DAVINCI ACADEMY DaVINCI ACADEMY CLASSROOM UPGRADES -MIDDLE D-2033 GRANT AVENUE OGDEN, UTAH

Case, Lowe and Hart, Inc. 2484 Washington Blvd. Ste 510 Ogden, Utah 84401

> ARW Engineers 1594 West Park Circle Ogden, Utah 84404

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EP111	ELECTRICAL POWER PLAN - SECOND FLOOR
EP601	ELECTRICAL SCHEDULES



	1		2		
APPLICABLE CODES:	2015 INTERNATIONAL BUILDING CODE 2014 NATIONAL ELECTRICAL CODE 2015 INTERNATIONAL PLUMBING CODE 2015 INTERNATIONAL MECHANICAL CODE 2015 INTERNATIONAL ENERGY CONSERVATION CODE 2015 INTERNATIONAL FIRE CODE 2015 INTERNATIONAL FUEL GAS CODE				
Occupancy:	E				
CONSTRUCTION TYPE:	Vb AREA "B" WILL BE SERVED BY AS AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13.				
ALLOWABLE FLOOR AREA: Per Table 506.2	E (Vb)=	SF 28,500	Frontage Increase	Factor	
ACTUAL FLOOR AREA:	Existing condition 1st and 2nd Floor Renovation Area	24,934 1,950			
REQUIRED FIRE WALLS:	Total	24,934			
FIRE EXTINGUISHERS	Existing Conditions				
ALLOWABLE STORIES: per table 504.4	Vb=2				
ACTUAL STORIES:	2				
ALLOWABLE BUILDING HEIGHT: per table 504.3 ACTUAL BUILDING HEIGHT:	Vb=60 25'-4"				
4					
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2	250 ft				
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE:	250 ft 188 ft				
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: EXITING REQUIREMENTS:	250 ft 188 ft AREA FUNCTION		FLOOR AREA	FLOOR AREA	PER OCC.
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: EXITING REQUIREMENTS: Occupant load factor	250 ft 188 ft AREA FUNCTION E- 1st Flr		FLOOR AREA 4,961	FLOOR AREA 20	PER OCC. Net
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: EXITING REQUIREMENTS: Occupant load factor table 1004.1.2	250 ft 188 ft AREA FUNCTION E- 1st Flr E- 2nd Flr E- 2nd Flr		FLOOR AREA 4,961 5,187	FLOOR AREA 20 20	PER OCC. Net Net
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: EXITING REQUIREMENTS: Occupant load factor table 1004.1.2	250 ft 188 ft AREA FUNCTION E- 1st Flr E- 2nd Flr B- 1st Flr office B- 2nd Flr office		FLOOR AREA 4,961 5,187 1,950 1.950	FLOOR AREA 20 20 100 100	PER OCC. Net Net
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: EXITING REQUIREMENTS: Occupant load factor table 1004.1.2	250 ft 188 ft AREA FUNCTION E- 1st Flr E- 2nd Flr B- 1st Flr office B- 2nd Flr office Kitchen		FLOOR AREA 4,961 5,187 1,950 1,950 593	FLOOR AREA 20 20 100 100 200	PER OCC. Net Net
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: EXITING REQUIREMENTS: Occupant load factor table 1004.1.2 Exit width .2 per 1005.3.2	250 ft 188 ft AREA FUNCTION E- 1st Flr E- 2nd Flr B- 1st Flr office B- 2nd Flr office Kitchen Excerise		FLOOR AREA 4,961 5,187 1,950 1,950 593 4,654	FLOOR AREA 20 20 100 100 200 50	PER OCC. Net Net
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: EXITING REQUIREMENTS: Occupant load factor table 1004.1.2 Exit width .2 per 1005.3.2	250 ft 188 ft AREA FUNCTION E- 1st Flr E- 2nd Flr B- 1st Flr office B- 2nd Flr office Kitchen Excerise		FLOOR AREA 4,961 5,187 1,950 1,950 593 4,654	FLOOR AREA 20 20 100 100 200 50 50 TOTAL	PER OCC. Net Net
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: EXITING REQUIREMENTS: Occupant load factor table 1004.1.2 Exit width .2 per 1005.3.2	250 ft 188 ft AREA FUNCTION E- 1st Flr E- 2nd Flr B- 1st Flr office B- 2nd Flr office Kitchen Excerise		FLOOR AREA 4,961 5,187 1,950 1,950 593 4,654	FLOOR AREA 20 20 100 100 200 50 50 TOTAL	PER OCC. Net Net
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: EXITING REQUIREMENTS: Occupant load factor table 1004.1.2 Exit width .2 per 1005.3.2	250 ft 188 ft AREA FUNCTION E- 1st Flr E- 2nd Flr B- 1st Flr office B- 2nd Flr office Kitchen Excerise		FLOOR AREA 4,961 5,187 1,950 1,950 4,654 4,654 OCCUPANTS 346	FLOOR AREA 20 20 100 100 200 50 TOTAL EXITS 2	PER OCC. Net Net
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: EXITING REQUIREMENTS: Occupant load factor table 1004.1.2 Exit width .2 per 1005.3.2	250 ft 188 ft AREA FUNCTION E- 1st Flr E- 2nd Flr B- 1st Flr office B- 2nd Flr office B- 2nd Flr office Kitchen Excerise		FLOOR AREA 4,961 5,187 1,950 1,950 4,654 0 0CCUPANTS 346 260	FLOOR AREA 20 20 100 100 200 50 TOTAL EXITS 2 2 2	PER OCC. Net Net
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: EXITING REQUIREMENTS: Occupant load factor table 1004.1.2 Exit width .2 per 1005.3.2	250 ft 188 ft AREA FUNCTION E- 1st Flr E- 2nd Flr B- 1st Flr office B- 2nd Flr office B- 2nd Flr office Kitchen Excerise		FLOOR AREA 4,961 5,187 1,950 1,950 4,654 0 0CCUPANTS 346 260	FLOOR AREA 20 20 100 100 200 50 TOTAL EXITS 2 2 4	PER OCC. Net Net
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: EXITING REQUIREMENTS: Occupant load factor table 1004.1.2 Exit width .2 per 1005.3.2 EXITING PROVIDED:	250 ft 188 ft AREA FUNCTION E- 1st Flr E- 2nd Flr B- 1st Flr office B- 2nd Flr office Kitchen Excerise GROUND FLOOR SECOND FLOOR TOTAL		FLOOR AREA 4,961 5,187 1,950 1,950 4,654 0 0CCUPANTS 346 260 0CCUPANTS	FLOOR AREA 20 20 100 100 200 50 TOTAL EXITS 2 4 EXITS	PER OCC. Net Net
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: EXITING REQUIREMENTS: Occupant load factor table 1004.1.2 Exit width .2 per 1005.3.2 EXITING PROVIDED:	250 ft 188 ft AREA FUNCTION E- 1st Flr E- 2nd Flr B- 1st Flr office B- 2nd Flr office Kitchen Excerise GROUND FLOOR GROUND FLOOR GROUND FLOOR GROUND FLOOR		FLOOR AREA 4,961 5,187 1,950 1,950 593 4,654 0 0CCUPANTS 346 0CCUPANTS 346 346	FLOOR AREA 20 20 100 100 200 50 TOTAL EXITS 2 4 EXITS 8	PER OCC. Net Net
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: EXITING REQUIREMENTS: Occupant load factor table 1004.1.2 Exit width .2 per 1005.3.2 EXITING PROVIDED:	250 ft 188 ft AREA FUNCTION E-1st Flr E-2nd Flr B- 1st Flr office B- 2nd Flr office Kitchen Excerise GROUND FLOOR SECOND FLOOR GROUND FLOOR SECOND FLOOR SECOND FLOOR TOTAL		FLOOR AREA 4,961 5,187 1,950 1,950 393 4,654 OCCUPANTS 346 260 OCCUPANTS 346 260	FLOOR AREA 20 20 100 100 200 50 TOTAL EXITS 2 4 EXITS 8 2 10	PER OCC. Net Net
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: EXITING REQUIREMENTS: Occupant load factor table 1004.1.2 Exit width .2 per 1005.3.2 EXITING PROVIDED: EXITING PROVIDED:	250 ft 188 ft AREA FUNCTION E- 1st Flr E- 2nd Flr B- 1st Flr office B- 2nd Flr office Kitchen Excerise GROUND FLOOR SECOND FLOOR S		FLOOR AREA 4,961 5,187 1,950 1,950 593 4,654 0 0CCUPANTS 346 260 346 346 260 1 <	FLOOR AREA 20 20 100 100 200 50 TOTAL EXITS 2 4 EXITS 2 10 0 10 0 10 0 10 0	PER OCC. Net Net
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: EXITING REQUIREMENTS: Occupant load factor table 1004.1.2 Exit width .2 per 1005.3.2 EXITING PROVIDED: EXITING PROVIDED: PLUMBING REQUIREMENTS: Fixture count based per table 2902.1	250 ft 188 ft AREA FUNCTION E-1st FIr E-2nd FIr B-1st FIr office B-2nd FIr office B-2nd FIr office Kitchen Excerise GROUND FLOOR SECOND FLOOR TOTAL GROUND FLOOR SECOND FLOOR SECOND FLOOR SECOND FLOOR COCUPANCY B- because over 15 occupancies requires 2 we min		FLOOR AREA 4,961 5,187 1,950 1,950 593 4,654 0 0CCUPANTS 346 260 346 260 1 <tr< td=""><td>FLOOR AREA 20 20 100 100 200 50 TOTAL EXITS 2 4 EXITS 2 10 OCCUPANTS 3</td><td>PER OCC. Net Net</td></tr<>	FLOOR AREA 20 20 100 100 200 50 TOTAL EXITS 2 4 EXITS 2 10 OCCUPANTS 3	PER OCC. Net Net
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: EXITING REQUIREMENTS: Occupant load factor table 1004.1.2 Exit width .2 per 1005.3.2 EXITING PROVIDED: EXITING PROVIDED: PLUMBING REQUIREMENTS: Fixture count based per table 2902.1	250 ft 188 ft AREA FUNCTION E- 1st Flr E- 2nd Flr B- 1st Flr office B- 2nd Flr office Kitchen Excerise GROUND FLOOR SECOND FLOOR SECOND FLOOR TOTAL OCCUPANCY B- because over 15 occupancies requires 2 wc min E		FLOOR AREA 4,961 5,187 1,950 1,950 593 4,654 0 0CCUPANTS 346 260 346 260 FIXTURE	FLOOR AREA 20 20 100 100 200 50 TOTAL EXITS 2 4 EXITS 2 10 OCCUPANTS 3 509	PER OCC. Net Net Net
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: EXITING REQUIREMENTS: Occupant load factor table 1004.1.2 Exit width .2 per 1005.3.2 EXITING PROVIDED: EXITING PROVIDED: <u>PLUMBING REQUIREMENTS:</u> Fixture count based per table 2902.1	250 ft 188 ft AREA FUNCTION E-1st Flr E-2nd Flr B-1st Flr office B-2nd Flr office Kitchen Excerise Image: Second FLOOR SECOND FLOOR SECOND FLOOR SECOND FLOOR SECOND FLOOR SECOND FLOOR OCCUPANCY B- because over 15 occupancies requires 2 wc min E B		FLOOR AREA 4,961 5,187 1,950 1,950 593 4,654 0 0CCUPANTS 346 260 346 260 Image: Second Se	FLOOR AREA 20 20 100 100 200 50 TOTAL EXITS 2 2 4 EXITS 2 10 OCCUPANTS 3 509 3	PER OCC. Net Net Net
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: EXITING REQUIREMENTS: Occupant load factor table 1004.1.2 Exit width .2 per 1005.3.2 EXITING PROVIDED: EXITING PROVIDED: PLUMBING REQUIREMENTS: Fixture count based per table 2902.1	250 ft 188 ft AREA FUNCTION E-1st Flr E-2nd Flr B-1st Flr office B-2nd Flr office Kitchen Excerise Image: Second FLOOR SECOND FLOOR SECOND FLOOR SECOND FLOOR TOTAL OCCUPANCY B- because over 15 occupancies requires 2 wc min E B E		FLOOR AREA 4,961 5,187 1,950 1,950 593 4,654 0 0CCUPANTS 346 260 346 260 593 1000000000000000000000000000000000000	FLOOR AREA 20 20 100 200 50 TOTAL EXITS 2 2 2 100 200 50 100 200 50 200 50 000 50 10 0CCUPANTS 3 509 3 509 3 509	PER OCC. Net Net Net Net Net Net Net Net
ALLOWABLE EGRESS TRAVEL DISTANCE: per table 1017.2 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: EXITING REQUIREMENTS: Occupant load factor table 1004.1.2 Exit width .2 per 1005.3.2 EXITING PROVIDED: EXITING PROVIDED: <u>PLUMBING REQUIREMENTS:</u> Fixture count based per table 2902.1	250 ft 188 ft AREA FUNCTION E-1st Flr E-2nd Flr B- 1st Flr office B- 2nd Flr office Kitchen Excerise GROUND FLOOR SECOND FLOOR TOTAL GROUND FLOOR SECOND FLOOR TOTAL OCCUPANCY B- because over 15 occupancies requires 2 wc min E B E B C C C C C C C C C C C C C C C C		FLOOR AREA 4,961 5,187 1,950 1,950 593 4,654 0 0CCUPANTS 346 260 346 260 FIXTURE Affection 1/25- to 50 WATER CLOSET FACTOR 1/25- to 50 WATER CLOSET FACTOR 1/40- to 80 LAVATORIES FACTOR 1/40- to 80 LAVATORIES FACTOR 1/50 INKING FOUNTAIN FACTOR 1/100	FLOOR AREA 20 20 100 100 200 50 TOTAL EXITS 2 2 4 EXITS 2 10 OCCUPANTS 3 509 3 509 3 509 3 509 3 509 3	PER OCC. Net Net Net Net Net Net Net Net

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6/20/17
DAVINCI
CLASSROOM
215 22ND ST.
Ogden, Utah 84401
MARK DATE DESCRIPTION
ISSUE DATE: JUNE 20, 2017 PROJECT NO: 17010
CAD DWG FILE: DRAWN BY: Author
CHK'D BY: Checker
JUNE 20, 2017
SHEET TITLE
CODE REVIEW &
LIFE SAFETY
SHEET NO:
G002



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E SIDEWALK	ACADEMY CLASSROOM UPGRADES -MIDDLE D- 215 22ND ST. Ogden, Utah 84401 MARK DATE DESCRIPTION
	ISSUE DATE: JUNE 20, 2017 PROJECT NO: 17010 CAD DWG FILE: DRAWN BY: Author CHK'D BY: Checker PERMIT SET JUNE 20, 2017 SHEET TITLE SHEET TITLE SHEET NO: C101



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	ISSUE DATE: JUNE 20, 2017
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	JUNE 20, 2017
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	GROUND FLOOR
	DEMO PLAN
	SHEET NO:
	D101



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MECHANICAL DEMOLITION KEYED NOTES				
MARK	NOTES			
MD1	EXISTING DIFFUSER/GRILLE TO REMAIN.			
MD2	EXISTING DIFFUSER/GRILLE TO BE RELOCATED.			
MD3	EXISTING DIFFUSER/GRILLE TO BE REMOVED.			
MD4	DUCTWORK TO REMAIN AND BE REUSED.			
MD5	EXISTING DUCTWORK TO BE REMOVED.			
MD6	EXISTING THERMOSTAT TO REMAIN.			
MD7	EXISTING THERMOSTAT TO BE RELOCATED.			
MD8	EXISTING INDOOR AIR HANDLING UNIT TO REMAIN.			



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	1.	THE STRUCTURAL NOTES ARE INTENDED TO COMPLEMENT THE PROJECT SPECIFICATIONS WHICH ARE
	2.	PART OF THE CONSTRUCTION DOCUMENTS. SPECIFIC NOTES AND DETAILS ON THE DRAWINGS SHALL GOVERN OVER THE STRUCTURAL NOTES AND TYPICAL DETAILS. THESE DRAWINGS (AND, WHERE APPLICABLE, ACCOMPANYING WRITTEN SPECIFICATIONS) ARE THE ONLY CONTRACT DOCUMENTS PROVIDED BY ARW ENGINEERS FOR THE PROJECT REPRESENTED HEREIN. NOTHING IN ANY DIGITAL MODEL OR DIGITAL FILE RELATED TO THIS PROJECT SHALL BE TAKEN TO SUPERSEDE ANY INFORMATION SHOWN IN THESE DRAWINGS (INCLUDING, BUT NOT LIMITED
)	3.	TO, DIMENSIONS, SIZES, ETC). THE ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. THE STRUCTURAL DRAWINGS ARE SUPPLEMENTARY TO AND MUST BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AND OTHER CONSULTANTS DRAWINGS. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY WORK
	4.	INVOLVED. IN CASE OF CONFLICT, FOLLOW THE MOST STRINGENT REQUIREMENT AS DIRECTED BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER. SEE SPECIFICATIONS FOR REQUIRED SUBMITTALS. SUBMITTALS SHALL BE MADE IN A TIMELY MANNER AS INDICATED IN SPECIFICATIONS. REVIEW OF SUBMITTALS BY ARW ENGINEERS IS FOR GENERAL COMPLIANCE ONLY AND IS NOT INTENDED AS APPROVAL. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SIZES, DIMENSIONS, AND ELEVATIONS ON SUBMITTALS AS RELATED TO DESIGN DOCUMENTS. PREPARATION OF SHOP DRAWINGS FOR STRUCTURAL ELEMENTS WILL REQUIRE INFORMATION (I.E. DIMENSIONS, ETC.) FOLIND IN THE ARCHITECTURAL STRUCTURAL AND OTHER
	5.	CONSULTANTS DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE. IF ACTUAL
-	6.	ARCHITECT PRIOR TO FABRICATION OR CONSTRUCTION OF ANY AFFECTED ELEMENTS. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL LOCATIONS AND SIZES OF MECHANICAL EQUIPMENT OR OTHER EQUIPMENT BEFORE FABRICATING AND ERECTING STRUCTURAL ELEMENTS. SIZES AND LOCATIONS THAT DIFFER FROM THOSE SHOWN ON THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ARCHITECT.
	7.	THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST TO THE ARCHITECT FOR ARCHITECT AND/OR ENGINEER APPROVAL BEFORE PROCEEDING WITH ANY CHANGES, MODIFICATIONS, OR
	8.	OBSERVATION VISITS TO THE SITE BY ARW ENGINEERS FIELD REPRESENTATIVES SHALL NEITHER BE CONSTRUED AS INSPECTION NOR APPROVAL OF CONSTRUCTION.
	9. 10.	WITHIN THE LIMITS OF DESIGN LOADS AS NOTED IN THESE DOCUMENTS. TYPICAL OR SIMILAR DETAILS AND SECTIONS SHALL APPLY WHERE SPECIFIC DETAILS ARE NOT
	11.	SHOWN. TYPICAL OR SIMILAR DETAILS REFER TO THE CONDITION ADDRESSED AND ARE NOT NECESSARILY DETAILS LABELED "TYPICAL" OR "SIMILAR" IN THE PLANS AND DOCUMENTS. DRAWINGS AND DETAILS HAVE BEEN PREPARED WITH THE INTENT TO VISUALLY REPRESENT
	12	INFORMATION PROVIDED IN SCALED FORM; HOWEVER CONTRACTOR/SUPPLIERS SHOULD NOT SCALE PLANS OR DETAILS FOR DIMENSIONAL INFORMATION. THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY SHORING AND BRACING FOR ALL
	13.	STRUCTURAL ELEMENTS UNTIL THE ENTIRE STRUCTURAL SYSTEM IS COMPLETED. DESIGN OF ALL SHORING AND BRACING IS BY OTHERS AT NO ADDITIONAL COST TO THE OWNER. ENGINEER SHALL NOT BE RESPONSIBLE FOR ACTIVITIES UNDER CONTROL OF THE CONTRACTOR SUCH AS CONSTRUCTION SITE SAFETY, MEANS, METHODS AND SEQUENCING OF CONSTRUCTION. ENGINEER
		SHALL NOT BE RESPONSIBLE FOR FABRICATION, ERECTION AND CONSTRUCTION REQUIREMENTS AS PRESCRIBED BY OSHA OR OTHER REGULATORY AGENCIES REGARDLESS OF INDICATIONS IN THESE DOCUMENTS.
	14.	NOTICE OF COPYRIGHT: THESE STRUCTURAL DRAWINGS ARE HEREBY COPYRIGHTED BY ARW ENGINEERS, ALL RIGHTS RESERVED. THESE DOCUMENTS DEFINE A STRUCTURE AND ARE INSTRUMENTS OF SERVICE, FOR ONE USE ONLY. REPRODUCTION AND DISTRIBUTION OF THESE DRAWINGS IS ONLY ALLOWED AS REQUIRED FOR REGULATORY AGENCIES AND FOR CONVEYANCE OF INFORMATION TO PARTIES INVOLVED IN THE CONSTRUCTION OF THIS PROJECT. THESE DOCUMENTS
		SHALL NOT BE REPRODUCED OR COPIED, IN PART OR WHOLE BY ANY PARTY FOR USE IN PREPARATION OF SHOP DRAWINGS OR OTHER SUBMITTALS.
B.	ST /	ATEMENT OF SPECIAL INSPECTIONS AND SPECIAL INSPECTIONS
	2.	SUBJECT TO SPECIAL INSPECTIONS IN ACCORDANCE WITH IBC SECTION 1705.11 AND 1705.12 ARE IDENTIFIED ON THESE DOCUMENTS WITH A CIRCLE "L". ALL OTHER ITEMS REQUIRING SPECIAL INSPECTION ARE IDENTIFIED IN THE SPECIAL INSPECTION SCHEDULE ON SHEET S003 AND S004. SPECIAL INSPECTIONS AND TESTING ARE TO BE PROVIDED AS REQUIRED BY IBC SECTIONS 1704 THROUGH 1705 AND OTHER APPLICABLE SECTIONS OF THE IBC. THE TYPE AND FREQUENCY OF TESTING AND SPECIAL INSPECTIONS SHALL BE AS NOTED IN THE SPECIAL INSPECTION SCHEDULE, JOB
	3.	SPECIFICATIONS, AND ACCORDANCE WITH IBC SECTION 110 AND CHAPTER 17. CONTRACTOR SHALL COORDINATE AND COOPERATE WITH REQUIRED INSPECTIONS. ALL TESTING AND SPECIAL INSPECTION SHALL BE PROVIDED BY A QUALIFIED INDEPENDENT SPECIAL
		INSPECTION AGENCY IN ACCORDANCE WITH IBC 1704 AND AS OUTLINED IN THE JOB SPECIFICATIONS. REPORTS OF FINDINGS OR DISCREPANCIES SHALL BE NOTED AND FORWARDED TO THE CONTRACTOR, ARCHITECT, ENGINEERS, AND BUILDING OFFICIAL IN A TIMELY MANNER.
	4.	STRUCTURAL OBSERVATION VISITS SHALL BE PERFORMED BY A REPRESENTATIVE FROM ARW ENGINEERS IN ACCORDANCE WITH THE CONTRACT AS NEEDED TO OBSERVE THE CONSTRUCTION OF CRITICAL BUILDING ELEMENTS (I.E. FOOTINGS, BRACED FRAMES, MOMENT FRAMES, DRAG STRUTS AND THEIR CONNECTIONS, COLLECTORS, AND ROOF AND FLOOR DIAPHRAGMS). STRUCTURAL OBSERVATION REPORTS FOR EACH VISIT SHALL BE SENT DIRECTLY TO THE ARCHITECT FOR DISTRIBUTION TO THE CONTRACTOR AND PLUE DING OFFICIAL STRUCTURAL OBSERVATION VISITS
	5.	SHALL NEITHER BE CONSTRUED AS SPECIAL INSPECTION NOR APPROVAL OF COMPLETED CONSTRUCTION. IN ACCORDANCE WITH IBC 1704.4, THE CONTRACTOR SHALL SUBMIT A WRITTEN CONTRACTOR'S STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER. THE STATEMENT SHALL BE
		DESIGNATED PRIOR TO THE CONSTRUCTION OF ANY SEISMIC/WIND-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC/WIND SYSTEM, OR COMPONENT IDENTIFIED IN THESE DOCUMENTS WITH A CIRCLE "L".
C.	BA	
	1. 2.	GOVERNING BUILDING CODE : INTERNATIONAL BUILDING CODE (IBC) 2015 RISK CATEGORY : II SUSPENDED FLOOR LOADS
-	3.	 a. LIVE LOAD = 95 PSF CORRIDORS; 55 PSF CLASSROOMS b. DEAD LOAD = 50 PSF SEISMIC DESIGN :
		 a. SEISMIC IMPORTANCE FACTOR, I_E: 1.0 b. SITE CLASS : D c. MAPPED SPECTRAL RESPONSE ACCELERATIONS : S_S = 1.375. S₁ = 0.497
		d. SPECTRAL RESPONSE COEFFICIENTS : $S_{DS} = 0.916$, $S_{D1} = 0.498$ e. SEISMIC DESIGN CATEGORY : D f. BASIC SEISMIC-FORCE-RESISTING SYSTEM : SPECIAL REINF. MASONRY SHEAR WALLS g. DESIGN BASE SHEAR : $V_{N-S} = 0.183$ W, $V_{E-W} = 0.183$ W
		 h. SEISMIC RESPONSE COEFFICIENT, C_S: 0.183 i. RESPONSE MODIFICATION FACTOR, R : 5 j. ANALYSIS PROCEDURE : EQUIVALENT LATERAL PROCEDURE

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D. FOUNDATION

- DESIGN SOIL PRESSURE : 2500 PSF 2. SOILS REPORT NOT PROVIDED

- - PLACE AND HAVE ATTAINED FULL STRENGTH.

E. CONCRETE

- **REQUIREMENTS LISTED BELOW :** a. FOOTINGS, GRADE BEAMS, FOUNDATION WALLS

 - a. 28 DAY COMPRESSIVE STRENGTH : 4500 PSI
- b. MAXIMUM W/C RATIO : c. MAXIMUM AGGREGATE SIZE :
- d. AIR CONTENT :

- 1. 28 DAY COMPRESSIVE STRENGTH : 3000 PSI
- WATER USED IN MIXING CONCRETE SHALL CONFORM TO ASTM C1602. NO PIPES, DUCTS, SLEEVES, ETC. SHALL BE PLACED IN STRUCTURAL CONCRETE UNLESS
- PLACEMENT.

- OF ANCHOR INSTALLATION.
- a. HILTI HIT-RE 500-V3 (ESR-3814), OR HILTI HIT-HY 200 (ESR-3187).
- b. SIMPSON SET-XP EPOXY (ESR-2508).
- a. SIMPSON SET-XP ADHESIVE (IAPMO ER-0265). b. POWERS AC100+ GOLD (ESR-3200). c. HILTI HIT-HY 70 (ESR-2682).
- a. POWERS POWER-STUD+ SD2 (ESR-2502). b. SIMPSON STRONG-BOLT 2 (ESR-3037).
- c. HILTI KWIK BOLT TZ (ESR-1917). a. HILTI KWIK BOLT TZ (ESR-3785).
- b. SIMPSON STRONG BOLT 2 (IAPMO ER-0240). c. POWERS POWER-STUD+ SD1 (ESR-2966). 8. UNLESS NOTED OTHERWISE, ALL SCREW ANCHORS INTO CONCRETE SHALL BE
- a. SIMPSON TITEN HD (ESR-2713). b. POWERS WEDGE BOLT PLUS (ESR-2526). c. HILTI KWIK HUS-EZ (ESR-3027).
- a. SIMPSON TITEN HD (ESR-1056). b. POWERS WEDGE BOLT+ (ESR-1678).
- RECORD OR THE SPECIAL INSPECTOR.
- LOCATION.

G. SUSPENDED CONCRETE SLABS / SLABS ON METAL DECK

- **BEYOND OPENING.**

- DURING ERECTION AND PLACEMENT OF SUSPENDED CONCRETE SLABS ON METAL DECK.

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- TYPICAL DETAIL) UNLESS NOTED OTHERWISE.
- USED UNLESS SPECIFICALLY APPROVED AND DETAILED BY THE ENGINEER.
- NOT ALLOWED. SEE DETAIL 4/S201.

3. ALL FOOTINGS SHALL BE PLACED ON MECHANICALLY COMPACTED FILL COMPACTED TO NOT LESS THAN 95% OF MODIFIED PROCTOR DENSITY (ASTM D-1557).

4. UNLESS NOTED OTHERWISE, ALL CONCRETE SLABS ON EARTH SHALL BEAR ON STRUCTURAL FILL COMPACTED TO 90% OF MODIFIED PROCTOR DENSITY (ASTM D-1557).

5. DESIGN AND ERECTION OF BRACING/SHORING IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. BRACING SHALL REMAIN IN PLACE UNTIL SUPPORTING STRUCTURAL ELEMENTS ARE IN

6. UNLESS NOTED OTHERWISE, ALL FOOTINGS SHALL HAVE VERTICAL FACES FORMED WITH STANDARD FORMING MATERIALS (WOOD, METAL, ETC.). WITH PRIOR APPROVAL OF ARCHITECT AND ENGINEER, CONCRETE FOR FOOTINGS CAN BE PLACED IN EXCAVATED "SOIL" FORMS PROVIDED THAT THE DIMENSIONS ARE INCREASED 3" ON EACH SIDE.

1. ALL CONCRETE MIX DESIGNS SHALL COMPLY WITH THE PROJECT SPECIFICATIONS AND THE

1. WHERE THE TOP OF THE ELEMENT IS EXPOSED OR LOCATED WITHIN 30" OF THE LOWEST

ADJACENT GRADE (EXPOSURE CATEGORY F1) :

4.5% +/- 1.5% 2. WHERE THE TOP OF THE ELEMENT IS NOT EXPOSED OR LOCATED WITHIN 30" OF THE LOWEST ADJACENT GRADE (EXPOSURE CATEGORY F0) :

a. 28 DAY COMPRÈSSIVE STRENGTH : 3000 PSI

b. INTERIOR SLABS ON GRADE (EXPOSURE CATEGORY F0) :

c. INTERIOR SUSPENDED SLABS (EXPOSURE CATEGORY F0) :

1. 28 DAY COMPRESSIVE STRENGTH : 3000 PSI

0.45

SPECIFICALLY DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER. NO ALUMINUM PRODUCTS SHALL BE EMBEDDED IN CONCRETE. PENETRATIONS THRU STRUCTURAL CONCRETE ELEMENTS MUST BE APPROVED BY THE ENGINEER AND SHALL BE BUILT INTO THE ELEMENT PRIOR TO CONCRETE

4. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS. GROOVES, ORNAMENTS, ETC. TO BE CAST IN TO CONCRETE, AND FOR EXTENT AND LOCATION OF DEPRESSIONS, CURBS, RAMPS, ETC.

F. ADHESIVE/MECHANICAL ANCHORS

1. ALL ADHESIVE/MECHANICAL ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH AN APPROVED INDEPENDENT EVALUATION REPORT (ICC, IAPMO, OR APPROVED EQUAL), AS INDICATED BELOW, AND IN ACCORDANCE WITH ALL MANUFACTURER'S REQUIREMENTS. 2. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT TIME

3. INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPLICABLE CERTIFICATION PROGRAM. CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM, OR EQUIVALENT IN ACCORDANCE WITH ACI 318-14 17.8.2.2. PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

4. UNLESS NOTED OTHERWISE, ALL ADHESIVE ANCHORS INTO CONCRETE SHALL BE :

c. POWERS PURE 110+ (ESR-3298), OR AC100+ GOLD (ESR-2582-COLD WEATHER). 5. UNLESS NOTED OTHERWISE, ALL ADHESIVE ANCHORS INTO MASONRY SHALL BE :

6. UNLESS NOTED OTHER WISE, ALL MECHANICAL ANCHORS INTO CONCRETE SHALL BE :

7. UNLESS NOTED OTHERWISE, ALL MECHANICAL ANCHORS INTO MASONRY SHALL BE :

9. UNLESS NOTED OTHERWISE, ALL SCREW ANCHORS INTO MASONRY SHALL BE :

10. ALL MASONRY CELLS WITHIN 8" OF THE ANCHOR SHALL BE SOLID GROUTED.

11. THE TESTING LABORATORY WILL PERFORM VISUAL INSPECTION OF ANCHORS AND DOWELS AS SPECIFIED IN THE SPECIAL INSPECTION SCHEDULE AND THE APPROVED INDEPENDENT EVALUATION REPORT. TENSION TESTING CAN BE REQUIRED AT THE DIRECTION OF THE STRUCTURAL ENGINEER OF

12. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON THAT HOLE AND SHIFT THE ANCHOR LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM SPACE OF (2) ANCHOR HOLE DIAMETERS OR 1 INCH, WHICH EVER IS LARGER, OF SOUND CONCRETE/MASONRY BETWEEN THE ANCHOR AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. AT CONTRACTORS OPTION, LOCATE EXISTING REINFORCMENT PRIOR TO DRILLING/CORING. IF THE ANCHOR OR DOWEL CANNOT BE SHIFTED AS NOTED ABOVE, THE ENGINEER WILL DETERMINE A NEW

13. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH MECHANICAL ANCHORS

1. UNLESS NOTED OTHERWISE, ALL CONCRETE SLABS ON METAL DECK SHALL BE 4" TOTAL THICKNESS, MATCH EXISTING FIELD VERIFY NORMAL WEIGHT CONCRETE WITH A WEIGHT LESS THAN 145 POUNDS PER CUBIC FOOT, REINFORCED WITH 6 X 6 - W1.4 X W1.4 WELDED WIRE FABRIC. REINFORCING STEEL SHALL BE CHAIRED TO 1" TOP COVER AT ALL BEAM LOCATIONS. EXCEPT WHERE SPECIFICALLY DETAILED, FIBER MESH MAY BE USED IN PLACE OF REINFORCEMENT IN SLABS ON DECK WHEN USED IN ACCORDANCE WITH AN APPROVED ICC RESEARCH REPORT AND WHERE APPROVED BY THE ENGINEER. WHERE THE SLAB CONSTRUCTION IS USED TO OBTAIN A UL FIRE RATING, THE PROPOSED FIBER MESH SHALL HAVE UL ACCEPTANCE AS AN APPROVED ALTERNATIVE TO WELDED WIRE FABRIC. 2. AROUND OPENINGS IN SUSPENDED CONCRETE SLABS, ADD REINFORCING BARS EQUIVALENT TO BARS CUT BY OPENING WITH HALF ON EACH SIDE OF OPENING. BARS PARALLEL TO PRINCIPAL REINFORCING SHALL RUN FULL LENGTH OF SPAN. BARS PARALLEL TO TEMPERATURE REINFORCING SHALL RUN 24"

3. SLAB PENETRATIONS LESS THAN 6" IN ALL DIRECTIONS WITH A CLEAR SPACING OF AT LEAST 3 TIMES THE LONGEST DIMENSION, DO NOT REQUIRE SUPPLEMENTAL REINFORCING. OTHERWISE, THE PENETRATIONS SHALL BE FRAMED ON 4 SIDES WITH STEEL ANGLES 4x4x1/4 OR BENT PLATES (SEE

4. EVERY EFFORT SHALL BE MADE TO PROVIDE A LEVEL FINISHED FLOOR WHILE MAINTAINING THE MINIMUM INDICATED SLAB THICKNESS. WHEN PLACING CONCRETE, SCREEDS SHALL BE RE-SET AFTER INITIAL SCREEDING TO ACCOUNT FOR DEFLECTION DUE TO CONCRETE WEIGHT. 5. CONTROL JOINTS IN SUSPENDED CONCRETE SLABS AND CONCRETE SLABS ON DECK SHALL NOT BE

6. SEE TYPICAL DETAILS WHEN SLABS ARE MADE COMPOSITE WITH STEEL BEAMS. ANY CONDUIT PLACED IN SLABS ON DECK SHALL BE SPACED NOT CLOSER THAN 18"O.C. CONDUIT

LARGER THAN 3/4" DIAMETER SHALL BE PLACED IN DECK FLUTES, BUT MAY NOT BE PLACED IN FLUTES WITH REINFORCING STEEL OR HSA'S. A 1" MINIMUM CLEARANCE SHALL BE MAINTAINED BETWEEN THE CONDUIT AND THE DECK. NO CONDUIT LARGER THAN 1" DIAMETER OR 1/3 THE THICKNESS OF THE CONCRETE OVER THE DECK FLUTE SHALL BE PLACED IN SLABS ON DECK. CONDUIT CROSSOVERS ARE

8. WHERE CONDUIT IS CLUSTERED TOGETHER TO RISE ABOVE SLAB OR PENETRATE SLAB, PENETRATION IN SLAB MUST BE SUPPORTED AS NOTED IN NOTE G.3 ABOVE. 9. CONTRACTOR SHALL PROVIDE ALL TEMPORARY SHORING, BRACING, AND GUYING AS REQUIRED

H. REINFORCING STEEL

1. REINFORCING BAR STRENGTH REQUIREMENTS:

a. ALL REINFORCING BARS SHALL CONFORM TO ASTM STANDARD A-615 GRADE 60 AND ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM STANDARD A-1064 AND SHALL BE SUPPLIED IN FLAT SHEETS. ADEQUATELY TIE AND SUPPORT ALL REINFORCING STEEL AS SPECIFIED BY ACI 117, TO MAINTAIN EXACT REQUIRED POSITION.

2. HEADED SHEAR STUD ASSEMBLIES SHALL CONFORM TO ASTM A1044.

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3. STEEL DISCONTINUOUS FIBER REINFORCEMENT SHALL BE DEFORMED AND CONFORM TO ASTM A820 AND SHALL HAVE A LENGTH TO DIAMETER RATIO NOT SMALLER THAN 50 AND NOT GREATER THAN 100. 4. HEADED DEFORMED BARS SHALL CONFORM TO ASTM A970. OBSTRUCTIONS OR INTERRUPTIONS OF THE BAR DEFORMATIONS, IF ANY, SHALL NOT EXTEND MORE THAN 2 BAR DIAMETERS FROM THE BEARING FACE OF THE HEAD.

5. ALL FIELD BENT DOWELS SHALL BE GRADE 40 WITH SPACING INDICATED REDUCED BY 1/3. 6. UNLESS NOTED OTHERWISE, REINFORCEMENT SHALL HAVE THE FOLLOWING CONCRETE COVERAGE :

- a. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3" b. EXPOSED TO EARTH OR WEATHER :
- #6 & LARGER 2" 2. #5 & SMALLER1-1/2"
- c. NOT EXPOSED TO WEATHER OR EARTH
- SLABS, WALLS, JOISTS, #11 & SMALLER 3/4" BEAMS, COLUMNS: MAIN REINFORCING OR TIES 1-1/2"
- d. SLAB ON GRADE
- 1. PLACE REINFORCING AT CENTER OF SLAB UNLESS INDICATED OTHERWISE. 7. EXCEPT WHERE NOTED ON PLANS OR DETAILS CONTINUOUS REINFORCEMENT SHALL BE SPLICED AT
- POINTS OF MINIMUM STRESS BY LAPPING PER THE REBAR LAP SCHEDULE. 8. REINFORCING STEEL MAY BE SPLICED WITH MECHANICAL COUPLERS THAT HAVE A TENSION CAPACITY OF AT LEAST 125% OF THE STRENGTH OF THE BAR. MECHANICAL COUPLERS SHALL BE A POSITIVE CONNECTING TYPE COUPLER, AND SHALL BE INSTALLED IN ACCORDANCE WITH AN APPROVED ICC RESEARCH REPORT. WHERE THESE ARE USED, SPLICES ON ADJACENT BARS SHALL BE STAGGERED AT LEAST 24 INCHES ALONG THE LENGTH OF THE BARS.
- 9. DO NOT WELD REINFORCING EXCEPT AS NOTED ON PLANS, WHERE REINFORCING IS WELDED, USE ASTM A-706 REINFORCING.
- 10. REINFORCING BARS, TIES, AND TENDONS SHALL BE SUPPORTED BY NYLON CONES, PLASTIC-COATED TIE-WIRES, OR PLASTIC-COATED CHAIRS. REINFORCING IN FOOTINGS IS PERMITTED TO BE SUPPORTED ON CONCRETE DOBIES.
- 11. UNLESS NOTED OTHERWISE, HOOKS, STIRRUPS, TIES, AND OTHER BENDS IN REINFORCING STEEL SHALL MEET THE STANDARDS SET FORTH IN ACI 318/318R-14. UNLESS OTHERWISE PERMITTED BY THE ENGINEER, ALL REINFORCEMENT SHALL BE BENT COLD. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT, EXCEPT AS SHOWN ON THESE DRAWINGS OR OTHERWISE PERMITTED BY THE ENGINEER.
- 12. UNLESS SPECIFICALLY NOTED AND/OR DETAILED IN THE STRUCTURAL DRAWINGS CONDUIT SHALL NOT BE IN CONTACT WITH REINFORCING STEEL.

	LEGEND OF SYMBOLS	AND ABE
AB ABV ARCH BLW BN CL CMU COL CONC DIA / Ø DBA ELEV EN FTG FFE HSA JBE MAX MB MC	EARCHOR BOLT = ABOVE = ARCHITECT = BELOW = BOUNDRY NAILING = CENTERLINE = CONCRETE MASONRY UNIT = CONCRETE = DIAMETER = DEFORMED BAR ANCHOR = ELEVATION = FOOTING = FINISHED FLOOR ELEVATION = HEADED STUD ANCHOR = JOIST BEARING ELEVATION = MAXIMUM = MASONRY BEAM = MASONRY COLUMN	
MIN OPP PL REINF REO'D	= MASONRY COLUMN = MINIMUM = OPPOSITE = PLATE = REINFORCING = REOLURED	L C
SIM TOB TOC TOG TOM TOS TYP UNO	 SIMILAR TOP OF BEAM ELEVATION TOP OF CONCRETE SLAB TOP OF GIRDER ELEVATION TOP OF MASONRY TOP OF STEEL ELEVATION TYPICAL UNLESS NOTED OTHERWISE 	L)

	Structural Sheet Index
SHEET	
NUMBER	SHEET NAM
S001	STRUCTURAL NOTES
S002	STRUCTURAL NOTES
S003	SCHEDULES
S101	PARTIAL ADDITION PLANS
S201	DETAILS
S202	DETAILS

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BREVIATIONS

FOOTING MARK

TOP OF FOOTING ELEV.

SECTION MARK SHEET NUMBER

TOP OF FOUNDATION WALL OR COLUMN PIER ELEV.

SHEAR WALL - SEE SCHEDULE MIN. LENGTH OF SHEAR WALL

FOOTING STEP

CONCRETE BEAM

FRAMING ANGLE SEE TYPICAL DETAIL

FRAMING CHANNEL SEE TYPICAL DETAIL

ITEMS, DETAILS, & SYSTEMS WHICH ARE PART OF THE LATERAL FORCE RESISTING SYSTEM.



D	A R C H I T E C T S E N G I N E E R S Case, Lowe & Hart, Inc. • 2484 Washington Blvd. Suite 510 • Ogden, Utah • 84401 801.399.5821 • www.clhae.com
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	DAVINCI A C A D E M Y
В	CLASS ROOM UPGRADES -MIDDLE D-215 22ND ST. Ogden, Utah 84401MARKDATEDESCRIPTION
	ISSUE DATE:JUNE 20, 2017PROJECT NO:17911CAD DWG FILE:DRAWN BY:ZTCHK'D BY:ATH
A	SHEET TITLE STRUCTURAL NOTES
	SHEET NO: S001

I.	S	TRUCTURAL STEEL	J.	HELICAL PIERS
	1.	STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING:		1. HELICAL PIER FOUNDATIO FOUNDATION" AND SHALL
		 ANSI/AISC 360-10 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", WITH "COMMENTARY" AND "SUPPLEMENTS" AS REQUIRED BY BUILDING CODE. 		REQUIRED BY THE SPECIA IBC CHAPTER 17.
		 AISC 303-10 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" EXCLUDING THE FOLLOWING SECTIONS: 4.4, 4.4.1, AND 4.4.2. AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS" 		2. HELICAL PIER FOUNDATIO RESIST THE REQUIRED LO
		 d. AWS D1.1 AND 1.3, "STRUCTURAL WELDING CODE" (EXCEPT SPECIFIC ITEMS DO NOT APPLY IF THEY CONFLICT WITH AISC). 		DESIGN, TESTING, AND INS 3. SHOP DRAWINGS AND CAL
	2.	e. ANSI/AISC 341-10 "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS". STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING:		ENGINEER SHALL BE SUBM PRIOR TO FABRICATION AN
D		 a. WIDE FLANGE SHAPES AND WT SHAPES - ASTM A992 b. OTHER SHAPES AND PLATES - ASTM A-36 (UNO) TUDED (TO) AND HOLE ON OTHER AND A SECTION OF (USO) - ASTM A SECTION OF ADE D (OCHADE AND A SECTION OF A S		CALCULATIONS SHALL INC SHAFT AND HELIX SIZES, F
		c. TUBES (TS) AND HOLLOW STRUCTURAL SECTIONS (HSS) - ASTM A-500, GRADE B (SQUARE AND RECTANGULAR SHAPES FY = 46 KSI AND ROUND SHAPES FY = 42 KSI) d STAINI ESS STEEL SHAPES PLATES AND EASTENERS – ASTM 304		4. HELICAL PIER FOUNDATION
		 e. DEFORMED BAR ANCHORS (DBA) - ASTM A-496, WELDED IN ACCORDANCE WITH AWS D1.1 f. HEADED STUD ANCHORS (HSA) - ASTM A-108, GRADE 1015 STEEL AND WELDED IN ACCORDANCE 		INSTALLERS. 5. ALL STEEL COMPONENTS
		WITH AWS D1.1 FOR TYPE "B". USE 3/4" DIAMETER STUDS, UNLESS NOTED OTHERWISE. g. THREADED ROD - ASTM A-449.		DIPPED GALVANIZED PER A 6. ALL HELICAL PIERS SHALL
	3.	CONNECTIONS SHALL COMPLY WITH THE STRUCTURAL DRAWINGS UNLESS WRITTEN APPROVAL TO CHANGE IS GIVEN BY THE STRUCTURAL ENGINEER.		REQUIRED TO REACH THE NO LESS THAN 5 TIMES TH
	4.	WITH SECTIONS 1702 AND 1704 OF THE IBC OR WITH SHOP INSPECTION BY AN INDEPENDENT AGENCY IN ACCORDANCE WITH SECTION 1704.2.5 OF THE IBC.		7. HELICAL PIER FOUNDATIO
	5.	WELDING a. ALL WELDING AND CUTTING SHALL BE PERFORMED BY AWS QUALIFIED WELDERS IN		SHALL BE RECORDED FOR 8. ALL PIERS SHALL BE PLAC
		ACCORDANCE WITH ANSI/AWS D1.1 (LATEST EDITION). b. USE E-70XX ELECTRODES UNLESS NOTED OTHERWISE. E-60XX MAY BE USED FOR WELDING		CLOSER THAN 3 HELICE DI ATTAIN THE REQUIRED LO
		STEEL DECKS. c. ALL INTERSECTING STEEL SHAPES WHICH ARE NOT CONNECTED WITH BOLTS SHALL BE WELDED TOGETHER WITH A FILLET WELD ALL AROUND UNLESS NOTED OTHERWISE, WHERE WELD SIZES		9. HELICAL PIER FOUNDATIO SHIMS INSTALLED IN THE (
		ARE NOT SHOWN USE THE FOLLOWING: 1. WHERE ALL CONNECTED PARTS ARE THICKER THAN 1/4", WELD IS 1/16" LESS THAN THE		PLANS. HELICAL PIER SUP NUMBER AND DEPTH OF P
		THICKNESS OF THE THINNEST PART. 2. WHERE ANY OF THE CONNECTED PARTS IS LESS THAN 1/4" THICK, WELD IS SAME AS		LOADS SHOWN ARE BASE
		THICKNESS OF THE THINNEST PART. d. WELDING OF HSA'S AND DBA'S SHALL CONFORM TO THE MANUFACTURER'S SPECIFICATIONS.	K.	1 DEFERRED SUBMITTALS
		ITEMS WHICH MAY NEED ADJUSTMENT AT THE SITE, REQUIRE THAT SOME WELDS BE FIELD WELDS. WHERE QUESTIONS OR DISCREPANCIES OCCUR THE CONTRACTOR SHALL COORDINATE		THAT INCLUDE DRAWINGS
	6.	THE WORK BETWEEN THE SHOP FABRICATOR AND THE STEEL ERECTOR. BOLTING		SIGNATURE OF THE DESIG 2. DEFERRED SUBMITTAL CC
C		a. UNLESS NOTED OTHERWISE, ALL STRUCTURAL STEEL TO STEEL CONNECTIONS SHALL USE HIGH STRENGTH BOLTS CONFORMING TO ASTM A-325.		THE BUILDING OFFICIAL. 3. DEFERRED SUBMITTALS S
C		D. UNLESS NOTED OTHERWISE, ALL BOLTING IS CLASSIFIED AS NON-SLIP CRITICAL BEARING TYPE CONNECTIONS WITH THREADS INCLUDED IN SHEAR PLANE. TIGHTEN BOLTS TO A SNUG TIGHT CONDITION. WITH ALL PLIES OF THE JOINT IN FIRM CONTACT.		a. HELICAL PIERS / MICRO PIER/PILES TO EXISTIN
		 c. WHERE OVERSIZED OR SLOTTED HOLES OCCUR IN THE OUTER PLY, AN ASTM F436 WASHER OR 5/16" THICK COMMON PLATE WASHER SHALL BE USED AS REQUIRED TO COMPLETELY COVER 	L.	EXISTING BUILDING NOTES
		THE HOLE. d. WHERE A STEEL BEAM TO BEAM CONNECTION IS NOT SHOWN, PROVIDE AN AISC STANDARD		1. ARW ENGINEERS EXPRES EXISTING BUILDING NOT S
	7	FRAMED CONNECTION SIZED FOR 1/2 OF THE TOTAL LOAD CAPACITY OF THE BEAM FOR THE SPAN AND STEEL SPECIFIED.		2. DRAWINGS AND DETAILS F AND CONFIGURATIONS OF
	7.	a. UNLESS NOTED OTHERWISE, METAL FLOOR DECK SHALL BE 22 GAUGE TYPE B FORMLOK COMPOSITE, GALVANIZED, VENTED STEEL DECK. UNLESS NOTED OTHERWISE, ATTACH TO		THE ENGINEER OF ANY DIS STRUCTURAL FLEMENTS.
		SUPPORTING STRUCTURE WITH 3/4" DIAMETER WELDS AT 12" MAXIMUM SPACING. ATTACH SIDE SEAMS WITH BUTTON PUNCH OR SIDE SEAM SCREWS AT 12" MAXIMUM SPACING. AN HSA FIELD-		3. THE CONTRACTOR IS RESI ELEMENTS WITHIN THE BU
		 WELDED THROUGH THE DECK MAY SUBSTITUTE FOR A PUDDLE WELD. b. ALL DECK SHALL BE CONTINUOUS OVER 3-SPANS. WHERE NOT POSSIBLE, THE DECK 		COMPLETE. AT NO ADDITI RESPONSIBLE FOR PROVI
		EQUIVALENT PERFORMANCE OF THE SPECIFIED DECK WITH 3-SPAN CONTINUITY.		STRUCTURAL MEMBERS U
		 PROVIDE L2"x2"x3/16" FOR DECK SUPPORT AT LOCATIONS WHERE COLUMNS EXTEND THROUGH DECK. 		
		 PAINTED STEEL DECK SHALL CONFORM TO ASTM A1008 AND GALVANIZED STEEL DECK SHALL CONFORM TO A653 GRADE G60. 		
		T. BUILDING ELEMENTS MAY BE SUPPORTED BY HANGING DIRECTLY FROM METAL DECKING, PROVIDED THAT THE TOTAL WEIGHT PER CONNECTION IS LESS THAN 50 LBS AND THAT THE ATTACHMENT TO THE DECKING IS DISTRIBUTED ACROSS AT LEAST TWO RIBS AND SPACED AT		
	8.	LEAST 6 FEET APART IN ANY DIRECTION. PROVIDE FULL DEPTH WEB STIFFENER PLATES AT EACH SIDE OF STEEL BEAMS AT ALL BEARING		
		(EXCEPT SECONDARY FRAMING) POINTS. STIFFENER PLATES SHALL BE THICKNESS SHOWN UNLESS NOTED OTHERWISE AND SHALL BE WELDED BOTH SIDES WITH FILLET WELDS ALL AROUND.		
		FLANGE WIDTH STIFFENER THICKNESS WELD THICKNESS < 8 1/4" 1/4" 3/16" 8 1/4" FE < 12 1/2" 3/8" 1/4"		
В	9.	12 1/2" < BF < 18" 1/2" FABRICATORS AND SUPPLIERS SHALL COORDINATE PAINT/FINISHES WITH REQUIREMENTS FOR		
	10	DIRECT APPLIED INSULATION, FIREPROOFING, ETC. AS NOTED IN THE PROJECT SPECIFICATIONS. D. WHEN DETERMINING THE FIRE RESISTANCE OF ASSEMBLIES, USE THE FOLLOWING: STEEL ROOF		P
	11	MEMBERS ARE CONSIDERED UN-RESTRAINED AND STEEL FLOOR FRAMING MEMBERS ARE CONSIDERED RESTRAINED.		
	12	NATURAL CROWN UP. 2. UNLESS OTHERWISE SHOWN OR DETAILED IN THE PLANS, ALL STEEL COLUMNS, BEAMS, BRACES,		C
		STRUTS, ETC. SHALL BE CONTINUOUS BETWEEN CONNECTIONS OR SUPPORTS. SPLICES IN MEMBERS SHALL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL BY THE ENGINEER OF RECORD.		
	13	3. THE NUMBER IN PARENTHESES (X) IN BEAM CALLOUT INDICATES THE TOTAL NUMBER OF HSA'S THAT SHALL BE INSTALLED ON BEAM. HSA'S SHALL BE UNIFORMLY SPACED AND SHALL BE INSTALLED ON THE POTTOM FULTE		
		THE BOTTOM FLOTE.		
				\parallel
А				
IF SHE	ET IS	S LESS THAN 22"x 34"		
IT I REDUC	SAI ES	REDUCED PRINT.		
		1 2		

HELICAL PIER FOUNDATIONS AND THEIR COMPONENTS SHALL BE CONSIDERED A "PILE FOUNDATION" AND SHALL BE SUBJECT TO CONTINUOUS SPECIAL INSPECTION AS REQUIRED BY THE SPECIAL INSPECTION SCHEDULE FOR PILE FOUNDATIONS AND PER

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HELICAL PIER FOUNDATION SYSTEMS SHALL BE DESIGNED BY A LICENSED ENGINEER TO RESIST THE REQUIRED LOADS AS INDICATED ON THE PLANS AND SCHEDULES. SEE PECIFICATIONS FOR ADDITIONAL INFORMATION CONCERNING REQUIREMENTS FOR DESIGN, TESTING, AND INSTALLATION OF HELICAL PIER FOUNDATIONS.

SHOP DRAWINGS AND CALCULATIONS PREPARED AND STAMPED BY A LICENSED INGINEER SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER FOR APPROVAL PRIOR TO FABRICATION AND INSTALLATION. AT A MINIMUM, SHOP DRAWINGS AND CALCULATIONS SHALL INCLUDE, BUT NOT BE LIMITED TO, PIER LAY-OUT, QUANTITIES, HAFT AND HELIX SIZES, FOUNDATION CONNECTION REQUIREMENTS, TEST PIER REQUIREMENTS, APPLIED SAFETY FACTORS, ETC.

HELICAL PIER FOUNDATION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH AN CC EVALUATION SERVICES INC. RESEARCH REPORT BY CERTIFIED HELICAL PIER

ALL STEEL COMPONENTS OF HELICAL PIER FOUNDATION SYSTEMS SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153.

ALL HELICAL PIERS SHALL BE PLACED IN UNDISTURBED SOIL TO A MINIMUM DEPTH AS REQUIRED TO REACH THE SPECIFIED LOAD REQUIREMENTS NOTED ON THE PLANS, BUT NO LESS THAN 5 TIMES THE DIAMETER OF THE LARGEST HELIX BELOW THE JNDISTURBED SURFACE.

HELICAL PIER FOUNDATION SHALL BE DRIVEN INTO SOIL UNTIL THE REQUIRED TORQUE OR ULTIMATE LOAD RATING IS REACHED. TORQUE RESULTS AND HELICAL PIER DEPTHS HALL BE RECORDED FOR EACH PIER AND SUBMITTED TO THE ENGINEER FOR REVIEW. ALL PIERS SHALL BE PLACED SUCH THAT THE HELICES OF ADJACENT PIERS ARE NO CLOSER THAN 3 HELICE DIAMETERS APART (BASED ON THE LARGEST HELICE USED TO ATTAIN THE REQUIRED LOAD RATING) WHEN THE PIER HAS REACHED ITS FINAL DEPTH. IELICAL PIER FOUNDATIONS USED TO RESIST CYCLICAL LOADING SHALL HAVE STEEL SHIMS INSTALLED IN THE COUPLING BOXES TO REMOVE SLACK AT COUPLERS. THE NUMBER AND LOCATION OF HELICAL PIERS IS SHOWN SCHEMATICALLY ON THE PLANS. HELICAL PIER SUPPLIER IS RESPONSIBLE FOR DETERMINING THE ACTUAL JUMBER AND DEPTH OF PIERS REQUIRED TO RESIST THE LOADS SHOWN ON THE PLANS. OADS SHOWN ARE BASED ON ALLOWABLE/DESIGN LEVEL FORCES.

DEFERRED SUBMITTALS ARE COMPLETE PACKAGES TO BE SUBMITTED FOR REVIEW HAT INCLUDE DRAWINGS AND CALCULATIONS FOR ALL ELEMENTS AND CONNECTIONS OF ITEMS LISTED BELOW. DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN. DEFERRED SUBMITTAL COMPONENTS SHALL NOT BE INSTALLED UNTIL APPROVED BY

DEFERRED SUBMITTALS SHALL INCLUDE, BUT ARE NOT LIMITED TO: HELICAL PIERS / MICRO PILES (TO INCLUDE DETAILS SHOWING ATTACHMENT OF PIER/PILES TO EXISTING FOUNDATIONS, NEW GRADE BEAMS, ETC.).

RW ENGINEERS EXPRESSLY DISCLAIMS RESPONSIBILITY FOR ANY PORTION OF THE EXISTING BUILDING NOT SPECIFICALLY ADDRESSED IN THESE DRAWINGS. DRAWINGS AND DETAILS HAVE BEEN PREPARED TO REFLECT THE EXISTING CONDITIONS AND CONFIGURATIONS OF STRUCTURAL ELEMENTS. HOWEVER, THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS AND ALERTING HE ENGINEER OF ANY DISCREPANCIES FOUND PRIOR TO FABRICATING OR INSTALLING

THE CONTRACTOR IS RESPONSIBLE FOR MAKING SURE THAT THE BUILDING AND LEMENTS WITHIN THE BUILDING REMAIN STABLE UNTIL CONSTRUCTION IS COMPLETE. AT NO ADDITIONAL COST TO THE OWNER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SHORING OR OTHER TEMPORARY SUPPORT OF TRUCTURAL MEMBERS UNTIL THE FINAL CONFIGURATION HAS BEEN COMPLETED.

BEAM PL. DIMEN				SCHED	JULE					
	SHEAI		ON	BOLTS W/ WASHE	STANDARD RS OVER OTS	WELD 'A'	COMN	ENTS		ARCHITECT
DEPTH W/ SHO SLOTTED	HOLES	Lev	Leh	No.	SIZE					ENGINEER
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W12 x PL. 5/16	' x 4"	1 1/2"	2"	3	3/4" Ø	1/4"			D	Case, Lowe & Hart, Inc. • 2484 Washin Suite 510 • Ogden Utah • 844(
W14 x 90 & PL. 5/16' LIGHTER	' x 4"	1 1/2"	2"	3	3/4" Ø	1/4"			L	801.399.5821 • www.clhae.cor
W16 x 77 & PL. 5/16'	' x 4"	1 1/2"	2"	4	3/4" Ø	1/4"				CONSULTANTS
W 18 X 05 & PL. 5/16' LIGHTER	' x 4"	1 1/2"	2"	5	3/4" Ø	1/4"				
LIGHTER PL. 5/16'	' x 4"	1 1/2"	2"	6	3/4" Ø	1/4"				A
	1 1/2"	FACE OF COL WEB	UMN / BEAM						-	W ERGINEER structural consultan 1594 W. Park Cir. Ogden, Utah 844 ph. 801.782.6008 fx. 801.782.48 STAMP
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SPECIAL INSPECTION SCHEDULE ^{1, 2}									
ESTABLISHED PER 2015 IBC SECTION 110 AND CHAPTER 17									
ITEM	CONTINUOUS	PERIODIC ³	REFERENCE						
PRE-FAB CONSTRUCTION (IBC 1704.2)			REFERENCE NOTES P1 & P2	P1. P2.	SPECIAL INSPECTION IS NOT REQUIRED WHERE TO APPROVED TO PERFORM SUCH WORK WITHOUT S INSPECTION FOR PREFABRICATED CONSTRUCTIO PLACE ON SITE. SPECIAL INSPECTION WILL NOT B THE CONSTRUCTION AND FURNISHES EVIDENCE (
CONCRETE CONSTRUCTION (IBC 1705.3)			SEE IBC TABLE 1705.3 - REF. NOTE C1	C 1.	SPECIAL INSPECTION IS NOT REQUIRED FOR CON				
REINFORCING STEEL PLACEMENT		•			SLABS, FOUNDATION WALLS, PATIOS, DRIVEWAYS				
WELDING OF REINFORCING STEEL	•	•	REFERENCE NOTE C2	- 02.	FLEXURAL AND AXIAL FORCES IN INTERMEDIATE A				
EMBEDDED BOLTS & PLATES	•				REINFORCED CONCRETE SHEAR WALLS, AND SHE				
VERIFYING REQUIRED DESIGN MIX		•			NOTED ABOVE.				
CONCRETE PLACEMENT / SAMPLING	•		REFERENCE NOTE C3	C3.	PERFORM AIR, SLUMP AND TEMP. TESTS WHEN CO PERIODIC SPECIAL INSPECTION IS REQUIRED FOR				
CURING TEMPERATURE / TECHNIQUES		•			CONCRETE PRIOR TO TENSIONING TENDONS OR F				
PRESTRESSED CONCRETE				C 5.	EPOXY AND EXPANSION ANCHORS INTO MASONR' ENGINEER USING AN APPROVED PRODUCT WITH				
APPLICATION OF PRESTRESSING FORCES	•				CONTINUOUS/PERIODIC SPECIAL INSPECTION REC				
GROUTING BONDED TENDONS	•		IN SEISMIC-FORCE-RESISTING SYSTEM						
ERECTION OF PRECAST MEMBERS		•							
VERIFICATION OF IN-SITU STRENGTH		•	REFERENCE NOTE C4						
EPOXY / EXPANSION ANCHOR PLACEMENT		•	REFERENCE NOTE C5	1					
HELICAL PILE FOUNDATIONS (IBC 1705.9)			REFERENCE NOTE HPF1	HPF1.	THE APPROVED GEOTECHNICAL REPORT AND TH				
RECORD INSTALLATION EQUIPMENT USED									

RECORD PILE DIMENSIONS, TIP ELEVATIONS, FINAL DEPTH, AND FINAL INSTALLATION TORQUE

THE ITEMS MARKED WITH A "●" IN THE SPECIAL INSPECTION SCHEDULE SHALL BE INSPE REFER TO THE MATERIAL SAMPLING AND TESTING SECTION, THE PROJECT SPECIFICATIO ENGINEER, CONTRACTOR, AND BUILDING OFFICIAL. ANY ITEMS WHICH FAIL TO COMPLY CORRECTED, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL, ANY CONSTRUCTION OR MATERIAL THAT HAS FAILED INSPECTION SHALL BE SUBJECT TO

CONTINUOUS SPECIAL INSPECTION MEANS THE FULL-TIME OBSERVATION OF WORK REQU CONTINUOUS SPECIAL INSPECTION MEANS THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED. PERIODIC SPECIAL INSPECTION MEANS THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK. (IBC SECTION 1702)

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NSPECTION TASKS PRIOR TO WELDING (TABLE N5.4-1)	FABRIC QUALITY C CONTINUOU	ATOR ONTROL S PERIODIC	SPECIAL IN QUALITY AS	SPECTOR SURANCE S PERIODIC	-	
VELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	•		•		1. PERIODIC OPERATIC	- OBSER
AANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABL AATERIAL IDENTIFICATION (TYPE / GRADE)	.E •	•	•	•	2. CONTINUC)NS.)US - PE
VELDER IDENTIFICATION SYSTEM ¹		•		•	3. QUALITY C	OINT OF
IT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)					4. QUALITY A	OR AND
					OTHERS V JURISDICT	VHEN RE TION (AH
* DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) * CLEANLINESS (CONDITION OF STEEL SURFACES)		•		•	PURCHAS NONDEST	ER, OWN RUCTIVE
* TACKING (TACK WELD QUALITY AND LOCATION)					BY THE AC	SENCY C
* BACKING TYPE AND FIT (IF APPLICABLE)					WITH SEC 5. QC AND Q	TION N7. A INSPE
CONFIGURATION AND FINISH OF ACCESS HOLES		•		•	ACCORDA 6. NONDEST	NCE WIT
* DIMENSIONS (ALIGNMENT, GAPS AT ROOT)					QUALIFIED N4.3.) IN ACC
* CLEANLINESS (CONDITION OF STEEL SURFACES)		•		•	7. NONDEST COMPLY V	RUCTIVE VITH AIS
* TACKING (TACK WELD QUALITY AND LOCATION)					8. OBSERVA	TION OF
		•			SHALL BE	THE PRI
THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTE VELDED A JOINT OR MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHAL	M BY WHICH . L BE THE LOV	A WELDER V V-STRESS T	VHO HAS YPE.		CONFORM FOR STRU	IANCE W
INSPECTION TASKS DURING WELDING (TABLE N5.4-2)	CONTINUOU				D1.1M STF	
ISE OF QUALIFIED WELDERS		•		•	9. THERMALI	
CONTROL AND HANDLING OF WELDING CONSUMABLES						S EXCE
* PACKAGING * EXPOSURE CONTROL		•		•		
IO WELDING OVER CRACKED TACK WELDS		•		•	10. WHEN REC	
INVIRONMENTAL CONDITIONS					ESTABLIS	
* WIND SPEED WITHIN LIMITS		•		•	REDUCTIO	IN SHAL
* PRECIPITATION AND TEMPERATURE					RATE OF L	JT IS ON
* SETTINGS ON WELDING EQUIPMENT					CHAPTER	N5e.
* TRAVEL SPEED					INITIAL RA	TE FOR
* SELECTED WELDING MATERIALS		•		•	INDIVIDUA	D TO 10
* SHIELDING GAS TYPE / FLOW RATE * PREHEAT APPLIED					DEFECTS	
* INTERPASS TEMPERATURE MAINTAINED (MIN. / MAX)					COMPLET THE WELD	ED, EXC ER OR \
* PROPER POSITION (F, V, H, OH)					AT LEAST MADE PRI	20 COMI OR TO IN
VELDING TECHNIQUES					OPERATO	E REJEC R, AFTEI
* EACH PASS WITHIN PROFILE LIMITATIONS		•		•	RATE OF U	ED WELI JT SHAL
* EACH PASS MEETS QUALITY REQUIREMENTS					EVALUATII OVER 3 FT	NG THE (1M) IN
INSPECTION TASKS AFTER WELDING (TABLE N5.4-3)	CONTINUOU	S PERIODIC		S PERIODIC	INCREMEN	3 1 IN. (2)
		•		•	REJECT R	ATE ON
VELDS MEET VISUAL ACCEPTANCE CRITERIA	•		•		THAN 1 IN.	(25mm)
* CRACK PROHIBITION					FRACTION 13. ALL NDT P	ERFOR
* WELD / BASE-METAL FUSION					SHOP FAB	RICATIC
* CRATER CROSS SECTION	•		•		PIECE. FC	IR FIELD
* WELD SIZE					STRUCTUR WHEN A W	KE, PIEC /ELD IS I
* UNDERCUT					NDT RECO DEFECT A	RD SHA
* POROSITY					14. DEMAND FOUND IN	CRITICA AISC 34
ARC STRIKES	•		•		PROCEDU WITH AWS	RES ANI 5 D1.1 AN
ACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	•		•		a. ARC S WITHI	TRIKES, N OR AD
REPAIR ACTIVITIES	•		•		b. PREHE	RED OR EAT AND
OOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	•		•		OUTLII c. UNREF	NED IN S PAIRED (
WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENEF THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3 I	RS HAS BEEN N. (75mm) OF	PERFORME THE WELD)	D IN		NOT B d. USE E ABSOF FT-LBS CLASS DEGRI PRESC ACCEF	E PERM LECTRC RBED EN S AT 20 I SIFICATIO EES FAH CRIBED PTABLE

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STRUCTURAL STEEL SPECIAL INSPECTION SCHEDULE

ESTABLISHED PER 2015 IBC SECTION 1705.2.1

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E ITEMS ON A RANDOM BASIS. DELAYED PENDING THESE

HESE TASKS FOR EACH

ALL BE PROVIDED BY THE R.

SHALL BE PROVIDED BY BY THE AUTHORITY HAVING CABLE BUILDING CODE (ABC), ENGINEER OF RECORD (EOR). G (NDT) SHALL BE PERFORMED ESPONSIBLE FOR QUALITY ERMITTED IN ACCORDANCE

HALL BE QUALIFIED IN 60-10 CHAPTER N4. 3 PERSONNEL SHALL BE

E WITH AISC 360-10 CHAPTER

APTER N5a AND b. OPERATIONS AND VISUA AND COMPLETED WELD HOD TO CONFIRM THAT ND WORKMANSHIP ARE ONSTRUCTION DOCUME L PROVISIONS OF AWS G CODE - STEEL FOR TURES SHALL APPLY. S OF ACCESS HOLES SHA PT, WHEN THE FLANGE 0mm) FOR ROLLED SHA ESS EXCEEDS 2 IN. (50mr Y CRACK SHALL BE DEEN SS OF SIZE OR LOCATIOI IDIX 3, TABLE A-3.1, WELE UNDNESS TO BE PHICS OR ULTRASONIC ED BY QA AS PRESCRIBE

F UT IS PROHIBITED. TRASONIC TESTING - THE TTED TO BE REDUCED IF D THE AHJ PER AISC 360-10

CATEGORY II, WHERE THE THE NDT RATE FOR AN LDING OPERATOR SHALL D THE REJECT RATE, TH INING UNACCEPTABLE JMBER OF WELDS OF THE WELDS TESTED F OPERATOR. A SAMPLING ELDS FOR A JOB SHALL FING SUCH AN INCREASE OR THE WELDER OR WEL ING OF AT LEAST 40 LLEN TO 5% OR LESS, T RNED TO 10%. FOR ATE OF CONTINUOUS WE HERE THE EFFECTIVE ESS, EACH 12 IN. (300mm HEREOF SHALL BE

D. FOR EVALUATING THE OUS WELDS OVER 3 FT (1M) IN CTIVE THROAT IS GREATER N. (150mm) OF LENGTH OR BE CONSIDERED ON WELD. L BE DOCUMENTED. FOR DT REPORT SHALL IDENTIFY E MARK AND LOCATION IN THE HE NDT REPORT SHALL

ATE THE LOCATION IN THE AND LOCATION IN THE PIECE. D ON THE BASIS OF NDT, THE ATE THE LOCATION OF THE

REJECTION SHALL MEET THE PROVISION WELDING METHODS,

Y CONTROL SHALL COMPLY DLLOWING: AND OTHER IMPERFECTIONS

TO THE JOINT, SHALL BE D.

ASS REQUIREMENTS AS 3.5.

GOUGES, AND NOTCHES WILL THE JOINT AREA. H CHARPY V-NOTCH

QUAL TO OR GREATER THAN 20 FAHRENHEIT UNDER AWS A5 METHODS, AND 40 FT-LBS AT 70 USING TEST PROCEDURES

DIX X OF AISC 358. DES INCLUDE E70TG-K2, E71 T-

INSPECTION TASKS PRIOR TO BOLTING (TABLE N5.6-1)		CONTINUOUS	PERIODIC		
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	•	•		1.	PER
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	•		•	2	NOT
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	•		•	2. 3.	QUA
PROPER BOLTING PROCEDURES SELECTED FOR JOINT DETAIL	•		•	4.	
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	• •		•		PUF TES FOF
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	•		•	5.	SE(FOI SPI
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	•		•	6	QA TIG
INSPECTION TASKS DURING BOLTING (TABLE N5.6-2)	CONTINUOUS PERIODIC	CONTINUOUS	PERIODIC	0.	
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	•		•		CO SH
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	•		•	7.	AR FO
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING			•		WI
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	•		•	8.	BE FAS OB TO
INSPECTION TASKS AFTER BOLTING (TABLE N5.6-3)	CONTINUOUS PERIODIC	CONTINUOUS	PERIODIC		
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	•	•			SP
INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT (TABLE N6.1)		CONTINUOUS	PERIODIC	1.	0 -
PLACEMENT AND INSTALLATION OF STEEL DECK	•	•		2.	DE P -
PLACEMENT AND INSTALLATION OF STEEL STUD ANCHORS	•	•		3.	QU
DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS	•	•		4.	QU TH PU TE
					FO
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					DE
				6.	FO
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GENERAL STEEL SPECIAL INSPECTION NOTES :

- QUALITY ASSURANCE (QA) INSPECTION OF FABRICATED ITEMS SHALL BE MADE AT THE FABRICATOR'S PLANT. THE QUALITY ASSURANCE INSPECTOR (QAI) SHALL SCHEDULE THIS WORK TO MINIMIZE INTERRUPTION TO THE WORK OF THE FABRICATOR. QA INSPECTION OF THE ERECTED STEEL SYSTEM SHALL BE MADE AT THE PROJECT SITE. THE QAI SHALL SCHEDULE THIS WORK TO MINIMIZE INTERRUPTION TO THE WORK OF THE ERECTOR.
- QA INSPECTION OF THE ERECTED STEEL SYSTEM SHALL BE MADE AT THE PROJECT SITE. THE QAI SHALL SCHEDULE THIS WORK TO MINIMIZE INTERROPTION TO THE WORK OF THE ERECTOR.
 WHERE A TASK IS NOTED TO BE PERFORMED BY BOTH QC AND QA, IT IS PERMITTED TO COORDINATE THE INSPECTION FUNCTION BETWEEN THE QCI AND QAI SO THAT THE INSPECTION FUNCTIONS ARE PERFORMED BY ONLY ONE PARTY. WHERE QA RELIES UPON INSPECTION FUNCTIONS PERFORMED BY QC, THE APPROVAL OF THE ENGINEER OF RECORD AND THE AUTHORITY HAVING JURISDICTION IS REQUIRED.
 THE FABRICATOR'S QCI SHALL INSPECT THE FABRICATED STEEL TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE SHOP DRAWINGS, SUCH AS PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION. THE ERECTOR'S QCI SHALL INSPECT THE ERECTED STEEL FRAME TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE ERECTION DRAWINGS, SUCH AS BRACES, STIFFENERS, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AND PROPER APPLIC
- APPLICATION OF JOINT DETAILS AT EACH CONNECTION. 5. THE QAI SHALL BE ON THE PREMISES FOR INSPECTION DURING THE PLACEMENT OF ANCHOR RODS AND OTHER EMBEDMENTS SUPPORTING STRUCTURAL STEEL FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS. AS A MINIMUM, THE DIAMETER, GRADE, TYPE AND LENGTH OF THE ANCHOR ROD OR EMBEDDED ITEM, AND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE, SHALL BE VERIFIED PRIOR TO PLACEMENT OF THE ACCOMPLICATION OF JOINT DETAILS AT EACH CONNECTION.
- IS CONCRETE. 6. THE QAI SHALL INSPECT THE FABRICATED STEEL OR ERECTED STEEL FRAME, AS APPROPRIATE, TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE CONSTRUCTION DOCUMENTS, SUCH AS BRACES, STIFFENERS, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.
- QUALITY ASSURANCE (QA) INSPECTIONS, EXCEPT NONDESTRUCTIVE TESTING (NDT), MAY BE WAIVED WHEN THE WORK IS PERFORMED IN A FABRICATING SHOP OR BY AN ERECTOR APPROVED BY THE AUTHORITY HAVING JURISDICTION (AHJ) TO PERFORM THE WORK WITHOUT QA. NDT OF WELDS COMPLETED IN AN APPROVED FABRICATOR'S SHOP MAY BE PERFORMED BY THAT FABRICATOR WHEN APPROVED BY THE AHJ. WHEN THE FABRICATOR PERFORMS THE NDT, THE QA AGENCY SHALL REVIEW THE FABRICATOR'S NDT REPORTS.

AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE AHJ STATING THAT THE MATERIALS SUPPLIED AND WORK PERFORMED BY THE FABRICATOR ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS. AT COMPLETION OF ERECTION, THE APPROVED ERECTOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE AHJ STATING THAT THE MATERIALS SUPPLIED AND WORK PERFORMED BY THE ERECTOR ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.
 IDENTIFICATION AND REJECTION OF MATERIAL OR WORKMANSHIP THAT IS NOT IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS, SHALL BE PERMITTED AT ANY TIME DURING THE PROGRESS OF THE WORK.

9. IDENTIFICATION AND REJECTION OF MATERIAL OR WORKMANSHIP THAT IS NOT IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS, SHALL BE PERMITTED AT ANY TIME DURING THE PROGRESS OF THE WORK.
 HOWEVER, THIS PROVISION SHALL NOT RELIEVE THE OWNER OR THE INSPECTOR OF THE OBLIGATION FOR TIMELY, IN-SEQUENCE INSPECTIONS. NONCONFORMING MATERIAL AND WORKMANSHIP SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE FABRICATOR OR ERECTOR, AS APPLICABLE.
 10. NONCONFORMING MATERIAL OR WORKMANSHIP SHALL BE BROUGHT INTO CONFORMANCE, OR MADE SUITABLE FOR ITS INTENDED PURPOSE AS DETERMINED BY THE ENGINEER OF RECORD.

10. NONCONFORMING MATERIAL OR WORKMANSHIP SHALL BE BROUGHT INTO CONFORMANCE, OR MADE SUITABLE FOR ITS INTENDED PURPOSE AS DETERMINE
 11. CONCURRENT WITH THE SUBMITTAL OF SUCH REPORTS TO THE AHJ, EOR OR OWNER, THE QA AGENCY SHALL SUBMIT TO THE FABRICATOR AND ERECTOR:

 (1) NONCONFORMANCE REPORTS
 (2) DEPORTS OF DEPARTS
 (3) DEPORTS OF DEPARTS

(2) REPORTS OF REPAIR, REPLACEMENT OR ACCEPTANCE OF NONCONFORMING ITEMS.





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AR	CHITECTURAL NOTES
1.	THE ARCHITECTURAL DRAWINGS ARE THE PRIMARY ANY CONFLICTS BETWEEN ARCHITECTURAL DRAWI CONDITIONS AND/OR DRAWINGS OF OTHER DISCIPI REPORTED TO THE ARCHITECT.
2.	THE CONTRACTOR SHALL VERIFY ALL EXISTING CO ITEMS AND DIMENSIONS BETWEEN EXISTING AND N PROJECT SHALL BE VERIFIED TO ENSURE COORDIN
3.	THE CONTRACTOR SHALL SUBMIT ANY PROPOSED OF THE CONTRACT DOCUMENTS, IN WRITING, TO TI PROCEEDING WITH ANY ACTION.
4.	WHERE SPECIFIC DETAILS ARE NOT PROVIDED, TYP STANDARD DETAILS SHALL APPLY. IF FURTHER DET ARCHITECT.
5.	DETAILS ARE PROVIDED FOR VISUAL REPRESENTAT OFTEN THE DETAILS ARE BASED ON A BASIS-OF-DE MATERIAL AND MAY BE DIAGRAMMATIC IN NATURE.
6.	IF A DIFFERENT PRODUCT OR MATERIAL FROM THA DRAWINGS OR SPECIFICATIONS IS SUBSTITUTED, IT THE CONTRACTOR TO PROVIDE ALTERNATE DETAIL ARCHITECT TO REVIEW.
7.	GENERALLY, DIMENSIONS SHOWN OF ARCHITECTU FROM THE CORE STRUCTURE FACE (IE. CONCRETE WALL=FACE OF STUD).
8.	ANY ADDITIONAL BLOCKING, BRACING, TRIM, FLASH REQUIRED FOR INSTALLATION OF COMPLETE SYST WINDOWS, OPENINGS, PENETRATIONS, ETC. ARE EX AND INSTALLED BY THE CONTRACTOR.
9.	ASSUME ALL GYP. BD. WALLS TO HAVE TOPSET RUE UNLESS NOTED OTHERWISE.
10.	PROVIDE SEALANT OR TRIM AS APPROPRIATE WHE COME IN CONTACT.
11.	PROVIDE FLOORING TRANSITION WHERE DISSIMILA OCCUR.
12.	PAINT ALL MISCELLANEOUS SURFACES, SUPPORTS PERMANENTLY ATTACHED TO PAINTED SURFACE O ELEMENTS.

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IE PRIMARY CONTRACT DOCUMENTS. RAL DRAWINGS AND EXISTING IER DISCIPLINES SHALL BE IMMEDIATELY	1 View Name	- VIEW TITLE	& L @ # AC	AND ANGLE AT POUND O ACOUSTIC
(ISTING CONDITIONS PRIOR TO AY WORK. FING AND NEW PORTIONS OF THE E COORDINATION.	0 1" 2"	GRAPHIC SCALE	A.F.F. ALUM APPROX ARCH ASPH BD	ABOVE FI ALUMINU APPROXII ARCHITEC ASPHALT BOARD
ROPOSED CHANGES OR MODIFICATIONS TING, TO THE ARCHITECT BEFORE		NORTH ARROW w/ TRUE NORTH	BITUM BLDG BLKG BRG BTM	BITUMINC BUILDING BLOCKING BEARING BOTTOM
VIDED, TYPICAL OR SIMILAR INDUSTRY RTHER DETAIL IS REQUIRED CONTACT	0	GRID INDICATOR	C C.I. C.J. C.L. CLG CLR CLR C.M.U.	CAST IRC CONTROL CENTER I CEILING CLEAR CONCRET
PRESENTATION OF DESIGN INTENT. ASIS-OF-DESIGN PRODUCT AND/OR N NATURE	A101	SECTION CALLOUT	C.O. C.O.T.G. COL CONC CONN CONSTR	CLEAN OU CLEAN OU COLUMN CONCRET CONNECT CONSTRU
FROM THAT INDICATED ON THE		DETAIL CALLOUT	CONT C.T. CTR	CONTINU CERAMIC CENTER
TITUTED, IT IS THE RESPONSIBILITY OF ATE DETAILS AS REQUIRED FOR THE	A101 SIM	DETAIL CALLOUT	D.C.W. D.H.W. D.F. DTL DIA	DOMESTI DOMESTI DRINKING DETAIL DIAMETEI
CHITECTURAL DRAWINGS ARE TAKEN CONCRETE WALL=FACE OF WALL; STUD		ELEVATION CALLOUT	DIM DISP DN DRN DS DWG	DIMENSIC DISPENSI DOWN DRAIN DOWNSP DRAWING
RIM, FLASHING, SEALANTS, ETC.	Name Elevation	LEVEL / ELEVATION CALLOUT	E EA ELES	EAST
LETE SYSTEMS_PERTAINING TO DOORS, ETC. ARE EXPECTED TO BE PROVIDED	100'-0"	SPOT ELEVATION CALLOUT	E.J. E.J. EL ELEC ENGR EQ	EXTENSION EXPANSION ELEVATION ELECTRIC ENGINEE EQUAL
OPSET RUBBER BASE INSTALLED	1:12	ROOF SLOPE INDICATOR	EQUIP (E) EXP EXT	Equipme Existing Expansio Exterioi
RIATE WHERE DISSIMILAR MATERIALS	Room name	ROOM TAG	F.A. F.D. FDN F.E.	FIRE ALAI FLOOR DI FOUNDAT FIRE EXT
E DISSIMILAR FLOORING MATERIALS	(101A)	DOOR TAG	FLR FLASH FLOR	FINE EXT FINISH FLOOR FLASHING FLUORES
SUPPORTS, METALS, ETC. IF SURFACE OR EXPOSED TO THE	A	WALL TAG	F.O. F.R. FT FTG FUT	FACE OF FIRE RAT FOOR OR FOOTING FUTURE
		WINDOW TAG	GA GALV GND GR G.W.B.	GAUGE GALVANIZ GROUND GRADE GYPSUM
		DEMOLITION KEYNOTE	GYP H.B. HC	GYPSUM HOSE BIB HANDICA
		FIRE RISER	H.M. Horiz Hgt	Hollow Horizon Height

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NGLE	JAN JST JT	JANITOR JOIST JOINT
OUND OR NUMBER	K.O.	KNOCK OUT
COUSTICAL BOVE FINISH FLOOR LUMINUM	LAM LAV	LAMINATE LAVATORY
PPROXIMATE RCHITECTURAL SPHALT OARD ITUMINOUS UILDING LOCKING EARING OTTOM OP OF FINISH CONCRETE AST IRON ONTROL JOINT ENTER LINE EILING LEAR ONCRETE MASONRY UNIT LEAN OUT	MAX MAS MECH MEMB MTL MFTR MH MIN MISC M.O. MTD N N.I.C. NO or # NOM N.T.S.	MAXIMUM MASONRY MECHANICAL MEMBRANE METAL MANUFACTURER MANHOLE MINIMUM MISCELLANEOUS MASONRY OPENING MOUNTED NORTH NOT IN CONTRACT NUMBER NOMINAL NOT TO SCALE
LEAN OUT AT GRADE OLUMN ONCRETE ONNECTION ONSTRUCTION ONTINUOUS ERAMIC TILE	O.C. O.D. OFF OH OPNG OPP	ON CENTER OUTSIDE DIAMETER (DIM) OFFICE OVERHEAD OPENING OPPOSITE
OMESTIC COLD WATER OMESTIC HOT WATER RINKING FOUNTAIN ETAIL IAMETER IMENSION	PL PLAM PLYWD P.O.C. PNL PR PT	PLATE PLASTIC LAMINATE PLYWOOD POINT OF CONNECTION PANEL PAIR POINT
ISPENSER OWN	Q.T.	QUARRY TILE
HAIN OWNSPOUT RAWING AST ACH XTERIOR INSULATION FINISH SYSTEM XPANSION JOINT LEVATION LECTRICAL NGINEER	RAD R.D. REF REINF REQD RESIL RFG RM RS R.O.	RADIUS ROOF DRAIN REFERENCE REINFORCED REQUIRED RESILIENT ROOFING ROOM RESINOUS FLOORING ROUGH OPENING
QUAL QUIPMENT XISTING XPANSION XTERIOR RE ALARM LOOR DRAIN DUNDATION RE EXTINGUISHER RE EXTINGUISHER CABINET NISH LOOR LASHING LUORESCENT ACE OF RE PATED	S SCH SECT SHT SIM SPECS SQ S.S. S.ST STD STL STOR STR SUSP SYM SYS	SOUTH SCHEDULE SECTION SHEET SIMILAR SPECIFICATION SQUARE SANITARY SEWER STAINLESS STEEL STANDARD STEEL STORAGE STRUCTURAL SUSPENDED SYMMETRICAL SYSTEM
AUGE AUGE	TLT TRTD T & B T.O. TRANS TYP	TOILET (ROOM) TREATED (PRESERVATIVE TOP & BOTTOM TOP OF TRANSFORMER TYPICAL
ROUND RADE YPSUM WALL BOARD YPSUM	U.N.O. UT	UNLESS NOTED OTHERWISE URINAL
OSE BIBB	VERT VEST	VERTICAL VESTIBULE
ANDIGAP OLLOW METAL ORIZONTAL EIGHT ISIDE DIAMETER (DIM) ICH, INCHES ISULATION ITERIOR	W W/ WC WD W/O WP	WEST WITH WATER CLOSET WOOD WITHOUT WATERPROOF





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5 FINISHES LEGEND WALL FINISHES FLOOR FINISH CEILING FINISH	A R C H I T E C T S E N G I N E E R S
FINISH SYMBOL	Case, Lowe & Hart, Inc. • 2484 Washington Blvd. Suite 510 • Ogden, Utah • 84401
FLOOR F1- CARPET F2- EXISTING BASE B1- 4" CARPET B2- EXISTING	801.399.5821 • www.clhae.com CONSULTANTS
—	
WALLS W1- PAINTED GYPSUM BOARD W2- MAGENTIC WHITEBOARD WALL PANELS W3- EXISTING	STAMP
CEILING C1- SUSPEND ACOUSTIC LAY-IN CEILING SYSTEM C2- EXISTING C1- SUSPEND ACOUSTIC LAY-IN CEILING SYSTEM C2- EXISTING C2- EXISTING	OF OF PETERSON 6830295-0301 SED A R CHI 6/20/17
	CLASSROOM UPGRADES -MIDDLE D- 215 22ND ST. Ogden, Utah 84401 MARK DATE DESCRIPTION
	ISSUE DATE: JUNE 20, 2017 PROJECT NO: 17010 CAD DWG FILE: DRAWN BY: Author CHK'D BY: Checker PERMIT SET JUNE 20, 2017 SHEET TITLE
8.1	GROUND FLOOR PLAN
	SHEET NO:
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Level 2 112' - 8"

<u>Level 1</u> 100' - 0"

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PIPING AND EQUIPMENT INSULATION SCHEDULE									
OVMPOL	OVOTEM	INDOOR		OUTDOOR		NOTES			
STMBUL	SYSTEM	MATERIAL	JACKET	MATERIAL	JACKET	NOTES			
DCW DHW DHR	DOMESTIC WATER	PRE-FORMED MINERAL FIBER	ASJ	PRE-FORMED MINERAL FIBER	PVC				

MINIMUM PIPE INSULATION THICKNESS TABL									
FLUID DESIGN OPERATING TEMP. RANGE (°F)		INSULATION C	NOMINAL PIPE OR						
	RATING (PERMS)	CONDUCTIVITY Btu·in/(h·ft²·°F)	MEAN RATING TEMP. (°F)	<1"	1" TO <1 1/2"	1 1/2" TO <			
141-200	-	0.25-0.29	125	1.5	1.5	2.0			
105-140	-	0.22-0.28	100	1.0	1.0	1.5			
40-60	<0.05	0.21-0.27	75	0.5	0.5	1.0			
<40	<0.02	0.20-0.26	50	0.5	1.0	1.0			

PIPING MATERIAL SCHEDULE									
SYSTEM	MATERIAL	JOINTS	NOTES						
DOMESTIC HOT & COLD WATER	TYPE 'L' COPPER	3" & SMALLER BELOW GRADE BRAZED 3" & SMALLER ABOVE GRADE SOLDERED	OR POLYPROPYLENE OR PRO PRESS						
NATURAL GAS - ABOVE GRADE	SCH 40 BLACK STEEL	2 PSI OR LESS THREADED MORE THAN 2 PSI WELDED							
SANITARY SEWER & VENT	SCH 40 BLACK STEEL	NO HUB COUPLING							
CONDENSATE DRAIN	OUTDOOR; COPPER INDOOR; PVC	O; PRO PRESS I; SOLVENT CEMENT							

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PLUMBING FIXTURE SCHEDULE MARK DESCRIPTION MANUFACTURER & MODEL GPM CONNECTIONS INK NOTES SINK ELKAY DRKR2217LC 1.5 1/2" 1/2" 1 1/2" <th></th> <th>3</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>4</th>		3							4			
MARK DESCRIPTION MANUFACTURER & MODEL GPM $CONNECTIONS$ NOTES <u>SINK</u> ELKAY DRKR2217LC 1.5 1/2" 1/2" 1 1/2"				PL	UMB	ING	FIXTU	RE S	CHEDULE			
MARK DESCRIPTION & MODEL GPM CW HW WASTE VENT NOTES SINK ELKAY DRKR2217LC 1.5 1/2" 1/2" 1 1/		DESCRIPTION	MANUFACTURER COM CONNECTIONS				ECTIONS		NOTES			
SINK ELKAY DRKR2217LC 1.5 1/2" 1/2" 1 1/2" 1 1/2" 18GA STAINLESS STEEL, SINGLE COMPARTMENT, 22 x 17 x 12, TOP MOUNT, SOUND GUARD, BUBBLER		DESCRIPTION	& MODEL	GFM	CW	HW	WASTE	VENT	NOTES			
	<u>S-1</u>	SINK	ELKAY DRKR2217LC	1.5	1/2"	1/2"	1 1/2"	1 1/2"	18GA STAINLESS STEEL, SINGLE COMPARTMENT, 22 x 17 x 12, TOP MOUNT, SOUND GUARD, BUBBLER			

.E R TUBE SIZE (in.) 4" TO <8" <4" ≥8" 2.0 2.0 1.5 1.5 1.0 1.0 1.0 1.5

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Γ					PLU	MBIN	IG FI)		CHED	ULE					PLUM	IBING LEGEND		
м		RIPTION							NOTES	5					SYMBOL	DESCRIPTION		
	<u>S-1</u> S	SINK	ELKAY		1.5 1/2	2" 1	1/2" 1	1/2" 1 1/2"	18GA STAIN	NLESS STEEL		ARTMENT, 22 x ⁻	17 x 12, TOP			DOMESTIC COLD WATER PIPING (DCW)		
				1					WOUNT, 30		DUDDLEN					RECIRCULATING HOT WATER PIPING (DHW)		ARCHITECTS
						PU	JMP S	SCHEDUL	E									ENGINEERS
MARK	MANUFACT	URER	SYSTEM	туре	GPM	HEAD			MOTOR			FS				SANITARY SEWER PIPING (ABOVE GROUND) SANITARY SEWER PIPING (UNDERGROUND)		Case I owe & Hart Inc. • 2484 Weshington Plud
	& MODE		SINK			(FT)		(°F) RPM	HP	PHASE (NS	ТРТ	TRAP PRIMER PIPING		Suite 510 • Ogden, Utah • 84401
$\begin{pmatrix} r \\ 1 \end{pmatrix}$	WRS-5		(GRAY WATER) BASIN	8	15	WATER	AMBIENT 3450	1/6	120 / 1	19 LEVEL	SENSOR, 10FT			CD G	CONDENSATE DRAIN NATURAL GAS PIPING		801.399.5821 • www.clhae.com
$\begin{pmatrix} P \\ 2 \end{pmatrix}$	WRS-5		(GRAY WATER) BASIN	8	15	WATER	AMBIENT 3450	1/6	120 / 1	19 LEVEL	SENSOR, 10FT	CORD		_	DIRECTION OF FLOW		CONSULIANIS
$\begin{pmatrix} P \\ 3 \end{pmatrix}$	WRS-5		(GRAY WATER) BASIN	8	15	WATER	AMBIENT 3450	1/6	120 / 1	19 LEVEL	SENSOR, 10FT	CORD	NS,	<u></u> Р			
$\left\langle \begin{array}{c} P \\ 4 \end{array} \right\rangle$	WRS-5		GRAY WATER) BASIN	8	15	WATER	AMBIENT 3450	1/6	120 / 1	19 LEVEL	SENSOR, 10FT	CORD	NS,	φ	FLOOR CLEANOUT		
																BALL VALVE		
								WATER I	HAMM							Y-STRAINER		
						MAR		IUFACTURER & MODEL	FIXTURE UNITS	E FIFE SIZE (IN)	HEIGHT (IN)	DIAMETEI						
						<u>wha</u>	<u>-A</u> J.R	R. SMITH 5005	1-11	3/4"	2.62"	3.25"	PROVIDE ACCE	SS		THERMOMETER		
						<u>wha</u>	<u>-B</u> J.R	R. SMITH 5010	12-32	1"	2.97"	3.25"	PROVIDE ACCE	SS		BLIND FLANGE OR CAP		
						<u>WHA</u>	<u>C</u> J.R	R. SMITH 5020	33-60	1"	3.59"	3.25"	PROVIDE ACCE	SS	~	PIPING TEE UP		STAMP
						<u>wha</u>	<u>-D</u> J.R	R. SMITH 5030	61-113	1"	5.14"	3.25"	PROVIDE ACCE	SS		PIPING ELBOW UP		STATESSION A
						WHA	<u>-e</u> J.R	R. SMITH 5040	114-154	1"	5.52"	3.25"	PROVIDE ACCE	SS		PIPING ELBOW DOWN PRESSURE GAUGE		PROFESSION
						WHA	<u>\-F</u> J.R	R. SMITH 5050	155-330	1"	6.67"	3.25"	PROVIDE ACCE	SS	© OR 🖸	FLOOR DRAIN OR FLOOR SINK	C	800 8 8557421 8 単 1
			RTL 22			N	OTES: -ALL	L WATER HAMMER		S LISTED IN		/ NOT APPEAR (ON DRAWINGS.					MORGAN B C P
				94 CFH			-SIZE AND	SELECT ALL WAT		ARRESTOR		JUNEN 3 RECC	DIVINIENDATIONS.			HOSE BIBB		AND ATE OF UTIL
								PLUM	IBING	GENE	RAL NO	TES:			\bigcirc	POINT OF CONNECTION		06 / 20 / 2017
PRC	OVIDE PIETRO F LBS / OZ GAS	FIORIENTI PRESSUF					1. A		IT MANUF	ACTURES	SHOWN AS	A BASIS OF	design. Not		DET#	DETAIL CALLOUT		
	R	REGULATC	DR C					ENDED TO SOI				ACTURER.			<u>XX-1</u>	PLUMBING FIXTURE CALLOUT		aff
							Z. T SYS THE	TEM'S SERVIC	ES WITH	OUT FIRST		FING ALL DO ONS REQUIF	WNTIME WITH		ABV			DAVINCI
0.			(E) RTU- 27 OF	-11			ACC		NEW CON	NECTIONS	MAY REQUI	RE ODD HOU	JR WORK.		BET	BETWEEN		A C A D E M Y
	1/2		13 13	-H			3. P SCA	PIPE ROUTING	IS APPRO	OXIMATE, E ATE ROUTI	NG, OFFSET	TIC, AND IS N S AND TRAN	NOT TO BE		BLW	BELOW		
							MAK	E CHANGES	WITHOUT	ADDITION	AL COSTS.				CO	CLEANOUT		CLASSROOM
		(E) RTU-4 120	CFH			4. T ALL	HE CONTRAC	TOR SHA MECHAN	LL CLOSEI IICAL, ARC	Y COORDIN	ATE NEW PL L, AND STRU	UMBING WITH		COTG	CLEANOUT TO GRADE		UPGRADES
							MEN 5. A	MBERS. ALL PIPING AN	D PLUMB	ING SYSTE	MS SHALL E	BE INSTALLE	DIN		(E)	EXISTING		
							ACC PLU	CORDANCE WI	TH THE L NATIONA	ATEST EDI AL FIRE CO	TION OF THE DE, AND INT	E INTERNATIONA	ONAL IL FUEL GAS		FCO			
) <u>(</u>	E) RTU-3 140	CFH			6. W	JE. WHEN CONNEC		W PIPING 1	O EXISTING	. CONTRACT	ОВ ТО МАТСН		SS	SANITARY SEWER		215 22ND 51. Orden 11tah 84401
							EXIS	STING PIPING	MATERIA	L UNLESS	OTHERWISE	INDICATED.			S.S.	STAINLESS STEEL	В	oguon, otan or tor
							7. P 8 A			OSED PIPE	S AND PIPE	SUPPORTS.	PEN ENDS TO		ТҮР	TYPICAL		MARK DATE DESCRIPTION
—(E) G———		_					BEC	CAPPED & SE	ALED WE	ATHERTIGI	IT.	o, 210. W/ O			VTR	VENT THRU ROOF		
(E) F	37 CFH			11	12 CFH	1	9. SUP	PIPING SEISM PPORTED BY R	IC SUPPO	DRTS SHAL GERS; HAN	L NOT BE R GERS IN THI	EQUIRED IF	PIPING IS 12 INCH OR	L	WCO	WALL GLEANOUT		
		_		、 L	(E) RTU-1		PIPI	ING WITH ROD	HANGER	S; HANGE	RS IN THE PI TO THE SUF	PE RUN OVE	R 12 INCHES INCHES	N				
			(E) G	1			BE F		BE SEISN		ESTRAINED.		DANT TRAD					
							PRIN	MERS, AND W	ATER HAN	MMER ARR	ESTORS.		JANI, INAF					ISSUE DATE: JUNE 20, 2017
							11. MAN	SIZE AND SEL	ECT ALL S RECOM	WATER HA	AMMER ARR DNS.	ESTORS PEF	3					PROJECT NO: 17010
							12. PLU	ALL WETTED	SURFACE	ES OF POT	ABLE WATE	R PIPES, PIP GHTED AVER	E FITTINGS, AGE LEAD			IN CEILING SPACE		DRAWN BY: GM, JAC
							CON	NTENT OF NO	MORE TH	AN 0.25 PE	RCENT PER	ANSI 61 AND) ANSI 372.		, <u> </u>	→→ >		CHK'D BY: MPM
															Ť.	TRAP		PERMIT SET
																		JUNE 20, 2017
															I M IZ	DISCHARGE		SHEET TITI E
														VENT (NO ADMIT				PLIMRING
														▾◜៶∟▾∟ /\∟L		INLET	А	
																		SUIEDULES,
																		NOIES, AND
													(A5)		AGE EJECIC	NK PUMP DETAIL		LEGEND
																		SHEET NO:
																		P001
	3									4						5		

	WATER HAMMER ARRESTER SCHEDULE										
MARK	MANUFACTURER & MODEL	FIXTURE UNITS	PIPE SIZE (IN)	HEIGHT (IN)	DIAMETER (IN)	NOTES					
<u>WHA-A</u>	J.R. SMITH 5005	1-11	3/4"	2.62"	3.25"	PROVIDE ACCESS					
<u>WHA-B</u>	J.R. SMITH 5010	12-32	1"	2.97"	3.25"	PROVIDE ACCESS					
WHA-C	J.R. SMITH 5020	33-60	1"	3.59"	3.25"	PROVIDE ACCESS					
<u>WHA-D</u>	J.R. SMITH 5030	61-113	1"	5.14"	3.25"	PROVIDE ACCESS					
<u>WHA-E</u>	WHA-E J.R. SMITH 5040 114-154 1" 5.52" 3.25" PROVIDE ACCESS										
WHA-F	WHA-F J.R. SMITH 5050 155-330 1" 6.67" 3.25" PROVIDE ACCESS										
NOTE -SIZ	NOTES: -ALL WATER HAMMER ARRESTERS LISTED IN SCHEDULE MAY NOT APPEAR ON DRAWINGS. -SIZE AND SELECT ALL WATER HAMMER ARRESTORS PER MANUFACTURER'S RECOMMENDATIONS.										

187 CFH

RESERVED

MARK	
P1	PIPE DOWN
P2	INSTALL NEV
P3	CORE DRILL
P4	RELOCATE (
P5	SEE DETAIL
P6	(E) SINK TO I
	MAIN AS POS

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	PACKAGE HVAC UNIT SCHEDULE																					
						OUTSIDE	EXTERNAL	EVN		HEAT	ING GAS	3	U	NIT ELE	CTRICA	L.	coc	DLING COII	_	DIMENSIONS	WEIGHT	
MARK	& MODEL	DESCRIPTION	AREA SERVED REFRIG ACFM AIR CFM PRESSURE RPM EDB LDB		INPUT MBH	OUTPUT MBH	МСА	MOP	VOLTS/ PHASE	EER Rating	EDB/EWB (°F)	LDB/LWB (°F)	TOTAL MBH	LxWxH (IN)	(LBS)	NOTES						
RTU 22	TRANE YHC037	DOWNFLOW	NEW CLASSROOM 229 & NEW CLASSROOM 230	R-410A	1150	370	0.750	879	65	140	83.2	66.6	11.4	15.0	460 / 3	17.5	84 / 60	53 / 48	31.6	70 x 44 x 36	544	SEISMIC CURB, ECONOMIZER
NOTE: A	TE: ALL PERFORMANCE BASED ON SITE ELEVATION OF 4200 FT ABOVE SEA LEVEL.																					

			REGIST	ER, GR	ILLE AND	DIFFU	SER S	SCHE	DUL	E	
MARK	MANUFACTURER & MODEL	DESCRIPTION	MATERIAL	FINISH	FRAME	DAMPER	MAX NC	MAX CFM	MAX APD	NECK SIZE	NOTES
S-1	TITUS TMS	CEILING LOUVERED SUPPLY DIFFUSER	ALUMINUM	STD WHITE #26	LAY-IN	IN DUCT TAKE-OFF	19	279	0.064	8"ø	
S-2	TITUS TMS	CEILING LOUVERED SUPPLY DIFFUSER	ALUMINUM	STD WHITE #26	LAY-IN	IN DUCT TAKE-OFF	18	382	0.051	10"ø	
R-1	TITUS PAR	CEILING LOUVERED RETURN GRILLE	STEEL	STD WHITE #26	LAY-IN	IN DUCT TAKE-OFF	20	500	0.09	12 x 12"	
		DUCT INS	JLATIO	SYMBOI		DETAIL					
D	UCT TYPE		DUCT L	OCATION			ISULATIO R-VALUE	DN E			
SUPPLY	PPLY, RETURN NOT WITHIN CONDITIONED SPACE						R-6				
SUPPLY	UPPLY, RETURN OUTSIDE BUILDING ENVELOPE						R-8				
NOTES:											

REQUIREMENTS APPLIED TO THE DUCT TYPE LISTED, WHETHER HEATED OR MECHANICALLY COOLED. MECHANICALLY COOLED DUCTS REQUIRING INSULATION SHALL HAVE A VAPOR RETARDER, WITH A PERM RATING NOT GREATER THAN 0.5 AND ALL JOINTS SEALED.

INSULATION TYPES: MINIMUM DENSITIES AND OUT OF PACKAGE THICKNESS. NOMINAL R-VALUES ARE FOR THE INSULATION AS INSTALLED AND DO NOT INCLUDE AIR FILM RESISTANCE.

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IF SHEET IS LESS THAN 22"x 34" IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

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MECHANICAL GENERAL NOTES:

- 1. ALL EQUIPMENT MANUFACTURES SHOWN AS A BASIS OF DESIGN. NOT INTENDED TO SOLE SOURCE EQUIPMENT MANUFACTURER.
- 2. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST STATE ADOPTED EDITION OF THE INTERNATIONAL MECHANICAL CODE AND SMACNA.
- 3. MECHANICAL PLANS ARE DIAGRAMMATIC ONLY. CONTRACTOR SHALL COORDINATE THEIR WORK WITH OTHER TRADES, AND ACTUAL JOB SITE CONDITIONS. CONTRACTOR TO FIELD VERIFY QUANTITIES AND DIMENSIONS.
- 4. CONTRACTOR TO PROVIDE ALL NECESSARY MATERIALS, DUCTWORK, HANGERS, FITTINGS, OFFSETS, INSULATION AND ACCESSORIES LOGICALLY REQUIRED FOR A COMPLETE FUNCTIONAL AIR DELIVERY SYSTEM.
- 5. DUCT DIMENSIONS ON DRAWINGS ARE INSIDE DIMENSIONS. MINIMUM DUCTWORK GAUGE TO BE 26 GAUGE.
- 6. CONTRACTOR SHALL COORDINATE ALL SUPPLY DIFFUSER PLACEMENTS.
- 7. ALL SQUARE ELBOWS IN SUPPLY AND RETURN DUCTWORK SHALL HAVE SINGLE THICKNESS TURNING VANES.
- 8. INSULATED FLEXIBLE DUCT NOT TO EXCEED 4 FEET IN LENGTH.
- 9. CONNECTIONS TO SUPPLY DIFFUSERS TO BE MADE WITH A RIDGED CONNECTION SO THAT CLEAR AND UNOBSTRUCTED AIRFLOW IS ACHIEVED.
- 10. MOUNT BOTTOM OF THERMOSTAT 60 INCHES ABOVE FINISHED FLOOR. RUN WIRING FROM THERMOSTAT LOCATION TO AIR HANDLER AND TERMINATE TO PROVIDE FOR A FULLY FUNCTIONAL SYSTEM.
- 11. CONTRACTOR TO FURNISH FILTERS.
- 12. CONTRACTOR TO FURNISH AND INSTALL CONDENSATE P-TRAP ON ALL NEW AIR HANDLERS PER DETAILS SHOWN ON DRAWING.
- 13. ALL PIPING THAT COMES IN CONTACT WITH A DISSIMILAR METAL TO BE PROTECTED AGAINST GALVANIC CORROSION.
- 14. REMOTE CONCEALED CEILING CABLE CONTROL SYSTEM REQUIRED FOR ALL MANUAL VOLUME DAMPERS IN HARD LID CEILING APPLICATIONS.
- 15. SEISMIC SUPPORTS ARE NOT REQUIRED FOR HVAC DUCTWORK IF DUCTS ARE SUSPENDED FROM HANGARS 12 INCH OR LESS IN LENGTH.
- 16. REFER TO STRUCTURAL DETAILS FOR ALL EQUIPMENT AND DUCT PENETRATIONS THROUGH ROOF. IF DETAIL IS NOT PRESENT THEN CONTACT ENGINEER.
- 17. ALL EXPOSED DUCTWORK TO HAVE ALL LABELS AND WRITING REMOVED FROM DUCT.
- 18. AFTER AIR AND HYDRONIC SYSTEM BALANCING HAS BEEN COMPLETED. MARK ALL BALANCING DAMPER AND BALANCING VALVES TO PERMANENTLY INDICATE FINAL POSITION; IE AN ARROW OR DRAWING AN OUTLINE OF **BALANCING HANDLE POSITION.**

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	<u>LIGHTING</u>		
	\square	FXISTING LIGHT FIXTURF	
	R	RELOCATED LIGHT FIXTURE	
		FIXTURE - RECESSED, SURFACE OR PENDANT MOUNT,	
		FIXTURE - RECESSED OR SURFACE MOUNT WITH EMERGENCY BATTERY PACK, NUMBER INDICATES FIXTURE TYPE	
D	\square	NUMBER INDICATES FIXTURE TYPE, NL (NIGHT LIGHT) POWERED AT ALL TIMES	
		FIXTURE - CHAIN, RECESSED, SURFACE OR PENDANT HUNG	
	(17)	SMALL LIGHT FIXTURE	
	\bigotimes	EXIT LIGHT, TOP MOUNTED, DARKENED AREA REPRESENTS LETTERED	
	н⊗	EXIT LIGHT, WALL MOUNTED, DARKENED AREA	
	\otimes	EXIT LIGHT, TOP MOUNTED, ARROW INDICATES	
	н⊗	EXIT LIGHT, WALL MOUNTED, ARROW INDICATES DIRECTION OF EGRESS	
	<u>SWITCHES (+</u>	48" UNLESS NOTED)	
	\$ _M	SINGLE POLE SWITCH OCCUPANCY SENSOR WALL SWITCH	
	Р \$	SWITCH WITH PILOT LAMP	
	\$a,b,c, etc.	SPECIAL SWITCHING, CONTROLS LIGHT FIXTURE WITH SAME SUBSCRIPT	
С	S MS	FLUORESCENT / LED DIMMER / OCCUPANCY SWITCH	
		MOTION SENSOR SLAVE WATT STOPPER DT-305 OR EQUIVALENT	
	PP	LIGHTING RELAY POWER PACK	
	DL	DAY LIGHTING SENSOR	
	CIRCUITING		
		WIRING CONCEALED IN CEILING OR WALL	
		WIRING CONCEALED IN FLOOR WIRING EXISTING	
	_////	CROSSLINES INDICATE NUMBER OF #12 CONDUCTORS. GROUND IS REPRESENTED BY CROSSLINE WITH DOT ON TOP. OTHER CONDUCTORS AND CONDUIT AS	
	A-1,3	BRANCH CIRCUIT HOMERUN TO PANELBOARD; NUMBER OF ARROWS INDICATE NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATION IDENTIFIES PANEL AND CIRCUIT NUMBER(S).	
D	<u>PANELBOARE</u>	OS AND POWER EQUIPMENT	
Б	\	FLUSH MOUNTED PANELBOARD AND CABINET	
		SURFACE MOUNTED PANELBOARD AND CABINET	
		CIRCUIT BREAKER DISCONNECT	
		SAFETY DISCONNECT SWITCH - UNFUSED	
	2 L	MANUAL MOTOR STARTER	
	\boxtimes	MAGNETIC MOTOR STARTER	
		COMBINATION STARTER & DISCONNECT SWITCH	
		FUSED DISCONNECT	
	(1/2)	MOTOR OUTLET, HORSEPOWER AS INDICATED	
		SEE SCHEDULES	
А			
IF SHE	ET IS LESS THAN 22	"x 34"	
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RECEPTACLES ((+18" UNLESS NOTED)

—	DUPLEX RECEPTACLE, NEMA 5-20R, GROUNDING TYPE
—	QUAD RECEPTACLE (DOUBLE DUPLEX), NEMA 5-20R, GROUNDING TYPE
\ominus	DUPLEX RECEPTACLE, 5-20R,GROUNDING TYPE, RECESS MOUNTED IN THE FLOOR
	DUPLEX RECEPTACLE, 5-20R,GROUNDING TYPE, RECESS MOUNTED IN THE CEILING
J	JUNCTION BOX
	GROUND ROD - 3/4" x 10'-0"

FIRE ALARM / MNS SYSTEM

MANUAL PULL STATION (+48" AFF)
FIRE ALARM - STROBE SPEAKER/HORN, NUMBER INDICATES STROBE CANDELLA RATING MOUNT NO HIGHER THAN 6'-6" AFF
FIRE ALARM - STROBE ONLY, NUMBER INDICATES STROBE CANDELLA
FIRE ALARM - STROBE SPEAKER/HORN WATER PROOF
CEILING MOUNTED FIRE ALARM STROBE SPEAKER/HORN, NUMBER INDICATES STROBE CANDELLA RATING
SMOKE DETECTOR
SMOKE DETECTOR SLEEPING ROOM
DUCT SMOKE DETECTOR
FAN SHUTDOWN RELAY
FIRE/SMOKE DAMPER- 120 VOLT

COMMUNICATIONS SYSTEMS

	TELEPHONE OUTLET w/ 3/4 " C. TO ACCESSIBLE CEILING. PROVIDE 1 EA. CAT. 6, 4 PAIR CABLE ON SINGLE GANG PLATE w/MODULAR JACKS, 2-RJ45
	TELEPHONE FLOOR BOX, ROUTE PHONE AND DATA CABLES TO ACCESSIBLE CEILING
\triangleleft	DATA OUTLET w/ 3/4 " C. TO ACCESSIBLE CEILING. PROVIDE 2 EA. CAT. 6, 4 PAIR CABLES ON SINGLE GANG PLATE w/MODULAR JACKS, 2-RJ45
	TELEPHONE / DATA OUTLET w/ 3/4" C. TO ACCESSIBLE CEILING. PROVIDE 1 EA. CAT. 6 AND 2 EA. CAT 6 - 4 PAIR CABLE ON SINGLE GANG PLATE w/MODULAR JACKS, 4-RJ45.
	TELEPHONE / DATA OUTLET w/ 3/4" C. TO ACCESSIBLE CEILING. PROVIDE 1 EA. CAT. 6 AND 2 EA. CAT 6 - 4 PAIR CABLE ON SINGLE GANG PLATE w/MODULAR JACKS, 4-RJ45 FLOOR MOUNTED.
\bigcirc	CEILING MOUNTED DATA OUTLET VGA / HDMI
Ø	WIRELESS DATA ACCESS POINT. PROVIDE CAT. 6 CABLE TO OWNER FURNISHED DEVICE
TTB	TELEPHONE TERMINAL BACKBOARD
LAN	LOCAL AREA NETWORK
di d	TELEPHONE OR DATA FLOOR OR WALL MOUNT 19 INCH IDF RACK, 72" TALL
SP	SPEAKER - CEILING SURFACE MOUNT
HSP	WALL SPEAKER/HORN

ONE-LINE DIAGRAM

	TRANSFORMER
-	FUSE
	MOLDED CASE CIRCUIT BREAKER
	DISCONNECT SWITCH
200 AT 225 AF	CIRCUIT BREAKER TRIP SETTING CIRCUIT BREAKER FRAME SIZE

<u>ABBREV</u>	<u>/IATIONS</u>
	KEYED NOTE CALLOUT - NUMBER AS INDICATED
3R	NEMA 3R ENCLOSURE
12	NEMA 12 ENCLOSURE
4	NEMA 4 ENCLOSURE
4X	NEMA 4X ENCLOSURE
А	AMPERE
AFF	ABOVE FINISHED FLOOR
AIC	AMPERES INTERRUPTING CAPACITY
APPROX	APPROXIMATELY
BC	BARE COPPER
С	CONDUIT
СВ	CIRCUIT BREAKER
CKT	CIRCUIT
CO	CONDUIT ONLY
CONC	CONCRETE
CI	
CU	
UTC (E)	
FXP	ELECTINAL METALLIC TODING
FA	FIRE ALARM
FLR	FLOOR
FT	FEET
GFI	GROUND FAULT CIRCUIT-INTERRUPTER
GND or GRD	GROUND
HPF	HIGH POWER FACTOR
IMC	INTERMEDIATE METAL CONDUIT
IN	INCHES
KVA	KILOVOLT AMPERE
LAN	LOCAL AREA NETWORK
MAX	MAXIMUM
MDP	MAIN DISTRIBUTION PANELBOARD
MIN	MINIMUM
(N)	NEW
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURING ASSOCIATION
NIC	NOT IN CONTRACT
NL	
OFOI	
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
0.U.	OVERHEAD
PA	PUBLIC ADDRESS
PT	POTENTIAL TRANSFORMER
RM	ROOM
RGC	RIGID GALVANIZED CONDUIT
TC	TERMINAL CABINET
ТТВ	TELEPHONE TERMINAL BOARD
ТҮР	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLT
W	WATT
w /	WITH
WP	WEATHERPROOF
XFMR	
+12"	MOUNTING HEIGHT ABOVE FINISHED FLOOR OR GRADE

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IK 2 3 4 5 7 7 7 7 7 7 7 7 7	NOTE PROVIDE 1-POLE, 20A BREAKER IN CIRCUIT 26. DATA J-BOX IN CEILING & WALL FOR VGA OR HDMI CABLE. PROVIDE 1" C. CONNECT TO EXISTING RECEPTACLE CIRCUIT. CONNECT TO EXISTING RECEPTACLE CIRCUIT. PROVIDE CEILING SPEAKER TO MATCH EXISTING. EXTEND 16-2 CABLES TO NEAREST EXISTING SPEAKER. EXTEND EXISTING RECEPTACLE CIRCUIT TO PUMP. PROVIDE 3-POLE, 20A, 480 VOLT BREAKER IN CIRCUIT 38.	D	A R C H I T E C T S E N G I N E E R S Case, Lowe & Hart, Inc. • 2484 Washington Blvd. Suite 510 • Ogden, Utah • 84401 801.399.5821 • www.clhae.com CONSULTANTS
	A A.1 A.3		STAMP
	A.6 A.7	C	APHOFESSIONA PHOFESSIONA 129383 KEVIN J. LEWIS 06/05/2017
	Β		DAVINCI A C A D E M Y
	B.7 B.8	В	CLASS ROOM UPGRADES -MIDDLE D- 215 22ND ST. Ogden, Utah 84401 MARK DATE DESCRIPTION
	C.4		
	D		ISSUE DATE:JUNE 20, 2017PROJECT NO:17010CAD DWG FILE:DRAWN BY:DRAWN BY:J.M.S.CHK'D BY:K.J.L.
	D.5		PERMIT SET JUNE 20, 2017
	E	A	SHEET TITLE ELECTRICAL POWER PLAN - MAIN FLOOR
	5		SHEET NO: EP101

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A	ISSUE DATE: JUNE 20, 2017 PROJECT NO: 17010 CAD DWG FILE: DRAWN BY: J.M.S. CHK'D BY: K.J.L. PERMIT SET JUNE 20, 2017 SHEET TITLE SHEET TITLE ELECTRICAL POWER PLAN - SHEET NO: EP111

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	CONDU	IT AND	CONDU	JCTOF ER)	SCHI	EDULE
ТҮРЕ	AMPS (1)		C		R	NOTES
1	20	0.75	2 QIY	SIZE (1) 12	GND (2) 12	-
2	20	0.75	3	12	12	-
3	20	0.75	4	12	12	-
4	30	0.75	2	10	10	
5	30	0.75	3	10	10	-
6	30	0.75	4	10	10	-
7	40	0.75	2	8	10	-
8	40	0.75	3	8	10	-
9	40	0.75	4	8	10	-
10	55	0.75	2	6	8	-
11	55	0.75	3	6	8	-
12	55	1	4	6	8	-
13	70	1	2	4	8	-
	70	1	3	4	8	-
15	70	1.25	4	4	8	-
16	85	1.25	2	3	8	-
17	85	1.25	3	3	8	-
18	85	1.25	4	3	8	-
19	95	1.25	3	2	6	-
20	95	1.25	4	2	6	-
21	110	1.25	3	1	b c	-
22	110	1.5	4	1/0	b	-
23	150	c. ۱ د	3	1/0	0 A	
24	175	2	4	2/0	6	-
25	175	2	4	2/0	6	-
20	200	2	3	3/0	6	-
28	200	2	4	3/0	6	-
29	230	2.5	3	4/0	4	-
30	230	2.5	4	4/0	4	-
31	255	2.5	3	250	4	-
32	255	2.5	4	250	4	-
33	310	2.5	3	350	3	-
34	310	3	4	350	3	-
35	380	3	3	500	3	
36	380	4	4	500	3	
37	400	2 EA 2	3	3/0	3	
38	400	2 EA 2	4	3/0	3	-
39	420	3	3	600	2	-
40	420	4	4	600	2	-
41	460	2 EA 2	3	4/0	2	-
42	460	2 EA 2.5	4	4/0	2	-
43	510	2 EA 2.5	3	250	1	-
44	510	2 EA 2.5	4	250	1	-
45	620	2 EA 2.5	3	350	1/0	-
46	620	2 EA 3	4	350	1/0	-
47	760	2 EA 3	3	500	1/0	-
48	760	2 EA 4	4	500	1/0	-
49	820	2 EA 3	3	600	2/0	-
50	820	2 EA 4	4	600	2/0	-
51	055 055	3 EA 2.5	3	000 000	2/0	-
52	1000	3 54 3	4 2	300 400	2/U 2/N	<u> </u>
50	1000	3 FA 3	<u>ح</u>	400	2/0	-
55	1140	3 EA 3	3	500	3/0	-
56	1140	3 EA 4	4	500	3/0	-
57	1240	4 EA 2.5	3	350	3/0	-
58	1240	4 EA 3	4	350	3/0	-
59	1260	3 EA 3	3	600	3/0	-
60	1260	3 EA 4	4	600	3/0	
61	1675	5 EA 3	4	400	4/0	-
62	1680	4 EA 4	4	600	4/0	-
63	2010	6 EA 3	4	400	250	-
	2100	5 EA 4	4	600	250	-
64	2520	6 EA 4	4	600	350	-
64 65	2660	7 EA 4	4	500	350	-
64 65 66			4	600	400	-
64 65 66 67	2940	7 LA 4				1
64 65 66 67 68	2940 3040	8 EA 4	4	500	400	-
64 65 66 67 68 69	2940 3040 4180	8 EA 4	4	500 500	400 500	-
64 65 66 67 68 69 70	2940 3040 4180 4200	8 EA 4 11 EA 4 10 EA 4	4 4 4	500 500 600	400 500 500	-
64 65 66 67 68 69 70 NOTES 1	2940 3040 4180 4200 :: CONDUCT PER NEC	8 EA 4 11 EA 4 10 EA 4 OR SIZE USING 110.14(C)(1)(A)	4 4 4 NEC TABLE 31	500 500 600 0-16; 60 DEG	400 500 500	- - 1 AWG
64 65 66 67 68 69 70 NOTES 1	2940 3040 4180 4200 :: CONDUCT PER NEC	8 EA 4 11 EA 4 10 EA 4 OR SIZE USING 110.14(C)(1)(A)	4 4 4 NEC TABLE 31	500 500 600 0-16; 60 DEG	400 500 500	- - - 1 AWG

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	LIGHTING FIXTURE SCHEDULE NOTE: ALL INTERIOR & EXTERIOR LIGHTING CONTROLS TO BE COMMISSIONED																
Ι									LAMPS			BALLA	STS		махімим		
	DESCRIPTION	VOLTS	MTG.	LENS	LENS FINISH TYPE NO. OF WATTS/LAMP		TYPE		NO. PER	INPUT	MANUFACTURER & CATALOG NUMBER (NO SUBSTITUTIONS WITHOUT PRIOR APPROVAL)	DETAILS					
						LED	F	н	LAMPS	TYPE	S	E	0	LUMINAIRE	WATIS		
	LED RECESSED	120/277	CEILING RECESSED	ACRYLIC	WHITE	*			1	LED 4000K		*		1	34	LITHONIA 2BLT4-40L-ADP-EZ1-LP840	
	LED RECESSED	120/277	CEILING RECESSED	ACRYLIC	WHITE	*			1	LED 4000K		*		1	34	LITHONIA 2BLT4-40L-ADP-EZ1-LP840-EL14L	
	-	-	-	-	-		*		-	-		*		-	-	-	
	-	-	-	-	-		*		-	-		*		-	-	-	

	EQUIPMENT SCHEDULE														
ODVT	EQUIP.	DECODIDITION		DUAGE	WATTS	DDV	STARTERS	CONTR	ROL	L PILOT		CONT	ACTS	CONTROL	REMARKO
CRKT.	NO.	DESCRIPTION	VOLIS	PHASE	H.P.	BRK	SIZE	H.O.A.	P.B.	GRN	RED	N.O.	N.C.	TRANS.	REMARK5
(E)	$\left\langle \begin{array}{c} P \\ 1 \end{array} \right\rangle$	SINK PUMP	120	1	1/3 HP	20	\$								MOTOR RATED SWITCH
(E)	$\left\langle \begin{array}{c} P \\ 2 \end{array} \right\rangle$	SINK PUMP	120	1	1/3 HP	20	\$								MOTOR RATED SWITCH
(E)	$\left\langle \begin{array}{c} P \\ 3 \end{array} \right\rangle$	SINK PUMP	120	1	1/3 HP	20	\$								MOTOR RATED SWITCH
(E)	$\left\langle \begin{array}{c} P \\ 4 \end{array} \right\rangle$	SINK PUMP	120	1	1/3 HP	20	\$								MOTOR RATED SWITCH
H2 -38	(RTU) 1	ROOF TOP UNIT	480	3	9.5 KW	20	F								NEMA 3R, FUSE PER MANUFACTURER
-		-	-	-	-	-									-

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