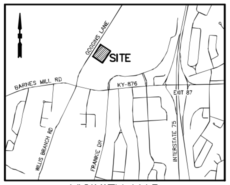


VICINITY MAP
1" = 2000'

LEGEND

- SURVEY CONTROL
- RBS - REBAR SET
- RBF - REBAR FOUND
- MNF - MAG NAIL FOUND
- LIGHT POLE
- IRRIGATION CONTROL VALVE
- WATER VALVE
- FIRE HYDRANT
- BORE HOLE
- BOLLARD/POST
- SANITARY SEWER MANHOLE
- GRATE INLET
- ELECTRIC CABINET
- GAS METER
- GEN. GENERATOR
- 18 TITLE EXCEPTION REFERENCE
- SURVEYED BOUNDARY
- ADJACENT PROPERTY
- —X—X— WOVEN WIRE FENCE
- —GAS— GAS LINE
- STORM DRAIN PIPE
- CENTER OF DRAIN/SWALE
- —SS— SANITARY SEWER
- —W— WATER LINE
- —UGE— UNDERGROUND ELECTRIC

ZONING REQUIREMENTS

ZONING DESIGNATION & REQUIREMENTS ARE BASED ON THE CITY OF RICHMOND OFFICIAL ZONING MAP (2025) AND CODE OF ORDINANCES, TITLE 8. THE PLANNING & CODES OFFICE SHOULD BE CONTACTED PRIOR TO COMMENCING DESIGN OR CONSTRUCTION. SURVEYOR WAS NOT PROVIDED WITH A ZONING REPORT.

NOTE: "FRONT", "REAR", AND "SIDE" WILL BE DETERMINED BASED UPON BUILDING ORIENTATION WHEN A SITE DEVELOPMENT PLAN IS PRESENTED TO THE PLANNING DEPARTMENT. THEREFORE, SETBACKS ARE NOT GRAPHICALLY SHOWN ON THE SUBJECT PROPERTY, EXCEPT THOSE OF PRIOR RECORD, AS NOTED.

CURRENT ZONING	B-3
MIN. BLDG. SITE AREA	0.5 ACRES
MAX. BLDG. COVERAGE	23%
MIN. LOT WIDTH	50' AT BSL
MIN. FRONT SETBACK	25'
MIN. SIDE SETBACK	10'
MIN. REAR SETBACK	15'
MAX BLDG. HEIGHT	100'

UNDERGROUND UTILITIES

UNDERGROUND UTILITY LOCATIONS ARE BASED ON VISIBLE SURFACE EVIDENCE, PLANS PROVIDED BY UTILITY COMPANIES, AND MARKINGS BY THE UNDERGROUND UTILITY PROTECTION CENTER. LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. UTILITIES MAY EXIST THAT ARE NOT SHOWN.

THE UTILITY PROTECTION CENTER (811) SHOULD BE CONTACTED PRIOR TO COMMENCING ANY EXCAVATION.

UTILITY PROVIDERS

ELECTRIC
KENTUCKY UTILITIES
200 E WATER ST
RICHMOND, KY 40475
(859) 626-3372

NATURAL GAS
RICHMOND UTILITIES
300 HALLIE IRVINE ST
RICHMOND, KY 40475
(859) 623-2323

TELEPHONE
AT&T
222 W LEXINGTON AVE
WINCHESTER, KY 40391
(859) 744-5171

COLUMBIA GAS PIPELINE
2001 MERCER RD
LEXINGTON, KY 40511
(800) 432-9345

COLUMBIA GAS TRANSMISSION
1675 MUDDY CREEK RD
WINCHESTER, KY 40391
(859) 745-6400

CABLE
SPECTRUM
1615 FOXHAVEN DR
RICHMOND, KY 40475
(859) 626-4816

WATER/SEWER
RICHMOND UTILITIES
300 HALLIE IRVINE ST
RICHMOND, KY 40475
(859) 623-2323

FLOOD NOTE

ACCORDING TO FEMA FLOOD INSURANCE RATE MAP (FIRM) NO. 21151C0252D, EFFECTIVE 12/21/2017, THE PROPERTY DEPICTED HEREON LIES IN ZONE X, DEFINED AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN".

SURVEY NOTES

THIS IS A BOUNDARY & TOPOGRAPHIC & EXISTING CONDITIONS SURVEY PREPARED FOR USE IN CIVIL DESIGN AND COMPLIES WITH 201 KAR 18:150.

MEASUREMENTS WERE MADE UTILIZING A COMBINATION OF CONVENTIONAL TOTAL STATION AND RTK GNSS (CARLSON BRx7). MEASUREMENTS MEET OR EXCEED THE MINIMUM RELATIVE POSITIONAL ACCURACY OF ±0.05' +100 PPM FOR URBAN SURVEYS AND WERE NOT ADJUSTED. THE UNADJUSTED ERROR OF CLOSURE FOR CONVENTIONAL TOTAL STATE MEASUREMENTS WAS 1:215,332.

HORIZONTAL COORDINATES ARE BASED ON KENTUCKY STATE PLAN COORDINATE SYSTEM (NAD83), SINGLE ZONE (1600) AND HAVE NOT BEEN SCALED TO GROUND.

ELEVATIONS ARE BASED ON NAVD88 (GEOID18). THE BENCHMARKS PROVIDED ON THESE PLANS SHOULD BE USED FOR ALL RELATED WORK.

CONTOUR INTERVAL IS ONE FOOT.

SOURCE OF TITLE: DB 626, PG 515 (PARCEL A)

CONTROL POINTS (RRBS) ARE 1/2" REBAR WITH BLUE CAP STAMPED "REF POINT, PLS 4068".

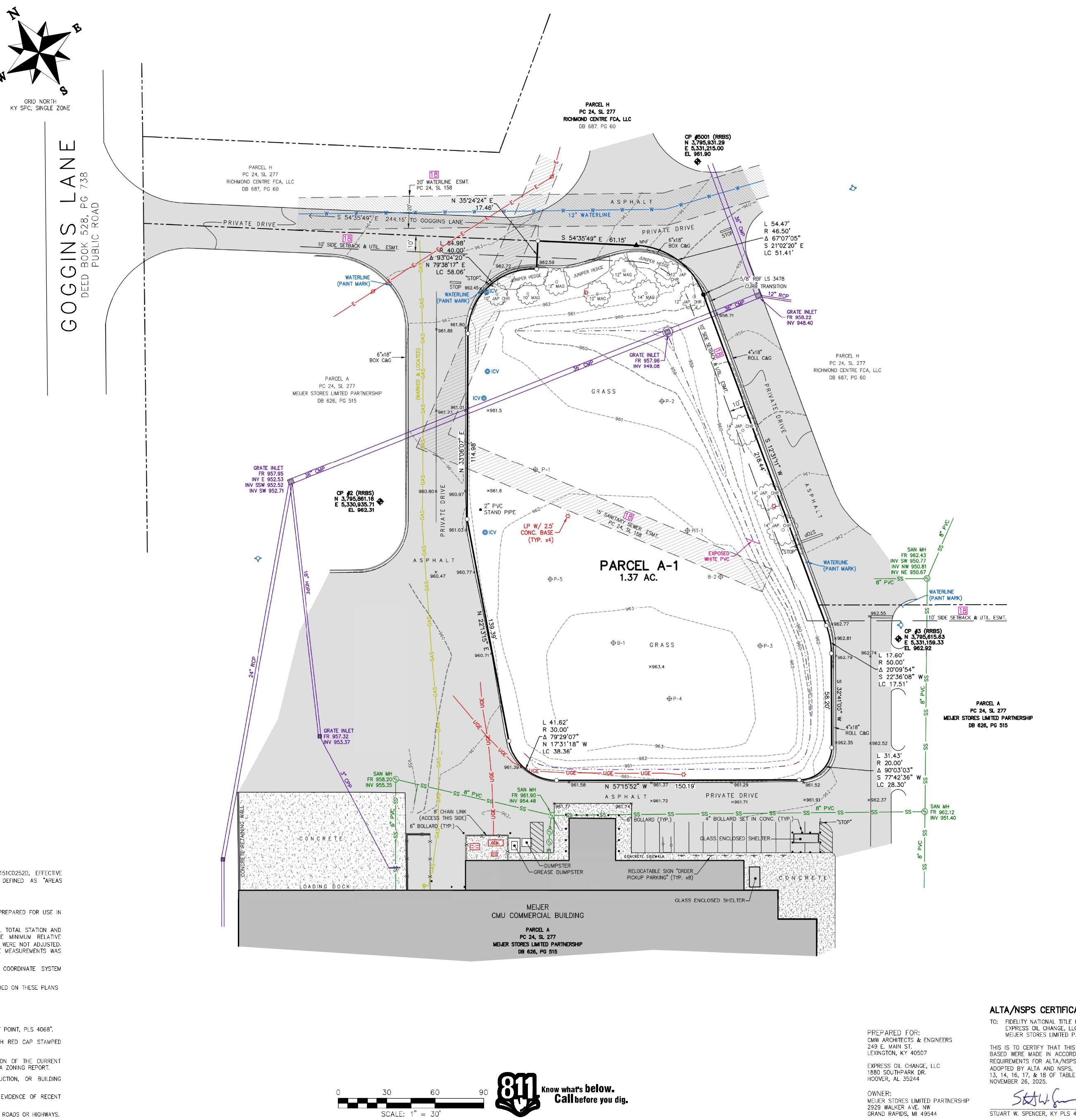
ALL PROPERTY CORNERS ARE MARKED WITH A 1/2" x 18" REBAR WITH RED CAP STAMPED "SPENCER, PLS 4068", EXCEPT AS OTHERWISE NOTED.

ZONING REQUIREMENTS ARE BASED ON THE SURVEYOR'S INTERPRETATION OF THE CURRENT DEVELOPMENT ORDINANCE AND ARE PROVIDED WITHOUT THE BENEFIT OF A ZONING REPORT.

NO EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS WAS OBSERVED AT THE TIME OF SURVEY.

THERE ARE NO KNOWN CHANGES PROPOSED TO RIGHTS-OF-WAY NOR EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS.

SUBJECT PROPERTY DOES NOT LIE WITHIN THE CONFINES OF KNOWN PUBLIC ROADS OR HIGHWAYS.



LEGAL DESCRIPTION PER TITLE COMMITMENT

SITUATED IN THE CITY OF RICHMOND, COUNTY OF MADISON, COMMONWEALTH OF KENTUCKY, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEING PARCEL A AS SHOWN AND MORE PARTICULARLY DESCRIBED ON THE FINAL SUBDIVISION PLAT -RICHMOND CENTRE LLC OF RECORD IN PLAT CABINET P24 SLIDE 158 AS AMENDED IN PLAT CABINET P24, SLIDE 277, MADISON COUNTY RECORDS.

BEING A PORTION OF THAT PROPERTY CONVEYED TO MEIJER STORES LIMITED PARTNERSHIP, A MICHIGAN LIMITED PARTNERSHIP, BY DEED FILED JUNE 5, 2007, AND RECORDED IN DEED BOOK 622, PAGE 150, AND BY DEED OF CORRECTION FILED SEPTEMBER 19, 2007, AND RECORDED IN DEED BOOK 626, PAGE 515, OF THE MADISON COUNTY RECORDS.

LEGAL DESCRIPTION AS SURVEYED

PARCEL A-1 - 1.37 ACRES

ALL THAT CERTAIN PIECE, PARCEL OR TRACT OF LAND LOCATED IN THE CITY OF RICHMOND, MADISON COUNTY, KENTUCKY, BEING ON THE NORTH SIDE OF MEIJER RETAIL STORE, AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A REBAR SET IN THE NORTH LINE OF PARCEL A, MEIJER STORES LIMITED PARTNERSHIP (DB 622, PG 150), A COMMON LINE TO RICHMOND CENTRE FCA, LLC (DB 687, PG 60); SAID POINT BEING LOCATED S 54°35'49" E A DISTANCE OF 244.15' FROM THE NORTHWESTERN CORNER OF PARCEL A;

THENCE WITH THE LINE OF PARCEL A AND RICHMOND CENTRE FCA, LLC, THREE (3) CALLS:

S 54°35'49" E A DISTANCE OF 61.15' TO A PK NAIL FOUND; THENCE

54.47' ALONG THE ARC OF A CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 46.50', A CHORD BEARING S_21°02'20" E, AND A CHORD LENGTH OF 51.41' TO A 5/8" REBAR STAMPED "3478" FOUND; THENCE

S 12°31'11" W, LEAVING THE LINE OF RICHMOND CENTRE FCA, LLC AT 204.72', IN ALL A DISTANCE OF 218.44' TO A REBAR SET APPROXIMATELY ONE FOOT BEHIND THE BACK OF CURB;

THENCE CONTINUING THROUGH PARCEL A ALONG A LINE APPROXIMATELY ONE FOOT BEHIND THE BACK OF CURB OR EDGE OF PAVEMENT, TEN (10) CALLS:

17.60' ALONG THE ARC OF A CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 50.00', A CHORD BEARING S_22°36'08" W, AND A CHORD LENGTH OF 17.51', TO A REBAR SET; THENCE

S 32°41'05"W A DISTANCE OF 58.20' TO A REBAR SET; THENCE

31.43' ALONG THE ARC OF A CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 20.00', A CHORD BEARING S_77°42'36" W, AND A CHORD LENGTH OF 28.30', TO A REBAR SET; THENCE

N 57°15'52" W A DISTANCE OF 150.19' TO A REBAR SET; THENCE

41.62' ALONG THE ARC OF A CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 30.00', A CHORD BEARING N_17°31'18" W, AND A CHORD LENGTH OF 38.36', TO A REBAR SET; THENCE

N 22°13'15" E A DISTANCE OF 139.39' TO A REBAR SET; THENCE

N 33°06'07" E A DISTANCE OF 114.98' TO A REBAR SET; THENCE

64.98' ALONG THE ARC OF A CURVE TURNING TO THE RIGHT, HAVING A RADIUS OF 40.00', A CHORD BEARING N_79°38'17" E, AND A CHORD LENGTH OF 58.06', TO A REBAR SET; THENCE CROSSING THE CURB

N 35°24'24" E A DISTANCE OF 17.46' TO THE POINT OF BEGINNING, HAVING AN AREA OF 1.37 ACRES, MORE OR LESS.

BEING A PORTION OF THE LAND CONVEYED TO MEIJER STORES LIMITED PARTNERSHIP, FROM THE RICHMOND CENTRE, LLC, ON SEPTEMBER 18, 2007, BY DEED RECORDED IN DEED BOOK 626, PAGE 515, IN THE OFFICE OF THE MADISON COUNTY CLERK.

RESPONSES TO TITLE OPINION

NCS TROY MI FILE NO.: GLT2500749
COMMITMENT NUMBER: GLK2500147
ISSUING AGENT: BRANDIN MCMILLEN
DATE: OCTOBER 31, 2025

SCHEDULE B, PART II, EXHIBIT B

ITEMS 1-10 ARE NOT SURVEY RELATED.

11. DECLARATION EASEMENT TO CROWN COMMUNICATION INC., A DELAWARE CORPORATION, FILED FOR RECORD MARCH 15, 2001, AND RECORDED IN BOOK 547, PAGE 32, IN THE OFFICE OF THE CLERK OF MADISON COUNTY, KENTUCKY.
    DOES NOT APPLY.

12. DEED OF EASEMENT TO THE CITY OF RICHMOND, FILED FOR RECORD JUNE 05, 1996, AND RECORDED IN BOOK 489, PAGE 804, IN THE OFFICE OF THE CLERK OF MADISON COUNTY, KENTUCKY.
    DOES NOT APPLY.

13. RESERVATIONS, RESTRICTIONS, COVENANTS, LIMITATIONS, EASEMENTS AND/OR OTHER CONDITIONS AS SHOWN ON PLAT RECORDED IN PLAT BOOK 15, PAGE 278, IN THE OFFICE OF THE CLERK OF MADISON COUNTY, KENTUCKY.
    DOES NOT APPLY.

14. DEED OF EASEMENT TO THE CITY OF RICHMOND, FILED FOR RECORD APRIL 16, 1996, AND RECORDED IN BOOK 464, PAGE 334, IN THE OFFICE OF THE CLERK OF MADISON COUNTY, KENTUCKY.
    DOES NOT APPLY.

15. RIGHT-OF-WAY EASEMENT TO THE SOUTH CENTRAL BELL TELEPHONE COMPANY, FILED FOR RECORD OCTOBER 17, 1973, AND RECORDED IN BOOK 273, PAGE 630, IN THE OFFICE OF THE CLERK OF MADISON COUNTY, KENTUCKY.
    DOES NOT APPLY.

16. RESERVATIONS, RESTRICTIONS, COVENANTS, LIMITATIONS, EASEMENTS AND/OR OTHER CONDITIONS AS SHOWN ON PLAT RECORDED IN PLAT BOOK 4, PAGE 68, IN THE OFFICE OF THE CLERK OF MADISON COUNTY, KENTUCKY.
    DOES NOT APPLY.

17. RESERVATIONS, RESTRICTIONS, COVENANTS, LIMITATIONS, EASEMENTS AND/OR OTHER CONDITIONS AS SHOWN ON PLAT RECORDED IN PLAT BOOK 16, PAGE 46, IN THE OFFICE OF THE CLERK OF MADISON COUNTY, KENTUCKY.
    DOES NOT APPLY.

18. RESERVATIONS, RESTRICTIONS, COVENANTS, LIMITATIONS, EASEMENTS AND/OR OTHER CONDITIONS AS SHOWN ON PLAT RECORDED IN PLAT BOOK 24, PAGE 158; AND AMENDED IN PLAT BOOK 24, PAGE 277, ALL IN THE OFFICE OF THE CLERK OF MADISON COUNTY, KENTUCKY.
    APPLIES. 10' SIDE SETBACK AND UTILITY EASEMENT ALONG THE NORTH & NORTHEAST SIDE OF PROPERTY, 20' WATERLINE NEAR NORTH SIDE OF THE PROPERTY, AND 15' SANITARY SEWER EASEMENT CROSSING THE PROPERTY.

19. RESERVATIONS, RESTRICTIONS, COVENANTS, LIMITATIONS, EASEMENTS, AND/OR CONDITIONS, AS ESTABLISHED IN INSTRUMENT, FILED FOR RECORD JUNE 05, 2007, AND RECORDED IN BOOK MC219, PAGE 439, IN THE OFFICE OF THE CLERK OF MADISON COUNTY, KENTUCKY.
    APPLIES. NO SURVEY RELATED ITEMS TO DEPICT.

20. RESERVATIONS, RESTRICTIONS, COVENANTS, LIMITATIONS, EASEMENTS, AND/OR CONDITIONS, AS ESTABLISHED IN INSTRUMENT, FILED FOR RECORD JUNE 05, 2007, AND RECORDED IN BOOK MC219, PAGE 494; AS MODIFIED IN IN BOOK MC223, PAGE 356, ALL IN THE OFFICE OF THE CLERK OF MADISON COUNTY, KENTUCKY.
    APPLIES. NO SURVEY RELATED ITEMS TO DEPICT.

21. RESERVATIONS, RESTRICTIONS, COVENANTS, LIMITATIONS, EASEMENTS, AND/OR CONDITIONS, AS ESTABLISHED IN INSTRUMENT, FILED FOR RECORD NOVEMBER 15, 2007, AND RECORDED IN BOOK MC225, PAGE 350, IN THE OFFICE OF THE CLERK OF MADISON COUNTY, KENTUCKY.
    APPLIES. NO SURVEY RELATED ITEMS TO DEPICT.

22. RESERVATIONS, RESTRICTIONS, COVENANTS, LIMITATIONS, EASEMENTS, AND/OR CONDITIONS, AS ESTABLISHED IN INSTRUMENT, FILED FOR RECORD NOVEMBER 15, 2007, AND RECORDED IN BOOK MC225, PAGE 374, IN THE OFFICE OF THE CLERK OF MADISON COUNTY, KENTUCKY.
    APPLIES. NO SURVEY RELATED ITEMS TO DEPICT.

23. RESERVATIONS, RESTRICTIONS, COVENANTS, LIMITATIONS, EASEMENTS, AND/OR CONDITIONS, AS ESTABLISHED IN INSTRUMENT, FILED FOR RECORD JUNE 28, 2019, AND RECORDED IN BOOK MC351, PAGE 528, IN THE OFFICE OF THE CLERK OF MADISON COUNTY, KENTUCKY.
    DOES NOT APPLY TO SUBJECT TRACT. APPLIES TO ADJOINING TRACT WITH SPECIFIC RESTRICTIONS.

24. RESERVATIONS, RESTRICTIONS, COVENANTS, LIMITATIONS, EASEMENTS, AND/OR CONDITIONS, AS ESTABLISHED IN INSTRUMENT, FILED FOR RECORD FEBRUARY 27, 2024, AND RECORDED IN BOOK MC417, PAGE 723, IN THE OFFICE OF THE CLERK OF MADISON COUNTY, KENTUCKY.
    APPLIES. NO SURVEY RELATED ITEMS TO DEPICT.

25. RESERVATIONS, RESTRICTIONS, COVENANTS, LIMITATIONS, EASEMENTS, AND/OR CONDITIONS, AS ESTABLISHED IN INSTRUMENT, FILED FOR RECORD JANUARY 29, 2025, AND RECORDED IN BOOK MC425, PAGE 167, IN THE OFFICE OF THE CLERK OF MADISON COUNTY, KENTUCKY.
    DOES NOT APPLY TO SUBJECT TRACT. APPLIES TO ADJOINING TRACT WITH SPECIFIC RESTRICTIONS.

26. RESERVATIONS, RESTRICTIONS, COVENANTS, LIMITATIONS, EASEMENTS, AND/OR CONDITIONS, AS ESTABLISHED IN INSTRUMENT, FILED FOR RECORD JANUARY 26, 2009, AND RECORDED IN BOOK MC238, PAGE 1, IN THE OFFICE OF THE CLERK OF MADISON COUNTY, KENTUCKY.
    APPLIES. NO SURVEY RELATED ITEMS TO DEPICT.

27. RESERVATIONS, RESTRICTIONS, COVENANTS, LIMITATIONS, EASEMENTS, AND/OR CONDITIONS, AS ESTABLISHED IN INSTRUMENT, FILED FOR RECORD JANUARY 19, 2010, AND RECORDED IN BOOK MC248, PAGE 135, IN THE OFFICE OF THE CLERK OF MADISON COUNTY, KENTUCKY.
    APPLIES. NO SURVEY RELATED ITEMS TO DEPICT.

811 Know what's below. Call before you dig.

PREPARED FOR:
CMW ARCHITECTS & ENGINEERS
249 E. MAIN ST.
LEXINGTON, KY 40507

EXPRESS OIL CHANGE, LLC
1880 SOUTHPARK DR.
HOOVER, AL 35244

OWNER:
MEIJER STORES LIMITED PARTNERSHIP
2929 WALKER AVE. NW
GRAND RAPIDS, MI 49544

ALTA/NSPS CERTIFICATION

TO: FIDELITY NATIONAL TITLE INSURANCE COMPANY
EXPRESS OIL CHANGE, LLC
MEIJER STORES LIMITED PARTNERSHIP

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1-5, 6(a) & (b), 7(a), 8-10, 13, 14, 16, 17, & 18 OF TABLE A, THEREOF. THE FIELDWORK WAS COMPLETED ON NOVEMBER 26, 2025.

Digitally signed by Stuart W. Spencer, PLS
Date: 2026.04.14 10:31:27-04'00'

STUART W. SPENCER, KY PLS 4068 DATE

STATE of KENTUCKY
STUART W. SPENCER
4068
LICENSED PROFESSIONAL LAND SURVEYOR

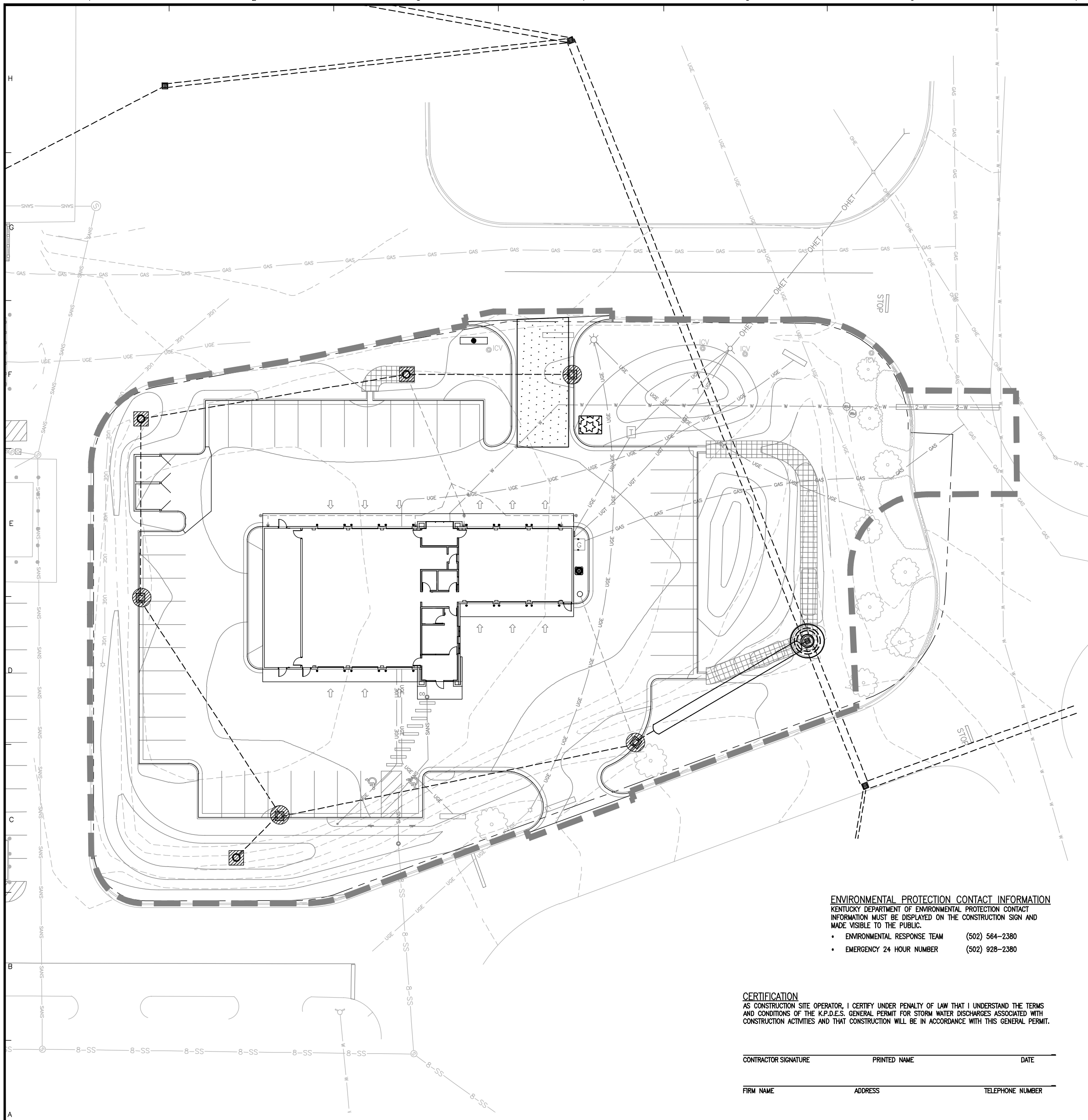
ALTA/NSPS LAND TITLE SURVEY
PARCEL A-1
A 1.37-ACRE PORTION OF PARCEL A, AS DESCRIBED IN DB 626, PG 515

2001 & 2013 LANTERN RIDGE DRIVE
RICHMOND, MADISON COUNTY, KENTUCKY

311 N 3rd Street
Richmond, KY 40475
859+623-0725
www.spencersurveying.com

SPENCERSURVEYING.COM PLS SPENCER LAND SURVEYING

REV: 4/14/2026
JOB NO: 3302 DATE: 11/26/2025



A EROSION SEDIMENT CONTROL PLAN - SWPPP

1"= 20'

0 20' 40'

ENVIRONMENTAL PROTECTION CONTACT INFORMATION

KENTUCKY DEPARTMENT OF ENVIRONMENTAL PROTECTION CONTACT INFORMATION MUST BE DISPLAYED ON THE CONSTRUCTION SIGN AND MADE VISIBLE TO THE PUBLIC.

- ENVIRONMENTAL RESPONSE TEAM (502) 564–2380
- EMERGENCY 24 HOUR NUMBER (502) 928–2380

CERTIFICATION

AS CONSTRUCTION SITE OPERATOR, I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE K.P.D.E.S. GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES AND THAT CONSTRUCTION WILL BE IN ACCORDANCE WITH THIS GENERAL PERMIT.

CONTRACTOR SIGNATURE PRINTED NAME DATE

FIRM NAME ADDRESS TELEPHONE NUMBER

LEGEND

(symbol)	LIMITS OF DISTURBANCE
SF	TEMPORARY WOVEN WIRE REINFORCED SILT FENCE PER DETAIL BMP5/C–100.2 AND KEPSC BMP MANUAL SECTION 4.5.1.
(symbol)	TEMPORARY CONSTRUCTION EXIT PER DETAIL BMP1/C–100.2 AND KEPSC BEST MANAGEMENT PRACTICES MANUAL SECTION 4.3.2.
(symbol)	TEMPORARY INLET SEDIMENT BARRIER PER DETAIL A/C–100.2 AND KEPSC BMP MANUAL SECTION 4.6.3.
(symbol)	TEMPORARY INLET PROTECTION USING STONE BAG SEDIMENT BARRIER ON DRAIN INLETS IN PAVED AREAS PER KYTC STD DWG RDX–230 AND KEPSC BMP MANUAL SECTION 4.6.1.
(symbol)	TEMPORARY INLET PROTECTION USING SILT FENCE ON DRAIN INLETS IN LANDSCAPE AREAS PER DETAIL BMP7/C–100.2 AND KEPSC BMP MANUAL SECTION 4.6.2.
(symbol)	TEMPORARY CONSTRUCTION SIGN. PERMITS, CONTRACTOR'S CONTACT INFORMATION, AND KENTUCKY DEPARTMENT OF ENVIRONMENTAL PROTECTION CONTACT INFORMATION (502–564–2380) TO BE DISPLAYED ON SIGN. SIGN TO BE CONSTRUCTED OF A RIGID MATERIAL, SUCH AS PLYWOOD OR OUTDOOR SIGN BOARD, AND CONSTRUCTED IN A MANNER TO PROTECT DOCUMENTS FROM WEATHER DAMAGE. ATTACH MAILBOX TO SIGN FOR STORAGE OF REPORTS, PLANS, ETC.
(symbol)	TEMPORARY CONCRETE WASH OUT PER KEPSC BMP MANUAL SECTION 4.9.6. EXACT LOCATION TO BE DETERMINED BY CONTRACTOR. CONCRETE WASH OUT IS TO BE A 2' DEEP PIT LINED WITH 10–MIL PLASTIC SHEETING, AND MUST BE AT LEAST 50' FROM STORM DRAINS. CONCRETE WASH OUT IS TO BE CLEANED AND NEW PLASTIC SHEETING INSTALLED ONCE THE CONCRETE WASH IS 1' DEEP.
(symbol)	TURF REINFORCEMENT MAT TO BE LANDLOK 450, OR APPROVED EQUIVALENT, PER KYTC STD DWG RDI–041 AND KEPSC BMP MANUAL SECTION 4.5.3. COORDINATE WITH SITE GRADING AND DRAINAGE PLAN C–103.

GENERAL NOTES

A. EROSION SEDIMENT CONTROL DEVICES SHOWN ON THIS PLAN ARE SCHEMATIC. EXACT LOCATIONS TO BE FIELD DETERMINED BY CONTRACTOR.
B. IMPLEMENT THE APPROVED SWPPP (SPECIFICALLY THE TEMPORARY CONSTRUCTION EXIT, SILT FENCE, AND INLET SEDIMENT BARRIER) PRIOR TO LAND–DISTURBING ACTIVITY.
C. INSTALL EROSION SEDIMENT CONTROL DEVICES ON NEW DRAINAGE STRUCTURES IMMEDIATELY AFTER THE NEW DRAINAGE STRUCTURE IS INSTALLED.
D. MAINTAIN MEASURES STATED ON THIS PLAN IN FULLY FUNCTIONAL CONDITION UNTIL THE UPSTREAM DRAINAGE AREA HAS BEEN STABILIZED.
E. ROUGHEN GRADED AREAS BY RUNNING TRACKED MACHINERY UP & DOWN SLOPES LEAVING IMPRINTS PARALLEL TO THE CONTOUR.
F. CLEAN EROSION SEDIMENT CONTROL DEVICES ONCE THE DEVICE HAS REACHED 1/3 CAPACITY.
G. IMMEDIATELY REPAIR OR REPLACE DAMAGED EROSION SEDIMENT CONTROL DEVICES.
H. TAKE ACTIONS TO MINIMIZE THE TRACKING OF SOIL AND DEBRIS FROM CONSTRUCTION AREAS ONTO PUBLIC ROADWAYS. CONTRACTOR TO REMOVE SOIL OR DEBRIS TRACKED ONTO THE ROADWAY IMMEDIATELY.
I. LOCATE SOIL STOCKPILES AWAY FROM STREAMS, PONDS, SWALES AND CATCH BASINS. CONTRACTOR TO SEED, MULCH, AND ADEQUATELY CONTAIN SOIL STOCKPILES THROUGH THE USE OF SILT FENCE.
J. PUMP SEDIMENT–LADEN GROUNDWATER ENCOUNTERED DURING TRENCHING, BORING, OR OTHER EXCAVATION ACTIVITIES TO AN EROSION SEDIMENT CONTROL DEVICE PRIOR TO DISCHARGING INTO A STREAM, POND, SWALE OR CATCH BASIN.
K. HOLD CLEARING AND GRUBBING TO THE MINIMUM AMOUNT NECESSARY FOR GRADING OPERATIONS.
L. SEQUENCE CONSTRUCTION TO MINIMIZE THE EXPOSURE OF CLEARED AND GRADED AREAS.
M. MAINTAIN A RAIN GAUGE OR USE A REFERENCE SITE TO RECORD THE AMOUNT OF PRECIPITATION DAILY.
N. IMMEDIATELY STABILIZE DISTURBED AREAS DURING INSTALLATION/REMOVAL OF THE UTILITY LINES AS CONSTRUCTED.
O. CONTRACTOR MUST BE FAMILIAR WITH AND ADHERE TO THE REQUIREMENTS OF THE KPDES GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES. KPDES GENERAL PERMIT IS PART OF THIS SWPPP, AND IS READILY AVAILABLE AT HTTPS://EEC.KY.GOV/ENVIRONMENTAL–PROTECTION/WATER/PERMITCERT/KPDES/DOCUMENTS/KYR10PERMIT.PDF. CONTRACTOR MUST KEEP A COPY OF THIS PERMIT ON–SITE FOR REFERENCE.
P. KENTUCKY EROSION PREVENTION AND SEDIMENT CONTROL (KEPSC) BEST MANAGEMENT PRACTICES (BMP) MANUAL IS PART OF THIS SWPPP, AND IS READILY AVAILABLE AT HTTP://WWW.KYT2.COM/PUBLICATIONS. CONTRACTOR MUST KEEP A COPY OF THIS MANUAL ON–SITE FOR REFERENCE.
Q. KENTUCKY TRANSPORTATION CABINET (KYTC) STANDARD DRAWINGS ARE PART OF THIS SWPPP, AND ARE READILY AVAILABLE AT HTTP://TRANSPORTATION.KY.GOV/HIGHWAY–DESIGN/PAGES/STANDARD–DRAWINGS.ASPX. CONTRACTOR MUST KEEP A COPY OF THE KYTC STANDARD DRAWINGS ON–SITE FOR REFERENCE.
R. WHERE LAND DISTURBANCE ACTIVITY HAS TEMPORARILY CEASED ON ANY PORTION OF A SITE, CONTRACTOR SHALL PROVIDE TEMPORARY SEEDING MEASURES MEETING KEPSC BMP MANUAL SECTION 4.4.1 AS SOON AS PRACTICABLE, BUT NO LATER THAN 14 CALENDAR DAYS AFTER THE ACTIVITY HAS CEASED. TEMPORARY SEEDING IS GOOD FOR 180 DAYS, AFTER 180 DAYS PERMANENT SEEDING IS NECESSARY.
S. WHERE LAND DISTURBANCE ACTIVITY HAS PERMANENTLY CEASED ON ANY PORTION OF A SITE, CONTRACTOR SHALL PROVIDE PERMANENT SODDING MEASURES MEETING KEPSC BMP MANUAL SECTION 4.4.2 AS SOON AS PRACTICABLE, BUT NO LATER THAN 14 CALENDAR DAYS AFTER THE ACTIVITY HAS CEASED.

BEST MANAGEMENT PRACTICES

1) THIS SWPPP EFFECTIVELY CONTROLS EROSION FROM DISTURBED SOILS AND WASH WATER. HOWEVER, NO PLAN CAN BE MADE THAT DETAILS ALL POSSIBLE CONTROL MEASURES THROUGHOUT CONSTRUCTION. THE CONTRACTOR IS TO PROVIDE ADEQUATE FUNDS IN THEIR BASE BID TO COMPLY WITH THE REQUIREMENTS OF THE CITY OF RICHMOND AND THE KENTUCKY DIVISION OF WATER.
2) CONTRACTOR TO IMMEDIATELY CONTAIN AND CLEAN UP ANY ILLICIT SPILLS, MAINTAIN OIL AND GREASE ABSORBING MATERIALS ON–SITE, AND PLAINLY LABEL CONTAINERS THAT ARE SUSCEPTIBLE TO SPILLING/LEAKING TO FACILITATE PROPER RESPONSE IF SPILLS/LEAKS OCCUR. CONTRACTOR IS TO MARK THE LOCATION OF ANY MAJOR SPILL OR LEAK ON THE SWPPP. WHEN MAJOR SPILLS ENTER A WATERWAY OR STORM SEWER CONTACT THE KENTUCKY DIVISION OF WATER AT 502–564–2380.
3) CONTRACTOR IS TO DEPOSIT RUBBISH, TRASH, GARBAGE, LITTER, ETC. IN SEALED/COVERED CONTAINERS.
4) CONTRACTOR IS TO APPLY WATER WHEN NECESSARY TO CONTROL DUST. WATER TANKER TO SPRAY WATER OVER AFFECTED AREAS PREVENTING DUST FROM BECOMING AIRBORNE. CARE SHOULD BE TAKEN TO PREVENT EXCESS WATER FROM CAUSING EROSION PROBLEMS.
5) CONCRETE TRUCKS MUST WASH OUT ON–SITE INTO A TRAPPING DEVICE.
6) CONTRACTOR MUST SECURE THE K.P.D.E.S. NOTIFICATION OF COVERAGE PRIOR TO LAND DISTURBING ACTIVITIES. THE K.P.D.E.S. NOTICE OF INTENT (NOI) MUST BE SUBMITTED AT LEAST SEVEN (7) DAYS PRIOR TO BEGINNING CONSTRUCTION USING THE KENTUCKY DIVISION OF WATER (KDOW) ONLINE E–PERMITTING WEB SITE.
7) CONTRACTOR TO SIGN THIS SWPPP AS THE CONSTRUCTION SITE OPERATOR, KEEP A SIGNED AND SEALED SWPPP ON–SITE, AND MAKE IT AVAILABLE TO INSPECTORS FROM THE CITY OF RICHMOND AND THE KENTUCKY DIVISION OF WATER.
8) CONTRACTOR (AT THEIR OWN EXPENSE) IS TO AMEND THE SWPPP AS NECESSARY. ALL NECESSARY MODIFICATIONS TO THE SWPPP MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER POSSIBLE AND NO LATER THAN SEVEN (7) CALENDAR DAYS AFTER DISCOVERING THE NEED FOR MODIFICATION. CONTRACTOR IS TO CLEARLY MARK CHANGES THAT ARE MADE, THE LOCATION OF FUELING STATIONS, MAINTENANCE AND CLEANING AREAS, LOADING AREAS, AND LOCATIONS WHERE MATERIALS ARE EXPOSED TO PRECIPITATION ON THE SWPPP.
9) EROSION CONTROL MEASURES, DISCHARGE LOCATIONS, VEHICLE EXITS, DISTURBED AREAS, AND STORAGE AREAS MUST BE INSPECTED BY QUALIFIED PERSONNEL EMPLOYED BY THE CONTRACTOR. INSPECTIONS MUST BE DONE AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS, OR AT LEAST ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT EQUAL TO 1/2 INCH OR GREATER. INSPECTION REPORTS MUST BE KEPT ON–SITE AND MADE AVAILABLE TO INSPECTORS FROM THE CITY OF DANVILLE AND THE KENTUCKY DIVISION OF WATER.
10) CONTRACTOR TO CLEARLY NOTE ON THIS SWPPP WHICH CONTRACTOR OR SUBCONTRACTOR IS RESPONSIBLE FOR EACH EROSION CONTROL DEVICE. EACH RESPONSIBLE CONTRACTOR OR SUBCONTRACTOR MUST SIGN A COPY OF THE CERTIFICATION STATEMENT BELOW, AND THESE CERTIFICATIONS ARE TO BE KEPT ON–SITE AND MADE AVAILABLE TO INSPECTORS FROM THE CITY OF DANVILLE AND THE KENTUCKY DIVISION OF WATER.
11) A QUALIFIED INSPECTOR EMPLOYED BY THE CONTRACTOR IS TO CONDUCT A FACILITY COMPLIANCE EVALUATION IMMEDIATELY AFTER THE EROSION CONTROL DEVICES ARE INSTALLED. THE QUALIFIED INSPECTOR IS TO LIST ANY POTENTIAL SOURCES OF NON–STORM WATER FLOWS, INSPECT THE EROSION CONTROL DEVICES FOR PROPER OPERATION, INSPECT FOR POTENTIAL POLLUTANT LEAVING THE SITE, AND INSPECT EQUIPMENT NEEDED TO IMPLEMENT THE SWPPP. THIS FACILITY COMPLIANCE EVALUATION REPORT IS TO BE KEPT ON–SITE AND MADE AVAILABLE TO INSPECTORS FROM THE CITY OF DANVILLE AND THE KENTUCKY DIVISION OF WATER.

DESCRIPTION

THIS PROJECT INVOLVES CONSTRUCTION OF AN AUTOMOTIVE REPAIR FACILITY WITH ASSOCIATED PAVING, GRADING, DRAINAGE, UTILITIES, LANDSCAPING, AND APPURTENANCES IN RICHMOND, MADISON COUNTY, KENTUCKY. THE TOTAL DISTURBED AREA IS 1.4± ACRES. ACCORDING TO THE NATIONAL RESOURCES CONSERVATION SERVICE SOIL MAP, THE SITE SOIL IS MOSTLY NICHOLSON SILT LOAM WHICH IS HYDROLOGIC SOIL GROUP B. THIS SITE DISCHARGES THROUGH THE RICHMOND CENTRE STORM SEWER & REGIONAL BASIN INTO IRVINE LICK. IRVINE LICK IS ON THE 303(D) LIST OF IMPAIRED STREAM FOR NUTRIENT/ EUTROPIHICATION BIOLOGICAL INDICATORS AND TOTAL DISSOLVED SOLIDS. TEMPORARY WATER QUALITY DURING CONSTRUCTION IS PROVIDED BY SILT FENCE, A CONSTRUCTION EXIT, INLET PROTECTION DEVICES, AND A CONCRETE WASHOUT. PERMANENT WATER QUALITY POST–CONSTRUCTION IS PROVIDED BY TURF REINFORCEMENT MATS, WATER QUALITY SWALES, A WATER QUALITY BASIN, AND A REGIONAL DETENTION BASIN.

SEQUENCE

1. CONTRACTOR TO SUBMIT KPDES NOI AS SITE OPERATOR
2. PRE–CONSTRUCTION MEETING WITH RICHMOND
3. TEMPORARY CONSTRUCTION EXIT
4. TEMPORARY SILT FENCE
5. TEMPORARY INLET SEDIMENT BARRIER
6. TEMPORARY CONSTRUCTION SIGN
7. BEGIN DEMOLITION, CLEARING, GRUBBING, AND EARTHWORK.
8. TEMPORARILY SEED AREAS THAT ARE INACTIVE FOR 14 DAYS OR MORE
9. STORM SEWER SYSTEM
10. INSTALL TEMPORARY INLET PROTECTION DEVICES IMMEDIATELY AFTER EACH DRAIN INLET IS IN PLACE
11. INSTALL TEMPORARY CONCRETE WASHOUT PRIOR TO ANY CONCRETE WORK
12. BUILDING AND UNDERGROUND UTILITY CONSTRUCTION
13. PAVING
14. PERMANENTLY SOD AREAS IMMEDIATELY UPON REACHING FINISHED GRADE, AS CONSTRUCTED
15. ONCE THE SITE WORK IS SUBSTANTIALLY COMPLETE WITH PAVEMENT AND GRASS COVER, WATER QUALITY BASIN & SWALES TO BE INSTALLED
16. TURF REINFORCEMENT MATS
17. ONCE THE SITE HAS STABILIZED IN ACCORDANCE WITH THE K.P.D.E.S. GENERAL PERMIT REGULATIONS, REMOVE THE TEMPORARY EROSION CONTROL DEVICES
18. SUBMIT KPDES NOTICE OF TERMINATION

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STATE OF KENTUCKY
PATRICK F.S. DEMING
20703
LICENSED
PROFESSIONAL ENGINEER
4–28–2026

EROSION SEDIMENT CONTROL PLAN - SWPPP

EXPRESS OIL CHANGE & TIRE ENGINEERS

2017 LANTERN RIDGE DRIVE
RICHMOND, KENTUCKY

ISSUED FOR CONSTRUCTION

Issue Date:	April, 2026
Drawn By:	XX
Checked By:	–
Revisions:	
	-
	-
	-
	-
	-
Mark	Date

AHJ SEAL

Project Number
25054.01

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C-100.1

ENGINEER CERTIFICATION

I hereby certify that the Best Management Detail Standards shown hereon have not been changed or modified in any way by me or by individuals under my direct supervision. I hereby certify that the Best Management Plan complies with the City of Richmond's ordinance regulations as well as all State and Federal regulations as shown on the detail and plan view pages.

Engineer Signature ______________________ Date

A PRECONSTRUCTION MEETING IS REQUIRED PRIOR TO ANY ACTIVITIES BEGIN ONSITE.

OWNER / CONTRACTOR LIABILITY AGREEMENT

THIS EROSION AND SEDIMENT CONTROL PLAN EFFECTIVLY CONTROLS EROSION FROM DISTURBED SOILS AND WASH WATER. HOWEVER NO PLAN CAN BE MADE THAT DETAILS ALL POSSIBLE CONTROL MEASURES THROUGH OUT CONSTRUCTION. THE OWNER / CONTRACTOR IS TO PROVIDE ADEQUATE FUNDS IN THEIR BASE BID TO COMPLY WITH THE REQUIRMENTS OF THE CLEAN WATER ACT, THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES), THE KENTUCKY DIVISION OF WATER AND THE CITY OF RICHMOND. THE OWNER / CONTRACTOR, BY SIGNING THIS PLAN, HAS ATTESTED THAT THEY ARE FULLY AWARE OF THE FOLLOWING REQUIRMENTS.

EROSION

1) INSTALL EROSION AND SEDIMENT CONTROL DEVICES ON ALL NEW DRAINAGE STRUCTURES IMMEDIATLEY AFTER THE NEW DRAINAGE STRUCTURE IS INSTALLED.
2) MAINTAIN ALL MEASURES STATED ON THIS PLAN IN FULLY FUNCTIONAL CONDITION UNTIL THE DRAINAGE AREA UPSTREAM OF THE MEASURE HAS BEEN STABILIZED.
3) ROUGHEN ALL GRADED AREAS BY RUNNING TRACKED MACHINERY UP AND DOWN SLOPES LEAVING IMPRINTS PARALLEL TO THE SLOPE CONTOUR.
4) CLEAN ALL EROSION AND SEDIMENT DEVICES ONCE THEY HAVE REACHED 1/3 CAPACITY.
5) IMMEDIATLEY REPAIR OR REPLACE DAMAGED EROSION AND SEDIMENT CONTROL DEVICES.
6) TAKE ACTIONS TO MINIMIZE THE TRACKING OF MUD AND SOIL FROM CONSTRUCTION AREAS ONTO PUBLIC ROADWAYS. CONTRACTOR TO REMOVE SOIL OR DEBRIS TRACKED ONTO THE ROADWAY DAILY.
7) LOCATE SOIL STOCKPILES AWAY FROM STREAMS, PONDS, SWALES AND CATCH BASINS. CONTRACTOR TO SEED, MULCH AND ADEQUATLEY CONTAIN SOIL STOCKPILES THROUGH THE USE OF SILT FENCE.
8) PUMP SEDIMENT LADEN GROUND WATER ENCOUNTERD DURING TRENCHING, BORING OR OTHER EXCAVATION ACTIVETIES TO A EROSION SEDIMENT CONTROL DEVICE PRIOR TO DISCHARGING INTO A STREAM, POND, SWALE OR CATCH BASIN.
9) HOLD CLEARING AND GRUBBING TO THE MINIMUM AMOUNT NECESSARY FOR GRADING OPERATIONS.
10) SEQUENCE CONSTRUCTION TO MINIMIZE THE EXPOSURE OF CLEARED AND GRADED AREAS.
11) IMMEDIATLEY STABILIZE DISTURBED AREAS DURING INSTALLATION / REMOVAL OF THE UTILITY LINES.

BEST MANAGMENT PRACTICE (BMP)

1) KENTUCKY EROSION CONTROL (KEPSC) BEST MANAGMENT PRACTICES MANUAL SHALL BE A PART OF THIS SEDIMENT AND EROSION CONTROL PLAN. THE CONTRACTOR MUST KEEP A COPY OF THIS MANUAL ON-SITE AT ALL TIMES FOR USE AND REFERENCE.
2) WHERE CONSTRUCTION OR LAND DISTURBANCE WILL OR HAS TEMPORARILY CEASED ON ANY PORTION OF A SITE, THE CONTRACTOR SHALL PROVIDE TEMPORARY SITE STABILIZATION MEASURES MEETING KEPSC BEST MANAGMENT PRACTICES MANUAL SECTION 4.4.1 AS SOON AS PRACTICABLE, BUT NO LATER THAN 14 CALENDER DAYS AFTER THE ACTIVETY HAS CEASED. SEEDING RATES ARE SHOWN ON THE SITE EROSION CONTROL DETAIL SHEET. TEMPORARY STABILIZATION IS GOOD FOR 180 DAYS, AFTER 180 DAYS PERMENANT STABILIZATION IS NECASSARY.
3) WHERE CONSTRUCTION OR LAND DISTURBANCE HAS PERMENANTLY CEASED ON ANY PORTION OF A SITE, THE CONTRACTOR SHALL PROVIDE PERMANENT SITE STABILIZATION MEASURES MEETING KEPSC BEST MANAGMENT PRACTICES MANUAL SECTION 4.4.2 AS SOON AS PRACTICABLE, BUT NO LATER THAN 14 CALENDER DAYS AFTER THE ACTIVETY HAS CEASED. SEEDING RATES ARE SHOWN ON THE SITE EROSION CONTROL DETAIL SHEET.
4) AREAS WITHIN 25' OF A STREAMBANK ARE TO BE BUFFER ZONES. NO WORK IS TO OCCUR IN THESE AREAS UNLESS ABSOLUTLEY NECESSARY, AND ANY DISTURBANCE IN THESE AREAS MUST BE STABILIZED WITHIN 24 HOURS.
5) CONTRACTORS MUST BE FAMILIAR WITH AND ADHERE TO THE REQUIRMENTS OF THE NPDES GENERAL PERMIT FOR STORMWATER POINT SOURCE DISCHARGES.

ILLICIT DISCHARGE DETECTION and ELIMINATION SYSTEM (IDDE)

1) CONTRACTORS ARE REQUIRED TO PROVIDE PRIMARY AND SECONDARY CONTAINMENT FOR FUEL AND OTHER HAZARDOUS MATERIALS AT THE WORK SITE TO PREVENT SOIL CONTAMINATION.
2) THE CONTRACTOR IS TO TAKE IMMEDIATE ACTION TO CLEAN UP SPILLS OF ILLICIT MATERIAL AND MUST MAINTAIN OIL AND GREASE ABSORBING MATERIALS ON-SITE. THE CONTRACTOR IS TO DEPOSIT RUBBISH TRASH, GARBAGE, LITTER, ETC. IN SEALED CONTAINERS. THE CONTRACTOR IS TO CONTROL DUST FROM THE SITE. CONCRETE TRUCKS MUST WASH OUT ON-SITE IN APPROVED AREAS DICTATED BY THIS PLAN OR A SEDIMENT TRAPPING DEVICE.
3) IN THE TIMES A PORT A LET IS NEEDED OR REQUIRED IT SHALL NOT BE PLACED IN A PUPLIC STREET. ALL FACILITIES SHALL BE PLACED AT LEAST 25' BEHIND THE CURB AND IN AN AREA TO PREVENT SPILLS IN THE EVENT IT TURNS OVER.
4) THE CONTRACTOR IS TO IMMEDIATELY CONTAIN AND CLEAN UP ANY ILLICIT SPILLS. THE CONTRACTOR IS TO MARK THE LOCATION OF ANY MAJOR SPILL OR LEAK ON THE EPSC PLAN. WHEN MAJOR SPILLS ENTER A WATERWAY OR STORM SEWER THEY ARE TO CONTACT THE KENTUCKY DIVISION OF WATER AT 502-564-2380.

REPORTING

1) THE EPSC PLAN AND SITE INSPECTION LOG SHALL BE KEPT ON SITE AT ALL TIMES.
2) MAINTAIN A RAIN GUAGE OR USE A REFERENCE SITE TO RECORD THE AMOUNT OF PRECIPITATION DAILY.
3) THE CONTRACTOR MUST SECURE THE KPDES NOTIFICATION OF COVERAGE PRIOR TO LAND DISTURBING ACTIVETIES. THE KPDES NOTICE OF INTENT (NOI) MUST BE SUBMITTED AT LEAST 7 DAYS PRIOR TO BEGINNING CONSTRUCTION IF THE KY DIVISION OF WATER (KDOW) ONLINE E-PERMITTING WEB SITE IS UTILIZED. THE NOI MUST BE SUBMITTED 30 DAYS PRIOR TO BEGINNING WORK IF A PAPER COPY IS SENT TO THE KDOW.
4) THE CONTRACTOR IS TO KEEP A SIGNED AND SEALED COPY OF THE EROSION AND SEDIMENT CONTROL PLAN ON-SITE, AND MAKE IT AVAILABLE TO THE KENTUCKY DIVISION OF WATER AND CITY OF RICHMOND.
5) THE CONTRACTOR (AT THEIR OWN EXPENCE) IS TO AMEND THE EROSION AND SEDIMENT CONTROL PLAN AS NECESSARY. ALL NECESSARY MODIFICATIONS TO THE EPSC PLAN MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER POSSIBLE AND NO LATER THAN 7 CALENDER DAYS AFTER DISCOVERING THE NEED FOR MODIFICATION. THE CONTRACTOR IS TO CLEARLY MARK ALL OF THE CHANGES THAT ARE MADE, LOCATION OF FUELING STATIONS, MAINTENANCE AND CLEANING AREAS AND LOCATIONS WHERE MATERIALS ARE EXPOSED TO PRECIPITATION ON THE EPSC.
6) EROSION CONTROL MEASURES, DISCHARGE LOCATIONS, VEHICLE EXITS, DISTURBED AREAS AND STORAGE AREAS MUST BE INSPECTED BY QUALIFIED PERSONNEL EMPLOYED BY THE CONTRACTOR. THE INSPECTIONS MUST BE DONE EVERY 7 CALENDER DAYS OR WITHIN 24 HOURS OF ANY STORM EVENT EQUAL TO 1/2 INCH OR GREATER. REPORTS OF THE INSPECTIONS MUST BE KEPT ON-SITE AND MADE AVAILABLE TO INSPECTORS FROM THE KENTUCKY DIVISION OF WATER AND CITY OF RICHMOND.
7) THE CONTRACTOR IS TO CLEARLY NOTE ON THEIR EROSION AND SEDIMENT CONTROL REPORTS WHICH CONTRACTOR OR SUBCONTRACTOR IS RESPONSIBLE FOR THE IMPLEMENTATION OF EACH MEASURE WITH THEIR CONTACT INFORMATION.

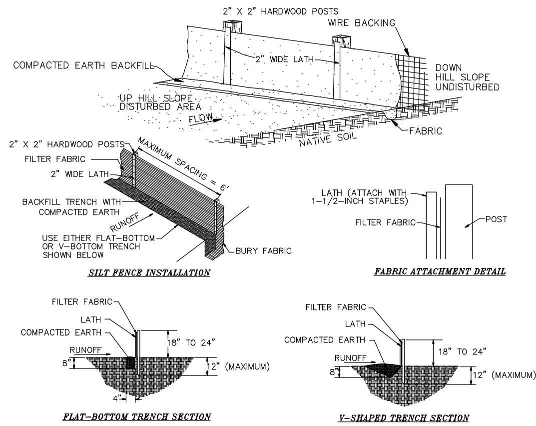
OBTAINING A CERTIFICATE OF OCCUPANCY

THE STORM INFRASTRUCTURE CERTIFICATION FORM, AS-BUILT DETENTION BASIN CHECKLIST, DIGITAL FORMAT PROVIDED OF THE COMPLETE INSPECTION LOG AND OPERATION AND MAINTAINENCE AGREEMENT MUST BE TURNED IN TO THE CITY OF RICHMOND PLANNING AND ZONING OFFICE BEFORE A CERTIFICATE OF OCCUPANCY WILL BE ISSUED FOR STRUCTURES.

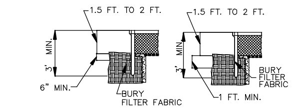
OWNER ______________________ DATE

BMP GENERAL NOTES CONTINUED

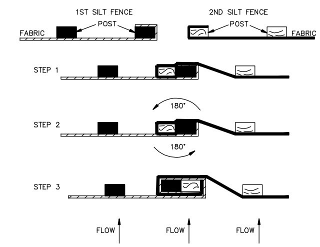
13. STRAW BALES ARE NOT APPROVED EROSION CONTROL DEVICES.
14. NO STREAM CROSSING OR CONSTRUCTION IS ALLOWED WITHOUT APPROVAL OF THE CITY'S STREAM CONSTRUCTION PERMIT. THE DEVELOPER MUST ALSO SUBMIT A COPY OF ALL APPROVED STREAM RELATED PERMITS FROM THE STATE.
15. ANY CHANGES TO A SITE'S INFRASTRUCTURE WILL REQUIRE AS-BUILT DRAWINGS TO BE SUBMITTED BEFORE A CERTIFICATE OF OCCUPANCY WILL BE ISSUED OR ANY BOND AMOUNTS LOWERED.
16. NO DEBRIS OR STORM RUN-OFF FROM A CONSTRUCTION SITE SHALL AFFECT ANY ADJOINING PROPERTY.
17. THE MAXIMUM SLOPES FOR ANY CUT OR FILL SHALL BE A MAXIMUM OF 2:1 EXCEPT FOR EARTHEN DAM EMBANKMENTS, ROCK CUTS, AND WHERE CERTIFIED BY A PROFESSIONAL GEOTECHNICAL ENGINEER AND SUPPORTING DOCUMENTATION.
18. PRIOR TO COMMENCING WITH CONSTRUCTION THE CONTRACTOR/DEVELOPER SHALL BE RESPONSIBLE FOR SECURING ALL REQUIRED PERMITS INCLUDING SUBMISSION IN WRITING OF A NOTICE OF INTENT (NOI) TO DISTURB AREAS OF ONE ACRE OR GREATER WITH THE KENTUCKY DIVISION OF WATER.



NOTES:
1. SILT FENCE SHALL BE FIRMLY INSTALLED IN A 6 INCH BY 6 INCH TRENCH AND BACKFILLED.
2. A MINIMUM OF 18 INCHES OF SILT FENCE FABRIC ABOVE THE GROUND IS REQUIRED.
3. A MINIMUM OF 6 INCHES OF SILT FENCE FABRIC IS TO BE BURIED & BACKFILLED IN THE TRENCH.
4. WOODEN OR STEEL POSTS ARE TO BE PLACED A MAXIMUM OF 6 FEET APART.
5. POSTS ARE TO BE INSTALLED A MINIMUM OF 10 INCHES INTO THE GROUND.
6. WOVEN WIRE BACKING OR DOUBLE FENCING WILL BE REQUIRED IN HIGH VOLUME AREAS.
7. REPLACE SILT FENCE IF FABRIC BECOMES TORN & REPLACE BROKEN POSTS AS NEEDED.
8. SEE ALSO COMBINING 2 PIECES OF SILT FENCES DETAIL.

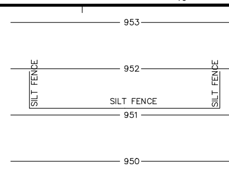


FILTER FABRIC BURIAL OPTIONS

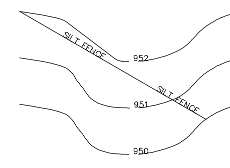


NOTES:
1. PLACE THE END POST OF THE 2ND SILT FENCE INSIDE THE END POST OF THE 1ST SILT FENCE.
2. ROTATE BOTH POSTS A MINIMUM OF 180 DEGREES IN A COUNTER CLOCK WISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL.
3. DRIVE BOTH POSTS A MINIMUM OF 10 INCHES INTO THE GROUND AND BACKFILL FABRIC.
4. REPLACE SILT FENCE IF FABRIC BECOMES TORN & REPLACE BROKEN POSTS AS NEEDED.
7. SEE ALSO TYPICAL SILT FENCE INSTALLATION DETAIL.

COMBINING 2 PIECES OF SILT FENCE



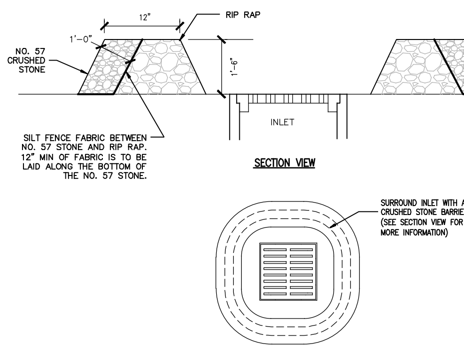
SILT FENCE ON GRADE



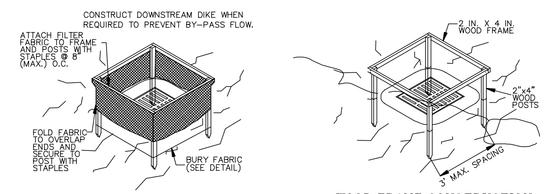
SILT FENCE ON SLOPE

SILT FENCE PLACEMENT

BMP 5 SILT FENCE INSTALLATION DETAIL



A INLET SEDIMENT BARRIER
N.T.S.



FILTER FABRIC INSTALLATION

WOOD FRAME CONSTRUCTION

BMP 7 FILTER FABRIC INLET PROTECTION

SEEDING RATES, SOIL CONDITIONS, AND INFORMATION FOR VARIOUS SPECIES & SEED MIXTURES				
SEED SPECIES & MIXTURES	SEEDING RATE/ACRE	PER 1000 sq.ft	SOIL pH	OTHER INFO
SEED & SEED MIXTURES FOR RELATIVELY FLAT OR SLIGHTLY SLOPING AREAS				
PERENNIAL RYE GRASS + TALL FESCUE TALL FESCUE + LADINO OR WHITE CLOVER	25 TO 35 lbs. 15 TO 30 lbs. 40 TO 50 lbs. 1 TO 2 lbs.	1 lbs. 1 lbs. 1 1/2 lbs. 2 oz.	5.6 to 7.0 5.5 to 7.5	Apply lime at 2 tons per acre if soil pH is below 5.5; use 400-800 lb. fertilizer (10-10-10) on poor soils. Use wildflower or "no mow" mixes to save on mowing and watering costs.
STEEP SLOPES, BANKS, CUTS, AND OTHER LOW MAINTENANCE AREAS				
SMOOTH BROMEGRASS + RED CLOVER TALL FESCUE + LADINO OR WHITE CLOVER ORCHARD GRASS + RED CLOVER + LADINO CLOVER CROWN VETCH + TALL FESCUE	25 TO 35 lbs. 10 TO 20 lbs. 40 TO 50 lbs. 1 TO 2 lbs. 20 TO 30 lbs. 10 TO 20 lbs. 1 TO 2 lbs. 10 TO 12 lbs. 20 TO 30 lbs.	1 lbs. 1/2 lbs. 1 lbs. 2 oz. 1 lbs. 1/2 lbs. 2 oz. 1/4 lbs. 1 lbs.	5.5 to 7.5 5.5 to 7.5 5.6 to 7.0 5.6 to 7.0	Track steep slopes with dozer up & down hill before seeding. Mulch slopes after seeding with 2 to 3 tons of straw or 6 tons of wood chips per acre. Use trackifier on mulch, disk it in, or punch in with sheep-foot roller. Disk or sheep-foot on the contour (across slope, on the level). For extremely steep slopes, use erosion control blankets after seeding. Use 24" spacing for blanket staples.
LAWNS & OTHER HIGH TRAFFIC OR HIGH MAINTENANCE AREAS (MOWED)				
BLUEGRASS PERENNIAL RYE GRASS (TURF) + BLUEGRASS TALL FESCUE (TURF TYPE) + BLUEGRASS	105 TO 140 lbs. 45 TO 60 lbs. 70 TO 90 lbs. 130 TO 170 lbs. 20 TO 30 lbs.	3 lbs. 2 lbs. 2 1/2 lbs. 4 lbs. 1 lbs.	5.5 to 7.0 5.6 to 7.0 5.6 to 7.5	Use wildflower mixes to save on mowing and watering costs. Do not establish grassed lawns near streams or wetlands. Leave a minimum of a 25 foot buffer of natural vegetation.
DITCHES & OTHER AREAS OF CONCENTRATED WATER FLOWS				
PERENNIAL RYE GRASS + WHITE OR LADINO CLOVER KENTUCKY BLUEGRASS + SMOOTH BROMEGRASS + SWITCH GRASS + TIMOTHY + PERENNIAL RYE GRASS + WHITE OR LADINO CLOVER TALL FESCUE + WHITE OR LADINO CLOVER TALL FESCUE + PERENNIAL RYE GRASS + KENTUCKY BLUEGRASS	100 TO 150 lbs. 1 TO 2 lbs. 20 lbs. 10 lbs. 3 lbs. 4 lbs. 10 lbs. 1 TO 2 lbs. 100 TO 150 lbs. 1 TO 2 lbs. 100 TO 150 lbs. 15 TO 20 lbs. 15 TO 20 lbs.	3 lbs. 2 oz. 1/2 lbs. 1/4 lbs. 2 oz. 1/4 lbs. 1/4 lbs. 2 oz. 3 lbs. 2 oz. 3 lbs. 1/2 lbs. 1/2 lbs.	5.6 to 7.0 5.6 to 7.0 5.5 to 7.5 5.5 to 7.5	Seed ditches & channels thickly. Do not use fertilizer near ditch or channel bottom. Use erosion control blankets or turf reinforcement mats when channel bottom exceed 3 percent. Silt check dams are needed when channel slopes exceed 5 percent or when channels begin down cutting (gullying) on the bottom. Do not use silt fencing as silt check dams in channels with slopes greater than 3 percent; use rock, brush, or commercial silt dikes instead.

UTILITY AND EASEMENT NOTE

All utilities should be field verified before any construction begins. Any contractor, owner, or designer is hereby forewarned that any excavation upon this site may result in the discovery of additional underground utilities not shown hereon. This plat depicts all visible easements and easements of record only as discovered during the course of this survey and does not warranty the depiction of all easements and or encumbrances.

DIAL 811 FOR BURIED LINE & CABLE LOCATIONS

SITE CONTRACTOR:

NAME: ______________________

PHONE #: ______________________

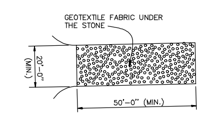
COMPANY: ______________________

SITE MANAGER:

NAME: ______________________

PHONE #: ______________________

COMPANY: ______________________



STONE SIZE: # 2 (1 1/2 " TO 3 1/2 " DIAMETER)
PAD THICKNESS > 6"
IF NECESSARY, INCLUDE WASHING
MAY REQUIRE PERIODIC TOP DRESSING WITH 2" STONE
MAINTAIN IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC ROADS.

NOTE: CONTRACTOR SHALL PLACE CONSTRUCTION EXIT AT THE START OF THE PROJECT. THIS SHALL BE THE ONLY POINT OF ENTRANCE OR EXIT TO THE PROJECT.

BMP 1 TEMPORARY CONSTRUCTION EXIT

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STATE OF KENTUCKY PATRICK F.S. DEMING 20703 LICENSED PROFESSIONAL ENGINEER
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EXPRESS OIL CHANGE & TIRE ENGINEERS

2017 LANTERN RIDGE DRIVE
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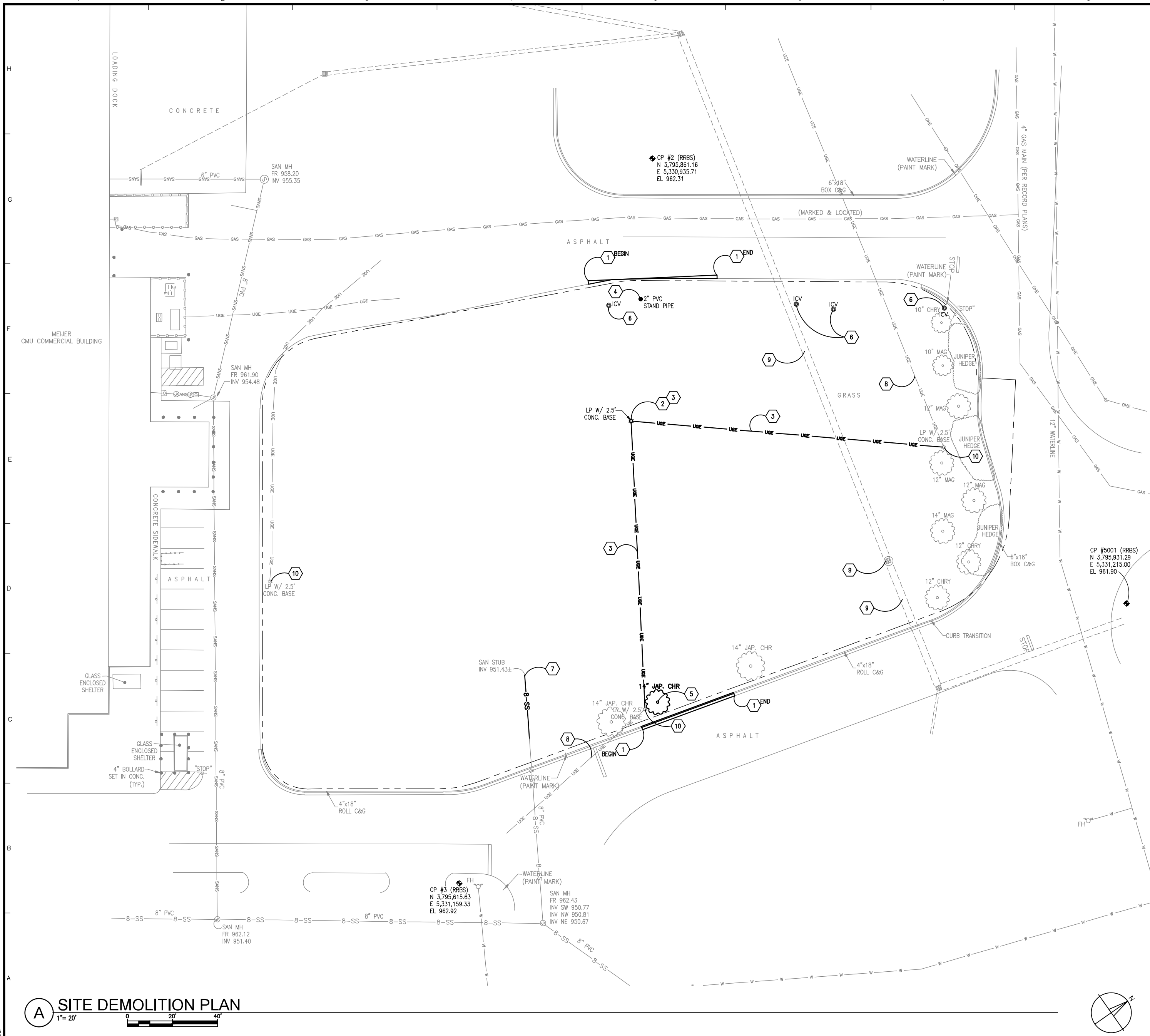

A SITE DEMOLITION PLAN
1"= 20'
0 20' 40'

GENERAL NOTES

A. MATERIALS TO BE REMOVED AND NOT TURNED OVER TO THE OWNER OR REUSED ARE TO BE DISPOSED OF IN AN APPROVED LANDFILL.
B. CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO REMAINING STRUCTURES, PAVEMENT, UTILITIES, ETC. AND MUST REPAIR DAMAGE RESULTING FROM CONSTRUCTION OF THIS PROJECT.
C. TEMPORARY BENCHMARKS LOCATED WITHIN DISTURBED AREAS ARE TO BE RELOCATED BY CONTRACTOR TO PROTECTED LOCATIONS PRIOR TO DEMOLITION.
D. UTILITIES ARE TO REMAIN AND TO BE PROTECTED THROUGHOUT CONSTRUCTION ACTIVITIES.
E. CONTRACTOR IS TO EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING UTILITY LINES. THE LOCATION AND ELEVATIONS OF THE EXISTING UTILITIES ARE BASED ON THE RECORDS OF THE RESPECTIVE UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE EXISTING UTILITY INFORMATION IS NOT TO BE TAKEN AS EXACT OR COMPLETE. THE CONTRACTOR MUST NOTIFY THE UTILITY COMPANIES AND APPROPRIATE AGENCIES AT LEAST 72 HOURS BEFORE EXCAVATION FOR EXACT FIELD LOCATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO RELOCATE ALL UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS. DIAL 811 TO CONTACT B.U.D. FOR LOCATION OF EXISTING UTILITIES.
F. CONTRACTOR TO REMOVE EXISTING VEGETATION AS REQUIRED TO FULFILL THE DESIGN INTENT OF THIS PROJECT.
G. DEMOLITION ACTIVITIES ARE TO BE SEQUENCED SUCH THAT SERVICE IS MAINTAINED TO ALL ADJACENT PROPERTIES FOR THE DURATION OF THE PROJECT. CONTRACTOR TO NOTIFY AFFECTED PROPERTY OWNER 72 HOURS PRIOR TO ANY TEMPORARY RESTRICTIONS.
H. CONTRACTOR IS TO ENSURE THAT PROPER EROSION CONTROL DEVICES ARE IN PLACE PRIOR TO DEMOLITION.
I. DOCUMENT LOCATIONS OF FOUND UTILITIES AND MISCELLANEOUS UNDERGROUND AMENITIES.
J. DEMOLITION NECESSARY FOR CONSTRUCTION OF THIS PROJECT, WHETHER INDICATED OR NOT, MUST BE DONE BY THE CONTRACTOR AND IS INCIDENTAL TO THE CONTRACT AMOUNT. EVERY EFFORT HAS BEEN MADE TO IDENTIFY THE SITE DEMOLITION REQUIRED.
K. KENTUCKY TRANSPORTATION CABINET (KYTC) STANDARD SPECIFICATIONS ARE PART OF THIS DEMOLITION PLAN AND ARE READILY AVAILABLE AT HTTP://TRANSPORTATION.KY.GOV/CONSTRUCTION/PAGES/KENTUCKY-STANDARD-SPECIFICATIONS.ASPX. CONTRACTOR MUST KEEP A COPY OF THE APPLICABLE KYTC STANDARD SPECIFICATIONS ON-SITE FOR REFERENCE.
L. CONTRACTOR TO MAINTAIN TRAFFIC ON THE PUBLIC ENTRANCE DRIVES IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). MUTCD IS AVAILABLE AT HTTPS://MUTCD.FHWA.DOT.GOV/PDFS/11TH_EDITION/MUTCD11THEDITION.PDF.
M. BURNING OF TREES / BRUSH IS NOT PERMITTED.
N. TREES NOT NOTED TO BE REMOVED ARE TO REMAIN AND BE PROTECTED THROUGHOUT CONSTRUCTION ACTIVITIES.
O. REMOVED UNDERGROUND ITEMS TO BE BACKFILLED PER EARTHWORK SPECIFICATIONS.

KEYED NOTES

1. SAWCUT AND REMOVE EXISTING ASPHALT AND/OR CURB AS NECESSARY TO PROVIDE A CLEAN EDGE FOR NEW ENTRANCES. COORDINATE WITH SITE LAYOUT PLAN C-102 FOR NEW ENTRANCES.
2. CAREFULLY REMOVE LIGHT POLE & FIXTURES AND STORE FOR RE-USE. IF LIGHT POLE AND/OR FIXTURES ARE DAMAGED DURING REMOVAL AND STORAGE, CONTRACTOR TO REPAIR OR REPLACE THE DAMAGED ITEM AS NECESSARY TO RETURN THE LIGHT TO PRE-CONSTRUCTION CONDITIONS. COORDINATE WITH SITE UTILITIES PLAN C-104 FOR REUSE.
3. REMOVE LIGHT CONCRETE BASE, CONDUIT, AND WIRING AS NECESSARY FOR NEW CONSTRUCTION.
4. REMOVE 2" PVC STAND PIPE, AND CAP PIPE 24" BELOW FINISHED GRADE.
5. REMOVE TREE.
6. IRRIGATION CONTROL VALVES TO REMAIN. CONTRACTOR TO FIELD DETERMINE THE LOCATION OF THE ASSOCIATED UNDERGROUND PIPING AND AVOID TO THE EXTENT POSSIBLE.
7. APPROXIMATE END OF EXISTING 8" SANITARY SEWER STUB PER RECORD PLANS. COORDINATE WITH SITE UTILITIES PLAN C-104 FOR REUSE.
8. APPROXIMATE LOCATION OF UNDERGROUND LIGHTING CONDUIT TO REMAIN AND BE PROTECTED THROUGHOUT CONSTRUCTION. EXACT LOCATION TO BE FIELD DETERMINED BY CONTRACTOR.
9. EXISTING STORM SEWER TO REMAIN AND BE PROTECTED THROUGHOUT CONSTRUCTION.
10. EXISTING LIGHT POLE TO REMAIN AND BE PROTECTED THROUGHOUT CONSTRUCTION.

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4-28-2026

SITE DEMOLITION PLAN

EXPRESS OIL CHANGE & TIRE ENGINEERS
2017 LANTERN RIDGE DRIVE
RICHMOND, KENTUCKY

ISSUED FOR CONSTRUCTION

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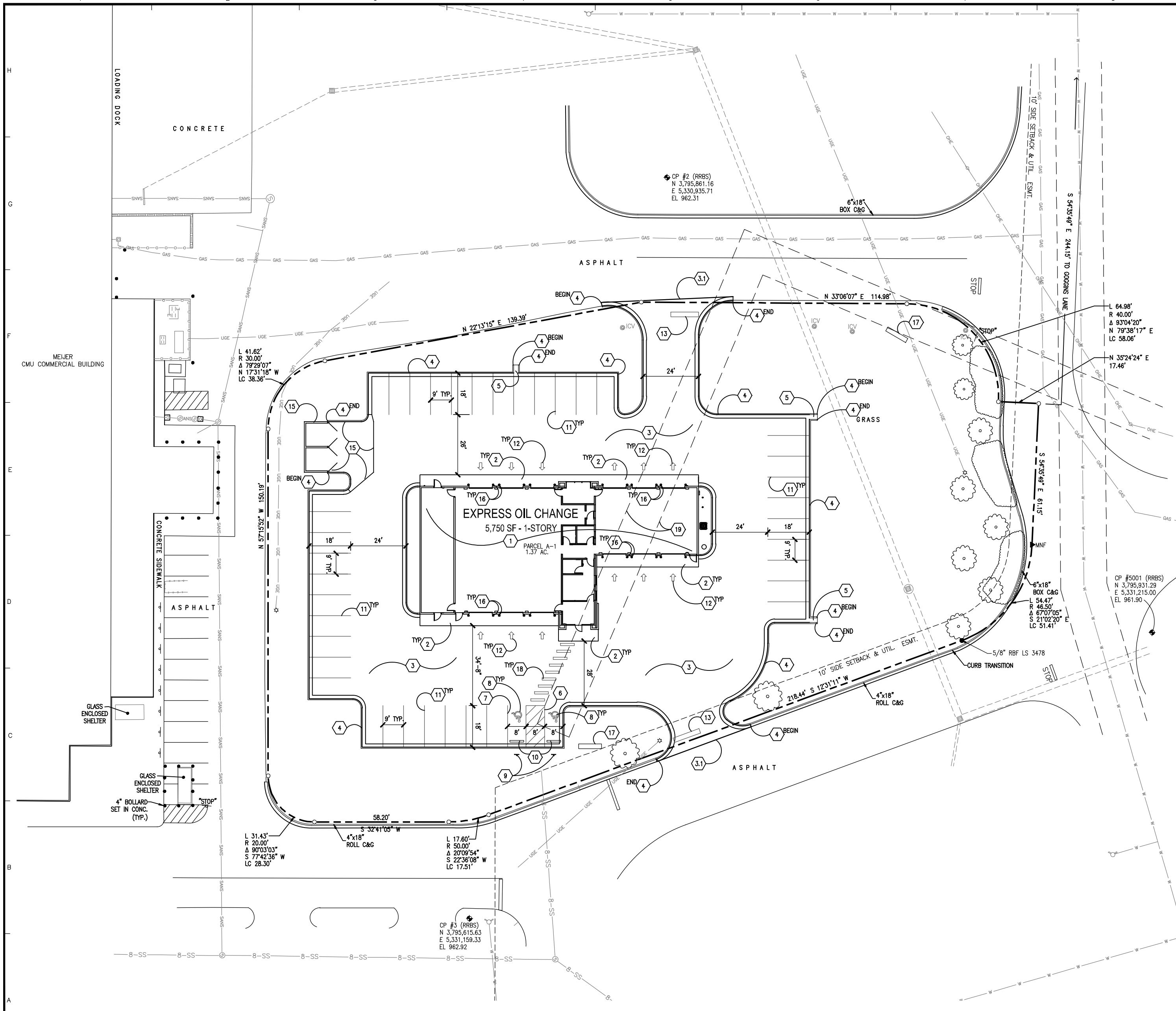

A SITE LAYOUT AND DIMENSIONING PLAN

1" = 20'

0 20' 40'

GENERAL NOTES

A. DIMENSIONS ARE TO THE FACE OF BUILDING, FACE OF CURB, EDGE OF PAVEMENT, AND/OR CENTER OF STRIP, UNLESS OTHERWISE NOTED.
B. DIMENSIONS ARE PARALLEL / PERPENDICULAR TO THE FACE OF BUILDING, UNLESS OTHERWISE NOTED.
C. CURB RADII ARE 3'-0", UNLESS OTHERWISE NOTED.
D. EXPANSION JOINT REQUIRED WHERE NEW CONCRETE ABUTS EXISTING CONCRETE, BUILDINGS/ FOUNDATIONS, AND ANY OTHER FIXED OBJECTS PER DETAIL E/C-110. EXPANSION JOINTS REQUIRED MAXIMUM 40' O.C. AND WITHIN THE SPACING MODULE OF THE CONTROL JOINTS.
E. EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING UTILITY LINES. EXISTING UTILITY INFORMATION IS NOT TO BE TAKEN AS EXACT OR COMPLETE. CONTRACTOR MUST NOTIFY THE UTILITY COMPANIES AND APPROPRIATE AGENCIES AT LEAST 72 HOURS BEFORE EXCAVATION FOR EXACT FIELD LOCATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO RELOCATE UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS. DIAL 811 TO CONTACT B.U.D. FOR LOCATION OF EXISTING UTILITIES.
F. CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO ANY STRUCTURE, PAVEMENT, UTILITY, PIPE, ETC. TO REMAIN AND SHALL REPAIR OR REPLACE THE DAMAGED ITEM AS NECESSARY TO RETURN IT TO PRE-CONSTRUCTION CONDITIONS WITH THE COST BEING INCIDENTAL TO THE CONTRACT AMOUNT.
G. DOCUMENT LOCATIONS OF FOUND UTILITIES AND MISCELLANEOUS UNDERGROUND AMENITIES.
H. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS PRIOR TO LAYOUT FOR NEW CONSTRUCTION.
I. KENTUCKY TRANSPORTATION CABINET (KYTC) STANDARD SPECIFICATIONS ARE PART OF THESE PLANS AND ARE READILY AVAILABLE AT HTTP://TRANSPORTATION.KY.GOV/CONSTRUCTION/ PAGES/KENTUCKY-STANDARD-SPECIFICATIONS.ASPX. CONTRACTOR MUST KEEP A COPY OF THE APPLICABLE KYTC STANDARD SPECIFICATIONS ON-SITE FOR REFERENCE.
J. CONTRACTOR TO MAINTAIN TRAFFIC ON THE PUBLIC ENTRANCE DRIVES IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). MUTCD IS AVAILABLE AT HTTPS://MUTCD.FHWA.DOT.GOV/PDFS/11TH_EDITION/MUTCD11THEDITION.PDF

KEYED NOTES ⬡

1. SEE BUILDING PLANS FOR EXACT BUILDING DIMENSIONS.
2. 5'-0" WIDE STRIP OF CONCRETE PAVEMENT ALONG THE FRONT AND BACK OF THE BUILDING PER DETAIL D/C-110. PROVIDE TOOLED CONTROL JOINTS EQUALLY SPACED AT 5'± O.C. PER DETAIL F/C-110. PROVIDE EXPANSION JOINTS WITHIN THE SPACING MODULE OF THE CONTROL JOINTS AT A MAXIMUM OF 40'± APART AND WHERE NEW CONCRETE ABUTS THE BUILDING & ABUTS EXISTING CONCRETE PER DETAIL E/C-110.
3. ASPHALT PAVEMENT PER DETAIL A/C-110.
   3.1. EDGE KEY NEW ASPHALT SURFACE INTO EXISTING ASPHALT PAVEMENT PER DETAIL C/C-110.
4. CONCRETE CURB AND GUTTER PER DETAIL B/C-110. PROVIDE JOINTS AT A MAXIMUM OF 40'± APART, AT ANGLE CHANGES OF DIRECTION, AT RADII POINTS OF INTERSECTION, WHERE NEW CONCRETE ABUTS THE BUILDING, AND WHERE NEW CONCRETE ABUTS EXISTING CONCRETE.
5. CONCRETE FLUME PER DETAIL K/C-110.
6. ACCESSIBLE AISLE WITH 6" WIDE BLUE THERMOPLASTIC BORDER AND 6" WIDE BLUE THERMOPLASTIC STRIPES AT 45° ANGLE AND 3' O.C. TYPICAL OF ALL ACCESSIBLE AISLES. THERMOPLASTIC TO MEET KYTC STD SPEC 717.
7. 4" BLUE THERMOPLASTIC STRIPE ADJACENT TO ACCESSIBLE SPACE PER KYTC STD SPEC 717.
8. BLUE THERMOPLASTIC ACCESSIBLE PARKING SYMBOL PER DETAIL G/C-110, TYPICAL. PROVIDE SYMBOL AT EVERY ACCESSIBLE SPACE.
9. ACCESSIBLE PARKING SIGN CENTERED ON EACH ACCESSIBLE SPACE PER DETAIL H-1/C-110.
10. PROVIDE ULINE 6' RUBBER WHEELSTOP, MODEL NO. H-4608B/Y, OR APPROVED EQUIVALENT AT EACH ACCESSIBLE SPACE. LOCATE 3' FROM EDGE OF PAVEMENT. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
11. 4" WHITE SOLID PARKING STRIPE PERMANENT PAINT PER KYTC STD SPEC 713, TYPICAL.
12. ARROW PAVEMENT MARKING PER DETAIL J/C-110. ARROWS TO BE REFLECTIVE DURABLE WHITE PAINT PER KYTC STD SPEC 714.
13. 24" WIDE x 12'-0" LONG STOP BAR TO BE WHITE THERMOPLASTIC PER KYTC STD SPEC 717.
14. COORDINATE WITH BUILDING PLANS FOR DUMPSTER ENCLOSURE, GATE, AND BOLLARD DETAILS.
15. HEAVY DUTY CONCRETE PAVEMENT WITHIN AND EXTENDING 20'-0" BEYOND THE DUMPSTER ENCLOSURE PER DETAIL D/C-110. PROVIDE TOOLED CONTROL JOINTS EQUALLY SPACED AT 10'± O.C. PER DETAIL F/C-110. PROVIDE EXPANSION JOINTS WHERE NEW CONCRETE ABUTS THE DUMPSTER ENCLOSURE WALL & ABUTS EXISTING CONCRETE PER DETAIL E/C-110.
16. STEEL PIPE BOLLARDS BETWEEN ALL BAY DOORS AT BUILDING CORNERS AND ON EACH SIDE OF THE GAS METER. COORDINATE WITH BUILDING PLANS FOR DETAILS.
17. GROUND MOUNTED MONUMENT SIGN. COORDINATE WITH SITE UTILITIES PLAN FOR ELECTRIC CONDUIT.
18. CROSSWALK PAVEMENT MARKINGS PER DETAIL L/C-110. ARROWS TO BE REFLECTIVE DURABLE WHITE PAINT PER KYTC STD SPEC 714.
19. SANITARY SEWER EASEMENT WILL BE ABANDONED ON THE MINOR PLAT BEING RECORDED.

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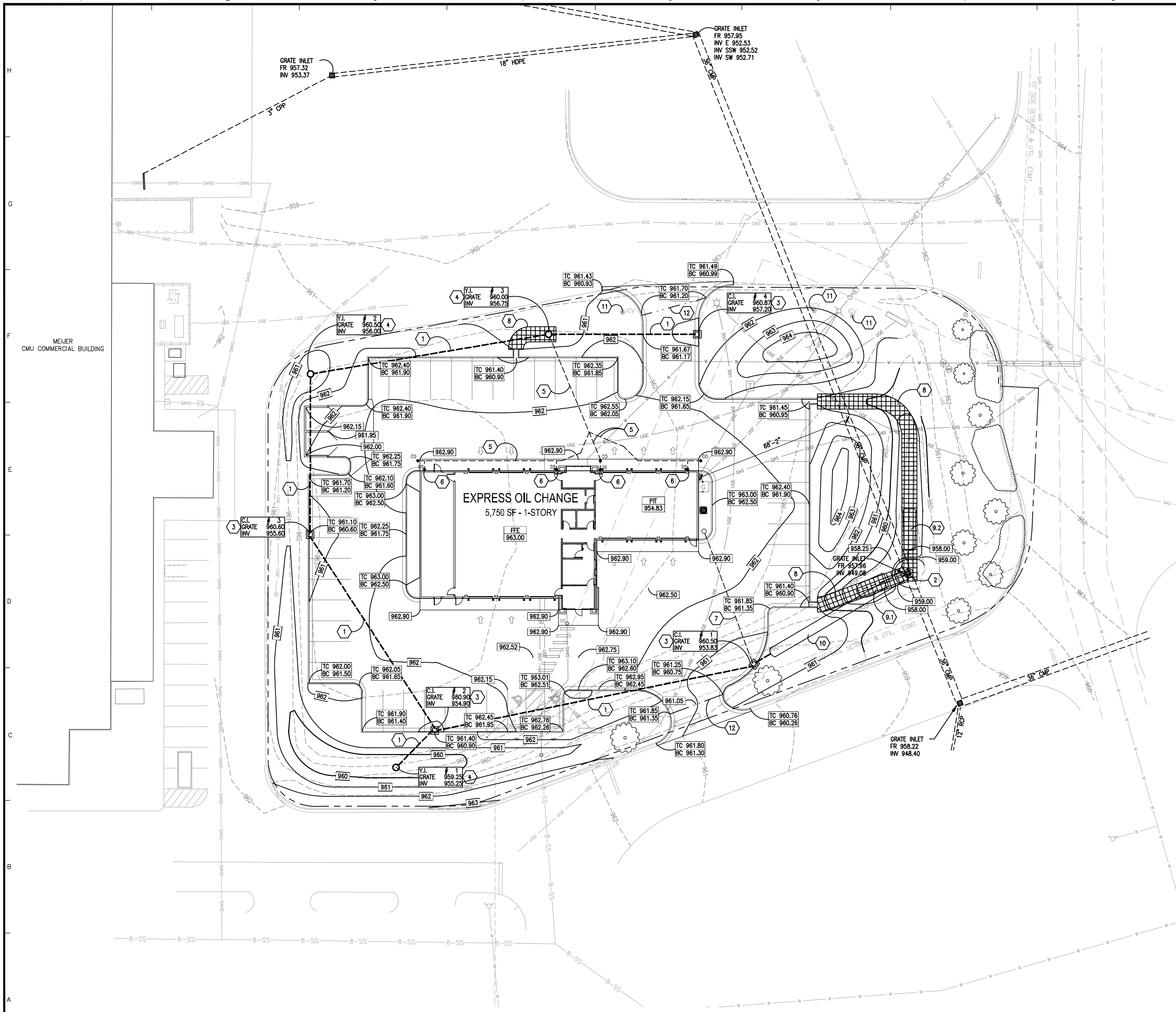

A SITE GRADING AND DRAINAGE PLAN

1"= 20'

0 20' 40'

GENERAL NOTES

A. EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING UTILITY LINES. EXISTING UTILITY INFORMATION IS NOT TO BE TAKEN AS EXACT OR COMPLETE. CONTRACTOR MUST NOTIFY THE UTILITY COMPANIES AND APPROPRIATE AGENCIES AT LEAST 72 HOURS BEFORE EXCAVATION FOR EXACT FIELD LOCATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO RELOCATE ALL UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS. DIAL 811 TO CONTACT B.U.D. FOR LOCATION OF EXISTING UTILITIES.
B. CONTRACTOR TO FIELD VERIFY DIMENSIONS AND INVERT ELEVATIONS OF DRAINAGE STRUCTURES PRIOR TO ANY DEMOLITION AND NEW CONSTRUCTION.
C. CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO ANY STRUCTURE, PAVEMENT, UTILITY, PIPE, ETC. TO REMAIN AND SHALL REPAIR OR REPLACE THE DAMAGED ITEM AS NECESSARY TO RETURN IT TO PRE-CONSTRUCTION CONDITIONS WITH THE COST BEING INCIDENTAL TO THE CONTRACT.
D. MAXIMUM CROSS-SLOPE OF WALK TO BE 1.8%.
E. MEET EXISTING GRADES OF ADJACENT FEATURES WITH A SMOOTH FLUSH CONNECTION.
F. STORM SEWER PIPE IS TO BE CONNECTED TO STRUCTURES WITH NON-SHRINK GROUT MEETING KYTC SPECIFICATIONS.
G. CONTRACTOR SHALL ADHERE TO TERMS AND CONDITIONS OF K.P.D.E.S. GENERAL PERMIT FOR STORMWATER DISCHARGES.
H. UNPAVED AREAS DISTURBED DURING CONSTRUCTION ARE TO RECEIVE SOD. SPREAD A MINIMUM OF 4" GOOD, CLEAN, WEED FREE TOPSOIL PRIOR TO INSTALLING SOD.
I. CONTRACTOR TO PROVIDE POSITIVE DRAINAGE IN ALL LAWNS AND PAVEMENT.
J. STORM PIPE IS TO BE PROPERLY TRENCHED AND JACKETED WITH COMPACTED CRUSHED STONE.
K. STORM STRUCTURES ARE TO BE BACKFILLED COMPLETELY WITH COMPACTED CRUSHED STONE.
L. STORM AND UTILITY VALVES, BOXES, AND MANHOLE LIDS REMAINING WITHIN THE PROJECT AREA ARE TO BE ADJUSTED FLUSH WITH FINISHED GRADE WHETHER INDICATED OR NOT.
M. COORDINATE WITH SURVEY FOR TEMPORARY BENCHMARK LOCATIONS. RELOCATE BENCHMARKS PRIOR TO DEMO / GRADING ACTIVITIES AS NECESSARY.
N. KENTUCKY TRANSPORTATION CABINET (KYTC) STANDARD SPECIFICATIONS ARE PART OF THESE PLANS AND ARE READILY AVAILABLE AT HTTP://TRANSPORTATION.KY.GOV/CONSTRUCTION/PAGES/KENTUCKY-STANDARD-SPECIFICATIONS.ASPX. CONTRACTOR TO KEEP COPY OF THE APPLICABLE KYTC STANDARD SPECIFICATIONS ON-SITE FOR REFERENCE.
O. KENTUCKY TRANSPORTATION CABINET (KYTC) STANDARD DRAWINGS ARE PART OF THESE PLANS AND ARE READILY AVAILABLE AT HTTP://TRANSPORTATION.KY.GOV/HIGHWAY-DESIGN/PAGES/STANDARD-DRAWINGS.ASPX. CONTRACTOR MUST KEEP A COPY OF THE APPLICABLE KYTC STANDARD DRAWINGS ON-SITE FOR REFERENCE.
P. ALL UNDERGROUND UTILITIES AND DRAINS REQUIRE AS-BUILT SURVEY. GENERAL CONTRACTOR RESPONSIBLE TO COORDINATE WITH LOCAL AUTHORITIES HAVING JURISDICTION ON AS-BUILT REQUIREMENTS.
Q. ALL PAVEMENT SUB-GRADE MUST BE SLOPED TO DRAIN TOWARD DRAINAGE STRUCTURES AND PIPES.
R. COMPLETELY BACKFILL ALL SIDES OF ALL DRAINAGE STRUCTURES AND PIPES WITH COMPACTED CRUSHED STONE TO ALLOW WATER SEEPING UNDER THE PAVEMENT TO DRAIN OUT.
S. SITE SUB-GRADE (ONCE PROPERLY CLEARED AND BENCHED) TO BE PROOF-ROLLED BY THE CONTRACTOR WITH A FULLY LOADED TANDEM-AXLE DUMP TRUCK IN THE PRESENCE OF THE GEOTECHNICAL ENGINEER PRIOR TO PLACING FILL. AREAS THAT PUMP, RUT OR WAVE TO BE SCARIFIED, MOISTURE CONDITIONED, RE-COMPACTED, AND PROOF-ROLLED AGAIN. AREAS THAT PUMP, RUT OR WAVE AFTER THE SECOND PROOF-ROLL TO BE UNDERCUT AND REPLACED WITH ENGINEERED FILL UNTIL THE SITE SUB-GRADE PASSES PROOF-ROLL.
T. SELECT ONSITE SOILS TESTED AND ACCEPTED BY THE GEOTECHNICAL ENGINEER CAN BE USED AS ENGINEERED FILL PROVIDED MATERIALS ARE PLACED AND COMPACTED AT THE PROPER MOISTURE CONTENT WITH NO ORGANICS AND NO LARGE ROCK. COORDINATE WITH GEOTECHNICAL ENGINEERING REPORT.
U. PAVEMENT SUB-GRADE TO BE PROOF-ROLLED BY CONTRACTOR WITH A FULLY LOADED TANDEM-AXLE DUMP TRUCK IN THE PRESENCE OF THE GEOTECHNICAL ENGINEER PRIOR TO PLACING DGA. AREAS THAT PUMP, RUT OR WAVE ARE TO BE UNDERCUT AND REPLACED WITH ENGINEERED FILL UNTIL THE PAVEMENT SUB-GRADE PASSES PROOF-ROLL.
V. COORDINATE WITH THE GEOTECHNICAL REPORT AND BUILDING PLANS FOR EARTHWORK WITHIN THE BUILDING FOOTPRINT.

KEYED NOTES ⬡

1. 15" DUAL WALL HDPE STORM SEWER PIPE (ADS N-12, OR APPROVED EQUIVALENT) PER DETAIL M/C-110, TYPICAL.
2. CORE DRILL EXISTING GRATE INLET IN FOUR LOCATIONS AS NECESSARY FOR CONNECTION 15", 8", AND TWO 6" STORM DRAIN PIPES PER DETAIL C/C-112. FILL THE VOID SPACE WITH NON-SHRINK GROUT.
3. PRECAST CONCRETE CURB INLET (CI) PER KYTC STD DWG RDB-320.
4. YARD INLET (YI) TO BE 30" NYLOPLAST DRAIN BASIN WITH A DOME GRATE, OR APPROVED EQUIVALENT.
5. 8" DUAL WALL HDPE ROOF DRAIN WITH 1% MIN. POSITIVE SLOPE AND 24" MIN. COVER DEPTH PER DETAIL M/C-110. PROVIDE A CLEANOUT (CO) AT THE BEGINNING OF THE EACH RUN OF ROOF DRAIN PER DETAIL N/C-110. CONNECT ROOF DRAIN TO STORM SEWER WITH ADS INSERTA TEE, OR APPROVED EQUIVALENT. EXACT ROUTE TO BE FIELD DETERMINED BY CONTRACTOR.
6. DOWNSPOUT (DS) BOOT CONNECTION TO ROOF DRAIN PER DETAIL P/C-110, TYPICAL. COORDINATE WITH BUILDING PLANS FOR EXACT NUMBER OF AND LOCATION OF DOWNSPOUTS. DOWNSPOUT BOOTS TO BE PAINTED TO MATCH BUILDING, COORDINATE WITH ARCHITECT.
7. EXTEND 2" DISCHARGE PIPE FROM BUILDING SUMP PUMP TO NEAREST DRAIN INLET WITH AT LEAST 24" COVER DEPTH PER DETAIL M/C-110. COORDINATE WITH BUILDING PLANS FOR EXACT LOCATION AND DETAILS OF PIT, SUMP PUMP, AND DISCHARGE PIPE.
8. TURF REINFORCEMENT MAT LINED DITCH FROM THE CONCRETE FLUME TO THE YARD/GRATE INLET SHOWN WITH CROSS HATCH PATTERN PER KYTC STD DWG RDI-041. TURF REINFORCEMENT MAT TO BE LANDLOK 450, OR APPROVED EQUIVALENT. COORDINATE WITH SITE PLAN C-102 FOR CONCRETE FLUME. COORDINATE WITH SWPPP SHEET C-100.
9. WATER QUALITY SWALES AND CHECK DAM MADE UP OF ENGINEERED SOIL MIX PER DETAILS A/C-112 AND C/C-112. WATER QUALITY TO BE INSTALLED LAST IN THE CONSTRUCTION SEQUENCE AFTER SITE WORK IS SUBSTANTIALLY COMPLETE WITH PAVEMENT AND GRASS COVER.
   9.1. WATER QUALITY SWALE ON SOUTH SIDE OF THE EXISTING GRATE INLET TO BE 14' LONG.
   9.2. WATER QUALITY SWALE ON WEST SIDE OF THE EXISTING GRATE INLET TO BE 18' LONG.
10. CRUSHED STONE UNDERGROUND WATER QUALITY BASIN WITH A CHAMBER SYSTEM AND 8" PERFORATED UNDERDRAIN PER DETAILS B/C-112 AND C/C-112. BASIN TO BE 70'-0" LONG x 7'-3" WIDE x 5'-6" DEEP OF NO. 57 CRUSHED STONE WRAPPED IN PERMEABLE FILTER FABRIC. 8" DUAL WALL HDPE PERFORATED DRAIN PIPE TO RUN ALONG THE BOTTOM OF THE CRUSHED STONE BASIN AND TO BE CONNECTED TO THE EXISTING GRATE INLET. CHAMBERS TO BE ADS STORMTECH SC-740 CHAMBERS, OR APPROVED EQUIVALENT. CHAMBER SYSTEM TO INCLUDE ONE (1) ROW HAVING NINE (9) CHAMBERS, TWO (2) END CAPS WITH 15" INLET AND 15" OUTLET AT THE TOP, AND ALL ACCESSORIES NECESSARY FOR A COMPLETE AND FUNCTIONAL UNDERGROUND CHAMBER SYSTEM. THERE MUST BE A LAYER OF WOVEN HIGH-STRENGTH PERMEABLE FILTER FABRIC BETWEEN THE CHAMBERS AND FOUNDATION STONE. CONTRACTOR MUST PROOF-ROLL THE SUBGRADE UNDER THE CRUSHED STONE BASIN WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK IN THE PRESENCE OF A GEOTECHNICAL ENGINEER. SUB-GRADE THAT FAILS PROOF-ROLL MUST BE UNDER-CUT, REPLACED, AND PROOF-ROLLED AGAIN. WATER QUALITY ITEMS TO BE INSTALLED LAST IN THE CONSTRUCTION SEQUENCE AFTER SITE WORK IS SUBSTANTIALLY COMPLETE WITH PAVEMENT AND GRASS COVER.
11. EXISTING IRRIGATION CONTROL VALVES TO REMAIN AND BE PROTECTED THROUGHOUT CONSTRUCTION. BOXES AND LIDS TO BE ADJUSTED FLUSH WITH FINISHED GRADE.
12. RIDGE LINE

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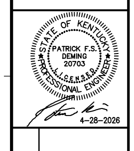

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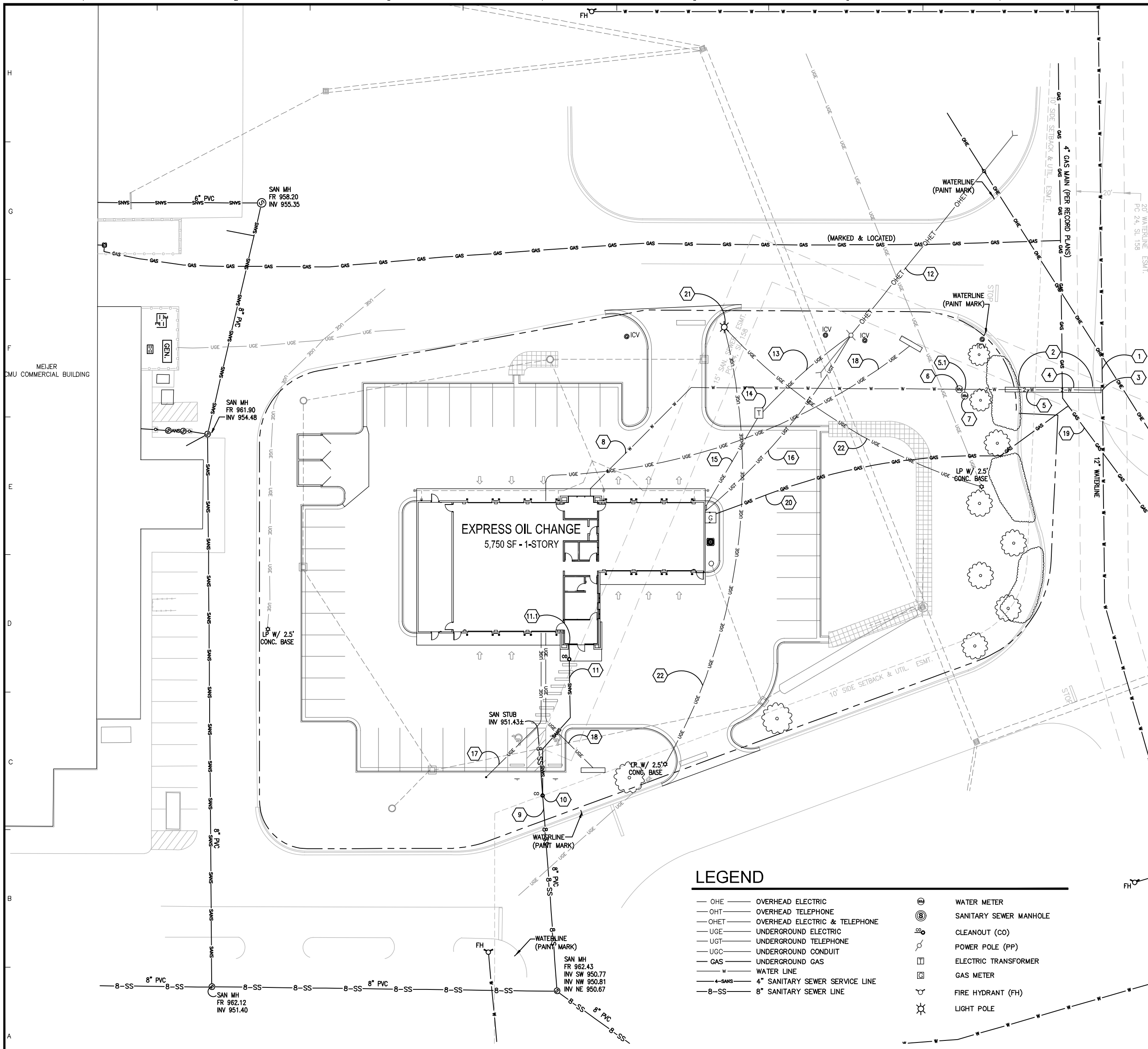

LEGEND

OHE	OVERHEAD ELECTRIC
OHT	OVERHEAD TELEPHONE
OHET	OVERHEAD ELECTRIC & TELEPHONE
UGE	UNDERGROUND ELECTRIC
UGT	UNDERGROUND TELEPHONE
UGC	UNDERGROUND CONDUIT
GAS	UNDERGROUND GAS
W	WATER LINE
4-SANS	4" SANITARY SEWER SERVICE LINE
8-SS	8" SANITARY SEWER LINE
WM	WATER METER
S	SANITARY SEWER MANHOLE
CO	CLEANOUT (CO)
	POWER POLE (PP)
T	ELECTRIC TRANSFORMER
G	GAS METER
	FIRE HYDRANT (FH)
	LIGHT POLE

A SITE UTILITIES PLAN
1"= 20'
0 20' 40'

GENERAL NOTES

A. PROPOSED UTILITIES SHOWN ON THIS PLAN ARE SCHEMATIC. EXACT ROUTES AND LOCATIONS TO BE FIELD DETERMINED BY CONTRACTOR IN COORDINATION WITH THE BUILDING PLANS AND RESPECTIVE UTILITY COMPANIES.
B. CONTRACTOR IS TO EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING UTILITY LINES. EXISTING UTILITY INFORMATION IS NOT TO BE TAKEN AS EXACT OR COMPLETE. CONTRACTOR MUST NOTIFY UTILITY COMPANIES AND APPROPRIATE AGENCIES AT LEAST 72 HOURS BEFORE EXCAVATION FOR EXACT FIELD LOCATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO RELOCATE UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS. DIAL 811 TO CONTACT B.U.D. FOR LOCATION OF EXISTING UTILITIES.
C. CONTRACTOR TO COORDINATE WORK WITH THE UTILITY COMPANIES PRIOR TO BID AND DURING CONSTRUCTION; PROVIDE ITEMS REQUIRED BY THE UTILITY COMPANIES INCLUDING, BUT NOT LIMITED TO, TRENCHING, BACKFILL, CONDUIT, ETC; AND VERIFY CONDUIT SIZE, BURIAL DEPTH, SEPARATION, PULL STRINGS, BUILDING ANCHORS, ETC. PRIOR TO BID.
D. CONTRACTOR IS TO VERIFY EXISTING UTILITIES IN THE FIELD PRIOR TO ORDERING MATERIALS AND INSTALLATION OF NEW LINES.
E. CASING SLEEVES SHALL BE PROVIDED FOR PIPING, CONDUIT, ETC. THRU AND UNDER CONCRETE AND MASONRY WALLS. COORDINATE WITH ALL TRADES PRIOR TO CONSTRUCTION.
F. UNDERGROUND LINES ARE TO BE PROPERLY TRENCHED AND JACKETED WITH CRUSHED STONE.
G. UNDERGROUND ELECTRIC AND COMMUNICATIONS CONDUIT TO HAVE LONG SWEEPS, NOT BENDS.
H. REPAIR DISTURBED SIDEWALK, CURB AND PAVEMENT MATCHING PRE-CONSTRICTION CONDITIONS.
I. COORDINATE WITH BUILDING PLANS FOR EXACT SIZE AND LOCATION OF UTILITIES ENTERING THE BUILDING.
J. TIE-INS TO EXISTING UTILITY MAINS MUST BE OBSERVED BY THE LOCAL UTILITY COMPANY REPRESENTATIVE.
K. PRIOR TO ORDERING MATERIALS, CONTRACTOR SHOULD FIELD DETERMINE THE EXACT INVERT ELEVATION, MATERIAL, AND OUTSIDE DIAMETER OF EXISTING WATER AND SANITARY SEWER PIPE AT THE POINT OF CONNECTION.
L. CONTRACTOR RESPONSIBLE FOR TAPPING AND TESTING OF THE WATER SANITARY SEWER IN ACCORDANCE WITH THE RICHMOND UTILITIES (RU) REQUIREMENTS. THESE TAPS AND TESTS MUST BE PERFORMED IN THE PRESENCE OF THE RU REPRESENTATIVES, NOTIFY RU AT LEAST 72 HOURS IN ADVANCE.
M. SEQUENCE CONSTRUCTION TO KEEP UTILITY SERVICES TO ADJACENT BUILDINGS UNINTERRUPTED DURING CONSTRUCTION. UTILITY SERVICES CAN BE TEMPORARILY SHUTDOWN DURING OFF HOURS. NOTIFY RESPECTIVE PROPERTY OWNER 72 HOURS BEFORE TEMPORARY SHUTDOWNS.
N. ALL UNDERGROUND UTILITIES AND DRAINS REQUIRE AS-BUILT SURVEY. GENERAL CONTRACTOR RESPONSIBLE TO COORDINATE WITH LOCAL AUTHORITIES HAVING JURISDICTION ON AS-BUILT REQUIREMENTS.
O. KENTUCKY UTILITIES COMPANY (KU) ELECTRIC SERVICE HANDBOOK IS PART OF THIS SITE UTILITIES PLAN AND IS AVAILABLE AT HTTPS://LGE-KU.COM/CUSTOMER-SERVICE/CUSTOMER-HANDBOOKS. CONTRACTOR MUST KEEP A COPY OF THE KU HANDBOOK ON-SITE FOR REFERENCE.
P. RICHMOND UTILITIES (RU) STANDARD SPECIFICATIONS, DRAWINGS AND MANUALS ARE PART OF THESE PLANS AND ARE READILY AVAILABLE AT HTTPS://RICHMONDUTILITIES.COM/PAGES/DOWNLOADS/INFRASTRUCTURE-DEVELOPMENT-MANUALS.PHP. CONTRACTOR MUST KEEP A COPY OF THE RU STANDARDS ON-SITE FOR REFERENCE.
Q. CONTRACTOR TO MAINTAIN TRAFFIC ON THE PUBLIC ENTRANCE DRIVES IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). MUTCD IS AVAILABLE AT HTTPS://MUTCD.FHWA.DOT.GOV/PDFS/11TH_EDITION/MUTCD11THEDITION.PDF.
R. A KNOX BOX RAPID ENTRY SYSTEM SHALL BE INSTALLED ON THE BUILDING, COORDINATE WITH ARCHITECT. PURCHASE SHALL BE COORDINATED WITH RICHMOND FIRE DEPARTMENT.

KEYED NOTES ⬡

1. APPROXIMATE LOCATION OF EXISTING 12" WATER MAIN PER RECORD PLANS, EXACT LOCATION AND SIZE TO BE FIELD DETERMINED BY CONTRACTOR PRIOR TO ORDERING MATERIALS.
2. REPAIR THE ENTRANCE DRIVE PAVEMENT PER DETAIL M12/C-111 AS NECESSARY FOR INSTALLATION OF THE WATERLINES. ALLOW THE CRUSHED STONE BACKFILL TO SETTLE FOR 30 DAYS UNDER TRAFFIC BEFORE RESTORING PAVEMENT. TOP OFF CRUSHED STONE AS NECESSARY.
3. 2" TAP OF EXISTING WATER MAIN WITH 8x2 BRASS TAPPING SADDLE, 2" BRASS SWING JOINT FOR TAP, AND VALVE ON OPPOSITE SIDE OF THE ENTRANCE DRIVE MEETING RICHMOND UTILITIES (RU) STANDARD SPECIFICATIONS PER DETAILS A, M5, W1, W4 & W7/C-111. PRIOR TO ORDERING MATERIALS, CONTRACTOR TO FILL OUT THE NECESSARY PAPERWORK AND FIELD DETERMINE EXACT TAP LOCATION IN COORDINATION WITH RU, NOTIFY RU 72 HRS IN ADVANCE.
4. 4" PVC ENCASEMENT PIPE WITH SPACERS AND END SEALS BORED UNDER THE ENTRANCE DRIVE MEETING RICHMOND UTILITIES (RU) STANDARD SPECIFICATIONS PER DETAILS M4 & W7/C-111. PRIOR TO ORDERING MATERIALS, CONTRACTOR TO FIELD DETERMINE EXACT LOCATION AND PIPE MATERIAL REQUIREMENTS IN COORDINATION WITH RU.
5. 2" CTS DOMESTIC WATER SERVICE LINE WITH TRACER WIRE THROUGH THE ENCASEMENT PIPE MEETING RICHMOND UTILITIES (RU) STANDARD SPECIFICATIONS PER DETAILS M4 & W7/C-113. PRIOR TO ORDERING MATERIALS, CONTRACTOR TO FIELD DETERMINE PIPE MATERIAL REQUIREMENTS IN COORDINATION WITH RU.
   5.1. PROVIDE 2x1 REDUCING TEE FITTING AT THE END OF THE 2" WATERLINE PER DETAIL A & M5/C-111 (REDUCING TO 1" ON RUN AND TO 1" ON BRANCH) SPLITTING FLOW TO THE IRRIGATION AND DOMESTIC WATER METERS.
6. 1" DOMESTIC WATER METER SETTING ON BUILDING SIDE OF THE ENTRANCE DRIVE MEETING RICHMOND UTILITIES (RU) STANDARD SPECIFICATIONS PER DETAIL W3/C-111. PRIOR TO ORDERING MATERIALS, CONTRACTOR TO FIELD DETERMINE EXACT METER LOCATION IN COORDINATION WITH RU, NOTIFY RU 72 HRS IN ADVANCE. WATER COMPANY TO INSTALL THE METER, AND BILL THE OWNER DIRECTLY.
7. 1" IRRIGATION METER SETTING ON BUILDING SIDE OF THE ENTRANCE DRIVE MEETING RICHMOND UTILITIES (RU) STANDARD SPECIFICATIONS PER DETAILS W3/C-111. PRIOR TO ORDERING MATERIALS, CONTRACTOR TO FIELD DETERMINE EXACT METER LOCATION IN COORDINATION WITH RU, NOTIFY RU 72 HRS IN ADVANCE. WATER COMPANY TO INSTALL THE METER, AND BILL THE OWNER DIRECTLY.
8. 1" SDR9 CL 200 HDPE DOMESTIC WATER SERVICE LINE FROM THE METER TO THE BUILDING MEETING RICHMOND UTILITIES (RU) STANDARD SPECIFICATIONS PER DETAILS A, M5 & W1/C-111. EXACT ROUTE TO BE FIELD DETERMINED BY CONTRACTOR. COORDINATE WITH BUILDING PLUMBING PLANS.
9. APPROXIMATE LOCATION OF EXISTING 8" SANITARY SEWER STUB PER RECORD PLANS. PRIOR TO ORDERING MATERIALS, CONTRACTOR TO FILL OUT THE NECESSARY PAPERWORK, FIELD DETERMINE THE EXACT LOCATION, ELEVATION, SIZE, MATERIAL, AND CONDITION OF THE SEWER STUB, PERFORM ACCEPTANCE TESTING OF THE SEWER STUB (CCTV, LOW PRESSURE AIR, AND DEFLECTION TESTS), AND CLEAN THE 8" STUB VIA HYDRO JET, AS NECESSARY. IF 8" PIPE STUB DOES NOT PASS ACCEPTANCE TESTING, NOTIFY THE ENGINEER.
10. SAW CUT EXISTING 8" SANITARY SEWER STUB TO PROVIDE A CLEAN EDGE FOR CONNECTION, AND PROVIDE A NEW TWO-WAY CLEANOUT AT THE EASEMENT LINE MEETING RICHMOND UTILITIES (RU) STANDARD SPECIFICATIONS PER DETAILS M6 & S7/C-111.
11. 4" SDR35 PVC SEWER SERVICE LATERAL FROM THE BUILDING TO THE TWO-WAY CLEANOUT WITH AT LEAST 30" COVER, 1% MIN / 2% MAX SLOPE, AND A CLEANOUT AT THE BEGINNING OF THE LATERAL MEETING RICHMOND UTILITIES (RU) STANDARD SPECIFICATIONS PER DETAILS M6 & S3/C-111. COORDINATE WITH BUILDING PLUMBING PLANS.
    11.1. NO FLOOR DRAINS IN BUILDING. MOP SINK TIED TO OIL/WATER SEPARATOR WITHIN BUILDING. SEE BUILDING PLANS.
12. ELECTRIC AND COMMUNICATIONS COMPANIES TO INSTALL OVERHEAD ELECTRIC PRIMARY LINES, COMMUNICATION LINES, POLES, & GUY WIRES, AND BILL THE OWNER DIRECTLY. CONTRACTOR TO FILL OUT THE NECESSARY PAPERWORK AND COORDINATE WITH ELECTRIC & COMMUNICATION COMPANIES PRIOR TO ORDERING MATERIALS.
13. TWO (2) 4" SCH40 PVC PRIMARY ELECTRIC CONDUITS FROM POWER POLE TO TRANSFORMER WITH AT LEAST 42" COVER DEPTH, PULL STRINGS, AND 3'-0" SCH80 ELBOWS & RISERS MEETING KENTUCKY UTILITIES (KU) STANDARDS. CONTRACTOR TO COORDINATE WITH KU PRIOR TO ORDERING MATERIALS AND FILL OUT THE NECESSARY PAPERWORK. KU TO INSPECT TRENCH BEFORE COVERING CONDUIT. KU TO INSTALL PRIMARY CONDUCTORS AND BILL OWNER DIRECTLY.
14. CONCRETE TRANSFORMER PAD MEETING KU STANDARDS. COORDINATE WITH KU BEFORE ORDERING MATERIALS. KU TO INSPECT FORMS BEFORE POURING CONCRETE. KU TO INSTALL TRANSFORMER AND BILL OWNER DIRECTLY.
15. SCH40 PVC SECONDARY ELECTRIC CONDUITS FROM THE TRANSFORMER TO THE BUILDING WITH AT LEAST 30" COVER, PULL STRINGS, 3'-0" SCH80 ELBOWS & RISERS, METER BASE, DISCONNECT, AND GROUNDING MEETING KU STANDARDS AND NATIONAL ELECTRIC CODE. COORDINATE WITH BUILDING ELECTRICAL PLANS FOR MORE INFORMATION ON THE SECONDARY ELECTRIC CONDUIT AND CIRCUITS.
16. TWO (2) 3" SCH40 PVC COMMUNICATION CONDUITS FROM POLE TO THE BUILDING WITH PULL STRINGS AND 3'-0" SCH80 ELBOWS & RISERS MEETING COMMUNICATION COMPANY STANDARDS. EXACT ROUTE AND LOCATION TO BE FIELD DETERMINED BY CONTRACTOR. COMMUNICATION CONDUITS MUST HAVE AT LEAST 12" SEPARATION FROM ELECTRIC CONDUIT. COMMUNICATION COMPANIES TO INSTALL CABLES AND BILL OWNER DIRECTLY.
17. SCH40 PVC CONDUIT FROM THE BUILDING ELECTRIC PANEL TO THE LANDSCAPE AREA IN FRONT OF THE PARKING STALLS WITH AT LEAST 30" COVER, PULL STRINGS, AND 3'-0" SCH80 ELBOWS & RISERS FOR FUTURE EV CHARGER. CAP AND MARK THE END FOR FUTURE CONNECTION. EXACT ROUTE AND LOCATION TO BE FIELD DETERMINED BY CONTRACTOR IN COORDINATION WITH OWNER. COORDINATE WITH BUILDING ELECTRICAL PLANS FOR EXACT SIZE AND LOCATION OF CONDUIT AND CIRCUIT.
18. SCH40 PVC CONDUIT FROM THE BUILDING ELECTRIC PANEL TO THE MONUMENT SIGN WITH AT LEAST 30" COVER, PULL STRINGS, AND 3'-0" SCH80 ELBOWS & RISERS MEETING NATIONAL ELECTRIC CODE. CAP AND MARK THE END FOR FUTURE CONNECTION. EXACT ROUTE AND LOCATION TO BE FIELD DETERMINED BY CONTRACTOR IN COORDINATION WITH OWNER. COORDINATE WITH BUILDING ELECTRICAL PLANS FOR EXACT SIZE AND LOCATION OF CONDUIT AND CIRCUIT.
19. APPROXIMATE LOCATION OF EXISTING 4" GAS MAIN PER RECORD PLANS, EXACT LOCATION AND SIZE TO BE FIELD DETERMINED BY CONTRACTOR IN COORDINATION WITH THE GAS COMPANY.
20. GAS COMPANY TO INSTALL GAS LINE FROM THE TAP TO AND INCLUDING THE GAS METER, AND BILL THE OWNER DIRECTLY. EXACT LOCATION OF TAP TO BE FIELD DETERMINED BY GAS COMPANY. CONTRACTOR TO FILL OUT THE NECESSARY PAPERWORK, COORDINATE WITH THE GAS COMPANY, AND PROVIDE GAS SERVICE LINE FROM METER INTO THE BUILDING. COORDINATE WITH BUILDING PLUMBING PLANS.
21. RE-INSTALL LIGHT POLE & FIXTURE ON A NEW CONCRETE BASE SIMILAR TO DETAIL Q/C-110, NEW LIGHT POLE BASE TO MATCH EXISTING LIGHT POLE BASE. EXACT LOCATION TO BE FIELD DETERMINED BY CONTRACTOR. COORDINATE WITH SITE DEMOLITION PLAN C-101.
22. SCH40 PVC UNDERGROUND CONDUIT, BOXES AND WIRES FROM REMAINING LIGHT POLE BASES TO THE NEW LIGHT POLE BASE MEETING NEC CODE. NEW CONDUIT & WIRE SIZE TO MATCH EXISTING CONDUIT & WIRE SIZE, MINIMUM. EXACT ROUTE AND LOCATION TO BE FIELD DETERMINED BY CONTRACTOR.

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PROFESSIONAL ENGINEER
4-28-2026

SITE UTILITIES PLAN

EXPRESS OIL CHANGE & TIRE ENGINEERS
2017 LANTERN RIDGE DRIVE
RICHMOND, KENTUCKY

ISSUED FOR CONSTRUCTION

Issue Date:	April, 2026
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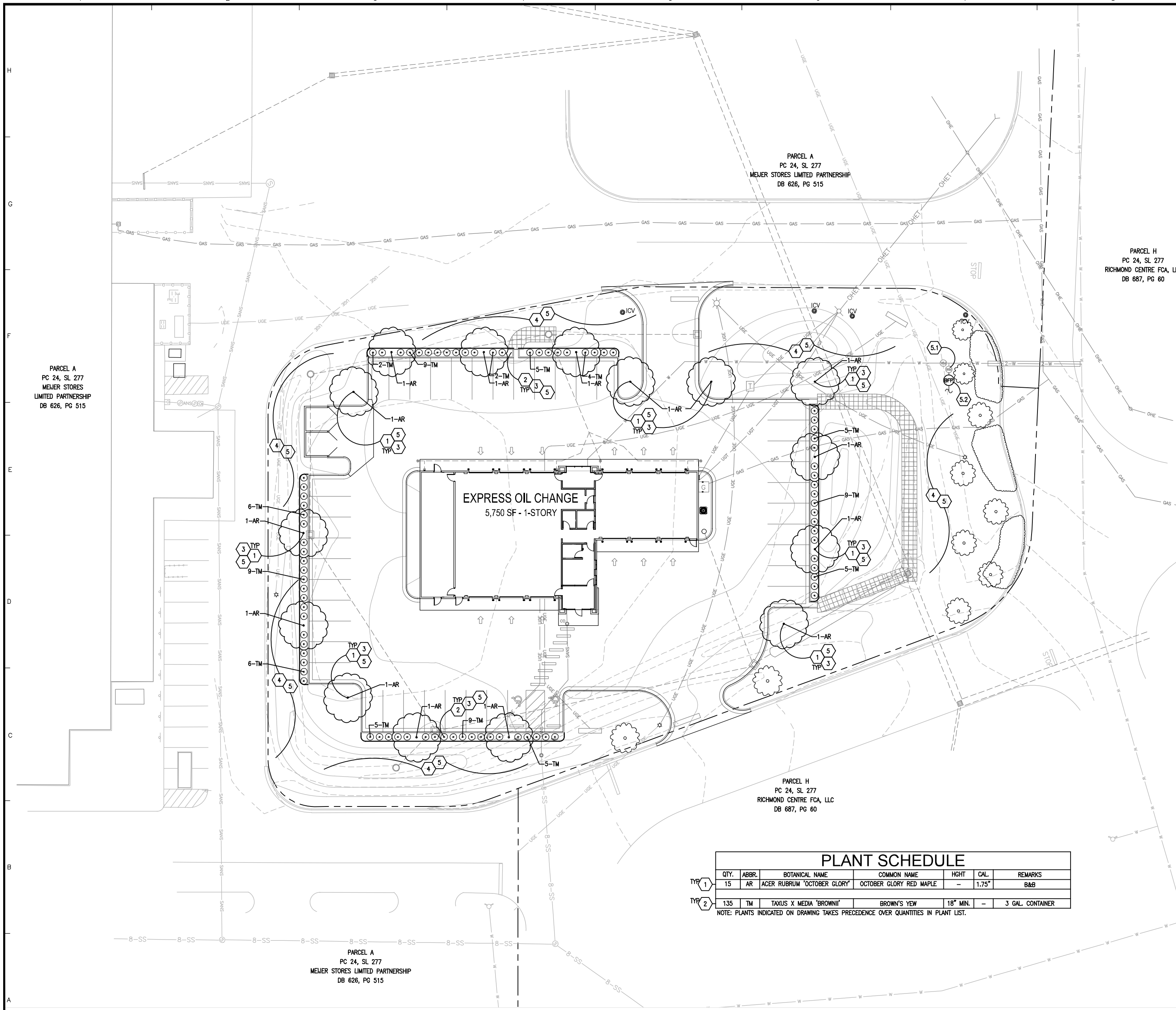


PLANT SCHEDULE

	QTY.	ABBR.	BOTANICAL NAME	COMMON NAME	HGHT	CAL.	REMARKS
TYP 1	15	AR	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	–	1.75"	B&B
TYP 2	135	TM	TAXUS X MEDIA 'BROWNII'	BROWN'S YEW	18" MIN.	–	3 GAL. CONTAINER

NOTE: PLANTS INDICATED ON DRAWING TAKES PRECEDENCE OVER QUANTITIES IN PLANT LIST.

(A) SITE LANDSCAPING PLAN
1"= 20'
0 20' 40'

GENERAL NOTES

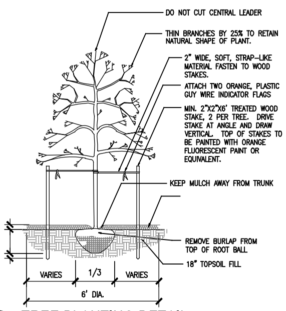
A. CONTRACTOR IS TO EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING UTILITY LINES. EXISTING UTILITY INFORMATION IS NOT TO BE TAKEN AS EXACT OR COMPLETE. CONTRACTOR MUST NOTIFY THE UTILITY COMPANIES AND APPROPRIATE AGENCIES AT LEAST 72 HOURS BEFORE EXCAVATION FOR EXACT FIELD LOCATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO RELOCATE UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS. DIAL 811 TO CONTACT B.U.D. FOR LOCATION OF EXISTING UTILITIES
B. CONTRACTOR TO VERIFY THAT ALL PLANT MATERIAL IS AVAILABLE AS SPECIFIED WHEN BID AND WHEN INSTALLED.
C. PLANT SUBSTITUTIONS MAY BE MADE ONLY WITH APPROVAL FROM OWNER OR LANDSCAPE ARCHITECT.
D. ALL PLANTS MUST MEET THE REQUIREMENTS OF THE MOST RECENT EDITION OF THE AMERICAN STANDARDS FOR NURSERY STOCK, ANS 260.1. PLANTS MUST BE HEALTHY, WELL BRANCHED, AND FREE OF DISEASE AND INSECT INFESTATION.
E. SPREAD A MINIMUM OF 4" OF CLEAN WEED-FREE TOPSOIL AND SOD OVER ALL AREAS DISTURBED AND NOT PAVED OR IN A LANDSCAPING BED.

KEYED NOTES ⬡

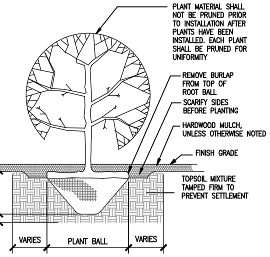
1. PLANT ALL DECIDUOUS TREES PER DETAIL B, THIS SHEET. PLACE A MINIMUM OF 18" GOOD, CLEAN, WEED FREE TOPSOIL IN ALL SHRUB/TREE PLANTING BEDS.
2. PLANT ALL SHRUBS PER DETAIL C, THIS SHEET. PROVIDE 3" OF SHREDDED HARDWOOD MULCH IN ALL LANDSCAPING BEDS.
3. PLACE A MINIMUM OF 18" GOOD, CLEAN, WEED FREE TOPSOIL IN ALL SHRUB/TREE PLANTING BEDS.
4. SPREAD A MINIMUM OF 4" OF CLEAN WEED-FREE TOPSOIL AND SOD ALL AREAS NOT NOTED TO BE PAVED OR TO BE IN A PLANTING BED.
5. ALL LANDSCAPE AND LAWN AREAS WITHIN THE LOT LINES ARE TO BE IRRIGATED WITH A FULLY AUTOMATED DRIP / BUBBLER IRRIGATION SYSTEM. IRRIGATION SYSTEM DESIGN IS DELEGATED TO THE CONTRACTOR AND IS TO BE APPROVED BY OWNER. SHOP DRAWINGS REQUIRED. PROVIDE AND COORDINATE THE INSTALLATION OF SCHEDULE 40 PVC SLEEVES UNDER THE PARKING LOT AND INTO THE BUILDING AS NECESSARY. CONTROLLER TO BE LOCATED INSIDE THE BUILDING, COORDINATE WITH BUILDING PLANS.
   - 5.1. COORDINATE WITH SITE UTILITIES PLAN FOR 1" IRRIGATION METER.
   - 5.2. BACKFLOW PREVENTER (BFP) FOR IRRIGATION SYSTEM TO BE 1" WATTS MODEL LF007 DOUBLE CHECK VALVE ASSEMBLY WITH SHUT OFF VALVES, OR APPROVED EQUIVALENT, INSTALLED IMMEDIATELY DOWNSTREAM OF THE METER. PLACE INSIDE A PIT WITH CAST IRON LID STATING 'WATER VALVE'. BED PIT ON COMPACTED CRUSHED STONE, DO NOT BED PIT ON WATERLINE.

LANDSCAPING STATISTICS
RICHMOND CENTRE

Property Zone:	B-3 (Highway Business District)
Total Development Area:	59,677 sq. ft.
Vehicular Use Area (V.U.A.) Parking Area Proposed:	25,103sq. ft.
Interior Landscape Area Required (5% of V.U.A.):	1,255 sq. ft.
Interior Landscape Area Provided:	2,269 sq. ft.
V.U.A. Interior Trees Required (1 / 250 SF):	5 Trees
V.U.A. Interior Trees Provided:	6 Trees



(B) TREE PLANTING DETAIL
N.T.S.



(C) SHRUB PLANTING DETAIL
N.T.S.

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SITE LANDSCAPING PLAN

EXPRESS OIL CHANGE & TIRE ENGINEERS
2017 LANTERN RIDGE DRIVE
RICHMOND, KENTUCKY

ISSUED FOR CONSTRUCTION

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AHJ SEAL

Project Number
25054.01

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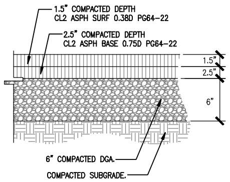
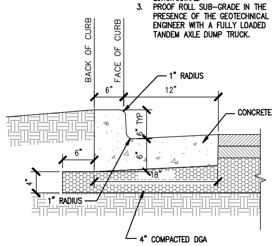
PLOT DATE: Tuesday, April 28, 2026 2:59:49 PM

NOTE:
1. CONTRACTOR TO PROOFROLL PARKING LOT SUBGRADE IN THE PRESENCE OF A GEOTECHNICAL ENGINEER PRIOR TO ANY FILL OR GRANULAR BACKFILL PLACEMENT.
2. PAVEMENT SUB-GRADE MUST BE SLOPED TO DRAIN TOWARD DRAINAGE STRUCTURES AND PIPES.

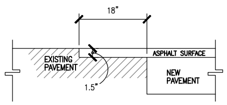


A ASPHALT PAVEMENT
N.T.S.

NOTES:
1. CONCRETE SHALL BE CLASS A PER THE CURRENT KENTUCKY TRANSPORTATION CABINET SPECIFICATIONS.
2. GUTTER SLOPE TO MATCH ADJACENT PAVEMENT, TRANSVERSE AND LONGITUDINAL.
3. PROOF ROLL SUB-GRADE IN THE PRESENCE OF THE GEOTECHNICAL ENGINEER WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK.



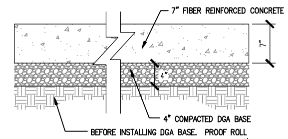
B CONCRETE CURB AND GUTTER
N.T.S.



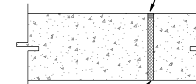
NOTE:
EDGE KEY WORK SHALL INCLUDE CUTTING OUT THE EXISTING ASPHALT TO A MINIMUM DEPTH AND WIDTH AS SHOWN, SO THE NEW SURFACE HEELS INTO THE EXISTING SURFACE. EDGE KEY SHALL ALSO INCLUDE ALL NECESSARY MATERIALS, LABOR, EQUIPMENT ETC. TO PERFORM THE WORK AND DISPOSE OF THE ASPHALT MATERIAL REMOVED. THE COST OF THE WORK TO BE INCLUDED IN THE PRICE OF THE ASPHALT.

C EDGE KEY
N.T.S.

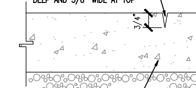
NOTES:
- CONCRETE TO BE CLASS A (3,500 PSI, MINIMUM).
- CONCRETE TO HAVE AN AIR CONTENT OF 6% ± 2%.
- CONCRETE SLUMP TO BE 3" ± 1".
- CONCRETE TO BE REINFORCED WITH MACRO-SYNTHETIC FIBERGLASS FIBERS AT A RATE OF 7 LBS PER CUBIC YARD PER ASTM C1116.
- USE WATER-REDUCING AND RETARDING ADMIXTURE WHEN REQUIRED BY HIGH TEMPERATURES, LOW HUMIDITY, OR OTHER ADVERSE PLACEMENT CONDITIONS PER INDUSTRY STANDARDS.
- PROVIDE CLEAR, WATERBORNE MEMBRANE-FORMING CURING COMPOUND PER INDUSTRY STANDARDS.
- PROVIDE MEDIUM BROOM FINISH, UNLESS OTHERWISE NOTED.
- SUB-GRADE TO BE PROOF-ROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK WEIGHING AT LEAST 15 TONS. SUB-GRADE THAT RUTS/PUMPS DEEPER THAN 1/2" MUST TO BE UNDER-CUT, REPLACED, AND PROOF-ROLLED AGAIN.



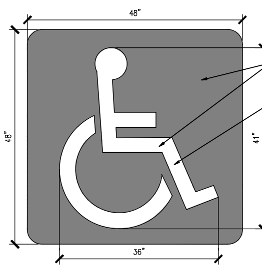
D HEAVY DUTY CONCRETE PAVEMENT
N.T.S.



E EXPANSION JOINT
N.T.S.

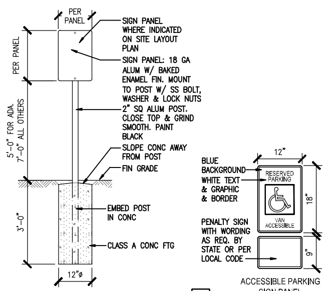


F CONTROL JOINT
N.T.S.



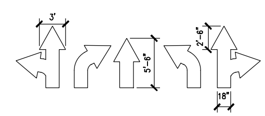
NOTES
1. ACCESSIBLE SYMBOL SHALL MEET FEDERAL HIGHWAY ADMINISTRATION (FHWA) STANDARDS AND CITY REQUIREMENTS.
2. ACCESSIBLE SYMBOL TO BE INSTALLED IN ALL ACCESSIBLE SPACES.
3. ACCESSIBLE SYMBOL TO BE WHITE SYMBOL ON BLUE BACKGROUND.
4. ACCESSIBLE SYMBOL TO BE PREFORMED THERMOPLASTIC PER KYTC STD SPEC 717 OR THERMOPLASTIC DURABLE PAINT PER KYTC STD SPEC 714.

G THERMOPLASTIC ACCESSIBLE PARKING SYMBOL
N.T.S.



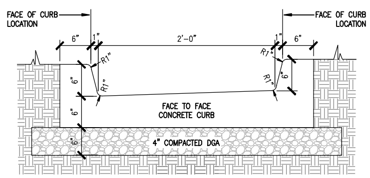
H SITE SIGNAGE
N.T.S.

NOTE:
ARROWS TO BE REFLECTIVE DURABLE WHITE PAINT PER KYTC STD SPEC 714.



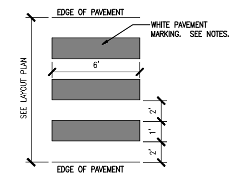
J TRAFFIC ARROWS
N.T.S.

NOTE:
- CONCRETE SHALL BE CLASS A PER THE CURRENT KENTUCKY TRANSPORTATION CABINET SPECIFICATIONS.
- EXPANSION JOINTS TO BE LOCATED 20'-0" O.C. MAX., JOINTS TO BE LOCATED AT ALL ANGLE CHANGE OF DIRECTIONS AND AT ALL RADII POINTS OF INTERSECTION.
- COORDINATE CURB HEIGHTS WITH SITE GRADING PLAN



K CONCRETE FLUME
N.T.S.

NOTES:
* CROSSWALK MARKINGS IN PARKING LOT REFLECTIVE DURABLE WHITE PAINT PER KYTC STD SPEC 714. APPLY TWO (2) COATS OF PAINT. SEE SITE LAYOUT PLAN.



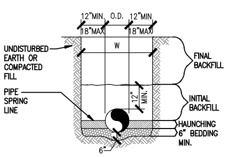
L CROSSWALK MARKINGS
N.T.S.

GENERAL NOTE:
MATERIALS AND METHODS ARE TO MEET THE REQUIREMENTS OF THE KENTUCKY TRANSPORTATION CABINET SPECIFICATIONS, LATEST EDITION.

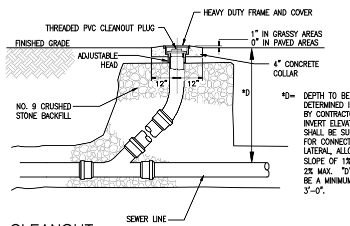
PAVEMENT REPAIR NOTES:
1. REPLACE ASPHALT, CONCRETE, CURB, AND STONE BASE WITH SAME TYPE & DEPTH AS EXISTING.
2. ASPHALT, CONCRETE, & STONE BASE MATERIALS AND METHODS ARE TO MEET THE REQUIREMENTS OF THE KENTUCKY TRANSPORTATION CABINET SPECIFICATIONS, LATEST EDITION.
3. COMPLETELY BACKFILL TRENCHES WITH COMPACTED CRUSHED STONE AS CONSTRUCTED IN ORDER TO MAINTAIN TRAFFIC.

LANDSCAPE REPAIR NOTES:
1. REPLACE GRASS, TOPSOIL, TREES, AND LANDSCAPING WITH SAME TYPE & DEPTH AS EXISTING.
2. SPREAD AT LEAST 4" OF TOPSOIL IN DISTURBED LANDSCAPE AREAS, THEN SEED AND MULCH.
3. IMMEDIATELY STABILIZE DISTURBED AREAS AS CONSTRUCTED.

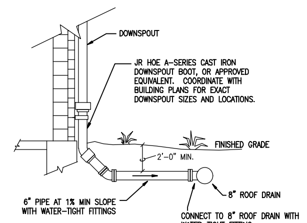
TRENCHING AND BEDDING NOTES
1. BEDDING SHALL BE NO. 9 CRUSHED STONE WORKED BY HAND AND COMPACTED.
2. HAUNCHING SHALL BE NO. 9 CRUSHED STONE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND COMPACTED.
3. INITIAL BACKFILL SHALL BE NO. 9 CRUSHED STONE WORKED BY HAND AND COMPACTED.
4. FINAL BACKFILL IN PAVED AREAS SHALL BE COMPACTED NO. 9 CRUSHED STONE.
5. FINAL BACKFILL IN LANDSCAPE AREAS CAN BE SELECT SOIL COMPACTED TO 95% STANDARD PROCTOR WITH NO ORGANICS AND NO LARGE ROCKS.
6. MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698.
7. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS AND ORGANICS.
8. TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL CODES.



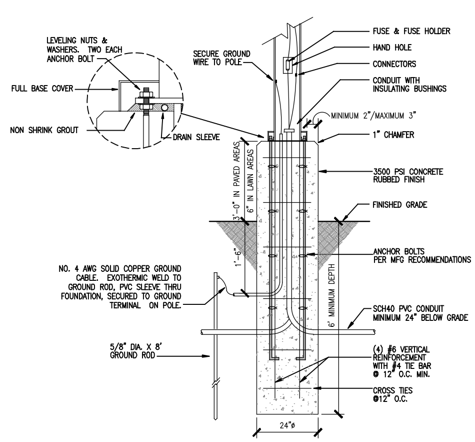
M TRENCHING AND BEDDING
N.T.S.



N CLEANOUT
N.T.S.



P DOWNSPOUT CONNECTION TO ROOF DRAIN
N.T.S.



Q LIGHT POLE BASE
N.T.S.

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STATE OF KENTUCKY
PATRICK F.S. DEMING
20703
LICENSED PROFESSIONAL ENGINEER
4-28-2026

SITE DETAILS
EXPRESS OIL CHANGE & TIRE ENGINEERS
2017 LANTERN RIDGE DRIVE
RICHMOND, KENTUCKY

ISSUED FOR CONSTRUCTION

Issue Date:	April, 2026
Drawn By:	XX
Checked By:	–
Revisions:	
	-
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	-
	-
	-
Mark	Date

AHJ SEAL

Project Number
25054.01

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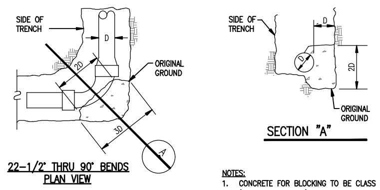
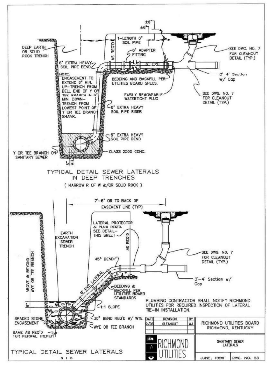
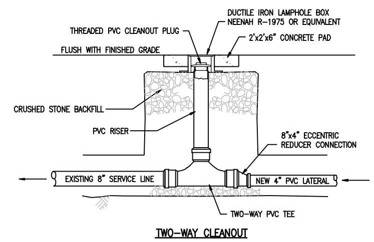


NOTES:
1. CONCRETE FOR BLOCKING TO BE CLASS "A" (3500 PSI MINIMUM).
2. DIMENSIONS SHOWN HEREON ARE MINIMUM.
3. BLOCKING MUST EXTEND TO UNDISTURBED EARTH.
4. PROVIDE THRUST BLOCKS AT ALL TAPS, PLUGS, BENDS, TEES, VALVES, AND HYDRANTS.

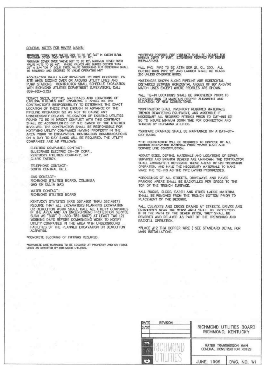
A CONCRETE THRUST BLOCKS
N.T.S.



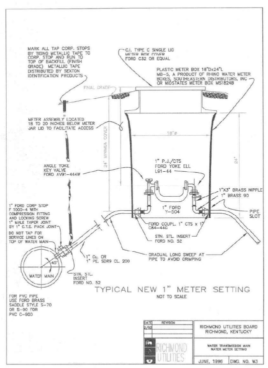
S3 SANITARY SEWER LATERAL
N.T.S.



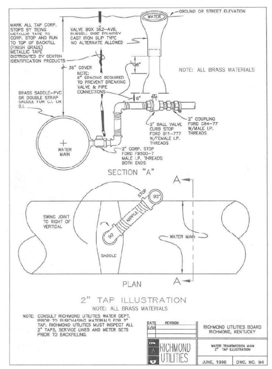
S7 SANITARY SEWER CLEANOUT
N.T.S.



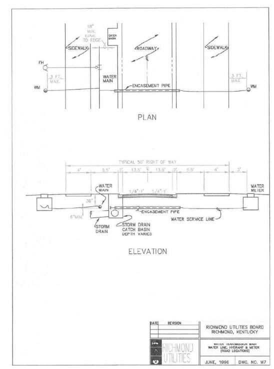
W1 WATER GENERAL NOTES
N.T.S.



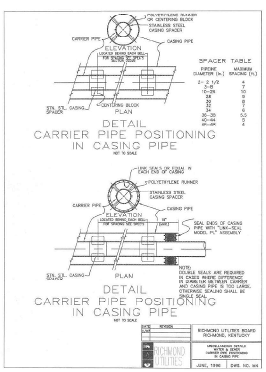
W3 TYPICAL WATER METER SETTING
N.T.S.



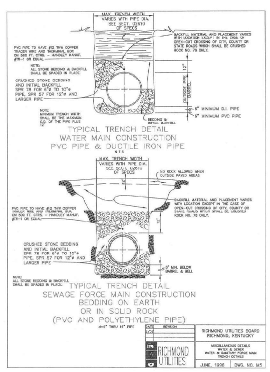
W4 2" TAP OF WATER MAIN
N.T.S.



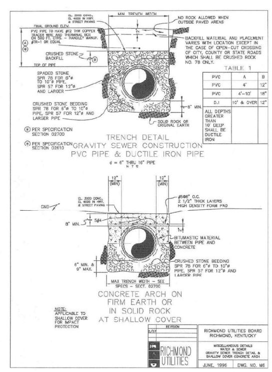
W7 WATERLINE ROAD LOCATIONS
N.T.S.



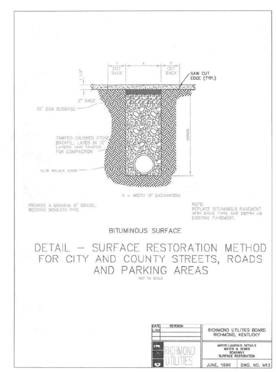
M4 WATERLINE POSTIONING WITHIN ENCASEMENT
N.T.S.



M5 WATERLINE TRENCHING AND BEDDING
N.T.S.



M6 SANITARY SEWER TRENCHING AND BEDDING
N.T.S.



12 ENTRANCE PAVEMENT RESTORATION
N.T.S.

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4-28-2026

SITE DETAILS

EXPRESS OIL CHANGE & TIRE ENGINEERS
2017 LANTERN RIDGE DRIVE
RICHMOND, KENTUCKY

ISSUED FOR CONSTRUCTION

Issue Date:	April, 2026
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AHJ SEAL

Project Number
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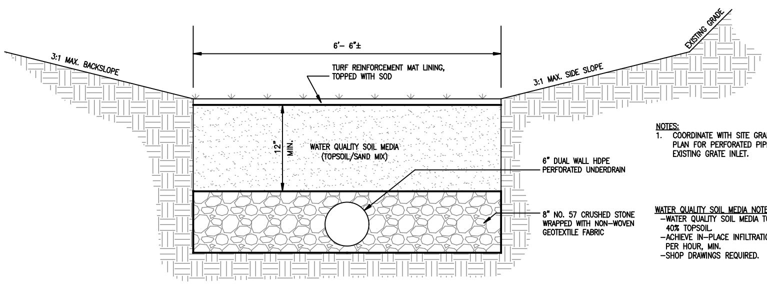
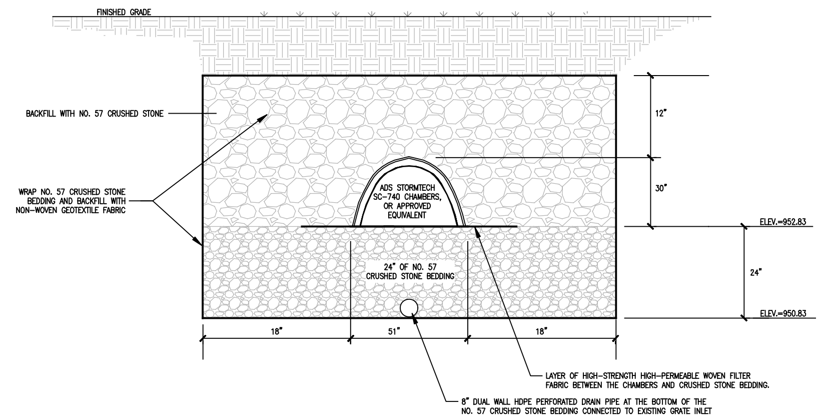


NOTES:
1. COORDINATE WITH SITE GRADING AND DRAINAGE PLAN FOR PERFORATED PIPE CONNECTIONS TO EXISTING GRATE INLET.

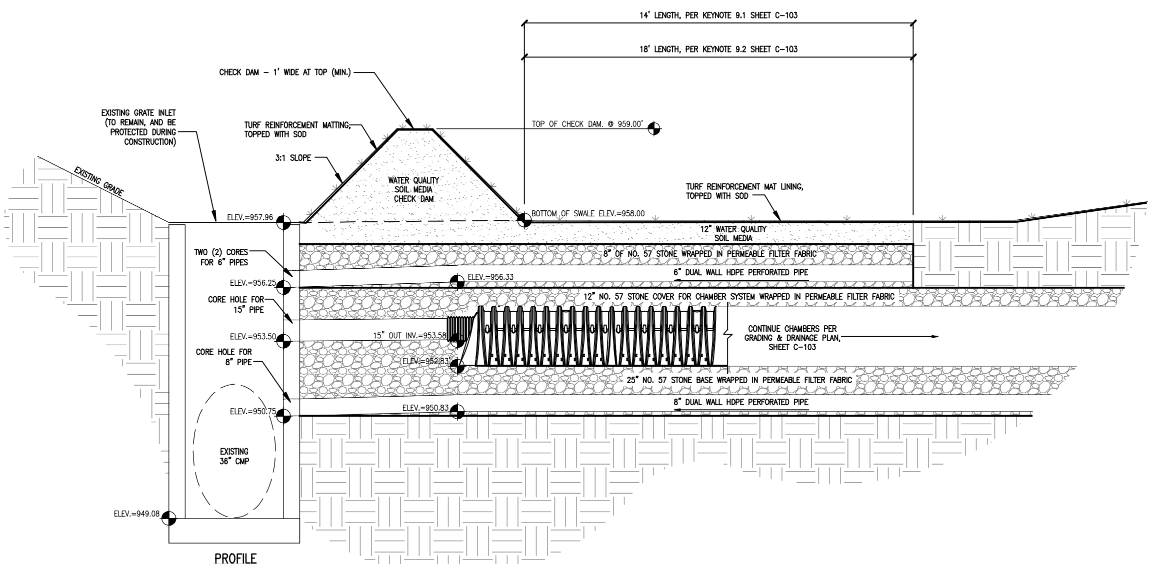
WATER QUALITY SOIL MEDIA NOTES:
- WATER QUALITY SOIL MEDIA TO CONSIST OF 60% SAND, 40% TOPSOIL.
- ACHIEVE IN-PLACE INFILTRATION RATE OF 3 INCHES PER HOUR, MIN.
- SHOP DRAWINGS REQUIRED.

A WATER QUALITY SWALE
N.T.S.



NOTES:
1. SHOP DRAWINGS REQUIRED.
2. UNDERGROUND DETENTION CHAMBER SYSTEM TO BE STORMTECH SC-740 CHAMBERS, OR APPROVED EQUIVALENT.
3. SYSTEM IS TO INCLUDE ALL ACCESSORIES NECESSARY FOR A COMPLETE AND FUNCTIONAL UNDERGROUND DETENTION CHAMBER SYSTEM.
4. CONTRACTOR MUST PROOF-ROLL THE SUB-GRADE WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK IN THE PRESENCE OF THE GEOTECHNICAL ENGINEER PRIOR TO PLACING THE CRUSHED STONE BEDDING. SUB-GRADE THAT FAILS THE PROOF-ROLL TEST MUST BE UNDER-CUT, REPLACED, AND PROOF-ROLLED AGAIN.
5. CONTRACTOR MUST DOCUMENT UNDERGROUND DETENTION CONSTRUCTION WITH PHOTOGRAPHS OF EVERY STAGE OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO THE FOLLOWING, PHOTOGRAPHS OF THE GEOTEXTILE COVERING OF THE SUB-GRADE, 6" PERFORATED PIPE, CRUSHED STONE BEDDING, CHAMBERS AS EACH ROW IS SET, CRUSHED STONE BACKFILL, AND GEOTEXTILE COVERING THE CRUSHED STONE BACKFILL.

B UNDERGROUND WATER QUALITY CHAMBER SYSTEM
N.T.S.



INSTALL WATER QUALITY SWALES AND CHAMBER SYSTEM SHOWN IN THE DETAILS ON THIS SHEET LAST IN CONSTRUCTION SEQUENCE, ONLY AFTER THE SITE WORK IS SUBSTANTIALLY COMPLETE WITH ADEQUATE PAVEMENT AND GRASS COVER.

C WATER QUALITY SWALE AND CHAMBER SYSTEM PROFILE
N.T.S.

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STATE OF KENTUCKY
PATRICK F.S. DEMING
20703
LICENSED
PROFESSIONAL ENGINEER
4-28-2026

SITE DETAILS

EXPRESS OIL CHANGE & TIRE ENGINEERS
2017 LANTERN RIDGE DRIVE
RICHMOND, KENTUCKY

ISSUED FOR CONSTRUCTION

Issue Date:	April, 2026
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Project Number
25054.01

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EXPRESS OIL CHANGE & TIRE ENGINEERS

SINGLE BUILDING / LEFT HAND OIL CHANGE/ REAR ENTER / SIDE TIRE STORAGE

2013 LANTERN RIDGE DRIVE
RICHMOND, KENTUCKY 40475

ATTENTION AUTHORITY HAVING JURISDICTION

Notice is hereby given that Aho Architects, a sole proprietorship, the Architect of Record on the above referenced project, will be providing construction administration services on a limited basis, supplemented by a third-party independent engineering consulting service as described below.

This project has been designed by the Architect and Engineers ("Design Team") for its specific location, or adapted from prototypical designs, to comply with the following codes, ordinances, and similar requirements adopted by the Authority Having Jurisdiction ("AHJ"):

- **See codes listed on Sheet LS100.**

During the Construction Administration Phase of the Project:

- General: The Design Team will respond to inquiries or requests from the Owner or Contractor, specifically related to documents prepared by the Design Team. As is standard in Construction Law and Professional Service Agreements, the Design Team shall not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Project(s), nor shall the Architect be responsible for the Owner's or Contractor's failure to perform the work in accordance with the requirements of the Permit Set Documents. The Architect shall be responsible for the Architect's negligent acts or omissions, but shall not have control over or charge of, and shall not be responsible for, acts or omissions of the Owner, Contractor, or of any other persons or entities performing portions of the work.
- Experienced Contractor: The Owner will use experienced and licensed Contractors familiar with the construction of Projects of this type and in similar locations, and experienced with the applicable building codes, selection of materials and systems, and methods of installation and construction; and able to implement the Permit Set Documents through completion of the Project(s).
- Submittals: The Design Team's Basic Construction Administration Services include review of critical submittals (e.g. shop drawings) by engineering disciplines (Structural). The Design Team shall also review, approve or take other appropriate action on any submittal for which the AHJ requires approval by the Architect/Engineer, as Additional Services.
- Site Visits: The Architect and Design Engineers typically will not be making any site visits unless specifically required to do so.
    - The Owner has been advised and acknowledges that some States and AHJs require the Architect to perform at least some site visits or provide a notice such as this statement.
    - In consideration of this, the Owner will provide site visits, observation, testing, and related work by a third party independent engineering consulting service:
        - The Owner has an agreement with Terracon, a provider of geotechnical, environmental, construction materials and facilities engineering
        - Experienced Professional Engineers or field technicians under the responsible control of a Professional Engineer will perform site observation, construction materials testing, and required Special Inspections (per IBC Chapter 17; see Schedule of Special Inspections on structural drawings provided) including review of construction for conformance with the permit drawings, supplemental drawings, shop drawings/submittals, and similar relevant documents. Written reports shall be provided, with the Design Team included on the distribution list and involved in resolving any deficiencies noted or other items requiring the Design Team's input.
    - If the above provisions are not acceptable to the AHJ and the AHJ gives notice requiring the Architect to make site visit(s), the Owner has agreed to authorize the Architect's Additional Services and Reimbursable Expenses to comply with the AHJ's requirements.

If you have any questions, or if there is anything else we can do for you, please do not hesitate to contact April Cain, the project manager or Tim Aho, Architect at the address/phone listed below, or by email at HYPERLINK "mailto:acain@ahoarch.com" acain@ahoarch.com or HYPERLINK "mailto:taho@ahoarch.com" taho@ahoarch.com . Thank you very much, and we appreciate the opportunity to be involved in this project in your jurisdiction.

*Image above is generic. See Civil for actual site conditions.

**See Material Schedule & Finish Schedule for Additonal Items for actual paint/material colors.

Note:

Owner responsible for reviewing all non-structural submittals / shop drawings.GC shall send the following submittals / shop drawings to the Structural Engineer for review:

Structural Steel (not including stairs)
Bar Joist
Rebar
Metal Deck
Concrete Mix Design

Note:

Full exterior wall mock-up required for Owner's approval prior to ordering materials. No exceptions.

ARCHITECT
AHO ARCHITECTS, A SOLE PROPRIETORSHIP
1855 DATA DRIVE, SUITE 150
HOOVER, ALABAMA 35244
205-983-6000

CIVIL ENGINEER
CMW
249 EAST MAIN STREET SUITE 100
LEXINGTON KENTUCKY, 40507
(859)-254-6623

STRUCTURAL ENGINEER
JOHN JONES, PE, SE
125 18TH STREET NORTH
PELL CITY, ALABAMA 35125
205-884-5334

MECHANICAL / PLUMBING ENGINEER
PINNACLE ENGINEERING, INC.
2031 SHADY CREST DRIVE
HOOVER, ALABAMA 35216
205-733-6912

ELECTRICAL ENGINEER
GIDEON WAMAE, P.E.
4120 OVERLOOK CIRCLE
TRUSSVILLE, ALABAMA 35173
205-413-4112

FINAL

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www.ahoarch.com

TIMOTHY ARNOLD AHO
REGISTERED
NO. 9084
COMMONWEALTH OF KENTUCKY
ARCHITECT
02/27/2026

Express Oil Change & Tire Engineers
Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage
Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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Title Sheet

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

T100

Scale	12" = 1'-0"

5/1/2026 11:35:50 AM

SUMMARY OF CHANGES

PROTOTYPE CHANGES

NO.	DESCRIPTION	NO.	DESCRIPTION
1.	No Pit Ladder		
2.	Pipe downspouts to storm.		

ISSUE FOR PERMIT CHANGES

ISSUED	REVISION #	DESCRIPTION	REVISED SHEETS	ISSUED	REVISION #	DESCRIPTION	REVISED SHEETS
			None				

ISSUE FOR BID CHANGES

ISSUED	REVISION #	DESCRIPTION	REVISED SHEETS	ISSUED	REVISION #	DESCRIPTION	REVISED SHEETS
04/20/2026	IFB - 0	Updated Spec Section 074113.16 and 083113, Added wall between Storage 12 & Storage 13, adjusted wall location between Toilet Room 8 and Manager 7, added guardrails at exterior exit doors, per AHJ requirements. Added stair width dimension.	G200, G201, LS102, LS103				
04/20/2026	IFB - 0	Updated door 1 to swing outward. Updated enlarged floor plans to show clear space at toilet rooms. Updated RCP for 1 hour fire rated ceiling assembly in Storage 13. Updated the roof access ladder location on the equipment platform.	A100, A103, A104, A106				
04/20/2026	IFB - 0	Updated roof plan for roof hatch location. Updated exterior elevations for adding guardrails at exit doors (AHJ Requirement), updateing Storefront E window to remove horizontal mullion, Updated building section for roof ladder relocation and adding attic access door.	A107, A200-A203, A300				
04/20/2026	IFB - 0	Updated stair sections to show guardrail / barrier below the stairs (AHJ Requirement), Added attic access door (A302), Updated keynote 331 for the guard at the equipment platform, added wall type I4a and ceiling type L1, updated 12/A602 for storefront modification.	A301, A302, A400, A602				
04/20/2026	IFB - 0	Updated A610 for added wall, updated door schedule for added fire rated door 29 and omitted rating requirement for door 23. Updated Storefront elevation E. Updated Finish Schedule (A621), S0.1 revised to update Basic Windspeed under Design Loads	A610, A620, A621, S0.1				
04/20/2026	IFB - 0	Updated Sheet S1.1 for added masonry wall. Revised Sheet S3.1 for roof hatch location on roof framing plan. P1.02 revised to relocate the electric water heater and recirculating pump. E100 revised to add note 24, E400 updated power for water heater & recirculating pump.	S1.1, S3.1, P1.02, E100, E400				

ISSUE FOR CONSTRUCTION CHANGES

ISSUED	REVISION #	DESCRIPTION	REVISED SHEETS	ISSUED	REVISION #	DESCRIPTION	REVISED SHEETS

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TIMOTHY ARNOLD AHO
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ARCHITECT
02/27/2026

Express Oil Change & Tire Engineers
Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage
Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

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Summary of Changes

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

G100

Scale 12" = 1'-0"

5/1/2026 11:35:50 AM

GENERAL PROJECT NOTES

1. These documents are considered accurate and true to the best knowledge of the Architect at this time, but do not necessarily represent, nor are they intended to represent, actual existing conditions, dimensions, and tolerances. Contractor shall field-verify existing conditions including, but not limited to materials, construction, elevations, and dimensions prior to bidding and undertaking the work. Items of concern shall be brought to the attention of the Architect. Submittal of a proposal (bid) by a Contractor and their Subcontractors shall constitute an acknowledgement and confirmation of having complied with these requirements.
2. All work shall comply with all applicable local, state, and national codes, rules, ordinances and regulations and authorities having jurisdiction.
3. The Contractor shall comply with all applicable provisions of the specifications, including, but not limited to all general conditions, supplementary general conditions, special conditions, and material and construction provisions, which apply to materials or construction methods required by this project.
4. Where warranties are concerned, Contractor shall follow manufacturer's standards and recommendations unless specifically directed otherwise. Any conditions which might negatively affect the warranty shall be brought to the attention of the Architect in advance.
5. The Owner and Contractor shall promptly report to the Architect any defects, suspected defects, or discrepancies in the Architect 's work or services of which the Owner or Contractor may become aware, so that the Architect may take measures to minimize the consequences of such a defect. Failure to notify the Architect shall relieve the Architect of costs of remedying the defects above the sum such remedy would have cost had prompt notification been given.
6. Neither the professional activities of the Architect, nor the presence of the Architect or its employees and consultants at a construction site shall relieve the Contractor or others of their obligations, duties, and responsibilities including, but not limited to: construction means and methods, sequence, techniques, or procedures necessary for performing, superintending, or coordinating all portions of the work in accordance with the contract documents and any health and safety precautions required by agencies having jurisdictional authority over the project. The Architect and its personnel have no authority to exercise control over any Contractor or other entity or their employees in connection with their means, methods, or safety precautions. The Contractor is solely responsible for jobsite safety. The Owner, Architect, and their Consultants shall be indemnified and shall be made additional insureds under the Contractor's general liability insurance policy.
7. All work, unless specifically indicated otherwise, shall be the responsibility of the General Contractor and shall be performed by the tradesmen skilled in the required field.
8. "Provide" shall mean to furnish and install, complete and ready for intended use.
9. Provide pressure treated wood where in contact with concrete or masonry.
10. The Contractor shall be responsible for all cutting, fitting, and patching that may be required to complete the work.
11. Dimensions of existing construction and repetitive dimensions are sometimes omitted. Detailed dimensions not indicated may be found on large-scale drawings of the same areas. Drawings are intended to reflect the existing conditions as closely as possible, however, the Contractor shall field verify and accept all existing conditions and dimensions. Notify Architect of any discrepancies affecting the work.
12. Provide all temporary services required to facilitate the work indicated, including but not limited to the following: power, lighting, heat, and water.
13. The Contractor(s) shall provide all barriers, shoring, warning lights, etc. as required to conduct the work and maintain the site in a safe condition consistent with good construction practices and with all applicable rules and regulations.
14. All exist. utility services including domestic water, sanitary sewer, electricity, fuel oil and/or gas shall be disconnected and made safe prior to any demolition work. Any work which might require interruption of utility services to Owner or other tenants, shall be approved and coordinated beforehand with the Owner.
15. It is the intent of the bid and construction documents to indicate complete and fully operational systems (i.e. structural, HVAC, plumbing, electrical, roofing, etc.). The Contractor shall provide operational systems and testing which comply with applicable codes, regulations, and requirements of authorities having jurisdiction.
16. Any work or utility outages which might disrupt the operations of the Owner or others shall be approved and coordinated in advance with the Owner and the Architect. The Contractor shall give the Owner and Architect at least three days advance notice prior to undertaking work which might cause disruption. Activities which produce utility outages, excessive noise, dust and other disruption shall be coordinated with the Owner and Architect. Some of these activities may need to occur at "off hours" to minimize disruption of the Owner's operations.
17. All wood blocking, trim, decking, etc. shall be decay-resistant treated, or as specified.
18. To prepare substrate for all wall mounted items, wall fixture, toilet accessories, etc. - fill all voids in the CMU surface to provide a sound base (provide blocking in stud walls) for all new wall mounted items, fixtures, etc. Install per manufacturer's specifications and recommendations.
19. Do not paint any caulking or sealants which are subject to movement. Control joints shall be caulked after paint and special coating applications. Provide caulking or sealants in colors which match adjacent finished surface as approved by the Architect.
20. Bidders shall be responsible for obtaining a copy of the Geotech Report from the Owner.
21. The project may include some items that are delegated design. Bidders shall ensure these items are covered in their base bid.
22. All questions that affect cost, time, etc. shall be presented in the form of RFI's to the Architect prior to bid.

ENERGY CODE EXEMPTION

Per 2012 International Energy Conservation Code:

C101.5.2 Low Energy Buildings. The following buildings, or portions thereof, separated from the remainder of the building by building thermal envelope assemblies complying with this code, shall be exempt from the building thermal envelope provisions this code:

1. Those with a peak design rate of energy usage less than 3.4 Btu/h x ft2 or 1.0 watt/ft2 of floor area for space conditioning purposes.
2. Those that do not contain "conditioned space".

Per Chapter 2:
Definition of Conditioned Space: An area or room within a building being heated or cooled, containing uninsulated ducts, or with a fixed opening directly into an adjacent conditioned space.

While the Oil Change & Service areas do have unit heaters, during normal operations, the Oil Change, Service, and Pit areas are **not enclosed** and are outside the building thermal envelope assembly. These areas are separated from the remainder of the building by building thermal envelope assemblies complying with this code. Later versions of the IECC (2018 and 2021) allow radiant heaters to be installed outside the building thermal envelope. Therefore, these areas shall be exempt from the building thermal envelope provisions of this code.

GENERAL ACCESSIBILITY NOTES

1. All door hardware shall be accessible type per section 404 of the 2009 ICC A117.1 / 2010 ADA Standards.
2. All walking surfaces shall have a maximum slope of 1:20 per section 405 of the 2009 ICC A117.1 / 2010 ADA Standards
3. All floor or ground surfaces shall be stable, firm, and slip resistant per section 302 of the 2009 ICC A117.1 / 2010 ADA Standards
4. Changes in level of 1/4" high maximum shall be permitted to be vertical per section 303 of the 2009 ICC A117.1 / 2010 ADA Standards
5. Provide maneuvering clearances at manual swinging doors per section 404 of the 2009 ICC A117.1 / 2010 ADA Standards
6. ADA mounting heights, dimensions, tolerances, etc. shall apply to all construction and the location of all fixtures, etc. unless specifically noted otherwise.

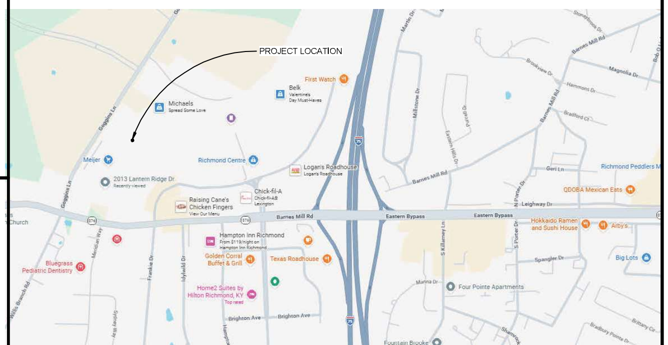
GENERAL INTERIOR NOTES

1. Quantities (area, perimeter, etc.) shown on finish schedule are approximate and are provided as a convenience to the Contractor. Actual quantities may vary and it is the responsibility of the Contractor to field verify.
2. Anything specified with a directional pattern (e.g. brushed aluminum, wood grain laminate, etc.) the pattern shall go in the same direction as directed by Architect.
3. The Contractor shall provide all necessary blocking in walls for support of all equipment, shelving, accessories, grab bars, wall hung lavatories, and other required elements.
4. Provide pressure treated wood where in contact with concrete or masonry.
5. Ease all edges on casework to prevent sharp corners.
6. Paint all HVAC wall grilles to match adjacent surface color unless otherwise noted or instructed by the Architect.
7. Use moisture resistant gypsum board at all walls subject to moisture unless wall will be subject to standing water or frequent wetting in which case you shall use cementitious backer.
8. Provide thresholds where required. All shall be ADA compliant.
9. All gypsum board to have a level 4 finish unless otherwise indicated.

BIDDING INQUIRES

Company: Express Oil Change
Contact: Chris Plummer
E-Mail: chris.plummer@expressoil.com
Phone: 205-945-1771

Note: Sub-contractors to call bidding General Contractor for questions



Express Oil Change & Tire Engineers
2013 Lantern Ridge Drive
Richmond KY, 40475

NORTH

Sheet Index	
Sheet Number	Sheet Name
T100	Title Sheet
G100	Summary of Changes
G200	Architectural Specifications
G201	Architectural Specifications
G202	Architectural Specifications
G300	Architectural Specifications & EOC Standards - Exterior
G301	EOC Standards - Interior
G400	Building COMCheck
LS100	Life Safety / Code Summary
LS101	Life Safety / Code Summary
LS102	Life Safety Plan - Main
LS103	Life Safety - Pit
AS100	Architectural Site Plan
A100	Floor Plan - Main
A101	Pit Floor Plan and Site Details
A102	Foundation Details
A103	Enlarged Floor Plans and Details
A104	Reflected Ceiling Plan - Main
A105	Reflected Ceiling Plan - Pit
A107	Roof Plan
A106	Floor Plan - Platform
A200	Exterior Elevation - False Front (West)
A201	Exterior Elevation - Rear Entry (East)
A202	Exterior Elevation - Left (North)
A203	Exterior Elevation - Right (South)
A300	Building Sections
A301	Building Sections
A302	Building Sections
A303	Building Sections
A304	Wall Sections and Details
A400	Wall Types
A600	Interior Elevations
A601	Interior Elevations
A602	Interior Elevations
A605	Interior Dimensional Info.
A610	Floor Finishes - Main
A611	Floor Finishes - Pit
A620	Schedules
A621	Finish Schedules & Head, Jamb, and Sill Details
R100	3D Views
R101	3D Views
S0.1	General Notes
S0.2	Typical Details
S0.3	Schedules
S1.1	Foundation Plan
S3.1	Roof Framing Plan
S5.1	Sections and Details
S5.2	Sections and Details
S5.3	Sections and Details
M0.01	Mechanical Legend, Abbreviations and Schedules
M0.02	Mechanical Specifications
M0.03	Mechanical Specifications
M0.04	Mechanical ComCheck
M1.01	Mechanical Floor Plan
M1.02	Partial Mechanical Floor Plans - Pit and Platform
M1.03	Mechanical Roof Plan
M2.01	Mechanical Details
M2.02	Mechanical Details
P0.01	Plumbing Legend, Abbreviations, and Schedules
P0.02	Plumbing Specifications
P0.03	Plumbing Specifications
P1.01	Plumbing Floor Plan - Gravity
P1.02	Plumbing Floor Plan - Pressure
P1.03	Partial Plumbing Plans - Pit and Platform
P2.01	Gravity Riser
P2.02	Pressure Riser
P3.01	Plumbing Details
E100	General Notes and Fixture Schedules
E101	Symbol Legends and Details
E102	Single Line Diagram and Panelboard Schedules
E103	Details
E104	Site Plan - Electrical
E200	Main Level Plan - Lighting
E201	Pit Level Plan - Lighting
E300	Main Level Plan - Power & Voice/Data
E301	Pit Level Plan - Power & Voice/ Data
E400	Main Level Plan - Elec. Conn. to Mech.
E401	Roof Plan - Electrical Connection to Mechanical
E500	Specifications
E600	ComCheck
E700	Site Plan - Photometrics

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02/27/2026

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Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage
Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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General Information

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

G101

Scale 12" = 1'-0"

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GENERAL NOTES

1. GENERAL CONTRACTOR SHALL ENSURE EACH OF THE FOLLOWING HAVE BEEN REVIEWED BY THE MANUFACTURER FOR COMPLIANCE WITH LOCAL CONDITIONS/REQUIREMENTS PRIOR TO BIDDING/ORDERING/INSTALLING: ROOFING, DOORS, WINDOWS/STOREFRONT, GLAZING, DOOR HARDWARE, PAINT, AND FIRE EXTINGUISHERS.
2. GENERAL CONTRACTOR SHALL PROVIDE SUBMITTALS / SHOP DRAWINGS FOR EACH PRODUCT LISTED UNDER ARCHITECTURAL SPECIFICATIONS. ALL SUBMITTALS / SHOP DRAWINGS ARE TO BE APPROVED BY THE OWNER AND/OR THE A/E PRIOR TO ORDERING.
3. PROVIDE MANUFACTURER'S STANDARD WARRANTY FOR ALL SPECIFIED PRODUCTS.
4. ALL EXTERIOR SIGNAGE AND SCONCES BY OTHERS.
5. ALL FURNITURE AND EQUIPMENT BY OTHERS. COORDINATE PLACEMENT WITH OWNER PRIOR TO ROUGHING IN REQUIRED UTILITIES.
6. ALL COMPARABLE PRODUCTS TO BE REVIEWED AND APPROVED BY THE OWNER PRIOR TO BID.
7. GC SHALL BE RESPONSIBLE FOR CHECKING WITH THE LOCAL AHJ ON ANY DEFERRED SUBMITTALS THAT MAY BE REQUIRED TO BE APPROVED BY THE AHJ PRIOR TO CONSTRUCTION.

DIVISION 4 - MASONRY

042200 - Concrete Unit Masonry

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Echelon, An Oldcastle Company or a comparable product by an approved manufacturer.

Products

A. Concrete Masonry Units
   1. Finish: Smooth and split-face
   2. Min. Compressive Strength: See Structural
   3. Density Classification: See Structural
   4. Provide types, shapes and sizes as indicated
   5. Integral Water Repellent: Provide RainBloc 80 by ACM Chemistries or a comparable product by an approved manufacturer.

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Argos or an approved comparable product by an approved manufacturer.

Products

B. Mortar
   1. Type: See Structural
   2. Color: Standard Gray.
   3. Liquid Mortar Additive: Provide RainBloc for Mortar or a comparable product by an approved manufacturer.

Subject to compliance with requirements, provide products indicated below:

Products

C. Joint Reinforcement
   1. Type: Hot dipped galvanized, carbon steel (ladder)
   2. Size: 0.187" diameter
   3. Length: Not less than 10'

*Provide full exterior wall mock-up for Owner's Approval prior to ordering. No Exceptions.

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Mortar Net Solutions or an approved comparable products by an approved manufacturer.

Subject to compliance with requirements, provide products indicated below:

D. Single Wythe Concrete Masonry Unit Drainage System
   1. BlockFlash

DIVISION 5 - METALS

055000- Metal Fabrications

Products:

A. Concrete-filled Steel Pipe Bollards
   1. Material: Schedule 40 steel pipe
   2. Height: 3'-6"
   3. Diameter: 4"
   4. Finish: Painted (See Finish Schedule)

Installation:
See drawings for installation details.

055113- Metal Pan Stairs

Delegated Design: Engage a qualified professional engineer to design stairs and railings and provide sealed calculations and drawings.

Products:

A. Metal Pan Stairs
   1. Steel Sheet Thickness: 0.067" minimum
   2. Uniform Load: 100 lbf/sf
   3. Concentrated Load: 300 lbf applied on an area of 4 sq. in.
   4. Finish: Painted (See Finish Schedule)
   5. Uniform and concentrated loads need not be assumed to act concurrently.
   6. Stair Framing: Capable of withstanding stresses resulting from railing loads in addition to loads specified above.

B. Stair Tread Bar Ribbed Abrasive Nosing
   1. Basis of Design: Nystrom Model V951
   2. Extents: Install Nosing to the full length of steps
   3. Color: Safety Yellow
   4. Type: Short Nose, Aluminum Extruded Anchor

C. Stair Railings
   1. Rails and Posts: 1 5/8" diameter
   2. Picket Infill: 1/2" round pickets spaced less than 4 inches clear.

D. Installation: Install per manufacturer's standard written instructions.

E. Warranty: Provide manufacturer's standard material warranty.

055133 - Ladders

Manufacturers:
Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Grainger, or a comparable product by an approved manufacturer:

Product:

A. Fixed Welded-Steel Ladder by Grainger
   1. Model F9S C1 Cotterman Fixed (Roof Ladder)
      a. Width: 20 inches
      b. Height: 9 feet

Installation:
Install ladder according to manufacturer's written instructions.

055213- Pipe and Tube Railings

Delegated Design: Engage a qualified professional engineer to design stairs and railings and provide sealed calculations and drawings.

A. Handrails & Top Rails of Guards
   1. Rails and Posts: 1 1/2" diameter
   2. Uniform Load: 50lbf/ft in any direction.
   3. Concentrated Load: 200 lbf applied in any direction
   4. Uniform and concentrated loads need not be assumed to act concurrently.
   5. Type: F or S
   6. Material: Schedule 40
   7. Finish: Painted (See Finish Schedule)
   8. Seismic Performance: See Structural

B. Infill of Guards
   1. Concentrated Load: 50 lbf applied horizontally on an area of 1 SF.
   2. Infill load and other loads need not be assumed to act concurrently.

Installation:
Install stairs and railings according to manufacturers' written instructions and with welded connections.

DIVISION 6 - WOOD, PLASTICS AND COMPOSITES

061000- Rough Carpentry

Products:

A. Framing with Dimensional Lumber (Interior Non-Load-Bearing)
   1. Thoroughly Dried
   2. No. 2 Southern Yellow Pine or No. 2 Douglas Fir
   3. Of sizes, shapes, and lengths required.
   4. Moisture content shall not exceed 19% at time of installation

B. Miscellaneous Lumber (e.g. Blocking, Furring, etc.)
   1. Thoroughly Dried
   2. No. 2 Southern Yellow Pine or No. 2 Douglas Fir
   3. Of sizes, shapes, and lengths required.
   4. Moisture content shall not exceed 19% at time of installation

C. Temporary Bracing, Shoring, etc. as required
   1. Thoroughly Dried
   2. No. 2 Southern Yellow Pine or No. 2 Douglas Fir
   3. Of sizes, shapes, and lengths required.
   4. Moisture content shall not exceed 19% at time of installation

D. Plywood decking (Platform)
   1. Plywood Type: Exposure 1
   2. Plywood Grade: BC
   3. Thickness: As indicated on drawings
   4. Square Edge
   5. Class: C Fire Rating
   6. Flame Spread Rating 76-200 / Smoke Developed Index <450

E. Plywood decking (Dumpster Roof and Sheathing)
   1. Plywood Type: Exposure 1
   2. Plywood Grade: BC
   3. Thickness: As indicated on drawings
   4. Square Edge

Note:
1. All plywood which has any edge or surface permanently exposed to the weather shall be of the exterior type.
2. All wood exposed to weather and/or in contact with masonry or concrete shall be pressure-treated lumber.

061533- Composite Decking

Products

A. Plastic Decking for Dumpster Enclosure Doors
   1. Composite plastic lumber
   2. Solid shapes made from a mixture of cellulose fiber and polyethylene or polypropylene.
   3. Surface Texture: Smooth.
   4. Color: See Finish Schedule.
   5. Size: See dumpster details.

Installation:
Install plastic decking according to manufacturers' written instructions.

Warranty:
Provide manufacturer's standard material warranty.

066400 Plastic Paneling (Fiberglass Reinforced Panels)

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Marlite Wall Systems, or a comparable product by one of the following:

1. Kal-Lite
2. Crane Composites
3. Panolam

Product Requirements:

A. Provide standard FRP (Fiber Reinforced Plastic) panels in 4' x 8' textured panels.
B. Color: As indicated on the Finish Schedule.
C. Conform to all building code requirements for interior finish for smoke and flame spread requirements tested in accordance with ASTM 84
D. Wall required Rating - Class A

Submittals:
Submit shop drawings (elevations of each wall) showing location of paneling and trim members.

Installation:
A. Install per manufacturer's written standards.

Warranty:
A. Provide manufacturer's standard warranty.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

071900- Water Repellents

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Ghostshield or a comparable product from an approved manufacturer.

Products

A. Water Repellant
   1. ISO-Tek 8540
   2. Color: Clear

Installation:
Install water repellents according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

072100- Thermal Insulation

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Owens Corning, or a comparable product by one of the following:

1. Johns Manville
2. CertainTeed

Products:

A. Kraft Faced (Vapor Retarder) Batt Insulation:
   1. EcoTouch PINK Fiberglass Insulation
   2. R-20 & R-38; where indicated
B. Continuous Rigid Insulation:
   1. R-9.1 ci, where indicated
   2. R-10; where indicated

Installation:
Install insulation and accessories according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard material warranty.

072400 Exterior Insulation and Finish System

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Dryvit Systems, Inc, or a comparable product by an approved manufacturer.

Products: Dryvit Systems, Inc., One Energy Way, West Warwick, RI 02893, 800-556-7752, HYPERLINK "http://www.dryvit.com" www.dryvit.com.

A. Molded, (Expanded) Rigid Cellular Polystyrene Board Insulation (Pre-Wrapped / Pre- base coated Architectural Shapes): Comply with ASTM E 2430/E 2430M.

   Provide pre-coated architectural shapes which include base coat and reinforcing mesh provided.

   1. Cornice Shape: Product number 205C166 604
   2. Trim: Product number 205T154 604

System Description:

A. The Dryvit Direct Apply is an Exterior Insulation and Finish System (EIFS):
   1. Water-resistive barrier membrane (for use at EIFS only): Basis-of-Design: Backstop NTX
   2. Adhesive: Basis-of-Design, as per Manufacturer's recommendation: Chemex-Pro. Installed in vertical ribbons to facilitate egress of incidental moisture
   3. Rigid expanded polystyrene insulation board.
   4. Base Coat (included in pre-coated shapes)
   5. Reinforcing Mesh (included in pre-coated shapes)
   6. Finish Coat
   7. Flashing materials

B. Pre-Installation Requirement: Contractor is to provide a mock-up of EIFS Finish for Owner's approval. This is required. No Exceptions.

C. Installation:
   1. Install on clean and dry unpainted brick, concrete or masonry, free of loose material and irregularties in accordance with ASTM C1397 and the Exterior Insulation and Finish System manufacturer's application instructions.
   2. Contractor's Option: Install EIFS system using Pre-buck Engineered Framing system for Parapet Cap in lieu of wood framing and plywood as shown in section detail drawing. If using Pre-Buck system, contractor must install per manufacturer's written installation instructions/ requirements.

C. Finish:
   1. Freestyle: Fine Texture
   2. Color (See Finish Schedule)

Warranty: Provide manufacturer's standard warranty.

072600 Vapor Retarders

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Reef Industries, or a comparable product by an approved manufacturer.

Products:

A. Reinforced Under Slab Vapor Retarder:
   1. Griffolyn 10 Mil Green
   2. Thickness: 10 mil
   3. Max Perm Rating: 0.1 perm
   4. Lap: 12" and tape with manufacturer recommended tape

Installation:
Install vapor retarders according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

072715 - Self-Adhesive Membrane Air Barrier

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by W.R. Meadows, or a comparable product by an approved manufacturer.

Products:

A. Self-Adhesive Air Barrier Sheet Membrane: Fully adhered, sheet membrane, vapor permeable air and water resistive barrier.

   1. Air-Shield SMP

Installation:
Install self adhered membrane air barriers according to manufacturers' written instructions.

Warranty:
Provide manufacturer's standard product warranty.

072726- Fluid-Applied Membrane Air Barrier

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by W.R. Meadows, or a comparable product by an approved manufacturer.

Products:

A. Liquid Membrane Air/Vapor & Liquid Moisture Barrier
   1. Air-Shield LMP

Installation:
Install fluid applied membrane air barriers according to manufacturers' written instructions.

Warranty:
Provide manufacturer's standard product warranty.

074113.16- Standing-Seam Metal Roof Panels (Standard)

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Berridge Manufacturing Co. or comparable product by an approved manufacturer.

Products:

A. Metal Panel: Cee-Lock

   1. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E 1592.
      a. Wind Loads: See Structural.
      b. Other Design Loads: See Structural.
      c. Deflection Limits: See Structural.
   2. Air Infiltration: Air leakage of not more than 0.06 cfm/sq. ft when tested according to ASTM E 1680 and ASTM E 283 at the following test-pressure difference:
      a. Test-Pressure Difference: 6.24 lbf/sq.ft.
   3. Water Penetration under Static Pressure: No water penetration when tested according to ASTM E 1646 and ASTM E 331 at the following test-pressure difference:
      a. Test-Pressure Difference: 15 lbf/sq.ft.
   4. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift-resistance class indicated.
      a. Uplift Rating: UL 90.
   5. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects.
   6. Material: Metallic coated steel
   7. Nominal Thickness: 24 gauge
   8. Finish: Two-coat fluoropolymer.
   9. Color: See Finish Schedule (verify sample with Owner prior to ordering)
   10. Panel Coverage: 16.5 inches
   11. Panel Height: 1.5 inches
   12. Slope: As indicated

B Substrate / Underlayment
   1. 5/8" exterior grade plywood with two layer of 15# felt (FL Product Approval #10626.2)

C. Ridge/Hip Cap
   1. Provide preformed ridge/hip cap by roofing manufacturer.
   2. Color: Match Roof Color.
   3. Material: Match Roof.

IFB-0

D. Snowguards
   1. Provide snowguards as required by the 2018 Kentucky Building Code.

Installation:
Install metal panels, underlayment, vents, and accessories according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard material and product warranties.

074293 Soffit Panels (Standard)

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by James Hardie Building Products, Inc. or a comparable product by an approved manufacturer.

Products:

A. Smooth Vented Soffits

   1. Structural Performance: Provide soffit systems capable of withstanding the effects of the following loads:
      a. Wind Loads: See Structural.
      b. Deflection Limits: See Structural.
   2. Net Free Area: 5 sq. in. per linear foot.
   3. Width: 12"
   4. Thickness: 0.25"
   5. Color: Painted, (See Finish Schedule)
   6. Jointing: Provide paintable PVC "H" Jointer between panels.

Installation:
Install soffit panels and accessories according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard material warranty.

075423- Thermoplastic Polyolefin (TPO) Roofing:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Versico or comparable product by an approved manufacturer.

Products:

A. VersiWeld 60 mil TPO fully adhered.

   1. ASTM D6878

   (Florida Approval Number: FL 14207) Please Note: System must be selected based on design pressures per Structural drawing sheet S0.2.

B. Underlayment: 1/2" Securock Gypsum Fiber Cover Board

C. Polyisocyanurate Insulation

   1. Thickness: R-25

D. Roof Walkways (if required)

   1. VersaWeld Heat Weldable Walkway Rolls

      a. Color: White
      b. Thickness: 180 mils
      c. As an option, walkway rolls may be fully adhered to the membrane surface with QA Seam Tape/ TPO Primer.

Installation:
Install TPO, underlayment, insulation, vents, accessories, etc., according manufacturer's published installation instructions.

Warranty:
Provide 20 Year NDL Manufacturers full system warranty

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FINAL

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IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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Architectural Specifications

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

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Scale 12" = 1'-0"

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076200 - Sheet Metal Flashing and Trim (Standard)

Provide products indicated for formed low-slope roof sheet metal fabrications:

A. Copings: Fabricate in minimum 96-inch-long, but not exceeding 12-foot-long, sections. Fabricate joint plates of same thickness as copings. Furnish with continuous cleats to support edge of external leg and interior leg. Miter corners, fasten and seal to be watertight. Shop fabricate interior and exterior corners.
Form sheet metal to fit substrates without excessive oil canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view. Form seams and seal joints as required by manufacturer for watertight construction.

1. Fabricate from one of the Following Materials:
   a. Galvanized Steel: 0.040 inch thick.
   b. Aluminum-Zinc Alloy-Coated Steel: 0.040 inch
2. Fabricate coping cap to include :
   a. Face Dimension: 6 inches minimum (Building)
   b. Back Dimension: 6 inches minimum (Building)

A. Performance Requirements:
1. Sheet metal flashing and trim assemblies shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.
2. Sheet Metal Standard for Flashing and Trim: Comply with NRCA's "The NRCA Roofing Manual" and SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.
3. SPRI Wind Design Standard: Manufacture and install copings and roof edge flashings tested according to SPRI ES-1 and capable of resisting the design pressure as specified on sheets S0.1 and S0.3
4. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.
   a. Temperature Change: 120 deg. F., ambient; 180 deg. F, material surfaces

B. Quality Assurance:
1. Fabricator Qualifications: Employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.
   a. For copings and roof edge flashings that are SPRI ES-1 tested, shop shall be listed as able to fabricate required details as tested and approved.

C. Sheet Metals:
1. Metallic-Coated Steel Sheet: Provide zinc-coated (galvanized) steel sheet according to ASTM A 653/A 653M, G90 coating designation or aluminum-zinc alloy-coated steel sheet according to ASTM A 792/A 792M, Class AZ50 coating designation, Grade 40; prepainted by coil-coating process to comply with ASTM A 755/A 755M.
   a. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
      1. Color: See Finish Schedule

C. Warranty:
1. Special Warranty on Finishes: Manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.
   a. Finish Warranty Period: 10 years from date of Substantial Completion.

077100- Roof Specialties (Standard)

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Roof Drainage Components & Accessories, Inc. or a comparable product by an approved manufacturer.

Products:

A. Gutters (alum.):
1. Style:Smooth Box Gutter - "F" Style
2. Size: 5"
3. Color: Match Roof Color

B. Conductor head w/ built-in overflow (alum.): Match downspout color.

C. Downspouts (alum.):
1. Style: Smooth Box Downspout
2. Size: 3"x4"
3. Color: As indicated on Finish Schedule

D. Downspout elbow / boot - Match downspout color

E. Straps
1. Smooth Box Downspout Strap.
2. Color: Match downspout color.

F. Thru-wall scuppers- match downspout color.
1. Size: 8" wide x 8" high

G. Thru-wall emergency roof scuppers - match downspout color:
1. Size 4" wide x 4" high

077100- Roof Specialties (Standard)

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Hickman Edge Systems, LLC or comparable product by an approved manufacturer.

Products:

A. Coping Cap (for Dumpster Enclosure only)
1. Product: Permasnap Premier Coping
2. 24 gauge w/ kynar finish
3. Color: See Finish Schedule
4. Face Dimension: 4 inches minimum
5. Back Dimension: 4 inches minimum

Installation:
Install roof specialties according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard material warranty.

077233 - Roof Hatch

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Babcock -Davis or a comparable product by an approved manufacturer.

Product:

A. Roof Hatch [FL. Product Approval #40712.1]

1. Model: BRHJA30X54S1T (BA3054)
2. Size: 30 inch x 54 inch
3. Accessories:
   a. Provide manufacturer's standard safety post for installation on fixed ladders mounted below hatch cover. Tubular post shall lock when fully extended. Release lever shall disengage the post to allow it to return to a lowered position.

Installation:
Install roof specialties according to manufacturers' written instructions.
Coordinate installation with installation of roof deck, structure, roofing membrane and base flashing.
Coordinate installation of sealant and roofing cement with work of this section to ensure water tightness.

Warranty:
Provide manufacturers' standard material warranty for hatch and all accessory items.

078443 - Joint Firestopping

Basis-of-Design Product: For joints in or between Fire-Resistance-Rated Construction: Subject to compliance with requirements, provide products indicated below by Tremco, or a comparable product by one of the following:

1. 3M Fire Protection Products
2. Owens Corning
3. Hilti, Inc.
4. ROCKWOOL

A. **Scope:** Work specified under this Section includes all labor, materials, equipment, services, accessories and coordination as required to furnish and install all firestopping systems including but not limited to, the following:
1. Firestopping sealant, firesafing and material required to render all fire rated assemblies fire and smoke tight in accordance with applicable codes, ordinances and requirements.
2. Penetrations of fire rated materials or assemblies shall be sealed by the trade whose work required the penetration, unless a firestop contractor is designated by the Contractor

B. **System Description/ Design Requirements:**
1. Fire-Rated Construction: Maintain vertical and horizontal barrier, structural floor-ceiling, and roof-ceiling fire resistance ratings at all penetrations, connections with other surfaces or types of construction, at separations required to permit building movement and sound or vibration absorption, and at other construction gaps.
2. Smoke Barrier Construction: Maintain vertical barrier and structural floor resistance to cold smoke at all penetrations, connections with other surfaces and types of construction and at all separations required to permit building movement and sound or vibration absorption, and at other construction gaps.
Provide products that upon curing, do not re-emulsify, dissolve, leach, breakdown or otherwise deteriorate over time from exposure to atmospheric moisture, sweating pipes, ponding water or other forms of moisture.
4. Provide firestop products that do not contain ethylene glycol.
5. Fire resistance rating must be equal to or exceed the fire resistance rating of the wall, floor or roof in or between which it is installed.
6. Exposed Joint firestopping systems must have a flame-spread and smoke-developed index of less than 25 and 450, respectively, as determined per ASTM E84

C. Installation:

1. Firestopping shall be installed at locations where openings are made and where shown or specified in accordance with manufacturer's written instructions, fire test assembly and as indicated on drawings.
2. Firestopping materials shall completely fill all void spaces regardless of geometric configuration and subject to tolerances established by the manufacturer.
3. Firestopping shall be installed at all piping, electrical conduit and cables,and ductwork penetrating fire rated assemblies and seal holes or voids made by penetrations to ensure an effective fire or fire/smoke barrier. Fire dampers in ducts and penetrations of fire resistance rated construction shall be furnished and installed in accordance with the requirements in Mechanical Sections.
4. Identify joint firestopping systems with legible metal or plastic labels. Attach labels permanently to surfaces adjacent to and within 6 inches of joint edge so labels are visible to anyone seeking to remove joint firestopping system. Include the following on the labels:

   a. "Warning - Joint Firestopping - Do NOT Disturb. Notify Building Management of Any Damage."
   b. Contractor's name, address and phone number.
   c. Designation of applicable testing agency
   d. Date of Installation
   e. Manufacturer's name
   f. Installer's name

D. Warranty: Provide manufacturers' standard product warranty.

079200- Joint Sealants

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Tremco, or a comparable product by one of the following:

1. BASF Building Systems
2. Pecora Corporation
3. Dow Corning Corp.

Products:

A. Silicone (for use around plumbing fixtures and around glazing):
1. Spectrem 2
2. Color: Clear

B. Urethane (for use at masonry, control joints, and rough openings)
1. Dymonic 100
2. Color: To match adjacent material color (color and paintable)

C. Joint Sealant Backing:
1. Closed cell material with a surface skin or as approved by sealant manufacturer

Installation:
Install sealants and proper backing according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

079219- Acoustical Joint Sealants

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by USG or a comparable product by an approved manufacturer.

Products:

A. Acoustical Joint Sealant
1. USG Sheetrock Brand Acoustical Sealant

Installation:
Install sealants according to manufacturers' written instructions.

Warranty:
Provide manufacturer's standard product warranty.

DIVISION 08 - OPENINGS

081113- Hollow Metal Doors and Frames (Standard)

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by CECO Door Products, or a comparable product by one of the following:

1. Curries Company
2. Steelcraft
3. Or Approved equal

Products:

Materials

A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
B. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.
C. Frame Anchors: ASTM A 653/A 653M, Commercial Steel (CS), Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.

081113- Hollow Metal Doors and Frames (Standard)

Hollow Metal Doors

A. General: Provide 1-3/4 inch doors of design indicated, not less than thickness indicated; fabricated with smooth surfaces, without visible joints or seams on exposed faces unless otherwise indicated. Comply with ANSI/SDI A250.8 and ANSI/NAAMM HMMA 867.

B. Exterior Doors: Face sheets fabricated of commercial quality hot-dipped zinc coated steel that complies with ASTM A 653/A 653M, Coating Designation A60. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level.

1. Design: Flush panel.
2. Level/Model: Level 2 and Physical Performance Level B (Heavy Duty), Minimum 18 gauge (0.042-inch - 1.0-mm) thick steel, Model 2.
3. Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet. Doors with an inverted top channel to include a steel closure channel, screw attached, with the web of the channel flush with the face sheets of the door. Plastic or composite channel fillers are not acceptable.
4. Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9" or minimum 14 gauge continuous channel with pierced holes, drilled and tapped.
5. Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.

C. Interior Doors: Face sheets fabricated of commercial quality cold rolled steel that complies with ASTM A 1008/A 1008M. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:
1. Design: Flush panel.
   a. Fire Door Core: As required to provide fire-protection and temperature-rise ratings indicated.
2. Level/Model: Level 2 and Physical Performance Level B (Heavy Duty), Minimum 18 gauge (0.042-inch - 1.0-mm) thick steel, Model 2.
3. Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet.
4. Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9" or minimum 14 gauge continuous channel with pierced holes, drilled and tapped.
5. Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.

D. Manufacturers Basis of Design:
1. CECO Door Products (C) Honeycomb Core - Regent Series.

Hollow Metal Frames

A. General: Comply with ANSI/SDI A250.8 and with details indicated for type and profile.
B. Exterior Frames: Fabricated of hot-dipped zinc coated steel that complies with ASTM A 653/A 653M, Coating Designation A60.
1. Fabricate frames with mitered or coped corners. Profile as indicated on drawings.
2. Manufacturers Basis of Design:
   a. CECO Door Products (C) – SQSeries.
   b. Curries Company (CU) – M Series.
C. Interior Frames: Fabricated from cold-rolled steel sheet that complies with ASTM A 1008/A 1008M.
1. Fabricate frames with mitered or coped corners. Profile as indicated on drawings.
2. Manufacturers Basis of Design:
   a. CECO Door Products (C) - SQ Series.
   b. Curries Company (CU) - M Series.
D. Fire rated frames: Fabricate frames in accordance with NFPA 80, listed and labeled by a qualified testing agency, for fire-protection ratings indicated.
E. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 Table 4 with reinforcement plates from same material as frames.

Frame Anchors

A. Jamb Anchors:
1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, formed from A60 metallic coated material, not less than 0.042 inch thick, with corrugated or perforated straps not less than 2 inches wide by 10 inches long; or wire anchors not less than 0.177 inch thick.
2. Stud Wall Type: Designed to engage stud and not less than 0.042 inch thick.
3. Compression Type for Drywall Slip-on (Knock-Down) Frames: Adjustable compression anchors.
4. Windstorm Opening Anchors: Types as tested and required for indicated wall types to meet specified wind load design criteria.
B. Floor Anchors: Floor anchors to be provided at each jamb, formed from A60 metallic coated material, not less than 0.042 inches thick.
C. Mortar Guards: Formed from same material as frames, not less than 0.016 inches thick.

Installation:
Install hollow metal doors and frames according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

081416- Flush Interior Wood Doors

Door Construction - General
A. WDMA I.S.1-A Performance Grade: Extra Heavy Duty; Aesthetic Grade: Premium.
B. U-Factor: 0.50

Core Construction
A. Particleboard Core Doors:
1. Particleboard: Wood fiber based materials complying with ANSI A208.1 Particleboard standard. Grade LD-2.
2. Adhesive: Fully bonded construction using Polyurethane (PUR) glue.
3. Blocking: As indicated under article "Blocking".

Veneered Doors for Painted Finish
A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. ASSA ABLOY Wood Doors (GR): GPD Series.
2. Eggers Industries (EG): Premium Series.
3. Marshfield-Algoma (MF): Signature Series.
4. VT Industries (VT): Artistry Series.

B. Interior Solid Core Doors:
1. Grade: Custom.
2. Faces: Veneer grades as noted below; veneer minimum 1/50-inch (0.5mm) thickness at moisture content of 12% or less.
   a. Rotary Sliced Natural Birch, A grade faces.
3. Match between Veneer Leaves: Book match.
4. Assembly of Veneer Leaves on Door Faces:
   a. Running Match.
5. Pair and Set Match: Provide for doors hung in same opening or separated only by mullions.
6. Transom Match: Continuous match.
7. Vertical Edges: Matching same species as faces. Wood or composite material, one piece, laminated, or veneered. Minimum requirements per WDMA section P-1, Performance Standards for Architectural Wood Flush Doors.
8. Horizontal Edges: Solid wood or structural composite material meeting the minimum requirements per WDMA section P-1, Performance Standards for Architectural Wood Flush Doors
9. Construction: Five plies. Stiles and rails are bonded to core, then entire unit sanded before applying face veneers.
10. At doors over 40% of the face cut-out for lights and or louvers, furnish engineered composite lumber core.

Light Frames and Glazing
A. Metal Frames for Light Openings in doors with up to 1-inch thick insulated glazing.
1. Low profile beveled vision lite frame
2. Color: Gray
3. 20 gauge cold rolled steel
4. Mitered and welded corners with counter sunk mounting holes
5. Size as indicated on plans.
B. Glazing: Comply with installation requirements in Division 08 Section "Glazing" and with the flush wood door manufacturer's written instructions.

081416- Flush Interior Wood Doors (continued):

Fabrication
A. Factory fit doors to suit frame opening sizes indicated.
1. Comply with requirements in NFPA 80 for fire rated doors.
2. Undercut: As required per manufacturer's templates and sill condition.
B. Factory machine doors for hardware that is not surface applied. Comply with final hardware schedules, door frame Shop Drawings, DHI A115-W series standards, and hardware templates.
1. Coordinate with hardware mortises in metal frames to verify dimensions and alignment before factory machining.
2. Metal Astragals: Factory machine astragals and formed steel edges for hardware for pairs of fire rated doors.
C. Openings: Cut and trim openings through doors in factory.
1. Light Openings: Trim openings with moldings of material and profile indicated.
2. Glazing: Comply with applicable requirements in Division 08 Section "Glazing."

Installation
A. Install per manufacturers' standard written instructions.

Warranty
A. Provide manufacturers' standard material warranty.

083113- Access Doors and Frames

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Williams Brothers, or a comparable product by an approved manufacturer.

Products:
A. Attic Ladder: Super Simplex Disappearing Stairway
i. Opening Size: 30 inches x 54 inches
ii. Floor to Mezzanine Height: 9' - 4"
iii. Floor to Ceiling Height: 8' - 5 1/2"
iv: Ladder width: 18 inches min.

B. Insulated Exterior Access Door
i. Model # WB EXT 1350 ULTRA 20x30
ii. Opening Size: 20 inches x 30 inches
iii. Door and Trim: 16 ga galv steel
iv. Finish: Primed white baked enamel, paintable surface.
v. Latches: pattle latch lock and slam catch and interior latch release.
vi. Hinges: continuous piano hinge.
vii. ASTM compliance: D4060, E330, G155 & G154,

Installation:
1. Install attic access according to manufacturer's written instructions.

Warranty:
1. Provide manufacturers' standard product warranty.

IFP-0

083613- Sectional Doors (Standard and Non-Impact Hurricane Zone):

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Overhead Door Corporation, or a comparable product by an approved manufacturer.

Products:

Notes:
1.) All glazing to have proper labels as required by local AHJ and building codes.
2.) All glazing shall be reviewed and approved by the local distributor to meet the requirements for the region in which the glazing is being installed. Any issues with items specified shall be brought to the attention of the Architect prior to bid.
3.) Door supplier is responsible for providing a door to meet the wind load requirements for the site location.

1.1 MANUFACTURERS
A. Acceptable Manufacturer: Overhead Door Corporation/Wayne Dalton, Commercial Solutions National Accounts, 2501 S. State Hwy. 121, Suite 200, Lewisville, TX 75067. ASD. Tel. Toll Free: (800) 275-3290. Phone: (469) 549-7100. Fax: (972) 906-1499. Web Site: www.overheaddoor.com. E-mail: info@overheaddoor.com.

B. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

1.2 STEEL SECTIONAL OVERHEAD DOORS

A. Sectional Overhead Steel Doors: Model 430 Steel Doors by Overhead Door Corporation:

FL Product Approval #11734.20

1. Doors:
   a. Operation:
      1) Provide doors designed for manual operation using a chain hoist.
   b. Structural Performance Requirements:
      1) Wind Loads: See Structural.

2. Door Model 430 Requirements:
   a. Door Assembly: Steel door assembly with rabbeted meeting rails to provide full-width interlocking structural rigidity.
      1) Panel Thickness: 2 inches (51 mm).
      2) Exterior Surface: Ribbed
      3) Section Material: Nominal 24 gauge steel.
      4) Center and End Stiles: 16 gauge steel
      5) Springs: 50,000 cycles.
      6) Provide leaf spring bumpers.
      7) Glazing Panels: Match Exterior Elevations
      8) Glazing Type: Non-Impact Rated Glazing: ¼ inch clear tempered glass consisting of one pane of ¼ inch non-insulated glass
      9) Finish: Two coat baked on polyester
      10) Color: See Finish Schedule.
      11) Hardware: Galvanized steel hinges and fixtures. Ball bearing rollers with hardened steel races.
      12) Lock: Interior mounted slide lock with dead bolt provided with hole to receive padlock provided by Owner.
      13) Weatherstripping: Provide complete weather stripping system to reduce air infiltration. Weatherstripping shall be replaceable.
      14) Track: Provide track as recommended by manufacturer to suit loading required and clearances available.
      15) Configuration Type: Vertical Lift Clearance: Track must provide 35" available headroom, which will maintain 14'-0" minimum clearance from finish floor to underside of lift equipment.
      16) Follow manufacturer's instructions for installation. Support tracks are to be adequately reinforced with continuous angle attached to structure.

1.3 EXECUTION

1 EXAMINATION
   a. Do not begin installation until substrates have been properly prepared. Verify that site conditions are acceptable for installation of doors, operators, controls and accessories. Ensure that openings are square, flush and plumb.
   b. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

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TIMOTHY ARNOLD AHO
REGISTERED
NO. 9084
COMMONWEALTH OF KENTUCKY
ARCHITECT
02/27/2026

Express Oil Change & Tire Engineers
Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage
Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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Architectural Specifications

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

G201

Scale 12" = 1'-0"

5/1/2026 11:35:55 AM

083613- Sectional Doors (Standard and Non-Impact Hurricane Zone):

2. PREPARATION
   a. Clean surfaces thoroughly prior to installation.
   b. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3. INSTALLATION
   a. General: Install door, track and operating equipment complete with all necessary accessories and hardware according to shop drawings, manufacturer's instructions.
   b. Lubricate bearings and sliding parts, and adjust doors for proper operation, balance, clearance and similar requirements.
   c. Coordinate installation with adjacent work to ensure proper clearance and allow for maintenance.
   d. Anchor assembly to wall construction and building framing without distortion or stress.
   e. Secure brace door tracks suspended from structure. Secure tracks to structural members only.

4 PROTECTION
   a. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove and legally dispose of construction debris from project site.
   b. Remove temporary coverings and protection of adjacent work areas. Repair or replace installed products damaged prior to or during installation.
   c. Lubricate bearings and sliding parts, assure weather tight fit around door perimeter and adjust doors for proper operation, balance, clearance and similar requirements. Protect installed products until completion of project.
   d. Touch-up, repair or replace damaged products before Substantial Completion.

Installation:
Install sectional doors according to manufacturers' written instructions.

Warranty:
Overhead Door Corporation warrants the door sections against defects in material and workmanship, and deterioration due to rust-through for ten years from date of delivery to the original purchaser. Window components are warranted against defects in material and workmanship for one year from date of delivery to the original purchaser. Overhead Door warrants all hardware and spring components against defects in material and workmanship for one year (or cycle life of the springs) from date of delivery to the original purchaser. Additional Limited Warranty requirements in accordance with manufacturer's full standard limited warranty documentation.

084113- Aluminum-Framed Entrances and Storefronts (Standard & Hurricane Non-Impact)

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by YKK AP America Inc., or a comparable product by one of the following:

1. Kawneer
2. Or Approved equal

Products:

A. Exterior Storefront System

   1. YES 45 TU
   2. Center set.
   3. Thermal Barrier: Provide continuous thermal barrier by means of a poured and debridged pocket consisting of a two part, chemically curing high density polyurethane which is bonded to the aluminum by YKK ThermaBond Plus.
   4. Materials: Anodized Aluminum; 0.050" minimum thickness.
   5. Accessories: As recommended by the manufacturer.
   6. Components: Manufacturer's standard extruded aluminum mullions, entrance doors, framing, and indicated shapes, perimeter anchor fillers and steel reinforcing as required.
   7. Glazing Stops: Manufacturer's standard glazing stops with EPDM glazing gaskets to prevent water infiltration at the exterior and Dow Corning 995 Structural Silicone Sealant with fixed stops at the interior. Color to match storefront.
   8. Finish: See finish schedule.
   9. Wind Load: See Structural for design pressures.
   10. Door: 35D - Medium Stile
       a. Material: 0.050" aluminum min. thickness
       b. Finish: See finish schedule.
       c. Hardware: See Division 8 Door Hardware
       d. Accessories: Manufacturer's standard
       e. Glass: See Division 8 Glazing
       f. Glazing Stops: Manufacturer's standard
       g. Weather-stripping: Manufacturer's standard

B. Interior Storefront System
   1. YES 45 FS
   2. Center set.
   3. Materials: Anodized Aluminum; 0.050" minimum thickness.
   4. Accessories: As recommended by the manufacturer.
   5. Finish: See finish schedule.

C. Storefront Glazing
   1. Glazing: Comply with Division 08 "Glazing"
   2. Glazing Gaskets: Manufacturer's standard sealed-corner pressure-glazing system of resilient elastomeric glazing gaskets, setting blocks, and shims or spacers.
   3. Glazing Sealants: As recommended by the manufacturer.

Installation:
Install aluminum-framed entrances and storefronts according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

087100- Door Hardware

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by the following manufacturers, or approved equal:

1. MK- McKinney
2. AD- Adams Rite
3. YA- Yale
4. RO-Rockwood
5. NO-Norton
6. PE- Pemko

General Notes:
1. Hardware listed for design criteria, confirm with specific door manufacturer.
2. Finishes for all door hardware are to be as indicated on Finish Schedule.

Hardware Sets:

Set: 1.0
Doors: 1
Description: EXT - ALUM

1	Continuous Hinge	MCK-25HD	MK
1	Deadlatch	4900 x 4591	AD
1	Cylinder	Mort / Cyl as required	YA
2	Pull	BF168	RO
1	Surface Closer	CLP8501	NO
1	Mtg Plate	as required	NO
1	Threshold	271A Pemkote MSES25SS	PE
1	Gasketing	by door / frame mfg	
1	Sweep	315CN	PE

Set: 2.0
Doors: 2, 5, 22, 23
Description: BAYS

4	Hinge	TA2714 4-1/2" x 4-1/2"	MK
1	Cylindrical Lock (classroom)	PB 5408LN	YA
1	Surface Closer	8501 Reg / PA	NO
1	Kick Plate	K1050 8" X 2" LDW 4BE CSK	RO
1	Door Stop	409 / 446 [as required]	RO
1	Gasketing	S773D	PE

087100- Door Hardware

Set: 3.0
Doors: 3
Description: WAITING - ALUM

1	Continuous Hinge	MCK-25HD	MK
2	Door Pull	BF168	RO
1	Surface Closer	8501 Reg / PA	NO
1	Door Stop	409 / 446 [as required]	RO
1	Gasketing	by door / frame mfg	

Set: 3.1
Doors: 9, 21, 24, 25
Description: EXT - BAYS

4	Hinge (heavy weight)	T4A3386 NRP 4-1/2" x 4-1/2"	MK
1	Exit Device (rim, nightlatch)	7150 WS PB627F	YA
1	Cylinder	Mort / Cyl as required	YA
1	Surface Closer	CLP8501	NO
1	Threshold	271A Pemkote MSES25SS	PE
1	Gasketing	S773D	PE
1	Rain Guard	346C x LAR	PE
1	Sweep	315CN	PE

Set: 4.0
Doors: 4
Description: TOILET

4	Hinge	TA2714 4-1/2" x 4-1/2"	MK
1	Cylindrical Lock (privacy)	PB 5402LN	YA
1	Mop Plate	K1050 4" X 1" LDW 4BE CSK	RO
1	Door Stop	409 / 446 [as required]	RO
1	Gasketing	S773D	PE
1	Surface Closer	8501 Reg / PA	NO

Set: 5.0
Doors:15
Description: OFFICE

4	Hinge	TA2714 4-1/2" x 4-1/2"	MK
1	Cylindrical Lock (entry)	PB 5407LN	YA
1	Door Stop	409 / 446 [as required]	RO
1	Threshold	271A Pemkote MSES25SS	PE
1	Gasketing	S773D	PE
1	Sweep	315CN	PE
1	Surface Closer	8501 Reg / PA	NO

Set: 6.0
Doors: 13,14
Description: BREAK

4	Hinge	TA2714 4-1/2" x 4-1/2"	MK
1	Passage Set	PB 5401LN	YA
1	Surface Closer	8501 Reg / PA	NO
1	Mop Plate	K1050 4" X 1" LDW 4BE CSK	RO
1	Kick Plate	K1050 8" X 2" LDW 4BE CSK	RO
1	Door Stop	409 / 446 [as required]	RO
1	Gasketing	S773D	PE

Set: 7.0
Doors: 16
Description: SHOP TOILET

4	Hinge	TA2714 4-1/2" x 4-1/2"	MK
1	Cylindrical Lock (privacy)	PB 5402LN	YA
1	Mop Plate	K1050 4" X 1" LDW 4BE CSK	RO
1	Door Stop	409 / 446 [as required]	RO
1	Threshold	271A Pemkote MSES25SS	PE
1	Gasketing	S773D	PE
1	Sweep	315CN	PE
1	Surface Closer	8501 Reg / PA	NO

Set: 8.0
Doors: 6, 7, 8, 10, 11, 12, 18, 19, 20, 26, 27,28
Description: OH DOOR

1	Hardware	By door mfg	

Installation:
Install door hardware according to manufacturers' written instructions.
All door hardware (Interior and Exterior) to be keyed alike.

Warranty:
Provide manufacturers' standard product warranty.

088000- Glazing (IGU) Standard and Hurricane Non-Impact

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Vitro, or a comparable product by one of the following:

1. Guardian Industries Corp.
2. Or Approved equal

Products:

Notes:
1.) All glazing to have proper labels as required by local AHJ and building codes.
2.) All glazing shall be reviewed and approved by the local distributor to meet the requirements for the region in which the glazing is being installed. Any issues with items specified shall be brought to the attention of the Architect prior to bid.

A. GL-1 Insulated Glass Unit
   Double Glazed Clear Solar Control Insulating Glass Unit Solarban® 90 on Clear 6mm (2) | Air 1/2" (12.7mm) | Clear 6mm
   1. Conformance: ASTM E 2190
   2. Outdoor Lite: Clear Float Glass as manufactured by Vitro Architectural Glass
      a. Conformance: ASTM C 1036, Type 1, Class 1, Quality q3.
      b. Glass Thickness: 6mm (1/4")
      c. Magnetic Sputter Vacuum Deposition Coating (MSVD): ASTM C 1376.
      d. Coating: Solarban® 90 on Surface # 2
      e. Heat-Treatment: Tempered; ASTM C 1048, Kind FT; Safety Glazing meets ANSI Z97.1 and CPSC 16CFR-1201
   3. Interspace Content: Air 1/2" (12.7mm)
   4. Indoor Lite: Clear float glass as manufactured by Vitro Architectural Glass
      a. Conformance: ASTM C 1036, Type 1, Class 1, Quality q3.
      b. Heat-Treatment: Tempered; ASTM C 1048, Kind FT; Safety Glazing meets ANSI Z97.1 and CPSC 16CFR-1201
      c. Glass Thickness: 6mm (1/4")
   5. Performance Requirements:
      a. Visible Light Transmittance: 51 percent minimum.
      b. Winter Nighttime U-Factor: 0.29 (Btu/hr*ft²*°F) maximum.
      c. Summer daytime U-Factor: 0.27 (Btu/hr*ft²*°F) maximum.
      d. Shading Coefficient: 0.27 maximum.
      e. Solar Heat Gain Coefficient: 0.23 maximum.
      f. Outdoor Visible Light Reflectance: 12 percent maximum.

B. GL-2 Monolithic Single-Glaze Float-Glass:
   Monolithic Clear Glass Clear 6mm
   1. Clear float glass as manufactured by Vitro Architectural Glass
      a. Conformance: ASTM C 1036, Type 1, Class 1, Quality q3.
      b. Heat-Treatment: Tempered; ASTM C 1048, Kind FT; Safety Glazing meets ANSI Z97.1 and CPSC 16CFR-1201
      c. Glass Thickness: 6mm (1/4")

088000- Glazing (IGU) Standard and Hurricane Non-Impact

   2. Performance Requirements:
      a. Visible Light Transmittance: 89 percent minimum.
      b. Winter Nighttime U-Factor: 1.02 (Btu/hr*ft²*°F) maximum.
      c. Summer daytime U-Factor: 0.92 (Btu/hr*ft²*°F) maximum.
      d. Shading Coefficient: 0.94 maximum.
      e. Solar Heat Gain Coefficient: 0.82 maximum.
      f. Outdoor Visible Light Reflectance: 8 percent maximum.

B. GL-2 Monolithic Single-Glaze Float-Glass:
   Monolithic Clear Glass Clear 6mm
   1. Clear float glass as manufactured by Vitro Architectural Glass
      a. Conformance: ASTM C 1036, Type 1, Class 1, Quality q3.
      b. Heat-Treatment: Tempered; ASTM C 1048, Kind FT; Safety Glazing meets ANSI Z97.1 and CPSC 16CFR-1201
      c. Glass Thickness: 6mm (1/4")
   2. Performance Requirements:
      a. Visible Light Transmittance: 89 percent minimum.
      b. Winter Nighttime U-Factor: 1.02 (Btu/hr*ft²*°F) maximum.
      c. Summer daytime U-Factor: 0.92 (Btu/hr*ft²*°F) maximum.
      d. Shading Coefficient: 0.94 maximum.
      e. Solar Heat Gain Coefficient: 0.82 maximum.
      f. Outdoor Visible Light Reflectance: 8 percent maximum.

C. GL-3 Spandrel Insulating Glass Unit (Non-Hurricane Type)
   Double Glazed Clear Solar Control Spandrel Insulating Glass Unit [Solarban® 90 on Clear 6mm (2) | Air 1/2" (12.7mm) | 100% Black Gray Opaci-Coat (4) on 6mm Clear]
   1. Conformance: ASTM E 2190, [ASTM C 1048, Condition B, Type I, Quality-Q3 and GANA 'Engineering Standards Manual' GANA 66-9-20 Specification for Heat-Strengthened or Fully Tempered Ceramic Enameled Spandrel Glass for Use in Building Window/Curtain Walls and Other Architectural Applications] or [Float glass complying with ASTM C 1048, GANA 'Engineering Standards Manual' GANA 89-1-6 Specification for Environmental Durability of Fully Tempered or Heat-Stren g thened Spandrel Glass with Applied Opacifier and other requirements specified, with manufacturer's standard opacifier material on coated second surface of lites]
   2. Outdoor Lite: Clear Float Glass as manufactured by Vitro Architectural Glass
      a. Conformance: ASTM C 1036, Type 1, Class 1, Quality q3.
      b. Glass Thickness: 6mm (1/4")
      c. Magnetic Sputter Vacuum Deposition Coating (MSVD): ASTM C 1376.
      d. Coating: Solarban® 90 on Surface # 2
      e. Heat-Treatment: Tempered; ASTM C 1048, Kind FT; Safety Glazing meets ANSI Z97.1 and CPSC 16CFR-1201
   3. Interspace Content: Air 1/2" (12.7mm)
   4. Indoor Lite: Clear Float Glass as manufactured by Vitro Architectural Glass
      a. Conformance: ASTM C 1036, Type 1, Class 1, Quality q3.
      b. Glass Thickness: 6mm (1/4")
      c. Heat-Treatment: Tempered; ASTM C 1048, Kind FT; Safety Glazing meets ANSI Z97.1 and CPSC 16CFR-1201
      d. Coating Type, Color, Number, % Coverage: Opaci-Coat 300, #3-967 Black-Gray 100% coverage
      e. Spandrel Coating Surface: 4
   5. Performance Requirements:
      a. Visible Light Transmittance: 3 percent minimum.
      b. Winter Nighttime U-Factor: 0.29 (Btu/hr*ft²*°F) maximum.
      c. Summer daytime U-Factor: 0.27 (Btu/hr*ft²*°F) maximum.
      d. Shading Coefficient: 0.21 maximum.
      e. Solar Heat Gain Coefficient: 0.18 maximum.
      f. Outdoor Visible Light Reflectance: 16 percent maximum.

D. Glazing Installation
   1. Install per manufacturers' standard written instructions.

E. Glazing warranty
   1. Provide manufacturers' standard product warranty.

DIVISION 9 - FINISHES

092900- Gypsum Board

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Lafarge unless otherwise indicated, or a comparable product by one of the following:

1. Georgia-Pacific
2. USG
3. National Gypsum

Products:

A. Moisture and Mold-Resistant Type: Mold Defense
   1. Thickness: 1/2 inch
   2. Long Edges: Tapered
   3. Finish: Level 4 in areas exposed to view. Level 1 in concealed areas.
B. Water-resistant Type: Watercheck (@ Toilet Rooms and behind plumbing fixtures)
   1. Thickness: 1/2 inch
   2. Long Edges: Tapered
   3. Finish: Level 4
   4. Cuts: All cuts in board shall be covered with special waterproofing sealant as recommended by the manufacturer.
C. Type X: Firecheck (As Required)
   1. Thickness: 5/8"
   2. Long Edges: Tapered
   3. Finish: Level 4
   4. All penetrations and joints to be sealed with fire caulk as recommended by the manufacturer.

Installation:
Install gypsum board and accessories according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

095000- Acoustical Tile Ceiling

Manufacturer:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Armstrong World Industries, Inc.

Products:
A. Acoustical Ceiling Panels

   1. Style: 1775 Dune
   2. Surface Texture: Fine Texture
   3. Composition: Mineral Fiber
   4. Color: White
   5. Size: 24 inch x 24 inch
   6. Edge Profile: Square Lay-in

B. Metal Suspension Systems

   1. Suprafine XL 9/16" Exposed Tee Grid and Edge Molding
   2. Wire for Hangers and Ties: ASTM A 641, Class 1 zinc coating, soft annealed, with a yield stress load of at least time three design load, but not less than 12 gauge.

Installation:
Install suspension system and panels in accordance with manufacturers' written instructions, and in compliance with ASTM C 636.

Warranty:
Provide manufacturers' standard product warranty.

096513- Resilient Base and Accessories

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Roppe, or a comparable product by one of the following:

1. Johnsonite, a Tarkett Company
2. Armstrong World Industries
3. Or Approved equal

Products:

A. Rubber Base: Pinnacle Rubber by Roppe
   1. Height: 4"
   2. Length: Coils in manufacturer's standard length
   3. Outside Corners: Job formed
   4. Inside Corners: Job formed
   5. Color as indicated on finish schedule.

B. Reducer Strip: Roppe Reducer Strip #22
   1. Color as indicated on finish schedule.

C. Adhesives: As recommended by the manufacturer

Installation:
Install resilient base and reducer according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

096519- Resilient Tile Flooring

Manufacturers:

Subject to compliance with requirements, provide product indicated below by Tarkett.

Products:

A. LVT
   1. Style / Color: Contour Mineral Basalt PCMB / Paved Path 4645
   2. Size: 12" x 36" planks
   3. Overall thickness: .120" (3 mm)
   4. Wear layer Thickness: 32 mil (0.8 mm)

B. Adhesives: As recommended by the manufacturer

Installation:
Install resilient floor tile according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

099113- Exterior Painting

Manufacturer:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Sherwin Williams.

Products:

A. Masonry:
   1.) Primer: SW Pro Industrial Heavy Duty Block Filler B42W150
   2.) Finish Coats: SW Latitude Exterior Acrylic in Satin Finish K62-Series
B. Steel:
   1.) Primer: SW Pro Industrial Pro-Cryl Universal Primer B66-1300 Series
   2.) Finish Coats: SW Pro Industrial Urethane Alkyd Enamel B54-Series
C. Wood:
   1.) Primer: SW Exterior Latex Wood Primer B42W8141
   2.) Finish Coats: SW Latitude Exterior Acrylic in Satin Finish K62-Series
D. Aluminum: Pro Industrial Urethane Alkyd Enamel Gloss, B54-150 Series
   1.) Primer: SW Pro Industrial Pro-Cryl Universal Primer B66-1300 Series
   2.) Finish Coats: SW Pro Industrial Sher-Cryl High Performance Acrylic Semi-Gloss B66-1350 Series

Note: Use 1 coat primer as recommended by manufacturer and 2 finish coats unless otherwise recommended by the manufacturer.

Installation:
Install exterior paint according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

099123- Interior Painting

Manufacturer:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Sherwin Williams.

Products:

A. Masonry:
   1.) Primer: SW Pro Industrial Heavy Duty Block Filler B42W150
   2.) Finish Coats: SW Pro Industrial Pre-Catalyzed Epoxy Semi-Gloss K46-Series
B. Steel:
   1.) Primer: SW Pro Industrial Pro-Cryl Universal Primer B66-1300 Series
   2.) Finish Coats: Pro Industrial Urethane Alkyd Enamel Gloss, B54-150 Series
C. Interior Wood:
   1.) Primer: SW PrepRite ProBlock Interior/ Exterior Latex Primer- Sealer B51-600 Series
   2.) Finish Coats: SW Pro Industrial Acrylic Semi-Gloss B66-650 Series
D. Gypsum Board in Office Area:
   1.) Primer: ProMar 200 Zero VOC Interior Latex Primer B28W12600
   2.) Finish Coats: ProMar 200 Zero VOC Interior Latex Egshel, B20W2600 Series. Use extreme bond primer at vinyl graphics.
E. Gypsum Board in Bay Area:
   1.) Primer: ProMAR 200 Zero VOC Interior Latex Primer B28W12600
   2.) Finish Coats: SW Pro Industrial Catalyzed Epoxy B73-Series. Use extreme bond primer at vinyl graphics.
F. Gypsum Board Ceilings:
   1.) Primer: ProMar 200 Zero VOC Interior Latex Primer B28W12600
   2.) Finish Coats: ProMar 200 Zero VOC Interior Latex Flat, B30W2650 Series
G. Sealed Concrete Floors:
   ArmorSeal Rexthane I Floor Coating + SharkGrip Slip-Resistant Additive (1000 HS primer)

Note: Use 1 coat primer as recommended by manufacturer and 2 finish coats unless otherwise recommended by the manufacturer.

Installation:
Install interior paint according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

DIVISION 10 - SPECIALTIES

101419- Dimensional Letter Signage - By others.

101423.13 Room-Identification Signage

See drawing on A602.

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REGISTERED
NO. 9084
COMMONWEALTH OF KENTUCKY
ARCHITECT
02/27/2026

Express Oil Change & Tire Engineers
Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage
Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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Architectural Specifications

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

G202

Scale 12" = 1'-0"

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102600 - Wall and Door Protection

Manufacturer:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by InPro Corporation:

Products:
A. Stainless Steel Flush Mount Corner Guards
B. Corner Radius:1/8"
C. Height: 4'-0"
D. Width: 1 1/2"
E. Materials: Stainless Steel: Type 430, 16 gauge
F. Attachment: Pre-drilled beveled holes and Phillips head screws.
G. Finish: Stainless Steel No. 4 satin finish.
H. Location: As indicated on drawings.
J. Installation: Install per manufacturer's standard written instructions.
K. Warranty: Provide manufacturers' standard product warranty.

102800- Toilet, Bath, and Laundry Accessories

The following list of accessories is essentially complete; however, the Contractor shall examine the drawings carefully and shall supply such items not specifically called for to provide a complete installation.

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Bradley Corporation or a comparable product by one of the following:

1. Bobrick Washroom Equipment, Inc.
2. American Specialties, Inc.
3. Or Approved Equal

Products:

A. Robe Hook: Bradley Model 915.
B. Grab Bars: Bradley Model 812-001-42, Model 812-001-36, and Model 812-001-24
C. Toilet Tissue Dispenser: Bradley Model 5425 **(By Others)**
D. Mirror: Bradley Model 780-2436
E. Soap Dispenser: Bradley Model 6563 **(By Others)**
F. Paper Towel Dispenser: Bradley Model 2494 **(By Others)**
G. Under Lavatory Guard: Truebro Lav Guard 2 by IPS Corporation
H. Baby Changing Station: Bradley Model 9631 (Light Gray)

Installation:

1. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and heights indicated.

2. Install grab bars to withstand a downward load of at least 250 lbf, when tested according to ASTM F 446.

Warranty:
Provide manufacturers' standard product warranty.

104413- Fire Department Lock Box

Manufacturers:

Subject to compliance with requirements, provide products indicated below by the Knox Company:

Products:

A. Lock Box: 3200 Series Hinged Door Surface Mount
   i. Color: As indicated on Finish Schedule

Installation:
1. Install fire department lock box in location and height as required by the authorities having jurisdiction.
2. Install per manufacturer's written installation instructions.

Warranty:
Provide manufacturers' standard product warranty.

104416- Fire Extinguishers

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Amerex Corporation, or a comparable product by one of the following:

1. Larsens Manufacturing Company
2. JL Industries
3. Or Approved Equal

Products:

A. ABC Dry Chemical Extinguisher: Amerex Model B456
B. Wall Bracket: Amerex Model 0546 Wall
C. UL and ULC Rating: 4A-80BC

Installation:

1. Install fire extinguishers in locations and heights indicated and in compliance with requirements of authorities having jurisdiction.

2. Install fire extinguishers and brackets according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

DIVISION 12- FURNISHINGS

123623.13 Plastic-Laminate-Clad Countertops

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Wilsonart.

Products:
A. Plastic Laminate #1
   i. High pressure decorative laminate: NEMA LD3
   ii. Grade: HGS
   iii. Color: 4880-38 Carbon Mesh

B. Adhesives: as recommended by the manufacturer

Installation:
Install plastic laminate according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

DIVISION 31- EARTHWORK

313116- Termite Control

Provide EPA Registered termiticide acceptable to authorities having jurisdiction, in an aqueous solution formulated to prevent termite infestation.

DIVISION 33 - UTILITIES

334600- Subdrainage

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Carlisle.

Products:

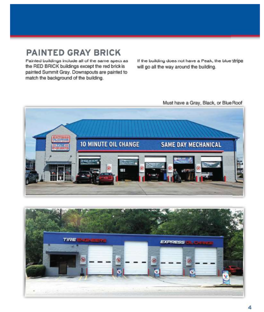
A. CCW MiraDrain 6200 and 9800
B. CCW MiraStop BW
C. CCW MiraClay Woven and Non-woven Geotextile
D. CCW MiraClay Granules or Mastic

Installation:
Install subdrainage products according to manufacturers' written instructions.

REQUIRED SUBMITTALS

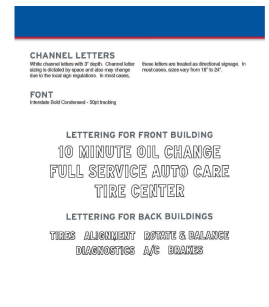
REQUIRED SUBMITTALS	SPECIFICATION SECTION	SUBMIT TO
Cast-In-Place Concrete / Rebar	See Structural Drawings	Structural Engineer / Architect / Owner
Unit Masonry	042200 Masonry	Structural Engineer / Architect / Owner
Structural Steel Framing	See Structural Drawings	Structural Engineer / Architect / Owner
Steel Joist Framing	See Structural Drawings	Structural Engineer / Architect / Owner
Steel Decking	See Structural Drawings	Structural Engineer / Architect / Owner
Ladders	055133 Ladders	Owner
Metal Copings & Canopies	077100 Roof Specialties & Drawings	Owner
EIFS Cornice	072400 EIFS	Owner
TPO Roofing	075423 TPO Roofing	Owner
Standing Seam Metal Roofing	074113.16 SSMR	Owner
Roof Specialities	077100 Roof Specialties	Owner
Aluminum Framed Entrances & Storefronts	084113 Storefront	Owner
Aluminum Windows	084113 Storefront	Owner
Hollow Metal Doors & Frames	081113 HM Doors & Frames	Owner
Interior Wood Doors	081416 Interior Wood Doors	Owner
Overhead Doors	083613 Sectional Doors	Owner
Door Hardware	087100 Door Hardware	Owner
Glazing	088000 Glazing	Owner
Exterior Paint	099113 Exterior Paint	Owner
Interior Paint	099123 Interior Paint	Owner
Fire Extinguishers	104416 Fire Extinguishers	Owner
Termite Control	313116 Termite Control	Owner
Foundation Waterproofing	334600 Subdrainage	Owner
Smoke Vent	See Mechanical Drawings	Owner
Exhaust Fans in Shop	See Mechanical Drawings	Owner
Radiant Heaters / Gas Fired Unit Heaters	See Mechanical Drawings	Owner
Heat Pump / Gas Fired Furnace	See Mechanical Drawings	Owner
Sump Pump	See Keynote #35	Owner
Water Heater / Recirculating Pump	See Plumbing Drawings	Owner
Oil Water Separator	See Plumbing Drawings	Owner
Plumbing Fixtures	See Plumbing Drawings	Owner
Fire Suppression (If Required)	See Fire Suppression Drawings	Owner
Electrical Panels	See Electrical Drawings	Owner
Electrical Fixtures	See Electrical Drawings	Owner
Signage	See Signage Package	Owner
Underground Piping Materials	See Civil Drawings	Civil Engineer / Owner
Underground Water Retention System	See Civil Drawings	Civil Engineer / Owner
Sewer Pump / Grinder Pump	See Civil Drawings	Civil Engineer / Owner

EXPRESS OIL CHANGE & TIRE ENGINEER STANDARDS - EXTERIOR



Awnings by General Contractor, See Details

Branded Sconces by Others



Letters by Others

Note: Items shown on this page are EOC standards. See Finish Schedule for actual materials to be used on this project.

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TIMOTHY ARNOLD AHO
REGISTERED
NO. 9084
COMMONWEALTH OF KENTUCKY
ARCHITECT
02/27/2026

Express Oil Change & Tire Engineers
Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage
Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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Architectural Specifications & EOC Standards - Exterior

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

G300

Scale 12" = 1'-0"

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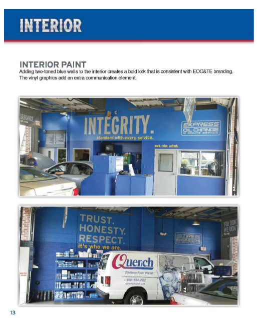
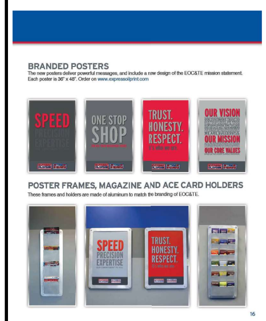
EXPRESS OIL CHANGE & TIRE ENGINEERS STANDARDS - INTERIOR

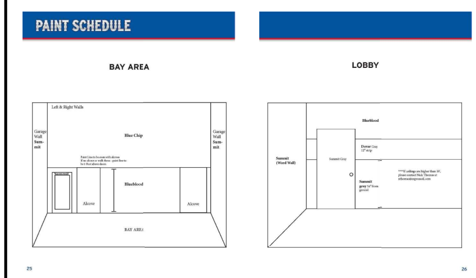


In Bay Media by Others

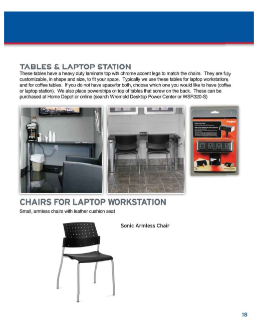


Branded Posters by Others.

Furniture by Others



See Finish Schedule for Paint Selections



Furniture by Others

Wall Graphics by Others

Coffee Cabinet Detail

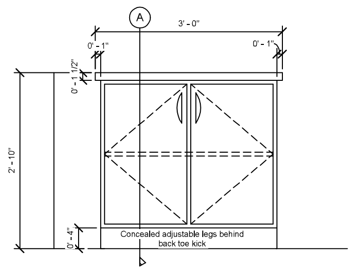
CONSTRUCTION AND MATERIAL NOTES:

Construction

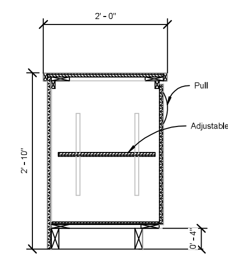
1.) Cabinets:	3/4" plywood with plastic laminate at exposed surfaces, black melamine at semi-exposed surfaces, and 3MM PVC edgebanding to match the adjacent laminate / melamine color
2.) Door Fronts:	3/4" plywood with plastic laminate with 3MM PVC edgebanding to match the adjacent laminate color
3.) Shelf:	3/4" plywood with black melamine at semi-exposed surfaces with 3MM PVC edgebanding to match the adjacent melamine color
4.) CounterTops:	3/4" plywood with plastic laminate with 3MM PVC Edgebanding to match the adjacent laminate color

Materials

1.) Cabinets:	Wilsonart 4880-38 Carbon Mesh
2.) Drawer Fronts:	Wilsonart 4880-38 Carbon Mesh
3.) Shelf:	Black Melamine
4.) Countertops:	Wilsonart 4830K-18 Satin Stainless
5.) Adjustable Shelve Supports:	Standard Euro Style 5MM Pin System.
5.) Hinges:	European 120 Degree Concealed / Supports - 90 Degree Angle Brackets
6.) Legs:	1" -2" Concealed Adjustable. / Legs - 5" to 6" Aluminum or Chrome Adjustable
7.) Finger Pulls:	Amerock Current 3 inch Modern Polished Chrome Edge Cabinet Pull



FRONT ELEVATION



SECTION A

Service Desk Details

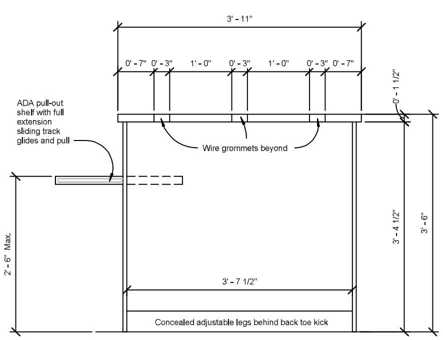
CONSTRUCTION AND MATERIAL NOTES:

Construction

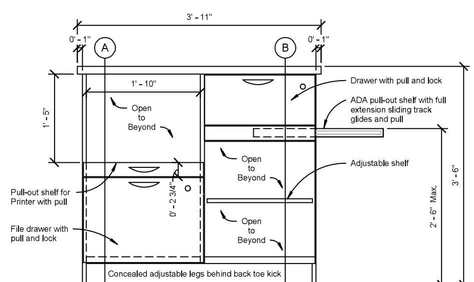
1.) Cabinets:	3/4" plywood with plastic laminate at exposed surfaces, black melamine at semi-exposed surfaces, and 3MM PVC edgebanding to match the adjacent laminate / melamine color
2.) Door and Drawer Fronts:	3/4" plywood with plastic laminate with 3MM PVC edgebanding to match the adjacent laminate color
3.) Drawer Box:	1/2" plywood with black melamine at semi-exposed surfaces with 3MM PVC edgebanding to match the adjacent melamine color
4.) CounterTops:	3/4" plywood with plastic laminate with 3MM PVC Edgebanding to match the adjacent laminate color

Materials

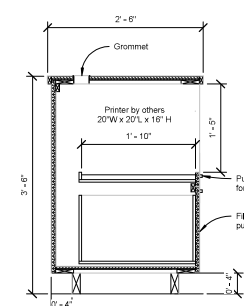
1.) Cabinets:	Wilsonart 4880-38 Carbon Mesh
2.) Drawer and Drawer Fronts:	Wilsonart 4880-38 Carbon Mesh
3.) Drawer Box:	Black Melamine
4.) Countertops:	Wilsonart 4830K-18 Satin Stainless
5.) Adjustable Shelve Supports:	Standard Euro Style 5MM Pin System.
5.) Hinges:	European 120 Degree Concealed / Supports - 90 Degree Angle Brackets
6.) Legs:	1" -2" Concealed Adjustable. / Legs - 5" to 6" Aluminum or Chrome Adjustable
7.) Finger Pulls:	Amerock Current 3 inch Modern Polished Chrome Edge Cabinet Pull
8.) Locks:	Manufacturer standard



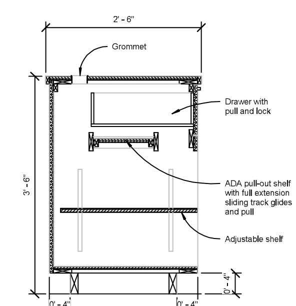
FRONT ELEVATION



BACK ELEVATION



SECTION A



SECTION B

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NO. 9084
COMMONWEALTH OF KENTUCKY
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02/27/2026

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No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

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EOC Standards - Interior

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

G301

Scale	As indicated

5/1/2026 11:36:09 AM

COMcheck Software Version COMcheckWeb

Envelope Compliance Certificate

Project Information

Energy Code:	2012 IECC
Project Title:	25042_EOC Richmond, KY
Location:	Richmond, Kentucky
Climate Zone:	4a
Project Type:	New Construction
Vertical Glazing / Wall Area:	4%

Construction Site:
Richmond Centre, Goggins Lane
Richmond, Kentucky 40475

Owner/Agent:
Express Oil Change & Tire Engineers
1880 Southpark Drive
Birmingham, Alabama 35244
205-337-2967
tyler.hendon@expressoil.com

Designer/Contractor:
Aho Architects, LLC
1855 Data Drive
Hoover, Alabama 35244
mbrunson@ahoarch.com

Additional Efficiency Package(s)
Credits: 1.0 Required 1.0 Proposed
Reduced Lighting Power, 1.0 credit

Building Area	Floor Area
1-Automotive facility : Nonresidential	685

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Roof: Insulation Entirely Above Deck, [Bldg. Use 1 - Automotive facility]	685	---	25.0	0.039	0.039
Floor: Unheated Slab-On-Grade, Vertical 2 ft., [Bldg. Use 1 - Automotive facility] (d)	182	---	10.0	0.540	0.540
NORTH					
Ext. Wall (North): Wood-Framed, 16in. o.c., [Bldg. Use 1 - Automotive facility]	1162	20.0	0.0	0.064	0.064
Door #13: Wood, Swinging, [Bldg. Use 1 - Automotive facility]	21	---	---	0.500	0.610
Window A: Other Window: Fixed, Perf. Specs.: Product ID Solarban 90 on Clear, SHGC 0.23, PF 0.63, VT 0.41, [Bldg. Use 1 - Automotive facility] (c)	85	---	---	0.450	0.380
EAST					
Ext. Wall (East @ Service Writing): Wood-Framed, 16in. o.c., [Bldg. Use 1 - Automotive facility]	315	20.0	0.0	0.064	0.064
Door #1: Glass (over 50% glazing): Metal Frame, Entrance Door, Perf. Specs.: Product ID Solarban 90 on Clear, SHGC 0.23, PF 0.63, VT 0.41, [Bldg. Use 1 - Automotive facility] (c)	21	---	---	0.450	0.770
Window B: Other Window: Fixed, Perf. Specs.: Product ID Solarban 90 on Clear, SHGC 0.23, PF 0.63, VT 0.41, [Bldg. Use 1 - Automotive facility] (c)	85	---	---	0.450	0.380
Int. Wall (East @ Manager / Toilet 8): Wood-Framed, 16in. o.c., [Bldg. Use 1 - Automotive facility]	315	20.0	0.0	0.064	0.064
Door #15: Wood, Swinging, [Bldg. Use 1 - Automotive facility]	21	---	---	0.500	0.610
Door #16: Wood, Swinging, [Bldg. Use 1 - Automotive facility]	21	---	---	0.500	0.610

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Int. Wall (East @ Break Room): Wood-Framed, 16in. o.c., [Bldg. Use 1 - Automotive facility]	315	20.0	0.0	0.064	0.064
SOUTH					
Ext. Wall (South): Wood-Framed, 16in. o.c., [Bldg. Use 1 - Automotive facility]	1010	20.0	0.0	0.064	0.064
Door #14: Wood, Swinging, [Bldg. Use 1 - Automotive facility]	21	---	---	0.500	0.610
Door #2: Wood, Swinging, [Bldg. Use 1 - Automotive facility]	21	---	---	0.500	0.610
WEST					
Ext. Wall (West @ Break Room): Steel-Framed, 16in. o.c., [Bldg. Use 1 - Automotive facility]	382	0.0	20.0	0.044	0.064
Int. Wall (West @ Manager / Toilet 8): Wood-Framed, 16in. o.c., [Bldg. Use 1 - Automotive facility]	315	20.0	0.0	0.064	0.064
Int. Wall (West @ Toilet 3 / Mech): Wood-Framed, 16in. o.c., [Bldg. Use 1 - Automotive facility]	444	20.0	0.0	0.064	0.064
Door #5: Wood, Swinging, [Bldg. Use 1 - Automotive facility]	21	---	---	0.500	0.610

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) 'Other' components require supporting documentation for proposed U-factors.
(c) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
(d) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Envelope PASSES: Design 1% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2012 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Marie C. Brunson, Project Coordinator — Marie C. Brunson — 03/03/2026
Name - Title — Signature — Date

COMcheck Software Version COMcheckWeb

Inspection Checklist

Energy Code: 2012 IECC

Requirements: 0.0% were addressed directly in the COM*check* 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 [PR1][1]	Plans and/or specifications provide all information with which compliance can be determined for the building envelope and document where exceptions to the standard are claimed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.3.1 [PR10][1]	The vertical fenestration area <= 30 percent of the gross above-grade wall area.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.3.1 [PR11][1]	The skylight area <= 3 percent of the gross roof area.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.3.2 [PR14][1]	In enclosed spaces > 10,000 ft2 directly under a roof with ceiling heights >15 ft. and used as an office, lobby, atrium, concourse, corridor, storage, gymnasium/exercise center, convention center, automotive service, manufacturing, non-refrigerated warehouse, retail store, distribution/sorting area, transportation, or workshop, the following requirements apply: (a) the daylight zone under skylights is >= half the floor area; (b) the skylight area to daylight zone is >= 3 percent with a skylight VT >= 0.40; or a minimum skylight effective aperture >= 1 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.3.2.2 [PR15][1]	Skylights in office, storage, automotive service, manufacturing, non-refrigerated warehouse, retail store, and distribution/sorting area have a measured haze value > 90 percent unless designed to exclude direct sunlight.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C104 [FO3][2]	Installed slab-on-grade insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C303.2 [FO4][2]	Slab edge insulation installed per manufacturer's instructions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.2.6 [FO5][2]	Slab edge insulation depth/length. Slab insulation extending away from building is covered by pavement or >= 10 inches of soil.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C403.2.8.1 [FO6][1]	Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.2.8 [FO12][3]	Bottom surface of floor structures incorporating radiant heating insulated to >=R-3.5.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*

Additional Comments/Assumptions:

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

Section # & Req.ID	Framing / Rough-In Inspection	Complies?	Comments/Assumptions
C402.4.1, C402.4.2 [FR16][1]	The building envelope contains a continuous air barrier that is sealed in an approved manner and either constructed or tested in an approved manner. Air barrier penetrations are sealed in an approved manner.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.3, C402.4.4 [FR18][3]	Factory-built fenestration and doors are labeled as meeting air leakage requirements.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.7 [FR17][3]	Vestibules are installed on all building entrances. Doors have self-closing devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.3.3, C402.3.4 [FR8][1]	Vertical fenestration U-Factor.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.3.3 [FR10][1]	Vertical fenestration SHGC value.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C303.1.3 [FR12][2]	Fenestration products rated in accordance with NFRC.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.1.3 [FR13][1]	Fenestration products are certified as to performance labels or certificates provided.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.4.5.1 [ME3][3]	Stair and elevator shaft vents have motorized dampers that automatically close.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.5.2 [ME58][3]	Outdoor air and exhaust systems have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Check gravity dampers where allowed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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

Section # & Req.ID	Insulation Inspection	Complies?	Comments/Assumptions
C402.4.1.1 [IN1][1]	All sources of air leakage in the building thermal envelope are sealed, caulked, gasketed, weather stripped or wrapped with moisture vapor-permeable wrapping material to minimize air leakage.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.2.1 [IN2][1]	Roof R-value. For some ceiling systems, verification may need to occur during Framing Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C303.2 [IN3][1]	Roof insulation installed per manufacturer's instructions. Blown or poured loose-fill insulation is installed only where the roof slope is <=3 in 12.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.2 [IN7][1]	Above-grade wall insulation installed per manufacturer's instructions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C104 [IN8][2]	Installed floor insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C303.1 [IN10][2]	Building envelope insulation is labeled with R-value or insulation certificate providing R-value and other relevant data.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.2.1 [IN14][2]	Exterior insulation is protected from damage with a protective material. Verification for exposed foundation insulation may need to occur during Foundation Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C402.4.6 [FI37][1]	Weatherseals installed on all loading dock cargo doors.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.8 [FI26][3]	Recessed luminaires in thermal envelope to limit infiltration and be IC rated and labeled. Seal between interior finish and luminaire housing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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

AHO ARCHITECTS
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REGISTERED
NO. 9084
COMMONWEALTH OF KENTUCKY
ARCHITECT
02/27/2026

Express Oil Change & Tire Engineers
Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage
Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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Building COMCheck

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

G400

Scale

5/1/2026 11:36:15 AM

1 General Information

PROJECT INFORMATION

Name of Project: Single Building / Left Hand Oil Change/ Rear Enter

Client: Express Oil Change & Tire Engineers

Location: Richmond, Kentucky
Authority Having Jurisdiction (AHJ): City: Richmond County: N/A State: N/A

Square Footage / Stories / Height: Main Level G.S.F. = 5,696 Stories = 1 + Pit Height = 28'- 7 1/2"
Pit Level G.S.F. = 1,340
Total G.S.F. = 7,036

PROJECT TYPE

■ New Construction ☐ Addition ☐ Other

☐ Alteration ☐ Change of Occupancy

BUILDING USE

☐ Single Use ☐ Mixed Use (Separated) ■ Mixed Use (Non-Separated)

■ Description: Automotive repair garage used for general service on automobiles.

SPRINKLERED

☐ Yes ☐ Partial ■ No

2 Codes

■ 2018 Kentucky Building Code (2015 IBC Code with Kentucky Amendments)

■ Kentucky State Plumbing Law (815 KAR Chapter 20)

■ 2012 International Energy Conservation Code

■ 2009 ICC ANSI A117.1

■ 2015 International Fire Code with Kentucky Amendments

■ 2023 National Electrical Code

■ 2018 International Fuel Gas Code

■ 2015 International Mechanical Code

3 Use and Occupancy Classification(s) (2018 Kentucky Building Code)

☐ Assembly Group A-1 ☐ High-Hazard Group H-2 ☐ Residential Group R-2

☐ Assembly Group A-2 ☐ High-Hazard Group H-3 ☐ Residential Group R-3

☐ Assembly Group A-3 ☐ High-Hazard Group H-4 ☐ Residential Group R-4

☐ Assembly Group A-4 ☐ High-Hazard Group H-5 ■ Storage Group S-1

☐ Assembly Group A-5 ☐ Institutional Group I-1 ☐ Storage Group S-2

■ Business Group B ☐ Institutional Group I-2 ☐ Utility & Misc Group U

☐ Educational Group E ☐ Institutional Group I-3

☐ Factory Group F-1 ☐ Institutional Group I-4

☐ Factory Group F-2 ☐ Mercantile Group M

☐ High-Hazard Group H-1 ☐ Residential Group R-1

4 Special Detailed Requirements Based On Use and Occupancy (2018 Kentucky Building Code)

406.8 Repair Garages

■ Project complies with 406.8 through 406.8.3

413 Combustible Storage

413.1 High-piled storage of combustible materials over 12'-0" or high-hazard commodities over 6'-0"

■ Yes ☐ No

413.2 Storage of combustible materials in attics, under-floor, and concealed spaces

☐ Yes ■ No

414 Hazardous Materials

■ Project complies with 414.2.1 through 414.2.5 (IFC)Control Areas

■ Number of Control Areas Provided: Entire Building is one control area

Location
■ Inside ☐ Outside

Use
■ Open ☐ Closed ■ Storage Only

Types of Hazardous Materials (Table 307.1.(1) of KBC and 3206.2 of KFC)

■ Class IIIB Liquids ■ Actual Storage per control area: 4040.13 gallons

■ Class IA Flammable Liquids ■ Actual Storage per control area: 0.94 gallons

■ Class IB Flammable Liquids ■ Actual Storage per control area: 3.25 gallons

■ High-Hazard Commodities per KFC 2018 3203.6 / 3206.2 (Rubber Tires)

■ Allowable Quantity: 0-500 s.f. ■ Actual Quantity: X≤500 s.f.

5 General Building Heights and Areas (2018 Kentucky Building Code)

504 Building Height and Areas and 506 Building Area (Per Table 504.3, 504.4, and 506.2)

☐ Allowable Building Height = 40'-0" ■ Actual Building Height = 28'- 7 1/2"

☐ Allowable Number of Stories Above Grade Plane = 1 ■ Actual Number of Stories Above Grade Plane = 1

☐ Allowable Area Factor = 9,000 s.f. ■ Actual Area = 7036 s.f. (5696 Main Level + 1340 Pit)

505.3 Equipment Platforms

■ Project complies with 505.3 through 505.3.3

508 Mixed Use and Occupancy

☐ Mixed Use Occupancy (Separated) ■ Mixed Use Occupancy (Non-Separated) ☐ Does not apply

No separation required between Group B and Group S-1 Occupancies

6 Types of Construction (2018 KBC)

601 General and 602 Construction Classification

☐ Type IA ☐ Type IB ☐ Type IIA ☐ Type IIB ☐ Type IIIA

☐ Type IIIB ☐ Type IV ☐ Type VA ■ Type VB

Table 601 Fire Resistance Rating Requirements for Building Elements

Building Elements	Hours Required	Hours Provided
Primary Structural Frame	0	0
Bearing Walls (Exterior)	0	0
Bearing Walls (Interior)	0	N/A
Nonbearing Walls & Partitions (Exterior)	0	0
Nonbearing Walls & Partitions (Interior)	0	0
Floor Construction & Associated Secondary Members	0	0
Roof Construction & Associated Secondary Members	0	0

Table 602 Fire Resistance Requirements for Exterior Walls Based on Fire Separation Distance

Fire Separation Distance	Rear Entry (East)	Right (South)	False Front (West)	Left (North)
X < 5				
5 ≤ X < 10				
10 ≤ X < 30				
X ≥ 30	>30'	>30'	>30'	>30'

X≥30' for Group B and S-1 = 0 hours

10≤X<30' for Group B and S-1 = 0 hours

* Fire separation distance based on Code Section 705.3

7 Fire And Smoke Protection Systems (2018 Kentucky Building Code)

718.4 Draftstopping in Attics

☐ Yes ☐ No ■ Not Required

☐ Openings in the partitions shall be protected by self-closing doors with automatic latches constructed as required for the partitions.

☐ Installed in attics and concealed roof spaces such that any horizontal area does not exceed 3,000 s.f.

8 Interior Finishes (2018 Kentucky Building Code)

Table 803.11 Interior Wall and Ceiling Finish Requirements by Occupancy

Group	Exit Enclosures and Exit Passageways	Corridors	Rooms and Enclosed Spaces
S-1	B	B	C
B	A	B	C

804.4.2 Minimum Critical Radiant Flux

☐ Class I ■ Class II

9 Fire Protection Systems (2018 Kentucky Building Code)

903 Automatic Sprinkler Systems
903.2.9.1 Repair Garages

☐ Yes ☐ Partial ■ Not Required

906 Portable Fire Extinguishers

■ Yes ☐ No

■ Project complies with 906.1 through 906.10

■ Project complies NFPA 10

907 Fire Alarm and Detection System

☐ Yes ■ Not Required

10 Means of Egress (2018 KBC)

DT_2018 KBC Table 1004.1.2 Maximum Floor Area Allowance Per Occupant (Group S-1)					
Occupancy Classification	Name	Room Number	Area	S.F. Per Occupants	No. of Occupants
S-1	Corridor	5	85 SF	200	0.43
S-1	Oil Change	6	1254 SF	200	6.27
S-1	Work Room	9	126 SF	200	0.63
S-1	Service	11	2476 SF	200	12.38
S-1	Storage	12	252 SF	300	0.84
S-1	Storage	13	500 SF	300	1.67
S-1	Pit	14	1218 SF	200	6.09
Subtotal			5911 SF		28.30

Please Note: The Group H-5 Fabrication and Manufacturing Load Factor of 200 square foot per occupant for manufacturing function of space was used for some of the above calculations because there is not a function of space occupant load factor for Repair Garages.

DT_2018 KBC Table 1004.1.2 Maximum Floor Area Allowance Per Occupant (Group B)					
Occupancy Classification	Name	Room Number	Area	S.F. Per Occupants	No. of Occupants
B	Service Writing	1	141 SF	150	0.94
B	Waiting	2	189 SF	150	1.26
B	Toilet	3	50 SF	150	0.33
B	Manager	7	54 SF	150	0.36
B	Toilet	8	46 SF	150	0.31
B	Break Room	10	118 SF	150	0.79
Subtotal			597 SF		3.98

10 Means of Egress (2018 KBC)

DT_2018 KBC Sections 1005.3.1 & 1005.3.2 Egress width Stairways and Other Egress Components (Group S-1)							
Occupancy Classification	Name	Room Number	No. of Occupants	Egress - Stairways	Required Stairway Width	Other Egress Components	Required Capacity in Inches
S-1	Corridor	5	0.43			0.2	0.09
S-1	Oil Change	6	6.27			0.2	1.25
S-1	Work Room	9	0.63			0.2	0.13
S-1	Service	11	12.38			0.2	2.48
S-1	Storage	12	0.84			0.2	0.17
S-1	Storage	13	1.67			0.2	0.33
S-1	Pit	14	6.09	0.3	1.83		
Subtotal			28.30		1.83		4.44

DT_2018 IBC Table 1005.3.2 Egress width Other Egress Components (Group B)					
Occupancy Classification	Name	Room Number	No. of Occupants	Other Egress Components	Required Capacity in Inches
B	Service Writing	1	0.94	0.2	0.19
B	Waiting	2	1.26	0.2	0.25
B	Toilet	3	0.33	0.2	0.07
B	Manager	7	0.36	0.2	0.07
B	Toilet	8	0.31	0.2	0.06
B	Break Room	10	0.79	0.2	0.16
Subtotal			3.98		0.80

Tables 1006.2.1 Spaces with One Exit or Exit Access Doorway

Occupancy	Max Occupant Load	Max Occupant Load Provided	Number of Exits Required	Number of Exits Provided	Max. Common Path of Travel Allowable (Nonsprinkled)	Max. Provided Common Path of Travel (Nonsprinkled)
S-1	29	28.33	1	4	100'-0"	≤ 100'-0"
B	49	3.98	1	1	100'-0"	≤ 100'-0"

Table 1006.3.1 Minimum Number of Exits or Access to Exits Per Story

Occupant Load Per Story	Minimum Number of Exits or Access to Exits from Story	Number of Exits or Access to Exits from Story Provided
1-500	2	5

Table 1006.3.2(1) Stories with One Exit Or Access to One Exit

Occupancy	Story	Max Occupant Load per Story	Maximum Common Path of Travel Allowed (Nonsprinkled)	Common Path of Travel Provided Max. (Nonsprinkled)
S	First story above or below grade plane	29	75'-0"	75'-0"

Table 1017.2 Exit Access Travel Distance

Occupancy	Without Sprinkler System (Feet)	With Sprinkler System	Max Travel Distance Provided (Feet)
S-1	200	N/A	75'-0"
B	200	N/A	77'-4"

12 Interior Environment (2018 Kentucky Building Code)

1208.1 Minimum Room Widths

Habitable spaces are not less than 7 feet in any plan dimension

■ Yes ☐ No

1208.2 Minimum Ceiling Heights

Occupiable spaces, habitable spaces, and corridors have a ceiling height of not less than 7 feet 6 inches. Bathrooms, toilet rooms, kitchens, storage rooms, and laundry rooms have a ceiling height of not less than 7 feet.

■ Yes ☐ No

1209.2 Attic spaces

Opening not less than 20 inches by 30 inches is provided for attic area with clear height over 30 inches. 30" headroom provided at or above access opening

■ Yes ☐ Not Required

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02/27/2026

Express Oil Change & Tire Engineers
Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage
Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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Life Safety / Code Summary

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

LS100

Scale 12" = 1'-0"

5/1/2026 11:36:17 AM

29 Plumbing Systems (2018 Kentucky Building Code)

Table 2902.1 Minimum Number of Required Plumbing Fixtures

DT_Plumbing Fixture_Group B

Total Occupant Load	Male	Female	Required Water Closets		Water Closets Provided	Required Lavatories		Lavatories Provided	Required Drinking Fountains	Drinking Fountains Provided	Required Service Sinks	Service Sinks Provided
			Male	Female		Male	Female					
3.98	1.99	1.99	0.08	0.08	1	0.05	0.05	1	0.04	1	1	1

DT_Plumbing Fixture_Group S-1

Total Occupant Load	Male	Female	Required Water Closets		Water Closets Provided	Required Lavatories		Lavatories Provided	Required Drinking Fountains	Drinking Fountains Provided	Required Service Sinks	Service Sinks Provided
			Male	Female		Male	Female					
28.33	14.17	14.17	0.14	0.14	1	0.14	0.14	1	0.03	1	1	1

2902.2 Separate Facilities

Separate facilities provided for each sex

□ Yes ■ Not Required per 2902.2 Exception 2

2902.2.1 Family or assisted use toilet facilities serving as separate facilities

■ Yes □ No □ Not Required

2902.3 Employee and public toilet facilities

■ Employee toilet combined with public toilet facilities

2902.3.1 Access

Route to public toilet facilities does not pass through kitchens, storage rooms, or closets and is accessible.

■ Yes □ No

2902.3.2 Location of toilet facilities in occupancies other than covered mall buildings

Located not more than one story above or below the space required to be provided with toilet facilities

■ Yes □ No

Path of travel to such facilities does not exceed 500 feet

■ Yes □ No

2902.4 Signage

■ Yes □ No

Legible sign designating the sex provided in visible location near entrance to toilet facility

□ Yes ■ Not Required per 2902.2.1

Plumbing Fixture Notes:
(1) High/ Low drinking fountain provided for the entire building.
(1) Service Sink provided for the entire building.
(2) Family Assisted-Use Toilet Room each containing (1) lavatory and (1) water closet provided for the entire building.

34 Tire Rebuilding and Tire Storage (2015 IFC with Kentucky Amendments)

3409 Indoor Storage Arrangement

■ Project complies with 3409.1 Pile Dimensions

■ Pile dimension less than 50'-0" in direction of wheel hole.

■ Tires stored adjacent to or along one wall shall not extend more than 25'-0" from that wall.

50 Hazardous Materials - General Provisions (2015 IFC with Kentucky Amendments)

Table 5003.1.1 (1) Maximum Allowable Quantity Per Control Area of Hazardous Materials Posing a Physical Hazard

■ Project complies with Table 5003.1.1 (1).

■ Project contains Class IIIB Liquid Storage that does not exceed 13,200 liquid gallons per control area.

■ Project contains Class IIIB Liquid Open-System that does not exceed 3,300 liquid gallons per control area.

■ Project contains Flammable Liquid IA Storage that does not exceed 30 liquid gallons per control area.

■ Project contains Flammable Liquid IA Open System that does not exceed 10 liquid gallons per control area.

■ Project contains Flammable Liquid IB Storage that does not exceed 120 liquid gallons per control area.

■ Project contains Flammable Liquid IB Open System that does not exceed 30 liquid gallons per control area.

■ Project complies 5003.8.3.1 through 5003.8.3.4

■ Entire building is one single control area.

57 Flammable and Combustible Liquids (2015 IFC with Kentucky Amendments)

5703.2 Fire Protection

■ Project complies with 5703.2.1 portable fire extinguishers an hose lines. (See Section 9 Fire Protection Systems).

5703.4 Spill Control and Secondary Containment

■ Not required. Project does not exceed maximum allowable quantity per control area.

■ Though not required, the pit itself acts as a secondary containment. There are no drains in the pit.

5 Fire Service Features (2015 IFC with Kentucky Amendments)

505.1 Address Identification

■ Yes □ No □ Not Required

■ Project complies 505.1 Address Identification

506 Key Boxes

■ Yes □ No □ Not Required

■ Project complies 506.1 Where Required

23 Motor Fuel-Dispensing Facilities and Repair Garages (2015 IFC with Kentucky Amendments)

2311.2.2 Waste oil, motor oil and other Class IIIB Liquids

■ Project complies with 2311.2.2 Waste oil, motor oil and other Class IIIB liquids.

2311.2.2.1 Tank Location

■ Project complies with 2311.2.2.1 tank location □

2311.2.3 Drainage and disposal of liquid and oil-soaked waste

□ Yes □ No ■ Not Required

■ Garage floors do not contain floor drains.

2311.4 Below-grade areas

■ Project complies with 2311.4.1 through 2311.4.3 □

2311.6 Fire Extinguishers

■ Project complies with 2311.6 fire extinguishers (See Section 9 Fire Protection Systems)

32 High Piled Combustible Storage (2015 IFC with Kentucky Amendments)

3203.6 High-hazard commodities

■ Yes □ No

■ Project does contain high-hazard commodities (Rubber Tires)

Definitions per Chapter 2 of the International Fire Code

High-piled Combustible Storage. Storage of combustible materials in closely packed piles or combustible materials on pallets, in racks or on shelves where the top of storage is greater than 12'-0" in height. When required by the fire code official, high-piled combustible storage also includes certain high-hazard commodities, such as rubber tires, Group A plastics, flammable liquids, idle pallets, and similar commodities, where the top of storage is greater than 6'-0" in height.

■ Project does contain high piled combustible storage over 6'-0" (<500 s.f. of rubber tire storage over 6 feet high).

Table 3206.2 General Fire Protection and Life Safety Requirements

Commodity Class	Size of High Piled Storage Area	All Storage Areas			
		Automatic Fire Extinguishing System	Fire Detection System	Building Access	Smoke and Heat Removal
High Hazard	0-500 s.f.	Not Required	Not Required	Not Required	Not Required

Solid-Piled Storage, Shelf Storage and Palletized Storage			
Max. Pile Dimension (Feet)	Max. Permissible Storage Height (Feet)	Max. Pile Volume (Cubic Feet)	
50 feet	Not Required	Not Required	

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ARCHITECT
02/27/2026

Express Oil Change & Tire Engineers
Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage
Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

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Life Safety / Code Summary

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

LS101

Scale 12" = 1'-0"

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LIFE SAFETY SYMBOL LEGEND

Exit Sign		Maneuvering clearances at manual swinging doors	
HC EXIT 32"	Handicap Accessible Egress Width	#	Travel Distance
32"	Exit from room (# = minimum clear width in inches)		1 Hour Rated

Keynote Schedule

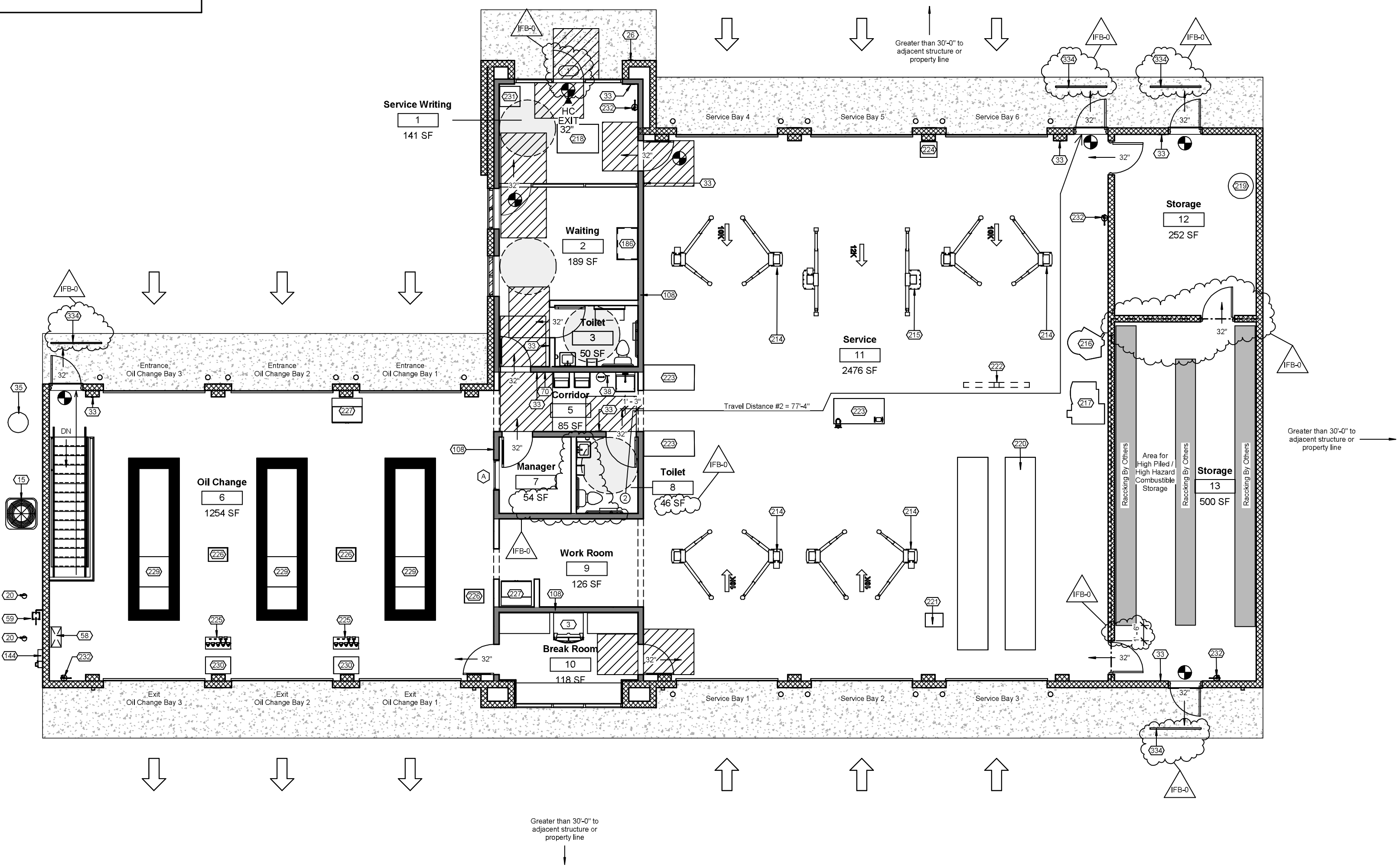
Tag	Text
3	Location of 30" wide refrigerator (By Others).
15	HVAC condensing unit. See Mechanical.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details. See Specification 055000 Metal Fabrications.
26	Fire Department Lock Box. Locate as directed by the Local Fire Marshal or AHJ. See Specification 104413 Fire Department Lock Box.
33	ADA compliant room / exit sign. See Details.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
38	Eyewash station. See Plumbing.
58	Verify location and size of pit exhaust opening with Structural and Mechanical drawings
59	Gas meter. See Plumbing.
70	Full-height FRP, entire wall, unless otherwise noted. See Specification 066400 Plastic Paneling (Fiberglass Reinforced Panels).

Keynote Schedule

Tag	Text
108	Gray shading indicates these walls are the boundaries for the building thermal envelope assembly.
144	Electrical meter. See Electrical.
186	Coffee cabinet.
214	10K Lift (By Others).
215	12K Lift (By Others).
216	Tire changer (By Others).
217	Wheel balancer (By Others).
218	Service Writing Desk.
219	Air compressor (By Others).
220	Scissor lift alignment (By Others).
221	Scissor lift alignment console (By Others). Provide conduit in slab as required. See alignment lift specifications (By Others).
222	Alignment scarecrow (By Others).

Keynote Schedule

Tag	Text
223	Work bench (By Others).
224	Strut compressor (By Others).
225	Lube console (By Others).
226	Computer podium (By Others).
227	Cashier computer station (By Others). Clear opening for cashier computer station must be 38 ½" wide minimum. No Exceptions.
229	Rolling drain pan (By Others).
230	Tool cart (By Others).
231	Beverage refrigerator (By Others).
232	Bracket mounted fire extinguisher. See Specification Section 104416 Fire Extinguishers. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details.
334	36" high x 5'-0" long painted steel pipe guardrail. See Specification Section 055213 Pipe and Tube Railings.



1 05_Life Safety Plan_Main
3/16" = 1'-0"

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Express Oil Change & Tire Engineers

Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage

Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

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Life Safety Plan - Main

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

LS102

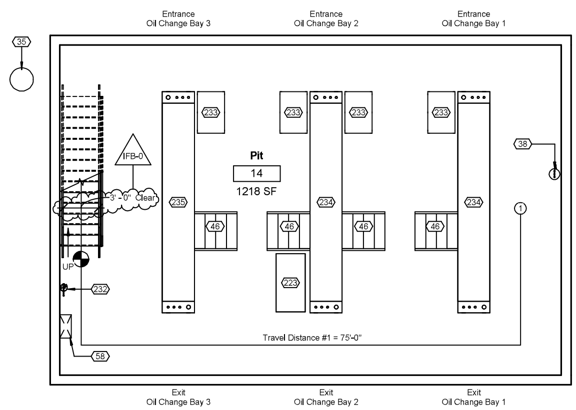
Scale	As indicated

5/1/2026 11:36:21 AM

LIFE SAFETY SYMBOL LEGEND

Symbol	Description	Symbol	Description
	Exit Sign		Maneuvering clearances at manual swinging doors
HC EXIT 32"	Handicap Accessible Egress Width	#	Travel Distance
32"	Exit from room (# = minimum clear width in inches)		1 Hour Rated

Keynote Schedule	
Tag	Text
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
38	Eyewash station. See Plumbing.
46	Oil tank stairs (By Others).
58	Verify location and size of pit exhaust opening with Structural and Mechanical drawings.
223	Work bench (By Others).
232	Bracket mounted fire extinguisher. See Specification Section 104416 Fire Extinguishers. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details.
233	275-gallon Class IIIB new oil tank (By Others).
234	928-gallon Class IIIB new oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.
235	928-gallon Class IIIB waste oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.



1 04_Life Safety Plan_Pit
3/16" = 1'-0"

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No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

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Life Safety - Pit

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

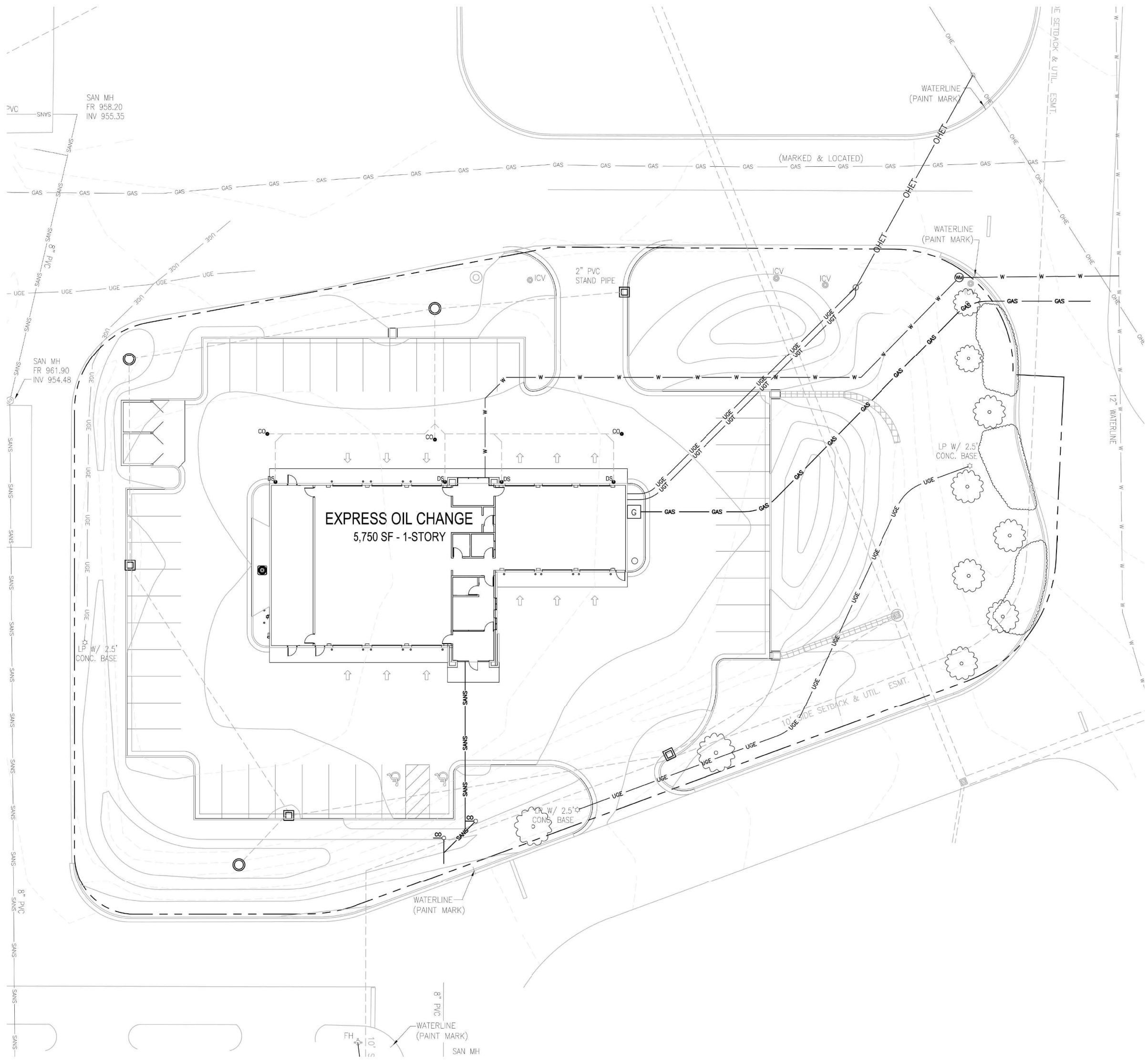
LS103

Scale	As indicated

5/1/2026 11:36:22 AM

NOTE:

THIS PLAN IS TO SHOW THE BUILDING AS IT RELATES TO THE SITE. A COMPLETE SET OF CIVIL DRAWINGS ARE TO BE SUBMITTED TO THE AHJ INDEPENDENT OF THIS SUBMITTAL. REFER TO THOSE DRAWINGS FOR ACTUAL INFORMATION.



1 Architectural Site Plan
N.T.S.

TRUE NORTH

PLAN NORTH

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Architectural Site Plan

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

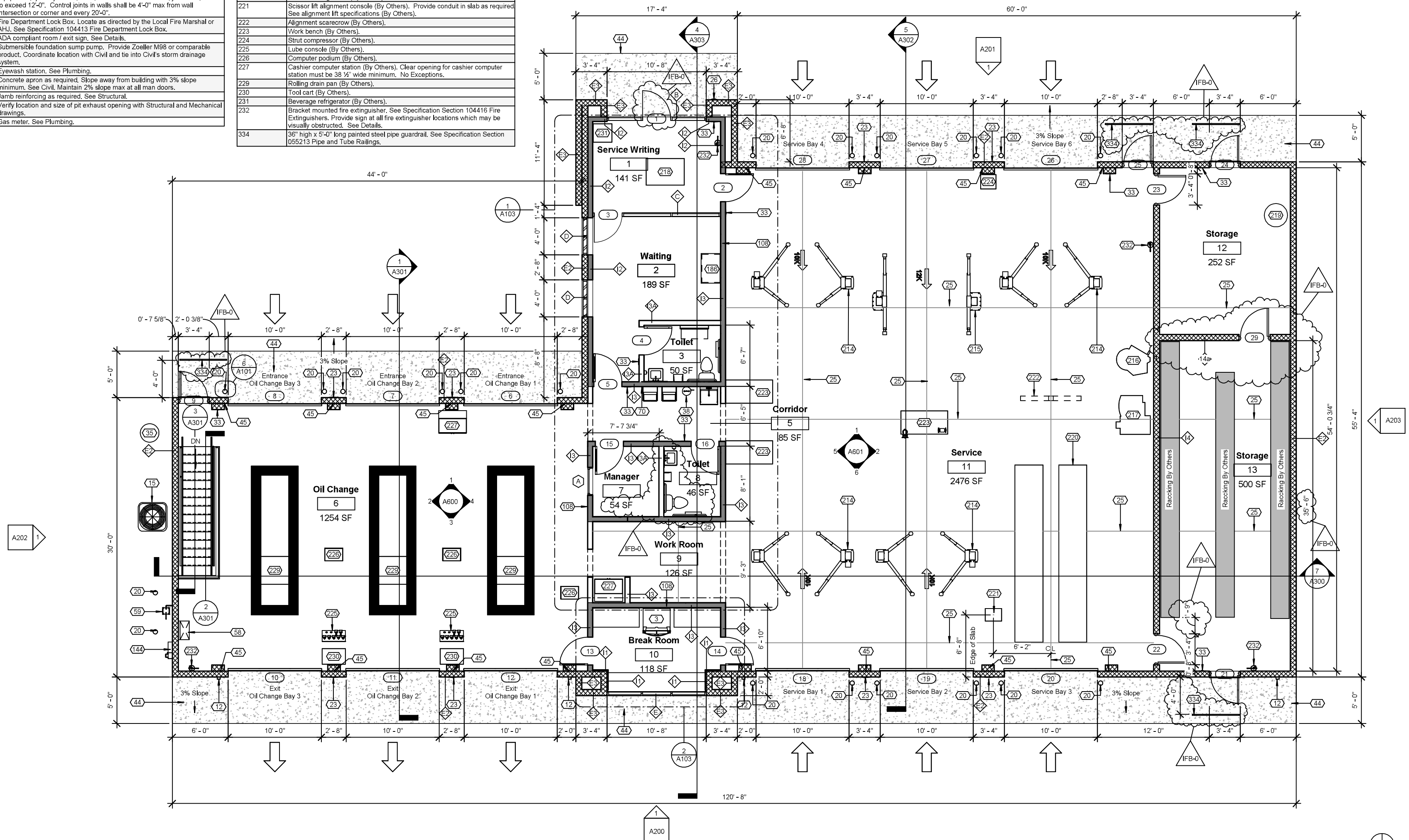
AS100

Scale N.T.S.

5/1/2026 11:36:27 AM

Keynote Schedule	
Tag	Text
3	Location of 30" wide refrigerator (By Others).
12	Pre-finished metal conductor head with built-in overflow and downspout. Drainage to discharge on grade, unless indicated on drawings that drainage is to be piped to storm, (See Civil). Provide a pre-finished elbow and concrete splash block. See Specification 077100 Roof Specialties.
15	HVAC condensing unit. See Mechanical.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details. See Specification 055000 Metal Fabrications.
23	Wall sconce (By Others). See Electrical. Locate junction box for sconces 5'-0" a.f.f. vertically and 4" from center horizontally. Verify with sign company prior to rough-in.
25	Control joint. For control joints in concrete floor slabs, coordinate location with equipment layout by others. Max. distance between control joints in slabs not to exceed 12'-0". Control joints in walls shall be 4'-0" max from wall intersection or corner and every 20'-0".
26	Fire Department Lock Box. Locate as directed by the Local Fire Marshal or AHJ. See Specification 104413 Fire Department Lock Box.
33	ADA compliant room / exit sign. See Details.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
38	Eyewash station. See Plumbing.
44	Concrete apron as required. Slope away from building with 3% slope minimum. See Civil. Maintain 2% slope max at all man doors.
45	Jamb reinforcing as required. See Structural.
58	Verify location and size of pit exhaust opening with Structural and Mechanical drawings.
59	Gas meter. See Plumbing.

Keynote Schedule	
Tag	Text
70	Full-height FRP, entire wall, unless otherwise noted. See Specification 066400 Plastic Paneling (Fiberglass Reinforced Panels).
108	Gray shading indicates these walls are the boundaries for the building thermal envelope assembly.
144	Electrical meter. See Electrical.
186	Coffee cabinet.
214	10K Lift (By Others).
215	12K Lift (By Others).
216	Tire changer (By Others).
217	Wheel balancer (By Others).
218	Service Writing Desk.
219	Air compressor (By Others).
220	Scissor lift alignment (By Others).
221	Scissor lift alignment console (By Others). Provide conduit in slab as required. See alignment lift specifications (By Others).
222	Alignment scarecrow (By Others).
223	Work bench (By Others).
224	Strut compressor (By Others).
225	Lube console (By Others).
226	Computer podium (By Others).
227	Cashier computer station (By Others). Clear opening for cashier computer station must be 38 ½" wide minimum. No Exceptions.
229	Rolling drain pan (By Others).
230	Tool cart (By Others).
231	Beverage refrigerator (By Others).
232	Bracket mounted fire extinguisher. See Specification Section 104416 Fire Extinguishers. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details.
334	36" high x 5'-0" long painted steel pipe guardrail. See Specification Section 055213 Pipe and Tube Railings.



1 01_Floor Plan_Main
3/16" = 1'-0"

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Floor Plan - Main

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

A100

Scale	3/16" = 1'-0"

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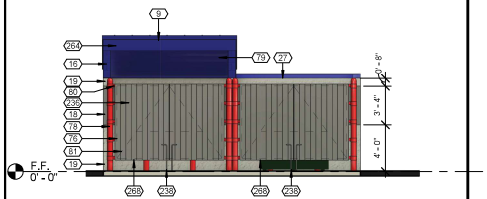
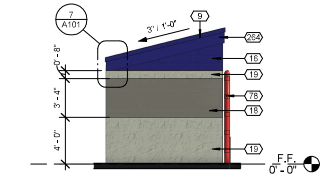
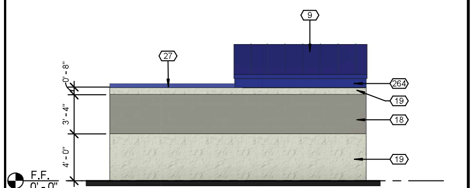


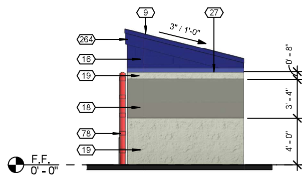
1 05_Dumpster Elevation_A
3/16" = 1'-0"



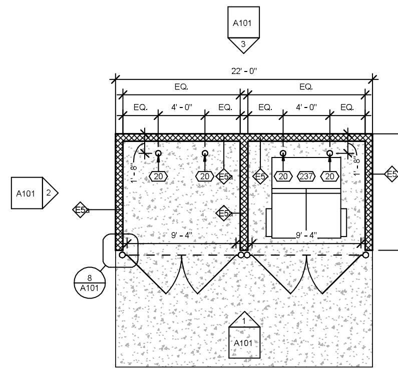
2 07_Dumpster Elevation_C
3/16" = 1'-0"



3 06_Dumpster Elevation_B
3/16" = 1'-0"



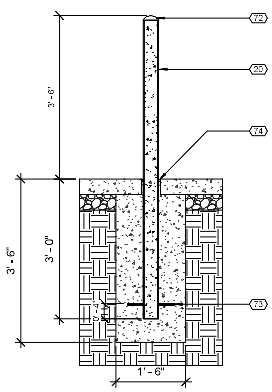
4 08_Dumpster Elevation_D
3/16" = 1'-0"



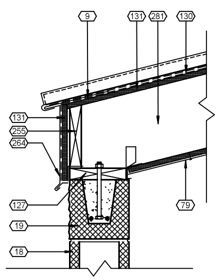
5 02_Floor Plan_Dumpster
3/16" = 1'-0"

Keynote Schedule

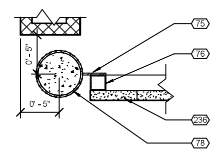
Tag	Text
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
16	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
18	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule. Project 1/2" where indicated on details.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details. See Specification 055000 Metal Fabrications.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking. Slope to drain. Color as indicated on Finish Schedule.
34	4" perforated perimeter drain with silt filtration fabric. See Details.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
38	Eyewash station. See Plumbing.
46	Oil tank stairs (By Others).
58	Verify location and size of pit exhaust opening with Structural and Mechanical drawings.
72	Painted concrete cap for pipe bollard. Color as indicated on Finish Schedule.
73	1/2" diameter x 4" long metal studs. Provide a total of 4.
74	1/2" expansion joint with backer rod and sealant.
75	1/4" x 6" painted steel bracket with continuous fillet weld to painted steel collar hinge and frame. Color as indicated on Finish Schedule.
76	2" x 2" x 1/4" painted steel gate frame with welded connections. Color as indicated on Finish Schedule.
78	6" diameter painted steel dumpster post. Color as indicated on Finish Schedule.
79	Wrap front face and underside of dumpster roof joists with prefinished metal panels (on 5/8" plywood) to match standing seam metal roof. Install and fasten prefinished metal panels per manufacturer's written standards to ensure a weathertight construction.
80	Hinge collar with grease fitting. Collar welded all around to post. Typical.
81	2" x 2" x 1/4" painted steel cross bracing with horizontal bracing in thirds (beyond). Color as indicated on Finish Schedule.
127	2x pressure treated wood nailer.
130	2 layers of #15 roofing felt.
131	5/8" pressure treated plywood decking. See Structural.
223	Work bench (By Others).
232	Bracket mounted fire extinguisher. See Specification Section 104416 Fire Extinguishers. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details.
233	275-gallon Class IIIB new oil tank (By Others).
234	928-gallon Class IIIB new oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.
235	928-gallon Class IIIB waste oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.
236	1x6 painted Trex slats secured to frame. See Finish Schedule for color.
237	Dumpster (By Others).
238	Cane bolts with stops.
255	2x pressure treated wood blocking.
264	Prefinished metal fascia / trim, with hemmed drip edge, to match standing seam metal roof.
268	Hold bottom of gate above grade as necessary to clear adjacent curb height to ensure gates can swing 180 degrees. Coordinate with Civil drawings for clearance needed.
281	2x P.T. joists. See Structural.



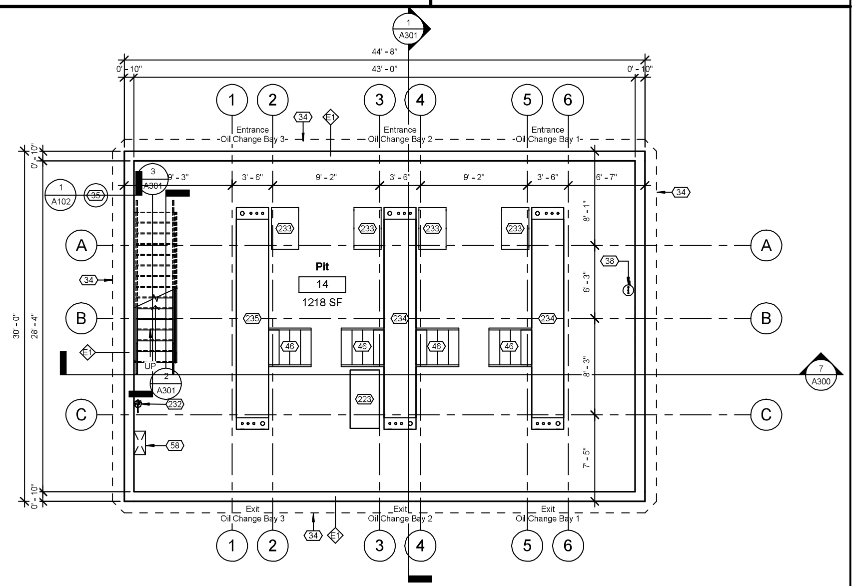
6 DT_Sheet A101_Bollard Detail
3/4" = 1'-0"



7 Roof Trim Detail
1 1/2" = 1'-0"



8 DT_Sheet A101_Dumpster Detail @ Gate
1 1/2" = 1'-0"



9 00_Floor Plan_Pit
3/16" = 1'-0"

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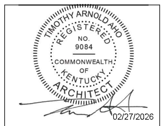

Express Oil Change & Tire Engineers

Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage

Richmond, Kentucky

FINAL

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IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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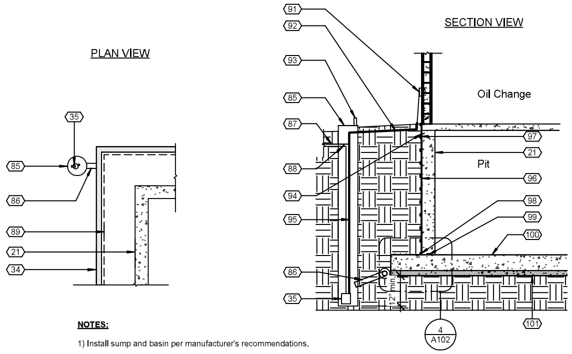
Pit Floor Plan and Site Details

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

A101

Scale	As indicated

5/1/2026 11:36:59 AM

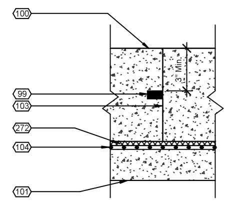


NOTES:

1) Install sump and basin per manufacturer's recommendations.

2) Provide traffic rated lid without vent if located in drive aisle.

1 DT_Sheet A102_Sump Pump Detail w/ Mud Slab
1/4" = 1'-0"



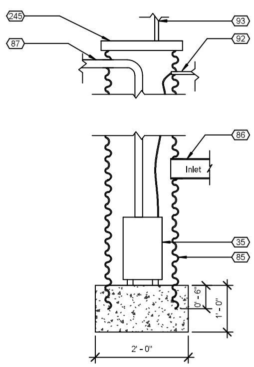
NOTES:

1. Install all waterproofing per manufacturer's recommendations.
2. GC to contact Owner for copy of Geotech Report.

2 DT_Sheet A102_Foundation Construction Joint w/ Mud Slab
1 1/2" = 1'-0"

Keynote Schedule

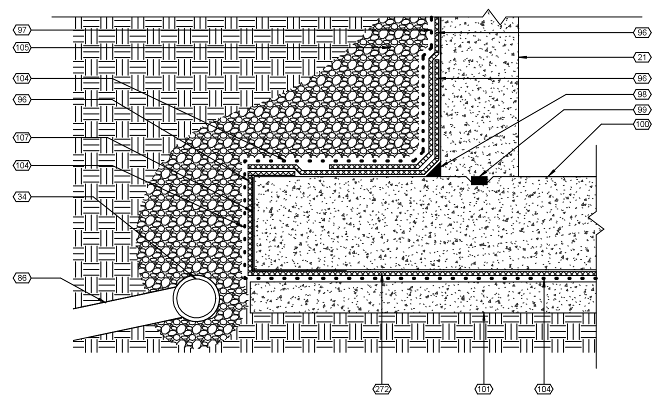
Tag	Text
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
34	4" perforated perimeter drain with silt filtration fabric. See Details.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
85	18" diameter black corrugated pipe with inlet fittings and solid heavy duty corrugated locking pipe cover set in concrete with power grommet, or Nyloplast drain basin with inlet fittings and lockable cover and power grommet. Contractor's Option. Set pipe in concrete 2'x2'x1'. Embed pipe 6" into concrete.
86	4" discharge pipe to sump pump.
87	2" discharge pipe from sump pump to storm drainage system. Coordinate with Civil.
88	Install union at serviceable depth.
89	Concrete foundation. See Structural.
91	Provide power for sump pump. See Electrical.
92	Power cord for sump pump to be run in conduit from outlet to sump below grade.
93	2" – 3" vent pipe
94	Fasteners at 12" max o.c. for securing subdrainage to pit wall. Follow manufacturer's installation instructions.
95	Pull rope or wire for submersible sump pump.
96	CCW MiraClay woven geotextile against wall/slab.
97	CCW MiraDrain 6200.
98	CCW MiraClay granules or CCW MiraClay mastic.
99	CCW MiraStop BW.
100	Concrete slab. See Structural.
101	4" mud slab if required. See Structural.
103	Construction joint.
104	CCW MiraDrain 9800.
105	3" washed #57 stone wrapped in silt filtration fabric.
107	CCW MiraClay 12" Reinforcing Angle Strip at all outside corners.
245	Lockable cover @ sump pump.
272	CCW MiraClay non-woven geotextile side up.



3 DT_Sheet A102_Sump Pump Section
3/4" = 1'-0"

NOTES:

1. Install all waterproofing and drainage components per manufacturer's recommendations.
2. GC to contact Owner for copy of Geotech Report.
3. See Structural for reinforcing in wall and slab.
4. See Structural for dimensions.



4 DT_Sheet A102_Foundation Waterproofing with Gravel Fill w/ Mud Slab
1 1/2" = 1'-0"

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02/27/2026

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Foundation Details

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

A102

Scale As indicated

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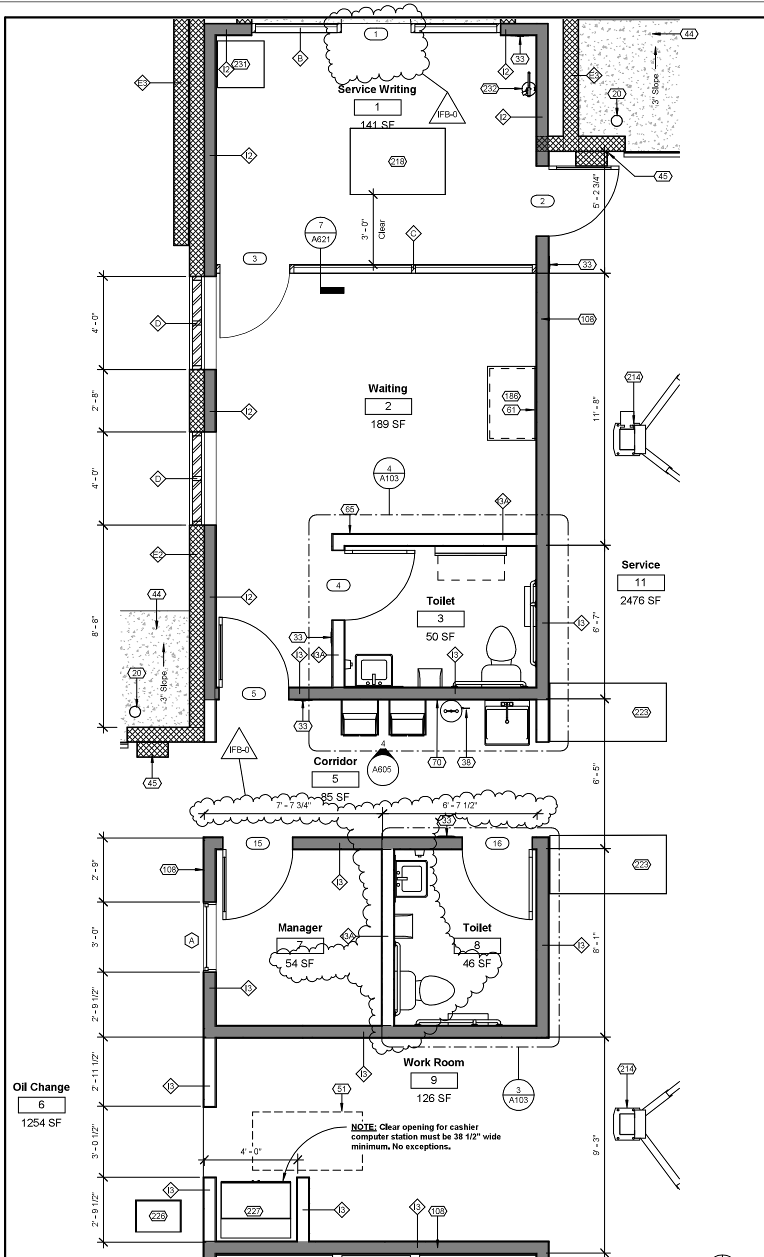
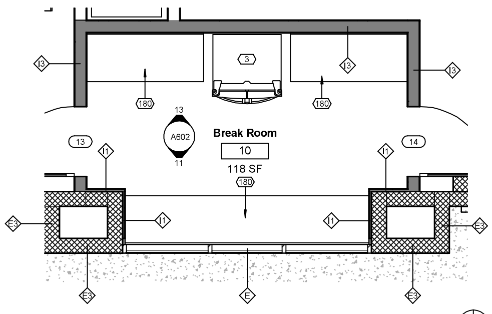
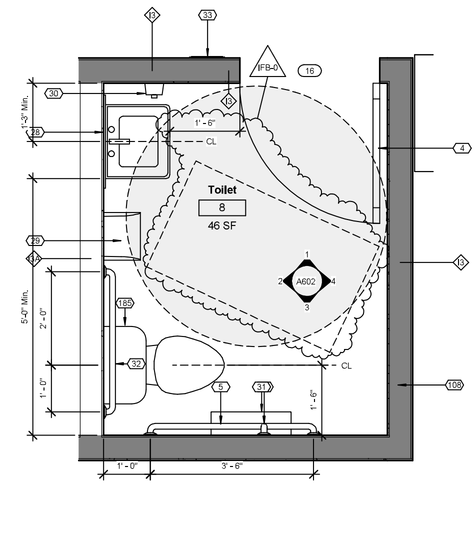


1 08_Enlarged Plan_Main
3/8" = 1'-0"

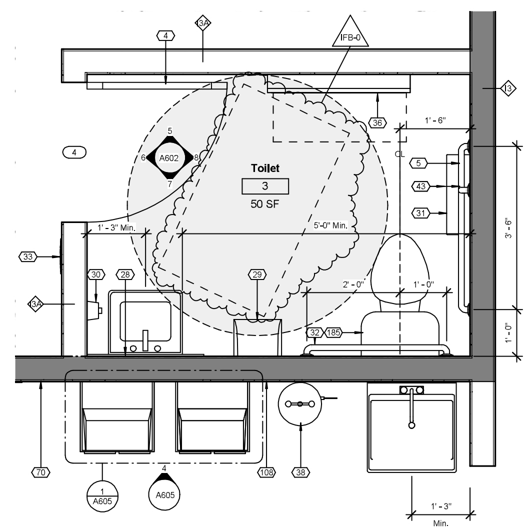


2 12_Enlarged Plan_Break Room 10
3/8" = 1'-0"

Keynote Schedule	
Tag	Text
3	Location of 30" wide refrigerator (By Others).
4	Robe hook mounted at 48" A.F.F. See Specification 102800 Toilet, Bath, and Laundry Accessories.
5	42" grab bar with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details. See Specification 055000 Metal Fabrications.
28	Framed mirror. See Specification 102800 Toilet, Bath, and Laundry Accessories.
29	Automatic Towel Dispenser (By others). Provide blocking in wall as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
30	Wall mounted soap dispenser (By Others). Provide blocking in wall as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
31	Jumbo Dual Roll Toilet Tissue dispenser (By Others). Provide blocking in wall as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
32	36" grab bar with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
33	ADA compliant room / exit sign. See Details.
36	Surface mounted baby changing station with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
38	Eyewash station. See Plumbing.
43	24" vertical grab bar with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
44	Concrete apron as required. Slope away from building with 3% slope minimum. See Civil. Maintain 2% slope max at all man doors.
45	Jamb reinforcing as required. See Structural.
51	Attic access ladder.
61	Wall mounted T.V. by others. See Electrical.
65	Word Wall. Use extreme bond primer. Graphics (By Others).
70	Full-height FRP, entire wall, unless otherwise noted. See Specification 066400 Plastic Paneling (Fiberglass Reinforced Panels).
108	Gray shading indicates these walls are the boundaries for the building thermal envelope assembly.
180	Plastic laminate over 3/4" plywood. See Specification 123623.13 Plastic-Laminate-Clad Countertops. See Finish Schedule for color.
185	Flush valve on transfer side of water closet.
186	Coffee cabinet.
214	10K Lift (By Others).
218	Service Writing Desk.
223	Work bench (By Others).
226	Computer podium (By Others).
227	Cashier computer station (By Others). Clear opening for cashier computer station must be 38 ½" wide minimum. No Exceptions.
231	Beverage refrigerator (By Others).
232	Bracket mounted fire extinguisher. See Specification Section 104416 Fire Extinguishers. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details.



3 10_Enlarged Plan_Toilet 8
3/4" = 1'-0"



4 09_Enlarged Plan_Toilet 3
3/4" = 1'-0"

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TIMOTHY ARNOLD AHO
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NO. 9084
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ARCHITECT
02/27/2026

Express Oil Change & Tire Engineers

Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage

Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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Enlarged Floor Plans and Details

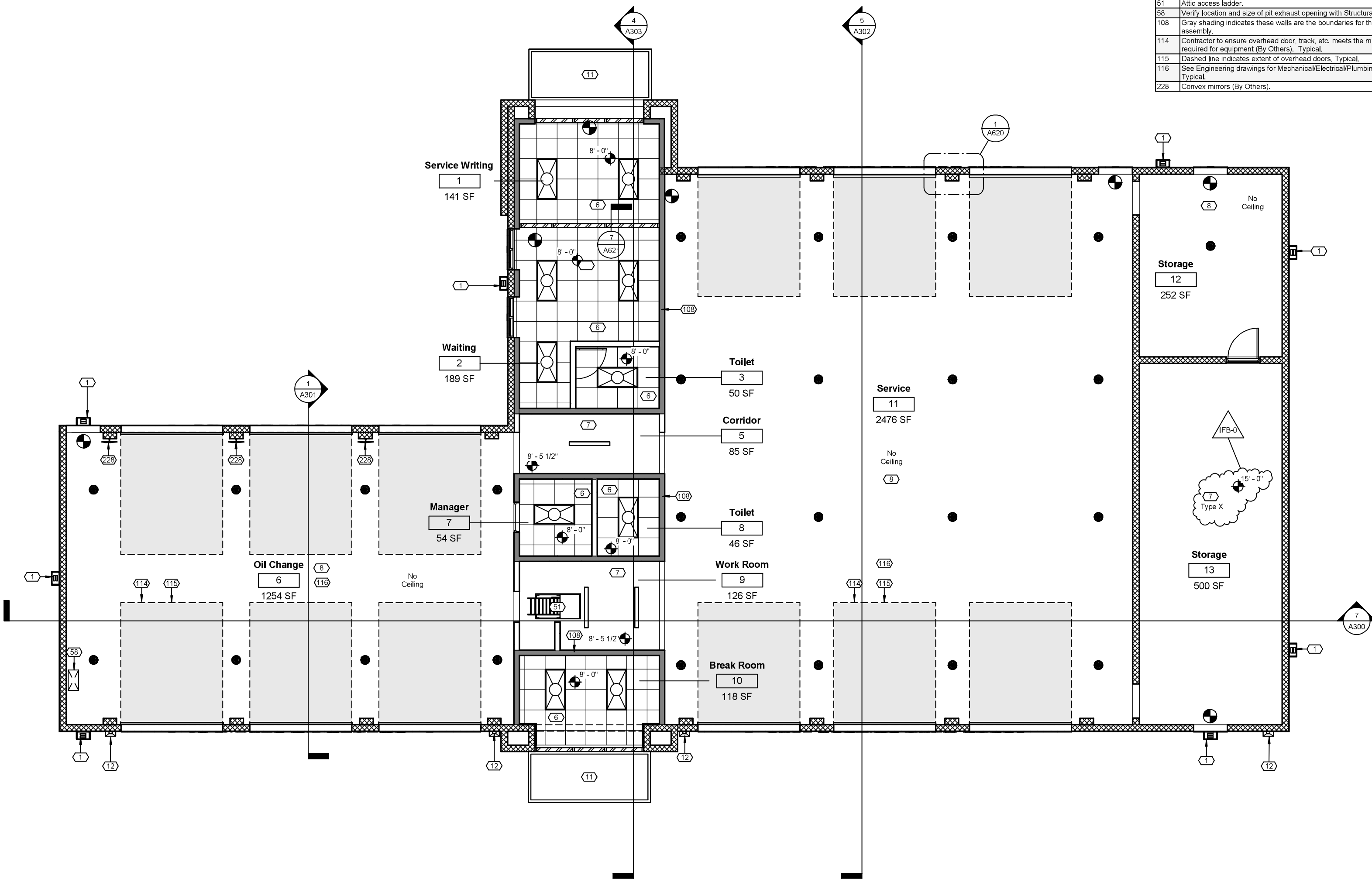
Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

A103

Scale As indicated

5/1/2026 11:37:03 AM

Keynote Schedule	
Tag	Text
1	Wall Pack / Electrical Fixture. See Electrical.
6	Lay-in acoustical ceiling tile and grid, supported from structure.
7	Painted 1/2" gypsum board ceiling secured to structure above. 5/8" Type X where indicated. See Details for # of layers.
8	Exposed to structure above.
11	Pre-finished metal canopy. See Details.
12	Pre-finished metal conductor head with built-in overflow and downspout. Drainage to discharge on grade, unless indicated on drawings that drainage is to be piped to storm, (See Civil). Provide a pre-finished elbow and concrete splash block. See Specification 077100 Roof Specialties.
51	Attic access ladder.
58	Verify location and size of pit exhaust opening with Structural and Mechanical drawings.
108	Gray shading indicates these walls are the boundaries for the building thermal envelope assembly.
114	Contractor to ensure overhead door, track, etc. meets the minimum vertical clearance required for equipment (By Others). Typical.
115	Dashed line indicates extent of overhead doors. Typical.
116	See Engineering drawings for Mechanical/Electrical/Plumbing fixtures and equipment. Typical.
228	Convex mirrors (By Others).



1 01_RCP_Main
3/16" = 1'-0"

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Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

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Reflected Ceiling Plan - Main

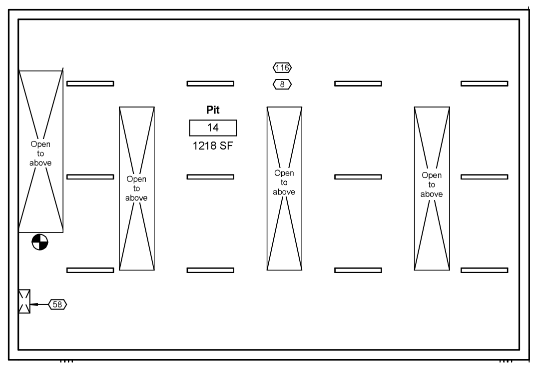
Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

A104

Scale	3/16" = 1'-0"

5/1/2026 11:37:04 AM

Keynote Schedule	
Tag	Text
8	Exposed to structure above.
58	Verify location and size of pit exhaust opening with Structural and Mechanical drawings.
116	See Engineering drawings for Mechanical/Electrical/Plumbing fixtures and equipment. Typical.



1 00_RCP_Pit
3/16" = 1'-0"

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Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

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Reflected Ceiling Plan - Pit

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

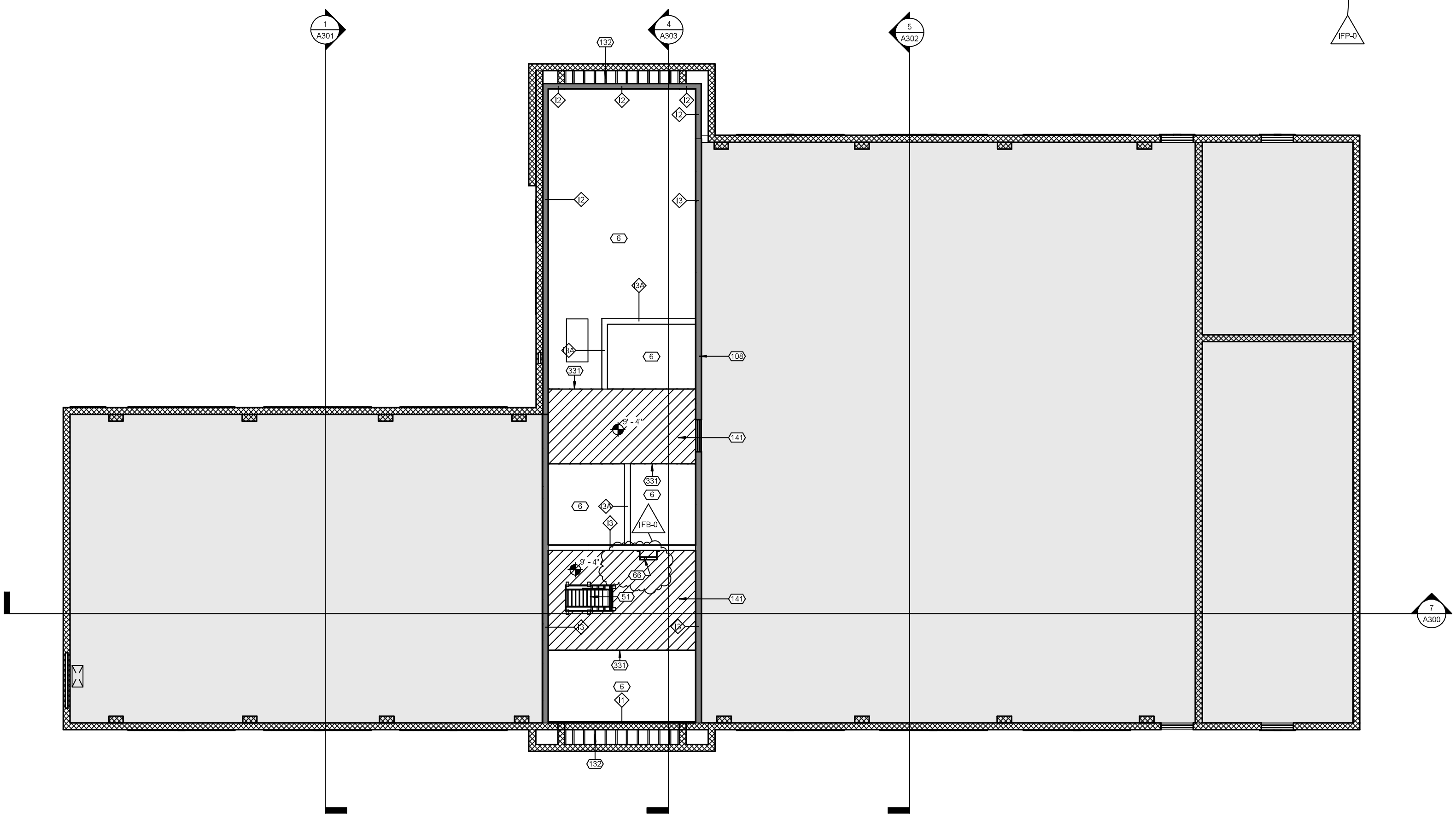
A105

Scale	3/16" = 1'-0"

5/1/2026 11:37:05 AM

Keynote Schedule	
Tag	Text
6	Lay-in acoustical ceiling tile and grid, supported from structure.
51	Attic access ladder.
66	Interior wall mounted ladder. See Details. See Specification 055133 Ladders. Color as indicated on Finish Schedule.
108	Gray shading indicates these walls are the boundaries for the building thermal envelope assembly.
132	2x wood framing @ 16" o.c. with kraft face R-38 batt insulation in between. Kraft face in contact with substrate.
141	3/4" tongue and groove plywood on 2x10 wood joists @ 12" o.c. Provide R-38 batt kraft face insulation in between joists. Kraft face in contact with substrate. (If applicable, it shall be the Contractor's option to provide plywood attached to bottom of joists for insulation to rest on or secure insulation to joists without the need for the plywood bottom).
331	Provide 42" guards at all exposed edges of above ceiling platforms. Concentrated Load: Guards shall be designed to resist a concentrated load of 200 pounds in accordance with Section 4.5.1 of ASCE/SEI 7. Uniform Load: Guards shall be designed to resist a linear load of 50 pounds per linear foot in accordance with Section 4.5.1.1 of ASCE/SEI 7. This load need not be assumed to act concurrently with the concentrated load specified above. Guard infill components except the top rail shall be designed to resist a concentrated load of 50 pounds in accordance with Section 4.5.1.2 of ASCE/SEI 7.

IFP-0



1 11_Floor Plan_Platform
3/16" = 1'-0"

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Richmond, Kentucky

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IFB-0	Bid Set / AHJ Resub.	04/20/2026

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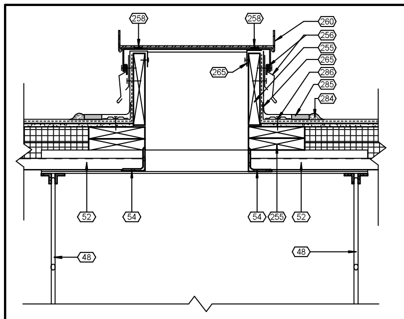
Floor Plan - Platform

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

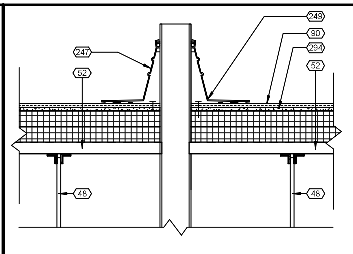
A106

Scale	3/16" = 1'-0"

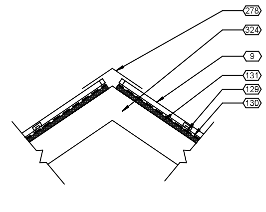
5/1/2026 11:37:06 AM



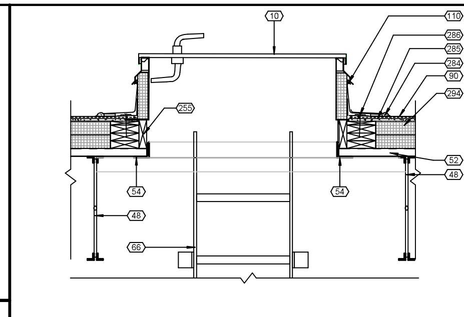
1 DT_Sheet A107_TPO Roof Curb Detail
1 1/2" = 1'-0"



2 DT_Sheet A107_TPO Roof Penetration Detail
1 1/2" = 1'-0"

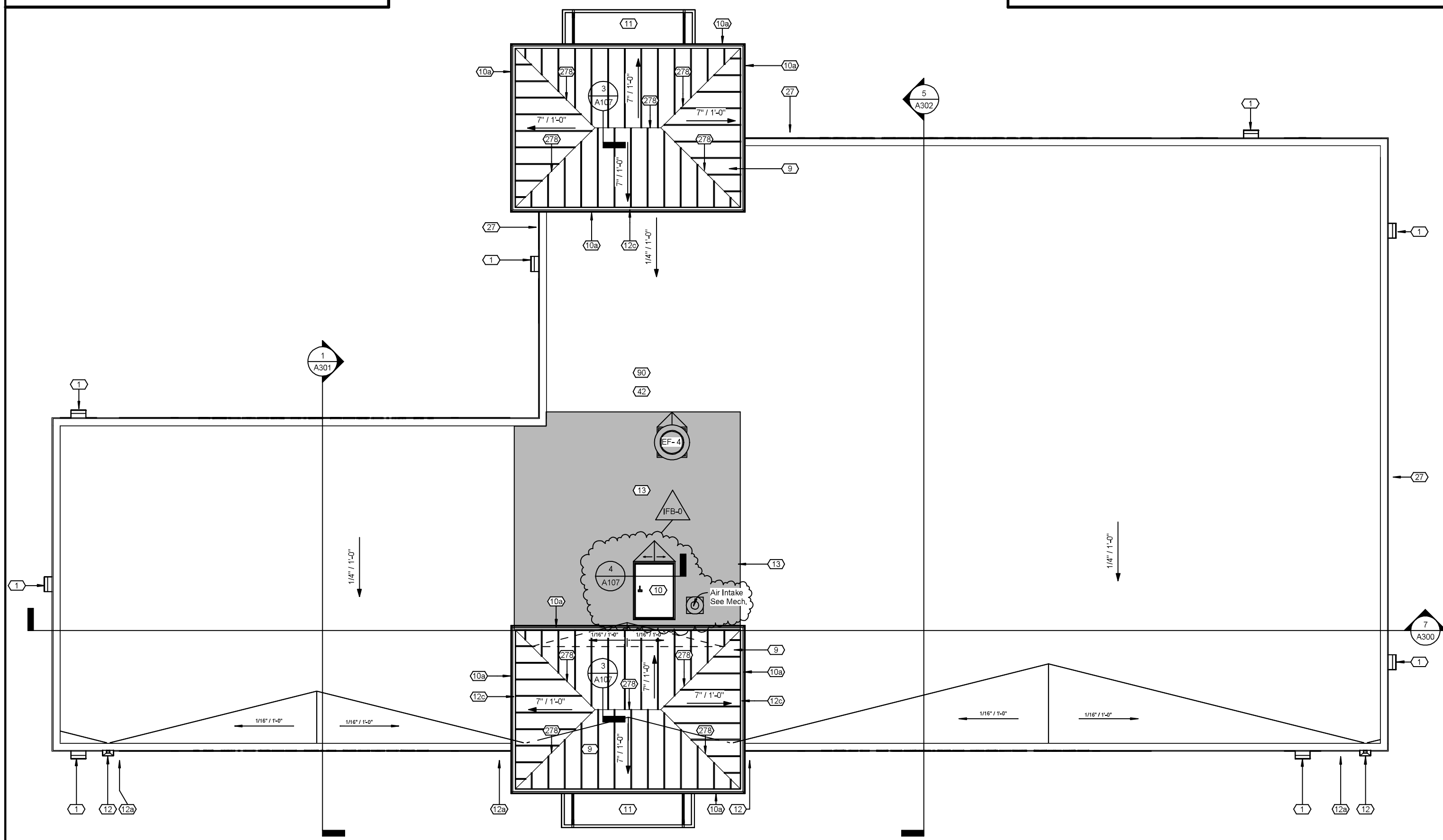


3 Draft Template_Typical Ridge-Hip Detail
1" = 1'-0"



4 DT_Sheet A107_Roof Hatch Detail - Parallel to Roof Joists
1" = 1'-0"

Keynote Schedule	
Tag	Text
1	Wall Pack / Electrical Fixture. See Electrical.
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
10	Roof hatch. See Specification 077233 Roof Hatches.
10a	Prefinished metal gutter. Match SSMR color.
11	Pre-finished metal canopy. See Details.
12	Pre-finished metal conductor head with built-in overflow and downspout. Drainage to discharge on grade, unless indicated on drawings that drainage is to be piped to storm, (See Civil). Provide a pre-finished elbow and concrete splash block. See Specification 077100 Roof Specialties.
12a	Emergency roof drain scupper. Locate adjacent to conductor head and 2 inches higher than downspout scupper location. See Specification 077100 Roof Specialties.
12c	Prefinished metal downspout. Match SSMR color. Discharge on TPO roof below.
13	Walk pad, see Specification 075423 TPO Roof.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking. Slope to drain. Color as indicated on Finish Schedule.
42	Paint all roof penetrations to match roof color.
48	Bar joist. See Structural.
52	Galvanized metal roof deck. See Structural.
54	Steel angle. See Structural.
66	Interior wall mounted ladder. See Details. See Specification 055133 Ladders. Color as indicated on Finish Schedule.
90	Fully adhered TPO membrane roofing installed per manufacturer's written instructions. See Specification 075423 Thermoplastic Polyolefin (TPO) Roofing.
110	Sealant with backer rod.
129	"H" clips at mid-span on standing seam metal roof.
130	2 layers of #15 roofing felt.
131	5/8" pressure treated plywood decking. See Structural.
247	Sealant compatible with water block sealant.
249	TPO pre-molded vent boot with pre-manufactured TPO membrane flashing by TPO manufacturer.
255	2x pressure treated wood blocking.
256	Prefinished metal flashing and counterflashing.
258	Continuous sealant around perimeter.
260	Base of equipment to extend 1/2" minimum beyond and down over top of roof curb.
265	TPO membrane turned vertically up the wall and fastened to wood blocking at top roof curb, or top of wall framing per detail. Adhere TPO membrane to wall substrate with manufacturer approved bonding adhesive.
278	Prefinished metal ridge/hip cap by metal roofing manufacturer. Provide vent material at ridge only (Match roof color).
284	Cut edge sealant at TPO roof membrane flashing.
285	Hot air weld at TPO membrane and membrane flashing.
286	Fastener and seam fastening plate.
294	Polyisocyanurate insulation board (See TPO Spec for required R-value). Provide ½" cover board, mechanically fastened, over the top of insulation in locations where membrane roofing is to be applied.
324	Cold-formed metal stud trusses, see Structural.



5 03_Roof Plan
3/16" = 1'-0"

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02/27/2026

Express Oil Change & Tire Engineers

Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage

Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
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Roof Plan

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

A107

Scale As indicated

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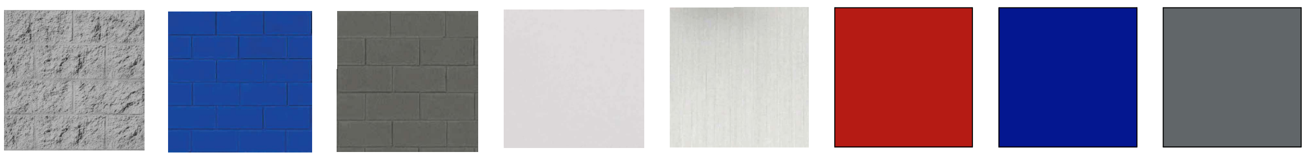
EXTERIOR FINISH MATERIAL LEGEND



PAINTED SPLIT-FACE CMU
Color: SW7669 Summit Gray
Manuf: Sherwin Williams
Keynote: 19

PAINTED SMOOTH-FACE CMU
Color: SW6966 Blueblood
Manuf: Sherwin Williams
Keynote: 16

PAINTED SMOOTH-FACE CMU
Color: SW7075 Web Gray
Manuf: Sherwin Williams
Keynote: 18

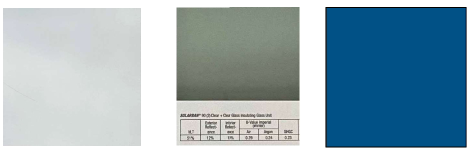
HM DOORS
Color: SW7669 Summit Gray
Manuf: Sherwin Williams

STOREFRONT DOORS/WINDOWS
Color: Clear Anodized Aluminum
Manuf: YKK

BOLLARDS
Color: Safety Red
Manuf: Sherwin Williams

STANDING SEAM METAL ROOF
Color: Royal Blue
Manuf: Berridge

CONDUCTOR HEADS / DOWNSPOUTS
Color: Match SW7075 Web Gray
Manuf: Sherwin Williams



OVERHEAD DOORS
Color: White
Manuf: TBD

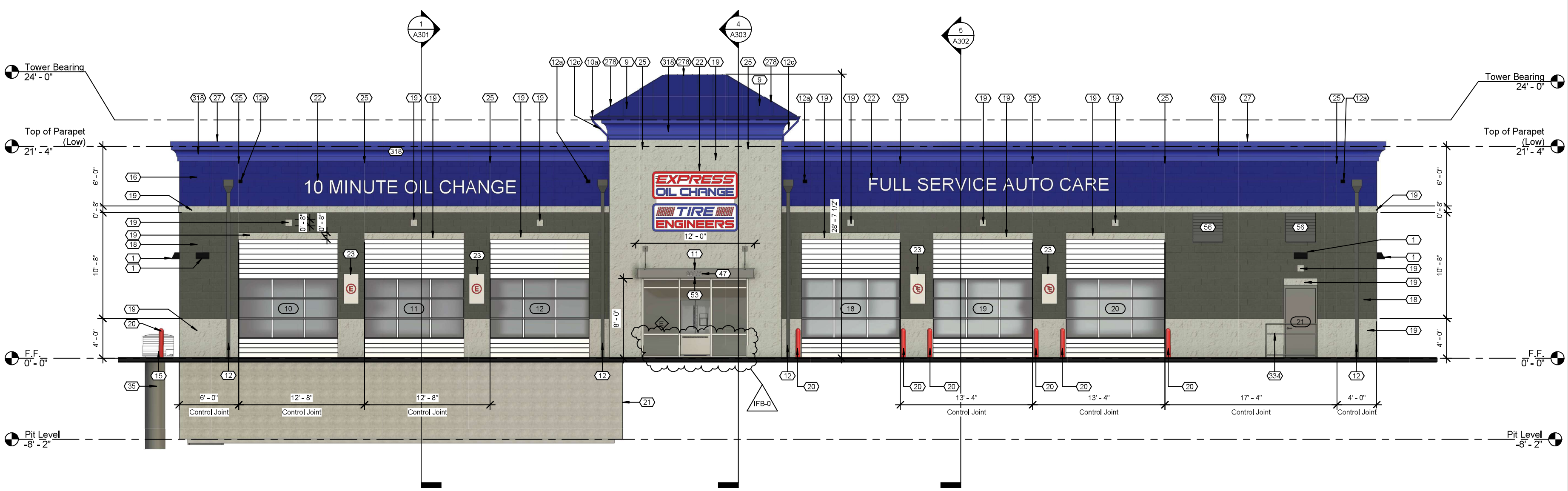
TINTED GLAZING
Color: Solarban 90 on Clear
Manuf: Vitro Architectural Glass

EIFS CORNICE & TRIM
Color: SW6966 Blueblood
Manuf: Sherwin Williams

MATERIAL PERCENTAGE CALCULATIONS		
WALL ELEVATION (NOT INCLUDING DOORS/ROOF)	1,860 S.F.	100%
PAINTED SMOOTH-FACE CMU (KEYNOTE #16)	465 S.F.	25% OF TOTAL
PAINTED SMOOTH-FACE CMU (KEYNOTE #18)	548 S.F.	31% OF TOTAL
PAINTED SPLIT-FACE CMU (KEYNOTE #19)	570 S.F.	31% OF TOTAL
PAINTED EIFS COPING/TRIM (KEYNOTE #318)	192 S.F.	10% OF TOTAL
GLAZING	85 S.F.	5% OF TOTAL

Keynote Schedule

Tag	Text
1	Wall Pack / Electrical Fixture. See Electrical.
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
10a	Prefinished metal gutter. Match SSMR color.
11	Pre-finished metal canopy. See Details.
12	Pre-finished metal conductor head with built-in overflow and downspout. Drainage to discharge on grade, unless indicated on drawings that drainage is to be piped to storm, (See Civil). Provide a pre-finished elbow and concrete splash block. See Specification 077100 Roof Specialties.
12a	Emergency roof drain scupper. Locate adjacent to conductor head and 2 inches higher than downspout scupper location. See Specification 077100 Roof Specialties.
12c	Prefinished metal downspout. Match SSMR color. Discharge on TPO roof below.
15	HVAC condensing unit. See Mechanical.
16	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
18	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule. Project 1/2" where indicated on details.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details. See Specification 055000 Metal Fabrications.
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
22	Signage (By Others). See Electrical.
23	Wall sconce (By Others). See Electrical. Locate junction box for sconces 5'-0" a.f.f. vertically and 4" from center horizontally. Verify with sign company prior to rough-in.
25	Control joint. For control joints in concrete floor slabs, coordinate location with equipment layout by others. Max. distance between control joints in slabs not to exceed 12'-0". Control joints in walls shall be 4'-0" max from wall intersection or corner and every 20'-0".
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking. Slope to drain. Color as indicated on Finish Schedule.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
47	Provide address identification as directed by the Local Fire Marshal or AHJ, but letter size shall not be less than 4 inches high.
53	Conduit to be centered horizontally for lights in canopy. Verify with sign company prior to rough-in.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
278	Prefinished metal ridge/hip cap by metal roofing manufacturer. Provide vent material at ridge only (Match roof color).
318	Painted preformed EIFS cornice and trim, See Specification Section 072400 EIFS Exterior Insulation and Finish System.
334	36" high x 5'-0" long painted steel pipe guardrail. See Specification Section 055213 Pipe and Tube Railings.



01_Exterior Elevation_False Front (West)
3/16" = 1'-0"

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ARCHITECT
02/27/2026

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Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage
Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

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Exterior Elevation - False Front (West)

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

A200

Scale 3/16" = 1'-0"

5/1/2026 11:37:31 AM

EXTERIOR FINISH MATERIAL LEGEND

PAINTED SPLIT-FACE CMU
Color: SW7669 Summit Gray
Manuf: Sherwin Williams
Keynote: 19

PAINTED SMOOTH-FACE CMU
Color: SW6966 Blueblood
Manuf: Sherwin Williams
Keynote: 16

PAINTED SMOOTH-FACE CMU
Color: SW7075 Web Gray
Manuf: Sherwin Williams
Keynote: 18

HM DOORS
Color: SW7669 Summit Gray
Manuf: Sherwin Williams

STOREFRONT DOORS/WINDOWS
Color: Clear Anodized Aluminum
Manuf: YKK

BOLLARDS
Color: Safety Red
Manuf: Sherwin Williams

STANDING SEAM METAL ROOF
Color: Royal Blue
Manuf: Berridge

CONDUCTOR HEADS / DOWNSPOUTS
Color: Match SW7075 Web Gray
Manuf: Sherwin Williams

OVERHEAD DOORS
Color: White
Manuf: TBD

TINTED GLAZING
Color: Solarban 90 on Clear
Manuf: Vitro Architectural Glass

EIFS CORNICE & TRIM
Color: SW6966 Blueblood
Manuf: Sherwin Williams

MATERIAL PERCENTAGE CALCULATIONS

WALL ELEVATION (NOT INCLUDING DOORS/ROOF)	1,811 S.F.	100%
PAINTED SMOOTH-FACE CMU (KEYNOTE #16)	465 S.F.	26% OF TOTAL
PAINTED SMOOTH-FACE CMU (KEYNOTE #18)	520 S.F.	29% OF TOTAL
PAINTED SPLIT-FACE CMU (KEYNOTE #19)	549 S.F.	30% OF TOTAL
PAINTED EIFS COPING/TRIM (KEYNOTE #318)	192 S.F.	10% OF TOTAL
GLAZING	85 S.F.	5% OF TOTAL

Keynote Schedule

Tag	Text
1	Wall Pack / Electrical Fixture. See Electrical.
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
10a	Prefinished metal gutter. Match SSMR color.
11	Pre-finished metal canopy. See Details.
12c	Prefinished metal downspout. Match SSMR color. Discharge on TPO roof below.
15	HVAC condensing unit. See Mechanical.
16	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
18	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule. Project 1/2" where indicated on details.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details. See Specification 055000 Metal Fabrications.
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
22	Signage (By Others). See Electrical.
23	Wall sconce (By Others). See Electrical. Locate junction box for sconces 5'-0" a.f.f. vertically and 4" from center horizontally. Verify with sign company prior to rough-in.
25	Control joint. For control joints in concrete floor slabs, coordinate location with equipment layout by others. Max. distance between control joints in slabs not to exceed 12'-0". Control joints in walls shall be 4'-0" max from wall intersection or corner and every 20'-0".
26	Fire Department Lock Box. Locate as directed by the Local Fire Marshal or AHJ. See Specification 104413 Fire Department Lock Box.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking. Slope to drain. Color as indicated on Finish Schedule.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
47	Provide address identification as directed by the Local Fire Marshal or AHJ, but letter size shall not be less than 4 inches high.
53	Conduit to be centered horizontally for lights in canopy. Verify with sign company prior to rough-in.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
59	Gas meter. See Plumbing.
144	Electrical meter. See Electrical.
278	Prefinished metal ridge/hip cap by metal roofing manufacturer. Provide vent material at ridge only (Match roof color).
318	Painted preformed EIFS cornice and trim, See Specification Section 072400 EIFS Exterior Insulation and Finish System.
334	36" high x 5'-0" long painted steel pipe guardrail. See Specification Section 055213 Pipe and Tube Railings.

1 02_Exterior Elevation_Rear Entry (East)
3/16" = 1'-0"

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02/27/2026

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IFB-0	Bid Set / AHJ Resub.	04/20/2026

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Exterior Elevation - Rear Entry (East)

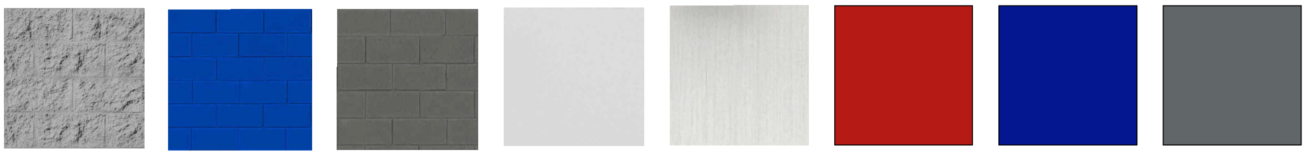
Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

A201

Scale	3/16" = 1'-0"

5/1/2026 11:37:55 AM

EXTERIOR FINISH MATERIAL LEGEND



PAINTED SPLIT-FACE CMU
Color: SW7669 Summit Gray
Manuf: Sherwin Williams
Keynote: 19

PAINTED SMOOTH-FACE CMU
Color: SW6966 Blueblood
Manuf: Sherwin Williams
Keynote: 16

PAINTED SMOOTH-FACE CMU
Color: SW7075 Web Gray
Manuf: Sherwin Williams
Keynote: 18

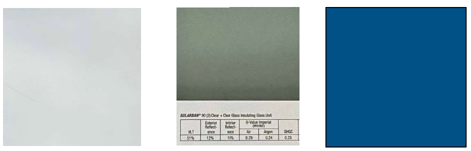
HM DOORS
Color: SW7669 Summit Gray
Manuf: Sherwin Williams

STOREFRONT DOORS/WINDOWS
Color: Clear Anodized Aluminum
Manuf: YKK

BOLLARDS
Color: Safety Red
Manuf: Sherwin Williams

STANDING SEAM METAL ROOF
Color: Royal Blue
Manuf: Berridge

CONDUCTOR HEADS / DOWNSPOUTS
Color: Match SW7075 Web Gray
Manuf: Sherwin Williams



OVERHEAD DOORS
Color: White
Manuf: TBD

TINTED GLAZING
Color: Solarban 90 on Clear
Manuf: Vitro Architectural Glass

EIFS CORNICE & TRIM
Color: SW6966 Blueblood
Manuf: Sherwin Williams

MATERIAL PERCENTAGE CALCULATIONS		
WALL ELEVATION (NOT INCLUDING DOORS/ROOF)	1,410 S.F.	100%
PAINTED SMOOTH-FACE CMU (KEYNOTE #16)	228 S.F.	16% OF TOTAL
PAINTED SMOOTH-FACE CMU (KEYNOTE #18)	458 S.F.	32% OF TOTAL
PAINTED SPLIT-FACE CMU (KEYNOTE #19)	536 S.F.	38% OF TOTAL
PAINTED EIFS COPING/TRIM (KEYNOTE #318)	124 S.F.	9% OF TOTAL
GLAZING	64 S.F.	5% OF TOTAL

Keynote Schedule

Tag	Text
1	Wall Pack / Electrical Fixture. See Electrical.
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
10a	Prefinished metal gutter. Match SSMR color.
11	Pre-finished metal canopy. See Details.
12	Pre-finished metal conductor head with built-in overflow and downspout. Drainage to discharge on grade, unless indicated on drawings that drainage is to be piped to storm, (See Civil). Provide a pre-finished elbow and concrete splash block. See Specification 077100 Roof Specialties.
12c	Prefinished metal downspout. Match SSMR color. Discharge on TPO roof below.
15	HVAC condensing unit. See Mechanical.
16	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
18	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule. Project 1/2" where indicated on details.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details. See Specification 055000 Metal Fabrications.
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
22	Signage (By Others). See Electrical.
25	Control joint. For control joints in concrete floor slabs, coordinate location with equipment layout by others. Max. distance between control joints in slabs not to exceed 12'-0". Control joints in walls shall be 4'-0" max from wall intersection or corner and every 20'-0".
26	Fire Department Lock Box. Locate as directed by the Local Fire Marshal or AHJ. See Specification 104413 Fire Department Lock Box.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking. Slope to drain. Color as indicated on Finish Schedule.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
47	Provide address identification as directed by the Local Fire Marshal or AHJ, but letter size shall not be less than 4 inches high.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
59	Gas meter. See Plumbing.
144	Electrical meter. See Electrical.
278	Prefinished metal ridge/hip cap by metal roofing manufacturer. Provide vent material at ridge only (Match roof color).
318	Painted preformed EIFS cornice and trim, See Specification Section 072400 EIFS Exterior Insulation and Finish System.
334	36" high x 5'-0" long painted steel pipe guardrail. See Specification Section 055213 Pipe and Tube Railings.

1 03_Exterior Elevation_Left (North)
3/16" = 1'-0"

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TIMOTHY ARNOLD AHO
REGISTERED
NO. 9084
COMMONWEALTH OF KENTUCKY
ARCHITECT
02/27/2026

Express Oil Change & Tire Engineers
Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage
Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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Exterior Elevation - Left (North)

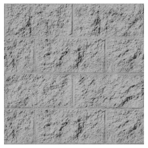
Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

A202

Scale 3/16" = 1'-0"

5/1/2026 11:38:17 AM

EXTERIOR FINISH MATERIAL LEGEND



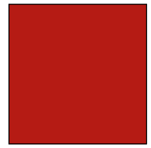
PAINTED SPLIT-FACE CMU
Color: SW7669 Summit Gray
Manuf: Sherwin Williams
Keynote: 19

PAINTED SMOOTH-FACE CMU
Color: SW6966 Blueblood
Manuf: Sherwin Williams
Keynote: 16

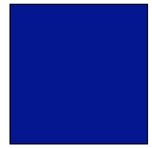
PAINTED SMOOTH-FACE CMU
Color: SW7075 Web Gray
Manuf: Sherwin Williams
Keynote: 18

HM DOORS
Color: SW7669 Summit Gray
Manuf: Sherwin Williams

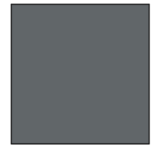
STOREFRONT DOORS/WINDOWS
Color: Clear Anodized Aluminum
Manuf: YKK



BOLLARDS
Color: Safety Red
Manuf: Sherwin Williams

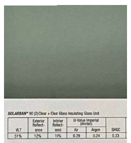


STANDING SEAM METAL ROOF
Color: Royal Blue
Manuf: Berridge

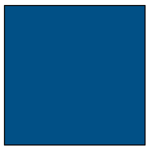


CONDUCTOR HEADS / DOWNSPOUTS
Color: Match SW7075 Web Gray
Manuf: Sherwin Williams

OVERHEAD DOORS
Color: White
Manuf: TBD



TINTED GLAZING
Color: Solarban 90 on Clear
Manuf: Vitro Architectural Glass

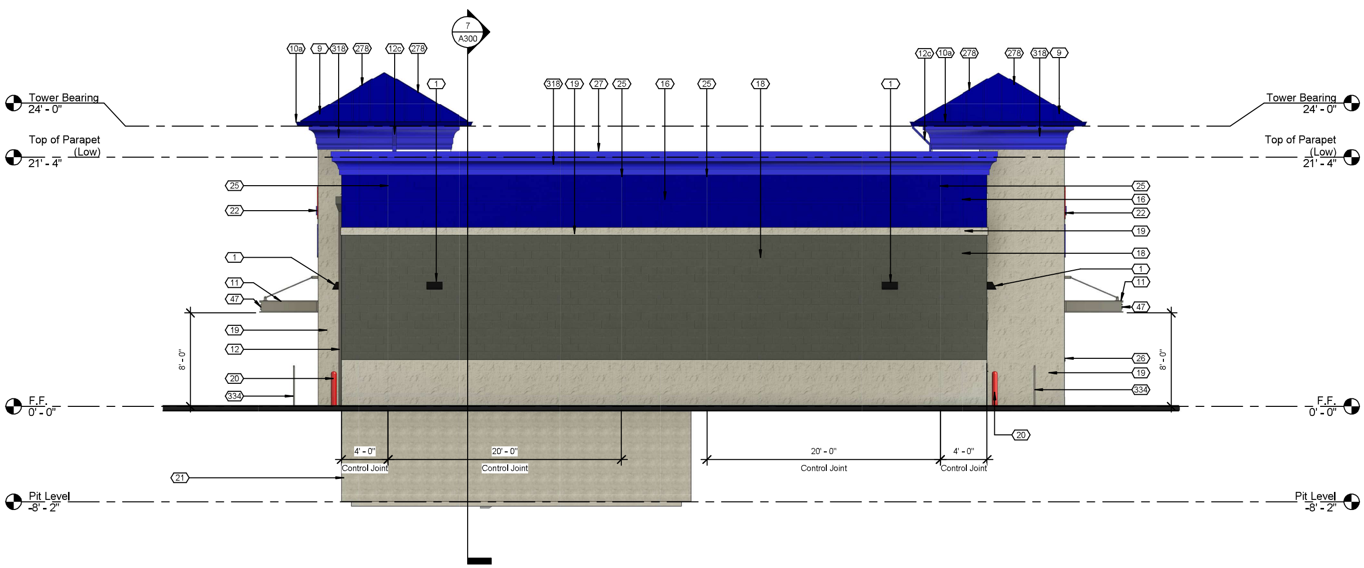


EIFS CORNICE & TRIM
Color: SW6966 Blueblood
Manuf: Sherwin Williams

MATERIAL PERCENTAGE CALCULATIONS		
WALL ELEVATION (NOT INCLUDING DOORS/ROOF)	1,420 S.F.	100%
PAINTED SMOOTH-FACE CMU (KEYNOTE #16)	249 S.F.	18% OF TOTAL
PAINTED SMOOTH-FACE CMU (KEYNOTE #18)	590 S.F.	41% OF TOTAL
PAINTED SPLIT-FACE CMU (KEYNOTE #19)	449 S.F.	32% OF TOTAL
PAINTED EIFS COPING/TRIM (KEYNOTE #318)	132 S.F.	9% OF TOTAL

Keynote Schedule

Tag	Text
1	Wall Pack / Electrical Fixture. See Electrical.
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
10a	Prefinished metal gutter. Match SSMR color.
11	Pre-finished metal canopy. See Details.
12	Pre-finished metal conductor head with built-in overflow and downspout. Drainage to discharge on grade, unless indicated on drawings that drainage is to be piped to storm, (See Civil). Provide a pre-finished elbow and concrete splash block. See Specification 077100 Roof Specialties.
12c	Prefinished metal downspout. Match SSMR color. Discharge on TPO roof below.
16	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
18	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule. Project 1/2" where indicated on details.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details. See Specification 055000 Metal Fabrications.
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
22	Signage (By Others). See Electrical.
25	Control joint. For control joints in concrete floor slabs, coordinate location with equipment layout by others. Max. distance between control joints in slabs not to exceed 12'-0". Control joints in walls shall be 4'-0" max from wall intersection or corner and every 20'-0".
26	Fire Department Lock Box. Locate as directed by the Local Fire Marshal or AHJ. See Specification 104413 Fire Department Lock Box.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking. Slope to drain. Color as indicated on Finish Schedule.
47	Provide address identification as directed by the Local Fire Marshal or AHJ, but letter size shall not be less than 4 inches high.
278	Prefinished metal ridge/hip cap by metal roofing manufacturer. Provide vent material at ridge only (Match roof color).
318	Painted preformed EIFS cornice and trim, See Specification Section 072400 EIFS Exterior Insulation and Finish System.
334	36" high x 5'-0" long painted steel pipe guardrail. See Specification Section 055213 Pipe and Tube Railings.



1 04_Exterior Elevation_Right (South)
3/16" = 1'-0"

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COMMONWEALTH OF KENTUCKY
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02/27/2026

Express Oil Change & Tire Engineers
Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage
Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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Exterior Elevation - Right (South)

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

A203

Scale 3/16" = 1'-0"

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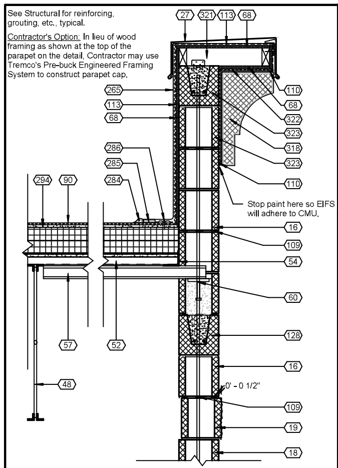
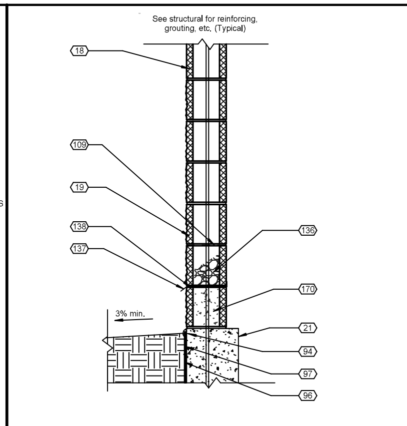
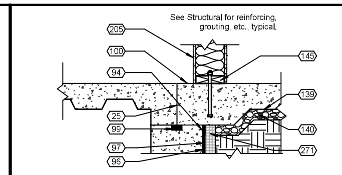


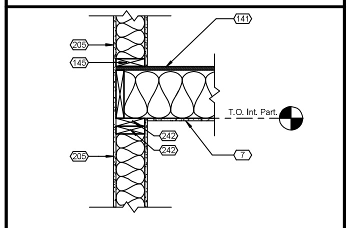
1 DT_Sheet A300 Roof at Parapet (Side Wall) Standard
1" = 1'-0"



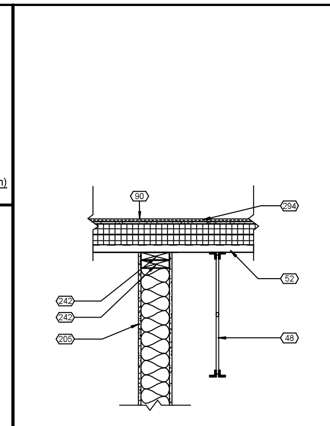
2 DT_Sheet A300_Water Table Detail @ Pit Wall Standard
1" = 1'-0"



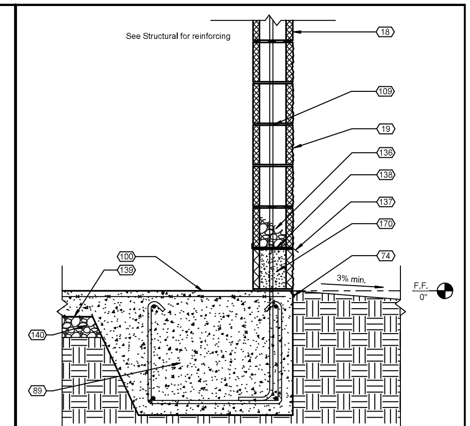
3 DT_Sheet A300_Slab On Grade - Pit Wall Transition (Insulation)
1" = 1'-0"



4 DT_Sheet A300_Wall Detail @ Platform (Wall Extended)
1" = 1'-0"



5 DT_Sheet A300_Wall Detail at Roof
1" = 1'-0"



6 DT_Sheet A300_Slab On Grade
1" = 1'-0"

Keynote Schedule

Tag	Text
1	Wall Pack / Electrical Fixture. See Electrical.
7	Painted 1/2" gypsum board ceiling secured to structure above. 5/8" Type X where indicated. See Details for # of layers.
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
10	Roof hatch. See Specification 077233 Roof Hatches.
10a	Prefinished metal gutter. Match SSMR color.
12c	Prefinished metal downspout. Match SSMR color. Discharge on TPO roof below.
15	HVAC condensing unit. See Mechanical.
16	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
18	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule. Project 1/2" where indicated on details.
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
25	Control joint. For control joints in concrete floor slabs, coordinate location with equipment layout by others. Max. distance between control joints in slabs not to exceed 12'-0". Contro joints in walls shall be 4'-0" max from wall intersection or corner and every 20'-0".

Keynote Schedule

Tag	Text
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking. Slope to drain. Color as indicated on Finish Schedule.
33	ADA compliant room / exit sign. See Details.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
38	Eyewash station. See Plumbing.
46	Oil tank stairs (By Others).
48	Bar joist. See Structural.
51	Attic access ladder.
52	Galvanized metal roof deck. See Structural.
54	Steel angle. See Structural.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
57	Joist extension. See Structural.
60	Steel plate with headed studs. See Structural.
66	Interior wall mounted ladder. See Details. See Specification 055133 Ladders. Color as indicated on Finish Schedule.
68	1/2" exterior plywood sheathing.
74	1/2" expansion joint with backer rod and sealant.
89	Concrete foundation. See Structural.
90	Fully adhered TPO membrane roofing installed per manufacturer's written instructions. See Specification 075423 Thermoplastic Polyolefin (TPO) Roofing.
94	Fasteners at 12" max o.c. for securing subdrainage to pit wall. Follow manufacturer's installation instructions.
96	CCW MiraClay woven geotextile against wall/slab.

Keynote Schedule

Tag	Text
97	CCW MiraDrain 6200.
99	CCW MiraStop BW.
100	Concrete slab. See Structural.
109	Horizontal joint reinforcement at 16" o.c. vertical.
110	Sealant with backer rod.
113	Fluid applied vapor permeable air barrier. See Specification 072726 Fluid Applied Membrane Air Barrier.
128	Painted smooth-face 8" concrete-filled "U" block bond beam. Condition varies. See Structural.
136	Pea gravel above through wall flashing.
137	Flashing between first and second course to utilize BlockFlash in addition to the pea gravel specified. Provide a drainage mat in open masonry cell directly above the BlockFlash pan.
138	Drainable weeps at every third mortar joint.
139	10 mil vapor barrier. See Specification 072600 Vapor Retarders.
140	Porous fill. See Geotechnical Report.
141	3/4" tongue and groove plywood on 2x10 wood joists @ 12" o.c. Provide R-38 batt kraft face insulation in between joists. Kraft face in contact with substrate. (If applicable, it shall be the Contractor's option to provide plywood attached to bottom of joists for insulation to rest on or secure insulation to joists without the need for the plywood bottom).
145	2x pressure treated wood sill plate.
170	Fill first course of CMU with grout.
205	1 layer of 1/2" painted gypsum board on both sides of 2"x6" wood studs at 16" o.c. Infill with kraft-faced R-20 batt insulation. Kraft in contact with gypsum board.
214	10K Lift (By Others).
215	12K Lift (By Others).

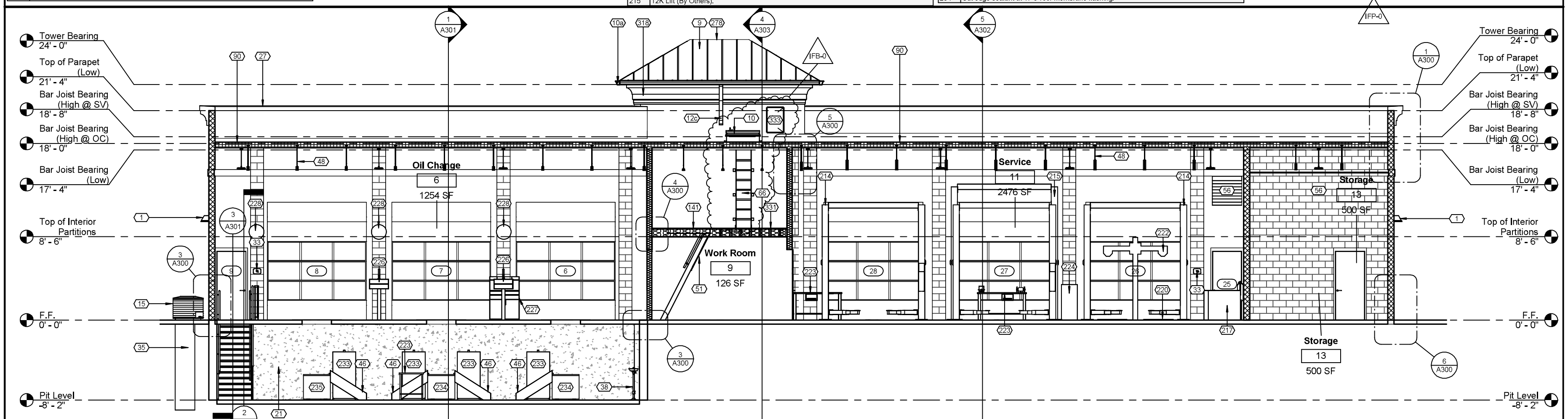
Keynote Schedule

Tag	Text
217	Wheel balancer (By Others).
220	Scissor lift alignment (By Others).
222	Alignment scarecrow (By Others).
223	Work bench (By Others).
224	Strut compressor (By Others).
226	Computer podium (By Others).
227	Cashier computer station (By Others). Clear opening for cashier computer station must be 38 ½" wide minimum. No Exceptions.
228	Convex mirrors (By Others).
233	275-gallon Class IIIB new oil tank (By Others).
234	928-gallon Class IIIB new oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.
235	928-gallon Class IIIB waste oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.
242	2x pressure treated wood top plate.
265	TPO membrane turned vertically up the wall and fastened to wood blocking at top roof curb, or top of wall framing per detail. Adhere TPO membrane to wall substrate with manufacturer approved bonding adhesive.
271	Continuous rigid insulation for 24" below slab at perimeter of thermal envelope. See Specification Section 072100 – Thermal Insulation for thickness.
278	Prefinished metal ridge/hip cap by metal roofing manufacturer. Provide vent material at ridge only (Match roof color).
284	Cut edge sealant at TPO roof membrane flashing.

Keynote Schedule

Tag	Text
285	Hot air weld at TPO membrane and membrane flashing.
286	Fastener and seam fastening plate.
294	Polyisocyanurate insulation board (See TPO Spec for required R-value). Provide ½" cover board, mechanically fastened, over the top of insulation in locations where membrane roofing is to be applied.
318	Painted preformed EIFS cornice and trim, See Specification Section 072400 EIFS Exterior Insulation and Finish System.
321	2x pressure treated wood framing spaced at 2'-0" o.c., minimum. Anchor 2x framing into grouted masonry cells using Simpson Strong Tie A23 angle ties. Secure angle ties on each side of framing members using 4 concrete screws on each side.
322	Vapor permeable air and water resistive barrier membrane. See Specification Section 072400 EIFS Exterior Insulation and Finish System.
323	Unpainted smooth-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry.
331	Provide 42" guards at all exposed edges of above ceiling platforms. Concentrated Load: Guards shall be designed to resist a concentrated load of 200 pounds in accordance with Section 4.5.1 of ASCE/SEI 7. Uniform Load: Guards shall be designed to resist a linear load of 50 pounds per linear foot in accordance with Section 4.5.1.1 of ASCE/SEI 7. This load need not be assumed to act concurrently with the concentrated load specified above. Guard infill components except the top rail shall be designed to resist a concentrated load of 50 pounds in accordance with Section 4.5.1.2 of ASCE/SEI 7.
333	20" x 30" Exterior attic access door, see Specification Section 083113 Access Doors and Frames.

IFP-0



7 Building Section 1
3/16" = 1'-0"

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COMMONWEALTH OF KENTUCKY
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Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage

Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

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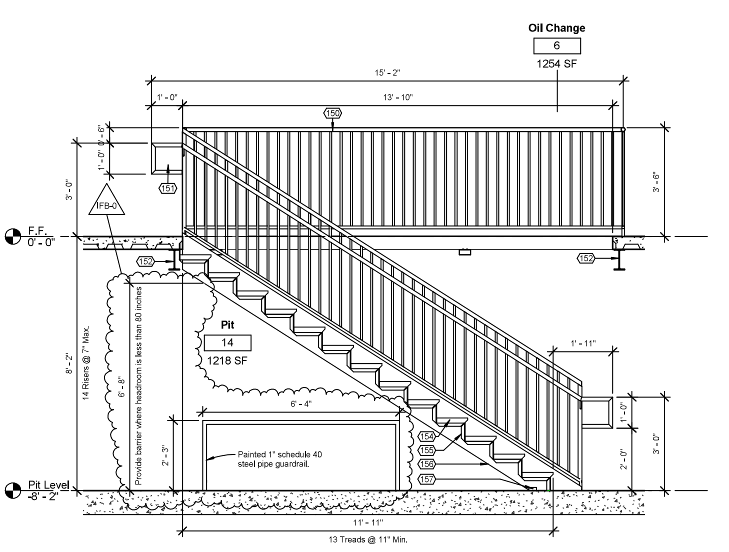
Building Sections

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

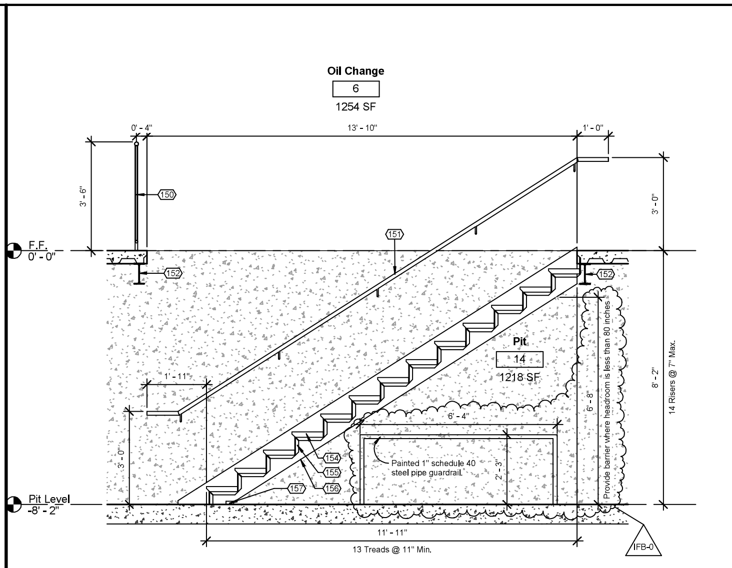
A300

Scale	As indicated

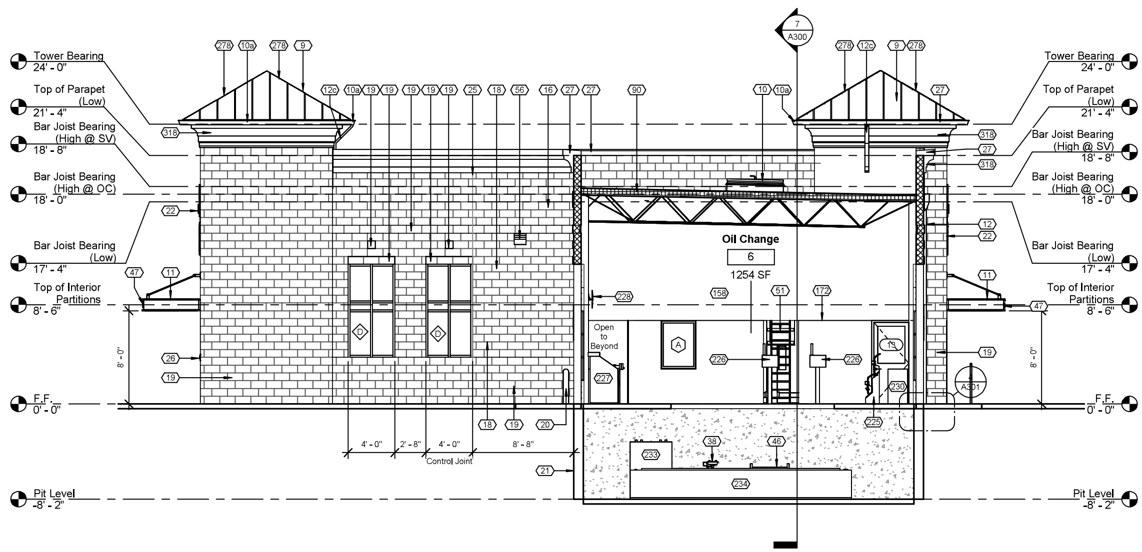
5/1/2026 11:38:42 AM



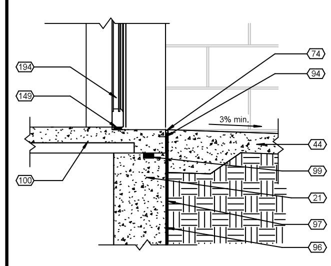
2 Stair Section 1
1/2" = 1'-0"



3 Stair Section 2
1/2" = 1'-0"



1 Building Section 2
3/16" = 1'-0"



4 DT_Sheet A301_Slab Detail @ Pit Wall
1" = 1'-0"

Keynote Schedule

Tag	Text
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
10	Roof hatch. See Specification 077233 Roof Hatches.
10a	Prefinished metal gutter. Match SSMR color.
11	Pre-finished metal canopy. See Details.
12	Pre-finished metal conductor head with built-in overflow and downspout. Drainage to discharge on grade, unless indicated on drawings that drainage is to be piped to storm, (See Civil). Provide a pre-finished elbow and concrete splash block. See Specification 077100 Roof Specialties.
12c	Prefinished metal downspout. Match SSMR color. Discharge on TPO roof below.
16	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
18	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule. Project 1/2" where indicated on details.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details. See Specification 055000 Metal Fabrications.
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
22	Signage (By Others). See Electrical.
25	Control joint. For control joints in concrete floor slabs, coordinate location with equipment layout by others. Max. distance between control joints in slabs not to exceed 12'-0". Control joints in walls shall be 4'-0" max from wall intersection or corner and every 20'-0".
26	Fire Department Lock Box. Locate as directed by the Local Fire Marshal or AHJ. See Specification 104413 Fire Department Lock Box.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking. Slope to drain. Color as indicated on Finish Schedule.
38	Eyewash station. See Plumbing.
44	Concrete apron as required. Slope away from building with 3% slope minimum. See Civil. Maintain 2% slope max at all man doors.
46	Oil tank stairs (By Others).
47	Provide address identification as directed by the Local Fire Marshal or AHJ, but letter size shall not be less than 4 inches high.
51	Attic access ladder.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
74	1/2" expansion joint with backer rod and sealant.
90	Fully adhered TPO membrane roofing installed per manufacturer's written instructions. See Specification 075423 Thermoplastic Polyolefin (TPO) Roofing.
94	Fasteners at 12" max o.c. for securing subdrainage to pit wall. Follow manufacturer's installation instructions.
96	CCW MiraClay woven geotextile against wall/slab.
97	CCW MiraDrain 6200.
99	CCW MiraStop BW.
100	Concrete slab. See Structural.
149	1/2" recess at scheduled door. See Structural.
150	Painted guardrail with painted 1/2" round pickets at 4" max o.c. See Finish Schedule for color. See Specification 055213 Pipe and Tube Railings.
151	Painted 1-1/2" outside diameter pipe handrail. Return handrail to guard/wall. Typical. See Finish Schedule for color. See Specification 055213 Pipe and Tube Railings.
152	Paint all structural steel P-5 Safety Yellow.
154	Concrete filled pre-fabricated metal pan stair treads with safety yellow abrasive nosing, full grit, full length, adhered and fastened. Typical. See Finish Schedule for color. See Specification 055113 Metal Pan Stairs.
155	1-1/4" steel angle clips.
156	10" steel channel stringer. See Finish Schedule for color. See Specification 055113 Metal Pan Stairs.
157	3"x3"x3-1/4" angle floor clip.
158	Vinyl letters (By Others).
172	Ensure paint line occurs at top of door and window frames. Ensure all openings, alcoves and windows align with top of door frame. Typical in Oil and Service Bays.
194	Scheduled door. See plans for details.
225	Lube console (By Others).
226	Computer podium (By Others).
227	Cashier computer station (By Others). Clear opening for cashier computer station must be 38 ½" wide minimum. No Exceptions.
228	Convex mirrors (By Others).
230	Tool cart (By Others).
233	275-gallon Class IIIB new oil tank (By Others).
234	928-gallon Class IIIB new oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.
278	Prefinished metal ridge/hip cap by metal roofing manufacturer. Provide vent material at ridge only (Match roof color).
318	Painted preformed EIFS cornice and trim, See Specification Section 072400 EIFS Exterior Insulation and Finish System.

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REGISTERED
NO. 9084
COMMONWEALTH OF KENTUCKY
ARCHITECT
02/27/2026

Express Oil Change & Tire Engineers

Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage

Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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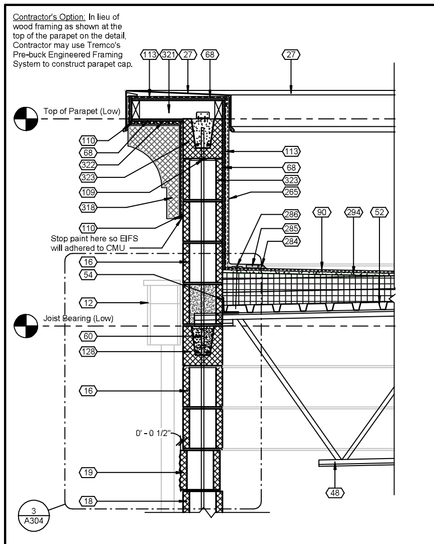
Building Sections

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

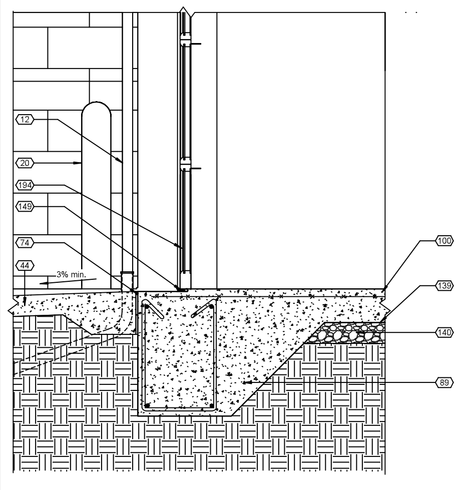
A301

Scale	As indicated

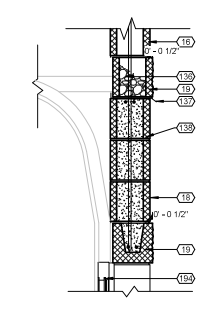
5/1/2026 11:38:45 AM



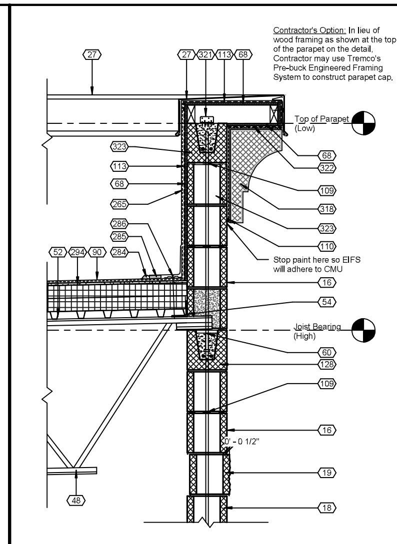
1 DT_Sheet A302 Roof at Parapet (Low) Standard
1" = 1'-0"



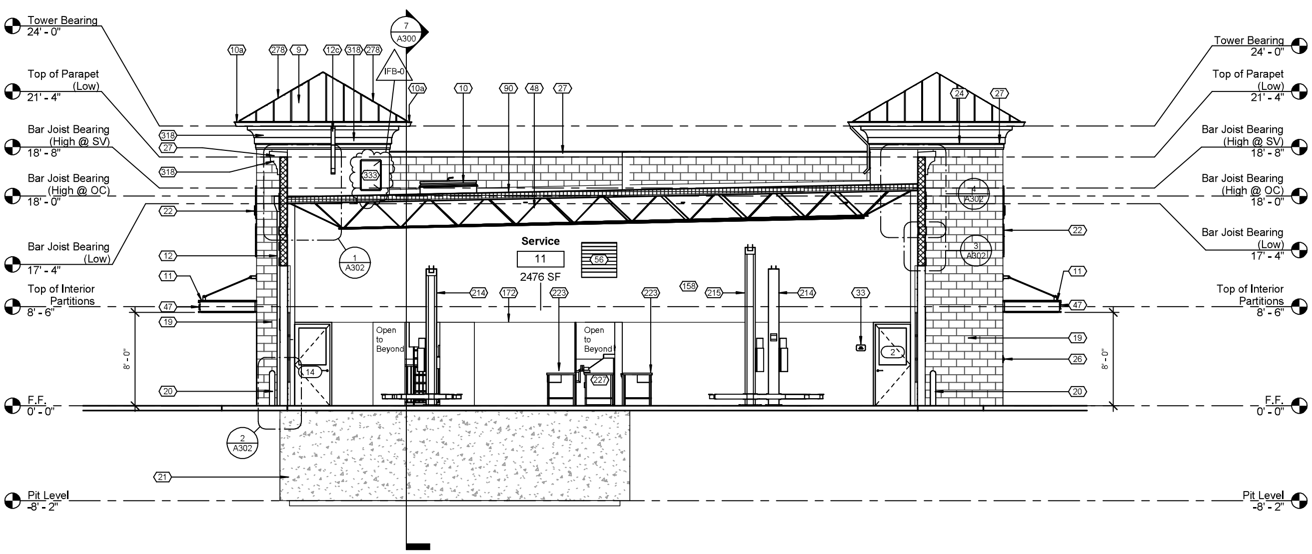
2 DT_Sheet A302_Slab on Grade @ OH Door with piped downspouts
1" = 1'-0"



3 DT_Sheet A302_OH Door Head Detail
1" = 1'-0"



4 DT_Sheet A302 Roof at Parapet (High) Standard
1" = 1'-0"



5 Building Section 3
3/16" = 1'-0"

Keynote Schedule	
Tag	Text
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
10	Roof hatch. See Specification 077233 Roof Hatches.
10a	Prefinished metal gutter. Match SSMR color.
11	Pre-finished metal canopy. See Details.
12	Pre-finished metal conductor head with built-in overflow and downspout. Drainage to discharge on grade, unless indicated on drawings that drainage is to be piped to storm, (See Civil). Provide a pre-finished elbow and concrete splash block. See Specification 077100 Roof Specialties.
12c	Prefinished metal downspout. Match SSMR color. Discharge on TPO roof below.
16	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
18	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule. Project 1/2" where indicated on details.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details. See Specification 055000 Metal Fabrications.
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
22	Signage (By Others). See Electrical.
24	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
26	Fire Department Lock Box. Locate as directed by the Local Fire Marshal or AHJ. See Specification 104413 Fire Department Lock Box.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking. Slope to drain. Color as indicated on Finish Schedule.
33	ADA compliant room / exit sign. See Details.
44	Concrete apron as required. Slope away from building with 3% slope minimum. See Civil. Maintain 2% slope max at all man doors.
47	Provide address identification as directed by the Local Fire Marshal or AHJ, but letter size shall not be less than 4 inches high.
48	Bar joist. See Structural.
52	Galvanized metal roof deck. See Structural.
54	Steel angle. See Structural.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
60	Steel plate with headed studs. See Structural.
68	1/2" exterior plywood sheathing.
74	1/2" expansion joint with backer rod and sealant.
89	Concrete foundation. See Structural.
90	Fully adhered TPO membrane roofing installed per manufacturer's written instructions. See Specification 075423 Thermoplastic Polyolefin (TPO) Roofing.
100	Concrete slab. See Structural.
109	Horizontal joint reinforcement at 16" o.c. vertical.
110	Sealant with backer rod.
113	Fluid applied vapor permeable air barrier. See Specification 072726 Fluid Applied Membrane Air Barrier.
128	Painted smooth-face 8" concrete-filled "U" block bond beam. Condition varies. See Structural.
136	Pea gravel above through wall flashing.
137	Flashing between first and second course to utilize BlockFlash in addition to the pea gravel specified. Provide a drainage mat in open masonry cell directly above the BlockFlash pan.
138	Drainable weeps at every third mortar joint.
139	10 mil vapor barrier. See Specification 072600 Vapor Retarders.
140	Porous fill. See Geotechnical Report.
149	1/2" recess at scheduled door. See Structural.
158	Vinyl letters (By Others).
172	Ensure paint line occurs at top of door and window frames. Ensure all openings, alcoves and windows align with top of door frame. Typical in Oil and Service Bays.
194	Scheduled door. See plans for details.
214	10K Lift (By Others).
215	12K Lift (By Others).
223	Work bench (By Others).
227	Cashier computer station (By Others). Clear opening for cashier computer station must be 38 ½" wide minimum. No Exceptions.
265	TPO membrane turned vertically up the wall and fastened to wood blocking at top roof curb, or top of wall framing per detail. Adhere TPO membrane to wall substrate with manufacturer approved bonding adhesive.
278	Prefinished metal ridge/hip cap by metal roofing manufacturer. Provide vent material at ridge only (Match roof color).
284	Cut edge sealant at TPO roof membrane flashing.
285	Hot air weld at TPO membrane and membrane flashing.
286	Fastener and seam fastening plate.
294	Polyisocyanurate insulation board (See TPO Spec for required R-value). Provide ½" cover board, mechanically fastened, over the top of insulation in locations where membrane roofing is to be applied.
318	Painted preformed EIFS cornice and trim, See Specification Section 072400 EIFS Exterior Insulation and Finish System.
321	2x pressure treated wood framing spaced at 2'-0" o.c., minimum. Anchor 2x framing into grouted masonry cells using Simpson Strong Tie A23 angle ties. Secure angle ties on each side of framing members using 4 concrete screws on each side.
322	Vapor permeable air and water resistive barrier membrane. See Specification Section 072400 EIFS Exterior Insulation and Finish System.
323	Unpainted smooth-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry.
333	20" x 30" Exterior attic access door, see Specification Section 083113 Access Doors and Frames.

IFP-0

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Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage

Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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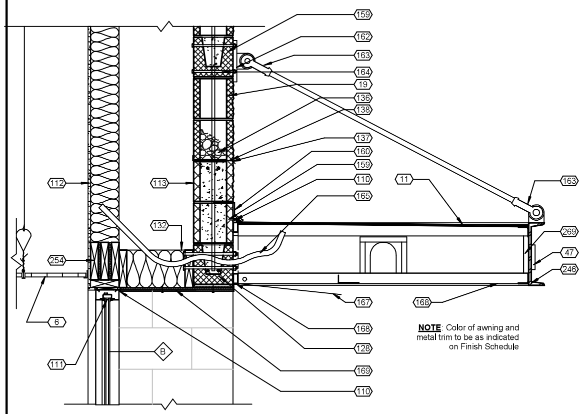
Building Sections

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

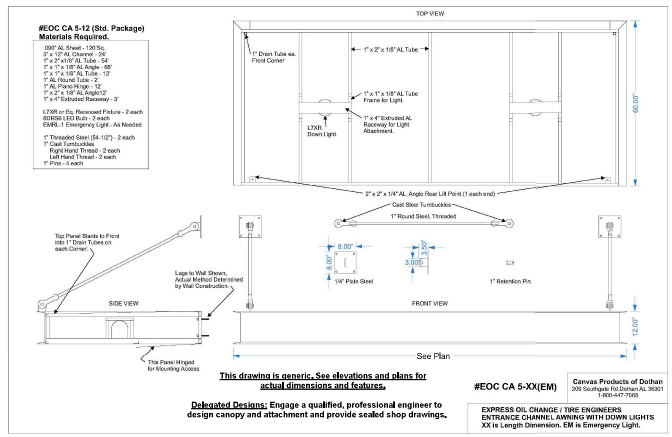
A302

Scale As indicated

5/1/2026 11:38:48 AM



1 DT_Sheet A303_Awning Section
1" = 1'-0"



2 DT_Sheet A303_Awning Details
N.T.S.

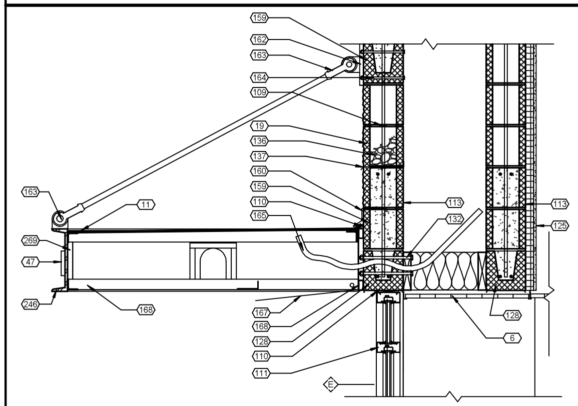
Keynote Schedule

Tag	Text
3	Location of 30" wide refrigerator (By Others).
6	Lay-in acoustical ceiling tile and grid, supported from structure.
7	Painted 1/2" gypsum board ceiling secured to structure above. 5/8" Type X where indicated. See Details for # of layers.
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
10	Roof hatch. See Specification 077233 Roof Hatches.
10a	Prefinished metal gutter. Match SSMR color.
11	Pre-finished metal canopy. See Details.
12c	Prefinished metal downspout. Match SSMR color. Discharge on TPO roof below.
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule. Project 1/2" where indicated on details.
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
24	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking. Slope to drain. Color as indicated on Finish Schedule.
47	Provide address identification as directed by the Local Fire Marshal or AHJ, but letter size shall not be less than 4 inches high.
48	Bar joist. See Structural.
51	Attic access ladder.
66	Interior wall mounted ladder. See Details. See Specification 055133 Ladders. Color as indicated on Finish Schedule.
90	Fully adhered TPO membrane roofing installed per manufacturer's written instructions. See Specification 075423 Thermoplastic Polyolefin (TPO) Roofing.
109	Horizontal joint reinforcement at 16" o.c. vertical.
110	Sealant with backer rod.
111	Aluminum storefront with insulated glazing. See Details.
112	Painted 1/2" gypsum board on 2x6 wood studs at 16" o.c. with kraft-face R-20 batt insulation (kraft in contact with gypsum board). See Details.
113	Fluid applied vapor permeable air barrier. See Specification 072726 Fluid Applied Membrane Air Barrier.
125	1/2" painted gypsum board over rigid insulation secured to z-clips over 8" smooth-face CMU.
128	Painted smooth-face 8" concrete-filled "U" block bond beam. Condition varies. See Structural.
132	2x wood framing @ 16" o.c. with kraft face R-38 batt insulation in between. Kraft face in contact with substrate.
136	Pea gravel above through wall flashing.
137	Flashing between first and second course to utilize BlockFlash in addition to the pea gravel specified. Provide a drainage mat in open masonry cell directly above the BlockFlash pan.

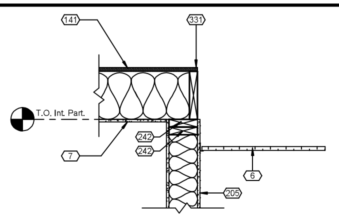
Keynote Schedule

Tag	Text
138	Drainable weeps at every third mortar joint.
141	3/4" tongue and groove plywood on 2x10 wood joists @ 12" o.c. Provide R-38 batt kraft face insulation in between joists. Kraft face in contact with substrate. (If applicable, it shall be the Contractor's option to provide plywood attached to bottom of joists for insulation to rest on or secure insulation to joists without the need for the plywood bottom).
159	Painted smooth-face grout-filled CMU where canopy attaches to wall construction. See Structural.
160	Pre-finished aluminum flashing to match color of canopy. Turn out onto canopy.
162	Pre-finished 8"x8"x1/4" steel plate anchored to wall using through wall fasteners by Canopy manufacturer's designated design.
163	Pre-finished 1" cast steel turnbuckle with 1" threaded steel rod and 1" pins.
164	Anchor canopy to wall using through wall fasteners by Canopy manufacturer's designated design.
165	Provide a 1" flexible conduit extending 12" beyond the face of the wall for canopy lighting. See Electrical.
167	Pre-finished hinged panel for mounting access. Color to match canopy.
168	1"x2" aluminum tube. Typical.
169	Pre-finished metal over 1/2" pressure treated plywood. Terminate at aluminum storefront. Turn up pre-finished metal 1" at edge where metal meets canopy. Secure panel to plywood with fasteners compatible with type and color of metal being used.
205	1 layer of 1/2" painted gypsum board on both sides of 2"x6" wood studs at 16" o.c. Infill with kraft-faced R-20 batt insulation. Kraft in contact with gypsum board.
218	Service Writing Desk.
227	Cashier computer station (By Others). Clear opening for cashier computer station must be 38 ½" wide minimum. No Exceptions.
231	Beverage refrigerator (By Others).
242	2x pressure treated wood top plate.
246	3"x12" aluminum channel.
254	2x wood framing at opening.
269	1" drain tube beyond. Slope top panel of canopy toward the drain tube at the front of the canopy.
278	Prefinished metal ridge/hip cap by metal roofing manufacturer. Provide vent material at ridge only (Match roof color).
318	Painted preformed EIFS cornice and trim, See Specification Section 072400 EIFS Exterior Insulation and Finish System.
331	Provide 42" guards at all exposed edges of above ceiling platforms. Concentrated Load: Guards shall be designed to resist a concentrated load of 200 pounds in accordance with Section 4.5.1 of ASCE/SEI 7. Uniform Load: Guards shall be designed to resist a linear load of 50 pounds per linear foot in accordance with Section 4.5.1.1 of ASCE/SEI 7. This load need not be assumed to act concurrently with the concentrated load specified above. Guard infill components except the top rail shall be designed to resist a concentrated load of 50 pounds in accordance with Section 4.5.1.2 of ASCE/SEI 7.

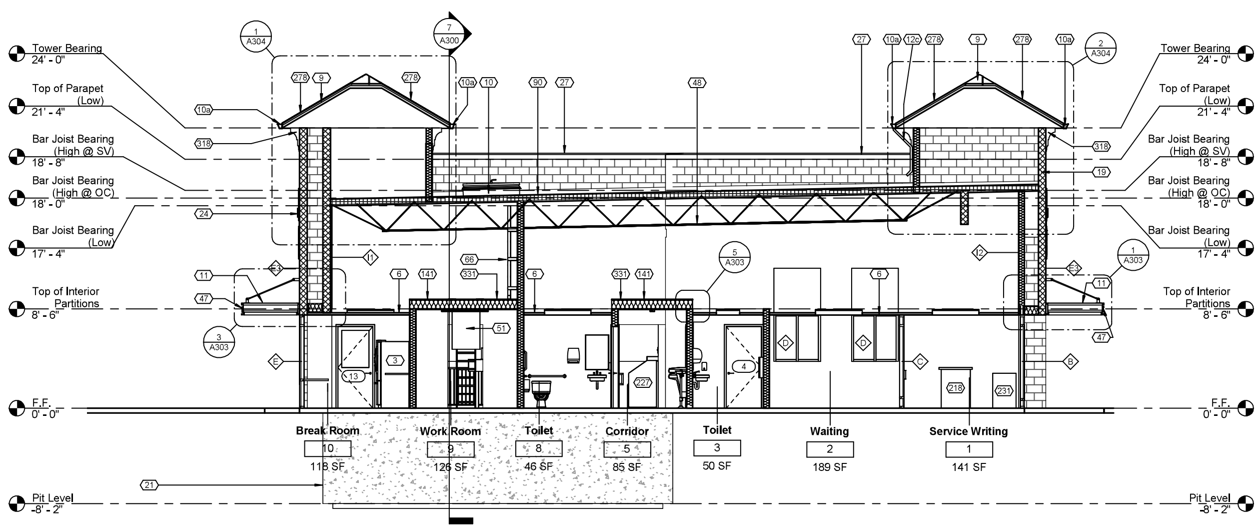
IFP-0



3 DT_Sheet A303_Awning Section @ False Entry
1" = 1'-0"



5 DT_Sheet A300_Wall Detail @ Platform
1" = 1'-0"



4 Building Section 4
3/16" = 1'-0"

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ARCHITECT
02/27/2026

Express Oil Change & Tire Engineers

Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage

Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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Building Sections

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

A303

Scale: As indicated

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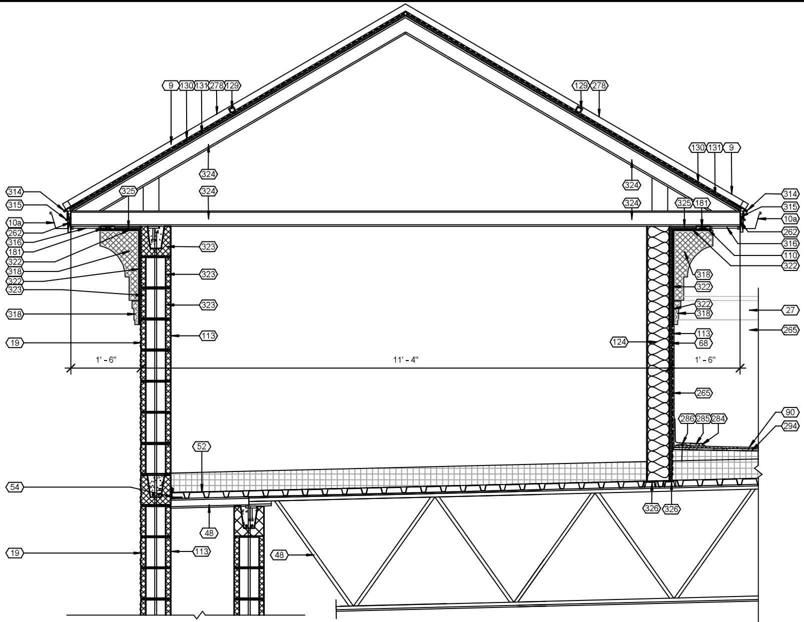
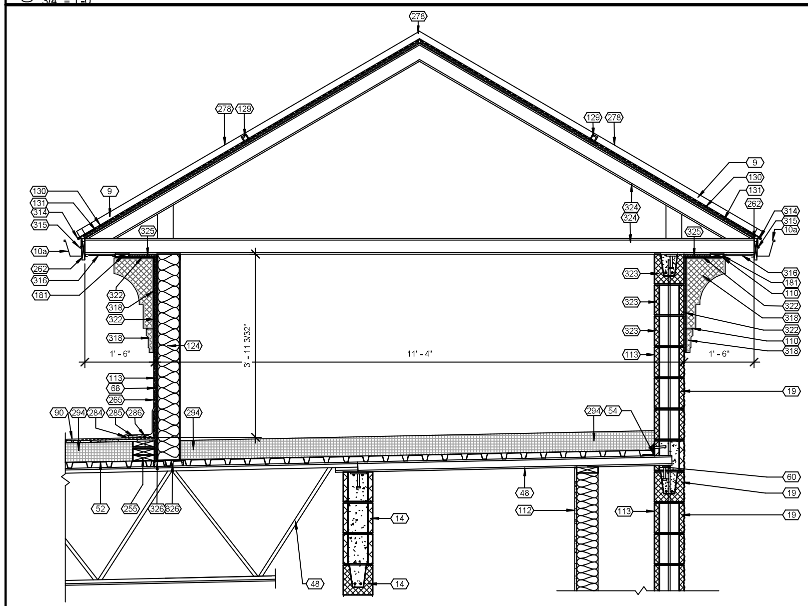
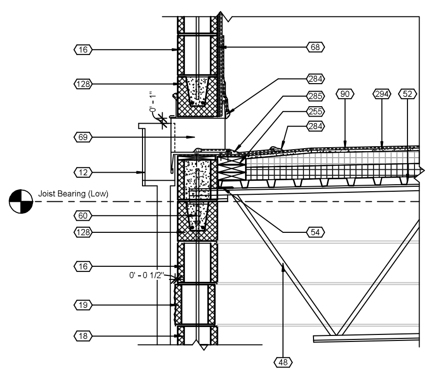


1 DT_Sheet A304_Single Building_Section Thru False Entry Tower
3/4" = 1'-0"



2 DT_Sheet A304_Single Building_Section Thru Rear Entry Tower
3/4" = 1'-0"



3 DT_Sheet A304 Roof Scupper Detail (Rear) Standard
1" = 1'-0"

Keynote Schedule

Tag	Text
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
10a	Prefinished metal gutter. Match SSMR color.
12	Pre-finished metal conductor head with built-in overflow and downspout. Drainage to discharge on grade, unless indicated on drawings that drainage is to be piped to storm, (See Civil). Provide a pre-finished elbow and concrete splash block. See Specification 077100 Roof Specialties.
14	Painted smooth-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
16	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
18	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule. Project 1/2" where indicated on details.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking. Slope to drain. Color as indicated on Finish Schedule.
48	Bar joist. See Structural.
52	Galvanized metal roof deck. See Structural.
54	Steel angle. See Structural.
60	Steel plate with headed studs. See Structural.
68	1/2" exterior plywood sheathing.
69	Thru-wall metal roof scupper for roof drainage. See Specification 077100 Roof Specialties.
90	Fully adhered TPO membrane roofing installed per manufacturer's written instructions. See Specification 075423 Thermoplastic Polyolefin (TPO) Roofing.
110	Sealant with backer rod.
112	Painted 1/2" gypsum board on 2x6 wood studs at 16" o.c. with kraft-face R-20 batt insulation (kraft in contact with gypsum board). See Details.
113	Fluid applied vapor permeable air barrier. See Specification 072726 Fluid Applied Membrane Air Barrier.
124	6" metal structural C-stud framing at 16" o.c. with R-20 batt insulation.
128	Painted smooth-face 8" concrete-filled "U" block bond beam. Condition varies. See Structural.
129	"H" clips at mid-span on standing seam metal roof.
130	2 layers of #15 roofing felt.
131	5/8" pressure treated plywood decking. See Structural.
181	1x wood blocking.
255	2x pressure treated wood blocking.
262	2x pressure treated painted wood fascia.
265	TPO membrane turned vertically up the wall and fastened to wood blocking at top roof curb, or top of wall framing per detail. Adhere TPO membrane to wall substrate with manufacturer approved bonding adhesive.
278	Prefinished metal ridge/hip cap by metal roofing manufacturer. Provide vent material at ridge only (Match roof color).
284	Cut edge sealant at TPO roof membrane flashing.
285	Hot air weld at TPO membrane and membrane flashing.
286	Fastener and seam fastening plate.
294	Polyisocyanurate insulation board (See TPO Spec for required R-value). Provide ½" cover board, mechanically fastened, over the top of insulation in locations where membrane roofing is to be applied.
314	Field cut seam and form pan around eave flashing.
315	Eave flashing with drip edge.
316	Painted, vented soffit. Provide paintable PVC jointer between soffit panels fastened to pressure treated wood blocking. See specification section 074293.
318	Painted preformed EIFS cornice and trim, See Specification Section 072400 EIFS Exterior Insulation and Finish System.
322	Vapor permeable air and water resistive barrier membrane. See Specification Section 072400 EIFS Exterior Insulation and Finish System.
323	Unpainted smooth-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry.
324	Cold-formed metal stud trusses, see Structural.
325	3/4" pressure treated plywood.
326	C channel running continuously within metal deck flute to support metal deck at wall locations. See Structural.

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IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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Wall Sections and Details

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

A304

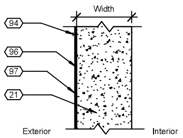
Scale As indicated

5/1/2026 11:38:53 AM

E1

Refer to structural drawings for reinforcing and other information

Install all waterproofing per manufacturer's recommendations.



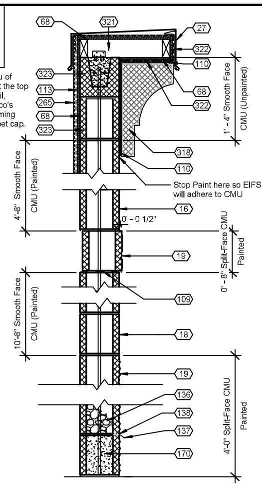
Wall Type No.	Description	Width	Ref Test
E1	As shown	See Struct.	-

E2

Contractor's Option: In lieu of wood framing as shown at the top of the parapet on the detail, Contractor may use Tremco's Pre-buck Engineered Framing System to construct parapet cap.

Refer to structural drawings for reinforcing, grouting, and other information

Install siloxane on the exterior side of wall construction

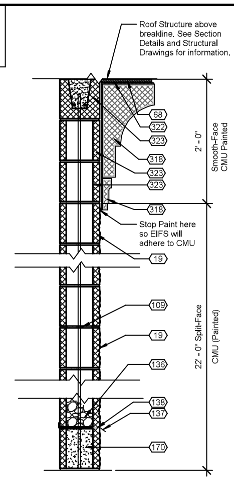


Wall Type No.	Description	Width	Ref Test
E2	As shown	7 5/8"	-

E3

Refer to structural drawings for reinforcing and other information

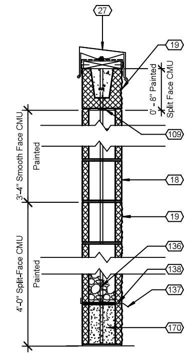
Install siloxane on the exterior side of wall construction



Wall Type No.	Description	Width	Ref Test
E3	As shown	7 5/8"	-

E5

Refer to structural drawings for reinforcing, grouting, and other information

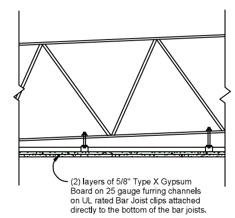


Wall Type No.	Description	Width
E5	As shown	7 5/8"
E5a	As shown, except without coping and painted CMU to roof. See Elevations on A101.	7 5/8"

IFB-0

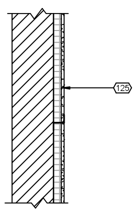
L1

Seal all penetrations with fire caulk



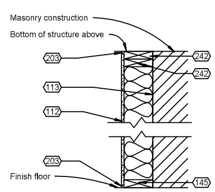
Assembly	Description	Width	Ref Test
L1	(2) Layers of 5/8" Type X Gypsum Board installed on 25 gauge 7/8" furring channels on Bar Joist clip attached directly to Bar Joists at 16" o.c, using Bar Joist Clip. Basis of Design: A237BR RESILMOUNT® Bar Joist To Furring Channel Resilient Clip	Varies	UL Design L527 / UL Test 263

I1



Wall Type No.	Description	Width	Ref Test
I1	As shown	2"	-

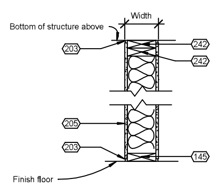
I2



Wall Type No.	Description	Width	Ref Test
I2	As shown	6"	-

I3

Note: Stagger electrical outlet boxes, switches, etc. Seal around all penetrations in wall with acoustical sealant.

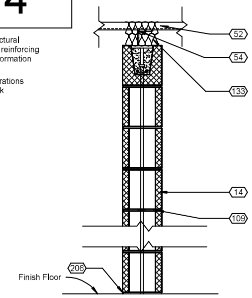


Wall Type No.	Description	Width	Ref Test
I3	As shown	6 1/2"	-
I3a	As shown, except extend only 6" above lay-in ceiling in lieu of extending to bottom of structure above	6 1/2"	

I4

Refer to structural drawings for reinforcing and other information

Seal all pentrations with fire caulk



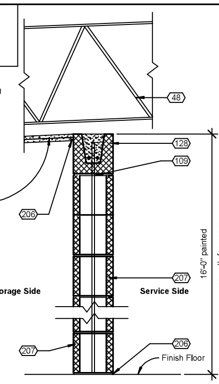
Wall Type No.	Description	Width	Ref Test
I4	As shown - Full Height	7 5/8"	U905

I4a

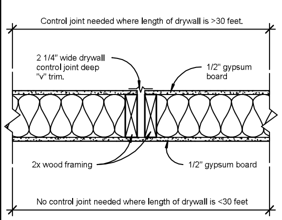
Refer to structural drawings for reinforcing and other information

Seal all penetrations with fire caulk

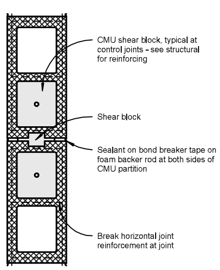
See L1 for additional information about 1-hour ceiling assembly.



Wall Type No.	Description	Width	Ref Test
I4a	1 Hour rated wall assembly	Varies	U905/ L527

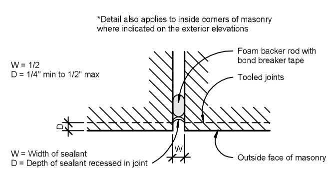


1 DT_Sheet A400_Gypsum Board Control Joint
1 1/2" = 1'-0"



2 DT_Sheet A400_Masonry Control Joint
1 1/2" = 1'-0"

*Detail also applies to inside corners of masonry where indicated on the exterior elevations



3 DT_Sheet A400_Sealant Detail
6" = 1'-0"

Keynote Schedule

Tag	Text
14	Painted smooth-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
16	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
18	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule. Project 1/2" where indicated on details.
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking. Slope to drain. Color as indicated on Finish Schedule.
48	Bar joist. See Structural.
52	Galvanized metal roof deck. See Structural.
54	Steel angle. See Structural.
68	1/2" exterior plywood sheathing.
94	Fasteners at 12" max o.c. for securing subdrainage to pit wall. Follow manufacturer's installation instructions.
96	CCW MiraClay woven geotextile against wall/slab.
97	CCW MiraDrain 6200.
109	Horizontal joint reinforcement at 16" o.c. vertical.
110	Sealant with backer rod.
112	Painted 1/2" gypsum board on 2x6 wood studs at 16" o.c. with kraft-face R-20 batt insulation (kraft in contact with gypsum board). See Details.
113	Fluid applied vapor permeable air barrier. See Specification 072726 Fluid Applied Membrane Air Barrier.
125	1/2" painted gypsum board over rigid insulation secured to z-clips over 8" smooth-face CMU.
128	Painted smooth-face 8" concrete-filled "U" block bond beam. Condition varies. See Structural.
133	Firestop safing.

Keynote Schedule

Tag	Text
136	Pea gravel above through wall flashing.
137	Flashing between first and second course to utilize BlockFlash in addition to the pea gravel specified. Provide a drainage mat in open masonry cell directly above the BlockFlash pan.
138	Drainable weeps at every third mortar joint.
145	2x pressure treated wood sill plate.
170	Fill first course of CMU with grout.
203	Acoustical sealant and backer rod. See Specification 079219 Acoustical Joint Sealants.
205	1 layer of 1/2" painted gypsum board on both sides of 2"x6" wood studs at 16" o.c. Infill with kraft-faced R-20 batt insulation. Kraft in contact with gypsum board.
206	Fire caulk both sides. Typical. See Specification 078443 Joint Firestopping.
207	Adhered stone veneer watertable sill over substrate. Install on mortar setting bed, over scratch coat, on 3.4 # galvanized metal lath on rainscreen drainage mat over fluid applied vapor permeable air barrier applied to substrate. Provide manufacturer's finished edge at corners and openings, typical. See Specification 047300 Manufactured Stone Veneer.
242	2x pressure treated wood top plate.
265	TPO membrane turned vertically up the wall and fastened to wood blocking at top roof curb, or top of wall framing per detail. Adhere TPO membrane to wall substrate with manufacturer approved bonding adhesive.
318	Painted preformed EIFS cornice and trim, See Specification Section 072400 EIFS Exterior Insulation and Finish System.
321	2x pressure treated wood framing spaced at 2'-0" o.c., minimum. Anchor 2x framing into grouted masonry cells using Simpson Strong Tie A23 angle ties. Secure angle ties on each side of framing members using 4 concrete screws on each side.
322	Vapor permeable air and water resistive barrier membrane. See Specification Section 072400 EIFS Exterior Insulation and Finish System.
323	Unpainted smooth-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry.

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TIMOTHY ARNOLD AHO
REGISTERED
NO. 9084
COMMONWEALTH OF KENTUCKY
ARCHITECT
02/27/2026

Express Oil Change & Tire Engineers

Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage

Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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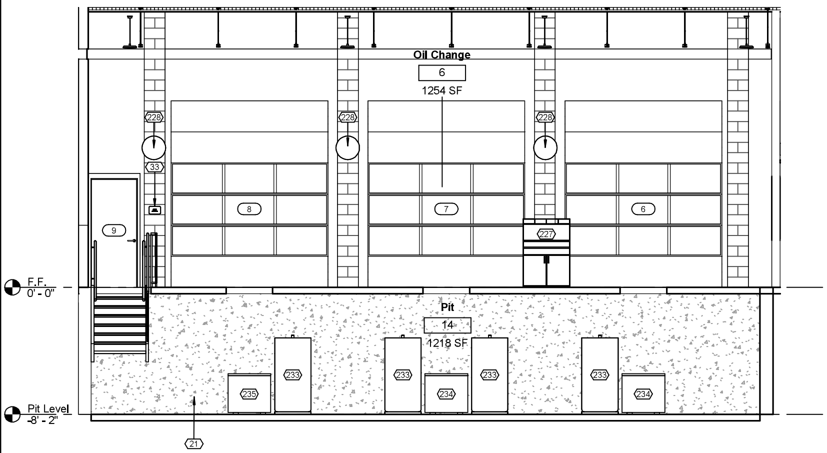
Wall Types

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

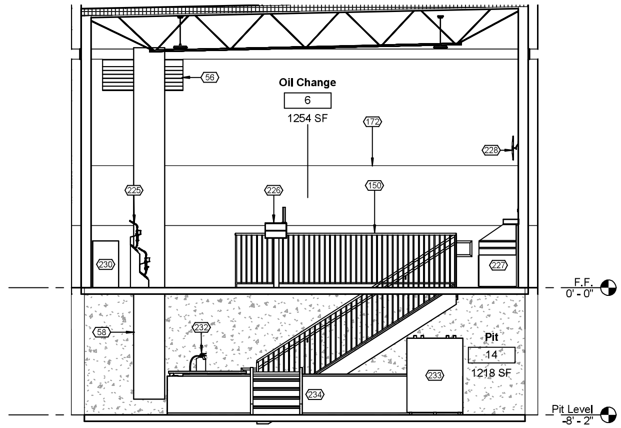
A400

Scale As indicated

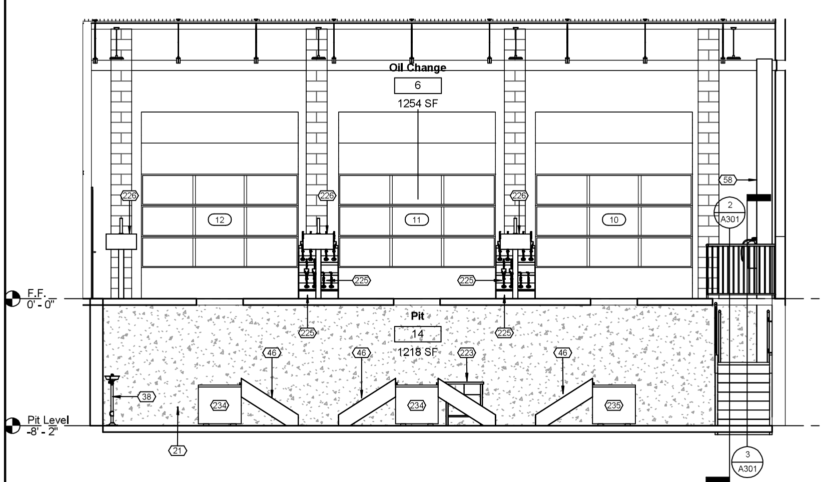
5/1/2026 11:38:56 AM



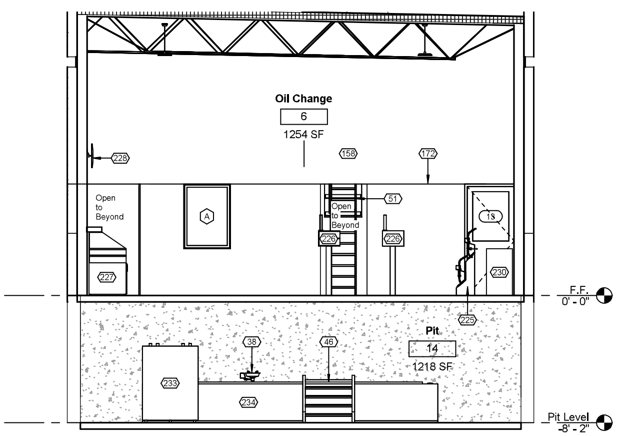
1 Oil Change_Interior Elevation A
1/4" = 1'-0"



2 Oil Change_Interior Elevation B
1/4" = 1'-0"



3 Oil Change_Interior Elevation C
1/4" = 1'-0"



4 Oil Change_Interior Elevation D
1/4" = 1'-0"

Keynote Schedule

Tag	Text
21	Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
33	ADA compliant room / exit sign. See Details.
38	Eyewash station. See Plumbing.
46	Oil tank stairs (By Others).
51	Attic access ladder.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
58	Verify location and size of pit exhaust opening with Structural and Mechanical drawings.
150	Painted guardrail with painted 1/2" round pickets at 4" max o.c. See Finish Schedule for color. See Specification 055213 Pipe and Tube Railings.
158	Vinyl letters (By Others).
172	Ensure paint line occurs at top of door and window frames. Ensure all openings, alcoves and windows align with top of door frame. Typical in Oil and Service Bays.
223	Work bench (By Others).
225	Lube console (By Others).
226	Computer podium (By Others).
227	Cashier computer station (By Others). Clear opening for cashier computer station must be 38 ½" wide minimum. No Exceptions.
228	Convex mirrors (By Others).
230	Tool cart (By Others).
232	Bracket mounted fire extinguisher. See Specification Section 104416 Fire Extinguishers. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details.
233	275-gallon Class IIIB new oil tank (By Others).
234	928-gallon Class IIIB new oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.
235	928-gallon Class IIIB waste oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.

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02/27/2026

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Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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Interior Elevations

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

A600

Scale	1/4" = 1'-0"

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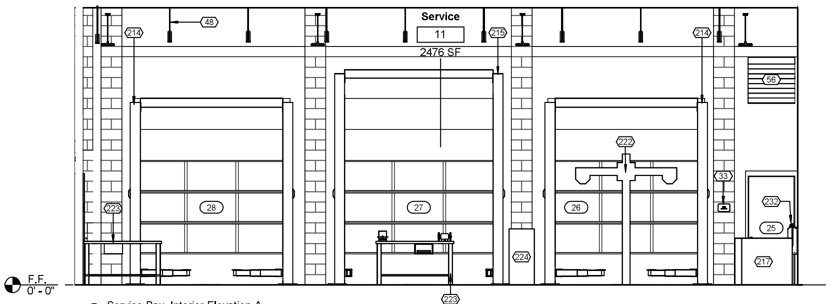
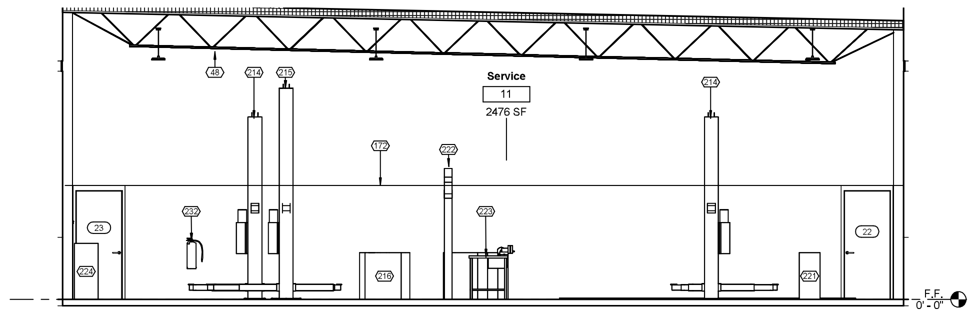
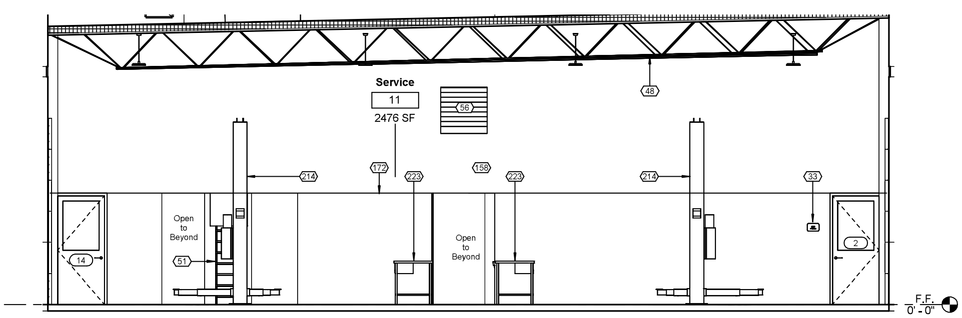


1 Service Bay_Interior Elevation A
1/4" = 1'-0"

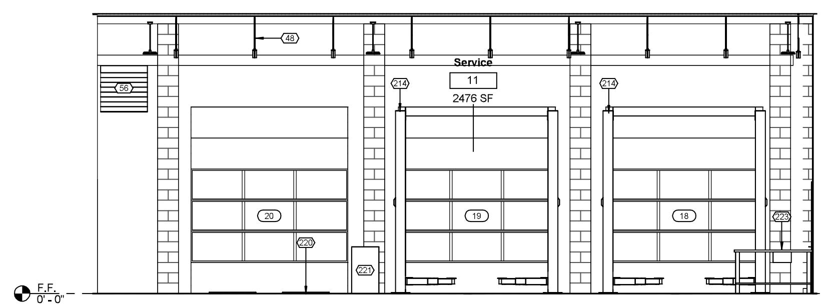


2 Service Bay_Interior Elevation D
1/4" = 1'-0"

Keynote Schedule	
Tag	Text
33	ADA compliant room / exit sign. See Details.
48	Bar joist. See Structural.
51	Attic access ladder.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
158	Vinyl letters (By Others).
172	Ensure paint line occurs at top of door and window frames. Ensure all openings, alcoves and windows align with top of door frame. Typical in Oil and Service Bays.
214	10K Lift (By Others).
215	12K Lift (By Others).
216	Tire changer (By Others).
217	Wheel balancer (By Others).
220	Scissor lift alignment (By Others).
221	Scissor lift alignment console (By Others). Provide conduit in slab as required. See alignment lift specifications (By Others).
222	Alignment scarecrow (By Others).
223	Work bench (By Others).
224	Strut compressor (By Others).
232	Bracket mounted fire extinguisher. See Specification Section 104416 Fire Extinguishers. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details.



5 Service Bay_Interior Elevation B
1/4" = 1'-0"



6 Service Bay_Interior Elevation C
1/4" = 1'-0"

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02/27/2026

Express Oil Change & Tire Engineers

Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage

Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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Interior Elevations

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

A601

Scale	1/4" = 1'-0"

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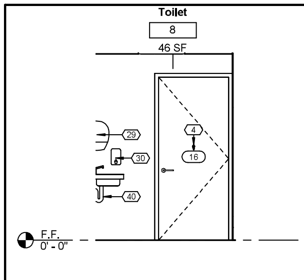
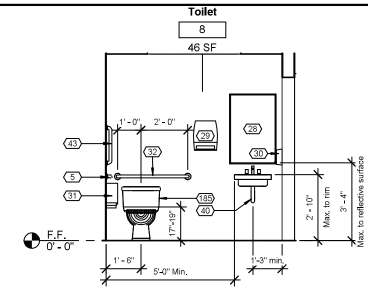
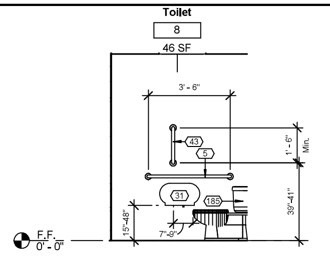


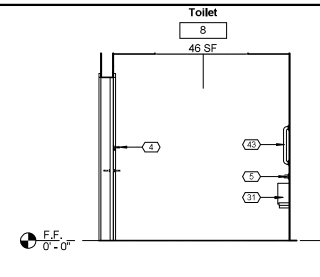
1 Toilet #8_Interior Elevation A
3/8" = 1'-0"



2 Toilet #8_Interior Elevation B
3/8" = 1'-0"

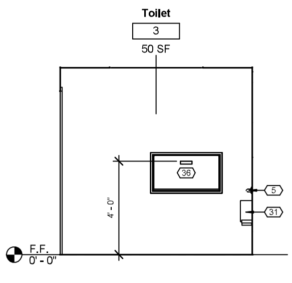


3 Toilet #8_Interior Elevation C
3/8" = 1'-0"

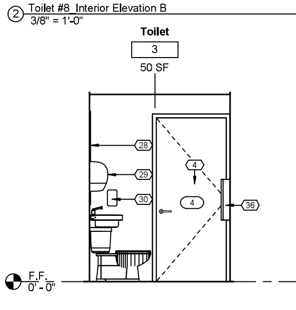


4 Toilet #8_Interior Elevation D
3/8" = 1'-0"

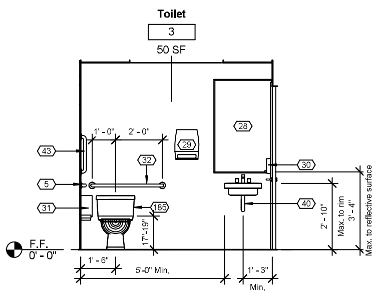
Keynote Schedule	
Tag	Text
3	Location of 30" wide refrigerator (By Others).
4	Robe hook mounted at 48" A.F.F. See Specification 102800 Toilet, Bath, and Laundry Accessories.
5	42" grab bar with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
28	Framed mirror. See Specification 102800 Toilet, Bath, and Laundry Accessories.
29	Automatic Towel Dispenser (By others). Provide blocking in wall as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
30	Wall mounted soap dispenser (By Others). Provide blocking in wall as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
31	Jumbo Dual Roll Toilet Tissue dispenser (By Others). Provide blocking in wall as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
32	36" grab bar with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
36	Surface mounted baby changing station with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
40	Under lavatory guard. See Specification 102800 Toilet, Bath, and Laundry Accessories.
43	24" vertical grab bar with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
111	Aluminum storefront with insulated glazing. See Details.
134	Plastic laminate over ½" plywood on 2x wood framing. Align with vertical mullions. Adhere plastic laminate to all four sides
179	Plastic laminate over 1x wood blocking. See Specification 123623.13 Plastic-Laminate-Clad Countertops. See Finish Schedule for color.
180	Plastic laminate over 3/4" plywood. See Specification 123623.13 Plastic-Laminate-Clad Countertops. See Finish Schedule for color.
181	1x wood blocking.
182	Concealed countertop bracket.
183	2x wood cleat.
184	Finish base. See Specification Section 096513 Resilient Base Accessories. See Finish Schedule for color.
185	Flush valve on transfer side of water closet.



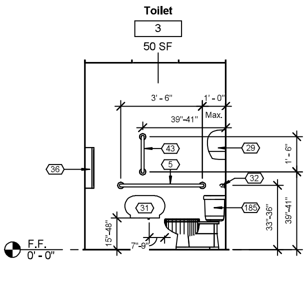
5 Toilet #3_Interior Elevation A
3/8" = 1'-0"



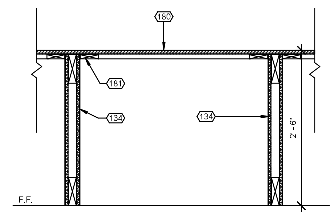
6 Toilet #3_Interior Elevation B
3/8" = 1'-0"



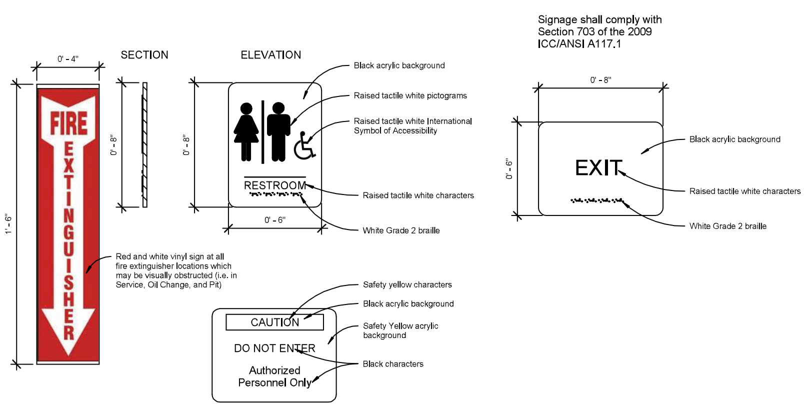
7 Toilet #3_Interior Elevation C
3/8" = 1'-0"



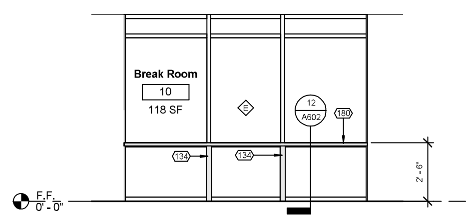
8 Toilet #3_Interior Elevation D
3/8" = 1'-0"



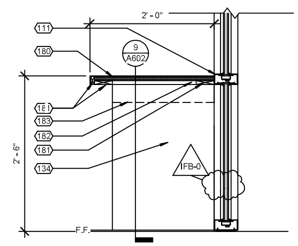
9 DT_Sheet A602_Countertop Section Detail
1" = 1'-0"



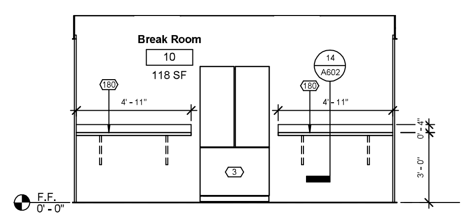
10 DT_Sheet A602_Signage
3" = 1'-0"



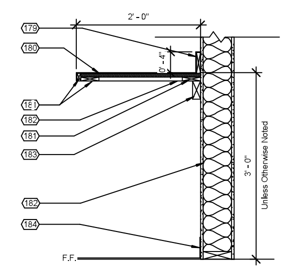
11 Break Room_Interior Elevation A
3/8" = 1'-0"



12 DT_Sheet A602_Countertop Section @ Storefront
1" = 1'-0"



13 Break Room_Interior Elevation B
3/8" = 1'-0"



14 DT_Sheet A602_Countertop Section @ Wall
1" = 1'-0"

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COMMONWEALTH OF KENTUCKY
02/27/2026

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IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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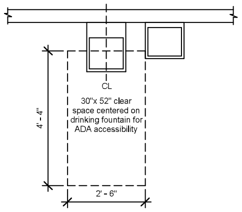
Interior Elevations

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

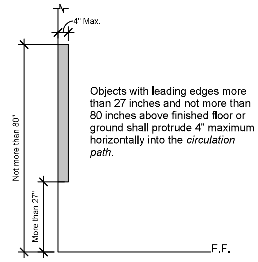
A602

Scale As indicated

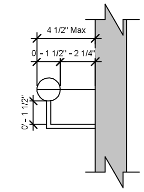
5/1/2026 11:39:03 AM



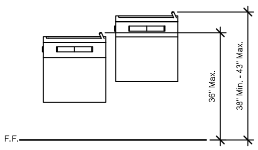
1 DT_Sheet A605_Drinking Fountain_Plan View
1/2" = 1'-0"



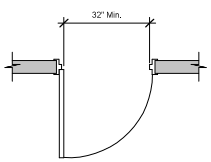
2 DT_Sheet A605_Limits of Protruding Objects
1/2" = 1'-0"



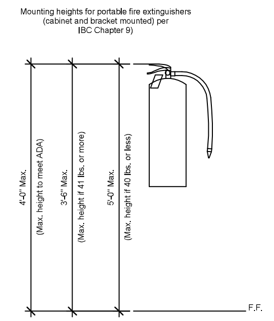
3 DT_Sheet A605_Handrail Detail
3" = 1'-0"



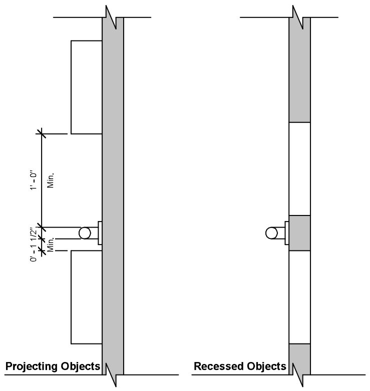
4 DT_Sheet A605_Drinking Fountain_Front View
1/2" = 1'-0"



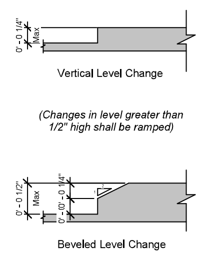
5 DT_Sheet A605_Clear Width @ Doorways
1/2" = 1'-0"



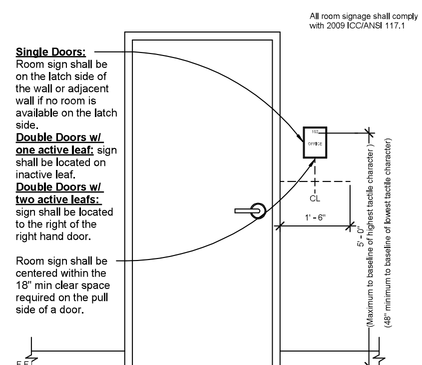
6 DT_Sheet A605_Fire Extinguisher Mounting Heights
1" = 1'-0"



7 DT_Sheet A605_Spacing of Grab Bars
1 1/2" = 1'-0"



8 DT_Sheet A605_Level Change
12" = 1'-0"



9 DT_Sheet A605_Signage Mounting Heights
3/4" = 1'-0"

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02/27/2026

Express Oil Change & Tire Engineers

Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage

Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

2026
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Interior Dimensional Info.

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

A605

Scale As indicated

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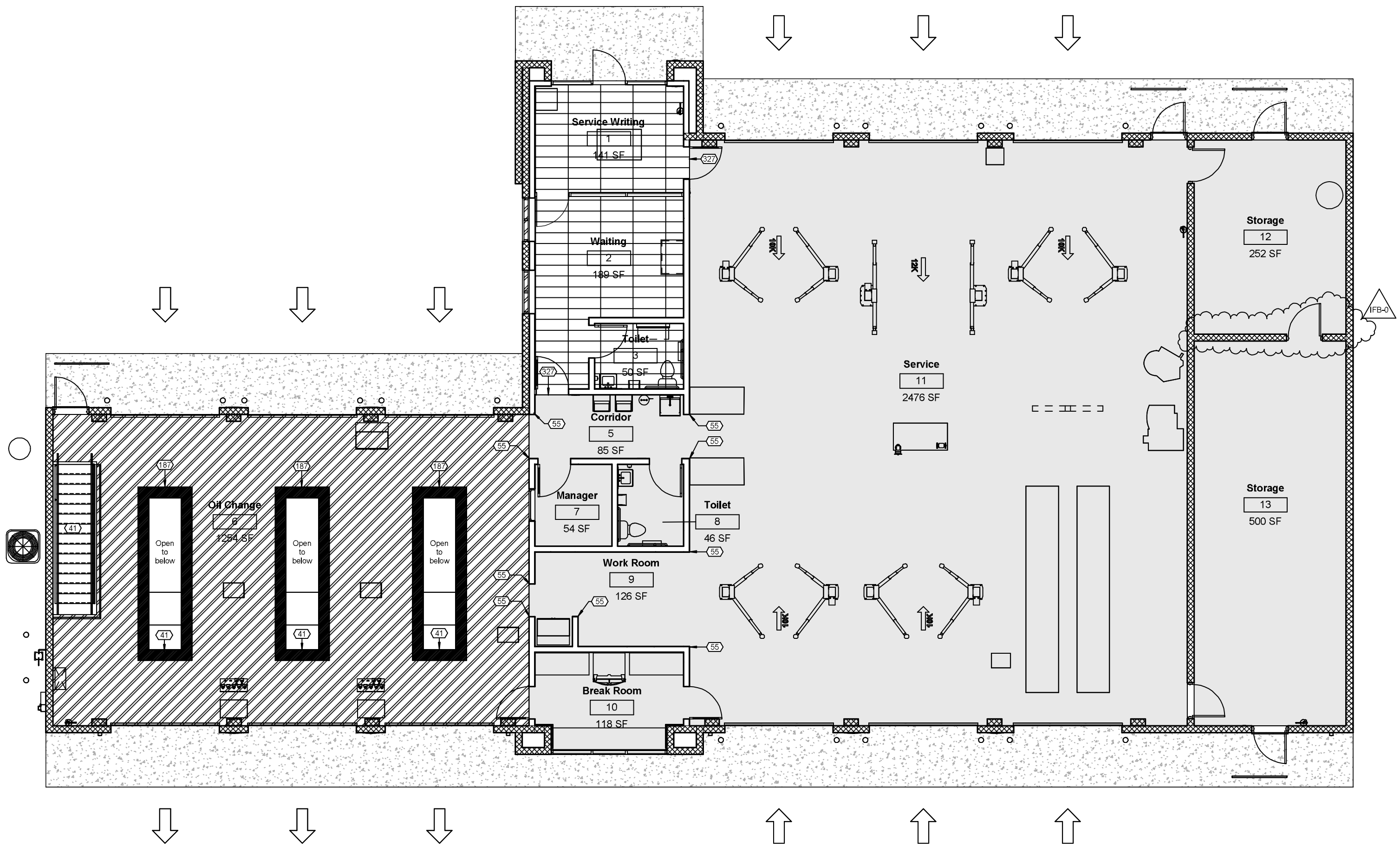
FLOOR FINISH LEGEND

Sealed Concrete	
Stonhard Flooring (By Others)	
Safety Yellow Paint.	
Luxury Vinyl Tile (LVT)	

Keynote Schedule	
Tag	Text
41	Paint structural steel at openings P-5 Safety Yellow. Typical for all pit and stairwell openings.
55	Stainless steel corner guard. See Specification 102600 Wall and Door Protection.
187	Paint 12" P-5 Safety Yellow around pit openings. Verify paint is compatible with floor finish.
327	Reducer strip.



2 07_Floor Finish Plan_Main
3/16" = 1'-0"

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Floor Finishes - Main

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

A610

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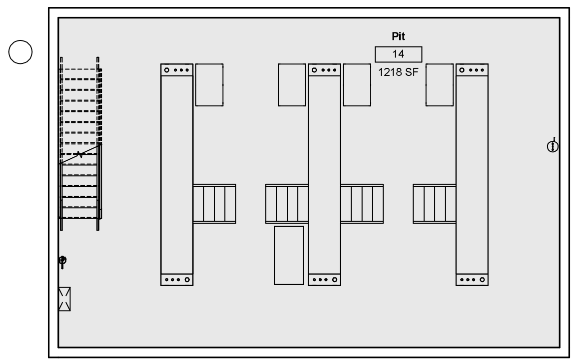
FLOOR FINISH LEGEND

Sealed Concrete

Stonhard Flooring (By Others)

Safety Yellow Paint.

Luxury Vinyl Tile (LVT)



1 06_Floor Finish Plan_Pit
3/16" = 1'-0"

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Floor Finishes - Pit

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

A611

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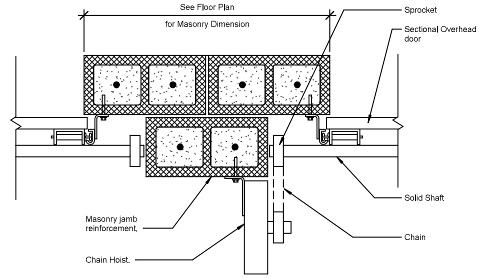
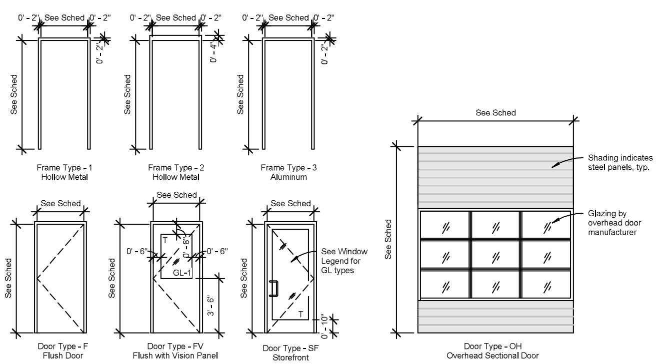
Door and Frame Schedule												
	Door						Frame					
Number	Width	Height	Thickness	Door Type	Door Material	Door Finish	Frame Type	Frame Material	Frame Finish	Glass	UL Label	Notes IFB-0
1	3' - 0"	7' - 0"				Factory Finish			Factory Finish			Provide lettering that reads, "This door must remain unlocked when business is occupied," per AHJ requirements.
2	3' - 0"	7' - 0"	0' - 1 3/4"	FV	Wood / Glass	Painted	1	Hollow Metal	Painted	Tempered		
3	3' - 0"	7' - 0"	0' - 1 3/4"	SF	Aluminum / Glass	Factory Finish	3	Aluminum	Factory Finish	Tempered		
4	3' - 0"	7' - 0"	0' - 1 3/4"	F	Wood	Painted	1	Hollow Metal	Painted	N/A		
5	3' - 0"	7' - 0"	0' - 1 3/4"	FV	Wood / Glass	Painted	1	Hollow Metal	Painted	Tempered		
6	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
7	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
8	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
9	3' - 0"	7' - 0"	0' - 1 3/4"	F	Hollow Metal	Painted	2	Hollow Metal	Painted	N/A		
10	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
11	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
12	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
13	3' - 0"	7' - 0"	0' - 1 3/4"	FV	Wood / Glass	Painted	1	Hollow Metal	Painted	Tempered		
14	3' - 0"	7' - 0"	0' - 1 3/4"	FV	Wood / Glass	Painted	1	Hollow Metal	Painted	Tempered		
15	3' - 0"	7' - 0"	0' - 1 3/4"	FV	Wood / Glass	Painted	1	Hollow Metal	Painted	Tempered		
16	3' - 0"	7' - 0"	0' - 1 3/4"	F	Wood	Painted	1	Hollow Metal	Painted	N/A		
18	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
19	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
20	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		IFB-0
21	3' - 0"	7' - 0"	0' - 1 3/4"	F	Hollow Metal	Painted	2	Hollow Metal	Painted	N/A		
22	3' - 0"	7' - 0"	0' - 1 3/4"	F	Hollow Metal	Painted	2	Hollow Metal	Painted	N/A	45 Min.	Provide fire rated label on door and frame.
23	3' - 0"	7' - 0"	0' - 1 3/4"	F	Hollow Metal	Painted	2	Hollow Metal	Painted	N/A		
24	3' - 0"	7' - 0"	0' - 1 3/4"	F	Hollow Metal	Painted	2	Hollow Metal	Painted	N/A		
25	3' - 0"	7' - 0"	0' - 1 3/4"	F	Hollow Metal	Painted	2	Hollow Metal	Painted	N/A		
26	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
27	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
28	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
29	3' - 0"	7' - 0"	0' - 1 3/4"	F	Hollow Metal	Painted	2	Hollow Metal	Painted	N/A	45 Min.	Provide fire rated label on door and frame.

IFB-0



1 DT_Sheet A620_Chain Hoist Detail
1 1/2" = 1'-0"

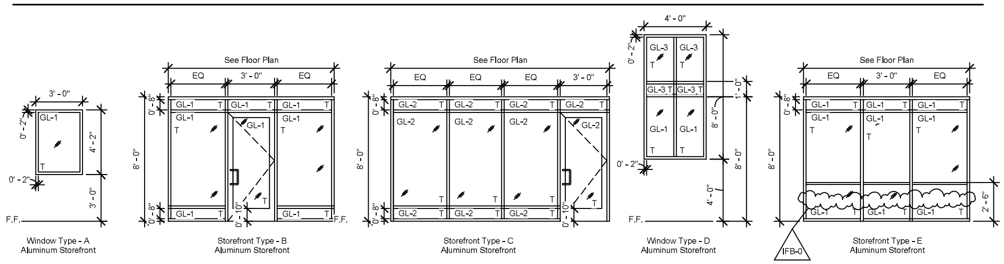
DOOR AND FRAME LEGEND



NOTE: Refer to floor plan for direction of door swing.

2 DT_Sheet A620_Door & Frame Legend
1/4" = 1'-0"

WINDOW LEGEND



3 DT_Sheet A620_Window Legend_Single Rear Enter
1/4" = 1'-0"

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02/27/2026

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Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

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Schedules

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

A620

Scale: As indicated

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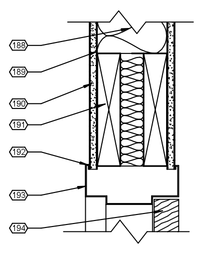
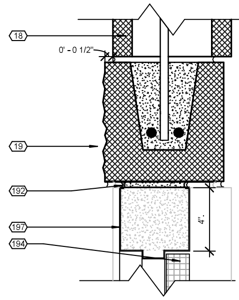
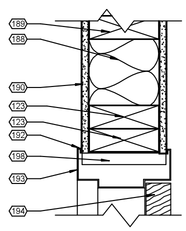


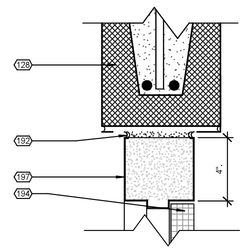
(1a) DT_Sheet A621_Door Head Detail_Wood
3" = 1'-0"



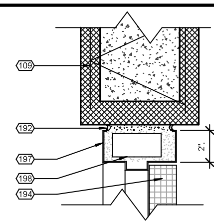
(2a) DT_Sheet A621_Door Head Detail_Masonry (Exterior)
3" = 1'-0"



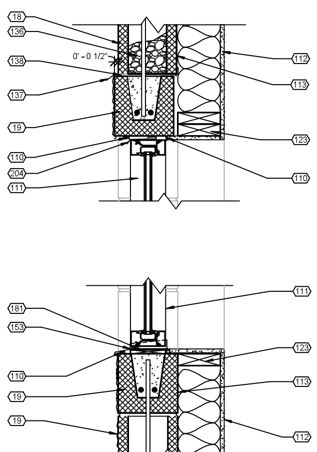
(3a) DT_Sheet A621_Door Jamb Detail_Wood
3" = 1'-0"



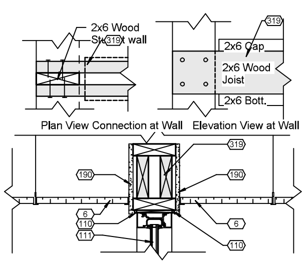
(4) DT_Sheet A621_Door Head Detail_Masonry (Interior)
3" = 1'-0"



(6) DT_Sheet A621_Door Jamb Detail_Masonry
3" = 1'-0"



(5) DT_Sheet A621_Storefront Window Head / Sill Detail_Masonry
1 1/2" = 1'-0"



(7) DT_Sheet A621_Wood Header @ Interior Storefront
1 1/2" = 1'-0"

Dover Gray is a Custom Color:

Deep Base

CCE Colorant	OZ	32	64	128
W1 White	-	14	1	1
B1 Black	2	26	1	1
R2 Maroon	-	4	-	1
Y3 Deep Gold	-	17	1	1

Material Schedule

Abbreviation	Material Description	Manufacturer	Style Name or Number	Color (Description)	Size	Finish	Material Notes
ACT-1	Acoustical Ceiling Tile	Armstrong	1775 Dune	White	24"x24"	N/A	Suprafine XL 9/16" Exposed Tee Grid
P-1	Paint - Color 1	Sherwin Williams	See Paint Schedule on G202	SW6966 Blueblood	N/A	See Paint Schedule on G202	
P-2	Paint - Color 2	Sherwin Williams	See Paint Schedule on G202	Custom Color (Dover Gray)	N/A	See Paint Schedule on G202	
P-3	Paint - Color 3	Sherwin Williams	See Paint Schedule on G202	SW7669 Summit Gray	N/A	See Paint Schedule on G202	
P-4	Paint - Color 4	Sherwin Williams	See Paint Schedule on G202	SW6959 Bluechip	N/A	See Paint Schedule on G202	
P-5	Paint - Color 5	Sherwin Williams	See Paint Schedule on G202	Safety Yellow	N/A	See Paint Schedule on G202	
P-6	Paint - Color 6	Sherwin Williams	See Paint Schedule on G202	Safety Red	N/A	See Paint Schedule on G202	
P-7	Paint - Color 7	Sherwin Williams	See Paint Schedule on G202	SW7006 Extra White	N/A	See Paint Schedule on G202	
P-8	Paint - Color 8	Sherwin Williams	See Paint Schedule on G202	SW7075 Web Gray	N/A	See Paint Schedule on G202	
PL-1	Plastic Laminate - Color 1	Wilsonart	4880-38	Carbon Mesh	N/A	N/A	
RB	Rubber Base	Ropee	Pinnacle	669 Battleship	4"	N/A	
SC	Sealed Concrete	Sherwin Williams	See Paint Schedule on G202	Haze Gray	N/A	See Paint Schedule on G202	Add SharkGrip for added slip resistance
SH	StonHard Flooring	StonHard	N/A	N/A	N/A	N/A	Provided and installed by (Others)
FRP-1	Fiberglass Reinforced Panels	Marlite	4'x8' Textured Panels	P430N Medium Gray	4'x8'	Pebbled	
LVT	Lux. Vinyl Tile	Tarkett	Contour Mineral Basalt PCMB	4645 Paved Path	12"x36"		

IFB-0

Finish Schedule for Additional Items

1.	Doors & Frames: Paint P-3	9.	Keynote 16: P-1	17.	Door Hardware: Satin Chrome	25.	Dumpster Gate / Frame: P-3
2.	Bollards & Dumpster Posts: P-6	10.	Keynote 334 (Outside guardrails): P-3	18.	Window Gaskets: Light Gray	26.	Overhead Door: White
3.	Exterior Pole Sign: By others.	11.	Keynote 18: P-8	19.	Exterior Aluminum Storefront & Door: Clear Anodized	27.	Lintel at OH Doors: P-3
4.	Conductor Head / Downspouts: Match P-8	12.	Keynote 19: P-3	20.	Abrasive Nosing: Safety Yellow	28.	Countertop Carbon Mesh: PL-1
5.	Electrical covers to be brushed aluminum	13.	Knox Box: Aluminum	21.	Interior Aluminum Storefront & Door: Clear Anodized	29.	EIFS Cornice & Trim: P-1
6.	Paint all louvers to match adjacent finish	14.	Roof: White TPO	22.	Chair Rail: Stainless Steel by others	30.	SSMR: Berridge, Royal Blue
7.	Keynote #327 Reducer Strip: Roppe Charcoal 123	15.	Coping Cap @ Dumpster: Match P-1	23.	Word Wall: P-3	31.	Bar Joists: Prefinished Gray
8.	Stairs & Railings & Interior Ladder (if req'd): P-5	16.	Coping Cap @ Bldg: Match P-1	24.	Canopy: Pantone 425C	32.	Metal Deck: Prefinished Gray

Keynote Schedule

Tag	Text
6	Lay-in acoustical ceiling tile and grid, supported from structure.
18	Painted smooth-face CMU. See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule.
19	Painted split-face CMU (bond beam where indicated; see Structural). See Specification 042200 Concrete Unit Masonry. Color as indicated on Finish Schedule. Project 1/2" where indicated on details.
109	Horizontal joint reinforcement at 16" o.c. vertical.
110	Sealant with backer rod.
111	Aluminum storefront with insulated glazing. See Details.
112	Painted 1/2" gypsum board on 2x6 wood studs at 16" o.c. with kraft-face R-20 batt insulation (kraft in contact with gypsum board). See Details.
113	Fluid applied vapor permeable air barrier. See Specification 072726 Fluid Applied Membrane Air Barrier.
123	Blocking. See Structural.
128	Painted smooth-face 8" concrete-filled "U" block bond beam. Condition varies. See Structural.
136	Pea gravel above through wall flashing.
137	Flashing between first and second course to utilize BlockFlash in addition to the pea gravel specified. Provide a drainage mat in open masonry cell directly above the BlockFlash pan.
138	Drainable weeps at every third mortar joint.
153	Aluminum sill flashing with end dams to match aluminum storefront framing.
181	1x wood blocking.
188	Kraft-faced batt insulation. Kraft in contact with gypsum board.
189	2x wood studs at 16" o.c.
190	1/2" painted gypsum board.
191	Double 2"x8" wood header.
192	Caulk all around on both sides.
193	Painted hollow metal frame with returns. See Finish Schedule for color.
194	Scheduled door. See plans for details.
197	Painted hollow metal frame, grouted solid.
198	Jamb anchors. Provide 3 per jamb.
204	Aluminum head flashing to match aluminum storefront framing.
319	Wood stud header at interior storefront. (4) 2x6 wood studs attached to extended wood stud at bearing wall. Extend wood stud in bearing wall up to roof deck. Brace as required.

Finish Schedule

Number	Name	Area	Floor Finish	Base Finish	Walls: Rear Entry (West)	Walls: Right (South)	Walls: False Front (East)	Walls: Left (North)	Ceiling Finish	Remarks
1	Service Writing	141 SF	LVT	RB	Storefront & P-1, P-2, P-3	P-1, P-2, P-3	Storefront	P-1, P-2, P-3	ACT-1	See G301 for paint patterns
2	Waiting	189 SF	LVT	RB	Storefront	P-1, P-2, P-3	P-3 & Vinyl Graphics (By Others), P-1, P-2, P-3	P-1, P-2, P-3	ACT-1	See G301 for paint patterns
3	Toilet	50 SF	LVT	RB	FRP-1	FRP-1	FRP-1	FRP-1	ACT-1	
5	Corridor	85 SF	SC	RB	FRP-1	P-1	P-1	P-1	P-7	
6	Oil Change	1254 SF	SH	None / RB	P-3	P-1, P-4 & Vinyl Graphics (By Others)	P-3	P-1, P-4	No Ceiling	Rubber base on gypsum board walls only. See G301 for paint patterns.
7	Manager	54 SF	SC	RB	P-3	P-3	P-3	P-3	ACT-1	
8	Toilet	46 SF	SC	RB	FRP-1	FRP-1	FRP-1	FRP-1	ACT-1	
9	Work Room	126 SF	SC	RB	P-1	P-1	P-1	P-1	P-7	
10	Break Room	118 SF	SC	RB	P-3	P-3	P-3	P-3	ACT-1	
11	Service	2476 SF	SC	None / RB	P-3	P-1, P-4	P-3	P-1, P-4 & Vinyl Graphics (By Others)	No Ceiling	Rubber base on gypsum board walls only. See G301 for paint patterns.
12	Storage	252 SF	SC	None	P-3	P-3	Fence	P-3	No Ceiling	
13	Storage	500 SF	SC	None	Fence	P-3	P-3	P-3	No Ceiling	
14	Pit	1218 SF	SC	None	None	None	None	None	N/A	Paint all structural steel in Pit P-5 Safety Yellow.

Note: Room 4 was intentionally omitted.

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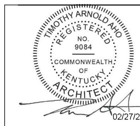

Express Oil Change & Tire Engineers

Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage

Richmond, Kentucky

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Finish Schedules & Head, Jamb, and Sill Details

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

A621

Scale	As indicated

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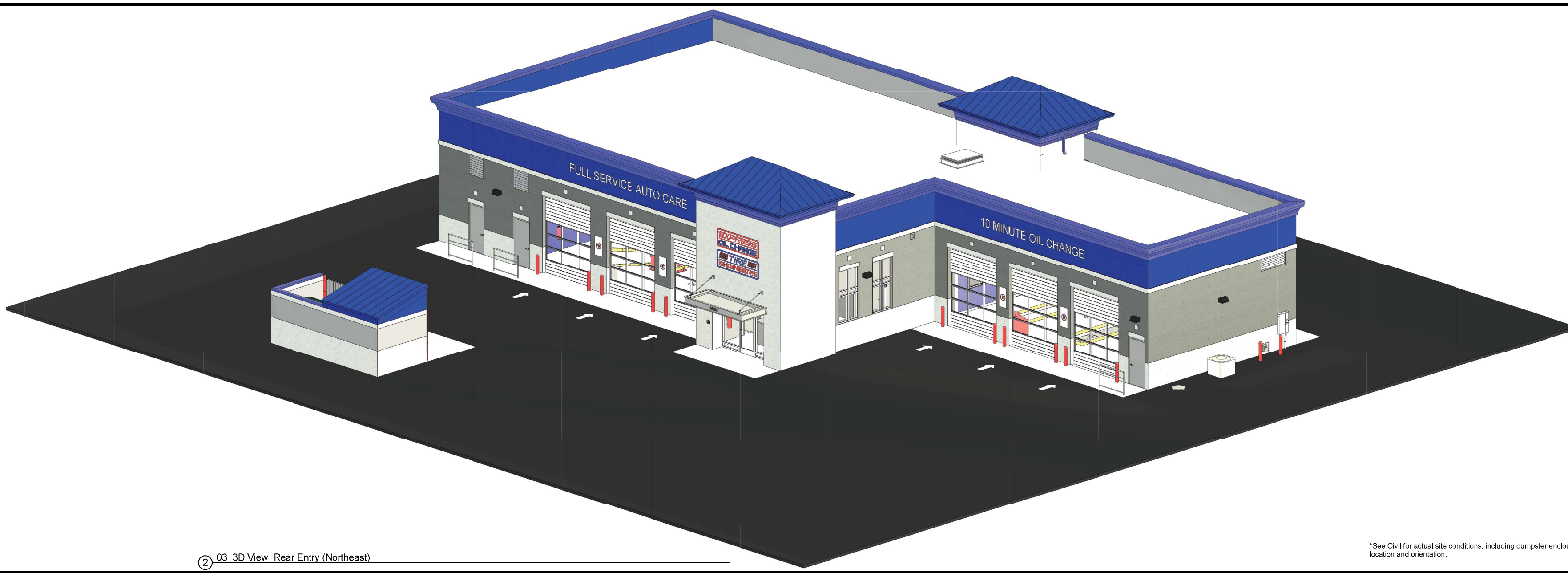
1 02_3D View_False Front (Southwest)

*See Civil for actual site conditions, including dumpster enclosure location and orientation.



2 03_3D View_Rear Entry (Northeast)

*See Civil for actual site conditions, including dumpster enclosure location and orientation.

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3D Views

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

R100

Scale

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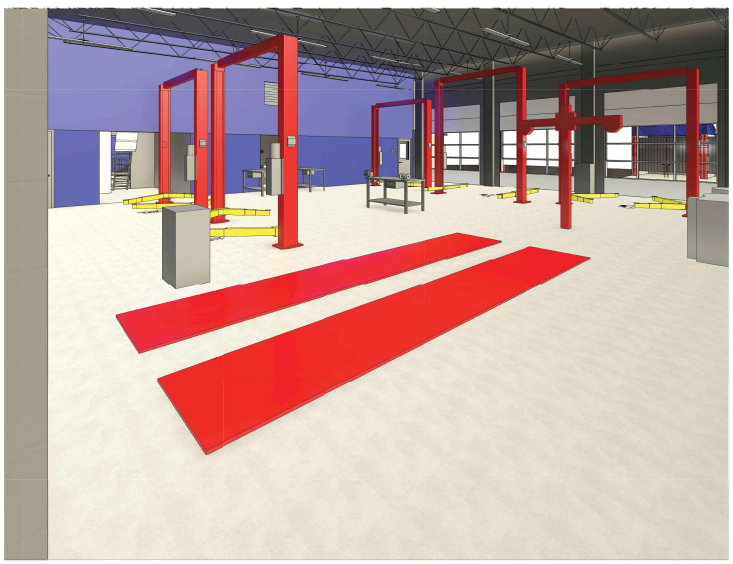
1 04_3D View_Oil Change A

2 05_3D View_Oil Change B



3 06_3D View_Service Bay A

4 07_3D View_Service Bay B

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TIMOTHY ARNOLD AHO
REGISTERED
NO. 9084
COMMONWEALTH OF KENTUCKY
ARCHITECT
02/27/2026

Express Oil Change & Tire Engineers

Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage

Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	2/27/2026
IFB-0	Bid Set / AHJ Resub.	04/20/2026

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3D Views

Project number	25042
Date	2/27/2026
Drawn by	ARC
Checked by	N/A

R101

Scale

5/1/2026 11:40:39 AM

SCHEDULE OF SPECIAL INSPECTIONS SERVICES					
PROJECT					
		APPLICABLE TO THIS PROJECT			
MATERIAL / ACTIVITY	SERVICE	Y/N	EXTENT	AGENT*	DATE COMPLETED
1705.1.1 Special Cases (work unusual in nature, including but not limited to alternative materials and systems, unusual design applications, materials and systems with special manufacturer's requirements - add additional rows as needed.)	Submittal review, shop (3) and/or field inspection				
1. Inspection of anchors post-installed in solid grouted masonry: Per research reports including verification of anchor type, anchor dimensions, hole dimensions, hole cleaning procedures, anchor spacing, edge distances, masonry unit, grout, masonry compressive strength, anchor embedment and tightening torque	Field inspection	Y	Periodic or as required by the research report issued by an approved source		
2. Aggregate Pier Inspection: The special inspector's responsibilities include, but are not limited to, review of the aggregate pier designer's use of soil parameters as presented in the project soils report, and during construction, verification of aggregate properties, type and number of lifts of aggregate, hole size and depths and top elevations of the pier elements, and applied energy. Additionally, results of qualitative tests on production aggregate pier elements such as modulus load testing, uplift pull-out testing, bottom stabilization tests and dynamic cone penetration tests, shall be reviewed to verify compliance with design specifications.	Field inspection	N	Periodic or as required by the research report issued by an approved source		
1705.2.1 Structural Steel Construction					
1. Fabricator and erector documents (Verify reports and certificates as listed in AISC 360, Section N.3.2 for compliance with construction documents)	Submittal Review	Y	Each submittal		
2. Material verification of structural steel	Shop (3) and field inspection	Y	Periodic		
3. Structural steel welding:					
a. Inspection tasks Prior to Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-1)	Shop (3) and field inspection	Y	Observe or Perform as noted (4)		
b. Inspection tasks During Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-2)	Shop (3) and field inspection	Y	Observe (4)		
c. Inspection tasks After Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-3)	Shop (3) and field inspection	Y	Observe or Perform as noted (4)		
d. Nondestructive testing (NDT) of welded joints:					
1) Complete penetration groove welds 5/16" or greater in risk category III or IV	Shop (3) or field ultrasonic testing - 100%	N	Periodic		
2) Complete penetration groove welds 5/16" or greater in risk category II	Shop (3) or field ultrasonic testing - 10% of welds minimum	Y	Periodic		
3) Welded joints subject to fatigue when required by AISC 360, Appendix 3, Table A-3.1	Shop (3) or field radiographic or Ultrasonic testing	N	Periodic		
4) Fabricator's NDT reports when fabricator performs NDT	Verify reports	Y	Each submittal (5)		
4. Structural steel bolting:	Shop (3) and field inspection				
a. Inspection tasks Prior to Bolting (Observe, or perform tasks for each bolted connection, in accordance with QA tasks listed in AISC 360, Table N5.6-1)		Y	Observe or Perform as noted (4)		
b. Inspection tasks During Bolting (Observe the QA tasks listed in AISC 360, Table N5.6-2)			Observe (4)		
1) Pre-tensioned and slip-critical joints		N			
a) Turn-of-nut with matching markings		N	Periodic		
b) Direct tension indicator		N	Periodic		
c) Twist-off type tension control bolt		N	Periodic		
d) Turn-of-nut without matching markings		N	Continuous		
e) Calibrated wrench		N	Continuous		
2) Snug-tight joints		Y	Periodic		
c. Inspection tasks After Bolting (Perform tasks for each bolted connection in accordance with QA tasks listed in AISC 360, Table N5.6-3)		Y	Perform (4)		
5. Visual inspection of exposed cut surfaces of galvanized structural steel main members and exposed corners of the rectangular HSS for cracks subsequent to galvanizing	Shop (3) or field inspection	Y	Periodic		
6. Embedments (Verify diameter, grade, type, length, embedment. See 1705.3 for anchors)	Field inspection	Y	Periodic		
7. Verify member locations, braces, stiffeners, and application of joint details at each connection comply with construction documents	Field inspection	Y	Periodic		
1705.2.2 Cold-Formed Steel Deck					
1. Manufacturer documents (Verify reports and certificates as listed in SDI QA/QC, Section 2, Paragraphs 2.1 and 2.2 for compliance with construction documents)	Submittal Review	Y	Each submittal		
2. Material verification of steel deck, mechanical fasteners and welding materials	Shop (3) and field inspection	Y	Periodic		
3. Cold-formed steel deck placement:	Shop (3) and field inspection	Y			
a. Inspection tasks Prior to Deck Placement (Perform the QA tasks listed in SDI QA/QC, Appendix 1 Table 1.1)		Y	Perform (4)		
b. Inspection tasks After Deck Placement (Perform the QA tasks listed in SDI QA/QC, Appendix 1 Table 1.2)		Y	Perform (4)		
4. Cold-formed steel deck welding:	Shop (3) and field inspection	Y			
a. Inspection tasks Prior to Welding (Observe the QA tasks listed in SDI QA/QC, Appendix 1 Table 1.3)		Y	Observe (4)		
b. Inspection tasks During Welding (Observe the QA tasks listed in SDI QA/QC, Appendix 1 Table 1.4)		Y	Observe (4)		
c. Inspection tasks After Welding (Perform the QA tasks listed in SDI QA/QC, Appendix 1 Table 1.5)		Y	Perform (4)		
5. Cold-formed steel deck mechanical fastening:	Shop (3) and field inspection	Y			
a. Inspection tasks Prior to Mechanical Fastening (Observe the QA tasks listed in SDI QA/QC, Appendix 1 Table 1.6)		Y	Observe (4)		
b. Inspection tasks During Mechanical Fastening (Observe the QA tasks listed in SDI QA/QC, Appendix 1 Table 1.7)		Y	Observe (4)		
c. Inspection tasks After Mechanical Fastening (Perform the QA tasks listed in SDI QA/QC, Appendix 1 Table 1.8)		Y	Perform (4)		
1. Material verification of cold-formed steel deck:					
a. Identification markings	Field inspection		Periodic		
b. Manufacturer's certified test reports	Submittal Review		Each submittal		
2. Connection of cold-formed steel deck to supporting structure:	Shop (3) and field inspection				
a. Welding			Periodic		
b. Other fasteners (in accordance with AISC 360,Section N6)					
1) Verify fasteners are in conformance with approved submittal			Periodic		
2) Verify fastener installation is in conformance with approved submittal and manufacturer's recommendations			Periodic		
1705.2.3. Open-Web Steel Joists and Joist Girders					
1. Installation of open-web steel joists and joist girders.					
a. End connections - welding or bolted	per SJI CJ or SJI 100	Y	Periodic		
b. Bridging - horizontal or diagonal					
1) Standard bridging.	per SJI CJ or SJI 100	Y	Periodic		
2) Bridging that differs from the specifications listed in SJI CJ or SJI 100.		Y	Periodic		
1705.3 Concrete Construction					
1. Inspect reinforcement, including prestressing tendons, and verify placement.	Shop (3) and field inspection	Y	Periodic		
2. Inspection of anchors cast in concrete	Shop (3) and field inspection	Y	Periodic		
3. Inspection of anchors post-installed in hardened concrete members per research reports, or, if no specific requirements are provided, by requirements shall be provided by the registered design professional and approved by the building official, including verification of anchor type, anchor dimensions, hole dimensions, hole cleaning procedures, anchor spacing, edge distances, concrete minimum thickness, anchor embedment and tightening torque	Field inspection	Y	Periodic or as required by the research report issued by an approved source		
a. Adhesive anchors installed in horizontal or upward-inclined orientation that resist sustained tension loads.		Y	Continuous		
b. Mechanical and adhesive anchors note defined in 4a.		Y	Periodic		
4. Verify use of approved design mix	Shop (3) and field inspection	Y	Periodic		
5. a. Prior to placement, fabricate specimens for strength tests, perform slump or slump flow, and air content density tests, and determine temperature of concrete.	Shop (3) and field inspection	Y	Continuous		
6. b. Verify that concrete specimens for strength tests are maintained in the required initial curing and laboratory curing environment, and that the maximum and minimum temperatures during the initial curing period are reported.	Shop (3) and field inspection	Y	Continuous		
7. Verify maintenance of specified curing temperature and techniques	Shop (3) and field inspection	Y	Periodic		
8. Concrete strength testing and verification of compliance with construction documents	Field testing and review of laboratory reports	Y	Periodic		
1705.4 Masonry Construction					
MINIMUM VERIFICATION REQUIREMENTS					
(A) Level 1, 2 and 3 Quality Assurance:					
1. Prior to construction, verification of compliance of submittals	Submittal Review		Prior to Construction		
(B) Levels 2 and 3 Quality Assurance:					
1. As masonry construction begins, verify that the following are in compliance:					
a. Proportions of the site-prepared mortar	Field inspection	Y	Periodic		
c. Grade, type, and size of reinforcement, and anchor bolts.	Field inspection	Y	Periodic		
2. Prior to grouting, verify that the following are in compliance:					
a. Grout space	Field inspection	Y N	Level 2 - Periodic Level 3 - Continuous		
b. Placement of reinforcement, connectors, and anchor bolts	Field inspection	Y N	Level 2 - Periodic Level 3 - Continuous		
3. Verify compliance of the following during construction:					
a. Materials and procedures with the approved submittals	Field inspection	Y	Periodic		
b. Placement of masonry units and mortar joint construction	Field inspection	Y	Periodic		
c. Size and location of structural members	Field inspection	Y	Periodic		
d. Type, size, location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction	Field inspection	Y N	Level 2 - Periodic Level 3 - Continuous		
f. Preparation, construction, and protection of masonry during cold weather (temperature below 40°F) or hot weather (temperature above 90°F)	Field inspection	Y	Periodic		
4. Observe preparation of grout specimens, mortar specimens, and/or prisms	Field inspection	Y N	Level 2 - Periodic Level 3 - Continuous		
1705.6 Soils					
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	Field inspection	Y	Periodic		
2. Verify excavations are extended to proper depth and have reached proper material.	Field inspection	Y	Periodic		
3. Perform classification and testing of compacted fill materials.	Field inspection	Y	Periodic		
4. Verify use of proper materials, densities, and lift thicknesses during placement and compaction of controlled fill.	Field inspection	Y	Continuous		
5. Prior to placement of controlled fill, inspect subgrade and verify that site has been prepared properly.	Field inspection	Y	Periodic		
1705.10 Fabricated items					
1. List of fabricated items requiring special inspection during fabrication:	Shop inspection	N	As noted in each applicable shop activity		
2. List of fabricated items to be fabricated on the premises of a fabricator approved to perform such work without special inspection (including name of approved agency providing periodic auditing):					
1705.11.3 Wind-resisting Components					
1. Roof covering, roof deck and roof framing connections.	Shop (3) and field inspection	Y	Periodic		
2. Exterior wall covering and wall connections to roof and floor diaphragms.	Shop (3) and field inspection	Y	Periodic		
1705.12.1 Structural Steel Special Inspections for Seismic Resistance					
1. Seismic force-resisting systems in SDC B, C, D, E, or F.	Shop (3) and field inspection	N	In accordance with AISC 341		
2. Structural steel elements in SDC B, C, D, E, or F other than those in Item 1. including struts, collectors, chords and foundation elements.	Shop (3) and field inspection	N	In accordance with AISC 341		

GENERAL NOTES
1. Contractor shall compare structural drawings and architectural drawings. Any omissions or discrepancies between plans, details, and specifications shall be brought to the attention of the Architect or Engineer before bidding. In all cases, more stringent requirement governs. Architectural dimensions and elevations will control.
2. Structural drawings or parts of the structural drawings may not be used as shop drawings without prior written approval.
3. All or parts of these drawings were produced with computer aided drafting. Drawings are available from the Engineer in DWG format on request.
4. Contractor proposed changes to details must be clearly noted on the first sheet of all shop drawings.
5. Construction shown is stable after the building is complete including interior and exterior finishes. The Contractor is responsible for temporary bracing of the structure during construction.
6. Review of submittal information shall be for general compliance with the contract documents and shall not include checking of detailed dimensions or detailed quantities.

DESIGN LOADS
1. Reference code for loading 2018 Kentucky Building Code.
   a. Risk Category II
   b. Wind Load
      1) Basic Wind Speed (3 sec gust) 115 mph
      2) Wind Exposure C
      3) Internal Pressure Coefficient +/- 0.18
      4) Velocity Pressure (qz) 28.8 psf

      IFB-0
   c. Roof Snow Load
      1) Ground Snow Load (Pg) 15 psf
      2) Flat Roof Snow Load (Pf) 15 psf
      3) Snow Exposure (Ce) 1.0
      4) Importance Factor 1.0
      5) Thermal Factor (Ct) 1.0
   d. Seismic Load
      1) Importance Factor 1.0
      2) Mapped Spectral Response Accelerations
         a) Ss 0.179
         b) S1 0.083
      3) Site Class C
      4) Spectral Response Coefficients
         a) Sds 0.155
         b) Sd1 0.083
      5) Seismic Design Category B
      6) Base Seismic-Force-Resisting System(s) and Response Modification Factor
         a) Intermediate Reinforced Masonry Shear Walls 3.5
      7) Design Base Shear x.x kips
      8) Seismic Response Coefficient (Cs) 0.xx
      9) Analysis Procedure = Equivalent Lateral Force
   e. Live Load
      1) Roof Load 20 psf
      2) Service Bay and slabs on grade 100 psf

FOUNDATIONS
1. Foundation design for this project was based on soils information provided by Terracon
2. Bearing capacity---------------------- 6000 psf
3. All footings are to bear on limestone bedrock.
4. Install corner bars at all footing intersections and corners (Provide lap length e.w.)
5. All footing elevations are given to the top of the footings.
6. Footing steps shown on the plans are furnished as a guide for estimating quantities. Final elevations are to be set in the field. Bearing elevations must be approved by a Soils Engineer before any concrete is placed.
7. Coordinate foundation elevations with plumbing requirements. Step footings as required to clear plumbing lines.
8. Provide drainage for all retaining walls, see architectural for notes and details.

MASONRY
1. All masonry work to be in accordance with "Building Code Requirements for Concrete Masonry Structures" TMS 402-2016 and "Specifications for Masonry Structures" TMS 602-2016
2. Fill all concrete masonry units with concrete or grout from the top of the footing to the finish floor or to 8" above finish grade whichever is higher.
3. Use ladder type joint reinforcement (Dur-O-Wall SW DA3100 or better) at 16" on center in all cavity walls where brick is used for one or more of the wythes.
4. Use truss type joint reinforcement (Dur-O-Wall SW DA3100 or better) at 16" o/c. in all other masonry walls.
5. Provide joint reinforcement at 8" o/c. for all walls constructed with stack bond.
6. Use Type "M" or Type "S" mortar in accordance with IBC Table 2103.7(1).
7. Minimum compressive strength of concrete masonry f'm = 2500 psi. Submit for review test data on strength of units before starting any masonry work.
8. Minimum compressive strength of grout f'm = 2500 psi. Use 3/8" max size aggregate. See Special Inspection Schedule for any testing requirements. Grout slump shall be 8" to 11".
9. Use "Fine" grout for all reinforced piers and reinforced wall in accordance with ASTM C 476.
10. Each grout lift shall not exceed 5'-0" unless cleanouts are provided in the bottom course.
11. Fill cells under all lintels with grout.
12. Provide lintels over all openings through wall. See lintel details for reinforcement.
13. Unless otherwise noted provide control joints in all walls 4'-0" from wall intersections or corners and at 20'-0"
14. Extend all horizontal steel and bond beams thru control joints.
15. Vertical Reinforcement shall extend into the bond beam.
16. Unless noted, all bars are to be located at the center of cell. Where bars are specified at each face, provide minimum ¾" clear space between reinforcement and CMU face shell.
17. Anchor bolt into grouted cell locations only, unless noted otherwise.

REINFORCING STEEL AND CONCRETE
1. All concrete work is to be in accordance with the "Building Code Requirements for Reinforced Concrete" (ACI 318-14).
2. All detailing is to be in accordance with "ACI Detailing Manual" SP-66
3. Use of Calcium Chloride, Chloride Ions, or other salts in concrete are prohibited.
4. Concrete Properties: See Schedule
   a. All concrete must obtain 7 day strength of 70% of design strength.
   b. Concrete mixes may use up to 25% of cementious weight as fly ash.
   c. Concrete mixes may use water reducers, accelerators or retarders with prior approval.
   d. Do not provide air entrainment in concrete mixes for interior slabs.
5. All steel reinforcement shall be of deformed bars of billet steel conforming to ASTM A615, Grade 60 in all concrete.
6. Welded wire fabric shall be ASTM 185 and shall lap 2 cross wires or 6" whichever is greater on all sides. All laps shall be wired together.
7. Provide (2) #4 bars x 4'-0" at re-entrant corner locations Typical. Locate 3" away from corner and space 1'-0" apart.
8. All slabs on grade are 6", unless noted. Slabs are to be placed on 10 Mil, PVC vapor barrier over 4" of porous fill. Reinforce slabs with 6x6 W2.9 x W2.9 WWF placed 1" from top of slab. Unless otherwise noted slabs shall have joints placed a 12'-0" on centers. Joints may be control joints or construction joints. See Architectural Plans for floor slopes and recesses for hard tile.
9. Minimum concrete cover for reinforcement:
   a) Footings 3" bottom, 2" sides
   b) Cast-In-Place Walls
      Surfaces exposed to weather or soil 2" - #6 and greater, 1-1/2" - #5 and smaller
      Other surfaces 3/4"
10. Provide corner bars at all wall and footing intersections.
11. No openings shall be allowed to penetrate any concrete work, unless it is shown on the structural framing plans without prior written approval. Contractor shall submit for review locations of proposed openings not shown 30 days prior to pouring any concrete.
12. Provide a continuous water bar at all wall construction joints below ground level.
13. Use 3/4" chamfer for all exposed corners unless noted.
14. Testing samples for preparing strength test specimens of each concrete mixture placed each day shall be taken in accordance with (1) through (3).
    1. At least once a day
    2. At least once for each 150yd^3 of concrete
    3. At least once for each 5000ft^2 of surface area for walls or slabs.

STRUCTURAL STEEL
1. All detailing, fabricating, and erection of structural steel shall be in accordance with the AISC 360-16 "Specifications for Structural Steel Buildings". All reactions shown are ASD loads.
2. All connections are to be detailed as Type 2 "simple frame connections".
3. All structural steel W shapes shall be ASTM A992.
4. All structural steel Tube sections shall be ASTM A500 Grade B.
5. All structural steel Pipe sections shall be ASTM A501.
6. All structural steel channels, angles and other sections shall be ASTM A36, unless noted.
7. Headed Studs shall be Type B Shear Connectors.
8. Shop and field connections shall be welded with E-70XX electrodes or bolted with 3/4" dia. A-325N or A-325F bolts, unless noted.
9. Use 3/4" cap and bearing plates, unless noted.
10. Use 3/4" dia x 1'-0" long ASTM 1554 Grade 36 anchor bolts, unless noted. In lieu of cast bolts, 3/4"x1'-0" long HAS rods epoxied with Hilti HVA epoxy, or equal, may be used with prior approval.
11. Grout under baseplates with ASTM C 1107 cementitious 6000 psi Non-Shrink Grout.
12. Structural steel shall be shop primed per SSPC paint system No. 7. Primer shall be SSPC paint with a minimum thickness of 2.0 MILS. Omit Paint at surfaces to be fireproofed.
13. Provide L 3"x3"x1/4" frames around all roof opening through metal decking.

STEEL JOIST
-
1. All steel joists shall conform to the standard specifications for the joist noted, as adopted by the Steel Joist Institute.
2. Refer to Components & Cladding Table and Diagram for roof uplift zones and pressures. Use 8psf dead load for net uplift determination.
3. K Series joists shall be welded to bearing plates or steel members with two 1/8" fillet welds 2" long.
4. All joist bearing plates are to be set 1/4" above the top of concrete masonry units.
5. Weights of mechanical units are not included in the joist loading designation shown. Design joist for loading shown plus the weight of mechanical shown. General contractor is to verify all weights of mechanical units with Mechanical Subcontractor before submitting shop drawings.
-

COLD-FORMED METAL (CFS) FRAMING (Tower Element)
-
1. All detailing, fabricating, and erection of light gauge steel shall be in accordance with the AISI S240-20 "North American Standard for Cold-Formed Steel Structural Framing".
2. All studs, joist, tracks, bridging, and accessories shall be a minimum of G60 galvanized and have minimum yield strength of 33ksi, unless noted otherwise.
3. Furnish design calculations sealed by a Professional Engineer licensed in the state of that the project is located for all truss members
4. Top and bottom tracks to 600T125-43 unless noted otherwise.
5. Provide double studs at all wall intersections, jambs, corners, and intersections.
6. All wall studs to have full bearing at top and bottom of stud.

REQUIRED STRUCTURAL SUBMITTALS
-
1. Concrete Mix Designs conforming to ACI 318 requirements
2. Reinforcing steel for all cast in place concrete work shown on the strucural drawings.
3. Reinforcing steel for all masonry work shown on the strucural drawings.
4. Structural steel.
5. Bar joist, composite floor deck, and roof deck.
6. Cold formed metal stud trusses.
7. Aggregate, helical anchor, or other foundation site improvement method, if specified on the project.

BJW STRUCTURAL ENGINEERS
BARNETT JONES WILSON, LLC ● PELL CITY ● TUSCALOOSA ● CHATTANOOGA ● WWW.STRUCT-ENGR.COM

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STATE OF KENTUCKY
JOHN C. JONES
04.20.2026
28096
LICENSED
PROFESSIONAL ENGINEER

Express Oil Change & Tire Engineers
Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage
Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	02/27/2026
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2026
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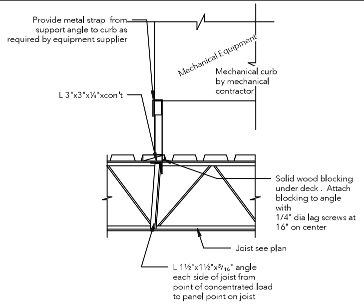
General Notes & Schedule of Special Inspections

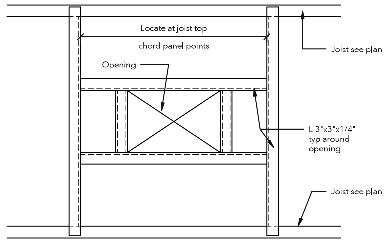
Project number	25042
Date	2/27/2026
Drawn by	jcj
Checked by	jd

S0.1

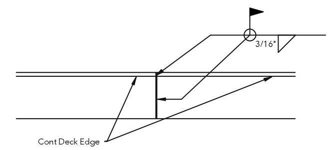
Scale 3/4" = 1'-0"



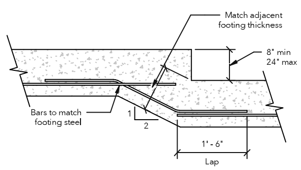
Typical Mechanical Equipment Support Details



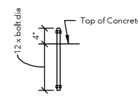
Typical Frame at Roof Deck Opening



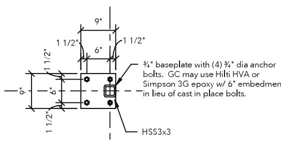
Typical Roof Deck Edge Angle Splice Detail



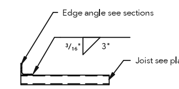
Single Footing Step



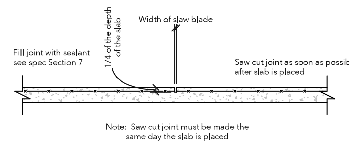
Typical Anchor Bolt Detail



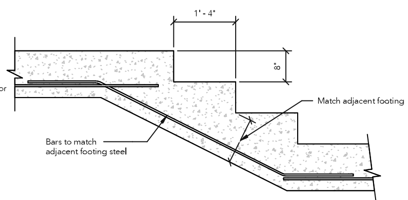
Typical Base Plate



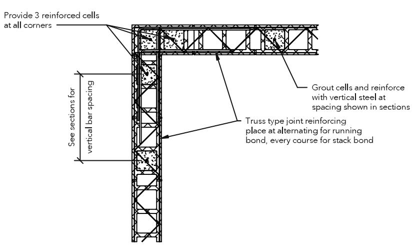
Deck Edge Fastening Detail



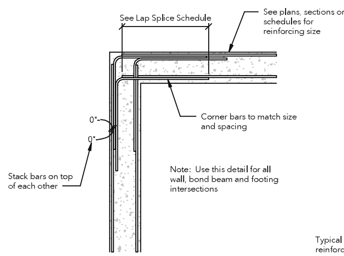
Typical Control Joint



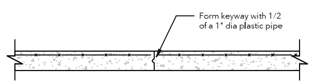
Multiple Footing Step



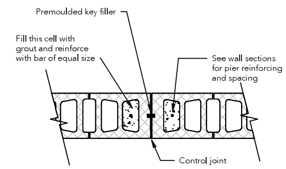
Typical Joint Reinforcing at Corner



Typical Beam, Wall or Footing Reinforcing at Corners

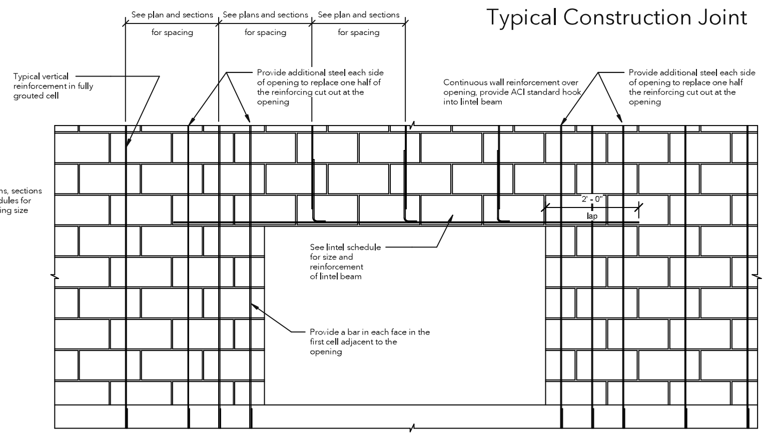


Typical Construction Joint

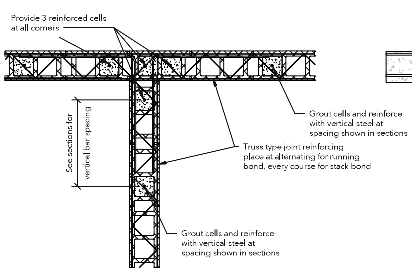


Note:
1. See architectural plan for spacing. If spacing is not shown place joints at 3 times the wall height but not greater than 20'-0" o.c., and at 4'-0" from corners
2. Extend all horizontal reinforcing including bond beam steel thru control joints.

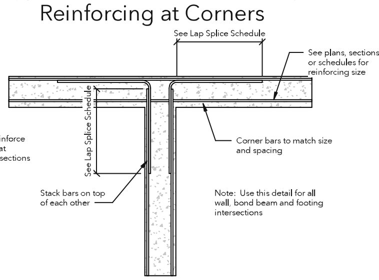
Typical MasonryWall Control Joint



CMU Lintel Elevation



Typical Joint Reinforcing at Intersection



Typical Beam, Wall or Footing Reinforcing at Intersetions

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No.	Description	Date
IFP-0	Issued for Permit	02/27/2026
IFB-0	Bid Set/AHJ Resub.	04/20/2026

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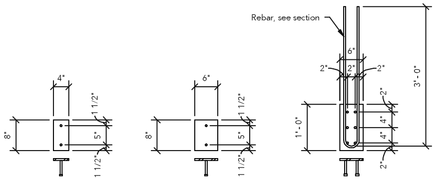
Typical Details

Project number	25042
Date	2/27/2026
Drawn by	jcj
Checked by	jd

S0.2

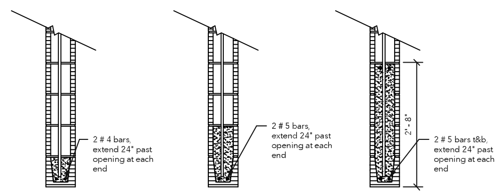
Scale	3/4" = 1'-0"



Embed plates

⅜" plate w/ ½"x4"headed studs

CONCRETE SCHEDULE						
Concrete Use	Design Strength	Max W/C Ratio	Slump Limits	Entrained Air Range	Weight	Notes
Basement Walls	4000 psi	n/a	6" to 8"	3% to 5%	150 pcf	Use HRWR
Slabs on Composite Metal Deck	4000 psi	n/a	6" to 8"	---	150 pcf	Use HRWR
Slabs on Grade/Grade Beams	4000 psi	n/a	6" to 8"	---	150 pcf	Use HRWR



CMU Lintel Schedule

Metal Deck Attachment Schedule

Area	Support Fastener/Pattern	Sidelap Fastener/Pattern
Roof - typical	#12 TEK screws 36/4 pattern	2 - #10 TEK screws
Roof - hatched area	#12 TEK screws 36/4 pattern	10 - #10 TEK screws

Reinforcing Steel Lap Splice Lengths

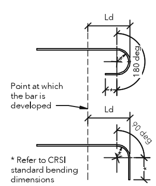
Bar Size	Column Splices	Bm, Ftg & Wall Splices	
		Top Bars	Other Bars
# 3	12"	19"	15"
# 4	15"	25"	19"
# 5	19"	31"	24"
# 6	23"	37"	29"
# 7	26"	54"	42"
# 8	30"	62"	48"
# 9	34"	70"	54"
# 10	38"	79"	61"
# 11	42"	87"	67"

Notes:
1. Top bars are any horizontal reinforcing steel that has another layer of steel more than 2" below the bars or reinforcing steel that has more than 12" of concrete below the bars.
2. All horizontal reinforcing bars in walls may be detailed as "Other Bars".
3. All corner bars may be detailed as "Other Bars".

Reinforcing Steel Lap Splice & Development Length for Concrete Masonry

Bar Size	Bar in center of wall			Bar in each face of wall
	6" CMU	8" CMU	12" CMU	
#3	16"	16"	16"	16"
#4	21"	21"	21"	30"
#5	32"	26"	26"	46"
#6	61"	43"	40"	85"
#7	NA	60"	46"	115"
#8	NA	NA	61"	NA

Notes:
1. Lengths are for vertical splces in walls.
2. Bar length for center of wall are based on f'm of 1500 psi or greater.
3. Bar length for face of wall are based on f'm of 2000 psi or greater.
4. Refer to General Notes and details for masonry strength.



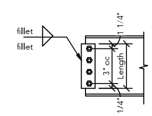
Components and Cladding Schedule
a = 6.5'

Area (sf)	Zone 1,2,3 (+) psf	Zone 1 (-) psf	Zone 2 (-) psf	Zone 3 (-) psf	Zone 4 (+) psf	Zone 4 (-) psf	Zone 5 (+) psf	Zone 5 (-) psf
10	10.5	-25.8	-43.3	-65.1	23.6	-25.6	23.6	-31.5
50	9.0	-24.3	-32.6	-39.2	21.2	-23.1	21.2	-26.6
100	8.3	-23.6	-28.0	-28.0	20.1	-22.1	20.1	-24.5

Beam to Column Single Shear Plate Connection Schedule

Min Beam Depth	Max end reaction	Length	# of bolts	Plate thickness	Fillet weld size
W10	16.7k	5-1/2"	2	5/16"	3/16"

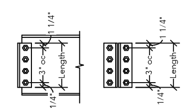
- Use this table for Wide Flange Beams to HSS Columns
- Loads are ASD
- Bolts are 3/4"dia Group A ASTM F3125 Gr A325 in standard or short-slotted holes transverse to direction of load with threads Excluded from shear plane. More than 5 bolts must have short-slotted holes.
- Plate is A36 and welds are E-70XX electrodes
- Beam reactions that exceed the max reaction in this table will use the Double Angle Frame Connection Schedule below.

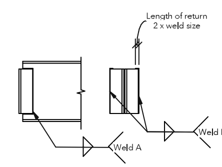


Beam Double Angle Shear Connection Schedule

Min Beam Depth	Max end reaction	Length	rows of bolts	Angle thickness	Weld A fillet size	Weld B fillet size
W10	14.6k	5-1/2"	2	1/4"	3/16"	1/4"

- Use this table for Wide Flange Beams to Wide Flange Columns or other Beams
- Loads are ASD
- Bolts are 3/4"dia Group A ASTM F3125 Gr A325 in standard or short-slotted holes transverse to direction of load with threads Excluded from shear plane.
- Angles are A36 and welds are E-70XX electrodes
- Beam reactions that exceed the max reaction in this table will shall be designed by steel fabricator and submit signed/sealed calculations prepared by a Professional Engineer licensed in the State of the Project





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Schedules

Project number	25042
Date	2/27/2026
Drawn by	jcj
Checked by	jd

S0.3

Scale	3/4" = 1'-0"

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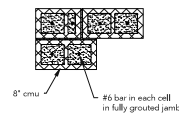
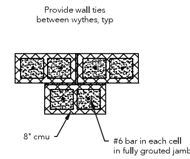
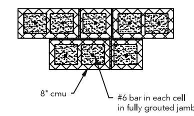


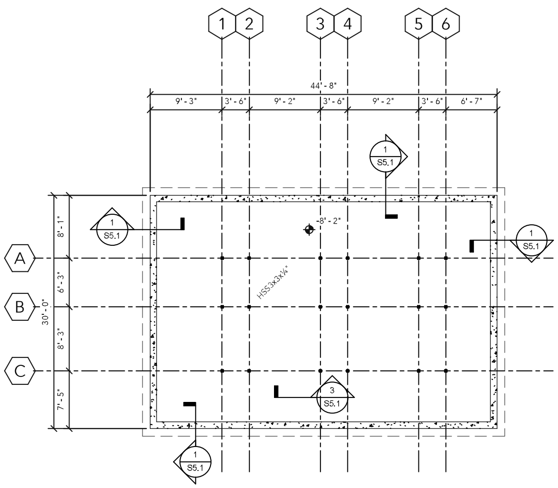
16" Jamb Reinforcing



32" Jamb Reinforcing

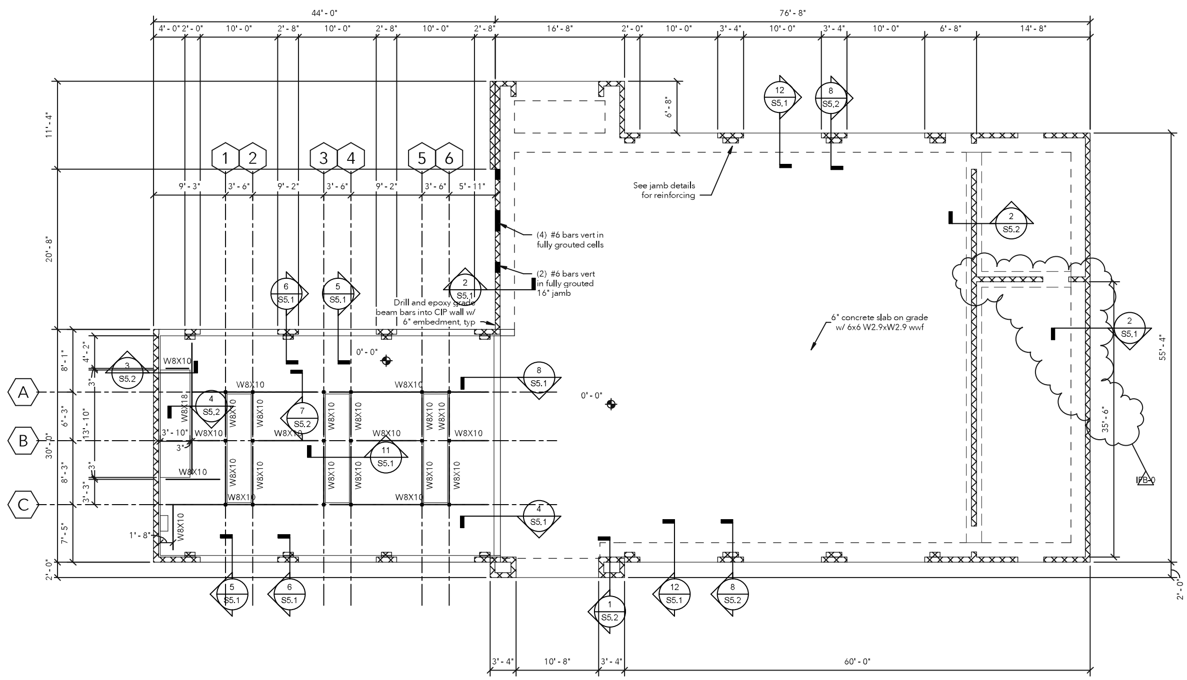


40" Jamb Reinforcing



PIT FOUNDATION PLAN

1/8" = 1'-0"



FOUNDATION PLAN

1/8" = 1'-0"

Sheet Notes:

1. See Sheet No S0 for typical details and general notes.
2. Reference all elevations to finish floor elevation (+) 0'-0"
3. Floor construction 3" concrete slab with 6x6 W2.9xW2.9 wwf over 2" x 20 ga. galvanized (G60) composite metal deck. Total slab thickness = 5". Provide 5/8" dia puddle welds on 36/4 pattern w/ (3) #12 TEK screw sidelap fasteners per span
4. All steel beam reactions shall be designed for 10 kips (ASD) unless noted otherwise.
5. Refer to architectural for all dimensions, slopes, elevations, etc. not illustrated on this plan. Coordinate all final dimensions and elevations with architectural.

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IFB-0	Bid Set/AHJ Resub.	04/20/2026

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Foundation Plan

Project number	25042
Date	2/27/2026
Drawn by	jcj
Checked by	jd

S1.1

Scale	As indicated

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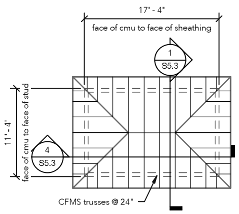

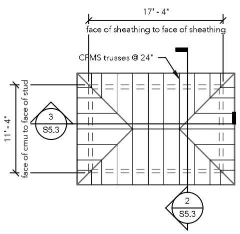

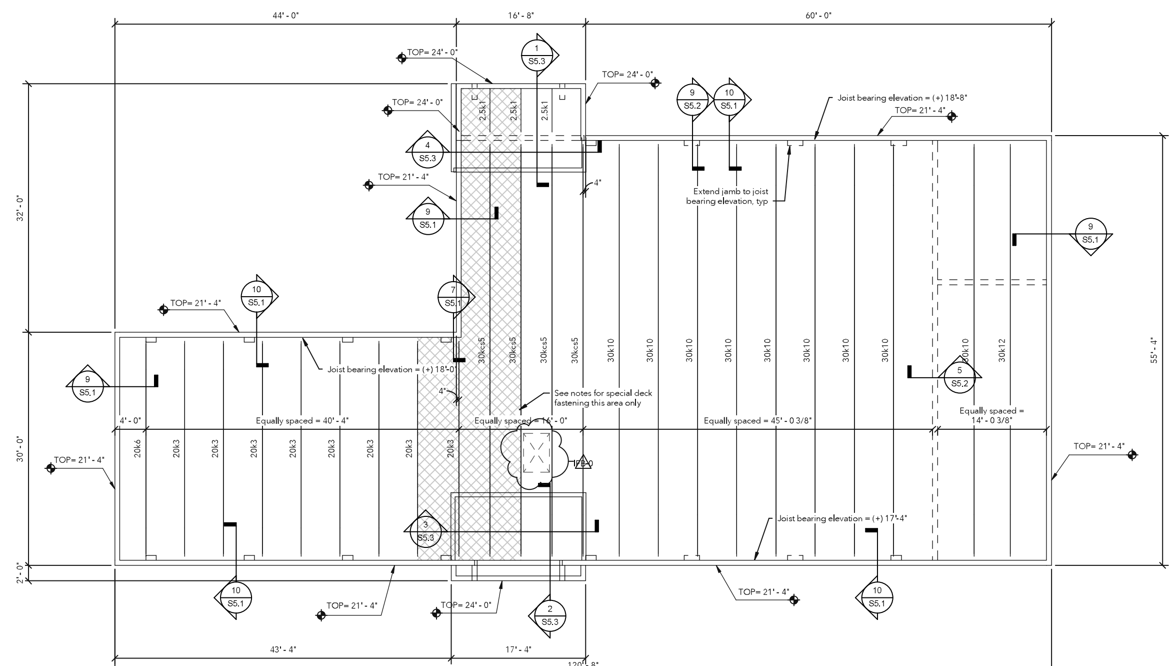

HIGH ROOF FRAMING PLAN

1/8" = 1'-0"

Sheet Notes:

1. See Sheet No S0.x for typical details and general notes.
2. Reference all elevations to finish floor elevation (+) 0'-0"
3. Truss Bearing Elevation (+) 23'-4".
4. Roof slope = 7"/12", unless noted
5. Roof construction 5/8" plywood deck with H-clips. Attach with 8d nails @ 6" o.c..
6. Refer to architectural drawings for all dimensions, slopes, elevations, etc... not illustrated on this plan. Coordinate all final dimensions and elevations with architectural.
7. Truss loading: Top Chord Live Load = 20psf, Top Chord Dead Load = 10psf, Bottom Chord Dead Load = 10psf.
8. Truss requirements: (note that all of these requirements must be included in the truss submittal prior to receiving approval)
   a) Furnish design calculations sealed by a Professional Engineer licensed in the state of that the project is located for all truss members.
   b) Truss manufacturer shall specify and provide all truss to truss and truss bearing connections, and not contain mention of "by others" in relation to design.
   c) Truss manufacturer shall be responsible for providing and illustrating all temporary and permanent bracing required.

ROOF FRAMING PLAN

1/8" = 1'-0"

Sheet Notes:

1. See S0.x Sheets for typical details and general notes.
2. Reference all elevations to finish floor elevation (+) 0'-0"
3. See plan for Joist Bearing Elevations.
4. Roof construction 1 1/2" x 22 ga. type B painted (gray) metal deck. See S0.3 sheets for attachment details. Paint bar joist gray.
5. Refer to architectural drawings for all dimensions, slopes, elevations, etc... not illustrated on this plan. Coordinate all final dimensions and elevations with architectural.

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Roof Framing Plan

Project number	25042
Date	2/27/2026
Drawn by	jcj
Checked by	jd

S3.1

Scale: As indicated

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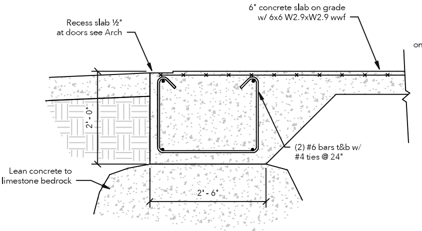

Section 12
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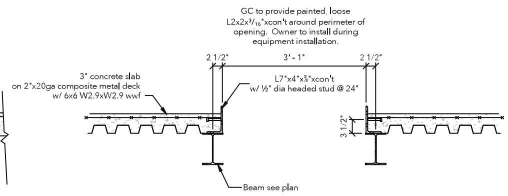
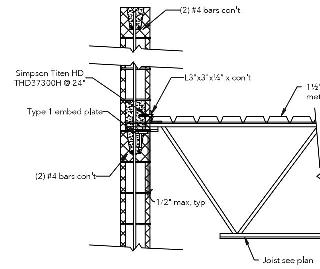


Section 11
3/4" = 1'-0"



Section 10
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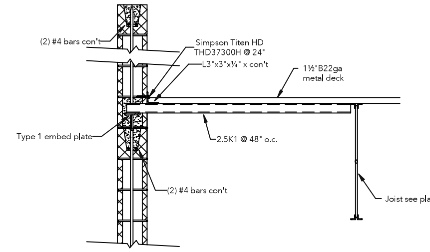

Section 9
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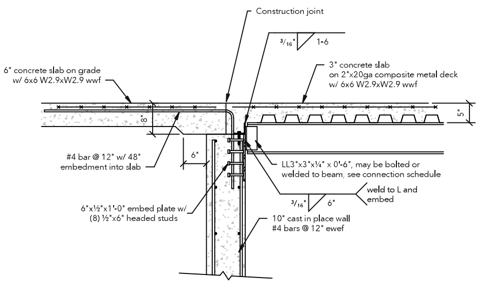
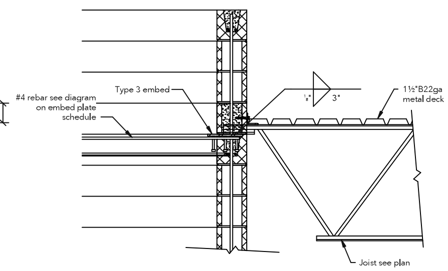
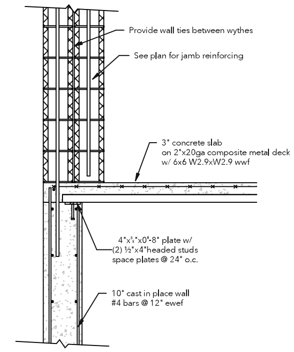


Section 8
3/4" = 1'-0"



Section 7
3/4" = 1'-0"



Section 6
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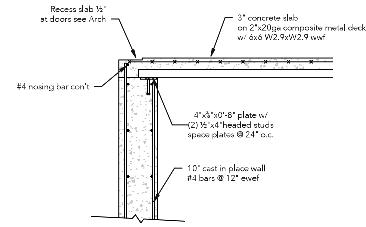

Section 5
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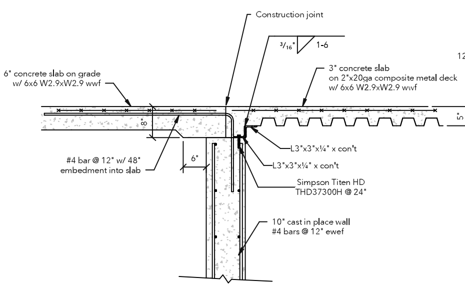
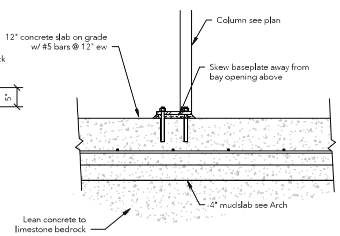
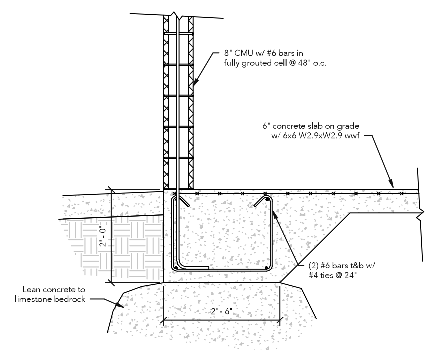


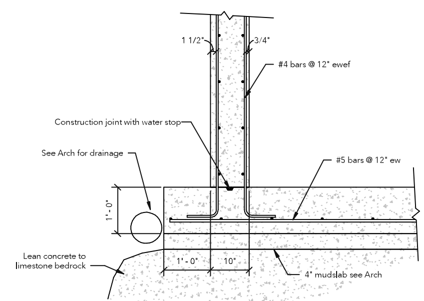
Section 4
3/4" = 1'-0"



Section 3
3/4" = 1'-0"



Section 2
3/4" = 1'-0"



Section 1
3/4" = 1'-0"

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Sections and Details

Project number	25042
Date	2/27/2026
Drawn by	jcj
Checked by	jd

S5.1

Scale 3/4" = 1'-0"

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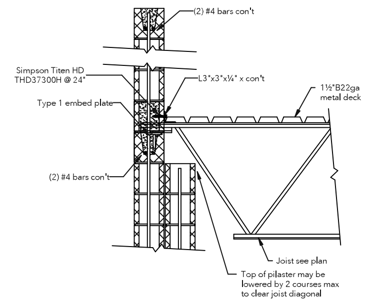

Section 9
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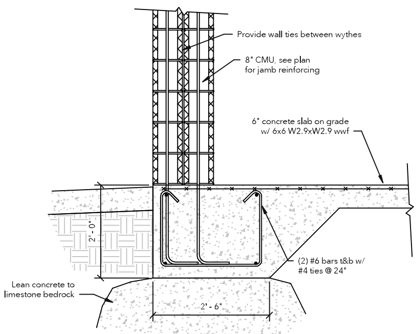
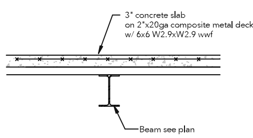


Section 8
3/4" = 1'-0"



Section 7
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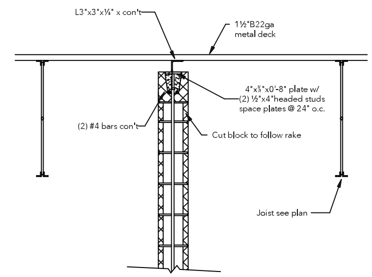

Section 5
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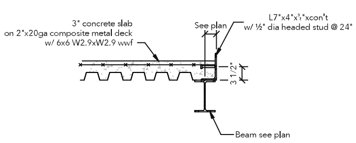

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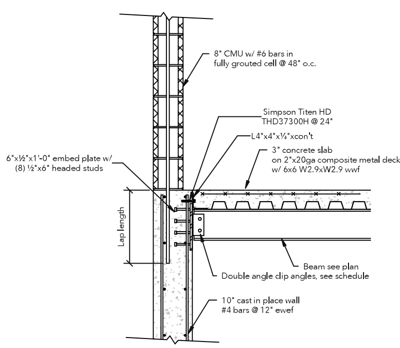

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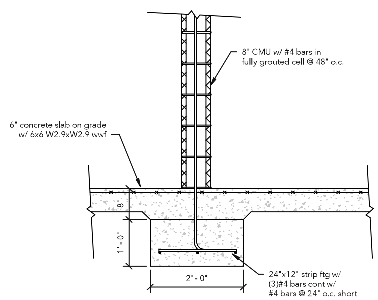

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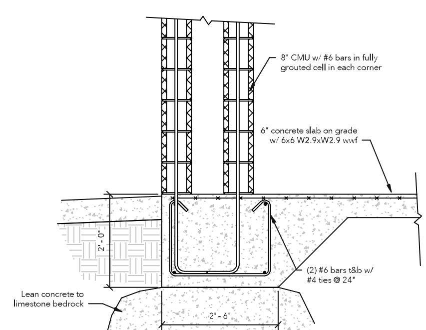

Section 1
3/4" = 1'-0"

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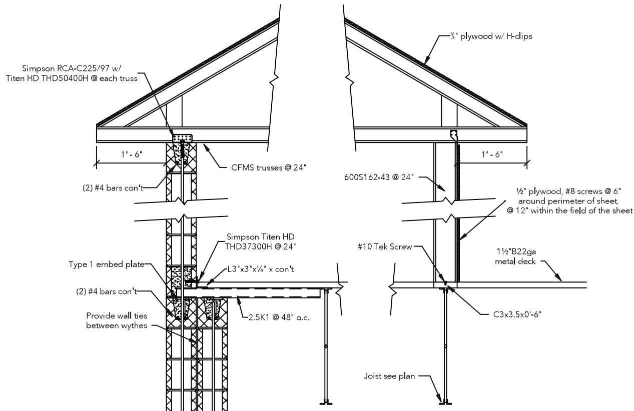
Sections and Details

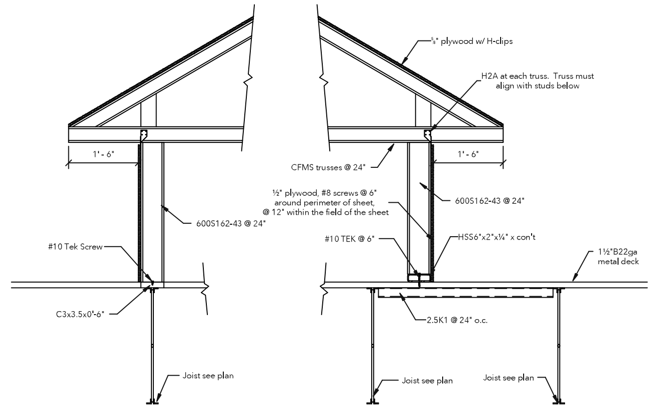
Project number	25042
Date	2/27/2026
Drawn by	jcj
Checked by	jd

S5.2

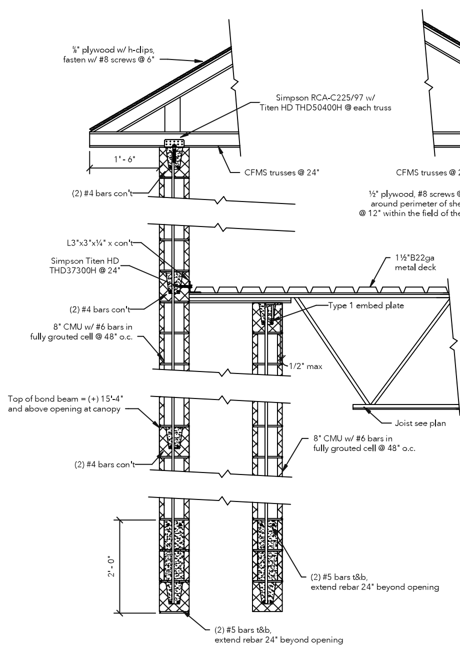
Scale 3/4" = 1'-0"



Section 4
3/4" = 1'-0"



Section 3
3/4" = 1'-0"



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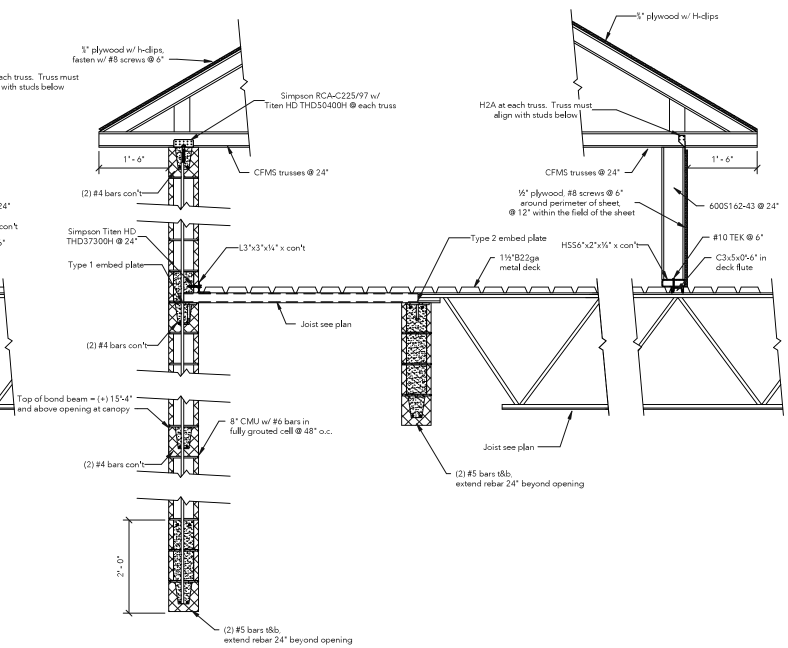

Section 1
3/4" = 1'-0"

BJW STRUCTURAL ENGINEERS

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STATE OF KENTUCKY
04.20.2026
LICENSED
PROFESSIONAL ENGINEER

Express Oil Change & Tire Engineers

Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage

Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	02/27/2026
IFB-0	Bid Set/AHJ Resub.	04/20/2026

2026
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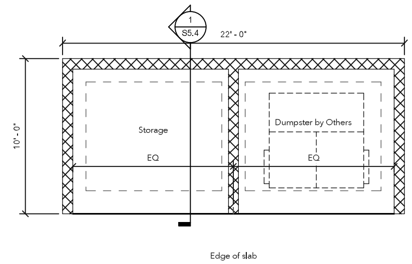
Sections and Details

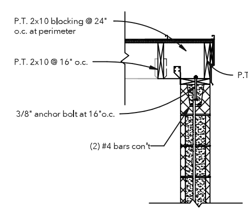
Project number	25042
Date	2/27/2026
Drawn by	jcj
Checked by	jd

S5.3

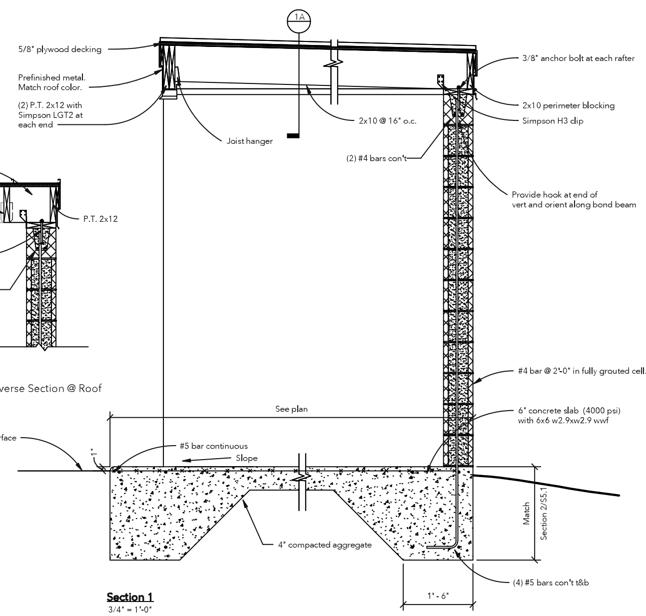
Scale 3/4" = 1'-0"



Dumpster Enclosure Plan
1/4" = 1'-0"



1A Transverse Section @ Roof



Section 1
3/4" = 1'-0"

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Date	2/27/2026
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Checked by	jd

S5.4

Scale: As indicated

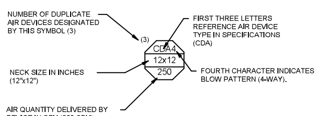
LEGEND

- DUCT SIZE, FIRST FIGURE IS SIDE SHOWN INSIDE CLEAR DIMENSION UNLESS NOTED OTHERWISE
- LOW PRESSURE, RECTANGULAR (GALVANIZED STEEL)
- LOW PRESSURE, RECTANGULAR (ALUMINUM STEEL)
- ROUND (GALVANIZED STEEL)
- MEDIUM PRESSURE, FLAT OVAL (GALVANIZED STEEL)
- FLEXIBLE DUCT
- R — DUCT RISE
- D — DUCT DROP
- EXISTING DUCTWORK TO REMAIN
- DUCT TRANSITION
- RECTANGULAR TO ROUND DUCT TRANSITION
- TURNING VANES
- FD — FIRE DAMPER AND SLEEVE, PROVIDE ACCESS DOOR
- SD — SMOKE DAMPER AND SLEEVE, PROVIDE ACCESS DOOR
- SD/FD — COMBINATION FIRE/SMOKE DAMPER, PROVIDE ACCESS DOOR
- MANUAL VOLUME DAMPER
- STANDARD 45° BRANCH, SUPPLY OR RETURN, NO SPLITTER
- STANDARD 45° BRANCH, SUPPLY OR RETURN, NO SPLITTER, WITH MANUAL VOLUME DAMPER
- CONICAL SPIN-IN FITTING WITH BUTTERFLY DAMPER
- GRILLE OR REGISTER, CEILING
- A — ACCESS DOOR
- D — CONDENSATE DRAIN PIPING
- AD — AUXILIARY CONDENSATE DRAIN PIPING
- R — REFRIGERANT PIPING (2 LINES TOTAL)
- ELBOW, 90° (LONG RADIUS)
- TEE
- TEE, TURNED UP
- TEE TURNED DOWN
- ELBOW, TURNED DOWN
- ELBOW, TURNED UP
- T — WALL MOUNTED THERMOSTAT
- H — WALL MOUNTED HUMIDISTAT
- S — WALL MOUNTED TEMPERATURE SENSOR
- C — WALL MOUNTED CARBON DIOXIDE SENSOR
- #G — WALL MOUNTED DEVICE W/ COVER GAURD
- SMOKE DETECTOR
- TIE NEW INTO EXISTING
- UC — UNDERCUT DOOR 3/4 INCHES
- SUPPLY AIR FLOW
- RETURN OR EXHAUST AIR FLOW

NOTE: THIS LEGEND IS FOR REFERENCE ONLY. ALL SYMBOLS WHICH APPEAR WITHIN THE LEGEND MAY NOT APPLY TO THIS PROJECT.

ABBREVIATIONS

AB.CL'G	ABOVE CEILING
ABV.	ABOVE
AC	ALTERNATING CURRENT
A/C	AIR COMPRESSOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AI	ANALOG INPUT
ALT.	ALTERNATE
AMP	AMPERE
AO	ANALOG OUTPUT
APPROX.	APPROXIMATELY
ARCH.	ARCHITECTURAL
AVG	AVERAGE
B	BOILER
BTU	BRITISH THERMAL UNIT
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CHWP	CHILLED WATER PUMP
CLG	CEILING
CT	COOLING TOWER
CU	CONDENSING UNIT
CWP	CONDENSER WATER PUMP
DEFL	DEFLECTION
DET	DETAIL
DI	DIGITAL INPUT
DIA	DIAMETER
Ø	DIAMETER
DO	DIGITAL OUTPUT
EDB	ENTERING DRY BULB
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EWB	ENTERING WET BULB
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXIST.	EXISTING
°F	DEGREES FAHRENHEIT
GFF	GAS FIRED FURNACE
GPM	GALLONS PER MINUTE
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FOOT OR FEET
HD.	HEAD
HP	HORSE POWER
HR	HOUR(S)
HT.	HEIGHT
HTR	HEATER
HVAC	HEATING, VENTILATION AND AIR CONDITIONING
HWP	HOT WATER PUMP
HX	HEAT EXCHANGER
HZ	FREQUENCY (HERTZ)
ID	INSIDE DIAMETER
IN.	INCHES
KW	KILOWATT
KWH	KILOWATT HOUR
MAX	MAXIMUM
MBH.	1000 BTU PER HOUR
MECH.	MECHANICAL
MFR.	MANUFACTURER
MIN	MINIMUM
NO.	NUMBER
N/A	NOT APPLICABLE
NC	NOISE CRITERIA
O.D.	OUTSIDE DIAMETER
OA	OUTSIDE AIR
⊖	OVAL DUCTWORK
ORIG.	ORIGINAL
PH.	PHASE
PIU	POWERED INDUCTION UNIT
PRESS	PRESSURE
RTN	RETURN AIR
RTU	ROOFTOP AIR HANDLING UNIT
SDC	STAND ALONE DIGITAL CONTROLLER
SENS.	SENSIBLE
SQ.	SQUARE
SPLY	SUPPLY
TEMP	TEMPERATURE
VAV	VARIABLE AIR VOLUME
W	WATT
W/	WITH
W.P.D.	WATER PRESSURE DROP



1 / M0.01 AIR DEVICE LEGEND
NO SCALE

GAS FIRED FURNACE SCHEDULE

EQUIPMENT NO.	MANUFACTURER/ MODEL NO.	CFM	O.A. CFM	E.S.P. (IN. W.C.)	FAN HP	COOLING COIL	GAS HEAT CAP. (MBH)		VENTING		ELECTRICAL			MOUNTING	WGT. (LBS)	REMARKS
							INPUT	OUTPUT	INTAKE (IN.)	DISCHARGE (IN.)	MCA	MOCP	VOLTS/PH./HZ.			
GFF-1	TRANE S9X1B040	1,195	150	0.5	1/2	CC-1	40	38.8	3	3	8.8	15	120/1/60	HORIZONTAL	150	1), 2), 3)

REMARKS:
1) UNIT MOUNTED ON EQUIPMENT PLATFORM.
2) PROVIDE WITH 1" THROWAWAY FILTERS.
3) ROUTE CONDENSATE TO HUB DRAIN.

COIL SCHEDULE

EQUIPMENT NO.	MANUFACTURER/ MODEL NO.	TYPE	MAXIMUM FINS PER INCH	ROWS (MIN)	MAXIMUM FACE VEL. (FPM)	AIR						DX REFR. TYPE	REMARKS
						CFM	EDB (°F)	EWB (°F)	LDB (°F)	LWB (°F)	DELTA P (IN. W.C.)		
CC-1	TRANE 5TXCB004	DIRECT EXPANSION	–	–	–	1195	79.0	66.0	58.4	56.8	–	R-454B	1)

REMARKS:
1) MOUNTED ON DISCHARGE OF FURNACE UNIT

AIR COOLED CONDENSING UNIT SCHEDULE

EQUIPMENT NO.	MANUFACTURER/ MODEL NO.	SERVICE	NOMINAL CAPACITY (TONS)	ELECTRICAL					WEIGHT (LBS)	REMARKS
				DISCONNECT	VOLTS/PH./HZ. 208/1/60		VOLTS/PH./HZ. 230/1/60			
					UNIT MCA	UNIT MOCP	UNIT MCA	UNIT MOCP		
CU-1	TRANE 5TTR4036	GFF-1	3	BY DIV. 16	18	30	18	30	200	1), 2), 3)

REMARKS:
1) PROVIDE LONG LINE ACCESSORIES AS REQUIRED BY MANUFACTURER.
2) UNITS SHALL BE SIZED AT 95°F AMBIENT AIR TEMPERATURE.
3) LOCATE UNIT ON HOUSEKEEPING PAD. ANCHOR UNIT TO PAD WITH EXPANSION BOLTS.

POWER VENTILATOR SCHEDULE

EQUIPMENT NO.	MANUFACTURER/ MODEL NO.	CFM	E.S.P. (IN. W.C.)	RPM	MAX. SONES	ELECTRICAL				LOCATION	TYPE	DRIVE	WGT (LBS.)	REMARKS
						DISCONNECT	MOTOR STARTER	WATTS	MOTOR VOLTS/PH./HZ.					
EF-1	COOK GC-146	70	0.35	849	1.5	BY DIV. 26	BY DIV. 23	32	115/1/60	CEILING	CENTRIFUGAL	DIRECT	15	1), 3), 5)
EF-2	COOK GC-146	70	0.35	849	1.5	BY DIV. 26	BY DIV. 23	32	115/1/60	CEILING	CENTRIFUGAL	DIRECT	15	1), 3), 5)
EF-3	COOK 150SQN17D	3000	0.35	1649	21.4	BY DIV. 26	BY DIV. 23	1 HP	115/1/60	INLINE	CENTRIFUGAL	DIRECT	120	2), 3), 6)
EF-4	COOK 195C7B	4200	0.35	1004	16.0	BY DIV. 26	BY DIV. 23	1 HP	115/1/60	ROOF	CENTRIFUGAL	BELT	125	2), 4)

REMARKS:
1) PROVIDE OCCUPANCY SENSOR FOR FAN OPERATION IN EACH RESTROOM.
2) FAN SHALL RUN CONTINUOUSLY DURING OCCUPIED HOURS. INTERLOCK WITH LOCAL SWITCH. COORDINATE WITH ELECTRICAL.
3) PROVIDE WITH FAN SPEED CONTROLLER.
4) PROVIDE WITH FAN INLET GUARDS AND BELT TENSIONER.
5) PROVIDE WITH BACKDRAFT DAMPER.
6) PROVIDE FAN WITH EC VARIFLOW DRIVE PACKAGE.

GAS UNIT HEATER SCHEDULE

EQUIPMENT NO.	MANUFACTURER/ MODEL NO.	INPUT (MBH)	OUTPUT (MBH)	AIRFLOW CFM	WATTS	ELECTRICAL			MOUNTING	REMARKS
						DISCONNECT	MOTOR STARTER	VOLTS/PH./HZ.		
UH-1	REZNOR UDAP 150	150	124	1921	392	BY ELEC.	BY MECH.	115/1/60	12'-0"	1), 2)
UH-2	REZNOR UDAP 150	150	124	1921	392	BY ELEC.	BY MECH.	115/1/60	12'-0"	1), 2)
UH-3	REZNOR UDAP 200	200	166	2562	491	BY ELEC.	BY MECH.	115/1/60	12'-0"	1), 2)
UH-4	REZNOR UDAP 200	200	166	2562	491	BY ELEC.	BY MECH.	115/1/60	12'-0"	1), 2)

REMARKS:
1) MAINTAIN CLEARANCE PER MANUFACTURERS INSTALL DETAILS. PROVIDE WITH VENT KIT.
2) PROVIDE WITH 24V TRANSFORMER AND LOW VOLTAGE THERMOSTAT.

OUTSIDE AIR CALCULATIONS

Served By	Space Name	Supply Air (cfm) Vpz (Max)	Area (sq. ft) Az	Occupancy Classification	MECHANICAL CODE OUTSIDE AIR REQUIREMENT: Max Number of Occupants/SF (per 1000 SF)	Number of Occupants Rp	O.A. Area Air Rate (cfm / sq. ft) Ra	O.A. People Air Rate (cfm/person) Pz	O.A. Area Air Rate (cfm)	O.A. People Air Rate (cfm)	O.A. (cfm) Vbz	Zone Effectiveness Ez	Corrected CFM Voz	MAX OA REQUIRED Vot	Primary O.A. Fraction Zp	Ventilation Effectiveness Ev	Remarks
AHU-1	1 Service Writing	320	141	Lobbies	--	1	0.06	5	8	5	13	0.80	17	17	0.05	1	
	2 Waiting Room	275	189	Lobbies	--	15	0.06	5	11	75	86	0.80	108	108	0.39	0.758	
	7 Manager	100	57	Office	5	1	0.06	5	3	5	8	0.80	11	11	0.11	1	
	10 Break Room	400	118	Break Room	35	1	0.06	10	7	10	17	1.80	9	9	0.02	1	
															OA	Lowest Ev	
															144.76	1.00	

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4/20/26

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Mechanical Legend, Abbreviations and Schedules

Project number	25042
Date	04/20/2026
Drawn by	CA
Checked by	JB

M0.01

Scale 12" = 1'-0"

4/30/2026 1:01:35 PM

SECTION 15010 - MECHANICAL GENERAL

A. PROVIDE EQUIPMENT, LABOR, MATERIAL, ETC., REQUIRED TO MAKE A COMPLETE WORKING INSTALLATION.
B. INSTALL THE WORK IN ACCORDANCE WITH DRAWINGS, SPECIFICATIONS AND THE STANDARDS AND CODES (LATEST EDITION) THAT APPLY TO THIS WORK. IN THE EVENT OF A CONFLICT, INSTALL WORK IN ACCORDANCE WITH THE MOST STRINGENT CODE REQUIREMENTS DETERMINED BY THE ENGINEER.
C. OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS INCLUDING: BUILDING PERMITS, HEALTH DEPARTMENT PERMITS AND SEWER TAP PERMITS. DELIVER TO ENGINEER CERTIFICATES OF INSPECTION AND APPROVAL ISSUED BY AUTHORITIES.
D. ALL EQUIPMENT AND METHOD SHALL BE INSTALLED AND CONNECTED IN ACCORDANCE WITH THE BEST ENGINEERING PRACTICES AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
E. DISCONNECT, REMOVE AND RE-INSTALL MECHANICAL SERVICES LOCATED ON OR CROSSING THROUGH CONTRACT LIMITS, ABOVE OR BELOW GRADE, OBSTRUCTING CONSTRUCTION OF PROJECT OR CONFLICTING WITH COMPLETED PROJECT OR ANY APPLICABLE CODES.
F. DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY. WORK CALLED FOR BY ONE IS BINDING AS IF CALLED FOR BY BOTH.
G. DRAWINGS ARE DRAWN TO A SMALL SCALE AND ARE DIAGRAMMATIC ONLY. THE DRAWINGS INDICATE SIZE AND GENERAL ARRANGEMENT OF EQUIPMENT. DO NOT SCALE DRAWINGS FOR EXACT LOCATIONS. FIELD MEASUREMENTS TAKE PRECEDENCE.
H. PROVIDE NECESSARY OFFSETS, ELBOWS AND FITTINGS AS REQUIRED TO AVOID CONFLICT WITH EQUIPMENT OF OTHER DIVISIONS AND TO OBTAIN PROPER HEADROOM AND CLEAR PASSAGEWAYS. THIS SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
I. WORK UNDER THIS DIVISION SHALL BE FIRST CLASS WITH EMPHASIS ON NEATNESS AND WORKMANSHIP. INSTALL WORK USING COMPETENT MECHANICS, UNDER SUPERVISION OF FOREMAN, ALL DULY CERTIFIED BY LOCAL AUTHORITIES.
J. INSTALLATION SUBJECT TO ENGINEER'SOBSERVATION, FINAL APPROVAL, AND ACCEPTANCE. ENGINEER MAY REJECT UNSUITABLE WORK.
K. ALL MATERIALS SHALL BE NEW. ALL MATERIALS AND EQUIPMENT FOR WHICH A UL STANDARD, AN AGA APPROVAL, AN AWWA STANDARD, FM LISTING OR ASME REQUIREMENTS IS ESTABLISHED, SHALL BE SO APPROVED AND LABELED OR STAMPED.

L. THE DRAWINGS ARE BASED ON THE USE OF PRODUCTS SPECIFIED AND LISTED FIRST. IF ANY REVISION IN PIPING, CONDUIT WORK, FOUNDATIONS, ANCHOR BOLTS, CONNECTIONS, ETC., IS REQUIRED BY OTHER NAMED PRODUCTS OR APPROVED SUBSTITUTIONS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE SUCH REVISIONS AT NO ADDITIONAL EXPENSE TO THE OWNER.
M. SUBMIT SIX (6) ORIGINAL COPIES OF COMPLETE SHOP DRAWINGS FOR ALL MATERIALS AND EQUIPMENT FURNISHED UNDER DIVISION 15 OF SPECIFICATIONS TO ENGINEER FOR REVIEW. SHOP DRAWINGS SHALL BEAR THE STAMP OF APPROVAL OF THE CONTRACTOR AS EVIDENCE THAT THE DRAWINGS HAVE BEEN CHECKED BY HIM. DRAWING SUBMITTED WITHOUT THIS STAMP OF APPROVAL WILL NOT BE CONSIDERED AND WILL BE RETURNED FOR PROPER RESUBMISSION.
N. REVIEW OF SHOP DRAWINGS DOES NOT RELIEVE CONTRACTOR OF RESPONSIBILITY FOR ERRORS AND OMISSIONS IN SHOP DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS AND SIZES OF EQUIPMENT. INFORM ENGINEER IN WRITING OF EQUIPMENT DIFFERING FROM THAT SHOWN.
O. PROVIDE MAINTENANCE AND OPERATING MANUALS BOUND IN 8-1/2" X 11" HARDBACK, THREE-POST BINDERS. MANUALS SHALL CONTAIN WRITTEN INSTRUCTIONS FOR EACH SYSTEM, SHOP DRAWINGS, SCHEMATIC DRAWINGS, EQUIPMENT CATALOG CUTS, MANUFACTURER'S INSTRUCTIONS, MANUFACTURERS WARRANTIES, AND VALVE TAG LIST.
P. PROVIDE AS-BUILT PRINTS AT THE COMPLETION OF JOB. KEEP ONE SET OF PRINTS ON JOB AND RECORD DAY TO DAY CHANGES TO CONTRACT DRAWINGS WITH RED PENCIL. INDICATE ACTUAL LOCATION OF PIPING, DUCTWORK, VALVES, DAMPERS, AND EQUIPMENT. TURN OVER PRINTS TO ENGINEER AT FINAL OBSERVATION.
Q. FURNISH ENGINEER WRITTEN WARRANTY, STATING THAT IF WORKMANSHIP AND/OR MATERIALS EXECUTED UNDER THIS DIVISION IS PROVEN DEFECTIVE WITHIN ONE (1) YEAR AFTER FINAL ACCEPTANCE, SUCH DEFECTS AND OTHER WORK DAMAGED WILL BE REPAIRED AND/OR REPLACED.

SECTION 15050 - BASIC MATERIALS AND METHODS

A. CONCRETE HOUSEKEEPING PADS:
   1. PROVIDE CONCRETE HOUSEKEEPING PADS UNDER ALL FLOOR MOUNTED EQUIPMENT, PIPE SUPPORT AND DUCT SUPPORTS AND WHERE INDICATED. CONCRETE SHALL BE 3000 PSI AT 28 DAYS MINIMUM.
   2. PADS SHALL BE DOWELED TO FLOOR WITH NOT LESS THAN 4 NO. 4 BARS GROUTED IN PLACE. ANCHOR BOLTS FOR EQUIPMENT SHALL BE POURED INTEGRAL WITH THE PAD. PADS SHALL BE REINFORCED WITH AT LEAST ONE NO. 4 BAR (STIRRUPS). PADS SHALL HAVE CHAMFERED EDGES AND A BROOM FINISH.
   3. HOUSEKEEPING PADS SHALL BE NOT LESS THAN 3-1/2 IN. THICK, SIZED AT LEAST 8 IN. LARGER THAN THE EQUIPMENT.
B. ACCESS PANELS:
   1. ACCESS PANELS SHALL HAVE WELDED STEEL FRAME, ONE PIECE DOORS, AND SELF LATCHING DOOR LOCKS. LOCKS SHALL BE SCREW DRIVER OPERATED WITH CASE HARDENED STEEL CAM. PANELS SHALL BE MILCOR, CESCO, KARP OR EQUAL.
   2. PROVIDE ACCESS PANELS IN WALLS AND CEILINGS AS NEEDED TO ALLOW ACCESS TO VALVES, EQUIPMENT, SHOCK ABSORBERS, TRAP PRIMERS, ETC. AND WHERE NOTED.
C. FIRESTOPPING AND SOUNDSTOPPING:
   1. PENETRATIONS THROUGH FLOORS AND FIRE RESISTANT WALLS SHALL BE SEALED TO THE RATED FIRE RESISTANCE EQUAL TO THE WALL. INSTALLATION SHALL BE DONE BY A QUALIFIED INSTALLER, APPROVED BY THE MANUFACTURER.
   2. IN AN EXISTING BUILDING ALL PENETRATIONS THROUGH FLOORS AND FIRE RESISTANT WALLS SHALL BE SEALED AT THE END OF EACH WORKING DAY. THESE CLOSURES SHALL HAVE AN EQUAL FIRE RESISTANCE RATING TO THE FLOOR OR WALL.
   3. PROVIDE SOUND PROOFING THROUGH NON-RATED WALLS.
D. PIPING SEALS:
   1. PROVIDE MODULAR, RESILIENT SEALS AROUND PIPES PENETRATING ALL EXTERIOR WALLS, AND FLOORS BELOW GRADE. PIPING SEALS SHALL BE THUNDERLINE CORP. "LINK SEAL" LS SERIES.
E. CUTTING AND PATCHING:
   1. CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING. CUT WALLS, FLOORS, CEILINGS, PARTITIONS, ETC., REQUIRED FOR THE INSTALLATION OF THIS WORK IN A NEAT AND CAREFUL MANNER. CORE DRILL FOR PIPE SLEEVES AND OTHER OPENINGS THROUGH FLOORS AND WALLS. SAWCUT LARGER OPENINGS. CUTTING SHALL BE KEPT TO A MINIMUM.
   2. REPLACE OR REPAIR DUCTWORK, CONDUIT, PIPING, ETC., THAT IS CUT. PATCH AROUND OPENING CUT BY THIS CONTRACTOR OR PROVIDED BY OTHERS FOR HIM. PATCHING SHALL BE DONE BY AN APPROVED QUALIFIED CONTRACTOR, BUT SHALL BE PAID FOR BY THIS CONTRACTOR. FINISHED PATCHING SHALL RETAIN FIRE AND SMOKE RATINGS OF THE ASSEMBLY AND SHALL MATCH SURROUNDING FINISH.
F. ANCHORS:
   1. MOUNT ALL EQUIPMENT, BRACKETS, HANGERS, ANCHORS, ETC. TO SAFELY RESIST THE VIBRATION OR THRUST FORCES AND SUPPORT THE UNIT'S WEIGHT.
   2. FLOOR MOUNTED ROTATING OR VIBRATING EQUIPMENT SHALL BE ANCHORED TO THE FLOOR USING GROUTED-IN-PLACE OR CAST-IN-PLACE ANCHOR BOLTS WITH THREE INCH HOOK AND SLEEVE. ANCHOR BOLTS SHALL BE OF THE SIZE RECOMMENDED BY THE MANUFACTURER.
   3. FLOOR MOUNTED STATIC ITEMS, WALL AND CEILING MOUNTED EQUIPMENT BRACKET AND HANGERS SHALL BE INSTALLED USING DRILLED ANCHORS. ANCHORS SHALL BE PHILLIPS DRILL COMPANY "RED HEAD" OR MULTI-SET II. SIZE ANCHORS FOR FOUR TIMES THE APPLIED LOAD. BOLTS USED OUTDOORS OR IN A WET ENVIRONMENT SHALL BE HOT DIP GALVANIZED.
G. PIPE IDENTIFICATION:
   1. IDENTIFICATION SHALL BE IN ACCORDANCE WITH ANSI-A13.1. PIPE MARKERS SHALL BE SETON'S WEATHER-CODE OR EQUAL.
   2. PROVIDE PIPE MARKERS AND DIRECTIONAL ARROWS ON PIPES AT BOTH SIDES OF PARTITIONS AND FLOORS SLABS, AT BRANCH LINE TAKE-OFFS, AT VALVES, AT INTERMEDIATE INTERVALS NOT IN EXCESS OF 20 FT. AND AT CONNECTIONS TO EQUIPMENT.
   3. TAPE COLOR BAND IDENTIFYING MARKERS AND ARROWS ON EACH PIPE, BOTH INSULATED AND BARE PIPES. PIPE MARKERS AND ARROWS SHALL BE LOCATED WHERE READILY VISIBLE AND ON LOWER QUADRANTS OF OVERHEAD PIPES.
H. VALVE TAG AND CHART:
   1. VALVE TAGS SHALL BE SETON M4506, BLACK FILLED LETTERS WITH BRASS JACK CHAIN. ONE VALVE NUMBER SHALL BE STAMPED ON EACH TAG. IDENTIFY EACH VALVE TAG FOR THE UTILITY IT SERVES, SUCH AS "CW" FOR COLD WATER, HW FOR HOT WATER, ETC. VALVE CHARTS SHALL BE SETON. ATTACH A NUMBERED VALVE TAG TO EACH VALVE.
   2. PROVIDE A TYPE WRITTEN CHART IN FRAME UNDER GLASS COVER, GIVING THE FULL LIST OF ALL VALVES INSTALLED UNDER THIS CONTRACT. CHART SHALL LIST VALVE NUMBER, TYPE OF UTILITY, AND LOCATION. MOUNT CHART WHERE DIRECTED BY OWNER. PROVIDE ONE ADDITIONAL COPY TO OWNER.
I. EQUIPMENT IDENTIFICATION:
   1. IDENTIFY EACH PIECE OF EQUIPMENT WITH A 1/8 INCH THICK ENGRAVED MELAMINE PLASTIC LAMINATE NAMEPLATE. LETTERS SHALL BE 1/2 INCH HIGH STANDARD STYLE. NAMES, ABBREVIATIONS, AND NUMBERING SHALL AGREE WITH THE CORRESPONDING EQUIPMENT DESIGNATIONS SHOWN ON THE DRAWINGS. USE BLACK LETTERS CUT IN A WHITE BACKGROUND FOR ALL EQUIPMENT ON STANDARD ELECTRICAL POWER
   2. FASTEN NAMEPLATES TO EQUIPMENT IN A CONSPICUOUS LOCATION USING SELF-TAPPING STAINLESS STEEL SCREWS, EXCEPT USE CONTACT EPOXY ADHESIVE WHERE SCREWS CANNOT OR SHOULD NOT PENETRATE SUBSTRATE.
J. PIPE SLEEVES:
   1. PROVIDE PIPE SLEEVES WHERE PIPES PASS THROUGH FLOORS AND WALLS ABOVE OR BELOW CEILINGS. PROVIDE PIPE SLEEVES IN NEW WALLS AND FLOORS AS THE WORK PROGRESSES. PROVIDE SPLIT PIPE SLEEVES IN NEW WALLS BUILT UP AROUND EXISTING PIPES. TACK WELD SPLIT SLEEVES TOGETHER.
   2. SIZE PIPE SLEEVES TO ALLOW CONTINUOUS INSULATION, BUT NOT LESS THAN TWO PIPE SIZES LARGER THAN PIPE. SLEEVES IN WALLS SHALL BE FLUSH WITH WALL, SLEEVES IN FLOORS SHALL EXTEND 3/4 INCHES ABOVE FLOOR AND BE FLUSH WITH STRUCTURE BELOW.
   3. SLEEVES IN CONCRETE WALLS, FLOORS OR MASONRY SHALL BE SCH 40 STEEL PIPE, MACHINE CUT. SLEEVES IN GYPSUM BOARD OR PLASTER WALLS SHALL BE 14 GAUGE, ROLLED GALVANIZED SHEET METAL TACK WELDED ON THE LONGITUDINAL SEAM.
   4. PROVIDE PLATES AROUND PIPES EXTENDING INTO EXPOSED AREAS WHERE THEY PASS THROUGH WALLS, FLOORS AND CEILINGS. SIZE PLATES TO COMPLETELY COVER PIPE SLEEVES. PLATES SHALL BE BEATON AND CADWELL, KEENEY OR GRINNELL, NICKEL PLATED STEEL, SPLIT PLATES WITH SET SCREW. CONCRETE FLOOR PLATE SHALL BE GRINNELL FIGURE 400.
K. FLASHING:
   1. PROVIDE FLASHING AT PIPING AND DUCT PENETRATIONS THROUGH ROOF AND ROOF MOUNTED STRUCTURES FURNISHED UNDER THIS DIVISION. FLASH IN ACCORDANCE WITH ROOFING MANUFACTURERS DETAILS. FLASHING MATERIALS SHALL BE IN ACCORDANCE WITH THE ROOFING MANUFACTURERS SYSTEM.
   2. PROVIDE FLASHING AT PIPES PASSING THROUGH FLOORS WITH WATERPROOF MEMBRANE. FLASHING SHALL BE IN ACCORDANCE WITH WATERPROOFING MANUFACTURER'S DETAILS.

SECTION 15260 - HVAC INSULATION

A. GENERAL:
   1. ALL INSULATION, JACKETING, AND ADHESIVE SHALL HAVE COMPOSITE SURFACE BURNING CHARACTERISTIC RATING AS TESTED BY ASTM E 84, UL 723, OR NFPA 255 NOT EXCEEDING A FLAME SPREAD OF 25 OR SMOKE DEVELOPED OF 50.
   2. SUBMITTALS SHALL USE PAGES FROM MIDWEST INSULATION CONTRACTORS ASSOCIATION - ACOMMERCIAL AND INDUSTRIAL INSULATION STANDARDS@ FOR DEFINING HOW INSULATION MATERIALS WILL BE APPLIED.
   3. ALL PIPE OR DUCT INSULATION SHALL BE CONTINUOUS THROUGH WALLS, CEILING OR FLOOR OPENINGS, OR SLEEVES; EXCEPT WHERE FIRESTOP OR FIRESAFING MATERIALS ARE REQUIRED.
   4. INSULATE ITEMS MOUNTED IN DUCTWORK WITH THE SAME THICKNESS OF INSULATION AS SPECIFIED FOR DUCTWORK. INCLUDING AIR MEASURING STATIONS, SMOKE DAMPERS, AND AUTOMATIC DAMPERS.
   5. REPAIR INSULATION DAMAGED BY WORK UNDER THIS CONTRACT TO MATCH EXISTING WORK OR REPLACE DAMAGED PORTION WITH INSULATION SPECIFIED FOR NEW WORK.
B. ELASTOMERIC CLOSED CELL INSULATION:
   1. INSULATION SHALL BE RUBATEX OR ARMSTRONG. SECURE INSULATION WITH CONTACT ADHESIVE IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. EXPOSED OR EXTERIOR INSTALLATIONS SHALL BE PAINTED WITH TWO COATS OF WATER BASE LATEX ENAMEL.
   2. PROVIDE 1 IN. THICK INSULATION ON DX REFRIGERANT PIPING, COOLING COIL CONDENSATE PIPING, CHILLED WATER RUN-OUTS TO TERMINAL DEVICES, COVERS AND CAPS FOR ALL VALVE STEMS AND OPERATORS, GAUGE COCKS, THERMOMETER WELLS AND OTHER APPURTENANCES SUBJECT TO SWEATING.
C. CONCEALED DUCTWORK:
   1. DUCT WRAP SHALL BE 2 IN. THICK, 1.0 PCF WITH ALUMINUM OR FRK FACING, HAVING A MAXIMUM VAPOR TRANSMISSION OF .02 PERMS. MINIMUM INSTALLED "R" VALUE SHALL BE 5.6 WITH 25% COMPRESSION. INSULATION SHALL BE 250 DEG. F RATED AS MANUFACTURED BY OWENS CORNING, MANVILLE, KNAUF, OR CERTAINTEED.
   2. APPLY JACKETED DUCTWRAP TO ALL CONCEALED DUCTWORK PROVIDING CONDITIONED AIR, OR OUTSIDE AIR. ONLY INSULATE RETURN DUCTWORK IN NON-CONDITIONED SPACES AND IN CEILING SPACES BELOW A ROOF. PULL INSULATION SNUG, BUT DO NOT COMPRESS INSULATION MORE THAN 1/4 INCH.
   3. SECURE DUCTWRAP INSULATION TO DUCTWORK USING ADHESIVE. SECURE INSULATION ON BOTTOM ON SIDES OF HORIZONTAL DUCTWORK AND ALL SIDES OF VERTICAL DUCTWORK WITH INSULPINS WELDED TO DUCT ON 12 TO 18 INCH CENTERS AND WITH CLIPS SLIPPED OVER THE PINS. APPLY CLIPS WITHOUT COMPRESSING INSULATION. MAKE JOINTS BY LAPPING THE FACING A MINIMUM OF 2 INCH AND STAPLING WITH T-5 FLARED STAPLES. VAPOR - SEAL WITH CHILDERS CP-30 LOW ODOR AT ALL STAPLES, CLIP LOCATIONS AND OTHER PENETRATIONS. SEAL JOINTS WITH 3 INCH WIDE FSK TAPE.
   4. FOR DUCTWORK INSIDE THERMAL ENVELOPE, INSULATION SHALL BE 2 IN. THICK. FOR DUCTWORK OUTSIDE THE THERMAL ENVELOPE, ALL DUCTWORK EXCEPT EXHAUST SHALL BE 4 IN. THICK (2 LAYERS).
D. EXPOSED DUCTWORK:
   1. INSULATION BOARD SHALL BE 2 IN. THICK 3 PCF WITH FRK FACING. MINIMUM INSTALLED "R" VALUE 6. INSULATION SHALL BE 250 DEG. F RATED AS MANUFACTURED BY OWENS CORNING, MANVILLE, KNAUF, OR CERTAINTEED.
   2. APPLY 2 IN. THICK INSULATION BOARD WITH FRK FACING TO ALL EXPOSED DUCTWORK PROVIDING CONDITIONED AIR, OR OUTSIDE AIR. INSULATE RETURN DUCTWORK IN NON-CONDITIONED SPACES.
   3. SECURE INSULATION WITH INSULPINS (ALL SURFACES) WELDED TO DUCT ON 12 TO 18 IN. CENTERS AND WITH CLIPS SLIPPED OVER PINS. SEAMS AND JOINTS SHALL BE VAPOR SEALED WITH 3 IN. WIDE FSK TAPE. CORNERS AND EDGES OF DUCTWORK SHALL BE REINFORCED WITH ROLL-ON CORNER BEAD. SEAL ALL BREAK AND PUNCTURES WITH VAPOR BARRIER SEALANT AND FSK TAPE.
E. PIPING FINISHES:
   1. METAL JACKETING SHALL BE, SMOOTH .016 IN. THICK, TYPE T 3003 ALUMINUM WITH LAMINATED MOISTURE BARRIER. JACKETING SHALL BE CHILDERS, ALUMINUM ROLL JACKETING WITH POLYKRAFT MOISTURE BARRIER. COVER THE FOLLOWING INSULATED SYSTEMS WITH METAL JACKETING: PIPING INSTALLED OUTDOORS. METAL FITTING COVERS SHALL BE TWO PIECE ALUMINUM. COVERS SHALL BE ELL-JAC.
   2. CONCEALED PIPING FINISH COVERING SHALL BE THE ALL SERVICE JACKET. FITTINGS SHALL BE COVERED BY WRAPPING THE FITTING WITH FIBER REINFORCED TAPE, WITH A 5 PERCENT OVERLAP. FITTING COVERS SHALL BE ONE PIECE 20 MIL PVC. COVERS SHALL BE CEEL-TITE 550 PVC-UVR BY CEEL-CO OR EQUALS.
A. DUCTWORK FINISHES:
INSULATED DUCTWORK INSTALLED OUTDOORS, INSULATED DUCTWORK WITHIN 8 FT. OF THE FINISHED FLOOR IN A MECHANICAL ROOM SHALL BE COVERED WITH 30 GAUGE GALVANIZED STEEL. COVERING SHALL BE HEMMED, AND FLANGED, SECURE WITH SELF TAPPING SCREWS ON EIGHT INCH CENTERS. DO NOT PUNCTURE VAPOR BARRIER

SECTION 15535 - REFRIGERANT PIPING SYSTEMS

A. REFRIGERANT PIPING SHALL BE TYPE L, HARD DRAWN COPPER TUBING CONFORMING TO ASTM SPECIFICATION B-280, CLEANED AND CAPPED AND MARKED "ACR". FITTINGS FOR REFRIGERANT LINES SHALL BE AS WROUGHT COPPER OR FORGED BRASS CONFORMING TO ANSI/ASME STANDARD B16.22. JOINTS IN REFRIGERANT LINES SHALL BE BRAZED IN ACCORDANCE WITH ANSI B9.1. KEEP REFRIGERATION PIPING SEALED UNTIL IT IS USED. CAP OPEN ENDS OF INSTALLED PIPING UNTIL READY FOR FINAL CONNECTIONS.
B. THE REFRIGERATION SYSTEM PIPING AND ACCESSORIES SHALL BE INSTALLED IN ACCORDANCE WITH THE SAFETY CODE FOR MECHANICAL REFRIGERATION ANSI/ASHRAE 15-92 AND THE REFRIGERATION PIPING CODE ANSI/ASME B31.5. THE REFRIGERANT TUBE SIZES, AND INSTALLATION OF TUBING SHALL BE IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
C. REFRIGERANT SUCTION LINE SIZE SHALL LIMIT THE TEMPERATURE RISE TO TWO DEGREES F AT FULL LOAD AND HOLD THE REFRIGERANT GAS VELOCITY TO NOT LESS THAN 500 FT. PER MIN. (FPM) IN THE HORIZONTAL NOR LESS THAN 1000 FPM IN THE VERTICAL AT MINIMUM LOAD. REFRIGERANT LIQUID LINE SIZE SHALL LIMIT THE PRESSURE DROP BETWEEN 4 AND 6 PSI AT FULL LOAD.
D. PITCH HOT GAS LINES AND SUCTION LINES APPROXIMATELY 1/8 INCH PER 10 FT. HOT GAS LINES AND SUCTION LINES EXCEEDING 30 FT. VERTICAL LIFT SHALL BE TRAPPED EVERY 20 FT. VERTICAL REFRIGERANT LINES SHALL BE RUN PLUMB, HORIZONTAL LINES SHALL RUN PARALLEL WITH BUILDING WALLS. REFRIGERANT LINES SHALL NOT CONTACT BUILDING STRUCTURE. ISOLATE PIPING WITH RESILIENT LINER IN PIPE SUPPORT OR ELASTOMERIC INSULATION.
E. TEST FOR LEAKS WITH AN ELECTRONIC LEAK DETECTOR. REPAIR LEAKS, REFILL, REPRESSURIZE, AND RETEST. FOLLOW STANDARD CHARGING AND DEHYDRATION PROCEDURES. CHARGE THROUGH THE SYSTEM FILTER-DRIER. CHANGE FILTER DRIERS AFTER 40 HOURS OF OPERATION.
F. PROVIDE A LINE SIZE FILTER-DRIER IN EACH LIQUID REFRIGERANT LINE BETWEEN THE CONDENSER AND THE EXPANSION VALVE. FILTER-DRIER SHALL BE A HENRY VALVE CO., SPORLAN OR ALCO.
G. SERVICE VALVES SHALL BE BACK SEATING TYPE, STEEL OR IRON BODY. PROVIDE SERVICE VALVES AT CONDENSING UNIT. SERVICE VALVES SHALL BE LINES SIZE. VALVES SHALL BE HENRY VALVE CO., COMPRESSOR VALVES, SPORLAN OR ALCO.
H. PROVIDE ISOLATION VALVES AROUND THE FILTER-DRIER TO PERMIT SERVICING THE DRIER WITHOUT LOSS OF REFRIGERANT. ISOLATION VALVES SHALL BE HENRY VALVE CO., 900 SERIES BALL VALVES, SPORLAN AND ALCO ARE APPROVED EQUAL.
I. CHARGING VALVE SHALL BE INSTALLED IN EACH LIQUID REFRIGERANT LINE BETWEEN THE CONDENSER AND THE FILTER DRIER. CHARGING VALVE SHALL BE A HENRY VALVE CO. TYPE 927 OR APPROVED EQUAL. SPORLAN AND ALCO ARE APPROVED EQUAL.

J. SIGHT GLASS SHALL BE INSTALLED IN EACH LIQUID REFRIGERANT LINE AT THE EVAPORATOR COIL. SIGHT GLASS SHALL BE HENRY VALVE CO. MI 31 SERIES DOUBLE PORT STYLE WITH EXTENDED ENDS FOR SOLDERING FOR LINES 5/8 INCH OD OR LARGER. USE MI 30 SERIES SINGLE PORT SOLDERING FOR LINES 5/8 INCH OD OR LARGER. USE MI 30 SERIES SINGLE PORT FOR LINES 1/2 INCH OD AND SMALLER. SPORLAN AND ALCO ARE APPROVED EQUAL.
K. PROVIDE BALANCED EXTERNALLY EQUALIZED THERMOSTATIC EXPANSION VALVE. DISTRIBUTORS SHALL BE MATCHED WITH THERMOSTATIC EXPANSION VALVES AND DIRECT EXPANSION COIL FOR PROPER PERFORMANCE. THERMOSTATIC EXPANSION VALVE (TXV) SHALL BE BALANCED EXTERNALLY EQUALIZED TYPE. DISTRIBUTIONS SHALL BE MATCHED WITH THERMOSTATIC EXPANSION VALVES AND DIRECT EXPANSION COIL FOR PROPER PERFORMANCE. DISTRIBUTORS SHALL BE ALCO OR APPROVED EQUAL. LOCATE BULB IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. CONNECT THE EQUALIZING LINE TO THE TXV DOWN STREAM OF THE BULB. PROVIDE TRAPPED DOUBLE SUCTION RISERS ON SYSTEMS WITH UNLOADING CAPABILITY, WHEN REQUIRED FOR PROPER OIL RETURN.
L. PROVIDE FLEXIBLE CONNECTORS ON LIQUID LINE, AND SUCTION LINE AT THE CONDENSING UNIT. FLEXIBLE CONNECTORS SHALL BE BRAIDED BRONZE COVERING ON A BRONZE HOSE. END CONNECTORS SHALL BE FEMALE COPPER TUBE TYPE. UNITS SHALL BE RATED NOT LESS THAN 270 PSI AT 250 DEGREES F. UNITS SHALL BE SOUTHEASTERN HOSE, INC., SUPERIOR OR ANACONDA.

SECTION 15620 - DIRECT VENT GAS-FIRED FURNACES

A. GAS-FIRED FURNACES SHALL BE COMPLETELY FACTORY ASSEMBLED INCLUDING COIL, CONDENSATE DRAIN PAN, FURNACE SECTION, FAN MOTOR(S), FILTERS AND CONTROLS IN AN INSULATED CASING THAT CAN BE APPLIED IN EITHER VERTICAL OR HORIZONTAL CONFIGURATION. UNITS SHALL BE RATED AND TESTED IN ACCORDANCE WITH ARI STANDARD 210. UNITS SHALL BE UL LISTED AND LABELED IN ACCORDANCE WITH UL 465 AND 559 FOR INDOOR BLOWER COIL UNITS AND SHALL BE AGA CERTIFIED.

B. UNIT CASING SHALL BE CONSTRUCTED OF ZINC COATED, MINIMUM 20 GAUGE, GALVANIZED STEEL. EXTERIOR SURFACES SHALL BE FINISHED WITH A WEATHER-RESISTANT BAKED ENAMEL FINISH. CASING SHALL BE COMPLETELY INSULATED WITH FIRE-RETARDANT, PERMANENT, ODORLESS GLASS FIBER MATERIAL. KNOCKOUTS SHALL BE PROVIDED FOR UNIT ELECTRIC POWER AND REFRIGERANT PIPING CONNECTIONS. CAPTIVE SCREWS SHALL BE STANDARD ON ALL ACCESS PANELS.

C. FURNACE HEAT EXCHANGER SHALL BE SECTIONAL TYPE, FABRICATED OF HEAVY GAUGE ALUMINIZED STEEL. VENTING SHALL BE DIRECT OUTDOORS. BURNERS SHALL BE MULTI-PORT, IN-SHOT TYPE CONSTRUCTED OF ALUMINIZED STEEL. GAS MAIN AND UNIT SHALL BE AGA APPROVED WITH REDUNDANT VALVE. FURNACE PILOT SHALL BE ELECTRONIC IGNITION. HEAT EXCHANGER SECTION SHALL BE INSULATED WITH FOIL FACE INSULATION.

D. EVAPORATOR COIL SHALL CONSIST OF CONFIGURED ALUMINUM FIN SURFACE MECHANICALLY BONDED TO 3/8 INCH INTERNALLY ENHANCED COPPER TUBING. COIL SHALL BE FACTORY PRESSURE AND LEAK TESTED AT 375 PSIG. COIL SHALL BE ARRANGED FOR BLOW-THROUGH AIRFLOW AND PROVIDED WITH CONDENSATE DRAIN PAN CONSTRUCTED OF PVC PLASTIC. EXTERNAL CONNECTIONS SHALL BE PROVIDED ON EITHER SIDE OF THE UNIT.

E. EVAPORATOR FAN SHALL BE FORWARD CURVED, CENTRIFUGAL-TYPE FAN(S) WITH ADJUSTABLE SPEED DIRECT DRIVE MOTOR. THERMAL OVERLOAD PROTECTION SHALL BE STANDARD ON MOTOR. FAN AND MOTOR BEARINGS SHALL BE PERMANENTLY LUBRICATED.

F. MAGNETIC EVAPORATOR FAN CONTACTOR, LOW VOLTAGE TERMINAL STRIP, CHECK VALVE(S), AND SINGLE POINT POWER ENTRY SHALL BE INCLUDED. ALL NECESSARY CONTROLS SHALL BE FACTOR-INSULATED AND WIRED. EVAPORATOR DEFROST CONTROL SHALL BE INCLUDED TO PREVENT COMPRESSOR SLUGGING BY TEMPORARILY INTERRUPTING COMPRESSOR OPERATION WHEN LOW EVAPORATOR COIL TEMPERATURES ARE ENCOUNTERED.

G. INSTALL UNIT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. INSTALL CONDENSATE DRAIN PIPING FROM UNIT TO DRAIN AS INDICATED ON THE DRAWINGS. PROVIDE UNIT WITH NECESSARY VENT PIPING AND CONCENTRIC INTAKE/EXHAUST ACCESSORIES.

H. GAS FIRED FURNACES SHALL BE CARRIER MODEL MXA OR APPROVED EQUAL.

SECTION 15629- UNIT HEATERS - GAS FIRED

A. THIS SPECIFICATION DESCRIBES THE REQUIREMENTS FOR LABOR AND MATERIALS NECESSARY FOR THE INSTALLATION OF GAS FIRED UNIT HEATERS INCLUDED AS PART OF THE BUILDING MECHANICAL SYSTEM.
B. CEILING MOUNTED UNIT HEATER - HORIZONTAL THROW:
   1. PERFORMANCE SHALL BE AS INDICATED ON THE EQUIPMENT SCHEDULE AND PLANS.. UNIT HEATERS SHALL HAVE A.G.A. (AMERICAN GAS ASSOCIATION) DESIGN CERTIFICATION.
   2. CASING: CASINGS SHALL BE A MINIMUM OF 22-GAUGE DIE-FORMED STEEL. ALL CORNERS SHALL BE ROUNDED WITH NO BREAKS. CASING SHALL BE PROVIDED WITH THREADED HANGER CONNECTIONS FOR UNIT SUSPENSION. ALL METAL SURFACES OF THE CASING SHALL BE TREATED TO PREVENT THE FORMATION AND SPREAD OF RUST. HEATERS SHALL BE PAINTED WITH AN ELECTROSTATICALLY APPLIED PAINT FOR OPTIMUM CORROSION PROTECTION. CASING SHALL BE COATED WITH A MINIMUM 2 MIL DRY FILM THICKNESS COATING. COATING SHALL PASS THE 1000 HOUR SALT SPRAY TEST UNDER ASTM 117.
   3. MOTOR: EACH UNIT HEATER SHALL HAVE A SINGLE MOTOR AND PROPELLER. MOTOR SHALL BE TOTALLY ENCLOSED WITH THERMAL OVERLOAD PROTECTION (SINGLE PHASE ONLY). PROPELLER SHALL BE STATICALLY BALANCED AND SHALL BE QUIPPED WITH A SAFETY FAN GUARD. ALL MOTOR WIRING SHALL BE TERMINATED IN AN ELECTRICAL JUNCTION BOX EITHER SUPPLIED WITH THE UNIT HEATER OR AS AN INTEGRAL PART OF THE MOTOR. MOTORS SHALL BE RATED AND TESTED IN ACCORDANCE WITH NEMA STANDARDS. MOTORS SHALL INCLUDE THE MANUFACTURER'S WARRANTY. MOTORS SHALL BE RATED TO OPERATE IN 104 DEGREES F AMBIENT AIR CONTINUOUSLY.
   4. BURNER: BURNER MATERIAL SHALL BE ALUMINIZED STEEL WITH NON-CLOGGING, SLOTTED PORTS AND 409 STAINLESS STEEL SEPARATOR STRIP DESIGNED FOR GOOD LIGHTING CHARACTERISTICS WITHOUT NOISE OF EXTINCTION.
   5. HEAT EXCHANGER: UNIT HEAT EXCHANGER SHALL BE CONSTRUCTED OF 20 GAUGE ALUMINIZED STEEL. HEAT EXCHANGER SHALL BE HELIARC MACHINE-WELDED AND DESIGNED WITH CONTOURED STRESS-FREE TUBES.
   6. CONTROLS (STANDARD): UNIT HEATER SHALL BE EQUIPPED WITH A 24V CONTROL TRANSFORMER, A FACTORY SUPPLIED TERMINAL BOARD FOR CONNECTION OF LOW VOLTAGE THERMOSTAT AND ACCESSORY FIELD WIRING, OVERHEAT CONTROL, 25V AUTOMATIC GAS VALVE, INTERMITTENT PILOT WITH 100% SHUT-OFF, GAS VALVE PRESSURE REGULATOR, AND ELECTRIC FAN TIMED DELAY RELAY. ALL CONTROLS SHALL BE RATED FOR A MAXIMUM INLET PRESSURE OF ½ PSI GAS PRESSURE. THE GAS VALVE AND FAN TIMER SHALL BE ENERGIZED BY THE THERMOSTAT (OR MANUAL SWITCH) UPON CALL FOR HEAT. THE FAN SHALL BE DELAYED FOR APPROXIMATELY 30 SECONDS AFTER MAIN BURNER IGNITION.
   7. THERMOSTAT: SINGLE-STAGE ROOM THERMOSTAT: 1.5 AMP AT 30VAC, 55 TO 95 DEGREES FAHRENHEIT TEMPERATURE RANGE, HEAT ANTICIPATOR 0.18 TO 0.8 AMP RATING, HONEYWELL T822D1008,
C. INSTALLATION: INSTALL UNIT HEATERS LEVEL AND PLUMB IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
   1. SUSPEND UNIT HEATERS FROM STRUCTURE WITH RUBBER-IN-SHEAR VIBRATION ISOLATORS.
   2. INSTALL SHUTOFF VALVE AND UNION ON EACH HEATER.
   3. INSTALL PIPING TO ALLOW SERVICE AND MAINTENANCE.
   4. COORDINATE INSTALLATION OF DISCONNECTS WITH ELECTRICAL CONTRACTOR.
   5. PROVIDE UNIT WITH TYPE B VENT. PROVIDE ROOF THIMBLE AND CAP. TERMINATE VENT 3 FEET ABOVE ROOF.
   6. PAINT VENT TO MATCH ROOF.

SECTION 15671 - AIR COOLED CONDENSING UNITS

A. UNITS SHALL BE ASSEMBLED ON MINIMUM 10 GAUGE STEEL MOUNTING/LIFTING RAILS AND SHALL BE WEATHER PROOFED. UNIT SHALL INCLUDE HERMETIC OR SEMI-HERMETIC RECIPROCATING COMPRESSOR(S), PLATE FIN CONDENSER COIL, FANS AND MOTORS, CONTROLS AND HOLDING CHARGE OF R-22. UNITS SHALL BE UL LISTED, AND RATED IN ACCORDANCE WITH ARI STANDARD 240 AND 270.
B. UNIT CASING SHALL BE CONSTRUCTED OF MINIMUM 18 GAUGE G-210, HEAVY GALVANIZED STEEL. EXTERIOR SURFACES SHALL BE FINISHED WITH A WEATHER-RESISTANT BAKED ENAMEL FINISH. COATING SYSTEM SHALL HAVE BEEN TESTED 500 HOURS IN SALT SPRAY TEST (ASTM B117). UNITS SHALL HAVE REMOVABLE PANELS THAT ALLOW ACCESS TO ALL MAJOR COMPONENTS AND CONTROLS.
C. SINGLE COMPRESSOR UNITS LESS THAN 7-1/2 TONS:
   1. COMPRESSOR SHALL BE HERMETICALLY SEALED AND MOUNTED ON RUBBER VIBRATION ISOLATORS. COMPRESSOR SHALL INCLUDE INTERNAL OVER TEMPERATURE AND PRESSURE PROTECTION, THERMOSTATICALLY CONTROLLED SUMP HEATER, AND INTERNAL SPRING MOUNTS. REFRIGERATION CIRCUIT SHALL INCLUDE FACTORY INSTALLED LIQUID LINE DRIER, LOW PRESSURE SWITCH. LIQUID LINE AND SUCTION LINE SERVICE VALVE WITH GAUGE PORT.
D. CONDENSER SHALL BE INTERNALLY FINNED OR SMOOTH BORE 3/8 INCH COPPER TUBES MECHANICALLY BONDED TO CONFIGURED ALUMINUM PLATE FIN AS STANDARD. COIL SHALL BE FACTORY PRESSURE AND LEAK TESTED TO 375 PSIG AIR PRESSURE. PROVIDE CONDENSER COIL GUARD CONSISTING OF METAL GRILLE WITH PVC COATING.
E. CONDENSER FAN AND MOTOR(S) SHALL HAVE DIRECT-DRIVE, STATICALLY AND DYNAMICALLY BALANCED FAN(S) WITH ALUMINUM BLADES AND ELECTRO-COATED STEEL HUBS. FANS SHALL BE MOUNTED IN DRAW-THROUGH VERTICAL DISCHARGE POSITION. PERMANENTLY LUBRICATED TOTALLY ENCLOSED TYPE MOTORS SHALL BE PROVIDED AND SHALL HAVE BUILT IN CURRENT AND THERMAL OVERLOAD PROTECTION. MOTOR(S) SHALL BE BALL BEARING TYPE.
F. UNITS SHALL BE COMPLETELY FACTORY WIRED WITH NECESSARY CONTROLS AND CONTACTOR WITH PRESSURE LUGS OR TERMINAL BLOCK FOR POWER WIRING. CONTROL WIRING SHALL BE 24-VOLT CONTROL CIRCUIT WHICH INCLUDES FUSING AND CONTROL TRANSFORMER.
G. DEFROST CONTROLS SHALL INCLUDE ELECTRONIC TIME INITIATED, TEMPERATURE TERMINATED DEFROST SYSTEM. TIMED OVERRIDE LIMITS DEFROST CYCLE TO 10 MINUTES.
H. LOW AMBIENT HEAD PRESSURE SHALL BE PROVIDED TO MODULATE THE RPM OF UNIT OUTDOOR FAN MOTOR IN RESPONSE TO OUTDOOR AMBIENT TEMPERATURES AND UNIT HEAD PRESSURE. PROVIDE UNIT COOLING OPERATION TO OUTDOOR TEMPERATURE 0 DEGREES F.
I. PROVIDE ANTI-SHORT-CYCLE TIMER TO PREVENT RAPID ON-OFF COMPRESSOR CYCLING IN LIGHT LOAD CONDITIONS BY NOT ALLOWING COMPRESSOR TO OPERATE FOR 5-7 MINUTES UPON SHUTDOWN. TIMER SHALL CONSIST OF A SOLID STATE TIMING DEVICE, 24-VOLT, 60 CYCLE.
J. WARRANTY:
   1. PROVIDE A WRITTEN WARRANTY AGREEING TO REPLACE COMPONENTS THAT FAIL IN MATERIALS AND WORKMANSHIP WITHIN THE SPECIFIED WARRANTY PERIOD, PROVIDED MANUFACTURER'S WRITTEN INSTRUCTIONS FOR INSTALLATION, OPERATION, AND MAINTENANCE HAVE BEEN FOLLOWED.
   2. WARRANTY PERIOD: MANUFACTURERS STANDARD, BUT NOT LESS THAN FIVE (5) YEARS FROM DATE OF SUBSTANTIAL COMPLETION FOR COMPRESSOR(S) AND ONE (1) YEAR FOR ALL OTHER COMPONENTS.
K. UNITS SHALL BE JCI, CARRIER OR APPROVED EQUAL. INSTALL UNIT IN ACCORDANCE WITH MANUFACTURER=S INSTRUCTIONS.

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No.	Description	Date
IFP-0	Issue for Permit	02/27/2026
IFB-0	Bid Set/AHJ Resub.	04/20/2026

2026
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Mechanical Specifications

Project number	25042
Date	04/20/2026
Drawn by	CA
Checked by	JB

M0.02

Scale	12" = 1'-0"

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SECTION 15870 - POWER VENTILATORS

A. POWER VENTILATORS WHICH ARE SCHEDULED OR REFERRED TO BY MODEL NUMBER OR CATALOGUE NUMBER ARE INTENDED TO INCLUDE ALL MATERIALS COVERED BY SUCH NUMBER. ANY REQUIRED ACCESSORIES FOR THE INSTALLATION OF THE FAN ARE TO BE BY THE SAME MANUFACTURER UNLESS OTHERWISE NOTED.
B. ALL WIRING AND ELECTRICAL COMPONENTS SHALL COMPLY WITH THE NATIONAL ELECTRIC CODES (NEC). ALL MATERIALS SHALL BE UL LISTED. FANS SHALL BE UL 705. FANS SHALL BEAR THE AMCA CERTIFIED RATINGS SEAL FOR SOUND AND AIR PERFORMANCE. FAN ASSEMBLY SHALL BEAR AN ENGRAVED ALUMINUM NAMEPLATE. FANS WHEELS SHALL BE BALANCED IN ACCORDANCE WITH AMCA STANDARD 204-96.
C. EACH UNIT SHALL HAVE A BIRDSCREEN CONSTRUCTED OF GALVANIZED WIRE MESH WITH 2 IN. OPENINGS MOUNTED VERTICALLY IN THE UNIT DISCHARGE. THE BIRDSCREEN SHALL PRODUCE MINIMAL EFFECT ON AIR AND SOUND PERFORMANCE.
D. INSTALL FAN IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. INSTALL FANS WITH CLEARANCES FOR SERVICE AND MAINTENANCE. MAKE FINAL DUCT CONNECTIONS TO FANS WITH FLEXIBLE CONNECTORS.
E. ROOF CURBS SHALL BE CONSTRUCTED USING MINIMUM 14 GAUGE GALVANIZED STEEL WITH FULLY MITERED AND WELDED CORNERS, INTEGRAL BASE PLATES INTERNALLY REINFORCED WITH 1 IN. X L IN. X 1/8 IN. STEEL ANGLE, FACTORY INSULATED WITH L L/2 IN. THICK THREE POUND PER CU. FT. DENSITY FIBERGLASS INSULATION. CURBS SHALL BE FABRICATED WITHOUT CANTS. MINIMUM HEIGHT OF CURB SHALL BE 8 IN. ABOVE FINISHED ROOF. CURBS SHALL BE CONSTRUCTED TO MATCH SLOPE OF ROOF AND PROVIDE A LEVEL TOP SURFACE FOR MOUNTING OF MECHANICAL EQUIPMENT.
F. BACK DRAFT DAMPER SHALL BE 6063T5 EXTRUDED ALUMINUM FRAME, .025 IN THICK FORMED ALUMINUM BLADES, EXTRUDED VINYL EDGE SEALS, SYNTHETIC BEARINGS, MILL FINISH.

G. DOWNBLAST CENTRIFUGAL ROOF EXHAUSTER - BELT DRIVE:

1. FAN SHALL BE SPUN ALUMINUM OF BOLTED AND WELDED CONSTRUCTION UTILIZING CORROSION RESISTANT FASTENERS. THE SPUN ALUMINUM STRUCTURAL COMPONENTS SHALL BE CONSTRUCTED OF MINIMUM 16 GAUGE MARINE ALLOY ALUMINUM, BOLTED TO A RIGID ALUMINUM SUPPORT STRUCTURE. THE ALUMINUM BASE SHALL HAVE CONTINUOUSLY WELDED CURB CAP CORNERS FOR MAXIMUM LEAK PROTECTION. THE DISCHARGE BAFFLE SHALL HAVE A ROLLED BEAD.

2. AN INTEGRAL CONDUIT CHASE SHALL BE PROVIDED THROUGH THE CURB CAP AND INTO THE MOTOR COMPARTMENT TO FACILITATE WIRING CONNECTIONS.

3. FAN WHEEL SHALL BE CENTRIFUGAL BACKWARD INCLINED, CONSTRUCTED OF 100% ALUMINUM, INCLUDING A PRECISION MACHINED CAST ALUMINUM HUB. WHEEL INLET SHALL OVERLAP AN AERODYNAMIC ALUMINUM INLET CONE. MOTOR SHALL BE HEAVY DUTY TYPE WITH PERMANENTLY LUBRICATED SEALED BALL BEARINGS AND FURNISHED AT THE SPECIFIED VOLTAGE, PHASE AND ENCLOSURE.

4. BEARINGS SHALL BE DESIGNED AND INDIVIDUALLY TESTED SPECIFICALLY FOR USE IN AIR HANDLING APPLICATIONS. CONSTRUCTION SHALL BE HEAVY DUTY REGREASABLE BALL TYPE IN A CAST IRON HOUSING SELECTED FOR A MINIMUM L50 LIFE IN EXCESS OF 200,000 HOURS AT MAXIMUM CATALOGED OPERATING SPEED.

5. BEARINGS AND DRIVES SHALL BE MOUNTED ON A MINIMUM 14 GAUGE STEEL ASSEMBLY, ISOLATED FROM THE UNIT STRUCTURE WITH RUBBER VIBRATION ISOLATORS. THESE COMPONENTS SHALL BE ENCLOSED IN A WEATHER TIGHT COMPARTMENT, SEPARATED FROM THE EXHAUST AIRSTREAM. DRIVES SHALL BE PRECISION MACHINED CAST IRON TYPE, KEYED AND SECURELY ATTACHED TO THE WHEEL AND MOTOR SHAFTS. DRIVES SHALL BE SIZED FOR 150% OF THE INSTALLED MOTOR HORSEPOWER. BELTS SHALL BE OIL AND HEAT RESISTANT, NON-STATIC TYPE.

6. FAN SHALL BE MODEL ACE-B AS MANUFACTURED BY LOREN COOK COMPANY. GREENHECK, ACME AND PENN VENTILATOR ARE APPROVED EQUAL.

H. SQUARE INLINE EXHAUSTER - DIRECT DRIVE:

1. THE FAN SHALL BE OF BOLTED AND WELDED CONSTRUCTION UTILIZING CORROSION RESISTANT FASTENERS. HOUSING SHALL BE MINIMUM 18 GAUGE STEEL WITH AIRFLOW STRAIGHTENING VANES, INTEGRAL DUCT FLANGES AND HINGED ACCESS DOOR.

2. FAN WHEEL SHALL BE CENTRIFUGAL BACKWARD INCLINED, CONSTRUCTED OF 100% ALUMINUM, INCLUDING A PRECISION MACHINED CAST ALUMINUM HUB. WHEEL INLET SHALL OVERLAP AN AERODYNAMIC ALUMINUM INLET CONE.

3. MOTOR SHALL BE HEAVY DUTY TYPE WITH PERMANENTLY LUBRICATED SEALED BALL BEARINGS AND FURNISHED AT THE SPECIFIED VOLTAGE, PHASE AND ENCLOSURE.

4. FAN SHALL BE MODEL SQI-D AS MANUFACTURED BY LOREN COOK COMPANY. GREENHECK, ACME AND PENN VENTILATOR ARE APPROVED EQUAL.

I. CEILING MOUNTED EXHAUST FAN - DIRECT DRIVE:

1. GC 100 SERIES: THE FAN WHEEL HOUSING AND INTEGRAL OUTLET DUCT SHALL BE INJECTION MOLDED FROM A SPECIALLY ENGINEERED RESIN EXCEEDING UL REQUIREMENTS FOR SMOKE AND HEAT GENERATION. THE OUTLET DUCT SHALL HAVE PROVISION FOR AN ALUMINUM BACKDRAFT DAMPER WITH CONTINUOUS ALUMINUM HINGE ROD. THE INLET BOX SHALL BE MINIMUM 22 GAUGE GALVANIZED STEEL. MOTOR SHALL BE ISOLATION MOUNTED TO A ONE PIECE GALVANIZED STAMPED STEEL INTEGRAL MOTOR MOUNT/INLET. A FIELD WIRING COMPARTMENT WITH RECEPTACLE SHALL BE STANDARD. TO ACCOMMODATE DIFFERENT CEILING THICKNESS, AN ADJUSTABLE PREPUNCHED MOUNTING BRACKET SHALL BE PROVIDED. A WHITE, NON-YELLOWING, HIGH IMPACT STYRENE INJECTION MOLDED GRILL SHALL BE PROVIDED AS STANDARD. WHEEL SHALL BE CENTRIFUGAL FORWARD CURVED TYPE, INJECTION MOLDED OF POLYPROPYLENE RESIN.

2. MOTOR SHALL BE OPEN DRIP PROOF TYPE WITH PERMANENTLY LUBRICATED SEALED BEARINGS AND INCLUDE IMPEDANCE OR THERMAL OVERLOAD PROTECTION AND DISCONNECT PLUG. MOTOR SHALL BE FURNISHED AT THE SPECIFIED VOLTAGE.

3. FAN SHALL BE MODEL GC AS MANUFACTURED BY LOREN COOK COMPANY. GREENHECK, ACME AND PENN VENTILATOR ARE APPROVED EQUAL.

SECTION 15892 - LOW PRESSURE DUCTWORK

A. GENERAL
   1. DUCT SYSTEM SHALL BE FABRICATED WITH SHEET METAL THICKNESSES AND REINFORCED IN ACCORDANCE WITH SMACNA, AS SHOWN ON THE DRAWINGS AND AS DESCRIBED HEREIN. DUCTS 18 INCHES AND LARGER ON ANY SIDE SHALL BE STIFFENED BY BEADING ON NOT TO EXCEED 12 INCH CENTERS, UNLESS NOTED OTHERWISE THE MINIMUM PRESSURE/VELOCITY CLASSIFICATION SHALL BE 2 INCH W.G. PLUS OR MINUS, AT 2500 FT. PER MINUTE, DUCT SEAL CLASS "A". DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS.
   2. DUCTWORK HANGERS SHALL BE SUPPORTED BY FASTENERS ATTACHED TO STRUCTURAL STEEL. REPAIR FIRE PROOFING WHICH WAS REMOVED FOR DUCTWORK INSTALLATION. INSTALLATION TO BE DONE BY AN APPROVED QUALIFIED TRADESMAN.
   3. INSTALL IN THE DUCTWORK DEVICES FURNISHED BY THE TEMPERATURE CONTROLS SUB-CONTRACTOR. INSTALL SMOKE DETECTORS IN DUCTWORK FURNISHED BY THE DIVISION 16 CONTRACTOR.
   4. WATER AND OTHER PIPES SHALL NOT BE ALLOWED TO PASS THROUGH AIR RISERS OR DUCTS, UNLESS APPROVED BY THE ENGINEERS, AND WHEN THIS OCCURS, THE SIZE OF SAID DUCT OR RISER SHALL BE PROPORTIONATELY INCREASED, SANITARY WASTE AND VENT PIPING SHALL NOT PENETRATE ANY DUCTWORK.
B. GALVANIZED STEEL DUCTWORK:
   1. GALVANIZED STEEL DUCTWORK SHALL CONFORM TO ASTM A653 (G60). ALL LONGITUDINAL SEAMS SHALL BE GROOVED, DOUBLE OR PITTSBURGH TYPE.
C. DUCTWORK FITTINGS:
   1. FOR RECTANGULAR DUCTWORK, VANES SHALL BE PROVIDED IN ELBOWS WITH 90 DEGREE THROATS AND THROAT RADII LESS THAN 1-1/2 TIMES DUCT WIDTH. VANES SHALL BE LOCATED IN ACCORDANCE WITH ASHRAE STANDARDS. DOUBLE-VANE AIRFOIL-TYPE TURNING VANES SHALL BE PROVIDED FOR ALL SQUARE TURNS.
D. HANGERS AND SUPPORTS:
   1. PROVIDE CONCRETE INSERTS OR STRUCTURAL STEEL FASTENERS APPROPRIATE FOR BUILDING MATERIALS. PROVIDE TRAPEZE AND RISER SUPPORTS AS REQUIRED. SUPPORT MATERIALS SHALL BE THE SAME AS DUCTWORK SUPPORTING.
   2. HANGER, STRAPS AND RODS SHALL WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE" STANDARDS
   3. DUCT ATTACHMENTS: SHEET METAL SCREWS, BLIND RIVETS OR SELF-TAPPING METAL SCREWS; COMPATIBLE WITH DUCT MATERIALS.
E. SEALANT MATERIAL:
   1. SEALANTS SHALL BE SOLVENT OR WATER BASED TYPE U.L. CLASSIFIED MEETING NFPA 90A CLASS 1 WITH ZERO FIRE AND SMOKE DEVELOPMENT RATING. SEALER SHALL BE UNITED SHEET METAL, UNITED DUCT SEALER, OR HARDCAST IRON GRIP NO. 601. TRANSVERSE SEAMS SHALL BE TAPED AND SEALED WITH TWO LAYERS OF UNITED SHEET METAL, UNI-CAST OR CAULKED WITH DUCT SEALER.
F. FLEXIBLE CONNECTORS:
   1. INSTALL FLEXIBLE CONNECTORS AT ALL SUPPLY AND EXHAUST FANS AND OTHER AIR HANDLING UNITS WITH INLET AND OUTLET DUCT OR CASING CONNECTIONS. CONNECTORS SHALL NOT BE PAINTED. CONNECTORS SHALL NOT BE USED AS TRANSITION PIECES BETWEEN FAN AND DUCTWORK.
   2. CONNECTORS SHALL BE NOT LESS THAN 4 INCHES LONG (IN CLEAR) AND PROPERLY ATTACHED TO DUCT AND FAN CONNECTION COLLAR BY 1 X 1/8 INCH DRAW BAND (FABRICATED OF THE SAME MATERIAL AS ADJACENT DUCTWORK) FIRMLY CLAMPED AROUND COLLARS IN SUCH A MANNER AS TO BE AIRTIGHT AND SECURED TO COLLARS WITH SHEET METAL SCREWS.
   3. FLEXIBLE CONNECTORS SHALL BE U.L. LISTED, NEOPRENE COATED HEAVY GLASS FABRIC. FABRIC SHALL BE VENTGLAS, MANUFACTURED BY VENTFABRICS, INC.
G. FLEXIBLE DUCTWORK:
   1. FLEXIBLE DUCTS SHALL BE USED FOR STRAIGHT RUNS OF OR OFFSETS UP TO 45 DEGREES, BUT NOT EXCEEDING 48 INCHES IN LENGTH. THE USE OF FLEXIBLE DUCTS AS ELBOWS WITH MORE THAN A 45 DEGREE BEND WILL NOT BE PERMITTED.
   2. FLEXIBLE DUCT SHALL BE UL LISTED AND LABELED AS CLASS 1, AIR DUCT CONNECTOR, IN ACCORDANCE WITH U.L. STANDARD 181 AND SHALL MEET THE REQUIREMENTS OF THE LATEST NFPA BULLETIN, NO. 90A AND NO. 90B FOR FLAME SPREAD AND SMOKE DEVELOPMENT RATING.
   3. FLEXIBLE DUCT SHALL BE RATED FOR A MAXIMUM PRESSURE OF 6 INCH POSITIVE AND 3/4 INCH NEGATIVE AND 4000 FPM MAXIMUM VELOCITY. AIR DUCT SHALL CONSIST OF: CPE LINER, COATED SPRING STEEL WIRE HELIX, FIBERGLASS INSULATING BLANKET, FIBERGLASS SCRIM AND REINFORCED ALUMINUM VAPOR BARRIER. THERMAL CONDUCTANCE SHALL BE .23 OR LESS.
   4. DUCT SHALL BE FLEXMASTER TYPE 8M OR PRIOR APPROVED EQUAL.
A. VOLUME DAMPERS:
   1. SINGLE BLADE DAMPERS SHALL BE CONSTRUCTED OF 22 GAUGE GALVANIZED STEEL (BLADE AND FRAME). SINGLE BLADE DAMPERS SHALL BE LIMITED TO A 12 INCH HIGH BLADE. BLADE EDGES SHALL BE CRIMPED OR REINFORCED. DAMPER LEVERS SHALL INDICATE POSITIVELY THE OPEN AND CLOSED POSITION. END BEARINGS SHALL BE MOLDED SYNTHETIC. DAMPERS SHALL BE RUSKIN MD25 OR APPROVED EQUAL (RUSKIN MDRS25 FOR ROUND DUCTS).
   2. MULTIBLADE DAMPERS SHALL BE CONSTRUCTED OF SHEET METAL THE SAME MATERIAL AS THE ADJACENT DUCTWORK. DAMPER FRAME SHALL BE NOT LESS THAN 16 GA., DAMPER BLADES NOT WIDER THAN 6 INCHES CRIMPED OR REINFORCED. DAMPER LEVERS SHALL INDICATE POSITIVELY THE OPEN AND CLOSED POSITION. END BEARINGS SHALL BE MOLDED SYNTHETIC. DAMPER SHALL BE RUSKIN MD35 OR APPROVED EQUAL.
B. FIRE DAMPERS:
   1. FIRE DAMPERS SHALL BE UNDERWRITERS APPROVED AND LABELED (UL555). DAMPERS SHALL BE FABRICATED OF GALVANIZED STEEL AND SHALL BE OF SUCH A DESIGN AND LENGTH AS TO FUNCTION AS A WALL MOUNTING SLEEVE, WHICH SHALL BE A PART OF THE FIRE DAMPER. SLEEVES SHALL BE OF WELDED OR BOLTED CONSTRUCTION. CRIMPING OR TABS WILL NOT BE ACCEPTABLE SUBSTITUTES FOR WELDING OR BOLTING.
   2. FIRE DAMPERS SHALL BE RUSKIN DIBD2 SERIES FOR 1 2 HOUR RATING. FIRE DAMPERS SHALL BE RUSKIN DIBD23 SERIES FOR 3 HOUR RATING. INSTALL STYLE A FIRE DAMPERS BEHIND DUCTED GRILLES AND REGISTERS IN RATED WALLS. INSTALL STYLE B OR C FIRE DAMPERS IN DUCTED OPENINGS IN RATED WALLS, AIR BALANCE AND PREFCO ARE APPROVED EQUAL.
C. DAMPER HARDWARE:
   1. ALL HARDWARE SHALL BE SMACNA ACCEPTED. INSULATED DUCTWORK (CONCEALED) - VENTLOK 638 ELEVATED DIAL REGULATOR. INSULATED DUCTWORK (EXPOSED) - VENTLOK 644 - SELF LOCKING REGULATOR. UNINSULATED DUCTWORK - VENTLOK 555 OR 560 QUADRANTS.
D. DUCT ACCESS DOORS:
   1. ACCESS DOORS SHALL BE HINGED, CONSTRUCTED OF THE SAME MATERIAL AS THE DUCTWORK. DOOR EDGES SHALL BE SEALED WITH 3/4 INCH WIDE X 1/8 INCH THICK NEOPRENE SPONGE GASKETING. DOOR HARDWARE SHALL BE VENTLOK #100 LATCHES. ACCESS DOORS ON INSULATED DUCTWORK SHALL BE DOUBLE WALL CONSTRUCTION WITH 1 INCH OF RIGID 3 PCF FIBERGLASS INSULATION.
   2. PROVIDE DUCT ACCESS DOORS AT ALL DUCT MOUNTED DEVICES REQUIRING ADJUSTMENT OR RESETTING. ACCESS DOORS SHALL BE APPROXIMATELY 18 INCHES HIGH BY 24 INCHES WIDE. IN SMALLER DUCTWORK, THE HEIGHT SHALL BE REDUCED TO BE 2 INCHES LESS THAN THAT OF THE DUCTWORK.

SECTION 15906 - TEMPERATURE CONTROLS

A. GENERAL:
   1. FURNISH AND INSTALL AN ELECTRIC SYSTEM OF AUTOMATIC TEMPERATURE CONTROL AS SPECIFIED HEREIN AND AS SHOWN ON THE CONTRACT DRAWINGS AS MANUFACTURED BY HONEYWELL, JOHNSON CONTROLS, INVENSYS, OR APPROVED EQUAL.
   2. EXTRA COSTS INCURRED BY USE OF OTHER THAN BASE BID CONTROL SYSTEM, SUCH AS WIRING, CONTRACT DRAWINGS CHANGES, CHANGES IN DESIGN, ADDED SUPERVISION, ETC., SHALL BE THE RESPONSIBILITY OF THE TEMPERATURE CONTROL SUBCONTRACTOR (TCSC).
   3. SYSTEM DOCUMENTATION SHALL INCLUDE THE FOLLOWING: MANUFACTURER'S DATA SHEETS OF ALL PRODUCTS (ORIGINAL COPIES), COMPLETE DESCRIPTION OF OPERATION OF ALL CONTROL LOOPS, INCLUDING RECOMMENDED SETPOINTS AND RANGES OF ADJUSTMENT; FULLY LABELED ELEMENTARY DIAGRAM (ELECTRICAL LADDER DIAGRAM), AND LISTS OF ALL PROPOSED DEVICES AND EQUIPMENT
B. MOTOR OPERATORS: MOTOR OPERATOR SHALL BE SPRING RETURN TYPE, WHICH RETURNS MOTOR ACTUATOR SHAFT TO ITS FULL NORMAL MECHANICAL TRAVEL UPON POWER FAILURE. DAMPER MOTOR DRIVE MECHANISM WILL INCLUDE HOLDING BRAKE TO KEEP THE RETURN SPRING FROM DRAWING THE ACTUATOR FROM DRIVING TOWARD ITS NORMAL POSITION UNLESS POWER IS INTERRUPTED. SUPPLY AND INSTALL ELECTRIC MOTOR OPERATORS FOR ALL DAMPERS. UNIT SHALL BE HONEYWELL MS8105A SERIES OR APPROVED EQUAL.
C. AUTOMATIC DAMPERS: ALL CONTROL DAMPERS SHALL BE STANDARD PRODUCTS OF DAMPER OR TEMPERATURE CONTROL MANUFACTURERS UNLESS NOTED OTHERWISE. LOCAL FABRICATION OF DAMPERS IS NOT ALLOWED. DAMPERS SHALL BE OPPOSED BLADE TYPE. FURNISH FOR INSTALLATION BY THE MECHANICAL CONTRACTOR ALL MOTOR OPERATED DAMPERS. DAMPERS SHALL BE RUSKIN MODEL CD50. GREENHECK IN AN APPROVED EQUAL.
D. THERMOSTATS:
   1. PROVIDE HVAC THERMOSTAT WITH THE FOLLOWING FEATURES: SEVEN DAY PROGRAMMING, TWO OCCUPIED/TWO UNOCCUPIED PERIODS PER DAY, AUTOMATIC HEAT/COOL CHANGEOVER WITH 2°F MINIMUM DEAD BAND, TWO STAGE HEATING, TWO STAGE COOLING, TOUCHSCREEN DISPLAY, AUXILIARY CONTACT, AND TEMPERATURE OVERRIDE. THERMOSTAT SHALL BE HONEYWELL VISIONPRO 8000 OR EQUAL.
   2. PROVIDE HEATER AND VENTILATION THERMOSTAT WITH THE FOLLOWING FEATURES: SINGLE STAGE CONTROL, ON/OFF/AUTO SWITCHING, AND ADJUSTABLE SETPOINT CONTROL
E. TEMPERATURE CONTROL WIRING:
   1. ALL CONTROL WIRING AND CONDUIT REQUIRED TO COMPLETE THE TEMPERATURE CONTROL SYSTEM SHALL BE PROVIDED BY THE TEMPERATURE CONTROL SUB-CONTRACTOR. ALL WIRING SHALL CONFORM TO STANDARDS AND SPECIFICATIONS OUTLINED IN DIVISION 16. WIRE SIZE SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND NATIONAL ELECTRIC CODE. MINIMUM CONDUIT SHALL BE 1/2 INCH DIAMETER. TCSC SHALL COORDINATE ALL CONTROL POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR PRIOR TO BID.
   2. ELECTRIC CONNECTIONS BETWEEN THE VARIOUS UNIT CONTROL CABINETS SHALL BE MADE BY THE TCSC. ALL WIRING MUST BE TAGGED ON BOTH ENDS WITH PANEL NUMBER AND TERMINAL NUMBER.
   3. THE TCSC IS RESPONSIBLE FOR ALL REQUIRED PROCESS AND ELECTRICAL CONNECTIONS TO ALL EQUIPMENT, CONTROL DEVICES, AND FIELD INSTRUMENTS. TCSC SHALL FURNISH AND INSTALL ALL CONDUITS, RACEWAYS, ETC., REQUIRED. TCSC SHALL FURNISH AND INSTALL ALL CONTROL AND INTERLOCK WIRING. TCSC SHALL FURNISH AND INSTALL ALL REQUIRED AUXILIARY STARTER CONTACTS OR RELAYS, ETC., FOR A COMPLETE ELECTRICAL INTERLOCK AND CONTROL WIRING SYSTEM.
F. INSTALLATION:
   1. THE ENTIRE CONTROL SYSTEM, INCLUDING LOW VOLTAGE WIRING, WITH THE EXCEPTION OF DUCT MOUNTED AUTOMATIC DAMPERS AND SMOKE DETECTORS, SHALL BE INSTALLED BY THE TEMPERATURE CONTROL CONTRACTOR, WHO SHALL MAKE ALL TESTS AND ADJUSTMENTS. ALL CONTROLS SHALL BE FIELD-TESTED AND FIELD-CALIBRATED.
   2. SET POINTS OF ALL CONTROLLING INSTRUMENTS ARE INDICATED AT A SPECIFIC POINT; HOWEVER, ALL SET POINTS SHALL BE ADJUSTABLE UP AND DOWN FROM THE POINT INDICATED.
   3. CONTRACTOR SHALL SUBMIT TENTATIVE LOCATIONS OF ALL CONTROL DEVICES AND COMPONENTS (INCLUDING TEMPERATURE SENSORS) TO THE ARCHITECT FOR WRITTEN APPROVAL PRIOR TO INSTALLATION. CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO LOCATION OF CONTROL DEVICES AND COMPONENTS TO LOCATION OF CONTROL DEVICES AND COMPONENTS. EFFECTS OF DRAFTS, RADIANT HEAT, VIBRATION, ETC ARE TO BE CONSIDERED WHEN INSTALLING CONTROL DEVICES AND COMPONENTS.
   4. PRIOR TO ORDERING FACTORY ASSEMBLED EQUIPMENT WHICH CONTAINS INTEGRAL CONTROL DEVICES AND COMPONENTS, THE CONTRACTOR SHALL OBTAIN A WRITTEN STATEMENT FROM BOTH THE MANUFACTURER AND THE INSTALLING CONTRACTOR THAT THEY HAVE REVIEWED THE APPROPRIATE SUBMITTAL DATA AND ARE AWARE OF THE MAKE, MODEL, TYPE, SIZE, CHARACTERISTICS, ETC. OF THE FACTORY ASSEMBLED CONTROL DEVICES AND COMPONENTS WHICH THEY SHALL BE REQUIRED TO INTERFACE TO AND/OR CONTROL.
   5. ALL CONTROL DEVICES (BOTH FIELD AND PANEL MOUNTED) SHALL BE LABELED TO INDICATE BOTH THEIR CONTROL SYSTEMS DESIGNATION, E.G., RTU-1 THERMOSTAT. UNLESS INDICATED OTHERWISE, ABBREVIATIONS AND ACRONYMS FOR ALL ID TAGS AND PANEL FACEPLATES SHALL BE APPROVED BY THE ENGINEER.
   6. ALL CONTROL DEVICES ARE TO BE MOUNTED IN ACCESSIBLE LOCATIONS. ALL DEVICES EXPOSED TO THE WEATHER SHALL BE HOUSED IN WEATHERPROOF ENCLOSURES.
   7. AT THE COMPLETION OF THE JOB, TCSC SHALL CORRECT HIS DRAWINGS TO INCLUDE ANY CHANGES MADE DURING CONSTRUCTION. TCSC SHALL PROVIDE COLOR-CODED DRAWINGS INDICATED ALL TEMPERATURE ZONES AND EQUIPMENT (3 COPIES).
G. OPERATION TEST AND OWNER'S INSTRUCTION:
   1. AT COMPLETION, TCSC SHALL OPERATE THE SYSTEM FOR A PERIOD OF AT LEAST THREE DAYS OF EIGHT HOURS EACH ON THE NEW SYSTEMS TO DEMONSTRATE FULFILLMENT OF THE REQUIREMENTS OF THE CONTRACT. DURING THIS TIME, ALL ADJUSTMENTS SHALL BE MADE TO THE EQUIPMENT SO THAT IT IS IN FIRST-CLASS OPERATING CONDITION. THE ENTIRE SYSTEM IS TO BE LEFT IN OPERATING CONDITION ACCEPTABLE TO THE ENGINEER.
   2. UPON COMPLETION OF THE WORK AND ACCEPTANCE BY THE OWNER, TCSC SHALL PROVIDE ONE SCHEDULED FOUR-HOUR PERIOD OF FORMAL INSTRUCTION TO THE OWNER'S OPERATING PERSONNEL WHO HAVE RESPONSIBILITY FOR THE MECHANICAL SYSTEM.

H. SEQUENCE OF OPERATIONS:
   1. HVAC UNITS:
      1. NORMAL OPERATION:
         1. UNITS SHALL BE CONTROLLED BY SPACE THERMOSTAT. FAN SHALL OPERATE CONTINUOUSLY DURING OCCUPIED MODE AND INTERMITTENTLY DURING UNOCCUPIED MODE.
         2. HEATING AND COOLING SHALL BE ENABLED BY THERMOSTAT.
         3. COOLING SETPOINT SHALL BE 73°F (ADJUSTABLE).
         4. HEATING SETPOINT SHALL BE 68°F (ADJUSTABLE).
         5. OUTSIDE AIR DAMPER SHALL OPEN DURING OCCUPIED MODE AND CLOSE DURING UNOCCUPIED MODE. OUTSIDE AIR DAMPER SHALL BE NORMALLY CLOSED AND RETURN TO NORMAL POSITION UPON LOSS OF POWER.

   2. EXHAUST FANS:
      1. INTERLOCK EXHAUST FANS AS NOTED ON SCHEDULE.

SECTION 15936 - REGISTERS, GRILLES AND DIFFUSERS

A. PRODUCT PERFORMANCE DATA SHALL BE TAKEN FROM TESTS CONDUCTED IN ACCORDANCE WITH ANSI/ASHRAE 70, AND ARI-890.
B. THE NOMINAL OR DUCT CONNECTION SIZE OF GRILLES (NOT OVERALL DIMENSIONS) IS GIVEN ON PLANS. GRILLES AND REGISTERS INCLUDING VOLUME CONTROLLERS SHALL BE CONSTRUCTED OF THE SAME MATERIALS SPECIFIED FOR THE GRILLE. THE GRILLE FINISH SHALL BE WHITE UNLESS NOTED OTHERWISE.
C. REFER TO ARCHITECTURAL DRAWINGS FOR THE VARIOUS CEILING TYPES. REFER TO DRAWINGS OF REFLECTED CEILING PLANS FOR LOCATION OF CEILING DIFFUSERS AND GRILLES. MOUNTING FRAMES SHALL BE PROVIDED FOR ALL GRILLES AND REGISTERS MOUNTED IN DRYWALL, PLASTER, CONCRETE OR MASONRY OPENINGS.
D. SUPPLIER SHALL CHECK ALL AIR DISTRIBUTION AND RETURN AIR DEVICES FOR PROPER PERFORMANCE, NOISE AND ACCESSORIES. ANY DEVICE EXCEEDING NOISE LEVEL HEREIN SPECIFIED SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEERS.
E. CONTRACTOR SHALL COORDINATE OPENINGS IN HARD CEILINGS, FURRED WALLS, MASONRY WALLS, AND FLOORS. MOUNT EACH DEVICE SECURELY TO AVOID RATTLING AND VIBRATION. DEVICES SHALL BE PARALLEL TO THE PLANE OF THE SURFACES THEY ARE MOUNTED.
F. CEILING DIFFUSER TYPE A - TITUS MODEL TDC STEEL LOUVERED FACE DIFFUSER WITH 12 X 12 INCH MODULE AND 9 X 9 INCH UNIFORM BACKPAN. DIFFUSER SHALL INCLUDE ROUND NECK, REMOVABLE CORE OF FIXED DEFLECTION LOUVERS AND EQUALIZING GRID. DIFFUSER SHALL BE SUITABLE FOR SURFACE MOUNTING WITH AIR PATTERN AS SHOWN ON DRAWINGS.
G. RETURN/EXHAUST/GRILLES TYPE A - TITUS MODEL 350 RL STEEL GRILLE. GRILL SHALL INCLUDE ONE SET OF FIXED BLADES SET AT 35° DEFLECTION ON 3/4 INCH SPACING.
H. RETURN/EXHAUST/GRILLES TYPE B - TITUS MODEL 50F ALUMINUM EGG CRATE GRILL. GRILLE SHALL INCLUDE 2 X 2 X 2 INCH ALUMINUM GRID.
I. RETURN/EXHAUST GRILLES TYPE C - TITUS MODEL 33R STEEL HEAVY DUTY BAR GRILLE. GRILLE SHALL INCLUDE ONE SET OF FIXED BLADES SET AT 35° DEFLECTION ON 2 INCH SPACING. BARS SHALL BE 14 GAUGE STEEL. BARS SHALL BE REINFORCED BY PERPENDICULAR STEEL BARS SPACED ON 6 INCH MAXIMUM CENTERS.

SECTION 15990 - TESTING, ADJUSTING AND BALANCING

A. THE TEST AND BALANCE CONTRACTOR SHALL BE AN INDEPENDENT CONTRACTOR THAT REGULARLY PERFORMS AIR AND WATER SYSTEMS TESTING AND BALANCING. MINIMUM QUALIFICATIONS FOR ACCEPTANCE SHALL BE GENERAL MEMBERSHIP IN NEBB OR AABC, EXCEPT THAT AFFILIATION WITH MANUFACTURERS, INSTALLING CONTRACTORS, OR ENGINEERING FIRMS MAY NOT PRECLUDE ACCEPTANCE.
B. PERFORM TESTING AND BALANCING PROCEDURES ON EACH SYSTEM ACCORDING TO THE PROCEDURES CONTAINED IN ASHRAE APPLICATIONS HANDBOOK, AABC OR NEBB NATIONAL STANDARDS.
C. CUT INSULATION, DUCTS, PIPES, AND EQUIPMENT CABINETS FOR INSTALLATION OF TEST PROBES TO THE MINIMUM EXTENT NECESSARY TO ALLOW ADEQUATE PERFORMANCE OF PROCEDURES. AFTER TESTING AND BALANCING, CLOSE PROBE HOLES AND PATCH INSULATION WITH NEW MATERIALS IDENTICAL TO THOSE REMOVED. RESTORE VAPOR BARRIER AND FINISH ACCORDING TO THE INSULATION SPECIFICATIONS FOR THIS PROJECT.
D. MARK EQUIPMENT SETTINGS WITH PAINT OR OTHER SUITABLE, PERMANENT IDENTIFICATION MATERIAL, INCLUDING DAMPER-CONTROL POSITIONS, VALVE INDICATORS, FAN-SPEED-CONTROL LEVERS, AND SIMILAR CONTROLS AND DEVICES, TO SHOW FINAL SETTINGS.
E. SET HVAC SYSTEM AIRFLOW AND WATER FLOW RATES WITHIN THE FOLLOWING TOLERANCES:
   1. SUPPLY, RETURN, AND EXHAUST FANS: PLUS 5 TO PLUS 10 PERCENT.
   2. AIR OUTLETS AND INLETS: 0 TO MINUS 10 PERCENT.
   3. HEATING-WATER FLOW RATE: 0 TO MINUS 10 PERCENT.
   4. COOLING-WATER FLOW RATE: 0 TO MINUS 5 PERCENT.
F. WITHIN 90 DAYS OF COMPLETING TESTING, ADJUSTING, AND BALANCING, PERFORM ADDITIONAL TESTING AND BALANCING TO VERIFY THAT BALANCED CONDITIONS ARE BEING MAINTAINED THROUGHOUT AND TO CORRECT UNUSUAL CONDITIONS. IF INITIAL TESTING, ADJUSTING, AND BALANCING PROCEDURES WERE NOT PERFORMED DURING NEAR-PEAK SUMMER AND WINTER CONDITIONS, PERFORM ADDITIONAL INSPECTIONS, TESTING, AND ADJUSTING DURING NEAR-PEAK SUMMER AND WINTER CONDITIONS.
G. THE MECHANICAL CONTRACTOR=S RESPONSIBILITIES: FURNISH THE TEST AND BALANCE CONTRACTOR ONE COMPLETE SET OF ACCEPTED EQUIPMENT DATA AND ONE COMPLETE SET OF ACCEPTED MECHANICAL SHOP DRAWINGS. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ADVISING THE TEST AND BALANCE CONTRACTOR OF ANY CHANGE(S) MADE TO THE SYSTEM(S) DURING THE CONSTRUCTION PROCESS. PROVIDE DRAWINGS, SPECIFICATIONS, SHOP DRAWINGS, CONTROL DIAGRAMS, ETC. DETAILING THE CHANGE(S) TO THE TEST AND BALANCE CONTRACTOR. REPLACE AND/OR INSTALL PULLEYS, BELTS, DAMPERS AND TRIM PUMP IMPELLERS AS REQUIRED FOR THE CORRECT BALANCE AS DIRECTED BY THE TEST AND BALANCE CONTRACTOR. ALLOCATE TIME IN THE CONSTRUCTION SCHEDULE FOR TEST AND BALANCE PROCEDURE. ASSIST THE TEST AND BALANCE CONTRACTOR IN COORDINATING WORK WITH THE OTHER TRADES, AND PREPARE THE SYSTEM FOR TESTING AND BALANCING.

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FINAL

No.	Description	Date
IFP-0	Issue for Permit	02/27/2026
IFB-0	Bid Set/AHJ Resub.	04/20/2026

2026
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Mechanical Specifications

Project number	25042
Date	04/20/2026
Drawn by	CA
Checked by	JB

M0.03

Scale 12" = 1'-0"

4/30/2026 1:01:35 PM

COMcheck Software Version COMcheckWeb
Mechanical Compliance Certificate

Project Information

Energy Code:	2012 IECC
Project Title:	EOC - Richmond, KY
Location:	Richmond, Kentucky
Climate Zone:	4a
Project Type:	New Construction

Construction Site:
Richmond, Kentucky

Owner/Agent:
Express Oil Change & Tire Engineers
1880 Southpark Drive
Birmingham, Alabama 35244
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Designer/Contractor:
Jeff Boyer
Pinnacle Engineering
2031 Shady Crest Drive
Hoover, Alabama 35216

Additional Efficiency Package(s)

Credits: 1.0 Required 0.0 Proposed

Mechanical Systems List

Quantity	System Type & Description
1	GFF-1 (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 40 kBtu/h Proposed Efficiency = 96.00% Et, Required Efficiency: 80.00 % Et (or 78% AFUE) Cooling: 1 each - Split System, Capacity = 33 kBtu/h, Air-Cooled Condenser, Unknown Economizer Proposed Efficiency = 14.30 SEER, Required Efficiency = 13.00 SEER Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00 Fan System: FAN SYSTEM 1 | office -- Compliance (Motor nameplate HP and fan efficiency method) : Passes Fans: FAN 1 Supply, Constant Volume, 1195 CFM, 0.3 motor nameplate hp SYSTEM COMPLIANCE FAILS: Economizer requirements have not been met.
2	UH-1,2 (Unknown w/ PerimeterSystem): Heating: 1 each - Unit Heater, Gas, Capacity = 150 kBtu/h Proposed Efficiency = 83.00% Ec, Required Efficiency: 80.00 % Ec
2	UH-3,4 (Unknown w/ PerimeterSystem): Heating: 1 each - Unit Heater, Gas, Capacity = 200 kBtu/h Proposed Efficiency = 83.00% Ec, Required Efficiency: 80.00 % Ec
1	Water Heater: Electric Storage Water Heater, Capacity: 30 gallons w/ Circulation Pump No minimum efficiency requirement applies

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 2012 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Jeff Boyer, PE — 2/26/26
Name - Title / Signature / Date

COMcheck Software Version COMcheckWeb
Inspection Checklist

Energy Code: 2012 IECC

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Job No.26052

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JEFFREY BOYER
40070
REGISTERED
4/20/26

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Richmond, Kentucky

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Mechanical Comcheck

Project number	25042
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M0.04

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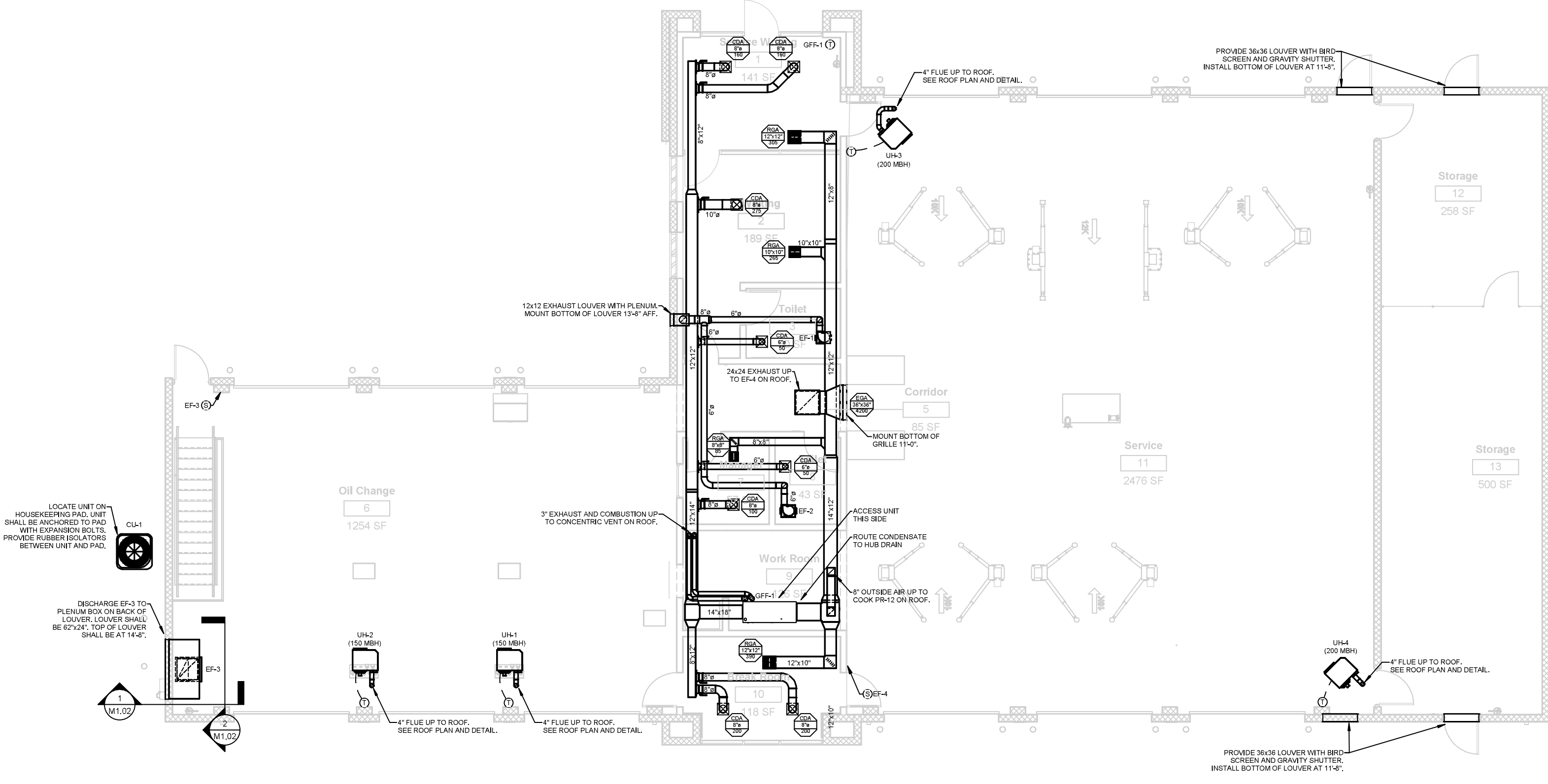

NORTH

MAIN FLOOR PLAN MECHANICAL
3/16" = 1'-0"

GENERAL NOTES:

1. VERIFY EXISTING CONDITIONS IN FIELD PRIOR TO BEGINNING WORK.
2. SPACE ABOVE CEILING IS LIMITED. CAREFUL COORDINATION WITH LIGHTING, ELECTRICAL, PLUMBING, STRUCTURAL, AND ARCHITECTURAL WORK IS CRITICAL TO DUCTWORK INSTALLATION.
3. PROVIDE NECESSARY OFFSETS IN PIPING, ELECTRICAL CONDUIT, AND DUCTWORK AS REQUIRED TO ACCOMMODATE NEW WORK. DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL DETAILS NOR CHANGES IN DUCTWORK ELEVATIONS NECESSARY FOR COMPLETE INSTALLATION.
4. COORDINATE CEILING AIR DEVICE LOCATIONS WITH LIGHTING PLAN AND ARCHITECT'S REFLECTED CEILING PLAN.
5. DUCTWORK SHALL BE RUN TIGHT TO STRUCTURE. AVOID CROSSING OVER LIGHTS AND OTHER DUCTS DUE TO TIGHT CLEARANCES.
6. LOUVERS SHALL BE RUSKIN ELF6375 OR APPROVED EQUAL. PROVIDE UNIT WITH BIRDSCREEN AND MILL ALUMINUM FINISH. COORDINATE EXACT HEIGHT AND COLOR OF LOUVER WITH ARCHITECT PRIOR TO ORDERING.
7. MOUNT TEMPERATURE CONTROLS 48" ABOVE FINISHED FLOOR. COORDINATE EXACT LOCATION WITH ARCHITECT.
8. SPILL CONDENSATE FROM AHUS INTO NEAREST FLOOR DRAIN.
9. PROVIDE ENGRAVED PLASTIC LABEL AT TERMINATION OF EACH AUXILIARY CONDENSATE DRAIN LINE READING AS FOLLOWS:
   "AHU-### AUXILIARY DRAIN LINE."
   "NOTIFY MAINTENANCE PERSONNEL WHEN WATER IS FLOWING"
10. CONNECT CONDENSATE DRAIN PIPING TO AIR HANDLING UNITS IN ACCORDANCE WITH DETAILS.
11. OUTSIDE AIR VENTILATION INTAKES FOR OIL CHANGE AND SERVICE AREAS WILL BE PROVIDED BY INTAKE LOUVERS.

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Mechanical Floor Plan

Project number	25042
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M1.01

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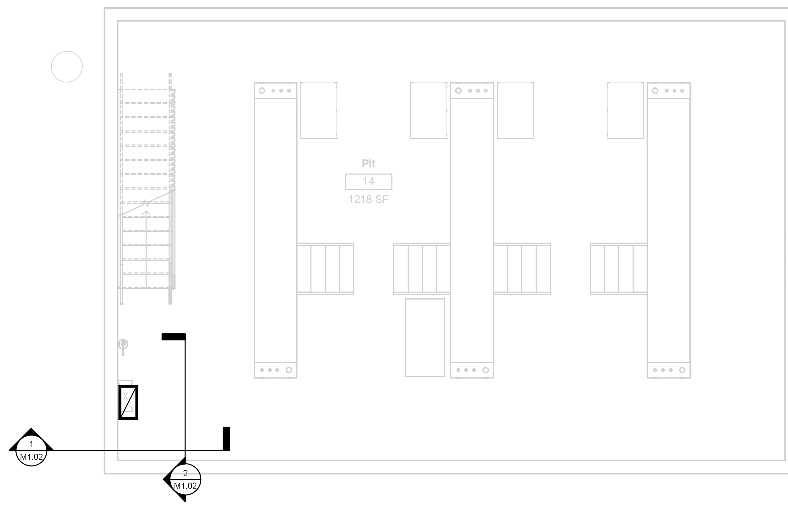
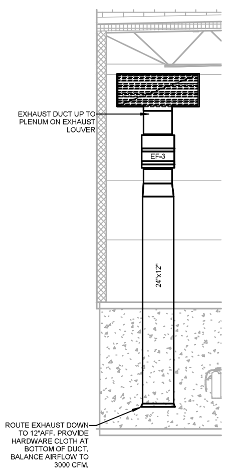
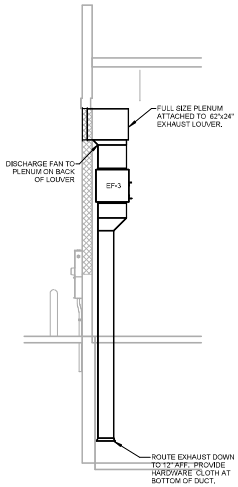


PIT FLOOR PLAN
MECHANICAL
NORTH 1/4" = 1'-0"



2 Pit Exhaust Elevation
M1.02 1/4" = 1'-0"



1 Section Through Pit Exhaust1
M1.02 1/4" = 1'-0"

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1. VERIFY EXISTING CONDITIONS IN FIELD PRIOR TO BEGINNING WORK.
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   "AHU-### AUXILIARY DRAIN LINE."
   "NOTIFY MAINTENANCE PERSONNEL WHEN WATER IS FLOWING"
10. CONNECT CONDENSATE DRAIN PIPING TO AHU IN ACCORDANCE WITH DETAILS.

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Partial Mechanical Floor Plans - Pit and Platform

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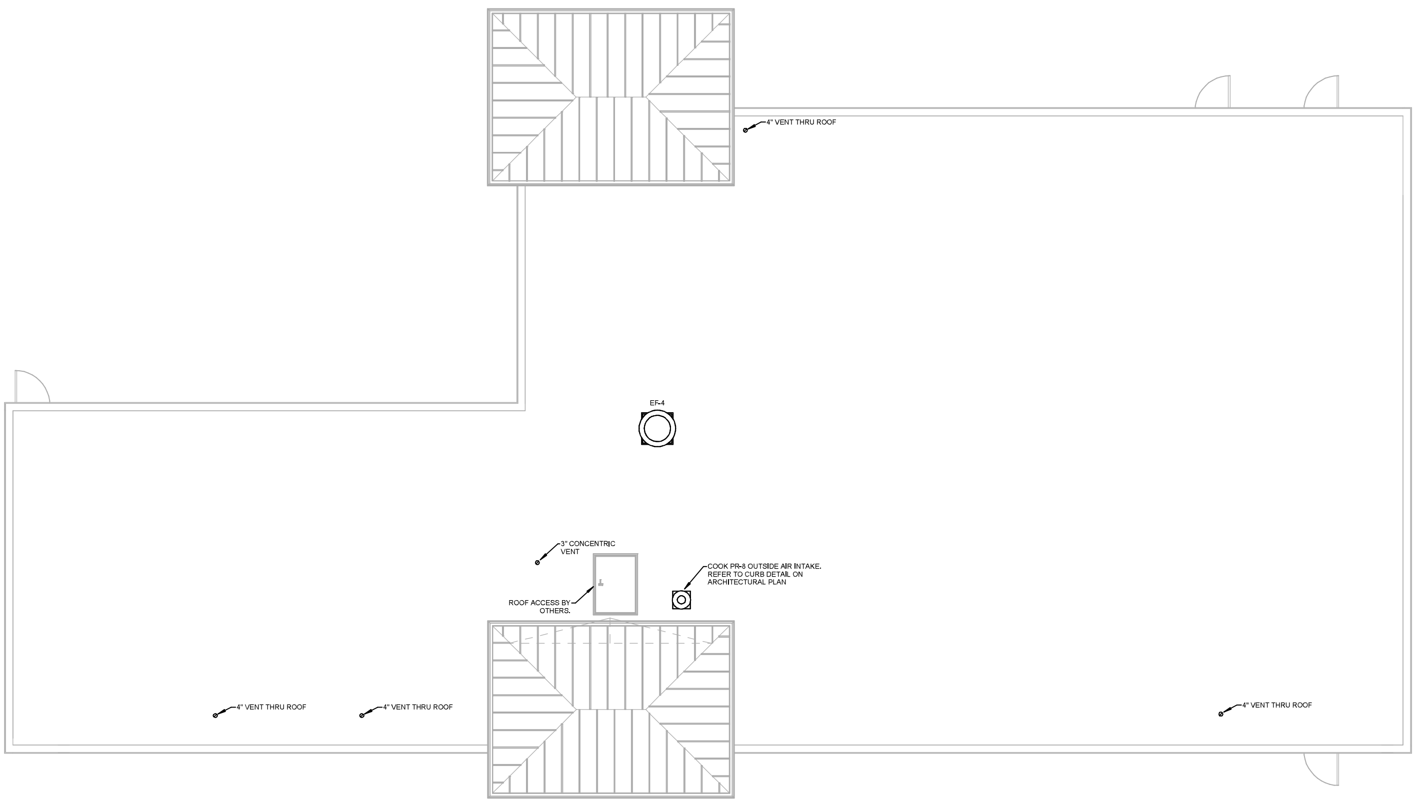

NORTH

MECHANICAL ROOF PLAN
3/16" = 1'-0"

GENERAL NOTES:

1. VERIFY EXISTING CONDITIONS IN FIELD PRIOR TO BEGINNING WORK.

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Mechanical Roof Plan

Project number	25042
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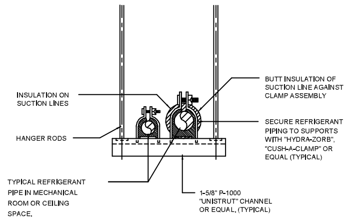
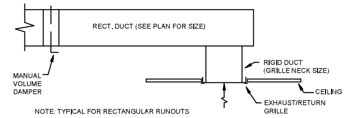
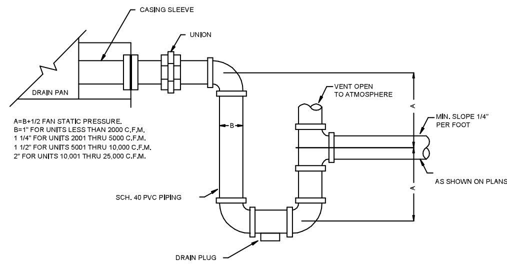


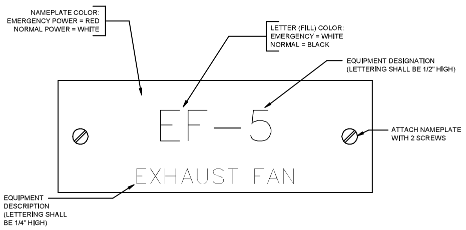
7 M2.01 REFRIGERANT PIPING SUPPORT DETAIL
TYPICAL FOR PIPING SUSPENDED FROM STRUCTURE
NO SCALE



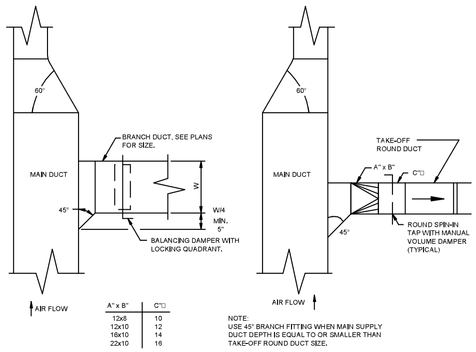
4 M2.01 TYPICAL RETURN AND EXHAUST RUN-OUT DETAIL
NO SCALE



1 M2.01 CONDENSATE DRAIN TRAP DETAIL
NO SCALE



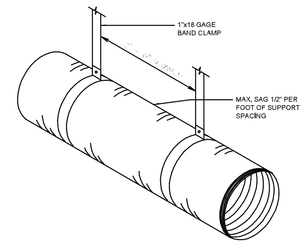
8 M2.01 MECHANICAL EQUIPMENT NAMEPLATE DETAIL
NO SCALE



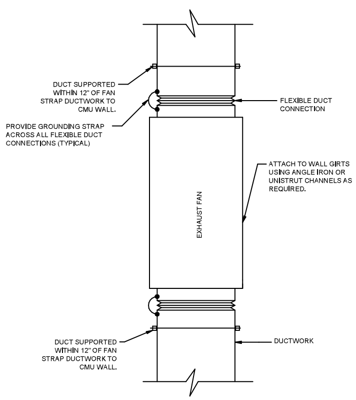
A" x B"	C"Ø
12x8	10
12x10	12
16x10	14
22x10	16

NOTE:
USE 45° BRANCH FITTING WHEN MAIN SUPPLY DUCT DEPTH IS EQUAL TO OR SMALLER THAN TAKE-OFF ROUND DUCT SIZE.

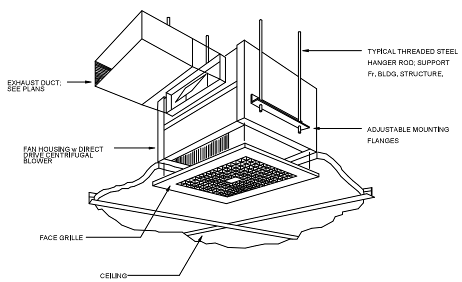
5 M2.01 TYPICAL DUCT TAKEOFF DETAIL
NO SCALE



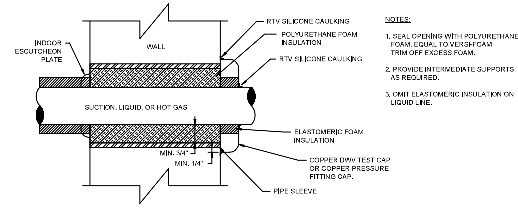
2 M2.01 FLEXIBLE DUCT SUPPORT DETAIL
NO SCALE



9 M2.01 INLINE EXHAUST FAN DETAIL
NO SCALE



6 M2.01 EXHAUST FAN INSTALLATION DETAIL(CEILING)
NO SCALE



NOTES:
1. SEAL OPENING WITH POLYURETHANE FOAM, EQUAL TO VERSI-FOAM TRIM OFF EXCESS FOAM.
2. PROVIDE INTERMEDIATE SUPPORTS AS REQUIRED.
3. OMIT ELASTOMERIC INSULATION ON LIQUID LINE.

3 M2.01 REFRIGERANT LINE - WALL PENETRATION DETAIL
NO SCALE

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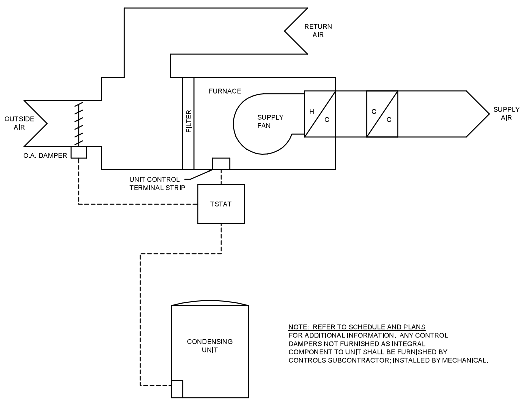
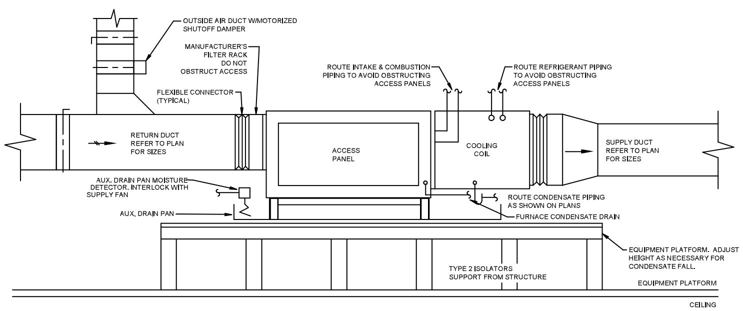
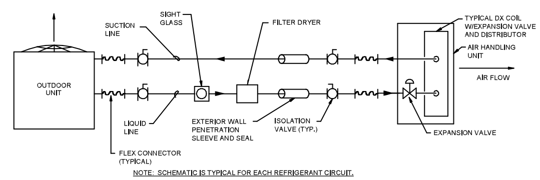


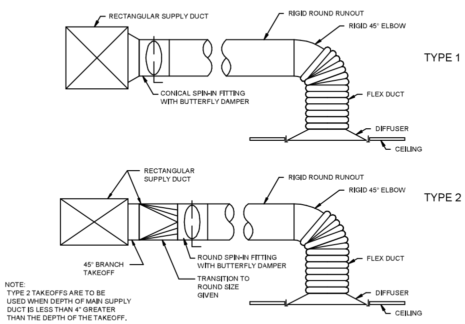
6 M2.02 HVAC CONTROL DIAGRAM
TYPICAL
NO SCALE



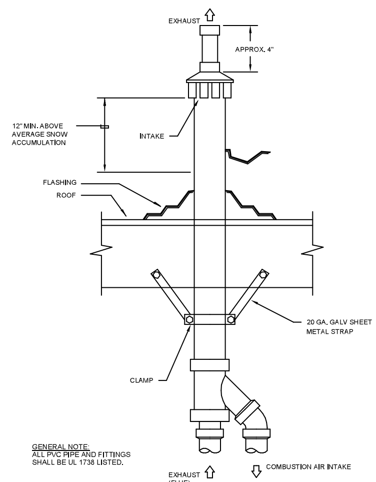
3 M2.02 FURNACE AND COOLING COIL UNIT DETAIL
NO SCALE



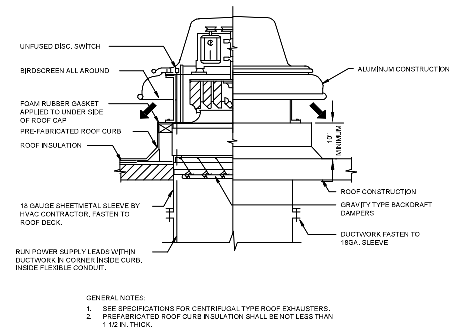
4 M2.02 REFRIGERANT PIPING DETAIL
NO SCALE



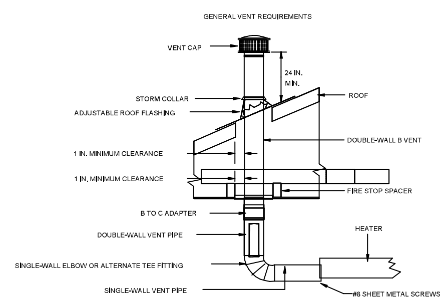
7 M2.02 TYPICAL DIFFUSER RUN-OUT DETAIL
NO SCALE



5 M2.02 CONCENTRIC ROOF TERMINATION DETAIL
NO SCALE



1 M2.02 ROOF EXHAUST FAN DETAIL
NO SCALE



2 M2.02 HEATER VENTING DETAIL
NO SCALE

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PLUMBING LEGEND, SYMBOLS AND ABBREVIATIONS

	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RETURN
	SANITARY VENT
	SANITARY WASTE

	BALL VALVE
	VALVE IN VERTICAL
	CAP ON END OF PIPE
CO	CLEANOUT - FLOOR TYPE
CO	CLEANOUT - WALL TYPE
	P-TRAP
	PIPE TURNING DOWN
	PIPE TURNING UP
	TEE DOWN
	TEE UP
	TIE NEW INTO EXISTING
P-1	PLUMBING FIXTURE NUMBER
XX	RISER NUMBER
	WATER HAMMER ARRESTOR
	PLUG TYPE CLEANOUT
	BALANCING VALVE
	CHECK VALVE
	GATE VALVE
	REDUCED PRESSURE ZONE BFP
	THERMOSTATIC MIXING VALVE
	FLOOR SINK
	FLOOR DRAIN
	ROOF DRAIN/OVERFLOW DRAIN
XX	FOOD SERVICE EQUIPMENT

ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
INV	INVERT
BFF	BELOW FINISHED FLOOR
CW	COLD WATER
DN	DOWN
EX	EXISTING
HW	HOT WATER
WS	WASTE STACK
VS	VENT STACK
AC	ABOVE CEILING
WHA	WATER HAMMER ARRESTOR
BFG	BELOW FINISHED GRADE
TMV	THERMOSTATIC MIXING VALVE
TP	TRAP PRIMER
DS	DOWNSPOUT
UG	UNDER GROUND

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PLUMBING FIXTURE CONNECTION SCHEDULE

EQUIPMENT NO.	DESCRIPTION	HOT WATER	COLD WATER	WASTE	VENT	REMARKS
WC-1	WATER CLOSET, ADA COMPLIANT	–	1/2"	4"	2"	
EW-1	EYEWASH	1/2"	1/2"	2"	1-1/2"	PROVIDE WITH MIXING VALVE; 1)
EWC-1	ELECTRIC WATER COOLER	–	1/2"	2"	1-1/2"	WALL MOUNT ADA WITH BOTTLE FILLER
LAV-1	LAVATORY, ADA COMPLIANT	1/2"	1/2"	1-1/2"	1-1/2"	WALL MOUNTED, PROVIDE TRAP WRAP AND MIXING VALVE
SK-1	SERVICE SINK	1/2"	1/2"	2"	1-1/2"	ROUTE TO INTERCEPTOR
WH-1	WALL HYDRANT	–	1/2"	–	–	

REMARKS:
1) SET SUPPLY WATER TEMPERATURE TO 90°F.

ELECTRIC WATER HEATER SCHEDULE

EQUIPMENT NO.	MANUFACTURER AND MODEL NO.	SERVICE	EFF (%)	ENTERING WATER TEMP (°F)	LEAVING WATER TEMP (°F)	RECOVERY RATE (GPH)	STORAGE CAPACITY (GAL)	TANK DIMENSIONS		ELECTRICAL			REMARKS
								HEIGHT (INCHES)	DIAMETER (INCHES)	HEATING ELEMENTS		VOLTS/PH/HZ	
										WATTAGE	QNTY		
EWH-1	A.O. SMITH ECS-30X	BATHROOMS/EYEWASH	–	60	120	21	30	3'-3"	1'-8"	4.5 KW	1	240 / 1 / 60	

RECIRCULATION PUMP SCHEDULE

EQUIPMENT NO.	MANUFACTURER/ MODEL NO.	SERVICE	TYPE	FLOW (GPM)	HEAD (FT.)	RPM	ELECTRICAL			REMARKS
							HP	DISCONNECT	VOLTS/PH./HZ.	
REC-1	TACO 2400-10S	HOT WATER RETURN	INLINE	2	10	3450	1/10	BY DIV. 16	120/1/60	1)

REMARKS:
1) PROVIDE AQUASTAT AND TIMER. INSTALL IN ACCORDANCE WITH IECC REQUIREMENTS.
2) PUMP SHALL BE STAINLESS STEEL BODY FOR DOMESTIC USE.

GREASE INTERCEPTOR SCHEDULE

EQUIPMENT NO.	MANUFACTURER/ MODEL NO.	FLOW RATE (GPM)	LIQUID HOLDING CAPACITY (GAL)	CONNECTION SIZES		UNIT DIMENSIONS			REMARKS
				INLET (IN.)	OUTLET (IN.)	LENGTH (IN.)	WIDTH (IN.)	DEPTH (IN.)	
OS-1	STRIEM OS-25	25	21	3	3	2'-3"	1'-11"	1'-3"	1)

REMARKS:
1) PROVIDE EXTENSION TO MATCH GRADE.

WASTE FLOW CALCULATION SUMMARY

	GALLONS PER DAY (GPD)	# OF PEOPLE/ CARS	GPD
PER EMPLOYEE	8	8	64
PER CAR SERVED	8	45	360
		BUILDING TOTAL (GPD)	424

REMARKS:
1) NO CARS WASHED ON SITE.

SANITARY SYSTEM SUMMARY

TOTAL LOAD (FIXTURE UNITS)	GPM
12.5	14

WATER METER SUMMARY

TOTAL LOAD (FIXTURE UNITS)	GPM
16	18

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Plumbing Legend, Abbreviations, and Schedules

Project number	25042
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SECTION 15011 - PLUMBING GENERAL

A. PROVIDE EQUIPMENT, LABOR, MATERIAL, ETC., REQUIRED TO MAKE A COMPLETE WORKING INSTALLATION.
B. INSTALL THE WORK IN ACCORDANCE WITH DRAWINGS, SPECIFICATIONS AND THE STANDARDS AND CODES (LATEST EDITION) THAT APPLY TO THIS WORK. IN THE EVENT OF A CONFLICT, INSTALL WORK IN ACCORDANCE WITH THE MOST STRINGENT CODE REQUIREMENTS DETERMINED BY THE ENGINEER.
C. OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS INCLUDING: BUILDING PERMITS, HEALTH DEPARTMENT PERMITS AND SEWER TAP PERMITS. DELIVER TO ENGINEER CERTIFICATES OF INSPECTION AND APPROVAL ISSUED BY AUTHORITIES.
D. ALL EQUIPMENT AND METHOD SHALL BE INSTALLED AND CONNECTED IN ACCORDANCE WITH THE BEST ENGINEERING PRACTICES AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
E. DISCONNECT, REMOVE AND RE-INSTALL PLUMBING SERVICES LOCATED ON OR CROSSING THROUGH CONTRACT LIMITS, ABOVE OR BELOW GRADE, OBSTRUCTING CONSTRUCTION OF PROJECT OR CONFLICTING WITH COMPLETED PROJECT OR ANY APPLICABLE CODES.
F. PROVIDE CUTTING OF PAVEMENT, SIDEWALKS, DRIVEWAYS, ETC., EXCAVATING, TRENCHING, SHORING AND DE-WATERING. PROVIDE BACKFILL MATERIAL AND PERFORM BACKFILLING.
G. RESTORE SITE TO ORIGINAL CONDITION OR NEW FINAL GRADES. PROVIDE PAVING, CONCRETE, SEED, OR SOD.
H. DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY. WORK CALLED FOR BY ONE IS BINDING AS IF CALLED FOR BY BOTH.
I. DRAWINGS ARE DRAWN TO A SMALL SCALE AND ARE DIAGRAMMATIC ONLY. THE DRAWINGS INDICATE SIZE AND GENERAL ARRANGEMENT OF EQUIPMENT. DO NOT SCALE DRAWINGS FOR EXACT LOCATIONS. FIELD MEASUREMENTS TAKE PRECEDENCE.
J. PROVIDE NECESSARY OFFSETS, ELBOWS AND FITTINGS AS REQUIRED TO AVOID CONFLICT WITH EQUIPMENT OF OTHER DIVISIONS AND TO OBTAIN PROPER HEADROOM AND CLEAR PASSAGEWAYS. THIS SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
K. WORK UNDER THIS DIVISION SHALL BE FIRST CLASS WITH EMPHASIS ON NEATNESS AND WORKMANSHIP. INSTALL WORK USING COMPETENT MECHANICS, UNDER SUPERVISION OF FOREMAN, ALL DULY CERTIFIED BY LOCAL AUTHORITIES.
L. INSTALLATION SUBJECT TO ENGINEER'SOBSERVATION, FINAL APPROVAL, AND ACCEPTANCE. ENGINEER MAY REJECT UNSUITABLE WORK.
M. ALL MATERIALS SHALL BE NEW. ALL MATERIALS AND EQUIPMENT FOR WHICH A UL STANDARD, AN AGA APPROVAL, AN AWWA STANDARD, FM LISTING OR ASME REQUIREMENTS IS ESTABLISHED, SHALL BE SO APPROVED AND LABELED OR STAMPED.
N. THE DRAWINGS ARE BASED ON THE USE OF PRODUCTS SPECIFIED AND LISTED FIRST. IF ANY REVISION IN PIPING, CONDUIT WORK, FOUNDATIONS, ANCHOR BOLTS, CONNECTIONS, ETC., IS REQUIRED BY OTHER NAMED PRODUCTS OR APPROVED SUBSTITUTIONS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE SUCH REVISIONS AT NO ADDITIONAL EXPENSE TO THE OWNER.
O. SUBMIT SIX (6) ORIGINAL COPIES OF COMPLETE SHOP DRAWINGS FOR ALL MATERIALS AND EQUIPMENT FURNISHED UNDER DIVISION 15 OF SPECIFICATIONS TO ENGINEER FOR REVIEW. SHOP DRAWINGS SHALL BEAR THE STAMP OF APPROVAL OF THE CONTRACTOR AS EVIDENCE THAT THE DRAWINGS HAVE BEEN CHECKED BY HIM. DRAWING SUBMITTED WITHOUT THIS STAMP OF APPROVAL WILL NOT BE CONSIDERED AND WILL BE RETURNED FOR PROPER RESUBMISSION.
P. REVIEW OF SHOP DRAWINGS DOES NOT RELIEVE CONTRACTOR OF RESPONSIBILITY FOR ERRORS AND OMISSIONS IN SHOP DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS AND SIZES OF EQUIPMENT. INFORM ENGINEER IN WRITING OF EQUIPMENT DIFFERING FROM THAT SHOWN.
Q. PROVIDE MAINTENANCE AND OPERATING MANUALS BOUND IN 8-1/2" X 11" HARDBACK, THREE-POST BINDERS. MANUALS SHALL CONTAIN WRITTEN INSTRUCTIONS FOR EACH SYSTEM, SHOP DRAWINGS, SCHEMATIC DRAWINGS, EQUIPMENT CATALOG CUTS, MANUFACTURER'S INSTRUCTIONS, MANUFACTURERS WARRANTIES, AND VALVE TAG LIST.
R. PROVIDE AS-BUILT PRINTS AT THE COMPLETION OF JOB. KEEP ONE SET OF PRINTS ON JOB AND RECORD DAY TO DAY CHANGES TO CONTRACT DRAWINGS WITH RED PENCIL. INDICATE ACTUAL LOCATION OF PIPING, VALVES, AND EQUIPMENT. TURN OVER PRINTS TO ENGINEER AT FINAL OBSERVATION.
S. FURNISH ENGINEER WRITTEN WARRANTY, STATING THAT IF WORKMANSHIP AND/OR MATERIALS EXECUTED UNDER THIS DIVISION IS PROVEN DEFECTIVE WITHIN ONE (1) YEAR AFTER FINAL ACCEPTANCE, SUCH DEFECTS AND OTHER WORK DAMAGED WILL BE REPAIRED AND/OR REPLACED.

SECTION 15051 - BASIC MATERIALS AND METHODS

A. ACCESS PANELS:
 1. ACCESS PANELS SHALL HAVE WELDED STEEL FRAME, ONE PIECE DOORS, AND SELF LATCHING DOOR LOCKS. LOCKS SHALL BE SCREW DRIVER OPERATED WITH CASE HARDENED STEEL CAM. PANELS SHALL BE MILCOR, CESCO, KARP OR EQUAL.
 2. PROVIDE ACCESS PANELS IN WALLS AND CEILINGS AS NEEDED TO ALLOW ACCESS TO VALVES, EQUIPMENT, SHOCK ABSORBERS, TRAP PRIMERS, ETC. AND WHERE NOTED.
B. FIRESTOPPING AND SOUNDSTOPPING:
 1. PENETRATIONS THROUGH FLOORS AND FIRE RESISTANT WALLS SHALL BE SEALED TO THE RATED FIRE RESISTANCE EQUAL TO THE WALL. INSTALLATION SHALL BE DONE BY A QUALIFIED INSTALLER, APPROVED BY THE MANUFACTURER.
 2. PROVIDE SOUND PROOFING THROUGH NON-RATED WALLS.
C. PIPING SEALS:
 1. PROVIDE MODULAR, RESILIENT SEALS AROUND PIPES PENETRATING ALL EXTERIOR WALLS, AND FLOORS BELOW GRADE. PIPING SEALS SHALL BE THUNDERLINE CORP. "LINK SEAL" LS SERIES.
D. CUTTING AND PATCHING:
 1. CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING. CUT WALLS, FLOORS, CEILINGS, PARTITIONS, ETC., REQUIRED FOR THE INSTALLATION OF THIS WORK IN A NEAT AND CAREFUL MANNER. CORE DRILL FOR PIPE SLEEVES AND OTHER OPENINGS THROUGH FLOORS AND WALLS. SAWCUT LARGER OPENINGS. CUTTING SHALL BE KEPT TO A MINIMUM.

 2. REPLACE OR REPAIR DUCTWORK, CONDUIT, PIPING, ETC., THAT IS CUT. PATCH AROUND OPENING CUT BY THIS CONTRACTOR OR PROVIDED BY OTHERS FOR HIM. PATCHING SHALL BE DONE BY AN APPROVED QUALIFIED CONTRACTOR, BUT SHALL BE PAID FOR BY THIS CONTRACTOR. FINISHED PATCHING SHALL RETAIN FIRE AND SMOKE RATINGS OF THE ASSEMBLY AND SHALL MATCH SURROUNDING FINISH.
E. ANCHORS:
 1. MOUNT ALL EQUIPMENT, BRACKETS, HANGERS, ANCHORS, ETC. TO SAFELY RESIST THE VIBRATION OR THRUST FORCES AND SUPPORT THE UNIT'S WEIGHT.
 2. FLOOR MOUNTED ROTATING OR VIBRATING EQUIPMENT SHALL BE ANCHORED TO THE FLOOR USING GROUTED-IN-PLACE OR CAST-IN-PLACE ANCHOR BOLTS WITH THREE INCH HOOK AND SLEEVE. ANCHOR BOLTS SHALL BE OF THE SIZE RECOMMENDED BY THE MANUFACTURER.
 3. FLOOR MOUNTED STATIC ITEMS, WALL AND CEILING MOUNTED EQUIPMENT BRACKET AND HANGERS SHALL BE INSTALLED USING DRILLED ANCHORS ![OR CAST IN PLACE INSERTS]. ANCHORS SHALL BE PHILLIPS DRILL COMPANY "RED HEAD" OR MULTI-SET II. SIZE ANCHORS ![AND INSERTS] FOR FOUR TIMES THE APPLIED LOAD. BOLTS USED OUTDOORS OR IN A WET ENVIRONMENT SHALL BE HOT DIP GALVANIZED.
A. PIPE IDENTIFICATION:
 1. IDENTIFICATION SHALL BE IN ACCORDANCE WITH ANSI-A13.1. PIPE MARKERS SHALL BE SETON'S WEATHER-CODE OR EQUAL.
 2. PROVIDE PIPE MARKERS AND DIRECTIONAL ARROWS ON PIPES AT BOTH SIDES OF PARTITIONS AND FLOORS SLABS, AT BRANCH LINE TAKE-OFFS, AT VALVES, AT INTERMEDIATE INTERVALS NOT IN EXCESS OF 20 FT. AND AT CONNECTIONS TO EQUIPMENT.
 3. TAPE COLOR BAND IDENTIFYING MARKERS AND ARROWS ON EACH PIPE, BOTH INSULATED AND BARE PIPES. PIPE MARKERS AND ARROWS SHALL BE LOCATED WHERE READILY VISIBLE AND ON LOWER QUADRANTS OF OVERHEAD PIPES.
B. VALVE TAG AND CHART:

 1. VALVE TAGS SHALL BE SETON M4506, BLACK FILLED LETTERS WITH BRASS JACK CHAIN. ONE VALVE NUMBER SHALL BE STAMPED ON EACH TAG. IDENTIFY EACH VALVE TAG FOR THE UTILITY IT SERVES, SUCH AS "CW" FOR COLD WATER, HW FOR HOT WATER, ETC. VALVE CHARTS SHALL BE SETON. ATTACH A NUMBERED VALVE TAG TO EACH VALVE.
 2. PROVIDE A TYPE WRITTEN CHART IN FRAME UNDER GLASS COVER, GIVING THE FULL LIST OF ALL VALVES INSTALLED UNDER THIS CONTRACT. CHART SHALL LIST VALVE NUMBER, TYPE OF UTILITY, AND LOCATION. MOUNT CHART WHERE DIRECTED BY OWNER. PROVIDE ONE ADDITIONAL COPY TO OWNER.
A. EQUIPMENT IDENTIFICATION:
 1. IDENTIFY EACH PIECE OF EQUIPMENT WITH A 1/8 INCH THICK ENGRAVED MELAMINE PLASTIC LAMINATE NAMEPLATE. LETTERS SHALL BE 1/2 INCH HIGH STANDARD STYLE. NAMES, ABBREVIATIONS, AND NUMBERING SHALL AGREE WITH THE CORRESPONDING EQUIPMENT DESIGNATIONS SHOWN ON THE DRAWINGS. USE BLACK LETTERS CUT IN A WHITE BACKGROUND FOR ALL EQUIPMENT ON STANDARD ELECTRICAL POWER
 2. FASTEN NAMEPLATES TO EQUIPMENT IN A CONSPICUOUS LOCATION USING SELF-TAPPING STAINLESS STEEL SCREWS, EXCEPT USE CONTACT EPOXY ADHESIVE WHERE SCREWS CANNOT OR SHOULD NOT PENETRATE SUBSTRATE.
B. PIPE SLEEVES:
 1. PROVIDE PIPE SLEEVES WHERE PIPES PASS THROUGH FLOORS AND WALLS ABOVE OR BELOW CEILINGS. PROVIDE PIPE SLEEVES IN NEW WALLS AND FLOORS AS THE WORK PROGRESSES. PROVIDE SPLIT PIPE SLEEVES IN NEW WALLS BUILT UP AROUND EXISTING PIPES. TACK WELD SPLIT SLEEVES TOGETHER.
 2. SIZE PIPE SLEEVES TO ALLOW CONTINUOUS INSULATION, BUT NOT LESS THAN TWO PIPE SIZES LARGER THAN PIPE. SLEEVES IN WALLS SHALL BE FLUSH WITH WALL, SLEEVES IN FLOORS SHALL EXTEND 3/4 INCHES ABOVE FLOOR AND BE FLUSH WITH STRUCTURE BELOW.
 3. SLEEVES IN CONCRETE WALLS, FLOORS OR MASONRY SHALL BE SCH 40 STEEL PIPE, MACHINE CUT. SLEEVES IN GYPSUM BOARD OR PLASTER WALLS SHALL BE 14 GAUGE, ROLLED GALVANIZED SHEET METAL TACK WELDED ON THE LONGITUDINAL SEAM.
 4. PROVIDE PLATES AROUND PIPES EXTENDING INTO EXPOSED AREAS WHERE THEY PASS THROUGH WALLS, FLOORS AND CEILINGS. SIZE PLATES TO COMPLETELY COVER PIPE SLEEVES. PLATES SHALL BE BEATON AND CADWELL, KEENEY OR GRINNELL, NICKEL PLATED STEEL, SPLIT PLATES WITH SET SCREW. CONCRETE FLOOR PLATE SHALL BE GRINNELL FIGURE 400.
C. FLASHING:
 1. PROVIDE FLASHING AT PIPING AND DUCT PENETRATIONS THROUGH ROOF AND ROOF MOUNTED STRUCTURES FURNISHED UNDER THIS DIVISION. FLASH IN ACCORDANCE WITH ROOFING MANUFACTURERS DETAILS. FLASHING MATERIALS SHALL BE IN ACCORDANCE WITH THE ROOFING MANUFACTURERS SYSTEM.
 2. PROVIDE FLASHING AT PIPES PASSING THROUGH FLOORS WITH WATERPROOF MEMBRANE. FLASHING SHALL BE IN ACCORDANCE WITH WATERPROOFING MANUFACTURER'S DETAILS.

SECTION 15261 - PLUMBING INSULATION

A. GENERAL:
1. ALL INSULATION, JACKETING, AND ADHESIVE SHALL HAVE COMPOSITE SURFACE BURNING CHARACTERISTIC RATING AS TESTED BY ASTM E 84, UL 723, OR NFPA 255 NOT EXCEEDING A FLAME SPREAD OF 25 OR SMOKE DEVELOPED OF 50.
2. SUBMITTALS SHALL USE PAGES FROM MIDWEST INSULATION CONTRACTORS ASSOCIATION – "COMMERCIAL AND INDUSTRIAL INSULATION STANDARDS" FOR DEFINING HOW INSULATION MATERIALS WILL BE APPLIED.
3. ALL PIPE INSULATION SHALL BE CONTINUOUS THROUGH WALLS, CEILING OR FLOOR OPENINGS, OR SLEEVES; EXCEPT WHERE FIRESTOP OR FIRESAFING MATERIALS ARE REQUIRED.
4. INSULATE ITEMS MOUNTED IN PIPING WITH THE SAME THICKNESS OF INSULATION AS SPECIFIED FOR PIPING.
5. REPAIR INSULATION DAMAGED BY WORK UNDER THIS CONTRACT TO MATCH EXISTING WORK OR REPLACE DAMAGED PORTION WITH INSULATION SPECIFIED FOR NEW WORK.
B. DOMESTIC WATER PIPING:
1. INSULATION SHALL BE 850 DEG. F RATED AS MANUFACTURED BY OWENS CORNING, MANVILLE OR KNAUF. ROUTED OR MOLDED FITTING INSULATION SHALL BE HAMFAB.
2. INSULATION SHALL HAVE FACTORY-APPLIED, REINFORCED, FLAME RETARDANT, VAPOR BARRIER JACKET EQUAL TO OWENS-CORNING ASJ WITH SELF-SEALING LAP. BUTT JOINTS SHALL BE TAPED WITH FIELD-APPLIED ASJ TAPE 3 IN. WIDE.
3. INSULATION THICKNESSES SHALL BE IN ACCORDANCE WITH INTERNATIONAL ENERGY CONSERVATION CODE FOR PIPE SIZES NOTED ON PLAN. PROVIDE 1" INSULATION ON HOT WATER PIPING IN ACCORDANCE WITH FLORIDA PLUMBING CODE 607.2.1.
4. ALL FITTINGS AND VALVES SHALL BE INSULATED WITH PREFORMED FIBER GLASS FITTINGS OR MITERED SECTIONS OF PIPE INSULATION. INSULATION SHALL BE OF EQUAL THICKNESS TO THE ADJACENT PIPE INSULATION.
5. METAL SHIELDS SHALL BE INSTALLED BETWEEN HANGERS OR SUPPORTS AND THE PIPING INSULATION. RIGID INSULATION INSERTS SHALL BE INSTALLED AS REQUIRED BETWEEN THE PIPE AND THE INSULATION SHIELDS. INSERTS SHALL BE OF EQUAL THICKNESS TO THE ADJACENT INSULATION AND SHALL BE VAPOR SEALED AS REQUIRED.
C. ELASTOMERIC CLOSED CELL INSULATION:
1. INSULATION SHALL BE RUBATEX OR ARMSTRONG. SECURE INSULATION WITH CONTACT ADHESIVE IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. EXPOSED OR EXTERIOR INSTALLATIONS SHALL BE PAINTED WITH TWO COATS OF WATER BASE LATEX ENAMEL.
2. PROVIDE 1 IN. THICK INSULATION ON DX REFRIGERANT PIPING, COOLING COIL CONDENSATE PIPING, AND CAPS FOR ALL VALVE STEMS AND OPERATORS, GAUGE COCKS, THERMOMETER WELLS AND OTHER APPURTENANCES SUBJECT TO SWEATING.
D. PIPING FINISHES:
1. METAL JACKETING SHALL BE, SMOOTH ,016 IN. THICK, TYPE T 3003 ALUMINUM WITH LAMINATED MOISTURE BARRIER. JACKETING SHALL BE CHILDERS. ALUMINUM ROLL JACKETING WITH POLYKRAFT MOISTURE BARRIER. COVER THE FOLLOWING INSULATED SYSTEMS WITH METAL JACKETING: PIPING INSTALLED OUTDOORS AND EXPOSED PIPING INDOORS WITHIN 8 FT. OF FINISHED FLOOR. METAL FITTING COVERS SHALL BE TWO PIECE ALUMINUM. COVERS SHALL BE ELL-JAC.
2. CONCEALED PIPING FINISH COVERING SHALL BE THE ALL SERVICE JACKET. FITTINGS SHALL BE COVERED BY WRAPPING THE FITTING WITH FIBER REINFORCED TAPE, WITH A 5 PERCENT OVERLAP. FITTING COVERS SHALL BE ONE PIECE 20 MIL PVC. COVERS SHALL BE CEEL-TITE 550 PVC+UVR BY CEEL-CO OR EQUALS.

SECTION 15410 - PLUMBING PIPING

A. THE WORK REQUIRED UNDER THIS SECTION INCLUDES ALL WORK NECESSARY FOR A COMPLETE INSTALLATION OF SANITARY WASTE PIPING, STORM PIPING AND DOMESTIC WATER PIPING INSIDE THE BUILDING TO 5 FEET OUTSIDE THE BUILDING. SUBMIT SCHEDULE OF PIPE AND FITTINGS FOR EACH SERVICE.
B. DOMESTIC WATER PIPING: WATER PIPING WITHIN THE BUILDING SHALL BE COPPER TUBE, TYPE "L" HARD TEMPER, ASTM B-88. PIPING BELOW GROUND SHALL BE COPPER TUBE, TYPE "K" SOFT TEMPER, ASTM B-88. FITTINGS SHALL BE WROUGHT COPPER, SOLDER TYPE, ASTM B-75, ANSI B16.22. SOLDER UNIONS SHALL BE WROT COPPER, WITH COPPER GROUND JOINT, ASTM B75, ANSI B16.22. DI-ELECTRIC, EPCO, 250 LB. WOG. SOLDER METAL SHALL CONFORM TO ASTM B32, LEAD-FREE.
C. STORM, SANITARY WASTE, AND VENT PIPING: ABOVE GROUND: SCHEDULE 40 PVC-DWV ASTM D-2665 USING SOLVENT CEMENT ASTM D02565. HORIZONTAL PIPING FOR FIXTURE ROUGHINS MAY BE DWV COPPER, ASTM B-306. BELOW GROUND: SCHEDULE 40 PVC-DWV ASTM D-2665 USING SOLVENT CEMENT ASTM D-2564.
D. STORM, SANITARY WASTE AND VENT FITTINGS: ABOVE GROUND: ![NO HUB CAST IRON SOIL PIPE FITTINGS WITH COUPLING ASSEMBLY CISPI STANDARD 310.] SCHEDULE 40 PVC-DWV, ASTM D-2855 USING SOLVENT CEMENT ASTM D-2564. BELOW GROUND: SCHEDULE 40 PVC-DWV, ASTM D-2855 USING SOLVENT CEMENT ASTM D-2564.
E. BALL VALVES: VALVES SHALL BE NIBCO T-585-70, FULL PORT BALL TYPE WITH BRONZE BODY, CHROME PLATED BALL AND BRONZE THREADED ENDS, 600 PSI WOG OR NIBCO S-585-70 IN COPPER LINES, HAMMOND, CRANE, APOLLO, MILWAUKEE, OR APPROVED EQUAL.
F. ALL PIPING SHALL BE ROUTED TO CONSERVE BUILDING SPACE, BE COORDINATED WITH ITEMS INSTALLED BY OTHER TRADES AND NOT INTERFERE WITH ACCESS TO OR OPERATION OF THE FACILITY.
G. PROVIDE ROOF FLASHINGS FOR PIPE PENETRATIONS THROUGH ROOF, TO BE INSTALLED BY ROOFING CONTRACTOR
H. WATER PIPING WITHIN BUILDING SHALL BE SIZE INDICATED ON PLANS AND RISERS. IN THE EVENT NO SIZE IS SHOWN, PIPE SIZE OR SIZE REQUIRED BY THE PLUMBING CODE. PIPING SHALL BE SLOPED TOWARD A SYSTEM DRAIN AND TOWARD OUTLETS, TO PROVIDE FOR SYSTEM DRAIN-DOWN. IF INSTALLED NEAR EXTERIOR WALLS, PIPING SHALL BE LOCATED ON THE INTERIOR SIDE OF INSULATION. INSTALL PIPING TO PREVENT DIRECT CONTACT BETWEEN FERROUS AND NON-FERROUS MATERIALS. ALLOW FLEXIBILITY FOR EXPANSION IN PIPING.
I. DOMESTIC WATER PIPING SYSTEM SHALL BE TESTED WITH POTABLE WATER AT A PRESSURE OF 125 PSIG OR 25 PSIG ABOVE DESIGN WORKING PRESSURE, WHICHEVER IS GREATER FOR 12 HOURS. TEST SHALL BE CONDUCTED WITH PLUMBING INSPECTOR UNLESS APPROVED OTHERWISE IN WRITING.
J. WATER DISTRIBUTION PIPING SHALL BE DISINFECTED PRIOR TO OCCUPANCY OR SYSTEM START-UP WITH A CHLORINE SOLUTION 50 PPM, ALLOW SYSTEM TO STAND FOR SIX HOURS MINIMUM, THEN EXERCISE ALL VALVES TO ENSURE TREATMENT OF ALL BRANCHES AND COMPONENTS. SYSTEM SHALL BE FLUSHED WITH POTABLE WATER AFTER DISINFECTION AND PRIOR TO PLACEMENT INTO SERVICE.
K. STORM, SANITARY WASTE AND VENT PIPING SHALL BE TESTED IN ACCORDANCE WITH WATER AND AIR TESTS AS SPECIFIED IN THE INTERNATIONAL PLUMBING CODE. IN ADDITION TO ANY TESTS REQUIRED BY THE LOCAL PLUMBING OFFICIAL, (10 FEET OF HEAD WITH NO APPARENT LEAKS, HOLD FOR 30 MINUTES MINIMUM). FLUSH ALL GRAVITY PIPING INCLUDING FLOOR DRAINS AND ROOF DRAINS PRIOR TO RUNNING OVER TO THE OWNER.
L. ALL PIPE SHALL BE CUT SQUARE. REAM PIPE AND TUBE ENDS AND REMOVE BURRS. CLEAN THE ENDS OF PIPES TO REMOVE OIL, GREASE AND OXIDES. PREPARE PIPING CONNECTIONS TO EQUIPMENT WITH FLANGES OR UNIONS.
M. ALL SOLDERED PIPING AND EQUIPMENT CONNECTIONS SHALL BE PROPERLY PREPARED IN ACCORDANCE WITH GOOD PIPING PRACTICE. APPLY A THIN LAYER OF FLUX TO ONLY THE MALE TUBING. ROTATE INTO THE FITTING WITH ONE OR TWO REVOLUTIONS.
N. DOMESTIC WATER PIPING: ROUTE PIPING IN ORDERLY MANNER, PLUMB AND PARALLEL TO BUILDING STRUCTURE, AND MAINTAIN GRADIENT. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT. PROVIDE CLEARANCE FOR INSTALLATION OF INSULATION AND ACCESS TO VALVES AND FITTINGS. PROVIDE ACCESS WHERE VALVES AND FITTINGS ARE NOT EXPOSED. INSTALL VALVES WITH STEMS UPRIGHT OR HORIZONTAL. PROVIDE DRAIN VALVES AT LOW POINTS IN SYSTEMS. TEST WATER PIPING BEFORE BEING INSULATED OR CONCEALED IN WALLS OR CEILING.
O. STORM, SANITARY WASTE, AND VENT PIPING: HORIZONTAL SOIL, WASTE AND DRAINAGE LINES WITHIN BUILDING SHALL HAVE A MINIMUM UNIFORM SLOPE OF 1/8 INCH PER FOOT ON 3 INCH AND LARGER, AND 1/4 INCH PER FOOT ON LINES 2 INCH AND SMALLER. TURNS IN SANITARY, SOIL, AND DRAIN PIPING SHALL BE MADE USING 45 DEGREE ELBOWS, WYES, QUARTER, EIGHTH, SIXTEENTH BENDS, OR OTHER BENDS APPROVED BY THE PLUMBING CODE. DO NOT USE SANITARY TEES OR CROSSES EXCEPT WHERE DISCHARGING FROM HORIZONTAL TO VERTICAL. MAKE CHANGES IN PIPE SIZES WITH REDUCING FITTINGS AND RECESSED REDUCERS. DO NOT REDUCE LINE SIZE IN DIRECTION OF FLOW. PROVIDE CLEANOUTS IN ALL HORIZONTAL TURNS IN WASTE PIPING GREATER THAN 45 DEGREES. PROVIDE DEEP SEAL TRAPS ON ALL FLOOR DRAINS, AND TRAP PRIMERS/SEAL WHERE REQUIRED BY CODE OR AS INDICATED ON DRAWINGS. INDIRECT WASTE LINES DUMPING INTO FLOOR OR HUB DRAINS SHALL MAINTAIN A 2-INCH AIR GAP BETWEEN THE END OF THE WASTE LINE AND THE RIM OF THE FLOOR OR HUB DRAIN.

SECTION 15416 - GAS PIPING SYSTEMS

A. PROVIDE COMPLETE INSTALLATION OF GAS PIPING FROM THE "POINT OF DELIVERY" UP TO AND INCLUDING CONNECTION TO ALL GAS-FIRED EQUIPMENT. CONNECT EQUIPMENT ITEMS FURNISHED UNDER OTHER SECTIONS OF SPECIFICATIONS. TEST IN ACCORDANCE WITH A.G.A., STANDARD GAS CODE, N.F.P.A. 54, AND APPLICABLE STATE AND LOCAL CODES.
B. ROUTE GAS SERVICE ENTRANCE PIPING INTO BUILDING TO AVOID INTERFERENCE AND DAMAGE. PROVIDE MANUAL SHUTOFF VALVE, GAS COCK AND GAUGE. VALVES SHALL BE LABELED.
C. PROVIDE ACCESS PANELS FOR VALVES AND OTHER ITEMS REQUIRING MAINTENANCE IN ENCLOSED SPACES. AVOID INSTALLING GAS APPURTENANCES IN ENCLOSED SPACES WHERE POSSIBLE. INSTALL IN ENCLOSED SPACES ONLY AS ALLOWED BY APPLICABLE CODES.
D. SUBMIT MANUFACTURER'S LITERATURE ON ALL MATERIALS AND EQUIPMENT INCLUDING: PIPE, PIPE COATING, ANODES, VALVES, FLEXIBLE CONNECTORS, FITTINGS, REGULATORS, RELIEF VALVES, GAUGES.
E. GAS SERVICE:
 1. COORDINATE INSTALLATION OF GAS SERVICE LINE WITH LOCAL GAS COMPANY. PAY ALL FEES.
 2. PROVIDE 12 INCH ELEVATED METER MOUNTING PADS ON TOP OF A 4 INCH THICK CONCRETE PAD FOR SUPPORT OF GAS METER AND PIPING.
 3. PROVIDE (TWO) 8 INCH DIAMETER PIPE BOLLARDS FOR GAS METER PROTECTION. BOLLARDS SHALL BE SIX FEET LONG (3 FEET BELOW GRADE), MOUNTED IN A 24 INCH DIAMETER HOLE, FILLED WITH 3,000 PSI CONCRETE.
F. INTERIOR PIPING: CONNECT TO ENTERING LINE AND DISTRIBUTE GAS TO EQUIPMENT ITEMS REQUIRING GAS AND AS INDICATED. PERFORM WORK IN ACCORD WITH APPLICABLE A.G.A., N.F.P.A. 54, STATE AND LOCAL CODES. INSTALL GAS STOP VALVES AND DRIP LEGS AT EACH EQUIPMENT ITEM. PIPING SHALL BE ADEQUATELY DRAINED WITH A MINIMUM SLOPE OF 1/4 INCH PER 15 FEET AND DRIP LEGS (FULL SIZE OF PIPE) INSTALLED AT ADDITIONAL POINTS WHERE CONDENSATE MAY COLLECT. INSTALL PRESSURE REDUCING VALVES AS REQUIRED TO PROVIDE PRESSURE WITHIN EQUIPMENT MANUFACTURER'S REQUIREMENTS.
G. EXTERIOR PIPING: EXTERIOR PIPING SHALL BE SCHEDULE 40 CARBON STEEL. PIPING 2 INCH AND SMALLER MAY USE THREADED FITTINGS. PIPING 2 2 INCH AND LARGER SHALL USE WELDED FITTINGS AND FLANGED VALVES. EXTERIOR PIPING SHALL BE COATED WITH AN ALKYD ENAMEL PRIMER (MINIMUM DRY THICKNESS 3 MILS). EXTERIOR PIPING SHALL BE SUPPORTED ON GALVANIZED B-LINE CHANNELS AND PIPE CLAMPS.
H. UNDERGROUND PIPING:
 1. UNDERGROUND PIPING SHALL BE CARBON STEEL - A53/A106-WELDED OR POLYETHYLENE. UNDERGROUND STEEL PIPING SHALL HAVE AT LEAST 18 INCH OF PROPER BACKFILL COVER.
 2. UNDERGROUND PIPING SHALL BE PROTECTED FROM CORROSION. PROVIDE COATED PIPING AND FITTINGS. REPAIR DAMAGED COATING AT WELDS. INSTALL SACRIFICIAL ANODES ON STEEL PIPING INTERVALS NOT EXCEEDING 100 FT.
 3. WHERE PIPES PENETRATE BASEMENT WALLS AND FOUNDATIONS INSTALL THUNDERLINE LINK SEAL.
 4. 1. GAS LINES ROUTED UNDER A BUILDING SHALL BE STEEL AND SHALL BE ENCASED IN A SCH 40 OUTER CONDUIT (AT LEAST 3 PIPE SIZES LARGER THAN THE GAS LINE). CONDUIT SHALL BE SEAL WELDED TO THE GAS PIPE INSIDE THE BUILDING. CONDUIT SHALL BE VENTED TO OUTDOORS. CONDUIT SHALL BE PROTECTED FROM CORROSION SIMILARLY TO UNDERGROUND PIPING.
I. PIPE/TUBING:
 1. STEEL PIPE: ASTM A53 GRADE A OR B, TYPE F, ERW OR SEAMLESS. SCHEDULE 40.
 2. ASTM A106 SEAMLESS. SCHEDULE 40.
 3. TUBING (STEEL) ASTM A539.
 4. PLASTIC PIPE ASTM D2513 POLYETHYLENE. DRISCO PIPE 6500 OR PRIOR APPROVED EQUAL.
J. FITTINGS:
 1. WELDED (STEEL): WELDING FITTINGS SHALL BE CARBON STEEL BUTT WELDING TYPE CONFORMING TO ASTM-234. ELBOWS SHALL BE LONG RADIUS TYPE. WELDING TEES SHALL BE USED ON BRANCH CONNECTIONS EQUAL TO OR GREATER THAN 2 THE DIAMETER OF THE MAIN RUN. FITTINGS SHALL BE LADISH, TUBE-TURN OR WELDBAND. CARBON STEEL REINFORCED BRANCH, WELDING FITTINGS UP TO 3 INCHES, BUT NOT GREATER THAN 2 THE DIAMETER OF THE MAIN RUN MAY BE USED. FITTINGS SHALL BE BONNEY FORGE OR PHOENIX FORGING.
 2. THREADED (MALLEABLE, IRON): SCREWED FITTINGS SHALL BE MALLEABLE IRON ASTM A-197 CLASS 150 CONFORMING TO ANSI B16.3. DIMENSIONS CONFORMING TO FEDERAL SPEC WW-P-521. FITTINGS SHALL BE GRINNELL, FLAGG OR STOCKHAM.
 3. HEAT FUSION/COMPRESSION (POLYETHYLENE): SOCKET TYPE FUSION SHALL MEET THE REQUIREMENTS OF ASTM 2683. FITTINGS SHALL BE LISTED AND MARKED ASTM D2513. BUTT TYPE FUSION FITTING SHALL MEET THE REQUIREMENTS OF ASTM D3261.
K. UNIONS (DIELECTRIC): CLASS 250 MALLEABLE, SCREWED ASTM A-197.
L. VALVES:
 1. 1 INCH AND SMALLER: BALL VALVE - CLASS 125 BRASS FULL PART, 2 PIECE BODY, CHROME PLATED BALL, BLOWOUT PROOF STEAM, TFE SEATS.
 2. 2 INCHES AND SMALLER: PLUG COCK - CLASS 125 CAST IRON, SCREWED, FULL PORT AGA LISTED. ANSI B16.33 HOMESTEAD FIGURE 601.
 3. 2 2 INCHES AND LARGER: PLUG VALVE - CLASS 125 FLANGED CAST IRON ASTM A126 CONFORMING TO ANSI B16.1.
M. PIPE COATING: X-TRU COAT OR PRIOR APPROVED EQUAL INCLUDING JOINTS AND FITTINGS.
N. PRESSURE REGULATORS: CAST IRON OR ALUMINUM BODY AND SPRING CASE WITH STAINLESS STEEL VALVE STEAM, SEAT RING AND VALVE PLUG, PLATED STEEL SPRINGS, NEOPRENE DIAPHRAGM AND GASKETS AND TFE DISC. REGULATING VALVES SHALL BE SIZED FOR THE FLOW INDICATED AND FOR INLET AND OUTLET PRESSURES INDICATED. OUTLET PRESSURE SHALL BE MAINTAINED UNDER THE DESIGN FLOW CONDITION AND AT NO FLOW. REGULATING VALVES TWO PSI AND BELOW SHALL HAVE LEAK LIMITING DEVICES. REGULATING VALVES OVER TWO PSI SHALL BE VENTED FULL SIZE TO OUTSIDE OF THE BUILDING. OTHER REGULATING VALVES REQUIRING ACCESS TO THE ATMOSPHERE SHALL BE EQUIPPED WITH VENT PIPING LEADING TO OUTSIDE. PROVIDE A PRESSURE RELIEF VALVE IF THE REGULATOR CONNECTION SIZE EXCEEDS TWO-INCHES. REGULATING VALVES SHALL BE FISHER, MAXITROL OR PRIOR APPROVED EQUAL MEETING ANSI Z21.18.
O. PRESSURE GAGE: FOR MEDIUM PRESSURE GAS; 0-5 PSI RANGE. FOR LOW PRESSURE GAS; 0-30 INCH W.C. RANGE. USE LOW PRESSURE TYPE 2-1/2 INCH DIAL PRESSURE GAGE WITH APPROPRIATE RANGE, OCI MODEL CO 34, TRERICE, WEKSLER OR APPROVED EQUAL.

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IFP-0	Issue for Permit	02/27/2026
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Plumbing Specifications

Project number	25042
Date	04/20/2026
Drawn by	CA
Checked by	JB

P0.02

Scale 12" = 1'-0"

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SECTION 15430 - PLUMBING SPECIALTIES

A. THIS SPECIFICATION DESCRIBES THE REQUIREMENTS FOR LABOR AND MATERIALS REQUIRED FOR THE INSTALLATION OF PLUMBING SPECIALTIES INCLUDED AS PART OF THE BUILDING PLUMBING SYSTEM.

B. MANUFACTURER'S LITERATURE INDICATING MODEL NUMBERS AND OPTIONS SHALL BE SUBMITTED FOR ALL FIXTURES AND EQUIPMENT. FORMAT SHALL INCLUDE A SCHEDULE OF THE SPECIALTIES SUBMITTED AND INCLUDE IDENTIFICATION NUMBER OF EACH ITEM, SUCH AS "FD-1 FLOOR DRAIN," A LIST OF EACH COMPONENT, ACCESSORY, AND OPTION OF THE ITEM BEING SUBMITTED. THIS SCHEDULE MUST BE INCLUDED IN THE FRONT OF THE SUBMITTAL PAGE.

C. CLEANOUTS SHALL CONSIST OF A COATED CAST IRON BODY WITH THREADED TOP WITH SPIGOT OR NO-HUB CONNECTION AND GASKETED BRONZE CLOSURE PLUG WITH COUNTERSUNK SLOT. HEAD SHALL BE ADJUSTABLE IN HEIGHT; PROVIDE NON-SKID COVERS FOR FLOOR CLEANOUTS. PROVIDE THREAD SHIELD TO PROTECT ADJUSTMENT THREADS FROM CONCRETE AS REQUIRED. CLEANOUTS SHALL BE INSTALLED IN HORIZONTAL RUNS AT SPACING OF NO MORE THAN 75 FEET. INSTALL CLEANOUTS AT THE BASE OF EVERY SOIL AND WASTE STACK, AND AT EACH 90 DEGREE CHANGE IN DIRECTION. INSTALL CLEANOUTS WHICH ARE NOT EASILY ACCESSIBLE UP THROUGH FLOOR OR WALL AND PROVIDE APPLICABLE COVERS. INSTALL CLEANOUTS TO ALLOW AT LEAST 18" FOR RODDING.

D. WATER HAMMER ARRESTORS SHALL BE CONSTRUCTED OF A STAINLESS STEEL OR COPPER SHELL, STAINLESS STEEL OR ELASTOMER BELLOWS, WITH PRECHARGE OF AIR, NITROGEN, OR ARGON. ARRESTERS SHALL CONFORM TO ASSE STD. 1010, AND SHALL BE ZURN "SHOKTROL", JOSAM "ABSORBOTRON", WADE "SHOKSTOP", OR PRECISION PLUMBING PRODUCTS "SHOCK ARRESTOR". UNIT SHALL BE SIZED IN ACCORDANCE WITH TO PDI STANDARDS. WATER HAMMER ARRESTORS SHALL BE SIZED TO ACTUAL PIPE SIZE AND INSTALLED AS NEAR THE SHOCK SOURCE AS PRACTICAL. INSTALL TO ALLOW UNOBSTRUCTED PATH FROM SHOCK SOURCE TO ARRESTOR.

E. BALANCING VALVES (DOMESTIC HOT WATER RETURN): VALVES SHALL BE BELL AND GOSSETT CB SERIES CIRCUIT SETTER. PRESETTABLE BALANCE VALVE, VARIABLE ORIFICE FLOW METER AND POSITIVE SHUT-OFF SERVICE VALVE. EQUIPMENT WITH CAPPED READOUT VALVES FITTED WITH INTERNAL CHECK VALVES, ¼ INCH NPT TAPPED AND PLUGGED DRAIN PORT. BRONZE BODY/BRASS BALL CONSTRUCTION WITH GLASS AND CARBON FILLED TFE SEAT RINGS, SOLDER CONNECTIONS. VALVES TO HAVE DIFFERENTIAL PRESSURE READ-OUT PORTS ACROSS VALVE SEAT AREA. FURNISH WITH PREFORMED INSULATION TO PERMIT ACCESS FOR BALANCE AND READ-OUT. TACO IS AN APPROVED EQUAL.

F. PRESSURE REDUCING VALVES: VALVES SHALL BE EQUAL TO WATTS SERIES U5B-GG BRONZE BODY SINGLE SEATED WITH COMPOSITION DIAPHRAGM AND STAINLESS STEEL SPRING, DIRECT ACTING WITH STRAINER ON INLET SIDE, INTEGRAL BY-PASS CHECK VALVE, GAUGE, AND THREADED ENDS. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

G. TRAP GUARD SEALS: PROVIDE AN ELASTOMERIC, NORMALLY CLOSED TRAP GUARD DEVICE TO PREVENT EVAPORATION OF THE TRAP SEAL AND TO PROTECT AGAINST SEWER GASES FROM BACKING UP INTO HABITABLE AREAS. DEVICE SHALL OPEN WITH FLUID AND ALLOWS LIQUID DRAINAGE TO FLOW THROUGH INTO THE BUILDING DRAIN. TRAP SEAL SHALL BE TRAP GUARD BY PRO-VENT SYSTEMS OR APPROVED EQUAL.

H. FLOOR DRAINS (FD-1): DRAIN SHALL INCLUDE COATED CAST IRON BODY WITH BOTTOM OUTLET, ½" TRAP PRIMER CONNECTION, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH TYPE "B" ROUND POLISHED NICKEL-BRONZE LIGHT DUTY STRAINER TOP WITH SQUARE HEELPROOF OPENINGS AND SECURED GRATE. DRAIN SHALL BE ZURN ZN-415-P-NH OR EQUAL BY JAY R. SMITH, WADE, OR JOSAM. PROVIDE 3 FT. SQ., 6 MIL BUTYL MEMBRANE, AT EACH FLOOR DRAIN. CLAMP MEMBRANE. MEMBRANE SHALL BE RECESSED IN THE FLOOR SLAB WITH TOPPING POURED OVER IT. DRAINS INSTALLED IN ELEVATED BUILDING FLOORS SHALL BE SEALED IN SUCH A MANNER AS TO PREVENT LEAKAGE OF WATER AROUND TRAP AND BODY TO CEILING BELOW.

I. FLOOR DRAIN (FD-2): DRAIN SHALL INCLUDE SUR-SET BUCKET, 9" DIAMETER MEDIUM DUTY CAST IRON GRATE, COATED CAST IRON BODY, ½" TRAP PRIMER CONNECTION, BOTTOM OUTLET, SEEPAGE PAN, AND COMBINATION MEMBRANE CLAMP. DRAIN SHALL BE ZURN Z-554-P-NH OR EQUAL BY JAY R. SMITH, WADE, OR JOSAM. PROVIDE 3 FT. SQ., 6 MIL BUTYL MEMBRANE, AT EACH FLOOR DRAIN. CLAMP MEMBRANE. MEMBRANE SHALL BE RECESSED IN THE FLOOR SLAB WITH TOPPING POURED OVER IT. DRAINS INSTALLED IN ELEVATED BUILDING FLOORS SHALL BE SEALED IN SUCH A MANNER AS TO PREVENT LEAKAGE OF WATER AROUND TRAP AND BODY TO CEILING BELOW.

J. ROOF DRAINS (RD): DRAIN SHALL CONSIST OF COATED CAST IRON BODY WITH NON-PUNCTURING FLUSHING CLAMP WITH INTEGRAL GRAVEL STOP AND DECK CLAMP. DRAIN SHALL HAVE AN ADJUSTABLE EXTENSION TO PLACE FLASHING CLAMP ABOVE INSULATION WHILE BODY RESTS ON THE ROOF STRUCTURE. PROVIDE WITH ALUMINUM ROOF DOME. PROVIDE 1710 EXPANSION JOINT IF PIPING IS NOT OFFSET BELOW THE ROOF. DRAIN SHALL BE JAY R. SMITH 1015Y-R-C-AD OR EQUAL BY WADE, JOSAM, OR ZURN. ROOF DRAINS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. COORDINATE THE WORK WITH ROOF DECK AND ROOFING CONTRACTOR TO INSURE PROPER AND TIMELY INSTALLATION.

K. OVERFLOW DRAINS (OD): DRAIN SHALL CONSIST OF COATED CAST IRON BODY WITH NON-PUNCTURING FLASHING CLAMP, TWO (2) INCH WATER DAM, AND DECK CLAMP. PROVIDE ALUMINUM ROOF DOME. PROVIDE 1710 EXPANSION JOINT IF PIPING IS NOT OFFSET BELOW ROOF. DRAIN SHALL BE J.R. SMITH 1080Y-R-C-AD OR EQUAL BY WADE, JOSAM, OR ZURN. OVERFLOW DRAINS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. COORDINATE THE WORK WITH ROOF DECK AND ROOFING CONTRACTOR TO INSURE PROPER AND TIMELY INSTALLATION.

L. DOWNSPOUT NOZZLES: WALL MOUNTED OUTLET NOZZLE FOR STORM DRAINAGE, PLAIN BRONZE BODY, DECORATION FACE OF WALL AND FLANGE, WITH SCREEN AND THREADED CONNECTOR. UNITS SHALL BE JAY R SMITH 1770-BS OR EQUAL BY ZURN, WADE, OR JOSAM.

M. HUB DRAIN (HD): DRAIN SHALL INCLUDE CAST IRON DEEP SEAL "P" TRAP WITH INDIRECT WASTE FUNNEL INLET AND SIDE OUTLET THREADED AND WITH ½ INCH THREADED FLUSH CONNECTION. DRAIN SHALL BE JOSAM 8821-051 OR EQUAL BY ZURN, JAY R. SMITH, OR WADE.

N. REDUCED PRESSURE ZONE BACKFLOW PREVENTER (ASSE 1015): BACKFLOW PREVENTER SHALL INCLUDE NPT BODY CONNECTIONS, QUARTER TURN, FULL PORT, RESILIENT SEATED BRONZE BALL VALVE, AND STRAINER. UNIT SHALL BE WATTS SERIES 909 QT OR EQUAL BY WILKINS, OR CONBRACO. BACKFLOW PREVENTERS SHALL BE INSTALLED IN ACCORDANCE WITH PER MANUFACTURER'S INSTRUCTIONS. AFTER INSTALLATION, BUT BEFORE SYSTEM IS PUT INTO SERVICE, TEST BACKFLOW PREVENTER FOR FUNCTIONALITY WITH TEST KIT AS RECOMMENDED BY MANUFACTURER. PIPE DISCHARGE FROM BACKFLOW PREVENTER VENT WITH CONNECTION-SIZE COPPER TUBING TO NEAREST FLOOR DRAIN. ENSURE AIR GAP IS PROVIDED IN RELIEF LINE EITHER BY AIR GAP FITTING OR ELEVATED DISCHARGE ABOVE DRAINS. BACKFLOW PREVENTER PIPING SHALL BE INSTALLED WITH UNIONS FOR REMOVAL.

O. WALL HYDRANTS (WH-1): WALL HYDRANTS SHALL BE NICKEL BRONZE PLATED, INTEGRAL VACUUM BREAKER, 3/4 INCH HOSE THREAD, KEY OPERATOR, NON-FREEZE TYPE, HOUSED IN A RECESSED STAINLESS STEEL BOX WITH HINGED LOCKING COVER. HYDRANT SHALL BE JAY R. SMITH 5509 QT OR EQUAL BY WADE, JOSAM OR ZURN. INSTALL WALL HYDRANTS AS INDICATED ON DRAWINGS, MINIMUM HEIGHT 18" A.F.F. UNLESS OTHERWISE INDICATED.

P. HOSE BIBB (HB-1): CHROME PLATED, ¾ INCH HOSE THREAD OUTLET, LOCK SHIELD CAP WITH INTEGRAL VACUUM BREAKER. CHICAGO FAUCET NO. 952 OR T&S BRASS.

Q. THERMOSTATIC MIXING VALVES: MIXING VALVE SHALL BE THERMOSTATIC TYPE WITH LIQUID FILLED MOTOR AND LEAD-FREE BRONZE BODY CONSTRUCTION WITH REPLACEABLE CORROSION RESISTANT COMPONENTS. VALVE CONSTRUCTION SHALL BE SLIDING PISTON CONTROL MECHANISM. PISTON AND LINER SHALL BE OF STAINLESS STEEL MATERIAL. VALVES SHALL BE EQUIPPED WITH REMOVABLE UNION END STOP AND CHECK INLETS WITH STAINLESS STEEL STRAINERS. VALVE SHALL PROVIDE PROTECTION FROM HOT AND COLD SUPPLY LINE FAILURE AND THERMOSTAT FAILURE. PROVIDE WITH DIAL THERMOMETER AND SHUT OFF VALVE ON TEMPERED WATER OUTLET. MIXING VALVE SHALL BE LAWLER 800 SERIES OR EQUAL BY HOLBY, SYMMONS, LEONARD, OR WATTS. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

R. OIL SEPARATOR: STRIEM HIGH EFFICIENCY OIL/WATER SEPARATOR MODEL OS-25 SHALL BE LIFETIME GUARANTEED AND MADE IN THE USA. SEPARATOR SHALL BE CERTIFIED TO IAPMO IGC 325 AND CARRY A UPC LISTING. SEPARATOR SHALL BE CONSTRUCTED OF POLYETHYLENE. SEPARATOR SHALL BE MANUFACTURED FOR ABOVE- OR BELOW-GRADE INSTALLATION. FIELD ADJUSTABLE RISER SYSTEM IS AVAILABLE AS AN OPTION TO BRING MANHOLE COVER TO GRADE. SEPARATOR FLOW RATE SHALL BE 25 GPM. SEPARATOR LIQUID HOLDING CAPACITY SHALL BE 21 GALLONS AND OIL CAPACITY SHALL BE 5.25 GALLONS. SOLIDS CAPACITY SHALL BE 6 GALLONS. COVER SHALL PROVIDE WATER/GAS-TIGHT SEAL AND HAVE A MAXIMUM 450 LBS. LOAD CAPACITY WHEN UNIT IS INSTALLED ABOVE-GRADE, AND 2,500 LBS. WHEN BURIED WITH SR16 RISER.

SECTION 15440 - PLUMBING FIXTURES

A. THIS SPECIFICATION DESCRIBES THE REQUIREMENTS FOR PLUMBING FIXTURES AND THEIR INSTALLATION.

B. SUBMITTALS SHALL INCLUDE MANUFACTURER'S DATA SHEETS AND DIMENSIONAL INFORMATION ON ALL FIXTURES AND ACCESSORIES. FORMAT SHALL INCLUDE A SCHEDULE OF THE FIXTURES SUBMITTED AND INCLUDE IDENTIFICATION NUMBER OF EACH ITEM, SUCH AS "P-1 WATER CLOSET", AND LIST OF EACH COMPONENT AND ACCESSORY OF THE FIXTURE, INCLUDING MANUFACTURER'S MODEL NUMBER. THIS SCHEDULE MUST BE INCLUDED IN THE FRONT OF THE SUBMITTAL BOOKLET.

C. VITREOUS WARE SHALL BE WHITE, REGULAR SECTION, OF WEIGHT REQUIRED, FREE FROM CRACKS, FLAWS, BLISTERS, CRAZES OR OTHER DEFECTS. PROVIDE WITH MOUNTING BRACKETS FOR WALL MOUNTED FIXTURES UNLESS FLOOR CARRIERS ARE INDICATED.

D. STAINLESS STEEL SHALL HAVE MACHINE GROUND FINISH, DECKS AND SINK COMPARTMENT SIDES SHALL BE BUFFED. EXPOSED SURFACES SHALL HAVE NO. 4 SATIN FINISH. INTERIOR SURFACES SHALL BE DEADENED, EXPOSED METAL PARTS SHALL BE CHROMIUM PLATED AND PROTECTED DURING CONSTRUCTION BY A COAT OF GREASE.

E. WATER CLOSET AND URINAL CARRIERS SHALL HAVE TAPERED THREAD FACE PLATE, PLASTIC COUPLING WITH TEST CAP, AND NEOPRENE RUBBER GASKET, LAVATORY, SINK AND URINAL CARRIERS SHALL HAVE RECTANGULAR STRUCTURAL STEEL UPRIGHTS. CARRIERS SHALL HAVE NECESSARY ACCESSORIES FOR PROPER INSTALLATION. CARRIERS SHALL BE ACCORDING TO ANSI A112.6.1M.

F. WATER CLOSETS AND URINALS SHALL HAVE BOLT CAPS.

G. SEATS SHALL BE WHITE, SOLID PLASTIC, WITH INTERNAL CHECK AND MOLDED STAINLESS STEEL HINGE WITHOUT VISIBLE METAL PARTS, EXCEPT AS HEREINAFTER SPECIFIED.

H. CHROMIUM PLATED TRAPS SHALL BE BRASS WITH CHROMIUM PLATED NIPPLE TO WALL AND ESCUTCHEON.

I. FITTINGS AND ACCESSORIES SPECIFIED DESIGNATE TYPE ONLY; PROVIDE MODIFICATIONS TO MAKE FITTINGS WORK PROPERLY WITH FIXTURE AND PIPING. PROVIDE NECESSARY TAILPIECE AND SHANKS.

J. INSTALL EYEWASH STATION WITHIN 10 FEET OF HAZARD AREA, COMPLETELY UNOBSTRUCTED FROM VIEW OR ACCESS, ANCHOR TO FLOOR IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS, PROVIDE AND INSTALL STRAINER AT DOMESTIC WATER INLET TO STATION. PROVIDE AND INSTALL ON WALL ABOVE STATION, A PLASTIC ENGRAVED SIGN READING "EMERGENCY USE ONLY", WHITE LETTERS ON RED BACKGROUND. PROVIDE MINIMUM 5 GALLON CONTAINER AND PROVIDE TIMED FLOW TEST FOR ALL EYEWASHES AND EMERGENCY SHOWERS, SUBMIT REPORT TO ARCHITECT OR ENGINEER PRIOR TO FINAL INSPECTION.

K. FIXTURES

WC-1 WATER CLOSET (17-1/2" HIGH, FLOOR MOUNT, TANK TYPE):
1. KOHLER K-43979 VITREOUS CHINA, 1.6 GALLON FLUSH; CLOSE COUPLED TANK WITH ELONGATED BOWL.
2. KOHLER K-7637 3/8" POLISHED CHROME ANGLE SUPPLY WITH STOP.
3. BENEKE 527SS ELONGATED SELF-SUSTAINING WITH CHECK HINGES, OPEN FRONT, HEAVY DUTY SOLID PLASTIC SEAT.

LAV-1 LAVATORY (ADA COMPLIANT, WALL HUNG):
1. AMERICAN STANDARD DECLYN WALL-HUNG LAVATORY, VITREOUS CHINA, WITH OVERFLOW AND 4" FAUCET CENTERS, DRILLED FOR CONCEALED ARM CARRIER.
2. ZURN Z-7443-VP SINGLE CONTROL FAUCET, LEVER HANDLE, 4" CENTER MOUNT, 1-1/4" GRID STRAINER.
3. MCGUIRE 170 1/2" X 3/8" SWEAT LAVATORY SUPPLIES WITH WHEEL HANDLE STOPS.
4. MCGUIRE 8902, 1-1/4 INCH X 1-1/2 INCH P-TRAP WITH ESCUTCHEON; ZURN GH, 1-1/4" OFFSET HANDICAP GRID DRAIN.
5. TRAP AND SUPPLIES COVERED WITH TRAP WRAP EQUAL TO BROCHAR INDUSTRIES.
6. ZURN Z-1231 LAVATORY CONCEALED ARM CARRIER.

EW-1 EYE/FACE WASH (PEDESTAL MOUNT):
1. STAINLESS STEEL BOWL WITH TWIN EYEWASH HEADS WITH FLIP TOP COVERS, CHROME PLATED WATER EYEWASH ASSEMBLY.
2. INCLUDE UNIVERSAL EMERGENCY SIGN CONFORMING TO ANSI Z535.1.
3. INCLUDE MIXING VALVE/TEMPERED WATER BLENDING SYSTEM.
4. EQUAL TO GUARDIAN G1825. CONFORM TO ANSI Z358.1.

EWC-1 WATER COOLER (WALL MOUNT, BOTTLE FILLING STATION, ADA):
1. ELKAY LZSTL8WSVRSK. HANDS FREE, ADA COMPLIANT DUAL STATION WITH BOTTLE FILLING STATION.
2. MCGUIRE 8902 P-TRAP WITH ESCUTCHEON.
3. MCGUIRE 170 STOP AND SUPPLY.

SK-1 LAUNDRY TUB (SINGLE COMPARTMENT):
1. FIAT MODEL NO. FL-1 SINGLE MOLDED STONE LAUNDRY TUB WITH FREE DRAINING SOAP TRAY ON BACK LEDGE. INCLUDE FOUR WHITE BAKED ENAMEL ANGLE LEGS THAT SLIP INTO MOLDED SOCKETS. SELF-LEVELING LEGS WITH FLOOR ANCHORS.
2. FIAT MODEL A-1 BRASS FAUCET WITH SWING SPOUT.
3. MCGUIRE 170 1/2" X 3/8" SWEAT LAVATORY SUPPLIES WITH WHEEL HANDLE STOPS.
4. MCGUIRE #150 TRAY PLUG WITH RUBBER STOPPER (1-1/2").
5. MCGUIRE #8912 1-1/2" X 1-1/2", 17 GAUGE BRASS P-TRAP.

CMVB COFFEE MAKE VALVE BOX:
1. GUY GRAY MODEL BIM 875.
2. 1/2" FIP x 1/4" O.D. OUTLET COMPRESSION ANGLE VALVE.
3. BOX IS 16 GAUGE STEEL WITH EPOXY FINISH.

L. ACCEPTABLE MANUFACTURERS: FIXTURES, VITREOUS CHINA - AMERICAN STANDARD, CRANE, ELJER, KOHLER FIXTURES, STAINLESS STEEL - JUST, ELKAY FLUSH VALVES - SLOAN, DELANEY, ZURN TOILET SEATS - OLSONITE, SPERZEL, CHURCH, BENEKE, BEMIS FAUCETS - T&S BRASS, SPEAKMAN, CHICAGO, SYMMONS, ELJER TERRAZZO - FIAT, CUTLER, FLORESTONE, STERN-WILLIAMS TRIM, CHROMED BRASS - MCGUIRE, SANITARY DASH, BRIDGEPORT SHOWER MIXING VALVES - POWERS, LEONARD, LAWLER, SYMMONS, SPEAKMAN, ZURN SHOWER HEADS - SYMMONS, SPEAKMAN, ZURN ELECTRIC WATER COOLERS - ELKAY, HALSEY TAYLOR, SUNROC, OASIS, HAWS. USE ONLY WATER COOLERS WHICH DO NOT USE CFC'S FOR REFRIGERATION. SCRUB SINKS - ELJER, AMERICAN STANDARD, KOHLER, CRANE CARRIERS - J. R. SMITH, JOSAM, ZURN, WADE EMERGENCY EQUIPMENT - GUARDIAN, HAWS, WESTERN, SPEAKMAN

M. INSTALL PLUMBING FIXTURE LEVEL AND PLUMB, IN ACCORDANCE WITH FIXTURE MANUFACTURER'S PUBLISHED LITERATURE, ROUGH-IN DRAWINGS, CODES REGULATIONS, AND REFERENCE STANDARDS. FASTEN PLUMBING FIXTURES SECURELY TO SUPPORTS OR BUILDING STRUCTURE. RIGIDLY SUPPORT WATER SUPPLIES BEHIND OR WITHIN WALL CONSTRUCTION. PROVIDE STOP VALVE IN THE WATER SUPPLY TO EACH FIXTURE IN AN ACCESSIBLE LOCATION. CONNECT WALL HUNG URINALS TO WASTE PIPING WITH RED BRASS NIPPLES. CONNECT FIXTURES TO WATER SUPPLY WITH COPPER OR BRASS (NO STEEL). EACH FIXTURE, FLOOR DRAIN AND PIECE OF EQUIPMENT REQUIRING CONNECTION TO DRAINAGE SYSTEM TO HAVE SEPARATE TRAPS INSTALLED AS CLOSE TO FIXTURE AS POSSIBLE. PROVIDE IRON OR STEEL BACKING FOR ALL WALL MOUNTED FIXTURES (OR WOOD BACKING ONLY IF BUILDING STRUCTURE IS WOOD). PROVIDE ESCUTCHEONS AT EACH WALL, FLOOR AND CEILING PENETRATION IN EXPOSED FINISHED LOCATIONS AND WITHIN CABINETS AND MILLWORK. APPLY SCP3154 PRIMER AND GENERAL ELECTRIC CO.'S NO. 1702 SILICONE SANITARY SEALANT AROUND PLUMBING FIXTURES TO CONCEAL VOIDS AT WALL AND CONTACT POINTS OF FIXTURE AFTER WALLS HAVE BEEN PAINTED. APPLY SCP3154 PRIMER AND GENERAL ELECTRIC CO.'S SILPRUF SEALANT ON PLAIN CONCRETE WALLS.

SECTION 15450 - PLUMBING EQUIPMENT

A. ELECTRIC WATER HEATERS:
1. WATER HEATER SHALL COMPLY WITH UL 1453.
2. STORAGE TANK CONSTRUCTION: ASME-CODE STEEL WITH 150 PSIG WORKING-PRESSURE RATING, STEEL JACKET WITH ENAMELED FINISH.
3. TAPPINGS: FACTORY FABRICATED OF MATERIALS COMPATIBLE WITH TANK FOR PIPING CONNECTIONS, RELIEF VALVE, PRESSURE GAGE, THERMOMETER, DRAIN, ANODE RODS, AND CONTROLS AS REQUIRED. ATTACH TAPPINGS TO TANK SHELL BEFORE TESTING AND LABELING. TAPPINGS SHALL HAVE THREADED ENDS ACCORDING TO ASME B1.20.1, PIPE THREADS.
4. INTERIOR FINISH: MATERIALS AND THICKNESSES COMPLYING WITH NSF 61, BARRIER MATERIALS FOR POTABLE-WATER TANK LININGS, EXTEND FINISH INTO AND THROUGH TANK FITTINGS AND OUTLETS.
5. INSULATION: COMPLY WITH ASHRAE 90.1. SURROUND ENTIRE STORAGE TANK EXCEPT CONNECTIONS AND CONTROLS.
6. HEATING ELEMENTS: ELECTRIC, SCREW-IN OR BOLT-ON, IMMERSION TYPE. STAGING AS NOTED IN SCHEDULE.
7. TEMPERATURE CONTROL: ADJUSTABLE IMMERSION THERMOSTAT.
8. SAFETY CONTROLS: AUTOMATIC, HIGH-TEMPERATURE-LIMIT AND LOW-WATER CUTOFF DEVICES OR SYSTEMS.
9. DRAIN VALVE: ASSE 1005, CORROSION-RESISTANT METAL, FACTORY INSTALLED.
10. ANODE RODS: FACTORY INSTALLED, MAGNESIUM.
11. DIP TUBE: FACTORY INSTALLED. NOT REQUIRED IF COLD-WATER INLET IS NEAR BOTTOM OF STORAGE TANK.
12. SPECIAL REQUIREMENT: NSF 5 CONSTRUCTION.
13. ACCEPTABLE MANUFACTURERS ARE LOCHINVAR, A. O. SMITH, OR PRIOR APPROVAL EQUAL.

B. THERMAL EXPANSION TANK (DOMESTIC WATER):
1. PRE-CHARGED HYDROPNEUMATIC STEEL EXPANSION TANK, CONSTRUCTED IN ACCORDANCE WITH SECTION VIII OF ASME BOILER AND PRESSURE CODE, WITH ALL WELDS CONFORMING TO ASME SECTION IX. TANK MUST BE STAMPED WITH A MAXIMUM WORKING PRESSURE OF 125 PSI AND A MAXIMUM WORKING TEMPERATURE OF 200 DEGREES F. ALL INTERNAL WETTED PARTS MUST COMPLY WITH FDA REGULATIONS AND APPROVALS. AN INTERNAL BUTYL DIAPHRAGM WILL BE USED TO ISOLATE AIR FROM WATER. AMTROL OR APPROVED EQUAL AST SERIES.

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IFP-0	Issue for Permit	02/27/2026
IFB-0	Bid Set/AHJ Resub.	04/20/2026

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Plumbing Specifications

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Scale	12" = 1'-0"

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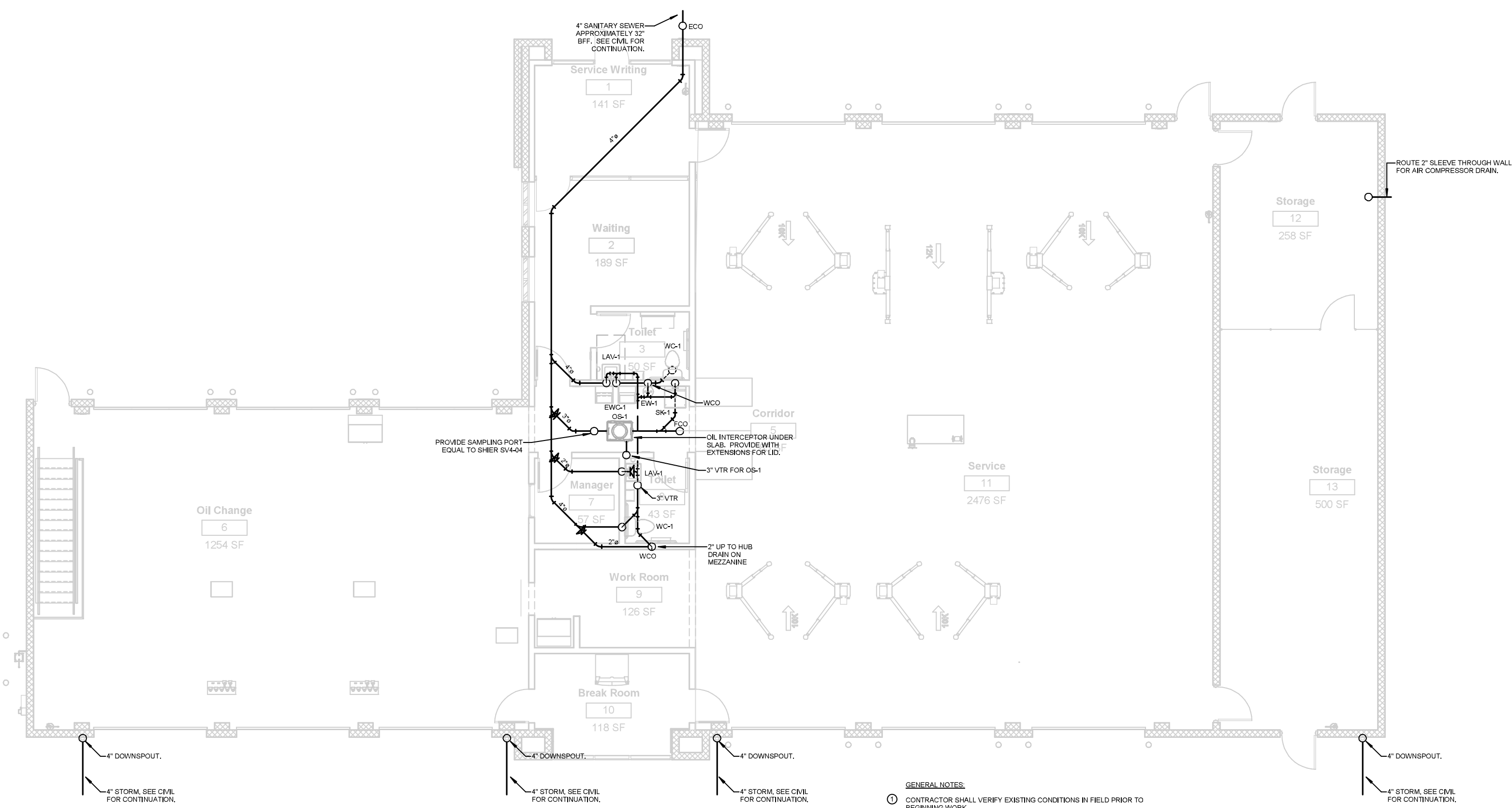

NORTH

MAIN FLOOR PLAN
PLUMBING - GRAVITY
3/16" = 1'-0"

GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD PRIOR TO BEGINNING WORK.
2. SPACE ABOVE CEILING IS LIMITED. CAREFUL COORDINATION WITH LIGHTING, ELECTRICAL, MECHANICAL, FIRE PROTECTION, STRUCTURAL AND ARCHITECTURAL WORK IS CRITICAL FOR COMPLETE PIPING INSTALLATION. CONTRACTOR SHALL PROVIDE NECESSARY OFFSETS IN NEW AND EXISTING PIPING AND ELECTRICAL CONDUIT AS REQUIRED TO ACCOMMODATE NEW WORK, CONTRACTOR SHALL ALLOW FOR ANY CONFLICTS ENCOUNTERED.
3. PIPING LAYOUTS ARE DIAGRAMMATIC AND DO NOT SHOW ALL ELEMENTS OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES ON DIRECTION, ELEVATION AND MINOR OFFSETS NECESSARY FOR COMPLETE INSTALLATION OF ELEMENTS SHOWN.
4. ALL WASTE PIPING SHOWN IS BELOW FINISHED FLOOR UNLESS OTHERWISE NOTED. ALL VENT PIPING SHOWN IS ABOVE CEILING UNLESS OTHERWISE NOTED.
5. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF ALL CEILING MOUNTED DEVICES. REFER TO ARCHITECTURAL FLOOR PLANS FOR ALL DIMENSIONS.
6. COORDINATE ACCESS DOOR LOCATIONS WITH GENERAL CONTRACTOR AND ARCHITECT.

Express Oil Change & Tire Engineers

Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage

Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issue for Permit	02/27/2026
IFB-0	Bid Set/AHJ Resub.	04/20/2026

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Plumbing Floor Plan Gravity

Project number	25042
Date	04/20/2026
Drawn by	CA
Checked by	JB

P1.01

Scale: As indicated

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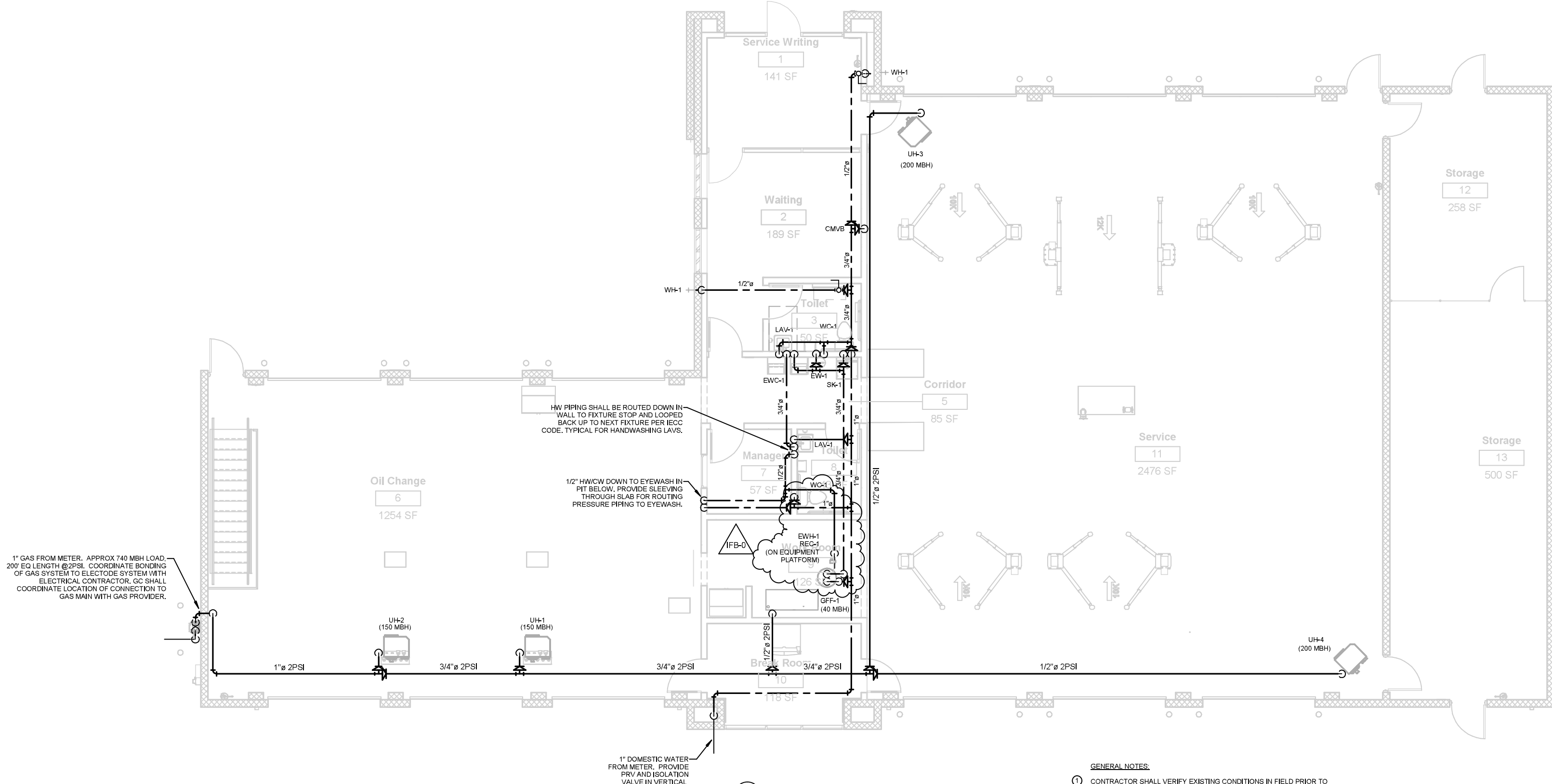

NORTH

MAIN FLOOR PLAN
PLUMBING - PRESSURE
3/16" = 1'-0"

GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD PRIOR TO BEGINNING WORK.
2. SPACE ABOVE CEILING IS LIMITED. CAREFUL COORDINATION WITH LIGHTING, ELECTRICAL, MECHANICAL, FIRE PROTECTION, STRUCTURAL AND ARCHITECTURAL WORK IS CRITICAL FOR COMPLETE PIPING INSTALLATION. CONTRACTOR SHALL PROVIDE NECESSARY OFFSETS IN NEW AND EXISTING PIPING AND ELECTRICAL CONDUIT AS REQUIRED TO ACCOMMODATE NEW WORK. CONTRACTOR SHALL ALLOW FOR ANY CONFLICTS ENCOUNTERED.
3. PIPING LAYOUTS ARE DIAGRAMMATIC AND DO NOT SHOW ALL ELEMENTS OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES ON DIRECTION, ELEVATION AND MINOR OFFSETS NECESSARY FOR COMPLETTE INSTALLATION OF ELEMENTS SHOWN.
4. ALL PRESSURE PIPING SHOWN IS ABOVE THE CEILING UNLESS OTHERWISE NOTED. ALL CONCEALED PIPING SHALL BE PEX-A OR COPPER. EXPOSED PIPING SHALL BE COPPER. LINES SHALL BE ½" UNLESS OTHERWISE NOTED.
5. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF ALL CEILING MOUNTED DEVICES. REFER TO ARCHITECTURAL FLOOR PLANS FOR ALL DIMENSIONS.
6. COORDINATE ACCESS DOOR LOCATIONS WITH GENERAL CONTRACTOR AND ARCHITECT.

Pinnacle Engineering, Inc
Engineering & Design Consultants
2111 Parkway Office Circle, Suite 125
Birmingham, AL 35244
(205) 733-6912 FAX: (205) 733-6913
Job No.26052

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Plumbing Floor Plan Pressure

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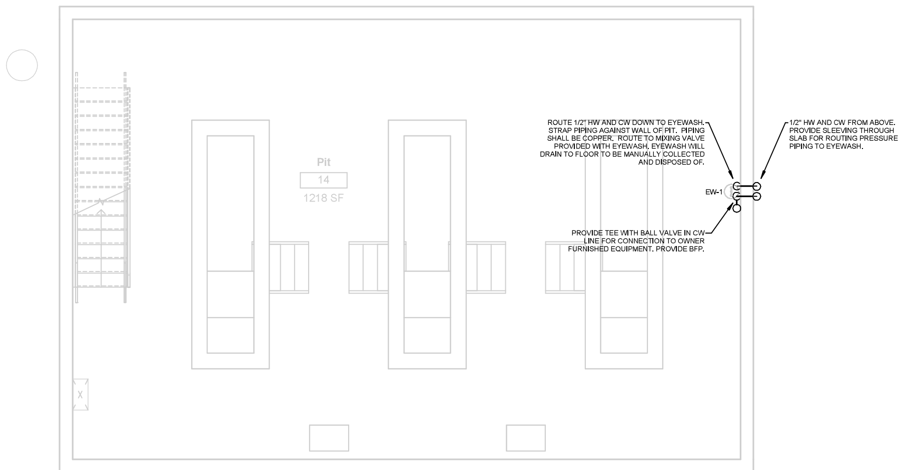

NORTH

PIT FLOOR PLAN PLUMBING
1/4" = 1'-0"

GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD PRIOR TO BEGINNING WORK.
2. SPACE ABOVE CEILING IS LIMITED. CAREFUL COORDINATION WITH LIGHTING, ELECTRICAL, MECHANICAL, FIRE PROTECTION, STRUCTURAL AND ARCHITECTURAL WORK IS CRITICAL FOR COMPLETE PIPING INSTALLATION. CONTRACTOR SHALL PROVIDE NECESSARY OFFSETS IN NEW AND EXISTING PIPING AND ELECTRICAL CONDUIT AS REQUIRED TO ACCOMMODATE NEW WORK. CONTRACTOR SHALL ALLOW FOR ANY CONFLICTS ENCOUNTERED.
3. PIPING LAYOUTS ARE DIAGRAMMATIC AND DO NOT SHOW ALL ELEMENTS OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES ON DIRECTION, ELEVATION AND MINOR OFFSETS NECESSARY FOR COMPLETTE INSTALLATION OF ELEMENTS SHOWN.
4. ALL PRESSURE PIPING SHOWN IS ABOVE THE CEILING UNLESS OTHERWISE NOTED. ALL CONCEALED PIPING SHALL BE PEX-A OR COPPER. EXPOSED PIPING SHALL BE COPPER. LINES SHALL BE ½" UNLESS OTHERWISE NOTED.
5. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF ALL CEILING MOUNTED DEVICES. REFER TO ARCHITECTURAL FLOOR PLANS FOR ALL DIMENSIONS.
6. COORDINATE ACCESS DOOR LOCATIONS WITH GENERAL CONTRACTOR AND ARCHITECT.

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Partial Plumbing Floor Plans - Pit and Platform

Project number	25042
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Drawn by	CA
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P1.03

Scale	As indicated

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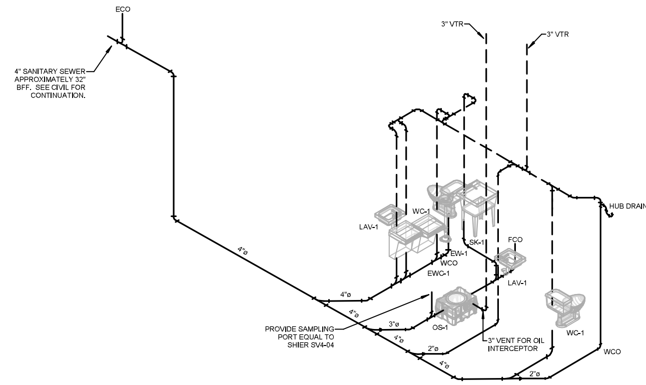

1 | P2.01 Gravity Riser

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Richmond, Kentucky

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Gravity Riser

Project number	25042
Date	04/20/2026
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P2.01

Scale

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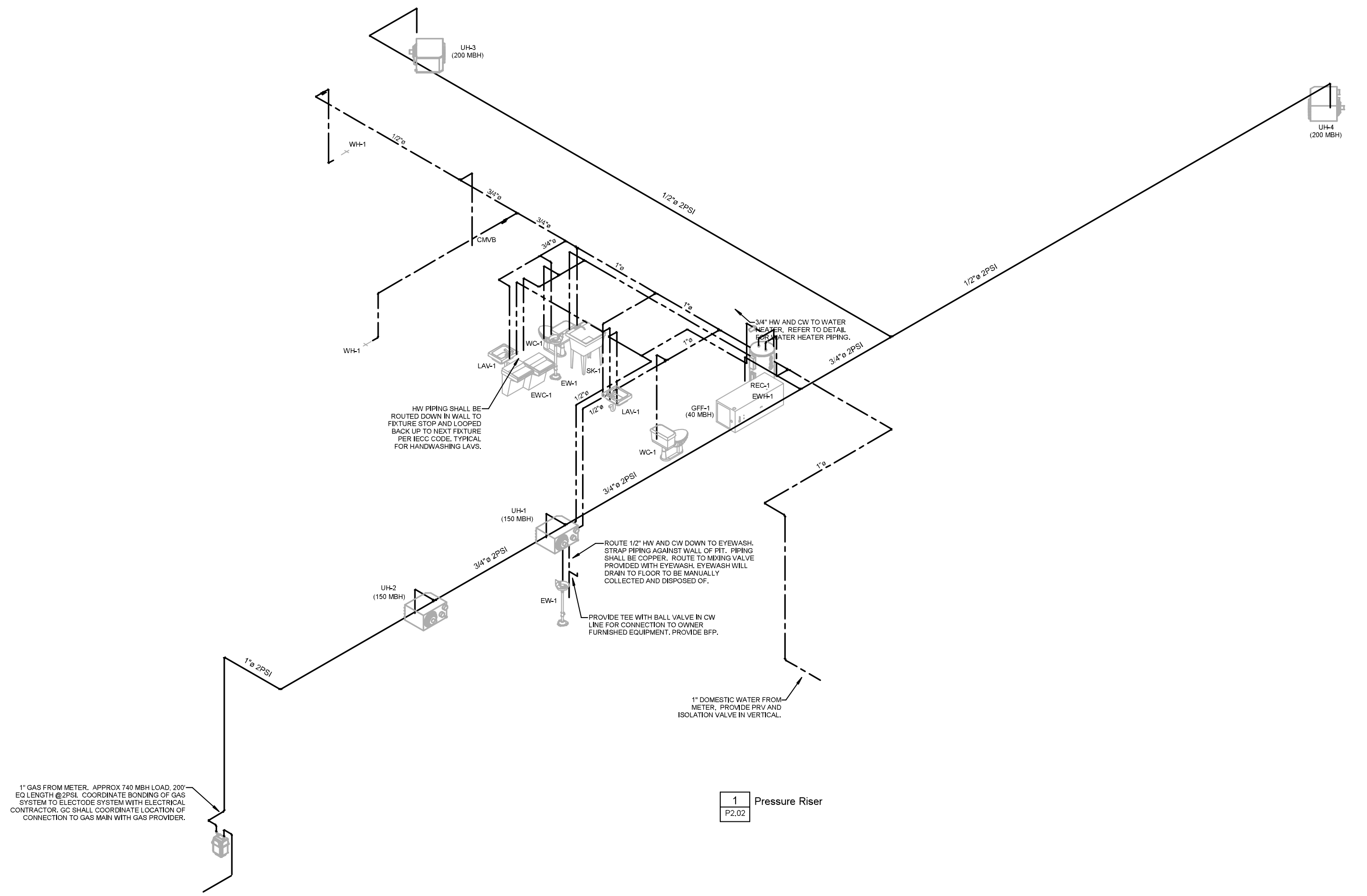

1 P2.02 Pressure Riser

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STATE OF KENTUCKY
JEFFREY BOYER
40070
REGISTERED PROFESSIONAL ENGINEER

4/20/26

Express Oil Change & Tire Engineers

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Pressure Riser

Project number	25042
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Drawn by	CA
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P2.02

Scale

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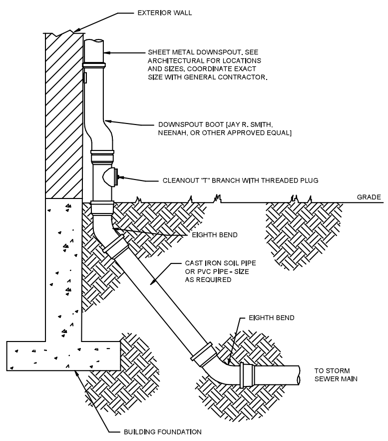
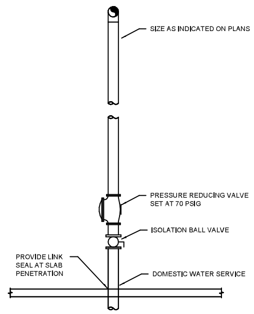
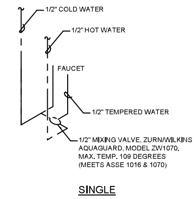


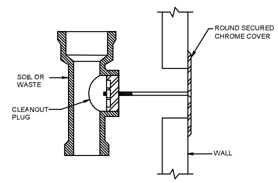
8 P3.01 DOWNSPOUT BOOT DETAIL
NO SCALE



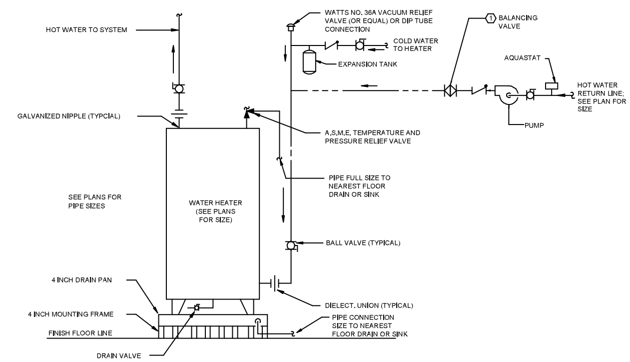
5 P3.01 DOMESTIC WATER ENTRANCE DETAIL
NO SCALE



1 P3.01 TYPICAL LAVATORY MIXING VALVE
SCALE: NONE

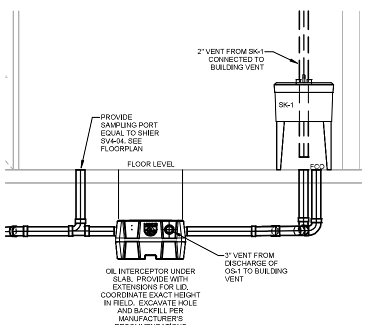


6 P3.01 WALL CLEANOUT
NO SCALE

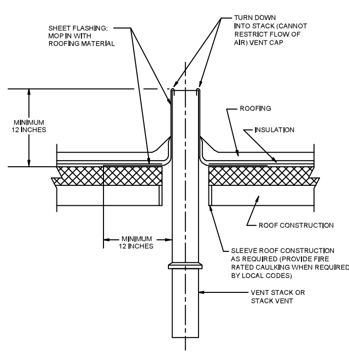


NOTES:
1 SET THE BALANCING VALVE PER MANUFACTURER'S INSTRUCTIONS.

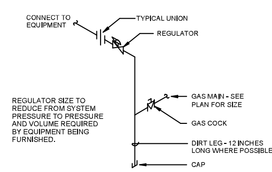
2 P3.01 ELECTRIC WATER HEATER (FLOOR MOUNTED)
NO SCALE



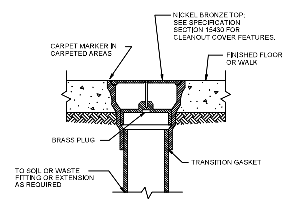
9 P3.01 OIL INTERCEPTOR DETAIL
1/2" = 1'-0"



7 P3.01 VENT THROUGH ROOF DETAIL
NO SCALE



4 P3.01 TYPICAL GAS CONNECTION
NO SCALE



3 P3.01 FLOOR CLEANOUT
NO SCALE

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Plumbing Details

Project number	25042
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LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	FIXTURE QUANTITY	FIXTURE WATTS	FIXTURE TYPE	MTG. TYPE	MTG. HT.	REC. DEPTH	DESCRIPTION
L1P	MAXLITE	BPHE3-U090WCS	LOT	90	LED	P	12' AFF	–	ROUND ECO PENDANT HIGH BAY GEN 3 FIXTURE WITH 12600 LUMEN OUTPUT, 4000K COLOR TEMPERATURE. PROVIDE ALL REQUIRED ACCESSORIES FOR HOOK AND CHAIN MOUNTING.
	APPROVED EQUAL								
L2	MAXLITE	LSV4U23WCSCR	LOT	35	LED	S	C	–	4' LINEAR LED FIXTURE, SURFACE MOUNTED WITH ALUMINUM VAPOR TIGHT HOUSING, SELECTABLE WATTAGE, 4500 LUMEN OUTPUT, 4000K COLOR TEMPERATURE. PROVIDE ALL REQUIRED ACCESSORIES FOR SURFACE MOUNTING. SEE LIGHTING PLANS FOR LOCATIONS AND QUANTITIES.
	APPROVED EQUAL								
L2P	MAXLITE	LSV4U23WCSCR MLCHKLSV15	LOT	35	LED	P	15'5"AFF	–	4' LINEAR LED FIXTURE, PENDANT MOUNTED WITH ALUMINUM VAPOR TIGHT HOUSING, SELECTABLE WATTAGE, 4500 LUMEN OUTPUT, 4000K COLOR TEMPERATURE. PROVIDE ALL REQUIRED ACCESSORIES FOR SUSPENDED MOUNTING. SEE LIGHTING PLANS FOR LOCATIONS AND QUANTITIES.
	APPROVED EQUAL								
L3	MAXLITE	MLFP-2427WCS	LOT	36	LED	LI	C	–	2X4 LAY-IN LED FLAT PANEL FIXTURE WITH SELECTABLE WATTAGE, SELECTABLE COLOR TEMPERATURE, 4000 LUMEN OUTPUT, DIMMABLE DRIVER, UNIVERSAL VOLTAGE.
	APPROVED EQUAL								
L3E	MAXLITE	MLFP-2427WCS-EM	LOT	36	LED	LI	C	–	2X4 LAY-IN LED FLAT PANEL FIXTURE WITH SELECTABLE WATTAGE, SELECTABLE COLOR TEMPERATURE, 4000 LUMEN OUTPUT, DIMMABLE DRIVER, UNIVERSAL VOLTAGE, AND EMERGENCY BATTERY PACK.
	APPROVED EQUAL								
L4	MAXLITE	M55U4W-CSBWCR MVCL40-55W	LOT	38	LED	W	10'AFF	–	FIXED WALL MOUNTED LED FIXTURE WITH BLACK FINISH, DIE-CAST ALUMINUM HOUSING, SELECTABLE COLOR TEMPERATURE, 3512 LUMEN OUTPUT, WIDE DISTRIBUTION. UL LISTED FOR WET LOCATION. NOTE 3.
	APPROVED EQUAL								
L4E	MAXLITE	M55U4W-CSBWCREO MVCL40-55W	LOT	38	LED	W	10'AFF	–	FIXED WALL MOUNTED LED FIXTURE WITH BLACK FINISH, DIE-CAST ALUMINUM HOUSING, SELECTABLE COLOR TEMPERATURE, 3512 LUMEN OUTPUT, WIDE DISTRIBUTION, ELECTRONIC DRIVER, AND EMERGENCY BATTERY PACK. UL LISTED FOR WET LOCATION. NOTE 3.
	APPROVED EQUAL								
L5	PROVIDED BY GENERAL CONTRACTOR		FURNISHED WITH UNIT			R	C	–	RECESSED LED DOWNLIGHT WITH 4000K COLOR TEMPERATURE, 3000 LUMEN OUTPUT, AND EMERGENCY BATTERY PACK. UL LISTED FOR WET LOCATION. FIXTURES ARE PROVIDED BY GENERAL CONTRACTOR AS PART OF THE METAL AWNING SYSTEM.
	PROVIDED BY GENERAL CONTRACTOR								
	PROVIDED BY GENERAL CONTRACTOR								
S1	PROVIDED BY SIGN MANUFACTURER		FURNISHED WITH UNIT			W	NOTE 3	–	WALL MOUNTED LED SIGN LIGHTING FIXTURE. NOTE 1 & 2.
	PROVIDED BY SIGN MANUFACTURER								
	PROVIDED BY SIGN MANUFACTURER								
S2	PROVIDED BY SIGN MANUFACTURER		FURNISHED WITH UNIT			W	NOTE 3	–	WALL MOUNTED LED LIGHT FIXTURE. NOTE 1 & 2.
	PROVIDED BY SIGN MANUFACTURER								
	PROVIDED BY SIGN MANUFACTURER								
BL	MAXLITE	EMT-2WH	FURNISHED WITH UNIT			W	9'AFF	–	WALL MOUNTED TWO HEAD LED EMERGENCY FIXTURE WITH WHITE THERMOPLASTIC HOUSING, 1100 LUMEN OUTPUT, SELF DIAGNOSTICS, AND EMERGENCY BATTERY PACK. SEE LIGHTING PLANS FOR LOCATION AND QUANTITIES.
	APPROVED EQUAL								
XL	MAXLITE	EX-GW	FURNISHED WITH UNIT			W	AD	–	WHITE THERMOPLASTIC LED EXIT SIGN WITH SINGLE FACE, GREEN LETTERS, UNIVERSAL MOUNTING, SELF DIAGNOSTICS, AND EMERGENCY BATTERY PACK. SEE LIGHTING PLAN FOR LOCATION AND QUANTITIES.
	APPROVED EQUAL								

ABBREVIATIONS: LI-LAY-IN C-CEILING LG-LENS GASKETING GMF-INTERNAL SLOW BLOW FUSE FL-FLUORESCENT MH-METAL HALIDE HO-HIGH OUTPUT AFF-ABOVE FINISH FLOOR P-PENDENT FC-FROM CEILING R-RECESSED AM-ABOVE MIRROR W-WALL AD-ABOVE DOOR S-SURFACE DTT-DOUBLE TWIN TUBE FLUORESCENT CA-CANOPY TC-TOP OF METAL CANOPY AW-ABOVE WINDOW VA-VERIFY WITH ARCHITECT

LIGHTING FIXTURE SCHEDULE GENERAL NOTES:

1. FIXTURE OUTLET BOX LOCATIONS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC AND APPROXIMATE IN LOCATION. EXACT POSITION OF THE OUTLET BOX SHALL DEPEND ON THE FIXTURE AND THE MOUNTING DETAIL.
2. MOUNTING AND SUPPORT DETAILS FOR LIGHTING FIXTURES SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER BEFORE THE FIXTURES ARE INSTALLED. NO COMBUSTIBLE MATERIALS SHALL BE USED.
3. WET LOCATION FIXTURES SHALL BE MOUNTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION SO AS TO ENSURE THE PREVENTION OF MOISTURE FROM ENTERING THE FIXTURE. IN ADDITION, EACH CONDUIT ENTRY WILL BE SEALED BY USE OF AN APPROVED SWEDGE FITTING WITH A NEOPRENE SEAL, AS MANUFACTURED BY JOHN REMKE COMPANY OR APPROVED EQUAL.
4. OUTLET BOXES SERVING WET LOCATION FIXTURE SHALL BE CODE SIZE, WITH A WATERTIGHT SOLID CAST TOP. CONDUIT ENTRIES SHALL BE THREADED.
5. FIXTURE MOUNTING HEIGHTS IN SCHEDULE ARE TYPICAL UNLESS NOTED OTHERWISE ON DRAWINGS.
6. FOR LIGHTING PACKAGE PRICING, CONTACT THE FOLLOWING:

   MIKE MCMAKEN
   REXEL ENERGY SOLUTIONS
   (M) 906-235-2979
   MIKE.MCMAKEN@REXELENERGY.COM

LIGHTING FIXTURE SCHEDULE NOTES:

1. INSTALLED BY SIGN COMPANY.
2. VERIFY MOUNTING HEIGHT WITH SIGN COMPANY BEFORE ROUGHING IN.
3. FIXTURE SHALL BE MOUNTED SO THAT THE BOTTOM OF THE FIXTURE IS AT 10' AFF TO ALIGN WITH BANDING ON EXTERIOR OF BUILDING.

GENERAL NOTES:

1. VERIFY ALL DOOR SWINGS WITH ARCHITECTURAL BEFORE ROUGHING IN LIGHT SWITCHES TO ENSURE PROPER SWITCH LOCATION. VERIFY ALL CASEWORK DETAILS TO ENSURE THAT ALL OUTLETS ABOVE CASEWORK ARE AT THE PROPER HEIGHT.
2. SERVICE TO THE BUILDING SHALL BE 120/240 VOLTS, 1PHASE, 3WIRE.
3. ALL CONDUIT SHALL BE RUN CONCEALED UNLESS SPECIFICALLY SHOWN EXPOSED, OR INSTALLED IN EXPOSED CEILING.
4. THE CONTRACTOR SHALL CHECK ALL LIGHTING FIXTURES FOR EXACT TYPE MOUNTING AND SPACE REQUIRED BEFORE ROUGHING IN.
5. THE ELECTRICAL CONTRACTOR SHALL WORK CLOSELY WITH THE GENERAL CONTRACTOR AND VERIFY EXACT TYPE OF EQUIPMENT TO BE INSTALLED AND THE DIMENSIONS WHICH MAY AFFECT THE EXACT PLACEMENT OF ELECTRICAL WORK.
6. VERIFY THE EXACT LOCATION OF ALL MOTORS AND EQUIPMENT BEFORE ROUGHING IN. LIKEWISE APPRAISE ALL TRADES OF THE LOCATIONS OF ELECTRICAL WORK THAT AFFECTS WALL THICKNESS, PLUMBING, MECHANICAL, ETC.
7. ALL CONDUIT STUBBED OUT FOR FUTURE SHALL BE CAPPED AND HAVE LOCATION MARKED WITH A 2" SQUARE, PAINTED RED, WITH CONDUIT NAME AND SIZE SHOWN IN WHITE.
8. ALL BRANCH CIRCUITS AND FEEDERS SHALL HAVE AN INSULATED GROUND WIRE PULLED IN THE CONDUIT WITH CURRENT CONDUCTOR UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE GROUNDING CONDUCTOR SHALL BE SIZED ACCORDING TO TABLE 250-122 OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE UNLESS INDICATED TO BE LARGER IN THE SPECIFICATIONS OR PLANS.
9. DO ALL WORK IN COMPLIANCE WITH ALL APPLICABLE CODES, LAWS AND ORDINANCES, THE NATIONAL ELECTRICAL CODE (HEREINAFTER REFERRED TO AS "CODE" OR "NEC"), THE AMERICANS WITH DISABILITIES ACT, AND THE REGULATIONS OF THE LOCAL AUTHORITIES HAVING JURISDICTION AND, WHERE APPLICABLE, UTILITY COMPANIES. OBTAIN AND PAY FOR ANY AND ALL REQUIRED PERMITS, INSPECTIONS, CERTIFICATES OF INSPECTIONS AND APPROVAL, AND THE LIKE, AND DELIVER SUCH CERTIFICATES TO THE OWNER.
10. THE MAIN SERVICE SHALL HAVE THE GROUNDED CONDUCTOR (NEUTRAL) GROUNDED TO THE GROUNDING ELECTRODE SYSTEM AT THE SUPPLY SIDE OF THE SERVICE DISCONNECTING MEANS BY A GROUNDING ELECTRODE CONDUCTOR NOT SMALLER THAN THAT SHOWN IN TABLE 250-66 OF THE NEC. THE GROUNDED CONDUCTOR (NEUTRAL), THE GROUNDING ELECTRODE CONDUCTOR, AND THE EQUIPMENT GROUNDING CONDUCTOR CONNECTIONS SHALL BE MADE INSIDE THE SERVICE ENTRANCE EQUIPMENT.
11. ALL CONDUCTORS SHALL BE COPPER, EXCEPT AS SHOWN ON DRAWINGS.
12. MINIMUM CONDUCTOR SIZE SHALL BE #12.
13. ALL CONDUIT INSTALLED INDOORS SHALL BE EMT, OTHERWISE SHALL BE IMC.
14. SWITCH AND RECEPTACLE COVER PLATES SHALL BE STAINLESS STEEL.
15. ALL DEVICES SHALL BE GRAY.
16. ALL FUSES SHALL BE DUAL ELEMENT, TIME DELAY, RATED 100,000 AIC.
17. ALL DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE.
18. ALL CONDUCTORS SHALL BE DUAL RATED THHN/THWN TYPE INSULATION.
19. GUTTERS (WIREWAYS) SHALL BE SIZED AS SHOWN OR AS REQUIRED BY CODE. ALL GUTTERS SHALL HAVE HINGED COVERS WITH APPROVED FASTENING DEVICES & SHALL BE A STANDARD MANUFACTURED ITEM WITH U.L. LABEL. GUTTERS FROM AC DUCT MATERIAL ARE NOT ACCEPTABLE. GUTTERS SHALL BE AS MANUFACTURED BY HOFFMAN, SQUARE "D", B & C OR APPROVED EQUAL. GUTTER TAPS SHALL BE ILSCO TYPE GTA OF PTA WITH GTC OR PTC INSULATING COVERS.
20. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR, PRIOR TO BID, TO REAFFIRM WITH THE UTILITY COMPANIES INVOLVED, THAT THE LOCATION, ARRANGEMENT (AND THE POWER COMPANY: VOLTAGE, PHASE & METERING REQUIRED) AND CONNECTIONS AT THE UTILITY SERVICE ARE IN ACCORDANCE WITH THEIR REGULATIONS & REQUIREMENTS. IF THEIR REQUIREMENTS ARE AT A VARIANCE WITH THESE DRAWINGS & SPECIFICATIONS, THE CONTRACT PRICE SHALL INCLUDE ANY ADDITIONAL COST NECESSARY TO MEET THOSE REQUIREMENTS WITHOUT EXTRA COST TO THE OWNER AFTER A CONTRACT HAS BEEN ENTERED INTO.
21. ON MANY PROJECTS, THE UTILITY COMPANY MAY LEVY CHARGES DUE TO LOCATION, SIZE OR TYPE OF SERVICE INVOLVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THESE CHARGES, UNLESS SUCH CHARGES ARE NOT AVAILABLE PRIOR TO BID & CONTRACTOR SO DOCUMENTS AT BID OPENING. SHOULD THE THE COST NOT BE AVAILABLE, PRIOR TO BID, THE CONTRACTOR SHALL SUBMIT A LETTER SO STATING WITH HIS BID.
22. ARRANGE WITH UTILITY COMPANIES FOR SUCH SERVICE AS SHOWN OR HEREIN SPECIFIED & INSTALLATION OF METER WHERE SHOWN. FURNISH WITH SHOP DRAWINGS, A SIGNED DOCUMENT FROM UTILITY COMPANIES DESCRIBING THE LOCATION & TYPE OF SERVICES TO BE FURNISHED AND ANY REQUIREMENTS THEY MAY HAVE. THIS DOCUMENT SHALL BE SIGNED FOR EACH UTILITY COMPANY BY A PERSON RESPONSIBLE FOR GRANTING SUCH SERVICES.
23. PAY ALL CHARGES (IF ANY) IN CONNECTION THEREWITH, INCLUDING PERMANENT METER DEPOSIT. METER DEPOSIT WILL BE REFUNDED TO THE CONTRACTOR AT TIME OF OWNER'S ACCEPTANCE.
24. ALL ELECTRICAL WIRING AND EQUIPMENT WILL BE SUBJECT TO THE APPROVAL OF THE CERTIFIED ELECTRICAL INSPECTOR IN COMPLIANCE WITH THE NATIONAL ELECTRIC CODE. A COPY OF THE ELECTRICAL INSPECTOR'S CERTIFICATE OF COMPLIANCE (GREEN STICKER) WILL BE REQUIRED AT THE COMPLETION OF THE PROJECT.

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STATE OF KENTUCKY
GIDEON
WAMAE
39747
LICENSED
PROFESSIONAL ENGINEER
4/20/26

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2026
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General Notes & Fixture Schedules

Project number	25042
Date	2/27/2026
Drawn by	TH
Checked by	GW

GIDEON WAMAE, P.E.
4120 OVERLOOK CIRCLE, TRUSSVILLE, AL 35173
GWAMAE@GW-ENG.COM | 205.413.4112

E100

Scale NO SCALE

4/24/2026 4:02:47 PM

GRAPHICAL ELECTRICAL SYMBOLS

BRANCH CIRCUIT SYMBOLS

	BRANCH CIRCUIT	HOMERUN TO 20A, 1POLE CIRCUIT BREAKER IN PANELBOARD OR DEVICE NOTED. WIRE SIZE IS 2#12&1#12GRD–3/4"C.
	BRANCH CIRCUIT	CONCEALED IN CEILING OR WALL.
	BRANCH CIRCUIT	CONCEALED IN FLOOR.
EX	BRANCH CIRCUIT	EXISTING CONDUIT BARS DENOTE NEW CONDUCTORS.
	BRANCH CIRCUIT	EXPOSED.
○	BRANCH CIRCUIT	RISER UP.
●	BRANCH CIRCUIT	RISER DOWN.

BRANCH CIRCUIT NOTES

	BRANCH CIRCUIT	3#12&1#12GRD–3/4"C
	BRANCH CIRCUIT	4#12&1#12GRD–3/4"C
10	BRANCH CIRCUIT	2#10&1#10GRD–3/4"C
10	BRANCH CIRCUIT	3#10&1#10GRD–3/4"C

SIZE CONDUIT PER NEC FOR GREATER NUMBER OF CONDUCTORS OR AS NOTED. THE NUMBER IN THE CIRCUIT INDICATES AWG WIRE SIZE AND THE HASHMARKS INDICATE THE NUMBER OF WIRES REQUIRED. EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH NEC TABLE 250–122. THE NUMBER OF HASH MARKS DO NOT INCLUDE EQUIPMENT GROUNDING CONDUCTOR.

GENERAL SYMBOLS

J	JUNCTION BOX.
J	WALL MOUNTED JUNCTION BOX.
J	WALL MOUNTED JUNCTION BOX WITH FLEXIBLE CONNECTION TO EQUIPMENT.
TV	ONE GANG BOX WITH 3/4"C. STUB UP ABOVE ACCESSIBLE CEILING WITH COAXIAL CABLE AND TV JACKS.
$\$_T$	MANUAL MOTOR STARTER WITH THERMAL PROTECTION.
	SAFETY SWITCH, NON–FUSED.
	SAFETY SWITCH, FUSED.
	CIRCUIT BREAKER MOUNTED IN NEMA 1 ENCLOSURE UNLESS NOTED OTHERWISE
	LIGHTING PANEL AND/OR RECEPTACLE PANEL.
	POWER PANEL.
TR	TRANSFORMER.
	GROUND.

GENERAL ABBREVIATIONS

H	MOUNTING HEIGHT ABOVE FINISHED FLOOR.
AF	ABOVE FINISHED FLOOR.
WP	WEATHER PROOF – NEMA 3R
RT	RAIN TIGHT – NEMA 4.
EP	EXPLOSION PROOF.
TP	TAMPER PROOF.
A	MOUNT ABOVE COUNTER.
BC	MOUNT BELOW COUNTER.
F	FLUSH MOUNTED.
SLD	SEE SINGLE LINE DIAGRAM.
GFI	GROUND FAULT INTERRUPTING.
C	CONDUIT.
EC	EMPTY CONDUIT
GC	FLEXIBLE CONDUIT.
SFC	SEALTITE FLEXIBLE CONDUIT.
EMT	ELECTRICAL METALLIC TUBING.
IMC	INTERMEDIATE METALLIC CONDUIT.
RG	RIGID CONDUIT.
PVC	NONMETALLIC RIGID CONDUIT.
EX	EXISTING.
XR	EXISTING TO BE REMOVED
RL	EXISTING TO BE REMOVED AND RELOCATED.
RQ	EXISTING TO BE REMOVED. EXTEND CIRCUIT CONDUCTORS AS REQUIRED AND INSTALL FINISHED BLANK COVER.
RR	EXISTING TO BE REMOVED AND REPLACED WITH NEW.
RL'D	RELOCATED POSITION.
EM	EMERGENCY BATTERY PACK

LIGHTING FIXTURE & CONTROL SYMBOLS

1 A	CEILING OUTLET	FIXTURE TYPE "A" CIRCUIT #1.
⊗	CEILING OUTLET	EXISTING.
	CEILING OUTLET	FLUORESCENT FIXTURE, SINGLE OR CONTINUOUS, LENGTHS AS SHOWN.
	CEILING OUTLET	FLUORESCENT STRIP.
	WALL OUTLET	BRACKET TYPE FIXTURE.
	WALL OUTLET	FLUORESCENT BRACKET TYPE FIXTURE.
$	SWITCH OUTLET	A.C. TYPE, SINGLE POLE, 20A, 125/277V.
$\$_3$	SWITCH OUTLET	A.C. TYPE, THREE WAY, 20A, 125/277V.
$\$_4$	SWITCH OUTLET	A.C. TYPE, FOUR WAY, 20A, 125/277V.
$\$_{OS}$	SWITCH OUTLET	180° DUAL TECH SENSOR LIGHTING MOTION DETECTOR, WALL MOUNTED. WATT STOPPER #DW–100.
PP	SWITCH OUTLET	LIGHTING MOTION DETECTOR POWER PACK. INSTALL ABOVE ACCESSIBLE CEILING.
M	SWITCH OUTLET	LIGHTING MOTION DETECTOR, CEILING MOUNTED.

SWITCH OUTLET NOTES

"a" "b" ETC.	FIXTURE CORRESPONDS TO A SWITCH DENOTED WITH THE SAME LOWER CASE LETTER.

EXIT LIGHT SYMBOLS

XL	WALL OR CEILING MOUNTED, SINGLE FACE, NO ARROW.
XL	CEILING MOUNTED, DOUBLE FACE, LEFT OR RIGHT ARROWS.
XL	WALL OR CEILING MOUNTED, SINGLE FACE, LEFT OR RIGHT ARROW.
XL	WALL OR CEILING MOUNTED, SINGLE FACE, LEFT AND RIGHT ARROWS.
XL	CEILING MOUNTED, DOUBLE FACE, LEFT AND RIGHT ARROWS.

RECEPTACLE OUTLET SYMBOLS

	WALL OUTLET	DUPLEX RECEPTACLE, 20A, 125V, 3WIRE, NEMA 5–20R.
	WALL OUTLET	DOUBLE DUPLEX RECEPTACLE, 20A, 125V, 3WIRE, NEMA 5–20R, SINGLE PLATE.
	WALL OUTLET	DUPLEX RECEPTACLE, 20A, 125V, NEMA 5–20R, GFCI, WEATHER–RESISTANT, WITH EXTRA DUTY IN–USE WEATHERPROOF COVER. HUBBELL CATALOG #GFR5362SGGY/WP8M
	WALL OUTLET	SINGLE RECEPTACLE, 20A, 250V, 3WIRE, NEMA 6–20R.
	WALL OUTLET	SINGLE RECEPTACLE, 20A, 250V, 3WIRE, NEMA L6–20R.
	FLOOR OUTLET	FLUSH MOUNTED IN–GRADE WITH DOUBLE DUPLEX RECEPTACLE, 20A, 125V, 3WIRE, NEMA 5–20R, FOUR SPACES FOR KEYSTONE CONNECTORS, AND BRUSHED BRASS COVER LEGRAND RFB4E OR EQUAL.
	CEILING OUTLET	DUPLEX RECEPTACLE, 20A, 125V, 3WIRE, NEMA 5–20R.

RECEPTACLE OUTLET NOTES

"G"	GROUND FAULT INTERRUPTER.
"GA"	GROUND FAULT INTERRUPTER, MOUNTED ABOVE COUNTER.
"A"	MOUNTED ABOVE COUNTER.
"BC"	MOUNTED BELOW COUNTER.
"DF"	FOR DRINKING FOUNTAIN.

VOICE/DATA OUTLET & CONDUIT SYMBOLS

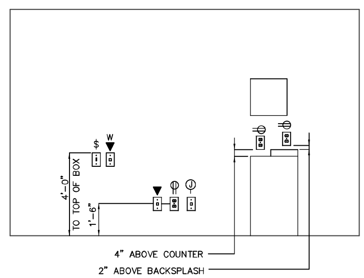
▶	VOICE/DATA OUTLET	WALL MOUNTED, WITH 3/4" CONDUIT HOMERUN TO NEAREST TELEPHONE CABINET OR BACKBOARD UNLESS NOTED OTHERWISE.
	VOICE/DATA OUTLET	TELEPHONE BACKBOARD – 3/4" PLYWOOD PAINTED WITH TWO COATS OF FIRE RETARDANT PAINT, 48"x96" HIGH, UNLESS SHOWN OTHERWISE.

VOICE/DATA OUTLET NOTES

"A"	MOUNTED ABOVE COUNTER.
"BC"	MOUNTED BELOW COUNTER.

NOTES:

1. INDICATED MOUNTING HEIGHTS ARE FROM FINISHED FLOOR TO CENTERLINE OF OUTLET BOX, UNLESS OTHERWISE NOTED.
2. REFER TO ARCHITECTURAL DETAILS FOR ADDITIONAL REQUIREMENTS.
3. INSTALL OUTLETS THAT ARE IN CLOSE PROXIMITY ON THE SAME CENTERLINE.
4. MOUNTING HEIGHTS SHOWN HERE ARE TYPICAL UNLESS NOTED OTHERWISE ON DRAWINGS.



DETAIL
TYPICAL MOUNTING HEIGHTS
NOT TO SCALE

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FINAL

No.	Description	Date
IFP-0	Issued for Permit	02/27/2026
IFB-0	Bid Set/ AHJ Resub.	04/20/2026

2026
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Symbol Legends and Details

Project number	25042
Date	2/27/2026
Drawn by	TH
Checked by	GW

E101

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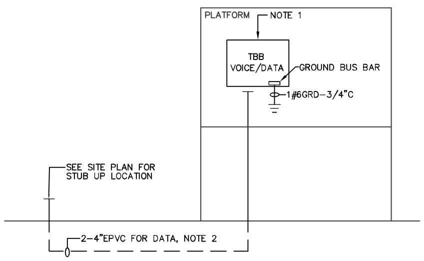
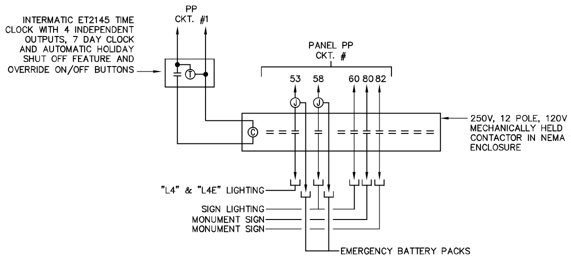
DETAIL
ARC FLASH HAZARD WARNING LABEL
NOT TO SCALE

NOTES:

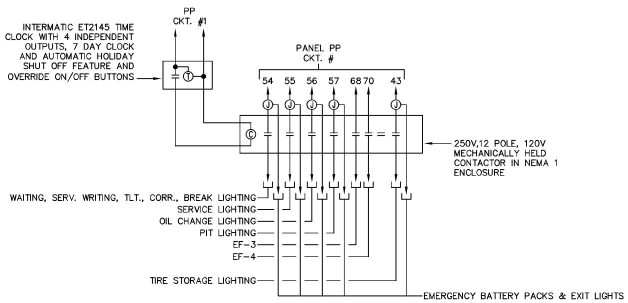
1. 48"x48" FREE STANDING TELEPHONE BACKBOARD. PROVIDE ACCESS AND WORK SPACE CLEARANCE AS REQUIRED BY LOCAL TELECOM UTILITY COMPANY.
2. CONDUIT ELBOWS SHALL BE SWEEPING WITH NO HARD ANGLES.



SINGLE LINE DIAGRAM
AUXILIARY
NOT TO SCALE



WIRING DIAGRAM
CONTACTOR C-2
NOT TO SCALE



WIRING DIAGRAM
CONTACTOR C-1
NOT TO SCALE

PANEL LOAD SUMMARY													
Panel: PP (SECTION I)													
Equipment	LIGHT	RCPT	O/M	CB SIZE	CIRCUIT #	PHASE A	PHASE B	CIRCUIT #	CB SIZE	LIGHT	RCPT	O/M	Equipment
CONTACTOR C-1 & C-2			100	20/1	1	1300		2	20/1	1200			SERVICE LIGHTING
OUTDOOR RECEPTACLE		200		20/1	3		800	4	20/1		600		SERVICE WRITING RECEP.
WAITING ROOM RECEP.		800		20/1	5	1600		6	20/1		800		MANAGER RECEPTACLE
TOILET RECEP.		800		20/1	7		1000	8	20/1		200		BREAK RECEPTACLE
SERVICE RECEPTACLE		400		20/1	9	600		10	20/1		200		BREAK RECEPTACLE
SERVICE RECEPTACLE		400		20/1	11		600	12	20/1		200		BREAK FRIDGE RECEPTACLE
SERVICE RECEPTACLE		400		20/1	13	800		14	20/1		400		SERVICE RECEPTACLE
SERVICE RECEPTACLE		400		20/1	15		800	16	20/1		400		COFFEE MAKER
TIRE CHANGER		900		20/2	17	3900		18	30/2		3000		ALIGNMENT LIFT
		900			19		3900	20			3000		
10K LIFT		1440		20/2	21	2880		22	20/2		1440		10K LIFT
		1440			23		2880	24			1440		
10K LIFT		1440		20/2	25	2880		26	20/2		1440		10K LIFT
		1440			27		2880	28			1440		
12K LIFT		1440		20/2	29	2640		30	20/2		1200		WHEEL BALANCER
		1440			31		2640	32			1200		
AIR COMPRESSOR		3360		60/2	33	3760		34	20/1		400		MANAGERS RECEPTACLE
		3360			35		3760	36	20/1		400		SERVICE DESK RECEPT.
IRRIGATION CONTROLLER		200		20/1	37	400		38	20/1		200		EQUIPMENT PLATFORM RECEPT
OIL CHANGE RECEPTACLE		600		20/1	39		1200	40	20/1		600		OIL CHANGE RECEPTACLE
PIT SUMP PUMP		200		20/1	41	400		42	20/1		200		OIL CHANGE DESK RECEP.
Sub-Total	0	21560	100			21160	20460			1200	18760	0	Sub-Total

	TOTAL CONNECTED LOAD PER PHASE	
LOAD TYPE	Phase A	Phase B
LIGHTING	1200.00	0.00
RECEPTACLES	19860.00	20460.00
MOTORS/OTHER	100.00	0.00
TOTAL	21160.00	20460.00

TOTAL CONNECTED LIGHTING LOAD	1.20	KVA
TOTAL CONNECTED RECEPTACLE LOAD	40.32	KVA
TOTAL CONNECTED MOTOR/OTHER LOAD	0.10	KVA
TOTAL CONNECTED LOAD	41.62	KVA
* Diversified per NEC Table 220.44.		

ENCLOSURE	NEMA 1
MOUNTING	SURFACE
MAIN TYPE	ML
SIZE	400A
FEED THRU	YES
FEED	BOTTOM
BUS RATING	400A
SERVICE RATED	NO
MIN FULL EQUIP KAIC RATING	22
TYPE	LOAD CENTER
MANUFACTURER	
OTHER	

VOLTS 120/ 240 V 1 Phase, 3 Wire & Grd Bus Bar

PANEL LOAD SUMMARY													
Panel: PP (SECTION II)													
Equipment	LIGHT	RCPT	O/M	CB SIZE	CIRCUIT #	PHASE A	PHASE B	CIRCUIT #	CB SIZE	LIGHT	RCPT	O/M	Equipment
STORAGE LIGHTING	800			20/1	43	1000		44	20/1		200		OIL CHANGE DESK RECEP.
WORK ROOM DESK RECEP.		200		20/1	45		400	46	20/1		200		OIL CHANGE DESK RECEP.
EXTERIOR RECEPTACLE		200		20/1	47	200		48	20/1				SPARE
PIT RECEPTACLE		600		20/1	49		800	50	20/1		200		PIT RECEPTACLE
SPARE				20/1	51	400		52	20/1		400		TBB RECEPTACLE
EXTERIOR LIGHTING	150			20/1	53		470	54	20/1	320			INTERIOR LTG./EF1&2
SERVICE LIGHTING	1638			20/1	55	2366		56	20/1	728			OIL CHANGE LIGHTING
PIT LIGHTING	540			20/1	57		1890	58	20/1	1350			SIGN LIGHTING
SPARE				20/1	59	400		60	20/1	400			SIGN LIGHTING
FUTURE EV CHARGER				50/2	61		50	62	20/1			50	REC-1
					63	1680		64	25/2			1680	CU-1
SPARE				20/1	65		1680	66				1680	
EWH-1			2250	25/2	67	3906		68	20/1			1656	EF-3
			2250		69		3906	70	20/1			1656	EF-4
UH-3 & UH-4			600	20/1	71	800		72	20/1		200		EXTERIOR RECEPTACLE
UH-1 & UH-2			51	20/1	73		901	74	15/1			850	GFF-1
DRINKING FOUNTAIN		200		20/1	75	200		76	20/1				SPARE
SPARE				20/1	77		400	78	20/1		400		LOT BELL
SPARE				20/1	79	100		80	20/1			100	MONUMENT SIGN
LIFT RECEPTACLE		600		20/1	81		700	82	20/1			100	MONUMENT SIGN
LIFT RECEPTACLE		600		20/1	83			84	20/1				SPARE
Sub-Total	3128	2400	6151			11052	11197			2798	1600	7772	Sub-Total

	TOTAL CONNECTED LOAD PER PHASE		DEMAND FACTOR	DEMAND LOAD (VA)	
LOAD TYPE	Phase A	Phase B		Phase A	Phase B
LIGHTING	4766.00	2360.00	1.25	5957.50	2950.00
RECEPTACLES	21060.00	22660.00	*	13030.00	13830.00
MOTORS/OTHER	6386.00	6637.00	1.00	6386.00	6637.00
TOTAL	32212.00	31657.00		25373.50	23417.00

TOTAL CONNECTED LIGHTING LOAD	5.93	KVA
TOTAL CONNECTED RECEPTACLE LOAD	4.00	KVA
TOTAL CONNECTED MOTOR/OTHER LOAD	12.92	KVA
TOTAL CONNECTED LOAD	22.85	KVA
* Diversified per NEC Table 220.44.		

WIRE SIZE CALCULATIONS		
LARGEST PHASE DEMAND	25.37	KVA
NO. OF PHASES	2.00	
DEMAND LOAD	50.75	KVA
TOTAL DEMAND LOAD	50.75	KVA
SUPPLY VOLTAGE	240.00	V
DEMAND AMPS	211.45	AMPS
MINIMUM CCT AMPS	211.45	AMPS

ENCLOSURE	NEMA 1
MOUNTING	SURFACE
MAIN TYPE	ML
SIZE	400A
FEED THRU	YES
FEED	TOP
BUS RATING	400A
SERVICE RATED	NO
MIN FULL EQUIP KAIC RATING	22
TYPE	LOAD CENTER
MANUFACTURER	
OTHER	

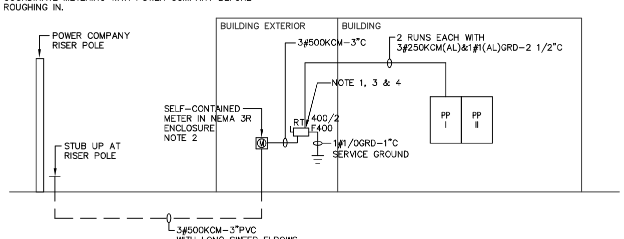
VOLTS 120/ 240 V 1 Phase, 3 Wire & Grd Bus Bar

GENERAL NOTES:

1. COORDINATE SERVICE SECONDARY FROM UTILITY TRANSFORMER TO METER WITH POWER COMPANY BEFORE BID AND PRICING. PROVIDE PER POWER COMPANY REQUIREMENTS.
2. EQUIPMENT WITH ALUMINUM FEEDERS SHALL BE PROVIDED WITH DUAL RATED TERMINALS.
3. PROVIDE 120/240V, 1Ø, 400A, UNDERGROUND SERVICE.
3. PROVIDE 2"X3" ENGRAVED LABEL WITH BLUE LETTERING INDICATING MAXIMUM AVAILABLE FAULT CURRENT AND DATE OF CALCULATION.
4. SERVICE DISCONNECT SHALL BE MOUNTED SUCH THAT CENTER OF OPERATING HANDLE SHALL NOT BE LESS THAN 4' AND NOT MORE THAN 6'-7" ABOVE GRADE.

NOTES:

1. SERVICE ENTRANCE RATED DISCONNECT SWITCH, NEMA 3R ENCLOSURE
2. COORDINATE METERING WITH POWER COMPANY BEFORE ROUGHING IN.



SINGLE LINE DIAGRAM
POWER
NOT TO SCALE

EQUIPMENT ELECTRICAL REQUIREMENTS SCHEDULE

EQUIPMENT	LOCATION	KW	HP	AMP	CIRCUIT BREAKER	DISCONNECT SWITCH/FUSE	CONDUCTORS & CONDUIT	VOLTAGE	CONNECTION
(4) 10K LIFT	SERVICE 11	–	2	12.0	20/2	–	2#12&1#12GRD-3/4"C	240V,1Ø	HARDWIRED
12K LIFT	SERVICE 11	–	2	12.0	20/2	–	2#12&1#12GRD-3/4"C	240V,1Ø	HARDWIRED
AIR COMPRESSOR	STORAGE 12	–	5	28.0	60/2	60/2, F40	2#8&1#10GRD-3/4"C	240V,1Ø	HARDWIRED
TIRE CHANGER	SERVICE 11	–	–	6.0	20/2	30/2	2#12&1#12GRD-3/4"C	240V,1Ø	HARDWIRED
WHEEL BALANCER	SERVICE 11	–	–	20.0	20/2	30/2	2#12&1#12GRD-3/4"C	240V,1Ø	HARDWIRED
ALIGNMENT LIFT	SERVICE 11	–	–	26.0	30/2	30/2, F30	2#10&1#10GRD-3/4"C	240V,1Ø	HARDWIRED

NOTES:

1. CONTRACTOR SHALL COORDINATE REQUIREMENTS SHOWN HERE WITH OWNER BEFORE ROUGHING IN. PROVIDE ELECTRICAL PER OWNER EQUIPMENT VENDOR REQUIREMENTS.

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FINAL

No.	Description	Date
IFP-0	Issued for Permit	02/27/2026
IFB-0	Bid Set/ AHJ Resub.	04/20/2026

2026
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Single Line Diagram & Panelboard Schedules

Project number	25042
Date	2/27/2026
Drawn by	TH
Checked by	GW

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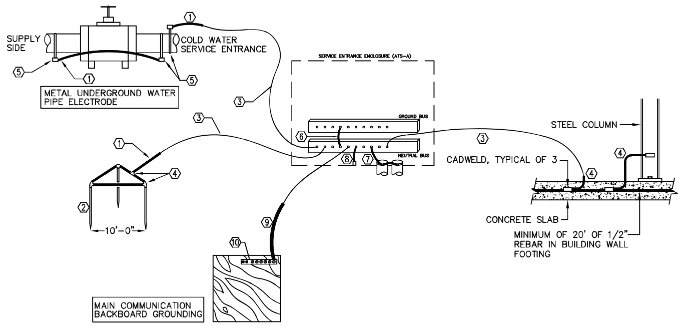


GROUNDING SYSTEM DETAIL

NOT TO SCALE

GROUNDING SYSTEM DETAIL – KEY NOTES

1. 4/0 BARE GROUNDING ELCTRODE CONDUCTOR.
2. 3/4"x10'-0" CLAD STEEL GROUND ROD, DRIVEN 24" BELOW GRADE, MINIMUM.
3. 4/0 BARE GROUNDING ELECTRODE CONDUCTOR IN 2"PVC-40.
4. EXOTHERMIC WELD CONNECTOR:
   TWO CABLES TO GROUND ROD, CADWELD #GT OR #GY
   CABLE TO CABLE TEE, CADWELD #TA
   ONE CABLE TO GROUND ROD, CADWELD #GR
5. CAST BRONZE, UL LISTED GROUND CLAMP, O-Z/GEDNEY TYPE-G.
6. BONDING JUMPER, SIZED BY EQUIPMENT MANUFACTURER PER NEC 250-66.
7. BONDING JUMPER TO GROUNDING BUSHING, AND BONDING JUMPERS FROM CONDUIT TO CONDUIT. ALL CONDUIT CONNECTED TO THE SERVICE ENTRANCE ENCLOSURE SHALL BE BONDED, SIZED PER NEC 250.
8. MAIN BONDING JUMPER, SIZED BY MANUFACTURER PER 250-66.
9. 4/0 BARE BONDING JUMPER.
10. 6 CONDUCTOR GROUND BUS, COPPER OR ALUMINUM RATED, ILSCO #PDE.

TYPICAL FEEDER DESIGNATION

_#_ & 1#_GRD – _C (_A/_P)

- NUMBER OF CIRCUIT CONDUCTORS
- SIZE OF CIRCUIT CONDUCTORS "AWG UNLESS NOTED kCMIL"
- PROTECTIVE DEVICE TO WHICH THE CIRCUIT IS CONNECTED
- SIZE OF CONDUIT
- SIZE OF GROUNDING CONDUCTOR

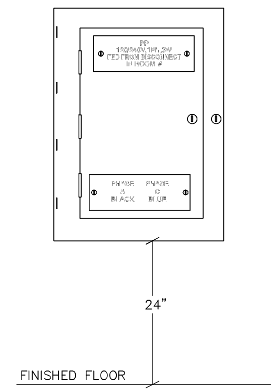
NOTE:

1. CONDUCTOR INSULATION TO BE 600V UNLESS OTHERWISE INDICATED.

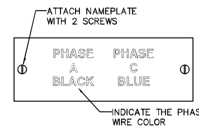
TYPICAL LUMINAIRE, DEVICE AND CIRCUIT DESIGNATIONS

a(R)1	LUMINAIRE TYPE 'R', CIRCUIT NO. 1, CONTROLLED BY SWITCH "a"
2 [A] b	FLUORESCENT LUMINAIRE TYPE 'A', CIRCUIT NO. 2, CONTROLLED BY SWITCH "b"
2	WALL OUTLET WITH RECEPTACLE NOTED, CONNECT TO CIRCUIT NO. 2
1(J)	EQUIPMENT CONNECTION – CONNECT TO CIRCUIT NO. 1

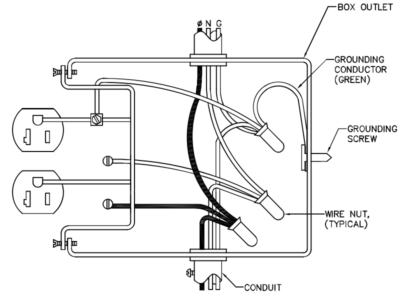
DETAIL
WIRING DESIGNATION
NOT TO SCALE



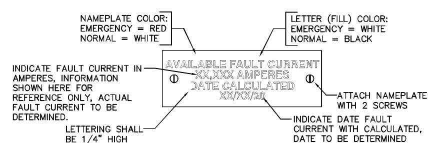
DETAIL
120/240V PANELBOARD INSTALLATION & NAMEPLATE DETAIL
NOT TO SCALE



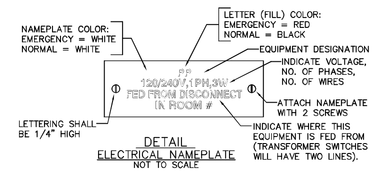
DETAIL
120/240V PANELBOARD ELECTRICAL NAMEPLATE
NOT TO SCALE



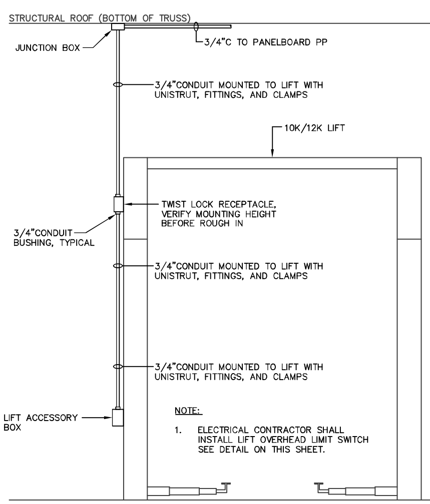
DETAIL
RECEPTACLE INSTALLATION
NOT TO SCALE



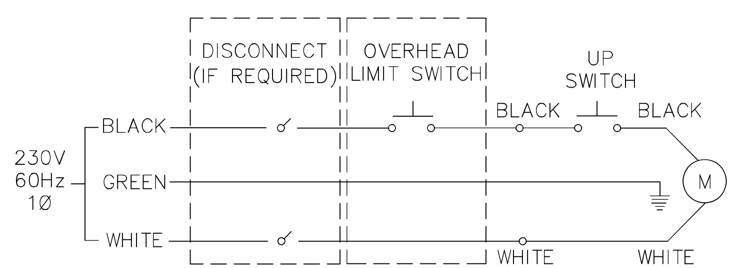
DETAIL
AVAILABLE FAULT CURRENT NAMEPLATE
NOT TO SCALE



DETAIL
ELECTRICAL NAMEPLATE
NOT TO SCALE



ELEVATION
LIFT POWER DETAIL
NOT TO SCALE



LIFT LIMIT SWITCH
WIRING DETAIL
NOT TO SCALE

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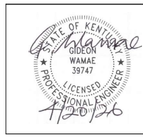

Express Oil Change & Tire Engineers

Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage

Richmond, Kentucky

FINAL

No.	Description	Date
IFP-0	Issued for Permit	02/27/2026
IFB-0	Bid Set/ AHJ Resub.	04/20/2026

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Details

Project number	25042
Date	2/27/2026
Drawn by	TH
Checked by	GW

E103

Scale NO SCALE

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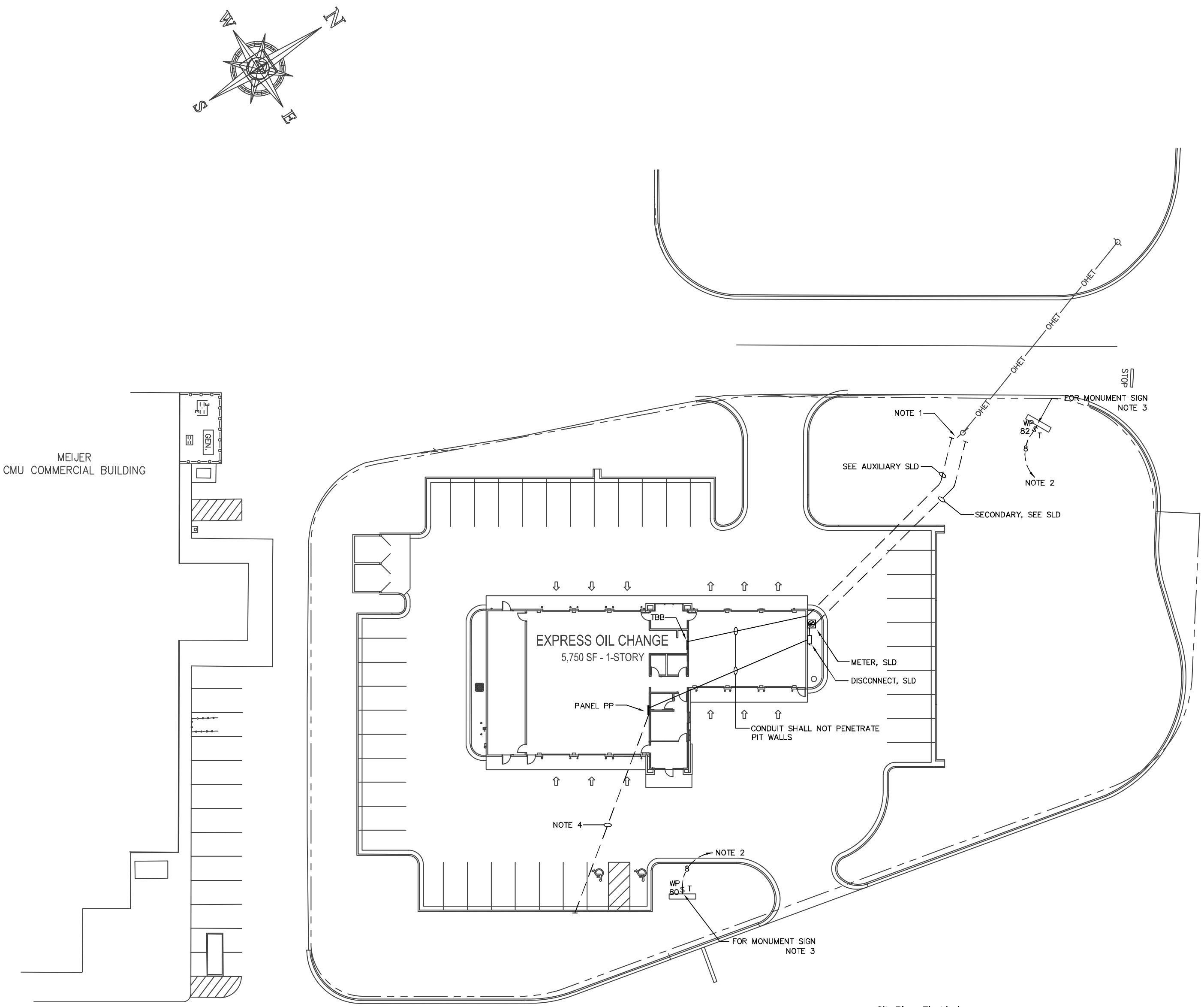

1 Site Plan - Electrical
1" = 20'-0"

NOTES:

1. VERIFY EXACT LOCATION OF STUB UP BEFORE ROUGH IN.
2. HOMERUN TO PANELBOARD PP THROUGH LIGHTING CONTACTOR C-2.
3. LOCATION OF MONUMENT SIGN SHOWN HERE IS FOR CIRCUIT INFORMATION ONLY. VERIFY EXACT LOCATION OF MONUMENT SIGN WITH CIVIL AND OWNER PRIOR TO ROUGH IN.
4. PROVIDE 1-1" EMPTY CONDUIT. HOMERUN TO PANEL PP FOR FUTURE EV CHARGING STATION. VERIFY EXACT LOCATION OF STUB UP WITH ARCHITECT AND CIVIL PRIOR TO INSTALLATION.

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Site Plan - Electrical

Project number	25042
Date	2/27/2026
Drawn by	TH
Checked by	GW

E104

Scale	1" = 20'-0"

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GENERAL NOTES:

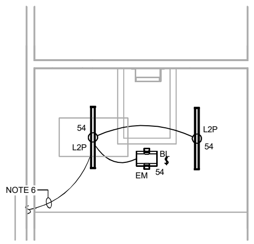
1. CONNECT ALL "BL", "XL" AND EMERGENCY BATTERY PACKS IN FIXTURES MARKED "EM" TO UNSWITCHED HOT LEG OF CIRCUIT.
2. ENSURE LIGHTING FIXTURES L1 AND L2 DO NOT CONFLICT WITH OH DOORS.
3. FOR THE LIGHTING PACKAGE PRICING CONTACT THE FOLLOWING:

   MIKE MCMAKEN
   REXEL ENERGY SOLUTIONS
   (M) 906 - 235 - 2979
   MIKE.MCMAKEN@REXELENERGY.COM

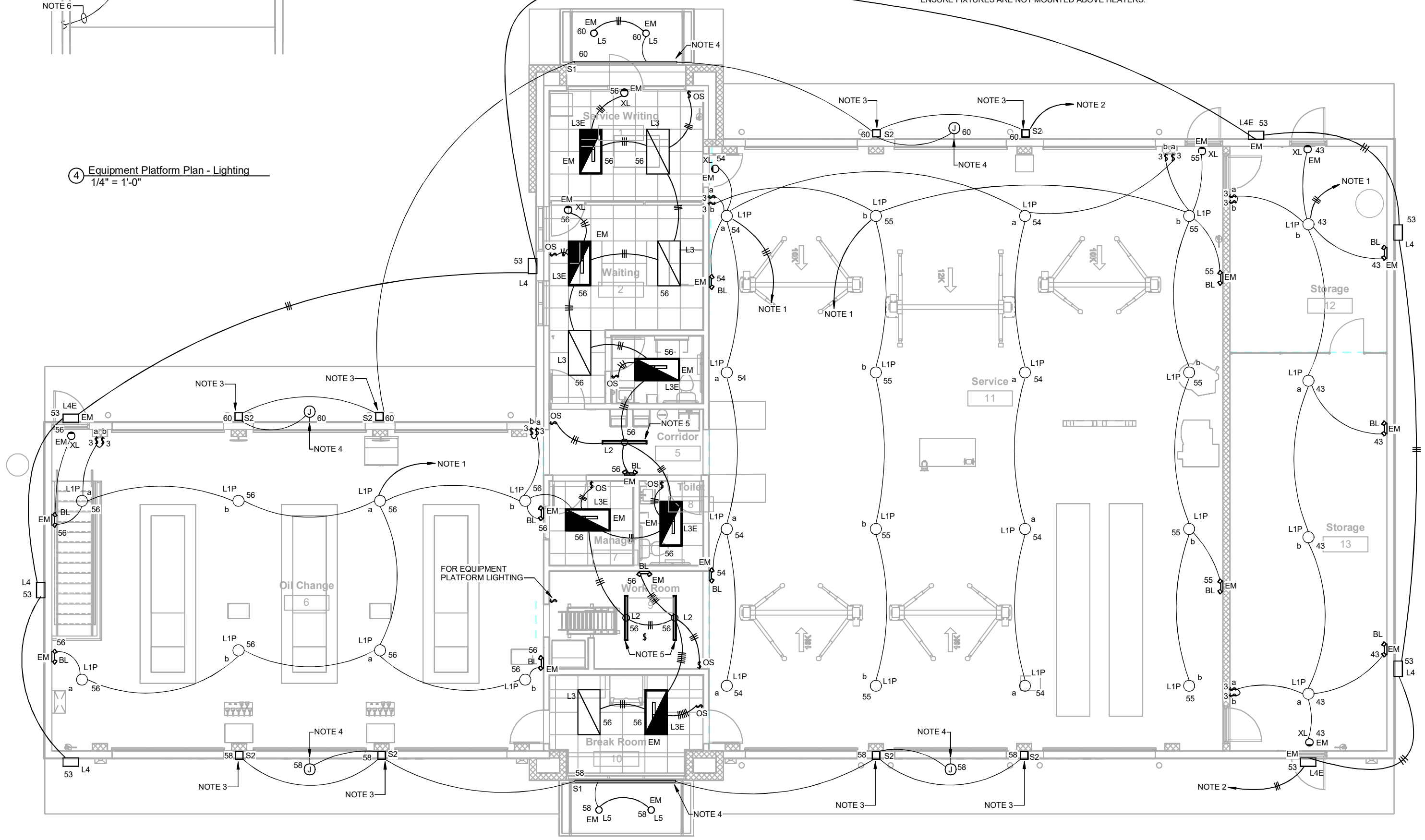
   STEPHEN MITCHELL
   MAXLITE
   (M) 908-256-3115
   SMITCHELL@MAXLITE.COM
4. ALL CONDUIT CROSSING OVERHEAD DOORS SHALL BE MOUNTED AS TIGHT TO THE STRUCTURE AS POSSIBLE TO AVOID CONFLICT WITH THE OVERHEAD DOOR TRACK.
5. OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENILATION.
6. ALL L1P FIXTURES SHALL BE INSTALLED SO THAT THE FIXTURES HANG JUST BELOW THE OVERHEAD DOOR TRACK WHILE THEY ARE OPEN. COORDINATE EXACT LOCATION OF FIXTURES TO ENSURE FIXTURES ARE NOT MOUNTED ABOVE HEATERS.

NOTES:

1. HOMERUN TO 20A, 1POLE CIRCUIT BREAKER IN PANELBOARD PP THROUGH LIGHTING CONTACTOR C-1. SEE DETAIL ON SHEET E102.
2. HOMERUN TO 20A, 1POLE CIRCUIT BREAKER IN PANELBOARD PP THROUGH LIGHTING CONTACTOR C-2. SEE DETAIL ON SHEET E102.
3. JUNCTION BOX FOR SIGN COMPANY PROVIDED FIXTURE SHALL BE MOUNTED FLUSH WITH EXTERIOR FACE OF WALL AT 60" ABOVE GRADE ON CENTER.
4. JUNCTION BOX FOR SIGN COMPANY PROVIDED FIXTURE SHALL BE MOUNTED ON EXTERIOR FACE OF WALL AT 17'AFF. COORDINATE EXACT LOCATION WITH SIGN LIGHTING INSTALLER BEFORE ROUGHING IN.
5. SURFACE MOUNT FIXTURE TO CEILING IN THIS AREA.
6. CONNECT TO LIGHTING BRANCH CIRCUIT ON MAIN FLOOR. CONNECT TO LIGHT SWITCH ON FIRST FLOOR.



4 Equipment Platform Plan - Lighting
1/4" = 1'-0"



1 Main Level Plan - Lighting
3/16" = 1'-0"

PLAN NORTH

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Main Level Plan - Lighting

Project number	25042
Date	2/27/2026
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E200

Scale: As indicated

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GENERAL NOTES:

1. CONNECT ALL "BL", "XL" AND EMERGENCY BATTERY PACKS IN FIXTURES MARKED "EM" TO UNSWITCHED HOT LEG OF CIRCUIT.

2. FOR THE LIGHTING PACKAGE PRICING, CONTACT THE FOLLOWING:

   MIKE MCMAKEN
   REXEL ENERGY SOLUTIONS
   (M) 906-235-2979
   MIKE.MCMAKEN@REXELENERGY.COM

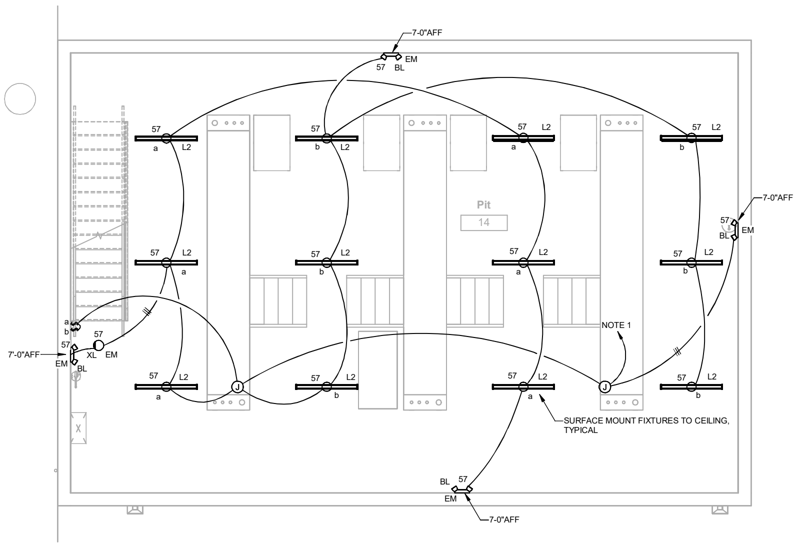
   STEPHEN MITCHELL
   MAXLITE
   (M)908-256-3115
   SMITCHELL@MAXLITE.COM

3. OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRWINGS FOR PROVIDED VENTILATION.

4. ADJUST LIGHT FIXTURES AS NEEDED TO AVOID CONFLICT WITH STRUCTURAL STEEL.

NOTES:

1. HOMERUN TO 20A, 1POLE CIRCUIT BREAKER IN PANELBOARD PP THROUGH LIGHTING CONTACTOR C-1.



1 Pit Level Plan - Lighting
1/4" = 1'-0"

PLAN NORTH

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Pit Level Plan - Lighting

Project number	25042
Date	2/27/2026
Drawn by	TH
Checked by	GW

E201

Scale 1/4" = 1'-0"

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4/24/2026 4:10:50 PM

GENERAL NOTES:

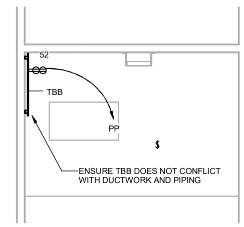
1. CONTRACTOR SHALL VERIFY/COORDINATE LOCATION OF ALL POWER & DATA OUTLETS FOR EQUIPMENT. OBTAIN OWNER'S APPROVAL BEFORE ROUGH IN, NO EXCEPTIONS. NO ADDITIONAL COMPENSATION SHALL BE AWARDED FOR ANY ADDITIONAL WORK REQUIRED TO RELOCATE OUTLETS DUE TO CONTRACTOR'S FAILURE TO COORDINATE WITH OWNER.
2. ALL HORIZONTAL CONDUIT RUNS SHALL BE A MINIMUM OF 8' ABOVE FINISHED FLOOR EXCEPT FOR DROPS. ENSURE CONDUIT DOES NOT CONFLICT WITH OVERHEAD DOOR.
3. OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENILATION.
4. EXPRESS OIL CHANGE HAS OBTAINED EQUIPMENT AVALABILITY AND SPECIAL VOLUME PRICING ON POWER EQUIPMENT AND LIGHTING CONTROL PACKAGES FROM REXEL. SEE CONTACTS BELOW FOR PRICING AND INFORMATION:

   JEFFREY PARKER
   REXEL
   (M) 508-916-7758
   JEFFREY.PARKER@REXELUSA.COM

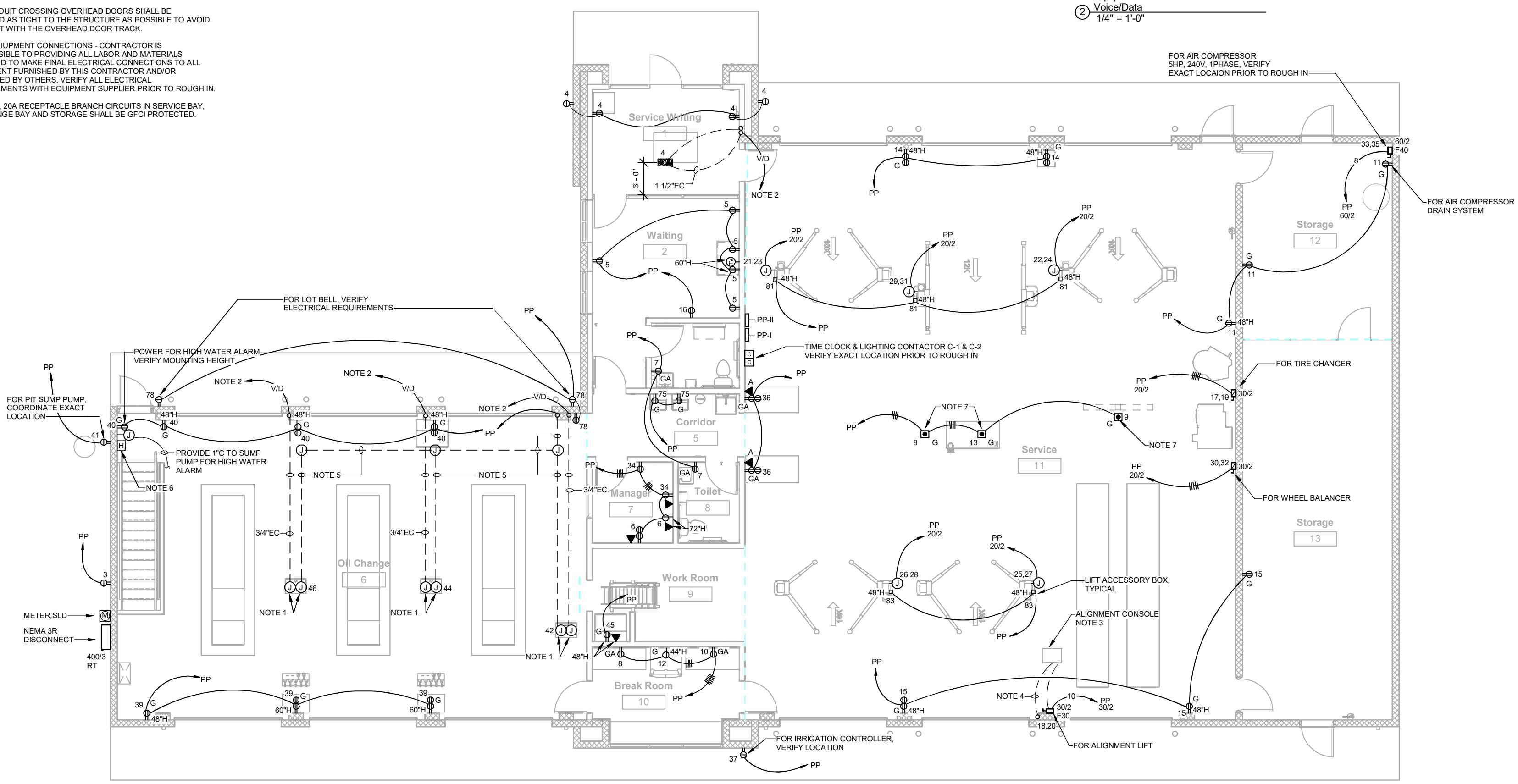
   MIKE MCMAKEN
   REXEL ENERGY SOLUTIONS
   (M) 906-235-2979
   MIKE.MCMAKEN@REXELENERGY.COM
5. ALL CONDUIT CROSSING OVERHEAD DOORS SHALL BE MOUNTED AS TIGHT TO THE STRUCTURE AS POSSIBLE TO AVOID CONFLICT WITH THE OVERHEAD DOOR TRACK.
6. FINAL EQUIPMENT CONNECTIONS - CONTRACTOR IS RESPONSIBLE TO PROVIDING ALL LABOR AND MATERIALS REQUIRED TO MAKE FINAL ELECTRICAL CONNECTIONS TO ALL EQUIPMENT FURNISHED BY THIS CONTRACTOR AND/OR FURNISHED BY OTHERS. VERIFY ALL ELECTRICAL REQUIREMENTS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH IN.
7. ALL 120V, 20A RECEPTACLE BRANCH CIRCUITS IN SERVICE BAY, OIL CHANGE BAY AND STORAGE SHALL BE GFCI PROTECTED.

NOTES:

1. 3/4" CONDUIT STUBBED UP 18" INTO WORK PEDESTAL BASE POST. PROVIDE FLEXIBLE CONDUIT INTO WORK PEDESTAL CABINET. COORDINATE OUTLET REQUIREMENTS PRIOR TO ROUGH IN.
2. HOMERUN 3/4"EC TO TELEPHONE BACKBOARD ON EQUIPMENT PLATFORM.
3. LOCATIONS SHOWN HERE ARE APPROXIMATE. FIELD COORDINATE EXACT LOCATION OF CONSOLE & CONDUIT WITH OWNER & ALIGNMENT LIFT SHOP DRAWINGS BEFORE ROUGH-IN.
4. PROVIDE 1 1/2" EMPTY CONDUIT FROM CONSOLE, STUBBED 8" UP ON INSIDE FACE OF EXTERIOR WALL.
5. CONDUIT FOR WORK PEDESTALS IN OIL CHANGE AREA SHALL BE MOUNTED/ROUTED ON THE CEILING OF THE PIT IN LIEU OF IN THE SLAB.
6. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ZOELLER - Z CONTROL APAK INDOOR ALARM WITH MECHANICAL FLOAT, MODEL # 10-4014. SEE MANUFACTURER INSTALLATION INSTRUCTIONS PRIOR TO ROUGH IN. PROVIDE BATTERIES.
7. CONTRACTOR SHALL PROVIDE UNISTRUT SPANNING BETWEEN BAR JOISTS FOR MOUNTING OF CELING RECEPTACLES.



2 Equipment Platform Plan - Power & Voice/Data
1/4" = 1'-0"



1 Main Level Plan - Power & Voice/Data
3/16" = 1'-0"

PLAN NORTH

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Express Oil Change & Tire Engineers

Single Building / Left Hand Oil Change / Rear Enter / Side Tire Storage

Richmond, Kentucky

FINAL

No.	Description	Date
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Main Level Plan - Power & Voice/Data

Project number	25042
Date	2/27/2026
Drawn by	TH
Checked by	GW
	E300
Scale	As indicated

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4/24/2026 4:10:57 PM

GENERAL NOTES:

1. OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENILATION.

2. EXPRESS OIL CHANGE HAS OBTAINED EQUIPMENT AVALABILITY AND SPECIAL VOLUME PRICING ON POWER EQUIPMENT AND LIGHTING CONTROL PACKAGES FROM REXEL. SEE CONTACTS BELOW FOR PRICING AND INFORMATION:

   JEFFREY PARKER
   REXEL
   (M) 508-916-7758
   JEFFREY.PARKER@REXELUSA.COM

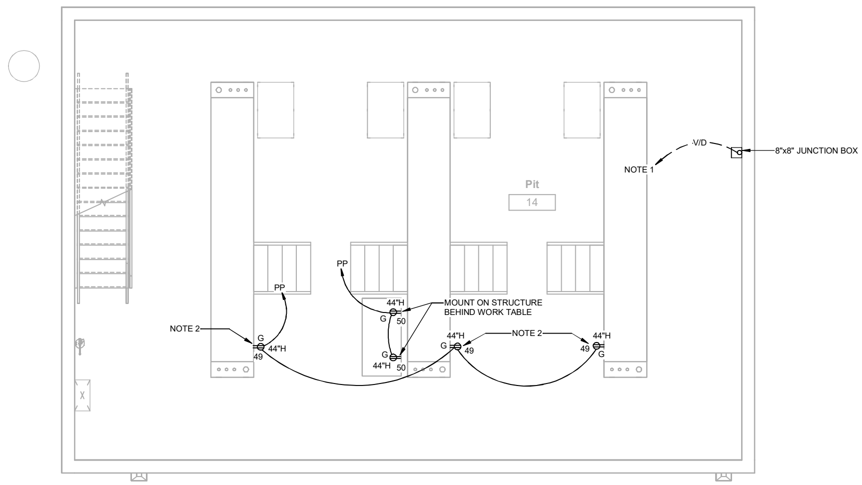
   COLIN BLACK
   REXEL
   COLIN.BLACK@REXELUSA.COM

   MIKE MCMAKEN
   REXEL ENERGY SOLUTIONS
   (M) 906-235-2979
   MIKE.MCMAKEN@REXELENERGY.COM

NOTES:

1. 2"EC HOMERUN TO TELEPHONE BACKBOARD ON EQUIPMENT PLATFORM.

2. MOUNT RECEPTACLES ONTO STRUCTURAL COLUMN.



1 Pit Level Plan - Power & Voice/Data
1/4" = 1'-0"

PLAN NORTH

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Pit Level Plan - Power & Voice/Data

Project number	25042
Date	2/27/2026
Drawn by	TH
Checked by	GW

E301

Scale	1/4" = 1'-0"

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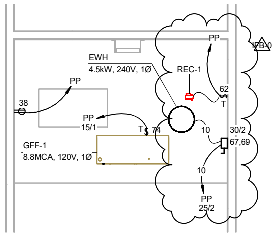
4/24/2026 4:11:03 PM

GENERAL NOTES:

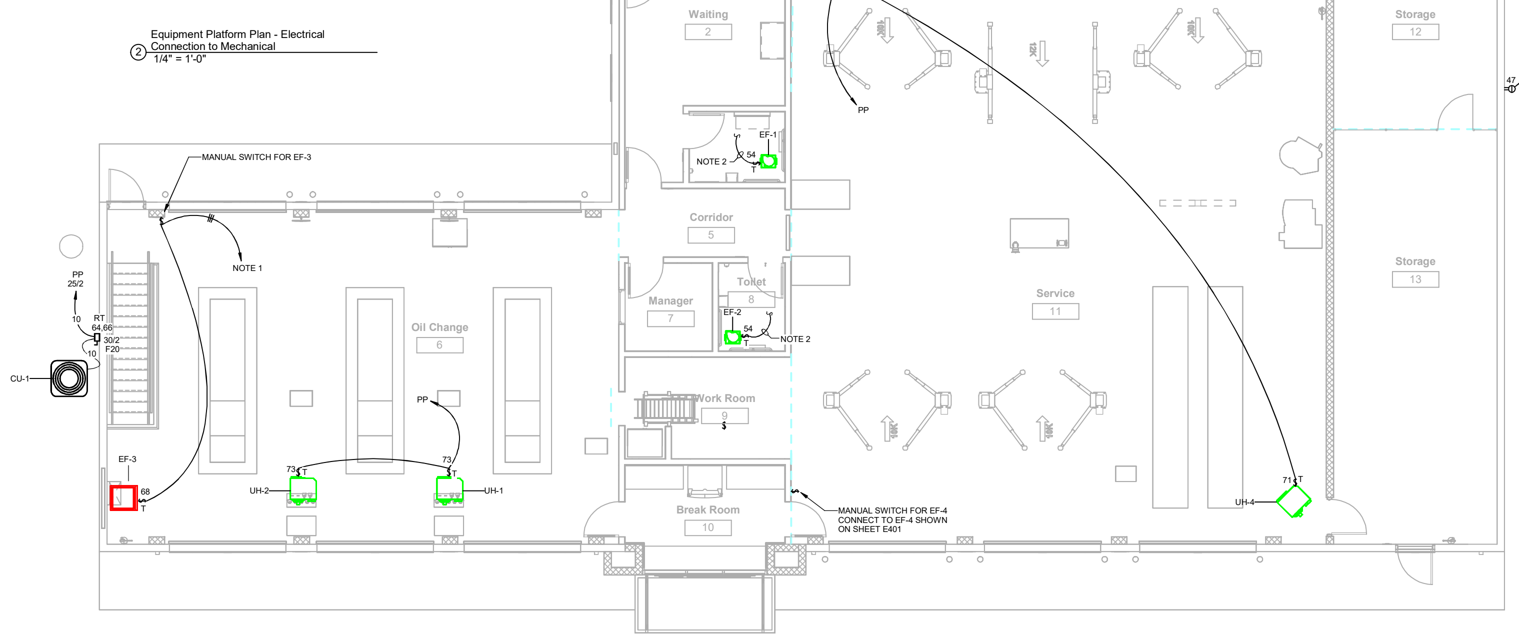
1. OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENTILATION.

NOTES:

1. CONNECT TO 20A, 1 POLE CIRCUIT BREAKER IN PANELBOARD PP THROUGH LIGHTING CONTACTOR C-1. SEE WIRING DIAGRAM ON SHEET E102 FOR MORE INFORMATION.
2. CONNECT TO LIGHTING CIRCUIT AND CONTROLS IN THIS AREA.



② Equipment Platform Plan - Electrical Connection to Mechanical
1/4" = 1'-0"



① Main Level Plan - Electrical Connection to Mechanical
3/16" = 1'-0"

PLAN NORTH

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Main Level Plan - Elec. Conn. to Mech.

Project number	25042
Date	2/27/2026
Drawn by	TH
Checked by	GW

E400

Scale	As indicated

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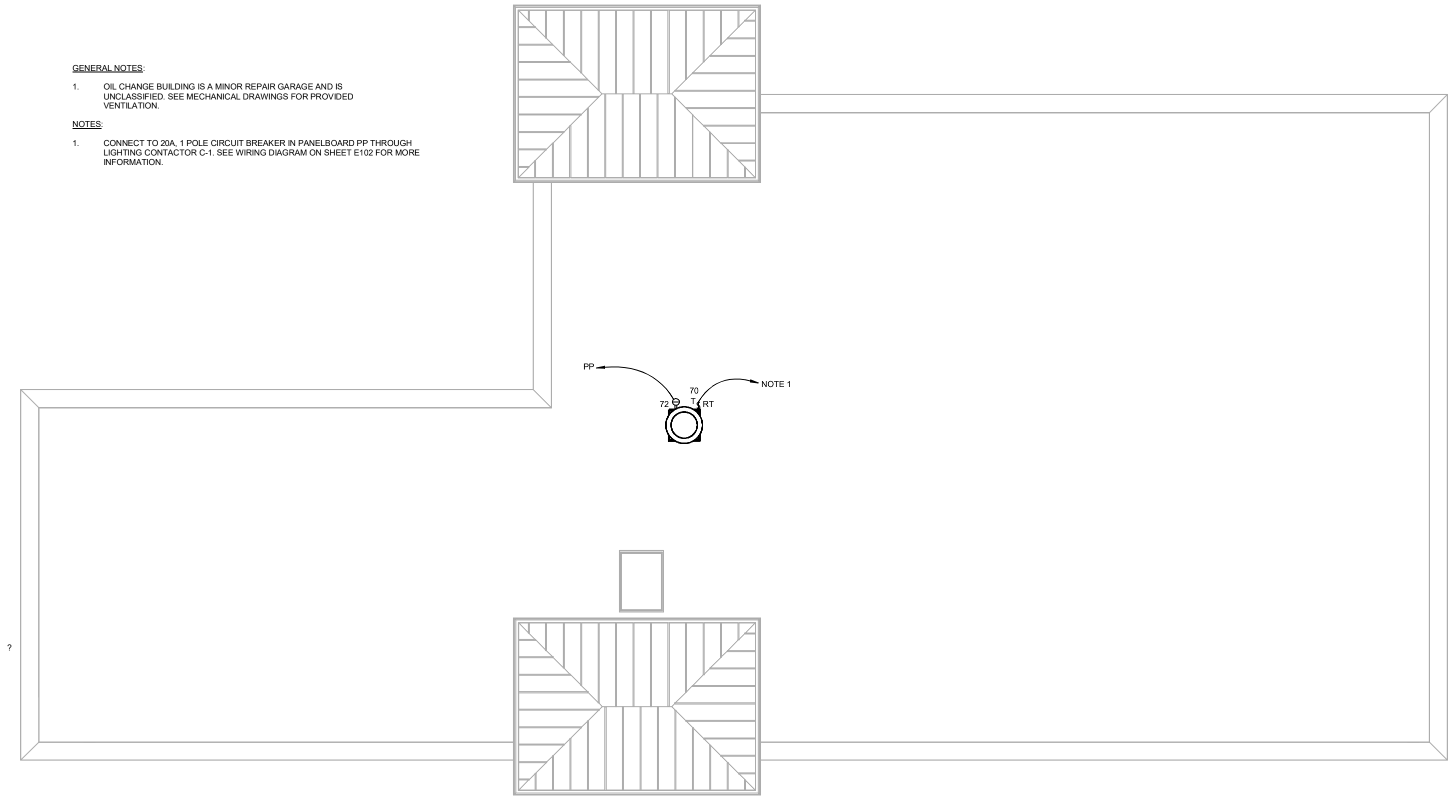
GENERAL NOTES:

1. OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENTILATION.

NOTES:

1. CONNECT TO 20A, 1 POLE CIRCUIT BREAKER IN PANELBOARD PP THROUGH LIGHTING CONTACTOR C-1. SEE WIRING DIAGRAM ON SHEET E102 FOR MORE INFORMATION.



1 Roof Plan - Electrical Connection to Mechanical
3/16" = 1'-0"

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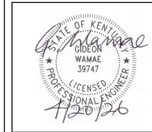

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Roof Plan - Elec. Conn. to Mech.

Project number	25042
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E401

Scale 3/16" = 1'-0"

4/24/2026 4:11:17 PM

014-15 ELECTRICAL-GENERAL PROVISIONS 16010 - 2
SECTION 16010 - ELECTRICAL SPECIFICATIONS

GENERAL REQUIREMENTS

A. Carefully examine General Conditions, other specification Sections, and other drawings (in addition to electrical), in order to be fully acquainted with their effect on electrical work.

B. Do all work in compliance with laws and ordinances and local authorities having jurisdiction and, where applicable, utility companies. Obtain and pay for any and all required permits, inspections, certificates of inspections and approval, and the like, and deliver such certificates to the Architect.

C. Cooperate with other trades and contractors at job. Perform work in such manner and at such times as not to delay work of other trades. Complete all work as soon as the condition of the structure and installation of equipment will permit. Patch, in a satisfactory manner and by the proper craft, any work damaged by electrical work.

D. All equipment (wiring devices, light fixtures, panelboards, disconnect switches, conductors, raceways, boxes, cabinets, circuit breakers, low voltage equipment, auxiliary systems, motors, machines, etc.) used for this project shall be tested by Underwriter's Laboratories, Inc and have "UL" nameplate.

E. Coordinate placement of equipment above ceiling to facilitate proper clearance for serving of equipments.

F. Take finish dimensions at the job site in preference to scale dimensions.

G. Obtain from manufacturer's data on all equipment, the dimensions of which may affect electrical work. Use this data to coordinate proper service characteristics, entry locations, etc., and to ensure minimum clearances are maintained.

H. The electrical contractor shall have had experience of at least the same size and scope as this project, on at least two other projects, within the last 5 years in order to be qualified to bid this project. This qualification shall also apply to his subcontractors.

I. Workmen shall be experienced in their respective trade. Workmanship of installed work shall be first class and will be so judged by the Architect/Engineer. Substandard work shall be removed and replaced.

J. The Bidders shall visit the site to thoroughly familiarize themselves with existing conditions prior to submitting their bid. No allowances will be made for lack of knowledge of existing conditions.

K. Provide one_Year warranty of conformance with drawings and specifications. In addition to the foregoing warranty, Contractor shall and does hereby warrant all materials and equipment furnished under this Division of the Specifications to be free from defects and to function or operate satisfactorily for one year after final acceptance of the work, and that any items not meeting this requirement will be made good by him without cost to owner, provided such defects or failures are not due to abuse, neglect, or lack of reasonable and ordinary maintenance.

L. Unless otherwise specified, provide only new, standard first grade materials throughout, conforming to standards established by Underwriter's Laboratories, Inc., and so marked and labeled, together with manufacturer's brand or trademark. All equipment subject to approval of Architect/Engineer before installation. All like items shall be of one manufacture.

M. Any equipment or materials shown on the drawings to be removed and reinstalled shall be cleaned and, if necessary repaired to like new condition prior to reinstallation.

N. Where shown on the drawings or specified herein, furnish and install electrical equipment. Furnish all materials, hardware, equipment, labor and services required for the installation of complete and properly working installations as shown on the drawings and described herein.

O. All work shall be executed in a workmanlike manner and shall present a neat and mechanical appearance upon completion. Care shall be exercised that all items are plumb, straight, level.

P. Equipment grounding conductors shall be bonded at each enclosure and pole base. All equipment grounding conductors shall be connected to a common bus, bonded to the equipment enclosure.

Q. An equipment grounding jumper shall be installed from the receptacle ground terminal to the outlet box.

CONDUITS

A. Conduit: Rigid and IMC shall be galvanized outside and inside by hot dipping. EMT shall be Electro_Galvanized. Conduit shall be as manufactured by Republic, Wheatland, Triangle, Pittsburgh Standard, Youngstown, or Allied.

B. Sealtight flexible metal conduit shall consist of flexible galvanized steel tubing with a liquidtight jacket of PVC. All flexible conduit shall have a copper bonding conductor wound into conduit body.

C. Couplings and connectors on rigid and IMC shall be standard threaded type, galvanized outside and inside by hot dipping. Clamp type and threadless are not acceptable. Couplings and connectors, for rigid and IMC shall be as manufactured by Raco or Appleton.

D. EMT connectors shall be steel, set screw unless required by code to be compression type, equipped with insulating throats. Connectors couplings shall be O-Z/Gedney 7000ST or 7000RST series, T & B 5123 - 5623 series, Midwest Electric series 1650, or equal series of Raco. Cast metal couplings will not be approved for any location.

E. EMT couplings shall be steel, set screw unless required by code to be compression type. Couplings shall be O-Z/Gedney 6000S or 6000RS series, T & B 5120 - 5620 series, Midwest Electric series 660, or equal series of Raco. Cast metal connectors will not be approved for any location.

F. Connectors raintight: Meyers or approved equal.

G. Bushings on rigid and IMC shall be threaded malleable iron with integral noncombustible insulator. Rigid and IMC bushings shall be O-Z/Gedney "IBC" series, T & B BIM series, Midwest Electric series 1031 - 1043 or equal by Penn Union. Grounding bushings shall be O-Z/Gedney "IBC-L" series, T & B 3870 - 3999 series, Midwest Electric GLL series or equal by Penn Union.

H. Watertight Flex Connectors: O-Z/Gedney, Raco, or Midwest Electric with insulating throat.

I. EMT conduit with set screw shall be used for all branch circuits, power feeders, auxiliary, signaling and controls circuits in none hazardous dry locations for 2" and smaller. EMT may be used exposed where not subject to physical damage. EMT with compression fitting may be used in damp locations up to the 2" limit. Otherwise use rigid or intermediate hot dipped galvanized inside and out steel, threaded for screwed fitting only conduits unless specified on the drawings otherwise.

J. Conduits shall be sized in accordance with the latest National Electrical Code except that conduits containing more than two conductors shall be sized based on 35% fill and 3/4" conduit shall contain no wire larger than #10 and no more than 6#12 or 4#10 wires. Conduit shall be sized larger than required above when so shown on the drawings or when required by local Code. Minimum size conduit shall be 3/4".

K. Where conduit enters boxes, they shall be secured in place with approved insulating fittings.

L. The use of running threads is absolutely prohibited. All conduit shall be jointed with approved conduit couplings. All couplings on IMC and rigid conduit shall be threaded.

M. All conduits shall be supported within 3 feet of each coupling, fitting, outlet box, junction box, cabinet or equipment enclosure Conduit supports shall be independent of ducts, plumbing piping, ceiling supports, etc. Conduits shall not be supported by junction boxes, pull boxes, fixtures, etc.

N. All exposed conduit threads, metal supports, etc., exposed to the elements or exterior of building shall be painted with rust preventive paint.

CONDUCTORS

A. Conductors for general use, sized #10 and smaller, shall be solid copper. Conductors #8 and larger, and any size to motors or vibrating equipment shall be stranded copper.

B. All conductor insulation shall be 600 volt THHN/THWN.

C. Wire connections, #10 and smaller connections shall be made with insulated wire connectors with steel spring connector threads. Wire connectors shall be "Twister" Wire-Nut series as manufactured by Ideal Industries, Inc. or approved equal.

D. On wire larger than #10, shall be made with approved solderless connectors and covered with Scotch #33 electrical tape so that the insulation is equal to conductor insulation.

E. Connection of stranded conductors, #8 and larger, to bus bars in switchboards, panelboards, equipment enclosures, junction boxes, etc. shall be made with individual lugs, size as required by conductor, bolted to bus bar with full size bolts and nuts with lock washers.

F. Conductors and conduits shall be continuous between outlets.

G. No conductor shall be pulled until conduit is cleaned of all foreign matter.

H. Where installed in panelboards, cabinets, wireways, switches and equipment wire and cable shall be neatly formed and tied.

I. Conductors sized #10 AWG and below shall have permanently colored insulation. Conductors sized #8 AWG and above shall be color coded by either permanently colored insulation or by means of colored tape applied to the conductor within 12" of each termination and in each enclosure, junction box, etc.

JUNCTION BOXES

A. Shall be standard type, with knockouts, made of hot dipped galvanized steel, Steel City, Raco, Appleton, or Bowers.

B. Ceiling outlet boxes shall be 4" octagon 1-1/2" deep or larger as required due to number of wires.

C. Boxes shall be provided with approved 3/8" fixture studs when required to support stem mounted light fixtures.

D. Except when located in exposed concrete block, switch and receptacle boxes shall be 4" square with trim ring for single gang installation. Appropriate gang boxes shall be used for mounting ganged switches.

E. When installed in exposed concrete block, switch and receptacle boxes shall be square type designed for exposed block installation.

F. Outlet boxes shall be securely fastened to structural members and shall not be supported by dry wall, gypsum board, plaster, etc. The device or plate installed in conjunction with the outlet box shall not be used for support. There shall be no more knockouts opened in any outlet box than are required. Boxes shall be sealed during construction.

G. Under no circumstances shall through-the-wall boxes be used. Back to back boxes shall be staggered at least 3 inches, except in fire rated partitions, in which case, back to back boxes shall be staggered at least 24 inches.

H. Outlet boxes two gangs and wider shall not be supported by attachment clips or any means which supports the boxes from less than two opposite sides of the box. Such outlet boxes in stud walls shall be supported securely by support members spanning between studs.

I. Outlet boxes installed in fire rated partitions shall be boxed in with wall board or other suitable fire rated material as required to maintain or restore the fire rating of the assembly.

WIRING DEVICES

A. Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other Part 2 articles:

1. Cooper Wiring Devices; a division of Cooper Industries, Inc. (Cooper).
2. Hubbell Incorporated; Wiring Device-Kellems (Hubbell).
3. Leviton Mfg. Company Inc. (Leviton).
4. Pass & Seymour/Legrand; Wiring Devices & Accessories (Pass & Seymour).

B. Convenience Receptacles, 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 configuration 5-20R, and UL 498.

1. Products: Subject to compliance with requirements, provide one of the following:
   a. Cooper; 5351 (single), 5352 (duplex).
   b. Hubbell; HBL5351 (single), CR5352 (duplex).
   c. Leviton; 5891 (single), 5352 (duplex).
   d. Pass & Seymour; 5381 (single), 5352 (duplex).

C. Duplex GFCI Convenience Receptacles, 125 V, 20 A:

1. Products: Subject to compliance with requirements, provide one of the following:
   a. Cooper; GF20.
   b. Pass & Seymour; 2084.

A. Switches, 120/277 V, 20 A:

1. Products: Subject to compliance with requirements, provide one of the following:
   a. Cooper: 2221 (single pole), 2222 (two pole), 2223 (three way), 2224 (four way).
   b. Hubbell: CS1221 (single pole), CS1222 (two pole), CS1223 (three way), CS1224 (four way).
   c. Leviton: 1221-2 (single pole), 1222-2 (two pole), 1223-2 (three way), 1224-2 (four way).
   d. Pass & Seymour: 20AC1 (single pole), 20AC2 (two pole), 20AC3 (three way), 20AC4 (four way).

B. Single and combination plate types to match corresponding wiring devices.

1. Plate-Securing Screws: Metal with head color to match plate finish.
2. Material for Finished Spaces: stainless steel 302 0.04-inch- (1-mm-) thick.
3. Material for Unfinished Spaces: Galvanized steel.
4. Material for Damp Locations: Cast aluminum with spring-loaded lift cover, and listed and labelled for use in "wet locations."

F. Wet-Location, Weatherproof Cover Plates: NEMA 250, complying with type 3R weather-resistant, extra duty, die-cast aluminum with lockable in-use cover.

G. Color: Wiring device catalog numbers in Section Text do not designate device color.

1. Wiring Devices Connected to Normal Power System: Gray unless otherwise indicated or required by NFPA 70 or device listing.
2. Wiring Devices Connected to Emergency Power System: Red.

H. Comply with NECA 1, including the mounting heights listed in that standard, unless otherwise noted.

I. Coordination with Other Trades:

1. Take steps to insure that devices and their boxes are protected. Do not place wall finish materials over device boxes and do not cut holes for boxes with routers that are guided by riding against outside of the boxes.
2. Keep outlet boxes free of plaster, drywall joint compound, mortar, cement, concrete, dust, paint, and other material that may contaminate the raceway system, conductors, and cables.
3. Install device boxes in brick or block walls so that the cover plate does not cross a joint unless the joint is troweled flush with the face of the wall.
4. Install wiring devices after all wall preparation, including painting, is complete.

J. Conductors:

1. Do not strip insulation from conductors until just before they are spliced or terminated on devices.
2. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire.
3. The length of free conductors at outlets for devices shall meet provisions of NFPA 70, Article 300, without pigtails.
4. Existing Conductors:
   a. Cut back and pigtail, or replace all damaged conductors.
   b. Straighten conductors that remain and remove corrosion and foreign matter.
   c. Pigtailing existing conductors is permitted provided the outlet box is large enough.

K. Device Installation:

1. Replace all devices that have been in temporary use during construction or that show signs that they were installed before building finishing operations were complete.
2. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
3. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.
4. Connect devices to branch circuits using pigtails that are not less than 6 inches (152 mm) in length.
5. When there is a choice, use side wiring with binding-head screw terminals. Wrap solid conductor tightly clockwise, 2/3 to 3/4 of the way around terminal screw.
6. Use a torque screwdriver when a torque is recommended or required by the manufacturer.
7. When conductors larger than No. 12 AWG are installed on 15- or 20-A circuits, splice No. 12 AWG pigtails for device connections.
8. Tighten unused terminal screws on the device.
9. When mounting into metal boxes, remove the fiber or plastic washers used to hold device mounting screws in yokes, allowing metal-to-metal contact.

L. Receptacle Orientation:

10. Install ground pin of vertically mounted receptacles up, and on horizontally mounted receptacles to the right.
11. Install hospital-grade receptacles in patient-care areas with the ground pin or neutral blade at the top.

M. Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.

N. Dimmers:

1. Install dimmers within terms of their listing.
2. Verify that dimmers used for fan speed control are listed for that application.
3. Install unshared neutral conductors on line and load side of dimmers according to manufacturers' device listing conditions in the written instructions.

O. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical and with grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.

P. Adjust locations of floor service outlets and service poles to suit arrangement of partitions and furnishings.

PANELBOARDS

A. Product Data: For each type of panelboard, switching and overcurrent protective device, transient voltage suppression device, accessory, and component indicated. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, and finishes.

B. Source Limitations: Obtain panelboards, overcurrent protective devices, components, and accessories from single source from single manufacturer.

1. Comply with NEMA PB 1 including handling requirements.

D. Comply with NFPA 70.

E. Coordinate layout and installation of panelboards and components with other construction that
penetrates walls or is supported by them, including electrical and other types of equipment, raceways, piping, encumbrances to workspace clearance requirements, and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

F. Enclosures: Flush-and surface-mounted cabinets as shown on drawings.

1. Rated for environmental conditions at installed location.
   a. Outdoor Locations: NEMA 250, Type 4X (stainless steel).
   b. Indoor location NEMA 1 with hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover.
2. Finishes:
   a. Back Boxes: Stainless Steel.
3. Directory Card: Inside panelboard door, mounted in transparent card holder.

G. Phase, Neutral, and Ground Buses:

1. Material: Hard-drawn copper, 98 percent conductivity.
2. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box.

H. Future Devices: Mounting brackets, bus connections, filler plates, and necessary appurtenances required for future installation of devices.

I. Panelboard Short-Circuit Current Rating: Fully rated to interrupt symmetrical short-circuit current available at terminals. See drawings for rating.

J. Manufacturers: Subject to compliance with requirements, provide products by either: Eaton, General Electric Company; Siemens, and Square D.

K. Branch Overcurrent Protective Devices for Circuit-Breaker Frame Sizes Larger Than 125 A: Bolt-on circuit breakers; plug-in circuit breakers where individual positive-locking device requires mechanical release for removal. Branch circuit breakers shall be HACR type. Molded-Case Circuit Breaker (MCCB): Comply with UL 489, with interrupting capacity to meet available fault currents.

L. Examine panelboards before installation. Reject panelboards that are damaged or rusted or have been subjected to water saturation.

M. Examine elements and surfaces to receive panelboards for compliance with installation tolerances and other conditions affecting performance of the Work.

N. Proceed with installation only after unsatisfactory conditions have been corrected.

O. Install panelboards and accessories according to NEMA PB 1.1.

P. Mount panelboard cabinet plumb and rigid without distortion of box. Mount recessed panelboards with fronts uniformly flush with wall finish and mating with back box.

Q. Install filler plates in unused spaces.

R. Arrange conductors in gutters into groups and bundle and wrap with wire ties after completing load balancing.

TEMPORARY POWER

A. The electrical contractor shall provide temporary electrical wiring for construction. The temporary service shall be single phase, three wire, 120/240 volts fused at main disconnect. All receptacles on this temporary service shall be protected by ground fault interruptible circuit breakers.

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IFP-0	Issued for Permit	02/27/2026
IFB-0	Bid Set/ AHJ Resub.	04/20/2026

2026
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Specifications

Project number	25042
Date	2/27/2026
Drawn by	TH
Checked by	GW

E500

Scale	NO SCALE

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COM*check* Software Version 4.1.5.5

Interior Lighting Compliance Certificate

Project Information

Energy Code:	2012 IECC
Project Title	Express Oil Change & Tire Engineers
Project Type:	New Construction

Construction Site:	Owner/Agent:	Designer/Contractor:
Richmond, KY	Express Oil Change & Tire Engineers Hoover, AL	Taylor Higginbotham GW Engineering Trussville, AL

Additional Efficiency Package(s)

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

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Automotive facility	6782	0.82	5561
		Total Allowed Watts =	5561

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-Automotive facility				
LED 1: L1P: Other:	1	28	90	2520
LED 2: L2L2P: Other:	1	17	35	595
LED 3: L3/L3E: Other:	1	10	36	360
			Total Proposed Watts =	3475

Interior Lighting PASSES: Design 38% 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 2012 IECC requirements in COM*check* Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Taylor Higginbotham — Taylor Higginbotham — 03/04/2026
Name - Title — Signature — Date

COM*check* Software Version 4.1.5.5

Exterior Lighting Compliance Certificate

Project Information

Energy Code:	2012 IECC
Project Title	Express Oil Change & Tire Engineers
Project Type:	New Construction
Exterior Lighting Zone	2 (Residential mixed use area (LZ2))

Construction Site:	Owner/Agent:	Designer/Contractor:
Richmond, KY	Express Oil Change & Tire Engineers Hoover, AL	Taylor Higginbotham GW Engineering Trussville, AL

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Entry canopy	9 ft2	0.25	Yes	2
Illuminated area of facade wall or surface	1700 ft2	0.1	No	170
			Total Tradable Watts (a) =	2
			Total Allowed Watts =	172
			Total Allowed Supplemental Watts (b) =	600

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 600 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)
Entry canopy (9 ft2): Tradable Wattage				
LED 1: L5/L4E: Other:	1	7	38	266
Illuminated area of facade wall or surface (1700 ft2): Non-tradable Wattage				
LED 2: L4: Other:	1	5	38	190
			Total Tradable Proposed Watts =	266

Exterior Lighting PASSES: Design 54% 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 2012 IECC requirements in COM*check* Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Taylor Higginbotham — Taylor Higginbotham — 03/04/2026
Name - Title — Signature — Date

COM*check* Software Version 4.1.5.5

Inspection Checklist

Energy Code: 2012 IECC

Requirements: 0.0% were addressed directly in the COM*check* 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][1]	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.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C103.2 [PR8][1]	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.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.2.1 [EL22][2]	Automatic controls to shut off all building lighting installed in all buildings.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.1 [EL23][2]	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.2 [EL15][2]	Lighting controls installed to uniformly reduce the lighting load by at least 50%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.2.3 [EL16][2]	Daylight zones provided with individual controls that control the lights independent of general area lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.3 [EL17][3]	Sleeping units have at least one master switch at the main entry door that controls wired luminaires and switched receptacles.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.2.2 [EL18][1]	Occupancy sensors installed in required spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.2.1 [EL20][1]	Primary sidelighted areas are equipped with required lighting controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.2.3 [EL21][1]	Enclosed spaces with daylight area under skylights and rooftop monitors are equipped with required lighting controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.4 [EL25][2]	Automatic lighting controls for exterior lighting installed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.3 [EL4][1]	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.3 [EL19][3]	Fluorescent luminaires with odd numbered lamp configurations that are within 10 feet center to center (if recess mounted) or are within 1 foot edge to edge (if pendant or surface mounted) shall be tandem wired.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.4 [EL6][1]	Exit signs do not exceed 5 watts per face.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

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

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.6 [EL24][1]	Exterior grounds lighting over 100 W provides >60 lm/W unless on motion sensor or fixture is exempt from scope of code or from external LPD.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.3 [EL8][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C408.2.5.1 [FI16][3]	Furnished as-built drawings for electric power systems within 30 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.3, C408.2.5.2 [FI17][3]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.5.2 [FI18][1]	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.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	See the Interior Lighting fixture schedule for values.
C405.6.2 [FI19][1]	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.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	See the Interior Lighting fixture schedule for values.
C408.3 [FI33][1]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.3 [FI60][1]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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

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IFB-0	Bid Set/ AHJ Resub.	04/20/2026

2026
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Project number	25042
Date	2/27/2026
Drawn by	TH
Checked by	GW

E600

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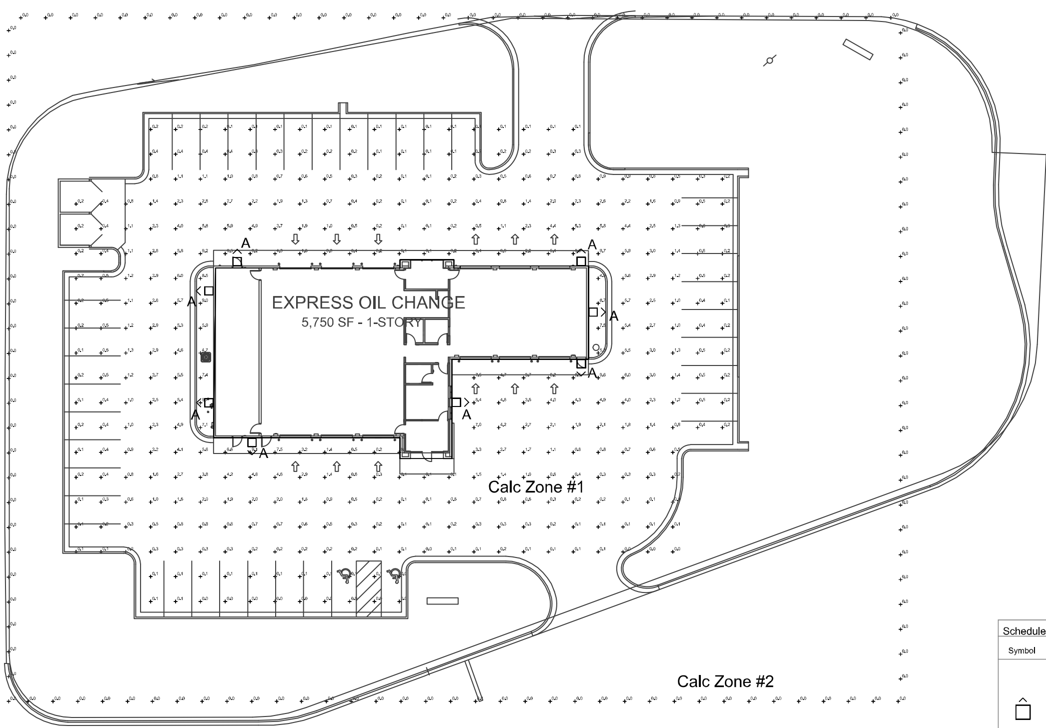
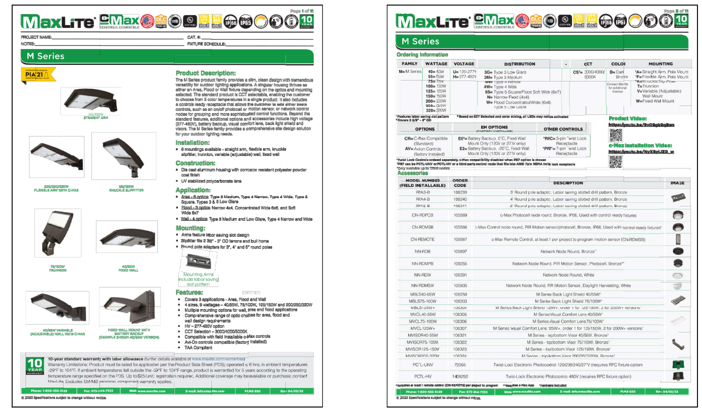


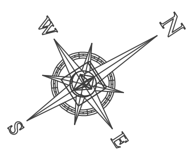
1 Site Plan - Photometrics
1" = 20'-0"



2 Light Fixture Cutsheets
N.T.S.

Schedule

Symbol	Label	Image	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power
	A		8	MaxLite Inc	M55U4W-CSBKCR	M55U4W-CSBKCR-4000K	1	5128	0.9	38.17



Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	1.6 fc	9.7 fc	0.0 fc	N/A	N/A
Calc Zone #2	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A

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Site Plan - Photometrics

Project number	25042
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Scale 1" = 20'-0"

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