

GENERAL NOTES:

- 1. ALL IMPROVEMENTS SHALL BE IN STRICT ACCORDANCE WITH THE CITY OF ADA, OKLAHOMA STANDARDS AND SPECIFICATIONS...
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO SECURE ALL PERMITS AND PROVIDE ALL BONDS REQUIRED FOR THIS WORK INCLUDING, BUT NOT LIMITED TO, UTILITY CONNECTIONS, BUILDING AND SITE CONSTRUCTION...
3. THE CONTRACTOR SHALL NOT START THE WORK UNTIL ALL PERMITS HAVE BEEN OBTAINED FROM THE JURISDICTIONAL AUTHORITIES...
4. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY THE CITY OF ADA, UTILITY SERVICE COMPANIES AND/OR ANY OTHER AUTHORITIES HAVING JURISDICTION SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND FINAL CONNECTION OF SERVICES...
5. ALL WASTE OR SPOIL SHALL BE TAKEN TO A CITY APPROVED SITE OR SPREAD IN AREAS OUTSIDE OF THE STREET RIGHTS-OF-WAY AS DIRECTED BY THE OWNER AND ENGINEER...
6. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE TO EXISTING PROPERTY, UTILITIES AND STRUCTURES OUTSIDE THE SCOPE OF WORK AND REPAIR SAME AT HIS OWN EXPENSE...
7. CONTRACTOR AND ALL RELATED CONSTRUCTION ACTIVITIES AREA REQUIRED TO MAINTAIN NORMAL NOISE LEVELS AND ALL EQUIPMENTS AND VEHICLES ARE REQUIRED TO BE PROPERLY MUFFLED...
8. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURFACE AND UNDERGROUND FACILITIES DURING ALL PHASES OF WORK...
9. UNDERGROUND FACILITIES, WHETHER INDICATED OR NOT, SHALL BE LOCATED AND FLAGGED BY THE UTILITIES AT THE REQUEST OF THE CONTRACTOR...
10. THE CONTRACTOR SHALL REPAIR, AT HIS EXPENSE, ANY DAMAGES TO EXISTING LOCATED FACILITIES CAUSED DIRECTLY OR INDIRECTLY BY HIS OPERATION...
11. BEFORE PROCEEDING, THE CONTRACTOR SHALL SATISFY HIMSELF THAT A CONFLICT DOES NOT EXIST AND THAT THE UNDERGROUND WORK CAN BE PERFORMED AS SHOWN ON THE PLANS...
12. THE CONTRACTOR IS TO VERIFY FIELD CONDITIONS AND NOTIFY OWNER AND ENGINEER OF ANY DISCREPANCIES PRIOR TO START OF WORK...
13. THE CONTRACTOR SHALL NOTIFY ALL ADJACENT PROPERTY OWNERS 48 HOURS PRIOR TO STARTING ANY WORK WHICH WILL AFFECT THEIR ACCESS...
14. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY BARRICADES, WORKING SIGNS, LIGHTS, FLASHERS AND FLAG PERSONS AS REQUIRED BY THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES"...
15. ALL DEBRIS AND SOILS, DERIVED FROM THE CONTRACTOR'S OPERATIONS, FOUND IN THE PUBLIC RIGHT-OF-WAY OR CAUSING NUISANCE TO OPERATIONS, SHALL BE CLEANED AND REMOVED ON A DAILY BASIS...
16. THE CONTRACTOR SHALL SATISFACTORILY CLEAN THE AREA OF ALL RUBBISH, EXCESS MATERIAL, MUD AND DEBRIS AND ALL PARTS OF THE WORK AREA SHALL BE LEFT IN A NEAT AND PRESENTABLE CONDITION...
17. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY, COUNTY, STATE AND FEDERAL REGULATIONS, CODES AND O.S.H.A. STANDARDS...
18. EXISTING INFORMATION SHOWN ON THIS PLAN IS REPRESENTED BASED ON SURVEY COMPLETED BY OLSSON, INC. (405) 242-6600...
19. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL BUILT ELEMENTS, INCLUDING BUT NOT LIMITED TO SIDEWALKS, PARKING SPACES AND ACCESS RAMPS COMPLY WITH THE CITY OF ADA ADA STANDARD REQUIREMENTS...
20. CONSTRUCTION ACTIVITIES THAT RESULT IN LAND DISTURBANCE OF EQUAL TO OR GREATER THAN ONE ACRE, OR LESS THAN ONE (1) ACRE IF THEY ARE PART OF A LARGER COMMON PLAN OF DEVELOPMENT OR SALE THAT TOTALS AT LEAST ONE (1) ACRE MUST ALSO OBTAIN A PERMIT FROM ODEQ (FORM 606-002A) (NOI) FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY...
21. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL BOUNDARY CORNERS AND SECTION CORNERS. ANY BOUNDARY CORNER AND/OR SECTION CORNER DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE RESET BY A LAND SURVEYOR LICENSED IN THE STATE OF OKLAHOMA...
22. ALL ELEVATIONS SHOWN ON THE CONSTRUCTION DOCUMENTS ARE BASED UPON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), HORIZONTAL DATUM NAD 83, OKLAHOMA STATE PLANE NORTH - US FOOT, UNLESS OTHERWISE NOTED...
23. CONTRACTOR TO COORDINATE CONSTRUCTION ACTIVITY WITH ANY ADJACENT PROJECTS AND NOTIFY OWNER AND ENGINEER OF DISCREPANCIES BETWEEN THESE PLANS AND WORK NECESSARY...
24. PRIOR TO CONSTRUCTION, CONTRACTOR MUST CONTACT CITY OF ADA PUBLIC WORKS DEPARTMENT TO SUBMIT A TRAFFIC CONTROL PLAN FOR APPROVAL

DEMOLITION NOTES:

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A DEMOLITION PERMIT FROM THE CITY PRIOR TO STARTING DEMOLITION ACTIVITIES...
2. THE CONTRACTOR SHALL CONFORM WITH ALL APPLICABLE CODES (LOCAL, STATE AND FEDERAL) FOR DEMOLITION, DUST CONTROL, EROSION CONTROL AND DISPOSAL OF DEMOLITION MATERIAL AND DEBRIS...
3. EXISTING UNDERGROUND LINES HAVE BEEN SHOWN TO THE EXTENT KNOWN. THE EXACT LOCATIONS AND NOTIFICATIONS OF THE PROPERTY AGENCY IS THE RESPONSIBILITY OF THE CONTRACTOR PRIOR TO ANY EXCAVATION...
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, PAVEMENT AND OTHER IMPROVEMENTS NOT SCHEDULED FOR REMOVAL...
5. THE CONTRACTOR SHALL PROPERLY DISPOSE OF ALL UNSUITABLE MATERIALS AND DEBRIS ENCOUNTERED OR GENERATED BY THE REMOVAL OPERATIONS...
6. STORM WATER POLLUTION PREVENTION PLAN BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED PRIOR TO ANY REMOVALS...
7. CONTRACTOR SHALL FULL DEPTH SAW CUT WITH A DIAMOND EDGE SAW BLADE ALL LOCATIONS WHERE PAVEMENT TO BE REMOVED ABUTS PAVEMENT TO REMAIN...
8. ALL DEBRIS RESULTING FROM CONSTRUCTION OPERATIONS SHALL BE HAULED OFF-SITE AND PROPERTY DISPOSED OF. THE OWNER SHALL HAVE FIRST RIGHTS TO ANY MATERIALS THAT HE DEEMS SALVAGEABLE...

SITE LAYOUT NOTES:

- 1. ALL DIMENSIONS ARE TO THE FACE OF CURB OR EDGE OF PAVEMENT, AND ALL BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF WALL, UNLESS OTHERWISE NOTED...
2. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS...
3. ALL PAVING MATERIALS & CONSTRUCTIONS METHODS SHALL BE IN ACCORDANCE WITH CITY OF ADA STANDARD DRAWINGS AND SPECIFICATIONS...
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THE ACCURACY AND LOCATION OF SITE BOUNDARY AND DIMENSIONS...
5. A DIAMOND EDGE SAW BLADE SHALL BE USED FOR CUTTING ALL REQUIRED CONSTRUCTION AND LONGITUDINAL PAVEMENT JOINTS...
6. CONTRACTOR SHALL BE RESPONSIBLE FOR LAYOUT OF CONCRETE PAVEMENT JOINTING, SPACING OF JOINTS, LOCATION OF EXPANSION JOINTS, CONTROL JOINTS AND CONSTRUCTION JOINTS...
7. THE PORTLAND CEMENT CONCRETE FOR PAVEMENT SHALL BE IN ACCORDANCE WITH THE CITY OF ADA STANDARD SPECIFICATIONS...
8. CONCRETE FOR INLETS, CURB AND GUTTER, SIDEWALKS AND MANHOLES SHALL BE IN ACCORDANCE WITH THE CITY OF ADA STANDARD SPECIFICATIONS...
9. PAVEMENT JOINTS SHALL BE IN ACCORDANCE WITH ODOT STANDARD SPECIFICATIONS USING MATERIAL CONFORMING TO ASTM DESIGNATION 1190...

GRADING NOTES:

- 1. NEW CONTOURS DENOTE TOP OF FINISHED PAVING OR GRADED AREA AS INDICATED. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE, UNLESS NOTED OTHERWISE...
2. NOTIFY ENGINEER IF EXISTING GROUND CONDITIONS VARY FROM THOSE SHOWN ON PLANS...
3. PROVIDE POSITIVE DRAINAGE AT ALL TIMES WITHIN THE CONSTRUCTION AREAS...
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DEWATER AND STABILIZE ANY SOFT SOILS AS NEEDED TO REACH OPTIMUM SOIL CONDITIONS...
5. ALL DISTURBED AREAS SHALL BE SODDED. CONTRACTOR SHALL BE RESPONSIBLE FOR SODDED AREAS UNTIL GROWTH IS ESTABLISHED...
6. BUILDING SITES ARE SHOWN FOR GRADING INFORMATION ONLY...
7. TOPSOIL SHALL BE STRIPPED, STOCKPILED ON-SITE AND SPREAD AFTER GRADING OPERATIONS...
8. CONTRACTOR SHALL PROVIDE WATER AS REQUIRED TO OBTAIN SPECIFIED COMPACTION...
9. DENSITY TESTING WILL BE PROVIDED BY THE CONTRACTOR...
10. THE EARTHWORK CONTRACTOR IS ULTIMATELY RESPONSIBLE TO IMPORT OR EXPORT MATERIAL AS NECESSARY TO ACHIEVE THE GRADES SHOWN...
11. OFF-SITE BORROW SOILS SHALL BE EVALUATED AND APPROVED BY THE OWNER PRIOR TO USE ON THE SITE...

GRADING NOTES:

- 12. ALL DIMENSIONS OR ELEVATIONS MARKED TO MATCH EXISTING SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION...
13. THE CONTRACTOR IS RESPONSIBLE TO ENSURE ALL EXCAVATIONS ARE MADE IN ACCORDANCE WITH CURRENT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) CONSTRUCTION STANDARDS...
14. ALL COMPACTION FOR EARTHWORK OPERATIONS AND SUBGRADE PREPARATION FOR PAVEMENT, DRIVEWAY AND SIDEWALK CONSTRUCTION SHALL CONFORM TO THE GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT...
15. SUITABLE FILL MATERIALS SHALL BE FREE OF ORGANIC OR OTHER DELETERIOUS MATERIALS AND SHALL HAVE A MAXIMUM PARTICLE SIZE LESS THAN 2 INCHES...
16. WHEN RUBBLE IS ENCOUNTERED, IT SHALL BE OVER-EXCAVATED AND REMOVED, AND LAWFULLY DISPOSED OF...

UTILITY NOTES:

- 1. THE FOLLOWING IS A MINIMUM DEPTH OF COVER OVER THE UTILITY PIPES...
2. EXISTING UTILITIES SHOWN ON THESE PLANS ARE NOT GUARANTEED...
3. THE CONTRACTOR SHALL COMPLY WITH CURRENT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) CONSTRUCTION STANDARDS...
4. THE CONTRACTOR SHALL COORDINATE WITH THE CITY FOR INSPECTION OF PRIVATE WATER AND SEWER CONNECTION...
5. CONTRACTOR TO COORDINATE THE INSTALLATION OF UTILITY SERVICES WITH UTILITY COMPANIES BEFORE THE INSTALLATION OF PAVEMENT...
6. THE CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING THE NECESSARY APPROVALS, PERMITS AND INSPECTIONS...
7. THE UTILITY CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF EXCESS TRENCHING MATERIAL FROM THE SITE...
8. CONTRACTOR SHALL COORDINATE AND PROVIDE ALL STAKING NECESSARY TO INSTALL CONDUITS SUFFICIENT FOR UTILITY AND IRRIGATION SERVICES...
9. CONTRACTOR SHALL NOTIFY APPROPRIATE UTILITY COMPANIES TO COORDINATE CONNECTIONS AND RELOCATIONS...
10. ALL VALVES, FITTINGS, AND WATER LINE DISINFECTION SHALL CONFIRM THE CITY OF ADA STANDARD SPECIFICATIONS...
11. TRENCH BACKFILL SHALL BE FREE OF BRICK, STONE OR CONCRETE RUBBLE...
12. THE TRENCHES SHALL BE KEPT FREE OF WATER AT ALL TIMES...
13. ALL STORM, SANITARY, AND WATER UTILITIES SHALL BE CONSTRUCTED AND TESTED PER THE CITY OF ADA STANDARD SPECIFICATIONS...
14. PRIVATE HIGH DENSITY POLYETHYLENE PIPE (HDPE) FOR STORM SEWERS SHALL COMPLY WITH THE FOLLOWING:
- AASHTO M294 TYPE S CORRUGATED EXTERIOR AND SMOOTH INTERIOR
- MINIMUM PIPE STIFFNESS AT 5% DEFLECTION ACCORDING TO ASTM D2142
- ASTM D3350 MINIMUM RESIN CELL CLASSIFICATION 335420C
- INTEGRAL BELL AND SPIGOT JOINTS WITH ELASTOMERIC SEALS
- MINIMUM 5% DEFLECTION OF THE AVERAGE INSIDE DIAMETER BY TESTING AFTER INSTALLATION
15. POLYVINYL CHLORIDE (PVC) FOR STORM SEWERS SHALL COMPLY WITH THE FOLLOWING:
- TYPES OF PIPES: A. CORRUGATED EXTERIOR, SMOOTH INTERIOR: ASTM F949; B. SOLID WALL: ASTM D3034 OR ASTM F679; C. CLOSED PROFILE: ASTM F1803; D. COMPOSITE: ASTM D2680
- PVC PLASTIC MEETING ASTM D1784, CELL CLASSIFICATION 12454
- MINIMUM PIPE STIFFNESS OF 46 PSI
- INTEGRAL BELL AND SPIGOT JOINTS WITH ELASTOMETRIC SEALS
16. POLYVINYL CHLORIDE (PVC) CONDUIT SHALL COMPLY WITH THE FOLLOWING:
- PIPE MATERIAL: SCHEDULE 40 CONDUIT IN ACCORDANCE WITH UL-651
- SOLVENT CEMENT TO JOIN CONDUIT: ASTM D 2564
17. ALL PRIVATE WATER SERVICE MAINS AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 24 (IFC 507.2.1)

EROSION CONTROL NOTES:

- 1. ALL PERIMETER EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE EXECUTION OF ANY DEMOLITION OR GRADING WORK...
2. THE CONSTRUCTION ENTRANCE SHALL BE THE FIRST CONSTRUCTION WORK ON THE PROJECT...
3. THE CONTRACTOR SHALL CONSTRUCT AS A MINIMUM ONE STABILIZED CONSTRUCTION ENTRANCE...
4. UNDERGROUND UTILITIES - SEDIMENT BARRIERS WILL BE UTILIZED AS REQUIRED TO BOUND THE DOWN SLOPE SIDE OF UTILITY CONSTRUCTION...
5. FINAL GRADING - SEDIMENT BARRIERS WILL BE MAINTAINED DOWN SLOPE FROM DISTURBED SOIL DURING THIS OPERATION...
6. SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE REMOVED FOLLOWING CONSTRUCTION OR UPON PERMANENT STABILIZATION...
7. THE ACTUAL SCHEDULE FOR IMPLANTING POLLUTANT CONTROL MEASURES WILL BE DETERMINED BY PROJECT CONSTRUCTION PROGRESS...
8. SEDIMENT FILTER, SILT FENCE AND STABILIZED CONSTRUCTION ENTRANCES SHALL BE CONSTRUCTED PER LOCAL JURISDICTIONAL REQUIREMENTS...
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION & SEDIMENT CONTROL MEASURES AND PRACTICES THROUGHOUT THE PROJECT...
10. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES...
11. SEDIMENT FILTERS AND SEDIMENT FENCES SHALL BE INSPECTED AND MAINTAINED NO LESS THAN WEEKLY OR WITHIN 24 HOURS OF A RAINFALL EVENT...
12. SEDIMENT COLLECTED BEHIND THE SEDIMENT FILTERS AND SILT FENCES SHALL BE REMOVED WHEN SEDIMENT REACHES ONE THIRD THE HEIGHT OF THE BARRIER...
13. THE CONTRACTOR SHALL PROVIDE ANY FURTHER EROSION CONTROL MEASURES IN ADDITION TO THOSE LISTED TO ENSURE THAT SILT WILL NOT LEAVE THE PROJECT CONFINES...
14. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION...
15. THE CONTRACTOR SHALL ENSURE THAT ALL DRAINAGE STRUCTURES, FLUMES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE...
16. ALL EROSION CONTROL DEVICES SHALL CONFORM TO THE APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS AND DESIGN CRITERIA...
17. AT ANY TIME DURING CONSTRUCTION THE CITY ENGINEER MAY REQUIRE ADDITIONAL EROSION/SILTATION CONTROL MEASURES...
18. CONTRACTOR IS RESPONSIBLE FOR THE PHASING, MOVING, ADDING, REMOVING, AND REPLACING OF SILT FENCE AND ANY SAFETY FENCE...
19. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A WALKABLE SIDEWALK FREE OF SEDIMENT AND DEBRIS DURING CONSTRUCTION

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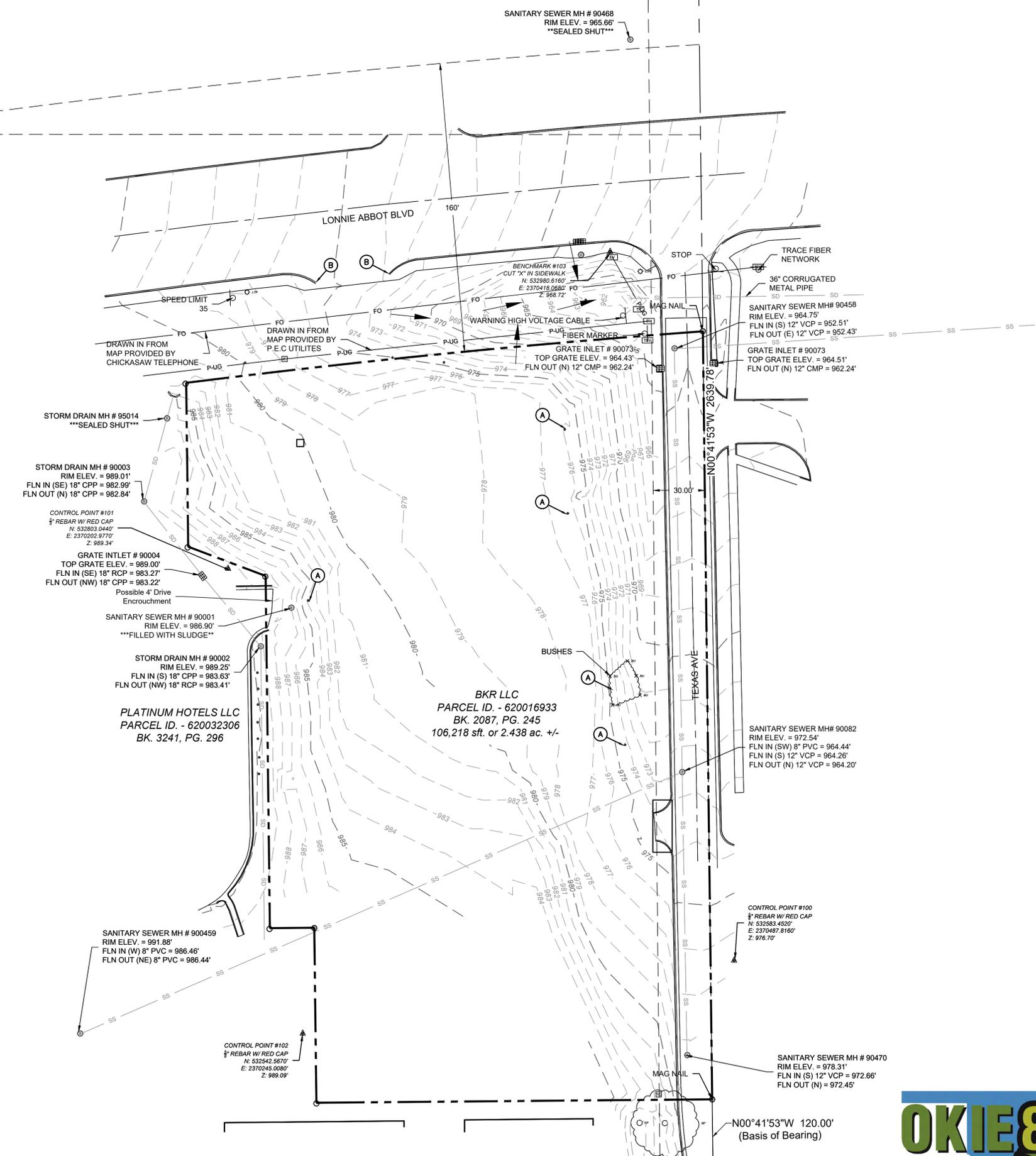
olsson logo, address: 11600 Broadway Extension Suite 300 Oklahoma City, OK 73114, phone: 405.242.6600, website: olsson.com, professional engineer seal for Scott C. Darr, Oklahoma State No. 29208, revision table with columns for REV. NO., DATE, REVISIONS DESCRIPTION, and REVISIONS, project name: SW CORNER OF LONNIE ABBOT BLVD AND N TEXAS AVE, location: ADA, OK, sheet number: SHEET C0.1



-CAUTION-

THE LOCATION OF UNDERGROUND UTILITIES DEPICTED ON THESE DRAWINGS ARE BASED ON VISUAL SURFACE EVIDENCE AND/OR AS-BUILT DRAWINGS PROVIDED BY OTHERS AND, THEREFORE, MAY NOT REPRESENT ALL UTILITIES PRESENT OR THEIR ACTUAL LOCATIONS. IT IS THE CONTRACTORS RESPONSIBILITY FOR COORDINATING WITH INDIVIDUAL UTILITY OWNERS TO ASCERTAIN THE EXACT LOCATION OF EXISTING UTILITIES AT SPECIFIC POINTS OF CONNECTION AND FOR NOTIFYING AHH PRIOR TO ANY EXCAVATION ON SITE.

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LEGEND

- # B-II EXCEPTION
 - △ CONTROL POINT
 - DECIDUOUS TREE
 - ELECTRIC BOX
 - EV ELECTRIC VAULT
 - FOUND MONUMENT (SEE DESCRIPTION)
 - ▣ GRATE INLET
 - ⊙ LIGHT POLE
 - ⊙ STORM DRAIN MANHOLE
 - ⊙ SET 3" REBAR W/ OLSSON CA 2483 CAP (UNLESS OTHERWISE NOTED)
 - ⊙ FOUND 3" REBAR W/ CA 2098 CAP (UNLESS OTHERWISE NOTED)
 - SIGN
 - ⊙ SANITARY SEWER MANHOLE
 - TP TELEPHONE PEDESTAL
 - TEV TELEPHONE VAULT
 - BOUNDARY LINE
 - STATUTORY R/W LINE
 - EASEMENT LINE
 - FO FIBER OPTIC LINE
 - P-UG UNDERGROUND ELECTRIC
 - SS SANITARY SEWER LINE
 - SD STORM DRAIN LINE
 - ROADWAY CENTERLINE
-
- (A) REMOVE EXISTING TREES AND BUSHES
 - (B) REMOVE EXISTING CURB AND GUTTER
 - (B) REMOVE & REPLACE FOR WATERLINE INSTALLATION
 - FLOW DIRECTION ARROW

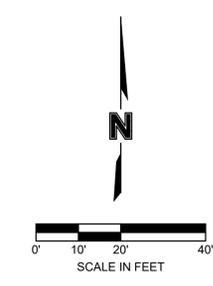


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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

EXISTING CONDITIONS & DEMOLITION PLAN
 BRAKES PLUS
 SW CORNER OF LONNIE ABBOT BLVD AND N TEXAS AVE
 ADA, OK
 2024

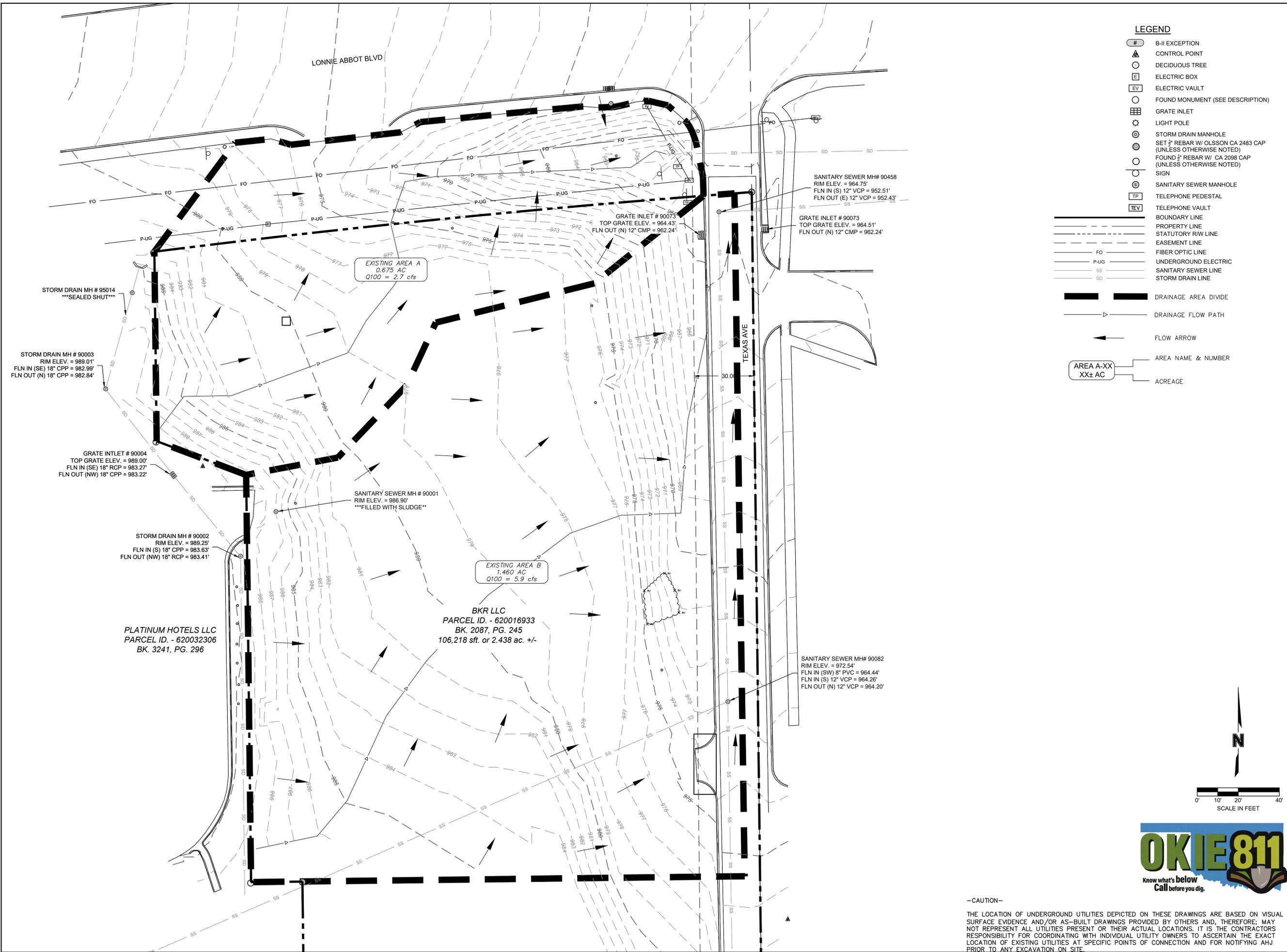


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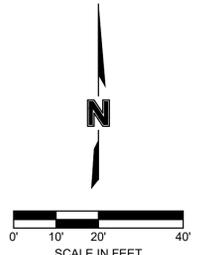
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- P-UG UNDERGROUND ELECTRIC
- SS SANITARY SEWER LINE
- SD STORM DRAIN LINE
- DRAINAGE AREA DIVIDE
- ▷ DRAINAGE FLOW PATH
- ← FLOW ARROW
- AREA A-XX
XX± AC AREA NAME & NUMBER
- XX± AC ACREAGE



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EXISTING DRAINAGE AREA

BRAKES PLUS

SW CORNER OF LONNIE ABBOT BLVD AND N TEXAS AVE

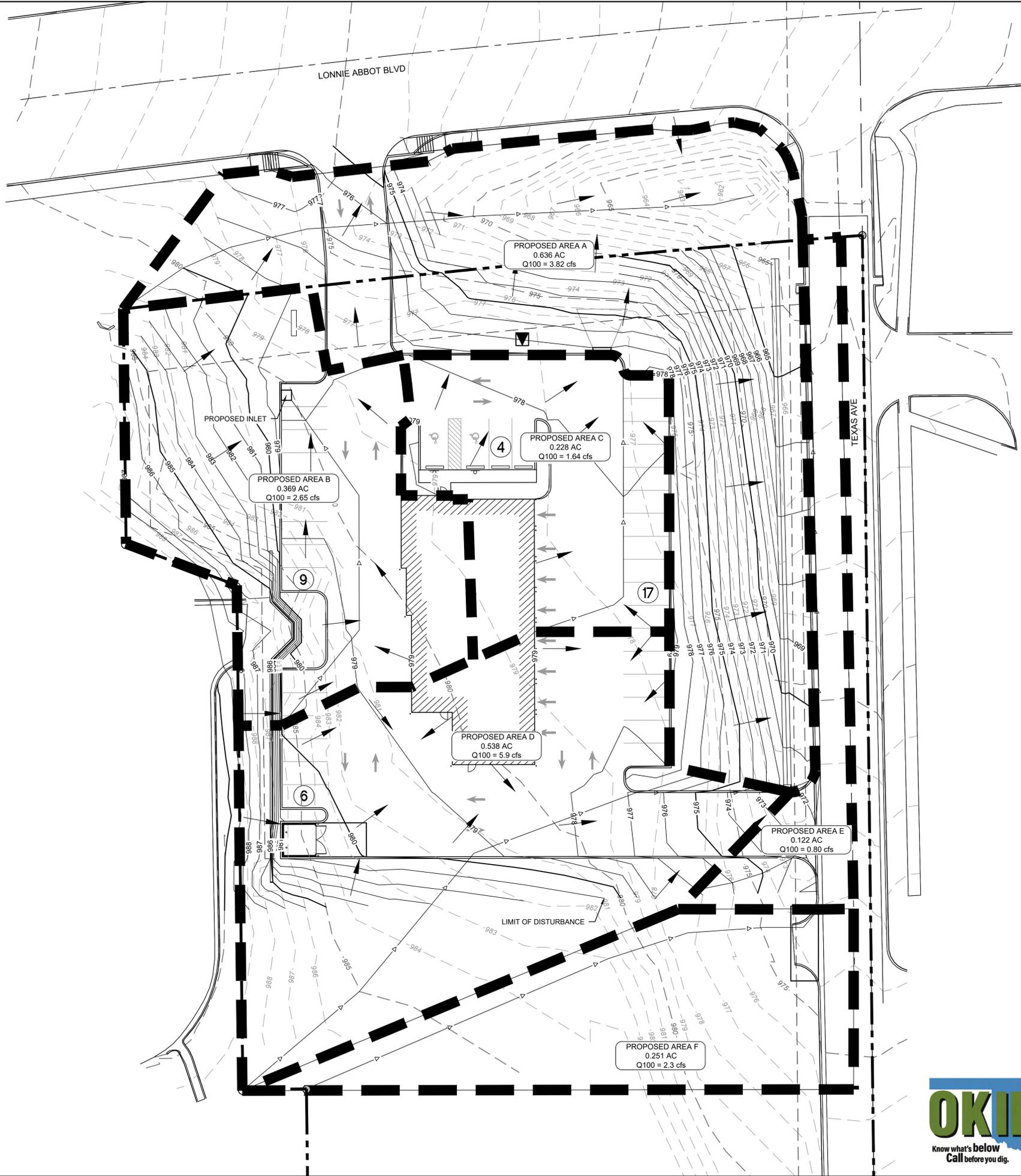
ADA, OK

2024

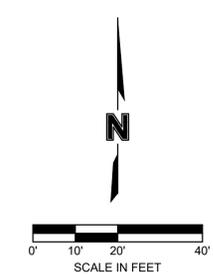
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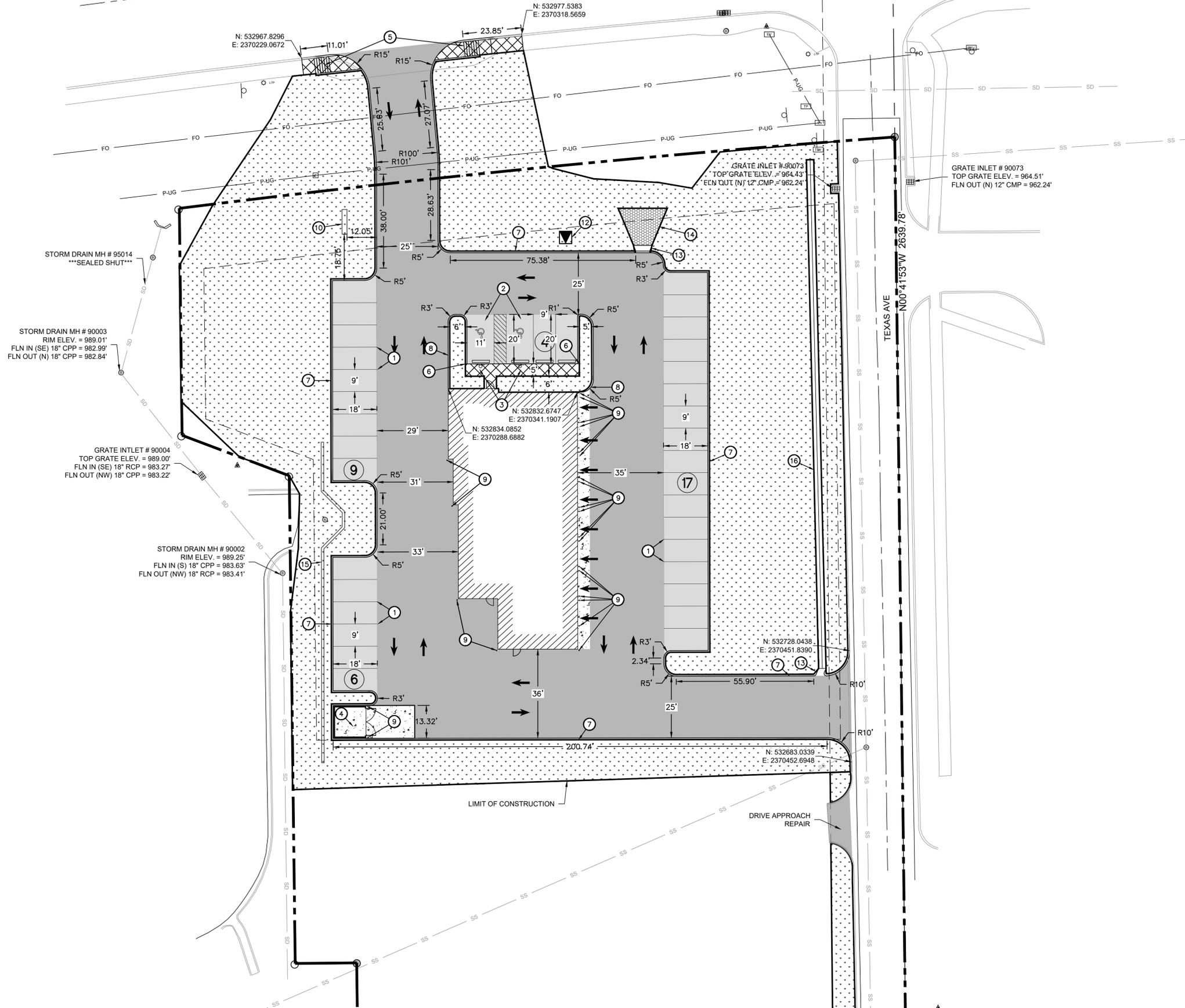
PROPOSED DRAINAGE AREA
 BRAKES PLUS
 SW CORNER OF LONNIE ABBOT BLVD AND N TEXAS AVE

2024
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PAVING LEGEND

- PARKING STALL COUNT
- PROPERTY LINE
- PROPOSED BUILDING OUTLINE
- INTEGRAL 6" PCC CURB (REF DETAIL, SHEET C4.0)
- PROPOSED SIDEWALK PCC PAVEMENT (REF DETAIL, SHEET C4.1)
- PROPOSED DRIVE AISLE PCC PAVEMENT (REF DETAIL, SHEET C4.1)
- PROPOSED PARKING STALL PCC PAVEMENT (REF DETAIL, SHEET C4.1)
- PROPOSED HEAVY DUTY PCC PAVEMENT (REF DETAIL, SHEET C4.1)
- PROPOSED RIP RAP (REF DETAIL, SHEET C4.1)
- PROPOSED SOD GRASS

SITE PLAN KEYNOTES

- 1 PROPOSED WHITE PAVEMENT STRIPING, TYP. (CONFORM TO LATEST MUTCD VERSION STANDARDS AND SPECIFICATIONS)
- 2 PROPOSED ADA PAVEMENT MARKING (REF DETAIL SHEET C4.0)
- 3 PROPOSED ADA SIGNAGE (REF DETAIL SHEET C4.0)
- 4 PROPOSED TRASH ENCLOSURE (REF ARCHITECTURAL PLANS)
- 5 PROPOSED PERPENDICULAR ADA RAMP (REF DETAIL SHEET C4.0)
- 6 PROPOSED 6" INTEGRAL SIDEWALK/CURB (REF DETAIL SHEET C4.0)
- 7 PROPOSED 6" INTEGRAL CURB (REF DETAIL SHEET C4.0)
- 8 TRANSITION TO 0" CURB (REF DETAIL SHEET)
- 9 PROPOSED 4" BOLLARD (REF DETAIL SHEET C4.0)
- 10 PROPOSED MONUMENT SIGN. REFERENCE ARCHITECTURAL PLANS FOR SIGN DETAILS. SEPARATE SIGN PERMIT IS REQUIRED.
- 11 PROPOSED LIGHT POLES, REFERENCE ELECTRICAL PLANS BY OTHERS.
- 12 PROPOSED ELECTRICAL, REFERENCE MEP PLANS
- 13 PROPOSED CONCRETE FLUME, REFERENCE DETAIL SHEET C4.1
- 14 PROPOSED RIP RAP
- 15 PROPOSED KEYSTONE BLOCK WALL OR OWNER APPROVED ALTERNATE. REF. MANUFACTURER SPECIFICATIONS AND RECOMMENDATION FOR INSTALLATION.
- 16 PROPOSED CONCRETE SWALE, 206 LF

NOTES:
 ALL DISTURBED AREAS TO BE GRASS, SOD ONLY, NOT SEEDED.
 DRIVEWAY APPROACH(ES) IN PUBLIC R-O-W, MUST MEET CITY OF ADA, OK TYPICAL ROADWAY DETAIL.

PARKING CALCULATIONS
 C-2 GENERAL COMMERCIAL DISTRICT
 1/150 SF PER RETAIL FLOOR SPACE, 32 SPACES MIN.
 1 ACCESSIBLE SPACE REQUIRED (1:25)
 PROVIDED: 34 STANDARD, 2 ACCESSIBLE

N

SCALE IN FEET

—CAUTION—
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11600 Broadway Extension
 Suite 300
 Oklahoma City, OK 73114
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 TEL 405.242.6600
 FAX 405.242.6601
 Olsson - Engineering
 Oklahoma COA #2483

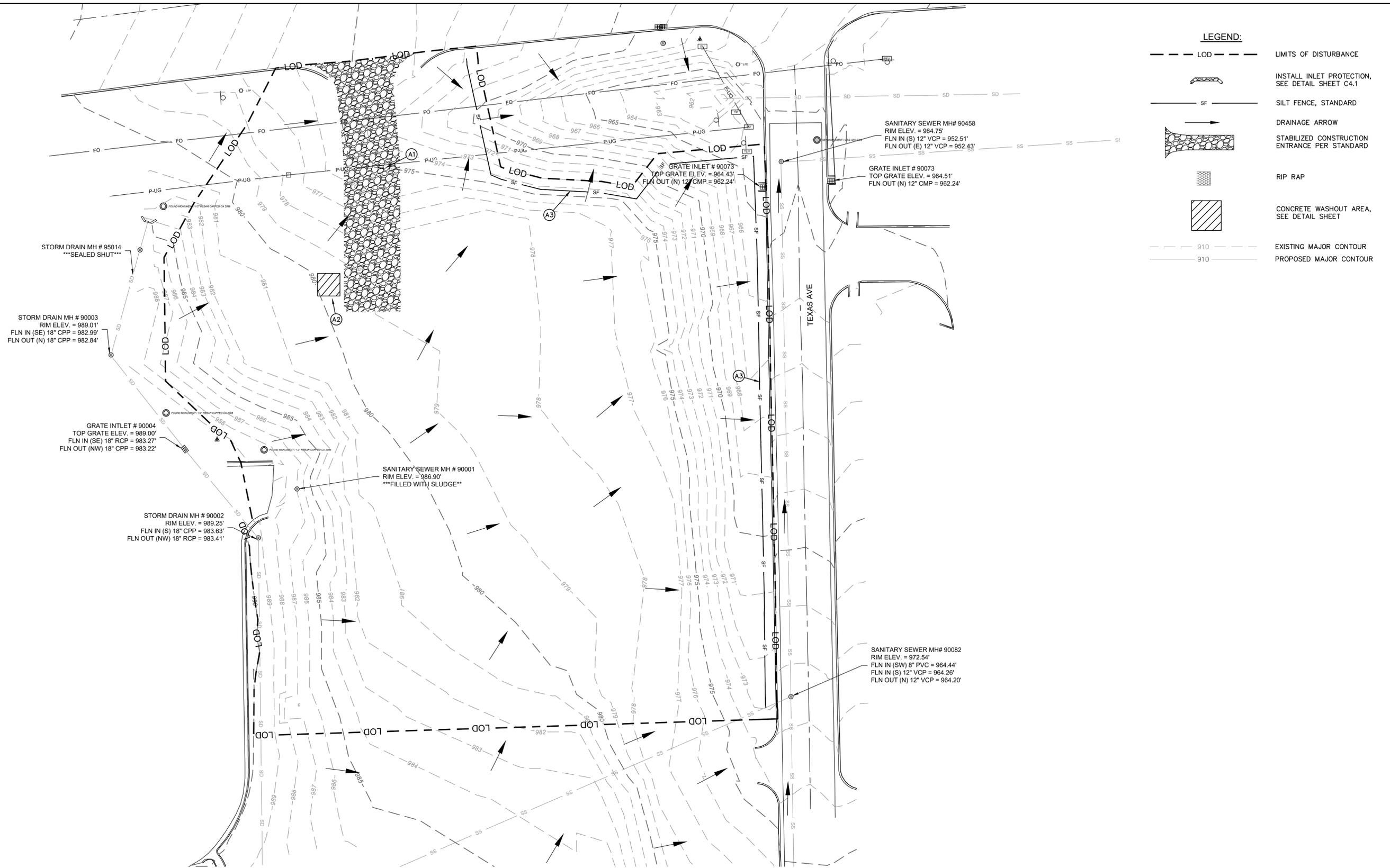


REV. NO.	DATE	REVISIONS DESCRIPTION

BY _____
 DATE _____
 SITE PLAN
 BRAKES PLUS
 SW CORNER OF LONNIE ABBOT BLVD AND N TEXAS AVE
 ADA, OK
 2024

drawn by: _____
 checked by: _____
 QA/QC by: _____
 project no.: 024-02476
 date: 11.04.2024

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 DATE: Nov 01, 2024 3:53pm USER: jgrogoux



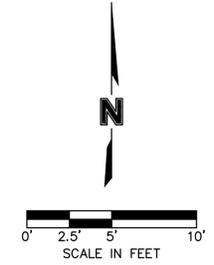
LEGEND:

- LOD LIMITS OF DISTURBANCE
- INSTALL INLET PROTECTION, SEE DETAIL SHEET C4.1
- SF SILT FENCE, STANDARD
- DRAINAGE ARROW
- STABILIZED CONSTRUCTION ENTRANCE PER STANDARD
- RIP RAP
- CONCRETE WASHOUT AREA, SEE DETAIL SHEET
- 910 EXISTING MAJOR CONTOUR
- 910 PROPOSED MAJOR CONTOUR

EROSION CONTROL CHART				
PROJECT STAGE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES
A-PRE CONSTRUCTION	A1	TEMPORARY CONSTRUCTION ENTRANCE	C	INSTALL AS SHOWN PER SUDAS DETAIL 9040.120
	A2	CONCRETE WASHOUT	C	INSTALL AS SHOWN SEE DETAIL SHEET C4.1
	A3	TEMPORARY STAGING/STOCKPILE AREA	B	CONTRACTOR IS TO DESIGNATE THE LOCATION OF THE STAGING AND STOCKPILE AREAS
	A4	SILT FENCE	C	INSTALL AS SHOWN PER SUDAS DETAIL 9040.119
	A5	SITE MASS GRADING	B	GRADE AS INDICATED ON PLANS



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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

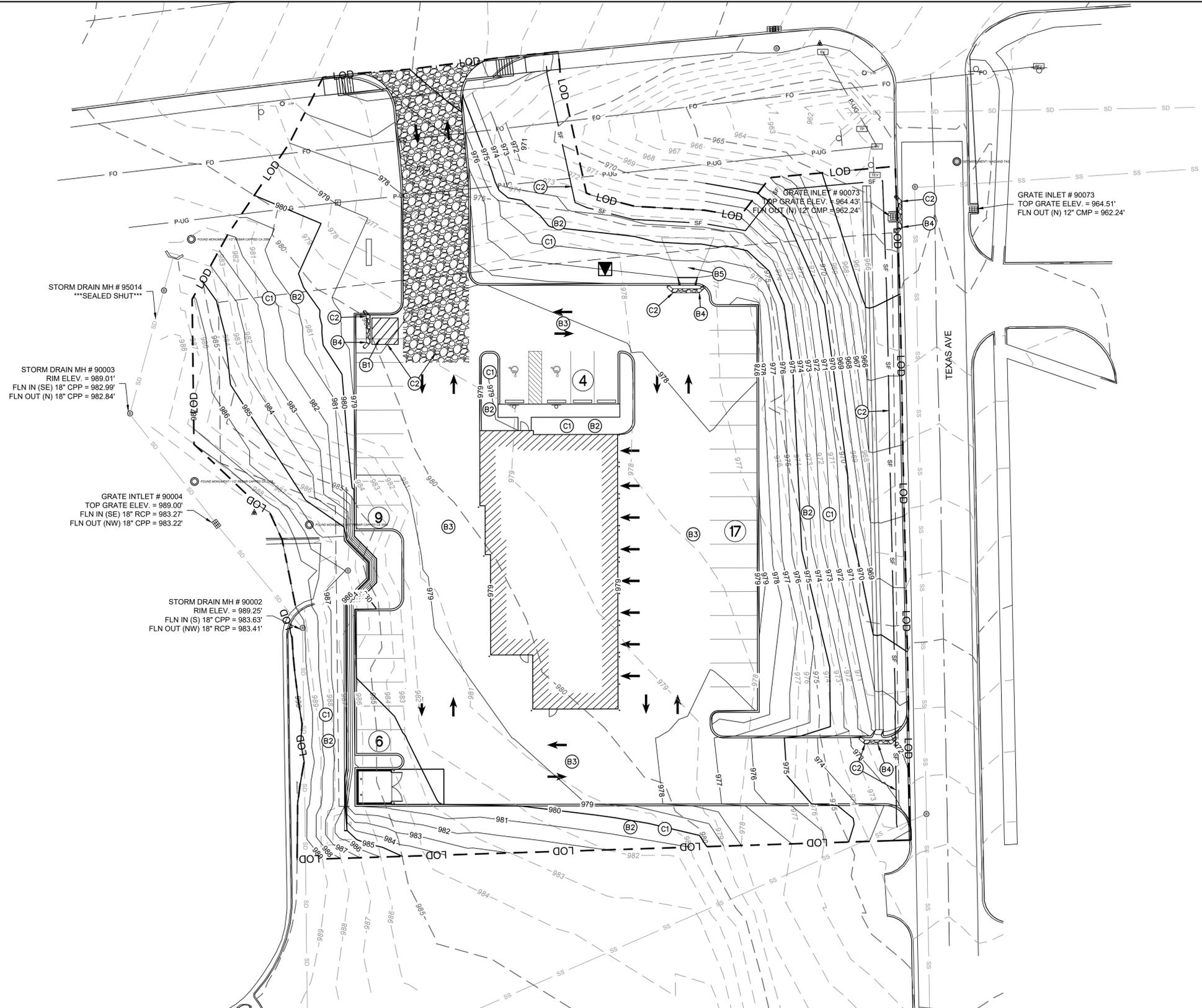
EROSION CONTROL PLAN
 BRAKES PLUS
 SW CORNER OF LONNIE ABBOT BLVD AND N TEXAS AVE
 ADA, OK

2024

drawn by: _____
 checked by: _____
 designed by: _____
 project no.: 024-02476
 date: 11.04.2024

SHEET C2.1

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 DATE: Nov 01, 2024 3:53pm USER: jgrogoux



LEGEND:

- LOD - LIMITS OF DISTURBANCE
- INSTALL INLET PROTECTION, SEE DETAIL SHEET C4.1
- SF - SILT FENCE PER STANDARDS
- DRAINAGE ARROW
- STABILIZED CONSTRUCTION ENTRANCE PER STANDARDS
- RIP RAP
- CONCRETE WASHOUT AREA, SEE DETAIL SHEET
- 910 - EXISTING MAJOR CONTOUR
- 910 - PROPOSED MAJOR CONTOUR

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SCOTT C. DARR
 PROFESSIONAL ENGINEER
 OKLAHOMA
 29208
 7-15-24

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

EROSION CONTROL PLAN

BRAKES PLUS

SW CORNER OF LONNIE ABBOT BLVD AND N TEXAS AVE

ADA, OK

2024

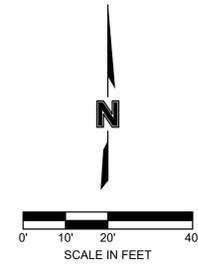
drawn by: _____
 checked by: _____
 designed by: _____
 QA/QC by: _____
 project no.: 024-02476
 date: 11.04.2024

PROJECT STAGE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES
B - CONSTRUCTION	B1	TEMPORARY CONCRETE WASHOUT	B	INSTALL AS INDICATED ON PLANS
	B2	APPLY PERENNIAL SEEDING	N/A	INSTALL AS INDICATED ON LANDSCAPE PLANS
	B3	PAVING	N/A	PAVE AS INDICATED ON SITE PLAN
	B4	TEMPORARY FLUME PROTECTION	B	INSTALL AS INDICATED ON PLANS
	B5	INSTALL RIP RAP	N/A	INSTALL AS INDICATED ON PLANS
C - POST CONSTRUCTION: FINAL STABILIZATION	C1	REPLACE TOPSOIL, MULCH, SOD, LANDSCAPE	N/A	PER LANDSCAPE PLAN
	C2	REMOVAL OF BMPS	N/A	REMOVE ANY TEMPORARY BMPS ON SITE



—CAUTION—

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REV. NO.	DATE	REVISIONS DESCRIPTION

REVISIONS

2024

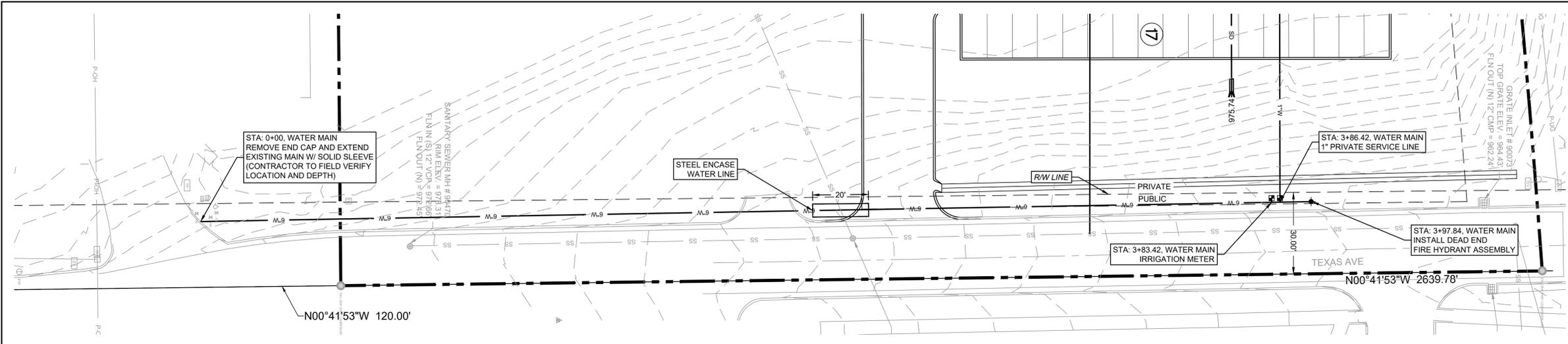
PUBLIC WATER MAIN EXTENSION P+P

BRAKES PLUS
SW CORNER OF LONNIE ABBOT BLVD AND N TEXAS AVE

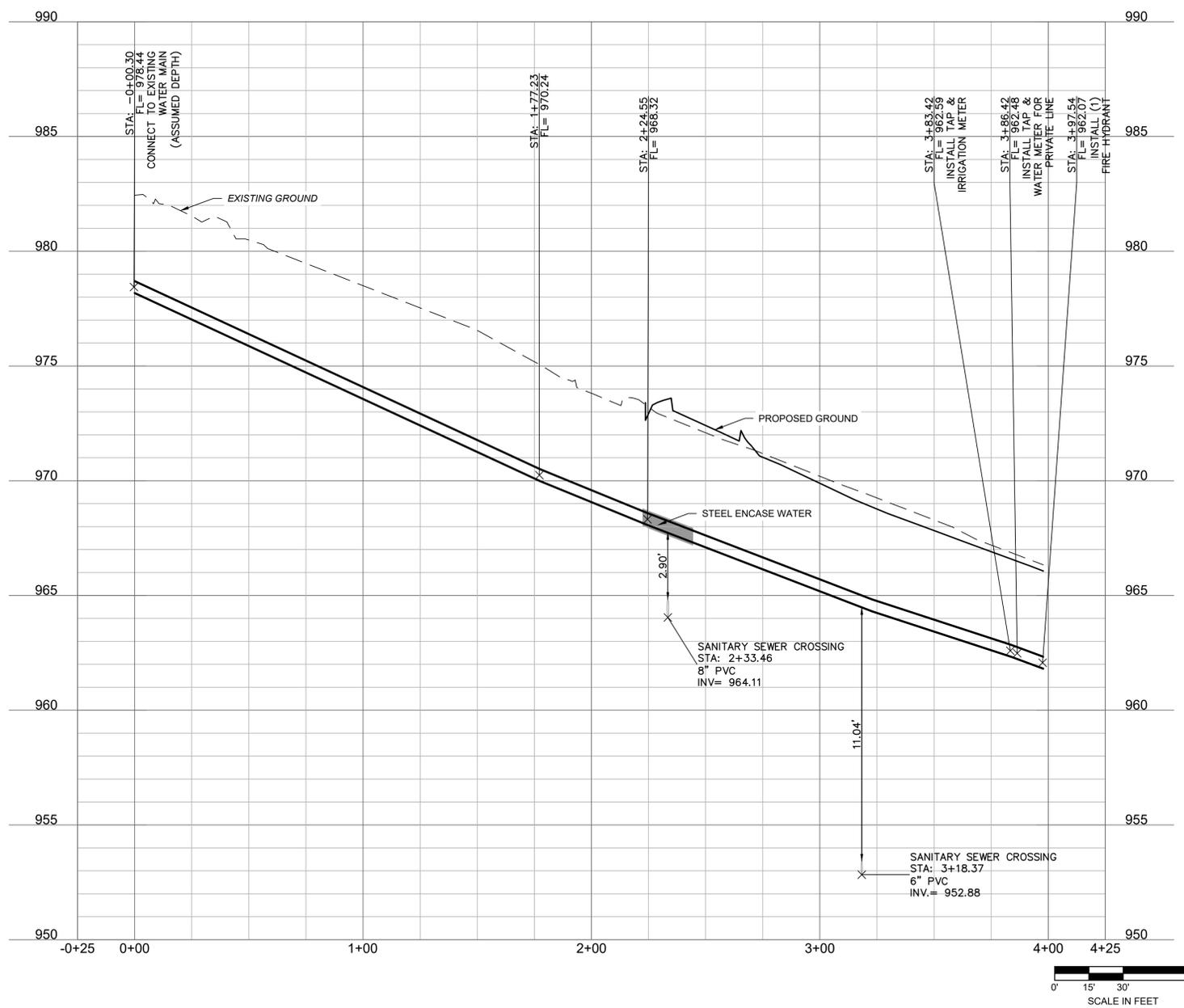
ADA, OK

drawn by: _____
checked by: _____
designed by: _____
QA/QC by: _____
project no.: 024-02476
date: 11.04.2024

SHEET
C3.1



WATER MAIN (-0+25 - 4+25)



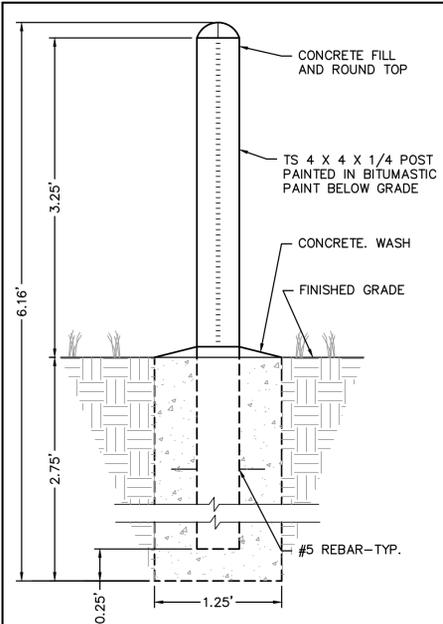
LEGEND:

---	PROPERTY BOUNDARY LINE
- - -	PROPERTY LOT LINE
SS	EXISTING STORM SEWER
SS	EXISTING SANITARY SEWER
P-OH	EXISTING OVERHEAD POWER
G	EXISTING UNDERGROUND GAS
CATV	EXISTING CABLE LINE
FO	EXISTING FIBER OPTIC
SD	PROPOSED STORM SEWER
P-UG	PROPOSED ELECTRIC LINE

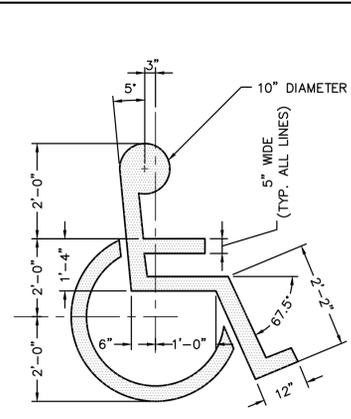
- NOTE:**
- NO FLOOR DRAINS IN BUILDING, MOP SINK TIED TO OIL/WATER SEPARATOR WITHIN BUILDING. REFERENCE MEP PLANS.
 - CONTRACTOR TO FIELD VERIFY EXISTING WATER MAIN CONNECTION POINT AND DEPTH



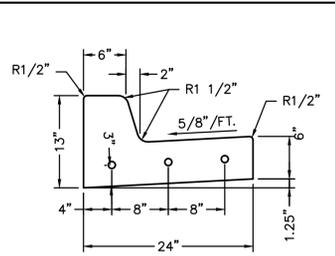
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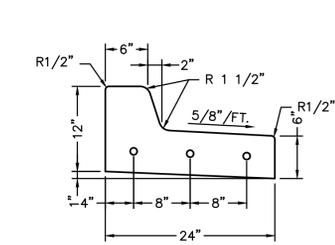
BOLLARD DETAIL
NOT TO SCALE



ACCESSIBLE PARKING SYMBOL
NOT TO SCALE



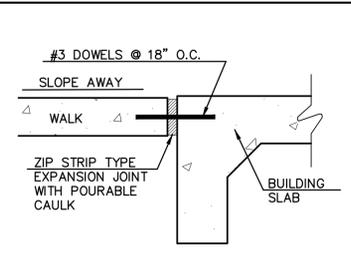
STRAIGHT BACK WET CURB & GUTTER
NOT TO SCALE



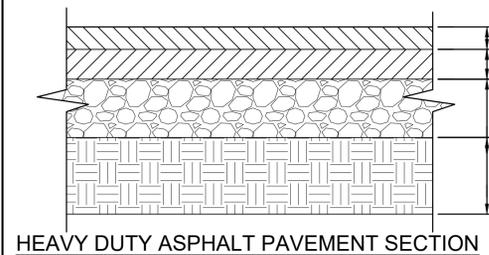
STRAIGHT BACK DRY CURB & GUTTER
NOT TO SCALE

- GENERAL NOTES:
- 3/4" ISOLATION JOINTS WITH 5/8" DIA. X 2' SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
 - 1" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
 - FIX DOWEL BARS WITH BAR SUPPORTS.
 - DEPTH OF CURB SHALL BE A MINIMUM OF 8" THROUGH HANDICAP ACCESSRAMP.

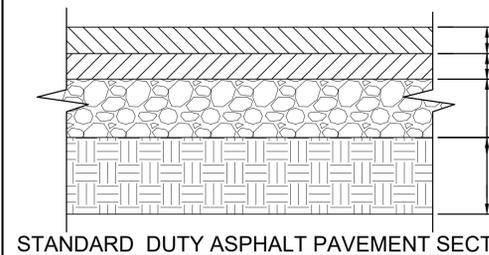
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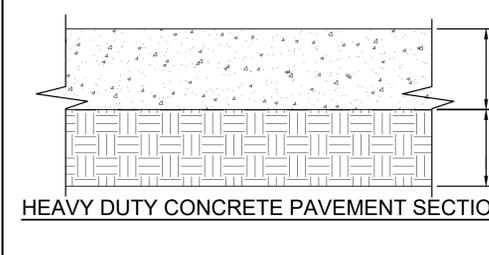
SIDEWALK TO BUILDING SLAB CONNECTION DETAIL
NOT TO SCALE



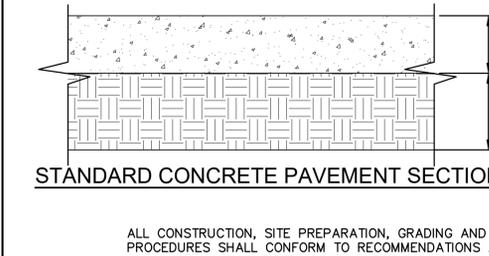
HEAVY DUTY ASPHALT PAVEMENT SECTION



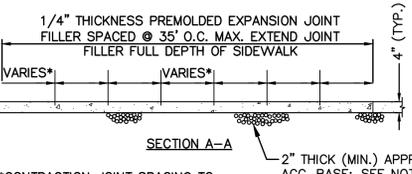
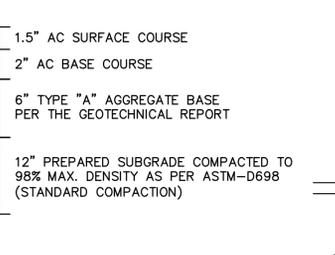
STANDARD DUTY ASPHALT PAVEMENT SECTION



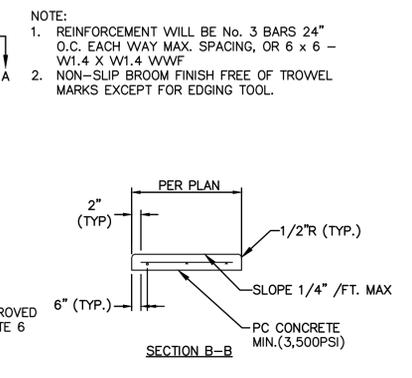
HEAVY DUTY CONCRETE PAVEMENT SECTION



STANDARD CONCRETE PAVEMENT SECTION



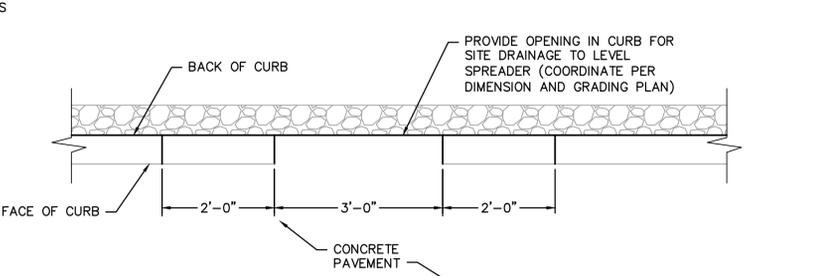
SECTION A-A



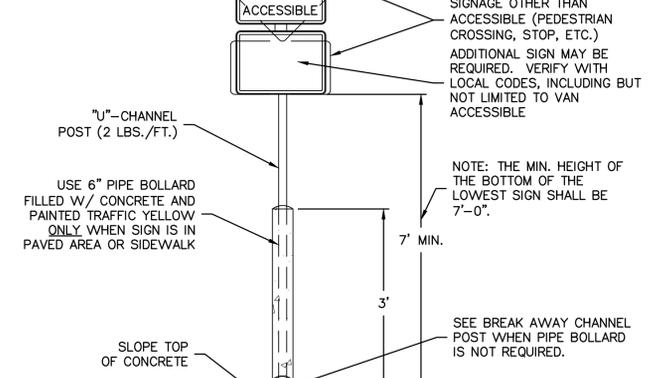
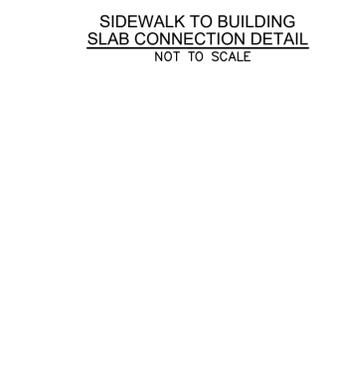
SECTION B-B

- SIDEWALK NOTES:**
- ALL WORK MUST MEET CURRENT AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS.
 - MINIMUM SIDEWALK WIDTH SHALL BE PER PLAN. SIDEWALK CROSS SLOPE SHALL BE A MAXIMUM OF 2% AND MINIMUM 3/8% SLOPE IN ANY DIRECTION AT INTERVALS OF 200' SHALL BE INSTALLED.
 - WHENEVER CHANGING DIRECTION IN A SIDEWALK, INSTALL A 5'X5' PASSING AREA WITH A MAXIMUM 2% SLOPE AND MINIMUM 3/8% SLOPE IN ANY DIRECTION.
 - WHENEVER CHANGING DIRECTION IN A SIDEWALK, INSTALL A 5'X5' PASSING AREA WITH MAXIMUM 2% SLOPE AND MINIMUM 3/8% SLOPE IN ANY DIRECTION.
 - OBJECTS SUCH AS TREE BRANCHES, SIGNS, WATER FOUNTAINS, ETC. SHALL NOT PROTRUDE INTO THE SIDEWALK MORE THAN 4" AT THE HEIGHTS BETWEEN 27" AND 80".
 - SIDEWALK SHALL BE CONSTRUCTED OF 4" THICK CONCRETE ON TOP OF 2" OF 1 1/2" CRUSHER RUN, 3/8" ROCK SCREENINGS, 1 3/8" CLEAN RECYCLED CONCRETE OR APPROVED EQUAL.
 - ALL OBSTRUCTIONS INTO THE WALK, SUCH AS POWER POLES, HYDRANTS, SIGN POSTS, ETC. MUST HAVE AT LEAST 48" OF CLEAR TRAVEL SPACE AROUND THE OBSTRUCTION.
 - SIDEWALK RUNNING GRADE SHALL NOT EXCEED 5% UNLESS THE SIDEWALK IS CONTAINED IN THE R-O-W AND THEN CANNOT EXCEED THE GENERAL GRADE ESTABLISHED FOR THE ADJACENT STREETS.

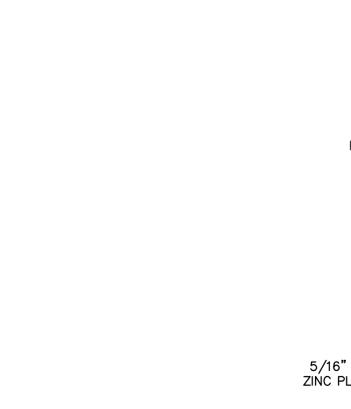
- SIDEWALK JOINT NOTES:**
- ALL JOINTS TO BE SEALED. TO BE THOROUGHLY CLEANED BY HYDROBLASTING AND/OR SAND BLASTING METHODS. THE JOINTS ARE TO BE FREE FROM ALL DUST COATINGS, ANY CONTAMINATES, AND FREE FROM ALL MOISTURE THAT MIGHT INTERFERE WITH THE PROPER AND SATISFACTORY BONDING OF THE JOINT SEALANT MATERIAL. THE JOINT WILL BE BLOWN OUT WITH DRY COMPRESSED AIR IMMEDIATELY PRIOR TO APPLYING SEALANT.
 - CONSTRUCTION EQUIPMENT AND OTHER VEHICLES AND PEDESTRIANS THAT MAY CAUSE DAMAGE TO THE JOINTS SHALL NOT BE ALLOWED ON THE PAVEMENT AND SIDEWALKS BEFORE THE SEALANT BECOMES TACK FREE.
 - USE 1/2" BY 4" EXPANSION JOINT MATERIAL ALONG SIDEWALK CURB AND ALONG BUILDING.
 - USE 1/2" BY 4" EXPANSION JOINT MATERIAL AROUND POLES OR OTHER OBSTRUCTIONS IN WALK AND FOR JOINTS SHOWN AS EXPANSION JOINTS ON THE PLAN VIEW OF THE SITE.
 - SAW CUT JOINTS WITHIN 24 HOURS.
 - SIDEWALK EXPANSION JOINTS ARE NOT DOWELED.



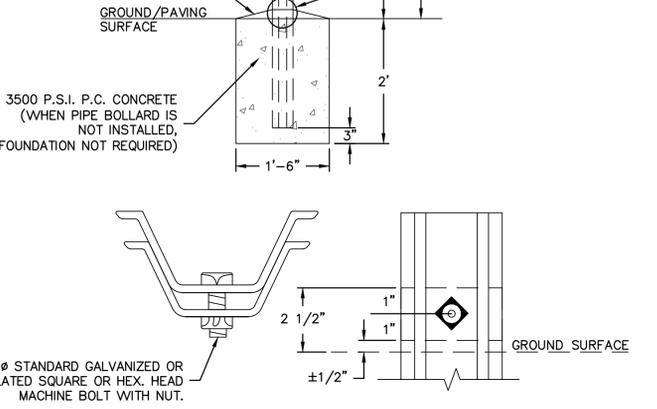
CURB OPENING FOR DRAINAGE
NOT TO SCALE



BREAK AWAY CHANNEL POST DETAIL SIGN DETAIL
NOT TO SCALE



SANITARY SEWER CLEAN-OUT



DIE OUT CURB RAMP

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Olsson - Engineering
Oklahoma COA #2483

SCOTT C. DARR
REGISTERED PROFESSIONAL ENGINEER
OKLAHOMA
29208
11-18-24

BY: _____

REVISIONS DESCRIPTION

DATE

REV. NO.

2024

CONSTRUCTION DETAILS

BRAKES PLUS
SW CORNER OF LONNIE ABBOT BLVD AND N TEXAS AVE
ADA, OK

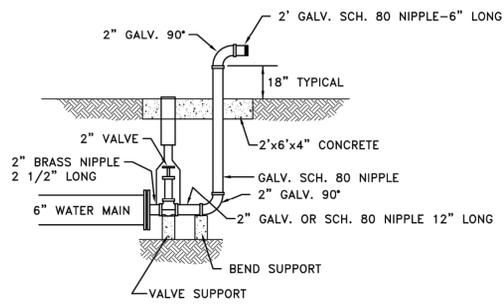
drawn by: _____
checked by: _____
designed by: _____
QA/QC by: _____
project no.: 024-02476
date: 11.04.2024

SHEET
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DATE: Nov 01, 2024 3:54pm USER: jgrogan

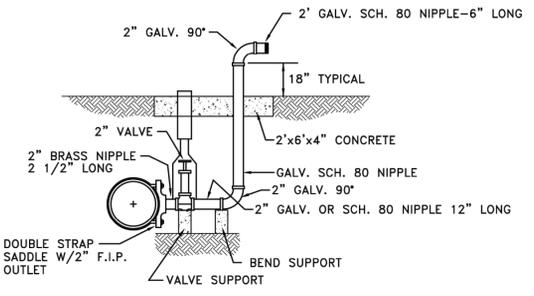
ALL CONSTRUCTION, SITE PREPARATION, GRADING AND EXCAVATION PROCEDURES SHALL CONFORM TO RECOMMENDATIONS AS OUTLINED IN THE GEOTECHNICAL REPORT PREPARED BY OLSSON ON 05-31-2024. FOR ALTERNATE PAVEMENT SECTIONS CONSULT WITH GEOTECHNICAL REPORT. ALL PAVEMENT MIXTURES AND GRADATIONS TO MEET THE CITY OF ADA, OKLAHOMA SPECIFICATIONS

PAVEMENT SECTIONS
NOT TO SCALE



- NOTES:**
- ADJUSTABLE VALVE BOXES SHALL BE INSTALLED ON ALL B.O. VALVES.

END 2" BLOW-OFF VALVE ASSEMBLY
N.T.S.

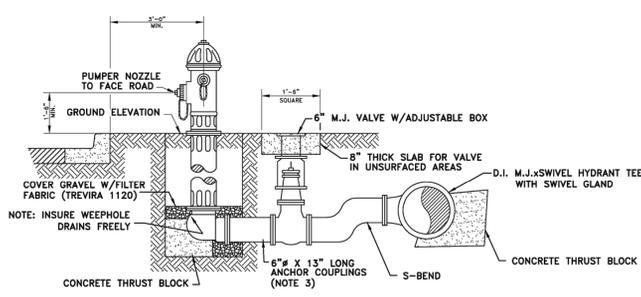


- NOTES:**
- GALV. SADDLES, STRAPS & BOLTS SHALL BE TAR COATED.
 - WHEN TAPPING MAIN, USE 1-7/8" BIT.
 - TAPPED TEES MAY BE USED ON CONNECTION TO NEW MAINS WHEN APPROVED BY OWNER.
 - ADJUSTABLE VALVE BOXES SHALL BE INSTALLED ON ALL B.O. VALVES.

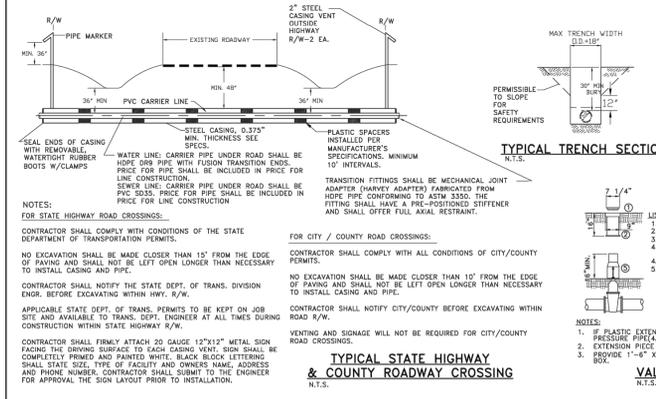
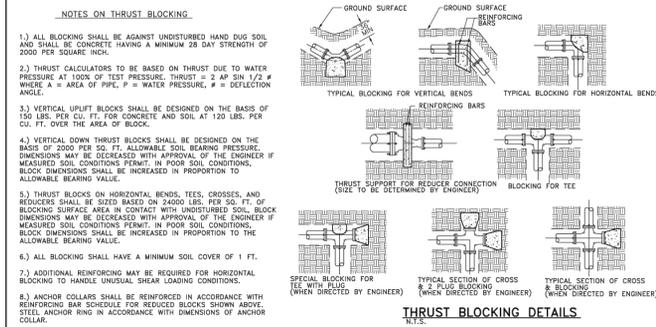
SIDE 2" BLOW-OFF VALVE ASSEMBLY
N.T.S.

GENERAL NOTES CONCERNING FIRE HYDRANTS :

- DRAINAGE BED SHALL CONSIST OF CRUSHED STONE OR COARSE GRAVEL W/COARSE SAND, MIN. VOLUME 7 CU. FT., DRAIN BED SHALL EXTEND A MIN. OF 6" ABOVE DRAIN OUTLET.
- USE 6" C.I. NIPPLE W/M.J. RETAINER GLANDS IF DISTANCE BETWEEN VALVE AND FIRE HYDRANT MUST BE GREATER THAN 17".
- FIRE HYDRANT SHALL BE BLOCKED AGAINST UNDISTURBED SOIL AS SHOWN.
- ALL HYDRANTS SHALL BE INSTALLED PLUMB.
- LARGE NOZZLE FACES ROAD, UNLESS OTHERWISE NOTED. ROTATE BARREL AS REQUIRED.
- HYDRANT SHOULD NOT BE SET CLOSER THAN 4' TO OBSTRUCTIONS THAT ARE IN LINE WITH NOZZLE.
- M.J. ANCHOR TEE FOR 16" AND SMALLER. WHEN USING REGULAR M.J. TEE USE 13" ADAPTER NIPPLE BETWEEN TEE AND VALVE.
- TAPPING SADDLES ARE REQUIRED ON ALL WATER MAIN LINES.
- USE MUELLER HYDRANT, OR APPROVED EQUAL

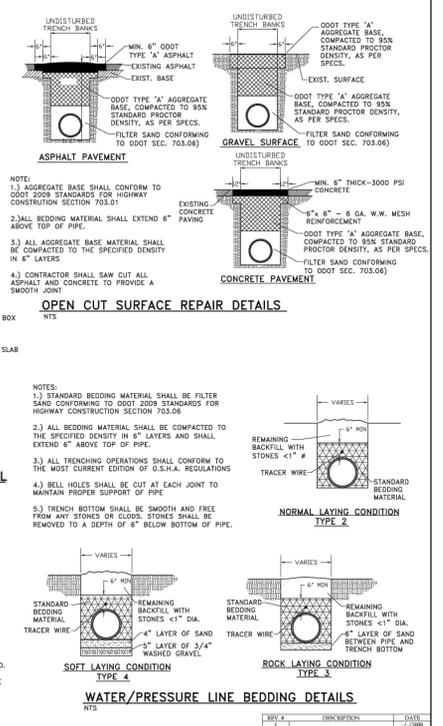


TYPICAL FIRE HYDRANT ASSEMBLY INSTALLATION
N.T.S.



GENERAL DATA FOR BLOCKING STANDARD FITTING

PIPE SIZE	TEE	90° BEND	45° BEND	22.5° BEND	11.25° BEND
4"	0.83	0.83	0.89	0.48	0.25
6"	1.40	1.40	2.00	1.08	0.55
8"	2.50	2.50	3.55	1.92	0.98
10"	3.55	3.55	5.00	2.65	1.33
12"	5.00	5.00	7.00	3.75	1.90
14"	7.00	7.00	9.50	5.00	2.50
16"	10.00	10.00	14.00	7.00	3.50
18"	14.00	14.00	19.00	9.50	4.75
20"	19.00	19.00	26.00	13.00	6.50
22"	26.00	26.00	35.00	18.00	9.00
24"	35.00	35.00	47.00	24.00	12.00
26"	47.00	47.00	62.00	32.00	16.00
28"	62.00	62.00	81.00	43.00	21.00
30"	81.00	81.00	105.00	57.00	28.00
36"	105.00	105.00	140.00	75.00	37.00
42"	140.00	140.00	185.00	100.00	50.00
48"	185.00	185.00	245.00	135.00	67.00
54"	245.00	245.00	320.00	180.00	90.00



CITY OF ADA PUBLIC WORKS

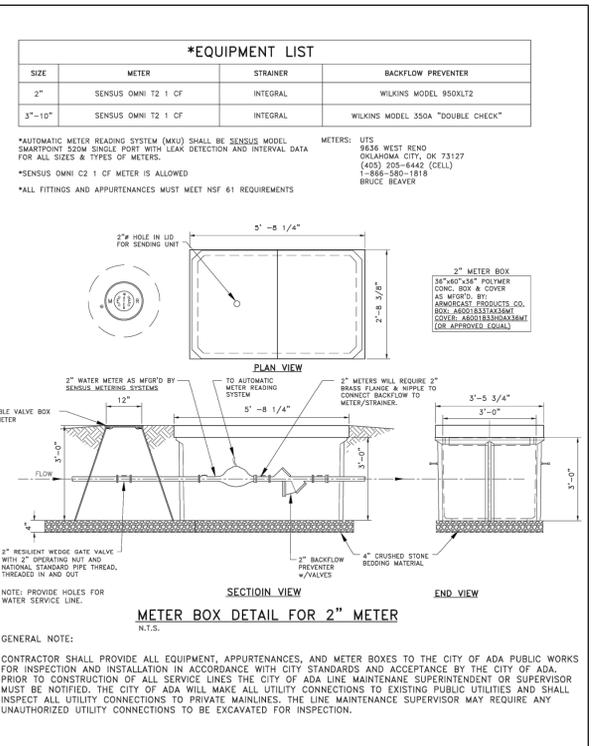
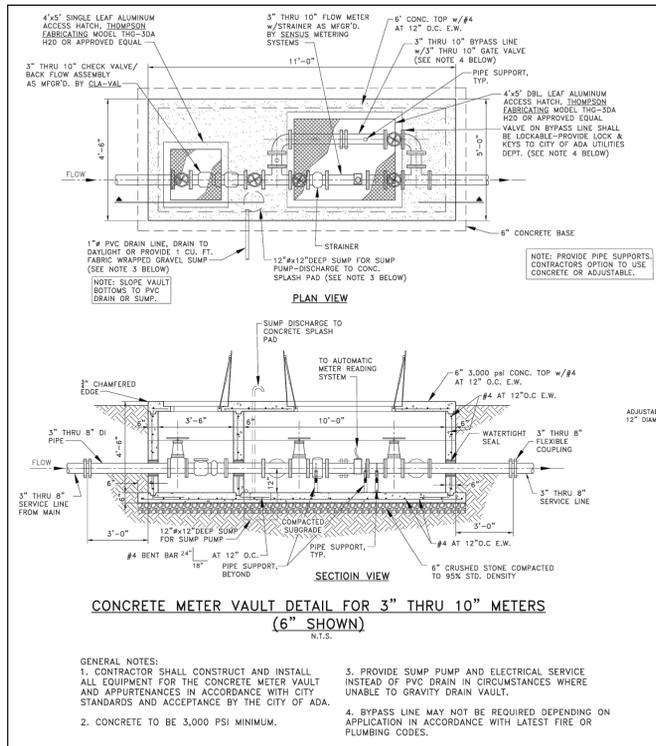
REV. #	DESCRIPTION	DATE
1		11/2009
2		11/2009
3		11/2009
4		11/2009

WATER DETAILS
REV. # 1 DATE: SEPT 2024

CITY OF ADA PUBLIC WORKS

REV. #	DESCRIPTION	DATE	REV. #	DESCRIPTION	DATE
1	SUPPLIERS AND METER SIZING	1/7/2010	5	WILKINS 350A VALVE CLARIFICATION	7/11/2012
2	LOCKABLE BYPASS & SUMP PUMP	8/23/2010	6	SENSUS 2" METER MODEL NUMBER	4/30/2014
3	ADD METER BOX SUPPLIER	10/7/2010	7	EQUIPMENT LIST	5/7/2014
4	BACKFLOW MFR. & VAULT SIZE	5/18/2012	8	2" METER BOX & RESILIENT GV	3/31/2017

CITY OF ADA
City of Ada-Engineering Dept.
METER BOX & VAULT DETAILS
SHEET 1 OF 1



***EQUIPMENT LIST**

SIZE	METER	STRAINER	BACKFLOW PREVENTER
2"	SENSUS OMNI T2 1 CF	INTEGRAL	WILKINS MODEL 950XL12
3"-10"	SENSUS OMNI T2 1 CF	INTEGRAL	WILKINS MODEL 350A "DOUBLE CHECK"

*AUTOMATIC METER READING SYSTEM (AMRS) SHALL BE SENSUS MODEL T2 METERS: UTS 9636 WEST REND OKLAHOMA CITY, OK 73127 (405) 208-1644 (CELL) 1-866-580-1818 BRUCE BEAVER
*SENSUS OMNI T2 1 CF METER IS ALLOWED
*ALL FITTINGS AND APPURTENANCES MUST MEET NSF 61 REQUIREMENTS

CITY OF ADA

REV. #	DESCRIPTION	DATE	REV. #	DESCRIPTION	DATE
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CITY OF ADA
City of Ada-Engineering Dept.
METER BOX & VAULT DETAILS
SHEET 1 OF 1

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USER: jrggoux

olsson

11600 Broadway Extension Suite 300 Oklahoma City, OK 73114
Olsson.com
TEL 405.242.6600
FAX 405.242.6601
Olsson - Engineering Oklahoma COA #2483

SCOTT C. DARR
REGISTERED PROFESSIONAL ENGINEER
OKLAHOMA
17-15-24

BY: _____
DATE: _____
REV. NO. _____

REVISIONS DESCRIPTION

CONSTRUCTION DETAILS CONT.

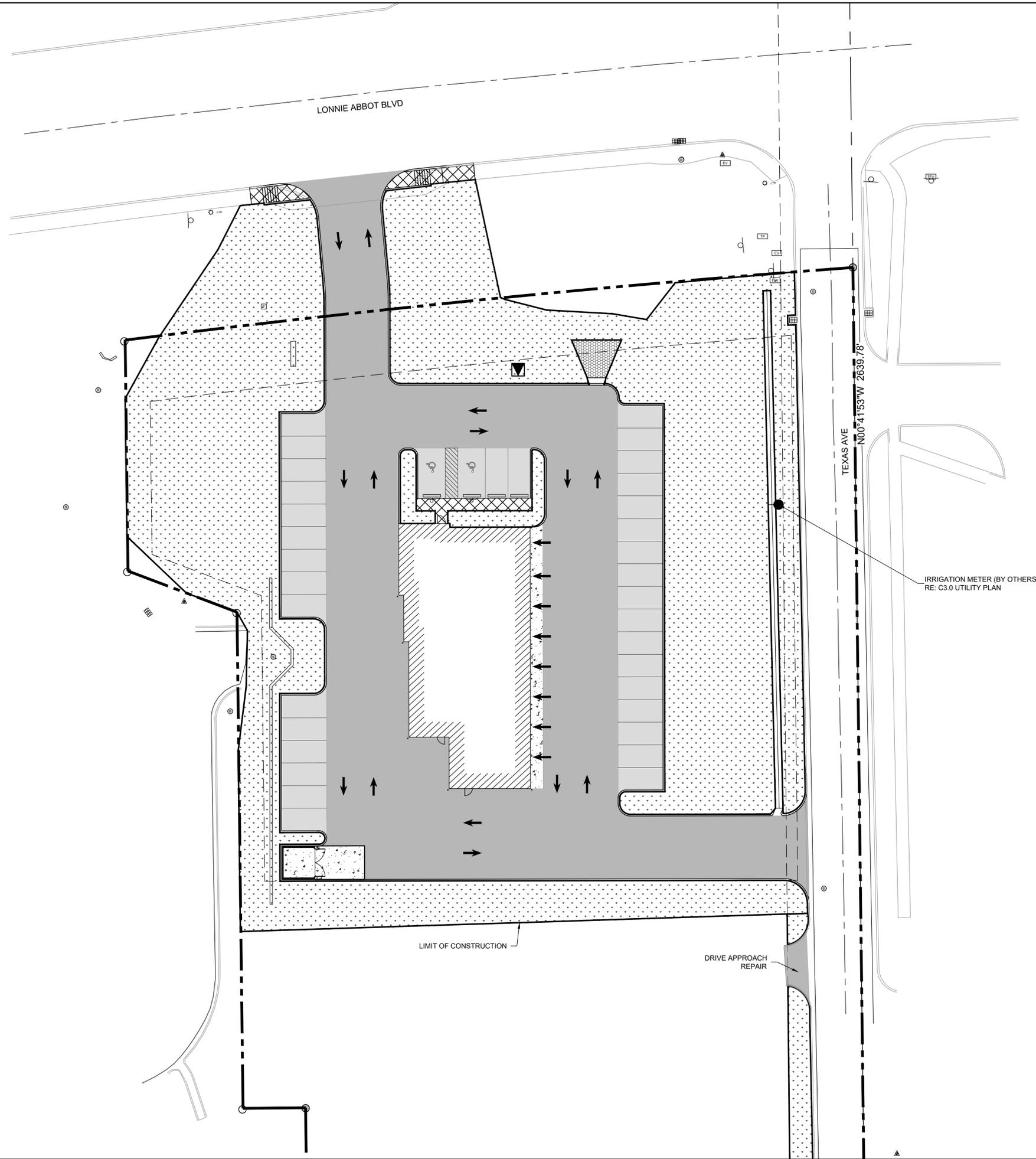
BRAKES PLUS
SW CORNER OF LONNIE ABBOT BLVD AND N TEXAS AVE
ADA, OK

2024

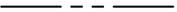
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checked by: _____
designed by: _____
QA/QC by: _____
project no.: 024-02476
date: 11.04.2024

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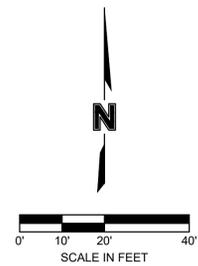
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 DATE: Nov 01, 2024 3:55pm USER: jgregoux



LEGEND

-  PROPERTY LINE
-  PROPOSED BUILDING OUTLINE
-  INTEGRAL 6" PCC CURB
-  PROPOSED SIDEWALK PCC PAVEMENT
-  PROPOSED DRIVE AISLE PCC PAVEMENT
-  PROPOSED PARKING STALL PCC PAVEMENT
-  PROPOSED HEAVY DUTY PCC PAVEMENT
-  PROPOSED RIP RAP
-  PROPOSED SOD GRASS

- NOTES:**
- ALL DISTURBED AREAS TO BE GRASS, SOD ONLY, NOT SEEDED.
 - ALL SOD AREAS ARE TO BE COVERED WITH AUTOMATIC SPRINKLER SYSTEM. CONTRACTOR TO DESIGN AND INSTALL SYSTEM.



—CAUTION—
 THE LOCATION OF UNDERGROUND UTILITIES DEPICTED ON THESE DRAWINGS ARE BASED ON VISUAL SURFACE EVIDENCE AND/OR AS-BUILT DRAWINGS PROVIDED BY OTHERS AND, THEREFORE, MAY NOT REPRESENT ALL UTILITIES PRESENT OR THEIR ACTUAL LOCATIONS. IT IS THE CONTRACTORS RESPONSIBILITY FOR COORDINATING WITH INDIVIDUAL UTILITY OWNERS TO ASCERTAIN THE EXACT LOCATION OF EXISTING UTILITIES AT SPECIFIC POINTS OF CONNECTION AND FOR NOTIFYING AHJ PRIOR TO ANY EXCAVATION ON SITE.



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 Olsson - Engineering
 Oklahoma COA #2483



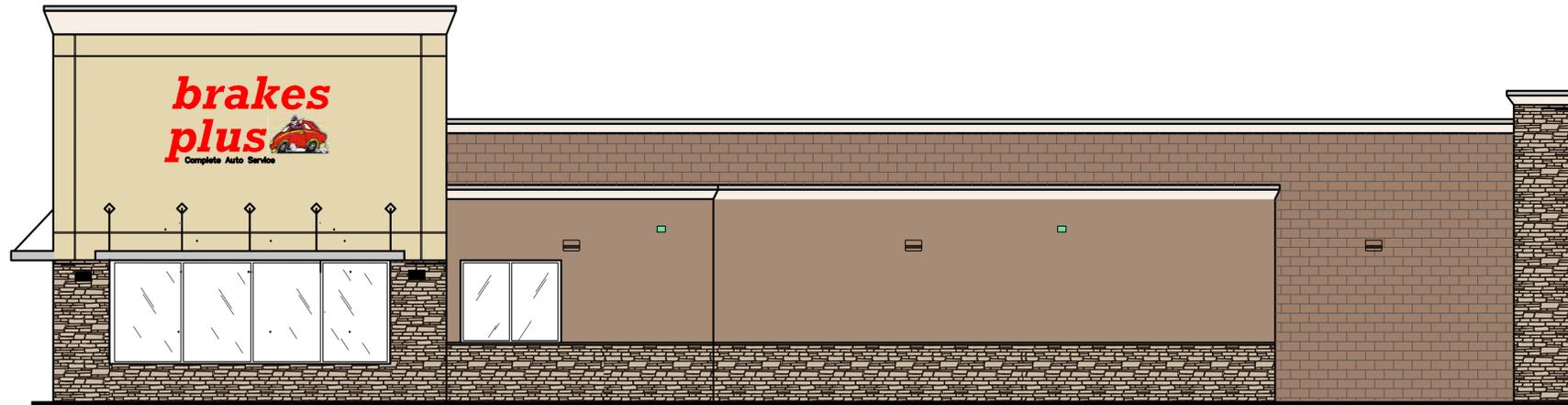
REV. NO.	DATE	REVISIONS DESCRIPTION	BY

LANDSCAPE PLAN
 BRAKES PLUS
 SW CORNER OF LONNIE ABBOT BLVD AND N TEXAS AVE
 ADA, OK

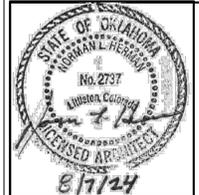
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 checked by: _____
 designed by: _____
 QA/QC by: _____
 project no.: 024-02476
 date: 11.04.2024

brakes plus

ADA, OKLAHOMA



BRAKES PLUS
1201 LONNIE ABBOTT BLVD.
ADA, OKLAHOMA



ARCHITECT OF RECORD

GENERAL NOTES

- WE CERTIFY THAT TO THE BEST OF OUR KNOWLEDGE AND INFORMATION, AND IN ACCORDANCE WITH ACCEPTED PROFESSIONAL STANDARDS, WE HAVE COMPLIED WITH APPLICABLE PORTIONS OF ANSI A117.1 2003 EDITION PERTAINING TO BUILDING ACCESSIBILITY FOR THE PHYSICALLY HANDICAPPED (ARCSA-401 THROUGH 34-411), IBC CHAPTER STANDARDS AND 1990 AMERICANS WITH DISABILITIES ACT (ADA) TITLE III ACCESSIBILITY GUIDELINES FOR BUILDING AND FACILITIES.
- ALL DIMENSIONS ARE TO THE FACE OF STUD AT FRAME WALLS AND TO THE FACE OF MASONRY WALLS AS SHOWN, UNLESS NOTED OTHERWISE.
- INSTALL SEALANT AT ALL INTERIOR AND EXTERIOR JOINTS, SEAMS, CONNECTIONS OF OPENINGS WHICH WOULD ALLOW WATER OR AIR INFILTRATION EXCEPT AS NOTED OTHERWISE. SEALANT COLOR TO MATCH ADJACENT SURFACE. COLOR REQUIRES ARCHITECT'S APPROVAL.
- DOOR OPENINGS IN FRAME CONSTRUCTION WHICH ARE NOT DIMENSIONED ARE EITHER CENTERED IN THE WALL OR LOCATED 5" FROM THE FACE OF STUD TO FINISH JAMB
- ALL HANDICAPPED FACILITIES SHALL BE IDENTIFIED WITH APPROVED SIGNAGE.
- THE CONTRACTOR IS RESPONSIBLE FOR PRODUCING A WEATHER TIGHT BUILDING -- DETAILS AND OMISSIONS TO DRAWINGS NOTWITHSTANDING, ALL DRAWING CONFLICTS WHICH MAY NOT ALLOW THIS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF TH ARCHITECT.
- DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND PLANS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT.
- ALL FLOORS WITH DRAINS ARE SLOPED MINIMUM 1/8" PER FOOT TO DRAIN UNLESS NOTED OTHERWISE.
- LOCATION OF EXISTING UTILITIES ARE SHOWN TO THE BEST OF OUR KNOWLEDGE, CONTRACTOR SHALL HAVE THE RESPONSIBILITY OF VERIFYING IN THE FIELD BEFORE CONSTRUCTION STARTS, AND COORDINATING ALL NEW UTILITY LOCATIONS, CONNECTIONS, AND PENETRATIONS W/ CIVIL ENGINEER.
- ALL REQUIRED EXITS SHALL BE OPERABLE FROM THE INSIDE WITHOUT SPECIAL KNOWLEDGE OR THE USE OF A KEY.
- PROVIDE FULL 2X6 WOOD BLOCKING AS REQUIRED TO SECURELY ANCHOR ALL WALL MOUNTED EQUIPMENT(E.G., CABINETS, TOILET ROOM, ACCESSORIES, HARDWARE, ETC.). BLOCKING SHALL PROVIDED A RIGID CONNECTION CAPABLE OF SUPPORTING LOADS AS DETERMINED BY MANUFACTURER. PROVIDE SOLID 2X6 WOOD BLOCKING SECURED TO 2 MAIN WALL STUDS TO SECURELY SUPPORT ALL WALL STOPS (DOOR BUMPER).
- THE GENERAL CONTRACTOR SHALL VERIFY AND COORDINATE WITH ALL TRADES, SIZES AND LOCATIONS OF ALL OPENINGS OF MECHANICAL AND ELECTRICAL EQUIPMENT, EQUIPMENT PADS, AS WELL AS POWER, WATER, AND DRAIN INSTALLATIONS, BEFORE PROCEEDING WITH WORK, ANY CONCERNS OF STRUCTURAL CONFLICTS, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT, A REASONABLE RESPONSE TIME SHALL BE ALLOWED.
- ALL FLOOR OR WALL OPENINGS REQUIRED FOR PIPES, DUCTS, CONDUITS, ETC. SHALL BE SEALED IN A MANNER APPROVED BY THE ARCHITECT.
- ROOMS ENCLOSED WITH 1-HOUR RATED WALLS REQUIRE RATED DOORS, 1-HOUR PARTITIONS PENETRATING THROUGH AND ABOVE ROOF SURFACE AND STRUCTURE ABOVE, ANY DUCTS PASSING THROUGH WALLS REQUIRE FIRE DAMPERS, ANY CONDUIT OF PIPING REQUIRES RATED SEALANT.
- STRUCTURAL NOTES SHALL GOVERN TYPICAL CONDITIONS WHETHER OR NOT SPECIFICALLY DETAILED OR NOTED.
- CONTROL JOINTS SHALL BE PROVIDED IN CONCRETE FLOOR SLABS AND MASONRY WALLS WHETHER OF NOT SPECIFICALLY REFERENCED ON PLANS. THE MAXIMUM AREA PERMITTED BETWEEN JOINTS SHALL BE 650 SQUARE FEET FOR REINFORCED CONCRETE SLABS, 250 SQUARE FEET FOR NON-REINFORCED SLABS AND 400 SQUARE FEET FOR MASONRY UNLESS SHOWN OTHERWISE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY ELECTRIC CONNECTIONS, METERS, TRANSFORMERS AND GENERATORS.
- IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE ELECTRICAL RECEPTACLES AND SWITCHES TO AVOID CASEWORK, DOORS, ETC.
- CAULK ALL INTERIOR AND EXTERIOR JOINTS.
- FOLLOW ALL RECOMMENDATIONS OF THE SOILS REPORT BY Olsson, Project #024-02476 dated MAY 2024.

PROJECT TEAM

OWNER:	EXPRESS OIL 1880 SOUTHPARK DRIVE BIRMINGHAM, AL 35244 ANDY GOLDEN 205943-5770
ARCHITECT:	NORMAN L. HERMAN 5265 RIO GRANDE # 202 LITTLETON, COLORADO 80120 (303)385-1203 ATTN: NORMHERMAN@ARCODEV.COM
STRUCTURAL ENGINEER:	PERFORMANCE ENGINEERING 7400 EAST ORCHARD ROAD, # 240 ENGLEWOOD, COLORADO 80111 (303)721-3322 ATTN: TOM SCHOTT
MECHANICAL PLUMBING ELECTRICAL ENGINEER	LOREN PRIEST 12005 ANTELOPE TRAIL, PARKER, COLORADO 80138 (303)748-1189 ATTN: LOREN@EEPARKER.COM
CIVIL ENGINEER	OLSSON ENGINEERING 601 P STREET, SUITE 200 LINCOLN, NE, 68508 ATTN: RYAN KUBERT 402-474-5311

SHEET INDEX

ARCHITECTURAL

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A2-3	REFLECTED CEILING PLAN
A2-4	ROOF PLAN
A3-1	EXTERIOR BUILDING ELEVATIONS
A4-1	BUILDING SECTIONS/ENVELOPE COMCHECK
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LOCATION-LEGAL DESCRIPTION

1201 LONNIE ABBOT BLVD., ADA, OKLAHOMA

CODE INFORMATION

APPLICABLE CODES

2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL PLUMBING CODE
2018 NATIONAL MECHANICAL CODE
2020 NATIONAL ELECTRICAL CODE
2018 IBC

TYPE OF CONSTRUCTION

TYPE V-B

MAXIMUM BUILDING HEIGHT

1 STORY

ALLOWABLE BUILDING AREA

9,000 S.F.

ACTUAL BUILDING AREA

4,897 S.F.

OCCUPANCY

M AND S-1
(MOTOR VEHICLE REPAIR GARAGE) NON-SEPARATED USES

OCCUPANT LOAD COUNT

SALES / WAITING AREA - 607 SF/ 60 OLF = 11 OCCUPANTS
BREAK ROOM - 125 SF/15 = 9 OCCUPANTS
ADMIN / OFFICE - 116 SF / 100 OLF = 2 OCCUPANTS
INVENTORY - 504 SF / 300 OLF = 2 OCCUPANTS
SERVICE BAYS - 3,221 SF / 200 = 16 OCCUPANTS
RESTROOMS - 148F /100 2 OCCUPANTS

TOTAL OCCUPANT LOAD = 42 OCCUPANTS

FIRE PROTECTION

BUILDING IS NON SPRINKLED

ROOFING MATERIALS

REQUIRED: CLASS "C" (CAN BE CLASS A OR B PER CODE)
PROVIDED: CLASS "A" ROOF

ROOF INSULATION REQUIREMENT: MEETS ASTM C 1289
ROOF INSULATION PROVIDED: MEETS ASTM C 1289

NUMBER OF EXITS REQUIRED:
2 REQUIRED.....2 PROVIDED

FIRE RESISTANCE OF EXTERIOR WALLS :
NONE REQUIRED.....DISTANCE GREATER THAN 30 FEET AND TYPE 5
CONSTRUCTION HAS NO REQUIREMENTS

FIRE RESISTANCE OF ELEMENTS :
TYPE 5B CONSTRUCTION HAS NO REQUIREMENTS

OPENING PROTECTION REQUIREMENTS:
NO REQUIREMENTS - FIRE SEPARATION DISTANCE EXCEEDS 30 FEET

PLUMBING FIXTURES

2 RR. REQ.
2 RR. PROVIDED

NUMBER OF EXITS

2 REQ.
2 PROVIDED

EXIT WIDTH

42 x 0.2 = 9" REQ.
36" PROVIDED

VICINITY MAP



BRAKES PLUS
LOCATION

VICINITY PLAN

HAZARDOUS GLAZING REQUIREMENTS:
THESE REQUIREMENTS HAVE BEEN MET...SEE SHEET A6-1
PARAPET REQUIREMENTS - PARAPETS MEET REQUIREMENTS. THEY EXCEED 30" IN HEIGHT HAD HAVE NO REQUIREMENT FOR FIRE RESISTANCE (SEE EXT. WALLS ABOVE)

REQUIRED PLUMBING FIXTURES:
- 2 RESTROOMS REQUIRED AND TWO PROVIDED
- 2 WATER CLOSETS REQUIRED AND TWO PROVIDED
- 2 LAVATORIES REQUIRED AND TWO PROVIDED
- HANDICAP WATER FOUNTAIN REQUIRED AND 1 PROVIDED
- 1 SERVICE SINK REQUIRED AND ONE PROVIDED.

ROOF DRAINAGE REQUIREMENTS:
ROOF DRAINAGE HAS BEEN PROVIDED PER #1503. SEE SUBMITTAL DWG A2-4 AND PLUMBING DRAWINGS

REVISION	DATE	COMMENTS
1	10-01-24	FOR SUBMITTAL TO BLDG. DEPT. RESPONSE TO BLDG. DEPT. COMMENTS

ARCODEV JOB # :
CLIENT JOB # :
DRAWN BY :
CHECKED BY : NLH
DATE OF ISSUE: 06.26.24



SHEET

A0

COVER SHEET

ICC A117.1-2009 : ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

ALL INTERIOR CONSTRUCTION WITHIN THE SCOPE OF THIS PROJECT IS REQUIRED TO BE ACCESSIBLE AS SET FORTH IN THE "ICC A117.1-2009 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES. SECTIONS INDICATED ON THIS SHEET REFERENCE THE "2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, UNLESS NOTED OTHERWISE.

DOORS

- Doors, doorways, and gates that are part of an accessible route shall comply with 404.
- Door openings shall provide a clear width of 32 inches, unless the opening is more than 24 inches deep, in which case the clear width of the opening shall be 36 inches. For swinging doors, the clear width shall be measured between the face of the door and the stop, with the door open 90 degrees.
- There shall be no projections into the clear opening lower than 34 inches. Projections into the clear opening between 34 inches and 80 inches shall not exceed 4 inches.
- In accordance with 404.2.3 exception 2, door closers and stops shall be permitted to be a minimum of 78 inches above the floor or ground.
- Minimum maneuvering clearances at swinging doors shall comply with ICC A117.1-2009 Section 404.2.3, Table 404.2.3.2 and Figure 404.2.3.2.
- Fire doors shall have a minimum opening force allowable by the appropriate administrative authority.
- Hinged doors other than fire doors shall have an opening force of 5 pounds maximum.
- Sliding doors shall have an opening force of 5 pounds maximum.
- Door and gate surfaces shall comply with 404.2.10.
- Doors shall be permitted to swing into turning spaces, per 304.4.
- Two doors in a series shall comply with ICC A117.1-2009 Section 404.2.5 and Figure 404.2.5.

NOTE: Y = 54" MIN. if door has a closer

NOTE: Y = 48" MIN. if door has a closer

NOTE: X = 12" MIN. if door has both a closer and a latch

NOTE: X = 8" if door has both a closer and a latch

NOTE: Door can have either a latch OR closer, but not both

RESTROOMS & DRINKING FOUNTAINS

- Where toilet rooms are provided, each toilet room shall comply with 603.
- Where toilet compartments are provided, at least one toilet compartment shall comply with 604.8.1. In addition to the compartment required to comply with 604.8.1, at least one compartment shall comply with 604.8.2 where six or more toilet compartments are provided, or where the combination of urinals and water closets totals six or more fixtures.
- Mirrors located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 40 inches maximum above finish floor or ground. Mirrors not located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 35 inches maximum above the finish floor or ground.
- Coat hooks shall be located within one of the reach ranges specified in 308. Shelves shall be located 40 inches minimum and 48 inches maximum above the finish floor.
- Water closets shall comply with 604.2 through 604.8.
- Toilet paper dispensers shall comply with ICC A117.1-2009, Chapter 6, Section 604.7 and shall not be located behind grab bars. Dispensers shall not be of a type that controls delivery or that does not allow continuous paper flow.
- Grab bars shall be provided at water closets and shall comply with ICC A117.1-2009, Chapter 6, Figure 604.5
- Urinals shall comply with 605 and shall be either wall-hung or stall type urinals.
- Lavatories shall comply with 606. Faucets for lavatories shall comply with 606.4. Exposed pipes under lavatories shall be insulated or otherwise protected to prevent against contact.
- Drinking Fountains shall comply with ICC A117.1-2009, Chapter 6, Section 602.2.
- Toilet paper dispensers shall comply with ICC A117.1-2009, Chapter 6, Figure 604.9.2.
- Fixed side wall grab bars shall comply with ICC A117.1-2009, Chapter 6, Section 604.5.1.

Provide Knee & Toe Clearance - See Section 306

Clearances & Heights at Lavatory

Stall Compartment Toe Clearance

Drinking Fountain Clearance and Spout Location

NOTE: if ONLY a parallel approach is provided, then 'X' shall be 3'-1/2" MAX

REACH RANGES, CONTROLS & OPERATING MECHANISMS

- Reach ranges shall comply with 308.
- Operable parts shall comply with 309 and shall be placed within one or more of the reach ranges specified in 308.
- In accordance with 309.4, operable parts shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds maximum.

Obstructed Forward Reach

Obstructed Side Reach

Unobstructed Forward Reach

Unobstructed Side Reach

PATH OF TRAVEL

- The running slopes of walking surfaces that are part of an accessible route shall not be steeper than 1:20 with a cross slope that is not steeper than 1:48.
- Changes in level shall comply with ICC A117.1-2009 Section 303.
- The clear width of walking surfaces on an accessible route shall comply with 403.5.1.
- The clear width at turns along an accessible route shall comply with 403.5.2.
- In accordance with 403.5.3, an accessible route with a clear width of less than 60 inches shall provide passing spaces at intervals of 200 feet.

Clear Width of an Accessible Route

Changes in Level

Walking Parallel To A Wall

SEATING AT TABLES & COUNTERS

- Where dining surfaces are provided for the consumption of food and drink, at least 5 percent of the seating spaces and standing spaces at the dining surfaces shall comply with 902. In addition, where work surfaces are provided for use by other than employees, at least 5 percent shall comply with 902. Confirm actual seat counts with Table 221.2.1
- Dining surfaces and work surfaces required to comply with 902 shall be dispersed throughout the space or facility containing dining surfaces and work surfaces.
- Dining surfaces and work surfaces shall comply with 902.2 and 903.3.

Toe and Knee Clearances

STAIRS AND RAMPS

- Ramps on accessible routes shall comply with 405.
- Ramp runs shall have a running slope not steeper than 1:12 with a cross slope not steeper than 1:48.
- The clear width of a ramp run or (where handrails are provided) the clear width between handrails shall be 36 inches minimum.
- The rise for any ramp run shall be 30 inches maximum.
- Ramps shall have landings at the top and the bottom of each ramp run complying with 405.7.
- Ramps with a rise greater than 6 inches shall have handrails complying with 505.
- Edge protection complying with 405.9.1 or 405.9.2, shall be provided on each side of ramp runs and each side of ramp landings.
- Stairs that are part of a means of egress shall comply with 504.
- All steps on a flight of accessible stairs shall have uniform riser heights and uniform tread depths. Risers shall be between 4 inches and 7 inches in height. Treads shall be 11 inches deep minimum.
- Open risers are not permitted.
- Nosings in steps shall comply with 504.5.
- Stairway handrails shall comply with 505.

Handrail Location with Barrier Edge Protection

Handrail Location with Alternate Edge Protection

NOTE: x = tread depth

curved or beveled nosing

angled riser

Stair Nosings

SLOPE	MAX. RISE
1:12 MIN.	30"
1:12 to 1:10	6"
1:10 to 1:08 MAX.	3"

*Only for Existing Sites, Buildings and Facilities

CLEARANCES & HEIGHTS AT LAVATORY

Lavatory Clearance

Standard Stall

Alternate Door Location

NOTE: Door shall not swing into compartment stall

Clear Floor Space and Water Closet Location

Recessed Toilet Paper Dispenser Location

Protruding Toilet Paper Dispenser Location

Height and Depth of Urinal

Grab Bars at Water Closets

SIGNAGE

- Signs shall comply with 703.
- Signs identifying permanent rooms and spaces shall comply with 703.1, 703.2, and 703.5. Where pictograms are provided as designations of permanent rooms and spaces, the pictograms shall comply with 703.6 and shall have text descriptors complying with 703.2 and 703.5.
- Signs that provide direction to or information about spaces and facilities shall comply with 703.5.
- Where more than one check-out aisle is provided, check-out aisles complying with 904.3 shall be identified by the International Symbol of Accessibility complying with 703.7.2.1. Where check-out aisles are identified by numbers, letters, or functions, signs identifying check-out aisles complying with 904.3 shall be located in the same location as the check-out aisle identification.

Centered on Tactile Characters

FOODSERVICE LINES, TABLEWARE AREAS & CHECKOUT AISLES

- Where check-out aisles are provided, check-out aisles shall comply with 904.3 and be dispersed.
- Where provided, at least one of each type of sales counter and service counter shall comply with 904.4. Where counters are dispersed throughout the building or facility, counters complying with 904.4 also shall be dispersed.
- Food service lines shall comply with 904.5. Where self-service shelves are provided, at least 50 percent, but no fewer than one, of each type provided shall comply with 308.
- Queues and waiting lines servicing counters or check-out aisles required to comply with 904.3 or 904.4 shall comply with 403.
- Check-out aisles and sales and service counters shall comply with the applicable requirements of 904.
- All points of counters required to comply with 904 shall be located adjacent to a walking surface complying with 403.

Parallel Approach at Sales & Service Counters

BRAKES PLUS

1201 LONNIE ABBOTT BLVD.
ADA, OKLAHOMA

ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	08-07-2024	FOR SUBMITTAL TO BLDG. DEPT.

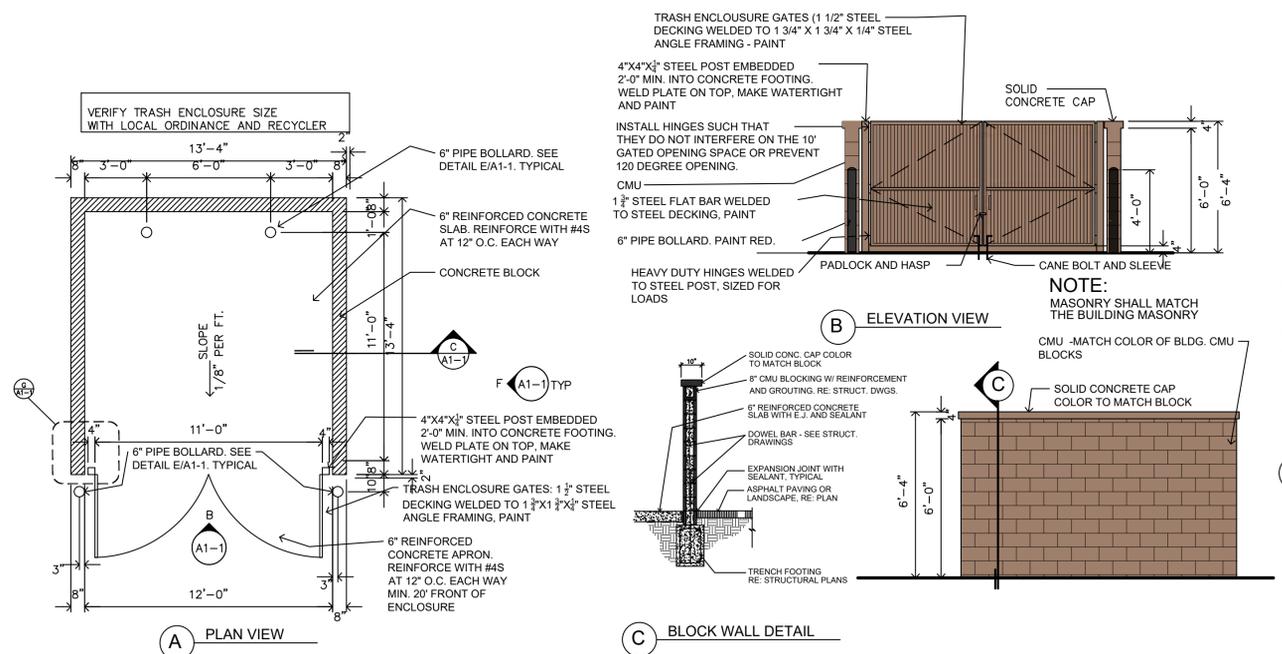
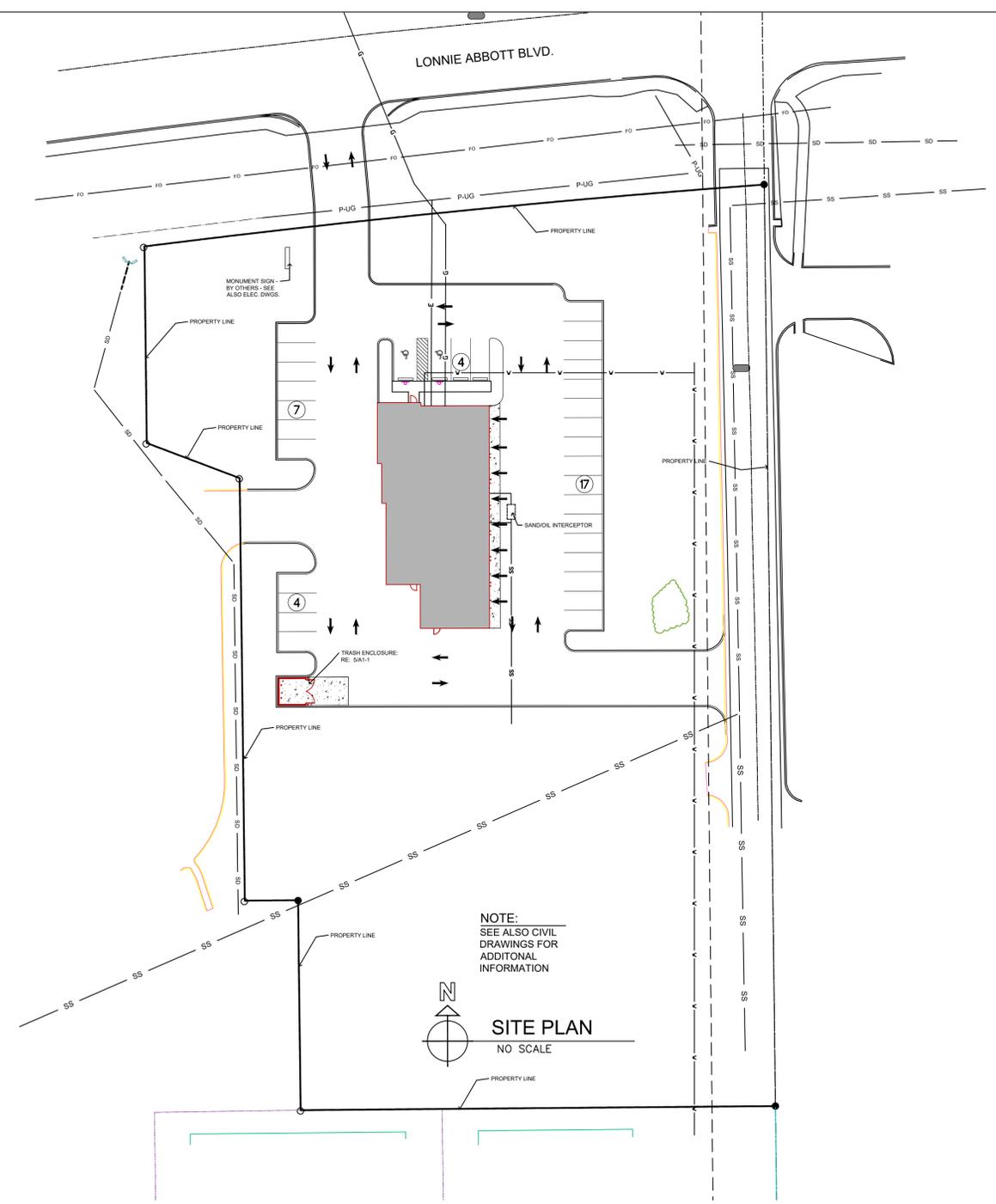
ARC CODEV

45 SPYGLASS DRIVE
LITTLETON, CO 80124
VOICE: 303.881-8925
NORMAN@ARC CODEV.COM

SHEET

A0.1

ACCESSIBLE DETAILS



TRASH ENCLOSURE GATES (1 1/2" STEEL DECKING WELDED TO 1 3/4" X 1 3/4" X 1/4" STEEL ANGLE FRAMING - PAINT)

4"x4"x1/2" STEEL POST EMBEDDED 2'-0" MIN. INTO CONCRETE FOOTING. WELD PLATE ON TOP. MAKE WATERTIGHT AND PAINT

INSTALL HINGES SUCH THAT THEY DO NOT INTERFERE ON THE 10' GATED OPENING SPACE OR PREVENT 120 DEGREE OPENING.

CMU

1 1/2" STEEL FLAT BAR WELDED TO STEEL DECKING, PAINT

6" PIPE BOLLARD. PAINT RED.

PADLOCK AND HASP

CANE BOLT AND SLEEVE

SOLID CONCRETE CAP

NOTE: MASONRY SHALL MATCH THE BUILDING MASONRY

CMU - MATCH COLOR OF BLDG. CMU BLOCKS

ROUND OFF CONCRETE TOP. PAINT RED.

6" DIA. STEEL BOLLARD FILLED SOLID WITH CONCRETE. PAINT RED.

SLOPE TOP

ASPHALT PAVING CONCRETE OR

CONCRETE BASE

EMBED STEEL POST IN CONCRETE FOUNDATION 2" DEPTH MIN.

WELD HINGE TO POST AND GATE

VERIFY TRASH ENCLOSURE SIZE WITH LOCAL ORDINANCE AND RECYCLER

3'-0" 6'-0" 3'-0"

6" PIPE BOLLARD. SEE DETAIL E/A1-1. TYPICAL

6" REINFORCED CONCRETE SLAB. REINFORCE WITH #4S AT 12" O.C. EACH WAY

CONCRETE BLOCK

SLOPE 1/8" PER FT.

11'-0"

3'-4"

6" PIPE BOLLARD. SEE DETAIL E/A1-1. TYPICAL

4"x4"x1/2" STEEL POST EMBEDDED 2'-0" MIN. INTO CONCRETE FOOTING. WELD PLATE ON TOP. MAKE WATERTIGHT AND PAINT

TRASH ENCLOSURE GATES: 1 1/2" STEEL DECKING WELDED TO 1 3/4" X 1 3/4" STEEL ANGLE FRAMING, PAINT

6" REINFORCED CONCRETE APRON. REINFORCE WITH #4S AT 12" O.C. EACH WAY MIN. 20" FRONT OF ENCLOSURE

6" PIPE BOLLARD. SEE DETAIL E/A1-1. TYPICAL

6" REINFORCED CONCRETE SLAB. REINFORCE WITH #4S AT 12" O.C. EACH WAY

6" PIPE BOLLARD. SEE DETAIL E/A1-1. TYPICAL

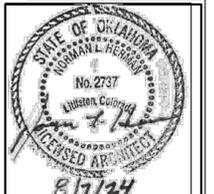
12'-0"

3"

3"

5 TRASH ENCLOSURE DETAIL
A1-1

BRAKES PLUS
1201 LONNIE ABBOTT BLVD.
ADA, OKLAHOMA



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	08.07.2024	FOR SUBMITTAL TO BLDG. DEPT.

ARCODEV JOB #:
CLIENT JOB #:
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CHECKED BY: NLH
DATE OF ISSUE: 06.26.24



SHEET
A1-1
SITE PLAN AND DETAILS



ARCHITECT OF RECORD

REVISION

DATE

COMMENTS

FOR SUBMITTAL TO BLDG. DEPT.

08.07.2024

06.26.24

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NLH

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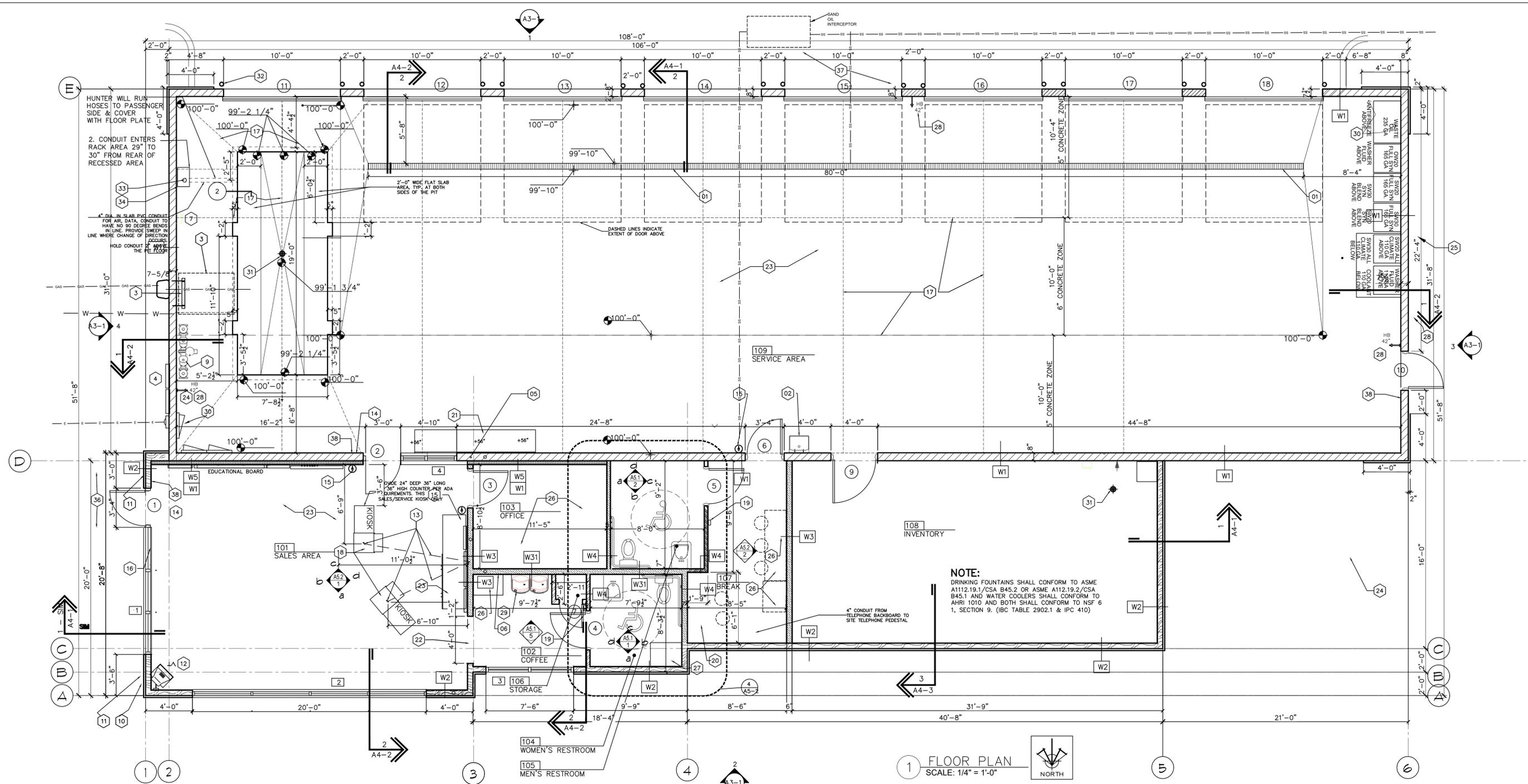
ARCODEV

45 SPIYGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.981-9105
NORMHERMAN@ARCODEV.COM

SHEET

A2-1

FLOOR PLAN



NOTE:
DRINKING FOUNTAINS SHALL CONFORM TO ASME A112.19.1/CSA B45.2 OR ASME A112.19.2/CSA B45.1 AND WATER COOLERS SHALL CONFORM TO AHR1 1010 AND BOTH SHALL CONFORM TO NSF 6.1, SECTION 9. (IBC TABLE 2902.1 & IPC 410)

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



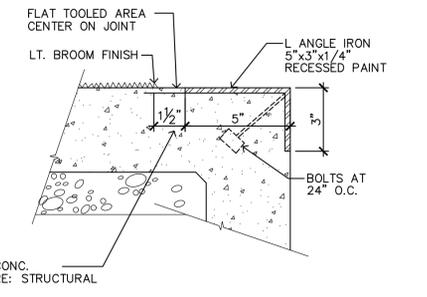
FLOOR PLAN KEYNOTES:

- 6" WIDE CONTINUOUS PRE-FORMED TRENCH DRAIN. MAX OPENING = 2". SEE PLUMBING DRAWINGS AND DRAIN SPEC.
- DEEP-BASIN SERVICE SINK. RE: MECHANICAL DRAWINGS. PROVIDE 48" HIGH x 36" WIDE STAINLESS STEEL PANEL ON WALL BEHIND SINK.
- ROOF LADDER (HATCH ABOVE) - RE: 2/A2-4 - COORDINATE EXACT LOCATION WITH BAR JOIST LOCATIONS.
- ELECTRICAL ENTRY EQUIPMENT. REFER TO ELECTRICAL DRAWINGS.
- PROVIDE ELECTRICAL CONDUIT FROM 18" AFF TO ABOVE CEILING AND PENETRATE THROUGH MASONRY WALL TO OFFICE.
- COLD WATER LINE FOR COFFEE MACHINE. RE: PLUMBING DRAWINGS.
- PROVIDE DISCONNECT FOR A LIFT AT THIS LOCATION.
- NOT USED.
- BACK FLOW PREVENTER. SEE CIVIL DRAWINGS. REFER TO PLUMBING DRAWINGS.
- PROVIDE KEY DROP BOX. MODEL NO. DSP204K AS MANUFACTURED BY AMSEC. INSTALLED BY CONTRACTOR.
- KNOX BOX. OBTAINED FROM LOCAL FIRE DEPARTMENT AND INSTALLED BY CONTRACTOR. VERIFY LOCATION WITH FIRE DEPARTMENT PRIOR TO INSTALLATION.
- PROVIDE BRACKETS TO SUPPORT TV MOUNTING BRACKET. COORDINATE WITH OWNER.
- TWO 1" ELECTRICAL CONDUITS FROM WALL TO EACH KIOSK & SERVICE COUNTER. CONDUIT #1 SHALL BE 7" FROM REAR WALL & 2'-6" FROM CENTERLINE OF FRONT DOOR (UP TO ABOVE CEILING). CONDUIT #2 WILL BE TO THE OUTSIDE OF #1 AND SLIGHTLY BACK TO ALLOW FOR ANGLE MOUNTING OF KIOSK.
- PROVIDE SIGN AT EXIT "MAXIMUM NUMBER OF OCCUPANTS"
- PROVIDE FIRE EXTINGUISHER AS DIRECTED BY LOCAL FIRE DEPARTMENT
- NOT USED.
- CONTROL JOINTS TYP.
- KIOSK AND PRINTER CABINET PROVIDED AND INSTALLED BY G.C.
- PROVIDE ACCESSIBLE SIGNAGE AT RESTROOM AS REQUIRED PER CODE
- LOCKERS PROVIDED AND INSTALLED BY OWNER
- SERVICE COUNTER PROVIDED AND INSTALLED BY G.C.
- 4'-0" W X 7'-4" H OPENING
- CONCRETE SLAB - RE: STRUCTURAL DRAWINGS.
- WATER-COOLER - (DEEP-ROCK WATER 303 292 2020; OR EQUAL).
- GAS METER.
- MILLWORK PROVIDED AND INSTALLED BY G.C.
- NOT USED.
- HOSE BIB. REFER TO PLUMBING DRAWINGS.
- WATER-COOLER - (DEEP-ROCK WATER 303 292 2020; OR EQUAL).
- ELECTRICAL CIRCUIT PANELS
- FLOOR DRAIN
- CONCRETE FILLED 4" DIA. STEEL BOLLARD 36" HIGH - PAINT RED
- CONDUIT CENTER IS 8" FROM THE CENTER.
- CONDUIT FROM CONTROL BOX TO RACK CONTROL BOX.
- NOT USED.
- ACCESSIBLE ENTRY SIDEWALK.
- PROVIDE 10" WIDE CONC. APRON IN FRONT OF OVERHEAD DOORS (6" DEEP WITH #3'S 16" O.C. EACH WAY IN CENTER OF SLAB)
- PROVIDE EXIT SIGN AS SHOWN ON DETAIL 10 ON SHEET A4-5 INCLUDING TACTILE REQUIREMENTS.

GENERAL NOTES:

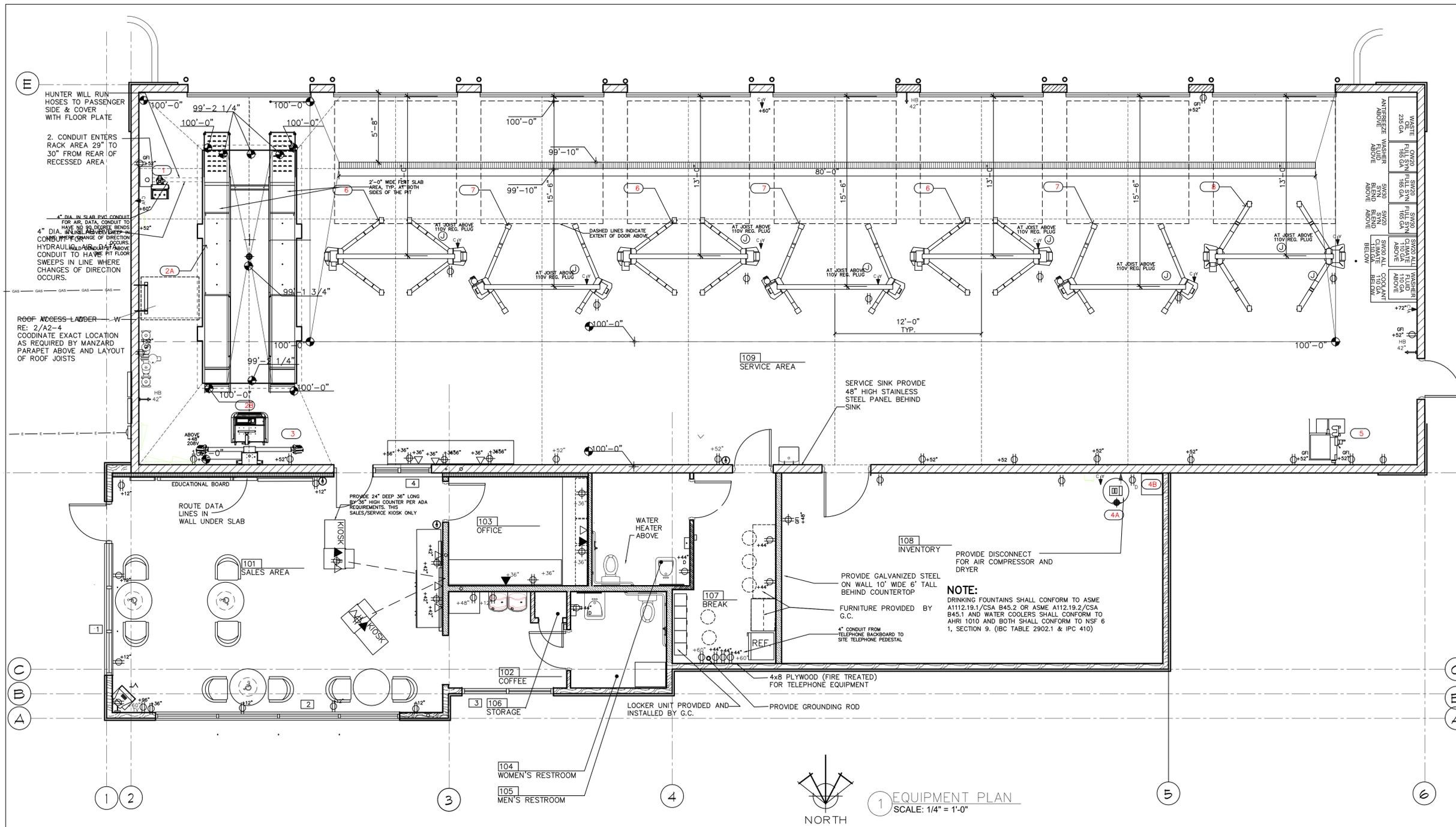
- PAINT EXPOSED UNFINISHED METALS PER SPECIFICATIONS. COLOR TO MATCH ADJACENT SURFACE IF NOT SPECIFIED.
- MAKE SURE TO HAVE A MINIMUM OF 6" CONCRETE UNDER HEAVY EQUIPMENT
- KEEP ALL EXPOSED PLUMBING AND CONDUIT LINES AT LEAST 6" ABOVE F.F.
- PROVIDE ANCHORS, BOLT AND OTHER NECESSARY FASTENERS AND BLOCKING AS REQUIRED AND ATTACH ACCESSORIES SECURELY TO WALLS AND PARTITIONS IN LOCATIONS AS SHOWN AS REQUIRED.
- PROVIDE FIRE EXTINGUISHERS AS REQUIRED BY LOCAL FIRE MARSHALL. CONTRACTOR IS REQUIRED TO CONTACT FIRE DEPARTMENT FOR FIRE EXTINGUISHER TYPE AND EXACT MOUNTING LOCATIONS.
- ALL ELECTRICAL DEVICES SHALL BE EXPOSED SURFACE MOUNTED IN INSTALLATION BAYS. ALL DEVICES IN PUBLIC AREAS SHALL BE CONCEALED IN WALLS.
- CONVENIENCE POWER IS INDICATED ON THIS DRAWING FOR REFERENCE. PROVIDE POWER PER EQUIPMENT AND ALL ASSEMBLIES NOTED AS WELL.
- FOLLOW ALL RECOMMENDATIONS OF THE SOILS REPORT BY OLSSON, PROJECT #024-024-76 DATED MAY 2024.
- N/A
- ALL DIMENSIONS OF FACE OF STUDS AND FACE OF CMU BLOCKS

WALLS ASSEMBLIES:				
ID	WALL TYPE / SYMBOL	DESCRIPTION	FIRE RATING	UL LISTING
W1	8" NOM. CONCRETE BLOCK FULL HEIGHT / DECK	NOMINAL (see PLAN) 16x8 LIGHT WEIGHT CONCRETE BLOCK. PROVIDE INSULATION IN OPEN CELLS WHERE EXTERIOR. GROUT CELLS SOLID AS THE STRUCTURAL DRAWINGS. MIN R VALUE OF 8.	LOOSE FILL SPECIFIED BY	-
W2	NEW WOOD STUD WALL	3/4" GYP BD EACH SIDE OVER 2X6 WOOD STUDS @ 16" O.C. TO ELEVATION NOTED ON DRAWINGS. PROVIDE MOISTURE RESISTANT GYP BD AT WET LOCATIONS IN RESTROOM. USE EXTERIOR SHEATHING ON OUTSIDE SURFACES. PROVIDE MIN. FULL BATT R-19 INSULATION W/ VAPOR BARRIER (450 KRAFT PAPER OF EQUAL CLASS W VAPOR BARRIER). PROVIDE WATER BARRIER GREENGUARD MAX BUILDING WRAP. PROVIDE DRAINAGE PER IBC SETICON 1404.2 & INSTALLED PER 1405.	-	-
W3		3/4" GYP BD EACH SIDE OVER 2X6 WOOD STUDS @ 16" O.C. TO UNDERSIDE OF STRUCTURE ABOVE.	-	-
W31		1" GYP. BD. EACH SIDE OVER 2X6 WOOD STUDS AT 16" O.C. O 12'-0" AFF. PROVIDE MOISTURE RESISTANT GYP BD AT WET LOCATIONS IN RESTROOM. PROVIDE FULL BATT SOUND INSULATION.	-	-
W4	NEW WOOD STUD WALL	3/4" GYP BD EACH SIDE OVER 2X4 WOOD STUDS @ O.C. @ 12'-0" AFF PROVIDE FULL BATT SOUND INSULATION.	-	-
W5	NEW FURRING	3/4" GYP BD OVER 2X2 WOOD FURRING STUDS @ 16" O.C. TO 6" ABOVE CEILING. PROVIDE FULL BATT INSULATION IN FURRED CAVITY	-	-
W6	NOT USED	NOT USED	-	-



2 "L" MTL. AT RECESSED SLAB TYP.
SCALE: 1/4" = 1'-0"

GENERAL WALL CONSTRUCTION NOTES:
PROVIDE SLIP TRACK HEAD RECEPTOR WHERE REQUIRED. ALL WALLS AROUND RESTROOMS TO RECEIVE R-19 BATT INSULATION. ALL RESTROOM CEILINGS TO RECEIVE R-19 BATT INSULATION.



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

ID	DESCRIPTION	MANUFACTURER	MODEL NUMBER	LENGTH	DEPTH	HEIGHT	HP	VOLTAGE	AMPS	PHASE	NOTES
1	ALIGNMENT RACK - CONTROL BOX	HUNTER	RXL01FT-IS	19"	7"-4 1/2"	6"	-	208-230	26A	1	DEDICATED CIRCUIT
2	ALIGNMENT MACHINE	HUNTER	WA443	36"	2'-6"	5'-8"	-	115	15A	1	DEDICATED CIRCUIT
3	ALIGNMENT SENSORS	HUNTER	HE421	8'-9"	1'-3"	10'-3"	-	120	15A	1	DEDICATED CIRCUIT
4A	AIR COMPRESSOR	CHAMPION	HR50-12	5'-10"	2'-4"	4'-8"	5	208	30A	3	DEDICATED CIRCUIT 30 AMP, WITH DISCONNECT
4B	AIR COMPRESSOR - DRYER	CHAMPION									
5	BRAKE LATHE	HUNTER	BL500	44 1/2"	35 1/2"	-	1.5	115	15A	1	DEDICATED CIRCUIT (115V, 15 AMP)
6	ABOVE-GROUND 10K TWIN POST LIFT	ROTARY	SPO10	11'-6"	-	12'-5"	5	110	-	1	WITH SHOCKWAVE, NON-DEDICATED CIRCUIT
7	ABOVE-GROUND 10K A-TWIN POST LIFT	ROTARY	SPOA10	11'-6"	-	12'-5"	5	110	-	1	WITH SHOCKWAVE, NON-DEDICATED CIRCUIT
8	ABOVE-GROUND 12K TWIN POST LIFT	ROTARY	SPOA12RA	11'-6"	-	13'-8"	5	110	-	1	WITH SHOCKWAVE, NON-DEDICATED CIRCUIT
9	NEW OIL TANK	VALVOLINE									
10	USED OIL TANK			3'	4'						STACKABLE
11	WASHER/COOLANT TANK			3'	3'	5'-1"					DEL. WALL. UL LISTED
12	OIL DISPENSER	EP16									
13											
14											
15											
16											
17											
18											
19											

ELECTRICAL LEGEND:	
⊕	DUPLEX OUTLET
⊕	DEDICATED DUPLEX OUTLET
⊕	AUTOCYCLE RECEPTACLE
⊕	FOUR-PLEX OUTLET
⊕	220-VOLT OUTLET
⊕	FLOOR OUTLET
⊕	TELEPHONE JACK
⊕	TELEPHONE JACK +60"
⊕	DATA JACK
⊕	PLUGMODE
⊕	AC ABOVE COUNTER
⊕	LIGHT SWITCH @ 54" AFF
⊕	THREE-WAY LIGHT SWITCH @ 56" AFF
⊕	TELEPHONE BACKBOARD W/ OUTLET
⊕	ELECTRICAL PANEL
⊕	TIME CLOCK
⊕	SIGN OUTLET
⊕	JUNCTION BOX
⊕	THERMOSTAT

GENERAL NOTES:

1. VERIFY ALL EQUIPMENT LOCATIONS WITH OWNER PRIOR TO INSTALLATION.
2. COORDINATE INSTALLATION OF EQUIPMENT ITEMS SUPPLIED BY OWNER.
3. TELEPHONE SYSTEM PROVIDED BY VENDORS. COORDINATE SCHEDULE WITH GENERAL CONTRACTOR.
4. COMPRESSED AIR LINE DROPS TO 48" AFF UNLESS NOTED OTHERWISE REFER TO PLUMBING PLAN FOR COMPRESSED AIR LINE SIZES.

BRAKES PLUS
1201 LONNIE ABBOTT BLVD.
ADA, OKLAHOMA

ARCHITECT OF RECORD

REVISION

DATE 08.07.2024

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ARCOCODE JOB #:

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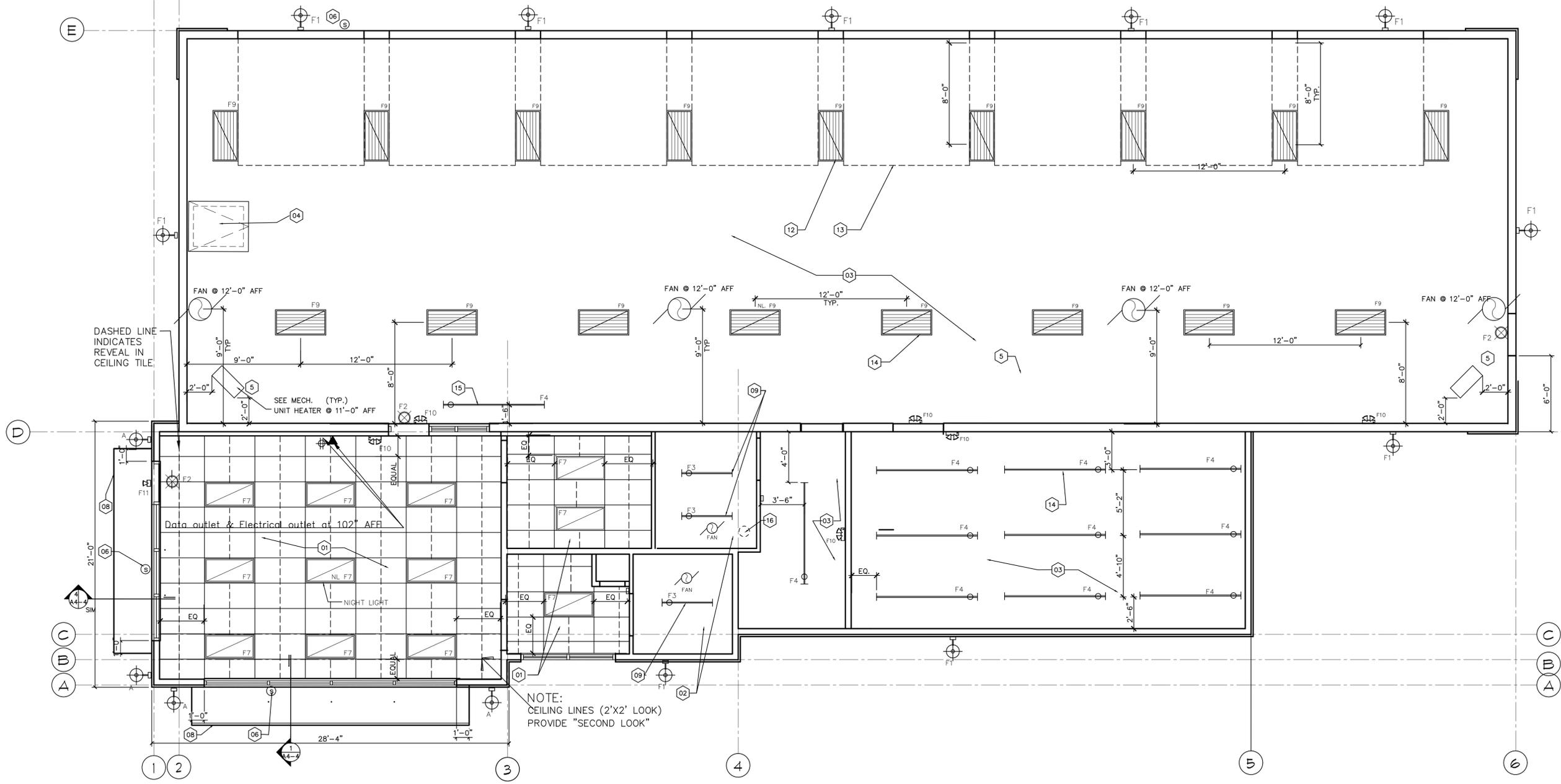
ARCOCODE

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SHEET

A2-2

EQUIPMENT PLAN



DASHED LINE INDICATES REVEAL IN CEILING TILE

SEE MECH. (TYP.) UNIT HEATER @ 11'-0" AFF

Data outlet & Electrical outlet at 102" AFF

NIGHT LIGHT

NOTE: CEILING LINES (2'X2' LOOK) PROVIDE "SECOND LOOK"

1 REFLECTIVE CEILING PLAN
SCALE: 1/4" = 1'-0"

- CEILING PLAN KEYNOTES:**
- 2x4 ACoustical TILE CEILING GRID WITH ARMSTRONG "DUNE - FINE FISURED SECOND LOOK" CEILING TILES. RE: ROOM FINISH SCHEDULE.
 - 6"X6" BO CEILING OVER WOOD STUD FRAMING. PAINT. RE: ROOM FINISH SCHEDULE
 - OPEN TO STRUCTURE ABOVE. PAINT. RE: ROOM FINISH SCHEDULE
 - ROOF LADDER AND HATCH ABOVE - COORDINATE EXACT LOCATION WITH ROOF FRAMING.
 - UNIT HEATER @ 11'-0" AFF TO BOTTOM - RE: MECH. DWGS.
 - JUNCTION BOX FOR EXTERIOR WALL SIGNS
 - NOT USED
 - LINE OF METAL AWNING
 - CENTER LIGHT FIXTURE IN ROOM
 - NA.
 - CENTER LIGHT FIXTURES BETWEEN OVERHEAD DOOR. MOUNT BOTTOM OF FIXTURE 2" BELOW BOTTOM OF OVERHEAD DOOR TRACK. TYPICAL
 - LINE OF OVERHEAD DOOR
 - MOUNT FIXTURES TIGHT TO STRUCTURE ABOVE. TYPICAL
 - CENTER FIXTURE OVER SERVICE DESK BELOW
 - ROCK MOUNTED WATER HEATER. RE: PLUMBING DRAWINGS.

LIGHT FIXTURE SCHEDULE ALL FIXTURES FURNISHED AND INSTALLED BY GENERAL CONTRACTOR									
SYMBOL	MARK	QUANTITY	DESCRIPTION	MANUF.	CAT. NO.	LAMP	MOUNTING	VOLTAGE	REMARKS
	A	4	EXTERIOR DECORATIVE LIGHT FIXTURE	COOPER LIGHTING	303-W1-LEDB2-3000-UNV-T4-DIM10	16W LED	WALL	120	REFER TO ELEVATIONS FOR MOUNTING LOCATIONS
	F1	8	EXTERIOR DECORATIVE LIGHT FIXTURE	MCGRAW EDISON	IST-SA1F-730-U-T4FT	25W LED	WALL	120	
	F2	3	EXIT SIGN	COOPER LIGHTING	APC7 G	LED	WALL/CENTER ON DOOR	120	PROVIDE EMERGENCY BATTERY PACK (90 MINUTE MIN.) MOUNT AT 12'-0" AFF
	F3	3	4'-0" STRIP LED	COOPER LIGHTING	4SNLED LD5 UNV	LED	UNIVERSAL	120	MOUNT AT 12'-0" AFF
	F4	11	8'-0" STRIP LED	COOPER LIGHTING	8T5NLED LD5 UNV	LED	UNIVERSAL	120	MOUNT AT 12'-0" AFF
	F7	12	2x4 RECESSED LED TROFFER	COOPER LIGHTING	24CGT 4540C	LED	GRID MOUNT	120	
	F9	17	4' - LED HIGHBAY	COOPER LIGHTING	LHB 18 UNV	LED	HUNG FROM STRUCT.	120	
	F10	6	EMERGENCY LIGHT W/ BATTERY BACKUP	COOPER LIGHTING	SEL 25	LED	WALL MOUNTED	120	PROVIDE EMERGENCY BATTERY PACK (90 MINUTE MIN.) AND TIME DELAY RELAY
	F11	2	EMERGENCY EGRESS LIGHT - EXTERIOR	COOPER LIGHTING	AEL 246	LED	SURFACE	120	PROVIDE EMERGENCY BATTERY PACK (90 MINUTE MIN.)

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ADA, OKLAHOMA



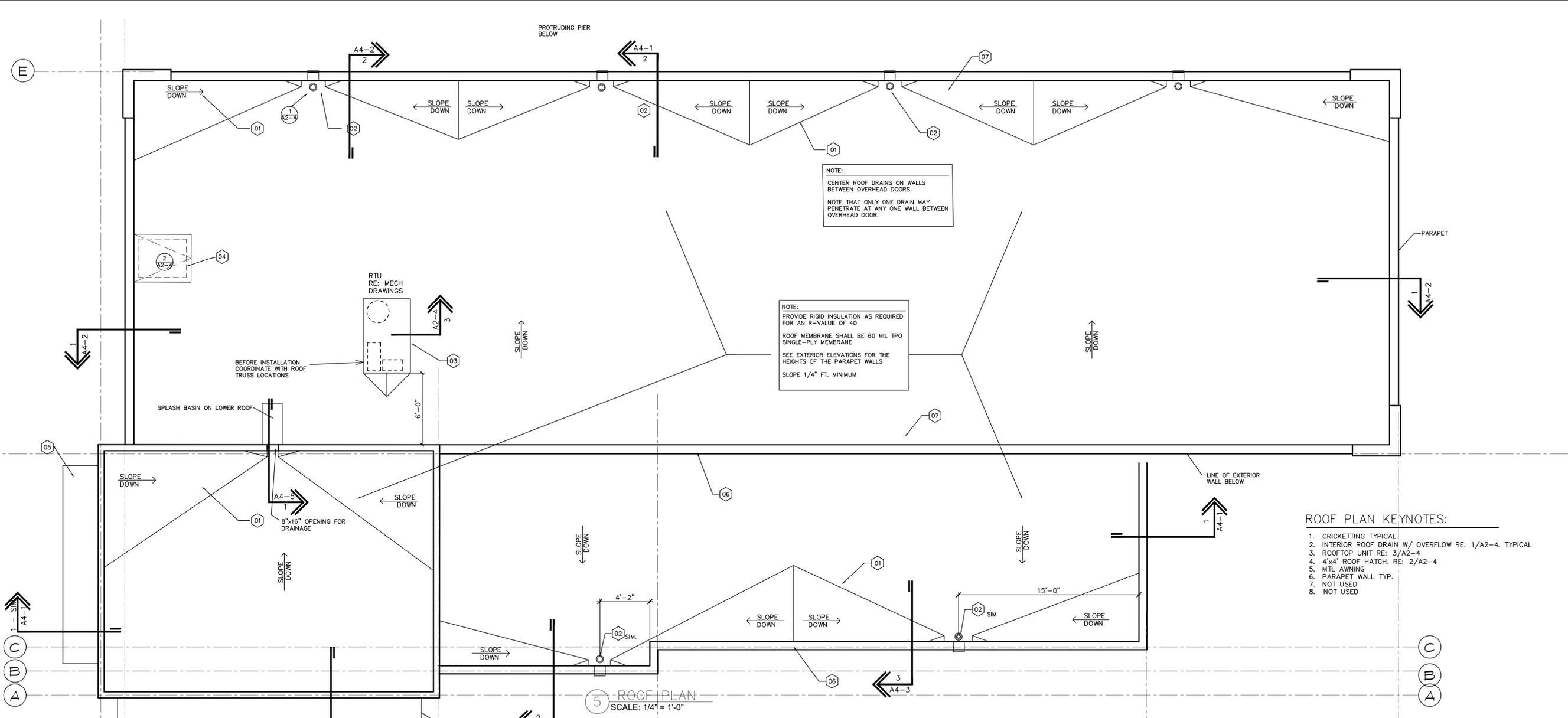
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	10.10.23	RESPOND TO BLDG. DEPT COMMENTS

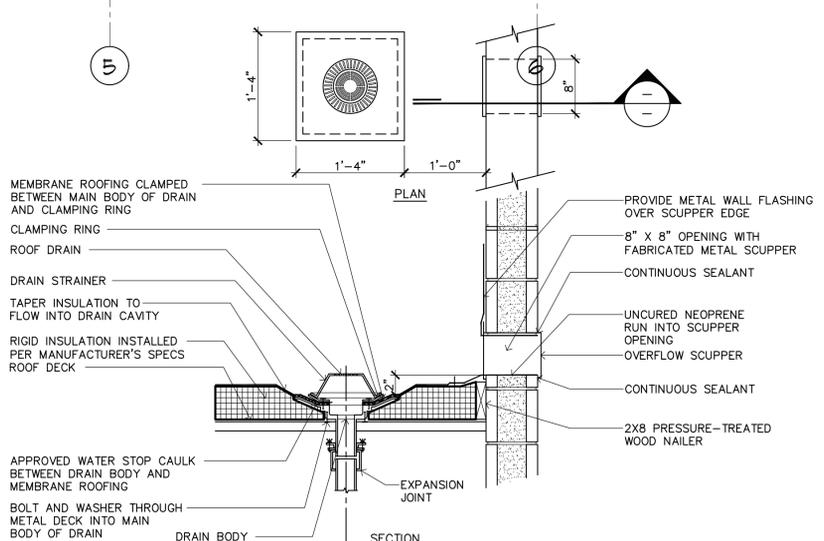
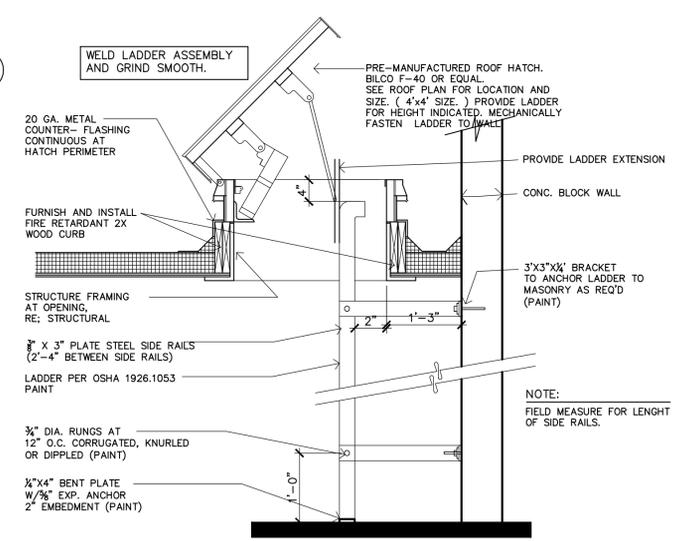
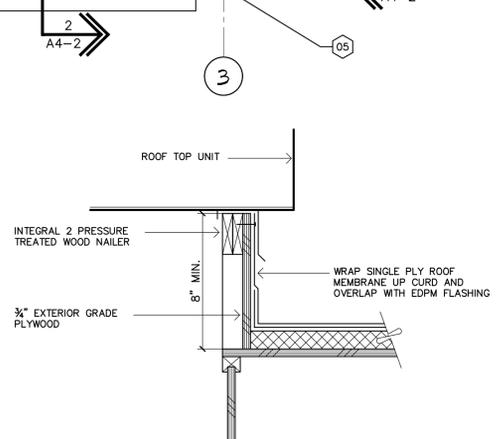
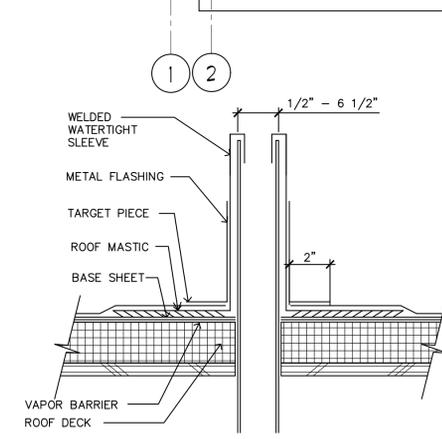
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SHEET
A2-3
CEILING PLAN



- ROOF PLAN KEYNOTES:**
1. CRICKETTING TYPICAL
 2. INTERIOR ROOF DRAIN W/ OVERFLOW RE: 1/A2-4. TYPICAL
 3. ROOFTOP UNIT RE: 3/A2-4
 4. 4'x4' ROOF HATCH. RE: 2/A2-4
 5. MTL AWNING
 6. PARAPET WALL TYP.
 7. NOT USED
 8. NOT USED



BRAKES PLUS
1201 LONNIE ABBOTT BLVD.
ADA, OKLAHOMA



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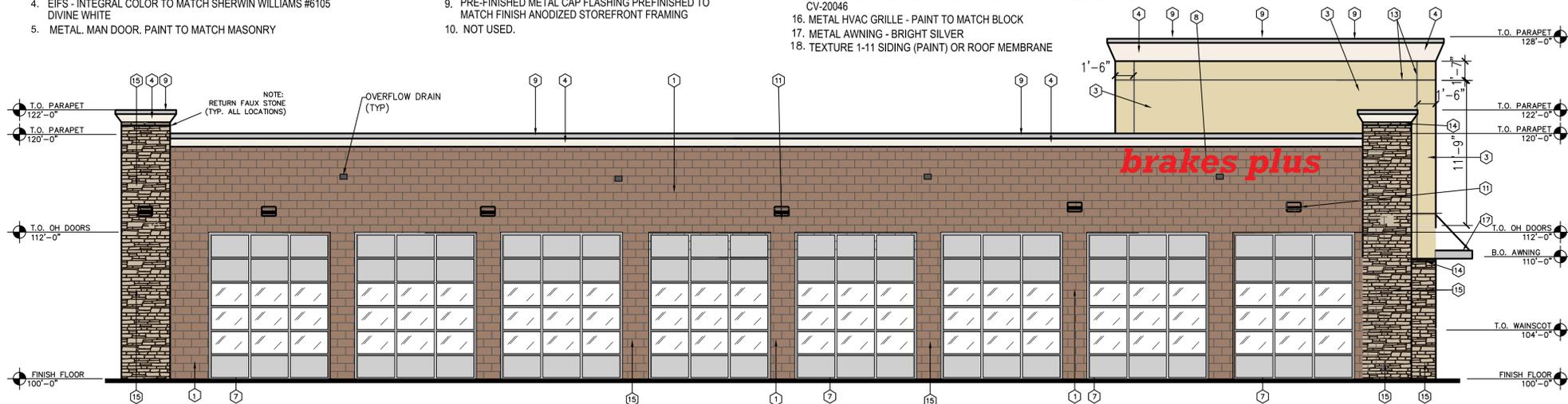
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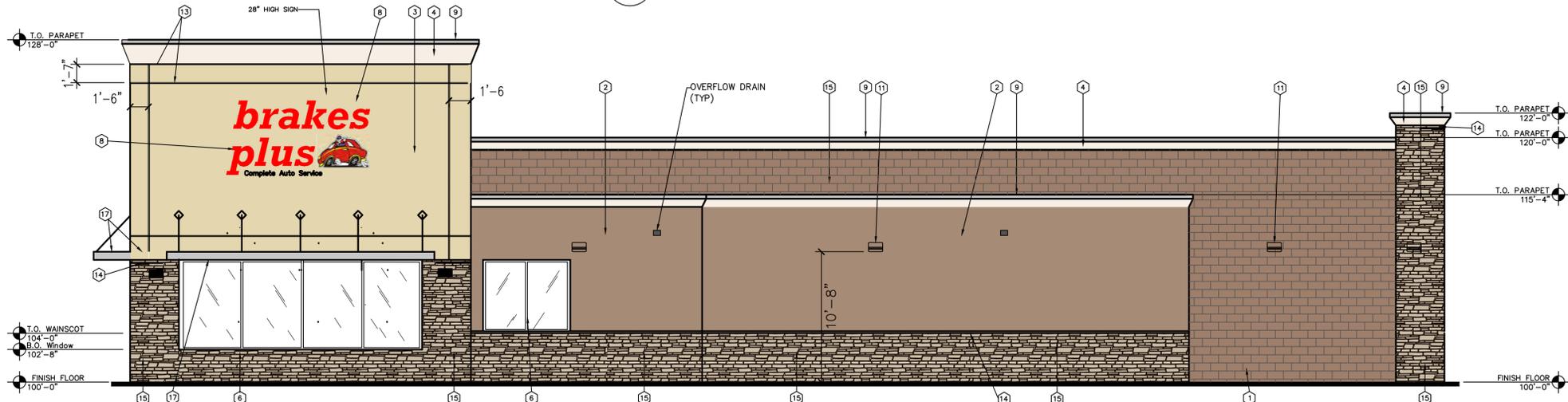
SHEET
A2-4
ROOF PLAN

KEYNOTES

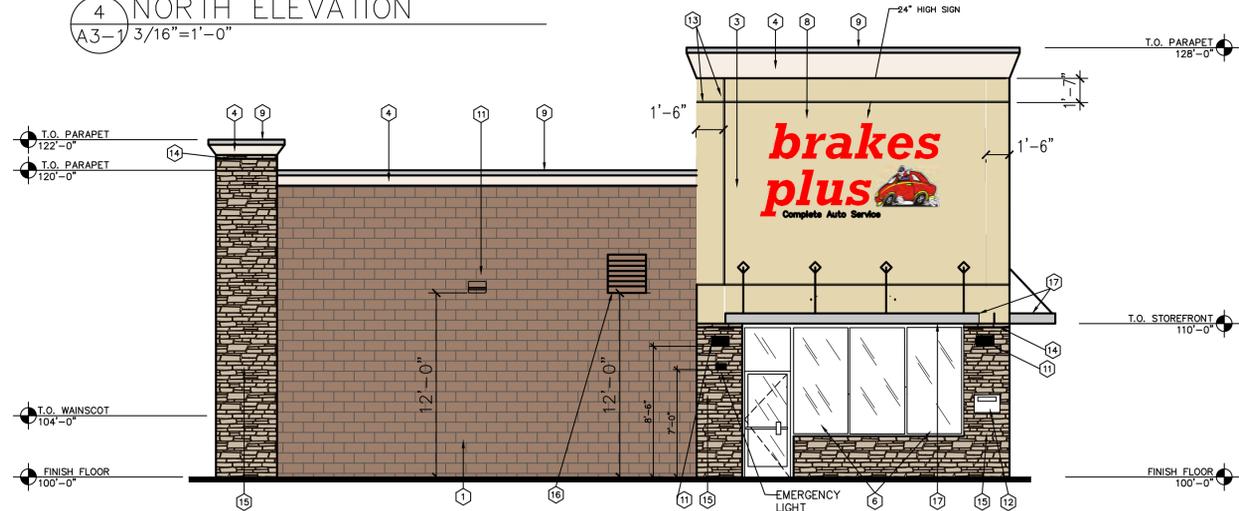
- 1. SMOOTH FACE CONCRETE BLOCK BY BEST BLOCK
COLOR: 739 MEDIUM BROWN
- 2. EIFS - INTEGRAL COLOR TO MATCH SHERWIN WILLIAMS #2835
CRAFTSMAN BROWN
- 3. EIFS - INTEGRAL COLOR TO MATCH SHERWIN WILLIAMS #2834
BIRDEYE MAPLE
- 4. EIFS - INTEGRAL COLOR TO MATCH SHERWIN WILLIAMS #6105
DIVINE WHITE
- 5. METAL MAN DOOR. PAINT TO MATCH MASONRY
- 6. ALUMINUM/GLASS STOREFRONT
CLEAR ANODIZED ALUMINUM
- 7. ALUMINUM SECTIONAL OVERHEAD DOORS
CLEAR ANODIZED ALUMINUM
- 8. ILLUMINATED SIGNAGE (UNDER SEPARATE PERMIT)
- 9. PRE-FINISHED METAL CAP FLASHING PREFINISHED TO
MATCH FINISH ANODIZED STOREFRONT FRAMING
- 10. NOT USED.
- 11. DECORATIVE LIGHT FIXTURE.
- 12. KEY DROP BOX
- 13. 1 1/2" X 3/4" REVEAL
- 14. WATER SILL - FAUX STONE - CULTURED STONE - WHITE OAK COUNTRY
LEDGESTONE CV-20046
- 15. FAUX STONE - CULTURED STONE - WHITE OAK COUNTRY LEDGESTONE
CV-20046
- 16. METAL HVAC GRILLE - PAINT TO MATCH BLOCK
- 17. METAL AWNING - BRIGHT SILVER
- 18. TEXTURE 1-11 SIDING (PAINT) OR ROOF MEMBRANE



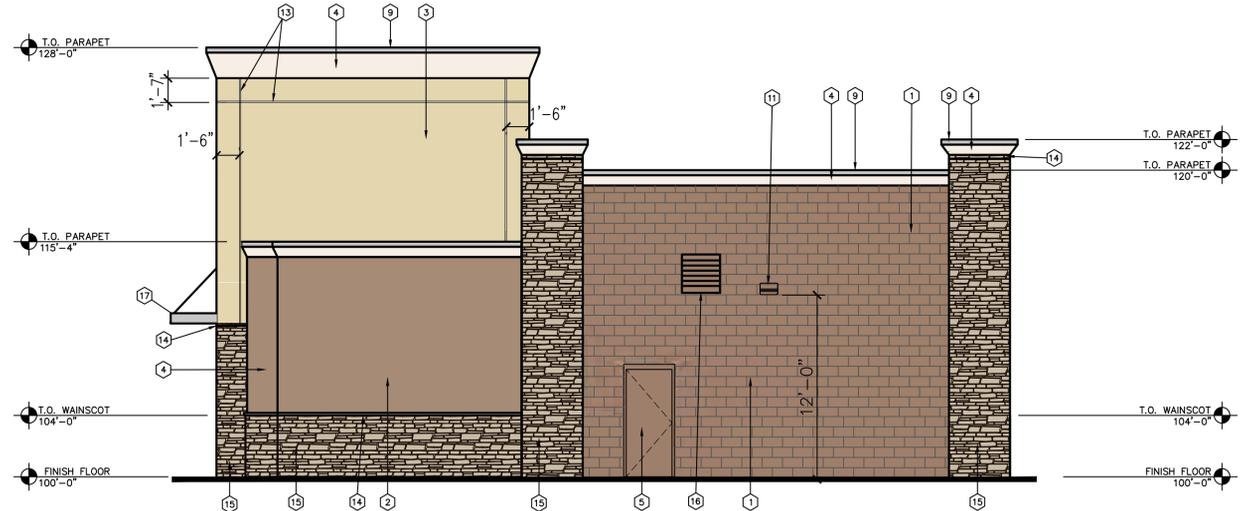
1 SOUTH ELEVATION
A3-1 3/16"=1'-0"



4 NORTH ELEVATION
A3-1 3/16"=1'-0"



2 EAST ELEVATION
A3-1 3/16"=1'-0"



3 WEST ELEVATION
A3-1 3/16"=1'-0"

BRAKES PLUS
1201 LONNIE ABBOTT BLVD.
ADA, OKLAHOMA



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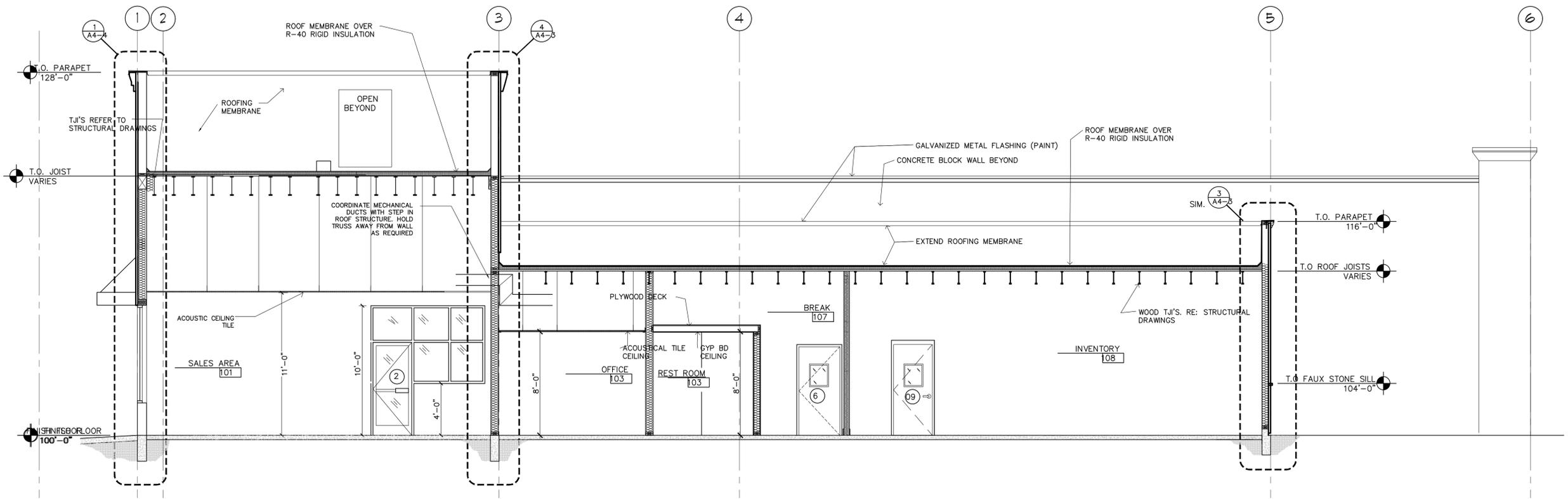


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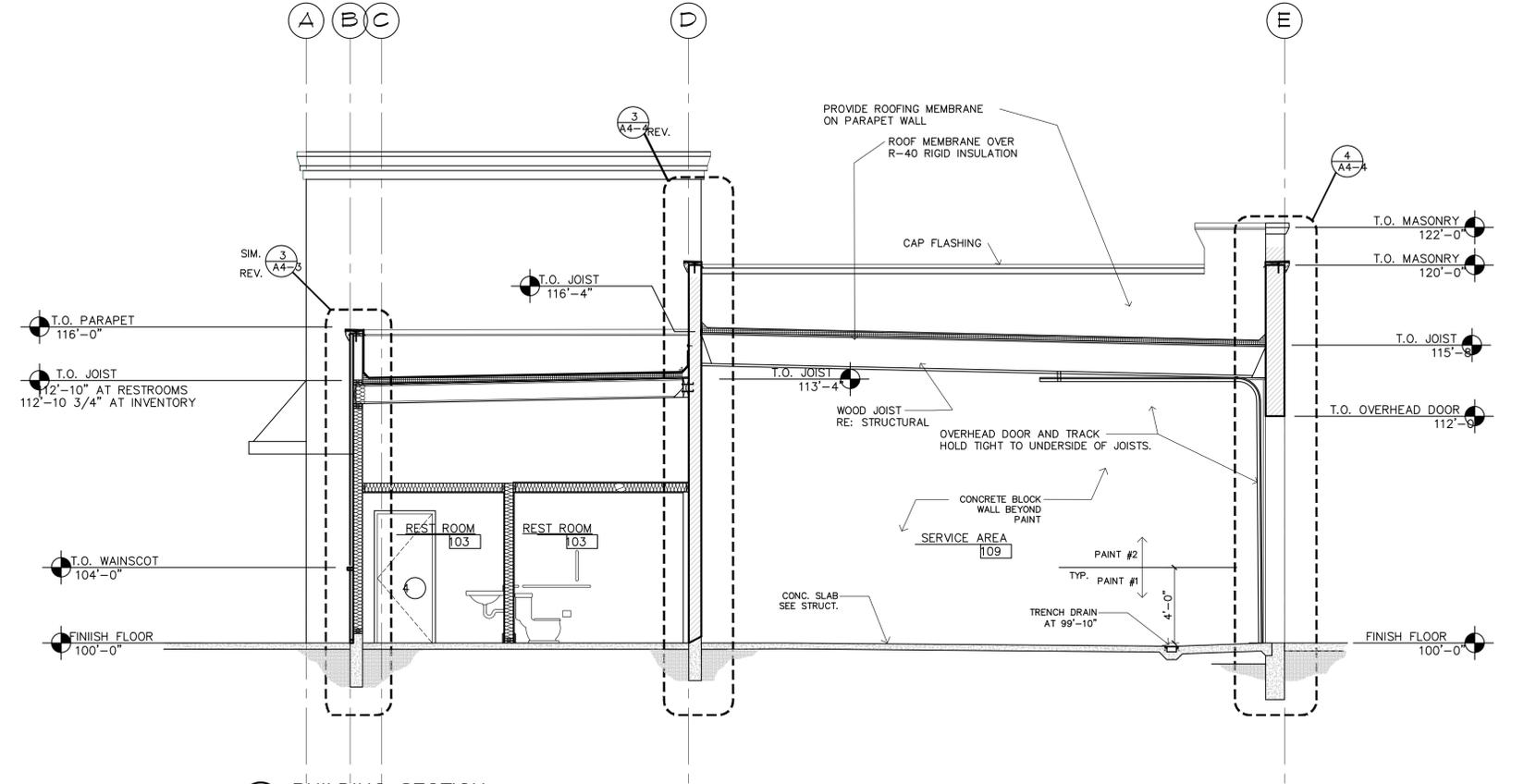
45 SPYGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.981-8923
NORMAN@ARCODEV.COM

EXTERIOR ELEVATIONS

A3-1

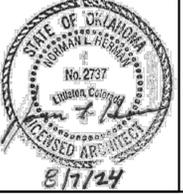


1 BUILDING SECTION
SCALE: 1/4" = 1'-0"



2 BUILDING SECTION
SCALE: 1/4" = 1'-0"

BRAKES PLUS
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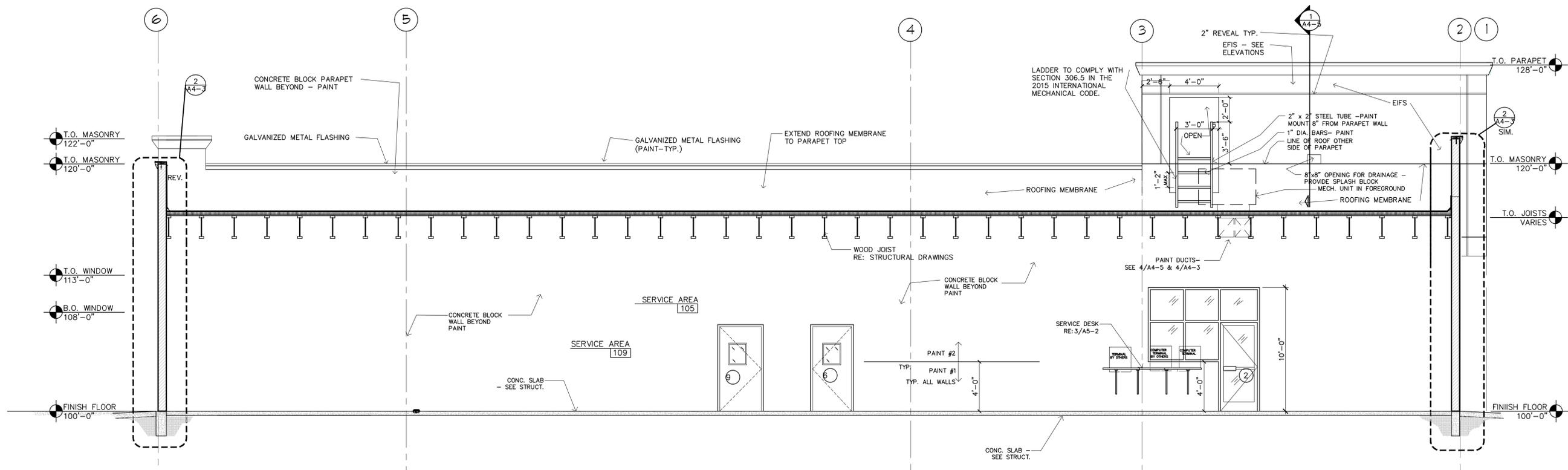
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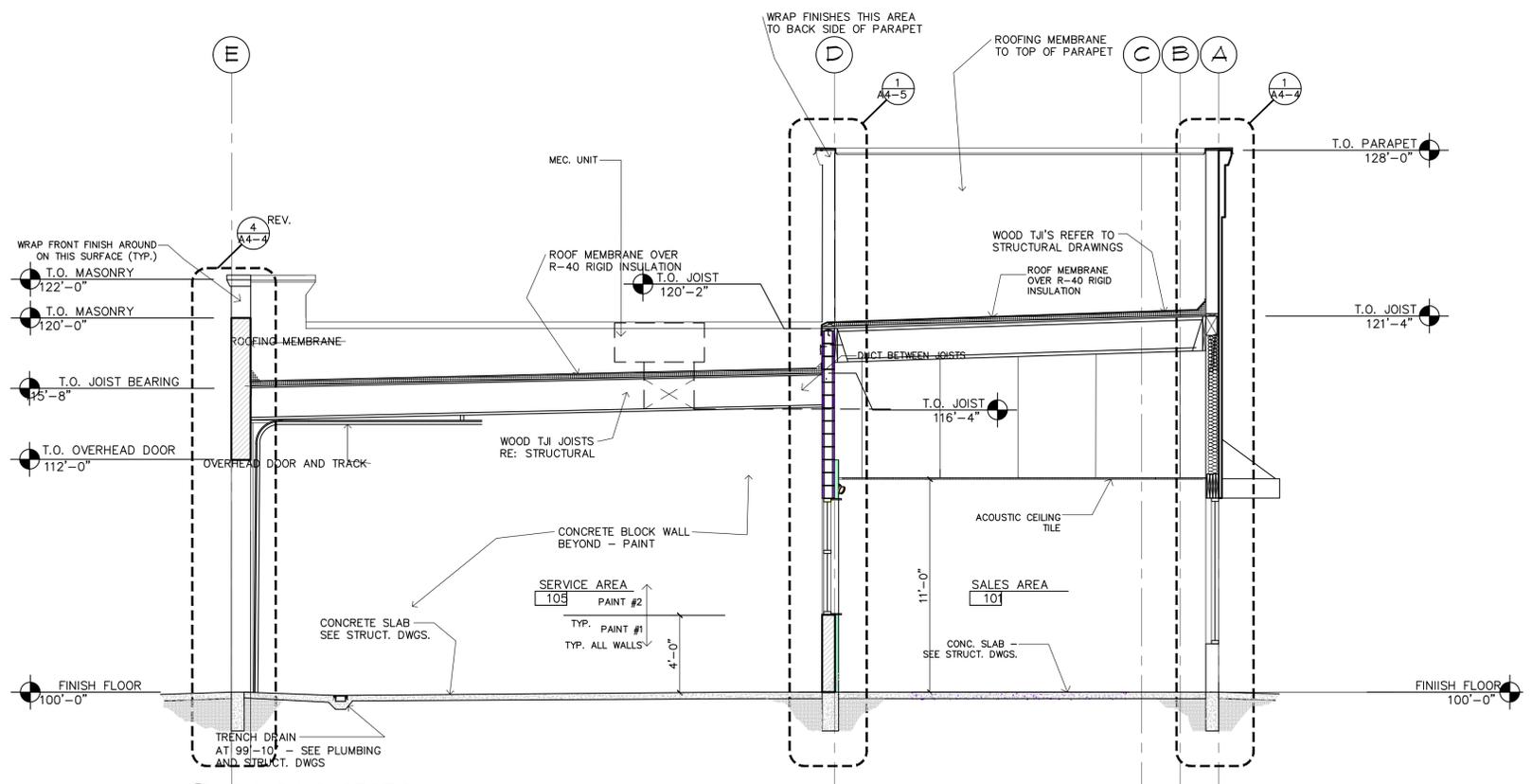
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SHEET
A4-1
BUILDING SECTIONS



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



2 BUILDING SECTION
SCALE: 1/4" = 1'-0"

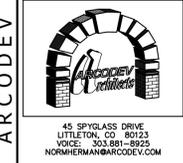
BRAKES PLUS
1201 LONNIE ABBOTT BLVD.
ADA, OKLAHOMA



8/7/24
ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	08.07.2024	FOR SUBMITTAL TO BLDG. DEPT.

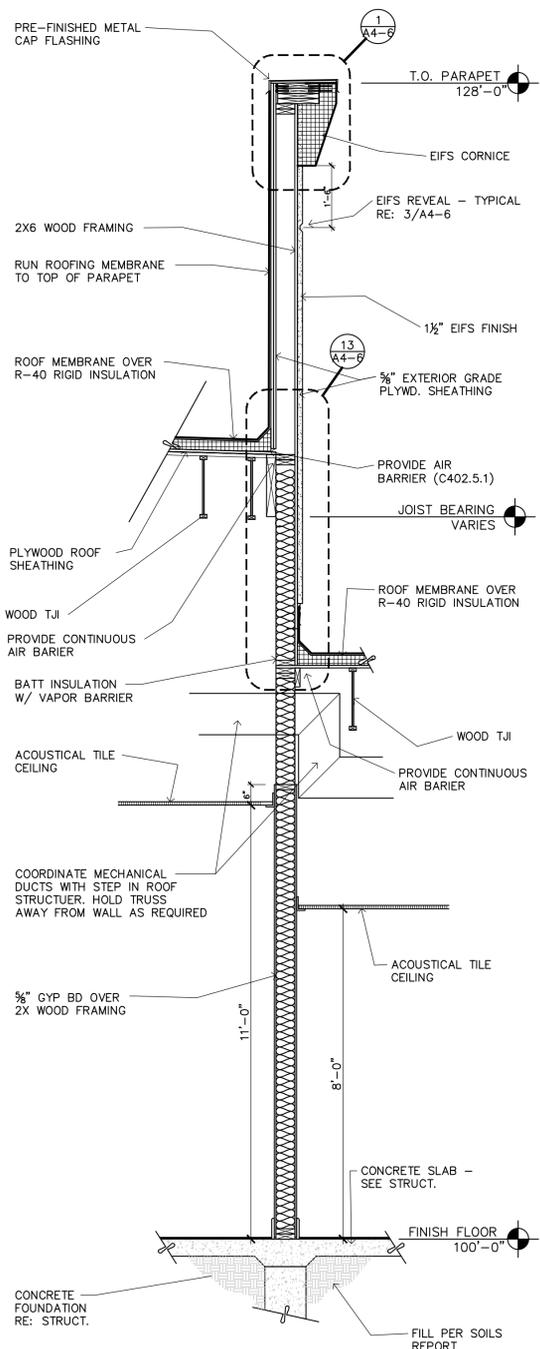
ARCODEV JOB #:
CLIENT JOB #:
DRAWN BY:
CHECKED BY: NLH
DATE OF ISSUE: 06.26.24



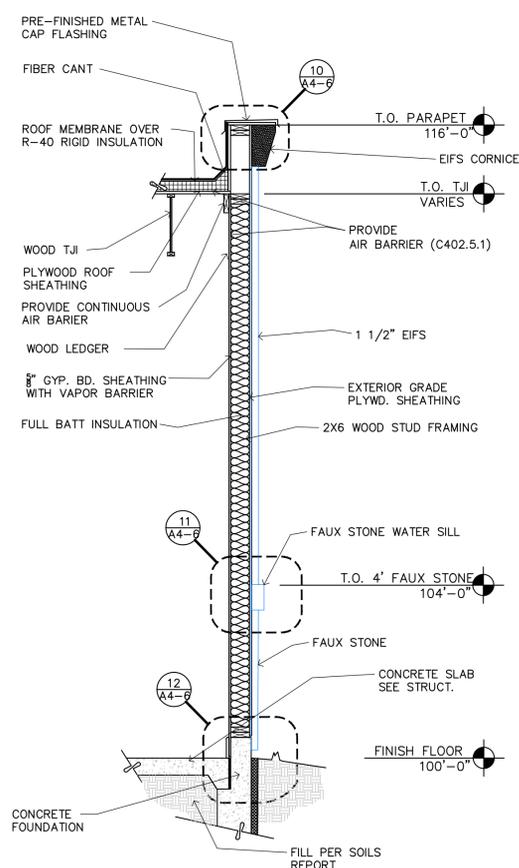
SHEET

A4-2

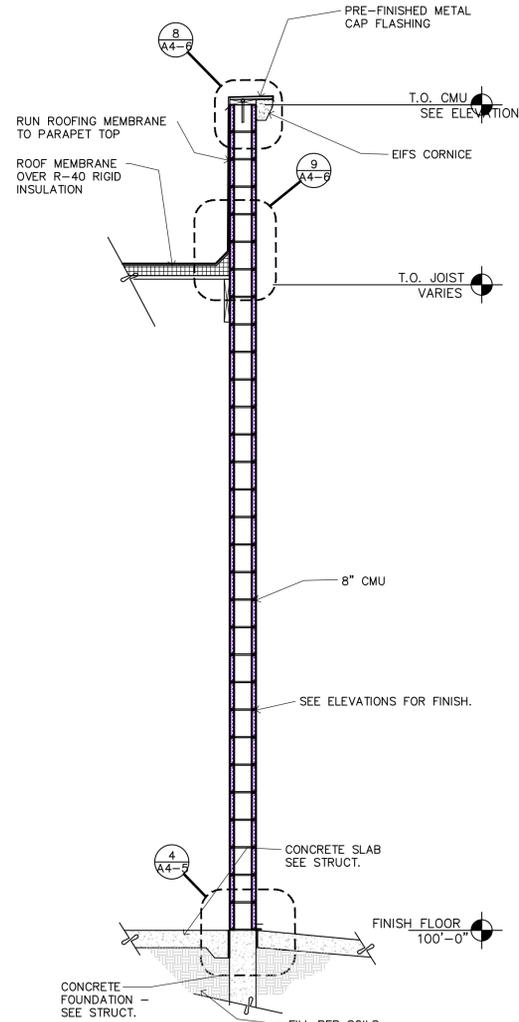
BUILDING SECTIONS



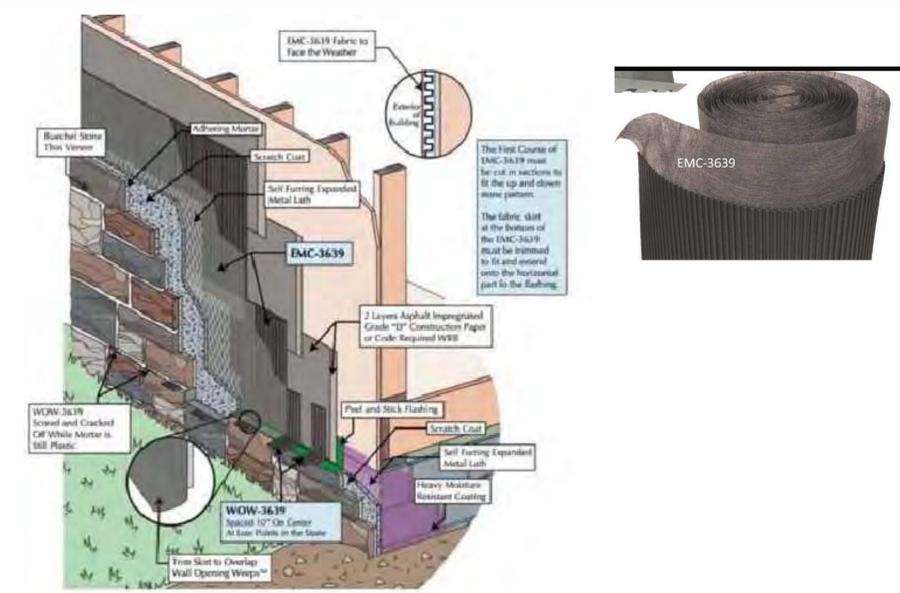
4 WALL SECTION
A4-3 1/2"=1'-0"



3 WALL SECTION
A4-3 1/2"=1'-0"

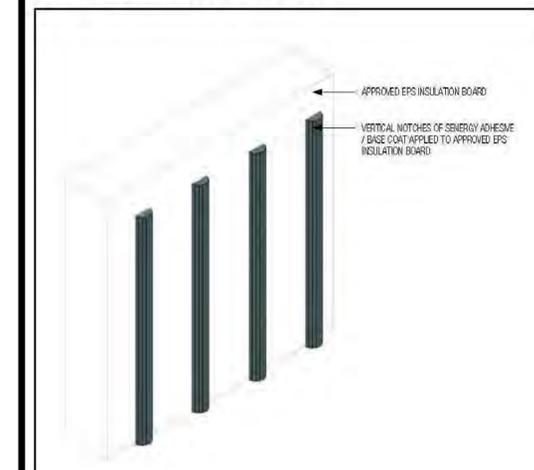


2 WALL SECTION
A4-3 1/2"=1'-0"



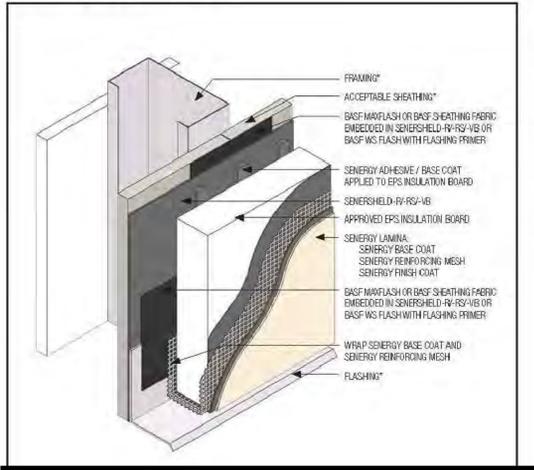
5 FAUX STONE WATER DRAINAGE DETAILS.
A4-3 NO SCALE

Channeled Adhesive CI Design



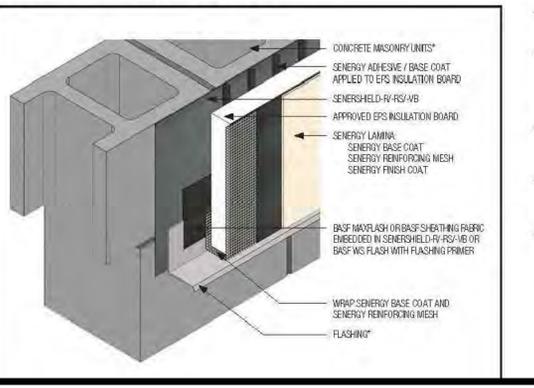
- Install BASF materials in accordance with current installation instructions.
- Unsatisfactory conditions shall be reported to the General Contractor and corrected before the application of BASF products.
- Verify all materials are installed in accordance with current installation instructions.
- Apply mixed base coat to entire surface of insulation board using a stainless steel trowel with 1/2" x 1/2" (13 mm x 13 mm) notches spaced 2" (50 mm) apart. Ribbons of adhesive must be applied parallel to the 2" (610 mm) dimension of the EPS insulation board to ensure they are applied to the substrate.
- Set EPS insulation board into place and apply pressure over entire surface of board to ensure positive uniform contact and high initial grab. Do not slide board into place.

Channeled Adhesive CI Design



- Install BASF materials in accordance with current installation instructions.
- Unsatisfactory conditions shall be reported to the General Contractor and corrected before the application of BASF products.
- Verify all materials are installed in accordance with current installation instructions.
- All terminations must be fully encapsulated with mesh reinforced base coat.
- Ensure a means for drainage is provided at system termination.

Channeled Adhesive CI Design



- Install BASF materials in accordance with current installation instructions.
- Unsatisfactory conditions shall be reported to the General Contractor and corrected before the application of BASF products.
- Verify all materials are installed in accordance with current installation instructions.
- All terminations must be fully encapsulated with mesh reinforced base coat.
- Ensure a means for drainage is provided at system termination.

1 EIFS WATER DRAINAGE DETAILS.
A4-3 NO SCALE

BRAKES PLUS
1201 LONNIE ABBOTT BLVD.
ADA, OKLAHOMA



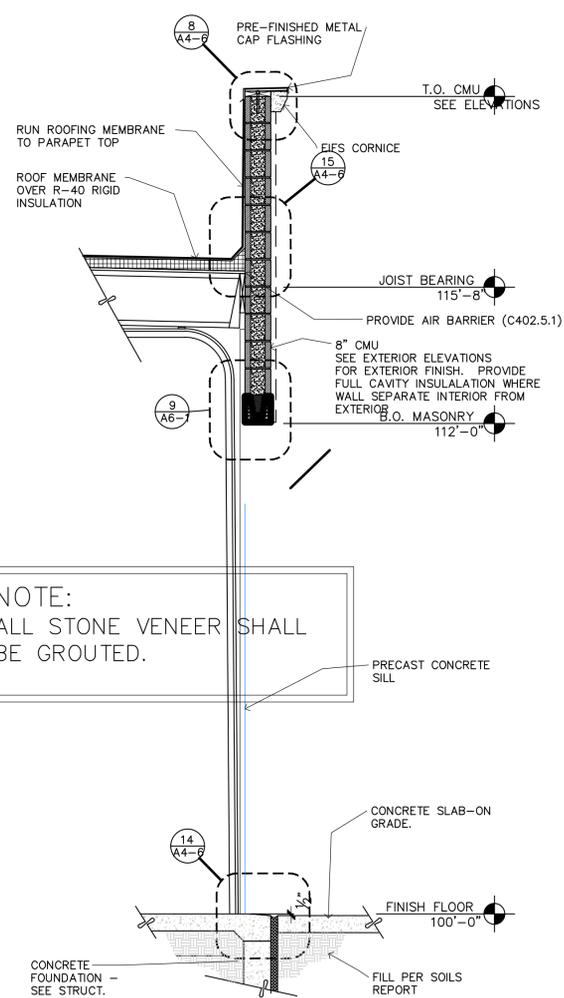
ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	06.07.2024	FOR SUBMITTAL TO BLDG. DEPT.

ARCODEV JOB #:
CLIENT JOB #:
DRAWN BY:
CHECKED BY: NLH
DATE OF ISSUE: 06.26.24

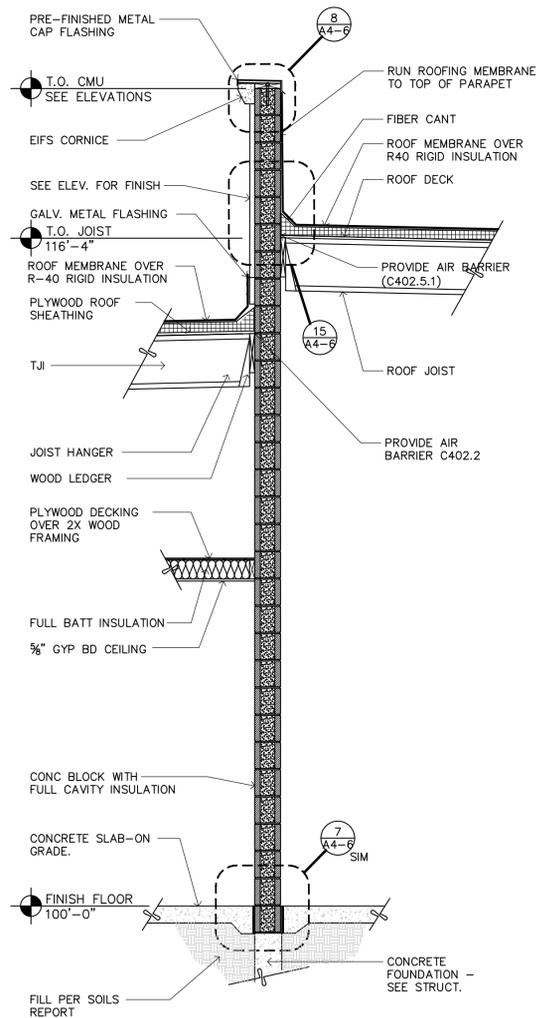
ARCODEV
45 SPYGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.881-8925
NORM@HERMANGARCODEV.COM

SHEET
A4-3
WALL SECTIONS

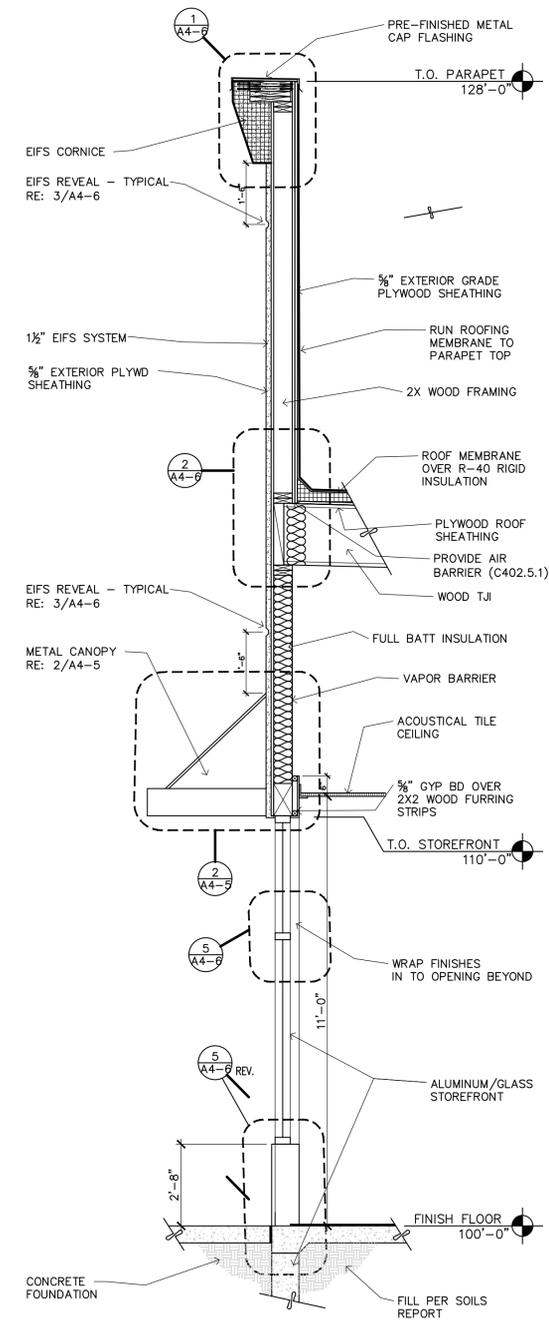


NOTE:
ALL STONE VENEER SHALL
BE GROUTED.

4 WALL SECTION
A4-4 1/2"=1'-0"



3 WALL SECTION
A4-4 1/2"=1'-0"



1 WALL SECTION
A4-4 1/2"=1'-0"

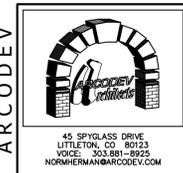
BRAKES PLUS
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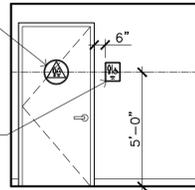
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CLIENT JOB #:
DRAWN BY:
CHECKED BY: NLH
DATE OF ISSUE: 06.26.24



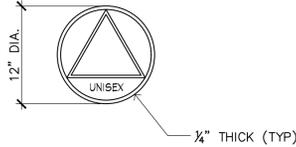
SHEET

A4-4
WALL SECTIONS

DOOR-MOUNTED SIGNAGE APPROPRIATE TO ROOM USE PER CBC 1115B.6.1, 1115B.6.2 AND 1115B.6.2



WALL MOUNTED SIGNAGE TO BE LOCATED ON LATCH SIDE OF DOOR SWING. MOUNT AT 60" TO CENTERLINE OF SIGN FROM FLOOR

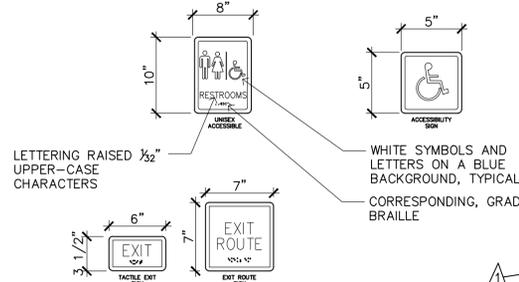


NOTES:

- ON DOORWAYS LEADING TO SANITARY FACILITIES, THE SYMBOLS TO BE PROVIDED ARE 12" EQUILATERAL TRIANGLE FOR MEN, OR 12" DIAMETER CIRCLE FOR WOMEN, 1/4" THICK CENTERED ON DOOR 60" ABOVE FLOOR, CONTRASTING COLOR WITH DOOR. PER CBC 1115B.6

NOTES:

- H.C. SIGNS PER ADA
- ALL LETTERS AND SYMBOLS SHALL BE RAISED 1/32"
- 12" DIAMETER CIRCLE, 1/4" THICK WITH THE COLOR AND CONTRAST BEING DISTINCTLY DIFFERENT FROM THE COLOR OF THE DOOR
- INTERNATIONAL SIGN OF ACCESSIBILITY, WHITE FIGURE ON BLUE (#15090 FEDERAL STANDARD 595A) BACKGROUND
- SIGN SHALL BE DISPLAYED AT 60" A.F.F., CENTERED ON THE DOOR. COLOR AND CONTRAST SHALL BE DISTINCTLY DIFFERENT FROM COLOR AND CONTRAST OF THE DOOR TYP. FOR MEN'S AND WOMEN'S SIGNS
- EDGES OF SIGNS SHALL BE ROUNDED, CHAMFERED OR EASED AND CORNERS OF SIGNS SHALL HAVE A MINIMUM RADIUS OF 1/8"
- 12" EQUILATERAL TRIANGLE, 1/4" THICK WITH THE VERTEX POINTING UPWARD AND THE COLOR AND CONTRAST BEING DISTINCTLY DIFFERENT FROM THE COLOR OF THE DOOR
- LETTERS AND NUMERALS ON SIGNS ARE RAISED 1/32", SANS SERIF UPPERCASE CHARACTERS TO BE ACCOMPANIED BY GRADE 2 BRAILLE.
- BRAILLE DOTS ARE 1/10" ON CENTER IN EACH CELL WITH 2/10" SPACE BETWEEN CELLS
- BRAILLE DOTS ARE RAISED A MINIMUM OF 1/40" ABOVE THE BACKGROUND
- MOUNTING HEIGHT IS 60" FROM FINISH FLOOR TO THE CENTERLINE OF THE SIGN

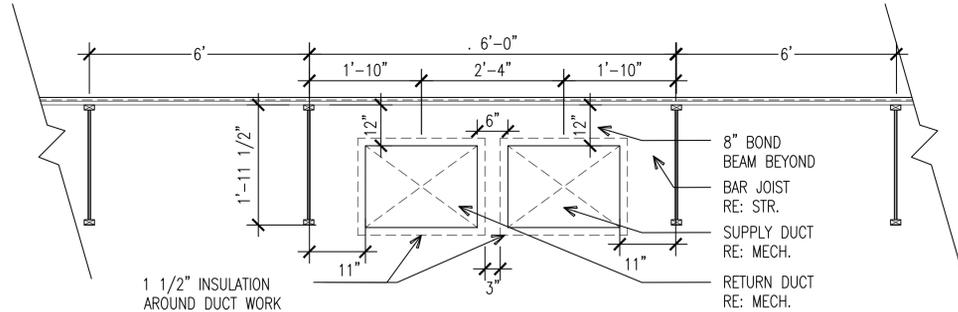


NOTE: PROVIDE SIGNAGE AT RESTROOMS AND EXITS

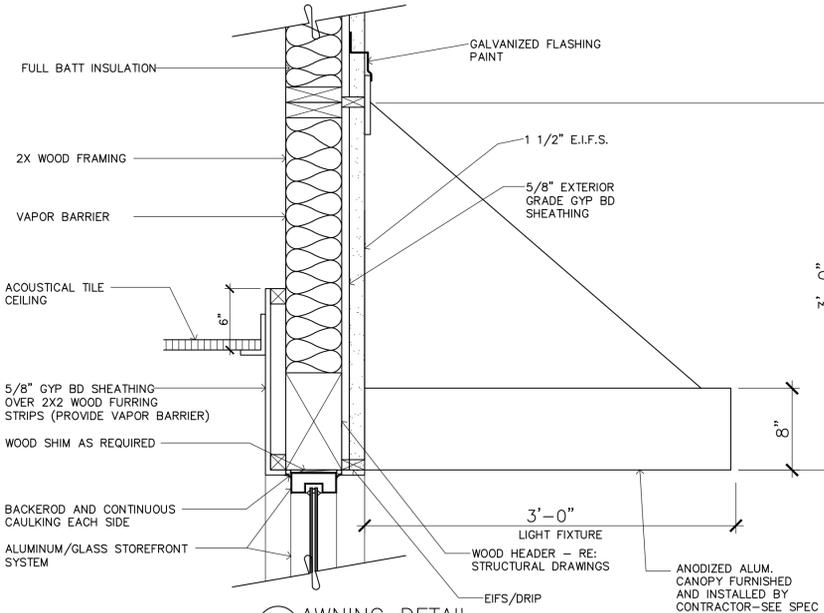
NOTES:

- CHARACTERS, SYMBOLS AND THEIR BACKGROUND SHALL HAVE A NONGLARE FINISH
- CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND
- VISUAL CHARACTERS ON SIGNS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60% MINIMUM AND 110% MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10% MINIMUM AND 20% MAXIMUM OF THE HEIGHT OF THE CHARACTER
- CHARACTERS ON SIGNS REQUIRED TO BE ACCESSIBLE SHALL BE SIZED ACCORDING TO THE "VISUAL CHARACTER HEIGHT" TABLE. THE MINIMUM HEIGHT IS MEASURED USING AN UPPERCASE LETTER "I".
- RAISED CHARACTERS ON SIGNS SHALL BE RAISED 1/32" MINIMUM AND SHALL BE SANS SERIF UPPERCASE CHARACTERS ACCOMPANIED BY CONTRACTED (GRADE 2) BRAILLE.
- RAISED CHARACTERS SHALL BE A MINIMUM OF 3/8" AND A MAXIMUM OF 2" HIGH.
- PICTORIAL SYMBOL SIGNS (PICTOGRAMS) SHALL BE ACCOMPANIED BY THE VERBAL DESCRIPTION PLACED DIRECTLY BELOW THE PICTOGRAM. THE OUTSIDE DIMENSION OF THE PICTOGRAM FIELD SHALL BE A MINIMUM OF 6" IN HEIGHT.
- BRAILLE SHALL BE PLACED A MINIMUM OF 3/8" AND A MAXIMUM OF 1/2" DIRECTLY BELOW THE TACTILE CHARACTERS, FLUSH LEFT OR CENTERED.
- RAISED CHARACTERS ON SIGNS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60% MINIMUM AND 110% MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10% MINIMUM AND 20% MAXIMUM OF THE HEIGHT OF THE CHARACTER.
- MOUNTING HEIGHT SHALL BE 48" MINIMUM, MEASURED FROM THE BASELINE OF THE LOWEST LINE OF BRAILLE, AND 60" MAXIMUM, MEASURED FROM THE BASELINE OF THE HIGHEST RAISED CHARACTERS, ABOVE THE FINISH FLOOR OR GROUND SURFACE.

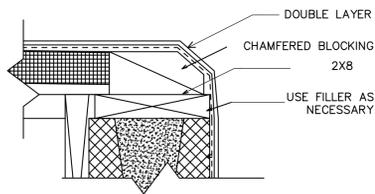
10 INTERIOR SIGNAGE INFORMATION
NO SCALE



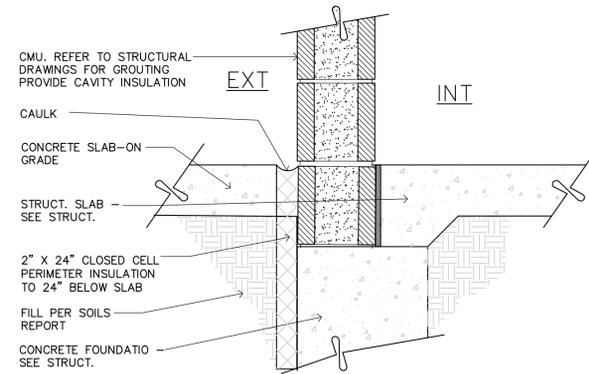
4 RTU DUCT-WORK DETAIL
SCALE: 3/4" = 1'-0"



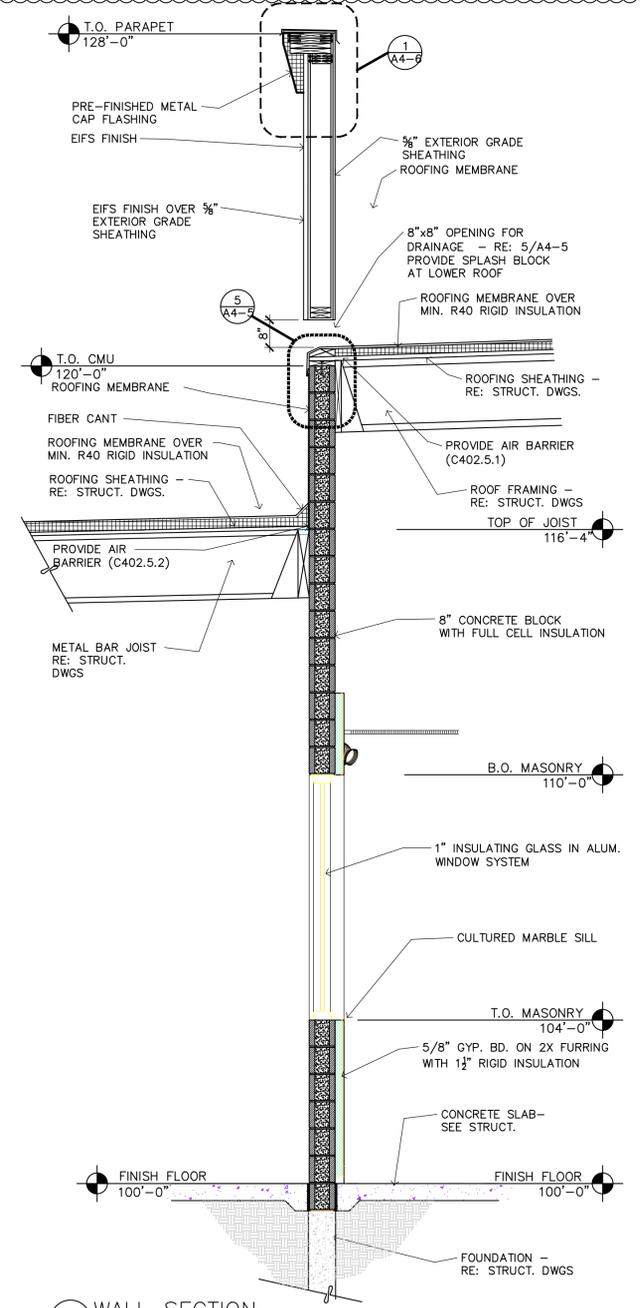
2 AWNING DETAIL
SCALE: 1 1/2" = 1'-0"



5 ROOF CORNER DETAIL
SCALE: 3" = 1'-0"

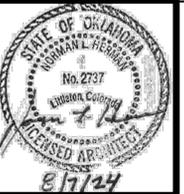


3 CMU FOUNDATION DETAIL
SCALE: 1/2" = 1'-0"



1 WALL SECTION
SCALE: 1/2" = 1'-0"

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ADA, OKLAHOMA



ARCHITECT OF RECORD

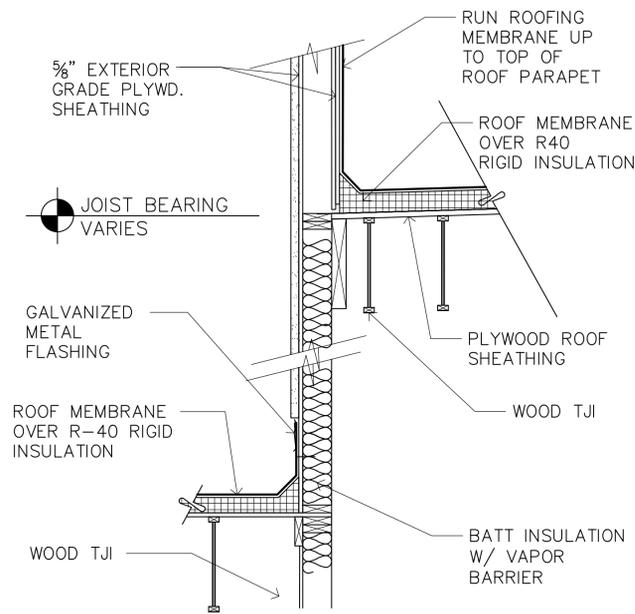
REVISION	DATE	COMMENTS
	08.07.2024	FOR SUBMITTAL TO BLDG. DEPT.



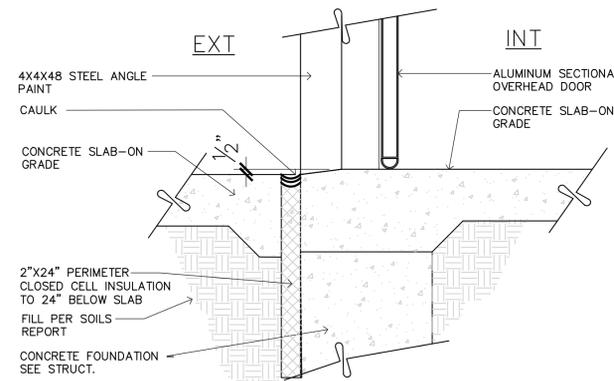
ARCODEV

A4-5

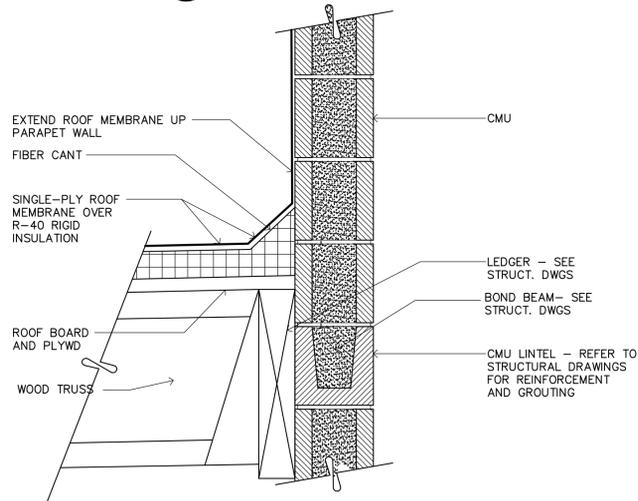
WALL SECTIONS & DET.



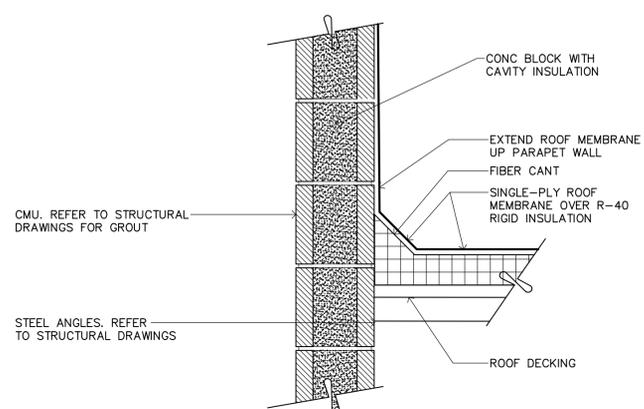
13 ROOF DETAIL
SCALE: 1/2" = 1'-0"



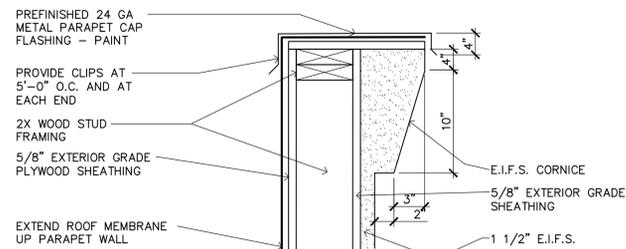
14 FOUNDATION DETAIL
SCALE: 1/2" = 1'-0"



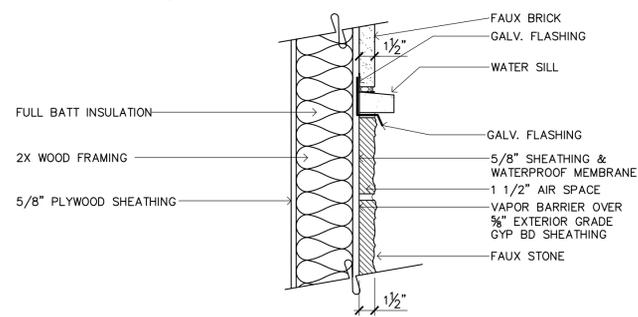
15 ROOF AT CMU DETAIL
SCALE: 1/2" = 1'-0"



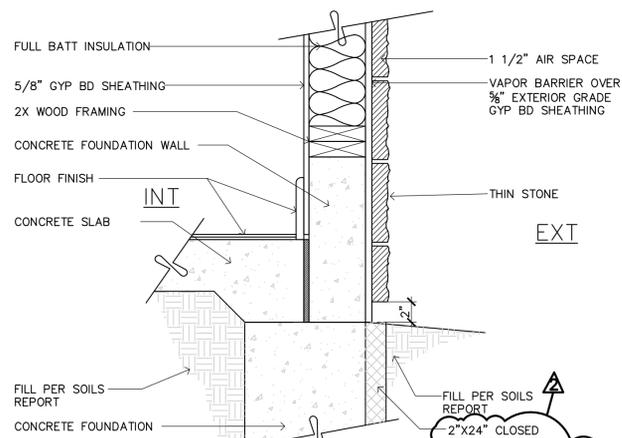
9 DECK AT CMU DETAIL
SCALE: 1/2" = 1'-0"



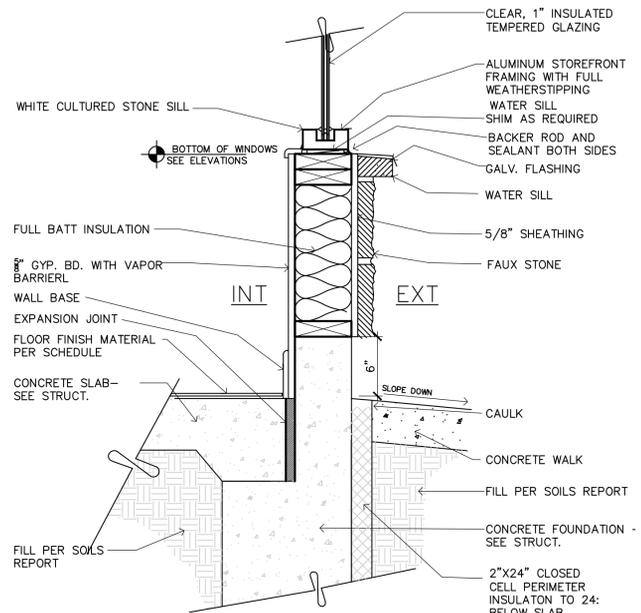
10 CORNICE AT STUD WALL DETAIL
SCALE: 1/2" = 1'-0"



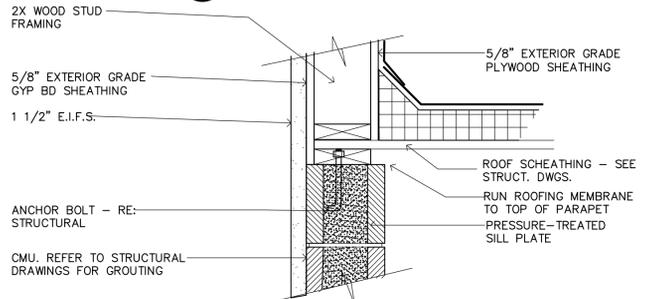
11 WAINSCOT DETAIL
SCALE: 1/2" = 1'-0"



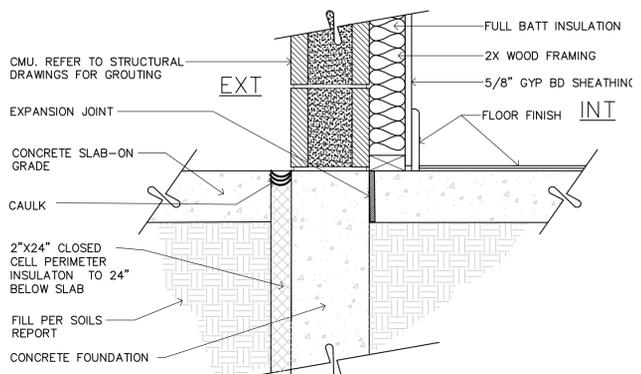
12 FOUNDATION DETAIL
SCALE: 1/2" = 1'-0"



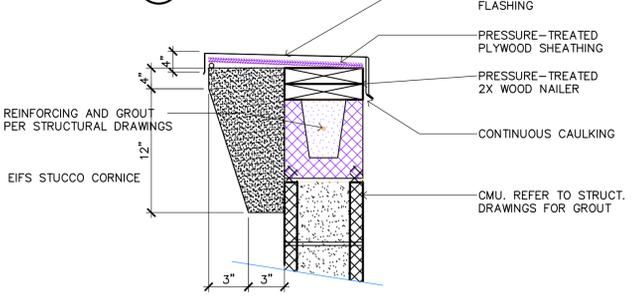
5 FOUNDATION DETAIL
SCALE: 1/2" = 1'-0"



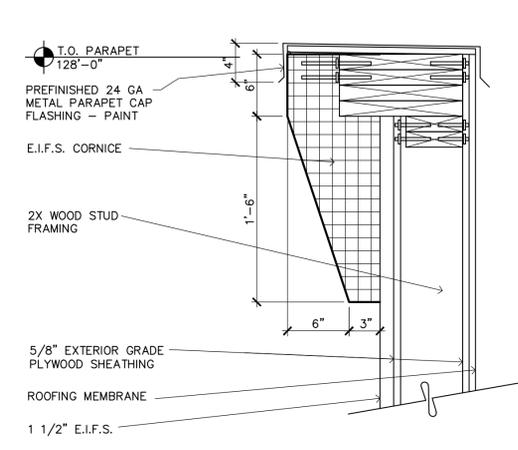
6 CMU AT STUD WALL DETAIL
SCALE: 1/2" = 1'-0"



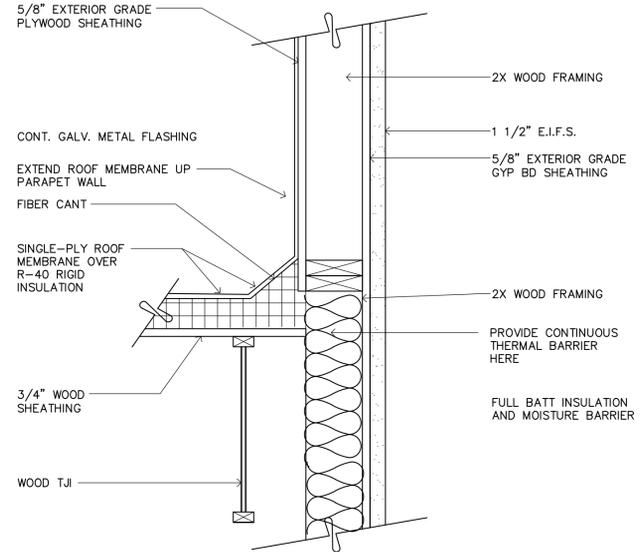
7 FOUNDATION DETAIL
SCALE: 1/2" = 1'-0"



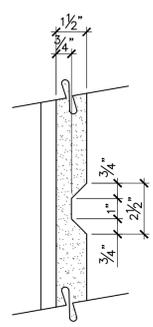
8 CORNICE AT CMU DETAIL
SCALE: 1/2" = 1'-0"



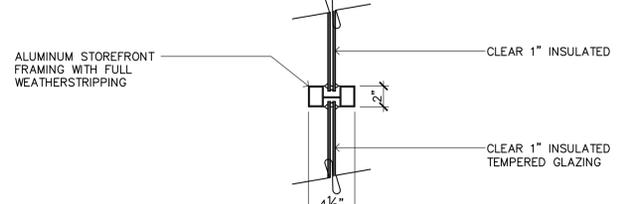
1 CORNICE AT STUD WALL DETAIL
SCALE: 1/2" = 1'-0"



2 DECK AT STUD WALL DETAIL
SCALE: 1/2" = 1'-0"



3 REVEAL DETAIL
SCALE: 3" = 1'-0"



4 STOREFRONT WINDOW DETAIL
SCALE: 1/2" = 1'-0"

BRAKES PLUS
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ADA, OKLAHOMA



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	06/07/2024	FOR SUBMITTAL TO BLDG. DEPT.

ARCOCODE JOB #:
CLIENT/JOB #:
DRAWN BY:
CHECKED BY: NLH
DATE OF ISSUE: 06.26.24



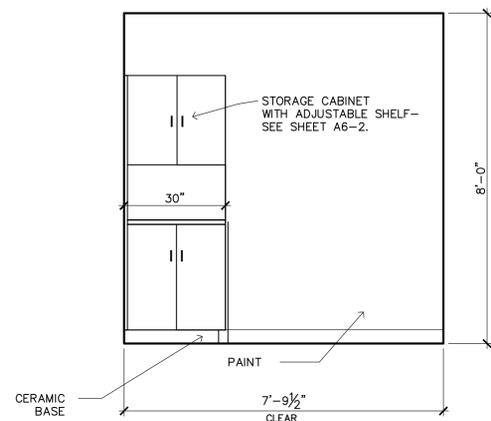
ARCOCODE

45 SPYGLASS DRIVE
LITTLETON, CO 80120
VOICE: 303.681-8925
NORTHERRMAN@ARCOCODE.COM

SHEET

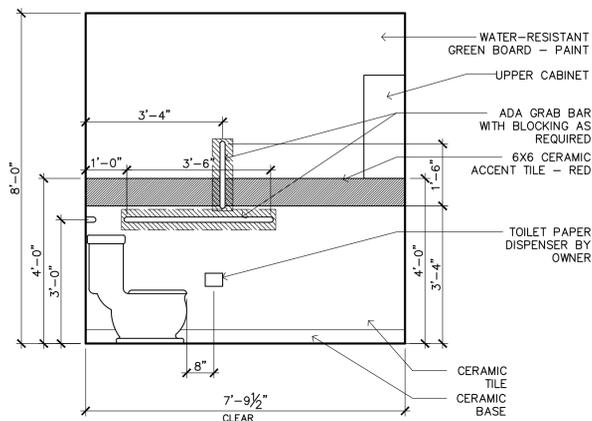
A4-6

DETAILS

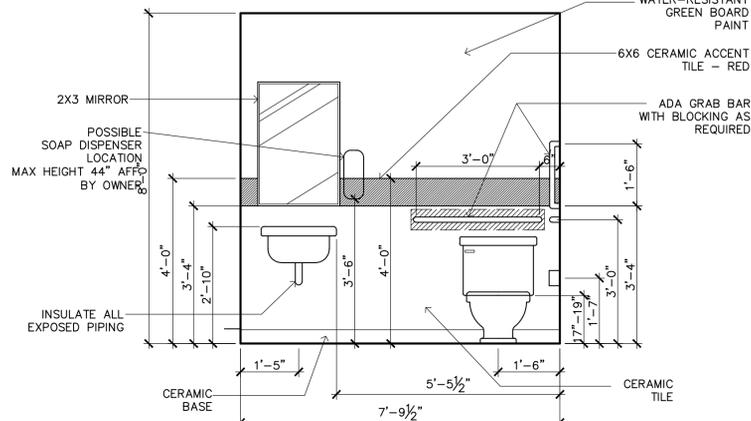


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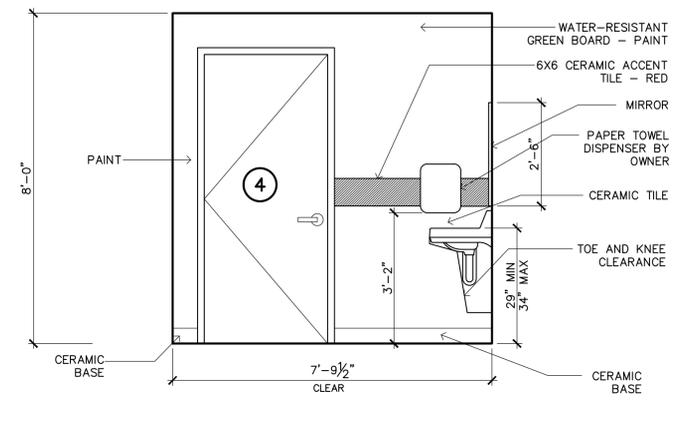
1 WOMEN'S RESTROOM ELEVATION
SCALE: 1/2" = 1'-0"



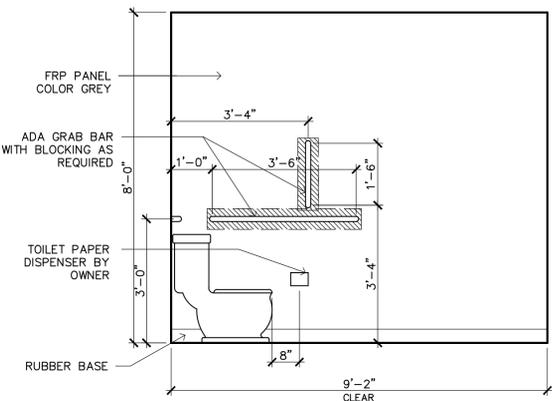
(a)



(b)

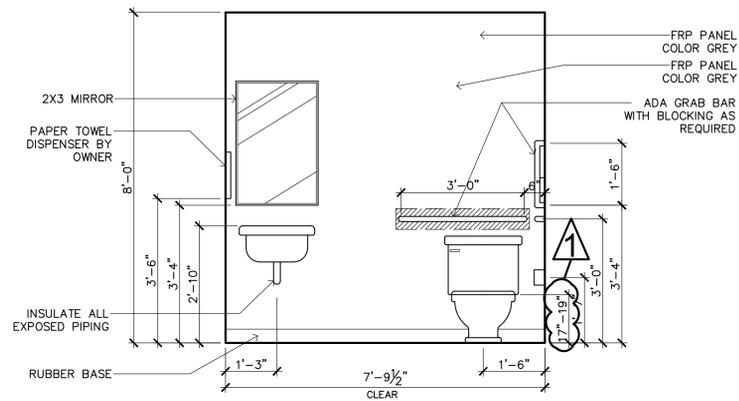


(c)

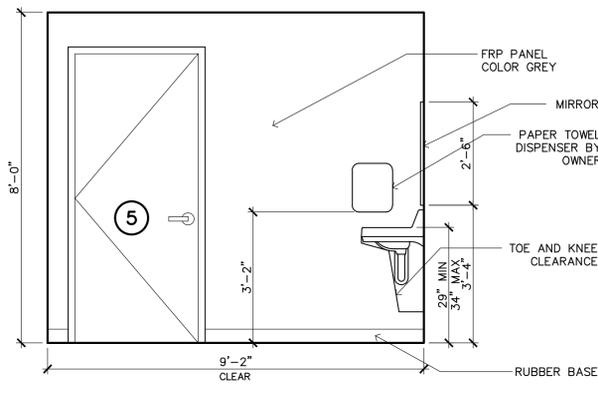


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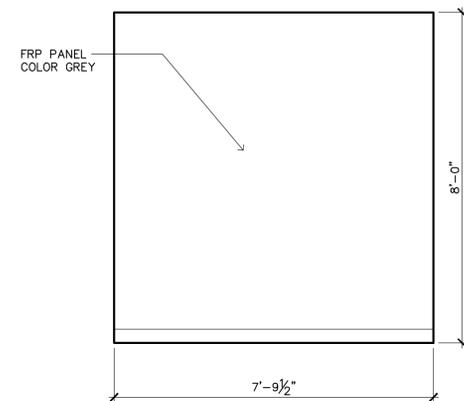
2 MEN'S RESTROOM ELEVATION
SCALE: 1/2" = 1'-0"



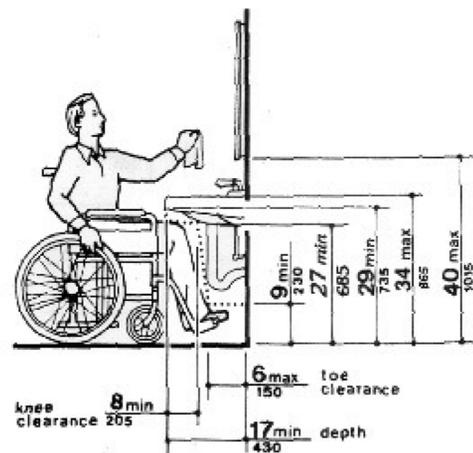
(c)



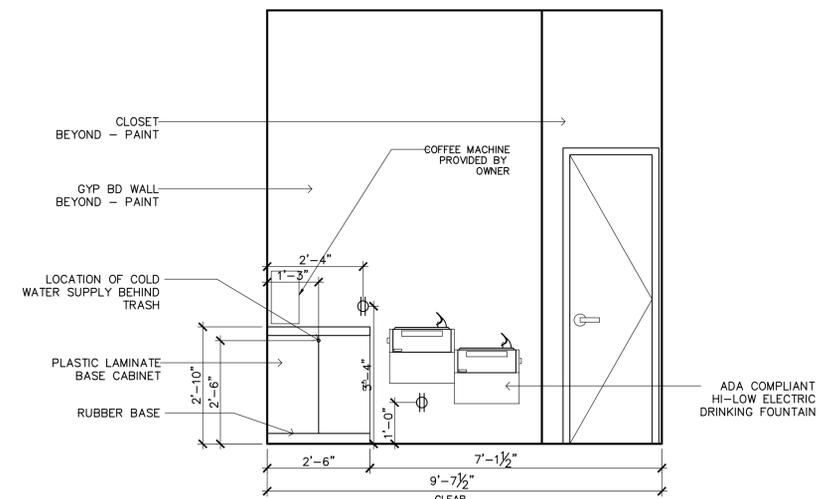
(d)



(a)



8 ADA FIXTURE PLACEMENT
NO SCALE



5 COFFEE ROOM ELEVATION
SCALE: 1/2" = 1'-0"

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ADA, OKLAHOMA



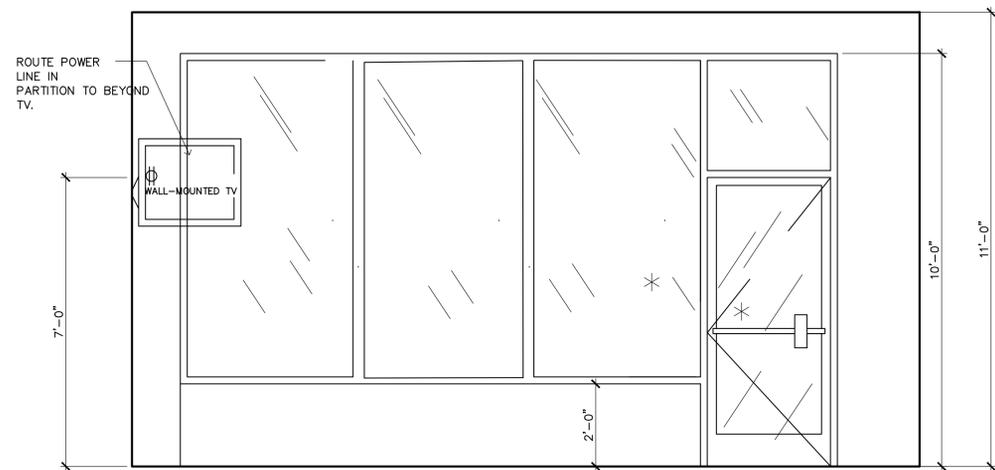
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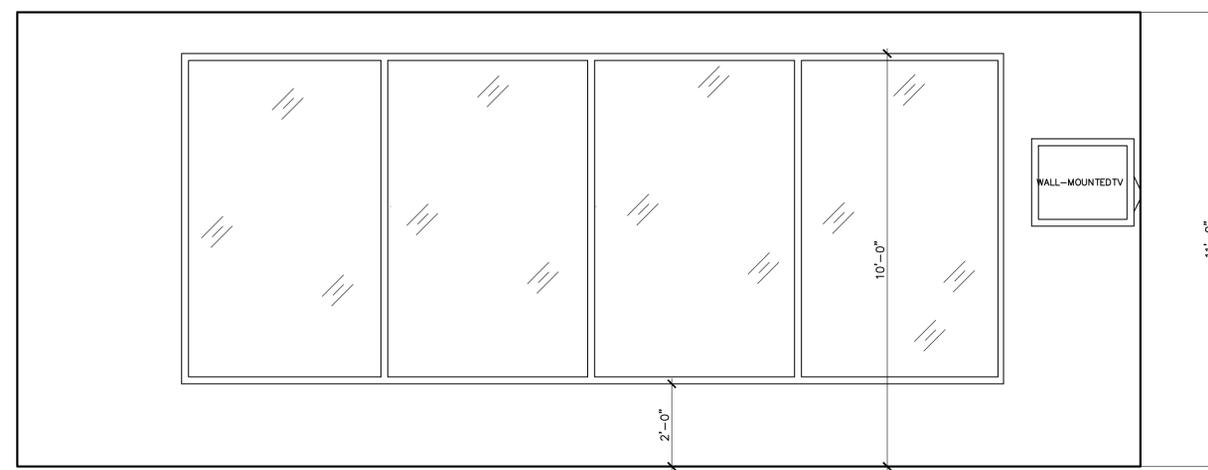
ARCODEV JOB #:
CLIENT JOB #:
DRAWN BY:
CHECKED BY: NLH
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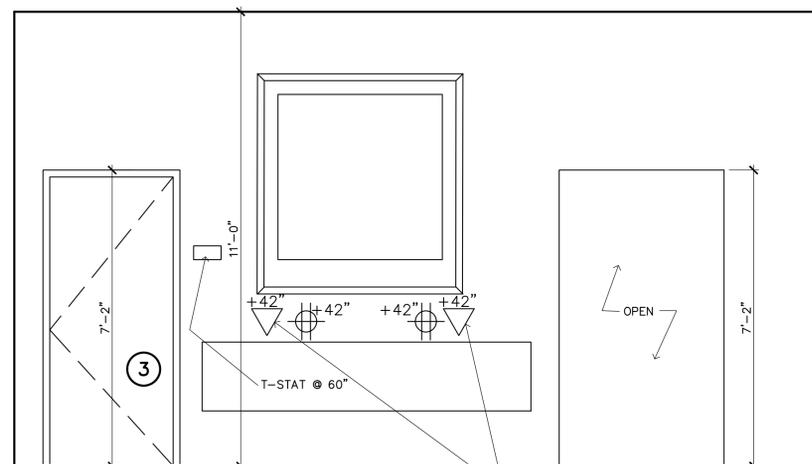
SHEET
A5-1
INTERIOR ELEVATIONS
AND DETAILS



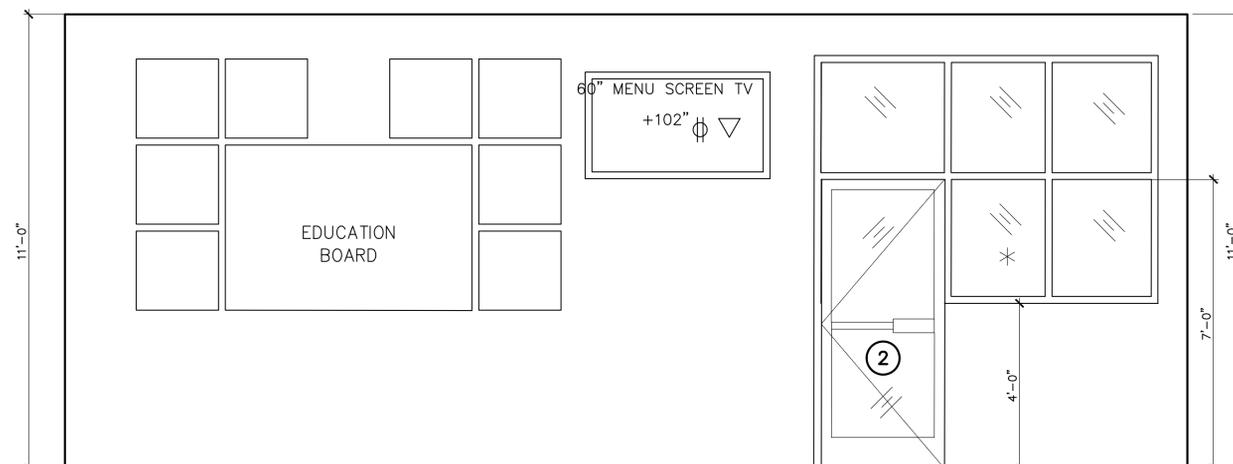
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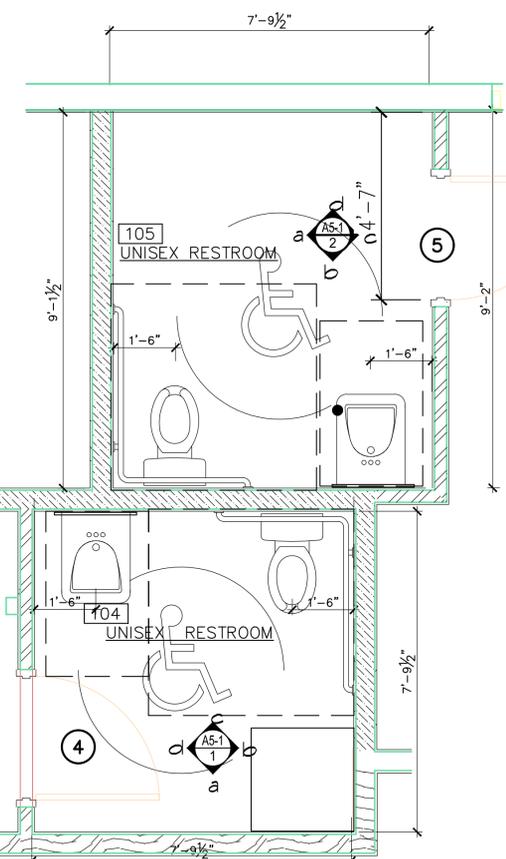
(a)



(d)

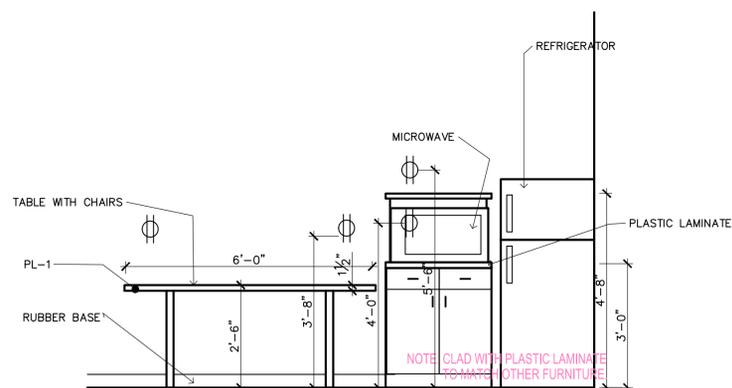


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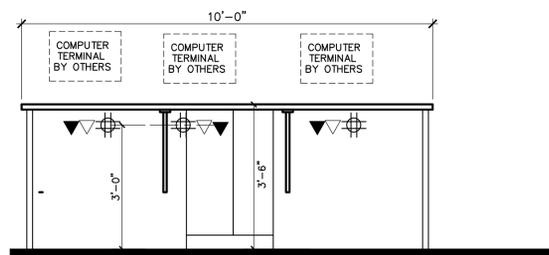


(4) ENLARGED RESTROOMS PLAN
SCALE: 1/2" = 1'-0"

(1) SALES AREA ELEVATIONS
SCALE: 1/2" = 1'-0"



(2) BREAK ROOM ELEVATION
SCALE: 1/2" = 1'-0"



(3) SERVICE DESK COMP. TERMINAL STATION
SCALE: 1/2" = 1'-0"

NOTE:

DASHED LINES ON RESTROOM FLOOR PLANS AT RIGHT SHOW THE CLEAR SPACE REQUIRED AT FIXTURES AND AT OPEN AREA:
OPEN AREA: 60" DIA. CIRCLE
TOILET: 5'-0" X 5'-0"
SINK: 30" X 48"

BRAKES PLUS
1201 LONNIE ABBOTT BLVD.
ADA, OKLAHOMA



ARCHITECT OF RECORD

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ARCODEV JOB #:
CLIENT JOB #:
DRAWN BY:
CHECKED BY: NLH
DATE OF ISSUE: 06.26.24



SHEET

A5-2

INTERIOR ELEVATIONS AND DETAILS

DOOR NO.	DOOR SIZE	DOOR				FRAME		DETAILS			HDMR GROUP	FIRE RATING	REMARKS
		TYPE	MATL	FINISH		MATL	FINISH	HEAD	JAMB	SILL			
				IN	OUT								
1	3'-0" X 7'-0"	C	ALUM/GL	M1	M1	ALUM.	M1	8/A6-1	7/A6-1	8/A6-1	6	-	SIGN THIS DOOR SHALL REMAIN UNLOCKED DURING BUSINESS HOURS. NO PANIC BAR REQUIRED.
2	3'-0" X 7'-0"	C	ALUM/GL	M1	M1	ALUM.	M1	8/A6-1	7/A6-1	8/A6-1	6	-	THIS DOOR CLEAR MILL FINISH TO MATCH STOREFRONT FRAMING
3	3'-0" X 7'-0"	B	H.M.	P2	P2	H.M.	P2	3/A6-1	3/A6-1	-	2	-	-
4	3'-0" X 7'-0"	B	H.M.	P2	P2	H.M.	P2	3/A6-1	3/A6-1	-	1	-	PROVIDE ACCESSIBLE RESTROOM SIGNAGE.
5	3'-0" X 7'-0"	F	H.M.	P2	P2	H.M.	P2	3/A6-1	3/A6-1	-	1	-	PROVIDE ACCESSIBLE RESTROOM SIGNAGE.
6	3'-0" X 7'-0"	E	H.M.	P2	P2	H.M.	P2	2/A6-1 SIM	4/A6-1 SIM	2/A6-1 SIM	4	-	PROVIDE 16"x30" VIEW PANEL.
7	2'-0" X 7'-0"	A	H.M.	-	-	-	-	-	-	-	-	-	-
8	NOT USED	-	-	-	-	-	-	1,2/A6-1	4/A6-1	1,2/A6-1	3	-	INSULATED DOOR
9	3'-8" X 7'-0"	E	H.M.	P2	P2	H.M.	P2	1/A6-1	4/A6-1	-	1	-	PROVIDE 16"x30" VIEW PANEL.
10	3'-0" X 7'-0"	B	H.M.	-	-	-	-	1,2/A6-1	4/A6-1	1,2/A6-1	3	-	INSULATED DOOR
11	10'-0" X 12'-0"	D	ALUM/GL	-	-	-	-	9/A6-1	6/A6-1	9/A6-1	-	-	PADLOCK
12	10'-0" X 12'-0"	D	ALUM/GL	-	-	-	-	9/A6-1	6/A6-1	9/A6-1	-	-	PADLOCK
13	10'-0" X 12'-0"	D	ALUM/GL	-	-	-	-	9/A6-1	6/A6-1	9/A6-1	-	-	PADLOCK
14	10'-0" X 12'-0"	D	ALUM/GL	-	-	-	-	9/A6-1	6/A6-1	9/A6-1	-	-	PADLOCK
15	10'-0" X 12'-0"	D	ALUM/GL	-	-	-	-	9/A6-1	6/A6-1	9/A6-1	-	-	PADLOCK
16	10'-0" X 12'-0"	D	ALUM/GL	-	-	-	-	9/A6-1	6/A6-1	9/A6-1	-	-	PADLOCK
17	10'-0" X 12'-0"	D	ALUM/GL	-	-	-	-	9/A6-1	6/A6-1	9/A6-1	-	-	PADLOCK
18	10'-0" X 12'-0"	D	ALUM/GL	-	-	-	-	9/A6-1	6/A6-1	9/A6-1	-	-	PADLOCK

- NOTES:
 1. THRESHOLD SHALL BE MAXIMUM 1/2" HIGH ABOVE FLOOR AND LANDING ON BOTH SIDES AT BUILDING ENTRANCES.
 2. MAXIMUM DOOR OPENING EFFORT SHALL BE 5 LBS AT EXTERIOR AND INTERIOR DOORS PER ANSI 404.2.9.
 3. ALL DOORS SHALL BE EQUIPPED WITH SIGNLE-EFFORT, NON-GRASP HARDWARE CENTERED BETWEEN 34" AND 48" ABOVE THE FLOOR.

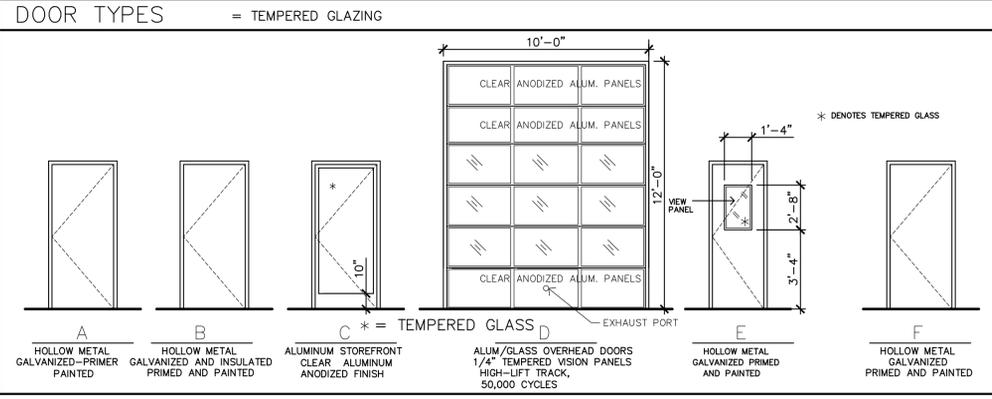
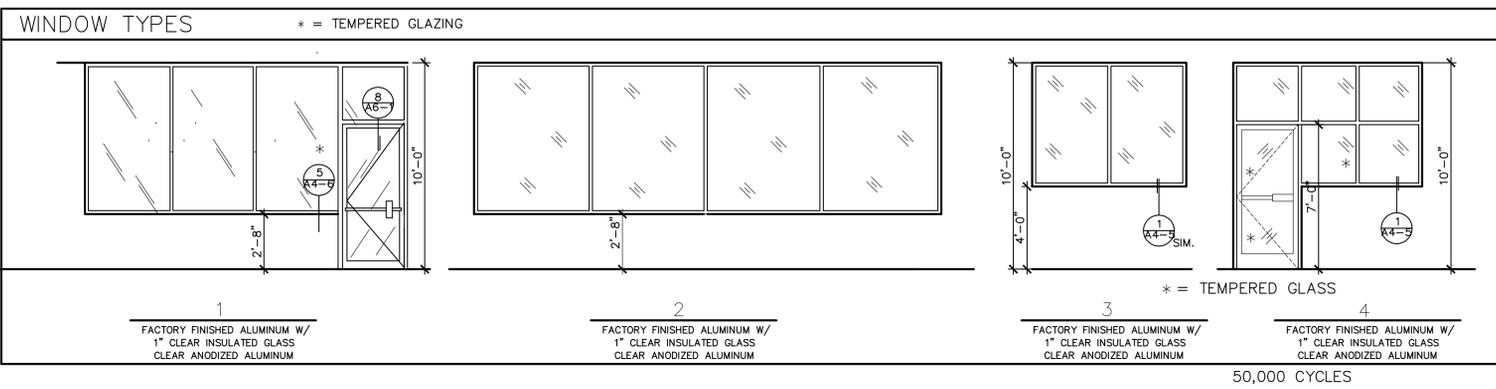
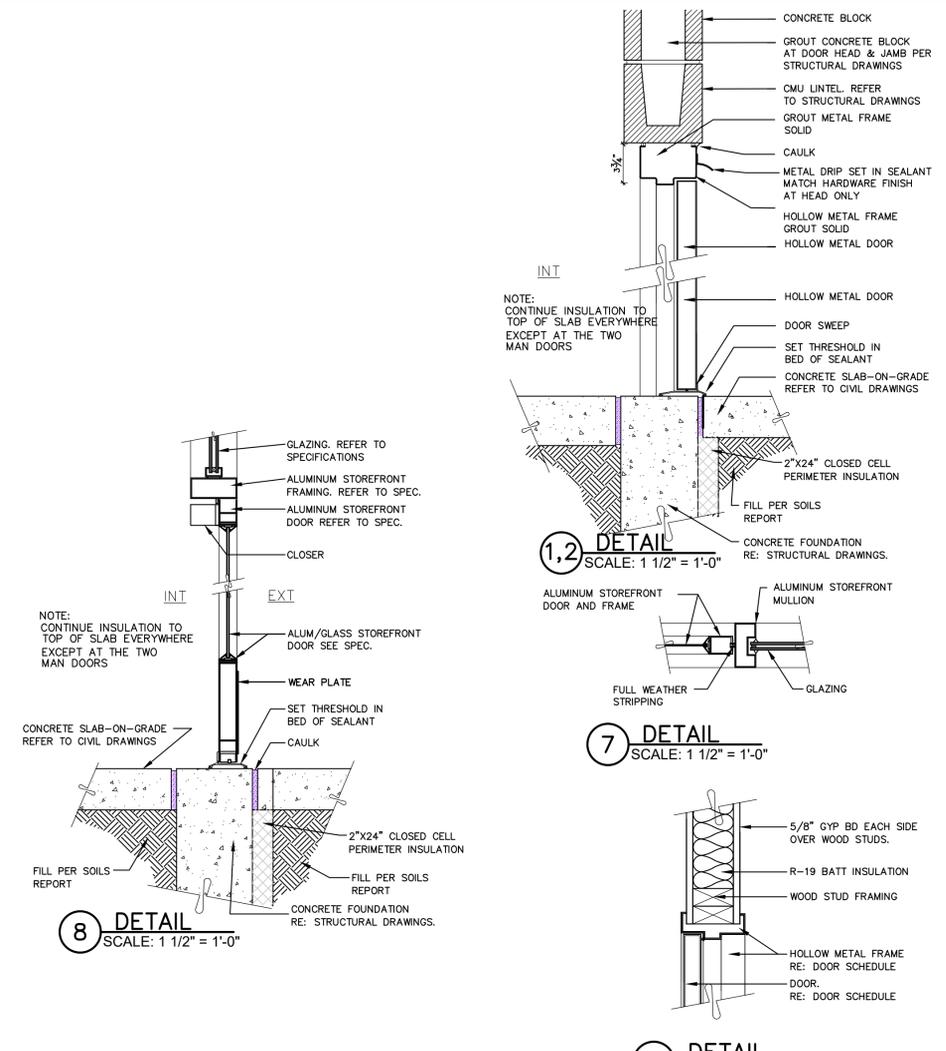
ROOM NO.	ROOM NAME	FLOORS		WALLS								CEILING			REMARKS
		FLOOR	BASE	WEST		EAST		NORTH		SOUTH		MATERIAL	FINISH	HEIGHT (AFF)	
				MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH				
101	SALES FLOOR	LVT	RB	GB	F3	ALUM/G.B.	F3	ALUM/G.B.	F3	G.B.	F3	ACT	F1	11'-0"	-
102	COFFEE ROOM	LVT	RB	GB	F3	GB	F3	GB	F3	GB	F3	ACT	F1	10'-0"	-
103	OFFICE	LVT	RB	GB	F3	GB	F3	GB	F3	GB	F3	ACT	F1	8'-0"	-
104	UNISEX RR.	LVT	CT	G.B./CT	F4/F1	G.B./CT	F4/F1	GB	F4	GB/CT	F4/F1	GB	F4	8'-0"	-
105	UNISEX RR.	SEALED CONCRETE	RB	FRP	F1	FRP	F1	FRP	F1	CONC	F1	GB	F4	8'-0"	-
106	STO.	LVT	RB	GB	F3	GB	F3	GB	F3	GB	F3	GB	F4	ON TRUSS	-
107	BREAK ROOM	SEALED CONCRETE	RB	GB	F3	GB	F3	G.B.	F3	CONC	F3	OPEN	P2	ON TRUSS	PROVIDE 1 COAT BLOCK FILLER AT CMU WALL.
108	INVENTORY	SEALED CONCRETE	RB	G.B.	F3	GB	F3	GB	F3	CONC	F5	OPEN	F4	ON TRUSS	-
109	SERVICE AREA	SEALED CONCRETE	-	CMU	F5	CMU	F5	CMU	F5	CMU	F5	OPEN	F4	VARIES	-
110	NOT USED	-	-	-	-	-	-	-	-	-	-	-	-	-	-
111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
 1. PROVIDE MOISTURE-RESISTANT GYPSUM BOARD.

GROUP	QTY.	DESCRIPTION
1	1 EACH 1 EACH 3 EACH 1 EACH 1 EACH	FRAME - ME416 3070 X 5 3/4" HM DOOR - 3070 X 1 3/4" H.M. HINGE - STANLEY FBB179 4.5 X 4.5 X 626 LOCKSET - SCHLAGE AL605 SAT X 626 (PRIVACY) FLOOR STOP - MM FS13 X US26D
2	1 EACH 1 EACH 3 EACH 1 EACH 1 EACH 1 EACH	FRAME - ME416 3070 X 5 3/4" HM LH CR ASA DOOR - 3070 X 1 3/4" H.M. HINGE - STANLEY FBB179 4.5 X 4.5 X 626 LOCKSET - SCHLAGE AL53PD SAT X 626 (ENTRY) CLOSER - LCN 1461 REG/PA TBMS X ALU FLOOR STOP - MM FS13 X US26D
3	1 EACH 1 EACH 1 EACH 1 EACH 1 EACH 1 EACH 1 EACH 1 EACH 1 EACH 1 EACH	FRAME - ME416 3070 X 5 3/4" 4" HD HM FH CR BJPR DOOR - 3070 X 1 3/4" HMD BLANK MOLCR HINGE - STANLEY FBB179 NRP 4.5 X 4.5 X 626 EXIT DEVICE - VON DUPRIN 22NL 3" X SP28 RIM CYLINDER - SCH 'C' X US26D CLOSER - LCN 4041 CUSH TBMS X ALU LATCHGUARD - MM M02C THRESHOLD - PEMKO 179AV X 36" SWEEP - PEMKO 18137P X 36" SMOKE SEAL - PEMKO SB8C 17"
4	1 EACH 1 EACH 3 EACH 1 EACH 1 EACH	FRAME - ME416 3070 X 5 3/4" HM LH CR ASA DOOR - 3070 X 1 3/4" HM HINGE - STANLEY FBB179 4.5 X 4.5 X 626 LOCKSET - SCHLAGE AL53PD SAT X 626 (ENTRY) CLOSER STOP - MM FS13 X US26D
5	1 EACH 1 EACH 3 EACH 1 EACH 1 EACH	FRAME - ME416 3070 X 5 3/4" HM DOOR - 3070 X 1 3/4" H.M. HINGE - STANLEY FBB179 4.5 X 4.5 X 626 LOCKSET - SCHLAGE AL605 SAT X 626 (PASSAGE) FLOOR STOP - MM FS13 X US26D
6	2 EACH 1 EACH 1 EACH 1 EACH 1 EACH 1 EACH 1 EACH 1 EACH	HINGE - KAWNEER OFFSET PIVOT CLOSER - LCN 4041 CUSH TBMS X ALU PUSH/PULL - KAWNEER, STYLE F-2 DEADLOCK - KAWNEER ADAMS RITE MS-1850A-505 W/ STANDARD LOCK CYLINDERS WITH HEAD & SILL BOLTS EXIT INDICATOR - KAWNEER ADAMS RITE 4089 THRESHOLD SWEEP WEATHERSTRIPPING NOTE: HEAD AND SILL BOLTS MUST BE OPERATED BY THE DEAD BOLT MECHANISM

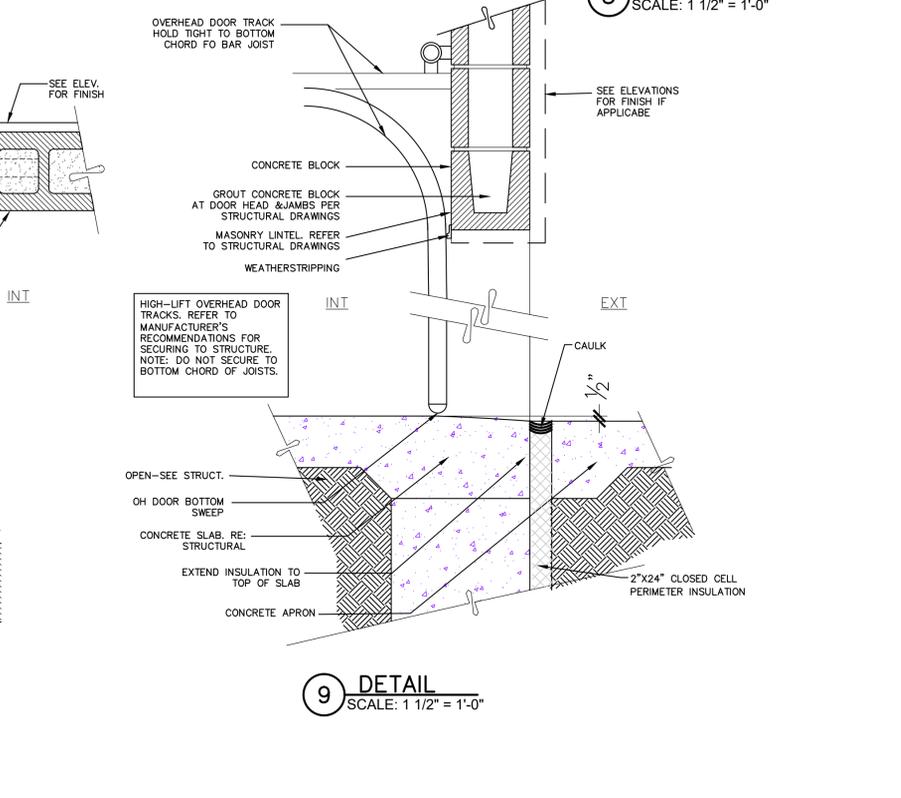
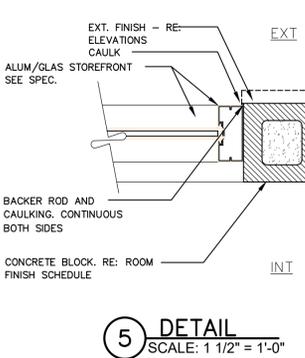
* ALL DOOR HARDWARE SHALL BE LEVER TYPE

FINISHES	
DOOR AND FRAME MATERIAL	
SCW	SOLID CORE WOOD
HM	HOLLOW METAL
ALUM	ALUMINIUM
STL	STEEL
DOOR AND FRAME FINISHES	
P1	NOT USED
P2	PRIMED AND PAINTED
P3	FACTORY PRIMED, STANDARD WHITE/LIGHT GRAY
M1	CLEAR ANODIZED ALUMINIUM, MILL FINISH
FINISH MATERIALS	
ACT	ACOUSTICAL CEILING TILES
CT	CERAMIC TILE
CMU	CONCRETE MASONRY UNIT
RB	RUBBER BASE
GB	GYPSUM BOARD
FRP	FIBERGLASS REINFORCED PLASTIC
CPT	CARPET
FINISHES	
F1	NONE
F2	HARDENER AND SEALER
F3	2 COATS ENAMEL
F4	2 COATS ENAMEL
F5	1 COAT BLOCK FILLER - 2 COAT HIGH GLOSS ENAMEL TO 4'-0" AFF - 1 COATS HIGH GLOSS ENAMEL ABOVE 4'-0" AFF
F6	2 COATS SEMI-GLOSS ENAMEL



NOTE:
 DOOR HANDLES, PULLS, LATCHES, AND OTHER OPERATING DEVICES ON DOORS REQUIRED TO BE ACCESSIBLE BY CHAPTER 11 SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE.

NOTE:
 EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT



BRAKES PLUS
 1201 LONNIE ABBOTT BLVD.
 ADA, OKLAHOMA

STATE OF OKLAHOMA
 ARCHITECTS & ENGINEERS
 No. 2737
 LINDSEY COOPER
 8/17/24
 ARCHITECT OF RECORD

REVISION
 DATE
 08/07/2024
 COMMENTS
 FOR SUBMITTAL TO BLDG. DEPT.

ARCODEV JOB #:
 CLIENT JOB #:
 DRAWN BY:
 CHECKED BY: NLH
 DATE OF ISSUE: 06.26.24

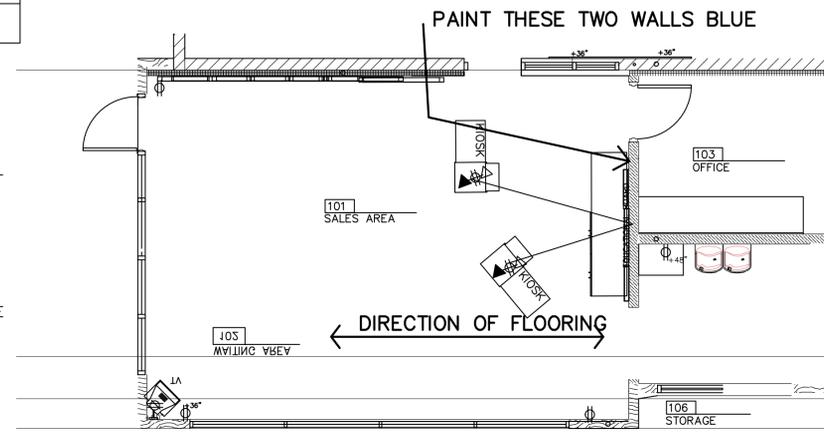
ARCODEV
 45 SPYGLASS DRIVE
 LITTLETON, CO 80123
 VOICE: 303.881-8925
 NORTHERMAN@ARCODEV.COM

SHEET
A6-1
 SCHEDULES

RESTROOM WAINSCOT FINISHES	
MAIN COLOR	TWO TOP ROWS
DALTILE (SEMI-GLOSS)	DALTILE (SEMI-GLOSS)
PRICE GROUP 2	PRICE GROUP 3
#0132	#DM-1
URBAN PUTTY #0161	CURRENT
SEMI-GLOSS	SEMI-GLOSS
4 1/4" X 4 1/4"	4 1/4" X 4 1/4"
GROUT: MAYEI BLANCO	GROUT: MAYEI BLANCO

4 RESTROOM FINISHES
SCALE: N.T.S.

- GENERAL NOTES:
- APPLY THE WALK OFF CARPET (4'X6' DIRECTLY TO THE CONCRETE SLAB DO NOT APPLY IT OVER THE FLOORING. PROVIDE JOHNSONITE REDUCER AROUND ALL EDGES (STYLE: CTA-09-A1, COLOR: BURNT UMBER)
 - ALL FLOORING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR
 - PROVIDE 1 EXTRA BOX (32 S.F.) OF ALL FLOORING PRODUCTS FOR ATTIC STOCK
 - ALL FLOORING MATERIALS MAY BE PURCHASED FROM EF CONTRACT FLOORING EXCEPT ADHESIVE AND THE TRANSITION STRIPS.....CONTACT KIMBERLY LYNCH AT THE CONTACT INFORMATION SHOWN BELOW.
 - RUBBER TRANSITION STRIP HAS A 1-3 WEEK LEAD TIME
- NOTE:
ALL INTERIOR FINISHES SHALL COMPLY WITH THE REQUIREMENTS CONTAINED IN THE 2018 IBC CHAPTER 18



1 DETAIL - INTERIOR PAINT DETAILS
SCALE: N.T.S.

	Floor	Supplied by:
Manufacturer (1)	Bolyu/EF Contract Flooring	Bolyu/EF Contract Flooring
Number (1)	Main Floor LVT Style: Woodlands, Color Ironwood LVT direction - Run lengthwise in the wide direction of the room. Regardless of entry location /showroom design	Bolyu/EF Contract Flooring
Color (1)	Ironwood - Item # EFCWL001	Bolyu/EF Contract Flooring
Finish	N/A	
Size (1)	7" x 48" (42 sq ft per box)	Bolyu/EF Contract Flooring
Note (1)	LVT - with Hardwood Plank Pattern Attic Stock - Provide 1 extra Box (32 sq. ft) extra for Attic Stock	
Adhesive (1a)	LVT Adhesive The LVT adhesive, Taylor, RESOLUTE (MS-PLUS* RESILIENT™) Adhesive	Supplied by Installer
Transition	Johnsonite - Rubber Reducer - Style: CTA-09-A1, Color: #63 Burt Umber	Supplied by Installer - Lead Time 1 - 3 weeks
Size (2)	24" x 24", (6.22 sq yds per box)	Bolyu/EF Contract Flooring
Note (2)	Install Quarter Turn	
Adhesive (2a)	Nexus, multipurpose carpet tile adhesive	Bolyu/EF Contract Flooring

CONTACT PRICING AND QUESTIONS (ALL LOCATIONS, NATIONWIDE)
TARA KALVA
BOLYU/EF CONTRACT
720-454-9014
TARA.KALVA@EFCONTRACTFLOORING.COM

3 DETAIL - FLOORING SPECIFICATIONS
SCALE: N.T.S.

Brakes Plus Interior Paint Specifications						
Location	Worldly Gray	Intellectual Gray	Virtual Taupe	Balanced Beige	Safety Red	Brakes Plus Blue
Shop	All walls above red base	Ceiling & Joists	Metal Doors & Frames (Interior of Building)		Lower 4' of walls This area to receive block filler & gloss paint	
Office			Painted Wood Doors and Frames	Walls		
Showroom			Half Wall Drywall Painted Wood Doors and Frames (to office and bathroom and closet)	Walls		See attached Drawing
Parts Room	Walls	Ceiling & Joists	Metal Door and Frame			
Employee Bath	Walls & Ceiling		Metal Doors & Frames			
Customer Bath			Painted Wood Doors and Frames	Walls & Ceiling		Formula: Promar 200 Deep Base B31W2253 1 Gallon Formula W1 2Y 23+11 B1 1+01 L1 2Y 21+11 R3 55+01
Break Room	Walls	Ceiling				

* Use block fill on all cinder block walls prior to painting (See Finish Schedule Section 3.05)

Brand	Sherwin-Williams	Sherwin-Williams	Sherwin-Williams	Sherwin-Williams	Sherwin-Williams	Sherwin-Williams
Color	Worldly Gray	Intellectual Gray	Virtual Taupe	Balanced Beige	Safety Red	Blue
Number	SW7043	SW7045	SW7039	SW7037		
Product						
Finish	See Finish Schedule Section 3.05	Dry Fall	See Finish Schedule Section 3.05	See Finish Schedule Section 3.05	See Finish Schedule Section 3.05	

2 DETAIL - INTERIOR PAINT SPECIFICATIONS
SCALE: N.T.S.

Brakes Plus Exterior Paint Specifications					
Location	Brand	Color	Number	Finish	Special Instructions
Corner-guards	Sherwin Williams	Artisan Tan	SW 7540		
Doors	Sherwin Williams	Artisan Tan	SW 7540		
Trash Enclosure Doors	Sherwin Williams	Artisan Tan	SW 7540		

5 DETAIL - EXTERIOR PAINT SPECIFICATIONS
SCALE: N.T.S.

BRAKES PLUS
1201 LONNIE ABBOTT BLVD.
ADA, OKLAHOMA

STATE OF OKLAHOMA
JUDICIAL DISTRICT OF MUSKOGEE
No. 2737
Littton, Colorado
REVISED AGREEMENT
8/17/24
ARCHITECT OF RECORD

REVISION

DATE	COMMENTS
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CLIENT JOB #:
DRAWN BY:
CHECKED BY: NLH
DATE OF ISSUE: 06.26.24

ARCODEV
45 SPYGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.881-9925
NORTHMAN@ARCODEV.COM

SHEET
A6-3
MATERIAL FINISHES

GENERAL STRUCTURAL NOTES:

A. DESIGN DATA:

DESIGN CODE:	2018 INTERNATIONAL BUILDING CODE
CONCRETE 28-DAY STRENGTH:	FC = 4,500 PSI
MISCELLANEOUS ROLLED SECTIONS AND PLATES (ANGLES, CHANNELS, PLATES, ETC.):	ASTM A36 (UNLESS NOTED OTHERWISE)
PLAIN BOLTS AND ANCHORS	ASTM A307
REINFORCING STEEL	ASTM A615 Fy = 60,000 PSI
WELDED WIRE FABRIC	ASTM A185

MORTAR TYPE S & GROUT 28-DAY COMPRESSIVE STRENGTH = 2,000 PSI (MASONRY CEMENT IS NOT ACCEPTABLE) ASTM C1019

CONCRETE MASONRY UNITS (LIGHTWEIGHT) ASTM C652
NET COMPRESSIVE STRENGTH OF CONCRETE MASONRY UNITS = 2,800 PSI
NET AREA COMPRESSIVE STRENGTH OF MASONRY FM = 2,000 PSI

ALLOWABLE SOIL BEARING CAPACITY: 2,300 PSF (PER SOIL REPORT)

DESIGN LOADS	
ROOFS	D = 20 PSF
	Lr = 20 PSF
	S = 10 PSF (GROUND & ROOF SNOW LOAD)

WIND LOADING CRITERIA (2018 IBC & ASCE 7-16)
110 MPH, EXPOSURE C

SEISMIC LOADING CRITERIA (2018 IBC & ASCE 7-16)
IMPORTANCE FACTOR = 1.0
MAPPED SPECTRAL RESPONSE S_s = 0.289g, S₁ = 0.082g
SITE CLASS = D, F_a = 1.569, F_v = 2.4
SPECTRAL RESPONSE COEFFICIENTS: SDS = 0.302g, SD1 = 0.132g
SEISMIC DESIGN CATEGORY = B
SEISMIC FORCE RESISTANT SYSTEM = ORDINARY REINFORCED MASONRY SHEAR WALLS & LIGHT FRAMED SHEAR WALLS
RESPONSE MODIFICATION FACTOR (R) = 2.0

B. FOUNDATION WORK:

1. THE GEOTECHNICAL REPORT PREPARED BY OLSSON (PROJECT NO. 024-02476) DATED MAY 31, 2024 IS AVAILABLE AND SHALL BE REVIEWED BY THE CONTRACTOR. SEE SPECIFICATIONS AND GEOTECHNICAL REPORT FOR OVEREXCAVATION RECOMPACTION.

2. CONTRACTOR SHALL COORDINATE FOOTING ELEVATIONS WITH FINAL GRADING PLAN TO PROVIDE A MINIMUM OF 2'-0" OF GRADE ABOVE THE BOTTOM OF ALL FOOTINGS.

3. SUBSOILS SUPPORTING OR IN DIRECT CONTACT WITH FOOTINGS, SLAB/ON-GRADE, OR OTHER FOUNDATION ELEMENTS SHALL BE PROTECTED AGAINST FREEZING CONDITIONS THAT COULD CAUSE MOVEMENT OR OTHER DETRIMENTAL EFFECT TO THE STRUCTURE AS A WHOLE OR TO ANY OF ITS COMPONENT PARTS.

4. WHEN WORKING NEAR EXISTING AND/OR NEW CONSTRUCTION, THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION SO AS NOT TO UNDERMINE, DISTURB, DAMAGE OR, IN ANY WAY, CAUSE UNDESIRABLE MOVEMENT, CRACKING, AND/OR SETTLEMENT OF THE ADJACENT CONSTRUCTION.

5. SLABS ON GRADE SHALL BE SUPPORTED ON SUBGRADE THAT HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE SECTION 4.3 "SLAB-ON-GRADE FLOORS" IN THE GEOTECHNICAL REPORT. ANY UNACCEPTABLE UNDISTURBED VIRGIN SOIL OR BACKFILL/GRANULAR FILL, AS DETERMINED BY THE OWNER'S GEOTECHNICAL ENGINEER, SHALL BE REMOVED AND REPLACED AS REQUIRED BY THE GEOTECHNICAL ENGINEER.

C. CONCRETE:

1. FOR REINFORCEMENT DEVELOPMENT LENGTH AND SPLICE LENGTH SEE TYPICAL REINFORCEMENT TABLE ON THIS SHEET.

2. PROVIDE CORNER BARS IN WALLS AND FOOTINGS THE SAME SIZE AND NUMBER AS THE CONTINUOUS REINFORCING.

3. REINFORCING IN FOOTINGS SHALL BE ACCURATELY PLACED BEFORE PLACING CONCRETE. DO NOT FLOAT REINFORCING INTO FOOTINGS.

4. CONCRETE SHALL BE REGULAR WEIGHT (144 PCF) WITH TYPE III CEMENT, 3/4" MAXIMUM AGGREGATE SIZE WITH POTABLE WATER. CONCRETE SHALL CONFORM TO ACI 301. THE MAXIMUM WATER-CEMENT RATIO FOR FOOTINGS, WALLS & SLABS SHALL BE 0.45. PROVIDE 6% AIR ENTRAINMENT IN CONCRETE USED IN FOOTINGS & WALLS. INTERIOR SLABS SHALL HAVE NATURAL ENTRAPPED AIR (3% MAXIMUM).

5. MECHANICALLY VIBRATE CONCRETE. EXCEPT THAT SLABS ON GRADE NEED TO BE VIBRATED ONLY AROUND UNDERFLOOR DUCTS AND OTHER ITEMS EMBEDDED IN THE SLAB. EMBEDDED ITEMS INCLUDE ELECTRICAL CONDUITS, MECHANICAL PIPING, AND STEEL ANGLES OR CHANNELS. EMBEDDED ITEMS DOES NOT IMPLY REINFORCING STEEL. ALL OTHER CONCRETE PLACEMENT SHALL BE VIBRATED. CONCRETE SHALL BE VIBRATED IN CONFORMANCE WITH ACI 309. VIBRATE CONCRETE ONLY UNTIL THE CONCRETE IS THOROUGHLY CONSOLIDATED AND THE VOIDS FILLED. INSERT INTERNAL VIBRATORS VERTICALLY TO THE FULL DEPTH OF THE LAYER BEING PLACED AND INTO THE PREVIOUS LAYER IF APPLICABLE. DO NOT DRAG VIBRATORS THROUGH THE CONCRETE. DO NOT FLOW CONCRETE FROM ONE LOCATION TO ANOTHER BY USE OF VIBRATOR.

6. DO NOT PLACE PIPES, DUCTS, OR CHASES IN STRUCTURAL CONCRETE WITHOUT APPROVAL OF THE ARCHITECT/ENGINEER. SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR LOCATIONS.

7. FLOOR SURFACE TOLERANCE CLASS "B". SEE ACI 301 FOR PROCEDURE OF MEASUREMENT AND CORRECTION.

8. CONTROL JOINTS SHALL BE PLACED AT COLUMN-LINE INTERSECTIONS AT A MAXIMUM SPACING INDICATED BELOW AND HAVE A MAXIMUM ASPECT RATIO OF 1.5 TO 1.0 UNLESS OTHERWISE INDICATED. SEE DETAIL - ON DRAWING - FOR CONTROL JOINT REQUIREMENTS.

SLAB THICKNESS	MAX. CONTROL JOINT SPACING
4"	12'-0"
5"	15'-0"

9. ALL CONSTRUCTION JOINTS IN CONCRETE WALLS SHALL HAVE A 2" X 4" CONTINUOUS KEYWAY. ALL CONSTRUCTION JOINTS, EXCEPT THOSE DETAILED, SHALL HAVE ARCHITECT/ENGINEER APPROVAL. SEE SPECIFICATIONS FOR OTHER CONSTRUCTION JOINT REQUIREMENTS.

10. ALL REINFORCING STEEL SHALL BE DEFORMED NEW BILLET BARS (A615, GRADE 60), BENT COLD, AND DETAILED, FABRICATED, AND HELD IN PLACE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315 - LATEST EDITION) EXCEPT AS OTHERWISE DETAILED OR SPECIFIED.

11. UNLESS NOTED OTHERWISE ON PLAN SHEETS SLABS ON GRADE SHALL BE:

SLAB THICKNESS	SLAB REINFORCEMENT	SUBBASE
4"	6x6-W1.4W1.4 WWF	SEE GEOTECHNICAL REPORT
5"	6x6-W2.9W2.9 WWF	SEE GEOTECHNICAL REPORT

12. ALL REINFORCING IN SLABS AND WALLS SHALL BE CONTINUOUS UNLESS DETAILED OTHERWISE AND LAP SPLICED ONLY IN REGIONS OF LOW STRESS. ALL BARS SHALL HAVE A STANDARD HOOK WHERE A HOOK IS SHOWN, UNLESS DETAILED OTHERWISE.

13. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING, UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
CONCRETE EXPOSED TO EARTH OR WEATHER: 2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: SLABS AND WALLS: 1"

D. MASONRY:

1. FURNISH AND CONSTRUCT MASONRY IN ACCORDANCE WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR MASONRY CONSTRUCTION (ACI 530.1-11/ASCE 6-11/TMS 602-11.)

2. LAY MASONRY UNITS IN RUNNING BOND.

3. MAXIMUM GROUT LIFT WITHOUT CLEANOUTS 4'-0" IN BLOCK WALLS AND 8" IN GROUTED TWO-WYTHE WALLS.

4. IN 8' WALLS, PROVIDE CONTINUOUS FULL HEIGHT VERTICAL REINFORCING IN CENTER OF GROUT AT CENTER OF WALL. TYPICAL REINFORCING SHALL BE 1-#6 AT 2'-0" ON CENTER AND 2-#6 AT CORNERS, INTERSECTIONS, WALL ENDS, DOOR AND WINDOW JAMBS, AND SIDE OF EXPANSION OR CONTROL JOINTS UNLESS NOTED OTHERWISE.

5. GROUT CELLS FULL AT ALL ANCHOR AND EMBED LOCATIONS.

6. PROVIDE LADDER TYPE #9 JOINT REINFORCING AT 16" ON CENTER VERTICAL SPACING IN ALL CLAY MASONRY AND UNLESS NOTED OTHERWISE.

7. SPLICE MASONRY WALL REINFORCING AS SCHEDULED ON 3/S3-3.

8. PLACE BOND BEAM REINFORCING CONTINUOUS THROUGH EXPANSION CONTROL JOINTS, WRAPPING BARS WITH 1/8 INCH THICK BOND BREAKING TAPE 2'-0" BOTH SIDES OF JOINT. DO NOT SPLICE BOND BEAM REINFORCING WITHIN 6'-0" OF AN EXPANSION OR CONTROL JOINT.

9. PROVIDE CONTINUOUS BOND BEAMS AT ALL BEAM BEARING AND TRUSS BEARING ELEVATIONS, AND AT THE TOP OF ALL WALLS.

10. SPLICE BOND BEAM REINFORCING AT MASONRY CONTROL/EXPANSION JOINTS AS SHOWN ON MASONRY JOINT DETAIL ON 4/S3-3.

11. PROVIDE CONTINUOUS WIRE LATH GROUT BARRIERS BELOW BOND BEAMS.

12. PROVIDE LINTELS OVER ALL OPENINGS AND RECESSES IN MASONRY WALLS.

13. ALL LINTELS SHALL HAVE A MINIMUM BEARING OF 8 INCHES EACH END.

14. FOR ALL OPENINGS NOT OTHERWISE DETAILED OR SCHEDULED, MINIMUM LINTELS SHALL BE FOR EACH 4 INCH OF MASONRY WIDTH 1-L 3-1/2 X 3-1/2 X 1/4 FOR SPANS UP TO 4'-0", 1-L 4 X 3-1/2 X 1/4 FOR SPANS UP TO 6'-0" AND 1-L 5 X 3-1/2 X 1/4 FOR SPANS UP TO 8'-0". FOR SPANS LESS THAN 2'-0" PROVIDE A 5/16" PLATE.

15. MASONRY CONTROL JOINT SPACING SHALL NOT EXCEED 24'-0".

16. ALL MASONRY CONSTRUCTION SHALL HAVE SPECIAL INSPECTION PER IBC SECTION 1705.4 AND HAVE LEVEL 2 QUALITY ASSURANCE IN ACCORD WITH ACI 930-11 SECTION 1.14. PERIODIC INSPECTION SHALL BE INTERPRETED AS TWO TIMES PER WEEK.

E. WOOD:

1. WOOD SHALL COMPLY WITH THE LATEST EDITION OF THE GRADING RULES OF THE WESTERN WOOD PRODUCTS ASSOCIATION OR THE WEST COAST LUMBER INSPECTION BUREAU.

2. ALL SAWN LUMBER SHALL BE STAMPED WITH THE GRADE MARK OF AN APPROVED GRADING AGENCY.

3. SAWN LUMBER SHALL HAVE THE FOLLOWING MINIMUM GRADE UNLESS NOTED OTHERWISE:

TYPE OF USE	MATERIAL AND GRADE
TOP PLATES, ALL OTHER SAWN LUMBER	DOUGLAS FIR NO. 2
POSTS AND BEAMS	DOUGLAS FIR NO. 1

4. ALL 2x BEARING WALLS SHALL BE BLOCKED HORIZONTALLY AT 4'-0" O.C. VERT. SPACING FOR ALL WALLS GREATER THAN 9'-0" IN HEIGHT.

5. ALL PLYWOOD SHALL BE C-D OR C-C SHEATHING EXTERIOR GRADE CONFORMING TO STANDARD PS0.019.

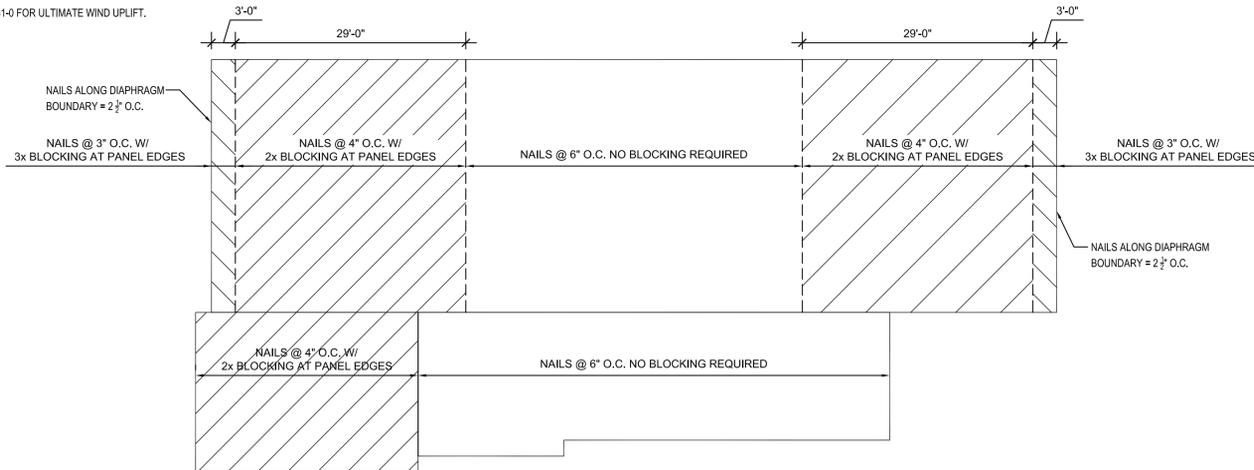
6. PLYWOOD SHALL BE PLACED WITH FACE GRAIN PERPENDICULAR TO SUPPORTS USING A MINIMUM 5-PLY PLYWOOD. PLYWOOD JOINTS SHALL BE STAGGERED.

7. PLYWOOD ATTACHMENT SHALL BE DONE USING COMMON NAILS. NAILING SHALL BE AS NOTED ON ROOF FRAMING PLAN.

8. ALL SILL PLATES IN CONTACT WITH CONCRETE OR MASONRY SHALL BE TREATED DOUGLAS FIR OR FOUNDATION GRADE REDWOOD.

9. BRACE WOOD TRUSSES LATERALLY AT BEARING POINTS AND INTERMEDIATE LOCATIONS AS REQUIRED BY MANUFACTURER.

10. SEE 3/S1-0 FOR ULTIMATE WIND UPLIFT.



2
S1-0 3/4"=1'-0" **ROOF DIAPHRAGM NAILING PATTERN**

F. SPECIAL INSPECTION

1. IN ACCORD WITH 2018 IBC SECTIONS 1704 & 1705, AS NOTED BELOW, TESTING AND INSPECTION SHALL BE BY AN INDEPENDENT TESTING/INSPECTION FIRM UNDER THE SUPERVISION OF A LICENSED ENGINEER EMPLOYED BY THAT FIRM. THIS ENGINEER SHALL BE DEEMED THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS PERFORMED BY HIS FIRM OR HIS CONSULTANTS. INSPECTORS SHALL BE ICBO CERTIFIED AND APPROVED BY THE BUILDING OFFICIAL.

2. THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS SHALL BE RESPONSIBLE FOR DEFINING THE ACTIVITIES OF THE INSPECTORS, FOR CERTIFYING THE QUALIFICATIONS OF THE INSPECTORS WITH THE BUILDING OFFICIAL AND TO ATTEND THE PRE-CONSTRUCTION MEETING TO DEFINE THEIR SCOPE OF SERVICES AND THE TESTING OR TEST PROCEDURES THAT ARE REQUIRED AS OUTLINED IN THE INTERNATIONAL BUILDING CODE.

3. SPECIAL INSPECTION IS TO BE PROVIDED IN ADDITION THE INSPECTIONS CONDUCTED BY THE LOCAL DEPARTMENT OF BUILDING SAFETY AND SHALL NOT BE CONSTRUED TO RELIEVE THE OWNER OR HIS AUTHORIZED AGENT FROM REQUESTING THE PERIODIC AND CALLED INSPECTIONS REQUIRED BY SECTION 106.5 AND 108.7 OF THE INTERNATIONAL BUILDING CODE.

4. CONCRETE PER SECTION 1705.3 AND TABLE 1705.3.

5. ANCHOR RODS INSTALLED IN CONCRETE: PER TABLE 1705.3.

6. REINFORCING PER TABLE 1705.3.

7. STRUCTURAL MASONRY: PER SECTION 1705.4.

8. GRADING, EXCAVATION AND FILLING: PER SECTION 1705.6. SEE GEOTECHNICAL REPORT.

9. EXPANSION BOLT, SCREW ANCHOR AND ADHESIVE ANCHOR INSTALLATION TO VERIFY INSTALLATION IN ACCORD WITH ICBO REPORTS NOTED PREVIOUSLY OR APPROVED EQUAL.

10. THE INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO BE CERTAIN IT CONFORMS TO THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.

11. THE INSPECTOR SHALL FURNISH DAILY INSPECTION REPORTS ON THE WORK TO THE BUILDING OFFICIAL AND TO THE ENGINEER. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, AND, IF UNCORRECTED, TO THE ENGINEER AND THE BUILDING OFFICIAL.

12. THE TESTING/ INSPECTION FIRMS ENGINEER SHALL COMPLETE, SIGN AND SEAL. A FINAL REPORT CERTIFYING THAT TO THE BEST OF HIS KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.

13. THE SPECIAL INSPECTOR SHALL BE SELECTED AND CREDENTIALS SHALL BE SUBMITTED TO THE CITY PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

G. OTHER:

1. UNLESS NOTED OTHERWISE, EXPANSION ANCHORS SHALL BE HILTI KWIK BOLT II EXPANSION ANCHORS OR APPROVED EQUAL. ADHESIVE ANCHORS SHALL BE HILTI STANDARD HAS RODS WITH THE HVA ADHESIVE SYSTEM, THE SIMPSON SET SYSTEM, OR APPROVED EQUAL.

2. VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO STARTING WORK. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES.

3. VERIFY IN FIELD ALL EXISTING CONDITIONS SHOWN ON DRAWINGS.

4. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL, AND PLUMBING WITH APPROPRIATE TRADES. PROVIDE ALL TEMPORARY BRACING, SHORING, GUYING, OR OTHER MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION.

5. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE STAMP (AND SIGNATURE) OF AN ENGINEER REGISTERED IN OKLAHOMA.

TYPICAL REINFORCING NOTES

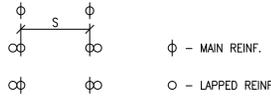
1. REINFORCING BAR DEVELOPMENT AND LAP SPLICE LENGTH SHALL BE AS SHOWN IN THIS TABLES UNLESS OTHERWISE NOTED ON THE DRAWINGS.

2. THE LENGTHS SHOWN IN THE TABLES ARE BASED ON THE FOLLOWING CONCRETE COVERAGE AND REINFORCING C-C SPACING:
BEAMS OR COLUMNS:
COVER (EQUAL OR MORE) 1.0bd (BAR DIAMETER)
CENTER TO CENTER (C-C) SPACING (EQUAL OR MORE) 2.0bd.
ALL OTHERS:
COVER (EQUAL OR MORE) 1.0bd
CENTER TO CENTER SPACING (EQUAL OR MORE) 3.0bd.

3. TOP BARS ARE DEFINED AS HORIZONTAL REINFORCEMENT SUCH THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE DEVELOPMENT LENGTH OR SPLICE.

4. DEVELOPMENT AND SPLICE LENGTH SHOWN SHALL NOT APPLY IF ANY OF THE FOLLOWING CONDITIONS OCCUR:
A) f'c < 2,500 PSI
B) f'y > 60,000 PSI
C) THE COVER OR C-C BAR SPACING IS NOT AS LISTED ABOVE
D) THE REINFORCING STEEL IS EPOXY COATED
E) LIGHT WEIGHT CONCRETE IS USED.

5. CENTER ON CENTER SPACING (S) IS DEFINED AS BELOW:



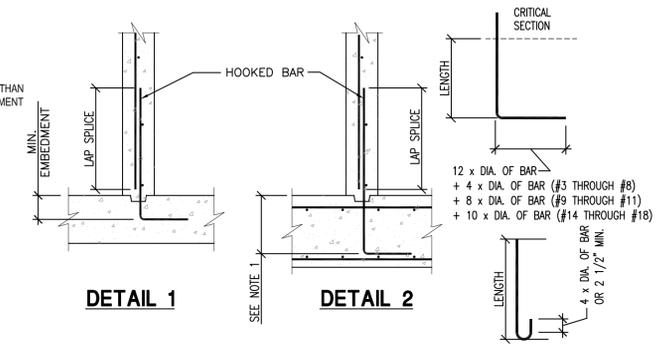
BAR SIZE	DEVELOPMENT LENGTH		SPLICE LENGTH	
	TOP	OTHER	TOP	OTHER
#3	1'-7"	1'-3"	2'-0"	1'-7"
#4	2'-1"	1'-7"	2'-8"	2'-1"
#5	2'-7"	2'-0"	3'-4"	2'-7"
#6	3'-1"	2'-5"	4'-0"	3'-1"
#7	4'-6"	3'-6"	5'-10"	4'-6"
#8	5'-2"	4'-0"	6'-8"	5'-2"
#9	5'-10"	4'-6"	7'-7"	5'-10"
#10	6'-7"	5'-1"	8'-6"	6'-7"
#11	7'-3"	5'-7"	9'-5"	7'-3"

BAR SIZE	LENGTH OR MIN. EMBEDMENT
#3	8"
#4	10"
#5	1'-0"
#6	1'-3"
#7	1'-5"
#8	1'-7"
#9	1'-10"
#10	2'-0"
#11	2'-3"

DEVELOPMENT LENGTH NOTES

1. WHERE DRAWINGS ARE DETAILED SIMILAR TO DETAIL 2, EXTEND THE EMBEDMENT LENGTH SUCH THAT THE HOOKED BAR CONTACTS THE LAYER OF MAIN REINFORCING SHOWN.

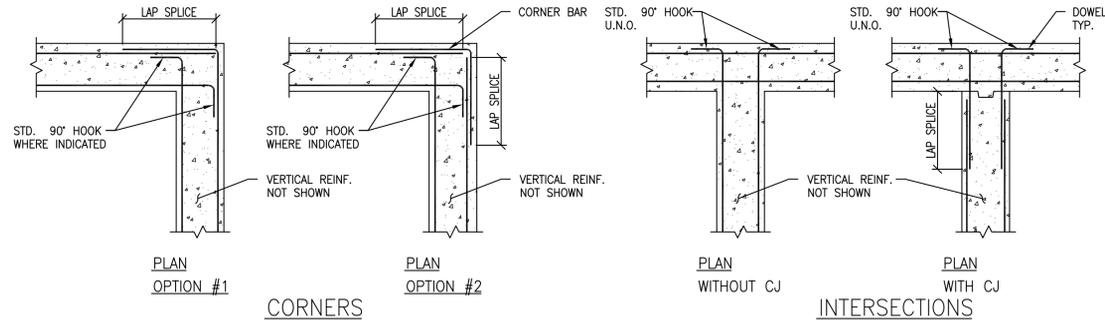
2. EMBEDMENT LENGTHS IN CHART ARE TYPICAL EXCEPT AS NOTED IN DETAIL 2, OR AS INDICATED ON DRAWINGS.



DETAIL 1

DETAIL 2

CONCRETE EXPOSURE	MEMBER	REINFORCEMENT	SPECIFIED COVER
CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	ALL	ALL	3"
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	ALL	#6 TO #18 #5 AND SMALLER	2" 1 1/2"
NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	SLABS, JOISTS, & WALLS	#14 & #18 #14 & SMALLER	1 1/2" 3/4"
	BEAMS, COLUMNS, PEDASTALS, AND TENSION TIES	PRIMARY REINFORCEMENT STRUTS, TIES, SPIRALS, AND HOOPS	1 1/2"



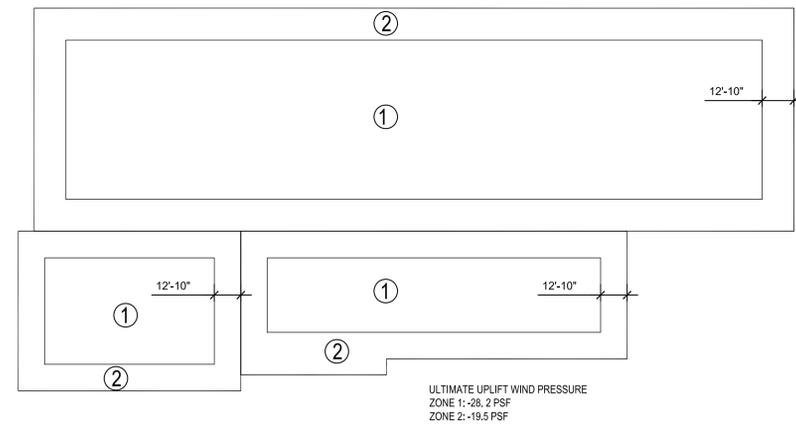
CORNERS

INTERSECTIONS

NOTE: UNLESS OTHERWISE INDICATED, THE CONTRACTOR HAS THE OPTION OF REINFORCING CORNERS IN ACCORDANCE WITH OPTION #1 OR OPTION #2.

NOTE: UNLESS OTHERWISE INDICATED, THE CONTRACTOR HAS THE OPTION OF CONSTRUCTING INTERSECTIONS WITH OR WITHOUT CONSTRUCTION JOINTS. REINFORCE PER APPLICABLE DETAIL.

1
S1-0 3/4"=1'-0" **HORIZONTAL WALL REINFORCEMENT DETAILS**



3
S1-0 3/4"=1'-0" **ROOF WIND UPLIFT LOADING**

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ENGINEER OF RECORD

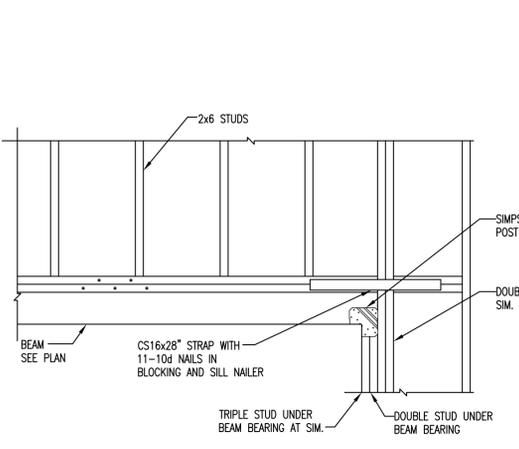
REVISION	DATE	COMMENTS

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CLIENT JOB #:
DRAWN BY: SLM
CHECKED BY: TAS
DATE OF ISSUE: 07.10.24

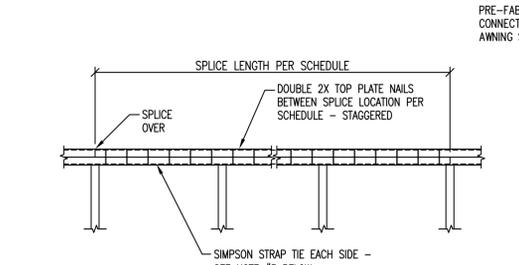
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NORTHMERMAN@ARCODEV.COM

SHEET

S1-0
GENERAL STRUCTURAL NOTES AND DETAILS



1 BEAM BEARING DETAIL
S3-2 3/4"=1'-0"

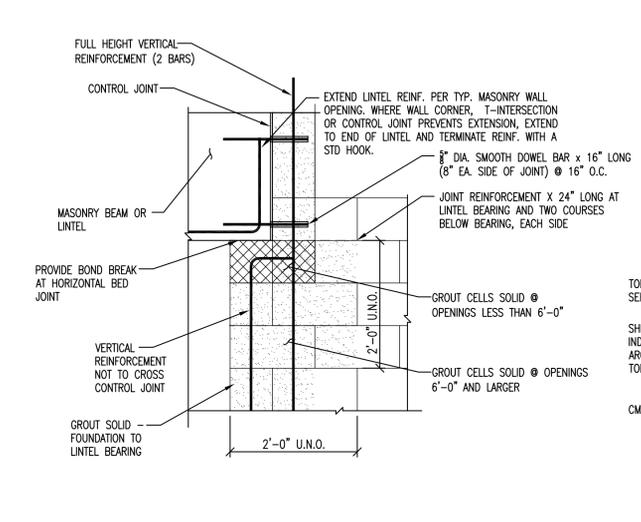


2 HIGH PARAPET
S3-2 3/4"=1'-0"

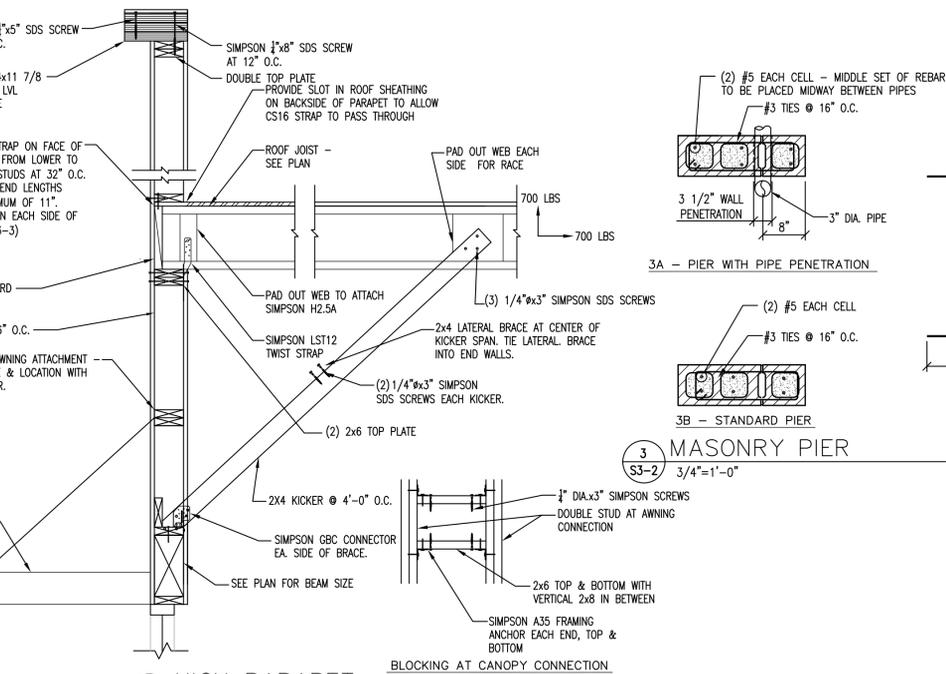
LENGTH OF WALL (BETWEEN CORNERS)	SPLICE LENGTH (MINIMUM)	NAILS ALONG SPLICE LENGTH
OVER 30'	4'-0"	18-16d
OVER 20'	2'-8"	10-16d
OVER 10'	1'-4"	6-16d
LESS THAN 10'	1'-4"	4-16d

NOTE:
1. DO NOT SPLICE TOP PLATES WITHIN 6'-0" OF ENDS OF WOOD STRUCTURAL PANEL SHEAR WALLS.
2. THIS DETAIL APPLIES TO ALL EXTERIOR WALLS AND INTERIOR WALLS. SIMPSON STRAP TIE NEED NOT BE APPLIED TO INTERIOR WALLS.
3. PROVIDE SIMPSON CMST 14 ON EACH SIDE OF TOP PLATE AT SPLICE LOCATION. EXTEND STRAP 34" BEYOND END OF PLATE SPLICE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

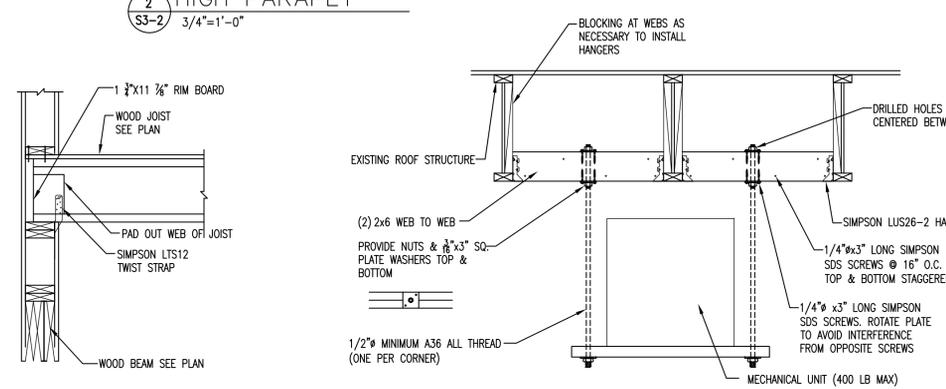
6 CHORD SPLICE
S3-2 3/4"=1'-0"



10 TYP. MASONRY BM/ LINTEL BEARING
S3-2 3/4"=1'-0"



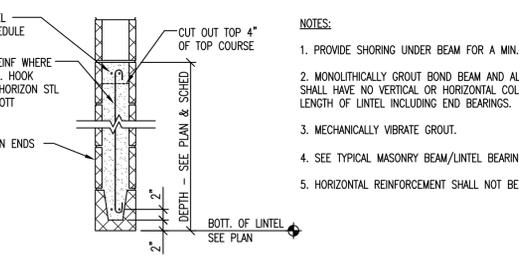
3 MASONRY PIER
S3-2 3/4"=1'-0"



7 FRAMING SECTION
S3-2 3/4"=1'-0"

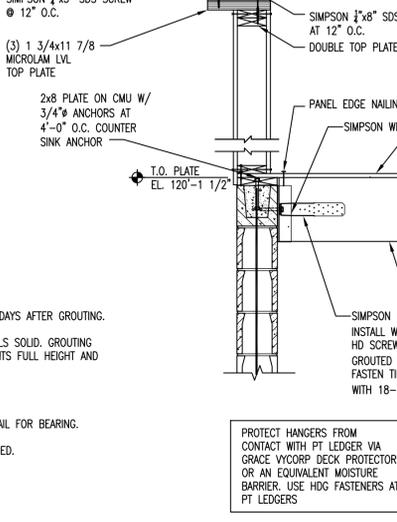
MASONRY LINTEL SCHEDULE				
MARK	DEPTH	BOND BM REINF	SHEAR REINF	REMARKS
ML-1	2'-8"	2-#5 TOP & BOTT	-	8" CMU
ML-2	1'-4"	2-#5 TOP & BOTT	-	8" CMU

NOTE:
1. USE LINTEL ML-2 AT ALL OPENINGS LESS THAN 4'-0" WIDE UNLESS NOTED OTHERWISE.
2. BOND BEAM REINFORCING SHALL BE CONTINUOUS WITHOUT SPLICES.
3. MASONRY LINTELS SHALL BE GROUTED SOLID.

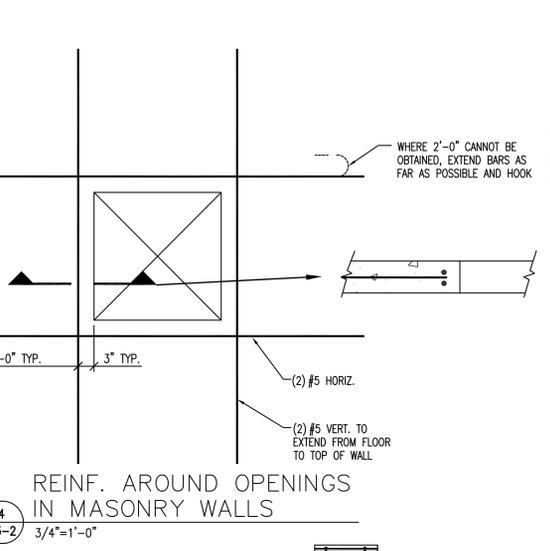


11 TYP. MASONRY BEAM/ LINTEL
S3-2 3/4"=1'-0"

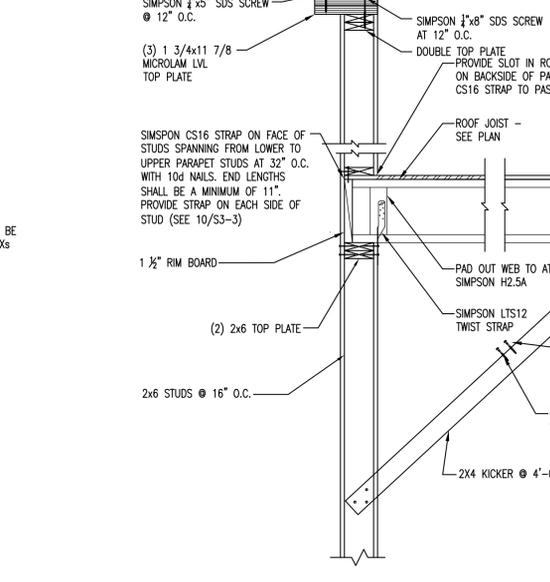
8 FRAMING SECTION
S3-2 3/4"=1'-0"



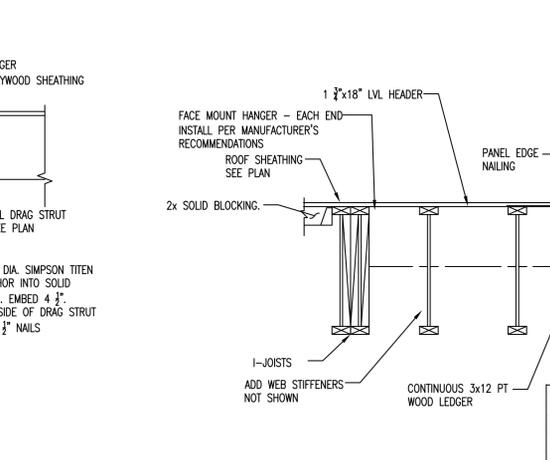
12 PARAPET WALL SECTION
S3-2 3/4"=1'-0"



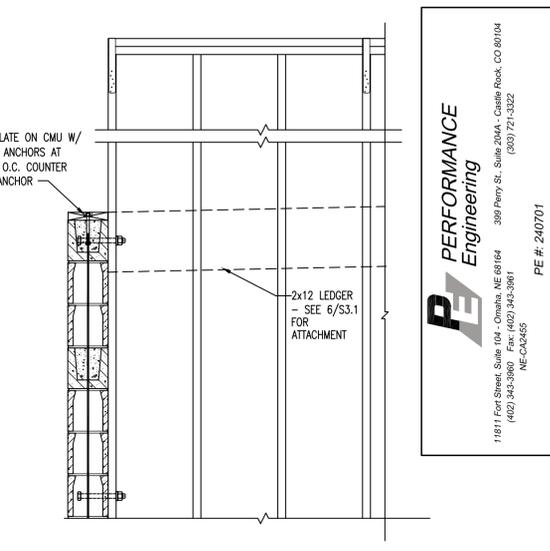
4 REINF. AROUND OPENINGS IN MASONRY WALLS
S3-2 3/4"=1'-0"



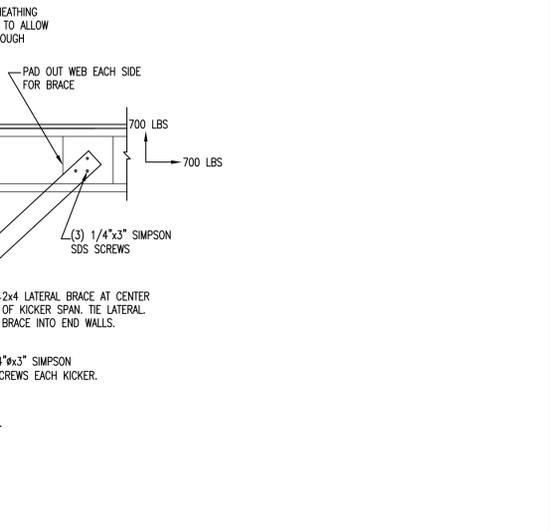
9 WALL SECTION
S3-2 3/4"=1'-0"



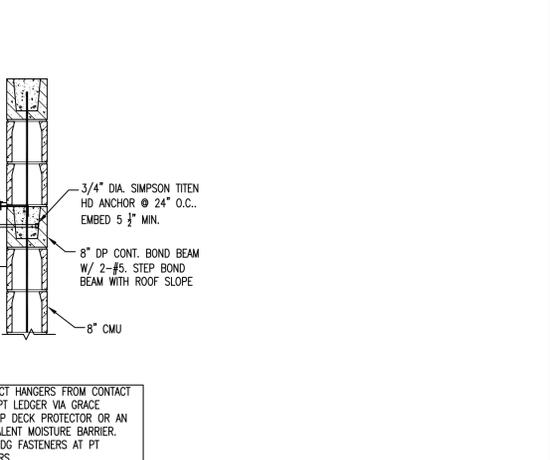
13 ROOF OPENING DETAIL
S3-2 3/4"=1'-0"



5 PARAPET WALL
S3-2 3/4"=1'-0"



9 WALL SECTION
S3-2 3/4"=1'-0"



13 ROOF OPENING DETAIL
S3-2 3/4"=1'-0"

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ENGINEER OF RECORD

REVISION	DATE	COMMENTS

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CLIENT JOB # _____
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CHECKED BY: TAS
DATE OF ISSUE: 07.10.24

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SHEET
S3-2
SECTIONS AND DETAILS

MECHANICAL GENERAL NOTES AND SPECIFICATIONS

GENERAL CONSTRUCTION NOTES:

- DRAWINGS ARE MEANT TO SHOW INTENT ONLY, NOT EXACT DETAIL. THESE DRAWINGS ARE A "BUILDERS SET" AND INTENDED FOR THE USE OF AN EXPERIENCED AND WELL QUALIFIED CONTRACTOR WHO MAY INFER REASONABLE INFORMATION BASED ON EXPERIENCE COMMON IN THE INDUSTRY AND TRADES. QUALITY LEVEL IS A REQUIRED STANDARD. DO NOT SCALE DRAWINGS. FIELD VERIFY ALL CONDITIONS OF WORK AND REPORT ANY DISCREPANCIES TO THE ARCHITECT/ENGINEER FOR CLARIFICATIONS BEFORE STARTING ANY WORK. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL ERRORS IN HIS WORK, INCLUDING THE LACK OF FIELD VERIFICATION OF EXISTING CONDITIONS.
- THE ARCHITECT AND PROFESSIONAL CONSULTANTS WILL NOT HAVE CONTROL OF AND WILL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, OR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK ON THIS PROJECT OR FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK ON THIS SITE, NOR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE INTENT OF THE CONTRACT AND OR THESE CONSTRUCTION DOCUMENTS.

BASIC REQUIREMENTS:

MECHANICAL DESIGN SHALL CONFORM TO THE CURRENT ADOPTED INTERNATIONAL MECHANICAL CODE. PROJECT SHALL BE COORDINATED WITH THE EXISTING BUILDING SERVICES AND SHALL INCLUDE ALL ITEMS NECESSARY FOR COMPLETE AND FULLY OPERATIONAL TENANT MECHANICAL SYSTEMS. MAKE CONNECTIONS TO AND EXTEND SYSTEMS INSTALLED BY OTHERS AND/OR FURNISHED BY OTHERS. PROVIDE ACCESSORIES AND INCIDENTAL ITEMS AS REQUIRED FOR A COMPLETE AND FULLY OPERATIONAL SYSTEM WHETHER OR NOT SPECIFICALLY SPECIFIED AND/OR SHOWN ON THE PLANS.

COORDINATE WITH OTHER TRADES FOR A COORDINATED INSTALLATION WITHIN THE AVAILABLE SPACE. WHERE CROWDED CONDITIONS EXIST, PREPARE COORDINATION DRAWINGS SHOWING ALL TRADE CONFLICTS AND SUBMIT TO ARCHITECT FOR APPROVAL AND DIRECTION PRIOR TO ROUGH-IN AND/OR INSTALLATION.

RELOCATION OF OUTLETS AND/OR DEVICES MADE PRIOR TO ROUGH-IN SHALL BE DONE AT NO ADDITIONAL COST.

ALL WORK SHALL BE PERFORMED BY PROPERLY LICENSED MECHANICS OR UNDER THEIR DIRECT SUPERVISION. ALL MATERIALS AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE APPLICABLE STANDARDS OF USE AND SHALL BEAR THE UL LABEL AS EVIDENCE THAT THE MATERIALS AND/OR EQUIPMENT MEETS THIS REQUIREMENT.

INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND DETAILS UNLESS OTHERWISE NOTED IN THESE PLANS. IF DISCREPANCIES EXIST CONTACT THE ENGINEER PRIOR TO ORDERING EQUIPMENT AND ROUGH-IN. ALL EQUIPMENT START UP AND TESTING SHALL BE PERFORMED BY THE EQUIPMENT MANUFACTURER TRAINED SERVICE TECHNICIAN.

THE SUB-CONTRACTOR SHALL VISIT THE JOB SITE AND BECOME FAMILIARIZED WITH ALL REQUIREMENTS OF THE CONTRACT PRIOR TO SUBMISSION OF BID. THE SUB-CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY CONFLICTS PRIOR TO BID OR START OF INSTALLATION.

THE SUB-CONTRACTOR SHALL ARRANGE FOR ALL INSPECTIONS WHEN THEY BECOME DUE, AND SHALL NOT COVER ANY WORK UNTIL APPROVED BY THE INSPECTION AUTHORITY. ANY AND ALL FEES ASSOCIATED WITH THE MECHANICAL WORK, INCLUDING CONSTRUCTION AND INSPECTIONS SHALL BE PAID FOR BY THE SUB-CONTRACTOR IN ORDER TO DELIVER A COMPLETE AND FINISHED BUILDING, READY FOR OCCUPANCY AND 100% USAGE. THE SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT THE SUB-CONTRACTOR HAS FAMILIARIZED HIMSELF/HERSELF WITH THE PLANS AND BUILDING SITE. CLAIMS MADE SUBSEQUENT TO THE PROPOSAL FOR MATERIALS AND LABOR BECAUSE OF DIFFICULTIES ENCOUNTERED, WILL NOT BE RECOGNIZED IF THEY COULD HAVE BEEN FORESEEN HAD PROPER EXAMINATION BEEN MADE. ANY COSTS DUE TO THE LACK OF COOPERATION AMONG TRADES SHALL BE BORNE BY THE SUB-CONTRACTOR.

THE INFORMATION PRESENTED ON THESE DRAWINGS IS DIAGRAMMATIC IN NATURE. IT DOES NOT NECESSARILY REPRESENT ALL FITTINGS, HANGERS, ETC. FOR A COMPLETE WORKING SYSTEM. PROVIDE ALL MATERIALS AND LABOR FOR COMPLETELY FINISHED AND OPERATIONAL SYSTEMS. REFER TO LATEST ARCHITECTURAL DRAWINGS

FOR: EXACT WALL LOCATIONS, DIMENSIONS, AND PLUMBING FIXTURE LOCATIONS AND REQUIREMENTS.

SUB-CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY ALTERATIONS REQUIRED BY THE OWNER, ARCHITECT, OR FIELD CONDITIONS.

ALL EQUIPMENT SHALL BE NEW, SHALL COMPLY WITH APPLICABLE INDUSTRY STANDARDS, WITH SPECIFICATIONS ON DRAWINGS, AND ENERGY CODE COMPLIANCE CERTIFICATION AS ADOPTED BY THE STATE, AS WELL AS LOCAL JURISDICTIONAL, BUILDING DEPARTMENT. SUBMIT DATA FOR APPROVAL PRIOR TO ORDERING EQUIPMENT. SUBMITTAL SHALL INCLUDE ENERGY CODE COMPLIANCE CERTIFICATION.

SUB-CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL EQUIPMENT INCLUDING: FIXTURES SPECIFIED IN EQUIPMENT SCHEDULE ON DRAWINGS FOR REVIEW/APPROVAL (5) DAYS PRIOR TO BID. EQUIPMENT IS NOT TO BE ORDERED WITHOUT SUBMITTAL TO ARCHITECT/OWNER/ENGINEER.

ALL SPACE HEATING SUPPLY AIR DUCTS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE LATEST S.M.A.C.N.A. DUCT CONSTRUCTION STANDARDS AND BE INSULATED IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL JURISDICTIONAL ENERGY CONSERVATION STANDARDS AND THE LATEST EDITION INTERNATIONAL MECHANICAL CODE.

ALL DUCT DIMENSIONS ARE CLEAR INSIDE DIMENSIONS. INCREASE LISTED DUCT SIZE TO ACCOMMODATE LINER.

FLEX SHALL NOT EXCEED 8 FT. IN LENGTH AND SHALL BE TYPE "1" FACTORY DUCT. PROVIDE WITH 1 IN. EXTERNAL INSULATION IF MAIN SUPPLY DUCT IS INSULATED.

ALL SUPPLY RUN-OUTS TO HAVE MANUALLY ADJUSTABLE VOLUME DAMPERS WITH ABILITY TO LOCK IN PLACE. THIS SUB-CONTRACTOR SHALL INCLUDE IN HIS/HER BID THE COMPLETE COST FOR THE ELECTRICAL CONTRACTOR TO INTERLOCK EXHAUST FANS AS REQUIRED BY EQUIPMENT SCHEDULE. THIS SUB-CONTRACTOR SHALL FIELD VERIFY 10 FT. MINIMUM CLEARANCE BETWEEN FRESH AIR INTAKE AND ALL VENTS OR EXHAUST OUTLETS.

WALL THERMOSTATS FOR HEATING/COOLING UNITS TO BE AUTOMATIC CHANGEOVER TYPE AND INSTALLED 48 IN. ABOVE FINISHED FLOOR. HEATING/COOLING UNITS SHALL MAINTAIN MINIMUM OUTSIDE AIR AS SHOWN ON SCHEDULE OR SHOWN IN FRESH AIR CALCULATIONS.

ALL FURNACES OR ROOFTOP UNITS SUPPLYING MORE THAN 2000 CFM OF AIR SHALL BE EQUIPPED WITH A SMOKE DETECTOR IN THE MAIN RETURN AIR DUCT WHICH WILL SHUT THE POWER OFF TO THE UNIT WHEN SMOKE IS DETECTED. THIS SMOKE DETECTOR SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR AND WIRED BY THE MECHANICAL CONTRACTOR. IN BUILDINGS WHERE FIRE DETECTION OR ALARM SYSTEMS ARE PROVIDED, THE SMOKE DETECTOR SHALL BE WIRED BY THE ELECTRICAL CONTRACTOR AND SHALL BE SUPERVISED BY FIRE ALARM SYSTEM. SEE LATEST EDITION INTERNATIONAL MECHANICAL CODE FOR ADDITIONAL REQUIREMENTS. MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL REMOTE TEST SWITCH AND INDICATING LIGHT AT CEILING LOCATION NEAR FURNACE/ROOFTOP LOCATION.

MECHANICAL CONTRACTOR IS RESPONSIBLE TO HAVE ROOFTOP UNIT MANUFACTURERS TECHNICIAN START ALL ROOFTOP UNITS. PROVIDE WRITTEN REPORT FROM MANUFACTURER FOR START-UP COMMISSIONING.

DUCTWORK

- DUCTWORK SHALL BE GALVANIZED SHEET METAL INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS. INSTALL TURNING VANES IN ALL ELBOWS. ALL SPIN-IN FITTINGS AND RUNOUTS TO ANY REGISTERS, RETURN, OR EXHAUST TERMINAL SHALL BE PROVIDED WITH MANUAL VOLUME DAMPERS.
- ALL DUCTWORK SHALL BE SEALED IN ACCORDANCE WITH SMACNA STANDARDS. THE DUCT PRESSURE CLASS SHALL BE AS NOTED ON PLANS OR CORRESPONDING TO THE MAXIMUM EQUIPMENT ESP ON EACH SYSTEM. THE DUCTWORK SHALL BE SEALED TIGHT. LEAKAGE MAY NOT EXCEED 10% OF DESIGN AIRFLOW AT DESIGN PRESSURE. FOR SMOKE CONTROL SYSTEMS THE DUCT MUST BE TESTED AT 1.5 TIMES ITS DESIGN PRESSURE AND LEAKAGE MAY NOT EXCEED 5% OF DESIGN AIRFLOW.
- ALL EXPOSED ROUND DUCTWORK SHALL BE SPIRAL DUCT. NO JOISTS OR CONNECTIONS SHALL HAVE

ANY VISIBLE SEALANT FROM THE EXTERIOR SO THE DUCTWORK HAS A CLEAN AND WORKMAN LIKE APPEARANCE.

- DUCT SIZES GIVEN ARE NET INSIDE FREE AREA.
- EQUIPMENT FLEXIBLE DUCTWORK CONNECTION NOT TO EXCEED 10 INCHES IN LENGTH WITH A MAX. 25 FLAME/50 SMOKE INDEX.
- FLEXIBLE DUCTWORK TO AIR DEVICES SHALL HAVE A MAXIMUM STRETCHED LENGTH OF 6 FEET. SUITABLE FOR RETURN AIR PLENUM.
- ALL EXHAUST TERMINALS MUST BE 3'-0" AWAY FROM IN ELEVATION FROM OPERABLE PORTION OF WINDOW AND DOORS. MC TO OFFSET AS REQUIRED.
- ALL DIRECT VENT TERMINALS MUST BE 4'-0" AWAY IN ELEVATION HORIZONTALLY OR BELOW AND ATLEAST 1'-0" ABOVE ANY OPERABLE PORTION OF A WINDOW OR DOOR. MC TO OFFSET AS REQUIRED.

INSULATION

- ALL INSULATING VALUES ARE TO CONFORM TO THE LATEST VERSION OF THE INTERNATIONAL ENERGY CODE.
- ALL ROUND CONCEALED RIGID SUPPLY DUCTWORK SHALL BE EXTERNALLY WRAPPED WITH NOMINAL 1-1/2" THICK (MINIMUM R-6.0) FIBER GLASS INSULATION WITH FIRE RETARDANT VAPOR BARRIER.
- OUTDOOR AIR INTAKE DUCTS SHALL BE EXTERNALLY WRAPPED WITH NOMINAL 1-1/2" THICK (MINIMUM R-12.0) FIBER GLASS INSULATION WITH FIRE RETARDANT VAPOR BARRIER.
- WHEN LOCATED IN UNCONDITIONED SPACES ALL RECTANGULAR DUCTWORK SHALL BE LINED WITH 1" THICK 2 POUND DENSITY MINIMUM R-6.0 FIBER GLASS ACOUSTIC DUCT LINER. ALL DUCTWORK EXPOSED TO OUTDOOR AMBIENT TYPE CONDITIONS (UNCONDITIONED ATTICS, OUTSIDE AIR DUCTS, ETC) SHALL BE EXTERNALLY WRAPPED OR INTERNALLY LINED IN 2 - 2.5" NOMINAL INSULATION (MINIMUM R-12.0). ALL OUTDOOR DUCTWORK SHALL HAVE 2 - 2.5" DUCTLINER (MINIMUM R-12.0) AND THE DUCT BE SEALED WEATHERPROOF PER SMACNA GUIDELINES. RECTANGULAR DUCT WORK IN RETURN AIR PLENUM SHALL BE LINED WITH 1/2" THICK 2 POUND DENSITY (MINIMUM R2.1) MAT-LACED ACOUSTIC DUCT LINER.

AIR INLETS AND OUTLETS

- FURNISH AND INSTALL AIR INLETS AND OUTLETS AS SCHEDULED ON THE PLANS.
- OUTLETS SHALL HAVE A WHITE BAKED ENAMEL FINISH TO MATCH CEILING OR WALL.

EXHAUST FANS

- FURNISH AND INSTALL CENTRIFUGAL EXHAUST FANS AS SCHEDULED ON THE PLANS.
- FURNISH AND INSTALL ROOF CURBS AND BACKDRAFT DAMPERS.
- FURNISH AND INSTALL UNITS COMPLETE WITH ALL OPERATIONAL AND SAFETY CONTROL NECESSARY FOR PROPER OPERATION.

ROOFTOP HVAC UNITS

- FURNISH AND INSTALL ROOF TOP PACKAGED ELECTRIC A/C UNITS WITH NATURAL GAS HEATING SECTIONS AS SCHEDULED ON THE PLANS. ACCEPTABLE MANUFACTURERS ARE TRANE, CARRIER, CARRIER, OR YORK. ANY SUBSTITUTED MODELS MUST BE EQUAL IN CONTROLS, ACCESSORIES, AND PERFORMANCE TO SCHEDULED MODELS.
- FURNISH AND INSTALL UNITS COMPLETE WITH ALL OPERATIONAL AND SAFETY CONTROLS FOR SATISFACTORY OPERATION. PROVIDE PHASE REVERSAL PROTECTION ON ANY UNITS WITH SCROLL COMPRESSORS.
- FURNISH PROGRAMMABLE SPACE THERMOSTAT WITH NIGHT SETBACK OPERATION OR DIGITAL CONTROL SYSTEM FOR VAV APPLICATIONS AS APPLICABLE. MOUNT AT 4-42-INCHES AFF.
- FURNISH ALL UNITS WITH 100% OUTDOOR AIR ECONOMIZER PACKAGE UNLESS OTHERWISE NOTED.
- FURNISH ALL UNITS WITH 14-INCH ROOF CURBS.

RADIANT HEATING UNITS

- FURNISH AND INSTALL NATURAL GAS FIRED RADIANT HEATING UNITS AND ASSOCIATED ACCESSORIES AS SCHEDULED ON THE PLANS.
- UNITS SHALL BE COMPLETE WITH PLUGS FOR ELECTRICAL CONNECTION, SPACE THERMOSTATS, TUBE EXTENSIONS, FLUES, AND ROOF CAPS AS REQUIRED. UNITS SHALL BE UL AND AGA RATED.

ABBREVIATIONS

(D)	DEMO
(E)	EXISTING
(N)	NEW
AV	AIR ADMITTANCE VALVE
AD	AREA DRAIN
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
B	BOILER
BB	BASEBOARD
BF	BOOSTER FAN
BFP	BACKFLOW PREVENTER
BT	BATH TUB
BV	BALL VALVE
CD	CONDENSATE DRAIN
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CN	CLEANOUT
COTG	CLEANOUT TO GRADE
CU	CONDENSING UNIT
CV	CHECK VALVE
CUH	CABINET UNIT HEATER
DCW	DOMESTIC COLD WATER
DF	DRINKING FOUNTAIN
DH	DOMESTIC HOT WATER
DSN	DOWN SPOUT NOZZLE
EC	ELECTRICAL CONTRACTOR
ECO	END OF LINE CLEANOUT
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
FURN	FURNACE
FCO	FLOOR CLEANOUT
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FS	FLOOR SINK
G	GAS
GC	GENERAL CONTRACTOR
GM	GAS METER
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GUH	GAS UNIT HEATER
GW	GREASE WASTE
GWH	GAS WATER HEATER
HB	HOSE BIB
HP	HEAT PUMP
HX	HEAT EXCHANGER
IM	ICE MAKER BOX
LAV	LAVATORY
LS	LAUNDRY SINK
MAU	MAKE-UP AIR UNIT
MC	MECHANICAL CONTRACTOR
MF	MEASURE FLOW
NIC	NOT IN CONTRACT
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
ORD	OVER FLOW ROOF DRAIN
P	PUMP
PC	PLUMBING CONTRACTOR
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
RARI	RETURN AIR REGISTER
RAR	RETURN AIR REGISTER
RD	ROOF DRAIN
RH	RADIANT HEATER
RTU	ROOF TOP UNIT
SA	SUPPLY AIR REGISTER
SAR	SUPPLY AIR REGISTER
SF	SUPPLY FAN
SFT	SERIES FAN TERMINAL
SH	SHOWER
SK	SINK
SOI	SAND/OIL INTERCEPTOR
SS	SERVICE SINK
T&P	TEMPERATURE & PRESSURE
TD	TRENCH DRAIN
TYP	TYPICAL
UR	URINAL
VAV	VARIABLE AIR VOLUME
VVT	VARI TRAC
WB	WASHER BOX
WCO	WALL CLEANOUT
WH	WALL HYDRANT

MECHANICAL LEGEND

PROVIDE TURNING VANES AT ALL CORNER BENDS IN ACCORDANCE WITH S.M.A.C.N.A. LOW VELOCITY DUCT MANUAL.

TYPICAL DUCT TAKE-OFF WITH MANUAL VOLUME DAMPER. MARK DAMPER POSITION AFTER AIR BALANCE.

THERMOSTAT SHALL BE MOUNTED PER OWNER'S DIRECTION. DO NOT MOUNT IN DIRECT SUNLIGHT. THERMOSTAT SHALL BE MOUNTED NEAR RETURN AIR DUCT AT 48" AFF.

MANUAL BALANCING DAMPER - PROVIDE WHERE SHOWN, AT ALL RUN-OUTS TO AIR OUTLETS, AND AT ALL MAIN DUCT SPLITS. DAMPERS SHALL BE "YOUNG REGULATOR CO" MODEL 820 OR EQUAL.

POINT OF CONNECTION - NEW TO EXISTING

INDICATES UNDERCUT DOOR FOR RETURN AIR

SUPPLY UP

SUPPLY DOWN

RETURN UP

RETURN DOWN

EXHAUST UP

EXHAUST DN

FLEXIBLE DUCT

DEMO

MANUAL VOLUME DAMPER

CEILING SUPPLY DIFFUSERS SEE SCHEDULES

CEILING RETURN AIR REGISTER SEE SCHEDULES

SIDEWALL SUPPLY/RETURN REGISTER, SEE SCHEDULES

FIRE DAMPER

SMOKE DAMPER

FIRE SMOKE DAMPER

EQUIPMENT TAG

(POC) POINT OF CONNECTION

ROOFTOP UNIT

FURNACE

CONDENSING UNIT

PARALLEL FAN POWERED VAV BOX

VAV/VT BOX

DCW - DOMESTIC COLD WATER

HCW - DOMESTIC HOT WATER

CND - CONDENSATE DRAIN

G - GAS LINE

SS - SANITARY SEWER BELOW FLOOR (SS)

SANITARY VENT

BALL VALVE

FLOOR DRAIN

FLOOR SINK

ELBOW - TURNED DOWN

ELBOW - TURNED UP

VENTILATION SCHEDULE (2018 IMC)

SYSTEM OR UNIT #	ROOM NAME	ZONE FLOOR AREA (SQ.FT.)	OUTDOOR AIRFLOW REQUIRED PER PERSON (CFM/PERSON) Rp	OUTDOOR AIRFLOW REQUIRED PER PERSON (CFM / SQ.FT.) Ra	ZONE OCCUPANT DENSITY (PPL/1000 SQ.FT.)	ZONE POPULATION (PEOPLE) Pz	BREATING OUTDOOR AIR FLOW (CFM) Vbz	ZONE AIR DISTRIBUTION EFFECTIVENESS Ez	REQUIRED ZONE OUTDOOR AIR FLOW Vbz (CFM)
RTU-1	SALES 101	630	7.5	0.12	15	8	124	0.8	155
	COFFEE 102	75	5	0.06	5	0	5	0.8	6
	OFFICE 103	100	5	0.06	5	1	11	0.8	14
	BREAK 107	114	5	0.06	5	1	12	0.8	15
	INVENTORY 108	500		.12 CFM/SQ.FT.					60
									249
								300	

EXHAUST FAN SCHEDULE

PLAN MARK	MFR	MODEL NO.	LOCATION	STYLE	CFM	ESP (IN)	SONES	WEIGHT LBS	SPD	ELECTRICAL DATA				REMARKS
					VOLT	PH	HP	WATTS						
EF-1	ACME	VQ0150	TOILET	CEILING	75	0.25	1.1	25	1	115	1	-	100	1, 2
EF-2	ACME	VQ0150	TOILET	CEILING	75	0.25	1.1	25	1	115	1	-	100	1, 2
EF-3	GREENHECK	SBE-2H20-5	SIDEWALL-SERVICE AREA	WALL	3200	.35	23	150	1	115	1	1/2	9.8 AMPS	1, 3 - 7

- SELECTION BASED AT ALTITUDE
 - INTERLOCK WITH LIGHT SWITCH
 - PROVIDE WALL MOUNTED SENSOR CONNECTED BY E.C.
 - PROVIDE VIBRATION ISOLATORS
 - FURNISH WITH WALL COLLAR (# C-20), MOTORIZED DAMPER & WEATHERHOOD
- 6 CO SENSOR ALARM PER PLANS
DAMPERS OPEN AT 50 PPM & FAN ENRGIZES
SHUTDOWN OPERATION - REVERSE SEQUENCE
- PROVIDE STARTER SET BY MC, USED FOR DAMPER MOTOR, THERMOSTAT AND CO SENSOR CONTROL.

AIR CIRCULATION FAN SCHEDULE

PLAN MARK	MFR	MODEL NO.	LOCATION	STYLE	CFM	ESP (IN)	SPD	ELECTRICAL DATA				REMARKS
					VOLT	PH	HP	WATTS				
F-1	DAYTON	2RDZ9	CEILING/WALL	PROP	7450/3450	.25	1	115	1	1/4	-	1 - 5

- SELECTION BASED AT ALTITUDE
- PROVIDE SOFT START
- OSCILLATING FAN
- STRUCTURAL AND MOUNTING EQ. PER MANUFACTURER
- OSCILLATING FAN: MEANT FOR AIR MOVEMENT ONLY

GAS UNIT HEATER SCHEDULE

PLAN MARK	MFR	MODEL NO.	FUEL	INPUT MBTUH	OUTPUT MBTUH	CFM	HP	VOLT	PH	FLUE SIZE (IN)	REMARKS
GUH-1	MODINE	PDP175	NG	175	143	2725	1/2	115	1	5	1, 2

- REFERS TO MODINE. PERFORMANCE REFERS TO LOCAL ALTITUDE. 82% EFFICIENCY GAS HEATING UNIT.
- PROVIDE REMOTE TSTAT WITH SUMMER/WINTER SWITCH.

ROOFTOP HVAC UNIT SCHEDULE

PLAN MARK	MFR	MODEL NO.	CFM	MIN OA CFM	BLWR HP	ESP (IN)	GAS NAT/PROP	HEATING CAPACITY				NET COOLING CAPACITY						REFRIG (R410A / R22)	EFFICIENCY (STD / HI)	SEER/EER RATING	WEIGHT LBS	ELECTRICAL DATA				REMARKS			
								INPUT MBH (SL)	OUTPUT MBH (ALT)	EAT (F)	LAT (F)	EFF	STG	TOTAL MBH	SENS MBH	EADB (F)	EAWB (F)					LADB (F)	LAWB (F)	VOLT	PH		FLA (LG MTR)	MCA	MOCP
RTU-1	CARRIER	48CGM06K1A3	1990	300	2	0.40	NG	130	106	63.3	113.4	81%	2	60.53	46.61	79.3	65.6	57.2	55.7	R-410A	STD	16 SEER	900	208	1	31.3	37	50	1 - 5

- REFERS TO COOLING CAPACITIES BASED ON 95F OADB, 80F EADB, 61F EAWB @ ELEV, AND 100F CONDENSING TEMPERATURE
- PROVIDE 14" ROOF CURB, BELT DRIVE, HAIL GUARDS, MICROPROCESSOR CONTROL, OPTIONAL DISCONNECT, AND 100% ECONOMIZER W/ BARO RELIEF.
- PROVIDE OPTIONAL CONVENIENCE OUTLET
- SEER AND EER RATING ARE RATED AT ARI CONDITIONS AND IN ACCORDANCE WITH DOE TEST PROCEDURES.
- PROVIDE 7-DAY, 24 HOUR PROGRAMMABLE THERMOSTAT.
- PROVIDE DUCT SMOKE DETECTOR AS REQUIRED.

CODES & DESIGN CRITERIA

JURISDICTION:	ADA, OK
MECHANICAL CODE:	2018 IMC
ENERGY CODE:	2018 IECC
LOCAL ADDENDUMS:	YES
WINTER DESIGN DB:	9 F
SUMMER DESIGN TEMP DB / WB:	99/74 F
INDOOR HEATING SET POINT:	72 F
INDOOR COOLING SET POINT:	75 F
ROOF R-VALUE:	R40 (VERIFY)
WALL R-VALUE:	R19
ELEVATION:	597 FT
BUILDING TOTAL AREA:	4897 SQ.FT.

MECHANICAL SHEET LIST

SHEET #	SHEET TITLE
M0.1	MECHANICAL SPECS, SCHEDULES AND LEGEND
M0.2	SEQUENCE OF OPERATION
M1.1	MECHANICAL PLAN
M1.2	MECHANICAL ROOF PLAN
M2.1	MECHANICAL DETAILS
M3.0	MECHANICAL COMCHECK
M3.1	MECHANICAL COMCHECK

HVAC TESTING AND BALANCING REQUIREMENTS:

THE MECHANICAL CONTRACTOR SHALL EMPLOY THE SERVICES OF AN INDEPENDENT TEST AND BALANCE CONTRACTOR TO BALANCE THE HVAC SYSTEMS IN ACCORDANCE WITH THE DRAWINGS.

HVAC SYSTEMS SHALL BE BALANCED IN ACCORDANCE WITH THE LATEST NEBB PROCEDURAL STANDARDS. THE BALANCING CONTRACTOR SHALL HAVE AT LEAST (3) THREE YEARS OF EXPERIENCE IN TESTING AND BALANCING.

THE BALANCING REPORT SHALL CONTAIN ALL INFORMATION REQUIRED BY NEBB PROCEDURAL STANDARDS FOR TESTING, ADJUSTING, AND BALANCING. THE REPORT SHALL INCLUDE, BUT MAY NOT BE LIMITED TO THE FOLLOWING:

A COMPLETE LIST OF BALANCING INSTRUMENTS AND THEIR LATEST CALIBRATION DATES IS TO BE INCLUDED IN THE FINAL REPORT.

BLOWER: MOTOR HP, VOLTAGE, AMPERAGE (NAMEPLATE AND ACTUAL) RPM, BELT MAKE/MODEL, SHEAVE MAKE/MODEL.

UNIT: MAKE/MODEL/SERIAL NUMBER, FILTER TYPE/SIZE/QUANTITY, FINAL BALANCED DAMPER POSITIONS.

AIR INLETS AND OUTLETS: DESIGN/PRELIMINARY/FINAL CFM'S (EXCLUDES RETURN GRILLES).

ALL MANUAL SINGLE BLADE DAMPERS SHALL BE SECURED IN THEIR FINAL BALANCED POSITIONS WITH A SHEET METAL SCREW THRU THE DAMPER HANDLE.

ALL COMPONENTS SHALL BE BALANCED TO WITHIN +/- 10% OF DESIGN CFM REQUIREMENTS.

PROJ #241412

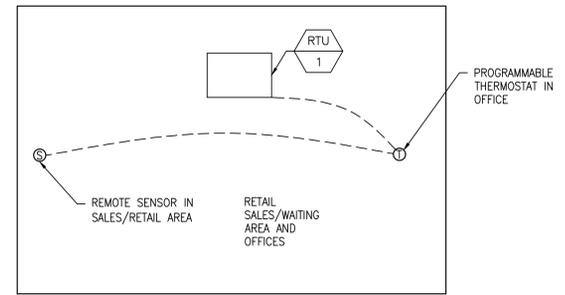
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BRAKES PLUS
1201 LONNIE ABBOTT BLVD.
ADA, OKLAHOMA

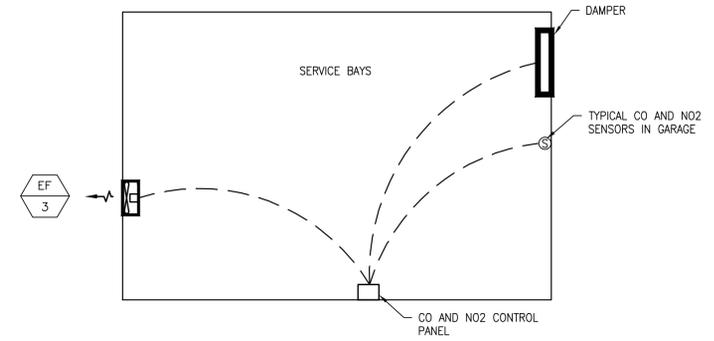


08/25/24
ARCHITECT OF RECORD

DATE	REVISION	COMMENTS
08/06/24		FOR BLDG. DEPT. SUBMITTAL
08/06/24		



OFFICE/RETAIL SALES ROOFTOP UNIT
NOT TO SCALE



SEQUENCE OF OPERATION FOR SERVICE BAYS:

EF-3 SHALL REMAIN OFF AND L-1 SHALL REMAIN CLOSED UNLESS A CALL FOR CARBON MONOXIDE OR NITROGEN DIOXIDE VENTING IS INITIATED.

VENTILATION SHALL BE INITIATED ACCORDING TO THE FOLLOWING SCHEDULE:

STAGE 1: LOW ALARM (25 PPM CO) (0.5 PPM NO2), MOTORIZED DAMPER FOR INTAKE LOUVER SHALL OPEN.

STAGE 2: MEDIUM ALARM (75 PPM CO) (1 PPM NO2), MOTORIZED DAMPER SHALL BE FULLY OPEN AND EXHAUST FAN SHALL BE ENERGIZED.

THE FAN SHALL OPERATE WHEN CARBON MONOXIDE LEVELS FALL BELOW 25 PPM OR NITROGEN DIOXIDE LEVELS FALL BELOW 0.5 PPM. EF SHALL TIME OFF AND L-1 SHALL CLOSE.

GARAGE TRANSFER FANS SHALL REMAIN ON CONSTANT DUTY.

GARAGE GAS DETECTION SPECIFICATIONS

- A. THE GARAGE GAS DETECTION SYSTEM SHALL HAVE A DEDICATED MICROPROCESSOR-BASED CONTROLLER THAT SHALL MONITOR AND CONTROL THE GARAGE GAS DETECTION SYSTEM IN A STAND-ALONE MODE OR AS A PART OF THE BUILDING AUTOMATION SYSTEM. THE CONTROLLER SHALL HAVE A LOCAL DISPLAY.
- B. THE SYSTEM SHALL CONSIST OF EXHAUST FANS, NATURAL MAKEUP AIR AND MULTIPLE GAS DETECTION SENSORS LOCATED PER SUPPLIER REQUIREMENTS AND RECOMMENDATIONS. THE PLANS ARE ONLY A GUIDE, ALL REQUIRED SENSOR LOCATIONS SHALL BE INCLUDED IN THE BID.
- C. THE SENSORS SHALL BE ONE OF THE FOLLOWING TYPES:
 1. MACURCO CM21A
 2. VULCAIN Q2
 3. VERIS G SERIES
 4. MSA Z GUARD

EACH SENSOR SHALL HAVE AN INTEGRAL ALARM LIGHT FOR 25, 50 AND 200 PPM CO AS A MINIMUM. AS AN ALTERNATE, A SERIES OF LIGHTS SHALL BE MOUNTED AT EACH SENSOR FOR THIS PURPOSE.
- D. THE CONTROLLER SHALL MONITOR THE FAN STATUS AND IF THE FAN FAILS TO START AN AUDIBLE ALARM SHALL BE SOUNDED IN THE GARAGE TO ANNUNCIATE THE FAILURE. THE FAILURE SHALL AUTOMATICALLY RESET WHEN FAN STATUS IS ESTABLISHED.
- E. THE SYSTEM SHALL MONITOR ALL OF THE GAS DETECTION SENSORS IN THE GARAGE AND DETERMINE THE MAXIMUM VALUE OF ALL OF THE SENSORS. IF THE MAXIMUM VALUE EXCEEDS THE MINIMUM SETPOINT (THRESHOLD 1) (ADJ.) THE EXHAUST FANS SHALL OPERATE. WHEN THE MAXIMUM VALUE DROPS BELOW 80% OF MINIMUM SETPOINT (THRESHOLD 1) (ADJ.) THE FAN SHALL BE DISABLED. SYSTEM TO EXHAUST A MINIMUM OF 0.75 CFM/SQFT AT HIGH SPEED.
- F. IF ANY SENSOR FAILS THE FAN SHALL OPERATE CONTINUOUSLY AND THE AUDIBLE ALARM SHALL BE SOUNDED. IF ANY SENSOR READING RISES ABOVE 200 PPM CO OR 2.0 PPM NO2, THE AUDIBLE ALARM SHALL BE SOUNDED.
- G. POINTS LIST:
 1. AIP CARBON MONOXIDE SENSORS (AS REQUIRED)
 2. AIP NITROGEN DIOXIDE SENSORS (AS REQUIRED)
 3. AOP FAN ANALOG SPEED REQUEST
 4. BIP FAN STATUS
 5. BOP ALARM LIGHT, HORN WITH SILENCE BUTTON
 6. ALM FAN FAILURE
 7. STPT FAN ENABLE LEVEL
 8. STPT FAN DISABLE LEVEL

END

SERVICE BAY EXHAUST FAN/INTAKE LOUVER

NOT TO SCALE

BRAKES PLUS

1201 LONNIE ABBOTT BLVD.
ADA, OKLAHOMA



08/25/24
ARCHITECT OF RECORD

REVISION	DATE	COMMENTS FOR BLDG. DEPT. SUBMITTAL
△	08/06/24	
	08/06/24	

ARCODEV JOB #:
CLIENT JOB #:
DRAWN BY: JRG
CHECKED BY: LRP
DATE OF ISSUE: 08/25/24



45 SPYGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.881.8925

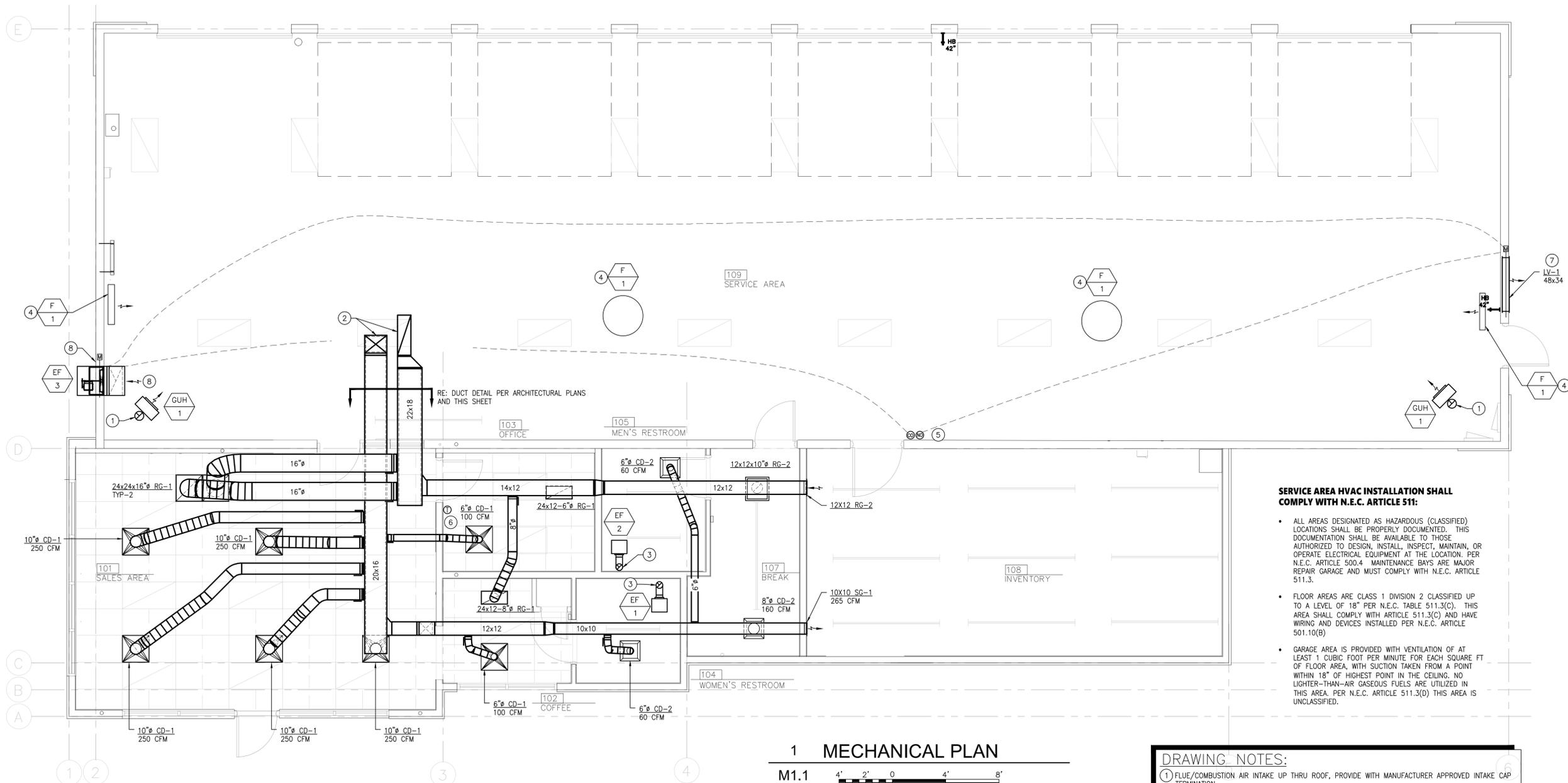
SHEET

PROJ #241412

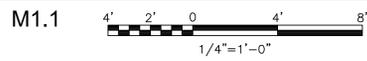
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MO.2

MECHANICAL SEQUENCE OF OPERATIONS



1 MECHANICAL PLAN



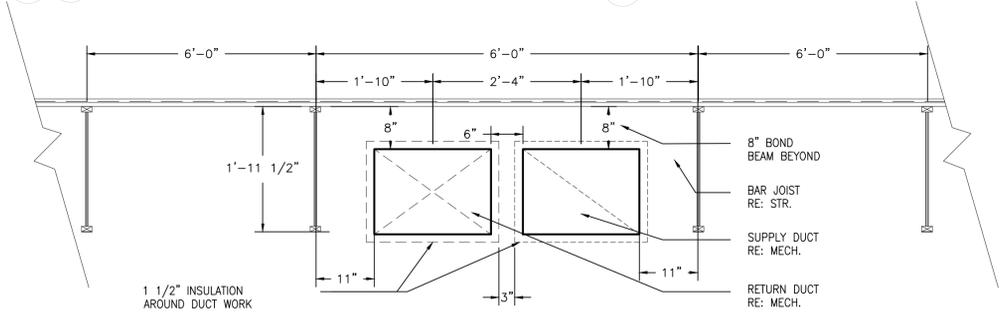
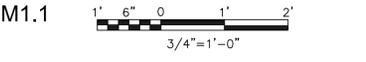
SERVICE AREA HVAC INSTALLATION SHALL COMPLY WITH N.E.C. ARTICLE 511:

- ALL AREAS DESIGNATED AS HAZARDOUS (CLASSIFIED) LOCATIONS SHALL BE PROPERLY DOCUMENTED. THIS DOCUMENTATION SHALL BE AVAILABLE TO THOSE AUTHORIZED TO DESIGN, INSTALL, INSPECT, MAINTAIN, OR OPERATE ELECTRICAL EQUIPMENT AT THE LOCATION. PER N.E.C. ARTICLE 500.4 MAINTENANCE BAYS ARE MAJOR REPAIR GARAGE AND MUST COMPLY WITH N.E.C. ARTICLE 511.3.
- FLOOR AREAS ARE CLASS 1 DIVISION 2 CLASSIFIED UP TO A LEVEL OF 18" PER N.E.C. TABLE 511.3(C). THIS AREA SHALL COMPLY WITH ARTICLE 511.3(C) AND HAVE WIRING AND DEVICES INSTALLED PER N.E.C. ARTICLE 501.10(B)
- GARAGE AREA IS PROVIDED WITH VENTILATION OF AT LEAST 1 CUBIC FOOT PER MINUTE FOR EACH SQUARE FT OF FLOOR AREA, WITH SUCTION TAKEN FROM A POINT WITHIN 18" OF HIGHEST POINT IN THE CEILING. NO LIGHTER-THAN-AIR GASEOUS FUELS ARE UTILIZED IN THIS AREA. PER N.E.C. ARTICLE 511.3(D) THIS AREA IS UNCLASSIFIED.

DRAWING NOTES:

- FLUE/COMBUSTION AIR INTAKE UP THRU ROOF. PROVIDE WITH MANUFACTURER APPROVED INTAKE CAP TERMINATION.
- FULL SIZE SA/RA DUCT DOWN FROM RTU. PROVIDE TRANSITIONS AS REQUIRED TO ACCOMMODATE DUCT SIZE AS INDICATED. PROVIDE FLEXIBLE CONNECTIONS AS REQUIRED.
- EXHAUST DUCT UP THRU ROOF TO APPROVED CAP OR GOOSENECK TERMINATION. SIZE AS INDICATED
- FANS SHALL BE EITHER WALL OR CEILING MOUNTED AT 10'-0" AFF. REFERENCE ARCHITECTURAL PLANS FOR FINAL LOCATION. COORDINATE WITH OTHER HVAC/SHOP EQUIPMENT. SEE OWNER FOR EXACT LOCATION.
- CONTROL WIRE FROM CO/NOX SENSORS BACK TO DETECTION SYSTEMS CONTROL PANEL. LOCATE AND INSTALL THE SENSORS BASED ON MANUFACTURERS INSTALLATION INSTRUCTIONS. COORDINATE FINAL LOCATION FOR CONTROL PANEL(S). PROVIDE 7-DAY, 24 HOUR PROGRAMMABLE THERMOSTAT WITH SPACE SENSOR. THERMOSTAT AND SENSOR LOCATIONS ON WALL TO BE VERIFIED WITH OWNER PRIOR TO INSTALLATION.
- PROVIDE 7-DAY PROGRAMMABLE T-STAT WITH SPACE SENSOR. BOTH SENSOR AND THERMOSTAT LOCATION SHALL BE COORDINATED WITH BUILDING OWNER.
- COORDINATE EXTERIOR WALL LOUVER AND EXHAUST FAN WALL OPENING SIZES AND LOCATIONS PER ARCHITECTURAL PLANS FOR EXACT LOCATION AND ELEVATION.
- PROVIDE 30x12 EXHAUST DUCT FROM EF-3, ROUTE UP INTERIOR WALL TO MIN. 18" BELOW STRUCTURE. PROVIDE HARDWARE MESH SCREEN AT OPENING. COORDINATE OPENINGS W/ ARCH PLANS AND OWNER.

2 DUCTWORK DETAIL



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	08/06/24	COMMENTS

ARCODEV JOB #:
CLIENT JOB #:
DRAWN BY: JRG
CHECKED BY: LRP
DATE OF ISSUE: 08/23/24

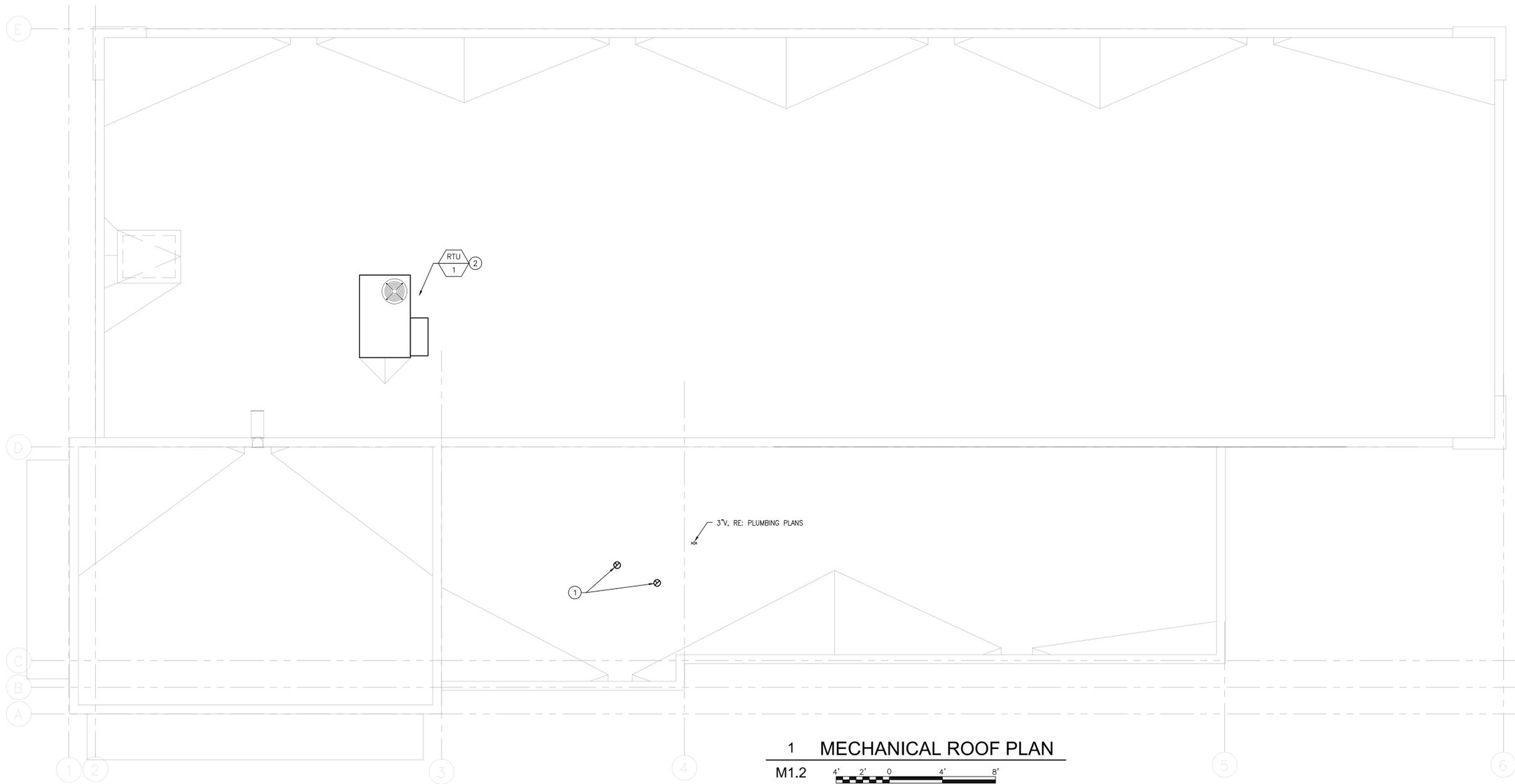


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LITTLETON, CO 80123
VOICE: 303.881.8925

A SHEET

PROJ #241412
ADAM A. POWELL, P.E.
PEC Enterprises, Inc.
14412 Alene Ct. NE
Albuquerque, NM 87123
Telephone 720-409-2454

M1.1
MECHANICAL PLAN



1 MECHANICAL ROOF PLAN
 M1.2 1/4"=1'-0"

DRAWING NOTES:
 ① EXHAUST DUCT FROM RESTROOM BELOW. TERMINATE WITH APPROVED CAP.
 ② NEW ROOFTOP UNIT: MAINTAIN 10'-0" FROM OUTSIDE AIR INTAKE.

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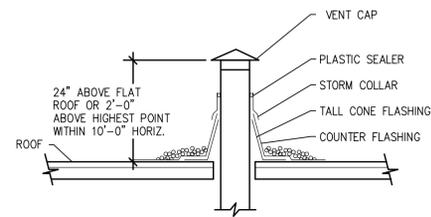
ARC CODE V JOB #:
 CLIENT JOB #:
 DRAWN BY: JRG
 CHECKED BY: LRP
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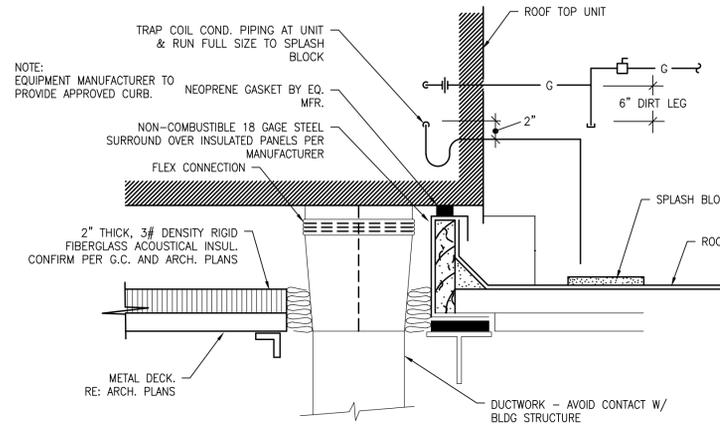
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M1.2
 MECHANICAL ROOF PLAN



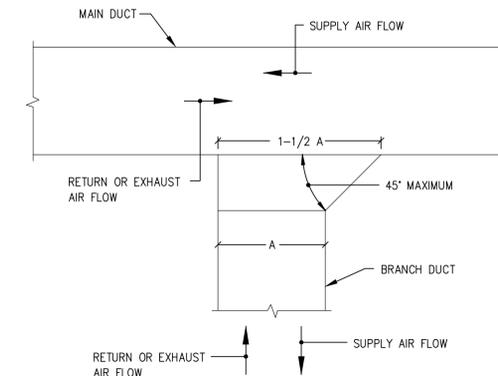
EXHAUST FAN DUCT THRU ROOF DETAIL

NOT TO SCALE



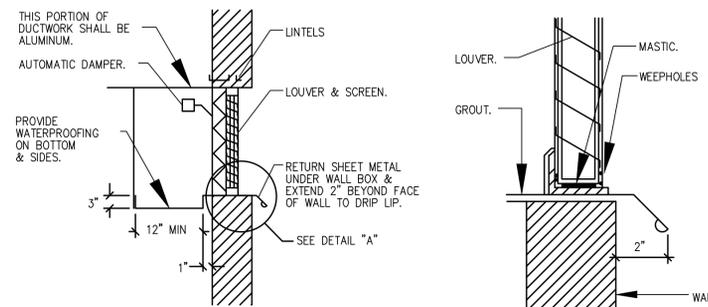
ROOFTOP UNIT INSTALLATION DETAIL

NOT TO SCALE



DUCT TAKE-OFF DETAIL

NOT TO SCALE



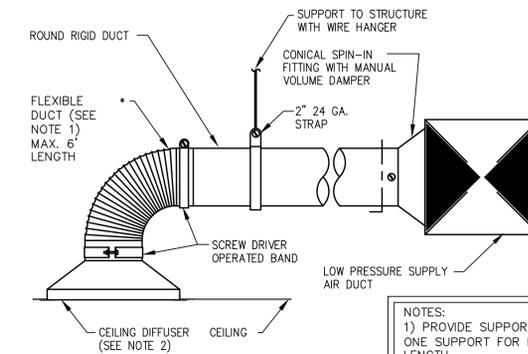
NOTE:
REFER TO MFR'S INSTURCTIONS
FOR SPECIFIC MOUNTING DETAILS.
COORDINATE WITH
ARCHITECTURAL REQUIREMENTS.

DETAIL A

NOT TO SCALE

WATERTIGHT LOUVER CONNECTION DETAIL

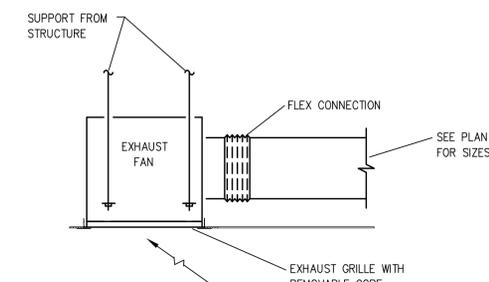
NOT TO SCALE



NOTES:
1) PROVIDE SUPPORT MINIMUM OF ONE SUPPORT FOR EACH 3'-0" OF LENGTH
2) SUPPORT DIFFUSER INDEPENDENT FROM DUCTWORK WITH WIRE HANGERS WHEN REQUIRED BY LOCAL CODE.

AIR DEVICE DETAIL

NOT TO SCALE



CEILING EXHAUST FAN DETAIL

NOT TO SCALE

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M2.1
MECHANICAL DETAILS

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C403.12.2	Snow/ice melting system and freeze protection systems have sensors and controls configured to limit service for pavement temperature and outdoor temperature. future connection to controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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COMcheck Software Version 4.1.5.5 Inspection Checklist

Energy Code: 2018 IECC

Requirements: 0.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [P92]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C103.2 [P93]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the service water heating systems and equipment and document where exceptions to the standard are claimed. Hot water system sized per manufacturer's sizing guide.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405 [P99]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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COMcheck Software Version 4.1.5.5 Mechanical Compliance Certificate

Project Information

Energy Code: 2018 IECC
 Project Title: Brakes Plus
 Location: Ada, Oklahoma
 Climate Zone: 3a
 Project Type: New Construction

Construction Site: ADA, OK
 Owner/Agent: Brakes Plus
 Designer/Contractor: Loren Priest
 EE LLC Engineering
 12005 Antelope Trail
 Parker, CO 80138
 303.481.189
 loren@eeparker.com

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed
 Reduced Lighting Power, 1.0 credit

Mechanical Systems List

Quantity	System Type & Description
1	RTU-1 (Single Zone) Heating: 1 each - Duct Furnace, Gas, Capacity = 130 kBtu/h Proposed Efficiency = 80.00% Ee, Required Efficiency: 80.00 % Ee Cooling: 1 each - Single Package DX Unit, Capacity = 80 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 14.00 EER, Required Efficiency: 11.00 EER / 12.0 EER Fan System: RTU-1 - Compliance (Motor nameplate HP method) : Passes Fans: RTU1 Supply, Constant Volume, 1990 CFM, 2.0 motor nameplate hp, 0.0 fan efficiency grade
2	GUH-1 (Single Zone) Heating: 1 each - Unit Heater, Gas, Capacity = 175 kBtu/h Proposed Efficiency = 80.00% Ee, Required Efficiency: 80.00 % Ee Fan System: GUH-1 - Compliance (Motor nameplate HP method) : Passes Fans: GUH1 Supply, Constant Volume, 2575 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade
1	EW-1-1 Electric Storage Water Heater, Capacity: 30 gallons w/ Circulation Pump Proposed Efficiency: 1.20 SL, %h (# > 12 KW), Required Efficiency: 1.20 SL, %h (# > 12 KW)

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Mechanical Designer: John R. Carter 9/25/24
 Name - Title Signature Date

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Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41]	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-5.5.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.11.3 [ME61]	HVAC piping insulation insulated in accordance with Table C403.11.3. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.8.4 [ME142]	Motors for fans that are not less than 1/12 hp and less than 1 hp are electronically commutated motors or have a minimum motor efficiency of 70 percent. These motors have the means to adjust motor speed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.8.4 [ME142]	Motors for fans that are not less than 1/12 hp and less than 1 hp are electronically commutated motors or have a minimum motor efficiency of 70 percent. These motors have the means to adjust motor speed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.8.5 [ME143]	Each DX cooling system > 65 kbtu and chiller water/evaporative cooling system with fans > 1/4 hp are designed to vary the indoor fan airflow as a function of load and comply with detailed requirements of this section.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.8.5 [ME143]	Each DX cooling system > 65 kbtu and chiller water/evaporative cooling system with fans > 1/4 hp are designed to vary the indoor fan airflow as a function of load and comply with detailed requirements of this section.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.12.1 [ME71]	Systems that heat outside the building envelope are radiant heat systems controlled by an occupancy sensing device or timer switch.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.3 [ME55]	HVAC equipment efficiency verified.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Mechanical Systems list for values.
C403.5.5 [ME113]	Fault detection and diagnostics installed with air-cooled unitary DX units having economizers.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.2 [ME59]	Natural or mechanical ventilation is provided in accordance with International Mechanical Code Chapter 4. Mechanical ventilation has capability to reduce outdoor air supply to minimum per IMC Chapter 4.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.7.1 [ME59]	Demand control ventilation provided for spaces >500 ft ² and >25 people/1000 ft ² occupant density and served by systems with air-side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5 [PL6]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.5 [PL6]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.5 [PL6]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.6.1 [PL3]	Automatic time switches installed to automatically switch off the recirculating hot-water system or heat trace.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.6.3 [PL7]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.6.3 [PL7]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.6.3 [PL7]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.7 [PL8]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.7 [PL8]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

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 14412 Alene Ct. NE
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M3.0
 MECHANICAL COMCHECK

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.6 [EL26]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.7 [EL27]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.8.2 [EL28]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.9 [EL29]	Total voltage drop across the combination of feeders and branch circuits \leq 5%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.3.3 [ME35]	Hot gas bypass limited to: \leq 240 kBtu/h - 50% $>$ 240 kBtu/h - 25%	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.2.1 [ME33]	Air outlets and zone terminal devices have means for air balancing.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.5.1 [ME123]	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.5.2 and refrigeration compressor systems that comply with C403.5.2.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

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Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.7.2 [ME115]	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.7.6 [ME141]	HVAC systems serving guestrooms in Group R-1 buildings with $>$ 50 guestrooms: Each guestroom is provided with controls that automatically manage temperature setpoint and ventilation (see sections C403.7.6.3 and C403.7.6.2).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.7.4 [ME57]	Exhaust air energy recovery on systems meeting Table C403.7.4(1) and C403.7.4(2).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.7.5 [ME116]	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.11.1 [ME60]	HVAC ducts and plenums insulated in accordance with C403.11.1 and constructed in accordance with C403.11.2. Verification may need to occur during Foundation Inspection.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.5.2 [ME62]	Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.5.3 [ME124]	Air economizers automatically reduce outdoor air intake to the design minimum outdoor air quantity when outdoor air intake will not reduce cooling energy usage. See Table C403.5.3.3 for applicable device types and climate zones.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.5.3.4 [ME125]	System capable of relieving excess outdoor air during air economizer operation to prevent overpressurizing the building. The relief air outlet located to avoid recirculation into the building.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.5.3.5 [ME126]	Return, exhaust/relief and outdoor air dampers used in economizers have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Reference section C403.7.7 for details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.4.1 [ME63]	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures $>$ 45F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint \leq 60F and cooling setpoint \geq 80F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

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Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C404.6.1 [F112]	Controls are installed that limit the operation of a recirculation pump installed to maintain temperature of a storage tank. System return pipe is a dedicated return pipe or a cold water supply pipe.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.1.1 [F157]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.1 [F128]	Commissioning plan developed by registered design professional or approved agency.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.3 [F131]	HVAC equipment has been tested to ensure proper operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.3.2 [F110]	HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.3.3 [F132]	Economizers have been tested to ensure proper operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.4 [F129]	Preliminary commissioning report completed and certified by registered design professional or approved agency.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.1 [F17]	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.3 [F143]	An air and/or hydronic system balancing report is provided for HVAC systems.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.4 [F130]	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

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Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3 [F18]	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.2 [F127]	HVAC systems and equipment capacity does not exceed calculated loads.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.1 [F147]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.2 [F147]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.4.1.2 [F138]	Thermostatic controls have a 5 °F deadband.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.1.3 [F120]	Temperature controls have setpoint overlap restrictions.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.2 [F139]	Each zone equipped with setback controls using automatic time clock or programmable control system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.2.1 [F140]	Automatic Controls: Setback to 55°F (heat) and 85°F (cool), 7-day clock, 2-hour occupant override, 10-hour backup.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.2.2 [F140]	Automatic Controls: Setback to 55°F (heat) and 85°F (cool), 7-day clock, 2-hour occupant override, 10-hour backup.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.2.3 [F141]	Systems include optimum start controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.2.4 [F141]	Systems include optimum start controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.3 [F111]	Heat traps installed on supply and discharge piping of non-circulating systems.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.4 [F123]	All piping insulated in accordance with section details and Table C403.11.3.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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BRAKES PLUS
1201 LONNIE ABBOTT BLVD.
ADA, OKLAHOMA



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	08/06/24	FOR BLDG. DEPT. SUBMITAL
	08/06/24	COMMENTS

ARCODEV JOB #: _____
CLIENT JOB #: _____
DRAWN BY: JRG
CHECKED BY: LRP

DATE OF ISSUE: 09/25/24



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A SHEET

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M3.1
MECHANICAL COMCHECK

PLUMBING GENERAL NOTES AND SPECIFICATIONS

GENERAL CONSTRUCTION NOTES:

- DRAWINGS ARE MEANT TO SHOW INTENT ONLY, NOT EXACT DETAIL. THESE DRAWINGS ARE A "BUILDERS SET" AND INTENDED FOR THE USE OF AN EXPERIENCED AND WELL QUALIFIED CONTRACTOR WHO MAY INFER REASONABLE INFORMATION BASED ON EXPERIENCE COMMON IN THE INDUSTRY AND TRADES. QUALITY LEVEL IS A REQUIRED STANDARD. DO NOT SCALE DRAWINGS. FIELD VERIFY ALL CONDITIONS OF WORK AND REPORT ANY DISCREPANCIES TO THE ARCHITECT/ENGINEER FOR CLARIFICATIONS BEFORE STARTING ANY WORK. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL ERRORS IN HIS WORK, INCLUDING THE LACK OF FIELD VERIFICATION OF EXISTING CONDITIONS.
- THE ARCHITECT AND PROFESSIONAL CONSULTANTS WILL NOT HAVE CONTROL OF AND WILL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, OR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK ON THIS PROJECT OR FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK ON THIS SITE, NOR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE INTENT OF THE CONTRACT AND OR THESE CONSTRUCTION DOCUMENTS.

BASIC REQUIREMENTS:

PLUMBING DESIGN SHALL CONFORM TO THE CURRENT INTERNATIONAL PLUMBING CODE. PROJECT SHALL BE COORDINATED WITH THE EXISTING BUILDING SERVICES AND SHALL INCLUDE ALL ITEMS NECESSARY FOR COMPLETE AND FULLY OPERATIONAL TENANT PLUMBING SYSTEMS. MAKE CONNECTIONS TO AND EXTEND SYSTEMS INSTALLED BY OTHERS AND/OR FURNISHED BY OTHERS. PROVIDE ACCESSORIES AND INCIDENTAL ITEMS AS REQUIRED FOR A COMPLETE AND FULLY OPERATIONAL SYSTEM WHETHER OR NOT SPECIFICALLY SPECIFIED AND/OR SHOWN ON THE PLANS.

DO NOT SCALE FROM THESE DRAWINGS. REFER TO ARCHITECTURAL OR CIVIL DRAWINGS BY OTHERS FOR DIMENSIONS AND FOR ESTIMATING DISTANCES. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS AND SPECIFICATIONS RELATING TO THE JOB WHETHER OR NOT INDICATED ON THESE DRAWINGS. ANY SCALE, DIMENSION OR QUANTITIES SHOWN ON THE DRAWINGS ARE FOR ENGINEERING CALCULATION PURPOSES ONLY. THE PLUMBING CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ESTIMATING AND DETERMINING ALL DISTANCES AND QUANTITIES RELATED TO THE PROJECT. REFER TO ARCHITECTURAL OR CIVIL DRAWINGS BY OTHERS AND VERIFY EXISTING CONDITIONS ON SITE FOR ALL ESTIMATING PURPOSES.

COORDINATE WITH OTHER TRADES FOR A COORDINATED INSTALLATION WITHIN THE AVAILABLE SPACE. WHERE CROWDED CONDITIONS EXIST, PREPARE COORDINATION DRAWINGS SHOWING ALL TRADE CONFLICTS AND SUBMIT TO ARCHITECT FOR APPROVAL AND DIRECTION PRIOR TO ROUGH-IN AND/OR INSTALLATION. RELOCATION OF OUTLETS AND/OR DEVICES MADE PRIOR TO ROUGH-IN SHALL BE DONE AT NO ADDITIONAL COST.

ALL WORK SHALL BE PERFORMED BY PROPERLY LICENSED PLUMBERS OR UNDER THEIR DIRECT SUPERVISION. ALL MATERIALS AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE APPLICABLE STANDARDS OF UL AND SHALL BEAR THE UL LABEL AS EVIDENCE THAT THE MATERIAL AND/OR EQUIPMENT MEETS THIS REQUIREMENT.

INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND DETAILS UNLESS OTHERWISE NOTED IN THESE PLANS. IF ANY DISCREPANCIES EXIST CONTACT THE ENGINEER PRIOR TO ORDERING EQUIPMENT AND ROUGH-IN.

ALL EQUIPMENT START UP AND TESTING SHALL BE PERFORMED BY THE EQUIPMENT MANUFACTURER TRAINED SERVICE TECHNICIAN. SUBMIT MANUFACTURER'S LITERATURE (SHOP DRAWINGS) FOR MATERIALS AND EQUIPMENT. SUBMITTAL SHALL INCLUDE EQUIPMENT PERFORMANCE DATA AT ELEVATION AND/OR LOCAL CONDITIONS. EQUIPMENT CUTSHEETS OR CATALOG COPIES ARE NOT ACCEPTABLE. SUBMITTAL SHALL BEAR THE APPROVAL OF THE GENERAL CONTRACTOR FOR COMPLIANCE WITH COORDINATION AND THESE SPECIFICATIONS PRIOR TO SUBMITTAL TO ARCHITECT AND/OR HIS AGENCIES. ANY EQUIPMENT SUBSTITUTED FOR WHAT IS SCHEDULED SHALL BE EQUAL TO THAT SCHEDULED IN CONTROLS, ACCESSORIES, AND PERFORMANCE REGARDLESS OF MANUFACTURER.

FIELD LABEL ALL PLUMBING EQUIPMENT AND PIPING AS INDICATED ON THE PLANS PER PLUMBING AND LOCAL CODE REQUIREMENTS. INDICATE DIRECTION OF FLOW ON PIPING.

TAG ALL VALVES WITH CONSECUTIVE NUMBERING ON PERMANENT HARD PLASTIC OR METAL TAG AND PROVIDE SCHEDULE LISTING ITEMS, AREA SERVED, SIZE AND VALVE TYPE. SUBMIT FINAL VALVE SCHEDULE FOR REVIEW.

PROVIDE EXPANSION LOOPS, SWING JOINTS, OR MECHANICAL EXPANSION COMPENSATING DEVICES AS REQUIRED TO ACCOUNT FOR THERMAL EXPANSION OF ALL PIPING SYSTEMS. EXPANSION SYSTEM SIZING SHALL BE IN ACCORDANCE WITH MATERIALS DATA SHEETS AND MANUFACTURER RECOMMENDATIONS.

INSTALL ALL EQUIPMENT PER MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS. IF PLAN DIFFERS FROM THESE INSTRUCTIONS THEN NOTIFY ENGINEER PRIOR TO ROUGH-IN. MANUFACTURER'S INSTRUCTIONS SHALL PREVAIL. SPECIAL ATTENTION MUST BE PAID TO GAS FIRED EQUIPMENT FLUE/GA LENGTHS, SIZES, AND MATERIAL.

BASIC MATERIALS

PLUMBING CONTRACTOR TO PROVIDE PLUMBING SYSTEM CONTROLS, CONTROLLERS, CONTROL TRANSFORMER, DISCONNECT STARTERS, CONTROL WIRE, INTERNATIONAL COUPLINGS FOR JOINING, AND ALL WORK NECESSARY FOR A COMPLETE AND OPERATIONAL PLUMBING SYSTEM. ALL ELECTRICAL ITEMS SHALL BE COORDINATED WITH ELECTRICAL DRAWINGS AND ELECTRICAL SUB-CONTRACTOR FOR INSTALLATION.

PROVIDE SUPPLEMENTAL STEEL AND SUPPORTS AS REQUIRED FOR INSTALLATION OF PLUMBING MATERIALS, EQUIPMENT, AND APPARATUS.

ALL WORK IN FINISHED AREAS SHALL BE CONCEALED UNLESS SPECIFICALLY NOTED AS EXPOSED ON THE PLANS. PRIOR TO THE INSTALLATION OF ANY EXPOSED WORK THIS CONTRACTOR SHALL VERIFY AND OBTAIN ARCHITECTURAL APPROVAL OF LOCATION AND EXTENT.

PROVIDE PRESSURE REDUCING VALVE ASSEMBLY AT BUILDING WATER SERVICE ENTRY WHERE PRESSURE EXCEEDS 65 PSI. PRESSURE REDUCING VALVE TO BE SET TO 65 PSI.

PROVIDE SANITARY SEWER SYSTEM CLEANOUTS AS REQUIRED BY LOCAL CODES. PROVIDE BRANCH SHUT-OFF VALVES ON ALL WATER LINES EXTENDING FROM MAINS. THE CONTRACTOR SHALL LOCATE AND FURNISH FOR INSTALLATION BY OTHERS, ALL ACCESS PANELS AS REQUIRED FOR ACCESS TO VALVES, MOTORS, ETC. AND THE PROPER SERVICING OF EQUIPMENT AND LINES INSTALLED UNDER THIS CONTRACT.

PIPING

- SANITARY, VENT, AND STORM PIPING ABOVE GRADE SHALL BE CAST IRON NO-HUB PIPE AND FITTINGS, MANUFACTURED TO CISPI 310 BEARING THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE AND BE LISTED BY NSF INTERNATIONAL. COUPLINGS FOR JOINING CAST IRON NO-HUB PIPE SHALL MEET THE REQUIREMENTS OF CISPI 310 AND LISTED BY NSF INTERNATIONAL TO THE CISPI 310 STANDARD. IF HEAVY DUTY COUPLINGS ARE REQUIRED: HUSKY 2000, CLAMP ALL 80, OR MISSION 80 COUPLINGS WITH CONSIDERATION TO USE: HUSKY 4000 OR CLAMP ALL 125. INSTALLATION IN COMPLIANCE TO CISPI HANDBOOK.
- SANITARY, VENT, AND STORM PIPING ABOVE AND BELOW GRADE SHALL BE SOLID CORE PVC SCHEDULE 40 OR 80 PIPE AND SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM D 1785 AND ASTM D 2865. INJECTION MOLDED PVC DWV FITTINGS SHALL CONFORM TO ASTM D 2865. FABRICATED PVC DWV FITTINGS SHALL CONFORM TO ASTM F 1866. PIPE AND FITTINGS SHALL BE MANUFACTURED AS A SYSTEM AND BE THE PRODUCT OF ONE MANUFACTURER. ALL PIPE AND FITTINGS SHALL BE MANUFACTURED IN THE UNITED STATES. ALL SYSTEMS SHALL UTILIZE A SEPARATE WASTE AND VENT SYSTEM. PIPE AND FITTINGS SHALL CONFORM TO NSF INTERNATIONAL STANDARD 14. INSTALLATION SHALL COMPLY WITH THE LATEST INSTALLATION INSTRUCTIONS PUBLISHED BY MANUFACTURER AND SHALL CONFORM TO ALL APPLICABLE PLUMBING, BUILDING, AND FIRE CODE REQUIREMENTS. BURIED PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D 2321 AND ASTM F 1668. SOLVENT CEMENT JOINTS SHALL BE MADE IN A TWO STEP PROCESS WITH PRIMER CONFORMING TO ASTM F 656 AND SOLVENT CEMENT CONFORMING TO ASTM D 2564. THE SYSTEM SHALL BE PROTECTED FROM CHEMICAL AGENTS, FIRE STOPPING MATERIALS, THREAD SEALANT, PLASTICIZED VINYL PRODUCTS, OR OTHER AGGRESSIVE CHEMICAL AGENTS NOT COMPATIBLE WITH PVC COMPOUNDS. SYSTEMS SHALL BE HYDROSTATICALLY TESTED AFTER INSTALLATION.
- DOMESTIC WATER PIPING ABOVE GRADE: ASTM B 88, TYPE L COPPER WITH SOLDERED OR MECHANICALLY CRIMPED JOINTS (PRO PRESS)
- DOMESTIC WATER PIPING ABOVE GRADE: SOCKET WELDED CPVC TUBE AND FITTINGS PER ASTM D 2846.
- DOMESTIC WATER PIPING ABOVE GRADE: UPONOR AUAPEX PIPING WITH PROPEX FITTINGS FOR ALL BRANCH CONNECTIONS AND TERMINATIONS (OR REHAU EQUIVALENT). DCW TO BE BLUE PIPE, DHW TO BE RED PIPE, AND DHWR TO BE CLEAR PIPE.
- DOMESTIC WATER PIPING BELOW GRADE SHALL BE TYPE K COPPER WITH SILVER SOLDERED JOINTS.
- CONDENSATE DRAIN PIPING SHALL BE TYPE M COPPER WITH SOLDERED JOINTS, OR CPVC IF ALLOWED BY LOCAL AUTHORITY HAVING JURISDICTION.

- ANY PIPING SYSTEM LOCATED IN A RETURN AIR PLENUM SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NO MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NO MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84.
- FIRE STOP ALL PIPING MATERIALS PASSING THROUGH FIRE RATED STRUCTURES OR FIRE RATED ASSEMBLIES IN ACCORDANCE WITH THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION. USE CURRENTLY LISTED U.L. CLASSIFIED PRODUCTS, TESTED BY ASTM E814. USE FOR ALL APPLICABLE PIPE PENETRATIONS THROUGH FIRE RATED FLOORS, WALLS, OR FLOOR CEILING ASSEMBLIES IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.
- COMPRESSED AIR PIPING: 1" AND SMALLER: TYPE K OR L (TYPE A OR B), COPPER TUBE; WROUGHT-COPPER FITTINGS; COPPER PRESSURE-SEAL-JOINT FITTINGS; COPPER-PUSH FITTINGS; AND BRAZED JOINTS.
- COMPRESSED AIR PIPING: 2" DOWN TO 1-1/4" SHALL BE TYPE K OR L (TYPE A OR B), COPPER TUBE; WROUGHT-COPPER FITTINGS; COPPER PRESSURE-SEAL-JOINT FITTINGS; AND BRAZED JOINTS.
- COMPRESSED AIR PIPING: 2-1/2" TO 4" SHALL BE TYPE K OR L (TYPE A OR B), COPPER TUBE; WROUGHT-COPPER FITTINGS; COPPER PRESSURE-SEAL-JOINT FITTINGS; AND BRAZED JOINTS.
- COMPRESSED AIR DRAIN PIPING SHALL BE TYPE M (TYPE C) COPPER TUBE; WROUGHT-COPPER FITTINGS, AND BRAZED OR SOLDERED JOINTS.

INSULATION

- WATER PIPING IN UNCONDITIONED SPACE AND EXTERIOR WALLS SHALL BE 2" FIBERGLASS INSULATION.
- HOT WATER PIPING 2" OR LESS SHALL BE 1-INCH FIBERGLASS INSULATION. HOT WATER PIPING GREATER THAN 2-INCHES SHALL BE 1 1/2" FIBERGLASS INSULATION. RUNOUTS, NOT EXCEEDING 12 FEET, UP TO 2-INCHES SHALL BE 1/2-INCH THICK FIBER GLASS INSULATION WITH AN ALL-SERVICE JACKETS.
- STORM DRAIN PIPING ABOVE GRADE SHALL BE 1/2-INCH THICK FIBER GLASS INSULATION WITH AN ALL-SERVICE JACKET.
- HORIZONTAL SANITARY AND STORM PIPING EXPOSED TO OUTDOOR TYPE AMBIENT CONDITIONS INCLUDING COVERED PARKING AND CRAWL SPACES SHALL BE HEAT-TRACED AND INSULATED WITH 1-INCH FIBERGLASS INSULATION.
- VERTICAL SANITARY AND STORM PIPING EXPOSED TO OUTDOOR TYPE AMBIENT CONDITIONS INCLUDING COVERED PARKING AND CRAWL SPACES SHALL BE INSULATED WITH 1-INCH FIBERGLASS INSULATION.
- CONDENSATE DRAIN PIPING SHALL BE 1/2-INCH THICK INSULATION WITH AN ALL-SERVICE JACKET.
- COLD WATER DISTRIBUTION PIPING SHALL NOT BE INSULATED UNLESS OTHERWISE NOTED.
- COLD OR HOT WATER PIPING IN A WALL, CEILING, OR FLOOR THAT IS ADJACENT TO AN UNCONDITIONED SPACE SHALL HAVE 1-INCH THICK INSULATION. THE PIPING SHALL ALSO BE INSTALLED TO THE WARM SIDE OF THE BUILDING INSULATION.
- HOT WATER PIPING LESS THAN 1-1/2" SHALL BE 1-INCH FIBERGLASS INSULATION. HOT WATER PIPING 1-1/2" TO 4" SHALL BE 1 1/2" FIBERGLASS INSULATION.

PLUMBING EQUIPMENT/FIXTURES

- FURNISH AND INSTALL PLUMBING FIXTURES AS SCHEDULED ON THE PLANS.
- PROVIDE CHROME PLATED ANGLE STOPS AND ESCUTCHEON PLATES ON ALL EXPOSED FIXTURE RUNOUTS.
- PROVIDE INSULATION AND ROUGH IN AS REQUIRED FOR COMPLIANCE WITH ADA REQUIREMENTS.
- PROVIDE ALL ACCESSORIES AND SPECIALTY ITEMS AS REQUIRED FOR A COMPLETE FIXTURE INSTALLATION.

REDUCED PRESSURE BACKFLOW PREVENTER

FURNISH AND INSTALL LEADFREE REDUCED PRESSURE BACKFLOW PREVENTER FOR THE PRIMARY DOMESTIC COLD WATER SERVICE IN ACCORDANCE WITH STATE, LOCAL, AND JURISDICTIONAL WATER DISTRICT REQUIREMENTS. FURNISH AND INSTALL REDUCED PRESSURE BACKFLOW PREVENTER FOR MECHANICAL EQUIPMENT REQUIRED OF THIS OR OTHER SECTIONS OF THESE SPECIFICATIONS.

ELECTRIC WATER HEATERS

FURNISH AND INSTALL A GLASS LINED ELECTRIC WATER HEATER AS SCHEDULED ON THE PLANS. FURNISH HEATER WHICH ARE UL LABELED AND MEET THE REQUIREMENTS OF LOCAL MUNICIPALITIES. WATER HEATER LOCATED IN CEILING SHALL BE PROVIDED WITH 2 1/2" DRAIN PAN. TERMINATE DRAIN TO NEAREST FLOOR DRAIN, FLOOR SINK OR LAV TRAP.

ABBREVIATIONS

(D)	DEMO
(E)	EXISTING
(N)	NEW
AAV	AIR ADMITTANCE VALVE
AD	AREA DRAIN
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
B	BOILER
BB	BASEBOARD
BFP	BOOSTER FAN
BFP	BACKFLOW PREVENTER
BT	BATH TUB
BV	BALL VALVE
CD	CONDENSATE DRAIN
CFM	CUBIC FEET PER MINUTE
CO	CHILLER
COTG	CLEANOUT TO GRADE
CU	CONDENSING UNIT
CV	CHECK VALVE
CUH	CABINET UNIT HEATER
DCW	DOMESTIC COLD WATER
DF	DRINKING FOUNTAIN
DHW	DOMESTIC HOT WATER
DSN	DOWN SPOUT NOZZLE
EC	ELECTRICAL CONTRACTOR
ECO	END OF LINE CLEANOUT
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EWC	ELECTRIC WATER COOLER
EWV	ELECTRIC WATER HEATER
FURN	FURNACE
FCO	FLOOR CLEANOUT
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FS	FLOOR SINK
G	GAS
GC	GENERAL CONTRACTOR
GM	GAS METER
GPM	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GUH	GAS UNIT HEATER
GW	GREASE WASTE
GWH	GAS WATER HEATER
HB	HOSE BIB
HP	HEAT PUMP
HX	HEAT EXCHANGER
IM	ICE MAKER BOX
LAV	LAVATORY
LS	LAUNDRY SINK
MAU	MAKE-UP AIR UNIT
MC	MECHANICAL CONTRACTOR
MF	MEASURE FLOW
NIC	NOT IN CONTRACT
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
ORD	OVER FLOW ROOF DRAIN
P	PUMP
PC	PLUMBING CONTRACTOR
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
RA	RETURN AIR
RAR	RETURN AIR REGISTER
RD	ROOF DRAIN
RH	RADIANT HEATER
RTU	ROOF TOP UNIT
SA	SUPPLY AIR
SAR	SUPPLY AIR REGISTER
SFT	SUPPLY FAN
SFT	SERIES FAN TERMINAL
SH	SHOWER
SK	SINK
SOI	SAND/OIL INTERCEPTOR
SS	SERVICE SINK
T&P	TEMPERATURE & PRESSURE
TD	TRENCH DRAIN
TYP	TYPICAL
UR	URINAL
VAV	VARIABLE AIR VOLUME
VAV	VARI TRAC
WB	WASHER BOX
WCO	WALL CLEANOUT
WH	WALL HYDRANT

PLUMBING LEGEND

---CND---	CONDENSATE		WALL CLEAN OUT
---DCW---	DOMESTIC COLD WATER	⊙	FLOOR CLEANOUT
---120°---	DOMESTIC HOT WATER	⊕	AREA DRAIN
---120°R---	DOMESTIC HOT WATER RECIRC	⊖	FLOOR DRAIN
---GW---	GREASE WASTE	⊙	FLOOR SINK FULL COVER
---G---	GAS	⊙	GAS METER
---RD---	ROOF DRAIN	⊙	GAS BIB
---ORO---	OVERFLOW ROOF DRAIN	⊙	⊕ BATH TUB/MOP SINK
---SS---	SAND OIL	⊙	⊖ SINK
---V---	VENT	⊙	⊖ 2-COMPARTMENT SINK
---(A)XX---	TYPICAL PIPE ABOVE/ON ROOF	⊙	⊖ DRINKING FOUNTAIN/URINAL
---(B)XX---	TYPICAL PIPE BELOW/UNDERGROUND	⊙	WASHER BOX
---(E)XX---	TYPICAL PIPE EXISTING	⊙	ICE BOX

VALVES		FIXTURES	
⊕	BALL VALVE		WALL CLEAN OUT
⊕	GATE VALVE	⊙	FLOOR CLEANOUT
⊕	CHECK VALVE	⊕	AREA DRAIN
⊕	PRESSURE REDUCING VALVE (PRV)	⊖	FLOOR DRAIN
⊕	MEASURE FLOW	⊙	FLOOR SINK FULL COVER
⊕	TEE UP	⊙	GAS METER
⊕	TEE DOWN	⊕	GAS BIB
⊕	ELBOW UP	⊙	⊕ BATH TUB/MOP SINK
⊕	ELBOW DOWN	⊙	⊖ SINK
⊕		⊙	⊖ 2-COMPARTMENT SINK
⊕		⊙	⊖ DRINKING FOUNTAIN/URINAL

MISC.	
⊕	POINT OF CONNECTION (POC)
⊕	DEMO

GENERAL NOTES

- ALL ITEMS CONNECTING TO POTABLE WATER SHALL MEET THE LEAD FREE STANDARD OF .25% OR LESS LEAD.
- PLUMBING PLANS REFERENCE FINISHED FLOOR TO FINISHED FLOOR ABOVE. SANITARY SHOWN IS FOR FIXTURES ABOVE UNLESS NOTED OTHERWISE.
- FIELD VERIFY ALL ROUTING OF PLUMBING LINES WITH OTHER TRADES. FIELD ADJUST ROUTING ACCORDINGLY TO MAKE SYSTEM WORK WITH OTHER TRADES.
- PROVIDE WATTS MMV ASSE1070 MIXING VALVE AT ALL PUBLIC FIXTURES AS REQUIRED PER LOCAL CODE.
- PC TO PROVIDE VACUUM BREAKERS AT LOCATIONS WHERE HOSES AND NOZZLES ARE USE, I.E. JANITOR SINKS, BEAUX SINKS, KITCHEN SPRAYERS, DISHWASHERS, AND BATHS.
- ALL DRAINAGE LINES 2-1/2" AND UNDER TO BE SLOPED AT MINIMUM 1/4" PER FOOT, AND 3" AND OVER TO BE SLOPED AT MINIMUM 1/8" PER FOOT UNLESS NOTED OTHERWISE.
- START TRENCHING FOR NEW SANITARY LINE AT FURTHEST FIXTURE (HIGHEST POINT IN SYSTEM) FROM CIVIL CONNECTION POINT TO BUILDING.
- FIELD ROUTE ALL CONDENSATE LINES, T&P VALVES, AND DRAIN VALVES FROM MECHANICAL AND PLUMBING EQUIPMENT TO SANITARY SEWER RECEPTOR OR STORM/GRADE PER LOCAL CODE AND JURISDICTION.

PLUMBING FIXTURE SCHEDULE

TAG	ADA	DESCRIPTION	CONNECTIONS				FIXTURE MANUFACTURER	MODEL NAME	MODEL #	FLOW RATE	DIMENSIONS	MOUNTING	RIM HEIGHT	FINISH	MISC.	REMARKS
			DCW	DHW	WASTE	VENT										
WC-1	YES	WATER CLOSET-TANK OPEN FRONT LESS COVER	1/2"	3"	2"	AMER. STND. CADET PRO	214A.104	1.28 GPF	12" R1/2-1/8" TRAP	FLOOR	16-1/2"		VITREOUS CHINA	ELONGATED		
LAV-1	YES	WALL HUNG FRONT LESS COVER	1/2"	1/2"	1-1/2"	AMER. STND. HEAVY DUTY	5901.110	0.356 XXX	20-1/2" X16-1/4"	WALL HANGER	31" TO 34" TO RIM		VITREOUS CHINA	STAINLESS HINGES	6W, WB	
SS-1	NO	SERVICE SINK	-	-	3"	ELKAY	14-1C22X22-OC	2.0 GPM	22"x22"x14"	FLOOR/WALL	36"		STAINLESS STEEL		PS	
WB-1	-	WALL BOX	1/2"	-	-	SIoux CHIEF	696	-	89-L FRAME	WALL	-		CHROME	RECESSED WALL BOX	W/ WATER HAMMER ARRESTOR	
HW-1	N	INTERIOR WALL HYDRANT	3/4"	-	-	WOODFORD	MODEL 101	-	VARIABLE W/ WALL DEPTH	INTERIOR ONLY	24" AFG		INTERIOR USE ONLY	W/ BACKFLOW PROTECTION		
EB-1	Y	BI-LEVEL	1/2"	-	2"	ELKAY	EZSTLWSK	36" WIDE	WALL	ADA	STAINLESS STEEL		BARRIER FREE	W/ BOTTLE FILLER	6W, 7	
RD-1	-	WALL HANGER	-	-	-	ZURN	SINGLE	2122	FLOOR	DURA COATED	DURA COATED		CARRIER ONLY	IF REQUIRED		
ORD-1	-	OVERFLOW ROOF DRAIN	-	-	-	ZURN	2160	15" DIA	ROOF/EXTERIOR	-	DURA COATED CAST IRON		FLASH CLAMP/GRAVEL GUARD			
DSN-1	-	DOWNSPOUT NOZZLE	-	-	-	ZURN	2199	-	ROOF/EXTERIOR	-	DURA COATED CAST IRON		FLASH CLAMP/GRAVEL GUARD			
AD-1	-	AREA DRAIN	-	-	-	ZURN	MEDIUM DUTY	Z-507-P	7" ROUND	FLOOR	-		NICKEL BRONZE			
FD-1	-	FLOOR DRAIN	-	-	-	ZURN	2-550-P	-	5-1/2" ROUND	FLOOR	-		CAST IRON BODY			

ALTERNATE MFG: AMERICAN STANDARD, CRANE, DELTA, ELKAY, HAWS, HALSEY TAYLOR, J.R.SMITH, KOHLER, LASCO, MOEN, SIOUX CHIEF, STING RAY, SYMONS, TOTO, WADE, ZURN.

BS-BASKET STRAINER	GS-GRID STRAINER	WB-WALL BRACKET	GENERAL NOTES:
DS-DOME STRAINER	PS-POP UP STRAINER	TP-ASSE 1018 OR 1044 TRAP PRIMER	1. ALL PUBLIC SINKS TO HAVE OPEN GRID STRAINERS.
EC-ENAMEL COATING	SS-STAINLESS STEEL	6W-6" WALL REQ.	2. ALL NON-PUBLIC SINKS TO HAVE POP-UP STRAINERS.

*NOTE: PROVIDE 1/2" DCW/DHW DOWN WALL TO FOOT PEDAL CONNECTIONS AS PER MANUFACTURERS INSTRUCTIONS

IPC WASTE AND WATER FIXTURE UNIT CALCULATION

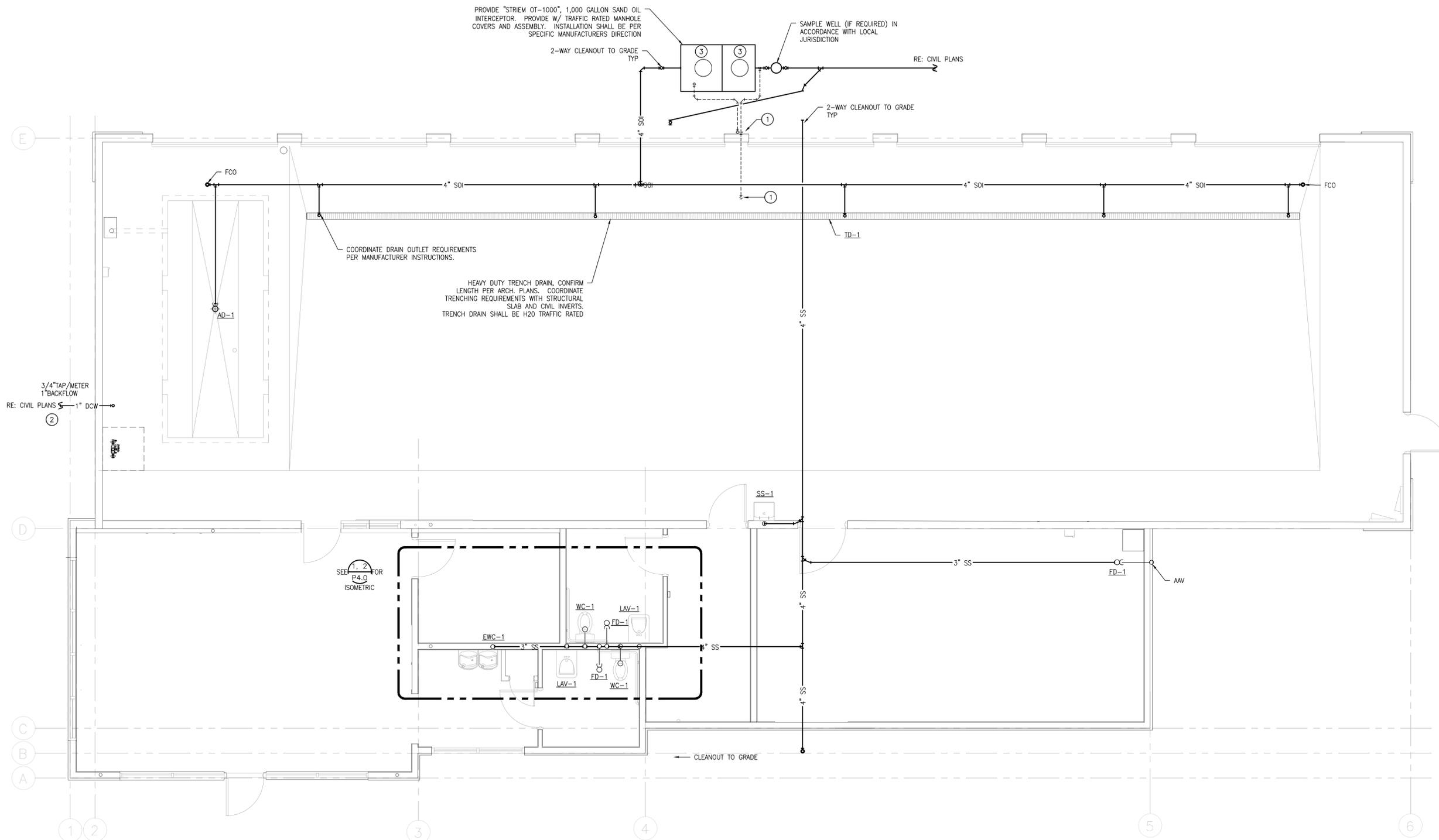
PROJECT: BRAKES PLUS - HIGHLAND VILLAGE, TEXAS		CODE: 2018 IPC		DATE: 1/6/2023								
BUILDING: 1												
FIXTURE TOTAL	FIXTURE TYPE	OCC.	SUPPLY TYPE	WATER FIXTURE UNITS					WASTE FIXTURES UNITS		REMARKS	
				COLD WATER	COLD TOTAL	HOT WATER	HOT TOTAL	COLD & HOT	COMBINED TOTAL	FIXTURE VALUES		TOTAL VALUES
2	HOSE BIBBS	PRIVATE	1/2" VALVE	1.00	2.00	0.0	0.0	1.00	2.0	0.0	0.0	
1	DRINKING FOUNTAIN	OFFICES	3/8" VALVE	0.25	0.3	0.0	0.25	0.3	0.50	0.5	0.5	
2	LAVATORY	PUBLIC	FAUCET	1.50	3.0	1.50	3.0	2.00	4.0	1.00	2.0	
1	SERVICE SINK	OFFICES	FAUCET	2.25	2.3	2.25	2.3	3.00	3.0	2.00	2.0	
2	WATER CLOSET	PUBLIC	FLUSH TANK	5.00	10.0	0.0	5.00	10.0	10.0	4.00	8.0	
TOTAL FIXT. UNITS					17.50		5.25		19.25		12.50	TOTAL FIXTURE UNITS
				GPM					20		4"	BUILDING MAIN SIZE
				PIPE SIZE					1"		1/8"	BUILDING MAIN SLOPE
				PIPE SIZE								
TAP & METER				WATER SERVICE LINE SIZE	3/4"							
BFP & BLDG MAIN				1"		6.00		9.00				

ELECTRIC WATER HEATER SCHEDULE

PLAN MARK	MANUFACTURER	MODEL NO.	TANK GALLONS	ELECTRICAL VOLT	PH KW	GPH RISE (F)	REMARKS
EW1-1	STATE	PCE-30-10MSA	30	120	1 1.5	8 70	1

PUMP SCHEDULE

PLAN MARK



PROVIDE "STRIEM OT-1000", 1,000 GALLON SAND OIL INTERCEPTOR. PROVIDE W/ TRAFFIC RATED MANHOLE COVERS AND ASSEMBLY. INSTALLATION SHALL BE PER SPECIFIC MANUFACTURERS DIRECTION

COORDINATE DRAIN OUTLET REQUIREMENTS PER MANUFACTURER INSTRUCTIONS.

HEAVY DUTY TRENCH DRAIN, CONFIRM LENGTH PER ARCH. PLANS. COORDINATE TRENCHING REQUIREMENTS WITH STRUCTURAL SLAB AND CIVIL INVERTS. TRENCH DRAIN SHALL BE H2O TRAFFIC RATED

3/4" TAP/METER
1" BACKFLOW
RE: CIVIL PLANS

SEC 1, 2 FOR P4.0 ISOMETRIC

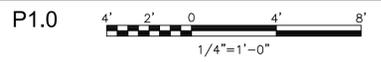
GENERAL NOTES:

- BUILDING SEWERS SHALL BE PROVIDED WITH CLEANOUTS LOCATED NOT MORE THAT 100'-0" APART, IPC SECTION 708.3.2
- CLEANOUTS SHALL BE INSTALLED AT EACH CHANGE OF DIRECTION GREATER THAN 45 DEGREES FOR BUILDING SEWER. FOR BUILDING DRAINS WHERE MORE THAN ONE CHANGE OF DIRECTION OCCURS IN A RUN OF PIPING, ONLY ONE CLEANOUT SHALL BE REQUIRED FOR EACH 40 FEET OF DEVELOPED LENGTH OF THE DRAINAGE PIPING, IPC SECTION 708.3.3
- REFER AND COORDINATE W/ CIVIL PLANS FOR SANITARY, GAS AND WATER EXIT/ENTRY LOCATIONS.
- PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS, RE: DETAIL ON SHEET ###

DRAWING NOTES:

- (2), 2" VENT UP THROUGH SLAB, COMBINE INTO (1) 3" V, ROUTE AS INDICATED. TERMINATE 3" V TO 3" VTR.
- 1" DOMESTIC WATER TAP/METER ON SITE UPSIZE TO A 1" DCW AFTER METER, TO A 1" BACKFLOW IN BUILDING. COORDINATE PER CIVIL PLANS.
- H2O TRAFFIC RATED MANHOLE ASSEMBLY, ACCESS COVERS, MANHOLE RING EXTENTIONS AS REQUIRED FOR DEPTH OF INTERCEPTOR.

1 UNDERGROUND PLUMBING PLAN



BRAKES PLUS
1201 LONNIE ABBOTT BLVD.
ADA, OKLAHOMA



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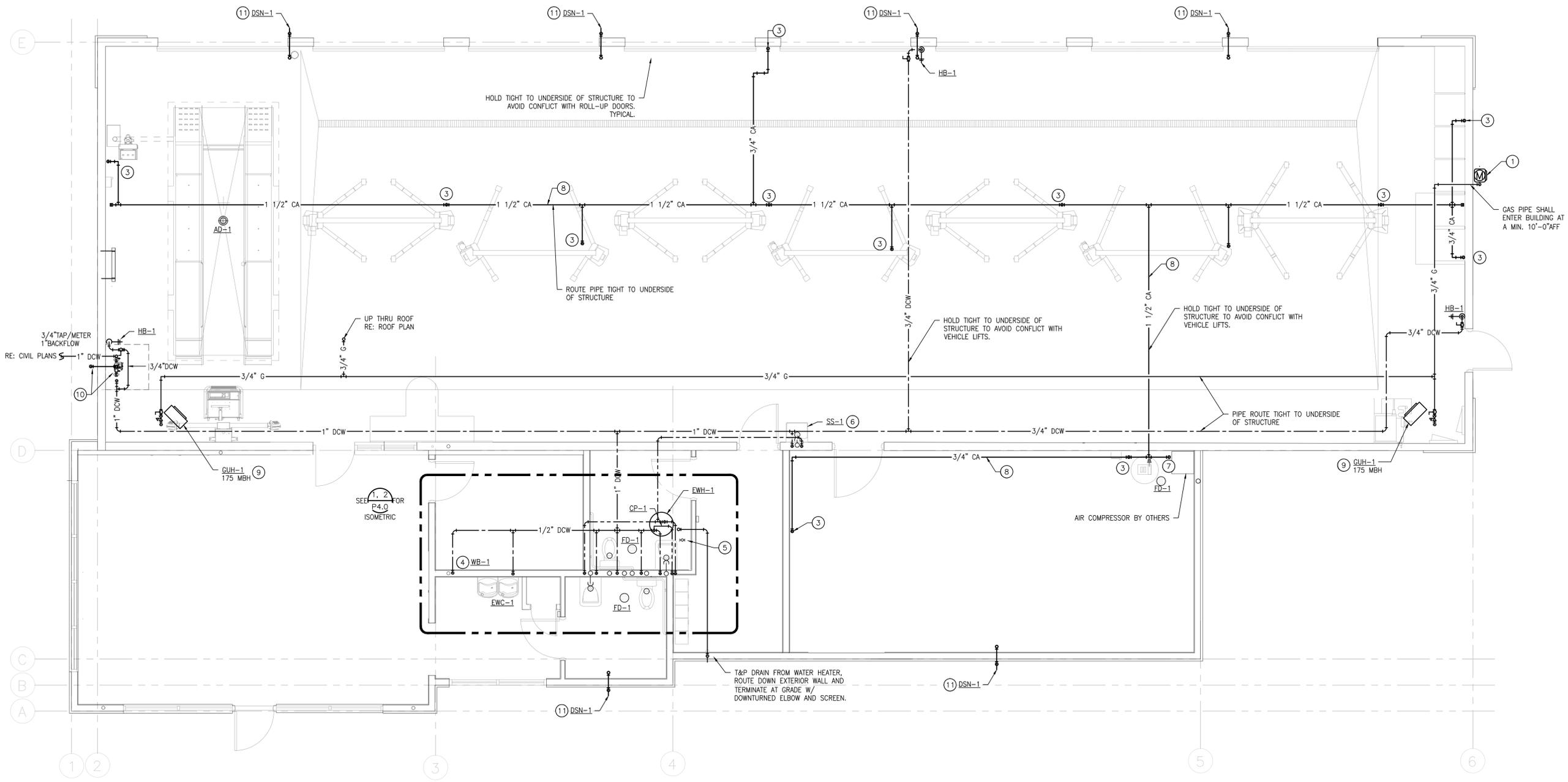


45 SPYGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.881.8925

A SHEET

PROJ #241412
ADAM A. POWELL, P.E.
PEC Enterprises, Inc.
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Albuquerque, NM 87123
Telephone 720-409-2454

P1.0
UNDERGROUND PLUMBING PLAN



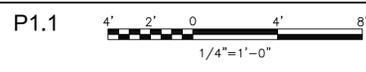
DRAWING NOTES:

- ① GAS METER: SIZING BASED ON 175'-0" AT 2 PSI GAS PRESSURE. TOTAL CONNECTED GAS LOAD = 480 MBH. CONFIRM GAS PRESSURE WITH LOCAL GAS COMPANY SERVICE.
- ② 3/4" G UP THRU ROOF FOR RTU-1, 130 MBH
- ③ 3/4" CA DROP, TERMINATE PER DETAIL. CONFIRM HEIGHT REQUIREMENT WITH EQUIPMENT SERVED. CONTRACTOR TO VERIFY SIZE IS ADEQUATE FOR EQUIPMENT USE.
- ④ 1/2" DCW DN IN WALL TO RECESSED WALL OUTLET VALVE BOX, PROVIDE W/ INLINE BACKFLOW PREVENTER. ROUGH-IN FOR COFFEE MAKER.
- ⑤ 3" V UP TO 3" VTR.
- ⑥ 3/4" DCW/DHW DN AT WALL, OFFSET 1/2" DCW/DHW TO FAUCET AND 1/2" DCW/DHW TO FOOT PEDALS.
- ⑦ COMPRESSED AIR MAIN FROM COMPRESSOR OUTLET. INSTALL PER MANUFACTURERS INSTRUCTIONS. PROVIDE ONE DISCONNECT AT AIR COMPRESSOR.
- ⑧ SLOPE COMPRESSED AIR DOWN IN DIRECTION OF SLOPE AT 1/8" PER FOOT, TYPICAL.
- ⑨ TERMINATE W/ SHUT-OFF VALVE, PRV AND DIRT LEG. PRV SHALL BE CAPABLE OF REDUCING FROM 2 PSI GAS TO 6" W.C. AT MBH AS INDICATED. PROVIDE VENTLESS REGULATOR IS LOCAL AHJ ALLOWS. IF NOT, VENT SHALL EXIT TO ATMOSPHERE, FULL SIZE.
- ⑩ 1" LEADFREE DOMESTIC WATER BACKFLOW DEVICE, FEBCO LF825Y OR EQUAL. RELIEF DRAIN PIPING FROM AIR GAP FITTING TO TERMINATE OUTDOORS. DISCHARGE MIN 6" AFG, TURN DOWN TO FINISHED GRADE. TERMINATION SHALL INCLUDE STAINLESS STEEL INSECT SCREEN.
- ⑪ 3" RD/ORD FROM ABOVE TO NEAREST PILASTER AND DOWN. EXTEND TO EXTERIOR WALL, TERMINATE W/ DSN-1 AT MIN 12" AFG.

GENERAL NOTES:

- 1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS, RE: DETAIL ON SHEET P3.1
- 2. PAINT ALL EXPOSED GAS PIPING TO MATCH, PER ARCH. PLANS.

1 PLUMBING PLAN



BRAKES PLUS
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 ADA, OKLAHOMA



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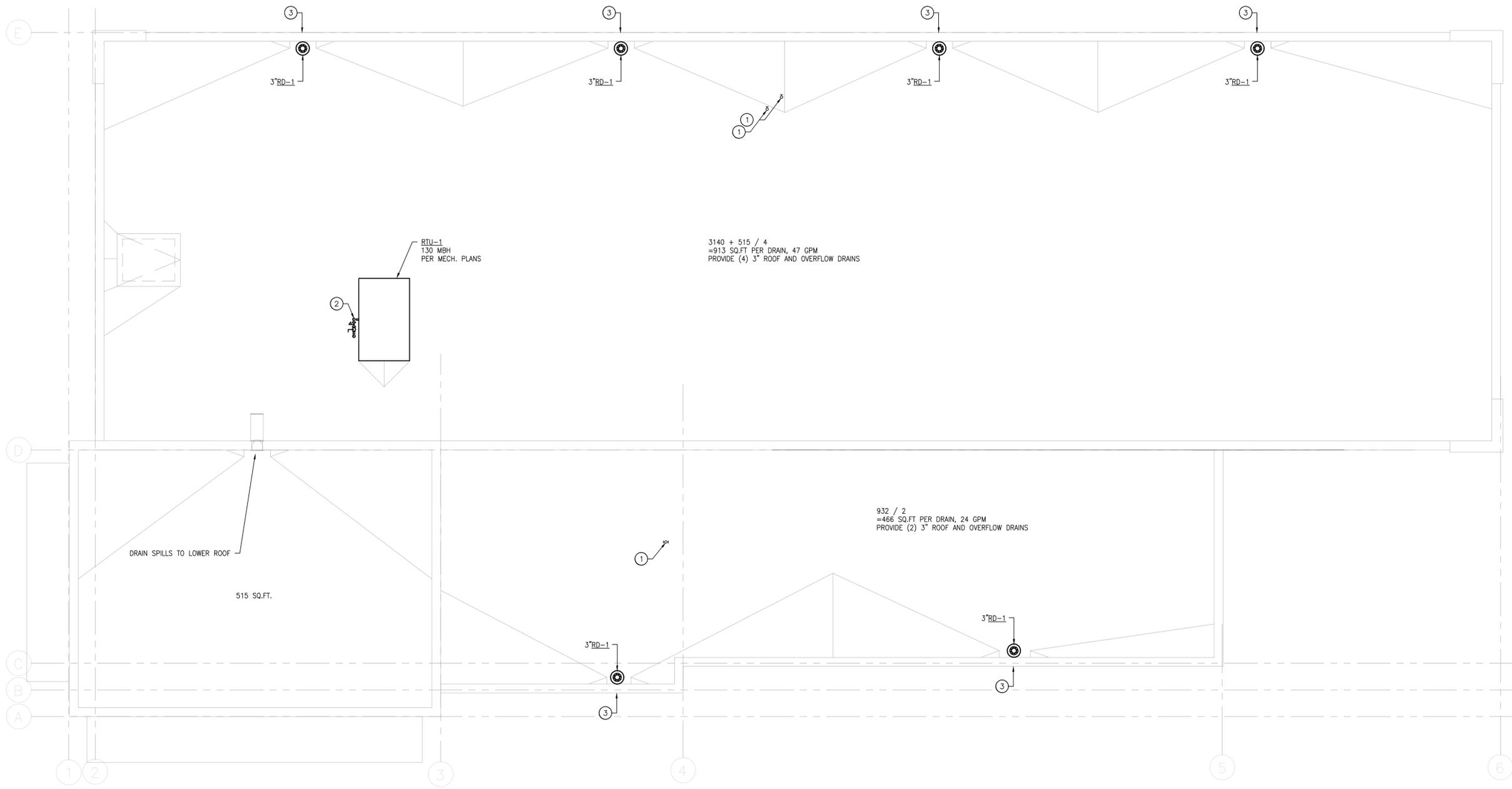


45 SPYGLASS DRIVE
 LITTLETON, CO 80123
 VOICE: 303.881.8925

A SHEET

PROJ #241412
ADAM A. POWELL, P.E.
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 14412 Alene Ct. NE
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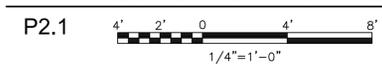
P1.1
 PLUMBING PLAN



3140 + 515 / 4
 =913 SQ.FT PER DRAIN, 47 GPM
 PROVIDE (4) 3" ROOF AND OVERFLOW DRAINS

932 / 2
 =466 SQ.FT PER DRAIN, 24 GPM
 PROVIDE (2) 3" ROOF AND OVERFLOW DRAINS

1 PLUMBING ROOF PLAN



DRAWING NOTES:

- ① 3" PLUMBING VENT UP THRU ROOF FROM BELOW, RE: PLUMBING PLANS.
- ② GAS PIPING UP FROM BELOW. ROUTE AND TERMINATE W/ SHUT-OFF VALVE, PRV AND DIRT LEG AT ROOFTOP UNIT. PRV SHALL BE CAPABLE OF REDUCING FROM 2 PSI GAS PRESSURE TO 7"W.W. AT MBH AS INDICATED.
- ③ OVERFLOW SCUPPER, SIZE PER ARCHITECTURAL PLANS.

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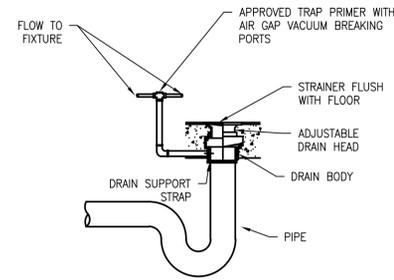


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SHEET

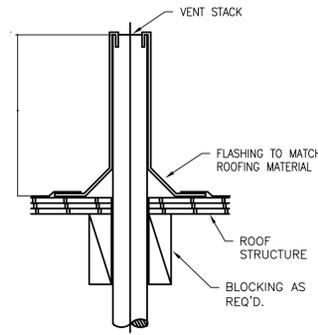
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P2.1
 PLUMBING ROOF PLAN



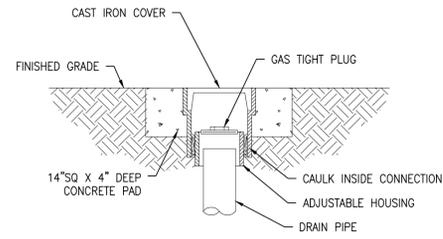
**FLOOR DRAIN W/
TRAP PRIMER DETAIL**

NOT TO SCALE



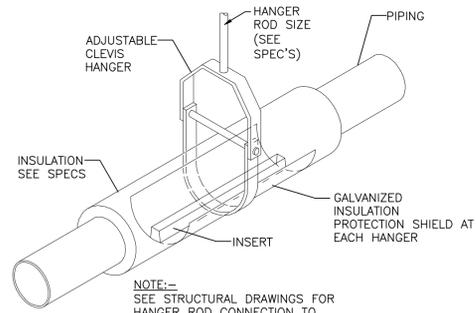
PIPE THRU ROOF DETAIL

NOT TO SCALE



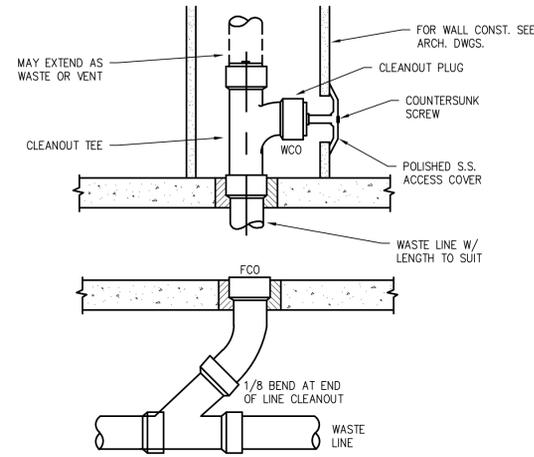
OUTSIDE CLEANOUT TO GRADE

NOT TO SCALE



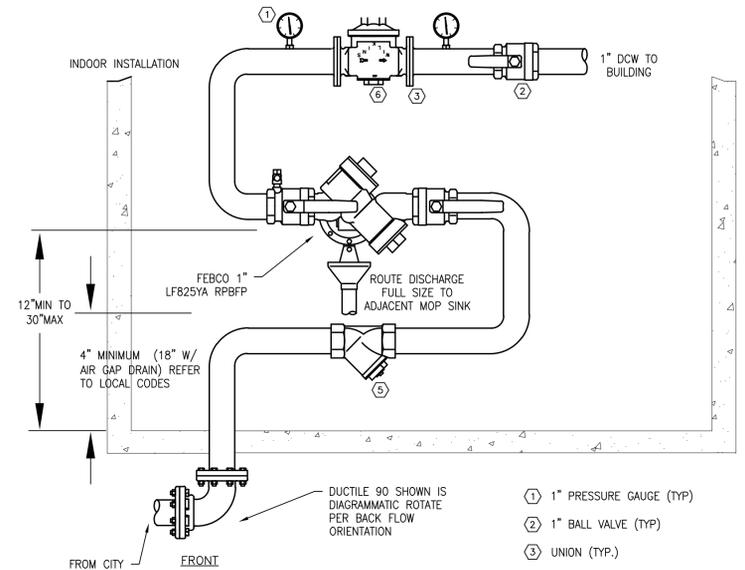
PIPE HANGER AND INSULATION DETAIL

NOT TO SCALE



CLEANOUT DETAILS

NOT TO SCALE

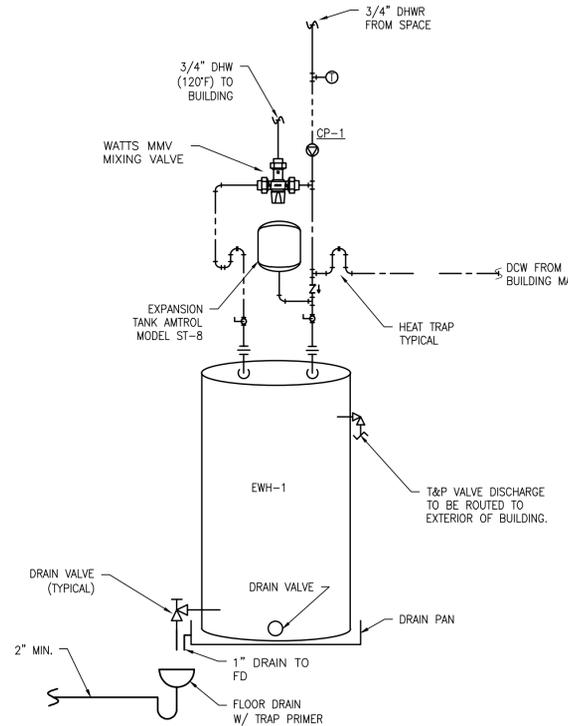


**DOMESTIC WATER ENTRY
BACKFLOW DETAIL**

NOT TO SCALE

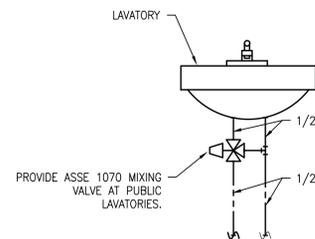
- ① 1" PRESSURE GAUGE (TYP)
- ② 1" BALL VALVE (TYP)
- ③ UNION (TYP.)
- ④ 1" BYPASS NORMALLY CLOSED.
- ⑤ 1" STRAINER.
- ⑥ 1" PRESSURE REDUCING VALVE (WILKINS 500 SERIES)

BACKFLOW PREVENTOR IN ACCORDANCE TO LOCAL CODES AND JURISDICTIONS.



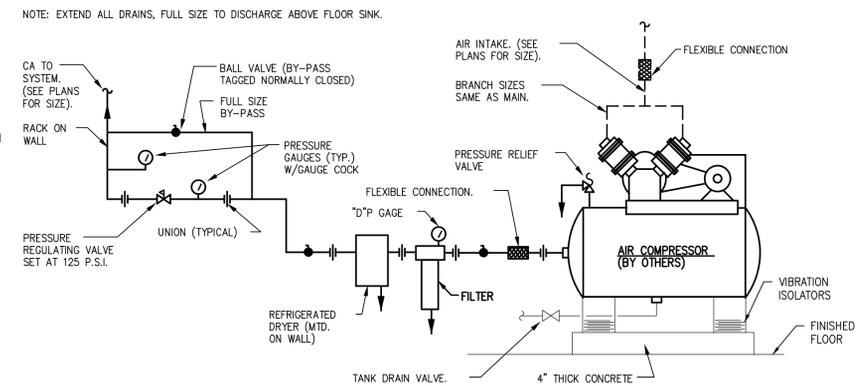
ELECTRIC WATER HEATER DETAIL

NOT TO SCALE



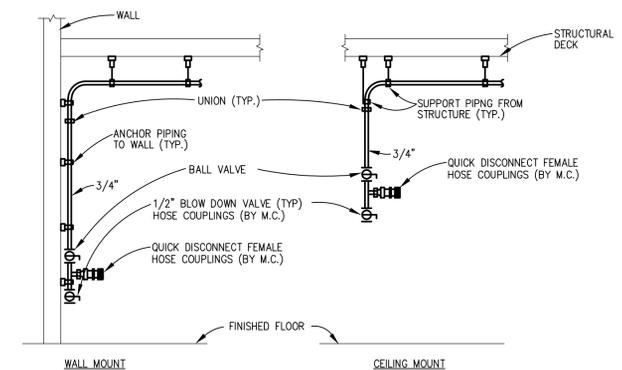
THERMOSTATIC MIXING VALVE DETAIL

NOT TO SCALE



AIR COMPRESSOR PIPING DETAIL

NOT TO SCALE



COMPRESSED AIR CONNECTION DETAILS

NOT TO SCALE

BRAKES PLUS
1201 LONNIE ABBOTT BLVD.
ADA, OKLAHOMA



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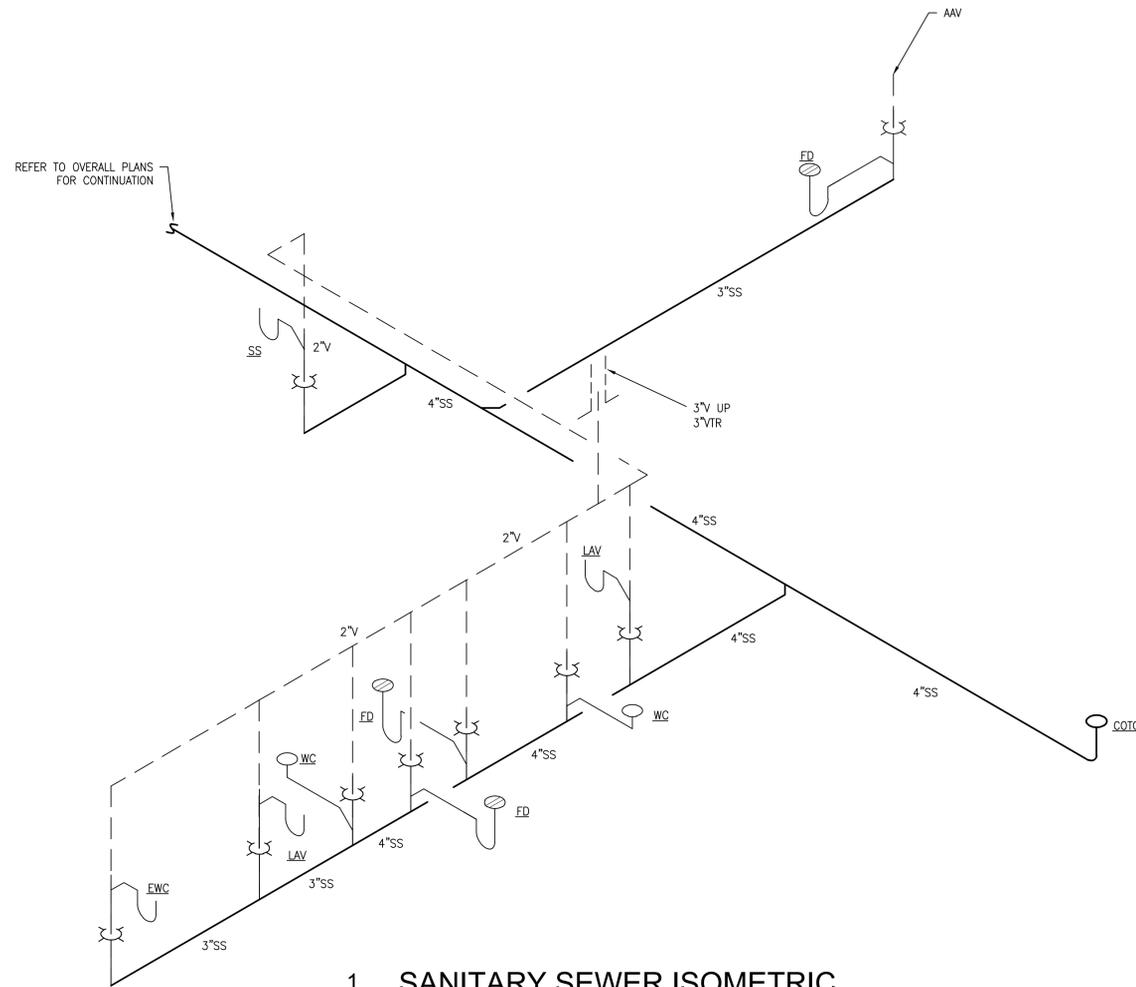


45 SPYGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.881.8925

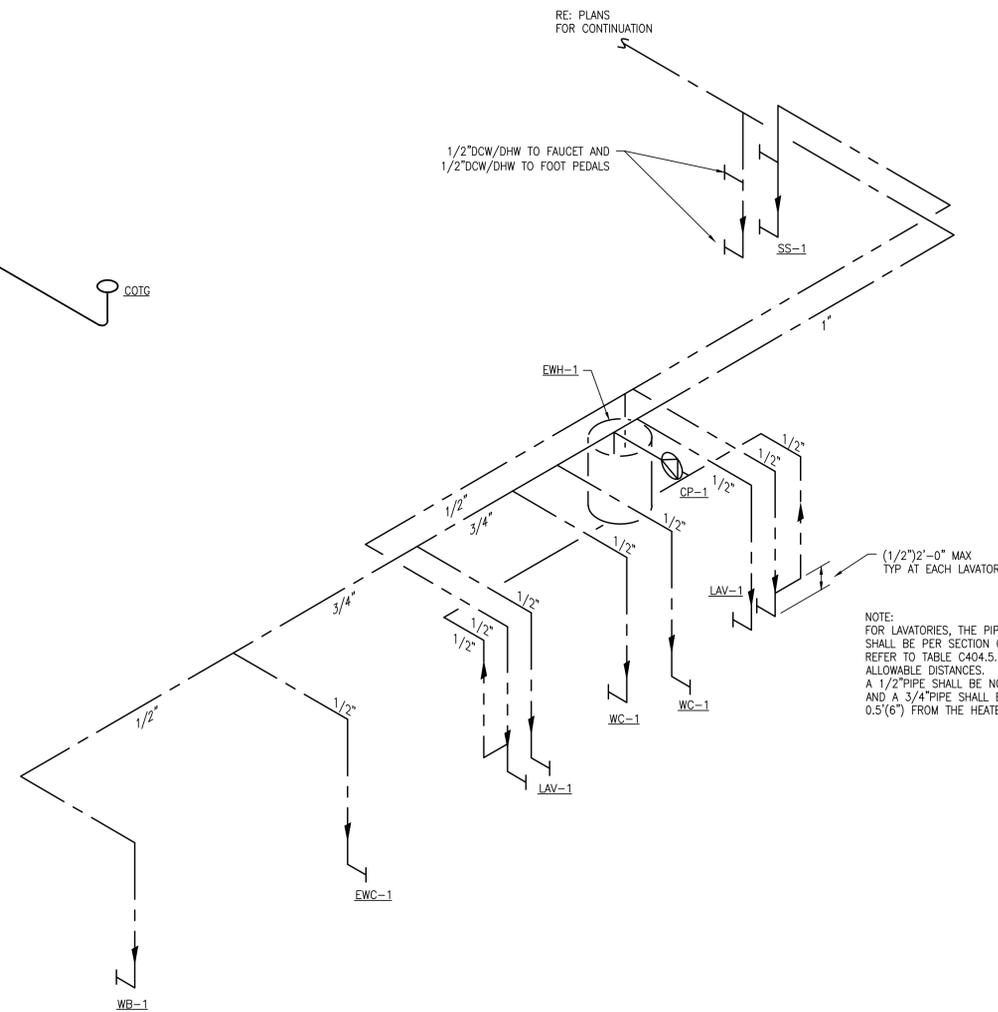
A SHEET

PROJ #241412
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14412 Alene Ct. NE
Albuquerque, NM 87123
Telephone 720-409-2454

P3.1
PLUMBING DETAILS



1 SANITARY SEWER ISOMETRIC
P4.0 N.T.S.



2 DOMESTIC HOT WATER PIPING DIAGRAM
P4.0 N.T.S.

NOTE:
FOR LAVATORIES, THE PIPE VOLUME AND DISTANCE SHALL BE PER SECTION C404.5 OF 2018 IECC. REFER TO TABLE C404.5.1 OF IECC FOR MAXIMUM ALLOWABLE DISTANCES.
A 1/2" PIPE SHALL BE NO LONGER THAN 2'-0" AND A 3/4" PIPE SHALL BE NO LONGER THAN 0.5'(6") FROM THE HEATED SOURCE MAIN.

BRAKES PLUS
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SHEET

P4.0

PLUMBING ISOMETRICS

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ELECTRICAL GENERAL NOTES

1. DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS IN FIELD PRIOR TO COMMENCEMENT OF WORK.
2. FINAL CONNECTIONS & ROUGH-IN REQUIREMENTS TO EQUIPMENT SHALL BE PER MANUFACTURER'S APPROVED WIRING DIAGRAMS, DETAILS AND INSTRUCTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED.
3. CONTRACTOR SHALL REVIEW ARCHITECTURAL, STRUCTURAL, MECHANICAL AND OTHER DRAWINGS PRIOR TO BID.
4. CONTRACTOR SHALL VISIT SITE PRIOR TO BID AND VERIFY THAT CONDITIONS ARE AS INDICATED. CONTRACTOR SHALL REPORT DISCREPANCIES TO THE ARCHITECT AND INCLUDE IN HIS BID ALL COSTS REQUIRED TO MAKE HIS WORK MEET EXISTING CONDITIONS.
5. PROPOSED SUBSTITUTIONS OF ELECTRICAL EQUIPMENT OR REQUEST FOR "OR EQUAL" OR "APPROVED EQUAL" LISTING SHALL BE SUBMITTED TO ARCHITECT NOT LESS THAN TEN (10) WORKING DAYS PRIOR TO BID.
6. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE ARCHITECT.
7. WORK, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE LATEST ADOPTED EDITIONS OF LOCAL, STATE, AND NATIONAL CODES AND ORDINANCES.
8. PROVIDE PERMITS AND INSPECTIONS REQUIRED.
9. PROVIDE RECORD DRAWINGS TO ARCHITECT. DRAWINGS SHALL INCLUDE ALL ADDENDUM ITEMS, CHANGE ORDERS, ALTERATIONS, REROUTINGS, ETC.
10. VERIFY EXACT LOCATION OF EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN.
11. SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW THAT WORK IS DEFECTIVE, CONTRACTOR SHALL MAKE CORRECTIONS NECESSARY AT NO COST TO OWNER.
12. WIRE SHALL BE COPPER, 75 DEGREE C RATED FOR GENERAL USE. FOR HID FIXTURES AND WIRING WITHIN 3 INCHES OF FLUORESCENT BALLASTS, WIRE SHALL BE COPPER, MINIMUM 90 DEGREE C RATED. SIZES INDICATED ARE FOR INSTALLATION IN A MAXIMUM 30 DEGREE C AMBIENT. CONDUCTOR AMPACITY SHALL BE DERATED FOR HIGHER AMBIENT INSTALLATIONS.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING EQUIPMENT WHICH IS DAMAGED DUE TO INCORRECT FIELD WIRING PROVIDED UNDER THIS SECTION OR FACTORY WIRING IN EQUIPMENT PROVIDED UNDER THIS SECTION.
14. CONTRACTOR'S FAILURE TO ORDER OR RELEASE ORDER FOR MATERIALS AND/OR EQUIPMENT WILL NOT BE ACCEPTED AS A REASON TO SUBSTITUTE ALTERNATE MATERIALS OR EQUIPMENT.
15. SYSTEMS SHALL BE COMPLETE, OPERABLE AND READY FOR CONTINUOUS OPERATION. LIGHTS, SWITCHES, RECEPTACLES, MOTORS, ETC., SHALL BE CONNECTED AND OPERABLE.
16. VERIFY EXACT LOCATIONS OF EXISTING AND NEW UNDERGROUND UTILITIES, PIPING AND RACEWAY SYSTEMS PRIOR TO TRENCHING. PROVIDE NECESSARY TRENCHING, BACKFILL, EXCAVATION SUPPORTS, SERVICE FEEDERS (CONDUIT AND/OR WIRE), PULLBOXES, TRANSFORMER PADS, SAWCUTTING AND PATCHING, CONCRETE/PAVING, ETC., REQUIRED. BACKFILL TRENCHES TO 90% COMPACTION AND PATCH TO MATCH EXISTING. CONTRACTOR SHALL OBTAIN AND VERIFY EXACT UTILITY COMPANY DRAWINGS AND REQUIREMENTS.
17. PROVIDE MAINTENANCE RECEPTACLE WITHIN 25'-0" OF ALL MECHANICAL OR MOTORIZED EQUIPMENT.
18. SEE MECHANICAL DRAWINGS FOR LOCATION OF MECHANICAL EQUIPMENT. PROVIDE SERVICE TO AND CONNECT EQUIPMENT AS REQUIRED. PROVIDE FUSES OR HACR-TYPE CIRCUIT BREAKERS FOR ALL AIR CONDITIONING EQUIPMENT SIZED IN ACCORDANCE WITH MANUFACTURER'S NAMEPLATE.
19. PROVIDE ENGRAVED NAMEPLATES ON PANELBOARDS, DISCONNECT SWITCHES, ETC. INDICATING EQUIPMENT DESIGNATION (OR DESIGNATION OF EQUIPMENT SERVED) AND VOLTAGE. NAMEPLATES TO BE MECHANICALLY FASTENED.
20. PANEL DIRECTORIES SHALL BE TYPED AND INSTALLED UNDER CLEAR PLASTIC COVERS.
21. ALL WIRING SHALL BE INSTALLED IN LISTED METALLIC RACEWAYS. RACEWAYS IN SLAB-ON-GRADE OR BELOW GRADE SHALL BE SCHEDULE 40 PVC. TRANSITIONS FROM BELOW TO ABOVE GRADE SHALL BE WITH RIGID STEEL ELBOWS WITH P.V.C. JACKET OR APPROVED EQUAL PROTECTION.
22. EMT, NON-METALLIC AND FLEXIBLE METAL CONDUITS SHALL HAVE A CODE SIZED COPPER GROUNDING CONDUCTOR. INCREASE CONDUIT SIZE AS REQUIRED.
23. FIRE ALARM, SOUND, TELEPHONE, COMPUTER, AND SIMILAR SYSTEMS CONDUITS LARGER THAN 1" SHALL HAVE LONG RADIUS SWEEPS (12 TIMES THE DIAMETER).
24. ALL ELECTRICAL SYSTEMS COMPONENTS SHALL BE LISTED OR LABELED BY U.L.
25. WIRE TERMINATION PROVISIONS FOR PANELBOARDS, CIRCUIT BREAKERS, SAFETY SWITCHES, AND ALL OTHER ELECTRICAL APPARATUS SHALL BE LISTED AS SUITABLE FOR 75 DEGREE C.
26. RECEPTACLES INSTALLED OUTSIDE, ON THE BUILDING EXTERIOR OR ROOF, WITHIN 6' OF A SINK OR WATER COOLER CONNECTION, VENDING MACHINES, AND KITCHEN AREAS SHALL BE GFCI TYPE OR PROTECTED BY GFCI CIRCUIT BREAKER PER NEC 511.12.
27. ALL NEW EQUIPMENT SUCH AS SWITCHBOARDS, DISTRIBUTION PANELS, DISCONNECT SWITCHES, TRANSFORMERS, AND PANELBOARDS SHALL BE BY THE SAME MANUFACTURER.
28. ELECTRICAL CONTRACTOR SHALL SUBMIT 5 COPIES OF ALL ELECTRICAL EQUIPMENT AND LIGHT FIXTURES TO ENGINEER VIA GENERAL CONTRACTOR FOR APPROVAL PRIOR TO ORDERING.
29. ELECTRICAL CONTRACTOR TO PROVIDE FINAL CONNECTION OF OWNER FURNISHED EQUIPMENT. VERIFY EXACT REQUIREMENTS PRIOR TO ROUGH-IN.
30. HANDLE TIES SHALL BE PROVIDED FOR ALL MULTI-WIRED BRANCH CIRCUITS UNLESS INDIVIDUAL NEUTRAL CONDUCTORS ARE PROVIDED PER NEC 210.4(B).
31. FURNISH ALL MECHANICAL EQUIPMENT WITH FUSIBLE DISCONNECTS. THESE DISCONNECTS SHALL BE EQUIPPED WITH CLASS "R" FUSES.

ALL ELECTRICAL WORK SHALL COMPLY WITH N.E.C. REQUIREMENTS

ELECTRICAL SHEET INDEX

NO.	REV.	DATE	BY	DESCRIPTION	SHEET NO.	SHEET DESCRIPTION
					8-6-24	PERMIT
					E0.1	ELECTRICAL COVER SHEET
					ES1.1	ELECTRICAL SITE PLAN
					E1.1	ELECTRICAL LIGHTING PLAN
					E2.1	ELECTRICAL POWER PLAN
					E3.1	ELECTRICAL ROOF PLAN
					E4.1	ELECTRICAL ONE LINE DIAGRAM
					E5.1	LIGHTING COMPLIANCE CERTIFICATES

ELECTRICAL LEGEND

	DUPLEX OUTLET
	DEDICATED DUPLEX OUTLET
	AUTOCLAVE RECEPTACLE
	FOUR-PLEX OUTLET
	220-VOLT OUTLET
	FLOOR OUTLET
	TELEPHONE JACK
	TELEPHONE JACK +60"
	DATA JACK
	PLUGMODE
	ABOVE COUNTER
	LIGHT SWITCH @ 56" AFF
	THREE-WAY LIGHT SWITCH @56" AFF
	TELEPHONE BACKBOARD W/ OUTLET
	ELECTRICAL PANEL
	TIME CLOCK
	SIGN OUTLET
	JUNCTION BOX
	THERMOSTAT

VERIFY ELECTRICAL REQUIREMENTS WITH OWNER PRIOR TO INSTALLATION

FIRE ALARM LEGEND

	MINI HORN/STROBE +90" A.F.F.
	MANUAL FIRE ALARM PULL STATION +48" A.F.F.

PROJ #24----

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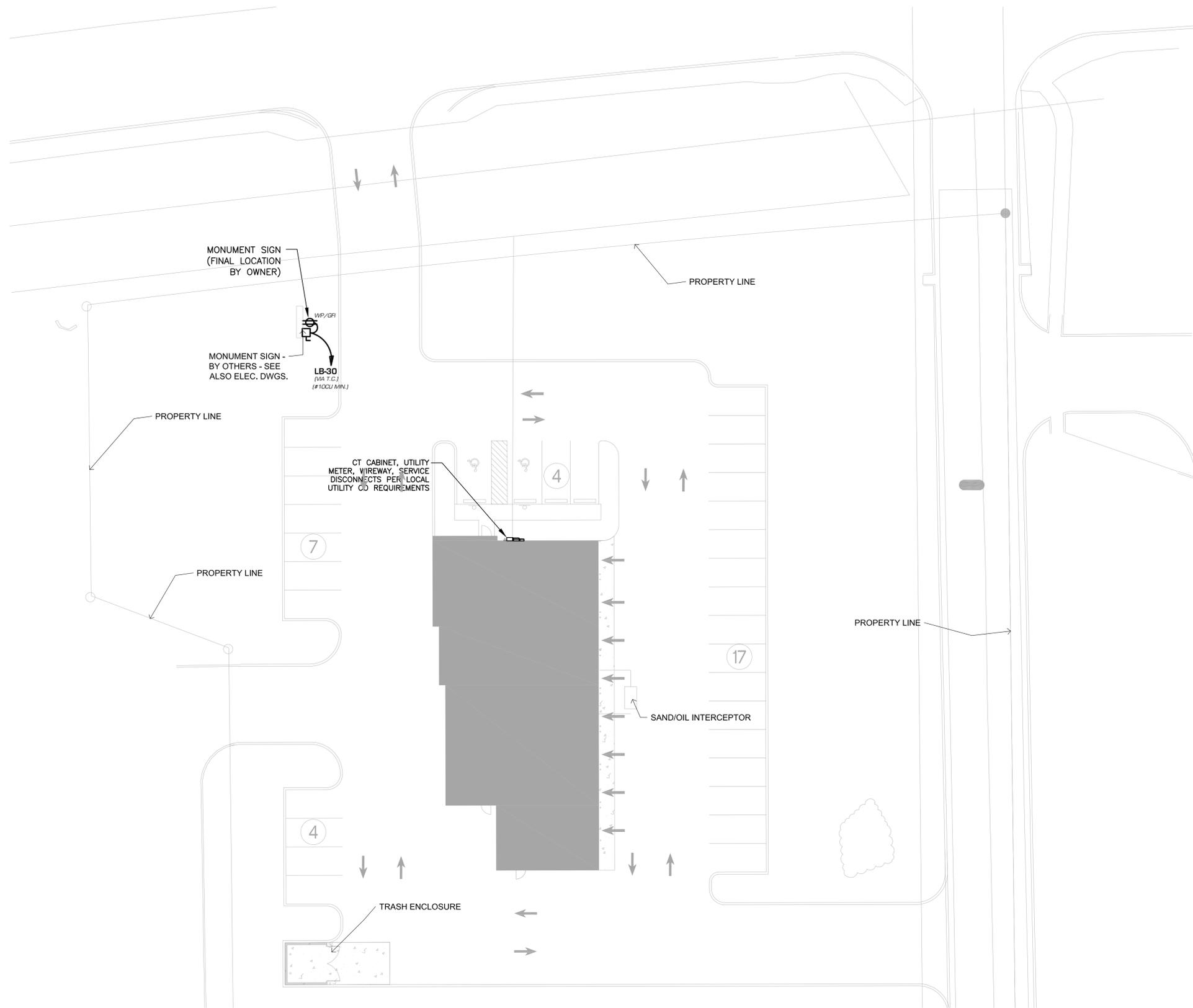
ARCDEV JOB #: _____
 CLIENT JOB #: _____
 DRAWN BY: **SB**
 CHECKED BY: **LRP**
 DATE OF ISSUE: **08.06.24**



SHEET

E0.1

ELECTRICAL
COVER SHEET



MONUMENT SIGN
(FINAL LOCATION
BY OWNER)

MONUMENT SIGN -
BY OTHERS - SEE
ALSO ELEC. DWGS.

LB-30
(#100U MIN.)

CT CABINET, UTILITY
METER, WIREWAY, SERVICE
DISCONNECTS PER LOCAL
UTILITY CO REQUIREMENTS

SAND/OIL INTERCEPTOR

TRASH ENCLOSURE

1 ELECTRICAL SITE PLAN
SCALE: 1" = 20'-0"



PROJ #24-
ADAM A. POWELL, P.E.
PEC Enterprises, Inc.
14412 Alene Ct. NE
Albuquerque, NM 87123
Telephone 720-409-2454

BRAKES PLUS
1201 LONNIE ABBOTT BLVD.
ADA, OKLAHOMA



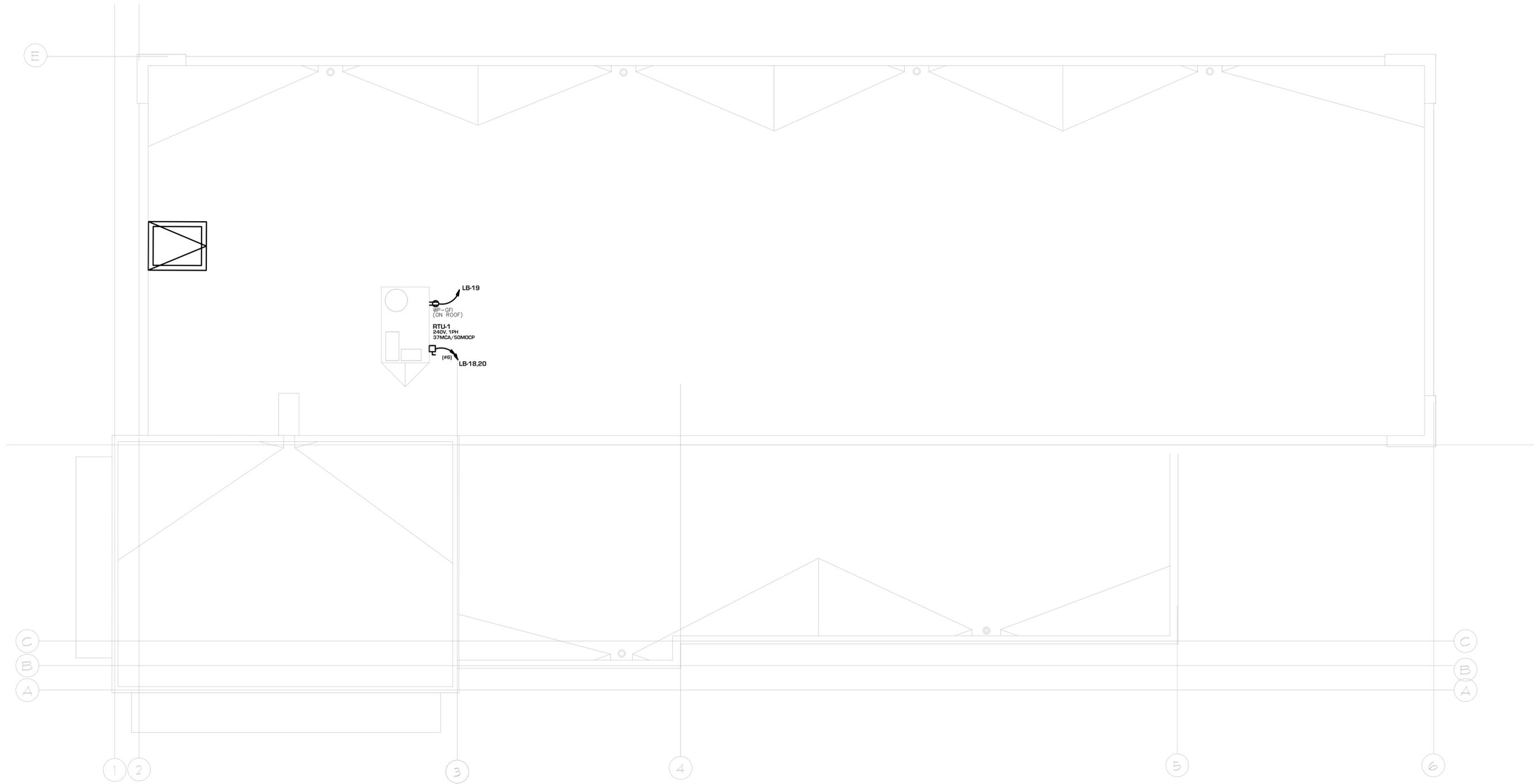
ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	08.06.24	FOR BLDG. DEPT. SUBMITTAL

ARCODEV JOB #: .
CLIENT JOB #: .
DRAWN BY: SB
CHECKED BY: LRP
DATE OF ISSUE: 08.06.24



ARCODEV
SHEET
ES1.1
ELECTRICAL
SITE PLAN



LB-19
WP - GP
(ON ROOF)

RTU-1
240V, 1PH
37MCA/50MDCP

LB-18,20
(#6)

1 ELECTRICAL ROOF PLAN
SCALE: 1/4" = 1'-0"

PROJ #24-
ADAM A. POWELL, P.E.
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ARCDEV
SHEET
E3.1
ELECTRICAL
ROOF PLAN

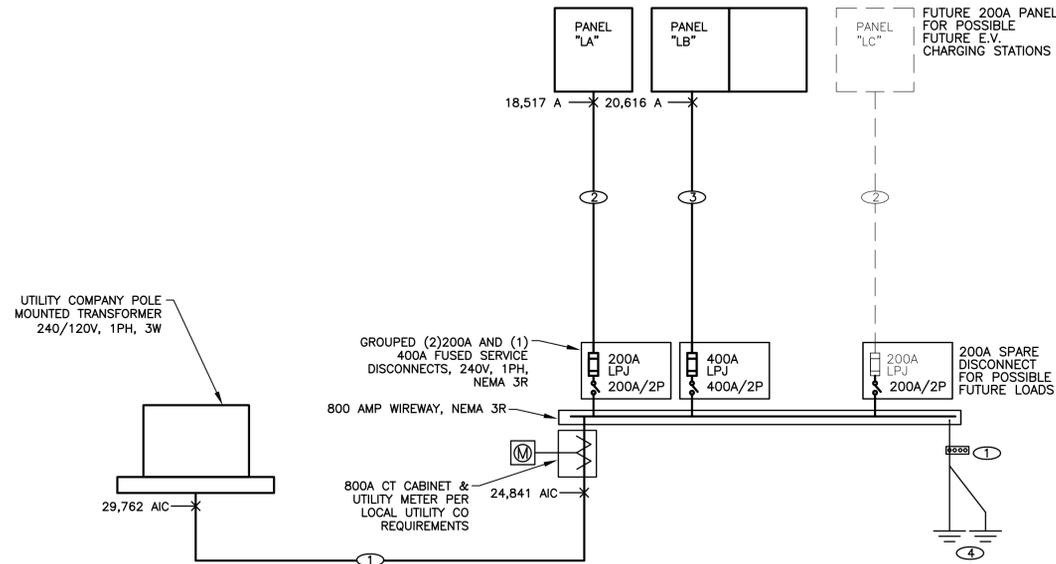
MECHANICAL EQUIPMENT SCHEDULE

DESIGNATION	DESCRIPTION	LOAD				VOLTAGE	PHASE	DISCONNECT SIZE	FUSE SIZE	FEEDER SIZE	REMARKS
		HP	KVA	FLA	MCA						
RTU-1	ROOF TOP UNIT			31.3	37.0	240	1	60A/2P	50A FRN-R	(2#6, 1#10G, 1-1/4"C)	
EF-1	EXHAUST FAN		100W			120	1	SMT0	-	(2#12, 1#12G, 3/4"C)	
EF-2	EXHAUST FAN		100W			120	1	SMT0	-	(2#12, 1#12G, 3/4"C)	
EF-3	EXHAUST FAN	1/2	1176W	9.8		120	1	SMT0	-	(2#12, 1#12G, 3/4"C)	
F-1	AIR CIRCULATION FAN	1/4	696W	5.8		120	1	30A/1P	9A FRN-R	(2#12, 1#12G, 3/4"C)	
GUH-1	GAS UNIT HEATER	1/2				120	1	SMT0	-	(2#12, 1#12G, 3/4"C)	
EW-1	WATER HEATER		1.5KW			120	1	-	-	(2#12, 1#12G, 3/4"C)	

REMARKS
 1. UNIT FURNISHED WITH INTEGRAL DISCONNECT.
 1. PROVIDE MOTOR RATED SWITCH WITH THERMAL OVERLOAD.

LIGHT FIXTURE SCHEDULE ALL FIXTURES FURNISHED AND INSTALLED BY GENERAL CONTRACTOR

SYMBOL	MARK	QUANTITY	DESCRIPTION	MANUF.	CAT. NO.	LAMP	LPW	MOUNTING	VOLTAGE	REMARKS
⊕	A	4	EXTERIOR DECORATIVE LIGHT FIXTURE	COOPER LIGHTING	303-WI-LEDB2-3000-UNV-T4-DIM10	16W LED	64	WALL	120	REFER TO ELEVATIONS FOR MOUNTING LOCATIONS
⊕	F1	10	EXTERIOR DECORATIVE LIGHT FIXTURE	MCGRAW EDISON	IST-SA1F-730-U-T4FT	25W LED	117	WALL	120	
⊗	F2	3	EXIT SIGN	COOPER LIGHTING	APC7 G	LED		WALL/CENTER ON DOOR	120	PROVIDE EMERGENCY BATTERY PACK (90 MINUTE MIN.)
—	F3	3	4'-0" STRIP LED	COOPER LIGHTING	4SNLED LD5 UNV	38W LED		UNIVERSAL	120	MOUNT AT 12'-0" AFF
—	F4	11	8'-0" STRIP LED	COOPER LIGHTING	8TSNLED LD5 UNV	61W LED		UNIVERSAL	120	MOUNT AT 12'-0" AFF
—	F7	12	2x4 RECESSED LED TROFFER	COOPER LIGHTING	24CGT 4540C	39W LED		GRID MOUNT	120	
—	F9	17	4' - LED HIGHBAY	COOPER LIGHTING	LHB 18 UNV	87W LED		HUNG FROM STRUCT.	120	
—	F10	6	EMERGENCY LIGHT W/ BATTERY BACKUP	COOPER LIGHTING	SEL 25	LED		WALL MOUNTED	120	PROVIDE EMERGENCY BATTERY PACK (90 MINUTE MIN.) AND TIME DELAY RELAY
—	F11	2	EMERGENCY EGRESS LIGHT - EXTERIOR	COOPER LIGHTING	AEL 246	LED		SURFACE	120	PROVIDE EMERGENCY BATTERY PACK (90 MINUTE MIN.)



1 ELECTRICAL ONE LINE DIAGRAM
 N.T.S.

FEEDER SCHEDULE

- 1 3 RUNS OF 3#300 MCM CU 2-1/2"C
- 2 3#250 MCM AL, 1#4 AL GND, 2"C
- 3 2 RUNS OF 3#250 MCM AL, 1#1 AL GND, 2"C
- 4 #2/0 CU GND TO BLDG. STEEL & COLD WATER BOND, #6 CU GND TO DRIVEN ROD, & #4 TO CONCRETE ENCASED ELECTRODE (JFER).

ONE-LINE DIAGRAM DETAIL NOTES

- 1 PROVIDE AN INTERSYSTEM BONDING TERMINATION (IBT) AS REQUIRED BY N.E.C. ARTICLE 250.94.

LOAD CALCULATIONS

LIGHTING	9.6 @ 125%	=	12.0 kVA
RECEPTACLE	10.0 @ 100%	=	10.0 kVA
BALANCE	3.1 @ 50%	=	1.6 kVA
MECHANICAL	12.4 @ 100%	=	12.4 kVA
25% OF LARGEST		=	1.9 kVA
SPECIAL	55.7 @ 100%	=	55.7 kVA
TOTAL		=	93.6 kVA (390 A)

SHORT CIRCUIT CALCULATIONS

POINT TO POINT METHOD FOR SHORT CIRCUIT CALCULATIONS ILLUSTRATED IN BUSSMAN MANUFACTURING PUBLICATION FORM SP090.
 SERVICE: 120/240 V., 1-PHASE, 3W

AVAILABLE SHORT CIRCUIT CURRENT FROM UTILITY = 29,762 A.
 FIND FACTOR f = 2.0 x (length in feet) x (short circuit current) (constant from Table C) x (line-to-line voltage)
 $f = 2.0 \times 100 \times 29,762 = 0.198$
 $3 \times 20,888 \times 240$

FIND FACTOR M = $\frac{1}{1+f}$ M = 0.8347
 SHORT CIRCUIT CURRENT AT CT/MAIN = M x AVAILABLE S.C. CURRENT
 I = 24,841 A.

LENGTH IN FEET = 20 f = 2.0 x 20 x 24,841 = 0.342
 FACTOR f = 0.342 1 x 12,122 x 240
 FACTOR M = 0.7454
 SHORT CIRCUIT CURRENT AT PANEL "LA" = 18,517 A.

LENGTH IN FEET = 24 f = 2.0 x 24 x 24,841 = 0.205
 FACTOR f = 0.205 2 x 12,122 x 240
 FACTOR M = 0.83
 SHORT CIRCUIT CURRENT AT PANEL "LB" = 20,616 A.

NOTE:

- 1. ELECTRICAL CONTRACTOR TO LABEL THE SERVICE ENTRANCE WITH THE AVAILABLE FAULT CURRENT AND THE DATE IT WAS CALCULATED AS REQUIRED BY N.E.C. ARTICLE 100.24

SCHEDULE - PANEL LA

MFG. AS APPROVED		NOTE: ALL BREAKERS 20A UNLESS NOTED OTHERWISE	
TYPE	PANELBOARD	LIGHT	7.9 kVA @ 125% = 9.9 kVA
LUG LOC.	TOP	RECEPT	11.7 kVA @ 100% = 11.7 kVA
AMPS	200A MLO	MECH.	kVA @ 100% = kVA
VOLTAGE	120/240V, 1ph, 3W	25% LARGEST MOTOR	kVA
MOUNTING	SURFACE	SPECIAL	6.3 kVA @ 100% = 6.3 kVA
BRACING	22,000 A.I.C.	SPARE	kVA
		TOTAL	27.8 kVA (116A)

EXTERIOR LIGHTING	404	1	1.2	720 OFFICE RECEIPTS	
EXTERIOR SIGN	1200	3	1.4	800 SALES AREA COUNTER RECEIPTS	
EXTERIOR SIGN	1200	5	1.6	1000 KIOSK RECEIPTS	
EW-1	1500	7	1.8	360 SALES AREA RECEIPTS	
EXTERIOR SIGN	1200	9	1.0	SPARE	
SALES, COFFEE, OFFICE LIGHTING	528	11	1.2	1800 SHOW WINDOW RECEIPTS	
SERVICE AREA LIGHTING	1144	13	1.4	360 SALES AREA RECEIPTS	
SERVICE AREA LIGHTING	660	15	1.6	500 TELEVISION	
SERVICE AREA LIGHTING	528	17	1.8	360 SERVICE AREA RECEIPTS	
INVENTORY, BREAK, RESTROOM LTG	1012	19	2.0	500 GARAGE A/C RECEIPTS	
IRRIGATION CONTROLS	500	21	2.2	540 GARAGE RECEIPT	
BREAK RM	180	23	2.4	360 GARAGE RECEIPT	
BURGLER ALARM	400	25	2.6	200 COMPUTER	
TELEPHONE SYSTEM	400	27	2.8	500 BENCH RECEIPT	
MICROWAVE	900	29	3.0	180 GARAGE RECEIPT	
BREAK RECEIPTS	360	31	3.2	360 GARAGE RECEIPT	
SPARE	1200	33	3.4	500 SERVICE AREA RECEIPTS	
REFRIGERATOR	1200	35	3.6	SPARE	
RECEIPT - WATER FOUNTAIN	370	37	3.8	360 GARAGE RECEIPT	
COFFEE UNIT	1000	39	4.0	1200 SHOW WINDOW RECEIPTS	
OFFICE RECEIPTS	360	41	4.2	300 MENU TV	
A phase =	11,526 VA	B phase =	14,420 VA	Total =	25,946 VA

SCHEDULE - PANEL LB

MFG. AS APPROVED		NOTE: ALL BREAKERS 20A UNLESS NOTED OTHERWISE	
TYPE	PANELBOARD 2-SECTION	LIGHT	1.7 kVA @ 125% = 2.1 kVA
LUG LOC.	TOP	RECEPT	1.4 kVA @ 100% = 1.4 kVA
AMPS	400A MLO	MECH.	12.4 kVA @ 100% = 12.4 kVA
VOLTAGE	120/240V, 1ph, 3W	25% LARGEST MOTOR	1.9 kVA
MOUNTING	SURFACE	SPECIAL	44.4 kVA @ 100% = 44.4 kVA
BRACING	22,000 A.I.C.	SPARE	kVA
		TOTAL	66.9 kVA (279A)

AIR COMPRESSOR	3360	1	1.2	1800 ALIGNMENT SENSORS
SPARE	3360	3	1.4	1800 ALIGNMENT MACHINE
SPARE	3360	5	1.6	SPARE
SPARE	3360	7	1.8	3120 ALIGNMENT RACK
AIR CIRCULATION FANS	1392	9	1.0	3120
AIR CIRCULATION FANS	1392	11	1.2	1800 BRAKE LATHE
SHOP EQUIPMENT RECEIPTS	1440	13	1.4	SPARE
SPARE	1440	15	1.6	SPARE
RECEPT	180	17	1.8	3755 RTU-1
RECEPT - RESTROOM	180	19	2.0	3755
RECEPT - RESTROOM	180	21	2.2	SPARE
RECEPT - INVENTORY	180	23	2.4	453 SITE LIGHTING
EF-3	1130	25	2.6	SPARE
GUH-1	500	27	2.8	720 INVENTORY RECEIPTS
GUH-1	500	29	3.0	1200 MONUMENT SIGN
SPARE	500	31	3.2	1000
SPARE	35	33	3.4	SPARE
SPARE	35	35	3.6	SPARE
SPARE	37	37	3.8	SPARE
SPARE	39	39	4.0	SPARE
SPARE	41	41	4.2	SPARE

SECTION TWO					
LIFT	2040 43	1.44	SPACE		
---	2040 45	1.46	SPACE		
LIFT	2040 47	1.48	SPACE		
---	2040 49	1.50	SPACE		
LIFT	2040 51	1.52	SPACE		
---	2040 53	1.54	SPACE		
LIFT	2040 55	1.56	SPACE		
---	2040 57	1.58	SPACE		
LIFT	2040 59	1.60	SPACE		
---	2040 61	1.62	SPACE		
LIFT	2040 63	1.64	SPACE		
---	2040 65	1.66	SPACE		
LIFT	2040 67	1.68	SPACE		
---	2040 69	1.70	SPACE		
SPACE	71	1.72	SPACE		
SPACE	73	1.74	SPACE		
SPACE	75	1.76	SPACE		
SPACE	77	1.78	SPACE		
SPACE	79	1.80	SPACE		
SPACE	81	1.82	SPACE		
SPACE	83	1.84	SPACE		
A phase =	9120 VA	B phase =	33670 VA	Total =	64871 VA

BRAKES PLUS
 1201 LONNIE ABBOTT BLVD.
 ADA, OKLAHOMA



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	08.06.24	FOR BLDG. DEPT. SUBMITTAL

ARC CODEV JOB #:
 CLIENT JOB #:
 DRAWN BY: SB
 CHECKED BY: LRP
 DATE OF ISSUE: 08.06.24



SHEET

PROJ #24-
 ADAM A. POWELL, P.E.
 PEC Enterprises, Inc.
 14412 Alene Ct. NE
 Albuquerque, NM 87123
 Telephone 720-409-2454

E4.1

ELECTRICAL ONE LINE DIAGRAM

COMcheck Software Version 4.1.5.5
Interior Lighting Compliance Certificate

Project Information
 Energy Code: 2018 IECC
 Project Title: Brakes Plus
 Project Type: New Construction

Construction Site: 1201 Lonnie Abbott Blvd Ada, OK
 Owner/Agent:
 Designer/Contractor: Loren Priest EE, LLC 12005 Antelope Trail Parker, CO 80138 303.748.1189 loren@eeparker.com

Additional Efficiency Package(s)

A Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts (B X C)
1-Sales Area (Retail Sales Area)	990	1.10	1089
2-Service/Repair (Automotive/Vehicular Maintenance Area)	3686	0.50	1843
Total Allowed Watts = 2932			

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Sales Area (Retail Sales Area)				
LED 7: F3 4' LED Strip; LED Linear 22W:	2	3	38	114
LED 8: F4 8' LED Strip; LED Linear 22W:	4	1	61	61
LED 7 copy 1: F7: 2x4 LED Troffer; LED Panel 19W:	1	12	39	468
2-Service/Repair (Automotive/Vehicular Maintenance Area)				
LED 8 copy 2: F9: 4' LED Highbay; LED Panel 60W:	1	17	87	1479
LED 8 copy 1: F4: 8' LED Strip; LED Linear 22W:	4	10	61	610
Total Proposed Watts = 2732				

Interior Lighting PASSES: Design 7% better than code

Interior Lighting Compliance Statement
 Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Stan Bentley – Electrical Designer *Stan Bentley* 8-2-24

Project Title: Brakes Plus Report date: 08/01/24
 Data filename: C:\COMCHECK\BRAKES PLUS\BRAKES PLUS- ADA OK.cck Page 1 of 8

Section # & Req. ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3 [EL22] 1	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight-responsive controls for applicable spaces. C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.4 [EL26]	Separate lighting control devices for specific uses installed per approved lighting plans.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.4 [EL27]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.5 [EL28] 1	Manual controls required by the energy code are in a location with ready access to occupants and located where the controlled lights are visible, or identify the area served and their status.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.6 [EL30] 1	Automatic lighting controls for exterior lighting installed. Controls will be daylight controlled, set based on business operation time-of-day, or reduce connected lighting > 30%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.3 [EL6]	Exit signs do not exceed 5 watts per face.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.6 [EL26]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.7 [EL27]	Electric motors meet the minimum efficiency requirements of Tables (C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.8.2 [EL28]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.9 [EL29]	Total voltage drop across the combination of feeders and branch circuits <= 3%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)
 Project Title: Brakes Plus Report date: 08/01/24
 Data filename: C:\COMCHECK\BRAKES PLUS\BRAKES PLUS- ADA OK.cck Page 5 of 8

COMcheck Software Version 4.1.5.5
Exterior Lighting Compliance Certificate

Project Information
 Energy Code: 2018 IECC
 Project Title: Brakes Plus
 Project Type: New Construction
 Exterior Lighting Zone: 4 (High activity metropolitan commercial district (L24))

Construction Site: 1201 Lonnie Abbott Blvd Ada, OK
 Owner/Agent:
 Designer/Contractor: Loren Priest EE, LLC 12005 Antelope Trail Parker, CO 80138 303.748.1189 loren@eeparker.com

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Wall area (Illuminated area of facade wall or surface)	3000 ft ²	0.15	No	450
Total Tradable Watts (a) =				0
Total Allowed Watts =				450
Total Allowed Supplemental Watts (b) =				900

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
 (b) A supplemental allowance equal to 900 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Wall area (Illuminated area of facade wall or surface 3000 ft ²). Non-tradable Wattage				
LED 1: F1: LED Wall pack; LED A Lamp 29W:	1	10	30	300
LED 4: A: LED Decorative Wall Lt; LED A Lamp 25W:	1	4	26	104
Total Tradable Proposed Watts = 0				

Exterior Lighting PASSES: Design 0.0% better than code

Exterior Lighting Compliance Statement
 Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Stan Bentley – Electrical Designer *Stan Bentley* 8-2-24

Project Title: Brakes Plus Report date: 08/01/24
 Data filename: C:\COMCHECK\BRAKES PLUS\BRAKES PLUS- ADA OK.cck Page 2 of 8

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)
 Project Title: Brakes Plus Report date: 08/01/24
 Data filename: C:\COMCHECK\BRAKES PLUS\BRAKES PLUS- ADA OK.cck Page 6 of 8

COMcheck Software Version 4.1.5.5
Inspection Checklist

Energy Code: 2018 IECC
 Requirements: 0.0% were addressed directly in the COMcheck software
 Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req. ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C103.2 [PR8]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C406 [PR9]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)
 Project Title: Brakes Plus Report date: 08/01/24
 Data filename: C:\COMCHECK\BRAKES PLUS\BRAKES PLUS- ADA OK.cck Page 3 of 8

Section # & Req. ID	Final Inspection	Complies?	Comments/Assumptions
C303.3 [F17] 2	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.4.1 [F18]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Interior Lighting fixture schedule for values.
C405.5.1 [F19]	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Exterior Lighting fixture schedule for values.
C408.1.1 [F15]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5 [F16]	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.3 [F13]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)
 Project Title: Brakes Plus Report date: 08/01/24
 Data filename: C:\COMCHECK\BRAKES PLUS\BRAKES PLUS- ADA OK.cck Page 7 of 8

Section # & Req. ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.2 [EL22] 2	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.1 [EL18] 1	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multi-purpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, warehouse storage areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.1 [EL19] 2	Occupancy sensors control function in warehouses: In warehouses, the lighting in aislesways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.1 [EL20] 3	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces >= 300 sq ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq. ft. within the space, 2) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 3) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone, and 4) are configured such that any daylight responsive control will activate space general lighting or control zone general lighting only when occupancy for the same area is detected.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.2 [EL21] 2	Each area not served by occupancy sensors (per C405.2.1) have time-switch controls and functions detailed in sections C405.2.2.1 and C405.2.2.2.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)
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BRAKES PLUS
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 8-6-24

ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	08.06.24	FOR BLDG. DEPT. SUBMITTAL

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SHEET
E5.1
 LIGHTING COMPLIANCE
 CERTIFICATES

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