

#### ADDENDUM NO. 1

ISSUED October 16, 2018

Fannin County Courthouse Phase II Interior & Exterior Restoration

Project No. #1737

ARCHITEXAS 1907 Marilla St. Second Floor Dallas, Texas 75201

214.748.4561

This Addendum forms a part of the Contract Documents and modifies the Construction Drawings and Project Manual dated January 23, 2018 as noted below.

BY:

	Bid Set Drawings	
AD1-01	A0.01	Replace A0.01 with attached.
AD1-02	L1.00	Replace L1.00 with attached.
AD1-03	L2.00	Replace L2.00 with attached.
AD1-04	L3.00	Replace L3.00 with attached.
AD1-05	C3.00	Replace C3.00 with attached.
AD1-06	C4.00	Replace C4.00 with attached.
AD1-07	C5.00	Replace C5.00 with attached.
AD1-08	C7.00	Replace C7.00 with attached.
AD1-09	A1.00	Replace A1.00 with attached.
AD1-10	A1.03	Replace A1.03 with attached.
AD1-11	A1.06	Replace A1.06 with attached.
AD1-12	A1.08	Replace A1.08 with attached.
AD1-13	A1.09	Replace A1.09 with attached.



AD1-14	A1.11	Replace A1.11 with attached.
AD1-15	A1.12	Replace A1.12 with attached.
AD1-16	A1.13	Replace A1.13 with attached.
AD1-17	A1.14	Replace A1.14 with attached.
AD1-18	A1.15	Replace A1.15 with attached.
AD1-19	A2.01	Replace A2.01 with attached.
AD1-20	A2.02	Replace A2.02 with attached.
AD1-21	A2.03	Replace A2.03 with attached.
AD1-22	A2.04	Replace A2.04 with attached.
AD1-23	A2.05	Replace A2.05 with attached.
AD1-24	A2.06	Replace A2.06 with attached.
AD1-25	A2.07	Replace A2.07 with attached.
AD1-26	A3.01	Replace A3.01 with attached.
AD1-27	A3.02	Replace A3.02 with attached.
AD1-28	A4.08	Replace A4.08 with attached.
AD1-29	A4.09	Replace A4.09 with attached.
AD1-30	A4.11	Replace A4.11 with attached.
AD1-31	A4.13	Replace A4.13 with attached.
AD1-32	A6.01	Replace A6.01 with attached.
AD1-33	A6.07	Replace A6.07 with attached.
AD1-34	A6.10	Replace A6.10 with attached.
AD1-35	A7.03	Replace A7.03 with attached.
AD1-36	A7.07	Replace A7.07 with attached.
AD1-37	A7.08	Replace A7.08 with attached.
AD1-38	A7.09	Replace A7.09 with attached.
AD1-39	SD2.01	Replace SD2.01 with attached.
AD1-40	SD2.02	Replace SD2.02 with attached.

AD1-41	S2.00	Replace S2.00 with attached.
AD1-42	S2.06	Replace S2.06 with attached.
AD1-43	S2.10	Replace S2.10 with attached.
AD1-44	S3.01	Replace S3.01 with attached.
AD1-45	S5.11	Replace S5.11 with attached.
AD1-46	M1.01	Replace M1.01 with attached.
AD1-47	M2.01	Replace M2.01 with attached.
AD1-48	M2.02	Replace M2.02 with attached.
AD1-49	M2.03	Replace M2.03 with attached.
AD1-50	M2.04	Replace M2.04 with attached.
AD1-51	M3.00	Replace M3.00 with attached.
AD1-52	M3.01	Replace M3.01 with attached.
AD1-53	M3.02	Insert M3.02 with attached.
AD1-54	M4.01	Replace M4.01 with attached.
AD1-55	M6.01	Replace M6.01 with attached.
AD1-56	P2.01	Replace P2.01 with attached.
AD1-57	P2.02	Replace P2.02 with attached.
AD1-58	P2.03	Replace P2.03 with attached.
AD1-59	P4.02	Replace P4.02 with attached.
AD1-60	P5.01	Replace P5.01 with attached.
AD1-61	E1.01	Replace E1.01 with attached.
AD1-62	E2.03	Replace E2.03 with attached.
AD1-63	E2.05	Replace E2.05 with attached.
AD1-64	E4.01	Replace E4.01 with attached.
AD1-65	E4.02	Replace E4.02 with attached.

Dallas | Austin www.architexas.com

#### Project Manual

AD1-66	00 0105	Replace Section 00 0105 Table of Contents page 3 with attached.
AD1-67	05 5000	Replace Section 05 5000 Metal Fabrications with attached.
AD1-68	07 3116	Replace Section 07 3116 Metal Shingles with attached.
AD1-69	07 5400	Replace Section 07 5400 Thermoplastic Membrane Roofing with attached.
AD1-70	07 7233	Insert Section 07 7233 Roof Hatches with attached.
AD1-71	08 5200	Replace Section 08 5200 Wood Windows with attached.
AD1-72	14 4200	Replace Section 14 4200 Wheel Chair Lifts with attached.
AD1-73	23 8126	Replace Section 23 8126 Split-System Air Conditioners with attached.
AD1-74	28 0800	Replace Section 28 0800 Security System Acceptance Testing with attached.
AD1-75	28 1300	Replace Section 28 1300 Access Control & Alarm Monitoring System with attached.
AD1-76	28 1600	Replace Section 28 1600 Intrusion Detection System with attached.
AD1-77	28 2300	Replace Section 28 2300 Video Surveillance System with attached.
	Bidder Questions	
AD1-78		The attached Pre-Bid Conference sign-in sheet and bidder questions are hereby made part of the Contract & bidding documents.
AD1-79		<ul> <li>Question:</li> <li>What is the scope of A1- " During Construction:</li> <li>1. Perform additional paint discovery as directed by THC Representative.</li> <li>I am assuming the rest of this item 1.4 Art Conservator Responsibilities refers to the You'ld deer??</li> </ul>
		Answer: Additional paint discovery may occur if uncovered. The Art Conservator would also supervise the restoration of the vault door.
AD1-80		Question: Will City of Bonham require an engineered stamp drawing for the clock tower? Spec Section 10 7429, 1.2C states to provide stamped drawing if required.
		Answer: Yes

AD1-81	Question: I was looking at this project on Dodge for DH Pace and there are not any plans posted – can you tell me if any doors or hardware are being replaced and if so how many total?
	Answer: Plans and specs can be obtained from Fannin CCH on the County's website and the State Electronic Business Daily or from Architexas at <u>rbresson@architexas.com</u> . All new doors and hardware.
AD1-82	Question: We need a clarification for Spec 073116 Metal Shingles. Sub-section 2.3 ,A refers to shingle stamped to size and profile to match original shingles. We have not found the information for the original shingles in the documents. We also need to know if there is a different profile on the tower base and the dormers.
	Answer: Reference revised specification Section 073116 Metal Shingles and sheets A1.13, A7.09, and A7.10 for shingle types and locations.
AD1-83	Question: Plan Sheet A6.01 calls out for Rooms 213 & 215 to have wood wainscot but the elevation on Plan Sheet A4.11 references Room 213 and Plan Sheet A4.12 references Room 215 does not show wood wainscot. Can we assume there is no wainscot in these rooms?
	Answer: No wainscot in Rooms 213 and 215. Reference revised A6.01.
AD1-84	Question: What is the ul number that we are to use on the fireproofing and what Is to be used you show Cafco is Cafco 300 ok
	Answer: Apply fireproofing as required to achieve noted rating. Material requirements are identified in the Project Manual.
AD1-85	Question: What ul number and which product for Intumescent fireproofing is to be used
	Answer: Apply fireproofing as required to achieve noted rating. Material requirements are identified in the Project Manual.
AD1-86	Question: Exact color/manufacture/style/pattern of the main roof custom metal stamped shingles
	Answer: Reference revised specification Section 073116 Metal Shingles.

AD1-87	Question:
	Profile Detail / Attachment / fastening detail for the Aluminum Cornice (Provided
	by others) Installed by roofing contractor
	Answer:
	Details provided on sheet A1.14. Shop drawings with proposed installation
	details to be reviewed by the architect and structural engineer.
15/ 00	
AD1-88	
	Plans indicate NEW / EXISTING elevation lines on the elevation drawings, Will
	the downspouts be fully replaced?
	Answer:
	Yes
AD1-80	Question
AD1-89	What type / gouge / meterials will the inlaid gutters be febricated with?
	what type / gauge / materials will the initial gutters be fabricated with?
	Answer:
	Reference specification Section 076200 Sheet Metal Flashing and Trim.
AD1-90	Question
AD1-90	What color / manufacture will the motal fascial drip odge, exposed flashing's
	transitions, crickats be?
	Answer:
	Fascia and Chimney Flashing – Colonial White
	Drip Edge, Crickets, Ridges, Valleys, Roof Flashings – Colonial Red
AD1-91	Question:
	The tower will be provided and installed by a specialty contractor. Will there be
	ANY flashing's, or shingles installed by our scope as the possible roofing
	contractor?
	Answer:
	Roofer to include flashing and install between roof and tower base and roof
	and dormers
AD1-92	Question
AD1 02	The specifications call for an 80 MIL TPO roof system with a 30 year NDI
	warranty I do not see these roof areas called out on the plans. Where will this be
	installed? And if it will be used on this project. Would Mule-Hide a product made
	by Carlisle be allowed? It has the same specifications required since it is just a
	private label of Carlisle.
	Appwor
	Reference sheets A1 14 and 1 15. TPO to be installed at tower base. Mule-
	Hide may be submitted with a substitution form.
AD1-93	UUESTION: The project shows the decking and trusces to be removed and replaced with an
	all metal roof truss/deck system. Who will hick this un? (We will not hid
	installation of trusses, metal decking) And will only hid above deck substrates

	1. Will the metal decking have plywood installed over it?
	<ol> <li>Insulation? (R value)? Inickness?</li> <li>If above dock inculation is desired would a "Nail Base" (Factory)</li> </ol>
	manufactured POLY ISO laminated to 5/8" decking) be allowed?
	4. Will wood blocking/sheathing be picked up by framing contractor?
	Answer:
	1. Yes
	2. Blown Insulation specified at attic with R-Value of 20
	3. N/A
	4. Coordinate with GC
AD1-94	Question:
	Will onsite dumpsters/roll offs be provided by GC?
	A
	Answer:
	Coordinate with GC
AD1-95	Question:
	Will all four sides of the building be scaffolded by others to the roof eave?
	beyond?
	Answer:
	Coordinate with GC
AD1-96	Question
	Do you have a product cut sheet for the stamped metal shingles?
	Answer:
	Reference revised specification Section 073116 Metal Shingles
AD1-97	Question:
	Will the Aluminum cornice around the perimeter of the building also go up the
	rake/gable ends of the buildings and dormers?
	Answer:
	Yes, at gable locations. Dormers will be pre-fabricated.
AD1-98	Question
	I need to get the blind scope clarified. Note 10 in the general notes on the
	window schedule page A6.08 mentions blinds at typical windows. There are
	several windows that show to receive custom wood shutters, metal shutters and
	some are shown to have a laminated glass guard rail in front of the window.
	Other than the note 10 I can find no specific call out for blinds. Please clarify
	locations of blinds.
	Answer:
	Typical window to receive wood blinds including windows with metal shutters
	and windows with laminated glass guardrails.

AD1-99	Question:
	Is there a known process to remove black adhesive from existing stone exterior?
	Answer:
	Yes, reference Project Manual. Methodology is specified in Section 003144
	Masonry Conservation Report and Section 040344 Masonry Cleaning
AD1-100	Question:
	Does the \$14 million figure for project cost include abatement and Phase I?
	Answor
	Answer. Vec
	105
AD1-101	Question:
	Section 013592 – Art Conservator, will this be the responsibility of the
	Owner?
	Answer:
	NO
AD1-102	Question:
	Section 014001 – Historic Preservation Qualification Statement Form, will this
	form be required to be submitted at bid time?
	Answer:
	No
AD1-103	Question:
	provided as an allowance established by the Owner?
	provided as an anowance established by the owner?
	Answer:
	Reference County's response.
AD1-104	Question:
	Section 073116 – Metal Shingles, the section states that the new metal shingles
	shall match the existing. Where can the existing shingles that are to be matched
	iounu (
	Answer:
	Reference revised specification Section 073116 Metal Shingles
	· · · · · · · · · · · · · · · · · · ·
AD1-105	Question:
	Please extend deadline for asking questions. While we have tried to
	thoroughly review the documents and compile questions, it is inevitable
	that additional questions will come up as we continue to work through
	the scope.
	Answer
	No
AD1-106	Question:
	Metal roofing shingles – specifications say to custom stamp to match

	original shingles. Please provide more information on the original shingle such as detailed photographs and dimensions. If the original shingle is not available, please select a similar shingle from a manufacturer's productline.
	Answer: Reference revised specification Section 073116 Metal Shingles
AD1-107	Question: The specification calls for a 30 year warranty on the 80 mil TPO and the manufacturers typically only give 20 year warranties on that product. Please advise.
	Answer: Reference revised specification Section 075400 Thermoplastic Membrane Roofing
AD1-108	Question: What is the thickness and fastening pattern for the plywooddeck?
	Answer: Shown on General Notes on sheet S1.02.
AD1-109	Question: No specification for the metal gutter liner. Please provide material/gauge/etc.
	Answer: Reference specification Section 076200.
AD1-110	Question: Restoration of existing vault door – can you provide any information you have on the existing vault door and/or detailedphotographs?
	Answer: See attached photos. Door was purchased on E-Bay and is believed to be the original vault door to the building. It is currently being stored locally at a residence's barn and needs to be transported to a shop for restoration.
AD1-111	Question: Specification section 01-3592 Art Conservator, Item 1.4 Duties and Responsibilities calls for the conservator to perform additionalpaint discovery as directed. Can you please confirm what additional tests/analysis will be required?
	Answer: Additional paint discovery may occur if uncovered. The Art Conservator would also supervise the restoration of the vault door.
AD1-112	Question: Detail 1 on sheet A6.01 details a pattern for sheet flooring (linoleum). The finish schedule on that same sheet lists flooring types for each room, but no room is indicated to have sheet flooring. Where does the sheet flooring occur?

	Answer:
	Reference revised sheet A6.01. This information is also called noted on sheets A1.06 and A1.08
AD1-113	Question:
	Specification section 07-1700 Bentonite Waterproofing calls to use Cetco
	material. Cetco makes several bentonite products. We assume the product for
	this project would be Voltex DS. Pleaseconfirm.
	Answer:
	We assumed Swelltite unless manufacturer recommends a different product for this application
AD1-114	Question:
	I here are multiple details for the perimeter wall (included inalternate #1) that show different materials for the capstone. Please confirm that the
	capstone for the wall should be cast stone and the veneer stones should be
	limestone.
	Answer:
	Confirmed
AD1-115	Question:
	There are multiple details for the new chimneys that show different materials.
	Please confirm that new limestone should be used to build the new chimneys.
	Answer:
	The chimney cap is caststone. The rest of the chimney is limestone.
AD1-116	Question:
	In regards to the stone veneer repairs, in situations (particularly adjacent to
	windows) where large stones are present and only a portion of that stone's face
	is damaged, is it acceptable to do a partial veneer (in lieu of replacing the entire face of the stone, only replace the part that is damaged)? The cost savings
	would be verysignificant.
	Answer:
	A partial veneer may only be acceptable in certain areas. The sub-contractor
	is not to add any visible non-original vertical joints. They may add a joint
	where it will be concealed, such as behind a brick mould.
AD1-117	Question:
	Also in regards to the stone veneer repairs, what thickness will be required for
	the new stone replacementpleces?
	Answer:
	Size will vary depending on location and condition. Minimum 3".
AD1-118	Question:
	Please provide attachment details for stone veneer repairs andfull depth stone
	replacement pieces

	Answer: Details are not provided. Reference general notes on drawings and Project Manual for description of work.
AD1-119	Question: Please provide the ASTM numbers and quantity for each type of stone testing required.
	Answer: Reference specification Section 040342 Masonry Restoration.
AD1-120	Question: It was mentioned during the pre-bid meeting that we must keep the building in the dry at all times even when we remove the existing roof structure. This will be extremely difficult. Would it be acceptable to leave the building exposed for a short period of time if we remove and salvage any wood flooring/trim that is scheduled to remain and reinstall it once the building is dried in? The cost savings would be very significant
	Answer: No
AD1-121	Question: Specification section 07-2126 Blown Insulation calls for insulation tobe installed "between framing members in attic". Please confirm that the intention is to insulate the entire underside of the roof deck to an R value of 20.
	Answer: Design intent to be blown insulation above the Third Floor ceiling. Foam insulation at the underside of the roof deck would be considered if it does not impact the cost.
AD1-122	Question: Sheet L1.00 – General Notes – Hardscape - #1 Type 1 calls for crushed limestone reused from existing stone panels removed in previous phase. Please confirm that this note no longer applies and the intention is to use new decomposed granite in alllocations.
	Answer: Confirmed
AD1-123	Question: Please clarify locations where fireproofing is required on structural steel and/or at walls.
	Answer: Locations noted to have a fire rated assembly: fire rated ceiling assemblies, shaft wall assemblies, balcony fire-rated plenum space
AD1-124	Question: Please specify Break Room stairs – what type. Conflicting/unclear detail (A4.01, A4.07).

	Answer: Reference sheet A7.03.
AD1-125	Question: We need details on Metal Shutters/Louvers (Type H & G A1.08,A6.07) Mfg? Model?
	Answer: Type H & G are custom metal shutters. The Louvers are pre-manufactured by the tower manufacturer.
AD1-126	Question: No intrusion called out in drawings. Is this correct? Specs call for Bosch E series – Please clarify and confirm.
	Answer: Provide add alternate pricing for comparable intrusion detection system.
AD1-127	Question: Controller at courtroom with existing system or new controller? S2 Software – existing or standalone?
	Answer: New controller. Stand alone.
AD1-128	Question: Video storage software called out supported by a Windows 2008 platform. Spec calls for S2NETVR 100. These are two different software programs. Pleaseclarify.
	Answer: S2NETVR 100
AD1-129	Question: Calling for network analytics in this spec. Usually in IT. Confirm scope for analytics.
	Answer: Requirement will be removed
AD1-130	Question: What kind of turnstile software and version?
	Answer: Requirement will be removed
AD1-131	Question: What type of TRS software and version?
	Answer: S2

AD1-132	Question: VMS – fully scalable. Virtual server? S2 VR 100 Series/MS Windows 2008. Virtual for backup only? Redundant? There are 3 different storage solutions – please confirm whichone?
	Answer: S2 VR 100 SERIES
AD1-133	Question: Intercom access integration. More specific – what type of system isexisting?
	Answer: Requirement will be removed
AD1-134	Question: Active directory integrated with all systems or just for access control system?
	Answer: Only integrated with access control system
AD1-135	Question: Access control software - servers confirm Cisco. Conflicting OS with MS Windows2008?
	Answer: S2 CONTROL SOFTWARE
AD1-136	Question: Controller calls for 16 readers for backup. Also calls for S2 which only has 14 readers.
	Answer: S2 SUPPORTS 32 CARD READERS
AD1-137	Question: With S2 server - 99 fault guarantee not reasonable.
	Answer: Requirement will be removed
AD1-138	Question: If Security/Technology/Data sub not authorized Bosch dealer – comparable mfg modelsacceptable?
	Answer: Comparable models will be accepted pending engineer review.
AD1-139	Question: Can you provide a repair detail for repairs identified as "P", "V", "T", "R"
	Answer:

	Details are not provided. Reference general notes on drawings and Project Manual for description of work.
AD1-140	Question:
	Are we to bid repairs as shown on prints? Quantities of repairs seem small?
	Answer:
	Yes
AD1-141	Question:
	What equipment is allowed inside building for installation of steel components? Floor Load ratings?
	Answer:
	Submit the proposed lifts to be used at the existing building for
	review. Generally 60 psf max
AD1-142	Question:
	Majority of new structural steel will need to be dropped in through the roof via
	crane during structural steel erection leaving the interior open to the elements during this process. Is this responsibility of steel erector to keep dry?
	Answer:
	Coordinate with GC
AD1-143	Question:
	A crane will have to be mobilized for the erection of this project. The crane will
	have to be positioned as close as possible to the building in various locations. Is this permissible?
	Answer:
	Submit proposed crane for review.
AD1-144	Question:
	What, if any, fire protection measures will need to take place during the erection
	of steel for this project?
	Answer:
	Coordinate with GC
AD1-145	Question:
	Will the concrete subcontractors cut openings for new imbeds? Will they be
	providing and installing embed plates as required?
	Answer:
	This is a means and methods item.
AD1-146	Question:
	Can you provide "Quarry of stone" requirements and regulations?
	Answer:
	Testing requirements of original and proposed limestone is specified in
	Section 040342 Masonry Restoration

AD1-147	Question: Outside & inside corner condition, do we replace entire corner piece of stone to eliminate joints at these locations, if only 1 side is marked for repair or replacement?
	Answer:
	Yes, no added joints.
AD1-148	Question:
	Are the cleaning mock-ups acceptable finished results?
	Answer:
	No, reference specification Section 040344 Masonry Cleaning
AD1-149	<ul> <li>Question:</li> <li>(P) Patch repair</li> <li>1. (P-2) indicates less than 15% deterioration. What average depth of repairs should be assumed for the P-2 repairs?</li> <li>2. (P-3) indicates 15% to 50% deterioration., What average depth of</li> </ul>
	repairs should be assumed for the P-3 repairs?
	Answer:
	1. Depth varies, VIF
	2. Depth varies, VIF
AD1-150	Question:
	R) Stone replacement
	Notes say to provide new limestone from existing quarry to match original. Due
	to serious logistics issues to re-open a quarry and extract and cut the stone an
	alternative source for the stone would be beneficial to both bidders and the
	provide alternative source to residence acceptable? If so, will the owner
	r
	Answer:
	No, there is no alternative
AD1-151	Question:
	(T) Tool repair
	(T) Tool existing limestone surfaces to create surface finish that closely
	resembles existing adjacent stone surfaces.
	1. Please clarify the expectation for this work.
	<ol> <li>We are assuming there will be no patching of these stone, is this correct?</li> </ol>
	<ol> <li>We are assuming that these stone will have any loose areas chipped</li> </ol>
	away and maybe some light sanding to enhance the appearance of
	the stone relative to the surrounding stone. Is this correct?
	4. If the above is not the intention, please clarify.
	Answer:
	1. Reference general notes on Exterior Elevations and Section 040342
	Masonry Restoration
	2. Yes
	3. Yes

#### 4. See above

#### Question:

#### (V) Dutchman repair:

(V) Attach limestone veneer to match adjacent limestone surfaces. This is the most prominent call out on the exterior masonry, so understanding the requirements for these repairs is important. We realize there may not be a standard depth for the dutchman repairs, but we will have to base pricing on something approximating an average depth requirement.

- Is there an average depth upon which pricing can be based? If not, what would be the thinest depth dutchman repairs anticipated? What would be the thickest depth anticipated?
- See question 2 above. Is an alternative source acceptable, and will owner provide alternative sourcing for acceptable limestone materials?

#### Answer:

- 1. Minimum 3" to 12" +/- VIF
- 2. No

#### AD1-152

## **GENERAL NOTES**

GENERAL DEMOLITION NOTES

- 1. THE MAXIMUM ALLOWABLE LOADING ON THE EXISTING FLOOR STRUCTURES SHALL BE 100 PSF. AREAS OF THE BUILDING WHICH MAY HAVE GREATER LOADING IMPOSED ON IT BY THE CONTRACTOR'S DEMOLITION PROCEDURE SHALL BE SHORED. 2. EXISTING STRUCTURE SHALL BE SHORED PRIOR TO COMMENCEMENT OF DEMOLITION. SELECTIONS OF STRUCTURE BEING DEMOLISHED SHALL NOT BE ALLOWED TO
- DROP ONTO FLOOR STRUCTURE BELOW. 3. SHORING SHALL TRANSFER LOADING DIRECTLY TO EXISTING LOAD BEARING MASONRY WALLS. SHORING SHALL BE DESIGNED TO SUPPORT THE FULL ANTICIPATED
- LOADING WITH NO BENEFIT FROM THE EXISTING STRUCTURAL FRAMING.
- 4. EXISTING CONSTRUCTION SHOWN TO REMAIN SHALL NOT BE DAMAGED DURING THE DEMOLITION PROCESS. PROVIDE ALL NECESSARY TEMPORARY PROTECTION. 5. FLOOR STRUCTURES SHOWN TO BE REMOVED SHALL BE CUT OFF FLUSH WITH THE FACE OF EXISTING LOAD BEARING MASONRY WALLS. IF SURFACES OF WALLS ARE DAMAGED, DAMAGED AREAS SHALL BE REPAIRED WITH IN-KIND MATERIALS TO MATCH EXISTING AND RESTORE THE FULL STRUCTURAL CAPACITY OF THE WALLS. **GENERAL CONSTRUCTION NOTES**
- 1. THE CONTRACTOR SHALL VISIT THE SITE TO REVIEW AND SURVEY EXISTING CONDITIONS TO FULLY UNDERSTAND SCOPE OF WORK.
- 2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND INSPECTIONS AND PAY ALL APPLICATION FEES.
- 3. IF THE CONTRACTOR PERFORMS OR PROCEEDS WITH ANY WORK, CONTRARY TO APPLICABLE LAWS, ORDINANCES, RULES AND REGULATIONS WITHOUT GIVING PRIOR WRITTEN NOTICE TO THE ARCHITECT, HE SHALL ASSUME FULL RESPONSIBILITY THEREFORE, AND SHALL BEAR ALL COST ATTRIBUTABLE THERETO. 4. THE WORK SHALL CONFORM WITH THE CURRENT EDITIONS OF THE FOLLOWING REGULATIONS:
- -2018 INTERNATIONAL BUILDING CODE W/ CITY OF BONHAM AMENDMENTS -2018 INTERNATIONAL FIRE CODE W/ CITY OF BONHAM AMENDMENTS -2018 INTERNATIONAL PLUMBING CODE W/ CITY OF BONHAM AMENDMENTS -2018 INTERNATIONAL MECHANICAL CODE W/ CITY OF BONHAM AMENDMENTS -2016 INTERNATIONAL ELECTRICAL CODE W/ CITY OF BONHAM AMENDMENTS
- -2018 INTERNATIONAL ENERGY CONSERVATION CODE W/ CITY OF BONHAM AMENDMENTS
- -U.S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION 5. THE CONTRACTOR SHALL CAREFULLY STUDY THE CONTRACT DOCUMENTS PRIOR TO CONSTRUCTION AND SHALL REPORT TO THE ARCHITECT ANY ERROR, INCONSISTENCY OR OMISSION DISCOVERED AND SHALL NOT PROCEED WITH THE WORK UNTIL THE INTENT OF THE DOCUMENTS IS VERIFIED BY THE ARCHITECT.
- ALL DRAWINGS AND SPECIFICATIONS FORMING PART OF THE CONSTRUCTION DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS CALLED FOR BY ONE WILL BE BINDING 6. AS IF CALLED FOR BY ALL; ANY WORK SHOWN OR REFERRED TO ON ANY ONE DOCUMENT SHALL BE PROVIDED AS THOUGH SHOWN ON ALL DOCUMENTS.
- 7. THE CONTRACT DOCUMENTS SHOULD BE INTERPRETED WITH THE FOLLOWING ORDER OF PRECEDENCE: SPECIFICATIONS, DETAILS, ENLARGEMENTS, OVERALL DRAWINGS AND SUBSEQUENT CLARIFICATIONS. ADDENDA SHALL OVERRIDE THE AFFECTED COMPONENTS IN ALL OF THE ABOVE. ALL VERBAL CLARIFICATIONS ARE TO BE RECORDED BY THE GENERAL CONTRACTOR AND SENT TO THE ARCHITECT WITHIN 7 (SEVEN) DAYS OF THE OCCURRENCE.
- THE STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL, AND AUDIO/VISUAL DOCUMENTS ARE SUPPLEMENTARY TO THE ARCHITECTURAL DOCUMENTS. SHOULD THERE BE A DISCREPANCY BETWEEN THE ARCHITECTURAL DOCUMENTS AND THE STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL, AND AUDIO/VISUAL DOCUMENTS, SUCH DISCREPANCY IS TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. THE CONTRACTOR SHALL RECEIVE INSTRUCTION PRIOR TO THE INSTALLATION OR PERFORMANCE OF SAID WORK. ANY WORK PERFORMED OR INSTALLED IN CONFLICT WITH THE DOCUMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE.
- INFORMATION CONTAINED ON THESE DRAWINGS WITH REGARD TO EXISTING CONDITIONS OF CONSTRUCTION IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR IN EXECUTING THE WORK. EVERY ATTEMPT HAS BEEN MADE TO PROVIDE COMPLETE AND ACCURATE REPRESENTATIONS OF SUCH EXISTING CONDITIONS. THIS INTERPRETATION HAS BEEN TAKEN BY FIELD MEASUREMENT AND OBSERVATION. THE ARCHITECT HAS ENDEAVORED TO IDENTIFY AS COMPLETELY AS POSSIBLE IN THE CONSTRUCTION DOCUMENTS, EXISTING ITEMS OF EQUIPMENT AND CONSTRUCTION THAT ARE REQUIRED TO BE REMOVED OR OTHERWISE DEMOLISHED. THIS INFORMATION IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR AND IS IN NO WAY INTENDED TO MEAN THAT DEMOLITION IS LIMITED ONLY TO THOSE ITEMS SPECIFICALLY IDENTIFIED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXECUTE DEMOLITION WORK AS REQUIRED TO REMOVE ELEMENTS AND SYSTEMS IDENTIFIED IN THE CONSTRUCTION DOCUMENTS, ALONG WITH THEIR ASSOCIATED PARTS.
- 10. ALL AREAS AND ITEMS INDICATING CONTRACT LIMITS AND LINES OF DEMARCATION ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, AND ARE NOT TO BE TAKEN LITERALLY. ACTUAL CONTRACT LIMITS ARE TO BE DETERMINED PRIOR TO BED OPENINGS BY FIELD VERIFICATION. 11. EXISTING CONSTRUCTION SHOWN TO REMAIN SHALL NOT BE DAMAGED DURING THE DEMOLITION PROCESS. PROVIDE ALL NECESSARY TEMPORARY PROTECTION.
- 12. ASSIST THE ARCHITECT IN MAKING THEIR EVALUATIONS AND RECOMMENDATIONS BY PROVIDING IN A TIMELY MANNER, AT NO ADDITIONAL COST TO THE OWNER, ACCURATE AND COMPLETE DRAWINGS, SKETCHES, PHOTOGRAPHS, SUFFICIENT TO CLEARLY DESCRIBE DISCREPANCIES, CONFLICTS, AND CONCEALED OR OTHERWISE UNANTICIPATED CONDITIONS AFFECTING NEW CONSTRUCTION.
- 13. SCAFFOLDING AND SHORING CANNOT BE SECURED TO EXISTING HISTORIC MATERIALS, OR CAUSE DAMAGE TO EXISTING MATERIALS. 14. REINSTALL EACH ELEMENT IN IT'S ORIGINAL LOCATION UNLESS NOTED OTHERWISE.
- 15. SIZE NOTED IN CONSTRUCTION DOCUMENTS FOR ORIGINAL MATERIALS ARE APPROXIMATE AND ARE TO BE FIELD VERIFIED PRIOR TO SUBMITTAL OF SHOP DRAWINGS. MATCH EXACT SIZES AND PROFILES OF ORIGINAL ELEMENTS. 16. FIELD VERIFICATIONS OF EXISTING CONDITIONS RELATING TO SPECIFIC PORTIONS OF THE WORK SHALL BE UNDERTAKEN IN ADVANCE TO ALLOW FOR THE TIMELY
- IDENTIFICATION OF EXISTING CONDITIONS THAT MAY AFFECT THE SCHEDULED INSTALLATION OF NEW WORK AS DESIGNED AND DETAILED, AND TO AVOID UNDUE AND UNREASONABLE DELAYS TO THE PROJECT SHOULD SUCH CONDITIONS BE DISCOVERED. TIMELY IDENTIFICATIONS OF SUCH CONDITIONS SHALL PROVIDE FOR A MINIMUM PERIOD OF 10 (TEN) WORKING DAYS DURING WHICH TIME THE ARCHITECT WILL EVALUATE THE CONDITIONS AND MAKE RECOMMENDATIONS FOR ACCOMMODATING NEW WORK. 17. CONTRACTOR IS TO PROVIDE AND INSTALL ALL ACCESS PANELS, RATED OR OTHERWISE, SIZE AS REQUIRED, AT ALL CONCEALED MECHANICAL AND PLUMBING ITEMS
- WHICH REQUIRE SERVICE OR ACCESS (VALVES, FIRE DAMPERS, DUCT HEATERS, ETC..). ACCESS PANELS IN RATED CEILING AND PARTITIONS SHALL HAVE THE APPROPRIATE U.L. LABELS.
- 18. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH ALL EQUIPMENT MANUFACTURER'S EQUIPMENT ROUGH-IN REQUIREMENTS. 19. EXISTING UTILITY SERVICES ARE TO REMAIN, BE PROTECTED, AND/OR TO BE OPERATIONAL DURING DEMOLITION AND CONSTRUCTION. REFERENCE RELEVANT MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS. CONTRACTOR TO BE RESPONSIBLE FOR PROTECTION OF AND RESTORATION OF SERVICES, AS WELL AS PROVISION OF TEMPORARY UTILITY SERVICES.
- 20. NOTIFY CITY OF BONHAM WHEN IT IS NECESSARY TO AFFECT UTILITIES BEFORE PROCEEDING WITH THE WORK. ALL EXISTING UTILITIES MUST BE CHECKED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF DEMOLITION WORK. ANY DAMAGES RESULTING FROM LACK OF COMPLIANCE WITH THE PROVISION SHOULD BE CORRECTED BY THE CONTRACTOR AT HIS OR HER OWN EXPENSE.

### **NEW FASTENERS**

1. ATTACHMENTS TO STONE I.E.: CONDUIT, WOOD FRAMING, ETC. MUST BE ATTACHED INTO MASONRY JOINTS UNLESS NOTED OTHERWISE. DO NOT DRILL THROUGH, PENETRATE OR ALTER IN ANY WAY THE ORIGINAL MATERIALS OR STRUCTURE UNLESS NOTED OTHERWISE.

#### GENERAL MEP NOTES

- CONCEALMENT OF CONDUIT, PIPING, AND DEVICES AT WALLS AND CEILINGS:
- 1. CONDUIT, WIRING, AND PIPING IS TO BE CONCEALED BEHIND FINISH FACE OF GYPSUM BOARD AND PLASTER WALLS ON THE FIRST, SECOND, AND THIRD FLOOR UNLESS NOTED OTHERWISE. 2. ROUTE CONDUIT INTO THE PLASTER AND MASONRY SO THAT A FULL APPLICATION OF LATH AND PLASTER SYSTEM IS INSTALLED OVER THE MATERIAL AND CONDUIT AND
- PIPING IS CONCEALED IN WALLS BEHIND THE PLASTER. ELECTRICAL BOXED AND ASSOCIATED ELEMENTS MUST BE RECESSED INTO WALLS SO THAT COVER PLATES ARE FLUSH WITH THE FINISH SURFACE OF THE WALL. PENETRATIONS AT MASONRY WALLS:
- 1. CUT/ CORE PLASTER AND MASONRY WALLS AS NECESSARY TO ACCOMMODATE NEW MATERIALS, COMPONENT, AND SYSTEMS INCLUDING CONDUIT, WIRING, PIPING, DUCTS AND ALL OTHER ITEMS REQUIRED FOR INSTALLATION OF OPERATION OF ELECTRICAL, MECHANICAL, AND PLUMBING SYSTEMS. RE: STRUCTURAL FOR PENETRATION DETAILS AT MASONRY LOAD BEARING WALLS. LOCATIONS OF MASONRY PENETRATIONS TO BE REVIEWED AND APPROVED BY ARCHITECT AND THC. WHERE CONDUIT AND PIPING ARE EXPOSED:
- 1. RUN PARALLEL TO WALLS AND BEAM ENDS AT 90 DEGREES TO EACH OTHER.
- 2. GANG PIPING AND CONDUIT WHEN CHANGING DIRECTIONS. 3. NEATLY BEND PIPES AND CONDUIT WHEN CHANGING DIRECTIONS.
- 4. WHEN GANGED PIPING IS BENT, IT MUST REMAIN EQUIDISTANT TO EACH OTHER.



### SHEET INDEX

A0.00	COVER SHEET
A0.01	PROJECT INFORMATION AND SHEET INDEX
A0.02 A0.03	LIFE SAFETY PLANS
DEMO	
D1.01	DEMOLITION SITE PLAN
D2.01	BASEMENT LEVEL DEMO FLOOR PLAN & RCP
D2.02	GROUND LEVEL DEMO FLOOR PLAN & RCP
D2.03	SECOND LEVEL DEMO FLOOR PLAN & RCP
D2.04 D2.05	ATTIC & ROOF LEVEL DEMO PLANS
	ΔΡΕ
L2.00	SITE LATOOT PLAN AND HARDSCAPE DETAILS SITE PLANTING PLAN AND PLANTING DETAILS
L3.00	SITE IRRIGATION PLAN
L3.01	SITE IRRIGATION DETAILS
CIVIL	
C1.00	DEMOLITION PLAN
C3.00	DIMENSION CONTROL PLAN
C5.00	GRADING PLAN
C6.00	DRAINAGE PLAN
C7.00	
C8.00	CIVIL DETAILS CIVIL DETAILS
C8.02	CIVIL DETAILS
ARCHITE	CTURAL
A1.00	SITE PLAN
A1.01	ACCESS RAMP PLAN & DETAILS
A1.02	SITE DETAILS
A1.03	SITE DETAILS RASEMENT LEVEL EL COR PLAN
A1.04	BASEMENT LEVEL RCP
A1.06	GROUND LEVEL FLOOR PLAN
A1.07	GROUND LEVEL RCP
A1.08 A1.09	SECOND LEVEL FLOOR PLAN SECOND LEVEL RCP
A1.10	THIRD LEVEL FLOOR PLAN
A1.11	THIRD LEVEL RCP
A1.12	ATTIC LEVEL PLAN
A1.14	ROOF DETAILS
A1.15	TOWER LEVEL FLOOR PLANS & LADDER DETAILS
A2.01	NORTH ELEVATION
A2.02	EAST ELEVATION
A2.04	PARTIAL EAST & WEST ELEVATIONS
A2.05	SOUTH ELEVATION
A2.06	VEST ELEVATIONS
A2.08	ELEVATION DETAILS
A3.01	BUILDING SECTION
A3.02	BUILDING SECTION
A4.02	INTERIOR ELEVATIONS - BASEMENT LEVEL
A4.03	INTERIOR ELEVATIONS - GROUND LEVEL
A4.04	
A4.05 A4.06	INTERIOR ELEVATIONS - GROUND LEVEL
A4.07	INTERIOR ELEVATIONS - GROUND LEVEL
A4.08	INTERIOR ELEVATIONS - GROUND LEVEL AND SECOND LEVEL
A4.09 A4.10	INTERIOR ELEVATIONS - SECOND LEVEL
A4.11	INTERIOR ELEVATIONS - SECOND LEVEL
A4.12	INTERIOR ELEVATIONS - SECOND LEVEL
A4.13	INTERIOR ELEVATIONS - SECOND AND THIRD LEVEL
A4.14	INTERIOR ELEVATIONS - THIRD LEVEL
A4.16	INTERIOR ELEVATIONS - THIRD LEVEL
A6.01	
A6.02 A6.03	CEILING & FLOOR TYPES
A6.04	DOOR & CASING TRIM SCHEDULE & TYPES
A6.05	DOOR SCHEDULES
A6.06 A6.07	DOOR & CASING TRIM DETAILS WINDOW/ LOUVER/ VENT TYPES AND DETAILS
A6.08	WINDOW/ LOUVER/ VENT SCHEDULES
A6.09	WINDOW/ LOUVER/ VENT SCHEDULES AND DETAILS
A6.10	WINDOW DETAILS
A7.02	STAIR PLANS, SECTIONS AND DETAILS
A7.03	CAST IRON STAIRS PLANS, SECTIONS, AND DETAILS
A7.04	CAST IRON STAIRS PLANS, SECTIONS, AND DETAILS
A7.05 A7.06	MILLWORK DETAILS
A7.07	MILWORK DETAILS
A7.08	BALCONY DETAILS
A7.09 A7.10	TOWER PLANS AND ELEVATIONS
STRUCT	JRAI
SD2.01	STRUCTURAL DEMOLITION PLANS
SD2.02	STRUCTURAL DEMOLITION PLANS
S1.01	STRUCTURAL NOTES STRUCTURAL NOTES, SYMBOLS LEGEND AND ABBREVIATIONS

00.00	
S2.00	BASEMENT FRAMING PLAN
S2.02	SECOND LEVEL FRAMING PLAN
S2.03	THIRD LEVEL FRAMING PLAN
S2.04	ATTIC LEVEL FRAMING PLAN
S2.05	ROOF FRAMING PLAN
S2.06	
S2.10	MECHANICAL YARD PLAN AND DETAILS
S3.01 S3.02	TYPICAL CONCRETE SECTIONS & DETAILS
S3.03	CONCRETE DETAILS
S4.01	TYPICAL MASONRY DETAILS
S5.01	FRAMING DETAILS
S5.02	FRAMING DETAILS
S5.03	FRAMING DETAILS
S5.04	FRAMING DETAILS
S5.10	TOWER FRAMING ELEVATIONS
S5.11	TOWER FRAMING DETAILS
S6.01	LIGHT GAUGE METAL TRUSS PROFILES
S6.02	LIGHT GAUGE METAL FRAMING DETAILS
<b>FIRE PROT</b>	ECTION
FP0.01	FIRE PROTECTION GENERAL NOTES AND LEGEND
FP1.01	BASEMENT AND GROUND LEVEL FIRE PROTECTION FLOOR PLANS
FP1.02	SECOND, THIRD, AND ATTIC LEVEL FIRE PROTECTION FLOOR PLANS
MECHANIC	CAL
M0.01	MECHANICAL GENERAL NOTES AND LEGEND
M1.01	MECHANICAL SITE PLAN
M2.00	BASEMENT LEVEL MECHANICAL FLOOR PLAN
M2.01	GROUND LEVEL MECHANICAL FLOOR PLAN
M2.02	SECOND LEVEL MECHANICAL FLOOR PLAN
M2.03	THIRD LEVEL MECHANICAL FLOOR PLAN
M2.04	ATTIC LEVEL MECHANICAL FLOOR PLAN
M2.05	CLOCK TOWER PLAN RASEMENT LEVEL MECHANICAL DIDING ELOOD DLAN
M3.00	GROUND LEVEL MECHANICAL PIPING FLOOR PLAN
M3.02	SECOND LEVEL MECHANICAL PIPING FLOOR PLAN
M3.04	ATTIC LEVEL MECHANICAL PIPING FLOOR PLAN
M4.01	MECHANICAL ENLARGED PLANS
M5.01	MECHANICAL DETAILS
M5.02 M5.03	
M5.03 M5.04	MECHANICAL SECTION VIEWS
M6.01	MECHANICAL SCHEDULES
M6.02	MECHANICAL SCHEDULES
M8.01	CONTROL DIAGRAMS
PLUMBING	à
P0.01	PLUMBING GENERAL NOTES AND LEGEND
P1.01	PLUMBING SITE PLAN
P2.01	BASEMENT LEVEL PLUMBING FLOOR PLANS
P2.02	GROUND LEVEL PLUMBING FLOOR PLANS
P2.02 P2.03	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS
P2.02 P2.03 P2.04 P2.01	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMPING ENLARGED FLOOR PLANS AND SECTIONS
P2.02 P2.03 P2.04 P3.01 P4.01	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 ELECTRIC	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 ELECTRIC/	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES AL
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES AL ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.01	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES AL ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.01 E2.02	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES AL ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.01 E2.02 E2.03	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES <b>AL</b> ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.01 E2.02 E2.03 E2.04	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES AL ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS THIRD LEVEL ELECTRICAL FLOOR PLANS
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.01 E2.02 E2.03 E2.04 E2.05 E2.01	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES AL ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS THIRD LEVEL ELECTRICAL FLOOR PLANS
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.01 E2.02 E2.03 E2.04 E2.05 E3.01 E4.01	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES <b>AL</b> ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS THIRD LEVEL ELECTRICAL FLOOR PLANS THIRD LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL SITE PLAN ATTIC LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL DETAILS ELECTRICAL DETAILS
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.01 E2.02 E2.03 E2.04 E2.05 E3.01 E4.01 E4.02	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES AL ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS THIRD LEVEL ELECTRICAL FLOOR PLANS THIRD LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL DETAILS ELECTRICAL DETAILS ELECTRICAL DETAILS ELECTRICAL SCHEDULES
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.01 E2.02 E2.03 E2.04 E2.05 E3.01 E4.01 E4.02 E4.03	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES <b>AL</b> ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS THIRD LEVEL ELECTRICAL FLOOR PLANS THIRD LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.01 E2.02 E2.03 E2.04 E2.05 E3.01 E4.01 E4.02 E4.03 <b>TECHNOLO</b>	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES <b>AL</b> ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS THIRD LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL DETAILS ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.01 E2.02 E2.03 E2.04 E2.05 E3.01 E4.01 E4.02 E4.03 <b>TECHNOLO</b>	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES <b>AL</b> ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS THIRD LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL DETAILS ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.01 E2.01 E2.02 E2.03 E2.04 E2.05 E3.01 E4.01 E4.02 E4.03 <b>TECHNOLO</b> T0.01 T0.02	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES AL ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS THIRD LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL DETAILS ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.01 E2.02 E2.03 E2.04 E2.05 E3.01 E4.01 E4.02 E4.03 <b>TECHNOLO</b> T0.01 T0.02 T1.01	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES <b>AL</b> ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS THIRD LEVEL ELECTRICAL FLOOR PLANS THIRD LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL DETAILS ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.02 E2.03 E2.04 E2.05 E3.01 E4.01 E4.02 E4.03 <b>TECHNOLO</b> T0.01 T0.02 T1.01 T1.02	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES <b>AL</b> ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS HIRD LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL DETAILS ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES BASEMENT LEVEL TECHNOLOGY FLOOR PLANS
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.01 E2.02 E2.03 E2.04 E2.05 E3.01 E4.02 E4.03 <b>TECHNOLO</b> T0.01 T0.02 T1.01 T1.02 T1.03	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES <b>AL</b> ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL SCHEDULES ELECTRICAL DETAILS ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES DOPU
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.02 E2.03 E2.04 E2.05 E3.01 E4.01 E4.02 E4.03 <b>TECHNOLO</b> T0.01 T0.02 T1.01 T1.02 T1.03 T1.04	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES <b>AL</b> ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS THIRD LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES TECHNOLOGY GENERAL NOTES AND SYMBOLS TECHNOLOGY ONE-LINE BASEMENT LEVEL TECHNOLOGY FLOOR PLANS GROUND LEVEL TECHNOLOGY FLOOR PLANS THIRD LEVEL TECHNOLOGY FLOOR PLANS THIRD LEVEL TECHNOLOGY FLOOR PLANS THIRD LEVEL TECHNOLOGY FLOOR PLANS
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.02 E2.03 E2.04 E2.05 E3.01 E4.01 E4.02 E4.03 <b>TECHNOLO</b> T0.01 T0.02 T1.01 T1.02 T1.03 T1.04 T1.05 T0.01	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES <b>AL</b> ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS THIRD LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES TECHNOLOGY GENERAL NOTES AND SYMBOLS TECHNOLOGY ONE-LINE BASEMENT LEVEL TECHNOLOGY FLOOR PLANS SECOND LEVEL TECHNOLOGY FLOOR PLANS THIRD LEVEL TECHNOLOGY FLOOR PLANS THIRD LEVEL TECHNOLOGY FLOOR PLANS
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.01 E2.02 E2.03 E2.04 E2.05 E3.01 E4.02 E4.03 <b>TECHNOLO</b> T0.01 T0.02 T1.01 T1.02 T1.03 T1.04 T1.05 T2.01 T2.01 T2.02	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES AL ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS THIRD LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL DETAILS ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES TECHNOLOGY GENERAL NOTES AND SYMBOLS TECHNOLOGY ONE-LINE BASEMENT LEVEL TECHNOLOGY FLOOR PLANS GROUND LEVEL TECHNOLOGY FLOOR PLANS THIRD LEVEL TECHNOLOGY FLOOR PLANS ATTIC LEVEL TECHNOLOGY FLOOR PLANS THIRD LEVEL TECHNOLOGY FLOOR PLANS
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.02 E2.03 E2.04 E2.05 E3.01 E4.01 E4.02 E4.03 <b>TECHNOLO</b> T0.01 T0.02 T1.01 T1.02 T1.03 T1.04 T1.05 T2.01 T2.02	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING ETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES <b>AL</b> ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS I HIRD LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL DETAILS ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES TECHNOLOGY GENERAL NOTES AND SYMBOLS TECHNOLOGY ONE-LINE BASEMENT LEVEL TECHNOLOGY FLOOR PLANS SECOND LEVEL TECHNOLOGY FLOOR PLANS THIRD LEVEL TECHNOLOGY FLOOR PLANS TECHNOLOGY ONE-LINE BASEMENT LEVEL TECHNOLOGY FLOOR PLANS THIRD LEVEL TECHNOLOGY FLOOR PLANS
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.02 E2.03 E2.04 E2.05 E3.01 E4.01 E4.02 E4.03 <b>TECHNOLO</b> T0.01 T0.02 T1.01 T1.02 T1.01 T1.02 T1.03 T1.04 T1.05 T2.01 T2.02 <b>AUDIO/VIS</b>	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES AL ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS THIRD LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL DETAILS ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES TECHNOLOGY GENERAL NOTES AND SYMBOLS TECHNOLOGY ONE-LINE BASEMENT LEVEL TECHNOLOGY FLOOR PLANS GROUND LEVEL TECHNOLOGY FLOOR PLANS THIRD LEVEL TECHNOLOGY FLOOR PLANS ATTIC LEVEL TECHNOLOGY FLOOR PLANS SECOND LEVEL TECHNOLOGY FLOOR PLANS THIRD LEVEL TECHNOLOGY FLOOR PLANS ATTIC LEVEL TECHNOLOGY FLOOR PLANS
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.02 E2.03 E2.04 E2.02 E2.03 E2.04 E2.05 E3.01 E4.02 E4.03 <b>TECHNOLO</b> T0.01 T0.02 T1.01 T1.02 T1.01 T1.02 T1.03 T1.04 T1.03 T1.04 T1.05 T2.01 T2.02 <b>AUDIO/VIS</b> ES0.00	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES AL ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS HIRD LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL DETAILS ELECTRICAL STEP DLAN ATTIC LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES TECHNOLOGY ONE-LINE BASEMENT LEVEL TECHNOLOGY FLOOR PLANS SECOND LEVEL TECHNOLOGY FLOOR PLANS HIRD LEVEL TECHNOLOGY FLOOR PLANS ATTIC LEVEL TECHNOLOGY FLOOR PLANS ATTIC LEVEL TECHNOLOGY FLOOR PLANS SECOND LEVEL TECHNOLOGY FLOOR PLANS SECOND LEVEL TECHNOLOGY FLOOR PLANS THIRD LEVEL TECHNOLOGY FLOOR PLANS ATTIC LEVEL TECHNOLOGY FLOOR PLANS
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.02 E2.03 E2.04 E2.05 E3.01 E4.01 E4.02 E4.03 <b>TECHNOLO</b> T0.01 T0.02 T1.01 T1.02 T1.01 T1.02 T1.03 T1.04 T1.05 T2.01 T2.02 <b>AUDIO/VIS</b> ES0.00 ES2.02	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES <b>AL</b> ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS HIRD LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL DETAILS ELECTRICAL DETAILS ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES TECHNOLOGY GENERAL NOTES AND SYMBOLS TECHNOLOGY ONE-LINE BASEMENT LEVEL TECHNOLOGY FLOOR PLANS SCOND LEVEL TECHNOLOGY FLOOR PLANS THIRD LEVEL TECHNOLOGY FLOOR PLANS THIRD LEVEL TECHNOLOGY FLOOR PLANS TECHNOLOGY ONE-LINE BASEMENT LEVEL TECHNOLOGY FLOOR PLANS THIRD LEVEL TECHNOLOGY FLOOR PLANS ATTIC LEVEL TECHNOLOGY FLOOR PLANS TECHNOLOGY DETAILS <b>GUND LEVEL TECHNOLOGY FLOOR PLANS</b> TECHNOLOGY DETAILS
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.02 E2.03 E2.04 E2.05 E3.01 E4.01 E4.02 E4.03 <b>TECHNOLO</b> T0.01 T0.01 T0.02 T1.01 T1.02 T1.01 T1.02 T1.03 T1.04 T1.03 T1.04 T1.05 T2.01 T2.02 <b>AUDIO/VIS</b> ES0.00 ES2.02 ES2.03 ES2.04	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES AL ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES SECOND LEVEL TECHNOLOGY FLOOR PLANS GROUND LEVEL TECHNOLOGY FLOOR PLANS SECOND LEVEL TECHNOLOGY FLOOR PLANS ATTIC LEVEL TECHNOLOGY FLOOR PLANS ATTIC LEVEL TECHNOLOGY FLOOR PLANS SECOND LEVEL TECHNOLOGY FLOOR PLANS SECOND LEVEL TECHNOLOGY FLOOR PLANS THIRD LEVEL TECHNOLOGY FLOOR PLANS ATTIC LEVEL TECHNOLOGY FLOOR PLANS SECOND LEVEL TECHNOLOGY FLOOR PLANS TECHNOLOGY DETAILS TECHNOLOGY DETAILS
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.02 E2.03 E2.04 E2.05 E3.01 E4.01 E4.02 E4.03 <b>TECHNOLO</b> T0.01 T0.02 T1.01 T1.02 T1.01 T1.02 T1.03 T1.04 T1.03 T1.04 T1.05 T2.01 T2.02 <b>AUDIO/VIS</b> ES0.00 ES2.02 ES2.03 ES2.04 ES2.04 ES2.09	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS THIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES AL ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS THIRD LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL DETAILS ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES SECOND LEVEL TECHNOLOGY FLOOR PLANS SECOND LEVEL TECHNOLOGY FLOOR PLANS SECOND LEVEL TECHNOLOGY FLOOR PLANS ATTIC LEVEL TECHNOLOGY FLOOR PLANS ATTIC LEVEL TECHNOLOGY FLOOR PLANS SECOND LEVEL TECHNOLOGY FLOOR PLANS ATTIC LEVEL TECHNOLOGY FLOOR PLANS ATTIC LEVEL TECHNOLOGY FLOOR PLANS SECOND LEVEL TECHNOLOGY FLOOR PLANS SECOND LEVEL TECHNOLOGY FLOOR PLANS ATTIC LEVEL TECHNOLOGY FLOOR PLANS ATTIC LEVEL TECHNOLOGY FLOOR PLANS SECOND LEVEL TECHNOLOGY FLOOR PLANS ATTIC LEVEL FLOOR PLAN ATTIC LEVEL FLOOR PLAN BECOND LEVEL FLOOR PLAN ATTIC LEVEL FLOOR PLAN ATTIC LEVEL FLOOR PLAN ATTIC LEVEL FLOOR PLAN ATTIC LEVEL FLOOR PLAN
P2.02 P2.03 P2.04 P3.01 P4.01 P4.02 P5.01 <b>ELECTRIC</b> E0.01 E1.01 E2.02 E2.03 E2.04 E2.05 E3.01 E4.01 E4.02 E4.03 <b>TECHNOLO</b> T0.01 T0.02 T1.01 T1.02 T1.03 T1.04 T1.03 T1.04 T1.03 T1.04 T1.05 T2.01 T2.02 <b>AUDIO/VIS</b> ES0.00 ES2.02 ES2.03 ES2.04 ES2.09 ES2.10	GROUND LEVEL PLUMBING FLOOR PLANS SECOND LEVEL PLUMBING FLOOR PLANS HIRD, ATTIC, AND ROOF LEVEL PLUMBING FLOOR PLANS PLUMBING ENLARGED FLOOR PLANS AND SECTIONS PLUMBING DETAILS PLUMBING WASTE AND VENT RISER DIAGRAM PLUMBING SCHEDULES AL ELECTRICAL GENERAL NOTES AND LEGEND ELECTRICAL SITE PLAN BASEMENT LEVEL ELECTRICAL FLOOR PLANS GROUND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS SECOND LEVEL ELECTRICAL FLOOR PLANS HIRD LEVEL ELECTRICAL FLOOR PLANS ELECTRICAL DETAILS ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES TECHNOLOGY ONE-LINE BASEMENT LEVEL TECHNOLOGY FLOOR PLANS SECOND LEVEL TECHNOLOGY FLOOR PLANS TECHNOLOGY DNE-LINE BASEMENT LEVEL TECHNOLOGY FLOOR PLANS TECHNOLOGY DETAILS TECHNOLOGY DETAILS

S1.03

ILL		

FRT ROUGH WOOD
FRT BLOCKING
FINISH WOOD
PLYWOOD
RIGID INSULATION
THERMAL/ ACOUSTIC BATT INSULATION
SPRAYED INSULATION
SPRAYED FIRE INSULATION
TYPE 'X' GYP. BOARD
METAL LATH & PLASTER
CARPET
HOLLOW CLAY TILE

SPECIAL INSPECTION TABLES

## **VICINITY MAP**

FUNCTIONALS

RACK ELEVATIONS

PLATE AND PANEL DETAILS

INTERIOR ELEVATIONS

DETAILS

ES4.01

ES5.01

ES5.02

ES5.03

ES6.02



## **PROJECT MEMBERS**

### OWNER

FANNIN COUNTY 101 E. SAM RAYBURN DRIVE SUITE 101 BONHAM, TEXAS 75418 T (903)583-7455

THC DIVISION OF ARCHITECTURE 108 W. 16TH STREET, 2ND FLOOR AUSTIN, TEXAS 78701 T (512)-463-6094

### ARCHITECT

ARCHITEXAS-ARCHITECTURE, PLANNING & HISTORIC PRESERVATION, INC. 1907 MARILLA STREET, 2ND FLOOR DALLAS, TEXAS 75201 T (214)748-4561

#### **STRUCTURAL/ CIVIL ENGINEER** JQ ENGINEERING, LLP

100 GLASS STREET DALLAS, TEXAS 75207 T (214)752-9098

**MPE ENGINEER** MEPCE 2829 STORY ROAD WEST LAS COLINAS, TEXAS 75038 T (972) 870-9060

#### HISTORIC FINISHES ANALYSIS SOURCE DESIGN STUDIO 3106 AVENUE R GALVESTON, TEXAS T (713)942-0194 F (713)528-7183

AUDIO/VISUAL/ACOUSTICAL WRIGHTSON, JOHNSON, HADDON, & WILLIAMS, INC. 4801 SPRING VALLEY RD. SUITE 113 DALLAS, TEXAS 75244 T (972)934-3700

#### LANDSCAPE ARCHITECT ARMSTRONG BERGER

2611 STATE ST. DALLAS, TEXAS 75204 T (214)871-0893

## DDO JECT INICODMATION

Ρ	ROJI	ECTINF			ON			
		$\sim$	$\sim$					
			T	<u>፞</u>	$\sum$			
	PROJEC	T # EABPRIB90	00014	)				
			<u>م</u> گ	مر				
	CONST	RUCTION CLAS	SIFICAT	ION				
	TYPE III	-В						
	USE GE	OUP CLASSIFIC						
	ASSEM	BLY GROUP A-3						
	BUSINE	SS GROUP B						
	STORA	GE GROUP S-1						
	ווח ווו ום							
	FXISTIN		= ^	04008	S F			
	REMOV			24920	SF			
				114				
	NUULU			114				
	TOTAL	BUILDING AREA		24010	S.F.			
	BUILDI							
	EXISTIN	IG BUILDING HEI	IGHT	4 STOR	IES 49' 3"			
	ADDED	BUILDING HEIG	HT	OSTOR	IES 17' 3"			
	OVERA	LL BUILDING HEI	GHT	4 STOR	IES 66' 6"			
	0000							
	FLOOR	USE GROUP			ESS COMPONENTS	# OCCUPANTS	EGRESS WIDTH	REO'D EGRESS WIDTH
	LOOK		1 2001	/ (())/	PER OCCUPANT	PER FLOOR	(W/ SPRINKLER)	
	0	В	236		150 GROSS	2	0.15	0.2"
	0	S-1	1580		300 GROSS	6	0.15	0.9"
	1	A-3	821		FIXED SEATS	48	0.15	7.2"
	1	В	1877		150 GROSS	13	0.15	2.0"
	1	В	891		15 NET	60	0.15	9.0"
	1	S-1	179		300 GROSS	1	0.15	0.2"
	2	A-3	3045		FIXED SEATS	162	0.15	24.3"
	2	В	405		15 NET	27	0.15	4.1"
	2	В	1065		150 GROSS	8	0.15	1.2"
	2	S-1	45		300 GROSS	1	0.15	0.2"
	3	A-3	987		FIXED SEATS	68	0.15	10.2"
	3	В	1465		150 GROSS	10	0.15	2.0"
	3	S-1	53		300 GROSS	1	0.15	0.2"

407

TOTAL NUMBER OF BUILDING OCCUPANTS:

ORIGINALLY CONSTRUCTED IN 1888, THE FANNIN COUNTY COURTHOUSE, IN BONHAM, TEXAS IS A RECORDED TEXAS HISTORIC LANDMARK. THIS PROJECT IS AUTHORIZED UNDER THE HISTORIC COURTHOUSE PRESERVATION PROGRAM, TEXAS GOVERNMENT CODE §§442.008, ET SEQ. ("PROGRAM"), AND THE RULES PROMULGATED THEREUNDER AT 13 TEXAS ADMINISTRATIVE CODE §§12.1, ET SEQ., AND THE INTERLOCAL COOPERATION ACT, GOVERNMENT CODE CHAPTER 791. ALL MATTERS PERTAINING TO THE PROJECT SHALL BE CONDUCTED IN CONFORMANCE WITH THE PROCEDURES DESCRIBED IN THE TEXAS HISTORIC COURTHOUSE PRESERVATION PROGRAM ROUND IX GRANT MANUAL, ALL APPLICABLE STATE AND FEDERAL LAWS, RULES AND REGULATIONS AND THE LEGAL DIRECTIVES OF THE COMMISSION AND ITS STAFF.



Dallas | Austin 1907 Marilla St. www.architexas.com Second Floor Dallas, Texas 75201 p 214.748.4561 **TEXAS HISTORICAL COMMISSION** real places telling real stories **FANNIN COUNTY** COURTHOUSE **INTERIOR & EXTERIOR RESTORATION** 101 E. Sam Rayburn Drive Bonham, Texas 75418 COPYRIGHT The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing. Any errors or omissions shall be reported to Architexas without delay. The Copyrights to all designs and drawings are the property of Architexas. Reproduction or use for any purpose other than that authorized by Architexas is forbidden. **REVISION HISTORY** 1 Oct. 16, 2018 Addendum #1 **ISSUED FOR CONSTRUCTION** #18326 9/21/2018 Architexas No. Date 1737 SEPT. 21, 2018 Sheet Name **PROJECT INFORMATION AND** SHEET INDEX Sheet Number Ao.oi









## 03 ROSE WALL ATTACHMENT DETAIL (typ.) 1"=1'-0"

PLA	NT LI	ST		August 2011
SYMBOL	. QUANTITY	SCIENTIFIC NAME	COMMON NAME	NOTES
SHRUE	3S / GROUN	DCOVER / VINES / GRASS		
DBH	124	Ilex cornuta 'Burfordii Nana'	Dwarf Burford Holly	5 Gal., Full, Bushy to Base
KR	62	Rosa 'Radcon'	'Knock Out Roses' (pimk)	3 Gal., Full @ 24" O.C.
RWT	29	R. wichuraiana thornless	Wichuraiana Thornless Rose	2 Gallon Containers (Antique Rose Emporium) Ordered by mail mid Sept. to mid May. Call 1-800-441-0002 or 979-836-9051
IRIS	155	Iris spp.	Iris	1 Gal. @ 12" O.C., Mixed Colors (1.0 Multiplier)
LS	3374	Liriope spicata	Creeping Liriope	2-1/4" Pots @ 8" O.C. (2.25 Multiplier)
BG	20,111 SF	Cynodon dactylon	Bermuda Sod	Solid Sod
MISCE	LLANEOUS	MATERIALS		
BP-1	60 SF	Vital Earth Bedding Soil	Bedding Soil Mix	2" Bedding Soil Mix around all existing trees Vital Earth Resources @ 1-800-245-7645
BP-2	2944 SF	Vital Earth Bedding Soil	Bedding Soil Mix	4" Bedding Soil Mix in all planting beds w/trees, shrubs, groundcover and vines, Vital Earth Resources @ 1-800-245-7645
MUL	2908 SF	Shredded Hardwood Mulch	Shredded Hardwood Mulch	1" in all Beds @ 2" around all trees, Vital Earth Resources @ 1-800-245-7645





## IRRIGATION LEGEND:

SYMBOL	DESCRIPTION
•	LAWN SPRAY HEAD
$ \bigcirc $	REMOTE CONTRO VALVE
	CONTROLLER
	MAINLINE PIPING
	LATERAL PIPING
	REMOTE CONTRC DRIP VALVE
	PLANTING BED TECHLINE TUBING
W	WATER METER
	ISOLATION VALVE
Y	WYE STRAINER
	BACKFLOW PREVENTER
	STATION NUMBER VALVE SIZE GPM (APPROX.)

PRAT NEAD
REMOTE CONTROL VALVE
CONTROLLER
MAINLINE PIPING
LATERAL PIPING
REMOTE CONTROL DRIP VALVE
PLANTING BED TECHLINE TUBING
WATER METER
ISOLATION VALVE
WYE STRAINER
BACKFLOW PREVENTER
STATION NUMBER

MANUFACTURER
RAINBIRD (30 PSI)
RAINBIRD
RAINBIRD
REFER TO SPEC.
REFER TO SPEC.
RAINBIRD
RAINBIRD
REFER TO SPEC.
NIBCO
FEBCO
FEBCO

PEB SERIES WITH PRS-D PRESSURE REGULATOR, REFER TO PLANS FOR SIZE
ESP-LXM SERIES W/ WIRELESS RAIN/FREEZE SENSOR
CLASS 200 PVC
3/4" & LARGER - CLASS 200 PVC 1/2" - CLASS 315 PVC
XCZ-PRF-BF SERIES, REFER TO PLAN FOR SIZE
XR-09-12 WITH COMPRESSION FITTINGS AND TDS-050 TUBING STAKES
PER LOCAL BUILDING CODE
#T-113 SERIES, REFER TO PLAN FOR SIZE
#650 SERIES, REFER TO PLAN FOR SIZE

#850BV SERIES, REFER TO PLAN FOR SIZE

1804 WITH MPR PLASTIC NOZZLES UNLESS NOTED OTHERWISE

MODEL NO,

FLOW CHART SPRAY HEADS:			PIPE SIZE CHART	= <u>PIPE SIZE:</u>
12F 12E 12C 12H 12B 12Q 10F 10H 10B 10Q	12' 12' 12' 12' 12' 12' 12' 10' 10' 10'	2.9 2.2 1.9 1.4 1.0 .7 1.7 .9 .6 .4	RADIUS LEGEND: $F = 360$ ° $E = 270$ ° $D = 240$ ° $C = 225$ ° $H = 180$ ° $B = 135$ ° $A = 120$ °	
8F 8H 8B 8Q	8' 8' 8' 8'	1.7 .9 .6 .4	$Q = 90^{\circ}$	

## NOTE:

1. THE IRRIGATION SUB-CONTRACTOR WILL REVIEW THE IRRIGATION HEAD LAYOUT OF THIS PLAN TO DETERMINE THE POSSIBILITY OF PLACING SPRINKLERS 20'-0" FROM FACE OF THE BUILDING AND STILL ACHIEVE COMPLETE COVERAGE. CONTRACTOR ALSO TO LOOK AT POSSIBILITY OF REDUCING TOTAL NUMBER OF HEADS AND DO THE SAME.







# **Dimension Control Notes**

- 1. PROPERTY LINE, PUBLIC RIGHT OF WAYS, EASEMENTS, EXISTING TOPOGRAPHIC SURVEY AND LOCATION OF PHYSICAL FEATURES WERE OBTAINED FROM A BOUNDARY/TOPOGRAPHIC SURVEY PERFORMED BY KSA ENGINEERS, INC. DATED APRIL 2007
- 2. ALL WORK, UNLESS NOTES, SHALL CONFORM TO THE CITY OF BONHAM STANDARD CONSTRUCTION SPECIFICATIONS.
- 3. THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING SUBSURFACE UTILITIES HAVE BEEN DETERMINED FROM DATA RECORDED BY OTHERS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES WITHIN THE AREA OF CONSTRUCTION. CONTRACTOR SHALL VERIFY SIZE AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.
- 4. ALL DIMENSIONS ARE FROM FACE OF CURB UNLESS OTHERWISE NOTED.
- 5. ALL DIMENSIONS ARE TO FACE OF BUILDING. REFER TO ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS. VERIFY DIMENSIONS IN FIELD.
- 6. REFER TO ARCHITECTURAL PLANS FOR ALL RAMP AND STAIR DETAILS.
- 7. PROPERTY LINE NOT INCLUDED IN EXISTING SURVEY. THE PROPERTY LINE AS SHOWN WAS DRAWN IN BASED ON A PDF DOCUMENT CREATED & PROVIDED BY KSA ENGINEERING ON 23 OCT. 2017. THE BEARINGS & DISTANCES PROVIDED HAVE NOT BEEN VERIFIED. NO BENCH MARKS PROVIDED.











# Legend

	PROPOSED COOL GRAY CONCRETE SIDEWALK
	PROPOSED WARM GRAY CONCRETE SIDEWALK
$\sum \sum$	PROPOSED ASPHALT PAVEMENT
	PROPOSED DECOMPOSED GRANITE (REF. LANDSCAPE)

# **Paving Plan Notes**

- 1. PROPERTY LINE, PUBLIC RIGHT OF WAYS, EASEMENTS, EXISTING TOPOGRAPHIC SURVEY AND LOCATION OF PHYSICAL FEATURES WERE OBTAINED FROM A BOUNDARY/TOPOGRAPHIC SURVEY PERFORMED BY KSA ENGINEERS, INC. DATED APRIL 2007
- 2. ALL WORK, UNLESS NOTES, SHALL CONFORM TO THE CITY OF BONHAM STANDARD CONSTRUCTION SPECIFICATIONS.
- 3. THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING SUBSURFACE UTILITIES HAVE BEEN DETERMINED FROM DATA RECORDED BY OTHERS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES WITHIN THE AREA OF CONSTRUCTION. CONTRACTOR SHALL VERIFY SIZE AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.
- 4. REFER TO ARCHITECTURAL PLANS FOR ALL RAMP AND STAIR DETAILS.
- 5. REFER TO ARCHITECTURAL PLANS FOR CONCRETE COLORS & PATTERNS.









# Legend

100.00	PROPOSED SPOT
	MATCH EXISTING
TC	TOP OF CURB ELEVATION
G	GUTTER ELEVATION
TS	TOP OF STAIR
BS	BOTTOM OF STAIR
TR	TOP OF RAMP
BR	BOTTOM OF RAMP
TG	TOP OF GRATE
RIM	TOP OF RIM ELEVATION
	PROPOSED CONTOUR AND ELEVATION
712	EXISTING CONTOUR AND ELEVATION

# **Grading Plan Notes**

- 1. REFER TO GEOTECHNICAL REPORT FOR FILL COMPACTION AND MOISTURE CONTENT REQUIREMENTS.
- 2. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL MANHOLES, CLEANOUTS, VALVE BOXES, FIRE HYDRANTS, ETC. WITHIN THE AREA OF CONSTRUCTION. THEY MUST BE ADJUSTED TO PROPER LINE AND GRADE BY THE CONTRACTOR PRIOR TO AND AFTER THE PLACING OF PAVING AND GRADING.
- 3. SIDEWALKS SHALL HAVE A SLOPE NO GREATER THAN 5% AND A CROSS SLOPE NOT GREATER THAN 2%, UNLESS OTHERWISE NOTED.
- 4. CONTRACTOR SHALL VERIFY AND RE-SHOOT ALL ELEVATIONS PRIOR TO CONSTRUCTION, ESPECIALLY IN AREAS WHERE EXISTING SITE FEATURES HAVE BEEN MOVED/REMOVED DURING PHASE I DEMOLITION.

CONTRACTOR SHALL INSTALL THE VAULT SUCH THAT THE TOP OF THE VAULT IS MIN. 4" ABOVE SURROUNDING GRADE. 









# Legend

	SANITARY SEWER LINE
0	SANITARY MANHOLE
0	SANITARY CLEANOUT
	WATER LINE
—	WATER VALVE
-	FIRE HYDRANT
———— E ————	ELECTRIC LINE (REF. E1.01)
TEL	TELECOM LINE (REF. MEP)
CH	CHILL WATER LINE (REF. M1.01)
———— HW ———	HOT WATER LINE (REF. M1.01)

# **Utility Plan Notes**

\_\_\_\_\_

- PROPERTY LINE, PUBLIC RIGHT OF WAYS, 1. EASEMENTS, EXISTING TOPOGRAPHIC SURVEY AND LOCATION OF PHYSICAL FEATURES WERE OBTAINED FROM A BOUNDARY/TOPOGRAPHIC SURVEY PERFORMED BY KSA ENGINEERS, INC. DATED APRIL 2009
- 2. THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING SUBSURFACE UTILITIES HAVE BEEN DETERMINED FROM DATA RECORDED BY OTHERS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES WITHIN THE AREA OF CONSTRUCTION. CONTRACT SHALL VERIFY SIZE AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.
- 3 ALL WATER AND SANITARY SEWER PIPES MUST BE INSTALLED AND TESTED ACCORDING TO TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ).
- CONTRACTOR SHALL VERIFY ALL EXISTING SANITARY 4. SEWER FLOW LINES BEFORE BEGINNING CONSTRUCTION.
- PROPOSED ELECTRIC, TELECOM, CHILL WATER, AND 5. HOT WATER LINES SHOWN HEREON ARE FOR REFERENCE ONLY AND SHOULD BE CONSIDERED APPROXIMATE. REFER TO MEP DRAWINGS FOR EXACT LOCATIONS.
- 6" DOUBLE CHECK BACKFLOW PREVENTER WITH CONCRETE VAULT TO BE PARK USA DOUBLE CHECK BACKFLOW PREVENTER ASSEMBLY (MODEL DDBP6) OR APPROVED EQUIVALENT.
- CONTRACTOR SHALL INSTALL THE VAULT SUCH THAT THE TOP OF THE VAULT IS MIN. 4" ABOVE SURROUNDING GRADE. CONNECT SUMP TO NEAREST STORM DRAIN.

·····









## **GENERAL NOTES**

- GENERAL SITE WORK 1. ALL AREAS AND ITEMS INDICATING CONTRACT LIMITS AND LINES OF DEMARCATION ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR AND ARE NOT TO BE TAKEN LITERALLY. ACTUAL CONTRACT LIMITS ARE TO BE DETERMINED PRIOR TO CONSTRUCTION BY FIELD VERIFICATION.
- EXISTING CONSTRUCTION SHOWN TO REMAIN SHALL NOT BE DAMAGED DURING THE DEMOLITION PROCESS. PROVIDE ALL NECESSARY TEMPORARY PROTECTION.
- EXISTING UTILITY SERVICES ARE TO REMAIN, BE PROTECTED, AND / OR TO BE OPERATIONAL DURING DEMOLITION AND CONSTRUCTION. REFERENCE RELEVANT MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS. CONTRACTOR TO BE RESPONSIBLE FOR PROTECTION OF AND RESTORATION OF SERVICES, AS WELL AS PROVISION OF TEMPORARY UTILITY SERVICES.
- NOTIFY CITY OF BONHAM WHEN IT IS NECESSARY TO AFFECT UTILITIES BEFORE PROCEEDING WITH THE WORK. ALL EXISTING UTILITIES MUST BE CHECKED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF DEMOLITION WORK. ANY DAMAGES RESULTING FROM LACK OF COMPLIANCE WITH THE PROVISION SHOULD BE CORRECTED BY THE
- CONTRACTOR AT HIS OR HER OWN EXPENSE. 5. REFERENCE CIVIL AND MEP DRAWINGS FOR SCOPE OF UTILITY WORK. 6. CONTRACTOR TO TAKE SPOT ELEVATIONS AT BUILDING CORNERS AND ENTRIES ONCE SIDEWALKS SURROUNDING BUILDING ARE REMOVED. SITE GRADING TO BE DETERMINED AFTER RECEIVING
- SPOT ELEVATIONS, REFERENCE CIVIL. 7. SITE SURVEY WITH UTILITY INFORMATION TO BE PROVIDED BY OWNER.
- 8. LIGHTNING PROTECTION SYSTEM TO BE INSTALLED, COORDINATE GROUNDING ROD LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.

## FOUNDATION WATERPROOFING SYSTEM

- 1. REFERENCE 1/A1.04 FOR ROUTING OF FOUNDATION DRAIN. 2. NOTIFY ARCHITECT IF DAMAGED AREAS OF FOUNDATION WALL ARE DISCOVERED PRIOR TO APPLICATION OF WATERPROOFING
- SYSTEM. 3. CONTRACTOR TO COORDINATE HELICAL PILE INSTALLATION AT ENTRIES AWAY FROM FOUNDATION DRAIN SYSTEM.

## MONUMENTS & MARKERS

- 1. PROVIDE TEMPORARY PROTECTION FOR EXISTING MONUMENTS AND RTHL MARKERS DURING CONSTRUCTION ACTIVITIES ON SITE. WHERE NOTED, REMOVE AND SALVAGE EXISTING SITE MARKERS AND
- FURNISHINGS FOR REINSTALLATION.
- TREES & LANDSCAPING 1. EXISTING TREES ARE TO REMAIN UNLESS NOTED OTHERWISE ON ARCHITECTURAL DRAWINGS.
- PRESERVE AND PROTECT EXISTING TREES ON SITE DURING CONSTRUCTION. PROVIDE TREE PROTECTION FENCING UNDER DRIP LINE OF TREE.
- ADJUST LAYOUT TEMPORARILY AS NECESSARY TO ALLOW FOR CONSTRUCTION IN IMMEDIATE VICINITY OF TREES.
- 4. EXISTING LANDSCAPE AFFECTED BY CONSTRUCTION ACTIVITIES IS TO BE REPLACED. (REF. LANDSCAPE)

### LIGHTING

REFERENCE ARCHITECTURAL, MEP AND LANDSCAPE DRAWINGS FOR SCOPE OF WORK ASSOCIATED WITH EXTERIOR BUILDING AND SITE LIGHTING.

### PARKING LOT

1. PROVIDE HANDICAP SIGNAGE AT HANDICAP PARKING. (REF. CIVIL) RESTRIPE PARKING TO ACCOMODATE 60° PARKING AND ONE WAY DRIVE.

MAINTAIN 12 FT. MIN. CLEAR WIDTH AT AISLES. (REF. CIVIL)

## SITE PLAN LEGEND

	ASPHALT PAVING (REF. CIVIL)
	CONCRETE PAVING W/ CONTEMPORARY FINISH
	CONCRETE PAVING W/ HISTORIC FINISH
	DECOMPOSED GRANITE (REF. LANDSCAPE)
	PLANTINGS (REF. LANDSCAPE)
Ρ	OUTDOOR POWER RECEPTACLE (REF. MEP/ CIVIL/ LANDSCAPE)
СВ	CATCH BASIN, TYP. OF 16 (REF CIVIL)
	PROPERTY LINE
⊕нв	HOSE BIB (REF. MEP/ CIVIL/ LANDSCAPE)







2 Alternate #1 Stone Wall Plan

**TRUE NORTH** 

**Mechanical Yard Site Plan** 























hitexas Dallas | Austin 1907 Marilla St. www.architexas.com Second Floor Dallas, Texas 75201 p 214.748.4561 TEXAS HISTORICAL COMMISSION real places telling real stories **FANNIN COUNTY** COURTHOUSE **INTERIOR & EXTERIOR RESTORATION** 101 E. Sam Rayburn Drive Bonham, Texas 75418 COPYRIGHT The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing. Any errors or omissions shall be reported to Architexas without delay. The Copyrights to all designs and drawings are the property of Architexas. Reproduction or use for any purpose other than that authorized by Architexas is forbidden. **REVISION HISTORY** 1 Oct. 16, 2018 Addendum #1 ISSUED FOR CONSTRUCTION #18326 9/21/2018 Architexas No. Date SEPT. 21, 2018 1737 Sheet Name **ROOF DETAILS** Sheet Number AI.I4

PROVIDE TEMPORARY COVER FOR DUCT OPENING TPO ROOF SYSTEM WOOD BLOCKING <	
UNDERLAYMENT RIGID INSULATION COMPOSITE DECK (REF. STRUCT.)	

STEEL BEAM (REF. STRUCT.)



## TPO ROOF SYSTEM UNDERLAYMENT

RIGID INSULATION -

CONTINUOUS BEAD OF CAP SEALANT

DRIP EDGE -

CONTINUOUS CLEAT

TREATED PLYWOOD SHEATHING

UNDERLAYMENT TPO ROOF SYSTEM -









**1** Tower Base Level Plan

exas Dallas | Austin 1907 Marilla St. www.architexas.com Second Floor Dallas, Texas 75201 p 214.748.4561 TEXAS HISTORICAL COMMISSION real places telling real stories **FANNIN COUNTY** COURTHOUSE **INTERIOR & EXTERIOR RESTORATION** 101 E. Sam Rayburn Drive Bonham, Texas 75418 COPYRIGHT The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing. Any errors or omissions shall be reported to Architexas without delay. The Copyrights to all designs and drawings are the property of Architexas. Reproduction or use for any purpose other than that authorized by Architexas is forbidden. **REVISION HISTORY** 1 Oct. 16, 2018 Addendum #1 ISSUED FOR CONSTRUCTION 9/21/2018 Architexas No. Date SEPT. 21, 2018 1737 Sheet Name **TOWER LEVEL FLOOR PLANS &** LADDER DETAILS Sheet Number A1.15





HONED, SMOOTH LIMESTONE
ROCK FACE LIMESTONE


\_\_\_\_\_ \_ \_ \_ \_ \_ VENEER BELT COURSE, TYP.

VENEER BOTTOM 3 COURSES, TYP.

 $\mathbf{V}$ 



	HONED, SMOOTH LIMESTONE
$\begin{split} & = \int_{-\infty}^{\infty} \int_{$	ROCK FACE LIMESTONE









HONED, SMOOTH LIMESTONE
ROCK FACE LIMESTONE



----\_\_\_\_\_

VENEER BELT COURSES, TYP. -

## VENEER BOTTOM 3 COURSES, TYP.

 $\mathbf{V}$ 





HONED, SMOOTH LIMESTONE
ROCK FACE LIMESTONE



# **1** Building Section A 3/16'' = 1'-0''

xas Dallas | Austin 1907 Marilla St. www.architexas.com Second Floor Dallas, Texas 75201 p 214.748.4561 TEXAS HISTORICAL COMMISSION real places telling real stories **FANNIN COUNTY** COURTHOUSE **INTERIOR & EXTERIOR RESTORATION** 101 E. Sam Rayburn Drive Bonham, Texas 75418 COPYRIGHT The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing. Any errors or omissions shall be reported to Architexas without delay. The Copyrights to all designs and drawings are the property of Architexas. Reproduction or use for any purpose other than that authorized by Architexas is forbidden. **REVISION HISTORY** 1 Oct. 16, 2018 Addendum #1 ISSUED FOR CONSTRUCTION #18326 9/21/2018 Architexas No. Date SEPT. 21, 2018 1737 Sheet Name **BUILDING SECTION** Sheet Number A3.01





# **1** Building Section B 3/16" = 1'-0"

xas Dallas | Austin 1907 Marilla St. www.architexas.com Second Floor Dallas, Texas 75201 p 214.748.4561 TEXAS HISTORICAL COMMISSION real places telling real stories **FANNIN COUNTY** COURTHOUSE **INTERIOR & EXTERIOR RESTORATION** 101 E. Sam Rayburn Drive Bonham, Texas 75418 COPYRIGHT The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing. Any errors or omissions shall be reported to Architexas without delay. The Copyrights to all designs and drawings are the property of Architexas. Reproduction or use for any purpose other than that authorized by Architexas is forbidden. **REVISION HISTORY** 1 Oct. 16, 2018 Addendum #1 ISSUED FOR CONSTRUCTION #18326 9/21/2018 Architexas No. Date SEPT. 21, 2018 1737 Sheet Name **BUILDING SECTION** Sheet Number A3.02





















**16 213 County Judge - North** 3/8" = 1'-0"









**3 209 South Corridor - West** 3/8" = 1'-0"

╎┾╪╪╎╎╎╎╎

WOOD WAINSCOT TYPE #1,

STAIN









						TI	HIRD LEVEL FINISH SO	CHEDULE				
		FLOOR						WALL		CEILING		CEILING
ROOM #	ROOM NAME	MATERIAL	TYPE	BASE	WAINSCOT	NORTH	EAST	SOUTH	WEST	MATERIAL	TYPE	Ξ (V.I.F
		1			T						1	
301	PURCHASING	WOOD	2	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	2	11'-8
302	COUNTY TREASURER'S ASST.	WOOD	2	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	2	11'-8 <sup>-</sup>
303	IT CLOSET	CONCRETE TOPPING	-	WOOD	-	GYP. BOARD. PAINT SW 6119	GYP. BOARD, PAINT SW 6119	PLASTER, PAINT SW 6119	PLASTER, PAINT SW 6119	GYP. BD. PAINT SW 6119	4	10' - '
304	COUNTY TREASURER	WOOD	3	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	GYP. BOARD, PAINT SW 6485	PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	2	11'-8
305	ELEVATOR VESTIBULE	WOOD	3	WOOD, STAIN	WOOD, STAIN	GYP. BD. PAINTSW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	GYP. BOARD, PAINT SW 6485	METAL, PAINT SW 6119	2	11'-8
306	NORTH CORRIDOR	TILE	1	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	2	11'-8
307	BALCONY	WOOD	-	WOOD, STAIN	-	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	ACOUSTICAL PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	3	11'-1
308	SOUTH CORRIDOR	TILE	1	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	2	11'-8
309	STAIR	CONCRETE	-	-	-	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	GYP. BOARD, PAINT SW 6485	PLASTER, PAINT SW 6485	GYP. BD, PAINT SW 6119	-	12' - 8
310	VESTIBULE	WOOD	3	WOOD, STAIN	WOOD, STAIN	GYP. BOARD, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	GYP. BOARD, PAINT SW 6485	METAL, PAINT SW 6119	2	11'-8
311	RESTROOM	TILE	4	TILE	TILE	GYP. BOARD, PAINT SW 6485	GYP. BOARD, PAINT 6485	PLASTER, PAINT SW 6485	GYP. BOARD, PAINT SW 6485	GYP. BD, PAINT SW 6119	4	11'-8
312	COUNTY AUDITOR	TILE	1	WOOD, STAIN	WOOD, STAIN	GYP. BOARD, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER/ GYP. BOARD, PAINT SW 6485	METAL, PAINT SW 6119	2	11'-8
313	COUNTY AUDITOR ASST.	TILE	1	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	GYP. BOARD, PAINT SW 6485	PLASTER/ GYP. BOARD, PAINT SW 6485	PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	2	11'-8
314	WEST CORRIDOR	TILE	1	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	2	11'-8
315	CENTRAL CORRIDOR	TILE	1	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	2	11'-8

						35	COND LEVEL FINISH SU					
		FLOOR					W	ALL		CEILING		CEILING H
ROOM #	ROOM NAME	MATERIAL	TYPE	BASE	WAINSCOT	NORTH	EAST	SOUTH	WEST	MATERIAL	TYPE	(V.I.F)
											- -	
201	COURT REPORTER	WOOD	2	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	2	13' - 1"
202	CONFERENCE/ JURY ROOM	WOOD	2	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	2	13' - 1"
203	IT CLOSET	CONCRETE TOPPING	-	WOOD, STAIN	-	GYP. BD, PAINT SW 6119	GYP. BD, PAINT SW 6119	PLASTER, PAINT SW 6119	PLASTER, PAINT SW 6119	GYP. BD. PAINT SW 6119	4	10' - 0"
204	JURY BREAK ROOM	WOOD	3	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	GYP. BD, PAINT 6485	GYP. BD, PAINT SW 6485	PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	2	13' - 1"
205	JURY RESTROOM	TILE	4	TILE	TILE	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	GYP. BD., PAINT SW 6485	GYP. BOARD, PAINT SW 6485	GYP. BOARD, PAINT SW 6119	4	12' - 6"
206	ELEVATOR VESTIBULE	WOOD	3	WOOD, STAIN	WOOD, STAIN	GYP. BD, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	GYP. BOARD, PAINT SW 6485	METAL, PAINT SW 6119	2	13' - 0"
207	NORTH CORRIDOR		1	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	X-MTL. PAN VAULT, PAINT SW 6119	5	14' - 0"
208	COURTROOM	WOOD/SHEET	2/3	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	ACOUSTICAL PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	3	25' - 9 3/4
209	SOUTH CORRIDOR		1	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	X-MTL. PAN VAULT, PAINT SW 6119	5	14' - 0"
210	STAIR	CONCRETE	-	-	-	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	GYP. BD., PAINT SW 6485	PLASTER, PAINT SW 6485	-	-	-
211	VESTIBULE	WOOD	3	WOOD, STAIN	WOOD, STAIN	GYP. BOARD, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	GYP. BOARD, PAINT SW 6485	METAL, PAINT SW 6119	2	12' - 6"
212	RESTROOM	TILE	4	TILE	TILE	GYP. BOARD, PAINT SW 6485	GYP. BOARD, PAINT 6485	PLASTER, PAINT SW 6485	GYP. BOARD, PAINT SW 6485	GYP. BOARD, PAINT SW 6119	4	12' - 6"
213	COUNTY JUDGE	TILE	1	CONCRETE	<b>(-)</b>	GYP. BOARD, PAINT SW 6485	PLASTER, PAINT 6485	PLASTER, PAINT SW 6485	PLASTER/ GYP. BOARD, PAINT SW 6485	X-MTL. PAN VAULT, PAINT SW 6119	5	13' - 11 3/
214	RESTROOM	TILE	1	TILE		PLASTER, PAINT SW 6485	GYP. BOARD, PAINT SW 6485	GYP. BD., PAINT SW 6485	GYP. BD., PAINT SW 6485	GYP. BOARD, PAINT SW 6119	4	12' - 6"
215	JUDGE ASST.	TILE	1	CONCRETE		GLASS PARTITION	GYP. BOARD, PAINT 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	X-MTL. PAN VAULT, PAINT SW 6119	5	13' - 11 3/
216	VESTIBULE	TILE	1	CONCRETE	WOOD, STAIN	PLASTER, PAINT SW 6485	GYP. BOARD, PAINT 6485	GLASS PARTITION	PLASTER, PAINT SW 6485	X-MTL. PAN VAULT, PAINT SW 6119	5	13' - 11 3/
217	WEST CORRIDOR	TILE	1	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	X-MTL. PAN VAULT, PAINT SW 6119	5	13' - 11 3/
218	CENTRAL CORRIDOR	TILE	1	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	X-MTL. PAN VAULT, PAINT SW 6119	5	13' - 11 3/

						GR	OUND LEVEL FINISH SC	HEDULE				
	DOOMNAME	FLOOR		DACE	MAINICCOT		WAL	L		CEILING		CEILING
		MATERIAL	TYPE	BASE	WAINSCOT	NORTH	EAST	SOUTH	WEST	MATERIAL	TYPE	(V.I.F
101	JP	WOOD	2	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	2	13'-(
102	JP CLERKS	WOOD	2	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	2	13' - (
103	IT CLOSET	CONCRETE TOPPING	-	WOOD, STAIN	-	GYP. BD, PAINT SW 6119	GYP. BD, PAINT SW 6119	PLASTER, PAINT SW 6119	PLASTER, PAINT SW 6119	GYP. BD, PAINT SW 6119	4	11'-7
104	JP CLERKS	WOOD	3	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	GYP. BOARD, PAINT SW 6485	PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	2	12'-1
105	ELEVATOR VESTIBULE	WOOD	3	WOOD, STAIN	WOOD, STAIN	GYP. BD, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	GYP. BOARD, PAINT SW 6485	METAL, PAINT SW 6119	2	13'-(
106	NORTH CORRIDOR	TILE	1	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	X-MTL. PAN VAULT, PAINT SW 6119	5	14' - 1 3
107	BAILIFF	WOOD	2	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	GYP. BOARD, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	2	13'-(
108	AV	CONCRETE TOPPING	-	WOOD, STAIN	-	GYP. BOARD, PAINT SW 6119	GYP. BOARD, PAINT SW 6119	PLASTER, PAINT SW 6119	GYP. BOARD, PAINT SW 6119	GYP. BOARD, PAINT SW 6119	4	10' - (
109	JUDGE'S ASST.	WOOD	2	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	2	13' - (
110	COUNTY COURT AT LAW JUDGE	WOOD	2	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	2	13' - (
111	EAST CORRIDOR	TILE	1	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	MTL. PAN VAULT, PAINT SW 6119	5	14'-1 3
112	JURY ROOM	WOOD	2	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	GYP. BD, PAINT SW 6485	METAL, PAINT SW 6119	2	13' - (
113	JP /COUNTY COURT AT LAW COURTROOM	FLOORING	2	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER/ GYP. BD, PAINT SW 6485	PLASTER, PAINT SW 6485	ACOUSTICAL PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	3	13' - !
114	SOUTH CORRIDOR		1	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	X-MTL. PAN VAULT, PAINT SW 6119	5	14' - 1 3
115	STAIR	CONCRETE	-	-	-	PLASTER, PAINT SW 6793	PLASTER, PAINT SW 6793	GYP. BD, PAINT SW 6793	PLASTER, PAINT SW 6793	-	-	-
116	COMMISIONER ASST.	WOOD	3	WOOD, STAIN	WOOD, STAIN	GYP. BOARD, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	METAL, PAINT SW 6119	2	13'-(
117	COMMISIONER CONFERENCE ROOM	TILE	1	CONCRETE	-	PLASTER/ GYP. BOARD, PAINT SW 6485	PLASTER/ GYP. BOARD, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	X-MTL. PAN VAULT, PAINT SW 6119	5	14' - 1
118	ATTORNEY CONFERENCE ROOM	TILE	1	CONCRETE	-	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	X-MTL. PAN VAULT, PAINT SW 6119	5	14'-2 \$
119	WEST CORRIDOR	TILE	1	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	X-MTL. PAN VAULT, PAINT SW 6119	5	14' - 1 🤅
120	CENTRAL CORRIDOR	TILE	1	WOOD, STAIN	WOOD, STAIN	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	PLASTER, PAINT SW 6485	X-MTL. PAN VAULT, PAINT SW 6119	5	14'-1 ;

						BAS	EMENT LEVEL FINISH	SCHEDULE				
		FLOOR						WALL		CEILING		CEILING
ROOM #	ROOM NAME	MATERIAL	TYPE	BASE	WAINSCOT	NORTH	EAST	SOUTH	WEST	MATERIAL	TYPE	(V.I.F
001	MECH	CONCRETE	_			Y-STONE	CMU	X-STONE	Y. STONE		5	7'-6
001	BREAK ROOM	CONCRETE	-	-	-	X-STONE X-STONE, CMU	CMU	X-STONE	CMU	X-MTL. PAN VAULT, PAINT SW 0119 X-MTL. PAN VAULT, PAINT SW 6119	5	7'-6
003	STAIR	CONCRETE	-	-	-	X-STONE	X-STONE	CMU	X-STONE	-	-	-
004	CORRIDOR	CONCRETE	-	-	-	X-STONE	X-STONE	X-STONE; GYP. BD., PAINT SW 6119	CMU	X-MTL. PAN VAULT, PAINT SW 6119	5	7'-6
005	ELEVATOR CONTROL CLOSET	CONCRETE	-	-	-	X-STONE	CMU	CMU	CMU	X-MTL. PAN VAULT, PAINT SW 6119	5	7 '- 6
006	MECH.	X-CONC., CONC.	-	-	-	X-STONE	X-STONE	X-STONE	X-STONE	X-MTL. PAN VAULT, PAINT SW 6119	5	7' - 2
007	MECH.	X-CONC., CONC.	-	-	-	X-PLASTER, PAINT SW 6119	X- PLASTER, PAINT SW 6119	X-PLASTER, PAINT SW 6119	X-PLASTER, PAINT SW 6119	GYP. BOARD, PAINT SW 6119	6	6'-1
008	MECH.	X-CONC.	-	-		X-PLASTER, PAINT SW 6119	X-PLASTER, PAINT SW 6119	X-PLASTER, PAINT SW 6119	X-PLASTER, PAINT SW 6119	GYP, BOARD, PAINT SW 6119	6	6'-11
009	MEN	TILE	-	TILE	TILE @ G.B. WALL	GYP. BD, PAINT SW 6119	X-STONE	GYP. BOARD, PAINT SW 6119	GYP. BOARD, PAINT SW 6119	GYP. BOARD, PAINT SW 6119	4	7' - 0
010	ELEVATOR VESTIBULE	CONCRETE	-	-	-	-	X-STONE	X-STONE	GYP. BOARD, PAINT SW 6119	GYP. BOARD, PAINT SW 6119	7	7'-6
011	ENTRY	CONCRETE	-	-	-	X-STONE	X-STONE	X-STONE; GYP. BD, PAINT SW 6119	X-STONE	GYP. BOARD, PAINT SW 6119	7	7'-6
012	WOMEN	TILE	-	TILE	TILE @ G.B. WALL	GYP. BOARD, PAINT SW 6119	GYP. BOARD, PAINT SW 6119	GYP. BOARD, PAINT SW 6119	X-STONE	GYP. BOARD, PAINT SW 6119	4	7' - C



# 

## 

Courtroom 208 2 Wall Stencil Pattern 1 1/2" = 1'-0"





## IG HT. REMARKS 31/2" 1/2" - 0" 1/2" 1/2" 1/2" 1/4" 1/2" 31/2" 1/2" 1/2" 1/2" 31/2" 1/2" /2"









# **GENERAL NOTES**

ENE	RAL			
•	FINISH	ES LISTED WITH 'X' DESIGNATION ARE EXISTING.		D) ELECTRICAL BOXES AND ASSOCIATED ELEME
	FINISH	EXPOSED SURFACES UNLESS NOTED OTHERWISE. THE		RECESSED INTO WALLS SO THAT COVER PLAT
	CONTR	ACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE		DEVICES ARE FLUSH WITH FINISH SURFACE O
	COORE	DINATION OF THE COMPLETE FINISH-OUT OF THE PROJECT.		E) BUILD OUT NEW PLASTER SYSTEM AS NEEDE
	ANY SU	JRFACES WHICH DO NOT HAVE A SPECIFIC FINISH NOTED, NOR		OUTER MOST EXISTING PLASTER SURFACE PF
	ARE NO	DTED TO REMAIN UNFINISHED SHALL BE BROUGHT TO THE		AND FINISH COAT APPLICATION.
	ATTEN	TION OF THE ARCHITECT AND FINISHED PER THE ARCHITECT'S		F) PREPARE AND FINISH PLASTER WALLS AS REG
	INSTRU	JCTION.		MATCH ORIGINAL SMOOTH PLASTER FINISH.
	BIDDE	RS ARE RESPONSIBLE FOR REVIEWING EXISTING CONDITIONS		SKIM COAT APPLICATION.
	OF ORI	GINAL FINISH ELEMENTS. CONDITIONS OF THESE ELEMENTS	2.	NEW GYPSUM BOARD PARTITION WALLS:
	AND SO	COPE OF WORK ARE NOT SPECIFIED PER INDIVIDUAL		A) GYPSUM BOARD PARTITION TO RECEIVE VEN
	LOCAT	IONS.		, UNLESS NOTED OTHERWISE.
	CONTR	RACTOR TO SUBMIT PAINT AND STAIN FINISH SCHEDULE TO		B) GYPSUM BOARD PARTITION WALL FINISH TO (
	ARCHI	TECT FOR REVIEW AND APPROVAL PRIOR TO CONDUCTING		, ADJACENT PLASTER WALL SURFACES.
	WORK.		3.	ACOUSTICAL PLASTER:
	DIMEN	SIONING AT WALLS IS FINISHED FACE OF WALL TO FINISHED	0.	A) EXISTING PLASTER TO BE REMOVED FROM FX
	FACEC	OF WALL UNLESS NOTED OTHERWISE.		MASONRY WALL
_	FINISH	FLOOR ELEVATIONS:		B) REPAIR & REPOINT MASONRY AS NECESSARY
-	A)	EXISTING ELEVATIONS & CEILING HEIGHTS ARE APPROXIMATE		INSTALL ATION OF PLASTER FINISH
	,	& ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR.		C) PROVIDE ACQUISTICAL PLASTER SYSTEM AS S
	B)	FINAL FLEVATIONS & CEILING HEIGHTS WILL BE DETERMINED		
	_/	ONCE NEW FINISH FLOOR LEVELS ARE ESTABLISHED IN	4	EXISTING MASONRY WALLS
		CORRIDORS	т.	A) CLEAN MASONRY EREE OF DEBRIS AND GRIM
				B) REPAIR & REPOINT MASONRY AS REO'D MOR
1 001	RS			ORIGINAL
	FXISTI	NG CONCRETE ELOORING <sup>.</sup>		
•	A)	REMOVE EXISTING LOOSE AND DETERIORATED MATERIAL		
	,,,	BACK TO SOUND SUBSTRATE	WAING	
	B)	CLEAN AND REMOVE EXISTING DIRT DEBRIS FILLER AND	1	
	Β,	EINISHES FROM CONCRETE ELOOR SURFACES SCHEDUILED	1.	
		TO REMAIN WITH SPECIFIED CONCRETE CLEANER		
	C			
	0)	ADEAS WITH EXTENSIVE DAMAGE AND / OD AT ELOOD ADEAS		
			0	B) FREF SURFACES FOR STAIN FINISH (REF. FRU NEW CEDAMIC THE WAINSCOT.
			Ζ.	
				A) PROVIDE CEMEINITIOUS BACKER BOARD BER
		COLOR, AGGREGATE, FINISH AND CONSTRUCTION.		
	D)	REPAIR HOLES, INDENTATIONS, AND CRACKS IN CONCRETE.		B) PROVIDE TILE AND GROUT AS SPECIFIED (REF
				MANUAL).
	Ε.	REQUIRED TO ALLOW FOR A LEVEL SURFACE.		100
	E)	TOOL AND STAIN PATCHED AREAS TO MATCH ADJACENT	CEILIN	
	-		1.	EXISTING METAL PAN VAULT (TYPE 5):
	⊢)	PROVIDE RESINOUS FLOORING AS SPECIFIED (REF. PROJECT		A) THE EXISTING METAL CEILING PAINT IS KNOW
				LEAD. WASTE GENERATED BY COATING REMC
•	NEW C	UNCRETE FLOORING, TOPPING AND BASEBOARDS:		SHALL BE CLASSIFIED AS HAZARDOUS MATER
	A)	CHALK TOOL JOINTS ON SLAB AS INDICATED ON		BE REMOVED IN ACCORDANCE WITH EPA & O
		STRUCTURAL PLANS.		B) REMOVE RUST FROM EXISTING METAL PAN SU
	<b>D</b> \			

- B) CONTRACTOR TO REVIEW CONTROL JOINT LAYOUT WITH ARCHITECT IN THE FIELD PRIOR TO TOOLING JOINTS. C) PROVIDE CONCRETE SEALER AS SPECIFIED (REF. PROJECT MANUAL). NEW WOOD FLOORING:
- A) NEW WOOD FLOORING IS TO MATCH ORIGINAL. ASSUME RECLAIMED OLD GROWTH LONG LEAF YELLOW PINE (REF. PROJECT MANUAL).
- B) CLEAN, SAND, SWEEP, AND VACUUM, FLOORING PRIOR TO FINISHING.
- C) FINISH FLOORING AS SPECIFIED (REF. PROJECT MANUAL). NEW TILE FLOORING: A) REMOVE EXISTING CONCRETE TOPPING & LOOSE AND
- EXISTING CONCRETE FLOORS. B) CONTRACTOR TO DOCUMENT ORIGINAL JOINT PATTERN ON EXISTING CONCRETE FLOORS. TILE TO BE CUT TO MATCH
- JOINT PATTERN. C) PREP FLOOR FOR TILE PER MANUFACTURERS
- RECOMMENDATIONS.
- D) PROVIDE CRACK ISOLATION MEMBRANE. E) INSTALL NEW TILE FLOORING AS SPECIFIED (REF. PROJECT MANUAL).
- NEW SHEET FLOORING:
- A) SHEET FLOOR PATTERN TO MATHC HISTORIC PATTERN, REF. 1/A6.01. B) INSTALL SHEET FLOOR AS SPECIFIED (REF. PROJECT MANUAL). 2.

## WALLS 1. PLASTER WALLS:

4.

5.

- A) CLEAN AND REMOVE FLAKING & PEELING PAINT FROM PLASTER WALL SURFACES.
- B) REMOVE DAMAGED AND / OR DETERIORATED PLASTER TO SOLID SUBSTRATE. REPAIR AND REPOINT MASONRY AS
- NECESSARY FOR PROPER INSTALLATION OF PLASTER FINISH. C) CONCEAL CONDUIT BEHIND FINISH FACE OF PLASTER. ROUT PLASTER AND UNDERLYING MASONRY TO ACCEPT CONDUIT AND TO ALLOW FOR A FULL APPLICATION OF LATH AND

# WAINSCOT PROFILE INTERSECTION

PLASTER SYSTEM.









# **GENERAL NOTES**

GENE								
1.	AND EXTERIOR WINDOWS FRAMES AND ASSOCIATED CASING							
	PRO\	/IDE WINDOWS FRAMES CASING AND HARDWARE AS						
	SPEC	THE WINDOWS, I RUNNES, SIGNARY AND FRANCE AS						
,		NOW SIZES AT EXISTING AND NEW MASONRY OPENINGS AR						
	APPR	20XIMATE CONTRACTOR IS TO VERIEV ORIGINAL MASONRY						
	OPEN	VINGS SIZES IN FIELD.						
3.	PRO\	/IDE TEMPORARY PROTECTION AS REQUIRED DURING						
	DEMO	DLITION AND CONSTRUCTION OF WINDOWS TO PROTECT						
	INTE	RIOR FROM WATER/ MOISTURE INTRUSION.						
1.	SECL	IRE LOOSE BLOCKING AND PROVIDE SUPPLEMENTAL						
	BLOC	KING AS NECESSARY FOR ATTACHMENT TO EXISTING AND						
	MATE	ERIALS.						
5.	REST	ORE SURROUND MATERIALS (STONE, MORTAR, ETC.).						
	REFE	RENCE EXTERIOR ELEVATIONS FOR EXTENT OF RESTORAT						
	WOR	К.						
	WOO	D SPECIES FOR EXTERIOR AND INTERIOR WINDOW SASHES						
	FRAMES TO BE SAPELE. CASING TRIM TO BE CLEAR VERTICAL G							
	DOU	GLAS FIR.						
<i>'</i> .	FINIS	HES:						
	A)	WOOD WINDOWS, FRAMES, TRANSOMS, AND CASINGS A						
		TO RECEIVE A PAINTED FINISH ON THE EXTERIOR AND A						
		STAINED FINISH ON THE INTERIOR, UNLESS NOTED						
		OTHERWISE.						
	B)	METAL CLAD WINDOWS AND SHUTTERS AT ORIGINAL VA						
		LOCATIONS ARE TO RECEIVE A PAINTED FINISH.						
<b>.</b>	UPPE	ER WINDOW SASH AND TRANSOMS TO BE FIXED; LOWER SA						
	BE O	PERABLE.						
).	HARE	DWARE:						
	A)	PROVIDE NEW HARDWARE AS SPECIFIED IN AND PROJEC						
	B)							
	C)	WITH ARCHITECT PRIOR TO INSTALLATION.						
	C)	PROVIDE SCREWS AND ATTACHMENTS THAT MATCH FIN						
	001	OF SPECIFIED HARDWARE COMPONENTS.						
10.		KTRUUM 208 WINDOWS TO RECEIVE CUSTOM WOOD SHUT						
	REF.	37 AO.US. I YPICAL WINDOW TO RECEIVE WOOD LOUVER BLI DROJECT MANUAL						
4.4								
11.								
	UPER	ADLE WINDOWS, HARDWARE, AND WEATHERSTRIPPING.						



## WOOD WINDOW FRAME, PAINT EXTERIOR ; STAIN INTERIOR. BACK PRIME PRIOR TO INSTALLATION

WOOD SASH W/ INSULATED GLASS











**5** Basement Vent Sill Detail



# **20 Typ. Top Sash** 3" = 1'-0"

WOOD MEETING RAIL, PAINT	
WOOD WINDOW FRAME, PAINT EXTERIOR, STAIN INTERIOR. BACK PRIME PRIOR TO	

**19 Typ. Meeting Rail** 

# & WEATHERSTRIPPING

WOOD WINDOW SILL, PAINT

WOOD STOOL

FLASHING SEALANT



INSTALLATION, TYP.

EXTERIOR; STAIN INTERIOR WOOD WINDOW FRAME, PAINT -

WOOD SASH W/ INSULATED GLASS & WEATHERSTRIPPING

WOOD TRACK FOR SHUTTER, REF. A6.08

WOOD STOOL

WOOD WINDOW SILL, PAINT EXTERIOR; STAIN INTERIOR SEALANT

EXIST'G LIMESTONE SILL

INSTALLATION, TYP. WOOD WINDOW FRAME, PAINT -WOOD SASH W/ INSULATED GLASS & WEATHERSTRIPPING

PROVIDE/ REPLACE WOOD EMBEDS AS REQ'D, TYP. WOOD TRACK FOR SHUTTER, REF. A6.08 WOOD BLOCKING

WOOD CASING PROFILE TYPE 2 & 3 (REF. CASING TYPES)

 $\gamma$ 

 $\sim$ 

**3** Jamb Detail



INTERIOR







**8** Sill Detail BI-FOLD STEEL SHUTTER, PAINT 1 1/2" MTL. QUARTER RD. BRICK MOULD, PAINT BACK PRIME & SEAL BEHIND PRIOR TO INSTALLATION, TYP. WOOD WINDOW FRAME, PAINT -BACK PRIME PRIOR TO INSTALLATION, TYP. WOOD SASH W/ INSULATED GLASS & WEATHERSTRIPPING

WOOD WINDOW FRAME, PAINT. BACK PRIME PRIOR TO INSTALLATION, TYP.

WOOD CASING, PROFILE TYPE 1 (REF. CASING TYPES)

STEEL SHUTTER, PAINT

FLASHING

SEALANT

EXIST'G LIMESTONE SILL







**Head Detail** 1 1/2" = 1'-0"



**13** Head Detail





**7** Sill Detail 1 1/2" = 1'-0"























TUBE STL. GUARDRAIL PER STAIR MANUFACTURER, PAINT, TYP. WALL BRACKET, JULIUS BLUM 275 OR SIM

- 1 1/4" STEEL PIPE HANDRAIL, PAINT

PAINTED 4" X .250 WIRE CLOTH
 INFILL WITH STL. ANGLE FRAME,
 PAINT, TYP.

- TUBE STL. GUARDRAIL PER STAIR MANUFACTURER, PAINT, TYP.



**3** Metal Rail 1 1/2" = 1'-0"

Architexas Dallas | Austin 1907 Marilla St. www.architexas.com Second Floor Dallas, Texas 75201 p 214.748.4561 TEXAS HISTORICAL COMMISSION real places telling real stories **FANNIN COUNTY** COURTHOUSE **INTERIOR & EXTERIOR RESTORATION** 101 E. Sam Rayburn Drive Bonham, Texas 75418 COPYRIGHT The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing. Any errors or omissions shall be reported to Architexas without delay. The Copyrights to all designs and drawings are the property of Architexas. Reproduction or use for any purpose other than that authorized by Architexas is forbidden. **REVISION HISTORY** 1 Oct. 16, 2018 Addendum #1 ISSUED FOR CONSTRUCTION #18326 9/21/2018 Architexas No. Date SEPT. 21, 2018 1737 Sheet Name CAST IRON STAIRS PLANS, SECTIONS, AND DETAILS Sheet Number A7.03





# **Break Room Cabinet Detail**



 $\times$ 







MIRROR

2' - 0"

----

----

2'- 10" . TILE = 2' - 5"

+ + +

T.O.

+-

(REF. SPECIFICATIONS)

- SOLID SURFACING BACKSPLASH

- SOLID SURFACING COUNTERTOP

- LAVATORY (REF. MEP)

- 12x6 COVE BASE TILE

- CONTEMPORARY WOOD BASEBOARD

- SOLID SURFACING COUNTERTOP SINK (REF. MEP)

- SOLID SURFACING BACKSPLASH

- GYP. BD. SURFACE, PAINT

- LIGHT FIXTURE TYPE J (REF. MEP)

- HARDWARE (REF. SPECIFICATIONS)

- CABINET BEYOND

exas Dallas | Austin 1907 Marilla St. www.architexas.com Second Floor Dallas, Texas 75201 p 214.748.4561 TEXAS HISTORICAL COMMISSION real places telling real stories **FANNIN COUNTY** COURTHOUSE **INTERIOR & EXTERIOR RESTORATION** 101 E. Sam Rayburn Drive Bonham, Texas 75418 \_\_\_\_\_ COPYRIGHT The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing. Any errors or omissions shall be reported to Architexas without delay. The Copyrights to all designs and drawings are the property of Architexas. Reproduction or use for any purpose other than that authorized by Architexas is forbidden. **REVISION HISTORY** 1 Oct. 16, 2018 Addendum #1 ISSUED FOR CONSTRUCTION 9/21/2018 #18326 Architexas No. Date 1737 SEPT. 21, 2018 Sheet Name MILWORK DETAILS Sheet Number A7.07













**TOWER BASE LEVEL** 165' - 0" +/- V.I.F.

## **GENERAL NOTES**

- PROVIDE CUPOLA WORK SHOWN ON THE DRAWINGS AND SPECIFICATIONS AND AS NEEDED FOR A COMPLETE AND PROPER INSTALLATION. PREFABRICATED ALUMINUM CUPOLA ASSEMBLY, INCLUDING: A) ALUMINUM STRUCTURAL FRAMING. B) ALUMINUM CLADDING AND BAKED ON KYNAR FINISHES IN COLOR SELECTED BY THE ARCHITECT. C) U.L. APPROVED SYSTEM FROM BASE OF CUPOLA TO TOP, WITH U.L. APPROVED LIGHTNING AIR TERMINAL.
- D) CLOCK SYSTEM INCLUDING DIALS, HANDS, NUMERALS,
- MOVEMENTS AND ILLUMINATION. DIMENSIONS PROVIDED ARE FOR DESIGN INTENT ONLY. FINAL DIMENSIONS TO BE COORDINATED & CONFIRMED BY TOWER MANUFACTURER.

11411	TAES
	PRODUCT DATA: INCLUDE CONSTRUCTION DETAILS, MATERIAL
	DESCRIPTIONS, DIMENSIONS OF INDIVIDUAL COMPONENTS, PROFILES
	AND FINISHES FOR EACH TYPE OF METAL PANEL AND ACCESSORY
	SUBMIT COMPREHENSIVE SHOP DRAWINGS CLEARLY ILLUSTRATING
	FABRICATION AND INSTALLATION LAYOUTS OF METAL PANELS;
	DETAILS OF EDGE CONDITIONS, JOINTS, PANEL PROFILE, CORNERS,
	ANCHORAGES, TRIM, FLASHING, CLOSURES AND ACCESSORIES;
	AND SPECIAL DETAILS. DISTINGUISH BETWEEN FACTORY - ASSEMBLY
	AND FIELD ASSEMBLY WORK.
	INCLUDE THE FOLLOWING:

- PLAN AND ELEVATIONS FRAMING AND ANCHORAGE DETAILS
- C) FLASHING DETAILS D) LIGHTNING PROTECTION AIR TERMINAL MOUNTED TO
- CUPOLA DOME
- E) VENTILATION LOUVERS F) ACCESSORY COMPONENTS
- IF REQUIRED PROVIDE STAMPED AND SEALED DRAWINGS OF A
- PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF TEXAS ON FINAL APPROVED DRAWINGS. SUBMIT KYNAR COLOR SAMPLES OF EXTERIOR COVERING.
- SAMPLES FOR INITIAL SELECTION; FOR FACTORY APPLIED COLOR FINISHES.

**1 Tower Dormer Base Level Plan** 3/4" = 1'-0"







DEMOLITION LEGEND								
	EXISTING STONE MASONRY WALL TO REMAIN.							
	EXISTING SLAB / FLOOR STRUCTURE FOUNDATION TO REMAIN							
	EXISTING CONCRETE TO BE REMOVED							
	EXISTING ROOF DECK TO BE REMOVED							

ROOF DEMOLITION KEY PLAN NOTES:

(1)DEMOLISH EXISTING STEEL TRUSS

2 DEMOLISH EXISTING STEEL GIRDER / BEAM

(3) DEMOLISH EXISTING STEEL ROOF FRAMING

4 DEMOLISH EXISTING ROOF DECK (ENTIRE ROOF)







CONCRETE FILL OVER EXIST FOOTING

DEMOLITION OF THE EXISTING BUILDING FINISHES, THE CONTRACTOR MUST CONSIDER AND ALLOW FOR THE FACT THAT DIMENSIONS, THE CONDITION OF STRUCTURAL ELEMENTS, AND DETAIL CONDITIONS MAY BE DIFFERENT FROM THOSE SHOWN ON THESE DRAWINGS.

thaping the built environment  $\square \Psi$ JQ ENGINEERING, LLP 100 GLASS STREET 214.752.9098 PROJECT NO: 3170377

NOTIFY ENGINEER WHERE CONDITIONS ARE DIFFERENT FROM THOSE SHOWN ON THESE DRAWINGS.







CL.2









1 MECHANICAL YARD FOUNDATION PLAN



 ISOLATION PADS TO BE PROVIDED WHERE NOTED ON THE MEP DRAWINGS.
 COORDINATE MECHANICAL PAD SIZE, LOCATION AND EMBEDDED ITEMS WITH MEP DRAWINGS AND EQUIPMENT MANUFACTURER.

 $2_{\frac{\text{TYPICAL EQUIPMENT ISOLATION PAD DETAIL}{\text{NO SCALE}}}$ 

3/4" CHAMFER ——

NOTES:

DECOMPOSED -

GRANITE -SEE CIVIL AND

LANDSCAPE

+











**11** <u>SECTION</u> SCALE: 3/4" = 1'-0"





# $-3_{\frac{\text{TYPICAL STRUCTURAL SLAB CONSTRUCTION JOINT DETAIL}{\text{NO SCALE}}}$







 $9_{\frac{\text{TYPICAL ELEVATOR SUMP PIT DETAIL}}{\text{NO SCALE}}}$ 





DALLAS, TEXAS 75207 JQENG.COM



















GENERAL NOTES

 PROVIDE BALANCING DAMPERS FOR ALL DIFFUSERS AND RETURN AIR GRILLES.
 ALL MITERED ELBOW SHALL BE WITH TURNING VANES.
 INSTALL ALL HVAC EQUIPMENT TO ALLOW FOR ACCESS FROM AN 8 FT. LADDER.

4. ALL AIR DEVICES SHOWN ON THE GROUND FLOOR REGISTERS. REFER TO SHEET M2.00 FOR CONTINUATION. COORDINATE ALL FLOOR PENETRATIONS WITH STRUCTURAL.

	NOTES BY SYMBOL
1	DUCT WORK TO BE INSTALLED CONCEALE ABOVE CEILING. COORDINATE WALL PENETRATION WITH STRUCTURAL.
2	INSTALL BOTTOM OF DIFFUSER APPROXIMATELY 8'-0" AFF. COORDINATE EXACT LOCATION WITH ARCHITECT.

# **1** GROUND LEVEL MECHANICAL FLOOR PLAN







GENERAL NOTES

1. PROVIDE BALANCING DAMPERS FOR ALL DIFFUSERS AND RETURN AIR GRILLES.

2. ALL MITERED ELBOW SHALL BE WITH TURNING VANES.

3. INSTALL ALL HVAC EQUIPMENT TO ALLOW FOR ACCESS FROM AN 8 FT. LADDER.

4. COORDINATE ALL WALL PENETRACTIONS WITH STRUCTURAL.

5. PROVIDE YOUNG'S REGULATOR FOR ALL SUPPLY, RETURN, AND EXHAUST DIFFUSERS AND GRILLES LOCATED IN AREAS WHERE ABOVE CEILING CANNOT BE ACCESSED.

	NOTES BY SYMBOL
1	PROVIDE LIGHT SHIELD FOR RETURN SLOT SIMILAR OR EQUAL TO TITUS MODEL FBR.
2	PROVIDE INTERNALLY LINED SPIRAL DUCTWORK WHERE DUCT IS EXPOSED. INSTALL ROUND DUCT WORK AS TIGHT TO CEILING AS POSSIBLE, SUCH THAT DUCT WORK NESTS INSIDE RIBBED CEILING.
3	FURNISH SIDEWALL SUPPLY ON SIDE OF ARCHITECTURALLY PROVIDED FUR OUT.

# $1 \underbrace{SECOND \, LEVEL \, MECHANICAL \, FLOOR \, PLAN}_{1/4"\,=\,1'-0"}$







# 1 THIRD LEVEL MECHANICAL FLOOR PLAN

1. PROVIDE BALANCING DAMPERS FOR ALL DIFFUSERS AND RETURN AIR GRILLES.
2. ALL MITERED ELBOW SHALL BE WITH TURNING VANES.
3. INSTALL ALL HVAC EQUIPMENT TO ALLOW FOR ACCESS FROM AN 8 FT. LADDER.
4. UNLESS OTHERWISE INDICATED ALL AIR DEVICES SHOWN ON THE THIRD FLOOR MECHANICAL PLAN ARE CEILING REGISTERS. REFER TO SHEET M2.04 FOR CONTINUATION.
5. PROVIDE YOUNG'S REGULATOR FOR ALL SUPPLY, RETURN, AND EXHAUST DIFFUSERS AND GRILLES LOCATED IN AREAS WHERE ABOVE CEILING CANNOT BE ACCESSED.

GENERAL NOTES







GENERAL NOTES

 PROVIDE BALANCING DAMPERS FOR ALL DIFFUSERS AND RETURN AIR GRILLES.
 ALL MITERED ELBOW SHALL BE WITH TURNING VANES.

3. INSTALL ALL HVAC EQUIPMENT TO ALLOW FOR ACCESS FROM AN 8 FT. LADDER.

4. CONTRACTOR TO INSTALL ALL EQUIPMENT AND DUCT WORK SUCH THAT MINIMUM 4'-0" WALKING ACCESS IS AVAILABLE TO ALL AHUS AND VAV BOXES.

	NOTES BY SYMBOL
1	AIR HANDLING UNIT SHALL BE MOUNTED WOOD CURB ON WOOD PLATFORM.
2	CONNECT SMOKE REMOVAL DUCT TO DORMER.
3	CONNECT EXHAUST DUCT TO DORMER.
4	INSTALL RETURN AIR MOTORIZED DAMPE IN MAIN RETURN DUCT, MATCH MAIN RETURN DUCT SIZE.
5	INSTALL OUTSIDE AIR MOTORIZED DAMPI IN MAIN OUTSIDE AIR DUCT, MATCH MAIN OUTSIDE AIR DUCT SIZE.
6	PROVIDE 18"x12" DUCT OPENING WITH BAROMETRIC RELIEF DAMPER ON RETUR AIR DUCT.

1 ATTIC LEVEL MECHANICAL FLOOR PLAN







# BASEMENT LEVEL MECHANICAL PIPING FLOOR PLAN

 REFER TO M5.02 FOR ALL CHILLED WATER PIPE ACCESSORY (VALVE,STRAINERS, CHECK VALVES, ETC.) LOCATIONS.
 CONTRACTOR TO CONFIRM REFRIGERANT PIPE SIZES WITH MANUFACTURER. NOTES BY SYMBOL PROVIDE BALL VALVES FOR EACH REFRIGERANT PIPE AT UNIT.







# GROUND LEVEL MECHANICAL PIPING FLOOR PLAN







GENERAL NOTES 1. REFER TO M5.02 FOR ALL CHILLED WATER PIPE ACCESSORY (VALVE, STRAINERS, CHECK VALVES, ETC.) LOCATIONS. 2. CONTRACTOR TO CONFIRM REFRIGERANT PIPE SIZES WITH MANUFACTURER.

NOTES BY SYMBOL PROVIDE BALL VALVES FOR EACH REFRIGERANT PIPE AT UNIT.







## GENERAL NOTES

1. REFER TO M5.02 FOR ALL CHILLED WATER PIPE ACCESSORY (VALVE, STRAINERS, CHECK VALVES, ETC.) LOCATIONS.

NOTES BY SYMBOL PROVIDE HEAT TRACE FOR ALL ABOVE GROUND CHILLED WATER PIPING. VFD SHALL BE MOUNTED TO UNI-STRUT FRAME IN A NEMA TYPE 3R ENCLOSURE. CONSULT WITH VFD MANUFACTURER FOR ENCLOSURE VENTING REQUIREMENTS. 4" TEMPORARY CONNECTIONS WITH GATE 3 4 PROVIDE BALL VALVES FOR EACH REFRIGERANT PIPE AT UNIT. Ymmmmmm

MECHANICAL YARD ENLARGED PLAN



									AIR	HANDL	ING UN	IT SCHED	OULE												
										C	OOLING COIL									ELECT	RICAL [	DATA			
TAG	TYPE	SUPPLY AIR (CFM)	OUTSIDE AIR (CFM)	ESP (IN. WC)	FAN DRIVE TYPE	FAN QTY	BHP	HP	SUPPLY AIR (CFM)	SENSIBLE CAPACITY (MBH)	TOTAL CAPACITY (MBH)	ENTERING AIR TEMPERATURE (DB°F/WB°F)	LEAVING AIR TEMPERATURE (DB°F/WB°F)	ENTERING WATER TEMPERATURE (°F)	LEAVING WATER TEMPERATURE (°F)	GPM	MAX COIL FACE VELOCITY (FPS)	MAX ROWS	MAX FINS/IN.	VOLTAGE / PHASE	MCA	MOCP	OPERATING WEIGHT (LBS.)	MANUFACTURER	MODEL NO.
AHU-1	VAV	5800	850	2.5	DIRECT	1	8.2	10	5800	186.1	233.3	80.5 / 64.7	51.3 / 50.8	42	52	46.5	500	6	9	208 / 3	53	90	1500	TRANE	UCCAG12A
AHU-2	VAV	3050	330	2.5	DIRECT	1	5.2	7.5	3300	95.4	111.8	79.4 / 64.0	52.2 / 51.8	42	52	22.3	500	6	9	208 / 3	35.5	60	1200	TRANE	UCCAH08A
AHU-3	VAV	2800	230	2.5	DIRECT	1	4.2	5.0	2800	81.6	93.4	78.1 / 63.9	51.5 / 51.2	42	52	18.6	500	6	9	208 / 3	28.0	50	1100	TRANE	UCCAH08A
AHU-4	VAV	6100	1150	2.5	DIRECT	1	7.0	7.5	6100	199.4	272.6	81.7 / 66.4	52.0 / 51.4	42	52	54.3	500	6	8.6	208 / 3	35	60	1600	TRANE	CSAA
1. PROVI	DE ALL UNI	TS WITH UN	IT MOUNTE	D VARIABL	E FREQU	ENCY D	DRIVE.			· ·		· · · · · ·									,				

2. ECONOMIZER REQUIREMENT OF 2018 IECC DOES NOT APPLY PER C501.6. TEXAS HISTORIC COMISSION MAY PROVIDE LETTER TO STATING THE DEGRADATION TO THE HISTORIC FANNIN COUNTY COURT HOUSE BUILDING IF LOUVERS ARE INSTALLED TO COMPLY WITH THE ECONOMIZER REQUIREMENT

										NIT	INDOOR U					
					ICAL	ECTRI	ELE	HEATING PERFORMANCE	RFORMANCE	OLING PER	GROSS CO	EAN				
MARK	NOTES	MODEL	MANUFACTURER		4	DATA		TOTAL		TOTAL	SENSIBLE	MOTOR	ESP (IN. WC)	SUPPLY AIR (CFM)	NOMINAL TONNAGE	MARK
	<b>`</b>		·····		MC	PH	VOLTAGE	(MBH)	(DB°F/WB°F)	(MBH)	(MBH)	(VV)		χ <i>γ</i>		
	}	MMD4	TOSHIBA	15	5.7	1	208	27.0	85/67	24.0	14.9	750	0.8	525	2.0	FCU-B-1
$\sim$	Į	MMD4	TOSHIBA	15 8	5.7	1	208	27.0	85/67	24.0	14.9	750	0.8	525	2.0	FCU-B-2
<b>č</b> CU-1		ММКЗ	TOSHIBA	15	0.4	1	208	-	75/63	7.9	5.9	20	0.04	320	0.6	FCU-G-1
		ММКЗ	TOSHIBA	15	0.4	1	208	-	75/63	7.9	5.9	20	0.04	320	0.6	FCU-G-2
	1	MML-AP	TOSHIBA	15	0.7	1	208	20	75/63	7.9	5.9	20	0.04	550	1.5	FCU-2-1
		MML-AP	TOSHIBA	15	0.6	1	208	13.5	75/63	7.9	5.9	20	0.04	460	1.0	FCU-2-2
		RBM 🟅	TOSHIBA		0.7	1	208	mun	<u> </u>		<u> </u>	- -		-	<u> </u>	MDC-B-1

1. PROVIDE AND INSTALL CONDENSATE FLOAT SWITCH IN CONDENSATE DRAIN PAN FOR HEAT PUMPS. FLOAT SWITCH SHALL DE-ENERGIZE UNIT IF CONDENSATE DRAIN LINE BECOMES BLOCKED. 2. PROVIDE AND INSTALL HAIL GUARDS ON HEAT PUMPS.

3. PROVIDE AND INSTALL 7-DAY PROGRAMMABLE THERMOSTAT FOR EACH HEAT PUMP.

4 UNITS ECU-G-1 AND ECU-G-2 SHALL BE COOLING ONLY 5. CONTRACTOR TO VERIFY ALL REFRIGERANT PIPE SIZE WITH MANUFACTURER

		AIR DEVICE	SCHEDUL	E	
					1
MARK	TYPE	DESCRIPTION	NECK SIZE (IN)	MANUFACTURER / MODEL NUMBER	MATERIAL
S1	SUPPLY	SIDE WALL DIFFUSER	SEE DRAWINGS	TITUS / 300RL	STEEL
S2	SUPPLY	FLOOR SUPPLY	18" x 12"	PRICE / LMBH	STEEL
S3	SUPPLY	LINEAR SLOT DIFFUSER	48" x 6"	TITUS / FL-10	ALUMINUM
S4	SUPPLY	LINEAR SLOT DIFFUSER	24" x 6"	TITUS / FL-10	ALUMINUM
S5	SUPPLY	12" x 12", 4-WAY THROW, THREE CONES	SEE NOTE 3	TITUS/TMS	STEEL
E1	EXHAUST	SIDE WALL DIFFUSER	SEE DRAWINGS	TITUS / 300RL	STEEL
E2	EXHAUST	PERFORATED CEILING DIFUSSER	SEE NOTE 3	TITUS/PAR	STEEL
R1	RETURN	SIDE WALL DIFFUSER	SEE DRAWINGS	TITUS / 300RL	STEEL
R2	RETURN	FLOOR RETURN	24" x 12"	PRICE/LMBH	STEEL
R3	RETURN	FLOOR RETURN	36" x 12"	PRICE/LMBH	STEEL
R4	RETURN	CEILING RETURN	24" x 6"	TITUS/50F	STEEL
R5	RETURN	CEILING RETURN	48" x 6"	TITUS/50F	STEEL

1. DEVICES SHALL BE FURNISHED WITH APPROPRIATE FRAMES, ETC. FOR MOUNTING IN RESPECTIVE CEILING TYPES.

2. SOUND VALUES SHALL NOT EXCEED 30 NC, UNLESS OTHERWISE NOTED.

3. SEE AIR DEVICE RUN-OUT SCHEDULE ON THIS SHEET.

3. FLOOR SUPPLY AND RETURN DIFFUSERS SHALL BE PENCIL AND HEEL PROOF.

# AIR DEVICE RUN-OUT SIZING

SUPPLY DU	ICTWORK	RETURN/EXHAUST DUCTWORK							
RUNOUT CFM	RUNOUT ø	RUNOUT CFM	RUNOUT ø						
0-100	6"	0-75	6"						
101-210	8"	76-170	8"						
211-380	10"	171-310	10"						
381-630	12"	311-500	12"						
631-950	14"	501-770	14"						
951-1400	16"	771-1100	16"						
1401-1800	18"	1101-1500	18"						

		V	AV TE	RMINA	L BO	X W/ E	LECT	RIC RE	E-HEAT S	SCHEDU	ILE					
					CC	OLING			ELECTRIC HEA	TING COIL		ELE	CTRICAL			
TAG	SIZE	INLET SIZE (IN.)	MAX. AIR PRESSURE DROP (IN. WC)	MAX NOISE CRITERIA (NC)	SUPPLY AIR (CFM)	MIN. SUPPLY AIR (CFM)	SUPPLY AIR (CFM)	TOTAL CAPACITY (KW)	ENTERING AIR TEMPERATURE (°F)	LEAVING AIR TEMPERATURE (°F)	STAGES	VOLTS/PH	MCA	MOP	MANUFACTURER	MODEL NUMBER
VAV-1-1	_	10	_	30	875	430	430	4.5	60	93.1	SCR	208/1	27	30	TITUS	DESV
VAV-1-2	_	8	-	30	270	180	180	2	60	95.1	SCR	208/1	12	15	TITUS	DESV
VAV-1-3	_	8	-	30	435	270	270	2.5	60	89.3	SCR	208/1	15	15	TITUS	DESV
VAV-1-4	-	8	_	30	320	290	290	3	60	92.7	SCR	208/1	18	20	TITUS	DESV
VAV-1-5	-	8	-	30	680	280	280	3	60	93.9	SCR	208/1	18	20	TITUS	DESV
VAV-1-6	-	8	-	30	700	310	310	3	60	88.7	SCR	208/1	18	20	TITUS	DESV
VAV-1-7	-	12	-	30	1225	635	635	6	60	89.9	SCR	208/1	36.1	40	TITUS	DESV
VAV-1-8	-	8	_	30	360	260	260	2.5	60	90.4	SCR	208/1	15	15	TITUS	DESV
VAV-1-9	-	8	-	30	430	210	210	2	60	90.1	SCR	208/1	12	15	TITUS	DESV
VAV-1-10	-	8	-	30	680	295	295	3	60	92.1	SCR	208/1	18	20	TITUS	DESV
·····	$\sim$	$\sim$	$\cdots$		$\cdots$		$\cdots$	· · · · · · · · · · · · · · · · · · ·	$\cdots$			·····				$\cdots$
VAV-2-1	-	8	-	30	455	345	345	3.5	60	92.1	SCR	208/1	21	25	TITUS	DESV
VAV-2-2	-	10	-	30	985	430	430	4.5	60	93.1	SCR	208/1	27	30	TITUS	DESV
VAV-2-3	-	12	-	30	1385	390	390	4.0	60	91.6	SCR	208/1	24	25	TITUS	DESV
VAV-2-4	- 		-	30	225	100	100	1.0	60	91.6	SCR	208/1	6.0	15	TITUS	DESV
VAV-3-1	-	10	-	30	910	460	590	4.5	60	90.9	SCR	208/1	36.1	40	TITUS	DESV
VAV-3-2	-	10	-	30	690	450	450	4.5	60	91.6	SCR	208/1	27	30	TITUS	DESV
VAV-3-3	-	10	-	30	920	490	490	4.5	60	90.9	SCR	208/1	27	30	TITUS	DESV
VAV-3-4	-	8	-	30	520	340	340	3.5	60	92.5	SCR	208/1	21	25	TITUS	DESV
VAV-4-1	-	16	-	30	2205	1100	650	9.5	60	91.6	SCR	208/1	57.1	60	TITUS	DESV
VAV-4-2	-	14	-	30	1715	860	650	8.5	60	91.6	SCR	208/1	51.1	60	TITUS	DESV
VAV-4-3	-	16	-	30	2205	995	650	9.5	60	91.6	SCR	208/1	57.1	60	TITUS	DESV

1. MAXIMUM N.C. RELATES TO DISCHARGE AT 1.0" STATIC PRESSURE.

2. PROVIDE DIRECT DIGITAL CONTROLS AND SEQUENCE OF OPERATION AS PER CONTROL DIAGRAMS.

3. PROVIDE FACTORY MOUNTED AND WIRED DISCONNECT SWITCH.

4. TEST AND BALANCE CONTRACTOR SHALL BALANCE ALL VAV BOXES TO SUPPLY AIR CFM COLUMN.

## OUTDOOR UNIT COOLING PERFORMANCE ELECTRICAL NOMINAL DATA MANUFACTURER MODEL NOTES AMBIENT AIR TONNAGE CAPACITY (MBH) TEMPERATURE VOLTAGE PH MCA MOCP (°F) TOSHIBA MMYH 105 208 96,000 1 36 40 ᢙᠬ᠇ᠬ᠇᠇᠇᠇᠇᠇᠇᠇᠇᠇᠇᠇᠇᠇᠇᠇᠇

6. CONTRACTOR TO VERIFY THAT INSTALLATION OF ALL REFRIGERANT EQUIPMENT IS IN COMPLIANCE WITH ASHRAE 15.





**1** Basement Level Plumbing Supply Floor Plan

\_\_\_\_Į\_\_\_

**TRUE NORTH** 

# 3 Below Basement Level Plumbing Waste and Vent Floor Plan

# **GENERAL NOTES**

- EQUIPMENT. AND RECEPTACLES TO BE REVIEWED AND APPROVED BY ARCHITECT AND THC REPRESENTATIVE PRIOR TO COMMENCEMENT OF
- UNDERGROUND PIPING WITH MECHANICAL, ELECTRICAL, CIVIL, AND LANDSCAPING DISCIPLINES. NEARBY FIRE HYDRANT FLOW TEST PER BONHAM FIRE DEPARTMENT. STATIC PRESSURE = 60 PSI,
- RESIDUAL PRESSURE = 50 PSI AND PITOT = 40 PSI. FIRE HYDRANT FLOW TEST TAKEN 4/25/2018. CONTRACTOR SHALL SAW-CUT ALL SLAB PENETRATIONS AND ENSURE THAT THEY ARE PROPERLY SEALED AND REMAIN WATERTIGHT.
- REFER TO BELOW BASEMENT LEVEL FLOOR PLAN FOR SLAB TRENCHING LOCATIONS (HATCHED PROVIDE BELOW SLAB PIPE HANGER SYSTEM FOR
- ALL WASTE PIPING SHOWN ON BELOW BASEMENT LEVEL PLUMBING WASTE AND VENT FLOOR PLAN. REFER TO DETAIL 10 ON SHEET P4.01 FOR MORE
- ALL ABOVEGROUND COLD WATER, HOT WATER, HOT WATER RETURN PIPING SHALL BE ROUTED AS CONNECT 1" CD PIPING TO EACH AIR HANDLING UNIT. FURNISH EACH AIR HANDLING UNIT WITH
- VENTED P-TRAP PRIOR TO CONNECTION. PROVIDE WYE FITTINGS AND LONG RADIUS ELBOWS






![](_page_72_Figure_1.jpeg)

![](_page_72_Figure_3.jpeg)

**1** Ground Level Plumbing Supply Floor Plan

# **GENERAL NOTES**

- FINAL LOCATION OF DEVICES, FIXTURES, EQUIPMENT, AND RECEPTACLES TO BE REVIEWED AND APPROVED BY ARCHITECT AND THC REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK AND INSTALLATION.
   CONTRACTOR SHALL FIELD COORDINATE ALL
- UNDERGROUND PIPING WITH MECHANICAL, ELECTRICAL, CIVIL, AND LANDSCAPING DISCIPLINES. 3. REFER TO WASTE AND VENT RISER DIAGRAM
- 3. REFER TO WASTE AND VENT RISER DIAGRAM DETAIL #2 FOR MORE INFORMATION.

![](_page_72_Picture_9.jpeg)

![](_page_73_Figure_0.jpeg)

![](_page_73_Figure_1.jpeg)

![](_page_73_Figure_3.jpeg)

**1** Second Level Plumbing Supply Floor Plan

# **GENERAL NOTES**

 FINAL LOCATION OF DEVICES, FIXTURES, EQUIPMENT, AND RECEPTACLES TO BE REVIEWED AND APPROVED BY ARCHITECT AND THC REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK AND INSTALLATION.
 REFER TO ENLARGED FLOOR PLANS FOR MORE INFORMATION.

![](_page_73_Picture_7.jpeg)

![](_page_74_Picture_0.jpeg)

![](_page_74_Picture_2.jpeg)

# **GENERAL NOTES**

FINAL LOCATION OF DEVICES, FIXTURES, EQUIPMENT, AND RECEPTACLES TO BE REVIEWED AND APPROVED BY ARCHITECT AND THC REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK AND INSTALLATION. REFER TO FLOOR PLANS AND ENLARGED FLOOR PLANS FOR SIZING AND MORE INFORMATION. 1. 2.

![](_page_74_Figure_5.jpeg)

![](_page_74_Picture_6.jpeg)

STORAGE TYPE ELECTRIC WATER HEATER SCHEDULE										
			-			-				
			STORAGE			ELECT	RICAL D	ATA		
MARK	LOCATION	INPUT (KW)	CAPACITY (GALLON)	TEMPERATURE RISE (F)	ATURE RECOVERY @ E (F) 80 F RISE (GPH)		TAGE PHASE FLA		MANUFACTURER	MODEL NUMBER
WH-1	MECH 007	4.0	40	80	20	208	3	38.4	AO SMITH	DEL-40

1. EQUIP WATER HEATER WITH TEMPERATURE LIMITING DEVICE. SET FOR 140 (F).

2. FURNISH AND INSTALL WATTS MODEL PLT-5 EXPANSION TANK.

	SUMP PUMP SCHEDULE													
		MAXIMUM MOTOR				ELECTR	RICAL DA	TA						
MARK	LOCATION	CAPACITY (GPM)	HEAD (FT)	HORSE	WER		VOLTAGE	PHASE	ΗZ	MANUFACTURER	MODEL NUMBER			
SP-1	ELEVATOR SHAFT	50	19	1/3	2	1750	120	1	60	LITTLE GIANT	WS30M			
SP-2A	STORAGE 008	45	20	1	2	1750	208	3	60	LITTLE GIANT	WS102M			
SP-2B	STORAGE 008	45	20	1	2	1750	208	3	60	LITTLE GIANT	WS102M			
SP-3	NORTH LAWN	45	20	4/10	2	1750	120	1	60	LITTLE GIANT	9SN-CIA-RF			

1. REFER TO SPECIFICATIONS AND DETAILS FOR MORE INFORMATION.

 PROVIDE SP-1 WITH ALDERON CONTROL PANEL AND REMOTE ALARM. SYSTEM SHALL HAVE AUTOMATIC CONTROL FLOAT SWITCHES; PUMP ON, PUMP OFF, AND HIGH WATER ALARM. ALL FIELD ADJUSTABLE AND WITH POWER CORD, CHECK VALVE AND SHUT OFF VALVE.
 PROVIDE SP-2A AND SP-2B WITH 3 PHASE DUPLEX CONTROL/ALARM PANEL WITH THREE SENSOR FLOATS AND ONE ALARM FLOAT. LITTLE GIANT MODEL 513285. 208/3 WITH 8.0 FLA. EQUIP WITH LITTLE GIANT MODEL CV-SE2 CHECK VALVES.

4. PROVIDE SP-3 WITH SIMPLEX CONTROL/ALARM PANEL WITH TWO SENSOR FLOATS AND ONE ALARM FLOAT. LITTLE GIANT MODEL 1121W120H17A. 120/1 WITH 20.0 FLA.

5. ALL PUMPS SHALL BE TIED INTO BUILDING AUTOMATION SYSTEM.

		GEI	NERA	AL PLU	JMBIN	IG SC	HEDULE
MARK	FIXTURE	MAX GPM/GPF	CW	HW/TW	WASTE	VENT	DESCRIPTION
AD-1	AREA DRAIN	-	-	-	4"	-	SPECIFIED BY CIVIL. REFER TO CIVIL FOR MORE INFORMATION.
CDP-1	CONDENSATE PUMP	3.5 AT 9' HEAD	-	-	1"	-	LITTLE GIANT MODEL VCL-24UL CONDENSATE PUMP WITH 1 GALLON COLLECTION TANK. 120/1, 1/18 HP.
CP-1	CLOSE COUPLED IN-LINE HOT WATER CIRCULATION PUMP	10 AT 10' HEAD	-	_	-	-	ARMSTRONG MODEL 20-20SS VARIABLE SPEED CIRULATOR. 0' TO 20' HEAD RANGE, MINIMUM 5 WATTS, MAXIMUM 45 WATTS, 120/1. PUMP CONTROLS SHALL BE CAPABLE OF LIMITING THE OPERATION OF THE CIRCULATING PUMP FROM HEATING CYCLE START-UP TO NOT GREATER THAN 5 MINUTES AFTER THE END OF THE CYCLE.
DYCO	DOUBLE YARD CLEANOUT	-	-	-	*	-	JOSAM MODEL 58680 CAST IRON DOUBLE YARD CLEANOUT. PROVIDE "T" HANDLE WRENCH.
EWC-1	BI-LEVEL ELECTRIC WATER COOLER (TAS)	-	1/2"	-	2"	1-1/2"	ELKAY MODEL LRPBM28K TAS COMPLIANT ELECTRIC WATER COOLER. 120/1.
FCO	FLOOR CLEANOUT	-	-	-	*	-	WATTS MODEL CO-200 CAST IRON FLOOR CLEANOUT.
FD-1	FLOOR DRAIN	-	-	-	*	2"	WATTS MODEL FD-100-A. 5" NICKEL BRONZE STRAINER. EQUIP WITH TRAP PROTECTION DEVICE
FS-1	FLOOR SINK	-	-	-	4"	2"	WATTS MODEL FS-750. 12" SQUARE, 10" DEEP WITH WHITE FINISH, 3/4 CAST IRON GRATE AND ALUMINUM DOME STRAINER. EQUIP WITH TR/ PROTECTION DEVICE
HD-1	HUB DRAIN	-	-	-	2"	2"	SIOUX CHIEF 832 SERIES HUB DRAIN FIXTURE. PROVIDE WITH DEBRIS SCREEN. HUB DRAIN SHALL BE ACCESSIBLE VIA 8"x8" ACCESS PANEL BOTTOM OF ACCESS PANEL SHALL BE APPROXIMATELY 12" ABOVE FINISH FLOOR. EQUIP WITH TRAP PROTECTION DEVICE. CONDENSAT SHALL TERMINATE TWO PIPE DIAMETERS ABOVE FLOOD RIM.
IWH-1	INSTANTANEOUS WATER HEATER	2.0	1/2"	1/2"	-	-	EEMAX MODEL EX4208T N4. 208/1, 4.1 KW. 0.3 GPM TURN ON, SET MAXIMUM WATER TEMPERATURE = 110 F.
L-1	LAVATORY UNDERCOUNTER (TAS)	0.5	1/2"	1/2"	2"	1-1/2"	AMERICAN STANDARD MODEL 9482.000 TAS ACCESSIBLE UNDERCOUNTER LAVATORY. EQUIP WITH: TOTO MODEL TEL115-D10E COUNTER MOUNT SELF GENERATING FAUCET KIT WITH TOTO MODEL TELC105-D10E CONTROLLER, TOTO MODEL TLT10R ASSE 1070 THERMOSTATIC MIXING VALVE, MOUNTING HARDWARE, 4" COVER PL AND SWIVEL COUPLING. LESS MIXING VALVE IF EQUIPPED WITH <u>IWH-</u>
L-2	LAVATORY WALL MOUNT (TAS)	0.5	1/2"	1/2"	2"	1-1/2"	AMERICAN STANDARD MODEL 9024.000EC TAS ACCESSIBLE WALL HU LAVATORY. NO FAUCET HOLES. EQUIP WITH: TOTO MODEL TEL135-D WALL MOUNT SELF GENERATING FAUCET KIT WITH TOTO MODEL TELC105-D10E CONTROLLER, TOTO MODEL TLT10R ASSE 1070 THERMOSTATIC MIXING VALVE AND SWIVEL COUPLING. LESS MIXING VALVE IF EQUIPPED WITH <u>IWH-1</u> .
MS-1	MOP SINK	2.2	3/4"	3/4"	3"	2"	FIAT TSB3000 FLOOR SET, SQUARE TERRAZZO MOP SINK WITH STAIN STEEL CAPS ON ALL CURBS. EQUIP WITH : FIAT MODEL 832AA HOSE & HOSE BRACKET, AND MOEN 8230 MANUALLY-OPERATED FAUCET.
NFYH-1	NON-FREEZE YARD HYDRANT	-	3/4"	_	-	-	WOODFORD MODEL Y95 ANTI-SIPHON NON-FREEZE YARD HYDRANT. INSTALLED FLUSH WITH SURROUNDING SURFACES.
RPBP-1	REDUCED PRESSURE ZONE BACKFLOW PREVENTER	-	3"	-	-	-	WATTS MODEL 957 REDUCED PRESSURE ZONE ASSEMBLY WITH BAL TYPE SHUT-OFF VALVE.
S-1	SINGLE BOWL SINK (TAS)	1.0	1/2"	1/2"	2"	1-1/2"	ELKAY MODEL ELUHAD211555PD UNDERMOUNT SINK. EQUIP WITH: MOEN MODEL 8780 MANUALLY-OPERATED FAUCET AND TOTO MODEL TLT10R ASSE 1070 THERMOSTATIC MIXING VALVE.
TMV-1	THERMOSTATIC MIXING VALVE	14	-	3/4"	-	_	POWERS MODEL LFMM431 MASTER MIXING VALVE. 5 PSI PRESSURE DROP ACROSS THE VALVE. SET OUTLET TEMPERATURE TO 120°F.
UR-1	URINAL WALL MOUNT, WALL OUTLET FLUSH VALVE	0.125	-		-	_	AMERICAN STANDARD MODEL 6042453 WALL HUNG URINAL WITH SELECTRONIC MODEL 6063513 BATTERY POWERED CHROME FINISH FLUSH VALVE.
UR-2	URINAL WALL MOUNT, WALL OUTLET FLUSH VALVE (TAS)	0.125	-	-	-	-	AMERICAN STANDARD MODEL 6042453 WALL HUNG, TAS ACCESSIBLE URINAL WITH SELECTRONIC MODEL 6063513 BATTERY POWERED CHROME FINISH FLUSH VALVE.
WC-1	WATER CLOSET WALL MOUNT, FLUSH VALVE (TAS)	1.1	1"	-	4"	2"	AMERICAN STANDARD MODEL 3351.511 WALL HUNG, TAS ACCESSIBLE WATER CLOSET WITH SELECTRONIC MODEL 6065.111 BATTERY POWERED CHROME FINISH FLUSH VALVE.
WC-2	WATER CLOSET WALL MOUNT, FLUSH VALVE	1.1	1"	-	4"	2"	AMERICAN STANDARD MODEL 3351.511 WALL HUNG, WATER CLOSET WITH SELECTRONIC MODEL 6065.111 BATTERY POWERED CHROME FINISH FLUSH VALVE.
WCO	WALL CLEANOUT	-	-	-	*	-	WATTS MODEL CO-380-RD WALL CLEANOUT WITH BRASS PLUG AND STAINLESS STEEL COVER.

1. THE SCHEDULE ABOVE IS INFORMATIONAL AND IS IN NO WAY INTENDED TO SPECIFY ALL NECESSARY APPURTENANCES FOR THE FIXTURES LISTED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE COMPLETE AND OPERATING PLUMBING SYSTEMS.

2. PROVIDE AND INSTALL STOPS AT ALL FIXTURES.

3. REFER TO NOTE BY SYMBOLS/NOTES ON DRAWINGS FOR HW/TW CONNECTION TYPE.

4. PROVIDE AND INSTALL WALL CLEANOUTS WHERE REQUIRED BY THE IPC.

5. COORDINATE FIXTURE COLORS AND FIXTURE FINISHES WITH ARCHITECT PRIOR TO ORDERING.

6. WHERE REQUIRED, PLUMBING FIXTURES SHALL BE INSTALLED AT A HEIGHT THAT IS CONSISTENT WITH TAS REQUIREMENTS. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS OF ALL WALL HUNG FIXTURES.

7. \* FIXTURE SHALL MATCH PIPE SIZE ON PLAN/RISER.

![](_page_75_Picture_20.jpeg)

![](_page_76_Figure_0.jpeg)

TRUE NORT

	NOTES BY SYMBOL
1	PROVIDE AND INSTALL NEW GENERATOR SET PER SPECIFICATIONS. PROVIDE AND INSTALL 1" CONDUIT WITH CONTROL WIRING TO REMOTE ANNUNCIATOR. PROVIDE AND INSTALL 1" CONDUIT WITH CONTROL WIRING TO ATS. PROVIDE AND INSTALL CIRCUITS FOR BATTERY CHARGER AND GENERATOR ACCESSORIES ACCORDINGLY. REFE TO RISER DIAGRAM AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2	NEW UTILITY COMPANY PAD MOUNTED TRANSFORMER. PROVIDE AND INSTALL CONCRET PAD PER ONCOR GUIDELINES. REFER TO ONCOR ELECTRIC SERVICE GUIDELINES FOR PAD/CONDU STUB UP REQUIREMENTS (WWW.ONCOR.COM).
3	EXISTING TRANSFORMER TO BE REMOVED BY ONCOR. CONTRACTOR TO REMOVE EXISTING PAD AND ASSOCIATED CONDUITS. COORDINATE WITH ONCOR FOR REMOVAL OR ABANDONMENT OF PRIMARY CONDUITS.
4	DEMOLISH EXISTING PEDESTAL, PAD, CONDUIT AN ALL OTHER CORRESPONDING ELECTRICAL INFRASTRUCTURE.
5	EXISTING UTILITY PRIMARY CONDUIT/CONDUCTORS. FIELD VERIFY EXACT LOCATION.
6	INSTALL QUADPLEX GFCI RECEPTACLE ON WALL BELOW FENCE.
7	PROVIDE AND INSTALL ONCOR HANDHOLE TO EXTEND EXISTING ONCOR PRIMARY FEEDER. COORDINATE WITH ONCOR FOR SIZING AND ADDITIONAL REQUIREMENTS.
8	ROUTE CONDUIT AND CONDUCTORS TO ELECTRICAL ROOM. SEE RISER DIAGRAM FOR ADDITIONAL INFORMATION.
9	ROUTE CIRCUIT THROUGH LIGHTING CONTACTOR

![](_page_76_Picture_4.jpeg)

![](_page_77_Figure_0.jpeg)

![](_page_77_Figure_1.jpeg)

 $1 \frac{\text{Second Level Electrical Power Floor Plan}}{\frac{1}{1/8" = 1'-0"}}$ 

TRUE NORTH

	LIGHTING CONTROLS TABLE
<u>Lighting</u> Control Tag	Switching Scheme
1	3-way switches for manual control of fixtures in lobby, locations as shown. No dimming controls. Lights denoted as night lights (nl) shall be ON continuously. Emergency lights (indicated hatched) are to be normally switched via manual wall switches (unless denoted as night lights), but default to ON when loss of normal power is sensed. Use UL924 listed device for emergency light operation.
2	Manual wall switch at location shown for ON/OFF control of all fixtures in room. No dimming controls. Lights shall be switched with the normal circuit in room, but automatically switch to ON position and from the emergency circuit indicated in the event of loss of the normal power circuit.
3	Corridor/Public Lobby lighting shall normally be controlled via timer-controlled relays in lighting control panel at each floor. Coordinate with Owner for scheduling of ON/OFF operation for corridor/lobby lighting. Lights shall come ON at scheduled time in the morning, and shall turn OFF at scheduled time in the evening. Lights shall provide warning blink 5 minutes in advance of scheduled OFF time. Provide push-button override switch at each major entry to corridors or lobby for after-hours operation. Wall push buttons at corridors / lobbies shall be disabled during normally scheduled ON operation. Pressing of push button override switches during after-hours operation shall turn ON all corresponding corridor or lobby light fixtures for a set period of 1 hour. After 1 hour ON duration, lights shall provide warning blink, and then turn OFF 5 minutes following blink. Lights shall then return to after-hours state. No dimming required for corridors and public lobbies. Lights shall be fully networked through the lighting control system, such that schedules and override settings may be modified at a head-end networked computer.
4	Ceiling occupancy sensor(s) with wall mounted override switch(es). No dimming controls. No networked controls. All lights in room shall be automatic on via occupancy sensor(s), and automatic or manual off via occupancy sensor(s)/switch(es). Emergency lights (indicated as hatched) are to be normally switched (unless denoted as night lights), but default to ON when loss of normal power is sensed. Use UL924 listed device for emergency light operation. Night lights shall be unswitched.
5	3-way switches for manual control of fixtures in work room, locations as shown. No dimming controls. Lights denoted as night lights (nl) shall be ON continuously. Emergency lights (indicated hatched) are to be normally switched via manual wall switches (unless denoted as night lights), but default to ON when loss of normal power is sensed. Use UL924 listed device for emergency light operation.
6	Combination dimming wall switch/occupancy sensor at location shown. Lights shall be manual ON via switch and automatic OFF via sensor. Switch shall provide for continuous dimming of lights in room. No emergency lights. No networked controls.
7	Stairwell lights to be unswitched. No networked controls. Normal and emergency circuits shall be provided to stairwell lighting as indicated. Use UL924 listed device for emergency lighting operation (each floor).
8	Provide ceiling mounted occupancy sensor coverage for full coverage of room. Upon sensing initial occupancy, general overhead lighting shall come on to 50% dimmed. Provide touch-screen controller at main entry to room, with options for multiple scene selections and dimming control. Row of general lighting at front of room shall have independent dimming control. Balcony lighting shall have independent dimming control. Each different type of light fixture in room shall have independent dimming/relay control. Coordinate with Owner for programming of scene selections and dimming presets. Lights shall be fully networked through the lighting control system, such that schedules and override settings may be modified at a head-end networked computer.

# GENERAL NOTES

# ALL EMERGENCY LIGHTS INDICATED WITH A HATCH SHALL BE POWERED BY CORRESPONDING EMERGENCY PANEL. SEE PANELBOARD SCHEDULE FOR INDICATED EMERGENCY LIGHTING CIRCUITS. BASEMENT, GROUND, AND SECOND LEVELS UTILIZE PANELBOARD "EB" WHILE THIRD AND ATTIC LEVELS UTILIZE PANELBOARD "EA". NO CIRCUIT SHALL BE GREATER THAN 16 AMPS. EMERGENCY LIGHTING SHALL BE CONTROLLED IN ACCORDANCE WITH LIGHTING CONTROLS TABLE. ALL GENERAL LIGHTING SHALL BE POWERED BY CORRESPONDING NORMAL PANEL. SEE PANELBOARD SCHEDULE FOR INDICATED LIGHTING CIRCUITS. BASEMENT, GROUND, AND SECOND LEVELS UTILIZE PANELBOARD "B" WHILE THIRD AND ATTIC LEVELS UTILIZE PANELBOARD "A". NO CIRCUIT SHALL BE GREATER THAN 16 AMPS. ALL BUILDING MOUNTED EXTERIOR LIGHT FIXTURES SHALL BE CONTROLLED BY LIGHTING CONTROL PANEL.

![](_page_77_Picture_7.jpeg)

![](_page_78_Figure_1.jpeg)

**TRUE NORTH** 

![](_page_78_Figure_2.jpeg)

![](_page_78_Figure_3.jpeg)

![](_page_78_Figure_4.jpeg)

# LIGHTING CONTROLS TABLE

<u>Lighting</u> <u>Control Tag</u>	Switching Scheme
1	3-way switches for manual control of fixtures in lobby, locations as shown. No dimming controls. Lights denoted as night lights (nl) shall be ON continuously. Emergency lights (indicated hatched) are to be normally switched via manual wall switches (unless denoted as night lights), but default to ON when loss of normal power is sensed. Use UL924 listed device for emergency light operation.
2	Manual wall switch at location shown for ON/OFF control of all fixtures in room. No dimming controls. Lights shall be switched with the normal circuit in room, but automatically switch to ON position and from the emergency circuit indicated in the event of loss of the normal power circuit.
3	Corridor/Public Lobby lighting shall normally be controlled via timer-controlled relays in lighting control panel at each floor. Coordinate with Owner for scheduling of ON/OFF operation for corridor/lobby lighting. Lights shall come ON at scheduled time in the morning, and shall turn OFF at scheduled time in the evening. Lights shall provide warning blink 5 minutes in advance of scheduled OFF time. Provide push-button override switch at each major entry to corridors or lobby for after-hours operation. Wall push buttons at corridors / lobbies shall be disabled during normally scheduled ON operation. Pressing of push button override switches during after-hours operation shall turn ON all corresponding corridor or lobby light fixtures for a set period of 1 hour. After 1 hour ON duration, lights shall provide warning blink, and then turn OFF 5 minutes following blink. Lights shall then return to after-hours state. No dimming required for corridors and public lobbies. Lights shall be fully networked through the lighting control system, such that schedules and override settings may be modified at a head-end networked computer.
4	Ceiling occupancy sensor(s) with wall mounted override switch(es). No dimming controls. No networked controls. All lights in room shall be automatic on via occupancy sensor(s), and automatic or manual off via occupancy sensor(s)/switch(es). Emergency lights (indicated as hatched) are to be normally switched (unless denoted as night lights), but default to ON when loss of normal power is sensed. Use UL924 listed device for emergency light operation. Night lights shall be unswitched.
5	3-way switches for manual control of fixtures in work room, locations as shown. No dimming controls. Lights denoted as night lights (nl) shall be ON continuously. Emergency lights (indicated hatched) are to be normally switched via manual wall switches (unless denoted as night lights), but default to ON when loss of normal power is sensed. Use UL924 listed device for emergency light operation.
6	Combination dimming wall switch/occupancy sensor at location shown. Lights shall be manual ON via switch and automatic OFF via sensor. Switch shall provide for continuous dimming of lights in room. No emergency lights. No networked controls.
7	Stairwell lights to be unswitched. No networked controls. Normal and emergency circuits shall be provided to stairwell lighting as indicated. Use UL924 listed device for emergency lighting operation (each floor).
8	Provide ceiling mounted occupancy sensor coverage for full coverage of room. Upon sensing initial occupancy, general overhead lighting shall come on to 50% dimmed. Provide touch-screen controller at main entry to room, with options for multiple scene selections and dimming control. Row of general lighting at front of room shall have independent dimming control. Balcony lighting shall have independent dimming control. Each different type of light fixture in room

have independent dimming control. Each different type of light fixture in room shall have independent dimming/relay control. Coordinate with Owner for programming of scene selections and dimming presets. Lights shall be fully networked through the lighting control system, such that schedules and override settings may be modified at a head-end networked computer.

# GENERAL NOTES

- ALL EMERGENCY LIGHTS INDICATED WITH A HATCH SHALL BE POWERED BY CORRESPONDING EMERGENCY PANEL. SEE PANELBOARD SCHEDULE FOR INDICATED EMERGENCY LIGHTING CIRCUITS. BASEMENT, GROUND, AND SECOND LEVELS UTILIZE PANELBOARD "EB" WHILE THIRD AND ATTIC LEVELS UTILIZE PANELBOARD "EA". NO CIRCUIT SHALL BE GREATER THAN 16 AMPS.
- EMERGENCY LIGHTING SHALL BE CONTROLLED IN ACCORDANCE WITH LIGHTING CONTROLS TABLE. ALL GENERAL LIGHTING SHALL BE POWERED BY CORRESPONDING NORMAL
- PANEL. SEE PANELBOARD SCHEDULE FOR INDICATED LIGHTING CIRCUITS. BASEMENT, GROUND, AND SECOND LEVELS UTILIZE PANELBOARD "B" WHILE THIRD AND ATTIC LEVELS UTILIZE PANELBOARD "A". NO CIRCUIT SHALL BE GREATER THAN 16 AMPS.
- ALL BUILDING MOUNTED EXTERIOR LIGHT FIXTURES SHALL BE CONTROLLED BY LIGHTING CONTROL PANEL.

![](_page_78_Picture_14.jpeg)

Location: Supply From: DP Mounting: Surface Enclosure: Type 1 otes: $\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Trip           20 A           25 A           30 A           30 A           25 A           60 A           20 A           60 A           20 A	Poles         2         2         2         2         2         2         2         2         2         2         3         3	624 VA 2520 2808 2520 1560 4260	A 73 VA 73 VA 2808 5938 5938 528 VA 528 VA	Volts: Phases: Wires: 0 2808 0 2808 0 2808 0 2808 0 23014 0 1560 0 1560	<ul> <li>208Y/12</li> <li>3</li> <li>4</li> <li>73 VA</li> <li>4332</li> <li>2808</li> <li>5938</li> <li>528 VA</li> </ul>	20 2520 2808 2520 5314	73 A 4332 5938 5938	<b>Ротър</b> 2 2 2 2 2 2 2 2	20 A 20 A 40 A 30 A 60 A	A.I.C. Rating: 22K Mains Type: MLO Mains Rating: 600 A MCB Rating: FCU-2-1 FCU-2-1 FCU-2-2 VAV-3-1 VAV-3-3 VAV-4-1 VAV-4-3		2 4 6 8 10 12 14 16 18 20 22 24
CKT       Circuit Description         1       VAV-2-4         5       VAV-2-1         5       VAV-2-1         9       VAV-2-2         11       VAV-2-2         13       VAV-3-2         15       VAV-3-4         17       VAV-3-4         21       VAV-4-2         23       VAV-2-3         25       VAV-2-3         27       VAV-2-3         33       35         37       OAF-1         39       41         41       EUH-A-1	Trip         20 A         25 A         30 A         30 A         25 A         60 A         20 A         60 A         20 A	Poles         2         2         2         2         2         2         2         2         2         3         3	624 VA 2520 2808 2520 1560 4260	A 73 VA 73 VA 2808 5938 5938 528 VA 528 VA	624 VA 624 VA 2808 2808 5314 5314 1560	B 73 VA 4332 2808 5938 528 VA	2520 2808 2520 5314	73 A 4332 5938 5938	<b>Poteo</b> 2 2 2 2 2 2 2 2	20 A 20 A 40 A 30 A 60 A	FCU-2-1 FCU-2-2 VAV-3-1 VAV-3-3 VAV-4-1 VAV-4-3		2 4 6 10 12 14 16 18 20 22 24
CKT       Circuit Description         1       VAV-2-4         5       VAV-2-1         7       VAV-2-1         9       VAV-2-2         11       VAV-3-2         15       VAV-3-4         19       VAV-3-4         21       VAV-4-2         23       VAV-2-3         25       VAV-2-3         27       VAV-2-3         31       AHU-2         33       35         37       OAF-1         39       41         41       EUH-A-1	Trip         20 A         25 A         30 A         30 A         25 A         60 A         20 A         60 A         20 A	Poles         2         2         2         2         2         2         2         2         2         2         2         3         3	624 VA 2520 2808 2808 2520 1560 4260	A 73 VA 73 VA 73 VA 2808 5938 5938 528 VA 4200	624 VA 2808 2808 2808 5314 1560	B 73 VA 4332 2808 5938 528 VA	2520 2808 2520 5314	73 A 4332 5938 5938	2 2 2 2 2 2 2 2 2	20 A 20 A 40 A 30 A 60 A	FCU-2-1 FCU-2-2 VAV-3-1 VAV-3-3 VAV-4-1 VAV-4-3		2 4 6 10 12 14 16 18 20 22 24
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1rip         20 A         25 A         30 A         30 A         25 A         60 A         20 A         60 A         20 A         60 A         20 A	Poles         2         2         2         2         2         2         2         2         2         2         3         3	624 VA 2520 2808 2520 2520 1560 4260	A 73 VA 73 VA 73 VA 2808 5938 5938 528 VA 528 VA	624 VA 2808 2808 2808 5314 1560	B 73 VA 4332 2808 5938 528 VA	2520 2808 2520 5314	73 A 4332 5938 5938	2 2 2 2 2 2 2 2 2	20 A 20 A 40 A 30 A 60 A	FCU-2-1 FCU-2-2 VAV-3-1 VAV-3-3 VAV-4-1 VAV-4-3		$ \begin{array}{c} 2 \\ 4 \\ 6 \\ 8 \\ 10 \\ 12 \\ 14 \\ 16 \\ 18 \\ 20 \\ 22 \\ 24 \\ \end{array} $
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	20 A 25 A 30 A 30 A 25 A 60 A 20 A 60 A 20 A	2 2 2 2 2 2 2 2 2 3 3 3	2520 2808 2520 1560 4260	73 VA 73 VA 2808 5938 528 VA 528 VA	624 VA 2808 2808 2808 5314 1560	<ul> <li>73 VA</li> <li>4332</li> <li>2808</li> <li>5938</li> <li>528 VA</li> </ul>	2520 2808 2520 5314	73 A 4332 5938 5938	2 2 2 2 2 2	20 A 20 A 40 A 30 A 60 A	FCU-2-1 FCU-2-2 VAV-3-1 VAV-3-3 VAV-4-1 VAV-4-3		$ \begin{array}{r}       4 \\       6 \\       8 \\       10 \\       12 \\       14 \\       16 \\       18 \\       20 \\       22 \\       24 \\       \end{array} $
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	25 A 30 A 30 A 25 A 60 A 20 A 60 A 20 A	2 2 2 2 2 2 2 3 3 3	2520 2808 2520 1560 4260	73 VA 2808 5938 528 VA 528 VA	2808 2808 2808 2808 5314 5314 1560	4332 2808 5938 528 VA	2808 2520 5314	4332	2 2 2 2 2 2	20 A 40 A 30 A 60 A 60 A	FCU-2-2 VAV-3-1 VAV-3-3 VAV-4-1 VAV-4-3		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	30 A 30 A 25 A 60 A 20 A 60 A 20 A	2 2 2 2 2 2 3 3 3	2808 2520 1560 4260	2808 2808 5938 528 VA	2808 2808 2808 5314 1560	4332 2808 5938 528 VA	2808 2520 5314	4332 5938 5938	2 2 2 2 2	40 A 30 A 60 A 60 A	VAV-3-1 VAV-3-3 VAV-4-1 VAV-4-3		$     \begin{array}{r}       10 \\       12 \\       14 \\       16 \\       18 \\       20 \\       22 \\       24     \end{array} $
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	30 A 25 A 60 A 20 A 60 A 20 A	2 2 2 2 3 3	2808 2520 1560 4260	2808 5938 528 VA	2808 2808 5314 1560	2808 5938 528 VA	2520 5314	5938 5938	2 2 2 2	30 A 60 A 60 A	VAV-3-3 VAV-4-1 VAV-4-3		14 16 18 20 22 24
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	25 A 60 A 20 A 60 A 20 A	2 2 2 3 3	2520 1560 4260	5938 528 VA	2808 5314 1560	2808 5938 528 VA	2520 5314	5938 5938	2	60 A 60 A	VAV-4-1 VAV-4-3		16 18 20 22 24
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	25 A 60 A 20 A 60 A 20 A	2 2 2 3 3	2520 1560 4260	5938 528 VA 4200	5314 5314 1560	5938 528 VA	5314	5938	2	60 A	VAV-4-1 VAV-4-3		20 22 24
21 23 25 27 VAV-2-3 29 31 31 35 37 OAF-1 39 41 EUH-A-1	60 A 20 A 60 A 20 A	2 2 3 3	1560 4260	528 VA	1560	5938 528 VA	5314	5938	2	60 A	VAV-4-3		22
25 27 VAV-2-3 29 31 AHU-2 33 35 37 OAF-1 39 41 EUH-A-1	20 A 60 A 20 A	2 3 3	1560 4260	528 VA	1560	528 VA			1				24
21 29 31 AHU-2 33 35 37 OAF-1 39 41 EUH-A-1	60 A 20 A	3	4260	4200	UdC1	528 VA			1	20 A	OAF-2		26
31     AHU-2       33     35       37     OAF-1       39     41       41     EUH-A-1	60 A 20 A	3	4260	4200			4260	4200	1	20 A	OAF-3		30
33 35 37 39 41 EUH-A-1	20 A	3							3	60 A	AHU-4		32
37 39 41 EUH-A-1	20 A	3			4260	4200	264 VA	264 VA					34
39 <u>41</u> EUH-A-1			264 VA	264 VA	<b>\</b>		201 17	201 171	3	20 A	OAF-4		38
EUH-A-1					264 VA	264 VA	5000	5000					40
43	60 A	2	5000	5000			5000	5000	2	60 A	EUH-A-2		44
45 47 EUH-A-3	60 A	2			5000	5000	5000	5000	2	20 A	EUH-A-4		46
47 49 SF-1	50 A	1	2880	528 VA	\ \		5000	5000	1	20 A	EF-2-1		48
51 EF-B-1	20 A	1			1176	264 VA			1	20 A	EF-2-2		52
53 55 AHIL3	50 A	3	3360				3360						54
57	50 A	5	5500		3360								58
59													60
61 63													62
65													66
67													68
71													70
73													74
75 77													76
79													80
81													82
83	Tot	al Load:	4520	08 VA	5058	81 VA	6179	01 VA					84
	Tota	al Amps:	37	77 A	42	28 A	52	2 A	1				
∋gend:													
oad Classification	Con	nnected	Load	De	mand Fa	actor	Estin	nated De	mand		Panel	Totals	
ower	1	157580 V	/A		100.00%	6	1	57580 V	A				
											Total Conn. Load:	157580 VA	
											Total Conn. Current:	: 437 A	
										Tot	al Est. Demand Current:	437 A	
otes:	I									<u> </u>		1	

	Branch Panel: MB Location: Supply From: DP Mounting: Surface Enclosure: Type 1				I	Volts: Phases: Wires:	208Y/12 3 4	20				A.I.C. Rating: 22K Mains Type: MLO Mains Rating: 225 A MCB Rating:		
lotes:														
скт	Circuit Description	Trip	Polos		^		B		C	Polos	Trip	Circuit D	scription	скт
1		30 A	2	2808	<b>4</b> 1248					2	20 A			2
3			-			2808	1248	1560	1872		2077			4
7	VAV-1-3	20 A	2	1560	1872					2	20 A	VAV-1-4		8
9 11	VAV-1-5	20 A	2			1872	1872	1872	. 1872	2	20 A	VAV-1-6	_	10 12
13	VAV-1-7	40 A	2	3754	1560	0754	4500			2	20 A	VAV-1-8		14
15		20.4	2			3754	1560	1248	. 1872	2	20. 4			18
19 21	VAV-1-3	20 A	2	1248	1872	2000	1176			2 1	20 A	EF-B-2		20
23	IWH-1	30 A	2			2000	1170	2000	. 264 VA	1	20 A 20 A	EF-B-3		22
25	EF-B-4	20 A	1	264 VA	264 VA					1	20 A	EF-B-5		26
27	EF-B-6	20 A	1			264 VA	264 VA	4260	503 \/Δ	1	20 A	EF-B-7		28
31	AHU-1	40 A	3	4260	593 VA			4200	. 555 VA	2	20 A	FCU-B-1		32
33						4260	593 VA			2	20 A	FCU-B-2		34
35	WH-1	40 A	3	4608	864 VA			4608	. 593 VA	1	20 A	Power		36 38
39		4077		+000	00+ 177	4608	400 VA			2	20 /			40
41	IWH-1	30 A	2	0000	0000			2000	. 400 VA		20 A	MDC-B-1		42
43				2000	2000	2000	2000			2	20 A	IWH-1		44
47	IWH-1	20 A	2			2000	2000	2000						48
49														50
51 53														52 54
55														56
57														58
61														62
63														64
65														66
69														70
71														72
73														74 76
77														78
79														80
83														82 84
		Tot	al Load:	3077	75 VA	3067	79 VA	270	14 VA		I	1		
00000		Tota	al Amps:	26	1 A	26	0 A	22	25 A					
.egenu														
		-		<u> </u>	_	·							<b>-</b> / I	
oad C	assification	Cor	nected   88468 \//	Load ₄	Der	nand Fa	ctor	Esti	mated De	mand		Panel	IOTAIS	
			20100 17	•			-		55 100 VF	•		Total Conn. Load:	88468 VA	
												Total Est. Demand:	88468 VA	
											Taf	Total Conn. Current:	246 A	
											101	ai Lot. Demanu Current:		
lotes:														

	Supply From: Mounting: Surface Enclosure: Type 3R			Volis.         2001/120           Phases:         3           Wires:         4								A.I.C. Rating: 65K Mains Type: MCB Mains Rating: 1600 A MCB Rating:				
tes:																
<b>КТ</b>	Circuit Description	Trip	Poles	1003	<b>A</b>		B		С	Poles	Trip	Circuit Description				
3	DISTRIBUTION PANEL "DP"	1000 A	3	1095	5250	1110	. 4604	4000	5004	3	100 A	PANEL "C"				
7				3084	2880	0.004	0000	1200	5004		50.4	CHP-1				
) 1	CH-1	300 A	3			3084	. 2880	3084	2880	3	50 A	CHP-1				
3 5	CHP-2	50 A	3	2880		2880										
7 }								2880								
1										-						
5																
7 )																
3																
7																
9 1						-										
		Tot	al Load	: 1491	89 VA	1522	298 VA	1622	273 VA		1					
С	lassification	Cor	<b>nected</b>	Load	De	mand Fa	actor	Estir	nated De	emand		Panel Totals				
r			1080 V	4		100.00%	%		1080 VA	<u>م</u>		Total Conn. Load: 463760 VA				
er		3	399908 \	/A	1080 VA         100.00%         1080 VA           399908 VA         100.00%         399908 VA					Ά		Total Est. Demand: 452200 VA				
onte		33120 VA 65.10% 21560 VA					/0	· ·	٨		Total Conn. Current: 1997 A					
tes:			33120 V	A		65.10%	/0 /0 		21560 V	A	Tot	Total Conn. Current: 1287 A al Est. Demand Current: 1255 A				
cepta			<u>33120 V</u>	A		65.10%	/0 /0		21560 V	A	Tot	Total Conn. Current: 1287 A a Est. Demand Current: 1255 A				
es:	Branch Panel: DP Location: MECH. 008 Supply From: SBD Mounting: Surface Enclosure: Type 1		<u>33120 V</u>	A		Volts Phases Wires	: 208Y/1 : 3 : 4	20	21560 V	A	Tot	Total Conn. Current:       1287 A         sal Est. Demand Current:       1255 A         A.I.C. Rating:       42K         Mains Type:       MLO         Mains Rating:       1000 A         MCB Rating:       1000 A				
epta	Branch Panel: DP Location: MECH. 008 Supply From: SBD Mounting: Surface Enclosure: Type 1 Circuit Description	Trip	33120 V			Volts Phases Wires	E	20	21560 V	Poles	Tot	Total Conn. Current:       1287 A         al Est. Demand Current:       1255 A         Al.C. Rating:       42K         Mains Type:       MLO         Mains Rating:       1000 A         MCB Rating:       Circuit Description				
epta	Branch Panel: DP Location: MECH. 008 Supply From: SBD Mounting: Surface Enclosure: Type 1 Circuit Description		33120 V	A	A 3077	Volts Phases Wires	E 3067	20	21560 V	A Poles 3	Tot	Total Conn. Current:       1287 A         al Est. Demand Current:       1255 A         Image: State of the state				
epta	Branch Panel: DP Location: MECH. 008 Supply From: SBD Mounting: Surface Enclosure: Type 1 Circuit Description	Trip	33120 V Poles 3	A	A 3077	Volts Phases Wires	<ul> <li>208Y/1</li> <li>3</li> <li>4</li> </ul>	20	21560 V	A Poles 3	Tot	Total Conn. Current:       1287 A         al Est. Demand Current:       1255 A         Image: State of the state				
epta es: CT	Branch Panel: DP Location: MECH. 008 Supply From: SBD Mounting: Surface Enclosure: Type 1 Circuit Description PANEL "B"	<ul> <li>Trip</li> <li>225 A</li> <li>200 A</li> </ul>	33120 V Poles 3 3	A	A 3077 4520	Volts Phases Wires	<ul> <li>208Y/1</li> <li>3</li> <li>4</li> </ul> B <ul> <li>3067</li> <li>3067</li> <li>5058</li> </ul>	20	21560 V	A Poles 3 3	Tot	Total Conn. Current:       1287 A         al Est. Demand Current:       1255 A         Image: State of the state				
epta	Branch Panel: DP Location: MECH. 008 Supply From: SBD Mounting: Surface Enclosure: Type 1 Circuit Description	<ul> <li>Trip</li> <li>225 A</li> <li>200 A</li> </ul>	33120 V Poles 3 3	A	A 3077 4520	Volts Phases Wires 1236 4724	<ul> <li>208Y/1</li> <li>3</li> <li>4</li> </ul> B <ul> <li>3067</li> <li>3067</li> <li>5058</li> </ul>	20	21560 V 21560 V 21560 V 21560 V 6179	A Poles 3 3	<b>Trip</b> 225 A 600 A	Total Conn. Current:       1287 A         ral Est. Demand Current:       1255 A         Image: All Constant of the second state of the second sta				
epta ====================================	Branch Panel: DP Location: MECH. 008 Supply From: SBD Mounting: Surface Enclosure: Type 1 Circuit Description PANEL "B" ATS - PANEL "EB"	<ul> <li>Trip</li> <li>225 A</li> <li>225 A</li> </ul>	33120 V Poles 3 3 3	A 	A 3077 4520 5400	Volts Phases Wires 4724 7348	<ul> <li>208Y/1</li> <li>208Y/1</li> <li>3</li> <li>4</li> </ul>	20	21560 V	A Poles 3 3 3	Tot 701 225 A 600 A	Total Conn. Current:       1287 A         cal Est. Demand Current:       1255 A         A.I.C. Rating:       42K         Mains Type:       MLO         Mains Rating:       1000 A         MCB Rating:       MCB Rating:         Circuit Description         PANEL "MB"         ELEVATOR				
epta ess: xT	Branch Panel: DP Location: MECH. 008 Supply From: SBD Mounting: Surface Enclosure: Type 1 Circuit Description PANEL "B" ATS - PANEL "EB"	<ul> <li>Trip</li> <li>225 A</li> <li>200 A</li> <li>225 A</li> </ul>	33120 V Poles 3 3 3	A	A 3077 4520 5400	Volts Phases Wires 4724 7348	<ul> <li>208Y/1</li> <li>3</li> <li>4</li> </ul> B <ul> <li>3067</li> <li>5058</li> <li>5400</li> <li>54400</li> </ul>	20 20 20 4424 8916	21560 V 21560 V 21560 V 21560 V 6179 5400	A Poles 3 3 3	Tot 701 225 A 600 A 60 A	Total Conn. Current:       1287 A         cal Est. Demand Current:       1255 A         A.I.C. Rating:       42K         Mains Type:       MLO         Mains Rating:       1000 A         MCB Rating:       Circuit Description         PANEL "MB"       PANEL "MA"         ELEVATOR       ELEVATOR				
epta ess: (T 1 3 5 7 9 1	Branch Panel: DP Location: MECH. 008 Supply From: SBD Mounting: Surface Enclosure: Type 1  Circuit Description PANEL "B" ATS - PANEL "EB" PANEL "A"	Trip 225 A 200 A	33120 V Poles 3 3 3	A	A 3077 4520 5400	Volts Phases Wires 4724 7348	<ul> <li>208Y/1</li> <li>3</li> <li>4</li> </ul> B <ul> <li>3067</li> <li>5058</li> <li>5058</li> <li>5400</li> <li>5400</li> </ul>	20 20 20 4424 8916	21560 V 21560 V 21560 V 21560 V 21560 V 21560 V	A Poles 3 3 3	Trip 225 A 600 A	Total Conn. Current:       1287 A         cal Est. Demand Current:       1255 A         Image: All Connection       Image: All Connection         A.I.C. Rating:       42K         Mains Type:       MLO         Mains Rating:       1000 A         MCB Rating:       Image: All Connection         PANEL "MB"       Image: All Connection         PANEL "MA"       Image: All Connection         Image: All Connection       Image: All Connection         MCB Rating:       Image: All Connection         MCB Rating:       Image: All Connection         Image: All Connection				
epta esta esta f f f f f f f f f f f f f	Branch Panel: DP Location: MECH. 008 Supply From: SBD Mounting: Surface Enclosure: Type 1  Circuit Description  PANEL "B"  ATS - PANEL "EB"  PANEL "A"	<ul> <li>Trip</li> <li>225 A</li> <li>200 A</li> <li>225 A</li> </ul>	33120 V Poles 3 3 3 3	A 	A 3077 4520 5400	Volts Phases Wires 4724 7348	<ul> <li>208Y/1</li> <li>3</li> <li>4</li> </ul> B <ul> <li>3067</li> <li>5058</li> <li>5058</li> <li>5400</li> <li>5400</li> <li>5400</li> </ul>	20 20 20 4424 8916	21560 V 21560 V 21560 V 21560 V 6179 5400	A Poles 3 3 3 3 3	Trip 225 A 600 A	Total Conn. Current:       1287 A         cal Est. Demand Current:       1255 A         Image: All Connection       Image: All Connection         A.I.C. Rating:       42K         Mains Type:       MLO         Mains Rating:       1000 A         MCB Rating:       Image: All Connection         Circuit Description       Image: All Connection         PANEL "MB"       Image: All Connection         PANEL "MA"       Image: All Connection         Image: All Connection       Image: All Connection         Image: All Con				
epta es: cr 3 5 7 9 1 3 5 7 9 1 3 5 7 7	Branch Panel: DP Location: MECH. 008 Supply From: SBD Mounting: Surface Enclosure: Type 1  Circuit Description  PANEL "B"  PANEL "B"	<ul> <li>Trip</li> <li>225 A</li> <li>200 A</li> <li>225 A</li> <li>200 A</li> </ul>	33120 V Poles 3 3 3 3 3	A 	A 3077 4520 5400	Volts Phases Wires 4724 7348	<ul> <li>208Y/1</li> <li>3</li> <li>4</li> </ul> B <ul> <li>3067</li> <li>5058</li> <li>5058</li> <li>5400</li> <li>5400</li> <li>5400</li> </ul>	20 20 20 4424 8916	21560 V 21560 V 21560 V 21560 V 6179 5400	A Poles 3 3 3 3 4 3	Trip 225 A 600 A	Total Conn. Current:       1287 A         cal Est. Demand Current:       1255 A         1255 A       1         A.I.C. Rating:       42K         Mains Type:       MLO         Mains Rating:       1000 A         MCB Rating:       1000 A         MCB Rating:       1000 A         PANEL "MB"       PANEL "MB"         ELEVATOR       1				
epta es: es: (T ) 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 1 1 9 1 1 1 9 1 1 1 9 1 1 1 9 1	Branch Panel: DP Location: MECH. 008 Supply From: SBD Mounting: Surface Enclosure: Type 1  Circuit Description  PANEL "B"  ATS - PANEL "EB"  PANEL "A"	<ul> <li>Trip</li> <li>225 A</li> <li>225 A</li> <li>225 A</li> <li>200 A</li> </ul>	33120 V Poles 3 3 3 3 3 3	A 	A 3077 4520 5400	Volts Phases Wires 4724 7348 7348	<ul> <li>208Y/1</li> <li>3</li> <li>4</li> </ul> B <ul> <li>3067</li> <li>5058</li> <li>5400</li> <li>5400</li> <li>5400</li> </ul>	20 20 20 3 3 4424 8916 3 8916 4424	21560 V 21560 V 21560 V 21560 V 21560 V	A Poles 3 3 3 3 4 3	Trip 225 A 600 A 60 A	Total Conn. Current:       1287 A         ial Est. Demand Current:       1255 A         Ial Est. Demand Current:       1267 A         Mains Type:       MLO         Mains Rating:       1000 A         MCB Rating:       MCB Rating:         Circuit Description       PANEL "MB"         PANEL "MA"       ELEVATOR         Ial Elevatore       Ial Elevatore				
epta es: es: 7 9 1 3 5 7 9 1 3 3 5 7 9 1 3 3 5 7 9 1 3 3 5 7 9 1 3 3 5 7 9 1 3 3 5 7 9 1 3 3 5 7 9 1 3 3 5 7 7	Branch Panel: DP Location: MECH. 008 Supply From: SBD Mounting: Surface Enclosure: Type 1  Circuit Description PANEL "B" ATS - PANEL "EB" PANEL "A"	<ul> <li>Trip</li> <li>225 A</li> <li>2200 A</li> <li>225 A</li> <li>200 A</li> <li>225 A</li> </ul>	33120 V Poles 3 3 3 3 3 3	A 	A 3077 5400 5400	Volts Phases Wires 4724 4724 7348 7348	<ul> <li>208Y/1</li> <li>3</li> <li>4</li> </ul> B 6 3067 5058 5058 5400 5400 5400	220 220 20 20 20 20 20 20 20 20 20 20 20	21560 V 21560 V 21560 V 21560 V 21560 V	A Poles 3 3 3 3 - - - - - - - - - - - - -	Trip 225 A 600 A 60 A	Total Conn. Current:       1287 A         ial Est. Demand Current:       1255 A         Al.C. Rating:       42K         Mains Type:       MLO         Mains Rating:       1000 A         MCB Rating:       MCB         Circuit Description         PANEL "MB"         ELEVATOR         Image: Content of the second secon				
epta es: es: (T ) 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 7 9 1 3 5 7 7 9 1 3 5 7 7 9 1 3 5 5 7 7	Branch Panel: DP Location: MECH. 008 Supply From: SBD Mounting: Surface Enclosure: Type 1  Circuit Description PANEL "B" ATS - PANEL "EB" PANEL "A"	<ul> <li>Z25 A</li> <li>Z25 A</li> <li>Z25 A</li> <li>Z25 A</li> <li>Z25 A</li> <li>Z25 A</li> </ul>	33120 V Poles 3 3 3 3 3 3 3	A	A 3077 5400 5400	Volts Phases Wires 4724 4724 7348 7348	B 3067 3067 5058 5058 5058 5058	20 20 20 20 20 20 20 20 20 20 20 20 20 2	C 21560 V 21560 V 21560 V 21560 V 21560 V	A Poles 3 3 3 3 - - - - - - - - - - - - -	Trip 225 A 600 A 60 A	Total Conn. Current:       1287 A         ial Est. Demand Current:       1255 A         A.I.C. Rating:       42K         Mains Type:       MLO         Mains Rating:       1000 A         MCB Rating:       MCB         Circuit Description         PANEL "MB"         ELEVATOR				
epta es: es: (T ) 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 9 1 3 5 7 9 9 1 3 5 7 9 9 1 3 5 7 9 9 1 3 5 5 7 9 9 1 3 5 5 7 9 9 1 3 5 5 7 9 9 1 3 5 5 7 9 9 1 3 5 5 7 9 9 1 3 5 5 7 9 9 1 3 5 5 7 9 9 1 3 5 5 7 9 9 1 3 5 5 7 9 9 1 3 5 5 7 9 9 1 3 5 5 7 9 9 1 3 5 5 7 9 9 1 3 5 5 7 9 9 1 3 5 5 7 9 9 1 3 5 5 7 9 9 1 3 5 5 7 9 9 1 3 5 5 7 9 9 1 3 5 5 7 9 9 1 3 5 7 9 9 1 3 5 5 9 9 1 3 5 5 9 1 9 9 1 9 1 9 1 1 3 1 1 9 1 1 1 1 1 1	Branch Panel: DP Location: MECH. 008 Supply From: SBD Mounting: Surface Enclosure: Type 1  Circuit Description  PANEL "B"  ATS - PANEL "EB"  PANEL "A"	<ul> <li>Z25 A</li> <li>Z25 A</li> <li>Z25 A</li> <li>Z25 A</li> <li>Z25 A</li> <li>Z25 A</li> </ul>	33120 V Poles 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	A	A 3077 5400 5400 5400	Volts Phases Wires 4724 4724 7348 2 4724 4724 2 4724	208Y/1 3 4 3 3 4 3 3 4 3 4 3 4 3 4 3 4 <td>220 20 20 20 20 20 20 20 20 20 20 20 20</td> <td>C 21560 V 21560 V 21560 V 21560 V 21560 V</td> <td>A Poles 3 3 3 </td> <td>Trip 225 A 600 A 60 A</td> <td>Total Conn. Current:       1287 A         ial Est. Demand Current:       1255 A         A.I.C. Rating:       42K         Mains Type:       MLO         Mains Rating:       1000 A         MCB Rating:       MCB         PANEL "MB"       PANEL "MA"         ELEVATOR      </td>	220 20 20 20 20 20 20 20 20 20 20 20 20	C 21560 V 21560 V 21560 V 21560 V 21560 V	A Poles 3 3 3 	Trip 225 A 600 A 60 A	Total Conn. Current:       1287 A         ial Est. Demand Current:       1255 A         A.I.C. Rating:       42K         Mains Type:       MLO         Mains Rating:       1000 A         MCB Rating:       MCB         PANEL "MB"       PANEL "MA"         ELEVATOR				
epta est: es: ct 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 3 5 7 9 1 1 3 5 7 9 1 1 3 5 7 9 1 1 1 9 1 1 1 9 1 1 1 1 9 1	ACIE  Branch Panel: DP  Location: MECH. 008 Supply From: SBD Mounting: Surface Enclosure: Type 1  Circuit Description  PANEL "B"  ATS - PANEL "EB"  PANEL "A"	<ul> <li>Z25 A</li> </ul>	33120 V Poles 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	A	A 3077 5400 5400	Volts Phases Wires 4724 4724 7348 7348 1236	<ul> <li>208Y/1</li> <li>3</li> <li>4</li> </ul>	20 20 20 20 20 20 20 20 20 20 20 20 20 2	C 21560 V 21560 V 21560 V 21560 V 5400 5400	A Poles 3 3 3 	Trip 225 A 600 A 60 A	Total Conn. Current:       1287 A         ial Est. Demand Current:       1255 A         A.I.C. Rating:       42K         Mains Type:       MLO         Mains Rating:       1000 A         MCB Rating:       MCB         Circuit Description         PANEL "MB"         ELEVATOR				

29652 VA

1080 VA

278644 VA

31680 VA

100.00%

100.00%

100.00%

65.78%

29652 VA

1080 VA

278644 VA

20840 VA

Total Conn. Load: 341056 VA

Total Est. Demand: 330216 VA

Total Conn. Current: 947 A

Total Est. Demand Current: 917 A

Notes:

Lighting Other Power

Receptacle

# EQUIPMENT SCHEDULE BY SYMBOL

		1				
			LOAD		-	
SYMBOL	DESCRIPTION	LOAD	UNITS	VOLTS/ PHASE	DISCONNECT	COMMENTS
<u>AHU-1</u>	AIR HANDLER UNIT -1	53	AMPS	208/3	60A-3P NEMA 3 DISCONNECT	-
<u>AHU-2</u>	AIR HANDLER UNIT -2	35.5	AMPS	208/3	60A-3P NEMA 3 DISCONNECT	-
<u>AHU-3</u>	AIR HANDLER UNIT -3	28	AMPS	208/3	60A-3P NEMA 3 DISCONNECT	-
<u>AHU-4</u>	AIR HANDLER UNIT -4	35	AMPS	208/3	60A-3P NEMA 3 DISCONNECT	-
<u>FCU-B-1</u>	FAN COIL UNIT B-1	5.7	AMPS	208/1	30A-2P NEMA 1 DISCONNECT	-
<u>FCU-B-2</u>	FAN COIL UNIT 6-1	5.7	AMPS	208/1	30A-2P NEMA 1 DISCONNECT	-
<u>FCU-G-1</u>	FAN COIL UNIT G-1	0.45		208/1	30A-2P NEMA 1 DISCONNECT	-
<u>FCU-G-2</u> MDC-B-1	FAN COIL UNIT MDC B-1	0.45	AMPS	200/1	30A-2P NEMA 1 DISCONNECT	
CU-1	CONDENSING UNIT 1	40	AMPS	200/1	60A-2P NEMA 3R DISCONNECT	-
<u>VAV-1-1</u>	VARIABLE AIR VOLUME 1-1	27	AMPS	208/1	60A-2P NEMA 1 DISCONNECT	-
VAV-1-2	VARIABLE AIR VOLUME 1-2	12	AMPS	208/1	30A-2P NEMA 1 DISCONNECT	-
<u>VAV-1-3</u>	VARIABLE AIR VOLUME 1-3	15	AMPS	208/1	30A-2P NEMA 1 DISCONNECT	-
<u>VAV-1-4</u>	VARIABLE AIR VOLUME 1-4	18	AMPS	208/1	30A-2P NEMA 1 DISCONNECT	-
<u>VAV-1-5</u>	VARIABLE AIR VOLUME 1-5	18	AMPS	208/1	30A-2P NEMA 1 DISCONNECT	-
<u>VAV-1-6</u>	VARIABLE AIR VOLUME 1-6	18	AMPS	208/1	30A-2P NEMA 1 DISCONNECT	-
<u>VAV-1-7</u>	VARIABLE AIR VOLUME 1-7	36	AMPS	208/1	60A-2P NEMA 1 DISCONNECT	-
<u>VAV-1-8</u>	VARIABLE AIR VOLUME 1-8	15	AMPS	208/1	30A-2P NEMA 1 DISCONNECT	-
<u>VAV-1-9</u>	VARIABLE AIR VOLUME 1-9	12	AMPS	208/1	30A-2P NEMA 1 DISCONNECT	
ECU-2-1				208/1		
FCU-2-2	FAN COIL UNIT	0.6	AMPS	208/1	30A-2P NEMA 1 DISCONNECT	_ {
VAV-2-1	VARIABLE AIR VOLUME 2-1	سيد	AMPS	208/1	30A-2P NEMA T DISCONNECT	ممي
<u>VAV-2-2</u>	VARIABLE AIR VOLUME 2-2	27	AMPS	208/1	30A-2P NEMA 1 DISCONNECT	-
VAV-2-3	VARIABLE AIR VOLUME 2-3	15	AMPS	208/1	30A-2P NEMA 1 DISCONNECT	-
VAV-2-4	VARIABLE AIR VOLUME 2-4	6	AMPS	208/1	30A-2P NEMA 1 DISCONNECT	-
<u>VAV-3-1</u>	VARIABLE AIR VOLUME 3-1	36.1	AMPS	208/1	60A-2P NEMA 1 DISCONNECT	-
<u>VAV-3-2</u>	VARIABLE AIR VOLUME 3-2	27	AMPS	208/1	60A-2P NEMA 1 DISCONNECT	-
<u>VAV-3-3</u>	VARIABLE AIR VOLUME 3-3	27	AMPS	208/1	60A-2P NEMA 1 DISCONNECT	-
<u>VAV-3-4</u>	VARIABLE AIR VOLUME 3-4	21	AMPS	208/1	30A-2P NEMA 1 DISCONNECT	-
<u>VAV-4-1</u>	VARIABLE AIR VOLUME 4-1	57.1	AMPS	208/1		-
<u>VAV-4-2</u>		57.1		208/1	60A-2P NEMA 1 DISCONNECT	-
<u>VAV-4-3</u> W/H_1	WATER HEATER 1	38.4	AMPS	208/3	60A-3P NEMA 1 DISCONNECT	
SP-1	SUMP PUMP 1	7.2	AMPS	120/1	20A-1P SNAP SWITCH	-
SP-2A	SUMP PUMP 2A	8.8	AMPS	208/3	60A-3P NEMA 3R DISCONNECT	-
<u>SP-2B</u>	SUMP PUMP 2B	34	AMPS	208/3	60A-3P NEMA 3R DISCONNECT	-
<u>SP-3</u>	SUMP PUMP 3	34	AMPS	208/3	60A-3P NEMA 3R DISCONNECT	-
<u>CH-1</u>	AIR COOLED CHILLER 1	257	AMPS	208/3	400A-3P NEMA 3R DISCONNECT	-
<u>OAF-1</u>	OUTSIDE AIR FAN 1	2.2	AMPS	208/3	20A-3P SNAP SWITCH	-
<u>OAF-2</u>	OUTSIDE AIR FAN 2	4.4	AMPS	120/1	20A-1P SNAP SWITCH	-
<u>OAF-3</u>	OUTSIDE AIR FAN 3	4.4	AMPS	120/1	20A-1P SNAP SWITCH	-
<u>OAF-4</u>	OUTSIDE AIR FAN 4	2.2		208/3	20A-3P SNAP SWITCH	-
		9.0		120/1		
EF-B-3	EXHAUST FAN 3	4.4	AMPS	120/1	20A-1P SNAP SWITCH	-
EF-B-4	EXHAUST FAN 4	2.2	AMPS	120/1	20A-1P SNAP SWITCH	-
<u>EF-B-5</u>	EXHAUST FAN 5	2.2	AMPS	120/1	20A-1P SNAP SWITCH	-
<u>EF-B-6</u>	EXHAUST FAN 6	2.2	AMPS	120/1	20A-1P SNAP SWITCH	-
<u>EF-B-7</u>	EXHAUST FAN 7	2.2	AMPS	120/1	20A-1P SNAP SWITCH	-
<u>EF-B-8</u>	EXHAUST FAN 8	2.2	AMPS	120/1	20A-1P SNAP SWITCH	-
<u>EF-B-9</u>	EXHAUST FAN 9	2.2	AMPS	120/1	20A-1P SNAP SWITCH	-
EF-B-10	EXHAUST FAN 10	2.2		120/1	20A-1P SNAP SWITCH	-
EF-2-1 EF-2-2	EXHAUST FAN 12	2.6	AMPS	120/1	20A-1P SNAP SWITCH	- _
<u></u> <u>CHP-1</u>	HYDRONIC PUMP 1	24	AMPS	208/3	30A-3P NEMA 3R DISCONNECT	
CHP-2	HYDRONIC PUMP 2	24	AMPS	208/3	30A-3P NEMA 3R DISCONNECT	-
<u>FP-1</u>	FIRE PUMP 1	50	HP	208/3	400A-3P NEMA 1 DISCONNECT	-
<u>CH-1</u>		257	AMPS	208/3	400A-3P NEMA 3 DISCONNECT	-
<u>51-1</u> EUH-A-1	ELECTRIC UNIT HEATER 1	24 48	AIVIPS	208/1	30A-TP NEMA T DISCONNECT	-
<u>EUH-A-2</u>	ELECTRIC UNIT HEATER 2	48	AMPS	208/1	30A-2P NEMA 1 DISCONNECT	-
<u>EUH-A-3</u>	ELECTRIC UNIT HEATER 3	48	AMPS	208/1	30A-2P NEMA 1 DISCONNECT	
<u>EUH-A-4</u>	ELECTRIC UNIT HEATER 4	48	AMPS	208/1	30A-2P NEMA 1 DISCONNECT	
<u>EUH-B-1</u>	ELECTRIC UNIT HEATER 5	9.6	AMPS	208/1	20A-2P SNAP SWITCH	
<u>CP-1</u> CDP-1	CONDENSATE PUMP 1	9.0 2.2	AMPS	120/1	20A-1F SNAF SWITCH	
<u>CDP-1</u>	CONDENSATE PUMP 2	2.2	AMPS	120/1	20A-1P SNAP SWITCH	
IWH-1	INSTANT WATER HEATER 1	19.7	AMPS	208/1	30A-2P NEMA 1 DISCONNECT	
<u>IWH-1</u>	INSTANT WATER HEATER 2	19.7	AMPS	208/1	30A-2P NEMA 1 DISCONNECT	
<u>IWH-1</u>	INSTANT WATER HEATER 3	19.7	AMPS	208/1	30A-2P NEMA 1 DISCONNECT	
<u>IWH-1</u>		19.7	AMPS	208/1		
		13.1		200/1	JUA-ZE NEIVIA I DIGUUNNEUT	
		1			1	1

NOTES:

1. VERIFY ALL MOUNTING REQUIREMENTS WITH EQUIPMENT PROVIDER. COORDINATE EXACT LOCATIONS OF ALL EQUIPMENT WITH ARCHITECT.

2. VERIFY ACTUAL EQUIPMENT LOADS AND CONNECTION REQUIREMENTS WITH MANUFACTURER. DO NOT EXCEED THE LOAD VALUE AS SHOWN ON SCHEDULE. ALL CIRCUITS DESIGNED BASED ON ABOVE LOADS FOR EACH EQUIPMENT. CONTRACTOR SHALL NOT CIRCUIT OR CONNECT ANY EQUIPMENT WHICH EXCEEDS THE CONNECTED LOAD AS SHOWN ON TABLE. WIRE AND CONDUIT SIZES SHALL BE SIZED TO COMPENSATE FOR VOLTAGE DROP PER THE NATIONAL ELECTRICAL CODE.

3. CONTRACTOR SHALL PROVIDE APPROPRIATE RECEPTACLE, JUNCTION BOX, DISCONNECT OR CONNECTION MEANS FOR ALL DEVICES IN EQUIPMENT SCHEDULE EVEN IF NOT NOTED FOR EQUIPMENT INSTALLATION. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT INSTALLER.

![](_page_79_Picture_13.jpeg)

Branch	Panel: C			<b>Volts:</b> 208Y/1	20		A.I.C. Rating: 22K		В	ranch Panel: B			<b>Volts</b> : 208	3Y/120		A.I.C. Rating: 22K	
5	Supply From: SBD Mounting: Surface Enclosure: Type 3R			Phases: 3 Wires: 4			Mains Type: MLO Mains Rating: 100 A MCB Rating:			Supply From: DP Mounting: Surface Enclosure: Type 1			Phases: 3 Wires: 4			Mains Type: MLO Mains Rating: 225 A MCB Rating:	
Notes:									Notes:								
CKT Circ	uit Description Trij	o Pole	s A	В	C	Poles Trip	Circuit Description	СКТ	скт	Circuit Description	Trip Poles	A	В	С	Poles	Trip Circuit De	escription CKT
1         SP-3           3         ADA Step Lighting	207	4 1 4 1	900 VA 1200	500 VA		1 20 A	Power	2 4	1 Recep 3 Vendir	tacle Ig Machine	20 A 1 20 A 1	720 VA 180 VA	180 VA 720	D VA	1	20 A     Vending Machine       20 A     Receptacle	<u> </u>
5								6	5 Recep	tacle	20 A 1			360 VA 1260	1	20 A Receptacle	6
7			360 V/	A		1 20 A	Exterior Receptacle	8	7 Recep		20 A 1	540 VA 900 VA	540 \/A 540		1	20 A Receptacle	8
11 Exterior Receptacle	20 /	A 1			360 VA			10	11 Recep	tacle	20 A 1		540 VA 540	540 VA 540 VA	1	20 A Receptacle	10
13								14	13 Recep	tacle	20 A 1	720 VA 360 VA	<b>\</b>		1	20 A Receptacle	14
15					260 \//	1 20.4	Exterior Decentede	16	15 Recep	tacle	20 A 1		540 VA 540	) VA	1	20 A Receptacle	16
17					360 VF			20	17 Recep	tacle	20 A 1	720 VA 360 VA		900 VA 540 VA	1	20 A Receptacle	20
21 Exterior Receptacle	20 /	۹ 1		360 VA				22	21 Recep	tacle	20 A 1		360 VA 360	) VA	1	20 A Receptacle	22
23 North Sidewalk Ligh	nting 20 /	A 1			50 VA 550 VA	A 1 20 A	Building In-Grade Lighting	24	23 Recep	tacle	20 A 1			720 VA 900 VA	1	20 A Receptacle	24
25 Flap Pole Lighting			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	3744	m -	1 20 A	South Sidewalk Lighting	26	25 Recep		20 A 1	360 VA 360 VA			1	20 A Receptacle	26
29 CU-1		A 2		0744	3744			30	29 Recep	tacle	20 A 1		500 VA 500	540 VA 500 VA	1	20 A Power	30
31	$\sim$	~~~	mm	m	m			32	31 Lightin	g	20 A 1	1308 1308			1	20 A Lighting	32
33					_			34	33 Lightin	9	20 A 1		1308 15	70	1	20 A Lighting	34
35								36	35 Lightin 37 Lightin	g	20 A 1	1570 1570		1570 1570	1	20 A Lighting	36
39								40	39 Lightin	g	20 A 1		1472 14	72	1	20 A Lighting	40
41								42	41 Lightin	g	20 A 1			1472 1472	1	20 A Lighting	42
	T	otal Loa	d: 3236 VA	4604 VA	5064 VA				43	Power	20 A 1	400 VA 500 VA	1000 50		2	20 A Pow	wer 44
Legend:		otal Amp	s: 27 A	40 A	44 A				45	Power	20 A 1		1000 500	180 VA			46
									49 51	Receptacle	20 A 2	0 VA					50 52
Load Classification	С	onnecte	d Load De	mand Factor	Estimated D	emand	Panel Totals		53								54
Power Recentacle		11464	VA	100.00%	11464 V	/A A	Total Conn. Load: 12004 VA		55								56
		1440	VA	100.00 %	1440 07	^	Total Est. Demand: 12904 VA		59								60
							Total Conn. Current: 36 A		61								62
						То	tal Est. Demand Current: 36 A		63								64
									65								66
Notes:									69								70
									71								72
									73								74
									75				-				76
									79								80
									81								82
									83			11976 \/A	10260 \/	A 12064 \/A			84
											Total Amps:	99 A	12362 V/ 104 A	A 13064 VA 109 A			
									Legend:								
									Load Classific	ation	Connected	Load De	mand Factor	Estimated De	mand	Panel	Totals
									Lighting		17662 V/	A	100.00%	17662 V	٩		
									Power		2900 VA	A	100.00%	2900 VA	<u> </u>	Total Conn. Load:	37302 VA
									Receptacle		16740 V/	A	/9.8/%	13370 V/	4	I Otal Est. Demand: Total Conn. Current:	33932 VA 104 A
																Total Est. Demand Current:	94 A

Branch F	Panel:
----------	--------

Branch Panel: A Location: Supply From: DP Mounting: Surface				Volts: 208Y/120 Phases: 3 Wires: 4							A.I.C. Rating: 22K Mains Type: MLO Mains Rating: 225 A			
lotes:	Enclosure: Type 1											MCB Rating:		
CKT	Circuit Description	Trip	Poloo		•		D			Boloo	Trin	Circuit D	acceletion	
1	Receptacle	20 A	1	720 VA	<b>4</b> 900 VA					1	20 A	Receptacle	escription	
3	Receptacle	20 A	1			180 VA	360 VA			1	20 A	Receptacle		
5	Receptacle	20 A	1					180 VA	720 VA	1	20 A	Receptacle		
7	Receptacle	20 A	1	0 VA	540 VA					1	20 A	Receptacle		
9	Receptacle	20 A	1			180 VA	180 VA	540.1/4	400.1/4	1	20 A	Receptacle		
11		20 A	1	1000	700 \ (A			540 VA	180 VA	1	20 A	Receptacle		
13		20 A	1	1260	720 VA	E40\/A	700 \/A			1	20 A	Receptacle		
10 17	Recentacle	20 A	1			540 VA	120 VA	720 \/A	540 \/A	1	20 A	Recentacle		
19	Receptacle	20 A 20 A	1	180 \/A				120 VA	0+0 VA		20 A			
21		20 A	1	100 VA										
23	Receptacle	20 A	1					360 VA	360 VA	1	20 A	Receptacle		
25	Receptacle	20 A	1	900 VA	900 VA					1	20 A	Receptacle		
27	Receptacle	20 A	1			900 VA	180 VA			1	20 A	Receptacle		
29	Receptacle	20 A	1					180 VA	500 VA	1	20 A	Power		
31	Power	20 A	1	500 VA	500 VA					1	20 A	Power		
33	Power	20 A	1			500 VA	360 VA			1	20 A	Receptacle		
35	Lighting	20 A	1					1308	1308	1	20 A	Lighting		
37	Lighting	20 A	1	1308	1308					1	20 A	Lighting		
39	Lighting	20 A	1			1308	1400			1	20 A	Lighting		
41	Lighting	20 A	1					1300	360 VA	1	20 A	Receptacle		
43	Power	20 A	1	500 VA	360 VA					1	20 A	Rece	ptacle	
45	Receptacle	20 A	1			360 VA	180 VA			2	20 A	Rece	otacle	
47	Receptacle	20 A	1					360 VA	0 VA				<b>F</b>	
49	Receptacle	20 A	2	180 VA										
51						0 VA								
53														
55														
50								-						
61														
63														
65														
67														
69														
71														
73														
75														
77														
79														
81														
		Tot	al Load:	1077	'6 VA	734	8 VA	891	6 VA					
		Tota	I Amps:	92	2 A	61	IA	76	6 A					
egend	:													
Load Classification		Con	Connected Load			nand Fa	ctor	Estim	nated De	mand		Panel	Totals	
Lighting 9240 VA		A	100.00%				9240 VA							
ther			1080 VA	4		100.00% 1080 V/			1080 VA	Total Conn. Load: 27040 VA				
ower		2500 VA				100.00%			2500 VA			Total Est. Demand:	24930 VA	
lecepta	acle		14220 V	A		85.16%		12110 VA		4		Total Conn. Current:	75 A	
											To	al Est. Demand Current:	69 A	
					1			1			1		1	

	Branch Panel: EB													
Location: Supply From: DP Mounting: Surface Enclosure: Type 1					Volts: 208Y/120 Phases: 3 Wires: 4							A.I.C. Rating: 22K Mains Type: MLO Mains Rating: 225 A MCB Rating:		
Notes:														
СКТ	Circuit Description	Trip	Polos		٨		B		C	Polos	Trip	Circuit Description		
			r Oles		<b>A</b> 500 VA					1	20 A	Generator Battery Charger		
3							500 VA			1	20 A	Generator Heater		
5									1272					
7	CP-1	20 A	1	864 VA	1272					3	20 A	SP-2		
9	FACP	20 A	1			500 VA	1272			_				
11	Lighting	20 A	1					350 V	A 1350	. 1	20 A	Lighting		
13	Lighting	20 A	1	1050										
15	Receptacle	20 A	1			180 VA	<b>\</b>							
17	Receptacle	20 A	1					180 V/	۹					
19	Receptacle	20 A	1	180 VA	180 VA					1	20 A	Receptacle		
21	Power	20 A	1			500 VA	500 VA			1	20 A	Power		
23								1272						
25	Power	20 A	3	1272										
27						1272								
29													;	
31													;	
33													;	
35													;	
37										_			;	
39														
41			L	504		170								
		Tot	al Load:	531	8 VA	4/2	24 VA	442	24 VA					
	J.	l Ota	I Amps:	4:	A	4	0 A	3	87 A					
Legend														
Load C	lassification	Cor	nected	Load	Dei	mand Fa	actor	Esti	mated D	emand		Panel Totals		
Lighting	]		2750 VA	۱ <u> </u>		100.00%	/o		2750 V/	4				
Power			10996 VA		٠		100.00%		10996 VA			Total Conn. Load: 14466 VA		
Recept	acle		720 VA			100.00%			720 VA			Total Est. Demand: 14466 VA		
												Total Conn. Current: 40 A		
											То	tal Est. Demand Current: 40 A		

Notes:

![](_page_80_Picture_9.jpeg)

# Table of Contents

07 6400	Aluminum Dormers
07 7233	Roof Hatches
07 8100	Applied Fireproofing
07 8123	Intumescent Mastic Fireproofing
07 8400	Firestopping
07 9200	Joint Sealers

# **Division 08 – Openings**

08 0386	Vault Door Restoration
08 1113	Hollow Metal Doors and Frames
08 1433	Stile and Rail Wood Doors
08 3100	Access Doors and Panels
08 5200	Wood Windows
08 7100	Door Hardware
08 7113	Automatic Door Operators
08 8000	Glazing
08 9100	Louvers

# Division 09 – Finishes

09 2200	Metal Support Assemblies
09 2300	Gypsum Plastering
09 2313	Acoustical Plastering
09 2900	Gypsum Board
09 3000	Tiling
09 6400	Wood Flooring
09 6516	Resilient Sheet Flooring
09 6723	Resinous Flooring
09 9100	Painting

# **Division 10 – Specialties**

10 1200	Bulletin Boards
10 1400	Signage
10 1460	Accessible Parking Signs
10 2116	Plastic Toilet Compartments
10 2813	Toilet Accessories
10 4413	Fire Extinguishers
10 7429	Historic Cupola Clock Tower

# **Division 11 – Equipment**

11 5213 Projection Screens

```
Fannin County Courthouse
Phase II Interior & Exterior Restoration
```

![](_page_81_Picture_11.jpeg)

![](_page_82_Picture_0.jpeg)

# PART 1 GENERAL

### 1.1 SUMMARY

- A. Section Includes:
  - 1. Shop fabricated metal components.
  - 2. Ladders.
  - 3. Guardrails and handrails.
  - 4. Replication of original corrugated metal ceilings.
  - 5. Recreation of vault doors.
  - 6. Recreation of metal window shutters.
  - 7. Outriggers at gutters.
  - 8. Cast Iron Stairs
- B. Related Sections:
  - 1. Division 01: Administrative, procedural, and temporary work requirements.

# 1.2 REFERENCES

- A. American Welding Society (AWS) D1.1 Structural Welding Code Steel.
- B. ASTM International (ASTM):
  - 1. A36/A36M Standard Specification for Carbon Structural Steel.
  - 2. A47/A47M Standard Specification for Ferritic Malleable Iron Castings.
  - 3. A48/A48M Standard Specification for Gray Iron Castings.
  - 4. A108 Standard Specification for Steel Bars, Carbon, Cold-Finished, Standard Quality.
  - 5. A123/A123M Standard Specification for Zinc (Hot-Galvanized) Coatings on Iron and Steel Products.
  - 6. A283 Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates, Shapes and Bars.
  - 7. A307 Standard Specification for Carbon Steel Externally Threaded Standard Fasteners.
  - 8. A500 Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
  - 9. A501 Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
  - 10. A780 Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.
  - 11. A1008/A1008M Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-
  - Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability. 12. A1011/A1011M – Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural,
  - High-Strength, Low-Alloy and High-Strength Low-Alloy with Improved Formability.
  - 13. E985 Standard Specification for Permanent Metal Railing Systems and Rails for Buildings.
- C. Society for Protective Coatings (SSPC) Painting Manual.
- D. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA).

# 1.3 SYSTEM DESCRIPTION

- A. Minimum design loads:
  - 1. Ladders:
    - a. Uniform load of 100 PSF.
    - b. Concentrated load of 300 pounds.
    - c. Maximum deflection under loading: L/240.
    - 2. Guard Rails and Handrails:
      - a. 50 pounds per linear foot applied in any direction at top, transferred via attachments and supports to building structure.
      - b. Concentrated 200 pound load applied in any direction at any point along top, transferred via attachments and supports to building structure.
      - c. Maximum deflection under loading: L/120.
    - 3. Gutter Supports:
      - a. Sufficient strength to remain intact when full of water.
      - b. Achieve minimum load requirements per SMACNA.

- 4. Concentrated and uniform loads do not need to be applied simultaneously.
- 5. Perform design under direct supervision of Professional Structural Engineer licensed in State in which project is located, with minimum 2 years experience in work of this Section.
- B. Fabricate guard rails and handrails in accordance with ASTM E985

# 1.4 SUBMITTALS

- A. Submittals for Review:
  - 1. Shop Drawings: Show dimensions, metal thicknesses, finishes, joints, attachments, and relationship of work to adjacent construction.
- B. Samples: 4 x 4 finish samples from manufacturer.
- C. Quality Control Submittals:
   1. Certificate of Compliance from Professional Structural Engineer performing system design.

# PART 2 PRODUCTS

- 2.1 MATERIALS STEEL
  - A. Shapes: ASTM A36/A36M.
  - B. Plate: ASTM A283.
  - C. Sheet: ASTM A1008/A1008M.
  - D. Galvanized Sheet: ASTM A653/A653M, Structural Quality, G90 coating class, 24 gage core steel unless noted otherwise.
  - E. Pipe: ASTM A501.
  - F. Tube: ASTM A500.
  - G. Bars: ASTM A108.
- 2.2 MATERIALS IRON
  - A. Cast Iron: ASTM A48/A48M, Class 30, or ASTM A47/A47M.

# 2.3 ACCESSORIES

- A. Exposed Screws: Same material as metal being fastened; Phillips flat head, countersunk, unless noted otherwise.
- B. Bolts: ASTM A307, hexagonal head type.
- C. Primer Paint: SSPC Paint 15, Type 1, red oxide.
- D. Anchoring Cement: Non-shrink cementitious type.

#### 2.4 FABRICATION

- A. Fit and shop assemble items in largest practical sections, for delivery to site.
- B. Fabricate items with joints tightly fitted and secured.
- C. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- D. Exposed Mechanical Fastenings: Flush countersunk screws or bolts, unobtrusively located, consistent with design of component except where specifically noted otherwise.

- E. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.
- F. Conceal fastenings where possible.
- G. Welding to conform to AWS D1.1.
  - 1. Use welds for permanent connections where possible. Grind exposed welds smooth.
  - 2. Tack welds prohibited on exposed surfaces.

# 2.5 FINISHES

- A. Exterior Ferrous Metal: Galvanized; ASTM A123/A123M, to 2.0 ounces per square foot.
- B. Interior Ferrous Metal:
  - 1. Shop painted except steel to be encased in concrete and surfaces to be welded.
  - 2. Surface preparation: SSPC SP2 Hand Tool Cleaning or SP3 Power Tool Cleaning.
  - 3. Application: One coat; follow coating manufacturer's instructions.
  - 4. Minimum dry film thickness: 2.0 mils.

# PART 3 EXECUTION

# 3.1 INSTALLATION

- A. Install items in accordance with approved Shop Drawings.
- B. Install components plumb, level, and rigid.
- C. Welding: AWS D1.1. Continuously weld connections. Grind and fill exposed welds; finish smooth and flush.
- D. Make bends uniform and free from buckles and other defects.
- E. Cut intersections square to within 2 degrees and to length within 1/8 inch. Remove burrs from cut ends. Miter and cope intersections within 2 degrees, fit to within 1/8 inch.
- F. Install sleeved components with anchoring cement.
- G. Prevent contact of exterior aluminum and dissimilar metals by use of zinc rich paint, bituminous coating, or non-absorptive gaskets.

#### 3.2 ADJUSTING

- A. Clean and touch up damaged primer paint with same product as applied in shop.
- B. Clean and touch up galvanized coatings at welded and abraded surfaces in accordance with ASTM A780, Annex A2.

# 3.3 SCHEDULE

- A. This Schedule includes principal items only; refer to Drawings for additional items not listed.
- B. Ladders:
  - 1. Side rails: Continuous steel flat bars, minimum  $\frac{1}{2} \times 2-1/2$  inches, eased edges, spaced 18 inches apart.
  - 2. Rungs: Round steel bars, 3/4 inch diameter, spaced 12 inches on center. Fit rungs in centerline of side rails and plug weld on outer rail face.
  - 3. Support ladders at top, bottom, and at intermediate points spaced maximum 5'-0" on center with steel brackets, welded or bolted to supports.
- C. Guardrails and Handrails:
  - 1. Fabricate from steel stock of sizes and types indicated.
  - 2. Make bends uniform and free from buckles and other defects.
  - 3. Cut intersections square to within 2 degrees and to length within 1/8 inch. Remove burrs from cut ends.
  - 4. Miter and cope intersections within 2 degrees, fit to within 1/8 inch.
  - 5. Continuously weld connections.

- 6. Where length exceeds that suitable for shipping and handling, fabricate in sections with concealed internal sleeves forming slip joints. Extend sleeves minimum 2 inches on both sides of joint; field weld and grind smooth.
- D. Corrugated Metal Ceilings: Fabricate to corrugation patterns to match historic.
- E. Vault Doors:
  - 1. Fabricate to sizes and profiles indicated from steel shapes and plates.
  - 2. Cut intersections square.
  - 3. Continuously weld connections.
- F. Metal Window Shutters:
  - 1. Fabricate to sizes and profiles indicated from steel shapes and plates.
  - 2. Cut intersections square.
  - 3. Continuously weld connections.

END OF SECTION

![](_page_86_Picture_0.jpeg)

# PART 1 GENERAL

# 1.1 SUMMARY

- A. Section Includes:
  - 1. Metal shingles.
  - 2. Metal flashings and accessories.
  - 3. Underlayment.
- B. Related Sections:
  - 1. Division 01: Administrative, procedural, and temporary work requirements.

# 1.2 REFERENCES

- A. ASTM International (ASTM):
  - 1. A653/A653M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process.
  - 2. D412 Standard Test Method for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers Tension.
  - 3. D1970 Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection.
- B. National Roofing Contractors Association (NRCA) Steep Roofing Manual.

# 1.3 SUBMITTALS

- A. Submittals for Review:
  - 1. Product Data: Technical data and installation instructions published by manufacturer of shingles.
  - 2. Samples: Full size shingle samples illustrating configuration, color, and surface finish.
- B. Quality Control Submittals:
  - 1. Qualifications: Installer qualifications per Section 01 4001.

# 1.4 QUALITY ASSURANCE

- A. Installer Qualifications:
  - 1. Minimum 5 years experience in work of this Section.
  - 2. Successful completion of at least 3 projects of similar scope and complexity within past 5 years.
- B. Perform Work in accordance with NRCAManual.
- C. Mockup:
  - 1. Size: Minimum 20 square feet.
  - 2. Include: Underlayment, shingles, and flashings.
  - 3. Locate where directed.
  - 4. Mockup to be approved by Architect and THC representative prior to commencing the Work.

# 1.5 PROJECT CONDITIONS

- A. Do not install underlayment at ambient or surface temperatures less than 40 degrees F or on wet or frozen substrate.
- B. Do not install shingles on wet or frozen substrate.

Fannin County Courthouse Phase II Interior & Exterior Restoration

#### 1.6 MAINTENANCE

A. Extra Materials: 2 percent of extra shingles.

# PART 2 PRODUCTS

- 2.1 MANUFACTURERS
  - A. Acceptable Manufacturers:
    - 1. Heather and Little (<u>www.heatherandlittle.com</u>) or approved substitute.
  - B. Substitutions: Under provisions of Division 01.

# 2.2 MATERIALS

- A. Galvanized Steel Sheet:
  - 1. ASTM A653/A653M, Structural Quality; 24 gage core steel with minimum 1.25 ounces/square foot galvanized coating.
  - 2. Prefinished with fluoropolymer coating containing minimum 70 percent PVDF resins, Colonial Red or approved substitute.
- B. Metal Shingle Types:
  - 1. Type 1
    - a. Locations: Main roof
    - b. Size: 6 inch x 12 inch rectangular pattern to match original appearance.
    - c. Color: Colonial Red.
  - 2. Type 2:
    - a. Locations: Tower roof
    - b. Size: No. 4 Small Arrowhead shingle by Heather and Little.
    - c. Color: Colonial Red.
  - 3. Type 3:
    - a. Locations: Dormers, tower base, tower face
    - b. Size: 12 inch x 18 inch rectangular pattern to match original appearance.
    - c. Color: Colonial Red.

#### 2.3 ACCESSORIES

- A. Underlayment (valleys, eaves, gutters):
  - 1. Description: ASTM D1970; minimum 30 mil thick polymer modified asphalt laminated to slipresistant polyethylene film, self-adhering with release paper facing, specifically formulated for extended high in-service temperatures.
  - 2. Elongation: Minimum 250 percent, tested to ASTM D412.
  - 3. Tensile strength: Minim um 250 PSI, tested to ASTM D412.
  - 4. Source: Grace Ultra by Grace Construction Products or approved substitute.
- B. Underlayment:
  - 1. Description: vapor permeable underlayment
  - 2. Source: Tyvek Protec 200 or approved substitute.
- C. Fasteners: Type recommended by NRCA, hot dip galvanized steel, length to penetrate minimum 3/4 inch into sheathing.
- D. Asphalt Plastic Cement: ASTM D2822, Type II, non-running, heavy body material composed of asphalt and other mineral ingredients.

#### 2.4 FABRICATION

A. Metal Shingles:

Fannin County Courthouse Phase II Interior & Exterior Restoration

- 1. Profile: Stam ped to size and profile to match original shingles.
- 2. Edges: Interlocking.
- 3. Form shingles true to shape, accurate in size, and free from distortion and defects.
- B. Metal Flashings and Trim:
  - 1. Fabricate from same material as shingles.
  - 2. Fabricate cleats and starter strips of same material as sheet metal.
  - 3. Hem exposed edges on underside 1/2 inch; miter and seam corners.
  - 4. Form sections true to shape, accurate in size, square, and free from distortion and defects.

# PART 3 EXECUTION

# 3.1 INSTALLATION OF UNDERLAYMENT

- A. Starting at low edge, apply underlayment horizontally on roof. Weatherlap each sheet 4 inches over preceding sheet. Lap ends 6 inches minimum.
- B. Press to full bond with substrate without voids, wrinkles, bridging, or fishmouths. Seal ends and edges.
- C. Lap underlayment minimum 12 inches over hips and ridges from both sides. Apply 36 inch wide strip centered lengthwise over ridge.
- D. Extend minimum 4 inches up abutting vertical surfaces.

# 3.2 INSTALLATION OF FLASHINGS

- A. Weather lap ends 2 inches minim um and seal with plastic cement.
- B. Apply one layer of 24 inch wide galvanized metal centered over valleys. Weather lap joints 2 inches minimum.
- C. Nail in place at 8 inches on center maximum.
- D. Apply plastic cement to cover nail heads and at edge of flashings for entire length of metal.

#### 3.3 INSTALLATION OF SHINGLES

- A. Remove foreign matter from interlocking edges and between shingles.
- B. Cut shingles at perimeter and around penetrations with maxim um 1/8 inch gaps.
- C. Nail shingles with two nails each. Do not drive nails so far as to create strain on shingles. Locate nails under subsequent shingles or cover heads with metal flashing.
- D. Miter shingles at centerline of valley metal to ensure straight border.
- E. Install flashings and trim to provide visual continuity and prevent water infiltration.

# END OF SECTION

![](_page_89_Picture_0.jpeg)

# PART 1 GENERAL

# 1.1 SUMMARY

- A. Section Includes:
  - 1. Sheathing board.
  - 2. Tapered roof insulation.
  - 3. Fully adhered single ply membrane roofing.
  - 4. Base flashings.
  - 5. Walkway pads.
- B. Related Sections:
  - 1. Division 01: Administrative, procedural, and temporary work requirements.
  - 2. Section 06 1000 Rough Carpentry.
  - 3. Section 07 6200 Sheet Metal Flashing and Trim.

# 1.2 REFERENCES

- A. American Society of Civil Engineers (ASCE) 7 Minimum Design Loads for Buildings and Other Structures.
- B. ASTM International (ASTM):
  - 1. C728 Standard Specification for Perlite Thermal Insulation Board.
  - 2. C1177/C1177M Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
  - 3. D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
  - 4. D6878 Standard Specification for Thermoplastic Polyolefin Based Sheet Roofing.
  - 5. E108 Standard Test Methods for Fire Tests of Roof Coverings.
- C. Factory Mutual Insurance Co. (FM) 4470 Approval Standard for Class 1 Roof Covers.
- D. National Roofing Contractors Association (NRCA) Roofing and Waterproofing Manual.

#### 1.3 SYSTEM DESCRIPTION

A. Design Requirements: Design roofing system to resist minimum wind loads in accordance with ASCE 7.

# 1.4 SUBMITTALS

- A. Submittals for Review:
  - 1. Shop Drawings: Indicate:
    - a. Setting plan for sheathing board and roof insulation.
    - b. Roof slopes.
    - c. Layout of seams.
    - d. Base flashing, termination, and special details.
    - e. Fastener types and locations.
    - f. Walkway pads.
  - 2. Product Data: Manufacturer's product specifications, installation instructions, and general recommendations for each product.
  - 3. Warranty: Sample warranty form.
- B. Quality Control Submittals:
  - 1. Certificates of Compliance: Certification from an independent testing laboratory that roofing system meets fire hazard and windstorm classification requirements.

#### 1.5 QUALITY ASSURANCE

- A. Installer Qualifications:
  - 1. Minimum 3 years documented experience in work of this Section.
  - 2. Licensed or certified by roofing materials manufacturer.
- B. Roofing System:
  - 1. FM 1-90 Windstorm Resistance and MH Hail Resistance, tested to FM 4470.
  - 2. Class A Fire Hazard Classification, tested to ASTM E108.
- C. Pre-Installation Conference:
  - 1. Convene at site 2 weeks prior to beginning work of this Section.
  - 2. Attendance: Architect, Contractor, roofing applicator, roofing manufacturer's representative, and related trades.
  - 3. Review and discuss: Contract Documents, roofing system manufacturer's literature, project conditions, scheduling, and other matters affecting application.
  - 4. Tour representative areas of roofing substrates; discuss substrate construction, related work, work conditions, and materials compatibility.

#### 1.6 DELIVERY, STORAGE AND HANDLING

- A. Store materials, other than membrane, in protected, dry area, between 60 and 80 degrees F until used; provide proper ventilation.
- B. Protect sheet goods from damage and wetting.

#### 1.7 PROJECT CONDITIONS

- A. Do not apply roofing to damp or frozen substrate.
- B. Do not apply roofing during inclement weather or at temperatures below 40 degrees F, or above 100 degrees F or if freezing weather is anticipated within 24 hours after application. Do not use frozen materials.

#### **1.8 WARRANTIES**

- A. Furnish manufacturer's 20 year warranty providing coverage against water leakage through roofing system.
  - 1. Make repairs to roofing system required due to defects in materials or workmanship resulting in water leakage into or through roofing system.
  - 2. Include cost of labor and materials necessary to make required repairs.
  - 3. Cover all roofing system components including roofing membrane, built-up and meta flashings, high wall waterproof flashings, roof insulation, expansion joint covers, and preflashed accessories.
  - 4. Not limited to specific dollar amount.
  - 5. Transferable to subsequent building owners during warranty period.
  - 6. Include coverage for wind speeds up to 90 MPH. Any wind speed coverage exceeding 55 mph or projects with code requirements must be reviewed by approved manufacturer advisor.

#### PART 2 PRODUCTS

- 2.1 MANUFACTURERS
  - A. Acceptable Manufacturers:
    - 1. Carlisle Syntec, Inc. (www.carlisle-syntec.com)
    - 2. Firestone Building Products Co. (www.firestonebpco.com)
    - 3. GAF Materials Corp. (www.gaf.com)
    - 4. Genflex Roofing Systems. (www.genflex.com)
    - 5. Johns Manville. (<u>www.jm.com</u>)

- 6. Versico, Inc. (www.versico.com)
- B. Substitutions: Under provisions of Division 01.

# 2.2 MATERIALS

- A. Rigid Roof Insulation:
  - 1. Type: ASTM C1289, Type V, Grade 2, rigid polyisocyanurate.
  - 2. Edges: Square.
  - 3. Thermal resistance: Minimum R value of 30.0.
- B. Sheathing Board:
  - 1. Type: ASTM C1177/C1177M, square cut ends and edges.
  - 2. Surfacing: Fiberglass mat with non-asphaltic coating.
  - 3. Mold resistance: 10, tested to ASTM D3273.

  - Size: 48 x 48 inches x 1/2 inch thick.
     Source: DensDeck Prime Roof Board by GP Gypsum Corporation (www.gp.com) or approved substitute.
- C. Roof Membrane:
  - 1. Type: ASTM D6878, thermoplastic polyolefin (TPO), ultraviolet resistant, reinforced.
  - 2. Size: Maximum sheet size permitted by application and job conditions.
  - 3. Thickness: 80 mils. reinforced
  - 4. Color: Ultra White.
- D. Flashing Sheet: Manufacturer's standard flashing sheet, color to match membrane.

# 2.3 ACCESSORIES

- A. Accessories: By manufacturer of roofing system, including adhesives, tapes, solvents, sealants, water cutoff mastic, and prefabricated pipe flashings.
- B. Walkway Pads: Preformed resilient pads, recommended by roofing manufacturer, minimum 1/2 inch thick.
- C. Fasteners: Hot-dip galvanized or fluoropolymer coated steel, approved by roofing system manufacturer, type and length suited to project conditions.
- D. Sheathing Board and Insulation Fasteners: Hot-dip galvanized or fluoropolymer coated steel, approved by FM and roofing system manufacturer, type and length suited to project conditions, with galvanized steel plates.
- E. Nailers and Curbs:
  - 1. Preservative treated wood, specified in Section 06 1000.
  - 2. Nailers: 3-1/2 inch face dimension x insulation thickness.
- F. Metal Flashings: Specified in Section 07 6200.

# **PART 3 EXECUTION**

#### 3.1 PREPARATION

- A. Remove projections that could puncture membrane from substrate.
- B. Clean substrate of loose and foreign material, oil, and grease.
- C. Complete roof penetrations and preparation for drains, flashings, and other penetrations prior to beginning roofing.

D. Protect adjacent and underlying surfaces.

# 3.2 INSTALLATION - GENERAL

A. Install roofing system in accordance with roofing system manufacturer's instructions, NRCA Manual, and approved Shop Drawings.

# 3.3 INSTALLATION OF TAPERED INSULATION

- A. Apply panels with edges perpendicular to deck flutes. Locate ends over solid bearing.
- B. Mechanically fasten to substrate in FM fastening pattern.
- C. Fit panels to other panels and at perimeter and around penetrations with maximum 3/8 inch voids.

#### 3.4 INSTALLATION OF SHEATHING BOARD

- A. Apply panels with edges offset from those in tapered insulation.
- B. Mechanically fasten to substrate in FM fastening pattern.
- C. Fit panels to other panels and at perimeter and around penetrations with maximum 3/8 inch voids.

# 3.5 INSTALLATION OF ROOF MEMBRANE

- A. Position sheets without stretching; minimize wrinkles. Allow membrane to relax before proceeding.
- B. Provide minimum 5-1/2 inch lap at joints between adjacent sheets.
- C. Splice sheets by solvent welding or heat welding method.
- D. Bond membrane to substrate with full adhesive bed.
- E. Fasten membrane to perimeter nailers with fasteners spaced 6 inches on center maximum.
- F. Daily Seal:
  - 1. Ensure that water does not flow beneath completed sections of roof.
  - 2. Temporarily seal loose edge of membrane with night seal when weather is threatening.
  - 3. When work is resumed, pull sheet free before continuing installation.

#### 3.6 INSTALLATION OF FLASHINGS

- A. Construct in accordance with roofing system manufacturer's standard details.
- B. Juncture of Horizontal and Vertical Surfaces:
  - 1. Use longest practical length flashing to minimize joints.
  - 2. Complete splice between flashing and main roof sheet before bonding flashing to vertical
  - surface. Extend splice 3 inches beyond fasteners that attach membrane to horizontal surface.3. Adhere flashing to substrate with full bed of adhesive.
  - 4. Fasten top of flashing at 12 inches on center maximum, under metal flashing.
- C. Penetrations through Membrane:
  - 1. Flash pipe with premolded pipe flashings wherever possible.
  - 2. Where molded pipe flashings cannot be installed, use field fabricated pipe seals.
  - 3. Seal clusters of pipes and unusually shaped penetrations with minimum 2 inch high flashing containing pourable sealer.
- D. Roof Drains:
  - 1. Taper insulation around drain to provide smooth transition from roof surface to drain clamping ring.
  - 2. Seal between membrane and drain base with water cutoff mastic.

# 3.7 INSTALLATION OF WALKWAY PADS

- A. Clean underside of pad; set pads in full adhesive bed.
- B. Leave 2 inch space between pieces.

END OF SECTION

![](_page_94_Picture_0.jpeg)

# PART 1 GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
   1. Prefabricated roof hatches with integral curbs, safety rail and operating hardware.
- B. Related Sections:
  - 1. Division 01: Administrative, procedural, and temporary work requirements.

#### 1.2 REFERENCES

A. ASTM International (ASTM) A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process.

#### 1.3 SUBMITTALS

- A. Submittals for Review:
  - 1. Shop Drawings: Indicate locations, dimensions, materials, finishes, attachment, and relationship to adjacent construction.
  - 2. Product Data: Manufacturer's literature including description of materials, finishes, operation, and installation instructions.
  - 3. Warranty: Sample warranty form.

#### 1.4 QUALITY ASSURANCE

A. Roof Hatches: Support minimum 40 PSF live load.

#### 1.5 WARRANTIES

A. Furnish manufacturer's 5 year warranty providing coverage against defective materials and workmanship.

#### PART 2 PRODUCTS

- 2.1 MANUFACTURERS
  - A. Acceptable Manufacturers:
    - 1. Babcock-Davis Hatchways, Inc. (www.babcockdavis.com)
    - 2. Bilco Co. (www.bilco.com)
    - 3. Commercial Products Group. (www.commercialproductsgroup.com)
    - 4. Precision Ladders, LLC. (www.precisionladders.com)
  - B. Substitutions: Under provisions of Division 01.

# 2.2 MATERIALS

- A. Galvanized Steel Sheet: ASTM A653/A653M, Structural Quality, G90 coating class.
- 2.3 MANUFACTURED UNITS
  - A. Roof Hatch:
    - 1. Type: Single leaf, ladder access.
    - 2. Nominal opening size: 30 inches wide x 36 inches long.
    - 3. Safety railing system: Bil-Guard 2.0 by Bilco or approved substitute.

# END OF SECTION

![](_page_95_Picture_0.jpeg)

# PART 1 GENERAL

# 1.1 SUMMARY

- A. Section Includes:
  - 1. Shop fabricated wood windows, with fixed and operable sash.
  - 2. Shop glazing.
  - 3. Operating hardware.
- B. Related Sections:
  - 1. Division 01: Administrative, procedural, and temporary work requirements.
  - 2. Section 08 8000 Glazing.

# 1.2 REFERENCES

- A. ASTM International (ASTM) B69 Standard Specification for Rolled Zinc.
- B. Architectural Woodwork Institute (AWI) Architectural Woodwork Quality Standards.

# 1.3 SYSTEM DESCRIPTION

- A. Design Requirements; design windows doors to withstand:
  - 1. Design wind pressure in accordance with Building Code, with maximum allowable deflection of L/180.
  - 2. Movement caused by an ambient temperature range of 120 degrees F and a surface temperature range of 160 degrees F.

# 1.4 SUBMITTALS

- A. Submittals for Review:
  - 1. Shop Drawings: Include locations, dimensions, profiles, relationship to adjacent construction, and attachments.
  - 2. Samples: Window corner, minim um 12 x 12 inches, showing corner construction and cross section.
- B. Quality Control Submittals:
  - 1. Qualification Statement: Fabricator qualifications per Section 01 4001.

# 1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications:
  - 1. Minimum 5 years experience in work of this Section.
  - 2. Successful completion of at least 3 projects of similar scope and complexity within past 5 years.
- B. Conform to applicable accessibility code for locating hardware.
- C. Mockup:
  - 1. Size: One full sized window unit.
  - 2. Locate where directed.
  - 3. Mockups to be approved by Architect and THC representative prior to commencing with the Work.

# 1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver units factory assembled, with sash installed in frame.

# PART 2 PRODUCTS

#### 2.1 MANUFACTURERS

- A. Acceptable Manufacturers:
   1. Re-View. (www.re-view.biz)
- B. Substitutions: Under provisions of Division 01.

# 2.2 MATERIALS

- A. Wood:
  - 1. Species and cut: Sapele, plain sawn, of quality suitable for opaque finish on exterior face and transparent finish on interior face.
  - 2. Grade: Graded in accordance with AW I Section 100, Premium Grade.
  - 3. Maximum moisture content: 6 percent.
- B. Glass and Glazing Accessories: Specified in Section 08 8000.
- C. Hardware:
  - 1. Sash lift:
    - a. Source: # R-09AD-FP1-605NL by House of Antique Hardware (<u>www.houseofantiquehardware.com</u>) or approved substitute.
    - b. Finish: Unlacquered brass.
    - 2. Sash lock:
      - a. Source: # R-09BM-8710-PB by House of Antique Hardware (<u>www.houseofantiquehardware.com</u>) or approved substitute.
      - b. Finish: Unlacquered brass.
    - 3. Sash pulley:
      - a. Source: # R-09SR-PBB-225-UL by House of Antique Hardware (www.houseofantiquehardware.com) or approved substitute.
      - b. Finish: Unlacquered brass.
- D. Sash Cord: Cotton cord with nylon core at wood windows. Chain at metal clad windows.
- E. Sash Weights: As required to create proper counterbalance for each operable sash.
- F. Weatherstripping: Bronze, spring folded for flexible fit.

END OF SECTION

![](_page_97_Picture_0.jpeg)

# PART 1 GENERAL

# 1.1 SUMMARY

- A. Section Includes:
  - 1. Electric vertical wheelchair lifts.
  - 2. Operating equipment and accessories.
- B. Related Sections:
  - 1. Division 01: Administrative, procedural, and temporary work requirements.

# 1.2 REFERENCES

- A. ASME International (ASME) A18.1 Safety Standard for Platform Lifts and Stairway Chairlifts.
- B. American Welding Society (AWS) D1.1 Structural Welding Code Steel.

# 1.3 SUBMITTALS

- A. Submittals for Review:
  - 1. Shop Drawings: Indicate drive mechanism, lift construction, dimensions, control functions and operational description.
  - 2. Product Data: Submit data on signal and operating fixtures, lift design, layout, components, and schematic of wiring diagrams.
  - 3. Samples: Submit samples, 3 x 3 inches in size illustrating floor and prefinished metal components.
  - 4. Submittals to be approved by Architect and THC Representative prior to commencing with the Work.
- B. Quality Control Submittals:
  - 1. Qualification Statement: Installer qualifications per Section 01 4001.
- C. Closeout Submittals:
  - 1. Operation and Maintenance Data.

# 1.4 QUALITY ASSURANCE

- A. Installer Qualifications:
  - 1. Minimum 5 years experience in work of this Section.
  - 2. Successful completion of at least 3 projects of similar scope and complexity within past 5 years.
- B. Regulatory Requirements: Comply with ASME A18.1.
- C. Perform Work in accordance with ASME A18.1 and AWS D1.1.
- D. Conform to applicable accessibility code for dimensions, locations, operation, and controls.
- E. Warranty: Provide one year warranty.

# 1.5 MAINTENANCE

A. Maintenance Service: Furnish service and maintenance of wheelchair lifts for period of one year from Date of Substantial Completion.

# PART 2 PRODUCTS

# 2.1 MANUFACTURERS

- A. Contract Documents are based on Lift-U Accessor I and II by Hogan Mfg., Inc. (www.hoganmfg.com)
- B. Substitutions: Under provisions of Division 01.

#### 2.2 COMPONENTS

- A. Wheelchair Lift:
  - 1. Platform size: Platform size shall not exceed 25 SF.
  - 2. Rated net capacity: 1050 pounds.
  - 3. Rated speed: 10 feet per minute minimum.
  - 4. Operation: Electric motor driving four mechanically synchronized screw columns.
  - 5. Options: Include powered landing roll up barrier, automatic door operator and operable step / ramp.
- B. Controls:
  - 1. Controls: Push button controls located at top and bottom landings, enabling lift to be called or sent to landing.
  - 2. Electric strike latches and electric spring bolts for gates.
  - 3. Emergency stop switch.
  - 4. Emergency alarm.
  - 5. Upper and lower limit switches.
  - 6. Battery backup.
  - 7. Emergency lowering.
- C. Motors, Controllers, Controls, Buttons, Wiring, Devices, and Indicators: As required by NFPA 70 and ASME A 18.1.
- D. Electrical Characteristics:
  - Electrical characteristics:
    - a. 115 VAC, 15 amp, three wire, single phase, 60 Hz.
    - b. 24 volt control circuit.

# 2.3 FINISHES

A. Steel:

1

- 1. Surface preparation: Clean and degrease metal surface.
- 2. Primer: Sprayed and baked.
- 3. Finish: Electrostatically applied powder coat; color to be selected from manufacturer's full color range.

# PART 3 EXECUTION

- 3.1 INSTALLATION
  - A. Install in accordance with ASME A18.1.
  - B. Install system components and connect to building utilities and electrical service.
- 3.2 FIELD QUALITY CONTROL
  - A. Perform tests required by ASME A18.1.
  - B. Submit test and approval certificates issued by authorities having jurisdiction.
- 3.3 ADJUSTING
  - A. Adjust automatic floor leveling feature at each stop to stop platform within 1/4 inch of finished floor.

END OF SECTION

![](_page_99_Picture_0.jpeg)

PART1-GENERAL

#### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

A. This Section includes split-system air-conditioning consisting of separate evaporator-fan and compressorcondenser components.

#### 1.3 SUBMITTALS

- A. Product Data: Include rated capacities, furnished specialties, and accessories for each type of product indicated. Include performance data in terms of capacities, outlet velocities, static pressures, sound power characteristics, motor requirements, and electrical characteristics. Refrigerant piping type, pressure rating, and sizes.
- B. Shop Drawings: Refrigerant routing, Diagram power, signal, and control wiring.
- C. Schematics: Refrigerant piping diagrams showing condenser unit, evaporator fan units, distribution header, all refrigerant piping sizes, and all refrigerant piping accessories.
- D. Field quality-control test reports.
- E. Operation and Maintenance Data: For split-system air-conditioning units to include in emergency, operation, and maintenance manuals.
- F. Warranty: Special warranty specified in this Section.

#### 1.4 QUALITY ASSURANCE

- A. Product Options: Drawings indicate size, profiles, and dimensional requirements of split-system units and are based on the specific system indicated. Refer to Division 01 Section "Product Requirements."
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- C. Energy-Efficiency Ratio: Equal to or greater than prescribed by ASHRAE 90.1, "Energy Efficient Design of New Buildings except Low-Rise Residential Buildings."
- D. Coefficient of Performance: Equal to or greater than prescribed by ASHRAE 90.1, "Energy Efficient Design of New Buildings except Low-Rise Residential Buildings."

- E. Units shall be designed to operate with HCFC-free refrigerants.
- F. The evaporator fans and condenser unit shall be manufacturer by the same manufacturer.

# 1.5 COORDINATION

- A. Coordinate size and location of concrete bases for units. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork are specified in Division 03 Section "Cast-in-Place Concrete."
- B. Coordinate size, location, and connection details with roof curbs, equipment supports, and roof penetrations specified in Division 07 Section "Roof Accessories."

#### 1.6 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of split-system air-conditioning units that fail in materials or workmanship within specified warranty period.
  - 1. Warranty Period: Five years from date of Substantial Completion.

#### 1.7 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Filters: One set of filters for each unit.
  - 2. Fan Belts: One set of belts for each unit.

#### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Carrier Air Conditioning; Div. of Carrier Corporation.
  - 2. Johnson Controls.
  - 3. Lennox Industries Inc.
  - 4. Mitsubishi.
  - 5. Toshiba.
  - 6. Trane Company (The); Unitary Products Group.
  - 7. York International Corp.

#### 2.2 WALL-MOUNTING, EVAPORATOR-FAN COMPONENTS

A. Cabinet: Enameled steel with removable panels on front and ends in color selected by Architect, and discharge drain pans with drain connection.

- B. Refrigerant Coil: Copper tube, with mechanically bonded aluminum fins, complying with ARI 210/240, and with thermal-expansion valve.
- C. Electric Coil: Helical, nickel-chrome, resistance-wire heating elements with refractory ceramic support bushings; automatic-reset thermal cutout; built-in magnetic contactors; manual-reset thermal cutout; airflow proving device; and one-time fuses in terminal box for overcurrent protection.
- D. Fan: Direct drive, centrifugal fan.
- E. Fan Motors: Comply with requirements in Division 23 Section "Common Motor Requirements for HVAC Equipment."
- F. Filters: Permanent, cleanable.
- G. Wall mounted unit shall have independent power source. Cannot share power source with condenser unit.

# 2.3 EVAPORATOR-FAN COMPONENTS

- A. Casing: Galvanized steel with flanged edges, removable panels for servicing, and insulation on back of panel.
  - 1. Insulation: Faced, glass-fiber duct liner.
  - 2. Drain Pans: Slide-out composite, with connection for drain.
- B. Refrigerant Coil: Aluminum tube, with mechanically bonded aluminum fins, complying with ARI 210/240, and with thermal-expansion valve.
- C. Fan: Direct drive forward-curved, double-width wheel of galvanized steel.
- D. Fan Motors: Comply with requirements in Division 23 Section "Common Motor Requirements for HVAC Equipment."
  - 1. Special Motor Features: Multitapped, multispeed with internal thermal protection and permanent lubrication.
- E. Disposable Filters: 1 inch thick, in fiberboard frames.
- F. Filter Rack: Provided by manufacturer compatible with 2" throwaway filters.
- G. Wiring Terminations: Connect motor to chassis wiring with plug connection.
- H. Wall mounted unit shall have independent power source. Cannot share power source with condenser unit.

#### 2.4 FLOOR CONSOLE EVAPORATOR-FAN COMPONENTS

- A. Casing: Cabinet shall be constructed of zinc-coated steel and configured for bottom return.
- B. Refrigerant Coil: Coil shall be copper tube with aluminum fins and galvanized steel tube sheets. Fins shall be bonded to the tubes by mechanical expansion and specially coated for enhanced wettability. A drip pan under the coil shall have a factory-installed drain connection for hose attachment to remove condensate.
- C. Fan: Direct Drive.

- D. Fan Motors: Motors shall be totally enclosed, permanently lubricated ball bearing with inherent overload protection.
- E. Wiring Terminations: Connect motor to chassis wiring with plug connection.
- F. Wall mounted unit shall have independent power source. Cannot share power source with condenser unit.

#### 2.5 DISTRIBUTION HEADER

A. General: Distribution header shall be able to control refrigerant flow to all VRF indoor units and allow for simultaneous heating and cooling.

#### 2.6 AIR-COOLED, COMPRESSOR-CONDENSER COMPONENTS

#### A. General:

Factory-assembled, single piece, air-cooled outdoor unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, and the multiple inverter-driven twin rotary compressors.

- The maximum sound pressure rating for a single module shall not exceed 62 dBA sound pressure in cooling and 63 dBA in heating and for twinned systems the sound pressure numbers should not exceed 65 dBA and 66 dBA. Sound pressure ratings are measured at a distance of 3 ft out and 4 ½ ft up from the side of the outdoor unit.
- 2. The outdoor unit shall include an oversized accumulator and a liquid tank for proper heating performance while allowing the indoor unit PMV (pulse modulating valve) metering device to shut off completely when a zone is satisfied.
- 3. The outdoor unit shall be protected by a high-pressure switch, high-pressure sensor, low-pressure sensor, fusible plug, PC board, and inverter overload protector.
- 4. The outdoor unit shall be capable of operating in cooling mode down to 23 F ambient air temperature and down to -4 F wet bulb ambient air temperature in heating.
- 5. The outdoor unit shall include a total oil management system that balances oil between compressors within a module, replenishes compressor oil to the compressors in a module from the oil separator if required, and allows oil and refrigerant to move between twinned units if required, even if one of the units is not running.
- B. Unit Cabinet:
  - 1. Unit cabinet shall be constructed of pre-coated steel, finished on both inside and outside.
  - 2. Unit access panels shall be removable with minimal screws and shall provide full access to the compressors, fan, and control components.
  - 3. Compressors shall be isolated in a compartment and have an acoustic wrap to assure quiet operation.
  - 4. The outdoor unit control panel shall include a sliding window to access adjustable controls and an LED display for setup and diagnostics.
  - 5. Unit cabinet shall be capable of withstanding 500-hour salt spray test per Federal Test Standard No. 141 (method 6061).
- C. Fans:
  - 1. Outdoor fan shall discharge air vertically and be driven by a DC inverter variable speed motor.
  - 2. Outdoor fan motor shall be totally-enclosed with permanently-lubricated bearings.
  - 3. Motor shall be protected by internal thermal overload protection.
  - 4. Fan blade shall be statically and dynamically balanced.
  - 5. Outdoor fan shall be protected by a raised protective grille.
- D. Compressors:
  - 1. Each outdoor unit module shall be equipped with two or three inverter-driven twin rotary compressors with full range control to an accuracy of ±0.1 Hz.
  - 2. Compressor shall be totally enclosed in the machine compartment.
  - 3. Compressors shall be equipped with factory mounted crankcase heaters.
  - 4. Internal overloads shall protect the compressor from over-temperature operation.

- 5. Motor shall be suitable for operation in an R-410A refrigerant atmosphere.
- 6. Compressor assembly shall be installed on rubber vibration isolators.
- 7. To maximize compressor reliability, multiple compressors within a module shall be started and operated in variable patterns to ensure equal run time on all compressors.
- 8. To ensure maximum efficiency throughout the system operation range, no compressor is required to run at maximum speed under any condition.
- E. Outdoor Coil:
  - 1. Coil shall be constructed of aluminum fins mechanically bonded to seamless copper tubes, which are cleaned, dehydrated, and sealed.
  - 2. The coil configuration shall be 4-sided and fully separated from the machine compartment for more effective heat transfer and sound isolation.
  - 3. The coil fins shall have a factory-applied corrosion resistant blue-fin finish.

# F. Controls and Safeties:

Operating controls and safeties shall be factory selected, assembled, and tested. The minimum control functions shall include the following:

- 1. Controls:
- a. Compressor speed to match the refrigerant flow and capacity with the system requirements.
- b. Outdoor fan motor speed for higher efficiency and lower sound.
- c. Oil control for improved system reliability and comfort
- d. Pulse modulating valve control for precise control of the refrigerant distribution and accurate capacity management to avoid starving any units.
- e. Control of compressor staging to maximize reliability and minimum run time on all compressors.
- f. Module control of compressor operation, compressor speed, and outdoor heat exchanger surface to maximize efficiency and sound level and reliability across the entire operating range of the system.
- g. Control of the outdoor heat exchanger surface (main vs sub heat exchangers) for maximum efficiency and comfort.

#### 2. Safeties:

- The following safety devices shall be part of the condensing unit:
- a. High-pressure switch
- b. Fuses
- c. Crankcase heater
- d. Fusible plug
- e. Overcurrent relay for the compressor
- f. Thermal protectors for compressor and fan motor
- g. Compressor time delay
- h. Oil recovery system
- i. Oil level sensor
- j. Overcurrent sensor
- k. Compressor suction and discharge temperature sensor
- I. Compressor suction and discharge pressure sensor
- G. Electrical Requirements:
  - 1. All sizes shall utilize 208/230-3-60 or 460-3-60 (V-Ph-Hz) field power supply.
  - 2. Two-core, standard, shielded low voltage cable shall be required for communication between outdoor and indoor unit.
  - 4. All power and control wiring must be installed per NEC and all local electrical codes.
- H. Refrigerant Piping and Line Lengths:
  - 1. Piping connections shall be from the front or the bottom of the unit. The unit shall be capable of operating with maximum connected refrigerant line lengths of 985 ft (actual).
  - 2. The outdoor unit shall have the ability to operate with a maximum height of 230 ft between the outdoor and the lowest indoor unit.
  - 3. The maximum distance between the outdoor unit and the furthest fan coil shall not exceed 590 ft actual or 720 ft equivalent. No line size changes or oil traps shall be required.
  - 4. The system shall be capable of operating when the height difference between the upper and the lower fan coil is 130 ft.

- I. Auxiliary Refrigerant Components:
  - 1. All field-supplied copper tubing connecting the outdoor unit to the indoor unit shall use factory-supplied branching kits consisting of either Y joints or headers to ensure even refrigerant flow.
  - 2. To ensure piping flexibility, the system shall allow having Y joints or headers downstream of another header.
  - 3. When twinning two modules, and in order to maximize efficiency and comfort, a 3/8-in. oil balance line shall be used to allow the flow oil and refrigerant between the two units, even when one of the units is not running.

#### 2.7 REFRIGERANT PIPING

- A. Performance Requirements for Refrigerant R-410A:
  - 1. Suction Line for Air-Conditioning Applications: 300 psig.
  - 2. Hot-Gas and Liquid Lines: 535 psig.

#### B. Copper Tube and Fittings:

- 1. Copper Tube: ASTM B 88, Type K or L
- 2. Wrought-Copper Fittings: ASME B16.22.
- 3. Wrought-Copper Unions: ASME B16.22.
- 4. Solder Filler Metals: ASTM B 32. Use 95-5 tin antimony or alloy HB solder to join copper socket fittings on copper pipe.
- 5. Brazing Filler Metals: AWS A5.8.
- 6. Flexible Connectors:
  - a. Body: Tin-bronze bellows with woven, flexible, tinned-bronze-wire-reinforced protective jacket.
  - b. End Connections: Socket ends.
  - c. Offset Performance: Capable of minimum 3/4-inch misalignment in minimum 7-inch long assembly.
  - d. Pressure Rating: Factory test at minimum 500 psig.
  - e. Maximum Operating Temperature: 250 deg F.

#### 2.8 ACCESSORIES

- A. Control equipment and sequence of operation are specified in Division 23 Sections "Instrumentation and Control for HVAC" and "Sequence of Operations for HVAC Controls."
- B. LonTalk building automation system controller.
- C. Smoke Detectors: Install in supply and return air. The smoke detectors stop operation of the unit by interrupting power to the control board if smoke is detected within the air compartment.
- D. Automatic-reset timer to prevent rapid cycling of compressor.

#### PART 3 - EXECUTION

# 3.1 INSTALLATION

- A. Install units level and plumb.
- B. Install evaporator-fan components using manufacturer's standard mounting devices securely fastened to building structure.

- C. Install ground-mounting, compressor-condenser components on 4-inch- thick, reinforced concrete base; 4 inches larger on each side than unit. Concrete, reinforcement, and formwork are specified in Division 03 Section "Cast-in-Place Concrete." Coordinate anchor installation with concrete base.
- D. Install ground-mounting, compressor-condenser components on polyethylene mounting base.
- E. Install roof-mounting compressor-condenser components on equipment supports specified in Division 07 Section "Roof Accessories." Anchor units to supports with removable, cadmium-plated fasteners.
- F. Install compressor-condenser components on restrained, spring isolators with a minimum static deflection of 1 inch.
- G. Install and connect precharged refrigerant tubing to component's quick-connect fittings. Install tubing to allow access to unit.

#### 3.2 CONNECTIONS

- A. Piping installation requirements are specified in other Division 23 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Install refrigerant ball valves on each line at condensing unit and fan coil unit, a total of four valves shall be installed per split system.
- C. Install piping adjacent to unit to allow service and maintenance.
- D. Duct Connections: Duct installation requirements are specified in Division 23 Section "Metal Ducts." Drawings indicate the general arrangement of ducts. Connect supply and return ducts to split-system air-conditioning units with flexible duct connectors. Flexible duct connectors are specified in Division 23 Section "Air Duct Accessories."
- E. Ground equipment according to Division 26 Section "Grounding and Bonding for Electrical Systems."
- F. Electrical Connections: Comply with requirements in Division 26 Sections for power wiring, switches, and motor controls.

#### 3.3 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust field-assembled components and equipment installation, including connections, and to assist in field testing. Report results in writing.
- B. Perform the following field tests and inspections and prepare test reports:
  - 1. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
  - 2. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.
  - 3. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- C. Remove and replace malfunctioning units and retest as specified above.

# 3.4 STARTUP SERVICE

- A. Engage a factory-authorized service representative to perform startup service.
  - 1. Complete installation and startup checks according to manufacturer's written instructions.

#### 3.5 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain units. Refer to Division 01 Section "Demonstration and Training."

END OF SECTION 23 3826

![](_page_107_Picture_0.jpeg)

#### PART 1 - GENERAL

#### 1.1 GENERAL

- A. Furnish engineering, labor, materials, apparatus, tools, equipment, and transportation required to thoroughly test the completed security system installation as described in these specifications.
- B. Full testing of a completed security system which includes:
  - 1. Develop, submit, and obtain Engineer's approval of security system Pre-Functional and Functional testing forms.
  - Complete 100% Pre-Functional test of the security system. Submit Pre-Functional testing documentation reflecting that all security devices, cabling, locking hardware, power, interfaces to other systems, network switches, servers, workstations, and other components required for a completely functional security system are provided per project documents.
  - 3. Complete 100% Functional test of the security system. Submit Functional testing documentation reflecting that all security equipment, components, interfaces, and programming are functioning correctly per project documents. Upon receiving approval of functional testing documentation, schedule final acceptance testing activities to be witnessed by Engineer and/or Owner.
  - 4. Demonstrate 100% security system functionality to the Engineer and Owner's IT and Security representatives. Document testing activities and submit with final As-Built drawing.

#### 1.2 SUMMARY OF SYSTEM COMMISSIONING ACTIVITIES

- A. Overview
  - 1. The purpose of system commissioning is to ensure the security system operates properly when it is needed most. Security systems are very complex from both an equipment and programming standpoint, and thorough testing is necessary to ensure correct operation.
  - 2. Perform testing activities after-hours or on weekends when the system is "quiet" and the building is generally unoccupied. This will minimize the amount of irrelevant activity in the system activity reports that will be used as a record of the pre and final test results.
- B. Pre-Functional Test
  - 1. Perform a 100% pre-functional test of system aspects to verify correct operation prior to scheduling the final test. The pre-test will help to make the final test run smoothly when demonstrating the system's operation to the Engineer and Owner's IT and Security representatives.
  - 2. Document the results of the pre-test using the approved test forms and submit a copy to the Engineer along with the system activity reports
- C. Functional Test
  - 1. Perform a 100% pre-functional test of system aspects to verify correct operation prior to scheduling the final test. The pre-test will help to make the final test run smoothly when demonstrating the system's operation to the Engineer and Owner's IT and Security representatives.
  - 2. Document the results of the pre-test using the approved test forms and submit a copy to the Engineer along with the system activity reports
- D. Final Acceptance Test
  - 1. Perform a final test of the system in the presence of the Engineer and Owner's IT and Security representatives to demonstrate correct operation of the security system.
- 1.3 SUBMITTALS
  - A. Operation and Maintenance Manuals
    - 1. Functional Design Manual: Includes a detailed explanation of the operation of the system.
    - 2. Hardware Manual which includes:
      - a. Pictorial parts list and part numbers
- b. Pictorial and schematic electrical drawings of wiring systems, including devices, control panels, instrumentation and annunciators
- c. Telephone numbers for the authorized parts and service distributors
- d. Include service bulletins
- 3. Software Manual which includes:
  - a. Use of system and applications software
  - b. Initialization, start-up, and shut down procedures
  - c. Alarm Reports
- 4. Operator's Manual which fully explains procedures and instructions for the operation of the system and includes:
  - a. Computers and peripherals
  - b. System start up and shut down procedures
  - c. Use of system, command, and applications software
  - d. Recovery and restart procedures
  - e. Graphic alarm presentation
  - f. Use of report generator and generation of reports
  - g. Data entry operator commands
  - h. Alarm messages and reprinting formats
  - i. System access requirements
- 5. Maintenance Manual which includes:
  - a. Instructions for routine maintenance listed for each component, and a multi-page summary of component's routine maintenance requirements.
  - b. Detailed instructions for repair of the security system.
  - c. A summary of the software licenses, including license numbers, quantity of clients, summary of the software options provided and database capabilities.
  - d. A summary of the TCP/IP address used and which system component they are associated with. Include the gateway address, subnet mask, DNS server, and host name information.
- 6. Test Results Manual, which includes the document results of tests, required under this Specification, organized by System, Floor, and Door.
- 7. Record Drawings Manual which includes 11"x17" prints of record drawings as described below.
- B. Record Drawings
  - 1. Drawings to fully represent installed conditions including actual locations of devices, actual cable and terminal block numbering, and correct wire sizing as well as routing. Record changes in the work during the course of construction on blue or black line prints.
  - 2. Include drawings submitted as part of the Shop Drawing package, plus additional information required to accurately document installed conditions.
  - 3. Include the following additional information:
    - a. Device addresses & IP address information.
    - b. Settings for each camera (lens specs, mm setting, auto shutter setting, and other available camera settings, etc.)
  - 4. Final acceptance will not be made until the Engineer approves the record drawings.

# PART 2 - PRODUCTS – NOT USED

#### PART 3 - EXECUTION

- 3.1 SCHEDULING
  - A. Coordinate security commissioning with the General Contractor and provide specific information on pretest and final-testing activities to be entered into the overall project construction schedule.

#### 3.2 TESTING REQUIREMENTS

- A. Site Tests
  - 1. Perform a 100% pretest of the system prior to final testing by the Engineer. Provide the Engineer with a minimum of a 5 day notice prior to scheduling testing.

- 2. At the conclusion of the work on a floor, test the system on that floor to verify proper operation and reporting of devices.
- 3. Work with the door hardware supplier to resolve electric hardware failures and door alignment/closure problems.
- 4. At the completion of the work, test the entire system to verify proper operation. At a minimum, include these tests:

a.	Door Hardware Test:	Coordinate with door hardware contractor to test electrified locking hardware of associated card reader doors.
b.	Card Reader Test:	Test functionality of card reader, alarm contact, and request-to-exit sensors to indicate the following: valid card read, invalid card read, door forced, and door propped alarms.
C.	Duress Button Test:	Test functionality of duress buttons to alarm on ACAMS workstations. Verify dispatch requirements and integration with VSS to provide automatic camera call up upon alarm activation.
d.	ACAMS Software Test:	Test software for correct programming and setup. Verify integration with the video surveillance, detention control system, intercom system, and other security subsystems. Verify graphical mapping screens and devices.
e.	Camera Test:	Review cameras for proper coverage, resolution, frame rate, and overall quality of image.
f.	Video Management Software Test:	Test recording system for correct programming, alarms, and event retrieval. Verify integration with ACAMS and video analytics software. Verify functionality at each client workstation. Verify graphical mapping screens and devices.
g.	Video Virtual Matrix Test:	Test functionality of virtual matrix switch for correct programming, operation, and alarm call up. Verify functionality to push video streams on-demand to any monitor and any client workstation.
h.	Video Appliance Test:	Test functionality of servers and storage appliances for system parity and bandwidth load balancing. Verify RAID-6x functionality by demonstrating 5 simultaneous drive failures and 1 server failure.
i.	Battery and UPS Load Test:	Disconnect AC power to security system components to verify battery operation functions and system remains fully operational.

- B. Test Preparation
  - 1. Provide device identification numbers that differ from or were not included on the original contract drawing set.
  - 2. Provide a complete systems point list.
  - 3. Provide paper and toner for the printer so that an event log can be printed out and attached to the test reports as verification of test sequence and systems response.
  - 4. During testing, provide a minimum of three technicians familiar with the installation to assist with the test. Stage the technicians as follows: one at the host, one at the device being tested, and one runner responsible to furnishing tools, step ladders, etc.
  - 5. Provide radios for use by the Engineer and Owner during testing.
  - 6. Provide pre-programmed access cards for use during testing. Provide one card for each access level.

# 3.3 TEST PROCEDURES

A. Refer to the test forms for testing procedures for each type of device/system.

# 3.4 DOCUMENTATION

- A. Provide a full-sized drawing package containing a detailed wiring diagram (layout of equipment/elevation, complete parts list, and a complete wiring diagram for each access control panel) for each SEC location in the TR rooms. Fold the diagram and place it inside a clear plastic pocket affixed to the inside door of the SEC.
- B. Provide a service log on the inside door of each SEC. Include columns for the following information: date of service, description of work performed, service technician(s), and service company in the service log. Place the service log inside a separate clear plastic pocket affixed to the inside door of the SEC.

# 3.5 DEMONSTRATION

- A. On completion of the acceptance test, instruct the owner's representatives, at a time convenient to them, in the operation and testing of the system.
- B. Utilize the database for the project during training to give the users a project specific example to learn from.
- C. Provide a minimum of 80 hours of on-site training by a factory trained representative for each of the following systems:
  - 1. Access Control & Alarm Monitoring System
  - 2. Video Surveillance System
    - a. Network Video Recording System
    - b. Network Video Analytics System
    - c. Network Video Servers and Storage Appliances
- D. Maintain a sign in sheet with names and dates of persons trained and forwarded to owner upon completion of training.
- E. Provide for four (4) Owner's representatives to attend factory certification training (off-site) for both the following systems:
  - 1. Access Control & Alarm Monitoring System
  - 2. Video Surveillance System

END OF SECTION



# PART 1 - GENERAL

#### 1.1 SUMMARY

- A. General: Furnish engineering, labor, materials, apparatus, tools, equipment, transportation, temporary construction and special or occasional services as required to make a complete working Access Control & Alarm Monitoring system installation, as described in these specifications. Contractor responsible for coordinating door hardware requirements and providing all necessary equipment and materials for proper installation of concealed access control system at each secured door with only user interaction required devices not required to be concealed.
- B. Section Includes:
  - 1. ACAMS servers and client workstations
  - 2. ACAMS control panels, input/output modules, and card readers
  - 3. ACAMS power supplies
  - 4. Alarm initiating devices, including: magnetic switch contacts, request-to-exit sensors, duress buttons, and general alarm points
  - 5. Integration with the VSS and other security subsystems to allow bi-directional communication with one another
  - 6. Interface to electric door hardware and ADA door operators
  - 7. Interface to elevator controllers
  - 8. Interface to fire/life-safety system
- C. Products Furnished and Installed Under another Section:
  - 1. 120V power
  - 2. Conduit and junction boxes
  - 3. ADA door operators and push buttons
  - 4. Fire/life-safety system interface relays
  - 5. Parking gate operators.
  - 6. Electromagnetic door holders
  - 7. Network connectivity for ACAMS devices via Owner's local/wide area network
- D. Related Sections:
  - 1. Consult other Divisions, determine the extent and character of related work and properly coordinate work specified herein with that specified elsewhere to produce a complete and operable system.
  - 2. Section 28 00 00 Security Basic Requirements: for submittal formats, warranty, general product requirements, and installation requirements.
  - 3. Section 28 05 13 Security System Cabling: for cable requirements related to the ACAMS.
  - 4. Section 28 05 53 Security System Labeling: for device labeling requirements.
  - 5. Section 28 08 00 Security System Acceptance Testing: for testing requirements.
  - 6. Section 28 16 00 Intrusion Detection System: for interface requirement to the ACAMS.
  - 7. Section 28 13 53 Access Detection Systems: for interface requirements to the ACAMS.
  - 8. Section 28 23 00 Video Surveillance System: for interface requirement with the ACAMS.

#### 1.2 SYSTEM DESCRIPTION

- A. Overview
  - 1. The ACAMS is a distributed network of control panels connected to and programmed from a host server and client workstations.
  - 2. The ACAMS is utilized for electronically controlling access to off-stage and on-stage areas, lounges, and supply rooms, storage rooms, and other staff-only spaces.

- 3. The ACAMS consists of redundant host servers located in the primary and secondary ER rooms, client workstations, control panels, card readers, and alarm initiating devices. The host server communicates with the field panels via the Owner's local/wide area network.
- B. Access Control & Alarm Monitoring System
  - 1. Provide ACAMS software and associated licenses to support the devices shown on the project drawings.
  - 2. Provide ACAMS client software licenses for monitoring and control of ACAMS. Provide web browser client license (thin client) to allow for remote viewing on other workstations.
  - Provide ACAMS control panels located in the ER and TR rooms as indicated on project drawings. Panels support up to 64 card readers each with locking control outputs and multiple general purpose input/output modules for automation.
  - 4. Provide multi-technology card readers as indicated on project drawings.
  - 5. Provide multi-technology card readers at Trans-Vac automatic feeder locations (not shown on project drawings) to activate feeder functionality. Assume a minimum of 75 locations.
  - 6. Provide interface to latch position switch (LX) and request-to-exit (RX) switch within electrified door hardware for card reader controlled doors. Provide alarm contacts and request-to-exit motion detectors for card reader doors that do not contain LX and RX sensors within the electrified hardware set. Refer to Section 08 06 00 Door Hardware for additional requirements.
  - 7. Provide alarm contacts for non-card reader controller perimeter doors as indicated on project drawings.
  - 8. Provide connection to local audible alarms at monitored at exit-only and emergency exit doors as indicated on project drawings. Local audible alarms to sound upon alarm activation (forced door, door held open, etc).
  - 9. Provide 12/24VDC ACAMS device and lock power supplies as indicated on project drawings.
  - 10. Provide battery backup of system components and power supplies.
- C. Badging System
  - 1. Included in Fannin County IT department.
- D. ACAMS Integration Requirements
  - 1. Provide ACAMS interface software to VSS network video recorders to enable alarm event recording and automatic call up of associated cameras upon alarm activation (forced door, door held open, etc).
  - 2. Provide ACAMS interface software for IDS control panels to enable bidirectional alarm communication and notification.
  - 3. Utilize hardwired input/output points to provide integration between detention control system and ACAMS to allow for redundant reporting of alarms within the Inmate ED Unit.
  - 4. Provide software integration between the ACAMS database and the following non-security systems: a. Owner's HR database to allow automatic provisioning and revocation of cardholder privileges
    - b. MS Active Directory to enable single sign-on, logical access control, and debit card capabilities
- E. Interface to Elevator Conveying System
  - 1. Non-Public passenger and freight elevator card readers to control access to floors based on cardholder access levels. Public elevator card readers to control access to floors only in times of heightened security.
  - 2. Furnish card readers to elevator contractor for installation inside elevator cars.
  - 3. Provide security demarcation enclosures located in the elevator machine rooms as indicated on project drawings. Route security cabling from the ACAMS control panels to the security demarcation enclosures to interface with elevator controller. Connections in the demarcation enclosure include landings, terminal blocks, and labels.
  - 4. Provide coordination during installation of card reader and cable terminations. Elevator contractor responsible for elevator traveler cable, connection from elevator controller to security demarcation enclosure, and installation of card readers within the elevator cabs.
- F. Interface to Fire/Life-Safety System
  - 1. Coordinate with Fire/Life-Safety system contractor to automatically drop power from stairwell, elevator vestibule lobby, and other access controlled doors within the path of egress upon alarm activation of the Fire/Life-Safety system.

#### 1.3 SUBMITTALS

- A. Contractor Qualifications: Submit certification letters for the manufacturer of the ACAMS.
- B. Product Data: Submit product information for components specified herein.
- C. Shop Drawings:
  - 1. Device placement on floor plans
  - 2. Point-to-Point Diagrams: Include wiring, points of connection and interconnecting devices between the following:
    - a. ACAMS control panel
    - b. ACAMS card reader and input/output modules
    - c. ACAMS power supplies
    - d. Card Readers
    - e. Alarm contacts and request-to-exit sensors
    - f. Local audible alarms
    - g. Interface to electrified door hardware
    - h. Interface to fire/life-safety system
    - i. Interface to elevator controller
    - j. Cable conductors (identify conductors on the point-to-point diagrams with the same tag as the installed conductor)
  - 3. Schedules: Provide schedules for ACAMS control panels that show each point ID with a description of the connected devices.
  - 4. Block Diagram/Riser Diagram: Show the ACAMS components, conduit, wire types, and sizes between them, including cabling interties between termination hardware.
  - 5. Custom mounting details

# PART 2 - PRODUCTS

#### 2.1 ACAMS SOFTWARE & SERVER

- A. General
  - 1. Designed for unlimited scalability with a multi-tier enterprise architecture to allow for centralized monitoring and control of buildings within the Owner's campus and future remote sites.

# B. Features

- 1. Capable of using a single user interface for the following applications:
  - a. Access control
  - b. Alarm monitoring
  - c. Intrusion detection
  - d. Graphical mapping
  - e. Badging and credential management
  - f. Visitor management
  - g. Video management
- 2. Supports automated communication in user configurable timed intervals for business automation processes and SQL databases using XML communications.
- 3. Supports real-time bidirectional communication between cardholder data with HR databases, emergency response systems, and third party systems using custom software scripts.
- C. Manufacturer
  - 1. S2 Security
    - a. S2 NetBOX

# 2.2 ACAMS WORKSTATIONS

- A. ACAMS Workstation
  - 1. Provided by Owner.
- B. ACAMS Software
  - 1. Manufacturer
    - a. S2 access control system or equal.

- 2. Include software licenses:
  - a. Integrated video management software for specified network video recording system, refer to Section 28 23 00 Video Surveillance System

# 2.3 ACAMS CONTROLLERS

- A. General
  - 1. An intelligent controller with integrated battery backup, database, and communication ports that supports 16 card readers.
  - 2. Supports multiple communication channels to which a variety of devices can connect.
  - 3. Supports hardware modules used for additional memory and/or for future feature enhancements.
  - 4. Functions provided include:
    - a. Central control for attached devices and addressable modules
    - b. Makes decisions for access
    - c. Responds to monitor activity
    - d. Receives input to control its decision making
    - e. Reports activity to other devices
- B. Features
  - 1. Supports HID proximity, MIFARE, and DESFire card reader formats
  - 2. Supports flash upgrades for firmware updates
  - 3. Utilizes an onboard Ethernet NIC
  - 4. Global input/output and anti-passback functionality
  - 5. Capable of utilizing keypad commands to activate/deactivate events
- C. Supports RS-485 connectivity to addressable modules:
  - 1. Input Module: Supports 8 Class A supervised input points
  - 2. Output Module: Supports 8 Form C dry contact relays
  - 3. Reader Interface Module: Supports 2 card readers with associated alarm contacts, request-to-exit devices, and lock outputs configured in Fail Secure mode.
- D. Manufacturer
  - 1. S2 system compatible with the existing Fannin county access controllers.
- 2.4 EQUIPMENT ENCLOSURES
  - A. General
    - 1. Provide enclosures with butt hinged and lockable door containing a lock kit (keyed alike with other security enclosures on the project).
    - 2. Provide perforated back panel for mounting control boards, relays, and terminal strips with enclosure.
    - 3. Provide slotted wiring duct for routing security cabling within enclosure.
    - 4. One tamper switch for each enclosure
  - B. Security Equipment Cabinets
    - 1. Type: NEMA type 1 enclosure
    - 2. Size: 36" x 24" x 6" minimum
    - 3. Finish: ANSI 61 gray polyester powder paint finish inside and out
    - 4. Manufacturer
      - a. Hoffman
        - 1) #A36N24M enclosure with #A36N24MPP back panel and #A612AR lock kit
      - b. Or equal
  - C. Slotted Wiring Duct
    - 1. Type: Lead-free PVC with narrow finger design
    - 2. Size: 1" x 1" minimum
    - 3. Color: Light gray
    - 4. Manufacturer
      - a. Panduit
        - 1) #Type-F narrow slot wiring duct
        - b. Or equal

# 2.5 WIREWAYS

# A. General

- 1. Provide screw cover wireway sections with open top assembly as shown on Security drawings.
- 2. Provide closure plates to secure end of wireway sections.
- B. Screw Cover Gutter Wireways
  - 1. Type: NEMA type 1 enclosure
  - 2. Size: 4" x 4" x 48" minimum
  - 3. Finish: ANSI 61 gray polyester powder paint finish inside and out

# C. Manufacturer

- 1. Hoffman
  - a. # F44T148GVP lay-in painted wireway without knockouts
  - b. #A44GCPNK closure plate without knockouts
- 2. Or equal

# 2.6 CARD READERS

- A. General
  - 1. Presenting an access card to the reader initiates a single transmission to the ACAMS controller.
  - Rugged, weatherized polycarbonate enclosure, designed to withstand an operating temperatures of -22 to 120 degrees Fahrenheit (-30 to 65 degrees Celsius) and operating humidity of 5-95% noncondensing.
  - 3. Utilizes a Wiegand protocol for communication for compatibility with standard access control systems.
  - 4. Utilizes a multi-color LED and an audible sounder to indicate the status of the door.
  - 5. Utilizes an internal tamper switch that will indicate an alarm condition if an unauthorized attempt is made to disassemble the unit.
  - 6. Capable of reading the following frequencies and card formats:
    - a. 125kHz Indala Prox (coordinate with Owner's existing security vendor for facility code and other propriety format information)
    - b. 13.56MHz HID iClass
- B. Manufacturer
  - 1. HID
    - a. Or equal
- 2.7 MAGNETIC CONTACT SWITCHES
  - A. Wood, Steel, and Hallow Metal Doors
    - 1. General
      - a. Mounting: Recessed
      - b. Contacts: Single Pole, Single Throw
      - c. Gap Distance: 0.5" maximum
    - 2. Manufacturer
      - a. GE Security
        - 1) #1078C 3/4" alarm contact switch
      - b. Or equal

#### 2.8 DURESS BUTTONS

- A. Under-Counter
  - 1. General
    - a. Actuating lever, housing, and cover plate made of ABS fire-retardant plastic
    - b. Latching circuit with integrated LED
    - c. Contact: Normally Open or Normally Closed electrical loop, SPDT
    - d. Operating Voltage: 12VDC
  - 2. Manufacturer
    - a. GE Security
      - 1) #3040 panic switch
    - b. Or equal

# 2.9 REQUEST-TO-EXIT MOTION SENSORS

- A. General
  - 1. Power: 12 or 24VDC, 35mA
  - 2. Relay Output: 2 form "C" contacts
  - 3. Adjustable relay latch time
  - 4. Programmable retrigger or non-retrigger mode
  - 5. Programmable Fail Safe or Fail Secure Modes
  - 6. Radio Frequency Interference (RFI) Immunity range from 26 to 1,000 MHz at 50 v/m
- B. Manufacturer
  - 1. Bosch
    - 1) #DS160 request-to-exit sensor
    - 2) #TP160 electrical back box adapter plate
  - 2. Or equal

# 2.10 MOTION SENSORS

- A. General
  - 1. Type: Passive infrared (PIR) detector with Fresnel type lens
  - 2. Operating Voltage: 10-14VDC
  - 3. Range: 35' x 35' minimum
  - 4. Integrated tamper switch
- B. Manufacturer
  - 1. Bosch
    - 1) #ISM-BLP1 blue line PIR detector
  - 2. Or equal
- 2.11 ACAMS POWER SUPPLIES
  - A. General
    - 1. Provides a 120VAC to 12 and 24VDC output, fully supervised power supply to power ACAMS field devices. Contractor responsible for providing power as necessary even if not shown on plans.
    - 2. Utilizes 16 PTC Class 2 rated power limited outputs.
    - 3. Short circuit and thermal overload protection.
    - 4. Integrated charger for sealed lead acid or gel type batteries.
    - 5. Capable of providing a 10 amp supply current.
    - 6. Supports a fire alarm disconnect to relay that individually selects any or all of the 16 outputs.
  - B. Manufacturer
    - 1. Altronix
      - 1) #MAXIM75 power supply
    - 2. Or equal

# 2.12 BATTERIES

- A. General:
  - 1. Voltage: 12.00
  - 2. Amps: 12.00
  - 3. Chemistry: SLA or VRLA valve regulated
  - 4. Termination: Spade protected terminals
- B. Manufacturer:
  - 1. Yuasa
    - 1) #RE12-12 sealed lead acid 12V 12Ah battery
  - 2. Or equal

# PART 3 - EXECUTION

# 3.1 INSTALLATION

# A. ACAMS Software & Server

- 1. Rack mount server in the security equipment rack in ER room as indicated on project drawings.
- Install MS Windows Server 2008 and necessary client access licenses. Coordinate with Owner's IT and Security representatives to program OS and other critical applications to Owner's existing standards.
- B. KVM Console
  - 1. Rack mount KVM console with integrated LCD monitor, keyboard, and mouse in the security equipment rack in ER room as indicated on the project drawings.
  - 2. Connect ACAMS servers to the KVM console. Provide adapters and cable extensions as required.
- C. ACAMS Control Panels
  - 1. Place power supply and associated hardware in same location.
  - 2. Provide designated resistors at device end of line per manufacturer's EOL recommendation to provide four-state supervision of security device and cabling.
  - 3. Provide EOL supervision for alarm contacts, local alarm sounders, motion detectors, glass break detectors, help/duress buttons, and other designated security devices connected to the ACAMS and IDS.
  - 4. Provide the following states of supervision:
    - a. Contact closed = Secure
    - b. Contact open = Alarm
    - c. Short circuit = Line fault
    - d. Open circuit = Line fault
- D. Card Readers
  - 1. Wire the card reader's multi-color LED to indicate the following status of the door.
    - a. Red status indicates the door is secure (locked).
    - b. Green status indicates the door is unsecured (unlocked).
    - c. Yellow status indicates the card reader is not functioning (off-line/trouble), is processing a read request, or has denied access.
  - 2. Utilize configuration card to enable optical tamper.
  - 3. Wire the card reader's optical tamper to spare input on the ACAMS reader module and jumper ground wire from door contact to provide a Normally Closed circuit.
  - 4. The card reader to produce an audible beep tone to indicate to the user:
    - a. The card was read and/or access was denied.
    - b. Door is being held open and needs to be closed.
- E. Elevator Readers
  - 1. Furnish card reader to elevator contractor for installation,
  - 2. Coordinate the installation and termination of the card reader inside the cab and in the elevator machine room.
  - Coordinate with elevator contractor to connect ACAMS output relays to elevator controller. Install terminal blocks in security demarcation enclosure as indicated on project drawings to separate security from elevator cabling.
- F. Door Hardware
  - 1. Route power to electrically controlled locks on life-safety doors through fire alarm output to automatically unlock the door upon activation of Fire/Life-Safety system. Connect fire alarm output to the disconnect relay on the associated 24VDC lock power supply.
  - 2. Setup and conduct a door hardware coordination meeting.
  - 3. Coordinate the installation and termination of the security cable with the installation of the electric door hardware and transfer hinge.
  - 4. Provide cable and terminate wires to delayed egress devices for monitoring activation of delayed egress by the ACAMS system.
- G. Door Contacts

- 1. Install on protected (secured) side of door.
- 2. Install 6" from leading edge at top of door.
- H. Duress Buttons
  - 1. Mount duress buttons under work desks as indicated on the project drawings.
  - 2. Coordinate with architect and casework contractor to field determine exact placement prior to installation.
- I. Request-To Exit Motion Detectors
  - 1. Mount motion detector on the secured (protected) side of door.
  - 2. Install motion detector so that detection pattern is not obstructed by Exit Signs, light fixtures and other objects that would interfere with proper operation.
  - 3. Adjust relay hold time and pattern to properly detect valid exit and allow shunting of door contact.
  - 4. Adjust detection sensitivity to pulse.
  - 5. Mask detector lens to provide a confined detection area limited to the door handle or push bar area.
  - 6. Run wire inside structural tube steel frame into back of condulet for cage locations.
- J. Local Alarm Sounders
  - 1. Mount local alarm sounder as necessary for proper coverage.
  - 2. Install local, square, and plumb. Set flush-mounted units so that the face of the cover, bezel, or escutcheon matches the surrounding finished surface.
  - 3. Mount so that there are no gaps, cracks, or obvious lines between the trim and the adjacent finished surface.

#### 3.2 PROGRAMMING

- A. Prior to the completion of construction, schedule a meeting with the Owner's IT and Security representatives to determine the programming criteria. Discuss the following:
  - 1. Access card levels and door groupings
  - 2. Alarm priority levels
  - 3. Schedules and time codes
  - 4. Holidays and holiday types (priorities)
  - 5. Action/responses from individual input points
  - 6. Standard and custom (expanded) reports
  - 7. Defining alarm messages and standard response messages applicable to site
  - 8. Routing of alarm points to selected mobile phones
  - 9. Routing of alarm points to operator's workstations, printers, and history files
  - 10. Coordinate implementation of graphics with Owner. Develop sample graphic complete with icons and text. Alarms to appear on building floor plans depicting the nature and location of alarms. Review and revise graphic layout as required by Owner.
- B. Document the results of the meeting and perform necessary programming to achieve the Owner's requests.
- C. System Operation, Alarm and Reporting Function: Program door control panel tamper switches to immediately report as a separate "tamper" point to the system resulting in an alarm condition displayed in both text and graphic form on the applicable workstation(s) and an alarm message transmitted to the appropriate pager(s).
- D. Receive CAD drawing files of floor plans and perform the following relative to system graphics:
  - 1. Delete non-applicable drawing layers and details to arrive at simple floor plans of the building as built.
  - 2. Convert drawings to a graphic file format compatible with the Owner's access control and alarm monitoring system.
  - 3. Load drawing files into the system.
  - 4. Apply new and predefined icons and other points on each graphic to indicate point and control status.
  - 5. Link graphic images to reader, monitor and control points.

# 3.3 TESTING

A. Commission ACAMS in accordance with Section 28 08 00.

END OF SECTION

# PAGE INTENTIONALLY LEFT BLANK



# PART 1 - GENERAL

#### 1.1 SUMMARY

- A. General: Furnish engineering, labor, materials, apparatus, tools, equipment, transportation, temporary construction, and special or occasional services required to make a complete working intrusion detection system installation as described in these specifications.
- B. Section includes:
  - 1. Intrusion Detection System, including digital communicator, keypad, and alarm devices.
  - 2. Door contacts, glass break detectors, motion sensors
  - 3. Duress alarm stations
  - 4. Interfaces and connections between intrusion detection subsystems to allow communication with one another
- C. Products furnished and installed under another section:
  - 1. 120V power
  - 2. Phone line
- D. Related sections:
  - 1. Section 28 00 00 Basic Security Requirements: for submittal format, warranty, general product requirements, and installation requirements
  - 2. Section 28 13 00 ACAMS: for interface requirement to the intrusion detection system
  - 3. Section 28 05 13 Security System Cabling: for cable requirements related to the IDS
  - 4. Section 28 05 53 Security System Labeling: for device labeling requirements
  - 5. Section 28 08 00 Security System Acceptance Testing: for testing requirements

# 1.2 SYSTEM DESCRIPTION

- A. Overview
  - 1. The IDS is utilized for after hours monitoring of facility.
  - 2. Activation of the IDS direct dials emergency services with a prerecorded message requesting law enforcement.
  - 3. The IDS integrates with the ACAMS through software to provide bidirectional communication and notification of alarm events.
- B. Intrusion Detection System
  - Provide an IDS control panel with integrated UL listed digital communicator located in the telecommunication room as indicated on project drawings. Panels support up to 8 areas and 128 zones by use of addressable input/output point modules.
  - 2. Provide LCD command keypads in the security desk. Keypads allow for system arming and disarming by authorized users.
  - 3. Provide battery backup of IDS components and power supplies for a minimum of 24 hours in the event of a power failure or emergency.
- C. Interface with ACAMS
  - 1. Provide Ethernet network interface module to allow for software integration with ACAMS.
  - 2. Configure IDS and ACAMS to allow for bidirectional communication of alarm contacts and motion detectors as shown on the project drawings.

#### 1.3 SUBMITTALS

- A. Product Data: Submit product information for the intrusion detection systems, including:
  - 1. IDS control panel

- 2. Keypads
- 3. Calculations for backup batteries
- B. Shop Drawings: Submit shop drawings containing the following:
  - 1. Device placement on floor plans
  - 2. Point-to-Point Wiring Diagrams: Include wiring, points of connect, and interconnecting devices between the following:
    - a. IDS control panel
    - b. IDS expansion modules and relays
    - c. Keypads
    - d. Motion sensors
    - e. Alarm contacts
    - f. Power supplies
    - g. Cable conductors (identify conductors on the point-to-point diagrams with the same tag as the installed conductor)
  - 3. Schedules: Provide schedules for the IDS control panel that show each alarm zone, applicable area or partition, and a description of the connected device.
  - 4. Custom mounting details

# PART 2 - PRODUCTS

#### 2.1 IDS CONTROL PANELS

- A. General
  - 1. Integrated UL listed digital communicator with phone line monitor (loop or ground start).
  - 2. Supports up to75 alarm zones and 8 programmable areas or partitions.
  - 3. Capable of utilizing multiple telephone numbers, primary and duplicate paths with main and alternate destinations.
  - 4. Capable of utilizing a dual phone line switcher to monitor 2 phone lines.
  - 5. Capable of sending daily automatic test and status reports.
  - 6. Supports supervised expansion and relay output modules.
  - 7. Supports RS-232 connectivity to third party devices for automation.
  - 8. Capable of utilizing an TCP/IP converter for Ethernet connectivity.
- B. Manufacturer
  - 1. Bosch G series control panels
    - a. Bosch #D7412GV2 control panel
    - b. Bosch #D8128D OctpPOPIT 8-point input module
    - c. Bosch #D8129 Octo-relay 8-point output module
    - d. Bosch #DX4020 Connettix Ethernet network interface module
  - 2. Or Equal

# 2.2 IDS KEYPADS

- A. General
  - 1. 32-character display
  - 2. Keys light on entry or key press
  - 3. Back lighted multi-key touch pad
  - 4. User controlled brightness and loudness
- B. Provide the ability to display for each detection point:
  - 1. Alarm
  - 2. Trouble
  - 3. Supervisory
  - 4. Faulted
  - 5. Custom text
- C. System wide displays include:
  - 1. Local system test

- 2. Sensor reset
- 3. Event log
- D. Manufacturer
  - 1. Bosch #D1260 alphanumeric LCD display keypad
  - 2. Or Equal

#### PART 3 - EXECUTION

#### 3.1 INSTALLATION

- A. General
  - 1. Follow manufacturers recommended guidelines for installation.
  - 2. Install glass break detection for all first floor and ground level windows.
  - 3. Install motion detectors in all public areas in basement, ground floor and first floor.

#### B. Components

- 1. IDS Control Panel
  - a. Place control panel and associated expansion boards in SEC (NEMA Type-1 enclosure) with ACAMS equipment in nearest TR room.
  - b. Utilize ACAMS power supplies to power control panel and associated expansion boards. Do not use plug-in transformers.
  - c. Provide standoff brackets to mount control boards to perforated panel within enclosure.
  - d. Place power supply and associated hardware in same location.
  - e. Install supervisory and end of line resistors as required.
  - f. Coordinate installation of phone jack in IDS control panel enclosure with telecommunications contractor for communications to the alarm receiver.
- 2. Keypads
  - a. Mount keypads as indicated on project drawings.

#### 3.2 PROGRAMMING

- A. Prior to the completion of construction, schedule a meeting with the Owner's IT and Security representatives to determine the following programming criteria:
  - 1. Zone or alarm point descriptions
  - 2. User authority levels to arm/disarm areas or alarm partitions
  - 3. Auto arm/disarm schedules
  - 4. Interface requirement with ACAMS
  - 5. Dispatch response from individual alarm points
  - 6. Password and call list information
- B. Document the results of the meeting and perform necessary programming to achieve the Owner's requests. Program and setup the system such that no additional programming other than entering new access codes is required.

#### 3.3 TESTING

A. Commission the Intrusion Detection System in accordance with Section 28 08 00.

# END OF SECTION

# PAGE INTENTIONALLY LEFT BLANK



# PART 1 - GENERAL

#### 1.1 SUMMARY

- A. General
  - 1. Provide engineering, labor, materials, apparatus, tools, equipment, transportation, temporary construction, and special or occasional services as required to make a complete working video surveillance system installation, as described in this specification.
  - 2. Section Includes:
    - a. Network video recording system
    - b. Network video management software
    - c. Network video cameras
    - d. Network video encoder servers
    - e. Analog cameras
    - f. Power supplies
    - g. Integration with the ACAMS and other security subsystems to allow for bidirectional communication
    - h. Interface to elevator conveying system
    - i. Interface to Point-of-Sale (POS) system
  - 3. Products Furnished and Installed Under another Section:
    - a. 120V power
    - b. Horizontal fiber optic and UTP cabling for IP cameras
- B. Related Sections
  - 1. Consult other Divisions, determine the extent and character of related work and properly coordinate work specified herein with that specified elsewhere to produce a complete and operable system.
  - 2. Section 28 00 00 Security Basic Requirements: for submittal formats, warranty, general product requirements, and installation requirements.
  - 3. Section 28 05 13 Security System Cabling: for cable requirements related to the VSS.
  - 4. Section 28 05 53 Security System Labeling: for device labeling requirements.
  - 5. Section 28 08 00 Security System Acceptance Testing: for testing requirements.
  - 6. Section 28 13 00 Access Control & Alarm Monitoring System: for interface requirements related to the VSS.
  - 7. Section 28 48 00 Detention Control System: for interface requirements related to the VSS.

#### 1.2 SYSTEM DESCRIPTION

- A. Overview
  - 1. The Owner desires a comprehensive and feature rich IP video surveillance system to monitor the flow of visitors, and staff throughout the building.
  - The VSS consists of host servers, RAID storage devices, video management software, a combination
    of fixed network and analog cameras, video encoder servers, and integration with other security
    subsystems.
  - 3. The VSS software will reside on fully scalable iSCSI SAN array storage devices with integrated MS Windows based servers to provide a non-proprietary software-based video solution.
  - 4. The VSS will utilize PoE network cameras within interior and exterior spaces of the building and traditional analog cameras within the elevator cars.
- B. Video Surveillance System
  - 1. Provide video management software and camera licenses to support the devices shown on the project drawings. Provide rack-mount NVR servers and RAID storage devices in the ER security cabinet to allow for 30 days of storage with continuous recording with 24fps at 1280x720.

- 2. Provide client video management software licenses for live viewing and monitoring of the cameras on ACAMS workstations. Provide web browser client software license (thin client) to allow for remote viewing on other workstations.
- 3. Provide network fixed and PTZ/360/180 cameras as shown on the project drawings. Typical cameras locations include:
  - a. Corridors
  - b. Perimeter entrances and emergency exits
  - c. Stairwells
  - d. Elevator vestibules
  - e. Exterior mounted cameras
- C. VSS Integration Requirements
  - 1. Provide software integration between the ACAMS and video management software for automatic camera call-up upon access control event.
  - 2. Provide integration between detention control system and video management software for automatic camera call-up upon activation alarm at all duress button locations and fire alarm manual pull stations. Utilize digital I/O to capture hardwired input/outputs from detention control system and convert them to digital alarms on the video management system.
- D. Interface to Elevator Conveying System
  - 1. Each elevator to contain an analog fixed camera within the ceiling of the elevator car.
  - 2. Provide stainless steel finish trim rings for mini-dome camera housings for cameras within the elevator cars. Coordinate with manufacturer to furnish custom painted housings.
  - 3. Furnish analog cameras with custom stainless steel finish to elevator contractor for installation within the elevator car.
  - 4. Provide analog signal cabling between the elevator machine room and the nearest TR room. Coordinate with elevator contractor for termination requirements.
  - 5. Provide analog camera power supplies to support the cameras in the elevator cars. Coordinate with elevator contractor for exact location.
  - 6. Provide rack-mount video encoder servers in the TR room to convert elevator analog video signals into a digital IP format for communication to the video management software.

# 1.3 SUBMITTALS

- A. Product Data: Submit product information for components specified herein.
- B. Shop Drawings:
  - 1. Floor Plans: 1/8 inch scale floor and site plans showing the locations of devices and cable routing paths with cable types and quantity called out.
  - 2. Point-to-Point Diagrams: Include wiring, points of connection and interconnecting devices between the following:
  - 3. Video surveillance system, monitors, and recording equipment
  - 4. Devices connected to the system
  - 5. Conductors (identify conductors on the point-to-point diagrams with the same tag as the installed conductor)
  - 6. Block Diagram/Riser Diagram: Show the video surveillance system components, conduit, wire types, and cabling interties between termination hardware.
  - 7. Custom mounting details

# 1.4 EXTRA MATERIALS

- A. Furnish extra materials to the Owner in the original manufacturer's packaging.
- B. Provide spare parts of the following installed devices:
  - 1. 4 x interior fixed network cameras
  - 2. 2 x exterior network cameras
  - 3. 4 x 8TB hard drives

# PART 2 - PRODUCTS

- 2.1 NETWORK VIDEO RECORDING SOFTWARE
  - A. General
    - 1. Complete software-based platform that encompasses recording video, viewing video, reviewing recorded video, and storing video for indefinite periods of time.
    - 2. Designed for a multi-site, multi-server environment for a fully scalable network video recording solution.
    - 3. The system simultaneously records, displays live video, and plays back video. None of the video operations interfere with each other. Live view and video playback does not interrupt the recording process.
  - B. Features
    - 1. Simultaneous support for MJPEG, MPEG-4, and H.264 video compression formats.
    - 2. Standards-based, open architecture software that is capable of running on non-proprietary hardware.
    - 3. Supports desktop, web browser, and mobile web clients. Capable of pushing live video on-demand to and from any client.
    - 4. Integrated virtual matrix switch for distributed video wall management.
    - 5. Search Capabilities
      - a. Motion detection time line
      - b. Auto-generated time intervals with thumbnail image previews
      - c. Object or zone based search
      - d. Alarm or event via ACAMS or video analytics behaviors
      - e. Supports an unlimited amount of configurable camera group views
    - 6. Recording Configuration
      - a. Advanced motion detection with configurable motion sensitivity, size, and speed
      - b. User configurable archiving schedules and sequences that do not impact uptime
      - c. Hardware and bandwidth utilization for monitoring and recording video and different frame rates and resolutions
      - d. Multiple channel audio recording
    - 7. Virtual Matrix Switch Configuration
      - a. Supports graphical keypads, touch screen monitors, dynamic mapping, and PTZ joystick controls
      - b. Supports an unlimited amount of cameras, monitors, and operators
      - c. Capable of pushing camera streams to any video wall monitor or remote display within the video management system
      - d. Capable of creating custom groups on-demand
      - e. Utilizes a one-touch or one-click selection from active maps to specific floor plans with detailed camera locations and viewing angles
      - f. Integrates with video analytics, ACAMS, and POS systems
      - g. Enables real-time notification, reviewing, and acknowledgement of events and alarms
    - 8. Video Analytics
    - 9. Network Configuration
      - a. Capable of utilizing multiple networks and subnets
      - b. Capable of utilizing user authentication via MS Windows User Account and Groups
      - c. Capable of running as a MS Windows service
      - d. Support for MS Active Directory
      - e. Support for VMware and MS Virtual PC
  - C. Manufacturer
    - 1. S2 NetVR 100 Series System
- 2.2 NETWORK VIDEO ANALYTICS SOFTWARE
  - A. General
    - 1. Provides the core functionality of a video analytics system that will process the digital video and generate alarms and/or event messages when specific events are detected.
    - 2. Software based solution installed on non-proprietary hardware with NVR integration
    - 3. The software will operate in various environmental conditions including the following:

- a. Natural or artificial lighting in indoor/outdoor environments
- b. Infrared illumination for use with compatible cameras
- c. Immune to false alarms in various weather conditions including sun, clouds, rain, snow, sleet, wind or fog
- d. Image stabilization to counter camera shake from wind or vibration due to camera mounting location
- B. Performance Requirements
  - 1. Capable of providing a variety of detection zones
    - a. A detection zone is defined as a region with a camera field of view used to detect behaviors specific to that zone.
  - 2. Capable of defining multiple detection zones with a single camera view.
  - 3. Capable of reporting alarms with the following:
    - a. On screen display with alarm text
    - b. Audio alarm alerts
    - c. Email notification containing the key video frame and relevant data
- C. Manufacturer
  - a. S2 Security
- 2.3 NETWORK VIDEO SERVER & STORAGE APPLIANCES
  - A. Document the cost of this hardware at time of bid due to price reductions and advancements in technology. Prior to placement of order, provide upgrades to the most current model as requested by the Owner up to the cost of the specified system.
  - B. General
    - 1. Controller: S2 Security Controller
    - 2. Processor: Intel Corei3 product family
    - 3. Memory: 8 GB RAM
    - 4. Hard Drive Configuration: RAID 5
    - 5. Hard Drive per Server: 2 x 8 TB SAS 7.2K RPM 3.5 inch HDD
    - 6. Chassis Configuration: Rack chassis with sliding rails
  - C. Features
    - 1. Fully scalable iSCSI SAN array with integrated virtual servers to provide a cloud-based video storage solution.
    - 2. Capable of creating a SAN array of up to 288 TB of raw storage with no single point of failure. Data access is protected during switch, port, NIC, power supply, fan, and disk failures.
    - 3. Capable of supporting RAID-6x so up to 5 simultaneous disk failures and a single server appliance failure will not affect data. Server applications restart automatically on an appliance failure.
    - 4. Integrated management software to provide alarms and alerts for disk failure, automation of iSCSI connections, and data protection.
  - D. Manufacturer
    - 1. S2 Security
- 2.4 NETWORK HD FIXED CAMERAS
  - A. Complete prepackaged unit containing:
    - 1. Sensor: 1/3" progressive scan CMOS Sensor
    - 2. Resolution: 30 frames at 1920 x 1080 (1080p HDTV)
    - 3. Video compression format: H.264 and MJPEG
    - 4. Camera Power over Ethernet (IEEE 802.3af) excluding heater/blower load
  - B. Manufacturer
    - a. Axis P3225-LV Mk II

# 2.5 NETWORK HD CORNER MOUNTED CAMERAS

- A. Complete prepackaged unit containing:
  - 1. Sensor: 1/3" progressive scan CMOS Sensor

- 2. Resolution: 30 frames at 1920 x 1080 (1080p HDTV)
- 3. Video compression format: H.264 and MJPEG
- B. Manufacturer
  - a. AXIS Q8414-LVS in White
- 2.6 NETWORK HD EXTERIOR CAMERAS
  - A. Complete prepackaged unit containing:
    - 1. Sensor: 1/3" progressive scan CMOS Sensor
    - 2. Resolution: 30 frames at 1920 x 1080 (1080p HDTV)
    - 3. Video compression format: H.264 and MJPEG
  - B. Manufacturer
    - a. AXIS P3227-LVE
- 2.7 NETWORK VIDEO ENCODERS
  - A. General
    - 1. Video Compression: Dual H.264 video streams per input
    - 2. Resolution: 30 frames at 720x480 (NTSC)
    - 3. Alarm and event management
    - 4. Inputs: 4 or 8 BNC, looping
  - B. Manufacturer
    - a. Axis
- 2.8 ANALOG FIXED CAMERAS
  - A. Complete prepackaged unit containing:
    - 1. 1/3" high resolution color CCD camera
    - 2. Resolution: 704x480 (4CIF)
    - 3. Auto iris, varifocal lens of 3.0-9.5mm
    - 4. Connectors:
      - a. Analog video, composite video output
      - b. Power, 12VDC or 24VAC
      - c. Vandal-resistant, IP66 rated dome housing
      - d. Stainless steel finish
  - B. Features
    - 1. Digital signal processing
    - 2. Digital slow shutter to enhance image quality in low light applications
  - C. Manufacturer
    - a. Axis
- 2.9 POWER SUPPLIES
  - A. General
    - 1. Provide a 120 to 24VAC output, continuous current, fully supervised power supply for each for each exterior camera with internal defroster/heater and each elevator camera.
    - 2. Provide separate transformers and cables for the defroster/heater in each exterior camera housing (i.e. do not connect these loads to the camera power supply).
  - B. Manufacturer
    - a. Axis
- 2.10 FIBER OPTIC MEDIA CONVERTERS
  - A. General
    - 1. Provide fiber optic media converts to support the stand-alone cameras shown on the site drawings.
  - B. Manufacturer

- 1. TC Communications (no substitutions)
  - a. Devices within each standalone camera:
    - 1) #TC3212-03-SC1-24 multi-mode fiber converter, stand alone, 24VDC

# PART 3 - EXECUTION

#### 3.1 INSTALLATION

- A. Network Video Recording Software
  - 1. Program record rate for network cameras at 30 frames per second at full resolution (1920x1080) using H.264 compression format.
  - 2. Coordinate with Owner's IT and Security representatives to set the following criteria:
    - a. Administrator and operator passwords
    - b. Camera and video device naming conventions
    - c. Maximum bit rate
    - d. Bandwidth throttle
    - e. Camera groups and operator views
    - f. Mapping features and criteria for a fully interactive graphical display of each floor plan
    - g. Alarm events and integration into ACAMS
    - h. Interface with POS system in Dining/Serving area
- B. Network Video Analytics Software
  - 1. Interface with video management software to transmit metadata from behavior alarms on recorded video.
  - 2. Coordinate with Owner's IT and Security representatives to set the following criteria:
    - a. Define zones for advanced motion detection to enable "tailgating" behavior alarm for turnstiles at the Employee Entrance.
    - b. Define crowd size and time threshold to enable "crowding", "loitering", and "stopped vehicle" behavior alarms for exterior cameras.
- C. Network Video Server & Storage Appliance
  - 1. Rack mount servers in the ER room as indicated on project drawings. Coordinate with Owner's IT representative and telecommunications contractor to provide network connectivity.
  - 2. Install MS Windows Server 2008 and necessary client access licenses.
  - 3. Install video management and video analytics software packages.
  - 4. Configure each array to support the maximum volume of disks in a RAID-6x configuration.
  - 5. Setup management software to transmit alerts and alarms for disk failure to the ACAMS. This will enable a single point of monitoring all security related alarms.
  - 6. Connect six (6) patch cords from network switch to each appliance to provide fault tolerance and sufficient switch ports for video throughput.
- D. Interior Network HD Cameras
  - 1. Provide flush ceiling mount for fixed network cameras within ceiling space. Install camera body above ceiling line when camera located in ceiling so only dome exposed.
  - 2. Provide surface mount ring and electrical back box adapter plate for fixed network cameras in stairwells or other wall mounted locations.
  - 3. Field determine exact placement of cameras to ensure complete coverage.
  - 4. Adjust the wide dynamic range, gain control, and noise reduction settings on each camera as required to provide clear and crisp video images.
- E. Exterior Network HD Cameras
  - 1. Provide outdoor housing and mounts for exterior cameras.
  - 2. Field determine exact placement of cameras to ensure complete coverage.
  - 3. Coordinate a meeting with Owner's IT and Security representatives and Division 26 contractor to walk site and confirm actual mounting locations for each CCTV camera prior to installation.
  - 4. Field determine fixed camera lens size and settings to ensure complete coverage.
- F. Network Video Encoder Servers
  - 1. Rack mount video encoders in the TR rooms as shown on the project drawings.
  - 2. Connect analog video signal cabling from elevator cameras to BNC inputs.

- 3. Program record rate at 12 frames per second at full resolution (704x480) using H.264 compression format.
- G. Analog Cameras in Elevator Cars
  - 1. Furnish housing, camera, and lens and deliver to elevator contractor.
  - 2. Installation of cameras within elevator cars by elevator contractor.
  - 3. Coordinate a meeting with elevator contractor to determine termination point of traveler cable coax for analog camera video signal.
  - 4. Camera powered by low voltage power supply within elevator car.
  - 5. Terminate analog cameras to network video encoder servers in nearest TR room.

#### 3.2 TESTING

A. Commission the video surveillance system in accordance with Section 28 08 00 – Security System Acceptance Testing.

END OF SECTION

# PAGE INTENTIONALLY LEFT BLANK

# Meeting Agenda

Project	Fannin County Courthouse Phase II Interior & Exterior Restoration
Project No.	#1737
Purpose	Pre-Bid Conference
Date	October 2, 2018

- I. Introductions
  - A. Sign-in sheet
  - B. Project Personnel
    - 1. Owner: Fannin County Contact: Fannin County Purchasing 903.583.0054 <u>fcch@fanninco.net</u>
    - Texas Historical Commission Contact: James Malanaphy, Project Reviewer 512.475.3285 james.malanaphy@thc.state.tx.us
    - Architect: Architexas
       Contact: David Chase, Principal
       214.748.4561
       <u>dchase@architexas.com
       Contact: Anne Stimmel, Project Architect
       astimmel@architexas.com
       Contact: Renee Bresson, Project Architect
       rbresson@architexas.com

      </u>
- II. Overview of Bidding Procedures, Requirements & Schedule
  - A. RFP Deadlines
  - B. Access to Drawings
  - C. Bidding Q&A
    - 1. Submit questions in writing to Fannin County Purchasing by 3pm on October 9th.
    - 2. Architexas will respond via Addendum by October 16th.
    - $\label{eq:constraint} 3. \quad \mbox{Proposals must be submitted to Fannin County by 1:30pm on October 23^{rd}. }$
    - 4. Expected selection and award by November 6<sup>th</sup>.
  - D. Bid Evaluation Criteria
    - 1.Price35%2.Delivery Schedule25%3.Past Experience15%4.References10%5.Proposed Subcontractors15%
    - 5. Proposed Subcontractors 15
  - E. Project Schedule 600 calendar days

- III. Summary of Work
  - A. Phase II of II for the full restoration of the 1888 courthouse.
  - B. Project is part of the Texas Historical Courthouse Preservation Program (THCPP).
  - C. Secretary of the Interior's Standards for the Treatment of Historic Properties apply to this project.
  - D. Project will be reviewed by THC.
  - E. Work includes interior and exterior restoration:
    - 1. Restore exterior and interior to 1888 appearance.
    - 2. Selective demolition of roof and support structure. Provide weathertight enclosure during roof removal.
    - 3. Masonry cleaning and restoration. Utilize original quarry for limestone replacement.
    - 4. Alternate #1 restore site to 1888 appearance.
    - 5. Determine spot elevations on site once sidewalks are removed.
    - 6. Provide foundation waterproofing system.
    - 7. Provide ADA access at basement level.
    - 8. Provide new traction elevator.
    - 9. Tower to be sole source.
    - 10. Dry in building prior to tower installation.
    - 11. New flooring throughout. Determine finish floor levels.
    - 12. Reconstruct original cast iron stairs.
    - 13. Reconstruct courtroom balcony.
    - 14. Provide new doors and windows to match historic appearance.
    - 15. Vault door restoration.
    - 16. Provide new courtroom furnishings.
    - 17. Provide all new MEP systems.
  - F. Reports for Reference (included in Project Manual).
    - 1. Geotechnical Report
    - 2. Environmental Reports
    - 3. Historical Paint and Finish Analysis Report
    - 4. Masonry Conservation Report
    - 5. Acoustical Report
- IV. General Questions
- V. Tour of the Building
- VI. Tour of the Original Quarry

# Fannin County Courthouse

Phase II Interior & Exterior Restoration

PRE-BID CONFERENCE SIGN-IN SHEET

DATE: OCTOBER 2, 2018

		NIN COULTRA		
CONTACT	COMPANY	ADDRESS	PHONE	E-MAIL
David Chase	Architexas	1907 Marilla, 2nd Floor Dallas, TX 75201	214-748-4561	dchase@architexas.com
Anne Stimmel	Architexas	1907 Marilla, 2nd Floor Dallas, TX 75201	214-748-4561	astimmel@architexas.com
KENDAN JENIGNS	PRITZ DURANT &	57. WOMILIA 76177	2 DR. 812-439-3813	Kendall @ petedurant.com
DENTON CLIME	Built HRight	963 6000 340 Waco tx 76706	254-412-0801	dentangobuilt-WRIGHt. NET
PAULUMN Gilden	VANGildEn Plaste	1917 N. Cenon 1. ubboth TY 79414	9667782251	VANGilden Plasten jug Ogmail. 000
JOHN XUNSO	EVEREST	519 E. J 30 Borting	2149062490	J3 WANSON DE VERESTEONSTRUCTIONING
Denver Price	Sunbelt	1318 Ferguson El.	214-218.3215	denver @ sun belt llc. com
Jill Holmes	FanninCounty	Advisor for U. house Restantion	(903)246-1057	fach@ tanninco. net
Alicia Whipple	Famin County	BOOK. 121 BOOLDERY TX75418	(903)5830054	awhipple a fanninco.net
Sherry Zindais	HanninCounty Hist. Auditor	2 2	(903)583-7457	Smzindars@Sanninco.net
<b>U</b>				



Architexas CREATE + CONSERVE

CONTACT	COMPANY	ADDRESS	PHONE	E-MAIL
DONARD HENKE	TURNER	10100 NOGNTRON OXPRES	WON 469 321 6946	a dhenke e toco.com
Matt Levenhagen	United Restoration	5720 Allison Rd Fouston, TR	713-987-9424	Matthe Durpinc.com
Scott Houser	Houser Fabrication	5704 Huy 90 Madisonville	903-721-1701	Scott@houserfabrication.com
John Castro	Voidform Products In	COISI Cavier Rd	817 205 9907	john. c Quoid form com
Stephen Snider	Tella Firma	1701 N Collins Blued.	(903) 815 9154	stephen, snider Etella Firma, com
JAMES MALANAPHY	thic		512. +15.328	James M. Othc. texas, 50
BRAD BOYD	MCR	5125 NE PKux	817498.7277	brad boude midcontinentation
RAMBY HighES	10	Ft. Worth	N	n
			· · · · · · · · · · · · · · · · · · ·	

CONTACT	COMPANY	ADDRESS	PHONE	E-MAIL
LEE EVANS	KBL Restoration	2506 Mohark ST. LongvierT	× 254-4K5-67	3 (RED KELLEStratio atom
BIII Melown	POWER LIFT	301 Progrees Dr.	800.991.5938	10 INFO (D) POWURIEFFOUNDATION (
Randy Crider	Frontier Waterproop	1 332 east oak	940-566-4856	randy@frontierwateravation ( an
Cory Lee	Americanfestoro	Tron Lightie, To	972-227-883	o dectode proprio
Donma Daniel	Acumen	6022 JOSTER NO AVIL	214916-505	S downle & AC LAMA HIA - DWTERARL
BO BOB MCKECH	we wath so	FOLDEND JENEST TX	817-4017617	buckechnie & man scorowith
DONNIE SAUDER	HOPE CONCRES	E P.O. 60× 489	903-583-29	22 Jonnie Snider @ hopen
Kyle Monerief	Phoenix I		214-902-011	KMONCRIES@ phoenix7, org
(				

CONTACT	COMPANY	ADDRESS	PHONE	E-MAIL
Aha				
Priveriy	<u> </u>			
Tak Sellert	Phoenix 7			Deeller & abaarid 65
STANLEY STONE	RELIANCE	1001 ALLIMAY DR NASH TY 75519	903-223-0944	STANLEY6
CLERIC BURDO	Ta	In Ci DII TUZCI	2147-2 9.90	DE RELIANCE NECHAN
INA 110 111	- 20	100 Glas, Delles 1× 1520	4 617.152.7.15	cbaker Cjeeng.com
Matthew Manske	MERCE	2928 Story Rol, Perce 750	\$ 972-870-9660	mmanske @ mepce.com
		0		
	· · · · · · · · · · · · · · · · · · ·			
	And a second			







