CHOATE CONSTRUCTION
OFFICES AT BELLE HALL
1671 BELLE ISLE DRIVE, SUITE 100 MT. PLEASANT, SOUTH CAROLINA

GENERAL NOTES:

1. DO NOT SCALE DRAWINGS

2. THE CONTRACTOR SHALL VISIT AND INSPECT THE PREMISES PRIOR TO SUBMITTING THEIR PROPOSAL TO FAMILIARIZE THEMSELVES WITH THE CONDITIONS UNDER WHICH THE WORK WILL BE PERFORMED. NO SUBSEQUENT EXTRAS OR ADDITIONS WILL BE ALLOWED ON ANY CLAIM DUE TO LACK OF KNOWLEDGE OF CONDITIONS OR CIRCUMSTANCES ABOUT WHICH THE CONTRACTOR COULD HAVE INFORMED HIMSELF.

3. THE CONTRACTOR SHALL MAKE KNOWN TO THE ARCHITECT ANY LIMITATIONS, EXCLUSIONS, OR MODIFICATIONS TO THE DOCUMENTS DURING THE PRICING PHASE OF THE PROJECT. UNLESS INFORMED OTHERWISE IN WRITING BEFORE SUBMISSION OF THE PROPOSAL, THESE ITEMS SHALL BE INCLUDED IN THE CONTRACTOR'S PRICE.

4. THE INTENT OF THESE DRAWINGS IS TO INDICATE THE SCOPE OF WORK REQUIRED IN ORDER TO CONSTRUCT A COMPLETE AND FINISHED SPACE READY FOR TENANT OCCUPANCY. THE CONTRACTOR AND SUBCONTRACTORS ARE EXPECTED TO VISIT THE PROJECT SITE PRIOR TO CONSTRUCTION AND NOTIFY THE ARCHITECT – PRIOR TO CONSTRUCTION– OF ANY DISCREPANCIES WITHIN THE DRAWINGS OR POSSIBLE CONFLICTS THAT MAY AFFECT THE PROGRESS OF THIS PROJECT. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND FIELD CONDITIONS NOTIFYING THE ARCHITECT OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE PROJECT.

5. INFORMATION REQUIRED BY THE CONTRACTOR THAT IS NOT CONTAINED IN THE CONTRACT DOCUMENTS SHALL BE REQUESTED BY THE GENERAL CONTRACTOR FROM THE ARCHITECT.

6. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR DISTRIBUTION OF DRAWINGS TO THE SUBCONTRACTORS.

7. DIMENSIONS ARE FACE OF GYPBD TO FACE OF GYPBD U.N.O.

8. SEAL ALL PENETRATIONS OF FIRE-RATED ASSEMBLIES IN ACCORDANCE WITH U.L. PENETRATION DETAIL.

9. PROVIDE FIRE EXTINGUISHERS HAVING A MINIMUM RATING OF 2-A, 10-BC FOR EVERY 3,000 SQUARE FEET OF FLOOR AREA. MOUNT BOTTOM AT 2'-9" A.F.F.

10. ALL CONSTRUCTION SHALL COMPLY WITH APPLICABLE CODES AND LOCAL REQUIREMENTS.

11. APPROVED PLANS SHALL BE KEPT ON SITE AND SHALL BE USED BY SUPERINTENDENT ONLY. ALL CONSTRUCTION SETS SHALL REFLECT THE SAME INFORMATION. THE CONTRACTOR SHALL ALSO MAINTAIN ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA AND CHANGE ORDERS, ON THE JOB PREMISES AT ALL TIMES, UNDER THE CARE OF THE SUPERINTENDENT.

12. TAKE NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF THE OCCUPANTS AND WORKERS AT ALL TIMES.

13. CONTRACTOR TO SUBMIT (3) SAMPLES OF CARPET AND (2) SEAMING DIAGRAMS FOR ARCHITECT APPROVAL BEFORE PLACING THE CARPET ORDER.

14. SHOULD THE CONTRACTOR BY HIS OWN FAULT FAIL TO COMPLETE WORK BY THE AGREED UPON COMPLETION DATE, AT THE DISCRETION OF THE OWNER, SHALL PERFORM THE WORK ON PREMIUM TIME TO CONFORM TO THE SCHEDULE. EXPENSES INCURRED BY SUCH WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

15. A REPRESENTATIVE OF THE GENERAL CONTRACTOR WHO IS AUTHORIZED TO DISCUSS THE WORK AND RECEIVE INSTRUCTIONS SHALL BE ON THE SITE AT ALL TIMES WHEN THE WORK IS IN PROGRESS.

16. THE GENERAL CONTRACTOR SHALL MAINTAIN A JOB SITE TELEPHONE AT ALL TIMES.

17. THE CONTRACTOR IS TO PROVIDE ALL LABOR AND MATERIALS IN ORDER TO EXECUTE ALL WORK AS SHOWN ON THESE DRAWINGS WITH THE EXCEPTION OF ITEMS OR AREAS MARKED "NOT IN CONTRACT", "N.I.C.", OR "BY OTHERS".

18. THE CONTRACTOR SHALL KEEP SUFFICIENT WORKMEN ON THE JOB SITE AT ALL TIMES TO PERFORM THE WORK IN THE MOST EXPEDITIOUS MANNER CONSISTENT WITH GOOD WORKMANSHIP, SOUND BUSINESS PRACTICE, AND THE BEST INTERESTS OF THE END USER.

19. ALL FEES, TAXES, PERMITS, APPLICATIONS, CERTIFICATES OF INSPECTION, AND THE FILING OF ALL WORK WITH GOVERNMENTAL AGENCIES SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

20. CONTRACTOR SHALL NOT PROCEED WITH ANY ADDITIONAL WORK OR CHANGES FOR WHICH HE EXPECTS ADDITIONAL COMPENSATION WITHOUT WRITTEN AUTHORIZATION TO PERFORM SUCH WORK.

21. CONTRACTOR SHALL AT ALL TIMES KEEP THE PREMISES FREE OF ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY HIS OPERATIONS OF ANY OTHER CONTRACTORS WITHIN THE AREA OF WORK. METHODS FOR SUCH REMOVAL MUST BE AGREEABLE TO OWNER.

22. PREMISES SHALL BE SWEPT CLEAN DAILY OF CONSTRUCTION DEBRIS.

23. FINAL CLEANING PRIOR TO END USER OCCUPANCY SHALL INCLUDE (BUT NOT BE LIMITED TO), CLEANING OF ALL WOOD AND GLASS SURFACES, DUSTING OF ALL HORIZONTAL SURFACES, VACUUMING OF ALL CARPETED AREAS, REMOVAL OF ALL STAINS, SPOTS, SPILLS, ETC. ON ANY SURFACE, MOP CLEANING AND WAXING OF ALL RESILIENT FLOORS, AND CLEANING ALL VINYL WALL COVERINGS FREE FROM DIRT ADHESIVE, OR OTHER FOREIGN MATERIALS.

24. GENERAL CONTRACTOR AND HIS VENDORS SHALL DETERMINE AVAILABILITY OF ALL FINISH MATERIALS, TRADE, AND ITEMS SHOWN IN THESE DOCUMENTS. ANY DELIVERY THAT MAY CAUSE POTENTIAL PROBLEMS IN MEETING AGREED UPON CONSTRUCTION SCHEDULE SHALL BE BROUGHT TO KGMA'S ATTENTION FOR POSSIBLE RE-EVALUATION OF MATERIAL DESIGNATION.

25. THE DESIGN CONCEPT OF THIS PROJECT IS BASED ON THE COLOR, TEXTURE, AND DESIGN OF FINISHED PRODUCTS AS SPECIFIED. IF THE CONTRACTOR FAILS TO ORDER MATERIALS IN SUFFICIENT TIME FOR ORDERLY INSTALLATION WITHIN THE PROJECT, KGMA WILL NOT ENTERTAIN ANY REQUEST FOR MATERIAL SUBSTITUTION. INSTEAD, THE CONTRACTOR SHALL PROVIDE AND INSTALL TEMPORARY FINISHES OR MATERIALS SATISFACTORY TO KGMA, PROVIDE AND INSTALL THE SPECIFIED FINISHES OR MATERIALS UPON THEIR ARRIVAL, AND BEAR ALL COSTS ASSOCIATED WITH THE INSTALLATION.

26. THE CONTRACTOR SHALL BE ANSWERABLE FOR HIS WORK AND SHALL NOT ACCEPT INSTRUCTION FROM LOCAL PERSONNEL WITHOUT VERIFICATION FROM THE TENANT'S AGREED UPON REPRESENTATIVE. THE CONTRACTOR WILL BE LIABLE FOR ANY EXPENSE CAUSED BY THE EXECUTION AND REMOVAL OF SUCH WORK WITHOUT WRITTEN AUTHORIZATION FROM THE TENANT'S REPRESENTATIVE.

27. BEFORE COMMENCING WORK, THE CONTRACTOR SHALL NOTIFY THE OWNER AND KGMA OF ANY AREAS THAT HAVE NOT BEEN SATISFACTORILY COMPLETED TO MEET BASE BUILDING STANDARDS. (I.E. FIREPROOFING, DUCTWORK, SLAB CONDITIONS, DEMISING WALLS, UTILITY HOOKUPS, ELECTRICAL PANELS, ETC.)

28. DO NOT SCALE DRAWINGS. DIMENSIONS SHALL GOVERN. DETAILS SHALL GOVERN OVER PLAN AND ELEVATION DRAWINGS. LARGE SCALE DETAILS SHALL GOVERN OVER SMALL DETAILS.

29. THERE SHALL BE NO SUBSTITUTION OF MATERIALS, WHERE A MANUFACTURER IS SPECIFIED. WHERE THE TERM "OR APPROVED EQUAL" IS USED, KGMA ALONE SHALL DETERMINE EQUALITY BASED UPON INFORMATION SUBMITTED BY THE CONTRACTOR.

30. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE GOVERNMENTAL AGENCY HAVING JURISDICTION AND SHALL CONFORM TO ALL SAFETY AND SANITARY LAWS, CITY, COUNTY, STATE, AND/OR FEDERAL ORDINANCES WHICH APPLY.

31. ALL WORK SHALL BE PERFORMED BY SKILLED WORKMEN AND IN ACCORDANCE WITH THE BEST PRACTICES OF THE TRADES INVOLVED.

32. ALL WORK SHALL BE ERECTED AND INSTALLED PLUMB, SQUARE, LEVEL, AND TRUE AND IN PROPER ALIGNMENT.

33. ALL MATERIAL SHALL BE NEW, UNUSED, AND OF THE HIGHEST QUALITY IN EVERY RESPECT UNLESS OTHERWISE NOTED. ALL MANUFACTURED EQUIPMENT, MATERIALS, AND FINISHES SHALL BE INSTALLED OR APPLIED ACCORDING TO THE MANUFACTURER'S WRITTEN RECOMMENDATIONS.
OTHER DOCUMENTS REQUIRED BY THIS WORK.

34. ALL INSTALLED PLUMBING, MECHANICAL, AND ELECTRICAL EQUIPMENT SHALL OPERATE QUIETLY AND FREE OF VIBRATION.

35. IT IS INTENDED THAT THE CONTRACTOR PROVIDE A COMPLETE JOB AND ANY OMISSIONS IN THE NOTES OR CONTRACT DOCUMENTS SHALL NOT BE CONSTRUED AS RELIEVING THE CONTRACTOR OF SUCH RESPONSIBILITY EXCEPT FOR ITEMS SPECIFICALLY NOTED.

36. ALL "HOLD" OR "CLEAR" DIMENSIONS SHALL BE EXACT WITHIN A 1/8" TOLERANCE ALONG FULL DISTANCE OF DIMENSION.

37. GENERAL CONTRACTOR SHALL SUBMIT, PRIOR TO COMMENCING WORK, A LIST OF ALL SUBCONTRACTORS TO KGMA AND OWNER. THE NAME OF PRINCIPAL CONTACT, THE ADDRESS, AND THE PHONE NUMBER OF EACH SUBCONTRACTOR SHALL BE INCLUDED ON THIS LIST.

38. CONTRACTOR SHALL SUBMIT SAMPLES TO KGMA AND TENANT FOR REVIEW OF ALL MATERIALS TOGETHER WITH FINISHES AND INTENDED USE IN THE WORK PRIOR TO COMMENCEMENT OF WORK.

39. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS IN TRIPLICATE TO KGMA FOR REVIEW OF ALL TRADES INVOLVED IN THIS CONTRACT. SHOP DRAWINGS ENHANCE THESE DRAWINGS AND SPECIFICATIONS – APPROVAL OF SHOP DRAWINGS SHALL NOT RELEASE CONTRACTOR OF RESPONSIBILITY FOR WORK AS SPECIFIED.

40. WHEN THE JOB IS SUBSTANTIALLY COMPLETE, THE GENERAL CONTRACTOR SHALL PREPARE A PUNCHLIST OF ITEMS TO BE COMPLETED OR CORRECTED AND SUBMIT THIS LIST TO KGMA AND TO THE END USER. FAILURE TO INCLUDE ANY ITEMS ON THIS LIST DOES NOT ALTER THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLETE THE WORK IN ACCORDANCE WITH THESE DOCUMENTS.

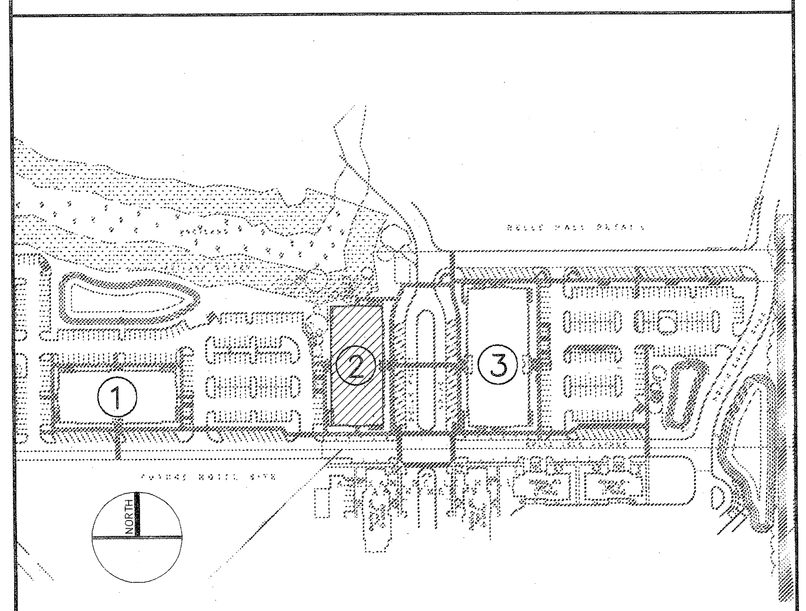
41. THE GENERAL CONTRACTOR SHALL SUBMIT SCALED REPRODUCIBLE AS-BUILT DRAWINGS TO OWNER AT THE COMPLETION OF THE PROJECT. ALL MECHANICAL, ELECTRICAL, AND ARCHITECTURAL CHANGES MADE DURING THE COURSE OF THE PROJECT SHALL BE INDICATED ON THESE DRAWINGS.

42. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE END USER AND THE BUILDING OWNER WITH ALL MANUFACTURER'S MANUALS AND RECOMMENDED MAINTENANCE PROCEDURES AND SCHEDULES.

43. FINAL PAYMENT TO THE GENERAL CONTRACTOR SHALL BE APPROVED WITHIN (5) DAYS OF RECEIPT OF AS-BUILT DRAWINGS, COMPLETION OF ALL PUNCH LIST ITEMS TO THE SATISFACTION OF THE END USER, AND SUBMISSION OF ALL E C

CODE COMPLIANCE CHECKLISTS

SITE MAP:



VICINITY MAP:



PROJECT CRITERIA

MOUNT PLEASANT, CHARLSTON, SC

INTERIOR PLAN REVIEW
BUILDING PLAN COMMENTS

INTERIOR FINISH CODE COMPLIANCE REPORT

PROJECT CRITERIA: This review is based on the following information:

DATE OF REVIEW: _____ B.P.R. FILE #: _____

NAME/DEVELOPMENT: CHOATE CONSTRUCTION

LOCATION OF DEVELOPMENT: 1671 BELLE ISLE DRIVE, SUITE 100, MT. PLEASANT, SOUTH CAROLINA

ARCHITECT: W. RICHARD KOHL PHONE #: 770-448-2743 SC. STATE REGIS. #: 2091

STRUCTURAL ENGINEER: – PHONE #: – SC. STATE REGIS. #: –

A. Occupancy Classification: BUSINESS

B. Type of Construction: II B Sprinklered: YES

C. Total Interior Finish Area in Square Feet: 7308
Includes: Basement: N/A sq.ft. Mezzanine: N/A sq.ft.

D. Floor Level: 1 Total number of stories in building: 2

E. Calculated Occupancy Load: 74

F. All Buildings described in these plans shall be constructed in compliance with the following:

Standard Building Code (International Building Code) – 2000 Edition with 2002, 2003 & 2004 Georgia Amendments
NFPA 101, Life Safety Code – 2000 Edition

INDEX OF DRAWINGS

GENERAL:

ARCHITECTURAL:

A0.0	COVER SHEET
A0.1	SPECIFICATIONS
A0.2	SPECIFICATIONS
A0.3	SPECIFICATIONS
A0.4	U.L. DESIGNS
A1.1	PARTITION PLAN AND REFLECTED CEILING PLAN
A4.3	FINISH PLAN AND INTERIOR ELEVATIONS
A6.1	PARTITION SECTIONS AND DETAILS
A6.5	DOOR SCHEDULE AND CASEWORK SECTIONS

MECHANICAL:

M0.1	SPECIFICATIONS
M0.2	LEGEND, NOTES, SCHEDULES & DETAILS – MECHANICAL
M-1	FIRST FLOOR – MECHANICAL PLAN

PLUMBING:

P0.1	LEGEND, NOTES, SCHEDULES AND DETAILS – PLUMBING
P-1	FIRST FLOOR – PLUMBING PLAN

ELECTRICAL:

E-0	SYMBOLS, LEGENDS, NOTES & SCHEDULES
E-01	SPECIFICATIONS
E-1	FIRST FLOOR – ELECTRICAL PLAN
L-1	FIRST FLOOR – LIGHTING PLAN

ABBREVIATIONS:

@	AT	FL.	FLOOR	STL.	STEEL
A.F.F.	ABOVE FINISHED FLOOR	GYP.	GYPSUM	STRUCT	STRUCTURAL
ALUM.	ALUMINUM	H.M.	HOLLOW METAL	TYP.	TYPICAL
BD.	BOARD	H.	HIGH	U.N.O.	UNLESS NOTED OTHERWISE
BLDG.	BUILDING	JT.	JOINT	VERT.	VERTICAL
℄	CENTERLINE	K.O.P.	KNOCK-OUT PANEL	W	WIDE
C.J.	CENTER JOINT	MAX.	MAXIMUM	W/	WITH
COORD.	COORDINATE	MIN.	MINIMUM	WD.	WOOD
C.O.	CONCRETE OPENING	MTL.	METAL	W.W.	WINDOW WALL
COL.	COLUMN	M.O.	MASONRY OPENING	T/	TOP OF
CONC.	CONCRETE	OPP.	OPPOSITE	⌀	DIAMETER
CONT.	CONTINUOS	N.I.C.	NOT IN CONTRACT		
DWG.	DRAWING	N.T.S.	NOT TO SCALE		
D.S.	DOWN SPOUT	PL.	PLAN		
EA.	EACH	PLYWD.	PLYWOOD		
EL.	ELEVATION	PR.	PAIR		
ELEV.	ELEVATION	P.T.	PRESSURE TREATED		
ELEC.	ELECTRIC	Q.C.	ON CENTER		
EXP.	EXPANSION	R.D.L.	ROOF DRAIN LEADER		
E.W.C.	ELECTRIC WATER COOLER	S.B.C.	STANDARD BUILDING CODE		
F.R.	FIRE RETARDANT	S.C.C.P.	SITE-CAST CONC. PANEL		
F.F.	FINISH FLOOR	SIM.	SIMILAR		

CONSULTANTS

BUILDING OWNER:

1671 BELLE ISLE, LLC
1200 LAKE HEARN DRIVE, SUITE 275 404-252-1200
ATLANTA, GA 30319 404-252-0600(FAX)
CONTACT: HUGH H. SCOTT III

ARCHITECT:

KOHL GRAMIGNA MONARDO ARCHITECTS, P.C.
655 ENGINEERING DRIVE, SUITE 150 770-448-2743
NORCROSS, GEORGIA 30092 770-734-0701 (FAX)
CONTACT: GRACE D. WILLIAMS EXT. 26
W. RICHARD KOHL EXT. 22

MECHANICAL ENGINEER:

BARRETT, WOODYARD & ASSOCIATES, INC.
3495 HOLCOMB BRIDGE ROAD 770-810-8800
NORCROSS, GEORGIA 30092 770-810-8808 (FAX)
CONTACT: STEVE BREWER

ELECTRICAL ENGINEER:

BARRETT, WOODYARD & ASSOCIATES, INC.
3495 HOLCOMB BRIDGE ROAD 770-810-8800
NORCROSS, GEORGIA 30092 770-810-8808 (FAX)
CONTACT: STEVE BREWER

ISSUE HISTORY

NO.	DATE	DESCRIPTION

THESE DRAWINGS REMAIN THE PROPERTY OF KOHL GRAMIGNA MONARDO ARCHITECTS, P.C. ALL RIGHTS RESERVED. THESE DRAWINGS MAY BE USED ONLY FOR THE PROJECT SPECIFIED HEREIN. THEY MAY NOT BE USED, IN WHOLE OR IN PART, ON OTHER PROJECTS NOR EXTENSIONS TO THIS PROJECT EXCEPT BY EXPRESS WRITTEN AGREEMENT.

REVISIONS

NO.	DATE	DESCRIPTION

CHOATE CONSTRUCTION
OFFICES AT BELLE HALL
1671 BELLE ISLE DRIVE, SUITE 100
MT. PLEASANT, SOUTH CAROLINA 29464

KOHL GRAMIGNA MONARDO ARCHITECTS, P.C.
655 Engineering Drive, Suite 150, Norcross, Georgia 30092 770-448-2743 www.kgmarchitects.com

COMPANY SEAL



ARCHITECT SEAL



KGM ARCHITECTS

ISSUED FOR CONSTRUCTION

SHEET TITLE: COVER SHEET

PROJECT NO. 6.200.210

SHEET NUMBER: A0.0

ISSUE DATE: 01.17.07

OF 1

SECTION 01050 PROJECT COORDINATION

PART 1: GENERAL

1.01 CONTRACTOR:
A. The care, control, and coordination of Project and Site shall be the responsibility of Contractor, including coordination of work of trades and Subcontractors.
B. The responsibility as to which trade provides articles or materials to be built in or provided rests with Contractor. Extras will not be considered in interpretation of specification as to which trade shall provide certain specialties or materials.

1.02 SITE:
A. Work, including temporary structures, plant, equipment and materials, shall be confined to established limits of site and shall be maintained in a clear orderly manner.
B. Prevent damage to buildings, pavements, poles, hydrants, cultivated or grassed areas on or surrounding site and adjacent roads. If such are damaged or disfigured, make good with material identical with existing and adjoining surfaces.

1.03 INSPECTION AND EXAMINATION:
A. Visit site, examine conditions prevailing and include all work and materials as required by the Contract Documents.
B. Review Contract Documents to determine all work specified under each section on which work of other sections depends. Examine installed work upon which work of a respective section depends. Notify the Architect in writing of defects in installed work. Commencement of work shall be deemed an acceptance of substrate conditions.
C. Drawings are diagrammatic and are intended to convey description of work and indicate general and approximate location, arrangement and sizes of fixtures and equipment. Obtain more accurate information about locations, arrangements and sizes from examination and coordination of shop drawings and contract drawings, and become familiar with conditions and spaces before proceeding with work. Where job conditions require changes in locations and arrangements indicated on the drawings, make no change until written authorization is received from the Architect. Install and arrange fixtures, systems and equipment, such as duct, pipe, and conduit to conserve headroom and space, including areas where such items are located above suspended ceilings.
D. During the execution of the work, advise the Architect in writing if:
1. Contradictions, discrepancies or errors are found or noted in Contract Documents.
2. Supplementary drawings, details, instructions or directions do not correspond with Contract Documents.
3. Omissions or other faults become evident which should be corrected in order that work will be executed. After advising of such discrepancies, no further work in affected area(s) shall be proceeded with until instructions rectifying situation are received.

1.04 COOPERATION:
A. Coordinate work of all trades on project.
B. Take field dimensions relative to work. Fabricate and erect work to suit field dimensions and field conditions. Provide forms, templates, anchors, sleeves, inserts and accessories to be fixed to or inserted in work and set in place or instruct related trades as to location.

1.05 LINES, LEVELS AND DIMENSIONS:
A. Lines and levels are indicated on drawings. Verify lines, level and dimensions and report errors or inconsistencies in the drawings to the Architect before commencing work.

1.06 CONCEALMENT:
A. Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas. If doubt arises as to means of concealment, or intention of the Contract Documents, request clarification before proceeding with portion of work in question.
B. Lay out mechanical and electrical work in advance of concrete placement and furring installation so that provisions may be made for concealment. Work shall be tested, inspected and pipe covering applied before concealment.

1.07 ALTERATIONS AND CORRECTION OF WORK:
A. Alterations, cutting, fittings, patching and correction of work shall be done by tradesmen specializing in work. Cut holes after located by trades. Drill work leaving clean hole. Do not cut, drill or sleeve load-bearing members without obtaining written authorization from the Architect for each condition.
B. Make cuts with clean, true, smooth edges. Fit units to tolerances established by existing work and in conformance with standards of practice specified herein. Make patches invisible in finished work.

1.08 FIRES:
A. Ensure no person on project lights fires of any kind. No rubbish shall be burned at site. When welding or using other flammable device, provide ABC type fire extinguisher at the location of such activity.
B. Be responsible for staining or damage to structure and materials, whether incorporated into building or otherwise, which occurs as a result of smoke or fires.

END OF SECTION 01050

SECTION 01304 SHOP DRAWINGS, PROJECT DATA, SAMPLES

PART 1: GENERAL

1.01 RELATED DOCUMENTS:
A. Article 3.12 of A.I.A. Document A-201, General Conditions of the Contract for Construction, Fourteenth Edition, dated 1987, to be supplemented as follows:
1. 3.12.12 The number of samples which need to be submitted and, if necessary, resubmitted, is one which the Architect will retain, one which will be returned to the Contractor for him to maintain at the job site, plus the number the Contractor requires to be returned for his use.
2. Submit all samples to Architect prepaid.
3. Approval or acceptance of samples will not preclude rejection of completed work. Approved samples to be held during entire construction period, safely stored in Field Superintendent's office.
4. No change in brand or make will be permitted after material has been reviewed unless satisfactory evidence is presented to and reviewed by Architect that manufacturer cannot make delivery of approved material on schedule.
5. 3.12.13 The Contractor is responsible for obtaining and distributing shop drawings, product data, and samples as necessary, before and after final approval.
6. Submission and review of shop drawings, product data, and samples in accordance with the following paragraphs;
a. Mechanical, Electrical, Structural and Sprinkler Plan Layout Shop Drawings shall be prepared at the same scale using transparent overlay system and submitted as such. Submit these shop drawings at the same time.
b. Submit six (6) copies of shop drawing, seven (7), if Engineering shop drawings, of standard manufactured item showing illustrated cuts of item to be furnished, scale details, sizes, dimensions, and other pertinent information.
c. Three (3) reviewed or corrected copies will be returned to Contractor. Remaining copies; retained for Architect and/or Engineer record copies. Contractor shall furnish his vendor with full information as to status of review and reason therefore.
d. Provide a clear space approximately 4" wide by 8" high at right-hand side of each sheet for stamping by Contractor, Architect, and Engineer.
e. Shop drawings and samples that are not stamped or otherwise clearly identified as having been reviewed and approved by the Contractor shall be immediately returned to the contractor for his review, prior to Architect's review.
f. Shop drawings and samples shall be accompanied with transmittal letter containing project name, Contractor's name, number of drawings and samples, titles, and other pertinent data.
g. Indicate on all items submitted the name of project, description, of names of equipment, materials, and items; and complete identification of locations at which materials or equipment are to be installed.
h. Number all submittals i.e. SD-1, SD-2, etc. and indicate specification section number and title.
7. 3.12.14 If it appears that checking has been inadequate or careless, shop drawings will be returned for proper checking before further processing or review by Architect. Shop drawings so returned will not be recorded or considered as submitted for review until properly checked, stamped, and forwarded to Architect for review.
8. Contractor is responsible for the accuracy of all dimensions and quantities shown on the submittals unless verification of questionable dimension or quantities is requested from the Architect due to conflict or inconsistency of the Contract Documents. Verification of field measurements of conditions shall remain the responsibility of the Contractor.
9. 3.12.15 Reviews by Architect will be general only; review shall not be interpreted as checking of detailed dimensions or approval of deviations from plans of specifications or from time schedule. Review shall not relieve Contractor for accuracy of shop drawings, including coordination with other trades; nor for furnishing of material as required by Contract, but not indicated on approved shop drawings.
10. Architect will return stamped shop drawings to Contractor for making and distributing of prints to suit job requirements. After review of shop drawings, Architect will mark comments and corrections on prints and stamp to indicate appropriate action as follows:
a. NO EXCEPTIONS TAKEN: Indicates the submittal has been reviewed and no exceptions taken. Contractor may proceed with the work.
b. MAKE CORRECTIONS NOTED: Indicates the submittal has been reviewed and exceptions indicated. Contractor may proceed with work or fabrication for same, subject to exceptions noted. Resubmittal not required.
c. REVISE AND RESUBMIT: Indicates the submittal has been reviewed and exceptions indicated. Drawings shall be corrected and resubmitted for review. Proceed with work only when resubmittal has been reviewed and "no exceptions taken" or "make corrections noted", has been indicated.
d. REJECTED: Indicates the submittal has been reviewed and found not in conformance with the Contract Documents. Contractor to make corrections and resubmit for review. Contractor shall not proceed with work or fabrication until resubmittal has been reviewed and "no exceptions taken" or "make corrections noted", has been indicated.
11. 3.12.16 Review of shop drawings, product data, and samples does not authorize changes from Contract requirements as to materials, workmanship, extent of work or price, unless authorized in separate Change Order.
12. Submittal of shop drawings is understood to constitute evidence that Contractor has checked information thereon, and that he accepts and is willing to perform work as shown in accord with best standard practices. No claim for extra will be allowed based upon work shown on shop drawings unless such claim is noted on Contractor's transmittal letter accompanying shop drawings.

END OF SECTION 1304

SECTION 01410 PRODUCTS AND APPROVALS

PART 1: GENERAL

1.01 DEFINITIONS:
A. Wherever the word "product" appears, it shall mean material, equipment, assembly, manufacturers' brands, trade name, items, or similar description as applicable.
B. Where the words "equal to", "approved equal", "approval equivalent", or other synonymous terms are used, it is expressly understood that they mean that the approval of any such submission is vested in the Architect, whose decisions shall be final and binding upon all concerned. Submit to Architect for approval.

1.02 PRODUCT STANDARDS:
A. Whenever any product is specified in accordance with Federal Specifications, and ASTM Standard, or other association standard, the Contractor shall present an affidavit from the manufacturer certifying that the product complies with the particular standard specification. Where necessary and required or specified, support test data shall be submitted to substantiate compliance.

1.03 SUBSTITUTIONS AND APPROVALS:
A. Whenever any product is specified or shown by describing proprietary items, model numbers, catalog numbers, manufacturer trade names or similar reference, the Contractor obligates himself to the use of such product. Where two or more products are shown or specified, the bidder has the option of which to use.
B. The Contractor shall place orders for specified products promptly upon award of Contract. No excuse or proposed substitution will be considered for products due to unavailability unless proof is submitted that firm orders were placed well in advance of their need for incorporation into the project. Substitutions will be considered after the Contract is signed, under the following conditions:
1. The reason for the unavailability is beyond the control of the Contractor. Unavailability will be construed as being due to strikes, lockouts, bankruptcy, discontinuance of the manufacture of a product, or Acts of God.
2. Request for such substitution is made in writing to the Architect within ten (10) days of the date that the Contractor ascertains that he cannot obtain the product specified.
3. Request is accompanied by a complete description of the product which the Contractor wishes to use as a substitute.

END OF SECTION 01410

SECTION 01420 INSPECTION

PART 1: GENERAL

1.01 SCOPE OF WORK: Material and workmanship subject to inspection, examination or testing by Owner and/or Architect during manufacture or construction and at places where such manufacture or construction is carried on. Neither inspection, testing, approval, nor acceptance of Work, in whole or in part, by Owner or his agent shall relieve Contractor or his Sureties of full responsibility for materials furnished or work performed not in strict accord with the Contract.

1.02 TESTING: Contractor shall furnish promptly materials necessary for any tests that may be required: Section GENERAL CONDITIONS, Paragraph 13.5.1 Tests. Tests by Contractor performed in such manner as not to delay Work, therefore, Contractor shall schedule testing services as timely as possible to conserve operating funds. Special, full-size and performance tests as described in various Sections of Specifications. Contractor shall pay for all Independent Testing Services.

1.03 DEFECTIVE MATERIAL AND WORKMANSHIP: Owner and/or Architect shall have right to reject defective material and workmanship and require correction. Rejected work not satisfactorily corrected within ten (10) working days upon written notice from either Architect or Owner; rejected material promptly segregated with proper materials without charge therefore. If the Contractor fails to proceed at once with correction of defective material or workmanship, Owner may by contract or otherwise, have defects remedied or rejected materials removed from site, charging cost of same against any monies which may be due Contractor, without prejudice to any other rights or remedies of Owner.

1.04 UNCOVERING WORK: If any work not specifically observed prior to being covered is requested to be seen by Architect, it shall be uncovered by Contractor: Section GENERAL CONDITIONS Article 13. If such work found not in accord with Contract Documents, due to fault of Contractor or his Subcontractors, he shall pay costs of uncovering and replacement. If work does meet requirements of Contract, actual cost of labor and materials involved, plus fifteen per cent (15%), shall be allowed by Contractor; if completion of Work of entire Contract has been delayed thereby, Contractor shall also be granted suitable extension of time for additional work also involved.

1.05 FINAL ACCEPTANCE: Inspection of material and finished articles to be incorporated in Work may be made at place of production, manufacture, or shipment whenever quantity justifies it. Such inspection and acceptance, unless otherwise stated in Specifications, shall be final, except as regards (1) latent defects, (2) departure from specific requirements of the Contract, (3) damage or loss in transit, or (4) fraud, or such gross mistakes as to amount to fraud. Subject to requirements contained in preceding statement, inspection of material and workmanship for final acceptance as a whole or in part made at site.

END OF SECTION 01420

SECTION 01700 PROJECT CLOSEOUT

PART 1: GENERAL

1.01 CERTIFICATES:
A. Contractor shall obtain certificates of approval, acceptance and compliance from authorities having jurisdiction over Work. Work not deemed complete will have final payment withheld until such certificates have been received.

1.02 GUARANTEE:
A. GENERAL CONTRACTOR: Upon completion of work under this Contract and before final payment is made, the General Contractor shall deliver his written guarantee made out to Owner, guaranteeing work, materials, equipment, appliances, workmanship for a period of one (1) year from date of final acceptance, unless otherwise specified in individual sections – longer period will apply.
B. SUBCONTRACTORS: In addition to his guarantee, Contractor shall obtain and deliver his subcontractors' or sub-subcontractors' guarantee as requested in respective sections of these Specifications covering work and materials incorporated into work of this Contract.

1.03 OPERATING INSTRUCTIONS:
A. MATERIAL REQUIRED: Wiring diagrams, piping diagrams, installation instructions, parts lists and similar information furnished for mechanical and electrical systems and manufactured items installed. Contractor responsible for assembling this material and turning it over to the General Contractor upon completion of Work and in such number of copies as instructed.
B. OPERATING PROCEDURES: Contractor shall furnish services of qualified personnel to start up equipment which has been contractor-furnished and instruct Owner's service employees as to procedures to be employed in starting up, operating, shutting down, lubricating, oiling, adjusting and maintaining mechanical and electrical systems.
1. Equipment furnished by others but installed by Contractor started up by Owner; necessary minor adjustments to this equipment made by Contractor. However, if this equipment has been improperly installed or damaged during installation, then Contractor to be responsible for performing necessary tasks in order to furnish Owner with operable equipment.
C. FINAL SUBMITTAL: Contractor is cautioned that operating instructions called for in above paragraphs are specific requirements and that Contract will not be considered complete until required information is submitted in acceptable form to the Architect and until Owner's service employees have been properly instructed in use and care of systems installed.

1.04 MAINTENANCE MANUAL:
A. Prior to final payment, submit brochures, in duplicate, presenting full details of care and maintenance for equipment furnished and installed under this Contract.

END OF SECTION 01700

SECTION 01701 CLEAN UP

PART 1: GENERAL

1.01 BASIC PROVISIONS:
A. WASTE MATERIAL: Construction Premises, job site, and adjacent property maintained by Contractor in reasonably neat and orderly condition and free from accumulations of waste material and rubbish during entire construction period. Remove crates, cartons, and other flammable waste material or trash from work areas at end of each working day.
B. FINISHING: Areas of building in which painting and finishing work is to be performed, cleaned throughout just prior to start of this work; these areas maintained in satisfactory condition during painting and finishing. Any finished surfaces which are defaced in any way by mechanics or workmen, cleaned and restored to their original condition.

1.02 FINAL CLEAN UP:
A. PREPARATION: In addition to cleaning specified above and more specific cleaning which may be required in various sections of the Specifications, building prepared for occupancy by thorough cleaning through cleaning throughout, including washing, or cleaning by other approved methods, surfaces on which dirt or dust have collected and by washing glass on both sides. Maintain adequate runner strips of non-staining reinforced Kraft Building Paper on finished floors as required by Architect, for protection of surfaces.
B. FINAL: Upon completion of Work, Contractor to remove temporary construction facilities, including buildings, fences, scaffolding, unused materials provided for Work and rubbish of every kind, leaving building, job site, and adjacent property in neat and clean condition acceptable to Owner and Architect.

END OF SECTION 01701

SECTION 03350 CONCRETE FINISHES

PART 1: GENERAL

1.01 RELATED DOCUMENTS:
A. The general provisions of the Contract, including General and Supplementary Conditions and General Requirements, apply to the work specified in this Section.

1.02 QUALITY ASSURANCE:
A. Tolerances in finish of concrete finish of concrete floor slabs shall comply with ACI 301, "Structural Concrete for Buildings".
1. Floor slabs to remain exposed or to receive contact floor covering or thin set tile: Class A.
2. Floor slabs to receive setting bed: Class C.
3. Exterior slabs: Class B.

1.03 SUBMITTALS:
A. Manufacturer's Standard Mixing and Application Instructions amended to comply with provisions of this project. The term "manufacturer's instructions" used in this Section refers to this submission unless otherwise noted.

1.04 JOB CONDITIONS:
A. TEMPERATURE OF CONCRETE DURING CURING:
1. When atmospheric temperature of 40 degrees F. and below maintain concrete temperature at not less than 55 degrees F. continuously throughout curing period. When necessary, make arrangements before concrete placing for heating, covering, insulation or housing as required to maintain specified temperature and moisture conditions continuously for concrete curing period. Provide cold weather protections complying with requirements of ACI 306.
2. When atmospheric temperature is 80 degrees F. and above, or during other climatic conditions which will cause too rapid drying of concrete, make arrangements before start of concrete placing for installation of wind breaks or shading, and for fog spraying wet sprinkling, or moisture-retaining covering. Protect concrete continuously for concrete curing period. Hot weather protections to comply with requirements of ACI 305.
B. TEMPERATURE CHANGES OF air immediately adjacent to the concrete during and immediately following curing period shall be kept as uniform as possible and shall not exceed 5 degrees F. in any one hour or 50 degrees F. in any 24-hour period.
C. PROTECTION FROM MECHANICAL INJURY: During curing period, protect concrete from damaging mechanical disturbances including load stresses, heavy shock, excessive vibration, and from damage caused by rain or flowing water. Protect finished concrete surfaces from damage by subsequent construction operations.

PART 2: PRODUCTS

2.01 CURING MATERIALS:
A. MOISTURE-RETAINING COVER: One of the following is acceptable.
1. Waterproof Paper: ASTM C 171, Type 1 or 2.
2. Polyethylene Sheeting: AASHO M 171.
3. Polyethylene coated burlap.
B. LIQUID MEMBRANE-FORMING CURING COMPOUND: ASTM C 309, Type 1. Compound shall be clear or translucent, non-staining, cause no adhesion problems with specified coverings and have a flash point not less than 100 degrees F.

PART 3: EXECUTION

3.01 FINISH OF FORMED SURFACES:
A. COMMON ROUGH FINISH (c):
1. Provide "C" finish to concrete formed surfaces that are to be concealed in finish work or by other construction, unless otherwise shown or specified.
2. "C" finish shall be the concrete surface having texture imparted by form facing material. This section covers removal of fins and other projections exceeding 1/4" in height.
B. SMOOTH RUBBED FINISH (R):
1. Provide "R" finish to exterior and interior concrete surfaces which are not covered by other construction and which will be visible. All edges shall be straight and square. This finish shall be produced by casting against overlay plywood forms and by rubbing surface with carborundum stone and water, to achieve a smooth finish, uniform in color and texture. Slush coat of cement grout or cement wash shall not be used at any stage to this finish.
C. RELATED UNFORMED SURFACES: At tops of walls, horizontal offsets, and similar unformed surfaces occurring adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise shown.

3.02 MONOLITHIC SLAB FINISHES:
A. FLOAT FINISH (F):
1. Apply "F" finish to monolithic slab surfaces that are to receive trowel finish and other finishes as herein specified.
2. After placing concrete slabs, do not work surface further until ready for floating. Begin floating when surface water has disappeared or when concrete has stiffened sufficiently to permit operation of power-driven float or both. Consolidate surface with power-driven floats, or by hand floating if area is small or inaccessible to power units.
3. Check and level surface plane to tolerance not exceeding 1/4" in 10' when tested with a 10' straightedge placed on the surface at not less than 2 different angles. Cut down high spots and fill low spots. Uniformly slope surfaces to drains. Immediately after leveling, refloat surface to uniform, smooth, granular texture.
B. NON-SLIP BROOM FINISH (N-S-B):
1. Apply "N-S-B" finish to exterior concrete platforms, walks, steps and ramps and elsewhere as indicated.
2. Immediately after trowel finishing, slightly roughen concrete surface by brooming in direction perpendicular to main traffic route. Coordinate required final finish with Architect before application.
C. SCRATCH FINISH (S):
1. Apply "S" to monolithic slab surfaces that are to receive mortar setting beds for tile, and other banded applied cementitious finish flooring material, and as shown on drawings.
2. After placing slabs, screen surface to a tolerance not exceeding 1/4" in 2' when tested with a 2' straightedge. Slope surfaces uniformly to drains where indicated. After leveling, roughen surface before final set with stiff brushes, brooms or rakes.
D. TROWEL FINISH (T):
1. Apply "T" finish to monolithic slab surfaces that are to be exposed to view, unless otherwise shown, and slab surfaces that are to be covered with resilient flooring, paint, or other thin film finish coating system.
2. After floating, begin first trowel finish operation using power driven trowel. Begin final toweling when surface produces ringing sound as trowel is moved over surface.
3. Consolidate concrete surface by final hand troweling operation, free from trowel marks, uniform in texture and appearance, and with surface plane to tolerance not exceeding 1/8" in 10' when tested with a 10' straightedge. Grind smooth surface defects, which would telegraph through applied floor covering system.

3.03 CONCRETE CURING AND PROTECTION:
A. GENERAL
1. Protect freshly placed concrete from premature drying and excessive cold or hot temperature, and maintain without drying at relatively constant temperature for the period of time necessary for hydration of cement and hardening of concrete.
2. Start initial curing as soon as free water has disappeared from concrete surface after placing and finishing. Weather permitting keep continuously moist for not less than 72 hours.
3. Begin final curing procedures immediately following initial curing and before the concrete has dried. Continue final curing for at least 168 cumulative hours (not necessarily consecutive) during which concrete has been exposed to air temperatures above 50 degrees F. Avoid rapid drying at end of final curing period.
B. CURING METHODS:
1. Cure concrete by moisture-retaining cover curing, or by liquid membrane curing, or by combinations thereof, as herein specified.
2. Water used in curing shall be free of impurities that could etch or discolor exposed, natural concrete surfaces.
C. PROVIDE MOISTURE-RETAINING COVER curing as follows: Cover concrete surfaces with specified moisture-retaining cover for curing concrete, placed in widest practicable width with sides and ends lapped at least 3" and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
D. PROVIDE LIQUID MEMBRANE CURING:
1. Apply specified membrane-forming curing compound to damp concrete surfaces as soon as the water film has disappeared. Apply uniformly in a 2-coat continuous operation by power spray equipment in accord with manufacturer's directions. Recoat areas that are subjected to heavy rainfall within 3 hours after initial application. Maintain continuity of coating and repair damage to coat during entire curing period.
2. Do not use membrane curing compounds on surfaces which are to be covered with a coating material applied directly to the concrete or with a covering material bonded to the concrete, such as other concrete, flooring, painting, and other coatings and finish materials.
E. CURING UNFORMED SURFACES:
1. Initially cure unformed surfaces, such as slabs, floor topping, and other flat surfaces by moist curing, whenever possible.
2. Final cure unformed surfaces, unless otherwise specified by any of the methods specified above, as applicable.
3. Final cure concrete surfaces to receive finish flooring by use of moisture retaining cover.

END OF SECTION 03350

SECTION 05400 LIGHT GAUGE FRAMING

PART 1: GENERAL

1.01 RELATED DOCUMENTS:
A. The general provisions of the Contract, including General and Supplementary Conditions and General Requirements, apply to the work specified in this Section.

1.02 SUBMITTALS:
A. Submit manufacturer's data describing materials proposed for use under this Section for approval.

PART 2: PRODUCTS

2.01 WALL/PARTITION MATERIALS
A. METAL STUDS:
1. Studs for interior walls and partitions of screw type, "C" shape and formed of minimum 25 gauge hot dip galvanized steel unless otherwise noted on the Drawings. Consult manufacturer's literature for gauges required for extended heights.
2. Studs for exterior framing and full height interior partition of screw type, "C" shape structural steel studs formed of 20 gauge, unless otherwise noted on the Drawings, galvanized steel conforming to ASTM A-570, Grade-D.
3. See Drawings for special requirements.
B. RUNNERS: Match studs; type recommended by stud manufacturer for floor and ceiling support of studs, and vertical abutment of work.
C. STIFFENERS: 3/4" zinc-coated, cold-rolled steel channels at 0.3 lb. per foot.
D. STUD SYSTEM ACCESSORIES: Provide stud manufacturer's standard clips, shoes, ties, reinforcement, fasteners, and other accessories as needed for a complete system.
E. FURRING MEMBERS: Screw-type, hat-shaped furring channels, of 25 gauge zinc-coated steel; comply with ASTM C645. Where furring is applied vertically, provide special-shaped units at external corners.

PART 3: EXECUTION

3.01 INSTALLATION OF METAL SUPPORTS:
A. GENERAL: Comply with ANSI A42.4 as applicable.

3.02 WALL/PARTITION SUPPORT SYSTEMS:
A. SUPPLEMENTARY FRAMING: Install blocking, and bracing to support fixtures, equipment, cabinets, furnishings, and similar work that cannot be adequately supported on gypsum board alone.
B. ISOLATION: Isolate stud system from transfer of structural loading to system, both horizontally and vertically. Provide slip or cushioned-type joints to attain lateral support and avoid axial loading.
C. BRACING: Anchor ends of horizontal stiffeners where system abuts structural columns or walls.
D. RUNNER TRACKS: Install runner tracks at floors, ceilings, and structural walls and columns where gypsum board stud system abuts other work, except as otherwise indicated.
E. PARTITION HEIGHTS: Terminate partition system at underside of ceilings, except where indicated to be extended to structure above.
F. STUD SPACING: Space studs 16" o.c., for interior use, and 16" o.c. for exterior use, except as otherwise indicated.
G. FASTENERS: Fasten studs at ends of floor and ceiling runner tracks by installing a screw into both flanges at each end.
H. STIFFENERS: Install horizontal stiffeners in stud system over 9' in height; space mid-point of partition height.
I. ANCHORING STUDS: Secure jamb studs to frames of openings with screws, wire-ties or welds, either directly to frames or special frame-support brackets, and install runner track sections (for jack studs) above and below openings, secured to jamb studs.
1. Space jack studs same as partition studs and screw to runner tracks above and below.
2. Install 2 studs at each jamb of each opening over 2'-0" wide, except as otherwise indicated.
3. Brace door frames over four feet wide, with minimum of two metal studs installed diagonally to structure above.
J. FURRING: Space furring members 24" o.c., except as otherwise indicated.
K. REINFORCING: Install extra furring members and angle runners at terminations of drywall work and at openings, and where required for support of other work occurring in the drywall work.

END OF SECTION 05400

SECTION 06100 ROUGH CARPENTRY

PART 1: GENERAL

1.01 RELATED DOCUMENTS:
A. The general provisions of the Contract, including General and Supplementary Conditions and General Requirements, apply to the work specified in this Section.

1.02 QUALITY ASSURANCE:
A. LUMBER STANDARD: Comply with PS 20, except as otherwise indicated.
B. PLYWOOD STANDARD: Comply with PS 1, except as otherwise indicated.
C. GRADE MARKING: All lumber shall be grade-stamped by an agency certified by the Board of Review of American Lumber Standards Committee and manufactured in accordance with Product Standard 20-70, as published by the Department of Commerce, except omit marking from surfaces to be exposed with transparent finish or without finish.

1.03 PRODUCT HANDLING:
A. DELIVERY AND STORAGE: Keep materials dry during delivery and storage. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber and plywood, and provide air circulation within stacks.

PART 2: PRODUCTS

2.01 LUMBER:
A. FRAMING LUMBER: STANDARD & BETTER OR STUD grade, of any commercial softwood species. Use for all framing and blocking except where treated lumber is specified.
B. FUNGI AND TERMITE TREATED LUMBER: No. 2 Southern Yellow Pine pressure treated in accordance with AWPB-LP-2 Standard. Use for framing, blocking and furring in contact with concrete, masonry, wood blocking at roof, and where noted.
C. SEASONING: All lumber 2" and less in thickness to be seasoned to a moisture content of 19% or less, with the indication of "S-DRY" on the grade stamp.

2.03 FASTENERS:
A. NAILS, SCREWS AND BOLTS: All of electro-galvanized steel for exterior uses.

PART 3: EXECUTION

3.01 INSTALLATION:
A. Install and erect all work plumb, level and true.
B. Anchor and nail as shown and to comply with the recommendations of the "Manual for House Framing" of the National Forest Products Associations, Table 1.
C. All edges of plywood supported by framing members or blocking. Fasten at minimum of six inches on center at edges and eight inches on center at intermediate supports.

END OF SECTION 06100

SECTION 06200 FINISH CARPENTRY AND MILLWORK

PART 1: GENERAL

1.01 RELATED DOCUMENTS:
A. The general provisions of the Contract, including General and Supplementary Conditions and General Requirements, apply to the work specified in this Section.

1.02 QUALITY ASSURANCE:
A. QUALITY STANDARDS: Expect as otherwise shown or specified, comply with specified provisions of the Architectural Woodwork Institute (AWI) "Quality Standards".
B. MEASUREMENTS: Before proceeding with woodwork required to be fitted to other construction, obtain measurements and verify dimensions and any shop drawing details as required for accurate fit.
C. OPTIMUM MOISTURE CONTENT: Kiln-dry woodwork to an average moisture content of 8% to 13% for interior woodwork, or as otherwise recommended by applicable Quality Standards for the regional climatic conditions involved.

1.03 SUBMITTALS:
A. SHOP DRAWINGS: Submit shop drawings showing dimensioned plans and elevations, large-scale details, attachment devices and other components in all millwork items.

PART 2: PRODUCTS

2.01 WOOD:
A. BIRCH: Unselect grade, in accordance with AWI Standards. Use for windowsills, quards at interior glass partitions, interior handrails, and other items noted as Birch or Finish Wood.

2.02 SHELVING:
A. Construct closet and storage room shelving of A/B Grade Fir Plywood with exposed-to-view edges receiving hardwood edge bands.
B. Frame to support shelves of Clear Fir.

2.03 CABINETS: Construct in accordance with Custom Grade Standard of the Architectural Woodwork Institute and of the following materials unless otherwise noted on the Drawings.
A. Doors, fronts of drawers, and other portions of 3/4" thick particleboard surface with laminated plastic using backed construction.
B. Bottom of drawers and concealed-to-view backs of cabinets of A/B Fir Plywood.
C. Sides of drawers of A/D interior Grade Fir Plywood.
D. Tops and edges, except as otherwise noted, of 3/4" thick particleboard surfaced with laminated plastic. Back splash of 3/4" Clear Fir.
E. Shelves on interior of cabinets (behind doors) and bottoms in cabinets shall be A/B interior Grade Fir Plywood. Edge band all edges not abutting other portions of the cabinet.
F. Shop stain all interior portions of cabinets with an oil base stain of shade approved by Architect and apply on one coat of clear lacquer.
G. Cabinets complete with scribe moldings.
H. Cabinet hardware as follows:
1. DOOR AND DRAWER PULLS: Stanley #448 3-1/2 US 26 finish.
2. HINGES: Stanley #332 US 26 finish.
3. MAGNETIC CATCHES: Stanley #41, one for each cabinet door.
4. SHELF HARDWARE: Knape and Vogt #225 Flush Shelf Standards, with 256 supports (4 ea shelf).
5. DRAWER SLIDES: Knape and Vogt #1300, length of drawer.
I. Laminated Plastic .062" thick, for all surfaces, and of the colors as selected by the Architect.

2.04: PLYWOOD:
A. PINE AND FIR PLYWOOD: A/B Interior Grade, Softwood Plywood as graded by the American Plywood Association.
B. BIRCH PLYWOOD: Good Grade, Rotary Cut, Natural Color Birch veneered plywood as graded by the Hardwood Plywood Manufacturer's Association.

2.05 PARTICLE BOARD:
A. PARTICLE BOARD: Mat formed wood particle board, Type 1-B-2, conforming to the National Particleboard Association Standards.

2.06 WORK STATION BRACKET
A. STEEL BRACKET: 11 gauge steel, 1-½" form with mutiple mounting holes per side, a 3"x3" 45 degree notch for wall cleat and wire run clearance.

PART 3: EXECUTION

3.01 PREPARATION:
A. CONDITION WOODWORK to average prevailing humidity conditions in installation areas prior to installing.

3.02 INSTALLATION:
A. INSTALL plumb, level, true, and straight, with no distortions. Shim as required, using concealed shims.
B. FITTING: Where woodwork abuts other finished work, scribe and cut for accurate fit. Before making cutouts, drill pilot holes at corners.
C. INSTALLATION OF TRIM:
1. Trim and Moldings: Install in single, unjointed lengths for openings and for runs less than 10 feet. For longer runs, use only one piece not less than 10 feet in any straight run. Stagger joints in adjacent members. Cope at returns and miter at corners.
2. Nailing: Blind nail where possible. Use fine finishing nails where exposed. Set exposed nail heads for filling, except for exterior wood that is to receive a natural finish (if any).
3. Preparation for Finish: Clean woodwork and fill nail holes in preparation for finishes specified under Section PAINTING where woodwork is to receive a transparent finish, use matching wood filler.
D. INSTALLATION OF MILLWORK:
1. Install millwork plumb, level, true, and straight, with no distortions. Shim as required, using concealed shims.
2. Secure to grounds, stripping and blocking with countersunk, concealed fasteners and blind nailing as required for a complete installation. Scribe and cut for accurate fit to other finished work.

3.03 FINISH HARDWARE INSTALLATION:
A. INSTALL EACH HARDWARE ITEM in compliance with the manufacturer's instructions and recommendations. Wherever cutting and fitting is required to install hardware onto or into surfaces which are later to be painted or finished in another way, install each item completely and then remove and store in a secure place during the finish application. After completion of the finishes, reinstall each item. Do not install surface-mounted items until finishes have been completed on the substrate.
B. ADJUST AND CHECK each operating item of hardware and each door to insure proper operation or function of every unit. Lubricate moving parts with type lubrication recommended by manufacturer (graphite-type if no other recommended). Replace units that cannot be adjusted and lubricated to operate freely and smoothly as intended for the application made.

END OF SECTION 06200

ISSUE HISTORY		
NO.	DATE	DESCRIPTION

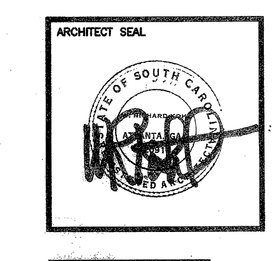
THESE DRAWINGS REMAIN THE PROPERTY OF KOHL GRAMIGNA MONARDO ARCHITECTS, P.C. ALL RIGHTS RESERVED. THESE DRAWINGS MAY BE USED ONLY FOR THE PROJECT SPECIFIED HEREIN. THEY MAY NOT BE USED, IN WHOLE OR IN PART, ON OTHER PROJECTS NOW EXTENSIONS TO THIS PROJECT EXCEPT BY EXPRESS WRITTEN AGREEMENT.

REVISIONS		
NO.	DATE	DESCRIPTION

CHOATE CONSTRUCTION
OFFICES AT BELLE HALL
1671 BELLE ISLE DRIVE, SUITE 100
MT. PLEASANT, SOUTH CAROLINA 29464

KOHL GRAMIGNA MONARDO ARCHITECTS, P.C.
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COMPANY SEAL



ARCHITECT SEAL



KGM ARCHITECTS

SHEET TITLE
SPECIFICATIONS

PROJECT NO.	SHEET NUMBER
6.200.210	A0.1
ISSUE DATE: 01.17.07	OF 4

ISSUED FOR CONSTRUCTION

SECTION 07901 SEALANTS AND CAULKING

PART 1: GENERAL

1.01 RELATED DOCUMENTS:
A. The general provisions of the Contract including General and Supplementary Conditions and General Requirements, apply to the work specified in this Section.

1.02 DEFINITIONS:
A. CAULKING COMPOUND applies to materials and work in connection with the filling or closing of interior joints where expansion or contraction is of no consideration, and where filling and closing of these interior joints is primarily for appearance.
B. SEALANT applies to materials and work to seal and make watertight all joints on the exterior side of the building, and joints on the interior of the building that may be expected to expand and contract, and the sealant material will recover to its original profile at rest.

1.03 SUBMITTALS:
A. MANUFACTURER'S DATA: Submit 2 copies of manufacturer's specifications, recommendations, and installation instructions for each type of material required.
B. QUALIFICATIONS AND CERTIFICATES:
1. Sealant Sub-Contractor shall have 5 years experience as an installer of sealants.

PART 2: PRODUCTS

2.01 MATERIALS, GENERAL:
A. COLORS: For exposed materials, provide color to match adjacent surfaces. For concealed materials, provide the natural color that has the best overall performance characteristics. Color to be Custom Color as selected by Architect.
B. COMPATIBILITY: Before purchase of each required materials, confirm its compatibility with each other material it will be exposed to in the joint system.

2.02 ELASTOMERIC SEALANTS:
A. EXTERIOR SILICONE CONSTRUCTION SEALANT:
1. Applicable Standards: Shall meet U.S. Federal Specification TT-S-001543A and TT-S-002230C and ASTM C920, Type S, Grade NS, Class 25. Use T, NT, M, G, A, O. Fire Tests of Building Construction and Materials, UL 263 (ASTM E119).
2. Shall be similar to Dow Corning 790 Series.
3. Shall be used in application at window perimeters.

2.03 CAULKING COMPOUND:
A. SYNTHETIC RESIN CAULKING COMPOUND: Oil-based caulking compound complying with FS TT-C-598, except compounded only with special acrylic resins, non-staining, non-bleeding, and paintable, similar to Pecora AC-20.

2.04 MISCELLANEOUS MATERIALS:
A. JOINT PRIMER/SEALER: Provide the type pf joint primer/sealer recommended by the sealant manufacturer for the joint surfaces to be primed or sealed.
B. BACKER ROD: Compressible rod stock of polyethylene foam, polyethylene jacketed polyurethane foam, neoprene foam or other flexible, permanent, durable non-absorptive material as recommended for compatibility with sealant by the sealant manufacturer.

PART 3: EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS:
A. Comply with manufacturer's printed instructions except where more stringent requirements are shown or specified, and except where manufacturer's technical representative directs otherwise.

3.02 JOINT PREPARATION:
A. CLEAN JOINT SURFACES immediately before installation of sealant or caulking compound, as required by Manufacturer. Remove dirt, insecure coating, moisture, and substances that could interfere with bond of sealant or caulking compound.
B. PRIME OR SEAL THE JOINT SURFACES whenever shown or recommended by the sealant and caulking manufacturer. Do not allow primer/sealer to spill or migrate onto adjoining surfaces. The Contractor shall be responsible for removal and substrate replacement of non-correctable substrates.

3.03 INSTALLATION:
A. INSTALL BACKER ROD for sealants and caulking. For all sealant joints 2 point adhesion is required. Use bond breaker tape where backer rod cannot be installed.
B. INSTALL SEALANTS AND CAULKING in uniform, continuous ribbons without gaps or air pockets, with complete "wetting" of the joint bond surfaces equally on opposite sides. Except as otherwise indicated, fill rabbet to a slightly concave surface, slightly below adjoining surfaces.
C. INSTALL SEALANTS AND CAULKING TO DEPTHS as recommended by the sealant and caulking manufacturer, but within the following general limitations, measured at the center (thin) section of the bead:
1. For normal moving joints sealed with elastomeric sealants, fill joints to a depth equal to 50% of joint width, but neither more than 1/2" deep nor less than 1/4" deep. No exterior joints shall be under 3/8" width.
2. For joints sealed by the non-elastomeric sealants and caulking compounds, fill joints to a depth in the range of 75% to 125% of joint width.
3. Advise the Architect of any sealant joints shown on the Drawings that lack adequate width and profile substrate depth interfaces that would inhibit the proper sealant to meet the need for a fully functional elastomeric joint.

3.04 WARRANTEE: Provide 2 years Labor and Material Warrantee.

END OF SECTION 07901

SECTION 08100 METAL DOORS AND FRAMES

PART 1: GENERAL

1.01 RELATED DOCUMENTS:
A. The general provisions of the Contract including General and Supplementary Conditions and General Requirements, apply to the work specified in this Section.

1.02 QUALITY ASSURANCE:
A. DOORS AND FRAMES Complying with the Steel Door Institute "Recommended Specifications for Standard Steel Doors and Frames" (S.D.I. 100), and as herein specified.

1.03 SUBMITTALS:
A. SHOP DRAWINGS:
1. Submit shop drawings for the fabrication and erection of metal doors and frames in accordance with the section SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
2. Provide a schedule of doors and frames using same reference numbers for details and openings as those on the Contract Drawings.

PART 2: PRODUCTS

2.01 MATERIALS:
A. HOT-ROLLED STEEL SHEETS AND STRIP: Commercial quality carbon steel, pickled and oiled, complying with ASTM A-569, and ASTM A-568.
B. COLD-ROLLED STEEL SHEETS: Commercial quality carbon steel, complying with ASTM A-366, and ASTM A-568.
C. GALVANIZED STEEL SHEETS: Zinc coated carbon steel sheets of commercial quality, complying with ASTM A-526, with ASTM A-525, G60 zinc coating, mill-phosphatized.
D. SUPPORTS AND ANCHORS: Fabricate of not less than 18 gauge galvanized sheet steel.
E. INSERTS, BOLTS, AND FASTENERS: Manufacturer's standard units, except hot-dip galvanized items to be built in to exterior walls, complying with ASTM A-153, Class C or D as applicable.
F. SHOP APPLIED PAINT: For steel surfaces, use rust-inhibitive enamel or paint, either air-drying or baking, suitable as a base for specified finish paints. Paint galvanized surfaces with zinc dust-zinc oxide.

2.02 FABRICATION, GENERAL:
A. FABRICATE DOORS AND FRAMES to be rigid, neat in appearance and free from defects, warp or buckle. Accurately form metal to required sizes and profiles. Weld exposed joints continuously, grind, dress, and make smooth, flush and invisible. Metallic filler to conceal manufacturing defects is not acceptable.
B. FINISH HARDWARE PREPARATION:
1. Prepare units to receive mortised and concealed finish hardware in accordance with Finish Hardware Schedule and templates provided by hardware supplier. Comply with applicable requirements of ANSI "Specification for Door and Frame Preparation".
2. For concealed overhead door closers, provide space, cutouts, reinforcing and provisions for fastening in top rail of doors or head of frames, as applicable.
3. Reinforce units to receive surface-applied hardware. Drilling and tapping for surface-applied finish hardware may be done at project site.
4. Locate finish hardware as shown on final shop drawings or if not shown, in accordance with "Recommended Locations for Builder's Hardware", published by the National Builders' Hardware Association.
C. SHOP PAINTING:
1. Clean, treat, and paint surfaces of fabricated units, including galvanized surfaces.
2. Clean steel surfaces of mill scale, rust, oil, grease, dirt, and other foreign materials before application of the shop coat of paint.
3. Apply shop coat of prime paint of even consistency to provide a uniformly finished surface ready to receive field-applied paint.

2.03 HOLLOW METAL DOORS:

A. METAL DOORS of the types and styles indicated and complying with S.D.I. 100 for minimum materials and construction requirements. Face sheets of not less than 18 gauge steel. Unless shown otherwise, interior doors shall be Type II, Style 2, and exterior doors Type III, Style 4. Cores for exterior doors shall be of Urethane. Cores for interior doors any type listed by the Steel Door Institute Standards.
B. PANELS: Panels above metal doors of same construction as door below panel.

2.04 HOLLOW METAL FRAMES:

A. PROVIDE METAL FRAMES of the types and styles indicated and complying with S.D.I. 100 for minimum materials and construction requirements. Form frames of not less than 18 gauge steel.
B. FABRICATE FRAMES of fully welded construction for exterior openings and interior doors with closers; knockdown type for other opening, unless noted otherwise.
C. FORM EXTERIOR FRAMES of hot-dip galvanized steel sheets with a stretcher level degree of flatness.
D. RUBBER DOOR SILENCERS: Drill stops to receive 2 silencers on strike jambs of single-swing frames and 4 silencers on heads of double-swing frames. Install plastic plugs to keep holes clear during construction.
E. PLASTER GUARDS: Provide 26gauge steel plaster guards or mortar boxes, welded to the frame, at back of all finish hardware cutouts where mortar or other materials might obstruct hardware operations.

PART 3: EXECUTION

3.01 INSTALLATION:
A. PLACING FRAMES:
1. Except for frames located at in-place concrete or masonry, place frames prior to construction of enclosing walls and ceilings. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is completed, remove temporary braces and spreaders leaving surfaces smooth and undamaged.
2. In masonry construction and stud walls, locate 3 wall anchors ps: jamb at hinge and strike levels, for doorframes to 7 feet in height and 4 wall anchors for frames exceeding 7 feet in height.
3. At in-place concrete or masonry construction, set frames and secure to adjacent construction with machine screws, spacers, and masonry anchorage devices.
B. DOOR INSTALLATION:
1. Fit metal doors accurately in their respective frames, within clearances specified in S.D.I. 100 Standard.
2. Finish hardware installation is specified in Section FINISH HARDWARE.

3.02 REPLACEMENT AND TOUCH-UP:
A. REPLACEMENT: Remove and replace defective work, including doors or frames that are warped, bowed or otherwise damaged.
B. PRIME COAT TOUCH-UP: Immediately after erection, sand smoothly any rusted or damaged areas of prime coat and apply touch-up of compatible air-drying primer.

END OF SECTION 08100

SECTION 08200 WOOD DOORS

PART 1: GENERAL

1.01 RELATED DOCUMENTS:
A. The general provisions of the Contract including General and Supplementary Conditions and General Requirements, apply to the work specified in this Section.

1.02 QUALITY ASSURANCE:
A. WOOD DOORS: Submit letter certifying that wood doors comply with requirements of the Architectural Woodwork Institute Quality Standards, Section 1300 "Wood Flush Doors".
B. FIRE-RATED WOOD DOORS: Where fire resistance classifications are shown or scheduled for wood door assemblies, provide doors which comply with the requirements of NFPA No. 80 "Standard for Fire Doors and Windows" and which have been tested and rated by Underwriter's Laboratories, Inc. Provide UL label on each door and panel.
C. MANUFACTURERS: Provide wood doors as manufactured by one of the following: Algoma Hardwoods, Inc., Eggers Hardwood Products Corp., Mohawk Co., Paine Lumber Company, Inc., or Weyerhaeuser Company.

1.03 SUBMITTALS:
A. MANUFACTURER'S DATA: Submit 2 copies of door manufacturer's catalog data, specifications, and installation instructions for each type of wood door required.
B. GUARANTEES: Submit 2 copies of written agreement in door manufacturer's standard form signed by the Manufacturer, Installer, and Contractor, agreeing to repair or replace defective doors which have warped (bow, cup, or twist) or which show photographing of construction below in face veneers, as defined in AWI Standard Door Guarantee, except the AWI provision for refunding the price received by the door manufacturer for any defective door shall not apply. The guarantee shall also include refinishing and reinstallation that may be required due to repair or replacement of defective doors. Guarantee doors for a one-year period of time after the date of Certificate of Substantial Completion of the building.

PART 2: PRODUCTS

2.01 MATERIALS AND COMPONENTS:
A. GENERAL: Provide wood doors complying with the applicable requirement of AWI for the kinds and types of doors indicated and as further specified. Provide trim for openings (if any), which have been tested and listed for the kind of door and rating indicated.

2.02 GENERAL FABRICATION REQUIREMENTS:
A. SOLID CORE WOOD DOORS: Full Flush, Type "S" cores, Custom Grade, waterproof bond per Section 1300 of the Architectural Woodwork Institute Standards. Veneer doors with Flatcut Birch. Stiles and exposed components of solid hardwood, color to match veneer. Particleboard Solid core will by acceptable. First floor Tenant Entrance at Entry Lobbies shall be Makore Veneer.
B. BI-FOLD AND SLIDING DOORS: Flush panel, hollow core doors with Type "K" cores, Custom Grade, per Section 1300 of the Architectural Woodwork Institute Standards. Veneer doors with Flatcut Birch. Stiles and exposed components of solid hardwood, color to match veneer.
C. FIRE RATED WOOD DOORS: Full Flush, Type "F" cores, Custom Grade, waterproof bond per Section 1300 of the Architectural Woodwork Institute Standards.
1. Veneer doors with Flat cut Birch. Stiles and exposed components of solid hardwood, color to match veneer.
2. Underwriters' Laboratory, Inc. label attached to doors for classifications listed on the Door Schedule.

PART 3: EXECUTION

3.01 INSTALLATION:
A. CONDITION doors to average prevailing humidity in installation area prior to hanging.
B. HARDWARE: For installation see Section FINISH HARDWARE.
C. MANUFACTURER'S INSTRUCTIONS: Install wood doors in accordance with manufacturer's instructions and as shown. Install fire-rated doors in corresponding fire-rated frames in accordance with the requirements of NFPA No. 80.
D. JOB FIT DOORS: Fit doors to frame for proper fit and uniform clearance at each edge and machine for hardware. Seal cut surfaces after fitting and machining.
1. Bevel doors 1/8" in 2" at lock and hinge edges.
2. Bevel fire-rated doors 1/16" in 2" at lock edge.
E. CLEARANCES: Wood doors provide clearances of: 1/8" at jamba and heads; 1/8" at meeting stiles for pairs of doors; and 1/2" from bottom of door to top of decorative floor finish or covering, except where threshold is shown of scheduled provide 1/4" clearance from bottom of door to top of threshold. Fire-rated doors provide clearance complying with the limitations of the authority having jurisdiction.

3.02 ADJUST AND CLEAN:
A. REHANG OR REPLACE DOORS that do not swing or operate freely, as directed by the Architect.
B. REFINISH OR REPLACE DOORS damaged during installation.

END OF SECTION 08200

SECTION 08710 FINISH HARDWARE

PART 1: GENERAL

1.01 RELATED DOCUMENTS:
A. The general provisions of the Contract including General and Supplementary Conditions and General Requirements, apply to the work specified in this Section.

1.02 DESCRIPTION OF WORK:
A. Work covered by this Section consists of furnishing and delivering to the job site for fitting and installation all finish hardware. It is intended that the following list of hardware will cover all finish hardware to complete the Project. Omissions and/or discrepancies shall be brought to the Architect's attention during the bidding period.

1.03 ITEMS SPECIFIED IN OTHER SECTIONS:
A. Finish hardware shall be installed under Section FINISH CARPENTRY AND MILLWORK.

1.04 SUPPLIER:
A. Finish hardware shall be furnished by a supplier approved by the Architect as having appropriate technical knowledge and experience to correctly interpret drawings and specifications. Supplier shall be prepared at all times during progress of installation to promptly provide competent and efficient Architectural Hardware Consultant (AHC) to approve its complete installation in order that all items shall be installed in the best manner and function properly.

1.05 DELIVERY:
A. Deliver all items of finish hardware to the Project Site, or as otherwise specified or required and shall be checked in for completeness and familiarization with the Contractor. All items of Finish Hardware shall be packaged, numbered, labeled to identify each opening for which it is intended, and to correspond with item numbers on the approved Hardware Schedule.

1.06 TEMPLATES:
A. Manufacturer to template finish hardware to be installed on or in metal doors and frames. Template machine screws shall be furnished for all such materials. This supplier shall furnish Hardware Schedule as approved by the Architect and all necessary templates to metal doors and frames fabricators for their coordination use.

1.07 SCHEDULES:
A. Submit complete typewritten Hardware Schedules to Architect for approval. After approval, provide required number of copies of approved Hardware Schedule for distribution. Do not place orders for materials until the Architect has given approval.
B. Submit two current copies of a catalog cut, with the Hardware Schedule for each item of hardware listed in the Schedule.
C. Identify each item in the Schedule on the first page of the Schedule by the manufacturer's name.

1.08 RESPONSIBILITY:
A. The supplier is responsible for furnishing hardware in accordance with the intent of this specification. Where, by virtue of Architectural design or by function, a change is necessary, hardware of equal design and quality may be furnished for approval of the Architect.

1.09 LOCATIONS:
A. Hardware locations dimension shall be as follows: (Distance from finish floor to centerline of):

1. Door Knob	38"
2. Door Pull	42"
3. Deadlock	60"
4. Exit Bolt Cross Bar	38"
5. Push Plate	50"

6. Butt Hinges Bottom Hinge – Finish floor to bottom of hinge 10"
Top Hinge – head rabbit to top hinge 5";
Center Hinge – equidistant between top and bottom hinges.

1.10 180 DEGREE OPENINGS:
A. Other than those doors that are restricted to less than 180 degree opening by building or by overhead holders or stops, all butts and/or closer arms shall be of sufficient size to allow full 180 degree opening of doors.

PART 2: PRODUCTS

2.01 BUTTS:
A. Doors 1-3/4" thick; minimum 4-1/2" x 4-1/2"
B. Doors 1-3/8" thick; minimum 3-1/2" x 3-1/2"
C. Each door shall have not less than 3 hinges.
D. All butts used with door closers shall be ball bearing. All exterior doors shall have ball bearing butts except as otherwise specified.
E. MANUFACTURER:
McKinney
Hager

2.02 FINISH:
Finishes to be building standard, unless noted otherwise in the Hardware Schedule:

BUILDING STANDARD

2.03 LOCKSETS/LATCHSETS:
A. LOCKSETS/LATCHSETS shall be the following manufacturer, or approved equal, and shall be furnished in the function as specified in the hardware sets:

MANUFACTURER	DESIGN	SERIES
Schlage	D10S	ATHENS

2.04 CLOSERS:
A. Closers shall be one of the following manufacturers, or approved equal, and shall be furnished in the manufacturer's recommended printed size for the specified condition unless otherwise noted in the hardware sets. Closers shall be full rack and pinion complete with back check. Springs shall be motor class type. Furnish flush mount transom brackets where no transom bar exists. Furnish parallel arm where required.

MANUFACTURER	SERIES
Yale	3501
LCN	4000
Sargent	1230

2.05 FIRE EXIT DEVICES:
A. Fire Exit devices by the following manufacturers, or approved equal, and furnished in the function as specified in the hardware sets. Furnish reinforced cross bars for all devices on doors 3'-2" and wider.

MANUFACTURER	SERIES
Corbin/Russwin	ED4800
Sargent	90
Von Duprin	88

2.06 DOOR TRIM:
A. All push plates, pulls, pull plates, kick and/or armor plates shall be any of one of the following manufacturer's products, or approved equal in catalog number as set forth herein:

MANUFACTURER	PUSH PLATE	PULL PLATE	KICK PLATE
Quality	40 4" x 16"	451D 4" x 16"	#48 8" x 2"LDW
Trimco	1001 3/4" x 16"	1014 3/4" x 16"	#6000 8" x 2"LDW
Baldwin	2124 4" x 16"	2347 4" x 16"	#2001 8" x 2"LDW

2.07 SILENCERS:
A. All interior wood and metal door frames shall have door silencers, Type 13374, 3 per single door; 2 per pair of doors.

2.08 DOOR STOPS:
A. Stops by one of the following manufacturers, or approved equal:

MANUFACTURER	TYPES		
Quality	432ES	331ES	W302TB
Trimco	1214ES	1211ES	W1274CCS
Baldwin	4011	4001	4032

2.09 FASTENINGS:
A. All screws shall be of matching finish to their product and shall be the manufacturer's standard for that item.
B. Sex Bolts: Door closers, door holder, and exit device installed on wood doors shall be attached by means of the bolts and sex nuts.

PART 3: EXECUTION

3.01 FINISH HARDWARE INSTALLATION:
A. INSTALL EACH HARDWARE ITEM in compliance with the manufacturer's instructions and recommendations. Wherever cutting and fitting is required to install hardware onto or into surfaces which are later to be painted or finished in another way, install each item completely and then remove and store in a secure place during the finish application. After completion of the finishes, reinstall each item. Do not install surface-mounted items until finishes have been completed on the substrate.
B. SCREW THRESHOLDS TO SUBSTRATE with No. 10 or larger screws of the proper type for permanent anchorage and of aluminum or stainless steel that will not corrode in contact with the threshold metal.
C. AT EXTERIOR DOORS set thresholds in a bed of either butyl rubber sealant or polyisobutylene mastic sealant to completely fill concealed voids and exclude moisture, unless thresholds have neoprene gaskets.
D. ADJUST AND CHECK each operating item of hardware and each door to insure proper operation or function of every unit. Lubricate moving parts with type lubrication recommended by manufacturer (graphite-type if no other recommended). Replace units that cannot be adjusted and lubricated to operate freely and smoothly as intended for the application made.

END OF SECTION 08710

SECTION 09260 GYPSUM DRYWALL

PART 1: GENERAL

1.01 RELATED DOCUMENTS:
A. The general provisions of the Contract, including General and Supplementary Conditions and General Requirements, apply to the work specified in this Section.

1.02 QUALITY ASSURANCE:
A. INDUSTRY STANDARD: Comply with applicable requirements of GA-216 "Application and Finishing of Gypsum Board" by the Gypsum Association, except where more detailed or more stringent requirements are indicated, including the recommendations of the manufacturer.
B. Prior to applying drywall, the drywall contractor shall check the fastening surfaces with a ten-foot straight edge to insure that no fastening member varies more than 1/8" from adjacent framing, bridging or furring member. Do not proceed with drywall application until fastening members are found straight, true and within tolerances stated. Starting drywall application constitutes acceptance of fastening surface conditions by drywall contractor.

1.03 PRODUCT HANDLING:
A. DELIVER GYPSUM DRYWALL materials in sealed containers and bundles, fully identified with manufacturer's name, brand, type, and grade; store in a dry, well-ventilated space, protected from the weather under cover and off the ground.

PART 2: PRODUCTS

2.01 METAL SUPPORT MATERIALS:
A. CEILING SUPPORT MATERIALS:
1. Main Runners: 1-1/2" steel channels, either cold-rolled at 0.475 lb. per foot, rust-inhibitive paint finish.
2. Furring Members: Screw-type, hat-shaped, furring channels of 25 gauge zinc-coated steel; comply with ASTM C-645.
3. Hanger Wire: Galvanized, soft-temper steel wire complying with ASTM A-641, Class 1 coating, prestretched, sized in accordance with ANSI A42.4.
4. Hanger Anchorages: Comply with ANSI A42.4 for concrete inserts, clips, bolts, anchorage for ceiling hangers, size devices for 3 x calculated load supported, except size direct-pull concrete inserts for 5 x calculated load.
5. Furring Anchorages: 16 gauge galvanized wire ties, manufacturer's standard wire-type clips, bolts, nails or screws as recommended by furring manufacturer and complying with ANSI A42.4.
B. WALL/PARTITION FURRING MATERIALS:
1. Furring Members: Screw-type, hat shaped channels, of 25 gauge zinc-coated steel; comply with ASTM C-645. Where furring is applied vertically, provide special-shaped units at external corners.

2.02 GYPSUM BOARD PRODUCTS:
A. Standard Board 5/8" thick, with tapered edges and conforming to ASTM C-36.
B. Fire-Rated Board 5/8" thick with tapered edges, Type -X, conforming to ASTM C-36.
C. Sound Deadening Board, 1/4" or 1/2" thick, square edge, Class – A, dense mineral fiberboard conforming to ASTM C-208.
D. Exterior Gypsum Sheathing, 1/2" thick, with tongue and groove edges, conforming to ASTM – C -79.
E. 1" thick Fire-Shield Shaftliner with square edges, Type x, conforming to AST-C-442.

2.03 TRIM ACCESSORIES:
A. GENERAL: Provide manufacturer's standard trim accessories of types indicated for drywall work, formed of galvanized steel unless otherwise indicated, with flanges for nailing or stapling, and beaded for concealment of flanges in joint compound. Provide corner beads, and No. 108 Edgeguards by Casing, Inc., or No. 200A Edge Channels by U.S. Gypsum Company.

2.04 JOINT TREATMENT MATERIALS:
A. JOINT TAPES: Plain or perforated complying with ASTM C-475.
B. JOINT COMPOUND: Of type recommended by drywall manufacturer of material installed in project.

2.05 MISCELLANEOUS MATERIALS:
A. LAMINATING ADHESIVE: The type and grade of adhesive or compound recommended by the gypsum board manufacturer, for laminating gypsum boards together in applications as indicated.
B. FASTENING ADHESIVE: The type and grade of adhesive recommended by the gypsum board manufacturer for fastening board to structural supports or substrates as indicated. On wood supports, provide adhesive complying with ASTM C-557.
C. GYPSUM BOARD FASTENERS: Comply with GA-216 and with gypsum board manufacturer's printed recommendations; choice is Installer's option where more than one type is recommended for application indicated. Nails shall have annular rings or serrated shanks.
D. ACOUSTICAL SEALANT: Non-shrinking, non-migrating, non-staining sealant of either non-drying or permanently elastic type, as recommended by the gypsum board manufacturer. Where exposed to view, provide paintable type acoustical sealant, either latex or acrylic based type, or acrylic-latex type.
E. SOUND ATTENUATION BLANKETS: Semi-rigid (friction-fit) spun mineral fiber blanket without membrane covering in 1-12" thickness with 3.0 pcf density. Flamespread, smoke and fuel ratings of less than 25 (UL-723); FS HH-1-521, Type – 1.

PART 3: EXECUTION

3.01 INSTALLATION OF METAL SUPPORT SYSTEMS:
A. GENERAL: Comply with ANSI A42.4 as applicable to the type of substrate and drywall support system indicated.
B. CEILING SUPPORT SUSPENSION SYSTEMS:
1. Secure hanger wires to structural support by wire tying directly to structure where possible; otherwise tie to inserts, clips, or other anchorage devices or fasteners as indicated. Wire-tie hanger wires to main runners.
2. Space main runners 4'-0" o.c. and space hangers 4'-0" o.c. along runners, except as otherwise shown.
3. Level main runners to a tolerance of 14" in 12'-0", measured both lengthwise on each runner and transversely between parallel runner.
4. Wire-tie or clip furring members to main runners and to other structural supports as indicated.
5. Space furring members 16" o.c., except as otherwise indicated.
6. Install auxiliary framing at termination of drywall work and at openings for light fixtures of similar work, as required for support of both the drywall construction and other work indicated for support thereon.

3.02 INSTALLATION OF GYPSUM BOARD:
A. INSTALLATION: Comply with "Recommended Specifications for the Application and Finishing of Gypsum Board, GA-216, by the Gypsum Association, except where more detailed or more stringent requirements are indicated herein or by the manufacturer's instructions and recommendations.
B. SOUND-RATED GYPSUM DRYWALL:
1. Comply with requirements of manufacturers printed literature to achieve required STC ratings, as proven by certified laboratory test reports.
2. Install number of plies of gypsum wallboard and sound-deadening board as indicated.
3. Seal perimeter of sound-rated work as follows:
a. At partitions, provide continuous beads of acoustical sealant at juncture or both faces of runners of plates with floor and ceiling construction and whenever work abuts dissimilar materials. Seal prior to installation of gypsum boards.
b. At ceilings, provide continuous beads of acoustical sealant whenever work abuts dissimilar materials.
c. At control joints, provide continuous beads of sealant between edges of gypsum boards. Seal prior to installation of surface-applied control joint accessories and locate at proper depth in joint to allow for insertion of expansion portion of control joint accessory.
4. At openings and cutouts, fill open spaces between edges of gypsum board and fixtures, cabinets, ducts and other flush or penetrating items, with continuous bead of acoustical sealant.
5. Seal sides and backs of electrical boxes or completely close up openings and joints with a bead of acoustical sealant.
6. Sound Flanking Paths: Where sound-rated partitions intersect non-rated construction to completely close sound flanking paths through non-rated construction. Seal joint between face layers at vertical interior angles of intersecting partitions.
7. Ceiling Plenums: Where sound-rated partitions extend through non-sound rated ceilings to structural substrates above, extend the same treatment to that portion of the partition above the ceiling as specified for portion below the ceiling. For double-layer partition applications, install base layer only above ceilings.
8. Partition insulation: Install sound attenuation blankets in partitions where indicated. Completely blanket space between studs to full height of partitions. Fit carefully behind electrical outlets and other work that penetrates partitions.
C. SINGLE-LAYER CEILINGS: Apply gypsum board on ceilings, before applications on walls and partitions, to the greatest extent possible. Apply in direction that will minimize end joints.
D. SINGLE-LAYER WALLS AND PARTITIONS:
1. Apply sheets in direction and of length that will minimize end joints.
2. For parallel applications, locate edge joints over supports; for right-angle applications, stagger end joints over supports.
E. DOUBLE-LAYER AND PARTITIONS (GYPSUM WALLBOARD AND SOUNDBOARD):
1. Apply base layer of sound-deadening board vertically with joints staggered on opposite sides of partition. Attach board to steel studs with 1" Type "S" screws spaced 27" o.c., along vertical joints and at quarter and mid-points of panel height along intermediate stud. Place 2 screws at each end of board through runner 1" from each vertical edge. Apply exposed face layer vertically with joints staggered from base layer joints and laminate to base layer. Fasten face layer of exposed gypsum wallboard around perimeter with 1-5/8" Type "S" screws spaced 12" o.c.

3.03 DRYWALL FINISHING:
A. FINISH EXPOSED DRYWALL SURFACES with joints, corners, and exposed edges reinforced or trimmed as specified and with all joints, fastener heads, trim accessory flanges and surface defects filled with joint compound.
B. REINFORCE EXTERNAL CORNERS of drywall work with corner beads. Securely fasten metal corner beads as recommended by the manufacturer. Use fasteners that will be fully concealed when joint compound filler is applied over flanges.
C. EDGE TRIM: Install corner beads at all external corners. Install in single unjointed lengths whenever possible. Install USG No. 200A Edge Channels or No. 108 Edgeguards by Casings, Inc. at all edges where gypsum board abuts other materials.

END OF SECTION 09260

ISSUE HISTORY		
NO.	DATE	DESCRIPTION

THESE DRAWINGS REMAIN THE PROPERTY OF KOHL, GRAMIGNA MONARDO ARCHITECTS, P.C. ALL RIGHTS RESERVED. THESE DRAWINGS MAY BE USED ONLY FOR THE PROJECT SPECIFIED HEREIN. THEY MAY NOT BE USED, IN WHOLE OR IN PART, ON OTHER PROJECTS NOW EXTENSIONS TO THIS PROJECT EXCEPT BY EXPRESS WRITTEN AGREEMENT.

REVISIONS		
NO.	DATE	DESCRIPTION

CHOATE CONSTRUCTION
OFFICES AT BELLE HALL
1671 BELLE ISLE DRIVE, SUITE 100
MT. PLEASANT, SOUTH CAROLINA 29464

KOHL GRAMIGNA MONARDO ARCHITECTS, P.C.
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COMPANY SEAL

ARCHITECT SEAL

KGM ARCHITECTS

ISSUED FOR CONSTRUCTION

SHEET TITLE
SPECIFICATIONS

PROJECT NO.	SHEET NUMBER
6.200.210	A0.2
ISSUE DATE: 01.17.07	OF 4

SECTION 09512 ACOUSTICAL CEILINGS

PART 1: GENERAL

1.01 RELATED DOCUMENTS:
A. The general provisions of the Contract, including General and Supplementary Conditions and General Requirements, apply to the work specified in this Section.

1.02 SUBMITTALS:
A. MANUFACTURER'S DATA, ACOUSTICAL CEILING: Submit 3 copies of manufacturer's product specification and installation instructions for each ceiling material required and for suspension system, including test reports and other data as required to show compliance with these Specifications.
B. SAMPLES: Submit one 12" square sample of each type ceiling unit to be used in the project in accordance with the Section SHOP DRAWINGS, PROJECT DATA, AND SAMPLES.

1.03 PRODUCT DELIVERY:
A. Deliver materials in manufacturer's original, unopened packages, fully identified with type, finish, performance data, and compliance labels.

1.04 JOB CONDITIONS:
A. SPACE ENCLOSURE: Do not install ceilings until space has been enclosed and until ambient conditions of temperature and humidity will be continuously maintained at values near those indicated for final occupancy.

PART 2: PRODUCTS

2.01 TYPES AND SYSTEMS:
A. All acoustical materials shall be of the following lay-in type or concealed suspension system as indicated on the Drawings and Schedules.
1. Lay-in Acoustical panels: 5/8" thick by 24"x 24" with angular tegular edge mineral board panel.

2.02 SUSPENSION SYSTEM:
A. MANUFACTURER: Exposed grid components named herein are as manufactured by Armstrong World Industries, Donn Products, Inc., or Chicago Metallic Corporation.
B. COMPONENTS: System shall consist of main support tees, cross tees, splice clips, wall angles, and hold down clips when application is exterior. Metal shall be steel for interior work and aluminum for exterior work.
C. DESIGN LOADS: Shall conform to ASTM C 635 intermediate-Duty Structural Classification. Suspension system shall be designed to support respective lay-in units and light fixtures, with deflection of suspension members not to exceed 1/360 of span of member.
D. FINISH: Exposed surfaces of tees and wall moldings shall be factory finish, white baked on enamel.
E. CEILING OFFSET MOLDING: Corner mold at ceiling offset shall be similar to Mitre Moulding as manufactured by Chicago Metallic Corp. Finish shall match that of exposed tees of suspension system.
F. HANGERS: Wire shall be No.l 12 gauge galvanized steel.

2.03 ACOUSTICAL MATERIAL:
A. RATING: Acoustical material shall be mineral fiber and comply with AMA Flame Spread.
B. DENSITY: Units shall be mineral fiber and comply with AMA Flame Spread.
C. FINISH: Acoustical material shall have a factory-applied white finish. Light reflectance shall be AIMA reflective value "A".
D. TYPES: Ceiling panels shall be as listed below.
1. Lay-In: BUILDING STANDARD UNLESS OTHERWISE NOTED.

PART 3: EXECUTION

3.01 INSTALLATION:
A. GENERAL REQUIREMENTS FOR INSTALLATION:
1. Pattern, Layout and Types.
a. Unless indicated otherwise herein or on the Drawings, ceilings shall be laid out symmetrically in each space, with no less than half of a panel or tile at walls.
b. Installation of acoustical materials and suspension systems shall be in strict accordance with manufacturer's written instructions.
c. Installation of acoustical materials and suspension systems shall be made by experienced mechanics, and mechanics approved by the manufacturer of materials used.
d. Fit parts neatly and accurately, true to line and plane.
B. GENERAL REQUIREMENTS FOR SUSPENSION SYSTEM:
1. Suspension system, including wall mold, shall be level to within 1/8" in 12 feet, with ceiling panels in place.
2. Exposed grid members shall be straight and in alignment. All exposed surfaces shall be flush and level.
3. Suspension System: Space main tee runner 48" o.c. Suspend from the structure above with wire hangers spaced not to exceed 48" o.c.
4. Space 48" cross tees 24" o.c. at right angles to main tee runners to form a 24" x 24"/24" x 48" grid pattern.
5. Ceiling Offset Molding: Secure mitered molding at ceiling offset with hanger rod. Install so as to prevent rotation of molding.
C. GENERAL REQUIREMENTS FOR ACOUSTICAL MATERIALS:
1. Scribe lay-in units neatly to abutting surfaces and to penetrations and protrusions.
2. Exercise care to prevent soiling of ceiling boards during installation. Leave entire system neatly and accurately fitted.

3.02 CLEANING:
A. Following installation, clean all soiled and discolored surfaces. Remove and replace units that are damaged or improperly installed.

END OF SECTION 09512

SECTION 09683 CARPET

PART 1: GENERAL

1.01 RELATED DOCUMENTS:
A. The general provisions of the Contract, including General and Supplementary Conditions and General Requirements, apply to the work specified in this Section.

1.02 DESCRIPTION OF WORK:
A. The extent of carpeting is shown on the Drawings and in schedules.

1.03 SUBMITTALS:
A. MANUFACTURER'S DATA, CARPET: Submit 2 copies of specifications, installation instructions, and general recommendations by the manufacturer of carpet materials. Transmit copy of each instruction to the installer.
B. SAMPLES: Submit 2 samples of each type of carpet and pad, 12" square, to illustrate the range of color and pattern variation. Review of samples will be for design, color, texture and pattern only. Compliance with all other requirements is the exclusive responsibility of Contractor.
C. MAINTENANCE INSTRUCTIONS: Submit 3 copies of the carpet manufacturer's printed instructions for maintenance of the installed work. Include name of manufacturer, material, brand name, color and texture designation, and precautions for the use of cleaning materials and methods that could damage the carpeting.

1.04 DELIVERY AND STORAGE:
A. COMPLY with the manufacturer's instructions and recommendations and as herein specified.
B. DELIVER MATERIALS to the project site in original packages or containers clearly labeled to identify manufacturer, brand name, quality or grade, and fire hazard classification.
C. STORE MATERIALS in original undamaged packages or containers. Do not store carpet in an upright position. Maintain temperature in storage area above 40 degrees F.

PART 2: PRODUCTS

2.01 FIRE HAZARD CLASSIFICATION:
A. Provide materials bearing UL label and marking, indicating the fire hazard classification of the carpet as determined by ASTM E85.
B. FLAMMABILITY

1. ASTM-3-84 Steiner Tunnel Test	26 oz.
Flame Spread Rate	25
Smoke Density Factor	85
Class	A

2.02 ALLOWANCE:
A. The Contractor shall provide carpet at the allowances shown on the drawings. This allowance includes cost for carpet material, installation, Contractor's mark-up, delivery, adhesive, trim strips, taxes, or costs incidental to furnishing materials. These costs shall be included in the Base Bid. Contractor to submit manufacturer's invoices for material upon Architect's request.

2.03 ACCESSORIES:
A. PAD: If required on the Drawings; shall be 34 oz. Shaw Duratech V Plus CF100 or equal.
B. STRIPPING, THRESHOLDS, ACCESSORIES, ETC.: Shall be Roberts, Allied Tack-Track, or equal. Provide sample of each item required.

PART 3: EXECUTION

3.01 INSPECTION:
A. INSTALLER must examine the areas and conditions under which carpeting is to be installed and notify the Contractor in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Installer and Architect.

3.02 INSTALLATION:
A. Installation shall be made by skilled mechanics in accordance with recommendations of the manufacturers of the material used and with the highest degree of workmanship.
B. This Contractor shall check all physical dimensions and other conditions and be responsible for proper fitting of carpet in all areas designated.
C. Carpeting shall be installed using the direct glue-down method. All seams shall reflect best possible workmanship and shall be subject to acceptance by the Architect.
D. This Contractor shall make necessary repairs after the initial installation as required.
E. This subcontractor shall guarantee against defects and workmanship for one year from date of installation at no cost to Owner.

3.04 CLEANUP:
A. UPON COMPLETION OF WORK, remove surplus materials, rubbish and debris resulting from carpet installation and leave areas of work in a neat, clean condition.

END OF SECTION 09683

SECTION 09900 PAINTING

PART 1: GENERAL

1.01 RELATED DOCUMENTS:
A. The general provisions of the Contract, including General and Supplementary Conditions and General Requirements, apply to the work specified in this Section.

1.02 DESCRIPTION OF WORK:
A. JOB REQUIREMENTS: The Contractor shall examine the Specifications for the various other trades and thoroughly familiarize himself with all provisions regarding their painting; he shall understand that all surfaces that are left unfinished by the requirements of other Specifications shall be painted under this Section. The Contractor shall understand that all work specified under this Section shall be in addition to shop and mill coats, priming and field coats specified in other Sections.

1.03 PAINTING WORK NOT REQUIRED:
A. PAINTING WORK EXCLUDED: The following categories of work are not included as part of the field-applied finish work.
1. Shop Priming: Unless otherwise specified, shop priming of ferrous metal items is included under the various Sections for structural steel, miscellaneous and electrical equipment, or accessories, and similar items.
2. Pre-Finished Items. Unless otherwise indicated, do not include painting when factory finishing is specified.
3. Concealed Surfaces: Unless otherwise indicated, painting is not required on surfaces such as walls or ceilings in concealed areas.
4. Finished Metal Surfaces: Metal surfaces of anodized aluminum, chromium plate, copper, bronze, and similar finished materials will not require finish painting, unless otherwise indicated.
5. Operating Parts and Labels:
a. Moving parts of operating units, mechanical and electrical parts, such as valve and damper operators, linkages, sinkages, sensing devices, motor and fan shafts will not require finish painting unless otherwise indicated.
b. Do not paint over any code-required labels such as Underwriters' Laboratories and Factory Mutual, or any equipment identification, performance rating, name, or nomenclature plates.

1.04 QUALITY ASSURANCE:
A. PAINTING STANDARD: All work shall conform to Type 2 quality of the Painting and Decorating Contractors of America Standards.

1.05 DELIVERY:
A. DELIVER ALL MATERIALS to the job site in original, new and unopened packages and containers bearing manufacturer's name, name or title of material, manufacturer's stock number and date of manufacture, manufacturer's name, contents by volume, for major pigment and vehicle constituents, thinning instructions, application instructions, color name and number.

1.06 JOB CONDITIONS:
A. WATER-BASE PAINTS: Apply only when the temperature of surfaces to be painted and the surrounding air temperatures are between 65 degrees F. and 95 degrees F., unless otherwise permitted by paint manufacturer's printed instructions.
B. SOLVENT-THINNED PAINTS: Apply only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 degrees F. and 95 degrees F., unless otherwise permitted by paint manufacturer's printed instructions.
C. DO NOT APPLY PAINT in the rain, fog, or mist; or when the relative humidity exceeds 85%; or to damp or wet surfaces; unless otherwise permitted by paint manufacturer's printed instructions.
D. PAINTING MAY BE CONTINUED during inclement weather only if the areas and surfaces to be painted are enclosed and heated within the temperature limits specified by the paint manufacturer during application and drying periods.

PART 2: PRODUCTS

2.01 PAINT COMPATIBILITY:
A. PAINT COORDINATION: Provide finish coats that are compatible with prime paints used. Review other Sections of these specifications in which prime paints are to be provided to ensure compatibility of total coating systems for various substrates. Upon request from other trades, furnish information on characteristics of finish materials proposed for use, to ensure compatible prime coats are used. Provide barrier coats over incompatible primers or remove and reprime as required.

2.02 APPROVALS:
A. FIRST LINE PAINTS from the following manufacturers are approved and coded as follows:

Duron	"D"
Pratt and Lambert	"P-L"
Glidden-Durkee	"G-D"
Martin-Senour Company	"M-S"
Sherwin-Williams Company	"SHW"
Porter	"P"

B. No "Second" or "Painter-maintenance lines will be approved. Submissions for approval shall include independent laboratory test results establishing quality equal to the approved products.
C. Priming coats, undercoats, and finish coats applied to the same surfaces shall all be products of the same manufacturer.
D. Submit for Architect's approval prior to starting any painting work the name of paint manufacturer and names of products proposed for use in project.

PART 3: EXECUTION

3.01 INSPECTION:
A. STARTING OF PAINTING work will be understand as the Applicator's acceptance of the surfaces and conditions within any particular area.

3.02 SURFACE PREPARATION:
A. PERFORM PREPARATION AND CLEANING PROCEDURES in strict accordance with the paint manufacturer's instructions and as herein specified for each particular substrate condition.
B. REMOVE all hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items in place and not to be finish-painted, or provide surface-applied protection prior to surface preparation and painting operations. Following completion of painting of each space or area, reinstall the removed items by workmen skilled in the trades involved.
C. SANDPAPER SMOOTH those finished surfaces exposed to view with 100 grit or finer sandpaper and dust off. Scrape and clean dry, seasoned knots and apply a thin coat of white shellac or other recommended knot sealer before application of the priming coat. After priming, fill holes and imperfections in finish surfaces with plastic wood filler. Sandpaper smooth when dried.
D. PRIME, SATIN, OR SEAL edges, faces, undersides, and backsides of wood required to be job-painted.
E. SEAL tops, bottoms, and cutouts of wood doors with a heavy coat of sealer immediately upon delivery to job.
F. TOUCH-UP SHOP-APPLIED PRIME COATS on ferrous metal wherever damaged or bare, where required by other Sections of these specifications. Clean and touch-up with the same type shop primer.

3.03 MATERIALS PREPARATION:
A. MIX AND PREPARE painting materials in accordance with the paint manufacturer's printed instructions.
B. STORE MATERIALS not in actual use in tightly covered containers. Maintain containers used in storage, mixing, and application of paint in a clean condition, free of foreign materials and residue.

3.04 APPLICATION:
A. GENERAL:
1. Apply paint in accordance with the paint manufacturer's printed instructions. Use applicators and techniques best suited for the substrate and type of material being applied.
2. Apply additional coats when undercoats, stains, or other conditions show through the final coat of paint, until the pain film is of uniform finish, color, and appearance. Give special attention to insure that all surfaces, including edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
3. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Paint surfaces behind permanently fixed equipment or furniture with prime coat only before final installation of equipment.
4. Paint interior surfaces of ducts, where visible through registers or grilles, with a flat, non-specular black paint.
5. Paint the backsides of access panels and removable or hinged covers to match the exposed surfaces.
6. Finish exterior doors on tops, bottoms, and side edges the same as the exterior faces unless otherwise indicated.
7. Sand lightly between each succeeding enamel or varnish coat.
8. Omit the first coat (primer) on metal surfaces that have been shop-primed and touch-up paint, unless otherwise indicated.
B. MINIMUM COATING THICKNESS: Apply each material at not less than the manufacturer's recommended spreading rate to establish a total dry film thickness as indicated or, if not indicated, as recommended by coating manufacturer.
C. MECHANICAL AND ELECTRICAL WORK: Painting of mechanical and electrical work is limited to those items exposed in Mechanical Equipment Rooms and in occupied spaces.
D. PRIME COATS:
1. Apply a prime coat of material that is required to be painted or finished and which has not been prime coated by others.
2. Recoat primed and sealed surfaces where there is evidence of suction spots or unsealed areas in first coat, to assure a finish coat with no burn-through or other defects due to insufficient sealing.

3.05 CLEAN-UP AND PROTECTION:
A. CLEAN-UP: During the progress of the work, remove from the site all discarded paint materials, rubbish, cans and rags at the end of each work day.
B. UPON COMPLETION of painting work, clean window glass and other paint-spattered surfaces. Remove spattered paint by proper methods of washing and scraping, using care not to scratch or otherwise damage finished surfaces.
C. PROTECTION: Protect work of other trades, whether to be painted or not, against damage by painting and finishing work. Correct and damage by cleaning, repairing or replacing, and repainting, as acceptable to the Architect.
D. PROVIDE "WET PAINT" SIGNS as required to protect newly painted finishes. Remove temporary protective wrappings provided by others for protection of their work after completion of painting operations.
E. AT COMPLETION of work of other trades, touch-up and restore all damaged or defaced painted surfaces.

3.06 PAINTING SCHEDULE:
A. EXTERIOR SURFACES:
1. STEEL: (Except for weathering steel items)
1 Coat - Metal Primer (Galvanized Metal Primer on Galvanized Metal)
2 Coats - Exterior Trim Paint
2. WOOD:
1 Coat - Cabots Wood Sealer
2 Coats - Cabots #0380 Transparent Stain
B. INTERIOR SURFACES:
1. GYPSUM WALLBOARD: (To receive wallcoverings)
1 Coat - 50% Solution Shellac and 50% Alcohol, or
1 Coat - Prep-A-Wall by New York Bronze Powder Company, Inc.
2. GYPSUM WALLBOARD: (Flat Finish)
1 Coat - Vinyl Primer
2 Coats - Flat Latex Paint
3. GYPSUM WALLBOARD: (Semi-Gloss Finish)
1 Coat - Vinyl Primer
2 Coats - Semi-Gloss Latex Paint
4. FERROUS METAL:
1 Coat - Metal Primer (Galvanized Metal Primer on Galvanized Metal) Note: This coat not required on shop-primed metal except as touch-up.
2 Coats - Alkyd Flat or Semi-Gloss
5. STAINED WOOD:
1 Coat - Wood Stain
1 Coat - Wood Sealer
1 Coat - Clear Lacquer
6. PAINTED WOOD:
1 Coat - Enamel Undercoat
2 Coats - Semi-Gloss Enamel
7. CONCRETE MASONRY UNITS: Interior See Schedule
1 Coat - Block Primer-Filler
2 Coats - Latex Masonry Paint
1 Coat - Block Primer-Filler
2 Coats - Semi-Gloss Enamel
8. CONCRETE: Interior See Schedule
1 Coat - Primer
2 Coats - Flat Latex Paint or Semi-Gloss Enamel
9. EXPOSED PIPES AND SHEET METAL: (Interior)
a. Exposed pipes, including sprinkler piping, and sheet metal work after installation and testing are to receive one coat of interior metal primer and two coats of semi-gloss enamel. Exposed pipe insulation primed with concrete primer and finished same as other pipes.
b. Canvas Covering on Duct, Pipe, and Equipment Insulation:
2 Coats - Alkyd Primer
1 Coat - Paint or Enamel to match finish coat on nearest wall. In areas where walls are not painted, use semi-gloss enamel for this coat.
c. Ductwork Exposed Outside of Building: (If any)To be painted with rust preventative paint, Rust-Oleum or approved equal, in color directed by the Architect.
d. All Ductwork, Conduits, Insulation, Pipe and Structure: Visible through grilles and diffusers; paint flat black.

3.07 COLORS AND FINISH:
A. Paint colors, surface treatment and finishes as selected by the Architect.
B. All surfaces receiving 2 coats of paint shall receive a slightly different color for each coat to assure complete coverage.

END OF SECTION 09900

SECTION 10520 FIRE EXTINGUISHERS

PART 1: GENERAL

1.01 RELATED DOCUMENTS:
A. The general provisions of the Contract including General and Supplementary Conditions and General Requirements, apply to the work specified in this Section.

1.02 SUBMITTALS:
A. SHOP DRAWINGS: Submit manufacturer's catalog data clearly marked to identify and describe products for use in the project.

PART 2: PRODUCTS

2.01 CABINETS:
A. CABINETS: Recessed type, Cabinet Series 2409, Trim Style 5R, Steel Cabinet, Textured Plexiglas Door with Black Lettering on White Background, Vertical Design, Steel Trim, G2409-5R GEMINI as manufactured by Larsen's Manufacturing Company or equal.

2.02 FIRE EXTINGUISHERS:
A. EXTINGUISHERS: Each cabinet shall contain the following:
1. Model MP5, Capacity 5 lbs. Class ABC, UL Rating 2A-10B:C, FM Approved, as a manufactured by Larsen's Manufacturing Company or equal.
B. WALL BRACKETS: Provide Series "B" wall brackets for wall mounting extinguishers where indicated on the Drawings.

PART 3: EXECUTION

3.01 INSTALLATION:
A. MOUNTING: Install fire extinguisher cabinets in accordance with the Contract Documents and the manufacturer's printed installation instructions. Provide fire extinguisher cabinets in finished spaces and bracket mounted fire extinguishers in leaseable spaces.
B. FILLING AND TAGGING: Fire extinguisher to have full charge at time the building is accepted by the Owner. Tag each extinguisher to indicate date extinguisher charged and inspected.

END OF SECTION 10520

ISSUE HISTORY		
NO.	DATE	DESCRIPTION

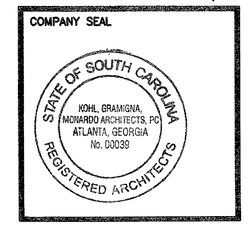
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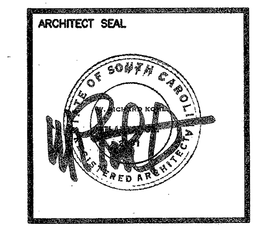
CHOATE CONSTRUCTION
OFFICES AT BELLE HALL
1671 BELLE ISLE DRIVE, SUITE 100
MT. PLEASANT, SOUTH CAROLINA 29464

KOHL GRAMIGNA MONARDO ARCHITECTS, P.C.
655 Engineering Drive, Suite 150, Norcross, Georgia 30092 770-448-2743 www.kgmarchitects.com

COMPANY SEAL



ARCHITECT SEAL



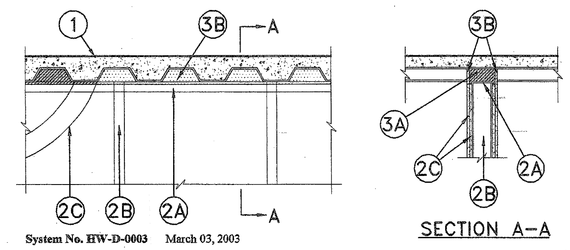
KGM ARCHITECTS

ISSUED FOR CONSTRUCTION

SHEET TITLE
SPECIFICATIONS

PROJECT NO. 6.200.210
ISSUE DATE 01.17.07
SHEET NUMBER A0.3
OF 4

Design No. HW-D-0003



SECTION A–A

System No. HW-D-0003 March 03, 2003

Assembly Ratings - 1 and 2 Hr (See Item 2)

L Rating at Ambient - Less Than 1 CFM/Lin Ft

L Rating at 400°F - Less Than 1 CFM/Lin Ft

Joint Width - 3/4 in. Max

Class II Movement Capabilities -25% Compression Only

1. **Floor Assembly -** Min 4-1/2 in. thick steel-reinforced lightweight or normal weight (100-150 pcf) structural concrete.

2. **Wall Assembly -** The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 or V400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor and Ceiling Runners -** Floor and ceiling runners of wall assembly shall consist of galv steel channels sized to accommodate steel studs (Item 2B) with min 1-1/4 in. to max 2 in. flanges. When deflection channel (Item 3A) is used, flange height of ceiling runner is to be equal to or greater than flange height of deflection channel and the ceiling runner is to nest within the deflection channel with a 1/2 in. to 3/4 in. gap maintained between the top of the ceiling runner and the top of the deflection channel. When deflection channel is not used, ceiling runner is secured to concrete floor with steel fasteners spaced max 24 in. OC.

A1. **Light Gauge Framing* - Slotted Ceiling Runner -** As an alternate to the ceiling runner in Item 2A, ceiling runner to consist of galv steel channel with slotted flanges sized to accommodate steel studs (Items 2B). Ceiling runner secured to bottom of concrete floor with steel fasteners spaced max 24 in. OC. When slotted ceiling runner is used, deflection channel (Item 3A) shall not be used.

SLIPTRACK SYSTEMS INC - SLP-TRK
METAL-LITE INC - The System

A2. **Light Gauge Framing* - Vertical Deflection Ceiling Runner -** As an alternate to the ceiling runner in Item 2A, vertical deflection ceiling runner to consist of galv steel channel with slotted vertical deflection clips mechanically fastened within runner. Slotted clip provided with stop bushings for permanent fastening of steel studs. Flanges sized to accommodate steel studs (Item 2B). Vertical deflection ceiling runner secured to floor with steel fasteners spaced max 24 in. OC. When vertical deflection ceiling runner is used, deflection channel (Item 3A) shall not be used.

THE STEEL NETWORK INC - VertiTrack VTD358, VTD400, VTD600 and VTD800

A3. **Light Gauge Framing* - Clipped Ceiling Runner -** As an alternate to the ceiling runner in Item 2A, clipped runner to consist of galv steel channel with clips preformed in track flanges which positively engage the inside flange of the steel studs (Item 2B). Track sized to accommodate steel studs (Item 2B). Track flanges to be min 2-3/4 in. Clipped ceiling runner secured to floor with steel fasteners spaced max 12 in. OC. When clipped ceiling runner is used, deflection channel (Item 3A) shall not be used.

TOTAL STEEL SOLUTIONS L L C - Snap Trak

B. **Studs -** Steel studs to be min 3-1/2 in. wide. Studs cut 1/2 in. to 3/4 in. less in length than assembly height with bottom nesting in and secured to floor runner and with top nesting in ceiling runner without attachment. When deflection channel (Item 3A) is used, steel studs attached to ceiling runner with sheet metal screws located 1/2 in. below the bottom of the deflection channel. When slotted ceiling runner (Item 2A1) is used, steel studs secured to slotted ceiling runner with No. 8 by 1/2 in. long wafer head steel screws at midheight of slot on each side of wall. Stud spacing not to exceed 24 in. OC. When vertical deflection ceiling runner (Item 2A2) is used, steel studs secured to slotted vertical deflection clips, through bushings, with steel screws at midheight of each slot.

C. **Gypsum Board* -** Gypsum board sheets installed to a min total thickness of 5/8 in. and 1-1/4 in. on each side of wall for 1 and 2 hr fire rated assemblies, respectively. Wall to be constructed as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory, except that a max 3/4 in. gap shall be maintained between the top of the gypsum board and the bottom surface of the floor. The screws attaching the gypsum board to the studs along the top of the wall shall be located 1 in. below the bottom of the ceiling runner. No gypsum board attachment screws shall be driven into the ceiling runner or into the optional deflection channel.

The hourly fire rating of the joint system is dependent on the hourly fire rating of the wall assembly in which it is installed.

3. **Joint System Max separation between bottom of floor and top of wall is 3/4 in. The joint system is designed to accommodate a max 25 percent compression from its installed width.** The joint system consists of the following:

A. **Deflection Channel -** (Optional, Not Shown) - Max 2 in. deep min 24 gauge galv steel channel sized to accommodate ceiling runner (Item 2A). Deflection channel secured to bottom of concrete floor with steel fasteners spaced max 24 in. OC. The ceiling runner is installed within the deflection channel to maintain a 1/2 in. to 3/4 in. gap between the top of the ceiling runner and the top of the deflection channel. The ceiling runner is not fastened to the deflection channel.

B. **Forming Material -** (Optional, Not Shown) - In 2 hr fire rated wall assemblies, polyethylene backer rod, mineral wool batt insulation or fiberglass batt insulation friction fit into joint opening.

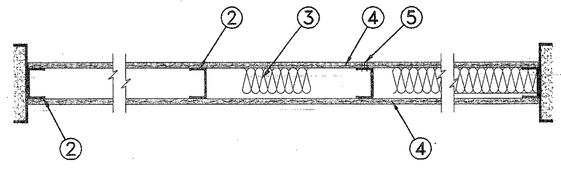
C. **Fill, Void or Cavity Material* - Sealant -** Min 1/2 in. thickness of fill material applied within joint opening on both sides of wall, flush with both surfaces of wall. In 1 hr fire rated walls, bond breaker tape applied to ceiling channel (Item 2A, 2A1, 2A2 or 2A3) prior to installation of fill material.

SPECIFIED TECHNOLOGIES INC - SpecSeal 100, 101, 102, 105, 120 or 129 Sealant

*Bearing the UL Classification Mark

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Design No. U465



Design No. U465 September 27, 2005

Nonbearing Wall Rating - 1 HR.

1. **Floor and Ceiling Runners -** (not shown) - Channel shaped runners, 3-5/8 in. wide (min), 1-1/4 in. legs, formed from min No. 25 MSG galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

2. **Steel Studs -** Channel shaped, 3-5/8 in. wide (min), 1-1/4 in. legs, 3/8 in. folded back returns, formed from min No. 25 MSG galv steel spaced 24 in. OC max.

3. **Batts and Blankets* -** (Optional) - Mineral wool or glass fiber batts partially or completely filling stud cavity.

See Batts and Blankets (BZJZ) category for names of Classified companies.

3A. **Fiber, Sprayed* -** As an alternate to Batts and Blankets (Item 3) - Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 3.0 lb/ft3. Alternate application method: The fiber is applied with U.S. Greenfiber LLC Type AD100 hot melt adhesive at a nominal ratio of one part adhesive to 6.6 parts fiber to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 2.5 lb/ft3.

U S GREENFIBER L L C - Cocoon2 Stabilized or Cocoon-FRM (Fire Rated Material)

3B. **Fiber, Sprayed* -** As an alternate to Batts and Blankets (Item 3) and Item 3A - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.

NU-WOOL CO INC - Cellulose Insulation

4. **Gypsum Board* -** 5/8 in. thick, 4 ft wide, attached to steel studs and floor and ceiling track with 1 in. long, Type S steel screws spaced 8 in. OC. along edges of board and 12 in. OC in the field of the board. Joints oriented vertically and staggered on opposite sides of the assembly. When attached to item 6 (resilient channels) or 6A (furring channels), wallboard is screw attached to furring channels with 1 in. long, Type S steel screws spaced 12 in. OC.

AMERICAN GYPSUM CO - Types AG-C, AGX-1
BEIJING NEW BUILDING MATERIALS CO LTD - Type DBX-1.
BPB AMERICA INC - Types 1, EGRG, ProRoc Type X, ProRoc Type C.
BPB CANADA INC - ProRoc Type C, ProRoc Type X or ProRoc Type Abuse-Resistant.
CANADIAN GYPSUM COMPANY - Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.
G-P GYPSUM CORP, SUB OF GEORGIA-PACIFIC CORP - Types 5, 9, C, DAP, DD, DA, DGG, DS, GPFS6.
LAFARGE NORTH AMERICA INC - Types LGFC2, LGFC2A, LGFC5, LGFC6A, LGFC-C, LGFC-C/A.
NATIONAL GYPSUM CO - Types FSK, FSK-C, FSK-G, FSW-C, FSW-G, FSW, FSW-3 , FSW-5.
PABCO GYPSUM, DIV OF PACIFIC COAST BUILDING PRODUCTS INC - Type PG-C or PG-9 .
PANEL REY S A - Type PRX.
SIAM GYPSUM INDUSTRY (SARABURI) CO LTD - Type EX-1
STANDARD GYPSUM L L C - Types FRX-6, VPBX-6, FRWRX-6, SHTGX-6, FRX-6 Exterior Gypsum Soffit Board, SG-C.
TEMPLE-INLAND FOREST PRODUCTS CORP - Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, TG-C.
UNITED STATES GYPSUM CO - Type AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.
USG MEXICO S A DE C V - Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.

4A. **Gypsum Board* -** (As alternate to Item 4) - Nom 5/8 in. thick gypsum panels with beveled, square or tapered edges, applied vertically/WT or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed. Panels attached to steel studs and floor runner with 1 in. long Type S steel screws spaced 8 in. OC when applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically.

CANADIAN GYPSUM COMPANY - Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.
UNITED STATES GYPSUM CO - Type AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.
USG MEXICO S A DE C V - Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.

4B. **Gypsum Board* -** (As an alternate to Items 4 or 4A) - Nom 3/4 in. thick, 4 ft wide, installed as described in Item 4A with screw length increased to 1-1/4 in.

CANADIAN GYPSUM COMPANY - Types AR, IP-AR.
UNITED STATES GYPSUM CO - Types AR, IP-AR.
USG MEXICO S A DE C V - Types AR, IP-AR.

5. **Joint Tape and Compound -** Vinyl, dry or premixed joint compound, applied in two coats to joints and screw heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints. As an alternate, nominal 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced.

6. **Resilient Channel -** (Optional-Not Shown) - 25 MSG galv steel resilient channels spaced vertically max 24 in. OC, flange portion attached to each intersecting stud with 1/2 in. long type S-12 panhead steel screws.

6A. **Steel Framing Members (Not Shown)* -** As an alternate to Item 3, furring channels and resilient sound isolation clip as described below:

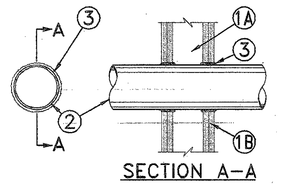
a. **Furring Channels -** Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel.

b. **Steel Framing Members* -** Used to attach furring channels (Item a) to studs (Item 1). Clips spaced 48 in. OC., and secured to studs with 1-5/8 in. wafer or hex head Type S steel screw through the center grommet. Furring channels are friction fitted into clips.
PAC INTERNATIONAL INC - Type RSIC-1.

*Bearing the UL Classification Mark

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System No. W-L-1001



SECTION A–A

System No. W-L-1001 June 15, 2005

F Ratings - 1, 2, 3 and 4 Hr (See Items 2 and 3)

T Ratings - 0, 1, 2, 3, and 4 Hr (See Item 3)

L Rating At Ambient - less than 1 CFM/sq ft

L Rating At 400 F - less than 1 CFM/sq ft

1. **Wall Assembly -** The 1, 2, 3 or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs -** Wall framing may consist of either wood studs (max 2 h fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 3-5/8 in. (92 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.

B. **Gypsum Board* -** Nom 1/2 or 5/8 in. (13 or 16 mm) thick, 4 ft. (122 cm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 26 in. (660 mm).

2. **Through-Penetrant -** One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min of 0 in / (0 mm). (point contact) to max 2 in. (51 mm) Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. **Steel Pipe - -** Nom 24 in. (610 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. **Iron Pipe -** Nom 24 in. (610 mm) diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in (305 mm) diam (or smaller) or Class 50 (or heavier) ductile iron pressure pipe.

C. **Conduit -** Nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 4 in (102 mm) diam (or smaller) steel electrical metallic tubing.

D. **Copper Tubing -** Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.

E. **Copper Pipe -** Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.

F. **Through Penetrating Product* -** Flexible Metal Piping The following types of steel flexible metal gas piping may be used:

1. Nom 2 in. (51 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

OMEGA FLEX INC

2. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

TITEFLEX CORP A BUNDY CO

3. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

WARD MFG INC

3. **Fill, Void or Cavity Material* - Caulk or Sealant -** Min 5/8 , 1-1/4, 1-7/8 and 2-1/2 in. (16, 32, 48 and 64 mm) thickness of caulk for 1, 2, 3 and 4 hr rated assemblies, respectively, applied within annulus, flush with both surfaces of wall. Min 1/4 in. (6 mm) diam bead of caulk applied to gypsum board/penetrant interface at point contact location on both sides of wall. The hourly F Rating of the firestop system is dependent upon the hourly fire rating of the wall assembly in which it is installed, astened to shown in the following table. The hourly T Rating of the firestop system is dependent upon the type or size of the pipe or conduit and the hourly fire rating of the wall assembly in which it is installed, as tabulated below:

Max Pipe or Conduit Diam In (mm)	F Rating Hr	T Rating Hr
1 (25)	1 or 2	0+, 1 or 2
1 (25)	3 or 4	3 or 4
4 (102)	1 or 2	0
6 (152)	3 or 4	0
12 (305)	1 or 2	0

+When copper pipe is used, T Rating is 0 h.

3M COMPANY - CP 25WB+ or FB-3000 WT.

*Bearing the UL Classification Mark

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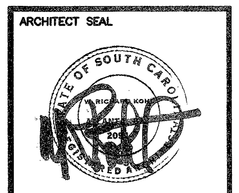
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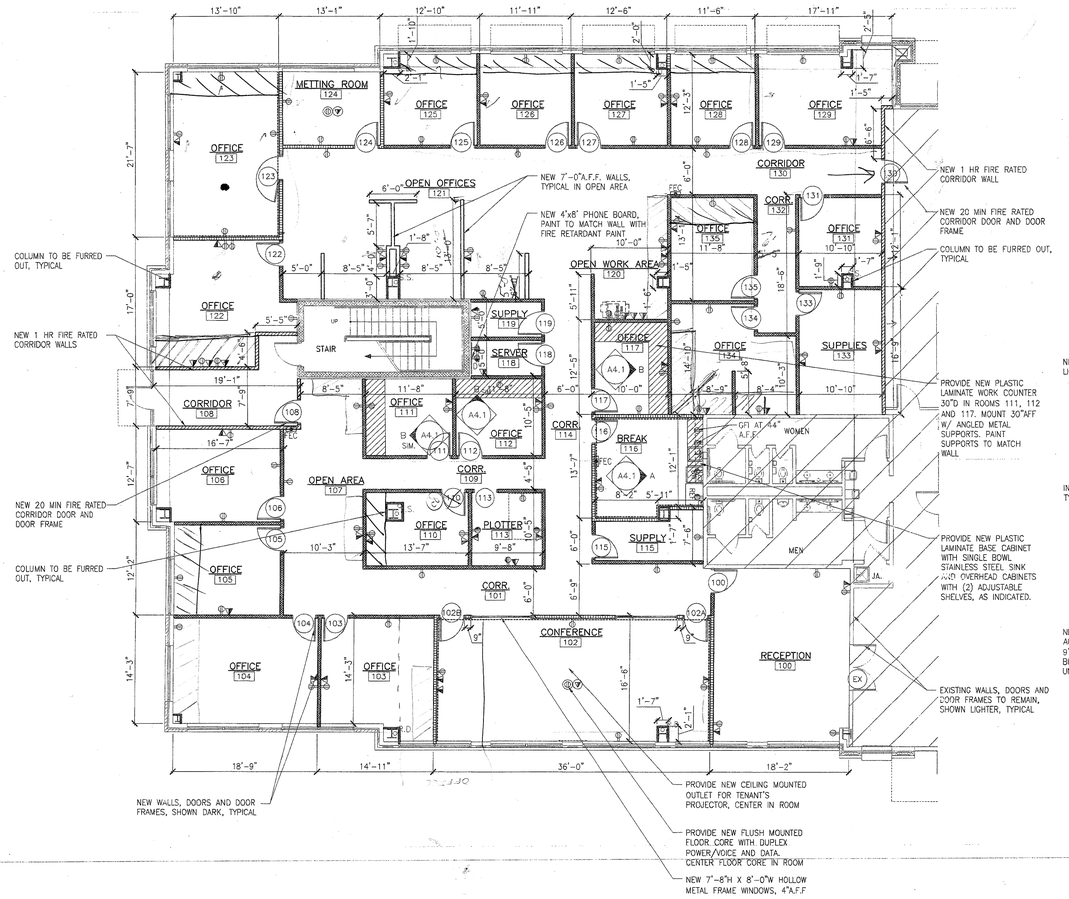


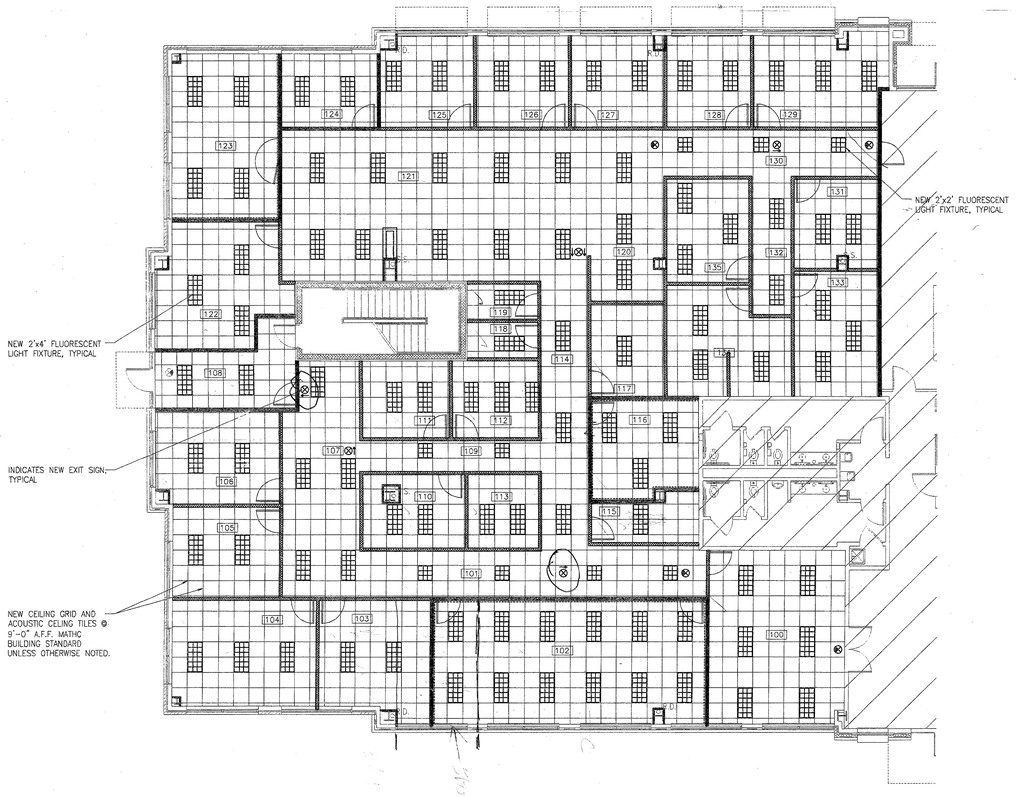
ARCHITECT SEAL



KGM ARCHITECTS

SHEET TITLE
U.L. DESIGNS





1 PARTITION PLAN
A1.1 SCALE: 1/8" = 1'-0"

0 4' 10' 20'

1. THE SPACE ABOVE THE CEILING IS BEING USED AS A RETURN AIR PLENUM. ALL MATERIALS MUST BE NON-COMBUSTIBLE (NO PVC OR ARMAFLEX).

2. WRAP EXPOSED STEEL COLUMNS IN GYPSUM BOARD.

3. CONTRACTOR TO INSTALL GYPSUM BOARD ON INSIDE OF EXTERIOR WALLS TO 6" ABOVE CEILING HEIGHT.

4. ALL NEW MILLWORK TO BE BUILT AND INSTALLED BY G.C, EXCEPT AS NOTED.

5. FURNITURE, APPLIANCES, AND EQUIPMENT SHOWN ARE FOR REFERENCE ONLY AND ARE NOT IN CONTRACT, EXCEPT AS NOTED OTHERWISE.

6. PROVIDE FIRE EXTINGUISHERS PER CODE, OR 1/3000 SF, OR AS LOCATED ON PLANS. MOUNTED @ 48" A.F.F. TO TOP OF EXTINGUISHER. PAINT FRAMES TO MATCH ADJACENT WALLS IN SEMI-GLOSS.

7. ALL OUTLETS INDICATED ARE NEW.

8. ALL OUTLETS, SWITCHES AND COVER PLATES TO BE ALMOND FINISH UNLESS OTHERWISE NOTED.

PARTITION SCHEDULE

ALL FIRE RATED PARTITIONS SHALL CONFORM TO ASTM-E814 FOR FIRE CAULK

TYPE	SYMBOL	ASSEMBLY	WALL THK.	WALL HT.	FIRE RAT.	REMARKS
A		3-5/8" (25 GA.) MTL. STUDS @ 24" o.c. w/ONE LAYER 5/8" GYPSUM BOARD EACH SIDE OF STUD.	4-7/8" OR AS DIMEN.	TO 7'-0" A.F.F	NONE	
B		3-5/8" (20 GA.) MTL. STUDS @ 24" o.c. w/ONE LAYER 5/8" GYPSUM BOARD EACH SIDE OF STUD.	4-7/8" OR AS DIMEN.	TO STRUCT.	NONE	
C		3-5/8" (20 GA.) MTL. STUDS @ 24" o.c. w/ONE LAYER 5/8" TYPE "X" FIRE RATED GYPSUM BOARD EA. SIDE, CAULK PERIMETER.	4-7/8" OR AS DIMEN.	TO STRUCT.	1-HOUR	UL NO. U465
D		3-5/8" (25 GA.) MTL. STUDS @ 24" o.c. w/ONE LAYER 5/8" GYPSUM BOARD EACH SIDE OF STUD.	4-7/8" OR AS DIMEN.	TO 6" ABOVE CEILING	NONE	
		INDICATES PARTITION W/ 1-1/2" SOUND ATTENTUATION BLANKET (SAB)				

NOTES: FIRE BARRIERS SHALL BE PERMANENTLY IDENTIFIED WITH 2" STENCILING ABOVE ANY DECORATIVE CEILING AND CONCEALED SPACES (SMOKE/FIRE BARRIER - PROTECT ALL OPENINGS @ 10'-0" ON CENTER ALONG WALL).

2 REFLECTED CEILING PLAN
A1.1 SCALE: 1/8" = 1'-0"

0 4' 10' 20'

1. THE SPACE ABOVE THE CEILING IS BEING USED AS A RETURN AIR PLENUM. ALL MATERIALS MUST BE NON-COMBUSTIBLE (NO PVC OR ARMAFLEX).

2. REUSE EXISTING LIGHTS WHERE POSSIBLE.

3. NEW 24"x24"x5/8" ARMSTRONG DUNE ACOUSTICAL CEILING TILE ON 9/16" THICK PAINTED METAL SUSPENSION SYSTEM @9'-0" A.F.F.

4. CONTRACTOR TO INSTALL GYPSUM BOARD ON INSIDE OF EXTERIOR WALLS TO 6" ABOVE CEILING HEIGHT.

5. ALL 2'x4' AND 2'x2' FLUORESCENT LIGHT FUTURES INDICATED ARE NEW.

CEILING SYMBOL LEGEND

- WALL TO UNDERSIDE OF CEILING
- WALL TO UNDERSIDE OF STRUCTURE
- 2' x 2' LAY-IN LUMINAIRE
- 2' x 4' LAY-IN LUMINAIRE
- LAY-IN LUMINAIRE W/ PARABOLIC LENS
- 1' x 4' SURFACE MOUNTED FIXTURE
- RECESSED DOWNLIGHT
- EXIT LIGHT
- HVAC SUPPLY DIFFUSER
- HVAC RETURN AIR
- EMERGENCY LIGHT

ELECTRICAL LEGEND

- ELECTRICAL DUPLEX OUTLET
- ELECTRICAL DOUBLE DUPLEX OUTLET
- DEDICATED ELECTRICAL DUPLEX OUTLET
- 280V ELECTRICAL OUTLET AS NOTED
- (D) FLOOR-MOUNTED ELECTRICAL DUPLEX OUTLET
- VOICE OUTLET
- DATA OUTLET
- COMBINATION VOICE/DATA OUTLET
- (V) FLOOR-MOUNTED VOICE/DATA OUTLET
- POWER POLE
- WALL OUTLET FOR CONNECTION OF MANUFACTURED SYSTEM POWER COMPARTMENT. PROVIDE SINGLE GANG PLASTER RING ON 4" SQ. BOX., WITH 1/4" CONDUIT.
- WALL OUTLET FOR CONNECTION OF MANUF. PARTITION SYSTEM COMMUNICATIONS COMPARTMENT. PROVIDE SINGLE GANG PLASTER RING ON 4" SQ. BOX, W/2 - 1" CONDUIT STUBBED OUT ABOVE CEILING. PLATE SHALL RECEIVE FLEX CONNECTION FROM PARTITION. (WIRING PROVIDED BY OTHERS.)

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COMPANY SEAL

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REGISTERED ARCHITECTS

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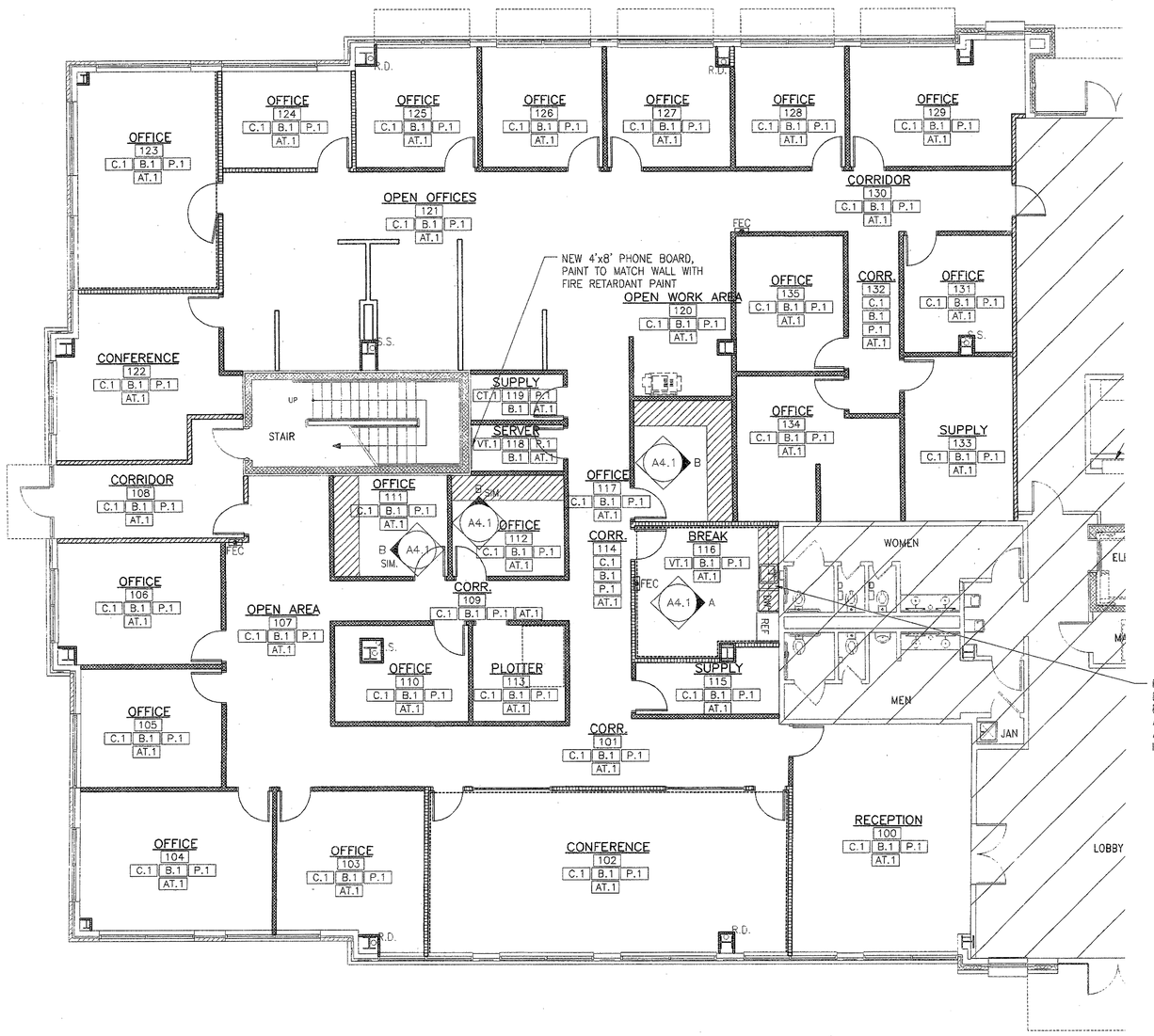
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REGISTERED ARCHITECT

KGM ARCHITECTS

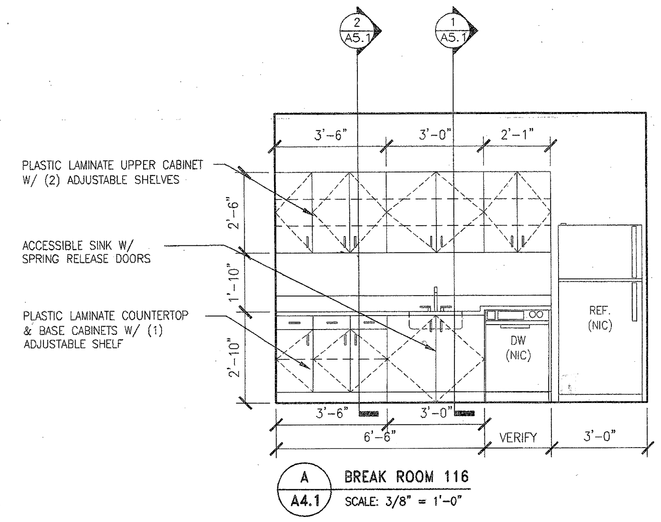
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SHEET TITLE
PARTITION PLAN AND REFLECTED CEILING PLAN

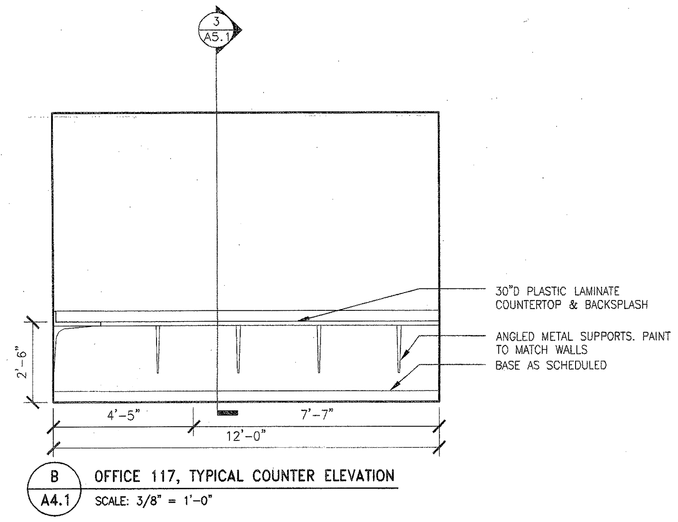
PROJECT NO.	SHEET NUMBER
6.200.210	A1.1
ISSUE DATE	OF 2
01.17.07	



1 A4.1 FINISH PLAN
SCALE: 1/8" = 1'-0"
0 4' 10' 20'



A A4.1 BREAK ROOM 116
SCALE: 3/8" = 1'-0"



B A4.1 OFFICE 117, TYPICAL COUNTER ELEVATION
SCALE: 3/8" = 1'-0"

INTERIOR GENERAL NOTES:

1. REFER TO INTERIOR FINISH LEGEND FOR SPECIFICATIONS OF FINISHES. NO SUBSTITUTIONS ACCEPTED UNLESS STIPULATED.
2. CONTRACTOR SHALL SUBMIT FINISH SAMPLES OF ALL MATERIALS TO THE ARCHITECT FOR APPROVAL PRIOR TO ORDER, FABRICATION, AND INSTALLATION.
3. INSTALL ALL MFRD. ITEMS, MATERIAL, AND EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDED SPECS. EXCEPTION: WHERE THE SPECS HEREIN ARE MORE STRINGENT, THESE SPECS SHALL BE COMPLIED WITH.
4. ALL FINISHES REQUIRED BY THE DESIGNER ARE INCLUDED HEREIN. SHOULD THERE BE ANY DISCREPANCIES, OR DISCONTINUED OR DELAYED MATERIAL, THE ARCHITECT IS TO BE NOTIFIED IMMEDIATELY AND CONSULTED WITH BEFORE PROCEEDING. NO SUBSTITUTION OF MATERIAL WILL BE ACCEPTED WITHOUT ARCHITECT'S PRIOR WRITTEN APPROVAL.
5. ALL MISC. GRILLES, PLATES, ETC. ON GYPSUM BOARD WALLS OR CEILINGS SHALL BE PAINTED TO MATCH THE SURFACES ON WHICH THEY OCCUR, U.O.N. ALL METAL SURFACES SHALL BE PRIMED PRIOR TO PAINTING.
6. REFER TO MILLWORK ELEVATIONS FOR FINISH INFORMATION.
7. ALL SWITCH AND OUTLET PLATES, PHONE AND DATA PLATES, AND THERMOSTATS SHALL BE WHITE, U.O.N. CONTRACTOR TO NOTIFY THE ARCHITECT BEFORE ORDERING. IF THESE FINISHES ARE NOT AVAILABLE, ARCHITECT TO SELECT ALTERNATE.
8. ALL EXPOSED ("OUTSIDE") CORNERS OF GYPSUM BOARD WALLS AND SOFFITS SHALL HAVE CORNER BEADS.
9. PROVIDE 4" OVERHEAD CONDUIT FROM BASE BUILDING TELECOM SERVICE ENTRANCE TO TENANT'S TELECOM ROOM.
10. ALL ANGLED WALLS ARE 45 DEGREES EXCEPT WHERE NOTED OTHERWISE.

FINISHES LEGEND

KEY: C.1 (FLOOR) / B.1 (BASE) / WC.1 (WALLS) / P.2 (NOTED)

CARPET:
- C.1 CARPET – $15/SQ. YD. INSTALLED ALLOWANCE
- C.2 CARPET – $15/SQ. YD. INSTALLED ALLOWANCE

VINYL COMPOSITION TILE:
- VT.1 12"X12"X1/8" VINYL COMPOSITION TILE, ARMSTONG IMPERIAL TEXTURE OR EQUAL
- VT.2 12"X12"X1/8" VINYL COMPOSITION TILE, ARMSTONG IMPERIAL TEXTURE OR EQUAL

RUBBER BASE:
- B.1 4" COVED RUBBER BASE, ROPPE OR EQUAL

PAINT:
- P.1 SHERWIN WILLIAMS LATEX EGGSHELL, TBD (FIELD)
- P.2 SHERWIN WILLIAMS SEMI-GLOSS ENAMEL, TBD (DOOR FRAMES)
- P.2 SHERWIN WILLIAMS LATEX EGGSHELL, TBD (ACCENT)

WALL COVERING:
- WC.1 WALLCOVERING, $2.75/SF INSTALLED ALLOWANCE

PLASTIC LAMINATE:
- PL.1 PLASTIC LAMINATE, WILSONART OR EQUAL
- PL.2 PLASTIC LAMINATE, WILSONART OR EQUAL

CEILINGS:
- AT.1 24"X24"X5/8" ARMSTRONG DUNE ACOUSTIC CEILING TILE IN 9/16" PAINTED METAL SUSPENSION SYSTEM

DOOR STAIN:
- DS.1 TBD

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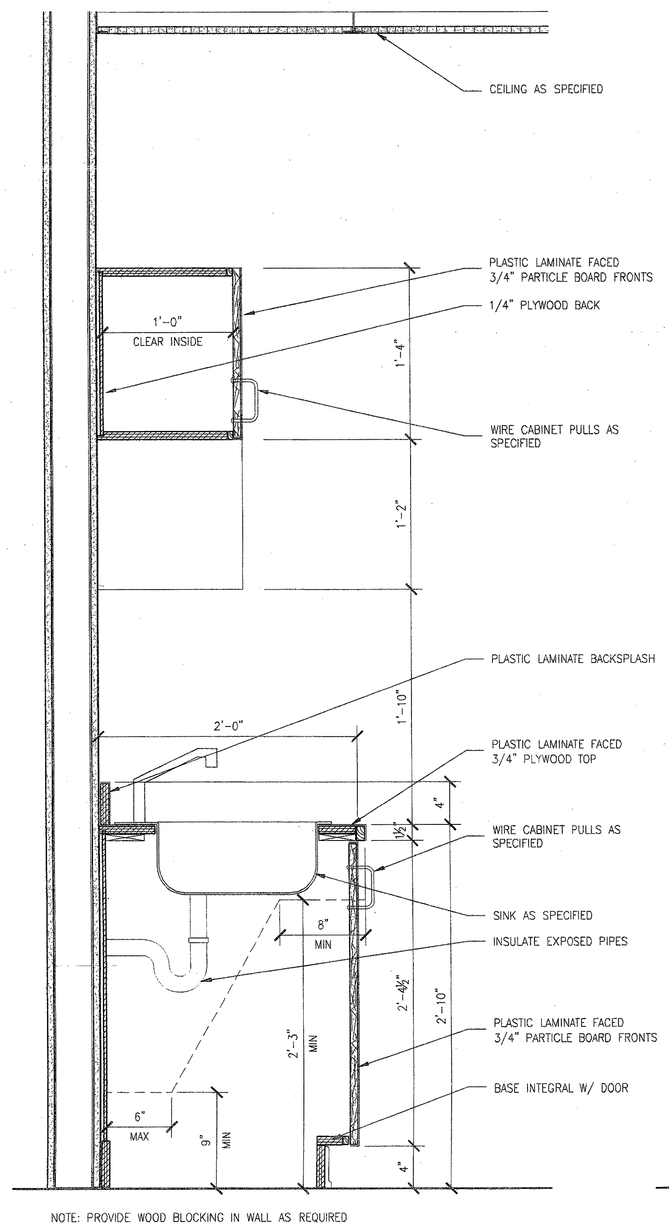
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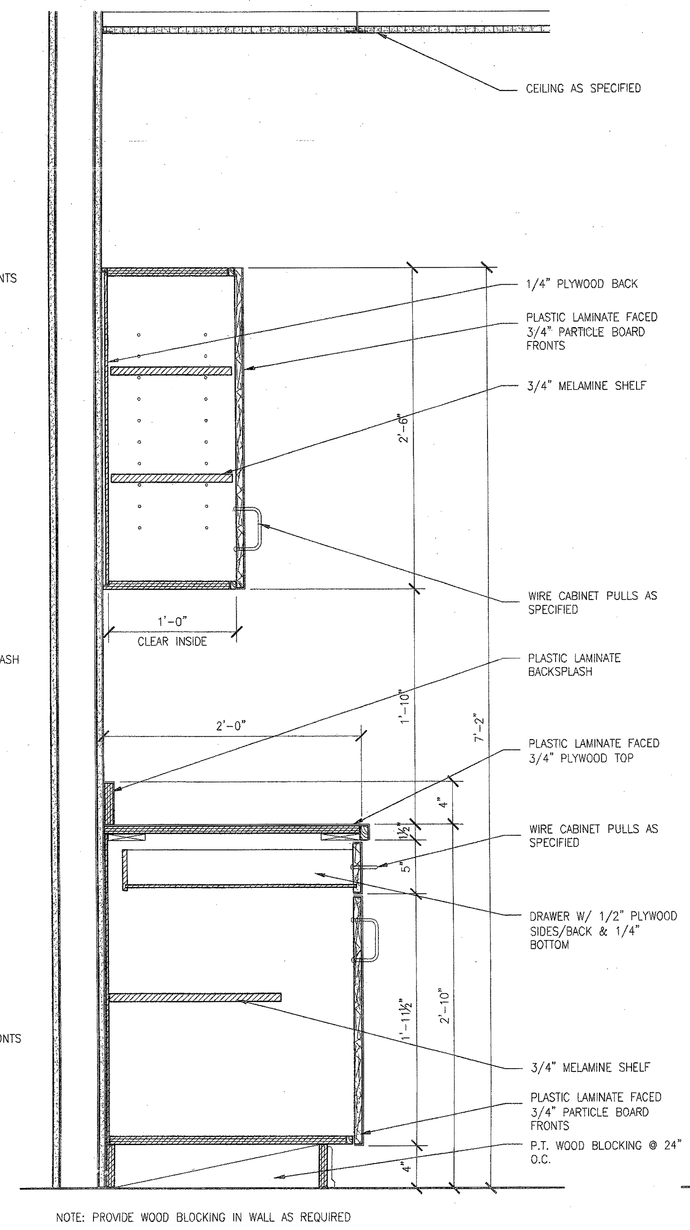
SHEET TITLE
FINISH PLAN AND INTERIOR ELEVATIONS

PROJECT NO.	SHEET NUMBER
6.200.210	A4.1
ISSUE DATE	OF 2
01.17.07	



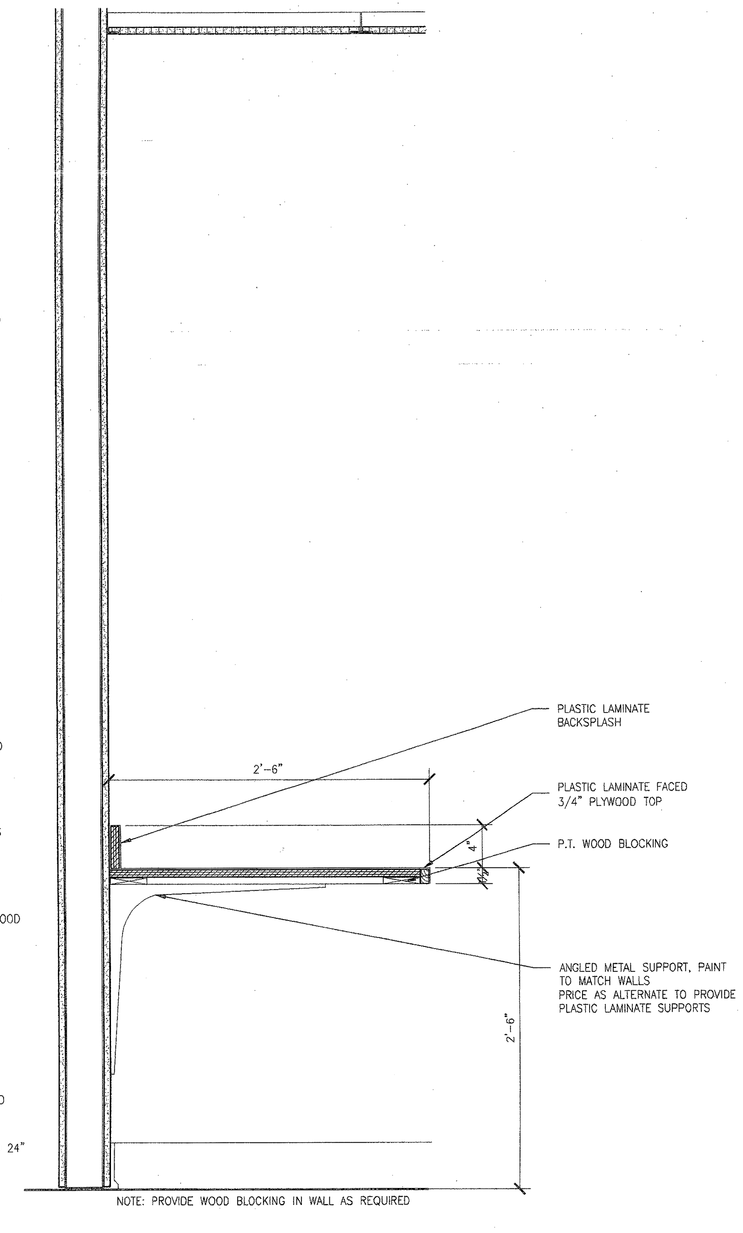
NOTE: PROVIDE WOOD BLOCKING IN WALL AS REQUIRED

1 A5.1 **SECTION @ ACCESSIBLE SINK**
SCALE: 1-1/2" = 1'-0"



NOTE: PROVIDE WOOD BLOCKING IN WALL AS REQUIRED

2 A5.1 **TYPICAL CASEWORK SECTION**
SCALE: 1-1/2" = 1'-0"

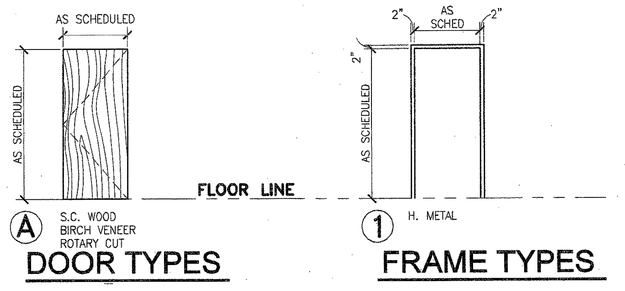


NOTE: PROVIDE WOOD BLOCKING IN WALL AS REQUIRED

3 A5.1 **TYPICAL COUNTERTOP SECTION**
SCALE: 1-1/2" = 1'-0"

DOORS & FRAMES SCHEDULE

LOC.	NMBR.	DOORS SIZE WIDTH	HEIGHT	THICKNESS	MATERIAL	TYPE	GLASS	LOUVER WIDTH	LOUVER HEIGHT	FRAMES MATERIAL	TYPE	DETAILS HEAD	JAMB	SILL	FIRE RATING LABEL	FIRE RATING HOUR	HARDWARE SET#	KEYSIDE #	REMARKS
																			1.) ALL FINISH HARDWARE TO BE LEVER (H/C ACCESS). 2.) EXIT DOOR SHALL NOT HAVE INSIDE KEY OPERATION 3.) RESTROOM DOOR SIGNAGE TO HAVE INTERNATIONAL SYMBOL OF ACCESSABILITY
	100	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	PASSAGE		
	102A	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		
	102B	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		
	103	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		
	104	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		
	105	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		
	106	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		
	108	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	20 MIN	ENTRY	BLDG. CORR.	CLOSER
	110	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		
	111	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		
	112	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		
	113	—	—	—	—	—				H. METAL	1				—	—	—		CASED OPENING
	115	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	STORAGE	114	
	116	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	PASSAGE		
	117	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		
	118	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	STORAGE	114	
	119	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	STORAGE	114	
	122	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		
	123	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		
	124	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		
	125	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		
	126	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		
	127	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		
	128	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		
	129	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		
	130	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	20 MIN	ENTRY	BLDG. CORR.	CLOSER
	131	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		
	133	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	STORAGE		
	134	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		
	135	3'-0"	8'-0"	1 3/4"	SC WOOD	A				H. METAL	1				—	—	OFFICE		



ISSUE HISTORY		
NO.	DATE	DESCRIPTION

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REVISIONS		
NO.	DATE	DESCRIPTION

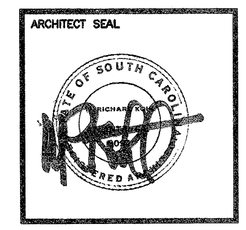
CHOATE CONSTRUCTION
OFFICES AT BELLE HALL
1671 BELLE ISLE DRIVE, SUITE 100
MT. PLEASANT, SOUTH CAROLINA 29464

KOHL GRAMIGNA MONARDO ARCHITECTS, P.C.
655 Engineering Drive, Suite 150, Norcross, Georgia 30092 770-448-2743 www.kgmarchitects.com

COMPANY SEAL



ARCHITECT SEAL

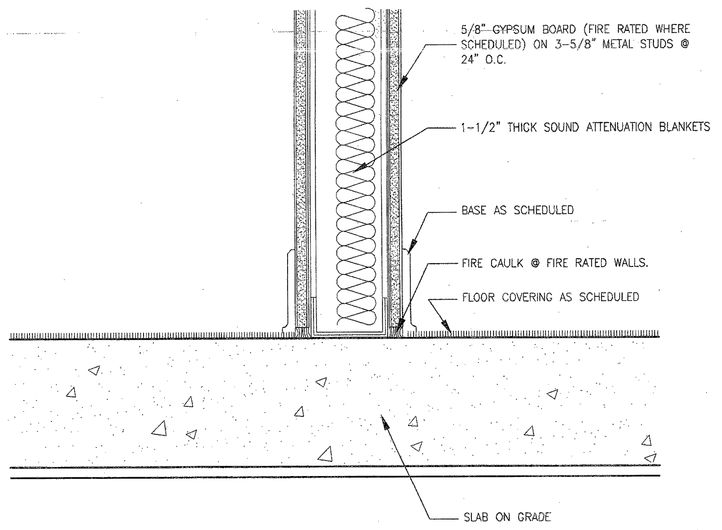


KGM ARCHITECTS

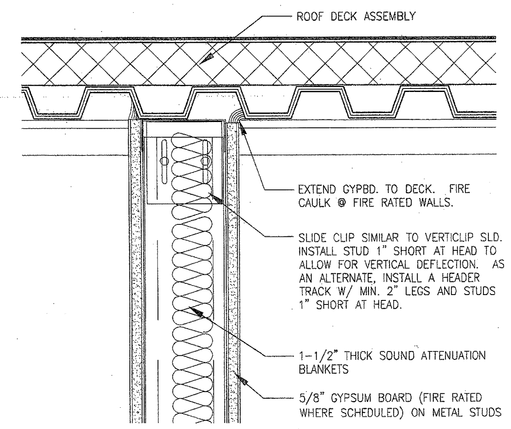
ISSUED FOR CONSTRUCTION

SHEET TITLE: DOOR SCHEDULE AND CASEWORK SECTIONS

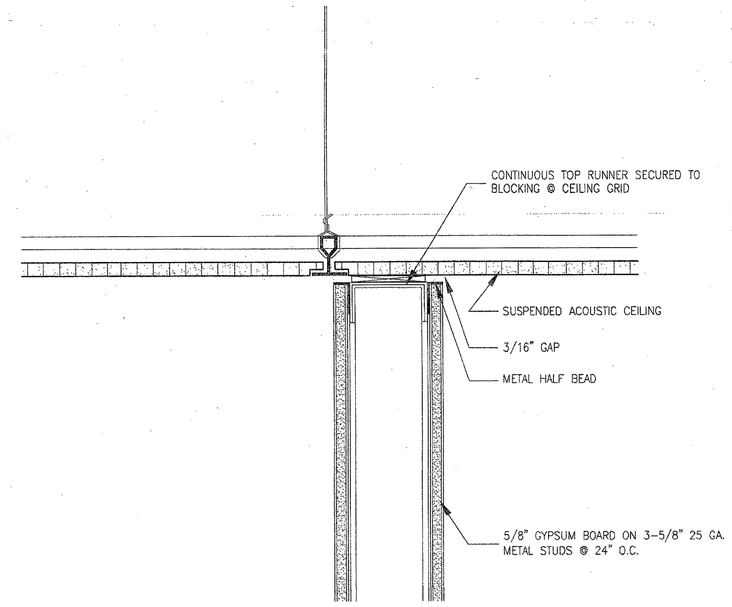
PROJECT NO.	SHEET NUMBER
6.200.210	A5.1
ISSUE DATE: 01.17.07	OF 1



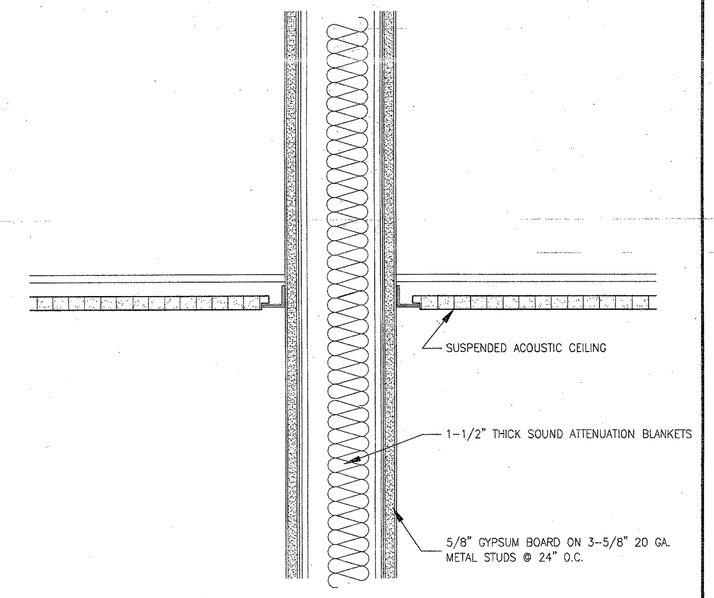
A A6.1 DETAIL – PARTITION @ FLOOR SLAB
SCALE: 3" = 1'-0"



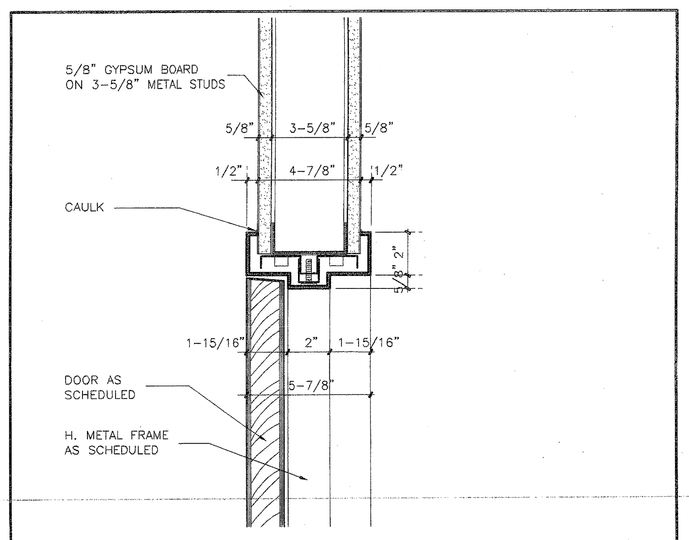
B A6.1 DETAIL – PARTITION @ ROOF DECK
SCALE: 3" = 1'-0"



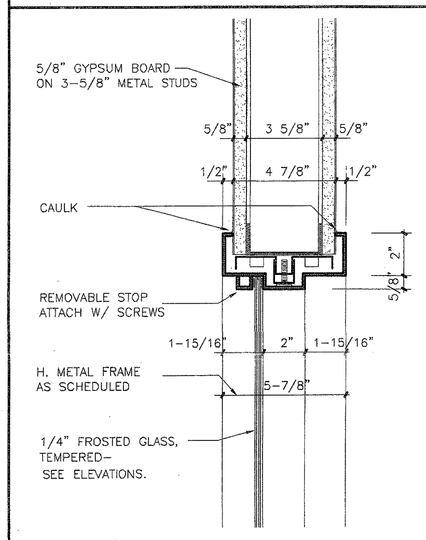
C A6.1 DETAIL – PARTITION @ CEILING
SCALE: 3" = 1'-0"



D A6.1 DETAIL – PARTITION @ CEILING
SCALE: 3" = 1'-0"



E A6.1 DETAIL – HEAD/JAMB
SCALE: 3" = 1'-0"



F A6.1 HEAD/JAMB @ INT. WDW.
SCALE: 3" = 1'-0"

1 A6.1 TYPE "A" (NON RATED)
SCALE: 3/4" = 1'-0"

2 A6.1 TYPE "B" (NON RATED)
SCALE: 3/4" = 1'-0"

3 A6.1 TYPE "C" (1 HR. RATED)
SCALE: 3/4" = 1'-0"

ISSUE HISTORY		
NO.	DATE	DESCRIPTION

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REVISIONS		
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CHOATE CONSTRUCTION
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COMPANY SEAL
STATE OF SOUTH CAROLINA
KOHL, GRAMIGNA, MONARDO ARCHITECTS, P.C. ATLANTA, GEORGIA No. 00039
REGISTERED ARCHITECTS

ARCHITECT SEAL
STATE OF SOUTH CAROLINA
REGISTERED ARCHITECT

KGM ARCHITECTS

ISSUED FOR CONSTRUCTION

SHEET TITLE
PARTION SECTIONS AND DETAILS

PROJECT NO.	SHEET NUMBER
6.200.210	A6.1
ISSUE DATE	OF 1
01.17.07	

NEW PANEL LC

VOLTAGE: 120/208 PHASE: 3P,4W AMP: MAIN: 100 MLO

DESCRIPTION	KW	BKR	CK	PH	CK	BKR	KW	DESCRIPTION
PC REC OFFICE	0.54	20/1	1	A	2	20/1	0.2	EF-1-C1
PC REC OFFICE	0.54	20/1	3	B	4	20/1	0.36	SERVER RM EQ
PC REC OFFICE	0.72	20/1	5	C	6	20/1	0.36	SERVER RM EQ
GEN REC OFF	1.08	20/1	7	A	8	20/1	1.26	GEN REC OFFICE
GEN REC OFF	1.08	20/1	9	B	10	20/1	1.26	GEN REC CON/RECPT
GEN REC OFF	1.26	20/1	11	C	12	20/1	1.26	GEN REC OFF
PC REC OFFICE	0.72	20/1	13	A	14	20/1	0.54	PC REC CONF/RECPT
PC REC OFFICE	0.54	20/1	15	B	16	20/1	0.54	PC REC OFFICE
PC REC OFFICE	0.72	20/1	17	C	18	20/1	0.54	FLOOR BOX
GFI REC BRK RM	0.18	20/1	19	A	20	20/1	0.18	GEN REC OPEN WRK
FRIDGE	1	20/1	21	B	22	20/1	0.36	GEN REC OPEN WRK
GFI REC BRK RM	0.18	20/1	23	C	24	20/1	0.54	GEN REC OPEN OFF
D/W	1	20/1	25	A	26	20/1	1	COPIER
PLOTTER	1	20/1	27	B	28	20/1	0.54	PC REC OPEN OFF
PLOTTER	1	20/1	29	C	30	20/1	1.08	GFI REC OFFICE
PLOTTER	1	20/1	31	A	32	20/1	0.18	GFI REC SERVER RM
SPARE		20/1	33	B	34	20/1	0.5	PRINTER OPEN AREA
SPARE		20/1	35	C	36	20/1		SPARE
SPARE		20/1	37	A	38			SPACE
SPARE		20/1	39	B	40			SPACE
SPARE		20/1	41	C	42			SPACE

A TOTAL	7.88
B TOTAL	7.72
C TOTAL	7.66

VLL	PH
208	3

CONN. kw	23.26
CONN. amps	64.64

RECEPTACLES
HEATING
AIR COND.
LIGHTING
MISC.

EXISTING PANEL LM1

VOLTAGE: 120/208 PHASE: 3P,4W AMP: MAIN: 600 MCB

DESCRIPTION	KW	BKR	CK	PH	CK	BKR	KW	DESCRIPTION
PANEL "L1"	5	100/3	1	A	2	100/3	7.88	PANEL "LC" #
------	4.1	---	3	B	4	---	7.72	------
------	3.1	---	5	C	6	---	7.66	------
SPACE			7	A	8			SPACE
SPACE			9	B	10			SPACE
SPACE			11	C	12			SPACE
SPACE			13	A	14			SPACE
SPACE			15	B	16			SPACE
SPACE			17	C	18			SPACE
SPACE			19	A	20			SPACE
SPACE			21	B	22			SPACE
SPACE			23	C	24			SPACE
SPACE			25	A	26			SPACE
SPACE			27	B	28			SPACE
SPACE			29	C	30			SPACE
SPACE			31	A	32			SPACE
SPACE			33	B	34			SPACE
SPACE			35	C	36			SPACE
SPACE			37	A	38			SPACE
SPACE			39	B	40			SPACE
SPACE			41	C	42			SPACE

PROVIDE NEW BREAKER

A TOTAL	12.88
B TOTAL	11.82
C TOTAL	10.76

VLL	PH
208	3

CONN. kw	35.46
CONN. amps	98.54

RECEPTACLES
HEATING
AIR COND.
LIGHTING
MISC.

EXISTING PANEL L1

VOLTAGE: 120/208 PHASE: 3P,4W AMP: 100 MAIN: MLO

DESCRIPTION	KW	BKR	CK	PH	CK	BKR	KW	DESCRIPTION
ELEV CAB LTS	1	20/1	1	A	2	20/1	1	RECP
ELEV RM RECP	1	20/1	3	B	4	20/1	1	RECP
ELEV PIT LTS	0.1	20/1	5	C	6	20/1	1	RECP
ELEV PIT RECP	1	20/1	7	A	8	20/1	1	RECP
SHUNT TRIP	0.1	20/1	9	B	10	20/1	1	RECP
SPACE			11	C	12	20/1	1	RECP
SPACE			13	A	14	20/1	1	TELE RM EQ
SPACE			15	B	16	20/1	1	TELE RM EQ
SPACE			17	C	18	20/1	1	TELE RM EQ
SPACE			19	A	20	20/1		SPARE
SPACE			21	B	22	20/1		SPARE
SPACE			23	C	24	20/1		SPARE
SPACE			25	A	26	20/1		SPARE
SPACE			27	B	28	20/1		SPARE
SPACE			29	C	30	20/1		SPARE

A TOTAL	5
B TOTAL	4.1
C TOTAL	3.1

VLL	PH
208	3

CONN. kw	12.2
CONN. amps	33.9

RECEPTACLES
HEATING
AIR COND.
LIGHTING
MISC.

LIGHTING FIXTURE SCHEDULE

SYMBOL DESCRIPTION

A — 2' X 4', 3-32W T8 LAMPS FLUORESCENT FIXTURE WITH 3" DEEP, 3X6, 18-CELL, PARABOLIC LOUVER, AIR RETURN & HEAT REMOVAL. SEMI SPECULAR LOW IRIDESCENT LOUVER FINISH. PROVIDE 277V ELECTRONIC BALLAST WITH <10% THD.

LAMPS: (3) SYLVANIA FO32/835
MANUFACTURER: METALUX ZEP3GAX SERIES OR EQUAL BY LITHONIA, LIGHTOLIER, DAYBRITE, COLUMBIA

A1 — SAME AS TYPE 'A' EXCEPT PROVIDE WITH BATTERY INVERTER CAPABLE OF 90 MINUTE OPERATION AND 1100 LUMENS.

B — 2' X 2', 3-17W T8 LAMPS FLUORESCENT FIXTURE WITH 3" DEEP, 3X3, 9-CELL, PARABOLIC LOUVER, AIR RETURN & HEAT REMOVAL. SEMI SPECULAR LOW IRIDESCENT LOUVER FINISH. PROVIDE 277V ELECTRONIC BALLAST WITH <10% THD.

LAMPS: (3) SYLVANIA FO17/835
MANUFACTURER: METALUX "2EP3GAX" SERIES OR EQUAL BY LITHONIA, LIGHTOLIER, DAYBRITE, COLUMBIA

B1 — SAME AS TYPE 'B' EXCEPT PROVIDE WITH BATTERY INVERTER CAPABLE OF 90 MINUTE OPERATION AND 1100 LUMENS.

X — EDGE-LIT LED EXIT SIGN, SELF POWERED. PROVIDE DIRECTIONAL ARROWS, DOUBLE OR SINGLE FACE AS INDICATED ON DRAWINGS. BRUSHED ALUMINUM TRIM FINISH. RED LETTERS ON MIRROR, SINGLE AND DOUBLE FACE. NICKEL CADMIUM BATTERY. 120/277V.

MANUFACTURER: SURE-LITES 'ELX' SERIES OR EQUAL BY LITHONIA, LIGHTOLIER, CHLORIDE, DUAL-LITE

EXISTING PANEL H1

VOLTAGE: 277/480 PHASE: 3P,4W AMP: 200 MAIN: MLO

DESCRIPTION	KW	BKR	CK	PH	CK	BKR	KW	DESCRIPTION
LTG	2	20/1	1	A	2	20/1	4.5	WTR HTR
LTG	1.7	20/1	3	B	4	20/1	2	EH-1
LTG	1.3	20/1	5	C	6			SPACE
LTG	0.6	20/1	7	A	8			SPACE
LTG	1	20/1	9	B	10			SPACE
LTG EXTERIOR	1.8	20/1	11	C	12			SPACE
LTG EXTERIOR	2.4	20/1	13	A	14			SPACE
LTG AREA	2.1	20/1	15	B	16			SPACE
LTG ELEV RM	0.1	20/1	17	C	18			SPACE
LTG CHOATE	2.6	20/1	19	A	20			SPACE
LTG CHOATE	2	20/1	21	B	22			SPACE
LTG CHOATE	2.1	20/1	23	C	24			SPACE
LTG CHOATE	2.2	20/1	25	A	26			SPACE
24 HR LTG CHOATE	1.1	20/1	27	B	28			SPACE
SPARE		20/1	29	C	30			SPACE
SPARE		20/1	31	A	32			SPACE
SPARE		20/1	33	B	34			SPACE
SPARE		20/1	35	C	36			SPACE
SPARE		20/1	37	A	38			SPACE
SPARE		20/1	39	B	40			SPACE
SPARE		20/1	41	C	42			SPACE

A TOTAL	14.3
B TOTAL	9.9
C TOTAL	5.3

VLL	PH
480	3

CONN. kw	29.5
CONN. amps	35.53

RECEPTACLES
HEATING
AIR COND.
LIGHTING
MISC.

EXISTING PANEL H3

VOLTAGE: 277/480 PHASE: 3P,4W AMP: 200 MAIN: MLO

DESCRIPTION	KW	BKR	CK	PH	CK	BKR	KW	DESCRIPTION
VAV-100	1.1	20/3	1	A	2	30/3	4.7	VAV-128
------	1.1	----	3	B	4	----	4.7	------
------	1.1	----	5	C	6	----	4.7	------
VAV-104	4.7	30/3	7	A	8	20/3	3.3	VAV-143/136
------	4.7	----	9	B	10	----	3.3	------
------	4.7	----	11	C	12	----	3.3	------
VAV-108	3.7	20/3	13	A	14			SPACE
------	3.7	----	15	B	16			SPACE
------	3.7	----	17	C	18			SPACE
VAV-110	4.7	20/3	19	A	20			SPACE
------	4.7	----	21	B	22			SPACE
------	4.7	----	23	C	24			SPACE
VAV-116/118	3.3	20/2	25	A	26			SPACE
------	3.3	----	27	B	28			SPACE
------	3.3	----	29	C	30			SPACE
VAV-120	1.1	20/3	31	A	32	20/1	2.5	WH-1-C1 #
------	1.1	----	33	B	34	30/1	4.8	EWH-1-C1 #
------	1.1	----	35	C	36	20/1	2.4	VAV-102/106
VAV-124	4.7	30/3	37	A	38	20/1	2.4	VAV-112/114
------	4.7	----	39	B	40	20/1	2.4	VAV-122/126
------	4.7	----	41	C	42	20/1	2.4	VAV-130/132

PROVIDE NEW BREAKER

A TOTAL	36.2
B TOTAL	38.5
C TOTAL	36.1

VLL	PH
480	3

CONN. kw	110.8
CONN. amps	133.4

RECEPTACLES
HEATING
AIR COND.
LIGHTING
MISC.

ELECTRICAL GENERAL NOTES

1. ALL WORK THIS DIVISION SHALL COMPLY WITH ALL LOCAL BUILDING CODES, LAWS, REGULATIONS, ORDINANCES, AND THE REQUIREMENTS OF THE 2005 NATIONAL ELECTRICAL CODE.
2. THE CONTRACTOR SHALL KEEP A RECORD OF THE CHANGES WHICH ARE IN CONFLICT WITH THESE DRAWINGS AND SPECIFICATIONS. AT THE COMPLETION OF HIS WORK HE SHALL SUBMIT "AS BUILT" PRINTS TO THE OWNER.
3. DRAWINGS ARE GENERALLY DIAGRAMMATIC AND DO NOT NECESSARILY SHOW EVERY FITTING AND DETAIL. ALL WORK SHALL BE INSTALLED SO THAT JUNCTION BOXES AND COMPONENTS WILL BE ACCESSIBLE FOR SERVICE.
4. ALL SYSTEMS, EQUIPMENT, COMPONENTS, WORK, ETC. PROVIDED UNDER THIS DIVISION SHALL BE COVERED BY A ONE YEAR GUARANTEE STARTING AT THE TIME OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER. ANY DEFECTS IN THE WORK, SYSTEMS, EQUIPMENT, OR COMPONENTS FOUND DURING THIS YEAR SHALL BE CORRECTED AT NO CHARGE. THE GUARANTEE SHALL INCLUDE PROVIDING ALL NECESSARY CUTTING, PATCHWORK, REPAINTING, ETC. TO MAKE THE WORK COMPLETE AND NEW.
5. ALL CONDUIT MUST BE CONCEALED IN THE WALLS OR ABOVE THE CEILING UNLESS OTHERWISE NOTED. MINIMUM CONDUIT SIZE IS 1/2".
6. ALL CONDUCTORS SHALL BE COPPER WITH TYPE "THW" OR "THHN" INSULATION AND THE MINIMUM WIRE SIZE SHALL BE #12 A.W.G. WITH A 167 DEGREE TEMPERATURE RATING.
7. ALL WORK MUST BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER ACCORDING TO GENERALLY ACCEPTED PRINCIPALS OF FIRST CLASS WORKMANSHIP.
8. ALL ROOF PENETRATIONS SHALL BE AS AUTHORIZED BY LANDLORD AND IN ACCORDANCE WITH LANDLORD REQUIREMENTS. MAINTAIN ROOF WATERTIGHT INTEGRITY.
9. STUB UP 3/4" EMT 6" ABOVE CEILING IN NEAREST WALL AT EACH TELEPHONE OUTLET AND COMPUTER OUTLET.
10. FASTEN ALL RECESSED LIGHTING FIXTURES TO STRUCTURE OR GRID PER N.E.C. 410-16.
11. RECESSED INCANDESCENT FIXTURES SHALL BE SUPPORTED IN COMPLIANCE WITH N.E.C. 410-65(C).
12. ALL PENETRATIONS THRU RATED WALLS, FLOORS AND CEILINGS SHALL BE FIRE STOPPED PER N.E.C. 300-21.
13. PROVIDE ALL GROUNDING AS REQUIRED BY N.E.C.
14. ALL UPPER LEVEL FLOOR SLAB PENETRATIONS SHALL BE CORE DRILLED, SLEEVED & SEALED PER LANDLORDS REQUIREMENTS.
15. DEVICE MOUNTING HEIGHTS ARE TO BE MEASURED TO THE DEVICE CENTERLINE.
16. ALL SWITCHES FOR FANS, LIGHTS, ETC. WHICH ARE SHOWN TO BE MOUNTED IN THE SAME GENERAL AREA SHALL SHARE A MULTI-GANG COVER PLATE AS REQUIRED.
17. ALL DIMMERS SHALL BE LUTRON NOVA T-STAR SERIES. COORDINATE FINISH WITH ARCHITECT.
18. PROVIDE PANEL DIRECTORY LABELING CIRCUITS, NEW CIRCUIRTS, SPARES AND SPACES.
19. REMOVE ALL ABANDONED WIRE.
20. WHERE DEMOLITION DISRUPTS ELECTRICAL CONTINUITY OF EXISTING TO REMAIN RECEPTACLES/LIGHTS, AND NO RECONNECTION IS SHOWN, RECONNECT TO ITS EXISTING CIRCUIT.
21. ALL CONDUIT SHALL BE 1/2" EMT WITH 2#12AWG CONDUCTORS UNLESS OTHERWISE NOTED.
22. UPDATE EACH PANEL DIRECTORY IN EXISTING PANELS NOTING ALL CHANGES AND ADDITIONS.
23. PROVIDE #12AWG GND. FOR ALL MECHANICAL EQUIPMENT UNLESS SHOWN OTHERWISE. ALL EQUIPMENT SHALL BE GROUNDED AT THE PANEL WHICH FEEDS THE EQUIPMENT.
24. COORDINATE RECEPTACLE NEMA TYPE AND VOLTAGE WITH COPIERS AND EQUIPMENT.
25. PROVIDE A NEW DIRECTORY FOR ALL PANELS. CORRECTLY LABEL ALL EXISTING CIRCUITS, NEW CIRCUITS, SPARES AND SPACES.
26. PROVIDE A SEPARATE GREEN, INSULATED, #12AWG EQUIPMENT GROUNDING CONDUCTOR ROUTED WITH THE BRANCH CIRCUIT HOMERUN CONDUCTORS.
27. WHERE RECEPTACLES ARE REMOVED OR MOVED, REUSE EXISTING CIRCUITRY IF POSSIBLE.
28. PROVIDE AN OUTLET BOX WITH A 3/4" CONDUIT STUBBED UP ABOVE CEILING FOR ALL NEW DATA AND TELEPHONE OUTLETS. PROVIDE PULL STRING.
29. WHERE WORK BY THE GENERAL CONTRACTOR (WALL REMOVAL, NEW OR RELOCATED WALL OPENING, ETC.) RESULTS IN THE REMOVAL, RELOCATION OR REFEEDING OF ELECTRICAL DEVICES OR LIGHTING FIXTURES, THE ELECTRICAL CONTRACTOR SHALL DISCONNECT OR RECONNECT AS REQUIRED ALL ACTIVE DEVICES REMAINING ON THAT CIRCUIT SYSTEM.
30. COORDINATE ALL FLOOR CORES WITH ARCHITECT/INTERIOR DESIGNER.
31. NEUTRAL CONDUCTORS FOR CONNECTIONS TO ALL FURNITURE SYSTEMS TO BE #10 AWG.
32. ARMORED CABLE MAY BE USED IN WALLS AND MILLWORK ONLY AND MUST BE MC TYPE (WITH GROUND). ALL CONDUIT TO AND ABOVE THE PLENUM SHALL BE EMT.

FIRE ALARM GENERAL NOTES

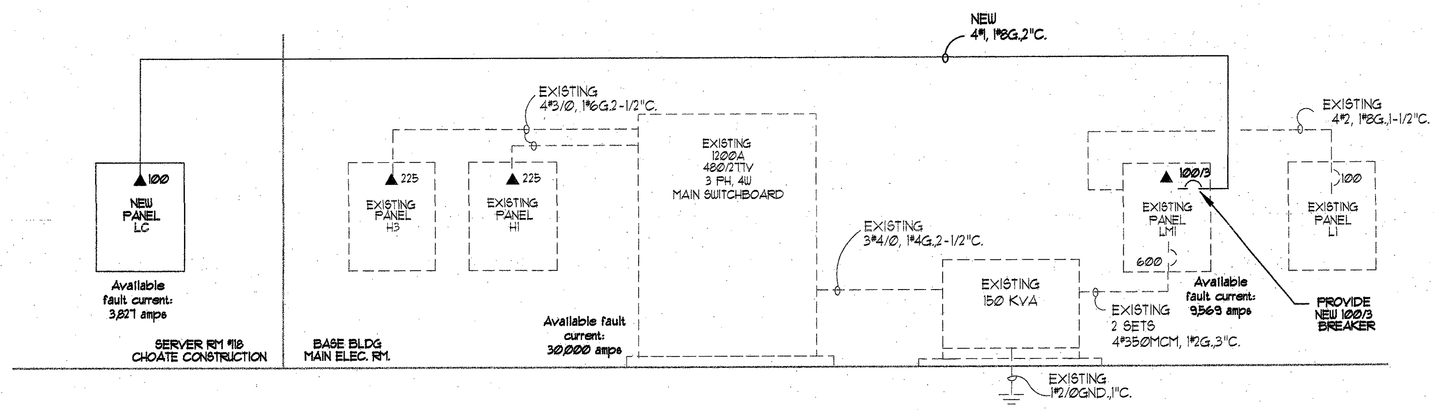
1. ALL NEW FIRE ALARM DEVICES SHALL BE ADA APPROVED. COORDINATE COLOR WITH ARCHITECT AND BASE BUILDING. DEVICES TO MATCH BASE BUILDING SYSTEM MANUFACTURER. PROVIDE ANY ADDITIONAL POWER AMPLIFIERS REQUIRED BY ADA APPROVED DEVICES.
2. ALL FIRE ALARM DEVICES, INCLUDING SPEAKERS, VISUALS, SMOKE DETECTORS, ETC. SHALL BE CONNECTED TO THE BASE BUILDING FIRE ALARM SYSTEM BY A LICENSED FIRE ALARM CONTRACTOR. COORDINATE CONNECTIONS WITH SYSTEM MANUFACTUER.
3. FIRE ALARM SYSTEM TO BE PROVIDED IN ACCORDANCE WITH THE GOVERNIING FIRE PROTECTION AND LIFE SAFETY ORDINANCE.

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION	ON CENTER MTG. HT.
	CONCEALED CONDUIT IN CEILING OR WALL	
	CONCEALED CONDUIT IN FLOOR OR UNDERGROUND	
	EXPOSED CONDUIT	
	CIRCUIT HOMERUN TO PANEL; EACH ARROWHEAD = 1 CIRCUIT	
	NO. OF CONDUCTORS IN CONDUIT; EACH CROSSHATCH = 1 WIRE	
	FLEXIBLE CONDUIT OR S.O. CORD	
	CONDUIT STUBBED UP OR TURNED DOWN	
	SURFACE MOUNTED RACEWAY	
	MULTI OUTLET SURFACE MOUNTED RACEWAY	
	PLYWOOD BACKBOARD	
	WALL MOUNTED SINGLE RECEPTACLE OUTLET	18"
	WALL MOUNTED DUPLEX RECEPTACLE OUTLET	18"
	WALL MOUNTED ABOVE COUNTER DUPLEX RECEPTACLE OUTLET	PER ARCH.
	WALL MOUNTED G.F.C.I. DUPLEX RECEPTACLE OUTLET	18"
	WALL MOUNTED ABOVE COUNTER G.F.C.I. DUPLEX RECEPTACLE OUTLET	PER ARCH.
	WALL MOUNTED DOUBLE DUPLEX RECEPTACLE OUTLET	18"
	WALL MOUNTED SPECIAL RECEPTACLE OUTLET	18"
J	JUNCTION BOX - SIZE AND MOUNTING AS REQUIRED	
D	WALL MOUNTED DOUBLE DUPLEX RECEPTACLE OUTLET ON A DEDICATED SEPARATE CIRCUIT	18"
D	WALL MOUNTED DUPLEX RECEPTACLE OUTLET ON A DEDICATED SEPARATE CIRCUIT	18"
	WALL MOUNTED DATA & TELEPHONE COMBINED OUTLET. PROVIDE 3/4" CONDUIT WITH PULL STRING TO 6" ABOVE ACCESSIBLE CEILING.	18"
	277/480 VOLT PANELBOARD	
	120/208 VOLT PANELBOARD	
S	WALL MOUNTED S.P.S.T. TOGGLE SWITCH	48"
3	WALL MOUNTED 3-WAY TOGGLE SWITCH	48"
4	WALL MOUNTED 4-WAY TOGGLE SWITCH	48"
D(XXX)	WALL MOUNTED DIMMER SWITCH (WATTAGE AND TYPE AS REQUIRED)	48"
M	MOTOR RATED TOGGLE SWITCH	AS REQ'D.
OS	OCCUPANCY SENSOR WALL SWITCH- WATTSTOPPER WI-200	48"
	COMBINATION MOTOR STARTER/DISCONNECT SWITCH	
S (30/3)	DISCONNECT SWITCH (FRAME/POLES/FUSE-IF REQUIRED)	
(2)	MOTOR - NUMBER INDICATES HORSEPOWER (F=FRACTIONAL)	
FA	FIRE ALARM ADA APPROVED AUDIO/VISUAL ALARM.	80" A.F.F.
SK	FIRE ALARM ADA APPROVED SPEAKER/STROBE ALARM.	80" A.F.F.
	FIRE ALARM ADA APPROVED VISUAL ALARM - WALL MOUNTED.	80" A.F.F.
D	FIRE ALARM SMOKE DETECTOR - WALL,CEILING MT.	12"BC
F	FIRE ALARM PULL STATION	48" A.F.F.
AFF/AFG	ABOVE FINISHED FLOOR/ABOVE FINISHED GRADE	
E/R/N	EXISTING/RELOCATED/NEW	
EX	EXISTING	
BC	BELOW CEILING	
AC	ABOVE COUNTER	
WP	WEATHER PROOF	
ER	EXISTING TO BE RELOCATED	
CR	WALL MOUNTED CARD READER. PROVIDE 3/4" CONDUIT WITH PULL STRING TO 6" ABOVE ACCESSIBLE CEILING.	48"
	2 X 4 FLUORESCENT LIGHT FIXTURE	
	2 X 2 FLUORESCENT LIGHT FIXTURE	
	LIGHT FIXTURE ON EMERGENCY/NIGHT LIGHT CIRCUIT	
	EXIT SIGN - CEILING,WALL MT.	
	FLUSH FLOOR BOX. CAST IRON. DUPLEX RECPTACLE, TELE/DATA	
	CEILING MOUNTED ULTRASONIC OCCUPANCY SENSOR - HALLWAY COVERAGE. PROVIDE POWER PACK. PROVIDE ALL ACCESORIES.	
	WALL OR CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR PROVIDE POWER PACK. PROVIDE ALL ACCESSORIES.	

GENERAL SYMBOLS LEGEND NOTES:

1. DEVICE BOXES IN RATED WALLS SHALL MEET STANDARD BUILDING CODE SECTION 705.4.
2. COORDINATE DEVICE HEIGHTS WITH ARCHITECT'S PLANS AND ELEVATIONS
3. ALL FIRE ALARM DEVICES SHALL BE 110CD UNLESS NOTED OTHERWISE.



1 / E-0 FIRST FLOOR RISER DIAGRAM - ELECTRICAL

NO SCALE

ISSUE HISTORY

NO.	DATE	DESCRIPTION
1	01.17.07	ISSUED FOR PERMIT/CONSTRUCTION

THESE DRAWINGS REMAIN THE PROPERTY OF KOHL, GRAMIGNA, MONARDO ARCHITECTS, P.C. ALL RIGHTS RESERVED. THESE DRAWINGS MAY BE USED ONLY FOR THE PROJECT SPECIFIED HEREIN. THEY MAY NOT BE USED, IN WHOLE OR IN PART, ON OTHER PROJECTS NOR EXTENSIONS TO THIS PROJECT EXCEPT BY EXPRESS WRITTEN AGREEMENT.

REVISIONS

NO.	DATE	DESCRIPTION

CHOATE CONSTRUCTION
OFFICES AT BELLE HALL
1671 BELLE ISLE DRIVE, SUITE 100
MT. PLEASANT, SOUTH CAROLINA 29464

KOHL GRAMIGNA MONARDO ARCHITECTS, P.C.
655 Engineering Drive, Suite 150, Norcross, Georgia 30092 770-448-2743 www.kgmarchitects.com

SEAL

KGM ARCHITECTS

ISSUED FOR CONSTRUCTION

SHEET TITLE: SYMBOLS LEGEND, NOTES & SCHEDULES

PROJECT NO. 6.200.210
BW&A NO. 07025
ISSUE DATE 01.17.07

SHEET NUMBER E-0 OF

SECTION 16010
ELECTRICAL GENERAL

1.0 GENERAL

1.01 SCOPE

A. Division 16 includes all Specifications in the 16000 series and the accompanying Electrical Drawings. Provide all labor, materials and equipment, and all necessary operations to provide the complete scope of the electrical systems intended under this Division. Division 16 is not a stand alone document, but a part of the complete Project Documents.

B. Attention is called to the fact that there are many interfaces between the work required in this Division and the work required in other Divisions. Provide the necessary interface and coordination with other Divisions to provide a complete project.

1.02 CODES AND REGULATIONS

A. All work under this Division shall comply with all local building codes, laws, regulations, ordinances and the requirements of the 2005 National Electrical Code.

B. Where conflicts of installation requirements occur between the aforementioned codes, regulations or the Contract Documents, the most restrictive shall govern.

C. Obtain all permits and licenses and pay all fees required by local authorities. Arrange for all necessary inspections required by the authorities having jurisdiction and provide written certificates of approval to the project Owner or his designated representative.

1.03 DRAWINGS AND SPECIFICATIONS

A. The Drawings and Specifications together are to be considered as the Contract Documents. Any work shown in one and not shown in the other, or implied by either, shall be provided to give a complete project.

B. Should any conflicts exist between the Drawings and Specifications or there is an item shown/called for which is not clearly defined, immediately submit a request for clarification. No additional monies will be granted later when a conflict is resolved or an item is more clearly defined.

C. The Drawings are schematic and are not intended to show the exact location outlets, etc. or the routing of conduit.

D. The exact location of equipment requiring electrical connections (mechanical equipment, elevators, lights, etc.) shall be as located by other Divisions of the Contract Documents. Refer to the Architectural, Structural and Mechanical Documents for dimensions and details of building construction and provide work described in this Division so that it conforms to the details of the project. The right is reserved to relocate any receptacle, switch or other outlet a maximum of 10'-0" before it is permanently installed without incurring additions to the Contract amount.

1.04 SITE VISIT

A. Visit the site and become familiar with all aspects of the site and existing conditions before submitting Contract price. No allowance will be made for lack of knowledge of existing conditions.

2.0 PRODUCTS

2.01 STANDARDS FOR MATERIALS AND WORKMANSHIP

A. All materials used shall be new and shall be stamped with the label of Underwriters Laboratories, Inc. (UL).

B. All materials shall meet the standards of the following associations and institutes where applicable:

1. National Fire Protection Association (NFPA)
2. American Society of Testing Materials (ASTM)
3. American National Standards Institute (ANSI)
4. National Electrical Manufacturer's Association (NEMA)
5. Institute of Electrical and Electronic Engineers (IEEE)

2.02 SHOP DRAWINGS AND SUBMITTAL

A. The Engineer's review of shop drawings or submittals is a cursory review to check for general compliances of submittals with the design intent of the Contract Documents. The Engineer's review does not relieve the Contractor of his responsibility of complying with the Contract Documents. All coordination of the work in strict compliance with the Contract Documents is the sole responsibility of the Contractor.

B. The following items shall be submitted for review:

1. Devices
2. Coverplates
3. Panelboards
4. Transformers
5. Fuses
6. Overcurrent devices
7. Disconnect switches
8. Lighting fixtures
9. Dimming system
10. Life safety system
11. Emergency system

2.03 RECORD (AS-BUILT) DRAWINGS AND MAINTENANCE MANUALS

A. At job completion, submit to the Architect, a set of mylar sepias showing all deviations from the Contract Documents. The Drawings shall also have dimensions locating all underground conduits. At job completion, submit to the Architect, three (3) sets of maintenance and instruction manuals for all equipment furnished on the project.

3.0 EXECUTION

3.01 COORDINATION

A. Coordinate all space requirements with all other Divisions before installing any work. Install work such that adequate space will be allotted for all other work from other Divisions to be installed and also will allow room for future access for repair and maintenance.

B. Any work installed without proper coordination shall be relocated at the Architect's direction without increasing the Contract price.

C. During the bidding process or the pricing for a guaranteed maximum price, coordinate with all other Divisions for the total amount of work required in Division 16. Any work shown or implied in another Division requiring work in Division 16 shall be included in the Contract price regardless of whether or not it is addressed in Division 16.

3.02 GUARANTEE

A. All systems, equipment, components, work, etc. provided under this Division shall be covered by a one year guarantee starting at the time of final acceptance of the work by the Owner. Any defects in the work, systems, equipment or components found during this year shall be corrected at no charge. The guarantee shall include providing all necessary cutting, patchwork, repainting, etc. to make the work complete and new.

B. Present this guarantee and any additional warranties or guarantees on furnished equipment or systems to the Architect. All equipment or system guarantees are in addition to the general guarantee.

SECTION 16100
ELECTRICAL BASIC MATERIALS & METHODS

1.0 GENERAL

N/A

2.0 PRODUCTS

2.01 CONDUIT

A. Galvanized rigid steel conduit shall be low carbon, hot-dipped galvanized both inside and out with threaded joints.

B. Intermediate metal conduit (IMC) shall be steel, galvanized both inside and out with threaded joints.

C. Electrical metallic tubing (EMT) shall be steel, galvanized both inside and out.

D. Plastic conduit (PVC) shall be schedule 40 PVC heavy wall type. A grounding conductor shall be provided.

E. Flexible metal conduit shall be flexible steel conduit tubing and shall meet Underwriters Laboratories Standard for Flexible Steel Conduit.

F. Liquid-tight flexible metal conduit and liquid-tight non-metallic conduits shall be liquid-tight and sunlight resistant.

G. Steel conduit approved manufacturers are Allied, Triangle and Republic.

H. PVC conduit approved manufacturers are Carlon and Triangle.

2.02 CONDUCTORS

A. Conductors shall be copper of 98% conductivity, 600 volt insulation. Sizes specified are AWG gauge for No. 4/0 and smaller and circular mils (MCM) for all sizes larger than no. 4/0. Conductors No. 10 and smaller shall be solid and type "THHN" or "THWN" insulation. No. 8 and larger shall be stranded and type "THW" or "XHHW" insulation. Aluminum conductors may be used for service lateral conductor if the same or larger capacity of the conductors specified. Aluminum conductors shall be Alcan 8000 series, Stabiloy or approved equal.

2.03 OUTLETS

A. Outlet boxes and covers shall be of such form and dimensions as to be adapted to their specified usage, locations, size and quantity of conduit, and size and quantity of conductors entering the boxes. In special "Fire Rated" partitions, outlets shall comply with ASTM No. E119.

B. Flush ceiling outlets for surface or pendant mounted lighting fixtures shall be one-piece 4" square or octagonal pressed steel boxes. Boxes for devices in unfinished masonry walls or stud walls shall be pressed steel, square corner, sectional switch boxes, or shall be 4" square box with a square cornered tile wall cover, set flush with masonry construction. Boxes in concrete ceiling slab shall be octagonal, shallow concrete boxes. Welded boxes are not acceptable.

C. Outlet box approved manufacturers are Appleton, Raco, Steel City or Crouse-Hinds.

2.04 DISCONNECT SWITCHES

A. Disconnect switches shall be "heavy-duty" type, enclosed switches of quick-make, quick-break construction. Switches shall be horsepower rated for 600 volts AC as required. Lugs shall be UL listed for copper and aluminum.

B. Disconnect switches shall be mounted to structure. Disconnect switches shall not be mounted to mechanical equipment or ductwork.

C. Fused disconnect switches shall have rejection type fuse clips with dual element, current limiting fuses of rating shown.

2.05 NAMEPLATES

A. Nameplates shall have 3/8" high engraved letters. 120 or 208 volts: white core laminated bakelite with black finish. 277 or 480 volts: white core laminated bakelite with red finish.

2.06 WALL SWITCHES

A. Wall switches shall be plastic, totally enclosed, quiet type, self-grounding, 277 volts and 20A rating and shall match existing if possible and equal the following:

Single Pole: Hubbell No. 1221 P&S No. 20AC1 Leviton No. 1221
Double Pole: Hubbell No. 1222 P&S No. 20AC2 Leviton No. 1222
Three-Way: Hubbell No. 1223 P&S No. 20AC3 Leviton No. 1223
Four-Way: Hubbell No. 1224 P&S No. 20AC4 Leviton No. 1224

B. Color shall be as selected by Architect.

C. Flush motor switches with red pilot light and with overload protection for fractional horsepower motors shall be Square "D" type FSJ-1P.

2.07 RECEPTACLES

A. Duplex receptacles shall be plastic, two-pole, three wire, self-grounding, side wired, 125 volts and 15A rating and shall match existing if possible and be equal to the following: Duplex receptacles shall be Hubbell No. 5262 Series. Isolated ground type shall be Hubbell No. IG-5262 Series.

B. Single receptacles shall be two-pole, three wire, self-grounding, side wired, 125 volts and 20A rating and shall match existing if possible and be equal to the following: Single receptacles shall be Hubbell No. 5361 Series, Leviton No. 5361 Series or P&S No. 5361 Series. Isolated ground type to be Hubbell No. IG-5361 Series, Leviton No. IG-5361 Series or P&S No. IG-5361 Series.

C. Color shall be as follows: General Power: Ivory
UPS Power: Orange
Generator Power only: Red

2.08 COVERPLATES

A. Coverplates for flush mounted devices shall be brushed finished stainless steel (or finish as selected by Architect) standard size, P&S Sierra S Series.

2.09 SMOKE AND FIRE STOP FITTINGS

A. Smoke and Fire Stop Fittings shall be UL listed for that purpose. The fittings used to seal conduit either on the outside of the conduit, busway or cable or internally shall have heat activated intumescent material which expands to fill all voids. Smoke and fire stop fittings shall be O.Z./Gedney "FIRE-SEAL" or Dow Corning silicone RTV foam with an hourly fire-rating equal to or higher than the rating of the floor, ceiling or wall through which the cable or conduit passes. The seals for conduit shall be of the flanged type.

2.10 FUSES

A. Provide all fuses. All fuses shall be of the same manufacturer. All fuses shall be of the high interrupting rating (200,000 Amps), current limiting type and manufactured by Bussmann. Fuses shall be provided for each fuse cutout and the specified quantity of fuses shall be furnished for spares.

B. Circuits 0 to 600 amperes shall be protected by rejection type, current limiting BUSSMANN LOWPEAK Dual Element Fuses LPN-RK (250 volts) or LPS-RK (600 volts). All dual-element fuses shall have separate overload and short-circuit clearing chamber. The fuse must hold 500% of rated current for a minimum of 10 seconds and be listed by Underwriter's Laboratories, Inc., with an interrupting rating of 200,000 amperes RMS symmetrical. The fuses shall be UL Class RK-1.

3.0 EXECUTION

3.01 CONDUIT

A. PVC extruded cover flexible conduit shall be used in making short flexible connections to rotating or vibrating machinery or equipment. The flexible conduit at these locations shall be as short as possible, but shall have a minimum length of 12".

B. A green stranded bonding jumper shall be installed outside of all flexible conduit that extends directly from a non-flex conduit to a rotating or vibrating machine. Where a junction box is used, the green stranded bonding jumper shall be installed inside the flexible conduit and attached to the junction box and to the machine. When the bonding jumper is installed outside of the flexible conduit, plastic wire straps shall be used 6" o.c. to secure the jumper to the flexible conduit.

C. EMT shall be used for branch circuits, fire alarm and telephone when not underground or in concrete in contact with the earth.

D. Armored cable may be used in walls and millwork only and must be MC type (with ground). All conduit to and above the plenum shall be EMT.

E. Rigid steel (or IMC) shall be used for service entrance and all feeders and branch circuits where exposed to damage.

F. Schedule 40 PVC may be used for all underground feeders, service entrance conductors when encased in 4" of concrete on all sides or under the lowest floor slab.

3.02 CONDUIT PROTECTION

A. All conduit installed in the ground outside the building exterior line (with the exception of exterior lighting circuits) shall be encased in 4" of concrete on all sides. Concrete shall be a minimum of 3000 P.S.I. mix. All threaded joints in rigid conduit that is encased in concrete shall have a U.L. listed joint compound applied. All conduit installed outside the building underground shall be buried a minimum of 30" below finished grade but in no case shall be buried deeper than 48". Where conduit is installed below the ground floor slab inside the building exterior line, the conduit shall be run between the floor slab and the vapor barrier. These conduits shall be installed in the slab itself where feasible. When a conduit duct bank must be installed then the entire duct bank shall be encased in concrete and installed per Appendix B of the NEC. Derating of conductors in the underslab duct bank shall be the responsibility of the contractor. Conduit installed in any slab, where permitted above, shall be above the bottom steel and below the top steel.

3.03 WIRING

A. All conductors shall be installed in conduit. No conductors shall be pulled into the conduit until the conduit system is complete and plaster had dried. Wire pulling lubricants shall be Gardner-Bender "Wireaide" or Ideal "Yellow 77".

B. Conductors shall be continuous from outlet to outlet and from outlet to junction box or pull box. All splices and joints shall be carefully and securely made to be mechanically and electrically solid with pressure type connectors, Gardner Bender "Wingard" or Ideal "Wingnut". Tape shall be "Scotch" No. 33 for indoor and No. 88 for outdoor or Gardner Bender No. 95-661. Where connection is made to any terminals of more than 30 amperes capacity and where conductors larger than No. 10 are connected to any terminal, copper terminal lugs shall be bolted to the conductors. Where multiple connections are made to the same terminal, individual lugs for each conductor shall be used. (Aluminum conductors, if used for service conductors, shall be made with high compression lugs as manufactured by Square D, Ideal or MAC.)

C. Each conduit shall have a minimum of two (2) conductors pulled in unless that particular conduit is noted as being for systems other than electrical circuitry and/or future use or unless noted otherwise.

D. Conductors for lighting and receptacle circuits shall have color coded jackets. The wiring shall be color coded with the same color used with its respective phase through the entire job as follows:

208/120 Volt System	480/277 Volt System
Phase A - Black	Phase A - Brown
Phase B - Red	Phase B - Orange
Phase C - Blue	Phase C - Yellow
Neutral - White	Neutral - Gray
Ground - Green	Ground - Green

E. The feeder and service entrance conductors shall be color coded by the use of colored plastic tape applied within 6" of each conductor end.

F. Branch circuit conductors shall not be smaller than No. 12 and where the home run from center of load exceeds 100'-0", the conductors from home run outlet to panel shall be No. 10 minimum.

3.04 GROUNDING

A. Ground connections shall be in accordance with the 2005 National Electrical Code.

1. Provide a grounding electrode system consisting of a minimum of three (3) copperweld rods, 3/4" x 10'-0", driven 24" below grade a minimum of 72" apart in the form of an equilateral triangle, bonded together with No. 4/0 conductors. Install rods a minimum of 36" clear of foundation walls to effect the building ground. If the resistance to ground exceeds 25 ohms, additional rods shall be driven and bonded together until a reading of 25 ohms or less to ground is obtained. After completion of the grounding system, measure the system ground resistance with a "Megger Earth Tester". Submit directly to the Architect two (2) copies of each test report certified by the testing technician and the Owner's representative.

2. Extend from the electrodes to the main service disconnect with a No. 4/0 copper insulated ground conductor in a 1" conduit and connect to the neutral bar, housing and frame.

3. Provide a No. 4/0 copper insulated conductor across the water meter with the conductor attached with clamps to the water line on each side of the meter.

4. Provide a No. 4/0 copper insulated ground conductor in a 1" conduit from cold water entrance pipe ahead of first valve to the main service disconnect and connect to the neutral bar, housing and frame.

5. Where nonmetallic insulating couplings or dielectric flanges are used in metallic water piping systems, provide a No. 4/0 copper, insulated ground conductor across the couplings with the conductor attached with clamps to the water line on each side of the coupling.

6. All ground connections in the building system ground shall be done with Cadweld.

7. All ground clamps shall be equipped with compression type cable lugs independent of the compression device clamping the pipe or rod.

8. All steel conduit entering the main service disconnect shall have threaded conduit insulated grounding bushings. All bushings shall be bonded together and bonded to the main grounding bus with a No. 4 bare conductor.

B. Provide an insulated green bonding jumper from the grounding lug of all receptacles to a Steel City "GEE" clip or a sheet metal screw in the outlet box. The ground wire installed behind the device mounting screws will not be acceptable.

C. Provide 1 #6-3/4" conduit from the system ground to the telephone company main distribution service cabinet

3.05 TELEPHONE CONDUIT SYSTEM

A. Telephone service shall include wood backboards and equipment cabinets with service entrance conduit as shown.

B. Telephone service entrance cable, all branch cabling and telephone instruments shall be provided by the telephone equipment vendor.

C. Provide an outlet and conduit system for the telephones as shown and leave the same in readiness for wiring by others. Provide pull line in all telephone conduit. Terminate all conduit at a uniform height with smooth insulated bushings at the telephone wood backboards.

D. Telephone wall outlets shall be pressed steel sectional switch boxes, wall mounted at the locations indicated. Coverplate shall have a bushed hole.

SECTION 16200
SERVICE AND DISTRIBUTION

1.0 GENERAL

N/A

2.0 PRODUCTS

2.01 BRANCH CIRCUIT PANELBOARDS

A. Panelboards (panels) shall be general purpose enclosures and shall be surface or flush mounted as indicated. Panels shall be of the automatic circuit breaker type, factory assembled by the manufacturer of the circuit breakers. Panels shall be for the voltage indicated with the quantity of poles and ampacity of circuit breakers shown.

B. Bus bars for the mains shall be of copper sized in accordance with U.L. standards. Full size bars shall be included. Bus bar taps for panels with single pole branches shall be arranged for sequence phasing of the branch circuit devices.

C. All circuit breakers shall be manually operated, thermal-magnetic, automatic, of the ampacity and poles as indicated. They shall be quick-make, quick-break, both on manual and automatic operation. Breakers shall be over-the-center toggle operating type, with the handle going to a position between ON and OFF to indicate automatic tripping. All multi-pole breakers shall have internal common trip. Breakers shall have a minimum of 10,000 RMS symmetrical amperes interrupting capacity unless designated otherwise. The breakers furnished shall be determined by the specifications and by the minimum U.L. labeled RMS symmetrical amperes interrupting capacity at circuit voltage. All circuit breakers shall be bolted on and rigidly braced.

D. Each panel as a complete unit shall have a short-circuit current rating equal to or greater than the available fault current.

E. Panels shall be as manufactured by General Electric, Square D, or Westinghouse.

2.02 DISTRIBUTION PANELBOARDS

A. Distribution panelboards (panels) shall be of the circuit breaker type, factory assembled by the manufacturer of the circuit breakers, complete with front door cover. The main breaker and the branch circuit breakers shall be as indicated. The main bus shall be 98% conductivity silver plated copper, rated as and of capacity equal to or greater than the rating or setting of the over-current protective device next back in the line. Panel shall be suitable for the voltage and phase indicated. Provide 25% ground bus.

B. Panels shall be flush or surface mounted as indicated, with baked-on enamel trim, adjustable trim clamps and door with chromium plated combination cylinder lock and catch, all locks keyed alike. Provide a specified nameplate for each device and a blank (not engraved) nameplate for each spare breaker or space.

C. The neutral bus shall utilize set-screws to bond the neutral bus through holes drilled in the neutral bar. A sheet copper neutral bus utilizing flathead screws to hold the neutral wires will not be acceptable.

D. All circuit breakers shall be manually operated, thermal-magnetic, automatic, of the ampacity and poles as indicated. They shall be quick-make, quick-break both on manual and on automatic operation. Breakers shall be over-the-center toggle operating type, with the handle going to a position between "ON" and "OFF" to indicate automatic tripping. All multi-pole breakers shall have internal common trip.

E. The interrupting capacity of the breakers furnished shall be 10,000 RMS symmetrical unless indicated otherwise.

F. All circuit breakers, including any connectors to the main bus, shall be bolted and rigidly braced.

G. Spaces for future installation of molded case circuit breakers are specifically by range of trip rather than a single trip size or frame size. The spaces so scheduled shall be complete with all bus and required bus connectors such that future breakers can be installed without adding or changing bus connectors on the main bus and without using a larger (frame size) or more expensive breaker than the trip size and interrupting capacity would require. If the bus connectors furnished on the main bus will not cover the trip range specified, then duplicate sets of connectors shall be furnished on the main bus for each frame size required.

H. Distribution panels shall be as manufactured by General Electric, Square D, or Westinghouse.

2.03 TRANSFORMERS

A. Branch circuit and distribution transformers shall be the dry type and shall have the ratings indicated.

B. Three phase transformers shall be 480 volt delta primary and 120/208 volt grounded type secondary. Transformers 25 KVA and larger shall have a minimum of 4 1/2% full capacity primary taps.

C. Transformers shall have a U.L. recognized 220 degree insulation system and shall be designed so that under full load, the average conductor temperature rise does not exceed 115 degree C. rise above a 40 degree C. ambient and the enclosure does not exceed a 50 degree C. rise at any point.

D. Transformers 24 KVA and larger shall be in a heavy gauge, sheet steel, ventilated enclosure. The ventilating openings shall be designed to prevent accidental access to live parts in accordance with UL, NEMA, and National Electrical Code standard for ventilated enclosures. Transformers 25 KVA through 112.5 KVA shall be designed so that they can be either floor or wall mounted. Above 112.5 KVA, they shall be floor mounted design. The entire transformer enclosure shall be degreased, cleaned, phosphatized, primed and finished with a grey, baked enamel.

E. Transformers that are of the floor mounted type shall be mounted on Korfund Vibration Eliminators of the pad type.

F. Transformers shall be as manufactured by General Electric, Square D, or Westinghouse.

3.0 EXECUTION

N/A

SECTION 16300
LIGHTING

1.0 GENERAL

N/A

2.0 PRODUCTS

2.01 LIGHTING FIXTURES

A. Each lighting fixture shall be as specified in the Lighting Fixture Schedule corresponding with its fixture type indication (letter).

2.02 LAMPS

A. The type lamps shall be as specified for each lighting fixture in the lighting fixture schedule.

B. The lamp catalog number is the catalog number for General Electric and is given as a standard of the quality and performance required. Equal lamps by Sylvania or Westinghouse will be acceptable. When a lamp manufacturer's name is used along with the catalog number in the lighting fixture schedule, it is considered unequaled by any other lamp and shall not be substituted for. The lamp performance with energy conserving ballasts furnished under this Section shall be certified by a nationally recognized independent testing laboratory.

3.0 EXECUTION

3.01 SUPPORT OF LIGHTING FIXTURES

A. All lighting shall be supported from the building structure. The fixtures shall be supported in a manner that will insure the fixture weight being equally distributed from each support and the fixture remaining in a level position.

SECTION 16920
MOTOR CONTROLS AND WIRING

1.0 GENERAL

1.01 SCOPE

A. All motors shall be provided under Division 15.

B. A motor starter shall be provided under this Section for each motor except for those specified in Division 15 to be furnished with integral starters. Motor starters shall be installed either in a Motor Control Center or separately mounted adjacent to the motor served.

C. Motor power wiring is defined as those conductors between the energy source and the motor. This power wiring shall be terminated at the motor terminals.

2.0 PRODUCTS

2.01 MOTOR STARTERS

A. Starters for motors 1/3 horsepower or smaller shall be manual unless remote or automatic starting is required, in which case the starters shall be magnetic, full voltage, non-reversing, single-speed, unless otherwise indicated. All other starters shall be magnetic.

B. Each starter for a three-phase motor shall be furnished with three (3) overload relays sized for the full load running current of the motor actually provided. Provide an external "HAND-OFF-AUTO" selector switch with green "RUNNING" light. Provide a red pilot light to indicate motor "STOPPED". Each pilot light shall have a legend plate indicating reason for signal.

C. Each overload relay shall have a normally open alarm contact which will close only when actuated by an overload (not to be confused with N.O. or N.C. auxiliary contacts). These contacts shall be properly wired to their respective blue pilot light provided on the starter front cover and having a "TRIPPED" legend plate.

D. Individually mounted motor starters shall be in a NEMA Type 1 general purpose enclosure in unfinished areas and shall be flush mounted in all finished areas. All starters mounted in exterior areas shall have a NEMA 3R enclosure. Each starter shall have a laminated nameplate to indicate Division 15 unit number, function and circuit number.

E. A control power transformer shall be provided at each motor starter for connection to the to the controls provided under Division 15. The control power transformer shall be mounted inside the motor starter enclosure. All control transformers at 50 VA or greater shall have primary fusing. Coordinate all control equipments with Division 15 and equipment manufacturers.

F. All motor starters, push buttons and pilot lights shall be of the same manufacturer as the switchboard and shall be General Electric, Square D, Joslyn Clark Controls or Westinghouse.

ISSUE HISTORY

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1	01.17.07	ISSUED FOR PERMIT/CONSTRUCTION

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REVISIONS

NO.	DATE	DESCRIPTION

CHOATE CONSTRUCTION
OFFICES AT BELLE HALL
1671 BELLE ISLE DRIVE, SUITE 100
MT. PLEASANT, SOUTH CAROLINA 29464

KOHL GRAMIGNA MONARDO ARCHITECTS, P.C.
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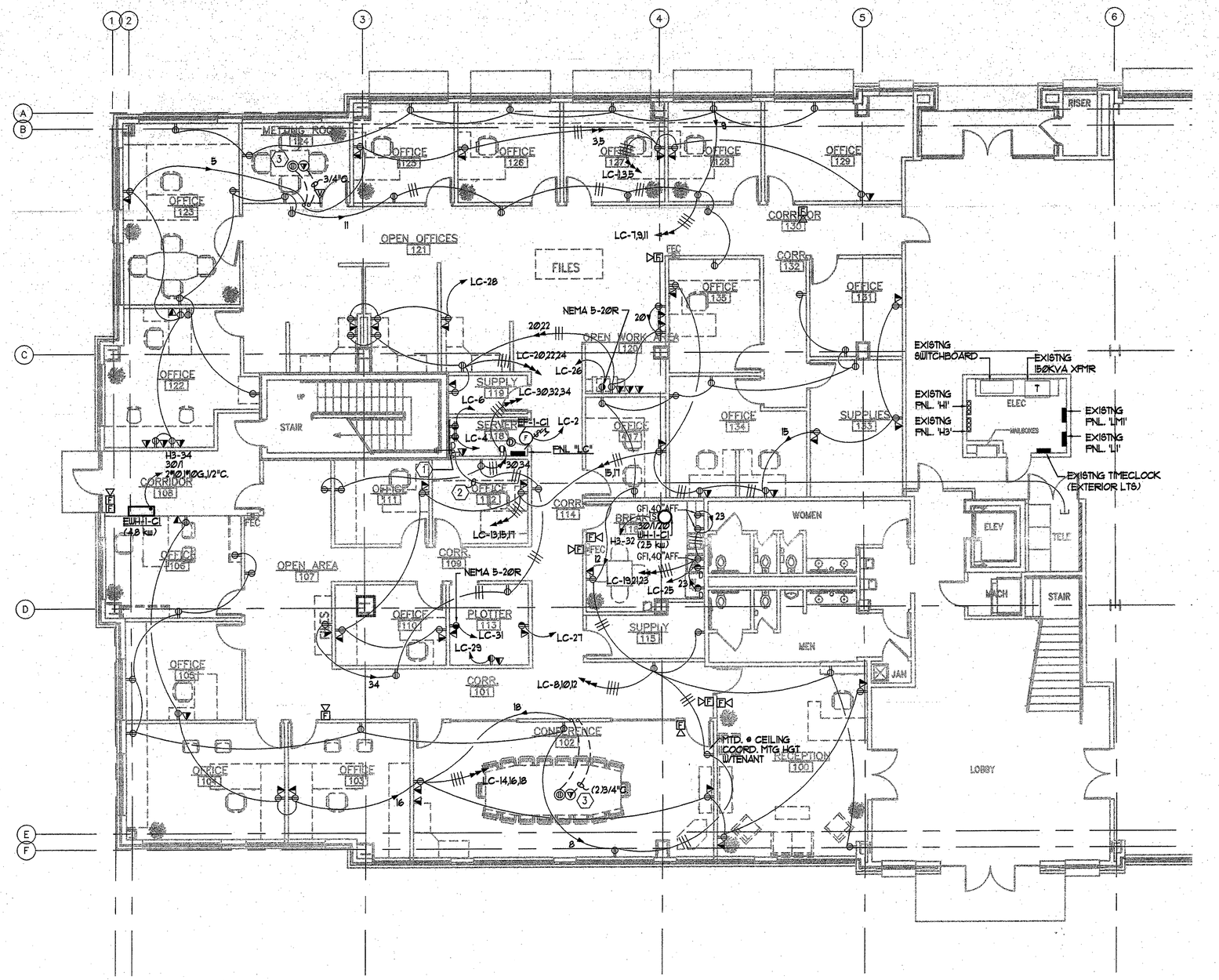
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KGM ARCHITECTS

ISSUED FOR CONSTRUCTION

SHEET TITLE
SPECIFICATIONS

PROJECT NO.	SHEET NUMBER
6.200.210 BW&A NO. 07025	E-01
ISSUE DATE 01.17.07	OF



1 / E-1 FIRST FLOOR PLAN – ELECTRICAL

1/8" = 1'-0"

LEGEND NOTES

1. PROVIDE 4'X8'X3/4" FIRE RETARDANT PLYWOOD BACKBOARD, LENGTH OF BOARD AS SHOWN. PROVIDE 1#6 CU GROUND BACK TO BUILDING GROUNDING ELECTRODE SYSTEM, PROVIDE 5' OF SLACK AT BACKBOARD. PAINT TO MATCH WALL.
2. PROVIDE 2" CONDUIT (TELEPHONE USE) WITH PULL STRING FROM TENANT TELEPHONE BACKBOARD TO BASE BUILDING TELEPHONE ROOM BACKBOARD. ROUTE ABOVE ACCESSIBLE CEILING. ALL BENDS MUST BE SWEEPING AND OF A RADIUS 10 TIMES THE INSIDE DIAMETER OF THE CONDUIT. NO MORE THAN TWO 90° CONDUIT BENDS BETWEEN TWO PULL BOXES. PROVIDE BUSHINGS AT EACH END. MAINTAIN INDUSTRY RECOMMENDED DISTANCES FROM LIGHT FIXTURES, MOTORS, TRANSFORMERS, ETC.
3. HUBBELL SHALLOW CAST IRON FLOOR BOX WITH BRASS S3825 COVER AND BRASS TWO GANG CARPET FLANGE. PROVIDE DUPLEX RECEPTACLE. COORDINATE TELE/DATA REQUIREMENTS WITH TENANT

GENERAL NOTES

1. REFER TO DRAWING E-0 FOR SYMBOLS LEGEND.
2. ALL DEVICES SHALL BE CONSIDERED NEW UNLESS NOTED OTHERWISE. THE LETTER "EX" ADJACENT TO DEVICE INDICATES EXISTING. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION & MOUNTING HEIGHTS OF ALL DEVICES.
3. VERIFY ELECTRICAL REQUIREMENTS & RECEPTACLE NEMA TYPES FOR COPIER(S) WITH EQUIPMENT SUPPLIER PRIOR TO INSTALLATION.
4. CONTRACTOR SHALL COORDINATE THE EXACT POWER AND WIRING REQUIREMENTS FOR ALL SYSTEM FURNITURE WITH THE FURNITURE SUPPLIER BEFORE ROUGH-IN. MAKE ADJUSTMENTS TO CIRCUITING AS REQUIRED.
5. HATCHING INDICATES AREA NOT IN CONTRACT.

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1671 BELLE ISLE DRIVE, SUITE 100
MT. PLEASANT, SOUTH CAROLINA 29464

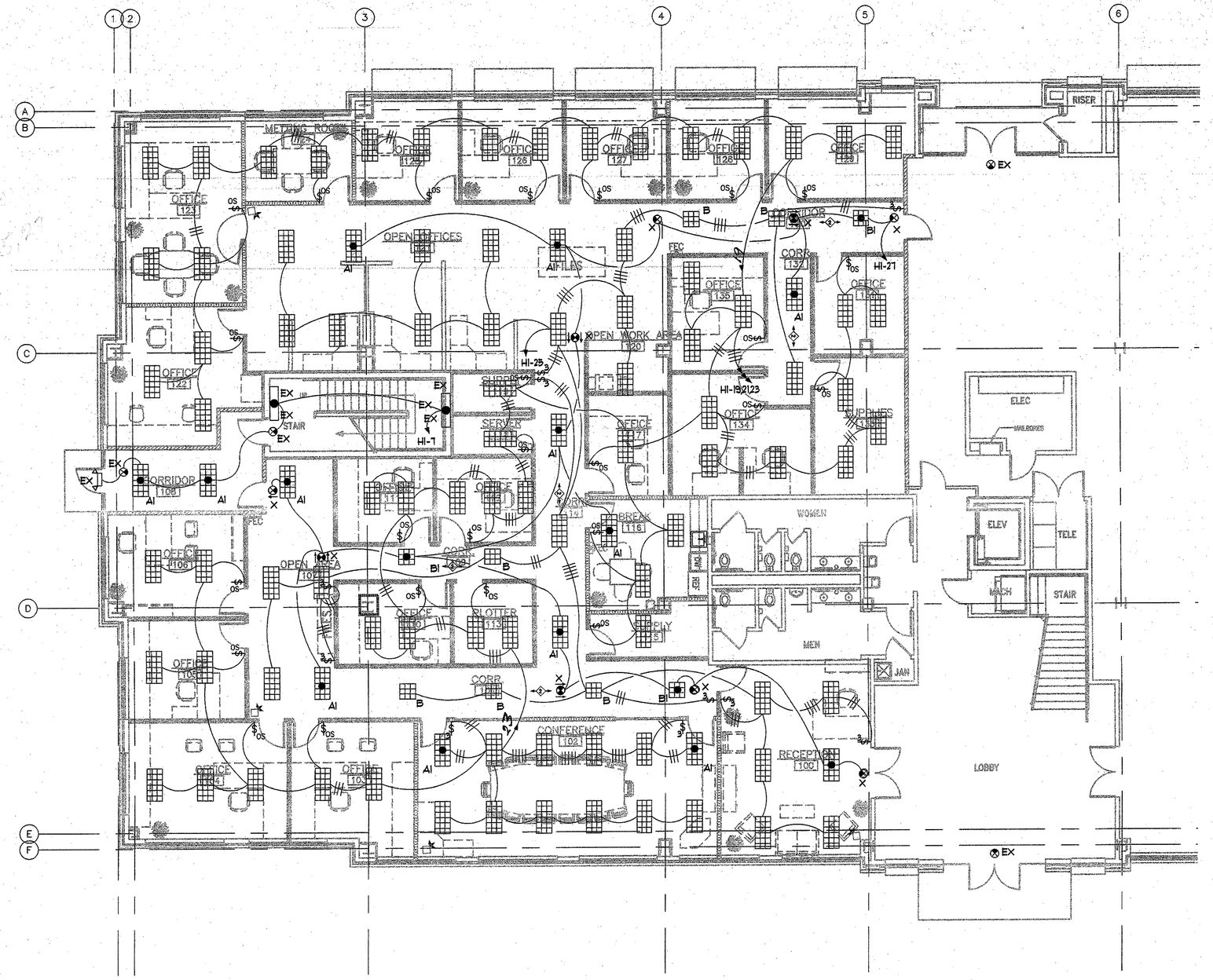
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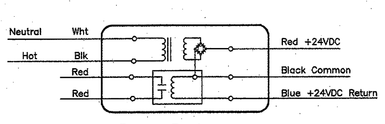
SHEET TITLE	
FIRST FLOOR – ELECTRICAL PLAN	
PROJECT NO. 6.200.210 BW&A NO. 07025	SHEET NUMBER E-1
ISSUE DATE 01.17.07	OF



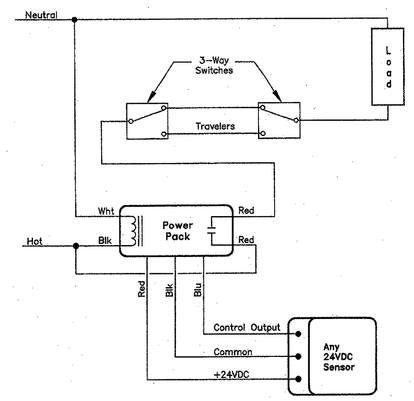
1 L-1 FIRST FLOOR PLAN – LIGHTING
1/8" = 1'-0"

GENERAL NOTES

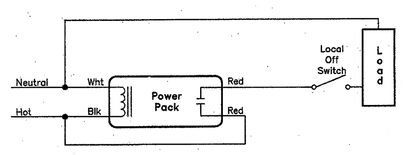
1. ALL LIGHT FIXTURES ARE TYPE 'A' UNLESS NOTED OTHERWISE. REFER TO LIGHTING FIXTURE SCHEDULE ON DRAWING E-0 FOR SPECIFICATIONS.
2. PROVIDE AN UNSWITCHED 'HOT' TO EXIT SIGNS AND 24 HR EMERGENCY EGRESS LIGHT FIXTURES.
3. ALL DEVICES SHALL BE CONSIDERED NEW UNLESS NOTED OTHERWISE. THE LETTER "EX" ADJACENT TO DEVICE INDICATES EXISTING. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION & MOUNTING HEIGHTS OF ALL DEVICES.
4. HATCHING INDICATES AREA NOT IN CONTRACT.



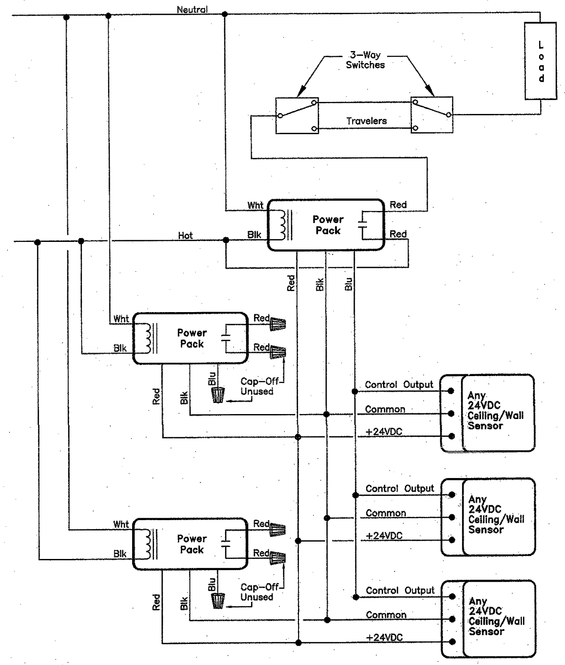
Power Pack
Internal Schematic



CONFERENCE #102
RECEPTION #100



OPEN AREA #107



CORRIDOR #114, #109 & #101
CORRIDOR #130, #132 & OPEN OFFICE #121

2 L-1 OCCUPANCY SENSOR WIRING DIAGRAMS
NO SCALE

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ISSUED FOR CONSTRUCTION

SHEET TITLE
FIRST FLOOR – LIGHTING PLAN

PROJECT NO.	SHEET NUMBER
6.200.210	L-1
BW&A NO. 07025	
ISSUE DATE 01.17.07	OF

15010 MECHANICAL GENERAL

A. This Division 15 and the accompanying drawings cover the provision of all labor, equipment, appliances, and materials and performing all operations in connection with the construction of the air conditioning, ventilating, heating, fire suppression and plumbing systems as specified herein and as shown.

B. The General Provisions and Division 1, including the general, supplementary and other conditions and other Divisions, as appropriate, apply to work specified in this Division.

C. Special attention is called to the fact that the work is to be performed within an existing, operational facility. Prior to the submission of bids, each bidder shall visit the project site, thoroughly investigate and be familiar with all existing conditions which will affect their work; especially the work to be performed above the existing ceilings.

D. Connect new work to existing work in a neat and workmanlike manner. Where an existing structure must be cut or existing utilities interfere, such obstructions shall be bypassed, removed, replaced or relocated, patched and repaired. Work disturbed or damaged shall be replaced or repaired to its prior condition.

E. Prior to the start of any demolition or construction, secure the services of a qualified, EPA Certified asbestos abatement agency to check the existing insulation, etc. for asbestos. Should asbestos be found, do not proceed with demolition or construction; notify the Architect in any case in writing of the agency's findings.

F. The implied and stated intent of the drawings and specifications is to establish minimum acceptable standards for materials, equipment and workmanship, and to provide operable mechanical systems complete in every respect.

G. The engineering drawings are diagrammatic, intended to show general arrangement and sizes of system components, and shall not be scaled. Rather, the architectural and structural drawings shall govern space constraints, dimensions and finishes. All offsets and fittings which will be necessary to accomplish the finished installation shall be provided at no additional cost or increase in the Contract.

H. Ensure optimum use of available space for materials and equipment installed above ceilings. Allocate space in the order of priority as listed below except as otherwise detailed. Items are listed in the order of priority, with items of equal importance listed under a single priority number.

1. Gravity flow piping systems
2. Vent piping systems
3. Recessed lighting fixtures
4. Concealed HVAC terminals and equipment
5. Air duct systems
6. Sprinkler piping systems
7. Pressurized piping systems
8. Electrical conduit, wiring, control air tubing

I. Order of space priority does not dictate installation sequence. Installation sequence shall be as required to install all affected trades.

J. The work of this Division 15 shall not obstruct access for installation, operation and maintenance of the work of any other Division.

K. All major items of equipment shall be arranged so as to provide a minimum of 28" clear aisle space. Additional space shall be provided between and around equipment for maintenance and proper operation as shown in the equipment manufacturer's literature.

L. Coordinate all work under this Division 15 with work under all other Divisions, providing adjustment as necessary.

M. Coordination of space requirements with respect to Division 16 shall be performed such that: 1)No equipment, piping or ductwork, other than electrical, shall be installed within 42" of switchboards or panelboards; 2) No piping or ductwork shall ever operate at a temperature in excess of 120 degrees F. shall be installed within 3" of any electrical conductor.

N. All items mounted in or below the ceiling, and all items penetrating the ceiling, shall be coordinated with the architectural reflected ceiling plans. If any items are not shown on these plans, or any items need to be relocated for coordination purposes, prepare a reflected ceiling plan and submit it to the Architect for approval.

O. All workmanship and materials provided under this Division 15 shall comply with all laws, ordinances, codes and regulations of all Federal, State and Local Authorities having jurisdiction.

P. Secure and pay all fees associated with all permits and licenses required for execution of the Contract. Arrange for all inspections required by city, county, state and other authorities having jurisdiction, and deliver certificates of approval to the Architect.

Q. The code requirements are strictly a minimum and shall be met without incurring additions to the Contract. Where requirements of the drawings or specifications exceed the code requirements, the work shall be provided in accordance with these drawings or specifications. In the event of conflict or ambiguity between the various codes, the most stringent requirement shall govern.

R. All electrical equipment and wiring provided under this Division 15 shall comply with the electrical system characteristics indicated on the electrical drawings and specified in Division 16.

S. All power wiring and final connections to equipment shall be provided under Division 16.

T. Control components, all interlocks (motor-operated dampers, fire alarm motors, etc.) and control wiring (120 volt, single phase and less) shall be provided under this Division 15 as required to achieve the specified control sequences.

U. All control wiring over 30 volts shall be installed by a Licensed Electrician working under this Division 15.

V. Sleeves shall be provided through all pipe penetrations of concrete or masonry walls, elevated floors and roofs, except those plumbing piping penetrations for fixtures, vents, etc.

W. Sleeves shall be fabricated from Schedule 40 steel pipe through 10" and Standard Wall steel pipe for sleeve sizes 12" and larger. All sleeves penetrating exterior walls, underground walls, pit or vault walls shall be provided with a 3" x 3/8" thick waterstop ring welded completely to the midpoint of the sleeve.

X. All sleeves penetrating exterior walls, underground walls, pit or vault walls and elevated floors shall be packed and sealed watertight.

Y. Sleeves through roofs shall extend above the roof surface and be flashed watertight.

Z. Sleeves through walls shall be cut and finished flush with each surface of the wall in which they are installed.

AA. Sleeves shall be sized to provide a minimum of 1/2" clearance between the inside surface of the sleeve and the outside finished surface of the pipe plus any insulation specified.

BB. Fire-stops shall be provided as specified herein. All annular spaces between piping and sleeves which do not require fire-stops shall be packed with mineral wool and caulked.

CC. Provide round, chrome-plated escutcheons on all exposed piping penetrations passing through walls, floors, partitions and ceilings.

DD. Where ductwork, piping, conduit, etc. pass through fire partitions, fire walls and floors, a fire-stop shall be provided that will ensure an effective barrier against the spread of fire, smoke and gases. Fire-stop material shall be packed tight and completely fill gaps between the ductwork, piping, conduit, etc. and the perimeter of their rough openings.

EE. Fire-stopping material shall maintain its dimensions and integrity while preventing the passage of flame, smoke and gases under conditions of installation and use when exposed to the ASTM E119 time-temperature curve for a time period equivalent to the rating of the assembly penetrated. Fire-stopping material shall be noncombustible as defined by ASTM E136; and, for insulation materials, melt point shall be a minimum of 1700 degrees F. for 1-hour protection and 1850 degrees F. for 2-hour protection. Fire-stopping material shall be Dow-Corning RTV Foam or 3M Fire Barrier Products or Sohio Carborundum Fyre Putty.

FF. Cutting of holes through concrete and masonry shall be by diamond core or concrete saw. Pneumatic hammer, impact electric and hand or manual hammer type drills will not be allowed, except as permitted by the Owner where required by limited working space. Locate holes such that they will not affect structural sections such as ribs or beams. Holes shall be laid out well in advance of the installation. These layout locations shall be approved by the Owner prior to drilling.

GG. All equipment shall be installed in strict conformance with the recommendations of the equipment manufacturer, as indicated on the Drawings and as specified

HH. Provide supplementary steel framing and welded steel equipment support stands as required for proper hanging and support of the mechanical systems. Steel angles, channels and tubing utilized for such framing shall be selected for a maximum deflection of 1/360th of the span.

II. Not Used.

JJ. The exterior surfaces of all mechanical equipment, piping, ductwork, conduit, etc., shall be cleaned and free of all dirt, grease, oil, paint splatter, and other construction debris.

15010 MECHANICAL GENERAL CONTINUED

KK. Ducts, plenums, and air unit casings shall be cleaned of all debris and either vacuumed or blown free of all rubbish, dirt, and dust before installing grilles, registers or diffusers.

LL. Bearings that require lubrication shall be lubricated in strict accordance with the manufacturers recommendations.

MM. All control equipment shall be adjusted to the settings required for the performance specified.

NN. Fans shall be adjusted to the speed indicated by the manufacturer to meet the installed final system pressure at the airflows indicated. Any additional sheaves and belts required for final adjustments shall be provided with no increase in the Contract amount.

OO. Any fans operated during construction shall have temporary filters. Temporary filters shall be changed regularly to minimize contamination of the equipment and duct systems. Permanent filters shall be installed prior to final inspection.

PP. All coils shall be thoroughly cleaned and combed prior to final inspection.

QQ. All ductwork surfaces visible through grilles, registers and diffusers in finished areas shall be painted flat black.

RR. All low pressure ductwork (design operating pressure of 1.0" W.C. E.S.P. or less) shall be tested by the operation of the system to which it is connected.

SS. All medium and high pressure ductwork (operating pressure of more than 1.0" W.C. E.S.P.) shall be tested at 1.5 times the design operating pressure of the system to which it is connected, or at the total fan pressure at shut-off, whichever is greater.

TT. All visible and audible air leaks from the ductwork systems (existing and new systems) shall be repaired.

UU. Soil and waste piping shall be tested with water before installing fixtures. Water test shall be applied to the system either in its entirety or to the individual sections. Each opening except the highest opening of the section under test shall be plugged, and the section shall be filled with water and tested with a head of water of at least ten (10) feet above the highest point in the system. The water shall be kept in the portion under test, for at least thirty (30) minutes; no drop in the water level will be acceptable.

VV. Not Used.

WW. Not Used.

XX. At the completion of the project, provide a set of reproducible sepias to the Owner which reflect all changes, deviations and revisions made to the original design documents. Locations of all underground piping and utilities shall be clearly shown and dimensioned from permanent reference points such as building column lines.

YY. Complete operating and maintenance manuals shall be provided to the Owner. Four copies shall be provided. Each copy shall be bound in a separate 3-ring, loose leaf notebook. Operating instructions shall be provided for each mechanical system, and shall each include a brief system description, a simple schematic and a sequence of operation. Operating and maintenance instructions shall be provided for each piece of equipment. A control system wiring diagram shall be included in each operating and maintenance manual.

ZZ. All work provided under this Division 15 shall be subject to a minimum one year warranty. The warranty shall include prompt repair or replacement of equipment or system failures and shall include all parts and labor. In addition, all reciprocating air conditioning compressors shall carry an additional four year parts-only warranty. Extended warranties shall be provided on all other equipment so specified in other Sections.

15043 HVAC TEST & BALANCE

A. This Section 15043 and the accompanying drawings cover the provision of all labor, equipment, appliances, and materials and performing all operations in connection with the testing and balancing (T&B) of the heating, ventilating and air conditioning (HVAC) systems as specified herein and as shown. These systems include, but are not limited to, the supply distribution systems, the return and exhaust air systems, and heating, ventilating and air conditioning equipment (all scheduled equipment as a minimum).

B. It is the intent of this Section of the specifications to provide a complete operable and balanced HVAC system as shown and specified which is reasonably airtight, comfortable and free of objectionable noise and vibration.

C. HVAC test and balance shall be performed by an independent agency certified by the Associated Air Balance Council (AABC) or National Environmental Balancing Bureau (NEBB) under direct contract to the General Contractor. All work performed by this agency shall be performed by qualified technicians under the direct supervision of an AABC or NEBB certified test and balance engineer. The agency shall be independent and shall not be associated in any way with the installing HVAC subcontractor.

D. HVAC test and balance shall be performed in accordance with the 4th edition of the AABC National Standards, 1982 for Total System Balance or the NEBB Procedural Standards for TAB of Environmental Systems, 4th Edition, 1983 together with the NEBB TAB Manual for Technicians, 1st Edition.

E. The final T&B report shall serve to substantiate compliance with the intent of the Contract Documents, specifically the HVAC systems.

F. HVAC test and balance shall not begin until the systems are substantially complete. Upon the completion of the T&B work, the Agency shall submit four copies of the complete HVAC Test and Balance Report directly to the Architect.

G. The Agency, as a part of its contract with the General Contractor, shall act as an authorized inspection agency, responsible to the General Contractor and the Architect and shall, during the test and balance, list those items which require correction or have not been installed in accordance with the Contract Documents.

H. The Agency shall plainly mark the settings of all valves, dampers and other adjustable devices. If a balancing device is provided with a memory stop, it shall be set, locked and marked.

I. Provide sufficient time before final completion date so that testing and balancing can be accomplished. Coordinate the submitted T&B schedule.

J. Provide immediate labor and tools to make required corrections and repairs without undue delay.

K. Any conditions which prevent a proper HVAC Test and Balance shall be reported by the Agency to the General Contractor and Architect within 7 days of their discovery.

L. If it is determined by the Agency and confirmed by the Architect that drive changes or additional balancing dampers are required, the Contractor shall obtain and install all necessary components.

M. The Agency shall cooperate with the Architect and the Contractor and all his subcontractors to perform the work in such a manner as to meet the job schedule.

N. The Agency shall verify that all system components are in place and in proper working order prior to leaving the project.

O. All reported, recorded data shall represent true measured conditions.

15500 SPRINKLER SYSTEMS

A. This Section 15500 and the accompanying drawings cover the provisions of all labor, equipment, appliances, and materials and performing all operations in connection with the construction of sprinkler systems as specified herein and as shown.

B. The work included under this Section 15500 shall include, but is not limited to, the following:

1. Piping and sprinkler heads.
2. Air compressor and controls
3. Hydraulic design computations.
4. Shop drawings and procurement of all approvals.

C. The sprinkler systems shall be designed and installed in conformance with the standards of NFPA 13, NFPA 72A, 72B, 72C, 72D, NFPA 231, the standards of the Underwriter (IRI/FM/ISO, etc.) and local codes.

D. The sprinkler design and installation shop drawings shall be submitted and approved by the Owner's underwriter and the Fire Marshall.

E. The sprinkler systems shall be installed by a firm which is duly licensed to install such systems in the State of Georgia.

F. Upon completion of the work, provide three (3) sets of "record" drawings of the fire protection systems as actually installed to the Owner. Drawings shall be to scale, and shall include all details required to accurately indicate the system as installed.

G. All control, check, drain, test and alarm valves and alarms shall be provided with identification signs of the standard design as adopted by the sprinkler industry and as recommended for the particular services. The signs shall be securely attached to each piece of equipment.

H. All equipment and materials provided under this Section 15500 shall be new and of the best grade commercial quality, shall be of the latest design of the manufacturer, and shall be listed and approved by U.L. and the Underwriter. Materials and equipment manufactured outside of the United States will not be acceptable. All components shall be suitable for the pressures indicated on the flow test.

I. All valves shall comply with requirements of NFPA and shall be Underwriters' Laboratories, Inc. (UL) listed.

J. Working pressure of all valves shall be minimum 175 psig at 70 degrees F. water temperature.

K. All sprinkler heads shall be automatic, closed-type standard spray heads.

L. Sprinkler Heads in Ceilings: 1) All areas with suspended ceilings shall have heads equal to Reliable Model G, semi-recessed type. 2) All public areas shall be provided with flush-type, fully recessed heads. 3) All leasable future tenant areas with suspended acoustical tile ceilings shall have heads equal to Reliable Model G, semi-recessed type.

M. Sprinkler heads installed in areas without ceilings shall be bronze heads in the upright position unless otherwise noted.

N. The temperature rating of the sprinkler heads shall be in accordance with the recommendations of the Underwriter.

O. Sprinkler guards shall be provided for all heads within seven feet of the floor, in mechanical, electrical and storage rooms, and elsewhere as required by the Underwriter.

P. Each drop to a sprinkler head in a ceiling shall be equipped with a chrome plated ceiling plate at the point the pipe passes through the ceiling.

Q. Provide to the Owner a cabinet containing two (2) head wrenches and a minimum of six (6) spare heads of each type and temperature rating used in the systems.

R. All heads installed in areas with tile ceilings shall have the heads centered in the tile to within 3".

S. Hose cabinets with hose racks shall be provided to achieve complete coverage of the floor area. Hose shall be 1 1/2" size and 75 ft. long. Provide complete with valve and nozzle.

T. Aboveground piping shall be Schedule 40, grade A53 or A120; except that Schedule 10 piping is acceptable on pipe sizes 2 1/2" and larger where permitted by the applicable codes and standards. Schedule 10 piping shall not be threaded nor cut-grooved.

U. Provide all necessary hangers, supports, bracing, accessories, etc., as required for proper installation of the work, and only approved type hangers shall be used. All sprinkler piping shall be supported from building structure; sprinkler lines under ducts shall not be supported from duct work but shall be supported from building structure with trapeze hangers where necessary.

V. The design and installation of the sprinkler system shall be based on office occupancy – light hazard of the class required by the occupancy indicated.

W. The entire sprinkler system shall be tested at 200 psi for not less than 2 hours. All leaks discovered shall be repaired by tightening, replacing or re-working the leaking component or joint.

X. Fire Protection scope of work consists of relocating existing sprinkler heads to coordinate with new wall, diffuser, and light fixture locations. Special attention is called to areas with gyp board ceilings. Provide fully recessed flush type heads as directed above for gyp board ceilings. Verify that all sprinkler heads are in good condition. Replace any sprinkler heads that are no longer in good condition.

15400 PLUMBING SYSTEMS

A. This Section 15400 and the accompanying drawings cover the provision of all labor, equipment, appliances, and materials and performing all operations in connection with the construction of the plumbing systems as specified herein and as shown. These systems include, but are not limited to, the following:

1. Sanitary waste and vent systems.
2. Domestic water systems.

B. Provide all final plumbing connections to all equipment furnished by Owner.

C. Provide gate valve and reduced pressure backflow preventer or vacuum breaker at the service entrance and at those connections (especially to kitchen equipment) required by local plumbing code.

D. It is the intent of this Section of the specifications to provide complete and operable plumbing systems as shown and specified which are free of leaks, properly vented, free of unreasonable noise, vibration and sweating, and fabricated so as to fit the space allotted and to exhibit a minimum resistance to fluid flow

E. The word "piping" is defined to mean all piping, fittings, joints, hangers, coatings, valves, cocks, insulation and accessories necessary for the plumbing systems described, shown and specified.

F. Provide all reducing fittings, flanges, couplings and unions of the size and type of material to match the piping connections at each fixture, piece of equipment, valve and accessory.

G. Union joints, couplings or flanges shall be provided in each pipe line connected to each piece of equipment, fixture and elsewhere as indicated and specified. Unions shall match the piping system in which they are installed. Unions or flanges shall be provided between all copper to steel connections. These unions shall be dielectric, insulating type.

H. All changes in direction and branches shall be made with manufactured fittings.

I. The use of offset-type reducers is strictly prohibited in any piping system.

J. In all water piping systems, changes in horizontal pipe line sizes shall be made with eccentric reducers installed flat on top for proper air venting. Reducing tees, reducing elbows and concentric reducers shall only be allowed in water piping systems for changing pipe sizes in vertical risers and for making connections to equipment and accessories from vertical risers.

K. All pipe joints shall be cut square and all burrs shall be removed.

L. Open ends of pipe lines not currently being handled shall be plugged during installation to keep dirt, water and foreign material out of the system.

M. Sanitary waste piping shall slope down in the direction of flow as shown on the drawings or as prescribed by Code, but not less than 1 percent.

N. Provide all final connections to equipment and fixtures furnished by Owner.

O. Trap primers shall be provided at all floor drains and hub drains.

P. All aboveground plumbing systems piping and valves sized 3/4" and larger which are installed in accessible locations (including piping above removable ceilings and behind access panels) shall be identified in strict conformance with the "Scheme for the Identification of Piping Systems" (ANSI A13.1 – 1981). Identification markers may be stenciled or shall be Setmark Pipe Markers, as manufactured by Seton Name Plate Corporation.

Q. Cleanouts shall be provided at the locations indicated and, as a minimum, where required by Code. Floor cleanouts shall be a minimum of 4" and shall be complete with a flush plug and removable, scoriated bronze floor plate. Provide carpet buttons in carpeted areas.

R. All above ground sanitary, waste and vent piping shall be hubless cast iron soil pipe. Joints on hubless cast iron soil pipe shall be made with neoprene couplings and stainless steel clamps.

S. Floor drains in toilets and finished areas shall be J. R. Smith 2000 Series with 6" Type B square adjustable strainers finished in satin nickel bronze; or equal by Josam or Zurn. Provide vandalproof secured tops. All floor drains shall be provided with a trap primer.

Floor drains in mechanical rooms and unfinished concrete floors shall be J. R. Smith 2131 Series with round 11 3/4" cast iron grate, sediment bucket and deep-seal P-trap; or equal products by Josam or Zurn. Provide vandalproof secured tops. All floor drains shall be provided with a trap primer.

T. Aboveground piping shall be Schedule 40, grade A53 or A120; except that Schedule 10 piping is acceptable on pipe sizes 2 1/2" and larger where permitted by the applicable codes and standards. Schedule 10 piping shall not be threaded nor cut-grooved.

U. Aboveground domestic water system piping 3" in size and smaller shall be Type L hard drawn copper tubing with wrought copper fittings and soldered joints.

V. Gate valves 3" or less in size shall be constructed with a bronze body, non-rising stem. Stem to be bronze ASTM B-62 or silicon bronze ASTM B-371 with malleable iron handwheels. Valve shall meet MSS-SP80. Valve shall be manufactured by Milwaukee, Hammond, Nibco or Stockham.

W. Ball valves 2 inch and smaller shall be two piece bronze body, large port with solid, smooth bore chrome plated brass ball, meeting MSS-SP110. Seats shall be reinforced TFE with Teflon packing ring and threaded adjustable stem. Valves on insulated lines will be provided with stem extensions to provide clearance for two inches of pipe insulation. Valves to be Apollo 70, Hammond 8501 or Watts B-6000.

X. Double Check backflow preventers shall be Watts Series 007 for ½" to 2–1/2" line sizes, and Series 775 for 3" and higher.

Y. Water pressure reducing valves (PRV) shall be the self-contained direct operating type with bronze body, stainless steel seat, stainless steel spring, and sealed spring cage. Pressure regulators shall be Watts Regulator Company's No. 25AUB or equal by Wilkins.

Z. Expansion tanks for water heaters shall be Watts Series DET. Expansion tanks shall be installed in the cold water supply line to each storage type water heater.

AA. Soldered joints shall be made with tin-antimony/silver solder. Solder containing lead shall not be permitted.

BB. All pipe insulation products shall have a permanent composite insulation, jacket and adhesive fire and smoke hazard rating as tested by procedure ASTM-84, NFPA 255 and UL 723 not exceeding Flame Spread 25 or Smoke Developed 50.

CC. Preformed insulation for all domestic hot and cold water piping shall be minimum 1" thick preformed fiberglass pipe insulation with white all-service jacket. All longitudinal joints shall be lapped, self-sticking type with all butt joints, tears, etc. sealed with a matching white vapor barrier tape. Elbows shall be mitered or may be Zeston covers filled with equivalent fiberglass insulation. The maximum K value of the insulation shall be 0.23 at 70 degrees F.

DD. Pipe hangers, hanger rods, trapeze type hangers, upper attachments and other supports shall be selected based on pipe size (plus insulation of pipes specified to be insulated) and the weight of the medium being transported or the medium used for testing, whichever is greater. Provide all hangers and rods, turnbuckles, angles, channels, and other structural supports to support the piping systems. Rods for pipe hangers shall be full size of the hanger manufacturer's catalog listed rod size for each type hanger specified. Hangers and supports shall be Michigan, ITT Grinnell or B-Line.

EE. All material utilized for the hanging and support of the piping systems shall be manufactured products which are specifically intended for the purpose of hanging piping systems. The use of wire, steel straps, plastic ties, etc. is strictly prohibited.

FF. Pipe hangers selected for supporting horizontal insulated piping shall be sized to fit around the outside of the pipe insulation. Insulated piping shall be supported on galvanized shields. Shields shall be 18 gauge x 12" long for pipes 2" and smaller and 16 gauge x 18" long for pipes 2 ½" and larger. Shields shall be 180 degrees around the lower half of the pipe at all pipe hangers, except that on trapeze hangers, pipe racks and floor supported horizontal pipes, shields shall be 360 degrees around the entire pipe.

GG. Pipe hangers for copper piping shall be copper plated or the piping shall be dielectrically isolated from any steel hangers or clamps that are used.

HH. Steel rods, framing and clamps shall be plated or primed to prevent rust formation.

II. Follow the general piping layout, arrangement, schematics and details. Provide all offsets, vents, drains and connections necessary to accomplish the installation. Fabricate piping accurately to measurements established at the project site to avoid interference with ductwork, other piping, equipment, openings, electrical conduits and light fixtures. Make suitable provision for expansion and contraction with expansion loops and offsets.

JJ. Pipe hangers or supports shall be provided within 18" of each horizontal fitting, equipment connection, valve, etc. and at not more than 10 ft. spacings along horizontal runs of straight, plain piping.

KK. Riser clamps shall be provided at each floor penetration.

LL. Provide insulation over all above ground hot and **cold water piping, except that no insulation is required on cold water lines installed inside interior plumbing chases (those chases with no exterior wall). All joints and tears shall be sealed with matching white vapor barrier tape.

15400 PLUMBING SYSTEMS CONTINUED

MM. All domestic water piping installed under this Division shall be disinfected with chlorine before it is placed into operation. The chlorinating material shall be liquid chlorine conforming to Federal Specification BB-C-120 and shall be introduced to the system by experienced operators only. The chlorine solution applied to the piping sections or system shall contain at least fifty parts per million of available chlorine and shall remain in the sections or system for a period of not less than sixteen (16) hours. During the disinfection period, all valves shall be opened and closed at least four times. After the disinfection period, the chlorinated water shall be flushed from the system with clear water until the residual chlorine content is not greater than two-tenths parts per million (0.2 PPM). Submit certification to the Architect that the system was disinfected.

15450 PLUMBING FIXTURES AND TRIM

A. This Section 15450 and the accompanying drawings cover the provisions of all labor, fixtures, equipment, appliances and materials, and performing all operations in connection with the construction and installation of the plumbing fixtures and trim as specified herein and as shown.

B. All exposed piping, valves, stops, P-traps, etc. shall be chrome-plated. Also, all exposed piping penetrations through walls, floors or ceilings shall be provided with chrome-plated cast brass escutcheons.

C. All P-traps shall be minimum 17-gauge brass.

D. Flush valves shall have non-hold open feature, vacuum breakers and cover cap on angle-type stop.

E. Provide all final connections to all equipment and fixtures furnished by Owner.

F. Unless otherwise specified in an individual fixture description, all enameled cast-iron and porcelain fixtures shall be white.

G. It is the intent of this Section of the specifications to provide complete, operable, adjusted, clean plumbing fixtures as shown and specified which are free of leaks, noise, air, vibration and waterflow fluctuations.

H. Units shall be installed as indicated and in conformance with the manufacturer's recommendations. Coordinate the actual units to be provided with all trades.

I. All plumbing fixtures shall be free of leaks, provided completely finished, trimmed, adjusted, cleaned and ready for use. They shall be properly secured to the structure by the use of thru-bolting, backplates, carriers, expansion shields (for floor mounting only) or toggle bolts.

J. The units shall be cleaned, tested and field-adjusted to provide optimum flow and drainage.

15800 AIR DISTRIBUTION DEVICES

A. This Section 15800 and the accompanying drawings cover the provisions of all labor, equipment, appliances and materials, and performing all operations in connection with the construction and installation of air distribution devices as specified herein and as shown.

B. It is the intent of this Section of the specifications to provide complete, operable, adjusted air distribution devices as shown and specified which are free of excessive noise, vibration and airflow fluctuations.

C. All air distribution devices shall be selected in accordance with the following minimum criteria unless otherwise noted below or on the drawings: 1. Method of mounting shall be compatible with the ceiling, wall or duct surface which it mounts on or in; i.e. in-line, surface mounting, plaster frame, duct collar, etc. The architectural drawings shall be referenced to determine the mounting method for each device. All flanges on surface mounted devices shall be provided with a gasket; 2. Finish of all ceiling mounted devices shall be selected to match the color of the adjacent ceiling. Finish of all wall mounted devices shall be primer which is compatible with the finish coating specified for the adjacent wall; finish coat will be applied under Division 9.

D. The basis of design is Titus. Any proposed substitutions shall be proven equal in all respects to the equipment specified as the basis of design. Any modifications to ductwork, controls, ceilings, building structure, etc., that result from any substitution shall be coordinated with all trades. This coordination shall occur before delivery of equipment and any modifications shall be performed without incurring additions to the Contract.

E. Acceptable manufacturers are Price, Carnes, and Metal Aire, provided that their units, performance, appearance and physical characteristics are equal in all respects for this specific project.

F. Ceiling diffusers (CD) shall be perforated face diffusers equipped with fully adjustable pattern controls, capable of providing one-way, two-way, two-way corner, three-way, and four-way air patterns; Titus PAS. Diffuser performance data shall be in accordance with ADC equipment test code 162R4. The perforated face shall be hinged for easy access to pattern controls and duct accessories. The maximum NC level at design airflow shall not exceed 35 when measured in a direct field 5'-0" from the face of the device. Diffusers to be 24"x24" unless noted on drawings.

G. Not Used.

H. Return Air Grilles (RAG) shall be hollow core, perforated face, lay-in type, selected to match the CDs; Titus PAR, 24"x24" face, 22"x22" neck (unless otherwise noted). Performance data shall be in accordance with ADC 1062R4. All other characteristics shall be equal to the ceiling diffusers.

I. Supply Slot Diffusers (SD) shall be equipped with an individually adjustable pattern controller for each slot to insure full 180 degree air pattern; Titus TBD-80 slot diffuser with two (2), one and one half inch (1-1/2") slots. The diffuser shall be constructed of 24 gauge galvanized steel with inlet size and length as indicated. Each SD shall be provided with a lined steel plenum with tappings for round duct connections as indicated. Maximum NC level shall not exceed 35 at design airflow. Liner shall conform to NFPA 90A 25/50 requirements.

J. Not Used.

K. Not Used.

L. Not Used.

M. Not Used.

N. Not Used.

O. Not Used.

P. Not Used.

Q. Not Used.

R. Air distribution devices shall be installed as indicated and in conformance with the manufacturer's recommendations. The color, frame and border types shall be coordinated with Architectural requirements and shall be selected to install in the finished surface indicated.

S. Grilles, registers and diffusers shall be tested and adjusted to provide the scheduled air flow capacities.

T. All adjustable air distribution devices located within three feet of any wall shall be set to blow directly away from, or parallel to, the wall.

U. In all slot diffuser applications, the inactive sections of the slot shall be finished with perforated steel, painted flat black, selected to match the CDs. These sections shall be open to the plenum as a return air path. The perforated plate shall have 50% free area, minimum.

15840 DUCTWORK

A. This Section 15840 and the accompanying drawings cover the provisions of all labor, equipment, appliances and materials and performing all operations in connection with the construction of the ductwork systems as specified herein and as shown. These systems include, but are not limited to, the following:

1. Supply air ductwork
2. Return, transfer and relief air ductwork
3. Exhaust ductwork

B. It is the intent of this Section of the specifications to provide a complete operable duct system as shown and specified which is reasonably airtight, free of noise, vibration and sweating, and fabricated so as to fit into the space allotted and to exhibit a minimum resistance to airflow.

C. Ductwork shall be provided in strict accordance with the first edition – 1985 – of the SMACNA HVAC Duct Construction Standards – Metal and Flexible, NFPA No. 90A, 90B, 91 and 96, and UL 181.

D. Ductwork dimensions shown are net, clear, inside dimensions with no allowance shown for duct liner. All ductwork specified to be lined shall be 2" larger than shown in each dimension to compensate for the liner. Ductwork shall be square, rectangular, round, spiral or flat oval as noted. Conversion of duct shapes and sizes shown shall be accomplished without increasing air velocities or friction losses and is subject to prior approval by the Architect.

15840 DUCTWORK CONTINUED

E. Elbows shall be either full radius type (inside radius equal to duct width), five-gore radiused flat-oval type or, in low pressure systems only, mitered with double-thickness turning vanes.

F. Abrupt changes in duct sizes and shapes shall not be permitted. The total angle of diverging transitions shall be not more than 15 degrees; converging transitions shall be not more than 30 degrees unless otherwise noted or required due to structural constraints.

G. Offsets, transitions, rises and drops are not individually called out on the design drawings. They shall be provided as required to fit the ductwork into the allocated spaces.

H. Transition rectangular ductwork on bottom and sides. Maintain top of ductwork level and as high as possible.

I. All supply air ductwork between the VAV self-contained packaged rooftop unit and the terminal units shall be constructed for 3" WC static pressure class at 4000 FPM velocity with Class A seals and is herein defined as "medium-pressure" ductwork. All other ductwork shall be constructed for standard 1" WC static pressure class at 2500 FPM with Class C seals and is herein defined as "low pressure ductwork."

J. Ductwork for supply, return, exhaust and relief of comfort conditioned and outside air shall be galvanized sheetmetal. Galvanized sheetmetal shall be lock-forming grade G90-ASTM A 525 hot dip galvanized steel sheets. Sheetmetal shall be galvanized on each side with not less than 1.25 ounces of zinc per square foot.

K. Spiral duct shall be utilized for all flat-oval and round ductwork in medium and high-pressure systems. Spiral duct shall be the product of United McGill Corporation, R.V. Money or an approved equal. Spiral ribbed duct is not acceptable.

L. Access panels shall be secured to the duct in a similar manner to the prescribed in NFPA 96 for the hood-to-duct connection.

M. Manual Volume Dampers: Single blade butterfly dampers are acceptable up to 12" round or 12" x 12" square. Dampers larger than these dimensions shall be multi-blade type. Single blade dampers shall be constructed of 16 gauge or heavier galvanized sheetmetal. No multi-blade damper blade shall exceed 8" in width. All multiple blade dampers shall be constructed of 16 gauge galvanized steel or heavier. The damper frame shall be 16 gauge or heavier. The damper action shall be opposed-blade type. Each blade shall pivot on a 1/2" cadmium plated, cold-rolled steel axle which pivots within self-lubricating, oilite bronze bearings. The top and bottom edges of each rectangular damper blade shall be crimped for stiffness. The operating rod for all dampers shall be extended outside the damper frame for attachment of an operator. Each operator shall have a position indicator and locking quadrant. All dampers utilized for introduction of outside air shall have flexible, gasketed edge and end seals. The leakage rate shall be less than 4 CFM per sq. ft. of free area against a 1" W.G. differential pressure, based on a nominal 48" x 48" damper size. Manual volume dampers shall be as manufactured by Louvers & Dampers, Inc. or an approved equal.

N. Fire dampers shall be UL-listed and labelled for 1 1/2 hours and shall be provided with 160 degrees F. links. Dampers installed within ducts shall be Type B or Type C with the blades out of the airstream. Areas indicated shall be net, clear, open areas.

O. Splitter dampers shall be provided at all low-pressure ductwork branches. All low-pressure ductwork branches shall be radiused or 45 degree take-offs; straight taps are unacceptable. The length of the damper blade shall be the same as the width of the widest duct section at the split, but in no case shall blade length be less than 12". Each operator rod shall have a locking swivel joint.

P. Flexible ductwork shall be Class 1, UL 181 air duct and meet NFPA 90A and 90B Standards. The internal duct surface shall be acoustically rated, black CPE bonded to a coated steel wire helix. The external jacket shall be a fiberglass, bi-directional reinforced, reinforced vapor barrier with a standing, triple ply seam. Fiberglass insulation shall be provided between the duct surface and the jacket to achieve a maximum thermal conductance of 0.23 BTU/Hr./sq. ft./degree F. at 75 degrees F. mean. Flexible ductwork shall be suitable for 10" W.G. positive pressure and 1" W.G. negative pressure. Flexible ductwork, insulation and insulation cover shall be suitable for ceiling return air plenum installation and shall comply with all applicable codes and standards regarding such ceiling plenum installations. Flexible duct shall be Thermaflex M-KE or an approved equal.

Q. The maximum allowable installed length of flexible ductwork shall be 8'-0" on low-pressure supply air systems limited to short runouts and end of runs connected to round neck supply diffusers and registers, 4'-0" on medium and high-pressure supply air systems limited to the runouts from the sheetmetal ductwork to each terminal unit, and 2'-0" on connections from round neck grilles to sheetmetal ductwork on return, exhaust and transfer ductwork.

R. Provide a spin-in fitting with integral scoop and volume damper at all flexible run-out connections in low-pressure supply air ductwork only.

S. Provide flexible duct connections at the inlet and outlet of each belt-driven fan, indoor unit, fan coil unit, air handling unit, etc., and at all other locations indicated. Flexible connections shall be fabricated from a glass fabric coated on both sides with neoprene. Minimum weight shall be 30 oz. per sq. yard.

T. Duct hardware shall be as manufactured by Young Regulator or an approved equal.

U. A duct access door shall be provided at each fire damper. Access doors shall be designed for 1.5 times the pressure of the duct in which they are mounted. Access doors shall be of sufficient size to provide access to the dampers for resetting the blades and replacing the links. Access doors in medium and high-pressure ductwork shall be installed downstream of fire dampers and shall be implosion type. Where access is provided through gypsum board walls or ceilings, furnish access door for installation under Division 9. Each door shall match the fire-rating of the wall or ceiling indicated.

V. Duct liner shall be one inch thick, 1 1/2 lb. density (3 lb. density on medium- and high-pressure supply air systems) fibrous glass with one face coated with a black fire retardant compound. The permanent composite fire and smoke hazard rating of the liner shall be stenciled on the liner face and shall be:

1. Maximum flame spread 25
2. Maximum smoke developed 50

W. Duct insulation shall be 2" thick, minimum 3/4 lb. density fiberglass with an FSKL 0.00035" thick aluminum foil jacket, reinforced with fiberglass scrim. Thermal conductivity shall be a maximum of K = 0.24 at 75 degrees F. mean temperature. Insulation shall be Benjamin Foster 85-20. Tape shall be aluminum foil and shall be SMACNA listed and labeled.

X. The composite NFPA 90A and 90B, ASTM E84, UL rating of the installed insulation shall not exceed 25/50.

Y. Ductwork shall be installed in strict accordance with SMACNA, UL and NFPA standards.

Z. Duct liner shall be provided for the following minimum distances or through the first elbow(s) or as otherwise indicated on the drawings, whichever is greater, downstream of each unit indicated below:

1. Packaged rooftop unit – 25 feet

AA. Duct liner shall also be provided throughout all return air, transfer and plenums.

BB. Duct liner shall be cut to provide overlapped and compressed longitudinal corner joints. Liner shall be installed with the coated surface facing the air stream. Duct liner shall be adhered to the ductwork with a 100% coverage of the sheet metal surfaces using a fire retardant adhesive applied by spraying. Coat all exposed leading edges and all transverse joints with fire retardant adhesive. The liner shall be additionally secured using metal pins welded to the duct and speed washers. All leading edges shall be secured with sheet metal airfoils.

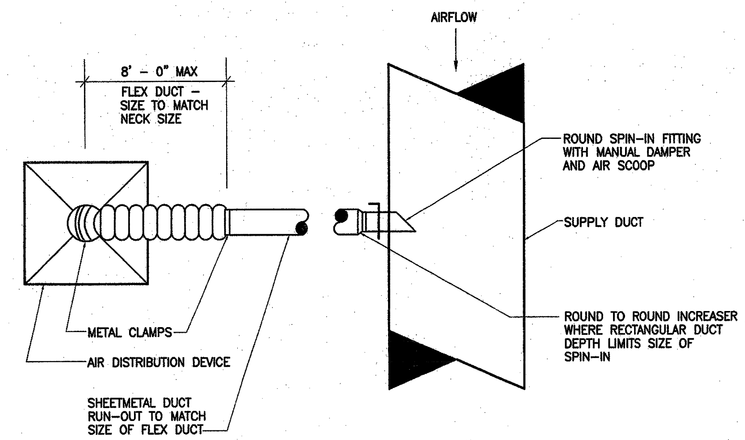
CC. All supply air ductwork which is not lined shall be insulated. Insulation shall be cut slightly longer than circumference of duct to insure full thickness at corners. All insulation shall be applied with edges tightly banded. Insulation shall be adhered to duct with fire resistant adhesive. Adhesive shall be applied so that insulation conforms to duct surfaces uniformly and firmly. In addition to the

ABBREVIATIONS

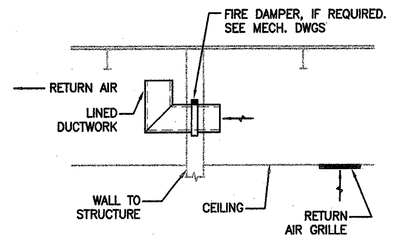
A/C	ABOVE CEILING
AD	ACCESS DOOR
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AUTO	AUTOMATIC
AC	AIR CONDITIONING
AHU	AIR HANDLING UNIT
ARP	ACID RESISTANCE PIPING
BAL	BALANCING
B/F	BELOW FLOOR
B/G	BELOW GRADE
BHP	BRAKE HORSEPOWER
BCO	BASE CLEANOUT
CW	COLD WATER (DOMESTIC)
CO	CLEANOUT
DN	DOWN
DR	DRAIN
do	DITTO
DWG	DRAWING
EA	EACH
ECC	ECCENTRIC
EFF	EFFICIENCY
EOD	EMERGENCY OVERFLOW DRAIN
EWT	ENTERING WATER TEMPERATURE
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FLR	FLOOR
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FEET
G	GATE
GA	GAUGE
GPM	GALLONS PER MINUTE
GL	GLOBE
GCO	GRADE CLEANOUT
HD	HUB DRAIN
HP	HORSEPOWER
HTG	HEATING
HW	HOT WATER (DOMESTIC)
HWR	HOT WATER RETURN
HWRR	HOT WATER REVERSE RETURN
HWS	HOT WATER SUPPLY
ID	INSIDE DIMENSION
IN	INCHES
KW	KILOWATTS
LB	POUNDS
LWR	LOOP WATER RETURN
LWS	LOOP WATER SUPPLY
MIN	MINIMUM
MAX	MAXIMUM
MFR	MANUFACTURER
NC	NORMALLY CLOSED
NG	NATURAL GAS
NFGH	NON-FREEZE GROUND HYDRANT
NFWH	NON-FREEZE WALL HYDRANT
NO	NORMALLY OPEN
NOM	NOMINAL
OD	OVERFLOW DRAIN
PSI	POUNDS PER SQUARE INCH
RAD	RADIUS
RED	REDUCER
RS	REFRIGERANT SUCTION
RTU	ROOFTOP UNIT
SAN	SANITARY
SQ	SQUARE
ST	STORM
TEMP	TEMPERATURE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VENT
VA	VALVE
VTR	VENT THRU ROOF
WC	WATER COLUMN
WHA	WATER HAMMER ARRESTOR
WT	WEIGHT
W	WASTE

LEGEND

	CEILING DIFFUSER
	CEILING RETURN AIR GRILLE or EXHAUST GRILLE
	SIDE-WALL or DUCT MOUNTED REGISTER
	SLOT DIFFUSER
	MANUAL VOLUME DAMPER
	FIRE DAMPER
T	THERMOSTAT
H	HUMIDISTAT
N	NIGHT SET-BACK
M	MOTOR OPERATED DAMPER
	EXISTING WORK
	NEW WORK
	WORK TO BE REMOVED
R	FLOOR DRAIN
	HOSE BIBB
	FLOOR CLEAN-OUT
	WALL CLEAN-OUT
	CONNECT TO EXISTING
SD	SMOKE DETECTOR
CO2	CO2 SENSOR

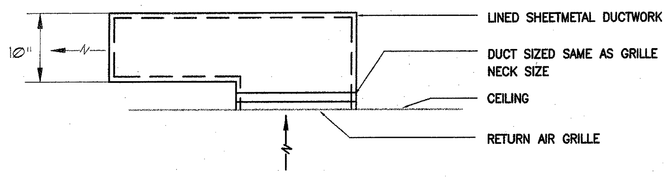


1 / M0.2 DIFFUSER CONNECTION DETAIL
NO SCALE



4 / M0.2 RETURN AIR BOOT DETAIL
NO SCALE

NOTES:
SEE MECH DWGS FOR DUCT SIZE. DUCT SIZE GIVEN IN SQUARE FEET OF FREE AREA. CONTRACTOR TO COORDINATE DUCT SIZE WITH ALL OTHER EQUIPMENT IN PLENUM.



2 / M0.2 RETURN AIR GRILLE DETAIL
NO SCALE

NOTE: LINED RAG ONLY IN CONFERENCE ROOMS.

ELECTRIC HEATER SCHEDULE

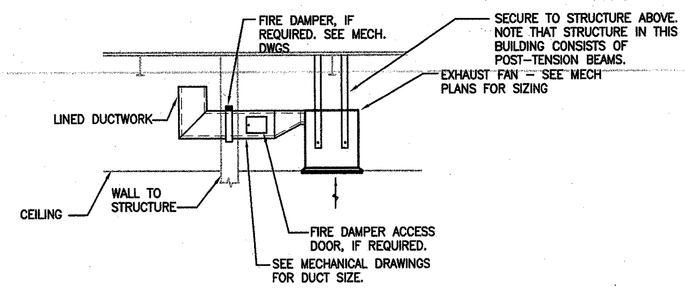
I.D. TAG	DESCRIPTION	CAPACITY KW	MIN CFM	FAN HP	VOLTS/ PHASE	BASIS OF DESIGN	REMARKS
EWH-1-C1	WALL HEATER	4.8	---	---	277/1	QMARK AWH4000	①

① PROVIDE UNIT WITH DISCONNECT AND INTEGRAL THERMOSTAT.

FAN SCHEDULE

I.D. TAG	CAPACITY (CFM)	S.P. (IN. WG)	MOTOR H.P.	DRIVE	VOLTS/ PHASE	MAXIMUM FAN RPM	MAXIMUM NOISE	TYPE OF FAN	BASIS OF DESIGN	REMARKS
EF-1-C1	84	0.125	F	DIRECT	120/1	900	1.4 SONES	CEILING EXHAUST	GREENHECK SP-A90	①②

① PROVIDE LINE VOLTAGE THERMOSTAT.
② FAN MUST BE CAPABLE OF 24/7 OPERATION.



3 / M0.2 EXHAUST FAN DETAIL
NO SCALE

ISSUE HISTORY		
NO.	DATE	DESCRIPTION
1	01.17.07	ISSUED FOR PERMIT/CONSTRUCTION

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REVISIONS		
NO.	DATE	DESCRIPTION

CHOATE CONSTRUCTION
OFFICES AT BELLE HALL
1671 BELLE ISLE DRIVE, SUITE 100
MT. PLEASANT, SOUTH CAROLINA 29464

KOHL GRAMIGNA MONARDO ARCHITECTS, P.C.
655 Engineering Drive, Suite 150, Norcross, Georgia 30092 770-448-2743 www.kgmarchitects.com

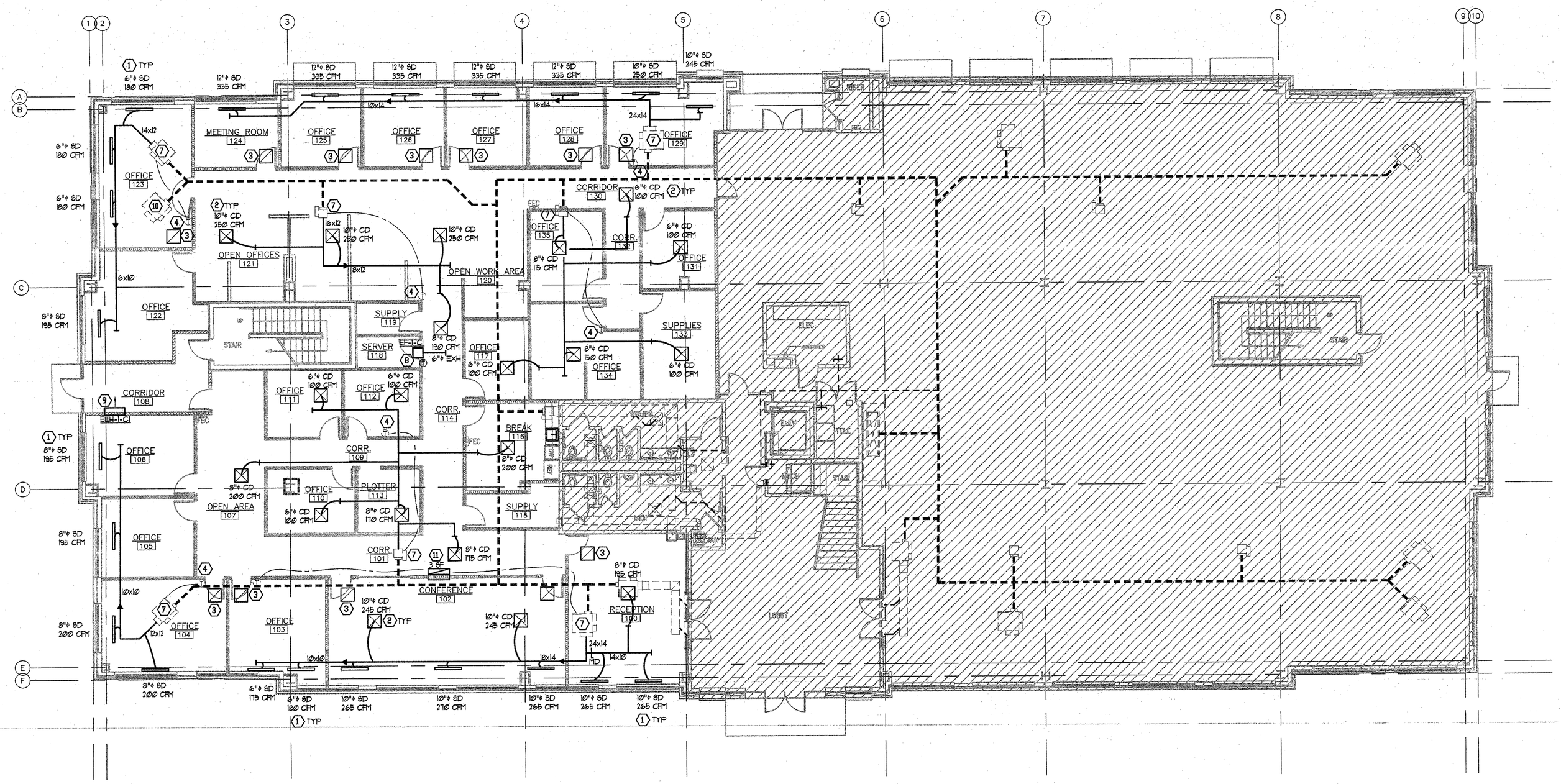
SEAL
SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 18964 JAIME ALLISON FRY

KGM ARCHITECTS

ISSUED FOR CONSTRUCTION

SHEET TITLE
LEGEND, NOTES, SCHEDULES, & DETAILS - MECHANICAL

PROJECT NO. 6.200.210 BW&A NO. 07025
SHEET NUMBER M0.2
ISSUE DATE 01.17.07
OF



1 M-1 FIRST FLOOR PLAN – MECHANICAL
1/8"=1'-0"

GENERAL NOTES:

1. PLENUM RETURN AIR SYSTEM IS BEING USED. COMBUSTIBLE MATERIALS PROHIBITED IN PLENUM.
2. INSTALL DUCTWORK TIGHT TO STRUCTURE.
3. SEE DETAIL 1/M0.2 FOR CEILING DIFFUSER CONNECTION.

KEY NOTES:

(1) PROVIDE AND INSTALL NEW BASE BUILDING STANDARD SLOT DIFFUSER. NECK SIZE AND AIRFLOW SHALL BE AS INDICATED.

(2) PROVIDE AND INSTALL NEW BASE BUILDING STANDARD CEILING DIFFUSER OF NECK SIZE AND AIRFLOW SHOWN.

(3) PROVIDE AND INSTALL NEW BASE BUILDING RETURN AIR GRILLE. ALL CONFERENCE AND MEETING ROOMS SHALL HAVE LINED SHEETMETAIL RETURN BOOT AND 4" LINED TRANSFER DUCTWORK FOR SOUND ATTENUATION, SEE DETAIL 2/M0.2.

(4) RELOCATE EXISTING THERMOSTAT TO THIS LOCATION. COORDINATE LOCATION WITH ARCHITECT.

(5) PROVIDE AND INSTALL BASE BUILDING STANDARD TERMINAL UNIT. PROVIDE AND INSTALL NEW 7-DAY PROGRAMMABLE THERMOSTAT IN THE LOCATION SHOWN. COORDINATE THERMOSTAT LOCATION WITH ARCHITECT.

(6) PROVIDE AND INSTALL BASE BUILDING STANDARD TERMINAL UNIT. PROVIDE AND INSTALL NEW 7-DAY PROGRAMMABLE THERMOSTAT IN THE LOCATION SHOWN. COORDINATE THERMOSTAT LOCATION WITH ARCHITECT. PRICE AS DEDUCT ALTERNATE: SERVE CONFERENCE ROOM FROM EXISTING RECEPTION TERMINAL UNIT. DUCTWORK TO BE SIZED AS APPROPRIATE. COORDINATE WITH DIVISION 16.

(7) BALANCE EXISTING TERMINAL UNIT TO CONNECTED AIRFLOW.

(8) PROVIDE AND INSTALL FAN AS SCHEDULED ON M0.2.

(9) PROVIDE AND INSTALL ELECTRIC WALL HEATER AS SCHEDULED ON M0.3. COORDINATE COLOUR AND LOCATION WITH ARCHITECT.

(10) TERMINAL UNIT SHALL BE CAPPED ABOVE CEILING.

(11) PROVIDE AND INSTALL RETURN AIR BOOT OF INDICATED FREE AREA. SEE 4/M0.2.

TERMINAL UNIT KEY

POWERED INDUCTION UNITS (PIU):

– UNIT NUMBER
– COOLING CAPACITY (CFM)
– HEATING CAPACITY (IN KW FOR ELECTRIC HEAT) (IN MBH FOR HOT WATER HEAT)

NOTE: FAN SHALL BE SIZED AT 160 TO 210 CFM PER KW OR 50 TO 60 CFM PER MBH. FAN SIZE SHALL NOT EXCEED A MAXIMUM OF 120% OF COOLING CFM. FAN SHALL BE SELECTED TO OPERATE AT 0.35" W.C. EXT. S.P.

VARIABLE AIR VOLUME UNITS (VAV):

– UNIT NUMBER
– COOLING CFM

NOTES:
1. PIU'S AND VAV'S SHALL NOT BE LOCATED ON WINDOW MULLIONS OR COLUMN LINES.
2. PIU'S LOCATED IN LOBBIES AND CORE AREAS SHALL BE CONSTANT VOLUME.
3. PIUS SERVING TREATMENT AREAS SHALL BE SERIES TYPE, CONSTANT VOLUME.

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SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 18885
JAMIE ALLISON

KGM ARCHITECTS

ISSUED FOR CONSTRUCTION

SHEET TITLE
FIRST FLOOR – MECHANICAL PLAN

PROJECT NO.	SHEET NUMBER
6.200.210 BW&A NO. 07025	M-1
ISSUE DATE 01.17.07	OF

ABBREVIATIONS

A/C	ABOVE CEILING
AD	ACCESS DOOR
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AUTO	AUTOMATIC
AC	AIR CONDITIONING
AHU	AIR HANDLING UNIT
ARP	ACID RESISTANCE PIPING
BAL	BALANCING
B/F	BELOW FLOOR
B/G	BELOW GRADE
BHP	BRAKE HORSEPOWER
BCO	BASE CLEANOUT
CW	COLD WATER (DOMESTIC)
CO	CLEANOUT
DN	DOWN
DR	DRAIN
do	DITTO
DWG	DRAWING
EA	EACH
ECC	ECCENTRIC
EFF	EFFICIENCY
EOD	EMERGENCY OVERFLOW DRAIN
EWT	ENTERING WATER TEMPERATURE
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FLR	FLOOR
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FEET
G	GATE
GA	GAUGE
GPM	GALLONS PER MINUTE
GL	GLOBE
GCO	GRADE CLEANOUT
HD	HUB DRAIN
HP	HORSEPOWER
HTG	HEATING
HW	HOT WATER (DOMESTIC)
HWR	HOT WATER RETURN
HWRR	HOT WATER REVERSE RETURN
HWS	HOT WATER SUPPLY
ID	INSIDE DIMENSION
IN	INCHES
KW	KILOWATTS
LB	POUNDS
LWR	LOOP WATER RETURN
LWS	LOOP WATER SUPPLY
MIN	MINIMUM
MAX	MAXIMUM
MFR	MANUFACTURER
NC	NORMALLY CLOSED
NG	NATURAL GAS
NFGH	NON-FREEZE GROUND HYDRANT
NFWH	NON-FREEZE WALL HYDRANT
NO	NORMALLY OPEN
NOM	NOMINAL
OD	OVERFLOW DRAIN
PSI	POUNDS PER SQUARE INCH
RAD	RADIUS
RED	REDUCER
RS	REFRIGERANT SUCTION
RTU	ROOFTOP UNIT
SAN	SANITARY
SQ	SQUARE
ST	STORM
TEMP	TEMPERATURE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VENT
VA	VALVE
VTR	VENT THRU ROOF
WC	WATER COLUMN
WHA	WATER HAMMER ARRESTOR
WT	WEIGHT
W	WASTE

WATER HEATER SCHEDULE

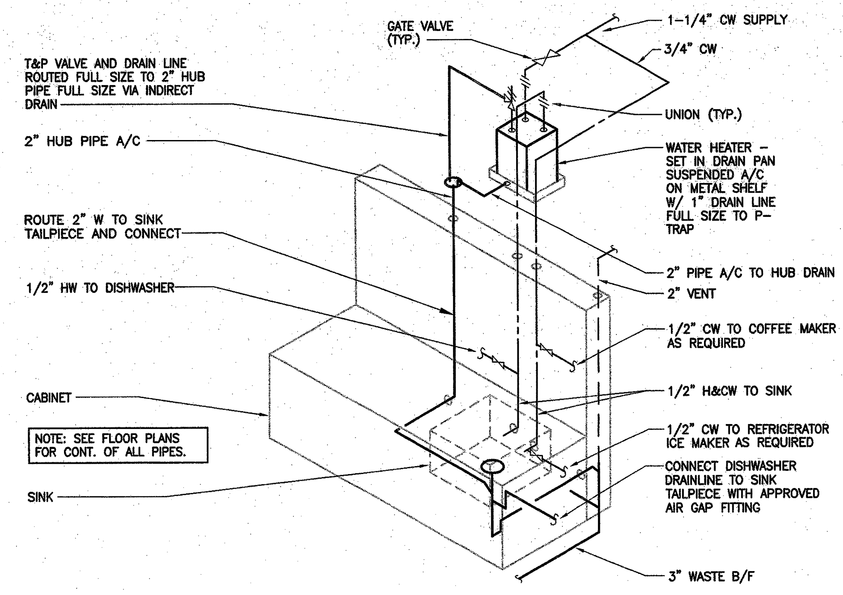
I.D. TAG	TYPE OF WATER HEATER	TANK CAPACITY (GALLONS)	RECOVERY AT 100°F RISE (GPH)	POWER INPUT	ELEC. CHAR. (VOLTS/PHASE)	BASIS OF DESIGN	REMARKS
WH-1-C1	ELECTRIC	10	10	2.5 kW	277/1	AO SMITH DEL-10	

PLUMBING LEGEND

———	COLD WATER
———	HOT WATER
———	HOT WATER RECIRCULATION
– – –	VENT
———	SANITARY WASTE
———	GAS
	WORK TO BE REMOVED
R	FLOOR DRAIN
	HOSE BIBB
	FLOOR CLEAN-OUT
	WALL CLEAN-OUT
	GATE VALVE
	BALL VALVE

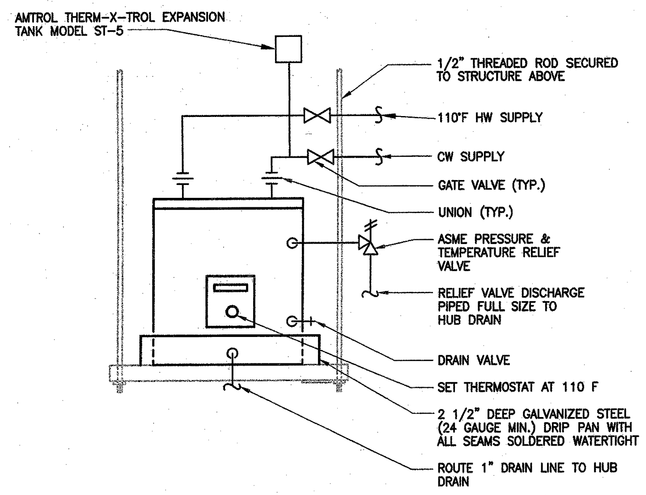
FIXTURE SCHEDULE

DESCRIPTION	WASTE	VENT	CW	HW
SINK (P-1)	3"	2"	1/2"	1/2"



1 / P0.1 BREAK ROOM SINK DETAIL

NO SCALE



NOTE: SET MOUNTING HEIGHT AS HIGH AS POSSIBLE.

NOTE: SHELF SHALL BE CONSTRUCTED TO SUPPORT THE WATER HEATER CAPACITY INDICATED. SEE FLOOR PLANS FOR LOCATION.

2 / P0.1 WATER HEATER DETAIL

NO SCALE

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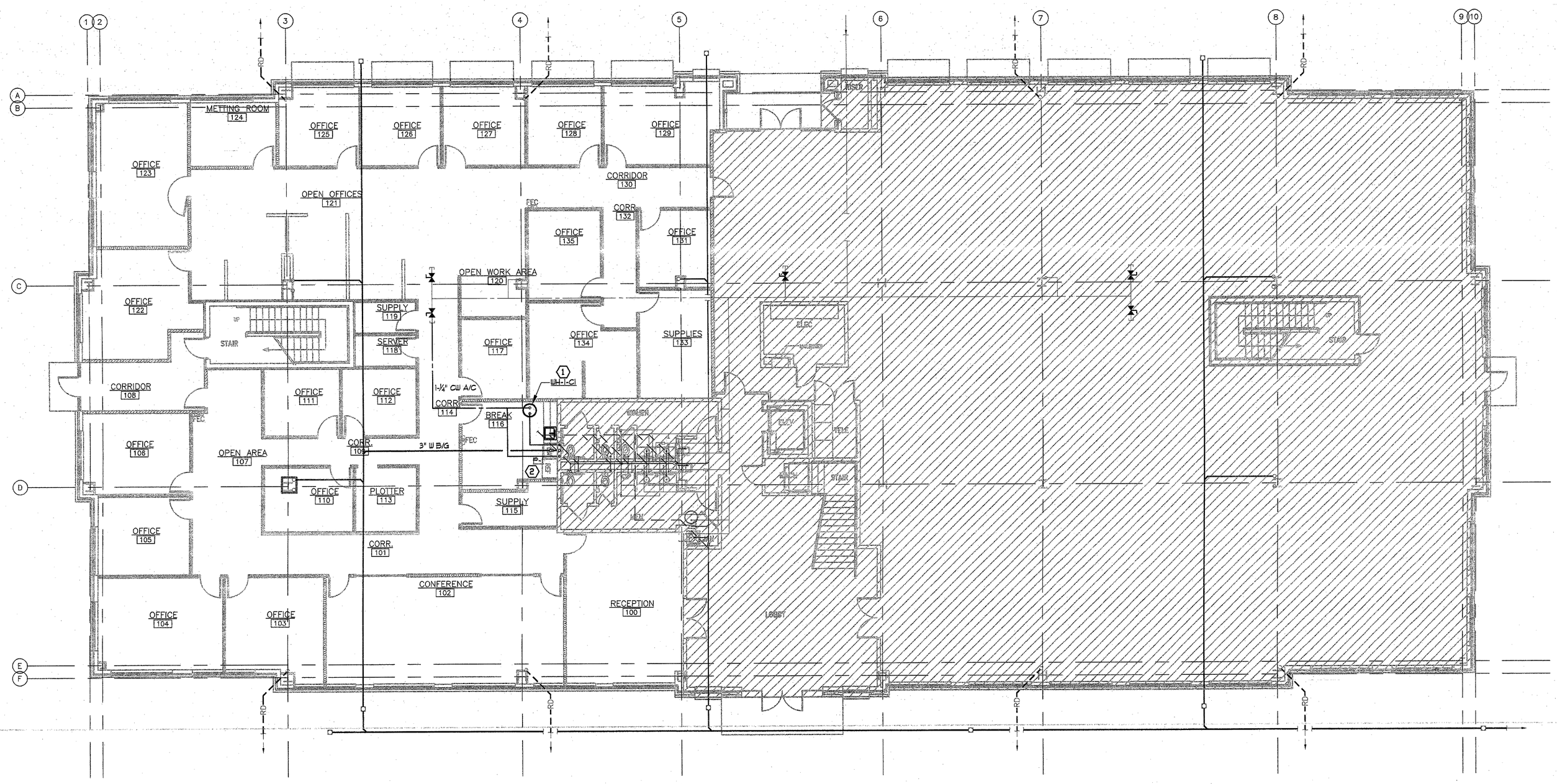
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KGM ARCHITECTS

ISSUED FOR CONSTRUCTION

SHEET TITLE
LEGEND, NOTES, SCHEDULES, & DETAILS - PLUMBING

PROJECT NO.	SHEET NUMBER
6.200.210 BW&A NO. 07025	P0.1
ISSUE DATE 01.17.07	OF



1 P-1 FIRST FLOOR PLAN – PLUMBING
1/8"=1'-0"

GENERAL NOTES:

1. PLENUM RETURN AIR SYSTEM IS BEING USED. COMBUSTIBLE MATERIALS PROHIBITED IN PLENUM.

KEY NOTES:

(1) PROVIDE AND INSTALL WATER HEATER AS SCHEDULED ON P0.1. SEE INSTALLATION DETAIL 2/P0.1.

(2) FIXTURE P-1 SHALL BE SINGLE COMPARTMENT, 18 GAUGE STAINLESS STEEL WITH SOUND-DEADENING, 22" X 22" OUTSIDE DIMENSIONS, 19" X 16" INSIDE DIMENSIONS, 6-½" DEEP; ELKAY MODEL LRAD 2222. FAUCET PUNCHING SHALL BE 3 HOLE AND SHALL BE COMPLETE WITH KOHLER MODEL K-15173, SINGLE HANDLE FAUCET WITH 10" SWING SPOUT, AND HAND SPRAY. PROVIDE STAINLESS STEEL REMOVABLE CRUMB CUP STRAINERS AND DRAINS COMPLETE WITH SERVICE STOPS, TAILPIECES, P-TRAP AND ALL TRIM. SEE 1/P0.1 FOR CONNECTION DETAIL. CONNECT 2" VENT TO EXISTING VENT LINE IN THIS AREA.

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SHEET TITLE
FIRST FLOOR – PLUMBING PLAN

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ISSUE DATE 01.17.07	OF