

MASTER SPECIFICATION

DIVISION 1 - GENERAL REQUIREMENTS

- A. RELATED DOCUMENTS: DRAWINGS AND GENERAL PROVISIONS CONTRACT APPLY TO WORK OF THIS PROJECT AND SPECIFICATIONS.
- B. SCOPE OF WORK: AS NEGOTIATED WITH OWNER.
- C. WORK BY OWNER: AS DETERMINED BY OWNER.
- D. CODE ANALYSIS:
 - 1. BUILDING: 2019 CBC
 - 2. ELECTRICAL: 2019 CEC
 - 3. PLUMBING: 2019 CPC
 - 4. MECHANICAL: 2019 CMC
 - 5. FIRE: 2019 CFC
- E. CUTTING:
 - 1. CUT EXISTING CONSTRUCTION WHERE WORK IS INCORRECTLY SEQUENCED, FITTED OR ALIGNED USING METHODS LEAST LIKELY TO DAMAGE ELEMENTS TO BE RETAINED OR ADJOINING CONSTRUCTION.
 - 2. IN GENERAL, WHERE CUTTING IS REQUIRED, USE HAND OR SMALL POWER TOOLS DESIGNED FOR SAWING OR GRINDING, NOT HAMMERING OR CHOPPING.
 - 3. CUT HOLES AND SLOTS NEATLY TO SIZE REQUIRED WITH MINIMUM DISTURBANCE OF ADJACENT SURFACES.
 - 4. TO AVOID MARRING EXISTING FINISHED SURFACES, CUT OR DRILL FROM THE EXPOSED OR FINISHED SIDE INTO CONCEALED SURFACES.
 - 5. CUT THROUGH CONCRETE AND MASONRY USING A CUTTING MACHINE SUCH AS A CARBORUNDUM SAW OR DIAMOND CORE DRILL.
- F. GENERAL REQUIREMENTS:
 - 1. VERIFY ALL CONDITIONS AND DIMENSIONS IN THE FIELD BEFORE PROCEEDING WITH WORK.
 - 2. SCHEDULE WORK FOR SPEEDY COMPLETION AND TO CAUSE MINIMUM DISRUPTION DURING CONSTRUCTION.
 - 3. OBTAIN AND PAY FOR ALL PERMITS.
 - 4. ALL WORK SHALL CONFORM TO APPLICABLE CODES AND REGULATIONS.
 - 5. ALL WORK AND MATERIALS SHALL BE GUARANTEED FOR ONE YEAR AFTER ACCEPTANCE OF COMPLETION.
 - 6. PERFORM WORK USING PERSONNEL SKILLED IN THE TRADES.
 - 7. CARRY ALL NECESSARY INSURANCE TO FULLY INDEMNIFY OWNER AND OWNER'S REPRESENTATIVES HARMLESS AGAINST ALL LOSSES, EXPENSES, CLAIMS FOR DEATH, PERSONAL INJURY, AND PROPERTY DAMAGE ARISING OUT OF WORK DONE BY CONTRACTOR OR SUBCONTRACTOR.
 - 8. CONTRACTOR SHALL SUPPLY, LOCATE, AND BUILD INTO THE WORK ALL INSERTS, ANCHORS, ANGLES, PLATES, OPENINGS, SLEEVES, HANGERS, SLAB DEPRESSIONS, AND PITCHES AS MAY BE REQUIRED TO ATTACH AND ACCOMMODATE OTHER WORK.
 - 9. THESE DOCUMENTS, AS INSTRUMENTS OF SERVICE, ARE THE PROPERTY OF THE ENGINEER AND MAY NOT BE USED OR REPRODUCED WITHOUT EXPRESSED WRITTEN CONSENT OF THE ENGINEER.
 - 10. SUBSURFACE CONDITIONS:
 - a. SUBSURFACE SOIL CONDITIONS INFORMATION IS NOT AVAILABLE.
 - b. FOUNDATIONS ARE DESIGNED FOR 1500 PSF SOIL BEARING CAPACITY.
 - c. CONTRACTOR SHALL REPORT ANY DIFFERING CONDITIONS TO THE ENGINEER BEFORE BEGINNING WORK.
- G. PATCHING:
 - 1. PATCH WITH SEAMS WHICH ARE DURABLE AND AS INVISIBLE AS POSSIBLE.
 - 2. RESTORE EXPOSED FINISHES OF PATCHED AREAS.
 - 3. WHERE NECESSARY, EXTEND AND REINFORCE FINISH RESTORATION INTO RETAINED ADJOINING WORK IN A MANNER WHICH WILL ELIMINATE EVIDENCE OF PATCHING AND REFINISHING.
- H. SUBMITTALS:
 - 1. SUBMIT FULL-SIZE, FULLY FABRICATED SAMPLES CURED AND FINISHED AS SPECIFIED AND PHYSICALLY IDENTICAL WITH MATERIAL OR PRODUCT PROPOSED.
 - 2. SAMPLES INCLUDE PARTIAL SECTIONS OF MANUFACTURED OR FABRICATED COMPONENTS, CUTS OR SWATCHES SHOWING COLORS, TEXTURE, AND PATTERN.
 - 3. SUBMIT SAMPLES FOR REVIEW OF KIND, COLOR, PATTERN, AND TEXTURE, FOR A FINAL CHECK OF THESE CHARACTERISTICS WITH OTHER ELEMENTS, AND FOR A COMPARISON OF THESE CHARACTERISTICS BETWEEN THE FINAL SUBMITTAL AND THE ACTUAL COMPONENTS AS DELIVERED AND INSTALLED.
 - 4. SUBMIT APPROVAL DRAWINGS OF ALL STRUCTURES FOR ENGINEER/OWNER REVIEW PRIOR TO FABRICATION.
- I. TEMPORARY FACILITIES:
 - 1. TEMPORARY ENCLOSURES:
 - a. PROVIDE TEMPORARY ENCLOSURE FOR PROTECTION OF CONSTRUCTION IN PROGRESS AND COMPLETED, FROM EXPOSURE, FOLL WEATHER, OTHER CONSTRUCTION OPERATIONS, AND SIMILAR ACTIVITIES.
 - b. WHERE HEAT IS NEEDED AND THE PERMANENT BUILDING ENCLOSURE IS NOT COMPLETE, PROVIDE TEMPORARY ENCLOSURES WHERE THERE IS NO OTHER PROVISIONS FOR CONTAINMENT OF HEAT.
 - c. COORDINATE ENCLOSURE WITH VENTILATING AND MATERIAL DRYING OR CURING REQUIREMENTS TO AVOID DANGEROUS CONDITIONS AND EFFECTS.
 - d. CLOSE OPENINGS THROUGH FLOOR OR ROOF DECKS AND HORIZONTAL SURFACES WITH LOAD-BEARING WOOD-FRAMED CONSTRUCTION.
 - 2. COLLECTION AND DISPOSAL OF WASTES:
 - a. COMPLY WITH REQUIREMENTS OF NFPA 241 FOR REMOVAL OF COMBUSTIBLE WASTE MATERIAL AND DEBRIS.
 - b. DO NOT HOLD COLLECTED MATERIALS MORE THAN 7 DAYS DURING NORMAL WEATHER OR 3 DAYS WHEN THE TEMPERATURE IS EXPECTED TO RISE ABOVE 80 DEG. F.
 - c. HANDLE HAZARDOUS, DANGEROUS OR UNSANITARY WASTE MATERIALS SEPARATELY FROM OTHER WASTE BY CONTAINERIZING PROPERLY.
 - d. DISPOSE OF MATERIAL IN A LAWFUL MANNER.

- J. PRODUCT SUBSTITUTIONS:
 - 1. REQUESTS FOR CHANGES IN PRODUCTS, MATERIALS, EQUIPMENT, AND METHODS OF CONSTRUCTION REQUIRED BY CONTRACT DOCUMENTS PROPOSED BY THE CONTRACTOR AFTER AWARD OF THE CONTRACT ARE CONSIDERED REQUESTS FOR SUBSTITUTIONS.
 - 2. CONSIDERATIONS BECAUSE:
 - a. PROPOSED CHANGES ARE IN KEEPING WITH THE GENERAL INTENT OF CONTRACT DOCUMENTS.
 - b. THE REQUEST IS TIMELY, FULLY DOCUMENTED, AND PROPERLY SUBMITTED.
 - c. A SUBSTANTIAL ADVANTAGE IS OFFERED THE OWNER, IN TERMS OF COST, TIME, ENERGY CONSERVATION OR OTHER CONSIDERATIONS OF MERIT, AFTER DEDUCTING OFFSETTING RESPONSIBILITIES THE OWNER MAY BE REQUIRED TO BEAR.
- K. FINAL CLEANING:
 - 1. EMPLOY EXPERIENCED WORKERS OR PROFESSIONAL CLEANERS FOR FINAL CLEANING.
 - 2. COMPLY WITH MANUFACTURER'S INSTRUCTIONS.
 - 3. COMPLETE THE FOLLOWING CLEANING OPERATIONS BEFORE REQUESTING INSPECTION FOR CERTIFICATE OF SUBSTANTIAL COMPLETION.
 - a. REMOVE LABELS THAT ARE NOT PERMANENT LABELS.
 - b. CLEAN TRANSPARENT MATERIALS, INCLUDING MIRRORS AND GLASS IN DOORS AND WINDOWS.
 - c. REMOVE GLAZING COMPOUND AND OTHER SUBSTANCES THAT ARE NOTICEABLE VISION-OBSCURING MATERIALS.
 - d. REPLACE CHIPPED OR BROKEN GLASS AND OTHER DAMAGED TRANSPARENT MATERIALS.
 - e. CLEAN EXPOSED EXTERIOR AND INTERIOR HARD-SURFACED FINISHES TO A DUST-FREE CONDITION, FREE OF STAINS, FILMS, AND SIMILAR FOREIGN SUBSTANCES.
 - f. LEAVE CONCRETE FLOORS BROOM CLEAN.
 - g. VACUUM CARPETED SURFACES.
 - h. WIPE SURFACES OF MECHANICAL AND ELECTRICAL EQUIPMENT.
 - i. CLEAN PLUMBING FIXTURES TO A SANITARY CONDITION.
 - j. CLEAN THE SITE, INCLUDING LANDSCAPE DEVELOPMENT AREAS, OF RUBBISH, LITTER, AND OTHER FOREIGN SUBSTANCES.

DIVISION 2 - SITEWORK

- A. SITE CLEARING:
 - 1. STRIP ENTIRE AREA WITHIN BUILDING AREA TO A MINIMUM DEPTH OF 12" BELOW EXISTING GRADE LEVEL TO REMOVE TOPSOIL AND ORGANIC MATERIAL.
 - 2. WHERE ORGANIC MATERIAL OCCURS DEEPER THAN 12", CONTINUE STRIPPING TO DEPTH NECESSARY TO REMOVE ALL MATERIAL.
- B. SITE CLEANING:
 - 1. CLEAN AND REMOVE ALL REMAINING TREES AND FOLIAGE AS DESIGNATED BY FILLING, CUTTING, AND HAULING FROM SITE.
 - 2. LEVEL ALL DIRT AND EARTH PILES, AND BACKFILL HOLES RESULTING FROM EXCAVATION FOR CLEARING AND GRUBBING WORK.
 - 3. LEAVE SITE LEVEL WITH NATURAL EXISTING GRADES AND ELEVATIONS AFTER REMOVAL OF TOP SOIL AND ORGANIC MATERIALS.
 - 4. LEAVE SITE HAND RAKED AND FREE OF STONES, STICKS, TRASH, AND OTHER DEBRIS.
- C. EXCAVATION:
 - 1. GENERAL:
 - a. EXCAVATE TO LINES AND ELEVATIONS AS REQUIRED.
 - b. MAKE EXCAVATIONS SUFFICIENTLY LARGE TO PERMIT PLACING AND REMOVAL OF FORMS, INSTALLATION OF WATERPROOFING, DAM PROOFING, AND UTILITIES; AND TO ALLOW INSPECTION.
 - 2. EXCAVATION FOR FOOTINGS:
 - a. FOUND BOTTOMS OF FOOTINGS ON GRAVEL OR FIRM UNDERSTRUCTURE AT ELEVATIONS INDICATED OR AS SHOWN.
 - b. SUBGRADE FOOTINGS SHALL BE LEVEL AND FREE OF LOOSE ROCK, DIRT, DEBRIS, AND STANDING WATER BEFORE ACCEPTANCE FOR PLACING CONCRETE.
- E. FILLING:
 - 1. FILL MATERIALS: PROVIDE GENERAL FILL OBTAINED FROM EXCAVATION ON SITE, IF ACCEPTABLE, OR FROM BORROW SOURCES.
 - 2. FILL CLASSIFICATIONS:
 - a. BUILDING AND 5' BEYOND: WELL GRADED, COARSE AND FINE GRAVEL.
 - b. PAVED AREAS: PIT RUN GRAVEL FOR BASE COARSE AND 3/4" TO 1-1/2" GRAVEL WASHED AND GRADED FOR SURFACE.
 - c. LANDSCAPED AREAS: WELL GRADED, COARSE AND MEDIUM SAND.
 - d. UTILITY EXCAVATIONS: COARSE AND MEDIUM SAND AND GRAVEL.
 - 3. PLACING:
 - a. PLACE FILL MATERIALS IN HORIZONTAL LOOSE LAYERS TO PRODUCE UNIFORM THICKNESS OF MATERIAL.
 - b. START PLACEMENT IN DEEPEST AREA AND PROGRESS APPROXIMATELY PARALLEL TO FINISHED GRADE.
 - c. THICKNESS OF LAYERS BEFORE COMPACTION: 8" FOR COHESIVE SOILS, 12" FOR COHESIONLESS SOILS.
 - d. DO NOT PLACE FILL MATERIAL ON AREAS WHERE FREE WATER IS STANDING OR ON SURFACES WHICH HAVE NOT BEEN APPROVED.
 - e. COMPACT TO MIN. 95% PROCTOR DENSITY.
- F. PAVEMENTS:
 - 1. GENERAL ROADWAY PREPARATION
 - a. ALL GRAVEL ROADWAYS SHALL BE BROUGHT TO GRADE AND CROWN (2% MIN) AS SPECIFIED ON THE DRAWINGS.
 - b. SUBGRADE SHALL BE COMPACTED AT +/- 2% OPTIMUM MOISTURE.
 - 2. GRAVEL ROADWAY
 - a. PRIOR TO PLACING GRAVEL, SUBGRADE SHALL BE WET TO OPTIMUM MOISTURE - 2% TO ALLOW "SEATING" OF GRAVEL IN SUBGRADE.
 - b. ROADWAY GRAVEL SHALL BE 3/4" ROADMIX WITH ANGULAR EDGES, CREATED BY CRUSHING.
 - c. MINIMUM GRAVEL THICKNESS PLACED SHALL BE 8" TO PROVIDE A COMPLETED 6" LAYER AFTER COMPACTION AND SETTLING.

- 3. ASPHALT ROADWAY
 - a. MINIMUM LAYERS OF SUBBASE AND BASE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DRAWINGS. SUBBASE SHALL BE COMPACTED TO 92% MODIFIED PROCTOR AND BASE SHALL BE COMPACTED TO 95% MODIFIED PROCTOR.
 - b. ASPHALTIC PRIME COAT SHALL BE PLACED ON BASE MATERIAL LAYER PRIOR TO ASPHALT PAVING
 - c. ASPHALT PAVEMENT SHALL BE INSTALLED TO THE A MINIMUM 4" THICKNESS. THE PAVEMENT SHALL BE COMPACTED TO A MINIMUM 97% MODIFIED PROCTOR.

DIVISION 3 - CONCRETE

- A. CONCRETE:
 - 1. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS.
 - a. SLAB ON GRADE: 2500 PSI
 - b. FOOTINGS: 2500 PSI
 - 2. CONCRETE SLABS ON GRADE: THICKNESS AS INDICATED ON DRAWINGS OVER 2 SAND & 6" CLASS II AGGREGATE, W/ 1/2 LB./CU.YD. FIBER MESH
 - 3. REINFORCING STEEL: ASTM A615, GRADE 60 DEFORMED NEW BILLET STEEL CONFORMING TO ACI 301, 315, 318, AND CRSI MANUAL OF STANDARD PRACTICES.
 - 4. CONTINUOUS HORIZONTAL REINFORCING STEEL IN FOOTINGS: LAP SPLICE MIN. OF 24"
 - 5. PROVIDE FOLLOWING MINIMUM CONCRETE COVER FOR REINFORCEMENT:
 - a. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
 - b. CONCRETE EXPOSED TO EARTH OR WEATHER, #6 OR LARGER: 2"
 - c. CONCRETE EXPOSED TO EARTH OR WEATHER, #5 OR SMALLER: 1-1/2"
 - 6. HORIZONTAL FOOTING BARS: BEND 1-0" AROUND CORNERS OR PROVIDE CORNER BARS WITH 2-0" LAP.
 - 7. PROVIDE SPACERS, CHAIRS, BOLSTERS, ETC., NECESSARY TO SUPPORT REINFORCING STEEL.
 - 8. PROVIDE PLASTIC TIPPED OR STAINLESS STEEL ENDS FOR SUPPORT ITEMS WHICH BEAR ON EXPOSED CONCRETE SURFACES.
 - 9. ALL REINFORCING DETAILS SHALL CONFORM TO ACI 315, MANUAL OF STANDARD PRACTICES FOR DETAILING REINFORCED CONCRETE STRUCTURES, UNLESS OTHERWISE DETAILED ON STRUCTURAL DRAWINGS.
 - 10. PERFORM ALL CONCRETE WORK IN ACCORDANCE WITH ACI 318, THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, AND ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.
- B. FORMWORK: ADEQUATELY TIED AND BRACED TO FORM TRUE LINES AND SQUARE CORNERS.
- C. FOOTINGS: FORM TO MEET SIZES INDICATED.
- D. POURING:
 - 1. POUR CONTINUOUSLY WITH FOOTINGS ON UNDISTURBED SOIL OR ENGINEERED FILL AND SLABS ON COMPACTED SOILS.
 - 2. FINISH OF SLABS: FLOAT INTERIOR FLOOR SLABS AND BROOM FINISH EXTERIOR WALKS.
 - 3. DO NOT PLACE CONCRETE ON FROZEN GRAND OR IN FREEZING CONDITIONS.
- E. INSTALLATION TOLERANCES:
 - 1. FOOTINGS: +/- 1/8" IN 10".
 - 2. SLABS: +/- 1/8" IN 10".

DIVISION 5 - STEEL/METALS

- A. STEEL STRUCTURES
 - 1. MINIMUM STEEL YIELD STRENGTHS:
 - A. WIDE FLANGE = 50 KSI
 - B. PIPE = 42 KSI
 - C. PLATE = 36 KSI
 - 2. ALL BUILDING FRAME SYSTEMS AND ROOF FRAMING SHALL BE PRIMED. ROOF/WALL SHEETING SHALL BE 26 GA RIBBED W/ KYNAR 500 OR EQUIV. FINISH
 - 3. ANY VARIATION DEVIANCE FROM THE PLANS MUST BE APPROVED BY THE ENGINEER.
- B. WALL & ROOF FRAMING
 - 1. ALL WALL & ROOF FRAMING SHALL COMPLY WITH THE CURRENT AISI CODE FOR COLD FORMED STEEL.
 - 2. MINIMUM 16 GAGE MATERIAL IS TO BE USED FOR WALL & ROOF FRAMING. LARGER MEMBER SIZES MAY BE REQUIRED BY WALL GIRT OR ROOF PURLIN DESIGN.
 - 3. FRAMING MEMBERS SHALL HAVE PRIMER FINISH.

DIVISION 6 - WOOD AND PLASTICS

- A. FRAMING:
 - 1. NOT APPLICABLE
- B. MISCELLANEOUS LUMBER:
 - 1. PROVIDE WOOD FOR SUPPORT OR ATTACHMENT OF OTHER WORK INCLUDING CANT STRIPS, BUCKS, NAILERS, BLOCKING, FURRING, GROUNDS, STRIPPING, AND SIMILAR MEMBERS.
 - 2. PROVIDE LUMBER OF SIZES INDICATED, WORKED INTO SHAPES SHOWN.
 - 3. MOISTURE CONTENT: MAX. 19% FOR LUMBER ITEMS NOT SPECIFIED TO RECEIVE PRESERVATIVE TREATMENT.
 - 4. GRADE: STANDARD GRADE LIGHT FRAMING SIZE LUMBER OF ANY SPECIES OR BOARD SIZE LUMBER AS REQUIRED. NO. 3 COMMON OR STANDARD GRADE BOARDS PER WCLIB OR WPA RULES OR NO.3 BOARDS PER SP1B RULES.
 - 5. PRESSURE TREAT ALL WOOD MEMBERS EXPOSED TO WEATHER OR IN CONTACT WITH MASONRY, CONCRETE OR SOIL.

- C. CONSTRUCTION PANELS:
 - 1. CONSTRUCTION PANEL STANDARDS: COMPLY WITH PS 1, U.S. PRODUCT STANDARD FOR CONSTRUCTION AND INDUSTRIAL PLYWOOD FOR PLYWOOD PANELS AND, FOR PRODUCTS NOT MANUFACTURED UNDER PS 1 PROVISIONS, WITH APA PERFORMANCE STANDARD AND POLICIES FOR STRUCTURAL USE PANELS, FORM NO. E445.
 - 2. TRADEMARK: FACTORY-MARK EACH CONSTRUCTION PANEL WITH APA TRADEMARK EVIDENCING COMPLIANCE WITH GRADE REQUIREMENTS.
 - 3. WALL SHEATHING: APA, STRUCTURAL I, GROUP I, SIZE AND SPAN RATING INDICATED; NAIL OR SCREW WITH 8d NAILS @ 6" O.C. @ EDGES AND 12" O.C. @ INTERMEDIATE SUPPORTS.
- D. PREFABRICATED WOOD TRUSSES (IF USED):
 - 1. COMPLY WITH NFPA NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION, TPI DESIGN SPECIFICATIONS FOR METAL PLATE CONNECTED WOOD TRUSSES, AND AITC 100.
 - 2. ALL TRUSSES SHALL BE DESIGNED AND CERTIFIED BY TRUSS MANUFACTURER'S REGISTERED ENGINEER.
 - 3. CORRELATE WITH TRUSS MANUFACTURER TO ENSURE ADEQUATE BEARING IS PROVIDED AT END REACTIONS OF ALL GIRDER TRUSSES.
 - 4. TRUSS MANUFACTURER SHALL SUBMIT SHOP DRAWINGS AND DESIGN NOTES WITH ENGINEER'S SEAL FOR APPROVAL BY THE BUILDING DEPT. DESIGN NOTES TO INCLUDE RATED LOAD CAPACITY OF CONNECTORS USED TO SECURE MEMBERS, CERTIFICATION OF CONNECTOR CAPACITIES AND MANUFACTURER'S LICENSE TO FABRICATE TRUSSES USING CONNECTOR SYSTEM PROPOSED.
 - 5. APPROVE FABRICATION AND INSTALLATION DRAWINGS SHOWING SIZE, SHAPE, AND LAYOUT BEFORE SUBMITTAL TO BUILDING DEPARTMENT AND BEFORE FABRICATION HAS BEGUN.
 - 6. BRACE TRUSSES DURING ERECTION AND AFTER PERMANENT INSTALLATION TO COMPLY WITH TPI WB7-76.
 - 7. METAL CONNECTOR PLATES: ASTM A446, GRADE A, G60 GALVANIZED STEEL.
 - 8. FABRICATE AND ASSEMBLE TO PROVIDE UNITS OF CONFIGURATION INDICATED WITH CLOSELY FITTED JOINTS AND CONNECTOR PLATES SECURELY FASTENED TO WOOD MEMBERS.

- E. MISCELLANEOUS MATERIAL (IF USED):
 - 1. FASTENERS AND ANCHORAGES:
 - a. PROVIDE SIZE, TYPE, MATERIAL, AND FINISH AS RECOMMENDED BY APPLICABLE STANDARDS, COMPLYING WITH APPLICABLE FEDERAL SPECIFICATIONS FOR NAILS, STAPLES, SCREWS, BOLTS, NUTS, WASHERS, AND ANCHORING DEVICES.
 - b. PROVIDE METAL HANGERS AND FRAMING ANCHORS OF SIZE AND TYPE RECOMMENDED BY MANUFACTURER FOR EACH USE INCLUDING RECOMMENDED NAILS.
 - c. WHERE ROUGH CARPENTRY WORK IS EXPOSED TO WEATHER, IN GROUND CONTACT OR IN AREA OF HIGH RELATIVE HUMIDITY, PROVIDE FASTENERS AND ANCHORAGES WITH HOT-DIP ZINC, ASTM A153.
 - 2. BUILDING PAPER: ASTM D225, TYPE I; ASPHALT SATURATED FELT, NONPERFORATED, 15 LB. TYPE.
 - 3. AIR FILTRATION BARRIER: DUPONT CO. MODEL TVYEK, SIMPLEX MODEL BARRICADE OR BETTER.
 - 4. SILL SEALER GASKETS:
 - a. GLASS FIBER RESILIENT INSULATION FABRICATED IN STRIP FORM FOR USE AS SILL SEALER
 - b. 1" NOMINAL THICKNESS COMPRESSIBLE TO 1/32"
 - c. SELECT FROM MANUFACTURER'S STANDARD WIDTHS TO SUIT WIDTH OF SILL MEMBERS INDICATED.
 - 5. PRESSURE TREAT ALL WOOD MEMBERS EXPOSED TO WEATHER OR IN CONTACT WITH MASONRY, CONCRETE OR SOIL.
- F. STANDING AND RUNNING TRIM AND RAILS (IF USED):
 - 1. EXTERIOR TRIM - OPAQUE FINISH:
 - a. GRADE: NO.1 IF STAINED OR NO.2 IF PAINTED.
 - b. LUMBER SPECIES: CEDAR.
 - 2. INTERIOR TRIM - OPAQUE FINISH:
 - a. GRADE: CUSTOM.
 - b. LUMBER SPECIES: POPLAR, OAK.

- G. CABINetry: NOT APPLICABLE
- H. CLOSET SHELIVING: NOT APPLICABLE
- I. INSTALLATION TOLERANCE (IF USED):
 - 1. ROUGH CARPENTRY: +/- 1/4" IN 10".
 - 2. FINISH CARPENTRY AND MILLWORK: +/- 1/8" IN 8".

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

- A. WATERPROOFING: AS SELECTED BY CONTRACTOR.
- B. INSULATION:
 - 1. WALLS: NOT APPLICABLE
 - 2. CEILINGS - ATTIC AREAS: NOT APPLICABLE
- C. ROOF SHINGLES (NOT APPLICABLE):
 - 1. ASPHALT/FIBERGLASS - 20 YEAR CELOTEX MODEL. FIBERGLASS ASPHALT SHINGLES 20, CERTAINTEED MODEL GLASS-GUARD OR AS SELECTED BY OWNER.
- D. FLASHING (NOT APPLICABLE):
 - 1. ASPHALT/FIBERGLASS SHINGLES:
 - a. FLASHING: 0.024" MILL FINISH SHEET ALUMINUM, JOB CUT TO SIZE AND CONFIGURATION.
 - b. DRIP EDGE: MIN. 0.0024" MILL FINISH ALUMINUM SHEET BRAKE-FORMED TO PROVIDE 3" ROOF DECK FLANGE AND 1-1/2" FASCIA FLANGE WITH 3/8" DRIP AT LOWER EDGE, MIN. 8" LENGTHS.
 - c. USE GALVANIZED STEEL AS ALTERNATE TO ALUMINUM.
- E. ROOF VENTS: AS SELECTED BY CONTRACTOR.

- F. GUTTERS AND DOWNSPOUTS:
 - 1. ALUMINUM: 3003-H14 ALLOY, MIN. 0.032" GA. FOR GUTTERS AND MIN. 0.019" GA. FOR DOWNSPOUTS. COLOR AS SELECTED BY OWNER.
 - 2. PROVIDE GUTTERS COMPLETE WITH STRAINERS, OUTLET TUBES, GUTTER ENDS, EXPANSION JOINTS, SCREENS, BAFFLES, ADN HANGERS.

- 3. STYLE:
 - a. GUTTER: AS SELECTED BY OWNER.
 - b. DOWNSPOUT: RECTANGULAR, SIZE 2"x4" OR SIMILAR.
- G. SEALANTS:
 - 1. INTERIOR: PAINT GRADE SILICONE.
 - 2. INTERIOR - WET LOCATIONS: MILDEW-RESISTANT SILICONE, WHITE.
 - 3. EXTERIOR: PAINT GRADE SILICONE.
 - 4. FOUNDATION: MULTI-PART, NON-SAG URETHANE.

DIVISION 8 - DOORS AND WINDOWS

- A. DOORS:
 - 1. METAL DOORS AND FRAMES:
 - a. INSULATED: NO INSULATION REQUIRED.
 - b. RATED: AS SELECTED BY OWNER.
 - c. STYLE: AS SELECTED BY OWNER.
 - 2. WOOD DOORS: NOT APPLICABLE
- B. WINDOWS: NOT APPLICABLE
- C. HARDWARE: PANIC OR PUSH/PULL AS SELECTED BY OWNER.
- D. GLAZING: NOT APPLICABLE
- DIVISION 9 - FINISHES
 - A. DRYWALL: NOT APPLICABLE
 - B. TILE: NOT APPLICABLE
 - C. RESILIENT FLOORING: NOT APPLICABLE
 - D. CARPET: NOT APPLICABLE
 - E. EXTERIOR PAINT:
 - 1. WOOD - GLASS, PAINTED: NOT APPLICABLE
 - 2. METAL - GALVANIZED:
 - a. PRIMER: 1 COAT RUST INHIBITIVE.
 - b. FINISH: 1 COAT ENAMEL PAINT.
 - 3. METAL - ALUMINUM (IF USED):
 - a. PRIMER: 1 COAT RUST INHIBITIVE.
 - b. FINISH: 1 COAT ENAMEL PAINT.
 - 4. CONCRETE, STUCCO - SOFT GLOSS:
 - a. PRIMER: NON-REQUIRED
 - b. FINISH: NON-REQUIRED
 - F. INTERIOR PAINT: NOT APPLICABLE

DIVISION 10 - SPECIALTIES

- A. WATER CLOSET ACCESSORIES: NOT APPLICABLE
- B. BATH ACCESSORIES: NOT APPLICABLE
- C. RESIDENTIAL APPLIANCES: NOT APPLICABLE

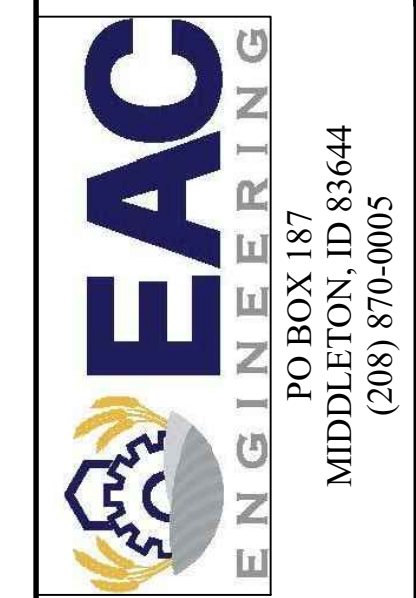
DIVISION 15 - MECHANICAL

- A. PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO INSTALL PLUMBING, RELATED FIXTURES, VENTILATION, ROOF AND FLOOR DRAINS, HEATING, AND AIR CONDITIONING.
- B. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODES AND ORDINANCES.
- C. COORDINATE WORK WITH ALL OTHER TRADES.
- D. TERMINAL HOOKUP OF ALL FIXTURES AND TAP IN TO ALL UTILITIES IS REQUIRED.
- E. INSTALL AND CHECK ALL PRESSURE REDUCING VALVES, POP OFF VALVES, AND OTHER SAFETY DEVICES BEFORE OPERATION OF SYSTEM.

- F. PLUMBING:
 - 1. INSTALL DOMESTIC HOT AND COLD WATER SUPPLY IN COPPER OR PEX.
 - 2. INSTALL SOIL WASTE AND VENT SYSTEM IN ABS DWV
 - 3. INSTALL ROOF AND FLOOR DRAINS TO DAYLIGHT.
 - 4. FIXTURES: INSTALL IN UNMARRIED CONDITION, PROTECT UNTIL COMPLETION OF WORK.
 - a. AS SELECTED BY OWNER.
 - 5. HOT WATER HEATER: NOT APPLICABLE
- G. HEATING AND VENTILATION: NOT APPLICABLE

DIVISION 16 - ELECTRICAL

- A. PROVIDE LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO INSTALL WIRING, RELATED FIXTURES, ELECTRIC HEAT ELEMENTS AND CONTROLS.
- B. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODES AND ORDINANCES.
- C. UNDERGROUND STUB UPS TO BE GRC TERMINATING INTO PANELS
- D. UNDERGROUND CONDUIT TO BE SCH. 40
- E. ALL EXPOSED CONDUIT
- F. MC CABLE NOT PERMITTED
- G. ALL GREENHOUSE INTERIORS CONSIDERED WET LOCATIONS, ALL INSTALLATIONS TO BE INSTALLED PER WET LOCATIONS.
- H. COORDINATE WORK WITH ALL OTHER TRADES.
- I. TERMINAL HOOKUP IS REQUIRED OF ALL FIXTURES, APPLIANCES, MOTORS, FANS, AND CONTROLS.
- J. DOMESTIC:
 - 1. MAIN PANEL BOARD:
 - a. AMPERAGE SERVICE PER PLANS.
 - b. MANUFACTURER: AS SELECTED BY OWNER.
 - 2. WIRING PER PLANS.
 - 3. ALL FIXTURES AND LAMPS TO BE COMPLETE AND AS SELECTED BY OWNER.
 - 4. EXTERIOR LIGHTING: AS SELECTED BY OWNER.



MERCED COLLEGE
UNIVERSITY DR.
MERCED, CA

SPECIFICATIONS



REV.	REVISION DATE
01	06/23/2022
PROJECT #:	21-073
DESIGN:	TCK
DRAWN:	TCK
REVIEW:	MCM
DATE:	12/22/21
SCALE:	N.A.
DWG NAME:	SPEC
SHEET	C.1
OF -- SHEETS	