

November 20, 2023

ADDENDUM #1

Owen Valley Middle School Addition and Interior Renovations

The original bid documents and drawings dated November 1, 2023, for the aforementioned project are amended as noted in this Addendum for the purpose of correcting and/or clarifying the original bid documents and drawings and shall take precedence over them. These changes and all incidental items required to provide the following corrections and/or clarifications shall be included even though not specifically described and shall become a part of the Contract Documents. This Addendum is to be sent to all bidders receiving bid documents and drawings and receipt of this Addendum is to be noted by each bidder in their bid proposal.

Revised documents and/or drawings included with this written Addendum include the following:

Documents -

- Pre-Bid Meeting Agenda
- Pre-Bid Meeting Sign-In Sheet

Drawings -

- Civil C6
- Architectural A3, A7, A12, A13, A15
- Structural S5
- Plumbing P4, P7
- Electrical E3, E5, E9

Pre-Bid Meeting Questions

1. Bidder question - "Sheet S2, section E shows a new folding partition support beam. Where is the detail for this support beam?"

Answer - Refer to Existing Roof Framing Plan At New Folding Partition plan on sheet S4, section K on sheet S3 and section Z on sheet S4.

2. Bidder question - "Is the exterior handrail shown on C6 stainless steel or painted? If it is stainless steel, what type? Is the rail to be fully welded? Number 4 finish?"

Answer - The handrail should be type 304, stainless steel, fully welded with No. 4 finish.

3. Bidder question - "What is the existing manufacturer and keyway of the existing keying system?"

Answer - The owner has confirmed that Best is the existing door lock manufacturer. Keying information is being confirmed and will be issued in a future addendum. 4. Bidder question - "Should there be borrowed lite frames in this area?"



Answer - These are existing windows to remain at this location.

5. Bidder question - "Is there asbestos present?"

Answer - There is not believed to be asbestos present at the project location. Owner has tri-annual inspection documents that can be made available for Contractor's review.

6. Bidder question - "Are the water closets being reused or are there new water closets required? There was no indication in the drawing specifications."

Answer - Only (2) water closets are to be removed and saved for reinstallation. One is located in Existing Restroom (RR128A) and the other is in Existing Restroom (RR128B). Refer to demolition keynote #6 on sheet P1. The new water closet specification (WC) is shown on sheet P7.

7. Bidder question - "There was reference to reworking existing fin-tube covers. What exactly is to be done to the fin-tube covers and/or piping?"

Answer - On the second floor, if Alternate #2 is accepted, the existing fin-tube below the windows on the east wall will require rework of the covers at new wall locations only. Existing fin-tube will remain in operation after completion of project. Refer to construction keynote #7 on sheet A4.

Drawings

Sheet C6 - The notes on the exterior handrail have been updated.

Sheet A3 - Wall type note has been added above the Vestibule to close off portal with ceiling above.

Sheet A7- Exterior soffit has been shown at the main entry. Lights at this location have been changed to a linear fixture. Lights have been modified on the Extended Corridor Plan.

Sheet A12 - Updated grading on elevation to match Civil drawings.

Sheet A13 - Note added for drip edge flashing at the bottom of the masonry opening. Sheet A15 - Hardware sets revised.

Sheet S5 - Foundation notes added.

Sheet P4 - Notes reworked at relocated fixtures for better clarity.

Sheet P7 - Space added between lavatory specification and water closet specification for better clarity.

Sheet E3 - Remote switches added to plan to match door hardware schedules.

Sheet E5 - Light fixtures modified at the main entry and Extended Corridor Plan.

Sheet E9 - Light fixtures revised on the schedule.

Approved Substitutions

Operable Partition Wall

After reviewing the submitted product information and corresponding with the product representative who has confirmed that all components of the specified product can be met, the Moderco Signature 843-E electrically-operated partition wall has been approved. Product representative contact information is as follows:

Bob Senseman, Vice President Lee Company, Inc. 27 South 12th Street Terre Haute, Indiana 47807 Office- (812) 235-8155 Email- <u>bsenseman@leecompanyinc.com</u>

The Issued for Construction drawing set will include the Architect's stamp and all Addendum items will be clouded for easy identification.

End of Addendum #1

Gordon Klaus, RA, ALA, NCARB Principal, Director of Architectural Design Three I Design Engineering + Architecture

Cc: file

Scott Stenftenagel, Clerk of the Works

1 Introductions

- A. SCHOOL CORPORATION
 - Superintendent
 Andy Cline
 Email: <u>acline@socs.k12.in.us</u>
 Office Phone: (812) 829-2233
 - Middle School Principal
 Tom Arthur
 Email: tarthur@socs.k12.in.us
 Office Phone: 812-829-2249

B. OWNER REPRESENTATION

 Clerk of the Works The Stenftenagel Group L.L.C. Dana Geldhof Email: dana@stengroup.com Phone: 812 639-6709

Scott Stenftenagel Email: scott@stengroup.com Phone: 812 639-8177

C. ARCHITECT

Three-i Design
 2425 W Indiana St, Evansville, IN 47712
 Phone: (812) 423-6800
 Project Architect: Gordon Klaus
 Email: gklaus@threeidesign.com

2 Sign-in Sheet

A. A Sign-in Sheet is being circulated. Everyone is required to sign-in and print legibly.

2.2 Bids

- A. Sealed bids will be received by Spencer-Owen Community Schools (herein referred to as the "School Corporation") at the Superintendent's Office, located at 205 East Hillside Ave, Spencer, Indiana 47460, until 1 PM EDT, local time, Tuesday, December 5, 2023.
- B. The Work shall be Bid as one unified Prime Contract.
- C. Bids will be publicly opened and read aloud in the boardroom at the above time and place. Bids received later than such hour will be returned unopened.

2.3 Drawings and Specifications

- A. The work on this project shall be performed in accordance with the Drawings and Specifications as well as all other Contract Documents prepared by Three-i Design.
- B. Copies of the Drawings and Specifications may be obtained from Repro Graphix, 14 N.W. 6th Street, Evansville, IN 47708, Phone: (812) 422-2400.
- C. Complete and detailed Drawings and Specifications for this work, including but not limited to the instructions to Bidders, General Conditions, and General Requirements are on file and may be **examined** at the following places:

McGraw-Hill Construction Dodge 8900 Keystone Crossing, Suite 540, Indianapolis, Indiana 46240 Phone: (317) 817-9110 / Fax: (317) 571-8201

ConstructConnect 3825 Edwards Road, Suite 800 Cincinnati, OH 45209 Phone: 800-364-2059 https://www.constructconnect.com

BX Indiana / Construction League 1200 South Madison Avenue Indianapolis, Indiana 46225 Phone: (317) 423-7080 / Fax: (317) 423-7094

By appointment only:

Spencer-Owen Community Schools 205 East Hillside Ave. Spencer, Indiana 47460

2.4 Contract Document Interpretation

- A. Bidders requesting Drawing or Specification interpretation from the Architect during the bidding period should contact the following <u>no later end of day</u> <u>Monday November 27th:</u> Three-I Design; Gordon Klaus; Email: gklaus@threeidesign.com; Phone: 812 423-6800.
- **2.5 Preparation and Submission of Bids** (The following must be submitted with the Bid)
 - A. As a result of House Bill 1019 (2015) and Senate Bill 375 (2016), effective January 1, 2017, <u>Contractors bidding public works projects must be</u> <u>pre-qualified with the State Department of Public Works before beginning</u> <u>construction on projects.</u> Contractors bidding this project must be pre-qualified at a minimum under the following: 1542.00A Institutional Buildings (Hospitals, Schools, Prisons) in excess of \$1,000,000. Please refer to each above listed Section for additional information. Contractors must submit their current Indiana Department of Public Works Administration Certificate of qualification with the Bid.
 - B. Bids shall be submitted on form included in the Project Manual which is based on the Indiana State Board of Accounts Form 96 (Revised 2013), prescribed by the Indiana State Board of Accounts (Bid Form).
 - C. Bond:
 - a. Each bid shall be accompanied by an acceptable certified check, cashier's check, or bid bond as provided in Acts 1969, Chapter 483, payable to the order of the School Corporation in an amount not less than five percent (5 percent) of the total bid.
 - D. Financial Statement:
 - a. Each bid shall be accompanied by a Financial Statement.
 - E. Non-Collusion Affidavit:
 - a. Each bidder shall furnish with his bid an affidavit that such bidder has not directly or indirectly entered into a combination, undertaking, collusion, or agreement with any other bidder or prospective bidder, or with any officer or members of the School Corporation which tends to or does lessen or destroy free competition in the letting of contracts sought for by these Instructions to Bidders.
 - F. E Verify: Contractors shall submit their current E Verify form with the Bid.
 - G. Bid Duration: The bidder agrees to hold the bid open for a period of 60 days after the date of opening.
 - H. Allowance Amount: Contractor should include an Allowance Amount of \$80,000 in the Base Bid amount.

2.6 Rejection of Bids

A. The School Corporation reserves the right to reject any and all bids and to waive any formalities in the bidding.

2.7 Site Visit

- A. A walk-thru of the existing site will be held immediately following the question and answer period.
- B. In any case, prior to bidding, all Contractors bidding on this work shall be required to make a personal inspection of the existing site and area to verify the existing conditions, materials and that the bidder has included all of the requirements in his bid proposal to properly complete the work.

2.8 Bid Form

- A. Please fill out the Form 96 Public Works Bid Form as well as the Supplemental Bid Form in their entirety.
- B. Alternates: See Section 01 23 00; Alternates and Drawing Sheets for full description of Alternates.

ALTERNATE 1: Second Floor Teacher' Lounge / Workroom #203 and Unisex Restroom #203A.

ALTERNATE 2: Second Floor Remodel Work in Corridor #200, Large Group Meeting Room #204, Large Group Meeting Room #207, and Large Group Meeting Room #208.

ALTERNATE 3: Re-Skin Bookshelves from existing Media Center.

ALTERNATE 4: New Ceiling Tile and Grid in Lobby Corridor #COR 101, Corridor #COR 102, Teacher's Lounge / Workroom #203, Restroom #203A, Large Group Meeting Room #204, Large Group Meeting Room #207 and Large Group Instruction Room #208

ALTERNATE 5: Second Floor Window Shades in Conference Room #202 and Teacher's Lounge / Workroom #203.

ALTERNATE 6: Electrical Feed for new AHU.

ALTERNATE 7: VAV Box Replacement.

- C. Required Documents to be submitted with the Contractors Bid:
 - Form 96 Contractor's Bid For Public Works (Current Revision) Indiana State Board of Accounts Form with Questionnaire.
 - Bidder's Financial Statement
 - Bid Security- Bid Bond
 - State Department of Public Works Qualification Certificate (Current Certificate)

Spencer Owen Community School Corporation Owen Valley Addition and Renovation Project PRE-BID MEETING AGENDA

November 15, 2023, 4 PM EDT

2.9 Subcontractors and Materials

A. The Architect and Owner's Representative will receive the complete subcontractor and materials list proposed by the low bid Contractor by email no later than 1:00 p.m. on the day following the bidding. Said list shall be confirmed in writing within forty-eight (48) hours thereafter. If low bidders do not comply with the same, the Architect and School Corporation will consider the bid incomplete and may take any action required to obtain a complete and responsible bid. Said list, upon approval, will be filed with the School Corporation and shall not be changed except by an approved Change Order.

2.10 Scope of Work (General Description)

- A. Work consists of the following general description but not limited to the following: Complete removal of existing exterior pavement and soffit to create new Administration Office addition and secured entrance, new concrete floor slab construction, exterior concrete pavement-walk and railings, exterior associated sitework and existing sanitary sewer modifications. The existing interior Administration Offices will be renovated. The Work, in general, to be performed in the renovated and new Administration Offices and support spaces consists of removal of existing walls, finishes, electrical and HVAC, installation of new walls, finishes, doors, aluminum storefront systems with security glazing, ceilings, aluminum soffit panels, window units, casework, light fixtures, electrical devices, card access and electronic door hardware, voice/data cabling and devices, finishes, plumbing fixtures, privacy curtains, toilet accessories, new HVAC AHU, ductwork, VAVs, grills, diffusers, test and balance, building management systems (BMS) additions and modifications, rework existing wet-pipe sprinkler system heads, installation of new wet-pipe sprinkler system, fire alarm system, etc.... The new Administration Office area will be conditioned by a new AHU which will be installed inside an existing adjacent Storage Room. The existing upper-level Media Center and adjacent space will be renovated as Alternates. There are several Alternates. Refer to Alternate Specification and Drawing Sheets for additional information. There is also structural and brick (masonry) work to be performed to the existing canopy structure and brick facade to reinforce the steel structure which supports the exterior brick veneer. The Contractor will be required to remove and relocate the Owner equipment and loose furniture as indicated on the drawing sheets. All work has substantial completion dates that must be adhered to. Monetary penalties will apply if substantial completion dates and punch lists are not completed as indicated in the plans and specifications.
- B. No Substitution Equipment: AHU-1 as indicated in the drawings shall be by Miller Picking with no allowable substitutions. The Owner, Engineer and product manufacturer have coordinated and selected this AHU due to the lead-times of other AHU's. This AHU will be provided by the Contractor. Attached for reference will be the approved AHU submittal. The Contractor shall review and upon finding it acceptable, immediately secure this equipment with the AHU manufacturer.

- C. The Contractor shall be responsible for temporary enclosures to secure construction areas and to seal-off areas to keep dust and fumes from entering adjacent spaces during all construction activities.
- D. During construction, the Contractor shall be responsible for securing all exterior openings at the end of each workday.
- E. Site visits may be scheduled with: Dana Geldhoff, phone 812 639-6709. Email: dana@stengroup.com. NOTE: visits shall be scheduled at a minimum of 24 hours in advance.

2.11 Site Access

- A. Contractors should carefully read General Conditions and all Sections and examine drawings to become familiar with the site access, Contractor lay-down areas, staging areas, requirements and restrictions.
- B. Existing pavement and sidewalks shall be protected. Existing buildings and adjacent parking lots and drives shall remain in use during the entire project period.

2.12 Schedule

A. DECEMBER 14, 2023 – Tentative Date for School Board to Award Contracts

DECEMBER 15, 2023 – Tentative Date for Contractor to be issued Notice to Proceed. Immediately start development of submittals.

FEBRUARY 2, 2024 - All submittals have been submitted and approved.

MAY 27, 2024 – Project Start Date. (Refer to Construction Phasing Plan Drawing for areas to start construction activities)

AUGUST 2, **2024** – Substantial Completion Date for the Nurses Suite Area and Main Entrance Sidewalk, Main Entrance and SRO Office.

AUGUST 2, **2024** - Substantial Completion Date for Upper-Level Work if these Alternates are approved.

NOVEMBER 8, 2024 – Substantial Completion Date for new Administration Office areas and support spaces.

NOVEMBER 18, 2024 – Start Date for demolition activities and new construction at existing Administration Office areas and support spaces.

FEBRUARY 28, **2025** – Substantial Completion Date for renovated existing Administration Office Area, new Media Center and associated spaces.

MARCH 28, 2025 - CLOSEOUT DOCUMENTS

Spencer Owen Community School Corporation Owen Valley Addition and Renovation Project PRE-BID MEETING AGENDA

November 15, 2023, 4 PM EDT

B. The Contractor is expected to provide the proper management, coordination of subcontractors, procurement of materials and equipment, necessary manpower, means and method, work the required hours, including weekends and holidays to meet the above listed Dates at no extra cost to the Owner.

2.13 Monetary Penalties

- A. There shall be Monetary Penalties associated for failure to complete given tasks within the given associated time periods and upon notifications of non-compliance for such tasks listed for the project. The Schedule of Penalties are as follows:
 - a. **Substantial Completion:** \$250 per calendar day for each calendar day after the stipulated Substantial Completion Date, unless previously waived in writing by the Owner's Representative.
 - b. Punch List Items Completion: Unless previously discussed and approved in writing by the Owner's Representative and/or the Architect, all Punch List items shall be completed within 7 calendar days after the Substantial Completion Date. The Contractor shall be charged \$150.00 per calendar day past the designated time noted above for failure to have completed all Punch List Items to the satisfaction of the Architect, Engineer and Owner's Representative.

2.14 Question and Answer Period (Pre-Bid Meeting)

A. The Pre-Bid Meeting Minutes, instructions, comments and interpretations shall be a part of the Contract Documents and shall have the same force as if they were incorporated therein.

2.15 Other Comments

- A. Contractor shall provide interior temporary wall construction at areas as designated on plans.
- B. Provide temporary equipment to maintain temperature, proper and acceptable humidity levels, and ventilation in enclosed areas to provide ambient conditions for storage, preparation, and Work; to cure installed materials, to prevent condensation, and to prevent accumulations of dust, fumes, and gasses. See Temporary Facilities and Controls Section 01 50 00 for additional information.
- C. Construction areas conditioned by existing HVAC equipment; the Contractor shall be responsible for filter changes of all existing HVAC equipment (VAVs, AHUs) serving all of the construction areas conditioned by existing HVAC equipment. See Temporary Facilities and Controls Section 01 50 00 for additional information.
- D. Contractor is responsible for implementing and maintaining all requirements of the Criminal History Background Check Policy. There are monetary damages for Contractors not complying with these requirements. This will be enforced.

- E. A qualified and experienced Project Superintendent is required to be on-site **<u>at all times</u>** during any and all activities.
- F. All Progress Meetings will be conducted at Spencer Owen Middle School.
- G. Addendum will be issued accordingly. Please check with Reprographics site for all Addenda.

2.16 Questions and Comments from Pre-Bid Meeting:

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Pre-Bid Meeting Sign-In Sheet

General Information

Project Name: SPENCER OWEN MIDDLE SCHOOL ADDITION AND RENOVATIONS

School Corporation:

SPENCER OWEN COMMUNITY SCHOOL CORPORATION

11-15-23 Date Owen Valley Middle School

	Attendance	
Name	Company	Phone/Email
SCOTT STENFTENAGEL	The Stenftenagel Group LLC	scott@stengroup.com (812)639.8177
DANA GELDHOF	The Stenftenagel Group LLC	dana@stengroup.com (812)639.9709
Trace Harruff	CDI, Inc.	estimating a colinc. net
Marty Ryan	Fe Moran Fire protection	Marty, Ryang Femolar, com
TRENT ELDRIDGE	THE PETERSON CO	TEUDPIDGE OTHE PETERSONCO. COM
Trevor Hyber	AA Huber + Sons	thuber Qachuber. Wm 765-653-3133
GHRIS NEOL	SCS CONSTRUCTION	ESTIMATING SCSCONSTRUCTION.
Counci Mail	Ferrer Mechanical	Colonel & Ferrer -MS. COM
Kyle Mann	Taber Owens	kyle. mon @ taberowens. com
COY TABER	TABER OWEN'S CONST.	Cay. taber o taberowens, am
NATE STALFY	DANCO CONSTRUCTION	KAITEdanco-const.com
Denno Rean	FHP	dreageneth purdencon
Brett Worland	Greneral Interiors	baurland@generalisteriors.com
Lucas briffigh	Woods	IUCAS. SITTEM (NOOLSCLECHIC,
Cody Vest	Strauser Construction	CVest@strausercci.com
Samartha Ginnell	FH Paschen	Sgrinnella Ahpaschen.com?
Lacey Medlin	MANFHP	Imedlin @fhpaschen.com
RANDY MILLER	HFI	RMILLER HARRELL-FISH. COM
Kyle Dettert	Hannig Construction	Kdehart@hannigconstruction.com
MIKE PETERSON	GARMONG	MPETERSON @ GARMONG.NET.
Chris Kelley	Electric Plus Fre	ckelley @clectricolus.com
LAUREN WARGEL	BiDesign	lwarge 1 @ three ide sign.com.

Please return this sheet to The Stenftenagel Group representative





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23 - 12:26pm N:\Clients\S-Z\Spencer-Owen Community Schools\22286A Spencer Owen Secured Entrance & Canopy\22286AA7.dwg Plotted





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	1) EA 1) EA	4110-SCUSH 4110-18	693 693	CLOSER (PARALLEL ARM) PLATE	<pre> </pre>
	1) EA 1) EA	4110-30 4110-61	693 693	SHOE SPACER	5
	1) EA 2) EA	BEA10PBJMI 1.75x4.75	SS	ACTUATOR (JAMB MTD PP, LOGO & TEXT, HW W/	(
	1) EA	653-04 x L2 x NS	630	REMOTE KEY SWITCH (POWER OFF DOOR OPERATOR)	(
	1) EA 1) EA	QEL 33A-NL-OP CD 33A-EO	711 711	ELECTRIC EXIT DEVICE EXIT DEVICE	Ç
	2) EA 2) EA	23Q 18" CTC KR-4954	US32D BLACK	OFFSET PULL KEYED REMOVABLE MULLION	
	1) EA 1) EA	425 PS902	AL BLACK	THRESHOLD POWER SUPPLY	
	3) EA	1E74	US26D	MORTISE CYLINDER (EXIT DOGGING, MULLION & KEY SWITCH)	
	1) EA	1E72	US26D	RIM CYLINDER (NL-OP EXIT) PROXIMITY READER (BY SECURITY CONTRACTOR) VIDEO INTERCOM (BY SECURITY CONTRACTOR) DOOR CONTACT (BY SECURITY CONTRACTOR) WEATHER STRIP (BY ALUM DOOR MANUF)	
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	SET #2 - 2) EA 1) EA	- OPENING: 100B (ONE S SL11HD 83" CD 334-NI -OP	BLACK	NING) CONTINUOUS HINGE EXIT DEVICE	
	1) EA 2) EA	CD 33A-EO 4110-SCUSH	711 693	EXIT DEVICE CLOSER (PARALLEL ARM)	
	2) EA 2) EA	4110-18 4110-30	693 693	PLATE SHOE	
	2) EA 2) EA	4110-61 23Q 18" CTC	693 US32D	SPACER OFFSET PULL	
	1) EA 1) EA	KR-4954 425	BLACK AL	KEYED REMOVABLE MULLION THRESHOLD	
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				WEATHER STRIP (BY ALUM DOOR MANUF) DOOR SWEEP (BY ALUM DOOR MANUF)	
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	4) EA 1) EA	307D 1E72	GREY US26D	DOOR BUMPER RIM CYLINDER (NL-OP EXIT)	
	2) EA	1E74	US26D	MORTISE CYLINDER (EXIT DOGGING & MULLION) DOOR CONTACT (BY SECURITY CONTRACTOR)	
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	1) EA 1) EA	4110-30 4110-61	693 693	SHOE SPACER	
	1) EA 2) EA	M FORCE OPERATOR BEA10PBJMI 1.75x4.75	SS	STANLEY DOOR OPERATOR (WITH 75" HEADER) ACTUATOR (JAMB MTD PP, LOGO & TEXT, HW W/	
	1) EA	653-04 x L2 x NS	630	REMOTE KEY SWITCH (POWER OFF DOOR	
	1) EA 2) EA	QEL 33A-NL-OP 23Q 18" CTC	711 US32D	ELECTRIC EXIT DEVICE	
	1) EA 1) EA	KR-4954 PS902	BLACK BLACK	KEYED REMOVABLE MULLION POWER SUPPLY	
	4) EA 1) EA	307D 1E72	GREY US26D	DOOR BUMPER RIM CYLINDER (NL-OP EXIT)	
	3) EA	1E74	US26D	MORTISE CYLINDER (EXIT DOGGING, MULLION & KEY SWITCH)	(
				DOOR CONTACT (BY SECURITY CONTRACTOR)	5
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	1) EA 1) EA	1500 4110-SCUSH	630 693	ELECTRIC STRIKE CLOSER (PARALLEL ARM)	}
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	3) EA 1) EA 1) EA	307D PS902	GREY BLACK	DOOR BUMPER POWER SUPPLY MORTISE CYLINDER	}
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				DOOR CONTACT (BY SECURITY CONTRACTOR)	>
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	3) EA 1) EA 3) EA	3001 4.5 X 4.5 WS401/402CCV 307D	US26D GREV	WALL STOP (EXCLUDE ON 124B)	-
	1) EA 1) EA	ND50BDC RHO 1C72	US26D US26D	ENTRANCE LOCK SET RIM CYLINDER	
	SET #7 -	- OPENINGS: 204, 207, 20	08 (ONE SET I	PER OPENING)	
	3) EA 1) EA	5BB1 4.5 x 4.5 NRP WS401/402CVX	652 US26D	HINGE WALL STOP	
	1) EA 3) EA	8400 10x34.5 B-CS 307D	US32D GREY	KICK PLATE (PUSH SIDE) DOOR BUMPER	
	1) EA 1) EA	1C72	US26D US26D	RIM CYLINDER	
	SET #8 - 3) EA	- OPENINGS: 122, 123, 13 5BB1 4.5 x 4.5	38 (ONE SET I 652	PER OPENING) HINGE	
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SET #11 3) EA 1) EA	- OPENINGS: 125, 126 5BB1 4.5 x 4.5 4010-SCUSH	6, 128B, 128C, 652	136, 203B (ONE SET PER OPENING) HINGE CLOSER (PARALLEL ARM)	3	NO	NAME	HANDED	SIZE	ELEV	DOOR INFORMATION	FINISH	GLAZING	ELEV	FRAME INFORMATI MATL	ON FINISH	HARDWARE SET REMARKS	S			
1) EA 1) EA 1) EA	8400 10x34.5 B-CS WS401/402CCV	US32D US26D	KICK PLATE (PUSH SIDE) WALL STOP	<u> </u>	100A	VESTIBULE	RHR	(2) 3'-0" x 7'-0" x 1 3/4"	D1	ANODIZED ALUMINUM	BLACK	1" THERMAL w/ 3/8" RESISTANT LAM COMPOSITE	F3	ANODIZED ALUMINUM	BLACK	1				<u>ה</u> ש מ ה ב
3) EA 1) EA	307D ND40S RHO	GREY US26D	DOOR BUMPER PRIVACY LOCK SET	3	100B	VESTIBULE	RHR	(2) 3'-0" x 7'-0" x 1 3/4"	D1		BLACK	RESISTANT LAM COMPOSITE 3/8" RESISTANT LAM	F3		BLACK	2				
SET #12 3) EA	- OPENINGS: 121D (C 5BB1 4.5 x 4.5 NRP	ONE SET PER 652	OPENING) HINGE	5	100C	VESTIBULE	RHR	(2) 3'-0" x 7'-0" x 1 3/4"	D1	ANODIZED ALUMINUM	BLACK	COMPOSITE 3/8" RESISTANT LAM	F4	ANODIZED ALUMINUM	BLACK	4				— + —· Ш
1) EA 1) EA 1) EA	4010-SCUSH 8400 10x34.5 B-CS	ALUM US32D	CLOSER (PARALLEL ARM) KICKPLATE (PUSH SIDE) WALL STOP	3	121A	NURSE'S OFFICE	LHR	3'-0" x 7'-0" x 1 3/4"	D4	WOOD VENEER	STAIN	COMPOSITE	F1	HOLLOW METAL	PAINT	16				
1) EA 3) EA 1) EA	307D ND80BDC RHO	GREY US26D	DOOR BUMPER STOREROOM LOCK SET	3	121B	NURSE'S OFFICE	LH	3'-0" x 7'-0" x 1 3/4"	D4	WOOD VENEER	STAIN	-	F1	HOLLOW METAL	PAINT	16				
				ا کړ	121C	SCHOOL NURSE'S OFFICE	RH	3'-0" x 7'-0" x 1 3/4"	D4	WOOD VENEER	STAIN	-	F1	HOLLOW METAL	PAINT	6				<b>н</b> п
2) EA 2) EA	- OPENING: 130A (ON SL11HD 83" CD 33A-L-06	BLACK US26D	CONTINUOUS HINGE Z	<u>E</u>	121D	NURSE'S STORAGE / SUPPLY ROOM	LH	3'-0" x 7'-0" x 1 3/4"	D4	WOOD VENEER	STAIN	-	F1	HOLLOW METAL		12				3
2) EA 2) EA	4110-SHCUSH 8400 10x34.5 B-CS	ALUM US32D	CLOSER (HOLD OPEN ARM) KICK PLATE (PUSH SIDE)		122	SMALL GROUP STUDY ROOM	LH	3'-0" x 7'-0" x 1 3/4"	D4	WOOD VENEER	STAIN		F7	HOLLOW METAL	PAINT	8				
1) EA 4) EA 2) EA	KR-4954 307D 1E72	628 GREY US26D	KEYED REMOVABLE MULLION DOOR BUMPER RIM CYLINDER (EXIT DEVICE)		124A	SCHOOL CORPORATION NURSE'S OFFICE	LH	3'-0" x 7'-0" x 1 3/4"	D4	WOOD VENEER	STAIN	-	F1	HOLLOW METAL	PAINT	15				
3) EA 1) EA	1E74 WS401/402CVX	US26D US26D US26D	MORTISE CYLINDER (EXIT DOGGING & MULLION) WALL STOP		124B	SCHOOL CORPORATION NURSE'S OFFICE	LH	3'-0" x 7'-0" x 1 3/4"	D4	WOOD VENEER	STAIN	-	F1	HOLLOW METAL	PAINT	6				
1) EA	FS436	US28	FLOOR STOP		125		LH	3'-0" x 7'-0" x 1 3/4"	D4	WOOD VENEER	STAIN	-	F1	HOLLOW METAL	PAINT	11				
3) EA 1) EA	5BB1 4.5 x 4.5 4010-SCUSH	652 ALUM	HINGE CLOSER (WITH STOP)		126 1274		RH	3'-0" x 7'-0" x 1 3/4"	D4	WOOD VENEER	STAIN	-	F1 F1		PAINT	11				
1) EA 3) EA	8400 10x34.5 B-CS 307D	US32D GREY	KICKPLATE (PUSH SIDE) DOOR BUMPER		127A	RECORDS ROOM	LH	3'-0" x 7'-0" x 1 3/4"	D4 D4	WOOD VENEER	STAIN	-	F1	HOLLOW METAL	PAINT	14				<u> </u>
1) EA 1) EA	ND80BDC RHO 1C72	US26D US26D	STOREROOM LOCK SET RIM CYLINDER		128A	SMALL MEETING ROOM	LH	3'-0" x 7'-0" x 1 3/4"	D5	WOOD VENEER	STAIN	1/4" CLEAR TEMPERED	F1	HOLLOW METAL	PAINT	16				
SET #15 3) EA	- OPENINGS: 124A, 12 5BB1 4.5 x 4.5 NRP	27A, 131B (ON 652	E SET PER OPENING) HINGE		128B	EXISTING RESTROOM	RH	3'-0" x 7'-0" x 1 3/4"	D4	WOOD VENEER	STAIN	-	F1	HOLLOW METAL	PAINT	11				
1) EA 1) EA	WS401/402CVX 8400 10x34.5 B-CS	US26D US32D	WALL STOP KICK PLATE (PUSH SIDE)		128C	EXISTING RESTROOM	LH	3'-0" x 7'-0" x 1 3/4"	D4	WOOD VENEER	STAIN	-	F1	HOLLOW METAL	PAINT	11			_ ≥	
4) EA 1) EA 1) EA	307D ND50BDC RHO 1C72	GREY US26D US26D	DOOR BUMPER ENTRANCE LOCK SET RIM CYLINDER		129	ATHLETIC DIRECTOR'S OFFICE	LH	3'-0" x 7'-0" x 1 3/4"	D5		STAIN	1/4" CLEAR TEMPERED	F1		PAINT	6		REVIEV	REVIEV	
SET #16	- OPENINGS: 121A, 12	21B, 128A (ON	E SET PER OPENING)	$\nabla q$	130A 130B			3'-0" x 7'-0" x 1 3/4"		WOOD VENEER WOOD VENEER		-	F0 F1	HOLLOW METAL				30% H	60%	#1 #1
3) EA 1) EA	5BB1 4.5 x 4.5 WS401/402CVX	652 US26D	HINGE WALL STOP	<u>ZE</u>	131A		RH	3'-0" x 7'-0" x 1 3/4"	D3	ANODIZED ALUMINUM	BLACK	3/8" RESISTANT LAM	F5	ANODIZED ALUMINUM	BLACK			D FOR	D FOR	
1) EA 3) EA 1) FA	8400 10x34.5 B-CS 307D ND70PD RHO	US32D GREY US26D	KICK PLATE (PUSH SIDE) DOOR BUMPER CLASSBOOM LOCK SET		131B	ADMIN OFFICE	LHR	3'-0" x 7'-0" x 1 3/4"	D4	WOOD VENEER	STAIN	-	F2	HOLLOW METAL	PAINT	15		TEM SSUEI	SSUE	SSUE
1) EA	1C72	US26D	RIM CYLINDER		131C	CORRIDOR	LH	3'-0" x 7'-0" x 1 3/4"	D4	WOOD VENEER	STAIN	-	F1	HOLLOW METAL	PAINT	10				
SET #17 3) EA	- OPENING: 132 (ONE 5BB1 4.5 x 4.5 NRP	E SET PER OPI 652	ENING) HINGE		132	CLOSET	LHR	3'-0" x 7'-0" x 1 3/4"	D4	WOOD VENEER	STAIN	-	F1	HOLLOW METAL	PAINT	17		ВY LEW	N R LE V	
1) EA 4) EA 1) EA	307D ND10S RHO	GREY US26D	DOOR BUMPER PASSAGE SET		133		LH	3'-0" x 7'-0" x 1 3/4"	D4		STAIN	-	F2	HOLLOW METAL		6		ГЕ //23	//23 //23	/23
, SET #18	- OPENING: 121D (ON	NE SET PER C	PENING)		134	COUNSELOR'S OFFICE	LH	3'-0" x 7'-0" x 1 3/4"	D4 D4	WOOD VENEER	STAIN	-	F2	HOLLOW METAL	PAINT	6		DAT 07/27	08/17 09/07	11/01
3) EA 1) EA 1) EA	5BB1 4.5 x 4.5 4011-SCUSH 8400 10x34 5 B-CS	652 ALUM US32D	HINGE CLOSER (PARALLEL ARM) KICKELATE (PLISH SIDE)		136	UNISEX RESTROOM	RH	3'-0" x 7'-0" x 1 3/4"	D4	WOOD VENEER	STAIN	-	F1	HOLLOW METAL	PAINT	11		REV A	C B	ОШ
1) EA 3) EA	WS401/402CCV 307D	US26D GREY	WALL STOP DOOR BUMPER		137A	ASSISTANT PRINCIPAL'S OFFICE	RH	3'-0" x 7'-0" x 1 3/4"	D4	WOOD VENEER	STAIN	-	F2	HOLLOW METAL	PAINT	6				
1) EA 1) EA	ND80BDC RHO 1C72	US26D US26D	STOREROOM LOCK SET RIM CYLINDER		137B	ASSISTANT PRINCIPAL'S OFFICE	RHR	3'-0" x 7'-0" x 1 3/4"	D4	WOOD VENEER	STAIN	-	F1	HOLLOW METAL	PAINT	6				
SET #19 1) EA	- OPENING: 140A (ON SL11HD 83"	IE SET PER O BLACK	PENING) CONTINUOUS HINGE		138		LH	3'-0" x 7'-0" x 1 3/4"	D4	WOOD VENEER	STAIN	-	F2		PAINT	8				
1) EA 1) EA	4110-SCUSH 4110-18	693 693	CLOSER (PARALLEL ARM) PLATE		139A 139B	PRINCIPAL'S OFFICE	RHR	3'-0" x 7'-0" x 1 3/4"	D4 D4	WOOD VENEER	STAIN	-	F2 F1	HOLLOW METAL	PAINT	6				00
1) EA 1) EA 1) EA	4110-30 4110-61 ND80BDC RHO	693 693 US26D	SHOE SPACER STOREROOM LOCK SET		140A	SRO OFFICE	LH	3'-0" x 7'-0" x 1 3/4"	D3	ANODIZED ALUMINUM	BLACK		F5		BLACK	19				46
3) EA 1) EA	307D IE74	GREY US26D	DOOR BUMPER MORTISE CYLINDER	7	140B		RHR	3'-0" x 7'-0" x 1 3/4"		WOOD VENEER			F1	HOLLOW METAL					2	47
1) EA				(E)	203A	TEACHER'S LOUNGE / WORK ROOM		3'-0" x 7'-0" x 1 3/4"		WOOD VENEER	STAIN		F1	HOLLOW METAL	PAINT					4
3) EA 1) EA	5BB1 4.5 x 4.5 NRP 4110-SCUSH	652 ALUM	HINGE CLOSER (PARALLEL ARM)	$\langle \langle \rangle$	203B			3'-0" x 7'-0" x 1 3/4"				······	F1						\$ ¥	Ż
1) EA 1) EA	8400 10x34.5 B-CS WS401/402CVX	US32D US26D	KICKPLATE (PUSH SIDE) WALL STOP	5	204		RHR	3'-0" x 7'-0" x 1 3/4"	D4 D4	WOOD VENEER	STAIN	-	F8	HOLLOW METAL	PAINT	7			20	A
3) EA 1) EA 1) EA	307D ND80BDC RHO 1C72	GREY US26D US26D	DOOR BUMPER STOREROOM LOCK SET RIM CYLINDER	$\left\{ \right\}$	208	LARGE GROUP MEETING ROOM	LHR	3'-0" x 7'-0" x 1 3/4"	D4	WOOD VENEER	STAIN	-	F8	HOLLOW METAL	PAINT	7			j Ň	Δ
SET #21	- OPENING: 140B (ON	IE SET PER O	PENING)	$\sum_{i=1}^{n}$															ЧЩ	Ζ
3) EA 1) EA 1) EA	5BB1 4.5 x 4.5 1500 4110-SCUSH	652 630	HINGE ELECTRIC STRIKE CLOSER (BARALLEL ARM)	$\left\{ \right. \right\}$	AL'	TERNATES: HEET G2 FOR A COMPLETE LIST AND DESCRIPTI					APPR		+	[		┝──_[5]]			5 2	~
1) EA 1) EA 1) EA	8400 10x34.5 B-CS WS401/402CVX	US32D US26D	KICK PLATE (PUSH SIDE) WALL STOP	{	ALL AI	LTERNATES.							MIN.		APPROACH					
1) EA 3) EA	PS902 307D	BLACK GREY	POWER SUPPLY DOOR BUMPER	$\sum_{i=1}^{n}$	GEN	IERAL DOOR NOTES:						MIN 10	4'-6'	MI	IN			1	Ξ	Ü
1) EA 1) EA	ND80BDC RHO 1C72	US26D US26D	STOREROOM LOCK SET RIM CYLINDER PROXIMITY READER (BY SECURITY CONTRACTOR)		1. ALL ALL	EGRESS DOORS SHALL BE NON-LOCKING AGAII LOCKING DEVICES ON MEANS OF EGRESS DOO	NST EGRESS ORS SHALL B	S. E					Z		0"					Ž
$\sim$	~~~~	$\sim$	DOOR CONTACT (BY SECURITY CONTRACTOR)		AC1	FIVATED BY EXIT DEVICE.						HOVI	4'-0" M		N APPROACH	AIM				Ш
			L	E/	2. DOC PIN	CHING, OR TWISTING TO OPERATE.	ASPING,						+							S
				;	3. ALL THE	. GLASS IN DOORS SHALL BE TEMPERED AND INS E DOOR MANUFACTURER.	STALLED BY				SCALE:	3/16" = 1'-0"	:AR/	ANCE DETAI	LS					
					4. ALL	DOORS AND HARDWARE SHALL COMPLY WITH I	BARRIER FR	EE				VADIES							: >	46
				:	5. ALL	HOLLOW METAL DOOR FRAMES SHALL BE CON	STRUCTED (	DF			-	SEE WALL TYPES		_	CAULK,				2 Z	7
					16 G	GAUGE MATERIAL.					 				BOTH SIE	DES HOLLOW M FRAME, PA	IETAL NNT		Ξ	
												BOTH SIDE	ES, PAIN		- METAL S		SCHEDULE		;≥	20
												METAL STU	UD BOX	NG V		$\overline{(T)}$		<		6
												CAULK, BC	OTH SIDE	s 🔸				DOOR,	FRAME A	\ND
												╼╼═┤ ╕╾┎╴┥				SCHEDULE		HARDW	ARE SCH	IEDULE,
											E DOC HEDUI	HOLLOW N FRAME, PA	/IETAL AINT	SOUN 5/8" (	ND INSULATIO			SPECIF		3
											SC	DOOR, SEE	E SCHEE	DULE BOTH	SIDES, PAINT	т —Ј			Y: DE	.SIGNED BY: GPK
											, I							CHECKED	BY: DA	.TE: 05/02/22
												SCALE: 1 1/2" = 1'-0"	DET	$\frac{2}{2}$		CAL JAMB DETAIL		GP SCALE:		= = ED
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![](_page_17_Figure_5.jpeg)

# **GENERAL NOTES:**

- ALL CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE INDIANA STATE BUILDING CODE, LOCAL BUILDING CODES, ORDINANCES, AND CURRENT REGULATIONS IN EFFECT AT TIME OF CONSTRUCTION.
- THE COMPLETED PROJECT SHALL BE FULLY FUNCTIONAL AND COMPLETE IN EVERY DETAIL INCLUDING ANY AND ALL SUCH DETAIL ITEMS OF WORK OR MATERIAL REQUIRED FOR NORMALLY COMPLETE SYSTEMS, WHETHER OR NOT SUCH ITEMS ARE SPECIFIED OR SHOWN ON THE DRAWINGS.
- ALL CONTRACTORS MUST VISIT THE SITE AND CAREFULLY EXAMINE AND NOTE ALL OF THE CONDITIONS AND EXISTING MATERIALS THERE. FAILURE TO DO SO WILL NOT BE CONSIDERED GROUNDS FOR ANY EXTRA CHARGES FOR MATERIAL, EQUIPMENT, SERVICES OR LABOR.
- 4. THE CONTRACTOR SHALL CONTACT THE OWNER'S PROJECT COORDINATOR REGARDING ANY SIGNIFICANT INTERFERENCES DISCOVERED IN THE FIELD PRIOR TO ANY WORK BEING PERFORMED. THE CONTRACTOR SHALL HAVE A PROPOSED COST ESTIMATE IN WRITING OF THE WORK REQUIRED.
- 5. THE GENERAL CONTRACTOR SHALL COORDINATE ALL WORK WITH THE OWNER'S PROJECT COORDINATOR.
- 6. THE GENERAL CONTRACTOR SHALL PROTECT PERSONNEL AND THE FACILITY FROM DAMAGE OR HAZARD DURING CONSTRUCTION.
- 7. USE OF THE SITE SHALL BE LIMITED TO THE AREAS AGREED UPON WITH THE OWNER, MATERIALS SHALL BE KEPT WITHIN THOSE AREAS OR STORED OFF THE SITE.
- IT SHALL BE THE RESPONSIBILITY OF EACH TRADE TO CLEAN UP ALL DEBRIS CREATED FROM THEIR PORTION OF THEIR WORK DAILY.
- 9. THESE DRAWINGS REPRESENT STRUCTURAL COMPONENTS IN THEIR FINAL AND FINISHED STATE. CONSTRUCTION PROCEDURES, METHODS, SAFETY PRECAUTIONS, OR MECHANICAL REQUIREMENTS USED TO ERECT THEM ARE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR OR SUBCONTRACTOR DOING THE WORK.
- 10. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS DURING CONSTRUCTION AND REPORT TO THE ENGINEER DURING CONSTRUCTION ANY DISCREPANCIES. FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATION.

# **MASONRY NOTES:**

- 1. ALL MASONRY MATERIALS AND CONSTRUCTION SHALL COMPLY WITH THE RECOMMENDATIONS OF BRICK INSTITUTE OF AMERICA (BIA) AND NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA) AND MINIMUM REQUIREMENTS ESTABLISHED BY LOCAL BUILDING CODE.
- 2. ALL CONCRETE MASONRY UNITS (CMU) SHALL BE ASTM C-90 TYPE N WITH TYPE "S" MORTAR UNLESS OTHERWISE SPECIFIED BY APPLICABLE BUILDING CODE. F'c = 1500 PSI. NEW CMU TO MATCH COLOR AND SURFACE TEXTURE OF EXISTING. NEW INFILL COURSING IS TO MATCH EXISTING WHERE POSSIBLE.
- 3. NO SPECIAL INSPECTION IS REQUIRED FOR CMU WALLS.
- 4. REINFORCE NEW WALLS AS SHOWN ON PLANS.
- 5. GROUT SOLID ALL REINFORCED CELLS AND BOND BEAMS WITH 2500 PSI GROUT.

# **STEEL NOTES:**

- ALL STRUCTURAL SHAPES ARE TO CONFORM TO ASTM A992, TUBES SHALL BE ASTM A500 GR. B AND STEEL PLATES, ANGLES & CHANNELS SHALL BE ASTM A36. ALL STEEL SHALL BE PAINTED, FIELD TOUCH-UP AS REQUIRED FOR WELDED AREAS.
- 2. ALL WELDS SHALL BE MADE BY QUALIFIED WELDERS. STEEL MANUFACTURER AND CONTRACTOR SHALL BE RESPONSIBLE FOR THE QUALIFICATION OF THEIR WELDERS, WELDING OPERATORS AND TACK WELDERS. QUALIFICATIONS MAY BE CONDUCTED BY THE STEEL MANUFACTURER OR CONTRACTOR OR BY AN INDEPENDENT TESTING AGENCY. ALL TESTING REQUIREMENTS SHALL BE AS SPECIFIED IN THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE (AWS D1.1), CHAPTER 4.
- 3. WELDING ELECTRODES E70XX.
- 4. ALL WELDING SHALL CONFORM TO AWS D1.1
- 5. ALL BOLTS ARE TO BE ASTM A325
- 6. CONTRACTOR SHALL VERIFY ALL CRITICAL DIMENSIONS PRIOR TO FABRICATION AND INSTALLATION.
- 7. DETAILING, FABRICATION AND ERECTION IS TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION.

# COATING NOTES:

SHOP AND FIELD PAINTING PER SPECIFICATIONS AS FOLLOWS:

ALL NEW STEEL TO RECEIVE BY SHOP :

SHERWIN-WILLIAMS PRO INDUSTRIAL PRO-CRYL UNIVERSAL ACRYLIC PRIMER OFF WHITE - B66W310 (HMC 15850).

# **CONCRETE NOTES:**

- 1. DETAILING, FABRICATION, AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 315-99 "ACI DETAILING MANUAL - 2004" (SP-66 C04). 2. UNLESS OTHERWISE NOTED, ALL REINFORCING BARS SHALL CONFORM TO
- ASTM A615 GRADE 60 (60,000 PSI YIELD). 3. ALL CONCRETE WORK SHALL CONFORM TO THE "A.C.I. BUILDING CODE", ACI 318 LATEST EDITION.
- 4. WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A1064. WWF TO BE SUPPLIED IN FLAT SHEETS ONLY.
- 5. SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301) APPLY.
- 6. ALL REINFORCING STEEL MARKED "CONTINUOUS" SHALL BE LAPPED 36 BAR DIAMETERS AT SPLICES (UNLESS NOTED OTHERWISE) AND AROUND CORNERS OR INTERSECTIONS WITH A STANDARD 90 DEGREE BEND ON CORNER BARS.
- 7. LAP TOP BARS AT CENTER OF SPAN; LAP BOTTOM BARS AT SUPPORTS.
- 8. CONCRETE PROTECTION FOR REINFORCEMENT OF POURED-IN-PLACE MEMBERS: (SEE SECTION 20.6 ACI 318 LATEST EDITION)

STRUCTURAL ELEMENT	MINIMUM COVER (INCHES)	C
STRENGTH (PSI)		_
SLAB	CENTERED	
FOOTING	3"	
WALLS	2"	

- 9. SLABS, WALLS, AND FOUNDATIONS AND OTHER CONSTRUCTION SHALL BE PROTECTED FROM FROST HEAVE.
- 10. PRIOR TO PLACING CONCRETE, REMOVE WATER FROM EXCAVATION, DEBRIS AND FOREIGN MATERIAL FROM FORMS. CHECK REINFORCING STEEL FOR PROPER PLACEMENT AND CORRECT ANY DISCREPANCIES.
- 11. REFER TO ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR ANY OTHER ADDITIONAL SLEEVES, ANCHORS, VENT OPENINGS, EMBEDDED ITEMS, DEPRESSIONS, ETC. NOT SHOWN ON STRUCTURAL PLANS THAT MIGHT BE REQUIRED.
- 12. PROVIDE A 3/4" CHAMFER ON ALL EXPOSED EDGES OF CONCRETE WALLS, AND SLABS, UNLESS NOTED OTHERWISE.
- 13. PLACING CONCRETE IN COLD WEATHER:
  - A. DO NOT PLACE CONCRETE WHEN THE AMBIENT TEMPERATURE IS BELOW 40 DEGREES F. OR APPROACHING 40 DEGREES F. AND FALLING WITHOUT SPECIAL PROTECTION CONFORMING TO ACI 306. B. REMOVE AND REPLACE CONCRETE DAMAGED BY FREEZING AT NO COST TO OWNER.
- 1. APPLICABLE BUILDING CODES AND AMENDMENTS A. 2014 INDIANA BUILDING CODE B. 2012 INTERNATIONAL BUILDING CODE
- C. ASCE STANDARDS: ASCE 7-10
- 2. PROJECT LOCATION: SPENCER, INDIANA (OWEN COUNTY)
- 3. DESIGN LOADS: LIVE & MISC. LOADS: 1) FIRST FLOOR (SLAB ON GRADE .... 100 PSF
- D. WIND LOADS:
- 1) ULTIMATE WIND SPEED = 115 MPH 2) RISK CATEGORY: Ili

3) WIND IMPORTANCE FACTOR:  $I_W = 1.15$ 4) EXPOSURE CATEGORY: C

E. EARTHQUAKE LOADS: 1) RISK CATEGORY: III

- 2) SEISMIC IMPORTANCE FACTOR:  $I_E = 1.25$
- 3) SEISMIC DESIGN CATEGORY: C
- 4) SITE CLASS: D 5) S_S = 0.33
- 6)  $S_1 = 0.12$
- 7) S_{DS} = 0.26
- 8) S_{D1} = 0.17 9) SEISMIC FORCE RESISTING SYSTEM -
- BRACED FRAME

- CONCRETE 4000 PS
- 4000 PS 4000 PS

- 14. CONCRETE FINISH: A. INTERIOR SLAB ON GRADE: FINISHING CLASS 4 AND 5 PER ACI 302. B. WALLS: KNOCK OFF PROJECTIONS & PATCH HONEYCOMB AREAS & ROCK POCKETS. SMALL AIR HOLES DO NOT REQUIRE PATCHING.
- 15. PREFORMED JOINT MATERIAL: 1/2 INCH THICK, CONFORMING TO ASTM D994, D1751, OR D1752.
- 16. ELASTOMERIC JOINT SEALANT: BASF, SHAKOPEE, MN, MASTERSEAL SL1. INSTALL PER MANUFACTURER RECOMMENDATIONS.
- 17. ADHESIVE ANCHOR SYSTEM SHALL CONFORM TO HILTI HIT-HY 200 FOR SOLID BLOCK OR CONCRETE AND HILTI HIT-HY 270 FOR HOLLOW BLOCK OR BRICK, OR APPROVED EQUAL.
- 18. CONCRETE SURFACE REPAIR MATERIAL SHALL CONFORM TO SIKAREPAIR 223 OR APPROVED EQUAL.
- 19. EXPANSION BOLTS SHALL CONFORM TO HILTI KWIK BOLT 3 OR APPROVED EQUAL.
- 20. FOLLOW ALL MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTION REQUIREMENTS FOR ANCHORS.

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A

- 2. FOOTINGS AND FOUNDATION WALLS:
- NOTED ABOVE.

- 3. SLAB-ON-GRADE CONSTRUCTION:
- B. SUBGRADE PREPARATION:
- DRAINAGE COURSE.
- D. REINFORCING STEEL:
- LESS THAN 12".
- STEEL.
- CONSTRUCTION.
- WORK.
- 4. SELECT FILL: MATERIAL CHANGES.

I. A GEOTECHNICAL REPORT INVESTIGATION WAS NOT PERFORMED FOR THIS PROJECT. FOUNDATION DESIGN IS BASED ON AN ALLOWABLE NET SOIL BEARING PRESSURE OF 1500 PSF. THIS IS TO BE CONFIRMED IN FIELD BY GEOTECHNICAL ENGINEER HIRED BY THE FOUNDATION CONTRACTOR ACCEPTABLE TO THE STRUCTURAL ENGINEER AND OWNER, DURING CONSTRUCTION. REMOVAL OF SUBSURFACE SHALL BE REQUIRED TO INSTALL THE FOUNDATION AND UNDERGROUND UTILITIES.

 $\vee$   $\vee$   $\vee$   $\vee$   $\checkmark$ 

A. COLUMN AND WALL FOOTINGS SHALL BE FORMED ON ALL SIDES.

B. CORNER BARS. PROVIDE 1 - #4 X 4'-0" (90 BENT BARS, 2'-0" EACH SIDE) EACH FACE OF WALL AT CORNERS. WHERE A FOUNDATION WALL INTERSECTS A CONTINUOUS FOUNDATION WALL, PROVIDE CORNER BARS AS

C. REINFORCING. FOUNDATION WALL HORIZONTAL REINFORCING SHALL BE CONTINUOUS THRU PIERS.

D. WALL FOOTING SIDE FORMS. WALL FOOTINGS WERE DESIGNED TO BE FORMED BOTH SIDES FULL HEIGHT OF WALL FOOTING. CONTRACTORS OPTION TO BANK FORM WALL FOOTINGS. INCREASE WIDTH OF BANK FORMED WALL FOOTINGS BY 6". MAINTAIN FORMED WALL FOOTING REINFORCING CAGE PROFILE.

E. SLEEVES THROUGH FOUNDATION WALLS. SLEEVES THROUGH FOUNDATION WALLS MAY REQUIRE ADDITIONAL REINFORCEMENT. CONSULT ENGINEER FOR SIZE AND SPACING OF SUCH REINFORCING STEEL IF DETAILS ARE NOT SHOWN ON THE DRAWINGS.

A. SPECIFICATION. UNLESS SPECIFIED OTHERWISE, SLAB ON GRADE CONSTRUCTION SHALL FOLLOW THE RECOMMENDATIONS OF GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION ACI 302.1R.

1) ALL GRADE ADJUSTMENTS FOR SLAB ON GRADE CONSTRUCTION SHALL BE ACCOMPLISHED WITH SELECT FILL AS SPECIFIED IN THE GEOTECHNICAL REPORT, IF AVAILABLE. 2) PRIOR TO CONCRETE PLACEMENT, PROVIDE A 6" MINIMUM DRAINAGE COURSE OVER THE FINAL PREPARED SUBGRADE. PLACE A 10 MIL POLYETHYLENE SHEET VAPOR BARRIER OVER THE

3) NO SLAB ON GRADE CONCRETE SHALL BE POURED AGAINST A FINAL PREPARED SUBGRADE CONTAINING FREE WATER, ICE, FROST, MUD, OR OTHER UNSUITABLE MATERIAL.

C. SELECT FILL. SELECT FILL REQUIRED FOR SLAB ON GRADE CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE GEOTECHNICAL REPORT, IF AVAILABLE.

1) SEE THE DRAWINGS FOR TYPICAL SLAB REINFORCEMENT REQUIREMENTS.

2) ALL WELDED WIRE FABRIC SHALL BE FURNISHED IN FLAT SHEETS. LAP ENDS AND SIDES ONE CROSS WIRE SPACING PLUS 2" AT SPLICES. 3) LAP CONTINUOUS SLAB ON GRADE REINFORCING STEEL 30 BAR DIAMETERS AT SPLICES BUT NOT

4) ALL REINFORCING STEEL AND WELDED WIRE FABRIC FOR SLABS ON GRADE SHALL BE CHAIRED WITH SLAB BOLSTERS DESIGNED FOR SUPPORT ON SOIL TO PROVIDE SPECIFIED COVER TO REINFORCING

E. CONSTRUCTION AND CONTROL JOINTS. SEE DETAILS ON THE DRAWINGS FOR REQUIREMENTS OF CONSTRUCTION JOINTS, CONTROL JOINTS, AND POUR SIZE AND SEQUENCE FOR SLAB-ON-GRADE

F. OPENINGS IN SLAB-ON-GRADE. UNLESS DETAILED OTHERWISE ON THE DRAWINGS, PROVIDE #5 BARS @ OPENING WIDTH + 3'-0" LONG AROUND ALL PENETRATIONS THROUGH SLAB ON GRADE 10" WIDE OR DIAMETER AND GREATER AND #5 X 3'-0" DIAGONAL CORNER BARS. SUCH REINFORCEMENT SHALL BE PROVIDED WHETHER OPENING IS SHOWN ON THE DRAWINGS OR NOT. THIS REINFORCEMENT SHALL ALSO BE PROVIDED AROUND BLOCKOUTS FOR STEEL OR CONCRETE COLUMNS.

G. CRANE LOADS. THE CONTRACTOR IS CAUTIONED AGAINST LOADING THE SLAB ON GRADE WITH CRANE LOADS. THE SLAB HAS NOT BEEN DESIGNED FOR CRANE LOADS AND WILL REQUIRE AN INCREASE IN SLAB THICKNESS AND/OR REINFORCEMENT. THE CONTRACTOR IS REQUIRED TO SUBMIT A PROPOSED PLAN FOR CRANE SUPPORT ON SLABS ON GRADE TO THE ENGINEER FOR REVIEW PRIOR TO COMMENCING

A. THE GENERAL CONTRACTOR SHALL SUBMIT TO THE ARCHITECT, STRUCTURAL ENGINEER, AND GEOTECHNICAL ENGINEER, THE SOURCE OF ALL SELECT FILL MATERIAL WITH SAMPLES TO BE TESTED BY THE OWNER'S TESTING LABORATORY FOR APPROVAL PRIOR TO PLACEMENT ON THE JOB. VERIFICATION WILL BE REQUIRED BY THE TESTING LABORATORY EACH TIME THE SOURCE OR CHARACTER OF THE

B. SELECT FILL MATERIAL SHALL BE PLACED IN MAXIMUM 8" LOOSE LIFTS AND COMPACTED TO 95% OF MODIFIED PROCTOR DENSITY (ASTM D-1557) AT ±2% OF OPTIMUM MOISTURE.

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# **PLUMBING SPECIFICATIONS**

<u>GENERAL</u>

THE PLUMBING DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO INDICATE THE GENERAL ARRANGEMENT OF EQUIPMENT AND PIPING. THE CONTRACTOR SHALL ATTEMPT TO ADHERE TO THE ARRANGEMENT SHOWN. THE CONTRACTOR SHALL MAKE REASONABLE MODIFICATIONS IN THE INSTALLATION AS REQUIRED SO ALL EQUIPMENT AND MATERIALS FIT PROPERLY AND CAN BE SERVICED.

IT IS THE INTENTION OF THE PLUMBING DRAWINGS TO CALL FOR FINISHED WORK, TESTED, AND READY FOR OPERATION. ANY APPARATUS, APPLIANCE, MATERIAL OR WORK NOT INDICATED ON THE DRAWINGS OR ANY INCIDENTAL ACCESSORIES REQUIRED TO MAKE WORK COMPLETE TO ALL RESPECTS AND READY FOR OPERATION SHALL BE FURNISHED, DELIVERED, AND INSTALLED WITHOUT ADDITIONAL EXPENSE OR TIME TO THE PROJECT.

THE PLUMBING CONTRACTOR SHALL EXAMINE ALL DRAWINGS RELATING TO WORK OF ALL TRADES AND BECOME FULLY INFORMED AS TO THE EXTENT AND CHARACTER OF THE WORK REQUIRED AND ITS RELATIONSHIP TO ALL OTHER WORK ON THE PROJECT. THE CONTRACTOR SHALL COOPERATE WITH ALL OTHER CONTRACTORS IN LOCATING PIPING, EQUIPMENT, ETC. IN ORDER TO AVOID CONFLICT WITH OTHER CONTRACTOR'S WORK.

INSPECT THE SITE AND BE INFORMED WITH RESPECT TO THE CONDITIONS, FACILITIES, DIFFICULTIES, AND RESTRICTIONS UNDER WHICH THE WORK SHALL BE DONE. IF DISCREPANCIES IN OR OMISSIONS FROM THE CONTRACT DOCUMENTS ARE FOUND, NOTIFY THE ENGINEER IN WRITING. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED FOR ANY ALLEGED MISUNDERSTANDING OF MATERIAL TO BE FURNISHED OR WORK TO BE DONE.

ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER. CARE SHALL BE EXERCISED TO MINIMIZE INCONVENIENCE OR DISTURBANCE TO OTHER AREAS OF THE BUILDING WHICH ARE TO REMAIN IN OPERATION. ISOLATE WORK AREAS BY MEANS OF TEMPORARY PARTITIONS AND/OR TARPS TO KEEP DUST AND DIRT WITHIN THE CONSTRUCTION AREA.

COORDINATE ALL ACTIVITIES, EQUIPMENT, AND UTILITY SHUTDOWNS WHICH MAY AFFECT ACTIVITIES OF THE BUILDING. COOPERATE WITH THE OWNER'S REPRESENTATIVE TO MINIMIZE DISRUPTIONS TO THE BUILDING OCCUPANTS. ALL SHUT DOWNS OF EXISTING SYSTEMS SHALL BE SCHEDULED AND APPROVED BY THE OWNER PRIOR TO COMMENCING WITH THE WORK.

ALL ITEMS REMOVED SHALL BECOME PROPERTY OF THE OWNER AND SHALL BE DISPOSED OF AS PER THE OWNER'S INSTRUCTIONS, UNLESS INDICATED OTHERWISE. ALL ITEMS WHICH ARE NOT TO BE STORED ON SITE BY OWNER SHALL BE REMOVED FROM THE BUILDING IMMEDIATELY.

USE OF THE OWNER'S ELEVATORS AND BUILDING CORRIDORS FOR HANDLING OF NEW AND REMOVED EQUIPMENT AND MATERIALS SHALL BE AT THE DIRECTION OF THE OWNER AND SHALL BE COORDINATED WITH HIS OPERATIONS.

COORDINATE ALL FINAL CONNECTIONS WITH THE OTHER TRADES AND OWNER FURNISHED EQUIPMENT. IF THIS CONTRACTOR INSTALLS HIS WORK BEFORE COORDINATION WITH THE OTHER TRADES OR THE OWNER SO AS TO CAUSE INTERFERENCE WITH THE WORK OF OTHER TRADES, HE SHALL MAKE ALL NECESSARY CHANGES IN HIS WORK AND CORRECT THE CONDITION WITHOUT EXTRA CHARGE OR SCHEDULE EXTENSION.

ALL EQUIPMENT SHALL BE INSTALLED PER THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS.

ALL MATERIALS SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR UNLESS OTHERWISE NOTED.

EXISTING MATERIALS THAT ARE REMOVED SHALL NOT BE REUSED IN NEW SYSTEMS, EXCEPT WHERE INDICATED TO BE RELOCATED.

ALL UNDERGROUND UTILITIES SHALL BE VERIFIED FOR PIPE SIZE AND LOCATION PRIOR TO FABRICATING AND INSTALLING ANY NEW PIPING. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITIES OR BE GROUNDS FOR EXTRA CHARGES.

TAKE PRECAUTION AGAINST DAMAGE TO ANY EXISTING UTILITIES, FURNISHINGS, AND CONSTRUCTION NOT INCLUDED WITHIN THE SCOPE OF THIS WORK. ANY DAMAGE CAUSED BY THE CONTRACTORS OPERATION SHALL BE REPAIRED AT HIS EXPENSE COMPLETE AND TO THE SATISFACTION OF THE OWNER.

PROVIDE ALL NECESSARY TEMPORARY OR PERMANENT CAPS OR PLUGS FOR PIPING. DO NOT LEAVE PIPING OPEN ENDED.

CLEAN THE JOB SITE DAILY AND REMOVE FROM THE PREMISES ANY DIRT AND DEBRIS CAUSED BY THE PERFORMANCE OF THE WORK INCLUDED IN THIS CONTRACT

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFEKEEPING OF HIS OWN PROPERTY ON THE JOB SITE. OWNER ASSUMES NO RESPONSIBILITY FOR PROTECTION OF PROPERTIES AGAINST FIRE, THEFT, AND ENVIRONMENTAL CONDITIONS.

IF CONTRACTOR ENCOUNTERS WHAT APPEARS TO BE A HAZARDOUS OR QUESTIONABLE MATERIAL. HE SHALL DISCONTINUE WORK IMMEDIATELY AND CONTACT THE OWNER'S REPRESENTATIVE.

THE PLUMBING CONTRACTOR SHALL KEEP ACCURATE RECORDS OF ALL CONCEALED PIPING AND EQUIPMENT WHICH DEVIATED FROM THE DRAWINGS. AT COMPLETION OF WORK, CONTRACTOR SHALL PRESENT TO THE OWNER'S REPRESENTATIVE A MARKED RECORD SET OF DESIGN PRINTS INDICATING CHANGES.

THE PLUMBING CONTRACTOR SHALL SUBMIT ELECTRONIC COPIES OF EQUIPMENT INFORMATION TO THE THREE I DESIGN PROJECT ENGINEER FOR REVIEW AND APPROVAL. THIS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO. THE FOLLOWING:

- 1. SANITARY SEWER PIPING AND FITTINGS
- DOMESTIC WATER PIPING AND FITTINGS
- PLUMBING FIXTURES 4. VALVES
- 5. PIPE INSULATION

SUBSTITUTION OF PRODUCTS SHALL BE MADE ONLY WITH THE APPROVAL OF THE THREE I DESIGN PROJECT ENGINEER. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DESIGN CHANGES AND ASSOCIATED COSTS RELATED TO THE USE OF THE PROPOSED EQUAL

ALL PLUMBING WORK SHALL CONFORM TO THE LATEST EDITION OF THE FOLLOWING CODES AND STANDARDS:

- 1. THE STATE PLUMBING CODE
- 2. THE STATE MECHANICAL CODE 3. THE STATE BUILDING CODE
- 4. APPLICABLE NFPA STANDARDS
- 5. APPLICABLE OSHA STANDARDS

# **PIPING SPECIFICATIONS**

UNDERGROUND SANITARY SEWER AND VENT PIPING

PVC PIPE: SCHEDULE 40, DWV, PVC PLASTIC, ASTM D1785 AND ASTM D2665.

PVC FITTINGS: PVC PLASTIC SOCKET FITTINGS, ASTM D 2665, MADE TO ASTM D3311 DRAIN, WASTE, AND VENT PATTERNS.

PVC SOLVENT CEMENT: ASTM D 2564. INCLUDE PRIMER ACCORDING TO ASTM F 656.

ABOVEGROUND SANITARY SEWER AND VENT PIPING

CAST IRON HUBLESS PIPE AND FITTINGS: ASTM A 888 OR CISPI 301. COUPLINGS SHALL BE TYPE 304 STAINLESS STEEL SHIELDED COUPLINGS, ASTM C 1277 OR CISPI 310, WITH TYPE 304 STAINLESS STEEL SHIELD, STAINLESS STEEL BANDS, AND ASTM C 564 RUBBER SLEEVE WITH INTEGRAL CENTER PIPE STOP. FOR UNDERGROUND SERVICE OR OTHERWISE NOTED, PROVIDE HEAVY-DUTY TYPE 304 STAINLESS STEEL SHIELDED COUPLINGS, ASTM C 1540, SUITABLE FOR UNDERGROUND INSTALLATION. INSTALL COUPLINGS ACCORDING TO THE MANUFACTURER'S WRITTEN INSTRUCTIONS.

LEAK TESTS: THE PIPING OF THE PLUMBING, DRAINAGE, AND VENT SYSTEMS SHALL BE TESTED WITH WATER OR AIR. THE TESTS SHALL BE PER THE PLUMBING CODE AND THE AUTHORITIES HAVING JURISDICTION. AFTER THE PLUMBING FIXTURES HAVE BEEN SET AND THEIR TRAPS FILLED WITH WATER, THEY SHALL BE SUBMITTED TO A FINAL TEST.

# DOMESTIC WATER PIPING

PIPING: HARD COPPER TUBE, TYPE L, ASTM B88, HARD DRAWN TEMPER.

FITTINGS: ASME B16.18, CAST-COPPER-ALLOY OR ASME B16.22, WROUGHT-COPPER, SOLDER-JOINT FITTINGS.

UNIONS: ASME B16.18, CAST COPPER-ALLOY BODY, HEXAGONAL STOCK, WITH BALL AND SOCKET JOINT, METAL-TO-METAL SEATING SURFACES, AND SOLDER JOINT ENDS.

BRONZE FLANGES: ASME B16.24, CLASS 150, WITH SOLDER-JOINT ENDS. FURNISH CLASS 300 FLANGES IF REQUIRED TO MATCH PIPING. DIELECTRIC UNIONS AND FLANGES: JOIN PIPING OF DISIMILAR MATERIALS WITH DIELECTRIC UNIONS OR FLANGES TO PROTECT AGAINST GALVANIC AND STRAY CURRENT CORROSION. DIELECTRIC UNIONS SHALL BE RATED FOR 250 PSI, ANSI B 16.39. FLANGES SHALL BE RATED FOR 175 PSI, ANSI B16.42 OR B16.24. THE BODY AND NUT SHALL BE STEEL WITH GALVANIZED COAT. THE INSULATOR SHALL BE NYLON, THE TAILPIECE SHALL BE BRASS, AND THE GASKETS SHALL BE EPDM (STANDARD) OR VITON (HIGH TEMP.). WILKINS MODEL DU, DUC, OR DUM OR EQUAL.

Y-PATTERN STRAINERS, NPS 2" AND SMALLER: 250 LB., CAST BRONZE ASTM B62, BRASS SCREEN RETAINER, COPPER GASKET, 20 MESH TYPE 304 STAINLESS STEEL SCREEN, AND THREADED OR SOLDERED CONNECTIONS. MUELLER STEAM SPECIALTY MODEL 352M AND 358S.

VALVES, NPS 2" AND SMALLER: LEAD FREE BALL VALVE, 600 PSI CWP, TWO-PIECE CONSTRUCTION WITH LEAD FREE BRONZE BODY CONFORMING TO ASTM C89836, STANDARD PORT, CHROME-PLATED LEAD FREE BRASS BALL, REPLACEABLE RPTFE SEATS, BLOWOUT PROOF LEAD FREE BRASS STEM, VINYL-COVERED STEEL HANDLE, AND SOLDER ENDS. MSS SP-110; ANSI/NSF 61-8 2008. VALVES SHALL HAVE STAINLESS STEEL STEM EXTENSIONS WHERE REQUIRED TO ALLOW FOR PROPER INSTALLATION OF INSULATION. APOLLO 70LF-200 OR EQUAL.

WATER HAMMER ARRESTORS: EQUAL TO ZURN MODEL Z-1700 SHOKTROL WATER HAMMER ARRESTORS WITH NESTING TYPE BELLOWS CONTAINED WITHIN A CASING HAVING SUFFICIENT DISPLACEMENT VOLUME TO DISSIPATE THE CALCULATED KINETIC ENERGY GENERATED IN THE PIPING SYSTEM. CASING AND BELLOWS CONSTRUCTED OF TYPE 304 STAINLESS STEEL. SIZES SHALL BE NOTED ON THE DRAWINGS.

SOLDERED JOINTS: USE ASTM B 813, WATER-FLUSHABLE, LEAD-FREE FLUX; ASTM B 32, LEAD-FREE-ALLOY SOLDER; AND ASTM B 828 PROCEDURE, UNLESS OTHERWISE INDICATED.

BRAZING FILLER METALS: AWS A5.8, BCUP SERIES, COPPER-PHOSPHORUS ALLOYS FOR GENERAL-DUTY BRAZING, UNLESS OTHERWISE INDICATED.

INSULATION: INSULATE ALL DOMESTIC WATER PIPING WITH ½ -INCH THICK FOR PIPING 1 ½-INCHES DIAMETER AND SMALLER AND 1-INCH THICK FOR PIPING 2-INCHES DIAMETER AND LARGER FLEXIBLE ELASTOMERIC EXPANDED CLOSED CELL THERMAL INSULATION, ASTM C534, TYPE 1-TUBULAR. FLAME SPREAD 25/SMOKE DEVELOPED 50 IN ACCORDANCE WITH ASTM E84. ARMACELL AP ARMAFLEX PIPE INSULATION AND ARMAFLEX 520 ADHESIVE. INSTALL ACCORDING TO INSULATION MANUFACTURER'S WRITTEN INSTRUCTIONS.

LEAK TESTS: UPON COMPLETION OF A SECTION OR OF THE ENTIRE HOT AND COLD WATER SYSTEM, IT SHALL BE TESTED AND PROVED TIGHT UNDER A WATER PRESSURE NOT LESS THAN THE WORKING PRESSURE UNDER WHICH IT IS USED. THE WATER USED FOR TESTS SHALL BE OBTAINED FROM A POTABLE SOURCE OF SUPPLY. A 50 PSIG AIR PRESSURE TEST MAY BE SUBSTITUTED FOR THE WATER TEST. IN EITHER METHOD OF TESTING, THE PIPING SHALL WITHSTAND THE TEST WITHOUT LEAKING FOR A PERIOD OF NOT LESS THAN 15 MINUTES. REPAIR ALL LEAKS AS REQUIRED.

FLUSHING AND DISINFECTION OF POTABLE WATER SYSTEMS: NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE THOROUGHLY FLUSHED AND DISINFECTED PRIOR TO USE WHENEVER REQUIRED BY THE ADMINISTRATIVE AUTHORITY. THE METHOD TO BE FOLLOWED SHALL BE THAT PRESCRIBED BY THE HEALTH AUTHORITY, OR, IN CASE NO METHOD IS PRESCRIBED, PER THE STATE PLUMBING CODE REQUIREMENTS. CONTRACTOR SHALL PERFORM WATER SAMPLE BACTERIA TEST AT THE END OF THE PROJECT AND PROVIDE RESULTS TO THE OWNER'S REPRESENTATIVE.

PIPE SUPPORTS

CONTRACTOR SHALL PROVIDE AND INSTALL ALL REQUIRED HANGERS, SUPPORTS, ANCHORS, FASTENERS, FITTINGS, ACCESSORIES, AND HARDWARE AS NECESSARY FOR THE COMPLETE INSTALLATION OF PLUMBING WORK. COMPLY WITH MSS-SP-58. CARBON STEEL PIPE HANGERS SHALL HAVE GALVANIZED METAL COATING, CONTINUOUS THREAD HANGER RODS, AND CARBON STEEL NUTS AND WASHERS. COPPER PIPE HANGERS SHALL HAVE COPPER-COATED STEEL.

PROVIDE PRODUCTS LISTED, CLASSIFIED, AND LABELED AS SUITABLE FOR THE PURPOSE INTENDED, WHERE APPLICABLE. CONTRACTOR SHALL TAKE SEISMIC REQUIREMENTS INTO CONSIDERATION WHILE SELECTING PRODUCTS. SEE SEISMIC SPECIFICATIONS BELOW.

WHERE SUPPORT AND ATTACHMENT COMPONENT TYPES AND SIZES ARE NOT INDICATED, SELECT IN ACCORDANCE WITH MANUFACTURER'S APPLICATION CRITERIA AS REQUIRED FOR THE LOAD TO BE SUPPORTED. INCLUDE CONSIDERATION FOR VIBRATION, EQUIPMENT OPERATION, AND SEISMIC/SHOCK LOADS WHERE APPLICABLE. INSTALL BUILDING ATTACHMENTS TO STRUCTURAL STEEL.

DO NOT USE WIRE, CHAIN, PERFORATED PIPE STRAP, OR WOOD FOR PERMANENT SUPPORTS UNLESS SPECIFICALLY INDICATED OR PERMITTED.

ALL STRUCTURAL STEEL COMPONENTS SHALL COMPLY WITH ASTM A992.

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**PIPE IDENTIFICATION** 

ALL NEW PIPING SYSTEMS SHALL BE LABELED WITH MANUFACTURED PIPE MARKERS NOTING UTILITY SERVICE AND FLOW DIRECTION. COMPLY WITH ASME A13.1, "SCHEME FOR THE IDENTIFICATION OF PIPING SYSTEMS," FOR LETTER SIZE, LENGTH OF COLOR FIELD, COLORS, AND VIEWING ANGLES OF IDENTIFICATION DEVICES FOR PIPING.

FIRE SEALANTS

ALL PIPE PENETRATIONS THROUGH FIRE-RATED WALLS AND FLOORS SHALL BE SEALED PROPERLY IN ORDER TO MAINTAIN THE INTEGRITY OF THE RATED SYSTEM.

# SEISMIC SPECIFICATIONS

SEISMIC RESTRAINTS: CONTRACTOR SHALL PROVIDE AND INSTALL ALL PIPING AND EQUIPMENT WITH SEISMIC RESTRAINTS AS REQUIRED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE WITH INDIANA AMENDMENTS AND ASCE STANDARD ASCE 7. SEISMIC DESIGN CATEGORY D.

SEISMIC RESTRAINT REFERENCE GUIDELINES: FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FEMA 414 - INSTALLING SEISMIC RESTRAINTS FOR DUCTWORK AND PIPING - DECEMBER 2004; FEMA 412 - INSTALLING SEISMIC RESTRAINTS FOR MECHANICAL EQUIPMENT - DECEMBER 2002; SMACNA -SEISMIC RESTRAINT MANUAL: GUIDELINES FOR MECHANICAL SYSTEMS - THIRD EDITION, 2008.

ALL WELDS SHALL BE BY A CERTIFIED WELDER PER AWS CODES.

SUPPORT SPACING SHALL NOT EXCEED 8'-0" OR PER MECHANICAL CODE LIMITATIONS. WHICHEVER IS

# PLUMBING FIXTURE SPECIFICATIONS

FLOOR DRAIN, FD: EQUAL TO ZURN FLOOR DRAIN, MODEL NO. ZN415S-NL, WITH DURA-COATED CAST IRON BODY WITH 3-INCH BOTTOM NEO-LOC OUTLET. COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SEEPAGE SLOTS AND "TYPE S" SQUARE POLISHED NICKEL BRONZE. LIGHT-DUTY STRAINER. QUANTITY FIVE (5).

LAVATORY, LAV: EQUAL TO AMERICAN STANDARD, MODEL NO. 0355.012, "LUCERNE" WALL-HUNG VITREOUS CHINA LAVATORY WITH FRONT OVERFLOW, D-SHAPED BOWL, SELF-DRAINING DECK AREA WITH CONTOURED BACK AND SIDE SPLASH SHIELDS, FAUCET LEDGE, FAUCET HOLES ON 4-INCH CENTERS, CONCEALED ARMS SUPPORT, 20-1/2" x 18-1/4" NOMINAL DIMENSIONS, ADA COMPLIANT, AND CONFORMS TO ASME A112.19.2. PROVIDE ZURN MODEL NO. Z1231, LAVATORY SUPPORT SYSTEM WITH 250 LBS. CAPACITY COMPLETE WITH DURA-COATED RECTANGULAR STEEL UPRIGHTS WITH WELDED FEET, CAST IRON ADJUSTABLE HEADERS, CONCEALED ARMS, STEEL SLEEVES, ALIGNMENT TRUSS, AND MOUNTING FASTENERS. FAUCET SHALL BE EQUAL TO CHICAGO FAUCET, MODEL NO. 895-317GN2AE72ABCP, DECK MOUNTED MANUAL SINK FAUCET WITH 4-INCH FIXED CENTERS, 5-1/4" RIGID / SWING GOOSENECK SPOUT, 0.5 GPM NON-AERATING LAMINAR OUTLET, 4-INCH VANDAL PROOF WRIST BLADE HANDLES, QUATURN COMPRESSION OPERATING CARTRIDGE, 1/2-INCH NPSM SUPPLY INLETS AND COUPLING NUT FOR 3/8-INCH FLEXIBLE RISERS, TOTAL LEAD CONTENT EQUAL TO OR LESS THAN 0.25% BY WEIGHTED AVERAGE, ASME A112.18.1 COMPLIANT, CERTIFIED NSF 61, AND ADA COMPLIANT. PROVIDE CHROME PLATED CAST BRASS P-TRAP, CHROME PLATED CAST BRASS ANGLE SUPPLY STOPS, AND TRUBRO LAV GUARD 2 FAST-FIT UNDER SINK PIPE COVERS, MODEL 102 EZ. ADA; ASME A 112.19.2. CONTRACTOR SHALL INSTALL LAVATORY TIGHT TO WALL AND SEAL WITH WATERPROOF SEALANT WHERE LAVATORY MEETS WALL TO PREVENT LEAKS. QUANTITY FOUR (4). PROVIDE FAUCET ONLY FOR TWO (2) EXISTING LAVATORIES TO REMAIN.

WATER CLOSET, WC: EQUAL TO AMERICAN STANDARD, MODEL NO. 2257.101, "AFWALL" MILLENNIUM FLO-WISE ELONGATED FLUSHOMETER WALL-MOUNTED TOILET, WITH 1-1/2" INLET TOP SPUD INLET. PROVIDE SLOAN ROYAL 111 (1.6 GALLON) FLUSH VALVE. PROVIDE INJECTION MOLDED SOLID POLYPROPYLENE HEAVY DUTY OPEN FRONT SEAT LESS COVER. PROVIDE AND INSTALL APPROPRIATE ADJUSTABLE, VERTICAL SIPHON JET WATER CLOSET CARRIER WITH 4-INCH NO-HUB CONNECTIONS COMPLETE WITH DURA-COATED CAST IRON RIGHT HAND. LEFT HAND. OR DOUBLE MAIN FITTING WITH 2-INCH VENT. ADJUSTABLE GASKETED FACEPLATE. UNIVERSAL FLOOR MOUNTED FOOT SUPPORTS, CORROSION RESISTANT ADJUSTABLE ABS COUPLING WITH INTEGRAL TEST CAP, FIXTURE BOLTS, TRIM, STUD PROTECTORS, REAR ANCHOR TIE DOWN, AND BONDED NEO-SEAL GASKET. QUANTITY FOUR (4). PROVIDE FLUSH VALVE ONLY FOR TWO (2) EXISTING WATER CLOSETS TO REMAIN.

SINK, SK-1: EQUAL TO JUST ARMOR GROUP LEDGE TYPE SINGLE COMPARTMENT DEEP STAINLESS STEEL SINK, MODEL NO. SLX-2019-16-GR, WITH SEAMLESS DIE-DRAWN CONSTRUCTION OF 16 GA. TYPE 304 STAINLESS STEEL, INTERIOR AND TOP SURFACES POLISHED TO A NON-POROUS HAND BLENDED FINISH, FULLY COATED UNDERSIDE FOR SOUND AND CONDENSATION CONTROL, STRAIGHT-SIDED COMPARTMENT WITH 1-3/4" RADIUS CORNERS, SELF-RIMMING TOP MOUNT WITH GRIP-RIM PLUS WITH STAINLESS STEEL MOUNTING CHANNELS, DRAIN PUNCHED FOR JUST J-35-SSF DRAIN, AND THREE (3) HOLES ON 4-INCH CENTERS. 20" x 19" OVERALL DIMENSIONS AND 14" x 16" x 10-1/2" DEEP BOWL DIMENSIONS. FAUCET SHALL BE CHICAGO FAUCET DECK MOUNTED MANUAL SINK FAUCET, MODEL NO. 786-GN8AE72ABCP, WITH 8-INCH FIXED CENTERS, 8-INCH RIGID / SWING GOOSENECK SPOUT, 0.5 GPM NON-AERATING LAMINAR OUTLET, 4-INCH VANDAL PROOF WRIST BLADE HANDLES, QUATURN COMPRESSION OPERATING CARTRIDGE, 1/2-INCH NPSM SUPPLY INLETS AND COUPLING NUT FOR 3/8-INCH FLEXIBLE RISERS, TOTAL LEAD CONTENT EQUAL TO OR LESS THAN 0.25% BY WEIGHTED AVERAGE, ASME A112.18.1 COMPLIANT, CERTIFIED NSF 61, AND ADA COMPLIANT. PROVIDE CHROME PLATED CAST BRASS P-TRAP AND CHROME PLATED CAST BRASS ANGLE SUPPLY STOPS. QUANTITY ONE (1).

SINK, SK-2: EQUAL TO JUST DOUBLE COMPARTMENT DEEP STAINLESS STEEL SINK, MODEL NO. DLX-1933A-J, WITH SEAMLESS DIE-DRAWN CONSTRUCTION OF 16 GA. TYPE 304 STAINLESS STEEL, INTERIOR AND TOP SURFACES POLISHED TO A NON-POROUS HAND BLENDED FINISH, FULLY COATED UNDERSIDE FOR SOUND AND CONDENSATION CONTROL, STRAIGHT-SIDED COMPARTMENT WITH 1-3/4" RADIUS CORNERS, SELF-RIMMING TOP MOUNT WITH GRIP-RIM PLUS WITH STAINLESS STEEL MOUNTING CHANNELS, DRAIN PUNCHED FOR JUST J-35-SSF DRAIN, AND THREE (3) HOLES ON 4-INCH CENTERS. 33" x 19" OVERALL DIMENSIONS AND 14" x 14" x 10" DEEP BOWL DIMENSIONS. FAUCET SHALL BE CHICAGO FAUCET DECK MOUNTED MANUAL SINK FAUCET. MODEL NO. 786-GN8AE72ABCP. WITH 8-INCH FIXED CENTERS, 8-INCH RIGID / SWING GOOSENECK SPOUT, 0.5 GPM NON-AERATING LAMINAR OUTLET, 4-INCH VANDAL PROOF WRIST BLADE HANDLES, QUATURN COMPRESSION OPERATING CARTRIDGE, 1/2-INCH NPSM SUPPLY INLETS AND COUPLING NUT FOR 3/8-INCH FLEXIBLE RISERS, TOTAL LEAD CONTENT EQUAL TO OR LESS THAN 0.25% BY WEIGHTED AVERAGE, ASME A112.18.1 COMPLIANT, CERTIFIED NSF 61, AND ADA COMPLIANT. PROVIDE CHROME PLATED CAST BRASS P-TRAP AND CHROME PLATED CAST BRASS ANGLE SUPPLY STOPS. QUANTITY ONE (1).

SINK, SK-3: EQUAL TO JUST DROP-IN LEDGE TYPE SINGLE COMPARTMENT STAINLESS STEEL SINK, MODEL NO. SL1613A-J, WITH SEAMLESS DIE-DRAWN CONSTRUCTION OF 16 GA. TYPE 304 STAINLESS STEEL, INTERIOR AND TOP SURFACES POLISHED TO A NON-POROUS HAND BLENDED FINISH, FULLY COATED UNDERSIDE FOR SOUND AND CONDENSATION CONTROL, STRAIGHT-SIDED COMPARTMENT WITH 1-3/4" RADIUS CORNERS, SELF-RIMMING TOP MOUNT WITH GRIP-RIM PLUS WITH STAINLESS STEEL MOUNTING CHANNELS, DRAIN PUNCHED FOR JUST J-35-SSF DRAIN, AND ONE (1) HOLE CENTERED. 13" x 16" OVERALL DIMENSIONS AND 10" x 10" x 7-5/8" DEEP BOWL DIMENSIONS. FAUCET SHALL BE CHICAGO FAUCET DECK MOUNTED MANUAL SINK FAUCET, MODEL NO. 430-ABCP, WITH 8-INCH RIGID / SWING GOOSENECK SPOUT, 1.5 GPM NON-AERATING LAMINAR OUTLET, VANDAL PROOF LEVER HANDLE, 1/2-INCH NPSM SUPPLY INLETS AND COUPLING NUT FOR 3/8-INCH FLEXIBLE RISERS, TOTAL LEAD CONTENT EQUAL TO OR LESS THAN 0.25% BY WEIGHTED AVERAGE, ASME A112.18.1 COMPLIANT, CERTIFIED NSF 61, AND ADA COMPLIANT. PROVIDE CHROME PLATED CAST BRASS P-TRAP AND CHROME PLATED CAST BRASS ANGLE SUPPLY STOPS. QUANTITY ONE (1).

FLOOR CLEANOUT, CO: EQUAL TO ZURN, MODEL NO. Z1400-SZ, "LEVEL-TROL" SQUARE ADJUSTABLE LEVELING FLOOR CLEANOUT WITH DURA-COATED CAST IRON BODY. GAS AND WATERTIGHT ABS THREAD PLUG, 4-INCH NO-HUB OUTLET, AND ROUND SCORIATED SECURED LIGHT-DUTY TOP WITH SQUARE FRAME. QUANTITY ONE (1).

WALL CLEANOUT, WCO: EQUAL TO ZURN, MODEL NO. Z1441, WALL CLEANOUT WITH SMOOTH ACCESS COVER, CAST IRON BODY, AND WATERTIGHT ABS TAPERED THREAD PLUG. QUANTITY TWO (2).

# **FIRE**

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# SCC

	Owen Valley 🚆
FIRE PROTECTION SPECIFICATIONS	
THE FIRE PROTECTION CONTRACTOR SHALL CAREFULLY EXAMINE ALL ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS PERTAINING TO THE CONSTRUCTION PRIOR TO FABRICATING AND INSTALLING THE WORK. THE FIRE PROTECTION CONTRACTOR SHALL COOPERATE WITH ALL OTHER CONTRACTORS IN LOCATING SPRINKLER PIPING AND SPRINKLER HEADS IN ORDER TO AVOID CONFLICT WITH OTHER CONTRACTORS WORK.	- DESLC
ALL FIRE PROTECTION WORK SHALL CONFORM TO THE LATEST EDITION OF NFPA 13, "STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS" AND TO ALL STATE AND LOCAL BUILDING CODES, FIRE MARSHAL, AND INSURANCE UNDERWRITER REQUIREMENTS.	
ALL MATERIALS SHALL BE PROVIDED BY THE FIRE PROTECTION CONTRACTOR UNLESS OTHERWISE NOTED.	
INSURANCE UNDERWRITER INFORMATION (I.E. COVERAGE REQUIREMENTS, CONTACT PERSON) SHALL BE OBTAINED FROM THE OWNER.	
OCCUPANCY AND HAZARD CLASSIFICATIONS AS WELL AS DENSITY/COVERAGE REQUIREMENTS SHALL BE APPROVED BY THE OWNER'S INSURANCE UNDERWRITER AS WELL AS THE AUTHORITIES HAVING JURISDICTION PRIOR TO THE INSTALLATION.	
THE OCCUPANCY/HAZARD CLASSIFICATION AND DENSITY/COVERAGE REQUIREMENTS SHALL BE CLEARLY INDICATED ON THE BID.	
THE FIRE PROTECTION CONTRACTOR SHALL SUBMIT DESIGN DRAWINGS TO THE AUTHORITIES HAVING JURISDICTION FOR APPROVAL PRIOR TO THE INSTALLATION. IN ADDITION, THE FIRE PROTECTION CONTRACTOR SHALL SUBMIT ELECTRONIC COPIES OF THE DESIGN DRAWINGS AND EQUIPMENT SUBMITTALS TO THREE I DESIGN FOR GENERAL REVIEW. AT PROJECT CLOSEOUT, CONTRACTOR SHALL SUBMIT "FOR RECORD" ELECTRONIC COPIES OF THE DESIGN DRAWINGS TO THE OWNER.	
TENTATIVELY, THE SYSTEM SHALL BE DESIGNED FOR LIGHT HAZARD OCCUPANCY WITH A DESIGN DENSITY PER THE INSURANCE CARRIER AND AUTHORITIES HAVING JURISDICTION REQUIREMENTS. SPRINKLER REQUIREMENTS SHALL BE MAXIMUM 225 SQUARE FOOT PER HEAD WITH MAXIMUM 15 FOOT SPACING USING 162 DEGREES F SEMI-RECESSED SPRINKLERS. THESE REQUIREMENTS SHALL BE CONFIRMED BY THE AUTHORITIES HAVING JURISDICTION AND THE INSURANCE UNDERWRITER PRIOR TO THE DESIGN.	
THE SYSTEM(S) SHALL BE HYDRAULICALLY CALCULATED. FLOW INFORMATION AND DESIGN INFORMATION OF EXISTING SYSTEMS SHALL BE OBTAINED FROM THE OWNER.	
UNLESS SHOWN OTHERWISE, EXACT PIPE ROUTING SHALL BE DETERMINED BY THE FIRE PROTECTION CONTRACTOR AND SHALL BE CLOSELY COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION.	DR 100% RE DR BID M #1
TENTATIVE HEAD LOCATIONS ARE SHOWN ON THE DRAWING(S) BASED ON THE ABOVE LISTED REQUIREMENTS AND IS FOR GUIDELINE PURPOSES ONLY. THE FIRE PROTECTION CONTRACTOR SHALL ADJUST QUANTITY AND LOCATIONS OF SPRINKLER HEADS AS REQUIRED TO MEET REQUIREMENTS. THE FIRE PROTECTION CONTRACTOR SHALL COORDINATE SPRINKLER HEAD LOCATIONS WITH THE GENERAL CONTRACTOR PRIOR TO THE INSTALLATION. ALL SPRINKLER HEADS SHALL BE CENTERED IN SUSPENDED LAY-IN TYPE CEILING APPLICATIONS	N ISSUED FC
PROVIDE SEISMIC RESTRAINTS ON FIRE PROTECTION SYSTEMS IN ACCORDANCE WITH NFPA 13.	В Я Т Т Т
THE FIRE PROTECTION CONTRACTOR SHALL INCLUDE COORDINATION AND INSTALLATION OF ALL REQUIRED ALARM DEVICES (I.E. FLOW SWITCHES, TAMPER SWITCHES, ETC.) INTO THE BUILDING ANNUNCIATOR PANEL AS DIRECTED BY THE OWNER. THE INSTALLATION SHALL CONFORM TO NFPA 13 REQUIREMENTS AS WELL AS ALL APPLICABLE ELECTRICAL CODES AND STANDARDS.	DATE 09/07/23 11/01/23 11/17/23
FIRE PROTECTION CONTRACTOR SHALL COORDINATE ALL SERVICE SHUTDOWNS AS WELL AS WORK SCHEDULES WITH THE OWNER PRIOR TO COMMENCING WITH THE WORK.	
ALL UNDERGROUND UTILITIES SHALL BE VERIFIED FOR PIPE SIZE AND LOCATION PRIOR TO FABRICATING AND INSTALLING ANY NEW PIPING. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITIES OR BE GROUNDS FOR EXTRA CHARGES.	NS
THE FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR BEING FULLY AWARE OF THE PROJECT CONDITIONS AND PARAMETERS PRIOR TO SUBMITTING THE BID.	
SCOPE OF WORK	AT 46
THE FIRE PROTECTION CONTRACTOR'S WORK SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE FOLLOWING:	Ž L Z
<ol> <li>RELOCATION OF EXISTING SPRINKLER HEADS DUE TO THE ASSOCIATED RENOVATION WORK. SEE REFLECTED CEILING PLANS ON SHEETS A7 THROUGH A8 FOR TENTATIVE SPRINKLER HEAD LOCATIONS.</li> </ol>	A ≥ 00
REQUIRED. SEE REFLECTED CEILING PLANS ON SHEETS A7 THROUGH A8 FOR TENTATIVE SPRINKLER HEAD LOCATIONS.	H ANDIAN AND INTERIOR H ADDITION AND INTERIOR H ADDITION AND INTERIOR 95 PLUMBING AND FIRE PROTECTION SPECIFICATIONS PRAWN BY: DESIGNED BY: RTN DESIGNED BY: RTN DESIGNED BY: BWW DIATE: DS/02/23 SCALE:
ЪIJ	PROJECT NUMBER: <b>22286A</b> SHEET NO:

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**P7** 

41 of 58

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	GENERAL SPECIFICATIONS:			<b>GENERAL SPECI</b>
1.	THREE I DESIGN HAS CONDUCTED REASONABLE RESEARCH AND FIELD VERIFICATION OF EXISTING CONSTRUCTION TO PREPARE THESE DOCUMENTS. HOWEVER, SUCH RESEARCH MAY NOT IDENTIFY ALL EXISTING CONDITIONS, AND THE DRAWINGS THAT THREE I REASONABLY RELIED UPON MAY BE INACCURATE OR INCOMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INVESTIGATE AND VERIFY EXISTING CONSTRUCTION	I	38. 39.	CABLE SHALL BE INSTALLED LEV LINES OR WALLS AND CLOSELY F
	ANY MATERIAL BRING ANY DISCREPANCIES, OR EXISTING CONDITIONS THAT WILL INTERFERE WITH THE PROPER INSTALLATION OF NEW MATERIALS OR CONSTRUCTION, TO THE ATTENTION OF THREE I DESIGN'S PROJECT MANAGER.	I	40.	SLACK TO ALLOW CONDUCTORS INCHES. WIRE AND CABLE SHALL BE CON
2.	RECORD DRAWINGS (OFTEN REFERRED TO AS "RED LINES" OR "AS-BUILTS") SHALL BE MAINTAINED BY EACH SUBCONTRACTOR AT THE DIRECTION OF THE GENERAL CONTRACTOR. UPON THE COMPLETION OF CONSTRUCTION, RECORD DRAWINGS SHALL BE TURNED OVER TO THREE I DESIGN, TOGETHER WITH O&M MANUALS FOR ALL NEW INSTALLED EQUIPMENT. CONTRACTOR'S FINAL PAY APPLICATION WILL BE RETAINED UNTIL RECORD DRAWINGS AND MANUALS ARE SUBMITTED. RECORD DRAWINGS SHALL DOCUMENT ALL CHANGES		<i>A</i> 1	OF CONDUCTORS, THE TYPE OF INSULATION, NAME OF THE MANU MANUFACTURE AND UL LABEL AS
	OCCURRING IN THE FIELD REGARDING MATERIALS INSTALLED, SIZES, DIMENSIONS, OR LOCATIONS OF INSTALLED CONSTRUCTION.	I	41.	LESS THAN THE MINIMUM RECON
3.	ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL ELECTRICAL MATERIAL, EQUIPMENT AND INCIDENTALS NOT SPECIFICALLY CALLED OUT AND LABOR, FOR A FULLY OPERATIONAL AND COMPLETE SYSTEM AS DESIGNED. MINOR ITEMS, ACCESSORIES OR DEVICES REASONABLY INFERABLE AS NECESSARY FOR COMPLETION AND PROPER OPERATION OF THE SYSTEM SHALL BE PROVIDED WHETHER SPECIFICALLY CALLED FOR BY THE SPECIFICATIONS OF DRAWINGS WITHOUT ADDITIONAL COST TO THE PROJECT.		42.	EXCEPT WHERE PARALLELING C THE PARALLELED CIRCUIT, AND ELECTRICALLY, AT BOTH ENDS, T
4.	ELECTRICAL CONTRACTOR SHALL ORDER MATERIALS AND EQUIPMENT PER DESCRIPTION AND SPECIFICATIONS. CATALOG NUMBERS, IF PROVIDED, ARE FOR REFERENCE ONLY. ELECTRICAL CONTRACTOR SHALL VERIFY CATALOG NUMBER(S) QUANTITIES AND VOLTAGE REQUIREMENTS BEFORE ORDERING. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ORDERING THE CORRECT MATERIAL AS PER DESCRIPTION		43.	INSTALLATION. THE LUBRICANT HARDEN OR CEMENT TO THE DU CABLE MANUFACTURER'S RECOI
5.	THIS ELECTRICAL SYSTEM HAS BEEN DESIGNED PER THE 2017 NATIONAL ELECTRIC CODE (NEC). MATERIAL AND EQUIPMENT SHALL CONFORM TO THE STANDARDS WHERE APPLICABLE OF THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), NATIONAL ELECTRIC CODE (NEC) AND UNDERWRITERS LABORATORIES (UL) LATEST EDITIONS. WORK SHALL CONFORM TO		45.	CONDUCTORS UP TO AND INCLU CONDUCTORS SHALL BE SOLID F ALL POWER WIRING AND BRANCI
6.	APPLICABLE FEDERAL, STATE AND LOCAL CODES. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR UNLOADING OR LOADING ALL SHIPMENTS OF ELECTRICAL EQUIPMENT RELATED TO THIS JOB, AND STORING OF THESE MATERIALS AT A SITE SPECIFIED BY THE OWNER	I	46.	MULTICONDUCTOR SHIELDED WI CONTROL, AND NETWORK WIRIN SPACE. WIRING IN THE CEILING S
7.	THE DRAWINGS IN THIS PROJECT, SHOW THE GENERAL ARRANGEMENT OF EQUIPMENT, APPARATUS, DEVICES, AND ACCESSORIES NECESSARY TO COMPLETE THIS PROJECT. THEIR EXACT LOCATION OR ARRANGEMENT, UNLESS DIMENSIONED, ARE SUBJECT TO MINOR CHANGES NECESSITATED BY FIELD CONDITIONS OR AS REQUIRED WITHOUT ANY ADDITIONAL COST TO THE PROJECT.	I	47.	FROM THE STRUCTURAL CEILING TIGHTEN ELECTRICAL CONNECT TORQUE-TIGHTENING VALUES. I
8.	CONTRACTOR SHALL REMOVE ABANDONED WIRING SHALL BE REMOVED TO SOURCE. ABANDONED CONDUIT		48.	MAKE SPLICES AND TAPS THAT A
9.	DISCONNECT ABANDONED OUTLETS AND REMOVE DEVICES. REMOVE ABANDONED OUTLETS IF CONDUIT SERVICING THEM IS ABANDONED AND REMOVED. PROVIDE BLANK COVERS FOR ABANDONED OUTLETS THAT ARE NOT REMOVED.		49.	RACEWAY SYSTEMS AND RACEW SECTIONS OF THE NATIONAL ELE SHALL BE UL LISTED FOR THE EN
10.	PROVIDE SINGLE CONDUCTOR BUILDING WIRE INSTALLED IN SUITABLE RACEWAY UNLESS OTHERWISE NOTED. ALL WIRING AND CABLE SHALL BE STRANDED, SOFT DRAWN COPPER WITH THWN-2/THHN TYPE INSULATION. WIRE SHALL BE RATED MINIMALLY FOR 600V, AND SHALL HAVE A MINIMUM SIZE OF #12 AWG FOR BRANCH CIRCUIT WIRING. #4 AWG AND LARGER CABLE SHALL BE STRANDED XHHW-2.		50.	EMT MAY BE USED FOR ALL INTE CONNECTORS SHALL BE USED F (NON-LIQUID-TIGHT) CONDUIT SH
13.	SINGLE CONDUCTOR BUILDING WIRE ACCEPTABLE MANUFACTURERS ARE <u>CERRO WIRE, ENCORE WIRE</u> CORPORATION, AND <u>SOUTHWIRE COMPANY.</u>		51.	THE USE OF CONDUIT BODIES SH ELBOWS CANNOT BE USED. THE (E.G., LB, LLB, ETC.).
14.	METAL CLAD CABLE IS PERMITTED WHERE CONCEALED ABOVE ACCESSIBLE CEILINGS FOR FINAL CONNECTION FROM JUNCTION BOXES TO LUMINAIRES. THE MAXIMUM LENGTH SHALL BE 6 FEET. IT IS ALSO PERMITTED IN HOLLOW STUD WALLS FOR BRANCH CIRCUITS UP TO 20 AMPS. SINGLE CONDUCTOR BUILDING WIRE IN RACEWAY SHALL BE RUN FROM THE CIRCUIT HOMERUN FROM THE FIRST OUTLET TO THE PANELBOARD.		52.	WHERE STANDARD FACTORY CC IT IS NECESSARY THAT ELBOWS, THE CURVE OF ANY CONDUIT FIE SPECIFIED IN THE NEC TABLE 2,
15.	METAL CLAD CABLE ACCEPTABLE MANUFACTURERS ARE <u>AFC CABLE SYSTEMS</u> , <u>ENCORE WIRE CORPORATION</u> , AND <u>SOUTHWIRE COMPANY.</u>	I	53.	
6.	ELECTRICAL CONTRACTOR SHALL PROVIDE STANDARD VINYL-CLOTH, SELF-ADHESIVE CABLE/CONDUCTOR MARKERS OF WRAP- AROUND TYPE, EITHER PRE-NUMBERED PLASTIC COATED TYPE, OR WRITE-ON TYPE CLEAR PLASTIC SELF-ADHESIVE COVER FLAP; NUMBERED TO SHOW CIRCUIT IDENTIFICATION.	I	54.	INSTALLER SHALL BE RESPONSIL INSTALLATION OF RACEWAYS. A COMPLETELY SEALED TO PREVE MANNER THAT MAINTAINS THE A
17.	CABLE/CONDUCTOR MARKERS SHALL INCLUDE FEEDER NUMBER ON EACH END OF EACH CONDUCTOR IN EACH CONDUIT, AND AT EACH BOX/ENCLOSURE/CABINET WHERE WIRES OF MORE THAN ONE CIRCUIT OR SYSTEM ARE PRESENT. MATCH CABLE CONDUCTOR MARKERS WITH MARKING SYSTEM IN PANELBOARDS, SHOP DRAWINGS, CONTRACT DOCUMENTS AND DRAWINGS.	I	55.	CONDUIT SHALL BE INSTALLED L LINES OR WALLS AND CLOSELY F CONDUIT SHALL BE GROUPED OF
18.	ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL COMPLETE UPDATED TYPEWRITTEN PANEL SCHEDULES FOR ALL AFFECTED PANELS AT THE COMPLETION OF THE PROJECT.	I	50.	STEAM OR HOT WATER PIPES AN
9.	ELECTRICAL CONTRACTOR SHALL COORDINATE WORK WITH OTHER CONTRACTORS TO PREVENT INTERFERENCE OF THE INSTALLATION, OPERATION AND/OR MAINTENANCE OF EQUIPMENT.	I	57. 58.	SOURCE AND LOAD CONDUCTOR
20.	ELECTRICAL CONTRACTOR SHALL PATCH ALL HOLES IN CEILINGS, WALLS, ETC. FOR ELECTRICAL DEMOLITION AND CONSTRUCTION TO OWNER SATISFACTION AND TO MAINTAIN REQUIRED FIRE RATING.	I	59.	SYSTEM.
21. 22.	ALL BLANK BOXES AND EMPTY CONDUITS SHALL HAVE PULL WIRES IN PLACE. ELECTRICAL CONTRACTOR SHALL MOUNT ALL ELECTRICAL DEVICE BOXES AND OBTAIN APPROVAL OF LOCATION FROM OWNER BEFORE INSTALLING CONDUIT AND WIRE.			HANGERS. DO NOT USE PERFOR MALLEABLE IRON OR WROUGHT CONDUIT OR HANGER SUPPORT. SUSPENDED FROM CONCRETE, M STRUCTURE IN ACCORDANCE W
23.	MIXING OF WIRES FROM DIFFERENT PANELS IN JUNCTION BOXES SHALL BE AVOIDED.	I	60.	COMPLY WITH NECA 1 AND NECA DRAWINGS OR IN THIS ARTICLE /
24.	ELECTRICAL CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE SUBMITTING A BID. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR FROM ANY RESPONSIBILITIES OR BE GROUNDS FOR ANY EXTRA CHARGES.		61.	COMPLETE RACEWAY INSTALLAT
25.	ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN, WIRING AND DEVICES (PROVIDE AND INSTALL), AND/OR DESCRIBED IN THE CONSTRUCTION DOCUMENTS, UNLESS NOTED OTHERWISE. ANY CONTROL WIRING NOT SHOWN ON THE ELECTRICAL DRAWINGS IS THE RESPONSIBILITY OF THE TEMPERATURE CONTROL CONTRACTOR OR MECHANICAL CONTRACTOR OR AS NOTED.		62. 63.	INSTALL NO MORE THAN THE EQ CONTROL WIRING CONDUITS, FO CHANGES IN DIRECTION. ALL CONDUIT IN FINISHED AREAS
26.	AT COMPLETION SUBMIT TO OWNER ALL THE WARRANTY DOCUMENTATION FOR ALL NEW INSTALLED EQUIPMENT. PROVIDE AT A MINIMUM 5-YEAR WARRANTY FOR ALL EMERGENCY UNITS, BATTERY OPERATED AND 1-YEAR FOR		64.	EXPOSED. SUPPORT CONDUIT WITHIN 12 IN
27.	ALL OTHER EQUIPMENT. COMPLY WITH PROJECT'S GENERAL NOTES AND REQUIREMENTS OUTLINED ON ARCHITECTURAL DRAWINGS.		65.	USE INSULATING BUSHINGS TO F RACEWAY TERMINATIONS AT LO
28.	ALL EQUIPMENT, EQUIPMENT INSTALLATION, WIRING AND WIRING METHODS, GROUNDING, LABELING ETC. SHALL BE INSTALLED IN COMPLIANCE WITH ALL APPLICABLE CODES AND STANDARDS, INDIANA AND LOCAL BUILDING CODES, ORDNANCES, AND CURRENT REGULATIONS IN EFFECT AT TIME OF CONSTRUCTION. WHERE THERE IS A DIFFERENCE BETWEEN THE STANDARDS, CODES, SPECIFICATIONS, THE MOST STRINGENT REQUIREMENTS SHALL		66.	TERMINATE THREADED CONDUIT OR CABINETS. INSTALL BUSHING BUSHINGS ON 1-1/2-INCH TRADE THROAT METAL GROUNDING BUS
29.	APPLY. ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED IN A GOOD WORKMANLIKE MANNER, AND IN ACCORDANCE		67.	INSTALL RACEWAYS SQUARE TO LOCKNUTS HAND TIGHT PLUS 1/4
30.	WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. IT SHALL BE THE RESPONSIBILITY OF EACH TRADE TO CLEAN UP ALL DEBRIS CREATED FROM THEIR PORTION OF			COATINGS ON ENCLOSURES. RE ENCLOSURE TO ASSURE A CONT
31.	WORK. SEE G2 REGARDING CLEANING STANDARDS. PROVIDE SUBMITTALS FOR PANELBOARDS FOR REVIEW AND APPROVAL PRIOR TO ORDERING.		68.	CUT CONDUIT PERPENDICULAR ROLL CUTTER OR A GUIDE TO MA
32.	MANUFACTURERS: NO SUBSTITUTIONS WILL BE ACCEPTABLE WITHOUT THE WRITTEN APPROVAL FROM OWNER REPRESENTATIVE/ARCHITECT/ENGINEER PRIOR TO OPENING THE BIDS.		69.	ELECTRICAL METALLIC TUBING (I NATIONAL ELECTRICAL CODE AN
33.	WHERE LIQUID TIGHT FLEXIBLE CONDUIT IS USED, AN ADDITIONAL STRANDED COPPER-GROUNDING CONDUCTOR SHALL BE INSTALLED AS A GROUNDING CONNECTION. THE CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH NEC ARTICLE 250, BUT SHALL NOT BE LESS THAN #12 AWG.		70.	EMT CONDUIT AND FITTINGS SHA STANDARD WALL THICKNESS. TI CORROSION WITH AN EVEN AND SHALL HAVE AN EVEN AND SMOO TUBE.
34. 35.	SPLICES IN WIRE OR CABLE GROUND CONDUCTORS SHALL NOT BE PERMITTED, UNLESS SPECIFIED. WIRE AND CABLE FOR GENERAL BUILDING USE SHALL BE SINGLE CONDUCTOR STRANDED COPPER, RATED 600V, IN ACCORDANCE WITH APPLICABLE ASTM, UL, CSA, ANSI AND ICEA/NEMA STANDARDS FOR THE TYPE OF WIRE AND INSULATION SPECIFIED.		71.	EMT SYSTEMS SHALL BE SUPPOR TO PREVENT EMT FROM SEPARA THE EMT WAS STRUCK BY A MON FINISHED TO REMOVE ROUGH FI
36.	WIRE AND CABLE SHALL BE MARKED AND LABELED IN ACCORDANCE WITH NEC ARTICLE 310.			
37.	WIRE AND CABLE INSTALLATION SHALL COMPLY WITH ALL APPLICABLE ARTICLES AND SECTIONS OF THE NEC OR AS APPLICABLE AND SHALL BE IN ACCORDANCE WITH THE CABLE MANUFACTURER'S PULLING TENSION AND			

# **IFICATIONS (CONTINUED):**

EL AND PLUMB IN NEAT SYMMETRICAL LINES PARALLEL TO BUILDING COLUMN FOLLOWING THE BUILDING OUTLINE.

GH OR TERMINATING IN JUNCTION OR DEVICE BOXES SHALL HAVE SUFFICIENT S TO BE PULLED ACROSS THE ENTIRE LENGTH OF THE BOX PLUS A MINIMUM OF 6

ITINUOUS IN LENGTH AND DELIVERED IN REELS OR IN COILS. REELS AND COILS H COMPLETE IDENTIFICATION, INCLUDING THE WIRE OR CABLE SIZE, THE NUMBER WIRE OR CABLE, LENGTH, WEIGHT, INSULATION THICKNESS, TYPE OF THE UFACTURER, ORIGINAL DATE OF MANUFACTURER, ORIGINAL DATE OF S APPROPRIATE.

OR SINGLE-CONDUCTOR CABLES AND MULTICONDUCTOR CABLES SHALL NOT BE MMENDED BY ICEA AND THE MANUFACTURER.

CONDUCTORS OF EACH BRANCH OR FEEDER CIRCUIT IN A SINGLE RACEWAY CIRCUITS. INSTALL PARALLELING CIRCUITS OF IDENTICAL MAKEUP AND LENGTH AS TERMINATE CONDUCTORS AT THE SAME LOCATION, MECHANICALLY AND TO ENSURE EQUAL DIVISION OF THE TOTAL CURRENT BETWEEN CONDUCTORS.

PLIED TO THE PULLING CABLE AS WELL AS THE INSULATED CABLE DURING SHALL BE COMPATIBLE WITH EXPOSED CABLING MATERIALS, SHALL NOT GUM, JCT OR CONDUIT. THE CABLE LUBRICANT SHALL BE IN ACCORDANCE WITH THE MMENDATIONS.

L MEET THE REQUIREMENTS OF NEMA WC 70 FOR TYPE THHN-THWN FOR JDING #4/0, AND TYPE XHHW FOR CONDUCTORS LARGER THAN #4/0. ALL FOR #10 AWG AND SMALLER; STRANDED FOR #8 AWG AND LARGER

CH CIRCUIT WIRING SHALL BE INSTALLED IN CONDUIT. CONCEAL CABLES IN DELOORS, UNLESS OTHERWISE INDICATED.

IRING FOR SYSTEMS OPERATING BELOW 30 VOLTS, SUCH AS TELEPHONE, IG SHALL BE INSTALLED IN CONDUIT FROM THE DEVICE BOX TO THE CEILING SPACE AND IN EQUIPMENT ROOMS MAY BE RUN EXPOSED PROVIDED THE CABLE TALLED IN A HANGER SYSTEM. ALL SUPPORT HANGERS SHALL BE SUPPORTED G AND NOT THE SUSPENDED CEILING SYSTEM.

ORS AND TERMINALS ACCORDING TO MANUFACTURER'S PUBLISHED F MANUFACTURER'S TORQUE VALUES ARE NOT INDICATED, USE THOSE

ARE COMPATIBLE WITH CONDUCTOR MATERIAL AND THAT POSSESS EQUIVALENT

VAY SYSTEM INSTALLATION SHALL COMPLY WITH ALL APPLICABLE ARTICLES AND ECTRICAL CODE (NEC), AND OTHER APPLICABLE CODES AND STANDARDS AND NVIRONMENT IN WHICH THEY ARE INSTALLED.

ERIOR RACEWAYS. LIQUID-TIGHT FLEXIBLE METAL CONDUIT WITH LIQUID-TIGHT FOR ALL MECHANICAL EQUIPMENT CONNECTIONS. FLEXIBLE METALLIC HALL BE USED FOR LAY-IN TYPE LIGHTING FIXTURES.

HALL BE LIMITED TO THOSE INSTALLATIONS WHERE FACTORY MANUFACTURED E PURCHASING DIVISION SHALL APPROVE EACH CONDUIT BODY INSTALLATION

ONDUIT ELBOWS FOR CONDUITS LARGER THAN 2 INCH, CANNOT BE UTILIZED AND 6, BENDS OR OFFSETS BE MADE BY THE CONTRACTOR, THE MINIMUM RADIUS OF ELD BEND TO THE CENTERLINE OF THE CONDUIT SHALL NOT BE LESS THAN THAT CHAPTER 9, OR AS REQUIRED BY LOCAL CODES.

SIZES SHALL BE 3/4 INCH.

BLE FOR CUTTING OPENINGS IN WALLS AND CEILINGS AS REQUIRED FOR THE ALL OPENINGS RESULTING FROM RACEWAY SHALL BE REPAIRED AND ENT THE PASSAGE OF DUST, SMOKE, AND OTHER FOREIGN MATERIALS AND IN A AREA'S REQUIRED FIRE RATING.

LEVEL AND PLUMB IN NEAT SYMMETRICAL LINES PARALLEL TO BUILDING COLUMN FOLLOWING THE BUILDING OUTLINE. VERTICAL AND HORIZONTAL RUNS OF NN COMMON SUPPORTS.

CHES AWAY FROM PARALLEL RUNS OF HIGH TEMPERATURE SURFACES, SUCH AS ND DO NOT RUN CONDUIT DIRECTLY UNDER STEAM OR WATER LINES.

DRS SHALL NOT SHARE THE SAME CONDUIT TO FEED LOADS.

RS SHALL NOT SHARE THE SAME CONDUIT AFTER THE LOCKOUT POINT FOR THE

TH SINGLE HOLE MALLEABLE IRON GALVANIZED PIPE STRAPS OR CLEVIS TYPE ATED STRAP OR WIRE FOR CONDUIT OR HANGER SUPPORT. BEAM CLAMPS OF STEEL WITH HOOK RODS TO GRIP THE BEAM FLANGE SHALL BE PROVIDED FOR DO NOT USE C_CLAMP TYPE FITTINGS. WHERE INDIVIDUAL CONDUITS ARE MASONRY, WOOD, ETC. THE CONDUIT HANGER SHALL BE SECURED TO A (ITH APPLICABLE PROVISIONS OF THE NEC.

A 101 FOR INSTALLATION REQUIREMENTS EXCEPT WHERE REQUIREMENTS ON ARE STRICTER.

TION BEFORE STARTING CONDUCTOR INSTALLATION.

UIVALENT OF THREE 90-DEGREE BENDS IN ANY CONDUIT RUN EXCEPT FOR DR WHICH FEWER BENDS ARE ALLOWED. SUPPORT WITHIN 12 INCHES OF

SHALL BE RUN CONCEALED. CONDUIT IN UNFINISHED AREAS MAY BE RUN

ICHES OF ENCLOSURES TO WHICH ATTACHED.

PROTECT CONDUCTORS INCLUDING CONDUCTORS SMALLER THAN #4 AWG FOR CATIONS SUBJECT TO MOISTURE OR VIBRATION.

TS INTO THREADED HUBS OR WITH LOCKNUTS ON INSIDE AND OUTSIDE OF BOXES GS ON CONDUITS UP TO 1-1/4-INCH TRADE SIZE AND INSULATED THROAT METAL SIZE AND LARGER CONDUITS TERMINATED WITH LOCKNUTS. INSTALL INSULATED SHINGS ON SERVICE CONDUITS.

THE ENCLOSURE AND TERMINATE AT ENCLOSURES WITH LOCKNUTS. INSTALL 4 TURN MORE. DO NOT RELY ON LOCKNUTS TO PENETRATE NONCONDUCTIVE EMOVE COATINGS IN THE LOCKNUT AREA PRIOR TO ASSEMBLING CONDUIT TO TINUOUS GROUND PATH.

TO THE LENGTH. FOR CONDUITS 2-INCH (53-MM) TRADE SIZE AND LARGER, USE AKE CUT STRAIGHT AND PERPENDICULAR TO THE LENGTH.

EMT) SHALL COMPLY WITH ALL APPLICABLE ARTICLES OR SECTIONS OF THE NO OTHER APPLICABLE STANDARDS.

ALL BE OF MILD STEEL TUBE, HAVING A CIRCULAR CROSS- SECTION AND THE INSIDE AND OUTSIDE SURFACE OF EMT SHALL BE PROTECTED AGAINST THOROUGH COATING OF ZINC. THE ZINC COATING OF THE FINISHED TUBING OTH APPEARANCE AND BE OF UNIFORM QUALITY FOR THE FULL LENGTH OF THE

RTED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND IN A MANNER ATING AT COMPRESSION OR SET SCREW TYPE COUPLINGS AND CONNECTORS IF VING OBJECT. ALL CUT ENDS OF EMT SHALL BE REAMED OR OTHERWISE DGES.

LIGHT	ING FIXTURE SCHE	DULE:					
<u>SYMBOL</u>		MANUFACTURER	MODEL	LAMP	LUMENS	WATTS	NOTES:
	2'x4' CPX LED PANEL, MULTIVOLT, 3500K	LITHONIA	CPX 2X4 4000LM 80CRI 35K SWL MIN10 ZT MVOLT	LED	5037	39.29	
A	2'x4' CPX LED PANEL, MULTIVOLT, 3500K	<u>LITHONIA</u>	CPX 2X4 4000LM 80CRI 35K SWL MIN10 ZT MVOLT E10WLCP	LED	5037	39.29	LIGHT FIXTURE WITH BATTERY PACK
NL	2'x4' CPX LED PANEL, MULTIVOLT, 3500K WITH NIGHT LIGHT	<u>LITHONIA</u>	CPX 2X4 4000LM 80CRI 35K SWL MIN10 ZT MVOLT NLIGHT PIR	LED	5037	39.29	nLIGHT ENABLE WITH PASSIVE INFRARED SENSOR, ON/OFF FUNCTIONALITY
В	2'x2' CPX LED PANEL, MULTIVOLT, 3500K	<u>LITHONIA</u>	CPX 2X2 4000LM 80CRI 35K SWL MIN10 ZT MVOLT	LED	4425	36.3	
B	2'x2' CPX LED PANEL, MULTIVOLT, 3500K	<u>LITHONIA</u>	CPX 2X2 4000LM 80CRI 35K SWL MIN10 ZT MVOLT E10WLCP	LED	4425	36.3	LIGHT FIXTURE WITH BATTERY PACK
Ċ	WF6 LED SWITCHABLE WHITE COLOR TEMPERATURE, DIMMABLE, MATTE WHITE	<u>LIITHONIA</u>	WF6 LED 30K40K50K 90CRI MW	LED	1090-1120	13.8	
D	2'x4' CPX LED PANEL, MULTIVOLT, 3500K	<u>LIITHONIA</u>	CPX 1X4 4000LM 80CRI 35K SWL MIN10 ZT MVOLT	LED	4172	35.5	
	2'x4' CPX LED PANEL, MULTIVOLT, 3500K		CPX 1X4 4000LM 80CRI 35K SWL MIN10 ZT MVOLT E10WLCP		4172	35.5	LIGHT FIXTURE WITH BATTERY PACK
E	4' WET BEAM 4, RECESSED HORIZONTAL MOUNT, 120-277V, COLOR CUSTOM	AXIS LIGHTING	WBRLED-750-80-35 -S-4-C-UNV-DP-1 -DS-B#	LED	2998	33.2	LIGHT FIXTURE WITH EMERGENCY BACKUP. COLOR TO MATCH SOFFIT COLOR.
F F	8' ELLE HORIZONTAL WALL MOUNT, 3500K, 120-277V, COLOR WHITE		ELSC-AR-350-80-35 -CLS-8-W-UNV-DP -1-MT-FL-NA		2810	28.4	
$\bigotimes$	EXIT SIGN FIXTURE, BRUSHED ALUMINUM HOUSING, SINGLE FACE, GREEN LETTERING, NICKEL-CADMIUM BATTERY	LITHONIA	EDGR 1 G EL	LED		34	

# **POWER LEGEND:**

DUPLEX RECEPTACLE. PROVIDE AND INSTALL (1) 120V, 20A, 2P, 3W, GROUNDING, SPECIFICATION GRADE RECEPTACLE, WHITE WITH STAINLESS STEEL PLATE IN SINGLE GANG OUTLET BOX AND 3/4" CONDUIT TO ACCESSIBLE CEILING CAVITY. BUSH CONDUIT ENDS. INSTALL OUTLET BOX AT 18" ABOVE FINISHED FLOOR TO CENTER, UNLESS NOTED OTHERWISE. +"XX" IS DIMENSION RECEPTACLE SHALL BE MOUNTED AFF TO CENTER. <u>HUBBELL</u> "BR20WHI" AND "NP8W" OR EQUAL.

G DUPLEX RECEPTACLE. PROVIDE AND INSTALL (1) 120V, 20A, 2P, 3W, GROUNDING, SPECIFICATION GRADE GFCI RECEPTACLE, WHITE WITH STAINLESS STEEL PLATE IN SINGLE GANG OUTLET BOX AND 3/4" CONDUIT TO ACCESSIBLE CEILING CAVITY. BUSH CONDUIT ENDS. INSTALL OUTLET BOX AT 18" ABOVE FINISHED FLOOR TO CENTER, UNLESS NOTED OTHERWISE. +"XX" IS DIMENSION RECEPTACLE SHALL BE MOUNTED AFF TO CENTER. <u>HUBBELL</u> "GFRST20W" AND "NP26W" OR EQUAL.

DUPLEX RECEPTACLE. PROVIDE AND INSTALL (1) 120V, 20A, 2P, 3W, GROUNDING, WP SPECIFICATION GRADE GFCI RECEPTACLE, WHITE IN SINGLE GANG OUTLET WEATHER PROOF BOX AND 3/4" CONDUIT TO ACCESSIBLE CEILING CAVITY. BUSH CONDUIT ENDS. INSTALL OUTLET BOX AT 18" ABOVE FINISHED FLOOR TO CENTER, UNLESS NOTED OTHERWISE. +"XX" IS DIMENSION RECEPTACLE SHALL BE MOUNTED AFF TO CENTER. <u>HUBBELL</u> "GF20WLA" OR EQUAL.

POWER CIRCUIT, 3/4" CONDUIT WITH (2) #12 AWG AND #12 GND, UNLESS OTHERWISE NOTED. ARROW DENOTES HOME RUN TO PANEL.

(J) EXISTING JUNCTION BOX.

# **SECURITY SYSTEM LEGEND:**

CR CARD READER - INSTALL AT 44" ABOVE FINISHED FLOOR TO CENTER

DC DOOR CONTACT - <u>GRI</u> 29AWG-GY-SR, MAGNETIC REED SWITCH SET, SURFACE MOUNT, CLOSED LOOP

DDC DOUBLE DOOR CONTACT - SAME AS DOOR CONTACT ABOVE, QUANTITY TWO PER DOOR.

SECURITY CAMERA.

PS POWER SUPPLY FOR DOOR SET, PROVIDED BY OTHERS.

W JAMB PUSH PLATE, PROVIDED BY OTHERS.

# DATA LEGEND:

DATA ONLY OUTLET LOCATION. PROVIDE AND INSTALL TWO BLUE CAT6 DATA CABLES IN DOUBLE GANG OUTLET BOX AND 3/4" CONDUIT TO ACCESSIBLE CEILING CAVITY. INSTALL OUTLET BOX AT 18" ABOVE FINISHED FLOOR TO CENTER, UNLESS NOTED OTHERWISE. PROVIDE WHITE COVER WITH 4 OUTLETS AND RJ45 CONNECTORS. DATA CONNECTIONS SHALL BE YELLOW. PROVIDE TERMINATIONS ON BOTH ENDS OF EACH CABLE AND TEST.

(W) EXISTING WIRELESS ACCESS POINT.

# **LIGHTING LEGEND:**

- OUTLET BOX AND 20A, 120-277V, SINGLE POLE SPECIFICATION GRADE TOGGLE SWITCH WITH STAINLESS STEEL FACEPLATE. INSTALL AT 44" ABOVE FINISHED FLOOR TO CENTER AND LOCATE WITHIN 12" OF STRIKE SIDE OF DOOR, UNLESS NOTED OTHERWISE. PROVIDE <u>HUBBELL</u> "CSB120W" OR EQUAL.
- \$3 OUTLET BOX AND 20A, 120-277V, THREE-WAY SPECIFICATION GRADE TOGGLE SWITCH WITH STAINLESS STEEL FACEPLATE. INSTALL AT 44" ABOVE FINISHED FLOOR TO CENTER AND LOCATE WITHIN 12" OF STRIKE SIDE OF DOOR, UNLESS NOTED OTHERWISE. PROVIDE <u>HUBBELL</u> "CSB320W" OR EQUAL.
- DUTLET BOX AND 20A, 120-277V, SPECIFICATION GRADE DIMMER SWITCH, SLIDE TYPE WITH (1) BUTTON, STAINLESS STEEL FACEPLATE. INSTALL AT 44" ABOVE FINISHED FLOOR TO CENTER, UNLESS NOTED OTHERWISE. PROVIDE <u>HUBBELL</u> "IPL06-LED" OR EQUAL.
- K KEYED SWITCH EXISTING.

# FIRE ALARM LEGEND:

- MANUAL PULL STATION. INSTALL PULL STATION AT 44" TO CENTER ABOVE FINISHED FLOOR TO BOTTOM, UNLESS NOTED OTHERWISE. MANUAL PULL STATION SHALL BE WHITE LETTERS ON RED BACKGROUND.
- AUDIO-VISUAL ALARM DEVICE, WHITE WITH RED LETTERS. INSTALL ON WALL AT 80" ABOVE FINISHED FLOOR.
- S SMOKE DETECTOR, CEILING MOUNT DEVICE, WHITE.
- VISUAL ONLY ALARM DEVICE, WHITE WITH RED LETTERS. INSTALL ON WALL AT 80" ABOVE FINISHED FLOOR TO BOTTOM OR 6" BELOW CEILING TO TOP, WHICHEVER IS LOWER.
- INSTALL VISUAL ONLY ALARM DEVICE, WHITE WITH RED LETTERS, CEILING MOUNT.
- SD INSTALL DUCT SMOKE DETECTOR.

![](_page_23_Picture_66.jpeg)

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۲	07/27/23	HON	ISSUED FOR 30% REVIEW	
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U	09/07/23	HON	ISSUED FOR 100% REVIEW	
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ш	11/17/23	HON	ADDENDUM #1	THREE i DESIGN ENGINEERING + ARCHITECTU
				WWW.THREEIDESIGN.COM EVANSVILLE, IN 812-42

Owen Valley

MS Add 1

CANOPY AND SECURED ENTRY RENOVATIONS	<b>OWEN VALLEY MIDDLE SCHOOL</b>	626 IN-46, SPENCER, INDIANA 47460	
SPECIFICA		S	
AND LEGE	NDS		
DRAWN BY: NDH	DE	SIGNED BY	:
CHECKED BY: NKZ	DA	TE: 06/22/2	2
SCALE:	NONE		
PROJECT NUN	MBER: 2286	5A	
SHEET NO: 58	<b>E9</b> 3 of \$	58	-