THE MEDICAL CENTER OF AURORA

21-048 TMCA SOUTH CATH 1 & 2 RENOVATION

1501 S Potomac St.
Aurora, CO 80012

ISSUE DATE: 02 DECEMBER 2022
PROJECT #: 21-048

Only highlighted or clouded revisions are approved on this review. All previous comments apply.

ISSUE FOR CONSTRUCTION

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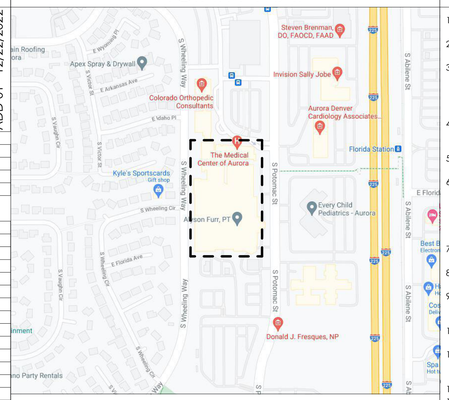
INDEX OF DRAWINGS

SHEET NO	SHEET NAME	IFC - 12/02/2022	ADD-01 - 12/22/2022
01 - GENERAL			
G.101	COVER & DRAWING INDEX	•	
04 - STRUCTURAL			
S1.01	STRUCTURAL DETAILS AND NOTES		•
05 - DEMOLITION			
D.201	DEMOLITION PLAN	•	
D.221	DEMOLITION REFLECTED CEILING PLAN	•	
06 - ARCHITECTURAL			
A.201	FLOOR PLAN	•	
A.211	EQUIPMENT PLAN	•	
A.221	REFLECTED CEILING PLAN	•	
A.501	INTERIOR PARTITION TYPE CHARTS	•	
A.561	INTERIOR ELEVATIONS	•	
A.571	TYPICAL CASEWORK SECTIONS & DETAILS	•	
07 - INTERIORS			
I.201	FINISH PLAN, DETAILS AND LEGEND	•	
09 - MECHANICAL			
M.000	MECHANICAL SYMBOLS, ABBREVIATIONS, AND NOTES	•	
M.001	MECHANICAL SPECIFICATIONS	•	
M.002	MECHANICAL SCHEDULES	•	
M.003	MECHANICAL DUCTWORK DETAILS	•	
M.004	MECHANICAL PIPING DETAILS	•	
MD.101	MECHANICAL DEMOLITION PLAN	•	
MP.101	MECHANICAL PIPING PLAN	•	
MV.101	MECHANICAL VENTILATION PLAN	•	
10 - PLUMBING			
P.000	PLUMBING AND MEDICAL GAS SYMBOLS, ABBREVIATIONS AND CODE INFO	•	
PD.101	PLUMBING AND MEDICAL GAS DEMOLITION FLOOR PLANS	•	
P.101	PLUMBING AND MEDICAL GAS FLOOR PLANS	•	
11 - ELECTRICAL			
E.000	ELECTRICAL SYMBOLS, ABBREVIATIONS & NOTES	•	
E.001	ELECTRICAL SPECIFICATIONS	•	
E.002	ELECTRICAL ONE-LINE	•	
E.003	ELECTRICAL DETAILS AND SCHEDULE	•	
E.004	ELECTRICAL DETAILS AND SCHEDULE	•	
ED.101	ELECTRICAL POWER AND SIGNAL DEMOLITION PLAN	•	
ED.201	ELECTRICAL LIGHTING DEMOLITION PLAN	•	
E.101	ELECTRICAL POWER AND SIGNAL PLAN	•	
E.102	ELECTRICAL RACEWAY PLAN	•	
E.201	ELECTRICAL LIGHTING REFECTED CEILING PLAN	•	
E.301	ELECTRICAL EQUIPMENT PLAN	•	
13 - PHILIPS - N-WES210501			
1-C1	COVER SHEET	•	
1-AN	GENERAL NOTES	•	
1-AL	EQUIPMENT LEGEND	•	
1-A1	SITE LAYOUT	•	
1-A2	EQUIPMENT LAYOUT	•	
1-A3	EQUIPMENT ELEVATIONS	•	
1-AD1	TRANSPORT DETAILS	•	
1-AD2	EQUIPMENT DETAILS	•	
1-AD3	EQUIPMENT DETAILS	•	
1-AD4	EQUIPMENT DETAILS	•	
1-AD5	EQUIPMENT DETAILS	•	
1-AD6	EQUIPMENT DETAILS	•	
1-SN	SUPPORT NOTES	•	
1-SL	SUPPORT LEGEND	•	
1-S1	SUPPORT LAYOUT - FLOOR & WALLS	•	
1-S2	SUPPORT LAYOUT - CEILING	•	
1-S3	SUPPORT LAYOUT - CEILING	•	
1-SD1	SUPPORT DETAILS	•	
1-SD2	SUPPORT DETAILS	•	
1-SD3	SUPPORT DETAILS	•	
1-SD4	SUPPORT DETAILS	•	
1-EN	ELECTRICAL NOTES	•	
1-EL1	ELECTRICAL LEGEND	•	
1-EL2	ELECTRICAL LEGEND	•	
1-E1	ELECTRICAL LAYOUT	•	
1-E2	RACEWAY & CONDUIT INFORMATION	•	
1-E3	RACEWAY & CONDUIT INFORMATION	•	
1-E4	RACEWAY & CONDUIT INFORMATION	•	
1-ED1	ELECTRICAL DETAILS	•	
1-ED2	ELECTRICAL DETAILS	•	
1-ED3	ELECTRICAL DETAILS	•	

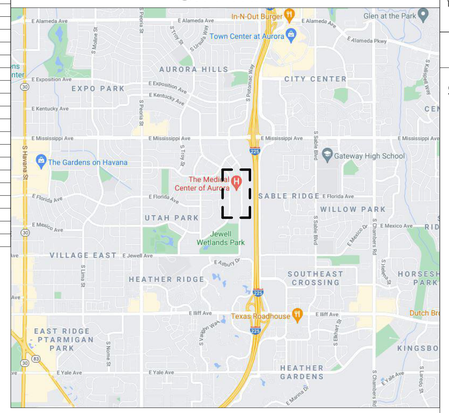
INDEX OF DRAWINGS

SHEET NO	SHEET NAME	IFC - 12/02/2022	ADD-01 - 12/22/2022
1-ED4	ELECTRICAL DETAILS	•	
1-N1	REMOTE SERVICE NETWORK	•	
1-N2	REMOTE SERVICE NETWORK	•	
1-CHK	CHECK LIST	•	
14 - PHILIPS - N-WES210500			
2-C1	COVER SHEET	•	
2-AN	GENERAL NOTES	•	
2-AL	EQUIPMENT LEGEND	•	
2-A1	SITE LAYOUT	•	
2-A2	EQUIPMENT LAYOUT	•	
2-A3	EQUIPMENT ELEVATIONS	•	
2-AD1	TRANSPORT DETAILS	•	
2-AD2	EQUIPMENT DETAILS	•	
2-AD3	EQUIPMENT DETAILS	•	
2-AD4	EQUIPMENT DETAILS	•	
2-AD5	EQUIPMENT DETAILS	•	
2-AD6	EQUIPMENT DETAILS	•	
2-SN	SUPPORT NOTES	•	
2-SL	SUPPORT LEGEND	•	
2-S1	SUPPORT LAYOUT - FLOOR & WALLS	•	
2-S2	SUPPORT LAYOUT - CEILING	•	
2-S3	SUPPORT LAYOUT - CEILING	•	
2-SD1	SUPPORT DETAILS	•	
2-SD2	SUPPORT DETAILS	•	
2-SD3	SUPPORT DETAILS	•	
2-SD4	SUPPORT DETAILS	•	
2-EN	ELECTRICAL NOTES	•	
2-EL1	ELECTRICAL LEGEND	•	
2-EL2	ELECTRICAL LEGEND	•	
2-E1	ELECTRICAL LAYOUT	•	
2-E2	RACEWAY & CONDUIT INFORMATION	•	
2-E3	RACEWAY & CONDUIT INFORMATION	•	
2-E4	RACEWAY & CONDUIT INFORMATION	•	
2-ED1	ELECTRICAL DETAILS	•	
2-ED2	ELECTRICAL DETAILS	•	
2-ED3	ELECTRICAL DETAILS	•	
2-ED4	ELECTRICAL DETAILS	•	
2-N1	REMOTE SERVICE NETWORK	•	
2-N2	REMOTE SERVICE NETWORK	•	
2-CHK	CHECK LIST	•	

VICINITY MAP



CITY MAP

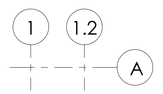


GENERAL PROJECT NOTES

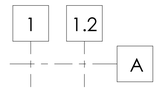
1. REFER TO COMPLETE SET OF ISSUED CONTRACT DOCUMENTS FOR APPLICABLE NOTES, ABBREVIATIONS, AND SYMBOLS.
2. DO NOT SCALE THE DRAWINGS. IF DIMENSIONS ARE IN QUESTION, OBTAIN CLARIFICATION FROM THE ARCHITECT BEFORE CONTINUING.
3. DIMENSIONS SHOWN ON THE FLOOR PLANS FOR NEW CONSTRUCTION ARE TO THE FACE OF FINISH OF INTERIOR WALLS, TO CENTERLINE OF COLUMNS, AND TO FACE OF CONCRETE OR MASONRY WALLS, UNLESS NOTED OTHERWISE. DIMENSIONS IN RENOVATED AREAS ARE FROM FINISH FACE OF EXISTING WALLS TO FINISH FACE OF NEW STUD WALLS, UNLESS NOTED OTHERWISE.
4. FIELD MEASURE AND CONFIRM DIMENSIONS FOR OWNER-PROVIDED EQUIPMENT AND FURNISHINGS. COORDINATE WITH THE OWNER ON DELIVERY AND INSTALLATION OF OFCI EQUIPMENT.
5. FINISH FLOOR ELEVATIONS ARE TO TOP OF FINISHED FLOORING PRODUCT, NOTED BY "AFF" (ABOVE FINISH FLOOR), UNLESS NOTED OTHERWISE.
6. WHERE NEW GYPSUM BOARD PARTITIONS ARE A CONTINUATION OF AN EXISTING PARTITION OR COLUMN ENCASEMENT, THE FACE OF THE NEW GYPSUM BOARD SHALL BE ALIGNED WITH THE FACE OF THE EXISTING SURFACE. WHERE A ONE-HOUR PARTITION IS SHOWN AS A CONTINUATION OF A TWO-HOUR PARTITION OR COLUMN ENCASEMENT, THE FACE OF THE GYPSUM BOARD SHALL BE OFFSET AS REQUIRED TO PROVIDE FACE ALIGNMENT OF GYPSUM BOARD ON BOTH SIDES.
7. LEVEL FLOORS SO THAT THEY DO NOT EXCEED VENDOR TOLERANCES AS INDICATED IN VENDOR DRAWINGS.
8. PARTITION TYPES AND FIRE RESISTIVE RATINGS INDICATED ON A WALL ARE TO BE CONTINUOUS FOR THE LENGTH AND HEIGHT OF A PARTITION.
9. OPENINGS IN RATED WALL, FLOOR, CEILING, AND ROOF ASSEMBLIES SHALL BE SEALED WITH A FIRE RESISTANT JOINT SYSTEM OR PROTECTED WITH A FIRE RATED CHASE AND LABELED WITH THE UL SYSTEM ACCORDINGLY.
10. EXIT SIGNS AND SMOKE DETECTORS LOCATED IN CEILINGS SHALL BE POSITIONED AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
11. WHERE MATERIALS ARE APPLIED TO, OR ARE IN DIRECT CONTACT WITH WORK INSTALLED BY ANOTHER SUBCONTRACTOR, COMMENCEMENT OF WORK IMPLIES ACCEPTANCE OF THE SUBSTRATE AS SUITABLE FOR THE APPLICATION INTENDED.
12. SEALANTS EXPOSED TO VIEW SHALL BE CUSTOM COLOR AS SELECTED BY THE ARCHITECT.
13. COORDINATE LOCATION OF SEALANT AND COMPATIBILITY OF SEALANTS WITH ADJACENT WORK, INCLUDING MATERIALS AND OTHER CONTIGUOUS SEALANTS.
14. CAULK AT JUNCTURE OF INTERIOR FACES OF DOOR FRAMES, VIEW WINDOW FRAMES, EXTERIOR WINDOW FRAMES, AND CABINET WORK WITH ADJACENT MATERIALS. MAINTAIN THE FIRE RATING OF CONSTRUCTION AROUND CABINETS, PANELS, AND BOXES RECESSED IN FIRE RATED WALL, FLOOR, AND CEILING ASSEMBLIES.

GENERAL SYMBOLS LEGEND

COLUMN GRID DESIGNATION

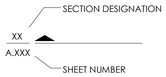


NEW GRID



EXISTING GRID

DETAIL CALLOUT TAG

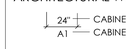


NOTE TAGS

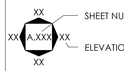
1 NOTE BY NUMBER

XX.XXX SPECIFICATION NOTE

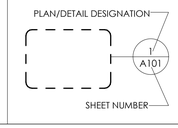
ARCHITECTURAL WOODWORK



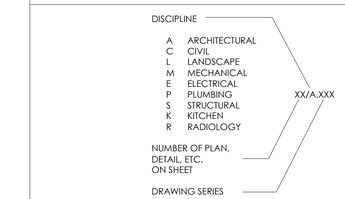
INTERIOR ELEVATION TAG



ENLARGED PLAN / CALLOUT TAG



DRAWING NUMBER KEY



PROJECT DESCRIPTION

RENOVATION OF THE EXISTING CATH LABS 1 AND 2. THESE LABS WERE CONSTRUCTED IN 2009 USING PHILIPS EQUIPMENT. THEY WERE DESIGNED AS CATH/EP LABS. THE EQUIPMENT IS APPROACHING END OF USEFUL LIFE. THE ROOMS WILL MAINTAIN THEIR PERIMETER BUT WILL UNDERGO AN EQUIPMENT REPLACEMENT. INCLUDED IN THE EQUIPMENT REPLACEMENT IS THE INCORPORATION OF NEW EP MAPPING SYSTEMS, NEW PATHWAYS FOR VENDOR EQUIPMENT, DEVELOPMENT OF A NEW COCKPIT OR MODIFICATION OF THE EXISTING ONE FOR TECH WORK. THE ROOM IS INTENDED TO STAY PHYSICALLY INTACT AT ITS BOUNDARIES WITH MODIFICATIONS INTERNAL AND NO CHANGE OF USE.

PROJECT DATA

- **CODES/ LAWS:**
  CITY OF AURORA:
  2015 INTERNATIONAL BUILDING CODE (IBC)
  2020 NATIONAL ELECTRICAL CODE (NEC)
  2015 INTERNATIONAL MECHANICAL CODE (IMC)
  2015 INTERNATIONAL PLUMBING CODE (IPC)
  2015 INTERNATIONAL FUEL GAS CODE (IFGC)
  2015 INTERNATIONAL FIRE CODE (IFC)
  2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
  2009 ICC / ANSI A117.1 ACCESSIBILITY CODE

  STATE OF COLORADO:
  2018 COLORADO DEPARTMENT OF HEALTH AND ENVIRONMENT - HOSPITAL LICENSING RULES
  2012 NFPA 101 - LIFE SAFETY CODE
  FEDERAL:
  2010 AMERICANS WITH DISABILITIES ACT GUIDELINES
- **OCCUPANCY CLASSIFICATION:**
  2015 IBC - GROUP I-2 (SECTION 308.4)
  2012 NFPA 101 - OCCUPANCY TYPE (CHAPTER 18)
- **PRINCIPAL OCCUPANCY TYPE:** HEALTHCARE GROUP I-2
- **CONSTRUCTION TYPE:**

  EXISTING: SBC - TYPE 1-A, UNRESTRAINED FULLY SPRINKLERED

  NEW: 2015 IBC - TYPE 1-A, FULLY SPRINKLERED
  2012 NFPA 220 - TYPE 1 (332)

ABBREVIATIONS LEGEND

ACC	ACCESSIBLE	NIC	NOT IN CONTRACT
AFF	ABOVE FINISHED FLOOR	NTS	NOT TO SCALE
APPROX	APPROXIMATE	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
ARCH	ARCHITECTURAL		
B.O.___	BOTTOM OF ____	OFOI	OWNER FURNISHED, OWNER INSTALLED
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED	OPP	OPPOSITE
		PERP	PERPENDICULAR
CFOI	CONTRACTOR FURNISHED, OWNER INSTALLED	PLBG	PLUMBING
		PLYWD	PLYWOOD
CL	CENTER LINE	RE:	REFER TO ____
CLG	CEILING	REF	REFRIGERATOR
CLR	CLEAR	REINF	REINFORCE, REINFORCING
CMU	CONCRETE MASONRY UNIT	RO	ROUGH OPENING
		ROW	RIGHT OF WAY
COORD	COORDINATE	SCHED	SCHEDULE
CORR	CORRIDOR	SF	SQUARE FOOT(FEET)
DBL	DOUBLE	SIM	SIMILAR
DEMO	DEMOLISH, DEMOLITION	SPEC	SPECIFICATION
EA	EACH	STC	SOUND TRANSMISSION CLASS
ELEC	ELECTRIC(AL)		
ELEV	ELEVATOR	STD	STANDARD
EQ	EQUAL	STL	STEEL
(E), EXST	EXISTING	STRUCT	STRUCTURAL
FF	FINISH FACE	T	TREAD
FF EL	FINISHED FLOOR ELEVATION	T&G	TONGUE & GROOVE
		TEMP	TEMPORARY
FLR	FLOOR	T.O.	TOP OF ____
FO	FINISHED OPENING	TOPO	TOPOGRAPHY, TOPOGRAPHIC
FP	FIRE PROTECTION		
FV	FIELD VERIFY	TYP	TYPICAL
GALV	GALVANIZED	UL	UNDERWRITER'S LABORATORIES
GYP BD	GYPSUM BOARD		
GYP PLAS	GYPSUM PLASTER	UNFIN	UNFINISHED
INSUL	INSULATION	UNO	UNLESS NOTED OTHERWISE
LAV	LAVATORY	W/	WITH
LVR	LOUVER	W/O	WITHOUT
MAX	MAXIMUM	WC	WATER CLOSET
MECH	MECHANICAL	WD	WOOD
MFR	MANUFACTURER	X	BY
MIN	MINIMUM		
MISC	MISCELLANEOUS		

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *William Griffin*
Date: *Dec 23, 2022*
2015 INTERNATIONAL CODES & 2020 NEC

RSN: *1680541*
Permit #: *22-2259738 LT*

RSN: *1679034*
Permit #: *22-2256682 REV.*

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No.	Description	Date
1	ADD-01	12/22/22

STATE OF COLORADO
JOHN MENNO NAP
401729
LICENSED ARCHITECT
12/22/2022

21-048 TMCA SOUTH CATH 1 & 2 RENOVATION

1501 S Potomac St.
Aurora, CO 80012

Issue	ISSUE FOR CONSTRUCTION
Date	02 DECEMBER 2022
Project Number	21-048
Drawn by	NVS
Checked by	JMN

Sheet Title
COVER & DRAWING INDEX

Sheet Number
G.101

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DEFERRED SUBMITTALS

1) GENERAL:

1A) THE FOLLOWING PORTIONS OF THE STRUCTURAL DESIGN WILL NOT BE SUBMITTED AT THE TIME OF PERMIT APPLICATION. WHEN RECEIVED AND REVIEWED, THESE DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL BY THE CONTRACTOR:
- ANCHORAGE, BRACING AND ATTACHMENT OF REQUIRED ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, FIRE SPRINKLER, AND OTHER EQUIPMENT AND SYSTEMS.
- SUPPLEMENTAL CEILING SUPPORT FRAME FOR MEDICAL EQUIPMENT DESIGNED BY CONTRACTOR. SEE DESIGN CRITERIA FOR DESIGN REQUIREMENTS

1B) CONNECTION OF DEFERRED SUBMITTAL ITEMS TO PRIMARY STRUCTURE BY DEFERRED SUBMITTAL SUPPLIER. DEFERRED SUBMITTAL SUPPLIER TO PROVIDE CONNECTIONS AND FRAMING ARRANGEMENT TO AVOID LOADING WHICH EXCEEDS THE CAPACITY OF THE ELEMENT BEING ATTACHED TO.

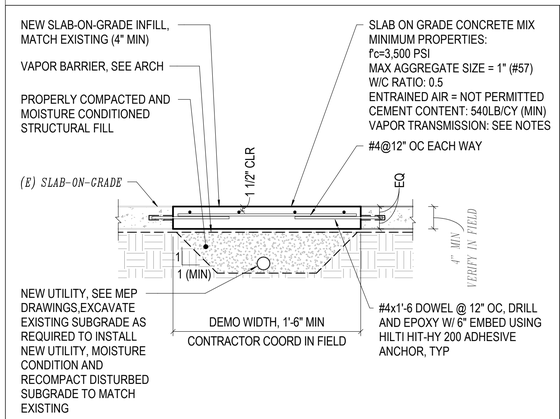
1C) ALL DEFERRED SUBMITTALS TO BE ATTACHED TO PRIMARY STRUCTURE WITH A PINNED CONNECTION. MOMENT CONNECTIONS TO PRIMARY STRUCTURE NOT PERMITTED UNLESS NOTED ON DRAWINGS OR APPROVED BY ENGINEER IN WRITING PRIOR TO SUBMITTAL OF DRAWINGS OR CALCULATIONS.

1D) LOADING FOR ATTACHMENT OF DEFERRED SUBMITTAL ITEMS ARE NOTED ON DRAWINGS AND ARE NOT TO BE INCREASED WITHOUT WRITTEN APPROVAL.

1F) SUBMIT STAMPED STRUCTURAL CALCULATIONS FOR ALL DEFERRED SUBMITTAL ITEMS PRIOR TO OR CONCURRENTLY WITH DRAWINGS OR PRODUCT DATA. INCLUDE ANALYSIS OF ATTACHMENT TO PRIMARY STRUCTURE. INCLUDE CURRENT ICC REPORT WITH ALL PROPRIETARY STRUCTURAL ELEMENTS AND ANCHORS/FASTENERS.

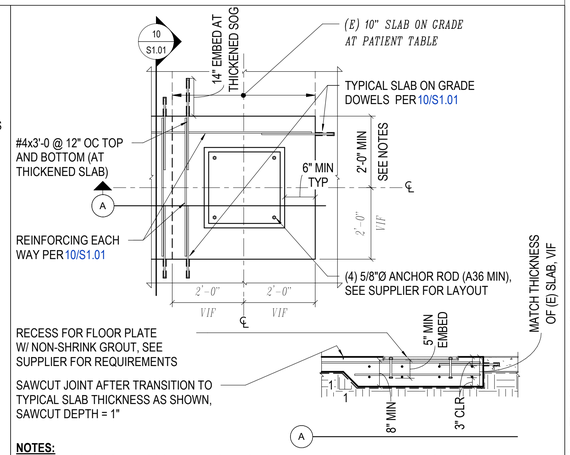
1G) POWDER ACTUATED FASTENERS (PAF) INTO CONCRETE OR CMU SHALL NOT BE USED TO RESIST TENSION LOADS. POWDER ACTUATED FASTENERS SHALL NOT BE USED TO RESIST GRAVITY LOADS.

Only highlighted or clouded revisions are approved on this review. All previous comments apply.



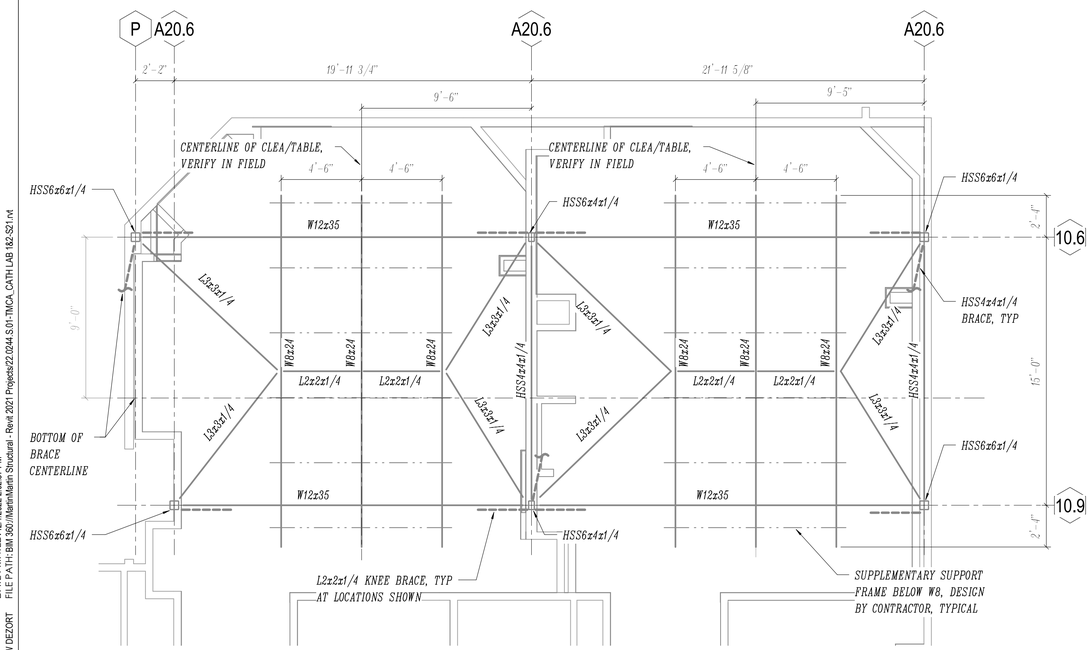
NOTES:
1. REFER TO ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR BELOW GRADE CONDUIT AND LOCATIONS AND EXTENTS OF SLAB CUT AND INFILL.
2. CONTRACTOR SHALL PROVIDE CONCRETE WITH REDUCED WATER IN ORDER TO ACHIEVE SLAB VAPOR TRANSMISSION REQUIRED FOR THE SPECIFIED FLOORING MATERIALS, COORDINATE REQUIREMENTS WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

10 3/4" = 1'-0" NEW UTILITY TRENCH IN EXISTING SLAB ON GRADE



NOTES:
1. CONTRACTOR SHALL COORDINATE SLAB ON GRADE DEMO EXTENTS WITH ARCHITECT PRIOR TO DEMO.
2. SEE 10/S1.01 FOR ADDITIONAL INFORMATION

8 1/2" = 1'-0" NEW UTILITY TRENCH IN (E) SLAB ON GRADE AT TABLE BASE PLATE



NOTES:
1. SIZES AND DIMENSIONS SHOWN ARE BASED OFF OF EXISTING DRAWINGS PROVIDED, CONTRACTOR SHALL VERIFY IN FIELD ALL SIZES AND DIMENSIONS PRIOR TO FABRICATION. SEE NOTE 4A) FOR ADDITIONAL REQUIREMENTS.

12 1/4" = 1'-0" EXISTING CATH LAB EQUIPMENT SUPPORT FRAMING

GENERAL NOTES

1) GENERAL:

1A) ENGINEER: REFERENCES ON THE STRUCTURAL DRAWINGS TO 'ENGINEER' MEAN THE STRUCTURAL ENGINEER OF RECORD. OTHER ENTITIES ARE SPECIFICALLY NOTED AS "CONTRACTOR'S ENGINEER", "MECHANICAL ENGINEER", ETC.

1B) THESE NOTES ARE THE PROJECT SPECIFICATIONS FOR CAST-IN-PLACE CONCRETE. THESE NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS, WHICH SHALL BE REFERENCED FOR ADDITIONAL REQUIREMENTS.

1C) UNDERGROUND UTILITIES: LOCATE EXISTING UTILITIES AND NOTIFY ARCHITECT OF EXISTING UTILITIES OR SUBGRADE CONDITIONS WHICH INTERFERE WITH WORK.

2) USE OF DRAWINGS:

2A) DO NOT SCALE DRAWINGS.

2B) DETAILS ON DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.

2C) DETAILS NOTED TYPICAL APPLY TO ALL SIMILAR CONDITIONS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ELSEWHERE ON THE PROJECT.

2D) WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, AND GENERAL NOTES:
- CONTACT THE ARCHITECT PRIOR TO PROCEEDING WITH CONSTRUCTION
- THE MORE STRINGENT REQUIREMENTS SHALL GOVERN FOR BIDDING / PRICING

3) EXISTING STRUCTURES:

3A) CONTRACT DOCUMENTS HAVE BEEN PREPARED USING AVAILABLE DRAWINGS DURING DESIGN.

3B) DURING CONSTRUCTION, THE CONTRACTOR MAY ENCOUNTER EXISTING CONDITIONS WHICH ARE NOT KNOWN OR ARE AT VARIANCE WITH PROJECT DOCUMENTATION. CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ALL CONDITIONS NOT PER THE CONTRACT DOCUMENTS. EXAMPLES INCLUDE:
- SIZES OR DIMENSIONS OTHER THAN THOSE SHOWN
- DAMAGE OR DETERIORATION TO MATERIALS AND COMPONENTS
- CONDITIONS OF INSTABILITY OR LACK OF SUPPORT
- ITEMS NOTED AS EXISTING ON THE DRAWINGS BUT NOT FOUND IN THE FIELD

3C) PREPARE DIMENSIONAL DRAWINGS OF ALL DISCOVERED ITEMS.

3D) CONTRACTOR SHALL FIELD VERIFY ALL EXISTING STRUCTURAL CONDITIONS PRIOR TO SUBMITTING SHOP DRAWINGS.

3E) CONTRACTOR SHALL MAKE ALLOWANCE FOR THE RESOLUTION OF SUCH DISCOVERIES IN THE CONSTRUCTION SCHEDULE.

3F) SUBMIT A DIMENSIONED DRAWING OF ALL NEW OPENINGS THROUGH EXISTING STRUCTURE AND SECURE APPROVAL PRIOR TO CUTTING. NEW OPENING MAY BE EITHER SHOWN ON THE CONTRACT DOCUMENTS OR PROPOSED BY THE CONTRACTOR. DRAWING SHALL SHOW:
- VERTICAL & HORIZONTAL LOCATION AND SIZE OF NEW OPENING(S)
- ALL EXISTING OPENINGS IN THE VICINITY OF THE NEW OPENING(S)
- ALL EXISTING STRUCTURE (BEAMS, COLUMNS, SLABS, WALLS, ETC) IN THE VICINITY OF THE NEW OPENING(S)
- ALL REINFORCING BAR SIZES AND POSITIONS (LAYOUT LOCATION AND DEPTH) CONFLICTING WITH OR IN THE VICINITY OF THE NEW OPENING(S).

4) COORDINATION:

4A) STRUCTURAL DRAWINGS ARE NOT STAND-ALONE DOCUMENTS AND ARE INTENDED TO BE USED IN CONJUNCTION WITH CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND DRAWINGS FROM OTHER DISCIPLINES. THE CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS INTO SHOP DRAWINGS AND WORK.

4B) COORDINATE DIMENSIONS OF ALL OPENINGS, BLOCKOUTS, DEPRESSIONS, ETC., WITH ARCHITECTURAL DRAWINGS, DRAWINGS FROM OTHER DISCIPLINES, AND FIELD CONDITIONS PRIOR TO SHOP DRAWING SUBMITTAL.

5) SUBMITTALS AND SUBSTITUTIONS:

5A) SUBMITTALS: REFER TO SPECIFICATIONS FOR DETAILED REQUIREMENTS.
- IF THE CONTRACTOR REQUESTS A CHANGE FROM THE STRUCTURAL DRAWINGS, IT SHALL BE APPROVED BY THE ARCHITECT AND DESIGNED BY MARTIN/MARTIN, INC. PRIOR TO SUBMITTING SHOP DRAWINGS. VARIATION SHALL BE INDICATED ON THE SHOP DRAWINGS. CONTRACTOR SHALL COMPENSATE MARTIN/MARTIN, INC. FOR MAKING THE CHANGE.
- CONSTRUCTION DOCUMENTS SHALL NOT BE REPRODUCED FOR USE IN SUBMITTALS
- ALL SHOP DRAWINGS SHALL REFERENCE THE STRUCTURAL DRAWING NUMBER AND DETAIL USED TO PREPARE THE SUBMITTAL

5B) SUBSTITUTIONS: ARCHITECT'S APPROVAL SHALL BE SECURED FOR ALL SUBSTITUTIONS

5C) NONCONFORMANCE: NOTIFY ARCHITECT OF CONDITIONS NOT CONSTRUCTED PER THE CONTRACT DOCUMENTS PRIOR TO PROCEEDING WITH CORRECTIVE WORK. SUBMIT PROPOSED REPAIR TO THE ARCHITECT FOR ACCEPTANCE. CONTRACTOR SHALL COMPENSATE MARTIN/MARTIN, INC. FOR DESIGNING THE REPAIR.

6) TEMPORARY CONDITIONS, CONSTRUCTION ENGINEERING, AND OSHA STANDARDS:

6A) THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION AND ONLY FOR LOADS ANTICIPATED DURING THE STRUCTURE'S SERVICE LIFE.

6B) THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES. REFER TO "LATERAL LOAD RESISTING SYSTEM DESCRIPTION" IN DESIGN CRITERIA FOR ADDITIONAL INFORMATION. CONTRACTOR SHALL PROVIDE ALL REQUIRED ENGINEERING AND OTHER MEASURES TO ACHIEVE THE MEANS, METHODS, AND SEQUENCES OF WORK WHICH MAY INCLUDE, BUT IS NOT LIMITED TO:
- LAYOUT
- DESIGN OF CONCRETE MIXES
- ERECTION PROCEDURES WHICH ADDRESS STABILITY OF THE FRAME DURING CONSTRUCTION
- WELD PROCEDURES
- DESIGN OF TEMPORARY BRACING OF WALLS FOR WIND, SEISMIC, OR SOIL LOADS
- SURVEYING TO VERIFY CONSTRUCTION TOLERANCES
- EVALUATION OF TEMPORARY CONSTRUCTION LOADS ON STRUCTURE DUE TO EQUIPMENT AND MATERIALS
- STRUCTURAL ENGINEERING TO RESIST ANY OTHER LOADS NOT IDENTIFIED ON DESIGN DRAWINGS

6C) NOTHING SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE CONSTRUED AS ELIMINATING THE NEED FOR THE CONTRACTOR TO COMPLY WITH ALL OSHA REQUIREMENTS. WHERE THE STRUCTURAL DRAWINGS APPEAR TO CONFLICT WITH OSHA REQUIREMENTS, THE STRUCTURAL DRAWINGS REPRESENT FINAL CONDITIONS ONLY.

7) MODIFICATIONS TO HARDENED OR EXISTING CONCRETE

7A) UNLESS NOTED ON THE STRUCTURAL DOCUMENTS MODIFICATIONS AS LISTED BELOW SHALL NOT BE MADE TO HARDENED OR EXISTING CONCRETE WITHOUT APPROVAL OF THE ARCHITECT AND MARTIN/MARTIN:
- SAW CUTTING
- CORING
- CHIPPING

7B) DO NOT CUT OR DAMAGE ANY REINFORCING WITHOUT APPROVAL OF THE ARCHITECT AND MARTIN/MARTIN.

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: William Griffin
Date: Dec 23, 2022
2015 INTERNATIONAL CODES & 2020 NEC
IF PAF ARE USED, SEE GENERAL NOTE 1F.

DESIGN CRITERIA

1) CODES AND STANDARDS:

1A) GENERAL DESIGN
- INTERNATIONAL BUILDING CODE 2015 WITH CITY OF AURORA AMENDMENTS
- INTERNATIONAL EXISTING BUILDING CODE 2015

2) GRAVITY LOADS:

2A) PHILIPS AZURION 7 C20 UNIT
- CLEA STAND (SP) = 2,557 LBS (SUSPENDED FROM CEILING)
- **ASSUMED MOMENT ≤ 5,000 FT-LBS, SEE NOTE 2B
- PATIENT TABLE (MSA) = 999 LBS (LEVEL 1 SLAB ON GRADE LOAD)
- **ASSUMED MOMENT ≤ 5,850 FT-LBS, SEE NOTE 2B
- EQUIPMENT RACK AND POWER BOOM = 865 LBS (SUSPENDED FROM CEILING)
- **ASSUMED MOMENT ≤ 5,555 FT-LBS, SEE NOTE 2B
- LCD MONITOR SYSTEM = 596 LBS (SUSPENDED FROM CEILING)
- MAVIG RADIATION SHEILD AND LIGHT = 167 LBS
  **ASSUMED MOMENT ≤ 900 FT-LBS, SEE NOTE 2B

2B) CONTRACTOR SHALL CONFIRM WITH EQUIPMENT SUPPLIER THAT BENDING MOMENTS STATED ABOVE MEET AND/OR EXCEED THE ACTUAL BENDING MOMENTS PROVIDED BY THE MANUFACTURER FOR EACH BOOM/EQUIPMENT.

3) LATERAL LOADS:

3A) MODIFICATIONS TO THE EXISTING BUILDING LATERAL SYSTEM CAPACITY AND/OR APPLIED LOADING IS LESS THAN THE ALLOWANCE PROVIDED IN THE IEBC. THEREFORE NO MODIFICATIONS ARE REQUIRED FOR THE EXISTING BUILDING LATERAL SYSTEM.

Structural plan review is limited to a general survey for code compliance. No review is implied nor was undertaken to verify structural adequacy.

3B) WIND LOADS:
- RISK CATEGORY = IV
- ULTIMATE WIND SPEED, Vult = 115 MPH
- EXPOSURE CATEGORY = B
- INTERNAL PRESSURE COEFFICIENT, Gcpi = ± 0.18

3C) SEISMIC LOADS:
- SEISMIC DESIGN CATEGORY = C
- RISK CATEGORY = IV
- SEISMIC IMPORTANCE FACTOR, Ie = 1.5
- MAPPED SPECTRAL RESPONSE ACCELERATION, Ss = 17.3%g
- MAPPED SPECTRAL RESPONSE ACCELERATION, S1 = 5.7%g
- DESIGN SPECTRAL RESPONSE COEFFICIENT, SDs = 0.184
- DESIGN SPECTRAL RESPONSE COEFFICIENT, SD1 = 0.091
- SOIL SITE CLASS = D (ASSUMED)

4) STIFFNESS AND DEFLECTION OF EXISTING INDEPENDENT STRUCTURAL STEEL FRAME

4A) SEE DETAIL 12/S1.01 FOR CONTRACTOR REQUIRED FIELD VERIFICATION. IF DISCREPANCIES ARE FOUND THAT VARY FROM EXISTING BUILDING DRAWINGS AND IN FIELD CONDITION, REPORT ALL DISCREPENCIES TO MARTIN/MARTIN FOR FURTHER EVALUATION. ADDITIONAL SCHEDULE MAY BE REQUIRED BASED ON THE DISCREPENCIES DISCOVERED.

4B) STIFFNESS VALUES SHOWN BELOW WERE REPORTED IN THE MARTIN/MARTIN STRUCTURAL NARRATIVE DATED 10 MAY 2022. THESE VALUES DO NOT MEET THE STATED EQUIPMENT REQUIREMENTS. HOWEVER, IN EMAIL RECEIVED ON 04 APRIL 2022, THIS STRUCTURAL PERFORMANCE HAS BEEN REVIEWED AND APPROVED BY THE EQUIPMENT MANUFACTURER.
EQUIPMENT MANUFACTURER TO REVIEW THE FINAL DEFLECTION AND STIFFNESS EVALUATION PROVIDED IN THESE DRAWINGS AND SUBMIT CONFIRMATION IN WRITING TO THE ARCHITECT THAT THE PROPOSED EQUIPMENT IS STILL ACCEPTABLE AS STATED IN THE EMAIL DATED 04 APRIL 2022.

4C) EXISTING UNISTRUT TO BE REMOVED AND REPLACED WITH A NEW UNISTRUT SYSTEM THAT WILL MEET ALL DEFLECTION AND STIFFNESS REQUIREMENTS OF EQUIPMENT NOTED IN SECTION 5) BELOW.

- CONTRACTOR OPTION TO HAVE UNISTRUT ENGINEER INVESTIGATE AND REVIEW THE EXISTING UNISTRUT SYSTEM FOR COMPLIANCE WITH THE DEFLECTION AND STIFFNESS REQUIREMENTS LISTED IN SECTION 5) BELOW.

Existing TMCA Cath Lab #1 and #2			
		Units	Comments
Current Horizontal Stiffness	71.4	k/in	N-S (brace frame direction)
Current Horizontal Stiffness	6.7	k/in	E-W (Moment frame direction)
Required Horizontal Stiffness (min)	45.6	k/in	(ASSUME PRIMARY STRUCTURE IS 75% OF TOTAL STIFFNESS) = REQUIRED STIFFNESS / 0.75 = (34.2/.75)
Current Vertical Stiffness	35.6	k/in	TOTAL LOAD / AVG DEFL.
Required Veritical Stiffness (min)	45.6	k/in	(ASSUME PRIMARY STRUCTURE IS 75% OF TOTAL STIFFNESS) = REQUIRED STIFFNESS / 0.75 = (34.2/.75)
Current Rotational Stiffness	39,603	k-in/rad	at beam end (without torsional rotation of W12x35)
Required Rotational Stiffness (min)	236,018	k-in/rad	(ASSUME PRIMARY STRUCTURE IS 75% OF TOTAL STIFFNESS) = REQUIRED STIFFNESS / 0.75 = (177,014/.75)
Current Vertical Deflection (max)	0.14	in	SEE "GRAVITY LOADS" FOR WEIGHTS OF EQUIPMENT INCLUDED IN ANALYSIS
Required Vertical Deflection (max) (CLEA STAND)	0.057	in	(ASSUME PRIMARY STRUCTURE DEFLECTION LIMIT IS 75% OF ALLOWABLE DEFLECTION) (0.076*.75)

5) DESIGN REQUIREMENTS FOR SUPPLEMENTAL SUPPORT SYSTEM BY CONTRACTOR (DEFERRED DESIGN):

5A) REQUIRED STIFFNESS:
- REQUIRED HORIZONTAL STIFFNESS OF SUPPLEMENTAL FRAME = 136.8 k/IN (ASSUMES SECONDARY STRUCTURE IS 25% OF TOTAL STIFFNESS)
- REQUIRED VERTICAL STIFFNESS OF SUPPLEMENTAL FRAME = 136.8 k/IN (ASSUMES SECONDARY STRUCTURE IS 25% OF TOTAL STIFFNESS)
- REQUIRED ROTATIONAL STIFFNESS OF SUPPLEMENTAL FRAME = 708,056 k-IN/RAD (ASSUMES SECONDARY STRUCTURE IS 25% OF TOTAL STIFFNESS)

5B) VERTICAL DEFLECTION REQUIREMENT:
- MAXIMUM VERTICAL DEFLECTION OF SUPPLEMENTAL FRAME = 0.019" (ASSUMES SECONDARY STRUCTURE IS 25% OF TOTAL DEFLECTION)

5C) SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

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Permit #: 22-2256682 REV.

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No.	Description	Date

COLORADO REGISTERED DANIEL T. MULLINS 38927 PROFESSIONAL ENGINEER

12/02/2022

21-048 TMCA SOUTH CATH 1 & 2 RENOVATION

1501 S Potomac St.
Aurora, CO 80012

Issue	ISSUE FOR CONSTRUCTION
Date	02 DECEMBER 2022
Project Number	21-048
Drawn by	GDR
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Sheet Title
STRUCTURAL DETAILS AND NOTES

Sheet Number
S1.01

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