City of Aurora Public Works Department

BUILDING PERMIT APPLICATION

Building Division • 15151 E. Alameda Parkway, Ste 2400 • Aurora, CO 80012 • 303-739-7420 • Fax: 303-739-7412
Email: ***permitcounter@auroragov.org***

Project Address	1400 SOUTH POTOMAC, AURORA, COLORADO		**Unit #** 180
Project Name:	INVISION SALLY JOBE AT 1400 SO. POTOMAC		
Contractor Company Name	TBD	**Phone**	**Fax**
Contact Person	LEE GAGNE'	**Phone**	
Email	l.gagne@hurley-gagne.com		**Fax** na
Architect and/or Engineer Contact information for correction items		HURLEY & GAGNE', INC	
Architect or Engineer name	LEE GAGNE	**Email**	l.gagne@hurley.gagne.com
Phone	303-413-1868	**Fax**	
Owner (Required for Certificate of Occupancy) only		INVISION/SALLY JOBE	
Owner address	~~200~~ 10700 S. GEDDES, SUITE 200, ENGLEWOOD CO.		
Email	—		
Valuation / FDA:$	$150,000	**Materials Cost: $**	$75,000

FDA = Fee Determination Assessment. (Also known as the value of project) has no relationship to the construction costs for the building which can vary greatly. Rather, The assessment is used only to determine the appropriate level of fees to fund our code compliance activities.

Describe The Work You Will Be Doing: RENOVATING OF 1,910 SQ. FT OF A MEDICAL OFFICES BULDING, TENET FINISH RENOVATION.

I declare under penalty that this application has been examined by me and that the statements made herein are made in good faith pursuant to City of Aurora tax and licensing regulations; and to the best of my knowledge and belief are true, correct and complete.

Print Name LEE GAGNE' **Signature** [signature] **Date** 03/05/2014

BOARD OF APPEALS: Contractor's Appeals and Standards Board. Applicants have the right to have the board hear appeals of orders, decisions or determinations made by the building official relative to the application and interpretation of the building code. Any application for appeal to the board shall be based on a claim that the true intent of the code or the rules legally adopted there under have been incorrectly interpreted, the provisions of the building code do not fully apply or an equally good or better form of construction is proposed.

THIS SPACE FOR OFFICE USE ONLY

Fee Determination Assessment: $ 150,000.00

Change of occupancy/use: ☐ Yes ☐ No

REVIEWS
- ☒ Structural
- ☒ Mechanical
- ☒ Plumbing
- ☒ Electrical
- ☐ Fire-Life Safety
- ☒ Building Life Safety

INSPECTIONS
- ☒ Structural
- ☒ Mechanical
- ☒ Plumbing
- ☒ Electrical
- ☒ Life Safety
- ☐ Gate/Hazard

Intake Date: 3/5/14

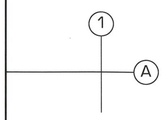
Balance Due: $

PRE APPROVAL Initial ____ ☐ Zoning ☐ Water
Exterior changes? ☐ Yes ☒ No
Homeowner verified: ☐ Yes ☐ No
Permit Type: LT.
Mid roof / Ave Bldg Height:
Parent Permit RSN:
Plans Examiner: PM
Subtype: T.I.
RSN: 87546

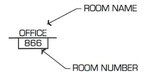
Plans Picked Up By:
Company Name:
Phone Number

DRAWING REFERENCES & SYMBOLS

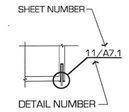
DRAWING REFERENCES & SYMBOLS



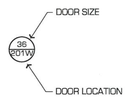
COLUMN CENTER LINES



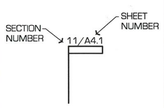
ROOM NUMBER



DETAIL REFERENCE

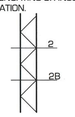


DOOR REFERENCE

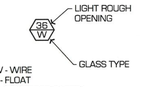


SECTION REFERENCE

NOTE: PARTITION REFERENCE ACCOMPANIED BY A "B" DENOTES SOUND ATTENUATING OR INSULATING BATT INSULATION

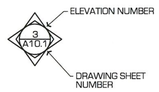


PARTITION TYPE



W - WIRE
F - FLOAT
T - TEMPERED SAFETY
F - FIRE RATED GLASS

BORROWED LIGHT



ELEVATION REFERENCE

DRAWING SYMBOLS

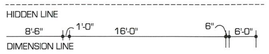
- EARTH
- GRAVEL
- ASPHALT
- CONCRETE
- MORTAR OR PLASTER
- CONCRETE BLOCK
- BRICK
- STONE
- STRUCTURAL
- GLASS
- INSULATION (LOOSE OR BATT)
- ACOUSTICAL TILE
- INSULATION (RIGID)
- WOOD (ROUGH)
- WOOD (FINISH)
- WOOD STUD PARTITION
- METAL STUD PARTITION
- EXISTING PARTITION TO REMAIN
- EXISTING PARTITION TO BE REMOVED
- STEEL (ALL SCALES)
- GYPSUM BOARD
- PLYWOOD
- PARTICLE BOARD
- ALUMINUM

DRAWING REFERENCES & ABBREVIATIONS

LINE REFERENCES

EQUIPMENT N.I.C./B.O.

HIDDEN LINE



DIMENSION LINE

CENTER LINE

FINISH FLOOR LINE

PROPERTY AND BOUNDARY LINE

EXISTING PARTITIONS TO BE REMOVED

W W W W W

UTILITY, ELECTRICAL AND TELEPHONE LINES

P - POWER
T - TELEPHONE
S - SANITARY SEWER
W - WATER
G - GAS

ABBREVIATIONS

A.F.F.	ABOVE FINISH FLOOR
@	AT
<	ANGLE
B.O.	BY OWNER CONTRACTOR INSTALLED EQUIPMENT, FURNISHED BY OWNER. CONTRACTOR TO RELOCATE AND/OR INSTALL AND CONNECT ALL SERVICES.
℄	CENTER LINE
DIM	DIMENSION
EL OR ELEV	ELEVATION
FL.	FLOOR
F.V.	FIELD VERIFY
HC.	HANDICAP
MIN	MINIMUM
MAX	MAXIMUM
N.I.C.	NOT IN CONTRACT EQUIPMENT NOT FURNISHED AS PART OF THE CONSTRUCTION CONTRACT. THE OWNER WILL FURNISH, SET IN PLACE, AND CONNECT OR WILL CONTRACT SEPARATELY TO HAVE THE EQUIPMENT FURNISHED, PLACED, AND CONNECTED TO SERVICES IF ANY.
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
RE:	REFER TO OR REFERENCE
R.O.	ROUGH OPENING
R.	RADIUS
SIM.	SIMILAR
TYP.	TYPICAL
W/	WITH
EWC	ELECTRIC WATER COOLER
FHC	FIRE HOSE CABINET
FEC	FIRE EXTINGUISHER CABINET
EQUIP	EQUIPMENT
CG	CORNER GUARD
MO	MASONRY OPENING
FD	FLOOR DRAIN

GENERAL NOTES

GENERAL NOTES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY AND ALL BUILDING PERMITS.

EXISTING CONDITIONS PLANS REFLECT GENERAL EXISTING CONDITIONS. NO INFERENCE IS MADE THAT ALL EXISTING CONDITIONS ARE SHOWN. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS IN THE AREAS OF CONSTRUCTION PRIOR TO SUBMITTING PRICES AND COMMENCING WORK.

ALL WORK SHALL COMPLY WITH AND BE IN ACCORDANCE WITH THE MINIMUM CONSTRUCTION STANDARDS OF ALL APPLICABLE STATE AND LOCAL CODES.

ALL WORKMANSHIP AND INSTALLATIONS SHALL BE AS ESTABLISHED BY GOOD AND NORMAL BUILDING PRACTICE AND MANUFACTURER'S INSTALLATION REQUIREMENTS.

PROJECT PHASING, SITE ACCESS AND TEMPORARY UTILITIES SHALL BE COORDINATED WITH THE OWNER.

THE CONTRACTOR SHALL CONTACT THE OWNER A MINIMUM OF SEVEN DAYS PRIOR TO COMMENCING DEMOLITION TO SCHEDULE THE FUTURE WORK.

THE CONTRACTOR SHALL MINIMIZE INTERFERANCE OF CONSTRUCTION WORK WITH ON-GOING BUSINESS IN THE EXISTING BUILDING. THE CONSTRUCTION AREA SHALL BE CLOSED OFF TO KEEP OTHER AREAS FREE OF DUST, DEBRIS AND NOISE.

THE CONTRACTOR SHALL KEEP PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS AND DEBRIS.

DIMENSIONS OF AND FROM EXISTING CONDITIONS HAVE HAVE BEEN TAKEN FROM EXISTING DRAWINGS AND/OR FIELD MEASUREMENTS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PERTAINING TO EXISTING CONDITIONS PRIOR TO THE START OF CONSTRUCTION.

DIMENSIONS FOR NEW CONSTRUCTION ARE ROUGH AND TO FACE OF STUD (UNLESS NOTED OTHERWISE). DIMENSIONS FROM EXISTING SURFACES ARE FROM FINISHED SURFACE. ALL DIMENSIONS ON INTERIOR ELEVATIONS ARE FINISH DIMENSIONS.

VERIFY ALL ROUGH-IN DIMENSIONS AND INSTALLATION REQUIREMENTS FOR EQUIPMENT WITH MANUFACTURER PRIOR TO ROUGH-IN.

THE CONTRACTOR SHALL PROVIDE ADEQUATE BLOCKING IN WALLS TO RECEIVE ALL ATTACHED EQUIPMENT, PLUMBING FIXTURES, MILLWORK, CASEWORK, HAND RAILS, ETC.

INSTALL ALL MATERIALS AND COMPONENTS IN NEW CONDITION (UNLESS NOTED OTHERWISE) PER MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS FULLY WARRANTED.

THE OWNER SHALL BE CONTACTED IN REGARDS TO ANY SALVAGEABLE MATERIAL OR EQUIPMENT REMOVED DURING CONSTRUCTION.

"TYPICAL" DRAWINGS REFER TO AREAS OF SIMILAR CONFIGURATION AS BEING TYPICAL THROUGHOUT, UNLESS NOTED OTHERWISE. ACTUAL CONDITIONS MAY VARY BUT DO NOT REVOKE THE INTENT OF THE CONFIGURATION INTENDED.

REVIEW DEMOLITION OF AND PENETRATIONS THROUGH EXISTING BUILDING STRUCTURE WITH STRUCTURAL ENGINEER WHERE POTENTIAL OF ENCOUNTERING BEARING MEMBERS EXISTS.

PATCH ALL EXISTING FLOORS, WALLS, CEILINGS, ROOFS, PAVING AND ANY OTHER AFFECTED SURFACES TO MATCH EXISTING MATERIALS AND FINISHES WHERE DISTURBED BY CONSTRUCTION.

THE CONTRACTOR SHALL MAINTAIN THE EXISTING STRUCTURAL AND FIREPROOFING INTEGRITY THROUGHOUT THE ENTIRE PROJECT AREA.

ANY DEMOLITION WHICH WILL CAUSE A DISTURBANCE TO EXISTING TENANTS WITHIN THE BUILDING SHALL BE ACCOMPLISHED AFTER HOURS.

CONTRACTOR SHALL DEMOLISH THE MECHANICAL, PLUMBING AND ELECTRICAL SYSTEMS BACK TO THE MAINS ON THE FLOOR. PIPING, CONDUIT, WIRING AND DUCTWORK SHALL NOT BE ABANDONED IN PLACE ABOVE THE CEILING. ALL UNUSED DATA AND TELEPHONE WIRING ABOVE THE CEILING SHALL BE DEMOLISHED BACK TO THE MAIN DISTRIBUTION SYSTEMS.

DUTY OF COOPERATION: RELEASE OF THESE DOCUMENTS ANTICIPATES FURTHER COOPERATION AMONG THE OWNER, CONTRACTOR AND ARCHITECT. ALTHOUGH THE ARCHITECT AND HIS CONSULTANTS HAVE PERFORMED THEIR SERVICES WITH DUE CARE AND DILIGENCE, THEY CANNOT GUARANTEE PERFECTION. ANY AMBIGUITY OR DISCREPANCY DISCOVERED SHALL BE REPORTED IMMEDIATELY TO THE ARCHITECT. FAILURE TO COOPERATE BY A SIMPLE NOTICE TO THE ARCHITECT SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ALL CONSEQUENCES. CHANGES MADE FROM THE PLANS WITHOUT THE CONSENT OF THE ARCHITECT ARE UNAUTHORIZED, AND SHALL RELIEVE THE ARCHITECT OF RESPONSIBILITY FOR ALL CONSEQUENCES ARRIVING OUT OF SUCH CHANGES.

INVISION
SALLY JOBE
Imaging by RIA and HealthONE

INVISION SALLY JOBE AT 1400 SOUTH POTOMAC
IMAGING CENTER RENOVATION - PHASE 1A & 1B

CODE INFORMATION & KEY PLAN

CODE INFORMATION

TENANT
RADIOLOGY IMAGING ASSOCIATES
10700 EAST GEDDES AVENUE
SUITE 200
ENGLEWOOD, COLORADO

PROJECT LOCATION
1400 SOUTH POTOMAC STREET
SUITE 180
AURORA, COLORADO 80012

BUILDING CODES
2009 INTERNATIONAL BUILDING CODE
2009 INTERNATIONAL FUEL GAS CODE
2009 INTERNATIONAL EXISTING BUILDING CODE
2009 INTERNATIONAL MECHANICAL CODE
2011 NATIONAL ELECTRICAL CODE
2009 INTERNATIONAL PLUMBING CODE
2009 INTERNATIONAL ENERGY CONSERVATION CODE
2009 INTERNATIONAL FIRE CODE
2009 ICC/ANSI A117.1 ACCESSABLE USEABLE BUILDINGS & FACILITIES

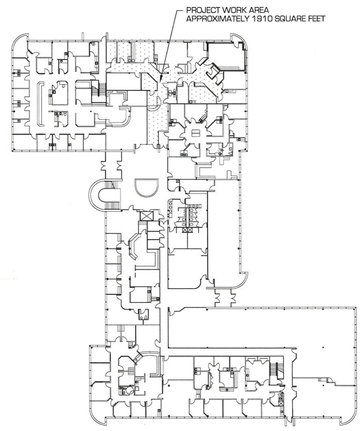
OCCUPANCY TYPE
BUSINESS GROUP B

PROJECT SQUARE FOOTAGE
APPROXIMATELY 1910 SQUARE FEET

FIRE PROTECTION
SPRINKLERED IBC 11.1 SPK

FIRE ZONE
AURORA FIRE DEPARTMENT

KEY PLAN



INVISION - SALLY JOBE AT LONE TREE
GROUND FLOOR PLAN

INDEX OF DRAWINGS & PROJECT TEAM

INDEX OF DRAWINGS

ARCHITECTURAL

TS	TITLE & INFORMATION SHEET
A2.1	DEMOLITION PLAN - PHASE 1A & 1B
A3.1	SUITE FLOOR PLAN - PHASE 1A & 1B
A3.2	SUITE REFLECTED CEILING PLAN AND EQUIPMENT SCHEDULE - PHASE 1A & 1B
A3.3	INTERIOR FINISH PLAN - PHASE 1A & 1B
A9.1	INTERIOR DETAILS
A9.2	INTERIOR DETAILS
A10.1	INTERIOR ELEVATIONS
A10.2	INTERIOR ELEVATIONS

STRUCTURAL

S3.1	GENERAL NOTES, FOUNDATION PLAN, AND FOUNDATION SECTIONS

MECHANICAL

M0.0	MECHANICAL SPECIFICATIONS, LEGEND, NOTES & SCHEDULES
M2.1	MECHANICAL DEMOLITION PLAN - PHASE 1A & 1B
M3.1	MECHANICAL FLOOR PLAN - PHASE 1A & 1B
P0.0	PLUMBING SPECIFICATIONS, LEGEND, NOTES & SCHEDULES
P2.1	PLUMBING DEMOLITION PLAN - PHASE 1A & 1B
P3.0	PLUMBING FLOOR PLAN - PHASE 1A & 1B

ELECTRICAL

ED1.0	ELECTRICAL DEMOLITION PLAN
E1.0	ELECTRICAL LIGHTING PLAN & FIXTURE SCHEDULE
E2.0	ELECTRICAL POWER PLAN
E3.0	MEDICAL IMAGING TECHNOLOGIES
E4.0	ELECTRICAL ICNE LINE & PANEL SCHEDULES

In buildings provided with an Automatic Fire Sprinkler System, new or existing Fire Alarm Systems shall be connected to the exterior horn/strobe. (Aurora Fire Dept. Policy)

PROJECT TEAM

ARCHITECT
LEE GAGNE'
HURLEY & GAGNE'
P.O. BOX 3209
BOULDER, COLORADO 80307-3209
TELEPHONE 303.413.1868
EMAIL lee.gagne@hurley-gagne.com

STRUCTURAL ENGINEER
TIMOTHY J. WEBB, P.E.
INTEGRAL, INC.
2590 31 STREET
BOULDER, COLORADO 80301
TELEPHONE 303.495.5206
EMAIL timw@1structural.com

MECHANICAL ENGINEER
BRYAN MOEN, P.E.
MOEN ENGINEERING CONSULTANTS, INC.
4191 WEST 98TH WAY
WESTMINSTER, COLORADO 80031
TELEPHONE 303.907.42851
EMAIL bmoen@mecengr.com

ELECTRICAL ENGINEER
JEFF NIELSEN, P.E.
JCN ENGINEERING, INC.
3281 ROUTT STREET
WHEAT RIDGE, COLORADO 80033
TELEPHONE 303.239.0736
EMAIL jcneng@comcast.net

STRUCTURAL PLAN REVIEW IS LIMITED TO A GENERAL SURVEY FOR CODE COMPLIANCE. NO REVIEW IS IMPLIED NOR WAS UNDERTAKEN TO VERIFY STRUCTURAL ADEQUACY.

SEPARATE FIRE SPRINKLER PERMIT REQUIRED
Due to the proposed work the general contractor is required to obtain the services of a fire sprinkler contractor to determine if a separate sprinkler permit is required. If it is determined that the spacing of the fire sprinkler heads is not in compliance, then a separate fire sprinkler permit is required. Approval of the documents is required prior to system installation or any request for inspection. A certificate of occupancy or final approval cannot be issued by the Building Division without this fire protection system. **2009 IFC, Section 105.7.1.**

SEPARATE FIRE ALARM PERMIT REQUIRED
Due to the proposed work the general contractor is required to obtain the services of a fire alarm contractor to determine if a separate alarm permit is required. If it is determined that the spacing of the fire alarm devices is not in compliance, then a separate fire alarm permit is required. Approval of the documents is required prior to system installation or any request for inspection. A certificate of occupancy or final approval cannot be issued by the Building Division without this fire protection system. **2009 IFC, Section 105.7.5.**

Field inspection consultation is available upon request. Call 303-739-7420 to request a consultation.

Failure to follow the approved plans may result in an hourly fee to review the field changes for code compliance.

This plan was reviewed for adopted codes and NOT reviewed for compliance with ADA or FHA accessibility. Contact 800-949-4232 (ADA) and 303-894-7822x325 (FHA) for federal accessibility requirements that apply to your project.

Code violations that are found during inspection are required to be corrected. Permit issuance does not grant approval of a code violation **2009 IBC 105.4**

NEW C.O. IS NOT REQ'D
City of Aurora Plan Review
Occ./Const. Type B / II-N SPK
Code 2009 IBC S.F. 1,900
RSN 8054446
Permit Number 14-822618/BLD

14-822618
CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 03/13/14
'09 IBC

HURLEY & GAGNE, INC.
ARCHITECTURE PLANNING
P.O. BOX 3209
BOULDER, COLORADO 80307
303.413.1868

STATE OF COLORADO
LEE S. GAGNE
C4289
13-04-2014
LICENSED ARCHITECT

INVISION - SALLY JOBE AT 1400 SOUTH POTOMAC
IMAGING CENTER RENOVATION - PHASE 1A & 1B
AURORA, COLORADO

PROJECT #	2014.01
DATE	28 FEB 2014
SCALE	AS NOTED
REV	
REV	
FILE	INVPM_TS

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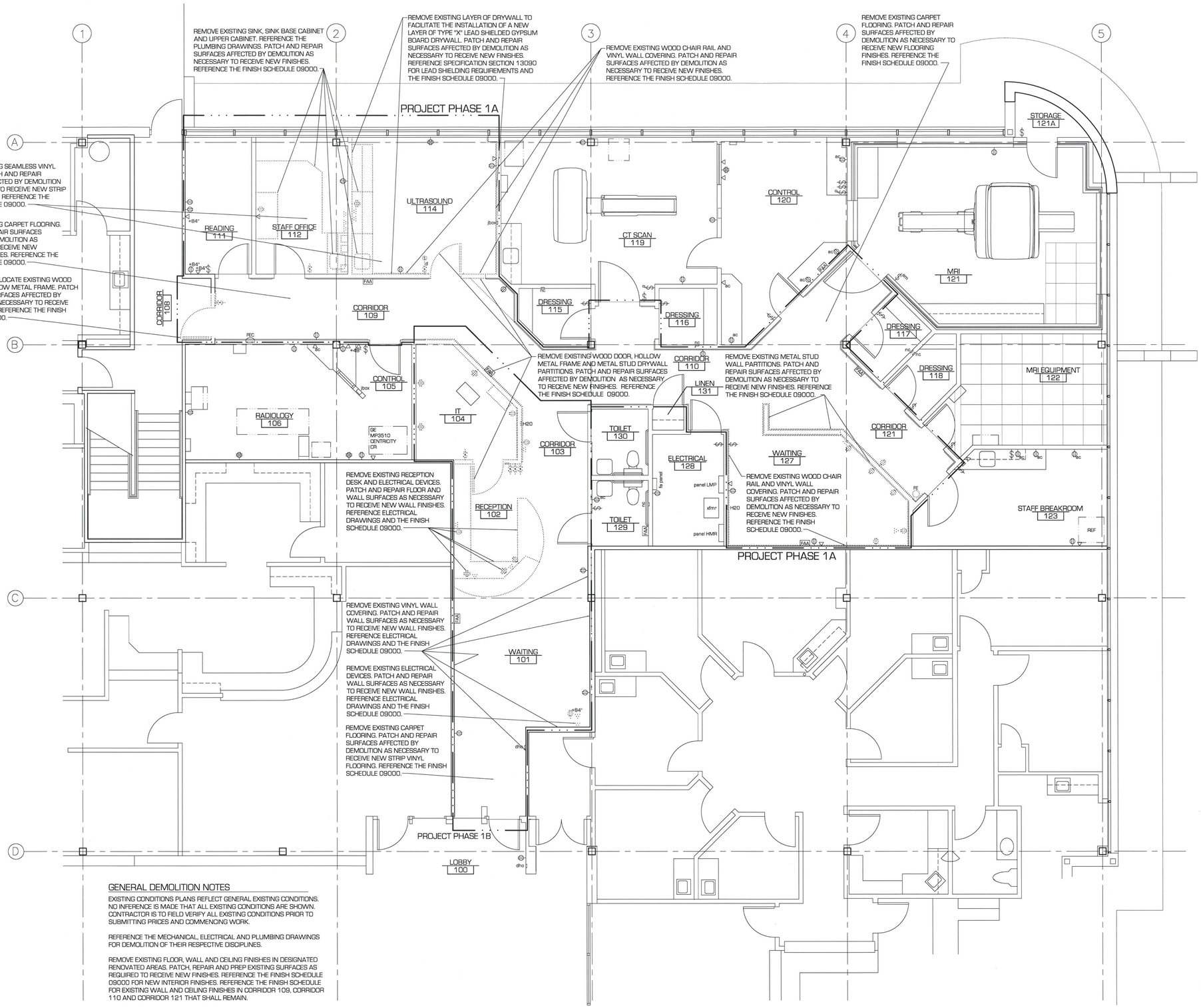
TITLE & INFORMATION SHEET

TS



GENERAL DEMOLITION NOTES

EXISTING CONDITIONS PLANS REFLECT GENERAL EXISTING CONDITIONS. NO INFERENCE IS MADE THAT ALL EXISTING CONDITIONS ARE SHOWN. CONTRACTOR IS TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING PRICES AND COMMENCING WORK.

REFERENCE THE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR DEMOLITION OF THEIR RESPECTIVE DISCIPLINES.

REMOVE EXISTING FLOOR, WALL AND CEILING FINISHES IN DESIGNATED RENOVATED AREAS. PATCH, REPAIR AND PREP EXISTING SURFACES AS REQUIRED TO RECEIVE NEW FINISHES. REFERENCE THE FINISH SCHEDULE 09000 FOR NEW INTERIOR FINISHES. REFERENCE THE FINISH SCHEDULE FOR EXISTING WALL AND CEILING FINISHES IN CORRIDOR 109, CORRIDOR 110 AND CORRIDOR 121 THAT SHALL REMAIN.

REMOVE EXISTING RESILIENT FLOOR BASE THROUGHOUT THE SUITE IN EACH APPLICABLE PROJECT PHASE. PATCH AND REPAIR WALL SURFACES AS NECESSARY TO RECEIVE NEW RESILIENT FLOOR BASE. REFERENCE THE FINISH SCHEDULE 09000.

CONTRACTOR TO REMOVE, CLEAN AND STORE EXISTING SUITE WINDOW COVERINGS DURING CONSTRUCTION IN EACH PROJECT PHASE. RE-INSTALL WINDOW COVERINGS IN THEIR ORIGINAL LOCATION PRIOR TO FINAL OCCUPANCY.

1 SUITE DEMOLITION FLOOR PLAN - PHASE 1A & 1B
1/4" = 1'-0"
RE:

14-822618

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 03/13/14

HURLEY & GAGNE, INC.
ARCHITECTURE PLANNING
P.O. BOX 3209
BOULDER, COLORADO 80307
303.413.1868

STATE OF COLORADO
LEE S. GAGNE
C4289
LICENSED ARCHITECT

INVISION SALLY JOBE AT 1400 SOUTH POTOMAC IMAGING CENTER RENOVATION - PHASE 1A & 1B AURORA, COLORADO

PROJECT #	2014.01
DATE	28 FEB 2014
SCALE	1/4" = 1'-0"
REV	
REV	
FILE	INVSJA_A2.1

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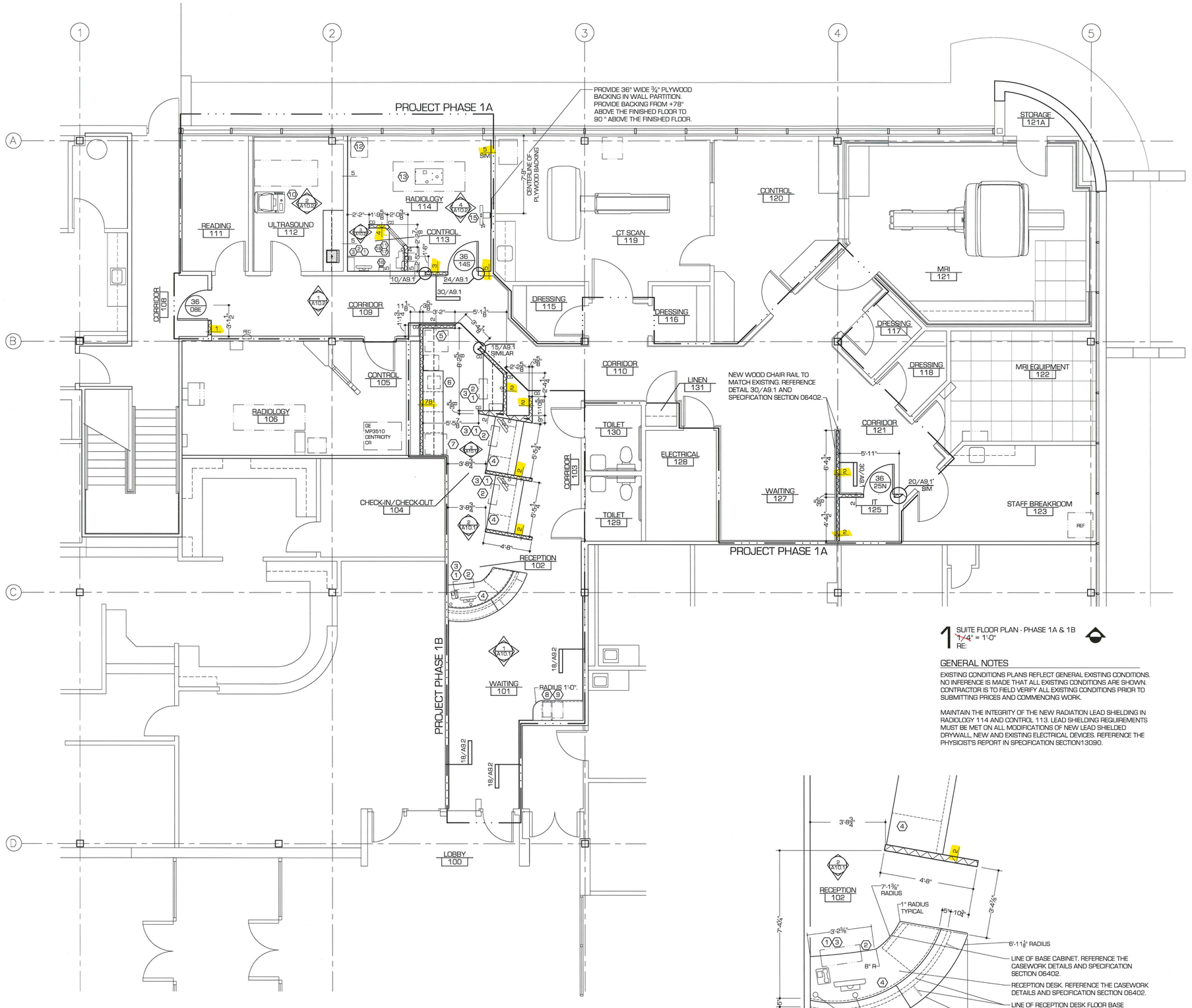
DEMO FLOOR PLAN PHASE 1A & 1B

A2.1



1 SUITE FLOOR PLAN - PHASE 1A & 1B
1/4" = 1'-0"
RE:

GENERAL NOTES

EXISTING CONDITIONS PLANS REFLECT GENERAL EXISTING CONDITIONS. NO INFERENCE IS MADE THAT ALL EXISTING CONDITIONS ARE SHOWN. CONTRACTOR IS TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING PRICES AND COMMENCING WORK.

MAINTAIN THE INTEGRITY OF THE NEW RADIATION LEAD SHIELDING IN RADIOLOGY 114 AND CONTROL 113. LEAD SHIELDING REQUIREMENTS MUST BE MET ON ALL MODIFICATIONS OF NEW LEAD SHIELDED DRYWALL, NEW AND EXISTING ELECTRICAL DEVICES. REFERENCE THE PHYSICIST'S REPORT IN SPECIFICATION SECTION13090.

NOTE: SOFFIT FASCIA ABOVE MATCHES RADIUS OF PRE-CAST CONCRETE TRANSACTION SHELF.

2 ENLARGED FLOOR PLAN - RECEPTION DESK
1/4" = 1'-0"
RE: 1/A3.1

14-822618

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 08/13/14

HURLEY & GAGNE, INC.
ARCHITECTURE PLANNING
P.O. BOX 3209
BOULDER, COLORADO 80307
303.413.1866

STATE OF COLORADO
LEE S. GAGNE
C4289
LICENSED ARCHITECT

INVISION SALLY JOBE AT 1400 SOUTH POTOMAC
IMAGING CENTER RENOVATION - PHASE 1A & 1B
AURORA, COLORADO

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REV	
REV	
FILE	INVSJA_A3.1

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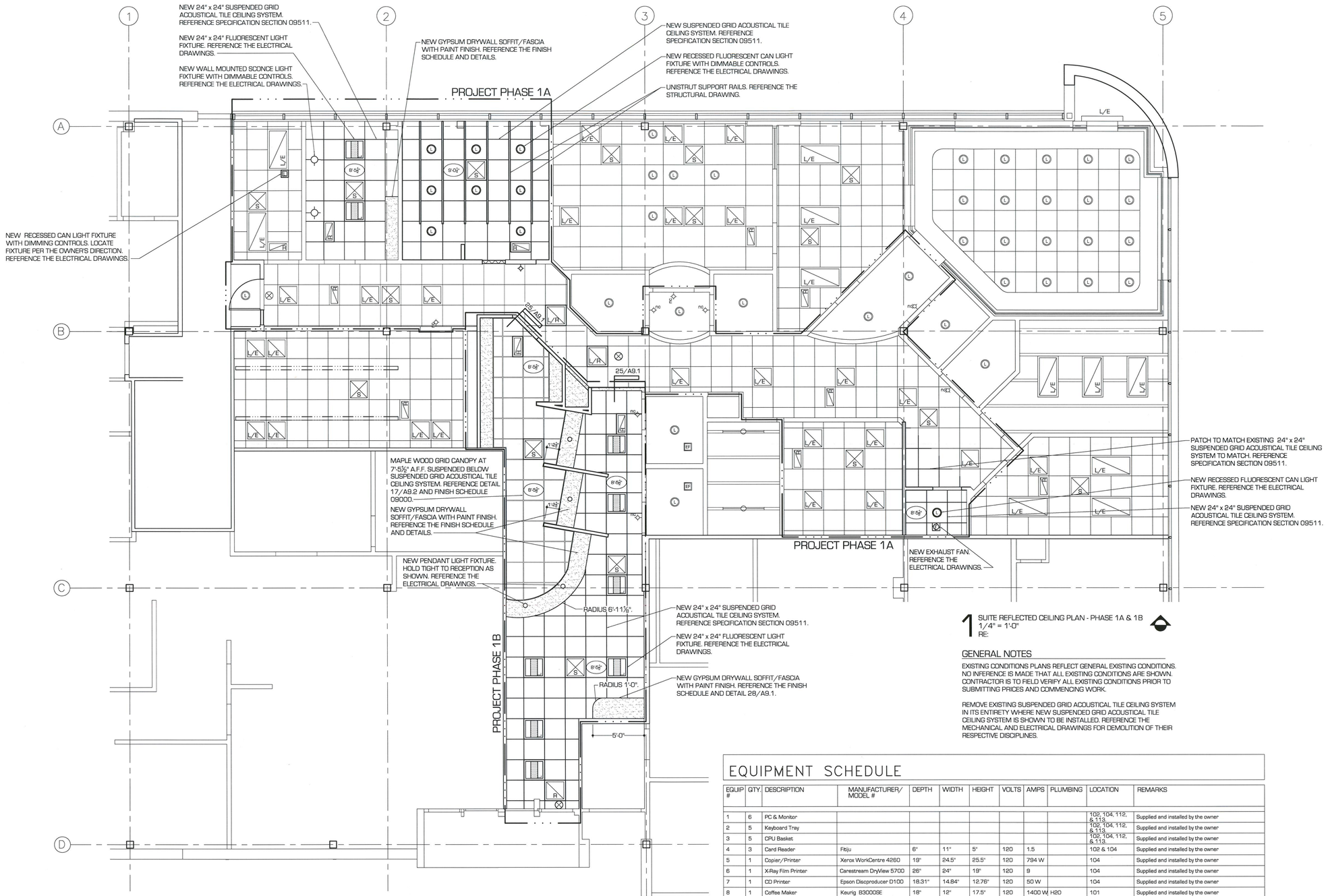
SUITE FLOOR PLAN PHASE 1A & 1B

A3.1



1 SUITE REFLECTED CEILING PLAN - PHASE 1A & 1B
1/4" = 1'-0"
RE:

GENERAL NOTES

EXISTING CONDITIONS PLANS REFLECT GENERAL EXISTING CONDITIONS. NO INFERENCE IS MADE THAT ALL EXISTING CONDITIONS ARE SHOWN. CONTRACTOR IS TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING PRICES AND COMMENCING WORK.

REMOVE EXISTING SUSPENDED GRID ACOUSTICAL TILE CEILING SYSTEM IN ITS ENTIRETY WHERE NEW SUSPENDED GRID ACOUSTICAL TILE CEILING SYSTEM IS SHOWN TO BE INSTALLED. REFERENCE THE MECHANICAL AND ELECTRICAL DRAWINGS FOR DEMOLITION OF THEIR RESPECTIVE DISCIPLINES.

REFLECTED CEILING PLAN LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUSPENDED GRID ACOUSTICAL TILE CEILING SYSTEM	L	WALL SURFACE MOUNTED LIGHT FIXTURE,LETTER DENOTES FIXTURE TYPE.
	SUSPENDED GYPSUM BOARD CEILING SYSTEM	X1	EXIT SIGN - ARROW(S) WHERESHOWN, SOLID INDICATESFACE OR FACES. ON UNSWITCHED HALLWAY OR AREA CIRCUIT.
CORRIDOR 171	ROOM NAME/NUMBER DESIGNATION		BATTERY PACK EGRESS LIGHT. ON UNSWITCHED HALLWAY OR AREA CIRCUIT.
8'-11½"	HEIGHT OF CEILING ABOVE FINISHED FLOOR 8'-6⅝" UNLESS NOTED OTHERWISE	G	CEILING RECESSED LIGHT FIXTURE, LETTER DENOTES FIXTURE TYPE.
	SUPPLY AIR DIFFUSER	E	SURFACE MOUNTED FLUORESCENTLIGHT FIXTURE, LETTER DENOTES FIXTURE TYPE.
R	RETURN AIR DIFFUSER	A	RECESS MOUNTED FLUORESCENT "NIGHT" LIGHT FIXTURE, LETTER DENOTES FIXTURE TYPE.
sp	FIRE PROTECTION SPRINKLER HEAD	A	RECESS MOUNTED FLUORESCENTLIGHT FIXTURE, LETTER DENOTES FIXTURE TYPE.
		J	JUNCTION BOX
			FIRE ALARM HORN STROBE, 80" ABOVE FLOOR OR 6" BELOW CEILING, WHICHEVER IS LOWER.
		80	FIRE ALARM STROBE ONLY, 80" ABOVE FLOOR OR 6" BELOW CEILING, WHICHEVER IS LOWER.
		SP	SPEAKER
		S	SMOKE DETECTOR
			ANNUNCIATING LIGHT
			EXHAUST FAN

EQUIPMENT SCHEDULE

EQUIP #	QTY.	DESCRIPTION	MANUFACTURER/ MODEL #	DEPTH	WIDTH	HEIGHT	VOLTS	AMPS	PLUMBING	LOCATION	REMARKS
1	6	PC & Monitor								102, 104, 112, & 113	Supplied and installed by the owner
2	5	Keyboard Tray								102, 104, 112, & 113	Supplied and installed by the owner
3	5	CPU Basket								102, 104, 112, & 113	Supplied and installed by the owner
4	3	Card Reader	Fitjiu	6"	11"	5"	120	1.5		102 & 104	Supplied and installed by the owner
5	1	Copier/Printer	Xerox WorkCentre 4260	19"	24.5"	25.5"	120	794 W		104	Supplied and installed by the owner
6	1	X-Ray Film Printer	Carestream DryView 5700	26"	24"	19"	120	9		104	Supplied and installed by the owner
7	1	CD Printer	Epson Discproducer D100	18.31"	14.84"	12.76"	120	50 W		104	Supplied and installed by the owner
8	1	Coffee Maker	Keurig B3000SE	18"	12"	17.5"	120	1400 W	H2O	101	Supplied and installed by the owner
9	1	Water Dispenser	Innowave BioCare	19"	13"	18"	120	.15	H2O	101	Supplied and installed by the owner
10	1	Ultrasound	GE LOGIQ S8	47.5"	26"	59.5"	120	20		112	Supplied and installed by the owner
11	1	Operator Touchscreen								113	NEMA 5-20 Hospital Grade Outlet
12	1	Power Cabinet								114	Supplied and installed by the owner
13	1	Float Top Elevator Table								114	Supplied and installed by the owner
14	1	Ceiling Mounted Tubestand								114	Supplied and installed by the owner
15	1	Wall Unit								114	Supplied and installed by the owner
16	1	Battery Charger								113	Supplied and installed by the owner
17	1	Dry Acess Point								113	Supplied and installed by the owner
18	1	DRX Computer								113	Supplied and installed by the owner
19											
20											
21											
22											
23											
24											
25											
26											
27											

2 EQUIPMENT SCHEDULE
NO SCALE
RE:

HURLEY & GAGNE, INC.
ARCHITECTURE PLANNING
P.O. BOX 3209
BOULDER, COLORADO 80307
303.413.1866

STATE OF COLORADO
LEE S. GAGNE
C4289
03-07-2014
LICENSED ARCHITECT

INVISION SALLY JOBE AT 1400 SOUTH POTOMAC IMAGING CENTER RENOVATION - PHASE 1A & 1B AURORA, COLORADO

PROJECT #	2014.01
DATE	28 FEB 2014
SCALE	1/4" = 1'-0"
REV	
REV	
FILE	INVSJA_A3.2

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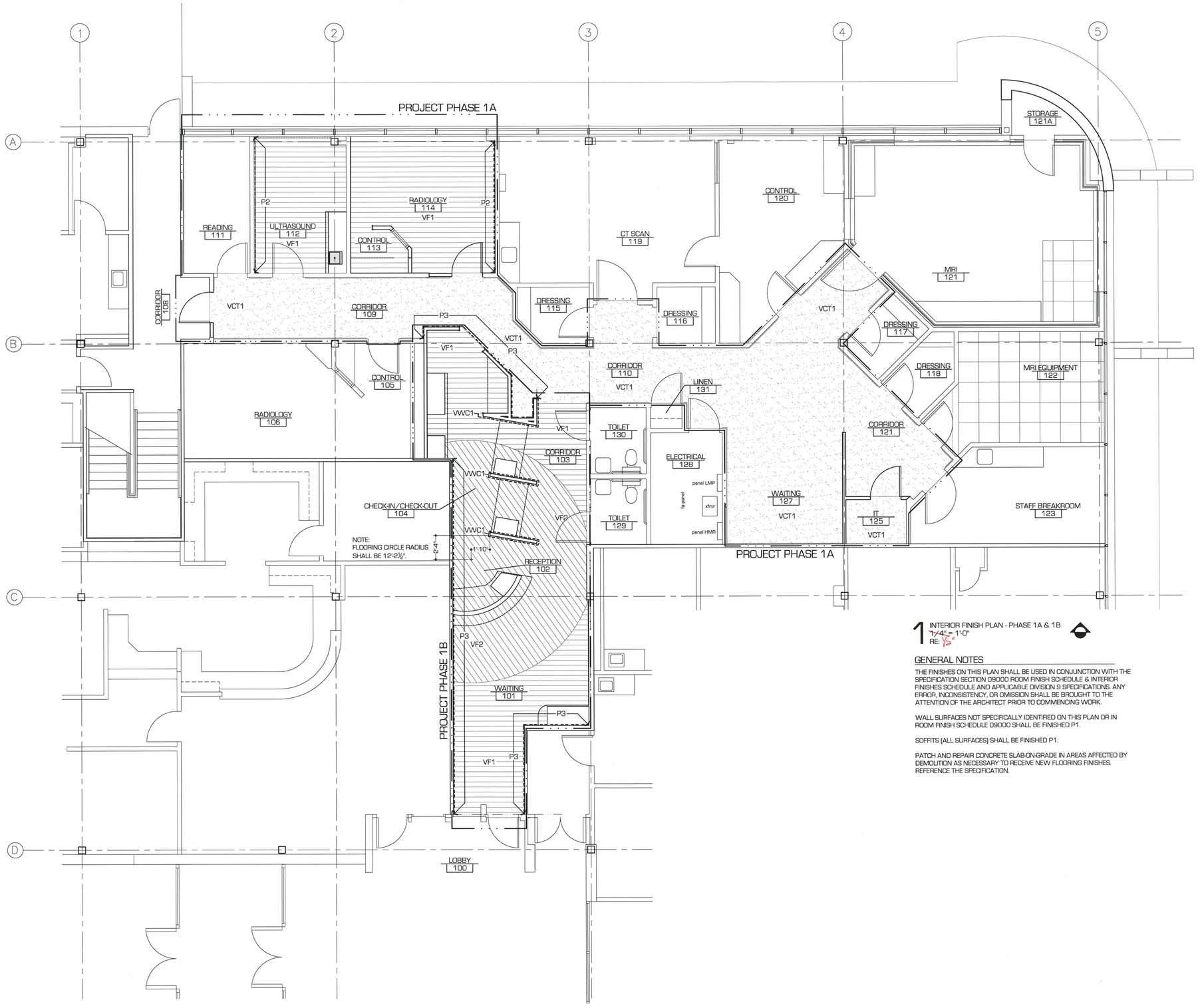
REFLECTED CEILING PHASE 1A & 1B

A3.2

14-822618
CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 03/13/14



1 INTERIOR FINISH PLAN - PHASE 1A & 1B
1/4" = 1'-0"
RE: 15"

GENERAL NOTES

THE FINISHES ON THIS PLAN SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATION SECTION 09000 ROOM FINISH SCHEDULE & INTERIOR FINISHES SCHEDULE AND APPLICABLE DIVISION 9 SPECIFICATIONS. ANY ERROR, INCONSISTENCY, OR OMISSION SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO COMMENCING WORK.

WALL SURFACES NOT SPECIFICALLY IDENTIFIED ON THIS PLAN OR IN ROOM FINISH SCHEDULE 09000 SHALL BE FINISHED P1.

SOFFITS (ALL SURFACES) SHALL BE FINISHED P1.

PATCH AND REPAIR CONCRETE SLAB-ON-GRADE IN AREAS AFFECTED BY DEMOLITION AS NECESSARY TO RECEIVE NEW FLOORING FINISHES. REFERENCE THE SPECIFICATION.

HURLEY & GAGNE, INC.
ARCHITECTURE
PLANNING
P.O. BOX 3209
BOULDER, COLORADO 80307
303.413.1868

STATE OF COLORADO
JOE S. GAGNE
C4289
03-07-14
LICENSED ARCHITECT

INVISION SALLY JOBE AT 1400 SOUTH POTOMAC
IMAGING CENTER RENOVATION - PHASE 1A & 1B
AURORA, COLORADO

PROJECT #	
2014.01	
DATE	28 FEB 2014
SCALE	1/4" = 1'-0"
REV	
REV	
FILE	INVSJA_A3.3

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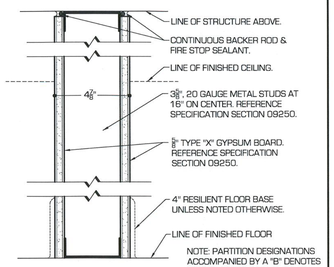
INTERIOR FINISH PLAN
PHASE 1A & 1B

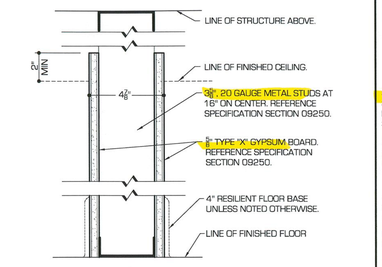
A3.3

14-822618

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 03/13/14

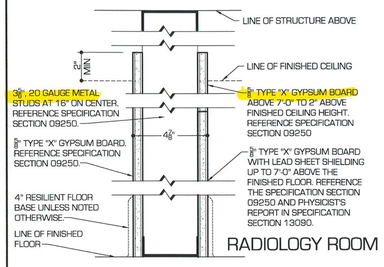


1 PARTITION TYPE ONE (ONE HOUR RATED)
SCALE: 3" = 1'-0"
RE: 1/A3.1



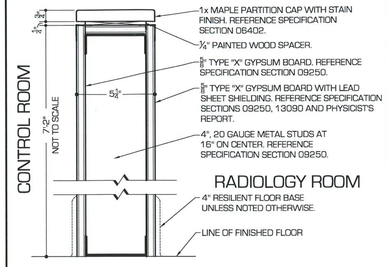
2 PARTITION TYPE TWO (NON-RATED)
SCALE: 3" = 1'-0"
RE: 1/A3.1

NOTE: PARTITION DESIGNATIONS ACCOMPANIED BY A "B" DENOTES SOUND ATTENUATING MINERAL FIBER BATT INSULATION.



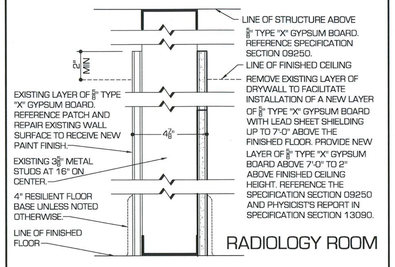
3 PARTITION TYPE THREE (NON-RATED)
SCALE: 3" = 1'-0"
RE: 1/A3.1

NOTE: PARTITION DESIGNATIONS ACCOMPANIED BY A "B" DENOTES SOUND ATTENUATING MINERAL FIBER BATT INSULATION.



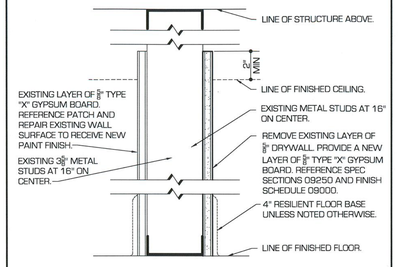
4 PARTITION TYPE FOUR (NON-RATED)
SCALE: 3" = 1'-0"
RE: 1/A3.1

NOTE: PARTITION DESIGNATIONS ACCOMPANIED BY A "B" DENOTES SOUND ATTENUATING MINERAL FIBER BATT INSULATION.



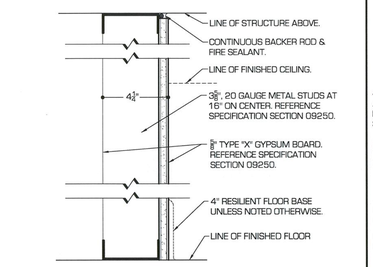
5 PARTITION TYPE FIVE (NON-RATED)
SCALE: 3" = 1'-0"
RE: 1/A3.1

NOTE: PARTITION DESIGNATIONS ACCOMPANIED BY A "B" DENOTES SOUND ATTENUATING MINERAL FIBER BATT INSULATION.



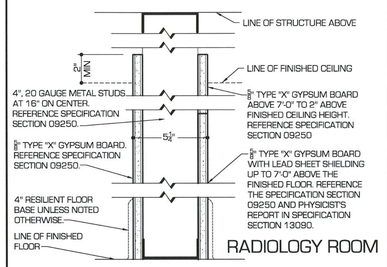
6 PARTITION TYPE SIX (NON-RATED)
SCALE: 3" = 1'-0"
RE: 1/A3.1

NOTE: PARTITION DESIGNATIONS ACCOMPANIED BY A "B" DENOTES SOUND ATTENUATING MINERAL FIBER BATT INSULATION.



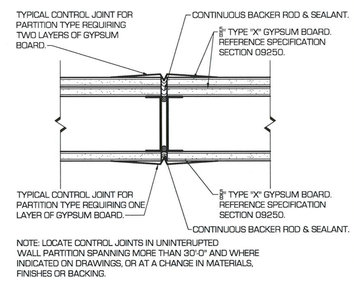
7 PARTITION TYPE SEVEN (NON-RATED)
SCALE: 3" = 1'-0"
RE: 1/A3.1

NOTE: PARTITION DESIGNATIONS ACCOMPANIED BY A "B" DENOTES SOUND ATTENUATING MINERAL FIBER BATT INSULATION.



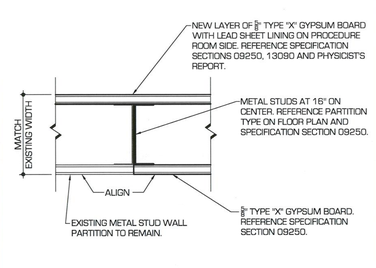
8 PARTITION TYPE EIGHT (NON-RATED)
SCALE: 3" = 1'-0"
RE: 1/A3.1

NOTE: PARTITION DESIGNATIONS ACCOMPANIED BY A "B" DENOTES SOUND ATTENUATING MINERAL FIBER BATT INSULATION.



NOTE: LOCATE CONTROL JOINTS IN UNINTERUPTED WALL PARTITION SPANNING MORE THAN 30'-0" AND WHERE INDICATED ON DRAWINGS, OR AT A CHANGE IN MATERIALS, FINISHES OR BACKING.

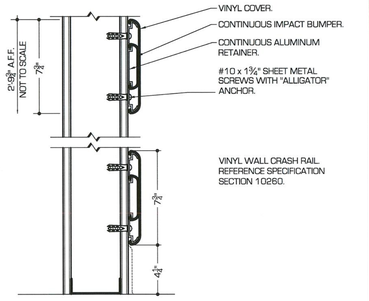
9 TYPICAL CONTROL JOINT DETAIL
SCALE: 3" = 1'-0"
RE: 1/A3.1



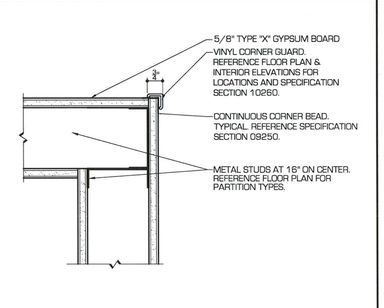
10 PARTITION DETAIL
SCALE: 3" = 1'-0"
RE: 1/A3.1

11

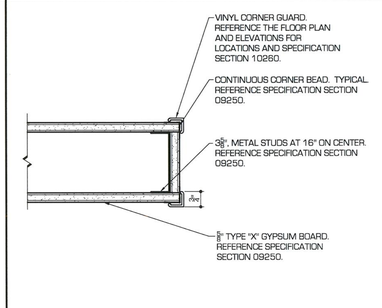
12



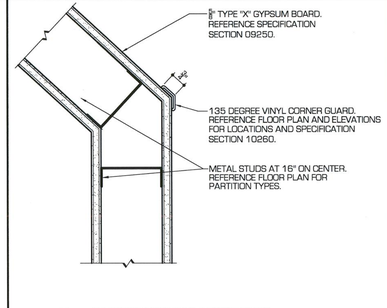
13 WALL GUARD DETAIL
SCALE: NONE
RE: 1/A3.1& 2/A10.2



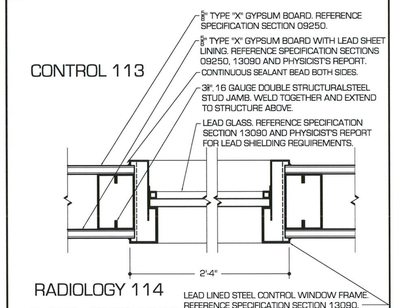
14 CORNER GUARD DETAIL
SCALE: 3" = 1'-0"
RE: 1/A3.1, 1/A10.1 & 1/A10.2



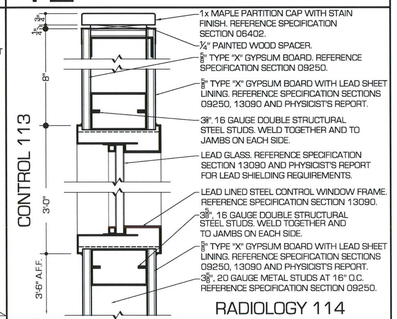
15 CORNER GUARD DETAIL
SCALE: 3" = 1'-0"
RE: 1/A3.1, 1/A10.2, 3/A10.2 & 4/A10.2



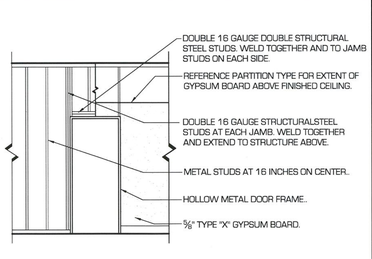
16 135 DEGREE CORNER GUARD DETAIL
SCALE: 3" = 1'-0"
RE: 1/A3.1, 1/A10.2 & 4/A10.2



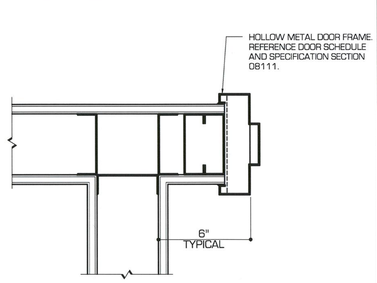
17 CONTROL WINDOW FRAME JAMB DETAIL
SCALE: 3" = 1'-0"
RE: 1/A3.1, 3/A10.2 & 4/A10.2



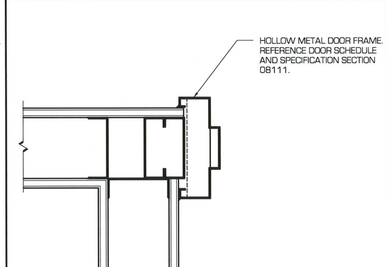
18 CONTROL WINDOW FRAME HEAD & SILL DETAIL
SCALE: 3" = 1'-0"
RE: 1/A3.1, 3/A10.2 & 4/A10.2



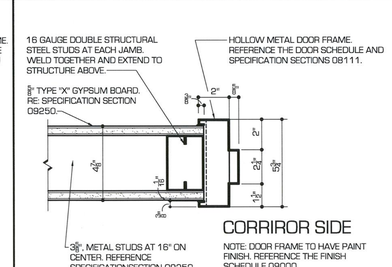
19 TYPICAL DOOR FRAMING DETAIL
SCALE: 3" = 1'-0"
RE: 1/A3.1



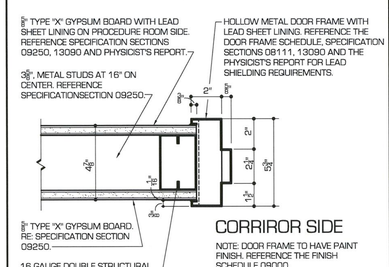
20 TYPICAL FRAME TO PARTITION DETAIL
SCALE: 3" = 1'-0"
RE: 1/A3.1



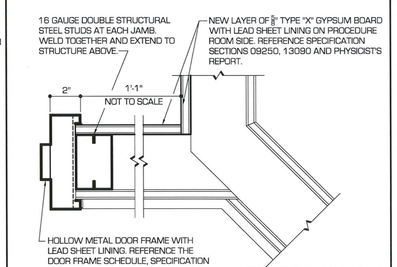
21 TYPICAL FRAME TO PARTITION DETAIL
SCALE: 3" = 1'-0"
RE: 1/A3.1



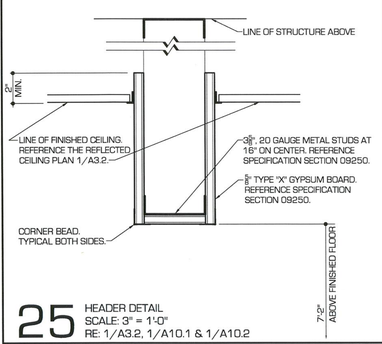
22 HOLLOW METAL FRAME TYPE ONE
SCALE: 3" = 1'-0"
RE: 1/A3.1 & DOOR SCHEDULE 08000



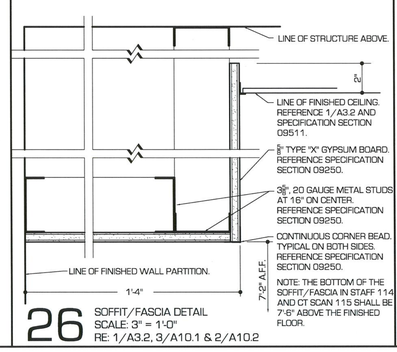
23 HOLLOW METAL FRAME TYPE TWO
SCALE: 3" = 1'-0"
RE: 1/A3.1 & DOOR SCHEDULE 08000



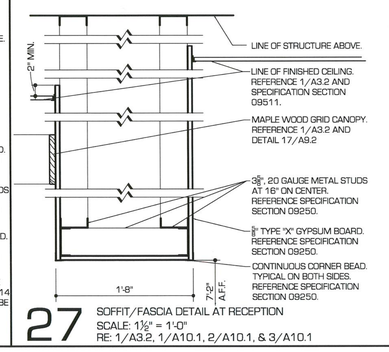
24 RADIOLOGY DOOR JAMB DETAIL
SCALE: 3" = 1'-0"
RE: 1/A3.1



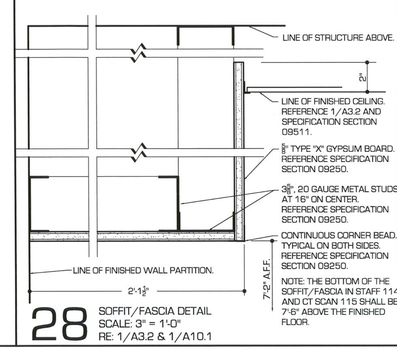
25 HEADER DETAIL
SCALE: 3" = 1'-0"
RE: 1/A3.2, 1/A10.1 & 1/A10.2



26 SOFFIT/FASCIA DETAIL
SCALE: 3" = 1'-0"
RE: 1/A3.2, 3/A10.1 & 2/A10.2



27 SOFFIT/FASCIA DETAIL AT RECEPTION
SCALE: 1½" = 1'-0"
RE: 1/A3.2, 1/A10.1, 2/A10.1, & 3/A10.1

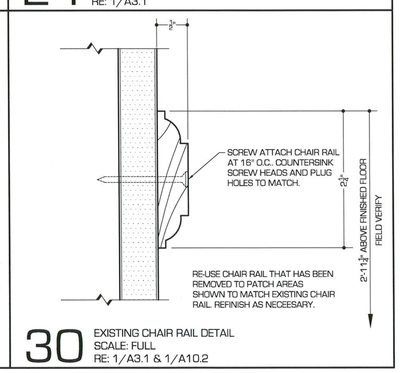


28 SOFFIT/FASCIA DETAIL
SCALE: 3" = 1'-0"
RE: 1/A3.2 & 1/A10.1

14-822618

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 6/13/14

29



30 EXISTING CHAIR RAIL DETAIL
SCALE: FULL
RE: 1/A3.1 & 1/A10.2

HURLEY & GAGNE, INC.
ARCHITECTURE PLANNING
P.O. BOX 3209
BOULDER, COLORADO 80307
303.413.1868

STATE OF COLORADO
LEE S. GAGNE
C4289
LICENSED ARCHITECT
02-07-14

INVISION SALLY JOBE AT 1400 SOUTH POTOMAC IMAGING CENTER RENOVATION - PHASE 1A & 1B AURORA, COLORADO

PROJECT #	
2014.01	
DATE	28 FEB 2014
SCALE	AS NOTED
REV	
REV	
FILE	INVSJA_A9.1

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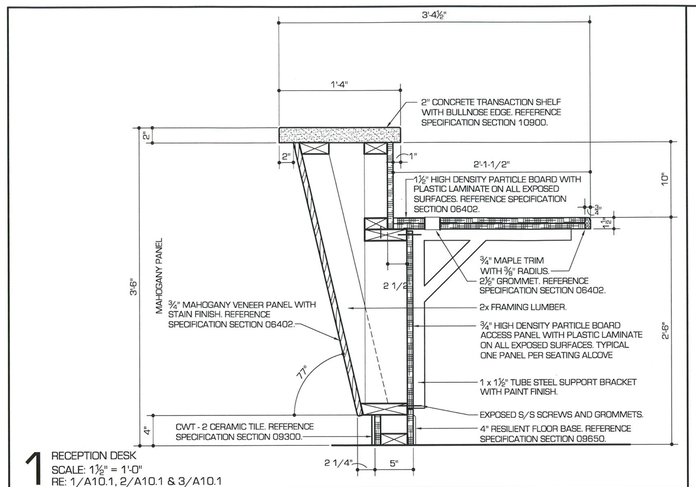
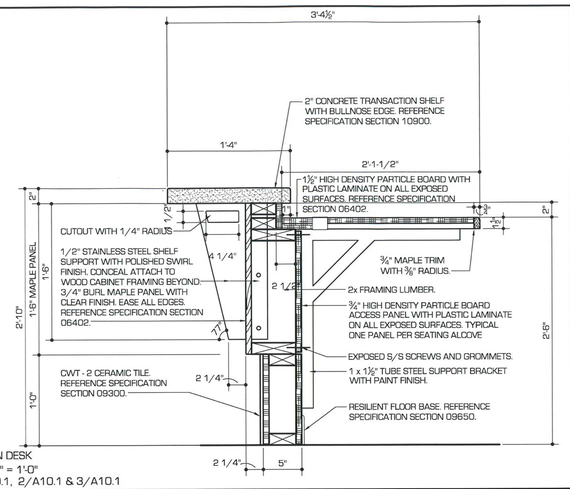
INTERIOR DETAILS

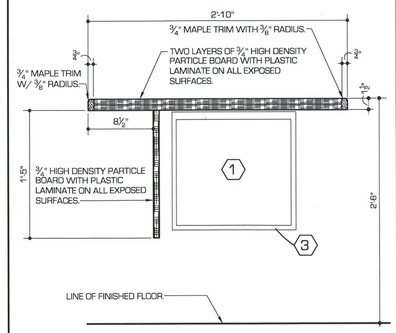
A9.1



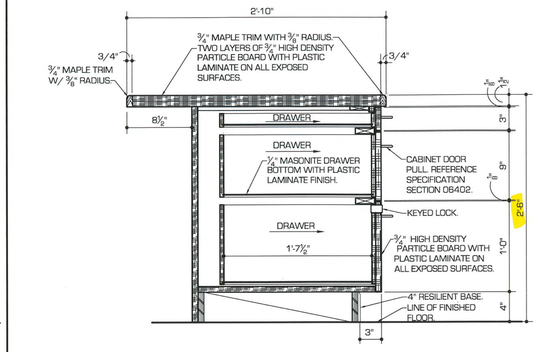
1 RECEPTION DESK
SCALE: 1½" = 1'-0"
RE: 1/A10.1, 2/A10.1 & 3/A10.1



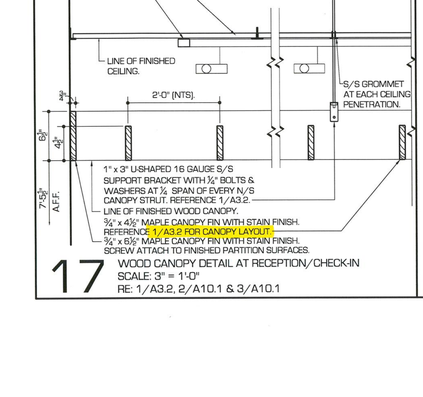
2 RECEPTION DESK
SCALE: 1½" = 1'-0"
RE: 1/A10.1, 2/A10.1 & 3/A10.1



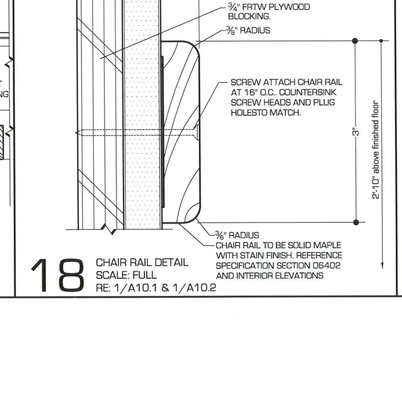
3 CHECK-IN/CHECK-OUT COUNTERTOP
SCALE: 1½" = 1'-0"
RE: 1/A10.1 & 3/A10.1



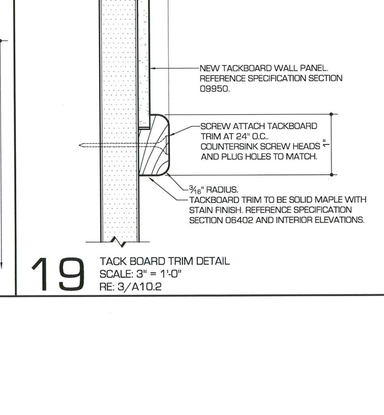
4 CHECK-IN/CHECK-OUT BASE CABINET
SCALE: 1½" = 1'-0"
RE: 1/A10.1 & 3/A10.1



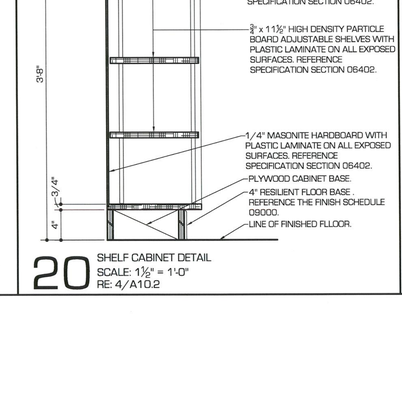
5 COUNTER
SCALE: 1½" = 1'-0"
RE: 1/A10.1 & 3/A10.1



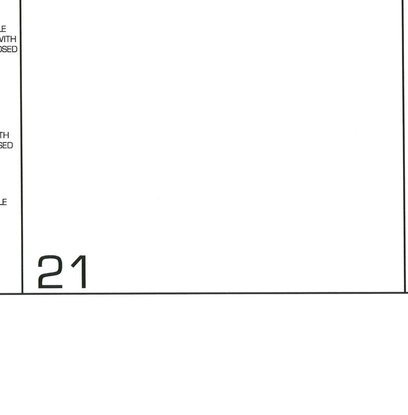
6 BASE CABINET
SCALE: 1½" = 1'-0"
RE: 1/A10.1



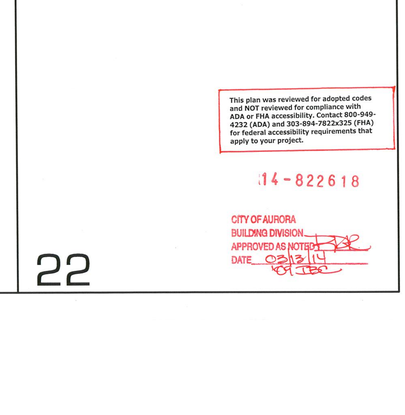
7 COUNTER
SCALE: 1½" = 1'-0"
RE: 3/A10.2



8 SINK BASE CABINET
SCALE: 1½" = 1'-0"
RE: 2/A10.2



9 BASE CABINET
SCALE: 1½" = 1'-0"
RE: 2/A10.2



10 FOUR DRAWER BASE CABINET
SCALE: 1½" = 1'-0"
RE: 3/A10.1, 2/A10.2

11

12 FILE CABINET
SCALE: 1½" = 1'-0"
RE: 2/A10.1

13 X-RAY FILM BASE CABINET
SCALE 1½" = 1'-0"
RE: 3/A10.1

14 UPPER CABINET
SCALE: 1½" = 1'-0"
RE: 3/A10.1, & 2/A10.2

15 UPPER CABINET
SCALE: 1½" = 1'-0"
RE: 3/A10.1

16

17 WOOD CANOPY DETAIL AT RECEPTION/CHECK-IN
SCALE: 3" = 1'-0"
RE: 1/A3.2, 2/A10.1 & 3/A10.1

18 CHAIR RAIL DETAIL
SCALE: FULL
RE: 1/A10.1 & 1/A10.2

19 TACK BOARD TRIM DETAIL
SCALE: 3" = 1'-0"
RE: 3/A10.2

20 SHELF CABINET DETAIL
SCALE: 1½" = 1'-0"
RE: 4/A10.2

21

22

HURLEY & GAGNE, INC.
ARCHITECTURE
PLANNING
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BOULDER, COLORADO 80307
303.413.1868

STATE OF COLORADO
LEE S. GAGNE
C4289
REGISTERED
LICENSED ARCHITECT

INVISION SALLY JOBE AT 1400 SOUTH POTOMAC IMAGING CENTER RENOVATION - PHASE 1A & 1B AURORA, COLORADO

PROJECT #	2014.01
DATE	28 FEB 2014
SCALE	AS SHOWN
REV	
REV	
FILE	INVSJA_A9.2

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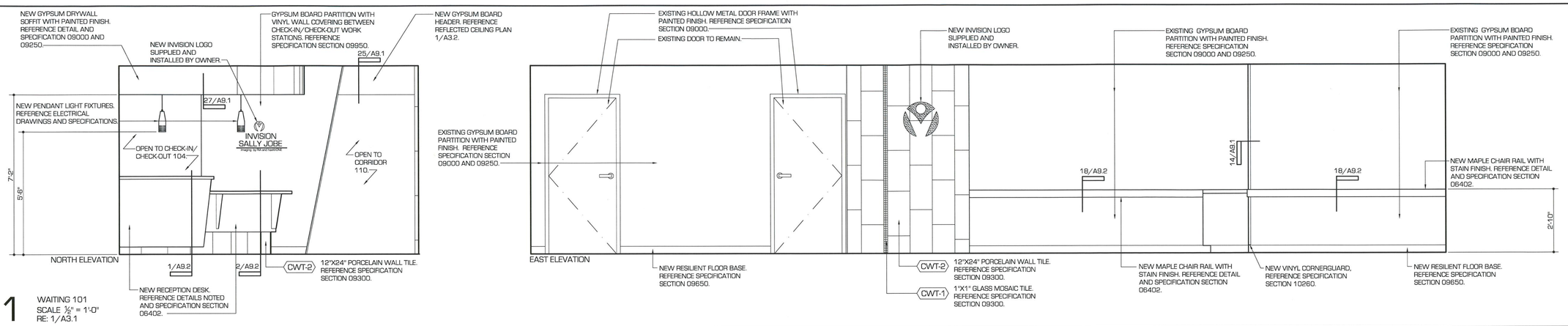
INTERIOR DETAILS

A9.2

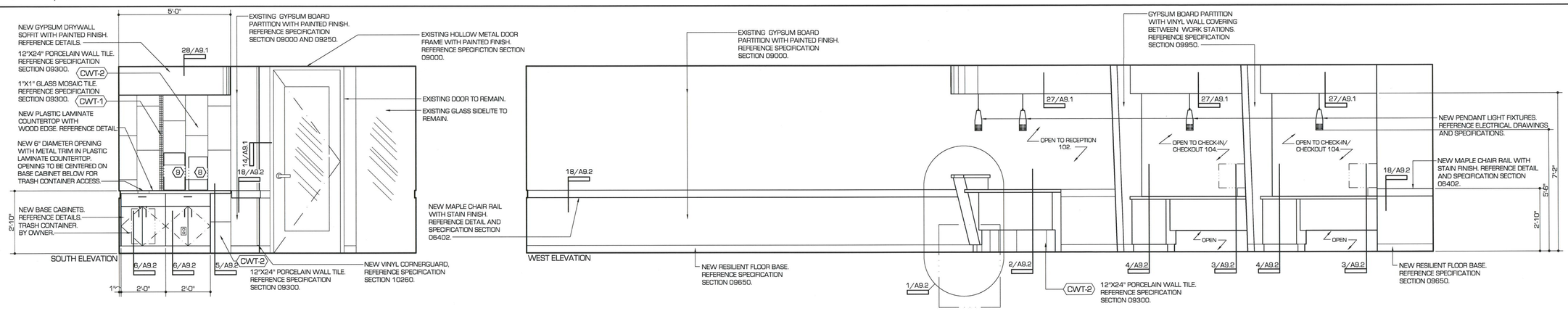
This plan was reviewed for adopted codes and NOT reviewed for compliance with ADA or FHA accessibility. Contact 800-949-4232 (ADA) and 303-894-7822x325 (FHA) for federal accessibility requirements that apply to your project.

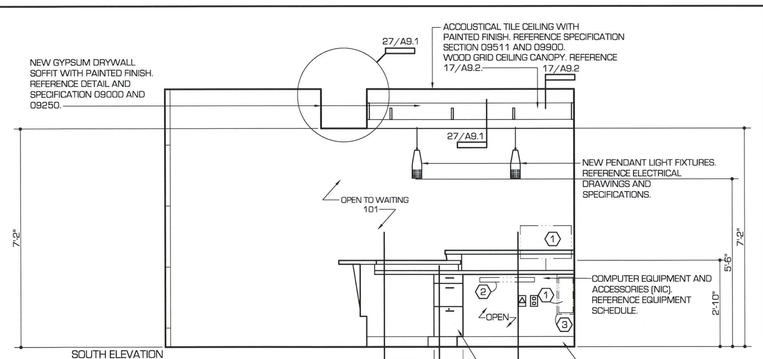
14-822618

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 02/13/14
BY IBC

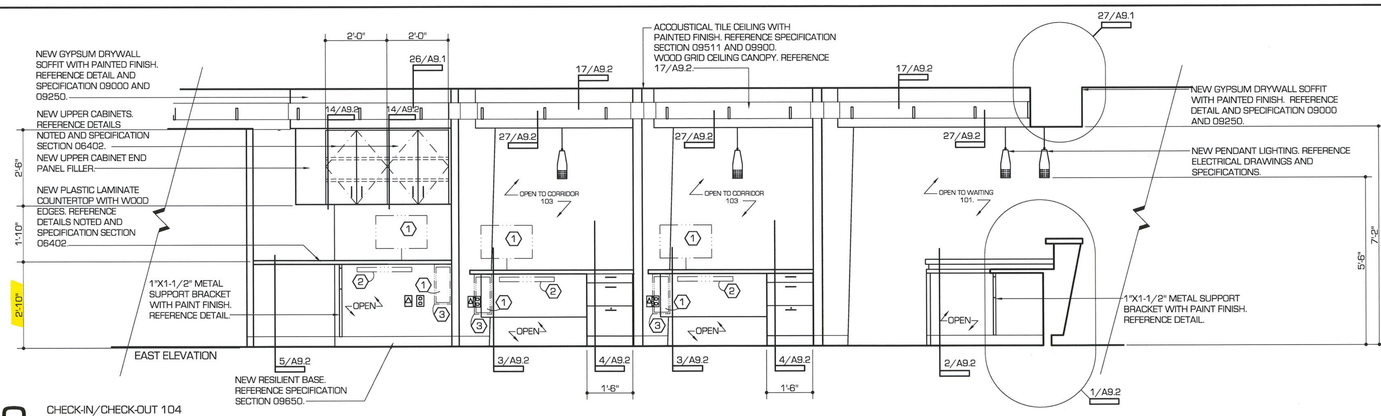


1 WAITING 101
SCALE ½" = 1'-0"
RE: 1/A3.1

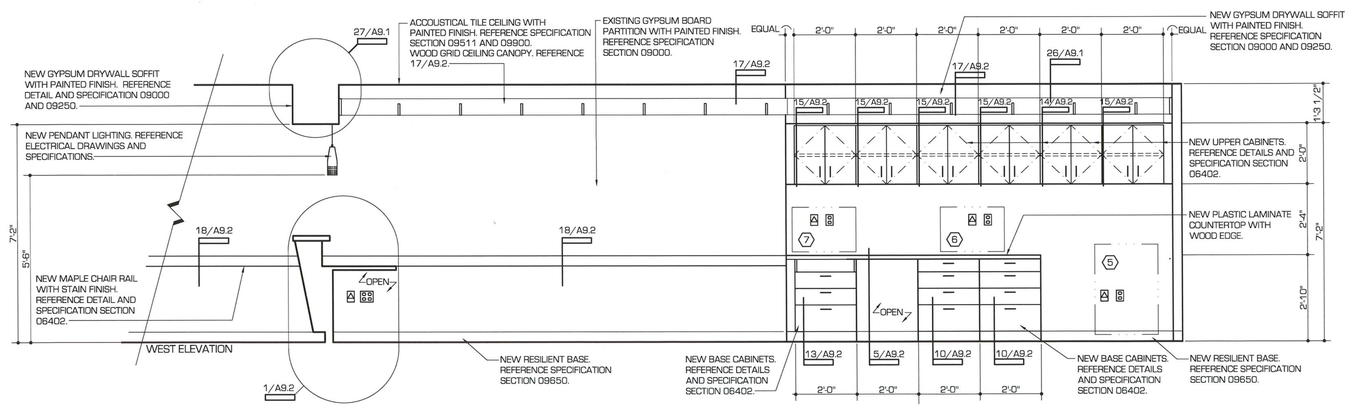




2 RECEPTION 102
SCALE ½" = 1'-0"
RE: 1/A3.1



3 CHECK-IN/CHECK-OUT 104
SCALE ½" = 1'-0"
RE: 1/A3.1



14-822618

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 03/12/14

HURLEY & GAGNE, INC.
ARCHITECTURE PLANNING
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BOULDER, COLORADO 80307
303.413.1868

STATE OF COLORADO
LEE S. GAGNE
C4289
LICENSED ARCHITECT
03-07-2014

INVISION SALLY JOBE AT 1400 SOUTH POTOMAC IMAGING CENTER RENOVATION - PHASE 1A & 1B AURORA, COLORADO

PROJECT #	
2014.01	
DATE	28 FEB 2014
SCALE	1/2" = 1'-0"
REV	
REV	
FILE	INVSJA_A101

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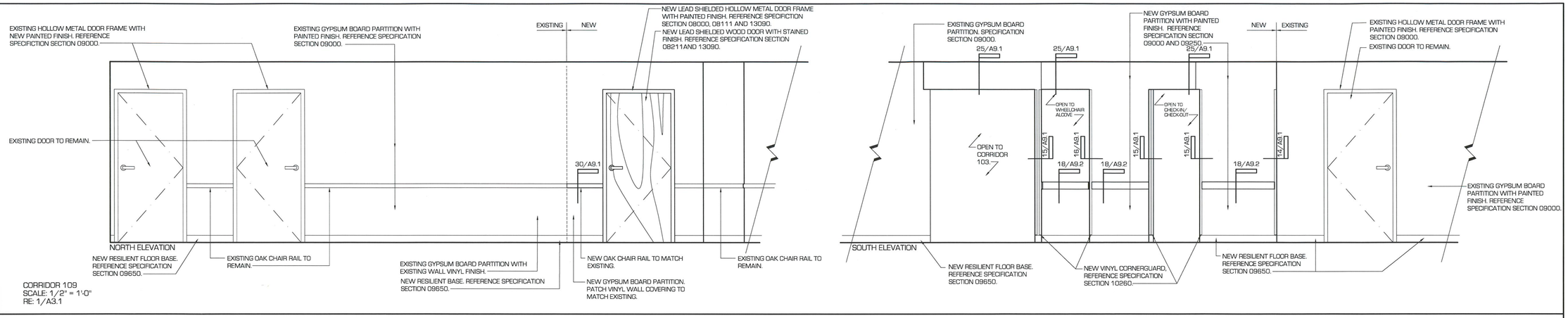
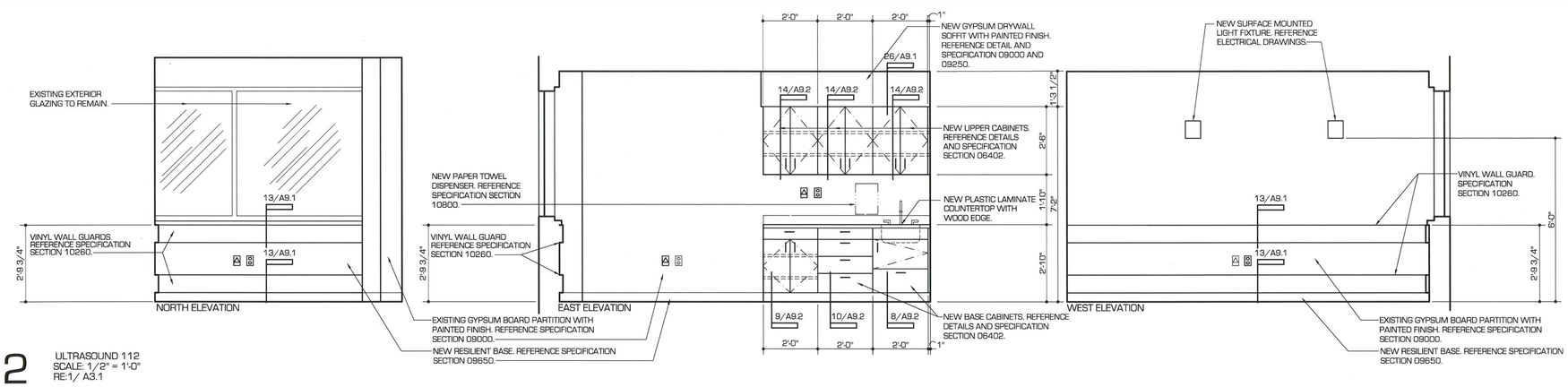
INTERIOR ELEVATIONS

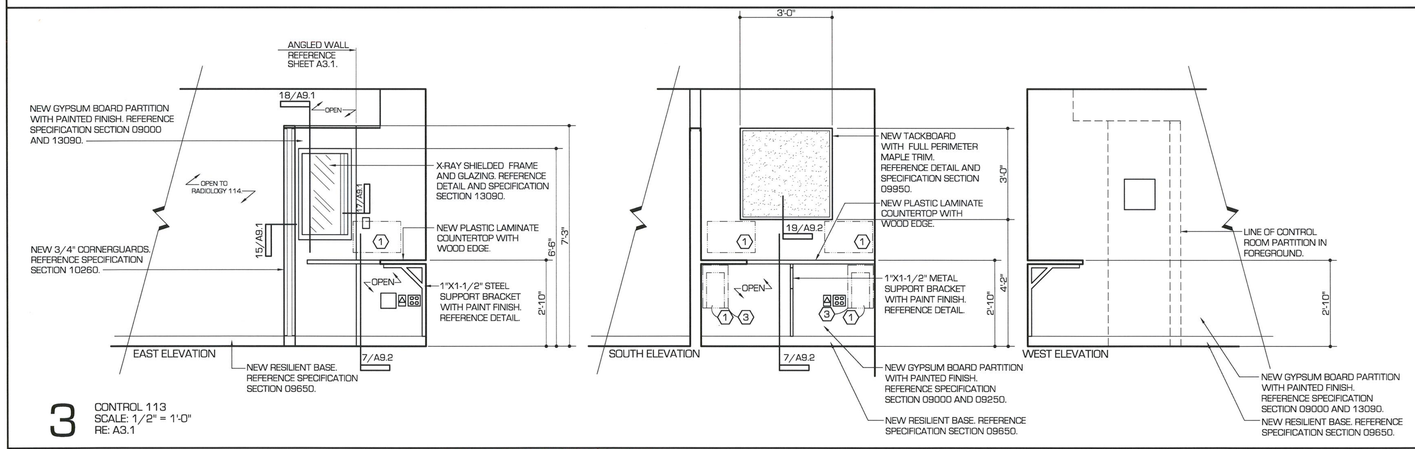
A10.1



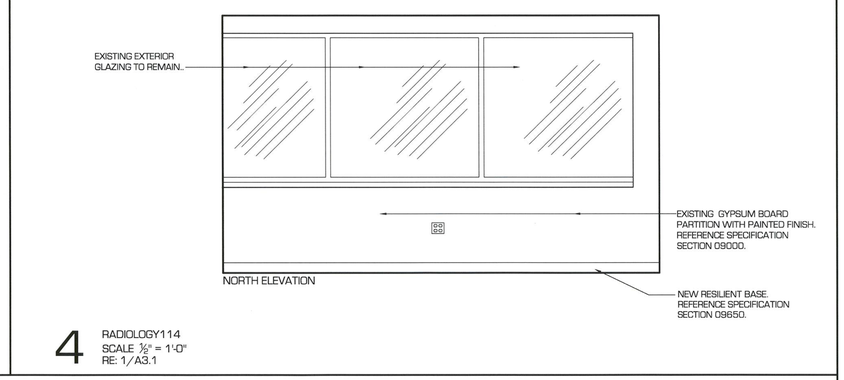
1 CORRIDOR 109
SCALE: 1/2" = 1'-0"
RE: 1/A3.1



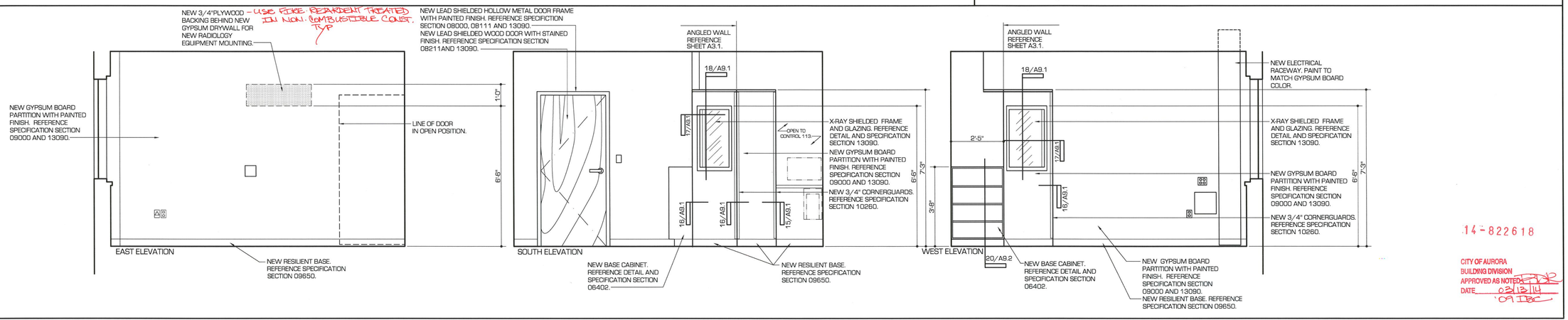
2 ULTRASOUND 112
SCALE: 1/2" = 1'-0"
RE:1/ A3.1



3 CONTROL 113
SCALE: 1/2" = 1'-0"
RE: A3.1



4 RADIOLOGY114
SCALE 1/2" = 1'-0"
RE: 1/A3.1



14-822618

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 03/12/14
'09 IBC

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ARCHITECTURE PLANNING
P.O. BOX 3209
BOULDER, COLORADO 80307
303.413.1868

STATE OF COLORADO
LEE S. GAGNE
C4289
12-31-14
LICENSED ARCHITECT

INVISION SALLY JOBE AT 1400 SOUTH POTOMAC IMAGING CENTER RENOVATION - PHASE 1A & 1B AURORA, COLORADO

PROJECT #	2014.01
DATE	28 FEB 2014
SCALE	1/2" = 1'-0"
REV	
REV	
FILE	INVSJA_A102

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INTERIOR ELEVATIONS

A10.2

GENERAL NOTES

DESIGN CRITERIA:
1. Building Code - IBC 2009
2. Design Occupancy Category - II
3. Loads
   - A. Dead
     - 1. Floor — 55 psf
   - B. Live
     - 1. Floor — 70 psf (50 psf office + 20 psf partitions)
     - 2. Equipment — 1125 lb

NOTES:
1. All items in general notes are applicable to entire set of structural construction documents, unless noted otherwise (U.N.O.).
2. All materials and installation procedures shall conform to the Building Code. All structural elements specified as being fabricated by a particular Manufacturer shall be as indicated, unless approved equal is accepted in writing by the Structural Engineer. Where discrepancies occur between Manufacturer's standard details and the structural details, the structural details shall take precedence.
3. Construction documents shall not be scaled for determination of quantities, dimensions, or locations.
4. Connections of mechanical, electrical and plumbing elements to structure shall be by others.
5. Where publications are referred to herein, the latest edition shall be used.
6. Structural elements shall not be cut, coped, notched, drilled, etc., unless specifically permitted by Structural Engineer, or as permitted in the Manufacturer's catalogue.
7. Structural Engineer shall be contacted when openings in structural elements are larger than the stud, joist, or bar spacing.
8. Any discrepancies between the structural construction documents and the construction documents of any other discipline shall be reported immediately to both parties.
9. All existing structural elements, dimensions and elevations shall be field verified before construction begins. Any discrepancies between the structural construction documents and the existing conditions shall be reported immediately to the Structural Engineer before proceeding.
10. The structural drawings indicate the structural elements in their final positions. The Contractor shall provide adequate temporary shoring and bracing as required to achieve the completed structure. The Contractor shall retain a Structural Engineer to design any temporary shoring or bracing that is required.
11. All special inspections shall be as required by the Building Code.
12. All materials testing shall be as required by the Building Code and in the architectural specifications.
13. All corners are 90-degrees.
14. All construction testing reports and installation logs shall be provided to the Structural Engineer within 7 days of testing or installation.

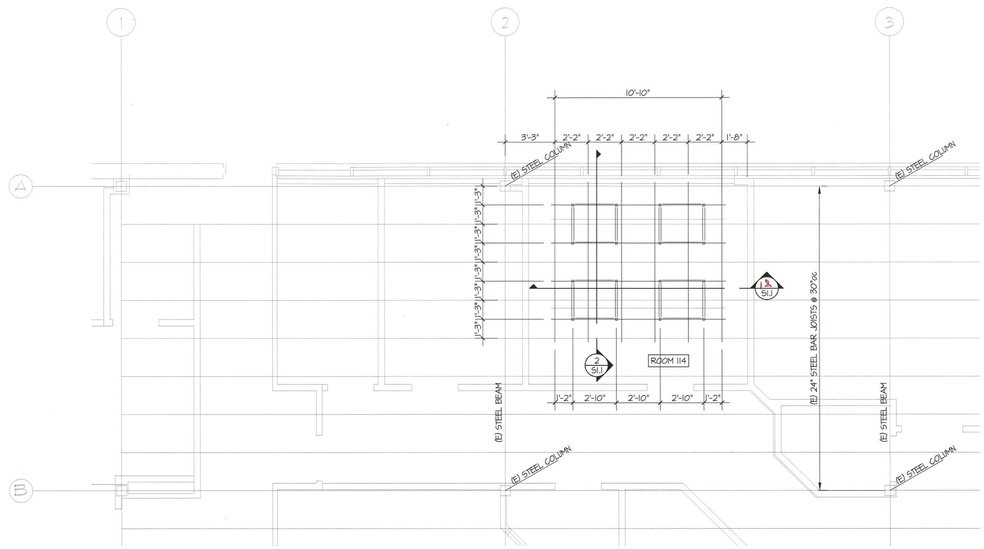
CONNECTORS/FASTENERS/ADHESIVES/WELDING/GROUT:
1. All bolts shall conform to ASTM A325. All bolts shall have a washer at both the head and the nut.
2. All welding shall be performed by an certified welder according to all AISC and ANS standards and recommendations. All welds shall be 70 ksi.
3. All fasteners to concrete or CMU shall be as follows with standard embedments as specified in the Manufacturer's catalogue. Fasteners shall be installed in accordance with all Manufacturer's recomendations and specifications.

Expansion	Hilti Kwik Bolt TZ
Capsule	Hilti HVA + HAS-E STD rod
Adhesive	Hilti HIT HY150 MAX + HAS-E STD rod
Screen	Hilti HIT HY20 + HIT-A rod
Epoxy	Hilti HIT RE500 + HAS-E STD rod

SHOP DRAWINGS:
1. Supplier shall furnish one reproducible and three copies of shop drawings of the following structural elements: structural steel, and pre-fabricated metal framing.
2. Structural calculations shall be included for pre-engineered elements, and shall be stamped by a Structural Engineer with a valid license in the jurisdiction of the project.
3. All items listed herein shall be provided to the Structural Engineer prior to fabrication, which shall not begin until review has been completed.
4. Shop drawings shall not contain reproductions of the construction documents.
5. Shop drawings shall be reviewed and initialed by the Contractor prior to submitting them to the Structural Engineer.
6. Variations from the construction documents requested by the Supplier or Contractor shall be clearly noted on the shop drawings.
7. Shop drawing review by the Structural Engineer is only for general conformance with the structural design requirements. Structural Engineer is not responsible for omissions, quantities, or dimensions. Structural Engineer is not responsible for fabrication methods or construction techniques. Contractor is responsible for conforming to the contract documents.

STEEL:
1. All structural steel has been designed according to AISC Steel Construction Manual.
2. All aspects of structural steel construction shall be in conformance with the AISC standards.
3. All steel that is exposed to earth or weather shall be galvanized.
4. All pre-fabricated metal framing shall be as manufactured by Unistrut.
5. All structural steel shapes shall conform to the following:

W-	ASTM A992
MC-, C-, L-, M-, S-	ASTM A36
HP-	ASTM A572, grade 50
HSS- (rectangular)	ASTM A500, grade B, Fy=46 ksi
HSS- (round)	ASTM A500, grade B, Fy=42 ksi
P-	ASTM A53, grade B
Plate	ASTM A36, Fy=36ksi

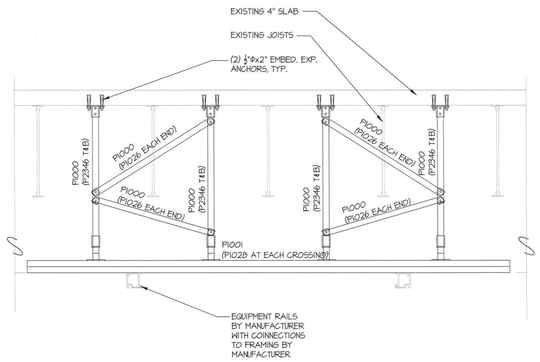


CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS, AND STRUCTURAL ELEMENTS BEFORE CONSTRUCTION BEGINS.

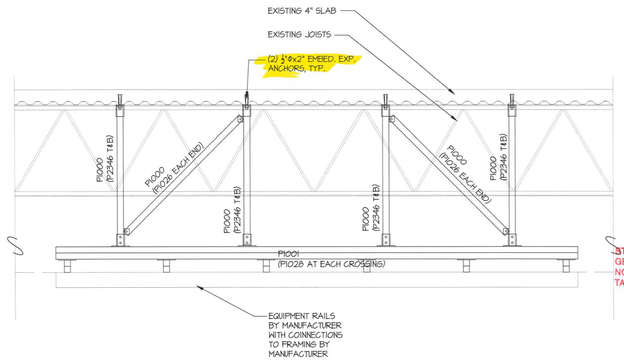
OVERHEAD EQUIPMENT FRAMING PLAN

1/4"=1'-0"

PLAN NORTH



1 S1.1 — 3/4"=1'-0



2 S1.1 — 3/4"=1'-0

STRUCTURAL PLAN REVIEW IS LIMITED TO A GENERAL, SURVEY FOR CODE COMPLIANCE. NO REVIEW IS IMPLIED NOR WAS UNDERTAKEN TO VERIFY STRUCTURAL ADEQUACY.

14-822618

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 03/13/14
BY EBC

HURLEY & GAGNE, INC.
ARCHITECTURE PLANNING
P.O. BOX 3209
BOULDER, COLORADO 80307
303.413.1868

integral, inc.
Structural Engineering Studio
2590 31st Street
Boulder, Colorado 80301
303 495 5206 v 303 495 5376 f
www.theintegral.com

COLORADO REGISTERED TIMOTHY WISE 39814 PROFESSIONAL ENGINEER

INVISION SALLY JOBE AT 1400 SOUTH POTOMAC IMAGING CENTER RENOVATION - PHASE 1A & 1B AURORA, COLORADO

PROJECT #	14013
DATE	2014-02-28
SCALE	
REV	
REV	
FILE	

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STRUCTURAL PLAN, NOTES, & DETAILS

S1.1

P:\2014\14013 Invision Sally Jobe at 1400 Potomac\Drawings\2014-02-28 14013 S1.1.dwg, 2/28/2014 10:53:33 AM, DWG To PDF.pc3

MECHANICAL SPECIFICATIONS

SUPPLY AND RETURN AIR DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED STEEL PER SMACNA DUCT CONSTRUCTION STANDARDS. RETURN AIR DUCTWORK AND SUPPLY AIR DUCTWORK SHALL BE CONSTRUCTED FOR 1" W.C. STATIC PRESSURE DOWNSTREAM OF VAV BOXES AND 3" W.C. UPSTREAM OF VAV BOXES. SPIRAL LOCK-FORMED ROUND DUCT MAY BE UTILIZED WHERE SPACE ALLOWS. TRANSVERSE JOINTS AND LONGITUDINAL SEAMS SHALL BE SEALED AIR-TIGHT WITH MASTIC. RADIUSED ELBOWS (R/D=1.5) OR MITERED ELBOWS WITH SINGLE THICKNESS TURNING VANES SHALL BE UTILIZED. TURNING VANES SHALL BE SUPPORTED AT INTERVALS OF 36" MAXIMUM. TURNING VANE RUNNERS SHALL HAVE A VANE IN EVERY SLOT AND SHALL CONFORM TO SMACNA DUCT CONSTRUCTION STANDARDS FOR STANDARD SPACING.

INSULATED, FACTORY FABRICATED, FLEXIBLE DUCTWORK MAY BE UTILIZED AT RUNOUTS TO AIR DIFFUSERS. FLEXIBLE DUCTWORK SHALL CONSIST OF AN EXTERIOR REINFORCED LAMINATED VAPOR BARRIER, 1.5" FIBERGLASS INSULATION AND INTERIOR VINYL LINER WITH SPRING STEEL WIRE HELIX. FIBERGLASS INSULATION SHALL HAVE A MAXIMUM CONDUCTIVITY, K-VALUE, OF 0.25 AT 75°F. VINYL LINER SHALL NOT BE PERFORATED. FLEXIBLE DUCT ASSEMBLY SHALL HAVE A FLAME SPREAD/SMOKE DEVELOPED RATING OF 25/50 OR LESS. FLEXIBLE DUCT TO FLEXIBLE DUCT CONNECTIONS SHALL BE MADE WITH FACTORY FABRICATED STEEL COLLARS. FLEXIBLE DUCT SHALL BE SECURED TO RIGID DUCTWORK AND AIR DEVICES WITH SCREWS AND DRAWBANDS. LENGTH OF FLEXIBLE DUCTWORK SHALL BE LIMITED TO 5' AND SHALL NOT BE COMPRESSED. FLEXIBLE DUCTWORK SHALL NOT BE USED FOR ELBOWS. FLEXIBLE DUCT SHALL NOT BE USED ABOVE INACCESSIBLE CEILINGS. FLEXIBLE DUCT SHALL NOT PASS THROUGH WALLS.

ALL RECTANGULAR SUPPLY AND RETURN RECTANGULAR DUCTWORK SHALL BE PROVIDED WITH DUCT LINER (INSIDE THE DUCT): ONE INCH THICK, RESIN BONDED GLASS FIBER, BLACK COATING ON AIR STREAM SURFACE, RATED BY MANUFACTURER FOR AT LEAST 4000 FPM AND MEETING THE REQUIREMENTS OF ASTM C1071 TYPE I. FIRE RESISTANCE SHALL MEET REQUIREMENTS OF NFPA 90A. FLAME SPREAD RATING NOT TO EXCEED 25. FUEL CONTRIBUTION AND SMOKE DEVELOPMENT NOT TO EXCEED 50. NOISE REDUCTION COEFFICIENT (NRC) OF NOT LESS THAN 0.60 WHEN TESTED IN ACCORDANCE WITH ASTM C423 USING AN "A" MOUNTING OR A MINIMUM OF 0.70 USING AN "F" MOUNTING. K VALUE NOT MORE THAN 0.26 BTUH PER SQUARE FOOT PER DEG. F AT 75 DEG. F OR AN "R" VALUE OF 4.2. MAXIMUM ABSOLUTE ROUGHNESS FACTOR PER FOOT OF .004

DUCT HANGERS SHALL BE CONSTRUCTED OF GALVANIZED STEEL. DUCTS SHALL BE SUPPORTED AND CONNECTED TO THE STRUCTURE PER SMACNA DUCT CONSTRUCTION STANDARDS. HANGERS AND SUPPORTS FOR GREASE DUCT SHALL BE OF NONCOMBUSTIBLE MATERIALS. FLEXIBLE DUCTS SHALL BE SUPPORTED WITH GALVANIZED STRAPS.

MANUAL VOLUME DAMPERS SHALL BE FURNISHED AND INSTALLED WHERE INDICATED AT SUPPLY AIR DUCT RUNOUTS TO AIR DIFFUSERS AND GRILLES AS NEAR AS POSSIBLE TO THE TRUNK DUCT. MANUAL VOLUME DAMPERS FOR RECTANGULAR DUCT SHALL BE CONSTRUCTED OF 16 GAUGE GALVANIZED STEEL AND BE THE OPPOSED BLADE TYPE. MANUAL VOLUME DAMPERS FOR ROUND DUCT SHALL BE CONSTRUCTED OF 16 GAUGE GALVANIZED STEEL AND BE THE SINGLE BLADE TYPE. DAMPER BEARINGS SHALL BE NYLON. STAND-OFFS TO OUTSIDE OF INSULATION SHALL BE PROVIDED FOR MANUAL VOLUME DAMPERS IN INSULATED DUCT. LOCKING AND INDICATING QUADRANTS SHALL BE PROVIDED WHERE DAMPER IS ACCESSIBLE.

AIR DEVICES SHALL BE AS SCHEDULED. EXPOSED SCREWS SHALL BE THE FINISHING TYPE AND PAINTED TO MATCH THE AIR DEVICE. SQUARE TO ROUND ADAPTORS SHALL BE PROVIDED WHERE REQUIRED FOR AIR DEVICES IN CEILINGS. AIR DEVICES SHALL BE FINISHED WITH WHITE BAKED ENAMEL UNLESS NOTED OTHERWISE. AIR DEVICES SHALL BE SECURED TO T-BAR CEILINGS WHERE APPLICABLE.

AUTOMATIC TEMPERATURE CONTROLS SHALL BE DESIGNED, FURNISHED AND INSTALLED BY A QUALIFIED TEMPERATURE CONTROL FIRM. NEW CONTROLLERS SHALL BE FULLY COMPATIBLE WITH EXISTING BUILDING CONTROL SYSTEM.

MECHANICAL LEGEND

ABBR	SYMBOL	DESCRIPTION
SA		EXISTING SUPPLY AIR
RA		EXISTING RETURN AIR
EA		EXISTING EXHAUST AIR
OA		EXISTING OUTSIDE AIR
SA		SUPPLY AIR
RA		RETURN AIR
EA		EXHAUST AIR
OA		OUTSIDE AIR
S		SPACE TEMP SENSOR
T-STAT		THERMOSTAT
MVD		MANUAL VOLUME DAMPER
UNO		UNLESS NOTED OTHERWISE
AFF		ABOVE FINISHED FLOOR
E		EXISTING
D		DEMO
R		RELOCATED
		POINT OF CONNECTION NEW TO EXISTING
		ITEMS TO BE DEMOLISHED

DIFFUSER & REGISTER SCHEDULE

SUPPLY AIR				RETURN/EXHAUST AIR			
ITEM	NECK SIZE	CFM RANGE	TYPE	ITEM	NECK SIZE	CFM RANGE	TYPE
1	6/6 - 6"ø	0 - 230	S1	1	12/12	0 - 350	R1
2	12/12 - 8"ø	0 - 410					
3	12/12 - 10"ø	0 - 600					

DIFFUSER & REGISTER SPECIFICATIONS

SUPPLY AIR

TYPE S1: KRUEGER MODEL SHR 24"X24" FLUSH FACE STEEL LOUVERED PANEL DIFFUSER, NON-ADJUSTABLE 4-WAY HORIZONTAL THROW, WHITE FINISH. FRAME 23 FOR LAY-IN CEILINGS. FRAME 21 FOR GYP. BOARD CEILINGS.

RETURN/EXHAUST AIR

TYPE R1: KRUEGER MODEL S85H, STEEL GRILLE, 1/2" BLADE SPACING, 35° BLADE ANGLE, WHITE FINISH. FRAME 23 FOR LAY IN CEILINGS. CONCEALED MOUNTING FOR GYP. BOARD CEILINGS AND WALLS.

EXHAUST FAN SCHEDULE

ITEM	MANUFACTURER/ MODEL	LOCATION/ SERVICE	CFM	ESP	FAN SONES	ELEC. DATA			OVERALL DIMENSIONS	NOTES
						WATTS	VOLT	PH		
EF 1	AIR KING/ AK300LS	COMPUTER ROOM/ HEAT EXHAUST	290	.1	3.0	79.9	115	1	12-7/8" DEEP X 12-3/4" WIDE X9-7/8" TALL	1

NOTES:

1. FURNISH WITH REVERSE ACTING THERMOSTAT SET TO TURN FAN ON AT 80 DEGREES F AND OFF AT 75 DEGREES F (ADJUSTABLE)

MECHANICAL SHEET INDEX

ISSUE: 02-28-14 PERMIT SET	ISSUE: 02-26-14 REVIEW SET	SHEET NO.	SHEET DESCRIPTION
●	●	M0.0	MECHANICAL SPECIFICATIONS, NOTES, LEGEND AND SCHEDULES
●	●	M2.1	MECHANICAL DEMOLITION FLOORPLAN - PHASE 1A & 1B
●	●	M3.1	MECHANICAL FLOOR PLAN - PHASE 1A & 1B

GENERAL NOTES

1. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE STATE CODES, LOCAL CODES, AND OWNER'S STANDARDS INDICATED BY THE CONSTRUCTION DOCUMENTS.
2. MECHANICAL DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS, CERTIFIED EQUIPMENT DRAWINGS AND FROM THE STRUCTURE ITSELF BEFORE FABRICATING ANY WORK, VERIFY ALL SPACE REQUIREMENTS COORDINATING WITH OTHER TRADES, AND INSTALL THE SYSTEMS IN THE SPACE PROVIDED WITHOUT EXTRA CHARGES TO THE OWNER.
3. CONTRACTOR SHALL COORDINATE WORK INDICATED WITH PLUMBING, ELECTRICAL, STRUCTURAL, AND ARCHITECTURAL DIVISIONS. VERIFY FIT OF MECHANICAL SYSTEMS PRIOR TO FABRICATION. COORDINATE ALL CHASE, SLEEVE, AND SLAB SAWCUT/COREDRILL REQUIREMENTS BEFORE CONSTRUCTION.
4. PROVIDE ALL EQUIPMENT SCHEDULED OR INDICATED ON THE DRAWINGS BUT NOT INCLUDED WITHIN THE SPECIFICATIONS INCLUDING ANY REQUIRED BUT NOT LISTED MISC ITEMS NEEDED TO PROVIDE COMPLETELY OPERATIONAL SYSTEMS AS INDICATED WHETHER SPECIFICALLY CALLED FOR OR NOT. INSTALLATION SHALL CONFORM TO MANUFACTURERS RECOMMENDATIONS AND APPLICABLE CODES. PROVIDE SUBMITTALS FOR ALL PROPOSED EQUIPMENT AND MATERIALS TO BE UTILIZED. PROVIDE OPERATION AND MAINTENANCE MANUAL FOR ALL SYSTEMS AND EQUIPMENT AT END OF PROJECT.
5. ELECTRICAL CHARACTERISTICS OF MECHANICAL EQUIPMENT SHALL BE VERIFIED WITH ELECTRICAL DRAWINGS AND ELECTRICAL CONTRACTOR PRIOR TO EQUIPMENT ORDER RELEASE. ADDITIONAL ELECTRICAL WORK RESULTING FROM EQUIPMENT SUBSTITUTION IS THE RESPONSIBILITY OF THIS CONTRACTOR.
6. ITEM DESIGNATIONS INDICATED HEREON ARE FOR PURPOSES OF THESE DOCUMENTS ONLY. CONTRACTOR SHALL VERIFY WITH OWNERS REPRESENTATIVE ACTUAL "TAGGING" INFORMATION TO BE PROVIDED FOR EACH ITEM OF MECHANICAL EQUIPMENT PRIOR TO NAMEPLATE ORDER RELEASE.
7. PROVIDE VALVE TAGS AND PIPE IDENTIFICATION BANDS. TAGS SHALL BE BRASS WITH CHAIN. IDENTIFICATION BANDS SHALL BE LOCATED EVERY 25 FEET AND ON EITHER SIDE OF INTERMEDIATE BARRIER.
8. PROVIDE 18" X 18" MINIMUM ACCESS DOOR IN INACCESSIBLE CEILINGS AND WALLS FOR EQUIPMENT AND VALVES REQUIRING ACCESS OR ADJUSTMENT. COORDINATE LOCATIONS AND SUBMIT TO ARCHITECT FOR APPROVAL PRIOR TO BEGINNING WORK.
7. DUCT SIZES INDICATED ARE OUTSIDE DIMENSIONS, BRANCH RUN-OUT DUCTS TO DIFFUSERS AND GRILLES TO BE SAME SIZE AS DIFFUSER OR GRILLE CONNECTION SIZE UNLESS OTHERWISE NOTED.
8. LENGTH OF FLEXIBLE DUCTWORK SHALL BE LIMITED TO 5'-0" MAX. HORIZONTAL RUN WITH ONLY ONE 90° ELBOW PERMITTED. SECURE FLEXIBLE DUCTWORK WITH SCREWS & DRAWBANDS PER SMACNA STANDARDS.
9. PROVIDE CEILING OPERATORS FOR INACCESSIBLE MVD'S WHERE INDICATED, EQUAL TO YOUNG REGULATOR, REMOTE GEAR OPERATED, WITH CEILING ESCUTCHEON.
10. DUCT MOUNTED SMOKE DETECTORS SHALL BE ZERO VELOCITY TYPE WHERE INDICATED ON DRAWINGS.
11. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR ACTUAL LOCATION OF GRILLES, DIFFUSERS, AND ACCESS DOORS IN CEILING. SECURE DIFFUSERS & GRILLES TO T-BAR CEILINGS WHERE APPLICABLE. SUBMIT SHOP DWG. FOR APPROVAL PRIOR TO BEGINNING WORK.
12. AT THE COMPLETION OF WORK, PROVIDE TESTING AND BALANCING SERVICES FOR MECHANICAL SYSTEM. SUBMIT WRITTEN REPORT TO ARCHITECT LISTING SYSTEM AIRFLOWS, ELECTRIC DATA, TEMPERATURES, AND PRESSURE DROPS.
13. WHERE PIPES PASS THROUGH FIRE-RATED FLOOR OR WALLS, SEAL WITH MATERIALS EQUAL TO 3M FIRE BARRIER, MEETING TESTING PER ASTM-E-814 (UL 1479). USE CAULK OR PUTTY TYPE. ALL EXTERIOR WALL AND ROOF PENETRATIONS SHALL BE SEALED WATERPROOF.
14. AT THE COMPLETION OF THE WORK AND PRIOR TO FINAL ACCEPTANCE, ALL PARTS OF THE WORK INSTALLED UNDER THIS SPECIFICATION SHALL BE THOROUGHLY CLEANED.
15. ALL EQUIPMENT, MATERIALS, AND INSTALLATION IS TO BE WARRANTEED FOR ONE YEAR TO BE FREE FROM DEFECT. PROVIDE WRITTEN WARRANTY TO OWNER.
16. THE OWNER AND ENGINEER ARE NOT RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PRECAUTIONS OR TO MEANS, METHODS, TECHNIQUES, CONSTRUCTION SEQUENCES, OR PROCEDURES REQUIRED TO PERFORM HIS WORK.
17. THIS CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND SIZES OF ALL EXISTING EQUIPMENT, DUCTWORK, PIPING, ELECTRICAL CONDUIT, STRUCTURAL MEMBERS, ETC., PRIOR TO STARTING OF CONSTRUCTION. COORDINATE CONFLICTS WITH THE GENERAL CONTRACTOR.
18. THIS CONTRACTOR SHALL COORDINATE ALL REQUIRED EXISTING BUILDING SERVICE SYSTEM OUTAGES WITH BUILDING MANAGEMENT.
19. ALL MECHANICAL SYSTEMS ARE REQUIRED TO BE INSTALLED PER BASE BUILDING REQUIREMENTS, LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
20. PATCH AND REPAIR TO MATCH EXISTING, ANY WALL/CEILINGS TO BE ACCESSED TO ROUTE PIPING AND DUCTWORK.
21. EXISTING DUCTWORK, PIPING, AND EQUIPMENT TO REMAIN IS SHOWN LIGHT. NEW DUCTWORK, PIPING, AND EQUIPMENT IS SHOWN HEAVY. EXISTING DUCTWORK, PIPING, AND EQUIPMENT TO BE REMOVED IS SHOWN WITH X OVER ITEM.

14-822618

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 05/13/14

HURLEY & GAGNE, INC.
ARCHITECTURE
PLANNING
P.O. BOX 209
BOULDER, COLORADO 80307
303.413.1868

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COLORADO LICENSED MECHANICAL ENGINEER 36163 PROFESSIONAL ENGINEER
FEB 28 2014

INVISION SALLY JOBE AT 1400 SOUTH POTOMAC
IMAGING CENTER RENOVATION - PHASE 1A & 1B
AURORA, COLORADO

PROJECT # 2014.01

DATE	28 FEB 2014
SCALE	1/4" = 1'-0"
REV	
REV	
FILE	

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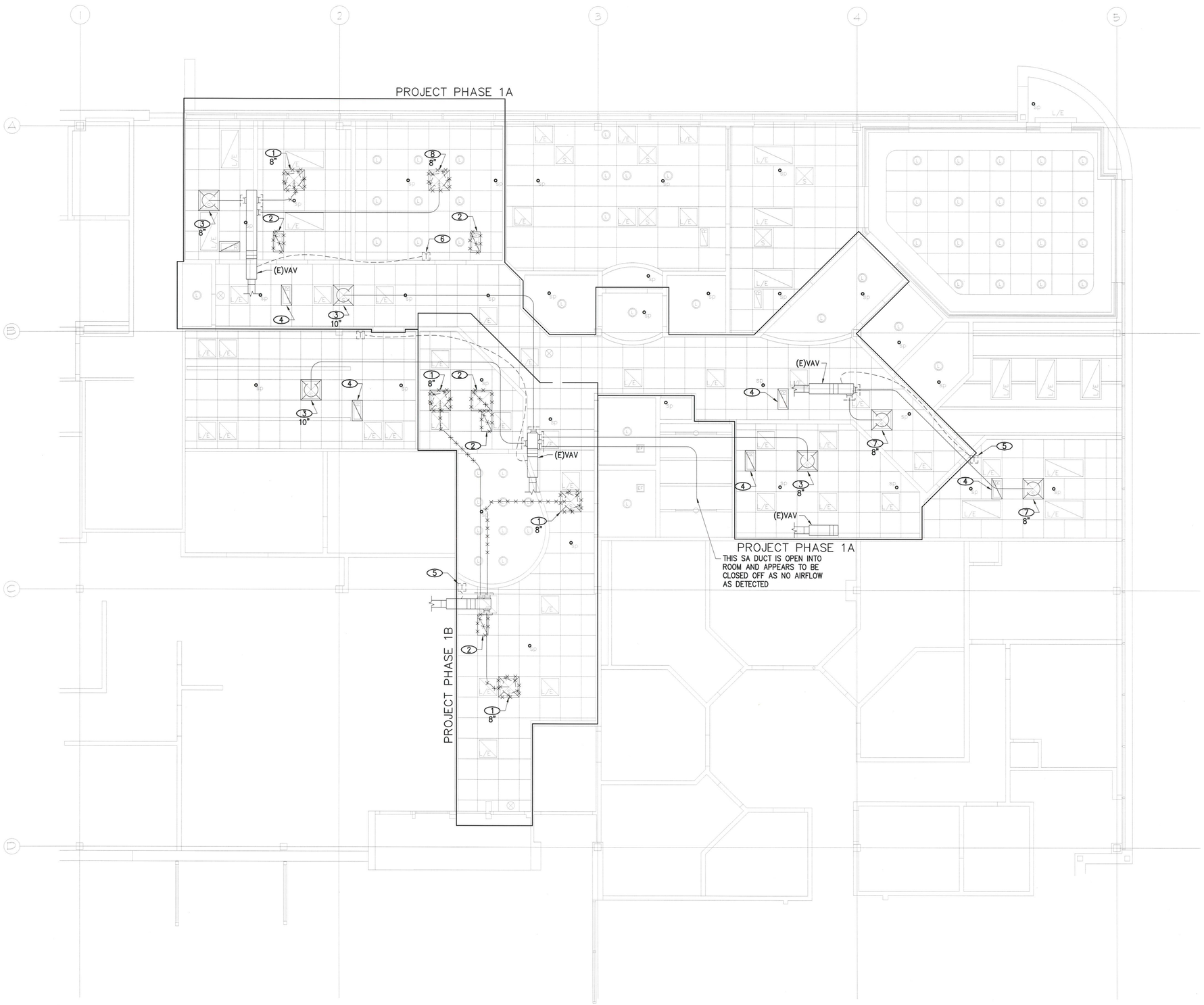
MECHANICAL SPECIFICATIONS, LEGEND, NOTES, AND SCHEDULES

M0.0

NOTES

1. EXISTING SUPPLY AIR DIFFUSER IN CEILING TO BE REMOVED AND RETAINED FOR FUTURE RE–INSTALLATION. CAP EXISTING SA IN CEILING SPACE WHERE SHOWN. RE–INSTALL IN NEW LOCATION EXTENDING FULL SIZE DIFFUSER SUPPLY AIR CONNECTION TO EXISTING SA DUCT AND CONNECT. BALANCE TO CFM SHOWN.
2. EXISTING RETURN AIR GRILLE IN CEILING TO BE REMOVED AND RETAINED FOR FUTURE RE–INSTALLATION. RE–INSTALL IN NEW LOCATION AS SHOWN.
3. EXISTING SUPPLY AIR DIFFUSER IN CEILING TO REMAIN. BALANCE TO CFM SHOWN.
4. EXISTING RETURN AIR GRILLE IN CEILING TO REMAIN.
5. EXISTING THERMOSTAT TO REMAIN.
6. EXISTING THERMOSTAT TO BE REMOVED AND RETAINED FOR FUTURE RE–INSTALLATION. RE–INSTALL IN NEW LOCATION AS SHOWN.
7. EXISTING SUPPLY AIR DIFFUSER IN CEILING TO REMAIN. NO RE–BALANCE REQUIRED.
8. EXISTING SUPPLY AIR DIFFUSER IN CEILING TO BE REMOVED AND DISCARDED.



1 MECHANICAL DEMOLITION FLOOR PLAN – PHASE 1A & 1B
1/4" = 1'-0"

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MECHANICAL DEMOLITION FLOOR PLAN – PHASE 1A & 1B

M2.1

14-822618

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 03/13/14

NOTES

1. EXISTING SUPPLY AIR DIFFUSER IN CEILING TO BE REMOVED AND RETAINED FOR FUTURE RE–INSTALLATION. CAP EXISTING SA IN CEILING SPACE WHERE SHOWN. RE–INSTALL IN NEW LOCATION EXTENDING FULL SIZE DIFFUSER SUPPLY AIR CONNECTION TO EXISTING SA DUCT AND CONNECT. BALANCE TO CFM SHOWN.
2. EXISTING RETURN AIR GRILLE IN CEILING TO BE REMOVED AND RETAINED FOR FUTURE RE–INSTALLATION. RE–INSTALL IN NEW LOCATION AS SHOWN.
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4. EXISTING RETURN AIR GRILLE IN CEILING TO REMAIN.
5. EXISTING THERMOSTAT TO REMAIN.
6. EXISTING THERMOSTAT TO BE REMOVED AND RETAINED FOR FUTURE RE–INSTALLATION. RE–INSTALL IN NEW LOCATION AS SHOWN.
7. EXHAUST FAN MOUNTED IN CEILING SPACE, DISCHARGE TO OPEN RETURN AIR PLENUM.
8. PROVIDE 2" DOOR UNDERCUT FOR EXHAUST FAN MAKE–UP AIR, COORDINATE UNDERCUT WITH GENERAL CONTRACTOR.
9. EXISTING SUPPLY AIR DIFFUSER IN CEILING TO REMAIN. NO RE–BALANCE REQUIRED.
10. 12X12 TRANSFER AIR OPENING WITH GRILLE ON WAITING ROOM SIDE OF WALL.

PROJECT PHASE 1A

PROJECT PHASE 1B

PROJECT PHASE 1A

(E)VAV

8"–200

8"–150

10"–100

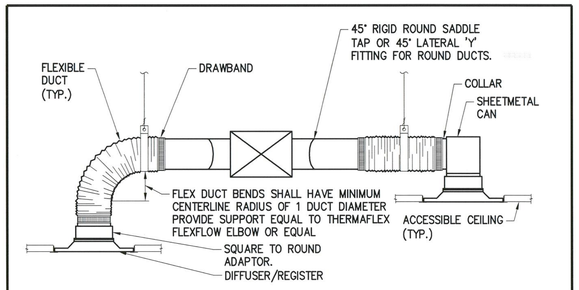
10"–300

8"–240

EF 1

THIS SA DUCT IS OPEN INTO ROOM AND APPEARS TO BE CLOSED OFF AS NO AIRFLOW WAS DETECTED

1 MECHANICAL FLOOR PLAN – PHASE 1A & 1B
1/4" = 1'–0"



DIFFUSER DETAIL
NO SCALE

Locate receptacles a minimum of 15" AFF and locate light switches, pull boxes and thermostats etc. a maximum of 44" AFF per ANSI A117.1 308.

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MECHANICAL FLOOR PLAN – PHASE 1A & 1B

M3.1

PLUMBING SPECIFICATIONS

WATER PIPING ABOVE GRADE SHALL BE TYPE L, HARD DRAWN COPPER WITH WROUGHT COPPER FITTINGS. FITTINGS SHALL BE SOLDERED WITH 95–5 TIN–ANTIMONY SOLDER OR BRAZED WITH SILVER BASED FILLER METAL. WATER PIPING SHALL BE TESTED WITH TEST PRESSURE MAINTAINED FOR A MINIMUM OF 30 MINUTES WITH NO LOSS. DOMESTIC WATER PIPING SHALL BE DISINFECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE JURISDICTIONAL HEALTH AND PLUMBING CODES.

DOMESTIC WATER PIPING SHALL BE INSULATED WITH NONCOMBUSTIBLE, PREFORMED, FIBERGLASS, PIPE INSULATION WITH A CONDUCTIVITY, K–VALUE, OF 0.24 AT 75° AND A FLAME SPREAD/ SMOKE DEVELOPED RATING OF 25/50 OR LESS. INSULATION SHALL HAVE A KRAFT REINFORCED FOIL VAPOR BARRIER WITH SELF–SEALING ADHESIVE JOINTS. INSULATION AT HANGERS AND CLAMPS SHALL BE OF HIGH DENSITY INSULATING MATERIAL. INSULATED PIPING EXPOSED TO VIEW SHALL BE COVERED AND FINISHED WITH A 30 MIL. THICK PVC JACKET.

PIPE INSULATION SCHEDULE

DOMESTIC HOT WATER SUPPLY COPPER PIPING = 1" THICK INSULATION

ABOVE GRADE SOIL, WASTE AND VENT PIPING SHALL BE NO–HUB, CAST IRON. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. WALL CLEANOUTS FOR WASTE PIPING SHALL BE FURNISHED AND INSTALLED BELOW SINKS, LAVATORIES AND URINALS IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE JURISDICTIONAL PLUMBING CODE. SOIL, WASTE AND STORM DRAIN PIPING 2–1/2" AND SMALLER SHALL BE SLOPED 1/4" PER FOOT UNLESS NOTED OTHERWISE ON DRAWINGS. SOIL, WASTE AND STORM DRAIN PIPING 3" AND LARGER SHALL BE SLOPED 1/8" PER FOOT UNLESS NOTED OTHERWISE ON DRAWINGS.

PIPE HANGERS FOR INSULATED PIPE SIZES 1/2" TO 1–1/2" SHALL BE ADJUSTABLE, STEEL, BAND TYPE. PIPE HANGERS FOR INSULATED PIPE SIZES 2" AND OVER SHALL BE ADJUSTABLE, STEEL CLEVIS TYPE. SHIELDS SHALL BE USED WHERE HANGER SUPPORTS INSULATED PIPE. SHIELDS SHALL BE 18 GAGE GALVANIZED STEEL OVER INSULATION 180 DEGREES AND A MINIMUM OF 12 INCHES LONG. PIPE HANGERS FOR BARE PIPE SHALL BE ADJUSTABLE, MALLEABLE STEEL, SPLIT RING TYPE. BARE COPPER PIPE SHALL BE PROTECTED FROM CORROSION BY TRISOLATOR OR SIMILAR PRODUCT. HANGERS SHALL BE PROVIDED AT INTERVALS IN ACCORDANCE WITH THE JURISDICTIONAL PLUMBING CODE.

PENETRATIONS OF FIRE RATED WALLS OR FLOORS BY PIPE SHALL BE SEALED BY A FIRESTOPPING SYSTEM UL LISTED FOR THE APPLICATION. PENETRATION SEAL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH PRINTED INSTRUCTIONS OF THE UL FIRE RESISTANCE DIRECTORY AND MANUFACTURERS INSTRUCTIONS. FIRESTOPPING SYSTEM SHALL BE EQUAL TO 3M FIRE BARRIER. FIRESTOPPING MATERIAL SHALL BE CAULK OR PUTTY TYPE.

CHROME PLATED ESCUTCHEONS SHALL BE PROVIDED AT PIPE SLEEVES FOR EXPOSED BARE PIPE.

PLUMBING LEGEND

ABBR	SYMBOL	DESCRIPTION
S OR W		EXISTING SOIL, WASTE OR SEWER BELOW GRADE OR FLOOR
S OR W		EXISTING SOIL, WASTE OR SEWER ABOVE GRADE OR FLOOR
V		VENT
CW		EXISTING COLD WATER
HW		EXISTING HOT WATER
S OR W		SOIL, WASTE OR SEWER BELOW GRADE OR FLOOR
S OR W		SOIL, WASTE OR SEWER ABOVE GRADE OR FLOOR
FCO/GCO		FLOOR OR GRADE CLEANOUT
CO		CLEANOUT
V		VENT
CW		COLD WATER
HW		HOT WATER
UNO		UNLESS NOTED OTHERWISE
AFF		ABOVE FINISHED FLOOR
E		EXISTING
D		DEMO
R		RELOCATED
		POINT OF CONNECTION NEW TO EXISTING
		ITEMS TO BE DEMOLISHED

FIRE PROTECTION SPECIFICATIONS

WORK SHALL COMPLY WITH LOCAL CODES AND ORDINANCES AND NATIONAL FIRE PROTECTION ASSOCIATION (HEREAFTER NFPA) STANDARD 13 – STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS. MATERIALS AND EQUIPMENT SHALL BE NEW AND GUARANTEED FOR ONE YEAR FROM THE DATE OF ACCEPTANCE. MATERIALS AND EQUIPMENT SHALL BE MEET THE REQUIREMENTS OF THE SPECIFICATION.

THE FIRE PROTECTION CONTRACTOR SHALL MODIFY THE EXISTING SYSTEM TO PROVIDE A COMPLETE FIRE PROTECTION SYSTEM OF TYPE, PRESSURE, FLOW AND DENSITIES REQUIRED BY AND IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION, ALL LOCAL JURISDICTIONAL AGENCIES CODES AND THE OWNERS INSURANCE CARRIER. THE TOTAL SYSTEM SHALL BE ACCEPTED WITHOUT PREMIUM PENALTIES DUE TO SYSTEM DESIGN, BY INSURANCE CARRIER OR LOCAL AUTHORITY.

EXISTING CONDITIONS AND EXISTING WATER MAINS SHALL BE VERIFIED IN THE FIELD. VOLUME AND PRESSURE OF INCOMING WATER SUPPLY SHALL BE VERIFIED.

ENGINEERING DRAWINGS AND HYDRAULIC CALCULATIONS, APPROVED BY AUTHORITIES HAVING JURISDICTION SHALL BE PREPARED AND SUBMITTED TO THE ARCHITECT. REVIEW AND APPROVAL BY AUTHORITIES HAVING JURISDICTION SHALL BE COMPLETED PRIOR TO SUBMITTING TO THE ARCHITECT. DESIGN SHALL BE BASED ON OCCUPANCY HAZARD CLASSIFICATION VERIFIED AND CONFIRMED WITH AUTHORITIES HAVING JURISDICTION AND THE OWNERS INSURANCE CARRIER.

SPRINKLER HEAD LOCATIONS SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PRIOR TO ORDER RELEASE. SPRINKLER HEADS SHALL BE LOCATED SYMMETRICALLY.

THE MANUFACTURERS DATA SHALL BE SUBMITTED TO THE ARCHITECT FOR SPRINKLERS, VALVES AND SPECIALTIES. THE SUBMITTED DATA SHALL INCLUDE PERFORMANCE RATINGS, ROUGH–IN DETAILS, WEIGHTS, SUPPORT REQUIREMENTS, AND PIPING CONNECTIONS.

WORK SHALL BE COORDINATED WITH THE WORK OF OTHER TRADES. MAINS AND BRANCHES SHALL BE ROUTED TO AVOID INTERFERENCES WITH DUCTWORK, PLUMBING, ELECTRICAL CONDUITS AND STRUCTURAL MEMBERS.

THE INSTALLED WORK OF OTHER TRADES SHALL BE INSPECTED PRIOR TO THE WORK OF THIS SECTION. CONDITIONS SHALL BE VERIFIED WHICH WILL ALLOW A FIRE SPRINKLER SYSTEM INSTALLATION TO BE MADE COMPLYING WITH THE REFERENCED STANDARDS AND REGULATIONS AND AUTHORITIES HAVING JURISDICTION. THE ARCHITECT SHALL BE NOTIFIED IN THE EVENT OF A DISCREPANCY. THE INSTALLATION SHALL NOT PROCEED IN THE AREAS OF DISCREPANCY UNTIL SUCH DISCREPANCIES HAVE BEEN FULLY RESOLVED.

CUTTING OF EXISTING OR COMPLETED CONSTRUCTION SHALL BE APPROVED BY THE ARCHITECT PRIOR TO SUCH CUTTING. STRUCTURAL MEMBERS SHALL NOT BE CUT EXCEPT UNDER THE SPECIFIC INSTRUCTION AND SUPERVISION OF THE ARCHITECT. SLEEVES, CAPS, PLATES, ESCUTCHEONS, FLASHING, ETC. SHALL BE PROVIDED TO CLOSE OPENINGS MADE FOR THE SPRINKLER SYSTEM.

SPRINKLER SYSTEMS SHALL BE TESTED IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF NFPA 13 AND ANY ADDITIONAL REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION. ALL TESTS AND INSPECTIONS REQUIRED BY THE REFERENCED STANDARDS AND REGULATIONS AND AUTHORITIES HAVING JURISDICTION SHALL BE PERFORMED AND SHALL BE WITNESSED AND APPROVED BY THE AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL BEAR THE COST OF ALL REQUIRED TESTING OF WORK, FURNISHING ALL LABOR, POWER AND EQUIPMENT.

THE OWNER, BUILDING DEPARTMENT AND THE FIRE DEPARTMENT SHALL HAVE THE OPTION OF WITNESSING ALL TESTS. AT LEAST THREE WORKING DAYS NOTICE SHALL BE PROVIDED PRIOR TO TESTING.

EXPOSED PORTIONS OF THE FIRE SPRINKLER SYSTEM SHALL BE THOROUGHLY CLEANED, REMOVING LABELS AND TRACES OF FOREIGN SUBSTANCE. ONLY CLEANING SOLUTIONS APPROVED BY THE MANUFACTURER OF THE ITEM TO BE CLEANED SHALL BE USED. DAMAGE TO FINISHED SURFACES SHALL BE AVOIDED.

CONTRACTOR SHALL SUBMIT RECORD DRAWINGS, OPERATION MANUALS AND MAINTENANCE MANUALS AS REQUIRED BY ARCHITECT UPON COMPLETION.

CONTROL VALVES, DRAIN VALVES AND GAUGES SHALL BE INSPECTED AND CHECKED FOR CORRECT OPERATION BY THE CONTRACTOR PRIOR TO ACCEPTANCE OF WORK.

FIRE SPRINKLER PIPING ABOVE GRADE SHALL BE SCHEDULE 40 BLACK STEEL WITH APPROVED MALLEABLE IRON THREADED FITTINGS. WHERE APPROVED BY AUTHORITIES HAVING JURISDICTION THIN–WALLED STEEL PIPE MEETING THE REQUIREMENTS SET FORTH IN NFPA 13 MAY BE USED. WHERE APPROVED BY AUTHORITIES HAVING JURISDICTION WELDED FITTINGS OF THE SAME CLASS AS THE PIPE OR GROOVE JOINT COUPLINGS AND FITTINGS MAY BE USED AS DIRECTED BY THE MANUFACTURER FOR FIRE SPRINKLER SERVICE. PIPE HANGERS SHALL CONFORM TO NFPA 13.

SPRINKLERS SHALL BE SEMI–RECESSED QUICK RESPONSE WITH CHROME FINISH TO MATCH EXISTING BUILDING STANDARD. SPRINKLERS IN RADIOLOGY ROOM TO BE FULLY RECESSED WITH COVERPLATE. FUSIBLE LINKS SHALL BE FUSIBLE–SOLDER LINK TYPE TEMPERATURE RATED FOR SPECIFIC AREA HAZARD.

VALVES SHALL BE UNDERWRITERS APPROVED AND FM LISTED AND SHALL BE SELECTED FOR APPROPRIATE SYSTEM OPERATING PRESSURES.

ALTERATIONS/MODIFICATIONS TO FIRE SPRINKLER AND/OR ALARM ARE REQUIRED TO BE PERMITTED SEPARATELY. TYP

PLUMBING SHEET INDEX

ISSUE		SHEET NO.	SHEET DESCRIPTION
02-28-14	PERMIT SET		
02-26-14	REVIEW SET		
●	●	P0.0	PLUMBING SPECIFICATIONS, NOTES, LEGEND AND SCHEDULES
●	●	P2.1	PLUMBING DEMOLITION FLOORPLAN – PHASE 1A & 1B
●	●	P3.1	PLUMBING FLOOR PLAN – PHASE 1A & 1B

PLUMBING GENERAL NOTES

1. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE STATE CODES, LOCAL CODES, AND OWNER'S STANDARDS INDICATED BY THE CONSTRUCTION DOCUMENTS.
2. PLUMBING DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS, CERTIFIED EQUIPMENT DRAWINGS AND FROM THE STRUCTURE ITSELF BEFORE FABRICATING ANY WORK, VERIFY ALL SPACE REQUIREMENTS COORDINATING WITH OTHER TRADES, AND INSTALL THE SYSTEMS IN THE SPACE PROVIDED WITHOUT EXTRA CHARGES TO THE OWNER.
3. CONTRACTOR SHALL COORDINATE WORK INDICATED WITH MECHANICAL, ELECTRICAL, FIRE PROTECTION, STRUCTURAL, CIVIL, AND ARCHITECTURAL DIVISIONS. CONTRACTOR SHALL VERIFY SIZE & LOCATION OF EXISTING UTILITIES PRIOR TO COMMENCING WORK, COORDINATE WITH OTHER TRADES AND MAKE FINAL CONNECTION. VERIFY FIT OF PLUMBING SYSTEMS PRIOR TO FABRICATION. COORDINATE ALL CHASE, SLEEVE, AND SLAB SAWCUT/COREDRILL REQUIREMENTS.
4. PROVIDE ALL EQUIPMENT SCHEDULED OR INDICATED ON THE DRAWINGS BUT NOT INCLUDED WITHIN THE SPECIFICATIONS INCLUDING ANY REQUIRED BUT NOT LISTED MISC ITEMS REQUIRED TO PROVIDE COMPLETE OPERATIONAL SYSTEMS AS INDICATED WHETHER SPECIFICALLY CALLED FOR OR NOT. INSTALLATION SHALL CONFORM TO MANUFACTURERS RECOMMENDATIONS AND APPLICABLE CODES. PROVIDE SUBMITTALS FOR ALL PROPOSED FIXTURES, EQUIPMENT AND MATERIALS TO BE UTILIZED. PROVIDE OPERATION AND MAINTENANCE MANUAL FOR ALL SYSTEMS AND EQUIPMENT AT END OF PROJECT.
5. ELECTRICAL CHARACTERISTICS OF PLUMBING EQUIPMENT SHALL BE VERIFIED WITH ELECTRICAL DRAWINGS AND ELECTRICAL CONTRACTOR PRIOR TO EQUIPMENT ORDER RELEASE. ADDITIONAL ELECTRICAL WORK RESULTING FROM EQUIPMENT SUBSTITUTION IS THE RESPONSIBILITY OF THIS CONTRACTOR.
6. ITEM DESIGNATIONS INDICATED HEREON ARE FOR PURPOSES OF THESE DOCUMENTS ONLY. CONTRACTOR SHALL VERIFY WITH OWNERS REPRESENTATIVE ACTUAL "TAGGING" INFORMATION TO BE PROVIDED FOR EACH ITEM OF MECHANICAL EQUIPMENT PRIOR TO NAMEPLATE ORDER RELEASE.
7. PROVIDE 18" X 18" MINIMUM ACCESS DOOR IN INACCESSIBLE CEILINGS AND WALLS FOR EQUIPMENT AND VALVES REQUIRING ACCESS OR ADJUSTMENT. COORDINATE LOCATIONS AND SUBMIT TO ARCHITECT FOR APPROVAL PRIOR TO BEGINNING WORK.
8. PROVIDE CLEANOUTS WHERE INDICATED ON DRAWINGS OR AS REQUIRED BY JURISDICTIONAL PLUMBING CODE.
9. CLEAN, TEST, AND SANITIZE ALL PLUMBING IN ACCORDANCE WITH REQUIREMENTS OF JURISDICTIONAL PLUMBING AND HEALTH CODES.
10. WHERE PIPES PASS THROUGH FIRE–RATED FLOOR OR WALLS, SEAL WITH MATERIALS EQUAL TO 3M FIRE BARRIER, MEETING TESTING PER ASTM–E–814 (UL 1479). USE CAULK OR PUTTY TYPE. ALL EXTERIOR WALL AND ROOF PENETRATIONS SHALL BE SEALED WATERPROOF.
11. AT THE COMPLETION OF THE WORK AND PRIOR TO FINAL ACCEPTANCE, ALL PARTS OF THE WORK INSTALLED UNDER THIS SPECIFICATION SHALL BE THOROUGHLY CLEANED.
12. ALL EQUIPMENT, MATERIALS, AND INSTALLATION IS TO BE WARRANTEED FOR ONE YEAR TO BE FREE FROM DEFECT. PROVIDE WRITTEN WARRANTY TO OWNER.
13. THE OWNER AND ENGINEER ARE NOT RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PRECAUTIONS OR TO MEANS, METHODS, TECHNIQUES, CONSTRUCTION SEQUENCES, OR PROCEDURES REQUIRED TO PERFORM HIS WORK.
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15. THIS CONTRACTOR SHALL COORDINATE ALL REQUIRED EXISTING BUILDING SERVICE SYSTEM OUTAGES WITH BUILDING MANAGEMENT.
16. ALL PLUMBING SYSTEMS ARE REQUIRED TO BE INSTALLED PER BASE BUILDING REQUIREMENTS, LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
17. PATCH AND REPAIR TO MATCH EXISTING, ANY WALL/CEILINGS TO BE ACCESSED TO ROUTE PIPING.
18. EXISTING PLUMBING AND EQUIPMENT TO REMAIN IS SHOWN LIGHT. NEW PLUMBING AND EQUIPMENT IS SHOWN HEAVY. EXISTING PLUMBING AND EQUIPMENT TO BE REMOVED IS SHOWN WITH X OVER ITEM.

PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	MFR/MODEL	ROUGH–IN (INCHES) HW	CW	V	TRAP	S/W	NOTES

S–1	ADA APPROVED 19" WIDE X 21" LONG X 6–1/2" DEEP SINGLE COMPARTMENT SELF RIMMING SINK CONSTRUCTED OF 18 GAUGE SOUND DAMPENED STAINLESS STEEL WITH HOLE DRILLINGS TO MEET FAUCET SPECIFICATIONS. PROVIDE CHROME PLATED BRASS STRAINER, CHROME PLATED BRASS P–TRAP AND WASTE ARM, 1/2" NOM. COMP. X 3/8" NOM. COMP. CHROME PLATED ANGLE STOPS WITH WHEEL HANDLES, CHROME PLATED FLEXIBLE SEAMLESS COPPER TUBE SUPPLIES, AND (1) PIECE SET SCREW TYPE CHROME PLATED CAST BRASS ESCUTCHEONS AT WALL PENETRATIONS. FAUCET TO BE OF CHROME PLATED CAST BRASS CONSTRUCTION WITH 1.5 GPM AERATOR AND CERAMIC DISK CARTRIDGE TYPE VALVE. ALL TRIM TO BE CHROME PLATED COPPER OR BRASS.	SINK = ELKAY #SL–ADA–1921–4 WITH CENTER REAR DRAIN OR EQUAL BY MOEN, KINDRED, KOHLER, JUST
		FAUCET = AMER. STD. #4275.551 OR EQUAL BY KOHLER, DELTA, SYMMONS, CHICAGO
		STRAINER = ELKAY #LK18B OR EQUAL BY BRASSCRAFT, DEARBORN BRASS, KOHLER, AMER. STD., DELTA, CHICAGO, T&S BRASS, PROFLO, JUST
		TRAP AND SUPPLY INSULATION = TRUEBRO #102–E–Z & #402W OR EQUAL BY BROCAR, PROFLO
			1/2	1/2	1 1/2	1 1/2	1 1/2	14-822618

ARCHITECTURE PLANNING

P.O. BOX 209
BOULDER, COLORADO 80307
303.413.1868

MOEN ENGINEERING CONSULTANTS INC
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WESTMINSTER, CO 80031
P: (303)907-4285

FEB 28 2014

INVISION SALLY JOBE AT 1400 SOUTH POTOMAC
IMAGING CENTER RENOVATION – PHASE 1A & 1B
AURORA, COLORADO

PROJECT #	2014.01
DATE	28 FEB 2014
SCALE	1/4" = 1'–0"
REV	
REV	
FILE	

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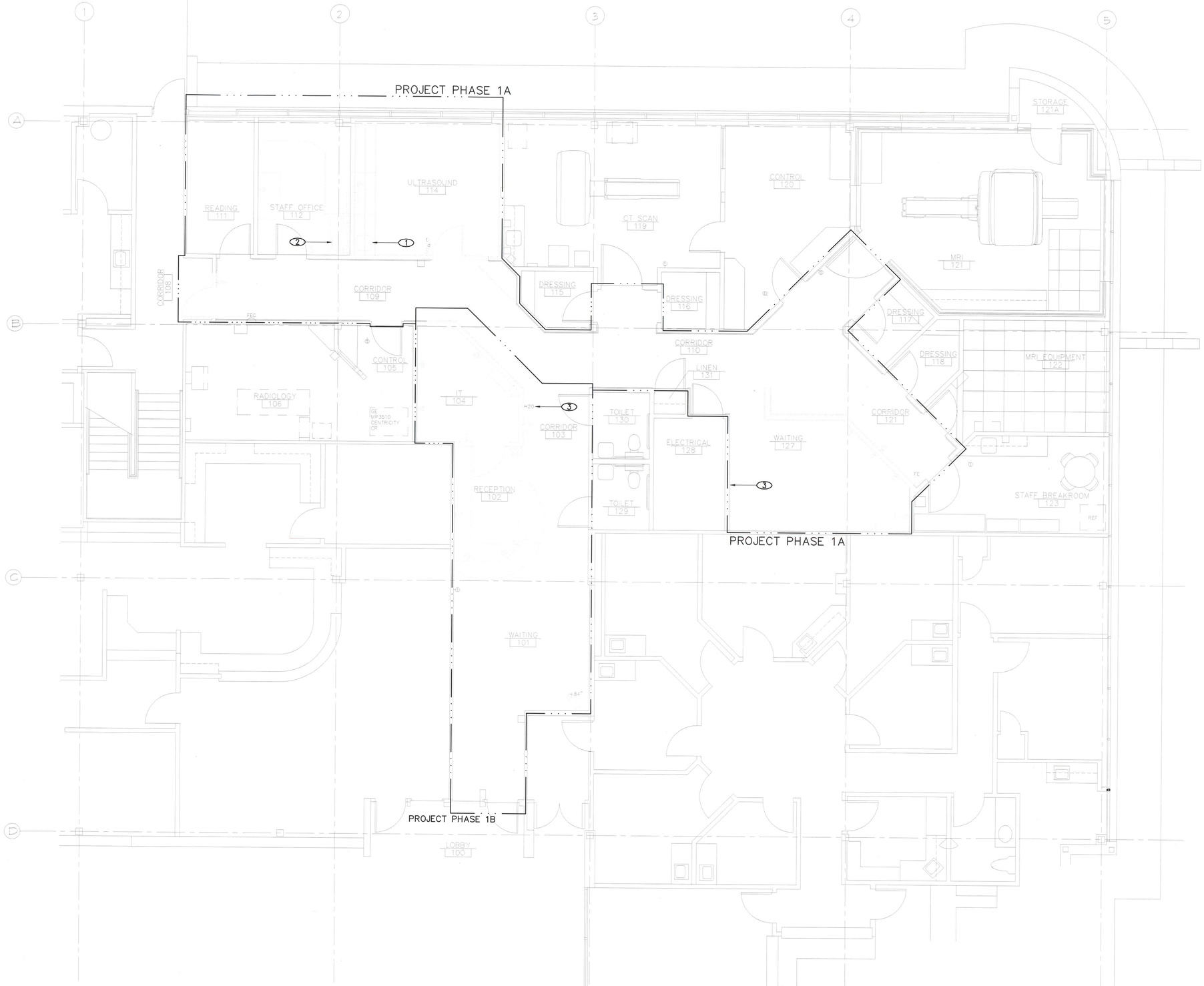
PLUMBING SPECIFICATIONS, LEGEND, NOTES, AND SCHEDULES

P0.0

KEYNOTES

1. EXISTING SINK TO BE REMOVED, CAP EXISTING HW, CW, AND WASTE ARM IN WALL BEHIND FINISHED SURFACE OF NEW WALL.
2. EXISTING SINK TO BE REMOVED, CAP EXISTING HW, CW, AND WASTE ROUGH-INS AT WALL FOR CONNECTION TO NEW SINK.
3. EXISTING CW SERVICE FOR WATER DISPENSER TO BE REMOVED, CAP IN CEILING SPACE AS CLOSE TO EXISTING CW MAIN AS POSSIBLE.



1 PLUMBING DEMOLITION FLOOR PLAN – PHASE 1A & 1B
1/4" = 1'-0"

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COLORADO LICENSED
JOHN T. MOEN
36163
PROFESSIONAL ENGINEER
FEB 28 2014

INVISION SALLY JOBE AT 1400 SOUTH POTOMAC
IMAGING CENTER RENOVATION – PHASE 1A & 1B
AURORA, COLORADO

PROJECT #	2014.01
DATE	28 FEB 2014
SCALE	1/4" = 1'-0"
REV	
REV	
FILE	

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PLUMBING DEMOLITION FLOOR PLAN – PHASE 1A & 1B

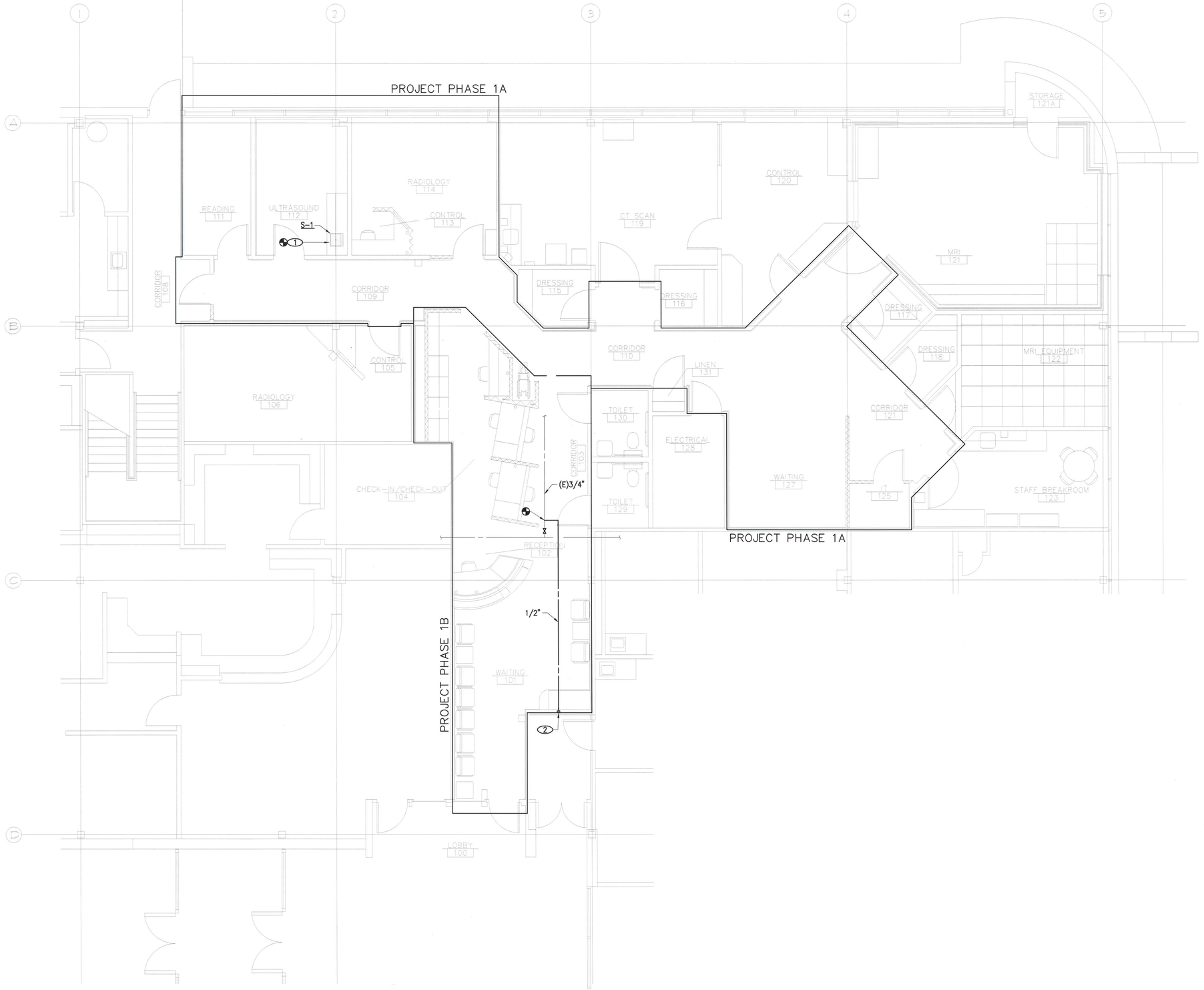
P2.1

14-822618

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 03/31/14

KEYNOTES

1. MODIFY EXISTING ROUGH-IN AS REQUIRED AND CONNECT 1/2"HW, 1/2"CW, AND 1-1/2"W TO NEW SINK.
2. PROVIDE NEW 1/2" NOM. COMP. X 3/8" NOM. COMP. CHROME PLATED ANGLE STOP WITH WHEEL HANDLE AND (1) PIECE SET SCREW TYPE CHROME PLATED CAST BRASS ESCUTCHEONS AT WALL PENETRATIONS BELOW COUNTER FOR CONNECTION TO WATER FILTER, EXTEND CW FROM FILTER TO COFFEE MACHINE.



1 PLUMBING FLOOR PLAN – PHASE 1A & 1B
1/4" = 1'-0"

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COLORADO LICENSED PROFESSIONAL ENGINEER 36163 — FEB 28 2014

INVISION SALLY JOBE AT 1400 SOUTH POTOMAC IMAGING CENTER RENOVATION – PHASE 1A & 1B AURORA, COLORADO

PROJECT #	2014.01
DATE	28 FEB 2014
SCALE	1/4" = 1'-0"
REV	
REV	
FILE	

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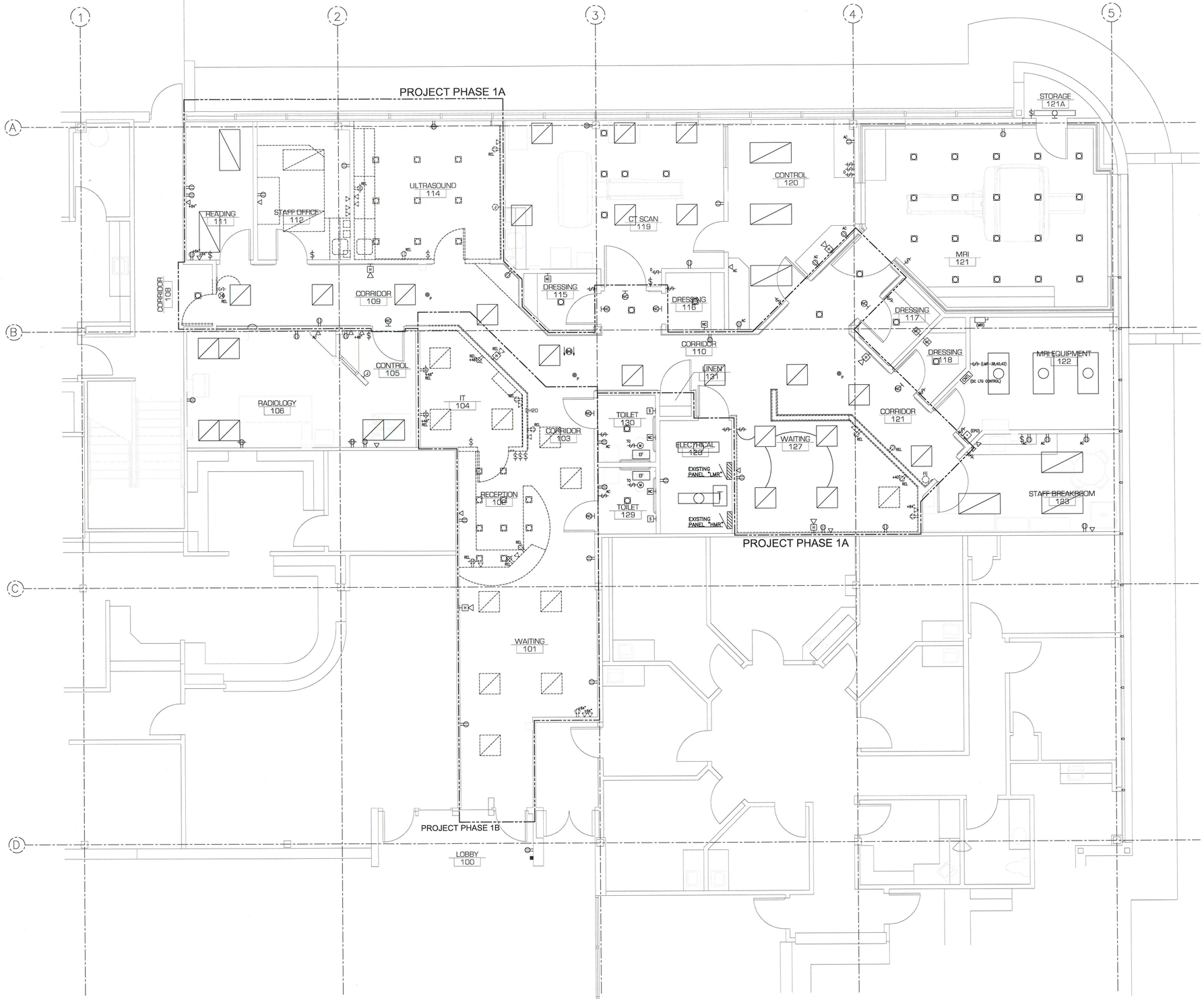
PLUMBING FLOOR PLAN – PHASE 1A & 1B

P3.1

14-822618

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 03/12/14



SUITE FLOOR PLAN - ELECTRICAL DEMOLITION
SCALE: 1/4" = 1'-0"

14-822618

HURLEY & GAGNE, INC.
ARCHITECTURE
PLANNING
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BOULDER, COLORADO 80307
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COLORADO REGISTERED PROFESSIONAL ENGINEER
29133
3-4-14

INVISION SALLY JOBE AT 1400 SOUTH POTOMAC IMAGING CENTER RENOVATION - PHASE ONE AURORA, COLORADO

PROJECT #	1393
DATE	28 FEB. 2014
SCALE	AS SHOWN
REV	-
REV	-
FILE	1393ELEC

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ELECTRICAL DEMOLITION PLAN

ED1.0

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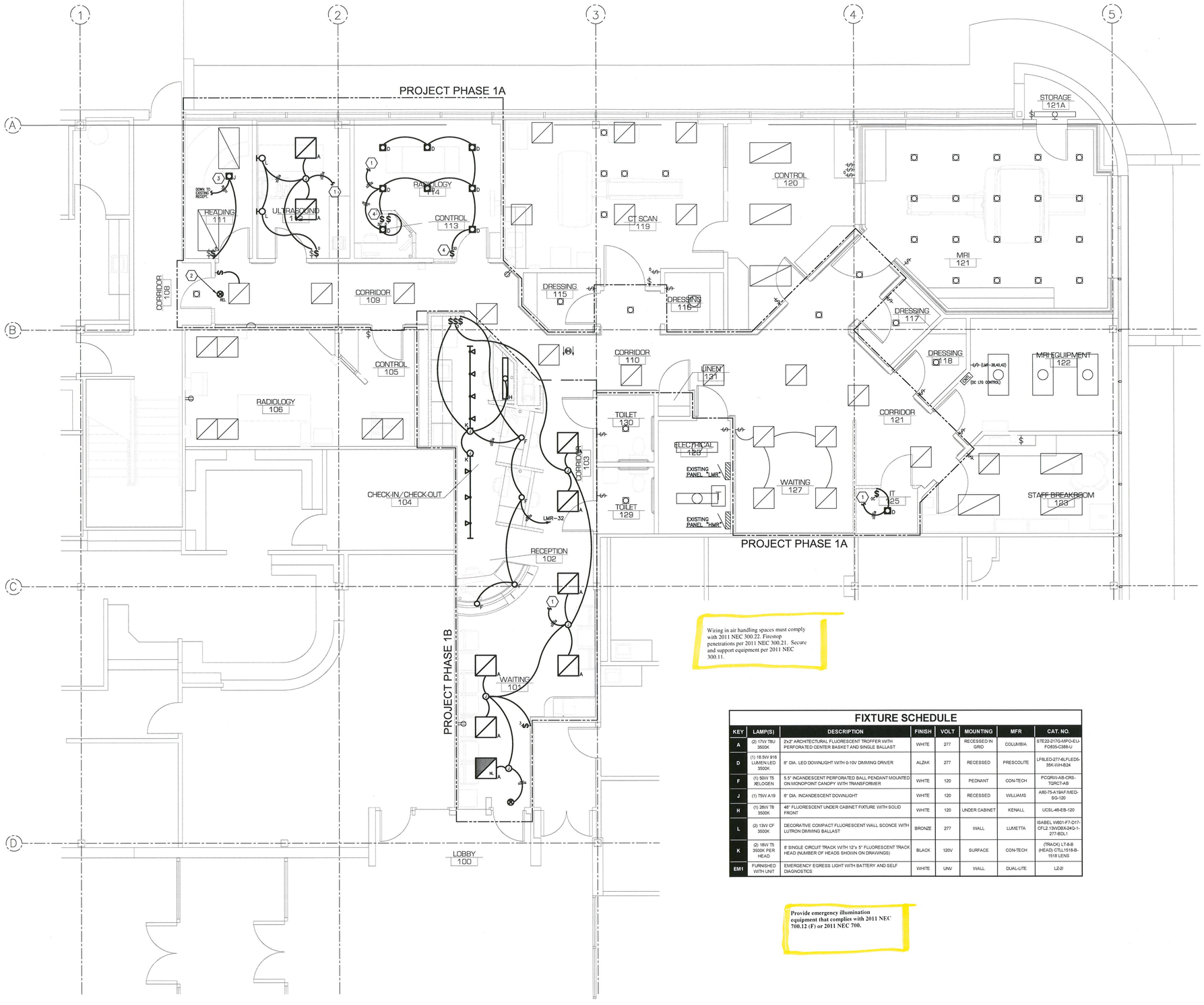

SUITE FLOOR PLAN - LIGHTING
SCALE: 1/4" = 1'-0"

ELECTRICAL SPECIFICATIONS

PROVIDE ALL EQUIPMENT AND SERVICES NECESSARY TOINSTALL THE COMPLETE SYSTEMS DESCRIBED BY THE CONTRACT DOCUMENTS AND SPECIFIED BELOW. THE DRAWINGS ILLUSTRATE THE GENERAL DESIGN AND EXTENT OF THE PERFORMANCE REQUIRED. ALL DIMENSIONS AND LOCATIONS SHALL BE TAKEN FROM THE ARCHITECTURAL DRAWINGS.

COMPLY WITH ALL STATE AND LOCAL CODES, UTILITY COMPANY REGULATIONS, FIRE DEPARTMENT REQUIREMENTS AND THE LATEST EDITIONS OF THE NFPA CODES.

EQUIPMENT AND MATERIALS SHALL BE NEW, UL-LISTED FOR THE USE INTENDED, BE FREE FROM DAMAGE OR DEFECT AND SHALL BE INSTALLED PER THE MANUFACTURERS INSTRUCTIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF THE ELECTRICAL SYSTEMS FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE. PROVIDE OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL ELECTRICAL SYSTEMS.

SUPPORT NEW AND EXISTING CONDUITS AND EQUIPMENT FROM THE STRUCTURE TO PREVENT SAGGING, POCKETING, SWAYING AND VIBRATIONS.

PROVIDE SLEEVES AND INSERTS FOR ALL ELECTRICAL CONDUIT. SEAL ALL CONDUIT PENETRATIONS PASSING THROUGH FIRE RATED BARRIERS WITH AN APPROVED MATERIAL TO MAINTAIN THE FIRE RATED INTEGRITY.

PROVIDE COMPLETE SYSTEMS OF CONDUCTORS AND RACEWAYS USING CONDUIT AND/OR CABLE ASSEMBLIES APPROPRIATE TO THE FUNCTION AND LOCATION AND SPECIFICALLY APROVED BY THE NEC. CONDUCTORS MUST BE DERATED PER THE NEC. LOAD BALANCE THE ENTIRE SYSTEM TO WITHIN 15% PER PHASE. PROVIDE A COMPLETE GROUNDING SYSTEM IN ACCORDANCE WITH ARTICLE 250 OF THE NEC.

THE FOLLOWING RACEWAYS ARE APPROVED FOR USE ON THIS PROJECT, WHERE APPROVED BY THE NEC;
EMT: ELECTRICAL METALLIC TUBING, GALVANIZED
GRC: GALVANIZED RIGID CONDUIT

THE FOLLOWING CABLE ASSEMBLIES MAY BE USED IN THE POWER DISTRIBUTION SYSTEM, WHERE APPROVED BY THE NEC: MC (METAL CLAD) CABLE.

PROVIDE GALVANIZED STEEL OUTLET AND JUNCTION BOXES, EXCEPT WHERE OTHERWISE INDICATED. BOXES SHALL BE A MINIMUM OF 4" SQUARE OR OCTAGONAL WITH DEPTH AS REQUIRED. THROUGH THE WALL BOXES ARE NOT PERMITTED. PROVIDE PLASTER OR TILE RINGS FOR ALL FLUSH OUTLETS INSTALLED WHERE REQUIRED.

ALL CONDUCTORS SHALL BE COPPER, RATED AT 600 VOLTS (STRANDED FOR NO. 8 AWG AND LARGER), WITH THE FOLLOWING INSULATION RATINGS: THHN, THWN, XHHW. THE CONDUCTORS SHALL BE APPLIED USING THE 75C RATING TABLE.

PROVIDE SPECIFICATION GRADE, IVORY TO MATCH EXISTING, DEVICES THROUGHOUT AS MANUFACTURED BY HUBBELL, ARROW HART OR LEVITON. PLATES SHALL BE WHITE NYLON WITH MATCHING SCREWS. PROVIDE BLANK COVERPLATE FOR UNUSED BOXES. COVERPLATES FOR MULTI-GANG APPLICATIONS SHALL BE SINGLE PIECE AND SIZED FOR THE BOX IT COVERS.

BRANCH CIRCUITS SHALL USE MINIMUM NO. 12 AWG WIRING FOR BRANCH CIRCUITS, PROTECTED BY 20 AMP CIRCUIT BREAKERS. CONTROL WIRING MAY BE NO. 14 AWG MINIMUM.

DO NOT INSTALL EXPOSED CONDUIT IN FINISHED AREAS.

USE FLEXIBLE METALLIC CONDUIT FOR CONNECTIONS TO MOTORS, FIXTURES AND OR OTHER EQUIPMENT WHERE VIBRATION IS ENCOUNTERED. PROVIDE SEALTITE FLEXIBLE METALLIC CONDUIT IN WET AREAS.

PROVIDE A GROUND WIRE IN NON-METALLIC CONDUIT AND FLEXIBLE CONDUIT.

PROVIDE CIRCUIT BREAKER TYPE PANELBOARDS AS SCHEDULED ON THE DRAWINGS. BREAKERS SHALL BE FULL WIDTH, THERMAL MAGNETIC, BOLT-ON TYPE. PROVIDE MULTI-POLE BREAKERS WITH COMMON TRIP AND SINGLE OPERATING HANDLE. PROVIDE SEPARATE GROUND BUS. PROVIDE A TYPED DIRECTORY IN A DIRECTORY FRAME. INSTALL TRIMS AND DOORS WITH THE PRIMER COATS IN FINISHED AREAS. PROVIDE THREE SPARE ¾" CONDUITS UP TO AN ACCESSIBLE LOCATION. PANELBOARDS SHALL BE SQUARE D OR EQUAL.

PROVIDE NORMAL DUTY, ENCLOSED, FUSIBLE AND NON-FUSIBLE SAFETY SWITCHES IN ENCLOSURES RATED FOR THEIR USE. PROVIDE A LABEL ON ALL SWITCHES.

PROVIDE BRANCH CIRCUITS, FEEDERS, JUNCTION BOXES, DISCONNECT SWITCHES, ETC. AS REQUIRED FOR A COMPLETE SYSTEM. MAKE POWER CONNECTIONS TO MOTORS AND CONTROLS FOR HEATING, VENTILATION, AIR CONDITIONING, PLUMBING AND OWNER FURNISHED EQUIPMENT AS REQURIED.

TELEPHONE: PROVIDE A COMPLETE SYTSEM OF RACEWAYS, PULL BOXES, OUTLET BOXES AND TERMINALS. CONDUIT IN THE BUILDING SHALL BE EMT WITH PLASTIC BUSHINGS ON EACH END WHERE THEY ARE NOT TERMINATED IN A BOX. PROVIDE A PULL STRING IN ALL EMPTY CONDUITS. WIRING SHALL BE BY THE TELEPHONE CONTRACTOR. FIELD VERIFY ALL TELEPHONE OUTLET LOCATIONS WITH THE ARCHITECT OR OWNER INCLUDING THE MOUNTING HEIGHT.

Wiring in air handling spaces must comply with 2011 NEC 300.22. Firestop penetrations per 2011 NEC 300.21. Secure and support equipment per 2011 NEC 300.11.

FIXTURE SCHEDULE

KEY	LAMP(S)	DESCRIPTION	FINISH	VOLT	MOUNTING	MFR	CAT. NO.
A	(2) 17W T8U 3500K	2'x2' ARCHITECTURAL FLUORESCENT TROFFER WITH PERFORATED CENTER BASKET AND SINGLE BALLAST	WHITE	277	RECESSED IN GRID	COLUMBIA	STE22-217G-MIPO-EU-FO835-C388-U
D	(1) 18.5W 916 LUMEN LED 3500K	6" DIA. LED DOWNLIGHT WITH 0-10V DIMMING DRIVER	ALZAK	277	RECESSED	PRESCOLITE	LF6LED-277-6LFLED5-35K-WH-B24
F	(1) 50W T5 XELOGEN	5.5" INCANDESCENT PERFORATED BALL PENDANT MOUNTED ON MONOPOINT CANOPY WITH TRANSFORMER	WHITE	120	PEDNANT	CON-TECH	PCQRW-AB-CRS-TQRCT-AB
J	(1) 75W A19	6" DIA. INCANDESCENT DOWNLIGHT	WHITE	120	RECESSED	WILLIAMS	A60-75-A19AF-MED-SQ-120
H	(1) 28W T8 3500K	48" FLUORESCENT UNDER CABINET FIXTURE WITH SOLID FRONT	WHITE	120	UNDER CABINET	KENALL	UCSL-46-EB-120
L	(2) 13W CF 3500K	DECORATIVE COMPACT FLUORESCENT WALL SCONCE WITH LUTRON DIMMING BALLAST	BRONZE	277	WALL	LUMETTA	ISABEL W601-F7-D17-CFL2.13WDBXJ4Q-1-277-BDL1
K	(2) 18W T5 3500K PER HEAD	8' SINGLE CIRCUIT TRACK WITH 12"x 5" FLUORESCENT TRACK HEAD (NUMBER OF HEADS SHOWN ON DRAWINGS)	BLACK	120V	SURFACE	CON-TECH	(TRACK) LT-8-B (HEAD) CTLL1518-B-1518 LENS
EM1	FURNISHED WITH UNIT	EMERGENCY EGRESS LIGHT WITH BATTERY AND SELF DIAGNOSTICS	WHITE	UNV	WALL	DUAL-LITE	LZ-2I

Provide emergency illumination equipment that complies with 2011 NEC 700.12 (F) or 2011 NEC 700.

DETAIL NOTES

1. CONNECT TO EXISTING 277V LIGHTING CIRCUIT MADE AVAILABLE THROUGH DEMOLITION. LIGHTING LOAD IS BEING REDUCED.
2. EXISTING DEVICE RELOCATED TO NEW LOCATION SHOWN. MAINTAIN EXISTING CIRCUIT CONTINUITY. PROVIDE ADDITIONAL CONDUIT AND WIRE AS REQUIRED,
3. LOCATE FIXTURE PER OWNERS DIRECTION.
4. PROVIDE LUTRON NOVA-T 0-10V 3-WAY DIMMER.

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE Nov 2014

14-822618

HURLEY & GAGNE, INC.
ARCHITECTURE PLANNING
P.O. BOX 209
BOULDER, COLORADO 80307
303.413.1868

INVISION SALLY JOBE AT 1400 SOUTH POTOMAC
IMAGING CENTER RENOVATION - PHASE ONE
AURORA, COLORADO

PROJECT #	1393
DATE	28 FEB. 2014
SCALE	AS SHOWN
REV	-
REV	-
FILE	1393ELEC

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ELECTRICAL LIGHTING PLAN & FIXTURE SCHEDULE

E1.0

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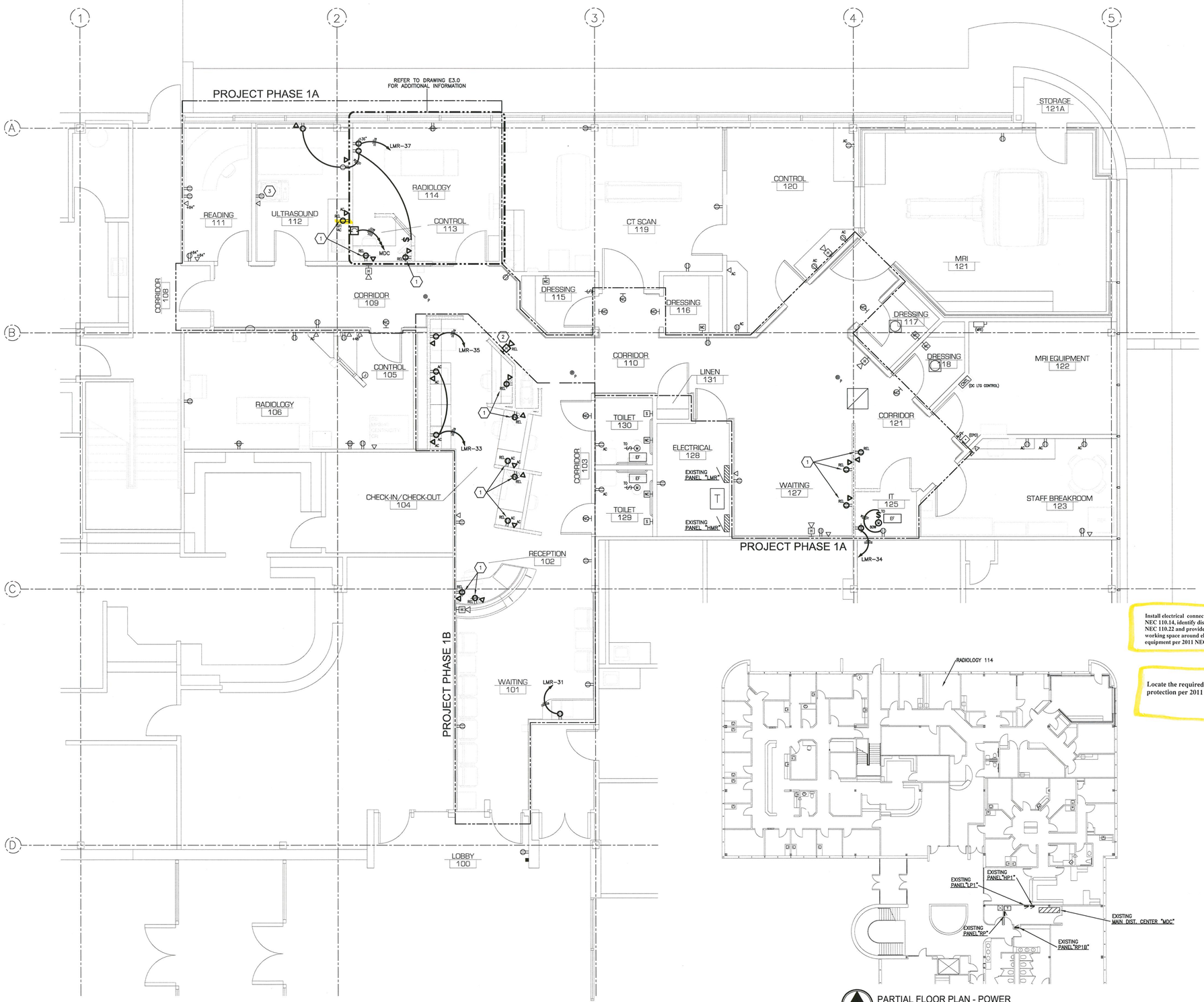

SUITE FLOOR PLAN - POWER
SCALE: 1/4" = 1'-0"

PARTIAL FLOOR PLAN - POWER
SCALE: 1/16" = 1'-0"

Install electrical connections per 2011 NEC 110.14, identify disconnects per 2011 NEC 110.22 and provide working space around electrical equipment per 2011 NEC 110.26

Locate the required overcurrent protection per 2011 NEC 240.21.

DETAIL NOTES

1. RELOCATE EXISTING RECEPTACLE TO NEW LOCATION SHOWN. MAINTAIN EXISTING CIRCUIT CONTINUITY. PROVIDE ADDITIONAL CONDUIT AND WIRE AS REQUIRED. PROVIDE NEW RECEPTACLE AND COVERPLATE.
2. EXISTING DEVICE RELOCATED TO NEW LOCATION SHOWN. MAINTAIN EXISTING CIRCUIT CONTINUITY. PROVIDE ADDITIONAL CONDUIT AND WIRE AS REQUIRED.
3. RECORD DOCS INDICATE THAT THIS RECEPTACLE IS ON A DEDICATED CIRCUIT. E.C. SHALL FIELD VERIFY. REPLACE EXISTING RECEPTACLE WITH REQUIRED NEMA CONFIGURATION – VERIFY WITH ULTRASOUND EQUIPMENT VENDOR.

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE MAR 7 2014

14-822618

HURLEY & GAGNE, INC.
ARCHITECTURE PLANNING
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BOULDER, COLORADO 80307
303.413.1868

COLORADO REGISTERED 29133 PROFESSIONAL ENGINEER
3.4.14

INVISION SALLY JOBE AT 1400 SOUTH POTOMAC IMAGING CENTER RENOVATION - PHASE ONE AURORA, COLORADO

PROJECT #	
1393	
DATE	28 FEB. 2014
SCALE	AS SHOWN
REV	-
REV	-
FILE	1393ELEC

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ELECTRICAL POWER PLAN

E2.0

JCN Engineering, Inc.
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JCN Engineering, Inc.
3281 Routt St., Wheat Ridge, CO 80033
(303) 239-0736

March 20, 2014

Hurley & Gagne, Inc.
PO Box 3209
Boulder, CO 80307

Attn: Tom Hurley

Re: **Invision Sally Jobe at 1400 S. Potomac**
Electrical Plan Review Responses

1. Please see attached point to point fault current calculation. This calculation includes feeder lengths in metallic conduit and all existing conductors are copper. This calculation will be on the record documents at the project completion. Fault #2 is at existing panel HMR and fault #4 is the secondary side of the transformer feeding existing panel LMR and the 2,224 amp value is at existing panel LMR.

2. The contractor shall provide redundant grounding as required by NEC article 517.13 in all patient care areas. This shall include a metallic conduit and a green ground conductor as indicated by wire ticks on the homeruns on our current drawings.

If you have questions or need additional information please let me know.

Jeff Nielsen P.E.
Project Engineer

14-822618

1

FAULT CURRENT CALCULATIONS

FAULT CURRENT AMPS AVAILABLE AT NEW 750 KVA TRANSFORMER (277/480V-3P-4W) = **16,900 AMPS**

500 KCM CU

FAULT #1 (LOCATION - MAIN DIST. PANEL "MDC")

$$f = \frac{1.73 \times 60 \times 16{,}900}{4 \times 22{,}185 \times 480} = 0.041$$

$$M = \frac{1}{1 + 0.041} = 0.961$$

FAULT AVAILABLE = 16,900 x 0.961 = 16,241 AMPS ①

300 KCM CU

FAULT #2 (LOCATION - PANEL "HMR")

$$f = \frac{1.73 \times 70 \times 16{,}241}{1 \times 18{,}176 \times 480} = 0.225$$

$$M = \frac{1}{1 + 0.225} = 0.816$$

FAULT AVAILABLE = 16,241 x 0.816 = 13,253 AMPS ②

FAULT #3 (ON PRIMARY SIDE OF 45 KVA TRANS. FEEDING PANEL "LMR")

$$f = \frac{1.73 \times 8 \times 13{,}253}{1 \times 3{,}806 \times 480} = 0.100$$

$$M = \frac{1}{1 + 0.100} = 0.909$$

FAULT AVAILABLE = 13,253 x 0.909 = 12,047 AMPS ③

FAULT #4 (ON SECONDARY SIDE OF 45 KVA TRANS. FEEDING PANEL "LMR")

$$f = \frac{12{,}047 \times 480 \times 1.73 \times 5.2}{100{,}000 \times 45} = 11.560$$

$$M = \frac{1}{1 + 11.560} = 0.080$$

FAULT AVAILABLE = $\frac{480}{208}$ x 12,047 x 0.080 = 2,224 AMPS ④

14-822618

JCN Engineering, Inc.
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Invision Sally Jobe
1400 S. Potomac, Aurora, CO
IMAGING CENTER RENOVATION
ELECTRICAL FAULT CALCS.

REVISIONS: -

PROJECT NUMBER: 1393
PLOT DATE: 03/06/14
DRAWN BY: bd
CHECK BY: JCN

E4.0A

ROOM PREPARATION

Ⓐ CIRCUIT BREAKER - SEE POWER LINE SPECS. CENTERLINE AT + 5 FT.

Ⓐ1 120 VOLT 20 AMP SWITCHED DUPLEX OUTLET. LOCATE SWITCH IN CONTROL BOOTH AS SHOWN.

Ⓐ2 120 VOLT 20 AMP 4PLEX OUTLET AT +36".

Ⓑ 6" X 6" X 4" ELEC. BOX. BOTTOM OF BOX AT +18" COVER PLATE TO CONTAIN 1 EA 1 1/4" TWO SCREW CABLE CLAMP CENTERED IN COVER.

Ⓒ 12" X 4" ELEC. TROUGH FLUSH IN WALL, EXTENDING 12" ABOVE CEILING.

Ⓒ1 12"X 12" X 4" ELEC. BOX. BOTTOM OF BOX AT +18". LEAVE 6" WIRETAILS IN BOX. OWNER PROVIDED ELECTRICAL CONTRACTOR TO CONNECT POWER LINE TO POWER CABINET AFTER IT IS SET IN PLACE.

Ⓓ PROVIDE 10 FT. LENGTH OF WIREMOLD #2600 CABLE WIREWAY AND 1 EA. #2611 90 DEG. CORNER. X-RAY INSTALLER WILL CUT AND SCREW TO FLOOR.

Ⓔ 6 " X 6 " X 4 " ELEC. BOX. BOTTOM OF BOX AT +42". COVER PLATE TO CONTAIN 1 EA. 1 1/2" TWO SCREW CABLE CLAMP CENTERED IN COVER.

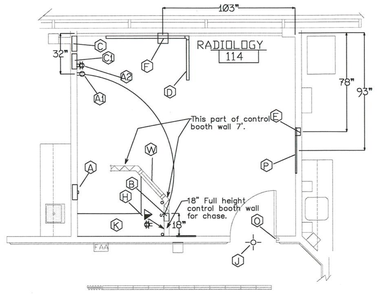
Ⓕ 8 " X 8 " X 4 " ELEC. BOX. FLUSH IN FINISHED CEILING. BLANK COVER PLATE.

Ⓗ 1 EA. RJ-45 NETWORK CONNECTIONS W/CAT 5E CABLE MINIMUM AND 1 EA. 120 VAC 20 AMP 4PLEX OUTLET. TERMINATE NETWORK CABLE AT FACILITY NETWORK HUB/TELCO CLOSET.

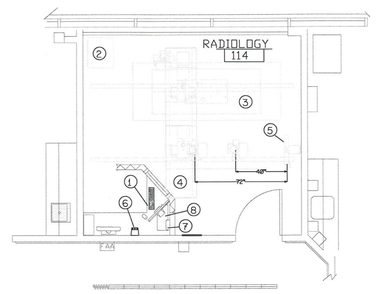
Ⓙ " IN USE " FIXTURE. 120 VOLT INCANDESCENT OR LED LAMP.

Ⓚ WORK COUNTER, 18" DEEP. MOUNTED AT +34" to +36". WITH 2" PLASTIC CABLE FEED-THRUS AS SHOWN.

Ⓠ DOOR SWITCH. CONTACTS OF SWITCH CLOSED WHEN DOOR IS CLOSED. RATED FOR 30VDC OPERATION.

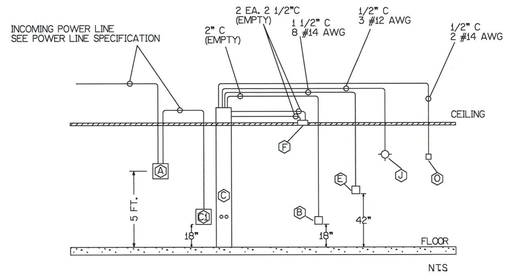


ROOM PREP VIEW



◯ EQUIPMENT LAYOUT

1. OPERATOR TOUCHSCREEN / KEYBOARD
2. POWER CABINET (QG-65)
3. FLOAT TOP ELEVATOR TABLE (QT-750)
4. CEILING MOUNTED TUBESTAND (RS-590)
5. WALL UNIT (QW420-D)
6. BATTERY CHARGER
7. DRX ACCESS POINT (ON TOP OF DRX COMPUTER)
8. DRX COMPUTER



N.T.S

POWER LINE SPECIFICATION FOR QG-65 65KW GENERATOR

DISTRIBUTION TRANSFORMER 80 KVA MINIMUM

THREE PHASE 480 VOLT Y-CONFIGURED +/- 5 % MEASURED LINE-TO-LINE, BALANCED TO NEUTRAL. ADDITIONAL NEUTRAL WIRE MAY BE USED IF REQUIRED BY LOCAL ELECTRICAL CODE. (RECOMMENDED)

TYPICAL WIRE SIZE BASED ON TOTAL LENGTH OF RUN FROM DISTRIBUTION TRANSFORMER THRU "A" CIRCUIT BREAKER AND TO "C1" BOX. ACTUAL VALUES DEPEND ON POWER QUALITY AND DISTANCE BETWEEN THE MAINS POWER AND THE GENERATOR.

480 VOLT THREE PHASE	
50 FT. RUN	#2 AWG #4 GND.
100 FT. RUN	#00 AWG #4 GND.
150 FT. RUN	#000 AWG #4 GND.
200 FT. RUN	#0000 AWG #4 GND.
SERVICE RATING	90 AMPS

ALL WIRING TO BE STRANDED COPPER

APPARENT LINE RESISTANCE .019 OHMS MAX.

ALL WIRING AND GROUNDING MUST BE IN ACCORDANCE WITH NEC (NFPA #70) OR LOCAL ELECTRICAL CODES.

A SEPARATE EARTH GROUND (#4 AWG INSULATED WIRE) MUST BE PROVIDED.

ALL CONDUIT RUNS TO BE DIRECT AND AS SHORT AS POSSIBLE.
NO CONDUIT EXCEPT THE INCOMING POWER LINE MAY EXCEED 35 FT.
ALL WIRING TO BE STRANDED COPPER

GENERAL NOTES

1. ROOM PREPARATION MUST BE COMPLETE BEFORE EQUIPMENT INSTALLATION CAN BEGIN.
2. " A " BOXES - VERIFY LOCATION WITH CODE REQUIREMENTS.

FEET 0 1 2 3 4 5 6 7 8 9 10 11 12

EQUIPMENT LAYOUT AND ROOM PREPARATION DRAWING ACCEPTED BY:
INITIALS _____
DATE _____

NOT FOR CONSTRUCTION

Invision Sally Jobe - Aurora
1400 South Potomac #180
Aurora, Colorado 80012

MEDICAL IMAGING TECHNOLOGIES 875 VALLEY STREET COLORADO SPRINGS, CO. 80915	PROJ.	DATE 2/10/2014
	REV.	
	DRAWN MWG	
PHONE (719) 520-1511 FAX (719) 520-1542		

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE _____

14-822618

JCN Engineering, Inc.
3281 Routt St., Wheat Ridge, CO 80033
(303) 239-0736

HURLEY & GAGNE, INC.
ARCHITECTURE PLANNING
P.O. BOX 209
BOULDER, COLORADO 80307
303.413.1868

COLORADO REGISTERED JEFFREY J. NIELSEN 29133 PROFESSIONAL ENGINEER
3-4-14

INVISION SALLY JOBE AT 1400 SOUTH POTOMAC
IMAGING CENTER RENOVATION - PHASE ONE
AURORA, COLORADO

PROJECT #	1393
DATE	28 FEB. 2014
SCALE	AS SHOWN
REV	-
REV	-
FILE	1393ELEC

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MEDICAL IMAGING TECHNOLOGIES
-

E3.0

COMcheck Software Version 3.9.1

Envelope Compliance Certificate

2012 IECC

Section 1: Project Information

Project Type: **New Construction**
Project Title: Invision Sally Jobe

Construction Site:
1400 S. Potomac
Aurora, CO

Owner/Agent:
Sally Jobe

Designer/Contractor:
Jeff Nielsen
JCN Engineering, Inc.
3281 Routt St.
Wheat Ridge, CO 80033
303.239.0736

Section 2: General Information

Building Location (for weather data): **Aurora, Colorado**
Climate Zone: **5b**
Building Type for Envelope Requirements: **Non-Residential**

Building Type — Floor Area
breast cancer clinic (Health care clinic) — 929

Section 3: Requirements Checklist

Envelope PASS (Design Criteria must be selected and Project Entered)

Climate-Specific Requirements:

Component Name/Description	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.

Air Leakage, Component Certification, and Vapor Retarder Requirements:

1. Continuous air barrier is provided throughout the building thermal envelope.
2. Air barrier joints and seams are sealed. The joints and seals are securely installed in or on the joint for its entire length.
3. Penetrations of the air barrier and paths of air leakage are caulked, gasketed or otherwise sealed in a manner compatible with the construction materials and location. Joints and seals are sealed in the same manner or taped or covered with a moisture vapor-permissible wrapping material. The joints and seals are securely installed in or on the joint for its entire length.
4. The air barrier is continuous for all assemblies that are the thermal envelope and across the joints and assemblies.
5. Recessed lighting fixtures installed in the building envelope are Type IC rated as meeting ASTM E283, tested to <= 2.0 cfm, and are sealed with gasket or caulk.
6. Completed building air leakage tested to <=0.40 cfm/ft2.
7. Air leakage of fenestration. Windows/non-glazed sliding and swinging doors/skylights with no weepage openings <= 0.20 cfm/ft2. Skylights with weepage <= 0.30 cfm/ft2. Curtain walls/storefront glazing <= 0.06 cfm/ft2. Doors: glazed swinging entrance/revolving/sliding <= 1.00 cfm/ft2. Doors: garage <= 0.40 cfm/ft2.

Exceptions:
- Field-fabricated assemblies.

8. Doors and access openings from conditioned space to shafts, chutes, stairways and elevator lobbies are gasketed, weatherstripped or sealed.

Exceptions:
- Door openings required to comply with International Building Code as per Section 0402.4.4

9. Stairway and shaft vents are provided with Class I motorized dampers with a leakage rate <= 4 cfm/ft2. Dampers are installed with controls so that they are capable of automatically opening upon activation of any fire alarm or the interruption of power to the damper.
10. Outdoor air supply and exhaust openings are provided with Class IA motorized dampers having a leakage rate <=4 cfm/ft2.

Exceptions:
- Gravity thermostatically dampers having a leakage rate <=20 cfm/ft2 are permitted for exhaust and relief dampers for buildings less than three stories in height above grade, or where the design outdoor air intake or exhaust capacity <=300 cfm.
- Dampers smaller than 24 inches in either dimension are permitted to have a leakage <=40 cfm/ft2.

11. Cargo doors and loading dock doors are weather sealed.
12. Building entrance doors have a vestibule equipped with self closing devices.

Exceptions:
- Building entrances with revolving doors.
- Doors not intended to be used as a building entrance by the public, or intended solely for employee use.
- Doors that open directly from a space less than 3000 sq. ft. in area.
- Doors sized primarily to facilitate vehicular movement or materials handling and adjacent personnel doors.
- Doors opening directly from a sleeping dwelling unit.

13. Component R-values & U-factors labelled as certified.
14. No roof insulation is installed on a suspended ceiling with removable ceiling panels.
15. 'Other' components have supporting documentation for proposed U-Factors.
16. Insulation installed according to manufacturer's instructions, in substantial contact with the surface being insulated, and in a manner that achieves the rated R-value without compressing the insulation. Except when instructed otherwise, edge joints between overlapping layers of continuous insulation are staggered.
17. Radiant panels and associated components, designed for heat transfer from the panel surfaces to the occupants or indoor space are insulated with a minimum of R-3.5

Minimum Skylight-Daylighting Requirements:

18. In enclosed spaces > 10,000 ft2 directly under a roof with ceiling heights >15 ft. and used as an office, lobby, atrium, concourse, corridor, storage, gymnasium exercise center, convention center, automotive service, manufacturing, non-refrigerated warehouse, retail store, distribution/sorting area, transportation, or workshop, the following requirements apply unless exempted:

The daylight zone under skylights is >= half the floor area.

The skylight area to daylight zone is >= 3 percent with a skylight VT >= 0.40, or a minimum skylight effective aperture >= 1 percent.

Exceptions:
- Spaces where the proposed general lighting power densities < 0.5 W/ft2.
- Areas with obstructions that block direct beam sunlight on >= 1/2 of the roof over the enclosed area for more than 1,500 daytime hours per year between 8 am and 4 pm.
- Spaces where the daylight zone under rooftop monitors is > 50 percent of the enclosed space floor area.

19. Skylights in office, storage, automotive service, manufacturing, non-refrigerated warehouse, retail store, and distribution sorting area have a measured haze value > 90 percent unless designed to exclude direct sunlight.

Additional Efficiency Package Requirements:

1. Full compliance with this energy code requires an "additional efficiency package" be adopted. None has yet been specified.

COMcheck Software Version 3.9.1

Interior Lighting Compliance Certificate

2012 IECC

Section 1: Project Information

Project Type: **New Construction**
Project Title: Invision Sally Jobe

Construction Site:
1400 S. Potomac
Aurora, CO

Owner/Agent:
Sally Jobe

Designer/Contractor:
Jeff Nielsen
JCN Engineering, Inc.
3281 Routt St.
Wheat Ridge, CO 80033
303.239.0736

Section 2: Interior Lighting and Power Calculation

A	B Floor Area	C Allowed Watts / ft2	D Allowed Watts
breast cancer clinic (Health care clinic)	929	1	929
		Total Allowed Watts =	929

Section 3: Interior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps / Fixture	C # of Fixtures	D Fixture Watt	E (C X D)
breast cancer clinic (Health care clinic 929 sq ft)				
Linear Fluorescent 1: Type A: 2 x 2 - 24" T8 17W / Electronic	2	9	34	306
Incandescent 1: Type D: LED downlight / Other	1	9	17	153
Incandescent 2: Type F: pendant / Incandescent 50W	1	4	50	200
Compact Fluorescent 1: Type K: track-head / Quad 4-pin 18W / Electronic	1	7	20	140
Compact Fluorescent 2: Type L: wall sconce / Twin Tube 13W / Electronic	2	3	30	90
		Total Proposed Watts =		889

Section 4: Requirements Checklist

Lighting Wattage:

1. Total proposed watts must be less than or equal to total allowed watts
Allowed Wattage: 929 Proposed Wattage: 889
Complies: YES

Mandatory Requirements:

2. Dwelling units (complete independent living facilities) within commercial buildings are not required to comply with interior lighting requirements of this code provided that >= 75 percent of the permanently installed fixtures other than low voltage lighting contain only high efficacy lamps.
3. Manual Controls: Each enclosed space has manual lighting control. Remotely located manual controls are labelled for area of service and indicate on/off status.

Exceptions:
- Security/emergency areas with 24-hour operation.
- Stairways/corridors that are means of egress.

4. Light Reduction Controls: Each space required to have a manual control shall allow for reducing the connected lighting load by at least 50 percent by either controlling all luminaires, dual switching of alternate rows of luminaires, alternate luminaires, or alternate lamps, switching the middle lamp luminaires independently of other lamps, or switching each luminaire or each lamp.

Exceptions:
- Only one luminaire rated < 100 W in space.
- An occupancy-sensing device controls the area.
- The area is a corridor, equipment/store rooms, restrooms, public lobby, elec/mech. room, or sleeping unit.
- Areas that use < 0.6 Watts/ sq.ft.
- Daylight spaces having automatic daylighting controls.

5. Automatic time switching controls are installed and have an override switching device. This override switching device allows for <= 2 hour operation cycle when spaces <= 5000 sq.ft., manual operation, and is readily accessible and located where the operation of the connected lights are visible or communicated to the user.

Exceptions:
- Sweeping units, patient care areas, and spaces where automatic shutoff would endanger safety or security or where lighting is intended for 24 hour operation.
- Emergency egress lighting.
- Spaces where lighting is controlled with occupancy sensors.
- Malls, arcades, auditoriums, single tenant retail spaces, industrial facilities and arenas that are <= 20,000 sq.ft. are permitted exceed the 2 hour operation cycle limit when a captive key device override switch is installed.

6. Occupant sensors are installed in the following spaces and automatically turn lighting off within 30 minutes of all occupants leaving the space. Classrooms, conference/meeting/training rooms, employee lunch and break rooms, private offices, storage/janitorial rooms, restrooms, and other spaces <= 300 sq.ft. Automatic-on sensors will power on <50 percent power.

Exceptions:
- Full power automatic-on controls are permitted where manual-on operation would endanger the safety or security of the room or building occupants.

7. Daylight zones have manual on individual lighting controls independent from that of the general area lighting that are either manual or automatic and serve zones <= 2,500 sq.ft. Zones under skylights more than 15 feet from the perimeter have lighting controls separate from daylight zones adjacent to vertical fenestration.

Exceptions:
- Contiguous daylight zones spanning no more than two orientations are allowed to be controlled by a single controlling device.
- Daylight spaces enclosed by walls or ceiling height partitions and containing two or fewer light fixtures are not required to have a separate switch for general area lighting.

8. Automatic daylight zone controls are capable of reducing power to < 35 percent using continuous dimming ballasts, and daylight sensing controls OR are capable of automatic power reduction using step-dimming multi-level switching and daylight sensing controls having at least two control channels per zone and at least one control step in the 50 - 70 percent range and another <= 35 percent of design power.

9. Medical task lighting or art/history display lighting claimed to be exempt from compliance has a control device independent of the control of the nonexempt lighting.
10. Separate control devices for display/accent lighting, case lighting, task lighting, nonvisual lighting, under-shelf/cabinet lighting, lighting for sale, and demonstration lighting.
11. Hotel/motel sleeping units and guest suites have control device(s) at the entry door that control all permanent luminaires, and switched receptacles.
12. Exit signs 5 Watts or less per sign.
13. Tandem wired one-lamp and three-lamp ballasted luminaires (No single-lamp ballasts)

Exceptions:
- Electronic high-frequency ballasts.
- Luminaires not on same switch.
- Recessed luminaires 10 ft. apart or surface/pendant not continuous.
- Luminaires on emergency circuits.

Additional Efficiency Package Requirements:

1. Full compliance with this energy code requires an "additional efficiency package" be adopted. None has yet been specified.

Interior Lighting PASSES: Design 4% better than code

Section 5: Compliance Statement

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2012 IECC requirements in ComCheck Version 3.9.1 and to comply with the mandatory requirements in the Requirements Checklist.

Jeff Nielsen President — 2.27.14
Name - Title — Signature — Date

(EXISTING) PANEL "HMR"

(G.E. A SERIES)

MOUNTING: ☐ FLUSH ☑ SURFACE
NEMA RATING: ☑ 1 ☐ 3R
SERVICE ENTRANCE RATED: ☐
ISOLATED GROUND BUS: ☐
LOCATION:
VOLTAGE: **277/480V-3PH-4W**
A.I.C. RATING: **14,000**
M.L.O: **400 AMP**
BUS SIZE: **400 AMP**

BRANCH BREAKERS

NOTES	CD	DESCRIPTION	SIZE	P	CIR	LEFT PHASE LOAD A	LEFT PHASE LOAD B	LEFT PHASE LOAD C	RIGHT PHASE LOAD A	RIGHT PHASE LOAD B	RIGHT PHASE LOAD C	CIR	SIZE	P	DESCRIPTION	CD	NOTES
		NON-USABLE SPACE			1	-			17175			2	80		-----	M	
		NON-USABLE SPACE			3		-			17175		4			CT MAIN DISC. SW.	M	
		NON-USABLE SPACE			5			-			17175	6		3	-----	M	
	MR	-----	15		7	3020			24930			8	90		-----	M	
	MR	FC1 WATER CHILLER		3	9		3020			24930		10			MRI MAIN DISC. SW.	M	
	MR	-----		3	11			3020			24930	12		3	-----	M	
	MR	-----	15		13	1250			2500			14	15		-----	MR	
	MR	CU-1 LIEBERT COND UNIT		3	15		1250			2500		16			LIEBERT CHILLER AUX WATER	MR	
	MR	-----		3	17			1250			2500	18		3	-----	MR	
	M	-----	20		19	2200			8314			20	50		-----	M	
	M	EXISTING LOAD			21		2200			8314		22			LIEBERT AC UNIT	M	
	M	-----		3	23			2200			8314	24		3	-----	M	
	M	-----	100		26	16000			2499			26	20	1	VAV-2	M	
	M	EXISTING LOAD			27		16000			2499		28	20	1	VAV-2	M	
	M	-----		3	29			16000			2499	30	20	1	VAV-2	M	
	H	BBH-N. STORE RM	20	1	31	2490			2499			32	20			M	
	H	BBH-SND. CNTL RM	20	1	33		2271			2499		34			VAV-1	M	
	H	BBH-BREAK ROOM	20	1	35			1247			2499	36		3	-----	M	
	L	LIGHTS-CTL. BREAK. EQUIP RM	20	1	37	1325			8800			38	70			M	1
	L	LIGHTS-OFFICE, COMM. CT RM	20	1	39		1650			8800		40			PANEL "LMR" (45KVA TRANS)	M	1
	L	LIGHTS-CORR, WAIT, RECEPTI	20	1	41			1710			8800	42		3	-----	M	1
						26265	26391	25427	66717	66717	66717						
						93002	93109	92144	Total Connected VA								
								278254	Total Connected VA all Phases								

CD	LOAD	CONNECTED	D.F	Est. KVA	AMPS
L	LIGHTING	4685 VA	1.25	5.9	
R	RECEPTACLES (1ST 10000)	0 VA	1.00	0.0	
R	RECEPTACLES (REMAINING)	0 VA	0.50	0.0	
M	MOTOR (LARGEST)	24942 VA	1.25	31.2	
MR	MOTORS (REMAINING)	20310 VA	1.00	20.3	
H	ELECTRIC HEAT	6008 VA	1.25	7.5	
M	ELECTRICAL MISC.	222359 VA	1.00	222.3	
	TOTAL ESTIMATED LOAD	**278284 VA**		**287.2**	**346.0**

NOTES
1. REVISED LOAD ON EXISTING CIRCUIT.
2
3

ALL SINGLE PHASE SHARED NEUTRAL CIRCUITS SHALL BE SUPPLIED WITH BREAKER HANDLE TIES PER NEC 210.4
PROVIDE FAULT CURRENT LABELING AS REQUIRED BY 2011 NEC 110.4

(EXISTING) PANEL "LMR"

(G.E. A SERIES)

MOUNTING: ☐ FLUSH ☑ SURFACE
NEMA RATING: ☑ 1 ☐ 3R
SERVICE ENTRANCE RATED: ☐
ISOLATED GROUND BUS: ☐
LOCATION:
VOLTAGE: **120/208V-3PH-4W**
A.I.C. RATING: **10,000**
MAIN C.B.: **150 AMP**
BUS SIZE: **225 AMP**

BRANCH BREAKERS

NOTES	CD	DESCRIPTION	SIZE	P	CIR	LEFT PHASE LOAD A	LEFT PHASE LOAD B	LEFT PHASE LOAD C	RIGHT PHASE LOAD A	RIGHT PHASE LOAD B	RIGHT PHASE LOAD C	CIR	SIZE	P	DESCRIPTION	CD	NOTES
	R	RECEPT-ULTRASOUND RM	20	1	1	720			600			2	20	1	RECEPT-COMM EQUIP.	R	
	R	RECEPT-ULTRASOUND TV PRE	20	1	3		720			600		4	20	1	RECEPT-COMM EQUIP.	R	
	R	RECEPT-STOR. IVPREP	20	1	5			540			600	6	20	1	RECEPT-COMM EQUIP.	R	
	R	RECEPT-OFFICE, VIEW BOX	20	1	7	560			1080			8	20	1	RECEPT-CT SCAN CHANGE RM	R	
	R	RECEPT-OFFICE	20	1	9		720			540		10	20	1	RECEPT-WORK ROOM	R	
	R	RECEPT-OFFICE	20	1	11			540			720	12	20	1	RECEPT-WORK RM. V-BOX	R	
	R	RECEPT-OFFICE, RESTROOM	20	1	13	720			720			14	20	1	RECEPT-CT/MRI CNTL RM	R	
	R	RECEPT-RECEPTION DESK	20	1	15		720			720		16	20	1	RECEPT-CT/MRI CNTL RM	R	
	R	RECEPT-WAITING ROOM	20	1	17			720			360	18	20	1	RECEPT-CT/MRI CNTL RM	R	
	R	RECEPT-COFFEE, DISPOSAL	20	1	19	1500			200			20	20	1	RECEPT-TELE EQUIP.	R	
	R	RECEPT-MICROWAVE	20	1	21		1800			540		22	20	1	MRI EQUIP/CHANGE ROOM	R	
	R	RECEPT-REFRIG, BREAK RM	20	1	23			1360			180	24	20	1	RECEPT-MRI ROOM	R	
	R	RECEPT-READING ROOM	20	1	25	540			1000			26	20	1	WATER HEATER	H	
	R	RECEPT-ROOFTOP	20	1	27		540			750		28	15	1	FILM PROCESSOR	R	
	R	FA BOOSTER PANEL	20	1	29			500			750	30		2	-----	R	
1	R	**RECEPT-COFFEE MAKER**	**20**	**1**	**31**	**1400**			**380**			32	**20**	**1**	**LIGHTS-RECEPTION 102**	L	1
1	R	**RECEPT-CO AND X-RAY PRINT**	**20**	**1**	**33**		**1130**			**360**		34	**20**	**1**	**RECEPT-IT 126**	R	1
1	R	**RECEPT-COPIER/PRINTER**	**20**	**1**	**35**			**794**			1400	36	20	1	LIGHTS-UNTRASOUND, CT	L	
1	R	**RECEPT-RADIOLOGY 114**	**20**	**1**	**37**	**360**			1200			38	20			L	
	ML	EF-1	20	1	39		90			1200		40			DCL LIGHTING PANEL	L	
	ML	EF-2	20	1	41			828			1200	42		3	-----	L	
						5800	5720	5282	5180	4710	5210						
						10980	10430	10492	Total Connected VA								
								31902	Total Connected VA all Phases								

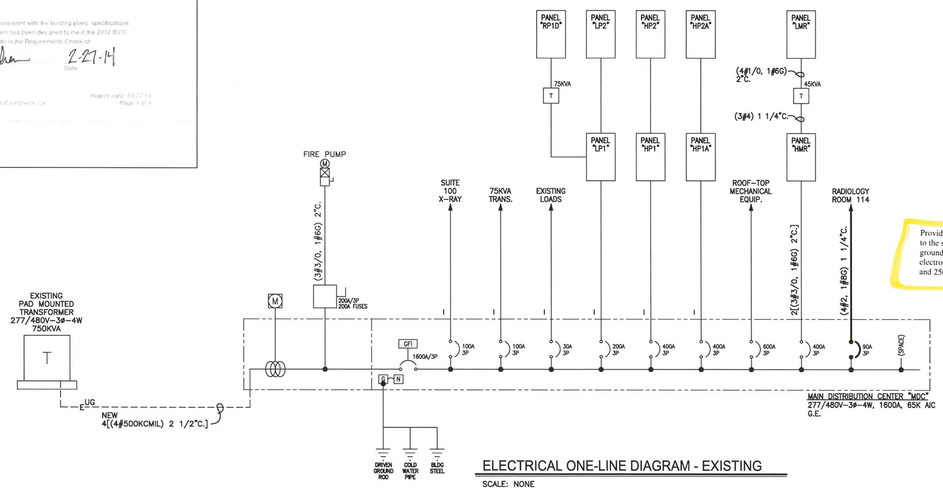
CD	LOAD	CONNECTED	D.F	KVA	AMPS
L	LIGHTING	5380 VA	1.25	6.7	
R	RECEPTACLES (1ST 10000)	10000 VA	1.00	10.0	
R	RECEPTACLES (REMAINING)	14604 VA	0.50	7.3	
M	MOTOR (LARGEST)	828 VA	1.25	1.0	
MR	MOTORS (REMAINING)	90 VA	1.00	0.1	
H	ELECTRIC HEAT	1000 VA	1.25	1.3	
M	ELECTRICAL MISC.	0 VA	1.00	0.0	
	TOTAL ESTIMATED LOAD	**31902 VA**		**26.4**	**73.3**

NOTES
1. PROVIDE NEW BREAKER IN EXISTING SPACE.
2
3

ALL SINGLE PHASE SHARED NEUTRAL CIRCUITS SHALL BE SUPPLIED WITH BREAKER HANDLE TIES PER NEC 210.4
PROVIDE FAULT CURRENT LABELING AS REQUIRED BY 2011 NEC 110.4

Legibly identify each breaker or switch for its use or purpose on the circuit directory in the panel/switchboard per 2011 NEC 408.4.

Service equipment shall be permanently and legibly marked to show the available fault current and date. 2011 NEC 110.24 (A).



ELECTRICAL ONE-LINE DIAGRAM - EXISTING
SCALE: NONE

ELECTRICAL LOAD STATEMENT

1.	EXISTING PEAK LOAD ON "MDC" (2013):	399 AMPS
2.	EXISTING PEAK LOAD ON "MDC" @ 125%:	499 AMPS
3.	EXISTING TOTAL LOAD ON PANEL "HMR":	343 AMPS
4.	NEW TOTAL LOAD ON EXISTING PANEL "HMR":	346 AMPS
5.	NEW LOAD ADDED TO EXISTING "MDC":	50 AMPS
5.	TOTAL LOAD ON EXISTING "MDC":	552 AMPS
5.	CAPACITY OF EXISTING "MDC"	1600A

Provide a grounded electrode system bonded to the service equipment enclosure, grounded conductors, and grounded electrode conductors per 2011 NEC 250.50 and 250.104.

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE _____ By _____
14-822618

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
LIGHTING	
^{S}	SPST WALL SWITCH, +48" UNLESS NOTED OTHERWISE, LETTER DENOTES SWITCHLEG.
^{3}	3-WAY WALL SWITCH, +48" ABOVE FLOOR UNLESS NOTED OTHERWISE.
^{D}	SLIDE-TO-OFF DIMMER SWITCH, +48" UNLESS NOTED OTHERWISE - BY LUTRON.
^{OS}	OCCUPANCY SENSOR WALL SWITCH - WATT-STOPPER #UW-200-I.
^{DS}	DIMMER/OCCUPANCY SENSOR WALL SWITCH - WATT-STOPPER #WD-280-I (277V) OR #WD-770-I (120V).
	OCCUPANCY SENSOR UNIT, CEILING MOUNTED - WATT STOPPER #DT-200 WITH POWER PACK #BZ-150 AS REQUIRED.
	MULTIPLE GANG SWITCH BANK, +48" ABOVE FLOOR UNLESS NOTED OTHERWISE.
	SURFACE OR PENDANT FLUORESCENT FIXTURE, LENGTH/MOUNTING PER FIXTURE SCHEDULE.
	RECESSED GRID MOUNTED FLUORESCENT FIXTURE. SIZE PER FIXTURE SCHEDULE.
	RECESSED GRID MOUNTED FLUORESCENT "NIGHT LIGHT" FIXTURE.
	RECESSED DOWNLIGHT FIXTURE, TYPE AND SIZE PER FIXTURE SCHEDULE.
	RECESSED WALLWASH FIXTURE, TYPE AND SIZE PER FIXTURE SCHEDULE.
	SURFACE OR PENDANT MOUNTED FIXTURE, TYPE AND SIZE PER FIXTURE SCHEDULE.
	SINGLE FACE EXIT SIGN, WITH ARROW AS SHOWN TYPE AND COLOR PER FIXTURE SCHEDULE.
	WALL MOUNTED BATTERY PACK EGRESS LIGHT, TYPE AND COLOR PER FIXTURE SCHEDULE.
POWER / TELECOMM.	
	DUPLEX RECEPTACLE, +15" UNLESS NOTED OTHERWISE.
	DOUBLE-DUPLEX RECEPTACLE, +15" UNLESS NOTED OTHERWISE.
	HALF SWITCHED DOUBLE-DUPLEX RECEPTACLE, +15" UNLESS NOTED OTHERWISE.
^{30}	SPECIAL RECEPTACLE, +15" UNLESS NOTED OTHERWISE.
	JUNCTION BOX, WALL MOUNTED AT +15" UNLESS NOTED OTHERWISE.
	JUNCTION BOX ABOVE CEILING.
	VOICE/DATA JACK, +15" ABOVE FLOOR IN A 2 1/8"D x 4" SQ. BOX WITH A SINGLE GANG MUD RING AND 3/4" CONDUIT TO ACCESSIBLE CEILING SPACE.
^{TC}	FRACTIONAL HP THERMAL-OVERLOAD SWITCH.
$_{2}$	MOTOR, SUBSCRIPT INDICATES HORSEPOWER.
(EP)	EMERGENCY POWER OFF SHUNT-TRIP BUTTON.
	BRANCH CIRCUIT PANELBOARD, +66" TO TOP OF PANEL.
FIRE ALARM / SECURITY	
^{VR}	DUCT DETECTOR KEYED TEST/RESET SWITCH.
$_{P}$	PHOTOELECTRIC SMOKE DETECTOR.
$_{T}$	THERMAL RATE-OF-RISE DETECTOR.
	MANUAL PULL STATION.
F	FIRE ALARM STROBE, +80" ABOVE FLOOR OR 6" BELOW CEILING, WHICHEVER IS LOWER.
FH	FIRE ALARM HORN/STROBE, +80" A.F.F. OR 6" BELOW CEILING, WHICHEVER IS LOWER.
CIRCUITING / TAGS	
	FLEX CONDUIT CONNECTION.
	CONDUIT, CONCEALED IN WALLS OR CEILING.
	CONDUIT, CONCEALED IN FLOOR.
E	CONDUIT, UNDERGROUND BURIED.
A-13,5	BRANCH CIRCUIT HOMERUN TO PANELBOARD, ARROWS INDICATES NUMBER OF CIRCUITS.
	NEUTRAL, HOT, SWITCH LEG & GROUND CONDUCTORS AND CONTROL PAIR; RESPECTIVELY
	CONDUIT STUB-UP
	CONDUIT STUB-DOWN
1	ELECTRICAL DETAIL NOTE REFERENCE.
E7-1	MECHANICAL EQUIPMENT REFERENCE.
1	FAULT CALCULATION REFERENCE.
AC	ABOVE COUNTER
CLG	CEILING MOUNTED
DN	STUB-DOWN
EX	EXISTING TO REMAIN
GFI	GROUND FAULT INTERRUPTER
REL	RELOCATED
S	SURFACE MOUNTED
UP	STUB-UP

NOTE: —HEAVY LINE WEIGHT INDICATES NEW WORK.
—LIGHT LINE WEIGHT INDICATES EXISTING TO REMAIN.
—LIGHT DASHED LINE WEIGHT INDICATES EXISTING TO BE REMOVED.

HURLEY & GAGNE, INC.
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P.O. BOX 209
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COLORADO REGISTERED 29133 PROFESSIONAL ENGINEER 2.27.14

INVISION SALLY JOBE AT 1400 SOUTH POTOMAC IMAGING CENTER RENOVATION - PHASE ONE AURORA, COLORADO

PROJECT #	1393
DATE	28 FEB. 2014
SCALE	AS SHOWN
REV	-
REV	-
FILE	1393ELEC

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ELECTRICAL ONE-LINE AND PANEL SCHEDULES

E4.0

JCN Engineering, Inc.
3281 Routt St., Wheat Ridge, CO 80033
(303) 239-0736