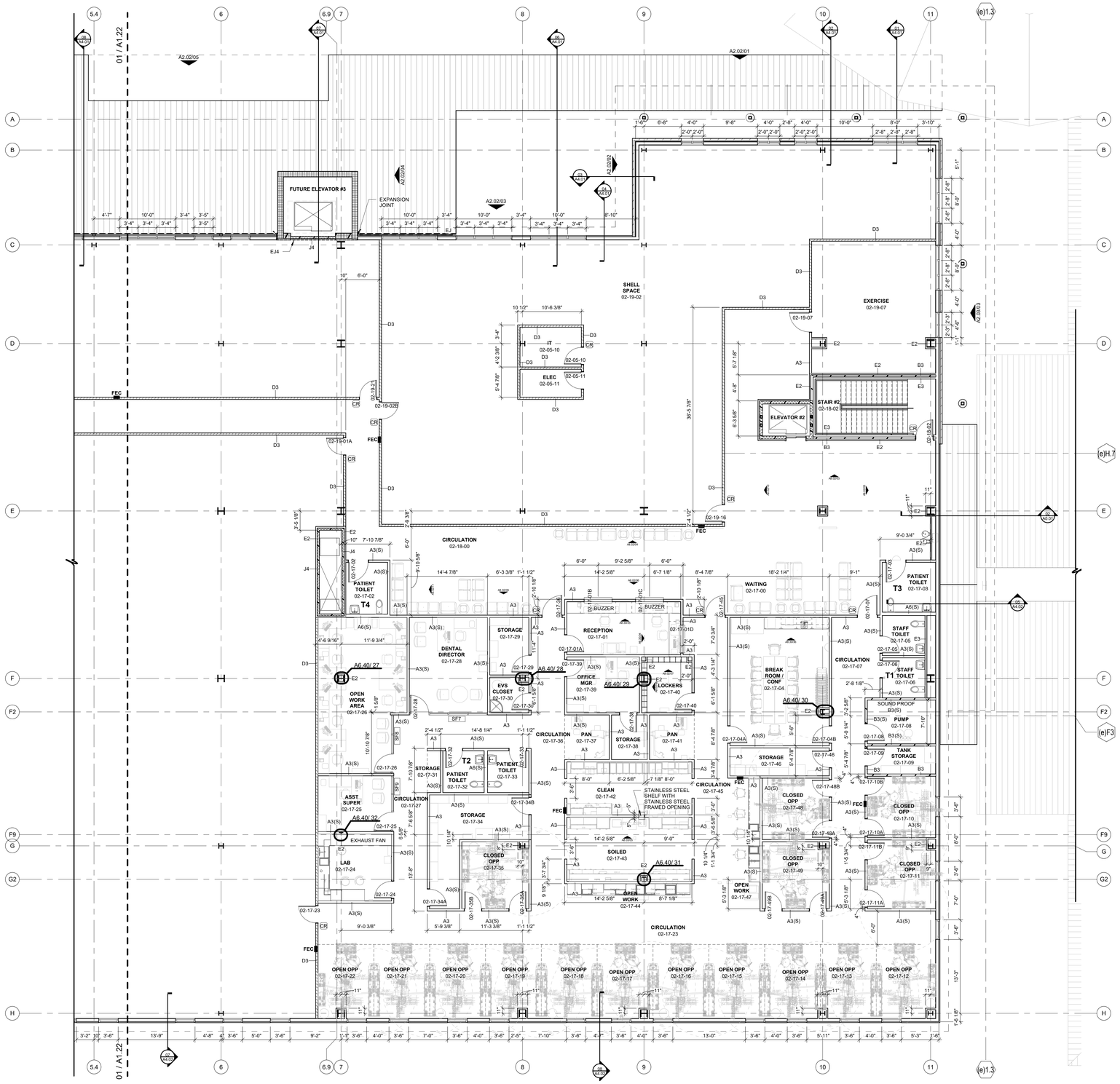

01 FLOOR PLAN LEVEL 02 SECTOR 01
1/8" = 1'-0"

PLAN NORTH
TRUE NORTH

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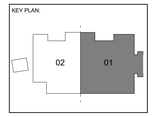
STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

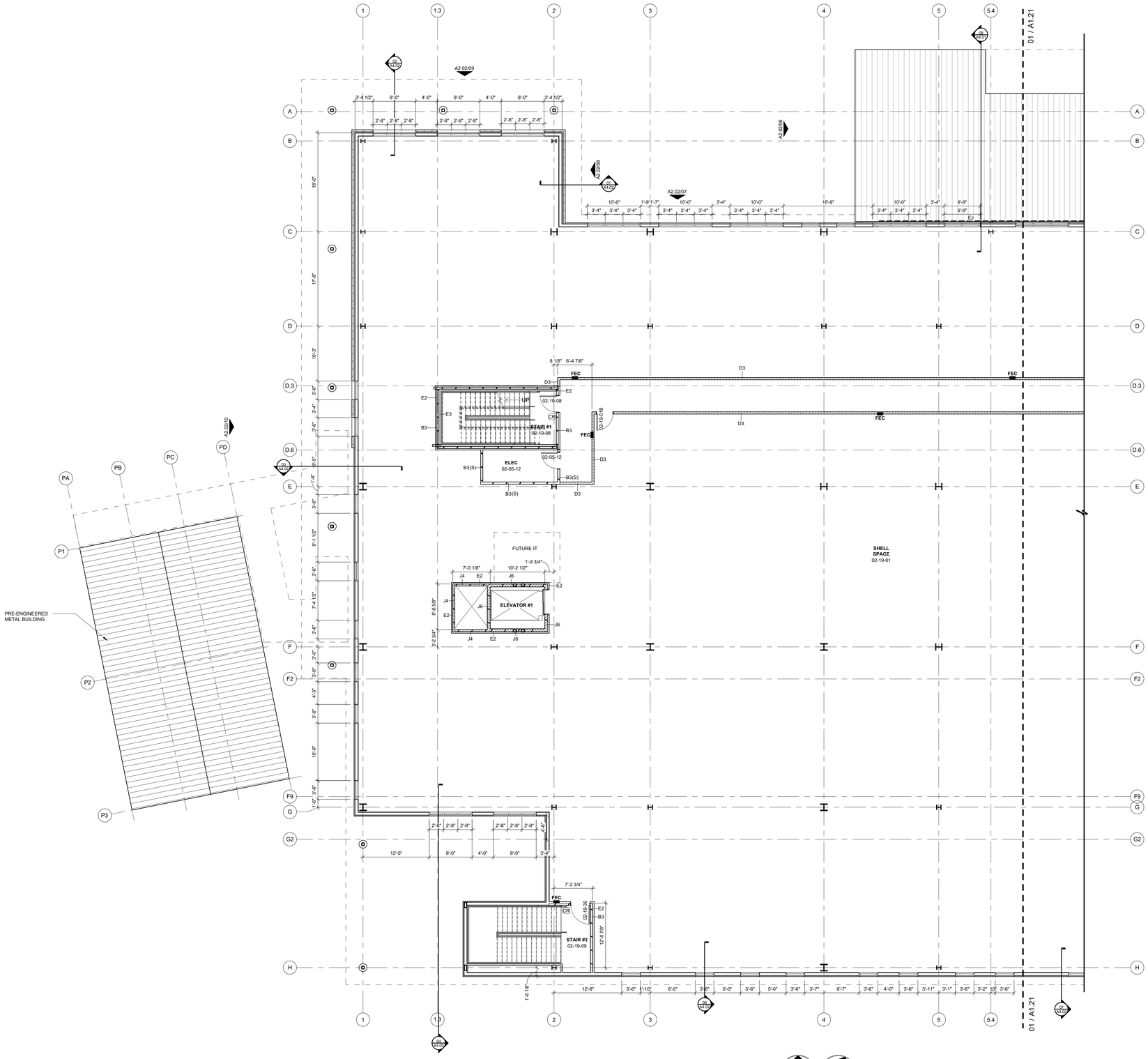
DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
A1.21

FLOOR PLAN LEVEL 02 SECTOR 01

GENERAL NOTES - FLOOR PLAN

1. INTERIOR DIMENSIONS ARE TO THE FACE OF DRYWALL OR FINISH.
2. ALL EXTERIOR DIMENSIONS ARE TO THE FACE OF EXTERIOR SHEATHING, UNLESS OTHERWISE NOTED.
3. REFER TO SHEET A2 FOR SERIES FOR EXTERIOR ELEVATIONS.
4. REFER TO SHEET A6.01 - A6.02 FOR PARTITION TYPES AND FRAMING DETAILS.
5. REFER TO SHEET A6.10 FOR DOOR SCHEDULE.
6. REFER TO SHEET A6.20 SERIES FOR TOILET & ACESSORY INFORMATION.
7. REFER TO SHEET A8 SERIES FOR MILLWORK AND INTERIOR ELEVATIONS.


1
1.3
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5.4
A
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C
D
D.3
D.6
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F2
F9
G
G2
H
PA
PB
PC
PD
P1
P2
P3
01 / A1.21
A2.02/09
A2.02/06
A2.02/07
A2.02/08
A2.02/10
A4.02
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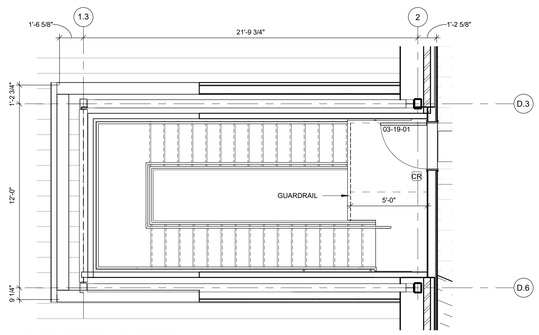
A4.03
A4.01



02 STAIR #1 ROOF
1/4" = 1'-0"

ROOF LEGEND

- TAPERED INSULATION
- STANDING SEAM METAL ROOF
- PRE-ENGINEERED CANOPY SYSTEM
- RD / OD — ROOF DRAIN AND OVERFLOW DRAIN
- WALKWAY PROTECTION

ROOF PLAN GENERAL NOTES

1. ROOF TYPES ARE AS FOLLOWS:
   1. ROOF TYPE 1: SINGLE PLY ROOFING
   2. ROOF TYPE 2: STANDING SEAM METAL ROOF
   3. ROOF TYPE 3: PRE-ENGINEERED ALUMINUM CANOPY
2. ALL ROOFING SURFACES TO SLOPE 1/4" VERTICAL PER 1'-0" HORIZONTAL MINIMUM, UNLESS NOTED OTHERWISE.
3. HATCHING INDICATES AREAS WHERE THE ROOF SLOPE IS ACHIEVED WITH TAPERED INSULATION.
4. TOP OF INSULATION HEIGHTS, HIGH POINTS AND LOW POINTS, ARE INDICATED AS THE TOP OF ROOF SURFACE ABOVE THE ROOF DRAIN(S). (I.E. +4.5" WHERE HIGH POINT OF ROOF DRAIN SUMP IS +0"
5. ALL ROOF TOP MECHANICAL, ELECTRICAL, AND/OR PLUMBING EQUIPMENT SHOWN FOR INFORMATION ONLY. REFERENCE MECHANICAL, ELECTRICAL, AND PLUMBING DOCUMENTS AND SPECIFICATIONS FOR SPECIFIC DESIGN INFORMATION.
6. PROVIDE WALKWAY PROTECTION TO MAJOR MECHANICAL, ELECTRICAL AND PLUMBING EQUIPMENT AS REQUIRED TO PROVIDE SERVICE ACCESS.WALKWAY PROTECTION IS INDICATED AS A GENERAL LAYOUT AND MAY NOT SHOW ALL FINAL LOCATIONS OF ALL EQUIPMENT.
7. EXISTING ROOFS TO REMAIN, UNLESS NOTED OTHERWISE.
8. REFERENCE DEMOLITION PLANS, SECTIONS
9. PATCH AND REPAIR EXISTING ROOFS DAMAGED DURING CONSTRUCTION.

ROOF TYPE 1
ROOF TYPE 2
ROOF TYPE 3
PRE-ENGINEERED ALUMINUM CANOPY
PRE-ENGINEERED METAL BUILDING
EXISTING ROOF TO REMAIN
HIP
A1.30/ 02
A2.04/ 01
193'-0 3/8"
27'-8"

01 OVERALL ROOF PLAN
1" = 10'-0"

PLAN NORTH / TRUE NORTH

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45 South 4th Street
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PROFESSIONAL SEAL:
STATE OF OKLAHOMA — JAMES R. CHILDERS — REGISTERED ARCHITECT
12-06-2019

CONSULTANT LOGO:

CLIENT:
THE CHEROKEE NATION — SEAL OF THE — SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN: 02 01

PROJECT PHASE: BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

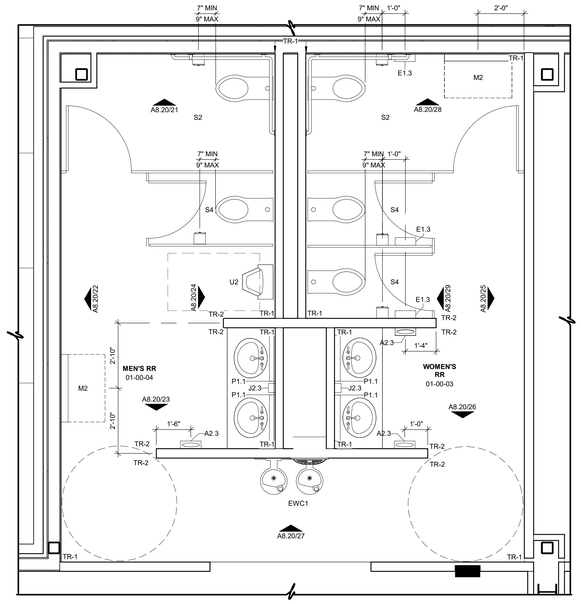
DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER: A1.30

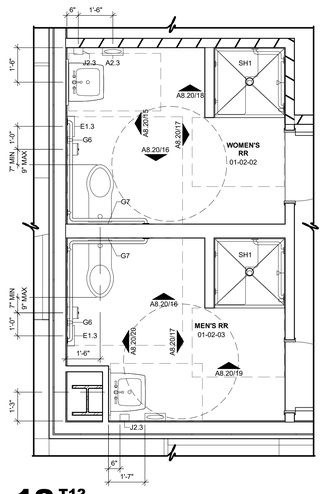
OVERALL ROOF PLAN

GENERAL NOTES

1. REFER TO SHEET A6.20 FOR STANDARD LAYOUTS & TOILET ACCESSORY INFORMATION.
2. REFER TO A7.00 FOR FINISH INFORMATION.



13 T13
3/8" = 1'-0"



12 T12
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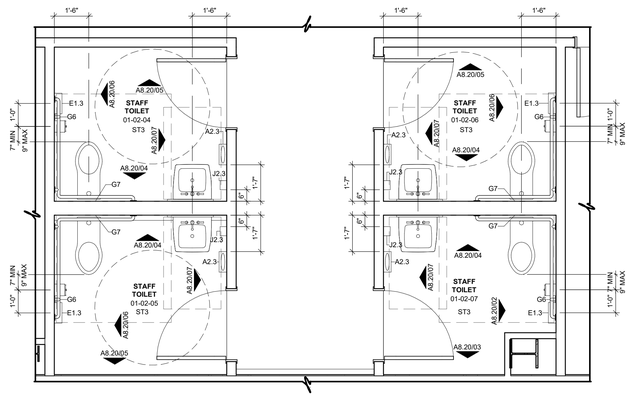

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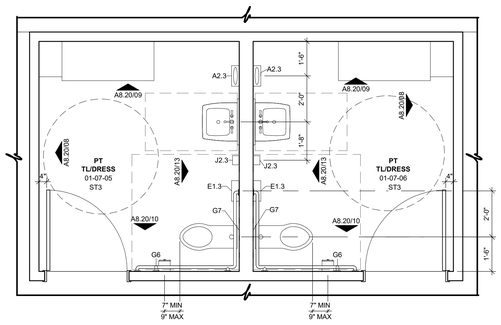

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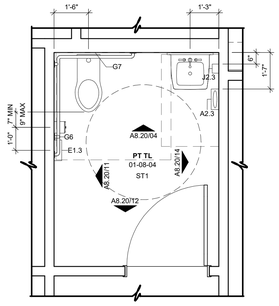

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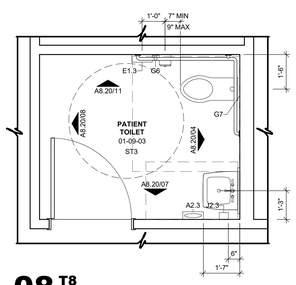

08 T8
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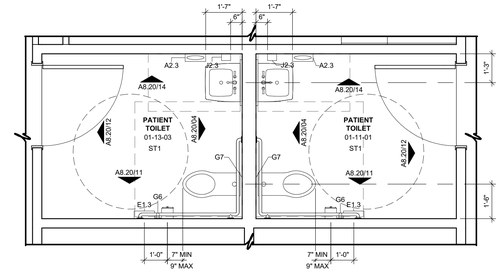

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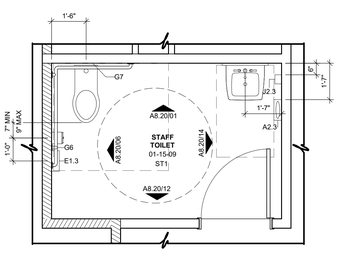
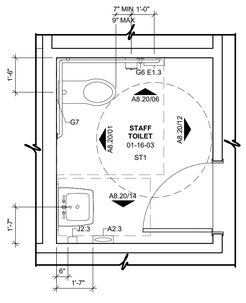


06 T6
3/8" = 1'-0"



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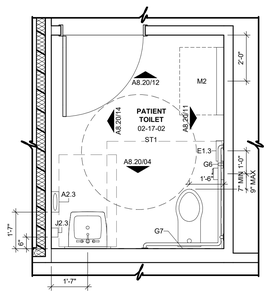

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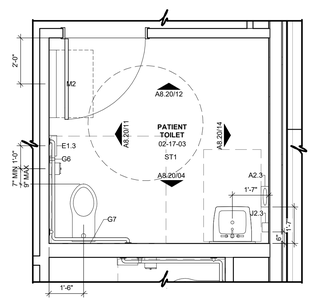
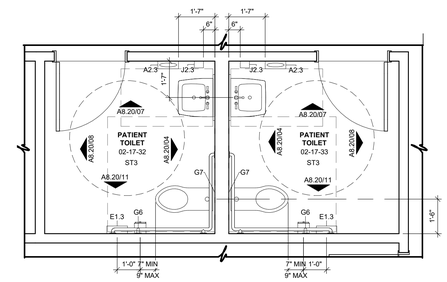
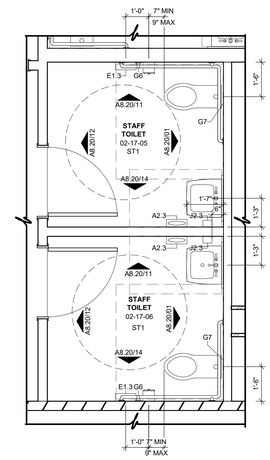
3/8" = 1'-0"



03 T3
3/8" = 1'-0"



02 T2
3/8" = 1'-0"



01 T1
3/8" = 1'-0"

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REGISTERED ARCHITECT

12-06-2019

CONSULTANT LOGO:

CLIENT:

THE CHEROKEE NATION
TRIBAL SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

A1.40

ENLARGED TOILET PLANS

EXTERIOR FINISH SCHEDULE

MASONRY

BRICK:

BR:
MANUFACTURER: ACME BRICK
PRODUCT: PERLA BLEND 30 GREY
TEXTURE: VELOUR

CONCRETE MASONRY UNIT:

CMU:
MANUFACTURER:
PRODUCT:
TYPE:

EIFS:

EIFS:
MANUFACTURER: DRYVIT
SYSTEM: OUTSULATION PLUS - MD
COLOR: 442 COTTON

MORTAR:

M:
MANUFACTURER: SOLOMON GRIND CHEM SERVICES, INC.
COLOR: TO MATCH EXISTING
TYPE: PORTLAND LIME TYPE "S" PRE BLENDED

DOORS, FRAMES & WINDOWS

STOREFRONT / CURTAINWALL

CW:
MANUFACTURER: KAWNEER
COLOR: TO MATCH EXISTING METAL ROOF
FINISH: KYNAR

HOLLOW METAL DOOR & FRAMES

HM:
COLOR: TO MATCH EXISTING METAL ROOF

AUTOMATIC SLIDING DOORS

ASD:
MANUFACTURER: ASSA ABLOY
PRODUCT: BESAM SL500
COLOR: TO MATCH EXISTING METAL ROOF
FINISH: KYNAR

METALS

METAL ROOF / METAL FASCIA / TRIM & COPING

MR / MS:
MANUFACTURER: BERRIDGE
COLOR: TEAL GREEN
FINISH: KYNAR

EXPOSED STEEL

ES:
COLOR: TO MATCH EXISTING METAL ROOF

WOOD SOFFITS

S:
PRODUCT: CEDAR - TO MATCH EXISTING

OVERHEAD COILING DOOR

OHD:
COLOR: RAL 7044

ARCHITECTURAL PRECAST CONCRETE

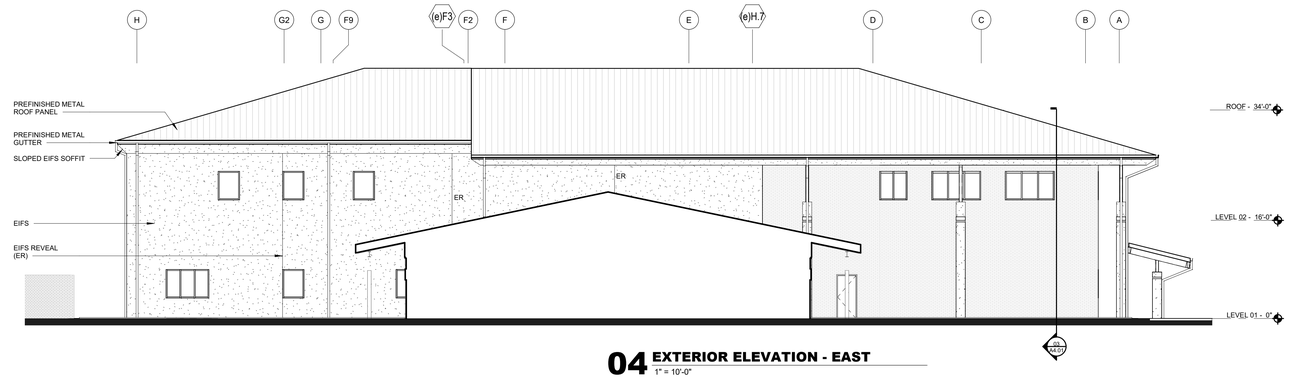
PC:
TO MATCH EXISTING

GLAZING

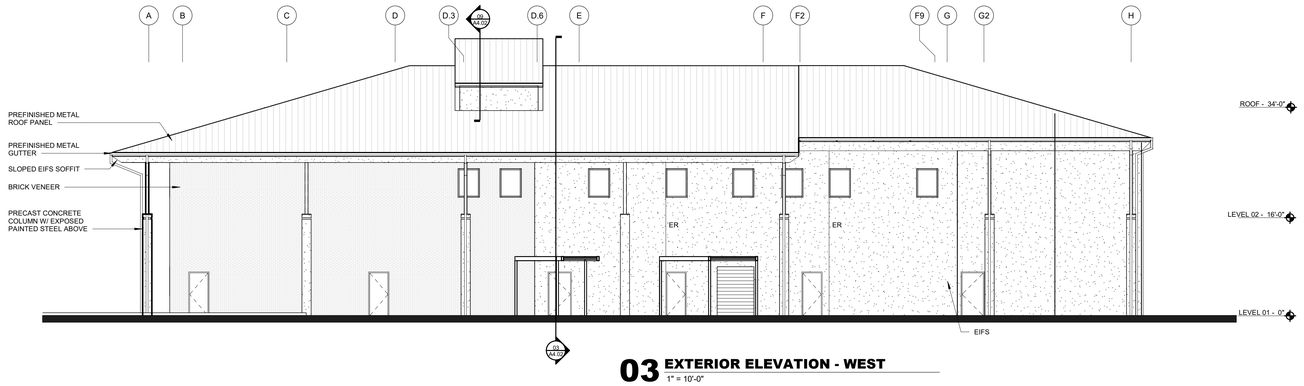
TINTED INSULATED GLAZING

MATERIAL LEGEND

- BRICK VENEER
- EIFS SYSTEM
- TINTED INSULATED GLAZING



04 EXTERIOR ELEVATION - EAST
1" = 10'-0"



03 EXTERIOR ELEVATION - WEST
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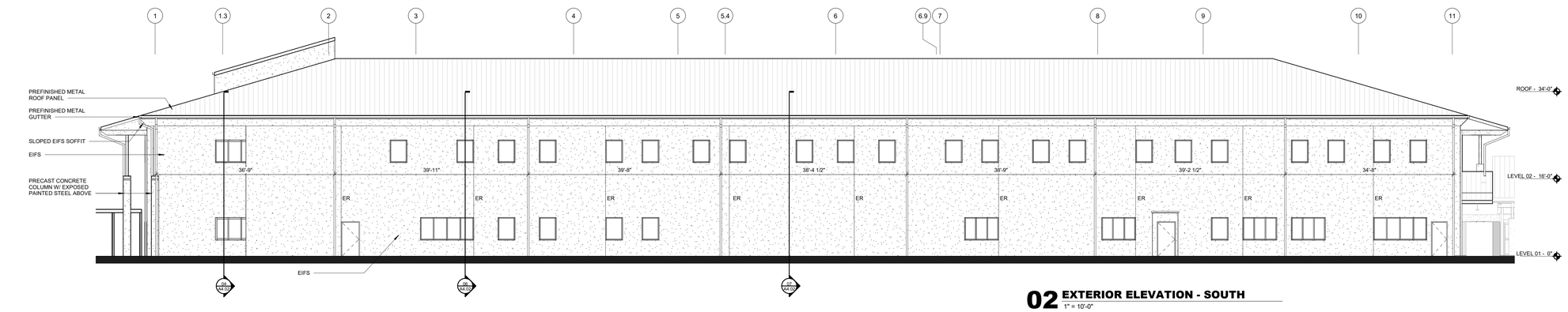
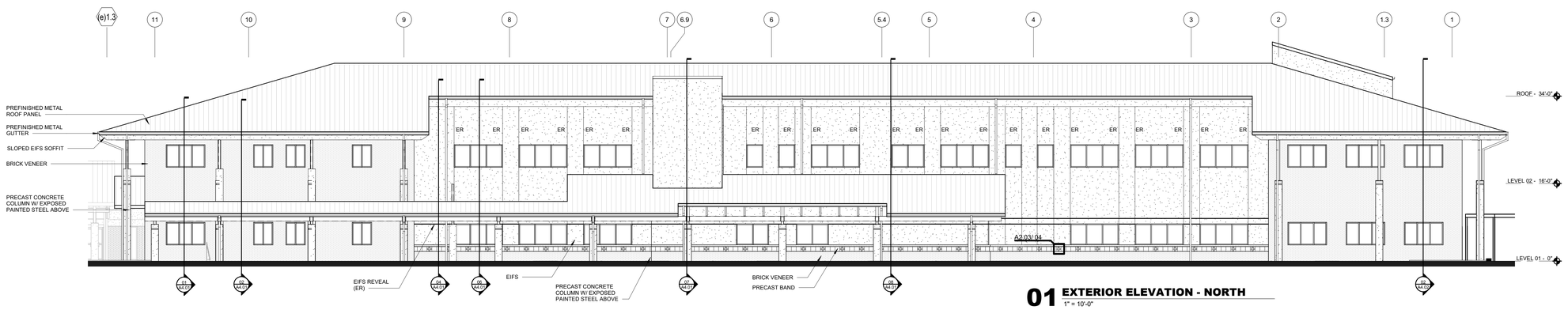


02 EXTERIOR ELEVATION - SOUTH
1" = 10'-0"



01 EXTERIOR ELEVATION - NORTH
1" = 10'-0"

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STATE OF OKLAHOMA — JAMES R. CHILDERS — REGISTERED ARCHITECT

12-06-2019

CONSULTANT LOGO:

CLIENT:

THE CHEROKEE NATION — SEAL OF — SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

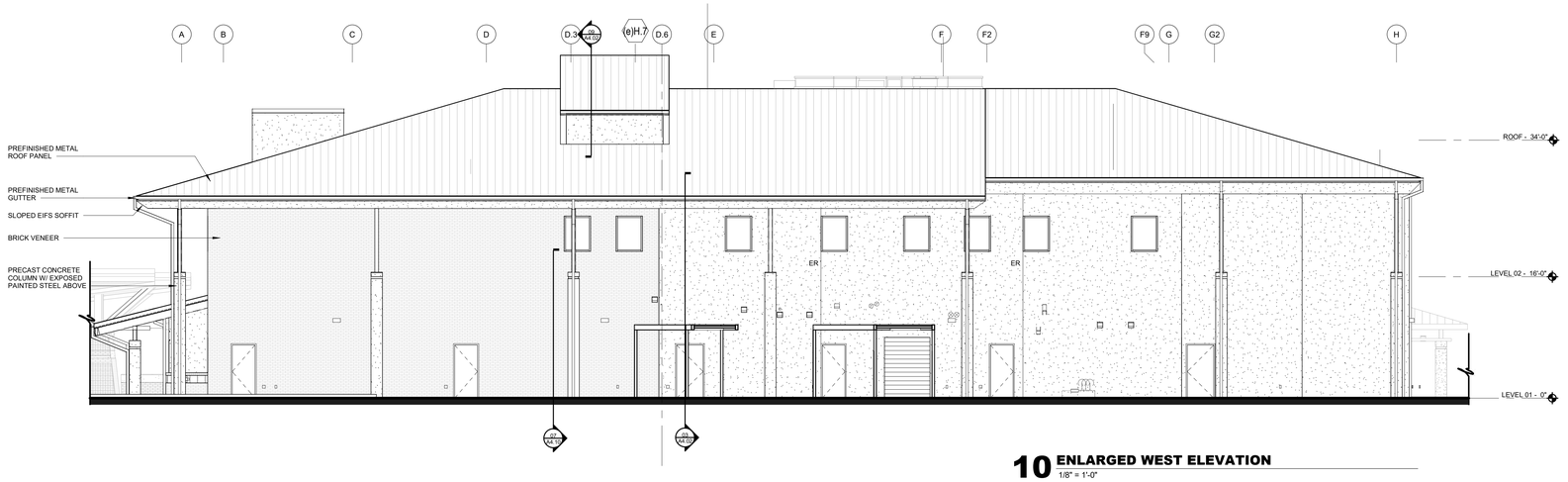
DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
A2.01

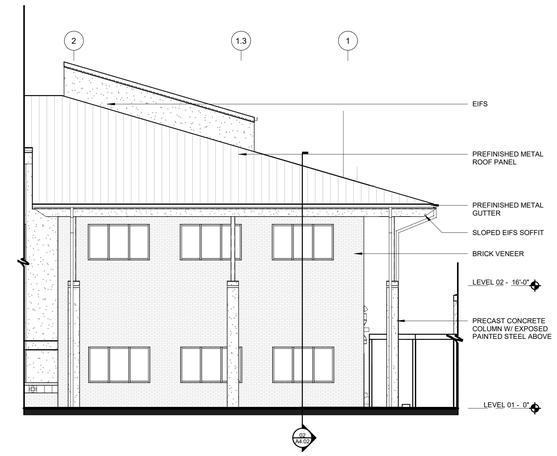
OVERALL EXTERIOR ELEVATIONS

MATERIAL LEGEND

- BRICK VENEER
- EIFS SYSTEM
- TINTED INSULATED GLAZING



10 ENLARGED WEST ELEVATION
1/8" = 1'-0"



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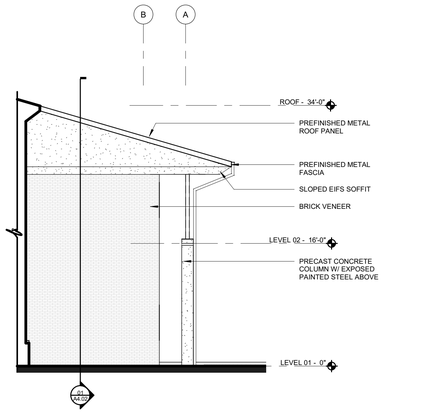
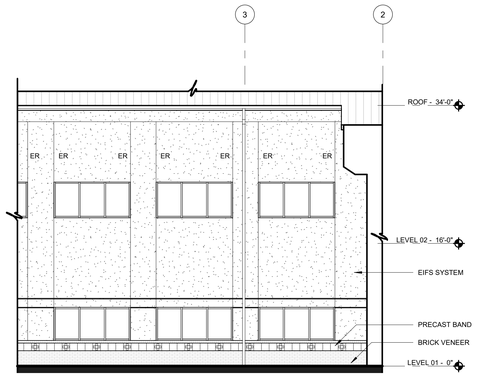


08 ENLARGED ELEVATION
1/8" = 1'-0"



07 ENLARGED ELEVATION
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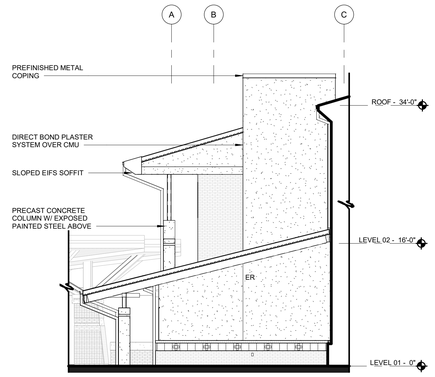
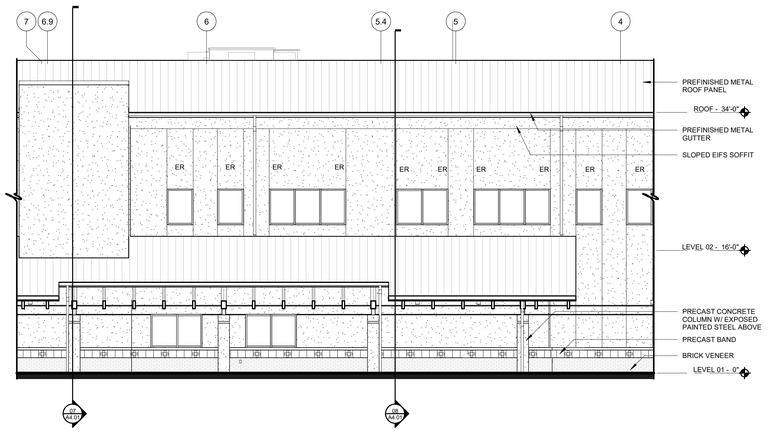


06 ENLARGED ELEVATION
1/8" = 1'-0"



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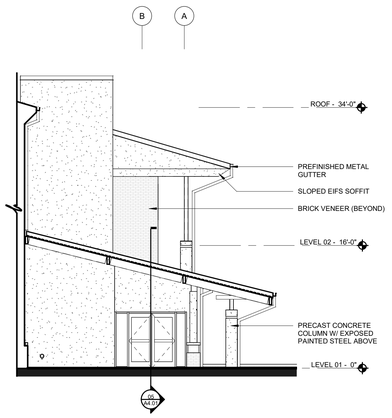

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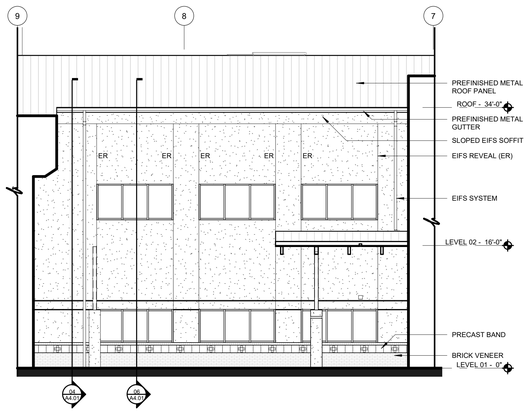
1/8" = 1'-0"



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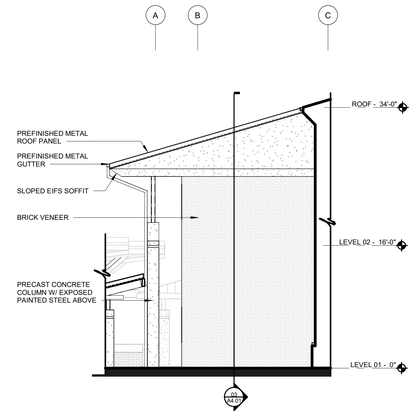
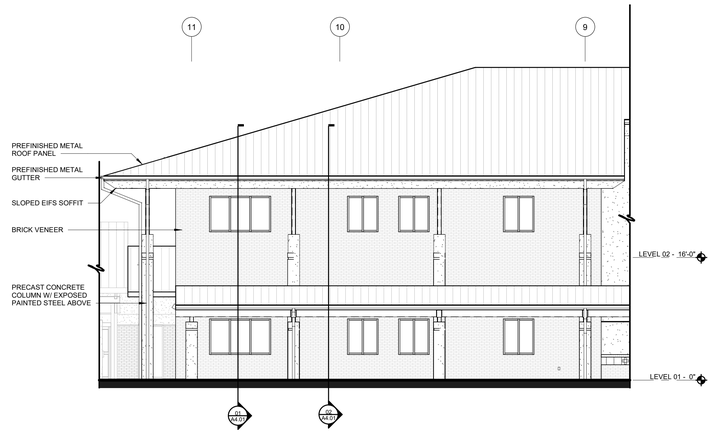
1/8" = 1'-0"



02 ENLARGED ELEVATION
1/8" = 1'-0"



01 ENLARGED ELEVATION
1/8" = 1'-0"

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STATE OF OKLAHOMA — JAMES R. CHILDERS — REGISTERED ARCHITECT

12-06-2019

CONSULTANT LOGO:

CLIENT:

THE CHEROKEE NATION — SEAL OF THE CHEROKEE NATION — SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
01-18-19	18-01.01

SHEET NUMBER:

A2.02

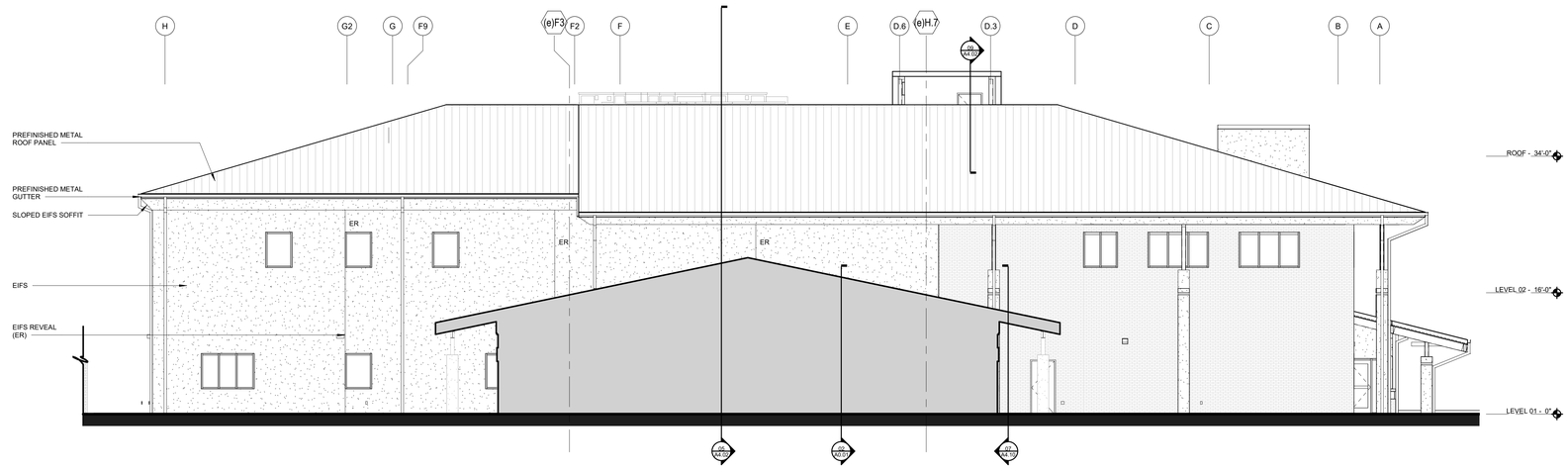
ENLARGED EXTERIOR ELEVATIONS

MATERIAL LEGEND

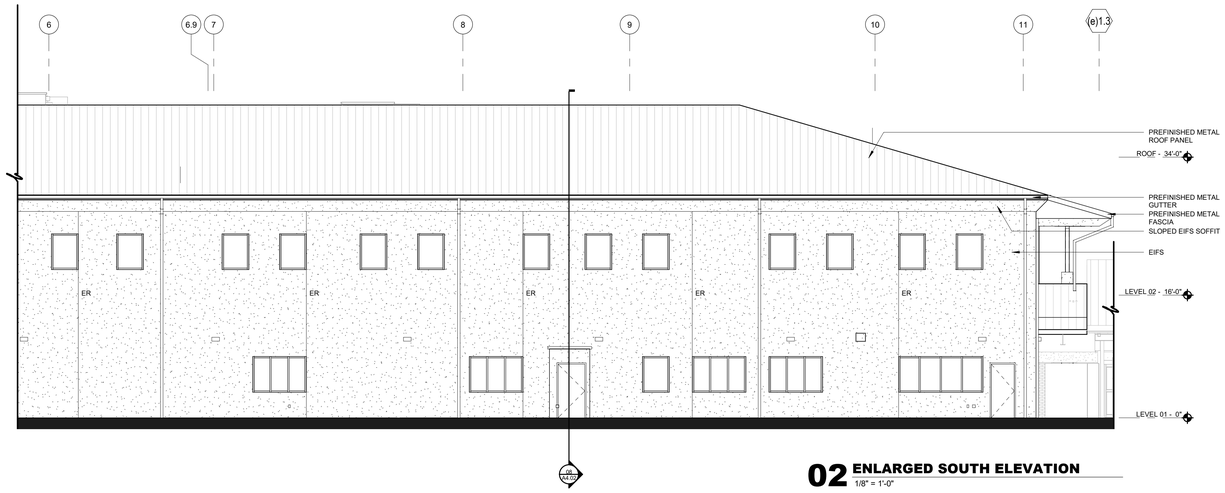
BRICK VENEER

EIFS SYSTEM

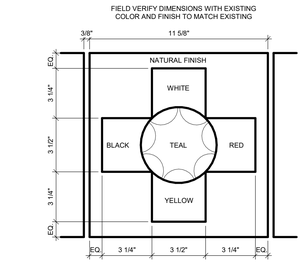
TINTED INSULATED GLAZING



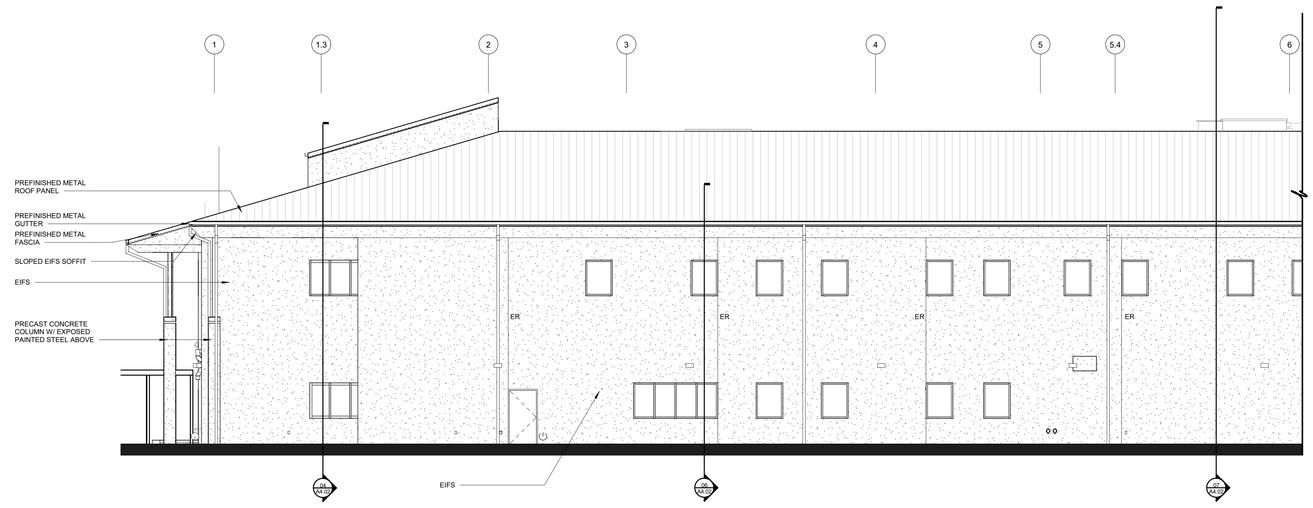
03 ENLARGED EAST ELEVATION
1/8" = 1'-0"



02 ENLARGED SOUTH ELEVATION
1/8" = 1'-0"



04 PRECAST PANEL DETAIL
3" = 1'-0"



01 ENLARGED SOUTH ELEVATION
1/8" = 1'-0"

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CLIENT:

THE CHEROKEE NATION — SEAL OF THE CHEROKEE NATION — SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

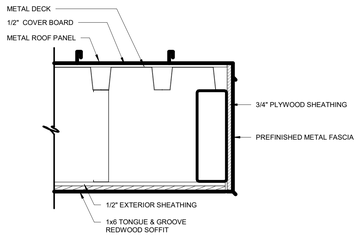
REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
01-18-19	18-01.01

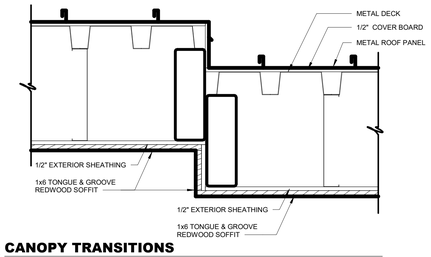
SHEET NUMBER:

A2.03

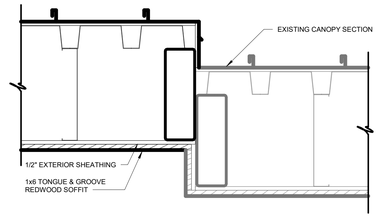
ENLARGED EXTERIOR ELEVATIONS



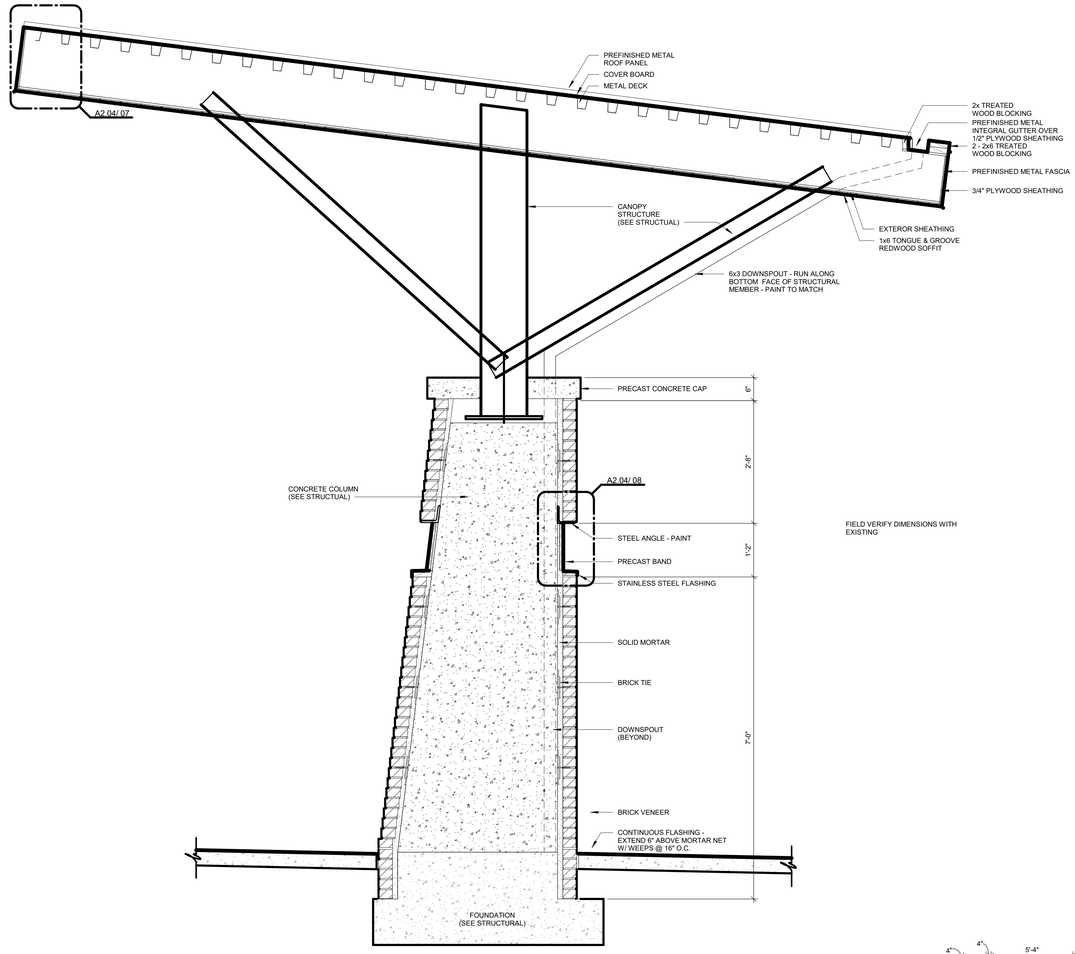
07 CANOPY END
1 1/2" = 1'-0"



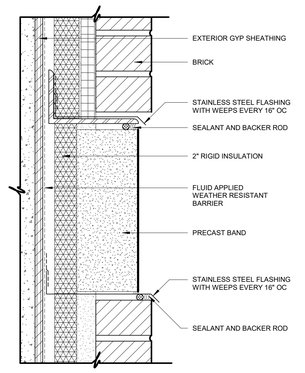
06 CANOPY TRANSITIONS
1 1/2" = 1'-0"



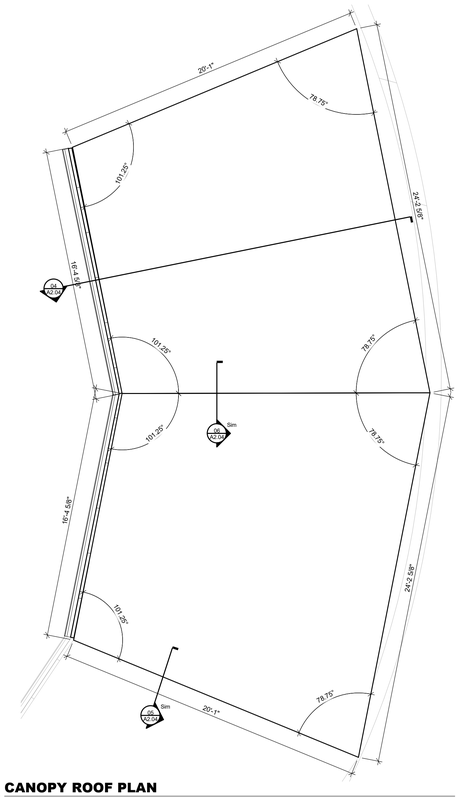
05 CANOPY TRANSITIONS
1 1/2" = 1'-0"



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

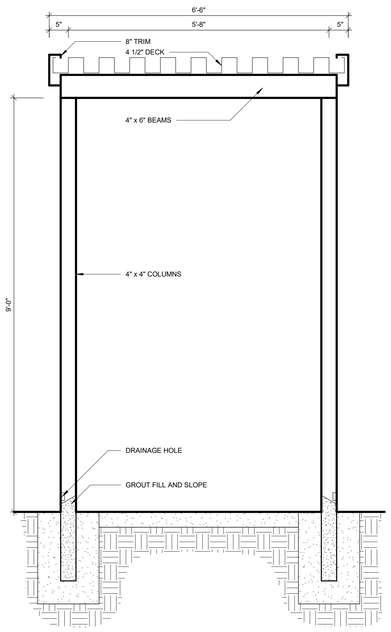


08 CANOPY SECTION DETAIL
3" = 1'-0"

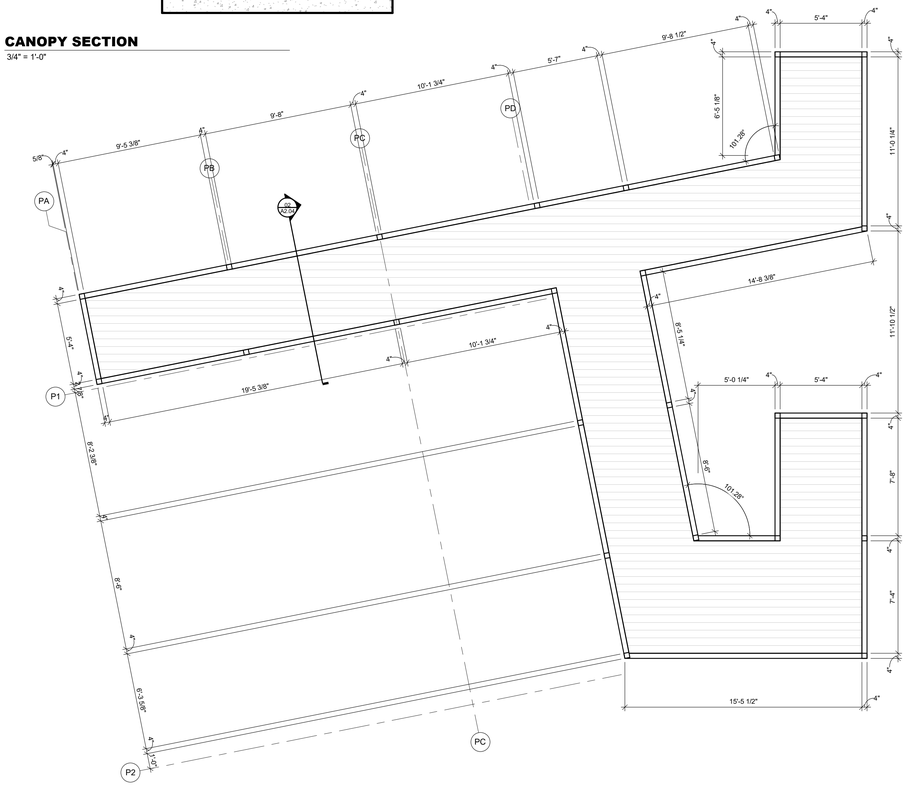


03 CANOPY ROOF PLAN
1/4" = 1'-0"

NOTE: TWO NEW CANOPY SECTIONS TO MATCH EXISTING FINISHES AND DIMENSIONS.



02 PRE-ENGINEERED METAL CANOPY SECTION
3/4" = 1'-0"



01 PRE-ENGINEERED METAL CANOPY PLAN
1/4" = 1'-0"

James R. Childers Architect, Inc.
45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com

PROFESSIONAL SEAL:

12-06-2019

CONSULTANT LOGO:

CLIENT:

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

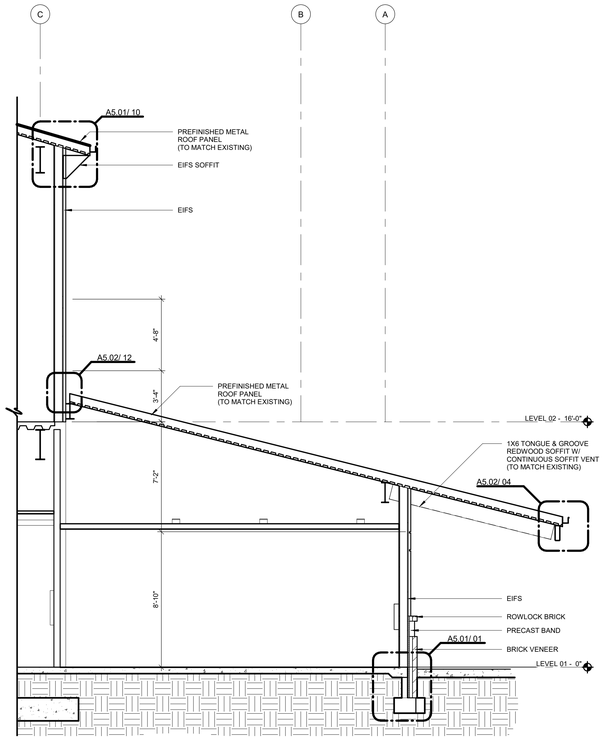
PROJECT PHASE:
BID PACKAGE 02

REVISIONS

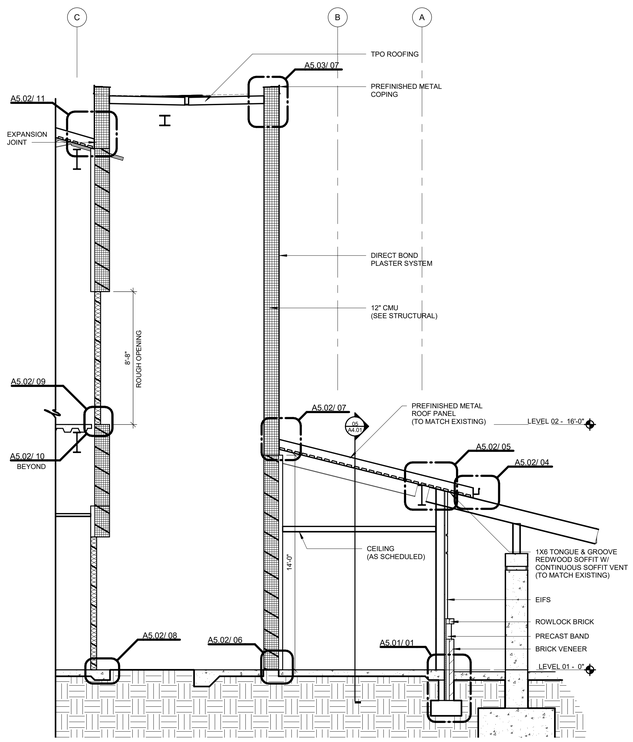
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: A2.04

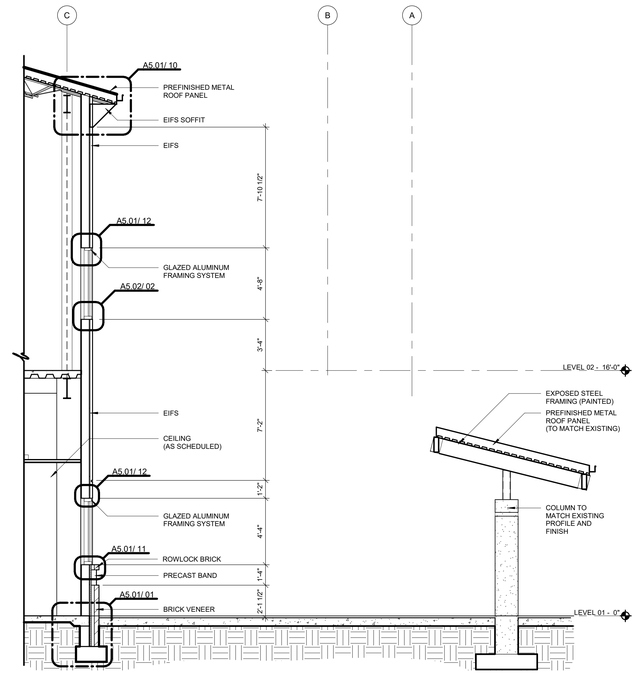
CANOPY PLANS AND DETAILS



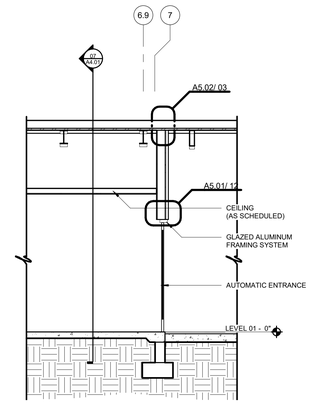
08 WALL SECTION
1/4" = 1'-0"



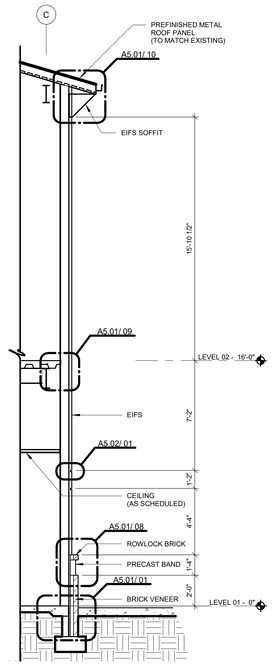
07 WALL SECTION
1/4" = 1'-0"



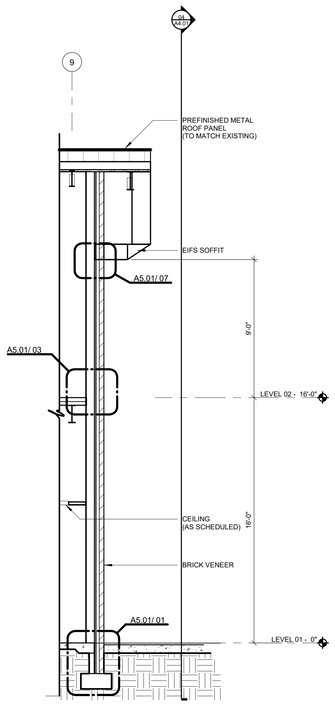
06 WALL SECTION
1/4" = 1'-0"



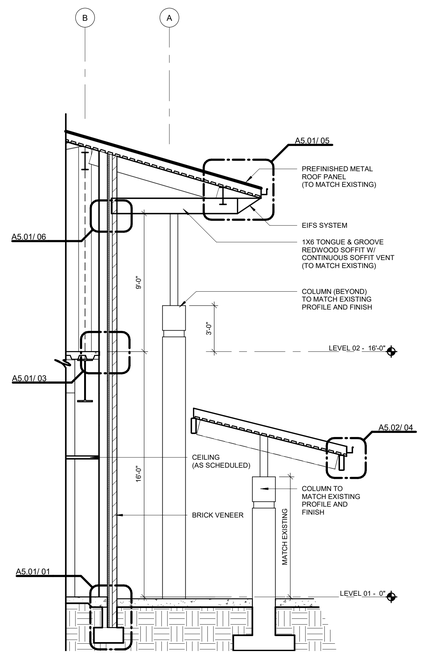
05 WALL SECTION
1/4" = 1'-0"



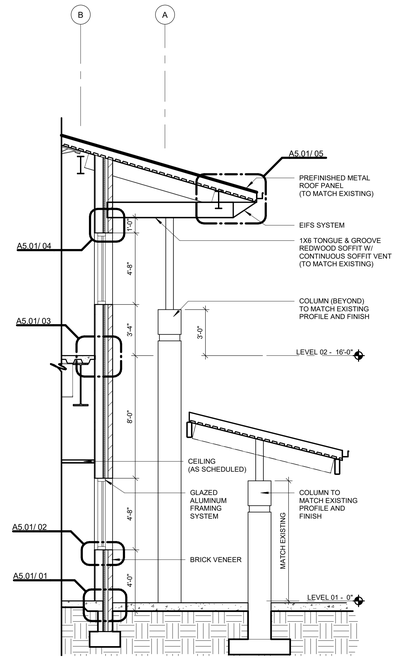
04 WALL SECTION
1/4" = 1'-0"



03 WALL SECTION
1/4" = 1'-0"



02 WALL SECTION
1/4" = 1'-0"



01 WALL SECTION
1/4" = 1'-0"

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STILWELL, OKLAHOMA

KEY PLAN:

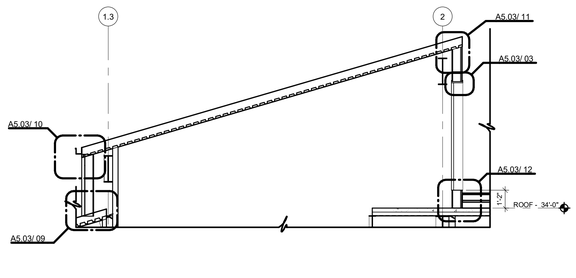
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

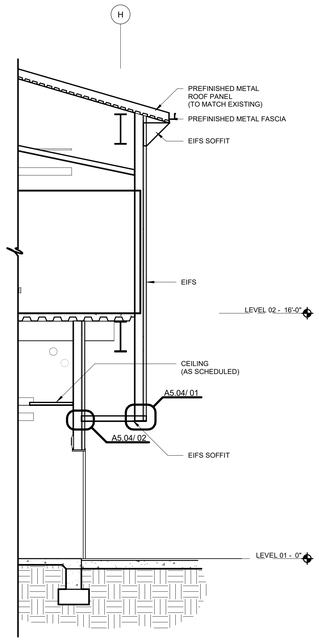
DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
A4.01

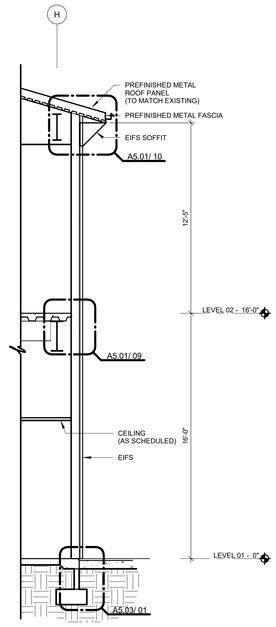
WALL SECTIONS



09 WALL SECTION
1/4" = 1'-0"



08 WALL SECTION
1/4" = 1'-0"



07 WALL SECTION
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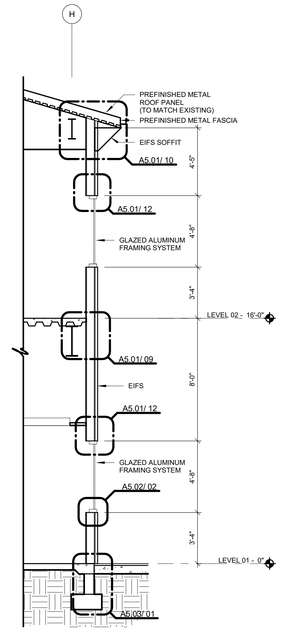

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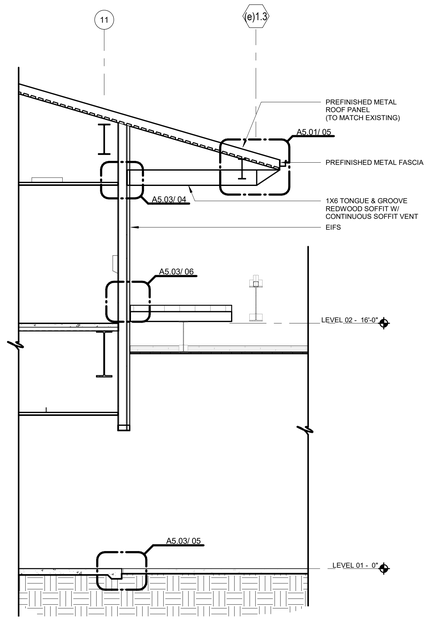
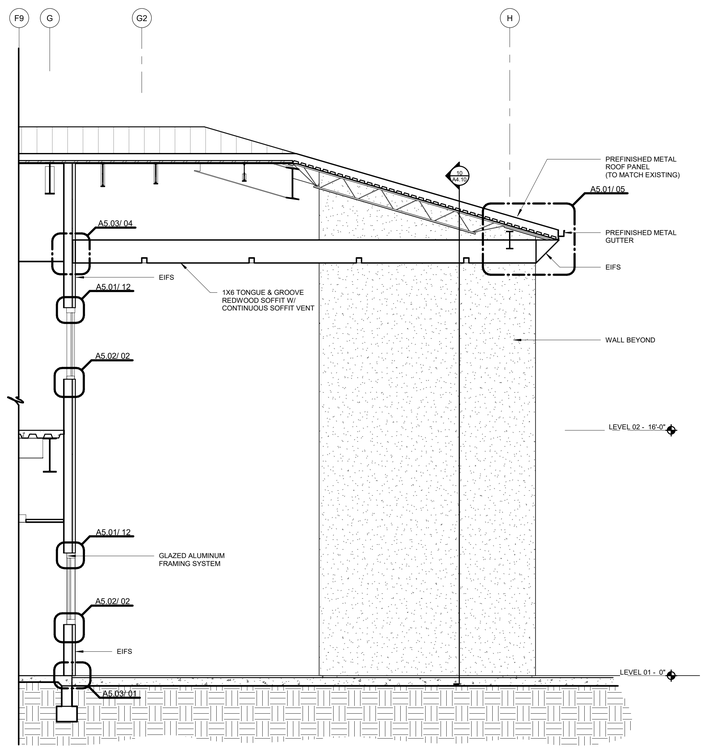


05 WALL SECTION
1/4" = 1'-0"



04 WALL SECTION
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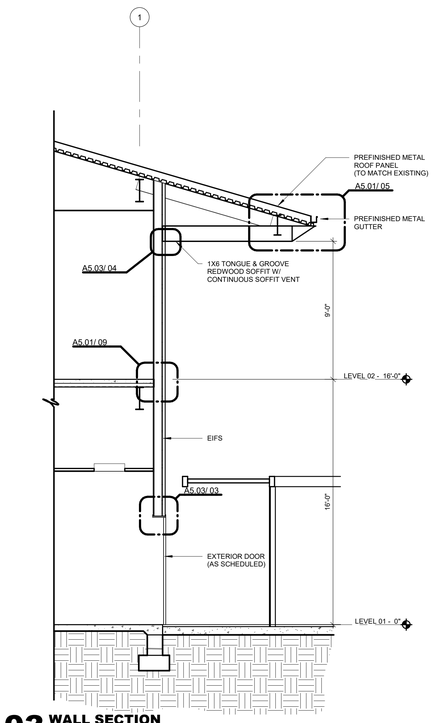
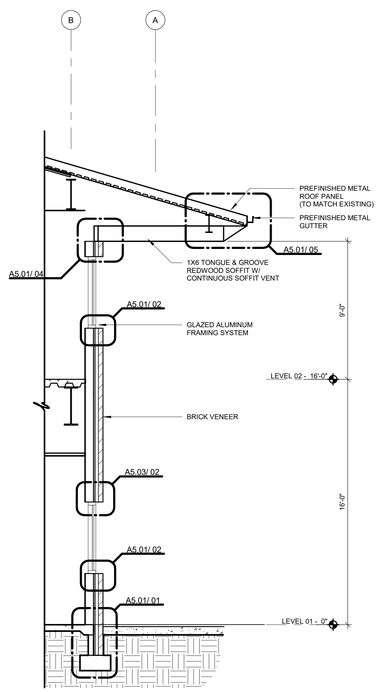
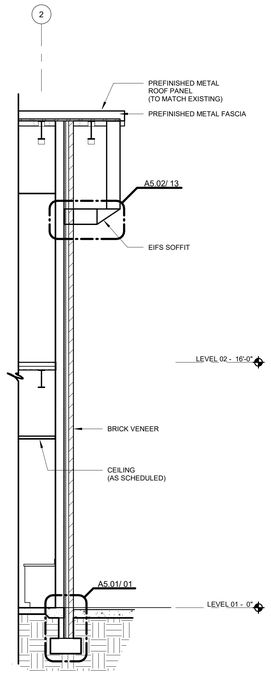


03 WALL SECTION
1/4" = 1'-0"



02 WALL SECTION
1/4" = 1'-0"



01 WALL SECTION
1/4" = 1'-0"

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PROFESSIONAL SEAL:

STATE OF OKLAHOMA
JAMES R. CHILDERS
REGISTERED ARCHITECT

12-06-2019

CONSULTANT LOGO:

CLIENT:

THE CHEROKEE NATION
TSA-LA-GI
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

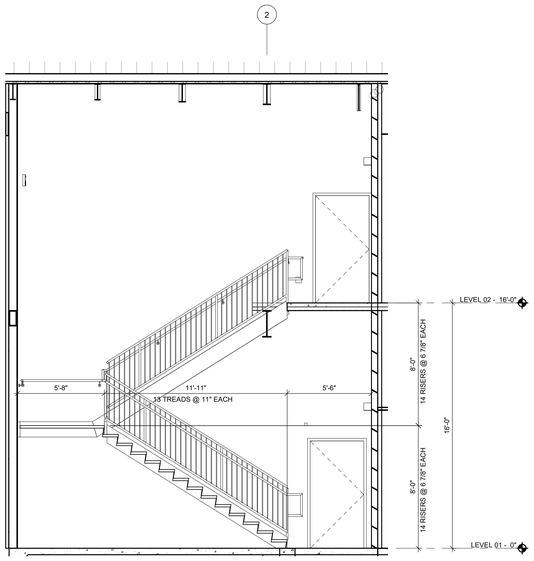
REVISIONS

#	DATE	DESCRIPTION

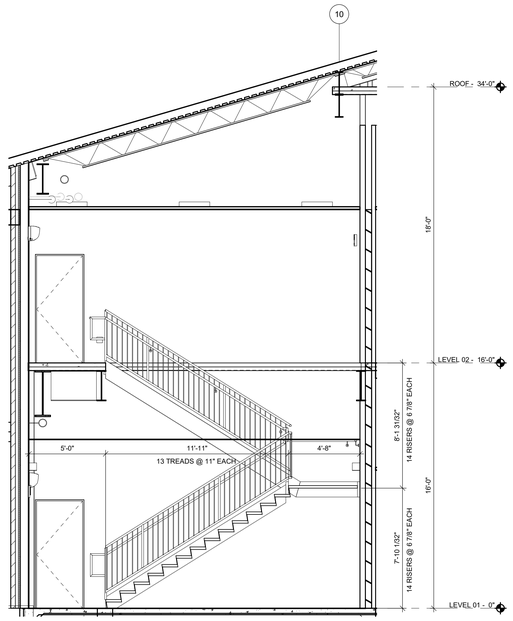
DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
A4.02

WALL SECTIONS



10 STAIR #3 SECTION
1/4" = 1'-0"



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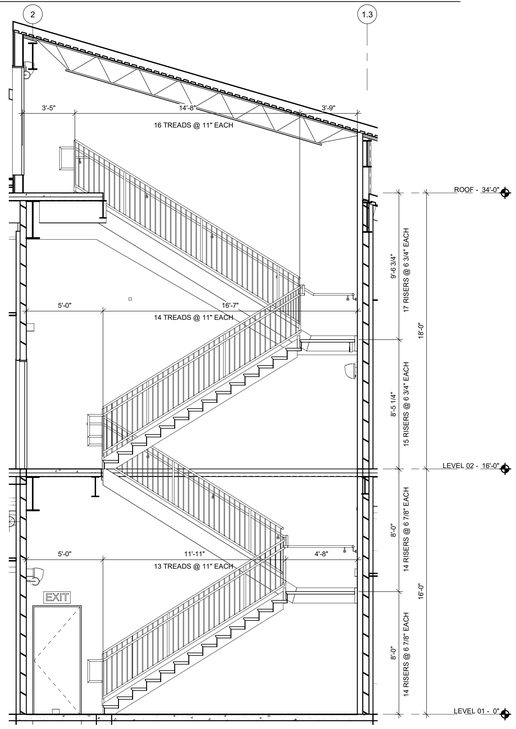

04 STAIR #1 SECTION
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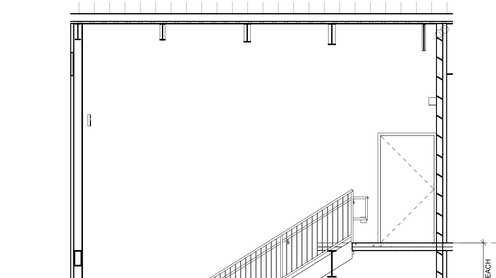

09 STAIR #3 LEVEL 02
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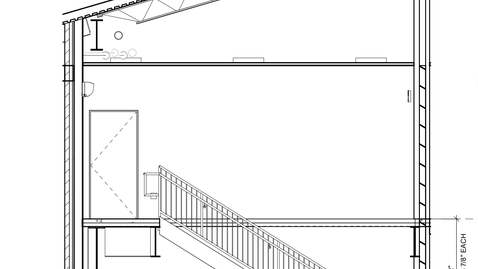
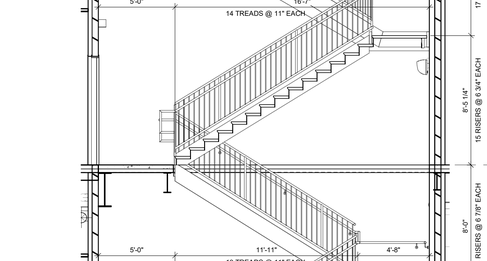


06 STAIR #2 LEVEL 02
1/4" = 1'-0"



02 STAIR #1 LEVEL 02
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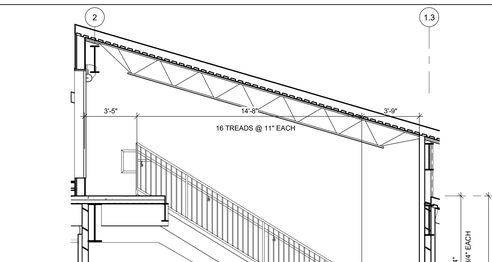
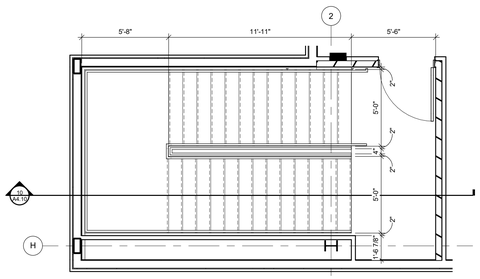
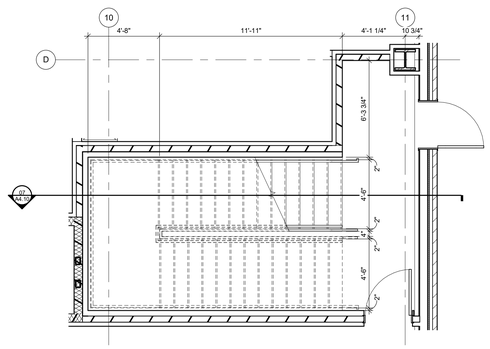


03 STAIR #1 ROOF LEVEL
1/4" = 1'-0"



08 STAIR #3 LEVEL 01
1/4" = 1'-0"



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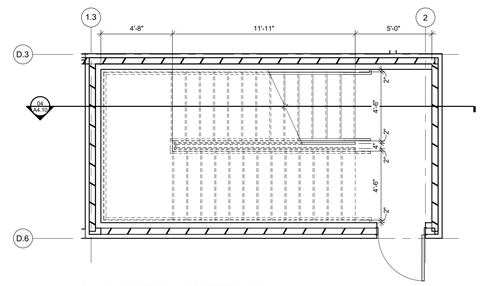
1/4" = 1'-0"



01 STAIR #1 LEVEL 01
1/4" = 1'-0"

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THE CHEROKEE NATION
FIRST CAPITAL
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

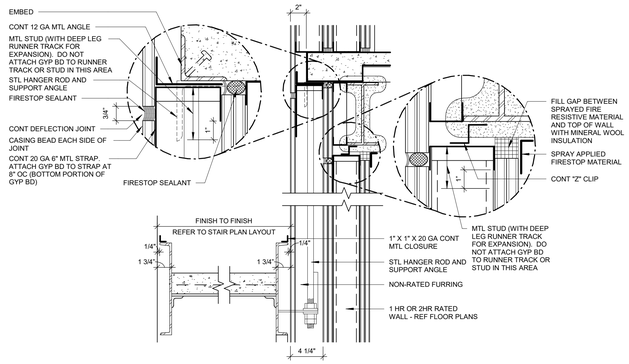
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

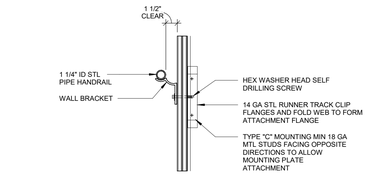
DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
A4.10

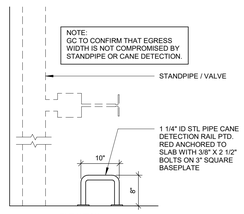
STAIR PLANS AND SECTIONS



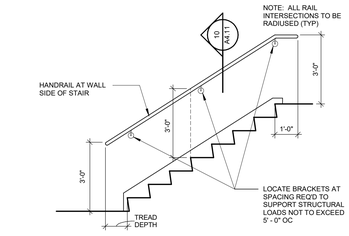
14 INTERMEDIATE LANDING SUPPORT
1 1/2" = 1'-0"



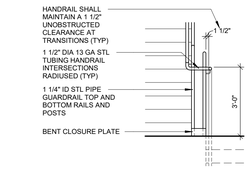
10 HANDRAIL MOUNTING AT GYP BOARD WALL
1 1/2" = 1'-0"



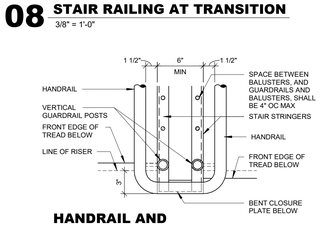
13 TYPICAL STANDPIPE
3/4" = 1'-0"



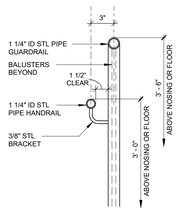
09 STAIR RAILING AT WALL
3/8" = 1'-0"



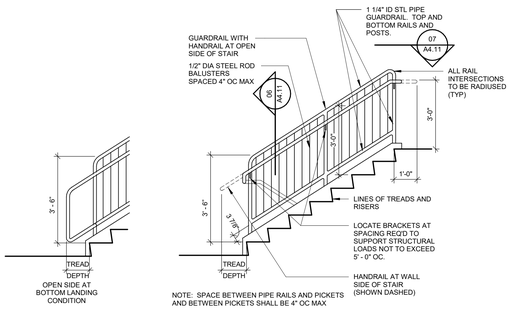
08 STAIR RAILING AT TRANSITION
3/8" = 1'-0"



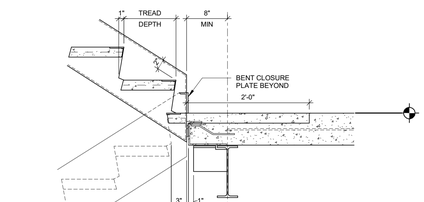
07 HANDRAIL AND GUARDRAIL AT LANDING PLAN
1 1/2" = 1'-0"



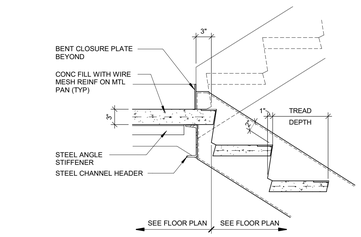
06 HANDRAIL AND GUARDRAIL SECTION
1 1/2" = 1'-0"



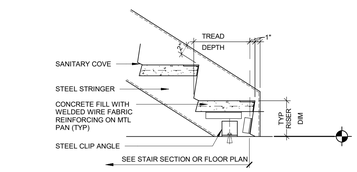
05 STAIR RAILING ELEVATION
3/8" = 1'-0"



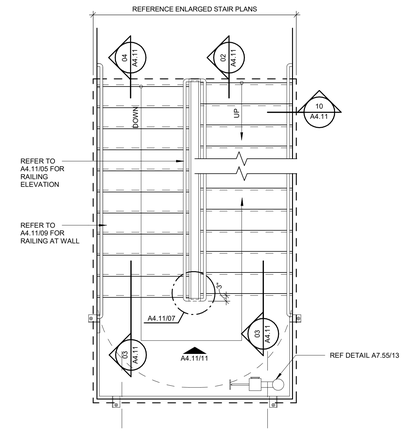
04 FLOOR LANDING AT CONCRETE ON METAL DECK
1" = 1'-0"



03 INTERMEDIATE LANDING
1" = 1'-0"

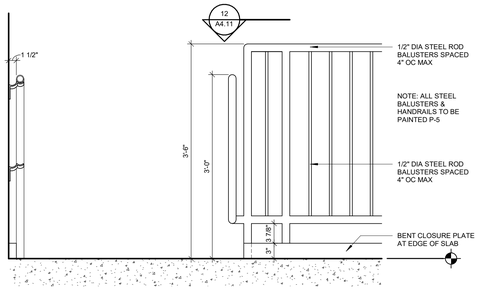


02 STRINGER TO SLAB CONNECTION
1" = 1'-0"

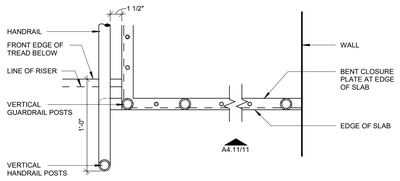


NOTE: REFER TO FLOOR PLANS FOR STAIR ORIENTATION.

01 STAIR PLAN REFERENCE
3/8" = 1'-0"



11 RAILING AND GUARDRAIL AT TOP LANDING
1" = 1'-0"



12 HANDRAIL AND GUARDRAIL AT TOP LANDING
1 1/2" = 1'-0"

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JAMES R. CHILDERS
REGISTERED ARCHITECT

12-06-2019

CONSULTANT LOGO:

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

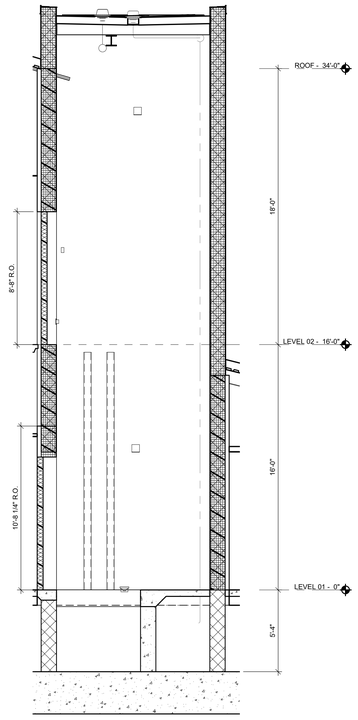
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

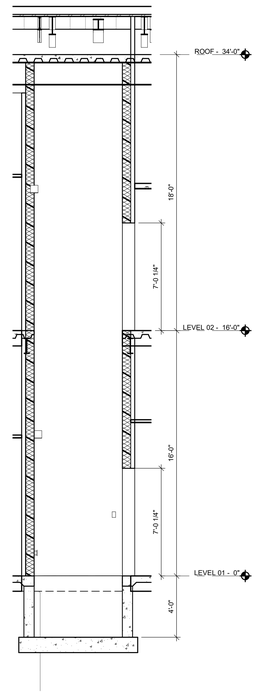
DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
A4.11

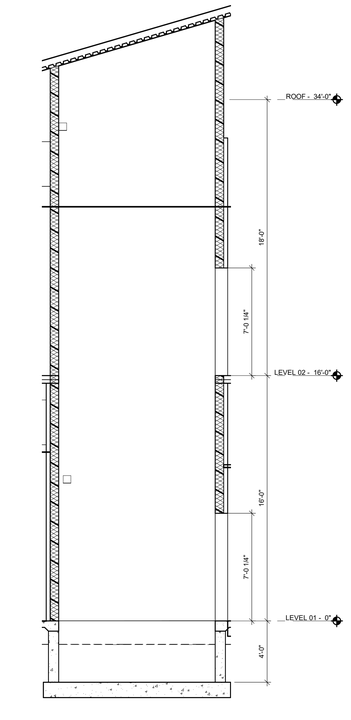
STEEL STAIR SECTIONS AND DETAILS



09 FUTURE ELEVATOR #3 SECTION
1/4" = 1'-0"



06 ELEVATOR #2 SECTION
1/4" = 1'-0"



03 ELEVATOR #1 SECTION
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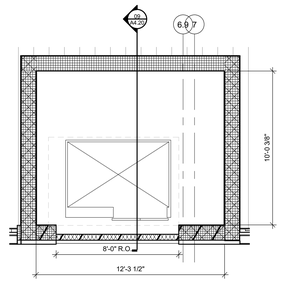
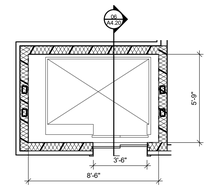
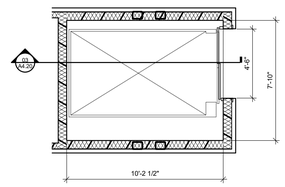


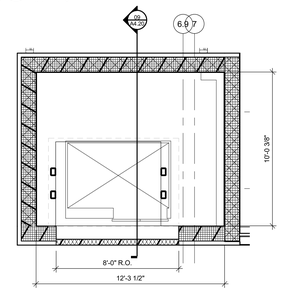
08 FUTURE ELEVATOR #3 LEVEL 02
1/4" = 1'-0"



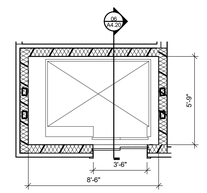
05 ELEVATOR #2 LEVEL 02
1/4" = 1'-0"



02 ELEVATOR #1 LEVEL 02
1/4" = 1'-0"



07 FUTURE ELEVATOR #3 LEVEL 01
1/4" = 1'-0"



04 ELEVATOR #2 LEVEL 01
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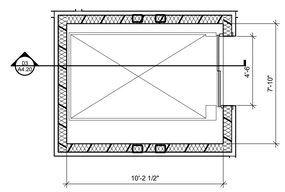

01 ELEVATOR #1 LEVEL 01
1/4" = 1'-0"

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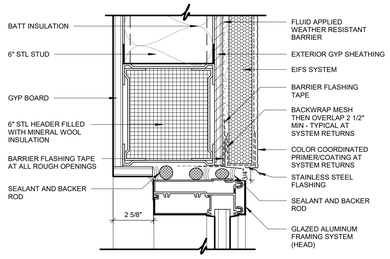
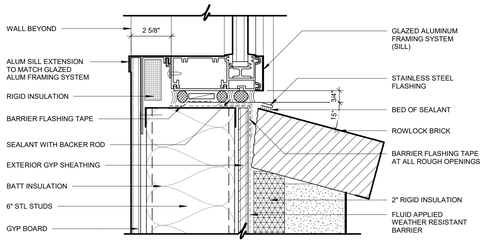
SHEET NUMBER: A4.20

ELEVATOR PLANS AND SECTIONS



12 WALL SECTION DETAIL
3" = 1'-0"



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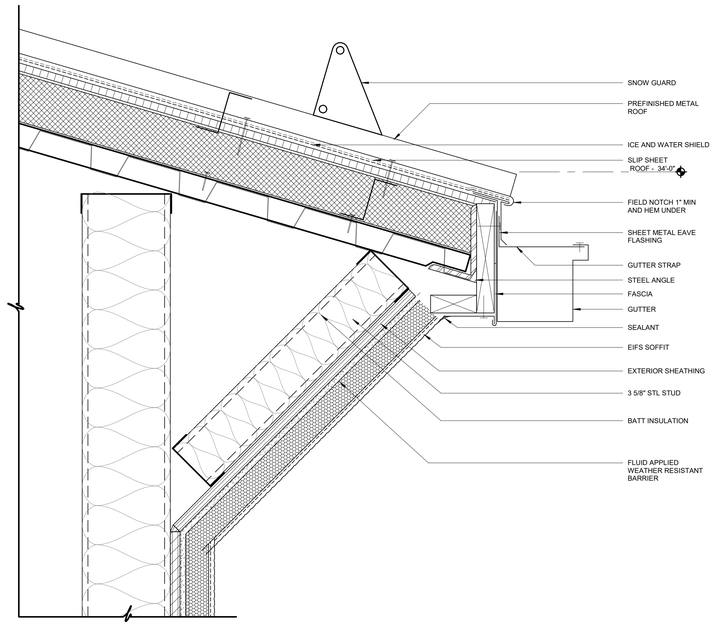

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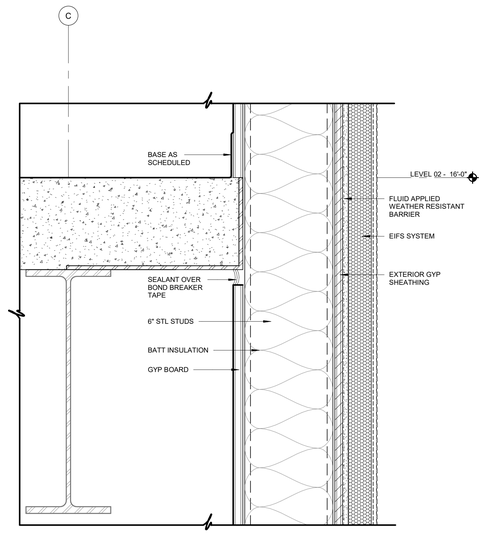

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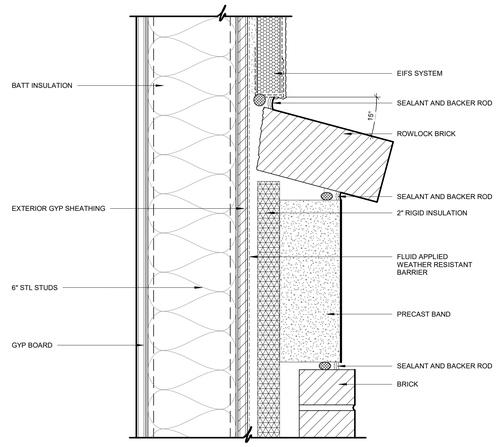

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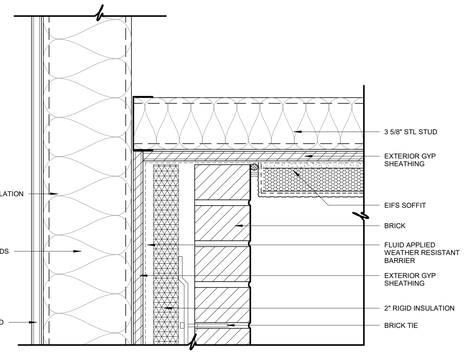

07 WALL SECTION DETAIL
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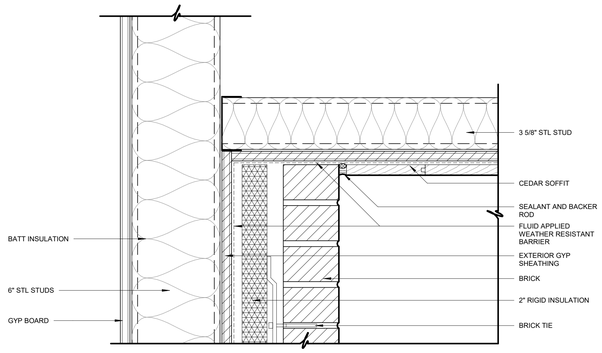

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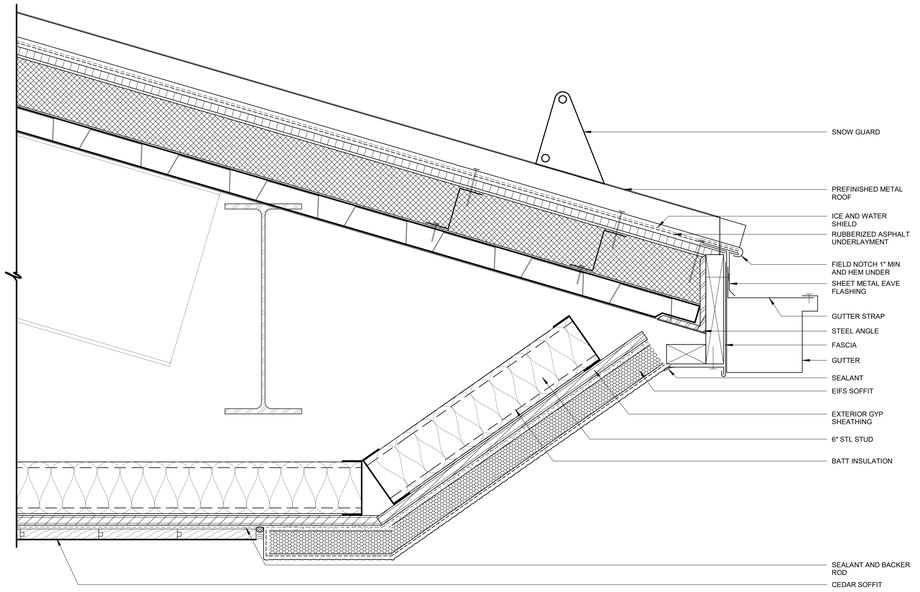

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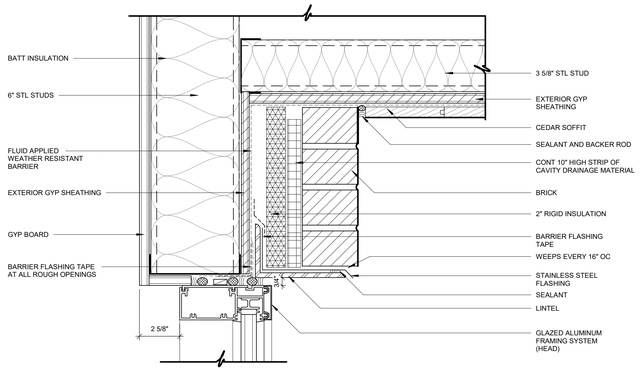

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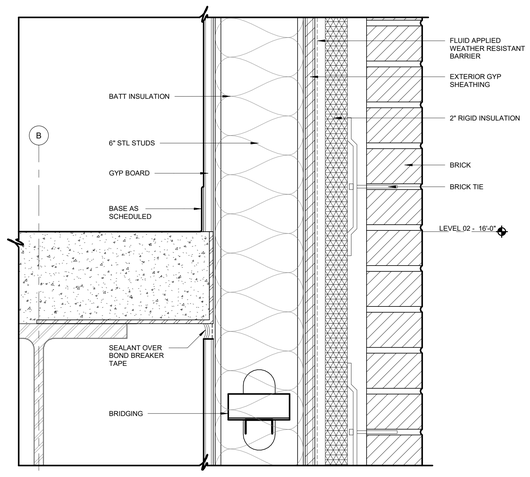

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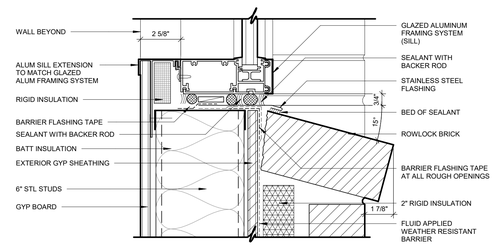

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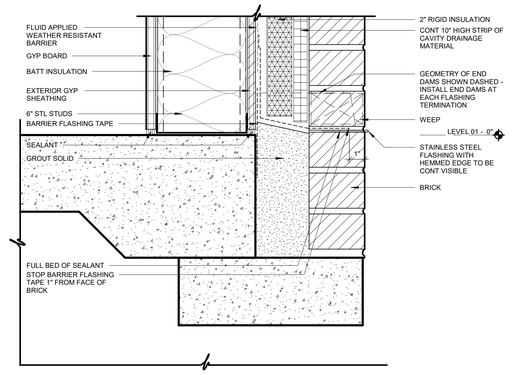

01 WALL SECTION DETAIL
3" = 1'-0"

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12-06-2019

CONSULTANT LOGO:

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THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

REVISIONS		
#	DATE	DESCRIPTION

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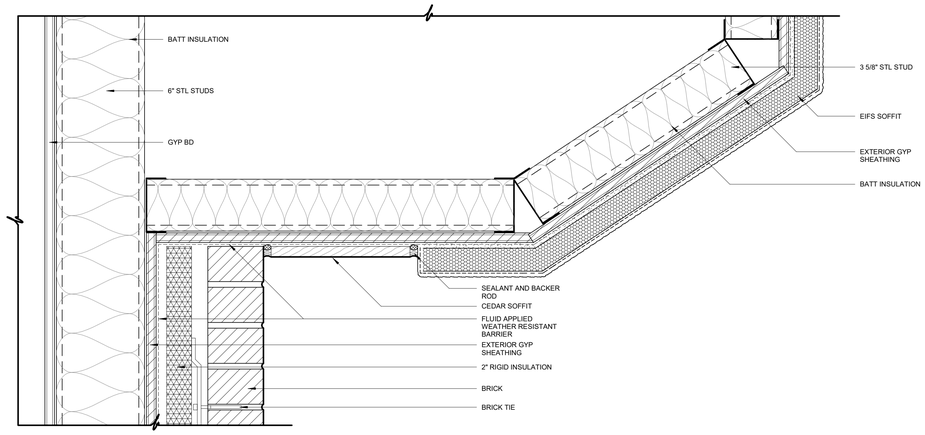
01-18-19	18-01.01

SHEET NUMBER:

A5.01

WALL SECTION DETAILS



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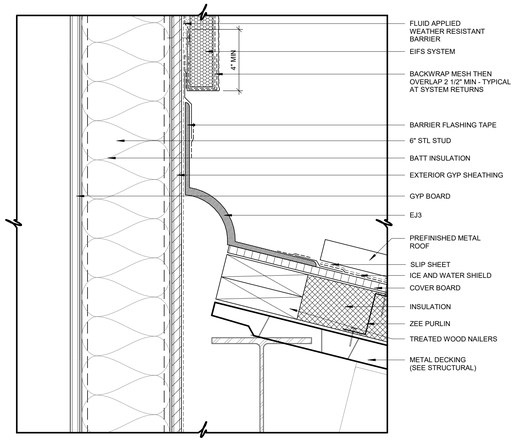

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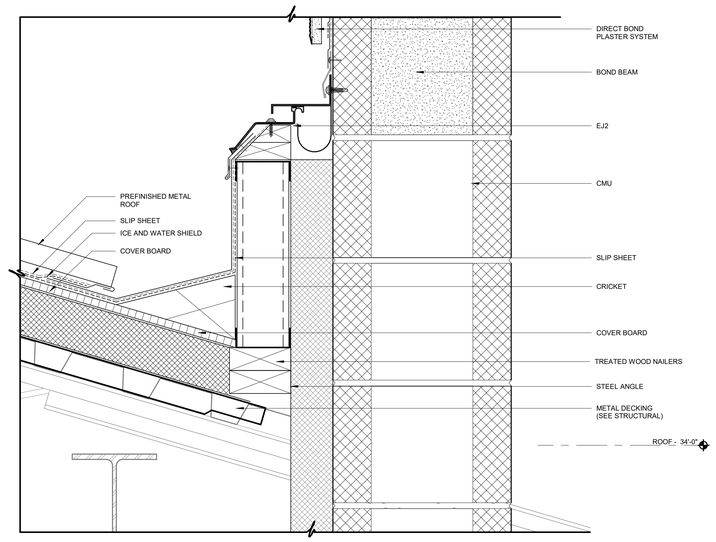

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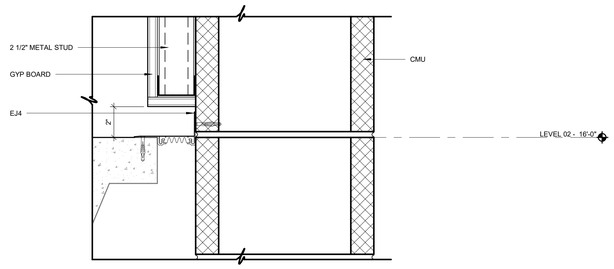

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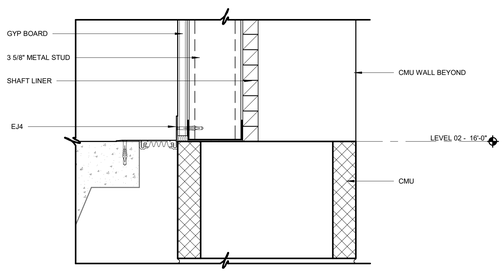

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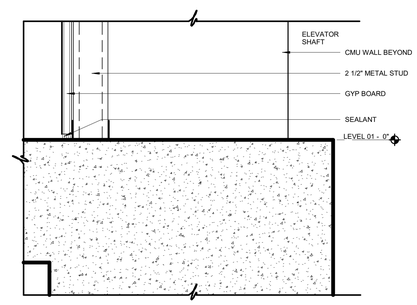

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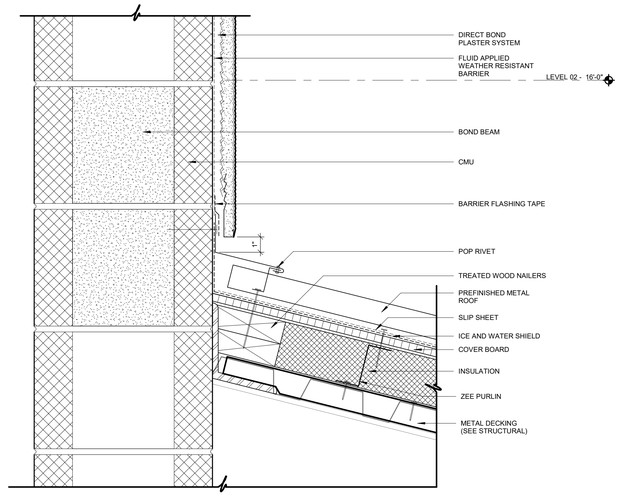

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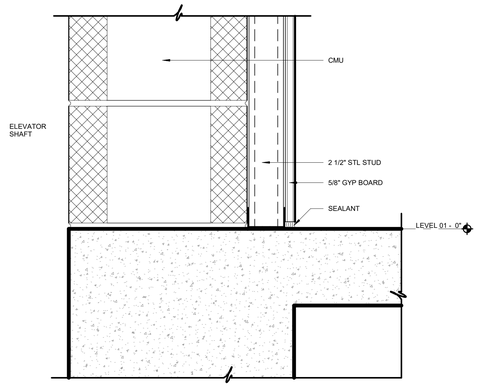

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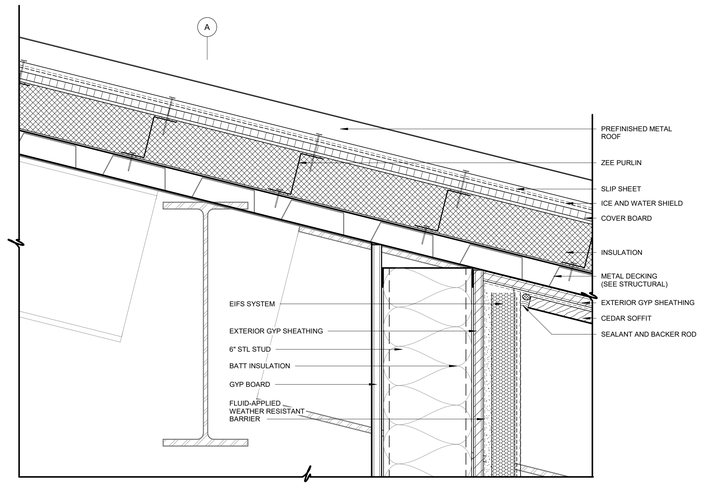

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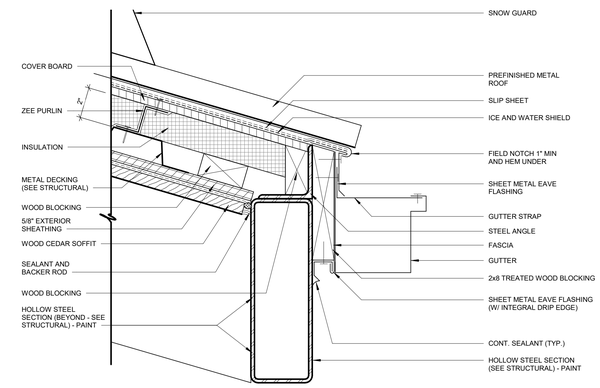

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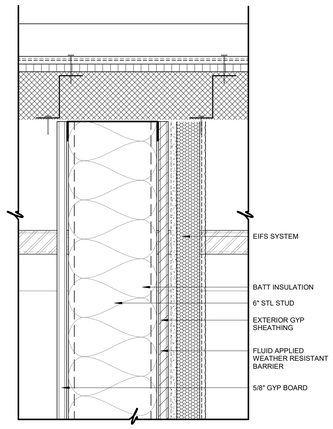

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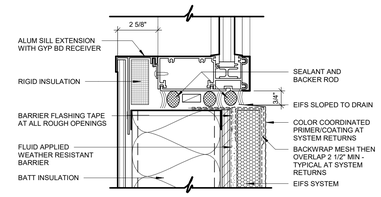

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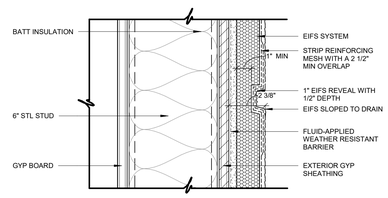

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3" = 1'-0"

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SEPT. 6, 1839 FORT WAYNE

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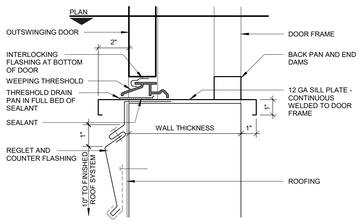
REVISIONS		
#	DATE	DESCRIPTION

DATE: 01-18-19

JOB NUMBER: 18-01.01

SHEET NUMBER: A5.02

WALL SECTION DETAILS



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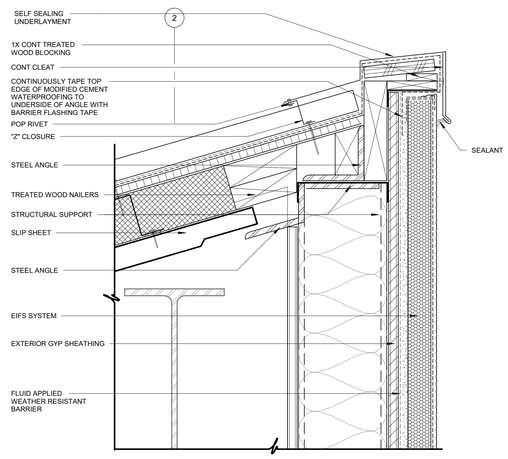

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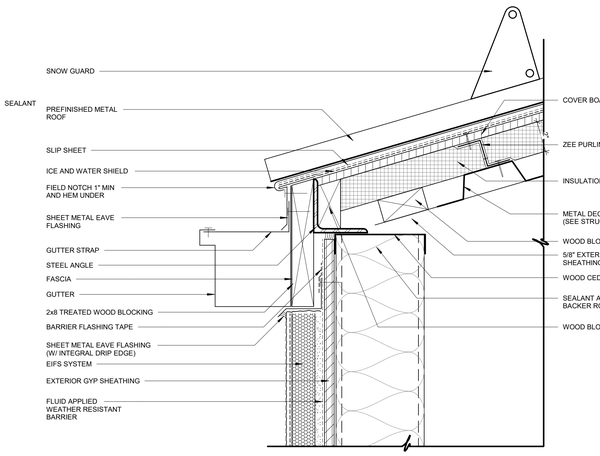

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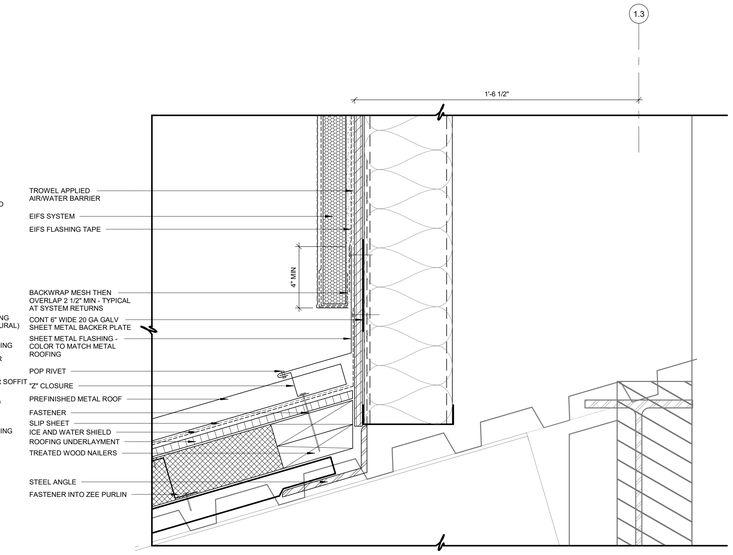
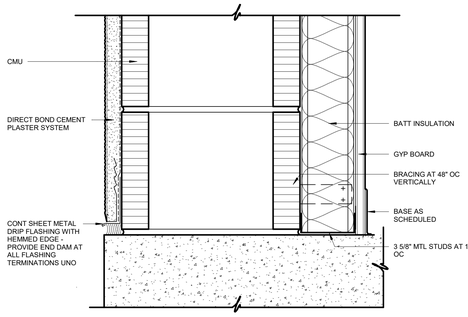


09 WALL SECTION DETAIL
3" = 1'-0"



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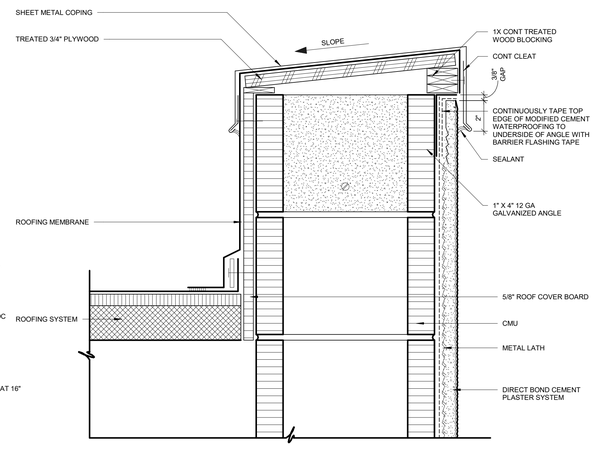

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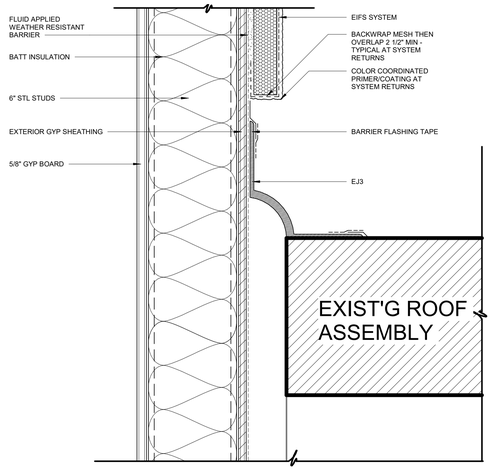

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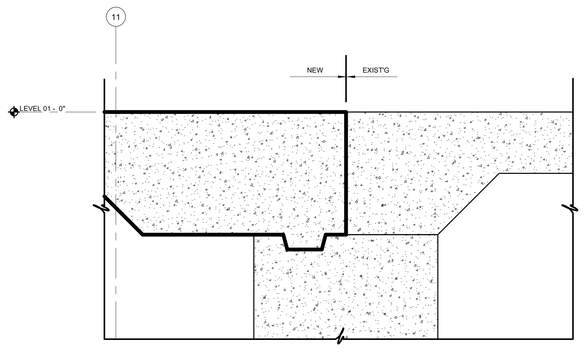

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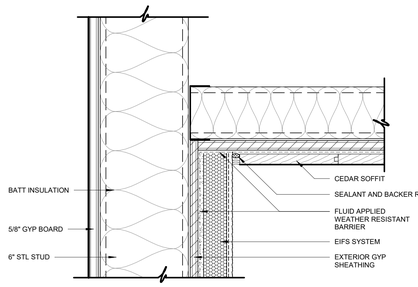

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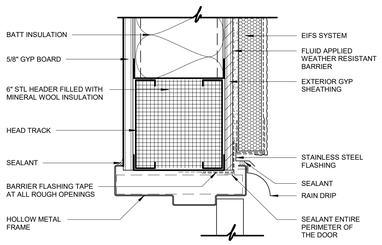

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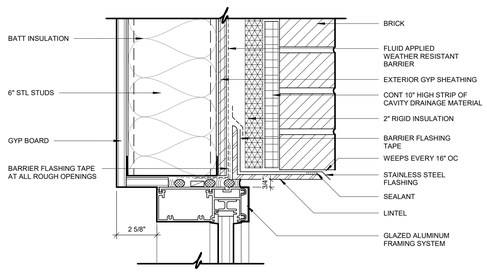

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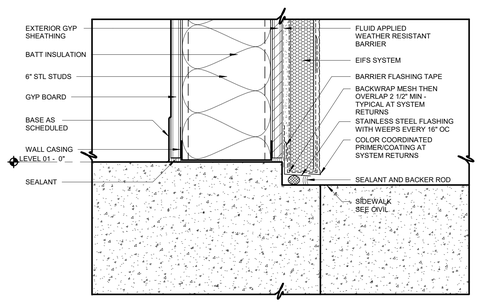


01 WALL SECTION DETAIL
3" = 1'-0"

James R. Childers Architect, Inc.
45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com

PROFESSIONAL SEAL:

STATE OF OKLAHOMA — JAMES R. CHILDERS — REGISTERED ARCHITECT

12-06-2019

CONSULTANT LOGO:

CLIENT:

THE CHEROKEE NATION — SEAL OF THE — SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

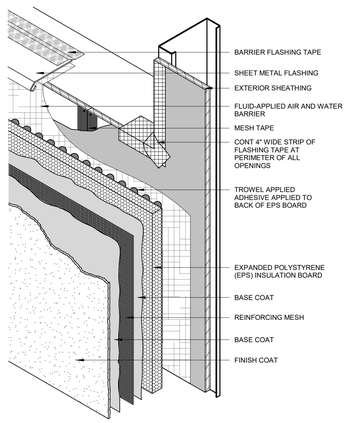
REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
01-18-19	18-01.01

SHEET NUMBER:

A5.03

WALL SECTION DETAILS



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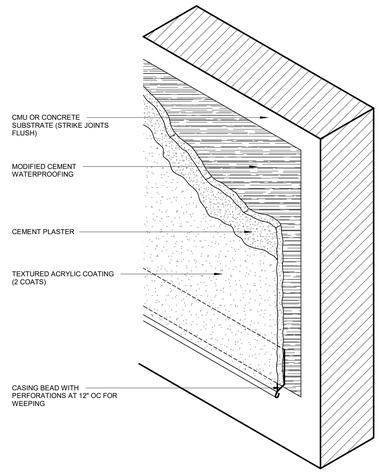

03 DIRECT BOND PLASTER SYSTEM COMPONENTS
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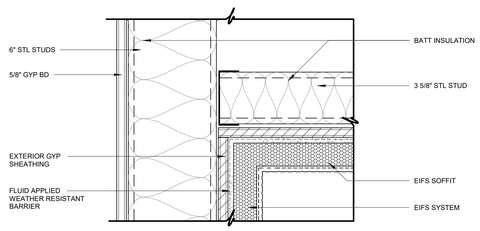

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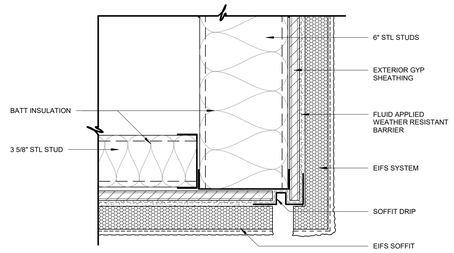

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3" = 1'-0"

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SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

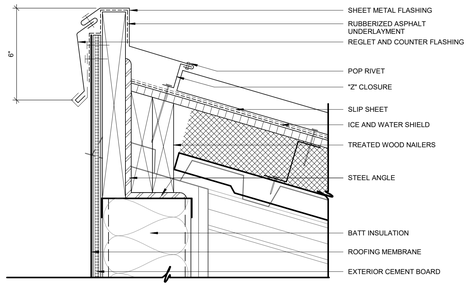
KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: A5.04

WALL SECTION DETAILS



10 RIDGE AT ROOF TO WALL
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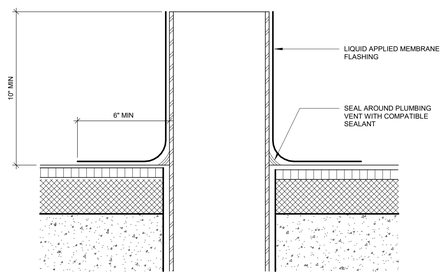

08 VENT PIPE PENETRATION
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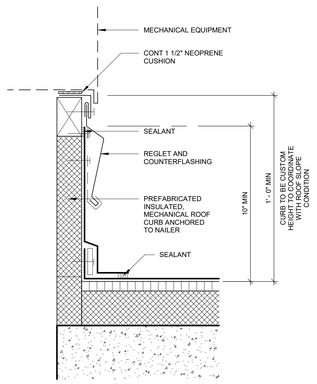

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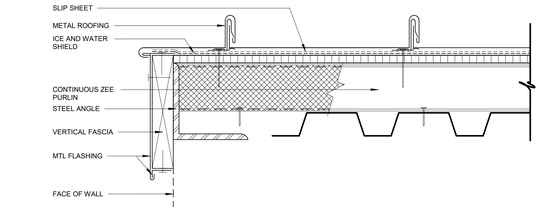

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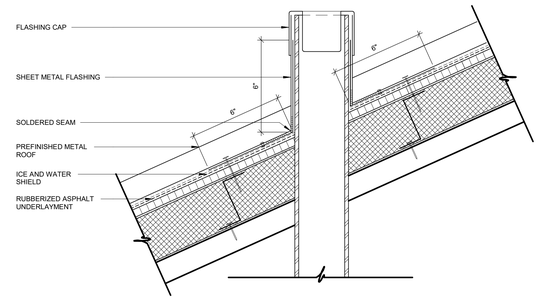

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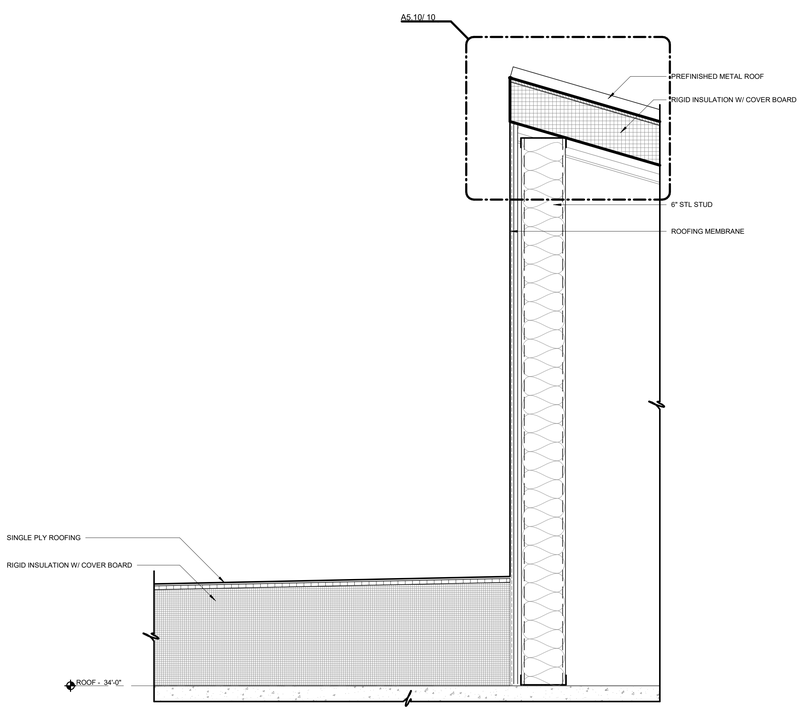

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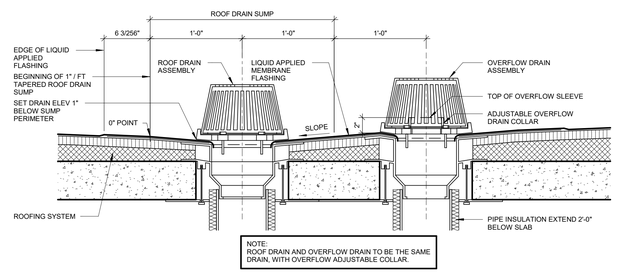
1 1/2" = 1'-0"



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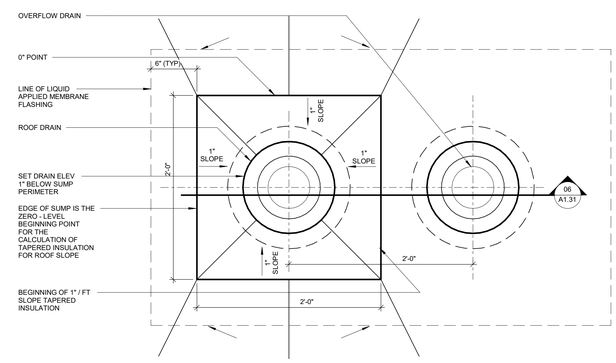
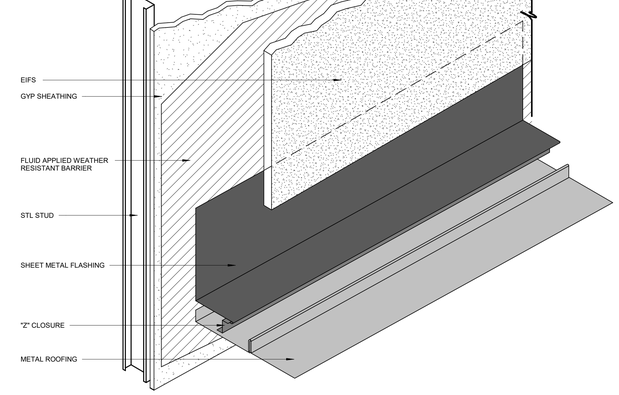
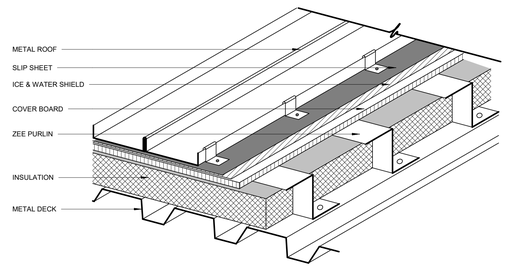


05 ROOF DRAIN PLAN
1 1/2" = 1'-0"



EIFS WALL / METAL ROOF PANEL FLASHING DETAIL
02
1" = 1'-0"



01 METAL ROOFING SECTION DETAIL
3" = 1'-0"

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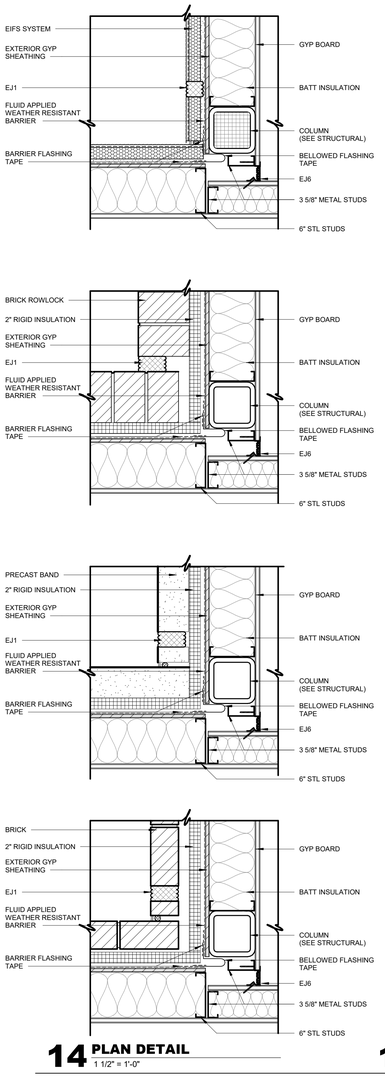
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
A5.10

ROOF DETAILS



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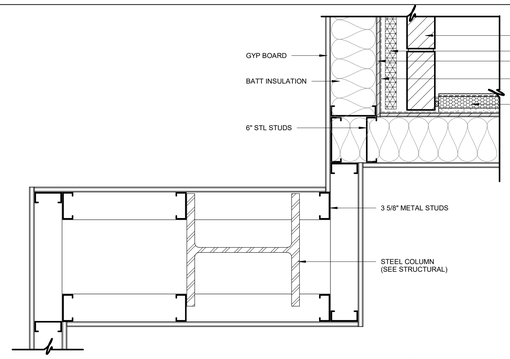

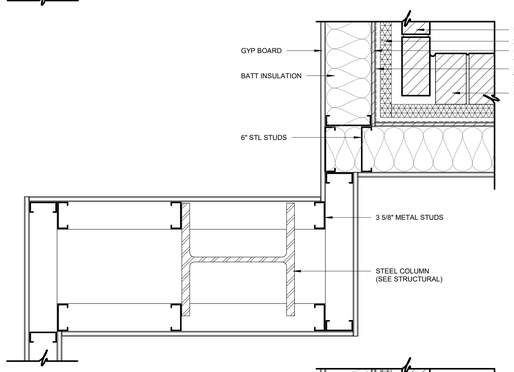

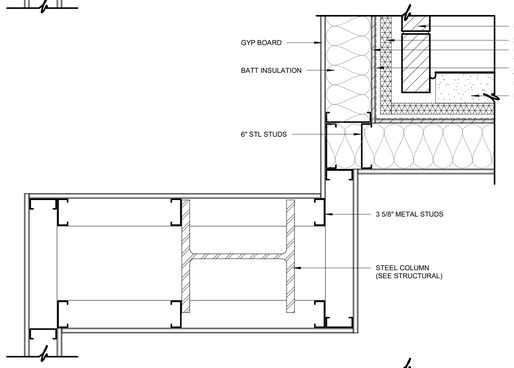

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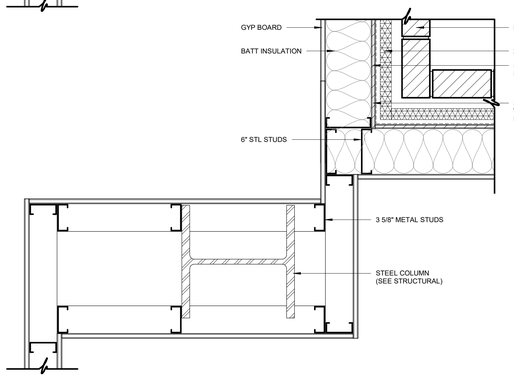

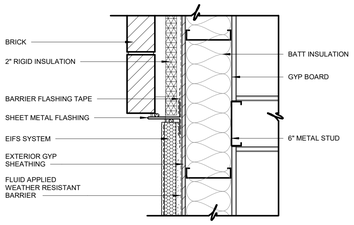

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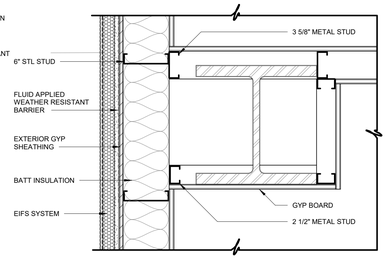

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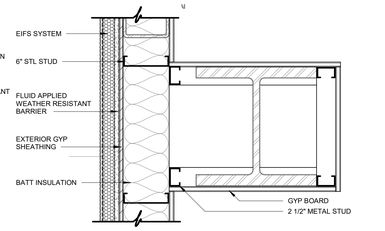

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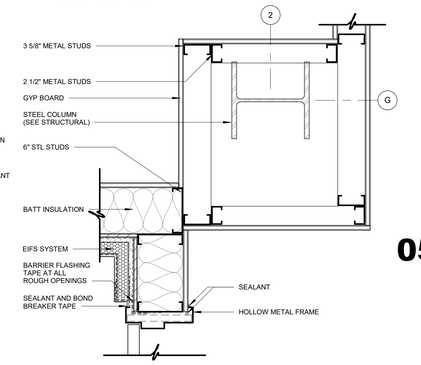

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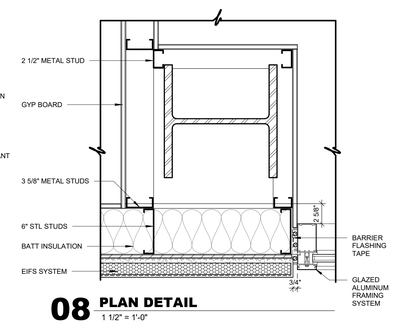

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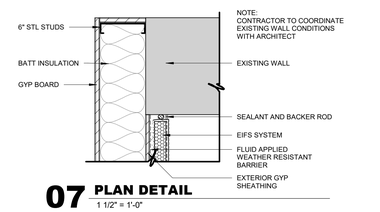

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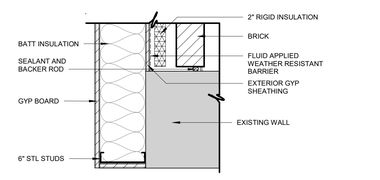

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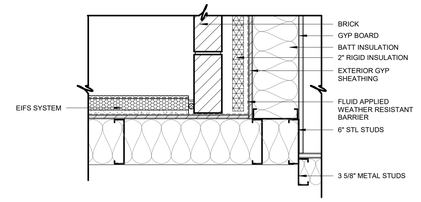

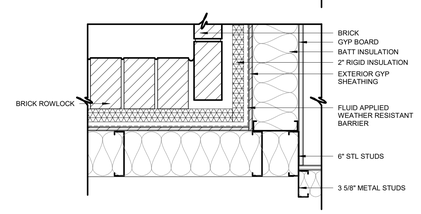

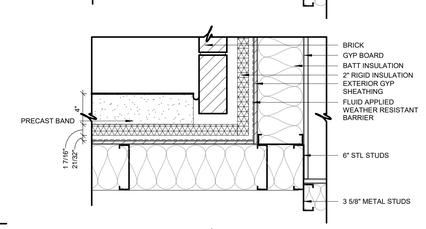

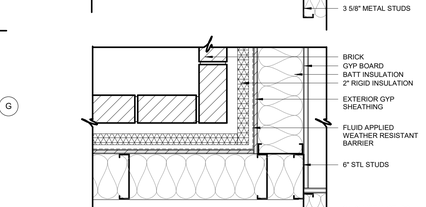

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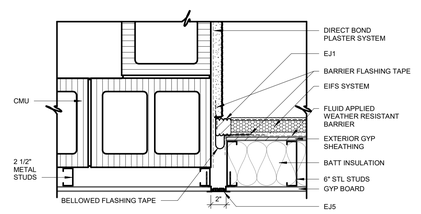

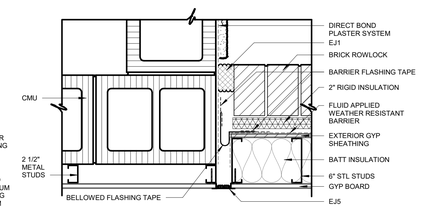

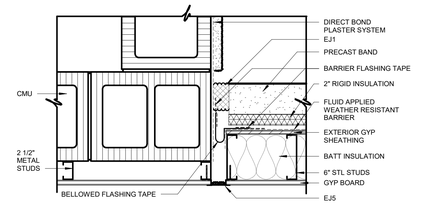

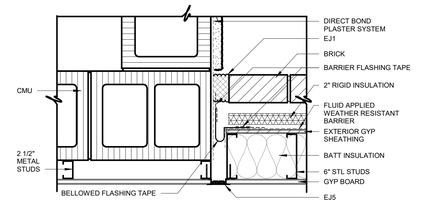

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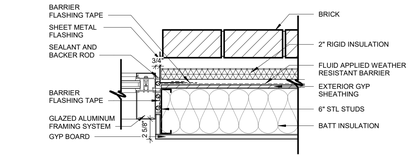

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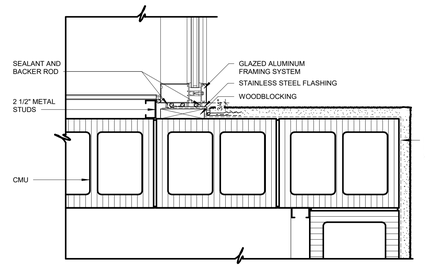

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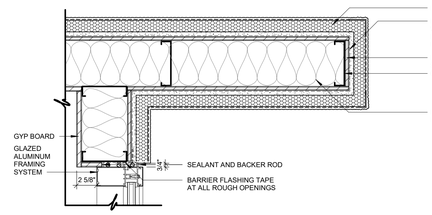

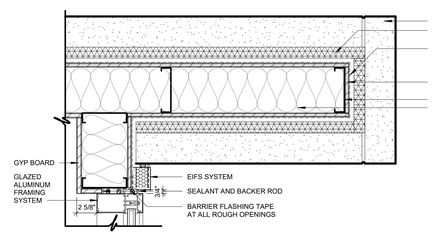

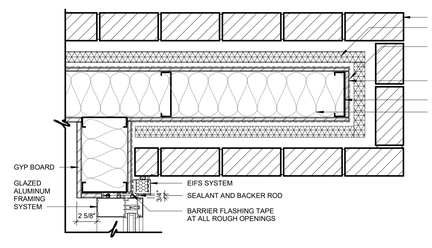

01 PLAN DETAIL
1 1/2" = 1'-0"

James R. Childers Architect, Inc.
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PROFESSIONAL SEAL:

CONSULTANT LOGO:

CLIENT:

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

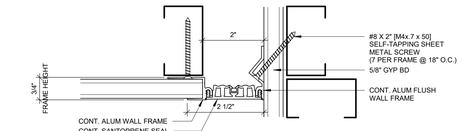
DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER:

A5.20

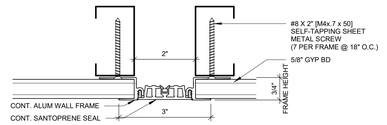
EXTERIOR PLAN DETAILS



06 EJ6 - INTERIOR WALL TO CORNER

6" = 1'-0"

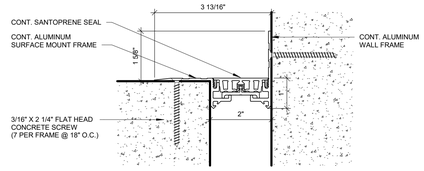
NOTE: BASIS OF DESIGN INPRO 112-A09-050



05 EJ5 - INTERIOR WALL TO WALL

6" = 1'-0"

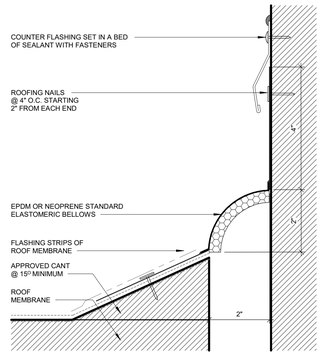
NOTE: BASIS OF DESIGN INPRO 112-A07-050



04 EJ4 - FLOOR TO WALL

6" = 1'-0"

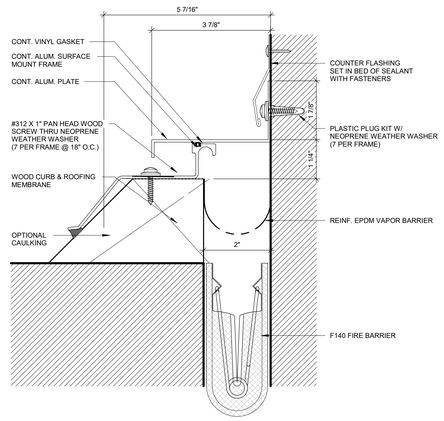
NOTE: BASIS OF DESIGN INPRO 104-A02-050



03 EJ3 - ROOF TO WALL

6" = 1'-0"

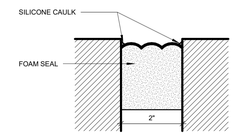
NOTE: BASIS OF DESIGN INPRO 672-G02-050



02 EJ2 - WALL TO ROOF

6" = 1'-0"

NOTE: BASIS OF DESIGN INPRO 661-A02-050



01 EJ1 - EXTERIOR WALL TO WALL

6" = 1'-0"

NOTE: BASIS OF DESIGN INPRO 1200-200

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12-06-2019

CONSULTANT LOGO:

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

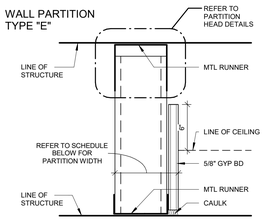
SHEET NUMBER:

A5.21

EXPANSION JOINTS

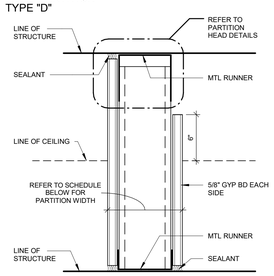
1" = 1'-0"
6"
3
2
1
0
6"
1 1/2" = 1'-0"
6"
2
1
0
6"
3" = 1'-0"
6"
3
2
1
0
6"
1" = 1'-0"
6"
4
3
2
1
0
6"
3/4" = 1'-0"
6"
4
3
2
1
0
6"
1/2" = 1'-0"
6"
6
4
2
0
6"
3/8" = 1'-0"
6"
10
8
6
4
2
0
1/4" = 1'-0"
6"
20
16
12
8
4
0
1/8" = 1'-0"

WALL PARTITION TYPE "E"



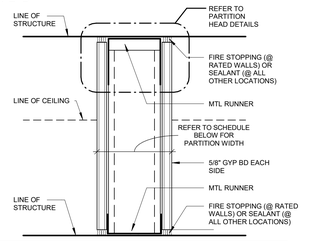
FLOOR PLAN DESIGNATION	STUD SIZE	PART WIDTH	FIRE RATING	UL LISTING	SOUND TRANS CLASS	REMARKS
E3	3 5/8"	4 1/4"	NON-RATED	N/A	N/A	
E2	2 1/2"	3 1/8"	NON-RATED	N/A	N/A	
E6	6"	6 5/8"	NON-RATED	N/A	N/A	

WALL PARTITION TYPE "D"



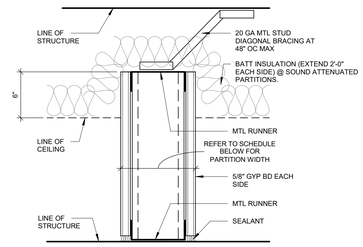
FLOOR PLAN DESIGNATION	STUD SIZE	PART WIDTH	FIRE RATING	UL LISTING	SOUND TRANS CLASS	REMARKS
D3	3 5/8"	4 7/8"	NON-RATED	N/A	N/A	
D2	2 1/2"	3 3/4"	NON-RATED	N/A	N/A	
D6	6"	7 1/4"	NON-RATED	N/A	N/A	
D3	3 5/8"	4 7/8"	SMOKE RESIST	N/A	N/A	
D2	2 1/2"	3 3/4"	SMOKE RESIST	N/A	N/A	
D6	6"	7 1/4"	SMOKE RESIST	N/A	N/A	

WALL PARTITION TYPE "B"



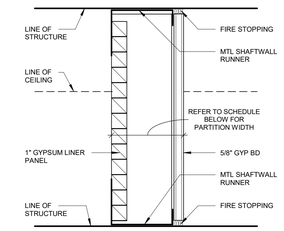
FLOOR PLAN DESIGNATION	STUD SIZE	PART WIDTH	FIRE RATING	UL LISTING	STC: NO SOUND / WITH SOUND	REMARKS
B3	3 5/8"	4 7/8"	NON-RATED	N/A	40 / 49 W/3" SAB	
B2	2 1/2"	3 3/4"	NON-RATED	N/A	40 / 49 W/3" SAB	
B6	6"	7 1/4"	NON-RATED	N/A	40 / 49 W/3" SAB	
B3	3 5/8"	4 7/8"	SMOKE RESIST	N/A	40 / 49 W/3" SAB	
B2	2 1/2"	3 3/4"	SMOKE RESIST	N/A	40 / 49 W/3" SAB	
B6	6"	7 1/4"	SMOKE RESIST	N/A	40 / 49 W/3" SAB	
B3	3 5/8"	4 7/8"	ONE HOUR	U465	40 / 49 W/3" SAB	
B2	2 1/2"	3 3/4"	ONE HOUR	N/A	40 / 49 W/3" SAB	
B6	6"	7 1/4"	ONE HOUR	U465	40 / 49 W/3" SAB	
B3	3 5/8"	4 7/8"	ONE HOUR/ SMOKE RESIST	U465	40 / 49 W/3" SAB	
B2	2 1/2"	3 3/4"	ONE HOUR/ SMOKE RESIST	N/A	40 / 49 W/3" SAB	
B6	6"	7 1/4"	ONE HOUR/ SMOKE RESIST	U465	40 / 49 W/3" SAB	

WALL PARTITION TYPE "A"



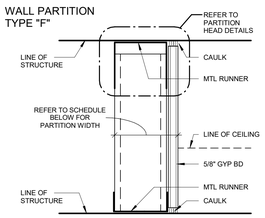
FLOOR PLAN DESIGNATION	STUD SIZE	PART WIDTH	FIRE RATING	UL LISTING	SOUND TRANS CLASS	REMARKS
A3	3 5/8"	4 7/8"	NON-RATED	N/A	40 / 49 W/3" SAB	
A2	2 1/2"	3 3/4"	NON-RATED	N/A	40 / 49 W/3" SAB	
A6	6"	7 1/4"	NON-RATED	N/A	40 / 49 W/3" SAB	

WALL PARTITION TYPE "J"



FLOOR PLAN DESIGNATION	STUD SIZE	PART WIDTH	FIRE RATING	UL LISTING	STC: NO SOUND / WITH SOUND	REMARKS
J4	4"	4 5/8"	ONE HOUR	U469	36 / 44 W/3" SAB	
J2	2 1/2"	3 1/8"	ONE HOUR	U469	36 / 44 W/1 1/2" SAB	
J6	6"	6 5/8"	ONE HOUR	U469	36 / 44 W/3" SAB	

WALL PARTITION TYPE "F"



FLOOR PLAN DESIGNATION	STUD SIZE	PART WIDTH	FIRE RATING	UL LISTING	SOUND TRANS CLASS	REMARKS
F3	3 5/8"	4 1/4"	NON-RATED	N/A	N/A	
F2	2 1/2"	3 1/8"	NON-RATED	N/A	N/A	
F6	6"	6 5/8"	NON-RATED	N/A	N/A	

NOTES

1. PARTITIONS ARE DISTINGUISHED ON FLOOR PLANS BY SYMBOL DESIGNATION, GRAPHIC DESIGNATION OR A COMBINATION OF BOTH DESIGNATIONS.
2. THERE ARE TWO TYPES OF SYMBOL DESIGNATIONS, ONE FOR PARTITONS NOT REQUIRING SOUND ATTENUATION AND ANOTHER FOR PARTITIONS WHICH REQUIRE SOUND ATTENUATION. REFER TO PARTITION MATRICES FOR SOUND ATTENUATION BLANKET (SAB) MINIMUM THICKNESS FOR STC INDICATED.

BARRIERS:	DESIGNATION	EXAMPLE	COMMENTS
SOUND:	(S)	A3(S)	
LEAD LINED:	(L)	A3(L)	EXTEND UP TO 7'-0" A.F.F.
SECURITY:	(P)	A3(P)	EXTEND FULL HEIGHT

3. THE INDIVIDUAL BARRIERS SHALL BE LOCATED ON THE SIDE OF THE PARTITION ADJACENT TO THEIR RESPECTIVE SPACES. IF MULTIPLE BARRIERS ARE INCORPORATED INTO THE SAME PARTITION, THEN THEY SHOULD BE DISPLAYED ACCORDINGLY. REFER TO THE FOLLOWING EXAMPLE: (SLP)
4. WALL PARTITION SIZE MATRIX:

NO:	CMU	SHAFTWALL	METAL STUDS
1	-	-	1 5/8"
2	-	2 1/2"	2 1/2"
3	-	-	3 5/8"
4	-	4"	-
6	5 5/8"	6"	6"
8	7 5/8"	-	8"
10	9 5/8"	-	10"
12	11 5/8"	-	12"

5. THE GRAPHIC DESIGNATION IS INCORPORATED FOR PARTITIONS REQUIRED TO BE SMOKE RESISTANT, FIRE RESISTANT, OR BOTH FIRE AND SMOKE RESISTANT. REFER TO NOTE 16.
6. "LINE OF STRUCTURE" INDICATED FOR EACH PARTITION IS DIAGRAMMATIC ONLY AND DOES NOT INDICATE EXACT CONSTRUCTION CONDITIONS OR GEOMETRY.
7. ALL DIMENSIONS ARE FROM FACE OF GYPSUM BOARD TO FACE OF GYPSUM BOARD. REFER TO PARTITION MATRICES FOR PARTITION WIDTH DIMENSIONS UNLESS INDICATED TO BE SHOWN ON PLAN.
8. FIRE SEALANT:
   1. FIRE RESISTANCE RATED PARTITIONS SHALL USE RATED FIRE/SMOKE FIRE RESISTANT FILL MATERIAL IN CONJUNCTION WITH AN APPROPRIATE RATED FIRE/SMOKE FIRE STOPPING SYSTEM.
   2. NON-RATED PARTITIONS AND NON-RATED SMOKE RESISTANT PARTITIONS SHALL USE ACOUSTICAL SEALANT.
9. INSULATION: - HEAD CONDITIONS AT FLOOR/ROOF DECK.
   1. FIRE RESISTANCE RATED PARTITIONS SHALL USE MINERAL WOOL INSULATION.
   2. NON-RATED PARTITIONS REQUIRING SOUND ATTENUATION SHALL USE SOUND ATTENUATION BLANKETS (SAB).
   3. PROVIDE FULL THICKNESS INSULATION INSIDE ALL STUD BOX BEAMS AND HEADERS WHICH OCCUR IN WALLS WITH SOUND ATTENUATION.
10. REFER TO SPECIFICATIONS FOR MINIMUM STUD THICKNESS, MAXIMUM SPACING AND ALLOWABLE LIMITING HEIGHTS DEFLECTION CRITERIA FOR GYPSUM BOARD ASSEMBLIES.
11. FOR PARTITIONS INDICATED TO RECEIVE SOUND ATTENUATION BLANKETS (SAB), EXTEND SAB TO FULL HEIGHT OF PARTITION UNLESS OTHERWISE INDICATED. FLOOR TRACK TO BE SET IN A CONT BED OF SEALANT.
12. FIRE RESISTANT AND FIRE RESISTANT SMOKE BARRIER RATINGS ARE TO SURROUND ALL OPENINGS IN RATED PARTITIONS.
13. SMOKE RESISTANT, FIRE RESISTANT, AND FIRE RESISTANT SMOKE BARRIER PARTITIONS SHALL EXTEND AND SEAL TO INSIDE FACE OF EXTERIOR SHEATHING, INCLUDING EXTENSIONS THROUGH SOFFITS.
14. EACH PARTITION SHOWN ON THE DRAWINGS TO HAVE A FIRE AND SMOKE RESISTANT RATING SHALLBE IDENTIFIED AS SUCH WITH A LABEL ABOVE THE CEILING ON EACH SEGMENT OF THE WALL AND 6' - 0" OC MAX EACH SIDE.
15. REFER TO STRUCTURAL DRAWINGS FOR REINFORCING INFORMATION.
16. GRAPHIC DESIGNATION

17. DO NOT APPLY BULLNOSE BLOCK AT CORNER GUARD LOCATIONS.
18. MASONRY REINFORCEMENT: REFERENCE STRUCTURAL DRAWINGS.
19. HW (HEAD OF WALL) DETAILS DO NOT ALTER PARTITION TYPES NOTED ON PLANS.

NOTE:
1. NOT ALL PARTITION TYPES SHOWN ON THIS SHEET ARE USED ON THIS PROJECT.
2. THE SHADED PORTIONS OF A PARTITION TYPE ARE NOT INCLUDED IN THE SCOPE OF THE WORK.
3. THE UN-SHADED PORTIONS OF ALL PARTITION TYPES ARE INTENDED TO BE IN THE SCOPE OF THE WORK.

HATCHING:
PARTITION TYPE INCLUDED IN SCOPE OF WORK
PARTITION TYPE NOT INCLUDED IN SCOPE OF WORK

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12-06-2019

CONSULTANT LOGO:

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WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

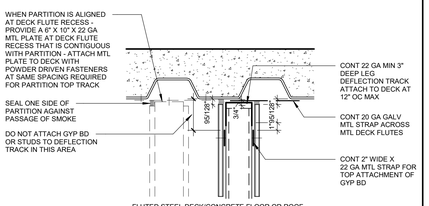
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: A6.01

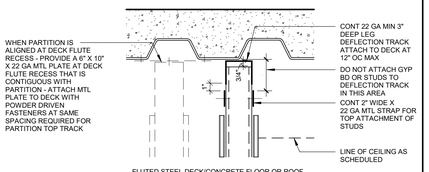
PARTITION TYPES

HEAD DETAILS - NON RATED



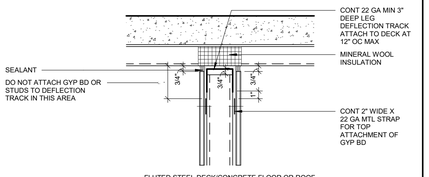
FLUTED STEEL DECK/CONCRETE FLOOR OR ROOF PARALLEL TO FLUTES

NON-RATED OR SMOKE RESISTANT



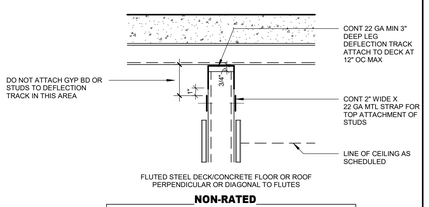
FLUTED STEEL DECK/CONCRETE FLOOR OR ROOF PARALLEL TO FLUTES

NON-RATED



FLUTED STEEL DECK/CONCRETE FLOOR OR ROOF PERPENDICULAR OR DIAGONAL TO FLUTES

NON-RATED OR SMOKE RESISTANT



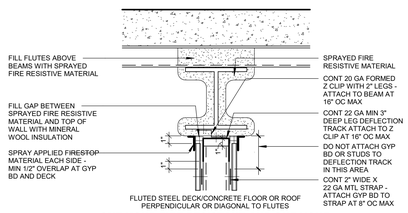
FLUTED STEEL DECK/CONCRETE FLOOR OR ROOF PERPENDICULAR OR DIAGONAL TO FLUTES

NON-RATED

HEAD OF WALL GENERAL NOTES

1. REFER TO SPECIFICATIONS FOR HEAD OF WALL SLOTTED TRACK OPTIONS FOR METAL STUD WALLS. CONT 2" WIDE X 22 GA METAL STRAP CAN BE DELETED IF OPTIONAL SLOTTED TRACKS ARE SELECTED.

HEAD DETAILS - ONE HOUR RATED

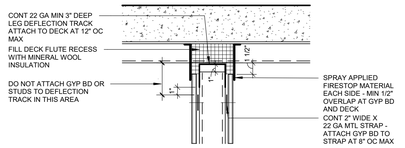


FLUTED STEEL DECK/CONCRETE FLOOR OR ROOF PERPENDICULAR OR DIAGONAL TO FLUTES

ONE HOUR FIRE RESISTANT AND ONE HOUR FIRE RESISTANT SMOKE BARRIER

UL-HW-D-0252

NOTE: REFER TO UL LISTING FOR COMPLETE ASSEMBLY REQUIREMENTS

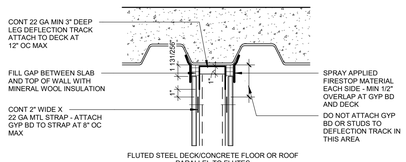


FLUTED STEEL DECK/CONCRETE FLOOR OR ROOF PERPENDICULAR OR DIAGONAL TO FLUTES

ONE HOUR FIRE RESISTANT AND ONE HOUR FIRE RESISTANT SMOKE BARRIER

UL-HW-D-0107

NOTE: REFER TO UL LISTING FOR COMPLETE ASSEMBLY REQUIREMENTS



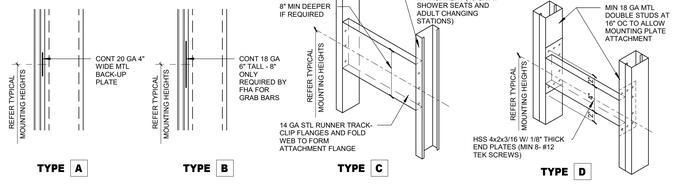
FLUTED STEEL DECK/CONCRETE FLOOR OR ROOF PARALLEL TO FLUTES

ONE HOUR FIRE RESISTANT AND ONE HOUR FIRE RESISTANT SMOKE BARRIER

UL-HW-D-0107

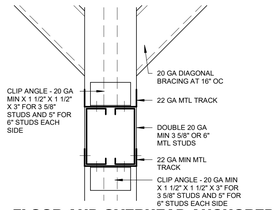
NOTE: REFER TO UL LISTING FOR COMPLETE ASSEMBLY REQUIREMENTS

ACCESSORY/EQUIPMENT MOUNTING DETAILS



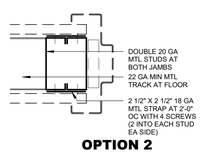
BARIATRIC GRAB BAR

PARTITION FRAMING DETAILS



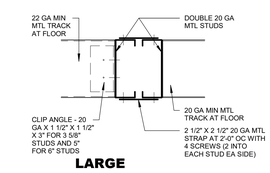
FLOOR AND OVERHEAD ANCHORED TOILET PARTITION HEADER

06 3" = 1'-0"



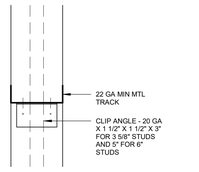
OPTION 2 DOOR OPENING JAMB STUDS

05 3" = 1'-0"



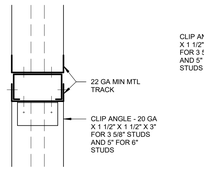
LARGE OPENING JAMB STUDS

04 3" = 1'-0"



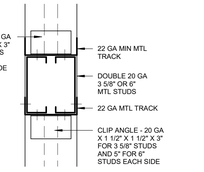
OPENING HEADER

03 3" = 1'-0"



DOOR OPENING HEADER

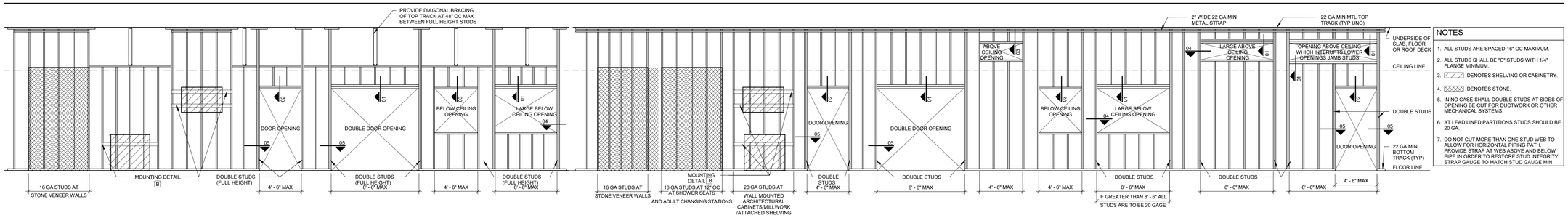
02 3" = 1'-0"



DOUBLE DOOR/LARGE OPENING HEADER

01 3" = 1'-0"

TYPICAL INTERIOR PARTITION FRAMING



NOTES

1. ALL STUDS ARE SPACED 16" OC MAXIMUM.
2. ALL STUDS SHALL BE "C" STUDS WITH 1/4" FLANGE MINIMUM.
3. DENOTES SHELVING OR CABINETRY.
4. DENOTES STONE.
5. IN NO CASE SHALL DOUBLE STUDS AT SIDES OF OPENING BE CUT FOR DUCTWORK OR OTHER MECHANICAL SYSTEMS.
6. AT LEAD LINED PARTITIONS STUDS SHOULD BE 20 GA.
7. DO NOT CUT MORE THAN ONE STUD WEB TO ALLOW FOR HORIZONTAL PIPING PATH. PROVIDE STRAP AT WEB ABOVE AND BELOW PIPE IN ORDER TO RESTORE STUD INTEGRITY. STRAP GAUGE TO MATCH STUD GAUGE MIN

James R. Childers Architect, Inc.
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www.childersarchitect.com

PROFESSIONAL SEAL:

CONSULTANT LOGO:

CLIENT:

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE: REVIT - ONLINE

REVISIONS		
#	DATE	DESCRIPTION

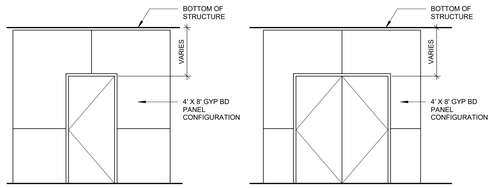
DATE: 05/18/16

JOB NUMBER: 18-01.01

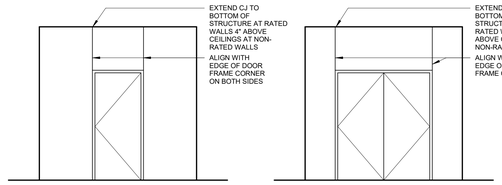
SHEET NUMBER: A6.02

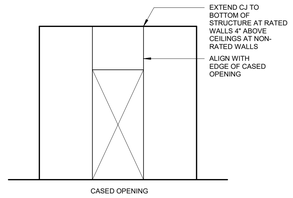
PARTITION FRAMING / HEAD DETAILS

GYPSUM BD CONFIGURATION AT DOORS

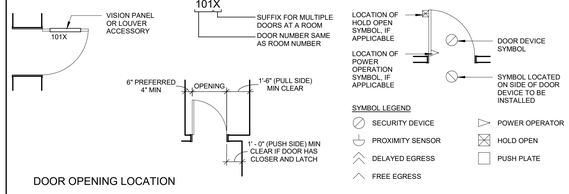


CONTROL JOINT AT DOOR FRAMES





DOOR PLAN DESIGNATION

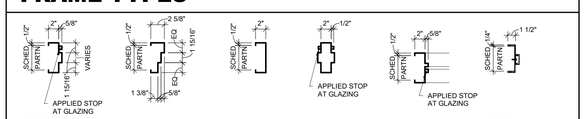


DOOR OPENING LOCATION

A. DOORS SHOWN ADJACENT TO A FLANKING WALL OR OTHER FIXED OBSTRUCTION, SHALL BE LOCATED AS SHOWN ABOVE.

B. OTHER LOCATIONS SHALL BE ON CENTERLINE OF ROOM OR AS SPECIFICALLY DIMENSIONED.

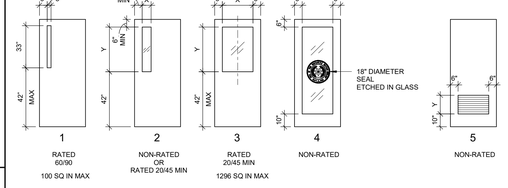
FRAME TYPES

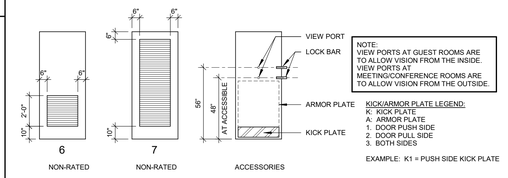


VISION PANELS / LOUVERS / ACCESSORIES

DOOR NOTES

1. CONTRACTORS TO USE THE ARCHITECT'S FLOOR PLAN DESIGNATION DOOR NUMBER IN ADDITION TO THE ROOM NUMBER ON ALL SHOP DRAWING SCHEDULE SUBMITTALS.





NOTE:
VIEW PORTS AT GUEST ROOMS ARE TO ALLOW VISION FROM THE INSIDE.
VIEW PORTS AT MEETING/CONFERENCE ROOMS ARE TO ALLOW VISION FROM THE OUTSIDE.

KICK/ARMOR PLATE LEGEND:
K: KICK PLATE
A: ARMOR PLATE
1. DOOR PUSH SIDE
2. DOOR PULL SIDE
3. BOTH SIDES

EXAMPLE: K1 = PUSH SIDE KICK PLATE

DOOR SCHEDULE

DOOR SCHEDULE

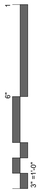
DOOR REVISION	DOOR NUMBER	WIDTH	HEIGHT	DOOR TYPE	MATERIALS AND FINISHES: FRAME TYPE	MATERIALS AND FINISHES: DOOR MATERIAL	MATERIALS AND FINISHES: FRAME MATERIAL	VISION PANEL & LOUVER TYPE	CONTROLS: POWER OPERATOR	CONTROLS: HOLD OPEN	CONTROLS: DOOR CONTROL A	CONTROLS: DOOR CONTROL B	FIRE RATING	HARDWARE	COMMENTS
LEVEL 01															
-	01-00-00A	6'-0"	7'-1 1/2"	C2		AL/GL	AL		-	-	CR	-	-	C714A M	
-	01-00-00B	6'-0"	7'-1 1/2"	C2		AL/GL	AL		-	-	-	-	-	800AV	
-	01-00-02A	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C207	
	01-00-02B	4'-11 1/8"	5'-6"	P		AL	AL		X					002	
	01-00-02C	4'-11 1/8"	5'-6"	P		AL	AL		X					002	
	01-00-02D	4'-11 1/8"	5'-6"	P		AL	AL		X					002	
-	01-00-07	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301W	
	01-00-07A	5'-0"	5'-6"	P		AL	AL		X					002	
-	01-00-09	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	201	
-	01-00-10A	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	45	731R	
-	01-00-10B	3'-0"	7'-0"	A1	1	HM	HM	-	-	-	CR	-	45	C715	
-	01-00-11	3'-6"	7'-0"	A1	1	HM	HM	-	-	-	CR	-	-	C715	
-	01-00-13	3'-6"	7'-0"	A1	1	HM	HM	-	-	-	CR	-	-	C715	
-	01-00-14	3'-6"	7'-0"	A1	1	HM	HM	-	-	-	CR	-	-	C715	
-	01-01-00A	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201C	
	01-01-00B	5'-0"	5'-6"	P		AL	AL		X					002	
	01-01-00C	5'-0"	5'-6"	P		AL	AL		X					002	
-	01-01-01A	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	503W	
-	01-01-01B	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-01-02A	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	503W	
-	01-01-02B	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-01-03A	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	503W	
-	01-01-03B	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-01-04A	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	503W	
-	01-01-04B	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-01-05	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-01-06	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-01-08	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-01-09	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-01-10	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-02-01	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501	
-	01-02-02	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301	
-	01-02-03	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301	
-	01-02-04	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301	
-	01-02-05	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301	
-	01-02-06	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301	
-	01-02-07	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301	
-	01-02-08A	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501	
-	01-02-08B	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501	
-	01-04-01	3'-0"	7'-0"	A1	1	HM	HM	-	-	-	CR	-	-	C205I	
-	01-04-02	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	207W	
-	01-04-03	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201W	
-	01-04-04	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	103	
-	01-04-05	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501W	
-	01-04-06	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501W	
-	01-04-07	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501W	
-	01-05-01A	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501	
	01-05-01B	6'-0"	M			STL	STL		X					002	
-	01-05-01C	3'-0"	7'-0"	A1	1	HM	HM	-	-	-	CR	-	45	C715	
	01-05-01G	5'-0"	6'-0"	P		AL	AL		X					002	
-	01-05-02	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	45	201	
-	01-05-03	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	45	C201W	
-	01-05-04	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	45	C201	
-	01-05-05	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	45	201	
-	01-06-01	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501	
-	01-06-02	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-07-01	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-07-02A	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	701	
-	01-07-02B	3'-6"	7'-0"	A1	1	HM	HM	-	-	-	CR	-	-	C201W	
-	01-07-02C	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201W	
-	01-07-03	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	103	
-	01-07-05	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301W	
-	01-07-06	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301W	
-	01-07-07	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403W	
-	01-07-08	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403W	
-	01-07-09	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403W	
-	01-07-10	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	207	
-	01-07-11	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403W	
-	01-07-12	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501	
-	01-07-14	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C711	
-	01-08-00A	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C711	
-	01-08-00B	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C711	
	01-08-01A	5'-0"	5'-6"	P		AL	AL		X					002	
-	01-08-01B	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-08-02	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201W	
-	01-08-03	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	201W	
-	01-08-04	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301W	
-	01-08-05	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403W	
-	01-08-06	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	507	
-	01-08-07	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201W	
-	01-08-08	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201W	
-	01-08-09	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201W	
-	01-08-10	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201W	
-	01-08-11	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-08-12	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-08-13	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	201	
-	01-08-14	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	103W	
-	01-08-15	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	103W	
-	01-08-16	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	603W	
-	01-09-00A	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C207	
	01-09-00B	5'-0"	6'-0"	P		AL	AL		X					002	
	01-09-00C	5'-8 7/8"	5'-6"	P		AL	AL		X					002	
	01-09-00D	5'-8 7/8"	5'-6"	P		AL	AL		X					002	
	01-09-00E	5'-8 7/8"	5'-6"	P		AL	AL		X					002	
-	01-09-01A	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C711	
-	01-09-01B	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C711	
-	01-09-03	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301W	
-	01-09-04	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403W	
-	01-09-05	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403W	
-	01-09-06	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403W	
-	01-09-07	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	C201	
-	01-09-11	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403W	
-	01-09-12	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501	
-	01-09-13	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501	
-	01-09-14	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	201W	
-	01-09-15	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501	
-	01-09-16	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	103	
-	01-09-17	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	103	
-	01-10-00	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501W	
-	01-10-02	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403W	
-	01-10-03	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403W	
-	01-10-04	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403W	
-	01-10-05B	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403W	
-	01-10-06B	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403W	

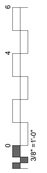
DOOR SCHEDULE

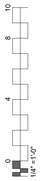
DOOR REVISION	DOOR NUMBER	WIDTH	HEIGHT	DOOR TYPE	MATERIALS AND FINISHES: FRAME TYPE	MATERIALS AND FINISHES: DOOR MATERIAL	MATERIALS AND FINISHES: FRAME MATERIAL	VISION PANEL & LOUVER TYPE	CONTROLS: POWER OPERATOR	CONTROLS: HOLD OPEN	CONTROLS: DOOR CONTROL A	CONTROLS: DOOR CONTROL B	FIRE RATING	HARDWARE	COMMENTS
-	01-13-07	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403W	
-	01-10-08	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403W	
-	01-10-09	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403W	
-	01-10-10	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-10-11	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-11-00A	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C711	
-	01-11-00B	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	701	
-	01-11-00C	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C711	
-	01-11-01	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301W	
-	01-11-02	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301W	
-	01-11-03	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	103W	
-	01-11-04	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	103W	
-	01-11-05	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-11-06	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	103W	
-	01-11-07	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	103W	
-	01-11-08	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501W	
-	01-12-00	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	201	
-	01-12-01	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403W	
-	01-12-02	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403W	
-	01-12-03	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403W	
-	01-12-04	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	201	
-	01-12-05	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	103	
-	01-12-06	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	103	
-	01-13-00A	5'-6"	P		AL	AL		X						002	
-	01-13-00B	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501	
-	01-13-01	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C711	
-	01-13-01A	8'-0"	M			STL	STL		X					002	
-	01-13-01B	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	C715	
-	01-13-03	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301W	
-	01-13-04	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201W	
-	01-13-05	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	403SW	
-	01-13-06	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	201W	
-	01-13-07	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-13-10	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	201	
-	01-13-11	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	201	
-	01-13-12	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501	
-	01-14-01A	6'-0"	7'-0"	A2	1	WD	HM	-	-	-	-	-	-	700M	
-	01-14-01B	3'-0"	7'-0"	A1	1	HM	HM	-	-	-	CR	-	-	C715	
-	01-14-02A	6'-0"	7'-0"	A2	1	WD	HM	-	-	-	-	-	-	700M	
-	01-14-02B	3'-0"	7'-0"	A1	1	HM	HM	-	-	-	CR	-	-	C715	
-	01-14-03	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	45	731CR	
-	01-14-04A	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501	
-	01-14-04B	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501	
	01-15-01A	4'-8 3/4"	5'-6"	P		AL	AL		X					002	
	01-15-01B	4'-8 3/4"	5'-6"	P		AL	AL		X					002	
	01-15-01C	4'-8 3/4"	5'-6"	P		AL	AL		X					002	
-	01-15-02A	3'-0"	7'-0"	G2		WD	HM	-				-	-	001	KI SYSTEMS
-	01-15-02B	3'-0"	7'-0"	G2		WD	HM	4			CR	-	-	C001	KI SYSTEMS
-	01-15-03A	3'-0"	7'-0"	G2		WD	HM	-				-	-	001	KI SYSTEMS
-	01-15-03B	3'-0"	7'-0"	G2		WD	HM	4			CR	-	-	C001	KI SYSTEMS
-	01-15-04A	4'-0"	7'-0"	G2		WD	HM	-				-	-	001	KI SYSTEMS
-	01-15-04B	3'-0"	7'-0"	G2		WD	HM	4			CR	-	-	C001	KI SYSTEMS
-	01-15-05A	3'-0"	7'-0"	G2		WD	HM	-				-	-	001	KI SYSTEMS
-	01-15-05B	3'-0"	7'-0"	G2		WD	HM	4			CR	-	-	C001	KI SYSTEMS
-	01-15-06A	3'-0"	7'-0"	G2		WD	HM	-				-	-	001	KI SYSTEMS
-	01-15-06B	3'-0"	7'-0"	G2		WD	HM	4			CR	-	-	C001	KI SYSTEMS
-	01-15-07A	3'-0"	7'-0"	G2		WD	HM	-				-	-	001	KI SYSTEMS
-	01-15-07B	3'-0"	7'-0"	G2		WD	HM	4			CR	-	-	C001	KI SYSTEMS
-	01-15-09	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301	
-	01-15-10	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	201	
-	01-15-11A	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-15-11B	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-15-12	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	103	
-	01-15-14	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
-	01-16-01A	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	103	
	01-16-01B	5'-0"	5'-6"	P		AL	AL		X					002	
-	01-16-02	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501	
-	01-16-03	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301	
-	01-16-04	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	201	
-	01-16-05	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	103	
-	01-16-06A	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501	
-	01-16-06B	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501	
-	01-16-07A	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501	
-	01-16-07B	3'-0"	7'-0"	A1	1	HM	HM	-	-	-	CR	-	-	C715	
-	01-16-08	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	103	
-	01-16-09	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	103	
-	01-16-10	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	103	
-	01-16-11	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C711	
-	01-16-12	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	103	
-	01-19-06A	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	45	731R	
-	01-19-06B	3'-6"	7'-0"	A1	1	HM	HM	-	-	-	CR	-	-	C715	

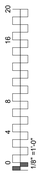
DOOR SCHEDULE

DOOR REVISION	DOOR NUMBER	WIDTH	HEIGHT	DOOR TYPE	MATERIALS AND FINISHES: FRAME TYPE	MATERIALS AND FINISHES: DOOR MATERIAL	MATERIALS AND FINISHES: FRAME MATERIAL	VISION PANEL & LOUVER TYPE	CONTROLS: POWER OPERATOR	CONTROLS: HOLD OPEN	CONTROLS: DOOR CONTROL A	CONTROLS: DOOR CONTROL B	FIRE RATING	HARDWARE	COMMENTS
LEVEL 02															
-	02-05-10	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	45	C201	
-	02-05-11	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	45	201	
-	02-05-12	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	201	
-	02-17-01A	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201	
	02-17-01B	5'-0"	5'-6"	P		AL	AL		X					002	
	02-17-01C	5'-0"	5'-6"	P		AL	AL		X					002	
	02-17-01D	5'-0"	5'-6"	P		AL	AL		X					002	
-	02-17-02	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301W	
-	02-17-03	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301W	
-	02-17-04A	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501	
-	02-17-04B	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501	
-	02-17-05	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301	
-	02-17-06	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301	
-	02-17-07	3'-6"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C201W	
-	02-17-08	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	201	
-	02-17-09	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	201	
-	02-17-10A	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	801L	
-	02-17-10B	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	801L	
-	02-17-11A	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	801L	
-	02-17-11B	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	801L	
-	02-17-23	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	CR	-	-	C711C	
-	02-17-24	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	501	
-	02-17-25	3'-4"	7'-11"	C1		AL/GL	AL		-	-	-	-	-	103A	
-	02-17-26	3'-4"	7'-11"	C1		AL/GL	AL		-	-	-	-	-	501A	
-	02-17-28	3'-4"	7'-11"	C1		AL/GL	AL		-	-	-	-	-	103A	
-	02-17-29	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	201	
-	02-17-30	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	201	
-	02-17-32	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301	
-	02-17-33	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	301	
-	02-17-34A	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	201	
-	02-17-34B	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	201	
-	02-17-35A	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	801L	
-	02-17-35B	3'-0"	7'-0"	A1	1	WD	HM	-	-	-	-	-	-	801



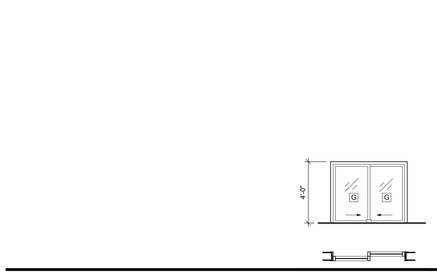


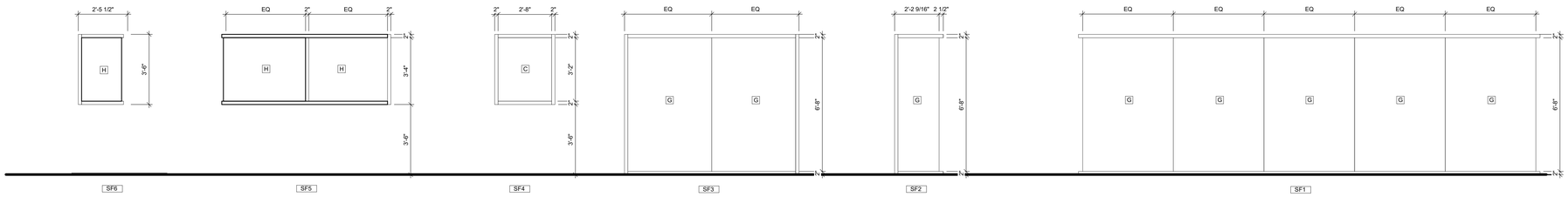




GLAZING LEGEND

- **C** CLEAR GLASS
- **G** TEMPERED CLEAR GLASS
- **H** ONE WAY VIEWING GLASS





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PROFESSIONAL SEAL:

12-06-2019

CONSULTANT LOGO:

CLIENT:

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

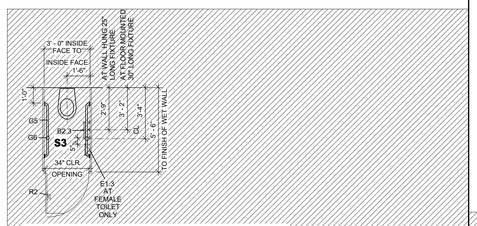
SHEET NUMBER:

A6.11

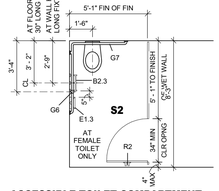
STOREFRONT ELEVATIONS

TOILET STALLS

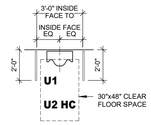
NOTE: LOCATE FLUSH ACTIVATION ON WIDE SIDE AT ALL TOILETS - LOCATE FLUSH VALVE BENEATH ADJACENT GRAB BARS.



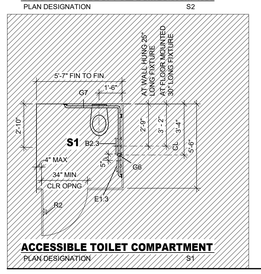
AMBULATORY ACCESSIBLE TOILET COMPARTMENT
PLAN DESIGNATION S3



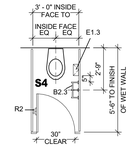
ACCESSIBLE TOILET COMPARTMENT
PLAN DESIGNATION S2



STANDARD URINAL
PLAN DESIGNATION U1
PLAN DESIGNATION U2 @ ACCESSIBLE

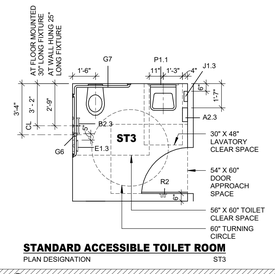


ACCESSIBLE TOILET COMPARTMENT
PLAN DESIGNATION S1

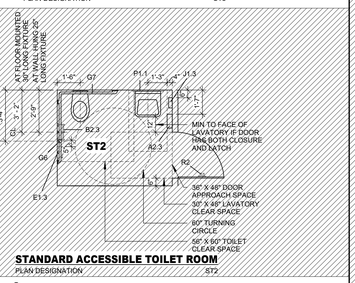


STANDARD COMPARTMENT
PLAN DESIGNATION S4

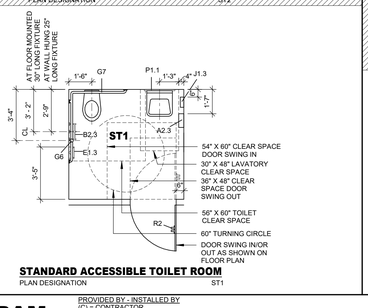
STANDARD TOILET LAYOUTS



STANDARD ACCESSIBLE TOILET ROOM
PLAN DESIGNATION ST3

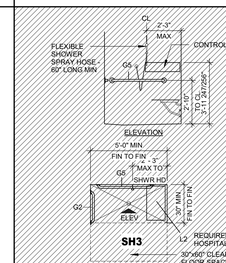


STANDARD ACCESSIBLE TOILET ROOM
PLAN DESIGNATION ST2

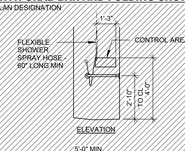


STANDARD ACCESSIBLE TOILET ROOM
PLAN DESIGNATION ST1

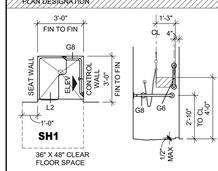
SHOWER / TUB LAYOUTS



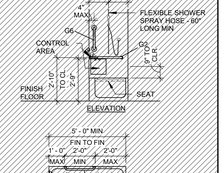
ACCESSIBLE ROLL-IN SHOWER COMPARTMENT
WITH GRAB BAR AND FOLDING SHOWER SEAT
PLAN DESIGNATION SH3



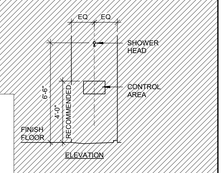
ACCESSIBLE ROLL-IN SHOWER COMPARTMENT
STALL WITH GRAB BAR, NO SHOWER SEAT
PLAN DESIGNATION SH2



ACCESSIBLE TRANSFER
TYPE SHOWER COMPARTMENT
PLAN DESIGNATION SH1

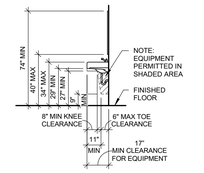


ACCESSIBLE TUB
PLAN DESIGNATION TB1



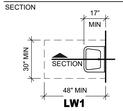
NON-ACCESSIBLE SHOWER
PLAN DESIGNATION SH4

ACCESSIBLE LAVATORIES / EWC



LAVATORY CLEARANCE

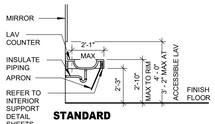
ACCESSIBLE LAVATORY
FRONT APPROACH SECTION
SECTION LW1



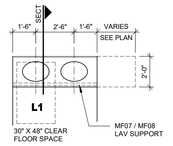
LW1
LW2 AT NON-ACCESSIBLE

CLEAR FLOOR SPACE AT LAVATORY

ACCESSIBLE LAVATORY
FRONT APPROACH
PLAN DESIGNATION LW1

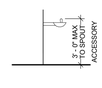


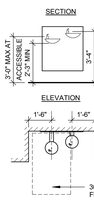
STANDARD
ACCESSIBLE LAVATORY
SECTION L1, L2, L3



STANDARD
ACCESSIBLE LAVATORY
PLAN DESIGNATION L1, L2, L3

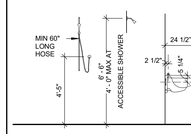
NOTE:
1.THE NUMBER (1,2,3, ETC.) REPRESENTS THE NUMBER OF LAVATORIES
2.COORDINATE LAVATORY MF08 SUPPORTS WITH BOWL LOCATIONS.

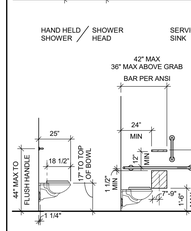


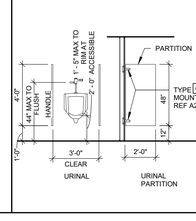


FOUNTAIN/COOLER HI-LO
PLAN DESIGNATION EWC1

FIXTURE MOUNTING DIAGRAM

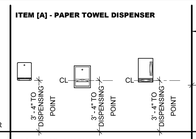
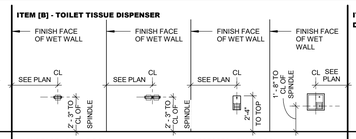
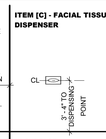
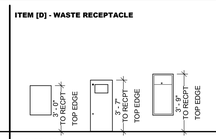
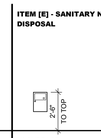
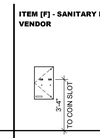
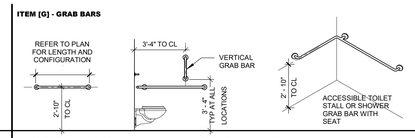


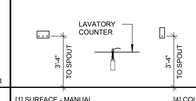
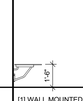
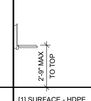
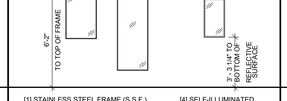
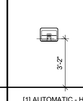
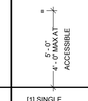
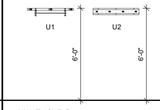
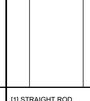




TOILET ACCESSORY MOUNTING DIAGRAM

PROVIDED BY - INSTALLED BY
(C) = CONTRACTOR
(O) = OWNER
(V) = VENDOR

TOILET ACCESSORY ITEM	ITEM [A] - PAPER TOWEL DISPENSER	ITEM [B] - TOILET TISSUE DISPENSER	ITEM [C] - FACIAL TISSUE DISPENSER	ITEM [D] - WASTE RECEPTACLE	ITEM [E] - SANITARY NAPKIN DISPOSAL	ITEM [F] - SANITARY NAPKIN VENDOR	ITEM [G] - GRAB BARS
FINISH FLOOR							
TYPES:	[1] SURFACE - MANUAL [2] SURFACE - AUTOMATIC [3] RECESSED - MANUAL MOUNTING: TYPE A (SHEET A2.01)	[1] SURFACE - SINGLE ROLL [2] SURFACE - DOUBLE ROLL [3] SURFACE - MULTI-ROLL [4] PARTITION-MOUNTED MOUNTING: TYPE A (SHEET A2.01) [5] RECESSED - SINGLE ROLL [6] RECESSED - MULTI-ROLL	[1] SURFACE [2] RECESSED MOUNTING: TYPE A (SHEET A2.01)	[1] SURFACE [2] RECESSED [3] SEMI-RECESSED [4] UNDER-COUNTER MOUNTING: TYPE A (SHEET A2.01)	[1] SURFACE [2] RECESSED [3] PARTITION-MOUNTED MOUNTING: TYPE A (SHEET A2.01)	[1] SURFACE [2] RECESSED MOUNTING: TYPE A (SHEET A2.01)	[1] HORIZONTAL - 18 INCHES [2] HORIZONTAL - 24 INCHES [3] HORIZONTAL - 30 INCHES [4] HORIZONTAL - 36 INCHES [5] HORIZONTAL - 42 INCHES [6] VERTICAL - 18 INCHES [7] L-SHAPED, HORIZONTAL - 42"x54" [8] L-SHAPED, HORIZONTAL - 16"x30" [9] U-SHAPED, HORIZONTAL - 24"x60"x24" MOUNTING: TYPE C OR D @ BARIATRIC CONDITIONS ONLY (SHEET A2.01)
DRAWING DESIGNATION	A1.1 - SURFACE - MANUAL (C) - (C) A1.2 - SURFACE - MANUAL (O) - (C) A1.3 - SURFACE - MANUAL (O) - (V) A2.1 - SURFACE - AUTOMATIC (C) - (C) A2.2 - SURFACE - AUTOMATIC (O) - (C) A2.3 - SURFACE - AUTOMATIC (O) - (V) A3.1 - RECESSED - MANUAL (C) - (C) A3.2 - RECESSED - MANUAL (O) - (C) A3.3 - RECESSED - MANUAL (O) - (V)	B1.1 - SURFACE - SINGLE ROLL (C) - (C) B1.2 - SURFACE - SINGLE ROLL (O) - (C) B1.3 - SURFACE - SINGLE ROLL (O) - (V) B2.1 - SURFACE - DOUBLE ROLL (C) - (C) B2.2 - SURFACE - DOUBLE ROLL (O) - (C) B2.3 - SURFACE - DOUBLE ROLL (O) - (V) B3.1 - SURFACE - MULTI-ROLL (C) - (C) B3.2 - SURFACE - MULTI-ROLL (O) - (C) B3.3 - SURFACE - MULTI-ROLL (O) - (V) B4.1 - PARTITION-MOUNTED (C) - (C) B4.2 - PARTITION-MOUNTED (O) - (C) B4.3 - PARTITION-MOUNTED (O) - (V) B5.1 - RECESSED - SINGLE ROLL (C) - (C) B5.2 - RECESSED - SINGLE ROLL (O) - (C) B5.3 - RECESSED - SINGLE ROLL (O) - (V) B6.1 - RECESSED - MULTI-ROLL (C) - (C) B6.2 - RECESSED - MULTI-ROLL (O) - (C) B6.3 - RECESSED - MULTI-ROLL (O) - (V)	C1.1 - SURFACE (C) - (C) C1.2 - SURFACE (O) - (C) C1.3 - SURFACE (O) - (V) C2.1 - RECESSED (C) - (C) C2.2 - RECESSED (O) - (C) C2.3 - RECESSED (O) - (V)	D1.1 - SURFACE (C) - (C) D1.2 - SURFACE (O) - (C) D1.3 - SURFACE (O) - (V) D2.1 - RECESSED (C) - (C) D2.2 - RECESSED (O) - (C) D2.3 - RECESSED (O) - (V) D3.1 - SEMI-RECESSED (C) - (C) D3.2 - SEMI-RECESSED (O) - (C) D3.3 - SEMI-RECESSED (O) - (V) D4.1 - UNDER-COUNTER (C) - (C) D4.2 - UNDER-COUNTER (O) - (C) D4.3 - UNDER-COUNTER (O) - (V)	E1.1 - SURFACE (C) - (C) E1.2 - SURFACE (O) - (C) E1.3 - SURFACE (O) - (V) E2.1 - RECESSED (C) - (C) E2.2 - RECESSED (O) - (C) E2.3 - RECESSED (O) - (V) E3.1 - PARTITION-MOUNTED (C) - (C) E3.2 - PARTITION-MOUNTED (O) - (C) E3.3 - PARTITION-MOUNTED (O) - (V)	F1.1 - SURFACE (C) - (C) F1.2 - SURFACE (O) - (C) F1.3 - SURFACE (O) - (V) F2.1 - RECESSED (C) - (C) F2.2 - RECESSED (O) - (C) F2.3 - RECESSED (O) - (V)	G1 - HORIZONTAL - 18 INCHES G2 - HORIZONTAL - 24 INCHES G3 - HORIZONTAL - 30 INCHES G4 - HORIZONTAL - 36 INCHES G5 - HORIZONTAL - 42 INCHES G6 - VERTICAL - 18 INCHES G7 - L-SHAPED, HORIZONTAL - 42"x54" G8 - L-SHAPED, HORIZONTAL - 16"x30" G9 - U-SHAPED, HORIZONTAL - 24"x60"x24"

TOILET ACCESSORY ITEM	ITEM [J] - SOAP DISPENSER	ITEM [K] - SOAP DISH	ITEM [L] - FOLDING SHOWER SEAT	ITEM [M] - CHANGING STATION	ITEM [N] - SHELF	ITEM [P] - MIRROR	ITEM [Q] - HAND DRYER	ITEM [R] - ROBE HOOK	ITEM [S] - TOWEL BAR	ITEM [T] - SANITIZER DISPENSER	ITEM [U] - MOP & BROOM HOLDER	ITEM [V] - ROD, HOOKS AND CURTAIN
FINISH FLOOR												
TYPES:	[1] SURFACE - MANUAL [2] SURFACE - AUTOMATIC [3] RECESSED - MANUAL MOUNTING: TYPE A (SHEET A2.01) [4] COUNTER - MANUAL [5] COUNTER - AUTOMATIC	[1] SURFACE [2] RECESSED [3] RECESSED - CERAMIC	[1] WALL MOUNTED - PADDED [2] WALL MOUNTED - COMPOSITE MOUNTING: TYPE C (SHEET A2.01)	[1] SURFACE - HDPE [2] SURFACE - STAINLESS STEEL [3] RECESSED - HDPE [4] RECESSED - STAINLESS STEEL MOUNTING: TYPE C (SHEET A2.01)	[1] STAINLESS STEEL - 18 INCH [2] SURFACE TOWEL SHELF - 24 INCH [3] FOLDING UTILITY MOUNTING: TYPE A (SHEET A2.01)	[1] STAINLESS STEEL FRAME (S.S.F.) [2] S.S.F. W/ SHELF [3] TILT S.S.F. MOUNTING: TYPE A (SHEET A2.01)	[4] SELF-ILLUMINATED [5] DECORATIVE [ ] 24 x 36 INCHES [ ] 24 x 72 INCHES [ ] __ x __ INCHES (OTHER)	[1] AUTOMATIC - HIGH SPEED [2] AUTOMATIC SENSOR [3] PUSH BUTTON MOUNTING: TYPE A (SHEET A2.01)	[1] SINGLE [2] DOUBLE MOUNTING: TYPE A (SHEET A2.01)	[1] 18 INCH [2] 24 INCH MOUNTING: TYPE B (SHEET A2.01)	[1] SURFACE - MANUAL [2] SURFACE - AUTOMATIC MOUNTING: TYPE A (SHEET A2.01)	[1] WITH SHELF [2] WITHOUT SHELF MOUNTING: TYPE B (SHEET A2.01)	[1] STRAIGHT ROD [2] CURVED ROD MOUNTING: TYPE B (SHEET A2.01)
DRAWING DESIGNATION	J1.1 - SURFACE - MANUAL (C) - (C) J1.2 - SURFACE - MANUAL (O) - (C) J1.3 - SURFACE - MANUAL (O) - (V) J2.1 - SURFACE - AUTOMATIC (C) - (C) J2.2 - SURFACE - AUTOMATIC (O) - (C) J2.3 - SURFACE - AUTOMATIC (O) - (V) J3.1 - RECESSED - MANUAL (C) - (C) J3.2 - RECESSED - MANUAL (O) - (C) J3.3 - RECESSED - MANUAL (O) - (V) J4.1 - COUNTER - MANUAL (C) - (C) J4.2 - COUNTER - MANUAL (O) - (C) J4.3 - COUNTER - MANUAL (O) - (V) J5.1 - COUNTER - AUTOMATIC (C) - (C) J5.2 - COUNTER - AUTOMATIC (O) - (C) J5.3 - COUNTER - AUTOMATIC (O) - (V)	K1 - SURFACE K2 - RECESSED K3 - RECESSED - CERAMIC	L1 - WALL - PADDED L2 - WALL - COMPOSITE	M1 - SURFACE - HDPE M2 - SURFACE - STAINLESS STEEL M3 - RECESSED - HDPE M4 - RECESSED - STAINLESS STEEL	N1 - STAINLESS STEEL - 18 INCH N2 - SURFACE TOWEL SHELF - 24 INCH N3 - FOLDING UTILITY	P1.1 - STAINLESS STEEL FRAME P1.2 - STAINLESS STEEL FRAME P2.1 - STAINLESS STEEL FRAME W/ SHELF P3.1 -TILT STAINLESS STEEL FRAME	P4.1 - SELF-ILLUMINATED P4.3 - SELF-ILLUMINATED P5.1 - DECORATIVE	Q1 - AUTOMATIC - HIGH SPEED Q2 - AUTOMATIC SENSOR Q3 - PUSH BUTTON	R1 - SINGLE R2 - DOUBLE	S1 - 18 INCH S2 - 24 INCH	T1.1 - SURFACE - MANUAL T1.2 - SURFACE - MANUAL T1.3 - SURFACE - MANUAL T2.1 - SURFACE - AUTOMATIC T2.2 - SURFACE - AUTOMATIC T2.3 - SURFACE - AUTOMATIC	U1 - WITH SHELF U2 - WITHOUT SHELF	V1 - STRAIGHT ROD V2 - CURVED ROD

TOILET ACCESSORY ITEM	ITEM [W] - WASH CLOTH BATH AND HAND TOWEL HOLDER	ITEM [X] - GLOVE DISPENSER	ITEM [Y] - SPECIMEN PASS THRU
FINISH FLOOR			
TYPES:	[1] TOWEL HOLDER MOUNTING: TYPE A (SHEET A2.01)	[1] STAINLESS STEEL - DOUBLE [2] STAINLESS STEEL - TRIPLE [3] STAINLESS STEEL - QUAD MOUNTING: TYPE A (SHEET A2.01)	[1] RECESSED - STAINLESS STEEL [2] RECESSED - STAINLESS STEEL (HEAVY DUTY) MOUNTING: TYPE B (SHEET A2.01)
DRAWING DESIGNATION	W1 - TOWEL HOLDER	X1 - STAINLESS STEEL - DOUBLE X2 - STAINLESS STEEL - TRIPLE X3 - STAINLESS STEEL - QUAD	Y1 - RECESSED STAINLESS STEEL Y2 - RECESSED STAINLESS STEEL (HEAVY DUTY)

NOTE:
1. ACCESSORIES CAN APPEAR ON FLOOR PLANS OR INTERIOR ELEVATIONS.
2. THE SHADED PORTIONS ARE NOT INCLUDED IN THE SCOPE OF THE WORK.
3. THE UN-SHADED PORTIONS ARE INTENDED TO BE IN THE SCOPE OF THE WORK.

HATCHING:
INCLUDED IN SCOPE OF WORK
NOT INCLUDED IN SCOPE OF WORK

James R. Childers Architect, Inc.
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Fort Smith, AR 72901
479-783-2480
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WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

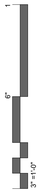
PROJECT PHASE:
REVIT - ONLINE

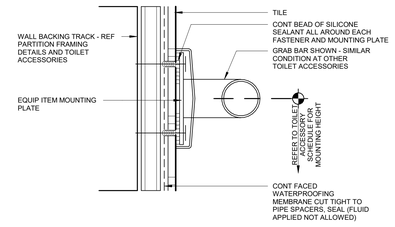
REVISIONS

#	DATE	DESCRIPTION

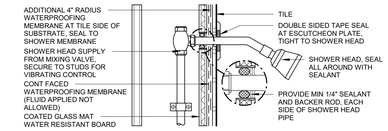
DATE: 02/23/17
JOB NUMBER: 18-01.01
SHEET NUMBER: A6.20

STANDARD TOILET LAYOUT / ACCESSORIES

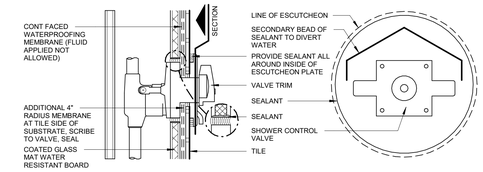




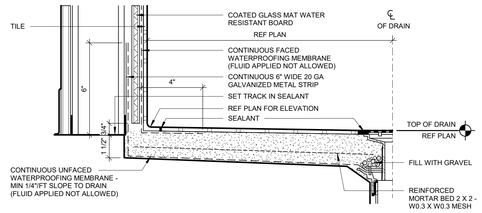
TOILET ACCESSORIES
06 PENETRATION DETAIL AT TILED WALL
6" = 1'-0"



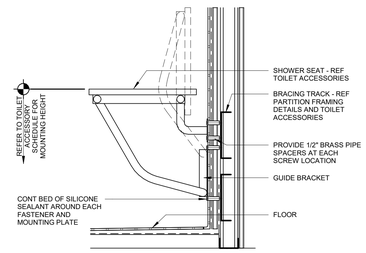
05 SHOWER HEAD PENETRATION DETAIL
3" = 1'-0"



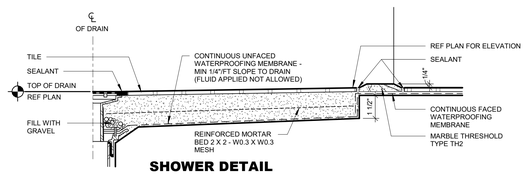
04 SHOWER CONTROL VALVE PENTRATION DETAIL
3" = 1'-0"



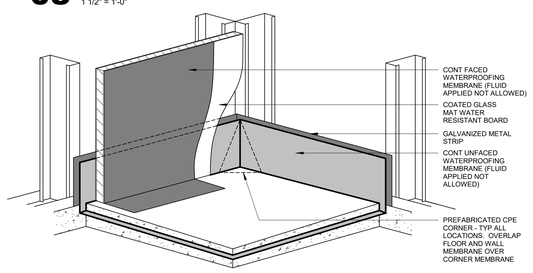
SHOWER DETAIL AT
03 1-1/2" SHALLOW SLAB DEPRESSION
3" = 1'-0"



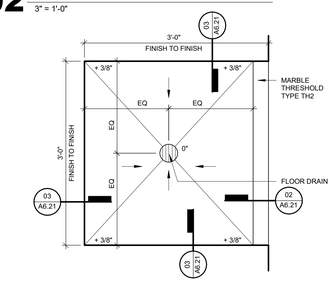
ACCESSIBLE SHOWER SEAT
08 PENETRATION DETAIL
1 1/2" = 1'-0"



SHOWER DETAIL
AT 1-1/2" SHALLOW SLAB
02 DEPRESSION WITH THRESHOLD
3" = 1'-0"



07 CORNER AT SHOWER WITH SLAB DEPRESSION
1 1/2" = 1'-0"



SHOWER REFERENCE PLAN WITH SLAB
01 DEPRESSION WITH CURB AND/OR THRESHOLD
1" = 1'-0"

James R. Childers Architect, Inc.
45 South 4th Street
Fort Smith, AR 72901
479-783-2480
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PROFESSIONAL SEAL:

12-06-2019

CONSULTANT LOGO:

CLIENT:

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

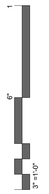
PROJECT PHASE:
BID PACKAGE 02

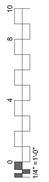
REVISIONS		
#	DATE	DESCRIPTION

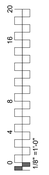
DATE: 12-06-19
JOB NUMBER: 18-01.01

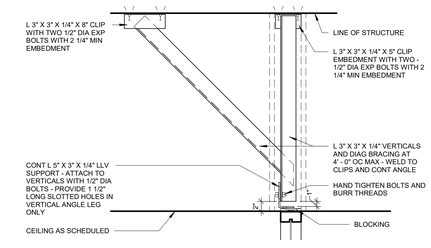
SHEET NUMBER:
A6.21

SHOWER DETAILS





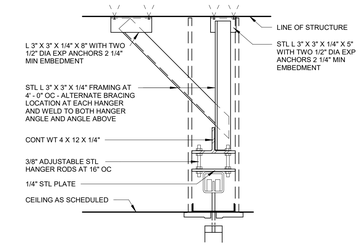




FINISH AFTER FABRICATION: SHOP PRIMER PAINT

04 HEAD SUPPORT AT INTERIOR ALUMINUM WALL SYSTEMS

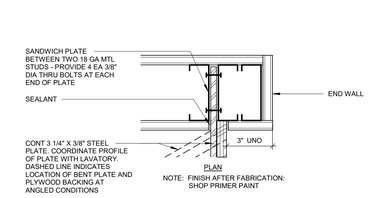
1" = 1'-0"



NOTE: FINISH AFTER FABRICATION: SHOP PRIMER PAINT

03 OPERABLE PARTITION SUPPORT

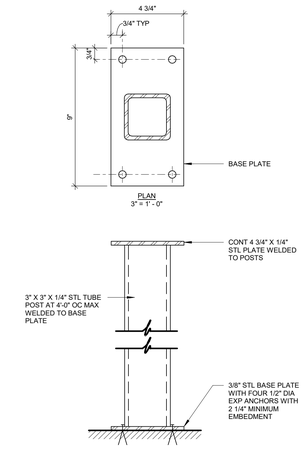
1/4" = 1'-0"



NOTE: FINISH AFTER FABRICATION: SHOP PRIMER PAINT

LAVATORY COUNTER SUPPORT SPAN 02 LESS THAN 10' - 0"

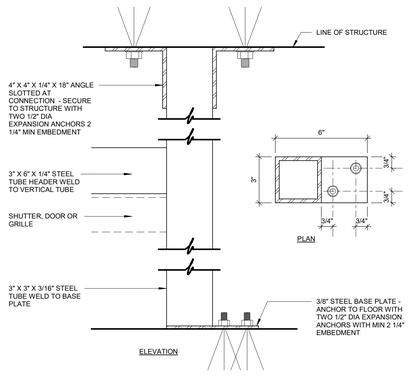
3" = 1'-0"



NOTE: FINISH AFTER FABRICATION: SHOP PRIMER PAINT

01 FREESTANDING PARTITION SUPPORT

3" = 1'-0"



NOTE: FINISH AFTER FABRICATION: SHOP PRIMER PAINT

05 SUPPORT FRAME AT INTERIOR, SHUTTER, DOOR, OR GRILLE

3" = 1'-0"

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BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

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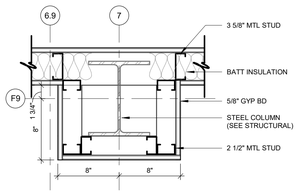
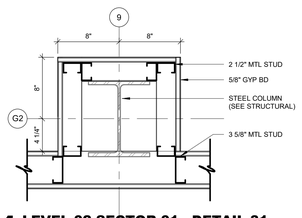
SHEET NUMBER:

A6.30

INTERIOR SUPPORT DETAILS



32 LEVEL 02 SECTOR 01 - DETAIL 32
1 1/2" = 1'-0"



31 LEVEL 02 SECTOR 01 - DETAIL 31
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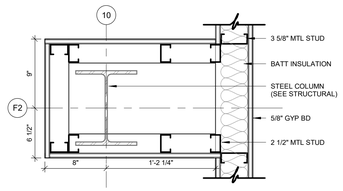

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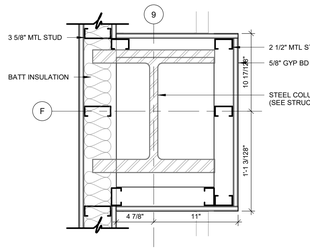
1 1/2" = 1'-0"



29 LEVEL 02 SECTOR 01 - DETAIL 29
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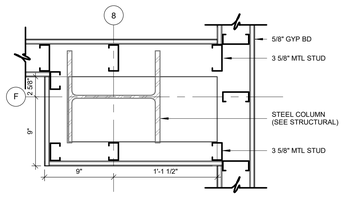
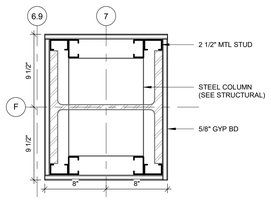


28 LEVEL 02 SECTOR 01 - DETAIL 28
1 1/2" = 1'-0"



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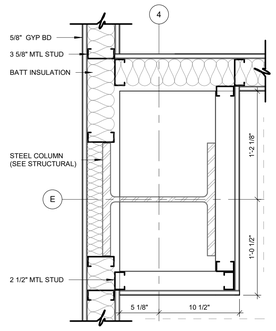
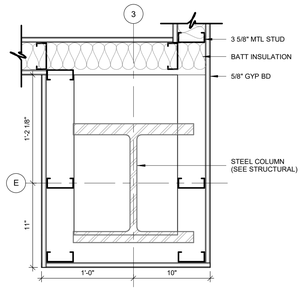
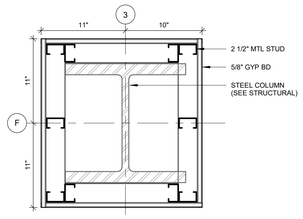
1 1/2" = 1'-0"



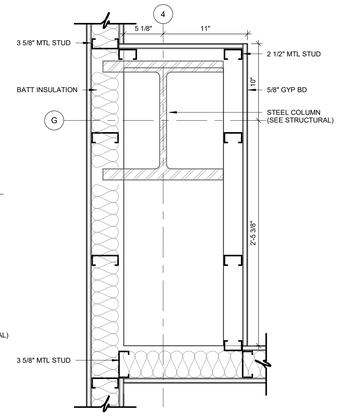
26 LEVEL 01 SECTOR 02 - DETAIL 26
1 1/2" = 1'-0"



25 LEVEL 01 SECTOR 02 - DETAIL 25
1 1/2" = 1'-0"



24 LEVEL 01 SECTOR 02 - DETAIL 24
1 1/2" = 1'-0"



23 LEVEL 01 SECTOR 02 - DETAIL 23
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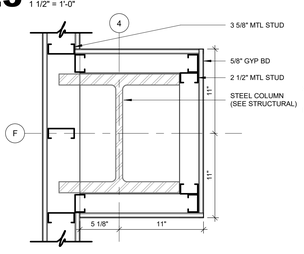

22 LEVEL 01 SECTOR 02 - DETAIL 22
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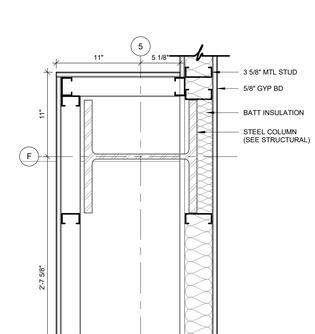

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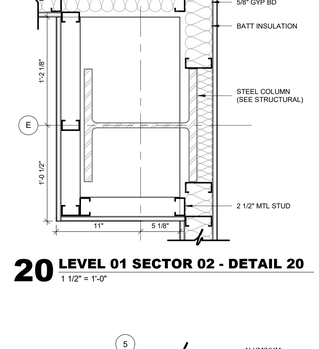

20 LEVEL 01 SECTOR 02 - DETAIL 20
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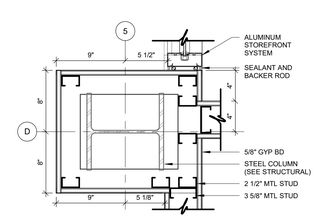
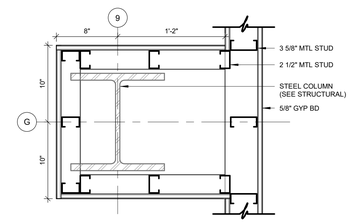


19 LEVEL 01 SECTOR 02 - DETAIL 19
1 1/2" = 1'-0"



18 LEVEL 01 SECTOR 01 - DETAIL 18
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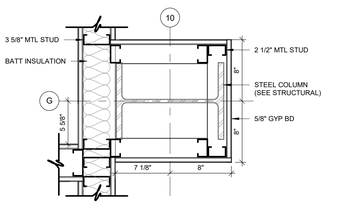

17 LEVEL 01 SECTOR 01 - DETAIL 17
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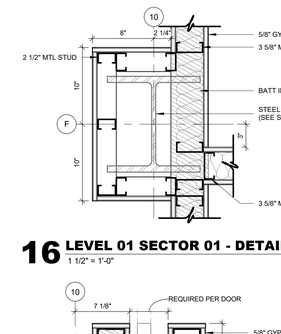

16 LEVEL 01 SECTOR 01 - DETAIL 16
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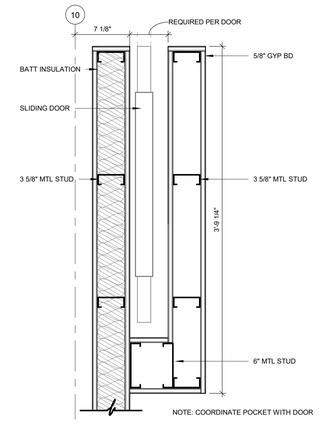

15 LEVEL 01 SECTOR 01 - DETAIL 15
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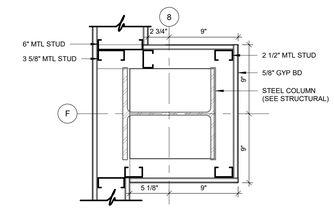

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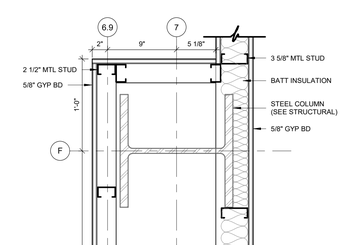
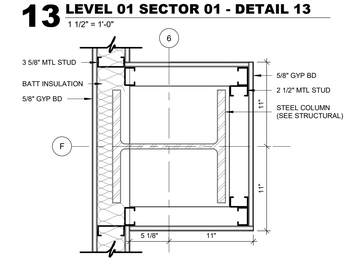


13 LEVEL 01 SECTOR 01 - DETAIL 13
1 1/2" = 1'-0"



12 LEVEL 01 SECTOR 01 - DETAIL 12
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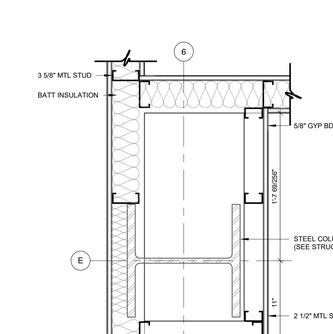

11 LEVEL 01 SECTOR 01 - DETAIL 11
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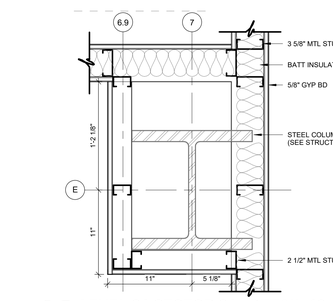

10 LEVEL 01 SECTOR 01 - DETAIL 10
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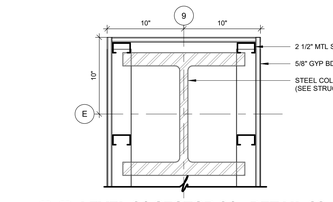

09 LEVEL 01 SECTOR 01 - DETAIL 09
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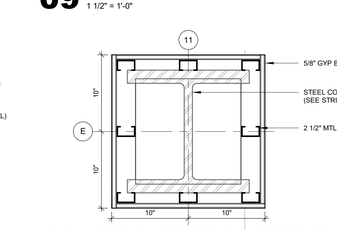

08 LEVEL 01 SECTOR 01 - DETAIL 08
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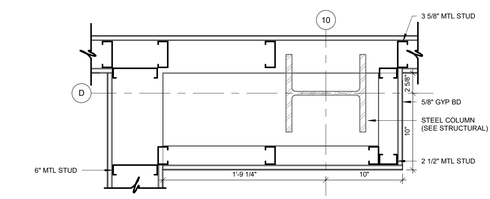

07 LEVEL 01 SECTOR 01 - DETAIL 07
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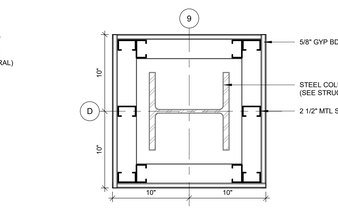

06 LEVEL 01 SECTOR 01 - DETAIL 06
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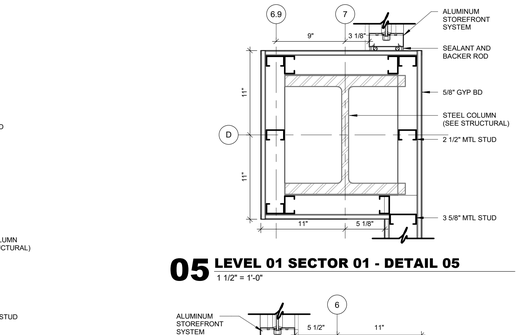

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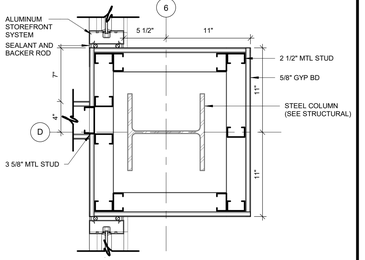

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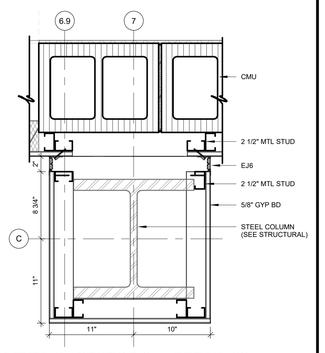

03 LEVEL 01 SECTOR 01 - DETAIL 03
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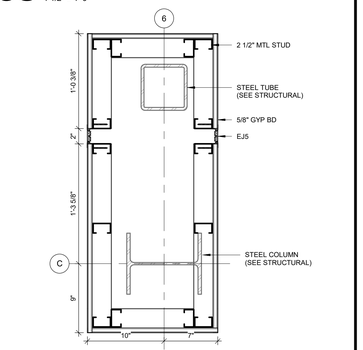

02 LEVEL 01 SECTOR 01 - DETAIL 02
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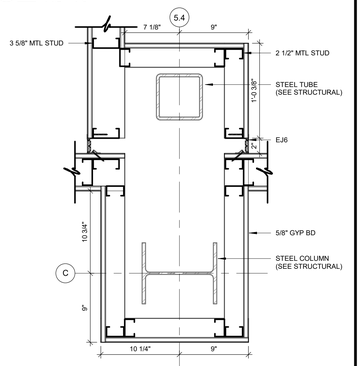

01 LEVEL 01 SECTOR 01 - DETAIL 01
1 1/2" = 1'-0"

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PROFESSIONAL SEAL:

STATE OF OKLAHOMA
JAMES R. CHILDERS
REGISTERED ARCHITECT

12-06-2019

CONSULTANT LOGO:

CLIENT:

THE CHEROKEE NATION
TRIBAL SEAL
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
A6.40

INTERIOR PLAN DETAILS

INTERIOR FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALL	CEILING	REMARKS
LEVEL 01						
00-PUBLIC FACILITIES						
01-00-01	LOBBY	HSF / EM	RB	P-1/ P-3/ WDP	WDP /GYP	NOTES 1 & 2
01-00-02	REGISTRATION	CPT	RB	P-1 / P-2	WDP /GYP	NOTES 1 & 2
01-00-03	WOMEN'S RR	PTF-1	TR-1 / TR-2 / MB	PTW / P-1E / AT	GYP	NOTE 1
01-00-04	MEN'S RR	PTF-1	TR-1 / TR-2 / MB	PTW / P-1E / AT	GYP	NOTE 1
01-00-07	LACTATION	HSF	IB	P-1 / P-3	SA-1	
01-00-09	STORAGE	HSF	RB	P-1	SA-1	
01-MEDICAL RECORDS						
01-01-00	RECEPTION	CPT	RB	P-1 / P-3	SA-1	NOTE 1
01-01-01	MR	HSF	RB	P-1	SA-1	
01-01-02	CHS	HSF	RB	P-1	SA-1	
01-01-03	CHS	HSF	RB	P-1	SA-1	
01-01-04	PBC-HC	HSF	RB	P-1	SA-1	
01-01-06	OPEN WORK (XS)	HSF	RB	P-1	SA-1	
01-01-07	CODER (X3)	HSF	RB	P-1 / P-3	SA-1	NOTE 1
01-01-08	OFFICE	CPT	RB	P-1 / P-2	SA-1	NOTE 1
01-01-09	OFFICE	CPT	RB	P-1 / P-3	SA-1	NOTE 1
01-01-10	FILE STORAGE	HSF	RB	P-1	SA-1	
02-EMPLOYEE FACILITIES						
01-02-01	EMPLOYEE AREA	HSF	RB	P-1	SA-1	
01-02-02	WOMEN'S RR	PTF-1 / PTF-2	TR-1 / TR-2	PTW / AT	GYP	NOTES 1 & 2
01-02-03	MEN'S RR	PTF-1 / PTF-2	TR-1 / TR-2	PTW / AT	GYP	NOTES 1 & 2
01-02-04	STAFF TOILET	PTF-1	TR-1 / TR-2	PTW / AT	SA-1	NOTE 1
01-02-05	STAFF TOILET	PTF-1	TR-1 / TR-2	PTW / AT	SA-1	NOTE 1
01-02-06	STAFF TOILET	PTF-1	TR-1 / TR-2	PTW / AT	SA-1	NOTE 1
01-02-07	STAFF TOILET	PTF-1	TR-1 / TR-2	PTW / AT	SA-1	NOTE 1
01-02-08	STAFF LOUNGE	HSF	RB	P-1 / P-3	SA-2	NOTE 1
03-PROPERTY & SUPPLY						
01-03-01	FACILITIES MANAGEMENT	ECS	RB	P-1	OPEN	
04-HOUSEKEEPING						
01-04-01	BIO-HAZARD	ECS	RB	P-1	OPEN	
01-04-02	EVS CLOSET	ECS	WP-02	WP-02	SA-1	
01-04-03	EVS BULK STORAGE	HSF	WP-02	WP-02	OPEN	
01-04-04	EVS OFFICE	HSF	RB	P-1	OPEN	NOTE 1
01-04-05	CLEAN LINEN	HSF	RB	P-1	SA-1	
01-04-06	LINEN DRY	HSF	RB	P-1	SA-1	
01-04-07	LINEN WASH	HSF	RB	P-1	SA-1	
05-MEP SPACE						
01-05-01	MEP	ECS	RB	P-1	OPEN	
01-05-02	STOR	HSF	RB	P-1	OPEN	
01-05-03	IT	ECS	RB	P-1	OPEN	
01-05-04	IT	ECS	RB	P-1	OPEN	
01-05-05	ELEC	ECS	RB	P-1	OPEN	
06-WINGS						
01-06-01	WINGS OFFICE	CPT	RB	P-1 / P-3	SA-1	NOTE 1
01-06-02	WINGS OFFICE	CPT	RB	P-1 / P-2	SA-1	NOTE 1
07-PHYSICAL THERAPY						
01-07-00	PT WAITING	HSF	RB	P-1 WDP	SA-2	NOTE 1
01-07-01	PT RECEPTION	CPT	RB	P-1 / P-2	SA-1	NOTE 1
01-07-03	PT OFFICE	CPT	RB	P-1 / P-3	SA-1	NOTE 1
01-07-04	PT ASST	RSF	RB	P-1 / P-3	SA-1	NOTE 1
01-07-05	PT TL/DRESS	PTF-1	TR-1 / TR-2	PTW / AT	SA-1	NOTE 1
01-07-06	PT TL/DRESS	PTF-1	TR-1 / TR-2	PTW / AT	SA-1	NOTE 1
01-07-07	PT TRTMT	HSF	IB	P-1 / P-3 / WP-01	SA-1	NOTE 1
01-07-08	PT TRTMT	HSF	IB	P-1 / P-2 / WP-01	SA-1	NOTE 1
01-07-09	PT TRTMT	HSF	IB	P-1 / P-3 / WP-01	SA-1	NOTE 1
01-07-10	STORAGE	HSF	IB	P-1	SA-1	
01-07-11	PT TRTMT	HSF	IB	P-1 / P-2 / WP-01	SA-1	NOTE 1
01-07-12	LINEN	HSF	RB	P-1	SA-1	
01-07-13	NOURISHMENT	RSF	RB	P-1	SA-1	
07-14	EXERCISE AREA	RSF	RB	P-1 / P-2	SA-1	NOTE 1
08-BEHAVIORAL HEALTH						
01-08-00	WAITING	HSF	RB	P-1 / WDP	SA-1	NOTE 1
01-08-01	RECEPTION	CPT	RB	P-1 / P-3	SA-1	NOTE 1
01-08-02	CIRCULATION	HSF	RB	P-1	SA-1 / GYP	NOTE 2
01-08-03	OFFICE THERAPIST	HSF	RB	P-1 / P-3	SA-1	NOTE 1
01-08-04	PT TL	PTF-1	TR-1 / TR-2	PTW / AT	SA-1	NOTE 1
01-08-05	OBSERVATION	CPT	RB	P-1	SA-1	
01-08-06	PLAY THERAPY	HSF	RB	P-1 / P-3	SA-1	NOTE 1
01-08-07	OFFICE THERAPIST	CPT	RB	P-1 / P-3	SA-1	NOTE 1
01-08-08	OFFICE THERAPIST	CPT	RB	P-1 / P-2	SA-1	NOTE 1
01-08-09	OFFICE THERAPIST	CPT	RB	P-1 / P-3	SA-1	NOTE 1
01-08-10	GROUP ROOM	HSF	RB	P-1 / P-3	SA-1	
01-08-11	MED SOC WK	HSF	RB	P-1	SA-1	
01-08-12	OFFICE ADMIN/APRN	HSF	RB	P-1 / P-3	SA-1	NOTE 1
01-08-13	STORAGE	HSF	RB	P-1	SA-1	
01-08-14	OFFICE THERAPIST	CPT	RB	P-1 / P-3	SA-1	NOTE 1
01-08-15	OFFICE THERAPIST	CPT	RB	P-1 / P-2	SA-1	NOTE 1
01-08-16	EXAM/BH	HSF	IB	P-1 / P-3 /WP-01	GYP	NOTE 1
09-PRIMARY CARE						
01-09-00	RECEPTION	CPT	RB	P-1 / P-3	SA-1 / GYP	NOTES 1 & 2
01-09-02	WT AL	HSF	RB	P-1	GYP	
01-09-03	PATIENT TOILET	PTF-1	TR-1 / TR-2	PTW / AT	SA-1	NOTE 1
01-09-04	PC EXAM	HSF	IB	P-1 / P-2 / WP-01	SA-1	NOTE 1
01-09-05	PC EXAM	HSF	IB	P-1 / P-3 / WP-01	SA-1	NOTE 1
01-09-06	PC EXAM	HSF	IB	P-1 / P-2 / WP-01	SA-1	NOTE 1
01-09-07	MEDS	HSF	IB	P-1	SA-1	
01-09-11	TREATMENT	HSF	IB	P-1 / P-2 / WP-01	SA-1	NOTE 1
01-09-12	CLEAN	HSF	IB	P-1	SA-1	
01-09-13	SOILED	HSF	IB	P-1	SA-1	
01-09-14	STORAGE	HSF	RB	P-1	SA-1	
01-09-15	FLOAT OFFICES	CPT	RB	P-1	SA-1	NOTE 1
01-09-16	PC PHY OFF	CPT	RB	P-1 / P-3	SA-1	NOTE 1
01-09-17	PC PHY OFF	CPT	RB	P-1 / P-2	SA-1	NOTE 1
01-09-18	OPEN WORK	HSF	RB	P-1	SA-1	
10-EYE CARE						
01-10-00	DISPENSING	HSF	RB	P-1	GYP	
01-10-02	PRELIM TEST	HSF	IB	P-1	SA-1	
01-10-03	EXAM REFRAC	HSF	IB	P-1 / P-3 / WP-01	SA-1	NOTE 1
01-10-04	EXAM REFRAC	HSF	IB	P-1 / P-2 / WP-01	SA-1	NOTE 1
01-10-05	SPECIAL TEST	HSF	IB	P-1 / P-3	SA-1	NOTE 1
01-10-06	EXAM REFRAC	HSF	IB	P-1 / P-2 / WP-01	SA-1	NOTE 1
01-10-07	EXAM NON-REFRAC	HSF	IB	P-1 / P-3 / WP-01	SA-1	NOTE 1
01-10-08	EXAM REFRAC	HSF	IB	P-1 / P-2 / WP-01	SA-1	NOTE 1
01-10-09	EXAM REFRAC	HSF	IB	P-1 / P-3 / WP-01	SA-1	NOTE 1
01-10-10	OPT PHY OFF	CPT	RB	P-1 / P-3	SA-1	NOTE 1
01-10-11	OPT PHY OFF	CPT	RB	P-1 / P-2	SA-1	NOTE 1
01-10-12	OPEN WORK	HSF	RB	P-1	SA-1	
11-WIC						
01-11-01	PATIENT TOILET	PTF-1	TR-2	PTW / AT	SA-1	NOTE 1
01-11-02	BREASTFEEDING ROOM	HSF	IB	P-1 / P-2	SA-1	NOTE 1
01-11-03	WIC OFFICE	CPT	RB	P-1 / P-3	SA-1	NOTE 1
01-11-04	WIC OFFICE	CPT	RB	P-1 / P-2	SA-1	NOTE 1
01-11-05	WIC STORAGE	HSF	RB	P-1	SA-1	
01-11-06	WIC OFFICE	CPT	RB	P-1 / P-3	SA-1	NOTE 1
01-11-07	WIC OFFICE	CPT	RB	P-1 / P-2	SA-1	NOTE 1
01-11-08	HEALTH ED	HSF	RB	P-1	SA-1	
12-SPECIALTY CARE						
01-12-00	MEDS	HSF	IB	P-1	SA-1	
01-12-01	SPECIALTY EXAM	HSF	IB	P-1 / P-3 / WP-01	SA-1	NOTE 1
01-12-02	SPECIALTY EXAM	HSF	IB	P-1 / P-2 / WP-01	SA-1	NOTE 1
01-12-03	SPECIALTY EXAM	HSF	IB	P-1 / P-3 / WP-01	SA-1	NOTE 1
01-12-04	STORAGE	HSF	RB	P-1	SA-1	
01-12-05	OFFICE	CPT	RB	P-1 / P-3	SA-1	NOTE 1
01-12-06	SPEC PHY OFF	CPT	RB	P-1 / P-3	SA-1	NOTE 1
01-12-07	OPEN WORK	HSF	RB	P-1	SA-1	
13-PUBLIC HEALTH						
01-13-00	RECEPTION	CPT	RB	P-1 / P-2	SA-1	NOTE 1
01-13-02	WT AL	HSF	RB	P-1	GYP	
01-13-03	PATIENT TOILET	PTF-1	TR-2	PTW / AT	SA-1	NOTE 1
01-13-04	INFECTION CONTROL	HSF	IB	P-1 / P-2	SA-1	NOTE 1
01-13-05	PHN EXAM	HSF	IB	P-1 / P-3 / WP-01	SA-1	NOTE 1
01-13-06	PHN MED ADMIN	HSF	IB	P-1 / P-2	SA-1	NOTE 1
01-13-07	PHN OFFICE	CPT	RB	P-1 / P-3	SA-1	NOTE 1
01-13-08	OPEN WORK	HSF	RB	P-1	SA-1 / GYP	
01-13-09	COPY AL	HSF	RB	P-1	GYP	
01-13-10	PHN STORAGE	HSF	RB	P-1	SA-1	
01-13-11	PHN STORAGE	HSF	RB	P-1	SA-1	
01-13-12	PHN OPEN WORK	HSF	RB	P-1	SA-1	
14-COMMUNITY SPACES						
01-14-01	CONFERENCE ROOM	CPT	RB	P-1 / P-2	SA-2 / GYP	NOTES 1 & 2
01-14-02	CONFERENCE ROOM	CPT	RB	P-1 / P-2	SA-2 / GYP	NOTES 1 & 2
01-14-04	KITCHEN	HSF	IB	P-1	GYP	
15-PHARMACY						
01-15-00	WAITING	HSF	RB	P-1	SA-2	
01-15-01	RECEPTION	HSF	RB	P-1	SA-1 / GYP	NOTE 2
01-15-02	CONSULT	HSF	RB	P-1 / P-2	SA-1	NOTE 1
01-15-03	CONSULT	HSF	RB	P-1 / P-3	SA-1	NOTE 1
01-15-04	HC CONSULT	HSF	RB	P-1 / P-2	SA-1	NOTE 1
01-15-05	CONSULT	HSF	RB	P-1 / P-3	SA-1	NOTE 1
01-15-06	CONSULT	HSF	RB	P-1 / P-2	SA-1	NOTE 1
01-15-07	CONSULT	HSF	RB	P-1 / P-3	SA-1	NOTE 1
01-15-08	BREAK	HSF	RB	P-1	SA-1	
01-15-09	STAFF TOILET	PTF-1	RB	PTW / AT	SA-1	NOTE 1
01-15-10	STORAGE	HSF	RB	P-1	SA-1	
01-15-11	BREAK-OUT	HSF	RB	P-1	SA-1	
01-15-12	SUPERVISOR	CPT	RB	P-1 / P-3	SA-1	NOTE 1
01-15-13	STORAGE	HSF	RB	P-1	SA-1	
01-15-14	PHARMACY	HSF	RB	P-1	SA-1	
01-15-15	WAITING	HSF	RB	P-1	SA-2 / GYP	NOTE 2
16-ADMINISTRATION						
01-16-00	WAITING	HSF	RB	P-1 / P-3	SA-1	NOTE 1
01-16-01	RECEPTION	CPT	RB	P-1 / P-2	SA-1	NOTE 1
01-16-02	COPY/WORK ROOM	HSF	RB	P-1	SA-1	
01-16-03	STAFF TOILET	PTF-1	RB	PTW / AT	SA-1	NOTE 1
01-16-04	STORAGE	HSF	RB	P-1	SA-1	
01-16-05	OFFICE	CPT	RB	P-1 / P-3	SA-2	NOTE 1
01-16-06	KITCHENETTE	HSF	RB	P-1	SA-1	
01-16-07	CONFERENCE ROOM	CPT	RB	P-1 / P-3	SA-2 / GYP	NOTES 1 & 2
01-16-08	OFFICE	CPT	RB	P-1 / P-2	SA-1	NOTE 1
01-16-09	OFFICE	CPT	RB	P-1 / P-3	SA-1	NOTE 1
01-16-10	OFFICE	CPT	RB	P-1 / P-2	SA-1	NOTE 1
01-16-11	CIRCULATION	HSF	RB	P-1	SA-1 / GYP	NOTE 2
01-16-12	SECURITY	CPT	RB	P-1	SA-1	

ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALL	CEILING	REMARKS
CIRCULATION						
01-00-08	CIRCULATION	HSF	RB	P-1	SA-2 / GYP	NOTES 1 & 2
01-00-10	STAIR #2	ECS	RB	P-1	OPEN	
01-00-11	CIRCULATION	HSF	RB	P-1 / P-3	SA-2 / GYP	NOTES 1 & 2
01-00-12	CIRCULATION	HSF	RB	P-1	SA-2 / GYP	NOTE 2
01-00-13	CIRCULATION	HSF	RB	P-1	SA-1 / GYP	NOTE 2
01-00-14	CIRCULATION	HSF	RB	P-1	SA-1	NOTE 2
01-01-05	CIRCULATION	HSF	RB	P-1	SA-1	
01-07-02	CIRCULATION	HSF	RB	P-1	SA-1 / GYP	NOTE 2
01-09-01	CIRCULATION	HSF	RB	P-1	SA-1 / GYP	NOTE 2
01-11-00	CIRCULATION	HSF	RB	P-1	SA-1 / GYP	NOTE 2
01-13-01	CIRCULATION	HSF	RB	P-1	SA-1 / GYP	NOTE 2
01-14-03	STAIR #1	ECS	RB	P-1	SA-1	
01-19-06	STAIR #3	ECS	RB	P-1	SA-1	
LEVEL 02						
02-EMPLOYEE FACILITIES						
02-19-07	EXERCISE	RSF	RB	P-1 WDP	SA-1	NOTES 1 & 2
05-MEP SPACE						
02-05-10	IT	ECS	N / A	P-1	OPEN	
02-05-11	ELEC	ECS	RB	P-1	OPEN	
02-05-12	ELEC	ECS	RB	P-1	OPEN	
17-DENTAL						
02-17-00	WAITING	HSF	RB	P-1 / WDP	SA-2 / GYP	NOTES 1 & 2
02-17-01	RECEPTION	CPT	RB	P-1 / P-3	SA-1	NOTE 1
02-17-02	PATIENT TOILET	PTF-1	TR-2	PTW / AT	SA-1	NOTE 1
02-17-03	PATIENT TOILET	PTF-1	TR-2	PTW / AT	SA-1	NOTE 1
02-17-04	BREAK ROOM / CONF	RF	SB	P-1 / P-3	SA-1	NOTE 1
02-17-05	STAFF TOILET	PTF-1	TR-2	PTW / AT	SA-1	NOTE 1
02-17-06	STAFF TOILET	PTF-1	TR-2	PTW / AT	SA-1	NOTE 1
02-17-07	CIRCULATION	RF	SB	P-3	SA-1 / GYP	NOTE 2
02-17-08	PUMP	ECS	RB	P-1	SA-1	
02-17-09	TANK STORAGE	ECS	RB	P-1	SA-1	
02-17-10	CLOSED OPP	RF	SB	P-1	SA-1	
02-17-11	CLOSED OPP	RF	SB	P-1	SA-1	
02-17-12	OPEN OPP	RF	SB	P-1 / P-3	WDP /GYP	NOTES 1 & 2
02-17-13	OPEN OPP	RF	SB	P-3	WDP /GYP	NOTE 2
02-17-14	OPEN OPP	RF	SB	P-3	WDP /GYP	NOTE 2
02-17-15	OPEN OPP	RF	SB	P-3	WDP /GYP	NOTE 2
02-17-16	OPEN OPP	RF	SB	P-3	WDP /GYP	NOTE 2
02-17-17	OPEN OPP	RF	SB	P-3	WDP /GYP	NOTE 2
02-17-18	OPEN OPP	RF	SB	P-3	WDP /GYP	NOTE 2
02-17-19	OPEN OPP	RF	SB	P-3	WDP /GYP	NOTE 2
02-17-20	OPEN OPP	RF	SB	P-3	WDP /GYP	NOTE 2
02-17-21	OPEN OPP	RF	SB	P-3	WDP /GYP	NOTE 2
02-17-22	OPEN OPP	RF	SB	P-1 / P-3	WDP /GYP	NOTES 1 & 2
02-17-23	CIRCULATION	RF	SB	P-3	SA-1 / GYP	NOTE 2
02-17-24	LAB	RF	SB	P-1	SA-1	
02-17-25	ASST SUPER	CPT	RB	P-1, P-3	SA-1	
02-17-26	OPEN WORK AREA	CPT	RB	P-1 / P-3	SA-1	NOTE 1
02-17-27	CIRCULATION	RF	SB	P-1	SA-1 / GYP	NOTE 2
02-17-28	DENTAL DIRECTOR	CPT	RB	P-1 / P-3	SA-1	NOTE 1
02-17-29	STORAGE	RF	RB	P-1	SA-1	
02-17-30	EVS CLOSET	ECS	RB	WP-02	SA-1	
02-17-31	STORAGE	RF	RB	P-1	SA-1	
02-17-32	PATIENT TOILET	PTF-1	TR-2	PTW / AT	SA-1	NOTE 1
02-17-33	PATIENT TOILET	PTF-1	TR-2	PTW / AT	SA-1	NOTE 1
02-17-34	STORAGE	RF	SB	P-1	SA-1	
02-17-35	CLOSED OPP	RF	SB	P-1	SA-1	
02-17-36	CIRCULATION	RF	SB	P-1	SA-1 / GYP	NOTE 2
02-17-37	PAN	RF	SB	P-1	SA-1	
02-17-38	STORAGE	RF	RB	P-1	SA-1	
02-17-39	OFFICE MGR	CPT	RB	P-1	SA-1	
02-17-40	LOCKERS	RF	SB	P-1	SA-1	
02-17-41	PAN	RF	SB	P-1	SA-1	
02-17-42	CLEAN	RF	SB	P-1	SA-1	
02-17-43	SOILED	RF	SB	P-1	GYP	
02-17-44	OPEN WORK	RF	SB	P-1	GYP	
02-17-45	CIRCULATION	RF	SB	P-1	SA-1 / GYP	NOTE 2
02-17-46	STORAGE	RF	RB	P-1	SA-1	
02-17-47	OPEN WORK	RF	SB	P-1	SA-1 / GYP	NOTE 2
02-17-48	CLOSED OPP	RF	SB	P-1	SA-1	
02-17-49	CLOSED OPP	RF	SB	P-1	SA-1	
19-SHELL SPACE						
02-19-01	SHELL SPACE	ECS	RB	P-1	OPEN	
02-19-02	SHELL SPACE	ECS	RB	P-1	OPEN	
CIRCULATION						
02-18-00	CIRCULATION	HSF	RB	P-1 WDP	SA-1 / SA-2 / GYP	NOTES 1 & 2
02-18-02	STAIR #2	ECS	RB	P-1	SA-1	
02-19-08	STAIR #1	ECS	RB	P-1	OPEN	
02-19-09	STAIR #3	ECS	RB	P-1	OPEN	

FINISH REMARKS

1. SEE INTERIOR ELEVATIONS, TOILET ELEVATIONS & FINISH PLANS FOR FINISH LOCATIONS.
2. SEE REFLECTED CEILING PLANS FOR FINISH LOCATIONS & HEIGHTS.
3. MANUAL WINDOW SHADES TO BE PROVIDED AT ALL EXTERIOR WINDOW LOCATIONS.
4. SEE FINISH LEGEND FOR ELEVATOR FINISH LOCATIONS.

INTERIOR FINISH LEGEND

CEILINGS

SA-1:
MANUFACTURER: ARMSTRONG
SYSTEM: CALLA
TYPE: SQUARE LAY-IN TEGULAR
COLOR: WHITE
TEXTURE: SMOOTH
SIZE: 2' X 4'
SUSPENSION SYSTEM: PRELUDE 15/16" GRID

SA-2:
MANUFACTURER: ARMSTRONG
SYSTEM: CALLA
TYPE: SQUARE LAY-IN TEGULAR
COLOR: WHITE
TEXTURE: SMOOTH
SIZE: 2' X 2'
SUSPENSION SYSTEM: PRELUDE 15/16" GRID

WDP:
NOTE: STAIN/SIZE/SPECIES TO MATCH EXISTING

FLOORS

ENTRY MAT

EM:
MANUFACTURER: SHAW CONTRACT
COLLECTION: WELCOME TILE II
PRODUCT TYPE: CARPET TILE
STYLE NUMBER: ST031
COLOR: EBONY
THICKNESS: .157"
SIZE: 24" X 24"
INSTALLATION: MONOLITHIC

CARPET

CPT:
MANUFACTURER: SHAW CONTRACT GROUP
PRODUCT TYPE: CARPET TILE
COLLECTION: CHENILLE
STYLE: KNIT TILE
COLOR: COCO
STYLE NUMBER: 59492
SIZE: 24" X 24"
THICKNESS: .15"
INSTALLATION: ASHLAR

RUBBER SPORTS FLOORING

RSF:
MANUFACTURER: CAPRI - THE TREAD COLLECTIVE
COLLECTION: CAPRI FITNESS & REC
PRODUCT: RE-TIRE RECYCLED RUBBER - STAMINA
COLOR: ZEAL RT 4050
THICKNESS: 8 MM
TYPE: ROLL

PORCELAIN FLOOR TILE

PTF-1:
MANUFACTURER: CROSSVILLE STUDIOS
COLLECTION: ONYX
COLOR: DARK GREY
SIZE: 24" X 48"
THICKNESS: 10 MM
FINISH: MATTE
INSTALLATION: RUNNING BOND (OVERLAP SHOULD NOT EXCEED 33%)
GROUT: G (3/16" GROUT JOINT)

PTF-2:
MANUFACTURER: CROSSVILLE STUDIOS
COLLECTION: ONYX
COLOR: DARK GREY
SIZE: 2" X 2" MOSAIC ON 12" X 12" SHEET
THICKNESS: 10 MM
FINISH: MATTE
INSTALLATION: N/A
GROUT: G (3/16" GROUT JOINT)

HETEROGENEOUS SHEET FLOORING

HSF:
MANUFACTURER: SHANNON SPECIALTY FLOORS - THE TREAD COLLECTIVE
COLLECTION/ PRODUCT LINE: TEKNOFLOR
PRODUCT: FORESTSCAPES HPD
COLOR: DAWN 88063
SIZE: 6' W x 75' L ROLL
THICKNESS: 2.3 MM
INSTALLATION: TUF STIK 9000 ADHESIVE W/ MATCHING WELD & INTEGRAL BASE

RUBBER FLOORING

RF:
MANUFACTURER: NORA
PRODUCT: NORAPLAN SENTICA nTx
ADHESIVE: nTx
COLOR: 6506 CASHMERE
SIZE: 48" ROLL
THICKNESS: 3.0 MM
COLD WELD ROD: 5106

BASES

RUBBER BASE

RB:
MANUFACTURER: ROPPE
STYLE: PINNACLE
COLOR: BLACK BROWN 193
SIZE: 4"
NOTE: PROVIDE PREMOLDED INTERIOR & EXTERIOR CORNERS PER MANUFACTURER'S RECOMMENDATION

METAL BASE

MB:
MANUFACTURER: SCHLUTER
COLOR: STAINLESS
HEIGHT: 3 1/8"
NOTE: COORDINATING INSIDE/OUTSIDE CORNER/END CAP TO BE USED PER MANUFACTURER'S RECOMMENDATION

INTEGRAL BASE

IB:
MANUFACTURER: SHANNON SPECIALTY FLOORS - THE TREAD COLLECTIVE
COLLECTION/ PRODUCT LINE: TEKNOFLOR
PRODUCT: FORESTSCAPES HPD
COLOR: DAWN 88063
SIZE: 6' W x 75' L ROLL
THICKNESS: 2.3 MM
INSTALLATION: TUF STIK 9000 ADHESIVE W/ MATCHING WELD

SANITARY BASE

SB:
MANUFACTURER: NORA
PRODUCT: NORAPLAN SENTICA
COLOR: 6506 CASHMERE
COLD WELD ROD: 5106

GROUT

G-1:
MANUFACTURER: MAPIE
COLOR: IVORY 39
TYPE: SANDED

G-2:
MANUFACTURER: MAPIE
COLOR: BLACK 10
TYPE: SANDED

WALLS

WOOD PANEL

WDP:
NOTE: STAIN/SIZE/SPECIES TO MATCH EXISTING

PORCELAIN TILE WALL

PTW:
MANUFACTURER: CROSSVILLE STUDIOS
COLLECTION: ONYX
COLOR: WHITE
SIZE: 24" X 48"
THICKNESS: 10 MM
FINISH: 30% POLISHED 70% MATTE - RANDOM BLEND
INSTALLATION: RUNNING BOND (OVERLAP SHOULD NOT EXCEED 33%)
GROUT: G (3/16" GROUT JOINT)

ACCENT TILE

AT:
MANUFACTURER: CROSSVILLE STUDIOS
COLLECTION: ONYX
COLOR: WHITE
SIZE: 3" X 6" BRICK MOSAIC
THICKNESS: 10 MM
FINISH: POLISHED
INSTALLATION: HORIZONTAL
GROUT: G

VINYL GRAPHIC

VG:
MANUFACTURER: KOROSEAL
COLLECTION: CUSTOM VINYL
COLOR: BLACK
NOTE: COORDINATE SYLLABARY SIZE & CONTENT W/ OWNER

GLAZING SYSTEM

GL-1:
MANUFACTURER: C.R.LAURENCE CO.
PRODUCT: WOOD END SHOWCASE FLAT REAR TRACK
MATERIAL: SATIN ANODIZED
PRODUCT NUMBER: D3276A

GLAZING SYSTEM

GL-1:
MANUFACTURER: C.R. LAURENCE CO.
PRODUCT: WOOD END SHOWCASE FLAT REAR TRACK
MATERIAL: SATIN ANODIZED ALUMINUM
PRODUCT NUMBER: D3276A

PAINT

P-1:
MANUFACTURER: SHERWIN WILLIAMS
PRIMER: PROMAR 200 ZERO VOC INTERIOR LATEX, B28W2600
FIRST COAT: PRO-INDUSTRIAL PRE-CATYLIZED WATER BASED EPOXY EG-SHEL, B73-360 SERIES
SECOND COAT: PRO-INDUSTRIAL PRE-CATYLIZED WATER BASED EPOXY EG-SHEL, B73-360 SERIES
COLOR: BALANCED BEIGE SW 7037
SHEEN: EG-SHEL

P-2:
MANUFACTURER: SHERWIN WILLIAMS
PRIMER: PROMAR 200 ZERO VOC INTERIOR LATEX, B28W2600
FIRST COAT: PRO-INDUSTRIAL PRE-CATYLIZED WATER BASED EPOXY EG-SHEL, B73-360 SERIES
SECOND COAT: PRO-INDUSTRIAL PRE-CATYLIZED WATER BASED EPOXY EG-SHEL, B73-360 SERIES
COLOR: BALANCED BEIGE SW 7037
COLOR: FLOWER POT SW 6334
SHEEN: EG-SHEL

P-3:
MANUFACTURER: SHERWIN WILLIAMS
PRIMER: PROMAR 200 ZERO VOC INTERIOR LATEX, B28W2600
FIRST COAT: PRO-INDUSTRIAL PRE-CATYLIZED WATER BASED EPOXY EG-SHEL, B73-360 SERIES
SECOND COAT: PRO-INDUSTRIAL PRE-CATYLIZED WATER BASED EPOXY EG-SHEL, B73-360 SERIES
COLOR: LOYAL BLUE SW6510
SHEEN: EG-SHEL

P-4:
MANUFACTURER: SHERWIN WILLIAMS
PRIMER: HARMONY INTERIOR LATEX PRIMER, B11
FIRST COAT: HARMONY INTERIOR LATEX FLAT, B5 SERIES
SECOND COAT: HARMONY INTERIOR LATEX FLAT, B5 SERIES
COLOR: NATURAL CHOICE SW 7011
SHEEN: FLAT

P-5:
MANUFACTURER: SHERWIN WILLIAMS
PRIMER: PRO INDUSTRIAL PRO-CRYL UNIVERSAL PRIMER
FIRST COAT: PRO INDUSTRIAL ACRYLIC SEMI-GLOSS, B66-650 SERIES
SECOND COAT: PRO INDUSTRIAL ACRYLIC SEMI-GLOSS, B66-650 SERIES
COLOR: SEALSKIN SW 7675
SHEEN: SEMI-GLOSS

MILLWORK

SOLID SURFACE

SS:
MANUFACTURER: MEGANITE
COLOR: ROCKY ROAD GRANITE
PRODUCT NUMBER: 729AR
THICKNESS: 1/2"

PLASTIC LAMINATE

PL-1:
MANUFACTURER: WILSONART
COLLECTION: HIGH PRESSURE LAMINATE
COLOR: WAREHOUSE OAK
PRODUCT NUMBER: 7969-K12
FINISH: 151 SOFT GRAIN
INSTALLATION: VERTICAL GRAIN INSTALLATION
EDGE BANDING: WAREHOUSE OAK 7969-K12

PL-2:
MANUFACTURER: WILSONART
COLLECTION: STANDARD LAMINATE
COLOR: TUMBLED MOSAIC
PRODUCT NUMBER: 4893-60
FINISH: 60 - MATTE
EDGE BANDING: PEBBLED MOSAID 4893-60

WALL PROTECTION

NOTE: ALL CORNER GUARDS & END GUARDS TO BE MOUNTED 6" AFF.

EG:
MANUFACTURER: KOROGARD - WALL PROTECTION
PRODUCT: SURFACE MOUNTED END GUARD
SERIES: G201 & G101
MATERIAL: VINYL
COLOR: OYSTER
NOTE: VERIFY LENGTH & COLOR MATCH EXISTING

CG:
MANUFACTURER: KOROGARD - WALL PROTECTION
PRODUCT: SURFACE MOUNTED CORNER GUARD
SERIES: G200
MATERIAL: VINYL
COLOR: OYSTER
SIZE: 2"
NOTE: VERIFY LENGTH & COLOR MATCH EXISTING

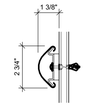
CH:
MANUFACTURER: KOROGARD - WALL PROTECTION
PRODUCT: SURFACE MOUNTED CHAIR RAIL
SERIES: CH20
MATERIAL: VINYL
COLOR: OYSTER
SIZE: 2"

HIWC:
MANUFACTURER: KOROGARD - WALL PROTECTION
PRODUCT: HIGH IMPACT WALL COVERING
COLOR: QUARRY
TEXTURE: SUEDE
SIZE: 4'X8' SHEETS

**DOORS

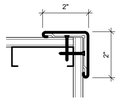
WALL & CORNER GUARD SCHEDULE SCALE: 3" = 1'-0"

NOTE: MOUNTING HEIGHT & OVERALL LENTH OF ALL CORNER GUARDS & END GUARDS TO MATCH EXISITING



CH

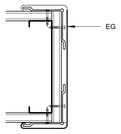
CHAIR RAIL



EG - HEIGHT TO MATCH EXISTING

END GUARD

SURFACE MOUNTED - NOT FIRE RATED
SCALE: NTS

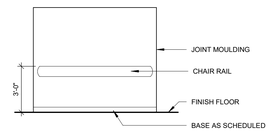


CG - HEIGHT TO MATCH EXISTING

CORNER GUARD

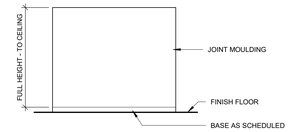
SURFACE MOUNTED - NOT FIRE RATED
SCALE: NTS

WALL PROTECTION ELEVATIONS



WP-01

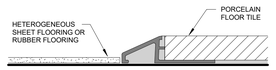
WALL PROTECTION



WP-02

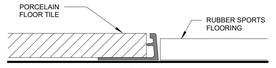
WALL PROTECTION

TRANSITIONS



T1

(SCHLUTER RENO-U)



T2

(SCHLUTER SCHIENE)

T3

(SCHLUTER RENO-U)

T4

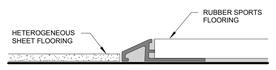
(SCHLUTER RENO-U)

T5

(SCHLUTER SCHIENE)

T6

(SCHLUTER RENO-U)



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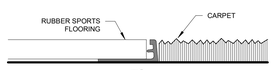
(SCHLUTER RENO-U)



T8

(SCHLUTER SCHIENE)

James R. Childers Architect, Inc.
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479-783-2480
www.childersarchitect.com

PROFESSIONAL SEAL:

12-06-2019

CONSULTANT LOGO:

CLIENT:

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER:

A7.01

WALL PROTECTION, TRANSITION & THRESHOLD DETAILS

PLAN NORTH / TRUE NORTH

01 ENLARGED FINISH PLAN - LEVEL 01 SECTOR 01

1/8" = 1'-0"

FINISH TAG LEGEND

ROOM NAME — ROOM
ROOM NUMBER — 100
FLOOR FINISH — CPTX
BASE FINISH — RBX
TYP WALL FINISH — PXX
CEILING — ACT
REMARKS — 1

REFER TO INTERIOR FINISH LEGEND FOR DEFINITION OF MATERIAL DESIGNATIONS

FINISH TAG REMARKS

1. SEE FINISH PLANS & ENLARGED FLOOR PATTERN DETAILS FOR FINISH LOCATIONS.
2. SEE REFLECTED CEILING PLANS FOR FINISH LOCATIONS & HEIGHTS.
3. SEE TOILET ELEVATIONS & FINISH PLANS FOR WALL FINISH LOCATIONS.
4. SEE FINISH LEGEND FOR ELEVATOR FINISH LOCATIONS.

GENERAL NOTES - FINISH PLAN

1. ALL GYPSUM BOARD WALLS TO BE PAINTED P-1 U.N.O.
2. ALL GYPSUM BOARD CEILINGS TO BE PAINTED P-4 U.N.O.
3. SEE SHEETS A1.40, A8.20-21, A8.20 TOILET & SHOWER PLANS / ELEVATIONS / ACCESSORIES.
4. SEE INTERIOR FINISH LEGEND FOR THRESHOLD & TRANSITION DETAILS.
5. SEE INTERIOR ELEVATIONS & MILLWORK ELEVATIONS FOR MILLWORK FINISH TYPES & LOCATIONS.
6. SEE INTERIOR ELEVATIONS & WALL PROTECTION ELEVATIONS FOR WALL PROTECTION FINISH TYPES & LOCATIONS.
7. COORDINATE ALL FLOOR DRAINS, SINKS & CLEAN OUTS W/ PLUMBING - IF DISCREPANCIES OCCUR NOTIFY ARCHITECT.
8. WELDING ROD AT WELDED SEAMS SHALL MATCH THE DARKER OF THE COLORS AT SEAMS THAT DIVIDE TWO COLORS U.N.O.
9. ALL RUBBER BASE TO EXTEND TO WALL BEHIND EQUIPMENT REGARDLESS OF EQUIPMENT ELEVATION & ROTATION.
10. ALL FLOOR FINISHES TO EXTEND UNDERNEATH MILLWORK.
11. MANUAL WINDOW SHADES TO BE PROVIDED AT ALL EXTERIOR WINDOW LOCATIONS U.N.O.
12. COORDINATE ALL FLOOR RECEPTACLES W/ ELECTRICAL - IF DISCREPANCIES OCCUR NOTIFY ARCHITECT.

FINISH MATERIALS LEGEND

AT	ACCENT TILE	PL	PLASTIC LAMIINATE
CG	CORNER GUARD	PTF	PORCELAIN FLOOR TILE
CH	CHAIR RAIL	PTW	PORCELAIN WALL TILE
CPT	CARPET	RB	RUBBER BASE
DH	DOOR HARDWARE	RF	RUBBER FLOOR
ECS	EXPOSED CONCRETE - SEALED	RSF	RUBBER SPORTS FLOORING
EG	END GUARD	SA	SUSPENDED ACCOUSTIC
EM	ENTRY MAT	SB	SANITARY BASE
G	GROUT	SS	SOLID SURFACE
GYP	GYPSUM BOARD	T	TRANSITIONS
HIWC	HIGH MPACT WALL COVERING	TH	THRESHOLDS
HM	HOLLOW METAL	TP	TOILET PARTITIONS
HSF	HETEROGENEOUS SHEET FLOORING	TR	TRIM
IB	INTEGRAL BASE	WD	WOOD DOOR
MB	METAL BASE	WDP	WOOD PANELING
P	PAINT	WS	WINDOW SHADES

FLOOR PATTERN LEGEND

HSF	HETEROGENEOUS SHEET FLOORING
RF	RUBBER FLOORING
CPT	CARPET TILE
EM	ENTRY MAT
RSF	RUBBER SPORTS FLOOR
ECS	EXPOSED CONCRETE - SEALED
PTF-1	PORCELAIN FLOOR TILE
PTF-2	PORCELAIN FLOOR TILE

THRESHOLD & TRANSITION LEGEND

TH1	METAL THRESHOLD
TH2	MARBLE THRESHOLD
T1	METAL TRANSITION
T2	METAL TRANSITION
T3	METAL TRANSITION
T4	METAL TRANSITION
T5	METAL TRANSITION
T6	METAL TRANSITION
T7	METAL TRANSITION
T8	METAL TRANSITION

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PROFESSIONAL SEAL:

STATE OF OKLAHOMA — JAMES R. CHILDERS — REGISTERED ARCHITECT

12-06-2019

CONSULTANT LOGO:

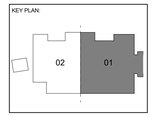
CLIENT:

THE CHEROKEE NATION — TRIBE OF INDIANS — SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

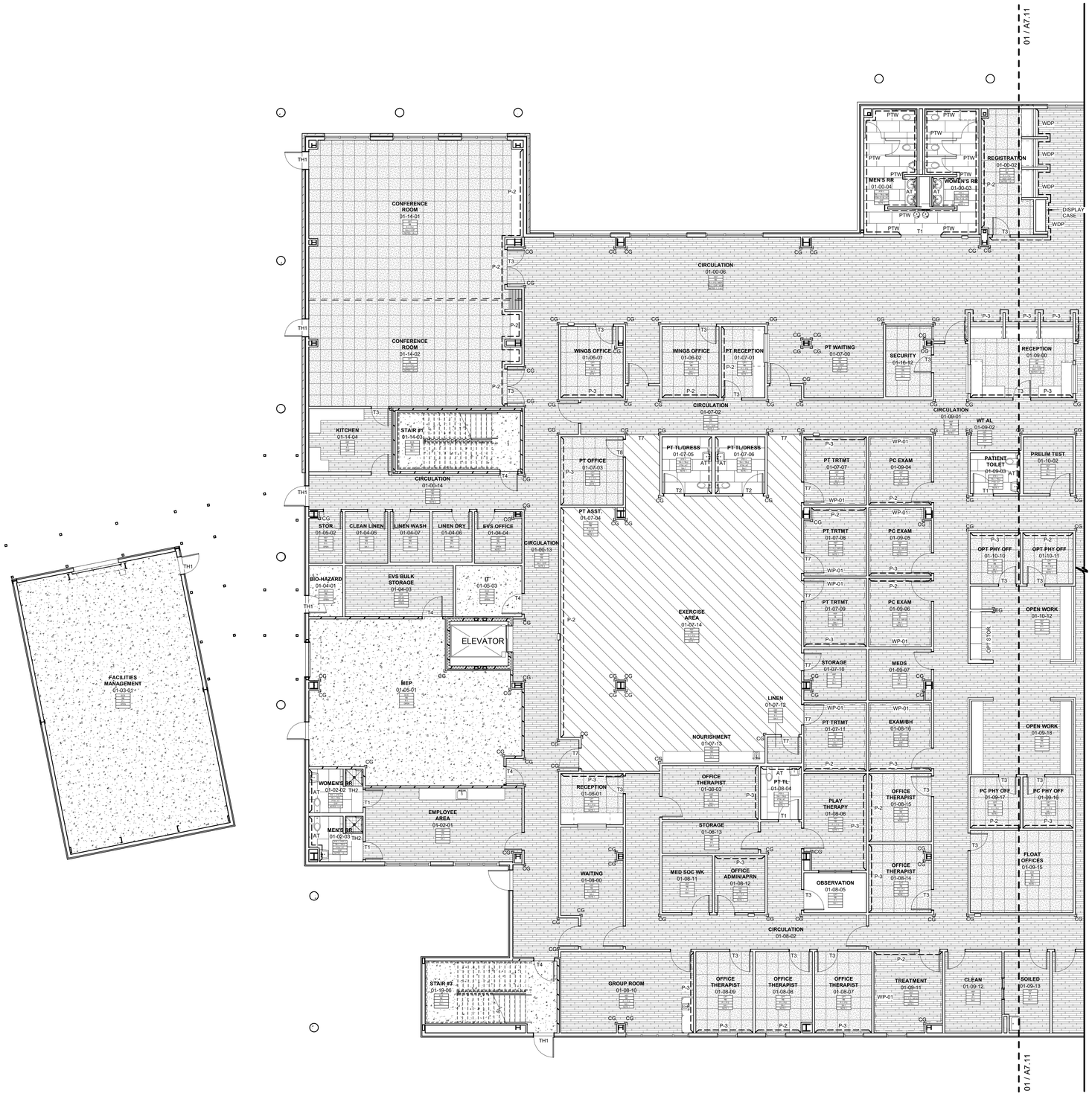
REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

A7.11

FINISH PLAN LEVEL 01 SECTOR 01



01 ENLARGED FINISH PLAN - LEVEL 01 SECTOR 02
1/8" = 1'-0"

PLAN NORTH

TRUE NORTH

FINISH TAG LEGEND

ROOM NAME — **ROOM**
ROOM NUMBER — 100
FLOOR FINISH — CPTX
BASE FINISH — RBX
TYP WALL FINISH — PXX
CEILING — ACT
REMARKS — 1

REFER TO INTERIOR FINISH LEGEND FOR DEFINITION OF MATERIAL DESIGNATIONS

FINISH TAG REMARKS

1. SEE FINISH PLANS & ENLARGED FLOOR PATTERN DETAILS FOR FINISH LOCATIONS.
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GENERAL NOTES - FINISH PLAN

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FINISH MATERIALS LEGEND

AT	ACCENT TILE	PL	PLASTIC LAMINATE
CG	CORNER GUARD	PTF	PORCELAIN FLOOR TILE
CH	CHAIR RAIL	PTW	PORCELAIN WALL TILE
CPT	CARPET	RB	RUBBER BASE
DH	DOOR HARDWARE	RF	RUBBER FLOOR
ECS	EXPOSED CONCRETE - SEALED	RSF	RUBBER SPORTS FLOORING
EG	END GUARD	SA	SUSPENDED ACCOUSTIC
EM	ENTRY MAT	SB	SANITARY BASE
G	GROUT	SS	SOLID SURFACE
GYP	GYPSUM BOARD	T	TRANSITIONS
HIWC	HIGH MPACT WALL COVERING	TH	THRESHOLDS
HM	HOLLOW METAL	TP	TOILET PARTITIONS
HSF	HETEROGENEOUS SHEET FLOORING	TR	TRIM
IB	INTEGRAL BASE	WD	WOOD DOOR
MB	METAL BASE	WDP	WOOD PANELING
P	PAINT	WS	WINDOW SHADES

FLOOR PATTERN LEGEND

HSF	HETEROGENEOUS SHEET FLOORING
RF	RUBBER FLOORING
CPT	CARPET TILE
EM	ENTRY MAT
RSF	RUBBER SPORTS FLOOR
ECS	EXPOSED CONCRETE - SEALED
PTF-1	PORCELAIN FLOOR TILE
PTF-2	PORCELAIN FLOOR TILE

THRESHOLD & TRANSITION LEGEND

TH1	METAL THRESHOLD
TH2	MARBLE THRESHOLD
T1	METAL TRANSITION
T2	METAL TRANSITION
T3	METAL TRANSITION
T4	METAL TRANSITION
T5	METAL TRANSITION
T6	METAL TRANSITION
T7	METAL TRANSITION
T8	METAL TRANSITION

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12-06-2019

CONSULTANT LOGO:

CLIENT:
THE CHEROKEE NATION — TRIBAL SEAL OF THE CHEROKEE NATION — SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

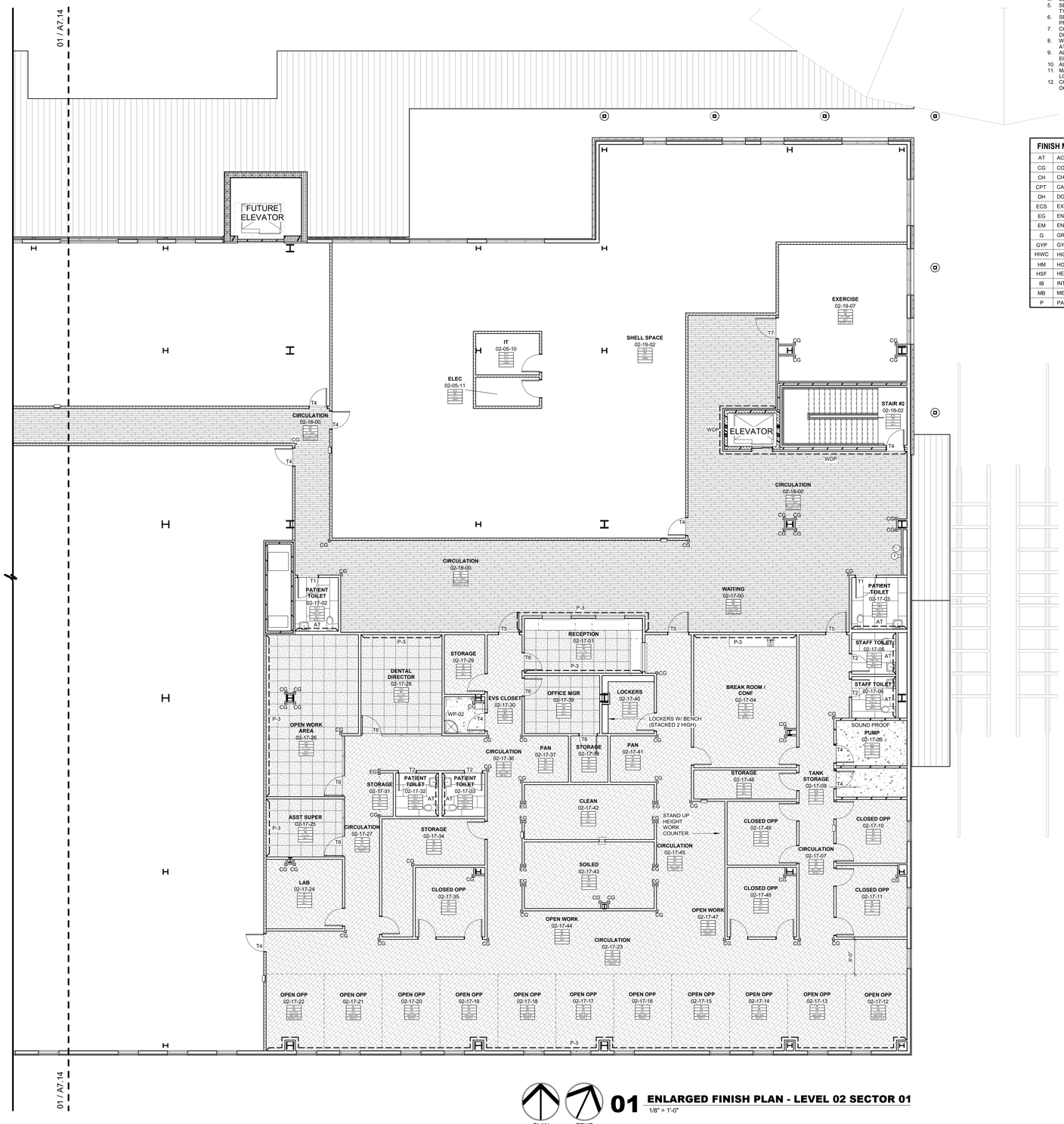
KEY PLAN:
02
01

PROJECT PHASE:
BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: A7.12
FINISH PLAN LEVEL 01 SECTOR 02



PLAN NORTH

TRUE NORTH

01 ENLARGED FINISH PLAN - LEVEL 02 SECTOR 01

1/8" = 1'-0"

FINISH TAG LEGEND

ROOM NAME — **ROOM**
ROOM NUMBER — 100
FLOOR FINISH — CPTX
BASE FINISH — RBX
TYP WALL FINISH — PXX
CEILING — ACT
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DH	DOOR HARDWARE	RF	RUBBER FLOOR
ECS	EXPOSED CONCRETE - SEALED	RSF	RUBBER SPORTS FLOORING
EG	END GUARD	SA	SUSPENDED ACCOUSTIC
EM	ENTRY MAT	SB	SANITARY BASE
G	GROUT	SS	SOLID SURFACE
GYP	GYPSUM BOARD	T	TRANSITIONS
HIWC	HIGH MPACT WALL COVERING	TH	THRESHOLDS
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HSF	HETEROGENEOUS SHEET FLOORING	TR	TRIM
IB	INTEGRAL BASE	WD	WOOD DOOR
MB	METAL BASE	WDP	WOOD PANELING
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RSF	RUBBER SPORTS FLOOR
ECS	EXPOSED CONCRETE - SEALED
PTF-1	PORCELAIN FLOOR TILE
PTF-2	PORCELAIN FLOOR TILE

THRESHOLD & TRANSITION LEGEND

TH1	METAL THRESHOLD
TH2	MARBLE THRESHOLD
T1	METAL TRANSITION
T2	METAL TRANSITION
T3	METAL TRANSITION
T4	METAL TRANSITION
T5	METAL TRANSITION
T6	METAL TRANSITION
T7	METAL TRANSITION
T8	METAL TRANSITION

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12-06-2019

CONSULTANT LOGO:

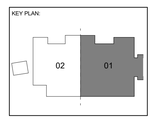
CLIENT:

THE CHEROKEE NATION — EST. OF THE — SEPT. 6, 1839 — NEW ECHOTA

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS

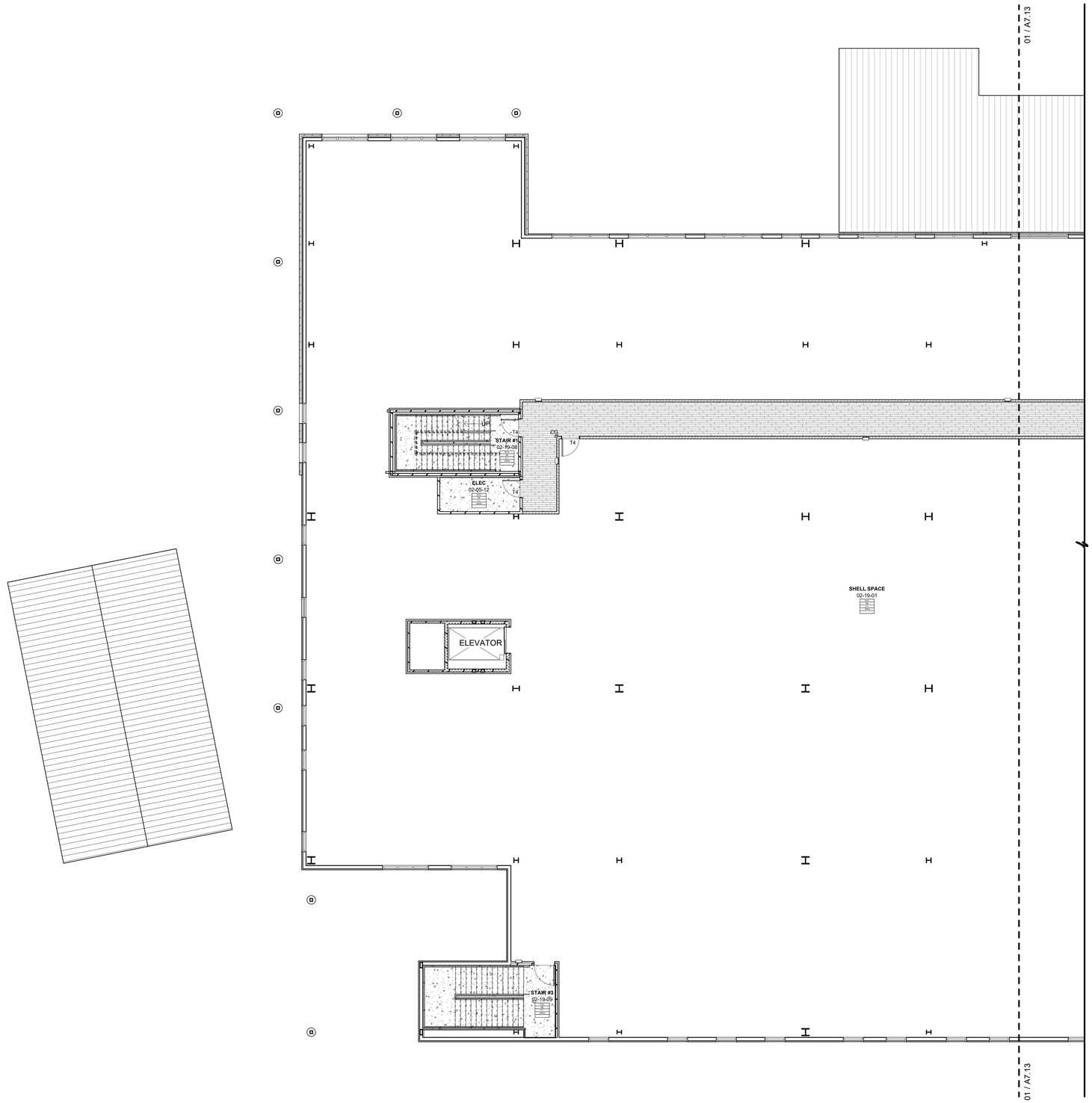
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: A7.13

FINISH PLAN LEVEL 02 SECTOR 01



01 ENLARGED FINISH PLAN - LEVEL 02 SECTOR 02

1/8" = 1'-0"

PLAN NORTH

TRUE NORTH

FINISH TAG LEGEND

ROOM NAME → **ROOM**
ROOM NUMBER → 100
FLOOR FINISH → CPTX
BASE FINISH → RBX
TYP WALL FINISH → PXX
CEILING → ACT
REMARKS → 1

REFER TO INTERIOR FINISH LEGEND FOR DEFINITION OF MATERIAL DESIGNATIONS

FINISH TAG REMARKS

1. SEE FINISH PLANS & ENLARGED FLOOR PATTERN DETAILS FOR FINISH LOCATIONS.
2. SEE REFLECTED CEILING PLANS FOR FINISH LOCATIONS & HEIGHTS.
3. SEE TOILET ELEVATIONS & FINISH PLANS FOR WALL FINISH LOCATIONS.
4. SEE FINISH LEGEND FOR ELEVATOR FINISH LOCATIONS.

GENERAL NOTES - FINISH PLAN

1. ALL GYPSUM BOARD WALLS TO BE PAINTED P-1 U.N.O.
2. ALL GYPSUM BOARD CEILINGS TO BE PAINTED P-4 U.N.O.
3. SEE SHEETS A1.40, A6.20-21, A8.20 TOILET & SHOWER PLANS / ELEVATIONS / ACCESSORIES.
4. SEE INTERIOR FINISH LEGEND FOR THRESHOLD & TRANSITION DETAILS.
5. SEE INTERIOR ELEVATIONS & MILLWORK ELEVATIONS FOR MILLWORK FINISH TYPES & LOCATIONS.
6. SEE INTERIOR ELEVATIONS & WALL PROTECTION ELEVATIONS FOR WALL PROTECTION FINISH TYPES & LOCATIONS.
7. COORDINATE ALL FLOOR DRAINS, SINKS & CLEAN OUTS W/ PLUMBING - IF DISCREPANCIES OCCUR NOTIFY ARCHITECT.
8. WELDING ROD AT WELDED SEAMS SHALL MATCH THE DARKER OF THE COLORS AT SEAMS THAT DIVIDE TWO COLORS U.N.O.
9. ALL RUBBER BASE TO EXTEND TO WALL BEHIND EQUIPMENT REGARDLESS OF EQUIPMENT ELEVATION & ROTATION.
10. ALL FLOOR FINISHES TO EXTEND UNDERNEATH MILLWORK.
11. MANUAL WINDOW SHADES TO BE PROVIDED AT ALL EXTERIOR WINDOW LOCATIONS U.N.O.
12. COORDINATE ALL FLOOR RECEPTACLES W/ ELECTRICAL - IF DISCREPANCIES OCCUR NOTIFY ARCHITECT.

FINISH MATERIALS LEGEND

AT	ACCENT TILE	PL	PLASTIC LAMINATE
CG	CORNER GUARD	PTF	PORCELAIN FLOOR TILE
CH	CHAIR RAIL	PTW	PORCELAIN WALL TILE
CPT	CARPET	RB	RUBBER BASE
DH	DOOR HARDWARE	RF	RUBBER FLOOR
ECS	EXPOSED CONCRETE - SEALED	RSF	RUBBER SPORTS FLOORING
EG	END GUARD	SA	SUSPENDED ACCOUSTIC
EM	ENTRY MAT	SB	SANITARY BASE
G	GROUT	SS	SOLID SURFACE
GYP	GYPSUM BOARD	T	TRANSITIONS
HWC	HIGH MPACT WALL COVERING	TH	THRESHOLDS
HM	HOLLOW METAL	TP	TOILET PARTITIONS
HSF	HETEROGENEOUS SHEET FLOORING	TR	TRIM
IB	INTEGRAL BASE	WD	WOOD DOOR
MB	METAL BASE	WDP	WOOD PANELING
P	PAINT	WS	WINDOW SHADES

FLOOR PATTERN LEGEND

HSF	HETEROGENEOUS SHEET FLOORING
RF	RUBBER FLOORING
CPT	CARPET TILE
EM	ENTRY MAT
RSF	RUBBER SPORTS FLOOR
ECS	EXPOSED CONCRETE - SEALED
PTF-1	PORCELAIN FLOOR TILE
PTF-2	PORCELAIN FLOOR TILE

THRESHOLD & TRANSITION LEGEND

TH1	METAL THRESHOLD
TH2	MARBLE THRESHOLD
T1	METAL TRANSITION
T2	METAL TRANSITION
T3	METAL TRANSITION
T4	METAL TRANSITION
T5	METAL TRANSITION
T6	METAL TRANSITION
T7	METAL TRANSITION
T8	METAL TRANSITION

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PROFESSIONAL SEAL:

STATE OF OKLAHOMA — JAMES R. CHILDERS — REGISTERED ARCHITECT

12-06-2019

CONSULTANT LOGO:

CLIENT:

THE CHEROKEE NATION — SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

02 01

PROJECT PHASE:

BID PACKAGE 02

REVISIONS

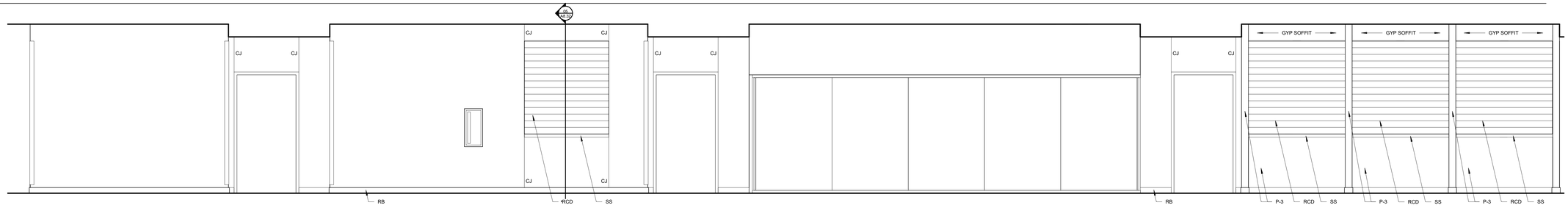
#	DATE	DESCRIPTION

DATE: 12-06-19

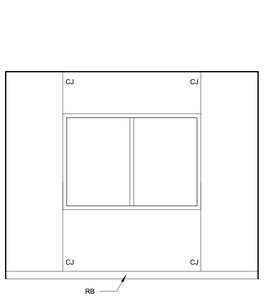
JOB NUMBER: 18-01.01

SHEET NUMBER: A7.14

FINISH PLAN LEVEL 02 SECTOR 02



09 CIRCULATION 01-00-06 - SOUTH
3/8" = 1'-0"



08 A - IE - OBSERVATION 01-08-05
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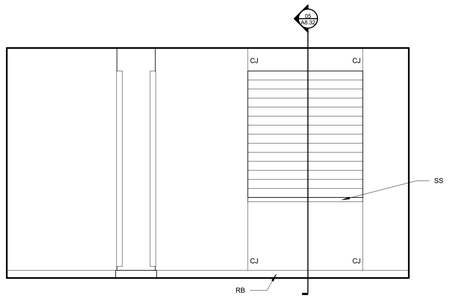

07 01-16-01 RECEPTION
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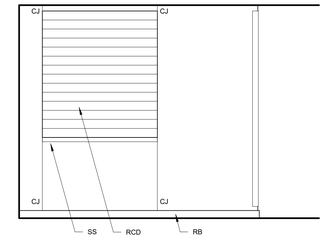
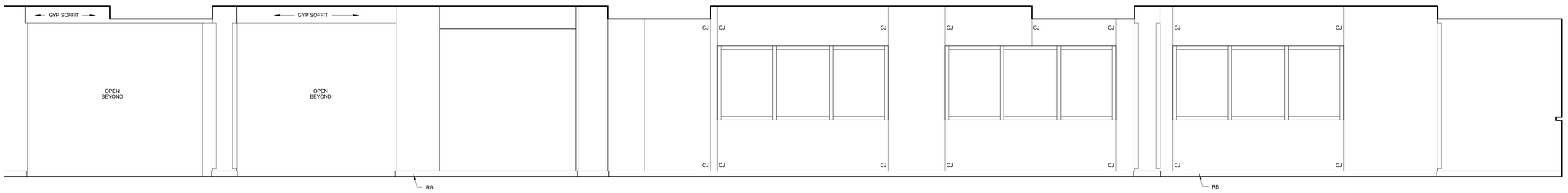


06 CIRCULATION 01-00-06 - EAST
3/8" = 1'-0"



05 CIRCULATION 01-00-06 - NORTH - PARTIAL
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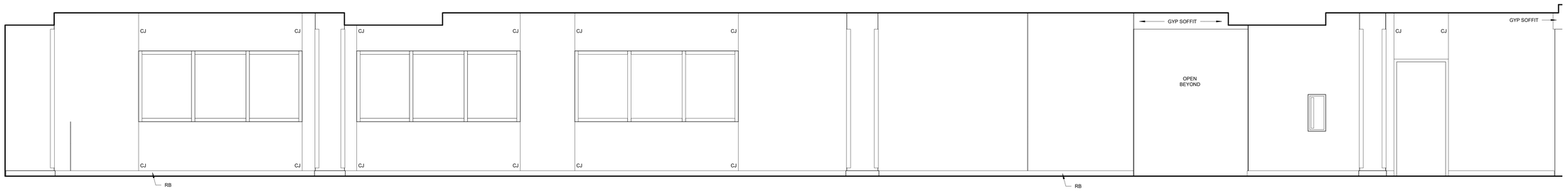

04 CIRCULATION 01-00-06 - NORTH - PARTIAL
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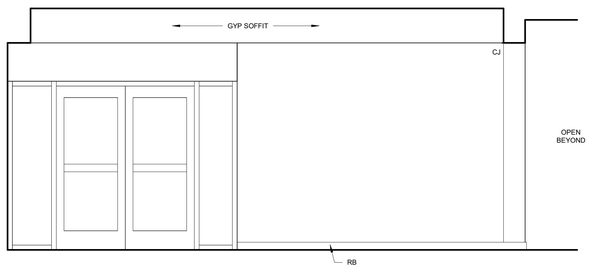

03 LOBBY 01-00-01 - PARTIAL
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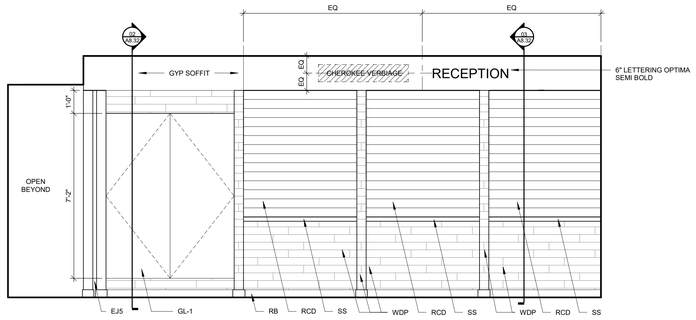

02 LOBBY 01-00-01 - PARTIAL
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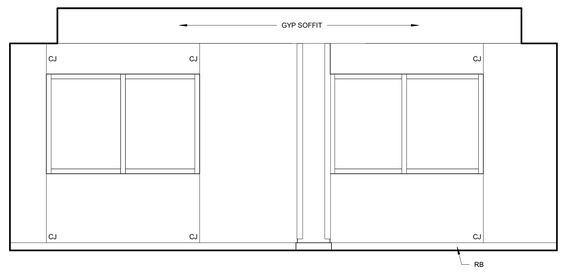

01 LOBBY 01-00-01
3/8" = 1'-0"

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STATE OF OKLAHOMA
JAMES R. CHILDERS
REGISTERED ARCHITECT

12-06-2019

CONSULTANT LOGO:

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

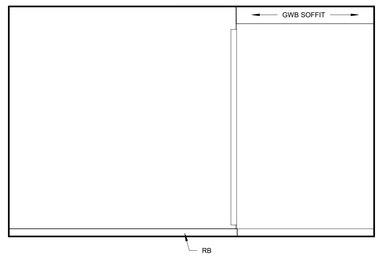
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
A8.01

INTERIOR ELEVATIONS



11 **CIRCULATION 02-18-00 WEST**
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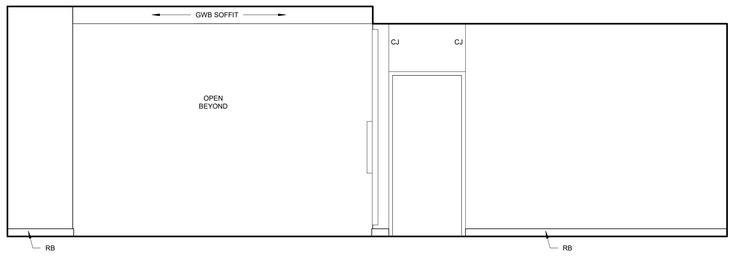
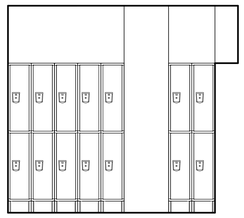
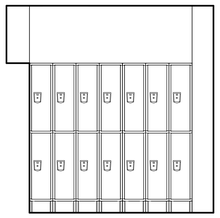


10 **CIRCULATION 02-18-00 WEST**
3/8" = 1'-0"

09 **CIRCULATION 02-18-00 SOUTH**
3/8" = 1'-0"



08 **LOCKERS 02-17-40 WEST**
3/8" = 1'-0"



07 **LOCKERS 02-17-40 NORTH**
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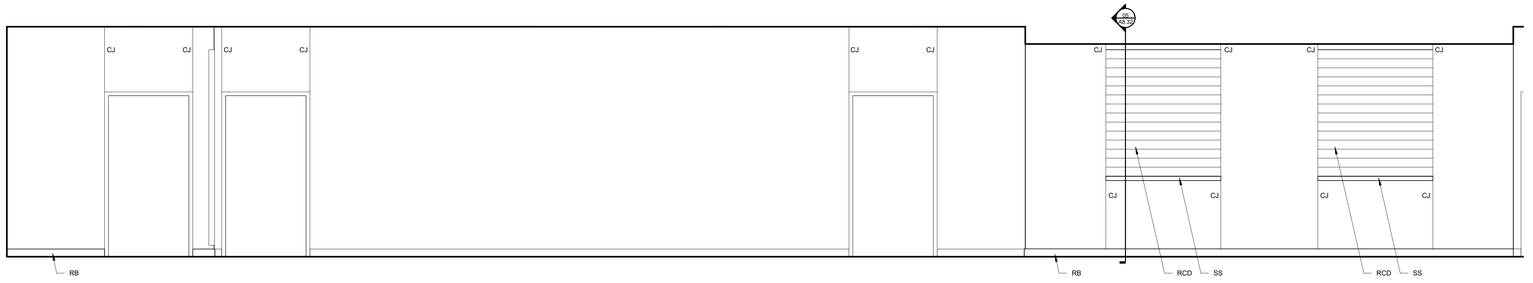
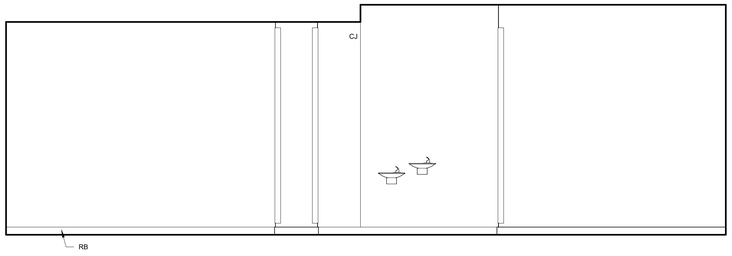


06 **CIRCULATION 02-18-00 SOUTH**
3/8" = 1'-0"



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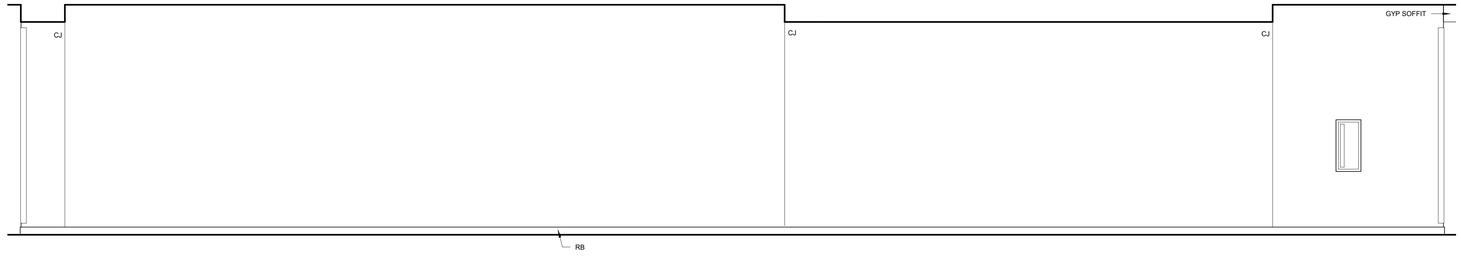

04 **CIRCULATION 02-18-00 - NORTH**
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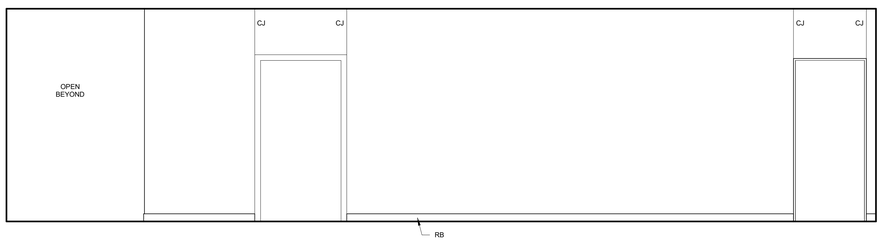

03 **CIRCULATION 02-18-00 NORTH**
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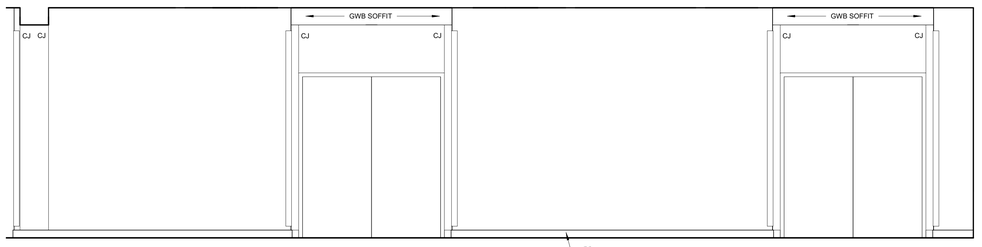

02 **CIRCULATION 01-00-06 WEST**
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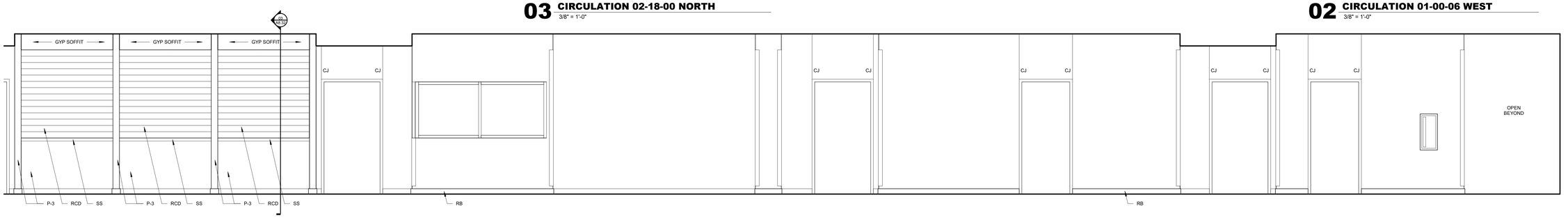

01 **CIRCULATION 01-00-06 SOUTH**
3/8" = 1'-0"

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JAMES R. CHILDERS
REGISTERED ARCHITECT

12-06-2019

CONSULTANT LOGO:

CLIENT:

THE CHEROKEE NATION
SEAL OF
SEPT. 6, 1839
1ST YEAR

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

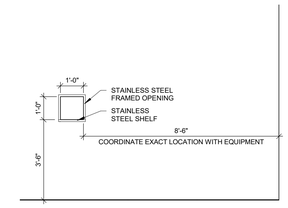
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

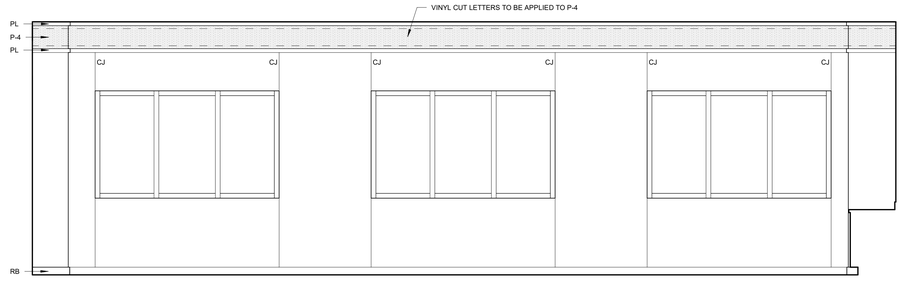
DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
A8.02

INTERIOR ELEVATIONS



05 ELEVATION AT SOILED PASS THRU
3/8" = 1'-0"



04 CONFERENCE ROM 01-14-01
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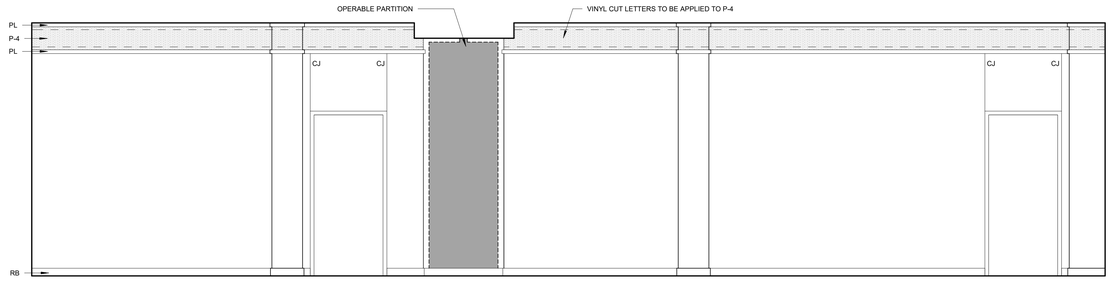

03 CONFERENCE ROOM 01-14-01/02
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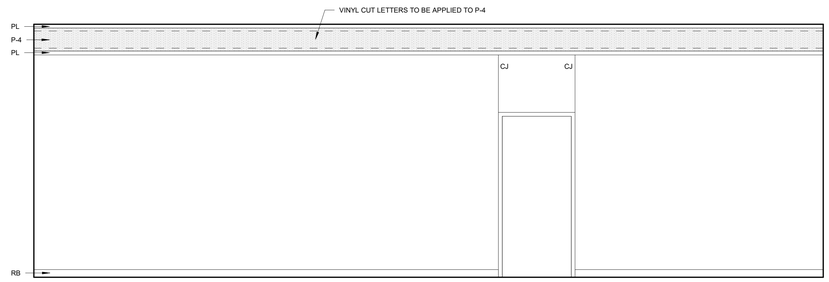

02 CONFERENCE ROOM 01-14-02
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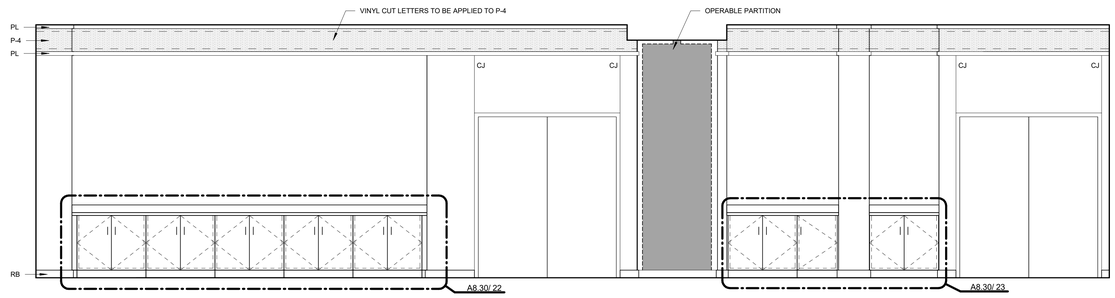

01 CONFERENCE ROOM 01-14-01/02
3/8" = 1'-0"

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KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

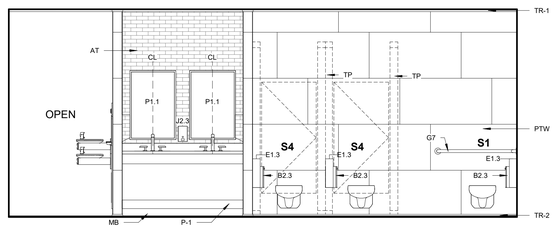
DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
A8.03

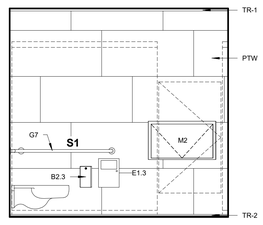
INTERIOR ELEVATIONS

GENERAL NOTES

1. REFER TO SHEET A6.20 FOR STANDARD LAYOUTS & TOILET ACCESSORY INFORMATION.
2. REFER TO A7.00 FOR FINISH INFORMATION.



29 TOILET ELEVATION
3/8" = 1'-0" 01-00-03, 01-00-04



28 TOILET ELEVATION
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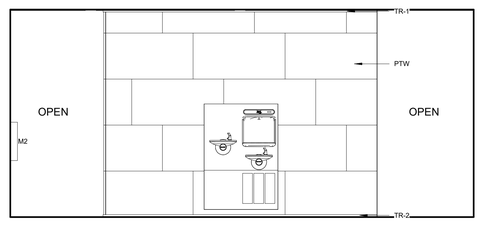

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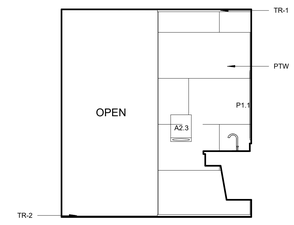

26 TOILET ELEVATION
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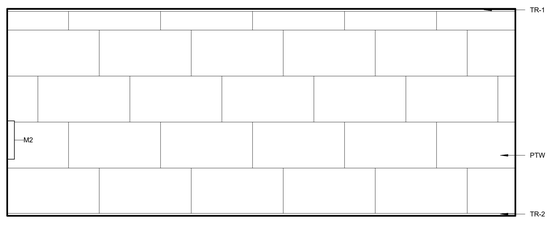

25 TOILET ELEVATION
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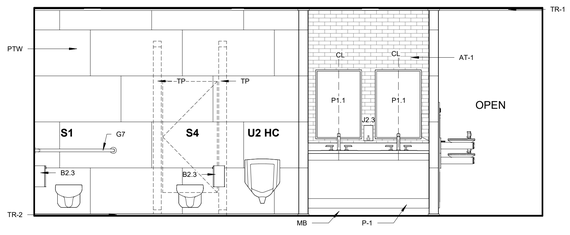

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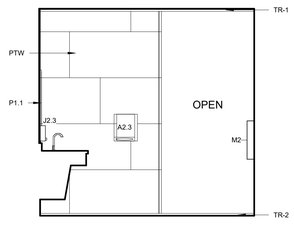
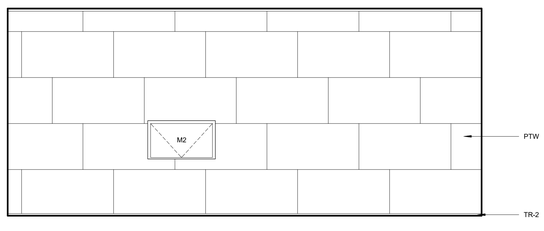


23 TOILET ELEVATION
3/8" = 1'-0" 01-00-03, 01-00-04



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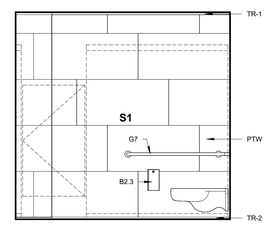
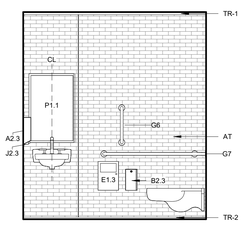
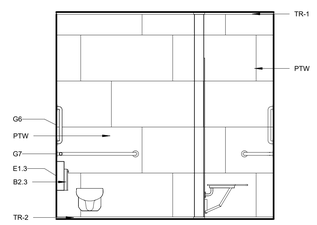
3/8" = 1'-0" 01-00-03, 01-00-04



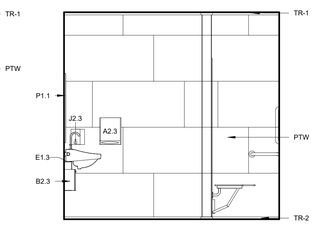
21 TOILET ELEVATION
3/8" = 1'-0" 01-00-03, 01-00-04



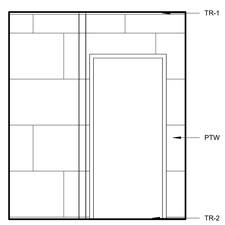
20 TOILET ELEVATION
3/8" = 1'-0" 01-02-02, 01-02-03



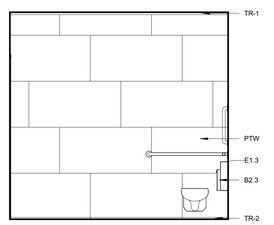
19 TOILET ELEVATION
3/8" = 1'-0" 01-02-02, 01-02-03



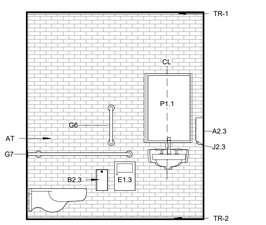
18 TOILET ELEVATION
3/8" = 1'-0" 01-02-02, 01-02-03



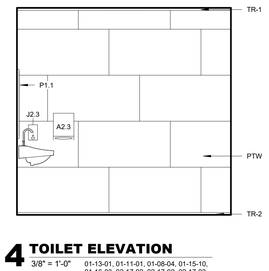
17 TOILET ELEVATION
3/8" = 1'-0" 01-02-02, 01-02-03



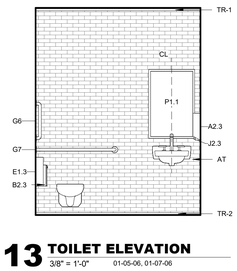
16 TOILET ELEVATION
3/8" = 1'-0" 01-02-02, 01-02-03



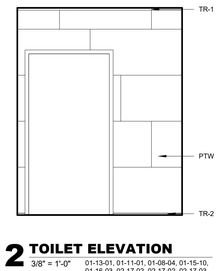
15 TOILET ELEVATION
3/8" = 1'-0" 01-02-02, 01-02-03



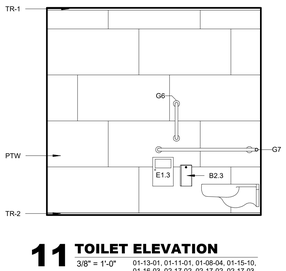
14 TOILET ELEVATION
3/8" = 1'-0" 01-13-01, 01-11-01, 01-08-04, 01-15-10, 01-16-03, 02-17-02, 02-17-02, 02-17-03, 02-17-05, 02-17-06



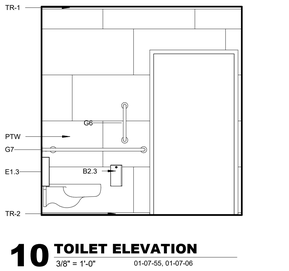
13 TOILET ELEVATION
3/8" = 1'-0" 01-05-06, 01-07-06



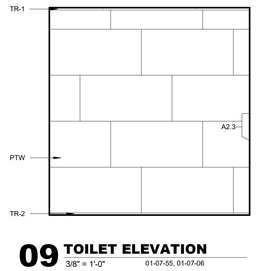
12 TOILET ELEVATION
3/8" = 1'-0" 01-13-01, 01-11-01, 01-08-04, 01-15-10, 01-16-03, 02-17-02, 02-17-02, 02-17-03, 02-17-05, 02-17-06



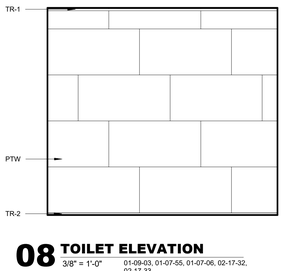
11 TOILET ELEVATION
3/8" = 1'-0" 01-13-01, 01-11-01, 01-08-04, 01-15-10, 01-16-03, 02-17-02, 02-17-02, 02-17-03, 02-17-05, 02-17-06



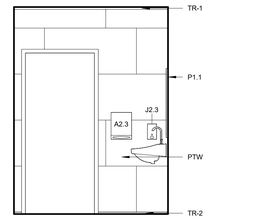
10 TOILET ELEVATION
3/8" = 1'-0" 01-07-55, 01-07-06



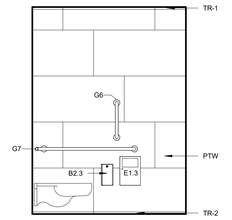
09 TOILET ELEVATION
3/8" = 1'-0" 01-07-55, 01-07-06



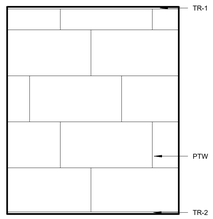
08 TOILET ELEVATION
3/8" = 1'-0" 01-09-03, 01-07-55, 01-07-06, 02-17-32, 02-17-33



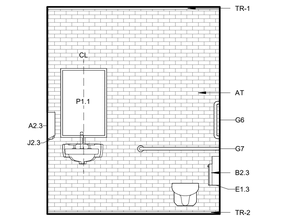
07 TOILET ELEVATION
3/8" = 1'-0" 01-09-03, 01-02-04, 01-02-05, 01-02-06, 01-02-07, 02-17-32, 02-17-33



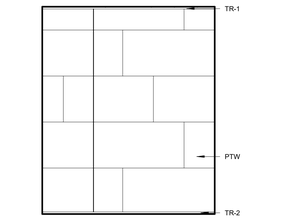
06 TOILET ELEVATION
3/8" = 1'-0" 01-02-04, 01-02-05, 01-02-06, 01-02-07, 01-15-10, 01-16-03



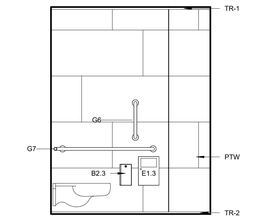
05 TOILET ELEVATION
3/8" = 1'-0" 01-02-04, 01-02-05, 01-02-06, 01-02-07, 01-17-02, 01-17-03



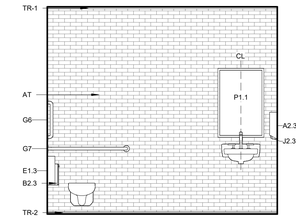
04 TOILET ELEVATION
3/8" = 1'-0" 01-09-03, 01-13-03, 01-11-01, 01-08-04, 01-02-04, 01-02-05, 01-02-06, 01-02-07, 02-17-02, 02-17-03, 02-17-32, 02-17-33



03 TOILET ELEVATION
3/8" = 1'-0" 01-02-04, 01-02-05, 01-02-06, 01-02-07



02 TOILET ELEVATION
3/8" = 1'-0" 01-02-04, 01-02-05, 01-02-06, 01-02-07



01 TOILET ELEVATION
3/8" = 1'-0" 01-15-10, 01-16-03, 02-17-05, 02-17-06

James R. Childers Architect, Inc.
45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com

PROFESSIONAL SEAL:

STATE OF OKLAHOMA
JAMES R. CHILDERS
REGISTERED ARCHITECT

12-06-2019

CONSULTANT LOGO:

CLIENT:

TRIBAL SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

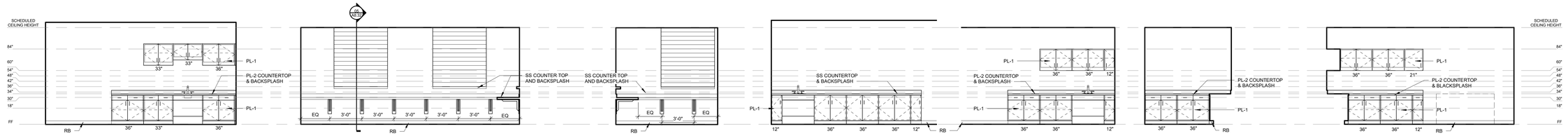
KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: A8.20

TOILET ELEVATIONS



36 02-17-04 BREAK ROOM/ CONF 1/4" = 1'-0"

35 02-17-01 RECEPTION 1/4" = 1'-0"

34 02-17-01 RECEPTION 1/4" = 1'-0"

33 01-16-07 CONFERENCE ROOM 1/4" = 1'-0"

32 01-16-06 KITCHENETTE 1/4" = 1'-0"

31 01-16-02 COPY/WORK ROOM 1/4" = 1'-0"

30 01-16-02 COPY/WORK ROOM 1/4" = 1'-0"

29 01-16-02 COPY/WORK ROOM 1/4" = 1'-0"

28 01-16-01 RECEPTION 1/4" = 1'-0"

27 01-15-01 RECEPTION 1/4" = 1'-0"

26 01-14-04 KITCHEN 1/4" = 1'-0"

25 01-14-04 KITCHEN 1/4" = 1'-0"

24 01-14-04 KITCHEN 1/4" = 1'-0"

23 01-14-02 CONFERENCE ROOM 1/4" = 1'-0"

22 01-14-01 CONFERENCE ROOM 1/4" = 1'-0"

21 01-13-00 RECEPTION 1/4" = 1'-0"

20 01-13-09 COPY AL 1/4" = 1'-0"

19 01-10-12 TYPICAL OPEN WORK 1/4" = 1'-0"

18 01-10-12 OPEN WORK 1/4" = 1'-0"

17 01-10-00 DISPENSING 1/4" = 1'-0"

16 01-10-00 DISPENSING 1/4" = 1'-0"

15 01-09-00 RECEPTION 1/4" = 1'-0"

14 01-09-00 RECEPTION 1/4" = 1'-0"

13 01-09-00 RECEPTION 1/4" = 1'-0"

12 01-09-00 RECEPTION 1/4" = 1'-0"

11 01-08-10 GROUP ROOM 1/4" = 1'-0"

10 01-08-01 RECEPTION 1/4" = 1'-0"

09 01-07-13 NOURISHMENT 1/4" = 1'-0"

08 01-07-01 PT RECEPTION 1/4" = 1'-0"

07 01-02-08 STAFF LOUNGE 1/4" = 1'-0"

06 01-02-08 STAFF LOUNGE 1/4" = 1'-0"

05 01-01-05 CIRCULATION 1/4" = 1'-0"

04 01-02-01 EMPLOYEE AREA 1/4" = 1'-0"

03 01-01-00 RECEPTION 1/4" = 1'-0"

02 01-01-00 RECEPTION 1/4" = 1'-0"

01 01-00-02 REGISTRATION 1/4" = 1'-0"

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WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

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PROJECT PHASE:
BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19
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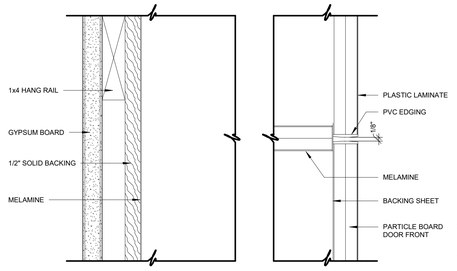
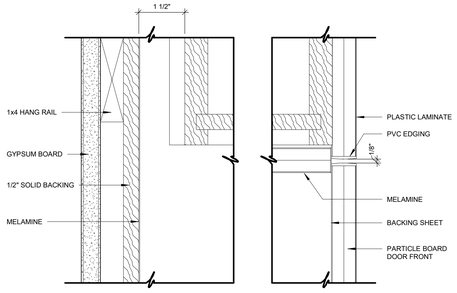
A8.30

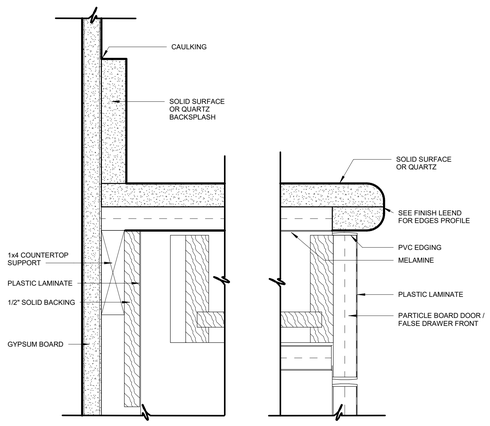
MILLWORK ELEVATIONS



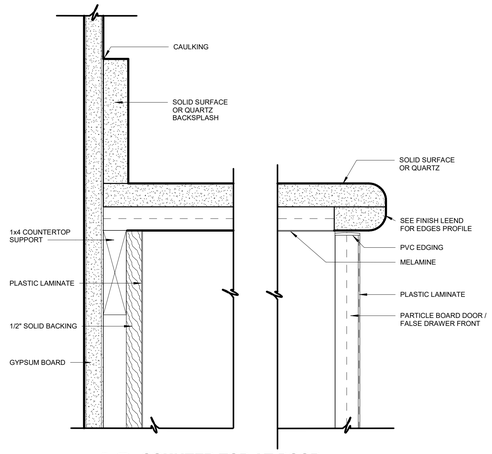
21 FALSE DRAWER TO DOOR SECTION
6" = 1'-0"



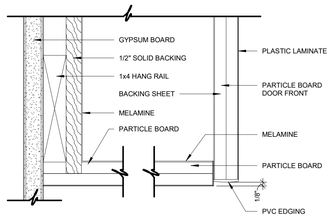
20 DRAWER TO DOOR SECTION
6" = 1'-0"



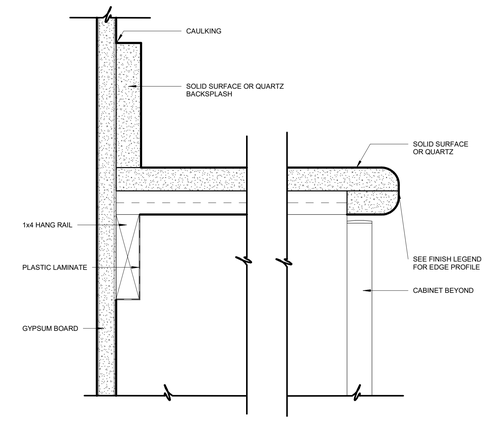
19 COUNTERTOP AT DRAWER
6" = 1'-0"



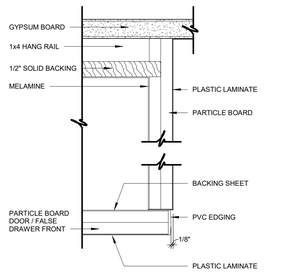
18 COUNTER TOP AT DOOR
6" = 1'-0"



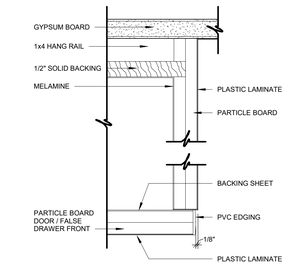
17 WALL CABINET AT BOTTOM
6" = 1'-0"



16 COUNTERTOP AT KNEESPACE
6" = 1'-0"



15 DRAWER AT FINISHED END SECTION
6" = 1'-0"



14 DOOR AT FINISHED END SECTION
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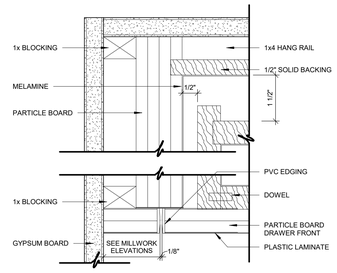
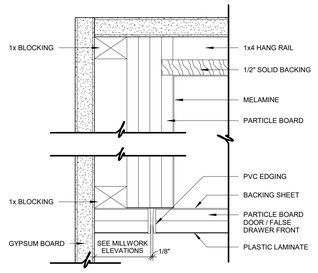
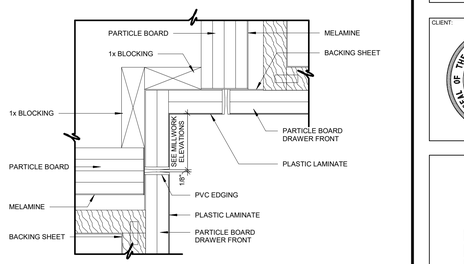


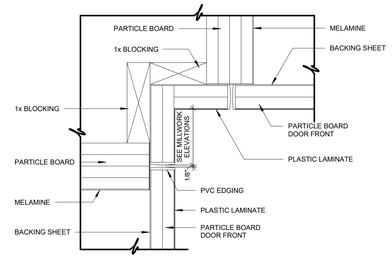
13 DRAWER SECTION
6" = 1'-0"



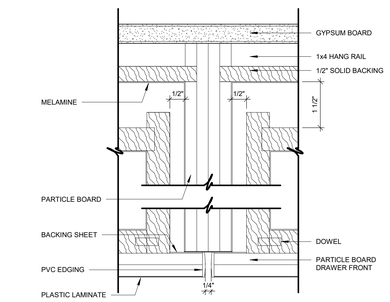
12 DOOR SECTION
6" = 1'-0"



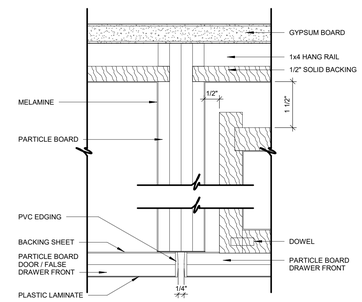
11 DRAWER SECTIONS AT CORNER
6" = 1'-0"



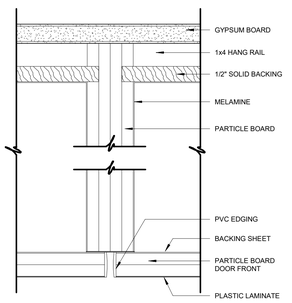
10 DOOR SECTIONS AT CORNER
6" = 1'-0"



09 CABINET TO CABINET SECTION
6" = 1'-0"



08 CABINET TO CABINET SECTION
6" = 1'-0"



07 CABINET TO CABINET SECTION
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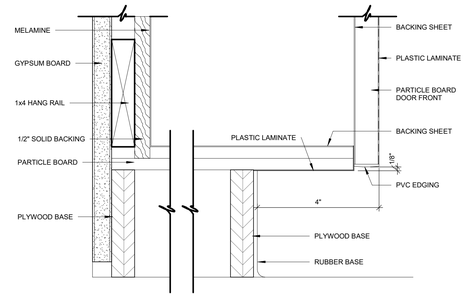
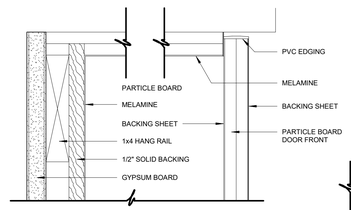
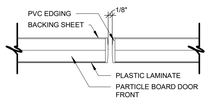


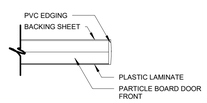
06 BASE CABINET AT FLOOR
6" = 1'-0"



05 WALL CABINET AT FURR DOWN
6" = 1'-0"

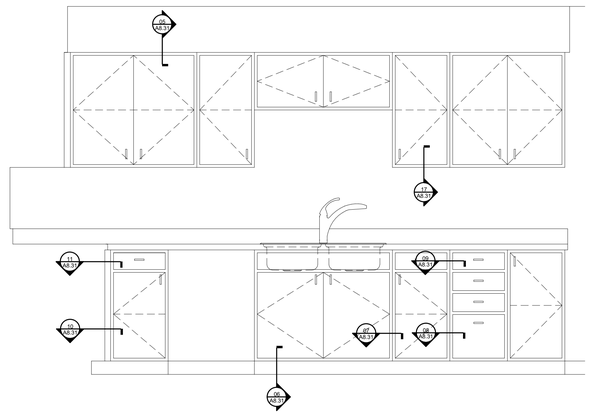


04 DOOR TO DOOR SECTION
6" = 1'-0"

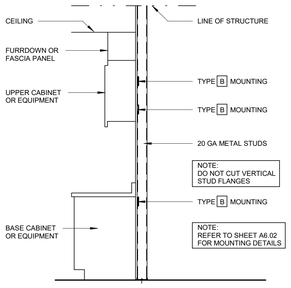


NOTE: 1" PARTICLE BOARD SHELF AT SPANS GREATER THAN 3'-0"

03 SHELF SECTION
6" = 1'-0"



02 MILLWORK DETAIL KEY (GENERIC ELEVATIONS)
3/4" = 1'-0"



01 TYPICAL STUD WALL SUPPORTING EQUIPMENT AND CABINETRY
1/4" = 1'-0"

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PROFESSIONAL SEAL:

STATE OF OKLAHOMA
JAMES R. CHILDERS
REGISTERED ARCHITECT

12-06-2019

CONSULTANT LOGO:

CLIENT:

THE CHEROKEE NATION
TRIBAL SEAL
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

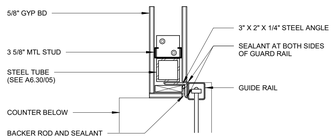
KEY PLAN:

PROJECT PHASE:

REVISIONS		
#	DATE	DESCRIPTION

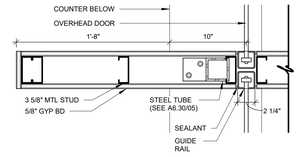
DATE: 03/08/13
JOB NUMBER: 18-01.01
SHEET NUMBER: A8.31

MILLWORK DETAILS



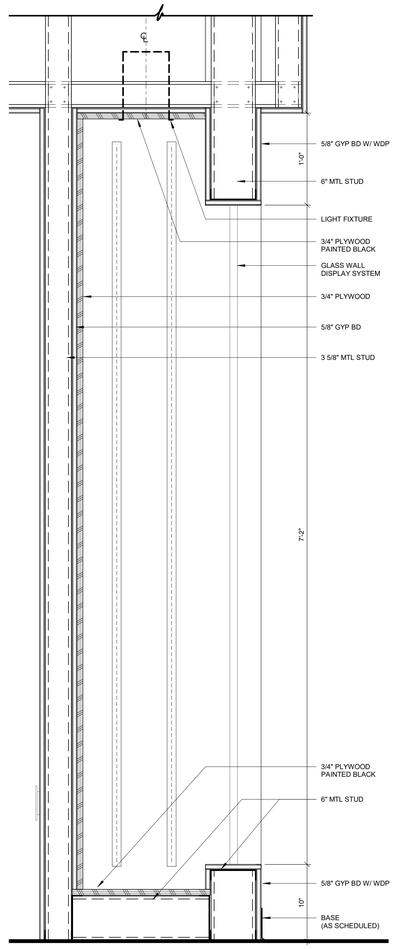
FACE MOUNTED JAMB DETAIL AT OVERHEAD DOOR

06 1 1/2" = 1'-0"



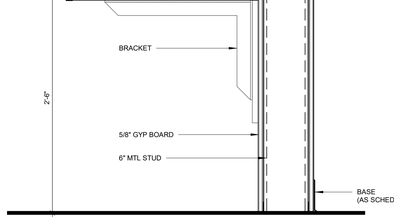
RECESSED JAMB DETAIL AT OVERHEAD DOOR

04 1 1/2" = 1'-0"



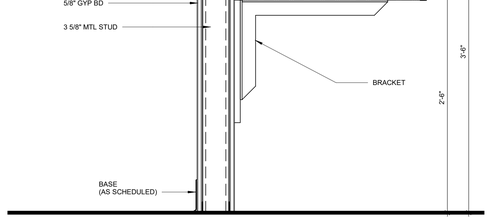
02 DISPLAY CASE SECTION

1 1/2" = 1'-0"



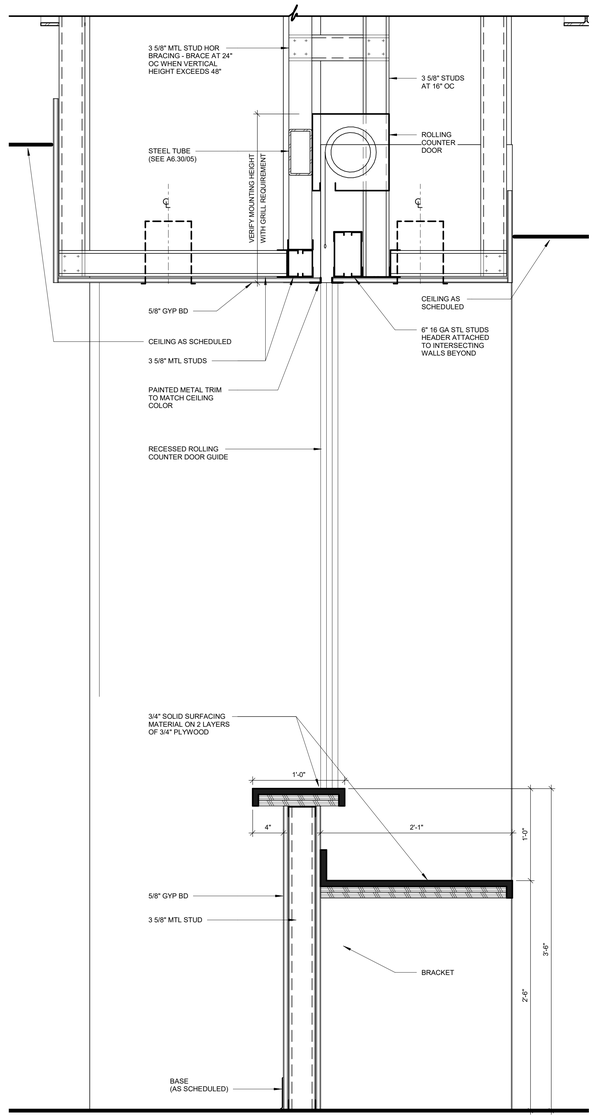
07 SECTION AT OPEN WORK

1 1/2" = 1'-0"



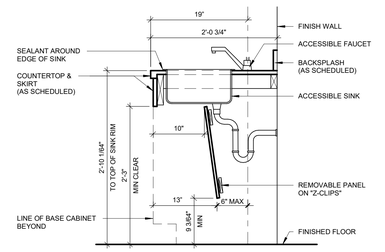
05 SECTION AT RECEPTION

1 1/2" = 1'-0"



03 SECTION AT REGISTRATION

1 1/2" = 1'-0"



01 SECTION @ ACCESSIBLE SINK

1" = 1'-0"

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PROFESSIONAL SEAL:

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JAMES R. CHILDERS
REGISTERED ARCHITECT

12-06-2019

CONSULTANT LOGO:

CLIENT:

THE CHEROKEE NATION
TRIBAL SEAL
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

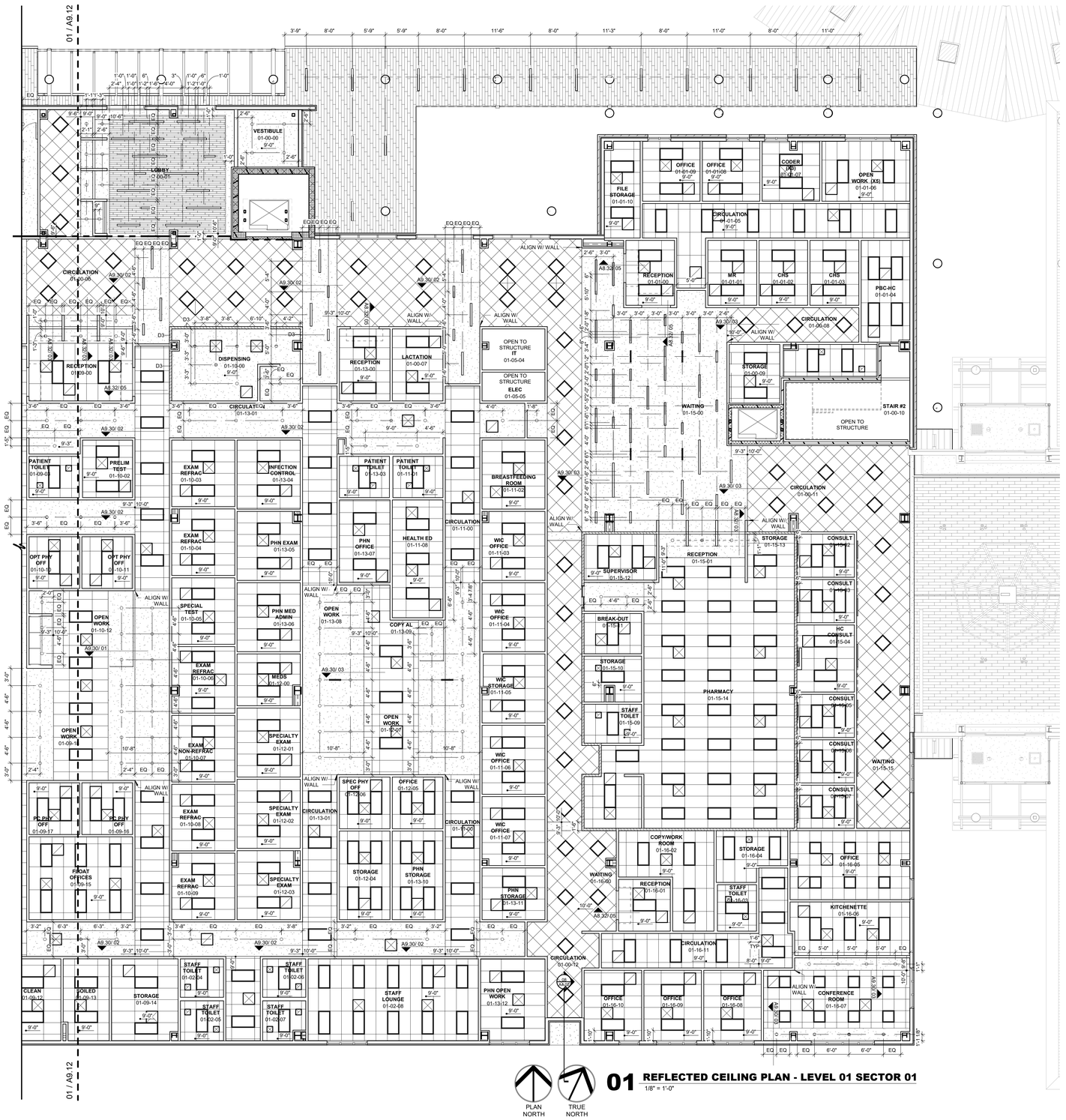
REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

A8.32

MILLWORK SECTIONS



01 REFLECTED CEILING PLAN - LEVEL 01 SECTOR 01
1/8" = 1'-0"

PLAN NORTH

TRUE NORTH

CEILING SYMBOLS

- GYPSUM BOARD CEILING
- WOOD CEILING
- 2 x 2 LAY-IN
- 2 x 4 LAY-IN
- OPEN TO STRUCTURE CEILING
- SUPPLY AIR
- RETURN AIR
- EXHAUST AIR
- ACCESS PANEL
- SUSPENDED LED LIGHT
- CONTROL JOINT
- LED TROFFER
- RECESSED LIGHT
- LINEAR DIFFUSERS
- RECESSED CAN

GENERAL NOTES

1. ALL CEILINGS SHALL BE 9' - 0" ABOVE FINISHED FLOOR, U.N.O. (COORDINATE W/ OWNER-FURNISHED VENDOR DRAWINGS & EQUIPMENT)
2. IN THE CASE OF MINOR DISCREPANCIES BETWEEN MEP & ARCHITECTURAL DOCUMENTS IN THE LOCATION OF CEILING MOUNTED COMPONENTS, THE ARCHITECTURAL REFLECTED CEILING PLAN SHALL GOVERN. IN THE CASE OF MAJOR DISCREPANCIES, THE ARCHITECT SHALL BE NOTIFIED AS SOON AS THE DISCREPANCY IS DISCOVERED PRIOR TO PROCEEDING WITH THE WORK.
3. REFERENCE MECHANICAL & ELECTRICAL DRAWINGS FOR MOUNTING LOCATIONS OF ITEMS WHERE NO CEILING IS REQUIRED OF INDICATED.
4. LIGHTS, DIFFUSERS, EXIT SIGNS, SMOKE DETECTORS, SPEAKERS, STROBES & MISCELLANEOUS DEVICES SHALL BE CENTERED IN THE CEILING TILE IN WHICH THEY OCCUR, U.N.O.
5. ALL CORRIDOR SPRINKLER HEADS SHALL BE ALIGNED IN THE SAME LOCATION PARALLEL TO THE WALL WITHIN EACH SPECIFIC CEILING CONSTRUCTION. ARCHITECTURALLY SIGNIFICANT SPRINKLER HEAD LOCATIONS MAY BE SHOWN ON REFLECTED CEILING PLAN FOR DESIGN INTENT ONLY.
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PROFESSIONAL SEAL:

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12-06-2019

CONSULTANT LOGO:

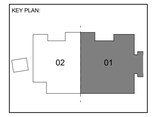
CLIENT:

THE CHEROKEE NATION — SEAL OF THE — SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

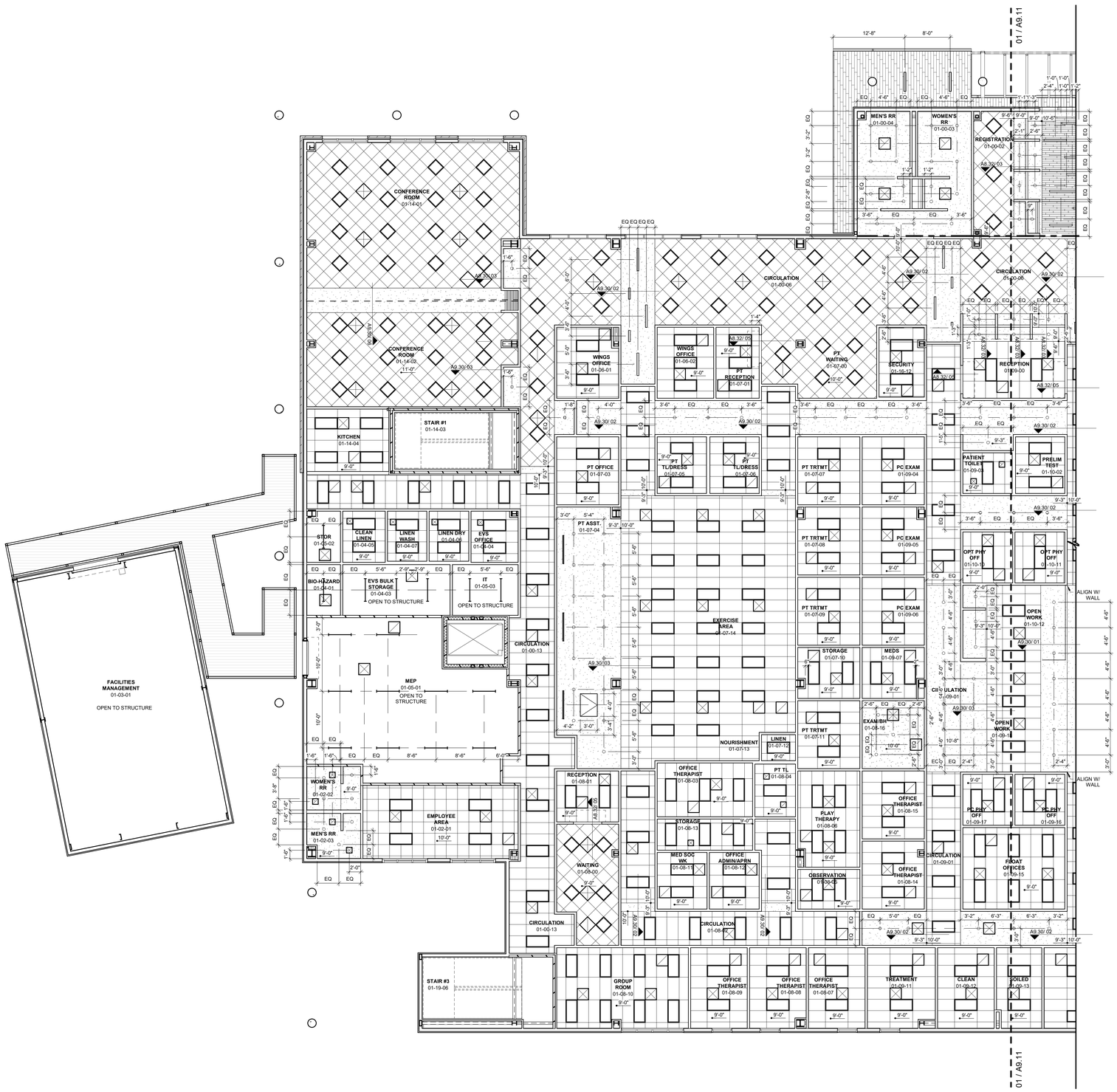
DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER:

A9.11

CEILING PLAN LEVEL 01 SECTOR 01



CEILING SYMBOLS

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- 2 x 2 LAY-IN
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PLAN NORTH / TRUE NORTH

01 REFLECTED CEILING PLAN - LEVEL 01 SECTOR 02

1/8" = 1'-0"

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12-06-2019

CONSULTANT LOGO:

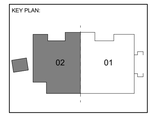
CLIENT:

THE CHEROKEE NATION — TRUST OF — SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

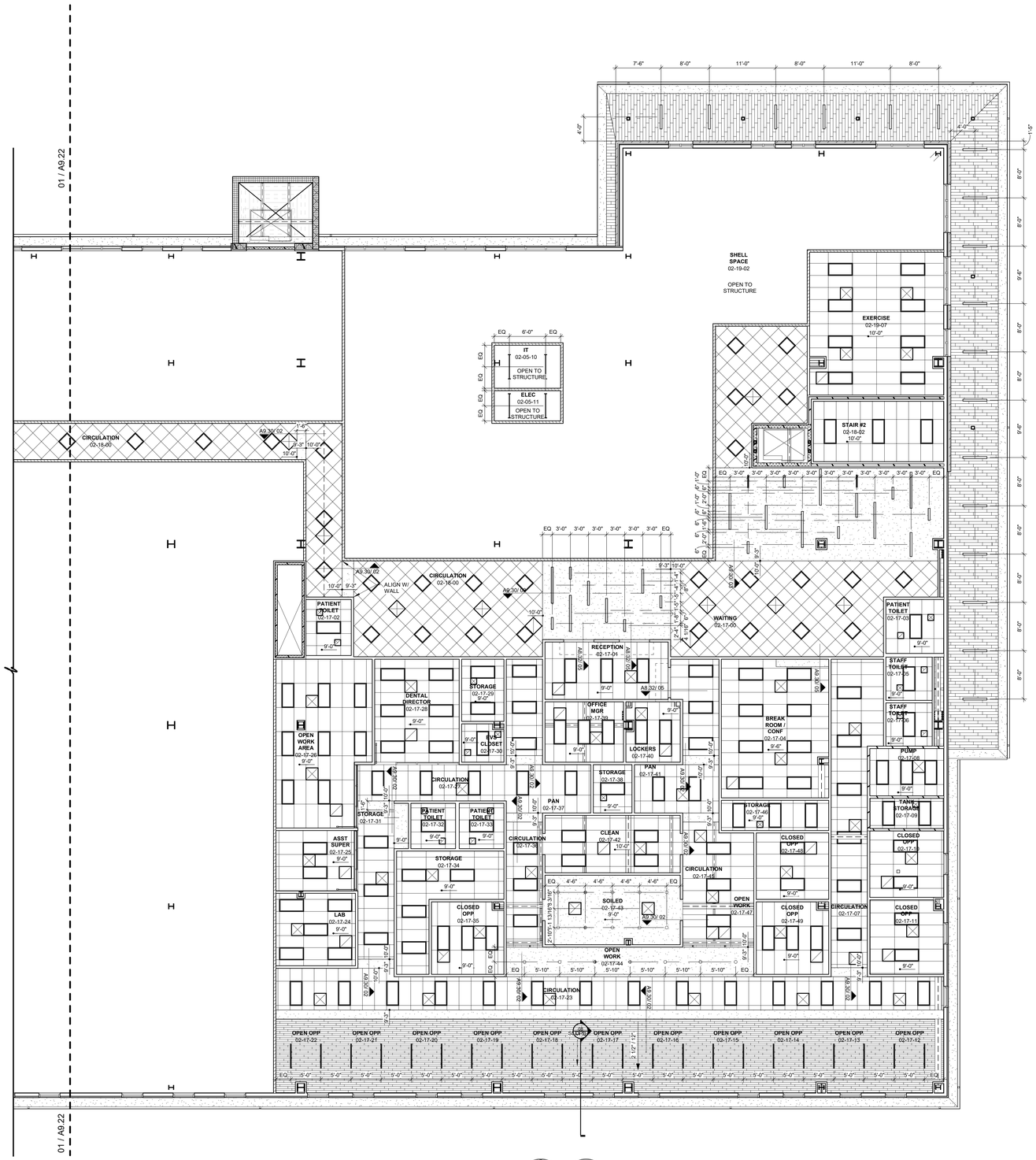
REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

A9.12

CEILING PLAN LEVEL 01 SECTOR 02



PLAN NORTH

TRUE NORTH

01 REFLECTED CEILING PLAN - LEVEL 02 SECTOR 01

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CEILING SYMBOLS

- GYPSUM BOARD CEILING
- WOOD CEILING
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- 2 x 4 LAY-IN
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12-06-2019

CONSULTANT LOGO:

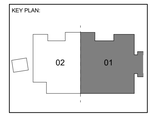
CLIENT:

THE CHEROKEE NATION — TRIBE OF INDIANS — SEPT. 6, 1839 — NEW ECHOTA

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS

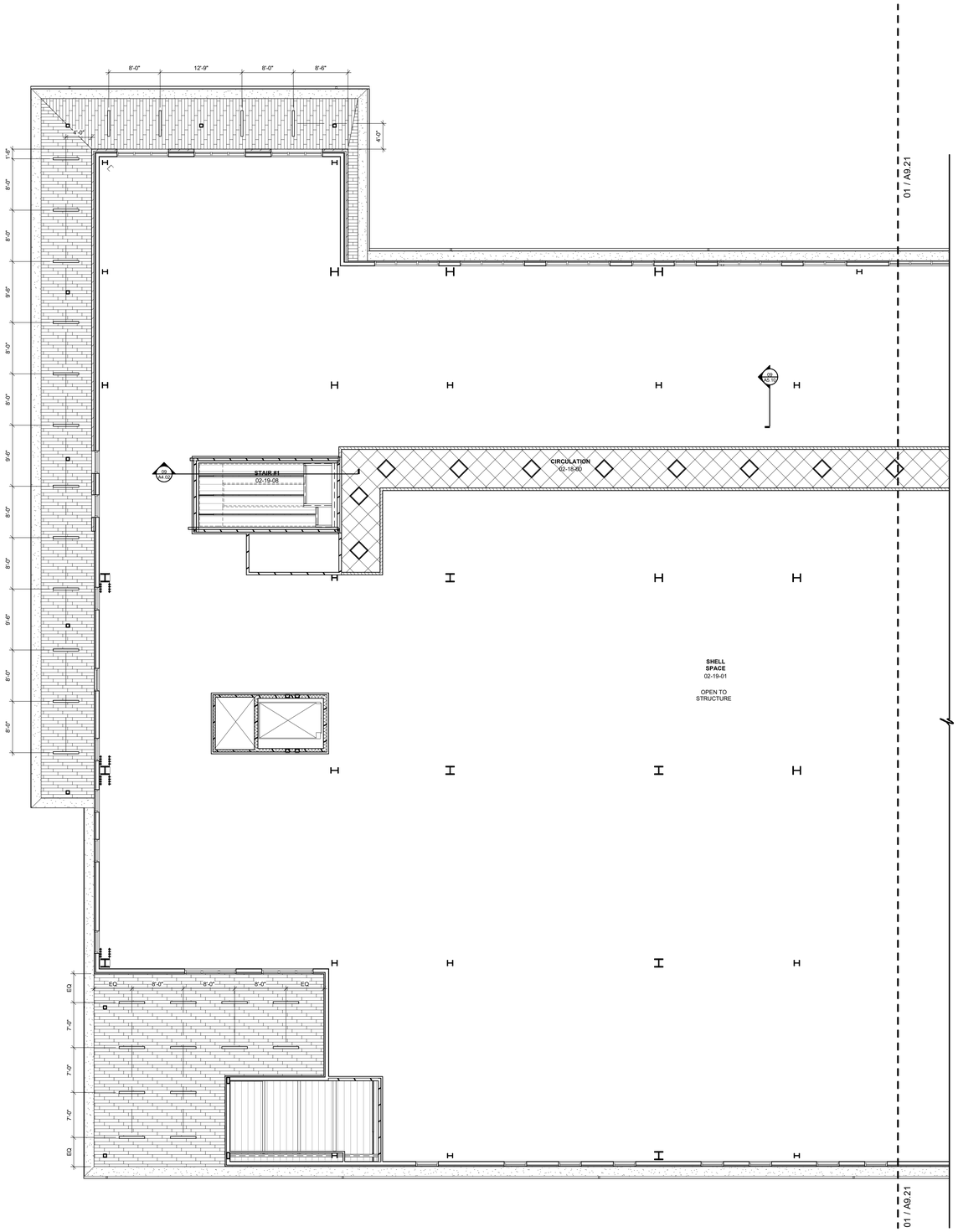
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

A9.21

CEILING PLAN LEVEL 02 SECTOR 01



PLAN NORTH

TRUE NORTH

01 REFLECTED CEILING PLAN - LEVEL 02 SECTOR 02

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CEILING SYMBOLS

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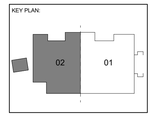
SEAL OF
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

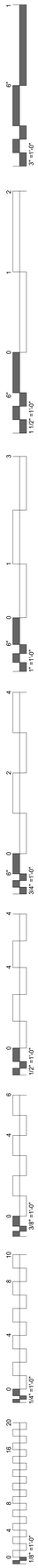
REVISIONS		
#	DATE	DESCRIPTION

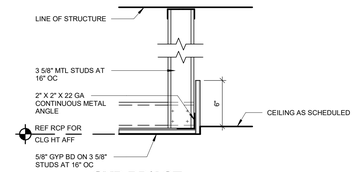
DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: A9.22

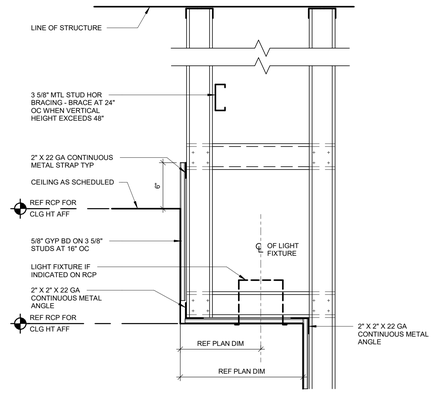
CEILING PLAN LEVEL 02 SECTOR 02





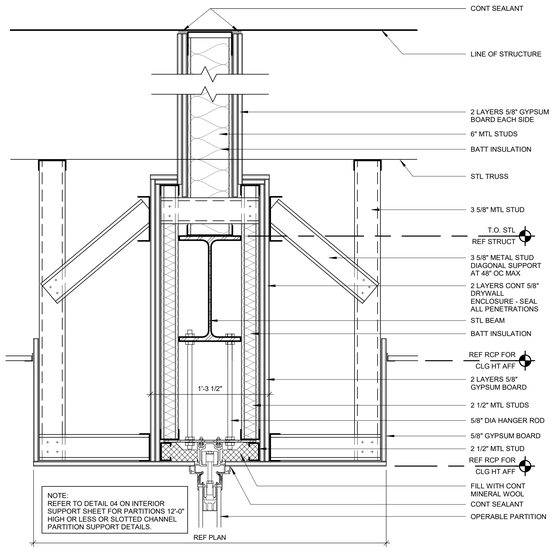
GYP BD/ACT TRANSITION DETAIL

04 1 1/2" = 1'-0"



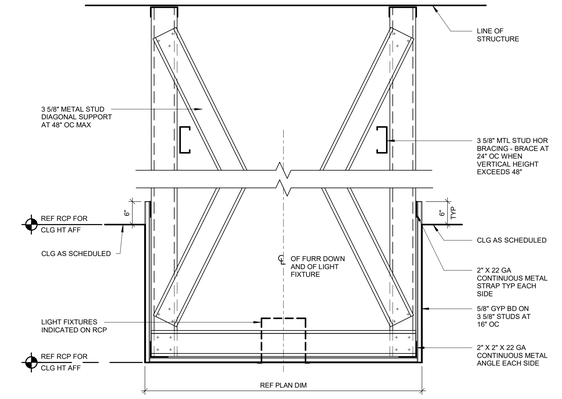
FURR DOWN DETAIL

03 1 1/2" = 1'-0"



OPERABLE PARTITION HEAD DETAIL

06 1 1/2" = 1'-0"



FURR DOWN DETAIL

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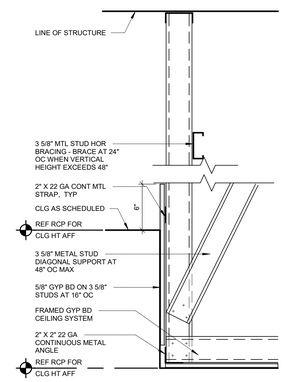
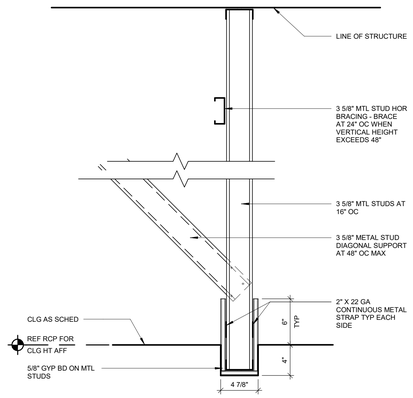


SOFFIT DETAIL

05 1 1/2" = 1'-0"



FURR DOWN DETAIL

01 1 1/2" = 1'-0"

James R. Childers Architect, Inc.
45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com

PROFESSIONAL SEAL:

12-06-2019

CONSULTANT LOGO:

CLIENT:

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: A9.30

CEILING DETAILS

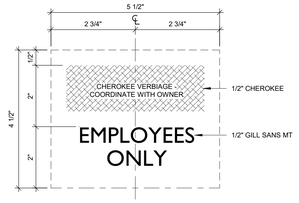
SIGNAGE SCHEDULE

MARK	SIGN TYPE	VERBIAGE	REMARKS
02 - EMPLOYEE FACILITIES			
01-02-09B	D.1	STAFF LOUNGE	
010201	D.2	EMPLOYEE AREA	
010202	E.3	WOMEN	
010203	E.2	MEN	
010204	E.1	STAFF RESTROOM	
010205	E.1	STAFF RESTROOM	
010206	E.1	STAFF RESTROOM	
010207	E.1	STAFF RESTROOM	
010208A	D.1	STAFF LOUNGE	
04 - HOUSEKEEPING			
010402	D.2	HOUSEKEEPING	
010403	D.2	BULK STORAGE	
010404	D.1	EVS OFFICE	
010405	D.2	CLEAN LINEN	
010406	D.2	LINEN DRY	
010407	D.2	LINEN WASH	
05 - MEP SPACE			
010501A	D.2	MEP	
010503	D.2	IT	
010504B	D.2	IT	
010505B	D.2	ELECTRICAL	
06 - WINGS			
010601	D.1	OFFICE	
010602	D.1	OFFICE	
07 - PHYSICAL THERAPY			
010701	D.1	RECEPTION	
010703	D.1	OFFICE	
010705	E.1	RESTROOM	
010706	E.1	RESTROOM	
010707	D.1	TREATMENT	
010708	D.1	TREATMENT	
010709	D.1	TREATMENT	
010710	D.2	STORAGE	
010711	D.1	TREATMENT	
010712	D.2	LINEN	
08 - BEHAVIORAL HEALTH			
010803	D.1	THERAPIST OFFICE	
010804	E.1	RESTROOM	
010805	D.1	OBSERVATION	
010806	D.1	PLAY THERAPY	
010807	D.1	THERAPIST OFFICE	
010808	D.1	THERAPIST OFFICE	
010809	D.1	THERAPIST OFFICE	
010810	D.1	GROUP THERAPY	
010811	D.1	SOCIAL WORK	
010812	D.1	OFFICE	
010813	D.2	STORAGE	
09 - PRIMARY CARE			
010900	D.1	RECEPTION	
010903	E.1	RESTROOM	
010904	D.1	EXAM	
010905	D.1	EXAM	
010906	D.1	EXAM	
010907	D.1	MEDS	
010908	D.1	EXAM	
010910	D.1	THERAPIST OFFICE	
010911	D.1	TREATMENT	
010912	D.1	CLEAN	
010913	D.1	SOILED	
010914	D.2	STORAGE	
010915	D.1	FLOATING OFFICES	
010916	D.1	PHYSICIAN'S OFFICE	
010917	D.1	PHYSICIAN'S OFFICE	
0109090	D.1	THERAPIST OFFICE	
10 - EYE CARE			
011000	D.1	DISPENSING	
011002	D.1	PRELIMINARY TESTING	
011003	D.1	EXAM REFRACTION	
011004	D.1	EXAM REFRACTION	
011005	D.1	SPECIAL TESTING	
011006	D.1	EXAM REFRACTION	
011007	D.1	EXAM NON-REFRACTION	
011008	D.1	EXAM REFRACTION	
011009	D.1	EXAM REFRACTION	
011010	D.1	PHYSICIAN'S OFFICE	
011011	D.1	PHYSICIAN'S OFFICE	
11 - WIC			
011101	E.1	RESTROOM	
011102	D.1	BREASTFEEDING	
011103	D.1	WIC OFFICE	
011104	D.1	WIC OFFICE	
011105	D.2	STORAGE	
011106	D.1	WIC OFFICE	
011107	D.1	WIC OFFICE	
011108	D.2	HEALTH EDUCATION	
011303	E.1	RESTROOM	
12 - SPECIALTY CARE			
011200	D.2	MEDS	
011201	D.1	SPECIALTY EXAM	
011202	D.1	SPECIALTY EXAM	
011203	D.1	SPECIALTY EXAM	
011204	D.2	STORAGE	
13 - PUBLIC HEALTH			
011300	D.1	RECEPTION	
011304	D.1	INFECTION CONTROL	
011305	D.1	PHN EXMA	
011306	D.1	PHN MED ADMIN	
011307	D.1	OFFICE	
011310	D.2	STORAGE	
011311	D.2	STORAGE	
011312	D.1	OPEN WORK	
14 - COMMUNITY SPACES			
011401A	D.1	CONFERENCE ROOM	
011402A	D.1	CONFERENCE ROOM	
011403	D.2	STORAGE	
011404A	D.2	KITCHEN	
011405	D.2	STORAGE	
15 - PHARMACY			
011502A	D.1	CONSULT	MOUNT ON DOOR
011502B	D.1	CONSULT	
011503A	D.1	CONSULT	MOUNT ON DOOR
011503B	D.1	CONSULT	
011504A	D.1	CONSULT	MOUNT ON DOOR
011504B	D.1	CONSULT	
011505A	D.1	CONSULT	MOUNT ON DOOR
011505B	D.1	CONSULT	
011506A	D.1	CONSULT	MOUNT ON DOOR
011506B	D.1	CONSULT	
011507A	D.1	CONSULT	
011507B	D.1	CONSULT	
011509	E.1	STAFF RESTROOM	
011510	D.2	STORAGE	
011511A	D.1	BREAK - OUT	
011511B	D.1	BREAK - OUT	
011512	D.1	SUPERVISOR	
16 - ADMINISTRATION			
011601	D.1	RECEPTION	
011602	D.1	COPY/WORK ROOM	
011603	E.1	STAFF RESTROOM	
011604	D.2	STORAGE	
011605	D.1	OFFICE	
011606A	D.1	KITCHEN	
011607	D.1	CONFERENCE ROOM	
011608	D.1	OFFICE	
011609	D.1	OFFICE	
011610	D.1	OFFICE	
011612	D.1	SECURITY	
17 - DENTAL			
021701	D.1	RECEPTION	
021702	E.1	RESTROOM	
021703	E.1	RESTROOM	
021704	D.1	BREAK ROOM	
021705	E.1	RESTROOM	
021706	E.1	RESTROOM	
021708	D.2	PUMP	
021709	D.2	STORAGE	
021710A	D.1	CLOSED OPERATORY	
021710B	D.1	CLOSED OPERATORY	
021711A	D.1	CLOSED OPERATORY	
021711B	D.1	CLOSED OPERATORY	
021724	D.1	LAB	
021725	E.1	ASSISTANT SUPERVISOR	MOUNT ON GLASS
021726	D.1	OPEN WORK AREA	MOUNT ON GLASS
021728	D.1	DENTAL DIRECTOR	MOUNT ON GLASS
021729	D.2	STORAGE	
021730	D.2	HOUSEKEEPING	
021732	E.1	RESTROOM	
021733	E.1	RESTROOM	
021734A	D.2	STORAGE	
021734B	D.1	STORAGE	
021735A	D.1	CLOSED OPERATORY	
021735B	D.1	CLOSED OPERATORY	
021739	D.1	OFFICE MANAGER	
021740	D.2	LOCKERS	
021742A	D.1	CLEAN	
021742B	D.1	CLEAN	
021743A	D.1	SOILED	
021743B	D.1	SOILED	
021746	D.2	STORAGE	
021748A	D.1	CLOSED OPERATORY	
021748B	D.1	CLOSED OPERATORY	
021749A	D.1	CLOSED OPERATORY	
021749B	D.1	CLOSED OPERATORY	

MARK	SIGN TYPE	VERBIAGE	REMARKS
18 - SECOND FLOOR CIRCULATION			
020512	D.2	ELECTRICAL	
021800	F.2	SEE SIGNAGE ELEVATIONS	
021802	F.1	STAIRWAY	
021908	F.1	SEE SIGNAGE ELEVATIONS	
19 - SHELL SPACE			
021901A	D.2	SHELL SPACE	
021902B	D.2	SHELL SPACE	

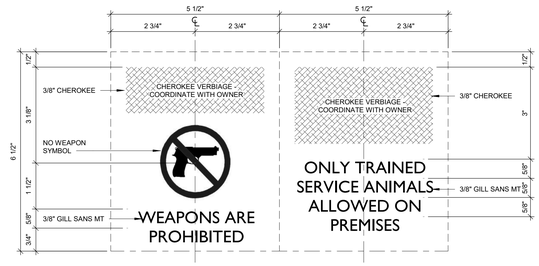
GENERAL NOTES

1. ALL SIGNAGE TO BE TAMPERPROOF.
2. ALL SIGNAGE TO HAVE ENGLISH & CHEROKEE VERBIAGE, COORDINATE VERBIAGE W/ OWNER.
3. COORDINATE ALL CUSTOM SIGNAGE DIMENSIONS, COLORS, LOGOS & ARTWORK W/ OWNER & ARCHITECT. (CUSTOM ELEMENTS NOT SHOWN)
4. VERIFY QUANTITY W/ OWNER.
5. VERIFY LOCATION W/ OWNER PRIOR TO MOUNTING SIGNAGE ON GLAZING.
6. ALL CAST METAL SIGNAGE TO BE GEMINI - FLAT FACE PROFILE LETTERS - OPTIMA SEMI-BOLD FONT. (COLOR & FONT TO MATCH EXISITNG)



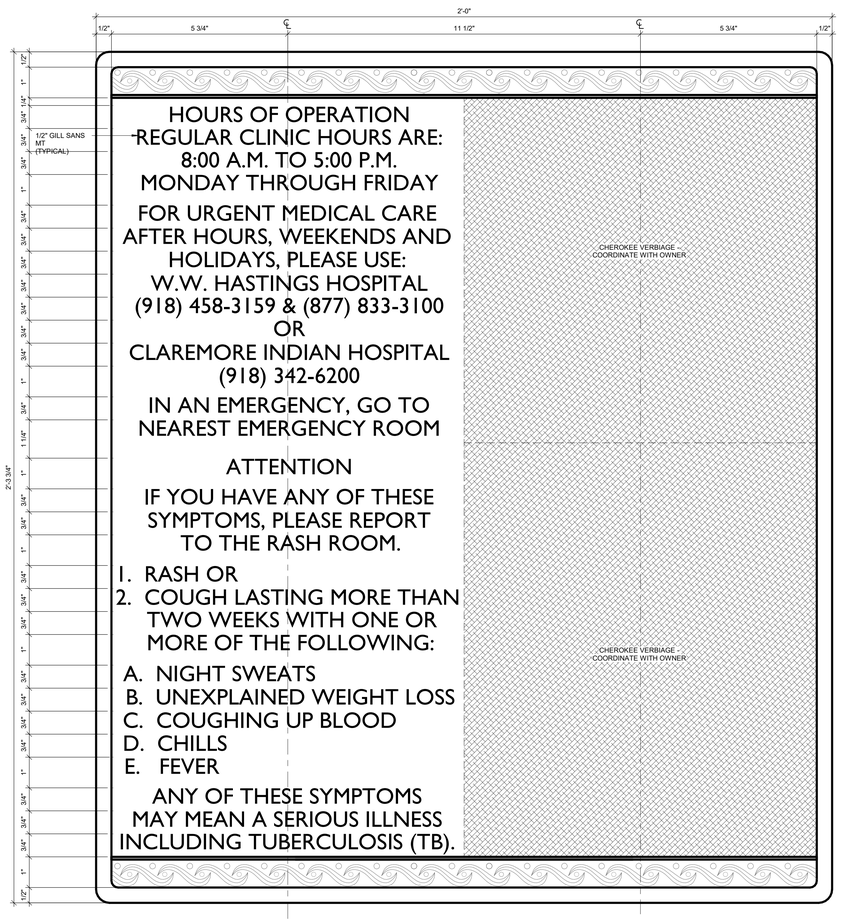
05 TYPE A.3
6" = 1'-0"

VINYL LETTERING
COORDINATE LOCATION W/ OWNER
VERIFY TEXT W/ OWNER



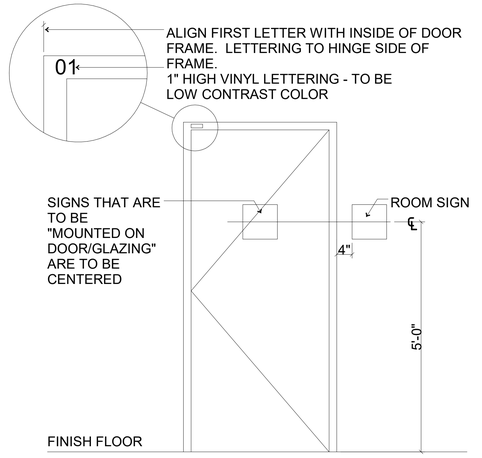
04 TYPE A.2
6" = 1'-0"

VINYL LETTERING
COORDINATE LOCATION W/ OWNER
VERIFY TEXT W/ OWNER

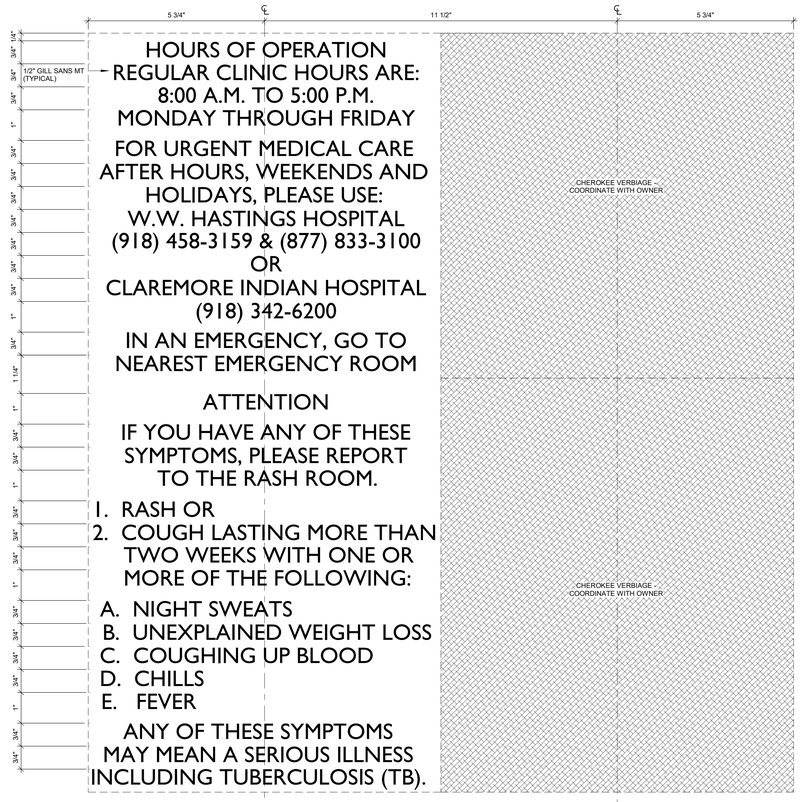


03 TYPE B.1
6" = 1'-0"

VINYL LETTERING
COORDINATE LOCATION W/ OWNER
VERIFY TEXT W/ OWNER



02 SIGNAGE MOUNTING LOCATIONS
3/4" = 1'-0"



01 TYPE A.1
6" = 1'-0"

VINYL LETTERING
COORDINATE LOCATION W/ OWNER
VERIFY TEXT W/ OWNER

James R. Childers Architect, Inc.
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PROFESSIONAL SEAL:

STATE OF OKLAHOMA · JAMES R. CHILDERS · REGISTERED ARCHITECT

12-06-2019

CONSULTANT LOGO:

CLIENT:

THE CHEROKEE NATION · TRIBAL SEAL · SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

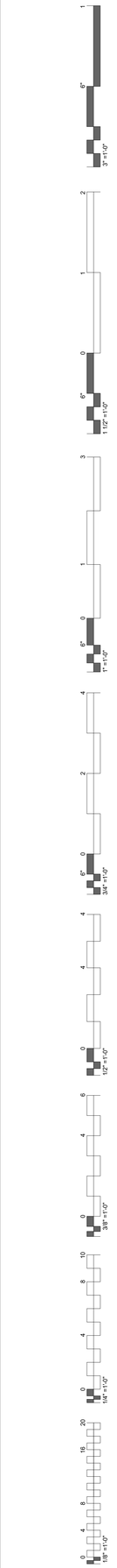
REVISIONS		
#	DATE	DESCRIPTION

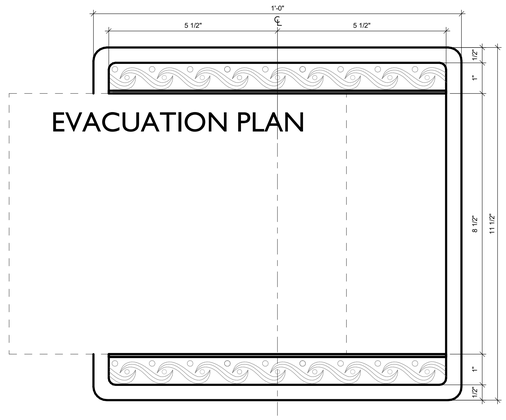
DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

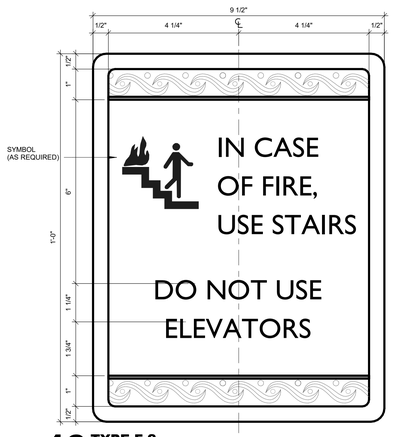
A10.00

SIGNAGE SCHEDULE & ELEVATIONS

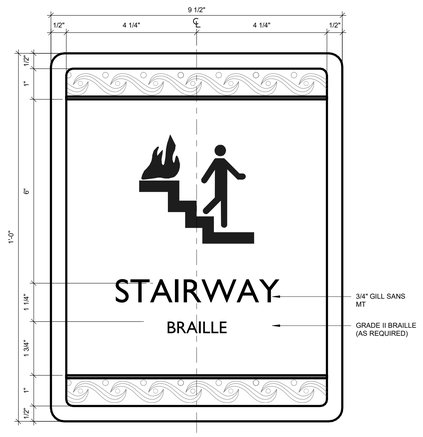




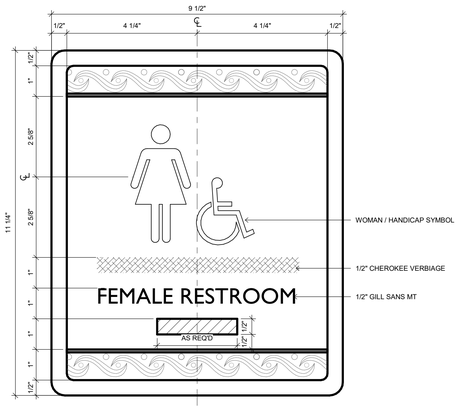
11 TYPE H 6" = 1'-0"
MODEL: EVH2-E1
EVACUATION PLAN PROVIDED BY OWNER
COORDINATE LOCATIONS W/ OWNER



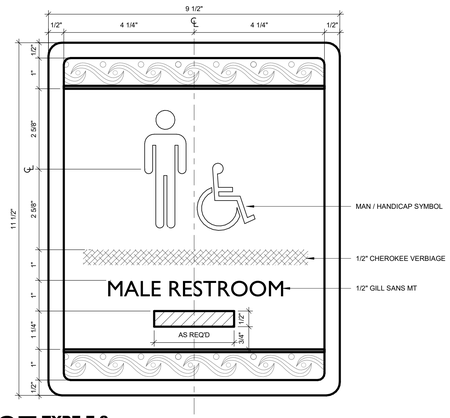
10 TYPE F.2 6" = 1'-0"
CUSTOM SIGNAGE TO MATCH EXISTING



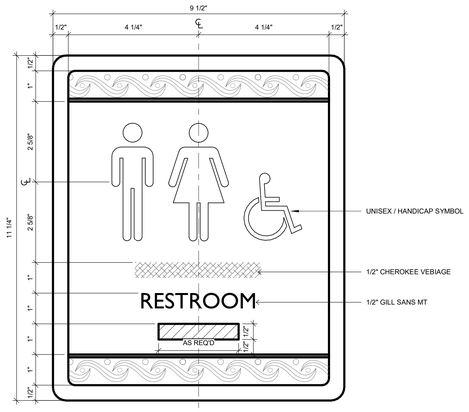
09 TYPE F.1 6" = 1'-0"
CUSTOM SIGNAGE - TO MATCH EXISTING
VERIFY TEXT W/ OWNER



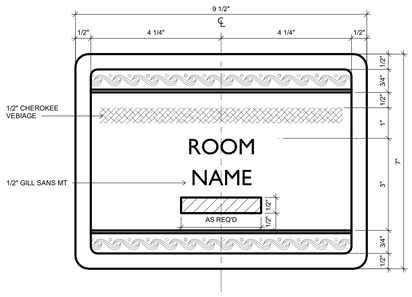
08 TYPE E.3 6" = 1'-0"
CUSTOM SIGNAGE TO MATCH EXISTING



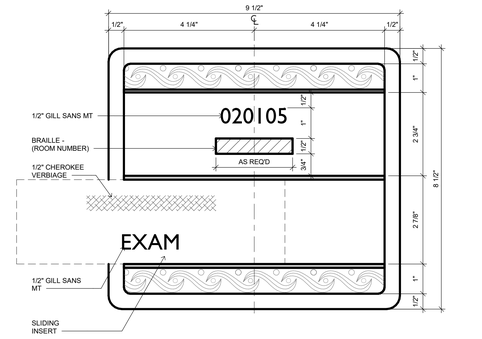
07 TYPE E.2 6" = 1'-0"
CUSTOM SIGNAGE TO MATCH EXISTING



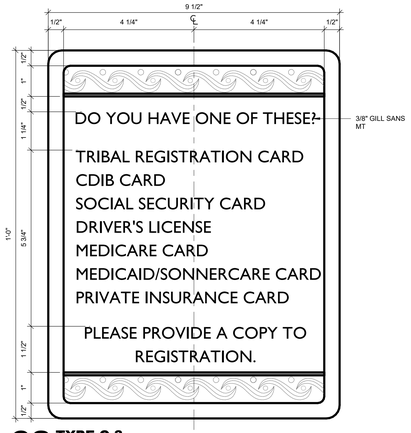
06 TYPE E.1 6" = 1'-0"
CUSTOM SIGNAGE TO MATCH EXISTING



05 TYPE D.2 6" = 1'-0"
CUSTOM SIGNAGE - TO MATCH EXISTING
VERIFY TEXT W/ OWNER

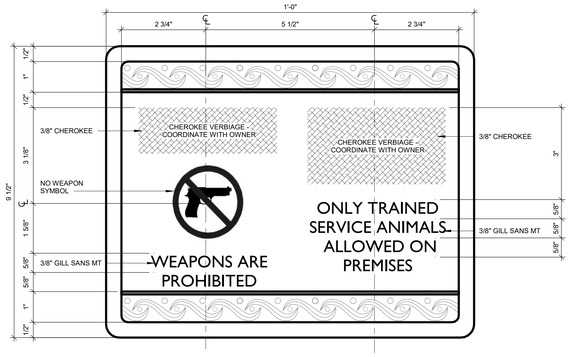


04 TYPE D.1 6" = 1'-0"
CUSTOM SIGNAGE TO MATCH EXISTING
VERIFY TEXT W/ OWNER



03 TYPE C.3 6" = 1'-0"
CUSTOM SIGNAGE TO MATCH EXISTING
COORDINATE LOCATION W/ OWNER
VERIFY TEXT W/ OWNER

02 TYPE C.2 6" = 1'-0"
CUSTOM SIGNAGE TO MATCH EXISTING
COORDINATE LOCATION W/ OWNER
VERIFY TEXT W/ OWNER



01 TYPE B.2 6" = 1'-0"
CUSTOM SIGNAGE - TO MATCH EXISTING
COORDINATE LOCATION W/ OWNER
VERIFY TEXT W/ OWNER

James R. Childers
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PROFESSIONAL SEAL:
STATE OF OKLAHOMA
JAMES R. CHILDERS
REGISTERED ARCHITECT
12-06-2019

CONSULTANT LOGO:

CLIENT:
THE CHEROKEE NATION
SEAL OF
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

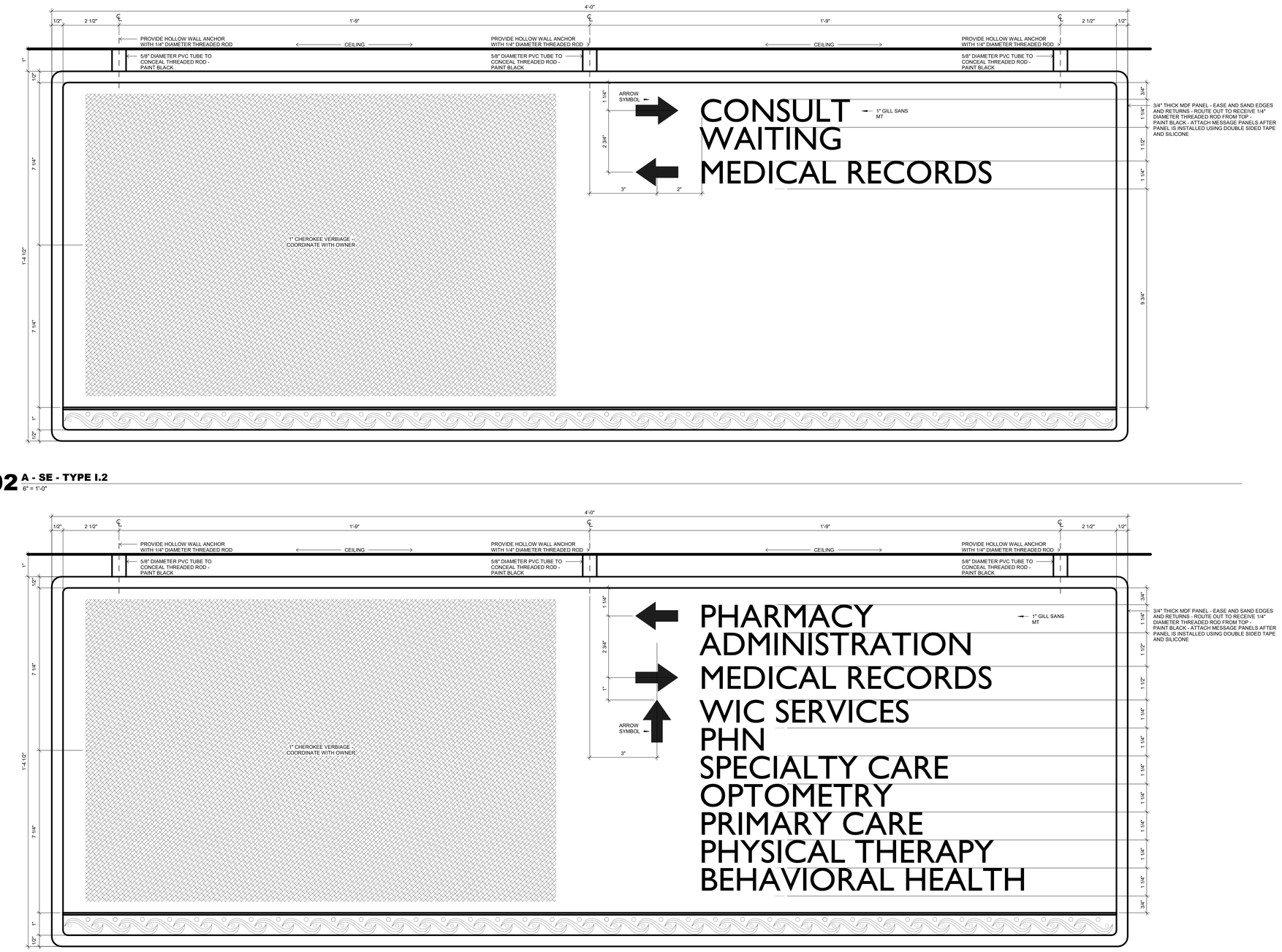
KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: A10.01
SIGNAGE ELEVATIONS



02 A - SE - TYPE I.2
6" = 1'-0"

01 A - SE - TYPE I.1
6" = 1'-0"

James R. Childers Architect, Inc.
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PROFESSIONAL SEAL:

STATE OF OKLAHOMA
JAMES R. CHILDERS
REGISTERED ARCHITECT

12-06-2019

CONSULTANT LOGO:

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

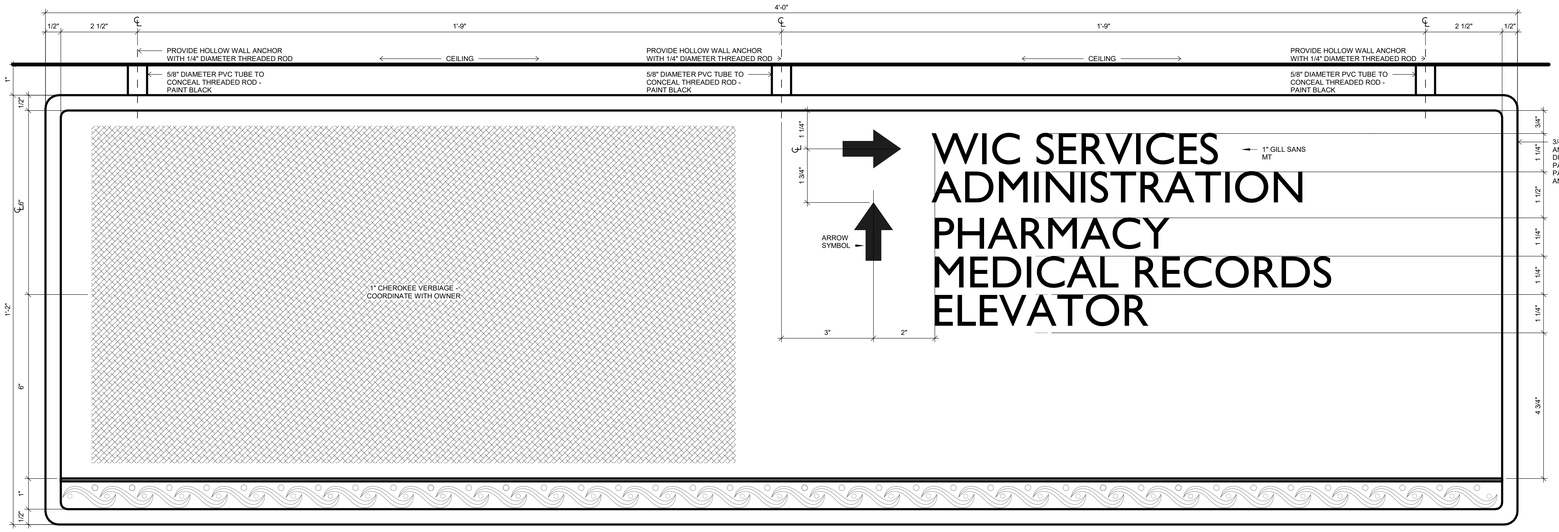
WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

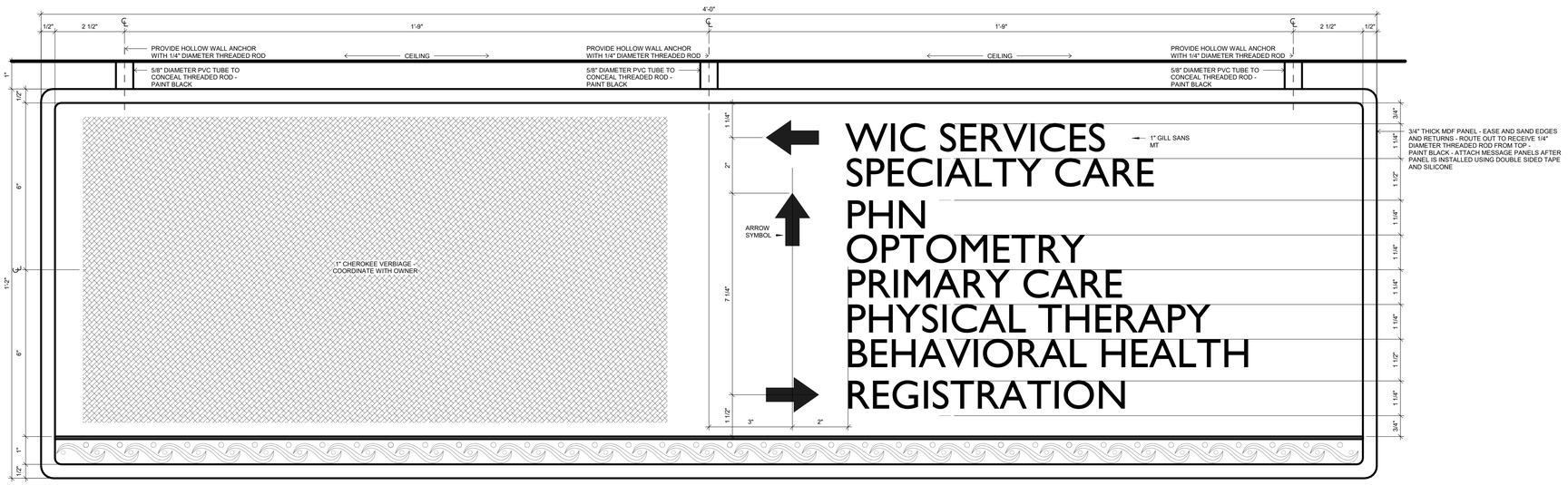
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: A10.02
SIGNAGE ELEVATIONS



02 A - SE - TYPE I.4
6" = 1'-0"



01 A - SE - TYPE I.3
6" = 1'-0"

James R. Childers Architect, Inc.
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12-06-2019

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CLIENT:

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

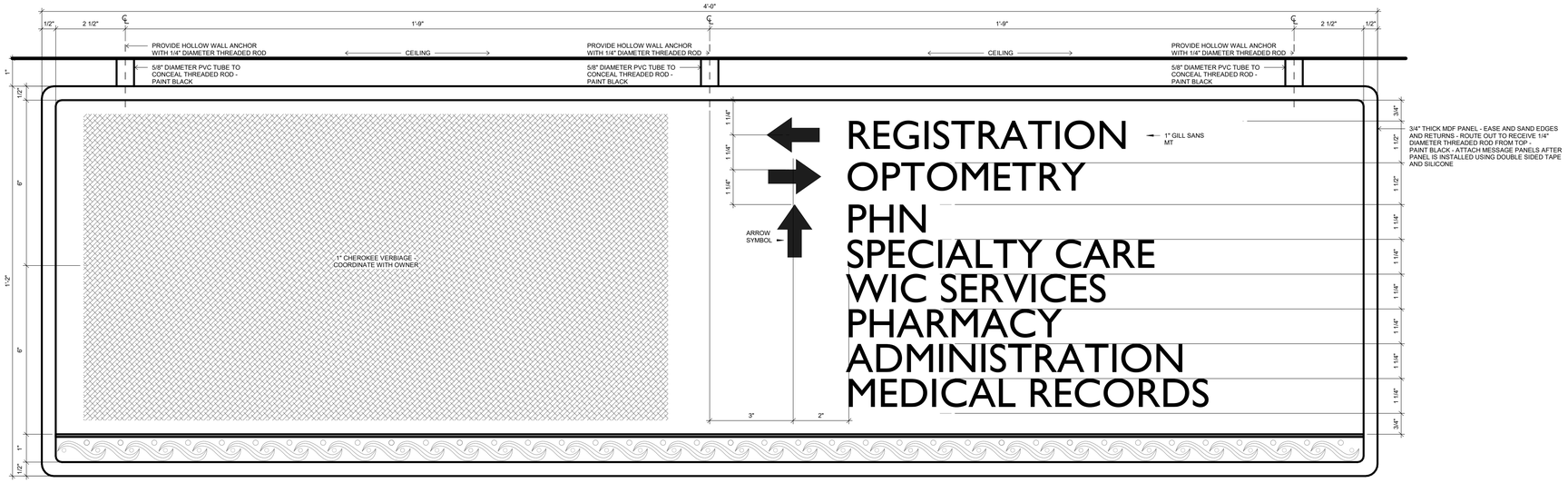
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

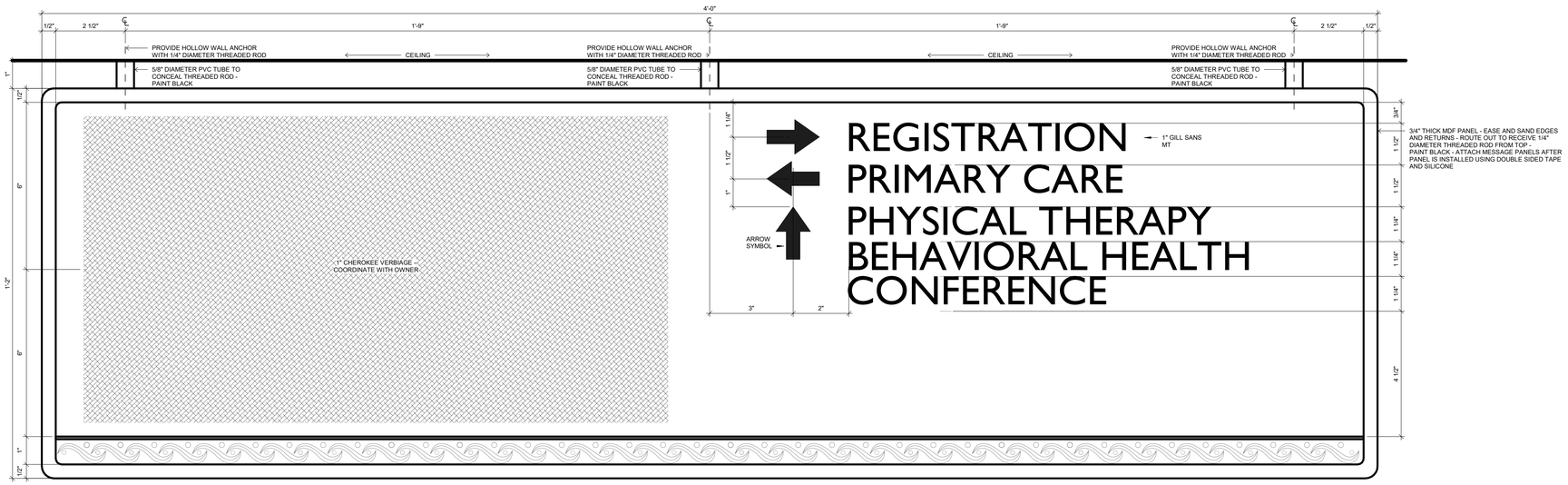
DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
A10.03

SIGNAGE ELEVATIONS



02 **A - SE - TYPE I.6**
6" = 1'-0"



01 **A - SE - TYPE I.5**
6" = 1'-0"

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JAMES R. CHILDERS
REGISTERED ARCHITECT

12-06-2019

CONSULTANT LOGO:

CLIENT:

THE CHEROKEE NATION
SEAL OF THE
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER
EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

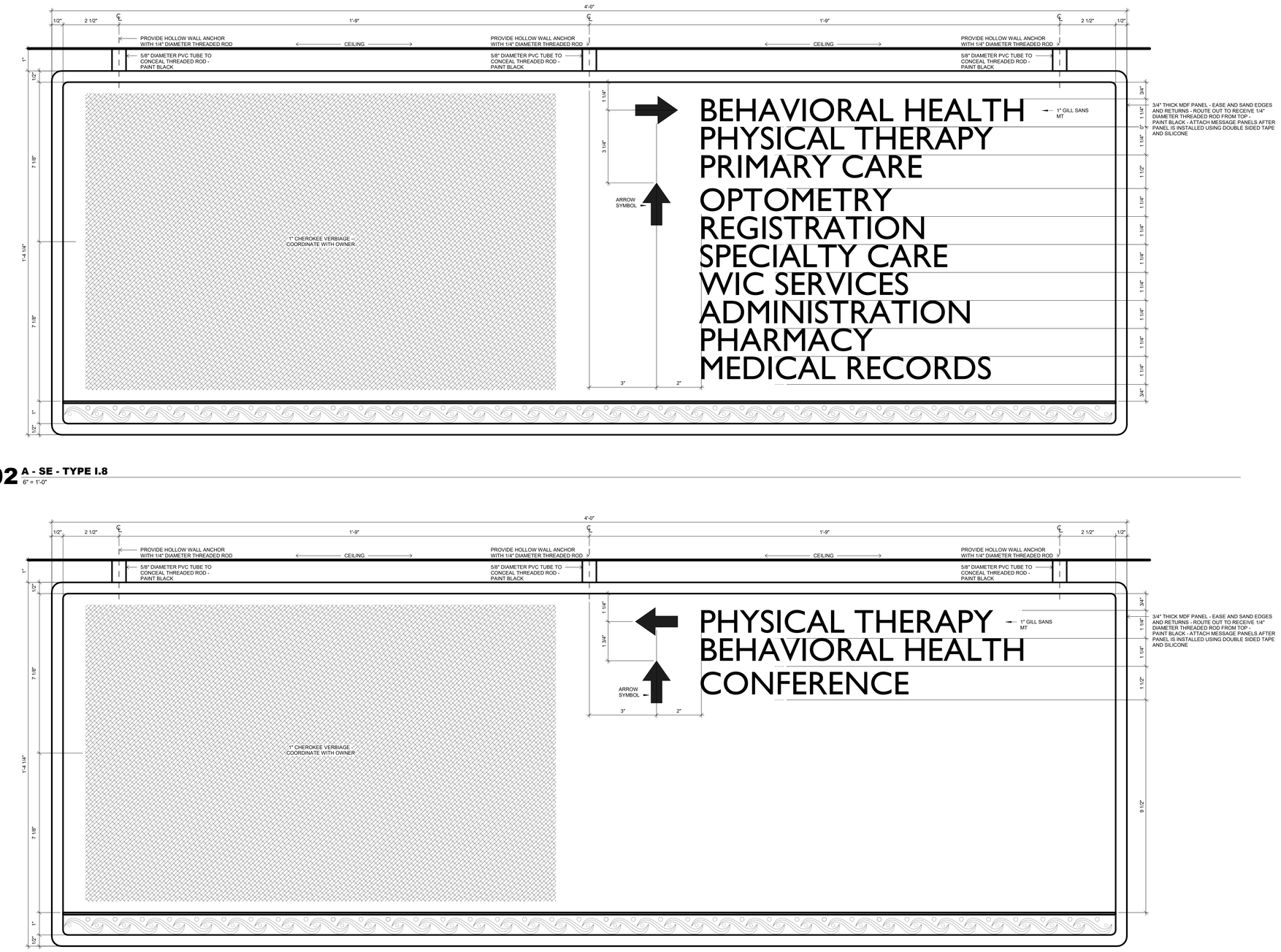
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01

SHEET NUMBER:
A10.04

SIGNAGE ELEVATIONS



02 A - SE - TYPE I.8
6" = 1'-0"

01 A - SE - TYPE I.7
6" = 1'-0"

James R. Childers Architect, Inc.
45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com

PROFESSIONAL SEAL:

STATE OF OKLAHOMA
JAMES R. CHILDERS
REGISTERED ARCHITECT

12-06-2019

CONSULTANT LOGO:

CLIENT:

THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER
EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

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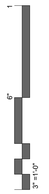
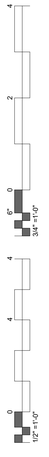
REVISIONS		
#	DATE	DESCRIPTION

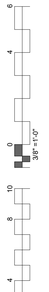
DATE:	JOB NUMBER:
12-06-19	18-01.01

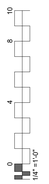
SHEET NUMBER:
A10.05

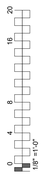
SIGNAGE ELEVATIONS

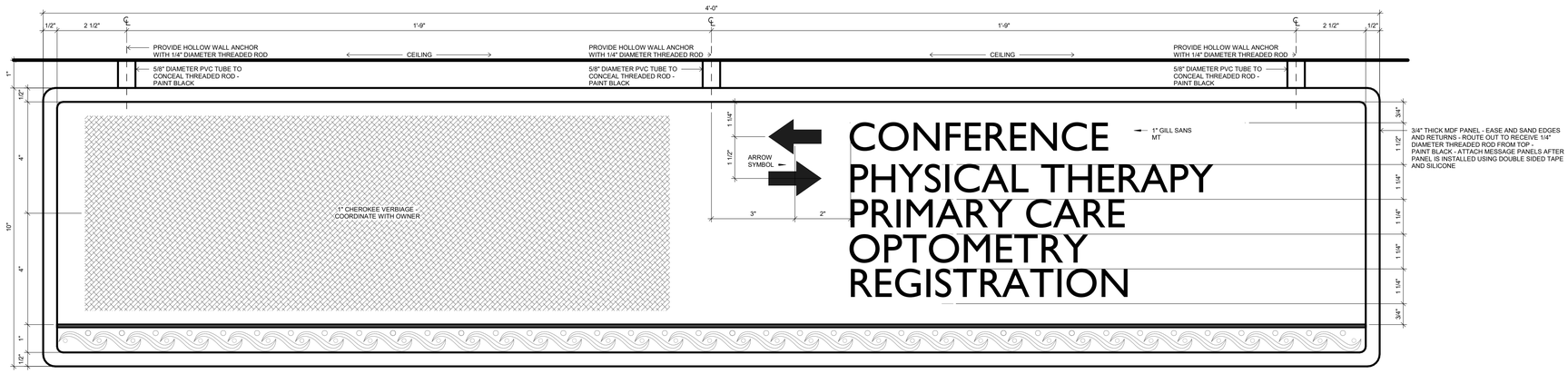












02 **A - SE - TYPE I.10**
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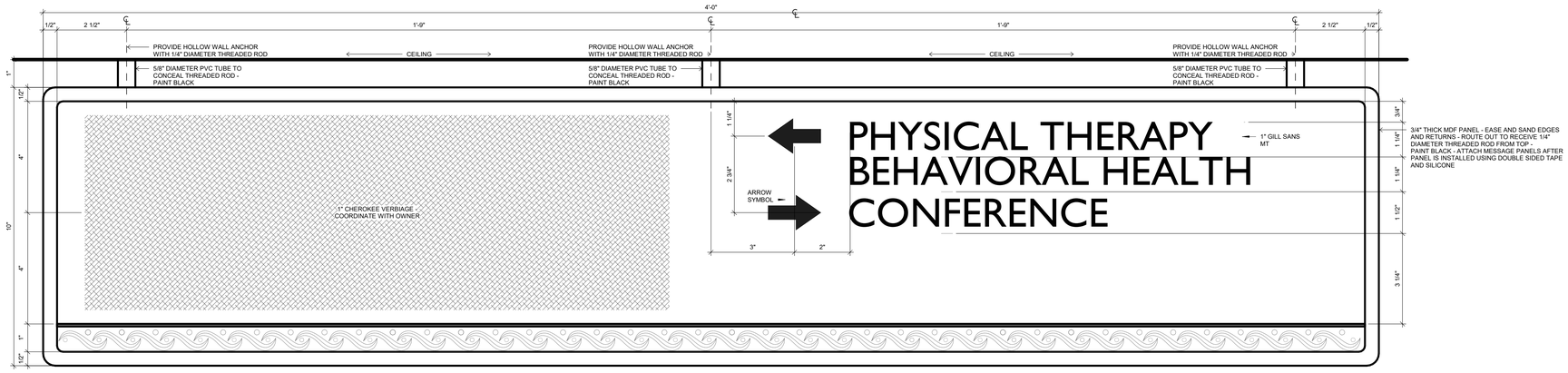

01 **A - SE - TYPE I.9**
6" = 1'-0"

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SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

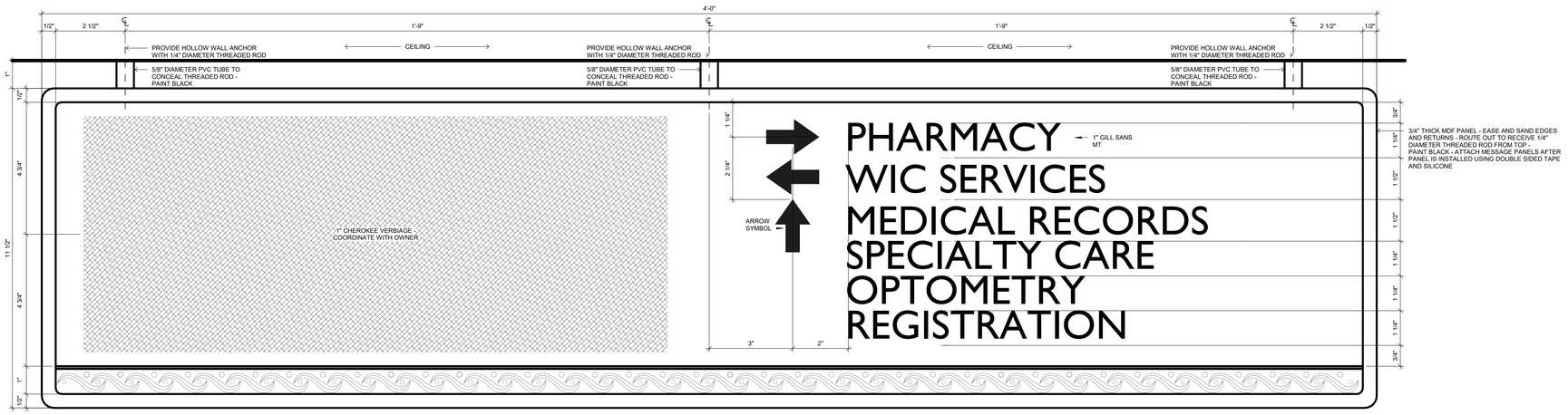
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

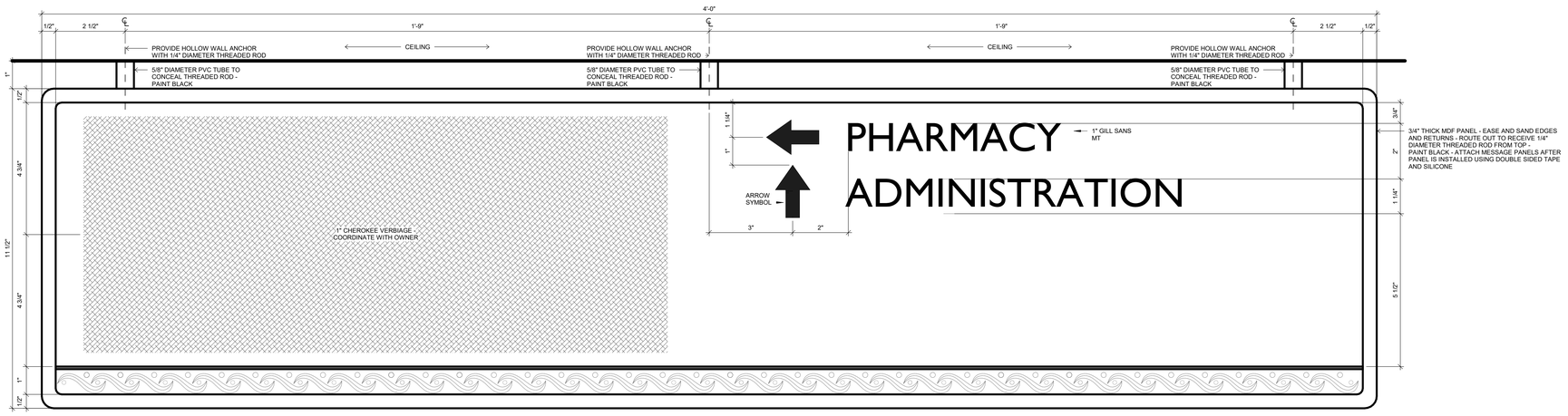
DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
A10.06

SIGNAGE ELEVATIONS



02 **A - SE - TYPE I.12**
6" = 1'-0"



01 **A - SE - TYPE I.11**
6" = 1'-0"

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12-06-2019

CONSULTANT LOGO:

CLIENT:

SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

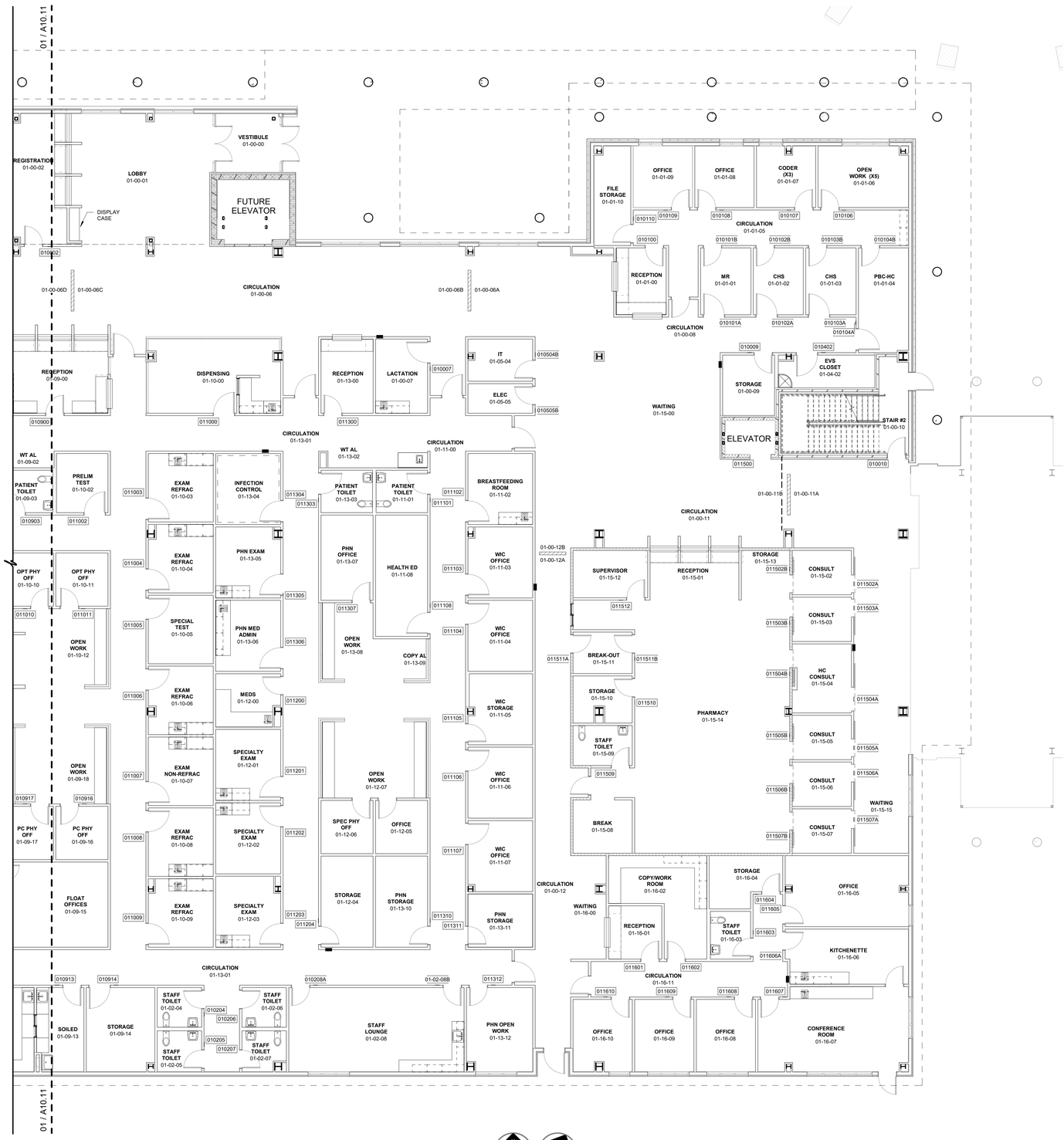
DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
A10.07

SIGNAGE ELEVATIONS

GENERAL NOTES

1. ALL SIGNAGE TO BE TAMPERPROOF.
2. ALL SIGNAGE TO HAVE ENGLISH & CHEROKEE VERBIAGE, COORDINATE VERBIAGE W/ OWNER.
3. COORDINATE ALL CUSTOM SIGNAGE DIMENSIONS, COLORS, LOGOS & ARTWORK W/ OWNER & ARCHITECT. (CUSTOM ELEMENTS NOT SHOWN)
4. VERIFY QUANTITY W/ OWNER.
5. VERIFY LOCATION W/ OWNER PRIOR TO MOUNTNG SIGNAGE ON GLAZING.
6. ALL CAST METAL SIGNAGE TO BE GEMINI - FLAT FACE PROFILE LETTERS - OPTIMA SEMI-BOLD FONT. (COLOR & FONT TO MATCH EXISITNG)



PLAN NORTH

TRUE NORTH

01 ENLARGED SIGNAGE PLAN - LEVEL 01 SECTOR 01

1/8" = 1'-0"

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PROFESSIONAL SEAL:

STATE OF OKLAHOMA — JAMES R. CHILDERS — REGISTERED ARCHITECT

12-06-2019

CONSULTANT LOGO:

CLIENT:

THE CHEROKEE NATION — 1839 — SEPT. 6, 1839 — FOR THE PEOPLE

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

A10.10

ENLARGED SIGNAGE PLAN - LEVEL 01 SECTOR 01

GENERAL NOTES

1. ALL SIGNAGE TO BE TAMPERPROOF.
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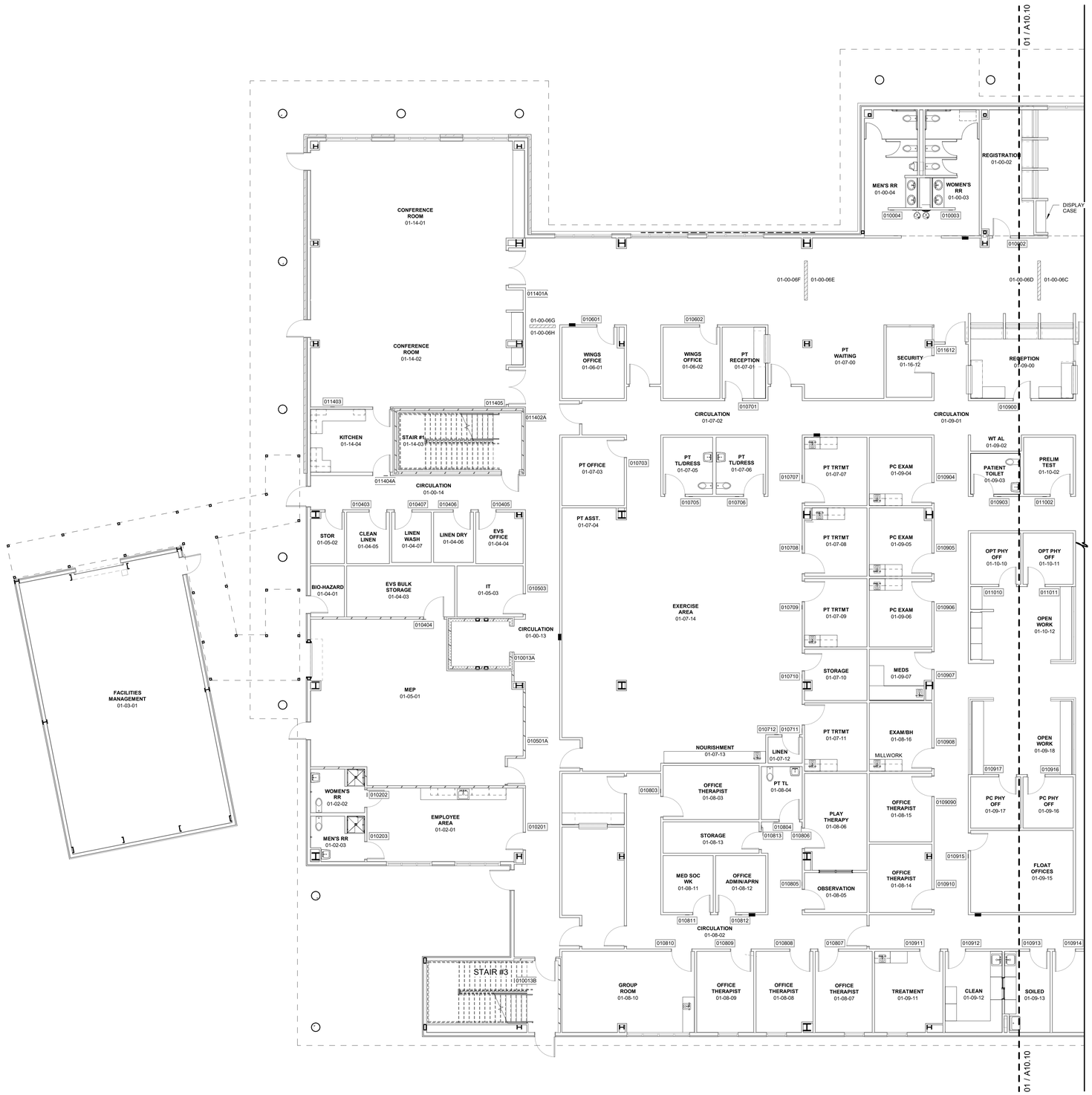

01 ENLARGED SIGNAGE PLAN - LEVEL 01 SECTOR 02
1/8" = 1'-0"

PLAN NORTH

TRUE NORTH

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STATE OF OKLAHOMA JAMES R. CHILDERS REGISTERED ARCHITECT

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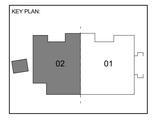
THE CHEROKEE NATION SEAL OF THE CHEROKEE NATION SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER:

A10.11

ENLARGED SIGNAGE PLAN - LEVEL 01 SECTOR 02

GENERAL NOTES

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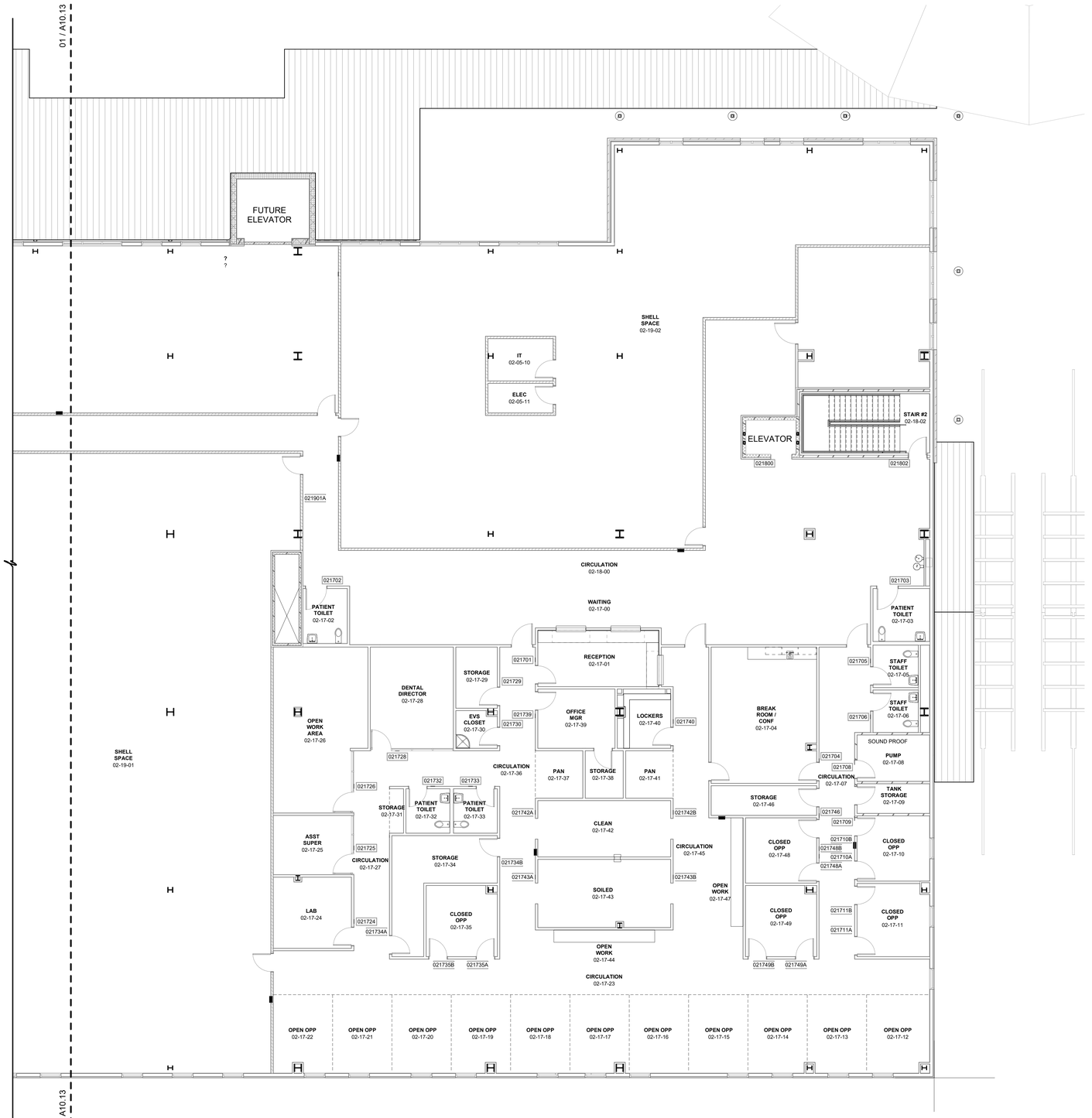

PLAN NORTH

TRUE NORTH

01 ENLARGED SIGNAGE PLAN - LEVEL 02 SECTOR 01

1/8" = 1'-0"

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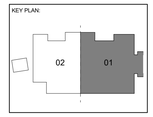
KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER:

A10.12

ENLARGED SIGNAGE PLAN - LEVEL 02 SECTOR 01

GENERAL NOTES

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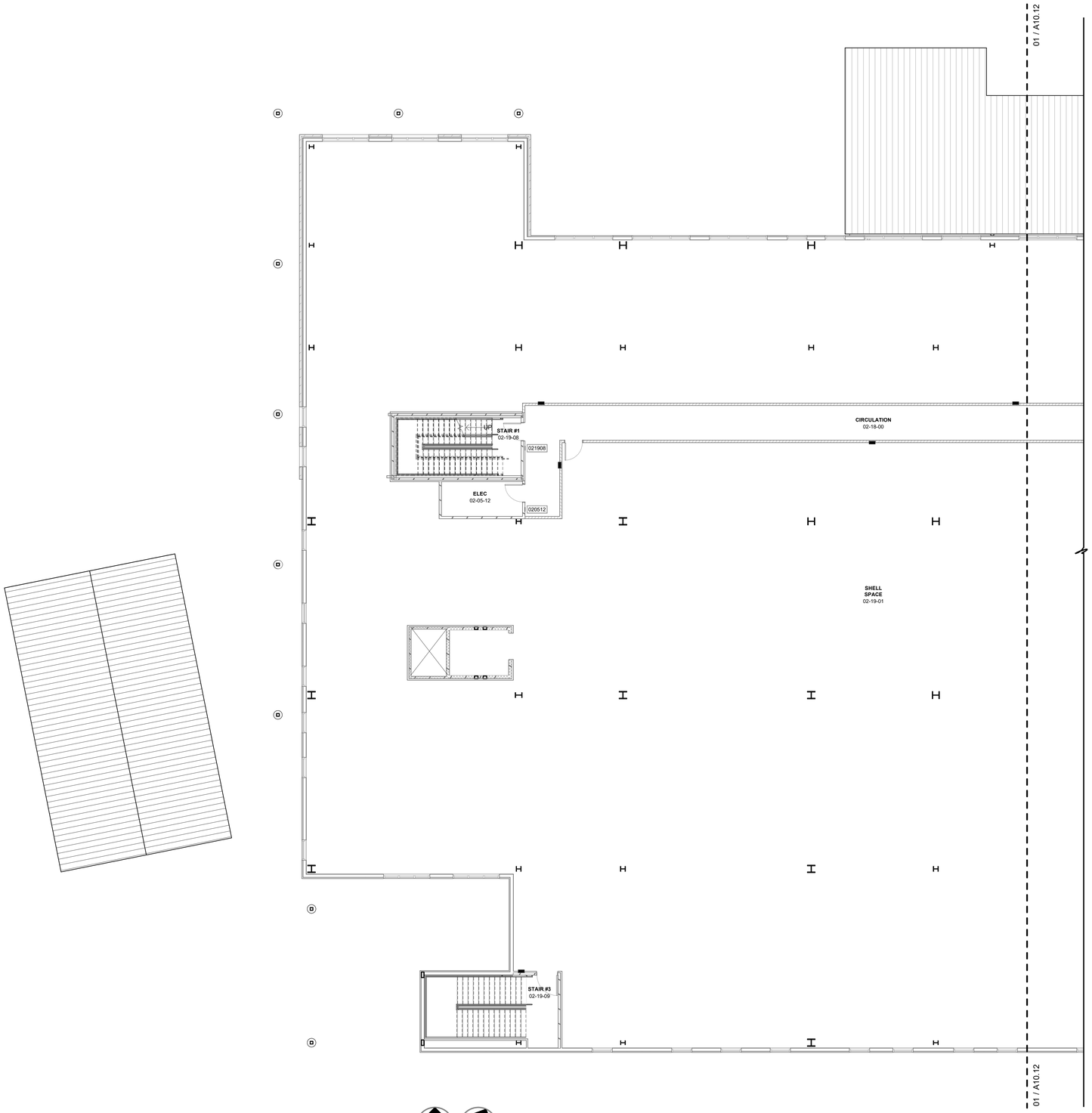

PLAN NORTH

TRUE NORTH

01 ENLARGED SIGNAGE PLAN - LEVEL 02 SECTOR 02

1/8" = 1'-0"

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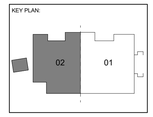

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
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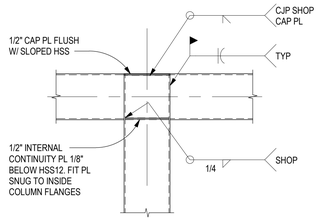
DATE:	JOB NUMBER:
12-06-19	18-01.01

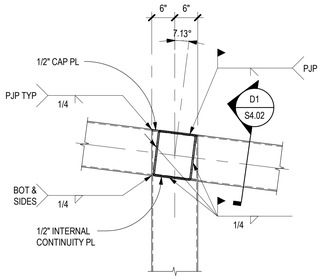
SHEET NUMBER:

A10.13

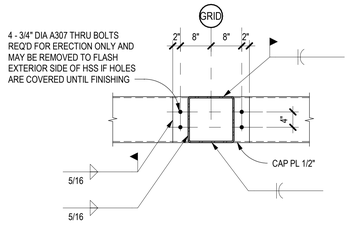
ENLARGED SIGNAGE PLAN - LEVEL 02 SECTOR 02



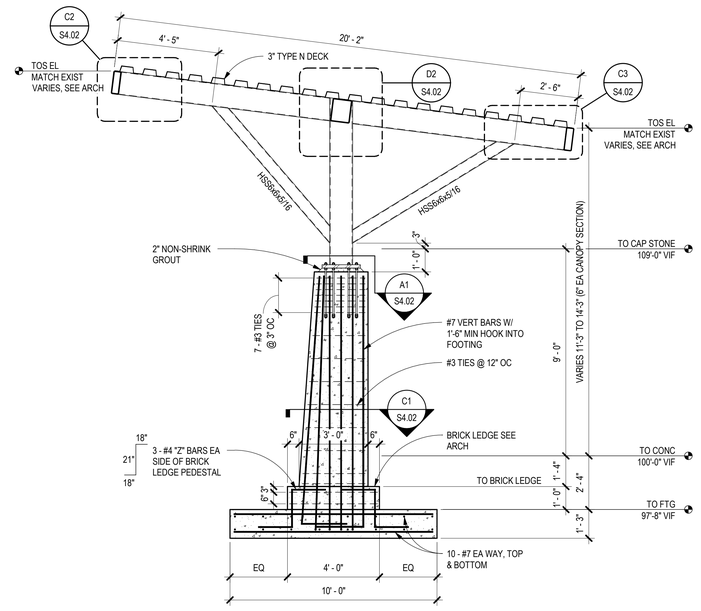
D1 BEAM TO COLUMN CONNECTION
SCALE: 3/4" = 1'-0"



D2 BEAM TO COLUMN CONNECTION
SCALE: 3/4" = 1'-0"

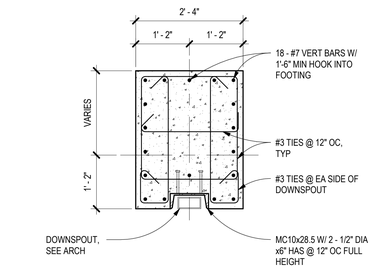


D3 BEAM TO BEAM CONNECTION
SCALE: 3/4" = 1'-0"

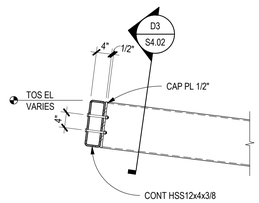


NOTES:
1. DESIGN BASIS BEARING PRESSURE = 1500 PSF.
2. ELEVATIONS AND COLUMN DIMENSIONS GIVEN ARE INTENDED TO MATCH EXISTING CANOPY ELEVATIONS AND COLUMN DIMENSIONS. CONTRACTOR TO FIELD VERIFY GIVEN INFORMATION.

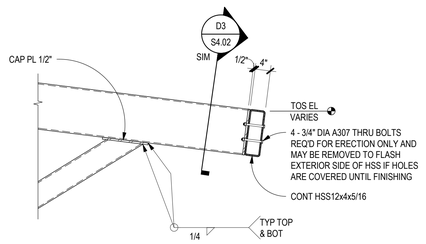
C4 CANOPY COLUMN SECTION - FULL HEIGHT
SCALE: 3/8" = 1'-0"



C1 CONCRETE PIER REBAR
SCALE: 3/4" = 1'-0"

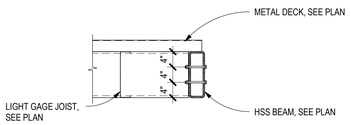


C2 CANOPY SECTION @ HIGH END
SCALE: 3/4" = 1'-0"

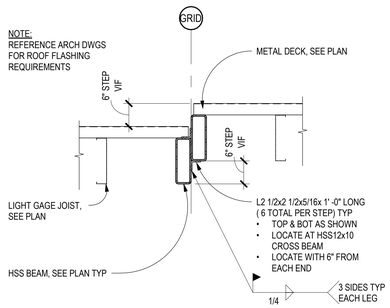


C3 CANOPY SECTION @ LOW END
SCALE: 3/4" = 1'-0"

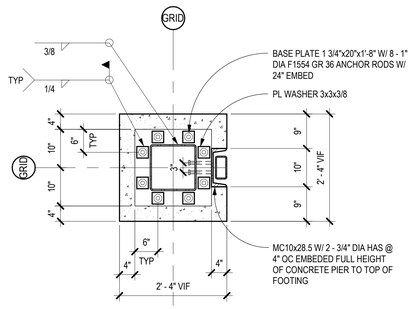
NOTE:
SEE ARCH FOR ROOFING
REQUIREMENTS



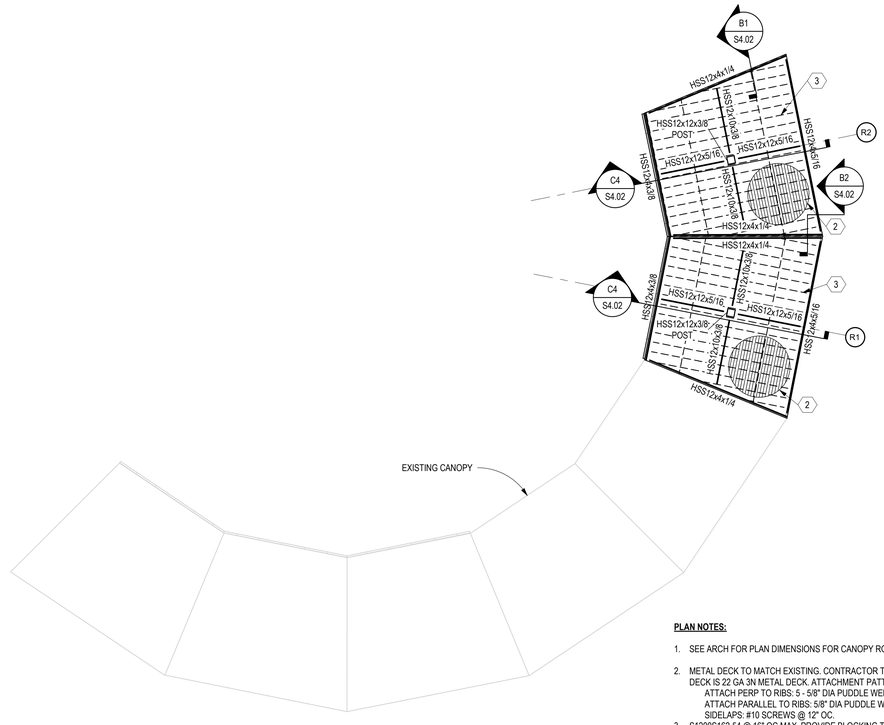
B1 SECTION AT CANOPY END
SCALE: 3/4" = 1'-0"



B2 CANOPY SECTION AT STEP
SCALE: 3/4" = 1'-0"



A1 COLUMN BASE DETAIL
SCALE: 3/4" = 1'-0"



A3 CANOPY FRAMING PLAN
SCALE: 1/8" = 1'-0"

PLAN NOTES:

1. SEE ARCH FOR PLAN DIMENSIONS FOR CANOPY ROOF.
2. METAL DECK TO MATCH EXISTING. CONTRACTOR TO VERIFY THAT EXISTING DECK IS 22 GA 3N METAL DECK. ATTACHMENT PATTERN AS FOLLOWS:
   ATTACH PERP TO RIBS: 5 - 5/8" DIA PUDDLE WELDS PER 36" WIDE SHEET.
   ATTACH PARALLEL TO RIBS: 5/8" DIA PUDDLE WELDS @ 12" OC.
   SIDELAPS: #10 SCREWS @ 12" OC.
3. S1200S162-54 @ 16" OC MAX. PROVIDE BLOCKING TO MATCH DEPTH OF JOIST AT MIDSPAN OF EACH JOIST SPAN.

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PROFESSIONAL SEAL:

CONSULTANT LOGO:

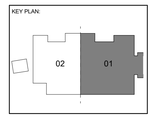
Chavez-Grieves
consulting engineers, inc.
4700 Lincoln Road NE, Suite 102 Albuquerque, NM 87109
505-344-4080 505-343-8759 (fax)

CLIENT:

THE CHEROKEE NATION
TAHLEQUAH, OKLA.
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER
EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
S4.02

ENLARGED PLANS

GENERAL PLUMBING SEISMIC NOTES

1	PROVIDE VIBRATION AND SEISMIC CONTROLS FOR FIRE-SUPPRESSION PIPING AND EQUIPMENT FOR DEVICES FOR FIRE-SUPPRESSION EQUIPMENT AND SYSTEMS.
2	PROVIDE VIBRATION AND SEISMIC CONTROLS FOR PLUMBING PIPING AND EQUIPMENT.
3	COORDINATE ALL VIBRATION ISOLATION DEVICE INSTALLATION AND SEISMIC BRACING FOR PLUMBING PIPING AND EQUIPMENT WITH OTHER SYSTEMS AND EQUIPMENT IN THE VICINITY, INCLUDING OTHER SUPPORTS AND RESTRAINTS, IF ANY.
4	TESTING AGENCY QUALIFICATIONS: AN INDEPENDENT AGENCY, WITH THE EXPERIENCE AND CAPABILITY TO CONDUCT THE TESTING INDICATED, THAT IS AN NRTL AS DEFINED BY OSHA IN 29 CFR 1910.7 AND THAT IS ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.
5	COMPLY WITH SEISMIC-RESTRAINT REQUIREMENTS IN THE INTERNATIONAL BUILDING CODE
6	WELDING QUALIFICATIONS: QUALITY PROCEDURES AND PERSONNEL ACCORDING TO AWS D1.1/D1.1M, "STRUCTURAL WELDING CODE-STEEL."
7	SEISMIC-RESTRAINT DEVICES SHALL HAVE HORIZONTAL AND VERTICAL LOAD TESTING AND ANALYSIS AND SHALL BEAR ANCHORAGE PRE-APPROVAL OPA NUMBER FROM OSHPD, PRE-APPROVAL BY ICC-ES, OR PRE-APPROVAL BY ANOTHER AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, SHOWING MAXIMUM SEISMIC-RESTRAINT RATINGS. RATINGS BASED ON INDEPENDENT TESTING ARE PREFERRED TO RATINGS BASED ON CALCULATIONS. IF PRE-APPROVED RATINGS ARE UNAVAILABLE, SUBMITTALS BASED ON INDEPENDENT TESTING ARE PREFERRED. CALCULATIONS (INCLUDING COMBINING SHEAR AND TENSILE LOADS) TO SUPPORT SEISMIC-RESTRAINT DESIGNS MUST BE SIGNED AND SEALED BY A QUALIFIED PROFESSIONAL ENGINEER.
8	SEISMIC RESTRAINTS FOR MEP EQUIPMENT AND SYSTEMS
9	BUILDING IS CLASSIFIED AS SEISMIC DESIGN CATEGORY C. CONTRACTOR SHALL PROVIDE SEISMIC BRACING FOR PIPING, DUCTWORK AND EQUIPMENT TO MEET ALL LOCAL AND NATIONAL CODE REQUIREMENTS.
10	CONTRACTOR'S RESPONSIBILITIES INCLUDE PROVIDING ALL SUBMITTAL'S AND DETAILS WITH STRUCTURAL ENGINEER'S CERTIFICATION FOR PERMITTING.
11	SIESMIC PROTECTION FOR CONCERNS OF ALL BUILDING SYSTEMS INCLUDING BUT NOT LIMITED TO MECHANICAL, PLUMBING, AND ELECTRICAL MUST MEET MINIMUM REQUIREMENTS OF ALL APPLICABLE CODES FOR BUILDINGS' CLASSIFIED SEISMIC PROTECTION MEASURES TO BE APPLIED SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND/OR FEDERAL CODES AND WITH MANUFACTURERS'S REQUIREMENTS, THE MOST STRINGENT SHALL APPLY

P-WATER HEATER SCHEDULE

TAG NUMBER	SERVICE	MFR	MODEL NUMBER	TYPE	GPM AT 70F RISE	POWER SUPPLY	NOTES
GWH-1 & 2	DOMESTIC HOT WATER	INTELLIHOT	iN400	TANKLESS	11	120/1/60	ALL APPLY

NOTES:
1. EACH WH TO HAVE DUAL HEAT EXCHANGERS FOR BUILT IN REDUNDANCY.
2. EACH WH TO HAVE 7" LCD TOUCHSCREEN DISPLAY DIRECT CELL LTE CONNECTIVITY.
3. HEAT EXCHANGERS TO BE 316L S.S., 3/4" ID.
4. MASTERLESS CASCADING DESIGN.
5. WHs TO COMMUNICATE WITH EACH OTHER.
6. ASME-HLW RATED.

P-BOOSTER PUMP SCHEDULE

TAG NUMBER	SERVICE	MFR	MODEL	TYPE	TOTAL SYSTEM US GPM	TDH FT	HP	POWER SUPPLY	NOTES

NOTES:
1. PUMPS TO BE FURNISHED WITH ECM MOTORS HAVING INTEGRAL MOTOR VFDs.
2. PUMPS TO BE MULTI-STAGE WITH SPLIT COUPLING.
3. SUCTION & dISCHARGE HEADERS TO BE 316L S.S.
4. PUMP BASPLATE SHALL BE 304 S.S.
5. ON-BOARD PUMP CONTROLLER SHALL CASCADE PUMPS FOR MAXIMUM EFFICIENCY.
6. PUMP CURVES SHALL BE PROGRAMMED INTO CONTROLLER.
7. ENTIRE SYSTEM (PUMPS, VFDs, CONTROLLERS) SHALL BE MANUFACTURED BY A SINGLE MANUFACTURER FOR SINGLE SOURCE RESPONSIBILITY.
8. SKID MOUNTED SYSTEM SHALL INCLUDE ALL PIPE, VALVES & FITTINGS, AND OFFER SINGLE POINT CONNECTIONS.
9. FURNISH WITH EXPANSION TANK SIZE AS RECOMMENDED BY BOOSTER PUMP MANUFACTURER.

PLUMBING PIPING INSULATION SCHEDULE

DESCRIPTION	INSULATION TYPE	INSULATION THICKNESS NOMINAL PIPE SIZE <1	1 TO <1-1/2	1-1/2 TO <4	4 TO <8	≥8
DOMESTIC COLD WATER PIPING BELOW GRADE	PVC OR HDPE JACKET ONLY, NO INSULATION	1	1	1.5	1.5	1.5
CONDENSATE PIPING ABOVE GRADE	ELASTOMERIC, ADD ASTM E84 COMPLIANT JACKET IN AIR PLENUM SPACES	0.5	1	1	1	1.5
PVC WASTE VENT AND WASTE DRAIN IN AIR PLENUM SPACE	COMPRESSED FIBERGLASS OR ELASTOMERIC WITH ASTM E84 COMPLIANT JACKET	0.5	0.5	0.5	0.5	0.5
WATER COOLER TRAPS, ALL EXPOSED LAVATORY AND SINK TRAPS, TAILPIECES, HOT AND COLD WATER SUPPLY LINES/ANGLE VALVES TO THESE DEVICES	EQUIVALENT TO TRUEBRO 102 E-Z PIPE COVER	0.125	0.125	0.125	0.125	0.125
DOMESTIC HOT WATER AND HOT WATER RETURN PIPING BELOW GRADE	ELASTOMERIC OR FOAM. ENCAPSULATE WITH PVC OR HDPE JACKET	1	1	1.5	1.5	1.5
DOMESTIC HOT WATER, HOT WATER, AND HOT WATER RETURN PIPING ABOVE GRADE	ELASTOMERIC, ADD ASTM E84 COMPLIANT JACKET IN AIR PLENUM SPACES	1	1	1.5	1.5	1.5
PVC WASTE DRAIN IN WALLS, AND WASTE VENT IN ALL AREAS ABOVE GRADE	COMPRESSED FIBERGLASS OR ELASTOMERIC WITH ASTM E84 COMPLIANT JACKET	1"	1"	1.5"	1.5"	1.5"

PIPING MATERIAL SCHEDULE

DESCRIPTION	MATERIAL
ABOVE GROUND GAS	SCHEDULE 40 BLACK STEEL WITH MALLEABLE IRON FITTINGS OR WELDED JOINTS WITH BUTT WELD FITTINGS. PROVIDE CORROSION-RESISTANT MATERIAL ON PIPING EXPOSED TO ATMOSPHERE OR IN CONTACT WITH MATERIAL EXERTING A CORROSIVE ACTION
ABOVE GROUND SANITARY SEWER AND VENT	PVC SCHEDULE 40 PIPE AND FITTINGS EXCEPT IN PLENUM RETURN AREAS. IN PLENUM RETURN AREAS WRAP PVC WITH 1" FIRE WRAP.
FLEXIBLE GAS PIPING INSIDE BUILDING	FOR FINAL CONNECTION TO EQUIPMENT ONLY. CORRUGATED STAINLESS STEEL GAS LINE WITH POLYETHYLENE JACKET AND FITTINGS BY MFG. MUST MEET ANSI, NFPA, FACTORY MUTUAL CODE AND LISTINGS AS AN ACCEPTABLE GAS PIPING MATERIAL. ALL STATE AND LOCAL CODE APPROVALS. PROVIDE PIPING EQUAL TO TRACPIPE BY OMEGA FLEX. SIZE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
FORCED MAIN PIPING	SCHEDULE 40 GALVANIZED STEEL WITH SCREWED JOINTS.
MEDICAL GAS PIPING	ASTM B88 TYPE L HARD COPPER WITH WROUGHT COPPER FITTINGS. MEDICAL GAS SUPPLY PIPING SHALL BE FACTORY CLEANED, OIL FREE & SEALED PER NFPA 99. JOINTS TO BE BRAZED.
UNDER GROUND GAS	APPROVED PLASTIC WITH COMPATIBLE FITTINGS CONFORMING WITH ASTM D 2513 AND SHALL BE INSTALLED IN ACCORDANCE WITH GAS CODE OR WITH SCH. 40 STEEL WITH MALLEABLE IRON FITTINGS OR WELDED JOINTS WITH BUTT WELD FITTINGS. MILL COAT PIPE WITH HIGH DENSITY POLYETHYLENE OVER ADHESIVE UNDERCOATING WRAP FIELD JOINTS AND FITTINGS WITH REPUBLIC "X-TRU-TAPE" OR EQUAL. PROVIDE WITH MARKER TAPE.
UNDERGROUND SANITARY SEWER AND VENT PIPING INSIDE BUILDING AND OUTSIDE BUILDING	PVC SCHEDULE 40 PIPE AND FITTINGS.
WATER DISTRIBUTION PIPE	WATER DISTRIBUTION PIPE SHALL CONFORM TO NSF 61 AND SHALL BE COPPER AND CONFORM TO THE STANDARDS LISTED IN TABLE 605.4 OF THE I.P.C
WATER SERVICE PIPE	WATER SERVICE PIPE SHALL CONFORM TO NSF 61 AND SHALL BE COPPER AND CONFORM TO THE STANDARDS LISTED IN TABLE 605.3 OF THE I.P.C

ROUGH-IN AND MOUNTING HEIGHT SCHEDULE

NOTES:
1. ALL VENT LINE SIZES SHOWN ARE MINIMUM UNLESS SHOWN LARGER ON RISER DIAGRAMS.
2. SIZES SHOWN FOR WASTE ARE FOR RISERS ONLY.
3. ALL DRAIN IN SLAB VENT DOWNS IN SLAB SHALL BE 2" OR LARGER.
4. VENT LINES SHALL RISE 6" ABOVE FLOOD LEVEL RIM BEFORE OFFSETTING HORIZONTALLY, EXCEPT FOR INTERCEPTORS LOCATED OUTDOORS.
5. SIZES SHOWN APPLY UNLESS NOTED DIFFERENTLY ON PLANS.

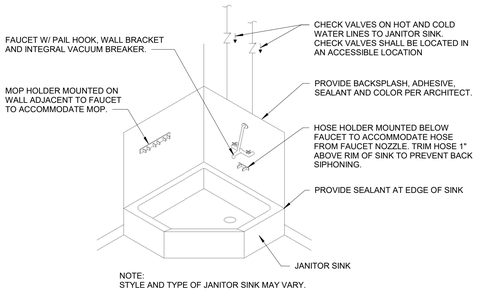
FIXTURE	WASTE	VENT	COLD WATER	HOT WATER	HEIGHT OF INSTALLATION
DRINKING FOUNTAIN	1-1/2"	1-1/2"	1/2"		NON-ADA 40" TO TOP OF ORIFICE ADA 36" TO TOP OF ORIFICE
EYEWASH STATION			1/2"	1/2"	
FLOOR DRAINS/SINKS	2"	1-1/2"			
HOSE BIBB			3/4"		18" ABOVE GRADE OUTSIDE, 18" A.F.F. INSIDE
JANITOR'S SINK	3"	1-1/2"	1/2"	1/2"	
LAVATORIES AND SINKS, COUNTER MOUNTED	1-1/2"	1-1/4"	1/2"	1/2"	
LAVATORIES AND SINKS, WALL MOUNTED	1-1/2"	1-1/4"	1/2"	1/2"	NON-ADA 31" TO TOP OF RIM ADA 34" TO TOP OF RIM
SUPPLY BOX			1/2"		12" TO BOTTOM OF BOX
URINAL FLUSH VALVE WALL MOUNTED	1-1/2"	1-1/4"	1"		NON-ADA 24" TO TOP OF FLOOD LEVEL ADA 17" TO TOP OF FLOOD LEVEL
UTILITY BOX	2"	1-1/2"	1/2"	1/2"	36" TO BOTTOM OF BOX
WASHER BOX	2"	1-1/2"	1/2"	1/2"	18" TO BOTTOM OF BOX
WATER CLOSET FLUSH VALVE FLOOR MOUNTED	3"	1-1/2"	1-1/4"		
WATER CLOSET FLUSH VALVE WALL MOUNTED	3"	1-1/2"	1-1/4"		NON-ADA 15" TO TOP OF BOWL ADA 17" TO TOP OF BOWL

PLUMBING EQUIPMENT SCHEDULE

FIXTURE TAG	DESCRIPTION	MANUFACTURER	TRIM	ELECTRICAL REQUIREMENTS
BV-1	BALL VALVE	APOLLO INTERNATIONAL 94ALF-A	LEAD FREE BALL VALVE, FULL PORT, BLOWOUT-PROOF, PRESSURE RETAINING, ADJUSTABLE STEM PACKING NUT	
CBV-1	CALIBRATED BALANCE VALVE	BELL&GOSSETT CIRCUIT SETTER PLUS	LEAD FREE, CIRCUIT SETTER PLUS, CALIBRATED BALANCE AND POSITIVE SHUT-OFF VALVE	
COTG-1	CLEANOUT TO GRADE, SPEEDI-SET OUTLET	J. R. SMITH 4237	UNFINISHED FLOOR CLEANOUT WITH ADJUSTABLE ROUND CAST IRON TRACTOR COVER TOP, DUCO CAST IRON CLEANOUT WITH ROUND ADJUSTABLE SCORIATED SECURED CAST IRON TOP, TAPERED THREAD BRONZE PLUG, REFER TO PLANS FOR SIZES	
CP-1	CIRCULATING PUMP	ARMSTRONG ASTRO 280 SS	THREE SPEED, BRONZE BODY WITH BRASS IMPELLER, WITH AQUASTAT AND AUTOMATIC TIMER KIT, 5 GPM @ 25 HEAD-FEET	230V, 1PH, 218 WATTS
CP-2	CIRCULATING PUMP	ARMSTRONG ASTRO 286 SS	THREE SPEED, BRONZE BODY WITH BRASS IMPELLER, WITH AQUASTAT AND AUTOMATIC TIMER KIT, 17 GPM @ 25 HEAD-FEET	230V, 1PH, 370 WATTS
DI-1	DEIONIZED WATER	PROVIDED BY OTHER INSTALLED BY CONTRACTOR	CONTRACTOR SHALL COORDINATE WITH BENCO PLANS AND REPRESENTATIVE FOR ALL REQUIREMENTS AND LOCATIONS OF DEIONIZED WATER	
ET-1	EXPANSION TANK	WATTS PLT-20	BRASS CONNECTION, WELDED STEEL CONSTRUCTION, POLYPROPYLENE LINER, BUTYL DIAPHRAGM, GROOVED DIAPHRAGM HOOP RING, WELDED AIR CHARGE FITTING, 14 GAL., 5.6 TANK ACCEPTANCE	
EWC-1	ELECTRIC WATER COOLER, SPLIT LEVEL, WALL MOUNTED, STANDARD AND HANDICAPPED, NO LEAD DESIGN, ONE PIECE, STAINLESS STEEL BASIN. FLEXIBLE SAFETY BUBBLER	ELKAY ERPBM28K	ADA APPROVED, W/ TOUCH PADS ON FRONT, FLEXIBLE SAFETY BUBBLER, P-TRAP, WATER VALVE	115V, 1PH, 380W
EWS-1	EYE WASH STATION 2-HEADS	STINGRAY S2230FLTSS/NA	WALL MOUNTED STAINLESS STEEL BOWL WITH TWO GS-PLUS SPRAY HEADS, 1/2" IPS CHROME PLATED BRASS STAY-OPEN BALL VALVE, TMV-3	
EWS-2	EYE WASH STATION 2-HEADS DECK MOUNTED	STINGRAY S2240FLT	DECK MOUNTED EMERGENCY EYEWASH, SWING-DOWN OPERATED, CORROSION RESISTANT MATERIALS, CERAMIC STAY OPEN VALVE, LEAD-FREE BRASS BODY, TMV-3	
FD-1	FLOOR DRAIN-SQUARE	MIFAB F1000-S	CAST IRON BODY, ANCHOR FLANGE, SECURED ROUND ADJUSTABLE STRAINER HEAD WITH HOLE GRATE, LOOSE GRATE AND SEDIMENT BUCKETS, MIFAB TRAP GUARD, REFER TO PLANS FOR SIZES	
FPHB-1	FROST PROOF HOSE BIBB - BOX	J.R. SMITH 5509QT	AUTOMATIC DRAINING, ANTI-SIPHON FREEZELESS, PROVIDE SHUTOFF VALVE FOR SUPPLY LINE IN AN ACCESSIBLE LOCATION	
FS-1	FLOOR SINK 12-1/2" CAST IRON RECEPTOR, 8" DEEP	J. R. SMITH 3150	CAST IRON FLANGED RECEPTOR, SEEPAGE HOLES, ACID RESISTANT COATED INTERIOR, NICKEL BRONZE RIM, LOOSE GRATE, ALUMINUM DOME BOTTOM STRAINER, GRATE, MIFAB TRAP GUARD	
GI-1	GREASE INTERCEPTOR	SCHIER GB-#75	POLYETHYLENE GREASE INTERCEPTOR WITH HIGHWAY TRAFFIC LOAD RATED, BOLTED, GAS/WATER TIGHT COMPOSITE COVER, CONTRACTOR SHALL HAVE LOCAL SANITARIAN AND ADMINISTRATIVE AUTHORITIES APPROVAL PRIOR TO ORDERING AND INSTALLATION	
HL-1	HANDICAPPED LAVATORY, COUNTER MOUNT, VITREOUS CHINA - OVAL	AMERICAN STANDARD 0476.028	AMERICAN STANDARD RELIANT 3 - 7385.004 SINGLE LEVER FAUCET, 0.5 GPM AERATOR, 4" CENTER SET TRIM PLATED, TMV-1 BELOW DECK, ZURN Z8743-PC GRID STRAINER, ZURN Z8700 SERIES P-TRAP, ZURN Z8800 SERIES STOP WITH FLEXIBLE SUPPLIES AND TURN KEY, ZURN Z8946-1-NT ADA TRAP, STOP AND SUPPLY PROTECTOR PVC TYPE INSULATION AROUND "P" TRAP & IPS CONNECTIONS, THREE HOLES ON DECK 4" CENTERS	
HL-2	HANDICAPPED LAVATORY, WALL MOUNT, VITREOUS CHINA	AMERICAN STANDARD DECLYN 0321.026	AMERICAN STANDARD RELIANT 3 - 7385.004 SINGLE LEVER FAUCET, 0.5 GPM AERATOR, 4" CENTER SET TRIM PLATED, TMV-1 BELOW DECK, ZURN Z8743-PC GRID STRAINER, ZURN Z8700 SERIES P-TRAP, ZURN Z8800 SERIES STOP WITH FLEXIBLE SUPPLIES AND TURN KEY, ZURN Z8946-1-NT ADA TRAP, STOP AND SUPPLY PROTECTOR PVC TYPE INSULATION AROUND "P" TRAP & IPS CONNECTIONS, CONCEALED ARM CARRIER SYSTEM J.R. SMITH 0700, THREE HOLES ON DECK 4" CENTERS	
HSH-1	HANDICAPPED SHOWER, 36"x 36"	AQUA BATH C4136BF-FUS 2"	STAINLESS STEEL DRAIN BODY STRAINER, SEAT, GRAB BARS, DELTA T13H332-25 SHOWER FAUCET SYSTEM	
HWC-1	HANDICAPPED WATER CLOSET, VITREOUS CHINA, FLUSH VALVE, FLOOR MOUNTED, ELONGATED RIM, 12" ROUGH-IN, SIPHON JET BOWL, 1.28 GPF	AMERICAN STANDARD MADERA 3461.001	BEMIS 1955CT OPEN FRONT SEAT, SLOAN ECOS 8111-1-6/1.1 HARDWIRED SENSOR FLUSH VALVE, EL-451 TRANSFORMER, Z5972-COMB CLOSET BOLT/WAX RING KIT	120V, 25W
HWC-2	HANDICAPPED WATER CLOSET, VITREOUS CHINA, FLUSH VALVE, WALL MOUNTED, ELONGATED RIM, 12" ROUGH-IN, SIPHON JET BOWL, 1.28 GPF	ZURN Z5615 HET SERIES	BEMIS 1955CT OPEN FRONT SEAT, SLOAN ECOS 8111-1-6/1.1 HARDWIRED SENSOR FLUSH VALVE, EL-451 TRANSFORMER, Z5972-COMB CLOSET BOLT/WAX RING KIT, J.R. SMITH 0210-M54-XK 1000# CARRIER	120V, 25W
JS-1	JANITOR'S SINK, FLOOR MOUNTED 24"x 24", ONE PIECE MOLDED CONSTRUCTION OF NATURAL CRUSHED STONE AND POLYESTER RESIN	FIAT FLOOR SINK MSB 2424	CHICAGO FAUCET 897-CP WALL MOUNTED 8" BODY W/ VACUUM BREAKER, HOSE BRACKET, MOP HANGER, BUMPER GUARDS, WALL GUARDS 2 PANELS & 1 BRACKET, SUPPLIED W/ CAST BRASS DRAIN, PROVIDE CHECK VALVES ON HOT AND COLD WATER LINES IN AN ACCESSIBLE LOCATION	
JS-2	CLINIC SERVICE SINK, WALL MOUNTED	AMERICAN STANDARD 9512.999.020	AMERICAN STANDARD 6047.117 MANUAL FLUSH VALVE TOP SPUD, AMERICAN STANDARD 7880.191 BEDPAN CLEANSER, AMERICAN STANDARD 7832504.075 RIM GUARD, CARRIER	
OD-1	OVERFLOW DRAIN	J.R. SMITH 1072	ADJUSTABLE, DUCO CAST IRON BODY, FLASHING CLAMP, GRAVEL STOP, POLYETHYLENE DOME, WATER DAM, SUMP PAN	
PT-1	PLASTER TRAP	TRAP-EZE BUFFALO DENTAL 62100	TRAP-EXE DIPOSABLE PLASTER TRAP KIT 3.5 GALLON	
RD-1	ROOF DRAINS	J.R. SMITH 1015	ADJUSTABLE EXTENSION, DUCO CAST IRON BODY, FLASHING CLAMP, GRAVEL STOP, POLYETHYLENE DOME, AND SUMP PAN	
RDOD-1	ROOF DRAIN/OVERFLOW COMBINATION	ZURN Z164	12" DIAMETER COMBINATION MAIN ROOF AND OVERFLOW DRAIN WITH LOW SILHOUETTE DOMES AND DOUBLE TOP-SET DECK PLATE	
RH-1	ROOF HYDRANT	WOODFORD SRH-MS	FREEZELESS ROOF HYDRANT, BACKFLOW PROTECTED WITH DOUBLE CHECK BACKFLOW PREVENTER, BUILT IN VENT, NO DRAIN REQUIRED	
RPZ-1	REDUCE PRESSURE PRINCIPLE BACKFLOW PREVENTER WITH WYE STRAINER, FOR DOMESTIC WATER, LEAD FREE	WATTS 375AST	PROVIDE SAME SIZE AS WATER LINE FROM METER, WATTS BALL VALVES AND "Y" STRAINER, SHALL MEET APPROVAL BY FOUNDATION FOR CROSS CONNECTION CONTROL AND HYDRAULIC RESEARCH AT THE UNIVERSITY OF SOUTHERN CALIFORNIA	
RPZ-2	REDUCE PRESSURE PRINCIPLE BACKFLOW PREVENTER, FOR IRRIGATION WATER	WATTS LF009M2 QT	PROVIDE SAME SIZE AS WATER LINE FROM METER, WATTS BALL VALVES AND "Y" STRAINER, SHALL MEET APPROVAL BY FOUNDATION FOR CROSS CONNECTION CONTROL AND HYDRAULIC RESEARCH AT THE UNIVERSITY OF SOUTHERN CALIFORNIA	
S-1	SINK SINGLE COMPARTMENT, OVERALL 19"x 19"x 6", OFF CENTER REAR DRAIN	ELKAY LRAD1919	ELKAY MODEL LK800GN08T4 CONCEALED DECK MOUNT 13" HIGH SPOUT, 8" REACH, AERATOR, 3-1/2" OPENING DRAIN. McGUIRE 151M HEAVY DUTY BRASS BASKET & STRAINER, 1 1/2", CHROME PLATED TAILPIECE. McGUIRE 8912 1 1/2" x 1 1/2" HEAVY DUTY CHROME PLATED CAST BRASS P-TRAP W/ CLEANOUT PLUG, McGUIRE 170LK CHROME PLATED SOLID BRASS ANGLE STOPS W/ 5" CHROME PLATED COPPER EXTENSION TUBE & LOOSE KEYS, FLEXIBLE CHROME PLATED COPPER RISERS, McGUIRE 111C SERIES 1 1/2" END OUTLET CONTINUOUS WASTE, PROVIDE TWO FAUCET HOLES ON DECK, 8" CENTERS	
S-2	SINK- COMMERCIAL SINGLE COMPARTMENT, WALL MOUNT KITCHEN	ADVANCE TABCO 7-PS-60	FAUCET INCLUDED, 3-1/2" OPENING DRAIN. McGUIRE 151M HEAVY DUTY BRASS BASKET & STRAINER, 1 1/2", CHROME PLATED TAILPIECE. McGUIRE 8912 1 1/2" x 1 1/2" HEAVY DUTY CHROME PLATED CAST BRASS P-TRAP W/ CLEANOUT PLUG, McGUIRE 170LK CHROME PLATED SOLID BRASS ANGLE STOPS W/ 5" CHROME PLATED COPPER EXTENSION TUBE & LOOSE KEYS, FLEXIBLE CHROME PLATED COPPER RISERS, McGUIRE 111C SERIES 1 1/2" END OUTLET CONTINUOUS WASTE, PROVIDE TWO FAUCET HOLES ON DECK	
S-3	SINK -COMMERCIAL COUNTER MOUNT THREE COMPARTMENT KITCHEN	ADVANCE TABCO DI-3-1612	(2) ADVANCE TABCO K-53 FAUCET, 12" REACH, 3-1/2" OPENING DRAIN. ZURN Z89600 TWIST DRAIN, McGUIRE 151M HEAVY DUTY BRASS BASKET & STRAINER, 1 1/2", CHROME PLATED TAILPIECE, McGUIRE 8912 1 1/2" x 1 1/2" HEAVY DUTY CHROME PLATED CAST BRASS P-TRAP W/ CLEANOUT PLUG, McGUIRE 170LK CHROME PLATED SOLID BRASS ANGLE STOPS W/ 5" CHROME PLATED COPPER EXTENSION TUBE & LOOSE KEYS, FLEXIBLE CHROME PLATED COPPER RISERS, McGUIRE 111C SERIES 1 1/2" END OUTLET CONTINUOUS WASTE, PROVIDE TWO FAUCET HOLES ON DECK	
S-4	SINK SINGLE COMPARTMENT,DENTAL	PROVIDED BY OTHER INSTALLED BY CONTRACTOR	FAUCET PROVIDED BY OTHER AND INSTALLED BY CONTRACTOR. McGUIRE 151M HEAVY DUTY BRASS BASKET & STRAINER, 1 1/2", CHROME PLATED TAILPIECE, McGUIRE 8912 1 1/2" x 1 1/2" HEAVY DUTY CHROME PLATED CAST BRASS P-TRAP W/ CLEANOUT PLUG, McGUIRE 170LK CHROME PLATED SOLID BRASS ANGLE STOPS W/ 5" CHROME PLATED COPPER EXTENSION TUBE & LOOSE KEYS, FLEXIBLE CHROME PLATED COPPER RISERS, McGUIRE 111C SERIES 1 1/2" END OUTLET CONTINUOUS WASTE	
S-5	SINK SINGLE COMPARTMENT, OVERALL 25"x 21"x 8", OFF CENTER REAR DRAIN	ELKAY LR2521	ELKAY MODEL LK500GN08T4 SINGLE POST MOUNT, CIRCULAR BASE, 11" HIGH SWING SPOUT, 9" REACH, 4" WRIST BLADE HANDLES, 0.5GPM AERATOR, 3-1/2" OPENING DRAIN. McGUIRE 151M HEAVY DUTY BRASS BASKET & STRAINER, 1 1/2", CHROME PLATED TAILPIECE. McGUIRE 8912 1 1/2" x 1 1/2" HEAVY DUTY CHROME PLATED CAST BRASS P-TRAP W/ CLEANOUT PLUG, McGUIRE 170LK CHROME PLATED SOLID BRASS ANGLE STOPS W/ 5" CHROME PLATED COPPER EXTENSION TUBE & LOOSE KEYS, FLEXIBLE CHROME PLATED COPPER RISERS, McGUIRE 111C SERIES 1 1/2" END OUTLET CONTINUOUS WASTE, PROVIDE ONE FAUCET HOLE ON DECK	
S-6	SINK SINGLE COMPARTMENT	PROVIDED BY OTHER AND INSTALLED BY CONTRACTOR	FAUCET PROVIDED BY OTHER AND INSTALLED BY CONTRACTOR. McGUIRE 151M HEAVY DUTY BRASS BASKET & STRAINER, 1 1/2", CHROME PLATED TAILPIECE. McGUIRE 8912 1 1/2" x 1 1/2" HEAVY DUTY CHROME PLATED CAST BRASS P-TRAP W/ CLEANOUT PLUG, McGUIRE 170LK CHROME PLATED SOLID BRASS ANGLE STOPS W/ 5" CHROME PLATED COPPER EXTENSION TUBE & LOOSE KEYS, FLEXIBLE CHROME PLATED COPPER RISERS, McGUIRE 111C SERIES 1 1/2" END OUTLET CONTINUOUS WASTE	
SB-1	SUPPLY BOX	GUY GRAY BIM-875	(1) 1/2" SUPPLY, PROVIDE WHA-1 (WATER HAMMER ARRESTOR)	
SCO-1	STACK CLEANOUT	J. R. SMITH 4510	DUCO CAST IRON CLEANOUT TEE, BRONZE PLUG, REMOVABLE STAINLESS STEEL COVER. REFER TO PLANS FOR SIZE, PROVIDE ROUND OR SQUARE FRAME AND COVER AS REQUIRED, REFER TO ARCHITECT	
SP-1	SUMP PUMP	WEIL 1412-OSS	SUBMERSIBLE TYPE PUMP, CAST IRON CASE, CAST IRON IMPELLER, 304 STAINLESS STEEL STRAINER AND HARDWARE, AIR-FILLED HERMETICALLY SEALED SHAFT, 15 FOOT POWER CORD, HARD WIRED, 1-1/2" OUTLET, AND CAPABLE OF 50 GPM AT 14 FEET HEAD. PROVIDE WITH ZOELLER # 30-0630 NO-CLOG, FLAPPER TYPE, CHECK VALVE. PROVIDE WITH 3 HARD WIRED WEIL #8230 FLOAT SWITCHES AND WEIL #8109-L SIMPLEX CONTROL PANEL, OIL SMART ALARM AND SWITHCH	115V, 60HZ, 1PH, 1/2 HP, 1750 RPM
SV-1	SINK SINGLE COMPARTMENT, BEHAVIORAL SAFETY, LIGATURE FREE	ELKAY LRAD1919	BE SAFE PRO #SF380 LIGATURE RESISTANT METERING FAUCET, A/C CONVERSION KIT FOR #SP390, LEAD FREE MINI THERMOSTATIC MIXING VALVE #SF372, 3-1/2" OPENING DRAIN. McGUIRE 151M HEAVY DUTY BRASS BASKET & STRAINER, 1 1/2", CHROME PLATED TAILPIECE. McGUIRE 8912 1 1/2" x 1 1/2" HEAVY DUTY CHROME PLATED CAST BRASS P-TRAP W/ CLEANOUT PLUG, McGUIRE 170LK CHROME PLATED SOLID BRASS ANGLE STOPS W/ 5" CHROME PLATED COPPER EXTENSION TUBE & LOOSE KEYS, FLEXIBLE CHROME PLATED COPPER RISERS, McGUIRE 111C SERIES 1 1/2" END OUTLET CONTINUOUS WASTE, PROVIDE THREE FAUCET HOLES ON DECK, 8" CENTERS	120V, 1PH, 60HZ, 0.3A
TMV-1	THERMOSTATIC MIXING VALVE - MAIN 120° LINE	BRADLEY S59-3045	LEAD FREE, INTEGRAL CHECK VALVE AND STRAINER, PROVIDE, TEMPERATURE CONTROL SET AT 110°	
TMV-2	THERMOSTATIC MIXING VALVE - POINT OF USE	POWERS E480-10	LEAD FREE, INTEGRAL CHECK VALVE AND STRAINER, PROVIDE, TEMPERATURE CONTROL SET AT 110°	
TMV-3	THERMOSTATIC MIXING VALVE - EMERGENCY	STINGRAY SV107	LEAD FREE, INTEGRAL CHECK VALVE AND STRAINER, PROVIDE, TEMPERATURE CONTROL SET AT 85°, VALVE TO BE LOCATED IN A VISIBALE AND ACCESSIBLE LOCATION AND WITHIN 4 TO 10 FEET OF FIXTURE	
TWCO-1	TWO WAY CLEANOUT, SPEEDI-SET OUTLET	J. R. SMITH 4237	UNFINISHED FLOOR DUCO CAST IRON CLEANOUT WITH ROUND ADJUSTABLE SCORIATED SECURED CAST IRON TOP, TAPERED THREAD BRONZE PLUG, REFER TO PLANS FOR SIZES	
UB-1	UTILITY BOX, WASTE, AND SUPPLY	OATLEY QUADTRO	(2) 1/2" SUPPLY VALVES, 2" DRAIN CONNECTION, 1/4" TURN VALVE, PROVIDE WHA-1 (WATER HAMMER ARRESTOR)	
UR-1	URINAL, WALL MOUNT, VITREOUS CHINA	AMERICAN STANDARD WASHBROOK 6590.001	INTEGRAL ELONGATED FLUSHING RIM, INTEGRAL TRAP, 2" FEMALE FLANGED OUTLET CONNECTION, J.R. SMITH 0637 URINAL SUPPORT, FLUSH VALVE SLOAN 186-0.5 HIGH EFFICIENCY	
WB-1	WASHER BOX, WASTE AND SUPPLY	OATLEY QUADTRO	(2) 1/2" SUPPLY VALVES, 2" DRAIN CONNECTION, 1/4" TURN VALVE, PROVIDE WHA-1 (WATER HAMMER ARRESTOR), INSTALL 18" AFF, COORDINATE WITH DISHWASHER EQUIPMENT SUPPLIER	
WC-2	WATER CLOSET, VITREOUS CHINA, FLUSH VALVE, WALL MOUNTED, ELONGATED RIM, 1.28 GPF	ZURN Z5615 HET SERIES	BEMIS 1955CT OPEN FRONT SEAT, SLOAN ECOS 8111-1-6/1.1 HARDWIRED SENSOR FLUSH VALVE, EL-451 TRANSFORMER, Z5972-COMB CLOSET BOLT/WAX RING KIT, J.R. SMITH 0210-M54-XK 1000# CARRIER	120V, 24W
WCO-1	WALL CLEANOUT	J. R. SMITH 4510	DUCO CAST IRON CLEANOUT TEE, BRONZE PLUG, REMOVABLE STAINLESS STEEL COVER. REFER TO PLANS FOR SIZE, PROVIDE ROUND OR SQUARE FRAME AND COVER AS REQUIRED, REFER TO ARCHITECT	
WHA-1	WATER HAMMER ARRESTOR	SIOUX CHIEF 650&660 HYDRARESTER	VACURESTER VACUUM BREAKER ARRESTER, TYPE L COPPER CONSTRUCTION, IF AN ACCESS DOOR IS NEEDED CONTACT THE ARCHITECT	
YH-1	YARD HYDRANT	WOODFORD MODEL Y2	BACKFLOW PROTECTED, AUTOMATIC DRAINING, FREEZELESS YARD HYDRANT	

GAS LOAD CALCULATION

GAS LOAD CALCULATION NOTES:
GAS LINES HAVE BEEN SIZED AS PER TABLE 402.4(2) OF THE 2



18 JANITOR'S SINK - ANGLED
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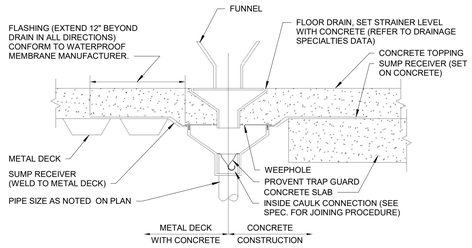
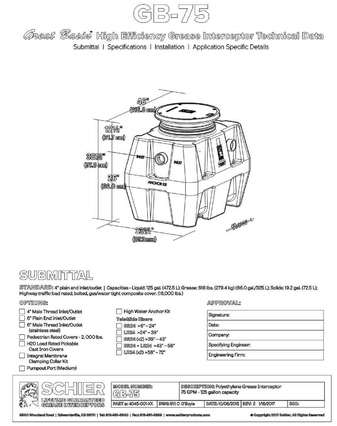


19 SAFE WASTE DRAIN
N.T.S.



20 GREASE INTERCEPTOR SCHIER GB-75
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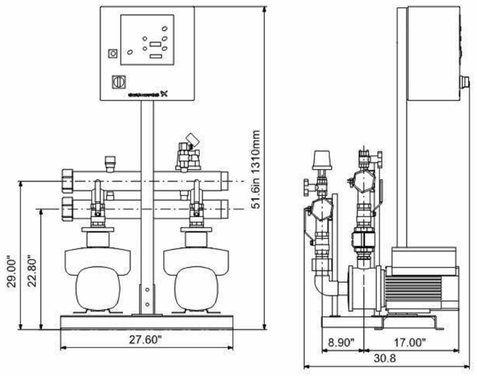

21 DOMESTIC BOOSTER PUMP
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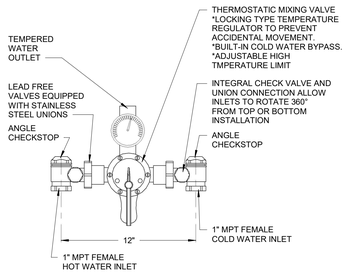

13 EMERGENCY MIXING VALVE
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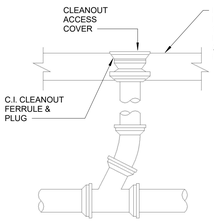

14 FLOOR CLEANOUT main
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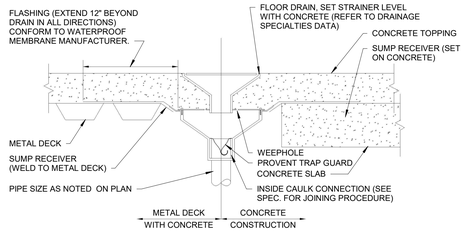

15 FLOOR DRAIN main
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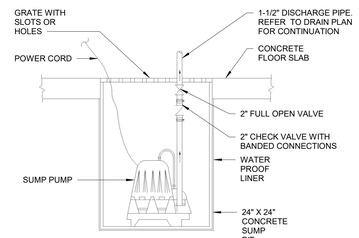

16 SUMP PUMP
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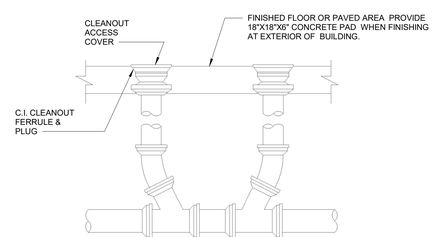

17 TWO WAY CLEANOUT
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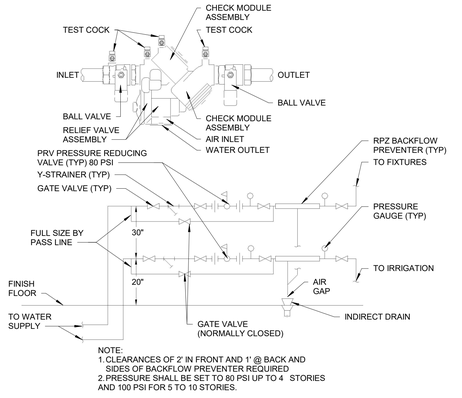
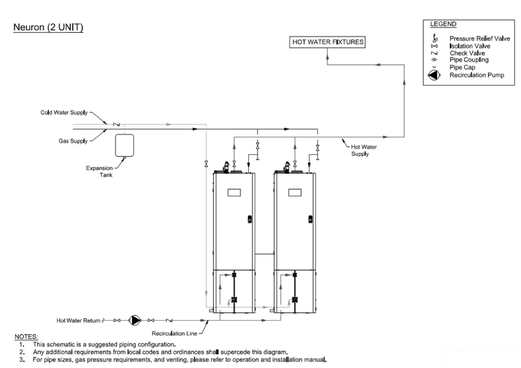


6 BACKFLOW PREVENTER DETAIL - STACKED
N.T.S.



7 GAS WATER HEATER - TANKLESS
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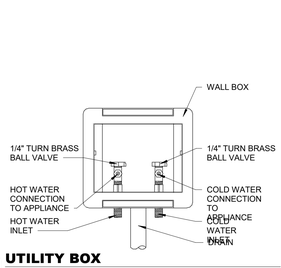

9 UTILITY BOX
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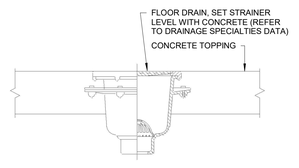

11 FLOOR SINK
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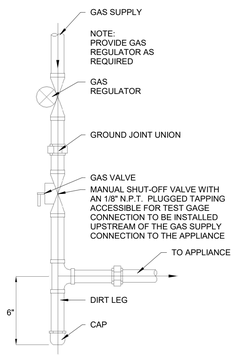

12 GAS CONNECTION
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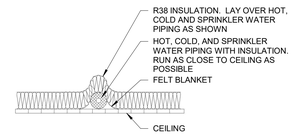

8 CEILING PIPE INSULATION
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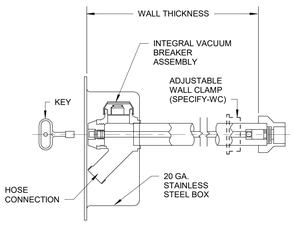
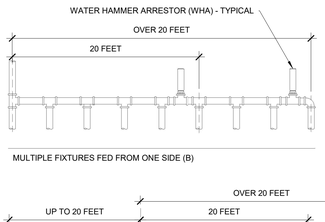


10 NON-FREEZE WALL HYDRANT
N.T.S.



GENERAL WHA NOTES:

LOCATE THE WHA IN A MULTIPLE FIXTURE SYSTEM AT THE END OF THE BRANCH LINE BETWEEN THE LAST TWO FIXTURES SERVED.

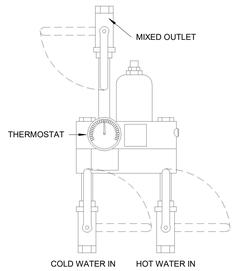
FOR REMOTE INSTALLATIONS THE WHA SHOULD BE PLACED AS CLOSE TO THE POINT OF VALVE CLOSURE AS POSSIBLE.

INSTALL WHA's APPROVED FOR SEALED-WALL INSTALLATION ON WATER LINES CONNECTED TO SOLENOID VALVES OR FLUSH VALVES. SIZE, LOCATE, AND INSTALL IN ACCORDANCE WITH PDI STANDARD WH 201.

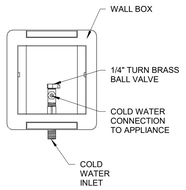
IDEALLY THE FLOW PRESSURE IN BRANCH LINES SERVING FIXTURES SHOULD NEVER EXCEED 55 P.S.I.G.

PROVIDE ACCESS PANEL AT EACH LOCATION WHERE THERE IS NOT AN ACCESSIBLE CEILING. MINIMUM SIZE OF 8" x 8".

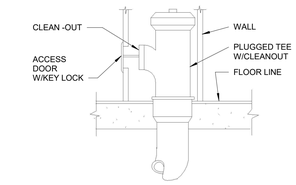
1 WATER HAMMER ARRESTOR INSTALLATION DETAIL
SCALE: N.T.S.



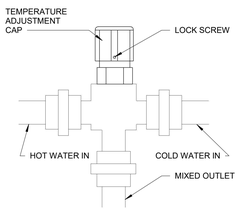
2 MAIN MIXING VALVE
N.T.S.



3 SUPPLY BOX
N.T.S.



4 WALL AND STACK CLEANOUT
N.T.S.



5 POINT OF USE - THERMOSTATIC MIXING VALVE
N.T.S.

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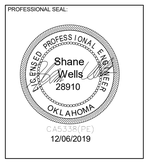
PROFESSIONAL SEAL:



CONSULTANT LOGO:

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PROJECT NO. 18068R
100 % COMPLETE

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5214 W. VILLAGE PARKWAY
SUITE 120
ROGERS, AR 72758
(479) 899-6370
www.hpengineeringinc.com

CLIENT:

THE CHEROKEE NATION
TRIBAL SEAL
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS:		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
P1.10

PLUMBING DETAILS

OVERALL LEVEL 01 DRAIN PLAN
1/8" = 1'-0"

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PROFESSIONAL SEAL:

LICENSED PROFESSIONAL ENGINEER
Shane Wells
28910
OKLAHOMA
CERTIFIED
12/06/2019

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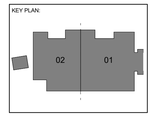
SEAL OF THE CHEROKEE NATION OKLAHOMA
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: P2.00

OVERALL LEVEL 01 DRAIN PLAN

KEYNOTES

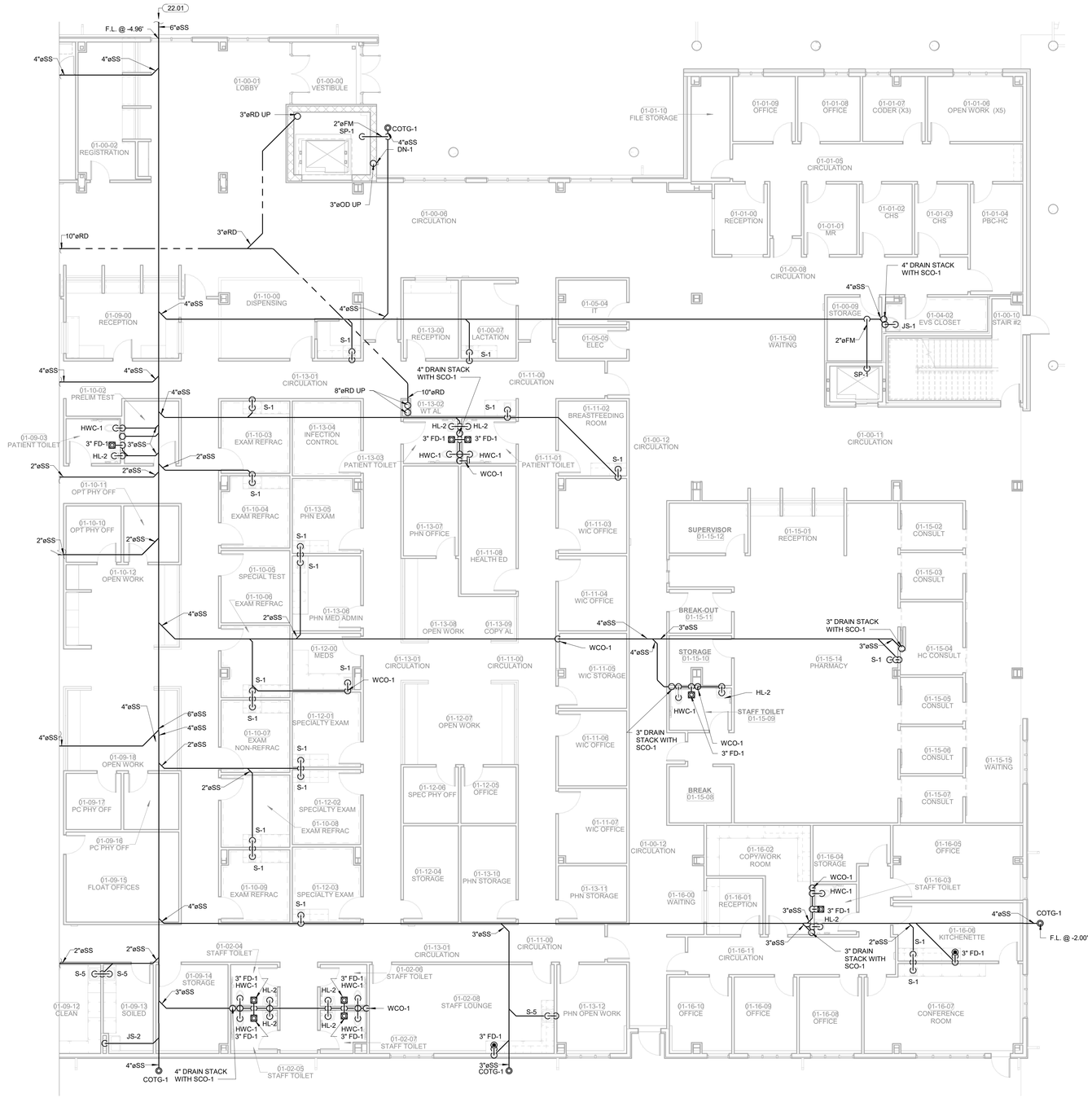
22.01	NEW 6" BUILDING DRAIN LINE. REFER TO CIVIL PLANS FOR CONTINUATION. 486 D.F.U.

SEISMIC RESTRAINTS FOR MEP EQUIPMENT AND SYSTEMS

BUILDING IS CLASSIFIED AS SEISMIC DESIGN CATEGORY C. CONTRACTOR SHALL PROVIDE SEISMIC BRACING FOR PIPING, DUCTWORK AND EQUIPMENT TO MEET ALL LOCAL AND NATIONAL CODE REQUIREMENTS.

CONTRACTOR'S RESPONSIBILITIES INCLUDE PROVIDING ALL SUBMITTAL'S AND DETAILS WITH STRUCTURAL ENGINEER'S CERTIFICATION FOR PERMITTING.

NOTE: IT IS THE PLUMBING CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE SITE CONTRACTOR TO CONFIRM THAT THE INVERT AND LOCATION OF THE SANITARY SERVICE IS COMPATIBLE WITH THE SITE UTILITIES PRIOR TO BEGINNING WORK.



FLOOR PLAN LEVEL 01 SECTOR 01 - DRAIN PLAN

1/8" = 1'-0"

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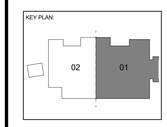
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

P2.11

DRAIN PLAN LEVEL 01 SECTOR 01

KEYNOTES

22.01	NEW 6" BUILDING DRAIN LINE. REFER TO CIVIL PLANS FOR CONTINUATION. 486 D.F.U.
22.02	NEW 4" DRAIN LINE. REFER TO CIVIL PLANS FOR CONTINUATION.
22.09	10" STORM DRAIN LINE. REFER TO CIVIL PLANS FOR CONTINUATION.

SEISMIC RESTRAINTS FOR MEP EQUIPMENT AND SYSTEMS

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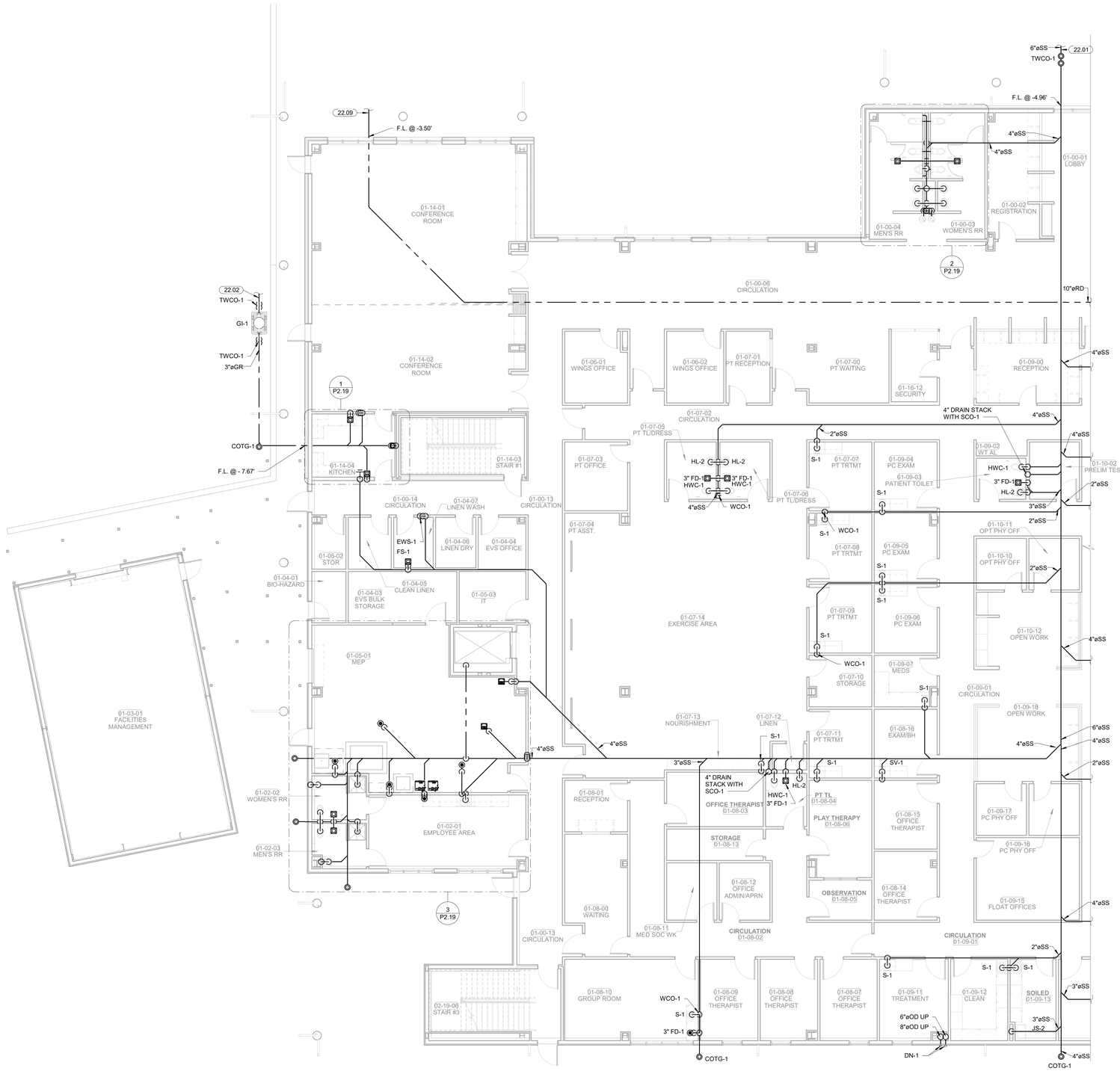

FLOOR PLAN LEVEL 01 SECTOR 02 - DRAIN PLAN
1/8" = 1'-0"

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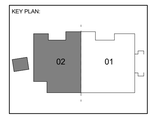
TRIBAL SEAL OF THE CHEROKEE NATION ESTD. SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:



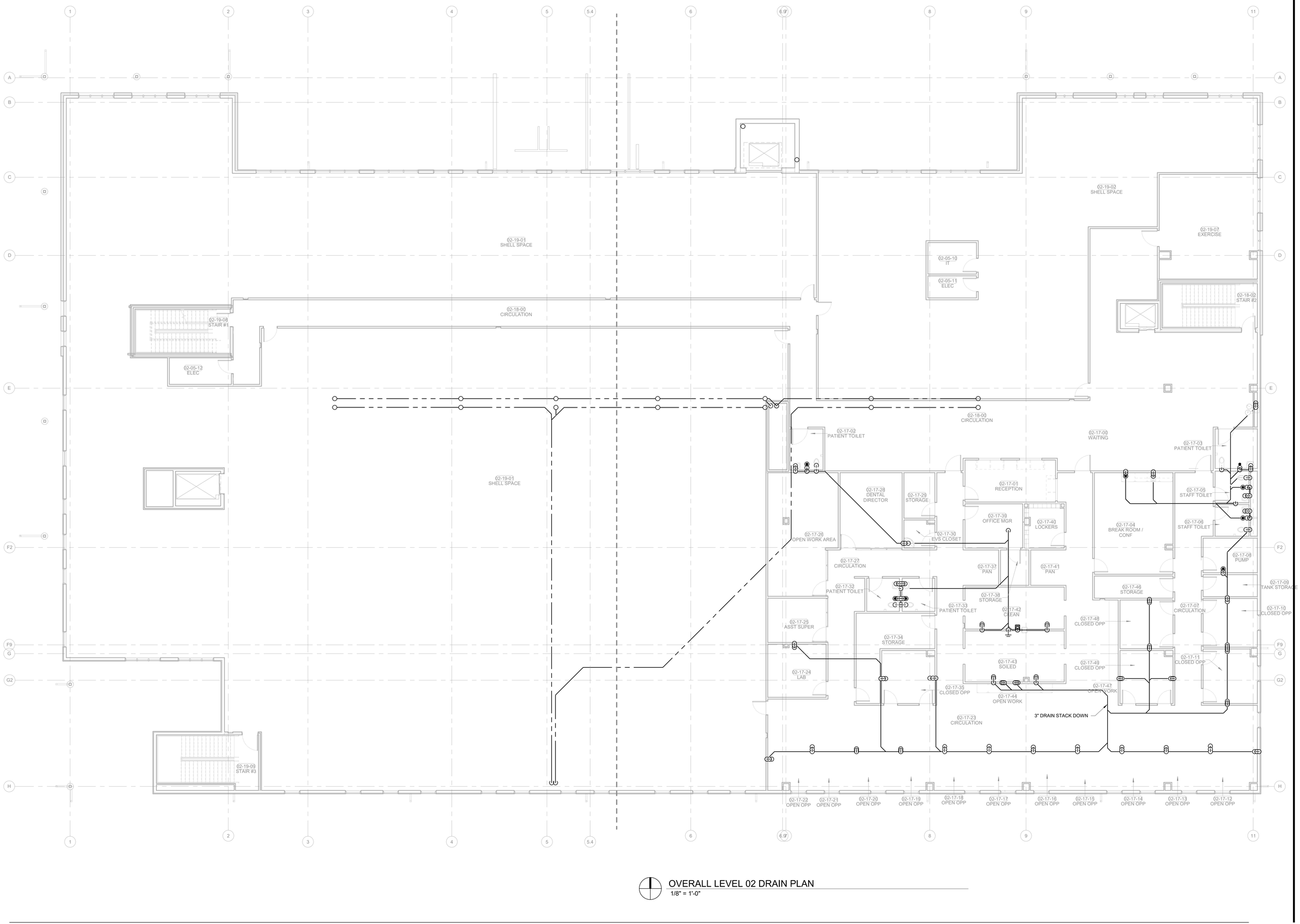
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
P2.12

DRAIN PLAN LEVEL 01 SECTOR 02



OVERALL LEVEL 02 DRAIN PLAN
1/8" = 1'-0"

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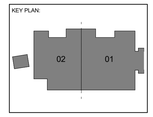
STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

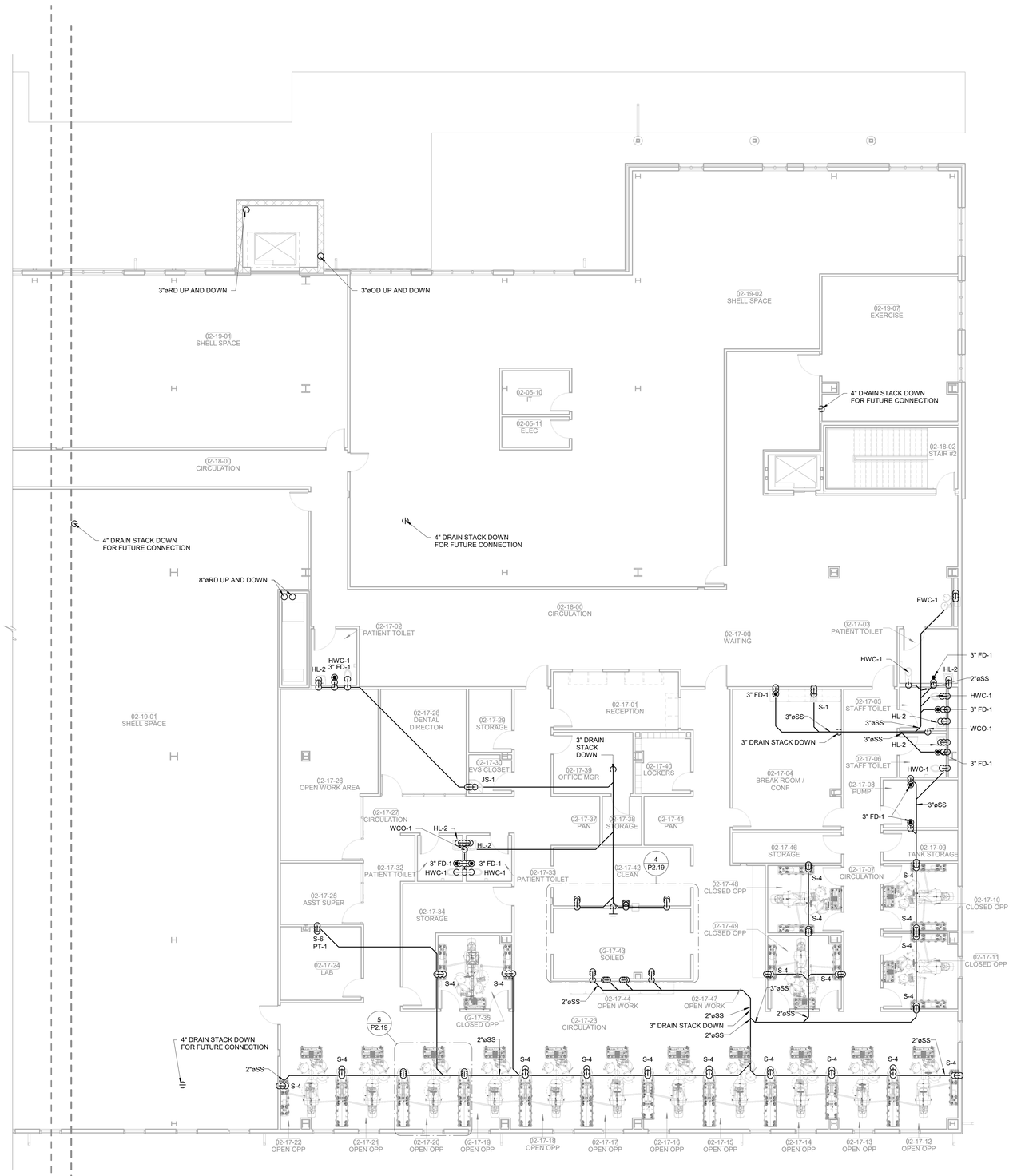
REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

P2.13

OVERALL LEVEL 02 DRAIN PLAN



FLOOR PLAN LEVEL 02 SECTOR 01 - DRAIN PLAN

1/8" = 1'-0"

James R. Childers
Architect, Inc.

45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com

PROFESSIONAL SEAL:

LICENSED PROFESSIONAL ENGINEER
Shane Wells
28910
OKLAHOMA
CERTIFIED

12/06/2019

CONSULTANT LOGO:

HP ENGINEERING

PROJECT NO. 18068R
100 % COMPLETE

HP ENGINEERING INC.
5214 W. VILLAGE PARKWAY
SUITE 120
ROGERS, AR 72758
(479) 899-6370
www.hpengineeringinc.com

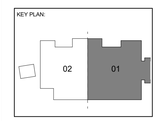
CLIENT:

SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

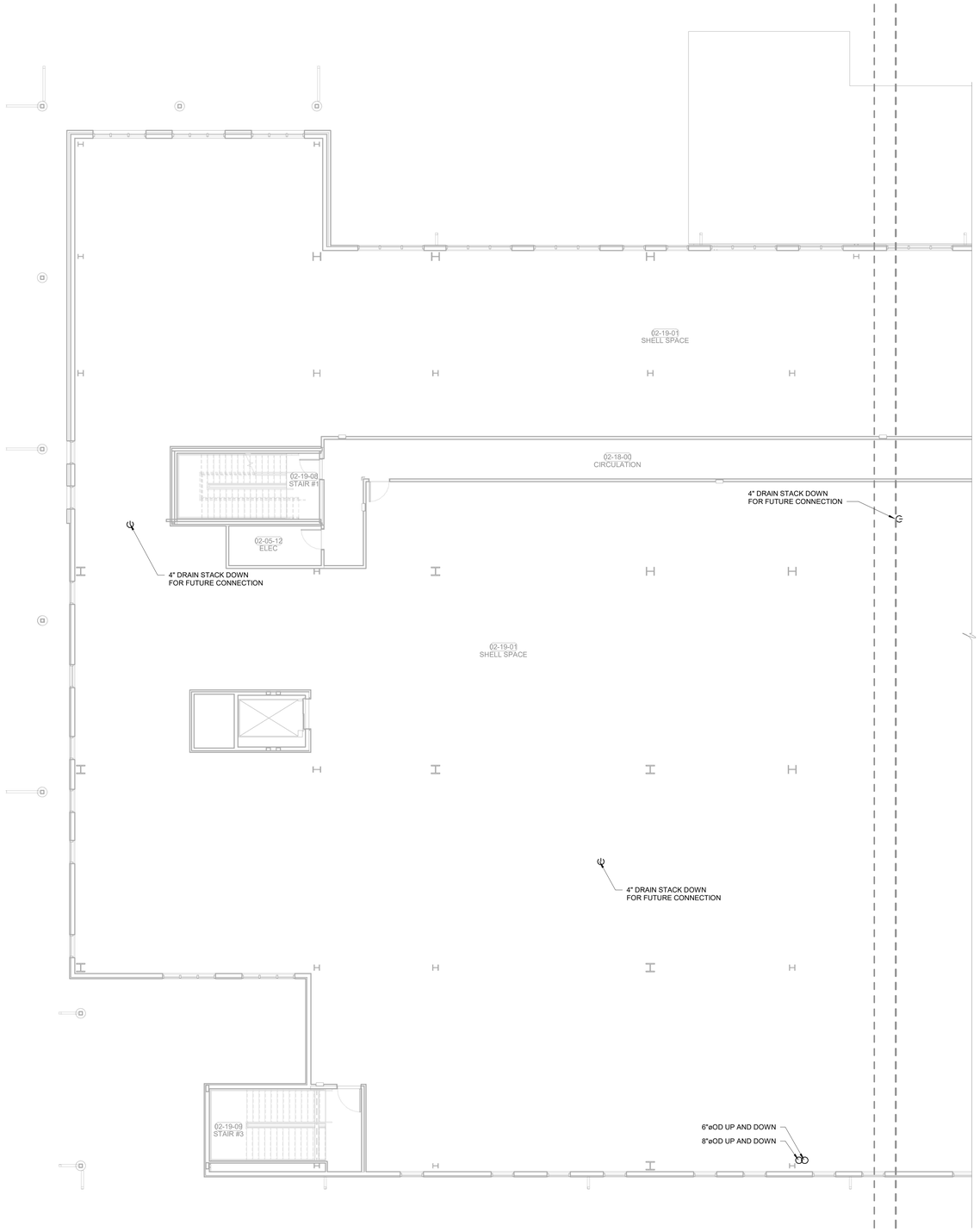
REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

P2.14

DRAIN PLAN
LEVEL 02
SECTOR 01



FLOOR PLAN LEVEL 02 SECTOR 02 - DRAIN PLAN
1/8" = 1'-0"

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

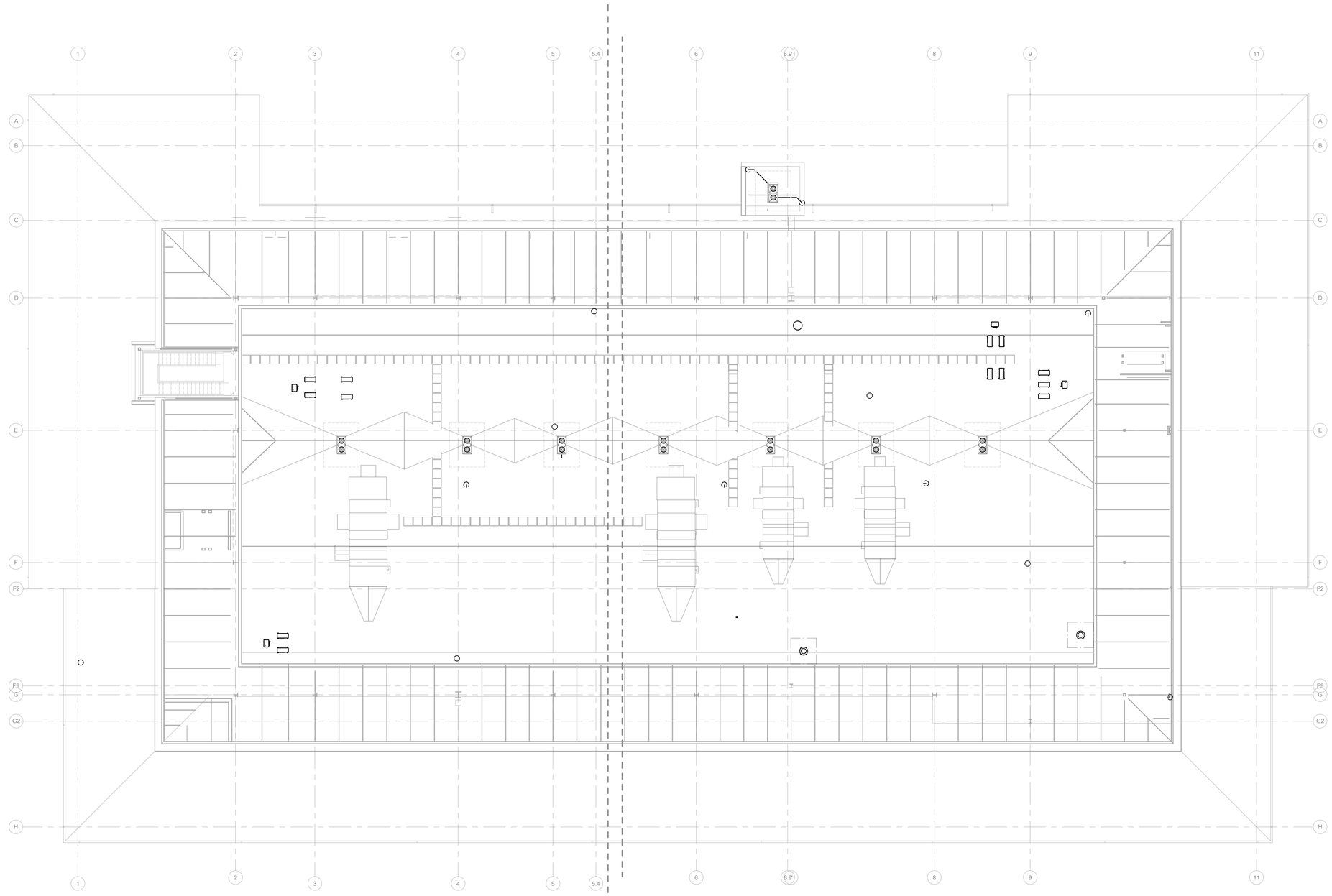
KEY PLAN:
02
01

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: P2.15

DRAIN PLAN
LEVEL 02
SECTOR 02



PLUMBING ROOF PLAN
1" = 10'-0"

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Shane Wells
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OKLAHOMA
DATE ISSUED
12/06/2019

CONSULTANT LOGO:

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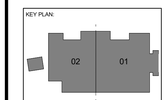
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:



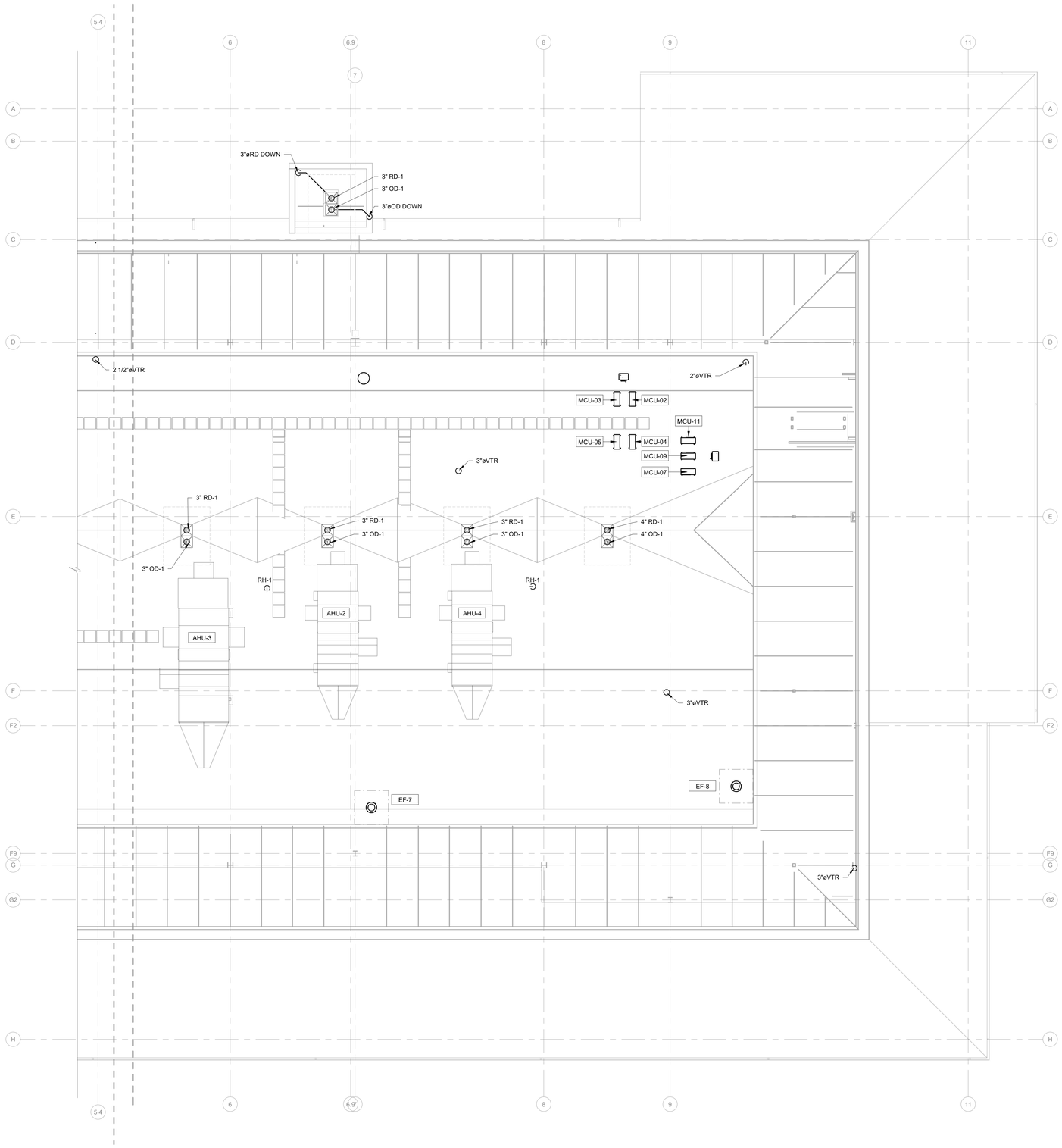
PROJECT PHASE:
BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: P2.16

OVERALL ROOF PLAN



PLUMBING ROOF PLAN SECTOR 01

1/8" = 1'-0"

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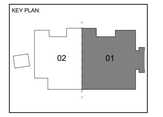
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

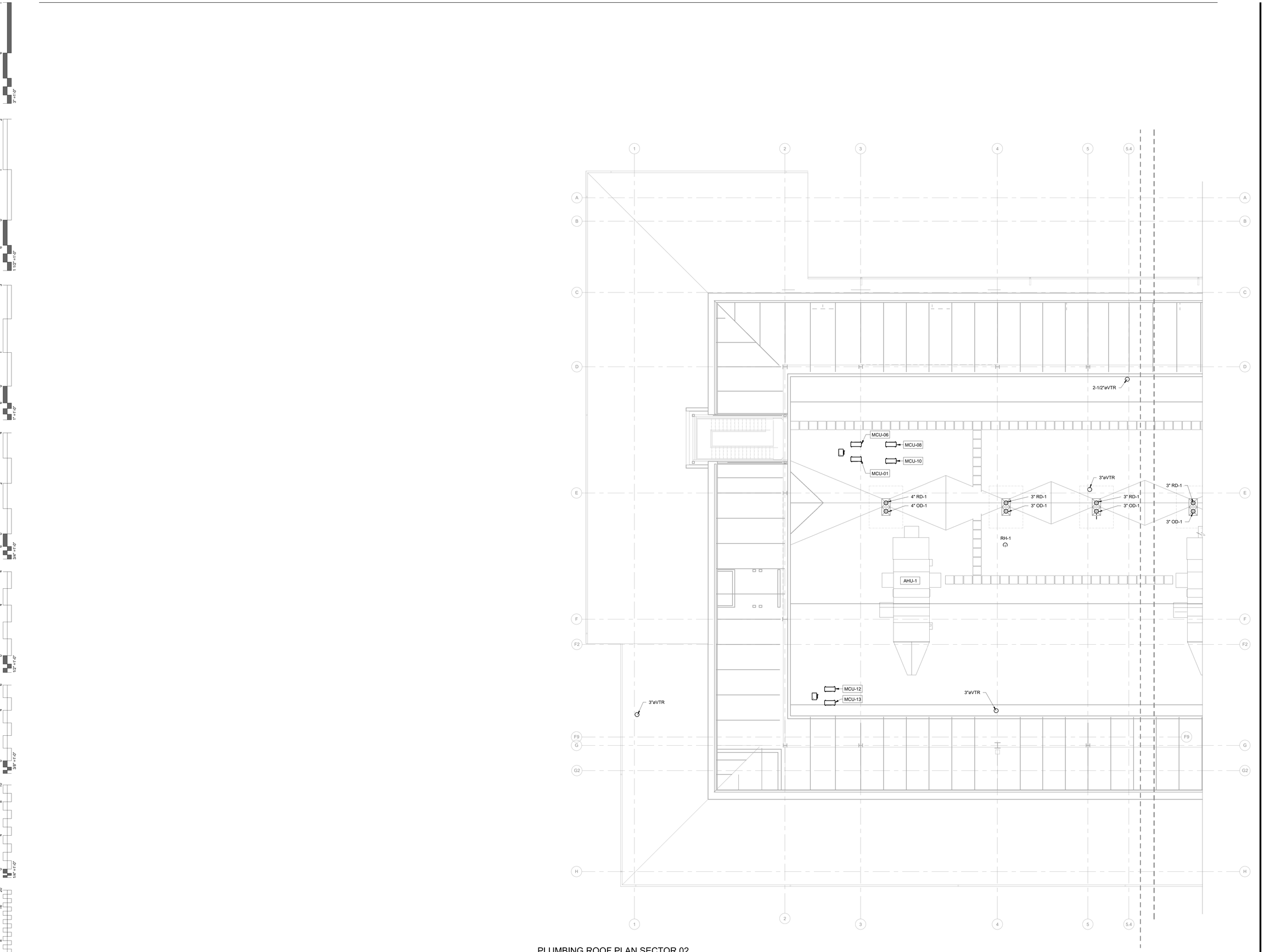
REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

P2.17

ROOF PLAN SECTOR 01



PLUMBING ROOF PLAN SECTOR 02

1/8" = 1'-0"

1" = 1'-0"
3" = 1'-0"
1 1/2" = 1'-0"
3/4" = 1'-0"
1/2" = 1'-0"
3/8" = 1'-0"
1/4" = 1'-0"
1/8" = 1'-0"

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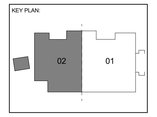
WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

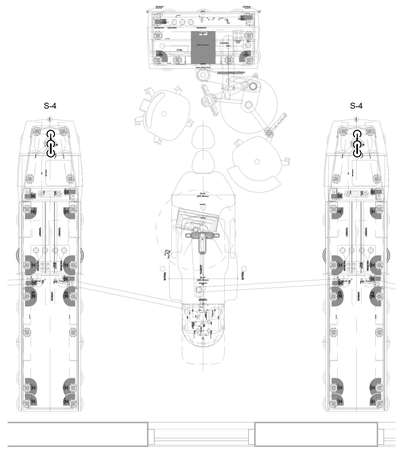
REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

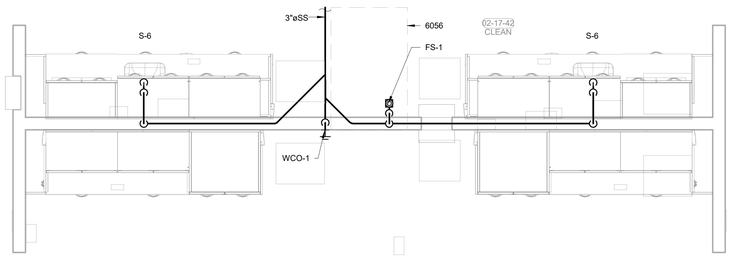
SHEET NUMBER:

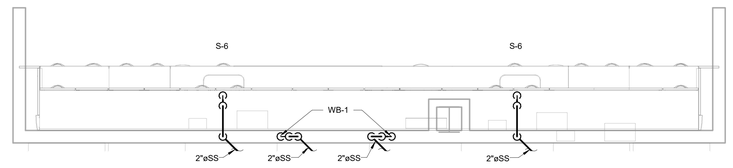
P2.18

ROOF PLAN SECTOR 02

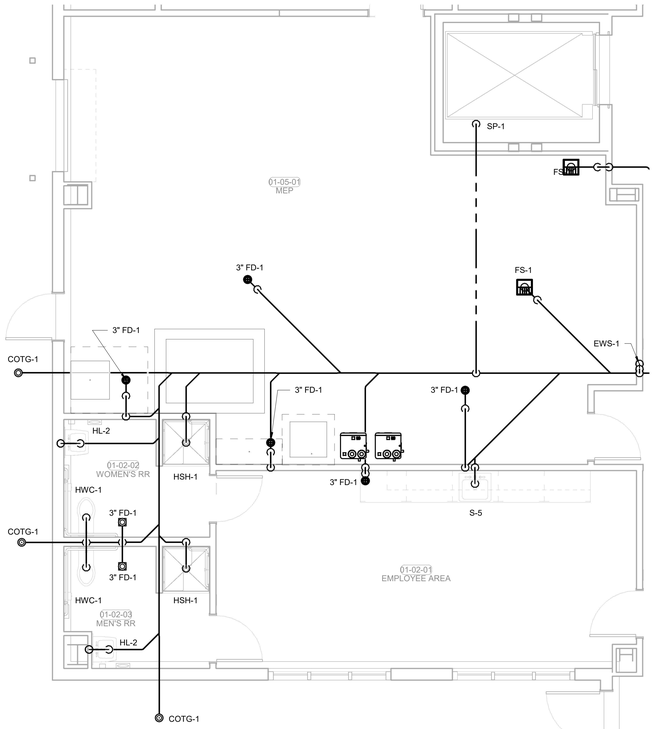


ENLARGED DRAIN PLAN - DENTAL
1/2" = 1'-0"

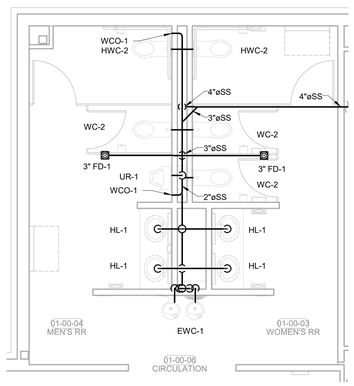




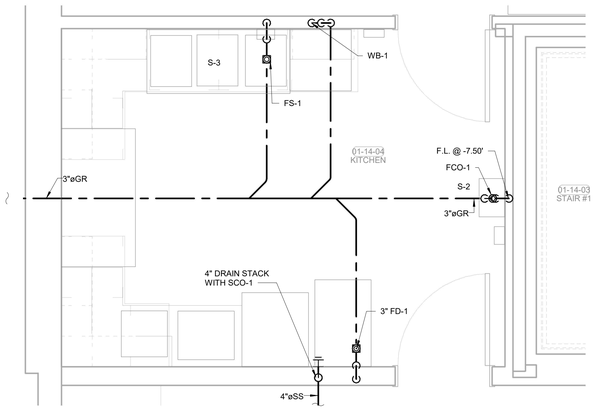
ENLARGED DRAIN PLAN - SOIL/CLEAN RM
1/2" = 1'-0"



ENLARGED DRAIN PLAN - MEP/EMPLOYEE AREAS
1/4" = 1'-0"



ENLARGED DRAIN PLAN - MAIN RESTROOMS
1/4" = 1'-0"



ENLARGED DRAIN PLAN - KITCHEN
1/2" = 1'-0"

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PROFESSIONAL SEAL:
LICENSED PROFESSIONAL ENGINEER
Shane Wells
28910
OKLAHOMA
DATE ISSUED
12/06/2019

CONSULTANT LOGO:
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PROJECT NO. 18068R
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www.hpengineeringinc.com

CLIENT:
SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

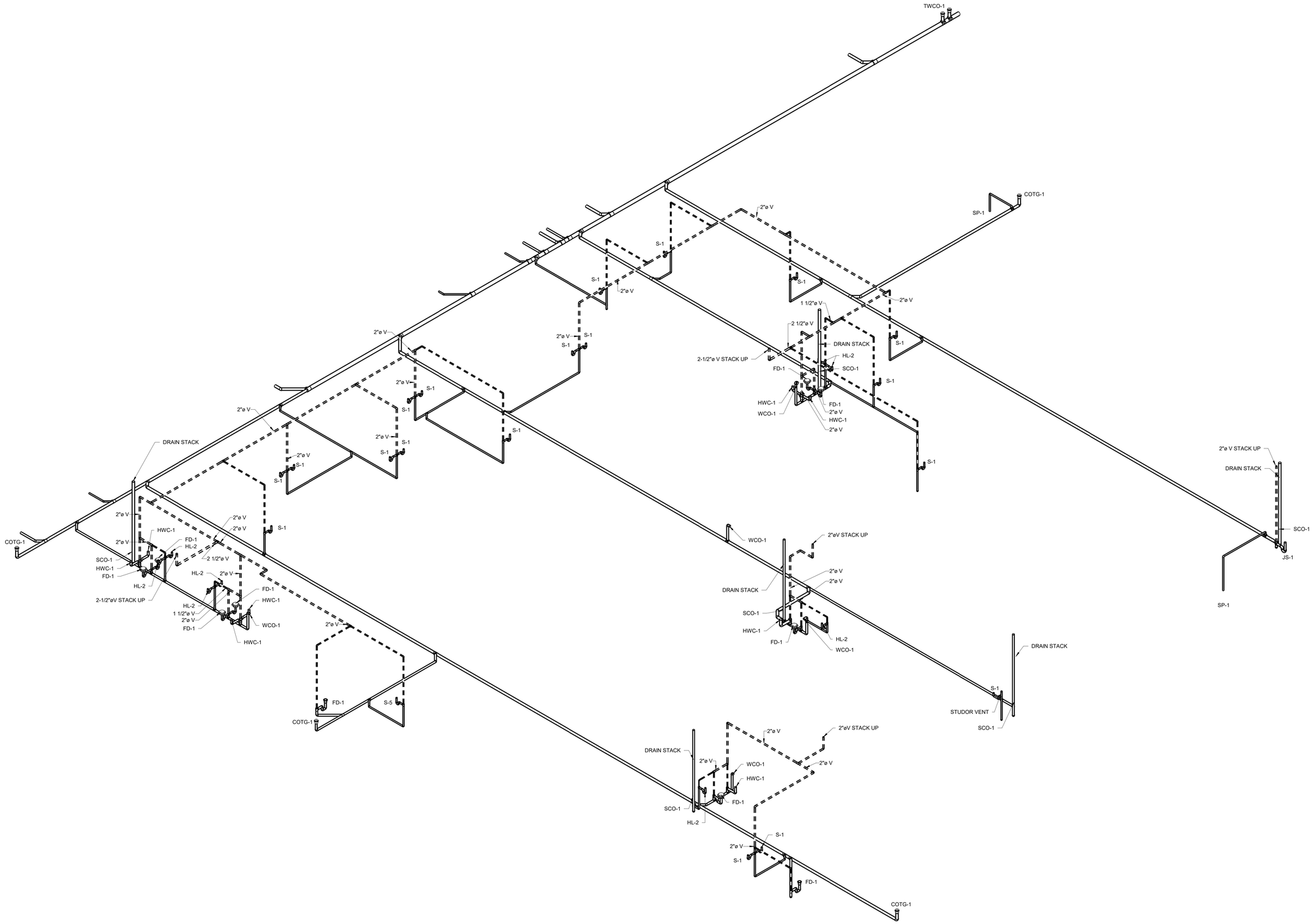
KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: P2.19

ENLARGED DRAIN PLANS



PLUMBING VENT ISOMETRIC LEVEL 01 SECTOR 01

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

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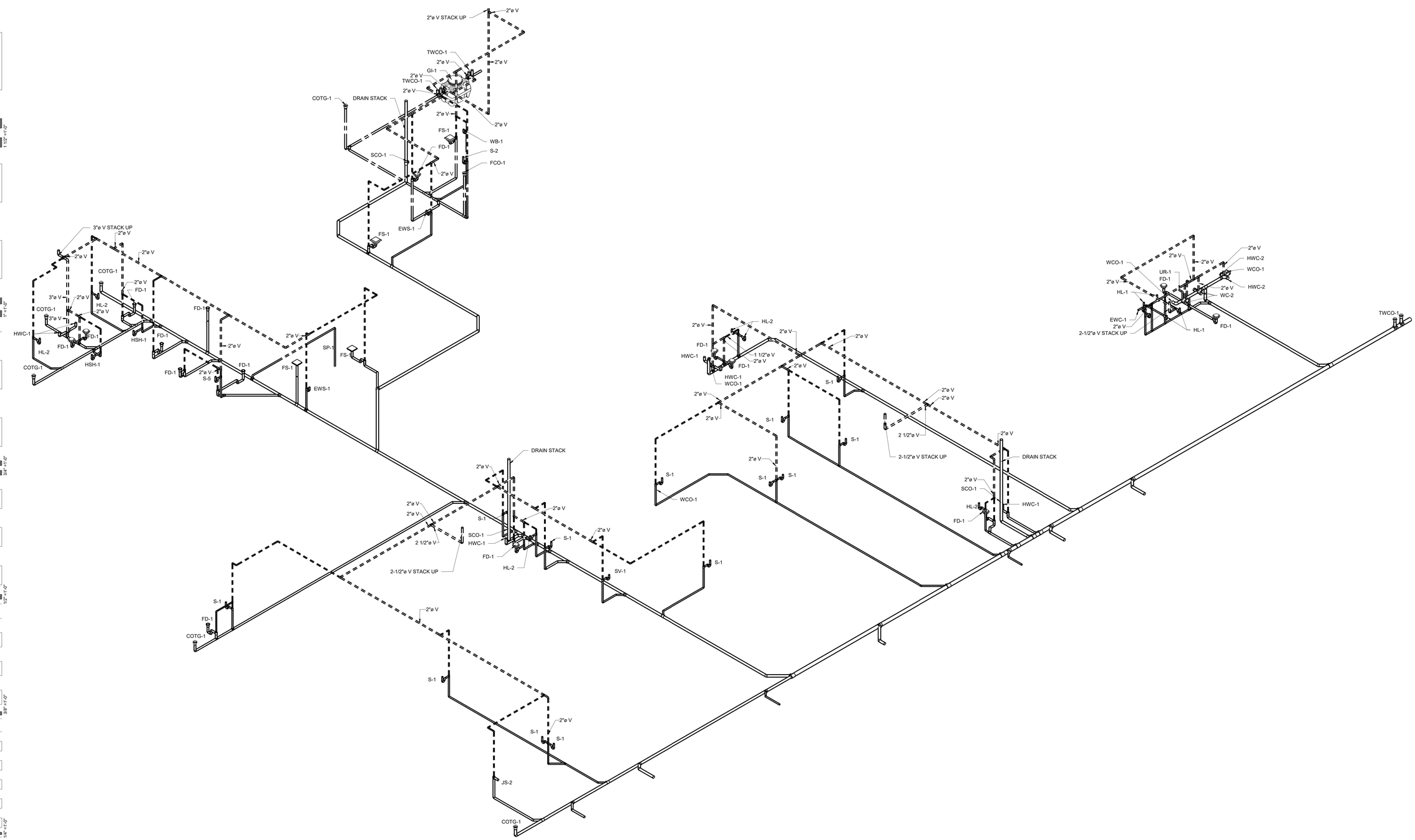
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
P2.20

PLUMBING DRAIN/VENT ISOMETRIC



PLUMBING VENT ISOMETRIC LEVEL 01 SECTOR 02

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

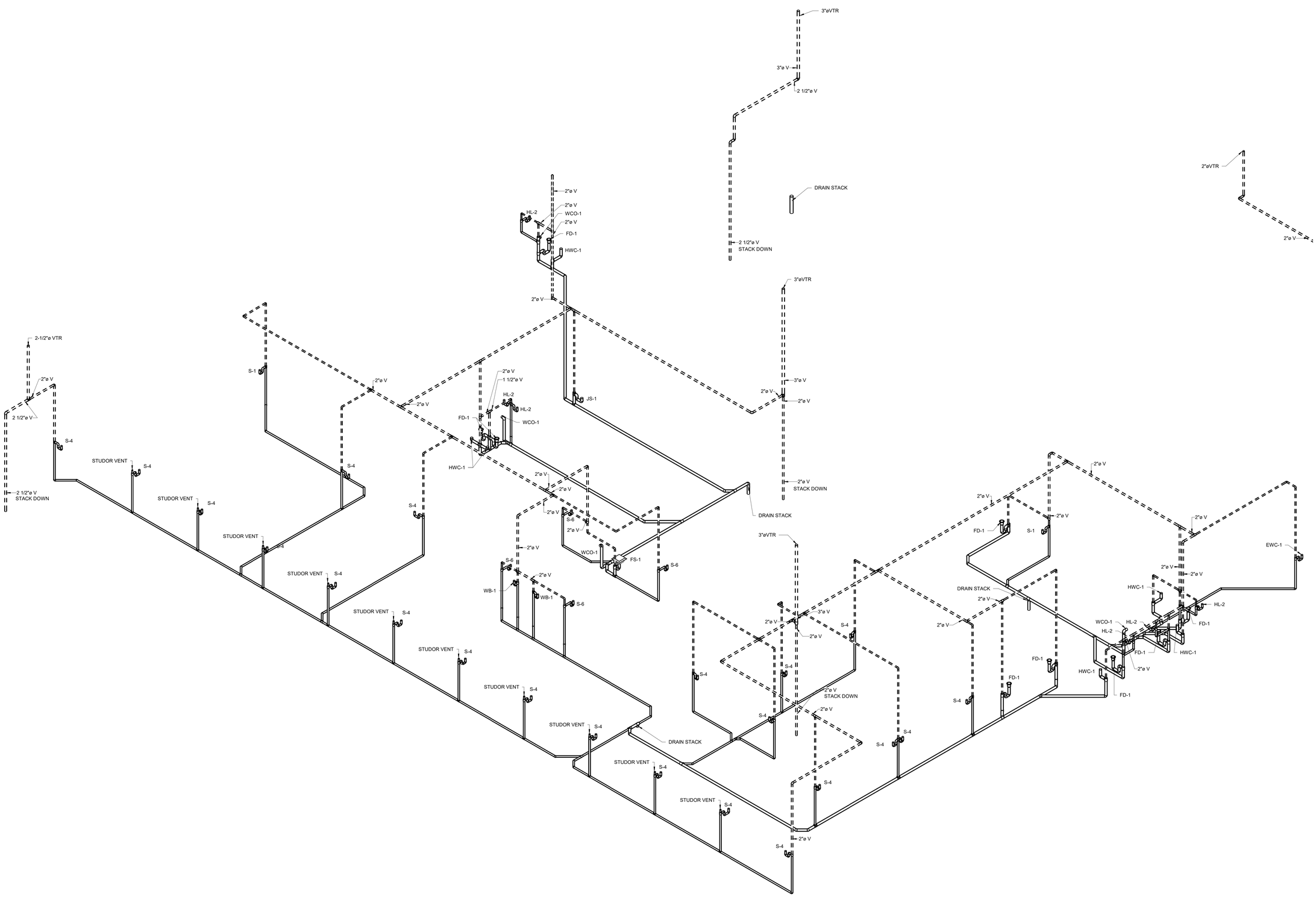
KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: P2.21

PLUMBING DRAIN/VENT ISOMETRIC



PLUMBING VENT ISOMETRIC LEVEL 02 SECTOR 01

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OKLAHOMA
DATE SIGNED
12/06/2019

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WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

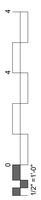
DATE: 12-06-19

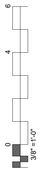
JOB NUMBER: 18-01.01

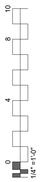
SHEET NUMBER:

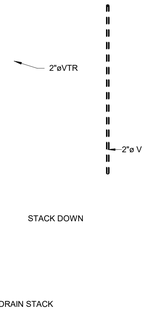
P2.22

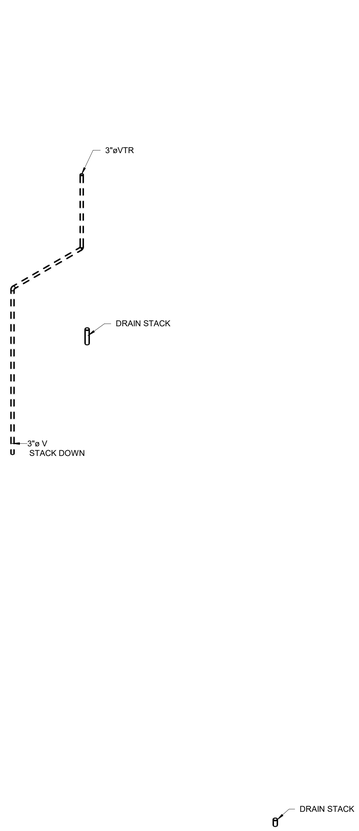
PLUMBING DRAIN/VENT ISOMETRIC

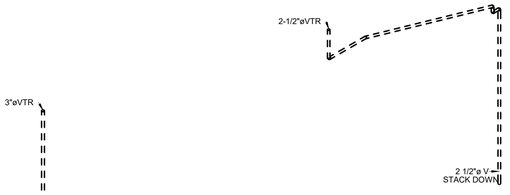


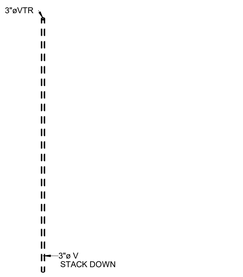












PLUMBING VENT ISOMETRIC LEVEL 02 SECTOR 02

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Shane Wells
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OKLAHOMA
CERTIFICATE OF AUTHORIZATION
CERTIFIED
12/06/2019

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

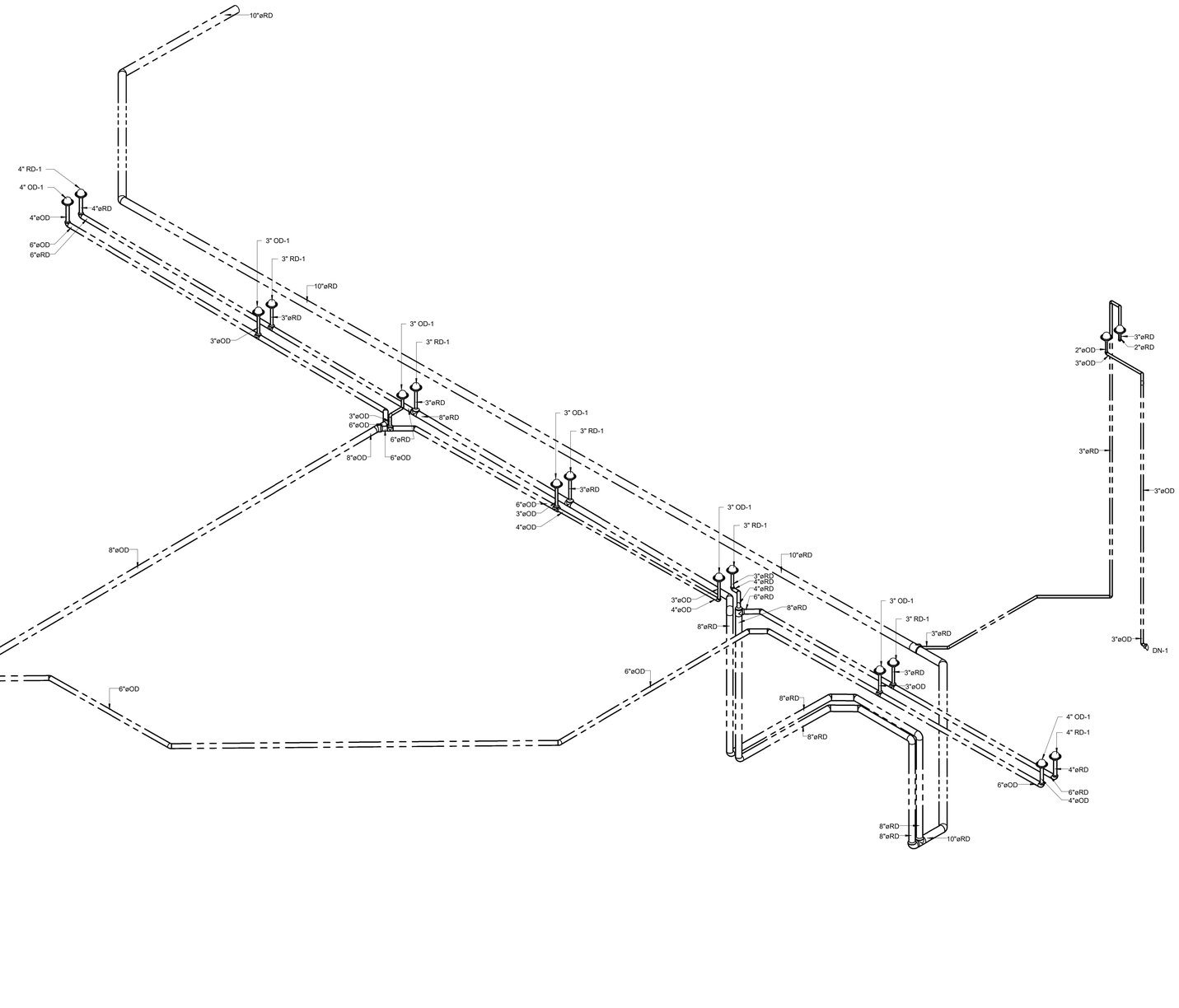
PROJECT PHASE:
BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: P2.23

PLUMBING DRAIN/VENT ISOMETRIC



ROOF DRAIN ISOMETRIC

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OKLAHOMA
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KEY PLAN:

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REVISIONS

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DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: P2.24

ROOF DRAIN ISOMETRIC

SEISMIC RESTRAINTS FOR MEP EQUIPMENT AND SYSTEMS

BUILDING IS CLASSIFIED AS SEISMIC DESIGN CATEGORY C. CONTRACTOR SHALL PROVIDE SEISMIC BRACING FOR PIPING, DUCTWORK AND EQUIPMENT TO MEET ALL LOCAL AND NATIONAL CODE REQUIREMENTS.

CONTRACTOR'S RESPONSIBILITIES INCLUDE PROVIDING ALL SUBMITTAL'S AND DETAILS WITH STRUCTURAL ENGINEER'S CERTIFICATION FOR PERMITTING.

NOTES:
RELOCATE EXISTING SPRINKLER HEADS TO NEW LAYOUT. MODIFY EXISTING AND/OR PROVIDE NEW PIPING & HEADS AS NEEDED TO ACCOMMODATE NEW LAYOUT. ALL WORK TO BE DESIGNED AND PERFORMED BY A LICENSED FIRE PROTECTION DESIGN/BUILD CONTRACTOR.

FIRE PROTECTION CONTRACTOR SHALL MODIFY EXISTING SPRINKLER SYSTEM FOR NEW PLAN. REFER TO GENERAL FIRE SPRINKLER NOTES ON SHEET P1.0.

OVERALL LEVEL 01 SUPPLY PLAN
1" = 10'-0"

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PROFESSIONAL SEAL:
LICENSED PROFESSIONAL ENGINEER
Shane Wells
28910
OKLAHOMA
CERTIFIED
12/06/2019

CONSULTANT LOGO:
HP ENGINEERING
PROJECT NO. 18068R
100 % COMPLETE
HP ENGINEERING INC.
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SUITE 120
ROGERS, AR 72758
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CLIENT:
THE CHEROKEE NATION
1839 SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:
02 01

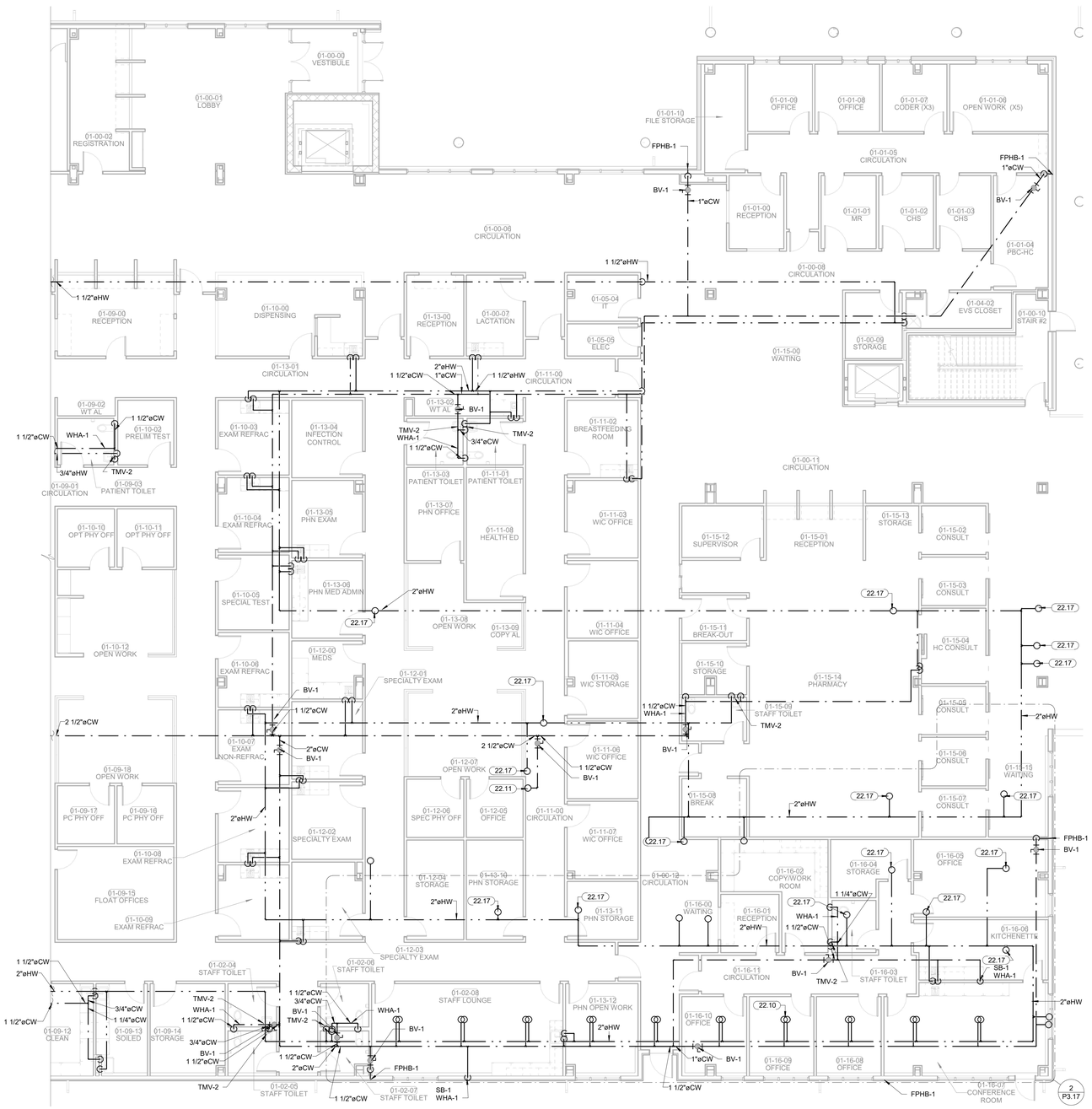
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
P3.00

OVERALL LEVEL 01 SUPPLY PLAN



FLOOR PLAN LEVEL 01 SECTOR 01 - SUPPLY PLAN

1/8" = 1'-0"

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LICENSED PROFESSIONAL ENGINEER — Shane Wells — 28910 — OKLAHOMA — CERTIFIED

12/06/2019

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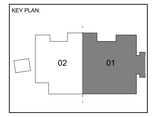
CLIENT:

SEAL OF THE CHEROKEE NATION — TRIBAL SEAT — SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER:

P3.11

SUPPLY PLAN LEVEL 01 SECTOR 01

KEYNOTES

22.03	NEW 8" FIRE LINE. STUB UP INSIDE BUILDING FOR SPRINKLER CONTRACTOR CONNECTION. FIRE LINE TO BE SIZED BY SPRINKLER CONTRACTOR. REFER TO CIVIL PLANS FOR CONTINUATION.
22.04	FIRE LINE TO FDC. REFER TO CIVIL PLANS FOR CONTINUATION. COORDINATE EXACT LOCATION OF FDC WITH LOCAL FIRE MARSHAL.
22.05	3" DOMESTIC WATER LINE. REFER TO CIVIL PLANS FOR CONTINUATION. 143 G.P.M.
22.06	2" MEDIUM PRESSURE GAS LINE (2 PSI). REFER TO CIVIL PLANS FOR CONTINUATION. 2859.8 MBH
22.07	IRRIGATION LINE TO RPZ-2. COORDINATE SIZE WITH IRRIGATION CONTRACTOR. REFER TO CIVIL PLANS FOR CONTINUATION.
22.08	IRRIGATION LINE. COORDINATE SIZE WITH IRRIGATION CONTRACTOR. REFER TO CIVIL PLANS FOR CONTINUATION.
22.20	PROVIDE 1" CW LINE TO THE MECHANICAL YARD YH-1. COORDINATE EXACT LOCATION OF THE YH-1 WITH EQUIPMENT AND OWNER/OWNER REPRESENTATIVE.

FLOOR PLAN LEVEL 01 SECTOR 02 - SUPPLY PLAN
1/8" = 1'-0"

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OKLAHOMA
DATE ISSUED
12/06/2019

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CLIENT:
TRIBAL SEAL OF THE CHEROKEE NATION OKLAHOMA SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:
02
01

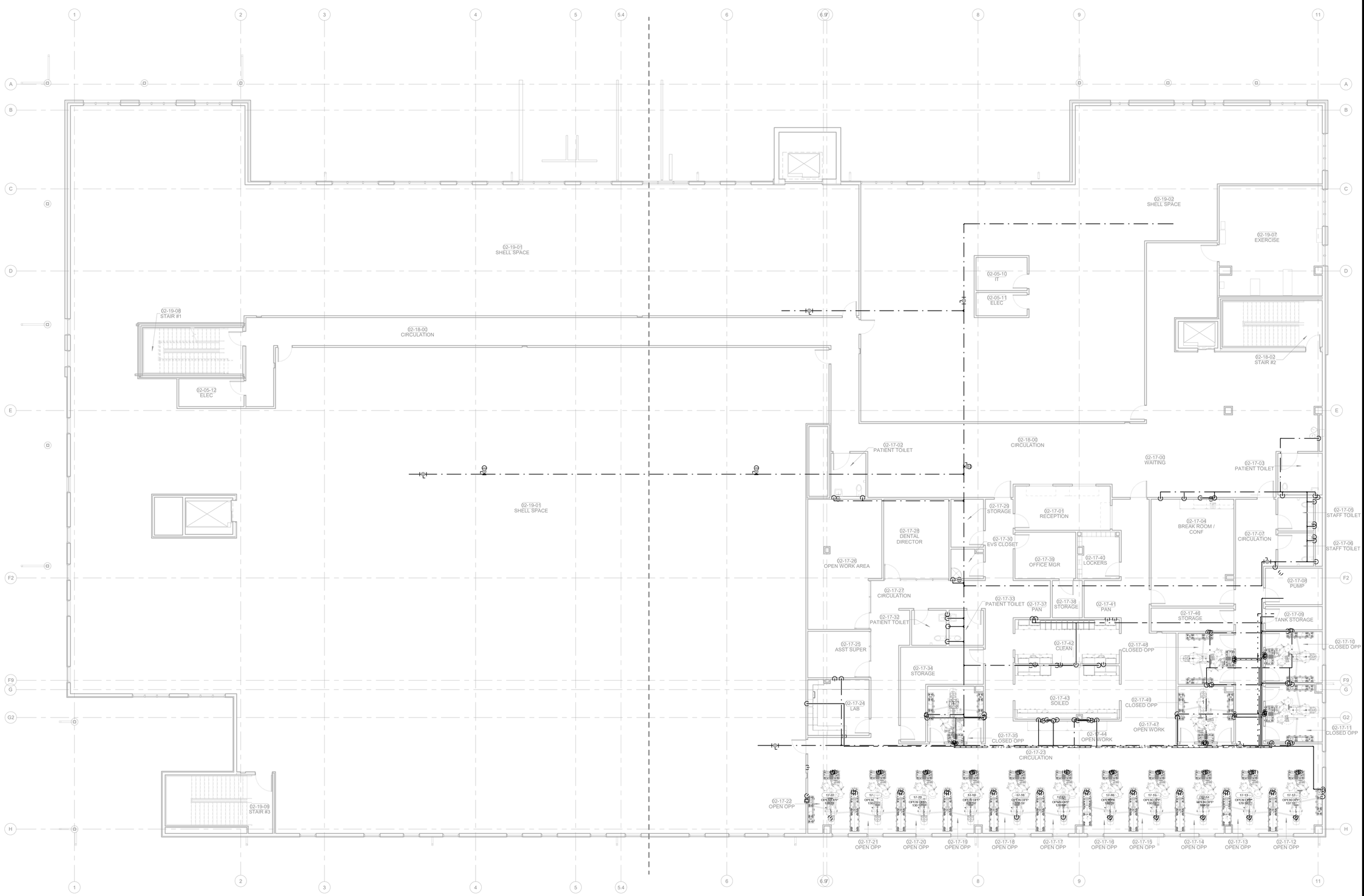
PROJECT PHASE:
BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: P3.12

SUPPLY PLAN LEVEL 01 SECTOR 02



OVERALL LEVEL 02 SUPPLY PLAN

1/8" = 1'-0"

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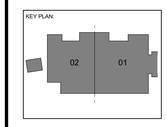
CLIENT:

THE CHEROKEE NATION
TRUST OF 1839
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

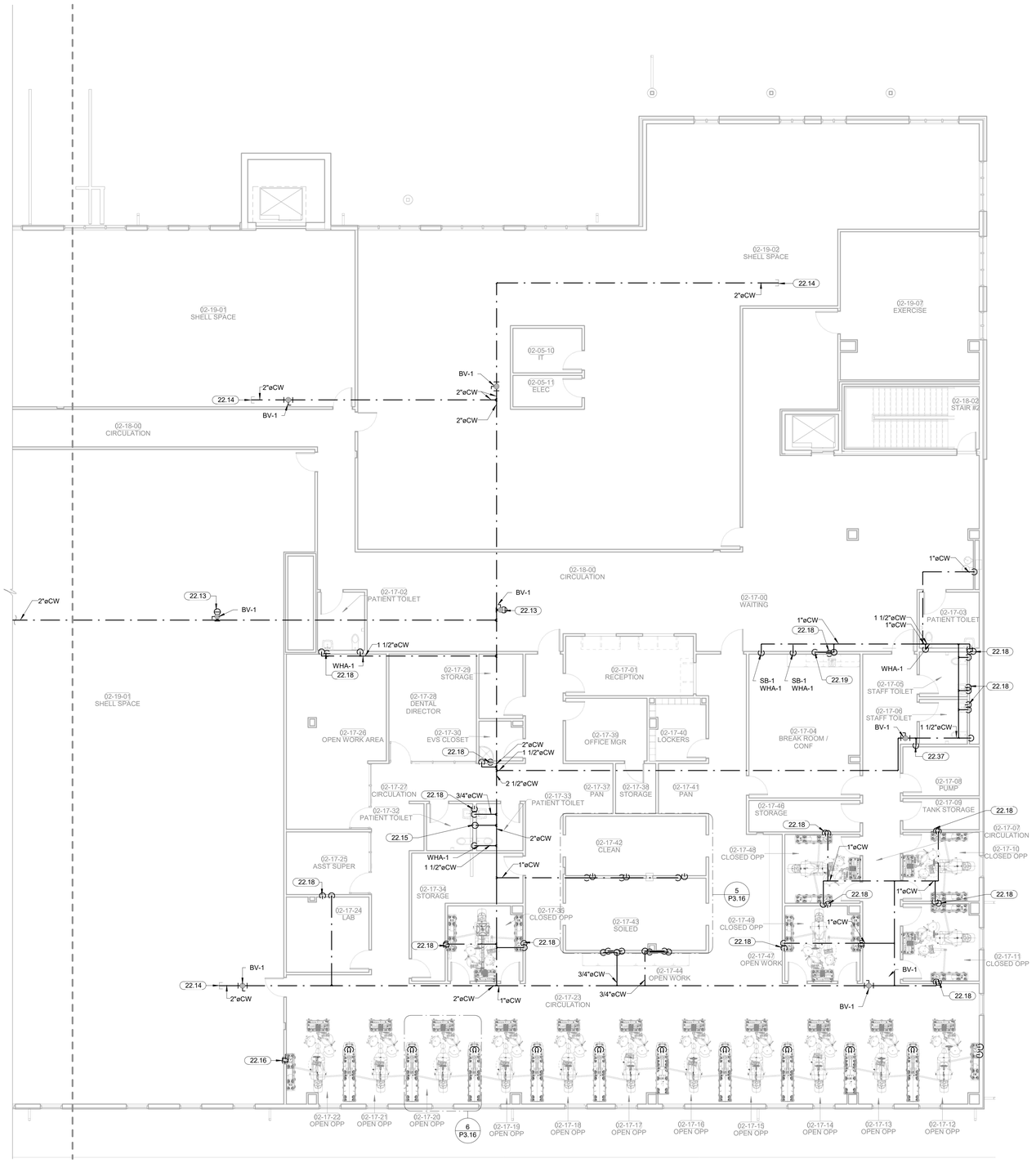
JOB NUMBER: 18-01.01

SHEET NUMBER: P3.13

OVERALL LEVEL 02 SUPPLY PLAN

KEYNOTES

22.13	3/4" CW UP FOR RH-1.
22.14	VALVE AND CAP CW LINE FOR FUTURE CONNECTION.
22.15	2-1/2" CW DOWN.
22.16	3/4" CW & HW DOWN. TYPICAL 12 PLACES
22.18	3/4" HW DOWN.
22.19	PROVIDE 1/2" CW LINE WITH VALVE TO AUTOMATIC COFFEEMAKER. FIELD VERIFY EXACT LOCATION OF COFFEEMAKER WITH EQUIPMENT SUPPLIER.
22.37	PROVIDE 1-1/4" CW LINE TO DI SYSTEM PROVIDED BY BENCO. COORDINATE EXACT LOCATION OF DI SYSTEM WITH BENCO. CONTRACTOR SHALL INSTALL DI-1 AND ROUTE PIPING ACCORDING TO THE BENCO PLANS AND MAKE ALL FINAL CONNECTIONS.



FLOOR PLAN LEVEL 02 SECTOR 01 - SUPPLY PLAN

1/8" = 1'-0"

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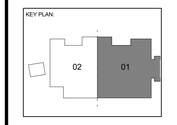
CLIENT:

SEAL OF THE CHEROKEE NATION FORT WAYNE SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

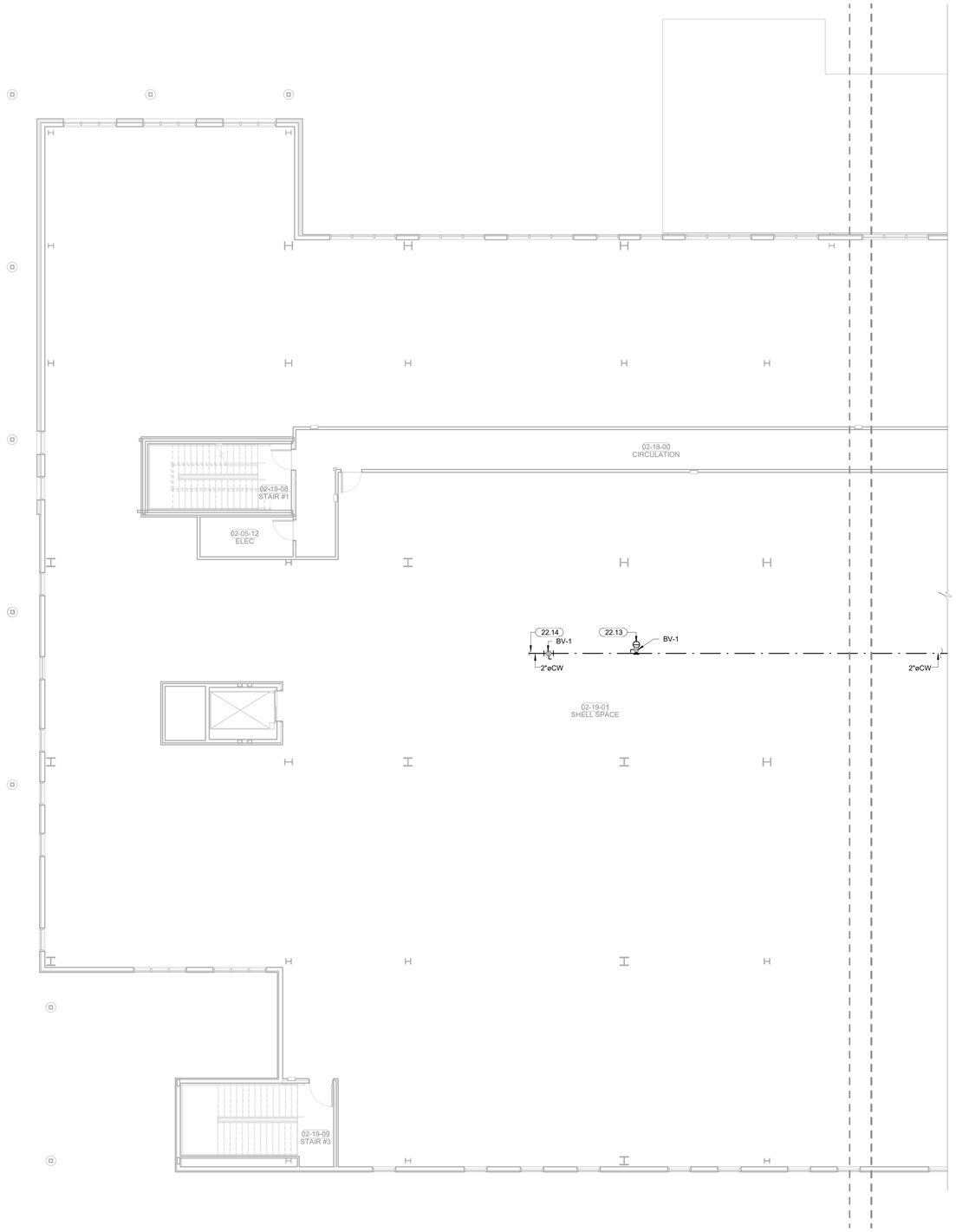
DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

P3.14

SUPPLY PLAN LEVEL 02 SECTOR 01

KEYNOTES	
22.13	3/4" CW UP FOR RH-1.
22.14	VALVE AND CAP CW LINE FOR FUTURE CONNECTION.



FLOOR PLAN LEVEL 02 SECTOR 02 - SUPPLY PLAN
1/8" = 1'-0"

1/8" = 1'-0"
3/4" = 1'-0"
1/2" = 1'-0"
3/8" = 1'-0"
1/4" = 1'-0"
3" = 1'-0"
1 1/2" = 1'-0"
1" = 1'-0"

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:
02
01

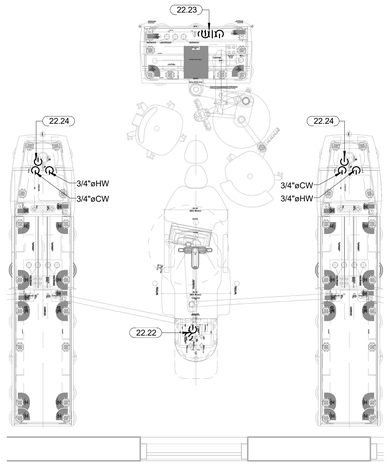
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

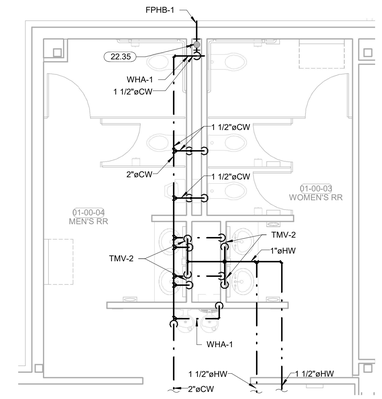
DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
P3.15

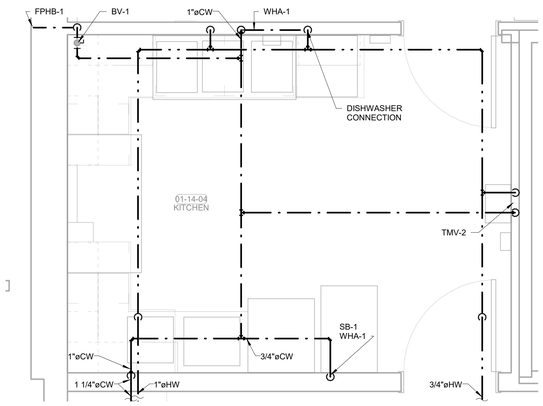
SUPPLY PLAN
LEVEL 02
SECTOR 02



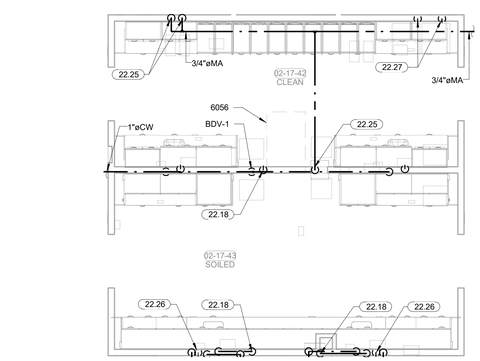
ENLARGED SUPPLY PLAN - DENTAL
1/2" = 1'-0"



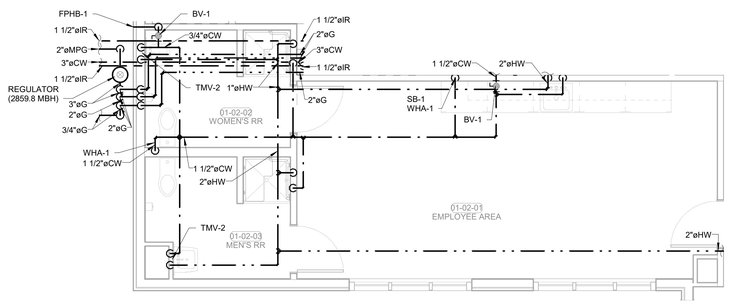
ENLARGED SUPPLY PLAN - MAIN RESTROOMS
1/4" = 1'-0"



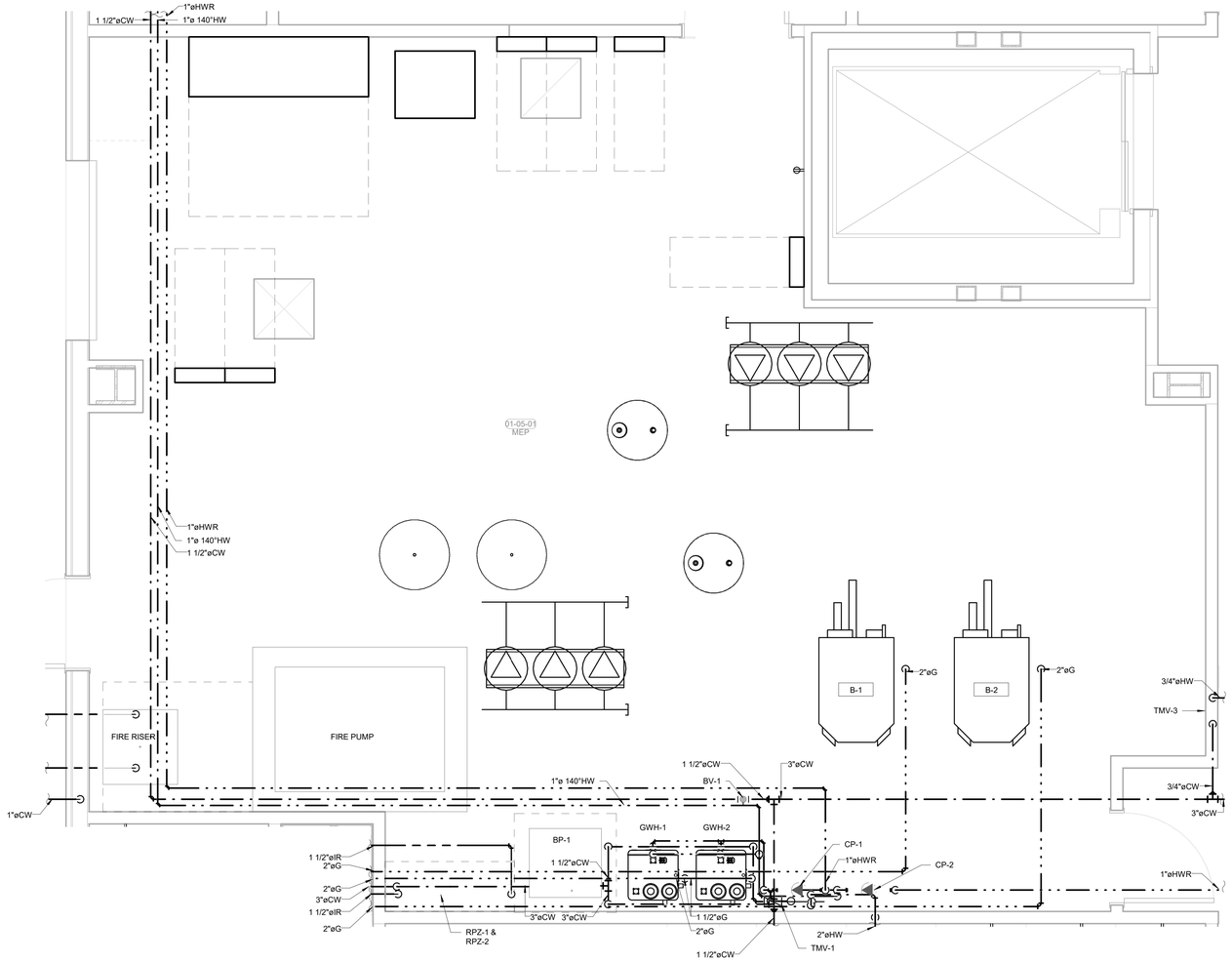
ENLARGED SUPPLY PLAN - KITCHEN
1/2" = 1'-0"



ENLARGED SUPPLY PLAN - SOIL/CLEAN RM
1/4" = 1'-0"



ENLARGED SUPPLY PLAN - EMPLOYEE AREAS
1/4" = 1'-0"



ENLARGED SUPPLY PLAN - MEP
1/2" = 1'-0"

KEYNOTES

22.18	3/4" HW DOWN.
22.22	PROVIDE 1/2" VAC AND AIR LINE VALVED AND CAPPED FOR FUTURE CONNECTION AT THE FOOT OF EACH CHAIR (TYPICAL 16 PLACES).
22.23	PROVIDE 1/2" AIR, 1/2" VAC, 1/2" O2 AND 1/2" NO2 AT EACH CABINET (TYPICAL 16 PLACES).
22.24	PROVIDE 1/2" AIR AT S-4 PER ADEC REQUIREMENTS. COORDINATE WITH ADEC PLANS FOR EXACT LOCATION AND CONNECTION (TYPICAL 22 PLACES).
22.25	PROVIDE 1/2" AIR DROP FOR EQUIPMET. COORDINATE EXACT LOCATION AND ADEQUATE SIZE WITH BENCO PLANS/EQUIPMENT.
22.26	PROVIDE 1/2" VAC AND AIR LINE FOR STERILAIZATION CABINET. COORDINATE WITH BENCO PLANS.
22.27	PROVIDE 1/2" VAC LINE FOR EQUIPMENT. COORDINATE EXACT LOCATION AND ADEQUATE WIZE WITH EQUIPMENT PLANS.
22.35	PROVIDE A LOCKABLE ACCESS BOX FOR BV-1.

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12/06/2019

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CLIENT:
SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

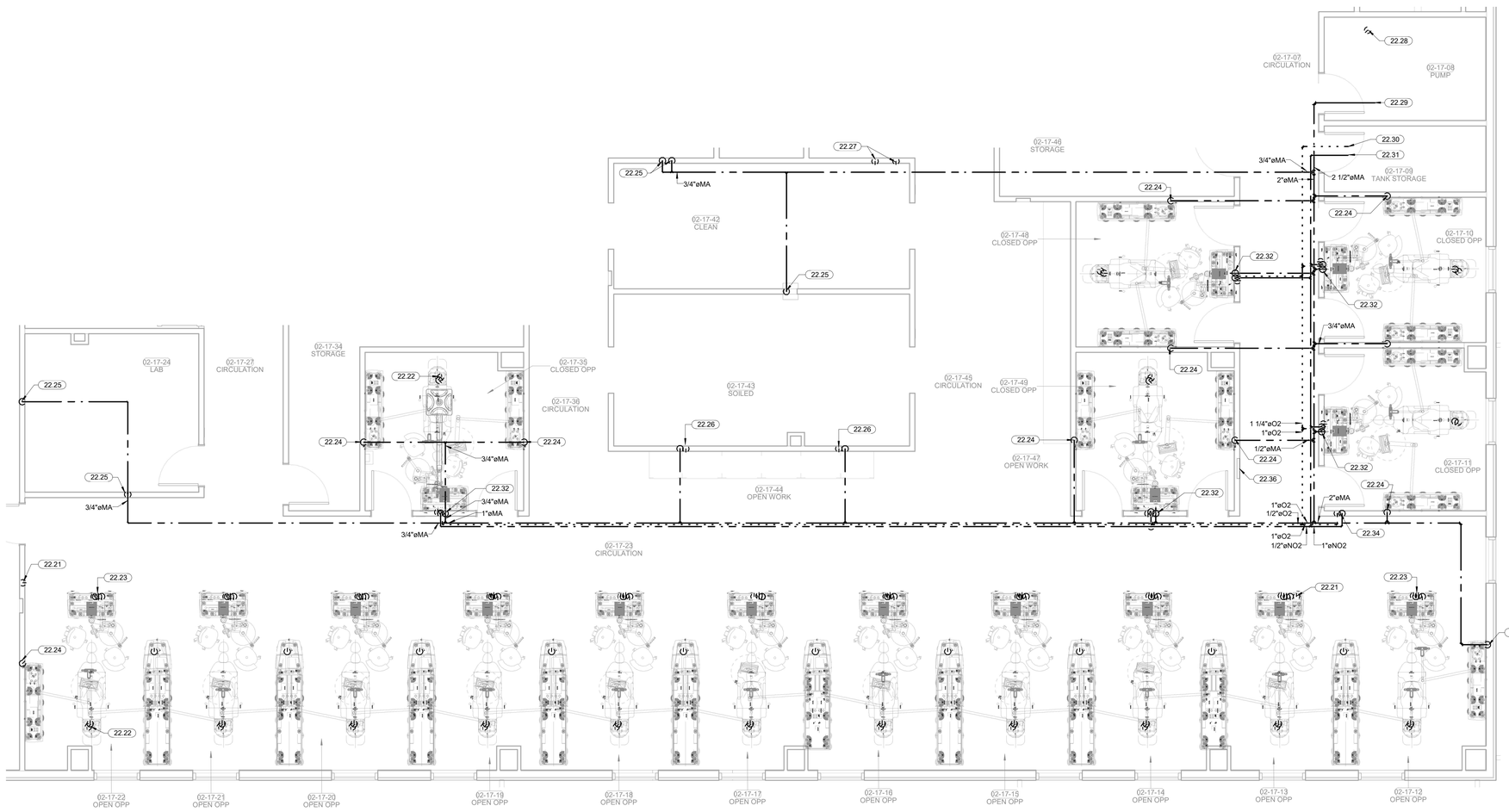
KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

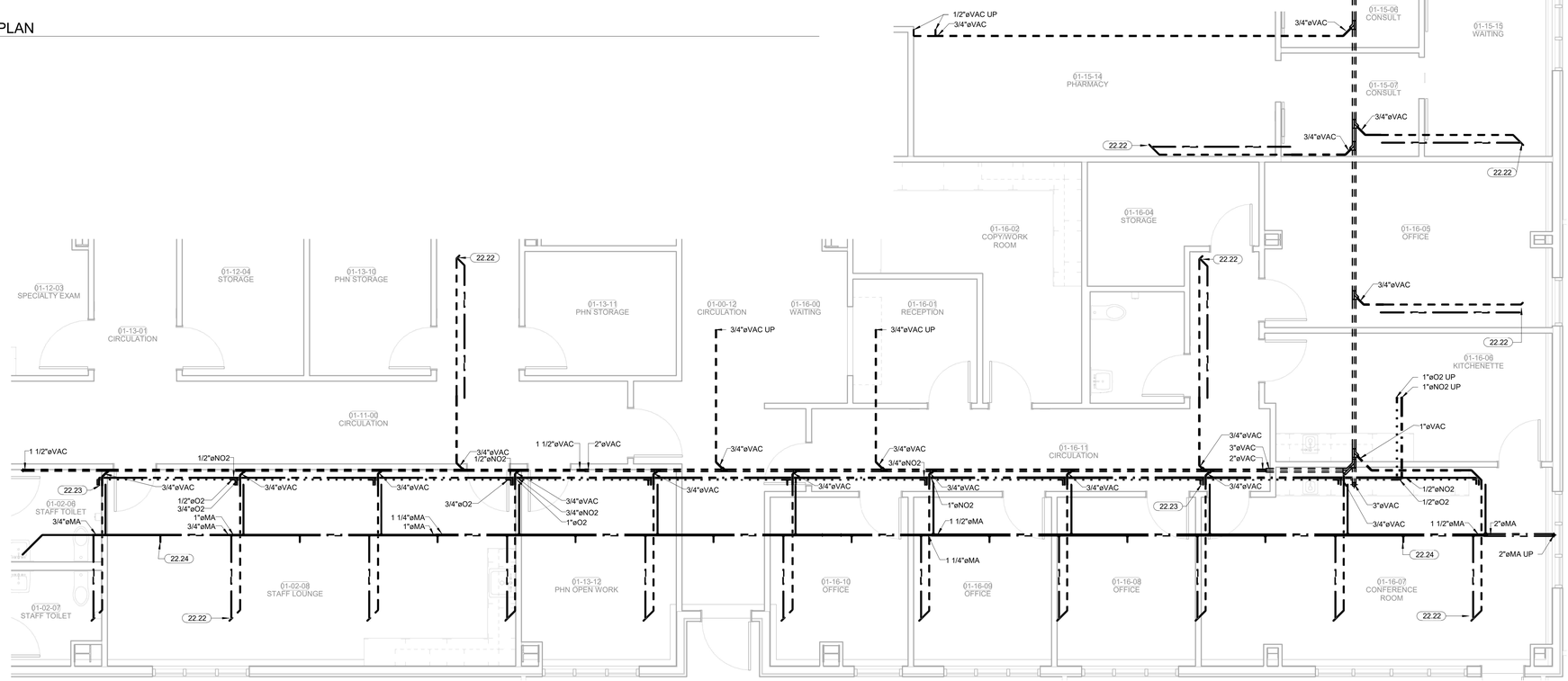
DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: P3.16

ENLARGED SUPPLY PLANS



ENLARGED MED GAS LEVEL 02 SECTOR 01 PLAN

1/4" = 1'-0"



ENLARGED MED GAS SUPPLY PLAN - FIRST FLOOR

1/4" = 1'-0"

KEYNOTES

Key Value	Keynote Text
22.21	VACUUM SYSTEM CLEANOUT. PLACE A THREADED CAP AT THE END OF THE MAIN AND BRANCH LINE RUN FOR CLEANING. COORDINATE WITH FURNITURE AND/OR EQUIPMENT.
22.22	PROVIDE 1/2" VAC AND AIR LINE VALVED AND CAPPED FOR FUTURE CONNECTION AT THE FOOT OF EACH CHAIR (TYPICAL 16 PLACES).
22.23	PROVIDE 1/2" AIR, 1/2" VAC, 1/2" O2 AND 1/2" NO2 AT EACH CABINET (TYPICAL 16 PLACES).
22.24	PROVIDE 1/2" AIR AT S-4 PER ADEC REQUIREMENTS. COORDINATE WITH ADEC PLANS FOR EXACT LOCATION AND CONNECTION (TYPICAL 22 PLACES).
22.25	PROVIDE 1/2" AIR DROP FOR EQUIPMET. COORDINATE EXACT LOCATION AND ADEQUATE SIZE WITH BENCO PLANS/EQUIPMENT.
22.26	PROVIDE 1/2" VAC AND AIR LINE FOR STERILAIZATION CABINET. COORDINATE WITH BENCO PLANS.
22.27	PROVIDE 1/2" VAC LINE FOR EQUIPMENT. COORDINATE EXACT LOCATION AND ADEQUATE WIZE WITH EQUIPMENT PLANS.
22.28	PROVIDE 3" VAC LINE TO EQUIPMENT. COORDINATE EXACT LOCATION OF EQUIPMENT WITH BENCO PLANS.
22.29	PROVIDE 2-1/2" AIR LINE TO EQUIPMENT. COORDINATE EXACT LOCATION OF EQUIPMENT WITH BENCO PLANS.
22.30	PROVIDE 1-1/4" O2 LINE TO MAINFOLD IN TANK STORAGE ROOM.
22.31	PROVIDE 1" NO2 LINE TO MAINFOLD IN TANK STORAGE ROOM.
22.32	3/4" AIR DOWN IN WALL TO FEED CHAIR AND CABINET.
22.33	2" AIR DOWN IN WALL TO BELOW FLOOR. PROVIDE 1/2" STUB FOR S-4.
22.34	1" O2 & NO2 DOWN IN WALL TO BELOW FLOOR.
22.36	ZONE VALVE BOX AND ALARM. COORDINATE EXACT LOCATION WITH BENCO.

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

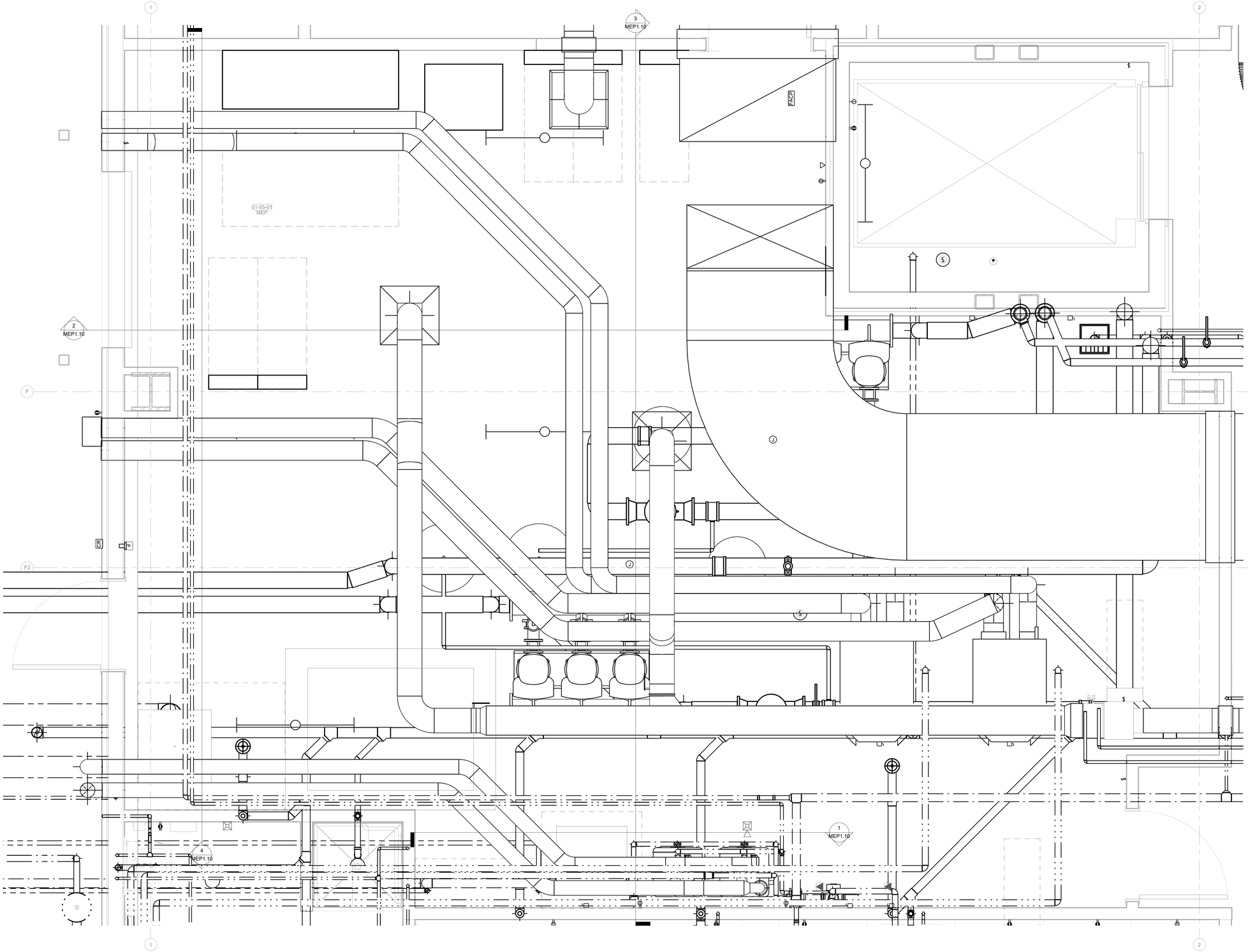
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
P3.17

ENLARGED MED GAS SUPPLY PLANS



MEP MECHANICAL ROOM
3/4" = 1'-0"

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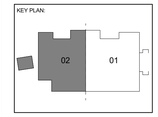
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

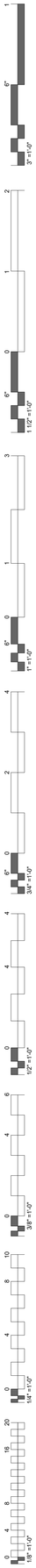
REVISIONS		
#	DATE	DESCRIPTION

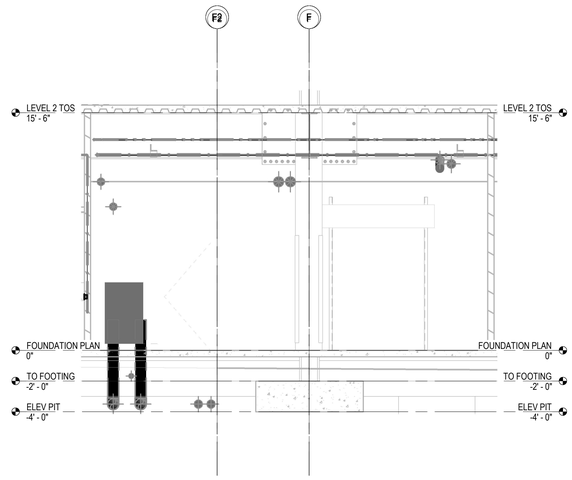
DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

MEP1.00

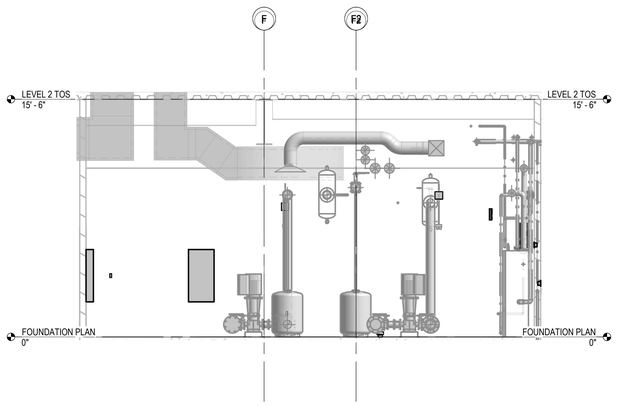
ENLARGED MECHANICAL ROOM





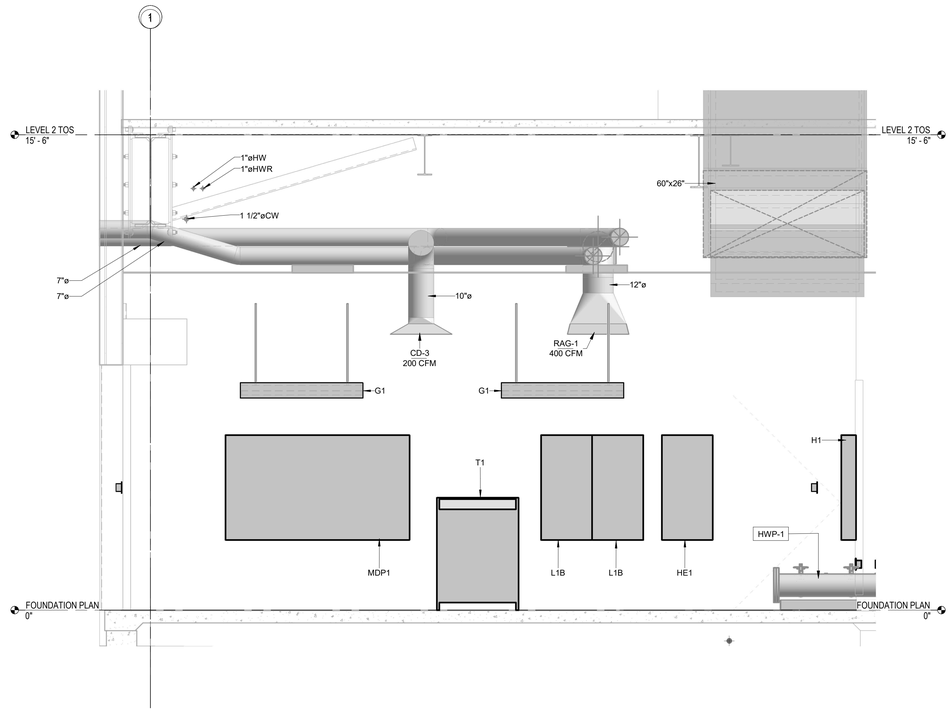
MEP - SECTION 3

1/4" = 1'-0"



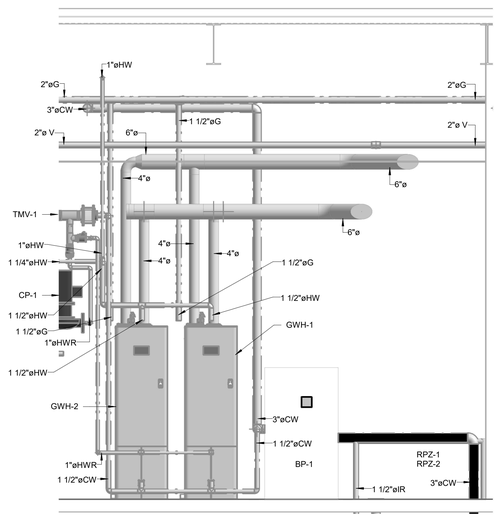
MEP - SECTION 2

1/4" = 1'-0"



MEP - SECTION 1

1/2" = 1'-0"



WATER HEATER SECTION

1/2" = 1'-0"

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PROFESSIONAL SEAL:

LICENSED PROFESSIONAL ENGINEER
Shane Wells
28910
OKLAHOMA
CASE 3 (SPD)

12/06/2019

CONSULTANT LOGO:

HP ENGINEERING
PROJECT NO. 18068R
100 % COMPLETE
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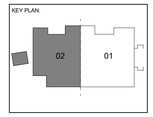
CLIENT:

TRIBAL SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

#	DATE	REVISIONS DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

MEP1.10

SECTIONS

EXPANSION TANK SCHEDULE

TAG	DESCRIPTION	MFR	MODEL	ASME CONSTRUCTION (YES/NO)	CAPACITY (GALLONS)	ACCEPTANCE (GALLONS)	INITIAL TANK PRESSURE (PSIG)	NOTES
ET-1	HEATING WATER EXPANSION TANK	ARMSTRONG	A200-L	YES	30	30	12	35% ETYLENE GLYCOL
ET-2	CHILLED WATER EXPANSION TANK	ARMSTRONG	A300-L	YES	50	50	12	35% ETYLENE GLYCOL

PUMP SCHEDULE

TAG	MFR	MODEL	TYPE	SERVICE	GPM	SYSTEM HEAD (ft)	MAX HP	VOLTS / PHASE	NOTES
CHWP-1	GRUNDFOS	HYDRO MPCE 3CRE64-2-2	TRIPLEX	CHILLED WATER	620	150	(3) 20	460 / 3	SEE BELOW
HWP-1	GRUNDFOS	HYDRO MPCE 3CRE20-2	TRIPLEX	HEATING WATER	230	100	(3) 5	460 / 3	SEE BELOW

GENERAL NOTES APPLICABLE TO ALL UNITS :
1.) PUMPS TO BE FURNISHED WITH INTEGRAL MOTOR VFD'S
2.) PUMPS TO BE VERTICAL MULTI-STAGE WITH SPLIT COUPLING
3.) PUMPS TO HAVE LIFETIME ALIGNMENT GUARANTEE
4.) SUCTION AND DISCHARGE HEADERS TO BE 316L STAINLESS STEEL
5.) PUMP BASEPLATE SHALL BE 304 STAINLESS STEEL
6.) ON-BOARD PUMP CONTROLLER SHALL CASECADE AND SEQUENCE PUMPS FOR MAXIMUM EFFICIENCY
7.) PUMP CURVES SHALL BE PROGRAMMED INTO CONTROLLER
8.) ENTIRE SYSTEM (PUMPS, VFD'S, CONTROLLER) SHALL BE MADE BY A SINGLE MANUFACTURER
9.) PUMPS TO BE OPERATED IN PARALLEL CONTROL
10.) EACH SKID MOUNTED SYSTEM SHALL INCLUDE ALL PIPE, VALVES AND FITTINGS, AND OFFER SINGLE POINT CONNECTIONS
11.) FURNISH EACH SYSTEM WITH BACNET INTERFACE CARD
12.) SYSTEM DESIGNED FOR 2 PUMPS TO HANDLE FULL LOAD WITH 3RD PUMP AS BACKUP
13.) FURNISH EACH SYSTEM WITH DIFFERENTIAL PRESSURE TRANSDUCERS
14.) SCCR 100K

AIR DEVICE SCHEDULE

TAG	DESCRIPTION	MFR	MODEL	FACE SIZE	FRAME SIZE	NECK SIZE	MATERIAL / FINISH	MAX FLOW
CD-1	CEILING DIFFUSER, LOUVERED FACE, ADJUSTABLE	PRICE	AMD	9x9	12x12	6	ALUMINUM/ WHITE	100 CFM
CD-2	CEILING DIFFUSER, LOUVERED FACE, ADJUSTABLE	PRICE	AMD	18X18	24x24	8	ALUMINUM/ WHITE	200 CFM
CD-3	CEILING DIFFUSER, LOUVERED FACE, ADJUSTABLE	PRICE	AMD	18x18	24x24	10	ALUMINUM/ WHITE	350 CFM
CD-4	CEILING DIFFUSER, LOUVERED FACE, ADJUSTABLE	PRICE	AMD	18x18	24x24	12	ALUMINUM/ WHITE	475 CFM
EAG-1	EGG CRATE EXHAUST GRILLE	PRICE	80	12X12	14X14	N/A	ALUMINUM/ WHITE	500 CFM
EAG-2	EGG CRATE EXHAUST GRILLE	PRICE	80	22X22	24X24	N/A	ALUMINUM/ WHITE	1000 CFM
LR-1	LINEAR 1" SLOT RETURN WITH SDA PLENUM	PRICE	SDR	1", 1 SLOT	60"	N/A	ALUMINUM/ REF ARCH	200 CFM
LS-1	LINEAR 1" SLOT DIFFUSER WITH SDA PLENUM, 1 SLOT	PRICE	SDS	1", 1 SLOT	48"	N/A	ALUMINUM/ REF ARCH	150 CFM
LS-2	LINEAR 1" SLOT DIFFUSER WITH SDA PLENUM, 1 SLOT	PRICE	SDS	1", 1 SLOT	60"	N/A	ALUMINUM/ REF ARCH	200 CFM
LS-3	LINEAR 1" SLOT DIFFUSER WITH SDA PLENUM, 2 SLOT	PRICE	SDS	1", 2 SLOT	60"	N/A	ALUMINUM/ REF ARCH	400 CFM
LS-4	LINEAR 1" SLOT DIFFUSER WITH SDA PLENUM, 1 SLOT	PRICE	SDS	1", 1 SLOT	24"	N/A	ALUMINUM/ REF ARCH	100 CFM
LV-1	WIND DRIVEN RAIN LOUVER	GREENHECK	EVH-501	12X14	N/A	N/A	ALUMINUM/ REF ARCH	150 CFM
LV-2	WIND DRIVEN RAIN LOUVER	GREENHECK	EVH-501	22X36	N/A	N/A	ALUMINUM/ REF ARCH	1300 CFM
RAG-1	EGG CRATE RETURN GRILLE	PRICE	80	22x22	24x24	REF PLANS	ALUMINUM/ WHITE	2500 CFM
STG-1	SIDEWALL RETURN GRILLE 30° DEFLECTION 1/2" O.C. SPACING. BLADES PARALLEL TO LONG DIMENSION	PRICE	630	8x6	10x8	N/A	ALUMINUM/ WHITE	250 CFM
STG-2	SIDEWALL RETURN GRILLE 30° DEFLECTION 1/2" O.C. SPACING. BLADES PARALLEL TO LONG DIMENSION	PRICE	630	8x8	10x10	N/A	ALUMINUM/ WHITE	300 CFM
TPG-1	MAXIMUM SECURITY GRILLE - SUICIDE DETERRENT - FIELD WELD INSTALL	TITUS	SG-SD	8X8	10X10	N/A	ALUMINUM/ WHITE	150 CFM

GENERAL NOTES APPLICABLE TO ALL UNITS:
1. COORDINATE AIR DEVICE DEFLECTION ADJUSTMENTS WITH THE MECHANICAL ENGINEER DURING AIR BALANCE.
2. PROVIDE 2" FACTORY FIBERGLASS WRAP ON ALL SUPPLY DIFFUSERS WITH BACKSIDE NOT EXPOSED TO SPACE.
3. FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR.
4. ALL AIR DEVICES ARE 4-WAY THROW UNLESS OTHERWISE NOTED IN SCHEDULES OR WITH FLOW ARROWS ON DRAWINGS.
5. REFER TO SPECIFICATIONS FOR APPROVED ALTERNATES.
6. BRANCH DUCT SIZE SHALL BE SAME AS NOTED DIFFUSER NECK SIZE UNLESS NOTED OTHERWISE. PROVIDE TRANSITION WHERE DUCT SIZE DIFFERS FROM NECK SIZE.
7. WHERE FINISH AND COLOR ARE NOTED TO BE SELECTED BY ARCHITECT/OWNER, THIS CONTRACTOR SHALL PROVIDE A COLOR PALETTE SAMPLE FOR FINAL APPROVAL WITH THE SUBMITTALS.
8. COORDINATE WITH ARCHITECT'S REFLECTED CEILING PLAN TO PROVIDE APPROPRIATE FRAME TYPE AND MOUNTING ACCESSORIES.
9. EQUALS PER SPECIFICATIONS.

EXHAUST FAN SCHEDULE

TAG	DESCRIPTION	MFR	MODEL	DRIVE	FLOW	ESP	RPM	VOLTS / PH	POWER	CONTROL TYPE	ACCESSORIES
EF-1	CABINET EXHAUST FAN	GREENHECK	SP-A125	DIRECT	75	0.25	1100	120/1	21 W	WALL SWITCH	A, F, G, I
EF-2	CABINET EXHAUST FAN	GREENHECK	SP-A125	DIRECT	75	0.25	1100	120/1	21 W	WALL SWITCH	A, F, G, I
EF-3	CABINET EXHAUST FAN	GREENHECK	SP-A125	DIRECT	75	0.25	1100	120/1	21 W	WALL SWITCH	A, F, G, I
EF-4	CABINET EXHAUST FAN	GREENHECK	SP-A125	DIRECT	75	0.25	1100	120/1	21 W	WALL SWITCH	A, F, G, I
EF-5	RECTANGULAR INLINE DUCT FAN	GREENHECK	SQ-120-VG	DIRECT	1300	1	1654	120/1	1/2 HP	CONTINUOUS, BAS	A, G, H
EF-6	RECTANGULAR INLINE DUCT FAN	GREENHECK	SQ-97-VG	DIRECT	150	0.6	1494	120/1	1/4 HP	CONTINUOUS, BAS	A, G, H
EF-7	DOWNBLAST EXHAUST FAN	GREENHECK	G-090-VG	DIRECT	300	0.25	1058	120/1	1/10 HP	WALL SWITCH	B
EF-8	DOWNBLAST EXHAUST FAN	GREENHECK	G-143-VG	DIRECT	1250	0.6	1133	120/1	1/2 HP	CONTINUOUS, BAS	B
EF-9	CABINET EXHAUST FAN	GREENHECK	SP-A125	DIRECT	75	0.25	1100	120/1	21 W	WALL SWITCH	A, F, G, I
EF-10	RECTANGULAR INLINE DUCT FAN	GREENHECK	SQ-90-VG	DIRECT	250	0.3	1194	120/1	1/10	T-STAT	A, D, H

GENERAL NOTES APPLICABLE TO ALL UNITS:
1. PROVIDE PRE-WIRED FACTORY MOUNTED INTEGRAL DISCONNECT DEVICE (NEMA 3R FOR EXTERIOR).
2. PROVIDE VARIABLE SPEED CONTROLLER (FACTORY INSTALLED IF AVAILABLE) ON ALL DIRECT DRIVE FANS FOR FAN BALANCING.
3. PROVIDE BELT TENSIONER ON ALL BELT DRIVE FANS.
4. PROVIDE WALL SLEEVE, FAN GUARD, EXTERIOR WEATHER HOOD AND MOTORIZED DAMPER WITH TIME DELAY CONTROLS ON ALL WALL MOUNTED PROPELLER FANS.
5. MOUNT FAN SPEED CONTROLLER IN ACCESSIBLE LOCATION ABOVE CEILING UNLESS OTHERWISE NOTED.
6. PROVIDE ROOF CURB TO MATCH ROOF TYPE AND SLOPE AT ALL ROOF MOUNTED FANS.

NOTES
A PROVIDE BACKDRAFT DAMPER.
B PROVIDE MOTORIZED DAMPER WITH TIME DELAY FAN START. MECHANICAL CONTRACTOR RESPONSIBLE FOR INSTALLING FAN, ROOF CURB, BACK DRAFT DAMPER, AND ALL INTERNAL POWER AND CONTROL WIRING AS REQUIRED TO PROVIDE FULLY OPERATIONAL FAN AND DAMPER.
C PROVIDE WITH VARIABLE FREQUENCY DRIVE SAME SIZE AS LISTED MOTOR HORSE POWER. PROVIDE WITH INVERTER DUTY (NEMA MGI PART 31), MOTOR-MOUNTED GROUNDING RING. REFER TO VARIABLE FREQUENCY DRIVE SCHEDULE FOR SPECIFICS.
D PROVIDE SPUN ALUMINUM VENT CAP, COOK MODEL "PR" WITH ROOF CURB.
E PROVIDE MANUFACTURER'S BRICK VENT. COLOR TO BE SELECTED BY ARCHITECT.
F PROVIDE MANUFACTURER'S WHITE ALUMINUM GRILLE.
G PROVIDE BIRD SCREEN.
H PROVIDE ISOLATOR KIT.
I PROVIDE MANUFACTURER'S WALL CAP.
J PROVIDE GREASE COLLECTION CUP.

GENERAL NOTE:
ALL RECTANGULAR DUCT SIZES SHOWN ARE THE OUTSIDE METAL DIMENSIONS. DUCT DIMENSIONS ALREADY HAVE ALLOWANCES FOR THE INSULATION LINER WHERE APPLICABLE IN THE RECTANGULAR DUCTS. AT DUAL WALL DUCTS, THE DIMENSION SHOWN IS THE OUTSIDE METAL DUCT SIZE AND ALREADY HAS ALLOWANCES FOR THE INSULATION THICKNESS.

NOTE: NO LINED DUCT IN KITCHEN

MECHANICAL DUCTWORK & INSULATION SCHEDULE

SERVICE	DUCT TYPE	INSULATION TYPE	INSULATION THICKNESS
ALL RUNOUTS TO SUPPLY DIFFUSERS AND RETURN GRILLES CONCEALED ABOVE CEILINGS	ROUND WRAPPED OR RECTANGULAR LINED, AS INDICATED ON PLANS.	FIBERGLASS WRAP OR MATTE FACED FIBERGLASS LINER	2" WRAP OR 1-1/2" LINER, R VALUE=6.0
ALL SUPPLY AIR DIFFUSERS (BACKSIDE, NOT EXPOSED TO SPACE)	N/A	FIBERGLASS WRAP	2" WRAP, R VALUE=6.0
FRESH AIR SUPPLY DUCT	ROUND WRAPPED OR RECTANGULAR LINED, AS INDICATED ON PLANS.	FIBERGLASS WRAP OR MATTE FACED FIBERGLASS LINER, N/A IF IN UNCONDITIONED SPACE	2" WRAP OR 1-1/2" LINER, R VALUE=6.0
FRESH AIR EXHAUST DUCT	ROUND WRAPPED OR RECTANGULAR LINED, AS INDICATED ON PLANS.	FIBERGLASS WRAP OR MATTE FACED FIBERGLASS LINER N/A IF IN UNCONDITIONED SPACE	2" WRAP OR 1-1/2" LINER, R VALUE=6.0
RESTROOM EXHAUST DUCT	ROUND WRAPPED OR RECTANGULAR LINED, AS INDICATED ON PLANS.	FIBERGLASS WRAP OR MATTE FACED FIBERGLASS LINER FIBERGLASS LINER	2" WRAP OR 1-1/2" LINER, R VALUE=6.0
ALL MEDIUM PRESSURE CONSTANT VOLUME AND VAV SUPPLY AIR DUCT FOR FIRST 20' FROM AIR HANDLER OR PACKAGED UNIT	DOUBLE WALL SPIRAL WITH PERFORATED METAL LINER	FIBERGLASS EQUAL TO UNITED MCGILL ACOUSTIC - K27	1-1/2", R VALUE=6.0
ALL MEDIUM PRESSURE CONSTANT VOLUME AND VAV SUPPLY AIR DUCT BEYOND 20' FROM AIR HANDLER OR PACKAGED UNIT	ROUND WRAPPED OR RECTANGULAR LINED, AS INDICATED ON PLANS.	FIBERGLASS WRAP OR MATTE FACED FIBERGLASS LINER FIBERGLASS LINER	2" WRAP OR 1-1/2" LINER, R VALUE=6.0
FUMEHOOD EXHAUST DUCT	304 STAINLESS STEEL SEALED WITH MASTIC JOINT SEALER	FIBERGLASS WRAP	1-1/2", R VALUE=6.0
FLAMMABLE STORAGE EXHAUST DUCT	EXPLOSION PROOF AND CORROSION PROOF WELDED 304 STAINLESS STEEL	FIBERGLASS WRAP	1-1/2", R VALUE=6.0
ALL SUPPLY AND RETURN DUCT SERVING SOUND SENSITIVE ROOMS	DOUBLE WALL SPIRAL WITH PERFORATED METAL LINER	FIBERGLASS EQUAL TO UNITED MCGILL ACOUSTIC - K27	1-1/2", R VALUE=6.0
GREASE DUCT	16 GAUGE, CARBON STEEL WELDED AIR TIGHT AT ALL JOINTS AND SEAMS. MECHANICAL FASTENERS SHALL NOT PENETRATE DUCT WALL	THERMAL CERAMICS FIREMASTER. UL LISTED FOR ZERO CLEARANCE TO COMBUSTIBLES	3"

HYDRONIC ACCESSORIES SCHEDULE

TAG	DESCRIPTION	MFR	MODEL	TANK MIXTURE	TANK VOLUME (GALLONS)	PRESSURE RANGE (PSI)	MAKE-UP CAPACITY (GPM @ PSI)	HP	VOLT/PH	ACCESSORIES
CPF-1	CHEMICAL FEEDER WITH PUMP	GRUNDFOS	GMPD-23050	35% GLYCOL	50	10-70	1.8 @70	1/3	120/1	1-7
CPF-2	CHEMICAL FEEDER WITH PUMP	GRUNDFOS	GMPD-23050	35% GLYCOL	50	10-70	1.8 @70	1/3	120/1	1-7

ACCESSORIES:
1. PROTECTIVE LOW WATER CUT-OFF ALARM.
2. HOA CONTROLS
3. 1/3 HP BRASS ROTARY VANE PUMP
4. MAGNETIC STARTER
5. PRESSURE TANK WITH PRESSURE CONTROLS
6. PROVIDE WITH PRESSURE GUAGES, PRESSURE REDUCING VALVE AND SYSTEM ISOLATION VALVES.
7. PROVIDE 110V SIGNAL FOR A REMOTE ALARM.

AIR SEPARATOR SCHEDULE

MARK	SERVES	MFR	MODEL	VOLUME (GAL)	WPD (FT)	WEIGHT (LB)	ACCESSORIES
AS-1	HEATING WATER SYSTEM	SPIROTHERM	VDT 600 FA	19.8	3	260	STEEL MESH STRAINER
AS-2	CHILLED WATER SYSTEM	SPIROTHERM	VDT 600 FA	19.8	3	260	STEEL MESH STRAINER

GENERAL MECHANICAL NOTES

1	SUBMISSION OF PROPOSAL IN CONNECTION WITH THIS WORK SHALL IMPLY THAT THE BIDDER HAS EXAMINED THE JOB SITE UNDER WHICH HE WILL BE OBLIGATED TO OPERATE SHOULD HE BE AWARDED THE WORK UNDER THIS CONTRACT. NO EXTRA CHARGE WILL BE ALLOWED FOR FAILURE OF ANY BIDDER TO EXAMINE THE SITE PRIOR TO BID.
2	ALL RECTANGULAR DUCT SIZES SHOWN ARE THE OUTSIDE METAL DIMENSIONS. DUCT DIMENSIONS ALREADY HAVE ALLOWANCES FOR THE INSULATION LINER WHERE APPLICABLE IN THE RECTANGULAR DUCTS. AT DUAL WALL DUCTS, THE DIMENSION SHOWN IS THE OUTSIDE METAL DUCT SIZE AND ALREADY HAVE ALLOWANCES FOR THE INSULATION THICKNESS.
3	ALL WORK SHALL CONFORM TO STATE AND LOCAL CODES, RULES, REGULATIONS, AND ORDINANCES WHICH SHALL TAKE PRECEDENCE OVER THE PLANS IF CONFLICTS EXIST BETWEEN THEM.
4	THE DRAWINGS INDICATE THE GENERAL LAYOUT REQUIREMENTS FOR EQUIPMENT, FIXTURES, PIPING, DUCTWORK, ETC. FINAL LAYOUT SHALL BE MODIFIED TO FIT ACTUAL SITE CONDITIONS.
5	COORDINATE ALL WORK WITH THE OWNER AND ALL OTHER CONTRACTORS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RIGGING, HANDLING, AND PROTECTION OF MATERIALS. PROVIDE LABOR TO RECEIVE UNLOAD, STORE, PROTECT, AND TRANSFER TO POINT OF INSTALLATION OF ANY OWNER-FURNISHED ITEMS.
6	IN CASES OF EQUIPMENT SUBSTITUTION, CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT ALL SYSTEMS AND COMPONENTS WILL FIT PROPERLY PRIOR TO FABRICATION OR ORDERING. INSTALLED DUCTS MAY BE RESIZED BY THE CONTRACTOR TO FIT FIELD CONDITIONS AS LONG AS THE INSTALLED DUCTS SHALL HAVE EQUAL FRICTION LOSS TO THOSE SHOWN. RECTANGULAR DUCTS SHALL NOT BE CHANGED TO ROUND DUCTS. PROVIDE COMPLETE SHEET METAL SHOP DRAWINGS TO ENGINEER SHOWING ACTUAL DUCT SIZES, ARRANGEMENTS, AND UNIT LOCATIONS TO BE INSTALLED. THIS SHALL BE DONE PRIOR TO FABRICATION OR INSTALLATION.
7	INSTALL ACOUSTIC TURNING VANES IN ELBOWS IN RECTANGULAR DUCTS 20" AND LARGER. INSTALL RADIUS TYPE ELBOWS IN RECTANGULAR DUCTS SMALLER THAN 20".
8	USE 45 DEGREE TAKE-OFF FITTINGS AT ALL ROUND SUPPLY BRANCH TAKEOFFS. PROVIDE BALANCE DAMPERS AT ALL SUPPLY DUCT RUNOUTS TO GRILLES. LOCATE AS FAR AS POSSIBLE FROM GRILLES IN AN ACCESSIBLE LOCATION. PROVIDE ACCESS PANELS IN SOLID WALLS AND CEILINGS FOR BALANCING DAMPERS.
9	USE FLEX DUCTS FOR FINAL CONNECTION TO ALL CEILING DIFFUSERS, AND WHERE NECESSARY, SIDEWALL DIFFUSERS, AND LIMIT TO 6' MAX. LENGTHS.
10	PROVIDE A COMPLETE AND OPERATING MECHANICAL SYSTEM, INCLUDING ALL INCIDENTAL ITEMS AND CONNECTIONS NECESSARY FOR PROPER OPERATION OR CUSTOMARILY INCLUDED, EVEN THOUGH EACH AND EVERY ITEM MAY NOT BE INDICATED.
11	THE MECHANICAL INSTALLATION SHALL BE SAFE, RELIABLE, ENERGY EFFICIENT AND EASILY MAINTAINED WITH ADEQUATE PROVISIONS ALLOWED FOR ACCESS TO EQUIPMENT.
12	THE MECHANICAL SYSTEM SHALL OPERATE QUIETLY WITH NOISE LEVELS BELOW THE CRITERIA RECOMMENDED FOR THE APPLICATION BY ASHRAE. PROVIDE CORRECTIVE ACTION AS REQUIRED TO REDUCE OBJECTIONABLE NOISE OR VIBRATION.
13	UNDERCUT DOORS 3/4 INCH WHERE NO RETURN NOR EXHAUST GRILLE IS SHOWN TO ALLOW FOR AIR TRANSFER (DO NOT UNDERCUT FIREDOORS.)
14	REFER TO ARCH. PLANS AND DETAILS FOR EXACT LOCATION OF ALL WALL AND CEILING MOUNTED DEVICES. ADJUST LOCATION OF SIDEWALL DEVICES AS NECESSARY TO AVOID INTERFERENCE WITH MOLDING OR OTHER ELECTRICAL DEVICES.
15	WHERE CONDUIT, CABLES, DUCTWORK OR PIPING PASSES THROUGH FIRE-RATED FLOORS OR WALLS, THE SLEEVES SHALL BE COMPLETELY SEALED WITH A FIRE STOP MATERIAL THAT IS UL LISTED AND ACCEPTED BY LOCAL AUTHORITIES HAVING JURISDICTION (AHJ) AS BEING SUITABLE FOR THIS SERVICE SUCH AS DOWN CORNING CORP "SILICONE ELASTOMER, RTV FOAM, OR SIMILAR MATERIAL TO MAINTAIN FIRE RATING OF THE WALL OR FLOOR.
16	CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CORING AND BEAM PENETRATIONS AS IT RELATES TO HIS WORK.
17	CONTRACTOR SHALL NOT INSTALL ANY MAINTENANCE ITEMS ABOVE HARD CEILINGS. THIS SHALL INCLUDE VALVES, DAMPERS, OR ANY OTHER ITEMS THAT REQUIRE ACCESS AFTER CONSTRUCTION IS COMPLETED. IF INSTALLATION ABOVE A HARD CEILING OF THESE ITEMS CANNOT BE AVOIDED, THEN PROVIDE CEILING ACCESS DOORS EQUAL TO ACUDOR MODEL FW-505 WHERE REQUIRED. AT FIRE-RATED WALLS, USE EQUIVALENT OF ACUDOR MODEL FB-5060. MINIMUM SIZE SHALL BE 12"x12". USE 18"x18" WHEN PERSONNEL ACCESS IS REQUIRED.
18	PROVIDE AN INSULATED BACK ON ALL THERMOSTATS AND TEMPERATURE SENSORS THAT ARE MOUNTED ON CMU OR HOLLOW WALLS. PROVIDE SHALLOW DEVICE EXTENSION BOX BEHIND T-STATS AND SENSORS ON MASONRY WALLS IN COMMERCIAL / RETAIL SPACES.
19	PROVIDE FIRE DAMPERS AT ALL FIRE-RATED WALLS AND FLOOR PENETRATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE BARRIER WALLS AND CEILINGS.
20	IF A CENTRAL FIRE ALARM SYSTEM IS REQUIRED FOR THIS PROJECT, MECHANICAL CONTRACTOR SHALL INSTALL DUCT MOUNTED SMOKE DETECTORS PROVIDED BY FIRE ALARM CONTRACTOR. REFER TO ELECTRICAL NOTES FOR EXACT REQUIREMENTS. MECHANICAL CONTRACTOR SHALL IDENTIFY A SET OF TERMINALS FOR EQUIPMENT SHUTDOWN ON ALL FAN POWERED EQUIPMENT REQUIRING SHUTDOWN CONTROLS. FIRE ALARM CONTRACTOR SHALL WIRE FROM DUCT MOUNTED SMOKE DETECTOR TO SHUTDOWN TERMINALS TO SHUT DOWN FAN OPERATION WHEN SMOKE IS DETECTED.
21	AT PENETRATIONS THROUGH FIRE WALLS, ANY PVC PIPE OR DUCT SHOULD BE EXTERNALLY SLEEVED WITH STEEL, FERROUS, OR COPPER MATERIALS, SECURELY FASTENED TO THE FIRE RATED ASSEMBLY, AND ANY SPACE BETWEEN THE SLEEVE AND THE ASSEMBLY PENETRATED SHALL BE PROTECTED USING MATERIAL THAT CONFORMS TO ASTM E 814 OR UL 1479, SUCH AS FIRE STOP FS-1900, OR FLAME STOPPER 5000
22	REFER TO ELECTRICAL DRAWINGS FOR SMOKE DAMPER AND FIRE/SMOKE DAMPER DETAIL. MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL DAMPERS WITH MOTORIZED ACTUATORS AND INSTALL SMOKE DETECTORS AND PROVIDE WIRING FOR FAN SHUTDOWN CONTROLS. COORDINATE WITH ELECTRICAL CONTRACTOR AND PROVIDE DAMPER ACTUATOR COMPATIBLE WITH ELECTRICAL WIRING PROVIDED. PROVIDE ANY WIRING OR COMPONENTS NOT PROVIDED BY THE ELECTRICAL CONTRACTOR THAT ARE REQUIRED TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
23	AHEAD OF ALL VAV BOX INLETS, INSTALL STRAIGHT DUCT EQUIVALENT TO AT LEAST 2 DIAMETERS IN LENGTH WHETHER SHOWN ON PLANS OR NOT.
24	SEISMIC PROTECTION FOR CONCERNS OF ALL BUILDING SYSTEMS INCLUDING BUT NOT LIMITED TO MECHANICAL, PLUMBING, AND ELECTRICAL MUST MEET MINIMUM REQUIREMENTS OF ALL APPLICABLE CODES FOR BUILDINGS' CLASSIFIED SEISMIC PROTECTION MEASURES TO BE APPLIED SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND/OR FEDERAL CODES AND WITH MANUFACTURERS'S REQUIREMENTS, THE MOST STRINGENT SHALL APPLY
26	NO RECTANGULAR DUCT SMALLER THAN 10"X10"

MECHANICAL PIPING & INSULATION SCHEDULE

NOTE: ALL EXTERIOR INSULATED PIPING TO BE PROVIDED WITH ALUMINUM JACKET.

SERVICE	PIPING TYPE	INSULATION TYPE	INSULATION THICKNESS	INSULATION THICKNESS NOMINAL PIPE SIZE <1	1 TO <1-1/2	1-1/2 TO <4	4 TO <8	≥8
HOT WATER HEATING TO 250° F	STEEL, SCHEDULE 40, BLACK TYPE "L" HARD COPPER	FIBERGLASS	1" UP TO 2" PIPE SIZE 1 1/2" ABOVE 2" PIPE SIZE					
CONDENSER WATER	STEEL, SCHEDULE 40, BLACK TYPE "L" HARD COPPER	FIBERGLASS	1" ABOVE GRADE N/A BELOW GRADE N/A BELOW GRADE					
EQUIPMENT DRAINS, COOLING CONDENSATE LINES, AND OVERFLOWS	TYPE "L" HARD COPPER	ELASTOMERIC	3/8" IF INTERIOR SPACE N/A EXTERIOR SPACE	0.5	0.5	1.0	1.0	1.0
ALL OUTDOOR INSULATED PIPING	PROVIDE WITH EMBOSSED ALUMINUM JACKET OVER SCHEDULED INSULATION	PER SCHEDULE	N/A	NA	NA	NA	NA	NA
CHILLED WATER ABOVE AND BELOW GRADE <40°F	STEEL, SCHEDULE 40, BLACK	FIBERGLASS	1" UP TO 2" PIPE SIZE 1 1/2" ABOVE 2" PIPE SIZE 1 1/2" ABOVE 2" PIPE SIZE	.5	1.0	1.0	1.0	1.5
CHILLED WATER ABOVE AND BELOW GRADE BETWEEN 40-60°F	STEEL, SCHEDULE 40, BLACK TYPE "L" HARD COPPER	FIBERGLASS	1" ALL SIZES	0.5	0.5	1.0	1.0	1.0

CONDENSING BOILER SCHEDULE

TAG	DESCRIPT	MNFR	MODEL	FLUID	WPD (FT)	FLOW RATE MAX/ MIN(GPM)	TURNDOWN	EFFICIENCY @ 100% FIRE / DESIGN EWT	OPERATING WEIGHT (LBS)	MBH IN	MBH OUT	BOILER VOLTAGE / PHASE / AMPS	PUMP VOLTAGE / PHASE / AMPS	NOTES
B-1	CONDENSING BOILER	CAMUS HYDRONICS	AVNH1600	35% ETHYLENE GLYCOL	4	115/13	22:1	92	1640	1600	1498	115V /1 /8A	115V /1 /8A	EFF. % FOR 180F LWT/160F RWT
B-2	CONDENSING BOILER	CAMUS HYDRONICS	AVNH1600	35% ETHYLENE GLYCOL	4	115/13	22:1	92	1640	1600	1498	115V /1 /8A	115V /1 /8A	EFF. % FOR 180F LWT/160F RWT

GENERAL NOTES APPLICABLE TO ALL UNITS:
1.) REQUIRED GAS PRESSURES 7.0" W.C. MINIMUM TO 14" W.C. MAXIMUM.
2.) INSTALL BOILERS ON EXISTING CONRETE PAD. 10" DIA. FLUE VENT CONNECTION, 10" DIA. COMBUSTION AIR CONNECTION, 2" NPT GAS CONNECTION, 4" FLANGED WATER CONNECTIONS.
3.) MANUFACTURER TO PROVIDE STARTUP SERVICE AND FIRST YEAR LABOR WARRENTY WITH DIAGNOSTICS
4.) MANUFACTURER TO SUBMIT EQUIPMENT SHEETS WITH QUOTE INCLUDING CAPACITY, EFFICIENCY, MCA, LENGTH, WIDTH, HEIGHT, AND WEIGHT
5.) MANUFACTURER TO PROVIDE BACNET COMMUNICATION INTERFACE TO TEMPERATURE CONTROL SYSTEM FOR ENABLE/DISABLE, STATUS, ALARM, SETPOINT ADJUSTMENT AND FIRING RATE FOR EACH BOILER.
6.) HEATING OUTPUT BASED ON 160 DEG. RETURN WATER, 180 DEG. SUPPLY WATER.
7.) BOILER MANUFACTURER SHALL FURNISH THE FOLLOWING FIELD INSTALLATION: 50 PSI RELIEF VALVES; 100% LOCKUP GAS PRESSURE REGULATOR FOR EACH BOILER, CONDENSATE NEUTRALIZATION KIT; AND COMBUSTION AIR INLET FILTER.
8.) BOILER MANUFACTURER SHALL FURNISH BOILER CIRCULATION PUMP FOR INSTALLATION.
9.) INSTALL BOILER ON EXISTING CONCRETE PAD.
10.) MANUFACTURER TO INCLUDE ALL STEP CONTROL FOR BOILER CAPACITY CONTROL.
11.) MANUFACTURER TO PROVIDE BACNET COMMUNICATION INTERFACE TO TEMPERATURE CONTROL SYSTEM.
12.) MANUFACTURER TO PROVIDE BOILER EMERGENCY SHUT-DOWN SWITCH (RED MUSHROOM BUTTON WITH LAMICOID LABEL).

CHILLER SCHEDULE

TAG	DESCRIPTION	MFR	MODEL	NOM. TONS	NET TONS	FLUID	FLOW RATE (GPM)	EVAP COIL PD	EWT (°F)	LWT (°F)	FAN FLA	TOTAL POWER	VOLTS	PH	MCA	MOCP	NOTES
CH-1	AIR COOLED SCROLL TYPE	TRANE	CGAM130	130	107.5	35% ETHYLENE GLYCOL	195	19.5 FT H20	51	40	33A	158.7 kW	460 V	3	261 A	300 A	UNIT HAS SIX COMPRESSOR ON TWO CIRCUITS
CH-2	AIR COOLED SCROLL TYPE	TRANE	CGAM130	130	107.5	35% ETHYLENE GLYCOL	195	19.5 FT H20	51	40	33A	158.7 kW	460 V	3	261 A	300 A	UNIT HAS SIX COMPRESSOR ON TWO CIRCUITS

GENERAL NOTES APPLICABLE TO ALL UNITS:
1. PROVIDE WITH SINGLE POINT POWER.
2. SCCR 65K
3. PHASE PROTECTION
4. BACNET INTERFACE
5. PROVIDE WITH FACTORY MOUNTED DISCONNECT.
6. PROVIDE WITH 5 YEAR FACTORY WARRENTY.

ROOFTOP CHILLED WATER VAV AIR HANDLING UNIT WITH HOT WATER HEAT

| TAG | DESCRIPTION | MFR | MODEL | SUPPLY FAN: DRIVE TYPE | FAN HP | CFM | ESP (IN-WG) | TSP (IN-WG) | RPM | EXHAUST FAN: FAN HP | CFM | ESP (IN-WG) | TSP (IN-WG) | RPM | HEATING COIL WATER (REHEAT): FLUID | CAPACITY (MBH) | EAT / LAT (°F) | FACE AREA (SQ FT) | MAX FACE VELOCITY (FPM) | MAX APD (IN-WG) | HEAT ROWS | FINS / FT | GPM | MAX WPD (FT) | ENT / LVG WATER TEMP (°F) | COOLING COIL WATER: FLUID | SENS / TOT CAP (MBH) | EAT DB / WB (°F) | LAT DB / WB (°F) | FACE AREA (SQ FT) | MAX FACE VELOCITY (FPM) | MAX APD (IN-WG) | ROWS | GPM | MAX WPD (FT) | EWT / LWT (°F) | OA CFM | PRIMARY AIR FILTERS | PRE-AIR FILTER | CIRCUIT #1 -

DUCT SILENCER SCHEDULE

TAG	MANUF.	MODEL	FLOW DIRECTION	AIRFLOW (CFM)	LENGTH (IN)	FACE DIMMENSION WIDTH (IN)	FACE DIMMENSION HEIGHT (IN)	FACE VELOCITY (FPM)	SILENCER PD IN WG	PD W/ SYSTEM EFFECTS IN WG	MINIMUM DYNAMIC INSERTION LOSS (dB) 63	125	250	500	1K	2K	4K	8K	NOTES
SL-AHU-1R	VIBRO-ACOUSTICS	RED-HV-FB-L24517	RETURN	17500	72	34	64	-1125	0.12	0.3	9	12	17	28	25	26	20	17	A,B,C,E
SL-AHU-1S	VIBRO-ACOUSTICS	RED-UHV-F3-L24517	SUPPLY	17500	108	26	60	+1569	0.16	0.16	8	18	20	32	43	37	27	19	A,B,C,D
SL-AHU-2R	VIBRO-ACOUSTICS	RED-HV-F6-L24517	RETURN	10500	72	38	42	-947	0.13	0.32	6	12	20	28	36	35	28	23	A,B,C,E
SL-AHU-2S	VIBRO-ACOUSTICS	EXRED-HV-F7-L24517	SUPPLY	10500	60	24 (36)	40	+1575	0.26	0.26	6	9	16	21	33	35	27	21	A,B,C,D,F
SL-AHU-3R	VIBRO-ACOUSTICS	RED-UHV-FB-L24517	RETURN	17500	72	34	64	-1125	0.07	0.17	7	10	11	24	24	26	19	17	A,B,C,E
SL-AHU-3S	VIBRO-ACOUSTICS	DEXRED-UHV-FX-L24517	SUPPLY	17500	144	26 (32)	60	+1569	0.11	0.24	11	23	24	34	47	39	29	30	A,B,C,G,D
SL-AHU-4R	VIBRO-ACOUSTICS	RED-HV-FC-L24517	RETURN	10500	96	36	42	-1000	0.09	0.09	9	15	22	30	31	30	23	21	A,B,C,E
SL-AHU-4S	VIBRO-ACOUSTICS	EXRED-HV-F7-L24517	SUPPLY	10500	48	24 (36)	40	+1575	0.2	0.26	5	7	12	18	27	24	20	18	A,B,C,D,H

GENERAL NOTES APPLICABLE TO ALL:
1. LENGTH SHOWN FOR ELBOW SILENCER IS CENTERLINE LENGTH
2. VELOCITY SHOWN IS +(FORWARD FLOW) OR -(REVERSE FLOW) AS DEFINED BY ASTM E477-13.
3. PRESSURE DROP, DYNAMIC INSERSION LOSS AND SELF GENERATED NOISE PER ASTM E477-13.
4. MAXIMUM PRESSURE DROP WITH SYSTEM EFFECTS = SILENCER PRESSURE DROP PER ASTM E477-13 + SYSTEM EFFECTS FOR NEARBY DUCT ELEMENTS.

NOTES:
A. RED = RECTANGULAR ELBOW DISSIPATIVE. EXRED ELBOW DISSIPATIVE
B. HTL CASING
C. ELBOW SILENCER
D. CASING TO BE HTLEQUIVALENT TO 10 GUAGE DUCT WALL TO CONTROL BREAKOUT.
E. CASING TO BE HTL EQUIVALENT TO 12 GUAGE DUCT WALL TO CONTROL BREAKOUT.
F. DUCT DIMENSION 24"X40", OUTSIDE CASING DIMENSION 36"X40"
G. DOUBLE ELBOW SILENCER WITH EXTENDED WIDTH. DUCT DIMENSION 26"X60", OUTSIDE CASING DIMENSION 32"X60".
H. EXTENDED WIDTH SILENCER. DUCT DIMENSION 24"X40", OUTSIDE CASING DIMENSION 36"X40".

MINI SPLIT AIR CONDITIONER SCHEDULE

INDOOR UNIT	OUTDOOR UNIT	DESCRIPTION.	MFR	MODEL (INDOOR/OUTDOOR)	CFM	SEER	COOLING CAPACITY (BTU/HR)	HEATING CAPACITY (BTU/HR)	VOLTS / PH	MCA	MOCP	NOTES
MAC-01	MCU-01	COOLING ONLY DX SYSTEM	MITSUBISHI	PKA-A12HA7/PUY-A12NKA7	335	20.8	12,000	-	208-230 / 1	11 A	30 A	A,B,C
MAC-02	MCU-02	COOLING ONLY DX SYSTEM	MITSUBISHI	PKA-A12HA7/PUY-A12NKA7	335	20.8	12,000	-	208-230 / 1	11 A	30 A	A,B,C
MAC-03	MCU-03	COOLING ONLY DX SYSTEM	MITSUBISHI	PKA-A12HA7/PUY-A12NKA7	335	20.8	12,000	-	208-230 / 1	11 A	30 A	A,B,C
MAC-04	MCU-04	COOLING ONLY DX SYSTEM	MITSUBISHI	PKA-A18HA7/PUY-A18NKA7	335	18.5	18,000	-	208-230 / 1	11 A	30 A	A,B,C
MAC-05	MCU-05	COOLING ONLY DX SYSTEM	MITSUBISHI	PKA-A18HA7/PUY-A18NKA7	335	18.5	18,000	-	208-230 / 1	11 A	30 A	A,B,C
MAC-06	MCU-06	HEAT PUMP DX SYSTEM	MITSUBISHI	PKA-A24HA7/PUZ-A24NHA7	635	21.4	24,000	28000	208-230 / 1	19 A	30 A	A,B
MAC-07	MCU-07	HEAT PUMP DX SYSTEM	MITSUBISHI	PKA-A12HA7/PUZ-A24NKA7	335	20.8	12,000	18000	208-230 / 1	11 A	30 A	A,B
MAC-08	MCU-08	HEAT PUMP DX SYSTEM	MITSUBISHI	PKA-A24HA7/PUZ-A24NHA7	635	21.4	24,000	28000	208-230 / 1	19 A	30 A	A,B
MAC-09	MCU-09	HEAT PUMP DX SYSTEM	MITSUBISHI	PKA-A18HA7/PUZ-A18NKA7	335	18.5	18,000	22000	208-230 / 1	11 A	30 A	A,B
MAC-10	MCU-10	HEAT PUMP DX SYSTEM	MITSUBISHI	PKA-A24HA7/PUZ-A24NHA7	635	21.4	24,000	28000	208-230 / 1	19 A	30 A	A,B
MAC-11	MCU-11	COOLING ONLY DX SYSTEM	MITSUBISHI	PKA-A24HA7/PUY-A24NKA7	335	21.4	24,000	-	208-230 / 1	19 A	30 A	A,B,C
MAC-12	MCU-12	HEAT PUMP DX SYSTEM	MITSUBISHI	PKA-A18HA7/PUZ-A18NKA7	335	18.5	18,000	22000	208-230 / 1	11 A	30 A	A,B
MAC-13	MCU-13	HEAT PUMP DX SYSTEM	MITSUBISHI	PKA-A18HA7/PUZ-A18NKA7	335	18.5	18,000	22000	208-230 / 1	11 A	30 A	A,B

GENERAL NOTES APPLICABLE TO ALL UNITS:
1. MAC & MCU COMPRISE A SINGLE AIR-CONDITIONING SPLIT SYSTEM AND INCLUDE MICROPROCESSOR CONTROLS, PROVIDE WALL MOUNT FOR WIRELESS REMOTE. ON/OFF 24-HOUR TIMER AND WASHABLE AIR FILTER.

NOTES
A PROVIDE WITH PROGRAMMABLE THERMOSTAT.
B PROVIDE WITH CONDENSATE PUMP: ASPEN MODEL MINI-TANK.
C LOW AMBIENT COOLING -100% NOMINAL CAPACITY AT 5 F.

GAS UNIT HEATER SCHEDULE

TAG	DESCRIPTION	MFR	MODEL	MBH	FAN HP	FLA	VOLTS / PH	WEIGHT	CONTROL TYPE
GUH-1	GAS UNIT HEATER WITH SEPARTED COMBUSTION	TRANE	GTNE003ATA	30	1/20	3	120/1	60 LB	THERMOSTAT
GUH-2	GAS UNIT HEATER WITH SEPARTED COMBUSTION	TRANE	GTNE003ATA	30	1/20	3	120/1	60 LB	THERMOSTAT

GENERAL NOTES APPLICABLE TO ALL UNITS:
1. SINGLE STAGE, DIRECT SPARK IGNITION.
2. PROVIDE WITH 30 DEGREE DOWN DISCHARGE NOZZLE.
3. PROVIDE WITH CONCENTRIC VENT KIT.
4. PROVIDE WITH WALL MOUNTED THERMOSTAT.
5. SUPPORT FROM STRUCTURE PER MFR RECOMMENDATIONS.
6. E.C. TO PROVIDE DISCONNECT SWITCH.

AHU - 03 VAV BOX WITH HOT WATER REHEAT SCHEDULE

TAG	DESCRIPTION	MFR	MODEL	VALVE SIZE (IN.)	COOLING DESIGN COOLING CFM	COOLING MINIMUM COOLING CFM	COOLING APD @ DESIGN FLOW (IN. WG)	COOLING INLET VELOCITY (FPM)	HEATING VALVE AIRFLOW (CFM)	HEATING EAT (°F)	HEATING LAT (°F)	HEATING COIL CAPACITY (MBH)	HEATING EWT (°F)	HEATING DELTA TEMP (°F)	HEATING NO. OF ROWS	HEATING COIL FLOW (GPM)	VOLTS / PH	WEIGHT (LBS.)	NOTES
VAV-3.01	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	06	6	460	140	0.37	2343	140	55	90 °F	6.89	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-3.02	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF10	10	1230	540	0.33	2255	540	55	90 °F	19.79	180	40	1	1	24 / 1	34	A,C,D,E
VAV-3.03	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF10	10	1300	400	0.36	2384	400	55	90 °F	16.66	180	40	1	0.9	24 / 1	34	B,C,D,E
VAV-3.04	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF08	8	720	400	0.27	2063	400	55	90 °F	13.13	180	40	1	0.7	24 / 1	25	A,C,D,E
VAV-3.05	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF10	10	1200	500	0.32	2200	500	55	90 °F	18.93	180	40	1	1	24 / 1	34	A,C,D,E
VAV-3.06	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF10	10	1250	530	0.34	2292	530	55	90 °F	19.58	180	40	1	1	24 / 1	34	B,C,D,E
VAV-3.07	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	430	240	0.33	2190	240	55	90 °F	8.58	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-3.08	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF14	14	2500	1350	0.22	2339	1350	55	90 °F	43.38	180	40	1	2.2	24 / 1	53	A,C,D,E
VAV-3.09	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF10	10	1250	700	0.34	2292	700	55	90 °F	23.03	180	40	1	1.2	24 / 1	34	A,C,D,E
VAV-3.10	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF10	10	1400	550	0.41	2567	550	55	90 °F	20	180	40	1	1	24 / 1	34	B,C,D,E
VAV-3.11	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF08	8	560	300	0.41	2200	300	55	90 °F	16.07	180	40	1	0.5	24/1	24	A,C,D,E

GENERAL NOTES APPLICABLE TO ALL UNITS:

1. DDC PROPORTIONAL HOT WATER VALVE
2. PROVIDE WITH FACTORY DISCONNECT
3. PROVIDE WITH POWER FUSE
4. PROVIDE WITH FACTORY MOUNTED 120V TO 24 V TRANSFORMER
5. DOUBLE WALL CONSTRUCTION

A. PROVIDE 2-WAY VALVE ON HOT WATER COIL.
B. PROVIDE 3-WAY VALVE ON HOT WATER COIL.
C. PROVIDE FACTORY MOUNTED AND PRE-PROGRAMMED, PRESSURE INDEPENDENT, BACNET DDC CONTROLLER WITH AIRFLOW MEASUREMENT AND WIRELESS COMMUNICATION RECEIVER
D. PROVIDE WITH WIRELESS ZONE TEMPERATURE SENSOR
E. PROVIDE WITH FACTORY WIRED AND TAGGED HOT WATER VALVE AND PIPING PACKAGE...

AHU - 01 VAV BOX WITH HOT WATER REHEAT SCHEDULE

TAG	DESCRIPTION	MFR	MODEL	VALVE SIZE (IN.)	COOLING DESIGN COOLING CFM	COOLING MINIMUM COOLING CFM	COOLING APD @ DESIGN FLOW (IN. WG)	COOLING INLET VELOCITY (FPM)	HEATING VALVE AIRFLOW (CFM)	HEATING EAT (°F)	HEATING LAT (°F)	HEATING COIL CAPACITY (MBH)	HEATING EWT (°F)	HEATING DELTA TEMP (°F)	HEATING NO. OF ROWS	HEATING COIL FLOW (GPM)	VOLTS / PH	WEIGHT (LBS.)	NOTES
VAV-1.01	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF12	12	1600	1600	0.31	2037	500	55	90 °F	18.42	180	40	1	1.02	24 / 1	43	A,C,D,E
VAV-1.02	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF08	8	600	120	0.08	2017	120	55	90 °F	5.79	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.03	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF10	10	1300	1300	0.36	2384	400	55	90 °F	15.3	180	40	1	0.85	24 / 1	34	A,C,D,E
VAV-1.04	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	250	150	0.03	1719	125	55	90 °F	4.83	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.05	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	100	100	0.02	1146	75	55	90 °F	4.83	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.06	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	200	200	0.28	2037	200	55	90 °F	6.95	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.07	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	400	400	0.28	2037	260	55	90 °F	7.61	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.08	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF08	8	600	600	0.2	1719	440	55	90 °F	11.95	180	40	1	0.66	24 / 1	24	A,C,D,E
VAV-1.09	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF05	5	120	30	0.02	1300	30	55	90 °F	3.64	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.10	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF10	10	110	110	0.34	2292	35	55	90 °F	14.76	180	40	1	0.8	24 / 1	34	A,C,D,E
VAV-1.11	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	1250	1250	0.02	1261	375	55	90 °F	3.39	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.12	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF05	5	120	120	0.07	1833	40	55	90 °F	5.08	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.13	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF08	8	800	800	0.33	2292	650	55	90 °F	17.45	180	40	1	0.9	24 / 1	24	A,C,D,E
VAV-1.14	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	110	110	0.02	1261	35	55	90 °F	3.39	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.15	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	360	360	0.23	1833	360	55	90 °F	8.45	180	40	1	0.6	24 / 1	24	A,C,D,E
VAV-1.16	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF05	5	330	330	0.11	2420	100	55	90 °F	5.41	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.17A	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF12	12	1750	1750	0.36	2228	700	55	90 °F	22.38	180	40	1	1.3	24 / 1	43	A,C,D,E
VAV-1.17B	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF12	12	1500	1500	0.28	1910	700	55	90 °F	22.38	180	40	1	1.3	24 / 1	43	A,C,D,E
VAV-1.18	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF08	8	600	600	0.2	1719	175	55	90 °F	7.77	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.19	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	210	210	0.05	2406	210	55	90 °F	7.07	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.20	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	400	400	0.28	2037	400	55	90 °F	8.72	180	40	1	0.6	24 / 1	24	A,C,D,E
VAV-1.21	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	390	390	0.27	1986	225	55	90 °F	8.36	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.22	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	220	220	0.05	2521	175	55	90 °F	7.55	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.23	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF05	5	350	350	0.13	2567	205	55	90 °F	8.05	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.24	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	100	100	0.02	1146	30	55	90 °F	3.24	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.25	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	360	360	0.23	1833	250	55	90 °F	8.73	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.26	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF08	8	600	600	0.2	1719	200	55	90 °F	9.19	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.27	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	200	200	0.05	2292	120	55	90 °F	6.46	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.28	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	100	100	0.02	1146	30	55	90 °F	3.24	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.29	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	400	400	0.28	2037	400	55	90 °F	10.78	180	40	1	0.6	24 / 1	24	A,C,D,E
VAV-1.30	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	225	225	0.03	1604	100	55	90 °F	4.33	180	40	1	0.5	24 / 1	24	B,C,D,E
VAV-1.31	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF10	10	1040	1040	0.25	1907	630	55	90 °F	21.65	180	40	1	0.5	24 / 1	34	A,C,D,E
VAV-1.32	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF08	8	640	190	0.22	1833	190	55	90 °F	9	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.33	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF05	5	300	300	0.09	2200	120	55	90 °F	6.46	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.34	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF05	5	300	300	0.09	2200	120	55	90 °F	6.46	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.35	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	440	440	0.34	2241	300	55	90 °F	9.39	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.36	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	200	200	0.05	2292	100	55	90 °F	5.97	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.37	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	420	420	0.31	2139	420	55	90 °F	11.09	180	40	1	0.6	24 / 1	24	A,C,D,E
VAV-1.38	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	500	500	0.44	2546	500	55	90 °F	12.28	180	40	1	0.7	24 / 1	24	A,C,D,E
VAV-1.39	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF05	5	300	300	0.09	2200	120	55	90 °F	6.46	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.40	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF05	5	250	250	0.07	1833	160	55	90 °F	7.28	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.41	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	360	360	0.23	1833	360	55	90 °F	10.14	180	40	1	0.6	24 / 1	24	A,C,D,E
VAV-1.42	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF05	5	400	400	0.09	2200	120	55	90 °F	6.46	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.43	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	200	200	0.05	2292	80	55	90 °F	5.42	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.44	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF05	5	230	230	0.06	1687	230	55	90 °F	8.43	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-1.45	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	200	200	0.03	1719	150	55	90 °F	7.09	180	40	1	0.5	24 / 1	24	A,C,D,E

GENERAL NOTES APPLICABLE TO ALL UNITS:

1. DDC PROPORTIONAL HOT WATER VALVE
2. PROVIDE WITH FACTORY DISCONNECT
3. PROVIDE WITH POWER FUSE
4. PROVIDE WITH FACTORY MOUNTED 120V TO 24 V TRANSFORMER
5. DOUBLE WALL CONSTRUCTION

A. PROVIDE 2-WAY VALVE ON HOT WATER COIL.
B. PROVIDE 3-WAY VALVE ON HOT WATER COIL.
C. PROVIDE FACTORY MOUNTED AND PRE-PROGRAMMED, PRESSURE INDEPENDENT, BACNET DDC CONTROLLER WITH AIRFLOW MEASUREMENT AND WIRELESS COMMUNICATION RECEIVER
D. PROVIDE WITH WIRELESS ZONE TEMPERATURE SENSOR
E. PROVIDE WITH FACTORY WIRED AND TAGGED HOT WATER VALVE AND PIPING PACKAGE...

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12/06/2019

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THE CHEROKEE NATION
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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: M1.02

MECHANICAL SCHEDULES

AHU - 02 VAV BOX WITH HOT WATER REHEAT SCHEDULE

TAG	DESCRIPTION	MFR	MODEL	VALVE SIZE (IN.)	COOLING				HEATING								VOLTS / PH	WEIGHT (LBS.)	NOTES
					DESIGN COOLING CFM	MINIMUM COOLING CFM	APD @ DESIGN FLOW (IN. WG)	INLET VELOCITY (FPM)	VALVE AIRFLOW (CFM)	EAT (°F)	LAT (°F)	COIL CAPACITY (MBH)	EWT (°F)	DELTA TEMP (°F)	NO. OF ROWS	FLUID FLOW (GPM)			
VAV-2.01	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF08	8	800	800	0.33	2292	220	55	90 °F	9.54	180	40	1	0.5	24 / 1	25	A,C,D,E
VAV-2.02	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	80	80	0.02	917	30	55	90 °F	3.24	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.03	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	80	80	0.02	917	30	55	90 °F	3.24	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.04	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	500	500	0.44	2546	300	55	90 °F	9.39	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.05	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	80	80	0.02	917	30	55	90 °F	3.24	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.06	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF10	10	1320	820	0.34	2349	500	55	90 °F	14.95	180	40	1	0.75	24 / 1	25	A,C,D,E
VAV-2.07	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF05	5	320	320	0.11	2347	190	55	90 °F	7.81	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.08	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF05	5	250	250	0.07	1833	100	55	90 °F	5.97	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.09	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	200	200	0.05	2292	100	55	90 °F	5.97	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.10	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	400	400	0.28	2037	300	55	90 °F	9.39	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.11	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	360	360	0.23	1833	360	55	90 °F	10.14	180	40	1	0.6	24 / 1	24	A,C,D,E
VAV-2.12	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	200	200	0.05	2292	80	55	90 °F	5.42	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.13	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF05	5	345	345	0.12	2530	200	55	90 °F	7.97	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.14	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	120	120	0.03	1375	80	55	90 °F	5.42	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.15	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	460	460	0.37	2343	460	55	90 °F	11.7	180	40	1	0.6	24 / 1	24	A,C,D,E
VAV-2.16	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	420	420	0.31	2139	420	55	90 °F	11.09	180	40	1	0.6	24 / 1	24	A,C,D,E
VAV-2.17	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	250	250	0.03	1719	80	55	90 °F	5.42	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.18	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	200	200	0.05	2292	60	55	90 °F	4.74	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.19	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	250	250	0.03	1490	60	55	90 °F	4.74	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.20	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	350	350	0.03	1719	90	55	90 °F	5.71	180	40	1	0.5	24 / 1	24	B,C,D,E
VAV-2.21	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	200	200	0.05	2292	70	55	90 °F	5.1	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.22	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	80	80	0.02	917	30	55	90 °F	3.24	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.23	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	390	390	0.06	1760	200	55	90 °F	6.46	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.24	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	150	250	0.03	1719	70	55	90 °F	5.1	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.25	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF12	12	1600	1600	0.31	2037	1500	55	90 °F	39.99	180	40	1	2	24 / 1	43	A,C,D,E
VAV-2.26	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	80	80	0.02	917	30	55	90 °F	3.24	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.27	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	140	140	0.03	1604	40	55	90 °F	3.85	180	40	1	0.5	24 / 1	24	B,C,D,E
VAV-2.28	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	160	160	0.04	1833	110	55	90 °F	6.22	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.29	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF05	5	300	300	0.09	2200	300	55	90 °F	9.39	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.30	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF05	5	240	240	0.06	1760	80	55	90 °F	5.42	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.31	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	180	180	0.04	2063	60	55	90 °F	4.74	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.32	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	320	320	0.04	1948	120	55	90 °F	6.46	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.33	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF05	5	300	300	0.09	2200	120	55	90 °F	6.46	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.34	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	150	150	0.03	1719	100	55	90 °F	5.97	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.35	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	420	420	0.31	2139	130	55	90 °F	6.68	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.36	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	450	450	0.36	2292	270	55	90 °F	9	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.37	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	180	180	0.04	2063	110	55	90 °F	6.22	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-2.38	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	100	100	0.02	1146	100	55	90 °F	5.97	180	40	1	0.5	24 / 1	24	A,C,D,E

GENERAL NOTES APPLICABLE TO ALL UNITS:

1. DDC PROPORTIONAL HOT WATER VALVE
2. PROVIDE WITH FACTORY DISCONNECT
3. PROVIDE WITH POWER FUSE
4. PROVIDE WITH FACTORY MOUNTED 120V TO 24 V TRANSFORMER
5. DOUBLE WALL CONSTRUCTION

A. PROVIDE 2-WAY VALVE ON HOT WATER COIL.
B. PROVIDE 3-WAY VALVE ON HOT WATER COIL.
C. PROVIDE FACTORY MOUNTED AND PRE-PROGRAMMED, PRESSURE INDEPENDENT, BACNET DDC CONTROLLER WITH AIRFLOW MEASUREMENT AND WIRELESS COMMUNICATION RECEIVER
D. PROVIDE WITH WIRELESS ZONE TEMPERATURE SENSOR
E. PROVIDE WITH FACTORY WIRED AND TAGGED HOT WATER VALVE AND PIPING PACKAGE...

AHU - 04 VAV BOX WITH HOT WATER REHEAT SCHEDULE

TAG	DESCRIPTION	MFR	MODEL	VALVE SIZE (IN.)	COOLING				HEATING								VOLTS / PH	WEIGHT (LBS.)	NOTES
					DESIGN COOLING CFM	MINIMUM COOLING CFM	APD @ DESIGN FLOW (IN. WG)	INLET VELOCITY (FPM)	VALVE AIRFLOW (CFM)	EAT (°F)	LAT (°F)	COIL CAPACITY (MBH)	EWT (°F)	DELTA TEMP (°F)	NO. OF ROWS	COIL FLW			
VAV-4.01	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF10	10	1100	1100	0.27	2017	375	55	90 °F	16.07	180	40	1	0.8	24 / 1	34	B,C,D,E
VAV-4.02	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF08	8	610	610	0.21	1748	220	55	90 °F	9.54	180	40	1	0.5	24 / 1	25	A,C,D,E
VAV-4.03	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	450	450	0.36	2292	300	55	90 °F	9.39	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-4.04	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	500	500	0.44	2546	400	55	90 °F	10.78	180	40	1	0.6	24 / 1	24	A,C,D,E
VAV-4.05	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF14	14	2040	2040	0.16	1908	1650	55	90 °F	48.78	180	40	1	2.5	24 / 1	53	A,C,D,E
VAV-4.06	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	470	470	0.39	2394	320	55	90 °F	9.64	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-4.07	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	470	470	0.39	2394	350	55	90 °F	9.98	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-4.08	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	140	140	0.03	1604	60	55	90 °F	4.74	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-4.09	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	400	400	0.28	2037	200	55	90 °F	7.97	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-4.10	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	400	400	0.05	2521	100	55	90 °F	5.97	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-4.11	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	150	150	0.03	1719	60	55	90 °F	4.74	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-4.12	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	480	480	0.41	2445	300	55	90 °F	9.39	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-4.13	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	110	110	0.02	1261	40	55	90 °F	3.85	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-4.14	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF08	8	610	610	0.3	2177	500	55	90 °F	14.95	180	40	1	0.75	24 / 1	25	B,C,D,E
VAV-4.15	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF04	4	200	200	0.05	2292	200	55	90 °F	7.97	180	40	1	0.5	24 / 1	24	A,C,D,E
VAV-4.16	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF06	6	350	350	0.28	2037	350	55	90 °F	10.78	180	40	1	0.6	24 / 1	24	A,C,D,E
VAV-4.17	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF10	10	1000	1000	0.23	1833	500	55	90 °F	18.93	180	40	1	1	24 / 1	34	A,C,D,E
VAV-4.18	SINGLE DUCT VAV TERMINAL UNIT W/ HOT WATER REHEAT	TRANE	VCWF08	8	840	840	0.36	2406	440	55	90 °F	13.87	180	40	1	0.7	24 / 1	25	A,C,D,E

GENERAL NOTES APPLICABLE TO ALL UNITS:

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PROFESSIONAL SEAL:

LICENSED PROFESSIONAL ENGINEER — Shane Wells — 28910 — OKLAHOMA — 12/06/2019

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CLIENT:

SEAL OF THE CHEROKEE NATION — SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: M1.03

MECHANICAL SCHEDULES

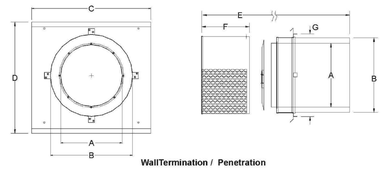
Saf-T Vent® CI Plus

DOUBLE WALL AL 29-4C® SPECIAL GAS VENT

Terminations:

Wall Termination / Penetration — Use to penetrate any combustible or non-combustible wall. This part is a thimble only and does not include any vent. Order enough vent to pass through the thimble and extend 4-6 inches beyond the building sheathing. Includes an AL29-4C® screen cover and a vent finish collar to terminate the vent system.

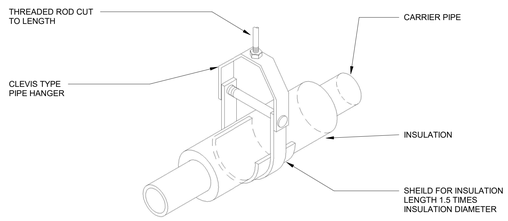
Part Number	Inner Vent Diameter	DIM - A Outer Jacket Diameter	DIM - B Outer Thimble Diameter	DIM - C Face Plate Width	DIM - D Face Plate Height	DIM - E Overall Length	DIM - F Exterior Length	DIM - G Wall Opening
CCE04WP	4	6.3	9	16	15	21.5	6	11
CCE05WP	5	7.3	10	17	16	23.5	8	12
CCE06WP	6	8.3	11	18	17	23.5	8	13
CCE07WP	7	9.3	12	18	17	23.5	12	14
CCE08WP	8	10.3	13	19	18	27.5	12	15
CCE09WP	9	11.3	14	20	19	27.5	12	16
CCE10WP	10	12.3	15	22	21	27.5	12	17
CCE12WP	12	14.3	17	24	23	27.5	12	19
CCE14WP	14	16.3	19	25	24	27.5	12	21
CCE16WP	16	18.3	21	27	26	27.5	12	23
CCE18WP	18	20.3	23	29	28	27.5	12	25
CCE20WP	20	22.3	25	31	30	27.5	12	27
CCE22WP	22	24.3	27	33	32	27.5	12	29
CCE24WP	24	26.3	29	35	34	27.5	12	31
CCE26WP	26	28.3	31	37	36	27.5	12	33
CCE28WP	28	30.3	33	39	38	27.5	12	35
CCE30WP	30	32.3	35	41	40	27.5	12	37
CCE32WP	32	34.3	37	43	42	27.5	12	39



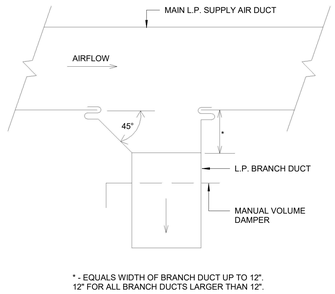
WallTermination / Penetration

MECHANICAL LEGEND

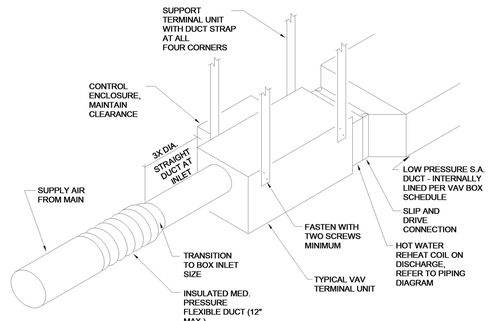
T	THERMOSTAT (MOUNTED AT 48" A.F.F)		EXHAUST GRILLE (CEILING MOUNTED)
S	TEMPERATURE SENSOR (MOUNTED AT 48" A.F.F)		SUPPLY DIFFUSER (CEILING MOUNTED)
F	REMOTE MANUAL PULL STATION (MOUNTED AT 48" A.F.F)		RETURN GRILLE (CEILING MOUNTED)
CO2	CARBON DIOXIDE DETECTOR (MOUNTED AT 48" A.F.F)	CD-2 225 CFM	DIFFUSER CALLOUT TAG
D	DUCT MOUNTED SMOKE DETECTOR		MANUAL BALANCE DAMPER
UCD	WHERE SHOWN, UNDERCUT DOOR 1/2"		VERTICAL DUCT TAKE-OFF WITH BALANCE DAMPER
AHU-1	EQUIPMENT OR DEVICE TAG		SIDEWALL AIR DEVICE
CFM	STANDARD CUBIC FEET PER MINUTE	M	MOTORIZED 3-POSITION ACTUATOR EQUAL TO BELIMO MODEL 'LF24-SR-E'
FD	FIRE DAMPER	24x12	RECTANGULAR DUCT (FIRST DIMENSION, SIDE SHOWN)
FSD	COMBINATION FIRE/SMOKE DAMPER	16"	ROUND DUCT
B.O.D.	BOTTOM OF DUCT		INTERNALLY LINED DUCT
B.O.B.	BOTTOM OF BEAM		AIR FLOW ARROW
A.F.F.	ABOVE FINISHED FLOOR	(ROUND) (RECTANGULAR)	DUCT CONTINUATION SYMBOLS
	CONNECT TO EXISTING	C	CONDENSATE PIPE
		R	REFRIGERANT PIPE



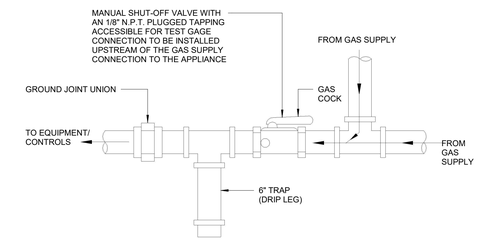
8 CLEVIS TYPE PIPE HANGER
SCALE: N.T.S.



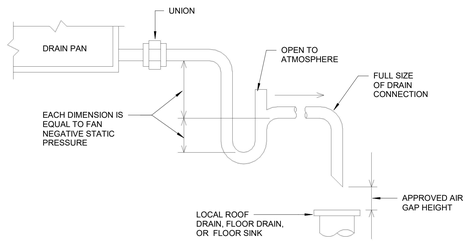
7 TYPICAL SUPPLY AIR BRANCH DUCT TAKE-OFF
SCALE: N.T.S.



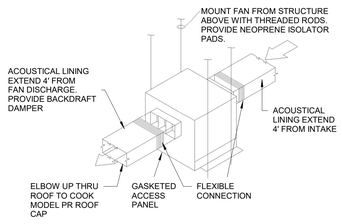
5 VAV BOX DETAIL
SCALE: N.T.S.



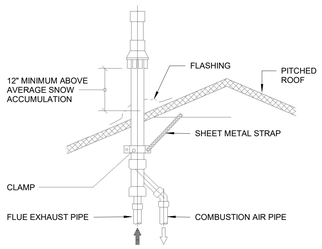
6 GAS CONNECTION TO EQUIPMENT
SCALE: N.T.S.



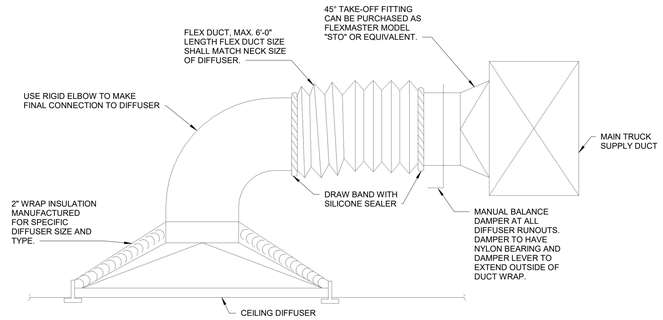
4 CONDENSATE DRAIN DETAIL
SCALE: N.T.S.



3 IN-LINE CEILING EXHAUST FAN DETAIL
SCALE: N.T.S.



2 CONCENTRIC SLOPED ROOF TERMINATION INSTALLATION DETAIL
SCALE: N.T.S.



1 TYPICAL DIFFUSER CONNECTION WITH INSULATION
SCALE: N.T.S.

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THE CHEROKEE NATION
TRUST OF 1839
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
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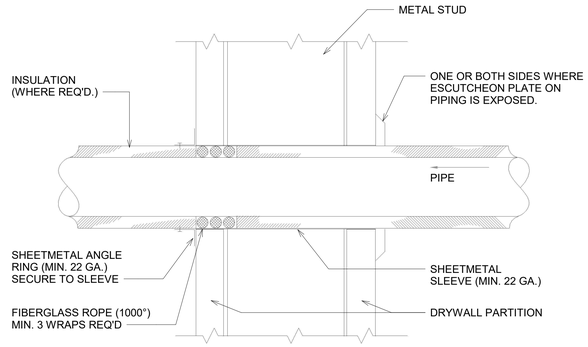
SHEET NUMBER:
M2.01

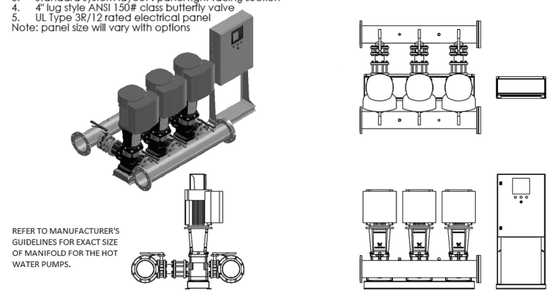
MECHANICAL LEGEND AND DETAILS



9 PIPE SLEEVE THRU WALL DETAIL
SCALE: N.T.S.

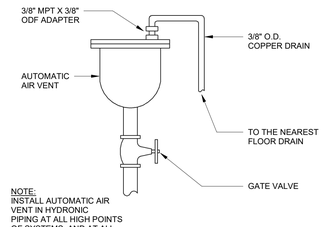
1. Manifolds 8" ANSI Class 150 AISI 316SS Schedule 10s ASTM A312 or Ø219.1mm x3mm
2. Base/frame AISI 304SS
3. Standard system layout : panel right facing suction
4. 4" lug style ANSI 150# class butterfly valve
5. UL Type 3R/12 rated electrical panel

Note: panel size will vary with options



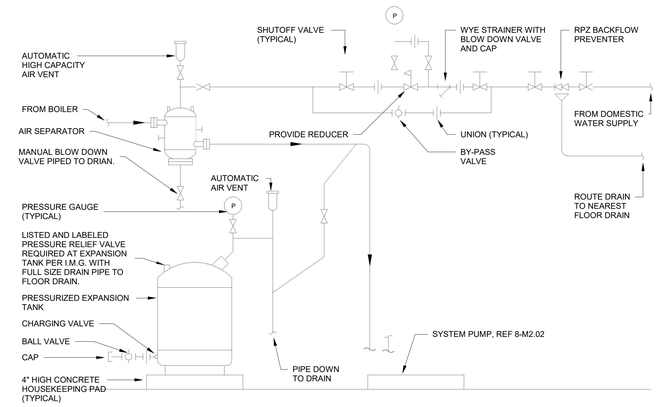
REFER TO MANUFACTURER'S GUIDELINES FOR EXACT SIZE OF MANIFOLD FOR THE HOT WATER PUMPS.

8 TRIPLEX PUMP SYSTEM DETAIL
1/4" = 1'-0"

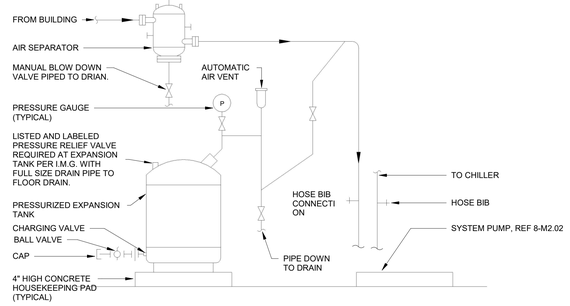


NOTE:
INSTALL AUTOMATIC AIR VENT IN HYDRONIC PIPING AT ALL HIGH POINTS OF SYSTEMS, AND AT ALL POINTS WHERE AIR POCKETS ARE CREATED.

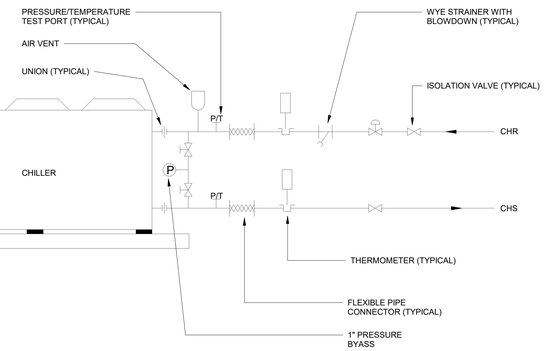
7 AIR VENT DETAIL
3/16" = 1'-0"



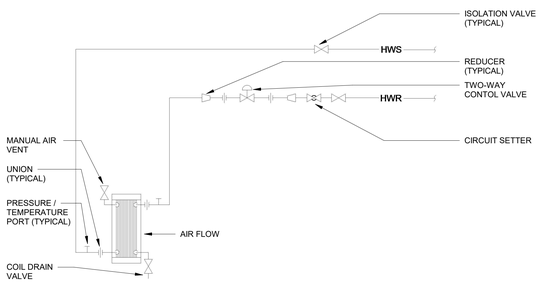
6 HEATING WATER SYSTEM MAKEUP AND EXPANSION TANK DETAIL
SCALE: N.T.S.



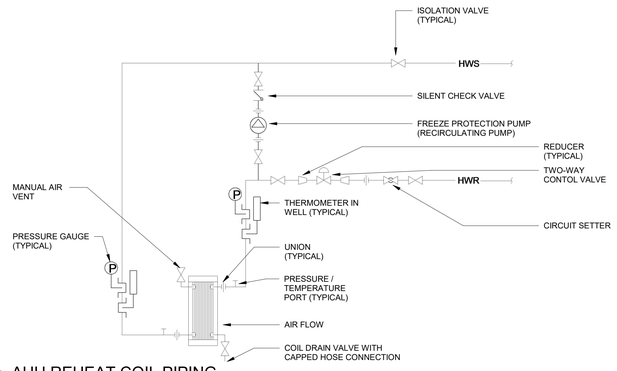
5 CHILLED WATER SYSTEM EXPANSION TANK DETAIL
SCALE: N.T.S.



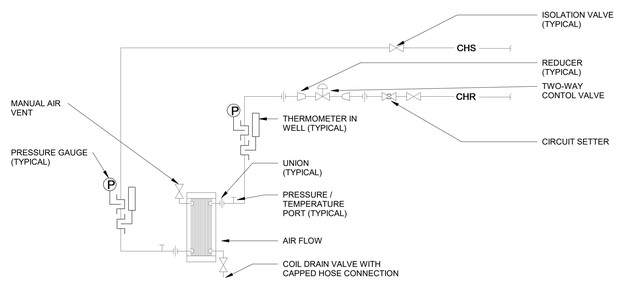
4 AIR COOLED CHILLER PIPING CONNECTION DETAIL
SCALE: N.T.S.



3 HOT WATER REHEAT COIL AT VAV BOX
3/16" = 1'-0"



2 AHU REHEAT COIL PIPING
3/16" = 1'-0"



1 AHU CHILLED WATER COIL
3/16" = 1'-0"

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STILWELL, OKLAHOMA

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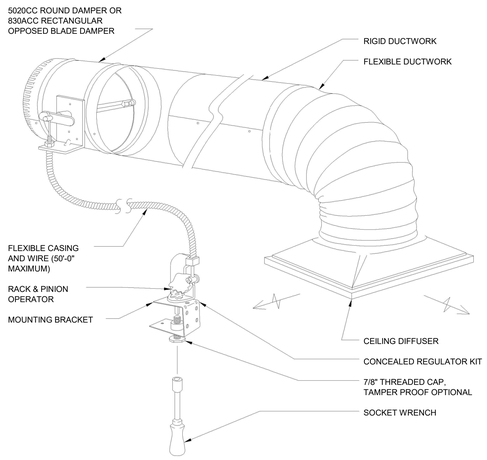
MECHANICAL DETAILS



270-896 BOWDEN CABLE CONTROL SYSTEM

NO SCALE

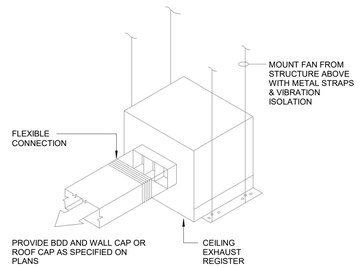
NOTE:

1) CABLE SHALL CONSIST OF 0.054" STAINLESS STEEL CONTROL WIRE ENCAPSULATED IN 1/16" FLEXIBLE GALVANIZED SPIRAL WIRE SHEATH.

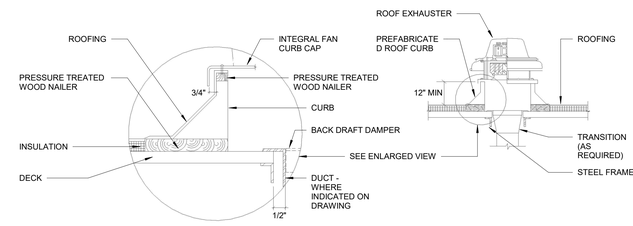
2) LOCKING RACK AND PINION GEAR DRIVE SHALL BE CONSTRUCTED OF 14 GAUGE STEEL AND SHALL BE USED TO CONVERT ROTARY MOTION INTO PUSH-PULL MOTION.

3) CONTROL SHAFT SHALL BE "D"-STYLE FLATTENED 1/4" DIAMETER WITH 265° ROTATION PROVIDING 1-1/2" LINEAR TRAVEL CAPABILITY.

7 REMOTE DAMPER OPERATOR DETAIL
SCALE: N.T.S.



5 CEILING EXHAUST FAN DETAIL
SCALE: N.T.S.

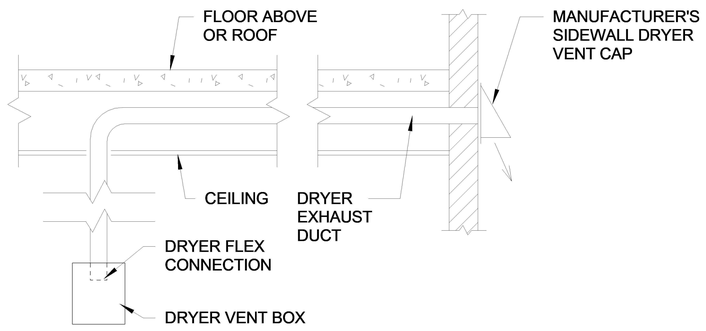


NOTES:

1. WHERE NO DUCT IS INDICATED, BACKDRAFT DAMPER SHALL BE FULL SIZE OF OPENING IN ROOF DECK.

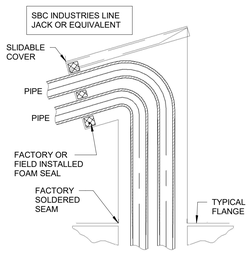
2. ROOF MOUNTED EXHAUST FANS SHALL NOT BE MOUNTED ON A SLOPE OF GREATER THAN 6:12.

4 ROOF MOUNTED EXHAUST FAN DETAIL
SCALE: N.T.S.

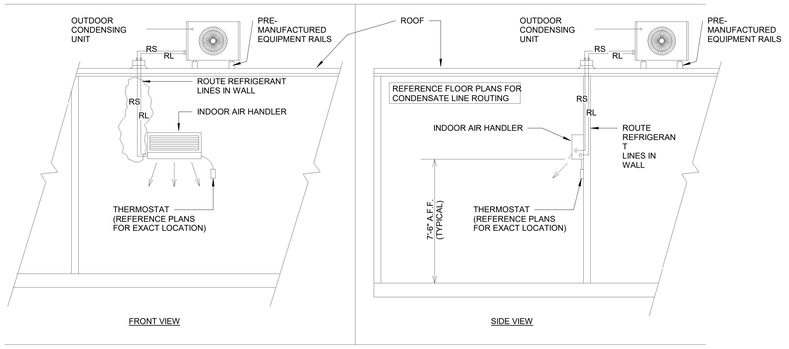


NOTE: VENT ROUTING TO BE INSTALLED PER MANUFACTURER'S RECOMMEDATIONS

3 DRYER EXHAUST VENT THRU SIDEWALL DETAIL
SCALE: N.T.S.



2 ROOF REFRIGERANT PIPING PENETRATION - GOOSENECK
N.T.S.



1 DUCTLESS SPLIT SYSTEM WITH ROOF-MOUNTED CONDENSING UNIT
SCALE: N.T.S.

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CLIENT:

SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: M2.03

MECHANICAL DETAILS

PLAN NORTH

TRUE NORTH

1 ENLARGED MECHANICAL REQUIREMENTS PLAN LEVEL 01 SECTOR 01

1/8" = 1'-0"

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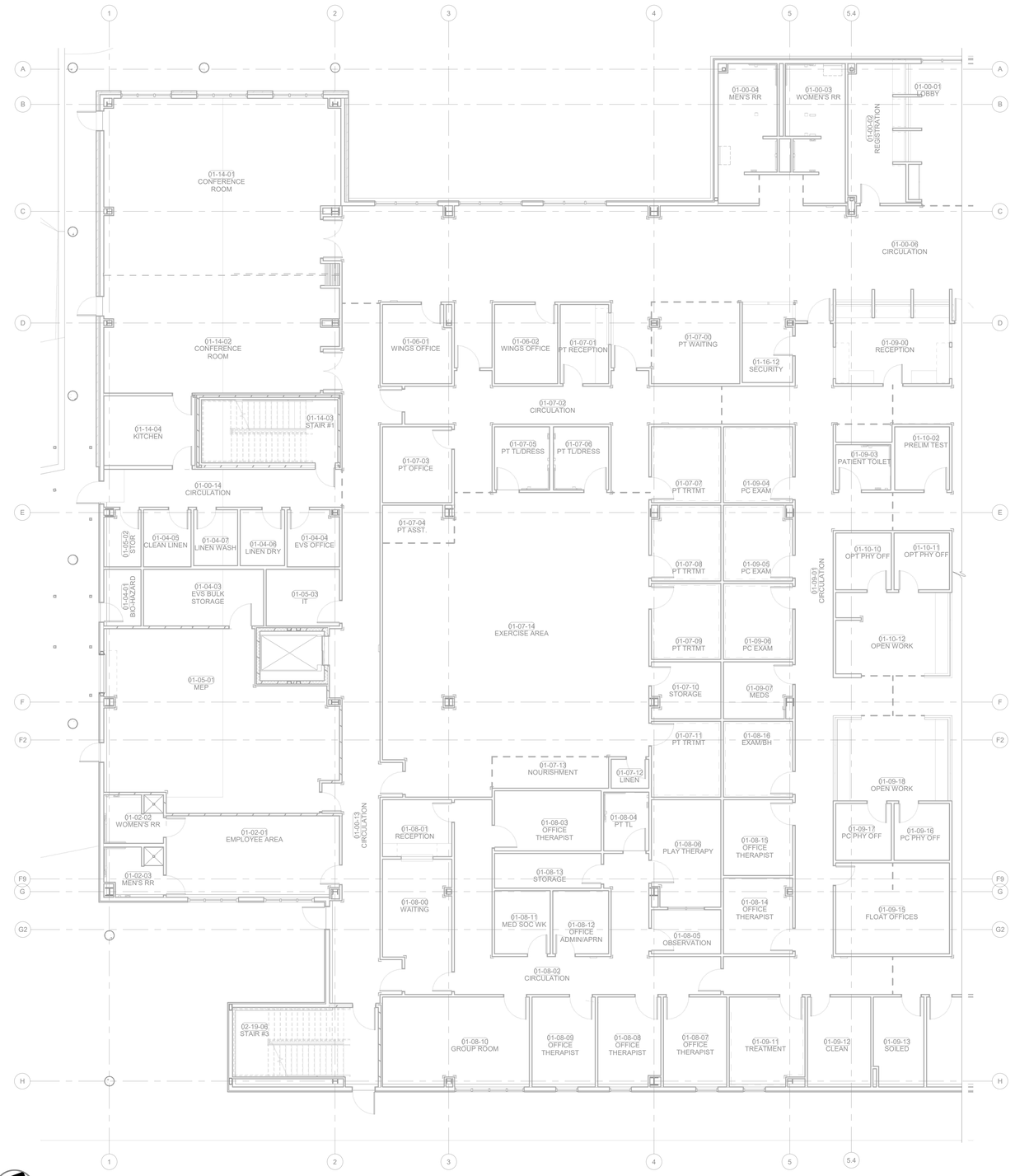
MECH REQS PLAN LEVEL 01 SECTOR 01



PLAN NORTH

TRUE NORTH

1 ENLARGED MECHANICAL REQUIREMENTS PLAN LEVEL 01 SECTOR 02

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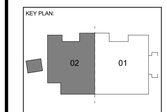
KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
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DATE: 12-06-19

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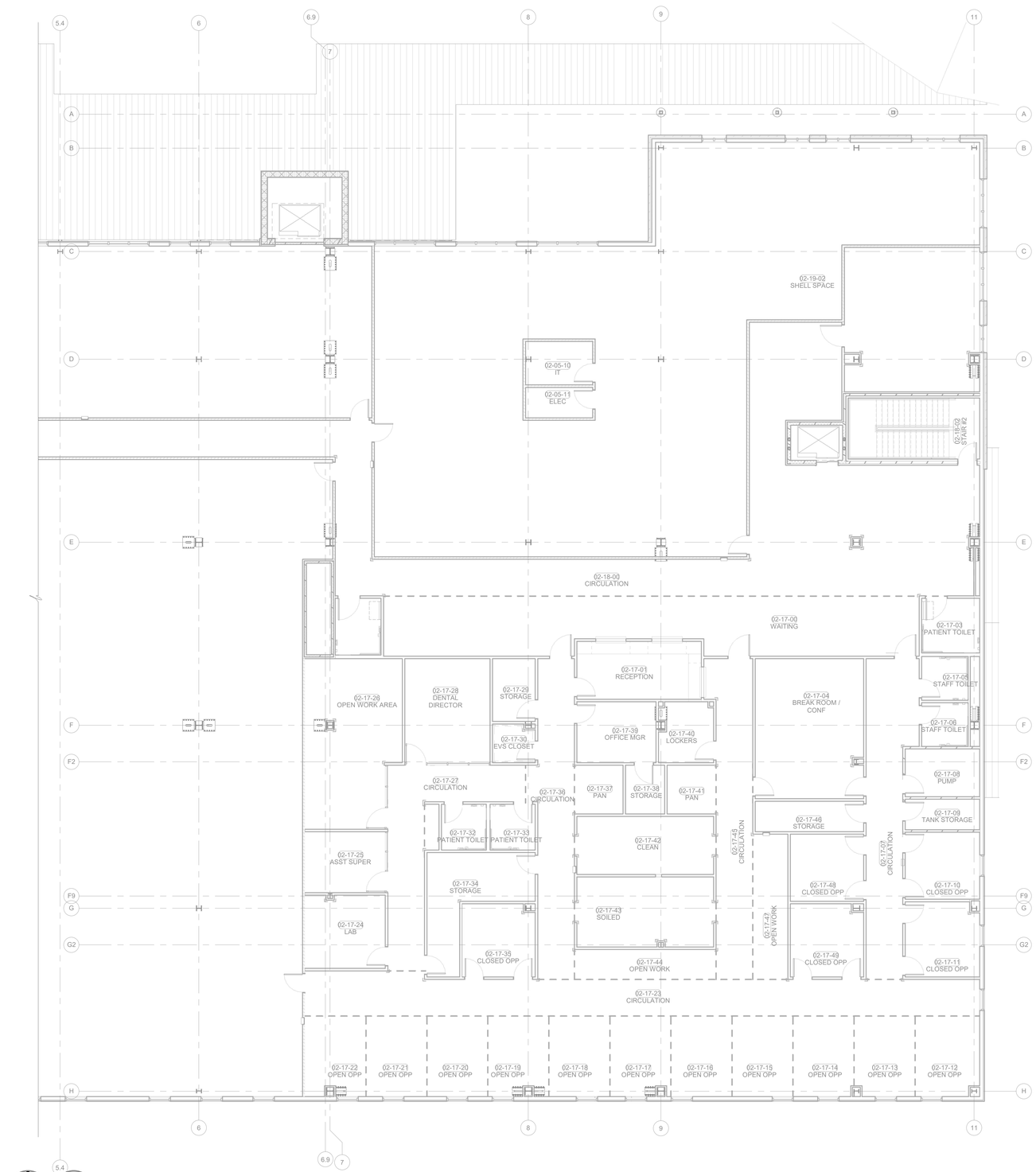
SHEET NUMBER:

M3.02

MECH REQS PLAN LEVEL 01 SECTOR 02



PLAN NORTH

TRUE NORTH

1 ENLARGED MECHANICAL REQUIREMENTS PLAN LEVEL 02 SECTOR 01

1/8" = 1'-0"

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FEAT OF STRENGTH
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REVISIONS

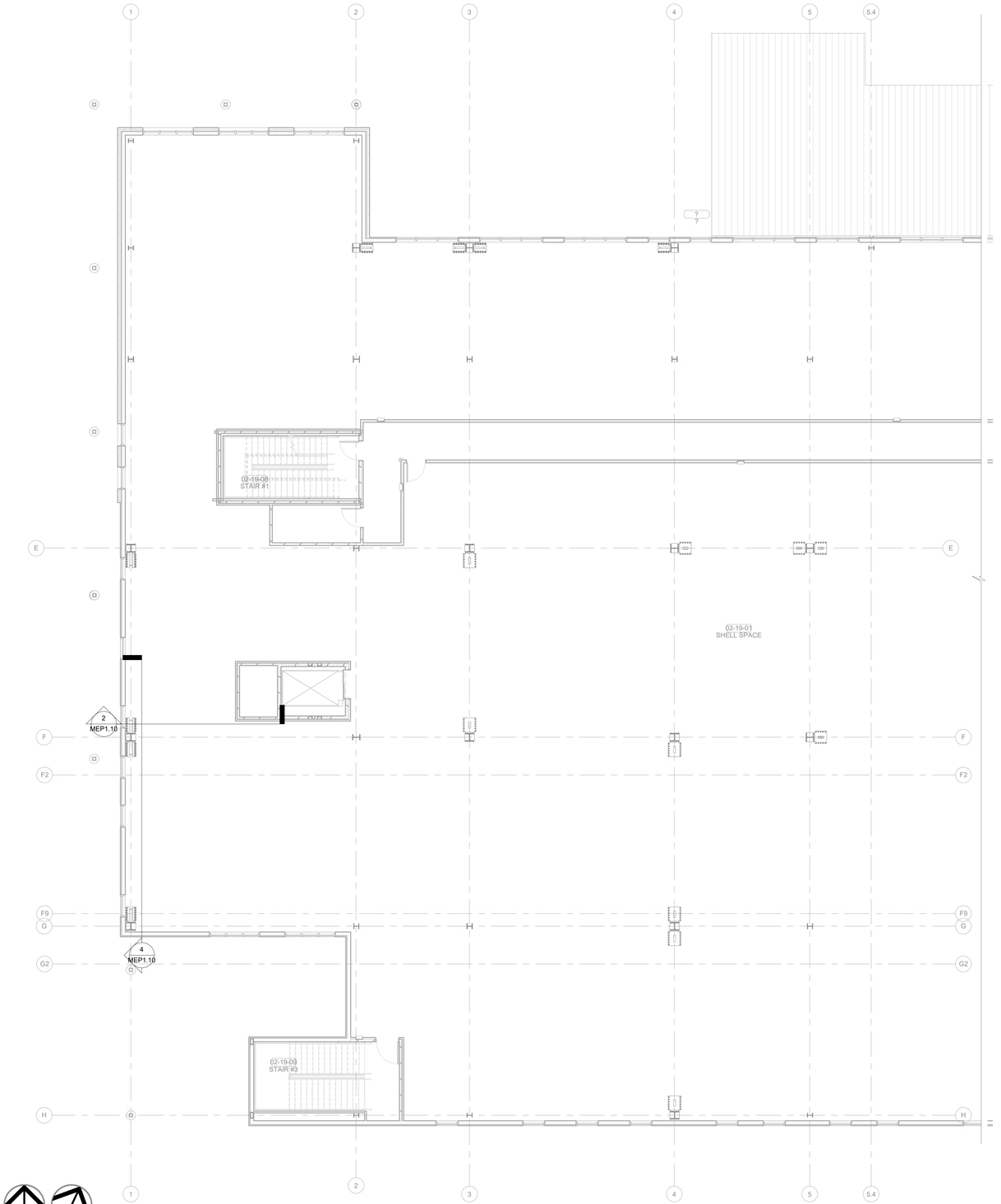
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: M3.03

MECH REQS PLAN LEVEL 02 SECTOR 01



PLAN NORTH

TRUE NORTH

1 ENLARGED MECHANICAL REQUIREMENTS PLAN LEVEL 02 SECTOR 02

1/8" = 1'-0"

James R. Childers Architect, Inc.
45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com

PROFESSIONAL SEAL:

LICENSED PROFESSIONAL ENGINEER
Shane Wells
28910
OKLAHOMA
CERTIFIED

12/06/2019

CONSULTANT LOGO:

HP ENGINEERING

PROJECT NO. 18068R
100 % COMPLETE

HP ENGINEERING INC.
5214 W. VILLAGE PARKWAY
SUITE 120
ROGERS, AR 72758
(479) 899-6370
www.hpengineeringinc.com

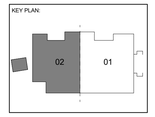
CLIENT:

SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

M3.04

MECH REQS PLAN LEVEL 02 SECTOR 02

MECHANICAL ZONING LEGEND

MAC-1	MAC-12	VAV-1.05	VAV-1.10	VAV-1.15	VAV-1.20	VAV-1.25	VAV-1.30	VAV-1.35	VAV-1.40	VAV-1.45	VAV-2.05	VAV-2.10	VAV-2.15	VAV-2.20	VAV-2.25	VAV-2.30	VAV-2.35
MAC-02	VAV-1.01	VAV-1.06	VAV-1.11	VAV-1.16	VAV-1.21	VAV-1.26	VAV-1.31	VAV-1.36	VAV-1.41	VAV-2.01	VAV-2.06	VAV-2.11	VAV-2.16	VAV-2.21	VAV-2.26	VAV-2.31	VAV-2.36
MAC-03	VAV-1.02	VAV-1.07	VAV-1.12	VAV-1.17	VAV-1.22	VAV-1.27	VAV-1.32	VAV-1.37	VAV-1.42	VAV-2.02	VAV-2.07	VAV-2.12	VAV-2.17	VAV-2.22	VAV-2.27	VAV-2.32	VAV-2.37
MAC-06	VAV-1.03	VAV-1.08	VAV-1.13	VAV-1.18	VAV-1.23	VAV-1.28	VAV-1.33	VAV-1.38	VAV-1.43	VAV-2.03	VAV-2.08	VAV-2.13	VAV-2.18	VAV-2.23	VAV-2.28	VAV-2.33	VAV-2.38
MAC-07	VAV-1.04	VAV-1.09	VAV-1.14	VAV-1.19	VAV-1.24	VAV-1.29	VAV-1.34	VAV-1.39	VAV-1.44	VAV-2.04	VAV-2.09	VAV-2.14	VAV-2.19	VAV-2.24	VAV-2.29	VAV-2.34	

PLAN NORTH / TRUE NORTH

1 OVERALL MECHANICAL ZONING PLAN LEVEL 01
1/8" = 1'-0"

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45 South 4th Street
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PROFESSIONAL SEAL:

LICENSED PROFESSIONAL ENGINEER
Shane Wells 28910
OKLAHOMA
COMMISSIONED
12/06/2019

CONSULTANT LOGO:

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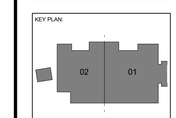
CLIENT:

THE CHEROKEE NATION
FIRST CAPITAL
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

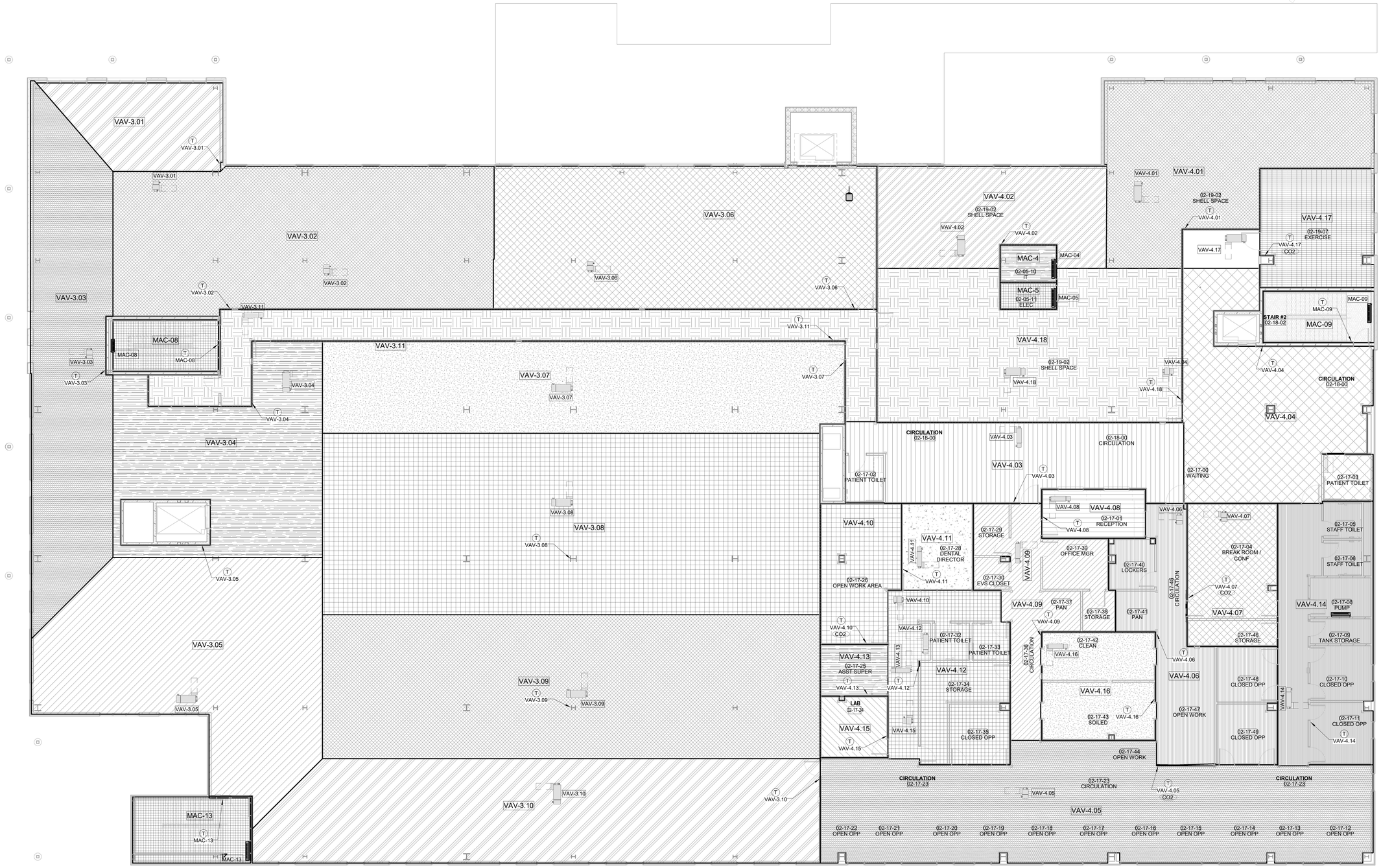
REVISIONS:		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: M3.05

MECH ZONING PLAN LEVEL 01

MECHANICAL ZONING LEGEND

MAC-4	VAV-3.01	VAV-3.06	VAV-3.11	VAV-4.05	VAV-4.10	VAV-4.15
MAC-5	VAV-3.02	VAV-3.07	VAV-4.01	VAV-4.06	VAV-4.11	VAV-4.16
MAC-08	VAV-3.03	VAV-3.08	VAV-4.02	VAV-4.07	VAV-4.12	VAV-4.17
MAC-09	VAV-3.04	VAV-3.09	VAV-4.03	VAV-4.08	VAV-4.13	VAV-4.18
MAC-13	VAV-3.05	VAV-3.10	VAV-4.04	VAV-4.09	VAV-4.14	



PLAN NORTH / TRUE NORTH

1 OVERALL MECHANICAL ZONING PLAN LEVEL 02

1/8" = 1'-0"

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Fort Smith, AR 72901
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PROFESSIONAL SEAL:

LICENSED PROFESSIONAL ENGINEER
Shane Wells
28910
OKLAHOMA
CERTIFIED
12/06/2019

CONSULTANT LOGO:

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5214 W. VILLAGE PARKWAY
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ROGERS, AR 72758
(479) 899-8370
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CLIENT:

THE SEAL OF THE CHEROKEE NATION FEAT OF ARMS SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

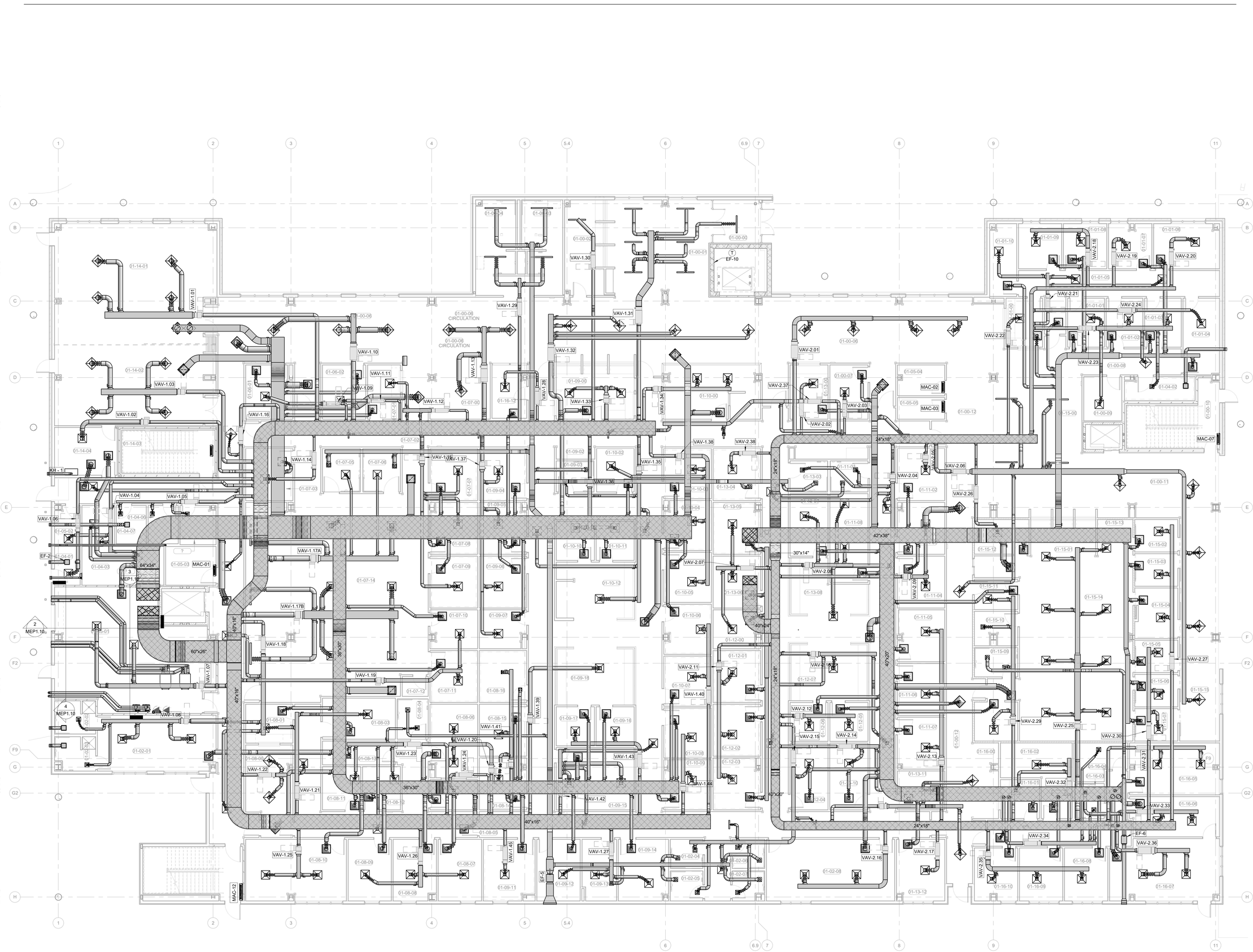
REVISIONS:		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

M3.06

MECH ZONING PLAN LEVEL 02



1 01 OVERALL MECHANICAL PLAN LEVEL 01
1/8" = 1'-0"

PLAN NORTH
TRUE NORTH

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CLIENT:

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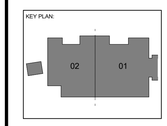
SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

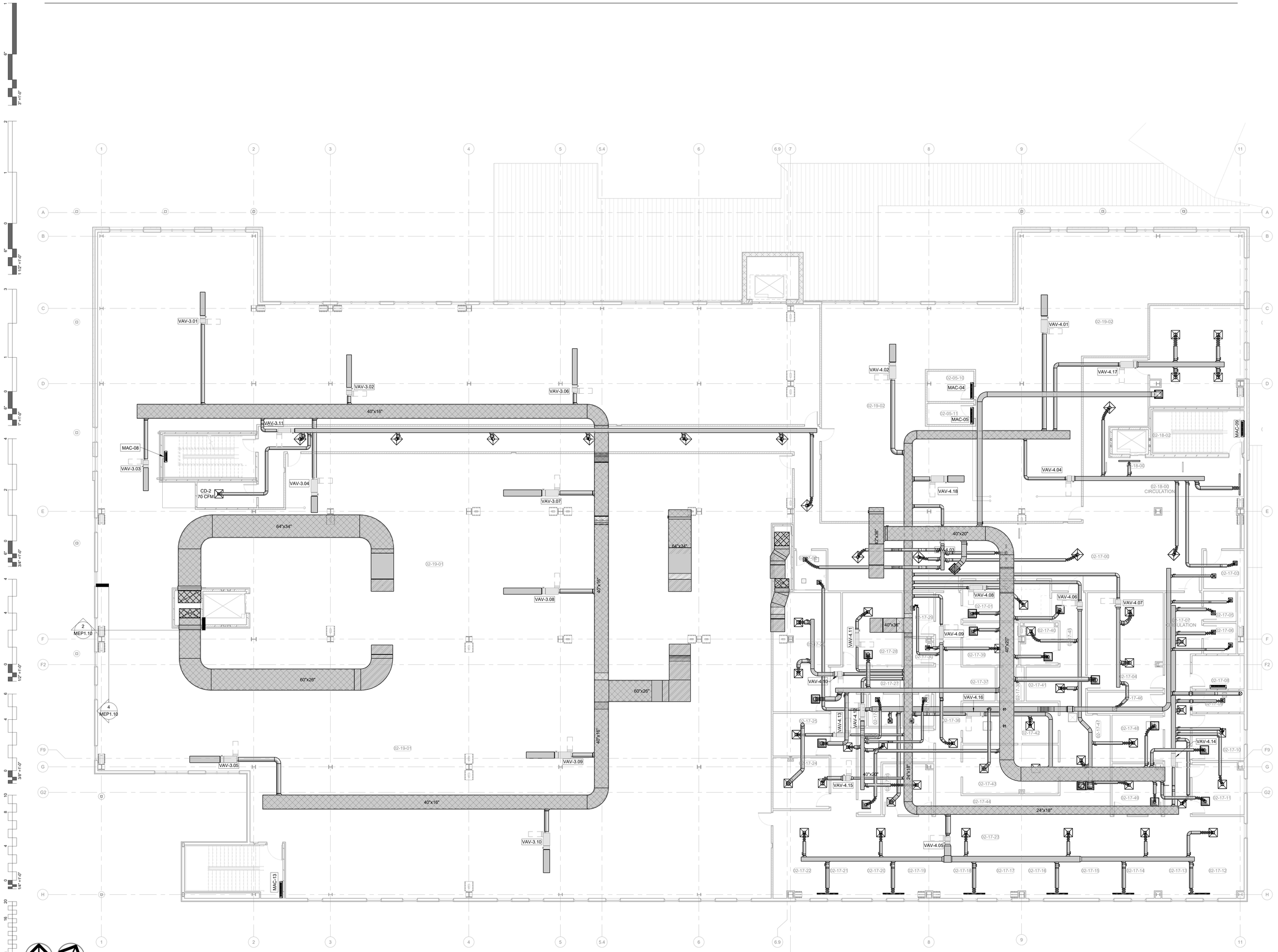
REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

M4.01

OVERALL MECH PLAN LEVEL 01



PLAN NORTH

TRUE NORTH

1 02 OVERALL MECHANICAL PLAN LEVEL 02

1/8" = 1'-0"

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Fort Smith, AR 72901
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PROFESSIONAL SEAL:

LICENSED PROFESSIONAL ENGINEER
Shane Wells
28910
OKLAHOMA
CERTIFIED

12/06/2019

CONSULTANT LOGO:

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PROJECT NO. 18068R
100 % COMPLETE
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(479) 899-6370
www.hpengineeringinc.com

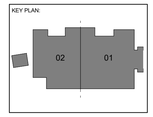
CLIENT:

SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

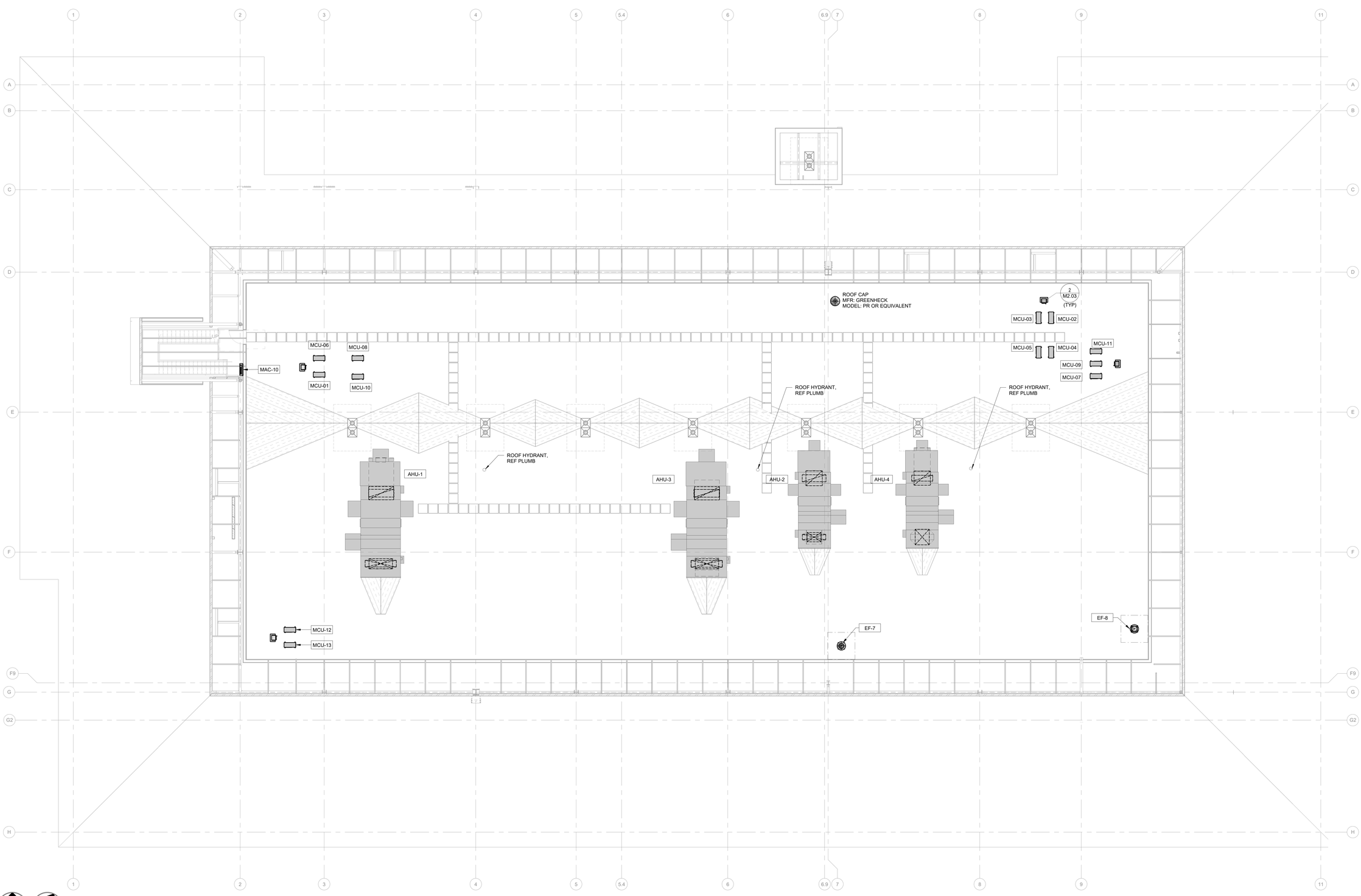
DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

M4.02

OVERALL MECH PLAN LEVEL 02

KEYNOTES	
Key Value	Keynote Text



PLAN NORTH

TRUE NORTH

OVERALL MECH ROOF PLAN

1/8" = 1'-0"

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Fort Smith, AR 72901
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PROFESSIONAL SEAL:

Shane Wells 28910 OKLAHOMA LICENSED PROFESSIONAL ENGINEER

CARL'S STAMP

12/06/2019

CONSULTANT LOGO:

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PROJECT NO. 18068R

100 % COMPLETE

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ROGERS, AR 72758
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CLIENT:

THE CHEROKEE NATION TRIBAL SEAL OF THE CHEROKEE NATION SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

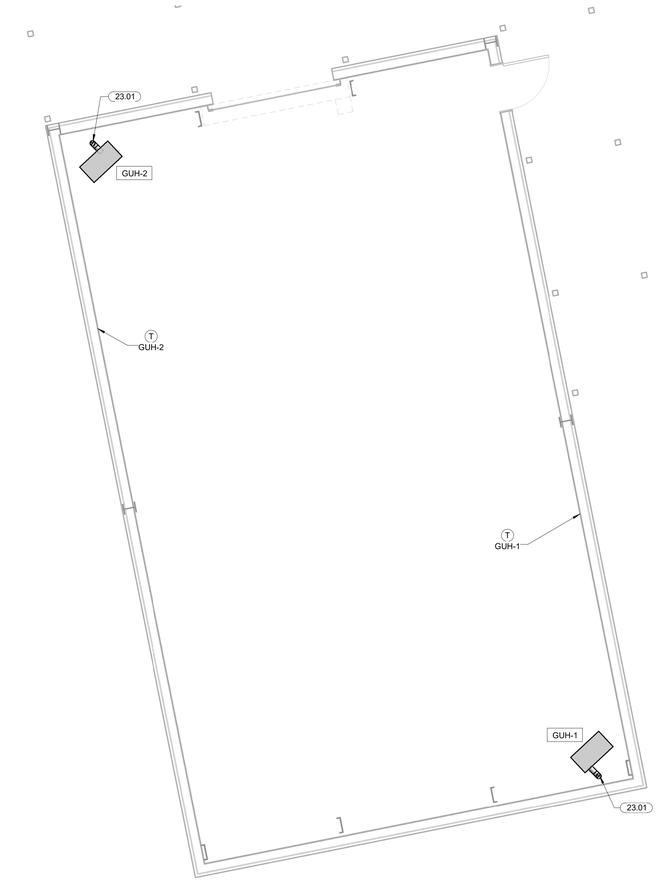
SHEET NUMBER:

M4.03

OVERALL MECH ROOF PLAN

KEYNOTES

23.01	MOUNT GAS UNIT HEATER AT 10'-0" AFF TO BOTTOM OF HEATER. INSTALL MFR CONCENTRIC VENT KIT THRU ROOF. SIZE AND INSTALL PER MFR INSTALLATION INSTRUCTIONS.



PLAN NORTH

TRUE NORTH

1 OVERALL MECHANICAL MAINTENANCE BUILDING PLAN
1/4" = 1'-0"

1 3" = 1'-0"
2 1 1/2" = 1'-0"
3 1 1" = 1'-0"
4 3/4" = 1'-0"
1/2" = 1'-0"
3/8" = 1'-0"
1/4" = 1'-0"
1/8" = 1'-0"

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Fort Smith, AR 72901
479-783-2480
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PROFESSIONAL SEAL:

LICENSED PROFESSIONAL ENGINEER
Shane Wells
28910
OKLAHOMA
(NOT SIGNED)
12/06/2019

CONSULTANT LOGO:

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PROJECT NO. 18068R
100 % COMPLETE

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CLIENT:

SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

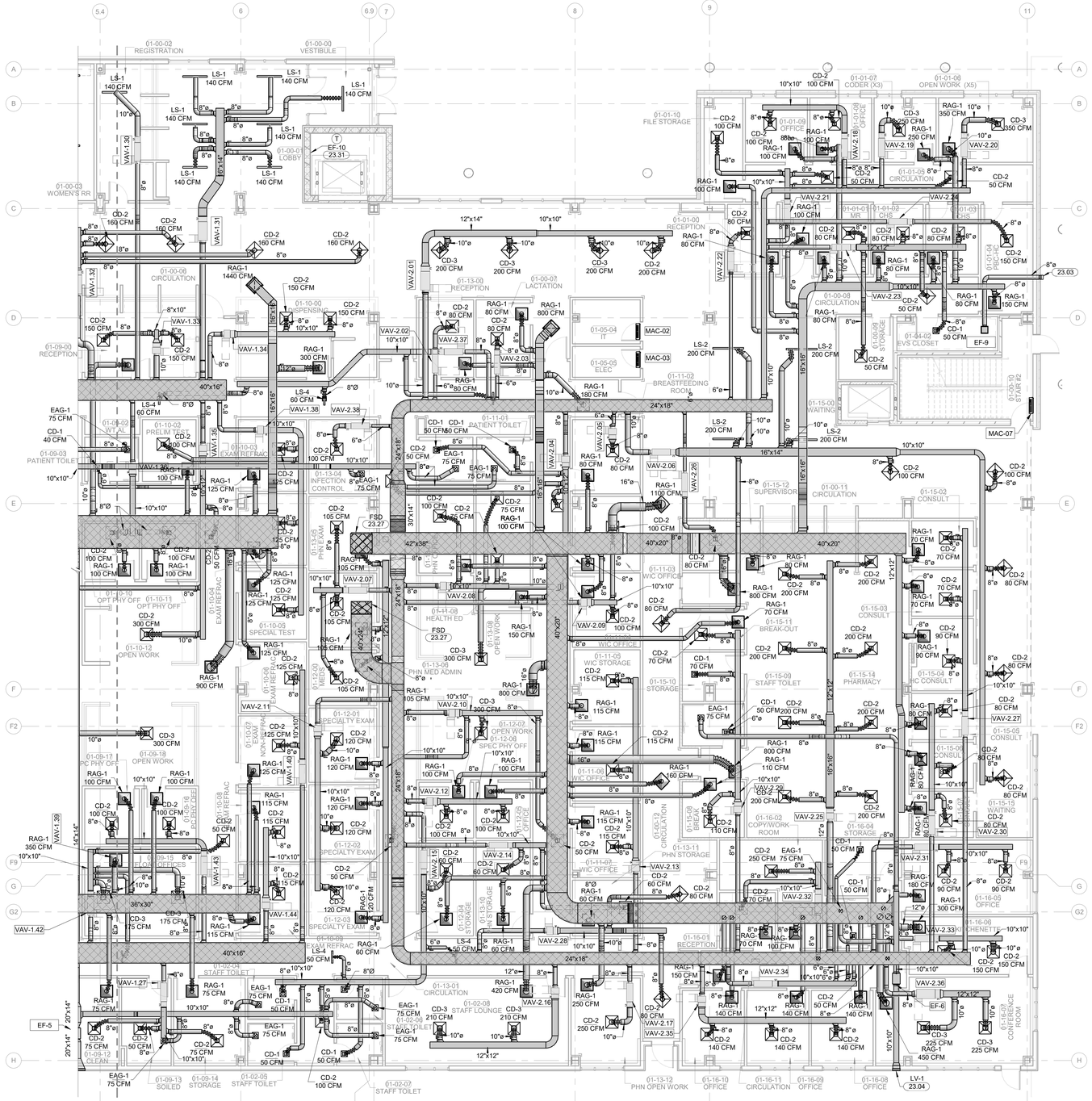
DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
M4.04

OVERALL MECH MAINTENANCE BUILDING PLAN

KEYNOTES

23.03	ROUTE EXHAUST THRU WALL TO WALL CAP. PROVIDE BIRDSCREEN AND BACKDRAFT DAMPER IN DUCT.
23.04	MOUNT LOUVER 10'-6" O.C. AFG.
23.27	PROVIDE MULTI-SECTION FIRE AND SMOKE DAMPER'S, RUSKIN FSD-60 OR EQUIVALENT, WHERE INDICATED AT FLOOR PENETRATIONS AT BOTTOM OF CHASE TO MAINTAIN 1-2 HOUR RATING AT FLOOR SLAB. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCE ON BOTH SIDES OF DUCTS TO ACCOMMODATE FSD ACTUATORS. ACTUATORS SHALL BE TANDEM-MOUNTED (ON SAME SIDE OF DUCT) ONLY WHERE SPACE CONSTRAINTS DO NOT ALLOW ACTUATORS TO BE MOUNTED ON BOTH SIDES OF DUCT. REFER TO DETAIL 2-M2.01.
23.31	INSTALL STG-2 WITH FIRE DAMPER IN ELEVATOR SHAFT. COORDINATE EXACT LOCATION WITH ELEVATOR SUPPLIER. COORDINATE EXACT THERMOSTAT LOCATION FOR EF-10 WITH ELEVATOR SUPPLIER.



1 ENLARGED MECHANICAL PLAN LEVEL 01 SECTOR 01
1/8" = 1'-0"

PLAN NORTH
TRUE NORTH

James R. Childers Architect, Inc.
45 South 4th Street
Fort Smith, AR 72901
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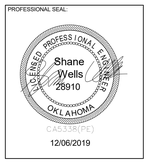
PROFESSIONAL SEAL:



CONSULTANT LOGO:

HP ENGINEERING
PROJECT NO. 18068R
100 % COMPLETE

HP ENGINEERING INC.
5214 W. VILLAGE PARKWAY
SUITE 120
ROGERS, AR 72758
(479) 899-6370
www.hpengineeringinc.com

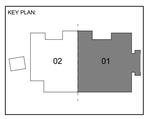
CLIENT:

THE CHEROKEE NATION TRUST OF THE CHEROKEE NATION ESTABLISHED SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

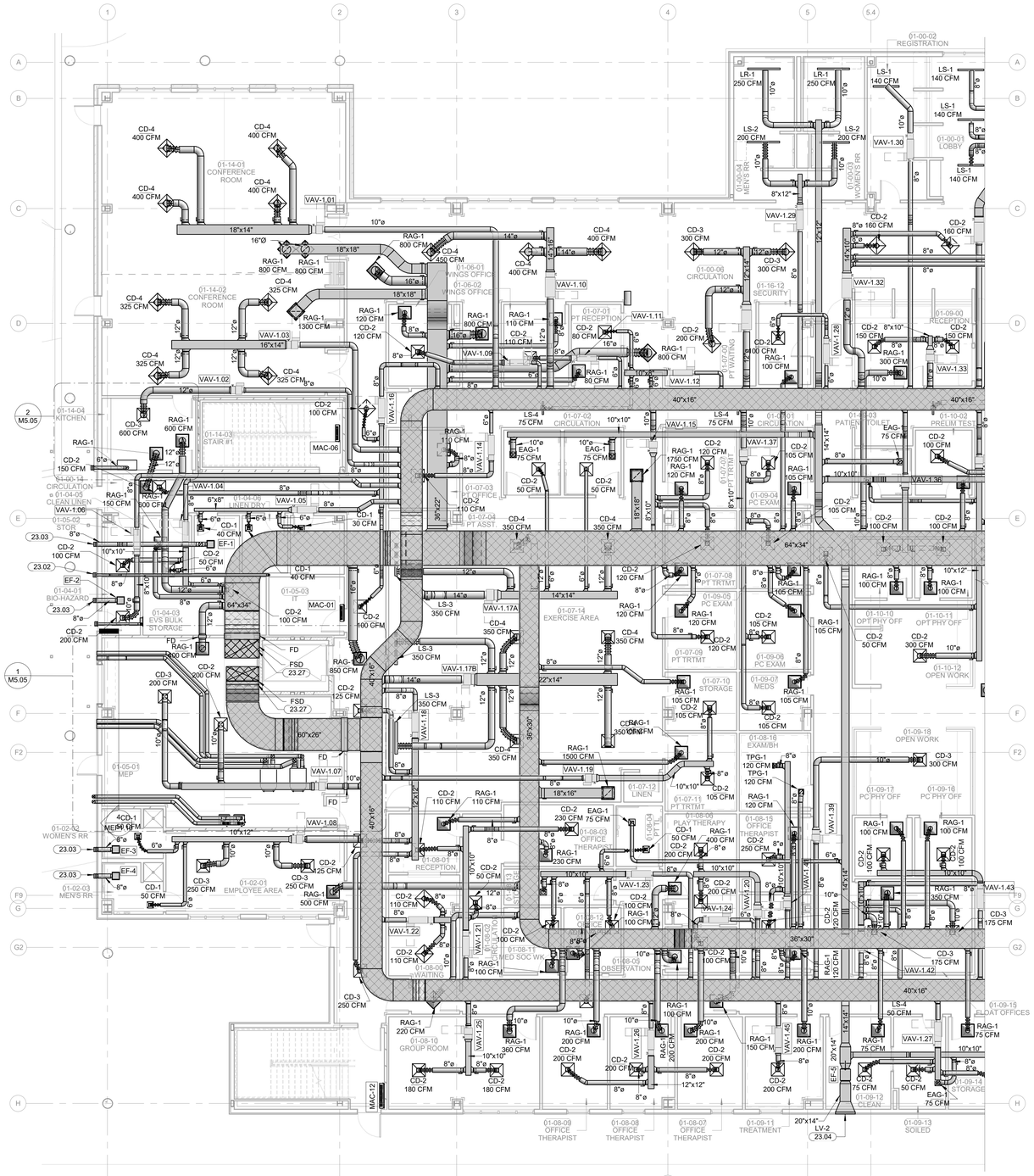
REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: M5.01

MECH PLAN LEVEL 01 SECTOR 01

KEYNOTES

23.02	ROUTE 4"Ø INSULATED STEEL OR ALUMINUM (RATED FOR DRYER EXHAUST) DRYER DUCT TO EXTERIOR AND TERMINATE WITH MFR WALL CAP AS SHOWN. PROVIDE DRYER WALL BOX BEHIND DRYER.
23.03	ROUTE EXHAUST THRU WALL TO WALL CAP. PROVIDE BIRDSCREEN AND BACKDRAFT DAMPER IN DUCT.
23.04	MOUNT LOUVER 10'-6" O.C. AFG.
23.27	PROVIDE MULTI-SECTION FIRE AND SMOKE DAMPER'S, RUSKIN FSD-60 OR EQUIVALENT, WHERE INDICATED AT FLOOR PENETRATIONS AT BOTTOM OF CHASE TO MAINTAIN 1-2 HOUR RATING AT FLOOR SLAB. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCE ON BOTH SIDES OF DUCTS TO ACCOMMODATE FSD ACTUATORS. ACTUATORS SHALL BE TANDEM-MOUNTED (ON SAME SIDE OF DUCT) ONLY WHERE SPACE CONSTRAINTS DO NOT ALLOW ACTUATORS TO BE MOUNTED ON BOTH SIDES OF DUCT. REFER TO DETAIL 2-M2.01.



1 ENLARGED MECHANICAL PLAN LEVEL 01 SECTOR 02
1/8" = 1'-0"

PLAN NORTH

TRUE NORTH

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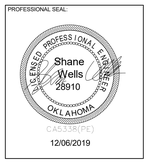
45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com

PROFESSIONAL SEAL:



12/06/2019

CONSULTANT LOGO:

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PROJECT NO. 18068R
100 % COMPLETE
HP ENGINEERING INC.
5214 W. VILLAGE PARKWAY
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ROGERS, AR 72758
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www.hpengineeringinc.com

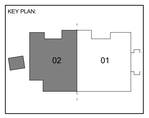
CLIENT:

THE CHEROKEE NATION TRIBAL SEAL

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

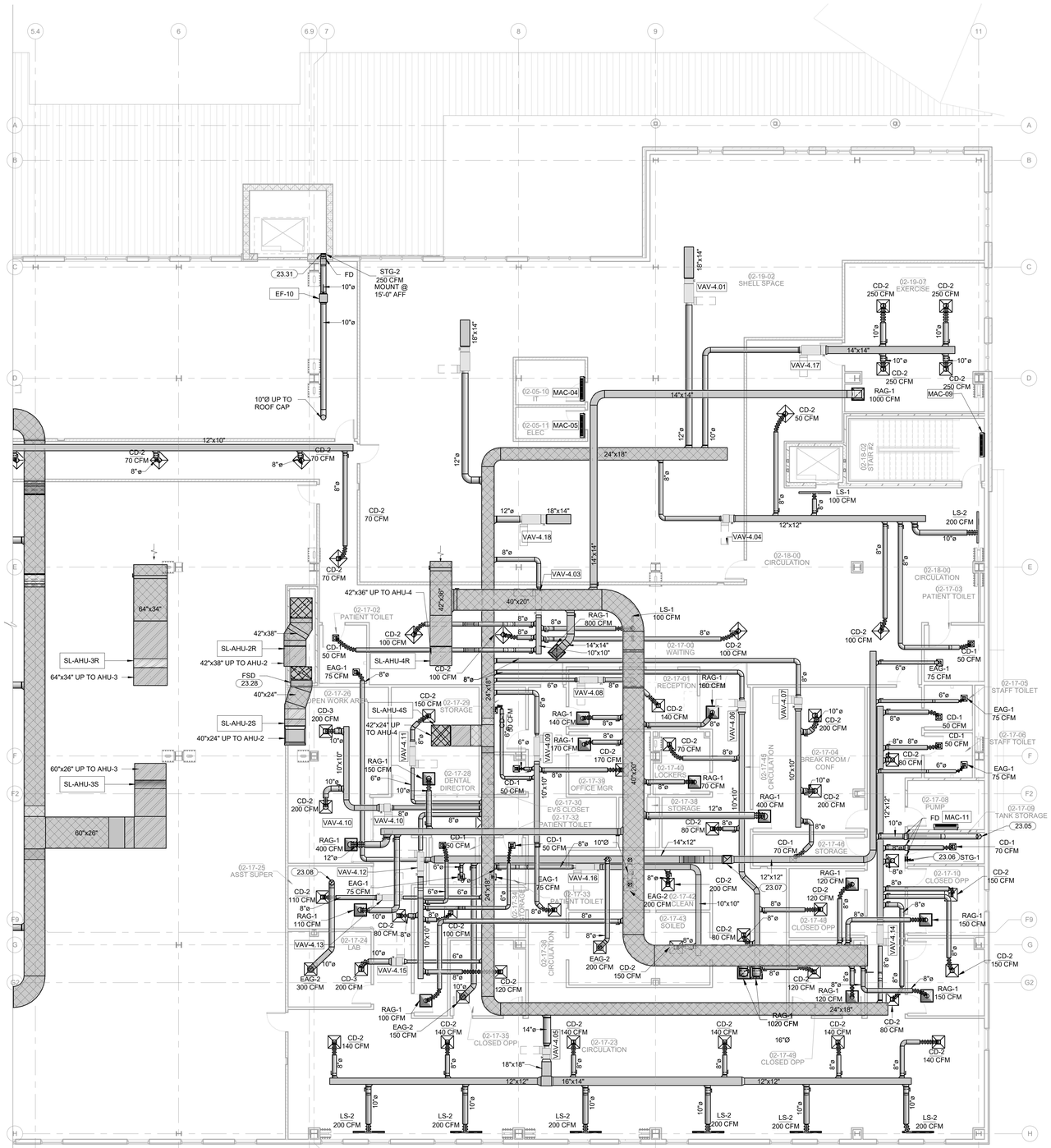
SHEET NUMBER:

M5.02

MECH PLAN LEVEL 01 SECTOR 02

KEYNOTES

23.05	ROUTE 10"Ø DUCT DOWN TO 1'-0" AFF WITH WIRE MESH.
23.06	MOUNT TRANSFER GRILLE 8'-0" AFF.
23.07	ROUTE 14"x16" DUCT UP TO EF-8.
23.08	ROUTE 10"Ø DUCT UP TO EF-7.
23.28	PROVIDE MULTI-SECTION FIRE AND SMOKE DAMPER'S, RUSKIN FSD-60 OR EQUIVALENT, WHERE INDICATED AT SHAFT WALL PENETRATIONS TO MAINTAIN 1-2 HOUR RATING OF SHAFT WALL. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCE ON BOTH SIDES OF DUCTS TO ACCOMMODATE FSD ACTUATORS. ACTUATORS SHALL BE TANDEM-MOUNTED (ON SAME SIDE OF DUCT) ONLY WHERE SPACE CONSTRAINTS DO NOT ALLOW ACTUATORS TO BE MOUNTED ON BOTH SIDES OF DUCT.
23.31	INSTALL STG-2 WITH FIRE DAMPER IN ELEVATOR SHAFT. COORDINATE EXACT LOCATION WITH ELEVATOR SUPPLIER. COORDINATE EXACT THERMOSTAT LOCATION FOR EF-10 WITH ELEVATOR SUPPLIER.



PLAN NORTH / TRUE NORTH

1 ENLARGED MECHANICAL PLAN LEVEL 02 SECTOR 01
1/8" = 1'-0"

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479-783-2480
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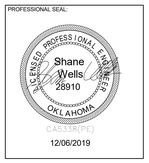
PROFESSIONAL SEAL:



12/06/2019

CONSULTANT LOGO:

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100 % COMPLETE

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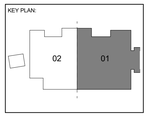
CLIENT:

THE CHEROKEE NATION
SEAL OF
Sept. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

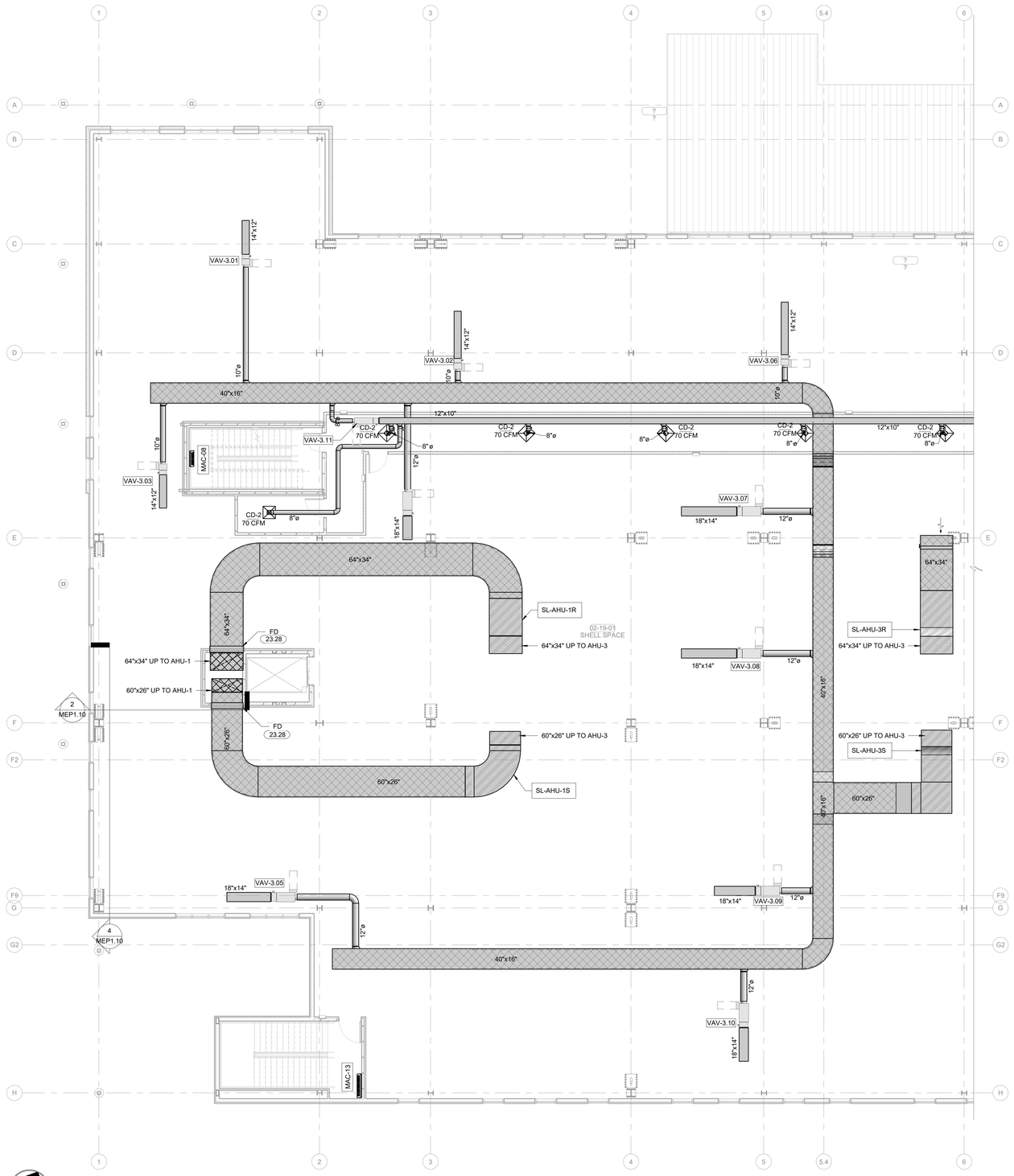
SHEET NUMBER:

M5.03

MECH PLAN
LEVEL 02
SECTOR 01

KEYNOTES

23.28	PROVIDE MULTI-SECTION FIRE AND SMOKE DAMPER'S, RUSKIN FSD-60 OR EQUIVALENT, WHERE INDICATED AT SHAFT WALL PENETRATIONS TO MAINTAIN 1-2 HOUR RATING OF SHAFT WALL. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCE ON BOTH SIDES OF DUCTS TO ACCOMMODATE FSD ACTUATORS. ACTUATORS SHALL BE TANDEM-MOUNTED (ON SAME SIDE OF DUCT) ONLY WHERE SPACE CONSTRAINTS DO NOT ALLOW ACTUATORS TO BE MOUNTED ON BOTH SIDES OF DUCT.



PLAN NORTH

TRUE NORTH

2 ENLARGED MECHANICAL PLAN LEVEL 02 SECTOR 02

1/8" = 1'-0"

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45 South 4th Street
Fort Smith, AR 72901
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PROFESSIONAL SEAL:

LICENSED PROFESSIONAL ENGINEER
Shane Wells
28910
OKLAHOMA
CERTIFIED

12/06/2019

CONSULTANT LOGO:

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100 % COMPLETE

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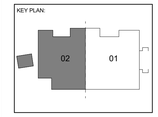
CLIENT:

SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS:

#	DATE	DESCRIPTION

DATE: 12-06-19

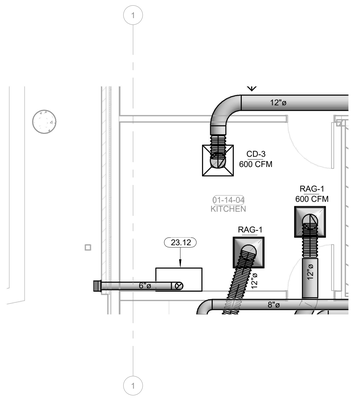
JOB NUMBER: 18-01.01

SHEET NUMBER: M5.04

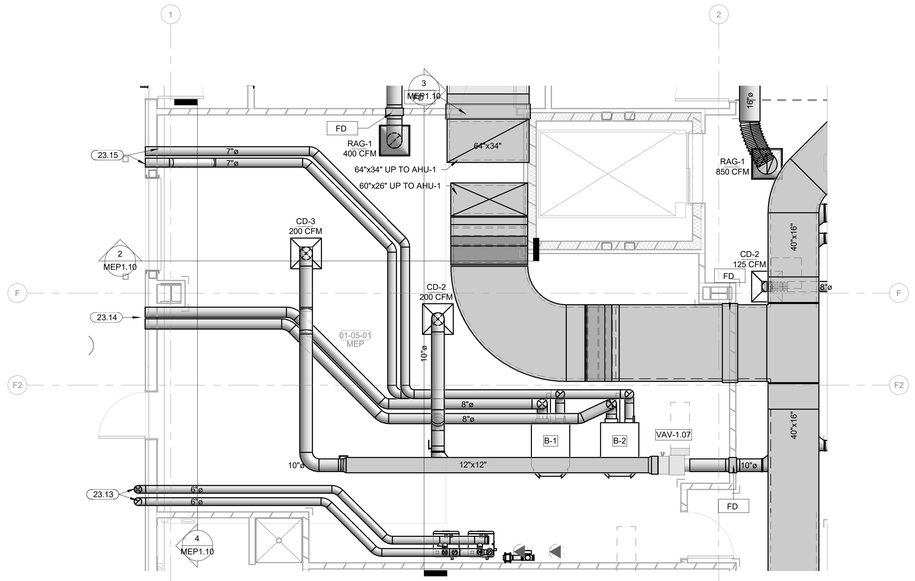
MECH PLAN LEVEL 02 SECTOR 02

KEYNOTES

23.12	KITCHEN HOOD EQUAL TO BLUE STAR MODEL BS-PL3624 TS WITH 600 CFM BLOWER (BY OTHERS).PROVIDE WITH FIRE SUPPRESSION SYSTEM EQUAL TO GUARDIAN III.
23.13	ROUTE WATER HEATER INTAKE AND EXHAUST THROUGH SIDEWALL AS SHOWN. PROVIDE MFR INTAKE/EXHAUST SIDEWALL KIT. INSTALL AND SIZE PIPE PER MFR INSTRUCTIONS.
23.14	12 x24 LOUVER RUSKIN ESD-435 WITH DUCT PLENUM.
23.15	7" BOILERS EXHAUST FLUES. INSTALL AT LEAST 10'-0" FROM AIR INTAKES AND AT LEAST 3'-0" ABOVE THEM. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS. USE RECOMMENDED WALL TERMINATION/PENETRATION AS SHOWN IN DETAIL 11/M2.01.



2 KITCHEN ENLARGED MECHANICAL PLAN
1/4" = 1'-0"



1 ENLARGED MECHANICAL ROOM-HVAC PLAN
1/4" = 1'-0"

PLAN NORTH / TRUE NORTH

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CLIENT:
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SEAL OF
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

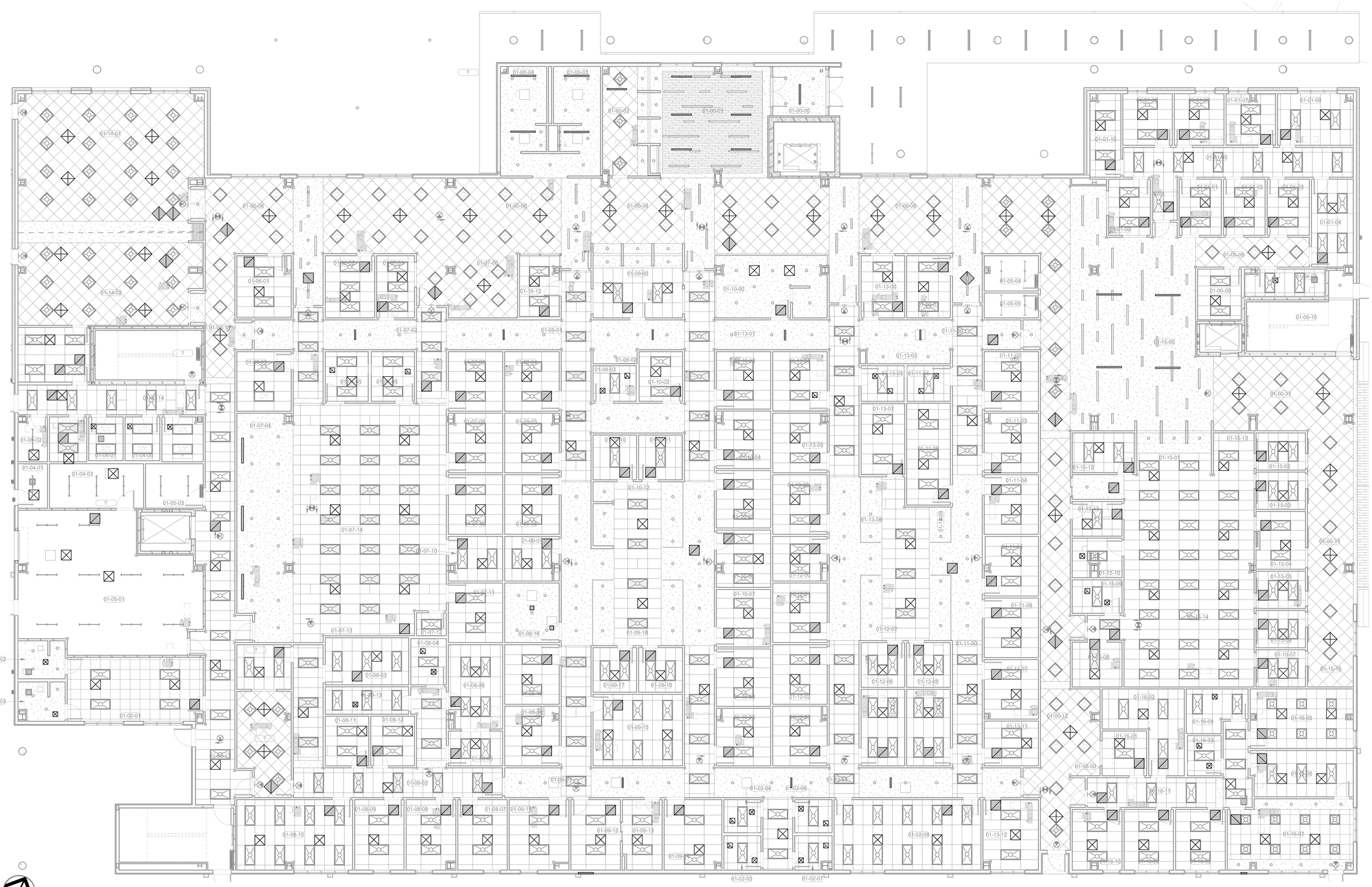
KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: M5.05

ENLARGED MECH. ROOM HVAC PLAN



PLAN NORTH

TRUE NORTH

1 OVERALL MECHANICAL CEILING PLAN LEVEL 01

1/8" = 1'-0"

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SEPT. 6, 1839

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STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
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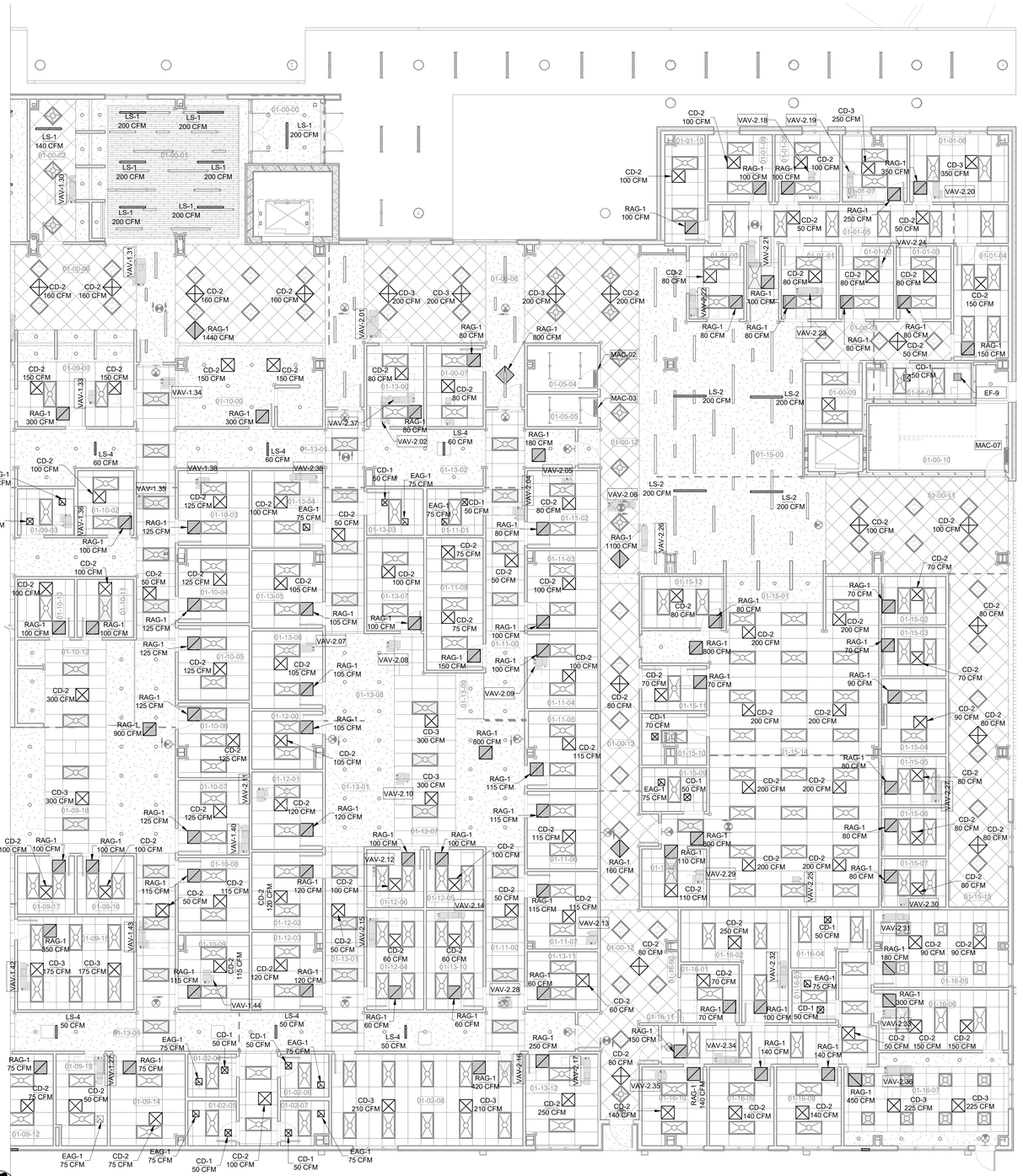
DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

M6.01

OVERALL MECH CEILING PLAN LEVEL 01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RAG-1 800 CFM
RAG-1 250 CFM
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RAG-1 900 CFM
RAG-1 180 CFM
RAG-1 140 CFM
RAG-1 450 CFM
LS-4 60 CFM
LS-4 50 CFM
LS-2 200 CFM
CD-1 50 CFM
CD-1 40 CFM
EAG-1 75 CFM
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MAC-03
MAC-07
EF-9
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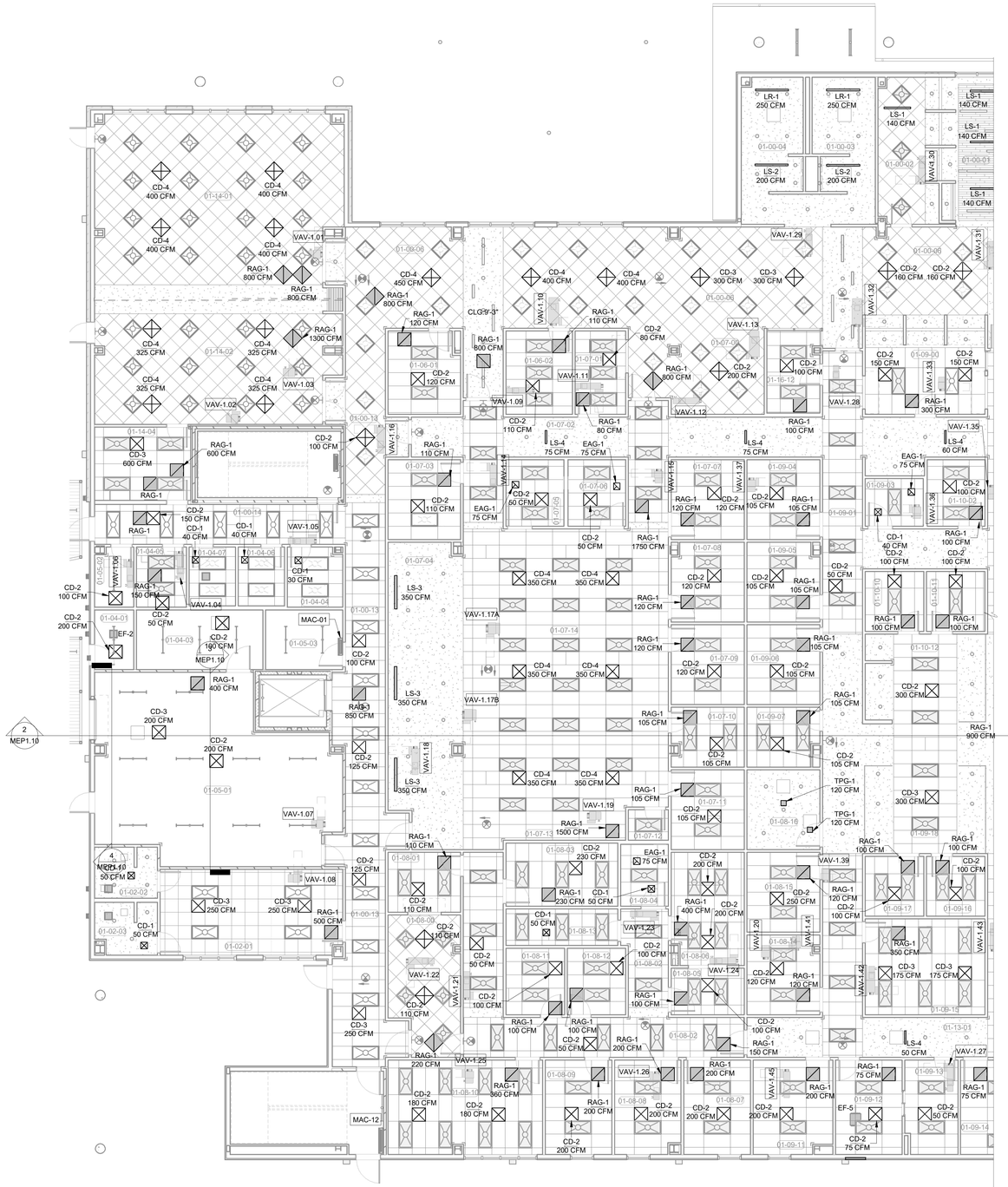

PLAN NORTH

TRUE NORTH

1 ENLARGED MECHANICAL CEILING PLAN LEVEL 01 SECTOR 02

1/8" = 1'-0"

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CLIENT:

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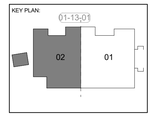
TRIBAL JURISDICTIONAL AREA
SEPT. 5, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

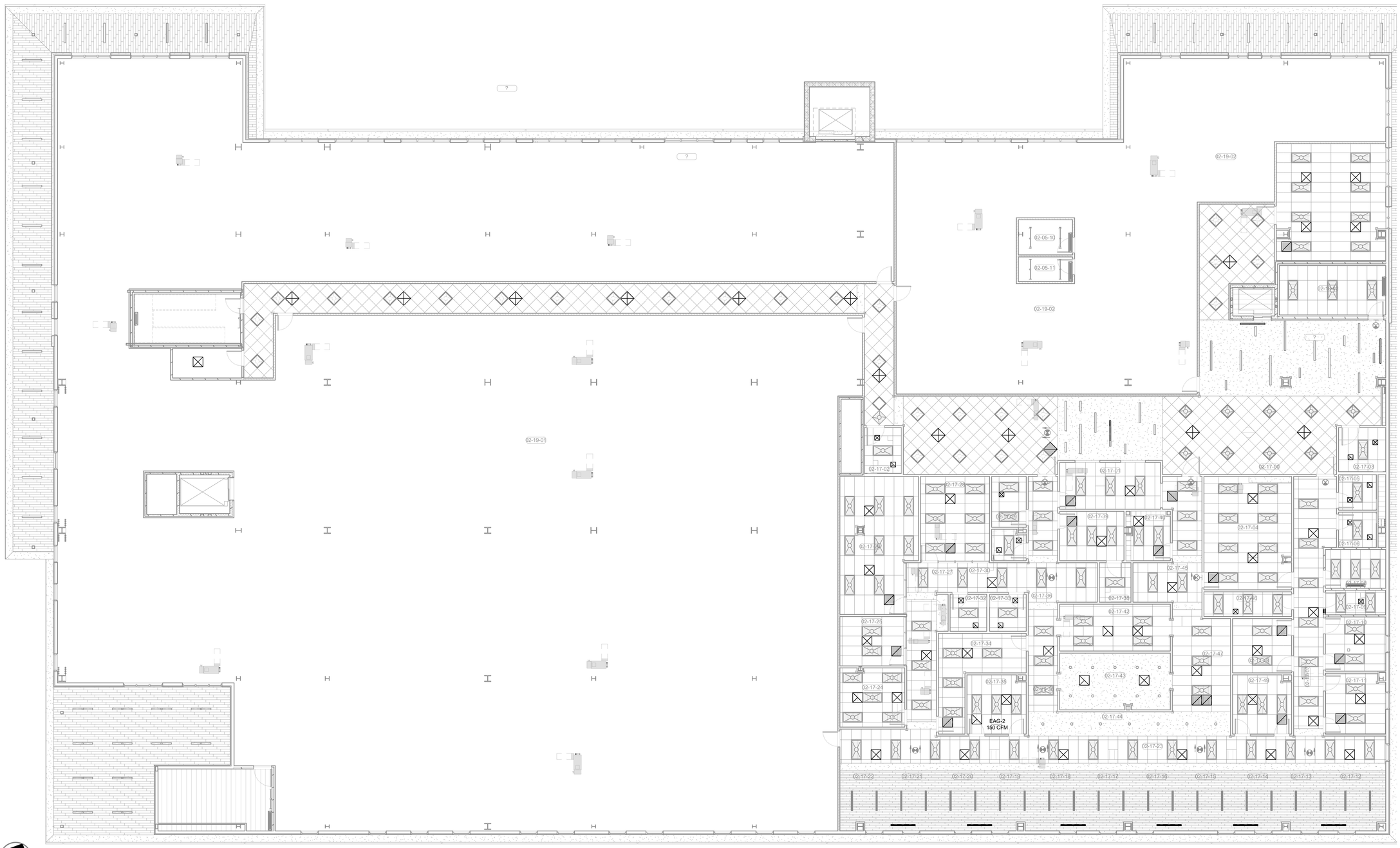
REVISIONS:		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

M6.03

MECH CEILING PLAN LEVEL 01 SECTOR 02



PLAN NORTH

TRUE NORTH

1 OVERALL MECHANICAL CEILING PLAN LEVEL 02

1/8" = 1'-0"

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12/06/2019

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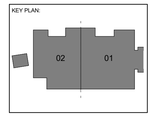
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

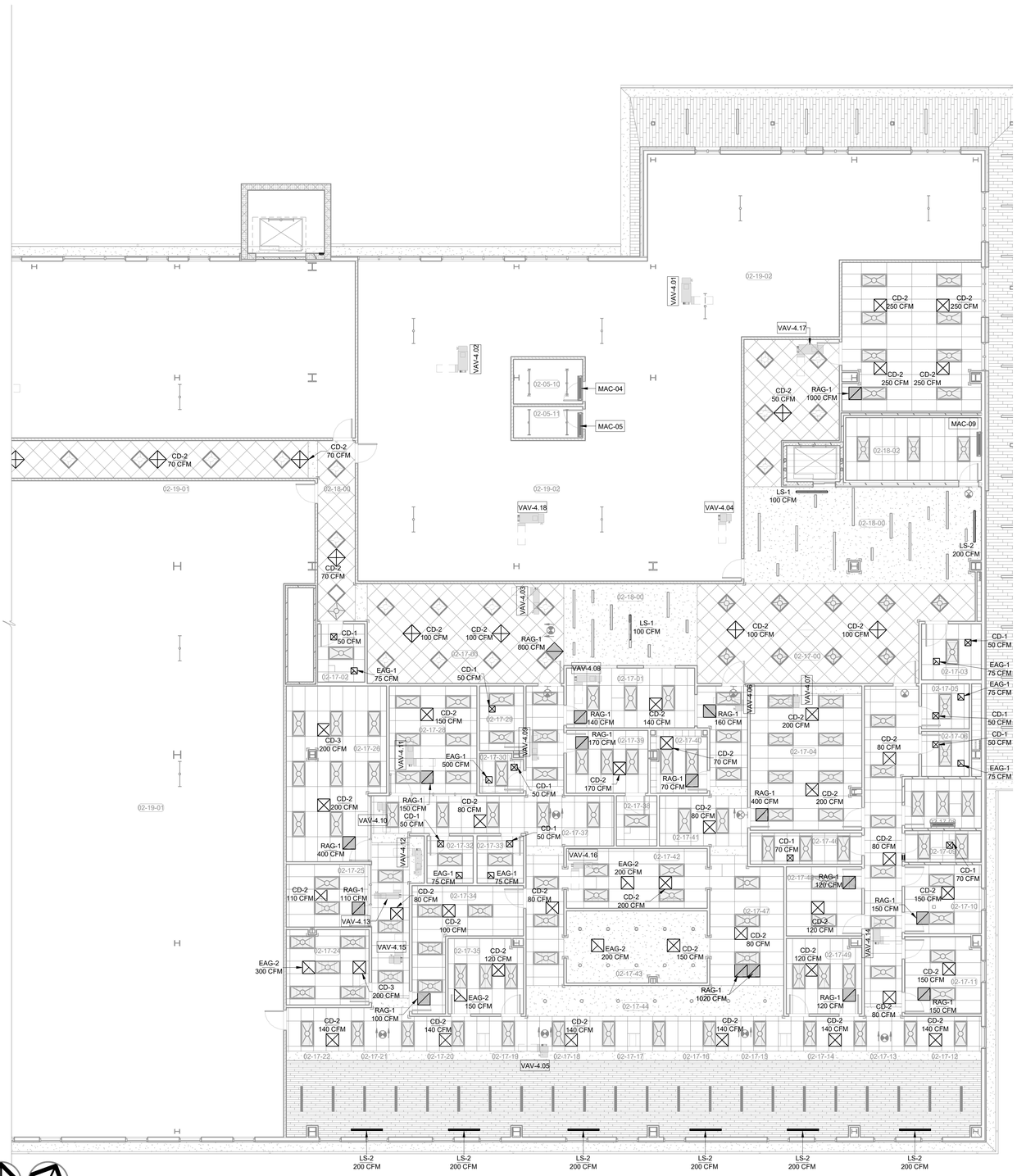
DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER:

M6.04

OVERALL MECH CEILING PLAN LEVEL 02



PLAN NORTH

TRUE NORTH

1 ENLARGED MECHANICAL CEILING PLAN LEVEL 02 SECTOR 01

1/8" = 1'-0"

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STILWELL, OKLAHOMA

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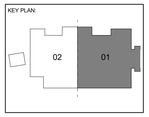


PROJECT PHASE:

BID PACKAGE 02

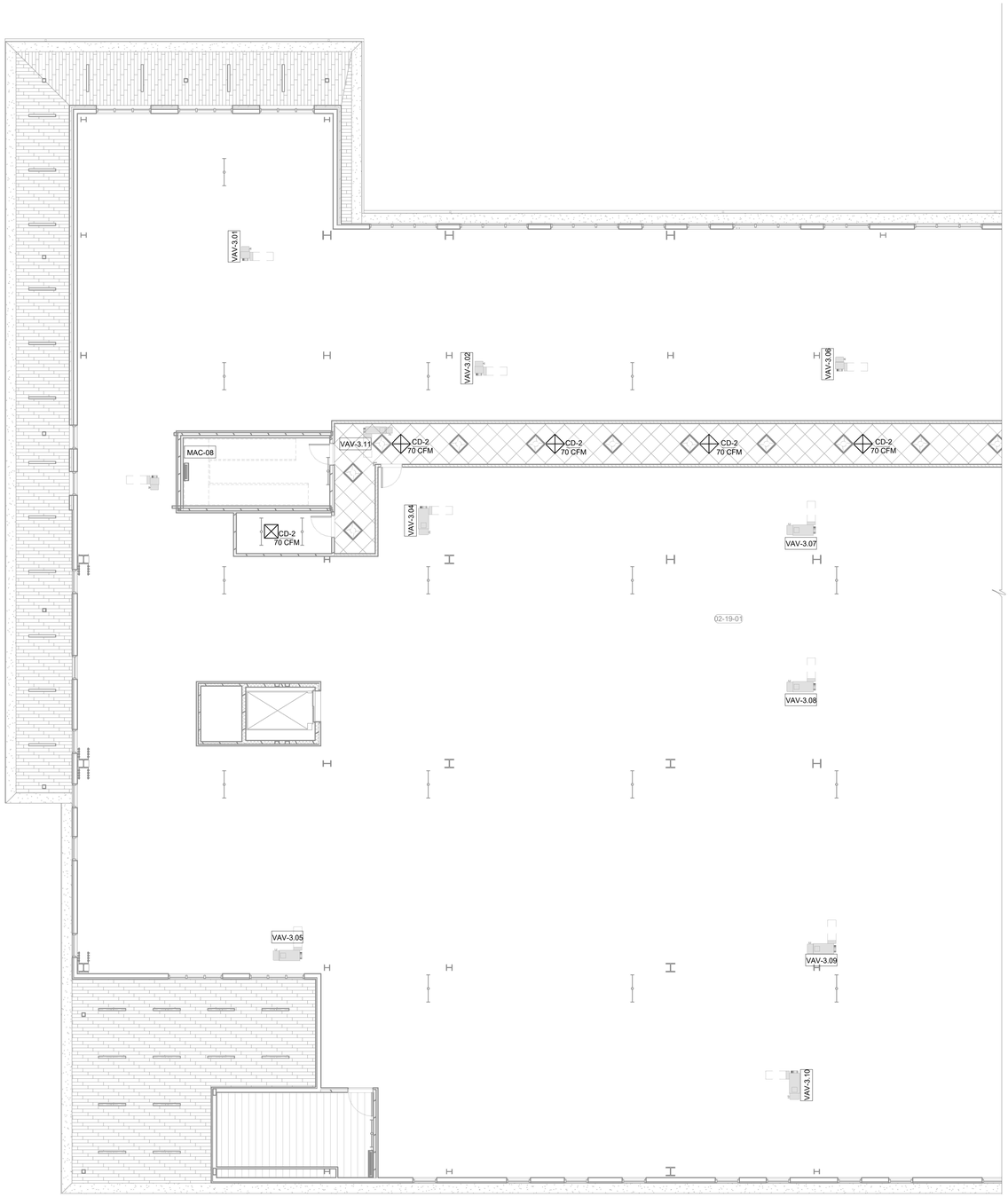
REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

M6.05

MECH CEILING PLAN LEVEL 02 SECTOR 01



PLAN NORTH

TRUE NORTH

1 ENLARGED MECHANICAL CEILING PLAN LEVEL 02 SECTOR 02

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CARL'S SIGNED

12/06/2019

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CLIENT:

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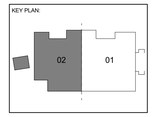
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

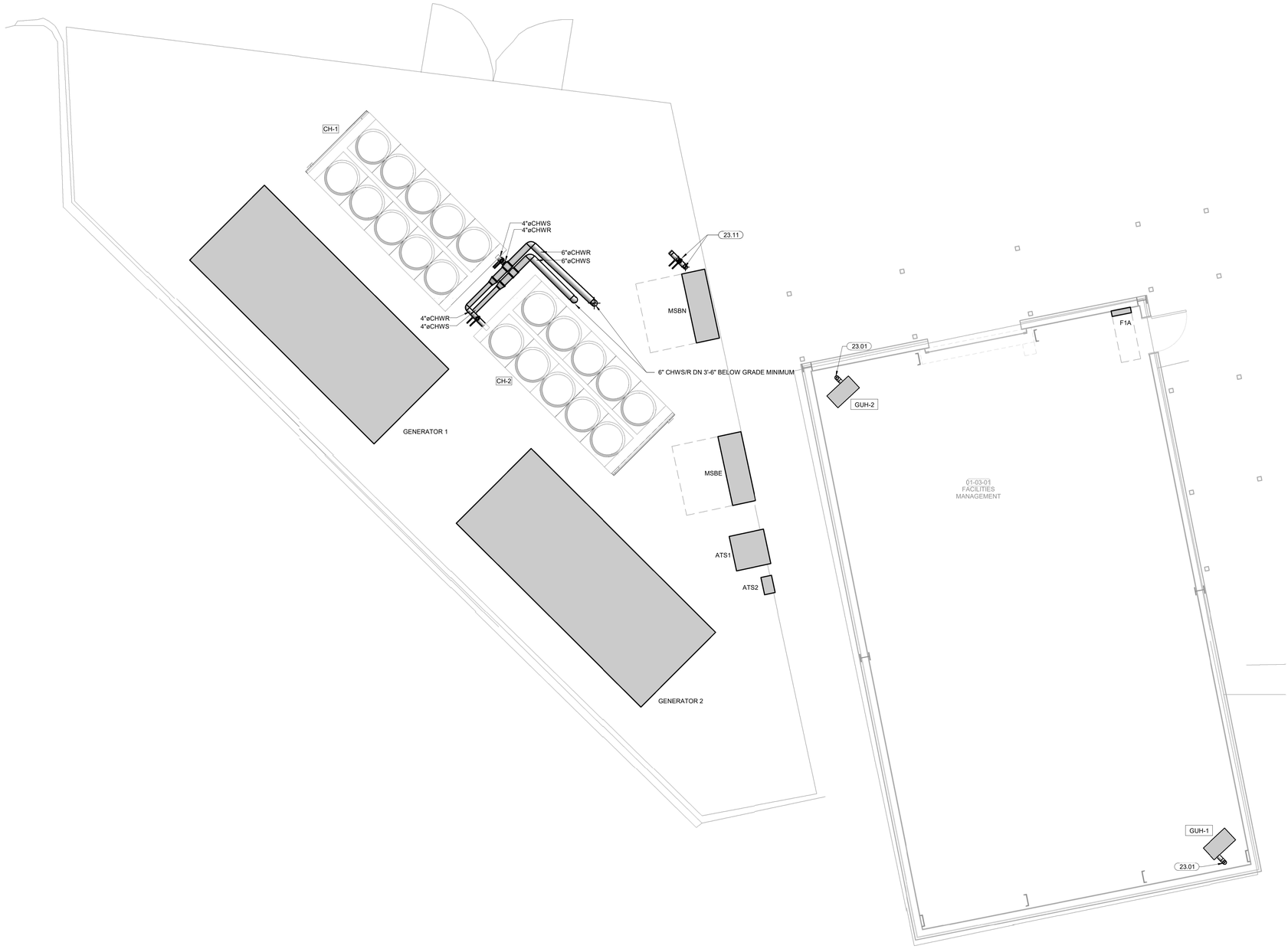
SHEET NUMBER:

M6.06

MECH CEILING PLAN LEVEL 02 SECTOR 02

KEYNOTES

23.01	MOUNT GAS UNIT HEATER AT 10'-0" AFF TO BOTTOM OF HEATER. INSTALL MFR CONCENTRIC VENT KIT THRU ROOF. SIZE AND INSTALL PER MFR INSTALLATION INSTRUCTIONS.
23.11	4" CHWR/CHWS STUP UP WITH CAP AND VALVE FOR POSSIBLE FUTURE CHILLER.



PLAN NORTH / TRUE NORTH

1 MECHANICAL YARD HYDRONIC PLAN
1/4" = 1'-0"

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CARL'S STAMP
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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

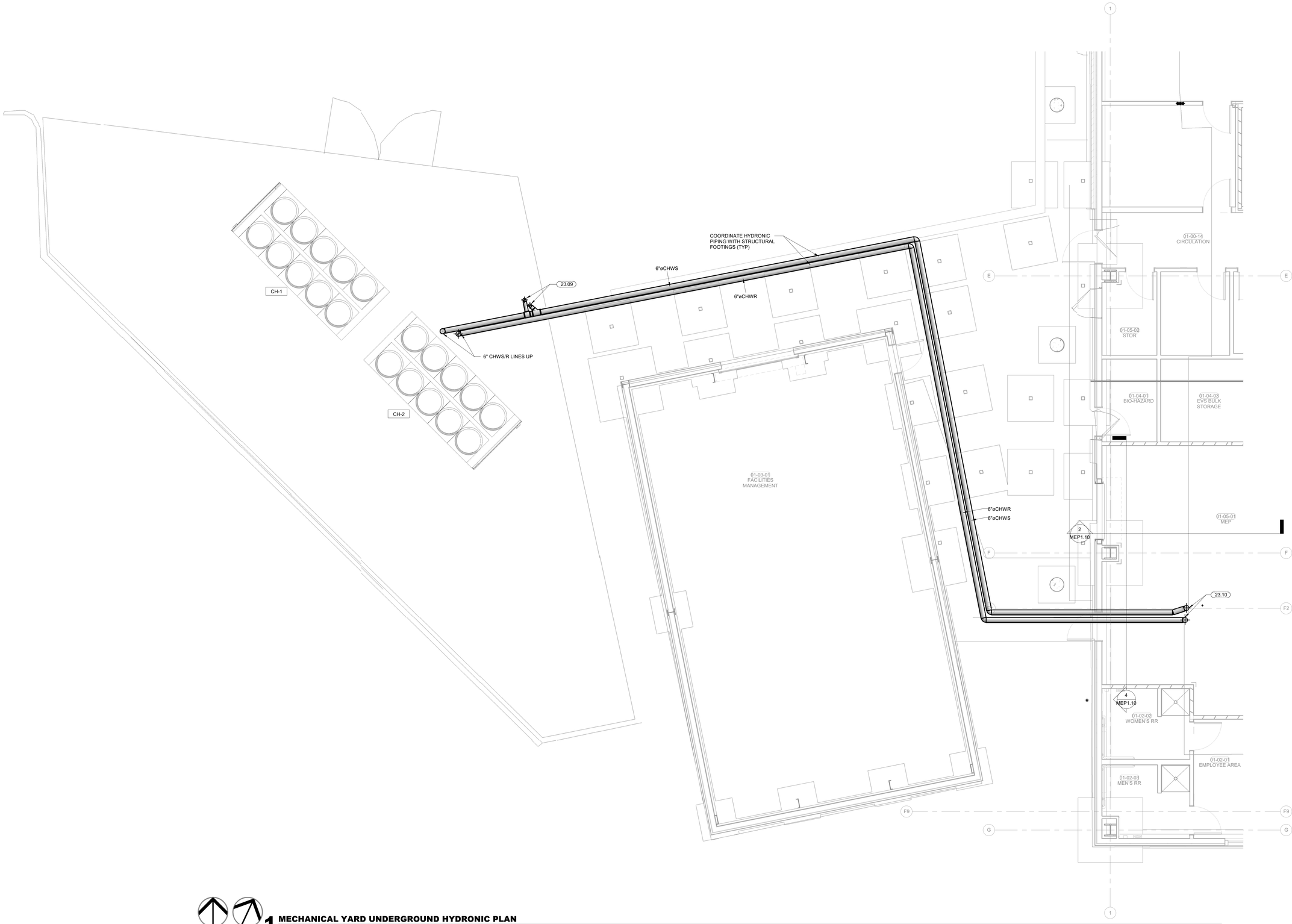
REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: M8.01
MECH YARD HYD PLAN

KEYNOTES

23.09	4" CHWS/R LINES TO STUB UP FOR POSSIBLE FUTURE CHILLER.
23.10	6" CHWS/R LINES UP THROUGH SLAB.



PLAN NORTH / TRUE NORTH

1 MECHANICAL YARD UNDERGROUND HYDRONIC PLAN
1/4" = 1'-0"

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OKLAHOMA
CARL'S SUPED
12/06/2019

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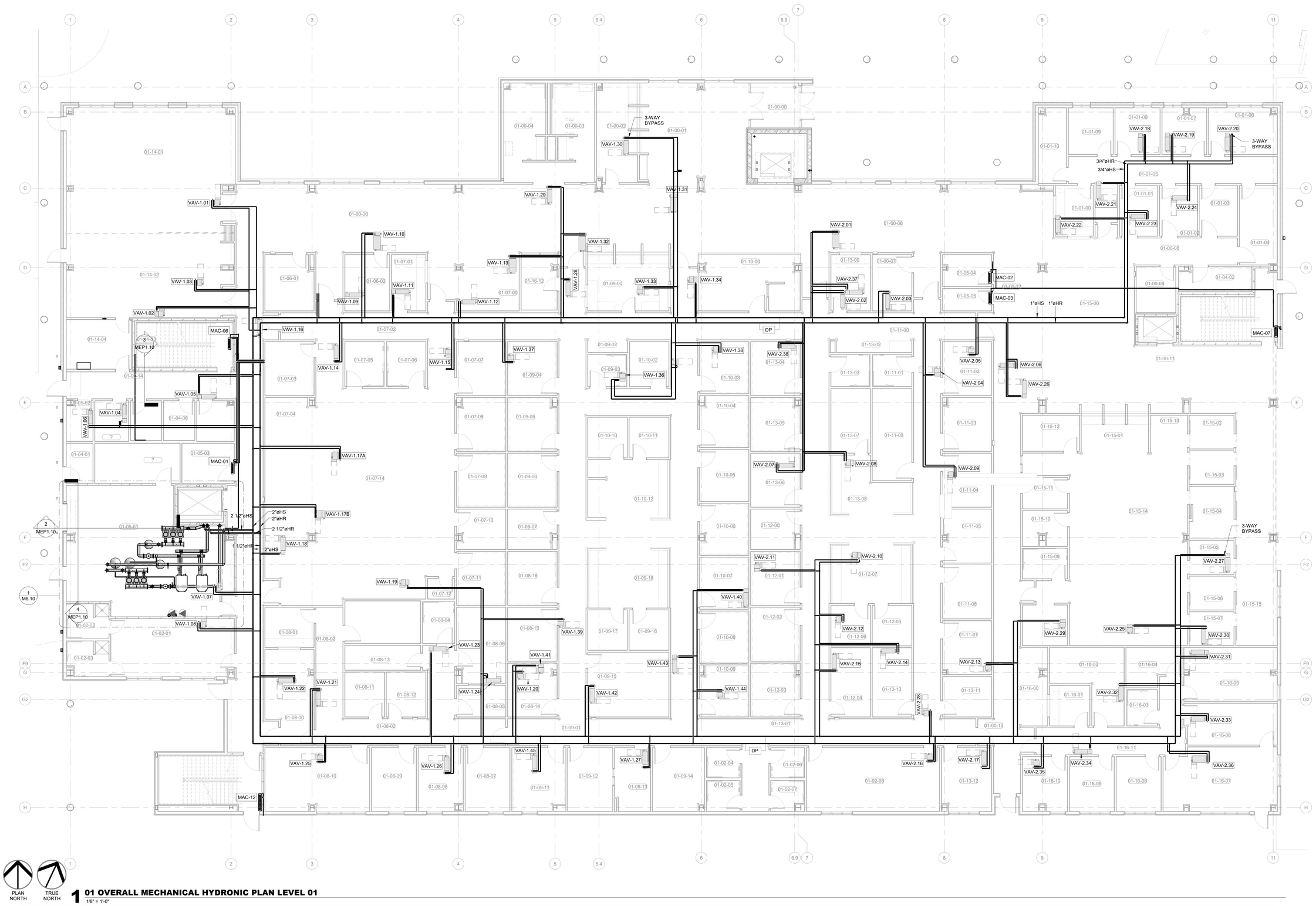
REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
M8.02

MECH YARD UG HYD PLAN



PLAN NORTH

TRUE NORTH

1 01 OVERALL MECHANICAL HYDRONIC PLAN LEVEL 01

1/8" = 1'-0"

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Shane Wells
28910
OKLAHOMA
CERTIFIED
12/06/2019

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PROJECT NO. 18068R
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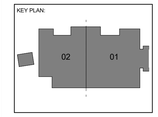
WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

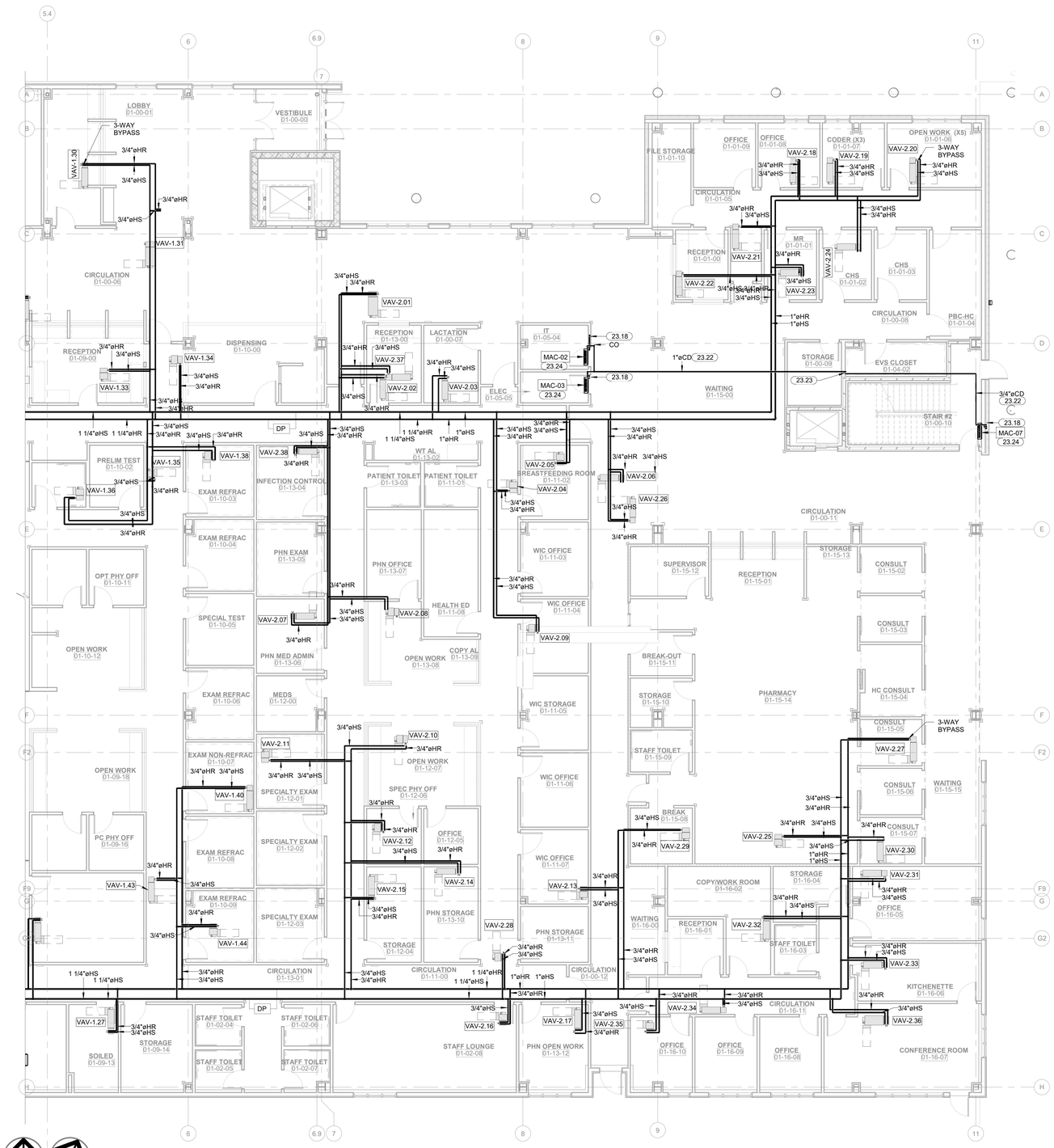
SHEET NUMBER:

M8.03

OVERALL MECH HYD PLAN LEVEL 01

KEYNOTES

23.18	REFRIGERANT LINES UP.
23.22	ROUTE PIPE ABOVE CEILING. ROUTE A MINIMUM OF 1/8" / 100FT OF PIPE.
23.23	PIPE DOWN ALONG WALL TO APPROVED DRAIN FIXTURE.
23.24	PROVIDE UNIT WITH CONDENSATE PUMP, MICRO-V BY ASPEN PUMPS OR EQUAL.



1 ENLARGED MECHANICAL HYDRONIC PLAN LEVEL 01 SECTOR 01
1/8" = 1'-0"

PLAN NORTH / TRUE NORTH

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WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:
02 01

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

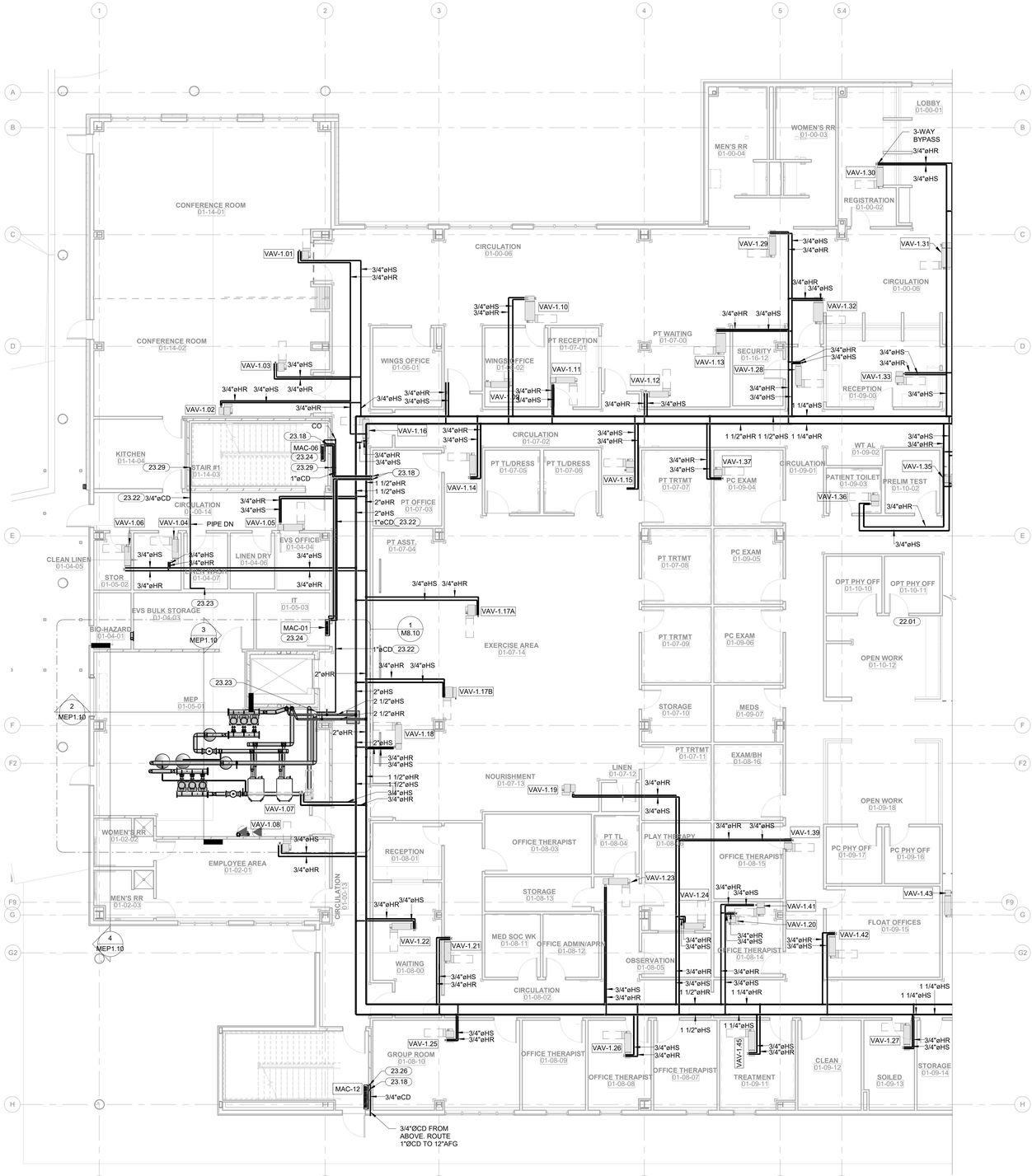
DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
M8.04

MECH HYD PLAN LEVEL 01 SECTOR 01

KEYNOTES

22.01	NEW 6" BUILDING DRAIN LINE. REFER TO CIVIL PLANS FOR CONTINUATION. 486 D.F.U.
23.18	REFRIGERANT LINES UP.
23.22	ROUTE PIPE ABOVE CEILING. ROUTE A MINIMUM OF 1/8" / 100FT OF PIPE.
23.23	PIPE DOWN ALONG WALL TO APPROVED DRAIN FIXTURE.
23.24	PROVIDE UNIT WITH CONDENSATE PUMP. MICRO-V BY ASPEN PUMPS OR EQUAL.
23.26	ROUTE CONDENSATE PIPE DN INSIDE WALL. DO NOT PROVIDE CONDENSATE PUMP FOR THIS UNIT SINCE IT DRAINS BY GRAVITY.
23.29	3/4" CONDENSATE PIPE FROM ABOVE AND DN TO ABOVE FIRST FLOOR CEILING.



1 ENLARGED MECHANICAL HYDRONIC PLAN LEVEL 01 SECTOR 02
1/8" = 1'-0"

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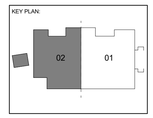
WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

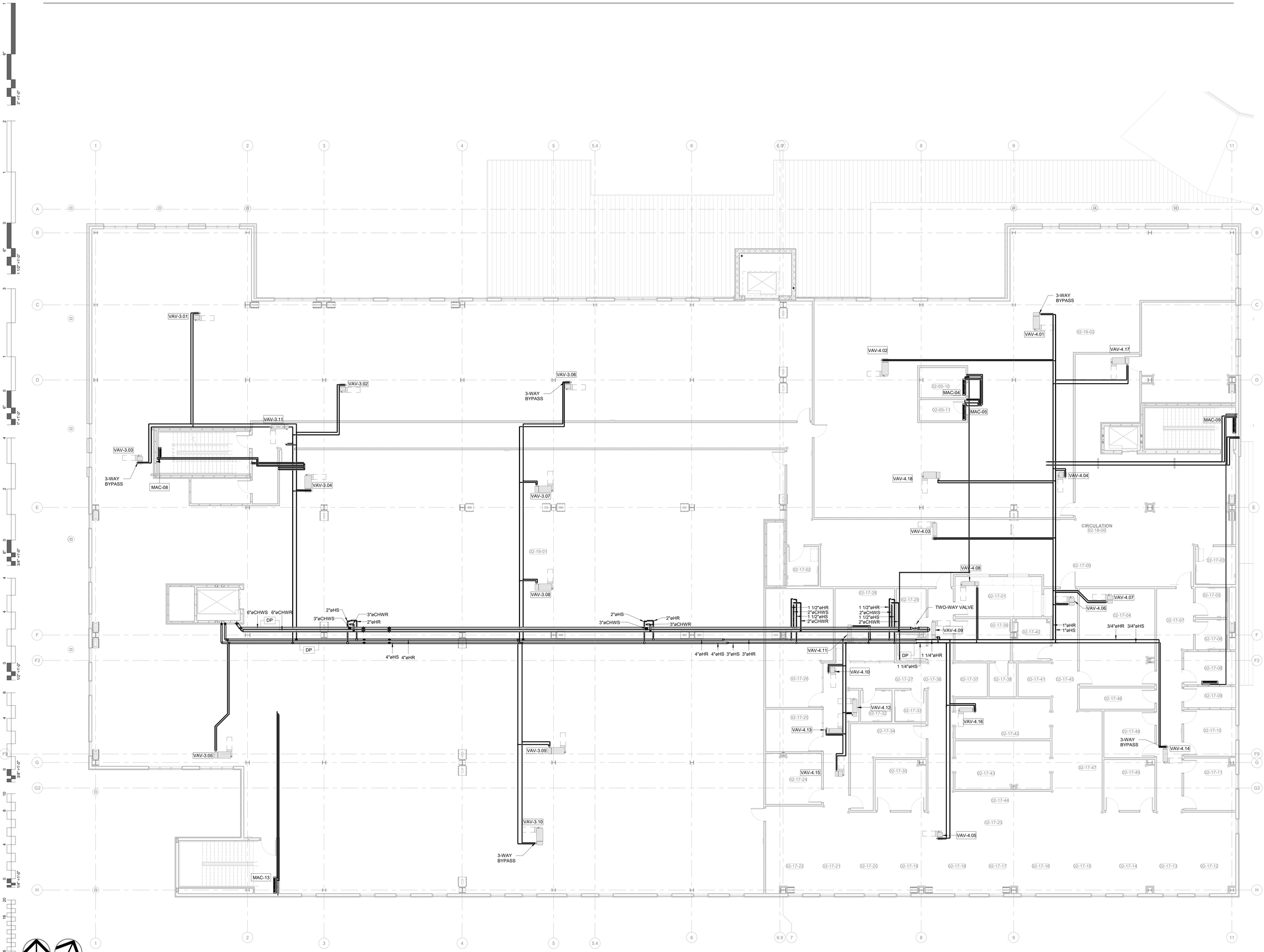
REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

M8.05

MECH HYD PLAN LEVEL 01 SECTOR 02



PLAN NORTH

TRUE NORTH

1 02 OVERALL MECHANICAL HYDRONIC PLAN LEVEL 02

1/8" = 1'-0"

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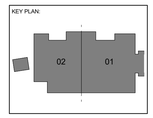
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

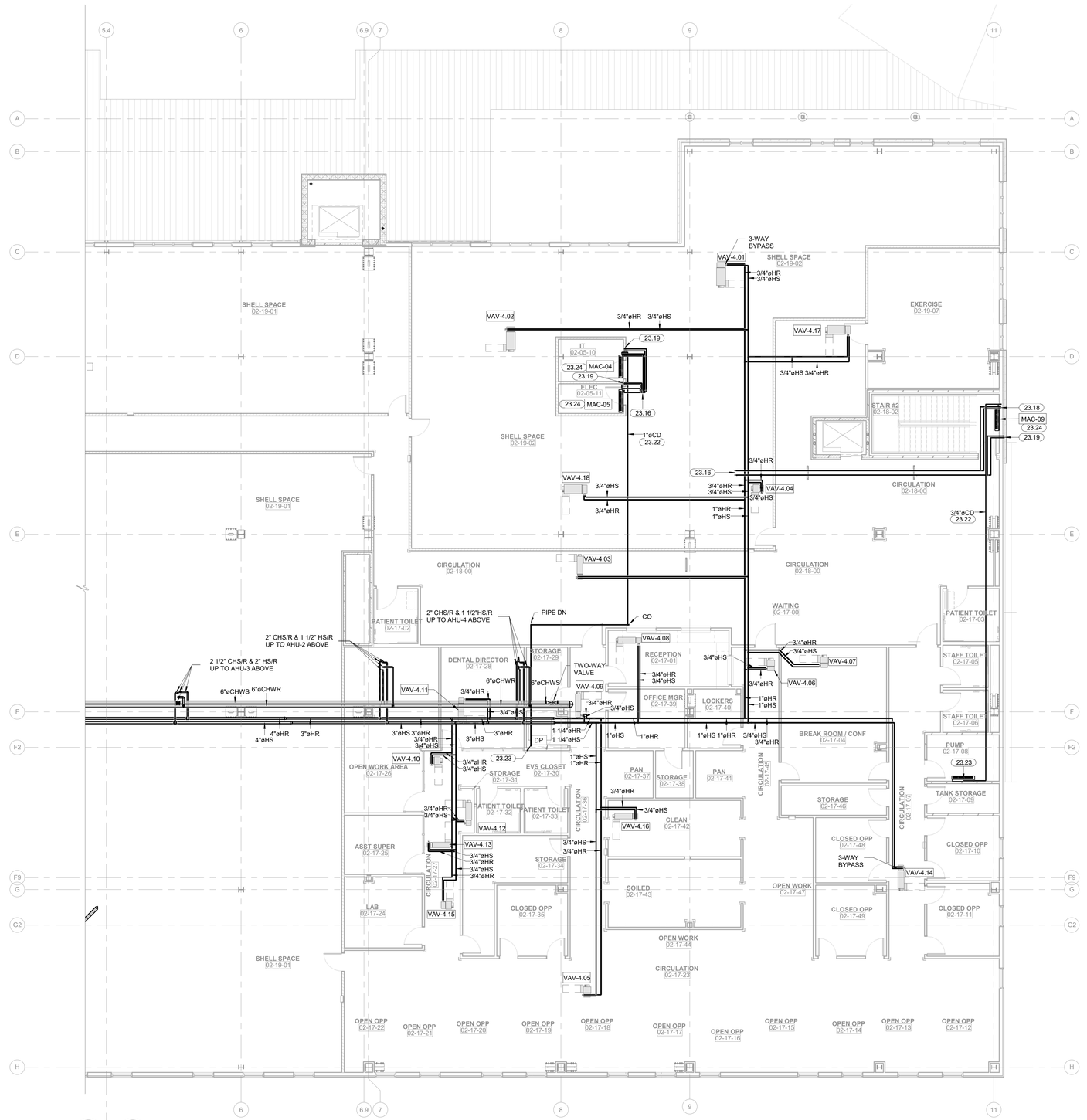
JOB NUMBER: 18-01.01

SHEET NUMBER: M8.06

OVERALL MECH HYD PLAN LEVEL 02

KEYNOTES

23.16	REFRIGERANT PIPING UP TO ROOF THROUGH GOOSENECK TO CONDENSING UNITS.
23.18	REFRIGERANT LINES UP.
23.19	REFRIGERANT LINES FROM BELOW.
23.22	ROUTE PIPE ABOVE CEILING. ROUTE A MINIMUM OF 1/8" / 100FT OF PIPE.
23.23	PIPE DOWN ALONG WALL TO APPROVED DRAIN FIXTURE.
23.24	PROVIDE UNIT WITH CONDENSATE PUMP, MICRO-V BY ASPEN PUMPS OR EQUAL.



PLAN NORTH / TRUE NORTH

1 ENLARGED MECHANICAL HYDRONIC PLAN LEVEL 02 SECTOR 01

1/8" = 1'-0"

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LICENSED PROFESSIONAL ENGINEER — Shane Wells 28910 — OKLAHOMA — CERTIFIED

12/06/2019

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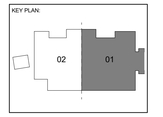
WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

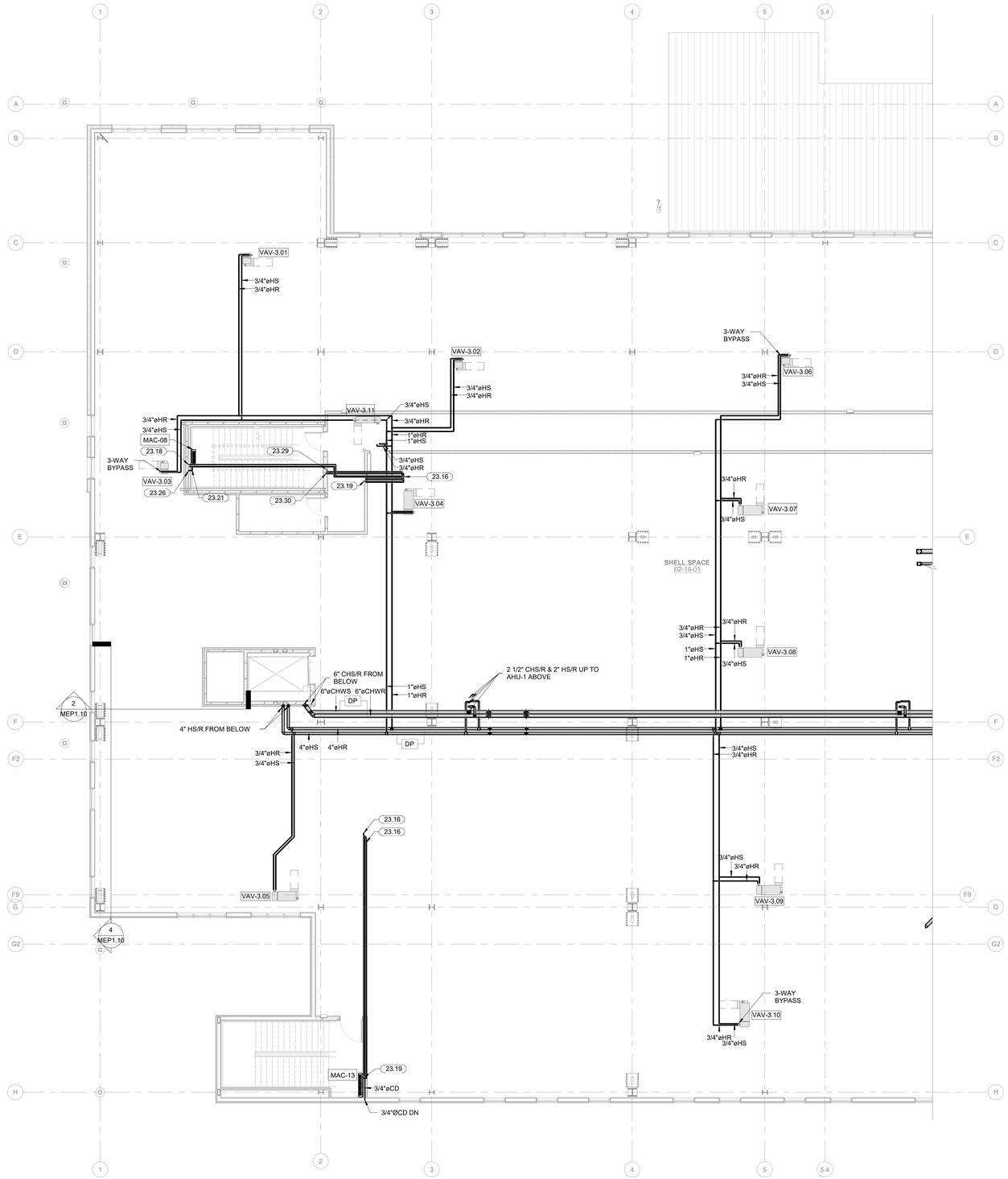
SHEET NUMBER:

M8.07

MECH HYD PLAN LEVEL 02 SECTOR 01

KEYNOTES

23.16	REFRIGERANT PIPING UP TO ROOF THROUGH GOOSENECK TO CONDENSING UNITS.
23.18	REFRIGERANT LINES UP.
23.19	REFRIGERANT LINES FROM BELOW.
23.21	TEE UP AND EXTEND AT 0'-6". LEAVE OPEN TO ATMOSPHERE.
23.26	ROUTE CONDENSATE PIPE DN INSIDE WALL. DO NOT PROVIDE CONDENSATE PUMP FOR THIS UNIT SINCE IT DRAINS BY GRAVITY.
23.29	3/4" CONDENSATE PIPE FROM ABOVE AND DN TO ABOVE FIRST FLOOR CEILING.
23.30	REFRIGERANT LINES FROM MCA-10 ABOVE.



1 **ENLARGED MECHANICAL HYDRONIC PLAN LEVEL 02 SECTOR 02**
1/8" = 1'-0"

PLAN NORTH

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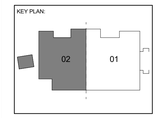
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:
BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: M8.08

MECH HYD PLAN LEVEL 02 SECTOR 02

KEYNOTES

23.17	REFRIGERANT PIPING TO BE ROUTED DN IN GOOSENECK THROUGH ROOF FROM ROOFTOP CONDENSING UNITS TO INDOOR AIR HANDLER. REFER TO DETAIL 2-M2.03.
23.20	REFRIGERANT LINES DN TO BELOW ROOF DECK.
23.21	TEE UP AND EXTEND AT 0'-6". LEAVE OPEN TO ATMOSPHERE.
23.26	ROUTE CONDENSATE PIPE DN INSIDE WALL. DO NOT PROVIDE CONDENSATE PUMP FOR THIS UNIT SINCE IT DRAINS BY GRAVITY.

ROOF CAP
23.17
MCU-03
MCU-02
MCU-05
MCU-04
23.17
MCU-09
MCU-07
23.21
3/4"øCD
23.26
23.20
23.17
MCU-06
MCU-08
MCU-01
MCU-10
AHU-1
AHU-3
AHU-2
AHU-4
23.17
MCU-12
MCU-13
EF-8
EF-7

1 03 OVERALL MECHANICAL HYDRONIC MEZZANINE PLAN
1/8" = 1'-0"

PLAN NORTH
TRUE NORTH

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SEPT. 6, 1839

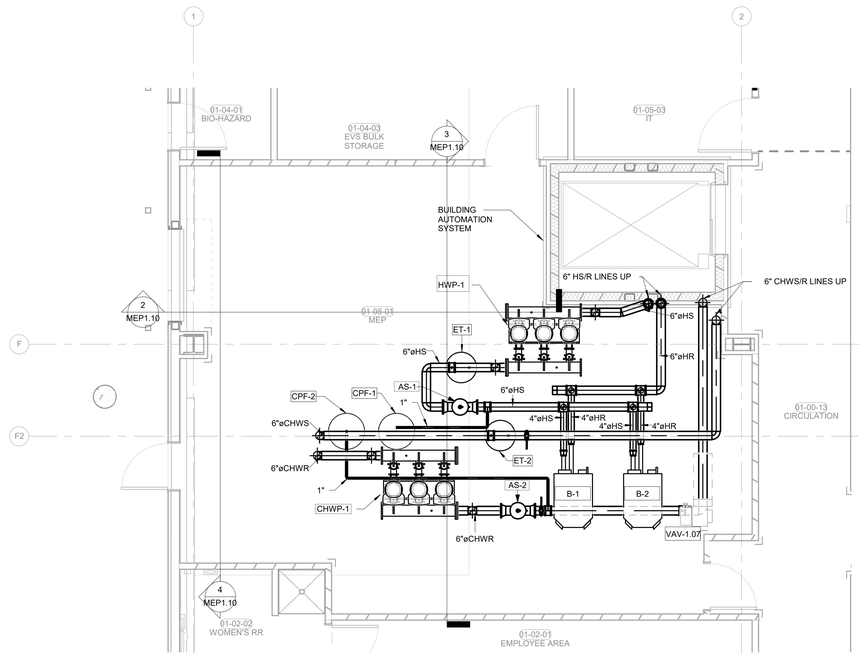
WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: M8.09
OVERALL MECH HYD ROOF PLAN



PLAN NORTH

TRUE NORTH

1 ENLARGED MECHANICAL ROOM HYDRONIC PLAN

1/4" = 1'-0"

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12/06/2019

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

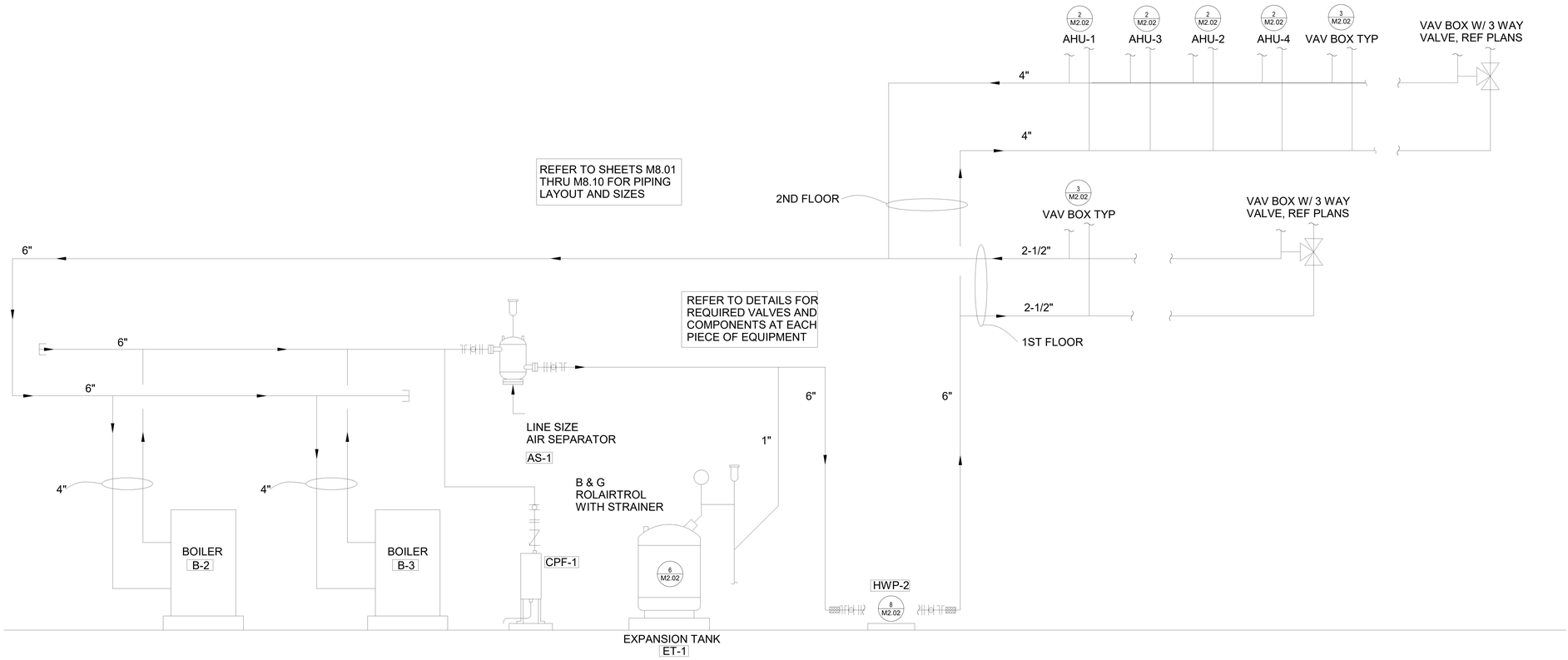
REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

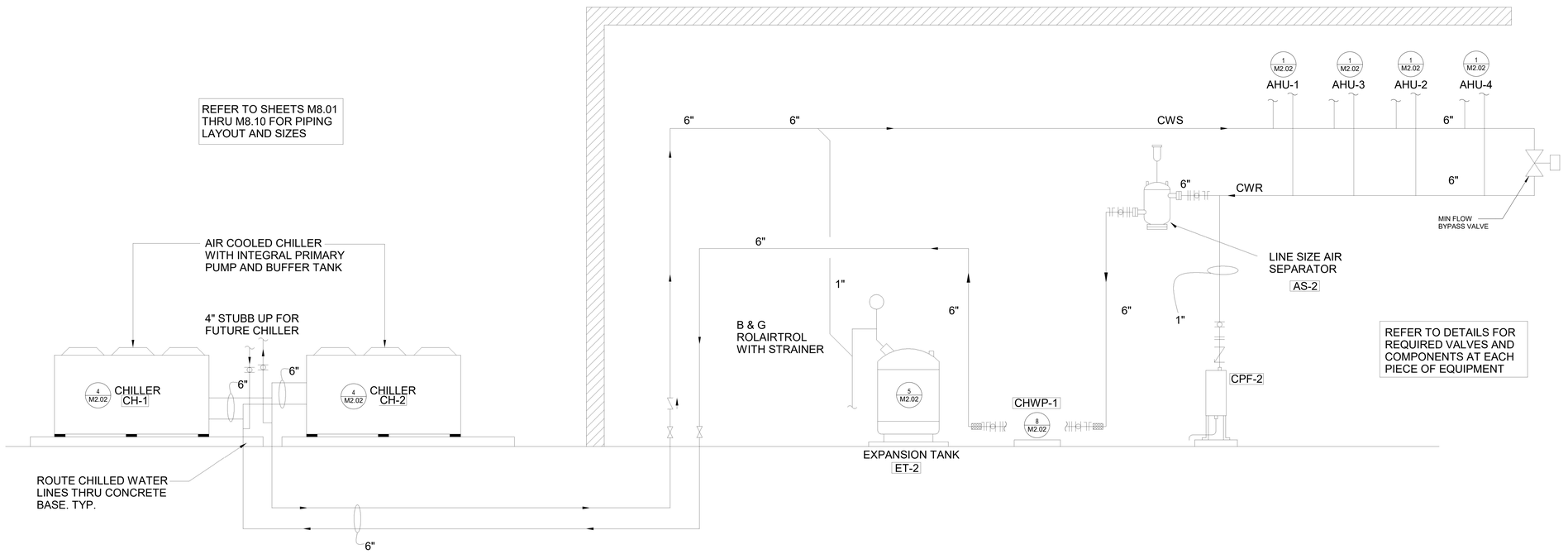
SHEET NUMBER:

M8.10

ENLARGED MECH. ROOM HYDRONIC PLAN



2 HEATING WATER SYSTEM PIPING DIAGRAM
N.T.S



1 CHILLED WATER SYSTEM PIPING DIAGRAM
N.T.S

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SEPT. 6, 1839

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STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: M8.11

HYDRONIC PIPING DIAGRAMS

Sequence of Operation – Airside Optimization

System Operating Modes: The Building Automation System (BAS) shall include a user-
adjustable time-of-day schedule to define when the various areas of the facility are expected to be occupied versus unoccupied. Then, based on current zone conditions, the BAS determines the current system operating mode.

Occupied Heat/Cool
During the Occupied Mode, each VAV terminal unit varies primary airflow, cycles a terminal fan (if equipped), and/or modulates (or stages) a local or remote heat source (if equipped) to maintain zone temperature at the occupied setpoint (cooling or heating). Meanwhile, the air-handling unit (AHU) modulates the supply fan and return fan (if equipped) to deliver the required airflow to the zones, positions the outdoor-air damper to bring in required amount of ventilation, modulates the central relief damper (or relief fan) to maintain building pressure at the desired setpoint, and modulates the chilled-water valve, modulates (or stages) the source of heat, and/or enables the airside economizer to discharge air at the desired setpoint.

Unoccupied Heat/Cool
During the Unoccupied Mode, each VAV terminal unit varies primary airflow, cycles a terminal fan (if equipped), and/or modulates (or stages) a local or remote heat source (if equipped) to maintain zone temperature at the unoccupied setpoint (cooling or heating). Meanwhile, the AHU shuts off, unless a zone requires unoccupied cooling or heating. If needed to operate, the AHU modulates the supply fan and return fan (if equipped) to deliver the required airflow to the zones, closes the outdoor-air damper, closes the central relief damper (or shuts off the central relief fan), and modulates the chilled-water valve or modulates (or stages) the source of heat to discharge air at the desired setpoint.

Morning Warm-up/Pre-cool
During the Morning Warm-up/Pre-cool Mode, each VAV terminal unit varies primary airflow, cycles a terminal fan (if equipped), and/or modulates (or stages) a local or remote heat source (if equipped) to raise/lower the zone temperature to the occupied setpoint (heating or cooling), and then closes. Meanwhile, the AHU modulates the supply fan and return fan (if equipped) to deliver the required airflow to the zones, closes the outdoor-air damper, closes the central relief damper (or shuts off the central relief fan), and modulates the chilled-water valve or modulates (or stages) the source of heat to discharge air at the desired setpoint.
For a cold
-air VAV system, if the return air dew point temperature is higher than 55°F (adj) during Morning Pre-cool Mode, the discharge-air temperature setpoint will be reset every 10 minutes so that it is only 2°F (adj) below the current return air dew point temperature .
Optimized System
-Level Control Sequences: The BAS shall perform the following optimized system-level control strategies:

Optimal Start
The BAS shall initiate Optimal Start mode such that the AHU is started and VAV boxes are enabled to allow the zone temperature to reach the occupied heating or cooling setpoint prior to scheduled occupancy. The system shall wait as long as possible before starting, so that the temperature in each zone reaches the occupied setpoint just in time for scheduled occupancy.

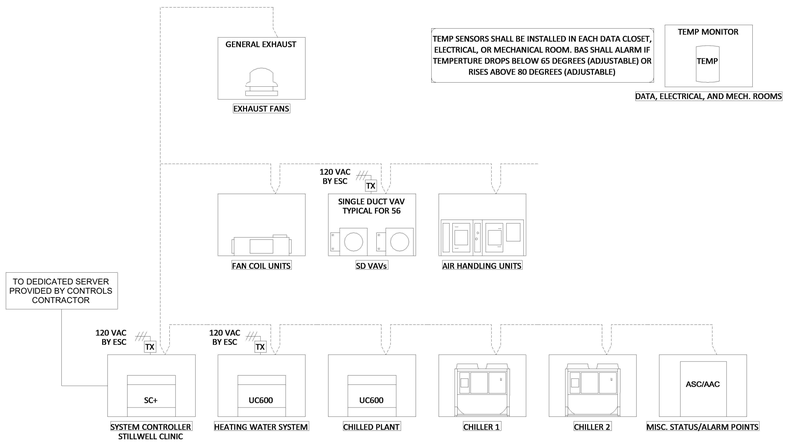
Optimal Stop
The BAS shall initiate Optimal Stop mode such that cooling or heating is disabled so that the zone temperature does not drift beyond the occupied standby setpoint by the end of the scheduled occupancy period. The AHU supply fan shall continue operating, and ventilation control shall continue, through the end of the scheduled occupancy period.

Unoccupied Economizing (Night Purge)
Between 4:00 AM (adj.) and 6:00 AM (adj), the BAS shall initiate Unoccupied Economizing mode if the current zone temperature is at least 1°F warmer than the occupied cooling setpoint and the outdoor dry-bulb temperature is more than 15°F (adj) cooler than the current zone temperature. When initiated, the AHU is started (OA damper fully open, chilled-water valve closed) and VAV boxes are enabled to allow the zone temperature to cool to the occupied cooling setpoint.

Optimized Control of Supply Duct Static Pressure (Fan-Pressure Optimization)
At a frequency of once every 10 minutes, the BAS shall monitor the damper position of all VAV terminal units. The BAS shall calculate a new supply fan duct static pressure setpoint based on the position of the furthest-open VAV damper, and send this newly-calculated setpoint to the AHU controller. When any VAV damper is more than 75% (adj) open, the supply fan duct static pressure setpoint shall be reset upward by 5% until no damper is more than 75% (adj) open or the static pressure setpoint has reset to the maximum setting. When all VAV dampers are less than 65% (adj) open, the supply fan duct static pressure setpoint shall be reset downward by 5% until at least one damper is more than 65% (adj) open or the static pressure setpoint has reset to the minimum setting.

Optimized Control of Supply Air Temperature (SAT Reset)
At a frequency of once every 10 minutes, the BAS shall monitor the outdoor dry-bulb temperature, as well as the zone temperature and damper position of all VAV terminal units. The BAS shall calculate a new SAT setpoint based on current outdoor air (OA) temperature, and send this newly-calculated SAT setpoint to the AHU controller. When the OA temperature is warmer than 65°F (adj), the SAT setpoint shall be 55°F (adj). When the OA temperature is colder than 55°F (adj), the SAT setpoint shall be 60°F (adj). When the OA temperature is between 55°F (adj) and 65°F (adj), the SAT setpoint shall be reset proportionally between 55°F (adj) and 60°F (adj). If at least two (adj) zones have both 1) a VAV damper that is more than 75% open, and 2) a current zone temperature that is higher than the current cooling setpoint, then the SAT setpoint shall return to 55°F (adj) If the outdoor dew point is higher than 60°F (adj), this SAT Reset sequence shall be suspended and the SAT setpoint shall be reset to 55°F (adj) until outdoor dew point drops below 57°F (adj).

Optimized Control of Ventilation (Ventilation Optimization)
The actual outdoor airflow shall be sensed at the outdoor air intake of the AHU, and controlled to an airflow setpoint determined according to ASHRAE Standard 62.1. When the BAS time-of-day schedule indicates that a zone is unoccupied, the required outdoor airflow for that zone shall be zero. When the schedule indicates that a zone is occupied, the required outdoor airflow for that zone shall equal the design outdoor airflow, unless the zone is equipped with occupancy sensor and/or a carbon dioxide (CO 2) sensor, or
uses a time-of-day ventilation schedule, to reduce the required outdoor airflow during periods of partial occupancy. The required outdoor-air fraction (current required outdoor airflow divided by the current primary airflow) shall be continuously calculated for each zone (VAV terminal unit). At a frequency of once every 10 minutes, the BAS shall gather this data from all VAV terminal units, calculate the minimum required outdoor airflow for the system according to ASHRAE 62.1, and send this newly-calculated outdoor airflow setpoint to the AHU controller.



1 CONTROLS - RISER AND MAIN SEQUENCE OF OPERATIONS
N.T.S.

Sequence of Operations
Chiller Water Plant
System General Description:
The chilled water system consists of the following:
Two (2) chillers, configured as: one (1) lead and one (1) lag
Three (3) chilled water pumps: one (1) lead, one (1) lag and one (1) standby
One (1) chilled water isolation valve per chiller
Chilled water bypass valve
The Building Automation System
(BAS) controller provides stand-alone control or
control from a higher level BAS and provides lead/lag/standby control for the chilled water pumps and controls the chilled water bypass valve to maintain minimum flow through operating chillers.

Chilled Water Plant Enable
The chilled water plant will be enabled in response to a need for chilled water from any system load as indicated by any chilled water valve being commanded to more than 50% open for more than 5 minutes.

Startup – Soft Start
System Soft Start - The chiller plant control system will initiate a "soft start" mode whenever the system chilled water temperature exceeds the specified chilled water system setpoint by 20°F (adj) at system start-up. The chiller plant control application will add cooling capacity during soft start mode only if return water temperature is not declining at a rate of at least 0.5°F (adj) per minute. This prevents the unnecessary operation of chillers and limits system electrical demand during chilled water loop pull down.

Chiller Sequencing
When the chilled water system is enabled the chiller plant control system will send an Enable signal to the lead chiller and chilled water pumping control. The chiller plant control system will initiate the start of the next chiller in the sequence whenever the chilled water load, as determined by the system supply water temperature, is not met for 20 (adj) minutes. The chiller plant control system will initiate the shutdown of the next chiller in the sequence whenever excess chilled water capacity exists, as determined by percent run load amps, for 20 (adj) minutes.

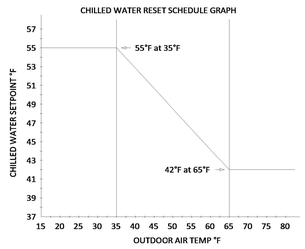
Chiller Rotation
Chiller rotation will be initiated based on an operator editable day of week/time, fixed number of days, number of run hours, or by the cycling of a binary input. Chiller cycling caused by normal system load fluctuations will cause the chillers to change rotation sequence or at the operator's option chillers may be forced into the rotation sequence at the time of sequence change.

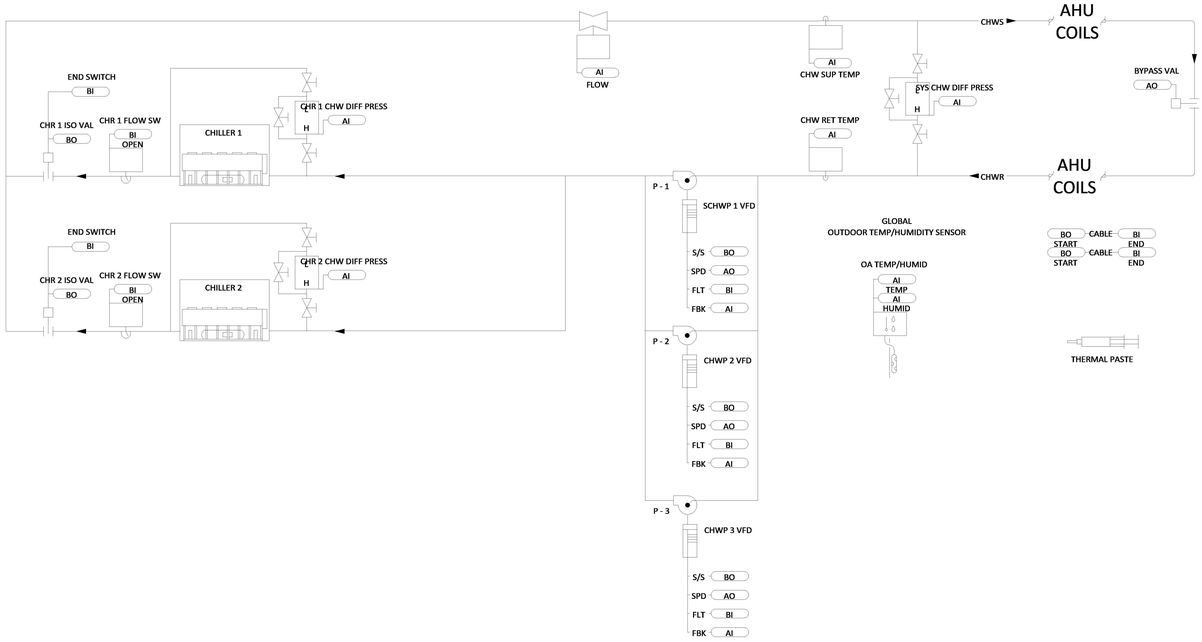
Chiller Setpoint Control
The chiller plant control system will control individual chiller setpoints to maintain the system supply water temperature setpoint.

Failure Recovery
Upon sensing a chiller failure the chiller plant control system will shut down the failed chiller immediately and initiate the start of the next chiller in the rotation sequence. In the event of a power loss, the chiller plant control application will compare the number of chillers running to the number of chillers running prior to the power loss. The application will add chillers one at a time, skipping normal delay timers, until the chillers running equals the number of chillers running prior to the power loss.

Chilled Water Supply Temp Reset:
The chilled water supply temperature setpoint default shall be
42 deg. F. (adj.)
This setpoint shall be reset based on outside air dry bulb temperature. When the outside air dry bulb is 65 deg. F or greater, the chilled water supply temperature shall be 42 deg. F. When the outside air dry bulb is 55 deg. F or less, the chilled water supply temperature shall be 55 deg. F. When the outside air dry bulb temperature is between 65 and 55 deg. F the chilled water supply temperature setpoint shall be linearly reset between 42 and 55 deg. F.
If at any time any AHU chilled water valve is more than 97% open, this reset shall be disabled and the chilled water supply temperature setpoint shall revert to default.
If the system global outside air temperature sensor is in fault, an alarm shall be annunciated at the BAS and the chilled water supply temperature setpoint shall revert to default.
Chilled Water Pumping System Enable/Disable:
The chilled water pumping system shall be enabled on a contact closure from any system chiller. When enabled, the BAS controller shall open the isolation valve and starts the lead chilled water pump. As additional chillers make chilled water requests, the next pump in the sequence shall be enabled and chiller isolation valves opened.
When the chilled water pumping system is disabled
, the chilled water pumps shall be off
and the isolation valves shall be closed unless requested by one of the chillers. The isolation valve for the first chiller in the sequence shall be an exception to this. If the plant is disabled, the isolation valve for that chiller shall be opened so that the pump can start immediately when the plant is enabled.

Chilled Water Pump Control:
When enabled as described above, the BAS controller shall start the lead chilled water pump through a contact closure of the pumps Variable Frequency Drive (VFD) drive run-enable contacts.
The BAS controller shall monitor the chilled water system differential pressure sensor. When the pump VFD is enabled, the BAS controller shall control the analog speed signal that is sent to the pump VFD to maintain the chilled water differential pressure setpoint which is reset as described in the Pump Optimzation section of this sequence. The default setpoint shall be 15 psig (adj.).
When the running pump(s)' speed is controlled to 100% (60 hz)and the system differential pressure setpoint is not maintained for 5 minutes, the next available lag pump shall start. When multiple pumps are running to maintain setpoint, their speed shall be modulated in unison.
If more than 1 pump is running and their speed is over 75% **, the last pump most recently started shall be disabled, subject to a minimum on/off timer of 10 minutes (adj.).
** this speed shall be adjusted by the BAS Contractor according to the pump curves provided by the pump manufacturer. The speed shall be chosen which according to the pump curves, indicates the resulting running pump(s) would be able to maintain the current flow and pressure at 100% as the speed
If a pump is commanded on and has a proof status (through the VFD) for more than 30 seconds (adj.), the BAS controller shall cancel the start command to that pump, annunciate a chilled water pump failure alarm to the BAS, and start the next pump in the sequence.
Once the problem has been corrected, the operator shall be able to clear the alarm failure from the BAS controller from the BAS interface or by manually overriding the pump on momentarily.
Chilled Water Pump Lead/Lag Rotation
The chilled water pump lead/lag sequence shall be rotated on a weekly schedule. The sequence shall be based on calculated run time with the pump having the least run time as lead, the pump with the next lowest run time will be the second in the sequence and so on. An operator shall be able to manually change the lead/lag sequence from the BAS.
System Differential Setpoint Optimization:
The BAS shall continually monitor the position of all valves in the chilled water system. From the BAS interface an operator shall be able to exclude any valve for consideration in this optimization.
At chilled water system startup
, the differential pressure setpoint is 100% of the
maximum pressure setpoint. When all valves are less than 85% open, the differential pressure setpoint shall be lowered by 0.1 psig (adj.). This occurs every 5 minutes until at least one valve is more than 85% open, or if the setpoint is equal to the minimum differential pressure setpoint, or if the pump VFD's are at a minimum speed setting (22 Hz).
When any valve is more than
95% open, the differential pressure setpoint shall
increases by 0.1 psig (adj.). This occurs every 5 minutes until no valve is more than 95% open, or if the differential pressure setpoint has risen to the system's maximum setting, or if the pump VFD's are at the maximum setting (60 Hz).
If the system differential pressure sensor is in fault, an alarm shall be annunciated at the BAS and the differential setpoint shall revert to default.
Chiller Isolation Valves:
Chiller isolation valves shall prevent the flow of water through non-operating chillers. Chiller chilled water pump operation will be coordinated with the isolation valve operation.
Bypass Valve Control:
The BAS controller shall monitor the evaporator differential pressure of the chillers. When the pressure of an operating chiller indicates a low pressure (flow), the BAS controller shall control the analog signal that is sent to the bypass valve to maintain minimum pressure (flow) on all operating chillers.





2 CONTROLS- CHILLED PLANT
N.T.S.

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WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

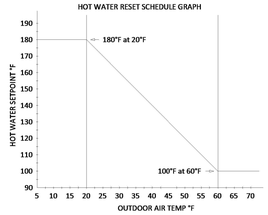
PROJECT PHASE:
BID PACKAGE 02

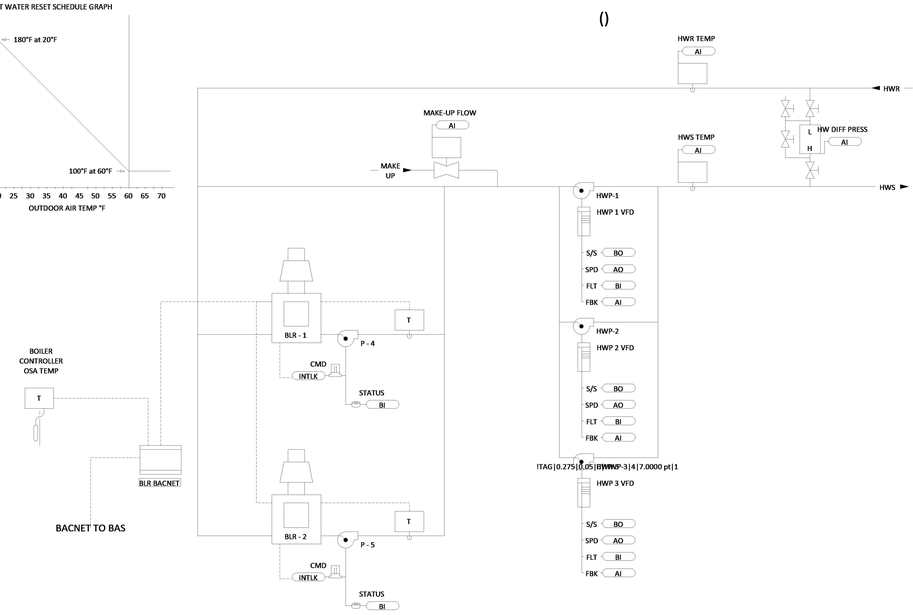
REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: M9.01
MECHANICAL CONTROLS

Sequence of Operations
Heating Water System
Hot Water Plant:
The hot water system consists of multiple boilers with factory BACnet interfaces, and associated pumps. The Building Automation System (BAS) controller shall control of the supply of heating water at a temperature setpoint (adj.) by communicating setpoints and enable/disable commands to the boilers via their BACnet interface, and directly controlling the secondary system pumps.
Heating System Enable/Disable:
The heating system shall be enabled when the outdoor air temperature is below 60.0 deg. F (adj.) or any system AHU heating valve is commanded more than 50% open for 5 minutes, or when at least 3 VAV heating valves are commanded more than 50% open for 5 minutes. When enabled, the BAS controller shall start the lead hot water distribution pump, the lead boiler circulating pump, and enable the lead boiler. The boiler factory control shall operate the boiler to maintain its local supply setpoint.
Heating shall be disabled when the outdoor air temperature is above
65.0 deg. F (adj.)
and no hot water valve is commanded 50% or more open. When heating is disabled, the hot water pumps and boilers shall be commanded to OFF.
Boiler Control:
Boilers will be controlled by their factory controller including lead/lag, rotation, and firing based on enable/disable and setpoints communicated to the boiler controllers via their factory BACnet interface from the BAS.
Hot Water Reset:
The hot water supply temperature setpoint shall be linearly reset from 100.0 deg. F (adj.) to 180.0 deg. F (adj.) as the outside air temperature falls from 60.0 deg. F (adj.) to 20.0 deg. F (adj.) per the provided hot water reset schedule graph.
Hot Water Distribution Pump Start/Stop:
The BAS controller shall start a hot water pump through a contact closure of the pump's variable frequency drive (VFD) run-enable contacts.
Hot Water Distribution Pump Status:
The BAS controller shall detect hot water pump run status by comparing the VFD speed feedback to the commanded speed and monitoring the VFD fault contacts.
Hot Water Distribution Pump Lead/Lag:
The hot water pump lead/lag sequence shall be based on a weekly schedule. From the BAS controller's optional Tracer™ TD7 Color Touch Screen Display or a BAS workstation, an operator shall be able to manually change the lead/lag sequence.
If the lead pump speed falls below
40% (adj.) for five minutes (adj.) the lag pump shall
be disabled.
Hot Water Distribution Pump Failure:
If the lead start/stop relay is enabled and the current switch status is off for more than 30 seconds (adj.), the BAS controller shall annunciate a hot water pump failure alarm to the BAS workstation and starts the lag pump. When a pump failure exists, lead/lag automation shall be disabled and the currently running pump becomes the lead pump. Once the problem has been corrected, the operator shall be able to clear the alarm failure from the BAS controller or BAS workstation. This action shall re-enable the lead/lag sequence.
Hot Water Distribution Pump Speed:
The BAS controller shall monitor the heating water system differential pressure sensor. When the pump VFD is enabled, the BAS controller shall control the analog speed signal that is sent to the pump VFD to maintain the heating water differential pressure setpoint which is reset as described in the Pump Optimization section of this sequence. The default setpoint shall be 15 psig (adj.).
When the running pump(s)' speed is controlled to 100% (60 hz)and the system differential pressure setpoint is not maintained for 5 minutes, the next available lag pump shall start. When multiple pumps are running to maintain setpoint, their speed shall be modulated in unison.
If more than 1 pump is running and their speed is over 75% **, the last pump most recently started shall be disabled, subject to a minimum on/off timer of 10 minutes (adj.).
** this speed shall be adjusted by the BAS Contractor according to the pump curves provided by the pump manufacturer. The speed shall be chosen which according to the pump curves, indicates the resulting running pump(s) would be able to maintain the current flow and pressure at 90% or less speed.
If a pump is commanded on and fails to prove status
(through the VFD) for more than 30
seconds (adj.), the BAS controller shall cancel the start command to that pump, annunciate a chilled water pump failure alarm to the BAS, and start the next pump in the sequence.
Once the problem has been corrected, the operator shall be able to clear the alarm failure from the BAS controller from the BAS interface or by manually overriding the pump on momentarily.
This shall re-enable the pumps participation in the lead/lag sequence.
Pump Optimization:
The BAS shall continually monitor the hot water control valve position of all AHU's in the hot water system.
At hot water system startup
, the hot water pressure setpoint is 100% of the maximum
pressure setpoint. When all hot water valves are less than 85% open, the hot water differential pressure setpoint shall be lowered by 0.1 psig (adj.) of the current hot water differential pressure setpoint. This occurs every 5 minutes until at least one valve is more than 85% open, or if the setpoint is equal to the minimum hot water differential pressure setpoint, or if the pump VFD's are at a minimum speed setting (22 Hz).
When any hot water valve is more than
95% open, the hot water pressure setpoint shall
increases by 0.1 psig (adj.) of the current hot water differential setpoint. This occurs every 5 minutes until no valve is more than 95% open, or if the hot water differential pressure setpoint has risen to the system's maximum setting, or if the pump VFD's are at the maximum setting (60 Hz).

Freeze Protection:
When the outdoor air temperature falls below 35.0 deg. F (adj.), the hot water distribution pump shall operate continuously to provide hot water circulation to all associated hot water coils. If the hot water supply temperature falls below 60.0 deg. F (adj.) during unoccupied periods, the boiler sequence shall be enabled to safeguard against low water temperature.
Make-Up Water Flow Monitoring:
If the Make-Up flow meter registers flow for more than 10 minutes (adjustable), or if the totalized flow surpasses 2 gallons (adj.) in a single month, an alarm shall be generated at the BAS.



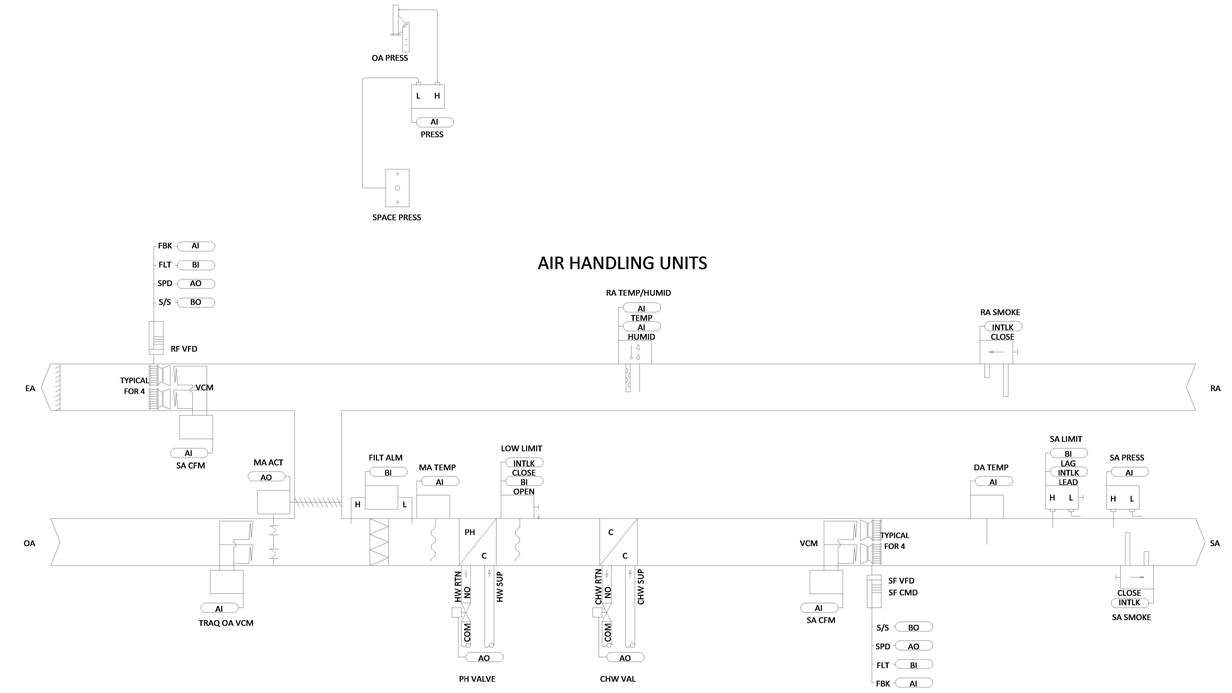


1 CONTROLS- HEATING WATER PLANT
N.T.S.

Sequence of Operations
Air Handling Units
Building Automation System Interface:
The Building Automation System (BAS) shall send the controller Occupied Bypass, Morning Warm-up/Pre-Cool, Occupied/Unoccupied and Heat/Cool modes. The BAS shall also send the discharge air temperature setpoint and the duct static pressure setpoint. If communication is lost with the BAS the controller shall operate using default modes and setpoints.
Occupied:
During occupied periods, the supply fan shall run continuously and the outside air damper shall open to maintain minimum ventilation requirements. The chilled water and hot water valves shall modulate to maintain the discharge air temperature setpoint. If economizing is enabled the outside air damper shall also modulate to maintain the discharge air temperature setpoint. If the discharge air temperature sensor fails the chilled water and hot water valves shall close and an alarm shall be annunciated at the BAS.
Unoccupied:
When the space temperature is below the unoccupied heating setpoint of 60.0 deg. F (adj.) the supply fan shall start, the outside air damper shall remain closed and the hot water valve shall open. When the space temperature rises above the unoccupied heating setpoint of 60.0 deg. F (adj.) plus the unoccupied differential of 4.0 deg. F (adj.) the supply fan shall stop and the hot water valve shall close.
When the space temperature is above the unoccupied cooling setpoint of
85.0 deg. F
(adj.) the supply fan shall start, the outside air damper shall open if economizing is enabled and remain closed if economizing is disabled and the chilled water valve shall open. When the space temperature falls below the unoccupied cooling setpoint of 85.0 deg. F (adj.) minus the unoccupied differential of 4.0 deg. F (adj.) the supply fan shall stop, the chilled water valve shall close and the outside air damper shall close.
Optimal Start:
The BAS shall monitor the scheduled occupied time, occupied space setpoints and space temperature to calculate when the optimal start occurs.

Morning Warm-Up Mode:
During optimal start, if the average space temperature is below the occupied heating setpoint a morning warm-up mode shall be activated. When morning warm-up is initiated the unit shall enable the heating and supply fan. The outside air damper shall remain closed. When the space temperature reaches the occupied heating setpoint (adj.), the unit shall transition to the occupied mode.
Pre-Cool Mode:
During optimal start, if the average space temperature is above the occupied cooling setpoint, pre-cool mode shall be activated. When pre-cool is initiated the unit shall enable the fan and cooling or economizer. The outside air damper shall remain closed, unless economizing. When the space temperature reaches occupied cooling setpoint (adj.), the unit shall transition to the occupied mode.
Optimal Stop:
The BAS shall monitor the scheduled unoccupied time, occupied setpoints and space temperature to calculate when the optimal stop occurs. When the optimal stop mode is active the unit controller shall maintain the space temperature to the space temperature offset setpoint. Outside air damper shall remain enabled to provide minimum ventilation.
Occupied Bypass:
The BAS shall monitor the status of the "on" and "cancel" buttons of the space temperature sensors. When an occupied bypass request is received from a space sensor, the unit shall transition from its current occupancy mode to occupied bypass mode and the unit shall maintain the space temperature to the occupied setpoints (adj.).
Supply Air Temperature Reset Control:
The supply air temperature setpoint shall be reset to the optimal setpoint communicated by the BAS. The BAS shall reset the supply air temperature setpoint based on the current outside air temperature, but shall override this reset function and return the supply air temperature setpoint to 55.0 deg. F (adj.) if more than two (adj.) zones begin to overheat. Also, the BAS shall override this reset function whenever outdoor dew point is higher than 60.0 deg. F (adj.) or indoor humidity is higher than 60% RH (adj.). If the supply air temperature drops below the minimum limit, a low temperature alarm shall be annunciated and the unit shall shut down. If the supply air temperature rises above the maximum limit, a high temperature alarm shall be annunciated.
Economizer:
The discharge air temperature sensor shall measure the dry bulb temperature of the air leaving the cooling coil while economizing. When economizing is enabled and the unit is operating in the cooling mode, the economizer damper shall be modulated between its minimum position and 100% to maintain the discharge air temperature setpoint. The economizer damper shall modulate toward minimum position in the event the mixed air temperature falls below the low temperature limit setting.
Comparative Enthalpy
:
Outside air (OA) enthalpy shall be compared with Return air (RA) enthalpy point.
The economizer shall enable when OA enthalpy is less than RA enthalpy - 2.0 BTU/LB.
The economizer shall disable when OA enthalpy is greater than RA enthalpy.
Demand Control Ventilation:
When in the occupied mode, the flow-measuring outdoor-air (Traq™) damper shall modulate to maintain the current outdoor airflow at setpoint. The BAS shall calculate and reset this outdoor airflow setpoint based on the current ventilation requirements of the VAV terminal units.

Supply Fan:
The fan shall be off in the unoccupied mode. When the unit controller is in the occupied mode, the supply fan shall operate continuously and its speed shall be modulated to maintain the duct static pressure setpoint. The duct static pressure setpoint shall be sent by the BAS and shall be reset between the minimum and maximum static pressure limits to maintain the critical zone VAV air damper in a position between 65% and 75% open.
If the supply fan fails to prove status for
30 seconds (adj.), the fan shall be commanded
off, the outside air damper shall close, all valves will close and an alarm will be annunciated at the BAS. A manual reset shall be required to restart the fan. A hardwired, high static pressure cut-off switch shall be electrically interlocked with the variable speed drive. If the high static pressure cut-off switch is tripped the fan shall stop, the outside air damper shall close, all valves will close and an alarm will be annunciated at the BAS. A manual reset of the high static pressure cut-off switch shall be required to restart the fan.
Building Pressure Control:
A differential pressure transducer shall actively monitor the difference in pressure between the building (indoors) and outdoors. If the building pressure increases above the desired setpoint, the AHU controller shall turn on the exhaust fan and modulate the exhaust fan VFD to control building pressure at setpoint. If the building pressure decreases below the desired setpoint, the controller shall turn off the exhaust fan.
Building Pressure Control:
A differential pressure transducer shall actively monitor the difference in pressure between the building (indoor) and outdoor. If the building pressure increases above the desired setpoint, the AHU controller shall enable the exhaust fan, and modulate the exhaust fan VFD to control building pressure at setpoint. If the building pressure decreases below the desired setpoint, the controller shall disable the exhaust fan.
Mixed Air Low Limit:
The initial damper opening rate shall be limited to 2% per minute (adj.) until the damper has reached its minimum ventilation position. The outside air damper shall modulate to a position less than the minimum damper position if the mixed air temperature drops below 50.0 deg. F (adj.). If the mixed air temperature sensor fails an alarm shall be annunciated at the BAS and the outside air damper shall return to the minimum position.
Freeze Protection:
A hardwired, low limit temperature switch shall be electrically interlocked with the variable speed drive. If the low limit temperature switch is tripped 38.0 deg. F (adj.), the outside air damper shall close, all valves shall open to 100% (adjust per climate) and an alarm shall be annunciated at the BAS. A manual reset of the low limit temperature switch shall be required to restart the fan.
Smoke Detector Shutdown: The unit shall shut down in response to a signal from either
smoke detector indicating the presence of smoke. The smoke detectors shall be interlocked to the unit through the dry contacts of the smoke detectors. A manual reset of the smoke detectors shall be required to restart the unit.



2 CONTROLS- AHU'S
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WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: M9.02
MECHANICAL CONTROLS

Sequence of Operations
- VAV with Hydronic Reheat
Building Automation System Interface:
The Building Automation System (BAS) shall send the controller Occupied and Unoccupied commands. The BAS may also send a Heat/Cool mode, priority shutdown commands, space temperature and/or space temperature setpoint. If communication is lost with the BAS, the VAV controller shall operate using its local setpoints.
Occupancy Mode:
The occupancy mode shall be communicated from the BAS. The VAV controller shall also include a spare binary input for possible future occupancy sensor connection, not included in this project.
Occupied:
Normal operating mode for occupied spaces or daytime operation. When the unit is in the occupied mode the VAV shall maintain the space temperature at the active occupied heating or cooling setpoint. Applicable ventilation and airflow setpoints shall be enforced. The occupied mode shall be the default mode of the VAV.
Unoccupied:
Normal operating mode for unoccupied spaces or nighttime operation. When the unit is in unoccupied mode the VAV controller shall maintain the space temperature at the stored unoccupied heating or cooling setpoint regardless of the presence of a hardwired or communicated setpoint. When the space temperature exceeds the active unoccupied setpoint the VAV shall modulate fully closed.
Occupied Bypass:
Mode used to temporarily place the unit into the occupied operation. Tenants shall be able to override the unoccupied mode from the space sensor. The override shall last for a maximum of 4 hours (adj.). The tenants shall be able to cancel the override from the space sensor at any time. During the override the unit shall operate in occupied mode.
Heat/Cool Mode:
The Heat/Cool mode shall be set by a communicated value or automatically by the VAV. In standalone or auto mode the VAV shall compare the primary air temperature with the configured auto changeover setpoint to determine if the air is "hot" or "cold". Heating mode it implies the primary air temperature is hot. Cooling mode it implies the primary air temperature is cold.
Heat/Cool Setpoint:
The space temperature setpoint shall be determined either by a local (e.g., thumbwheel) setpoint, the VAV default setpoint or a communicated value. The VAV shall use the locally stored default setpoints when neither a local setpoint nor communicated setpoint is present. If both a local setpoint and communicated setpoint exist, the VAV shall use the communicated value.
Cooling Mode:
When the unit is in cooling mode, the VAV controller shall maintain the space temperature at the active cooling setpoint by modulating the airflow between the active cooling minimum airflow setpoint to the maximum cooling airflow setpoint. Based on the VAV controller occupancy mode, the active cooling setpoint shall be one of the following:

Setpoint	**Default Value**
Occupied Cooling Setpoint	74.0 deg. F
Unoccupied Cooling Setpoint	85.0 deg. F
Occupied Standby Cooling Setpoint	78.0 deg. F
Occupied Min and Max Cooling Airflow Setpoint	See VAV Schedule

The VAV shall use the measured space temperature and the active cooling setpoint to determine the requested cooling capacity of the unit. The outputs will be controlled based on the unit configuration and the requested cooling capacity.

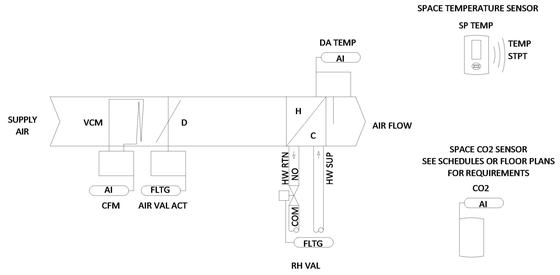
Ventilation Control:
When the unit is in unoccupied mode, the ventilation airflow setpoint will be zero.
When the unit is in occupied mode, the ventilation airflow setpoint will equal the design outdoor airflow (see VAV schedule).
CO
2 Sensor (For VAV Units with CO 2 Sensors Scheduled or shown on floor plans)
When the unit is in occupied mode;
When the CO2 concentration is at or below DCV Minimum CO2 Concentration, the ventilation airflow setpoint is equal to the DCV Minimum Ventilation setpoint.
When the CO
2 concentration is at or above Design CO2 Concentration, the Ventilation airflow setpoint is equal to the Design Minimum Ventilation setpoint.
When the CO
2 concentration is between the scheduled CO2 concentration values, the control system will interpolate between Ventilation setpoints.
The current ventilation airflow setpoint shall be communicated to the BAS for control of the system outdoor
-air intake.

Heating Mode:
When the unit is in heating mode, the VAV controller shall maintain the space temperature at the active heating setpoint by modulating the airflow between the active heating minimum airflow setpoint to the maximum heating airflow setpoint. Based on the VAV controller occupancy mode, the active heating setpoint shall be one of the following:

Setpoint	**Default Value**
Occupied Heating Setpoint	71.0 deg. F
Unoccupied Heating Setpoint	60.0 deg. F
Occupied Standby Heating Setpoint	67.0 deg. F
Occupied Min and Max Heating Airflow Setpoint	See VAV Schedule

The VAV controller shall use the measured space temperature and the active heating setpoint to determine the requested heating capacity of the unit. The outputs will be controlled based on the unit configuration and the requested heating capacity.

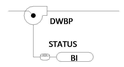
Reheat Control:
Reheat will only be allowed when the primary air temperature is 5.0 deg. F below the configured reheat enable setpoint of 70.0 deg. F (adj.). The reheat shall be enabled when the space temperature drops below the active heating setpoint and the minimum airflow requirements are met. During reheat the VAV shall operate at its minimum heating airflow setpoint and energize the heat as follows:
Proportional Hot Water Reheat:
If the space temperature is below the heating setpoint the hot water reheat valve shall modulate as required to maintain the active heating setpoint.
Ventilation Control (Fixed):
When the unit is in unoccupied mode, the ventilation airflow setpoint shall be zero.
When the unit is in occupied mode, the ventilation airflow setpoint shall equal the design outdoor airflow (see VAV schedule).
The current ventilation airflow setpoint shall be communicated to the BAS for control of the system outdoor
-air intake.
Space Sensor Failure:
If there is a fault with the operation of the zone sensor an alarm shall be annunciated at the BAS. Space sensor failure shall cause the VAV to drive the damper to minimum air flow if the VAV is in the occupied mode, or drive it closed if the VAV is in the unoccupied mode.



1 CONTROLS- VAV'S
N.T.S.

(EXHAUST AND MISCELLANEOUS I/O)

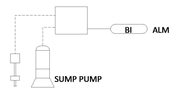
DOMESTIC WATER BOOSTER PUMP MONITORING



DOMESTIC WATER BOOSTER PUMP IS CONTROLLED INDEPENDTENLY WITH NO WORK BY THE ATC.
ATC SHALL PROVIDE, INSTALL, AND WIRE CURRENT SWITCH TO REPORT PUMP STATUS TO THE BAS.

A

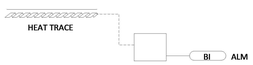
ELEVATOR SUMP PUMP ALARM MONITORING



SUMP PUMPS PROVIDED AND INSTALLED BY OTHERS WITH STAND-ALONE LEVEL CONTROL AND MONITORING.
THE BAS SHALL MONITOR THE ALARM CONTACT OF THE SUMP PUMP CONTROL PANELS

B

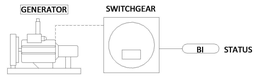
HEAT TRACE STATUS MONITORING



HEAT TRACE TO BE PROVIDED AND INSTALLED BY CONTRACTORS OTHER THAN THE ATC WITH INTEGRATED CONTROL
THE ATC SHALL WIRE THE ALARM CONTACTS ON THE HEAT TRANCE CONTROL PANELS FOR MONITORING BY THE BAS

C

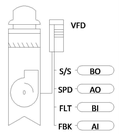
POWER SWTICHGEAR STATUS MONITORING



THE GENERATOR AND SWITCHGEAR ARE CONTROLLED INDEPENDENTLY AND NOT TIED TO THE BAS OTHER THAN FOR MONITORING PURPOSES.
THE BAS SHALL MONITOR AUXILIARY CONTACTS ON THE SWITCH GEAR IN ORDER TO DISPLAY STATUS INFORMATION AVAILABLE FROM THE CONTACTS
.

D

GENERAL/BATHROOM EXHAUST FAN CONTROL



Sequence of Operations
- Bathroom and General Exhaust Fans
Building Automation System Interface:
The Building Automation System (BAS) shall send the exhaust fan controller Occupied / Unoccupied modes based on a time of day schedule.
Occupied Mode:
During occupied periods, the exhaust fan shall run continuously. The unit controller shall control the fan at the speed setpoint which will be set during TAB
Unoccupied Mode:
During unoccupied periods, the exhaust fan shall be off.

Fan Status and Failure:
The controller shall monitor the fan status via the VFD speed feedback and fault/alarm contacts. If the fan is not operating as commanded within 40 seconds after a request for fan operation a fan failure alarm shall be annunciated at the BAS, and the exhaust fan shall stop, requiring a manual reset at the BAS.

E

2 CONTROLS- EXHAUST AND MISCELLANEOUS I/O
N.T.S.

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12/06/2019

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SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

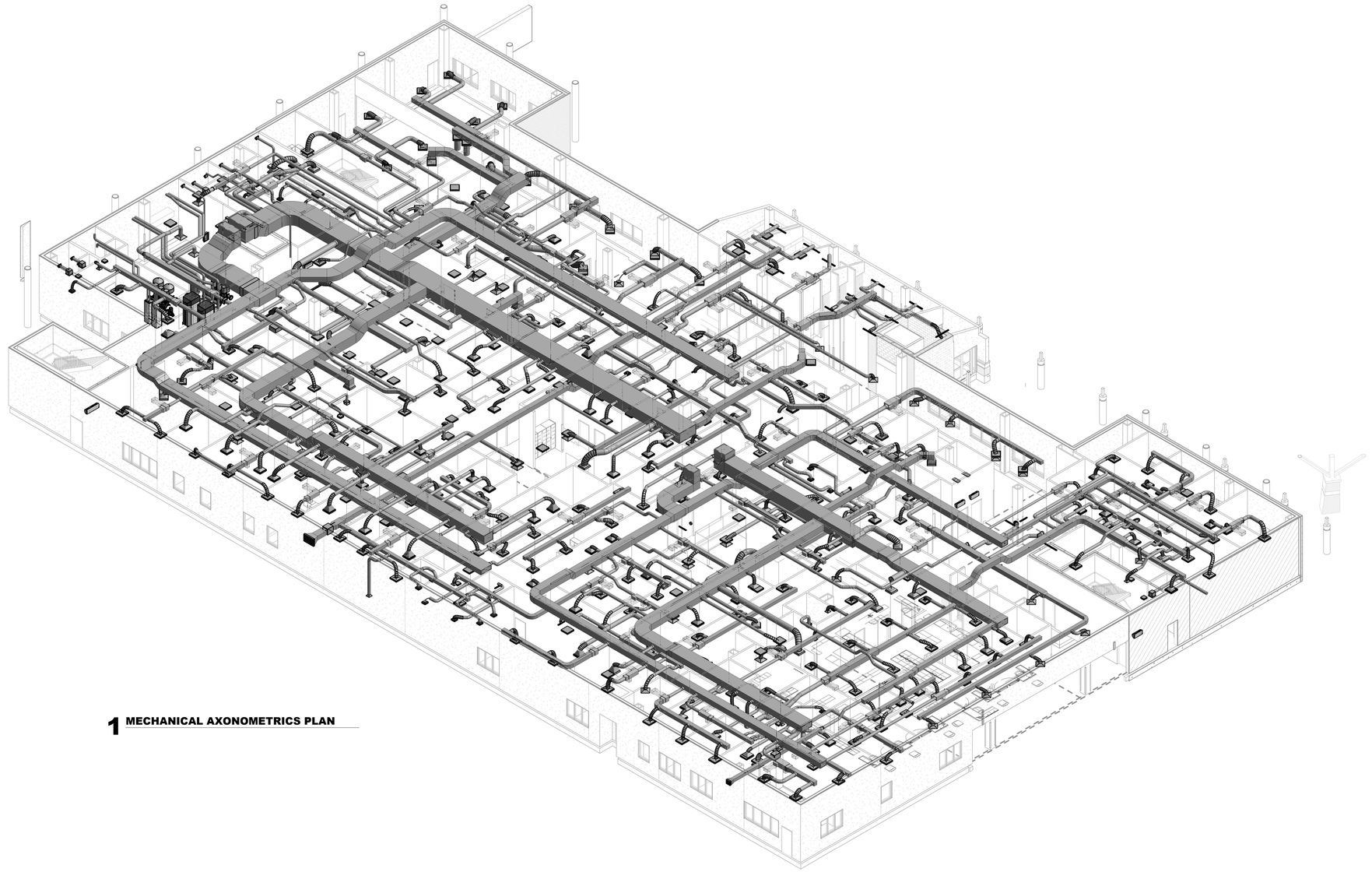
WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: M9.03
MECHANICAL CONTROLS



1 **MECHANICAL AXONOMETRICS PLAN**

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SEAL OF THE CHEROKEE NATION FEB. 21ST SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

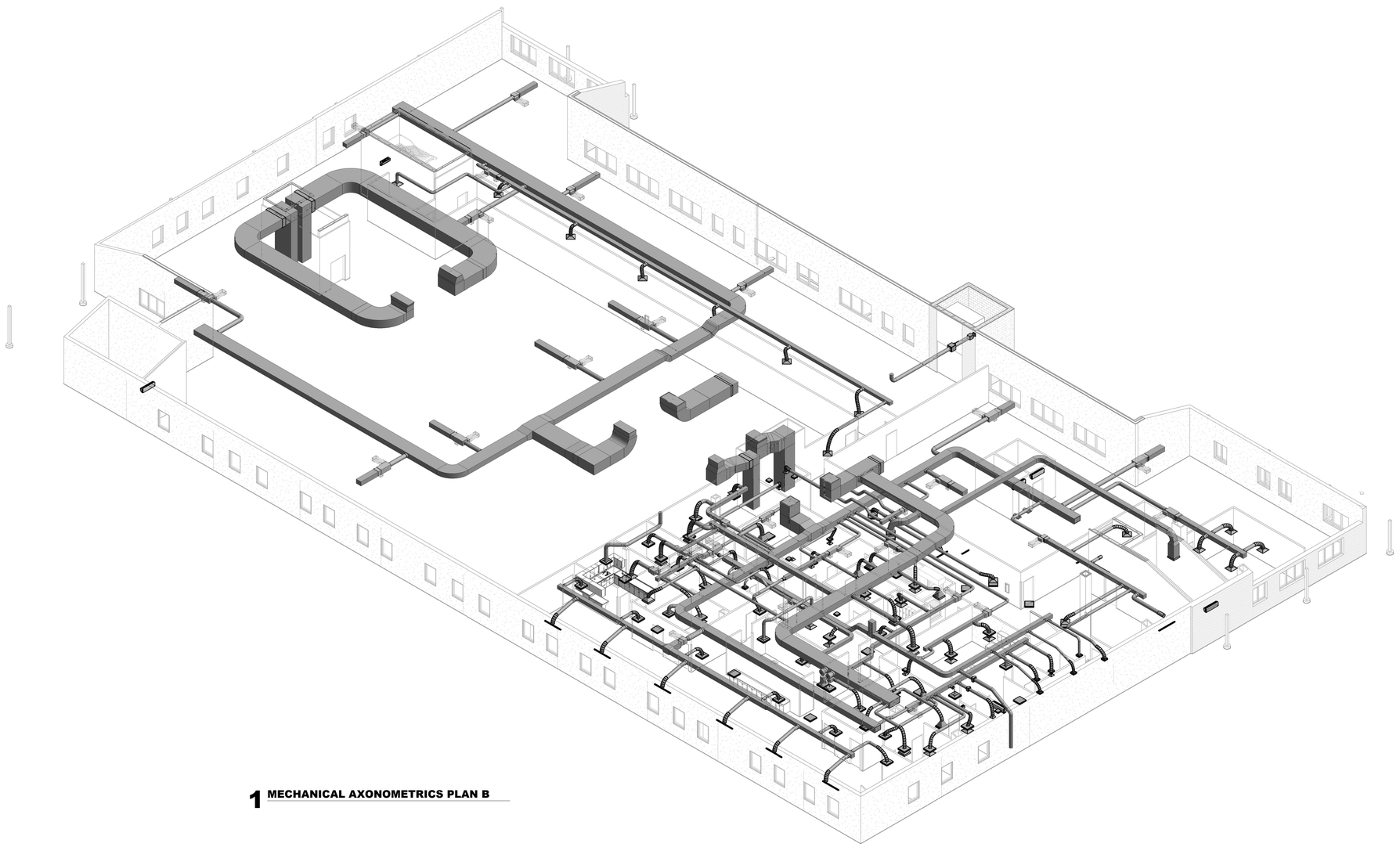
REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

M10.01

MECH AXONOMETRIC PLAN LEVEL 01



1 **MECHANICAL AXONOMETRICS PLAN B**

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

M10.02

MECH AXONOMETRIC PLAN LEVEL 02

GENERAL POWER NOTES

1	ALL RECEPTACLES SHALL BE GROUNDING TYPE.
2	ALL RECEPTACLES INSTALLED IN BATHROOMS, OUTDOORS AND KITCHENS SHALL HAVE GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION AS REQUIRED BY THE NATIONAL ELECTRIC CODE.
3	COORDINATE MECHANICAL EQUIPMENT CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. LOCATE FEEDERS, DISCONNECTS AND MAINTENANCE RECEPTACLES SO THAT THEY WILL NOT INTERFERE WITH OPERATION OR MAINTENANCE OF MECHANICAL EQUIPMENT.
4	PROVIDE POWER TO MECHANICAL, PLUMBING, AND ALL OTHER EQUIPMENT AS REQUIRED FOR PROPER OPERATION, COORDINATE AND VERIFY EACH PIECE OF EQUIPMENTS POWER/CONTROL REQUIRMENTS PRIOR TO ORDERING RELATED ELECTRICAL EQUIPMENT. REFER TO RELATED MECHANICAL, PLUMBING, AND OTHER RELATED DOCUMENTS FOR LOCATIONS OF EQUIPMENT AND REQUIRED CLEARANCES AROUND EQUIPMENT.
5	COORDINATE EXACT MOUNTING HEIGHT OF EACH ABOVE COUNTER RECEPTACLE WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
6	ALL OUTLETS LOCATED IN AREAS REQUIRING GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION PER NEC-210 SHALL CONSIST OF A GFCI PROTECTED DEVICE, EVEN IF NOT SPECIFICALLY INDICATED IN THE DRAWINGS. THE GROUND-FAULT CIRCUIT INTERRUPTER SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION AS DEFINED IN THE NEC. ALL RECEPTACLES SUPPLIED THROUGH A GROUND-FAULT CIRCUIT INTERRUPTER SHALL BE MARKED "GFCI PROTECTED."

GENERAL LIGHTING NOTES

1	WHERE RECESSED LIGHTING FIXTURES ARE INDICATED IN A FIRE RATED CEILING, PROVIDE A ONE HOUR RATED "TENT" FOR FIXTURE
2	PROVIDE ALL MOUNTING AND SUPPORT HARDWARE FOR LIGHT FIXTURES TO MEET SPECIFIED MOUNTING HEIGHTS. REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT MOUNTING HEIGHTS OF FIXTURES.
3	CONNECT "UN-SWITCHED" HOT CONDUCTOR FROM CIRCUIT SERVING SPACE LIGHTING TO EACH EXIT SIGN, EMERGENCY LIGHT, AND ANY FIXTURE DESIGNATED AS NIGHT LIGHT SERVING THE SPACE.
4	COORDINATE ALL DEVICES AND WALL-MOUNTED LIGHT FIXTURE LOCATIONS WITH THE ARCHITECTURAL WALL FINISHES AND ELEVATIONS. SPECIAL ATTENTION AND COORDINATION OF WALL FINISHES IS REQUIRED PRIOR TO ROUGH-IN. EXACT LOCATION OF DEVICES SHALL BE COORDINATED WITH THE ARCHITECT PRIOR TO ROUGH-IN TO AVOID INSTALLATION ON SPECIAL ARCHITCTURAL WALL FINISHES. DEVICES NOT PROPERLY COORDINATED WITH THE SPECIAL WALL FINISHES INDICATED IN THE CONSTRUCTION DOCUMENTS PRIOR TO ROUGH-IN SHALL BE RELOCATED AT NO ADDITIONAL COST TO THE OWNER.
5	ELECTRICAL CONTRATOR SHALL VERIFY CHEVRON DIRECTIONS OF ALL EXIT SIGNS PRIOR TO ORDERING.
7	COORDINATE AND PROVIDE DIMMER SWITCHES RATED FOR AND COMPATABLE WITH INTENDED LIGHT FIXTURE(S) TO BE CONTROLLED. CIRCUITS CONTROLLED WITH LINE-VOLTAGE DIMMER SWITCHES SHALL NOT SHARE NEUTRAL CONDUCTORS.
8	FOR GENERATOR FED EXIT AND EMERGENCY LIGHTS: CIRCUITS SHALL HAVE RELAY FUNCTION OVERRIDE LIGHTING CONTROLS, DURING GENERATOR OPERATION.

GENERAL LOW VOLTAGE NOTES

1	PROVIDE BACK BOX AND CONDUIT TO ABOVE THE ACCESSIBLE CEILING AS REQUIRED FOR THE HVAC BUILDING AUTOMATION SYSTEM DEVICES. COORDINATE EXACT LOCATIONS AND OTHER REQUIREMENTS WITH RELATIVE MEP DRAWINGS AND THE CONTROLS CONTRACTOR PRIOR TO ROUGH-IN. THERMOSTATS, TEMPERATURE SENSORS, STATIC PRESSURE SENSORS, HUMIDISTATS, ETC. SHALL BE INSTALLED AT THE SAME ELEVATION AS THE LIGHT SWITCHES UNLESS REQUIRED OTHERWISE.
2	PROVIDE (1) 1/2" CONDUIT, AND 4" SQUARE BOX WITH SINGLE GANG DEVICE RING FOR ALL THERMOSTAT LOCATIONS INDICATED ON THE MECHANICAL DRAWINGS. ROUTE CONDUIT FROM BOX TO ACCESSIBLE CEILING CAVITY. PROVIDE PLASTIC BUSHINGS ON EXPOSED CONDUIT ENDS. PROVIDE PULL STRING IN ALL EMPTY CONDUIT SYSTEMS. COORDINATE EXACT LOCATIONS AND MOUNTING HEIGHTS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
3	PROVIDE CABLE TRAY ABOVE CEILING IN ALL CORRIDORS FOR ROUTING OF LOW VOLTAGE CABLES.
4	PROVIDE 4'WIDE X 4'TALL X 3/4" FIRE RATED, PAINTED CDX PLYWOOD BACKBOARD WHERE SHOWN ON DRAWINGS OR AS REQUIRED FOR TELEPHONE, CATV, ALARM SYSTEM EQUIPMENT, ECT. COORDINATE EXACT LOCATION(S) WITH RESPONSIBLE CONTRACTOR(S).
5	FURNISH AND INSTALL A TELEPHONE SERVICE CONDUIT(S) PER TELEPHONE SERVICE PROVIDER SPECIFICATIONS. STUB UP AT DESIGNATED EQUIPMENT BOARD.
6	ONE #6 COPPER INSULATED GROUND WIRE FROM THE ELECTRICAL SERVICE GROUND TO THE TELEPHONE EQUIPMENT BOARD. LEAVE 36" EXTRA WIRE AT FREE END.
7	FURNISH AND INSTALL A CABLE TV SERVICE CONDUIT(S) PER CABLE TV PROVIDER SPECIFICATIONS. STUB UP AT SERVICE POINT.
8	REFER TO SITE UTILITIES PLAN AND COORDINATE ENTIRE INSTALLATION WITH CABLE TV SERVICE PROVIDER.
9	PROVIDE ROUGH-IN OF ALL BACK BOXES, CONDUITS (WITH BUSHINGS AND PULL STRINGS) AND OTHER WIRE WAYS AS REQUIRED FOR LOW VOLTAGE SYSTEMS. COORDINATE ALL REQUIRED LOCATIONS WITH OWNER AND RESPONSIBLE CONTRACTOR(S).
10	ALL CABLES PULLED IN CONDUIT ROUTED UNDERGROUND SHALL BE WET RATED.
11	REFER TO SITE UTILITIES PLAN AND COORDINATE ENTIRE INSTALLATION WITH PHONE SERVICE PROVIDER.

GENERAL ELECTRICAL NOTES

1	SPECIAL ATTENTION SHALL BE GIVEN TO ALL RACEWAYS WITHIN FINISHED AREAS WITHOUT CEILINGS AND EXPOSED TO STRUCTURE. IN GENERAL, ALL RACEWAYS SHALL BE CONCEALED WITHIN WALLS, ABOVE STRUCTURE FINISH, OR BELOW FLOOR SLABS WHEN SPECIFIED. WHERE EXPOSED CONDITIONS ARE NECESSARY OR UNAVOIDABLE DUE TO OTHER CONDITIONS, THE BID SHALL INCLUDE ANY REASONABLE MEANS TO MINIMIZE THE AMOUNT OF SURFACE MOUNTED EQUIPMENT. PRIOR TO ROUGH-IN, COORDINATE ALL EXPOSED RACEWAY AND BOX CONDITIONS WITH ARCHITECT PRIOR TO CONSTRUCTION OF WALLS, ROOF DECK, OR FLOOR SLABS. ATTACHMENT TO ROOF DECK OR JOIST WEBBINGS IS NOT ALLOWED, MAINTAIN A MINIMUM SPACING OF 1-1/2" FROM CONDUIT TO ROOF DECK. IN AREAS WHERE EXPOSED RACEWAYS ARE REQUIRED, INSTALL SYSTEMS SQUARE AND TIGHT TO STRUCTURE AND PAINT TO MATCH THE STRUCTURE PER ARCHITECT AND/OR OWNER SPECIFICATIONS. FAILURE TO PROPERLY COORDINATE THE ROUTING OF EXPOSED RACEWAYS MAY RESULT IN RELOCATION OF SUCH RACEWAYS AT NO ADDITIONAL COST TO THE OWNER.
2	OPENINGS AROUND ELECTRICAL PENETRATIONS THROUGH FIRE-RESISTANT-RATED WALLS, PARTITIONS, FLOORS OR CEILINGS SHALL BE FIRESTOPPED USING APPROVED METHODS TO MAINTAIN THE FIRE RESISTANCE RATING. PROVIDE PENETRATION FIRE STOPPING WITH RATINGS DETERMINED PER ASTM E 814 OR UL 1479. FIRE STOPPING SHALL NOT BE LESS THAN FIRE RESISTANCE RATING OF CONSTRUCTED PENETRATIONS.
3	FIELD VERIFY LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, INCLUDING POWER POLES, TELEPHONE PEDESTALS, OVERHEAD AND UNDERGROUND FEEDERS, METERS, PANELS, DEVICES, ETC. PROVIDE FOR COORDINATION WITH EXISTING EQUIPMENT.
4	CONDUCTORS FOR BRANCH CIRCUITS AS DEFINED IN ARTICLE 100, SHALL BE SIZED TO PREVENT A VOLTAGE DROP EXCEEDING 3% AT THE FARTHEST LOAD, AND WHERE THE MAXIMUM TOTAL VOLTAGE DROP ON BOTH FEEDERS AND BRANCH CIRCUITS TO THE FARTHEST LOAD DOES NOT EXCCED 5%.
5	ALL WORK IS TO BE PERFORMED IN STRICT COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE, STATE LAWS, AND ALL OTHER REGULATIONS GOVERNING WORK OF THIS NATURE.
6	THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, MATERIAL, AND LABOR TO SATISFY A COMPLETE AND WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED.
7	CONTRACTOR TO CONFIRM EXACT LOCATION OF EXISTING AND NEW EQUIPMENT.
8	ALL ELECTRIC MATERIALS AND EQUIPMENT FOR THE PROJECT SHALL BE NEW AND U.L. OR EQUALLY LISTED.
9	SUBMIT TO THE OWNER CERTIFICATES OF INSPECTIONS IN DUPLICATE FROM AN APPROVED INSPECTION AGENCY UPON COMPLETION.
10	THE CONTRACTOR SHALL SECURE ALL PERMITS OR APPLICATIONS AND PAY ANY AND ALL FEES AS REQUIRED,
11	THE CONTRACTOR SHALL FURNISH ALL INSTRUMENTS AND QUALIFIED PERSONNEL OR FIRM TO PERFORM ALL REQUIRED TESTS.
12	NO EQUIPMENT SHALL BE ENERGIZED UNTIL ALL TEST AND ADJUSTMENTS HAVE BEEN MADE. THREE COPIES OF ALL TEST RESULTS SHALL BE DELIVERED TO THE OWNER
13	JUNCTION BOXES LOCATED ABOVE GRID CEILINGS SHALL BE LOCATED NO GREATER THAN 4-FEET ABOVE THE CEILING IN A LOCATION ACCESSIBLE VIA A LADDER FROM THE ROOM BELOW.
14	ALL WIRING DEVICE COVERPLATES SHALL INDICATE PANELBOARD AND CIRCUIT SERVING THE DEVICE. UTILIZE CLEAR VINYL (BLACK LETTERING) IDENTIFICATION LABLES MANUFACTURED BY 3M COMPANY (OR APPROVED EQUIVALENT).
15	THE TYPE OF CONDUIT SHALL BE AS FOLLOWS FOR ALL FEEDERS AND DISTRIBUTION CIRCUITS, UNLESS OTHERWISE SPECIFIED. APPLICATION - TYPE OF CONDUIT BURIED IN CONCRETE OR OUTDOORS - PVC WITH RIGID GALVANIZED STEEL ELBOWS
16	SEISMIC PROTECTION FOR SEISMIC CONCERNS OF ALL BUILDING SYSTEMS INCLUDING BUT NOT LIMITED TO MECHANICAL, PLUMBING, AND ELECTRICAL MUST MEET MINIMUM REQUIREMENTS OF ALL APPLICABLE CODES FOR BUILDINGS' CLASSIFIED SEISMIC USE GROUP AND SEISMIC DESIGN CATEGORY. ANY REQUIREMENTS FOR SEISMIC PROTECTION MEASURES TO BE APPLIED SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND/OR FEDERAL CODES AND WITH MANUFACTURER'S REQUIREMENTS, THE MOST STRINGENT SHALL APPLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE TYPE AND LOCATION OF SEISMIC RESTRAINTS REQUIRED FOR THE VARIOUS SYSTEM'S ELEMENTS CONTAINED IN THE CONSTRUCTION DOCUMENTS BASED ON THE RELATED SEISMIC CODE CRITERIA, THE SIZE AND WEIGHT OF THE SUPPORTED ELEMENT AND THE DISTANCE FROM STRUCTURE THAT THE ELEMENT WILL BE INSTALLED. IF REQUIRED BY LOCAL, STATE, FEDERAL CODES AND/OR OTHER AUTHORITY HAVING JURISDICTION (AHJ) THE CONTRACTOR SHALL SUBMIT DESCRIPTIVE CATALOG DATA OF SEISMIC RESTRAINTS, SHOP DRAWINGS SHOWING THE TYPES, LOCATIONS AND INSTALLATION DETAILS OF SEISMIC RESTRAINTS AND CALCULATIONS SHOWING THAT THE SEISMIC RESTRAINTS MEET THE SEISMIC REQUIREMENTS TO THE LOCAL AHJ FOR REVIEW AND APPROVAL. CALCULATIONS SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF THE PROJECT LOCATION AND EMPLOYED BY THE MANUFACTURER OF THE SEISMIC RESTRAINT PRODUCTS. CALCULATIONS SHALL INCLUDE DEAD LOADS, STATIC SEISMIC LOADS AND CAPACITY OF MATERIALS UTILIZED FOR CONNECTIONS TO EQUIPMENT AND STRUCTURE.
17	UNLESS NOTED OTHERWISE PROVIDE MINIMUM #8 AWG CONDUCTORS IN 1" CONDUIT(S) FOR ALL UNDERGROUND SITE POWER AND LIGHTING CIRCUITS. INCREASE CONDUCTOR AND RELATED CONDUIT SIZE AS NOTED OR OTHERWISE REQUIRED TO LIMIT VOLTAGE DROP TO LESS THAN 5% FOR THE ENTIRE LENGTH OF SYSTEM.
18	UNDERGROUND UTILITIES/FEEDERS/BRANCH CIRCUITS/ETC. SHALL NOT BE ROUTED THROUGH OR WITHIN 25 FEET OF ANY AREAS DEDICATED FOR FUTURE BUILDING ADDITION.
19	DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. REVIEW ALL GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS.
20	INSTALL EQUIPMENT IN A MANNER TO REMAIN ACCESSIBLE WITH REASONABLE MEANS BY THE OWNER FOLLOWING COMPLETION OF WORK. SPECIAL ATTENTION AND ADDITIONAL COORDINATION IS EXPECTED IN AREAS OF THE BUILDING WHERE THE CEILING AND STRUCTURE HEIGHTS HAVE SIGNIFICANT DIFFERENT ELEVATIONS. EQUIPMENT REQUIRING POSSIBLE FUTURE ACCESS SHALL BE INSTALLED SUCH THAT IT MAY BE SAFELY ACCESSED FROM A STANDARD STEP LADDER OR PERSONNEL LIFT SUITABLE FOR THE LOCATION AND CEILING HEIGHT, WITHOUT REMOVING OR DAMAGING THE CEILING GRID STRUCTURE.
21	COORDINATE ALL CEILING MOUNTED ELECTRICAL ITEMS WITH OTHER DISCIPLINES, WITH CEILING, AND STRUCTURE. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN.
22	ROOM NAMES/NUMBERS SHOWN IN PANELBOARD SCHEDULES ARE PER ARCHITECTURAL FLOOR PLANS. CONTRACTOR SHALL PROVIDE FINALIZED PANELBOARD SCHEDULES AT COMPLETION OF PROJECT WITH OWNER PROVIDED ROOM NAMES/NUMBERS.
23	THE CONTRACTOR SHALL FURNISH AND INSTALL ALL GROUNDING SYSTEMS (AS REQUIRED) IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE.
24	ALL ELECTRICAL WORK SHALL BE COORDINATED WITH THE MECHANICAL WORK AS CALLED FOR IN MECHANICAL SPECIFICATIONS AND PLANS.
25	PROVIDE A MINIMUM OF (3) SPARE 1" CONDUITS FROM RECESSED PANELBOARD, UP TO ACCESSIBLE CEILING SPACE.
26	FIELD MOUNTED DEVICES SUCH AS SWITCHES, MOTOR STARTERS, RECEPTACLES, ETC., ARE SHOWN IN THEIR APPROXIMATE LOCATION. SWITCH MOUNTING HEIGHT SHALL BE 48" ABOVE FINISHED FLOOR AND RECEPTACLE MOUNTING HEIGHT SHALL BE 18" ABOVE FINISHED FLOOR UON. REFER TO THE TYPICAL MOUNTING HEIGHT DETAIL.
29	PROVIDE EMT WITH PROPERLY INSTALLED COMPRESSION OR SET-SCREW TYPE FITTINGS AND AN INSULATED EQUIPMENT GROUNDING CONDUCTOR FOR ALL RACEWAYS SERVING EXAM ROOMS, LABS, AND OTHER RELATED ROOMS TO COMPLY WITH NEC, HEALTHCARE FACILITIES.

ABBREVIATIONS

AC	ABOVE COUNTER	IG	ISOLATED GROUND
AFF	ABOVE FINISHED FLOOR	MCC	MOTOR CONTROL CENTER
CB	CIRCUIT BREAKER	NEC	NATIONAL ELECTRICAL CODE
E	EXISTING	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
EC	ELECTRICAL CONTRACTOR	NIC	NOT IN CONTRACT
EP	EXPLOSION PROOF	NL	NIGHT LIGHT
GFI	GROUND FAULT CIRCUIT INTERRUPTER	UG	UNDERGROUND
GR	GROUND	UON	UNLESS OTHERWISE NOTED
HP	HORSE POWER	WP	WEATHERPROOF
		WR	WEATHER RESISTANT

WIRING

- WIRING CONCEALED IN CEILING OR WALLS UON. ALL WIRE IS NUMBER #12 AWG MINIMUM.
- EXPOSED RACEWAY.
- UNDERGROUND RACEWAY; TYPE, SIZE, CONDUCTORS, AND ARRANGEMENT BY NOTATION OR SCHEDULE.

SWITCHES

$* SWITCH MOUNTED AT +48"; SINGLE POLE UON.
LOWER CASE LETTER, WHEN PRESENT, INDICATES FIXTURES CONTROLLED.

* ABBREVIATIONS FOR SWITCH
2 DOUBLE POLE SWITCH
3 3-WAY SWITCH
4 4-WAY SWITCH
D DIMMER SWITCH (SHALL BE COMPATABLE WITH FIXTURE BEING DIMMED)
F FAN SWITCH: DUAL OPERATION WITH DIMMER
K KEYED SWITCH
M MOTOR RATED SWITCH
OS DUAL TECHNOLOGY OCCUPANCY SENSOR
V VOLUME CONTROL SWITCH

◇OS CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR WITH SPARE DRY CONTACTS. HUBBELL OMNIDIARP SERIES

RECEPTACLES

- DUPLEX RECEPTACLE (NEMA 5-20R)
- DUPLEX RECEPTACLE (NEMA 5-20R); MOUNTED 6" ABOVE COUNTERTOP.
- (ALL RECEPTACLE TYPES) WITH USB CHARGING PORTS
- GFI DUPLEX RECEPTACLE (NEMA 5-20R), SELF-TEST TYPE
- GFI DUPLEX RECEPTACLE (NEMA 5-20R), SELF-TEST TYPE; MOUNTED 6" ABOVE COUNTERTOP.
- QUADRUPLEX RECEPTACLE (TWO NEMA 5-20R)
- SPECIAL RECEPTACLE: VERIFY NEMA TYPE WITH MANUFACTURER
- FLOOR BOX WITH DATA: LEGRAND WIREMOLD SERIES RFB4E-OG OR RFB6E-OG WITH EVOLUTION COVER. ROUTE (2)1" FOR DATA FROM FLOOR BOX TO NEAREST ACCESSIBLE CEILING SPACE. ON FLOOR LEVELS WITH ACCESSIBLE SPACE BELOW, USE POKE-THRU STYLE FLOOR BOXES: LEGRAND 6AT SERIES. SEE ARCHITECTURAL PLANS FOR LOCATION UON.
- TV TELEVISION: PROVIDE HUBBELL NSAV62M JUNCTION BOX (OR EQUAL) WITH 1/2" CONDUIT FOR POWER AND 1"CONDUIT (WITH PULL STRINGS) FOR A/V ROUTED TO ACCESSIBLE CEILING SPACE. PROVIDE CONNECTIONS FOR POWER, DATA, COAX, AND HDMI. MOUNT AT +60" AFF UNO. CONFIRM HEIGHTS WITH ARCHITECT PRIOR TO ROUGH-IN.
- SINGLE RECEPTACLE (NEMA 5-20R)
- SPLIT WIRED DUPLEX RECEPTACLE (NEMA 5-20R)
- DIRECT EQUIPMENT CONNECTION: VERIFY CONNECTION DETAILS WITH MANUFACTURER
- FLOOR BOX: HUBBEL 3SFBSS WITH 3SFBC COVER. EC SHALL ROUTE A 1"C FOR FLOOR BOX TO NEAREST ACCESSIBLE CEILING SPACE. ON FLOOR LEVELS WITH ACCESSIBLE SPACE BELOW, USE POKE-THRU STYLE FLOOR BOXES: HUBBELL PT2X2 SERIES. SEE ARCHITECTURAL PLANS FOR LOCATION UON.
- CEILING MOUNTED RECEPTACLE(NEMA 5-20R)

PANELS AND MISC.

- LIGHT OR POWER PANEL
- J 4x4 JUNCTION BOX.
- EQUIPMENT DISCONNECT: INTERIOR DISCONNECTS SHALL BE NEMA 1 TYPE. EXTERIOR DISCONNECTS SHALL BE NEMA 3R TYPE. SIZE AS INDICATED IN THE PLANS AND PER NAMEPLATE RATING.
- PHONE/DATA: PROVIDE 4"X4", 30-1/4 CUBIC INCH OUTLET BOX AT 8" ABOVE COUNTER (UON) WITH (2) 3/4" CONDUITS (WITH PULL STRINGS) ROUTED TO ACCESSIBLE CEILING SPACE. PROVIDE SINGLE GANG MUD RING WITH BLANK COVER. PROVIDE PLASTIC BUSHINGS ON EXPOSED CONDUIT ENDS. REFER TO THE SYSTEMS PLANS AND SPECIFICATIONS FOR INSTALLATION REQUIREMENTS. VERIFY NUMBER OF DROPS WITH OWNER.
- PHONE/DATA: PROVIDE 4"X4", 30-1/4 CUBIC INCH OUTLET BOX AT +18" (UON) WITH (2) 3/4" CONDUITS (WITH PULL STRINGS) ROUTED TO ACCESSIBLE CEILING SPACE. PROVIDE SINGLE GANG MUD RING WITH BLANK COVER. PROVIDE PLASTIC BUSHINGS ON EXPOSED CONDUIT ENDS. REFER TO THE SYSTEMS PLANS AND SPECIFICATIONS FOR INSTALLATION REQUIREMENTS. VERIFY NUMBER OF DROPS WITH OWNER.
- PHONE/DATA: PROVIDE 4"X4", 30-1/4 CUBIC INCH OUTLET BOX IN CEILING. PROVIDE SINGLE GANG MUD RING WITH BLANK COVER. REFER TO THE SYSTEMS PLANS AND SPECIFICATIONS FOR INSTALLATION REQUIREMENTS. VERIFY NUMBER OF DROPS WITH OWNER.
- TV TELEVISION: PROVIDE 4"X4" JUNCTION BOX WITH (2) 3/4" CONDUITS (WITH PULL STRINGS) ROUTED TO ACCESSIBLE CEILING SPACE. PROVIDE SINGLE GANG MUD RING WITH BLANK COVER. CONFIRM HEIGHTS WITH ARCHITECT PRIOR TO ROUGH-IN. REFER TO THE SYSTEMS PLANS AND SPECIFICATIONS FOR INSTALLATION REQUIREMENTS. VERIFY NUMBER OF DROPS WITH OWNER.
- S CEILING MOUNTED SPEAKER
- CR CARD READER: REFER TO SYSTEM PLANS AND SPECIFICATIONS. AT EACH DOOR WITH A CARD READER PROVIDE ALL ELECTRICAL CONNECTIONS FOR DOOR HARDWARE SYSTEMS AS REQUIRED TO MAKE A COMPLETE OPERATIONAL SYSTEM. WHERE REQUIRED, BACK TO BACK 2"X4" BOXES ARE ALLOWED FOR CARD READER AND PUSH TO EXIT SWITCH. PROVIDE POWER TO THE LOCK SYSTEM IN THE I.T. ROOM WHERE NEEDED BY CONTRACTOR INSTALLING SYSTEM.

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Robert Brandon Pinkerton
23042
OKLAHOMA
SEAL WITHHELD
12/06/2019

CONSULTANT LOGO:
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CLIENT:
THE CHEROKEE NATION
TRIBAL SEAL
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: E1.01

ELECTRICAL NOTES AND LEGEND

PLAN NORTH

TRUE NORTH

1 POWER PLAN LEVEL 01 SECTOR 01

1/8" = 1'-0"

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12/06/2019

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SEPT. 6, 1839

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STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

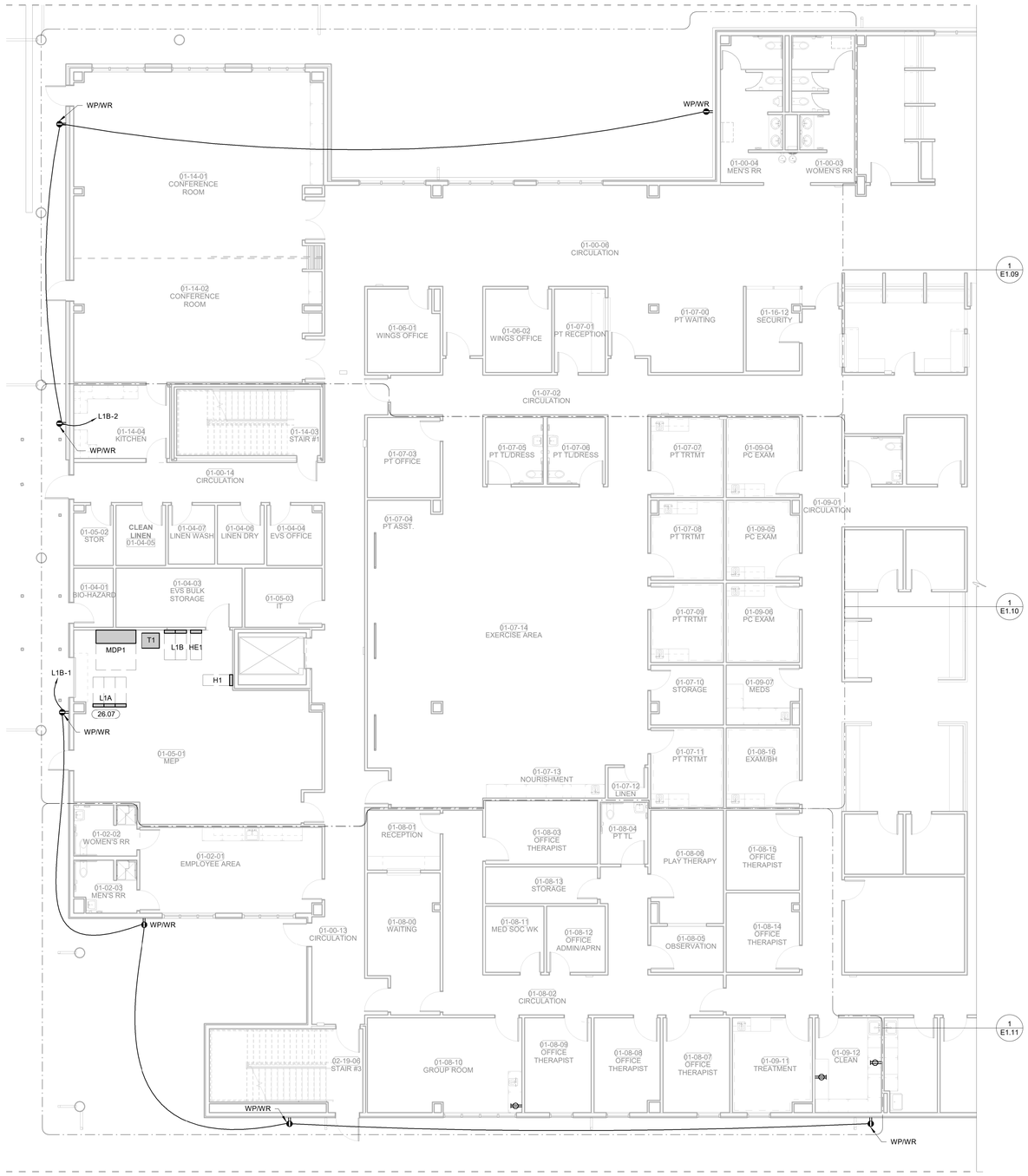
SHEET NUMBER:

E1.02

POWER PLAN LEVEL 01 SECTOR 01

KEYNOTES

26.07	MOUNT PANELS AND DISCONNECTS ON UNISTRUT, E.C FABRICATE IN FIELD COORDINATE EXACT LOCATION AND CLEARANCES WITH PLUMBING AND MECHANICAL CONTRACTORS PRIOR TO ROUGH-IN



PLAN NORTH

TRUE NORTH

1 POWER PLAN LEVEL 01 SECTOR 02

1/8" = 1'-0"

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WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: E1.03

POWER PLAN LEVEL 01 SECTOR 02

KEYNOTES

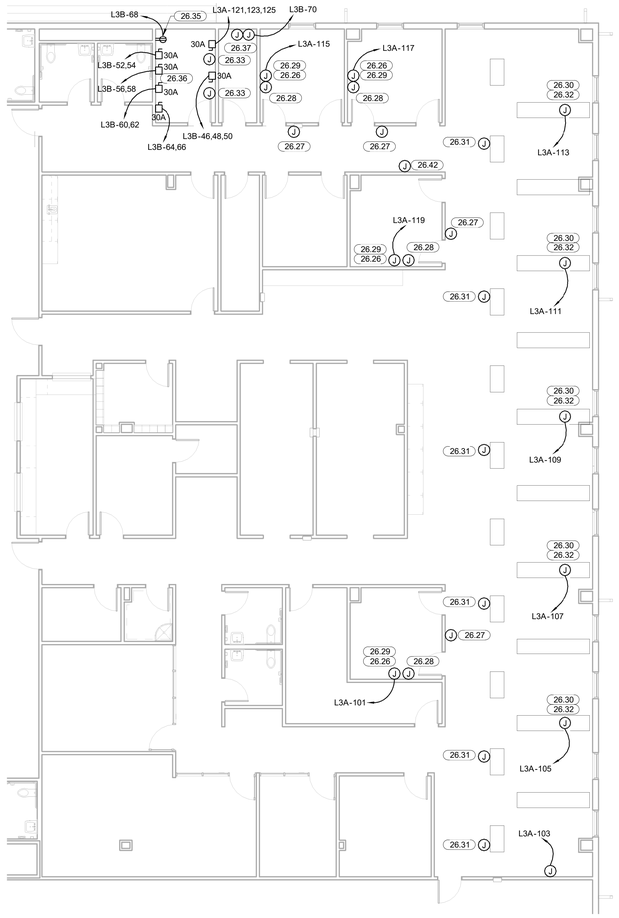
26.26	+43 1/2" XRAY.
26.27	+48" EXPOSURE BUTTON. PROVIDE 1" CONDUIT TO ACCESSIBLE CELING SPACE.
26.28	+43 1/2" REMOTE STATION. PROVIDE 1" CONDUIT TO ACCESSIBLE CELING SPACE.
26.29	REFER TO DETAIL 4 ON SHEET Q3.2
26.30	REFER TO DETAIL 5 ON SHEET Q3.2
26.31	EXPOSURE BUTTON. COORDINATE MOUNTING HEIGHT WITH DENTAL EQUIPMENT PROVIDER.
26.32	REMOTE STATION AND XRAY. COORDINATE MOUNTING HEIGHT WITH DETAL EQUIPMENT PROVIDER.
26.33	REFER TO DETAIL 1 SHEET Q3.2.
26.35	HOSPITAL GRADE RECEPTACLE.
26.36	REFER TO DETAIL 6 SHEET Q3.2.
26.37	REFER TO DETAIL 3 SHEET Q3.2.
26.39	REFER TO ADEC DRAWINGS AND PROVIDE A CONTINUOUS CONDUIT PATH AS DRAWIN IN THE ADEC PLAN.
26.42	MED GAS ALARM. COORDINATE POWER REQUIREMENTS WITH NEWEST BENCO PLANS PROVIDE ALL NECESSARY CABLE AND CIRCUITS FOR PROPER OPERATION.

POWER PLAN NOTES

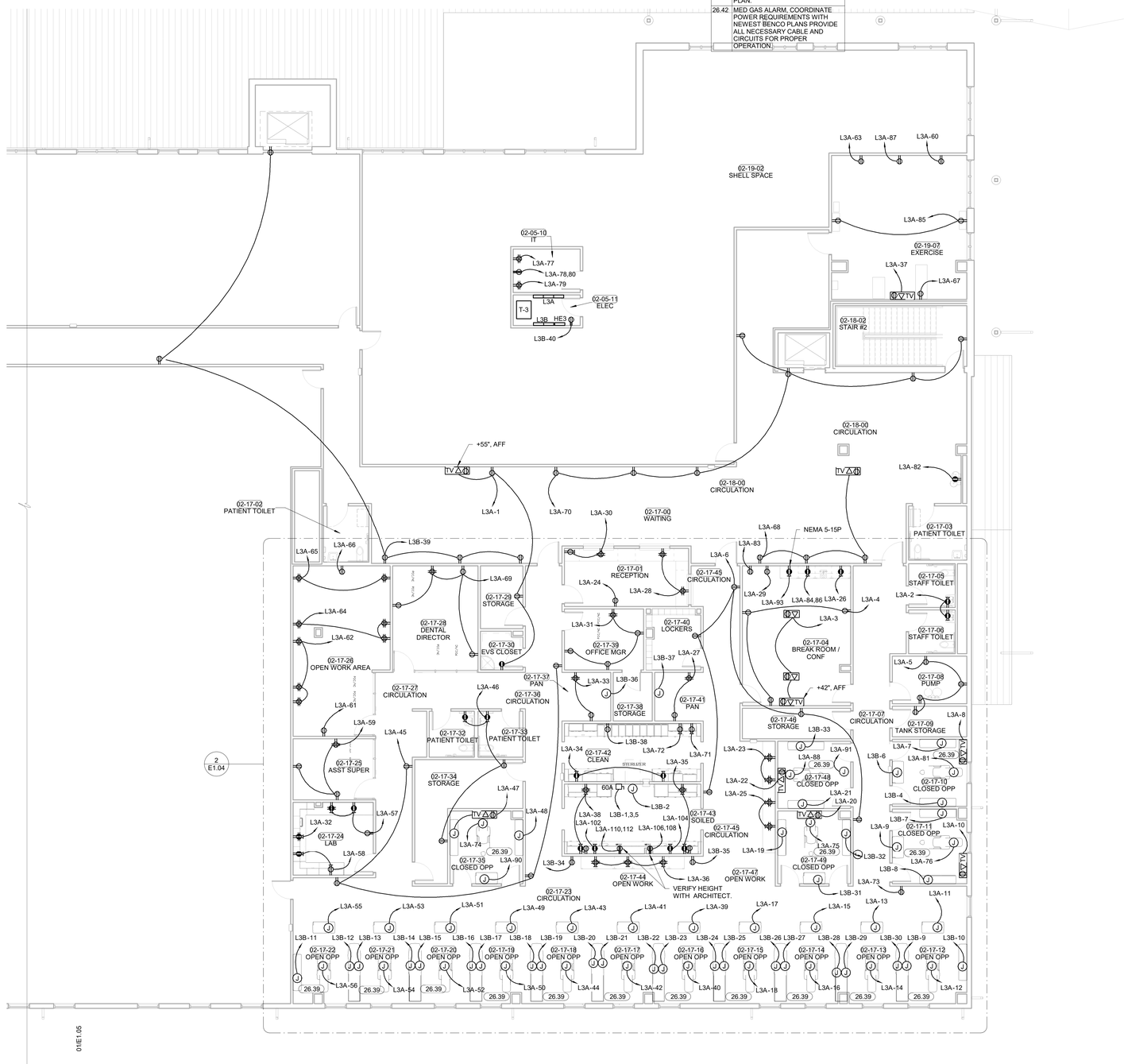
COORDINATE MOUNTING HEIGHTS FOR POWER ASSOCIATED WITH TV OUTLETS WITH ARCHITECT PRIOR TO ROUGH-IN.
E.C. SHALL COORDINATE ALL EQUIPMENT WITH THE ILO DESIGN DRAWINGS TO ENSURE PLACEMENT OF EQUIPMENT WORKS AS DESIGNED.
GROUNDING OF RECEPTACLES AND FIXED ELECTRICAL EQUIPMENT IN PATIENT CARE SPACES SHALL COMPLY WITH NEC 517.13.

DENTAL EQUIPMENT NOTES

VERIFY LOCATION AND ELECTRICAL REQUIREMENTS OF ALL DENTAL EQUIPMENT WITH DENTAL EQUIPMENT PROVIDER PRIOR TO ROUGH-IN. SEE Q SHEETS FOR ADDITIONAL ELECTRICAL REQUIRMENTS.



2 POWER PLAN LEVEL 02 SECTOR 01 - BENCO DENTAL POWER
1/8" = 1'-0"



PLAN NORTH / TRUE NORTH

1 POWER PLAN LEVEL 02 SECTOR 01
1/8" = 1'-0"

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

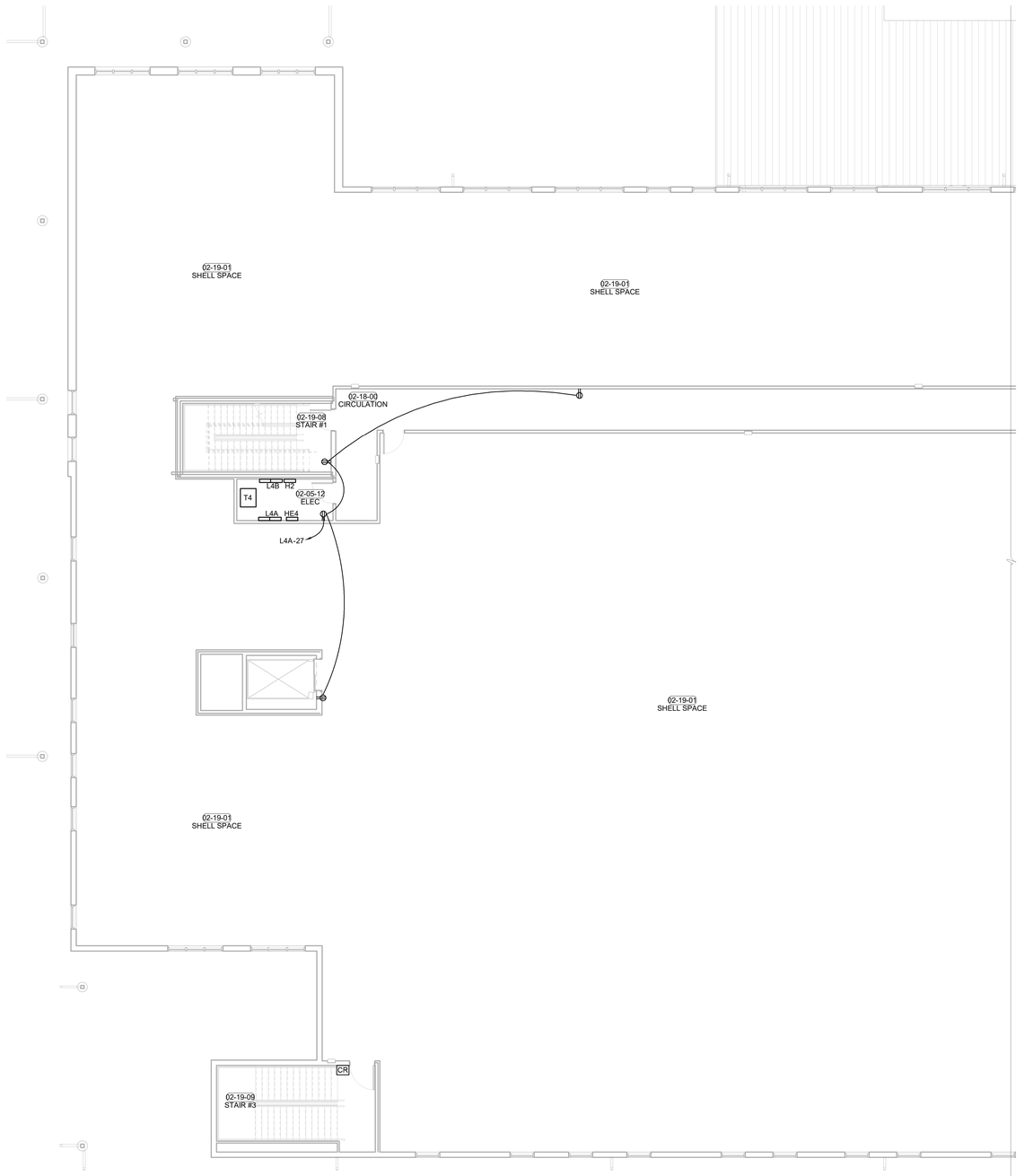
KEY PLAN:
02
01

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: E1.04

POWER PLAN LEVEL 02 SECTOR 01



PLAN NORTH

TRUE NORTH

1 POWER PLAN LEVEL 02 SECTOR 02

1/8" = 1'-0"

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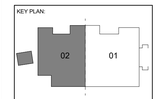
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

E1.05

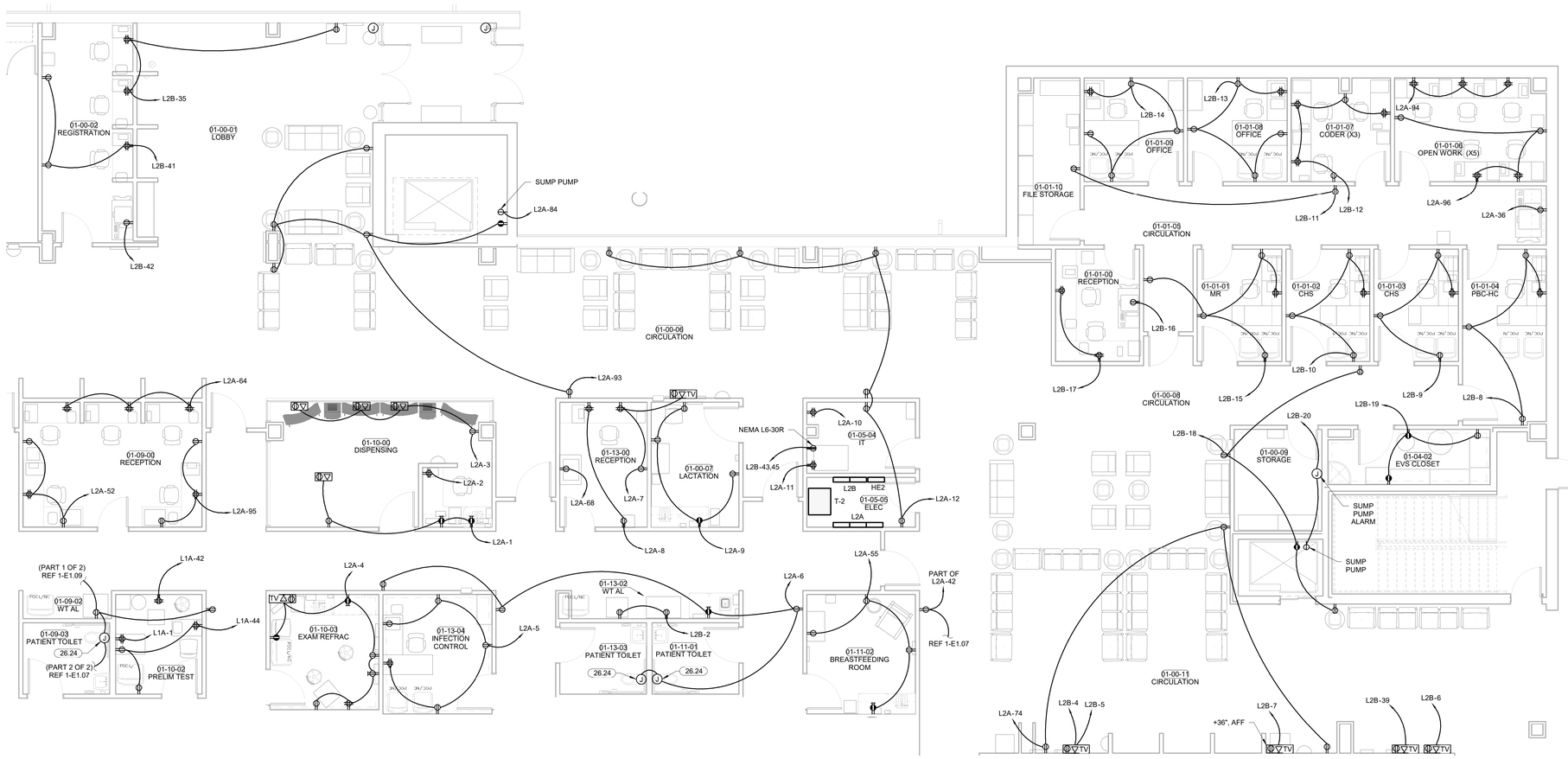
POWER PLAN
LEVEL 02
SECTOR 02

POWER PLAN NOTES

COORDINATE MOUNTING HEIGHTS FOR POWER ASSOCIATED WITH TV OUTLETS WITH ARCHITECT PRIOR TO ROUGH-IN.
E.C. SHALL COORDINATE ALL EQUIPMENT WITH THE ILO DESIGN DRAWINGS TO ENSURE PLACEMENT OF EQUIPMENT WORKS AS DESIGNED.
GROUNDING OF RECEPTACLES AND FIXED ELECTRICAL EQUIPMENT IN PATIENT CARE SPACES SHALL COMPLY WITH NEC 517.13.

KEYNOTES

26.24	MAKE CONNECTIONS TO AUTOMATIC FLUSH TOILETS/URINAL AND AUTOMATIC SINKS PER MANUFACTURER SPECIFICATIONS.



PLAN NORTH

TRUE NORTH

1 POWER PLAN LEVEL 01 SECTOR 01 NORTH

3/16" = 1'-0"

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12/06/2019

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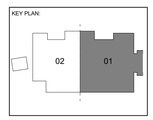
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: E1.06

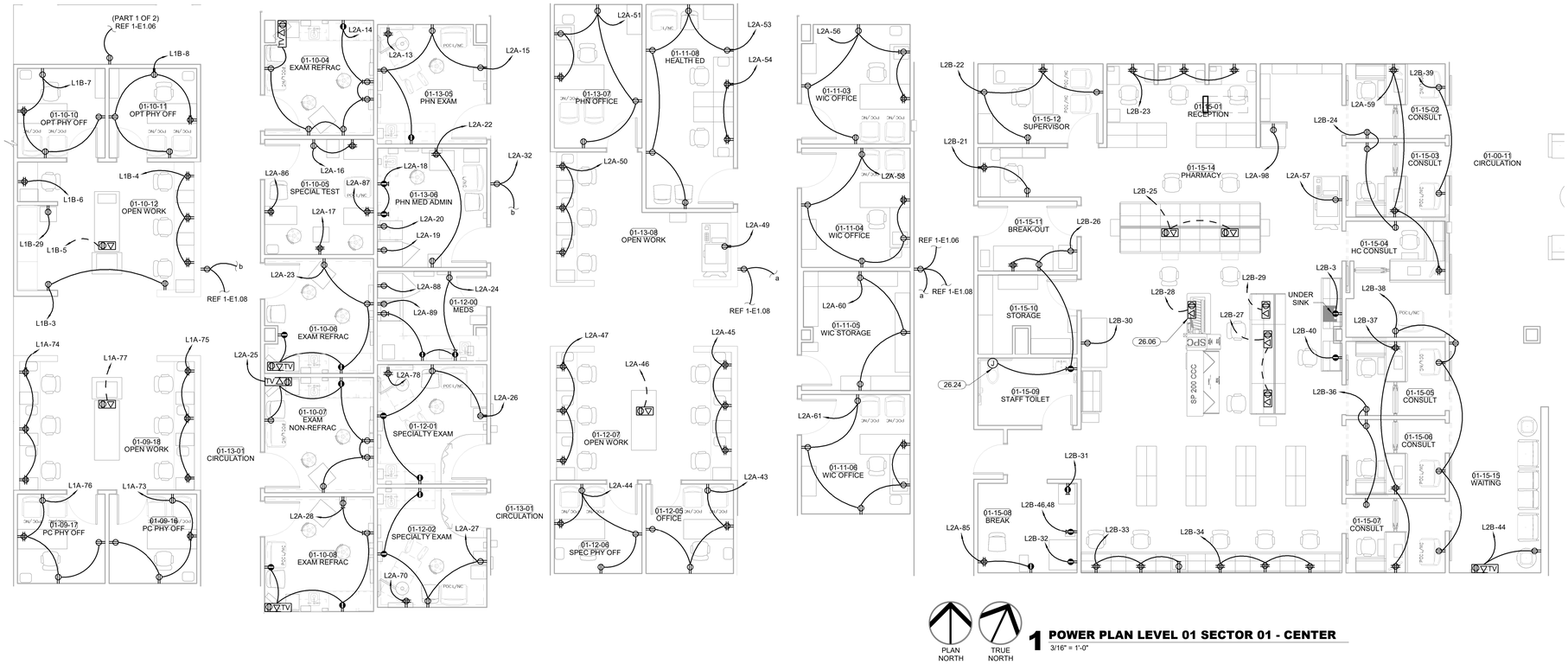
POWER PLAN LEVEL 01 SECTOR 01 N

POWER PLAN NOTES

COORDINATE MOUNTING HEIGHTS FOR POWER ASSOCIATED WITH TV OUTLETS WITH ARCHITECT PRIOR TO ROUGH-IN.
E.C. SHALL COORDINATE ALL EQUIPMENT WITH THE ILO DESIGN DRAWINGS TO ENSURE PLACEMENT OF EQUIPMENT WORKS AS DESIGNED.
GROUNDING OF RECEPTACLES AND FIXED ELECTRICAL EQUIPMENT IN PATIENT CARE SPACES SHALL COMPLY WITH NEC 517.13.

KEYNOTES

26.06	CORDINATE POWER REQUIREMENT WITH SP 200 FROM SCRIPTPRO.
26.24	MAKE CONNECTIONS TO AUTOMATIC FLUSH TOILETS/URINAL AND AUTOMATIC SINKS PER MANUFACTURER SPECIFICATIONS.



PLAN NORTH

TRUE NORTH

1 POWER PLAN LEVEL 01 SECTOR 01 - CENTER

3/16" = 1'-0"

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

E1.07

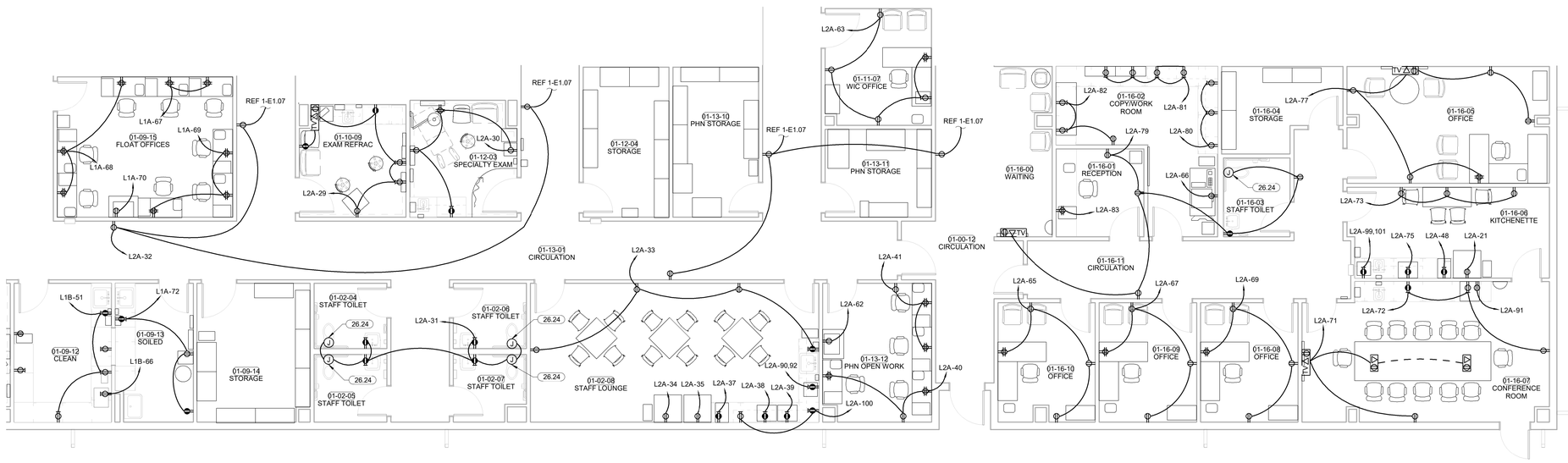
POWER PLAN
LEVEL 01
SECTOR 01 CTR

POWER PLAN NOTES

COORDINATE MOUNTING HEIGHTS FOR POWER ASSOCIATED WITH TV OUTLETS WITH ARCHITECT PRIOR TO ROUGH-IN.
E.C. SHALL COORDINATE ALL EQUIPMENT WITH THE ILO DESIGN DRAWINGS TO ENSURE PLACEMENT OF EQUIPMENT WORKS AS DESIGNED.
GROUNDING OF RECEPTACLES AND FIXED ELECTRICAL EQUIPMENT IN PATIENT CARE SPACES SHALL COMPLY WITH NEC 517.13.

KEYNOTES

26.24	MAKE CONNECTIONS TO AUTOMATIC FLUSH TOILET/URINAL AND AUTOMATIC SINKS PER MANUFACTURER SPECIFICATIONS.



PLAN NORTH

TRUE NORTH

1 POWER PLAN LEVEL 01 SECTOR 01 - SOUTH
3/16" = 1'-0"

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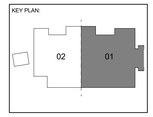
TRIBAL SEAL OF THE CHEROKEE NATION OKLAHOMA SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

E1.08

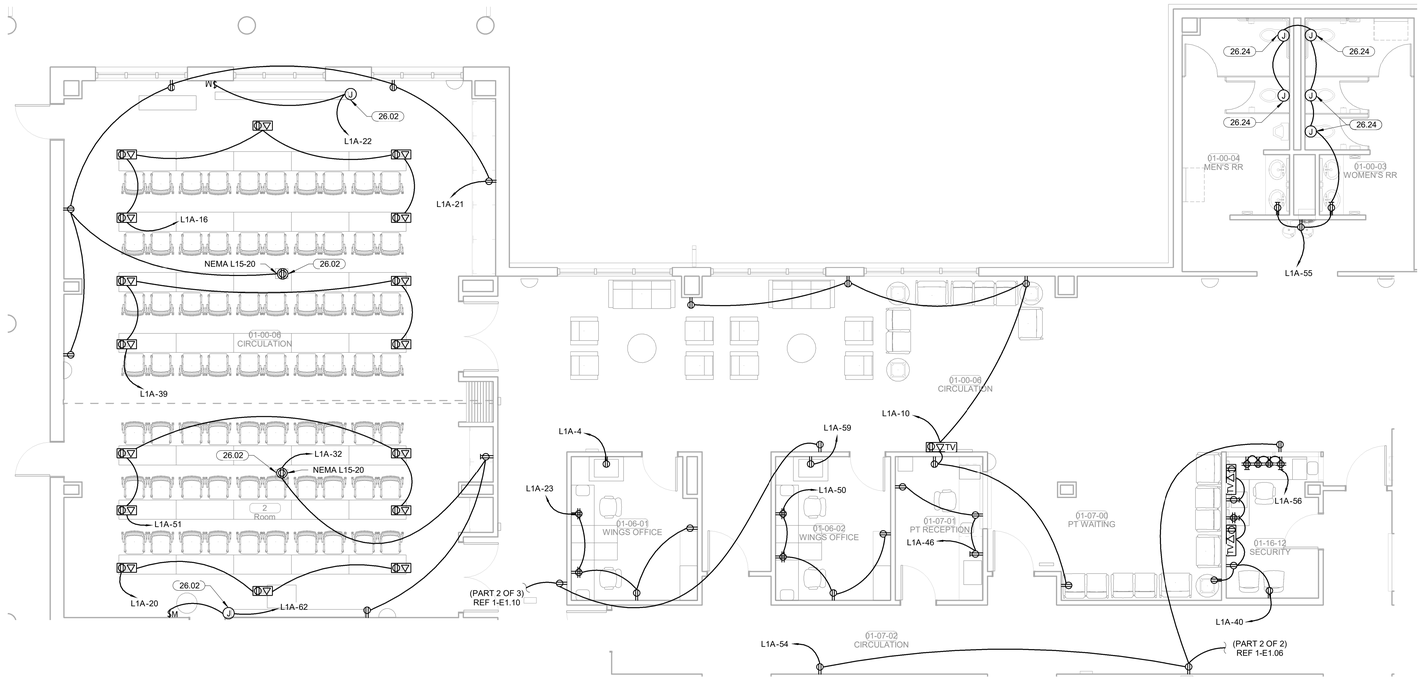
POWER PLAN LEVEL 01 SECTOR 01 S

POWER PLAN NOTES

COORDINATE MOUNTING HEIGHTS FOR POWER ASSOCIATED WITH TV OUTLETS WITH ARCHITECT PRIOR TO ROUGH-IN.
E.C. SHALL COORDINATE ALL EQUIPMENT WITH THE ILO DESIGN DRAWINGS TO ENSURE PLACEMENT OF EQUIPMENT WORKS AS DESIGNED.
GROUNDING OF RECEPTACLES AND FIXED ELECTRICAL EQUIPMENT IN PATIENT CARE SPACES SHALL COMPLY WITH NEC 517.13.

KEYNOTES

26.02	POWER FOR PROJECTOR OR PROJECTOR SCREEN. CORDINATE LOCATION WITH ARCHITECTURALS PRIOR TO INSTALLING.
26.24	MAKE CONNECTIONS TO AUTOMATIC FLUSH TOILETS/URINAL AND AUTOMATIC SINKS PER MANUFACTURER SPECIFICATIONS.



PLAN NORTH

TRUE NORTH

1 POWER PLAN LEVEL 01 SECTOR 02 - NORTH
3/16" = 1'-0"

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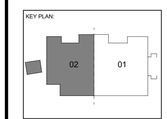
TRIBAL SEAL OF THE CHEROKEE NATION 1839 DEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

E1.09

POWER PLAN LEVEL 01 SECTOR 02 N

1" = 1'-0" 3" = 1'-0" 1 1/2" = 1'-0" 3/4" = 1'-0" 1/2" = 1'-0" 3/8" = 1'-0" 1/4" = 1'-0" 1/8" = 1'-0"

POWER PLAN NOTES

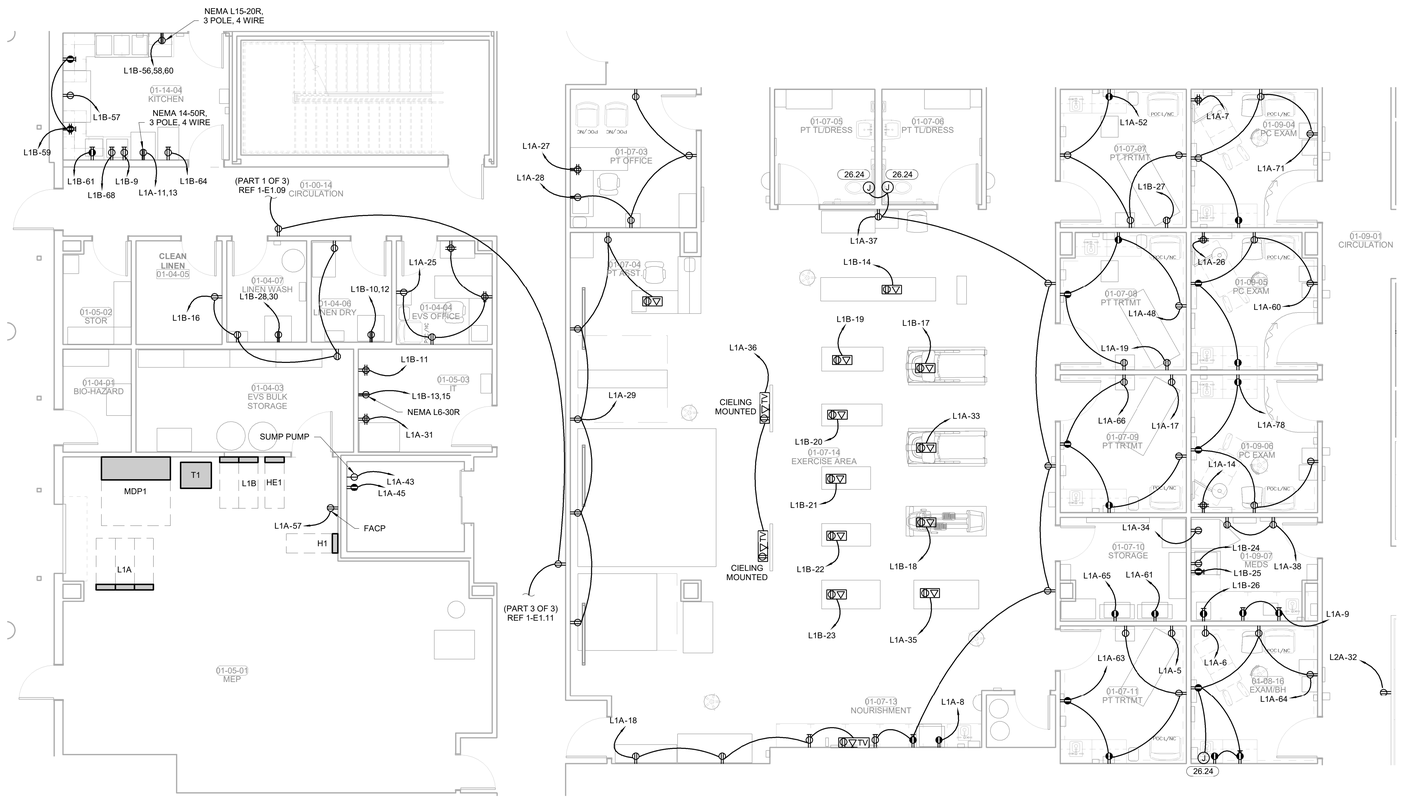
COORDINATE MOUNTING HEIGHTS FOR POWER ASSOCIATED WITH TV OUTLETS WITH ARCHITECT PRIOR TO ROUGH-IN.
E.C. SHALL COORDINATE ALL EQUIPMENT WITH THE ILO DESIGN DRAWINGS TO ENSURE PLACEMENT OF EQUIPMENT WORKS AS DESIGNED.
GROUNDING OF RECEPTACLES AND FIXED ELECTRICAL EQUIPMENT IN PATIENT CARE SPACES SHALL COMPLY WITH NEC 517.13.

DENTAL EQUIPMENT NOTES

VERIFY LOCATION AND ELECTRICAL REQUIREMENTS OF ALL DENTAL EQUIPMENT WITH BENCO(DENTAL EQUIPMENT PROVIDER) PRIOR TO ROUGH-IN.

KEYNOTES

26.24	MAKE CONNECTIONS TO AUTOMATIC FLUSH TOILETS/URINAL AND AUTOMATIC SINKS PER MANUFACTURER SPECIFICATIONS.



1 **POWER PLAN LEVEL 01 SECTOR 02 - CENTER**
3/16" = 1'-0"

PLAN NORTH / TRUE NORTH

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12/06/2019

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CLIENT:
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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:
02
01

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
E1.10

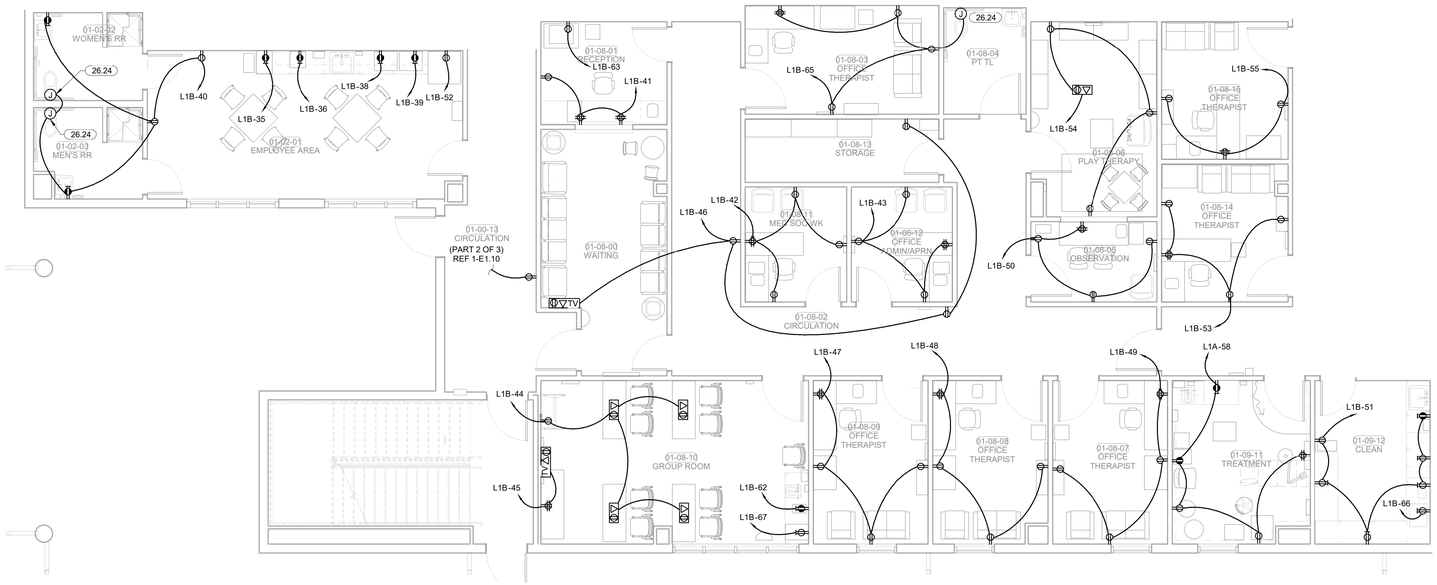
POWER PLAN LEVEL 01 SECTOR 02 CTR

POWER PLAN NOTES

COORDINATE MOUNTING HEIGHTS FOR POWER ASSOCIATED WITH TV OUTLETS WITH ARCHITECT PRIOR TO ROUGH-IN.
E.C. SHALL COORDINATE ALL EQUIPMENT WITH THE ILO DESIGN DRAWINGS TO ENSURE PLACEMENT OF EQUIPMENT WORKS AS DESIGNED.
GROUNDING OF RECEPTACLES AND FIXED ELECTRICAL EQUIPMENT IN PATIENT CARE SPACES SHALL COMPLY WITH NEC 517.13.

KEYNOTES

26.24	MAKE CONNECTIONS TO AUTOMATIC FLUSH TOILETS/URINAL AND AUTOMATIC SINKS PER MANUFACTURER SPECIFICATIONS.



PLAN NORTH

TRUE NORTH

1 POWER PLAN LEVEL 01 SECTOR 02 - SOUTH

3/16" = 1'-0"

James R. Childers Architect, Inc.

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Fort Smith, AR 72901
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PROFESSIONAL SEAL:

LICENSED PROFESSIONAL ENGINEER
Robert Brandon Pinkerton
23042
OKLAHOMA
(NOT VALID UNLESS SIGNED)

12/06/2019

CONSULTANT LOGO:

HP ENGINEERING

PROJECT NO. 18068R

100 % COMPLETE

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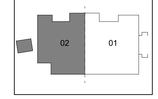
ROGERS, AR 72758
(479) 899-6370
www.hpengineeringinc.com

CLIENT:

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

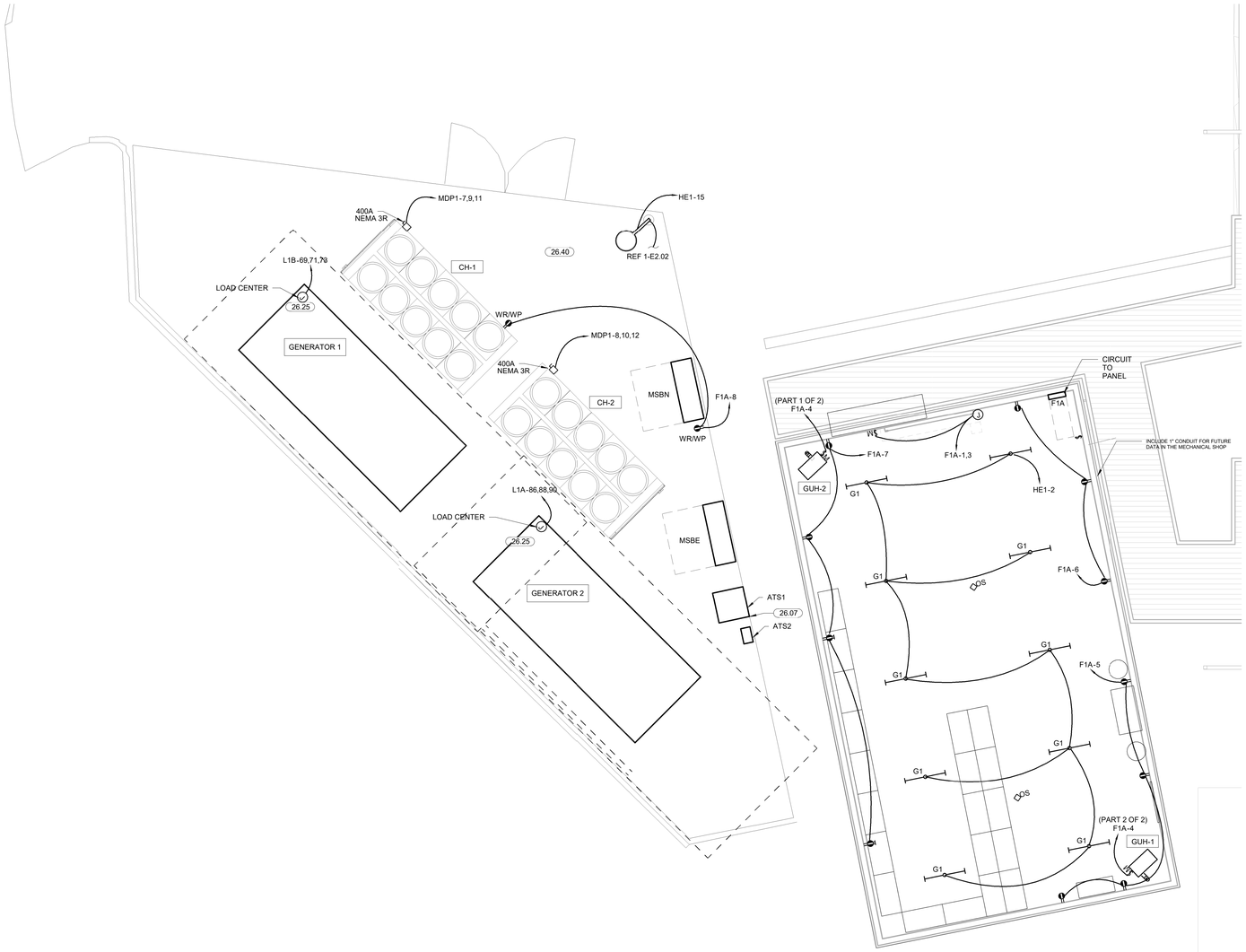
SHEET NUMBER:

E1.11

POWER PLAN LEVEL 01 SECTOR 02 S

KEYNOTES

26.07	MOUNT PANELS AND DISCONNECTS ON UNISTRUT, E.C FABRICATE IN FIELD COORDINATE EXACT LOCATION AND CLEARANCES WITH PLUMBING AND MECHANICAL CONTRACTORS PRIOR TO ROUGH-IN
26.25	PROVIDE 1" UNDERGROUND CONDUIT TO ACCESSIBLE CEILING SPACE IN MAIN BUILDING FOR GENERATOR CONTROLS.
26.40	PROVIDE ALL NEEDED CONDUIT FOR FUTURE CHILLER COORDINATE STUB UP LOCATION WITH HYDRONIC PIPE LOCATIONS.



PLAN NORTH / TRUE NORTH

1 MAINTENANCE/ MECHANICAL YARD POWER
3/16" = 1'-0"

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STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

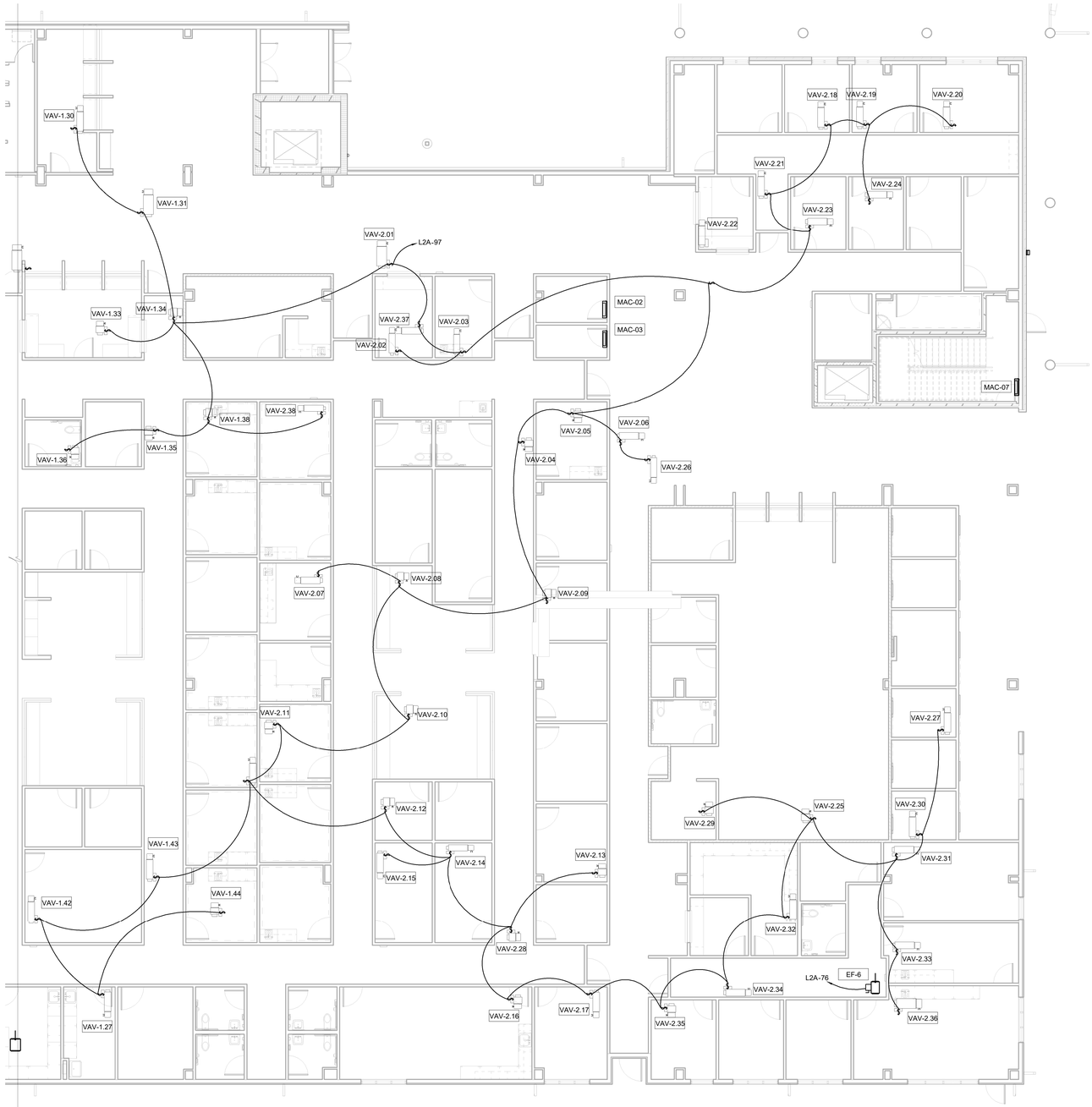
REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: E1.13
MAINTENACE/ MECH YARD POWER/LIGHTING

MECHANICAL POWER PLAN NOTES

E.C.SHALL MAKE CONNECTIONS BETWEEN THE OUTDOOR AND INDOOR UNITS OF THE MINI-SPLIT SYSTEM.
EXHAUST FANS SHALL BE CIRCUITED WITH LIGHTS UNLESS SHOWN OTHERWISE. REFER TO MECHANICAL PLANS FOR CONTROLS OF EXHAUST FANS.
VAV DISCONNECTS ARE FACTORY INSTALLED.



PLAN NORTH TRUE NORTH

1 MECHANICAL POWER PLAN LEVEL 01 SECTOR 01
1/8" = 1'-0"

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12/06/2019

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SEPT. 6, 1839

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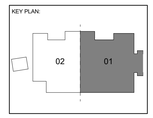
KEY PLAN:



PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
E1.14

MECH POWER PLAN LEVEL 01 SECTOR 01

MECHANICAL POWER PLAN NOTES

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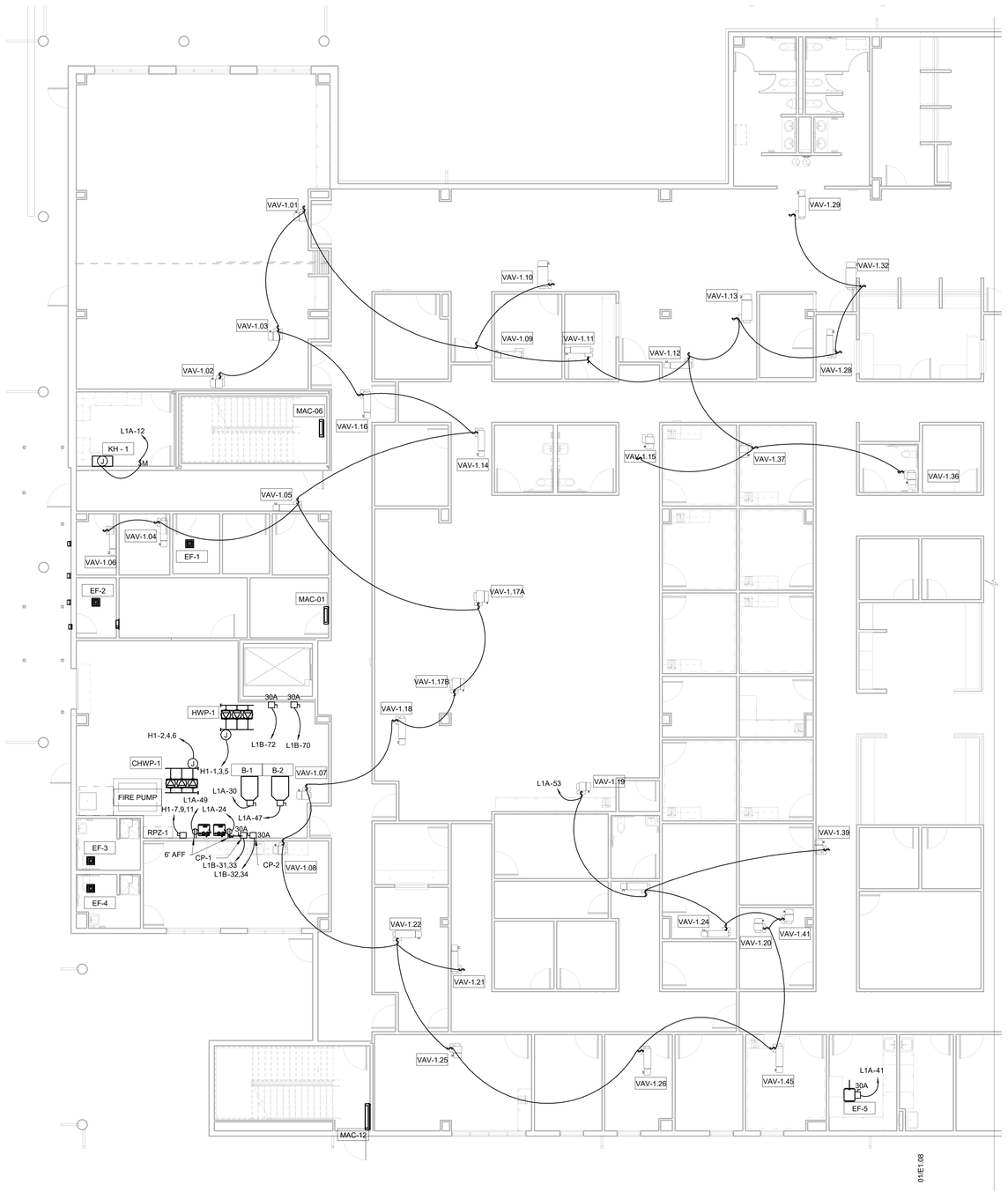
VAV DISCONNECTS ARE FACTORY INSTALLED.



PLAN NORTH

TRUE NORTH

1 MECHANICAL POWER PLAN LEVEL 01 SECTOR 02
1/8" = 1'-0"

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12/06/2019

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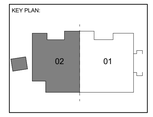
STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

E1.15

MECH POWER PLAN LEVEL 01 SECTOR 02

MECHANICAL POWER PLAN NOTES

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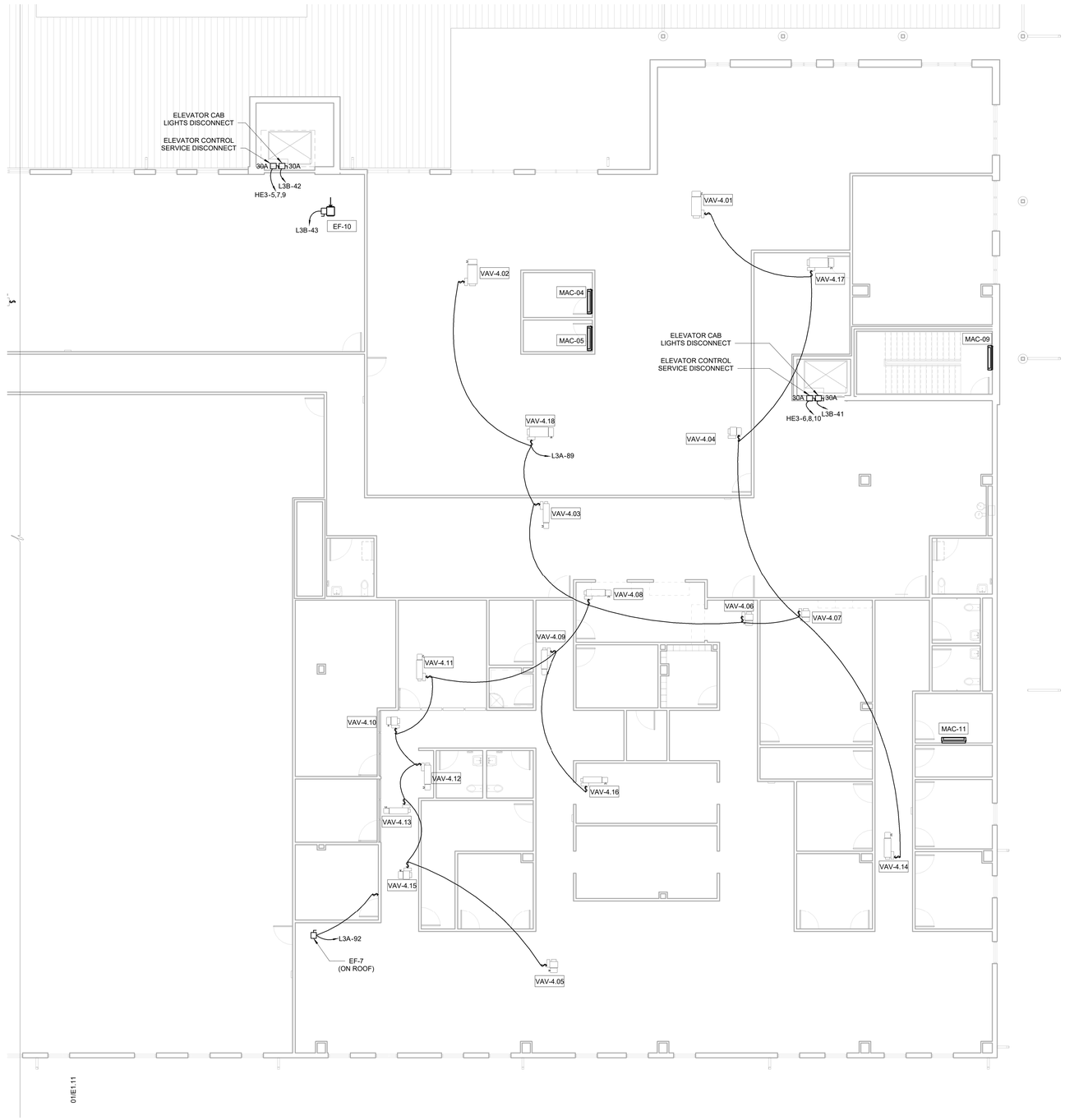
EXHAUST FANS SHALL BE CIRCUITED WITH LIGHTS UNLESS SHOWN OTHERWISE. REFER TO MECHANICAL PLANS FOR CONTROLS OF EXHAUST FANS.
VAV DISCONNECTS ARE FACTORY INSTALLED.



PLAN NORTH

TRUE NORTH

1 MECHANICAL POWER PLAN LEVEL 02 SECTOR 01

1/8" = 1'-0"

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12/06/2019

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

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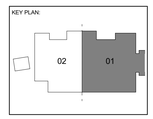
KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER:

E1.16

MECH POWER PLAN LEVEL 02 SECTOR 01

MECHANICAL POWER PLAN NOTES

E.C.SHALL MAKE CONNECTIONS BETWEEN THE OUTDOOR AND INDOOR UNITS OF THE MINI-SPLIT SYSTEM.
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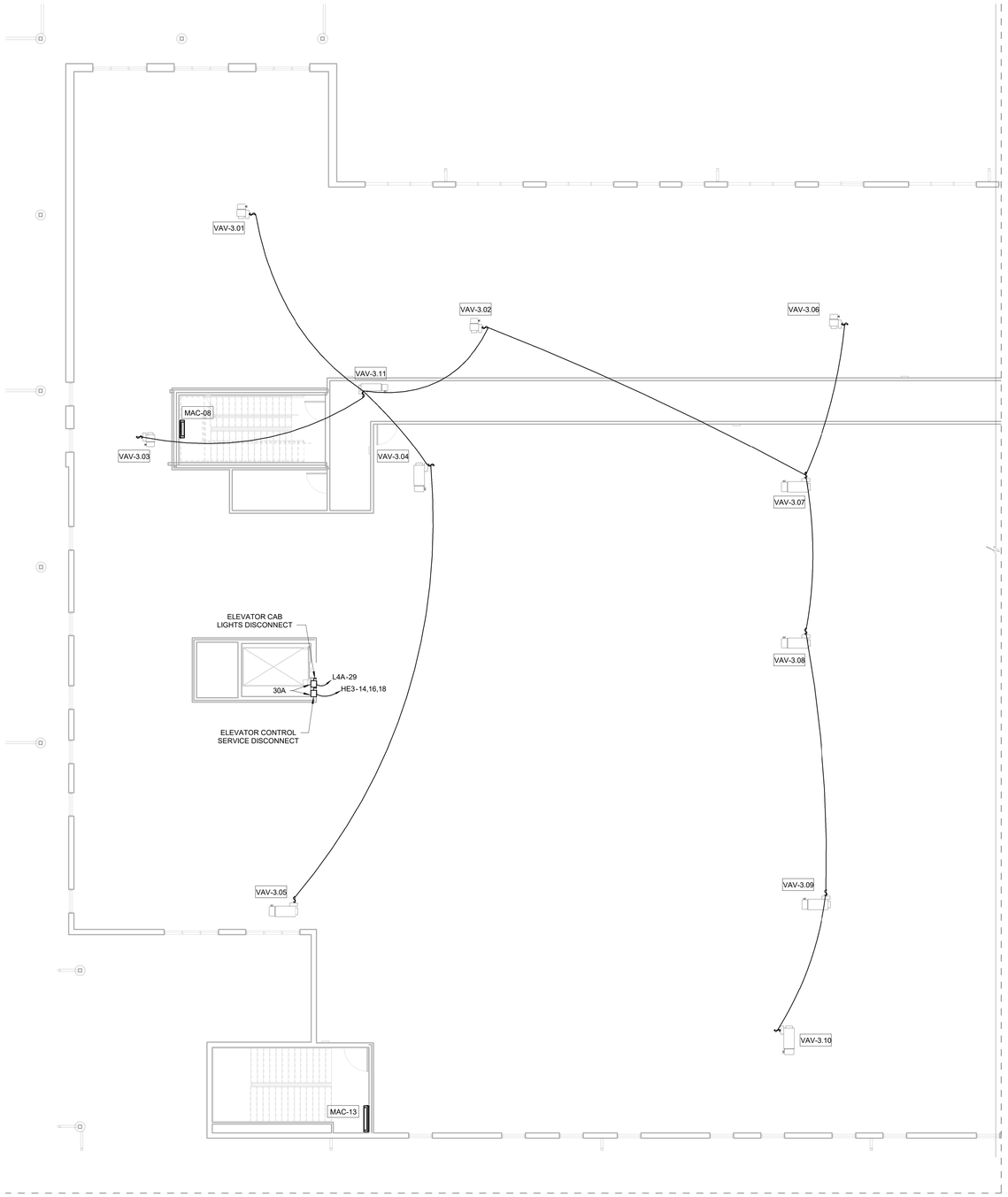

PLAN NORTH / TRUE NORTH

1 MECHANICAL POWER PLAN LEVEL 02 SECTOR 02
1/8" = 1'-0"

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:
02 01

PROJECT PHASE:
BID PACKAGE 02

REVISIONS

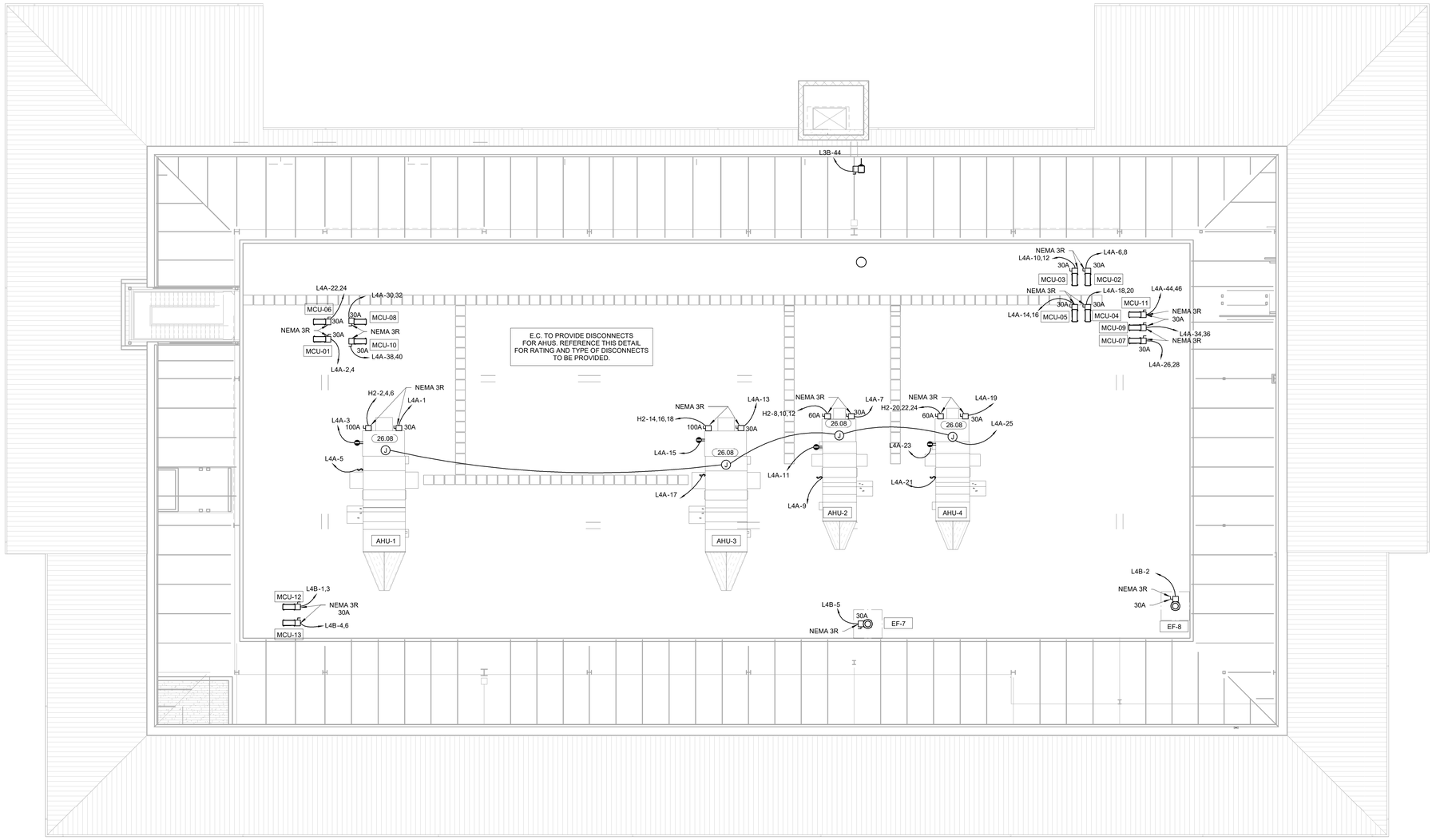
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: E1.17

MECH POWER PLAN LEVEL 02 SECTOR 02

KEYNOTES

26.08	POWER FOR MECHANICAL CONTROL SYSTEMS, CORDINATE EXACT LOCATION WITH CONTROL SYSTEMS CONTRACTOR OR MECHANICAL CONTRACTIOR PRIOR TO ROUGH-IN.



PLAN NORTH

TRUE NORTH

1 MECHANICAL POWER PLAN LEVEL 3

1" = 10'-0"

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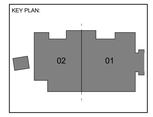
STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: E1.18

MECH POWER PLAN ROOF

FIRE ALARM GENERAL NOTES

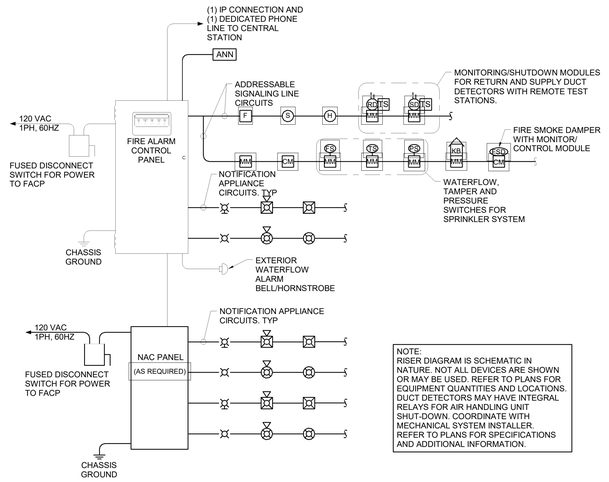
1. FIRE ALARM SYSTEM DESIGN, INSTALLATION AND MATERIALS SHALL BE IN ACCORDANCE WITH NFPA 70 AND NFPA 72. SYSTEM SHALL ALSO MEET ALL APPLICABLE BUILDING CODES, FIRE CODES AND THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND INSURANCE CARRIER. VERIFY REQUIREMENTS PRIOR TO BID SUBMITTAL.
2. INFORMATION ON CONTRACT DOCUMENTS IS GENERAL INFORMATION AND FOR BID PURPOSES ONLY. PERFORM REQUIRED CALCULATIONS AND COORDINATE WITH OTHER TRADES. DEVIATIONS FROM ENGINEERS LAYOUT WILL NOT BE CONSIDERED UNLESS A FORMALLY SUBMITTED RFI IS RECEIVED AND APPROVED.
3. PROVIDE ADDITIONAL MATERIALS AND LABOR REQUIRED DUE TO LACK OF COORDINATION OR TO MEET AUTHORITY HAVING JURISDICTION AND INSURANCE CARRIER REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.
4. PROVIDE ALL EQUIPMENT AND LABOR REQUIRED FOR A COMPLETE AND OPERATIONAL FIRE ALARM SYSTEM.
5. THE FIRE ALARM CONTROL PANEL AND REMOTE ANNUNCIATOR LOCATIONS SHOWN SHALL BE COORDINATED WITH THE FIRE DEPARTMENT AND AHJ PRIOR TO INSTALLATION.
6. PROVIDE DEDICATED CONNECTION OF THE FIRE ALARM SYSTEM TO A UL LISTED CENTRAL STATION.
7. PROVIDE KNOX BOX FOR FIRE DEPARTMENT ACCESS. CONNECT TAMPER SWITCH TO FIRE ALARM SYSTEM AS REQUIRED.
8. PROVIDE CONNECTION TO EXTERIOR WATERFLOW ALARM BELL AS REQUIRED.
9. PROVIDE NOTIFICATION, INITIATING AND MONITORING DEVICES AS INDICATED ON THE DRAWINGS. FIRE ALARM DEVICES SHALL BE OF ONE MANUFACTURER AND SHALL BE LISTED FOR USE WITH THE FIRE ALARM CONTROL PANEL.
10. PROVIDE NOTIFICATION APPLIANCE CIRCUIT PANEL(S) TO POWER NOTIFICATION DEVICES AS REQUIRED. CONNECT TO FIRE ALARM SYSTEM.
11. AUDIBLE NOTIFICATION DEVICES SHALL SOUND UNTIL SILENCED AT THE CONTROL PANEL OR REMOTE ANNUNCIATOR AS REQUIRED. VISUAL ALARM IS DISPLAYED UNTIL DEVICE IS RETURNED TO ITS NORMAL POSITION OR SUPERVISORY CONDITION IS CLEARED.
12. ROOF TOP AIR DISTRIBUTION SYSTEMS EXCEEDING 2,000 CFM: PROVIDE DUCT MOUNTED SMOKE DETECTORS FOR AIR HANDLING UNIT SHUTDOWN AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MONITOR MODULE FOR SUPPLY AIR DUCT DETECTOR AND RELAY/MONITOR MODULE FOR RETURN AIR DUCT DETECTOR. REFER TO MECHANICAL SHEETS FOR AIR HANDLING UNIT AND DUCTWORK LAYOUT AND DETAILS.
13. DUCT SMOKE DETECTION SHALL TRANSMIT A SUPERVISORY SIGNAL TO THE FACP.
14. AIR HANDLING SYSTEMS THAT ARE MONITORED SHALL SHUTDOWN AND REMAIN DOWN UNTIL MANUALLY RESET.
15. FORWARD COMPLETED FIRE ALARM CERTIFICATE OF COMPLETION TO THE OWNER.
16. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
17. NEW SYSTEM TO CONNECT TO EXISTING FIRE ALARM SYSTEM.
18. NEW FIRE ALARM DEVICES TO BE COMPATIBLE WITH EXISTING SYSTEM.

FIRE ALARM INSTALLATION NOTES

1. SYSTEM SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 72 AND LOCAL CODES AND REGULATIONS. ALL EQUIPMENT AND MATERIALS SHALL BE UL LISTED AND APPROVED BY THE AUTHORITY HAVING JURISDICTION.
2. FIRE ALARM CONTROL PANEL SHALL BE MODULAR, POWER-LIMITED DESIGN WITH ELECTRONIC MODULES, UL 864 LISTED, AND DESIGNED TO TRANSMIT ALARM, TROUBLE, AND SUPERVISORY SIGNALS TO A UL LISTED CENTRAL STATION THROUGH A DIGITAL ALARM COMMUNICATOR TRANSMITTER WITH (1) ETHERNET PORT CONNECTION AND (1) DEDICATED TELEPHONE LINE.
3. PROVIDE 120VAC POWER THROUGH DEDICATED LOCKING BREAKER AT POWER PANEL.
3. GROUND THE FACP AND ALL ASSOCIATED CIRCUITS.
4. INSTALL A #6 AWG GROUND WIRE FROM THE TELE-COMMUNICATIONS EQUIPMENT GROUNDING POINT TO THE FACP.
5. SYSTEM SHALL INCLUDE 24V DC POWER SYSTEM WITH SEALED LEAD CALCIUM BATTERIES AND AUTOMATIC BATTERY CHARGER IN ACCORDANCE WITH NFPA 72.
6. PROVIDE (1) IP CONNECTION TO CUSTOMERS INTERNET NETWORK AND (1) DEDICATED TELEPHONE LINE TERMINATED WITH (1) RJ-31X MODULAR OUTLET AT DACT LOCATION.
7. INTERFACE WITH AND MONITOR ALL FIRE SUPPRESSION SYSTEM DEVICES INCLUDING (BUT NOT LIMITED TO) SPRINKLER FLOW AND TAMPER SWITCHES.
8. INTERFACE WITH AND MONITOR DUCT DETECTORS FOR HVAC UNITS WITH CFM OF 2,000 OR GREATER.
9. WIRE AND CABLE SHALL BE UL LISTED AND LABELED AS COMPLYING WITH NFPA 70, ARTICLE 760. SIGNALING LINE CIRCUITS TO BE TWISTED, SHIELDED PAIR, SIZED AS RECOMMENDED BY SYSTEM MANUFACTURER. NON-POWER-LIMITED CIRCUITS TO BE SOLID-COPPER CONDUCTORS WITH 600-V RATED, 75 DEG C, COLOR-CODED INSULATION.
   9.1 LOW-VOLTAGE CIRCUITS: NO. 16 AWG, MINIMUM
   9.2 LINE-VOLTAGE CIRCUITS: NO. 12 AWG, MINIMUM
10. INSTALL AND TEST SYSTEMS ACCORDING TO NFPA 72. COMPLY WITH NECA 1.
11. TEST ALL SYSTEM DEVICES FOR PROPER OPERATION IN THE PRESENCE OF THE AHJ AND OTHER OFFICIALS INSPECTING THE FIRE ALARM SYSTEM.
12. IF REQUIRED BY THE LOCAL AHJ, EQUIPMENT DATA SHEETS AND BATTERY CALCULATIONS IN ACCEPTANCE WITH NFPA 72 SHALL BE PERFORMED BY THE FIRE ALARM SYSTEM MANUFACTURER/INSTALLER TO MATCH EQUIPMENT TO BE INSTALLED.
13. SYSTEM INSTALLER SHALL BE A LICENSED FIRE ALARM CONTRACTOR IN THE RESPECTIVE STATE OF THIS PROJECT.

FIRE ALARM LEGEND

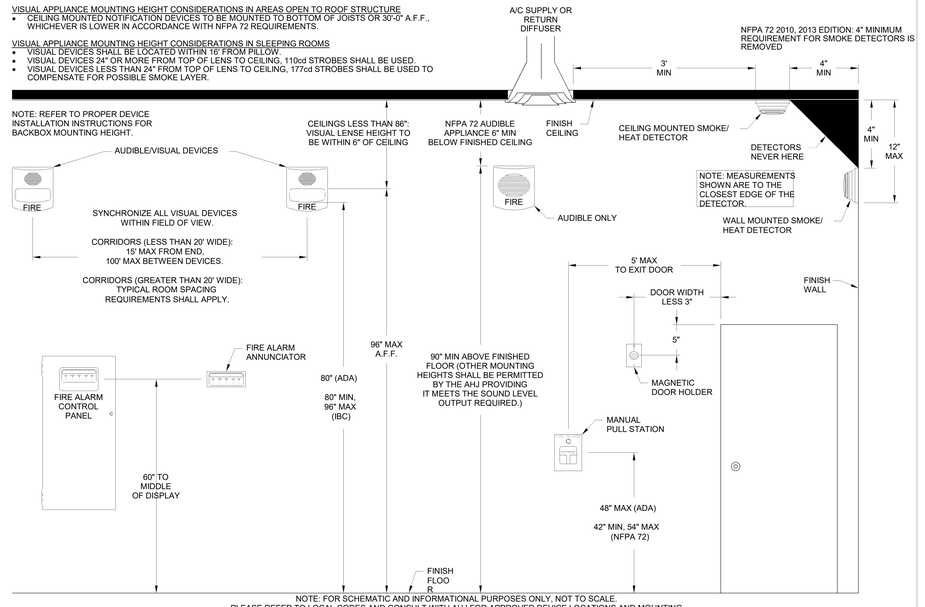
S	SMOKE DETECTOR
H	HEAT DETECTOR
D	DUCT DETECTOR
	WALL MOUNT HORN STROBE
	CEILING MOUNT HORN STROBE
	WALL MOUNT STROBE
	CEILING MOUNT STROBE
F	PULL STATION
ANN	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FS	SPRINKLER FLOW SWITCH
T S	SPRINKLER TAMPER SWITCH
MM	FIRE ALARM MONITOR MODULE
CM	FIRE ALARM CONTROL MODULE



NOTE:
RISER DIAGRAM IS SCHEMATIC IN NATURE. NOT ALL DEVICES ARE SHOWN OR MAY BE USED. REFER TO PLANS FOR EQUIPMENT QUANTITIES AND LOCATIONS. DUCT DETECTORS MAY HAVE INTEGRAL RELAYS FOR AIR HANDLING UNIT SHUT-DOWN. COORDINATE WITH MECHANICAL SYSTEM INSTALLER. REFER TO PLANS FOR SPECIFICATIONS AND ADDITIONAL INFORMATION.

3 TYPICAL FIRE ALARM RISER DETAIL - EXISTING
N.T.S.

FIRE ALARM DEVICE MOUNTING HEIGHTS (PER NFPA 72)



2 FIRE ALARM MOUNTING HEIGHTS
N.T.S.

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(AS NOTED)
12/06/2019

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SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: E1.19

FIRE ALARM LEGEND AND NOTES

PLAN NORTH

TRUE NORTH

1 SYSTEMS PLAN LEVEL 01 SECTOR 01

1/8" = 1'-0"

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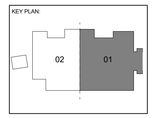


PROJECT PHASE:

BID PACKAGE 02

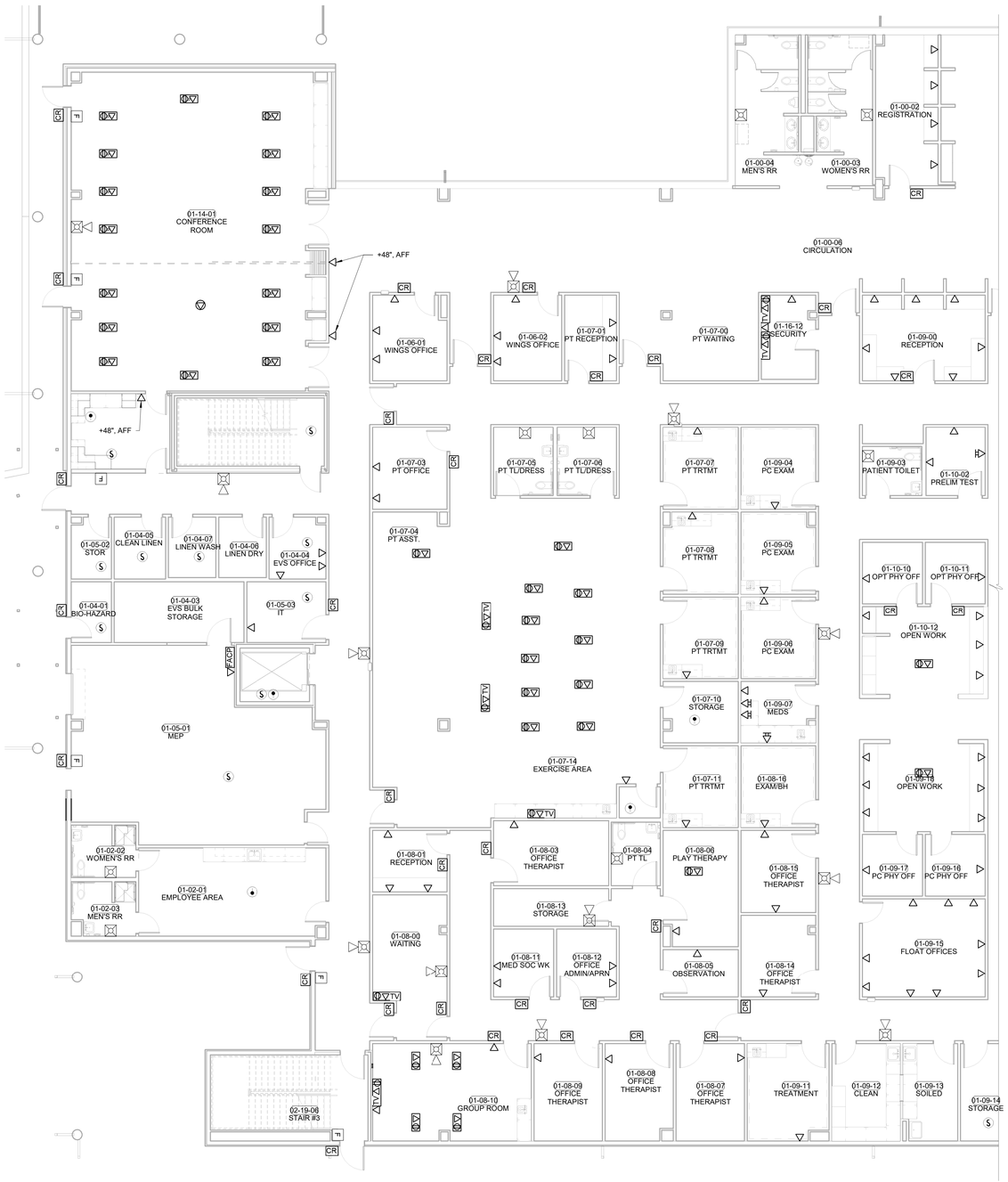
REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

E1.20

SYSTEMS PLAN LEVEL 01 SECTOR 01



PLAN NORTH

TRUE NORTH

1 SYSTEMS PLAN LEVEL 01 SECTOR 02

1/8" = 1'-0"

James R. Childers Architect, Inc.

45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com

PROFESSIONAL SEAL:

LICENSED PROFESSIONAL ENGINEER
Robert Brandon Pinkerton
23042
OKLAHOMA
(NOT VALID UNLESS SIGNED)

12/06/2019

CONSULTANT LOGO:

HP ENGINEERING
PROJECT NO. 18068R
100 % COMPLETE

HP ENGINEERING INC.
5214 W. VILLAGE PARKWAY
SUITE 120
ROGERS, AR 72758
(479) 899-6370
www.hpengineeringinc.com

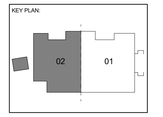
CLIENT:

SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

E1.21

SYSTEMS PLAN LEVEL 01 SECTOR 02

PLAN NORTH

TRUE NORTH

1 SYSTEMS PLAN LEVEL 02 SECTOR 01

1/8" = 1'-0"

James R. Childers Architect, Inc.

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PROFESSIONAL SEAL:

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Robert Brandon Pinkerton
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OKLAHOMA
PLAN SHOPPED
12/06/2019

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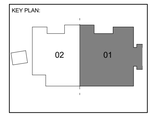
TRIBAL SEAL OF THE CHEROKEE NATION ESTABLISHED SEPT. 6, 1839 1ST FLAG

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

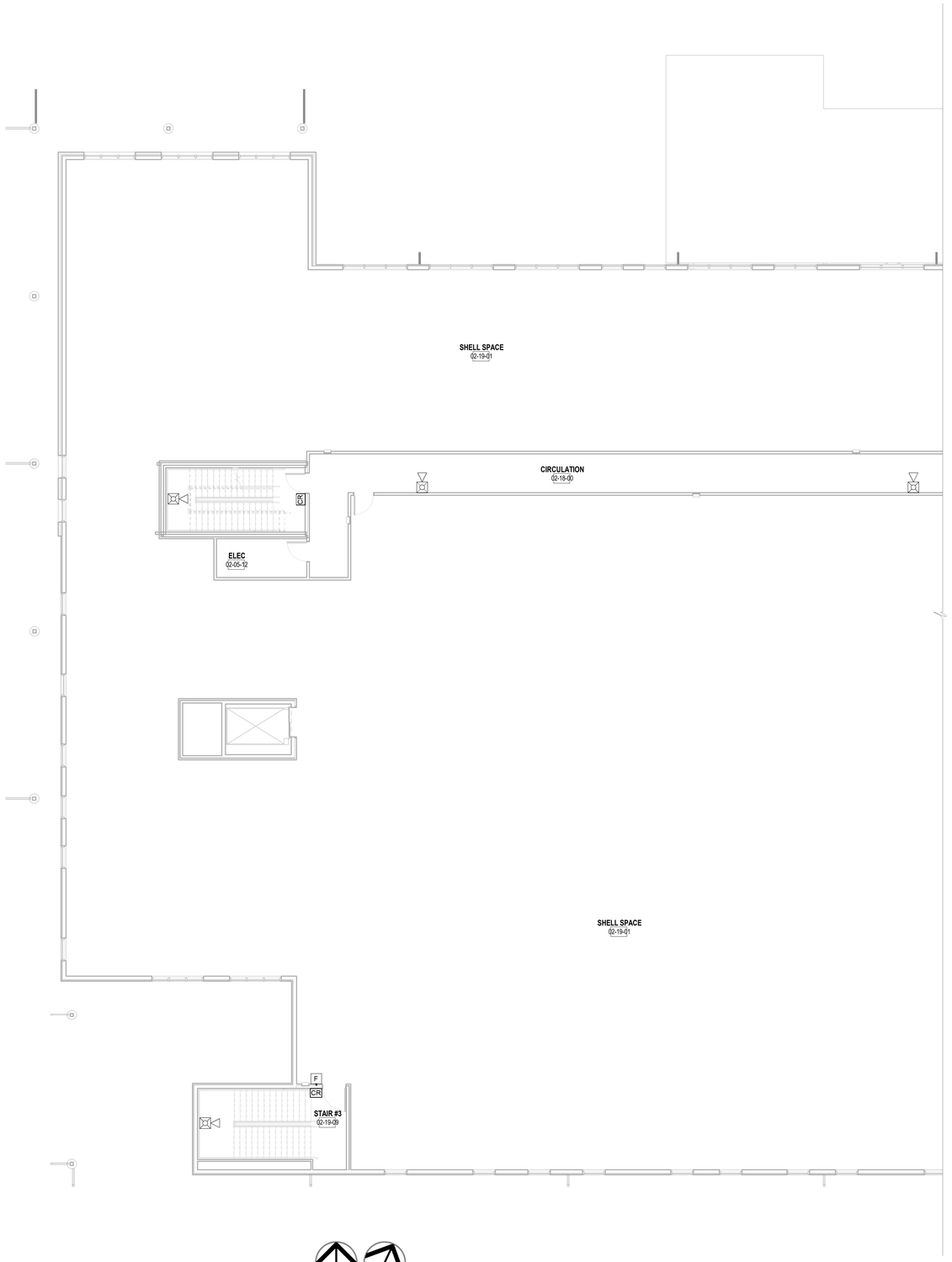
REVISIONS:		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

E1.22

SYSTEMS PLAN LEVEL 02 SECTOR 01



PLAN NORTH

TRUE NORTH

1 SYSTEMS PLAN LEVEL 02 SECTOR 02

1/8" = 1'-0"

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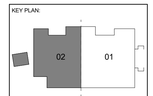
DEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

E1.23

SYSTEMS PLAN LEVEL 02 SECTOR 02

PLAN NORTH

TRUE NORTH

1 FIRST FLOOR CABLE TRAY PLAN

1" = 10'-0"

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: E1.24

FIRST FLOOR CABLE TRAY PLAN

PLAN NORTH

TRUE NORTH

1 SECOND FLOOR CABLE TRAY PLAN
1/8" = 1'-0"

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS:

#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: E1.25
SECOND FLOOR CABLE TRAY PLAN

LUMINAIRE SCHEDULE

NOTES:
1. EC SHALL PROVIDE A SUBMITTAL PACKAGE INCLUDING CUTSHEETS FOR EACH FIXTURE.
2. EC SHALL PROVIDE ALL ACCESSORIES FOR A COMPLETE ASSEMBLY INCLUDING MOUNTING HARDWARE.
3. THE MOUNTING TYPE OF EACH FIXTURE SHALL BE COMPATIBLE WITH INSTALLATION SURFACE OF EACH FIXTURE.
4. ALL FINISHES SHALL BE COORDINATED WITH ARCHITECT AND DOCUMENTED ON SUBMITTALS.

TYPE	LAMP	BALLAST / DRIVER	VOLTS	WATTS	DESCRIPTION	MANUFACTURER
A1	LED, 3500K	10-100%	120/277	32 W	2X4, TROFFER, CENTER BASKET TROFFER, 4000LM, 80CRI	VISIONEERING - LRTF
A2	LED, 3500K	10-100%	120/277	32 W	2X4, TROFFER, CENTER BASKET TROFFER, 3800LM, 80CRI	VISIONEERING - LRTF
C1	LED, 3500K	10-100%	120/277	12 W	6", RECESSED, DOWNLIGHT, 1300LM, 80CRI	VANTAGE - V6CER
G1	LED, 3500K	10-100%	120/277	35 W	4' SURFACE STRIP, 4000LM, 80CRI	VISIONEERING - LCOMN
G2	LED, 3500K	10-100%	120/277	35 W	4' SURFACE STRIP, 4000LM, 80CRI	VISIONEERING - LCOMN
G3	LED, 3500K	10-100%	120/277	35 W	4' SURFACE STRIP, 4000LM, 80CRI	VISIONEERING - LCOMN
L2	LED, 3500K	10-100%	120/277	36 W	4"X2' ;LINEAR RECESSED FLUSH MOUNT FIXTURE 500LM/FT, 80CRI	LUX - EOS
L4	LED, 3500K	10-100%	120/277	72 W	4"X4' ;LINEAR RECESSED FLUSH MOUNT FIXTURE 500LM/FT, 80CRI	LUX - EOS
L6	LED, 3500K	10-100%	120/277	109 W	4"X6' ;LINEAR RECESSED FLUSH MOUNT FIXTURE 500LM/FT, 80CRI	LUX - EOS
S2	LED, 4000K	STANDARD	120/277	494 W	25' POLE LIGHT, FORWARD THROW,30000LM	LSI - MRM
S3	LED, 4000K	STANDARD	120/277	500 W	25' POLE LIGHT, FORWARD THROW, 30000LM,	LSI - MRM
S4	LED, 3500K	10-100%/BATTERY	120/277	14 W	7' 2" WEATHER PROOF AREA LIGHT	IN-LIGHTING KHA SLIM
W1	LED, 4000K	STANDARD	120/277	45 W	WALL PACK, TRAPEZOID, 6000LM, 70CRI	LSI-XWM
X1	LED	BATTERY	120/277	5 W	EXIT SIGN, EDGELIT, AC ONLY	SURE LITES - EUX

ZONE	EGRESS	OCCUPANCY SENSOR TYPE	SWITCH TYPE	CRESTRON PART NUMBER
1	YES	CEILING	NA	6
2	YES	CEILING	KEYPAD	1
3	NO	CEILING	NA	2
4	NO	CEILING	KEYPAD	2
5	NO	CEILING	KEYPAD	2
6	NO	CEILING	KEYPAD	2
7	YES	CEILING	KEYPAD	2
8	YES	CEILING	NA	6
9	YES	CEILING	KEYPAD	2
10	YES	CEILING	KEYPAD	2
11	YES	CEILING	KEYPAD	2
12	YES	CEILING	KEYPAD	2
13	YES	CEILING	KEYPAD	4
14	YES	CEILING	KEYPAD	2
15	YES	CEILING	KEYPAD	2
16	YES	CEILING	KEYPAD	2
17	YES	CEILING	KEYPAD	3
18	YES	NA	KEYPAD	5
19	YES	NA	KEYPAD	5
20	NO	CEILING	NA	1
21	NO	CEILING	NA	1
22	YES	CEILING	NA	6
23	YES	CEILING	NA	6
24	YES	CEILING	NA	6
25	YES	CEILING	NA	7
26	YES	CEILING	NA	1
27	YES	CEILING	KEYPAD	2
28	YES	CEILING	NA	1
29	YES	CEILING	NA	1
30	YES	CEILING	NA	1
31	YES	CEILING	NA	1
32	YES	CEILING	KEYPAD	3
33	NO	CEILING	KEYPAD	2
34	NO	CEILING	KEYPAD	2
35	YES	CEILING	KEYPAD	3
36	YES	CEILING	NA	2
37	YES	CEILING	KEYPAD	2
38	YES	CEILING	NA	1
39	NO	CEILING	KEYPAD	2
40	NO	CEILING	KEYPAD	2
41	YES	CEILING	NA	10
42	YES	CEILING	NA	1
43	YES	CEILING	NA	6
44	YES	CEILING	NA	1
45	YES	CEILING	KEYPAD	3
46	NO	CEILING	KEYPAD	2
47	YES	CEILING	NA	10
48	NO	CEILING	KEYPAD	2
49	YES	CEILING	NA	1
50	YES	CEILING	NA	1
51	YES	CEILING	KEYPAD	3
52	YES	CEILING	KEYPAD	2
53	NO	CEILING	NA	1
54	NO	CEILING	NA	1
55	YES	CEILING	NA	1
56	YES	CEILING	KEYPAD	3
57	YES	CEILING	KEYPAD	2
58	NO	CEILING	KEYPAD	2
59	YES	CEILING	NA	1
60	YES	CEILING	NA	1
61	YES	CEILING	NA	1
62	NO	CEILING	KEYPAD	2
63	NO	CEILING	KEYPAD	2
64	YES	CEILING	KEYPAD	3
65	YES	CEILING	KEYPAD	2
66	NO	CEILING	KEYPAD	2
67	NO	CEILING	KEYPAD	2
68	NO	CEILING	KEYPAD	2
69	YES	CEILING	NA	1
70	YES	CEILING	NA	1
71	YES	CEILING	NA	6
72	YES	CEILING	KEYPAD	2
73	YES	CEILING	KEYPAD	3
74	YES	CEILING	KEYPAD	2
75	NO	CEILING	NA	1
76	NO	CEILING	NA	1
77	NO	CEILING	NA	1
78	YES	CEILING	NA	1

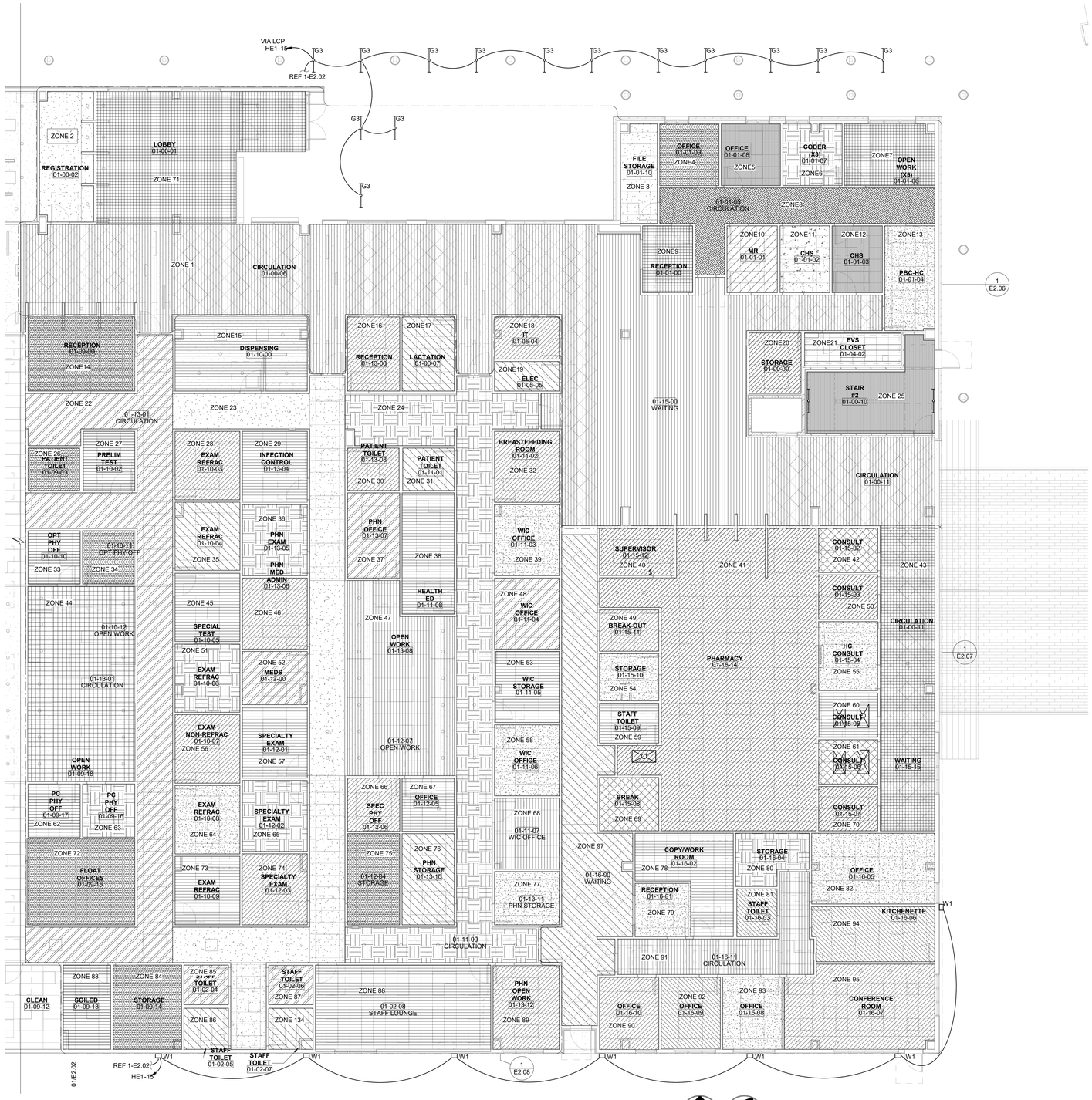
ZONE	EGRESS	OCCUPANCY SENSOR TYPE	SWITCH TYPE	CRESTRON PART NUMBER
79	YES	CEILING	NA	1
80	NO	CEILING	NA	1
81	YES	CEILING	NA	1
82	YES	CEILING	KEYPAD	2
83	NO	CEILING	NA	1
84	NO	CEILING	KEYPAD	2
85	YES	CEILING	NA	1
86	YES	CEILING	NA	1
87	YES	CEILING	NA	1
88	YES	CEILING	NA	10
89	YES	CEILING	KEYPAD	2
90	NO	CEILING	KEYPAD	2
91	YES	CEILING	NA	6
92	NO	CEILING	NA	2
93	NO	CEILING	NA	2
94	YES	CEILING	NA	2
95	YES	CEILING	KEYPAD	9
96	YES	CEILING	KEYPAD	11
97	YES	CEILING	NA	6
98	YES	CEILING	NA	6
99	YES	CEILING	NA	2
100	YES	CEILING	NA	2
101	YES	CEILING	NA	6
102	NO	CEILING	KEYPAD	2
103	NO	CEILING	KEYPAD	2
104	YES	CEILING	KEYPAD	2
105	YES	CEILING	KEYPAD	2
106	YES	CEILING	KEYPAD	4
107	YES	CEILING	NA	7
108	YES	CEILING	NA	6
109	YES	CEILING	NA	6
110	YES	CEILING	KEYPAD	2
111	NA	CEILING	NA	1
112	YES	CEILING	NA	1
113	YES	CEILING	NA	1
114	YES	CEILING	NA	1
115	NO	CEILING	NA	1
116	NO	CEILING	NA	1
117	NO	CEILING	NA	1
118	NO	CEILING	NA	1
119	NO	CEILING	KEYPAD	2
120	YES	CEILING	NA	12
121	YES	CEILING	NA	1
122	YES	CEILING	NA	1
123	NO	CEILING	NA	1
124	NO	CEILING	NA	1
125	YES	NA	KEYPAD	5
126	YES	CEILING	NA	1
127	YES	CEILING	NA	1
128	YES	NA	KEYPAD	13
129	YES	CEILING	NA	1
130	YES	CEILING	NA	1
131	YES	CEILING	NA	1
132	YES	CEILING	NA	1
133	NO	SWITCH	NA	7
134	YES	CEILING	NA	1
135	YES	CEILING	NA	1
136	YES	CEILING	NA	1
137	YES	CEILING	NA	10
138	YES	CEILING	KEYPAD	2
139	YES	CEILING	NA	1
140	YES	CEILING	NA	1
141	YES	CEILING	KEYPAD	2
142	YES	CEILING	NA	1
143	YES	CEILING	NA	1
144	YES	CEILING	NA	6
145	NO	CEILING	NA	1
147	YES	CEILING	KEYPAD	2
148	YES	CEILING	KEYPAD	2
149	YES	CEILING	KEYPAD	2
150	YES	CEILING	NA	1
151	YES	CEILING	KEYPAD	2
152	YES	CEILING	KEYPAD	2
153	YES	CEILING	KEYPAD	2
154	YES	CEILING	KEYPAD	2
155	YES	CEILING	KEYPAD	2
156	NO	CEILING	NA	1
157	YES	CEILING	NA	7

CRESTRON PART NUMBER	SCHEDULE NUMBER
GLPP1SW-1OS-OCC	1
GLPP1SW-JKP-1OS-OCC	2
GLPP1DIM-JKP-1OS-OCC	3
GLPP1SW-JKP-JKP-1OS-OCC	4
GLPP1SW-KJP	5
COORIDOR	6
STAIRWAY	7
GLPP1SW-2QUAD-OCC	8
GLPP2SW-JKP-JKP-1OS-OCC	9
GLPP1SW-2OS-OCC	10
GLPAC4-AKP-AKP-2OS-OCC-1PART	11
GLPP1SW-4OS-OCC	12
GLPP1SW-JKP-JKP	13
SHELL SPACE	14

KEYNOTES

LIGHTING PLAN NOTES

VERIFY MOUNTING HEIGHT OF ALL PENDANT FIXTURES PRIOR TO ROUGH-IN.



PLAN NORTH

TRUE NORTH

1 LIGHTING PLAN LEVEL 01 SECTOR 01
1/8" = 1'-0"

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CLIENT:
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TRIBAL SEAL
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:
02 01

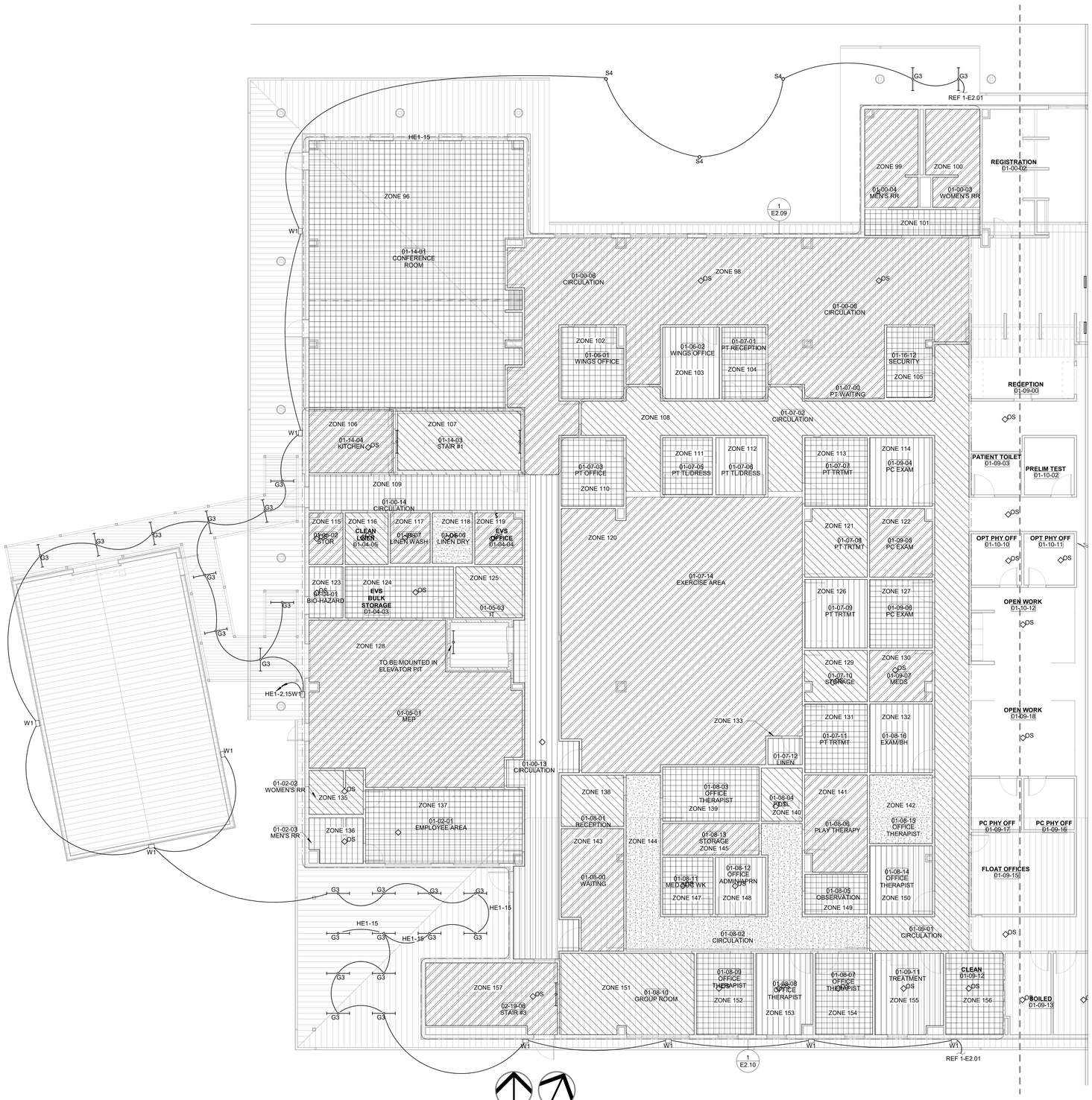
PROJECT PHASE:
BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: E2.01

ZONING PLAN LEVEL 01 SECTOR 01



1 LIGHTING PLAN LEVEL 01 SECTOR 02
1/8" = 1'-0"

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SEAL OF
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:
02
01

PROJECT PHASE:
BID PACKAGE 02

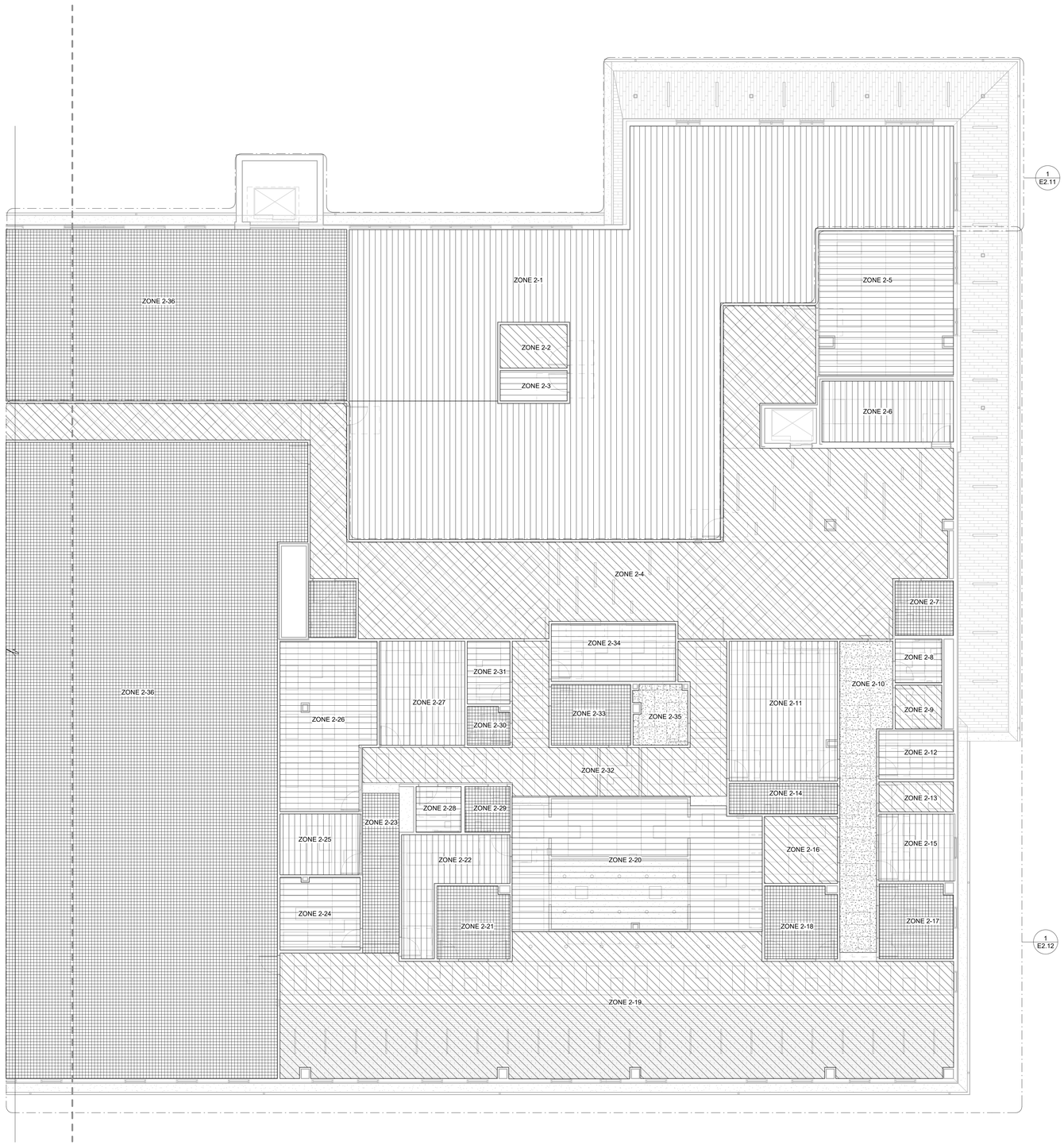
REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
E2.02

ZONING PLAN
LEVEL 01
SECTOR 02

ZONE	EGRESS	OCCUPANCY SENSOR TYPE	SWITCH TYPE	CRESTRON PART NUMBER
2-1	NO	NA	KEYPAD	14
2-2	YES	NA	KEYPAD	5
2-3	YES	NA	KEYPAD	5
2-4	YES	CEILING	NA	6
2-5	YES	CEILING	KEYPAD	2
2-6	YES	CEILING	NA	7
2-7	YES	CEILING	NA	1
2-8	YES	CEILING	NA	1
2-9	YES	CEILING	NA	1
2-10	YES	CEILING	NA	6
2-11	YES	CEILING	KEYPAD	4
2-12	YES	CEILING	KEYPAD	2
2-13	YES	CEILING	KEYPAD	2
2-14	NO	CEILING	NA	1
2-15	YES	CEILING	KEYPAD	4
2-16	YES	CEILING	KEYPAD	4
2-17	YES	CEILING	KEYPAD	4
2-18	YES	CEILING	KEYPAD	4
2-19	YES	CEILING	NA	6
2-20	YES	CEILING	NA	6
2-21	YES	CEILING	KEYPAD	4
2-22	NO	CEILING	NA	1
2-23	YES	CEILING	NA	6
2-24	YES	CEILING	KEYPAD	2
2-25	NO	CEILING	KEYPAD	2
2-26	YES	CEILING	NA	1
2-27	NO	CEILING	KEYPAD	2
2-28	YES	CEILING	NA	1
2-29	YES	CEILING	NA	1
2-30	YES	CEILING	NA	1
2-31	NO	CEILING	NA	1
2-32	YES	CEILING	NA	6
2-33	YES	CEILING	NA	2
2-34	YES	CEILING	KEYPAD	2
2-35	YES	CEILING	KEYPAD	2
2-36	NO	NA	KEYPAD	6
2-37	NO	CEILING	NA	1
2-38	YES	CEILING	NA	7
2-39	YES	CEILING	NA	7



PLAN NORTH

TRUE NORTH

LIGHTING PLAN LEVEL 02 SECTOR 01

1/8" = 1'-0"

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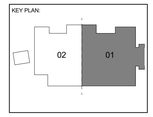
STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS

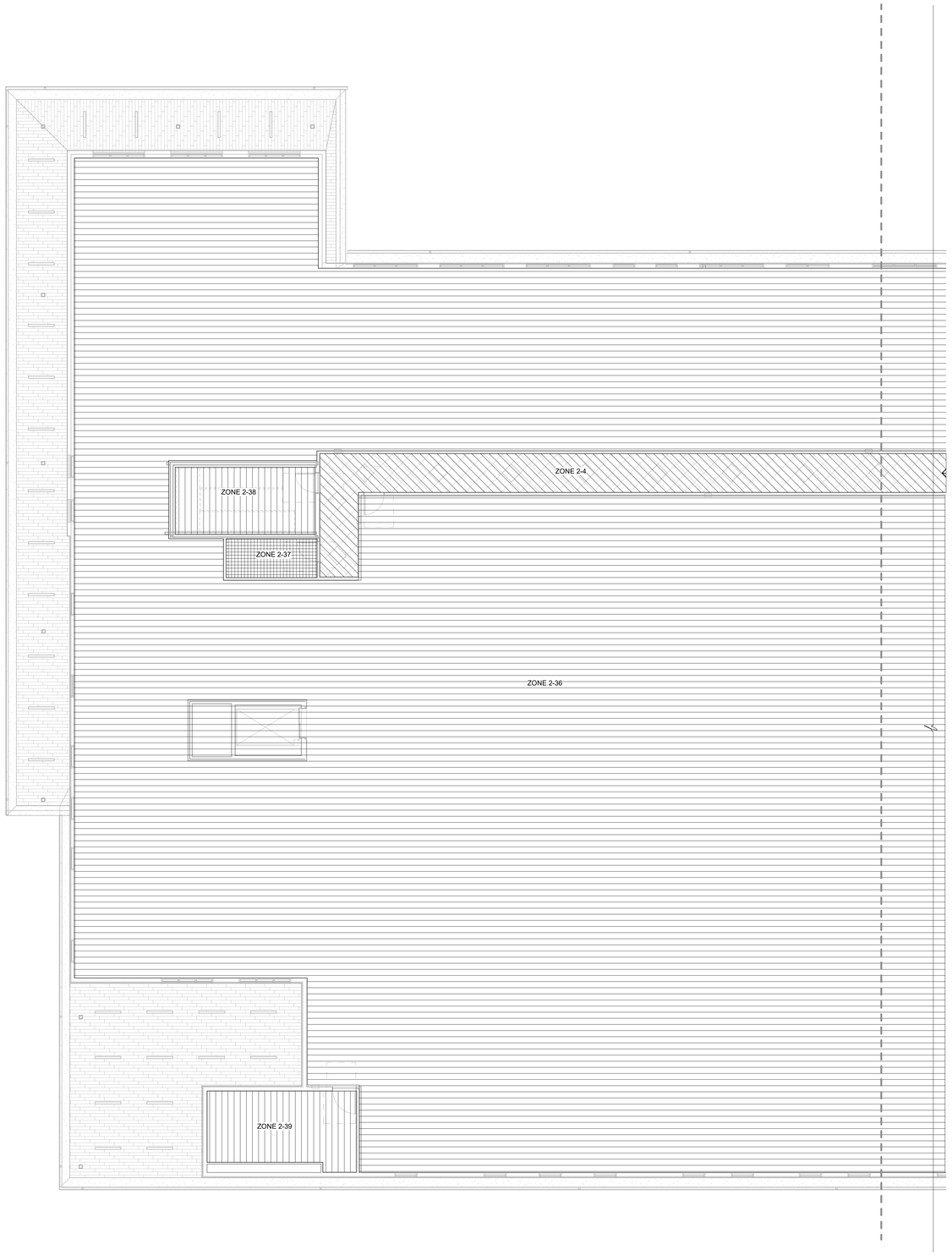
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

E2.03

ZONING PLAN LEVEL 02 SECTOR 01



PLAN NORTH

TRUE NORTH

ZONING PLAN LEVEL 02 SECTOR 02

1/8" = 1'-0"

James R. Childers Architect, Inc.
45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com

PROFESSIONAL SEAL:

LICENSED PROFESSIONAL ENGINEER
Robert Brandon Pinkerton
23042
OKLAHOMA
(NOT VALID UNLESS SIGNED)

12/06/2019

CONSULTANT LOGO:

HP ENGINEERING
PROJECT NO. 18068R
100 % COMPLETE

HP ENGINEERING INC.
5214 W. VILLAGE PARKWAY
SUITE 120
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(479) 899-6370
www.hpengineeringinc.com

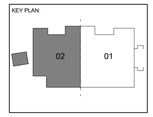
CLIENT:

SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

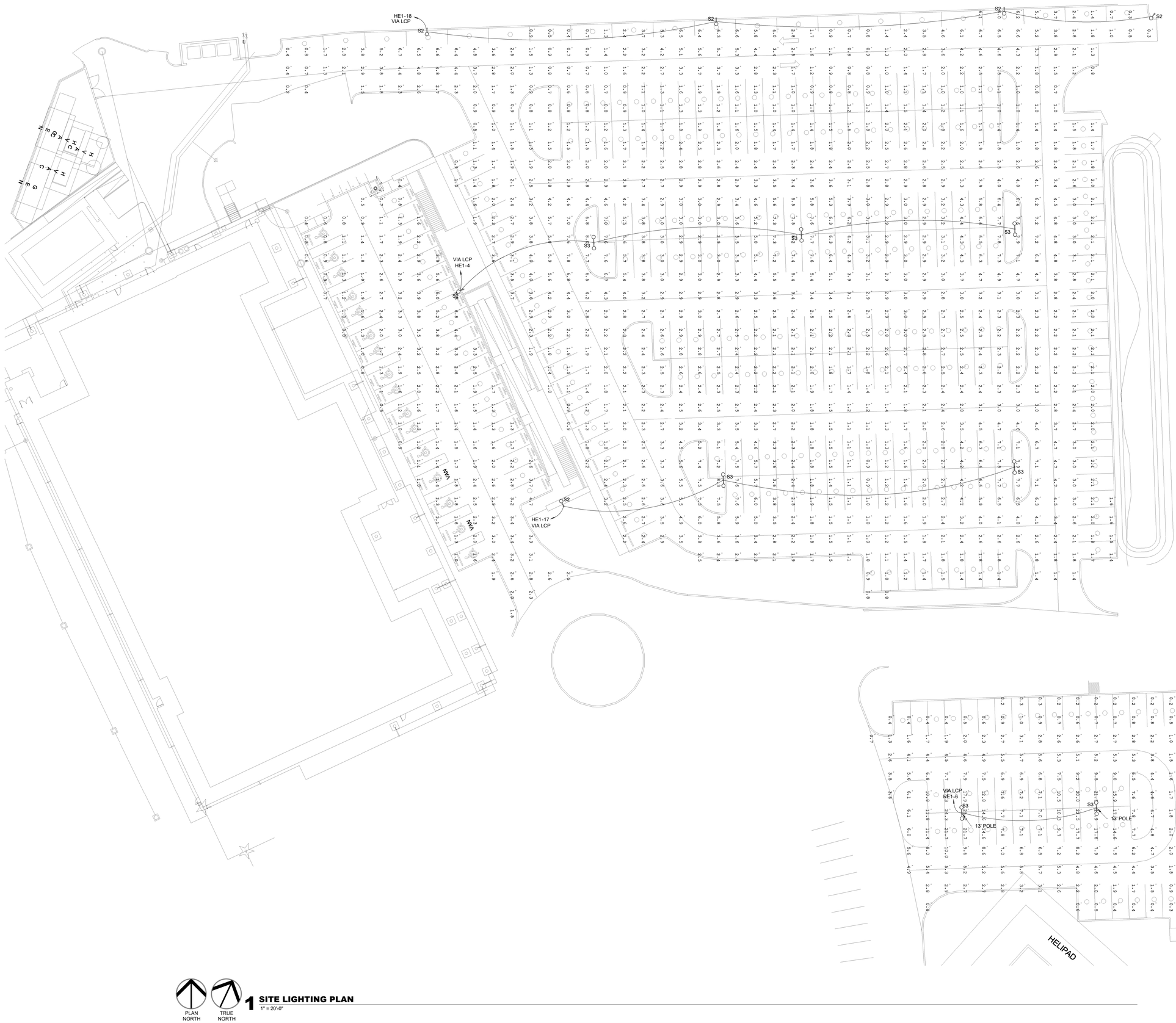
REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

E2.04

ZONING PLAN LEVEL 02 SECTOR 02



PLAN NORTH

TRUE NORTH

1 SITE LIGHTING PLAN

1" = 20'-0"

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(NOT SIGNED)
12/06/2019

CONSULTANT LOGO:

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PROJECT NO. 18068R
100 % COMPLETE

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SEAL OF THE CHEROKEE NATION FORT GIBSON, OKLA. SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

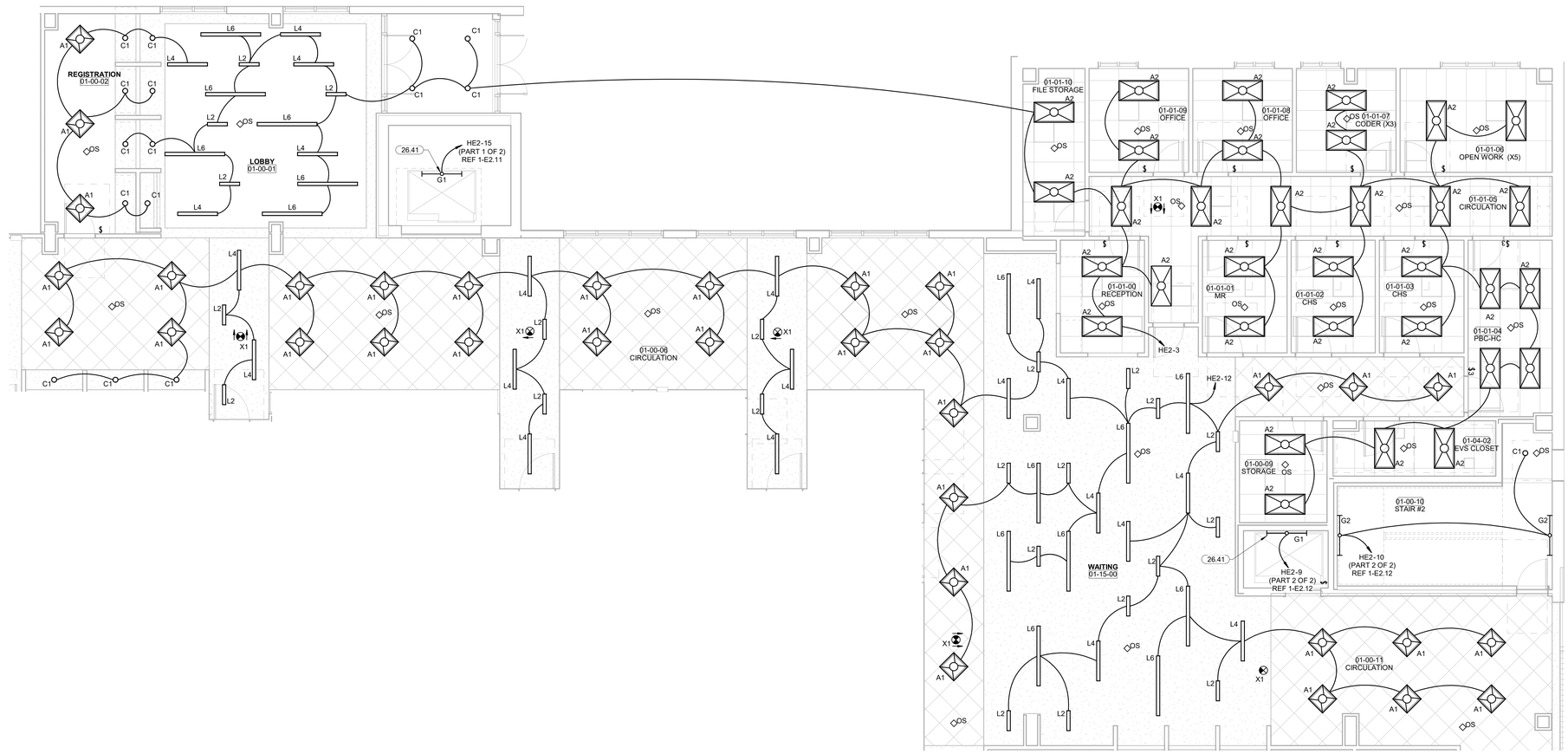
DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER:

E2.05

SITE LIGHTING PLAN



1 NORTH SECTOR 1 ENLARGED LIGHTING
3/16" = 1'-0"

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PROFESSIONAL SEAL:

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23042
OKLAHOMA
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12/06/2019

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CLIENT:

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SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS:

#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
E2.06

NORTH SECTOR 1 ENLARGED LIGHTING PLAN

James R. Childers
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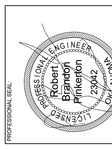
PROFESSIONAL SEAL



12/06/2019

CONSULTANT LOGO

HP ENGINEERING
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HP ENGINEERING, INC.
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OKLAHOMA CITY, OK 73109
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INFO@HPENGINEERING.COM

CLIENT

WILMA P. MANKILLER HEALTH CENTER
EXPANSION

STILWELL, OKLAHOMA

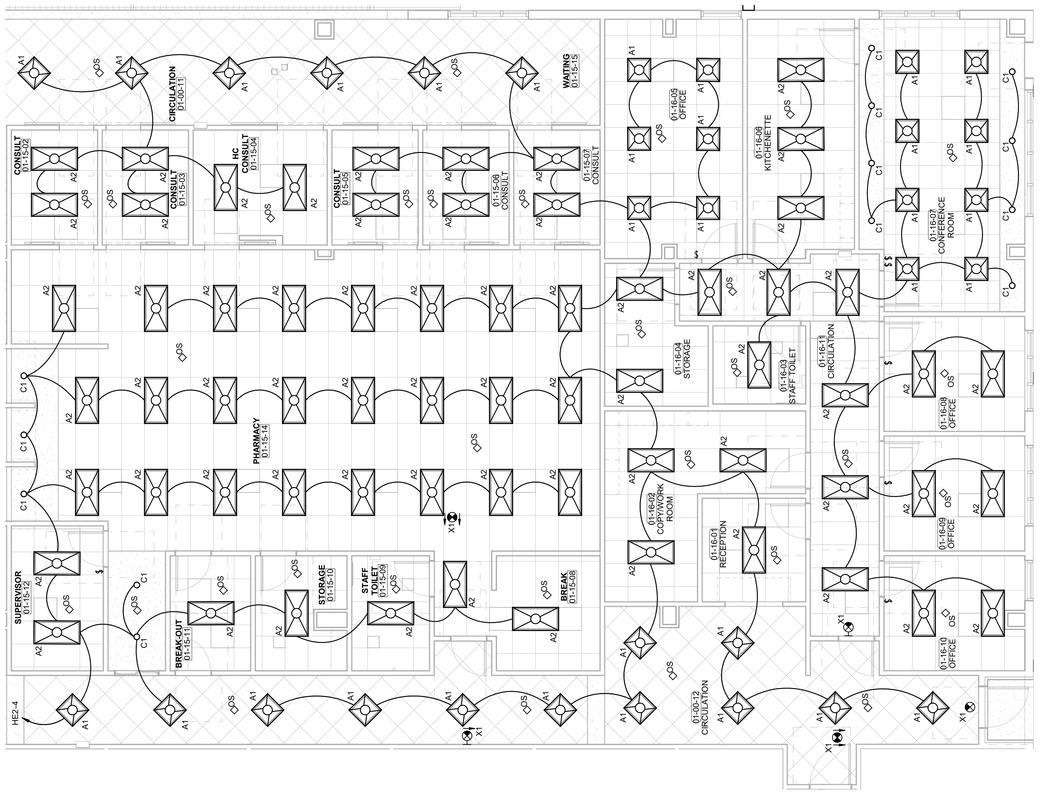
KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

#	DATE	REVISIONS DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: E2.07

CENTER SECTOR 1 ENLARGED LIGHTING PLAN

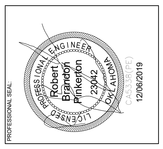


1 CENTER SECTOR 1 ENLARGED LIGHTING
3/16" = 1'-0"

PLAN NORTH
TRUE NORTH

James R. Childers
Architect, Inc.
43 South 4th Street
Fayetteville, AR 72701
479-782-2480
www.childersarchitect.com

PROFESSIONAL SEAL



CONSULTANT LOGO

HP.ENGINEERING
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INFO@HPENGINEERING.COM

CLIENT

WILMA P. MANKILLER HEALTH CENTER
EXPANSION
STILWELL, OKLAHOMA

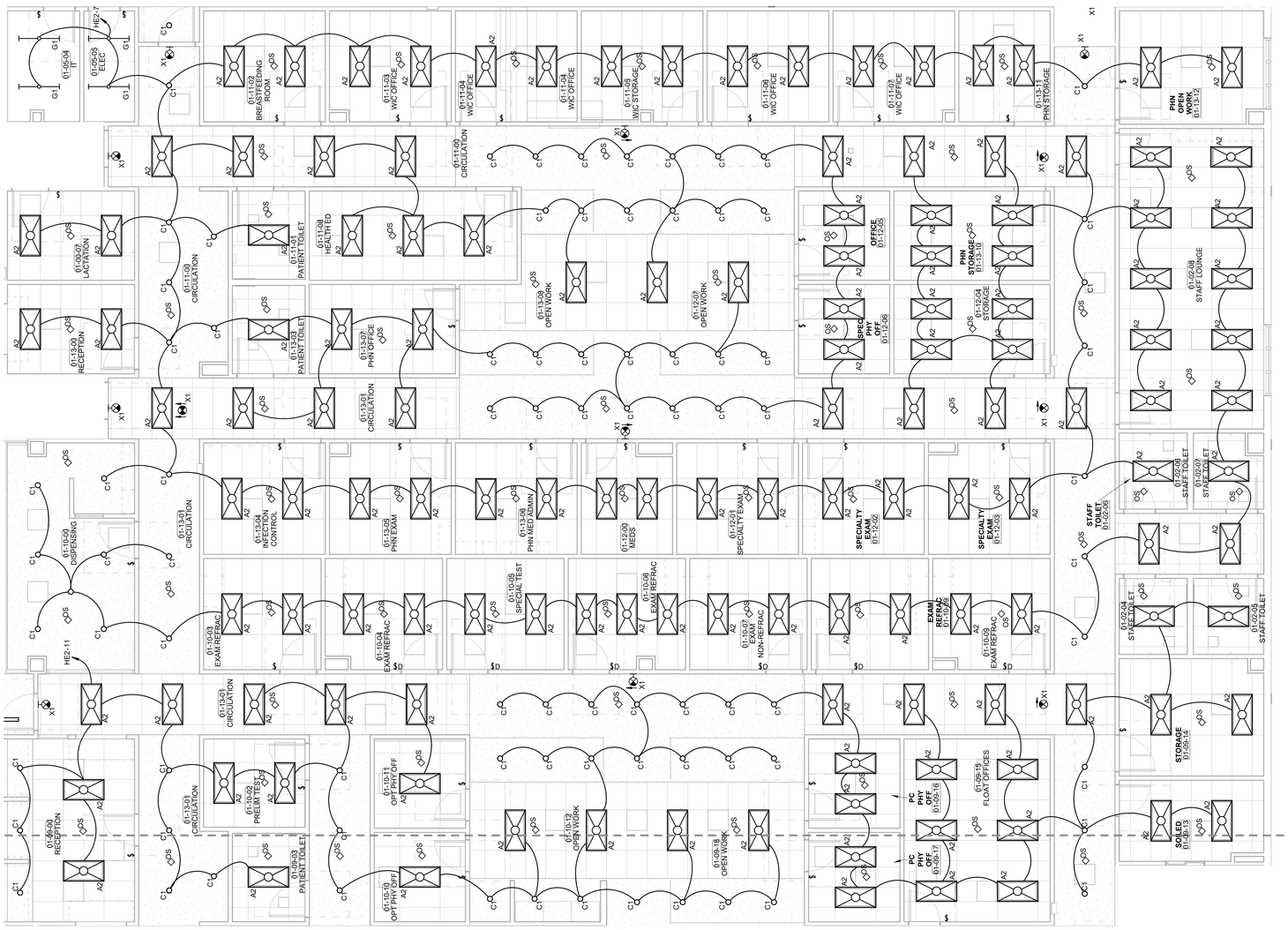
KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

#	DATE	REVISIONS DESCRIPTION

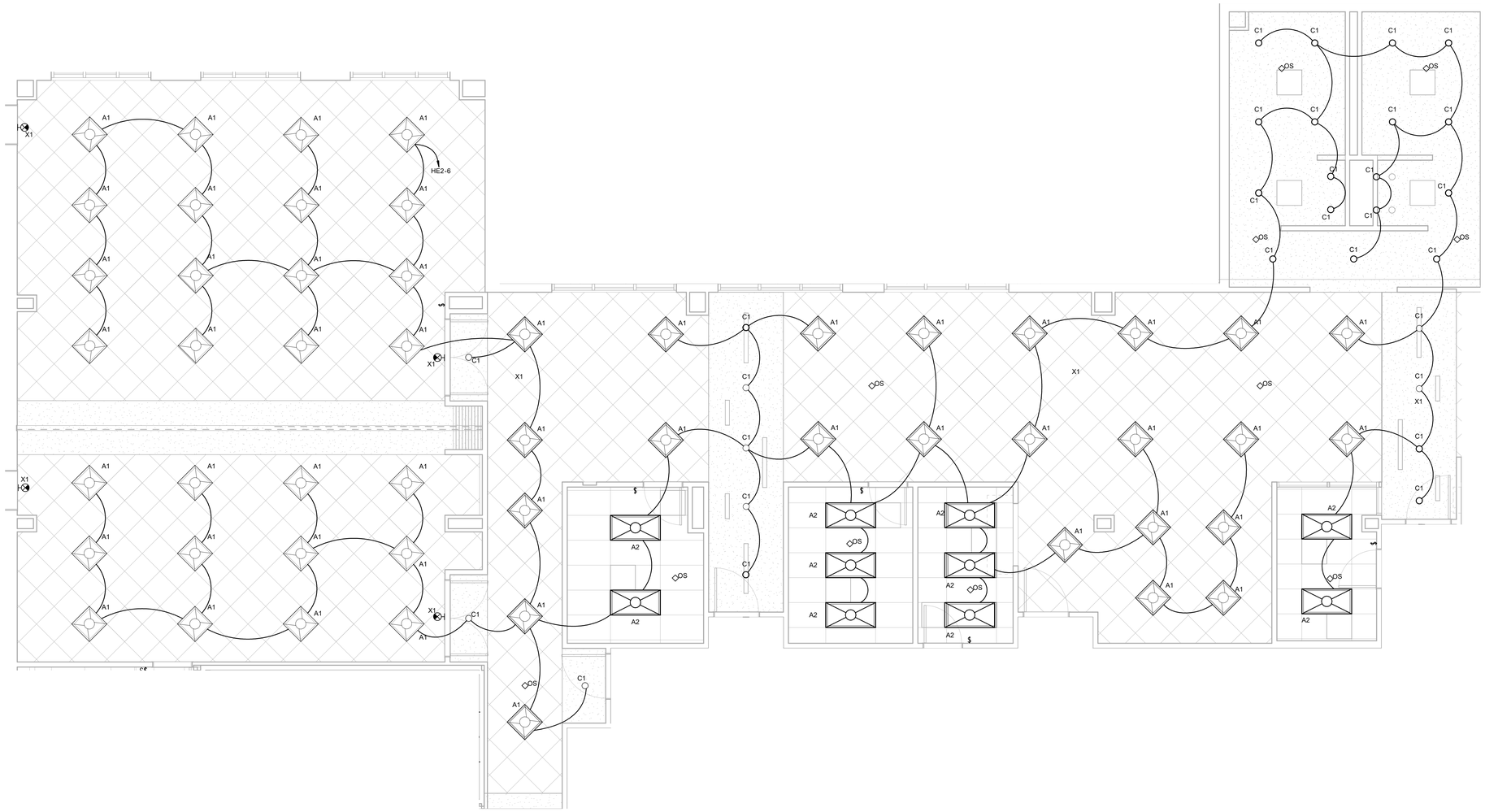
DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: E2.08

SOUTH SECTOR
1 ENLARGED
LIGHTING PLAN



1 SOUTH SECTOR 1 ENLARGED LIGHTING
3/16" = 1'-0"

PLAN NORTH
TRUE NORTH



PLAN NORTH

TRUE NORTH

1 NORTH SECTOR 2 ENLARGED LIGHTING
1/4" = 1'-0"

James R. Childers Architect, Inc.
45 South 4th Street
Fort Smith, AR 72901
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Robert Brandon Pinkerton
23042
OKLAHOMA
(NOT VALID UNLESS SIGNED)
12/06/2019

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CLIENT:

THE CHEROKEE NATION
SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS

#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: E2.09

NORTH SECTOR 2 ENLARGED LIGHTING PLAN

James R. Childers
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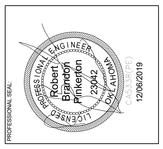
PROFESSIONAL SEAL



12/06/2019

CONSULTANT LOGO

HP.ENGINEERING
PROJECT NO. 18068R
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TULSA, OK 74136
(405) 896-8300
RENE@HPENGINEERING.COM

CLIENT

WILMA P. MANKILLER HEALTH CENTER
EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

#	DATE	REVISIONS DESCRIPTION

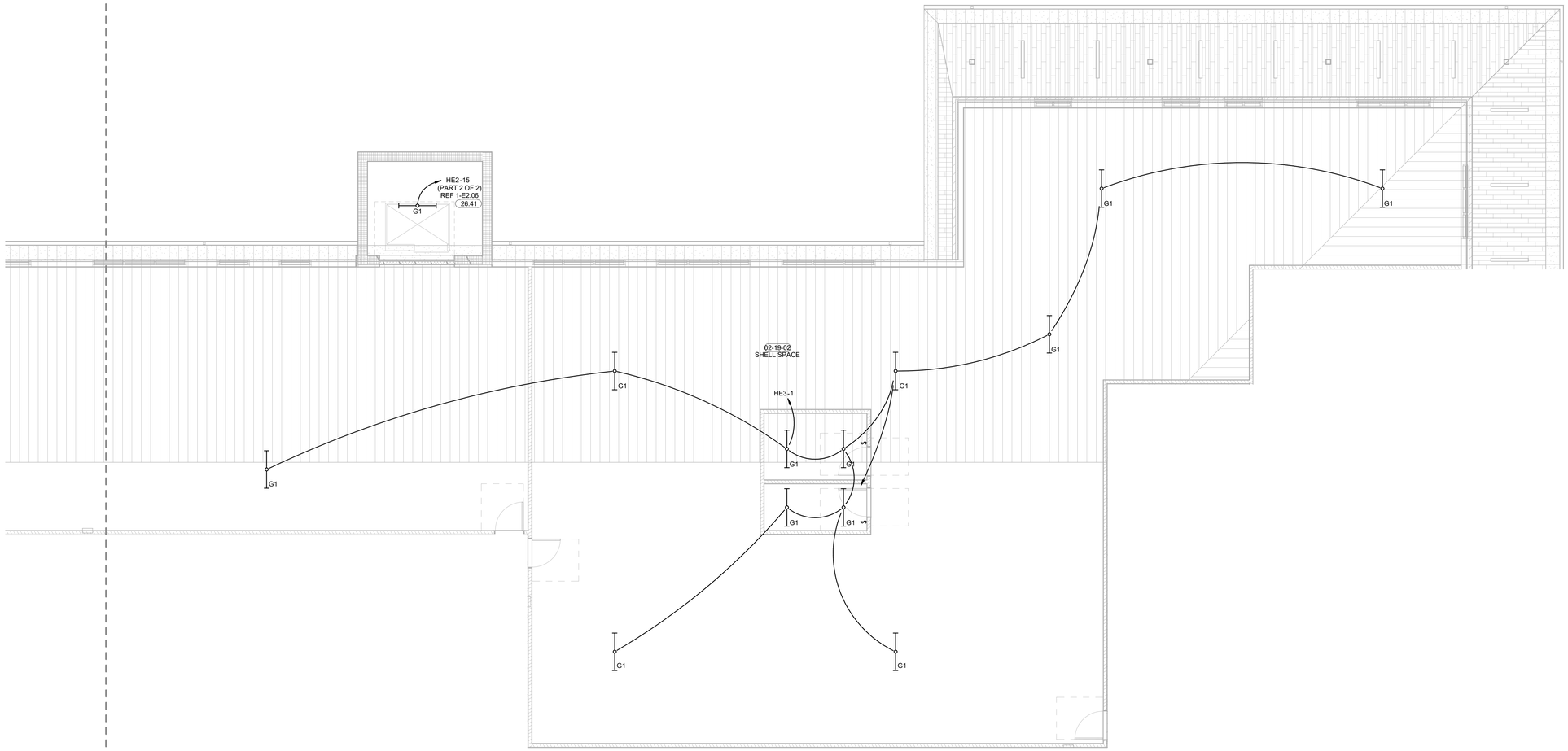
DATE: 12-06-19

JOB NUMBER: 18-01.01

SHEET NUMBER: E2.10

CENTER SECTOR 2 ENLARGED LIGHTING PLAN

KEYNOTES	
Key Value	Keynote Text
26.41	COORDINATE ELEVATOR SERVICE LIGHT WITH ELEVATOR INSTALLER SO NOT TO INTERFERE WITH ELEVATOR CLEARANCES OR OPERATION.



PLAN NORTH

TRUE NORTH

1 NORTH SECTOR 1 LEVEL 02 LIGHTING PLAN

3/16" = 1'-0"

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Robert Brandon Pinkerton
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OKLAHOMA
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12/06/2019

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CLIENT:

THE CHEROKEE NATION
SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

E2.11

NORTH SECTOR 1 LEVEL 02 ENLARGED LIGHTING PLAN

KEYNOTES

Key Value	Keynote Text
26.41	COORDINATE ELEVATOR SERVICE LIGHT WITH ELEVATOR INSTALLER SO NOT TO INTERFERE WITH ELEVATOR CLEARANCES OR OPERATION.

SHELL SPACE 02-19-01

PATIENT TOILET 02-17-02

CIRCULATION 02-18-00

EVS CLOSET 02-17-30

STORAGE 02-17-29

OPEN WORK AREA 02-17-26

DENTAL DIRECTOR 02-17-28

CIRCULATION 02-17-27

PATIENT TOILET 02-17-32

PATIENT TOILET 02-17-33

STORAGE 02-17-34

CLOSED OPP 02-17-35

ASST SUPER 02-17-25

LAB 02-17-24

CIRCULATION 02-17-36

PAN 02-17-37

STORAGE 02-17-38

CLEAN 02-17-42

SOILED 02-17-43

OPEN WORK 02-17-44

RECEPTION 02-17-01

OFFICE MGR 02-17-39

LOCKERS 02-17-40

PAN 02-17-41

CIRCULATION 02-17-45

OPEN WORK 02-17-47

CLOSED OPP 02-17-48

CLOSED OPP 02-17-49

02-19-07 EXERCISE

STAIR #2 02-18-02

HE2-10 (PART 1 OF 2) REF 1-E2.06

HE2-9 (PART 1 OF 2) REF 1-E2.06

26.41

02-18-00 CIRCULATION

WAITING 02-17-00

PATIENT TOILET 02-17-03

BREAK ROOM

CONF 02-17-04

STORAGE 02-17-46

CIRCULATION 02-17-07

STAFF TOILET 02-17-05

STAFF TOILET 02-17-06

PUMP 02-17-08

TANK STORAGE 02-17-09

CLOSED OPP 02-17-10

CLOSED OPP 02-17-11

02-17-22 OPEN OPP

02-17-21 OPEN OPP

02-17-20 OPEN OPP

02-17-19 OPEN OPP

02-17-18 OPEN OPP

02-17-17 OPEN OPP

02-17-16 OPEN OPP

02-17-15 OPEN OPP

02-17-14 OPEN OPP

02-17-13 OPEN OPP

02-17-12 OPEN OPP

G1

HE3-1

HE3-3

HE3-17

PLAN NORTH

TRUE NORTH

1 LIGHTING PLAN LEVEL 02 SECTOR 01

3/16" = 1'-0"

James R. Childers Architect, Inc.
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OKLAHOMA
REGISTERED

12/06/2019

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CLIENT:

THE CHEROKEE NATION TRIBAL SEAL
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19

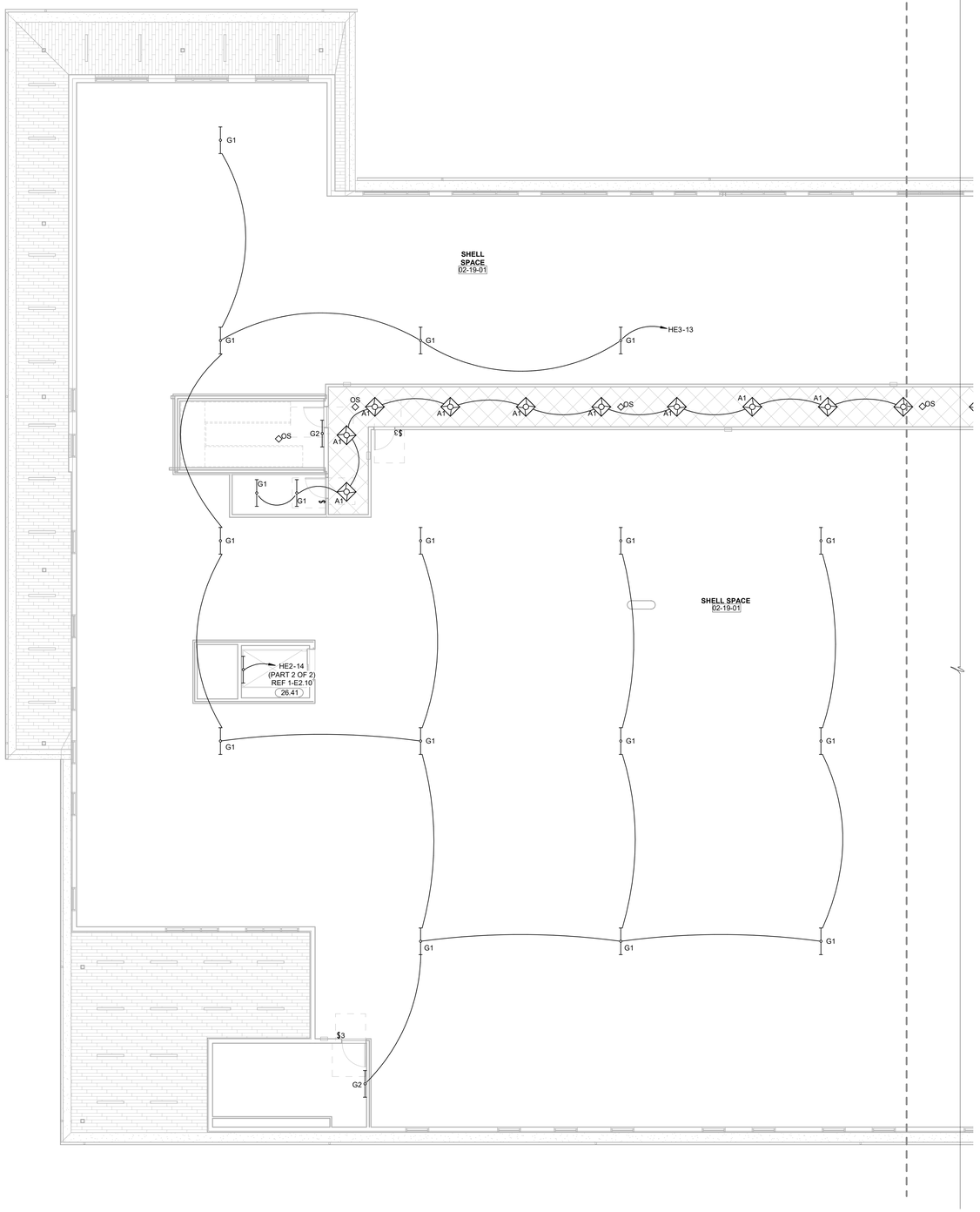
JOB NUMBER: 18-01.01

SHEET NUMBER:

E2.12

SOUTH SECTOR 1 LEVEL 02 ENLARGED LIGHTING PLAN

KEYNOTES	
Key Value	Keynote Text
26.41	COORDINATE ELEVATOR SERVICE LIGHT WITH ELEVATOR INSTALLER SO NOT TO INTERFERE WITH ELEVATOR CLEARANCES OR OPERATION.



PLAN NORTH

TRUE NORTH

1 LIGHTING PLAN LEVEL 02 SECTOR 02

1/8" = 1'-0"

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PROFESSIONAL SEAL:

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Robert Brandon Pinkerton
23042
OKLAHOMA
(PRELIMINARY)
12/06/2019

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CLIENT:

SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:

BID PACKAGE 02

REVISIONS:		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:

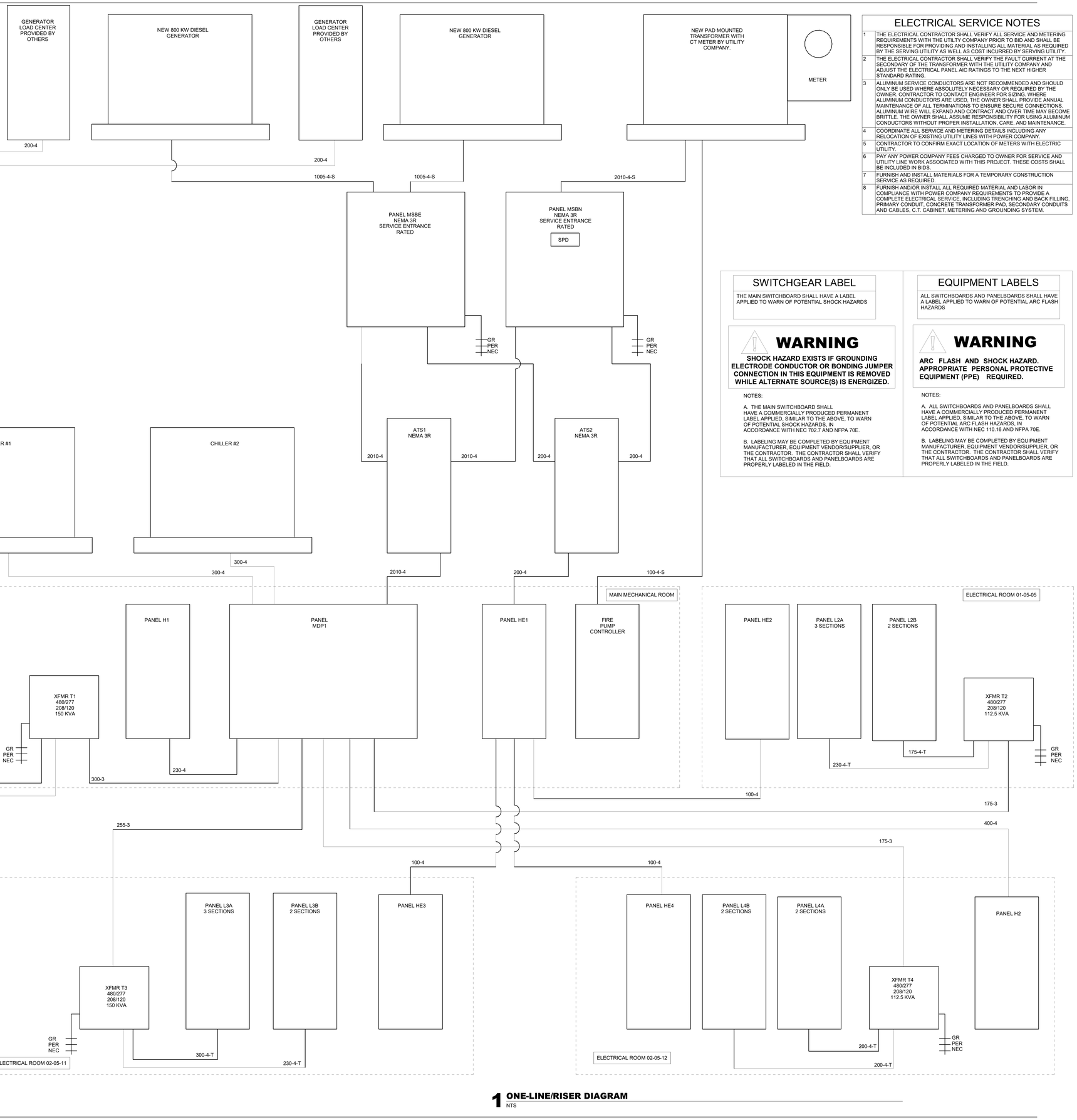
E2.13

LIGHTING PLAN LEVEL 02 SECTOR 02

1. CONDUIT SIZED BASED ON CONDUCTOR PROPERTIES LISTED IN THE CURRENT NEC EDITION, CHAPTER, 9, TABLES 5 AND 5A, AND CONDUIT AREAS LISTED CHAPTER 9, TABLE 4 FOR EMT WITH 40% FILL. OTHER CONDITIONS MAY REQUIRE A LARGER CONDUIT, SUCH AS UNDERGROUND PVC, SIZED FOR NEC.
2. GROUND SIZES: EQUIPMENT GROUNDING CONDUCTOR BASED ON NEC TABLE 250.122 - COPPER / GROUNDING ELECTRODE CONDUCTOR BASED ON NEC TABLE 250.66 - COPPER
3. CONDUCTOR SIZES BASED ON NEC TABLE 310.15 - COPPER 75°C.

ELECTRICAL FEEDER KEYNOTES

65-4	1"C,4#6,1#10 GR
100-4	1 - 1 1/4"C,4#3,1#8 GR
100-4-S	1 - 1 1/4"C,4#3
175-3	1 - 1 1/2"C,3#2/0,1#6 GR
175-4SC	2"CONDUIT
175-4-T	2"C,4#2/0,1#4 GR
200-4	2"C,4#3/0,1#6 GR
200-4C	2"CONDUIT
200-4-T	2"C,4#3/0, 1#4 GR
230-4	1 - 2 1/2"C,4#4/0,1#4 GR
230-4C	1 - 2 1/2"CONDUIT
230-4-T	1 - 2 1/2"C,4#4/0,1#2 GR
255-3	2"C,3-250KCMIL,1#4 GR
300-3	2 - 1 1/2"C,3#1/0,1#4 GR EACH
300-4	2 - 2"C,4#1/0,1#4 GR EACH
300-4C	2 - 2"CONDUITS
300-4-T	2 - 2"C,4#1/0,1#2 GR EACH
400-4	2 - 2"C,4#3/0,1#3 GR EACH
400-4C	2 - 2"CONDUITS
620-4C	2 - 2 1/2"CONDUITS
1005-4C	3 - 4"CONDUIT
1005-4-S	3 - 3"C,4-400KCMIL EACH
1240-4C	4 - 3"CONDUITS
2010-4	6 - 3"C,4-400KCMIL, 1-250KCMIL EACH
2010-4-S	6 - 3"C,4-400KCMIL EACH
2010-4-SC	6 - 3"CONDUITS



FAULT CURRENT

DEVICE NAME	FAULT CURRENT
UTILITY	50117
MDPN	50117
MDPE	50117
AST1	48754
AST2	37802
MDP1	45428
H1	39728
H2	19027
T1	40122
T2	10564
T3	14179
T4	25781
L1A	11017
L1B	11018
F1A	2740
L2A	6894
L2B	6894
L3A	9479
L3B	9379
L4A	33057
L4B	33057
FIRE PUMP	50117

ELECTRICAL SERVICE NOTES

1	THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL SERVICE AND METERING REQUIREMENTS WITH THE UTILITY COMPANY PRIOR TO BID AND SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AS REQUIRED BY THE SERVING UTILITY AS WELL AS COST INCURRED BY SERVING UTILITY.
2	THE ELECTRICAL CONTRACTOR SHALL VERIFY THE FAULT CURRENT AT THE SECONDARY OF THE TRANSFORMER WITH THE UTILITY COMPANY AND ADJUST THE ELECTRICAL PANEL AIC RATINGS TO THE NEXT HIGHER STANDARD RATING.
3	ALUMINUM SERVICE CONDUCTORS ARE NOT RECOMMENDED AND SHOULD ONLY BE USED WHERE ABSOLUTELY NECESSARY OR REQUIRED BY THE OWNER. CONTRACTOR TO CONTACT ENGINEER FOR SIZING. WHERE ALUMINUM CONDUCTORS ARE USED, THE OWNER SHALL PROVIDE ANNUAL MAINTENANCE OF ALL TERMINATIONS TO ENSURE SECURE CONNECTIONS. ALUMINUM WIRE WILL EXPAND AND CONTRACT AND OVER TIME MAY BECOME BRITTLE. THE OWNER SHALL ASSUME RESPONSIBILITY FOR USING ALUMINUM CONDUCTORS WITHOUT PROPER INSTALLATION, CARE, AND MAINTENANCE.
4	COORDINATE ALL SERVICE AND METERING DETAILS INCLUDING ANY RELOCATION OF EXISTING UTILITY LINES WITH POWER COMPANY.
5	CONTRACTOR TO CONFIRM EXACT LOCATION OF METERS WITH ELECTRIC UTILITY.
6	PAY ANY POWER COMPANY FEES CHARGED TO OWNER FOR SERVICE AND UTILITY LINE WORK ASSOCIATED WITH THIS PROJECT. THESE COSTS SHALL BE INCLUDED IN BIDS.
7	FURNISH AND INSTALL MATERIALS FOR A TEMPORARY CONSTRUCTION SERVICE AS REQUIRED.
8	FURNISH AND/OR INSTALL ALL REQUIRED MATERIAL AND LABOR IN COMPLIANCE WITH POWER COMPANY REQUIREMENTS TO PROVIDE A COMPLETE ELECTRICAL SERVICE, INCLUDING TRENCHING AND BACK FILLING, PRIMARY CONDUIT, CONCRETE TRANSFORMER PAD, SECONDARY CONDUITS AND CABLES, C.T. CABINET, METERING AND GROUNDING SYSTEM.

SWITCHGEAR LABEL

THE MAIN SWITCHBOARD SHALL HAVE A LABEL APPLIED TO WARN OF POTENTIAL SHOCK HAZARDS

WARNING

SHOCK HAZARD EXISTS IF GROUNDING ELECTRODE CONDUCTOR OR BONDING JUMPER CONNECTION IN THIS EQUIPMENT IS REMOVED WHILE ALTERNATE SOURCE(S) IS ENERGIZED.

NOTES:

A. THE MAIN SWITCHBOARD SHALL HAVE A COMMERCIALLY PRODUCED PERMANENT LABEL APPLIED, SIMILAR TO THE ABOVE, TO WARN OF POTENTIAL SHOCK HAZARDS, IN ACCORDANCE WITH NEC 702.7 AND NFPA 70E.

B. LABELING MAY BE COMPLETED BY EQUIPMENT MANUFACTURER, EQUIPMENT VENDOR/SUPPLIER, OR THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY THAT ALL SWITCHBOARDS AND PANELBOARDS ARE PROPERLY LABELED IN THE FIELD.

EQUIPMENT LABELS

ALL SWITCHBOARDS AND PANELBOARDS SHALL HAVE A LABEL APPLIED TO WARN OF POTENTIAL ARC FLASH HAZARDS

WARNING

ARC FLASH AND SHOCK HAZARD. APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (PPE) REQUIRED.

NOTES:

A. ALL SWITCHBOARDS AND PANELBOARDS SHALL HAVE A COMMERCIALLY PRODUCED PERMANENT LABEL APPLIED, SIMILAR TO THE ABOVE, TO WARN OF POTENTIAL ARC FLASH HAZARDS, IN ACCORDANCE WITH NEC 110.16 AND NFPA 70E.

B. LABELING MAY BE COMPLETED BY EQUIPMENT MANUFACTURER, EQUIPMENT VENDOR/SUPPLIER, OR THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY THAT ALL SWITCHBOARDS AND PANELBOARDS ARE PROPERLY LABELED IN THE FIELD.

1 ONE-LINE/RISER DIAGRAM
NTS

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Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com

PROFESSIONAL SEAL:
LICENSED PROFESSIONAL ENGINEER — Robert Brandon Pinkerton — 23042 — OKLAHOMA — CERTIFICATE OF AUTHORIZATION
12/06/2019

CONSULTANT LOGO:
HP ENGINEERING
PROJECT NO. 18068R
100 % COMPLETE
HP ENGINEERING INC.
5214 W. VILLAGE PARKWAY
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CLIENT:
THE CHEROKEE NATION — SEAL OF — SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: E3.01

ELECTRICAL SCHEDULES AND RISER

SWITCHBRD: MDP1 — NEW

Location: MEP 01-05-01 | **Volts:** 480/277 Wye | **A.I.C. Rating:** (7) FULLY RATED
Supply From: ATS1 | **Phases:** 3 | **Mains Type:** MLO
Mounting: SURFACE | **Wires:** 4 | **Mains Rating:** 2000 A
Enclosure: NEMA 1

Notes:

CKT	Load Name	CB	P	Wire	A	B	C	Wire	P	CB	Load Name	CKT
1					669...	490...						2
3	T-1 (8)	300	3	--		612...	497...	--	3	250	T-3 (8)	4
5							654...	464...				6
7					723...	723...						8
9	CHILLER 1 (8)	300	3	--		723...	723...	--	3	300	CHILLER 2 (8)	10
11							723...	723...				12
13					432...	735...						14
15	T-2 (8)	175	3	--		428...	735...	--	3	400	H2 (8)	16
17							411...	735...				18
19					144...	0		--	--	--	SPACE	20
21	T-4 (8)	175	3	--		162...	0	--	--	--	SPACE	22
23							119...	0	--	--	SPACE	24
25					130...	0		--	--	--	SPACE	26
27	H1 (8)	200	3	--		130...	0	--	--	--	SPACE	28
29							130...	0	--	--	SPACE	30
31	SPACE	--	--	--	0	0		--	--	--	SPACE	32
33	SPACE	--	--	--		0	0	--	--	--	SPACE	34
35	SPACE	--	--	--			0	0	--	--	SPACE	36
37	SPACE	--	--	--	0	0		--	--	--	SPACE	38
39	SPACE	--	--	--		0	0	--	--	--	SPACE	40
41	SPACE	--	--	--			0	0	--	--	SPACE	42
					Total Load:	405021 VA	401463 VA	396320 VA				
					Total Amps:	1465 A	1452 A	1431 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Hvac	253270 VA	100.00%	253270 VA		
Motor	18955 VA	100.00%	18955 VA	**Total Conn. Load:**	1202804 VA
Other	69080 VA	100.00%	69080 VA	**Total Est. Demand:**	1073938 VA
Power	570510 VA	100.00%	570510 VA	**Total Conn. Current:**	1447 A
Receptacle	245197 VA	52.04%	127599 VA	**Total Est. Demand...**	1292 A
Lighting - Exterior	2952 VA	125.00%	3690 VA		
Kitchen	37859 VA	65.00%	24608 VA		
Continuous	4981 VA	125.00%	6226 VA		

SWITCHBRD: MSBE — NEW

Location: MECHANICAL YARD | **Volts:** 480/277 Wye | **A.I.C. Rating:** (7) FULLY RATED
Supply From: GENERATOR | **Phases:** 3 | **Mains Type:** MLO
Mounting: SURFACE | **Wires:** 4 | **Mains Rating:** 2000 A
Enclosure: NEMA 3R

Notes:

CKT	Load Name	CB	P	Wire	A	B	C	Wire	P	CB	Load Name	CKT
1					405...	262...						2
3	ATS1 (8)	2000	3	--		401...	263...	--	3	200	ATS2 (8)	4
5							396...	270...				6
7					0	0						8
9	400A SPACE	--	--	--		0	0	--	--	--	400A SPACE	10
11							0	0				12
13					0	0						14
15	400A SPACE	--	--	--		0	0	--	--	--	400A SPACE	16
17							0	0				18
					Total Load:	431245 VA	427805 VA	423364 VA				
					Total Amps:	1559 A	1547 A	1528 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Hvac	253270 VA	100.00%	253270 VA		
Lighting	35240 VA	125.00%	44051 VA	**Total Conn. Load:**	1282414 VA
Motor	18955 VA	100.00%	18955 VA	**Total Est. Demand:**	1164097 VA
Other	69080 VA	100.00%	69080 VA	**Total Conn. Current:**	1543 A
Power	607921 VA	100.00%	607921 VA	**Total Est. Demand...**	1400 A
Receptacle	245197 VA	52.04%	127599 VA		
Lighting - Exterior	9910 VA	125.00%	12388 VA		
Kitchen	37859 VA	65.00%	24608 VA		
Continuous	4981 VA	125.00%	6226 VA		

Branch Panel: MSBN — NEW

Location: MECHANICAL YARD | **Volts:** 480/277 Wye | **A.I.C. Rating:** (7) FULLY RATED
Supply From: UTILITY TRANSFORMER | **Phases:** 3 | **Mains Type:** MLO
Mounting: SURFACE | **Wires:** 4 | **Mains Rating:** 2000 A
Enclosure: NEMA 3R

Notes:

CKT	Load Name	CB	P	Wire	A	B	C	Wire	P	CB	Load Name	CKT
1					262...	405...						2
3	ATS2 (8)	200	3	--		263...	401...	--	3	2000	ATS1 (8)	4
5							270...	396...				6
7					0	0						8
9	SPD	100	3	--		0	0	--	3	20	LCP PHASE LOSS CIRCUIT	10
11							0	0				12
13					0	0						14
15	400A SPACE	--	--	--		0	0	--	--	--	400A SPACE	16
17							0	0				18
					Total Load:	431245 VA	427805 VA	423364 VA				
					Total Amps:	1559 A	1547 A	1528 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Hvac	253270 VA	100.00%	253270 VA		
Lighting	35240 VA	125.00%	44051 VA	**Total Conn. Load:**	1282414 VA
Motor	18955 VA	100.00%	18955 VA	**Total Est. Demand:**	1164097 VA
Other	69080 VA	100.00%	69080 VA	**Total Conn. Current:**	1543 A
Power	607921 VA	100.00%	607921 VA	**Total Est. Demand...**	1400 A
Receptacle	245197 VA	52.04%	127599 VA		
Lighting - Exterior	9910 VA	125.00%	12388 VA		
Kitchen	37859 VA	65.00%	24608 VA		
Continuous	4981 VA	125.00%	6226 VA		

Branch Panel: H1 — NEW

Location: MEP 01-05-01 | **Volts:** 480/277 Wye | **A.I.C. Rating:** (7) FULLY RATED
Supply From: MDP1 | **Phases:** 3 | **Mains Type:** MLO
Mounting: SURFACE | **Wires:** 4 | **Mains Rating:** 225 A
Enclosure: NEMA 1

Notes:

CKT	Load Name	CB	P	Wire	A	B	C	Wire	P	CB	Load Name	CKT
1					6318	120						2
3	HWP-1	30	3	#10		6318	120	#1	3	100	CHWP-1	4
5							6318	120				6
7					6633	0		--	--	--	SPACE	8
9	BP-1	30	3	#10		6633	0	--	--	--	SPACE	10
11							6633	0	--	--	SPACE	12
13	SPACE	--	--	--	0	0		--	--	--	SPACE	14
15	SPACE	--	--	--		0	0	--	--	--	SPACE	16
17	SPACE	--	--	--			0	0	--	--	SPACE	18
19	SPACE	--	--	--	0	0		--	--	--	SPACE	20
21	SPACE	--	--	--		0	0	--	--	--	SPACE	22
23	SPACE	--	--	--			0	0	--	--	SPACE	24
25	SPACE	--	--	--	0	0		--	--	--	SPACE	26
27	SPACE	--	--	--		0	0	--	--	--	SPACE	28
29	SPACE	--	--	--			0	0	--	--	SPACE	30
31	SPACE	--	--	--	0	0		--	--	--	SPACE	32
33	SPACE	--	--	--		0	0	--	--	--	SPACE	34
35	SPACE	--	--	--			0	0	--	--	SPACE	36
37	SPACE	--	--	--	0	0		--	--	--	SPACE	38
39	SPACE	--	--	--		0	0	--	--	--	SPACE	40
41	SPACE	--	--	--			0	0	--	--	SPACE	42
					Total Load:	13072 VA	13072 VA	13072 VA				
					Total Amps:	47 A	47 A	47 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	18955 VA	100.00%	18955 VA		
Power	20260 VA	100.00%	20260 VA	**Total Conn. Load:**	39215 VA
				Total Est. Demand:	39215 VA
				Total Conn. Current:	47 A
				Total Est. Demand...	47 A

Branch Panel: H2 — NEW

Location: ELEC 02-05-12 | **Volts:** 480/277 Wye | **A.I.C. Rating:** (7) FULLY RATED
Supply From: MDP1 | **Phases:** 3 | **Mains Type:** MCB
Mounting: SURFACE | **Wires:** 4 | **Mains Rating:** 400 A
Enclosure: NEMA 1

Notes:

CKT	Load Name	CB	P	Wire	A	B	C	Wire	P	CB	Load Name	CKT
1	SPACE	--	--	--	0	218...						2
3	SPACE	--	--	--		0	218...	#2	3	90	AHU-01 SINGLE POINT	4
5	SPACE	--	--	--			0	218...				6
7	SPACE	--	--	--	0	149...						8
9	SPACE	--	--	--		0	149...	#6	3	60	AHU-02 SINGLE POINT	10
11	SPACE	--	--	--			0	149...				12
13	SPACE	--	--	--	0	218...						14
15	SPACE	--	--	--		0	218...	#2	3	90	AHU-03 SINGLE POINT	16
17	SPACE	--	--	--			0	218...				18
19	SPACE	--	--	--	0	149...						20
21	SPACE	--	--	--		0	149...	#6	3	60	AHU-04 SUPPLY FAN	22
23	SPACE	--	--	--			0	149...				24
25	SPACE	--	--	--	0	0		--	--	--	SPACE	26
27	SPACE	--	--	--		0	0	--	--	--	SPACE	28
29	SPACE	--	--	--			0	0	--	--	SPACE	30
31	SPACE	--	--	--	0	0		--	--	--	SPACE	32
33	SPACE	--	--	--		0	0	--	--	--	SPACE	34
35	SPACE	--	--	--			0	0	--	--	SPACE	36
37	SPACE	--	--	--	0	0		--	--	--	SPACE	38
39	SPACE	--	--	--		0	0	--	--	--	SPACE	40
41	SPACE	--	--	--			0	0	--	--	SPACE	42
					Total Load:	73575 VA	73575 VA	73575 VA				
					Total Amps:	266 A	266 A	266 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Hvac	220726 VA	100.00%	220726 VA		
				Total Conn. Load:	220726 VA
				Total Est. Demand:	220726 VA
				Total Conn. Current:	265 A
				Total Est. Demand...	265 A

Branch Panel: HE1 — NEW

Location: MEP 01-05-01 | **Volts:** 480/277 Wye | **A.I.C. Rating:** (7) FULLY RATED
Supply From: ATS2 | **Phases:** 3 | **Mains Type:** MLO
Mounting: SURFACE | **Wires:** 4 | **Mains Rating:** 225 A
Enclosure: NEMA 1

Notes:

CKT	Load Name	CB	P	Wire	A	B	C	Wire	P	CB	Load Name	CKT
1					100...	350			1	20	MECHANICAL SHOP LIGHTING	2
3	HE2 (8)	100	3	--		6074	1994		1	20	PARKING LOT LIGHTING	4
5							7767	1000	1	20	PARKING LOT LIGHTING	6
7					0	158...						8
9	HE4 (8)	100	3	--		0	156...	--	3	100	HE3 (8)	10
11							0	148...				12
13	SPACE	--	--	--	0	0		--	--	--	SPACE	14
15	EXTERIOR BUILDING LIGHTING	20	1			2631	0		--	--	SPACE	16
17	PARKING LOT LIGHTING	20	1				1494	1976	1	20	PARKING LOT LIGHTING	18
19	SPACE	--	--	--	0	0			--	--	SPACE	20
21	SPACE	--	--	--		0	0		--	--	SPACE	22
23	SPACE	--	--	--			0	0	--	--	SPACE	24
25	SPACE	--	--	--	0	0			--	--	SPACE	26
27	SPACE	--	--	--		0	0		--	--	SPACE	28
29	SPACE	--	--	--			0	0	--	--	SPACE	30
31	SPACE	--	--	--	0	0			--	--	SPACE	32
33	SPACE	--	--	--		0	0		--	--	SPACE	34
35	SPACE	--	--	--			0	0	--	--	SPACE	36
37	SPACE	--	--	--	0	0			--	--	SPACE	38
39	SPACE	--	--	--		0	0		--	--	SPACE	40
41	SPACE	--	--	--			0	0	--	--	SPACE	42
					Total Load:	26224 VA	26342 VA	27044 VA				
					Total Amps:	95 A	95 A	98 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	35240 VA	125.00%	44051 VA		
Power	37411 VA	100.00%	37411 VA	**Total Conn. Load:**	79610 VA
Lighting - Exterior	6958 VA	125.00%	8698 VA	**Total Est. Demand:**	90159 VA
				Total Conn. Current:	96 A
				Total Est. Demand...	108 A

Branch Panel: HE2 — NEW

Location: ELEC 01-05-05 | **Volts:** 480/277 Wye | **A.I.C. Rating:** (7) FULLY RATED
Supply From: HE1 | **Phases:** 3 | **Mains Type:** MLO
Mounting: SURFACE | **Wires:** 4 | **Mains Rating:** 100 A
Enclosure: NEMA 1

Notes:

CKT	Load Name	CB	P	Wire	A	B	C	Wire	P	CB	Load Name	CKT
1	SPACE	--	--	--	0	0		--	--	--	SPACE	2
3	LOBBY & MEDICAL RECORDS LIGHTING	20	1			2496	3260		1	20	PHARMACY & CIRCULATION LIGHTING	4
5	SPACE	--	--	--				0	2332	1	20	CIRCULATION LIGHTING	6
7	WIC OFFICES & LOUNGE LIGHTING	20	1		3972	1808				1	20	MEP & CIRCULATION LIGHTING	8
9	SECTOR 1 ELEVATOR PIT LIGHTS	20	1			70	178			1	20	STAIR #2 LIGHTING	10
11	EXAM ROOMS & OFFICES LIGHTING	20	1					1572	3863	1	20	PHARMACY LOBBY & CORRIDOR LTG	12
13	EXERCISE & THERAPY OFFICES LTG	20	1		4156	70				1	20	SECTOR 2 ELEVATOR PIT LIGHTS	14
15	ELEVATOR PIT LIGHTS	20	1			70	0			--	--	SPACE	16
17	SPACE	--	--	--				0	0	--	--	SPACE	18
19	SPACE	--	--	--	0	0				--	--	SPACE	20
21	SPACE	--	--	--		0	0			--	--	SPACE	22
23	SPACE	--	--	--				0	0	--	--	SPACE	24
25	SPACE	--	--	--	0	0				--	--	SPACE	26
27	SPACE	--	--	--		0	0			--	--	SPACE	28
29	SPACE	--	--	--				0	0	--	--	SPACE	30
31	SPACE	--	--	--	0	0				--	--	SPACE	32
33	SPACE	--	--	--		0	0			--	--	SPACE	34
35	SPACE	--	--	--				0	0	--	--	SPACE	36
37	SPACE	--	--	--	0	0				--	--	SPACE	38
39	SPACE	--	--	--		0	0			--	--	SPACE	40
41	SPACE	--	--	--				0	0	--	--	SPACE	42
					Total Load:	10006 VA	6074 VA	7767 VA				
					Total Amps:	37 A	22 A	29 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	23847 VA	125.00%	29809 VA		
				Total Conn. Load:	23847 VA
				Total Est. Demand:	29809 VA
				Total Conn. Current:	29 A
				Total Est. Demand...	36 A

Branch Panel: HE3 — NEW

Location: ELEC 02-05-11 | **Volts:** 480/277 Wye | **A.I.C. Rating:** (7) FULLY RATED
Supply From: HE1 | **Phases:** 3 | **Mains Type:** MLO
Mounting: SURFACE | **Wires:** 4 | **Mains Rating:** 100 A
Enclosure: NEMA 1

Notes:

CKT	Load Name	CB	P	Wire	A	B	C	Wire	P	CB	Load Name	CKT
1	SHELL SPACE & CIRCULATION LTG	20	1		2872	0						2
3	OPEN OPP LIGHTING	20	1			3173	0					4
5								4157	4157			6
7	ELEVATOR CONTROL SERVICE	25	3	#10	4157	4157				#10	3	25	ELEVATOR CONTROL SERVICE	8
9							4157	4157						10
11	SHUNT-TRIP BREAKER	--	--	--			0	0	--	--	--	--	SHUNT-TRIP BREAKER	12
13	SHELL SPACE LIGHTING	20	1		525	4157								14
15	SPACE	--	--	--		0	4157			#10	3	25	ELEVATOR CONTROL SERVICE	16
17	RECEPTION & BREAKROOM...	20	1					2336	4157					18
19	SPACE	--	--	--	0	0				--	--	--	SPACE	20
21	SPACE	--	--	--		0	0			--	--	--	SPACE	22
23	SPACE	--	--	--				0	0	--	--	--	SPACE	24
25	SPACE	--	--	--	0	0				--	--	--	SPACE	26
27	SPACE	--	--	--		0	0			--	--	--	SPACE	28
29	SPACE	--	--	--				0	0	--	--	--	SPACE	30
31	SPACE	--	--	--	0	0				--	--	--	SPACE	32
33	SPACE	--	--	--		0	0			--	--	--	SPACE	34
35	SPACE	--	--	--				0	0	--	--	--	SPACE	36
37	SPACE	--	--	--	0	0				--	--	--	SPACE	38
39	SPACE	--	--	--		0	0			--	--	--	SPACE	40
41	SPACE	--	--	--				0	0	--	--	--	SPACE	42
					Total Load:	15868 VA	15643 VA	14806 VA				
					Total Amps:	58 A	57 A	53 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	8906 VA	125.00%	11133 VA		
Power	37411 VA	100.00%	37411 VA	**Total Conn. Load:**	46317 VA
				Total Est. Demand:	48544 VA
				Total Conn. Current:	56 A
				Total Est. Demand...	58 A

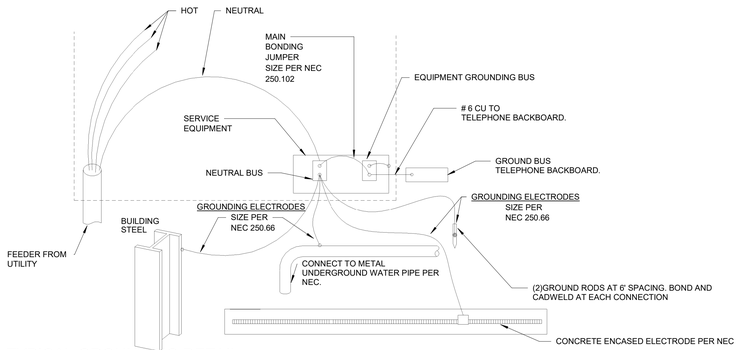
Branch Panel: F1A — NEW

Location: MECHANICAL SHOP | **Volts:** 120/208 Wye | **A.I.C. Rating:** (7) FULLY RATED
Supply From: L1A | **Phases:** 3 | **Mains Type:** MCB
Mounting: SURFACE | **Wires:** 4 | **Mains Rating:** 60 A
Enclosure: NEMA 1

Notes:

CKT	Load Name	CB	P	Wire	A	B	C	Wire	P	CB	Load Name	CKT
1	OVERHEAD DOOR	20	2		300	0				--	--	SPACE	2
3						300	720			1	20	GUH-1 & GUH-2	4
5	MAINTENANCE SHOP RECEPTACLES	20	1					720	540	1	20	MAINTENANCE RECEPS	6
7	MAINTENANCE SHOP RECEPTACLES	20	1		720	360				1	20	OUTDOOR SERVICE RECEPTACLES	8
9	SPACE	--	--	--			0	0		--	--	SPACE	10
11	SPACE	--	--	--				0	0	--	--	SPACE	12
13	SPACE	--	--	--	0	0				--	--	SPACE	14
15	SPACE	--	--	--			0	0		--	--	SPACE	16
17	SPACE	--	--	--				0	0	--	--	SPACE	18
19	SPACE	--	--	--	0	0				--	--	SPACE	20
21	SPACE	--	--	--			0	0		--	--	SPACE	22
23	SPACE	--	--	--				0	0	--	--	SPACE	24
					Total Load:	1380 VA	1020 VA	1260 VA				
					Total Amps:	12 A	9 A	11 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Hvac	720 VA	100.00%	720 VA		
Other	600 VA	100.00%	600 VA	**Total Conn. Load:**	3660 VA
Receptacle	2340 VA	100.00%	2340 VA	**Total Est. Demand:**	3660 VA
				Total Conn. Current:	10 A
				Total Est. Demand...	10 A



TYPICAL GROUNDING DETAIL
12" = 1'-0"

PANELBOARD NOTES (#)

1. TERMINATE GROUND ON ISOLATED GROUND BUS.
2. INSTALL LOCKING DEVICE FURNISHED WITH PANELBOARD (LOCK-OFF FOR MAINTENANCE).
3. INSTALL LOCKING DEVICE FURNISHED WITH PANELBOARD (LOCK-ON FOR CRITICAL LOAD).
4. GFI BREAKER FOR PERSONNEL PROTECTION (5mA).
5. GFI BREAKER FOR EQUIPMENT PROTECTION (30mA).
6. CONDUCTOR SIZE SHOWN IN PANEL SCHEDULE HAS BEEN INCREASED FOR VOLTAGE DROP. SIZE EQUIPMENT GROUND PROPORTIONALLY PER NEC. REFERENCE GROUND WIRE SIZING CHART.
7. REFER TO ONE-LINE DIAGRAM FOR AVAILABLE FAULT CURRENT FOR INTERRUPT RATINGS.
8. REFER TO ONE-LINE DIAGRAM FOR WIRE SIZES.
9. FACTORY WIRED TO LOAD.
10. THRU CONTROLLER. REFER TO LIGHTING CONTROLLER DETAIL.
11. ADD CIRCUIT BREAKER TO EXISTING PANEL.

EQUIPMENT GROUNDING CONDUCTOR SIZING CHART

BRKR AMPS		WIRE SIZE				
15-20	PHASE	12	10	8	6	4
	GROUND	12	10	8	6	4
25-30	PHASE	10	8	6	4	3
	GROUND	10	8	6	4	3
35-50	PHASE	8	6	4	3	2
	GROUND	10	8	4	4	4
60	PHASE	6	4	3	2	1
	GROUND	10	6	6	4	4
70	PHASE	6	4	3	2	1
	GROUND	8	4	4	3	2
80-90	PHASE	4	3	2	1	1/0
	GROUND	8	6	4	4	3
100	PHASE	3	2	1	1/0	2/0
	GROUND	8	6	4	4	3

PER NEC 250.122(B)

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PROFESSIONAL SEAL:
LICENSED PROFESSIONAL ENGINEER — Robert Brandon Pinkerton — 23042 — OKLAHOMA — REGISTERED
12/06/2019

CONSULTANT LOGO:
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CLIENT:
TRIBAL SEAL OF THE CHEROKEE NATION — SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-06-19 | JOB NUMBER: 18-01.01
SHEET NUMBER: E3.02

PANEL SCHEDULES

Branch Panel: L1A — NEW

Location: MEP 01-05-01 | **Volts:** 120/208 Wye | **A.I.C. Rating:** (7) FULLY RATED
Supply From: T1 | **Phases:** 3 | **Mains Type:** MCB
Mounting: SURFACE | **Wires:** 4 | **Mains Rating:** 300 A
Enclosure: NEMA 1

Notes:

CKT	Load Name	CB	P	Wire	A	B	C	Wire	P	CB	Load Name	CKT
1	6439 TABLE 10-02	20	1		600 180				1	20	OUTDOOR SERVICE RECEPTACLES	2
3	RECEPTACLES	20	1			0 180			1	20	WINGS OFFICE COPIER/PRINTER 06-01	4
5	PT EXAM TABLE 07-11	20	1				180 180		1	20	PT EXAM TABLE 08-16	6
7	PC EXAM TABLE 09-04	20	1		360 1440				1	15	ICE MAKER 07-13	8
9	MEDS WORK BENCH 09-07	20	1			360 2160			1	20	CIRCULATION TV/RECEPTACLES 00-06	10
11	KITCHEN OVEN 14-04	50	2	#6			8250 360		1	20	KH -1	12
13					8250 360				1	20	PC EXAM TABLE 09-06	14
15	SHUNT TRIP SPACE	--	--	--		0 2500			1	20	CONFERENCE RM FLOORBOXES 14-01	16
17	PT TABLE 07-09	20	1				180 900		1	20	NOURISHMENT RECEPTACLES 07-13	18
19	PT TABLE 07-08	20	1		360 1500				1	20	CONFERENCE RM FLOORBOXES 14-02	20
21	CONFERENCE RM RECEPTACLES 14-01	20	1			1400 360			1	20	CONF. PROJECTOR SCREEN 14-01	22
23	WINGS OFFICE RECEPTACLES 06-01	20	1				1080 360		1	20	HOT WATER HEATER-2	24
25	EVS OFFICE RECEPTACLES 04-04	20	1		1440 360				1	20	PT EXAM TABLE 09-05	26
27	PT OFFICE RECEPTACLES 07-03	20	1			360 720			1	20	PT OFFICE RECEPTACLES 07-03	28
29	PT ASST RECEPS/FLOOR BOX 07-04	20	1				1400 960		1	20	BOILER 1	30
31	IT DEDICATED RECEPTACLES 05-03	20	1		360 860				1	20	CONFERENCE RM RECEPTACLES 14-02	32
33	EXERCISE AREA FLOORBOXES 07-14	20	1			500 360			1	20	MEDS RECEPTACLE 09-07	34
35	EXERCISE AREA FLOORBOXES 07-14	20	1				500 720		1	20	EXERCISE AREA TV/RECEPS 07-14	36
37	EXCERISE AREA RECEPTACLES 07-14	20	1		1130 360				1	20	MEDS RECEPTACLES 09-07	38
39	CONFERENCE RM FLOORBOXES 14-01	20	1			2000 1980			1	20	SECURITY RECEPTACLES 16-12	40
41	EF-5	20	1				373 180		1	20	PRELIM TEST RECEPTACLES 10-02	42
43	ELEVATOR SYMPLEX SUMP PUMP	20	1		180 720				1	20	PRELIM TEST RECEPTACLES 10-02	44
45	ELEVATOR PIT GFCI	20	1			180 540			1	20	PT RECEPTION RECEPTACLESS 07-01	46
47	BOILER 2	20	1				960 1080		1	20	PT TRTMT 07-08	48
49	HOT WATER HEATER-1	20	1		360 1080				1	20	WINGS OFFICE RECEPTACLES 06-02	50
51	CONFERENCE RM FLOORBOXES 14-02	20	1			2000 720			1	20	PT TRTMT RECEPTACLES 07-07	52
53	VAV POWER SECTOR 2	20	1				408 1285		1	20	CIRCULATION RECEPTACLES 07-02	54
55	WATER FOUNTAIN/RESTROOM SERV(4)	20	1		665 1440				1	20	SECURITY CPU RECEPTACLES 16-12	56
57	FACP	20	1			360 900			1	20	TREATMENT RECEPTACLES 09-11	58
59	WINGS OFFICE COPIER/PRINTER 01-02	20	1				180 900		1	20	PC EXAM RECEPTACLES 09-05	60
61	STORAGE REFRIGERATOR 07-10	20	1		600 360				1	20	CONF. PROJECTOR SCREEN 14-01	62
63	PT TRTMT RECEPTACLES 07-11	20	1			900 1105			1	20	PC EXAM/BH RECEPTACLES 09-08	64
65	STORAGE REFRIGERATOR 07-10	20	1				600 900		1	20	PT TRTMT RECEPTACLES 07-09	66
67	FLOAT OFFICES RECEPTACLES 09-15	20	1		720 1080				1	20	FLOAT OFFICES RECEPTACLES 09-15	68
69	FLOAT OFFICES RECEPTACLES 09-15	20	1			1080 360			1	20	FLOAT OFFICES COPIER/PRINTER 01-15	70
71	PC EXAM RECEPTACLES 09-04	20	1				720 720		1	20	SOILED ROOM RECEPTACLES 09-13	72
73	PC PHY OFF RECEPTACLES 09-16	20	1		900 1080				1	20	OPEN WORK CPU RECEPTACLES 09-18	74
75	OPEN WORK CPU RECEPTACLES 09-18	20	1			1080 900			1	20	PC PHY OFF RECEPTACLES 09-17	76
77	OPEN WORK FLOORBOX 09-18	20	1				500 900		1	20	PC EXAM RECEPTACLES 09-06	78
79	SPACE	--	--	--	0 0			--	--	--	SPACE	80
81	SPACE	--	--	--		0 0		--	--	--	SPACE	82
83	SPACE	--	--	--			0 0	--	--	--	SPACE	84
85					1380 6667							86
87	PANEL F1A (8)	60	3	--		1020 6667		--	3	200	GENERATOR 2 LOAD CENTER (8)	88
89							1260 6667					90
91	SPARE	20	1	--	0 0			--	1	20	SPARE	92
93	SPARE	20	1	--		0 0		--	1	20	SPARE	94
95	SPARE	20	1	--			0 0	--	1	20	SPARE	96
97	SPARE	20	1	--	0 0			--	1	20	SPARE	98
99	SPARE	20	1	--		0 0		--	1	20	SPARE	100
101	SPACE	--	--	--			0 0	--	--	--	SPACE	102
103	SPACE	--	--	--	0 0			--	--	--	SPACE	104
105	SPACE	--	--	--		0 0		--	--	--	SPACE	106
107	SPACE	--	--	--			0 0	--	--	--	SPACE	108
109	SPACE	--	--	--	0 0			--	--	--	SPACE	110
111	SPACE	--	--	--		0 0		--	--	--	SPACE	112
113	SPACE	--	--	--			0 0	--	--	--	SPACE	114
115	SPACE	--	--	--	0 0			--	--	--	SPACE	116
117	SPACE	--	--	--		0 0		--	--	--	SPACE	118
119	SPACE	--	--	--			0 0	--	--	--	SPACE	120
121	SPACE	--	--	--	0 0			--	--	--	SPACE	122
123	SPACE	--	--	--		0 0		--	--	--	SPACE	124
125	SPACE	--	--	--			0 0	--	--	--	SPACE	126
	Total Load:	34792 VA			30692 VA		32703 VA					
	Total Amps:	293 A			256 A		275 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Hvac	720 VA	100.00%	720 VA		
Other	4560 VA	100.00%	4560 VA	**Total Conn. Load:**	98186 VA
Power	21305 VA	100.00%	21305 VA	**Total Est. Demand:**	77355 VA
Receptacle	52808 VA	59.47%	31404 VA	**Total Conn. Current:**	273 A
Kitchen	16500 VA	100.00%	16500 VA	**Total Est. Demand...**	215 A
Continuous	2293 VA	125.00%	2866 VA		

Branch Panel: L2A — NEW

Location: ELEC 01-05-05 | **Volts:** 120/208 Wye | **A.I.C. Rating:** (7) FULLY RATED
Supply From: T-2 | **Phases:** 3 | **Mains Type:** MCB
Mounting: SURFACE | **Wires:** 4 | **Mains Rating:** 225 A
Enclosure: NEMA 1

Notes:

CKT	Load Name	CB	P	Wire	A	B	C	Wire	P	CB	Load Name	CKT
1	DISPENSING RECEPTACLES 10-00	20	1		1040 360				1	20	DISPENSING CPU RECEPTACLES 10-00	2
3	DISPENSING FLOORBOXES 10-00	20	1			1860 1260			1	20	EXAM REFRAC RECEPTACLES 10-03	4
5	INFECTION CONTROL RECEPTS 13-04	20	1				1080 770		1	20	WT AL 13-02/TOILET 11-01/TOILET 13-03	6
7	RECEPTION RECEPTACLES 13-00	20	1		900 540				1	20	RECEPTION RECEPTACLES 10-04	8
9	LACTATION RECEPTACLES 00-07	20	1			900 360			1	20	IT DEDICATED RECEPTACLES 05-04	10
11	IT DEDICATED RECEPTACLES 05-04	20	1				360 1080		1	20	ELEC RM/IT RM RECEPTACLES 05-05	12
13	PHN EXAM RECEPTACLES 13-05	20	1		360 1620				1	20	EXAM REFRAC RECEPTACLES 10-04	14
15	PHN EXAM RECEPTACLES 13-05	20	1			900 360			1	20	SPECIAL TEST RECEPTACLES 10-05	16
17	SPECIAL TEST RECEPTACLES 10-05	20	1				180 360		1	20	PHNMED ADMIN RECEPTACLES 13-06	18
19	5050 REFRIGERATOR 13-06	20	1		900 600				1	20	5054 FREEZER 13-06	20
21	KITCHENETTE REFRIGERATOR 16-06	20	1			600 360			1	20	PHNMED ADMIN RECEPTACLES 13-06	22
23	EXAM REFRAC RECEPTACLES 10-06	20	1				1260 720		1	20	MEDS RECEPTACLES 12-00	24
25	EXAM NON-REFRAC RECEPTACLES...	20	1		1440 720				1	20	SPECIALTY EXAM RECEPTACLES 12-01	26
27	SPECIALTY EXAM RECEPTACLES 12-02	20	1			720 1260			1	20	EXAM REFRAC RECEPTACLES 10-08	28
29	EXAM REFRAC TV/RECEPTACLES 10-08	20	1				1440 720		1	20	SPECIALTY EXAM RECEPTACLES 12-03	30
31	TOILET RECEPTS...	20	1		820 1080				1	20	CIRCULATION RECEPTACLES 13-01	32
33	STAFF LOUNGE RECEPTACLES 02-08	20	1			720 1000			1	20	STAFF LOUNGE REFRIGERATOR 02-08	34
35	STAFF LOUNGE ICE MAKER 02-08	20	1				1000 360		1	20	COPIER/PRINTER 01-05	36
37	STAFF LOUNGE ICE MAKER 02-08	20	1		1800 1501				1	20	STAFF LOUNGE MICROWAVE 02-08	38
39	STAFF LOUNGE MICROWAVE 02-08	20	1			1334 900			1	20	PHN OPEN WORK RECEPTACLES 13-12	40
41	PHN OPEN WORK RECEPTACLES 13-12	20	1				900 1080		1	20	CIRCULATION RECEPTACLES 00-02	42
43	OFFICE RECEPTACLES 12-05	20	1		900 900				1	20	SPEC PHY OFF RECEPTACLES 12-06	44
45	OPEN WORK CPU RECEPTACLES 12-07	20	1			1080 500			1	20	OPEN WORK FLOORBOX 12-07	46
47	OPEN WORK CPU RECEPTACLES 12-07	20	1				1080 1680		1	15	KITCHENETTE ICE MAKER 16-08	48
49	OPEN WORK COPIER/PRINTER 13-08	20	1		180 1080				1	20	OPEN WORK RECEPTACLES 13-08	50
51	PHN OFFICE RECEPTACLES 13-07	20	1			1080 900			1	20	RECEPTION CPU RECEPTACLES 09-00	52
53	HEALTH ED RECEPTACLES 11-08	20	1				900 720		1	20	HEALTH ED RECEPTACLES 11-08	54
55	BREASTFEEDING RECEPTACLES 11-02	20	1		720 1080				1	20	WIC OFFICE RECEPTACLES 11-03	56
57	PHARMACY COPIER/PRINTER 15-14	20	1			180 1080			1	20	WIC OFFICE RECEPTACLES 11-04	58
59	CONSULT RECEPTS 15-02, 15-03, 15-04	20	1				1080 540		1	20	WIC STORAGE RECEPTACLES 11-05	60
61	WIC OFFICE RECEPTACLES 11-06	20	1		1080 360				1	20	OPEN WORK COPIER/PRINTER 13-12	62
63	WIC OFFICE RECEPTACLES 11-07	20	1			1080 1080			1	20	RECEPTION RECEPTACLES 09-00	64
65	OFFICE RECEPTACLES 16-10	20	1				900 180		1	20	WORK ROOM COPIER/PRINTER 01-02	66
67	OFFICE RECEPTACLES 16-09	20	1		900 180				1	20	RECEPTION RECEPTACLE 13-00	68
69	OFFICE RECEPTACLES 16-08	20	1			900 360			1	20	SPEC EXAM TABLE 12-02	70
71	CONF. ROOM TV/FLOORBOXES 16-07	20	1				1540 1360		1	20	SPECIALTY EXAM RECEPTACLES 16-07	72
73	KITCHENETTE RECEPTACLES 16-06	20	1		540 900				1	20	CIRCULATION RECEPTACLES/TV 00-11	74
75	KITCHENETTE MICROWAVE 16-06 (6)	20	1	#10		1668 500			1	20	EF-6	76
77	OFFICE RECEPTACLES 16-05	20	1				1440 360		1	20	SPECIALTY EXAM RECEPTACLES 12-01	78
79	RECEPTION/CIRC. RECEPTACLES 16-01	20	1		1465 540				1	20	WORKROOM RECEPTACLES 16-02	80
81	WORKROOM RECEPTACLES 16-02	20	1			720 540			1	20	WORKROOM RECEPTACLES 16-02	82
83	RECEPTION CPU RECEPTACLES 16-01	20	1				360 1680		1	20	SUMP PUMP RECEPTACLE	84
85	BREAK CPU RECEPTACLES 15-08	20	1		540 600				1	20	6403 EQUIPMENT 10-05	86
87	6404 EQUIPMENT 10-05	20	1			600 900			1	20	5050 REFRIGERATOR 12-00	88
89	5054 FREEZER 12-00	20	1				900 1020	#10	2	25	STAFF LOUNGE COFFEE 02-08	90
91	CONFERENCE RECEPTACLES 16-07	20	1		360 1020							92
93	LOBBY RECEPTACLES 01-00	20	1			1800 1080			1	20	OPENWORK CPU RECEPTACLES 01-06	94
95	RECEPTION CPU RECEPTACLES 09-00	20	1				900 1080		1	20	OPENWORK CPU RECEPTACLES 01-06	96
97	VAV POWER SECTOR 1	20	1		600 600				1	20	PHARMACY REFRIGERATOR 15-14	98
99	KICHENETTE COFFEE 16-06	25	2	#10		1020 360			1	20	LOUNGE RECEPTACLES 02-08	100
101							1020 0	--	1	20	SPARE	102
103	SPARE	20	1	--	0 0			--	1	20	SPARE	104
105	SPARE	20	1	--		0 0		--	1	20	SPARE	106
107	SPARE	20	1	--			0 0	--	1	20	SPARE	108
109	SPARE	20	1	--	0 0			--	--	--	SPACE	110
111	SPACE	--	--	--		0 0		--	--	--	SPACE	112
113	SPACE	--	--	--			0 0	--	--	--	SPACE	114
115	SPACE	--	--	--	0 0			--	--	--	SPACE	116
117	SPACE	--	--	--		0 0		--	--	--	SPACE	118
119	SPACE	--	--	--			0 0	--	--	--	SPACE	120
121	SPACE	--	--	--	0 0			--	--	--	SPACE	122
123	SPACE	--	--	--		0 0		--	--	--	SPACE	124
125	SPACE	--	--	--			0 0	--	--	--	SPACE	126
	Total Load:	28226 VA			29962 VA		30050 VA					
	Total Amps:	235 A			252 A		253 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	2760 VA	100.00%	2760 VA		
Power	675 VA	100.00%	675 VA	**Total Conn. Load:**	88238 VA
Receptacle	82763 VA	56.04%	46382 VA	**Total Est. Demand:**	51857 VA
Kitchen	2040 VA	100.00%	2040 VA	**Total Conn. Current:**	245 A
				Total Est. Demand...	144 A

Branch Panel: L3A — NEW

Location: ELEC 02-05-11 | **Volts:** 120/208 Wye | **A.I.C. Rating:** (7) FULLY RATED
Supply From: T-3 | **Phases:** 3 | **Mains Type:** MCB
Mounting: SURFACE | **Wires:** 4 | **Mains Rating:** 300 A
Enclosure: NEMA 1

Notes:

CKT	Load Name	CB	P	Wire	A	B	C	Wire	P	CB	Load Name	CKT
1	CIRCULATION RECEPTACLES 18-09	20	1		900 360				1	20	STAFF TOILET RECEPTACLES 17-05,06	2
3	BRKROOM/CONF FLOORBOXES 17-04	20	1			1360 900			1	20	BREAK RM/CONF RECEPTACLES 17-04	4
5	PUMP RECEPTACLES 17-08	20	1				720 900		1	20	RECEPTACLES 17-40,45	6
7	CLOSED OPP RADIO. UNIT 17-10	20	1		600 360				1	20	CLOSED OPP TV/RECEPTACLE 17-10	8
9	CLOSED OPP RECEPTACLES 17-11	20	1			600 360			1	20	CLOSED OPP TV/RECEPTACLE 17-11	10
11	OPEN OPP RECEPTACLES 17-12	20	1				600 1000		1	20	OPEN OPP FLOORBOX 17-12	12
13	OPEN OPP RECEPTACLES 17-13	20	1		600 1000				1	20	OPEN OPP FLOORBOX 17-13	14
15	OPEN OPP RECEPTACLES 17-14	20	1			600 1000			1	20	OPEN OPP FLOORBOX 17-14	16
17	OPEN OPP COMPUTER 17-15	20	1				600 1000		1	20	OPEN OPP FLOORBOX 17-15	18
19	CLOSED OPP RECEPTACLES 17-49	20	1		500 360				1	20	CLOSED OPP TV/RECEPTACLES 17-49	20
21	CLOSED OPP RECEPTACLES 17-48	20	1			500 360			1	20	CLOSED OPP TV/RECEPTACLE 17-48	22
23	OPEN WORK CPU RECEPTACLES 17-47	20	1				720 600		1	15	COPIER/PRINTER 17-01	24
25	OPEN WORK CPU RECEPTACLES 17-47	20	1		720 1668				1	20	CONF / BREAK MICROWAVE 17-04	26
27	PAN RECEPTACLES 17-41	20	1			540 720			1	20	RECEPTION RECEPTACLES 17-01	28
29	CONF / BREAK REFRIGERATOR 17-04	20	1				600 540		1	20	RECEPTION RECEPTACLES 17-01	30
31	OFFICE MANAGER RECEPTACLES 17-39	20	1		900 360				1	20	LAB RECEPTACLES 17-24	32
33	PAN RECEPTACLES 17-37	20	1			540 360			1	20	CLEAN ROOM RECEPTACLES 17-42	34
35	SOILED ROOM RECEPTACLES 17-43	20	1				900 1080		1	20	OPEN WORK CPU RECEPTACLES 17-44	36
37	EXERCISE TV/RECEPTACLE 19-07	20	1		360 900				1	20	SOILED ROOM RECEPTACLES 17-43	38
39	OPEN OPP COMPUTER 17-16	20	1			600 1000			1	20	OPEN OPP FLOORBOX 17-16	40
41	OPEN OPP COMPUTER 17-17	20	1				600 1000		1	20	OPEN OPP FLOORBOX 17-17	42
43	OPEN OPP COMPUTER 17-18	20	1		600 1000				1	20	OPEN OPP FLOORBOX 17-18	44
45	CIRC. RECEPTACLES 17-23,27,36	20	1			720 720			1	20	RECEPTACLES 17-32,33,34	46
47	CLOSED OPP RECEPTACLES 17-35	20	1				1100 600		1	20	CLOSED OPP RECEPTACLES 17-35	48
49	OPEN OPP COMPUTER 17-19	20	1		600 1000				1	20	OPEN OPP FLOORBOX 17-19	50
51	OPEN OPP COMPUTER 17-20	20	1			600 1000			1	20	OPEN OPP FLOORBOX 17-20	52
53	OPEN OPP COMPUTER 17-21	20	1				600 1000		1	20	OPEN OPP FLOORBOX 17-21	54
55	OPEN OPP COMPUTER 17-22	20	1		600 1000				1	20	OPEN OPP FLOORBOX 17-22	56
57	LAB RECEPTACLES 17-24	20	1			720 780			1	20	LAB RECEPTACLES 17-24	58
59	ASST SUPER RECEPTACLES 17-25	20	1				720 500		1	20	EXERCISE EQUIPMENT 19-07	60
61	OPEN WORK AREA CPU RECEP 17-26	20	1		180 1080				1	20	OPEN WORK AREA RECEPTACLES...	62
63	EXERCISE EQUIPMENT 19-07	20	1			500 1080			1	20	OPEN WORK AREA RECEPTACLES...	64
65	OPEN WORK AREA CPU RECEP 17-26	20	1				720 600		1	20	OPEN WORK AREA RECEPTACLES...	66
67	EXERCISE EQUIPMENT 19-07	20	1		500 1440				1	20	RECEPTACLES 18-00	68
69	DENTAL DIRECTOR RECEPS 28-30	20	1			900 2160			1	20	CIRCULATION RECEPTACLES 18-00	70
71	CLEAN TABLE TOP STERILIZER 17-42	20	1				180 180		1	20	CLEAN TABLE TOP STERILIZER 17-42	72
73	EXERCISE EQUIPMENT 19-07	20	1		180 600				1	20	DENTAL CHAIR 17-35	74
75	DENTAL CHAIR 17-49	20	1			500 600			1	20	DENTAL CHAIR 17-11	76
77	IT RECEPTACLES 05-10	20	1				360 250		2	20	IT RACK 05-10	78
79	IT RECEPTACLES 05-10	20	1		360 250							80
81	DENTAL CHAIR 17-10	20	1			600 360			1	20	WATER FOUNTAIN (4)	82
83	CONF / BREAK REFRIGERATOR 17-04	20	1				600 1768	#10	2	25	BREAKROOM/CONF. COFFEE 17-04	84
85	EXERCISE EQUIPMENT 19-07	20	1		720 1768							86
87	EXERCISE EQUIPMENT 19-07	20	1			500 500			1	20	DENTAL CHAIR 17-48	88
89	RTU RECEPTACLES	20	1				216 600		1	20	CLOSED OPP RECEPTACLES 17-35	90
91	CLOSED OPP RECEPTACLES 17-48	20	1		500 500				1	20	EF-7	92
93	BREAK / CONF ICE MAKER 17-04	15	1			1236 0		--	1	20	SPARE	94
95	SPARE	20	1	--			0 0	--	1	20	SPARE	96
97	SPARE	20	1	--	0 0			--	1	20	SPARE	98
99	SPARE	20	1	--		0 0		--	1	20	SPARE	100
101	XRAY	20	1				960 180		1	20	ULTRASONIC CLEANER	102
103	XRAY	20	1		960 180				1	20	AUTOCLAVE	104
105	XRAY	20	1			960 500						106
107	XRAY	20	1				960 500	#10	2	30	MIELE INSTRUMENT WASHER	108
109	XRAY	20	1		960 500							110
111	XRAY	20	1			960 500		#10	2	30	MIELE INSTRUMENT WASHER	112
113	XRAY	20	1				960 0	--	--	--	SPACE	114
115	XRAY	20	1		960 0			--	--	--	SPACE	116
117	XRAY	20	1			960 0		--	--	--	SPACE	118
119	XRAY	20	1				960 0	--	--	--	SPACE	120
121					1000 0			--	--	--	SPACE	122
123	AIR COMPRESSOR	30	3	#10		1000 0		--	--	--	SPACE	124
125							1000 0	--	--	--	SPACE	126
	Total Load:	27026 VA			27796 VA		26374 VA					
	Total Amps:	226 A			232 A		220 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	27404 VA	100.00%	27404 VA		
Power	18100 VA	100.00%	18100 VA	**Total Conn. Load:**	81196 VA
Receptacle	32156 VA	65.55%	21078 VA	**Total Est. Demand:**	70118 VA
Kitchen	3536 VA	100.00%	3536 VA	**Total Conn. Current:**	225 A
				Total Est. Demand...	195 A

PANELBOARD NOTES (#)

1. TERMINATE GROUND ON ISOLATED GROUND BUS.
2. INSTALL LOCKING DEVICE FURNISHED WITH PANELBOARD (LOCK-OFF FOR MAINTENANCE).
3. INSTALL LOCKING DEVICE FURNISHED WITH PANELBOARD (LOCK-ON FOR CRITICAL LOAD).
4. GFI BREAKER FOR PERSONNEL PROTECTION (5mA).
5. GFI BREAKER FOR EQUIPMENT PROTECTION (30mA).
6. CONDUCTOR SIZE SHOWN IN PANEL SCHEDULE HAS BEEN INCREASED FOR VOLTAGE DROP. SIZE EQUIPMENT GROUND PROPORTIONALLY PER NEC. REFERENCE GROUND WIRE SIZING CHART.
7. REFER TO ONE-LINE DIAGRAM FOR AVAILABLE FAULT CURRENT FOR INTERRUPT RATINGS.
8. REFER TO ONE-LINE DIAGRAM FOR WIRE SIZES.
9. FACTORY WIRED TO LOAD.
10. THRU CONTROLLER. REFER TO LIGHTING CONTROLLER DETAIL.
11. ADD CIRCUIT BREAKER TO EXISTING PANEL.

EQUIPMENT GROUNDING CONDUCTOR SIZING CHART

BRKR AMPS		WIRE SIZE				
15-20	PHASE	12	10	8	6	4
	GROUND	12	10	8	6	4
25-30	PHASE	10	8	6	4	3
	GROUND	10	8	6	4	3
35-50	PHASE	8	6	4	3	2
	GROUND	10	8	4	4	4
60	PHASE	6	4	3	2	1
	GROUND	10	6	6	4	4
70	PHASE	6	4	3	2	1
	GROUND	8	4	4	3	2
80-90	PHASE	4	3	2	1	1/0
	GROUND	8	6	4	4	3
100	PHASE	3	2	1	1/0	2/0
	GROUND	8	6	4	4	3

PER NEC 250.122(B)

Branch Panel: L1B — NEW

Location: MEP 01-05-01 | **Volts:** 120/208 Wye | **A.I.C. Rating:** (7) FULLY RATED
Supply From: T1 | **Phases:** 3 | **Mains Type:** MCB
Mounting: SURFACE | **Wires:** 4 | **Mains Rating:** 300 A
Enclosure: NEMA 1

Notes:

CKT	Load Name	CB	P	Wire	A	B	C	Wire	P	CB	Load Name	CKT
1	OUTDOOR SERVICE RECEPTACLES	20	1		720 540				1	20	OUTDOOR SERVICE RECEPTACLES	2
3	OPEN WORK RECEPTACLES 10-12	20	1			720 1080			1	20	WORKSTATION RECEPTACLES

Branch Panel: L4A — NEW

Location: ELEC 02-05-12 | **Volts:** 120/208 Wye | **A.I.C. Rating:** (7) FULLY RATED
Supply From: T4 | **Phases:** 3 | **Mains Type:** MCB
Mounting: SURFACE | **Wires:** 4 | **Mains Rating:** 200 A
Enclosure: NEMA 1

Notes:

CKT	Load Name	CB	P	Wire	A	B	C	Wire	P	CB	Load Name	CKT
1	AHU-1 UV	15	1		462 1144			#10	2	30	MCU-01	2
3	AHU-1 GFCI	15	1			1200 1144						4
5	AHU-1 LIGHTING	15	1				391 1144	#10	2	30	MCU-02	6
7	AHU-2 UV	15	1		232 1144							8
9	AHU-2 LIGHTING	15	1			391 1144		#10	2	30	MCU-03	10
11	AHU-2 GFCI	15	1				1200 1144					12
13	AHU-3 UV	15	1		462 1144			#10	2	30	MCU-05	14
15	AHU-3 GFCI	15	1			1200 1144						16
17	AHU-3 LIGHTING	15	1				391 1144	#10	2	30	MCU-04	18
19	AHU-4 UV	15	1		232 1144							20
21	AHU-4 LIGHTING	15	1			391 1976		#10	2	30	MCU-06	22
23	AHU-4 GFCI	15	1				1200 1976					24
25	MECHANICAL CONTROL	20	1		1440 1144			#10	2	30	MCU-07	26
27	SECTOR 2 SERVICE	20	1			1440 1144						28
29	ELEVATOR CAB LIGHTS	20	1				200 1976	#10	2	30	MCU-08	30
31	SPARE	20	1	--	0 1976							32
33	SPARE	20	1	--		0 1144		#10	2	30	MCU-09	34
35	SPARE	20	1	--			0 1144					36
37	SPARE	20	1	--	0 1976			#10	2	30	MCU-10	38
39	SPACE	--	--	--		0 1976						40
41	SPACE	--	--	--			0 0	--	1	20	SPARE	42
43	SPACE	--	--	--	0 1976			#10	2	30	MCU-11	44
45	SPACE	--	--	--		0 1976						46
47	SPACE	--	--	--			0 0	--	1	20	SPARE	48
49	SPACE	--	--	--	0 0			--	1	20	SPARE	50
51	SPACE	--	--	--		0 0		--	1	20	SPARE	52
53	SPACE	--	--	--			0 0	--	--	--	SPACE	54
55	SPACE	--	--	--	0 0			--	--	--	SPACE	56
57	SPACE	--	--	--		0 0		--	--	--	SPACE	58
59	SPACE	--	--	--			0 0	--	--	--	SPACE	60
61	SPACE	--	--	--	0 0			--	--	--	SPACE	62
63	SPACE	--	--	--		0 0		--	--	--	SPACE	64
65	SPACE	--	--	--			0 0	--	--	--	SPACE	66
67	SPACE	--	--	--	0 0			--	--	--	SPACE	68
69	SPACE	--	--	--		0 0		--	--	--	SPACE	70
71	SPACE	--	--	--			0 0	--	--	--	SPACE	72
73	SPACE	--	--	--	0 0			--	--	--	SPACE	74
75	SPACE	--	--	--		0 0		--	--	--	SPACE	76
77	SPACE	--	--	--			0 0	--	--	--	SPACE	78
79	SPACE	--	--	--	0 0			--	--	--	SPACE	80
81	SPACE	--	--	--		0 0		--	--	--	SPACE	82
83	SPACE	--	--	--			0 0	--	--	--	SPACE	84
	Total Load:				14476 VA	16270 VA	11910 VA					
	Total Amps:				124 A	139 A	99 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Hvac	31824 VA	100.00%	31824 VA		
Power	1640 VA	100.00%	1640 VA	**Total Conn. Load:**	42656 VA
Receptacle	6240 VA	100.00%	6240 VA	**Total Est. Demand:**	43394 VA
Lighting - Exterior	2952 VA	125.00%	3690 VA	**Total Conn. Current:**	118 A
				Total Est. Demand...	120 A

Branch Panel: L4B — NEW

Location: ELEC 02-05-12 | **Volts:** 120/208 Wye | **A.I.C. Rating:** (7) FULLY RATED
Supply From: | **Phases:** 3 | **Mains Type:** MCB
Mounting: SURFACE | **Wires:** 4 | **Mains Rating:** 200 A
Enclosure: NEMA 1

Notes:

CKT	Load Name	CB	P	Wire	A	B	C	Wire	P	CB	Load Name	CKT
1	MCU-12	20	2		1976 500				1	20	EF-8	2
3						1976 1976			2	20	MCU-13	4
5	EF-7	20	1				500 1976					6
7	SPARE	20	1	--	0 0			--	1	20	SPARE	8
9	SPARE	20	1	--		0 0		--	1	20	SPARE	10
11	SPARE	20	1	--			0 0	--	1	20	SPARE	12
13	SPARE	20	1	--	0 0			--	1	20	SPARE	14
15	SPARE	20	1	--		0 0		--	1	20	SPARE	16
17	SPARE	20	1	--			0 0	--	1	20	SPARE	18
19	SPARE	20	1	--	0 0			--	1	20	SPARE	20
21	SPARE	20	1	--		0 0		--	1	20	SPARE	22
23	SPARE	20	1	--			0 0	--	1	20	SPARE	24
25	SPARE	20	1	--	0 0			--	1	20	SPARE	26
27	SPARE	20	1	--		0 0		--	1	20	SPARE	28
29	SPARE	20	1	--			0 0	--	1	20	SPARE	30
31	SPARE	20	1	--	0 0			--	1	20	SPARE	32
33	SPARE	20	1	--		0 0		--	1	20	SPARE	34
35	SPACE	--	--	--			0 0	--	--	--	SPACE	36
37	SPACE	--	--	--	0 0			--	--	--	SPACE	38
39	SPACE	--	--	--		0 0		--	--	--	SPACE	40
41	SPACE	--	--	--			0 0	--	--	--	SPACE	42
43	SPACE	--	--	--	0 0			--	--	--	SPACE	44
45	SPACE	--	--	--		0 0		--	--	--	SPACE	46
47	SPACE	--	--	--			0 0	--	--	--	SPACE	48
49	SPACE	--	--	--	0 0			--	--	--	SPACE	50
51	SPACE	--	--	--		0 0		--	--	--	SPACE	52
53	SPACE	--	--	--			0 0	--	--	--	SPACE	54
55	SPACE	--	--	--	0 0			--	--	--	SPACE	56
57	SPACE	--	--	--		0 0		--	--	--	SPACE	58
59	SPACE	--	--	--			0 0	--	--	--	SPACE	60
61	SPACE	--	--	--	0 0			--	--	--	SPACE	62
63	SPACE	--	--	--		0 0		--	--	--	SPACE	64
65	SPACE	--	--	--			0 0	--	--	--	SPACE	66
67	SPACE	--	--	--	0 0			--	--	--	SPACE	68
69	SPACE	--	--	--		0 0		--	--	--	SPACE	70
71	SPACE	--	--	--			0 0	--	--	--	SPACE	72
73	SPACE	--	--	--	0 0			--	--	--	SPACE	74
75	SPACE	--	--	--		0 0		--	--	--	SPACE	76
77	SPACE	--	--	--			0 0	--	--	--	SPACE	78
79	SPACE	--	--	--	0 0			--	--	--	SPACE	80
81	SPACE	--	--	--		0 0		--	--	--	SPACE	82
83	SPACE	--	--	--			0 0	--	--	--	SPACE	84
	Total Load:				2476 VA	3952 VA	2476 VA					
	Total Amps:				21 A	33 A	21 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Hvac	7904 VA	100.00%	7904 VA		
Power	1000 VA	100.00%	1000 VA	**Total Conn. Load:**	8904 VA
				Total Est. Demand:	8904 VA
				Total Conn. Current:	25 A
				Total Est. Demand...	25 A

Branch Panel: HE4 — NEW

Location: Space 442 | **Volts:** 480/277 Wye | **A.I.C. Rating:** (7) FULLY RATED
Supply From: HE1 | **Phases:** 3 | **Mains Type:** MLO
Mounting: SURFACE | **Wires:** 4 | **Mains Rating:** 100 A
Enclosure: NEMA 1

Notes:

CKT	Load Name	CB	P	Wire	A	B	C	Wire	P	CB	Load Name	CKT
1	SPARE	20	1	--	0 0			--	1	20	SPARE	2
3	SPARE	20	1	--		0 0		--	1	20	SPARE	4
5	SPARE	20	1	--			0 0	--	1	20	SPARE	6
7	SPARE	20	1	--	0 0			--	1	20	SPARE	8
9	SPACE	--	--	--		0 0		--	--	--	SPACE	10
11	SPACE	--	--	--			0 0	--	--	--	SPACE	12
13	SPACE	--	--	--	0 0			--	--	--	SPACE	14
15	SPACE	--	--	--		0 0		--	--	--	SPACE	16
17	SPACE	--	--	--			0 0	--	--	--	SPACE	18
19	SPACE	--	--	--	0 0			--	--	--	SPACE	20
21	SPACE	--	--	--		0 0		--	--	--	SPACE	22
23	SPACE	--	--	--			0 0	--	--	--	SPACE	24
25	SPACE	--	--	--	0 0			--	--	--	SPACE	26
27	SPACE	--	--	--		0 0		--	--	--	SPACE	28
29	SPACE	--	--	--			0 0	--	--	--	SPACE	30
31	SPACE	--	--	--	0 0			--	--	--	SPACE	32
33	SPACE	--	--	--		0 0		--	--	--	SPACE	34
35	SPACE	--	--	--			0 0	--	--	--	SPACE	36
37	SPACE	--	--	--	0 0			--	--	--	SPACE	38
39	SPACE	--	--	--		0 0		--	--	--	SPACE	40
41	SPACE	--	--	--			0 0	--	--	--	SPACE	42
	Total Load:				0 VA	0 VA	0 VA					
	Total Amps:				0 A	0 A	0 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
				Total Conn. Load:	0 VA
				Total Est. Demand:	0 VA
				Total Conn. Current:	0 A
				Total Est. Demand...	0 A

PANELBOARD NOTES (#)

1. TERMINATE GROUND ON ISOLATED GROUND BUS.
2. INSTALL LOCKING DEVICE FURNISHED WITH PANELBOARD (LOCK-OFF FOR MAINTENANCE).
3. INSTALL LOCKING DEVICE FURNISHED WITH PANELBOARD (LOCK-ON FOR CRITICAL LOAD).
4. GFI BREAKER FOR PERSONNEL PROTECTION (5mA).
5. GFI BREAKER FOR EQUIPMENT PROTECTION (30mA).
6. CONDUCTOR SIZE SHOWN IN PANEL SCHEDULE HAS BEEN INCREASED FOR VOLTAGE DROP. SIZE EQUIPMENT GROUND PROPORTIONALLY PER NEC. REFERENCE GROUND WIRE SIZING CHART.
7. REFER TO ONE-LINE DIAGRAM FOR AVAILABLE FAULT CURRENT FOR INTERRUPT RATINGS.
8. REFER TO ONE-LINE DIAGRAM FOR WIRE SIZES.
9. FACTORY WIRED TO LOAD.
10. THRU CONTROLLER. REFER TO LIGHTING CONTROLLER DETAIL.
11. ADD CIRCUIT BREAKER TO EXISTING PANEL.

EQUIPMENT GROUNDING CONDUCTOR SIZING CHART

BRKR AMPS		WIRE SIZE				
15-20	PHASE	12	10	8	6	4
	GROUND	12	10	8	6	4
25-30	PHASE	10	8	6	4	3
	GROUND	10	8	6	4	3
35-50	PHASE	8	6	4	3	2
	GROUND	10	8	4	4	4
60	PHASE	6	4	3	2	1
	GROUND	10	6	6	4	4
70	PHASE	6	4	3	2	1
	GROUND	8	4	4	3	2
80-90	PHASE	4	3	2	1	1/0
	GROUND	8	6	4	4	3
100	PHASE	3	2	1	1/0	2/0
	GROUND	8	6	4	4	3

PER NEC 250.122(B)

James R. Childers Architect, Inc.
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479-783-2480
www.childersarchitect.com

PROFESSIONAL SEAL:
LICENSED PROFESSIONAL ENGINEER — Robert Brandon Pinkerton — 23042 — OKLAHOMA — REGISTERED
12/06/2019

CONSULTANT LOGO:
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PROJECT NO. 18068R
100 % COMPLETE
HP ENGINEERING INC.
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(479) 899-6370
www.hpengineeringinc.com

CLIENT:
THE CHEROKEE NATION — TRUST OF THE — SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

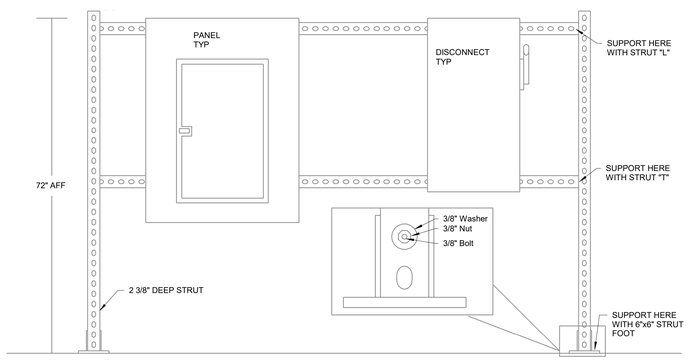
PROJECT PHASE:
BID PACKAGE 02

REVISIONS

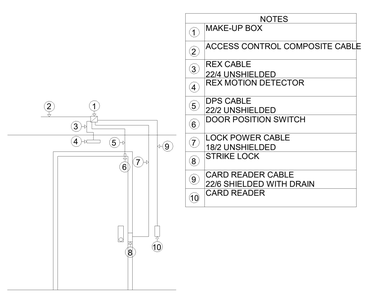
#	DATE	DESCRIPTION

DATE: 12-06-19
JOB NUMBER: 18-01.01
SHEET NUMBER: E3.04

PANEL SCHEDULES

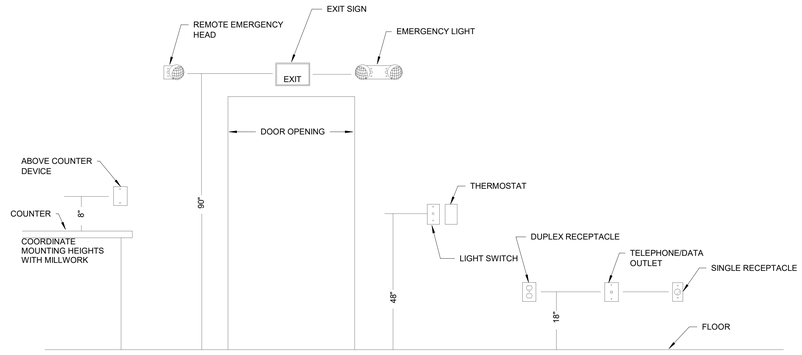


3 TYP STRUT INSTALLATION
1" = 1'-0"



NOTES	
1	MAKE-UP BOX
2	ACCESS CONTROL COMPOSITE CABLE
3	REX CABLE 22/4 UNSHIELDED
4	REX MOTION DETECTOR
5	DPS CABLE 22/2 UNSHIELDED
6	DOOR POSITION SWITCH
7	LOCK POWER CABLE 18/2 UNSHIELDED
8	STRIKE LOCK
9	CARD READER CABLE 22/6 SHIELDED WITH DRAIN
10	CARD READER

2 DOOR TYPICAL- SINGLE DOOR WITH STRIKE LOCK
NTS



1 TYPICAL MOUNTING HEIGHT
12" = 1'-0"

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LICENSED PROFESSIONAL ENGINEER
Robert Brandon Pinkerton
23042
OKLAHOMA
(NOT VALID UNLESS SIGNED)
12/06/2019

CONSULTANT LOGO:

HP ENGINEERING
PROJECT NO. 18068R
100 % COMPLETE

HP ENGINEERING INC.
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CLIENT:

TRIBAL SEAL OF THE CHEROKEE NATION
SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:

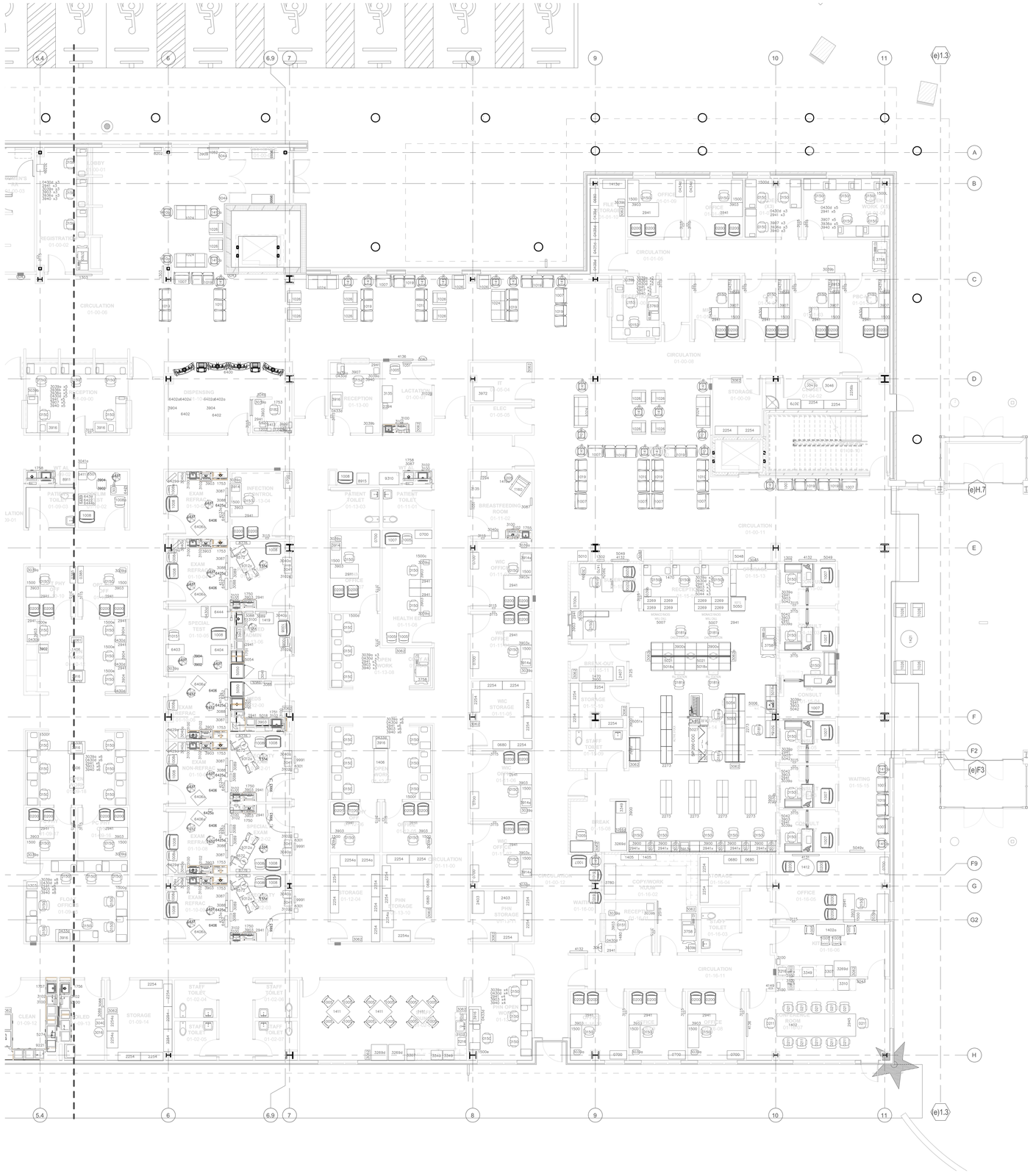
PROJECT PHASE:
BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-06-19	18-01.01

SHEET NUMBER:
E3.05

ELECTRICAL DETAILS



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CONSULTANT LOGO:

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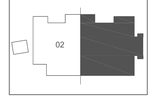
CLIENT:

THE CHEROKEE NATION FIRST CAPITAL SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE:	JOB NUMBER:
12-6-2019	18-01.01

SHEET NUMBER:

EQ1.11

EQUIPMENT PLAN
LEVEL 01
SECTOR 01

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PROFESSIONAL SEAL:

CONSULTANT LOGO:

Interior Logistics

CLIENT:

WILMA P. MANKILLER HEALTH CENTER
EXPANSION
STILWELL, OKLAHOMA

KEY PLAN:

PROJECT PHASE:
BID PACKAGE 02

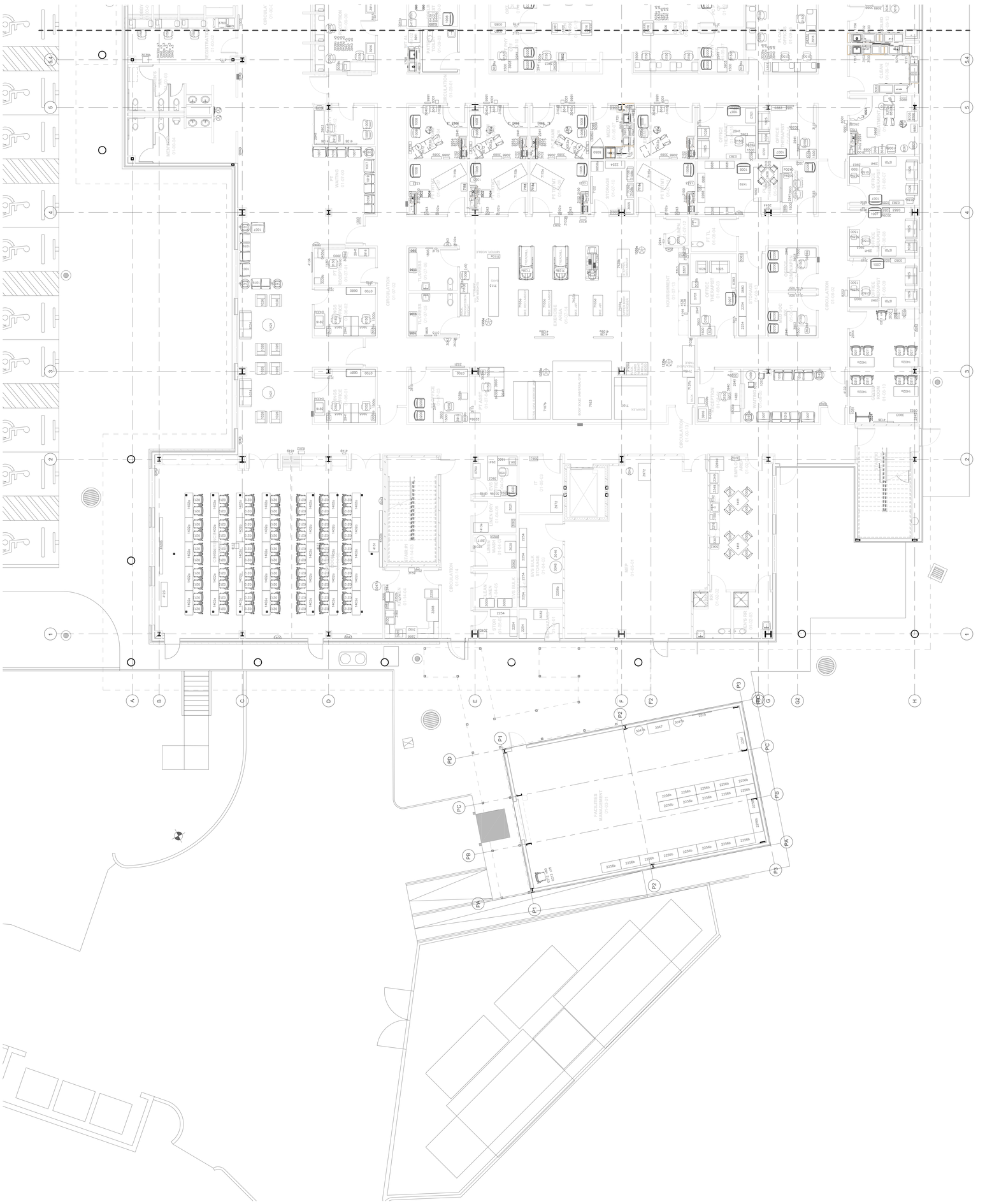
#	DATE	DESCRIPTION

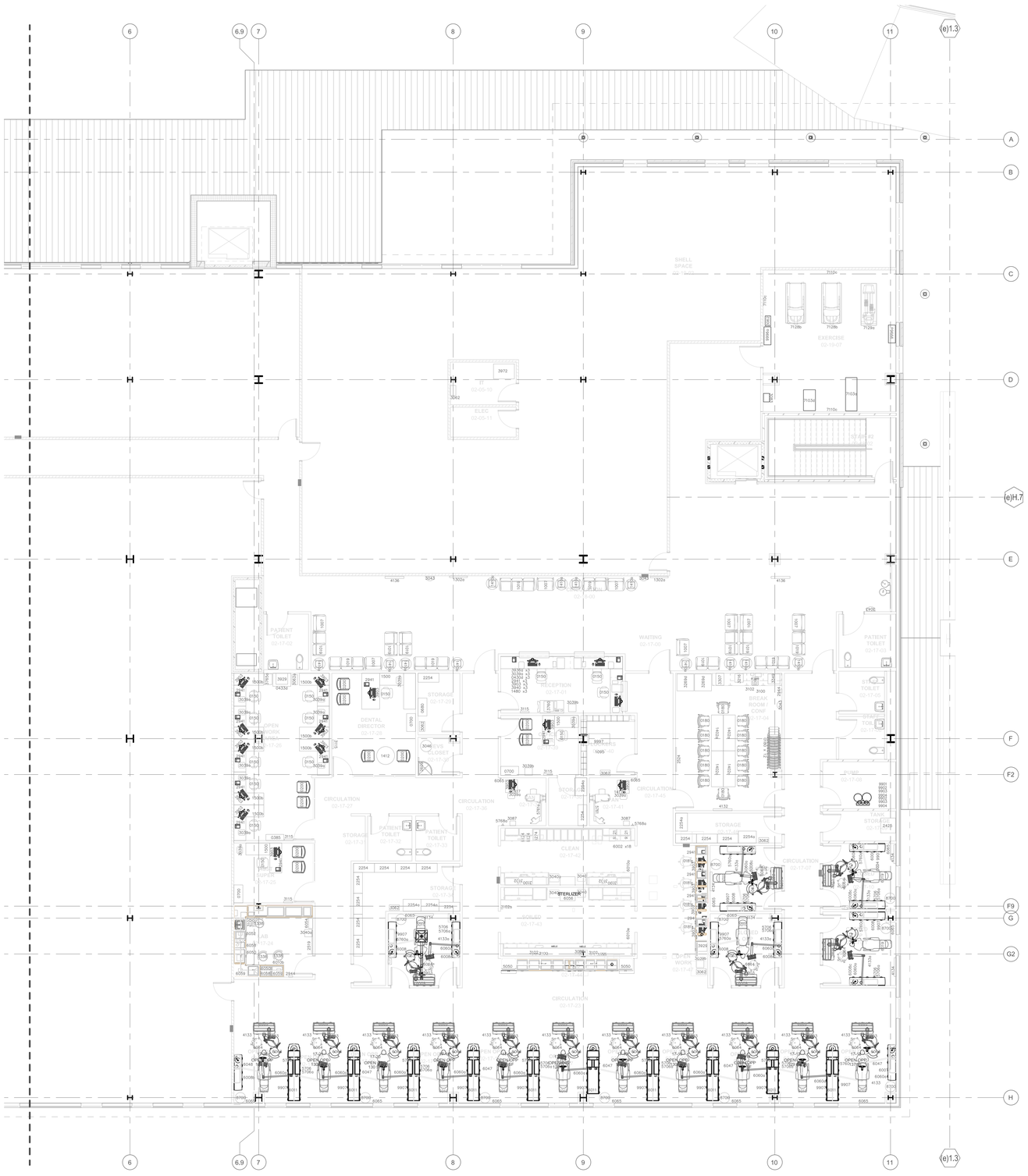
REVISIONS

DATE: 12-6-2019
JOB NUMBER: 18-01.01

SHEET NUMBER: EQ1.12

EQUIPMENT PLAN
LEVEL 01
SECTOR 02





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CONSULTANT LOGO:

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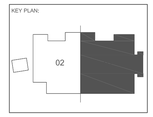
CLIENT:

THE CHEROKEE NATION TRIBE OF OKLAHOMA SEPT. 6, 1839

WILMA P. MANKILLER HEALTH CENTER EXPANSION

STILWELL, OKLAHOMA

KEY PLAN:



PROJECT PHASE:

BID PACKAGE 02

REVISIONS		
#	DATE	DESCRIPTION

DATE: 12-6-2019

JOB NUMBER: 18-01.01

SHEET NUMBER:

EQ1.21

EQUIPMENT PLAN
LEVEL 02
SECTOR 01