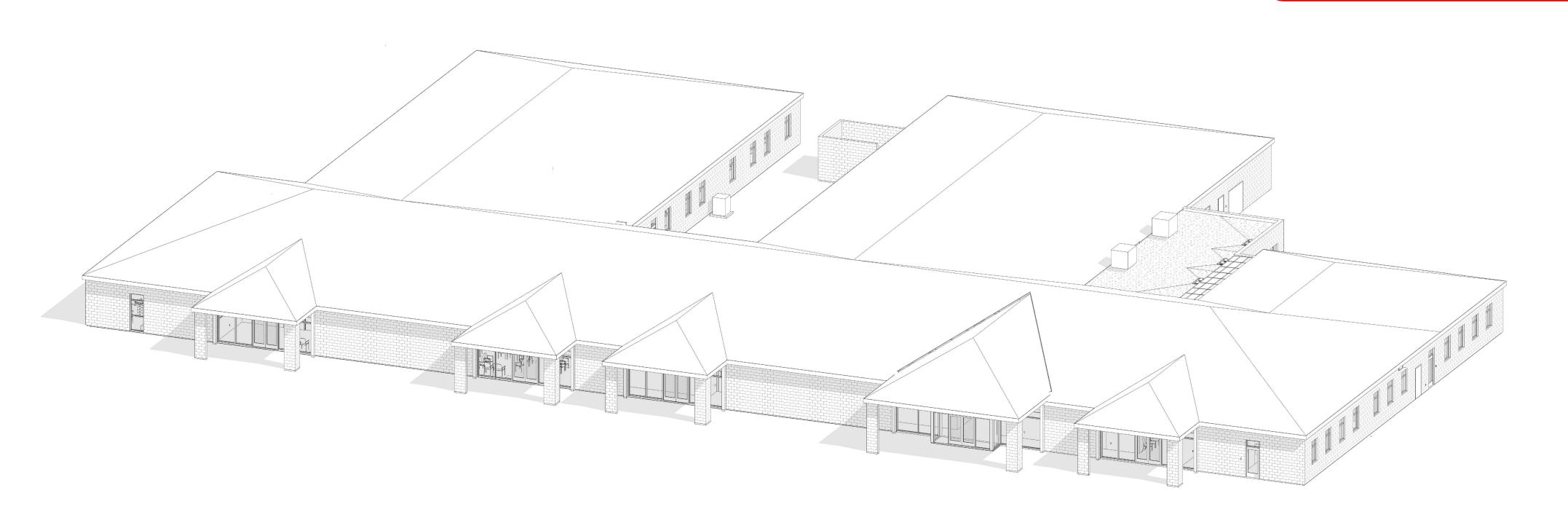
707 N. ARMSTRONG PLACE, BOISE, IDAHO 83704

10/12/2022

PIVOT NORTH ARCHITECTURE PROJECT #:

14 - Drawings 04 - Documents



OWNER CENTRAL DISTRICT HEALTH 707 N ARMSTRONG PLACE BOISE, IDAHO 83704

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E-MAIL: kolson@catorruma.com



CATOR RUMA
& ASSOCIATES, CO. CATOR RUMA
& ASSOCIATES, CO.

APPLICABLE CODES

| ACCESSIBILITY CODE | 2009 ICC A117.1 |
|--|------------------|
| INTERNATIONAL BUILDING CODE | 2018 EDITION |
| INTERNATIONAL ENERGY CONSERVATION CODE | 2018 EDITION |
| INTERNATIONAL FIRE CODE | 2018 EDITION |
| INTERNATIONAL MECHANICAL CODE | 2018 EDITION |
| INTERNATIONAL PLUMBING CODE | 2017 EDITION |
| NATIONAL ELECTRICAL CODE | 2017 EDITION |
| ZONING ORDINANCE: CITY OF BOISE | Zoning Ordinance |

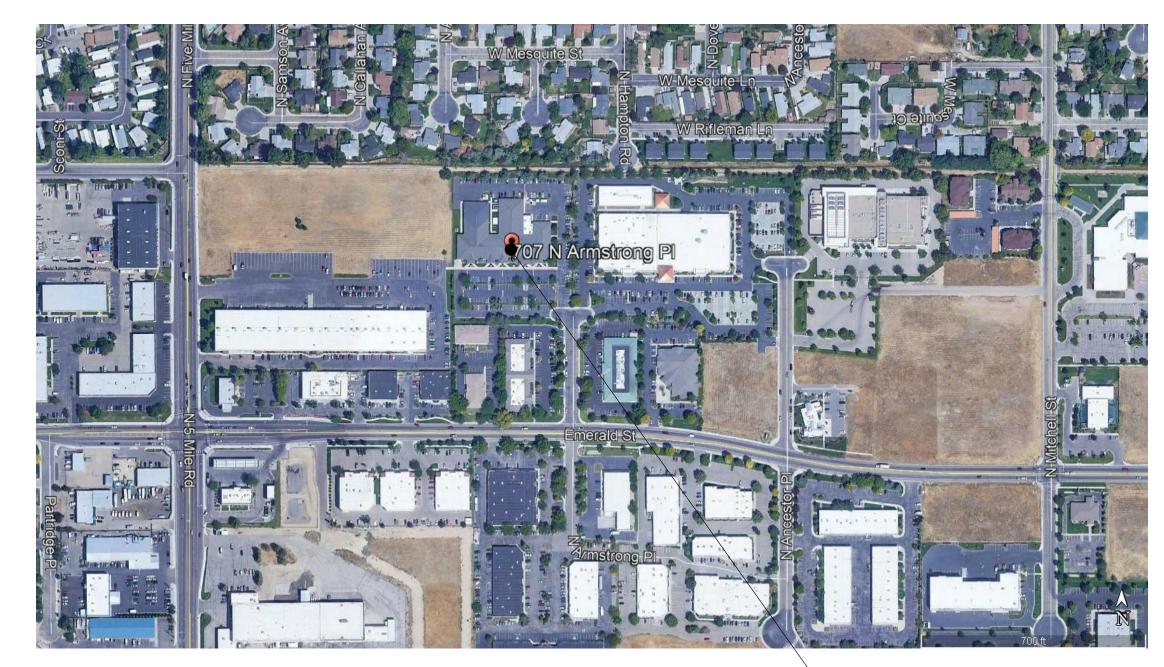
NONE

DEFERRED SUBMITTALS

PROJECT DESCRIPTION

RESTROOM REMODEL. ADDING WALL TILE TO THE SPECIFIED RESTROOMS, REPLACING VANITIES AND ACCESSORIES, REPLACING AND RE-INSTALLING ALL TOILET ACCESSORIES.

THERE IS NO CHANGE TO THE EXISTING BUILDING EXITING PLAN OR BUILDING ENVELOPE AS A RESULT OF THIS REMODEL



PROJECT LOCATION

G0.00 COVER SHEET

G0.02 DRAWING INFORMATION & ACCESSIBILITY COMPLIANCE

GO.04 WALL TYPES AND RATED ASSEMBLIES G2.01 LEVEL 1 - EXITING AND OCCUPANCY PLAN

ARCHITECTURAL

A5.01 ENLARGED PLANS - RESTROOMS

A8.51 INTERIOR ELEVATIONS & DETAILS A9.51 LEVEL-ENLARGED CEILING PLAN - RESTROOMS

ELECTRICAL

E0-01 ELECTRICAL LEGENDS, DETAILS & NOTES

E2-01 LEVEL 1 - ELECTRICAL PLANS

PLUMBING

PO-01 PLUMBING LEGENDS & NOTES

P2-02 LEVEL 1 - PLUMBING PLANS - RESTROOMS 178 & 181 P2-02 LEVEL 1 - PLUMBING PLANS - RESTROOMS 185 & 186

KEY PLAN

AREA OF WORK -RR 178 & 181

AREA OF WORK -

RR 185 & 186

P3-01 PLUMBING SPECIFICATIONS

PIVOT NORTH ARCHITECTURE, PLLC. 116 SOUTH 6TH STREET BOISE, ID 83702

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Revisions:

Checked By:

COVER SHEET

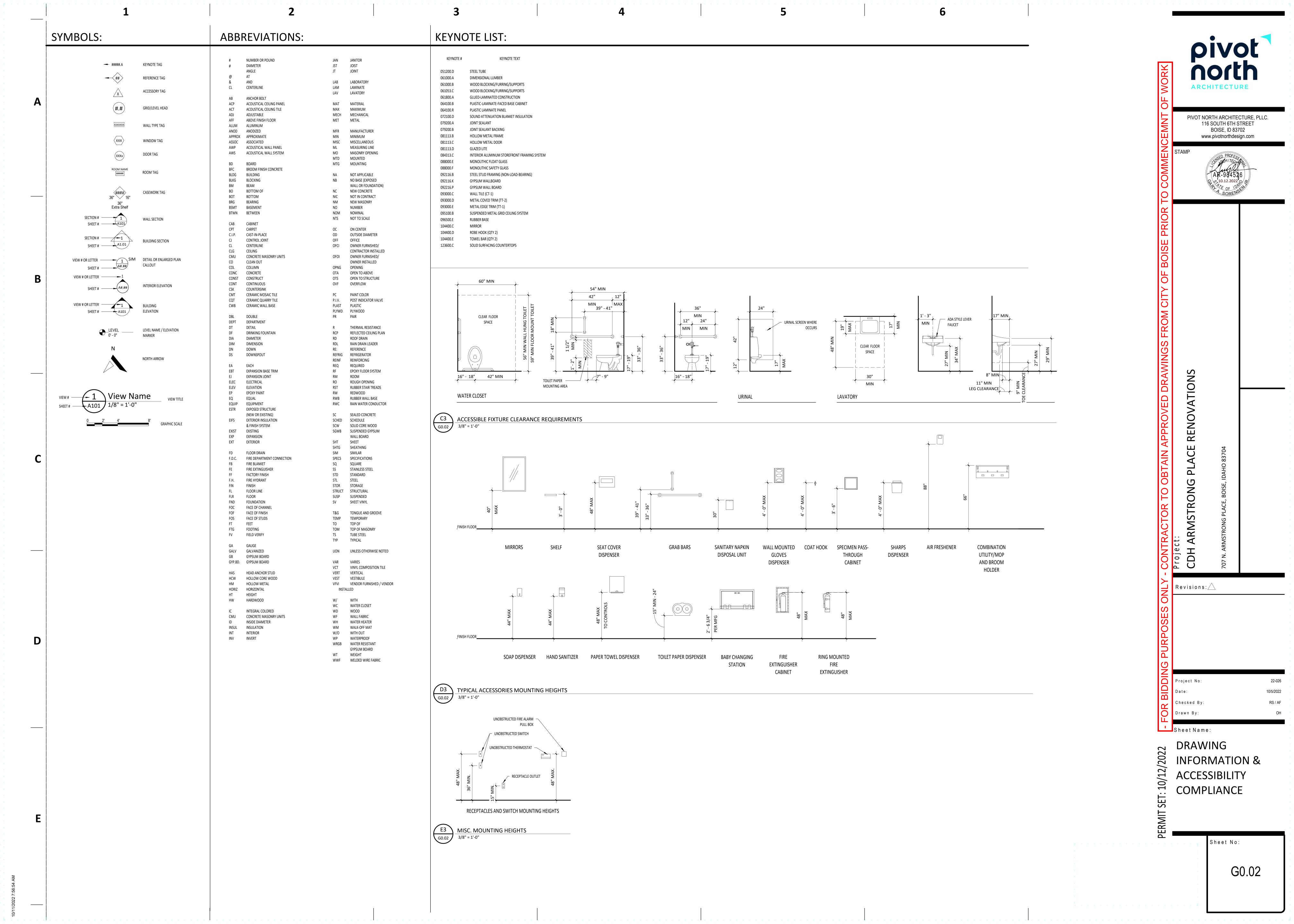
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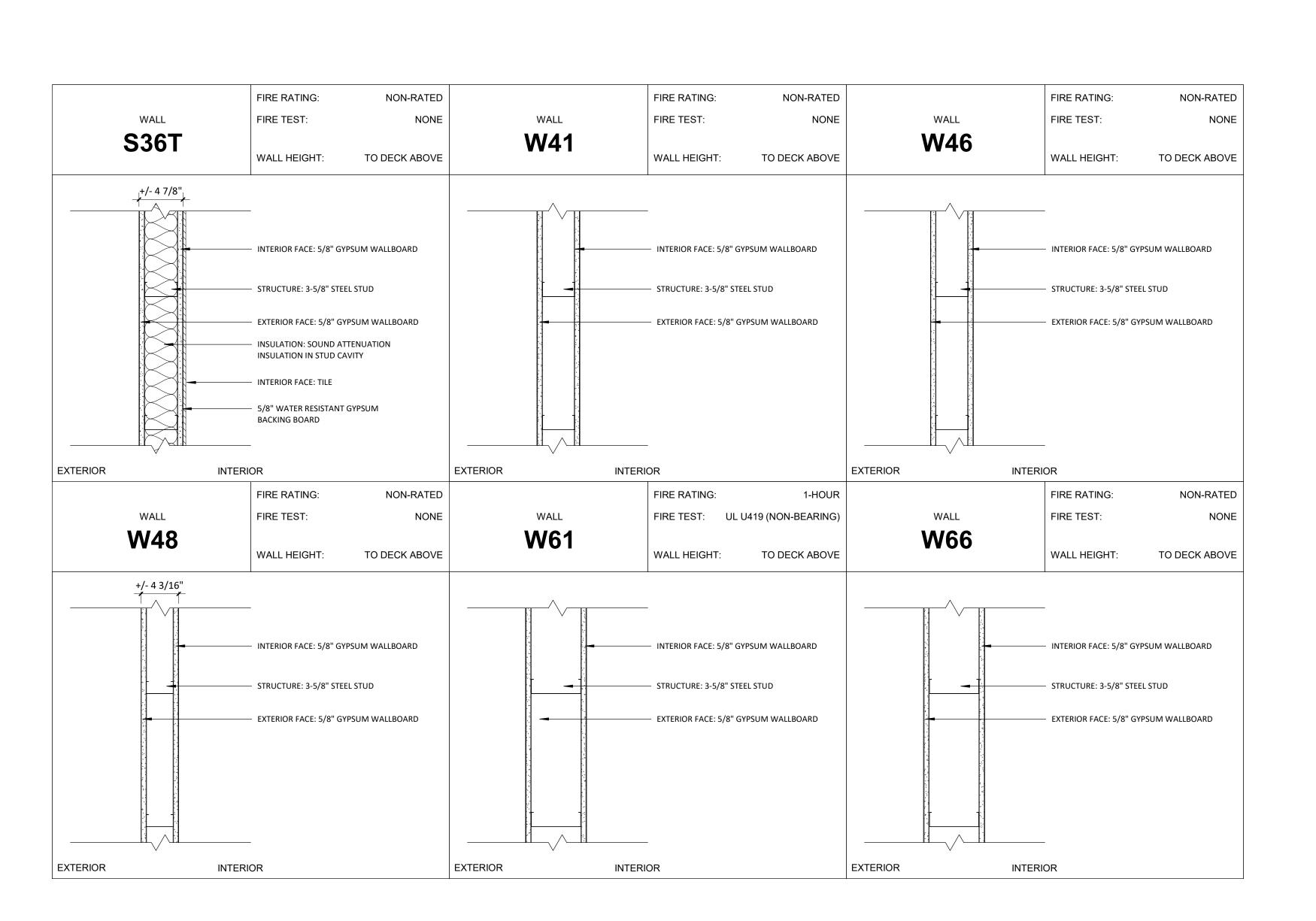
Planning & Development Services
City of Boise | www.cityofboise.org/pds 8/20/2024 | BLD24-02200

City of Boise Building Division Plans Reviewed for Code Compliance These plans must remain on the jobsite at all times. Approval of this Plan and Issuance of the Building Permit Shall Not Be: Held to be an approval of a violation of any provision of a city ordinance or State Law.

G0.00

Sheet No:





C1
G0.04
WALL TYPES - INTERIOR 02
1 1/2" = 1'-0"

GENERAL NOTES

1. WALL TYPES DESCRIBED ON THIS SHEET DO NOT ACCOUNT FOR REQUIRED BACKING AND/OR SUPPORT FOR WALL MOUNTED FIXTURES, EQUIPMENT, CASEWORK AND/OR SYSTEMS FURNITURE. COORDINATE WITH ENLARGED FLOOR PLANS, AND INTERIOR ELEVATIONS PRIOR TO THE COVERING OF STUD FRAMING. REFER TO MANUFACTURER'S RECOMMENDATIONS AND

USE MOUNTING PLATE ELEVATION TYP. DETAIL WHERE APPLICABLE 2. PROVIDE SEISMIC BRACING PER SEISMIC BRACING DETAIL @ PARTITION

WALLS, TYP. AT ALL WALL TYPES THAT DO NOT EXTEND TO DECK 3. WALL THICKNESS DESCRIBED ON THIS SHEET ARE SHOWN NOMINALLY IN PLAN REPRESENTATIONS

4. HORIZONTAL BRACING 2'-0" A.F.F. AT FIRST OCCURRENCE AND EVERY 4'-0" THEREAFTER AT ALL WALLS WITH GYPSUM BOARD ON ONLY ONE SIDE. 5. AT ALL WALLS WITH SOUND ATTENUATION, SEAL TOP OF WALL AT

STRUCTURE AND BOTTOM OF WALL WITH SOUND SEALANT 6. AT ALL WALLS THAT EXTEND TO STRUCTURE PROVIDE DEFLECTION TRACK. RE: SPECIFICATION SECTION 092116 - GYPSUM BOARD ASSEMBLIES. 7. FOR ALL WALLS WITH TILE INSTALLED IN DRY AREAS USE WATER-RESISTANT

BOARD ASSEMBLIES. 8. CONTRACTOR SHALL NOTIFY ARCHITECT IMMEDIATELY IF CLEARANCES AND

ADA REQUIREMENTS ARE NOT ACHIEVED.

GYPSUM BACKING BOARD. RE: SPECIFICATIONS SECTION 092116 - GYPSUM

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Revisions:

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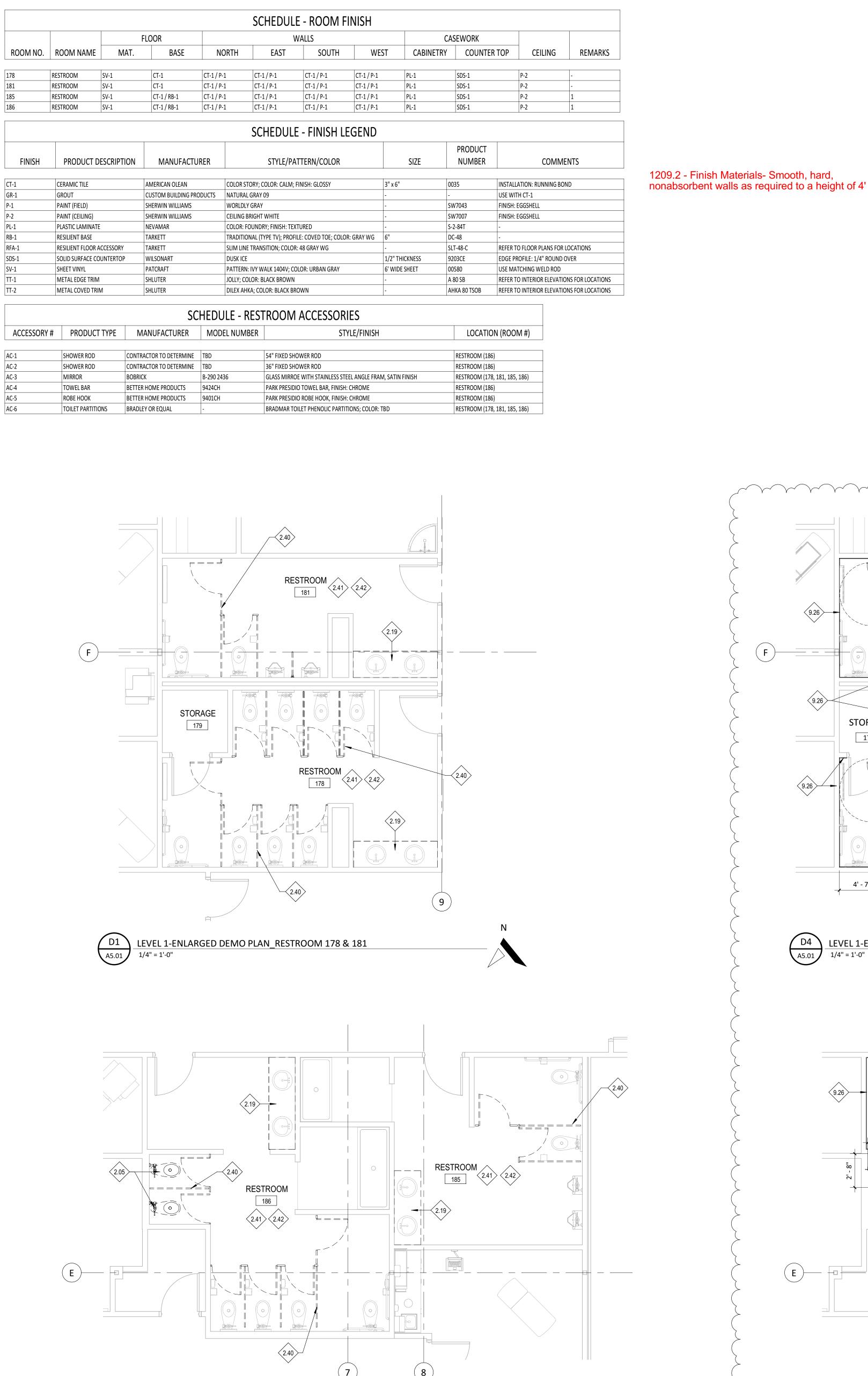
Project No:

WALL TYPES AND RATED ASSEMBLIES

Sheet No:

G0.04





E1 LEVEL 1-ENLARGED DEMO PLAN_RESTROOM 185 & 186

12. RELOCATE MECHANICAL AND ELECTRICAL SYSTEMS AS REQUIRED TO NEW TOILET PARTITIONS C2 (A8.51) C1 179 NEW TOILET PARTITIONS B1 **(**A8.51**)** A6 4' - 7 3/8" | 2' - 10" | 2' - 10" | 2' - 9 1/2" | 9.26 D4 LEVEL 1-ENLARGED FLOOR PLAN_RESTROOM 178 & 181

1/4" = 1'-0" 9.26 NEW TOILET PARTITIONS -RESTROOM NEW TOILET PARTITIONS D5 (A8.51) D3 E4 LEVEL 1-ENLARGED FLOOR PLAN_RESTROOM 185 & 186

LEGEND - DEMO PLAN

- EXISTING WALL SYSTEM TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION.
- $\sqsubseteq \equiv \exists$ Existing wall system to be removed and all associated ITEMS TO ACCOMMODATE NEW CONSTRUCTION. RELOCATE MECHANICAL AND ELECTRICAL ITEMS AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION. COORDINATE REMOVAL OF WALL SYSTEM, PATCH AND REPAIR WITH NEW CONSTRUCTION
 - EXISTING DOOR SYSTEM TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION.

SCOPE OF WORK.

- EXISTING DOOR SYSTEM TO BE REMOVED AND ALL ASSOCIATED ITEMS TO ACCOMMODATE NEW CONSTRUCTION. COORDINATE REMOVAL OF DOOR SYSTEM, PATCH AND REPAIR WITH NEW CONSTRUCTION SCOPE OF WORK.
- GENERAL NOTES DEMO PLAN
- 1. UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE TO THE FACE OF STUDS FOR GWB WALLS/PARTITIONS.
- 2. UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE TO FACE OF FINISHED MASONRY FOR CMU.
- 3. SCREENED LINES REPRESENT EXISTING WALLS, DOORS, WINDOWS, ETC TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION ACTIVITIES.
- 4. FOR DIMENSIONAL EXTENTS OF EXISTING WALL DEMOLITION, CUTTING AND PATCHING, SEE NEW FLOOR PLANS. 5. PROTECT FROM DAMAGE ALL EXISTING TO REMAIN CASEWORK,
- EQUIPMENT, FLOOR FINISHES AND CEILING FINISHES DURING
- CONSTRUCTION.
- 6. PROTECT FROM DAMAGE DURING DEMOLITION, MOVING AND CONSTRUCTION ALL EXISTING CASEWORK, EQUIPMENT, FURNITURE AND
- ARTWORK THAT IS TO BE RE-USED. 7. SEE MECHANICAL, ELECTRICAL AND STRUCTURAL DRAWINGS FOR
- ADDITIONAL DEMOLITION WORK. 8. WHERE EXISTING CARPET/CARPET TILE ARE TO REMAIN, CUT AND PATCH
- CARPET AS REQUIRED TO FACILITATE NEW CONSTRUCTION. 9. VERIFY ALL AS-BUILT CONDITIONS PRIOR TO DEMOLITION. 10. COORDINATE REMOVAL OF EXISTING SYSTEMS, PATCH AND REPAIR WITH
- NEW CONSTRUCTION SCOPE OF WORK.
- 11. PATCH AND REPAIR WALLS SO THERE ARE NO NOTICEABLE SEAMS OR
- ACCOMMODATE NEW CONSTRUCTION. 13. COORDINATE EXTENTS OF CONCRETE FLOOR SLAB DEMOLITION WITH
- PLUMBING DEMO DRAWINGS. 14. ALL PRIMARY STRUCTURAL WALLS AND COLUMNS HAVE A 1-HOUR. WHERE REVISING/DISTURBING EXISTING PRIMARY STRUCTURE WALLS, PATCH AND
- REPAIR WALL TO PRESERVE RATING. 15. UNLESS NOTED OTHERWISE, REMOVE ALL FLOORING AND RUBBER WALL

- - REFERENCE NOTES 2.05 REMOVE EXISTING PLUMBING FIXTURES AND ALL ASSOCIATED ITEMS. COORDINATE WITH DEMO PLUMBING DRAWINGS AND NEW
 - CONSTRUCTION SCOPE OF WORK. 2.19 REMOVE EXISTING CASEWORK AND ALL ASSOCIATED ITEMS.
 - 2.40 REMOVE EXISTING PLUMBING PARTITIONS AND ALL ASSOCIATED ITEMS. COORDINATE WITH DEMO PLUMBING DRAWINGS AND NEW
 - CONSTRUCTION SCOPE OF WORK. 2.41 REMOVE AND RE-INSTALL ALL BATHROOM ACCESSORIES. COORDINATE WITH NEW CONSTRUCTION SCOPE OF WORK, TYPICAL.
 - 2.42 PATCH AND REPAIR WALL TO ACCEPT NEW FINISHES 9.26 NEW WALL TILE TO BE INSTALLED OVER EXISTING WALL. SEE FINISH SCHEDULE AND INTERIOR ELEVATIONS FOR EXTENT OF NEW TILE.



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STAMP



REMARKS

1. INSTALL RB-1 IN SHOWER AREAS ONLY.

GENERAL NOTES - FLOOR PLAN

- 1. UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE TO THE FACE OF STUDS OR ... GWB WALLS / PARTITIONS. 2. UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE TO FACE OF FINISHED
- MASONRY FOR CMU. 3. FOR FLOOR FINISHES RE: ROOM FINISH SCHEDULE, AND FINISH PLANS. 4. UNLESS NOTED OTHERWISE ALL GWB WALLS SHALL HAVE A 4" STUD FRAM
- RETURN AT ALL DOOR AND WINDOW JAMBS. SEE ENLARGED PLANS FOR WALL TYPES.
- 6. FOR WALLS NOT DESIGNATED WITH A WALL TYPE, COORDINATE WITH STRUCTURAL DRAWINGS & WALL SECTIONS.
- 7. WHERE INSTALLING NEW COLUMNS IN EXTERIOR WALLS, PATCH AND REPAR WALL TO MAINTAIN 1 HOUR RATED ASSEMBLY.
- 8. WHERE NEW WALLS PLANE ALIGNS WITH EXISTING WALL PLANE THERE SHALL BE NO NOTICEABLE SEAMS OR BREAKS IN THE FINISHED APPEARANCE OF THE

LEGEND - FLOOR PLAN

DOOR SYMBOL, RE: DOOR SCHEDULE, SHEET A7.01

INTERIOR DETAILS SHEET

XXXXXXXX WALL TYPE, RE: SHEET G0.04

WINDOW TYPE, RE: WINDOW FRAME TYPE SHEETS, SHEET A FIRE EXTINGUISHER CABINET. RE: DIVISION 10 - SPECIALTIES 1 AND SHEET GO.02 AND FIRE EXTINGUISHER DETAIL ON THE

FLOOR DRAIN. COORDINATE WITH PLUMBING DRAWINGS.

STEEL STUD AND GYPSUM BOARD WALL. RE: WALL TYPES.

EXISTING STEEL STUD AND GYPSUM BOARD WALL TO REMAIN. RE: WALL TYPES.

FLOOR BOX. RE: ELECTRICAL DRAWINGS

KEY PLAN

AREA OF WORK — RR 185 & 186

AREA OF WORK RR 178 & 181

ABBREVIATIONS

FLOOR FINISHES

SV VINYL SHEET FLOOR COVERING WALL BASE

RB RESILIENT BASE **WALL FINISHES**

CT CERAMIC TILE P PAINT

PL PLASTIC LAMINATE SS SOLID SURFACE

Checked By:

Proje(CDH

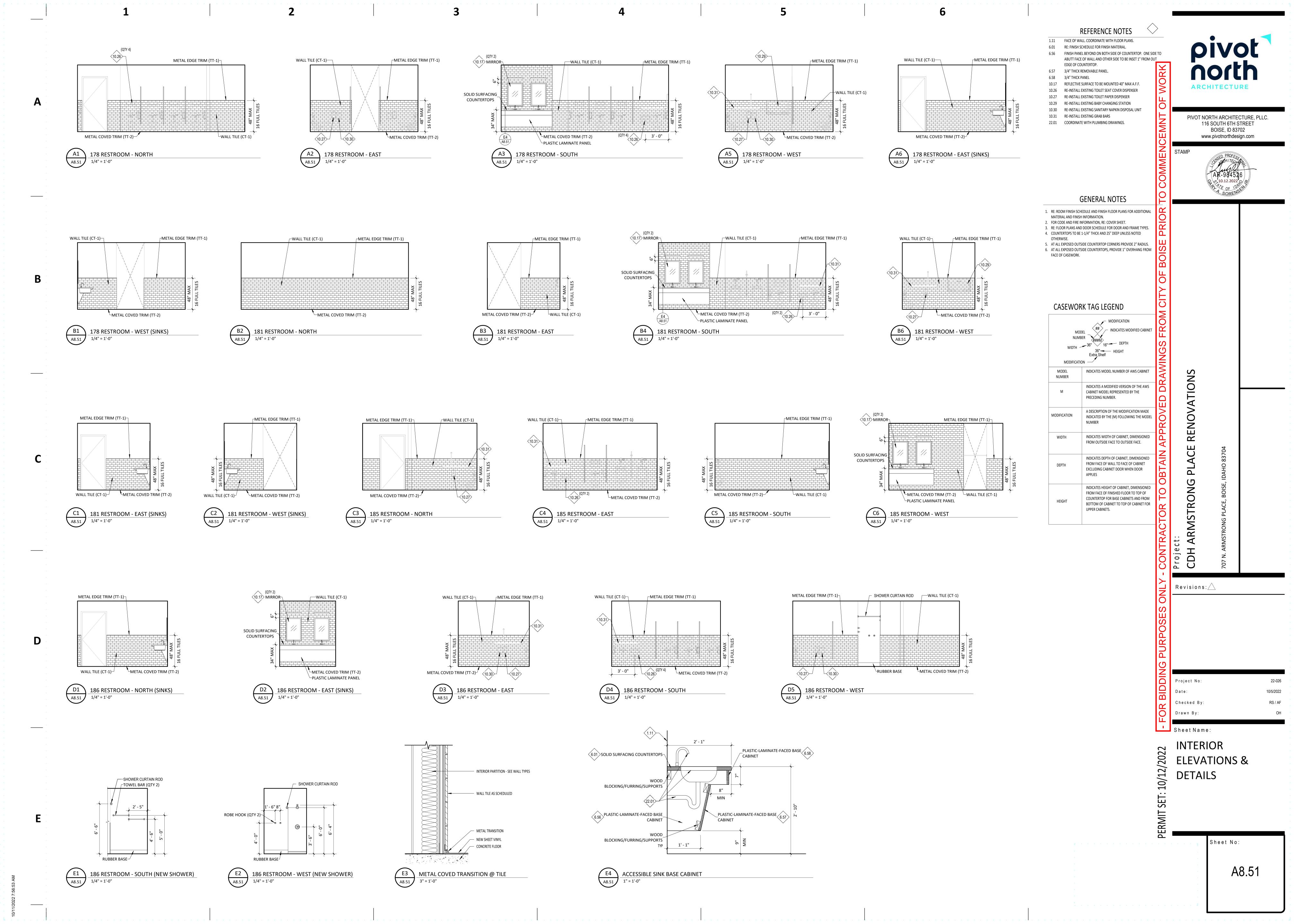
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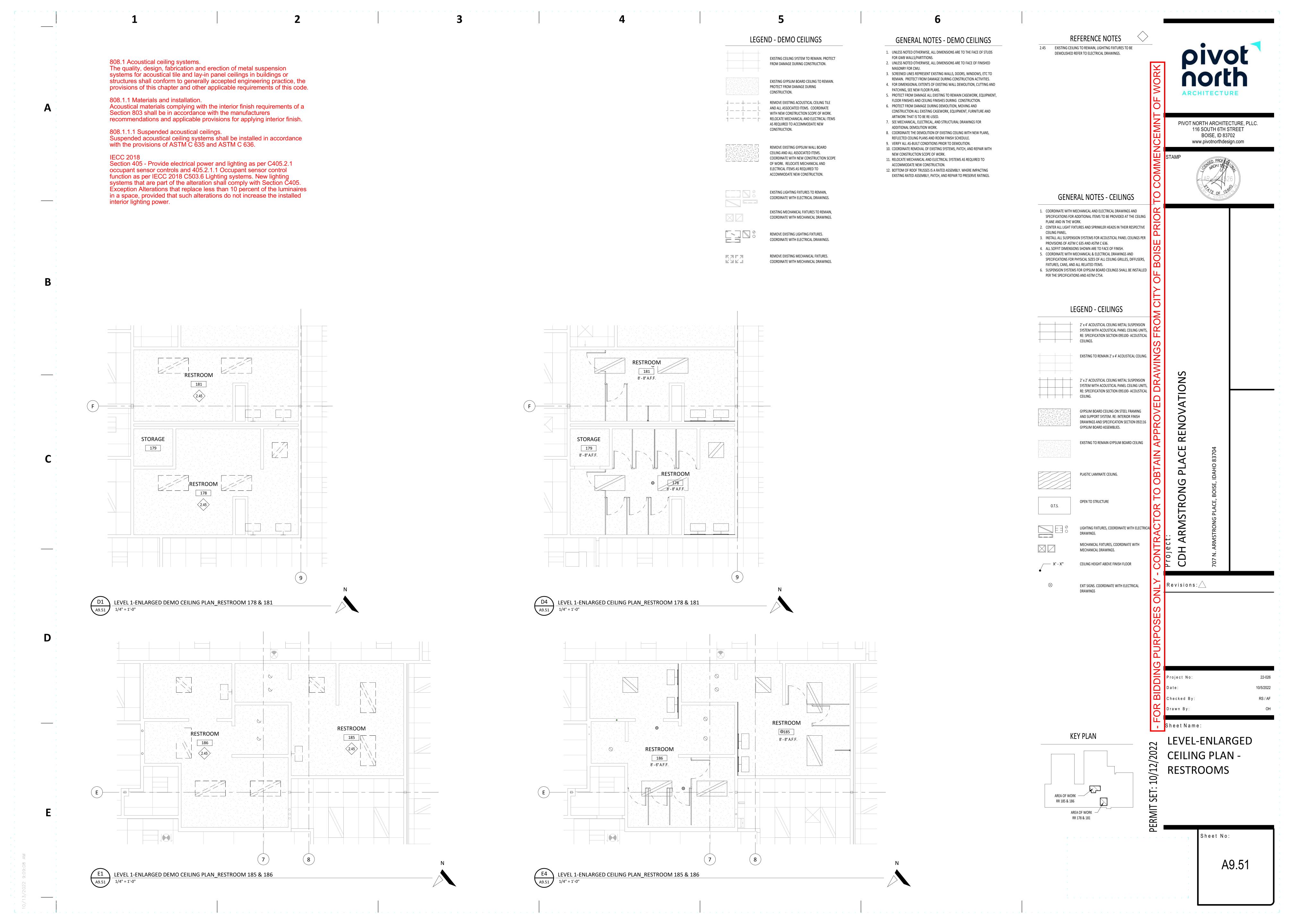
1 CITY COMMENTS

Sheet Name: **ENLARGED PLANS -**

RESTROOMS

Sheet No: A5.01





JTILITY METER

POWER POLE

ENCLOSED CIRCUIT BREAKER

OGGLE SWITCH

| | LIGHTING LEGEND (Not all symbols listed below are used on these drawings) | | | | | | | | |
|-------------|--|----------|---|--|--|--|--|--|--|
| SYMBOL | DESCRIPTION | SYMBOL | DESCRIPTION | | | | | | |
| a A | SHADING INDICATES EM SYSTEM, LOWER CASE SUBSCRIPT INDICATES SWITCHING, UPPER CASE SUBSCRIPT INDICATES LUMINAIRE TYPE (TYP) | · · | PENDANT LUMINAIRE - SINGLE SUSPENSION | | | | | | |
| | TROFFER - RECESSED | · · · · | PENDANT LUMINAIRE - MULTIPLE SUSPENSION | | | | | | |
| | SURFACE LUMINAIRE | <u>δ</u> | WALL MOUNTED LUMINAIRE | | | | | | |
| | LINEAR LUMINAIRE - RECESSED | ♥ 🗵 | IN-WALL LUMINAIRE | | | | | | |
| A— B— | FIELD MEASURED LUMINAIRE LENGTH AND SHAPE DENOTED BY LINEWORK SUBSCRIPT IN RECTANGLE INDICATES LUMINAIRE TYPE | | POLE LUMINAIRE - ARM MOUNTED | | | | | | |
| ∅ ∅ | DOWNLIGHT - RECESSED | 立立 | POLE LUMINAIRE - POST TOP | | | | | | |
| 0 | DOWNLIGHT - SURFACE | | BOLLARD | | | | | | |
| ⊗ | EXIT SIGN - CEILING MOUNTED | | TRACK HEAD AND TRACK | | | | | | |
| ፟ 🕏 | EXIT SIGN - WALL MOUNTED (FLUSH TO WALL) | ⋈ | EXTERIOR STAKE MOUNTED | | | | | | |
| № 9 | EXIT SIGN - WALL MOUNTED (PROJECTS FROM WALL) | 4_} | EMERGENCY LIGHTING UNIT - WALL MOUNTED | | | | | | |
| * 2 | INDICATES EXIT SIGN FACES - SINGLE OR DOUBLE | Σď | EMERGENCY LIGHTING UNIT - CEILING MOUNTED | | | | | | |
| | INDICATES EXIT SIGN CHEVRONS - LEFT/RIGHT OR BOTH | > | INDICATES DIRECTIONAL AIMING | | | | | | |
| | _ | | | | | | | | |

| CONTROLS LEGEND (Not all symbols listed below are used on these drawings) | | | | | | | |
|---|---|-----------------|--|--|--|--|--|
| SYMBOL | DESCRIPTION | SYMBOL | DESCRIPTION | | | | |
| Sa | SINGLE POLE SWITCH (SUBSCRIPT DENOTES SWITCHING) | S _{VS} | VARIABLE SPEED/SPEED CONTROLLER SWITCH | | | | |
| S ₂ | TWO POLE SWITCH | S _{EP} | EXPLOSION PROOF SWITCH | | | | |
| S ₃ | THREE-WAY SWITCH | S _{TO} | THERMAL OVERLOAD SWITCH | | | | |
| S ₄ | FOUR-WAY SWITCH | S _{MC} | MOMENTARY CONTACT SWITCH | | | | |
| s _K | KEY OPERATED SWITCH | Q S | COMBINATION SWITCH AND DUPLEX RECEPTACLE | | | | |
| S _M | MANUAL SWITCH, HORSEPOWER RATE | P | PHOTOCELL | | | | |
| S _D | DIMMER SWITCH | • | PUSH BUTTON | | | | |
| S _{PI} | SWITCH WITH PILOT LIGHT (PILOT LIGHT IS 'ON' WHEN SWITCH IS 'ON') | ТС | TIME CLOCK | | | | |
| S _P | SWITCH WITH PILOT LIGHT LOCATOR (CONTINUOUSLY LIGHTED HANDLE) | (| OCCUPANCY SENSOR - WALL MOUNTED IR=INFRARED, US=ULTRASONIC, DT=DUAL TECHNOLOGY | | | | |
| S _{LV} | LOW VOLTAGE SWITCH | | | | | | |

| | FIRE ALARM SYSTEM LEGEND (Not all symbols listed below are used on these drawings) | | | | | | | | |
|------------------------|---|------------------|---|--|--|--|--|--|--|
| SYMBOL | DESCRIPTION | DESCRIPTION | | | | | | | |
| FACP | FIRE ALARM CONTROL PANEL | Шм | MANUAL PULL STATION | | | | | | |
| FAPS | FIRE ALARM (NAC) POWER SUPPLY | O AIM | ADDRESSABLE INPUT MODULE | | | | | | |
| FSA | FIRE ALARM SYSTEM ANNUNCIATOR PANEL (GRAPHIC/LED) | OAOM | ADDRESSABLE OUTPUT MODULE | | | | | | |
| FAA | REMOTE ANNUNCIATOR PANEL | ⊠ H15cd | AUDIOVISUAL DEVICE (H##cd=HORN/STROBE COMBINATION S=SPEAKER/STROBE COMBINATION) | | | | | | |
| GZM | GRAPHIC ZONE MAP | □Ин | AUDIBLE DEVICE (H=HORN, S=SPEAKER, C=CHIME) | | | | | | |
| RACP | RESCUE ASSISTANCE SYSTEM HEAD END UNIT | X 15cd | FIRE ALARM STROBE (cd= CANDELA RATING 15, 30, 75, 110) | | | | | | |
| FSC | FIRE FIGHTER SMOKE CONTROL PANEL | 【 J | EMERGENCY TELEPHONE STATION (J=JACK, H=HANDSET) | | | | | | |
| FAD | FIRE ALARM DIRECTORY ANNUNCIATOR | RA | RESCUE ASSISTANCE TELEPHONE STATION) | | | | | | |
| ⊘ _P | SMOKE DETECTOR (P=PHOTOELECTRIC, SB=WITH SOUNDER BASE, BR=BEAM RECEIVER, BT=BEAM TRANSMITTER, AS = AIR SAMPLING) | φ | MAGNETIC DOOR HOLD | | | | | | |
| () _F | THERMAL DETECTOR F=FIXED TEMPERATURE, R=FIXED TEMPERATURE & RATE OF RISE (TEMP. RATING) | Q | TAMPER SWITCH | | | | | | |
| ⊘ uv | FLAME DETECTOR (UV=ULTRAVIOLET, IR=INFRARED) | \\$ | FLOW DETECTOR SWITCH | | | | | | |
| ⊚= | DUCT SMOKE DETECTOR S=SUPPLY, R=RETURN | , <u>\$</u> , | PRESSURE SWITCH | | | | | | |
| ⊠ RTS | DUCT DETECTOR REMOTE INDICATOR ALARM AND TEST | ● _{FSD} | FIRE/SMOKE DAMPER | | | | | | |
| × | REMOTE INDICATOR LIGHT | O co | CARBON MONOXIDE ALARM/DETECTOR | | | | | | |
| | | ♀ co | CARBON MONOXIDE ALARM/DETECTOR, WALL MOUNTED | | | | | | |

| | REFERENCE SYMBOLS LEGEND (Not all symbols listed below are used on these drawings) | | | | | | | | |
|--|--|--|---|--|--|--|--|--|--|
| SYMBOL | DESCRIPTION | SYMBOL | DESCRIPTION | | | | | | |
| $\langle \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \!$ | KEY NOTE REFERENCE | 1 | KITCHEN/OWNER/MEDICAL EQUIPMENT REFERENCE | | | | | | |
| LPA-# | TYPICAL CIRCUIT NUMBER | Æ | EXISTING TO REMAIN | | | | | | |
| TG# (| TYPICAL LUMINAIRE TYPE | R | EXISTING TO BE REMOVED | | | | | | |
| | TYPICAL ROOM REFERENCE (TOP = RM #, BOTTOM = FLR) | <u>k</u> | EXISTING TO BE RELOCATED | | | | | | |
| UH | MECHANICAL EQUIPMENT REFERENCE | | EXISTING TO REMAIN - REPLACE DEVICE | | | | | | |
| LC1 | LIGHTING CONTROL / EQUIPMENT REFERENCE | <u></u> R R R R R R R R R | EXISTING TO BE REMOVED AND REPLACED | | | | | | |
| <u>FB-1</u> | ELECTRICAL ACCESSORIES REFERENCE | | | | | | | | |

| | ABBREVIATIONS LEGEND (Not all symbols listed below are used on these drawings) | | | | | | | |
|--------|--|--------|---------------------------------------|--|--|--|--|--|
| SYMBOL | DESCRIPTION | SYMBOL | DESCRIPTION | | | | | |
| Α | AMPERES | MCP | MOTOR CIRCUIT PROTECTOR | | | | | |
| AC | ABOVE COUNTER, MOUNT HORIZONTALLY TO CENTERLINE OF DEVICE, +6" ABOVE COUNTER OR BACK SPLASH | MEC | SEE MECHANICAL EQUIPMENT SCHEDULE | | | | | |
| AFF | ABOVE FINISHED FLOOR | MIN | MINIMUM | | | | | |
| AFG | ABOVE FINISHED GRADE | MLO | MLO MAIN LUGS ONLY | | | | | |
| ANN | ANNUNCIATOR | MTS | MANUAL TRANSFER SWITCH | | | | | |
| ARF | ABOVE RAISED FLOOR | NC | NORMALLY CLOSED | | | | | |
| ASSD | AIR SAMPLING SMOKE DETECTION | NIC | NOT IN CONTRACT | | | | | |
| ATS | AUTOMATIC TRANSFER SWITCH | NL | NIGHT LIGHT | | | | | |
| BFG | BELOW FINISHED GRADE | NO | NORMALLY OPEN | | | | | |
| С | CONDUIT | NTS | NOT TO SCALE | | | | | |
| CATV | CABLE TELEVISION | ос | ON CENTER | | | | | |
| СВ | CIRCUIT BREAKER | OFCI | OWNER FURNISHED, CONTRACTOR INSTALLED | | | | | |
| CCTV | CLOSED CIRCUIT TELEVISION | OFOI | OWNER FURNISHED, OWNER INSTALLED | | | | | |
| (E) | EXISTING | OSWF | ON SITE WORK FORCE | | | | | |
| EM | EMERGENCY | РВ | PULL BOX | | | | | |
| EMDC | EMERGENCY MAIN DISTRIBUTION CENTER | SB | STAND-BY | | | | | |
| EP | EXPLOSION PROOF | SDC | SUB-DISTRIBUTION CENTER | | | | | |
| EPO | EMERGENCY POWER OFF | TP | TAMPER PROOF | | | | | |
| EVO | EMERGENCY VENTILATION ON/OFF | TVSS | TRANSIENT VOLTAGE SURGE SUPPRESSER | | | | | |
| EWC | ELECTRIC WATER COOLER | TYP | TYPICAL | | | | | |
| FA | FIRE ALARM | UF | UNDER FLOOR | | | | | |
| G | GROUND | UG | UNDER GROUND | | | | | |
| GCP | GENERATOR CONTROL PANEL | UON | UNLESS OTHERWISE NOTED | | | | | |
| GFCI | GROUND FAULT CIRCUIT INTERRUPTER | UPS | UNINTERRUPTIBLE POWER SUPPLY | | | | | |
| НОА | HAND OFF AUTOMATIC | V | VOLTS | | | | | |
| IG | ISOLATED GROUND | VFD | VARIABLE FREQUENCY DRIVE | | | | | |
| MAX | MAXIMUM | W/ | WITH | | | | | |
| MCB | MAIN CIRCUIT BREAKER | W/O | WITHOUT | | | | | |
| MCC | MOTOR CONTROL CENTER | WP | WEATHER PROOF | | | | | |
| MDC | MAIN DISTRIBUTION CENTER | XFMR | TRANSFORMER | | | | | |

| ONE-LINE DIAGRAM LEGEND (Not all symbols listed below are used on these drawings) | | | | | | | | |
|---|---|-----------------|--|--|--|--|--|--|
| SYMBOL | DESCRIPTION | SYMBOL | DESCRIPTION | | | | | |
| ~_ | DISCONNECT SWITCH | Α | PANELBOARD "A" | | | | | |
| - | DISCONNECT SWITCH, FUSED | PM | EM=ENERGY METER, PM=POWER METER, CM=CIRCUIT MONITOR | | | | | |
| _^_ | CIRCUIT BREAKER | -Vs - | VOLTMETER TEST SWITCH | | | | | |
| | FUSE | — AS — | AMMETER TEST SWITCH | | | | | |
| Ť | GROUND | 0 | VOLTMETER | | | | | |
| T ## | STEP DOWN TRANSFORMER, ## INDICATES KVA | (A) | AMMETER | | | | | |
| TK ## | K-RATED STEP DOWN TRANSFORMER ## INDICATES KVA, # INDICATES K RATING | (XXX) | SEE FEEDER/MEC/TRANSFORMER SCHEDULES FOR FEEDER SIZE | | | | | |
| | CURRENT TRANSFORMER | G | ENGINE GENERATOR | | | | | |
| -}⊱ | POTENTIAL TRANSFORMER | ─ | CONTACTOR/RELAY/CAPACITOR (AS NOTED) | | | | | |
| ₹ OR | SERVICE ENTRANCE TRANSFORMER | .\ | TRANSFER SWITCH - ATS=AUTOMATIC, MTS=MANUAL | | | | | |
| M | METER | GFI | GROUND FAULT INTERRUPTER | | | | | |
| | EQUIPMENT ENCLOSURE | SPD | SURGE PROTECTIVE DEVICE | | | | | |
| ⟨₩ | SERVICE WEATHERHEAD | §T) | SHUNT TRIP | | | | | |
| -X ISCA | SHORT CIRCUIT CURRENT AVAILABLE | >> | TERMINATIONS LB=LOAD BREAK, NLB=NO LOAD BREAK | | | | | |
| ⟨k ⟩ a | KIRK KEY INTERLOCK, SUBSCRIPT INDICATES INTERLOCKED GROUP | ≪ ≫ | DRAW-OUT DEVICE | | | | | |
| ⟨E ⟩ _a | ELECTRICAL INTERLOCK, SUBSCRIPT INDICATES INTERLOCKED GROUP | <i>→</i> ≻ | PLUG-IN DEVICE | | | | | |
| M> | MECHANICAL INTERLOCK | EO | ELECTRICALLY OPERATED | | | | | |

LUMINAIRE SCHEDULE

2. VERIFY FINISH WITH ARCHITECT.

D1 4" DIAMETER LED DOWNLIGHT, CLEAR SEMI-SPECULAR

FLOOD DISTRIBUTION 2'x4' VOLUMETRIC LENSED TROFFER, 0-10V DIMMING

DRIVER

2'x4' VOLUMETRIC LENSED TROFFER, 0-10V DIMMING

DRIVER

2' LINEAR WALL MOUNT BATHROOM SCONCE, ACRYLIC

SPECIFIC REMARKS:

B. REFER TO LIGHTING SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

E. PROVIDE FLICKER FREE LED DRIVERS MEETING IEEE 1789.

5. REFER TO POLE BASE DETAIL FOR MORE INFORMATION.

REFLECTOR. 0-10V 10% DIMMING DRIVER, 40 DEGREE 3500K

6. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING DETAILS.

C. PROVIDE UNIT PRICING FOR ALL LUMINAIRES BY TYPE AND SUBMIT WITH BID FORM.

D. PROVIDE AN EMERGENCY BALLAST TEST SWITCH FOR RECESSED DOWNLIGHTS ON CEILING ADJACENT TO LUMINAIRE.

3. PROVIDE ALL MOUNTING HARDWARE, LAMP HEADS, ACCESSORIES, ETC, FOR A COMPLETE AND OPERATIONAL TRACK LIGHTING SYSTEM.

LUMENS

4. PROVIDE ALL MOUNTING HARDWARE, CONNECTORS, DRIVERS, ACCESSORIES, ETC. FOR A COMPLETE AND OPERATIONAL COVE LIGHTING SYSTEM.

1. VERIFY EXACT MOUNTING HEIGHT WITH ARCHITECT AND PROVIDE APPROPRIATE SUSPENSION LENGTH.

A. CATALOG NUMBER REFERS TO FIRST NAME LISTED UNDER MANUFACTURER PER LUMINAIRE TYPE. REMAINING MANUFACTURERS LISTED ARE CONSIDERED TO BE EQUIVALENT PRODUCTS FOR THIS PROJECT AND SHALL MEET ALL CRITERIA LISTED INCLUDING THAT CALLED FOR BY THE SPECIFIC LUMINAIRE CATALOG NUMBER.

BALLAST/DRIVER

0-10V

DIM LEVEL VOLTAGE

CATALOG NUMBERS DO NOT NECESSARILY REPRESENT COMPLETE CATALOG NUMBERS. ALL ITEMS LISTED IN THE DESCRIPTION SHALL BE PROVIDED.

LIGHTING PLAN NOTES:

- 1. REFER TO ARCHITECTURAL ELEVATIONS AND REFLECTED CEILING PLANS FOR EXACT MOUNTING LOCATIONS OF DEVICES AND LUMINAIRES.
- 2. COORDINATE LUMINAIRE LOCATIONS WITH MECHANICAL PIPING, DUCTWORK, ETC., TO AVOID CONFLICTS. SEE SPECIFICATIONS FOR COORDINATION
- 3. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH 120V AND 277V
- 4. FIELD COORDINATE EXACT LOCATION OF CEILING MOUNTED OCCUPANCY SENSORS PER MANUFACTURER'S INSTRUCTIONS. OCCUPANCY/VACANCY SENSING DEVICES ARE SHOWN FOR GENERAL DESIGN INTENT ONLY. CONTRACTOR SHALL PROVIDE THE TYPE AND QUANTITY OF OCCUPANCY/VACANCY SENSING DEVICES AS NECESSARY FOR PROPER COVERAGE AND CONTROL OF LUMINAIRES WHERE INDICATED ON THE LIGHTING PLANS. FIELD ADJUSTMENT TO DEVICE LOCATIONS SHALL BE MADE AS REQUIRED TO CAPTURE ALL OCCUPANTS, WHETHER SITTING AT A DESK OR MOVING AROUND THE SPACE. ADDITIONAL DEVICES SHALL BE PROVIDED AND FIELD ADJUSTMENTS SHALL BE MADE AS NECESSARY, AT NO ADDITIONAL COST TO OWNER. CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.

POWER PLAN NOTES:

- . MAKE ALL FINAL ELECTRICAL CONNECTIONS TO EQUIPMENT REQUIRING ELECTRICAL CONNECTION. THIS SHALL INCLUDE BUT NOT BE LIMITED TO ALL MECHANICAL AND OTHER EQUIPMENT INCLUDED IN THIS PROJECT.
- 2. COORDINATE EXACT REQUIREMENTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
- 3. PROVIDE FUSES SIZED PER EQUIPMENT MANUFACTURER'S REQUIREMENTS.
- SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS TO SUIT EQUIPMENT AND SPACE. DISCONNECT SWITCHES SHALL BE WITHIN SIGHT OF THE EQUIPMENT THEY SERVE AND MOUNTED AT 6'-3", MAXIMUM, TO TOP OF CABINET. MAINTAIN NEC WORK SPACE REQUIREMENTS.

4. DISCONNECT SWITCH LOCATIONS ARE SHOWN DIAGRAMMATICALLY AND

- . RECEPTACLES INDICATED TO BE MOUNTED ABOVE COUNTER ARE TO BE MOUNTED HORIZONTALLY 6" ABOVE COUNTER UNLESS OTHERWISE NOTED.
- 6. NO RECEPTACLES SHALL BE MOUNTED BELOW +18" AFF.
- 7. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH 120V CIRCUIT.
- 8. CIRCUITS MAY BE COMBINED INTO HOMERUNS OF UP TO SIX (6) CURRENT CARRYING CONDUCTORS, INCLUDING NEUTRALS, UNLESS OTHERWISE INDICATED. WHERE CIRCUITS ARE COMBINED WITHIN A SINGLE CONDUIT, PROVIDE STRIPING FOR FULL LENGTH OF NEUTRAL CONDUCTOR INSULATION TO MATCH THE COLOR CODE OF THE ASSOCIATED PHASE CONDUCTOR. SEE SPECIFICATION FOR COLOR CODES.
- 9. GFCI RECEPTACLES ARE NOT GENERALLY SHOWN ON DRAWINGS. ALL RECEPTACLE OUTLETS LOCATED IN TOILET ROOMS, SHOWER ROOMS, LOCKER ROOMS, GARAGES, SERVICE BAYS, ROOFTOPS, OUTDOOR LOCATIONS, MECHANICAL ROOMS, WITHIN 6 FEET OF A SINK, AT ELECTRIC WATER COOLERS, OR OTHER WET LOCATIONS SHALL BE PROVIDED WITH GFCI PROTECTION PER NEC ARTICLE 210 AND NEC SECTION 422.5, PROVIDE GFCI RECEPTACLES IN ELEVATOR PITS, HOISTWAYS, MACHINE ROOMS, CONTROL SPACES, AND CONTROL ROOMS PER NEC SECTION 620.85. ADDITIONAL GFCI PROTECTION TO BE PROVIDED AS INDICATED. WHERE GFCI DEVICES ARE REQUIRED AND/OR SHOWN BUT ARE NOT ACCESSIBLE WHEN EQUIPMENT IS INSTALLED. I.E. VENDING MACHINES. ETC.. PROVIDE BLANK FACE GFCI DEVICE AND COVERPLATE AHEAD OF INACCESSIBLE RECEPTACLES. MOUNT ADJACENT TO EQUIPMENT AT SWITCH HEIGHT UNLESS OTHERWISE SHOWN.
- 10. 120V POWER HAS BEEN SHOWN ON DRAWINGS TO J-BOXES IDENTIFIED FOR BAS CONTROLS, DAMPER ACTUATORS AND OTHER MISCELLANEOUS POWER TO OPERATE MECHANICAL CONTROLS AND DEVICES. COORDINATE ALL 120V REQUIREMENTS WITH MECHANICAL CONTROLS AND EQUIPMENT AND MAKE ALL CONNECTIONS REQUIRED TO THESE OR OTHER 120V MECHANICAL CIRCUITS AS REQUIRED. DO NOT CONNECT THESE LOADS TO OTHER CIRCUITS WITH LOADS OTHER THAN THOSE IDENTIFIED HERE.
- 11. ALL OUTDOOR AND ROOFTOP RECEPTACLES SHALL BE OUTDOOR RATED AND SHALL HAVE A WEATHERPROOF IN USE COVER.

GENERAL NOTES:

- 1. FOR REMODELING, WORK INCLUDED IS DENOTED IN BOLD. EXISTING CONDITIONS TO REMAIN ARE DENOTED LIGHTLY.
- 2. PROTECT STRUCTURE AND OWNER EQUIPMENT FROM DAMAGE. IMMEDIATELY REPLACE OR REPAIR, TO ORIGINAL CONDITION, DAMAGE CAUSED BY THE CONTRACTOR WHETHER EQUIPMENT APPEARS TO BE CURRENTLY IN USE OR NOT, UNLESS WRITTEN AUTHORIZATION FROM THE OWNER INDICATED OTHERWISE. PREPARE LISTING OF ALL EXISTING DAMAGED ITEMS AND SUBMIT TO OWNER PRIOR TO BEGINNING WORK.
- 3. INSTALL CONDUIT CONCEALED IN FINISHED AREAS UNLESS OTHERWISE NOTED. PAINT EXPOSED CONDUIT TO MATCH EXISTING FINISHES WITHIN THE SURROUNDING AREA.
- 4. DO NOT ROUTE CONDUIT WITHIN STRUCTURAL OR TOPPING SLABS OF FLOORS UNLESS SPECIFICALLY NOTED OTHERWISE AND WRITTEN APPROVAL IS
- OBTAINED FROM THE STRUCTURAL ENGINEER.
- 5. FIRE SEAL ALL FIRE RATED WALL AND FLOOR PENETRATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE RATED WALLS.
- 6. COORDINATE EXACT REQUIREMENTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN AND ORDERING MATERIALS OR EQUIPMENT.
- OWNER FURNISHED DRAWINGS AND/OR LIMITED FIELD OBSERVATIONS. CATOR, RUMA & ASSOCIATES IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION OR THE ADEQUACY, SAFETY AND CONFORMANCE TO CURRENT PREVAILING CODES OF ANY WORK SHOWN AS EXISTING ON THESE DRAWINGS.

7. EXISTING INFORMATION SHOWN ON THE DRAWINGS HAS BEEN TAKEN FROM

8. PROVIDE SEPARATE INSULATED GROUNDING CONDUCTOR IN ALL FEEDER, HOMERUN AND BRANCH CIRCUITS.

DEMOLITION NOTES:

- UNLESS NOTED OTHERWISE, BOLD ITEMS INDICATE EQUIPMENT, DEVICES, ETC. TO BE REMOVED. SEE SPECIFICATION SECTION 260500 FOR REMODEL/DEMOLITION DETAILED REQUIREMENTS.
- 2. DEMOLITION DRAWINGS MAY NOT SHOW EVERY ITEM TO BE DEMOLISHED. CONTRACTOR SHALL VISIT SITE TO DETERMINE AND COORDINATE THE EXACT EXTENT OF DEMOLITION TO FACILITATE ALL WORK INDICATED BY THE CONTRACT DOCUMENTS PRIOR TO QUOTATION. NO EXTRAS WILL BE ALLOWED FOR WORK REQUIRED TO ACHIEVE THE END RESULT AS INDICATED BY THE CONTRACT DOCUMENTS. REWORK EXISTING TERMINATIONS, CONNECTIONS, CONDUIT, WIRING, ETC. TO ACCEPT NEW WORK. MAINTAIN CIRCUIT CONTINUITY TO EXISTING CIRCUITS AND DEVICES TO REMAIN OR REMODEL/DEMOLITION DETAILED REQUIREMENTS TO BE RELOCATED. PRIOR TO COMMENCEMENT OF ANY DEMO WORK, CONFIRM EXISTING CONDITIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
- 3. ALL ITEMS IDENTIFIED TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY INCLUDING ALL WIRING AND EXPOSED CONDUIT AND CONDUIT SUPPORTS BACK TO POINT OF ORIGIN OR NEXT DEVICE TO REMAIN. REMOVED ITEMS SHALL BE TURNED OVER TO THE OWNER, UNLESS NOTED OTHERWISE, AND STORED IN THE AREA DESIGNATED BY THE OWNER. REMOVE FROM SITE AND LEGALLY DISPOSE OF ALL ITEMS THE OWNER CHOOSES NOT TO ACCEPT.
- 4. WHERE EXISTING CONDUITS ARE SHOWN TO BE REMOVED AND HAVE BEEN ROUTED IN CONCRETE FLOOR SLABS, CONCRETE WALLS OR CONCRETE CEILINGS, THEY SHALL BE CUT BACK FLUSH WITH CONCRETE. FILL WITH GROUT TO ACHIEVE A SMOOTH AND EVEN FINISH FLUSH WITH CONCRETE SURFACE AFTER CONDUCTORS HAVE BEEN REMOVED.
- 5. REUSE EXISTING CONDUIT WHERE CURRENT NEC AND LOCAL CODE REQUIREMENTS ARE MAINTAINED. PROVIDE NEW CONDUIT AND WIRE FOR NEW INSTALLATIONS AND EXTENSION OF EXISTING INSTALLATIONS. REUSE EXISTING CONDUIT IN PLACE, DO NOT REINSTALL EXISTING CONDUIT. PROVIDE LABELING PER SPECIFICATIONS FOR REUSED CONDUIT. 6. RELOCATED EQUIPMENT AND DEVICES ARE TO BE CLEANED OF ALL FOREIGN
- MATERIAL. REPLACE EQUIPMENT OR DEVICES WHICH ARE DEFECTIVE OR DAMAGED DURING RELOCATION. 7. WHERE EXISTING DEVICES, SWITCHES, MOTOR CONNECTIONS, ETC. ARE TO
- BE REMOVED FROM WALLS WHICH ARE REMAINING, WALLS SHALL BE PATCHED TO MATCH ORIGINAL FINISH. BLANK COVERPLATES OVER EXISTING BOXES ARE NOT ACCEPTABLE, UNLESS NOTED OTHERWISE.

FIRE ALARM PLAN NOTES:

- 1. FIRE ALARM EQUIPMENT AND DEVICES SHOWN ON THESE DRAWING INDICATE THE INTENT, PERFORMANCE, AND SCOPE OF THE SYSTEM. THE FULL DESIGN OF THE FIRE ALARM SYSTEM SHALL BE DONE BY THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE A SHOP DRAWING SUBMITTAL FOR APPROVAL BY THE LOCAL FIRE DEPARTMENT AND/OR THE AUTHORITY HAVING JURISDICTION. THE CONTRACTOR SHALL ARRANGE TO HAVE THE FIRE ALARM SYSTEM SUBMITTAL SEALED AND SIGNED BY A REGISTERED PROFESSIONAL ENGINEER WHO WILL ASSUME THE DUTY OF ENGINEER OF RECORD FOR THE FIRE ALARM SYSTEM DESIGN. THE ELECTRICAL ENGINEER OF RECORD AT CATOR, RUMA & ASSOCIATES, CO. WILL NOT BE RESPONSIBLE FOR SEALING AND SIGNING THE FIRE ALARM SYSTEM SHOP DRAWING SUBMITTAL.
- 2. LOCATE SMOKE DETECTORS PER NFPA 72 AND MANUFACTURERS REQUIREMENTS. THE LOCATIONS OF SMOKE DETECTORS ON THE DRAWINGS ARE DIAGRAMMATIC ONLY. DETECTORS SHALL NOT BE PLACED WITHIN 3'-0" OF ANY CEILING MOUNTED HVAC SUPPLY AIR DEVICE.
- 3. NEW FIRE ALARM DEVICES SHALL MATCH EXISTING, UNLESS NOTED OTHERWISE. PROVIDE RE-PROGRAMMING OF SYSTEM AS REQUIRED TO ACCOMMODATE NEW DEVICES. REVISE EXISTING ANNUNCIATOR(S) AND GRAPHIC ZONE MAP(S) TO REFLECT PROJECT FIRE ALARM AND ARCHITECTURAL MODIFICATIONS. UPDATE GRAPHIC ZONE MAPS IN BOTH THE FIRE COMMAND CENTER AND ON THIS FLOOR AS REQUIRED. SUBMIT TO ENGINEER AND BUILDING/FIRE DEPARTMENTS FOR REVIEW PRIOR TO INSTALLATION.

CATALOG SERIES

AMICA FAML

AMICA FAML

BRINK WS-776

MANUFACTURER

GOTHAM

PORTFOLIO

FOCAL POINT

FOCAL POINT

METALUX

METALUX

WAC LIGHTING

LOAD

17 VA

FINISH

CLEAR,

SEMI-SPECULA

WHITE

MOUNTING

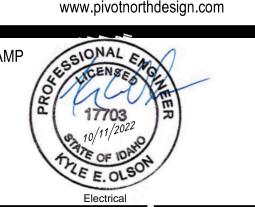
RECESSED

RECESSED

RECESSED

BRUSHED 7'-6" TO BOTTOM ALUMINUM

PIVOT NORTH ARCHITECTURE, PLLC. 116 SOUTH 6TH STREET BOISE, ID 83702



Revisions:/ \setminus

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SCHEDULES & NOTES

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E. FUSIBLE SWITCHES: HEAVY DUTY SWITCHES, WITH FUSES OF CLASSES AND CURRENT RATINGS INDICATED. WHERE CURRENT LIMITING FUSES ARE INDICATED, PROVIDE

OTHERWISE NOTED. PROVIDE UL TYPE "HD" 100 PERCENT DUTY RATED SWITCHES

F. ELECTRICAL INTERLOCKS: PROVIDE NUMBER AND ARRANGEMENT OF INTERLOCK CONTACTS IN SWITCHES AS INDICATED OR REQUIRED.

G. DISCONNECT SWITCH HANDLES SHALL BE LOCKABLE IN OPEN AND CLOSED POSITION WITHOUT MODIFICATION.

1.3 INSTALLATION:

A. PROVIDE CIRCUIT AND MOTOR DISCONNECT SWITCHES AS INDICATED AND WHERE REQUIRED BY CODE. PROVIDE EACH MOTOR WITH A HORSEPOWER RATED DISCONNECT SWITCH AND EXTERNAL THERMAL OVERLOAD PROTECTION. INSTALL WITHIN SIGHT OF MOTORS OR EQUIPMENT SERVED. B. UPON COMPLETION OF INSTALLATION OF ELECTRICAL CONNECTIONS, AND AFTER CIRCUITRY HAS BEEN ENERGIZED WITH RATED POWER SOURCE, TEST CONNECTIONS TO DEMONSTRATE CAPABILITY AND COMPLIANCE WITH REQUIREMENTS, ENSURE THAT DIRECTION OF ROTATION OF EACH MOTOR FULFILLS REQUIREMENT. CORRECT

MALFUNCTIONING UNITS AT SITE. THEN RETEST TO DEMONSTRATE COMPLIANCE. C. ALL SPLICES IN CONTROL PANELS, TERMINAL JUNCTION BOXES, LOW VOLTAGE CONTROL CIRCUITS AND FIRE ALARM CONDUCTORS SHALL BE ON NUMBERED TERMINAL STRIP.

END OF SECTION SECTION 262416 PANELBOARDS PART 1 GENERAL

A. THIS SECTION INCLUDES LIGHTING AND POWER PANELBOARDS AND ASSOCIATED AUXILIARY EQUIPMENT RATED 600 V OR LESS. A. OVERCURRENT PROTECTIVE DEVICE (OCPD): A DEVICE OPERATIVE ON EXCESSIVE CURRENT THAT CAUSES AND MAINTAINS THE INTERRUPTION OF POWER IN THE CIRCUIT IT

1.3 SUBMITTALS: A. PRODUCT DATA FOR EACH TYPE PANELBOARD, ACCESSORY ITEM, AND COMPONENT SPECIFIED. B. SHOP DRAWINGS FROM MANUFACTURERS OF PANELBOARDS INCLUDING DIMENSIONED PLANS, SECTIONS, AND ELEVATIONS. SHOW TABULATIONS OF INSTALLED DEVICES, MAJOR FEATURES, AND VOLTAGE RATING. INCLUDE THE FOLLOWING:

2. BUS CONFIGURATION AND CURRENT RATINGS. SHORT CIRCUIT CURRENT RATING OF PANELBOARD. 4. FEATURES, CHARACTERISTICS, RATINGS, AND FACTORY SETTINGS OF INDIVIDUAL PROTECTIVE DEVICES AND AUXILIARY COMPONENTS. C. WIRING DIAGRAMS DETAILING SCHEMATIC DIAGRAM INCLUDING CONTROL WIRING, AND DIFFERENTIATING BETWEEN MANUFACTURER-INSTALLED AND FIELD-INSTALLED

D. REPORT OF FIELD TESTS AND OBSERVATIONS. E. PANEL SCHEDULES FOR INSTALLATION IN PANELBOARDS. SUBMIT FINAL VERSIONS AFTER LOAD BALANCING.

A. LISTING AND LABELING: PROVIDE PRODUCTS SPECIFIED IN THIS SECTION THAT ARE LISTED AND LABELED. 1. THE TERMS "LISTED" AND "LABELED" SHALL BE DEFINED AS THEY ARE IN THE NATIONAL ELECTRICAL CODE, ARTICLE 100 B. MANUFACTURER'S QUALIFICATIONS: FIRMS REGULARLY ENGAGED IN MANUFACTURE OF PANELBOARDS AND ENCLOSURES, OF TYPES, SIZES AND RATINGS REQUIRED, WHOSE PRODUCTS HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR NOT LESS THAN 5 YEARS.

C. INSTALLER'S QUALIFICATIONS: A FIRM WITH AT LEAST 3 YEARS OF SUCCESSFUL INSTALLATION EXPERIENCE ON PROJECTS UTILIZING PANELBOARDS SIMILAR TO THOSE REQUIRED FOR THIS PROJECT. 1.5 EXTRA MATERIALS:

A. KEYS: FURNISH SIX SPARES OF EACH TYPE FOR PANELBOARD CABINET LOCKS. B. TOUCH_UP PAINT FOR PANELBOARDS: ONE HALF_PINT CONTAINER.

1. ENCLOSURE TYPE WITH DETAILS FOR TYPES OTHER THAN NEMA TYPE 1

PART 2 PRODUCTS 2.1 MANUFACTURERS: A. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY THE FOLLOWING:

 GENERAL ELECTRIC CO. 2. SQUARE D CO. SIEMENS ENERGY & AUTOMATION, INC

PANELBOARDS, GENERAL REQUIREMENTS A. OVERCURRENT PROTECTIVE DEVICES (OCPDS): PROVIDE TYPE, RATING, AND FEATURES AS INDICATED. COMPLY WITH DIVISION 26 SECTION ON OVERCURRENT PROTECTIVE

 NEMA 3R: RAINTIGHT NEMA 3S: RAINTIGHT AND DUST TIGHT 3. NEMA 4X: CORROSION-RESISTANT FIBERGLASS ENCLOSURE, WATERTIGHT, DUST TIGHT AND RESISTANT TO OIL AND COOLANT SEEPAGE. 4. NEMA 12: DUST TIGHT, DRIPPROOF, AND RESISTANT TO OIL AND COOLANT SEEPAGE. C. FRONT: HINGED TRIM TYPE, SECURED TO BOX WITH 1/4-20-LARGE HEAD SLOTTED CAPTIVE SCREWS EXCEPT AS INDICATED. FRONT FOR SURFACE MOUNTED PANELS SHALL

DOOR, AND DOOR SWINGS AS INDICATED. D. DIRECTORY FRAME: METAL, MOUNTED INSIDE EACH PANEL DOOR WITH CARD AND CLEAR PLASTIC COVER. DIRECTORY SHALL MATCH PANELBOARD CONFIGURATION, I.E. TOP

1. PROVIDE ALTERNATE TO PROVIDE TIN-PLATED, HIGH-STRENGTH, ELECTRICAL GRADE ALUMINUM ALLOY BUS IN LIEU OF COPPER. F. EQUIPMENT GROUND BUS: ADEQUATE FOR FEEDER AND BRANCH_CIRCUIT EQUIPMENT GROUND CONDUCTORS. BONDED TO BOX.

G. PROVIDE LUGS FOR INCOMING FEEDERS AND GROUNDS COMPATIBLE WITH BUS AND FEEDER MATERIAL.

C. MOUNTING: PLUMB AND RIGID WITHOUT DISTORTION OF BOX. MOUNT FLUSH PANELS UNIFORMLY FLUSH WITH WALL FINISH. D. CIRCUIT DIRECTORY: TYPED AND REFLECTIVE OF FINAL CIRCUIT CHANGES REQUIRED TO BALANCE PANEL LOADS. OBTAIN APPROVAL BEFORE INSTALLING. E. INSTALL FILLER PLATES IN UNUSED SPACES

F. PROVISION FOR FUTURE CIRCUITS AT FLUSH PANELBOARDS: STUB ONE 1 INCH EMPTY CONDUIT FROM PANEL FOR EACH SET OF 3 SPARES OR SPACES INTO ACCESSIBLE CEILING SPACE OR SPACE DESIGNATED TO BE CEILING SPACE IN FUTURE. STUB ONE 1 INCH EMPTY CONDUITS FOR EACH SET OF 3 SPARES OR SPACES INTO RAISED FLOOF SPACE OR BELOW SLAB OTHER THAN SLABS ON GRADE.

A. IDENTIFY FIELD_INSTALLED WIRING AND COMPONENTS AND PROVIDE WARNING SIGNS IN ACCORDANCE WITH DIVISION 26 SECTION ON ELECTRICAL IDENTIFICATION.

A. CONNECTIONS: MAKE EQUIPMENT GROUNDING CONNECTIONS FOR PANELBOARDS AS INDICATED.

MAINTENANCE OF PANELBOARDS RATED 600 VOLTS OR LESS" AND MANUFACTURERS' WRITTEN INSTALLATION INSTRUCTIONS.

INDICATED. PROTECT PRIMARY WITH CURRENT-LIMITING OCPD AS INDICATED. PROVIDE FUSED PROTECTION OF CONTROL CIRCUITS.

B. PROVIDE GROUND CONTINUITY TO MAIN ELECTRICAL GROUND BUS INDICATED.

"APPLICATION GUIDE FOR GROUND FAULT CIRCUIT INTERRUPTERS."

CONTROLLER," EXCEPT OMIT OVERLOAD PROTECTION.

A. TIGHTEN ELECTRICAL CONNECTORS AND TERMINALS, INCLUDING GROUNDING CONNECTIONS, IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED TORQUE_TIGHTENING VALUES. WHERE MANUFACTURER'S TORQUE VALUES ARE NOT INDICATED, USE THOSE SPECIFIED IN UL 486A AND UL 486B.

A. UPON COMPLETING INSTALLATION OF THE SYSTEM, PERFORM THE FOLLOWING TESTS: 1. MAKE INSULATION RESISTANCE TESTS OF PANELBOARD BUSES, COMPONENTS, AND CONNECTING SUPPLY, FEEDER, AND CONTROL CIRCUITS. MAKE CONTINUITY TESTS OF CIRCUITS. PROCEDURES: MAKE FIELD TESTS AND INSPECTIONS AND PREPARE PANEL BOARD FOR SATISFACTORY OPERATION IN ACCORDANCE WITH MANUFACTURER'S

RECOMMENDATIONS AND THESE SPECIFICATIONS C. SCHEDULE TESTS WITH AT LEAST ONE WEEK IN ADVANCE NOTIFICATION. D. REPORTS: PROVIDE REPORT WRITTEN REPORTS OF TESTS AND OBSERVATIONS. REPORT DEFECTIVE MATERIALS AND WORKMANSHIP AND UNSATISFACTORY TEST RESULTS

INCLUDE RECORDS OF REPAIRS AND ADJUSTMENTS MADE. E. LABELING: UPON SATISFACTORY COMPLETION OF TESTS AND RELATED EFFORT, APPLY A LABEL TO TESTED COMPONENTS INDICATING RESULTS OF TESTS AND INSPECTION RESPONSIBLE ORGANIZATION AND PERSON, AND DATE. F. VISUAL AND MECHANICAL INSPECTION: INCLUDE THE FOLLOWING INSPECTIONS AND RELATED WORK:

1. INSPECT FOR DEFECTS AND PHYSICAL DAMAGE, LABELING, AND NAMEPLATE COMPLIANCE WITH REQUIREMENTS OF UP_TO_DATE DRAWINGS AND PANELBOARD 2. EXERCISE AND PERFORM OF OPERATIONAL TESTS OF ALL MECHANICAL COMPONENTS AND OTHER OPERABLE DEVICES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTION MANUAL.

3. CHECK PANELBOARD MOUNTING, AREA CLEARANCES, AND ALIGNMENT AND FIT OF COMPONENTS. 4. CHECK TIGHTNESS OF BOLTED ELECTRICAL CONNECTIONS WITH CALIBRATED TORQUE WRENCH. REFER TO MANUFACTURER'S INSTRUCTIONS FOR PROPER TORQUE

5. VERIFY THAT PROPER GROUNDING BUSHINGS/BONDING/ AND PANEL ENCLOSURE BONDING IS COMPLETE. 6. VERIFY ISOLATED NEUTRAL BAR AND NEUTRAL CONNECTIONS. G. ELECTRICAL TESTS: INCLUDE THE FOLLOWING ITEMS PERFORMED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTION: 1. INSULATION RESISTANCE TEST OF BUSES. INSULATION RESISTANCE LESS THAN 100 MEGOHMS IS NOT ACCEPTABLE.

GROUND RESISTANCE TEST ON SYSTEM AND EQUIPMENT GROUND CONNECTIONS. 3. TEST MAIN AND SUBFEED OVERCURRENT PROTECTIVE DEVICES IN ACCORDANCE WITH SECTION "OVERCURRENT PROTECTIVE DEVICES." H. RETEST: CORRECT DEFICIENCIES IDENTIFIED BY TESTS AND OBSERVATIONS AND PROVIDE RETESTING OF PANELBOARDS BY TESTING ORGANIZATION. VERIFY BY THE SYSTEM TESTS THAT THE TOTAL ASSEMBLY MEETS SPECIFIED REQUIREMENTS.

A. UPON COMPLETION OF INSTALLATION, INSPECT INTERIOR AND EXTERIOR OF PANELBOARDS. REMOVE PAINT SPLATTERS AND OTHER SPOTS, DIRT, AND DEBRIS. TOUCH UP SCRATCHES AND MARKS OF FINISH TO MATCH ORIGINAL FINISH. END OF SECTION 262416

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1.10 REGULATORY REQUIREMENTS

A. THE DRAWINGS AND SPECIFICATIONS TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT THAN ADOPTED CODES, AMENDMENTS OR STATUTES. ALL WORK SHALL BE EXECUTED IN ACCORDANCE WITH THOSE EDITIONS OF THE FOLLOWING AS CURRENTLY ADOPTED BY THE LOCAL AND STATE AUTHORITY HAVING JURISDICTION: IBC, NFPA, ADA, UL, IEEE, NEMA, CBM, ANSI, NECA, ICEA AND IETA INCLUDING LOCAL AMENDMENTS AND APPLICABLE REQUIREMENTS OF THE LOCAL FIRE DEPARTMENT, B. THE HANDLING, REMOVAL AND DISPOSAL OF REGULATED LIQUIDS OR OTHER MATERIALS SHALL BE IN ACCORDANCE WITH U.S. EPA, STATE AND LOCAL REGULATIONS.

C. THE HANDLING, REMOVAL AND DISPOSAL OF LEAD BASED PAINT AND OTHER LEAD CONTAINING MATERIALS SHALL COMPLY WITH EPA, OSHA, AND ANY OTHER FEDERAL, STATE, D. ALL MATERIAL USED ON THIS PROJECT SHALL BE UL LISTED AND LABELED AND BE ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION AS SUITABLE FOR THE USE

1.11 PERMITS AND FEES:

A. PAY FOR ALL FEES AND ELECTRICAL PERMITS, PLAN REVIEW AND INSPECTIONS FROM AUTHORITY HAVING JURISDICTION. PROVIDE ALL NOTICES NECESSARY IN CONNECTION THEREWITH. WORK SHALL NOT BE COVERED BEFORE INSPECTIONS BY THE JURISDICTIONAL AUTHORITIES AND OBSERVATION BY THE OWNER/ENGINEER.

1.12 PRODUCT OPTIONS AND SUBSTITUTIONS

A. PROVIDE PRODUCTS SPECIFIED. MATERIALS AND EQUIPMENT OF EQUIVALENT QUALITY MAY BE SUBMITTED TO THE ARCHITECT/ENGINEER AT LEAST TEN (10) WORKING DAYS PRIOR TO THE BID DATE REQUESTING PRIOR REVIEW. THIS SUBMITTAL SHALL INCLUDE ALL DATA NECESSARY FOR COMPLETE EVALUATION OF THE PRODUCT. THE OWNER RETAINS THE RIGHT TO REQUIRE EQUIPMENT AS SPECIFIED.

1.13 SUBMITTALS:

A. PRIOR TO ORDERING PURCHASING, STORING OR INSTALLING MATERIALS, SUBMIT SHOP DRAWINGS AND PRODUCT DATA IN ELECTRONIC FORMAT.SUBMIT ONLY FOR PRODUCTS WHERE REQUIRED BY THESE SPECIFICATION SECTIONS. CLEARLY INDICATE THE EQUIPMENT AND MATERIAL PROPOSED FOR APPLICATION AND BE THE PROPOSED FABRICATION AND INSTALLATION METHODS. CONTINUE TO SUBMIT AFTER EACH ARCHITECT/ENGINEER'S ACTION. UNTIL A "NO EXCEPTION TAKEN" OR "MAKE CORRECTIONS NOTED" ACTION IS RECEIVED WITH THE EXCEPTION OF FIRE ALARM SUBMITTALS WHICH MAY BE REQUIRED TO BE SUBMITTED UNTIL A "NO EXCEPTION TAKEN" ACTION IS RECEIVED FOR LOCAL AUTHORITIES THAT REQUIRE THIS METHOD. SUBMITTALS NOT REQUIRED WILL BE RETURNED WITHOUT ACTION. B. SUBMITTALS SHALL BE REVIEWED BY THE ARCHITECT/ENGINEER FOR GENERAL CONFORMANCE WITH CONTRACT REQUIREMENTS. SUBMITTALS PROCESSED BY THE ARCHITECT/ENGINEER SHALL NOT BE CONSIDERED CHANGE ORDERS. THE CONTRACTOR SHALL REVIEW AND STAMP, EACH SUBMITTAL FOR CONFORMANCE WITH THE

THE ARCHITECT/ENGINEER WILL NOT BE PROCESSED. C. VERIFY ALL MEASUREMENTS AND REVIEW SHOP DRAWINGS BEFORE SUBMITTING THEM. ANY DEVIATIONS FROM THE SPECIFIED REQUIREMENTS FOR ANY ITEM OF MATERIAL OR EQUIPMENT EXIST, SUCH DEVIATION SHALL BE EXPRESSLY STATED IN WRITING AND INCORPORATED AS PART OF THE SUBMITTAL. 1.14 SPECIFIC CATEGORY SUBMITTAL REQUIREMENTS:

DRAWINGS AND SPECIFICATIONS PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER. DATA SUBMITTED FROM SUB-CONTRACTORS AND MATERIAL SUPPLIERS DIRECTLY TO

A. PROVIDE SUBMITTALS FOR EACH ITEM OF EQUIPMENT SPECIFIED OR SCHEDULED IN THE CONTRACT DOCUMENTS INCLUDING BUT NOT LIMITED TO: WIRING DEVICES, PANELBOARDS, OVERCURRENT PROTECTIVE DEVICES, TEST REPORTS, COORDINATION DRAWINGS, FLOOR BOXES, FIRE ALARM SYSTEM AND LUMINAIRES.

A. STORE PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, WITH SEALS AND LABELS INTACT AND LEGIBLE. STORE SENSITIVE PRODUCTS IN WEATHER-TIGHT ENCLOSURES; MAINTAIN WITHIN TEMPERATURE AND HUMIDITY RANGES REQUIRED BY MANUFACTURER'S INSTRUCTIONS.

1.15 DELIVERY, STORAGE AND PROTECTION:

1.16 DEMOLITION/REMODEL WORK:

A. PRIOR TO DEMOLITION, VERIFY CIRCUITING AND VERIFY THAT ABANDONED WIRING AND EQUIPMENT SERVE ONLY ABANDONED FACILITIES. MAINTAIN ELECTRICAL CONTINUITY TO REMAINING WIRING AND EQUIPMENT.

B. DEMO DRAWINGS ARE BASED ON LIMITED FIELD OBSERVATION AND/OR EXISTING RECORD DOCUMENTS. REPORT DISCREPANCIES TO ARCHITECT/ENGINEER BEFORE DISTURBING EXISTING INSTALLATION,

C. DISCONNECT ABANDONED OUTLETS AND REMOVE DEVICES. REMOVE ABANDONED OUTLET BOXES IF CONDUIT SERVING THEM IS ABANDONED AND REMOVED.

E. REPAIR TO ORIGINAL CONDITION ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND EXTENSION WORK.

F. CIRCUITS OR SYSTEMS WIRING SHALL NOT PASS THOUGH OUTLET OR JUNCTION BOXES THAT MAY BE RENDERED INACCESSIBLE BY CHANGES MADE TO THE BUILDING. MAINTAIN ACCESS TO EXISTING ELECTRICAL INSTALLATIONS THAT ARE TO REMAIN ACTIVE. MODIFY INSTALLATION OR (ONLY WITH PRIOR APPROVAL) PROVIDE ACCESS PANEL AS APPROPRIATE

D. DISCONNECT AND REMOVE ELECTRICAL DEVICES AND EQUIPMENT SERVING UTILIZATION EQUIPMENT THAT HAS BEEN REMOVED, ABANDONED LUMINAIRES, BRACKETS, STEMS,

G. CONNECT NEW WORK TO EXISTING WORK IN A MANNER THAT WILL ASSURE PROPER RACEWAY GROUNDING THROUGHOUT IN CONFORMANCE WITH THE NATIONAL ELECTRICAL

H. EXISTING CONDUITS, WIRE, DEVICES, LUMINAIRES, ETC SHOWN TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE SITE UNLESS OTHERWISE NOTED. I. IF HAZARDOUS MATERIALS ARE ENCOUNTERED THE CONTRACTOR SHALL REPORT FINDINGS TO THE ARCHITECT/ENGINEER.

. THE PROJECT INVOLVES RENOVATION AND REMODEL OF THE EXISTING BUILDING. ON THE DRAWINGS, WORK MAY BE DENOTED BY SHOWING ITEMS AS BOLD OR LIGHT LINE WEIGHT AND CERTAIN RENOVATION SYMBOLS ARE USED. THESE INDICATIONS AND SYMBOLS ARE AMPLIFIED AS FOLLOWS: a BOLD PRINT (WHEN USED): WORK INCLUDED IN THIS CONTRACT IS DENOTED IN BOLD PRINT OR DARKER LINE WEIGHT

b. LIGHT PRINT (WHEN USED): WORK SHOWN LIGHTLY INDICATES EXISTING CONDITIONS TO REMAIN.

1.17 CUTTING AND PATCHING

A CAREFULLY LAY OUT ALL WORK IN ADVANCE SO AS TO FLIMINATE REWORK WHERE POSSIBLE CUTTING CHANNELING OR DRILLING OF FLOORS WALL PARTITIONS CEILINGS AND ROOFS. ANY DAMAGE TO THE BUILDING. STRUCTURE, PIPING, DUCTS, FOUIPMENT OR ANY DEFACED FINISH SHALL BE REPAIRED BY SKILLED MECHANICS OF THE TRADES INVOLVED AT NO ADDITIONAL COST TO THE OWNER AND TO THE SATISFACTION OF THE ARCHITECT/ENGINEER. ANY NECESSARY CUTTING, CHANNELING, DRILLING OR WELDING AS REQUIRED FOR THE PROPER SUPPORT, CONCEALMENT, INSTALLATION OR ANCHORING OF RACEWAYS, OUTLETS, OR OTHER ELECTRICAL

SERVICE, BOTH DURING AND AFTER THE WARRANTY PERIOD. INCLUDE ADDRESSES AND PHONE NUMBERS FOR THE OWNER TO CONTACT FOR WARRANTY, SERVICE AND

B. FINAL ACCEPTANCE BY THE OWNER WILL NOT OCCUR UNTIL ALL OPERATING AND MAINTENANCE MANUALS ARE RECEIVED AND OWNER'S PERSONNEL HAVE BEEN THOROUGHLY INDOCTRINATED IN THE MAINTENANCE AND OPERATION OF ALL EQUIPMENT.

C. THE ELECTRICAL SYSTEM INSTALLED UNDER THIS CONTRACT SHALL BE LEFT IN PROPER WORKING ORDER. REPLACE, AT NO ADDITIONAL COST TO THE OWNER, ANY WORK. MATERIALS, OR EQUIPMENT WHICH EXHIBIT DEFECTS IN DESIGN, CONSTRUCTION OR WORKMANSHIP WITHIN ONE YEAR, OR AS SPECIFICALLY NOTED ELSEWHERE IN THESE SPECIFICATIONS, FROM DATE OF FINAL OWNER ACCEPTANCE.

1.26 WARRANTY: A. THE ELECTRICAL SYSTEM INSTALLED UNDER THIS CONTRACT SHALL BE LEFT IN PROPER WORKING ORDER. REPLACE AT NO ADDITIONAL COST TO THE OWNER, ANY WORK MATERIALS, OR EQUIPMENT WHICH EXHIBIT DEFECTS IN DESIGN, CONSTRUCTION OR WORKMANSHIP WITHIN ONE YEAR, OR AS SPECIFICALLY NOTED ELSEWHERE IN THESE SPECIFICATIONS, FROM DATE OF FINAL OWNER ACCEPTANCE,

SECTION 26 05 19 - LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLE

END OF SECTION

1.3 INSTALLATION:

A. THIS SECTION INCLUDES WIRES, CABLES AND CONNECTORS FOR POWER, LIGHTING, SIGNAL, CONTROL AND RELATED SYSTEMS RATED 600 VOLTS AND LESS

A. BUILDING WIRE: COPPER 600 VOLT THERMOPLASTIC INSULATION RATED 90 DEGREES C. TYPE THHN/THWN.

A. PROVIDE WIRE AND CABLE SUITABLE FOR THE TEMPERATURE, CONDITIONS, AND LOCATION WHERE INSTALLED.

B. WIRE AND CABLE MANUFACTURERS: AMERICAN INSULATED WIRE, ANACONDA_ERICSSON INC; WIRE AND CABLE DIV., BELDEN DIV; COOPER INDUSTRIES., BRAND_REX DIV; PYLE NATIONAL CO., GENERAL CABLE CORPORATION, HITEMP WIRES, INC. PHELPS DODGE CABLE AND WIRE CO., ROME CABLE CORP., SOUTHWIRE COMPANY, SUPERIOR ESSEX:

C. CONNECTORS: O_Z/GEDNEY CO., AMP, INC., BURNDY CORPORATION, IDEAL INDUSTRIES, INC.3M COMPANY, THOMAS AND BETTS CORP.

1. COMPLETELY AND THOROUGHLY SWAB RACEWAY BEFORE INSTALLING WIRE. 2. METAL CLAD CABLE MAY BE USED ONLY FOR: a. CONNECTION OF LUMINAIRES IN ACCESSIBLE CEILINGS (MAX. 6 FOOT LENGTHS).

B. USE SOLID CONDUCTOR FOR FEEDERS AND BRANCH CIRCUITS 10 AWG AND SMALLER.

b. FOR OUTLET-TO-OUTLET BRANCH CIRCUIT WIRING IN STUD PARTITIONS OR CASEWORK. c. FOR BRANCH CIRCUIT DROPS FROM A LOCAL JUNCTION BOX ABOVE THE CEILING INTO A STUD WALL AND CASEWORK. d. USES NOT PERMITTED INCLUDE BRANCH CIRCUIT HOME RUNS, EQUIPMENT OR MOTOR FEEDERS, EXPOSED INSTALLATIONS OR EMERGENCY SYSTEMS.

C. USE STRANDED CONDUCTORS FOR CONTROL CIRCUITS. D. USE CONDUCTOR NOT SMALLER THAN 12 AWG FOR POWER AND LIGHTING CIRCUITS.

E. USE 10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS LONGER THAN 50 FEET TO THE FIRST FIXTURE OR DEVICE.

F. USE 10 AWG CONDUCTORS FOR 20 AMPERE, 277 VOLT BRANCH CIRCUITS LONGER THAN 100 FEET TO THE FIRST FIXTURE OR DEVICE. G. PULL ALL CONDUCTORS INTO RACEWAY AT SAME TIME. DO NOT EXCEED THE MAXIMUM TENSILE STRENGTH OF THE CABLE BEING PULLED AS ALLOWED BY NEC AND/OR THE

CABLE MANUFACTURER. PULLING COMPOUND SHALL BE NON-CONDUCTIVE AND SHALL DRY TO A FINE LUBRICATING POWDER. H. WHERE A BRANCH CIRCUIT EXTENDS THROUGH A RECEPTACLE OUTLET, ALL CONNECTING CONDUCTORS SHALL BE PIGTAILED SO AS TO PREVENT DOWNSTREAM LOADS FROM BEING CONDUCTED THROUGH RECEPTACLE

I. USE SUITABLE WIRE PULLING LUBRICANT FOR BUILDING WIRE 4AWG AND LARGER. J. SUPPORT CABLES ABOVE ACCESSIBLE CEILING. USING SPRING METAL CLIPS OR METAL CABLE TIES TO SUPPORT CABLES FROM STRUCTURE. CEILING SUSPENSION SYSTEM OR SUSPENDED GRID SYSTEMS SHALL NOT BE ALLOWED TO PROVIDE SUPPORT FOR CABLE WIRING SYSTEMS. DO NOT ALLOW CABLE TO REST ON CEILING PANELS.

L. USE SOLDERLESS PRESSURE CONNECTORS WITH INSULATING COVERS FOR COPPER CONDUCTOR SPLICES AND TAPS, 8 AWG AND SMALLER. M. USE INSULATED SPRING WIRE CONNECTORS WITH PLASTIC CAPS FOR COPPER CONDUCTOR SPLICES AND TAPS, 10 AWG AND SMALLER

120/208 VOLTS

1.4 WIRE AND CABLE COLOR CODING:

K. NEATLY TRAIN AND LACE WIRING INSIDE BOXES, EQUIPMENT AND PANELBOARDS.

A. WIRE NO. 6 AWG AND SMALLER SHALL BE FACTORY COLOR-CODED. WIRE NO. 4 AWG AND LARGER MAY BE COLOR-CODED BY FIELD PAINTING OR COLOR TAPING OF 6-INCH

LENGTH OF EXPOSED ENDS. CONDUCTORS HAVING WHITE, GRAY, WHITE WITH COLORED STRIPE, GREEN OR GREEN WITH COLORED STRIPE SHALL NOT BE USED TO INDICATE OTHER THAN NEUTRAL OR GROUNDING.

1.4 QUALITY ASSURANCE:

EATON

DEVICES, WITH OCPDS ADAPTED TO PANELBOARD INSTALLATION. TANDEM CIRCUIT BREAKERS SHALL NOT BE USED. MULTIPLE BREAKERS SHALL HAVE COMMON TRIP. B. ENCLOSURES: CABINETS, FLUSH OR SURFACE MOUNTED AS INDICATED. NEMA TYPE 1 ENCLOSURE, EXCEPT WHERE THE FOLLOWING ENCLOSURE REQUIREMENTS ARE INDICATED. PROVIDE GALVANIZED SHEET STEEL CABINET TYPE ENCLOSURES, IN SIZES AND NEMA TYPES AS INDICATED, CODE-GAUGE, MINIMUM 16-GAUGE THICKNESS. CONSTRUCT WITH MULTIPLE KNOCKOUTS AND WIRING GUTTERS. PROVIDE BAKED GRAY ENAMEL FINISH OVER A RUST INHIBITOR COATING. DESIGN ENCLOSURES FOR RECESSED MOUNTING. PROVIDE ENCLOSURES WHICH ARE FABRICATED BY SAME MANUFACTURER AS PANELBOARDS, WHICH MATE AND MATCH PROPERLY WITH PANELBOARDS TO BE ENCLOSED.

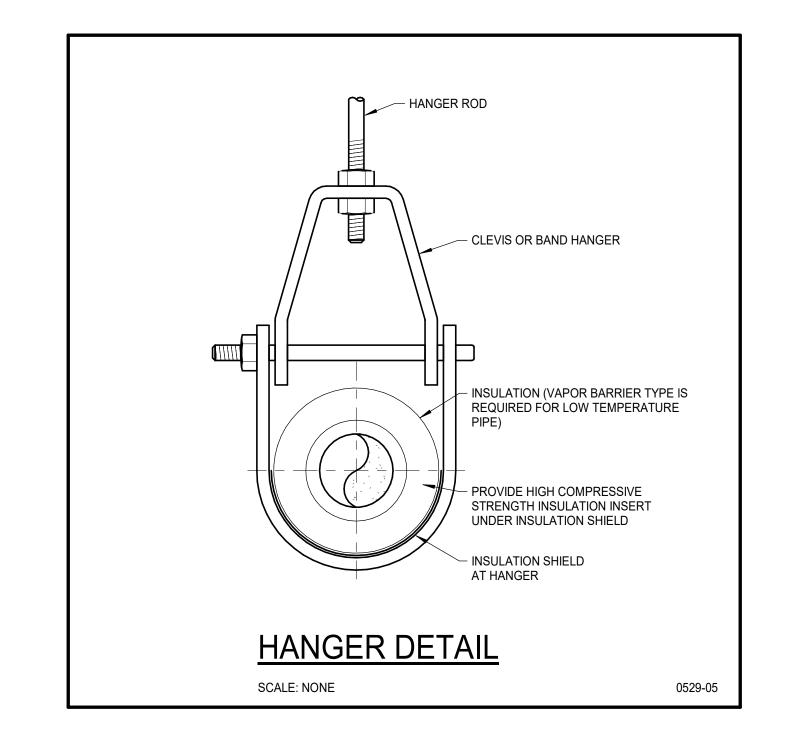
BE SAME DIMENSIONS AS BOX. FRONTS FOR FLUSH PANELS SHALL OVERLAP BOX EXCEPT AS OTHERWISE SPECIFIED. PROVIDE FRONTS WITH HINGED TRIM CONSTRUCTION AND DOOR WITH FLUSH LOCKS AND KEYS, ALL PANELBOARD ENCLOSURES KEYED ALIKE, WITH CONCEALED DOOR HINGES ON INNER DOOR, PIANO HINGE ON OUTER TRIM

E. BUS MATERIAL: PROVIDE TIN PLATED HARD-DRAWN COPPER OF 98 PERCENT CONDUCTIVITY.

| GENERAL LEGEND (Not all symbols listed below are used on these drawings) | | | | | | | | |
|--|---|--|--------|--|--|--|--|--|
| ABBR. | SYMBOL | DESCRIPTION | ABBR. | SYMBOL | DESCRIPTION | | | |
| | | | | | CAP END OF PIPE | | | |
| | X | SECTION DESIGNATION SECTION CUT ON THIS SHEET | | SLOPE | PITCH DOWN IN DIRECTION OF ARROW | | | |
| | | — SECTION CUT ON THIS SHEET | | × | PIPE ANCHOR | | | |
| | X | VIEW REFERENCE DESIGNATION | | -=- | PIPE ALIGNMENT GUIDE | | | |
| | X-X - | — VIEW REFERENCE ON THIS SHEET | | | UNION OR FLANGE | | | |
| | X | EQUIPMENT UNIT IDENTIFICATION | | | CONCENTRIC PIPE REDUCER | | | |
| | 1-2-3 | EQUIPMENT UNIT NUMBER (UNIT SERVED - FLOOR - — SEQUENCE #) | | | ECCENTRIC PIPE REDUCER | | | |
| | 10 | — DIFFUSER IDENTIFICATION | PRV | _\$_ | PRESSURE REDUCING VALVE | | | |
| \boxtimes | A) 250 | ─ DIFFUSER NECK DIAMETER─ DIFFUSER CFM | PTRV | <u> </u> | PRESSURE AND/OR TEMPERATURE RELIEF VALVE | | | |
| | | — LINEAR DIFFUSER IDENTIFICATION | | → | ISOLATION VALVE (RE: SPEC FOR TYPE) | | | |
| | 8ø/24"L 9999 | ─ LINEAR DIFFUSER NECK DIAMETER─ LINEAR DIFFUSER LENGTH | | | VERTICAL PIPE VALVE | | | |
| | 9999 | — LINEAR DIFFUSER CFM | CV | _ _ _ | CHECK VALVE | | | |
| | | — FINNED TUBE RADIATOR ACTIVE ELEMENT LENGTH | | — &— | SOLENOID / MOTORIZED VALVE | | | |
| | 2'-6" FTR 28 | EQUIPMENT UNIT IDENTIFICATION EQUIPMENT UNIT NUMBER | | — | SOLENOID VALVE | | | |
| | 3-0 20 | RADIATOR ENCLOSURE LENGTH (OR W-W=WALL-TO-WALL) | | —ды | HOSE END DRAIN VALVE | | | |
| | $\langle x \rangle$ | KEY NOTE REFERENCE | P/T | | PRESSURE / TEMPERATURE TAP | | | |
| | 1 | KITCHEN/OWNER/MEDICAL EQUIPMENT REFERENCE | | | STRAINER | | | |
| | | TYPICAL ROOM REFERENCE (TOP = RM #, BOTTOM = FLR) | | | STRAINER W/ BLOWDOWN | | | |
| | Š | POINT OF CONNECTION, NEW TO EXISTING | | —————————————————————————————————————— | BRAIDED FLEXIBLE PIPE CONNECTOR | | | |
| | | POINT OF DISCONNECTION, DEMO | | <u>—</u> ———— | DOUBLE-BOWL FLEXIBLE PIPE CONNECTOR | | | |
| | — | DIRECTION OF FLOW IN PIPE | | П | THERMOMETER | | | |
| | [:::::::::::::::::::::::::::::::::::::: | DUCTWORK, PIPING AND EQUIPMENT TO BE REMOVED | | <u> </u> | PRESSURE GAUGE | | | |
| (E) | | EXISTING | | — <u>O</u> — | SIGHT GLASS | | | |
| (N) | | NEW | C.A.P. | \square | CEILING ACCESS PANEL | | | |
| (R) | | RELOCATED | | | PUMP | | | |
| (F) | | FUTURE | ТВ | | THRUST BLOCK | | | |
| DIA | Ø | DIAMETER | MAV | <u> </u> | MANUAL AIR VENT | | | |
| WAD | | WALL ACCESS DOOR | AAV | <u></u> | AUTOMATIC AIR VENT | | | |
| NIC | | NOT IN CONTRACT | | | | | | |
| AFF | | ABOVE FINISHED FLOOR | | | | | | |
| GC | | GENERAL CONTRACTOR | 1 | | | | | |
| MC | | MECHANICAL CONTRACTOR | | | | | | |
| EC | | ELECTRICAL CONTRACTOR | | | | | | |
| UNO | | UNLESS NOTED OTHERWISE | 1 | | | | | |
| С | | COMMON | 1 | | | | | |
| NC | | NORMALLY CLOSED | 1 | | | | | |
| NO | † | NORMALLY OPEN | | | | | | |

| ABBR. | SYMBOL | (Not all symbols listed below DESCRIPTION | ABBR. | SYMBOL | DESCRIPTION | | |
|----------|-------------------|---|---------|---------------------------|------------------------------------|--|--|
| CW | CW | DOMESTIC COLD WATER PIPING | GCO/SCO | Φ | GRADE CLEANOUT / SURFACE CLEANOUT | | |
| HW | —— – – —HW— | DOMESTIC HOT WATER PIPING | FCO | $\overline{\circ}$ | FLOOR CLEANOUT | | |
| HWC | HWC- | DOMESTIC HOT WATER CIRC PIPING | WCO | WCO O-II WALL CLEANOUT | | | |
| CW-S | —— – —CW-S– | SOFTENED DOMESTIC COLD WATER PIPING | СО | -43 | LINE CLEANOUT | | |
| HW-S | ——HW-S | SOFTENED DOMESTIC HOT WATER PIPING | AD | 0 | AREA DRAIN | | |
| 140°F HW | —— – – –140°F HW | DOMESTIC HOT WATER PIPING @ TEMP SHOWN | FD | FLOOR DRAIN | | | |
| 40°F HWC | —— — — –140°F HWC | DOMESTIC HOT WATER CIRC PIPING @ TEMP SHOWN | FS | | FLOOR SINK | | |
| TW | —— —TW— | TEPID WATER PIPING | RD / OD | 0 | ROOF DRAIN OR OVERFLOW DRAIN | | |
| TWC | — TWC- | TEPID WATER CIRC PIPING | | | | | |
| ICW | —— - —ICW— | INDUSTRIAL COLD WATER PIPING | VB | | ATMOSPHERIC VACUUM BREAKER | | |
| IHW | — —IHW— | INDUSTRIAL HOT WATER PIPING | BFP | <u></u> <u>M</u> <u>M</u> | BACKFLOW PREVENTER | | |
| IHWC | IHWC- | INDUSTRIAL HOT WATER CIRC PIPING | SA | <u></u> | SHOCK ARRESTOR W / ISOLATION VALVE | | |
| NPCW | | NON-POTABLE COLD WATER PIPING | GC | ₩ | GAS SHUT-OFF VALVE | | |
| NPHW | | NON-POTABLE HOT WATER PIPING | | 宀 | STOP AND DRAIN VALVE | | |
| NPHR | NPHR | NON-POTABLE HOT WATER CIRC PIPING | BV | * | BALANCING VALVE | | |
| V | v | VENT PIPING | WH | + | WALL HYDRANT | | |
| AV | _{AV} | ACID RESISTANT VENT PIPING | НВ | + | HOSE BIBB | | |
| W | ——w—— | WASTE PIPING | RH | | ROOF HYDRANT | | |
| W | — —w— — | WASTE PIPING BELOW FLOOR | YH | | YARD HYDRANT | | |
| AW | ——AW—— | ACID RESISTANT WASTE PIPING | DSN | 쇼 | DOWNSPOUT NOZZLE | | |
| AW | — -AW- — | ACID RESISTANT WASTE PIPING BELOW FLOOR | MH | | MANHOLE | | |
| GW | ——GW—— | GREASE WASTE (TO GREASE INTERCEPTOR) | CI | | CAST IRON | | |
| GW | — -gw- — | GREASE WASTE PIPING BELOW FLOOR | СВ | | CATCH BASIN | | |
| SD | ——SD—— | STORM DRAIN PIPING | VTR | | VENT THRU ROOF | | |
| SD | — -sp- — | STORM DRAIN PIPING BELOW FLOOR | IE | | INVERT ELEVATION | | |
| OD | ——OD—— | OVERFLOW DRAIN PIPING | PVC | | POLYVINYL CHLORIDE | | |
| OD | — -op- — | OVERFLOW DRAIN PIPING BELOW FLOOR | | | | | |
| CA | ——СА—— | COMPRESSED AIR | | | | | |
| G | ——G—— | NATURAL GAS PIPING | | | | | |

| | GRAB BARS THIS SCHED | GENERAL SPECIFICATIONS FOR WATER CLOSETS, URINALS, LAVATORIES, BBY ARCHITECT. DULE INCLUDES ITEMS THAT MAY NOT BE INCLUDED IN THE DRAWING DO ARCHITECTURAL DRAWINGS FOR LOCATION AND MOUNTING HEIGHT. | | ANEOUS FIXTURE REC | UIREMENTS |). | | | | | | | | |
|--------|---|--|----------------------|--------------------|-----------|--------------|----------------|---|----------|--------|--------|--------|------|--|
| | | FIXTURE | | | | TF | RIM | ELECTRICAL | | | CONNEC | CTIONS | T | |
| DESIG. | FIXTURE NAME | FIXTURE DESCRIPTION | MANUFACTURER | MODEL | SIZE | MANUFACTURER | MODEL | ACCESSORY REQUIREMENTS I.R/BATTERY/HP | FLOW | WASTE | VENT | CW | HW | REMARKS |
| L-1 | LAVATORY (EXISTING) | EXISTING RE-USED LAVATORY WITH NEW FAUCET | N/A | N/A | N/A | DELTA | 590LF-LGHGMHDF | BATTERY | 1.5 GPM | 1 1/2" | 1 1/2" | 1/2" | 1/2" | RE-USE LAVATORY, PROVIDE LISTED FAUCET AND INSTALL SLOAN MIXING VALVE MIX-135-A. PROVIDE NEW TRU-BRO INSULATION KIT, 17 GA. CHROME PLATED P-TRAP AND CHROME PLATE COPPER SUPPLY TUBES. |
| SH-1 | SHOWER | FIBERGLASS ALCOVE SINGLE PIECE SHOWER / HAND SHOWER SYSTEM WITH PRESSURE BALANCING SHOWER VALVE | AQUABATH | 1543CTN-EVERYDAY | 54x28 | DELTA | 142840-L | MANUAL | 2.0 GPM | 2" | 1 1/2" | 1/2" | 1/2" | SELECT LEFT HAND RIGHT HAND ORIENTATION PER ARCHITECTURAL DRAWINGS, COORDINATE INSTALLATION WITH FRAMMING CONTRACTOR. |
| UR-1 | URINAL (EXISTING) | EXISTING RE-USED FLUSH-O-METER URINAL | - | - | N/A | SLOAN | GS-8186 | BATTERY | 1.0 GPF | 2" | 1 1/2" | 3/4" | - | PROVIDE NEW BATTERY OPERATED HANDS FREE FLUSH VAVLE PER SCHEDULE, NEW WASTE OUTLET GASKET. CONFIRM WATER LINE SIZE AND MATCH STOP VALVE. |
| WC-1 | WATER CLOSET | ADA FLOOR MOUNTED FLUSH VALVE WATER CLOSET | AMERICAN STANDARD | 3461.001 | N/A | SLOAN | GS-8122 | BATTERY | 1.28 GPF | 4" | 2" | 1" | - | PROVIDE 5901.100 HEAVY DUTY OPEN FRONT SEAT, CONFIRM WATER LINE SIZE AND MATCH FLUSHOMETER STOP VALVE. |
| WC-2 | WATER CLOSET | FLOOR MOUNTED FLUSH VALVE WATER CLOSET | AMERICAN STANDARD | 3451.001 | N/A | SLOAN | GS-8122 | BATTERY | 1.28 GPF | 4" | 2" | 1" | - | PROVIDE 5901.100 HEAVY DUTY OPEN FRONT SEAT, CONFIRM WATER LINE SIZE AND MATCH FLUSHOMETER STOP VALVE. |



GENERAL NOTES:

- WORK INCLUDED IN THE CONTRACT IS DENOTED IN BOLD. EXISTING CONDITIONS TO REMAIN ARE DENOTED LIGHTLY.
- A DETAILED METHOD OF PROCEDURE IS REQUIRED WHEN A CONSTRUCTION ACTIVITY AFFECTS THE SAFETY OF THE OCCUPANTS, OWNER'S EQUIPMENT OR VALUABLE CONTENTS OR ANY SYSTEM WHICH SUPPORTS THESE SYSTEMS; OR ESSENTIALLY AFFECTS THE BUILDING MANAGEMENT, OPERATIONS OR
- CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF ANY WORK AND SHALL NOTIFY THE ENGINEER/ARCHITECT OF ANY DISCREPANCIES FOR RESOLUTION.
- 4. COORDINATE WORK WITH ALL TRADES.
- 5. CONTRACTOR IS RESPONSIBLE FOR SECURING AND WEATHERPROOFING ANY ROOF OPENING NOT COMPLETED DURING WORKING HOURS.
- 6. COORDINATE ALL PIPING WITH EQUIPMENT, STRUCTURE, ETC.
- 7. CONTRACTOR SHALL NOT SHUT DOWN / TAKE OUT OF SERVICE ANY SYSTEMS WITHOUT FIRST COORDINATING WITH OWNER AND PREPARING M.O.P.

PLUMBING NOTES:

- CONTRACTOR SHALL NOT SHUT-OFF/PUT OUT OF SERVICE ANY SYSTEMS/SERVICES WITHOUT FIRST COORDINATING WITH OWNER.
- 2. THIS CONTRACTOR SHALL COORDINATE LOCATIONS OF PIPING WITH OTHER TRADES AND ADVISE ARCHITECT/ENGINEER OF ANY POSSIBLE CONFLICTS. VERIFY EXACT LOCATIONS, ELEVATIONS AND DIMENSIONS OF STRUCTURAL MEMBERS AND OPENINGS.
- SEE SPECIFICATIONS FOR WATER HAMMER ARRESTOR SIZING. ALL FLUSH VALVES AND SOLENOID OPERATED EQUIPMENT SHALL HAVE A WATER HAMMER ARRESTOR.
- 4. SEE PLUMBING FIXTURE SCHEDULE FOR PIPE SIZING TO INDIVIDUAL PLUMBING FIXTURES.
- ALL EXISTING FIXTURES AND EQUIPMENT TO BE REMOVED SHALL HAVE ALL ASSOCIATED PIPING CONTROLS, HANGERS, SUPPORTS AND ANY MISCELLANEOUS ASSOCIATED SERVICE OR PART REMOVED COMPLETELY.
- 6. ALL MEDICAL GAS PIPING SHALL HAVE TOP TAKE-OFFS WHENEVER POSSIBLE.
- 7. REFER TO ARCHITECTURAL DRAWINGS FOR ROOF PENETRATION DETAILS.8. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE ELEVATIONS AND
- LOCATIONS.
- INVERT ELEVATIONS SHOWN ARE BASED ON A GROUND FLOOR FINISH ELEVATION OF 100 FOOT.
- 10. SEE ARCHITECTURAL CONSTRUCTION DOCUMENTS FOR DIMENSIONED LOCATION OF PLUMBING FIXTURES AND WALLS.
- 11. PROVIDE CLEANOUTS IN ACCESSIBLE LOCATIONS PER THE PROJECT SPECIFICATIONS AND LOCAL PLUMBING CODES.

FOUNDATION PLUMBING NOTES

- CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF ANY WORK.
- 2. COORDINATE WORK WITH ALL TRADES.

OF PLUMBING FIXTURES AND WALLS.

- 3. SEE ARCHITECTURAL CONSTRUCTION DOCUMENTS FOR EXACT LOCATION
- PROVIDE A WALL CLEANOUT ON ALL VERTICAL VENT PIPING SERVING BELOW GRADE HORIZONTAL WASTE PIPING.

DEMOLITION GENERAL NOTES:

- EXISTING ITEMS TO REMAIN ARE DENOTED LIGHTLY UNLESS OTHERWISE NOTED. ALL ITEMS SHOWN DASHED & BOLD SHALL BE REMOVED UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL NOT SHUT-OFF OR PUT-OUT OF SERVICE ANY SYSTEMS OR SERVICE WITHOUT FIRST COORDINATING WITH THE OWNER.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE AND UNDERSTAND THE EXTENT OF THE REMODEL WORK REQUIRED PRIOR TO BID. NO EXTRAS WILL BE ALLOWED FOR WORK REQUIRED TO ACHIEVE THE END RESULT AS INDICATED BY THE CONTRACT DOCUMENT.
- 4. CONTRACTOR SHALL DETERMINE AND COORDINATE THE EXACT EXTENT OF DEMOLITION TO FACILITATE ALL WORK INDICATED BY THE CONTRACT
- PRIOR TO COMMENCEMENT OF ANY DEMOLITION WORK, VERIFY EXISTING CONDITIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
- 6. ALL ITEMS IDENTIFIED TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY UNLESS OTHERWISE NOTED. REMOVED ITEMS SHALL BE TURNED OVER TO THE OWNER UNLESS OTHERWISE NOTED AND STORED IN THE AREA DESIGNATED BY THE OWNER. REMOVE FROM SITE AND LEGALLY DISPOSE OF ALL ITEMS THE OWNER CHOOSES NOT TO ACCEPT.
- 7. WHERE EXISTING PIPING, WIRING ETC. ARE TO BE REMOVED FROM WALLS WHICH ARE REMAINING, THE WALLS SHALL BE REPAIRED TO MATCH ORIGINAL CONDITIONS.
- 8. WHERE EXISTING PIPING TO BE REMOVED PASSES THROUGH FLOORS, THEY SHALL BE CUT BACK TO WITHIN CONCRETE AND FILLED WITH GROUT TO ACHIEVE A SMOOTH AND EVEN FINISH WITH CONCRETE SURFACE.

pivot

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T"

HE DOES NOT MEASURE 1 INCH,
DRAWING IS NOT TO SCALE

CATOR | RUMA & ASSOCIATES, CO. 0 South Orchard Street, Boise, ID 83705 208) 343-3663 • www.catorruma.com

ARMSTRONG PLACE, BOISE, IDAHO 83704

CO Revisions:

Project No: 22-026

Date: 10/12/2022

Checked By: RE

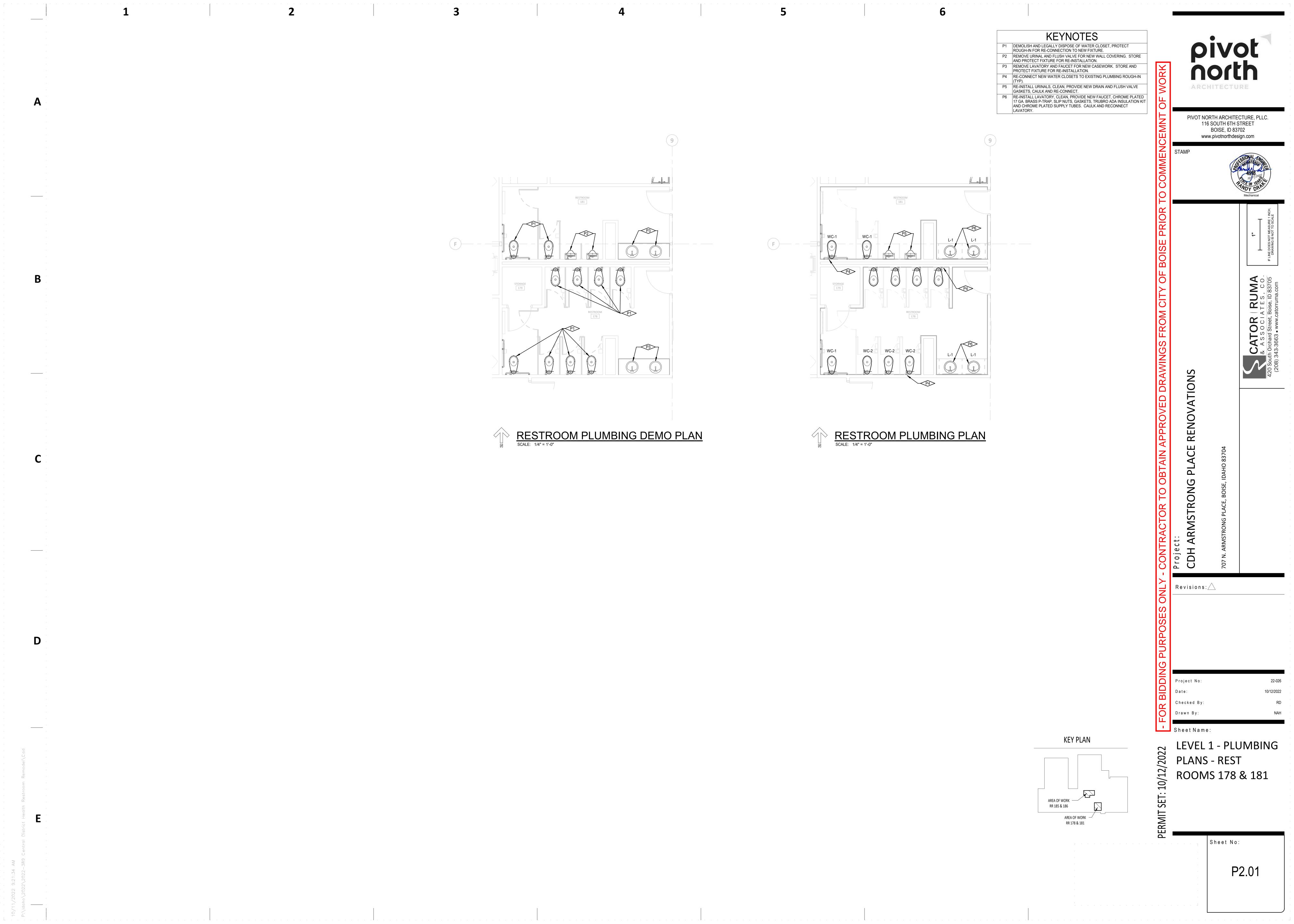
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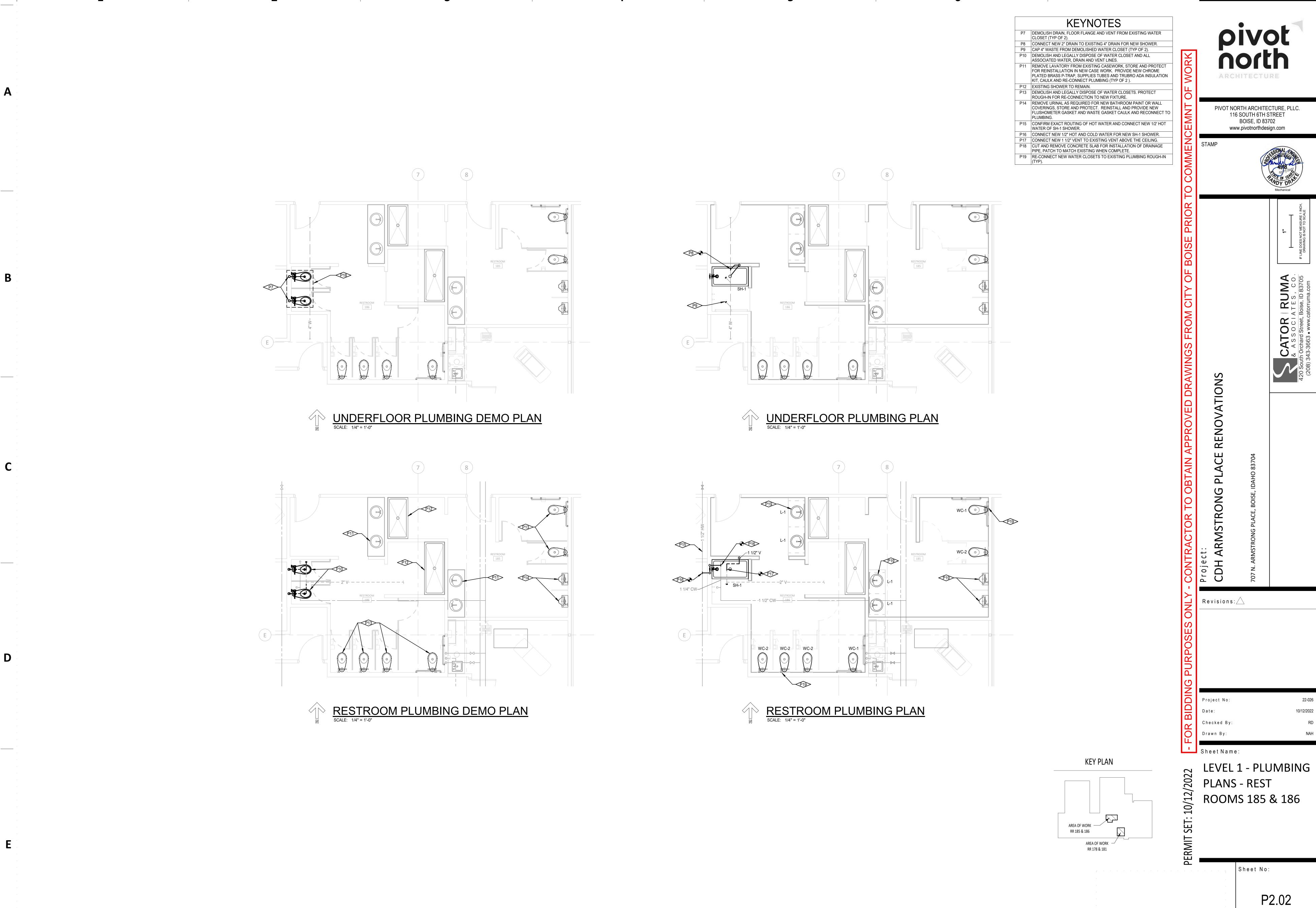
Drawn By:

PLUMBING LEGENDS
& NOTES

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220500 / 230500 GENERAL WORK REQUIREMENTS FOR PLUMBING & HVAC

All work shall conform to latest adopted versions of IBC, SMACNA, ISUPC, IMC, NFPA, IFC, IFGC, IEEC and all other applicable codes enforced by the authorities having jurisdiction. The scope of the work included under this Division of the Specifications shall include mechanical systems as shown on the plans. The Contractor shall provide all supervision, labor, material, equipment, machinery, plant and any and all other items of equipment as indicated on the drawings and as required for complete and operational systems

Contractor shall give all necessary notices; obtain and pay for all permits; pay all government sales taxes, fees and other costs incurred in connection with the work; file all necessary plans; prepare all documents and obtain all required certificates of inspections for his work and deliver same to the Engineer before request for acceptance and final payment for the work.

All materials installed shall bear the UL label and shall be new, full weight, and of best quality with the same brand or manufacturer used for each class of material or equipment. The Contractor shall follow drawings in laying out work, check drawings of other trades and verify onsite conditions in which work will be installed.

The Contractor shall protect all work, material and existing furnishings from damage by his work or workmen and shall be liable for all damage thus caused. All equipment, unless shown otherwise, shall be securely attached to the building structure in an

All work under this section shall be guaranteed in writing to be free of defective work, materials or parts for a period of one year after acceptance of the contract

Contractor shall coordinate the installation of mechanical materials and equipment with all trades.

MECHANICAL SUBMITTALS

Provide electronic copies of all mechanical submittals for the Architect and Engineer's review, identifying the following:

- Supplier and Contractor name, company and all contact information. 2. Schedule or list of all equipment, including make, type, manufacturer's name, and trade designation
- of all materials and equipment to be used and furnished. Include a complete list of all accessories and options provided. Equipment performance, ratings and capacities - include fan curves, blower charts, manufacturer
- construction, finish guarantees and color selections. List all dimensions of equipment, as are necessary to check space requirements.

print outs, air and water pressure drops, RPM values, sound pressure values, equipment

All submittals shall be reviewed, stamped and signed by the General Contractor prior to submission to the Architect and Engineer for review.

RECORD DOCUMENTS

Contractor shall keep a complete set of red-lined record document prints in custody during entire period of construction at the construction site. One (1) set of record documents shall be provided to the Engineer for review, indicating final project conditions after completion of work.

Provide two sets of OPERATION AND MAINTENANCE MANUALS for the Owner to be submitted through the Architect and Engineer for review, identifying the following:

- Equipment model and size.
- Equipment suppliers with addresses and telephone numbers.
- Replacement parts. Service requirements.
- Copies of reviewed submittals for all major equipment.

All work under this section shall be guaranteed in writing to be free of defective work, materials or parts for a period of one year after acceptance of the contract.

SELECTIVE DEMOLITION

Disconnect, demolish and remove mechanical systems, equipment and components indicated to be removed. If pipe, insulation or equipment to remain is damaged in appearance or is unserviceable, remove damaged or unserviceable portions and replace with new products of equal capacity and

- Piping or duct to be removed: Remove portion of piping or duct system indicated on Drawings and cap or plug remaining piping or duct with same or compatible material.
- 2. Piping or duct to be abandoned in place: Drain piping and cap piping or duct with same or compatible material.
- 3. Equipment to be removed: Disconnect and cap services; remove equipment. Equipment to be removed and reinstalled: Disconnect and cap services; remove, clean and store
- equipment; reinstall, reconnect and make equipment operational 5. Equipment to be removed and salvaged: Disconnect and cap services; remove equipment and
- deliver to Owner. 211000 - FIRE PROTECTION SYSTEMS

GENERAL

Comply with requirements of Authority Having Jurisdiction. Comply with requirements of Owner's insurance underwriter.

Submit design drawings, design calculations and installation inspection reports. Include seal and signature of registered NICET Level III designer licensed in jurisdiction. Installer's Qualifications: Firms licensed by State Fire Marshal qualified to install and alter fire

protection in compliance with the requirements of the Authority Having Jurisdiction. Submit shop drawings to fire marshal for review. Shop drawings and hydraulic calculations shall be reviewed, stamped and signed by the Authority

Having Jurisdiction (AHJ) prior to submission to the Architect and Engineer for review.

Steel Pipe: ASTM A 53, Schedule 40 with threaded or roll grooved fittings Steel Pipe: ASTM A 135, Schedule 10 with roll grooved fittings.

FIRE-STOPPING

Fire-Resistant Sealant: U.L. listed for application one-part elastomeric sealant formulated for use in a

SPRINKLER APPLICATIONS

Rooms without Ceilings: Upright sprinklers, chrome plated.

Spaces Subject to Freezing: Upright, pendent dry-type and sidewall dry-type sprinklers

Rooms with Suspended Ceilings: Semi-recessed sprinklers, chrome plated. Wall Mounting: Sidewall sprinklers.

220700 - PLUMBING PIPING INSULATION

When installed indoors, insulation shall have a flame spread rating of 25 or less and a smoke developed rating of 50 or less.

INSULATION MATERIALS

Mineral fiber insulation shall have glass fibers bonded with a thermosetting resin complying with ASTM C 547, Type 1, with factory-applied all-purpose ASJ-SSL vapor retarder jacket.

FIELD APPLIED JACKETS Provide standard PVC fitting covers.

GENERAL APPLICATION REQUIREMENTS

Apply insulation continuously and uninterrupted through all hanger and support load points, and all framing, wall, and floor penetrations in accordance with manufacturer's written instructions.

Insulation application will incorporate valve bodies leaving only valve handles exposed. Provide and install valve stem extensions to accommodate insulation as required.

INSULATION APPLICATION SCHEDULE Domestic Hot, Re-circulated water:

Provide 1" thick for 1-1/4" and smaller 2" thick 1-1/2" and larger, mineral fiber insulation with PVC fitting covers and ASJ-SSL jacket.

Provide 1" thick mineral fiber insulation with PVC fitting covers and ASJ-SSL jacket. Insulation for any piping system not listed shall comply with the International Energy Conservation Code (IECC) latest edition.

221110 - DOMESTIC WATER SYSTEM

All work shall be per the latest edition of Idaho State Uniform Plumbing Code and local codes. All pipe, fittings, and other components installed in domestic water systems shall be NSF-61 certified.

Hard Copper Tube: ASTM B 88, Type K or L, water tube, hard drawn temper with wrought copper solder fittings.

JOINT MATERIALS

Solder: ASTM B 32, Alloy Sn95, Sn94 or E; lead free.

WATER HAMMER ARRESTORS

Bellows Type: Stainless steel casing and bellows, rated for 250psi, 200 degrees F., tested and certified in accordance with PDI Standard WH-201.

Piston Type: 60psi pre-charge, sealed from system water with free sliding piston and EPDM O-rings. Suitable for up to 150psi and 180 thread connections.

FIRE-STOPPING

Fire-Resistant Sealant: U.L. listed for application one-part elastomeric sealant formulated for use in a through-penetration fire-stop system.

CLEANING

Use purging and disinfecting procedures prescribed by Authority Having Jurisdiction or, if method is not prescribed, procedure described in either AWWA C651 or AWWA C652.

221316 - SANITARY WASTE & VENT PIPING

PIPE AND TUBES APPROVED MANUFACTURERS

Tyler

Hubless cast-iron Soil Pipe & Fittings: ASTM A888 and CISPI 301 listed and labeled with no hub compact banded fittings and couplings. Building two (2) stories and less standard 2 band couplings are acceptable, buildings greater than two (2) stories, heavy duty 4 band couplings shall be use on all floors up to the last two stories. The uppermost two (2) stories standard couplings will be acceptable.

Hubless couplings shall be composed of a stainless steel shield, clamp assembly and an elastomeric sealing sleeve conforming to CISPI 130 and ASTM C-564. Joints for hubless pipe and fittings shall conform to manufacturer's installation instructions and local code requirements.

INSTALLATION

Install Hubless cast-iron soil pipe and fittings per CISPI "Cast Iron Soil Pipe and Fittings Handbook" and local code whichever is the most stringent.

Fire-Resistant Sealant: U.L. listed for application one-part elastomeric sealant formulated for use in a

through-penetration fire-stop system

221319 - SANITARY WASTE PIPING SPECIALTIES

All work shall be per the latest edition of ISUPC and local codes.

MANUFACTURERS J. R. Smith

Zurn Wade

TRAP PRIMERS

Bronze body valve with automatic vacuum breaker. Provide with 1/2" connections matching piping system. Compliance with ASSE 1018. Provide "Prime-Rite Trap Primer Valve (PPP) or equivalent.

FLOOR CLEANOUTS

Provide round, cast iron body with recessed bronze closure plug, or PVC with brass center plug. Provide with bronze frame and cover plate.

Provide cleanout tee with raised head brass plug. Provide flat-style chrome plated wall cover plate with hole for 1/4" bolt; 1/4-20 threaded bolt with chrome plated countersunk flat head.

SURFACE CLEANOUTS Provide cast iron body ferrule with raised head brass plug.

6" round nickel bronze adjustable strainer head with secured square hole grate and bottom waste

Provide medium-duty cast iron manhole cover and ring 12" diameter to be set in concrete pad.

FLOOR DRAINS

Toilet Rooms & Finished Areas

Round cast iron body with flashing collar and cast iron ring.

Jay R. Smith 2005-A, or equivalent.

224000 - PLUMBING FIXTURES

All fixtures, faucets, trim and accessories shall be lead-free and shall meet NSF-61 requirements. All angle stops shall be 1/4-turn ball valve type. All trim for fixtures shall be as specified and shall be fully code compliant and operational.

Level, plumb and fully caulk plumbing fixture with mold resistant silicone caulking. Install water shock arrestors at flush valve fixtures as per PDI recommendations. Prime traps for floor drains, floor sinks and open hub drains, where possible utilize flush valve or sink/lavatory tail piece type primers. Where not practical provide adjustable pressure differential type trap primers with shutoff ball valves and access panels (coordinate location with General

230510 / 220510 - BASIC PIPING MATERIALS & METHODS FOR HVAC AND PLUMBING

PIPE AND TUBING MATERIALS

Steel Pipe: ASTM A 53, Schedule 40, black steel pipe, plain ends or threaded and coupled.

Domestic water above grade: Drawn Temper Copper Tubing: ASTM B 88, Type L.

Below Grade Water Service: Ductile iron pipe AWWA C151 or AWWA C115 with AWWA C104 cement-mortar lining, AWWA C900 PVC where allowed by code, or hard drawn temper copper tubing, ASTM B88, Type K with brazed joints.

Sanitary Drainage & Vents Inside Building

Above Grade: Service weight cast iron, no hub with neoprene gaskets; service weight cast iron hub and spigot type with neoprene gaskets; or DWV copper with wrought copper or cast brass fittings. Below Grade: Service weight cast iron, no-hub or hub and spigot type with neoprene compression gaskets; or Schedule 40 PVC DWV with solvent weld joints.

Natural Gas: Schedule 40 black steel pipe, with 150 lb. malleable iron fittings and threaded joints for 2" and less. Welded joints for 2-1/2" and larger (above grade only).

FITINGS

Wrot copper sweat fittings: ASTM B75 with ASTM B 32, Alloy Sn95, Sn94 or E; lead free solder. Malleable-Iron Threaded Fittings: ANSI B16.3, Class 150, standard pattern. Butt weld class 150 steel weld fittings: ASME B16.9 & ASTM A234 WPB, steel Flanges and flanged Grooved fittings: ductile iron ASTM A536, grade 65-45-12, malleable iron ASTM A47, fabricated carbon steel ASTM A53 grade B.

Provide ASTM F492PP dielectric couplings between copper and steel pipe connections.

FIRE-STOPPING

Fire-Resistant Sealant: U.L. listed for application one-part elastomeric sealant formulated for use in a through-penetration fire-stop system.

ADJUSTING AND CLEANING

Clean and flush hydronic piping systems. Chemical Treatment: Provide a water analysis and initial treatment after completion of system testing

and cleaning. Provide corrosion inhibitor as recommended by chemical treatment Contractor.

230523 / 220523 - GENERAL DUTY VALVES FOR HVAC & PLUMBING

General duty valves common to most mechanical piping systems. Comply with ASME B31.9 for building services piping.

Comply with MSS Standard Practices referenced.

PRODUCTS Ball Valves: MSS SP-110, full port, class 150, 600 psi cwp, bronze body, chrome plated brass ball and Gate Valves (2 1/2" and smaller): MSS SP-80, class 125, 200 psi cwp, bronze body.

Gate Valves (3" and larger): MSS SP-85, class 125, 200 psi cwp, cast iron body. Butterfly Valves: MSS SP-76, 200psi cwp, cast iron body, lug type or grooved. Swing Check Valves (2 1/2" and smaller): MSS SP-80, class 125, 200 psi cwp, bronze body.

Swing Check Valves (3" and larger): MSS SP-71, class 125, 200 psi cwp, cast iron body.

230529 / 220529 - HANGERS & SUPPORTS FOR HVAC AND PLUMBING PIPING AND EQUIPMENT

Hangers and supports for mechanical systems piping and equipment, including seismic restraints per

Manufactured Unit Hangers, Supports and Components: Factory fabricated according to MSS SP-58.

IBC in accordance with the latest SMACNA Seismic Design Guide for seismic zones as identified by

current IBC.

Hanger and support applications and installation shall comply with MSS SP-69 and SP-89. Install hangers, supports, clamps and attachments as required to properly support piping from building Hanger spacing shall as a minimum meet the ISUPC or local plumbing and mechanical codes. Equipment support requires fabricated structural steel stands to suspend equipment from structure above or support equipment above floor.

Insulated Piping shall comply with the following installation requirements:

PIVOT NORTH ARCHITECTURE, PLLC. 116 SOUTH 6TH STREET BOISE, ID 83702

www.pivotnorthdesign.com

STAMP

Provide and install protective sheet metal shields MSS Type 40 on cold piping 2" and less.

Provide and install asbestos-free calcium silicate insert encased with a vapor barrier, and a sheet

Shield shall span an arc of 180 degrees and shall be minimum 8" in length.

END OF SECTION

metal shield for piping 2-1/2" and larger to prevent crushing damage to insulation.

Duct Hangers: All duct hangers shall be sheet metal strapping, or angle iron in compliance with

SMACNA guidelines. Use attachments appropriate for building materials. Verify with Structural

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