DIVISION 20: MECHANICAL AND ELECTRICAL GENERAL REQUIREMENTS

PART 1 - GENERAL

- 1.1 RELATED DOCUMENTS
- A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT. INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 01 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.
- B. WHERE PARAGRAPHS OF THIS SECTION CONFLICT WITH SIMILAR PARAGRAPHS OF DIVISION 01, THE MORE
- STRINGENT SPECIFICATION REQUIREMENTS SHALL PREVAIL.
- C. THIS SECTION SHALL APPLY TO THE FOLLOWING DIVISIONS: 1. DIVISION 21 - FIRE SUPPRESSION
- 2. DIVISION 22 PLUMBING
- 3. DIVISION 23 HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)
- 4. DIVISION 26 ELECTRICAL
- 5. DIVISION 27 COMMUNICATIONS

WHICH ARE PART OF CONTRACT DOCUMENTS.

6. DIVISION 28 - ELECTRONIC SAFETY AND SECURITY

1.2 SUMMARY

- A. PERFORM WORK AND PROVIDE MATERIAL AND EQUIPMENT AS SHOWN ON THE DRAWINGS, AS SPECIFIED AND IN ACCORDANCE WITH THIS SECTION. COMPLETELY COORDINATE WORK OF THIS DIVISION WITH WORK OF OTHERS AND PROVIDE A COMPLETE AND FULLY FUNCTIONAL INSTALLATION.
- B. DRAWINGS AND SPECIFICATIONS FORM COMPLIMENTARY REQUIREMENTS. PROVIDE WORK SPECIFIED AND NOT SHOWN, WORK SHOWN AND NOT SPECIFIED AS THOUGH EXPLICITLY REQUIRED BY BOTH. ALTHOUGH WORK IS NOT SPECIFICALLY SHOWN OR SPECIFIED, PROVIDE SUPPLEMENTARY OR MISCELLANEOUS ITEMS. APPURTENANCES, DEVICES AND MATERIALS OBVIOUSLY NECESSARY FOR A SOUND, SECURE AND COMPLETE
- C. GIVE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND BACK CHARGES, AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES THAT HAVE JURISDICTION. PERFORM WORK IN ACCORDANCE WITH ALL LEGAL REQUIREMENTS AND WITH SPECIFICATIONS, DRAWINGS, ADDENDA AND CHANGE ORDERS, ALL OF
- D. EXAMINE DRAWINGS AND OTHER SECTIONS OF SPECIFICATIONS FOR REQUIREMENTS THAT AFFECT WORK OF
- E. OBTAIN CONSTRUCTION STANDARDS, IF ANY, FROM BUILDING OWNER, AND ENSURE ALL WORK COMPLIES.
- 1.3 DEFINITIONS
- A. AS USED IN ALL SECTIONS, "PROVIDE" MEANS "FURNISH AND INSTALL." "FURNISH" MEANS "TO PURCHASE AND DELIVER TO THE PROJECT SITE COMPLETE WITH EVERY NECESSARY APPURTENANCE AND SUPPORT," AND "INSTALL" MEANS "TO UNLOAD AT THE DELIVERY POINT AT THE SITE AND PERFORM EVERY OPERATION NECESSARY TO ESTABLISH SECURE MOUNTING AND CORRECT OPERATION AT THE PROPER LOCATION IN THE PROJECT. 'POS' MEANS PROVIDED UNDER OTHER SPECIFICATION SECTION. "ARCHITECT" MEANS THE "PRIME DESIGN CONSULTANT." IF R.G. VANDERWEIL ENGINEERS, LLP IS NOT THE PRIME DESIGN CONSULTANT, THE ARCHITECT MAY AUTHORIZE R.G. VANDERWEIL ENGINEERS, LLP TO ACT ON THE ARCHITECT'S BEHALF IN MATTERS CONCERNING THE ALL SECTIONS OF SPECIFICATIONS.
- 1.4 CONTRACT DOCUMENTS
- A. REFER TO ARCHITECTURAL, FIRE PROTECTION, PLUMBING, HVAC, ELECTRICAL, STRUCTURAL, TELE/DATA AND ALL OTHER DRAWINGS AND OTHER SECTIONS THAT INDICATE TYPES OF CONSTRUCTION IN WHICH WORK SHALL
- BE INSTALLED AND WORK OF OTHER TRADES WITH WHICH WORK OF THIS SECTION MUST BE COORDINATED B. EXCEPT WHERE MODIFIED BY A SPECIFIC NOTATION TO THE CONTRARY. IT SHALL BE UNDERSTOOD THAT THE INDICATION AND/OR DESCRIPTION OF AN ITEM, IN THE DRAWINGS OR SPECIFICATIONS OR BOTH, CARRIES WITH
- IS EXPLICITLY STATED AS PART OF THE INDICATION OR DESCRIPTION. C. ITEMS REFERRED TO IN SINGULAR NUMBER IN CONTRACT DOCUMENTS SHALL BE PROVIDED IN QUANTITIES

IT THE INSTRUCTION TO FURNISH AND INSTALL THE ITEM, REGARDLESS OF WHETHER OR NOT THIS INSTRUCTION

- NECESSARY TO COMPLETE WORK. . DRAWINGS ARE DIAGRAMMATIC. THEY ARE NOT INTENDED TO BE ABSOLUTELY PRECISE; THEY ARE NOT INTENDED TO SPECIFY OR TO SHOW EVERY OFFSET, FITTING, AND COMPONENT. THE PURPOSE OF THE DRAWINGS IS TO INDICATE A SYSTEMS CONCEPT. THE MAIN COMPONENTS OF THE SYSTEMS, AND THE APPROXIMATE GEOMETRICAL RELATIONSHIPS. BASED ON THE SYSTEMS CONCEPT, THE MAIN COMPONENTS, AND THE APPROXIMATE GEOMETRICAL RELATIONSHIPS, PROVIDE ALL OTHER COMPONENTS AND MATERIALS NECESSARY TO MAKE THE SYSTEMS FULLY COMPLETE, COORDINATED WITH OTHER SYSTEMS AND THE STRUCTURE AND SPACE AVAILABLE. AND OPERATIONAL
- E. INFORMATION AND COMPONENTS SHOWN ON SINGLE LINE /SCHEMATIC DIAGRAMS BUT NOT SHOWN ON PLANS. AND VICE VERSA, SHALL APPLY OR BE PROVIDED AS IF EXPRESSLY REQUIRED ON BOTH.
- F. DATA THAT MAY BE FURNISHED ELECTRONICALLY (ON COMPACT DISK (CD), ELECTRONIC MAIL, OR OTHERWISE) IS DIAGRAMMATIC. ELECTRONICALLY FURNISHED INFORMATION IS SUBJECT TO THE SAME LIMITATION OF PRECISION DESCRIBED ABOVE. IF FURNISHED, ELECTRONIC DATA IS FOR CONVENIENCE AND GENERALIZED REFERENCE, AND SHALL NOT SUBSTITUTE FOR SEALED OR STAMPED CONSTRUCTION DOCUMENTS.
- 1.5 ELECTRONIC CAD FILES
- A. ELECTRONIC CAD FILES FOR FIRE PROTECTION, PLUMBING, HVAC, ELECTRICAL, TELE/DATA AND SECURITY DRAWINGS WILL BE FURNISHED BY ENGINEER AT CONTRACTOR'S REQUEST. ENGINEER WILL FORWARD THE 'RELEASE OF LIABILITY' FORM TO CONTRACTOR FOR COMPLETION/SIGNATURE. CONTRACTOR TO RETURN FORM TO ENGINEER PRIOR TO ENGINEER'S ISSUANCE OF ELECTRONIC CAD FILES. 1.6 DISCREPANCIES IN DOCUMENTS
- A. WHERE DRAWINGS OR SPECIFICATIONS CONFLICT OR ARE UNCLEAR, SUBMIT CLARIFICATION REQUEST IN
- WRITING BEFORE AWARD OF CONTRACT. OTHERWISE, ARCHITECT'S INTERPRETATION OF CONTRACT DOCUMENTS SHALL BE FINAL, AND NO ADDITIONAL COMPENSATION SHALL BE PERMITTED DUE TO DISCREPANCIES OR UN-CLARITIES THUS RESOLVED. B. WHERE DRAWINGS OR SPECIFICATIONS DO NOT COINCIDE WITH MANUFACTURERS' RECOMMENDATIONS OR
- WITH APPLICABLE CODES AND STANDARDS, SUBMIT CLARIFICATION REQUEST IN WRITING BEFORE INSTALLATION. OTHERWISE, MAKE CHANGES IN INSTALLED WORK REQUIRED FOR COMPLIANCE WITH MANUFACTURER INSTRUCTIONS OR CODES AND STANDARDS WITHIN CONTRACT PRICE.
- C. IF THE REQUIRED MATERIAL, INSTALLATION, OR WORK CAN BE INTERPRETED DIFFERENTLY FROM DRAWING TO DRAWING, OR BETWEEN DRAWINGS AND SPECS, PROVIDE MATERIAL, INSTALLATION OR WORK THAT IS OF THE HIGHER STANDARD.
- D. IT IS THE REQUIREMENT OF THESE CONTRACT DOCUMENTS TO REQUIRE PROVISION OF SYSTEMS AND COMPONENTS THAT ARE FULLY COMPLETE AND OPERATIONAL AND FULLY SUITABLE FOR THE INTENDED USE. THERE MAY BE SITUATIONS IN THE DOCUMENTS WHERE INSUFFICIENT INFORMATION EXISTS TO PRECISELY DESCRIBE A CERTAIN COMPONENT OR SUBSYSTEM, OR THE ROUTING OF A COMPONENT OR ITS COORDINATION WITH OTHER BUILDING ELEMENTS. IN THESE CASES, WHERE NOTIFICATION REQUIRED BY PARAGRAPH (A) ABOVE HAS NOT BEEN SUBMITTED, PROVIDE THE SPECIFIC COMPONENT OR SUBSYSTEM WITH ALL PARTS NECESSARY FOR THE INTENDED USE, FULLY COMPLETE AND OPERATIONAL, AND INSTALLED IN WORKMANLIKE MANNER EITHER CONCEALED OR EXPOSED IN ACCORDANCE WITH THE DESIGN INTENT.
- . IN CASES COVERED BY PARAGRAPH (D) ABOVE, WHERE THE CONTRACTOR BELIEVES ENGINEERING GUIDANCE IS NEEDED THE CONTRACTOR SHALL, SUBMIT A SKETCH IDENTIFYING PROPOSED SOLUTION. ARCHITECT SHALL REVIEW, NOTE IF NECESSARY, AND APPROVE THE SKETCH.
- WHERE DISCREPANCIES EXIST BETWEEN THE MECHANICAL, PLUMBING, FIRE PROTECTION, ELECTRICAL AND TELE/DATA DRAWINGS IN REGARDS TO WHAT TRADE OWNS EQUIPMENT SUCH AS DISCONNECTS, STARTERS, ETC., THE DISCREPANCY SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION IN ACCORDANCE WITH PARAGRAPH (A) ABOVE. IF THE SCOPE IS NOT RESOLVED PRIOR TO THE AWARD OF CONTRACT, THE ELECTRICAL CONTRACTOR SHALL PROVIDE SUCH ITEMS.
- 1.7 MODIFICATIONS IN LAYOUT
- A. DRAWINGS ARE DIAGRAMMATIC. THEY INDICATE GENERAL ARRANGEMENTS OF MECHANICAL SYSTEMS AND OTHER WORK. THEY DO NOT SHOW ALL OFFSETS REQUIRED FOR COORDINATION NOR DO THEY SHOW THE EXACT ROUTINGS AND LOCATIONS NEEDED TO COORDINATE WITH STRUCTURE AND OTHER TRADES AND TO MEET CEILING HEIGHTS AND OTHER ARCHITECTURAL REQUIREMENTS.
- B. TO OBTAIN THE INTENDED AESTHETICS IN SPACES USED BY BUILDING OCCUPANTS, PRIOR TO INSTALLATION OF VISIBLE MATERIAL AND EQUIPMENT (INCLUDING ACCESS PANELS). REVIEW ARCHITECTURAL DRAWINGS FOR DESIRED LOCATIONS. WHERE NOT DEFINITIVELY INDICATED THE CONTRACTOR SHALL REQUEST INFORMATION
- C. CHECK CONTRACT DRAWINGS, AS WELL AS SHOP DRAWINGS, TO VERIFY AND COORDINATE SPACES IN WHICH WORK OF THIS SECTION WILL BE INSTALLED.
- D. MAINTAIN MAXIMUM HEADROOM AT ALL LOCATIONS. ALL PIPING, DUCT, CONDUIT, AND ASSOCIATED COMPONENTS TO BE AS TIGHT TO UNDERSIDE OF STRUCTURE AS POSSIBLE.
- E. MAKE REASONABLE MODIFICATIONS IN LAYOUT AND COMPONENTS NEEDED TO PREVENT CONFLICT WITH WORK OF OTHER TRADES AND TO COORDINATE ACCORDING TO PARAGRAPHS ABOVE. SYSTEMS SHALL BE RUN IN A RECTILINEAR FASHION.
- . WHERE CONFLICTS OR POTENTIAL CONFLICTS EXIST AND ENGINEERING GUIDANCE IS DESIRED THE CONTRACTOR SHALL SUBMIT SKETCH OF PROPOSED RESOLUTION TO ARCHITECT FOR REVIEW AND APPROVAL AS DESCRIBED/OUTLINED BELOW IN 'REQUEST FOR INFORMATION' (RFI) SECTION.
- 1.8 REQUEST FOR INFORMATION (RFI'S)
- A. WHERE AN RFI IS A REQUEST TO RESOLVE A CONFLICT OR AN UN-CLARITY. OR A REQUEST FOR ADDITIONAL DETAIL, CONTRACTOR'S RFI SHALL INCLUDED SKETCH OR EQUIVALENT DESCRIPTION OF CONTRACTOR'S PROPOSED SOLUTION, IN ACCORDANCE WITH PARAGRAPHS "DISCREPANCIES IN DOCUMENTS; AND "MODIFICATIONS IN LAYOUT" ABOVE.
- B. TO EXPEDITE THE PROCESSING OF RFIS, THE CONTRACTOR SHALL SUBMIT AN ELECTRONIC CORRESPONDENCE WITH THE FOLLOWING INFORMATION CONTAINED WITHIN, AT THE MINIMUM, AS WELL AS THE CONTRACTOR'S PROPOSED SOLUTION, WITH SKETCHES AS REQUIRED:
- 1. PROJECT NAME
- 2. DATE OF RFI SUBMISSION / DATE OF REQUIRED RFI RESPONSE (3-DAY MINIMUM)
- 3. RFI NUMBER
- 4. NAME OF CONTRACTING COMPANY SUBMITTING RFI AND NAME OF PERSON SUBMITTING RFI
- 5. SPECIFICATION SECTION CITED 6. DRAWING NUMBER REFERENCED

- 7. CONTRACTOR EMAIL ADDRESS AND FAX NUMBER (FOR RESPONSE)
- 8. CONTRACTOR FIELD QUESTION (PROVIDE A NARRATIVE WITH SUPPLEMENTAL SKETCH) 9. CONTRACTOR PROPOSED SOLUTION (PROVIDE A NARRATIVE WITH SUPPLEMENTAL SKETCH)
- 10. RESPONDENT NARRATIVE BOX (FOR ENGINEER'S RESPONSE)

1.9 EXISTING CONDITIONS AND PREPARATORY WORK

THE FIELD.

- A. DRAWINGS ARE DIAGRAMMATIC, THEREFORE DETERMINE EXACT LOCATIONS OF SYSTEMS AND COMPONENTS IN
- B. CARE SHALL BE TAKEN DURING THE INSTALLATION OF THE NEW WORK, AS NOT TO DAMAGE OR INTERRUPT THE EXISTING BUILDING SYSTEMS AND SERVICES INSTALLED.
- C. LOCATION OF EQUIPMENT OR THE ROUTING OF THE VARIOUS SYSTEMS AS WELL AS OPENINGS IN FLOOR SLABS
- OR WALLS SHALL BE GOVERNED BY THE EXISTING CONDITIONS AS THEY APPEAR IN THE FIELD. D. THIS PROJECT INVOLVES CONSTRUCTION INSIDE AN EXISTING STRUCTURE. CONTRACTORS, BY SUBMITTING A BID, ARE DEEMED TO BE COMPLETELY FAMILIAR WITH THE EXISTING CONDITION OF THE BUILDING AS IT INFLUENCES THE WORK DESCRIBED. POTENTIAL PROBLEMS AREA SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IMMEDIATELY.
- E. ANY/ALL DEMOLITION SHALL BE COORDINATED WITH OWNER, ARCHITECT, G.C.. AND ENGINEER.
- BEFORE STARTING WORK IN A PARTICULAR AREA OF THE PROJECT, VISIT THE LOCATION AND EXAMINE CONDITIONS UNDER WHICH WORK MUST BE PERFORMED INCLUDING PREPARATORY WORK DONE UNDER OTHER SECTIONS OR OTHER CONTRACTS OR BY THE OWNER. REVIEW GEOMETRICAL CONSTRAINTS, SUCH AS CEILING HEIGHTS. TO ENSURE CONSTRUCTABILITY AND ACCESS FOR MAINTENANCE. REPORT CONDITIONS THAT MIGHT ADVERSELY AFFECT WORK IN WRITING TO THE ARCHITECT. DO NOT PROCEED WITH WORK UNTIL DEFECTS HAVE BEEN CORRECTED AND CONDITIONS ARE SATISFACTORY. COMMENCEMENT OF WORK SHALL BE CONSTRUED AS COMPLETE ACCEPTANCE OF EXISTING CONDITIONS AND PREPARATORY WORK.
- 1.10 CODES, STANDARDS, AUTHORITIES AND PERMITS
- A. PERFORM WORK IN ACCORDANCE WITH RULES, REGULATIONS, STANDARDS, CODES, ORDINANCES, AND LAWS OF LOCAL, STATE, AND FEDERAL GOVERNMENTS, AND OTHER AUTHORITIES THAT HAVE LEGAL JURISDICTION
- B. PRIOR TO COMMENCEMENT OF WORK, NOTIFY STATE AND APPLICABLE AUTHORITIES AND SUBMIT ALL OF THE APPLICABLE NOTIFICATIONS FOR CONSTRUCTION, OPERATION AND/OR DEMOLITION.
- C. MATERIALS AND EQUIPMENT SHALL BE MANUFACTURED, INSTALLED AND TESTED AS SPECIFIED IN LATEST EDITIONS OF APPLICABLE PUBLICATIONS, STANDARDS, RULINGS AND DETERMINATIONS OF:
- CODES.
- 2. AMERICAN GAS ASSOCIATION (AGA). 3. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA).
- 4. AMERICAN INSURANCE ASSOCIATION (AIA) (FORMERLY NATIONAL BOARD OF FIRE UNDERWRITERS).

1. LOCAL AND STATE BUILDING, PLUMBING, MECHANICAL, ELECTRICAL, FIRE AND HEALTH DEPARTMENT

- 5. OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).
- 6. UNDERWRITERS LABORATORIES (UL)
- 7. FACTORY MUTUAL ASSOCIATION (FM)
- 8. OWNER'S INSURANCE UNDERWRITER. 9. SHEET METAL & AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)
- D. MATERIAL AND EQUIPMENT SHALL BE LISTED BY UNDERWRITERS' LABORATORIES (UL), AND APPROVED BY
- ASME, ANSI, ASTM, AND AGA FOR INTENDED SERVICE. E. WHEN REQUIREMENTS CITED IN THIS SPECIFICATION CONFLICT WITH EACH OTHER OR WITH CONTRACT
- DOCUMENTS, MOST STRINGENT SHALL GOVERN WORK.
- F. SECURE AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. SECURE TRADE PERMITS PRIOR TO BEGINNING WORK.
- G. PERFORM ALL WORK IN ACCORDANCE WITH BASE BUILDING RULES, REGULATIONS, SPECIFICATIONS AND STANDARDS.
- A. WARRANT THE WORK OF THIS SECTION IN WRITING FOR ONE YEAR FOLLOWING THE DATE OF SUBSTANTIAL COMPLETION. IF THE EQUIPMENT IS USED FOR VENTILATION, TEMPORARY HEAT, OR OTHER USE PRIOR TO INITIAL BENEFICIAL OCCUPANCY BY THE OWNER, THE BID PRICE SHALL INCLUDE AN EXTENDED PERIOD OF WARRANTY COVERING THE ONE-YEAR OF BENEFICIAL OCCUPANCY BY THE OWNER. THE WARRANTY SHALL REPAIR OR REPLACE DEFECTIVE MATERIALS, EQUIPMENT, WORKMANSHIP AND INSTALLATION THAT DEVELOP WITHIN THIS PERIOD, PROMPTLY AND TO ARCHITECT'S SATISFACTION AND CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER WARRANTY WITHIN CONTRACT PRICE.
- 1.12 COORDINATION DRAWINGS
- A. A SINGLE SET OF COORDINATION DRAWINGS SHALL BE MUTUALLY PREPARED BY ALL MECHANICAL AND ELECTRICAL TRADES. THE INITIATION OF THESE DRAWINGS BEGINS WITH THE SHEET METAL SUBCONTRACTOR.
- B. THE SHEET METAL SUBCONTRACTOR SHALL PREPARE A COMPLETE SET OF ELECTRONIC DRAWINGS IN APPROVED VERSIONS OF AUTOCAD, REVIT, OR APPROVED ALTERNATIVE, AT SCALE NOT LESS THAN 3/8" EQUALS 1'-0" SHOWING: STRUCTURE, RATED PARTITIONS, CEILING TYPE AND OTHER INFORMATION AS NEEDED FOR COORDINATION. ALL TRADES SHALL ELECTRONICALLY ADD THEIR SYSTEMS TO THE ELECTRONIC FORMATTED DRAWINGS, EACH TRADE IN A DIFFERENT COLOR, SHOWING REQUIRED OFFSETS AND DIMENSIONS TO AVOID INTERFERENCES. THESE ELECTRONIC FILES WILL BE CONSIDERED THE PROJECT COORDINATION DRAWINGS.
- C. WHERE CONFLICTS OCCUR WITH PLACEMENT OF MATERIALS OF VARIOUS TRADES, THE SHEET METAL SUBCONTRACTOR WILL BE RESPONSIBLE TO COORDINATE THE AVAILABLE SPACE TO ACCOMMODATE
- D. SHEET METAL FABRICATION SHALL NOT START UNTIL COPIES OF COMPLETED COORDINATION DRAWINGS ARE RECEIVED BY THE ARCHITECT AND HAVE BEEN REVIEWED.
- E. REVIEW BY ENGINEER OF COORDINATION DRAWINGS IS LIMITED TO CONFIRMING THAT REQUIREMENTS FOR COORDINATION AND PREPARATION OF PLANS HAVE BEEN COMPLIED WITH BY THE CONSTRUCTION MANAGER OR GENERAL CONTRACTOR AND SHALL NOT DIMINISH RESPONSIBILITY UNDER THIS CONTRACT FOR FINAL COORDINATION OF INSTALLATION AND MAINTENANCE CLEARANCES OF ALL SYSTEMS AND EQUIPMENT WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND OTHER RELATED WORK.
- 1.13 SHOP DRAWING SUBMITTALS
- A. SUBMITTAL COVER SHEET:
- 1. SHOP DRAWING SUBMITTAL FOR EACH PRODUCT SHALL INCLUDE A COPY OF THE FOLLOWING COVER SHEET COMPLETELY FILLED OUT. INCOMPLETE OR INCORRECT COVER SHEET SUBMITTAL SHALL CONSTITUTE REASON FOR REJECTION.
- 2. PROVIDE SEPARATE COVER SHEET (BELOW) FOR EACH PRODUCT, RATHER THAN ONE COVER SHEET FOR MULTIPLE PRODUCTS, WHETHER OR NOT SUPPLIED BY ONE MANUFACTURER OR VENDOR.

	SHOP DRAWING COVER SHEE	ΞŤ	
PRO	JECT: CONTRA	ACTOR:	
DIVIS	DIVISION NO.: SECTION		
DESC	CRIPTION:		
CON	TRACT DRAWING REFERENCE NO:		
EQUI	PMENT TAG:		
SUBN	MISSION (CIRCLE ONE): FIRST, SECOND, THIRD, FOURTH	1	
DATE	: :		
INFO	RMATION AND CHECKLIST		
1.	Contractor's Log #ID		
2.	Name, address, and phone number of supplier.		
3.	Are all specified or scheduled items included and exactly match scheduled/specified items?	Yes	No
4.	Is this item a substitution?	Yes	No
5.	Are deviations clearly identified?	Yes	No
6.	Does equipment fit space shown on construction documents, coordination drawings, and actual field conditions?	Yes	No
7.	Has support, erection, weights, and installation been coordinated with all trades?	Yes	No
8.	Does the proposed installation void warranties and/or violate UL or code requirements?	Yes	No
9.	Does this material/equipment add expense to other trades or project costs?	Yes	No
10.	Does equipment require interface with other trades? List divisions and specifics requiring coordination?	Yes	No
11.	Is control interface coordinated?	Yes	No
12.	List electrical characteristics (Voltage/Phase/Hz/Amps)		

B. SUBMITTAL PROCEDURES, CONTENTS, AND FORMAT

1. CONSTRUCTION MANAGER OR GENERAL CONTRACTOR SHALL FIRST REVIEW SUBMITTAL PACKAGES FOR COMPLIANCE WITH CONTRACT DOCUMENTS. UPON REVIEW BY THE G.C. THE SUBMITTALS WILL THEN BE SUBMITTED FOR REVIEW BY ARCHITECT. REVIEW BY CONSTRUCTION MANAGER OR CONTRACTOR IS INTENDED TO ENSURE THAT THE SUBMITTALS INCLUDE THE FOREGOING COVER SHEET. ARE IN THE CORRECT ELECTRONIC FORMAT AS SPECIFIED BELOW. AND THAT THE DEVICES/EQUIPMENT/ITEMS FIT INTO THE SPACE PROVIDED. ALSO, THAT THE SUBMITTAL CONTAINS ADEQUATE INFORMATION TO VERIFY SPECIFICATION REQUIREMENTS AS WELL AS THE PERFORMANCE AND DIMENSIONAL REQUIREMENTS SHOWN ON THE DRAWINGS. IF A SHOP DRAWING IS RETURNED WITH A SUBMITTAL STATUS OF "REJECTED"

- OR "REJECTED: REVISE AND RESUBMIT", IT INDICATES THE SHOP DRAWING WAS NOT ADEQUATELY REVIEWED BY THE CONTRACTOR. SUBSEQUENT RE-SUBMITTALS SHALL BE COMPLETE AND SHALL INCLUDE A COVER LETTER SUMMARIZING THE CORRECTIONS MADE IN RESPONSE TO THE REVIEW COMMENTS.
- 2. SUBMITTALS WILL BE PROVIDED TO ENGINEER IN ELECTRONIC (PDF) FORMAT. A SINGLE PDF FILE SHALL BE SUBMITTED FOR EACH RESPECTIVE SUBMITTAL. THE PDF FILE WILL BE FORMATTED IN THE FOLLOWING WAY:
- a. SUBMITTALS WILL BE 'EMAILED' TO THE MECHANICAL/ELECTRICAL TEAM VIA THE FOLLOWING EMAIL ADDRESS(ES):
- 1. PROJECT MANAGERS EMAIL: pvankauwenberg@vanderweil.com
- 2. DL-BOS-SHOPDRAWINGS@VANDERWEIL.COM 3. SUBMITTAL CONTENTS
- a. ELECTRONIC SUBMITTALS SHALL BE COMPREHENSIVE AND FULLY SELF CONTAINED AND SHALL NOT CONTAIN LINKS TO ASSOCIATED WEBSITES.
- AND PLANS AND DIAGRAMS AS NECESSARY TO CONFIRM COMPLIANCE WITH PLANS AND c. SUBMITTALS SHALL CONTAIN ONLY INFORMATION RELEVANT TO THE PARTICULAR EQUIPMENT OR
- MATERIALS TO BE FURNISHED. CLEARLY INDICATE THE PIECE OF EQUIPMENT OR MATERIAL BEING PROVIDED. DO NOT SUBMIT GENERIC CATALOG CUTS WHICH DESCRIBE SEVERAL DIFFERENT ITEMS IN ADDITION TO THOSE SPECIFIC ITEMS BEING PROVIDED. 4. SHOP DRAWINGS SHOWING MANUFACTURER'S PRODUCT DATA SHALL CONTAIN DETAILED DIMENSIONAL
- DRAWINGS, ACCURATE AND COMPLETE DESCRIPTION OF MATERIALS OF CONSTRUCTION, MANUFACTURER'S PUBLISHED PERFORMANCE CHARACTERISTICS AND CAPACITY RATINGS (PERFORMANCE DATA, ALONE, IS NOT ACCEPTABLE), ELECTRICAL REQUIREMENTS AND WIRING DIAGRAMS. DRAWINGS SHALL CLEARLY INDICATE LOCATION (TERMINAL BLOCK OR WIRE NUMBER), VOLTAGE AND FUNCTION FOR ALL FIELD TERMINATIONS, AND OTHER INFORMATION NECESSARY TO DEMONSTRATE COMPLIANCE WITH ALL REQUIREMENTS OF CONTRACT DOCUMENTS.
- D. ACCEPTABLE MANUFACTURERS: SUBSTITUTION OF PRODUCTS OTHER THAN THOSE OF THE ACCEPTABLE MANUFACTURERS SPECIFIED HEREIN SHALL NOT BE MADE. ONLY THE SPECIFIED ITEMS, OR COMPARABLE PRODUCTS BY ONE OF THE OTHER NAMED ALTERNATIVE MANUFACTURERS SHALL BE SUBMITTED. OTHER MANUFACTURERS AND PRODUCTS WILL NOT BE USED.
- E. DEVIATIONS
- 1. PROPOSED DEVIATIONS FROM CONTRACT DOCUMENTS SHALL BE REQUESTED INDIVIDUALLY IN WRITING WHETHER DEVIATIONS RESULT FROM FIELD CONDITIONS, STANDARD SHOP PRACTICE, OR OTHER CAUSE. SUBMIT LETTER WITH TRANSMITTAL OF SHOP DRAWINGS WHICH FLAGS THE DEVIATION TO THE ATTENTION
- 2. WITHOUT LETTERS FLAGGING THE DEVIATION TO THE ARCHITECT, IT IS POSSIBLE THAT THE ARCHITECT MAY NOT NOTICE SUCH DEVIATION OR MAY NOT REALIZE ITS RAMIFICATIONS. THEREFORE, IF SUCH LETTERS ARE NOT SUBMITTED TO THE ARCHITECT, THE CONTRACTOR SHALL HOLD THE ARCHITECT AND HIS CONSULTANTS HARMLESS FOR ANY AND ALL ADVERSE CONSEQUENCES RESULTING FROM THE DEVIATIONS BEING IMPLEMENTED. THIS SHALL APPLY REGARDLESS OF WHETHER THE ARCHITECT HAS REVIEWED OR APPROVED SHOP DRAWINGS CONTAINING THE DEVIATION, AND WILL BE STRICTLY
- 3. APPROVAL OF PROPOSED DEVIATIONS, IF ANY, WILL BE MADE AT DISCRETION OF ARCHITECT.
- F. SUBMITTAL STATUS: SUBMITTALS WILL BE RETURNED MARKED/NOTED AS ILLUSTRATED BELOW: "APPROVED AS NOTED": REVIEWED AND FOUND GENERALLY ACCEPTABLE. MINOR DEVIATIONS NOTED. NO FURTHER SUBMITTAL IS REQUIRED IF NOTED DEVIATIONS ARE COMPLIED WITH/CORRECTED.
- "REJECTED: REVISE AND RESUBMIT": SUBMITTAL CONTAINS DEVIATIONS WHICH SHALL BE CORRECTED AND CONFIRMED BY A NEW SUBMITTAL
- "<u>REJECTED</u>": SUBMITTAL IS INCORRECT TO SUCH AN EXTENT THAT MATERIAL IS UNACCEPTABLE, OR IS INCOMPLETE TO SUCH AN EXTENT THAT A COMPLETE REVIEW CANNOT BE MADE. RESUBMIT IN ACCORDANCE WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- "NO ACTION": SUBMITTAL NOT REVIEWED. "REVIEWED FOR INFORMATION": THIS SUBMITTAL IS FOR INFORMATION ONLY.
- G. RESPONSIBILITY: INTENT OF ARCHITECT'S SUBMITTAL REVIEW IS TO CHECK FOR CAPACITY, RATING. AND CERTAIN CONSTRUCTION FEATURES. CONTRACTOR SHALL ENSURE THAT WORK MEETS REQUIREMENTS OF CONTRACT DOCUMENTS REGARDING INFORMATION THAT PERTAINS TO FABRICATION PROCESSES OR MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION; AND FOR COORDINATION OF WORK OF THIS AND OTHER SECTIONS. WORK SHALL COMPLY WITH SUBMITTALS MARKED "REVIEWED" TO EXTENT THAT THEY AGREE WITH CONTRACT DOCUMENTS. SUBMITTAL REVIEW SHALL NOT DIMINISH RESPONSIBILITY UNDER THIS CONTRACT FOR DIMENSIONAL COORDINATION, QUANTITIES, INSTALLATION, WIRING, SUPPORTS AND ACCESS FOR SERVICE, NOR SHOP DRAWING ERRORS OR DEVIATIONS FROM REQUIREMENTS OF CONTRACT DOCUMENTS. NOTING OF SOME ERRORS WHILE OVERLOOKING OTHERS WILL NOT EXCUSE PROCEEDING IN ERROR. CONTRACT DOCUMENTS REQUIREMENTS ARE NOT LIMITED, WAIVED NOR
- SUPERSEDED BY REVIEW. H. SCHEDULE: INCORPORATE SHOP DRAWING REVIEW PERIOD INTO CONSTRUCTION SCHEDULE SO THAT WORK IS NOT DELAYED. CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR DELAYS CAUSED BY NOT INCORPORATING THE FOLLOWING SHOP DRAWING REVIEW TIME REQUIREMENTS INTO HIS PROJECT SC HEDULE. WORKING DAYS LISTED REFERENCE THE TIME IN THE ENGINEER'S OFFICE. IT DOES NOT INCLUDE TRANSMITTAL OR REVIEW TIME OF OTHERS. ALLOW AT LEAST 7 WORKING DAYS, EXCLUSIVE OF TRANSMITTAL TIME, FOR REVIEW EACH TIME SHOP DRAWING IS SUBMITTED OR RESUBMITTED WITH THE EXCEPTION THAT 14 WORKING DAYS, EXCLUSIVE OF TRANSMITTAL TIME, ARE REQUIRED FOR THE FOLLOWING:
- 1. HVAC TEMPERATURE CONTROL SUBMITTALS.
- 2. COORDINATION DRAWINGS. 3. FIRE PROTECTION FABRICATION DRAWINGS.
- 4. IF MORE THAN FIVE SHOP DRAWINGS OF A SINGLE TRADE ARE RECEIVED IN ONE CALENDAR WEEK
- 1.14 RECORD DRAWINGS (AS-BUILTS) A. AS WORK PROGRESSES AND FOR DURATION OF CONTRACT, MAINTAIN COMPLETE AND SEPARATE SET OF PRINTS OF CONTRACT DRAWINGS AT JOB SITE AT ALL TIMES. RECORD WORK COMPLETED AND ALL CHANGES FROM ORIGINAL CONTRACT DRAWINGS. SUCH CHANGES SHALL INCLUDE, BUT NOT BE LIMITED TO, THOSE RESULTING FROM RFI'S, FIELD CONDITIONS, AND MODIFICATIONS AND ADDITIONS. INCLUDE ACTUAL LOCATION OF EXISTING UTILITIES IF THEY DIFFER FROM DESIGN DOCUMENTS. AT COMPLETION OF PROJECT CONTRACTOR SHALL INCORPORATE ALL CHANGES INTO RECORD AS-BUILT DRAWINGS IN ELECTRONIC FORMAT AND SUBMIT
- FOR REVIEW AND APPROVAL. B. AT COMPLETION OF WORK, PREPARE A COMPLETE SET OF RECORD DRAWINGS IN ELECTRONIC FORMAT
- DELIVER TO THE ARCHITECT FOR APPROVAL. C. AFTER APPROVAL, DELIVER THE FOLLOWING:
 - 1. ORIGINAL (NOT SCANNED) ELECTRONIC VERSION OF DRAWINGS IN APPROVED FORMAT, NOTATED AS "RECORD DRAWINGS," AND CONFORMED TO INCORPORATE ALL CHANGES TO THE ORIGINAL DESIGN NOTED ABOVE, THE CHANGES SHALL BE CLOUDED AND APPROPRIATELY IDENTIFIED. DELIVER ONE COPY EACH TO THE GENERAL CONTRACTOR, OWNER, ARCHITECT, AND ENGINEER.
- 1.15 BULLETINS, MANUALS, AND OPERATING INSTRUCTIONS ELECTRONIC FORMAT
- PROVIDE ELECTRONICALLY FORMATTED (SEARCHABLE PDF) FILES OF MANUFACTURER'S OPERATING AND MAINTENANCE INSTRUCTIONS FOR EACH PIECE OF EQUIPMENT AND SYSTEM. COMPILE RESPECTIVE WORK OF EACH DISCIPLINE INTO A SINGLE FILE FOR EACH DISCIPLINE. INFORMATION SUCH AS MAKE, TYPE, SIZE, CAPACITY, SERIAL NUMBER, ETC. SHALL BE INCLUDED AS PART OF THE MANUAL. PROVIDE, WITHIN THE ELECTRONIC FILE, TABLE OF CONTENTS/INDEX LISTING.
- 1.16 SPECIAL RESPONSIBILITIES A. COOPERATE AND COORDINATE WITH WORK OF OTHER SECTIONS IN EXECUTING WORK OF THIS SECTION. 1. PERFORM WORK SO THAT PROGRESS OF ENTIRE PROJECT INCLUDING WORK OF OTHER SECTIONS SHALL
 - NOT BE INTERFERED WITH OR DELAYED. 2. PROVIDE INFORMATION AS REQUESTED ON ITEMS FURNISHED UNDER ONE SECTION WHICH SHALL BE INSTALLED UNDER OTHER SECTIONS
- 3. FOR EQUIPMENT PROVIDED UNDER ANY DIVISION OR SECTION WHICH HAS CONNECTION MADE UNDER THE MECHANICAL OR ELECTRICAL SECTIONS, OBTAIN DETAILED INSTALLATION AND HOOKUP INFORMATION FROM THE EQUIPMENT MANUFACTURERS.
- 4. OBTAIN FINAL ROUGHING DIMENSIONS OR OTHER INFORMATION AS NEEDED FOR COMPLETE INSTALLATION OF ITEMS FURNISHED UNDER OTHER SECTIONS OR BY OWNER. 5. KEEP FULLY INFORMED AS TO SHAPE, SIZE AND POSITION OF OPENINGS REQUIRED FOR MATERIAL OR EQUIPMENT TO BE PROVIDED UNDER ALL SECTIONS. GIVE FULL INFORMATION SO THAT OPENINGS REQUIRED BY WORK OF THIS SECTION MAY BE COORDINATED WITH OTHER WORK AND OTHER OPENINGS AND MAY BE PROVIDED FOR IN ADVANCE. IN CASE OF FAILURE TO PROVIDE SUFFICIENT INFORMATION IN PROPER TIME, PROVIDE CUTTING AND PATCHING OR HAVE SAME DONE, AT OWN EXPENSE AND TO FULL
- SATISFACTION OF ARCHITECT. 6. NOTIFY ARCHITECT OF LOCATION AND EXTENT OF EXISTING PIPING, CONDUIT, DUCTWORK AND EQUIPMENT THAT INTERFERES WITH NEW CONSTRUCTION. IN COORDINATION WITH AND WITH APPROVAL OF ARCHITECT, RELOCATE PIPING, DUCTWORK AND EQUIPMENT TO PERMIT NEW WORK TO BE PROVIDED. REMOVE NON_FUNCTIONING AND ABANDONED PIPING, DUCTWORK AND EQUIPMENT. DISPOSE OF OR
- STORE ITEMS. B. BUILDING EXPANSION JOINTS AND FIREWALLS
- 1. DUCTWORK, CONDUIT, CABLE TRAY, PIPING, AND OTHER HORIZONTAL DISTRIBUTION SYSTEMS SHALL BE PROVIDED WITH APPROVED EXPANSION PROVISIONS WHEN PASSING BY BUILDING EXPANSION JOINTS. PROVIDE COPPER GROUND JUMPER ACROSS EXPANSION JOINTS FOR ELECTRICAL COMPONENTS. SYSTEMS SHALL BE RUN THROUGH RATED WALLS, PARTITIONS, AND FLOORS VIA APPROVED FIREPROOFED SLEEVES.
- INSTALLATION SHALL PROVIDE ACCESS TO SYSTEMS
- 1. INSTALLATION SHALL ALLOW CLEARANCES FOR EASY ACCESS TO SYSTEMS FOR ROUTINE MAINTENANCE,
- FOR REPAIRS, AND FOR INSTALLING NEW CABLE IN CONDUIT AND CABLE TRAYS. 2. ACCESS PANELS SHALL BE INSTALLED IN CEILINGS THAT ARE NOT COMPOSED OF REMOVABLE TILES. THESE SHALL BE LOCATED WHEREVER SYSTEMS COMPONENTS EXIST THAT HAVE MOVING PARTS, MOTORS, OR OTHER COMPONENTS REQUIRING PERIODIC MAINTENANCE, ADJUSTMENT, OR REPLACEMENT, ACCESS PANELS SHALL BE SHOWN ON COORDINATION DRAWINGS AND SHALL BE OF THE TYPE AND FINISH AS APPROVED BY THE ARCHITECT.

D. PROTECTION OF WORK

- 1. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR WORK AND EQUIPMENT UNTIL FINALLY INSPECTED, TESTED, AND ACCEPTED. CAREFULLY STORE MATERIALS AND EQUIPMENT THAT IS NOT IMMEDIATELY INSTALLED AFTER DELIVERY TO SITE. CLOSE OPEN ENDS OF WORK WITH TEMPORARY COVERS OR PLUG DURING CONSTRUCTION TO PREVENT ENTRY OF OBSTRUCTING MATERIAL. COVER WORK SUBJECT TO
- FALLING DEBRIS WITH TEMPORARY COVERS. 2. PROVIDE ALL MATERIALS, EQUIPMENT AND LABOR TO PROVIDE ADEQUATE PROTECTION OF ALL EQUIPMENT
- MATERIAL. AT COMPLETION, ALL WORK MUST BE TURNED OVER TO OWNER CLEAN AND IN NEW CONDITION. 3. PROTECT THE WORK AND MATERIAL OF OTHER TRADES THAT MIGHT BE DAMAGED BY WORK OR WORKMEN
- E. FIREPROOFING: PATCHING AND REPAIRING OF FIREPROOFING DUE TO CUTTING OR DAMAGING TO FIREPROOFING DURING COURSE OF WORK SPECIFIED UNDER THIS SECTION SHALL BE PERFORMED BY INSTALLER OF FIREPROOFING AND PAID FOR BY TRADE RESPONSIBLE FOR DAMAGE AND SHALL NOT CONSTITUTE GROUNDS FOR AN EXTRA TO OWNER.
- b. SUBMITTALS SHALL INCLUDE ALL CATALOG DATA AND PHYSICAL AND PERFORMANCE CHARACTERISTICS 1.17 CONTINUITY OF SERVICES
 - A. DO NOT INTERRUPT EXISTING SERVICES WITHOUT OWNER'S WRITTEN APPROVAL
 - B. SCHEDULE INTERRUPTIONS IN ADVANCE, ACCORDING TO OWNER'S INSTRUCTIONS. SUBMIT, IN WRITING, WITH REQUEST FOR INTERRUPTION, METHODS PROPOSED TO MINIMIZE LENGTH OF INTERRUPTION.
 - C. INTERRUPTIONS SHALL BE SCHEDULED AT TIMES OF DAY AND WORK SO THAT THEY HAVE MINIMAL IMPACT ON

 - E. INCLUDE PREMIUM TIME WORK ASSOCIATED WITH INTERRUPTIONS OF SERVICES AND/OR SHUTDOWNS TO
 - 1.18 PROJECT PUNCH LIST PROCEDURE:
 - A. WHEN THE CONTRACT WORK IS SUBSTANTIALLY COMPLETE, EACH TRADE CONTRACTOR SHALL PHYSICALLY WALK DOWN THE INSTALLATION AND PREPARE A PUNCH LIST CONTAINING AN ITEMIZATION OF WORK REMAINING FOR 100% COMPLETION. THE PUNCH LIST SHALL BE SUBMITTED TO THE ARCHITECT AS A PREREQUISITE TO THE ARCHITECT'S OWN PUNCH LIST, WHICH WILL THEN BE DEVELOPED TO COMPLEMENT THAT OF THE TRADE
 - B. REGARDLESS OF WHAT THE ENGINEER OBSERVES AND DOES NOT OBSERVE IN THE WALK-THROUGH, THE RESPONSIBILITY FOR SUCCESSFUL COMPLETION OF THE CONTRACT IN ALL OF ITS DETAILS REMAINS WITH
 - C. IF, WHEN THE ENGINEER ARRIVES AT THE SITE CERTAIN AREAS ARE NOT COMPLETE AND READY FOR PUNCH OUT, THE ENGINEER WILL NOT REVIEW THESE AREAS. WHEN A SECOND NOTIFICATION IS ISSUED INDICATING
 - D. CONFIRMATION OF PUNCH LIST REMEDIATION. ONCE THE ENGINEER HAS SUBMITTED THE ENGINEERING PUNCH LIST, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THAT ALL THE LISTED ITEMS HAVE BEEN CORRECTLY REMEDIED. THE ENGINEER WILL NOT VISIT THE PROJECT TO RE-OBSERVE

 - SAFETY AND SECURITY DRAWINGS WILL BE FURNISHED BY ENGINEER AT CONTRACTOR'S REQUEST. THESE FILES WILL BE PROVIDED ON ENGINEER'S FTP SITE IN THE SOFTWARE RELEASE USED BY THE ENGINEER. IF
 - PROCESSING COSTS. B. REQUESTS SHOULD BE MADE BY FILLING OUT A FORM LETTER AND PROVIDING AN AUTHORIZED SIGNATURE. THE REQUESTED INFORMATION WILL NOT BE RELEASED PRIOR TO RECEIPT OF THIS LETTER FOR THE APPROPRIATE
 - 1.20 PROJECT CLOSE-OUT PROCEDURE:
 - REVIEW REQUIREMENTS OF EACH SECTION OF THE SPECIFICATIONS AND SUBMIT FOR APPROVAL TO ARCHITECT THE SIGN-OFF FORMS THAT SHALL BECOME THE PROJECT CLOSE-OUT CHECKLIST. THESE, AT A MINIMUM, SHALL INCLUDE THE FOLLOWING INFORMATION SHOWN IN ATTACHED PROJECT CLOSEOUT CHECKLIST EXAMPLE. THE ARCHITECT AND/OR OWNER MAY INCORPORATE ADDITIONAL SPECIFIC ITEMS TO THE FOLLOWING CHECKLIST WHICH SHALL BECOME PART OF THE PROJECT REQUIREMENTS. REQUIREMENTS SHALL ALSO INCLUDE THE FOLLOWING:
 - a. NFPA 13 FIRE PROTECTION TEST CERTIFICATE COMPLETED AND SIGNED
 - c. EMERGENCY LIGHTING LOAD LETTER FROM ELECTRICAL CONTRACTOR CONFIRMING EMERGENCY LIGHTING SYSTEM IS FULLY INSTALLED AND OPERATIONAL.
 - e. A PLUMBING DISINFECTION OF WATER SYSTEM TEST CERTIFICATE f. HVAC TESTING AND BALANCING REPORT

- DURING THE COURSE OF CONSTRUCTION. THIS INCLUDES PROTECTION FROM MOISTURE AND FOREIGN
- AND MAKE GOOD ALL DAMAGE THUS CAUSED.

- OWNER'S OPERATIONS.
- D. SUBCONTRACTOR SHALL COORDINATE SHUTDOWNS OF EXISTING SYSTEMS.
- AVOID DISRUPTION TO OWNER'S OPERATIONS.
- CONTRACTOR.
- THE CONTRACTOR.
- THE INSTALLATION IS COMPLETED AND THE CONTRACTOR HAS PUNCHED AND CORRECTED THESE AREAS, THE ENGINEER WILL THEN RE-VISIT THE SITE FOR FINAL OBSERVATIONS AND PUNCH LIST.
- THE AREAS ALREADY VISITED IN THE FINAL WALK-THROUGH.
- 1.19 ELECTRONIC FILES
- A. ELECTRONIC FILES FOR FIRE PROTECTION, PLUMBING, HVAC, ELECTRICAL, COMMUNICATION, OR ELECTRONIC OTHER MEDIA OR SOFTWARE VERSION IS REQUESTED, ENGINEER WILL REQUIRE ADVANCE REIMBURSEMENT OF
- DOCUMENTS. THE CONTRACTOR SHALL REQUEST THE FORM LETTER FROM PROJECT MANAGER
- b. NFPA 72 FIRE ALARM COMPLETED FORM
- d. LIGHTING CONTROLS COMMISSIONING REPORT

BIDDING &

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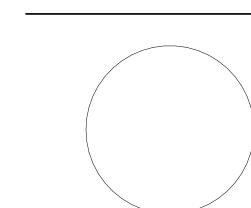
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REVISIONS

SCALE 12" = 1'-0"

DIVISION 20 SPECIFICATIONS