Perkins&Will

RESTROOM RENOVATIONS



ISSUE FOR BID

JUNE 9, 2025

PROJECT DESCRIPTION

Interior Renovation of Restrooms including new partitons, finishes, plumbing fixtures, new ceilings, lighting and door replacement.

APPLICABLE CODES

BUIDING CODE: 2015 INTERNATIONAL BUILDING CODE
EXISTING BUIDING CODE: 2015 INTERNATIONAL BUILDING CODE
ENERGY CODE: 2021 INTERNATIONAL ENERGY CODE
ACCESSIBILITY CODE: 2018 ADA DESIGN GUIDELINES
ACCESSIBILITY CODE: 2018 ILLINOIS ACCESSIBILITY CODE (ILAC)
FIRE PREVENTION CODE: 2015 INTERNATIONAL FIRE CODE
MECHANICAL CODE: 2014 INTERNATIONAL MECHANICAL CODE
ELECTRICAL CODE: 2014 NATIONAL ELECTRIC CODE
PLUMBING CODE: ILLINOIS PLUMBING CODE

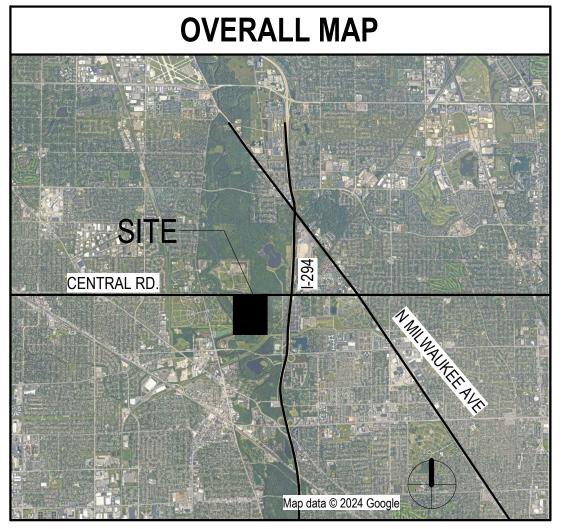
OCCUPANCY CLASSIFICATION

ASSEMBLY
EDUCATIONAL CLASSROOMS
BUSINESS

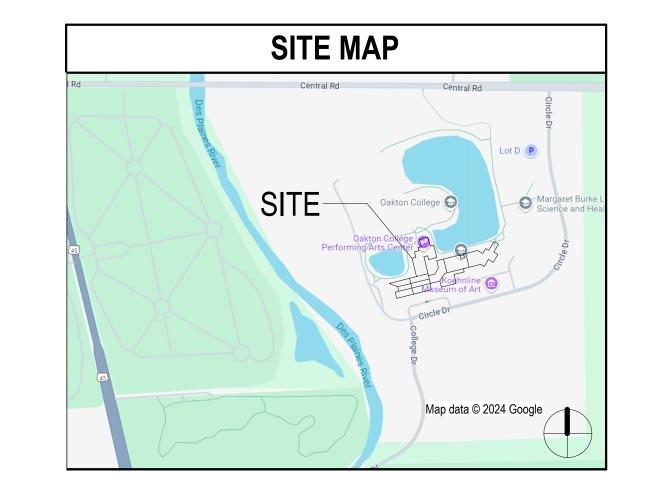
CONSTRUCTION TYPE

EXISTING CONSTRUCTION IS STRUCTURAL STEEL FRAME WITH METAL DECKING FLOOR
WITH CONCRETE TOPPING.

CONSTRUCTION	I TYPE		
	ONSTRUCTION IS STRUC RETE TOPPING.	TURAL STEEL FRAME V	VITH METAL DECKING FL
FIRE PROTECTION	ON		
BUILDING E	<u>LEMENT</u>	RATING	REFERENCE
A. Structural	Frame	1 hours	Table 601
	ng Walls and Partitions Interior	0 hours	Table 601
C. Floor Con	struction	1 hour	Table 601
D. Roof Cons	struction	1 hour	Table 601
i. (ii. l	all and Ceiling Finishes Corridors Rooms and Enclosed paces	Class C (Sprinklered) Class C (Sprinklered)	

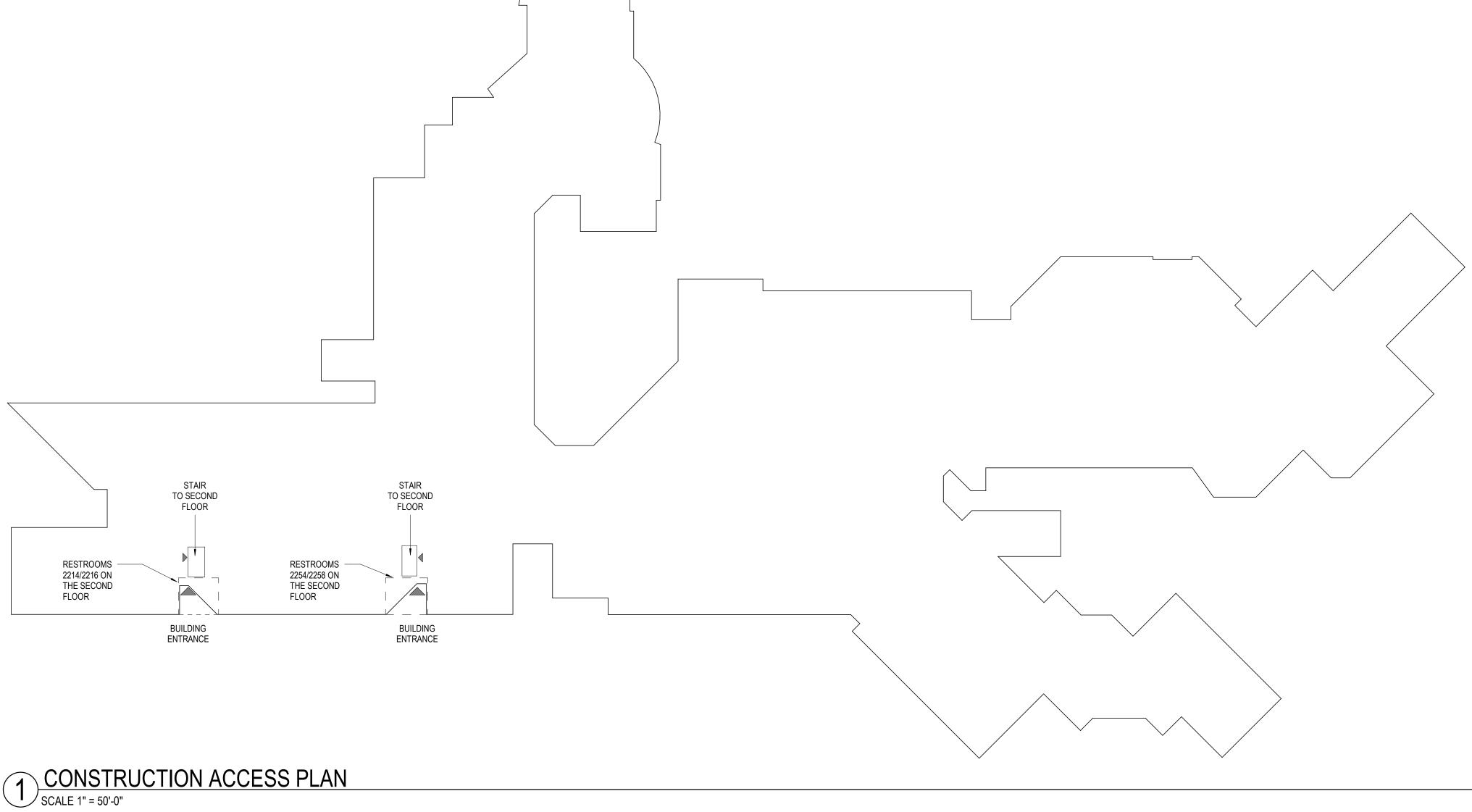


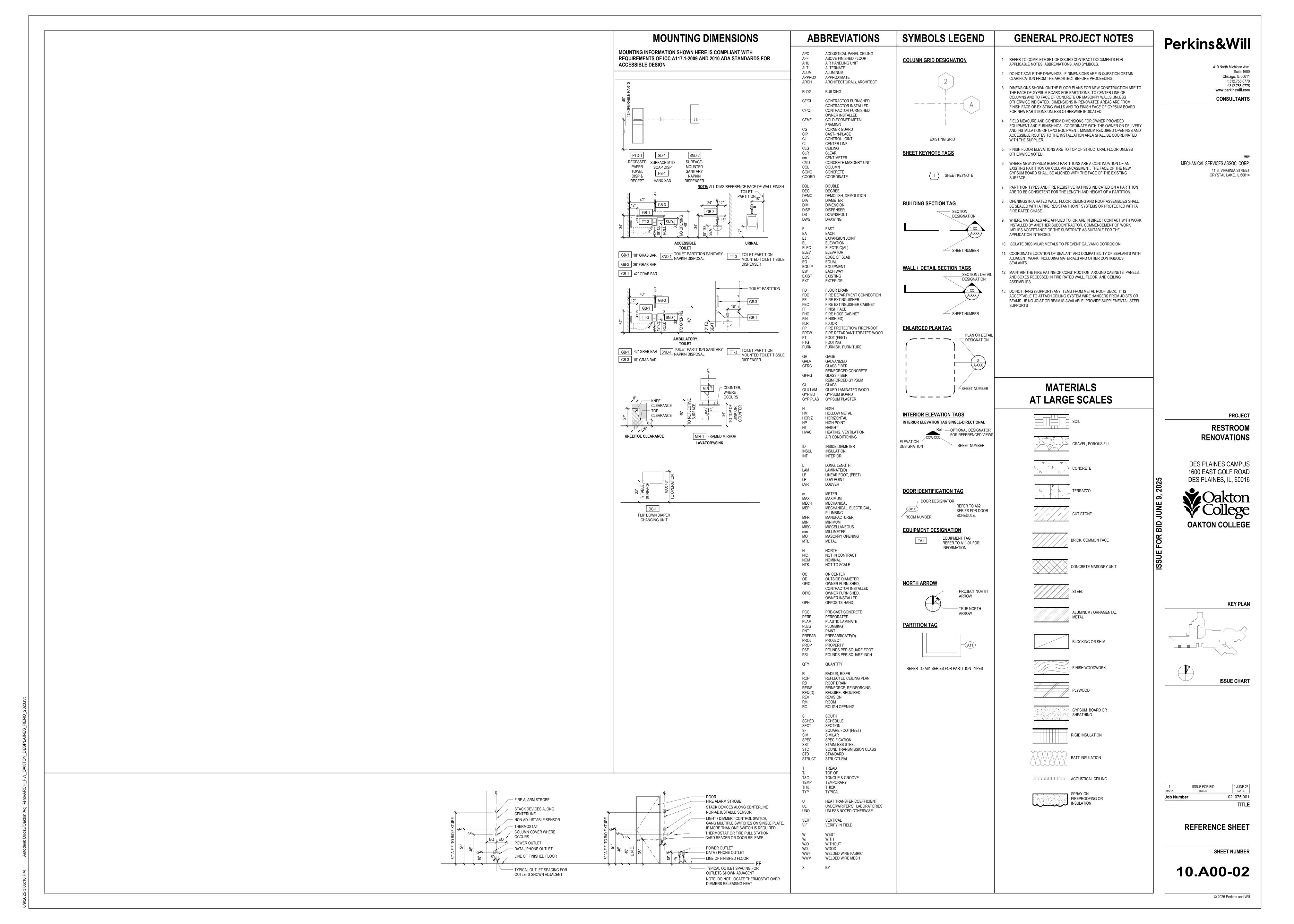
VICINITY MAP								
CENTRAL RD	SITE SITE							
RANDRO	GOLFRD							
	Map data © 2024 Google							



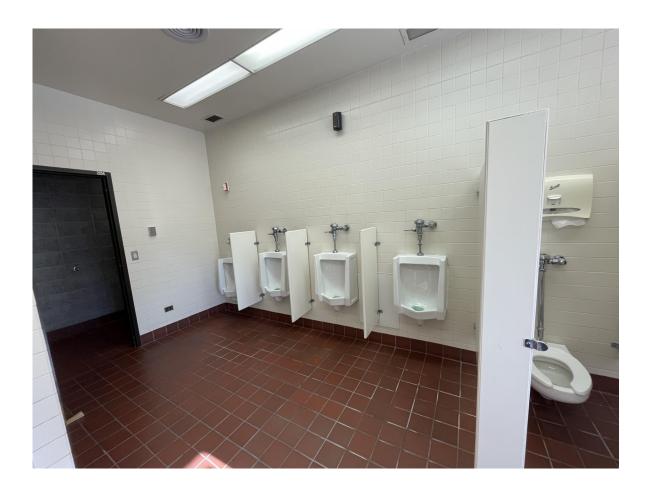
OWNER	ARCHITECT	MECH., PLUMBING, ELEC., LOW VOLTAGE, & FIRE PROTECTION ENGINEERING
OAKTON COLLEGE 1600 E. GOLF RD. DES PLAINES, IL 60016	PERKINS AND WILL 410 N. MICHIGAN AVE. STE. 1600 CHICAGO, IL 60611 DESIGN FIRM #: 184000338-0001	MECHANICAL SERVICES ASSOCIATES, CORP. 111 S. VIRGINIA ST. CRYSTAL LAKE, IL 60014 DESIGN FIRM #: 184001504-0002

	SHEET INDEX - TOILET RENOVATION 2025	
SHEET NUMBER	SHEET NAME	ISSUED FOR BID
11-GENERAL		
0.G00-01	COVER	•
4-ARCHITECTURAL		
0.A00-02	REFERENCE SHEET	•
0.A04-02	DEMOLITION PLANS	•
0.A44-01	ENLARGED RESTROOM PLANS	•
0.A61-02	INTERIOR PARTITION TYPES & DETAILS	•
05-FIRE PROTECTION		
0.FP10-01	FIRE PROTECTION PLANS	•
06-PLUMBING		
0.P04-02	PLUMBING DEMOLITION PLANS - LEVEL 02	•
0.P10-01	PLUMBING PLANS -LEVEL 01	•
0.P10-02	PLUMBING PLANS -LEVEL 02	•
0.P20-00	PLUMBING GENERAL NOTES, SCHEDULES, AND DETAILS	•
0.P20-01	PLUMBING RISER DIAGRAMS	•
7-MECHANICAL		
0.M10-01	MECHANICAL PLANS	•
0.M20-00	GENERAL MECHANICAL NOTES	•
0.M20-01	MECHANICAL SCHEDULES AND DETAILS	•
08-ELECTRICAL AND LOW	//OLTAGE	
0.E04-01	ELECTRICAL DEMOLITION PLANS	•
0.E05-01	LIGHTING DEMOLITION PLANS	•
0.E10-01	ELECTRICAL AND SYSTEMS NEW WORK PLANS	•
0.E12-01	LIGHTING NEW WORK PLANS	•
0.E41-01	SCHEDULES AND LIGHTING SEQUENCE OF OPERATION	•
0.E51-01	FIRE ALARM NOTES AND DETAILS	•
0.E61-01	GENERAL ELECTRICAL NOTES	•





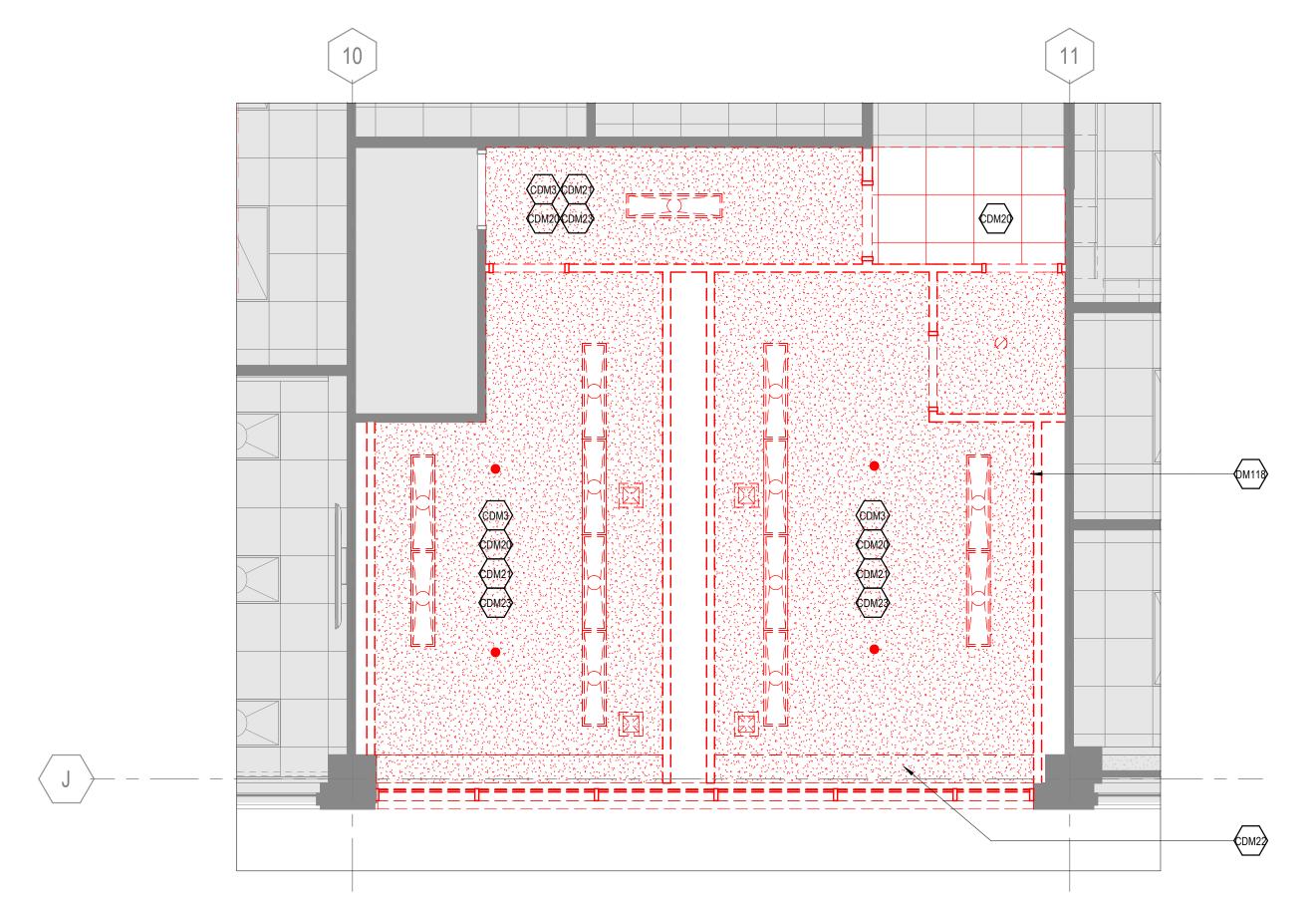




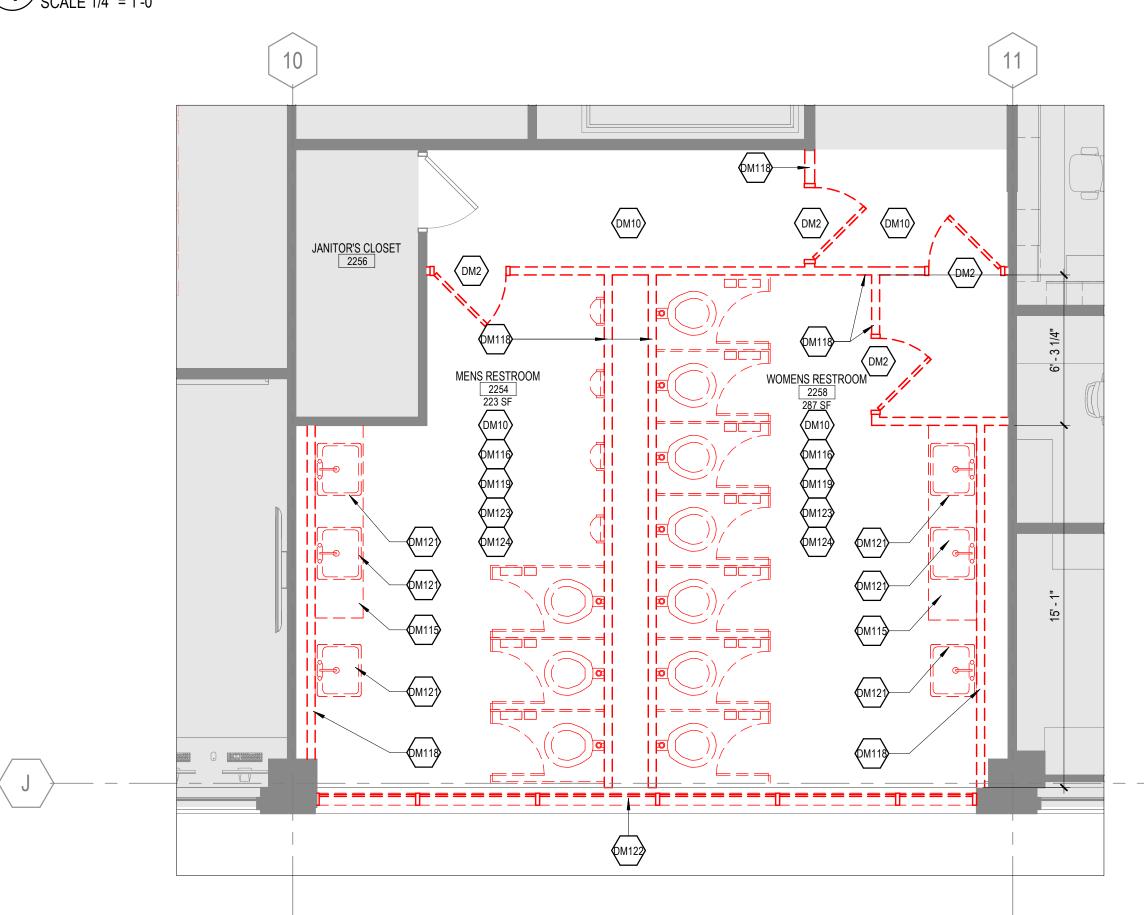




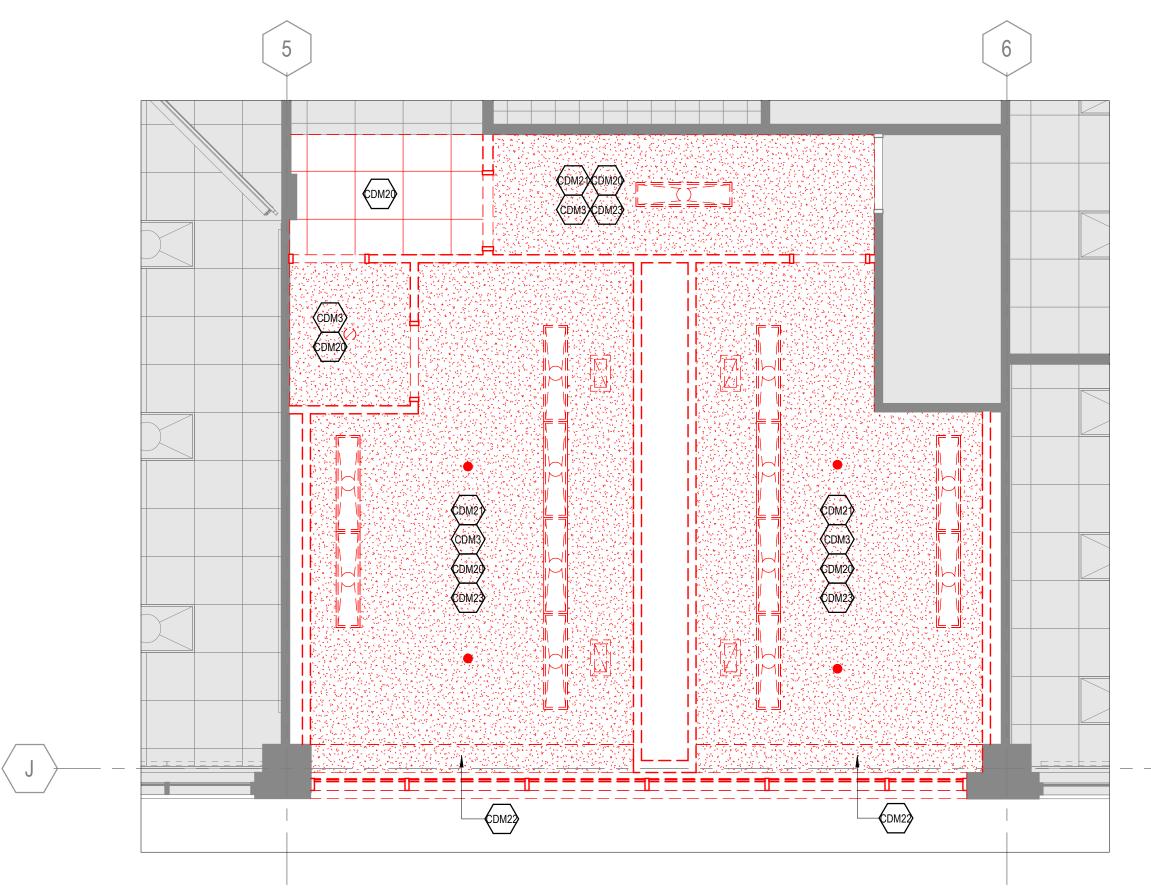
5 PHOTOS OF EXISTING CONDITIONS SCALE 1/16" = 1'-0"



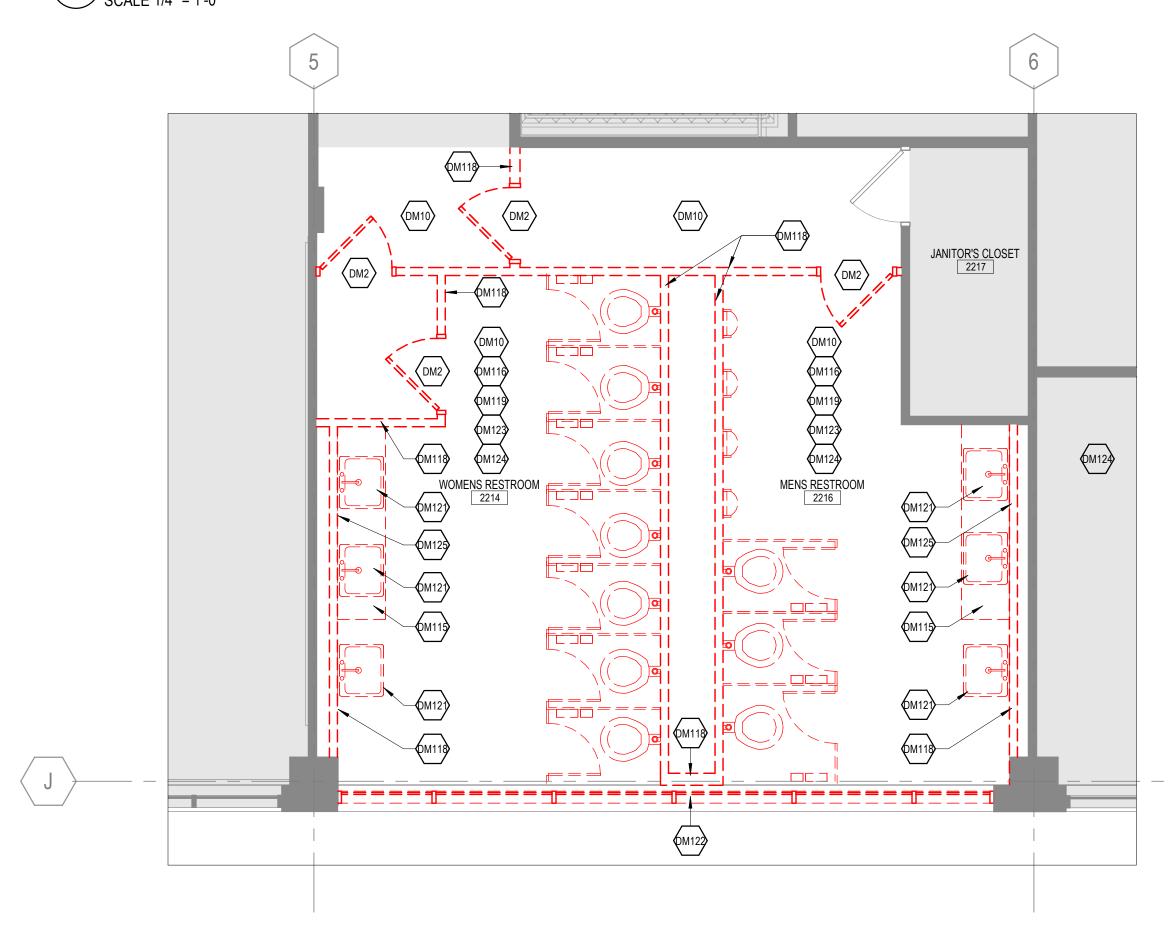
DEMO REFLECTED CEILING PLAN - 2254/2258 SCALE 1/4" = 1'-0"



2 DEMOLITION PLAN - LEVEL 02 - 2254/2258
SCALE 1/4" = 1'-0"



3 DEMO REFLECTED CEILING PLAN - 2214/2216 SCALE 1/4" = 1'-0"



1 DEMOLITION PLAN - LEVEL 02 - 2214/2216
| SCALE 1/4" = 1'-0"

DEMOLITION PLAN AND CEILING **PLAN GENERAL NOTES**

THE CONTRACTOR SHALL FIELD SURVEY THE SITE OF PROPOSED WORK TO DETERMINE THE EXTENT AND NATURE OF THE DEMOLITION WORK. REFER TO ALL CONTRACT DOCUMENTS FOR ADDITIONAL REQUIREMENTS AND SCOPE OF DEMOLITION WORK. REFER TO THE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL DEMOLITION REQUIREMENTS.

PROTECTION SHALL BE PROVIDED FOR BASE BUILDING CONSTRUCTION AND ALL EXISTING CONSTRUCTION TO REMAIN.

THE CONTRACTOR SHALL REVIEW ALL EXISTING CONDUIT, WIRING, JUNCTION BOXES, ELECTRICAL COMMUNICATION, AND LIFE SAFETY DEVICES WITH THE LANDLORD AND OWNER PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION WORK. ALL EXISTING ITEMS TO REMAIN SHALL BE PROPERLY MARKED AT THE PROJECT SITE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LANDLORD

COORDINATE WITH OWNER TO VERIFY THAT OWNER HAS REMOVED ALL ITEMS SCHEDULED OR PLANNED TO BE REMOVED BY OWNER.

WHERE PARTITIONS ARE BEING REMOVED, ALL ELECTRICAL OUTLETS AND SWITCHES SHALL BE DISCONNECTED AT SUPPLY JUNCTION BOXES, UNO.

WHERE PLUMBING, WATER LINES, WASTES, AND VENTS ARE REMOVED, THEY SHALL BE DISCONNECTED AND CAPPED AT THE TAP CONNECTION; ADEQUATELY

RECESS TO ACCOMMODATE PATCHING AND FINISH OF THE FINISH SURFACE.

REMOVE ALL LOW VOLTAGE CABLING AND CONNECTORS THAT ARE NOT REQUIRED FOR THE OPERATION OF THE FINAL LOW VOLTAGE SYSTEM.

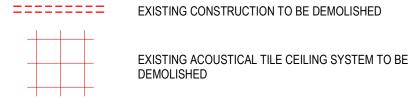
ALL EMPTY CONDUITS TO BE REMOVED.

REPAIR DEMOLITION PERFORMED IN EXCESS OF THAT REQUIRED AT NO COST TO OWNER OR ARCHITECT. IMMEDIATELY REPAIR ANY DAMAGES CAUSED TO ADJACENT FACILITIES BY DEMOLITION OPERATIONS.

LEGEND

NOT IN CONTRACT

EXISTING CONSTRUCTION TO REMAIN



FIXTURE TO REMAIN

FIXTURE TO BE DEMOLISHED

SCOPE OF WORK PRICED AS ALT#1

DEN	DEMOLITION PLAN KEYNOTES								
	<<< Indicates Sheet Keynote								
CDM3	REMOVE ALL LIGHT FIXTURES THIS ROOM; RETURN TO OWNER UPON REQUEST; PREPARE FOR NEW FIXTURES								
CDM20	DEMOLISH CEILING								
CDM21	REMOVE ALL SPRINKER HEADS AND PREPARE FOR NEW CONCEALED HEAD THIS ROOM								
CDM22	DEMOLISH DRYWALL SOFFIT AT WINDOW HEAD								
CDM23	REMOVE ALL EXISTING DIFFUSERS THIS ROOM								
DM2	REMOVE DOOR, FRAME, & HARDWARE; RETURN DOOR & HARDWARE TO OWNER AS REQUESTED								
DM10	DEMOLISH TILE FLOORING; PREPARE FOR NEW FLOORING								
DM115	DEMOLISH COUNTERTOP IN ITS ENTIRETY								
DM116	DEMOLISH ALL TOILET PARTITIONS AND PARTITION DOORS THIS ROOM								
DM118	DEMOLISH PARTITION								
DM110	DEMOLICITED ON EXICTING WALLS TO DEMAIN								

DEMOLISH TILE ON EXISTING WALLS TO REMAIN DEMOLISH PLUMBING FIXTURES; CUT CAP & SEAL ALL UTILITIES BACK TO SOURCE; REFER TO PLUMBING DRAWINGS DEMOLISH WINDOW WALL SYSTEM. PATCH AND REPAIR EXISTING OPENING TO PREPARE FOR NEW WINDOW SYSTEM.

DEMOLISH ALL TOILETS/URINALS THIS ROOM; CUT CAP & SEAL ALL UTILITIES BACK TO SOURCE; REMOVE ABANDONED VENT PIPING IN ITS ENTIRETY; REFER TO PLUMBING DRAWINGS DEMOLISH ALL WALL-MOUNTED ACCESSORIES AND TOILET ACCESSORIES THIS ROOM. SALVAGE AND RETURN TO OWNER AS

Scale: 1/8" = 1' - 0"

DM125 DEMOLISH MIRROR IN ITS ENTIRETY

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CONSULTANTS

MECHANICAL SERVICES ASSOC. CORP. 11 S. VIRGINIA STREET CRYSTAL LAKE, IL 60014

> **PROJECT RESTROOM**

RENOVATIONS

DES PLAINES CAMPUS 1600 EAST GOLF ROAD DES PLAINES, IL, 60016



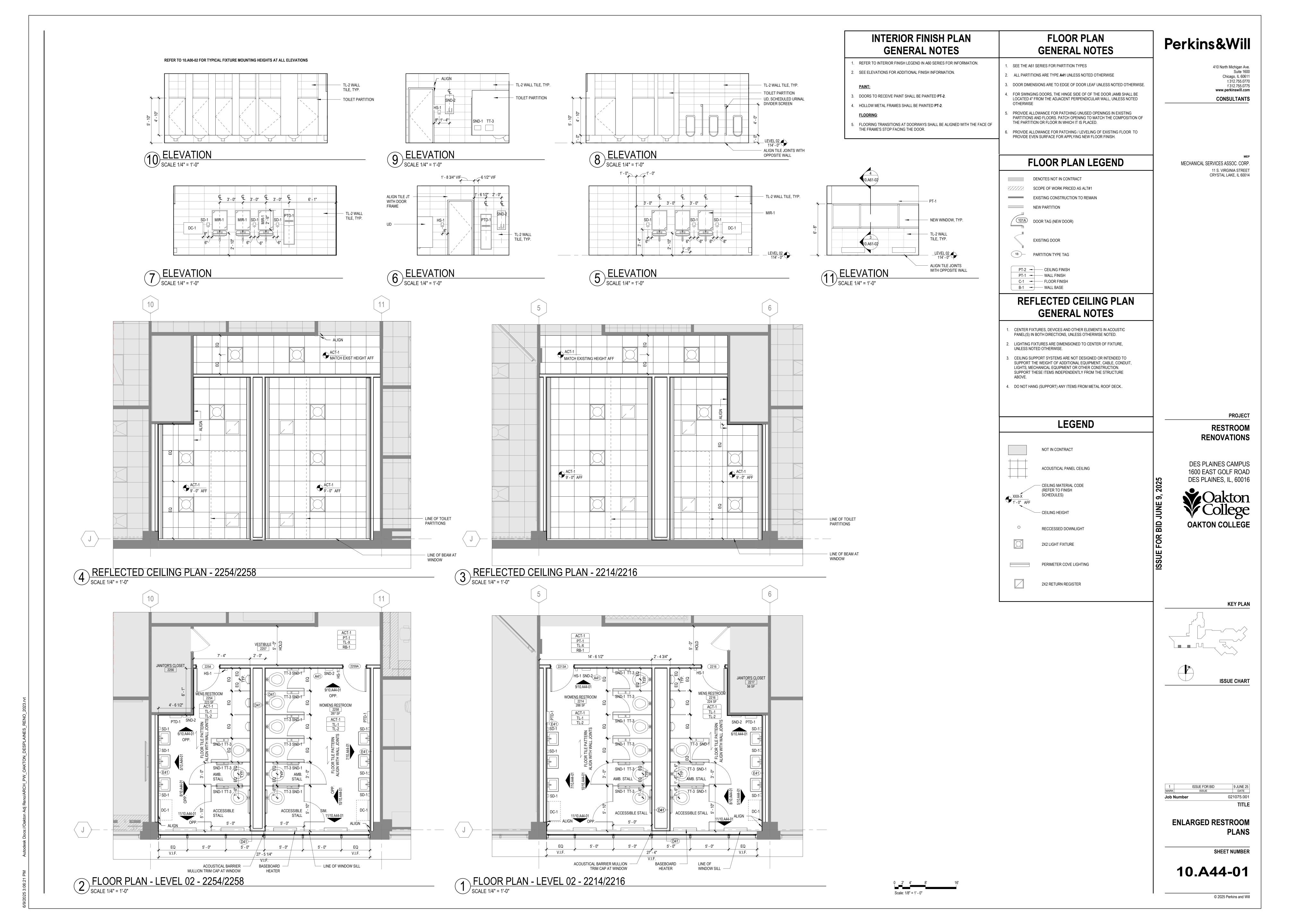
KEY PLAN

ISSUE CHART

DEMOLITION PLANS

SHEET NUMBER

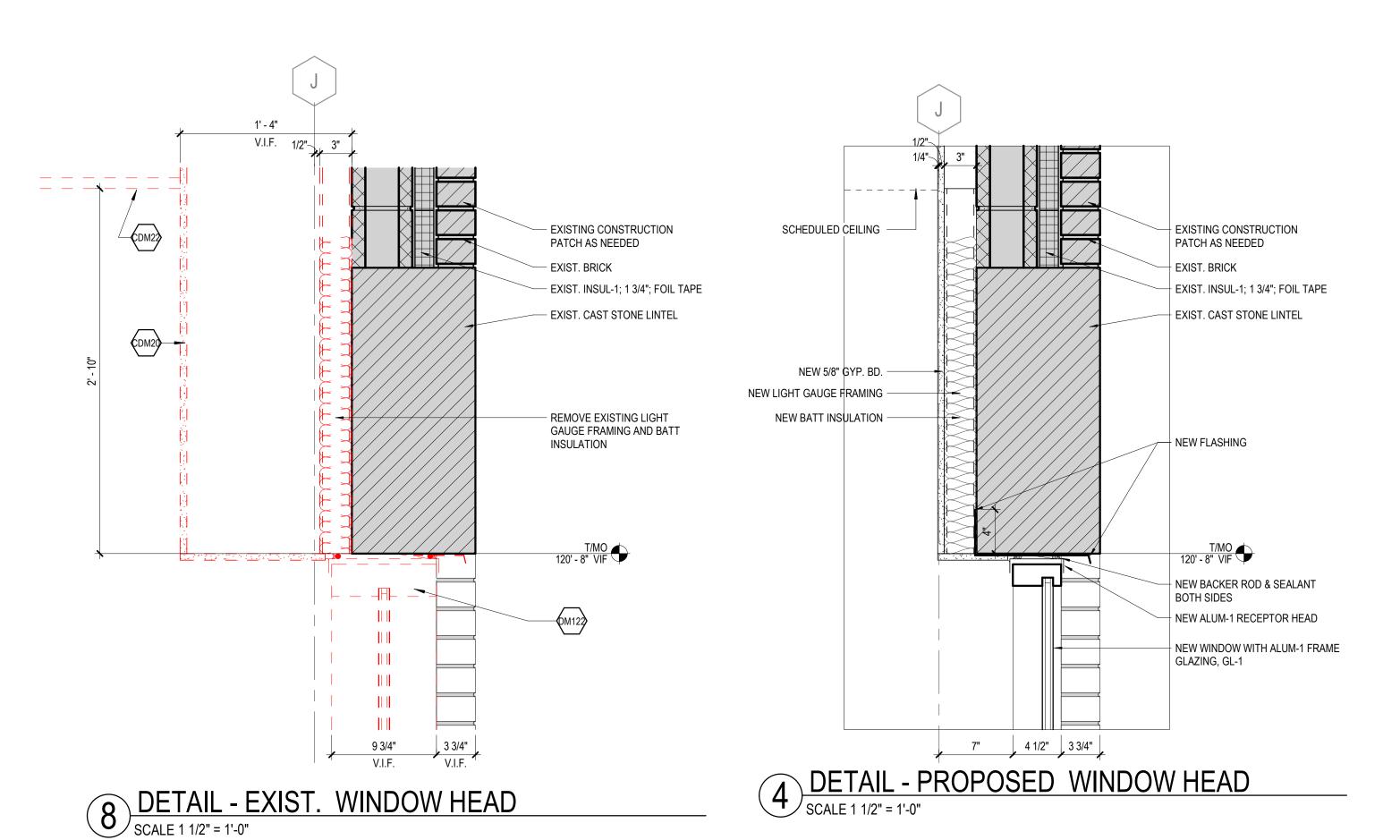
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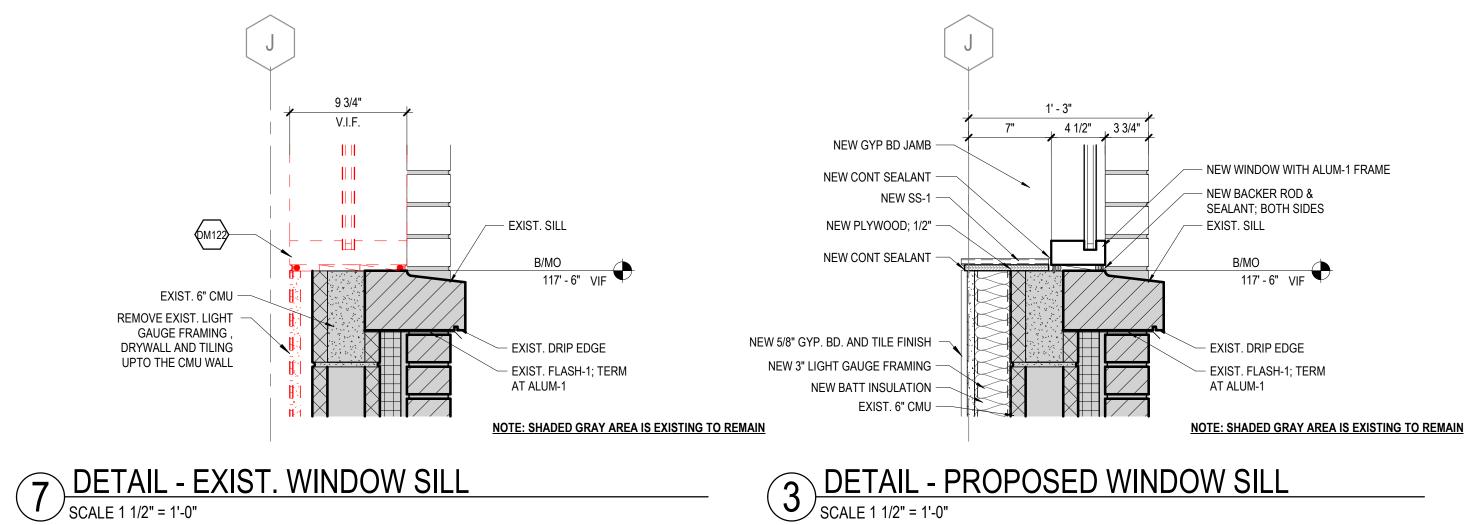


EXTERIOR WINDOW REPLACEMENT DETAILS

DEMOLITION KEYNOTES <<< Indicates Sheet Keynote</p> CDM20 DEMOLISH CEILING DEMOLISH DRYWALL SOFFIT AT WINDOW HEAD DEMOLISH WINDOW WALL SYSTEM. PATCH AND REPAIR EXISTING OPENING TO PREPARE FOR NEW

WINDOW SYSTEM.





3 DETAIL - PROPOSED WINDOW SILL SCALE 1 1/2" = 1'-0"

GLAZING SCHEDULE MFR (BASIS OF DESIGN) DESCRIPTION / COLOR COMMENTS CLEAR FLOAT GLASS TEMPERED; LOW-IRON

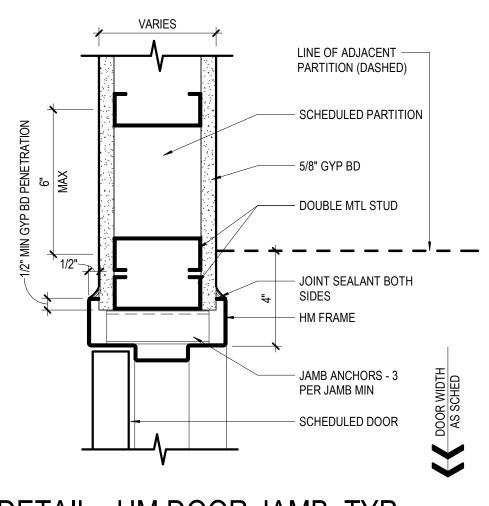
		TOILI	ET ACCESSO	ORY SCHEDULE		
TAG	DESCRIPTION	PROCUREMENT	MFR (BOD)	MODEL	COLOR / FINISH	REMARKS
SD-1	SOAP DISPENSER	OFCI	-	-	SATIN STAINLESS STEEL	
DC-1	DIAPER CHANGING STATION		BOBRICK	KB310-SSWM	SATIN STAINLESS STEEL	SURFACE MOUNTED
SND-1	SANITARY NAPKIN DISPOSAL		BOBRICK	B-270 CLASSIC SERIES	SATIN STAINLESS STEEL	SURFACE MOUNTED
SND-2	SANITARY NAPKIN DISPENSER	OFCI	BOBRICK	B-47069C	SATIN STAINLESS STEEL	SURFACE-MOUNTED
PTD-1	PAPER TOWEL DISPENSER	OFCI	BOBRICK		SATIN STAINLESS STEEL	SURFACE MOUNTED
GB-1	GRAB BAR		BOBRICK	B-5806.99 X 42	SATIN STAINLESS STEEL	
GB-2	GRAB BAR		BOBRICK	B-5806.99 X 36	SATIN STAINLESS STEEL	
GB-3	GRAB BAR		BOBRICK	B-5806.99 X 18	SATIN STAINLESS STEEL	
HS-1	HAND SANITIZER DISPENSER	OFCI	PURELL	H-1950	WHITE	
TP	TOILET PARTITION		BOBRICK	1098 SERIES	SC04 - FOREST GREEN SIERRA SERIES	CEILING HUNG SOLID COLOR COMPOSITE MATERIAL
UD	URINAL DIVIDER SCREEN		BOBRICK	1098 SERIES	SC04 - FOREST GREEN SIERRA SERIES	WALL HUNG SOLID COLOR COMPOSITE MATERIAL
MIR-1	24" W X 30" H MIRROR		-	-	STAINLESS STEEL FRAMED	6MM TEMPERED GLASS
TT-3	TOILET PAPER DISPENSER	OFCI (TBD)	BOBRICK	B-2888	STAINLESS STEEL	

	FINISH SCHEDULE										
TAG	FINISH TYPE	MANUFACTURER	STYLE	COLOR / FINISH	REMARKS						
ACT-1	ACOUSTICAL CEILING TILE	CERTAINTEED	1222BF-75-1 SYMPHONY M 2'X2'X3/4", NARROW REVEALED EDGE	WHITE							
	CEILING GRID	CERTAINTEED	CMC 4500 SERIES 9/16", 1/4" BOLT SLOT	WHITE							
TL-1	PORCELAIN TILE	ERGON	ELEGANCE, 12"x24"	63778R GREY	RESTROOM - FLOOR TILE						
TL-2	PORCELAIN TILE	ERGON	ELEGANCE, 12"x24"	63771R IVORY	RESTROOM - WALL TILE						
TL-X	TBD	TBD	TBD	TBD	MATCH CORRIDOR FLOORING						
PT-1	PAINT - FIELD	SHERWIN WILLIAMS	EGGSHELL	SW 7005, PURE WHITE							
PT-2	PAINT - DOORS AND FRAMES	BENJAMIN MOORE	SEMI-GLOSS	BM 2135-30, NOCTURNAL GREY							
RB-1	RESILIENT BASE	-	-	-	MATCH EXIST. BASE IN THE HALLWAY						
SS-1	SOLID SURFACE SILL	LG HAUSYS	HI-MACS	M321 BASILLICA	MATCH EXISTING WINDOW SILL FROM OTHER AREAS						

PAINT NOTES: 1. GYPSUM BOARD WALLS SHALL HAVE EGGSHELL FINISH, UNO. 2. GYPSUM BOARD CEILINGS SHALL HAVE FLAT FINISH, UNO. 3. ALL DOORS AND DOOR FRAMES SCHEDULED TO RECEIVE PAINT SHALL HAVE SEMI-GLOSS FINISH, UNO.

- PARTITION AS SCHEDULED - MTL.RUNNER - HOLLOW METAL FRAME - DOOR AS SCHEDULED





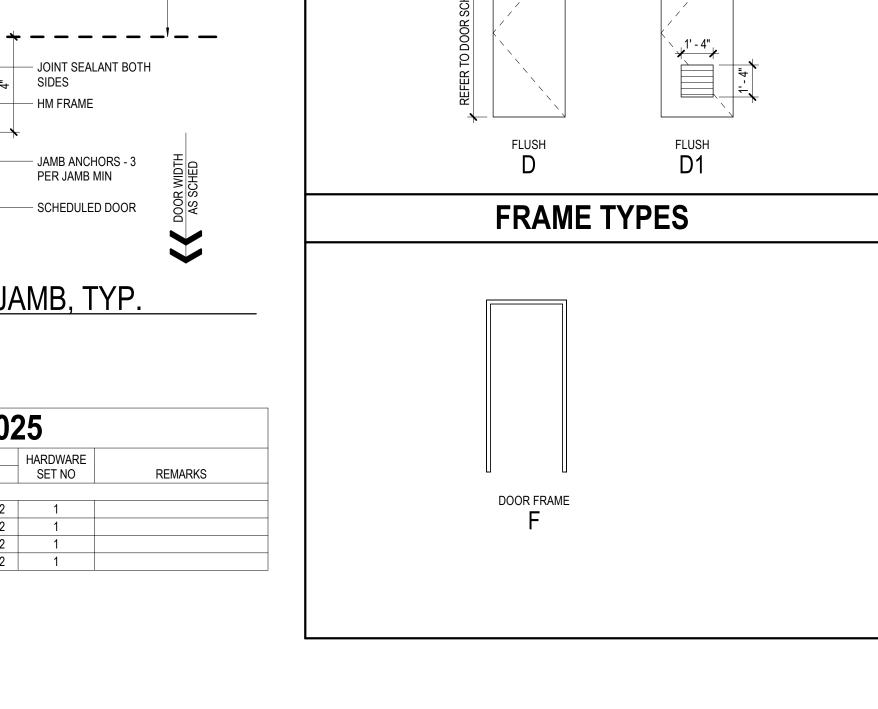
5/8" GYP BD, 1 LAYER EA SIDE

STEEL STUD -

FIRE TEST NUMBER

_	1	DETAIL -	HM	DOOR	JAMB,	TYP.
		SCALE 3" = 1'-0"				

	DOOR SCHEDULE - TOILET RENOVATIONS 2025													
		FIRE	OPENI	NG SIZE		DOOR			FRAME		DET	ΓAILS	HARDWARE	
DOOR NO	ROOM NAME	RATING	WIDTH	HEIGHT	TYPE	MATL	FINISH	TYPE	MATL	FINISH	HEAD	JAMB	SET NO	REMARKS
										•				
2213A	WOMENS RESTROOM	-	3' - 0"	7' - 0"	F	HM	PT-2	F	HM	PT-2	1/10.A61-02	2/10.A61-02	1	
2216	MENS RESTROOM	-	3' - 0"	7' - 0"	F	HM	PT-2	F	HM	PT-2	1/10.A61-02	2/10.A61-02	1	
2254	MENS RESTROOM	-	3' - 0"	7' - 0"	F	HM	PT-2	F	HM	PT-2	1/10.A61-02	2/10.A61-02	1	
2259A	WOMENS RESTROOM	-	3' - 0"	7' - 0"	F	HM	PT-2	F	HM	PT-2	1/10.A61-02	2/10.A61-02	1	



INTERIOR PARTITION CHARTS Perkins&Will

PARTITION TYPE GENERAL NOTES

. NOT ALL PARTITION TYPES SHOWN ARE UTILIZED. PARTITION TYPE, FIRE-RESISTANCE RATING AND STC RATING INDICATED FOR A GIVEN PARTITION ARE TO BE CONTINUOUS FOR THE LENGTH AND

GENERAL NOTES

HEIGHT OF THAT PARTITION UNLESS OTHERWISE NOTED. CONSTRUCT FIRE-RESISTANCE RATED PARTITIONS BEFORE NON-RATED. ABUT NON-RATED PARTITIONS INTO RATED PARTITIONS. ISOLATE NON-LOAD-BEARING FRAMING FROM STRUCTURAL ELEMENTS TO PREVENT THE TRANSFER OF LOAD TO PARTITION FRAMING. UNLESS OTHERWISE NOTED. STOP VERTICAL STUDS 3/4" BELOW TOP OF CEILING RUNNER (TOP TRACK) TO ALLOW FOR VERTICAL DEFLECTION. DO NOT ATTACH STUDS OR GYPSUM BOARD TO CEILING RUNNER (TOP TRACK). THIS MAY ALSO BE ACHIEVED BY UTILIZING PROPRIETARY SYSTEMS DESCRIBED IN THE SPECIFICATIONS.

PROVIDE DOUBLE-STUD FRAMING AT JAMBS OF ALL PARTITION OPENINGS. WHERE CONTROL JOINTS ARE REQUIRED BASED UPON SPECIFIED FREQUENCY, AND ARE NOT SHOWN ON INTERIOR ELEVATIONS, LOCATE CONTROL JOINTS ON BOTH STRIKE AND HINGE SIDES OF DOORS. WHEN PROVIDING CONTROL JOINTS AT DOORS DOES NOT MEET THE SPECIFIED FREQUENCY, PROVIDE DOUBLE-STUD CONTROL JOINT CONSTRUCTION AND VERIFY LOCATION WITH THE ARCHITECT PRIOR TO PROCEEDING. PROVIDE SHEET METAL BLOCKING/BACKING FOR WALL MOUNTED ITEMS SPECIFIED OR SHOWN IN THE DRAWINGS.

FIRE-RESISTANCE RATED PARTITIONS (THE FOLLOWING NOTES APPLY TO ALL PARTITIONS INDICATED TO HAVE A FIRE-RESISTANCE RATING.)

- PROVIDE PERMANENTLY STENCILED IDENTIFICATION ABOVE THE CEILING AT 4'-0" OC ON ALL FIRE-RESISTANCE RATED PARTITIONS. THE
- IDENTIFICATION SHALL BE A MINIMUM OF 4" HIGH AND READ AS FOLLOWS: "FIRE AND SMOKE BARRIER - PROTECT ALL OPENINGS". FIRE-RESISTANCE RATED PARTITIONS SHALL BE CONSTRUCTED FROM THE TOP OF NON-FINISHED FLOOR TO THE UNDERSIDE OF THE FLOOR OR ROOF
- STRUCTURE ABOVE. THROUGH-PENETRATIONS IN FIRE-RESISTANCE RATED PARTITIONS SHALL BE SEALED WITH MATERIALS AND ASSEMBLIES NECESSARY TO MAINTAIN THE REQUIRED FIRE-RESISTANCE RATING.

ACOUSTICAL PARTITIONS (THE FOLLOWING NOTES APPLY TO ALL PARTITIONS DESIGNATED TO HAVE EITHER SOUND ATTENUATION BLANKETS OR A SOUND TRANSMISSION CLASS (STC) RATING.)

- 1. SEAL PARTITIONS AT ENTIRE PERIMETER WITH NON-HARDENING ACOUSTICAL SEALANT.
- 2. SOUND ATTENUATION BLANKETS ARE TO FILL THE DEPTH OF THE FRAMING CAVITY UNLESS OTHERWISE NOTED. 3. DO NOT COMPRESS SOUND ATTENUATION BLANKETS AT BLOCKING OR
- RECESSED ITEMS. 4. SEAL ALL WALL INTERSECTIONS AND CONTROL JOINTS WITH NON-HARDENING ACOUSTICAL SEALANT.
- 5. SEAL ALL CONDUIT, STRUCTURAL, DUCT AND PIPE PENETRATIONS WITH NON-HARDENING ACOUSTICAL SEALANT. PROVIDE ACOUSTICAL PADS AROUND ANY ITEMS PENETRATING THE FACE
- OF PARTITION, INCLUDING ELECTRICAL AND TECHNOLOGY JUNCTION OR ELECTRICAL/TECHNOLOGY BOXES ON OPPOSITE SIDES OF A PARTITION

ARE TO BE SEPARATED BY A MINIMUM OF 1 STUD SPACE.

DOOR TYPES

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> **PROJECT RESTROOM**

RENOVATIONS DES PLAINES CAMPUS



KEY PLAN

ISSUE CHART	Γ

		TITLE
Job N	b Number 0210	
MARK	ISSUE	DATE
1	ISSUE FOR BID	9 JUNE 25

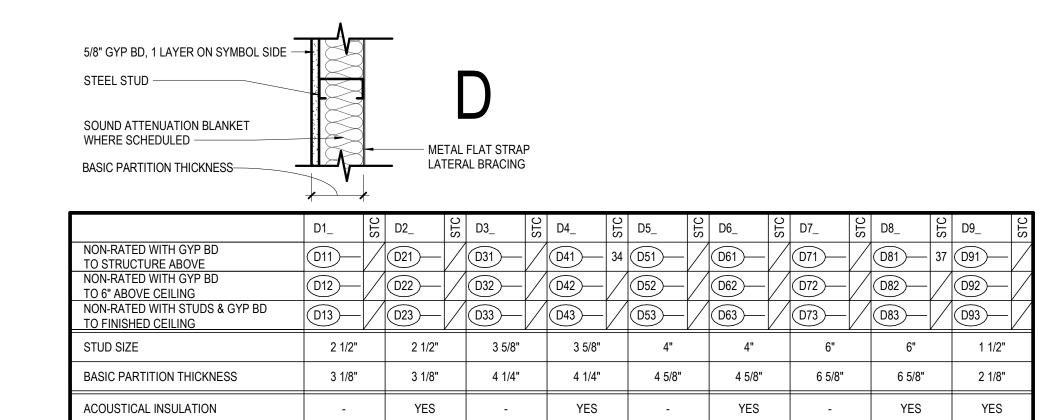
INTERIOR PARTITION TYPES & DETAILS

SHEET NUMBER

10.A61-02

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5/8" GYP BD, 2 LAYERS ON SYMBOL SIDE STEEL STUD SOUND ATTENUATION BLANKET WHERE SCHEDULED BASIC PARTITION THICKNESS			FLAT STRAP AL BRACING						
	E1_ 5	E2_ 2LS	E3_ S	E4_ OLS	E5_ CLS	E6_ SIC	E7_ CLS	E8_ SIC	E9_ SI
NON-RATED WITH GYP BD TO STRUCTURE ABOVE	E11 /	(E21)—/	E31 —	E41 — 38	E51 /	E61 /	E71 —	E81 /	E91 —
NON-RATED WITH GYP BD TO 6" ABOVE CEILING	E12 /	E22 /	E32 /	E42 /	E52 /	E62 /	E72 /	E82 /	E92 /
NON-RATED WITH STUDS & GYP BD TO FINISHED CEILING	E13 —	E23—/	E33 — /	E43—/	E53—/	E63—/	E73—/	E83—/	E93)—/
STUD SIZE	2 1/2"	2 1/2"	3 5/8"	3 5/8"	4"	4"	6"	6"	1 5/8"
BASIC PARTITION THICKNESS	3 3/4"	3 3/4"	4 7/8"	4 7/8"	5 1/4"	5 1/4"	7 1/4"	7 1/4"	2 3/4"



SOUND ATTENUATION BLANKET WHERE SCHEDULED -BASIC PARTITION THICKNESS— | E | A3_

 A1_
 55
 A2_
 55
 A3_
 55
 A4_
 55
 A3_
 55
 A6_
 55
 A7_
 55
 A6_
 47_
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 A 1-HR RATED WITH GYP BD TO STRUCTURE ABOVE
NON-RATED WITH GYP BD TO STRUCTURE ABOVE NON-RATED WITH GYP BD TO 6" ABOVE CEILING
NON-RATED WITH STUDS & GYP BD TO FINISHED CEILING STUD SIZE 2 1/2" 3 5/8" 3 5/8" BASIC PARTITION THICKNESS 3 3/4" 5 1/4" 5 1/4" 7 1/4" 7 1/4" 3 3/4" 4 7/8" 4 7/8" ACOUSTICAL INSULATION YES YES YES YES

UL DES U465

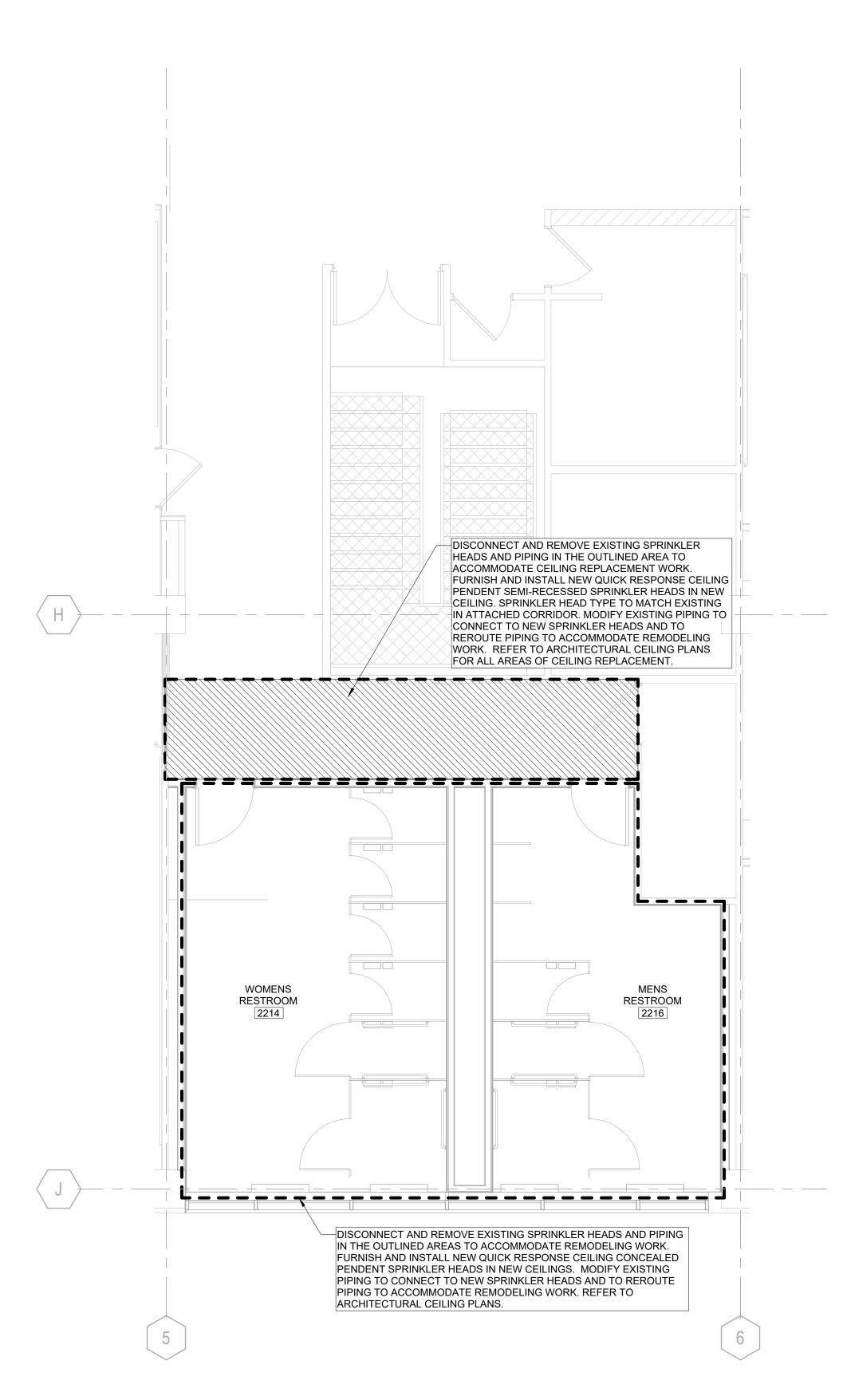
U494

UL DES U465

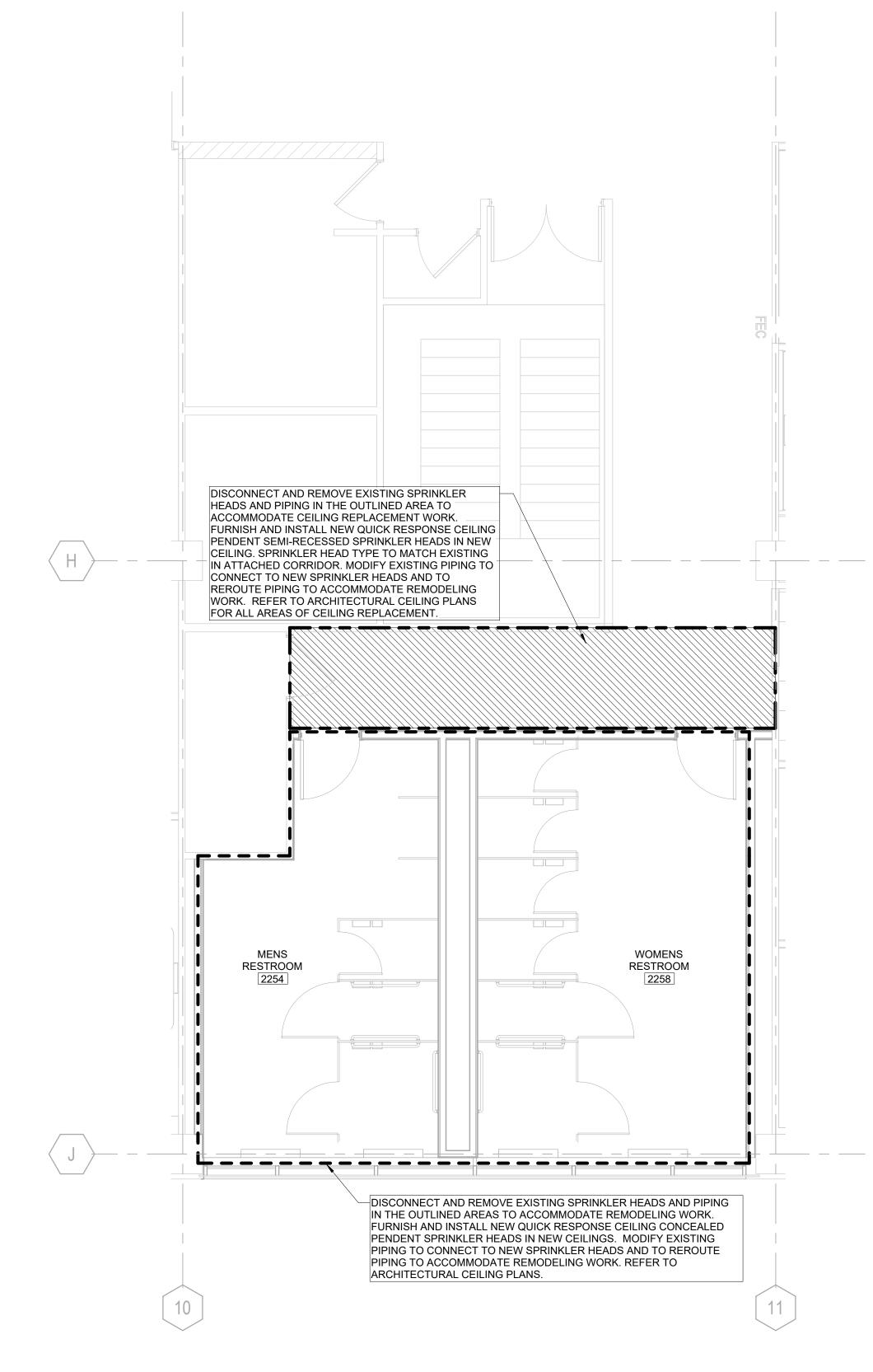
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U465

U465



1) FIRE PROTECTION PLAN - 2214/2216



2 FIRE PROTECTION PLAN - 2254/2258

FIRE PROTECTION GENERAL NOTES:

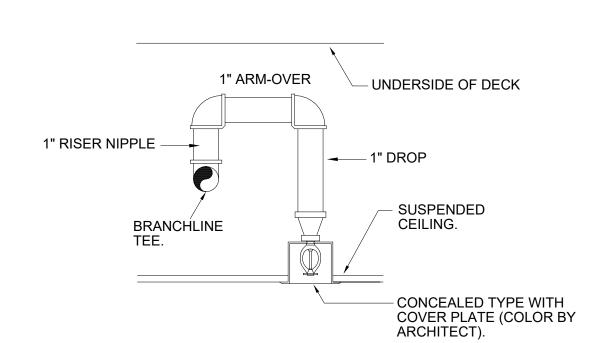
- CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE AND VERIFYING ALL EXISTING FIELD CONDITIONS PRIOR TO SUBMISSION OF HIS BID. CONTRACTOR SHALL DOCUMENT ELECTRONICALLY ACTUAL LOCATION AND ROUTING OF EXISTING SPRINKLER PIPING AND SPRINKLER HEADS.
- 2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENGINEERING OF THE FIRE SUPPRESSION SYSTEM, INCLUDING PREPARATION OF WORKING PLANS, CALCULATIONS, AND FIELD TEST REPORTS. ENGINEERING SHALL BE PERFORMED BY A QUALIFIED LICENSED PROFESSIONAL ENGINEER WHO SHALL SEAL AND SIGN ALL WORKING PLANS, DETAILS AND CALCULATIONS.
- 3. EACH SPRINKLER HEAD OUTLET WITHIN THE SPACE SHALL FEED A SINGLE SPRINKLER HEAD. MODIFY THE EXISTING SPRINKLER PIPING FOR PROVIDING WATER SUPPLY TO THE ADDITIONAL SPRINKLER HEADS ADDED AS REQUIRED PER NFPA 13 IN EXISTING AREAS WHERE NEW SPRINKLER PIPING IS INSTALLED AND/OR MODIFIED.
- 4. ALL NEW MATERIAL AND EQUIPMENT SHALL BE LISTED BY U.L. AND APPROVED BY F.M.
- IN THE FINISHED CEILING AREAS, SPRINKLER HEADS SHALL BE QUICK RESPONSE CONCEALED PENDENT TYPE WITH COVER PLATE COLOR TO BE SELECTED BY ARCHITECT. IN AREAS WITHOUT CEILING, SPRINKLER HEADS TO BE UPRIGHT OR SIDEWALL. ALL SIDE WALL OR UPRIGHT SPRINKLER HEADS SHALL BE PROVIDED WITH PROTECTIVE COVER. ALL UPRIGHT & SIDEWALL SPRINKLER HEADS AND PROTECTIVE COVER FINISHES & COLOR TO BE SELECTED BY THE ARCHITECT. ORIFICE SIZE, MAKE AND MODEL OF SPRINKLER HEADS SHALL MATCH WITH THE BUILDING SPRINKLERS RATED AT 175 PSI, BUT WHERE SYSTEM PRESSURES EXCEED 175 PSI, PROVIDE HIGH PRESSURE SPRINKLER HEADS. ACCEPTABLE MANUFACTURERS ARE: VICTAULIC, VIKING, TYCO, AND RELIABLE.
- 6. MAINTAIN MINIMUM CLEARANCE OF 18 INCHES OR GREATER BETWEEN SPRINKLER HEAD DEFLECTOR AND THE TOP OF MATERIAL STORED BENEATH.
- 7. CONTRACTOR IS RESPONSIBLE FOR COORDINATING HIS WORK WITH THE WORK OF ALL OTHER TRADES AND MAKING ANY NECESSARY MODIFICATIONS TO HIS WORK AT NO ADDITIONAL COST, INCLUDING ALL OFFSETS.
- 8. CONTRACTOR SHALL REMOVE EXISTING EQUIPMENT AND MATERIALS PERTAINING TO HIS CONTRACT AS SPECIFIED OR AS REQUIRED WHETHER SHOWN ON THE DRAWINGS OR NOT, TO PREPARE FOR THE NEW WORK. ANY COMPONENT OF THE EXISTING SYSTEM REQUIRING REPLACEMENT OR UPGRADE TO MEET CODES MUST BE REPLACED WITH NEW. REROUTE EXISTING PIPING, RELOCATE EXISTING SPRINKLER HEADS AND ADD NEW SPRINKLER HEADS AS REQUIRED TO ACCOMMODATE NEW WALLS, STRUCTURAL COMPONENTS AND/OR CHANGES MADE BY OTHER TRADES.
- 9. CONTRACTOR SHALL INSTALL SPRINKLER SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA-13, IFC 2015 AND LOCAL BUILDING CODES.
- 10. SUBMIT COORDINATED SHOP DRAWINGS TO ARCHITECT, LOCAL FIRE PREVENTION BUREAU AND OWNER'S INSURANCE UNDERWRITERS FOR REVIEW AND APPROVAL PRIOR TO THE INSTALLATION OF A FIRE SUPPRESSION SYSTEM. THE SHOP DRAWINGS SHALL INCLUDE AND SHOW THE BASIS OF COMPLIANCE WITH THE DESIGN DENSITY AND THE SPECIFIC ARRANGEMENT OF THE SYSTEM. THE DETAILS ON THE SHOP DRAWINGS SHALL INCLUDE HANGER LOCATIONS, EXISTING AND NEW PIPE SIZING AND ELEVATIONS, DUCTWORK, DIFFUSERS, REGISTERS, MECHANICAL EQUIPMENT, LIGHT FIXTURE AND SPRINKLER HEAD LOCATIONS AND MUST BE SUBMITTED PRIOR TO FABRICATION AND INSTALLATION. THE SHOP DRAWINGS SUBMITTAL SHALL BE SIGNED AND SEALED BY THE CONTRACTOR'S QUALIFIED LICENSED PROFESSIONAL ENGINEER. SUBMITTAL SHALL ALSO INCLUDE MANUFACTURER'S INSTALLING INSTRUCTIONS FOR ANY SPECIALLY LISTED EQUIPMENT INCLUDING DESCRIPTIONS, LIMITATIONS FOR ANY SPRINKLER DEVICES, AND FITTINGS
- 11. CONTRACTOR IS RESPONSIBLE FOR COORDINATING SPRINKLER HEAD LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS. SPRINKLER HEAD LOCATIONS ON THE SHOP DRAWINGS ARE SUBJECT TO APPROVAL BY THE ARCHITECT.
- 12. SPRINKLERS SHALL BE PLACED IN THE CENTER OF CEILING TILES IN BOTH DIRECTIONS.
- 13. PROVIDE ACCESS PANELS FOR ALL VALVES, FLOW SWITCHES AND OTHER ITEMS REQUIRING SERVICE AND ACCESSIBILITY ABOVE NON-ACCESSIBLE CEILING.
- 14. CONTRACTOR IS RESPONSIBLE TO SAW-CUT EXISTING WALLS, CORE FLOORS AND CEILINGS FOR INSTALLING NEW PIPING. ALL NEW PIPING PENETRATIONS SHALL BE PROPERLY SEALED WITH U.L. LISTED FIRE STOPPING MATERIALS TO MAINTAIN THE REQUIRED FIRE RESISTANCE RATING, REGARDLESS IN THE EXPOSED CONSTRUCTION AREAS OR ABOVE DROPPED-CEILING AREAS.
- 15. CONTRACTOR SHALL SIZE SPRINKLER PIPING HYDRAULICALLY IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA-13 2013 EDITION AND IFC 2015 UNLESS NOTED OTHERWISE. PROVIDE PERMANENT METAL PLACARD AT THE BASE OF EACH RISER, INDICATING THE DESIGN, AREA, FLOW AND PRESSURE REQUIRED FOR EACH SYSTEM.
- 16. POOLING OF CUTTING OILS OR OTHER PETROLEUM BASED PRODUCTS IN THE SPRINKLERS MUST BE AVOIDED. THEREFORE, ALWAYS CUT AND THREAD PIPE WITHOUT THE SPRINKLER PIPING BEING ATTACHED AND BE SURE TO CHECK AND DRAIN THE DROPS OF ANY EXCESSIVE OIL PRIOR TO MOTAL ATTOM OF THE ORDINAL EDG.
- TO INSTALLATION OF THE SPRINKLERS.

 17. ALL PIPING TO BE INSTALLED ABOVE ESTABLISHED FINISHED CEILING AND TO RUN CONCEALED TO FOLLOW THE ARCHITECT'S DESIGN INTENTION. ANY PIPING THAT MUST RUN EXPOSED SHALL BE PAINTED WITH COLOR SELECTED BY THE ARCHITECT. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- 18. CONTRACTOR MUST NOTIFY ARCHITECT, OWNER AND LOCAL FIRE DEPARTMENT IN WRITING MINIMUM 5 BUSINESS DAYS PRIOR TO ANY SHUTDOWN OF SYSTEM.
- 19. CONTRACTOR SHALL SUBMIT AS-BUILT DRAWINGS FOR ALL PIPING AFTER INCORPORATING ALL THE CHANGES MADE IN FIELD.
- 20. ANY EXISTING SPRINKLER PIPING NO LONGER USED OR EXISTING ABANDONED PIPING, HANGERS, SUPPORTS AND RELATED APPURTENANCES SHALL BE REMOVED.
- 21. CONTRACTOR SHALL COORDINATE PIPING RUNS AND DROPS TO CEILING WITH ALL OTHER
- TRADES AND OFFSET ROUTING TO AVOID DUCTWORK, PIPING, MECHANICAL EQUIPMENT & ELECTRICAL.

 THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE ACTUAL LOCATION AND
- ROUTING OF THE EXISTING PIPING

 23. ALL PERMITS, FEES, LICENSES, APPROVALS, AND OTHER ARRANGEMENTS FOR WORK SHALL BE
- OBTAINED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- 21. CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIAL FOR ONE YEAR AFTER COMPLETION AGAINST ALL DEFECTS OF MATERIAL, EQUIPMENT, AND WORKMANSHIP.
- 21. PROVIDE COMPETENT OPERATING TECHNICIAN TO INSTRUCT THE OWNER IN THE OPERATION AND MAINTENANCE OF THE INSTALLED EQUIPMENT.
- 21. THE DRAWINGS INDICATE THE ZONING, GENERAL CHARACTER, AND LOCATION OF WORK
- INCLUDED, BUT HAVING DETAILS OMITTED WHICH ARE TO BE PROVIDED WITHOUT EXTRA COST.

 21. STEEL PIPE WITH WALL THICKNESS LESS THAN SCHEDULE 40 SHALL NOT BE JOINED BY
- THREADED FITTINGS. ALL PIPE SHALL BE MARKED CONTINUOUSLY ALONG ITS LENGTH BY THE MANUFACTURER IN SUCH A WAY AS TO PROPERLY IDENTIFY THE TYPE OF PIPE.
- 21. FITTINGS SHALL BE RATED FOR 175 PSI.
- 21. SUPPORT NEW WATER EXTINGUISHING PIPING IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA-13. WHEN THE MAXIMUM PRESSURE AT THE SPRINKLER EXCEEDS 100 PSI, THE UNSUPPORTED LENGTH BETWEEN THE END SPRINKLER IN A PENDENT POSITION OR DROP NIPPLE OR ARMOVER AND THE LAST HANGER ON BRANCH LINE SHALL NOT BE GREATER THAN 12 INCHES.



NIPPLE & REDUCING ELBOW
SUPPLYING SPRINKLER HEAD

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KEY PLAN

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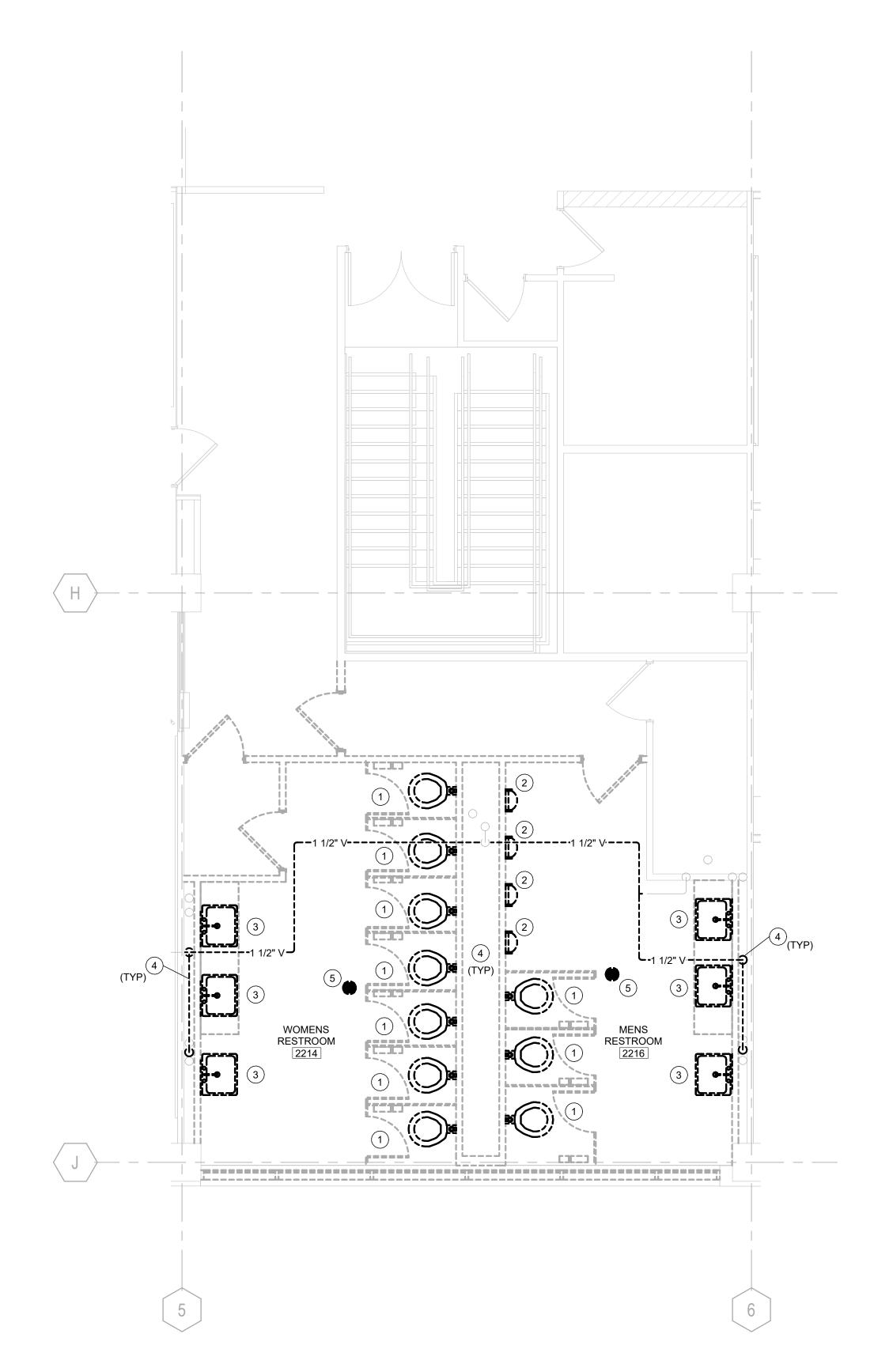
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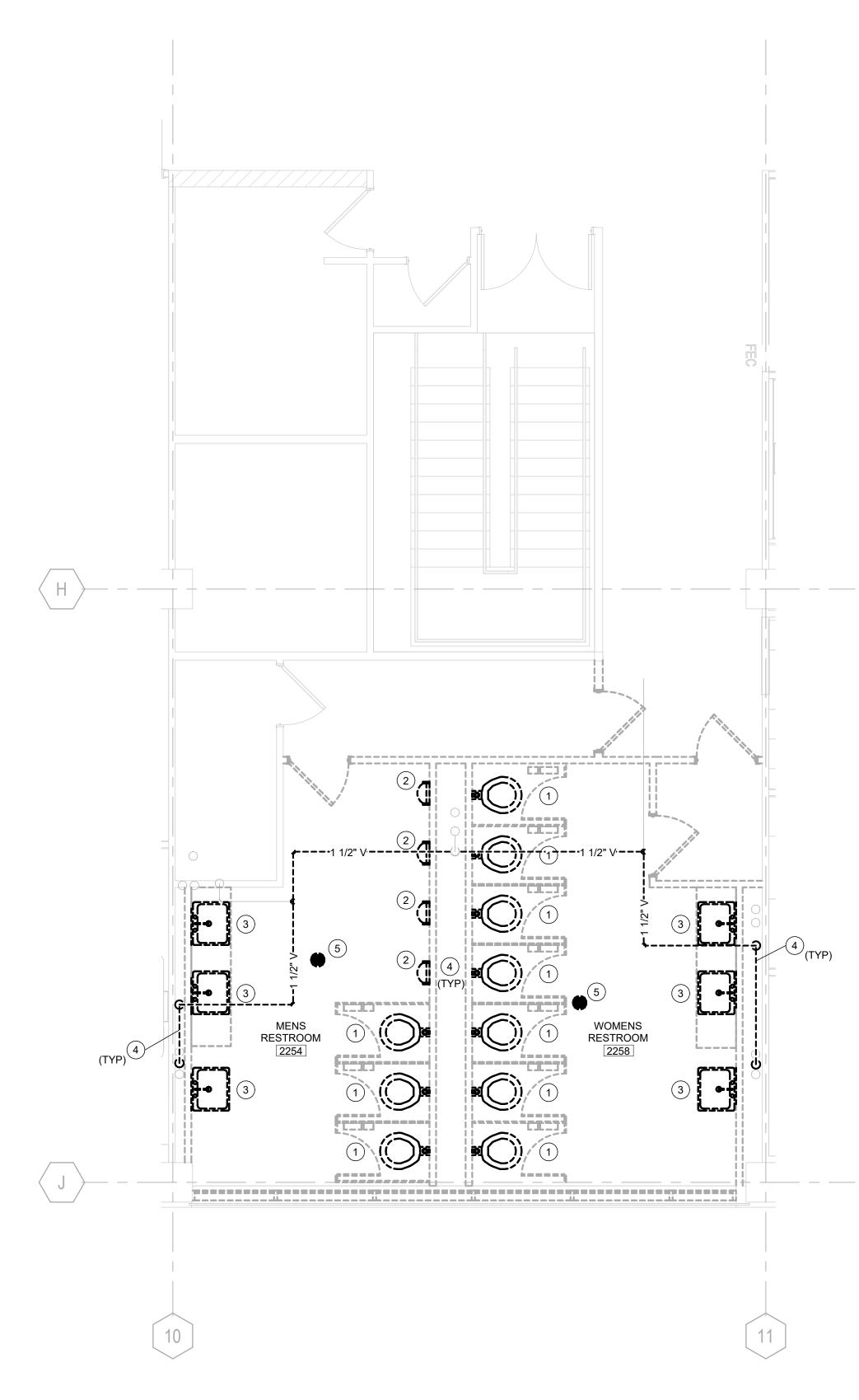
FIRE PROTECTION PLANS

SHEET NUMBER

10.FP10-01



1 LEVEL 02 PLUMBING DEMOLITION PLAN - 2214/2216



2 LEVEL 02 PLUMBING DEMOLITION PLAN - 2254/2258

PLUMBING GENERAL DEMOLITION NOTES:

NOTES RE: EXISTING CONDITIONS

ADDITIONS.

- 1. VERIFY EXISTING CONDITIONS AND LOCATIONS IN FIELD PRIOR TO BIDDING. FAILURE TO DO SO SHALL NOT RELIEVE CONTRACTOR FROM PERFORMING THE WORK REQUIRED UNDER THIS CONTRACT.
- MAKE NECESSARY MODIFICATIONS AND ADJUSTMENTS TO ALL MECHANICAL, PLUMBING, AND ELECTRICAL ITEMS AND EQUIPMENT, BOTH NEW AND EXISTING AS MAY BE REQUIRED BY THESE ALTERATIONS AND
- DISCONNECT AT SOURCE AND REMOVE EXISTING PLUMBING FIXTURES, PIPING, HANGERS, ANCHORS, AND OTHER ITEMS WHICH ARE RENDERED OBSOLETE BY THESE ALTERATIONS AND ADDITIONS.
- THE OWNER RESERVES THE RIGHT TO SALVAGE ANY EQUIPMENT OR MATERIALS REMOVED BY THE CONTRACTOR. SALVAGED EQUIPMENT WILL BE IDENTIFIED AND TAGGED BY THE OWNER PRIOR TO START OF DEMOLITION AND DIRECTION WILL BE GIVEN TO THE CONTRACTOR FOR TURN OVER OF THIS EQUIPMENT AT THE SCHOOL LOADING DOCK. COORDINATE WITH OWNER.
- 5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE EXISTING BUILDING IN OPERATION AT ALL TIMES DURING OCCUPIED PERIOD. IF IT IS ABSOLUTELY NECESSARY TO SHUT DOWN THE FACILITY AT ANY TIME, THE CONTRACTOR SHALL CONSULT WITH THE OWNER AND MAKE ARRANGEMENTS TO DO SO AT THE OWNER'S CONVENIENCE DURING OFF HOURS. CONTRACTOR SHALL PROVIDE OWNER ADVANCE NOTICE IN WRITING A MINIMUM OF 3 BUSINESS DAYS PRIOR TO SHUT DOWN.
- 6. COORDINATE WORK WITH OTHER TRADES TO AVOID CONFLICTS AND DELAYS.
- ALL CUTTING AND PATCHING AS REQUIRED FOR WORK TO BE BY THE CONTRACTOR. REFER TO SPECIFICATIONS.
- 8. WHERE THE EXISTING PIPING SERVING ANY EXISTING FIXTURE IN AREA OF EXISTING BUILDING NOT TO BE ALTERED IS INTERFERED WITH, CONTRACTOR SHALL REROUTE AND RECONNECT ALL SUCH PIPING WITH PRIOR APPROVAL FROM THE ENGINEER.
- 9. CONTRACTOR SHALL X-RAY (WHERE APPROPRIATE) AND UTILIZE VIDEO TO ELECTRONICALLY DOCUMENT ALL PIPING AND ANY ELECTRICAL CONDUIT IN ALL REMODELING AREAS PRIOR TO ANY DEMOLITION OR NEW WORK. DOCUMENTATION SHOULD INCLUDE CONDUIT ROUTING, PIPING TYPES, SIZES, ROUTING, AND INVERT ELEVATIONS. POWER ROD AND PRESSURE JET ALL SANITARY WASTE PIPING, FROM POINT OF NEW CONNECTIONS OUT TO EXTERIOR INSPECTION MANHOLE. AT CONCLUSION OF PRESSURE JETTING, PROVIDE VIDEO OF INTERIOR PIPE CONDITION TO ARCHITECT AND ENGINEER.

NOTES RE: INSPECTING EXISTING BUILDING

- 1. THE CONTRACTORS SHALL VISIT AND INSPECT THE EXISTING BUILDING AND SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ACTUAL JOB CONDITIONS PRIOR TO BIDDING. NO EXTRAS WILL BE ALLOWED FOR WORK WHICH MIGHT HAVE BEEN REASONABLY FORESEEN BY AN INSPECTION OF THESE PREMISES.
- 2. WHILE THE SIZE AND LOCATION OF NEW WORK AND EQUIPMENT IN THE EXISTING BUILDING HAS BEEN INDICATED ON THE DRAWINGS AS ACCURATELY AS POSSIBLE, CONTRACTOR SHALL ADJUST HIS WORK AS REQUIRED TO AVOID EXISTING DUCTS, PIPES, CONDUITS, AND BEAMS NOT SHOWN ON PLANS. CONTRACTOR SHALL ADAPT HIS WORK TO MEET ALL ACTUAL CONDITIONS ON THE EXISTING PREMISES.
- 3. CONTRACTOR SHALL INSPECT THE PREMISES AND MAKE A DETAILED EXAMINATION OF ALL LOCATIONS WHERE NEW WORK IS TO BE INSTALLED AND SHALL EXAMINE EXISTING PIPING, CONDUITS, STRUCTURAL SUPPORTING BEAMS, ETC.

LEGENDS:

——— INDICATES EXISTING TO REMAIN.

---- INDICATES EXISTING TO BE DISCONNECTED AND REMOVED.

E.T.R. EXISTING TO REMAIN.

PLUMBING DEMOLITION NOTES:

- 1) REMOVE WATER CLOSET AND ALL ASSOCIATED HARDWARE, PIPING, AND SUPPORTS FOR A COMPLETE FIXTURE REMOVAL.
- 2 REMOVE URINAL AND ALL ASSOCIATED HARDWARE, PIPING, AND SUPPORTS FOR A COMPLETE FIXTURE REMOVAL.
- (3) REMOVE LAVATORY AND ALL ASSOCIATED HARDWARE, PIPING, AND SUPPORTS FOR A COMPLETE
- FIXTURE REMOVAL.

 4 FIELD VERIFY ALL EXISTING PIPE ROUTING IN WALLS, ABOVE CEILING, AND BELOW FLOOR. DEMOLISH PIPING AS NECESSARY FOR MODIFICATION AND EXTENSION TO NEW PLUMBING
- DEMOLISH PIPING AS NECESSARY FOR MODIFICATION AND EXTENSION TO NEW PLUMBING FIXTURES. DEMOLISH DOMESTIC WATER PIPING DOWN TO LOCATION BELOW FLOOR AND REPLACE WITH COPPER. FIELD VERIFY ALL EXISTING VENT AND SANITARY PENETRATIONS THROUGH FLOOR IN EXISTING CHASES. WHERE NECESSARY DEMOLISH DOWN TO LEVEL BELOW FLOOR AND RELOCATE AS NECESSARY TO COORDINATE WITH NEW CHASES.
- FLOOR DRAIN AS INDICATED. SAWCUT FLOOR AS NECESSARY FOR REPLACEMENT OF FLOOR DRAIN. PATCH ALL AREAS OF SAWCUTTING TO MATCH SURROUNDING CONSTRUCTION.

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PROJECT ADJACENCIES

RENOVATIONS

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PLUMBING DEMOLITION PLANS - LEVEL 02

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PROJECT **ADJACENCIES RENOVATIONS**

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OAKTON COLLEGE

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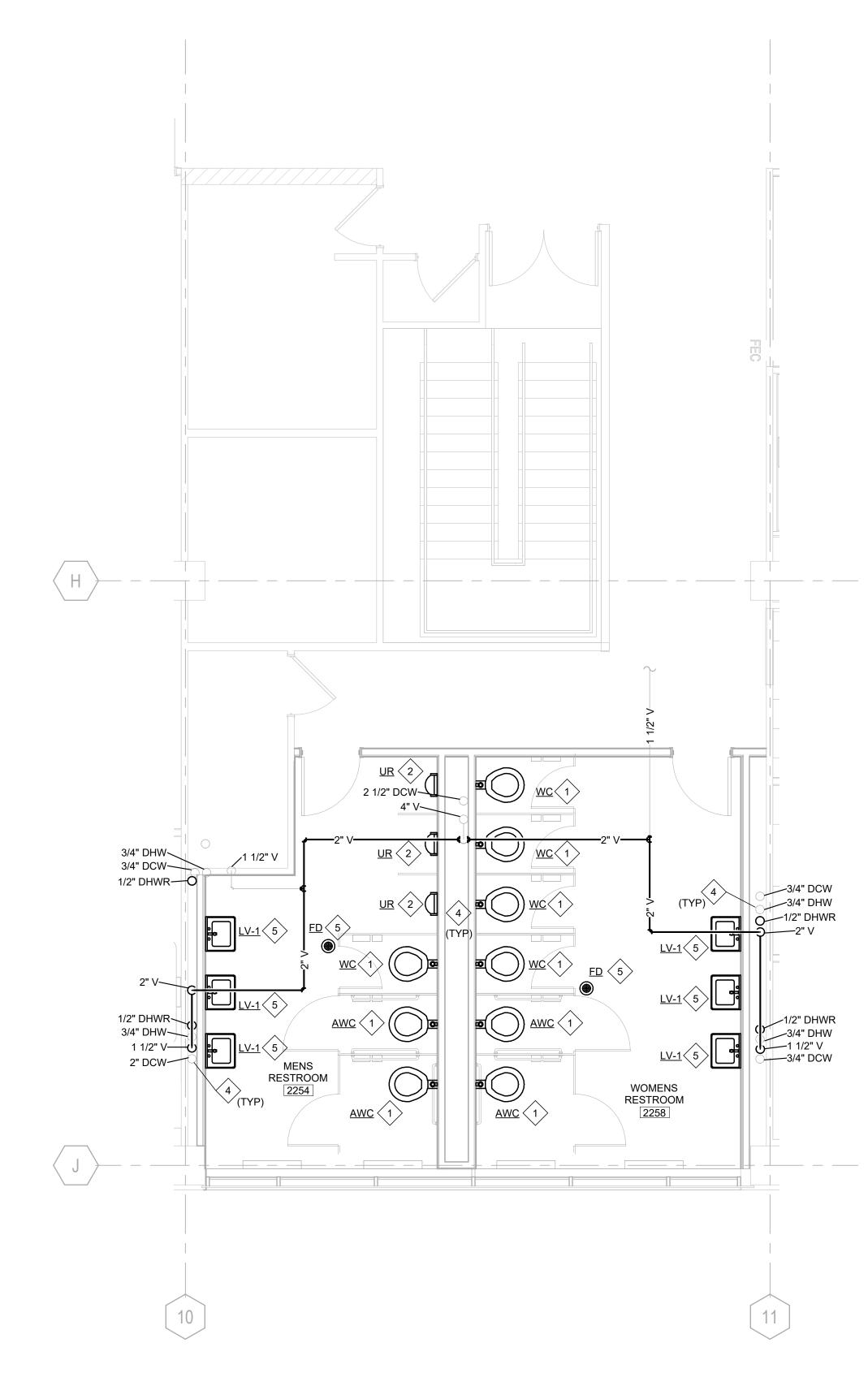
PLUMBING PLANS -LEVEL 01

SHEET NUMBER

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MENS RESTROOM 2216

LEVEL 02 PLUMBING PLAN - TOILETS OVERALL - 2214/2216



2 LEVEL 02 PLUMBING PLAN - TOILETS OVERALL - 2254/2258

PLUMBING INSTALLATION NOTES:

- 1 PROVIDE WATER CLOSET LEVEL AND PLUMB AT LOCATION INDICATED. COORDINATE FINAL LOCATION AND ELEVATION WITH ARCHITECTURAL. INSTALL PER ALL MANUFACTURER RECOMMENDATIONS. PROVIDE 1" DCW, 4" SAN, AND 2-1/2" VENT CONNECTIONS REFER TO RISER DIAGRAMS FOR ALL GROUPED FIXTURE PIPING SIZES.
- 2 PROVIDE URINAL LEVEL AND PLUMB AT LOCATION INDICATED. COORDINATE FINAL LOCATION AND ELEVATION WITH ARCHITECTURAL. INSTALL PER ALL MANUFACTURER RECOMMENDATIONS. PROVIDE 1" DCW, 3" SAN, AND 2" VENT CONNECTIONS. REFER TO RISER DIAGRAMS FOR ALL GROUPED FIXTURE PIPING SIZES.
- PROVIDE LAVATORY LEVEL AND PLUMB AT LOCATION INDICATED. COORDINATE FINAL LOCATION, ELEVATION, AND MOUNTING WITH ARCHITECTURAL. INSTALL PER ALL MANUFACTURER RECOMMENDATIONS. PROVIDE 1/2" DCW, 1/2" DHW, 2" SAN, AND 1-1/2" VENT CONNECTIONS. PROVIDE 1/2" DHWR LINE TO WITHIN 2 FT OF LAVATORY MEETING ALL REQUIREMENTS OF THE ENERGY CONSERVATION CODE. PROVIDE CIRCUIT SETTER AT ACCESSIBLE LOCATION IN DHWR BRANCH AND BALANCE TO 0.25 GPM. REFER TO RISER DIAGRAMS FOR ALL GROUPED FIXTURE PIPING SIZES.
- 4 FIELD VERIFY ALL EXISTING PIPE ROUTING IN WALLS, ABOVE CEILING, AND BELOW FLOOR. DEMOLISH PIPING AS NECESSARY FOR MODIFICATION AND EXTENSION TO NEW PLUMBING FIXTURES. DEMOLISH DOMESTIC WATER PIPING IN EXISTING PLUMBING WALLS DOWN TO LOCATION BELOW FLOOR AND REPLACE WITH COPPER. PROVIDE WALL CLEANOUTS AT END OF ALL SANITARY RUNS.

PROVIDE FLOOR DRAIN AT LOCATION INDICATED. INSTALL PER ALL MANUFACTURER RECOMMENDATIONS. EXTEND AND CONNECT TO EXISTING 3" SANITARY DRAIN PIPE BELOW FLOOR. FIELD VERIFY ALL PIPE SIZES AND COORDINATE FLOOR DRAIN CONNECTION SIZE WITH EXISTING PIPE SIZE PRIOR TO ORDERING. ALIGN TO FLOORING. COORDINATE WITH ARCHITECTURAL. PATCH AND REPAIR ALL SURROUNDING CONSTRUCTION AS NECESSARY TO REPLACE FLOOR DRAIN INCLUDING ANY NECESSARY DEMOLITION ON LEVEL BELOW.

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 021075.00

PLUMBING PLANS -LEVEL 02

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10.P10-02

(SEE BOOK SPECIFICATION FOR ADDITIONAL INFORMATION)

- 1. CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE AND VERIFYING ALL EXISTING FIELD CONDITIONS PRIOR TO SUBMISSION OF HIS BID.
- A. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING PIPING LOCATIONS SIZES. NO EXTRA COMPENSATION WILL BE ALLOWED FOR THE CONTRACTOR FAILING TO DO SO.
- B. CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH PROCESS FOR ACCESSING SITE, ROOF, BASEMENT, FLOOR AND SPACE. CONTRACTOR SHALL NOT CUT ANY OPENINGS, IN FAÇADE, ROOF, FLOORS, ETC UNLESS COMPLETELY NECESSARY AND WITH PRIOR APPROVAL FROM THE OWNER AND ARCHITECT. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCLUDING PATCHING AND REPAIR TO RETURN TO ORIGINAL CONDITION.
- 2. THE CONTRACT DOCUMENTS ARE DIAGRAMMATIC IN NATURE AND INDICATE APPROXIMATE LOCATION OF EXISTING FIXTURES, PIPING AND EQUIPMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE ACTUAL LOCATIONS, SIZES AND ROUTING OF THE EXISTING, PIPING, ETC.
- A. CONTRACTOR SHALL REMOVE EXISTING FIXTURES, EQUIPMENT, PIPING AND MATERIALS PERTAINING TO HIS CONTRACT AS SPECIFIED OR AS REQUIRED WHETHER SHOWN ON THE DRAWINGS OR NOT. TO PREPARE FOR THE NEW WORK. LANDLORD TO BE PROVIDED WITH RIGHT OF REFUSAL FOR SALVAGE VALUE OR ATTIC STOCK. IF OWNER REFUSES CONTRACTOR SHALL REMOVE ALL DEMOLISHED MATERIALS FROM THE SITE AND PROPERLY
- B. CONTRACTOR SHALL PROVIDE LABOR, MATERIALS AND EQUIPMENT AND INSTALL SAME AS REQUIRED TO ACCOMPLISH WORK AND PROVIDE COMPLETE AND FULLY FUNCTIONING SYSTEMS.
- 3. CONTRACTOR IS RESPONSIBLE FOR COORDINATING HIS WORK WITH THE WORK OF ALL OTHER TRADES AND MAKING ANY NECESSARY MODIFICATIONS TO HIS WORK AT NO ADDITIONAL COST, INCLUDING ALL OFFSETS.
- 4. CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATION OF ANY EXISTING MINOR INTERFERENCES, INCLUDING CONDUIT, HANGERS, ETC., AT NO ADDITIONAL COST.
- 5. CEILING SPACE IS USED AS A RETURN AIR PLENUM. ALL MATERIALS IN CEILING SPACE SHALL BE RATED FOR RETURN AIR PLENUM PER THE ILLINOIS BUILDING CODE. COORDINATE WITH ALL TRADES. PVC PIPING IS NOT PERMITTED IN THE CEILING SPACE. REFER TO ILLINOIS BUILDING CODE SECTION 602.2.1 FOR ALL REQUIREMENTS FOR MATERIALS WITHIN PLENUMS. EXCEPT AS REQUIRED BY SECTIONS 602.2.1.1 THROUGH 602.2.1.7, MATERIALS WITHIN PLENUMS SHALL BE NONCOMBUSTIBLE OR SHALL BE LISTED AND LABELED AS HAVING A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723.
- 6. ALL WORK SHALL BE IN ACCORDANCE WITH THE ILLINOIS STATE PLUMBING CODE. THESE CODES SHALL BE FOLLOWED AS MINIMUM, PROVIDING HIGHER GRADES OF MATERIAL AND WORKMANSHIP WHERE REQUIRED BY THESE DOCUMENTS. PROVIDE ALL TESTS REQUIRED BY ILLINOIS STATE PLUMBING CODE AND LOCAL CODES.
- 7. ALL EQUIPMENT, MATERIALS, ETC. SHALL COMPLY WITH THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC).
- 8. ALL WETTED SURFACES OF EQUIPMENT, MATERIALS, ETC. SHALL COMPLY WITH NSF 61 FOR POTABLE DOMESTIC WATER PIPING AND COMPONENTS.
- 9. ALL PERMITS, FEES, LICENSES, APPROVALS AND OTHER ARRANGEMENTS FOR WORK SHALL BE OBTAINED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- 10. SUBMITTALS
- A. SUBMITTAL FIXTURES AND EQUIPMENT SPECIFICATIONS AND CUTS FOR REVIEW AND APPROVAL B. SUBMIT ASSEMBLED PRINTED INSTRUCTIONS FOR THE OPERATION AND MAINTENANCE OF EACH ITEM INSTALLED ALONG WITH EQUIPMENT CUTS AND CONTROL WIRING DIAGRAMS
- C. SUBMIT ASSEMBLED PRINTED OPERATION AND MAINTENANCE MANUALS FOR DOMESTIC WATER HEATING SYSTEMS, SUB-SYSTEMS AND EQUIPMENT INSTALLED ALONG WITH EQUIPMENT CUTS AND CONTROL WIRING DIAGRAMS IN ACCORDANCE WITH SECTION C408.1.1 OF THE 2021 IECC.
- D. SUBMIT COORDINATED SHOP DRAWINGS FOR REVIEW. THE SHOP DRAWINGS SHALL INDICATE PIPING AND
- FIXTURE LOCATIONS AND MUST BE SUBMITTED PRIOR TO INSTALLATION.
- E. CONTRACTOR SHALL SUBMIT FLUSHING AND DISINFECTION REPORTS REQUIRED BY OWNER FOR APPROVAL
- F. CONTRACTOR TO SUBMIT AS-BUILT DRAWINGS FOR PIPING, INCLUDING FIXTURE LOCATIONS.
- G. SUBMIT DOMESTIC WATER HEATING EQUIPMENT FUNCTIONAL TEST RESULTS PRIOR TO FINAL INSPECTION. H. SUBMIT ITEMIZED DEFICIENCIES LIST PRIOR TO FINAL INSPECTION.
- I. SUBMIT SCHEDULE FOR ALL REQUIRED TRAINING PRIOR TO FINAL INSPECTION.
- J. SUBMIT EQUIPMENT AND CONTROL OPERATIONS AND MAINTENANCE MANUALS TO OWNER WITHIN 90 DAYS OF ISSUANCE OF CERTIFICATE OF OCCUPANCY. K. ALL DEFICIENCIES SHALL BE CORRECTED AND THE FINAL DOMESTIC WATER HEATING EQUIPMENT FUNCTIONAL
- TEST RESULTS SUBMITTED WITHIN 90 DAYS OF ISSUANCE OF CERTIFICATE OF OCCUPANCY.
- 11. CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIAL FOR ONE YEAR AFTER FINAL ACCEPTANCE AGAINST ALL DEFECTS OF MATERIAL, EQUIPMENT AND WORKMANSHIP.
- 12. PROVIDE COMPETENT MANUFACTURER CERTIFIED OPERATING TECHNICIAN TO INSTRUCT THE OWNER IN THE OPERATION AND MAINTENANCE OF ALL INSTALLED EQUIPMENT AND TEMPERATURE CONTROLS. TRAINING MUST BE COMPLETED WITHIN 90 DAYS OF THE ISSUANCE OF CERTIFICATE OF OCCUPANCY. SUBMIT SCHEDULE OF TRAINING SESSIONS PRIOR TO FINAL INSPECTION.
- 13. PROVIDE ACCESS PANELS FOR ALL VALVES OR ANY PIECE OF EQUIPMENT WHEN NECESSARY TO LOCATE ABOVE NON-ACCESSIBLE CEILINGS. SUBJECT TO THE APPROVAL OF THE ARCHITECT. NO EQUIPMENT SHALL BE LOCATED
- DIRECTLY ABOVE WALLS 14. PROVIDE ALL HOLES, SLEEVES AND CAULKING FOR INSTALLATION OF THIS WORK. CAULKING TO CONFORM TO
- FIRE RATING OF WALLS. 15. PROVIDE ISOLATION VALVES FOR ALL PIPING TAKE-OFFS FROM MAINS.
- 16. PROVIDE ALL CORES, OPENINGS, SLEEVES AND CAULKING FOR INSTALLATION OF THIS WORK. CAULKING TO CONFORM TO FIRE RATING OF WALLS.
- 17. PIPING SHALL BE ABOVE CEILING AND CLEAR ANY EXISTING PIPING, LIGHTING FIXTURES, DUCTS, ETC. 18. RUN NEW WASTE PIPES AS CLOSE AS POSSIBLE TO UNDERSIDE OF FLOOR SLAB AND VENT PIPING AS CLOSE AS
- POSSIBLE TO SLAB ABOVE. 19. DISRUPTION OF ANY EXISTING SERVICE SHALL BE COORDINATED WITH THE OWNER AND SHALL BE PERFORMED
- AT A TIME AND MANNER SO AS TO CAUSE THE OWNER A MINIMUM OF INCONVENIENCE. 20. FOR EXACT LOCATION OF PLUMBING FIXTURES, REFER TO ARCHITECTURAL PLANS AND ELEVATIONS.
- 23. IN ALL CASES WHERE COPPER PIPE CONNECTIONS ARE MADE TO PIPING OR ANY ITEMS OF EQUIPMENT OF DISSIMILAR METAL, PROVIDE DIELECTRIC FITTINGS.
- 27. PROVIDE AND INSTALL VALVE TAGS AND PIPE LABELS. SUBMIT PROPOSED VALVE TAG AND LABELING
- NOMENCLATURE FOR REVIEW. PROVIDE OWNER WITH VALVE SCHEDULE IN FORMAT DETERMINED BY OWNER.
- 28. CLEAN AND DISINFECT DOMESTIC WATER PIPING AS FOLLOWS:
- A. PURGE NEW PIPING AND PARTS OF EXISTING PIPING THAT HAVE BEEN ALTERED, EXTENDED, OR REPAIRED BEFORE USING.
- B. USE PURGING AND DISINFECTING PROCEDURES PRESCRIBED BY AUTHORITIES HAVING JURISDICTION; IF METHODS ARE NOT PRESCRIBED, USE PROCEDURES DESCRIBED IN EITHER AWWA C651 OR AWWA C652.
- 29. PLUMBING FIXTURES:

CHAMBERS ARE NOT PERMITTED.

- A. FURNISH AND INSTALL PLUMBING FIXTURES INDICATED. FIXTURES TO BE CONNECTED, CLEANED AND READY FOR USE. PIPING TO BE PROPERLY SECURED TO WALLS AND STUDS
- B. PROVIDE TRAPS AND SUPPLIES WITH STOPS, MAKE ALL FINAL CONNECTION TO EACH FIXTURE. C. LAVATORY: PROVIDE WITH THERMOSTATIC MIXING VALVE, CHROME PLATED GRID STRAINER, TAILPIECE, P- TRAP AND ADA OFFSETS.
- D. PROVIDE ADA INSULATION PROTECTION OF HOT WATER, COLD WATER AND WASTE PIPING AT LAVATORIES. E. PROVIDE AND INSTALL WATER HAMMER ARRESTERS IN WATER PIPING ACCORDING TO PDI-WH 201. AIR
- 30. HANGERS: ALL PIPING SHALL BE SUPPORTED AS REQUIRED BY THE ILLINOIS BUILDING CODE.
- A. PIPE HANGERS, CLAMPS, ETC. ON HOT PIPING TO BE ON INSIDE OF INSULATION. B. PIPE HANGERS, CLAMPS, ETC. ON COLD PIPING TO BE ON OUTSIDE OF INSULATION.

PLUMBING FIXTURES SCHEDULE:

(SEE ARCHITECTURAL DRAWINGS FOR FIXTURES MOUNTING HEIGHTS)

PLUMBING CONTRACTOR SHALL COORDINATE ALL SENSOR OPERATING TIMING AND ANGLES WITH OWNER IN FIELD AND PROVIDE ADDITIONAL ADJUSTMENTS AS REQUIRED.

WATER CLOSET "WC"

SLOAN: ST-2459. ACCESSIBLE, WALL-MOUNTING, BACK-OUTLET, EXPOSED 1-1/2" TOP SPUD, VITREOUS-CHINA FIXTURE, ELONGATED BOWL WITH SIPHON-JET. HIGH EFFICIENCY RATED FOR FLUSH VOLUME OF 1.28 GPF. PROVIDE AND INSTALL BEMIS MODEL 2155SSCT SELF-SUSTAINING ELONGATED OPEN SEAT WITH STAINLESS STEEL HINGES; JAY R. SMITH ADJUSTABLE FIXTURE SUPPORT MODEL 0211Y FOR SIPHON JET WATER CLOSETS. PROVIDE WITH TOTO TET1LA ECO POWER HIGH EFFICIENCY, SELF-POWERED HYDROELECTRIC FLUSH VALVE SYSTEM, 1.28 GPF, NO MINIMUM DAILY USAGE REQUIREMENT, CHROME PLATED BODY WITH TAMPER-PROOF SCREWS AND SOLID BRONZE VALVE BODY, TRUE MECHANICAL FLUSH OVERRIDE, SMART SENSOR WITH SELF-ADJUSTING DETECTION RANGE, 6-SECOND DETECTION TIME, 1" ANGLE STOP AND 1-1/2" VACUUM BREAKER FOR 1-1/2" TOP SPUD INLET, ADA COMPLIANT. REFER TO ARCHITECTURAL SHEETS FOR MOUNTING HEIGHTS.

ACCESSIBLE WATER CLOSET "AWC"

SAME AS 'WC" EXCEPT MOUNT PER ADA HEIGHT REQUIREMENTS.

LAVATORY "LV-1"

KOHLER: KINGSTON MODEL K-2007 WALL-HUNG, VITREOUS-CHINA FIXTURE WITH OVERFLOW, SINGLE DECK HOLE FOR CENTER FAUCET, DRILLED FOR CONCEALED ARM CARRIER INSTALLATION. PROVIDE WITH TOTO TEL105 ECO POWER, SELF-POWERED HYDROELECTRIC FAUCET SYSTEM, 0.5GPM, NO MINIMUM DAILY USAGE REQUIREMENT, MICRO-SENSOR POSITIONED UNDERNEATH SPOUT HEAD, VANDAL RESISTANT AERATOR HOUSING, CHROME PLATED SPOUT BODY, SINGLE-HOLE MOUNT, COMPLETE WITH SPOUT BODY, CONTROLLER BOX, AND MOUNTING HARDWARE; JAY R. SMITH LAVATORY CONCEALED ARM FLOOR MOUNTED SUPPORT MODEL 0700 WITH PRO-SET UPRIGHTS; POWERS LFE480 HYDROGUARD THERMOSTATIC MIXING VALVE; ADA COMPLIANT CHROME PLATED GRID STRAINER; 1-1/4" OFFSET CHROME PLATED CAST BRASS TRAP AND TAILPIECE; 3/8" CHROME PLATED ANGLE STOPS WITH LOOSE KEY ADJUSTMENTS. PROVIDE AND INSTALL TRUEBRO (LAV-GUARD) ADA COMPLIANT INSULATION ON HOT WATER. COLD WATER AND TRAP AND WASTE PIPING. REFER TO ARCHITECTURAL SHEETS FOR MOUNTING HEIGHTS.

FLOOR DRAIN "FD"

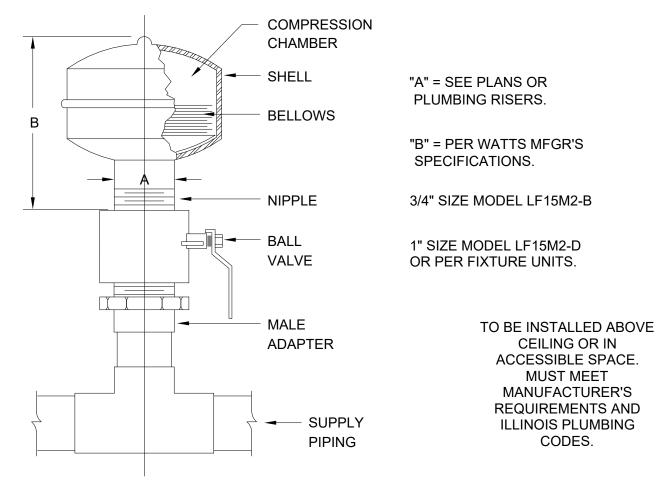
ZURN: MODEL Z415B; DURA-COATED CAST IRON BODY, COMBINATION INVERTIBLE MEMBRANE CLAMP, ADJUSTABLE COLLAR WITH SEEPAGE SLOTS; 5" ROUND TOP FLUSH WITH FINISHED FLOOR SURFACE, "TYPE B" POLISHED NICKEL BRONZE, LIGHT-DUTY HEEL-PROOF STRAINER.

WALL CLEANOUT "WCO"

JAY R. SMITH: MODEL 4472 WALL CLEANOUT WITH STAINLESS COVER. BRONZE PLUG.

SLOAN: SU-1009 WALL MOUNTED URINAL; 0.5 GPF; WHITE VITREOUS CHINA; 3/4" TOP SPUD, 2" OUTLET; A.D.A. COMPLIANT UNIT. PROVIDE WITH FIXTURE CARRIER AND WALL MOUNTING HARDWARE. PROVIDE WITH TOTO TEU1LA ECO POWER HIGH EFFICIENCY, SELF-POWERED HYDROELECTRIC FLUSH VALVE SYSTEM, 0.5 GPF, NO MINIMUM DAILY USAGE REQUIREMENT, CHROME PLATED BODY WITH TAMPER-PROOF SCREWS AND SOLID BRONZE VALVE BODY, TRUE MECHANICAL FLUSH OVERRIDE, SMART SENSOR WITH SELF-ADJUSTING DETECTION RANGE, 6-SECOND DETECTION TIME, ADA COMPLIANT. REFER TO ARCHITECTURAL SHEETS FOR MOUNTING HEIGHTS.

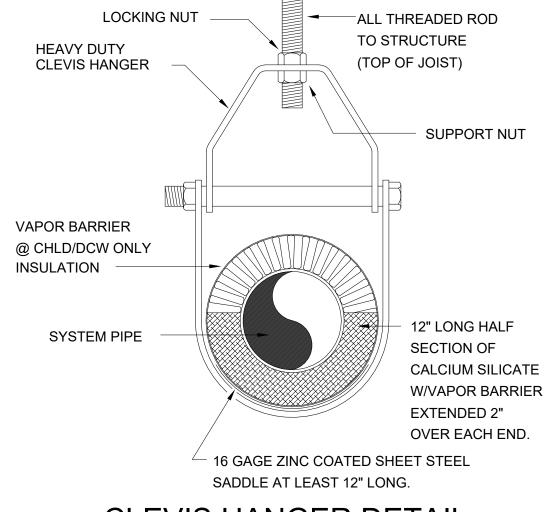
GENERAL PLUMBING SYMBOLS SYMBOL DESCRIPTION SYMBOL DESCRIPTION ABOVE SUSPENDED CEILING WALL CLEAN-OUT CI CAST IRON WF WASH FOUNTAIN CO **CLEAN-OUT** YCO YARD CLEAN-OUT CTC CLOSE TO CEILING-EXPOSED YD YARD DRAIN CW COLD WATER SUPPLY **COLD WATER PIPING** HOT WATER PIPING DF DRINKING FOUNTAIN DN DOWN HOT WATER RETURN PIPING DS DOWNSPOUT CONDENSATE DRAIN PIPING EW EYE WASH SPRINKLER PIPING ELECTRIC WATER COOLER EWC VENTING PIPING FCO FLOOR CLEAN-OUT —SS—─ │ STM PIPING ASC FD FLOOR DRAIN SAN PIPING ASC FHB FREEZE-PROOF HOSE BIBB PIPING BELOW GRADE HWB **HOT WATER BOILER** STM PIPING BELOW GRADE HOT WATER RETURN SAN PIPING BELOW GRADE HOT WATER SUPPLY BALL VALVE LAV LAVATORY CIRCUIT SETTER/BAL. VALVE MOP BASIN GAS COCK P/FT 1 PITCH PER FOOT CHECK VALVE PRV PRESSURE RELIEF VALVE TEMP. CONTROL VALVE RD **ROOF DRAIN** SOLENOID VALVE SAN SANITARY SEWER UNION SD SHOWER DRAIN THERMOMETER GAGE SH SHOWER HEAD SHOWER HEAD SK FREEZE PROOF HOSE BIBB SINK SANITARY SEWER MANHOLE \longrightarrow ELBOW UP SS SERVICE SINK **ELBOW DOWN** STM STORM SEWER ____ CHROME/DROP SPRINKLR HEAD STMH STORM SEWER MANHOLE TRV TEMPERATURE RELIEF VALVE BRASS/UPRIGHT SPRNKLR HEAD SHOCK ARRESTER W/ TW **TEMPERED WATER** ISOLATION VALVE UR URINAL CLEANOUT VTR VENT THROUGH ROOF INLINE CIRC. PUMP CONNECTION POINT BETWEEN WATER CLOSET



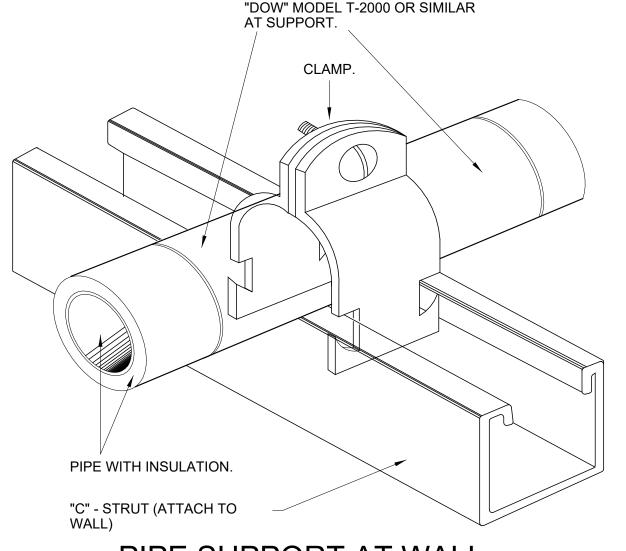
WATER HAMMER ARRESTOR

INSULATION WITH HIGH DENSITY

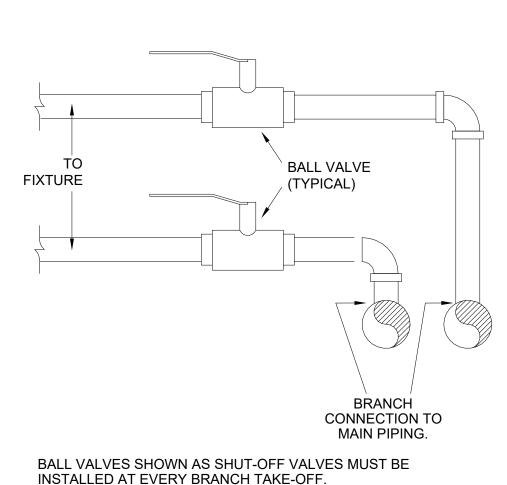
INSERT AT SUPPORT OR USE



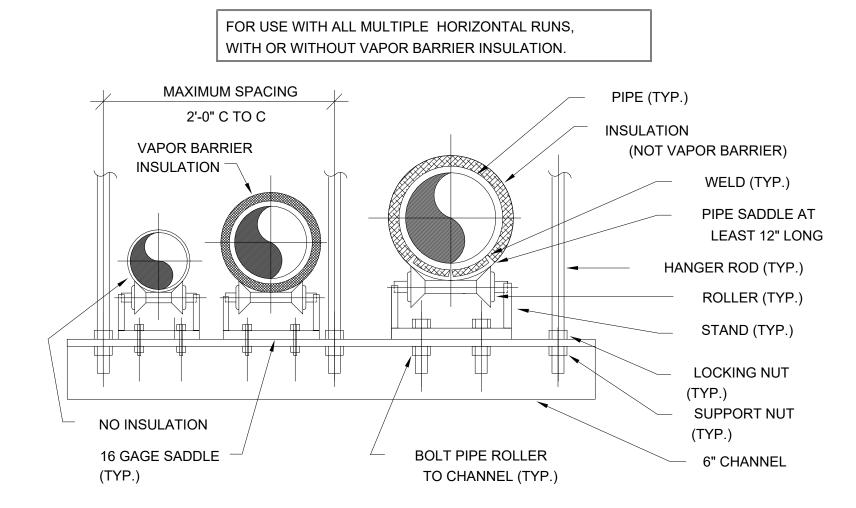
CLEVIS HANGER DETAIL



PIPE SUPPORT AT WALL



TYPICAL BRANCH DOMESTIC WATER PIPING OFF PIPING MAINS NO SCALE



TRAPEZE HANGER DETAIL

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MECHANICAL SERVICES ASSOC. CORP. 11 S. VIRGINIA STREET CRYSTAL LAKE, IL 60014

> **PROJECT ADJACENCIES** RENOVATIONS

DES PLAINES CAMPUS 1600 EAST GOLF ROAD DES PLAINES, IL, 60016

OAKTON COLLEGE

KEY PLAN

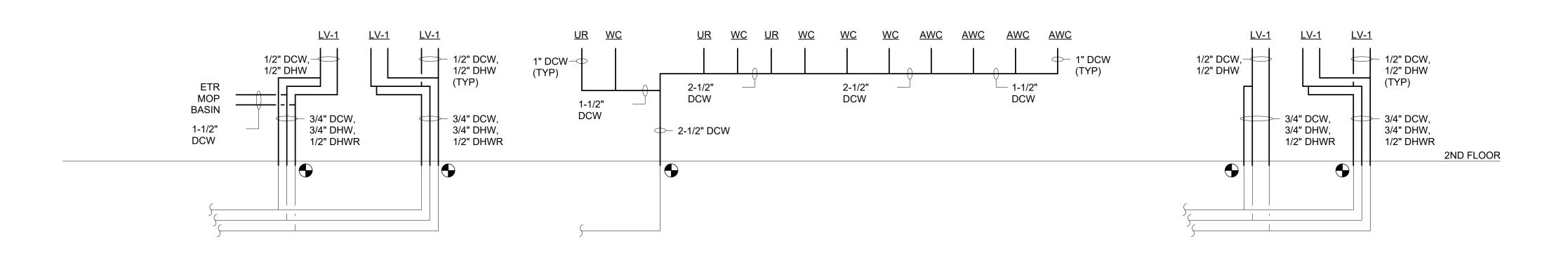
ISSUE CHART

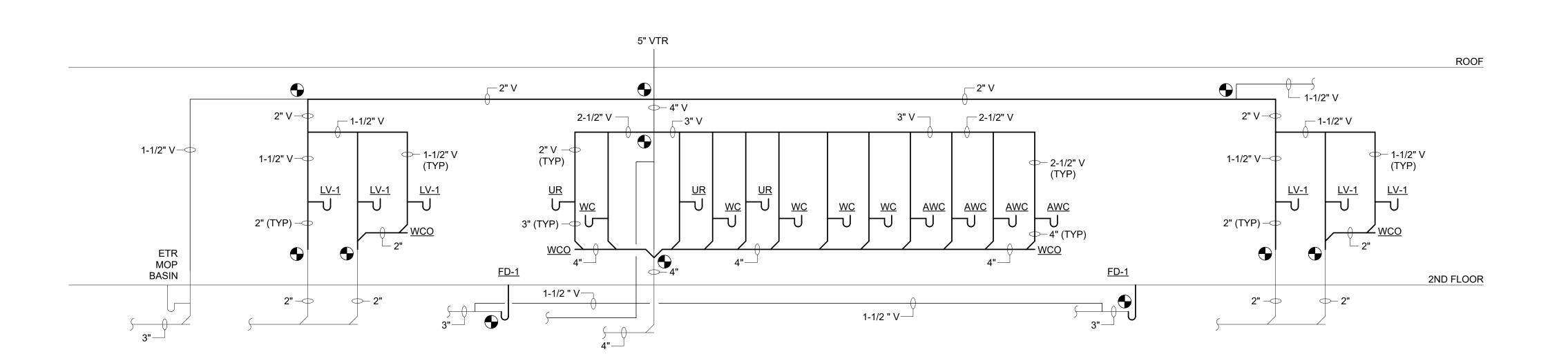
PLUMBING GENERAL NOTES, SCHEDULES, **AND DETAILS**

SHEET NUMBER

10.P20-00

1ST FLOOR





1ST FLOOR

SANITARY WASTE AND VENT RISER S SANIT NO SCALE (SIMILAR EACH TOILET ROOM GROUP)

NOTES:

1. RISERS ARE DIAGRAMMATIC BASED ON HISTORIC DRAWINGS. CONTRACTOR TO FIELD VERIFY ALL EXISTING SIZES, MATERIALS, AND ROUTING. SANITARY DRAIN AND VENT RISERS ARE TO BE DEMOLISHED AND RELOCATED AS NECESSARY WHERE EXISTING FLOOR PENETRATION LOCATIONS ARE FOUND TO INTERFERE WITH NEW PLUMBING

- 2. WHERE GALVANIZED PIPING IS PRESENT CONCEALED IN EXISTING TOILET ROOM WALLS, REPLACE ALL EXISTING GALVANIZED WATER PIPING WITH COPPER BACK TO LOCATION BELOW 2ND FLOOR AND ABOVE 1ST FLOOR CEILINGS.
- 3. FIXTURES ARE SHOWN WITH INDIVIDUAL SANITARY DRAIN AND VENT CONNECTIONS FOR DIAGRAMMATIC PURPOSES. BACK-TO-BACK CARRIERS ARE TO ACCEPTABLE WHEREVER

CONSULTANTS

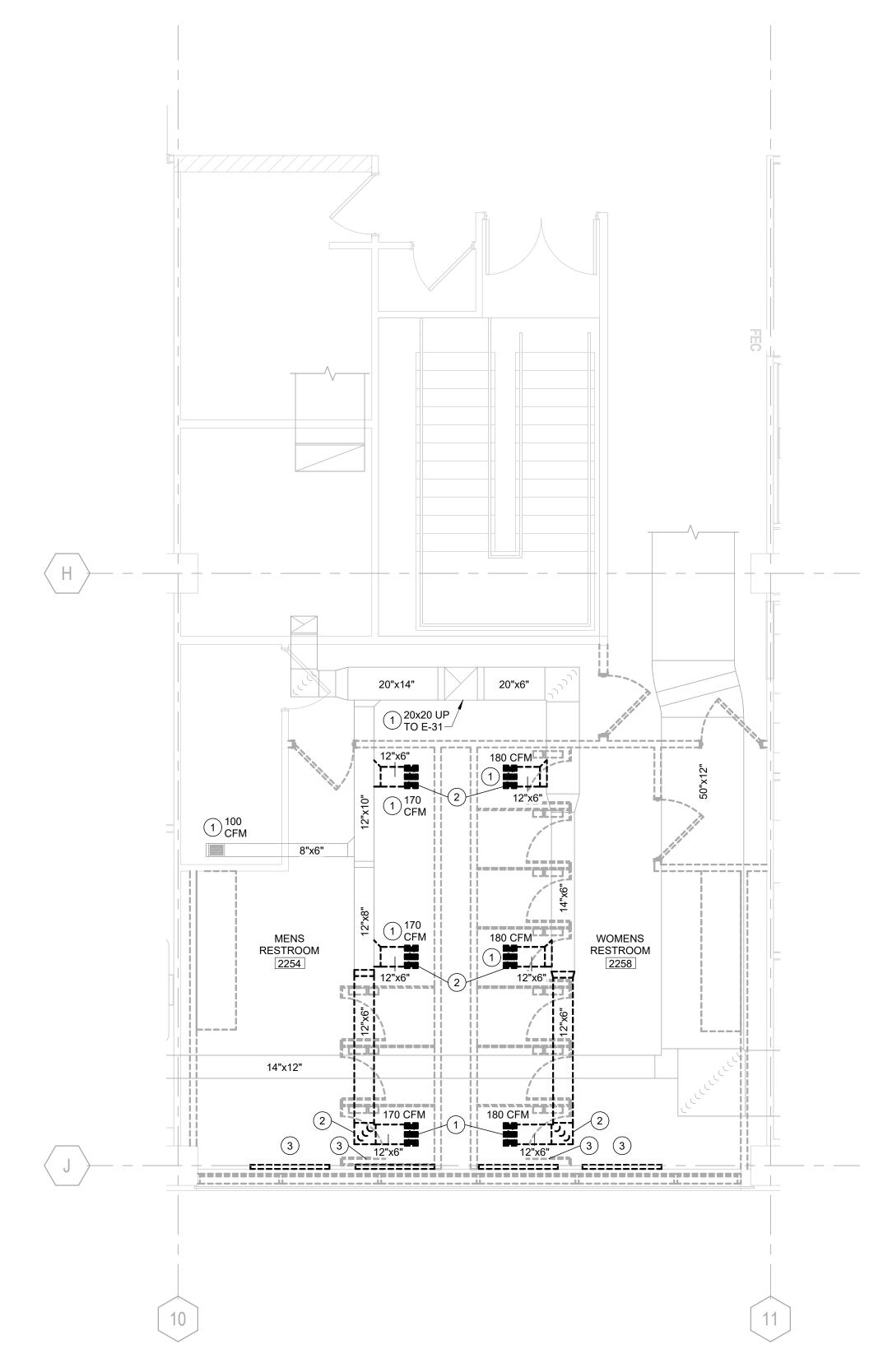
PLUMBING RISER **DIAGRAMS**

SHEET NUMBER

10.P20-01

WOMENS RESTROOM 2214 MENS RESTROOM 2216

1 LEVEL 02 MECHANICAL DEMOLITION PLAN - 2214/2216



2 LEVEL 02 MECHANICAL DEMOLITION PLAN - 2254/2258

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MECHANICAL DEMOLITION NOTES:

1 PRIOR TO DEMOLITION, FIELD MEASURE EXISTING EXHAUST AIR DEVICE AIRFLOWS. FIELD VERIFY EXISTING EXHAUST FAN OPERATION.

2 REMOVE TOILET ROOM EXHAUST AIR DEVICES AND BRANCH DUCTS AS INDICATED AND CAP. FIELD VERIFY EXISTING ROUTING AND DEMOLITION.

3 REMOVE ELECTRIC BASEBOARD HEATER COMPLETE WITH ALL HARDWARE AND CONTROLS.

ADJACENCIES RENOVATIONS

DES PLAINES CAMPUS 1600 EAST GOLF ROAD DES PLAINES, IL, 60016

Oakton College
OAKTON COLLEGE

KEY PLAN

ISSUE CHART

MARK ISSUE DATE

Job Number 021075.00

TITL

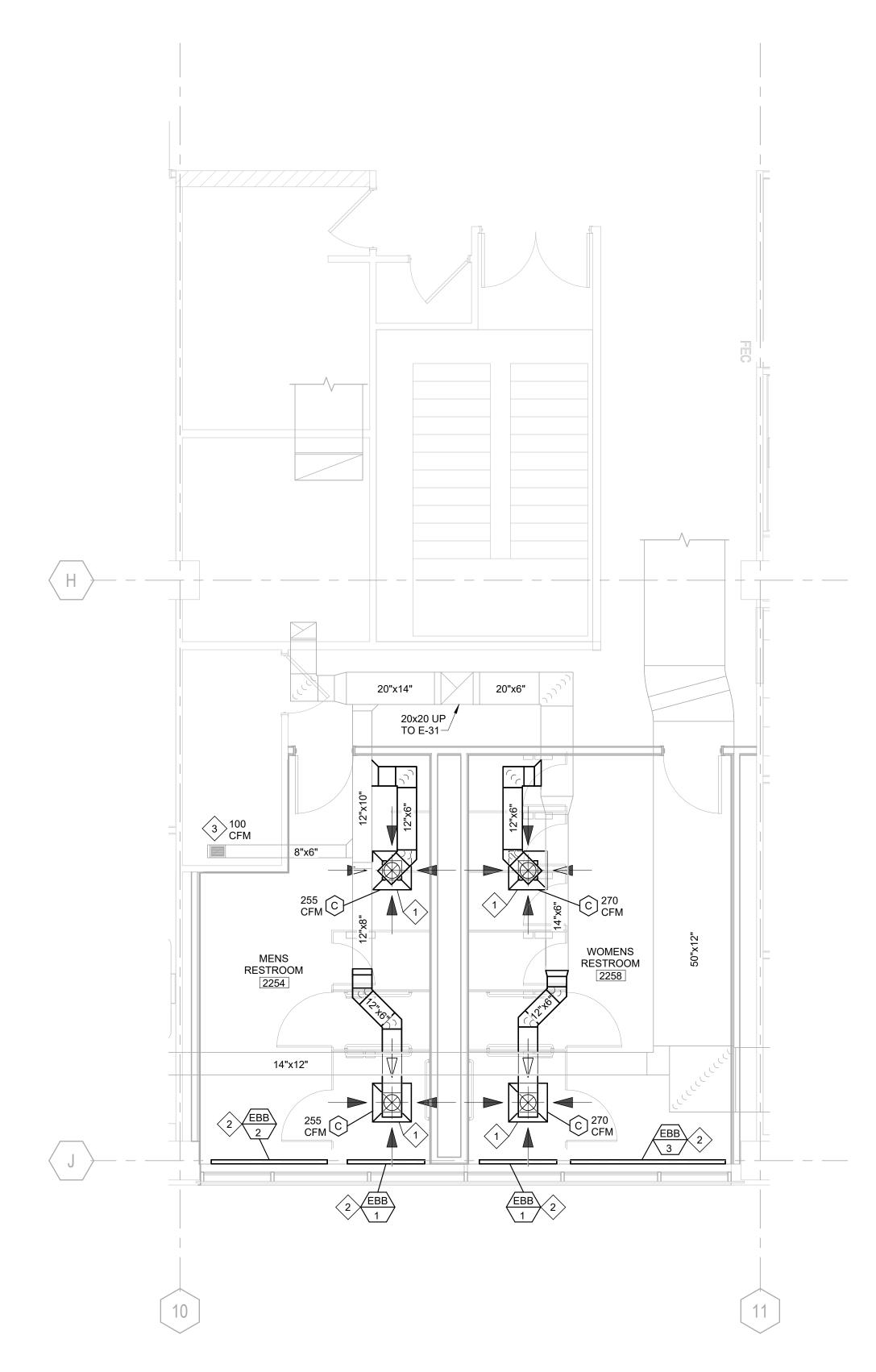
MECHANICAL DEMOLITION PLANS

SHEET NUMBER

10.M04-01

36x36 UP — TO E-12 WOMENS RESTROOM 2214

1 LEVEL 02 MECHANICAL PLAN - 2214/2216



2 LEVEL 02 MECHANICAL PLAN - 2254/2258

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MECHANICAL INSTALLATION NOTES:

3 REBALANCE JANITOR CLOSET EXHAUST FLOW TO CFM LISTED.

PROVIDE EXHAUST AIR DEVICE AS SHOWN. COORDINATE FINAL LOCATION AND MOUNTING WITH ARCHITECTURAL CEILING PLAN. EXTEND AND MAKE CONNECTION TO EXISTING EXHAUST DUCTS AS INDICATED. FIELD VERIFY ALL ROUTING AND CONNECTION TO EXISTING. BALANCE TO CFM INDICATED.

PROVIDE ELECTRIC BASEBOARD HEATER AT LOCATION SHOWN. MOUNT TO WALL LEVEL AND PLUMB PER ALL MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION AND ELEVATION WITH ARCHITECTURAL AND ALL OTHER TRADES AND EXISTING CONDITIONS.

ADJACENCIES RENOVATIONS

DES PLAINES CAMPUS 1600 EAST GOLF ROAD DES PLAINES, IL, 60016



KEY PLAN

ISSUE CHART

 1
 ISSUE FOR BID
 9 JUN 29

 MARK
 ISSUE
 DATE

 Job Number
 021075.00

MECHANICAL PLANS

SHEET NUMBER

10.M10-01

- 1) CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE AND VERIFYING ALL EXISTING FIELD CONDITIONS PRIOR TO SUBMISSION OF HIS BID. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CHASES, DUCTWORK AND PIPE SIZES. NO EXTRA COMPENSATION WILL BE ALLOWED FOR THE CONTRACTOR FAILING TO DO SO.
 - CONTRACTOR SHALL FIELD VERIFY LOCATIONS, SIZES AND CAPACITIES OF ALL EQUIPMENT, APPARATUS AND DEVICES, INCLUDING BUT NOT LIMITED TO TERMINAL UNITS, FANS, CONVECTORS, FANS, ETC. CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH PROCESS FOR ACCESSING SITE, ROOF, FLOOR AND SPACE. CONTRACTOR SHALL NOT CUT ANY HOLES, IN FACADE, ROOF, FLOORS, ETC. UNLESS COMPLETELY NECESSARY AND WITH PRIOR APPROVAL FROM THE OWNER AND ARCHITECT. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCLUDING PATCHING AND REPAIR REQUIRED TO RETURN TO ORIGINAL
- THE CONTRACT DOCUMENTS ARE DIAGRAMMATIC IN NATURE AND INDICATE APPROXIMATE LOCATION OF DUCTWORK, PIPING AND EQUIPMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE ACTUAL LOCATIONS, SIZES AND ROUTING OF THE EXISTING DUCTS, PIPING, ETC. A) CONTRACTOR SHALL REMOVE EXISTING EQUIPMENT AND MATERIALS PERTAINING TO HIS CONTRACT AS SPECIFIED OR AS REQUIRED WHETHER SHOWN ON THE DRAWINGS OR NOT, TO PREPARE FOR THE NEW WORK. OWNER TO BE PROVIDED WITH RIGHT OF REFUSAL FOR SALVAGE VALUE OR ATTIC STOCK. IF OWNER REFUSES CONTRACTOR SHALL REMOVE ALL DEMOLISHED EQUIPMENT AND MATERIALS FROM
 - THE SITE AND PROPERLY DISPOSE. CONTRACTOR SHALL PROVIDE LABOR, MATERIALS AND EQUIPMENT AND INSTALL SAME AS REQUIRED TO ACCOMPLISH WORK AND PROVIDE COMPLETE AND FULLY FUNCTIONING SYSTEMS.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATING HIS WORK WITH THE WORK OF ALL OTHER TRADES AND MAKING ANY NECESSARY MODIFICATIONS TO HIS WORK AT NO ADDITIONAL COST. INCLUDING ALL OFFSETS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATION OF ANY EXISTING MINOR INTERFERENCES, INCLUDING CONDUIT, HANGERS, ETC., AT NO
- ALL WORK SHALL BE IN ACCORDANCE WITH INTERNATIONAL MECHANICAL CODE AND THE LATEST EDITION OF THE ILLINOIS ENERGY CONSERVATION CODE. THESE CODES SHALL BE FOLLOWED AS MINIMUM PROVIDING HIGHER GRADES OF MATERIAL AND WORKMANSHIP WHERE REQUIRED BY THESE DOCUMENTS. PROVIDE ALL TESTS REQUIRED BY LOCAL CODES.
- 6) ALL EQUIPMENT, MATERIALS, ETC. SHALL COMPLY WITH THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC).
- ALL PERMITS, FEES, LICENSES, APPROVALS AND OTHER ARRANGEMENTS FOR WORK SHALL BE OBTAINED BY THE CONTRACTOR AT HIS OWN
- 8) ALL EQUIPMENT, TERMINAL UNITS, REHEAT COILS, DAMPERS, DIFFUSERS AND GRILLES SHALL BE UL LISTED.
- 9) SUBMITTALS

19) COMMISSIONING PLAN.

CONDITION.

- SUBMIT EQUIPMENT SPECIFICATIONS AND CUTS FOR REVIEW AND APPROVAL.
- SUBMIT ASSEMBLED PRINTED OPERATION AND MAINTENANCE MANUALS OF EACH ITEM INSTALLED ALONG WITH EQUIPMENT CUTS AND CONTROL WIRING DIAGRAMS IN ACCORDANCE WITH SECTION C408.1.1 OF THE IECC. SUBMIT COORDINATED SHOP DRAWINGS FOR REVIEW. THE SHOP DRAWINGS SHALL INDICATE PIPING, DUCT, DIFFUSER, LIGHT FIXTURE,
- STRUCTURE AND THERMOSTAT LOCATIONS AND MUST BE SUBMITTED PRIOR TO FABRICATION AND INSTALLATION. CONTRACTOR SHALL SUBMIT CERTIFIED TEST AND BALANCE REPORTS FOR APPROVAL PRIOR TO FINAL INSPECTION BY AHJ.
- SUBMIT EQUIPMENT FUNCTIONAL TEST RESULTS, CONTROLS FUNCTIONAL TEST RESULTS AND ECONOMIZER FUNCTIONAL TEST RESULTS
- PRIOR TO FINAL INSPECTION BY AHJ. SUBMIT ITEMIZED DEFICIENCIES LIST AND DEFERRED TESTING LIST PRIOR TO FINAL INSPECTION BY AHJ.
- SUBMIT SCHEDULE FOR ALL REQUIRED TRAINING PRIOR TO FINAL INSPECTION BY AHJ. SUBMIT AS-BUILT DRAWING INDICATING A NUMBERING SYSTEM WHICH CORRELATES PLAN WITH BALANCE REPORT, VAV BOXES, ETC. SUBMIT AS-BUILT DRAWINGS FOR DUCTWORK AND PIPING, INCLUDING THERMOSTAT LOCATIONS.
- SUBMIT EQUIPMENT AND CONTROL OPERATIONS AND MAINTENANCE MANUALS TO OWNER WITHIN 90 DAYS OF ISSUANCE OF CERTIFICATE OF OCCUPANCY.
- ALL DEFICIENCIES SHALL BE CORRECTED AND THE FUNCTIONAL TEST RESULTS SUBMITTED WITHIN 90 DAYS OF ISSUANCE OF CERTIFICATE
- CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIAL FOR ONE YEAR AFTER FINAL ACCEPTANCE AGAINST ALL DEFECTS OF MATERIAL, EQUIPMENT AND WORKMANSHIP.
- PROVIDE COMPETENT MANUFACTURER CERTIFIED OPERATING TECHNICIAN TO INSTRUCT THE OWNER IN THE OPERATION AND MAINTENANCE OF ALL INSTALLED EQUIPMENT AND TEMPERATURE CONTROLS. TRAINING MUST BE COMPLETED WITHIN 90 DAYS OF THE ISSUANCE OF CERTIFICATE OF OCCUPANCY. SUBMIT SCHEDULE OF TRAINING SESSIONS PRIOR TO FINAL INSPECTION BY AHJ.
- 12) THE DRAWING INDICATES GENERAL CHARACTER AND LOCATION OF WORK INCLUDED, BUT HAVING MINOR SPECIALTIES OMITTED WHICH ARE TO BE PROVIDED AND INSTALLED WITHOUT EXTRA COST.
- 13) PROVIDE ISOLATION VALVES FOR ALL PIPING TAKE-OFFS FROM MAINS.
- 14) PROVIDE ALL CORES, OPENINGS, SLEEVES AND CAULKING FOR INSTALLATION OF THIS WORK. CAULKING TO CONFORM TO FIRE RATING OF WALLS.
- 15) VERIFY EXACT LOCATION OF TEMPERATURE SENSORS WITH OWNER AND ARCHITECT PRIOR TO INSTALLATION.
- PROVIDE AND INSTALL VALVE TAGS, PIPE LABELS AND DUCTWORK LABELS. SUBMIT PROPOSED VALVE TAG AND LABELING NOMENCLATURE FOR REVIEW. PROVIDE OWNER WITH VALVE SCHEDULE IN FORMAT DETERMINED BY OWNER.
- 17) CONTRACTOR SHALL CUT ALL OPENINGS REQUIRED FOR HIS WORK. ALL OPENINGS SHALL BE SEALED AIR TIGHT. CONTRACTOR SHALL ALSO PATCH AND SEAL ANY EXISTING OPENINGS LEFT UNUSED AS A RESULT OF THIS WORK.
- 18) ALL NEW CONTROLS SHALL BE DDC. EXTEND EXISTING SYSTEM AS REQUIRED FOR NEW WORK. PROVIDE AND INSTALL TEMPERATURE SENSORS,
- CONDUIT, CABLING AND NECESSARY LOCAL AND NETWORK CONTROLLERS REQUIRED FOR A FULLY OPERATING SYSTEM. INCORPORATE NEW WORK, USING OWNER STANDARD SEQUENCES FOR SIMILAR SYSTEMS AND PROVIDE NEW GRAPHICS, ALARMS, ETC. TO MEET OWNER'S STANDARD.
- A) CERTIFY THAT HVAC&R SYSTEMS, SUBSYSTEMS, AND EQUIPMENT HAVE BEEN INSTALLED, CALIBRATED, AND STARTED AND ARE OPERATING ACCORDING TO THE CONTRACT DOCUMENTS AND APPROVED SHOP DRAWINGS AND SUBMITTALS.
- CERTIFY THAT HVAC&R INSTRUMENTATION AND CONTROL SYSTEMS HAVE BEEN COMPLETED AND CALIBRATED, THAT THEY ARE OPERATING ACCORDING TO THE CONTRACT DOCUMENTS AND APPROVED SHOP DRAWINGS AND SUBMITTALS, AND THAT PRETEST SET POINTS HAVE
- CERTIFY THAT TAB PROCEDURES HAVE BEEN COMPLETED AND THAT TAB REPORTS HAVE BEEN SUBMITTED, DISCREPANCIES CORRECTED, AND CORRECTIVE WORK APPROVED.
- SET SYSTEMS, SUBSYSTEMS, AND EQUIPMENT INTO OPERATING MODE TO BE TESTED ACCORDING TO APPROVED TEST PROCEDURES (E.G., NORMAL SHUTDOWN, NORMAL AUTO POSITION, NORMAL MANUAL POSITION, UNOCCUPIED CYCLE, EMERGENCY POWER, AND ALARM CONDITIONS)
- MEASURE CAPACITIES AND EFFECTIVENESS OF SYSTEMS, ASSEMBLIES, SUBSYSTEMS, EQUIPMENT, AND COMPONENTS, INCLUDING OPERATIONAL AND CONTROL FUNCTIONS TO VERIFY COMPLIANCE WITH ACCEPTANCE CRITERIA.
- TEST SYSTEMS. ASSEMBLIES, SUBSYSTEMS, EQUIPMENT, AND COMPONENTS OPERATING MODES, INTERLOCKS, CONTROL RESPONSES, AND RESPONSES TO ABNORMAL OR EMERGENCY CONDITIONS, AND RESPONSE ACCORDING TO ACCEPTANCE CRITERIA.
- 20) CONSTRUCTION CHECKLISTS: PREPARE AND SUBMIT DETAILED CONSTRUCTION CHECKLISTS FOR HVAC&R SYSTEMS, SUBSYSTEMS, EQUIPMENT,
 - A) CONTRIBUTORS TO THE DEVELOPMENT OF CONSTRUCTION CHECKLISTS SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
 - HVAC&R SYSTEMS AND EQUIPMENT INSTALLERS. TAB TECHNICIANS.
- HVAC&R INSTRUMENTATION AND CONTROLS INSTALLERS.
- 21) PERFORM TESTS USING DESIGN CONDITIONS, WHENEVER POSSIBLE.
 - A) SIMULATED CONDITIONS MAY, WITH APPROVAL OF ARCHITECT, BE IMPOSED USING AN ARTIFICIAL LOAD WHEN IT IS IMPRACTICAL TO TEST UNDER DESIGN CONDITIONS. BEFORE SIMULATING CONDITIONS, CALIBRATE TESTING INSTRUMENTS. PROVIDE EQUIPMENT TO SIMULATE LOADS. SET SIMULATED CONDITIONS AS DIRECTED BY COMMISSIONING COORDINATOR AND DOCUMENT SIMULATED CONDITIONS AND METHODS OF SIMULATION. AFTER TESTS, RETURN CONFIGURATIONS AND SETTINGS TO NORMAL OPERATING CONDITIONS.
 - COMMISSIONING TEST PROCEDURES MAY DIRECT THAT SET POINTS BE ALTERED WHEN SIMULATING CONDITIONS IS IMPRACTICAL. COMMISSIONING TEST PROCEDURES MAY DIRECT THAT SENSOR VALUES BE ALTERED WITH A SIGNAL GENERATOR WHEN DESIGN OR SIMULATING CONDITIONS AND ALTERING SET POINTS ARE IMPRACTICAL.
- 22) IF TESTS CANNOT BE COMPLETED BECAUSE OF A DEFICIENCY OUTSIDE THE SCOPE OF THE HVAC&R SYSTEM, DOCUMENT THE DEFICIENCY AND REPORT IT TO OWNER. AFTER DEFICIENCIES ARE RESOLVED, RESCHEDULE TESTS.
- 23) IF SEASONAL TESTING IS SPECIFIED, COMPLETE APPROPRIATE INITIAL PERFORMANCE TESTS AND DOCUMENTATION AND SCHEDULE SEASONAL
- 24) COORDINATE SCHEDULE WITH, AND PERFORM THE FOLLOWING ACTIVITIES AT THE DIRECTION OF, COMMISSIONING COORDINATOR.
- 25) COMPLY WITH CONSTRUCTION CHECKLIST REQUIREMENTS, INCLUDING MATERIAL VERIFICATION, INSTALLATION CHECKS, START-UP, AND PERFORMANCE TESTS REQUIREMENTS SPECIFIED IN SECTIONS SPECIFYING HVAC SYSTEMS AND EQUIPMENT.
- 26) PROVIDE TECHNICIANS, INSTRUMENTATION, TOOLS, AND EQUIPMENT TO COMPLETE AND DOCUMENT THE FOLLOWING:
- PERFORMANCE TESTS.
- DEMONSTRATION OF A SAMPLE OF PERFORMANCE TESTS. COMMISSIONING TESTS.
- COMMISSIONING TEST DEMONSTRATIONS.
- 27) COMMISSIONING AND COMPLETION REQUIREMENTS: PRIOR TO FINAL INSPECTION BY AUTHORITY HAVING JURISDICTION SUBMIT THE FOLLOWING FOR REVIEW BY THE ENGINEER.
- A) HVAC SYSTEMS TEST AND BALANCE REPORT. FUNCTIONAL PERFORMANCE TESTING REPORTS FOR THE FOLLOWING:
 - HVAC EQUIPMENT SHALL UNDERGO FUNCTIONAL PERFORMANCE TESTING TO DEMONSTRATE THAT THE INSTALLATION AND OPERATION OF COMPONENTS, SYSTEMS AND SYSTEM TO SYSTEM INTERFACING ARE IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS. TESTING SHALL INCLUDE ALL MODES AS DESCRIBED IN THE SEQUENCE OF OPERATION AT FULL LOAD AND PART LOAD, REDUNDANT MODE, PERFORMANCE OF ALARMS AND MODE OF OPERATION UPON LOSS OF POWER AND RESTORATION
 - HVAC CONTROL SYSTEM SHALL BE TESTED TO DOCUMENT PROPER CALIBRATION AND ADJUSTMENT AND THAT THE SYSTEMS OPERATE IN ACCORDANCE WITH PLANS AND SPECIFICATIONS. SEQUENCE OF OPERATIONS SHALL BE FUNCTIONALLY TESTED TO DOCUMENT OPERATION IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.
- AIR ECONOMIZERS SHALL BE TESTED TO DOCUMENT PROPER OPERATION IN ACCORDANCE WITH THE MANUFACTURERS ITEMIZED LIST OF DEFICIENCIES FOUND DURING TESTING THAT HAVE NOT BEEN CORRECTED.
- DEFERRED TESTS THAT COULD NOT BE PERFORMED BECAUSE OF CLIMATIC CONDITIONS AND THE CLIMATIC CONDITIONS REQUIRED FOR FUNCTIONAL PERFORMANCE TEST PROCEDURES USED DURING COMMISSIONING PROCESS AND MEASURABLE CRITERIA FOR TEST ACCEPTANCE.
- F) RECORD OF TRANSMITTANCE OF ALL OPERATION AND MAINTENANCE MANUALS

MECHANICAL GENERAL DEMOLITION NOTES:

NOTES RE: EXISTING CONDITIONS

- 1. VERIFY EXISTING CONDITIONS AND LOCATIONS IN FIELD PRIOR TO BIDDING. FAILURE TO DO SO SHALL NOT RELIEVE CONTRACTOR FROM PERFORMING THE WORK REQUIRED UNDER THIS CONTRACT.
- MAKE NECESSARY MODIFICATIONS AND ADJUSTMENTS TO ALL MECHANICAL AND ELECTRICAL ITEMS AND EQUIPMENT, BOTH NEW AND EXISTING, AS MAY BE REQUIRED BY THESE ALTERATIONS AND ADDITIONS.
- 3. DISCONNECT AT SOURCE AND REMOVE EXISTING ELECTRICAL MATERIALS AND EQUIPMENT AND ALL OTHER MECHANICAL ITEMS WHICH ARE RENDERED OBSOLETE BY THESE ALTERATIONS AND ADDITIONS. THESE ARE THE PROPERTY OF THE OWNER AND SHALL EITHER BE REMOVED FROM THE SITE OR RETURNED TO THE OWNER'S STOCK AT THE DISCRETION OF THE OWNER.
- DISCONNECT, REMOVE AND RELOCATE EXISTING MECHANICAL MATERIALS AND EQUIPMENT, AND ALL OTHER MECHANICAL ITEMS WHICH INTERFERE OR ARE INTERFERED WITH, OBSTRUCT OR ARE OBSTRUCTED BY THESE LOCATIONS AS DIRECTED. RECONNECT SUCH ITEMS IN PROPER OPERATING CONDITION AT NEW LOCATIONS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE EXISTING BUILDING IN MECHANICAL OPERATION AT ALL TIMES DURING THE ENTIRE CONSTRUCTION PERIOD. IF IT IS ABSOLUTELY NECESSARY TO SHUT DOWN THE FACILITY AT ANY TIME, THE CONTRACTOR SHALL CONSULT WITH THE OWNER AND MAKE ARRANGEMENTS TO DO SO AT THE OWNER'S CONVENIENCE. PRIOR NOTICE SHALL BE GIVEN.
- 6. COORDINATE WORK WITH OTHER TRADES TO AVOID CONFLICTS AND DELAYS.
- ALL CUTTING AND PATCHING AS REQUIRED FOR WORK TO BE BY THE CONTRACTOR.
- WHERE EXISTING CONDUITS HAVE BEEN MADE OBSOLETE BY THESE ALTERATIONS AND ADDITIONS AND IT IS IMPRACTICAL TO REMOVE SAME, CONTRACTOR SHALL:
 - a) CUT PIPING, CONDUITS AND DUCTS OFF AT SLAB OR WALL LINE. b) CAP ALL OBSOLETE PIPING AND DUCTWORK.
- WHERE THE EXISTING PIPING, CONDUIT OR DUCTWORK SERVING ANY EXISTING MECHANICAL EQUIPMENT IN AREA OF EXISTING BUILDING NOT BE ALTERED IS INTERFERED WITH, CONTRACTOR SHALL REROUTE AND RECONNECT ALL SUCH PIPES OR DUCTWORK.
- 10. CONTRACTOR IS RESPONSIBLE FOR ISOLATING, DRAINING, REFILLING & VENTING OF ALL SYSTEMS REQUIRED FOR EXECUTION OF WORK. COORDINATE PROCEDURES WITH OWNER.

NOTES RE: INSPECTING EXISTING BUILDING

SUPPORTING BEAMS, ETC.

- THE CONTRACTORS SHALL VISIT AND INSPECT THE EXISTING BUILDING AND SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ACTUAL JOB CONDITIONS PRIOR TO BIDDING. NO EXTRAS WILL BE ALLOWED FOR WORK WHICH MIGHT HAVE BEEN REASONABLY FORESEEN BY AN INSPECTION OF THESE PREMISES.
- WHILE THE SIZE AND LOCATION OF NEW WORK AND EQUIPMENT IN THE EXISTING BUILDING HAS BEEN INDICATED ON THE DRAWINGS AS ACCURATELY AS POSSIBLE, CONTRACTOR SHALL ADJUST HIS WORK AS REQUIRED TO AVOID EXISTING DUCTS, PIPES, CONDUITS AND BEAMS NOT SHOWN ON PLANS. CONTRACTOR SHALL ADAPT HIS WORK TO MEET ALL ACTUAL CONDITIONS ON THE EXISTING PREMISES.
- CONTRACTOR SHALL INSPECT THE PREMISES AND MAKE A DETAILED EXAMINATION OF ALL LOCATIONS WHERE NEW WORK IS TO BE INSTALLED AND SHALL EXAMINE EXISTING PIPING, CONDUITS, STRUCTURAL
- CONTRACTOR AFTER INSPECTING THE PREMISES AND THE DRAWINGS SHALL CALL TO THE ATTENTION OF THE ARCHITECT ANY LACK OF ANY NECESSARY SPACE OR CLEARANCE REQUIRED BY THE VARIOUS EQUIPMENT PRIOR TO BIDDING. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES NECESSARY IF HE NEGLECTS TO DO SO.

——— INDICATES EXISTING TO REMAIN. ---- INDICATES EXISTING TO BE DISCONNECTED AND REMOVED E.T.R. EXISTING TO REMAIN.

CONTROLS REQUIREMENTS:

CONTROLS FOR ALL NEW EQUIPMENT ARE TO BE FULLY INTEGRATED INTO EXISTING BUILDING CONTROLS

REMOVE AND REINSTALL CEILINGS AS NEEDED FOR CONTROLS AND CONTROLS CABLING. ALL CONTROLS CABLING AND WIRING TO BE PLENUM RATED. PROVIDE 120V CONNECTIONS TO NEW CONTROLS EQUIPMENT AS REQUIRED. PROVIDE SWITCHBOARD CONNECTION. COORDINATE REQUIREMENTS WITH ELECTRICAL.

GENERAL CONTROLS NOTES:

ALL SYSTEMS NEW AND EXISTING PROVIDED WITH NEW CONTROLLER AND CONTROLS.

ALL CONTROLS ASSOCIATED WITH DEMOLISHED EQUIPMENT ARE TO BE FULLY REMOVED.

- ALL SYSTEMS NEW AND EXISTING PROVIDED WITH NEW CONTROLLERS AND CONTROLS TO BE BALANCED FOR
- COORDINATE ALL ROOM TEMPERATURE SENSOR REQUIREMENTS AND INSTALLATION LOCATIONS WITH

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> **PROJECT ADJACENCIES** RENOVATIONS

DES PLAINES CAMPUS

GENERAL MECHANICAL

10.M20-00

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SHEET NUMBER

021075.001

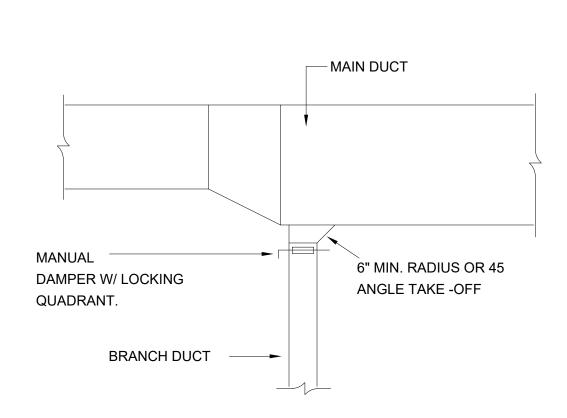
	GENERAL MECHA	ANICAI	LSYMBOLS
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
CFM	CUBIC FEET PER MINUTE		SUPPLY DUCT
СН	CABINET HEATER		RETURN/EXHAUST DUCT
EA	EXHAUST AIR		OUTSIDE AIR
EF	EXHAUST FAN	<u> </u>	REINFORCED/INSULATED FLEX
FC	FLEX CONNECTION	-	SUPPLY DIFFUSER
RA	RETURN AIR		RETURN REGISTER
SA	SUPPLY AIR		45 DEGREE TAP
OA	OUTSIDE AIR		CAP
T	ROOM TEMP SENSOR		GATE VALVE
H	HUMIDISTAT	_	B & G CIRCUIT SETTER
UH	UNIT HEATER	1	CHECK VALVE
VD	VOLUME DAMPER		GAS COCK/ PLUG COCK
WG	WITH GUARD	-1001-	GLOBE VALVE
O.A.C.	OPENING ABOVE CEILING		TEMP. CONTROL VALVE
	SUPPLY UP - DOWN		WELDED ELBOW
	RETURN/EXHAUST UP - DN.		BUTTERFLY VALVE
	OUTSIDE AIR UP - DOWN		STRAINER
cws	CONDENSER WATER SUPPLY	-+0	ELBOW UP
CWR	CONDENSER WATER RETURN	-+-	ELBOW DOWN

GRILLE, DIFFUSER & REGISTER SCHEDULE											
TAG	MANUFACTURER	MODEL NUMBER	S/R	DESCRIPTION	OBD	REMARKS					
<u>(C)</u>	TITUS	350FL	R/E	ALUMINUM RETURN/EXHAUST REGISTER (SEE PLANS FOR SIZE & CEILING TYPE)	Y	1, 2, 3, 4					

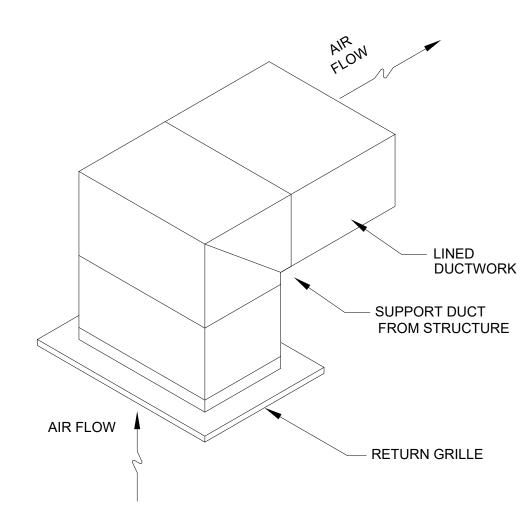
ELECTRICAL BASEBOARD SCHEDULE											
TAG	MANUFACTURER	MODEL NUMBER	WATT/FT	LENGTH	WATT	AMP.	VOLTAGE	REMARKS			
EBB 1	QMARK	DBSL04	250	4'	1000	3.6	277 VOLT 60 CYCLE 1 PHASE	1, 2, 3, 4, 5, 6			
EBB 2	QMARK	DBSL06	250	6'	1500	5.4	277 VOLT 60 CYCLE 1 PHASE	1, 2, 3, 4, 5, 6			
EBB 3	QMARK	DBSL08	250	8'	2000	7.2	277 VOLT 60 CYCLE 1 PHASE	1, 2, 3, 4, 5, 6			

REMARKS

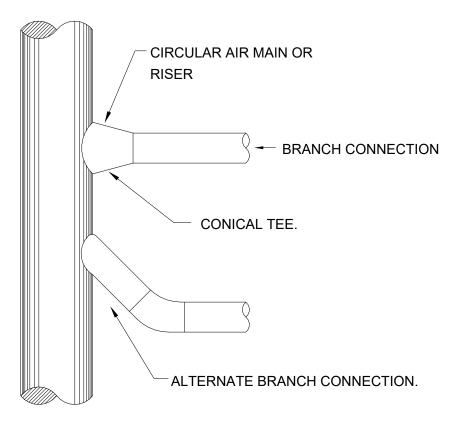
- WALL MOUNT. COORDINATE HEIGHT WITH ARCHITECT.
 PROVIDE WITH INTEGRAL T-STAT AND DISCONNECT SWITCH.
- PROVIDE WITH END CAPS, BRACKETS & SUPPORTS.
 CUSTOM FINISH & COLOR TO BE SELECTED BY ARCHITECT.
- 5. TOP DISCHARGE, BOTTOM INTAKE.6. COORDINATE SETPOINT AND CONTROL WITH OWNER AND EXISTING BUILDING CONTROLS.



BRANCH DUCT CONNECTION NO SCALE



RETURN AIR GRILLE DETAIL
NO SCALE



1. FINISH & COLOR BY ARCHITECT.

DRAWINGS.

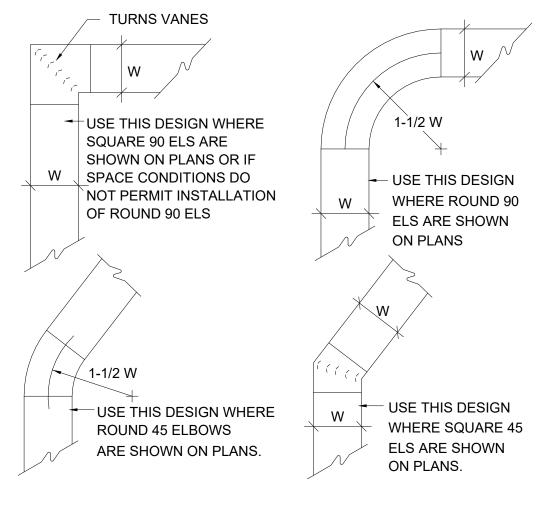
2. LAY-IN FULL FACE; 23-5/8" X 23-5/8" PANEL SIZE-

3. 35 DEGREE DEFLECTION, 3/4" SPACING.

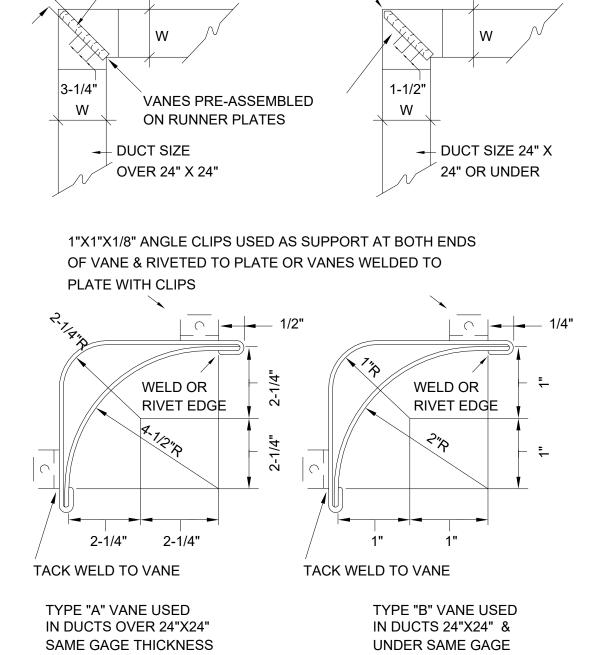
UNLESS SHOWN OTHERWISE ON PLANS. COORDINATE WITH ARCHITECTURAL REFLECTED CEILING DRAWINGS.

4. COORDINATE WITH ARCHITECTURAL REFLECTED CEILING

SHEET METAL DUCT DETAILS NO SCALE



SHEET METAL DUCT DETAILS
NO SCALE



--9" ∕--GALVANIZED TURNS VANES

SQUARE DUCT ELBOWS
NO SCALE

THICKNESS AS DUCT

AS DUCT, NOT TO

EXCEED 20 US GAGE

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Cakton

OAKTON COLLEGE

KEY PLAN

ISSUE CHART

 1
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 9 JUN

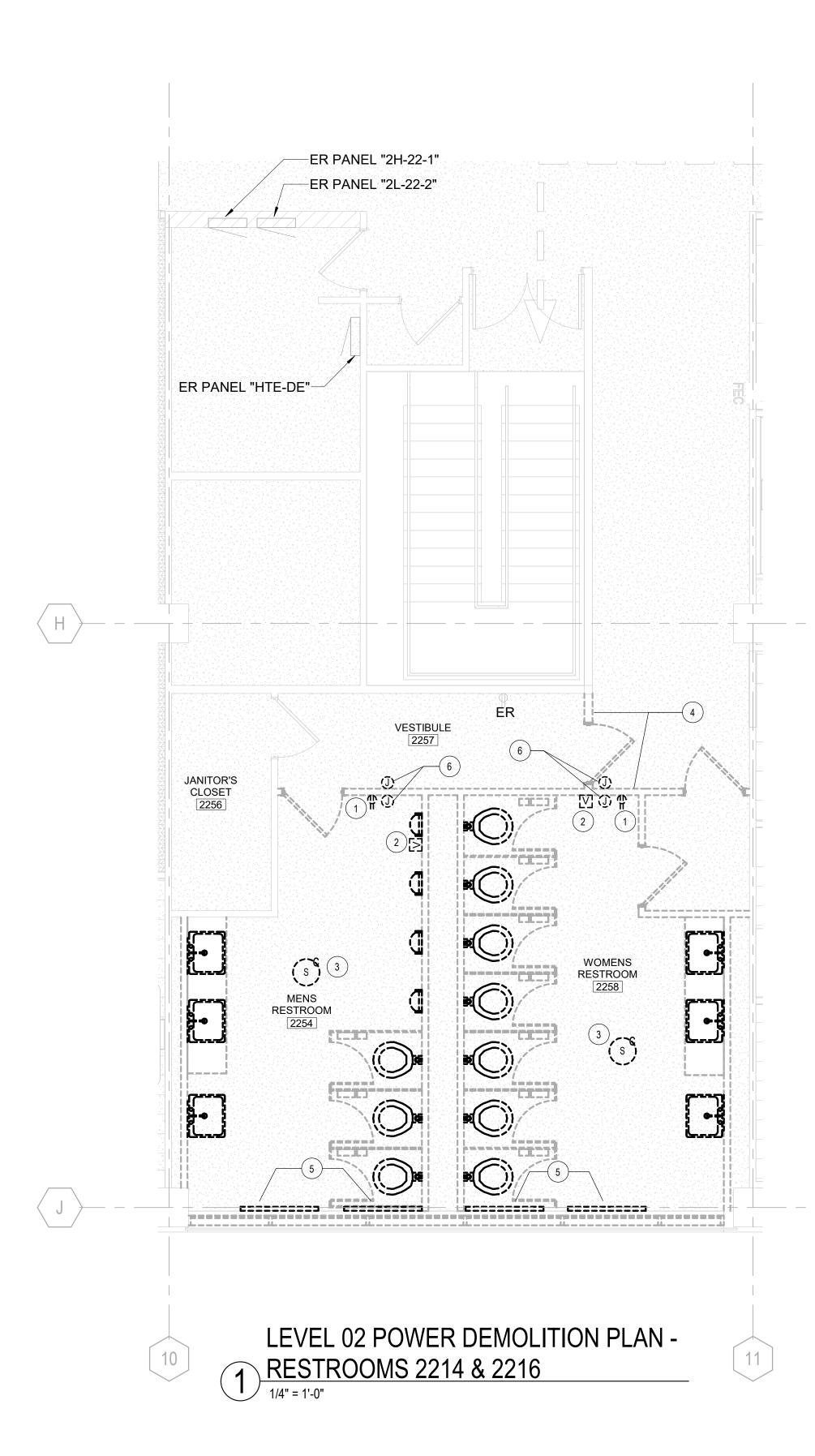
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MECHANICAL SCHEDULES AND DETAILS

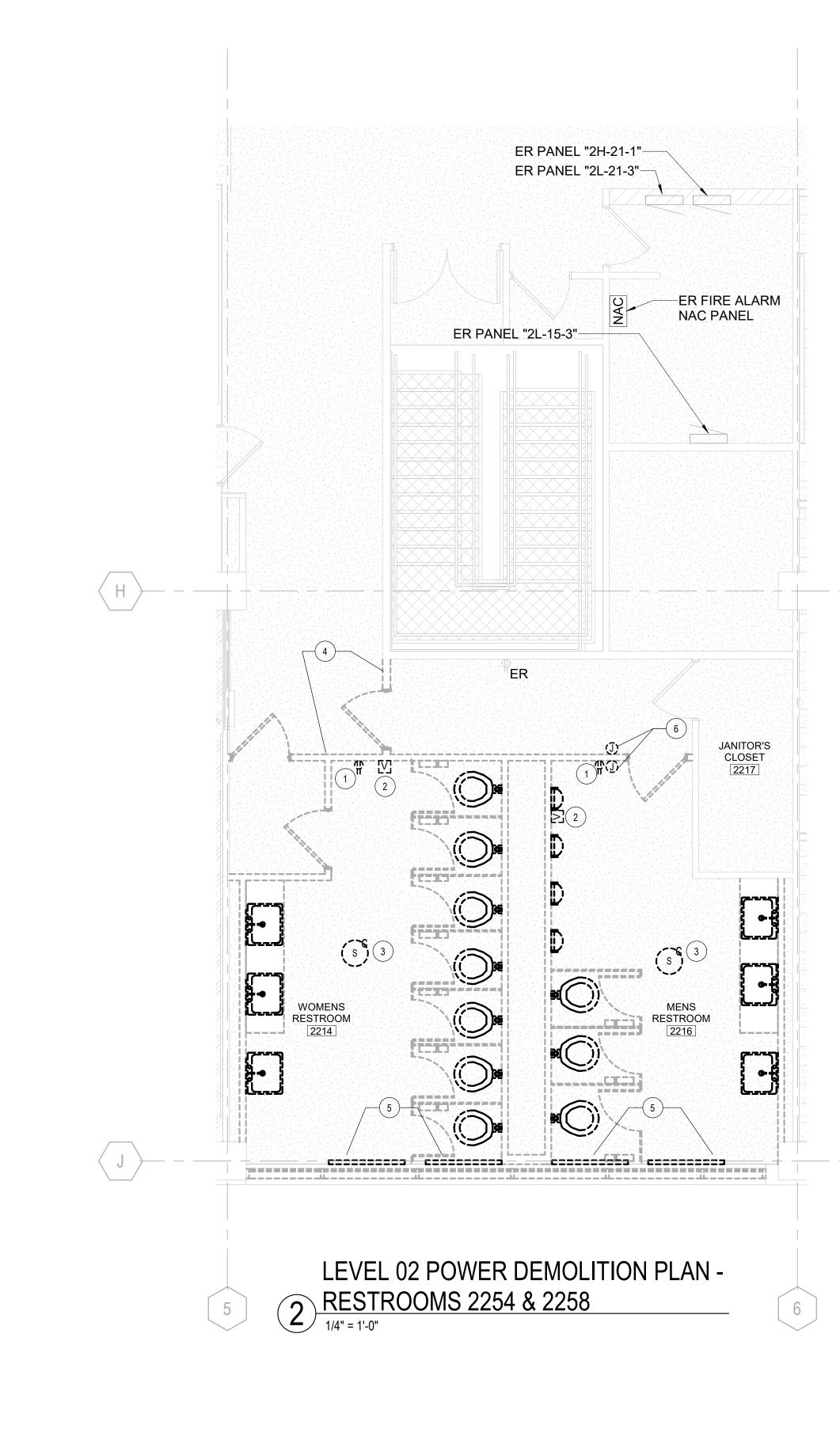
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ELECTRICAL DEMOLITION NOTES \otimes

- DISCONNECT AND REMOVE EXISTING RECEPTACLE. DISCONNECT AND REMOVE EXISTING CONDUIT AND WIRES BACK TO POINT FOR RECONNECTION TO NEW RECEPTACLE. BYPASS EXISTING CONDUIT AND WIRE AS REQUIRED TO KEEP EXISTING TO REMAIN DEVICES IN CIRCUIT ENERGIZED. DISPOSE OF RECEPTACLE PER EPA REQUIREMENTS.
- 2. DISCONNECT AND REMOVE EXISTING FIRE ALARM DEVICE. DISCONNECT AND REMOVE EXISTING FIRE ALARM CABLING AND CONDUIT BACK TO NEAREST UNAFFECTED JUNCTION BOX. BYPASS EXISTING CABLE AND CONDUIT AS REQUIRED TO KEEP EXISTING TO REMAIN DEVICES IN CIRCUIT ENERGIZED.
- 3. DISCONNECT AND REMOVE EXISTING RECESSED CEILING SPEAKER COMPLETE. DISCONNECT AND REMOVE ALL CONDUIT AND WIRING SHALL BE MOVED BACK TO HEADEND EQUIPMENT SERVING DEVICES. BYPASS EXISTING CONDUIT AND WIRES AS REQUIRED TO KEEP EXISTING TO REMAIN DEVICES IN EXISTING CIRCUIT ENERGIZED. DISPOSE OF SPEAKERS PER EPA REQUIREMENTS.
- 4. EC SHALL INVESTIGATE AND DETERMINE ANY EXISTING TO REMAIN ELECTRICAL DEVICES ON THIS WALL AND DISCONNECT, BYPASS, REMOVE, AND REINSTALL UPON COMPLETION OF NEW WALL CONSTRUCTION. ELECTRICAL DEVICES SHALL INCLUDE BUT ARE NOT LIMITED TO CONTROLLERS, DISCONNECT SWITCHES, RECEPTACLES, LIGHT SWITCHES, ETC.
- 5. DISCONNECT AND REMOVE EXISTING POWER FROM EXISTING BASEBOARD HEATERS. DISCONNECT AND REMOVE EXISTING CONDUIT AND WIRES BACK TO POINT NEAREST UNAFFECTED JUNCTION BOX. BYPASS EXISTING CONDUIT AND WIRES AS REQUIRED TO KEEP EXISTING TO REMAIN DEVICES IN EXISTING CIRCUIT ENERGIZED. PATCH AND REPAIR EXISTING WALLS AND FLOORS AS REQUIRED.
- 6. EC SHALL INVESTIGATE AND DETERMINE IF ANY WIRING IS PRESENT INSIDE EXISTING SURFACE MOUNTED JUNCTION BOXES AND RACEWAY. REMOVE RACEWAY AND WIRING BACK TO NEAREST UNAFFECTED JUNCTION BOX. BYPASS EXISTING CONDUIT AND WIRES AS REQUIRED TO KEEP EXISTING TO REMAIN DEVICES IN EXISTING CIRCUIT ENERGIZED.



CARD DIRECTORY NOTE:

TYPICAL FOR PANELS AFFECTED BY DEMOLITION/NEW WORK. MODIFY PANEL CARD DIRECTORIES TO REFLECT MODIFICATIONS MADE TO PANEL. TRACE OUT ALL EXISTING TO REMAIN CIRCUITS. LABEL BREAKERS NO LONGER SERVING LOADS AS "SPARE". PROVIDE A NEW TYPED CARD DIRECTORY. DO NOT HAND WRITE DIRECTORIES OR MODIFY EXISTING ONES. (TYPICAL FOR ALL PANELS AFFECTED BY DEMOLITION/NEW WORK)

<u>EXISTING FIRE ALARM CABLING NOTE:</u>

EXISTING TO REMAIN FREE AIR FIRE ALARM CABLES LOCATED ABOVE CEILING SHALL BE REINSTALLED IN CONDUIT. EC SHALL REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ALLOWANCE AMOUNT. REFER TO SHEET E51-01 FOR FURTHER INFORMATION.

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KEY PLAN

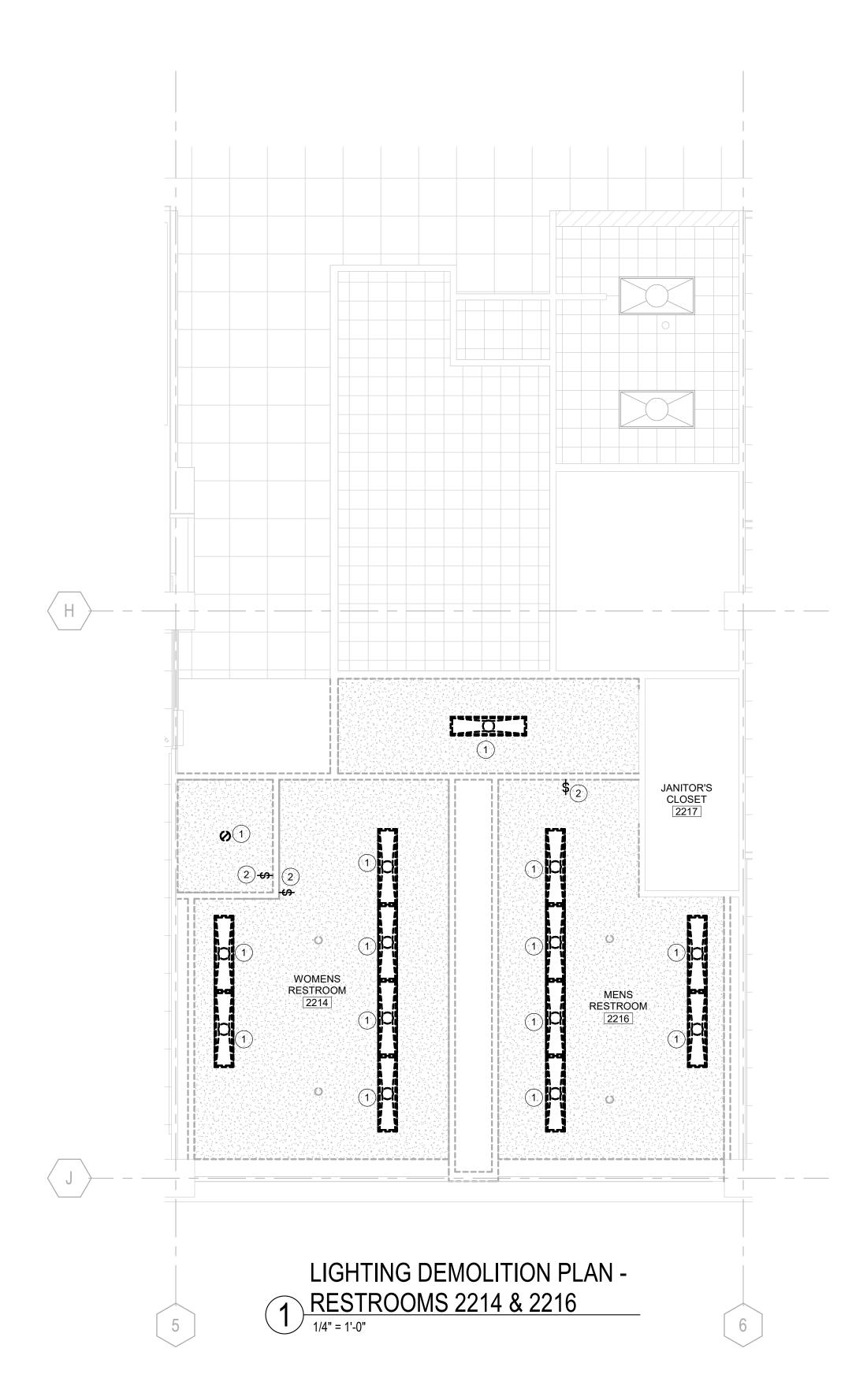
ISSUE CHART

ELECTRICAL DEMOLITION PLANS

TITLE

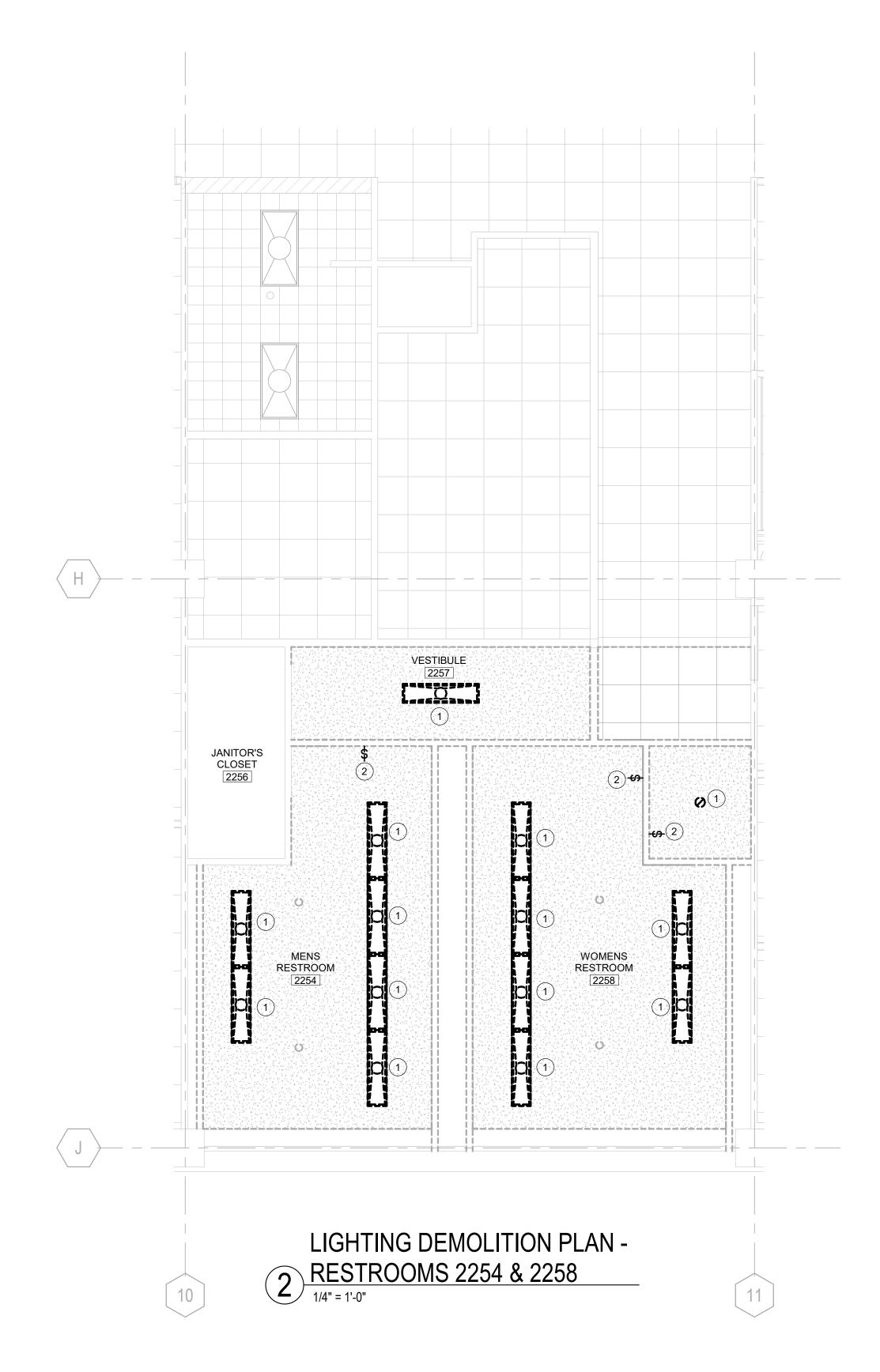
SHEET NUMBER

10.E04-01



ELECTRICAL DEMOLITION NOTES ®

- 1. DISCONNECT AND REMOVE EXISTING LIGHT FIXTURE COMPLETE. DISCONNECT AND REMOVE EXISTING CONDUIT AND WIRES BACK TO POINT FOR RECONNECTION TO NEW LIGHT FIXTURES. EC SHALL VERIFY EMERGENCY LIGHTING CIRCUIT IN FIELD FOR RECONNECTION TO NEW FIXTURE. BYPASS EXISTING CONDUIT AND WIRES AS REQUIRED TO KEEP EXISTING TO REMAIN LIGHTING IN EXISTING CIRCUIT ENERGIZED. DISPOSE OF LIGHT FIXTURES PER EPA REQUIREMENTS.
- 2. DISCONNECT AND REMOVE EXISTING LIGHTING CONTROL COMPLETE. DISCONNECT AND REMOVE EXISTING CONDUIT AND WIRES BACK TO NEAREST UNAFFECTED JUNCTION BOX. BYPASS EXISTING CONDUIT AND WIRING AS REQUIRED TO KEEP EXISTING TO REMAIN DEVICES IN EXISTING CIRCUIT ENERGIZED.
- 3. DISCONNECT, REMOVE, AND SALVAGE EXISTING LIGHT FIXTURES LOCATED IN THIS SPACE. DISCONNECT AND REMOVE EXISTING CONDUIT AND WIRES BACK TO POINT AS REQUIRED FOR RECONNECTION. EC SHALL VERIFY EMERGENCY LIGHTING CIRCUIT IN FIELD FOR RECONNECTION AS REQUIRED. BYPASS EXISTING CONDUIT AND WIRES AS REQUIRED TO KEEP EXISTING TO REMAIN LIGHTING IN EXISTING CIRCUIT ENERGIZED.



GENERAL LIGHTING DEMOLITION NOTE:

INSTALL BLANK FINISHED COVERPLATES OVER ALL FLUSH MOUNTED WALL OPENINGS WHERE DEVICES HAVE BEEN REMOVED AND LOCATIONS WILL NOT BE REUSED. WHERE SURFACE MOUNTED BOXES AND RACEWAYS WILL NO LONGER BE USED AND CONSIDERED ABANDONED, THEY WILL BE REMOVED COMPLETELY AND WALL PATCHED AND PAINTED TO MATCH SURROUNDING AREA. ANY CEILING TILES LEFT WITH HOLES IN THEM FROM REMOVAL OF DEVICES SHALL BE REPLACED WITH NEW MATCHING CEILING TILES. ALL HOLES IN WALLS, CEILINGS, AND FLOORS SHALL BE PATCHED AND PAINTED TO MATCH AREA.

GENERAL DEMOLITION NOTE:

EC SHALL FURNISH AND INSTALL PERMANENT SUPPORTS FOR ANY UNSUPPORTED CONDUIT, BOX, OR CABLES FOUND ABOVE THE CEILING DURING ABOVE CEILING WORK AND/OR AREAS WITH CEILINGS BEING REMOVED BY THE ARCHITECT. EXISTING FREE AIR WIRES SERVING LIGHT FIXTURES FOUND ABOVE CEILING CONDUIT SHALL BE INSTALLED IN 3/4" CONDUIT MINIMUM UNLESS NOTED OTHERWISE. COORDINATE REQUIREMENTS WITH OWNER.

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KEY PLAN

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 Job Number
 021075.001

LIGHTING DEMOLITION PLANS

SHEET NUMBER

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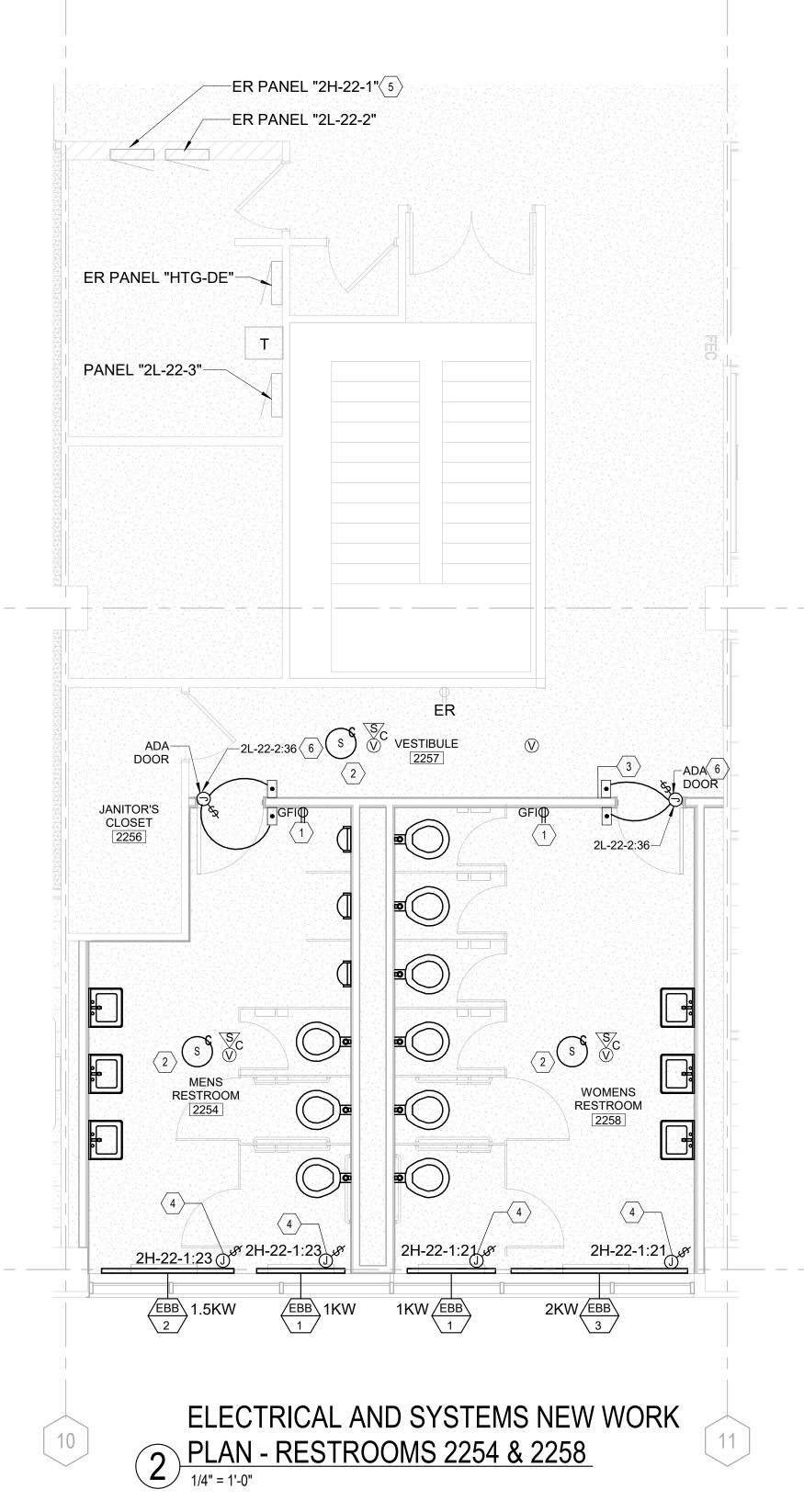
5 ER PANEL "2H-21-1"— ER PANEL "2L-21-3"-NAC PANEL ER PANEL "2L-155"-ER ADA 6 DOOR ___2L-155:26 DOOR CLOSET 2217 6 2L-155:26 WOMENS RESTROOM MENS RESTROOM 2216 $-\sqrt{4}$ 2H-21-1:26 2H-21-1:25 \langle 4 \rangle 2H-21-1:25 б2H-21-1:26 EBB 1.5KW EBB 1KW ELECTRICAL AND SYSTEMS NEW WORK 1 PLAN - RESTROOMS 2214 & 2216

ELECTRICAL PLAN NOTES: 🗵

- 1. FURNISH AND INSTALL NEW GFI/TAMPER PROOF RECEPTACLE. EXTEND EXISTING BRANCH CIRCUIT CONDUIT AND WIRES AS REQUIRED TO RECONNECT EXISTING CIRCUIT TO NEW DEVICE.
- 2. FURNISH AND INSTALL NEW CEILING MOUNTED INTERCOM SPEAKER. CONNECT TO EXISTING INTERCOM PAGING CIRCUIT SERVING THE ADJACENT CORRIDOR. FURNISH AND INSTALL ADDITIONAL CONDUIT AND WIRING AS REQURIED FOR A COMPLETE INSTALLATION.
- 3. REINSTALL ALL EXISTING TO REMAIN ELECTRICAL DEVICES AFFECTED BY WALL REMOVAL. EXTEND EXISTING CONDUIT AND WIRES AS REQUIRED.
- 4. A DISCONNECT SWITCH IS INTEGRAL WITH THE BASEBOARD HEATER. FURNISH AND INSTALL NEW BRANCH CIRCUIT FROM NOTED PANELBOARD. PATCH AND REPAIR EXISTING WALLS AND CEILINGS AS REQUIRED FOR ROUTING NEW BRANCH CIRCUIT. COORDINATE POINT OF CONNECTION WITH MC.
- 5. CUT, PATCH, AND REPAIR EXISTING WALL AS REQUIRED FOR NEW BRANCH CIRCUITS TO EXISTING RECESSED PANELBOARD. PAINT TO MATCH SURROUNDING AREAS. COORDINATE FINAL COLOR WITH OWNER AND ARCHITECT.
- FURNISH AND INSTALL NEW POWER FOR NEW ACCESSIBLE DOOR HARDWARE. FURNISH AND INSTALL NEW BRANCH CIRCUIT FROM NOTED PANELBOARD. INCLUDE BOXES AND RACEWAYS FOR HANDICAP PADDLES AND CONNECTION TO OPERATOR UNIT. FURNISH AND INSTALL CONDUIT AND WIRES AS REQUIRED PER DOOR MANUFACTURER FOR A COMPLETE INSTALLATION. COORDINATE DOOR HARDWARE WITH ARCHITECT. COORDINATE PUSHPLATES LOCATIONS AND TYPE WITH ARCHITECT PRIOR TO INSTALLATION. INTERLOCK VESTIBULE DOORS AS SHOWN ON DRAWING. COORDINATE ADDITIONAL REQUIREMENTS WITH DOOR CONTRACTOR. FURNISH AND INSTALL ADDITIONAL CONDUIT AND WIRES AS REQUIRED TO OPEN BOTH DOORS SIMULTANEOUSLY.

GENERAL ELECTRICAL NOTES:

- A. COORDINATE MOUNTING HEIGHT AND LOCATIONS OF RECEPTACLES WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
- B. FINAL CONNECTIONS MADE TO MECHANICAL EQUIPMENT SHALL BE IN LIQUIDTIGHT FMC. VERIFY FINAL MOCP REQUIREMENTS OF BASEBOARD HEATERS WITH MC.



FIRE ALARM SCOPE NOTE:

A. FURNISH AND INSTALL NEW NOTIFICATION DEVICES AS SHOWN. COORDINATE FINAL LOCATIONS WITH ALL TRADES PRIOR TO INSTALLATION. FURNISH AND INSTALL NEW FIRE ALARM CABLE AND CONDUIT AS REQUIRED. CONNECT DEVICES TO NEAREST EXISTING LOCAL NOTIFICATION CIRCUIT. REFER TO SHEET 10.E51-01 FOR ADDITIONAL INFORMATION.

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KEY PLAN

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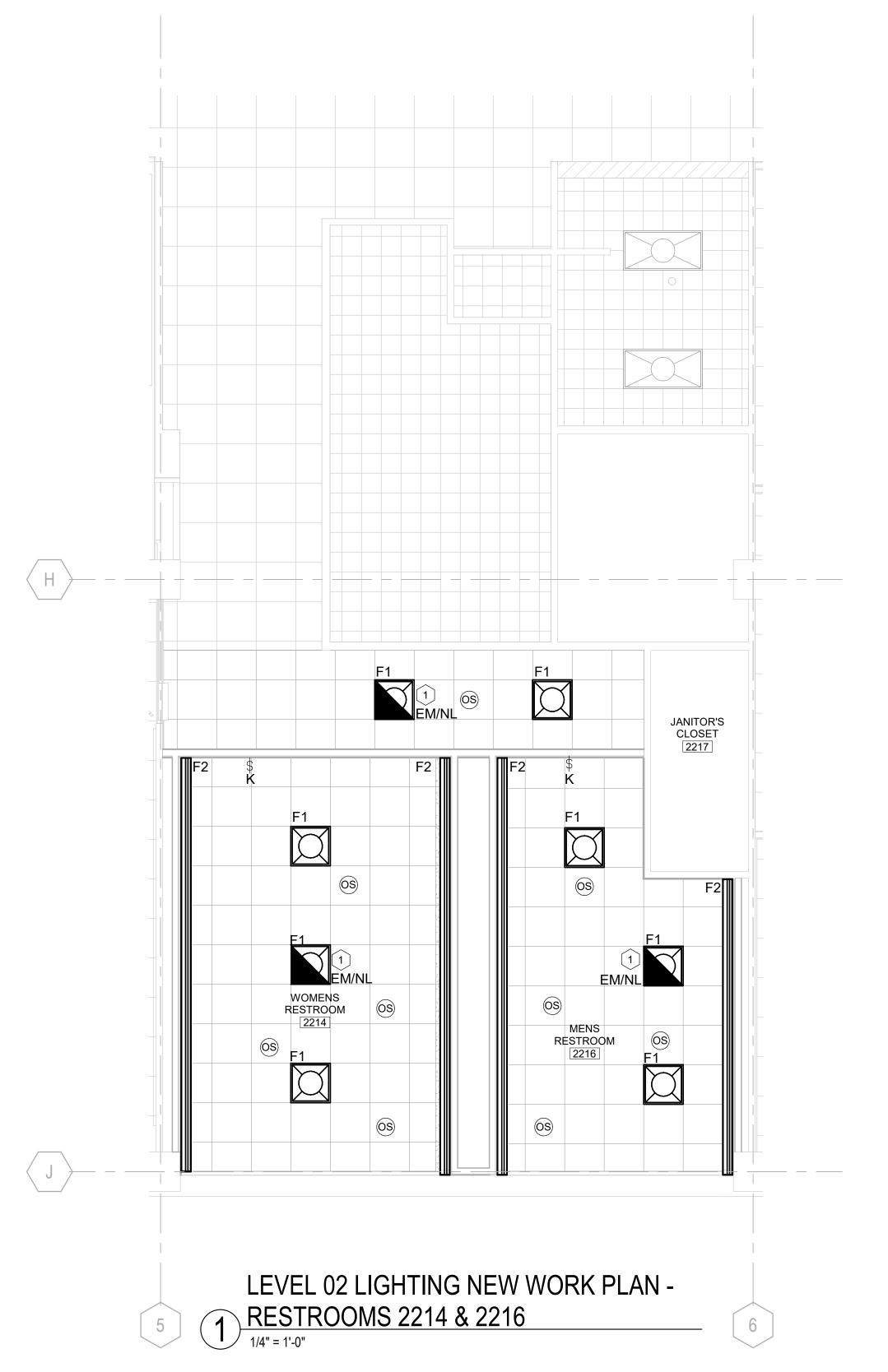
ELECTRICAL AND SYSTEMS NEW WORK PLANS

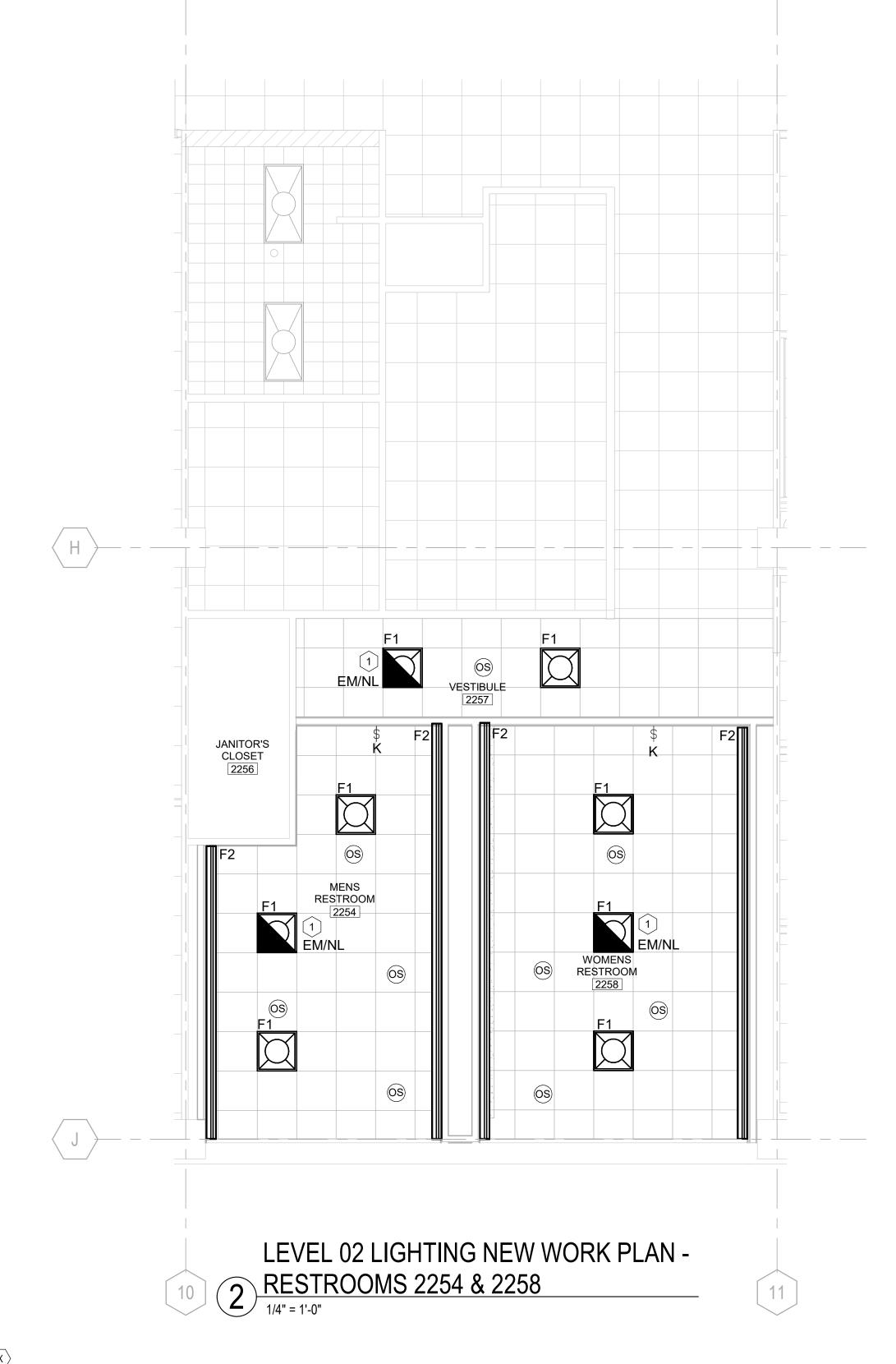
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ELECTRICAL PLAN NOTES (X)

1. EXTEND NEAREST EXISTING EMERGENCY/NIGHT LIGHT BRANCH CIRCUIT FOR NEW EM/NL FIXTURE. EXTEND EXISTING CONDUIT AND WIRES AS REQUIRED. FIXTURE SHALL BE WIRED AHEAD OF LOCAL LIGHTING CONTROLS. REFER TO LIGHTING SEQUENCE OF OPERATIONS FOR FURTHER INFORMATION. MINIMUM 2#10, 1#12GRD IN 3/4"C.

GENERAL ELECTRICAL NOTES:

- A. REUSE EXISTING BRANCH CIRCUITS FOR ALL NEW LIGHT FIXTURES UNLESS NOTED OTHERWISE. EXTEND EXISTING CONDUIT AND WIRES AS REQUIRED. RECONNECT EXISTING EMERGENCY/NIGHT LIGHT CIRCUITS TO NEW FIXTURES AS SHOWN.
- B. ALL EM/NIGHT LIGHTS SHALL BE RECONNECTED TO EXISTING EM/NIGHT LIGHT BRANCH CIRCUIT AHEAD OF LOCAL CONTROLS. EXTEND EXISTING CONDUIT AND WIRES AS REQUIRED. USE #10 WIRE FOR 277V CIRCUITS LONGER THAN 200 FEET.
- C. VERIFY EXISTING LIGHTING BRANCH CIRCUIT VOLTAGE IN FIELD PRIOR TO ORDERING FIXTURES.
- D. COORDINATE LIGHT SWITCH LOCATIONS WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
- COORDINATE MOUNTING OF CEILING MOUNTED CONTROL DEVICES WITH ARCHITECT PRIOR TO START OF WORK. ENSURE MAXIMUM COVERAGE IS ACHIEVED.

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 021075.001

LIGHTING NEW WORK PLANS

SHEET NUMBER

10.E12-01

ſ	PANEL #:	2L-1	EXISTING ELECTF 55		VOLTAGE		120/208V 3 PHASE 4 WIRE			
LO	CATION:	CLOS	ET 2220		MAIN E	BREAKER: UG ONLY:	•			
	ROJECT: PROJ. #:		N TOILET RENOVATIONS				EXISTING			
ССТ	POLE	TRIP		LOAD A	LOAD B	LOAD C	AREA SERVED	POLE	TRIP	CC1
1	1	20	EXISTING LOAD	1000 1000			EXISTING LOAD	1	20	2
3	1	20	EXISTING LOAD		1000		EXISTING LOAD		20	4
5	1	20	EXISTING LOAD	·		1000 1000	EXISTING LOAD		20	6
7	1	20	EXISTING LOAD	1000 1000		1000	NAC PANEL IDF-3 2218		20	8
9	1	20	EXISTING LOAD]	1000		EXISTING LOAD		20	10
11	1	20	EXISTING LOAD		1000	1000				
13	1	20	EWC	1000		1000	FIRE ALARM		20	12
15	1	20	EXISTING LOAD	1000	1000		EXISTING LOAD	1	20	14
17	1	20	EXISTING LOAD		1000	1000	EXISTING LOAD	1	20	16
19				_		1000	EXISTING LOAD	1	20	18
21	3	20	SPARE	500	-		NAC PANEL	. 1	20	20
23	3	20	SPARE		1000		EXISTING LOAD	1	20	22
25						1000	EXISTING LOAD	1	20	24
27				400			ADA DOORS (NOTE 1)	1	20	26
	3	20	SPARE		-		SPACE	1		28
29						-	SPACE			30
			TOTAL (VA) "A" PHASE: TOTAL (VA) "B" PHASE: TOTAL (VA) "C" PHASE:		7000	7000	200% NEUTRAL: ISOLATED GROUND BUS:			
			TOTAL (VA) THIS PANEL: TOTAL AMPS THIS PANEL:	20900		7000	FEED THRU LUGS:			

	PANEL #		2 -2 ET 2250		V	BU	PHASE: 120 JSSING: 150 EAKER: 150				
						MAIN LUC	GONLY:-				
Ρ	ROJECT	OAKTO	ON TOILET RENOVATIONS				A.I.C.: EX	STING			
	PROJ.#	2450				MOL	JNTING: FLU	JSH			
ст	POLE	TRIP	AREA SERVED DEMO TABLE/CONV RECS	LOAI	O A LO	DAD B LC	DAD C	AREA SERVED	POLE	TRIP	С
1	1	20			1440 1000			PRINTER	1	20	:
3	1	20	EXISTING LOAD			500 1080		MANAGER 2268	1	20	
5	1	20	COLLAB POKE THRU/MONITOR		,		1500 1080	DIRECTOR 2266	1	20	
7	1	20	EXISTING LOAD		500		1000		·		
9	1	20	WORKSTATIONS 2264			1000		SPARE	1	20	
11	1	20	MANAGER 2265			500	1080	MONITOR TRAINING CENTER	11	20	1
13	1	20	EXISTING LOAD		1000		1000	EXISTING LOAD	11	20	1
15	1	20	EXISTING LOAD		1000	1000		EXISTING LOAD	1	20	1
	-		EXISTING LOAD			1000		EXISTING LOAD	11	20	1
17	1	20					1000	EXISTING LOAD	1	20	1
19	1	20	EXISTING LOAD		1000 1000			EXISTING LOAD	1	20	2
21	1	20	EXISTING LOAD	•		1000 1000		EXISTING LOAD	1	20	2
23	1	20	EXISTING LOAD		l		1000 1000	2, 10 - 11 - 10 - 10 - 10			
25					1000		1000				2
27	2	20	EXISTING LOAD		1000	1000		EXISTING LOAD	2	20	2
29	1	20	EXISTING LOAD			1000	1000	EXISTING LOAD	11	20	2
31	1	20	MANAGER 2270		720		1000	EXISTING LOAD	1	20	3
33	1	20	MANAGER 2269		1000	1440		EXISTING LOAD	11	20	3
			SPACE			1500		WORKSTATIONS	1	20	3
35	1	20					400	ADA DOORS (NOTE 1)	1	20	3
37	1	20	WORKSTATIONS		1500 1000			TRAINING ROOM	1	20	3
39	1	20	SPACE			500		MONITOR TRAINING CENTER	1	20	4
41	1	20	DIRECTOR MONITOR		L		500 1500	DEMO TABLES/MONITOR	1	20	4
		1	TOTAL (VA) "A" F TOTAL (VA) "B" F	PHASE:	13160	12520	1000	200% NEUTRAL:	1		1 4
			TOTAL (VA) "C" F	PHASE:			13060	ISOLATED GROUND BUS:			

	PANEL #	2H2	2-1				80V 3 PHASE 4 WIRE			
	OCATION!	CLOS	ET 2250			SSING: 100A				
LC	JCATION:	0_00				EAKER: 100A				
Б	DO IECT	OAKTO	ON TOILET RENOVATIONS		MAIN LUC	GONLY: NO A.I.C.: EXIST	FINIC			
Г	PROJ. #		IN TOILET RENOVATIONS		MOL	NTING: SURF				
	Ι 1.03. π.	2430			IVIOO	IVI IIVO. OOKI	AGE			Т
ССТ	POLE	TRIP	AREA SERVED	LOAD A	LOAD B LC	AD C	AREA SERVED	POLE	TRIP	CC
1	1	20	EXISTING LOAD	2000)					
				2000)		EXISTING LOAD	1	20	2
3	1	20	EXISTING LOAD		2000					
					2000		EXISTING LOAD	1	20	4
5	1	20	EXISTING LOAD			2000				
						2000	EXISTING LOAD	1	20	6
7	1	20	EXISTING LOAD	2000						
				2000	-		EXISTING LOAD	1	20	8
9	1	20	EXISTING LOAD		2000					
					2000		EXISTING LOAD	1	20	10
11	1	20	EXISTING LOAD			2000			1	
• •						2000	EXISTING LOAD	1	20	12
13	1	25	VAV-8 (ER)	4000				-		
		-		2500	-					14
15	1	20	VAV-9 (ER)		2000					
		-			2500					16
17	1	20	VAV-11 (ER)			2500				
•						2500	VAV-10 (ER)	3	20	18
19	1	30	VAV-12 (ER)	6000		2000	VIII 10 (=11)		1	<u> </u>
				2000	•					20
21	1	20	EBB RESTROOM 2258 (NOTE 1)		3000					
		20			2000					22
23	1	20	EBB RESTROOM 2254 (NOTE 1)		2000	2500				
	'	-				2000	VAV-12 (ER)	3	20	24
25	1	20	SPARE				(=. ()			T-
	'			500) r		ECLYPSE CONTROLLER (ER)	1	20	26
		-	TOTAL (VA) "A" PHA	-			200% NEUTRAL:			
			TOTAL (VA) "B" PHA		, 17500		20070 NEO IIVAE.			
			TOTAL (VA) "C" PHAS		17.000	17500	ISOLATED GROUND BUS:			
			. 51/12 (7/7) 5 1 11/14				1002 (12b 01(00))			
			TOTAL (VA) THIS PAN	EL: 58000	IVA		FEED THRU LUGS:			
			TOTAL AMPS THIS PAN				: LLD 11110 2000.			

LIGHT FIXTURE SCHEDULE										
TAG MANUFACTURER		MODEL NUMBER	LAN	IPS / LUMINAR	RIES	DRIVER	MOUNTING	DESCRIPTION	REMARKS	
IAG	WANDIACIONEN	MODEL NOMBEK	QTY TY	E WATTS	VOLTS	DRIVER	MOONTING	DESCRIPTION	KLIMAKKO	
F1	LITHONIA LIGHTING	2BLT2-20L-ADP-GZ10-LP840	PER DWG. LE	D 16.3	120/277	0-10 DIMMING	RECESSED	2X2 LED TROFFER	VERIFY VOLTAGE OF EXISTING LIGHTING BRANCH CIRCUIT PRIOR TO ORDERING. VERIFY EXACT GRID TYPE PRIOR TO ORDERING ANY LAY-INFIXTURE. COORDINATE FIXTURE COLOR TEMPERATURE WITH OWNER AND ARCHITECT PRIOR TO ORDERING.	
F2	FOCAL POINT	FWSL-FL-450LF-40K-1C-UNV-LD1-U-WH-XFT XIN	PER DWG. LE	D 28	120/277	0-10 DIMMING	RECESSED	LINEAR RECESSED WALL WASHER	REFER TO ARCHITECTURAL CEILING PLANS FOR FIXTURE LENGTHS PRIOR TO ORDERING. VERIFY EXACT GRID TYPE AND MOUNTING TYPE REQUIRED WITH ARCHITECT PRIOR TO ORDERING. COORDINATE FIXTURE COLOR TEMPERATURE WITH OWNER AND ARCHITECT PRIOR TO ORDERING. INCLUDE ALL EXTENSION PIECES AND END CAPS AS NEEDED TO FIT THE ENTIRE COVE LENGTH NEEDED. PROVIDE ADDITIONAL ELECTRICAL CONNECTIONS AS REQUIRED.	

NOTES:

- LIGHT FIXTURES SHALL BE INDEPENDANTLY SUPPORTED TO THE BUILDING STRUCTURE SEPARATE FROM THE CEILING SYSTEM. REFER TO SPECIFICATIONS SECTION 265100 FOR ADDITIONAL INFORMATION.
- 3 REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND LENGTH OF FIXTURES.

1 OTHER MANUFACTURERS ARE ALLLOWED UPON ARCHITECT/OWNER'S PRIOR APPROVAL.

- 4 FURNISH AND INSTALL ALL LIGHT FIXTURE MOUNTING HARDWARE REQUIRED FOR A COMPLETE INSLALLATION OF LIGHT FIXTURES (IE. PENDANTS, FLANGE KITS, CANOPIES, TONG HANGERS, SAFETY CHAINS, UNI-STRUT, ETC.)
- 5 CATALOG NUMBERS MAY NOT REFLECT ALL OF THE REQUIREMENTS INCLUDED IN THE DRAWINGS AND SPECIFICATIONS. COORDINATE EXACT REQUIREMENTS WITH MANUFACTURER AND EXISTING SITE CONDITIONS. COORDINATE CEILING TYPES AND MOUNTING TYPES REQUIRED WITH ARCHITECTURAL RCP'S PRIOR TO ORDERING.
- 6 COORDINATE FIXTURE COLOR AND LAMP COLOR TEMPERATURE WITH ARCHITECT AND OWNER PRIOR TO ORDERING.
- 7 VERIFY ABOVE CEILING CLEARANCE FOR ALL RECESSED FIXTURES PRIOR TO ORDERING.

LIGHT FIXTURE INSTALLATION:

A. SUPPORT FOR LIGHTING FIXTURES IN OR ON GRID-TYPE SUSPENDED CEILINGS:

GENERAL NOTES

PANEL #: 2H21-1

PROJ. #: **2450**

LOCATION: CLOSET 2220

3 1 20 EXISTING LOAD

11 1 20 EXISTING LOAD

15 1 20 EXISTING LOAD

17 1 20 EXISTING LOAD

19 1 20 EXISTING LOAD

21 1 30 EXISTING LOAD

23 1 20 EXISTING LOAD

25 1 20 EBB RESTROOM 2214 (NOTE 1)

PROJECT: OAKTON TOILET RENOVATION

 CCT
 POLE
 TRIP
 AREA SERVED

 1
 1
 20
 EXISTING LOAD

30 EXISTING LOAD

EXISTING LOAD

EXISTING LOAD

- INSTALL A MINIMUM OF FOUR CEILING SUPPORT SYSTEM RODS OR WIRES FOR EACH FIXTURE. LOCATE NOT MORE THAN 6 INCHES FROM LIGHTING FIXTURE CORNERS. RODS/WIRE MUST BE INSTALLED FROM STRUCTURE AND SIZED IN ORDER TO SUPPORT EACH FIXTURE INDEPENDENTLY OF GRID. WIRE SHALL HAVE BREAKING STRENGTH OF THE WEIGHT OF THE FIXTURE AT A SAFETY FACTOR OF 3 TIMES UNITS WEIGHT. PROVIDE NO MORE THAN 2" OF SLACK IN EACH FIXTURE SUPPORT CABLE AFTER FIXTURES HAVE BEEN INSTALLED WITHIN GRID.
- SUPPORT CLIPS: FASTEN TO LIGHTING FIXTURES AND TO CEILING GRID MEMBERS AT OR NEAR EACH FIXTURE CORNER WITH CLIPS THAT ARE UL LISTED FOR THE APPLICATION, PER NEC 410-16-C.
- FIXTURES OF SIZES LESS THAN CEILING GRID: INSTALL AS INDICATED ON REFLECTED CEILING PLANS OR CENTER IN ACOUSTICAL PANEL, AND SUPPORT FIXTURES INDEPENDENTLY WITH AT LEAST TWO 3/4-INCH METAL CHANNELS SPANNING AND SECURED TO CEILING TEES. INSTALL AT LEAST ONE INDEPENDENT SUPPORT ROD OR WIRE FROM STRUCTURE TO A TAB ON EACH END OF LIGHTING FIXTURE. WIRE OR ROD SHALL HAVE BREAKING STRENGTH OF THE WEIGHT OF FIXTURE AT A SAFETY FACTOR OF 3.
- E. ALL JUNCTION BOXES USED FOR SUPPORTING LIGHT FIXTURES WILL BE HEAVY DUTY UL LISTED FOR THE APPLICATION. DO NOT SUPPORT FROM CEILING GRID. SUPPORT FROM STRUCTURE AND USE GRID TO STABILIZE UNIT.

POLE TRIP CCT

EXISTING LOAD 1 20 2

EXISTING LOAD 1 20 4

EXISTING LOAD 1 20 12

EXISTING LOAD 1 20 14

EXISTING LOAD 1 20 16

EXISTING LOAD 1 20 18

EXISTING LOAD 1 20 20

EXISTING LOAD 1 20 22

EXISTING LOAD 1

200% NEUTRAL:

FEED THRU LUGS:

ISOLATED GROUND BUS:

EXISTING LOAD

EXISTING LOAD

EXISTING LOAD

		L	LIGHTING SYMBOL LIST					
LIGHTING CONTR	OL SEQUENCE OF OPERATION							
ROOMS DESCRIPTION	LIGHTING CONTROL	DIAGRAM SYMBOL	PLAN SYMBOL	DESCRIPTION				
RESTROOM	OCCUPANCY SENSOR CONTROLLED WITH WALL MOUNTED KEYED SWITCH. AUTO ON, AUTO OFF WHEN UNOCCUPIED. EM/NL SHALL REMAIN ON 100% OF THE TIME		\$H K	WALLPOD: KEYED SWITCH ON/OFF, 1-POLE, LOW VOLTAGE nLIGHT #nPODA KEY WH				
VESTIBULE	OCCUPANCY SENSOR CONTROLLED. AUTO ON, AUTO OFF WHEN UNOCCUPIED. EM/NL SHALL REMAIN ON 100% OF THE TIME.			CEILING MOUNTED, DUAL-TECH, LOW				
LIGHTING CONTROL SYSTEM BASIS OF DESIGN IS THE ACUITY NLIGHT PRODUCT. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SOFTWARE AND HARDWARE TO PROVIDE A COMPLETE AND OPERABLE LIGHTING CONTROL SYSTEM INCLUDING BUT NOT LIMITED TO BRIDGES, SMART SENSORS (OCCUPANCY AND PHOTOSENSOR), WALL STATIONS, POWER SUPPLIES, COMMUNICATIONS MODULES, CABLING, START UP AND COMMISSIONING. CONTRACTOR SHALL INCLUDE TASK TUNING LIGHTING DURING FINAL SETUP.				VOLTAGE VACANCY SENSOR WITH REAR PORT CONNECTION. nLIGHT #High Mount 360° (Model # CM 10) / (Model # CM 9)				
	G. URNISH AND INSTALL ALL REQUIRED CONDUIT AND WIRING FOR AND BETWEEN ALL DEVICES PER MANUFACTURER REQUIREMENT. ALL CAT6A PLENUM RATED CABLE BACK TO IDF/MDF CLOSET AND COORDINATE FINAL TERMINATION WITH THE OWNER.	nPP10	N/A	nLIGHT SERIES RELAY/POWER PACK FOR CIRCUIT CONTROL. PROGRAMMED AND NETWORKED OVER CAT5E nLIGHT #NPP16				

ELECTRICAL CONTRACTOR TO COORDINATE WITH THE OWNER FOR SOFTWARE INSTALLATION AND ACCESS TO WINDOWS BASE SERVER. ELECTRICAL CONTRACTOR TO PROVIDE TRAINING TO THE OWNER, PROGRAMING AND TROUBLESHOOTING THE LIGHTING CONTROL SYSTEM

1. OCCUPANCY SENSOR, DAYLIGHT SENSOR, AND SWITCH QUANTITIES: PROVIDE QUANTITIES OF NOTED

3. POWER LOSS SENSE CIRCUIT: EMERGENCY POWER PACKS MUST HAVE NON-EMERGENCY LIGHTING

5. COORDINATE FINAL LOCATION FOR LIGHT SWITCHES AND SENSORS WITH THE ARCHITECT.

EXPANDED TO APPLY TO EACH SPACE WITHIN PROJECT.

NON-EM BRANCH MUST SERVE SAME AREA AS EMERGENCY LIGHTS.

SYSTEMS TO PROVIDE FLEXIBILITY FOR FUTURE NETWORKING.

DEVICES AS SHOWN ON FLOOR PLANS, BUT NO LESS THAN ONE OF EACH DEVICE INDICATED ON THE WIRING DIAGRAMS. LIGHTING CONTROLS VENDOR MUST PROVIDE ALL ADDITIONAL APPARATUSES AND DEVICES REQUIRED FOR A FULLY FUNCTIONAL SYSTEM AS NOTED ON THIS SHEET, ON THE DRAWING SET, AND AS

LIGHTING VENDOR TO CONFIRM QUANTITIES AND TYPE OF RELAY POWER PACKS REQUIRED MEET PROJECT SPECIFICATIONS AND DESIGN DRAWINGS. ALL LAYOUTS SHOW MINIMUM NUMBER OF DEVICES AND MUST BE

BRANCH CIRCUIT PROVIDED FOR PROPER POWER-LOSS SENSING. PROVIDE NON-EMERGENCY BRANCH

CIRCUIT AHEAD OF LIGHTING CONTROLS FROM NEAREST LOCAL LIGHTING BRANCH. LIGHTS FED FROM

4. PROVIDE PLENUM RATED CAT-5 INTERCONNECTION ACROSS MULTIPLE SPACES FOR ALL NLIGHT CONTROL

EXISTING ELECTRICAL PANEL LOAD SCHEDULE

2000

2000

2000

TOTAL (VA) "A" PHASE: 21500

TOTAL (VA) THIS PANEL: 53500VA

TOTAL (VA) "B" PHASE:

TOTAL (VA) "C" PHASE:

2000

16000

VOLTAGE / PHASE: 277/480V 3 PHASE 4 WIRE

A.I.C.: EXISTING

AREA SERVED

BUSSING: 100A

MAIN BREAKER: 100A MAIN LUG ONLY: -

BRANCH DRAWINGS CIRCUIT $\leftarrow - \rightarrow - - -$ DRAWINGS NCM PDT 9 RJB /CM 9

— — LINE VOLTAGE (120V OR 277V) CAT5E CABLE PLENUM RATED

WIRE LEGEND

TYPICAL RESTROOM NORMAL LIGHTING LOAD NORMAL BRANCH CIRCUIT $\leftarrow - \rightarrow - - -$ DRAWINGS NCM PDT 9 RJB /CM 9 TYPICAL VESTIBULE

ALL PANELS AFFECTED BY DEMOLITION AND NEW WORK SHALL HAVE CARD DIRECTORIES REPLACED WITH NEW TYPED CARD DIRECTORY INCLUDING ROOM AND DEVICES SERVED. TRACE OUT ALL WIRING AND CONDUIT AS REQUIRED TO DETERMINE THIS INFORMATION. NO HANDWRITTEN CARD **DIRECTORIES ARE ALLOWED.**

PANEL SCHEDULE NOTES:

FURNISH AND INSTALL NEW CIRCUIT BREAKER IN EXISTING PANELBOARD. NEW CIRCUIT BREAKER MAKE, MODEL, AND AIC RATING SHALL MATCH EXISTING.

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> **PROJECT ADJACENCIES RENOVATIONS**

DES PLAINES CAMPUS 1600 EAST GOLF ROAD DES PLAINES, IL, 60016



KEY PLAN

ISSUE CHART

ISSUE FOR BID 021075.001

> **SCHEDULES AND** LIGHTING SEQUENCE OF OPERATION

> > SHEET NUMBER

10.E41-01

FIRE ALARM SYSTEM GENERAL NOTES: (EXISTING SYSTEM)

- FIRE ALARM CONTRACTOR TO PROVIDE AND INSTALL NEW FIRE ALARM DEVICES IN LOCATIONS GIVEN AND WIRE BACK TO EXISTING SIEMENS XLS FIRE ALARM CONTROL PANEL. ALL FIRE ALARM WIRING TO BE PLENUM RATED AND INSTALLED IN RED RACEWAY. ALL RACEWAY IN FINISHED AREAS TO BE OF THE METALLIC WIREMOLD TYPE (COLOR SELECTED BY ARCHITECT). WHERE CONDUIT IS USED AS THE PREDOMINATE TYPE OF RACEWAY CONDUIT MAY BE USED (AT ARCHITECT'S DISCRETION) AND MUST BE PAINTED OUT TO MATCH SURROUNDING AREA. ANY SURFACE MOUNTED RACEWAY TYPE ON FINISHED WALL IN OCCUPIED SPACES SHALL BE SELECTED BY ARCHITECT INCLUDING COLOR.
- PRIOR TO SUBMITTING BID, CONTRACTOR SHALL WALK EACH BUILDING AND BECOME FAMILIARIZED WITH THE BUILDING CONSTRUCTION. TAKE NOTE TO ALL CEILING AND WALL MATERIALS PRIOR TO BIDDING. NO ADDITIONAL COST WILL BE INCURRED BY THE OWNER FOR WORK THAT COULD HAVE BEEN REASONABLY DETERMINED AND/OR AVOIDED HAD THE CONTRACTOR FIELD VERIFIED EXISTING BUILDING CONSTRUCTION TYPE AND CONDITIONS PRIOR TO BIDDING.
- 3. FIRE ALARM CONTRACTOR TO MOUNT VISUAL STROBES AT 80" AFF TO BOTTOM OF BOX OR AS REQUIRED BY LOCAL JURISDICTION.
- 4. FIRE ALARM CONTRACTOR TO MOUNT PULL STATIONS AT 48" AFF TO TOP OF BOX. OPERATING HANDLE HEIGHT NOT TO EXCEED 48" AFF.
- 5. FIRE ALARM CONTRACTOR SHALL VERIFY THAT ALL FIRE ALARM DEVICES CONFORM TO ILLINOIS ACCESSIBLITY CODE REQUIREMENTS.
- 6. FIRE ALARM CONTRACTOR TO PROVIDE AND INSTALL FIRE ALARM ZONE MAP IN A PLEXI-GLASS FRAME WHEN NEW INITIATING DEVICES ARE INSTALLED. MAPS TO BE MOUNTED NEXT TO CONTROL AND ANNUNCIATOR PANELS. GIVE (5) COPIES TO OWNER. SHOW ALL INITIATING DEVICES AND NAC PANELS. MAPS SHALL BE LEGIBLE AND OF A SIZE NO LARGER THAN 17"x22" UNLESS OTHERWISE AGREED UPON BY THE OWNER AND ENGINEER. DEVICES AND TEXT (I.E. ROOM NUMBERS) SHALL BE OF A SIZE SO AS TO BE CLEARLY LEGIBLE. TEXT TO BE A MINIMUM 3/32" IN HEIGHT.
- TAMPER SWITCHES TO INDICATE "SUPERVISORY" ONLY.
- 8. EACH SIGNAL CIRCUIT SHALL NOT EXCEED 1.3 AMPS. ADJUST WIRE SIZES TO LIMIT VOLTAGE DROP AS PER NFPA 72 AND LOCAL CODE.
- 9. PROVIDE AND INSTALL ADDITIONAL POWER SUPPLIES/EXTENDER PANELS ("NAC" PANELS) AND VOICE AMP PANELS AS REQUIRED FOR PROPER OPERATION OF NOTIFICATION CIRCUITS AND TO MINIMIZE WIRING RUNS TO FIRE ALARM CONTROL PANEL AND TO MEET SLC CIRCUIT DISTANCE LIMITATIONS. "NAC" PANELS SHALL BE INSTALLED IN JANITOR CLOSETS OR STORAGE ROOMS IF APPROVED BY THE OWNER. "NAC" PANELS WILL NOT BE INSTALLED ABOVE CEILINGS OR IN CEILING SPACES.
- 10. PROVIDE AND INSTALL RED PREFINISHED BACK BOX WHERE SURFACE MOUNTED BOXES ARE REQUIRED. INSTALL MANUFACTURER TRIM PLATE AS REQUIRED. COORDINATE COLOR PRIOR TO ORDERING.
- 11. CONTRACTOR SHALL MAINTAIN AN OPERABLE FIRE ALARM SYSTEM AT ALL TIMES. AT NO TIME SHALL THE BUILDING BE LEFT UNPROTECTED WITHOUT NOTIFICATION IN WRITING TO OWNER AND FIRE DEPARTMENT. MINIMUM 48 HOURS ADVANCED NOTICE IS REQUIRED. CONTRACTOR SHALL HIRE FIRE DEPARTMENT APPROVED GUARD/FIRE DEPARTMENT PERSONNEL TO WATCH BUILDING WHEN LEFT UNPROTECTED. MINIMIZE SYSTEM DOWN TIME TO THE FULLEST EXTENT POSSIBLE.
- 12. CONTRACTOR SHALL PROVIDE BATTERY BACKUP IN ORDER TO OBTAIN 24 HOURS OF STAND BY OPERATION IN THE EVENT OF A POWER FAILURE, THEN 2 HOURS OF ALARM TIME OR 15 MINUTES OF EMERGENCY ALARM OPERATION THEREAFTER AT MAXIMUM LOAD.
- 13. PROGRAM FIRE ALARM CONTROL PANEL TO DISPLAY ADDRESSABLE DEVICE TYPE, ITS ADDRESS AND ITS RESPECTIVE LOCATION. EXACT ROOM NAMES AND NUMBERS SHALL BE VERIFIED IN THE FIELD WITH THE OWNER. DO NOT USE ROOM NAME AND NUMBER INFORMATION INDICATED ON THE DRAWINGS WITHOUT ARCHITECT/OWNERS CONSENT IN WRITING. PRIOR TO PROGRAMMING FIRE ALARM CONTROL PANEL, SURVEY THE BUILDING WITH THE ARCHITECT/OWNER TO OBTAIN THE CORRECT ROOM NAME AND NUMBERING INFORMATION TO BE DISPLAYED ON THE CONTROL PANEL AND ANNUNCIATOR PANEL. SURVEYING AND PROGRAMMING OF THE CONTROL PANEL AS DESCRIBED ABOVE WILL BE DONE BY THE CONTRACTOR AS PART OF THIS CONTRACT.
- 14. SET EACH INITIATING DEVICE WITH ADDRESSABLE STATION NUMBER AS REQUIRED. LABEL EACH DEVICE WITH ADDRESS NUMBER. PROVIDE LIST OF ADDRESSABLE DEVICE LOCATION NUMBERS TO OWNER. LABEL EACH NOTIFICATION DEVICE WITH CIRCUIT INFORMATION. INCLUDE BAR CODE ON EACH DEVICE AS WELL. SEE SPECIFICATIONS.
- 15. CONTRACTOR SHALL TURN OVER ALL SMOKE DETECTOR DUST CAPS TO OWNER UPON COMPLETION OF PROJECT.
- 16. SMOKE AND/OR HEAT DETECTORS SHALL BE INSTALLED A MINIMUM OF 6 FEET AWAY FROM AIR SUPPLY OR AIR RETURN DIFFUSER GRILLES SO AS PREVENT FALSE ALARMS.
- 17. THE CONTRACTOR SHALL PERFORM AN INITIAL SYSTEM CHECKOUT TO DETERMINE FUNCTIONABILITY OF THE EXISTING SYSTEM PRIOR TO THE START OF WORK. PROVIDE DOCUMENTATION TO THE OWNER IDENTIFYING ANY FIRE ALARM COMPONENTS NOT CURRENTLY WORKING. IF THIS DOCUMENT IS NOT PROVIDED TO THE OWNER PRIOR TO THE START OF WORK, THE CONTRACTOR IS ACKNOWEDGING THAT ALL EXISTING SYSTEM COMPONENTS ARE IN PROPER WORKING ORDER.
- 18. FIRE ALARM SYSTEM DEMOLITION WORK SHALL BE PERFORMED AS SOON AS PRACTICAL IN ORDER TO LEAVE SUFFICIENT TIME DURING CONSTRUCTION TO CORRECT ANY PROBLEMS ENCOUNTERED WITH THE WIRING SYSTEM. THE CONTRACTORS SCOPE OF WORK SHALL INCLUDE REMOVAL OF FIRE ALARM DEVICES SHOWN ON DEMOLITION PLAN (TO BE REMOVED) AND TO ASCERTAIN ANY WIRING PROBLEMS OR ILLEGAL T-TAPPING OF HARD WIRED INITIATING AND NOTIFICATION CIRCUITS AS THEY MAY HAVE AN AFFECT ON ALL REMAINING DEVICES. PROVIDE A WRITTEN REPORT TO THE OWNER IDENTIFYING ALL DEFECTIVE DEVICES OR IMPROPER WIRING CONDITIONS.
- 19. IN FINISHED AREAS WHERE EXISTING SURFACE MOUNTED BACKBOXES. WIREMOLD OR CONDUIT HAVE BEEN REMOVE. PATCH AND PAINT WALLS AND/OR CEILINGS TO MATCH SURROUNDING AREAS. COORDINATE WITH THE ARCHITECT AND OWNER. NEW DEVICES AND RACEWAYS MAY BE MOUNTED AT NEW LOCATIONS.
- 20. ANY PORTIONS OF EXISTING CEILINGS TO BE REMOVED BY CONTRACTOR FOR INSTALLATION OF THEIR WORK SHALL BE RETURNED TO THEIR ORIGINAL CONDITION. MATCH EXISTING CEILING MATERIAL. PATCH AND PAINT AS REQUIRED. CONTRACTOR SHALL ARCHIVE AND DOCUMENT ALL EXISTING CEILING CONDITIONS ELECTRONICALLY PRIOR TO BEGINNING THE PROJECT. IF ANY DAMAGE IS FOUND THEY SHALL BRING IT TO THE ATTENTION OF THE OWNER IN WRITING PRIOR TO PERFORMING WORK. IF THIS DOCUMENTATION IS NOT PROVIDED THE CONTRACTOR IS ASSUMING THE LIABILITY FOR REPLACING ALL DAMAGED CEILING SYSTEMS DISCOVERED AFTER THE COMPLETION OF THE PROJECT. ALL DAMAGED CEILING SYSTEMS WILL BE REPLACED AT THE CONTRACTORS EXPENSE. PROVIDE WRITTEN DOCUMENTATION TO THE OWNER AT THE PRE-CONSTRUCTION MEETING.
- 21. ALL WALL AND FLOOR PENETRATIONS SHALL BE SLEEVED AND FIREPROOFED.
- 22. THE CONTRACTOR SHALL COORDINATE PROJECT SCHEDULING WITH THE OWNER TO ACCOMODATE ALL SCHOOL PROGRAMS. THE SCHOOL WILL OCCUPY ONLY AREAS DETERMINED TO BE SAFE AND NOT UNDER CONSTRUCTION PER THE AGREED UPON SCHEDULE. COORDINATE SCHEDULING OF WORK WITH THE OWNER UPON AWARD OF BID.
- 23. CONTRACTOR SHALL INCLUDE ALL EXPENSES FOR LOCATING AND REPLACING ALL EXISTING END-OF-LINE RESISTORS IN ORDER TO ALLOW EXISTING DEVICES TO BE COMPATIBLE WITH THE NEW SYSTEM AND/OR EXISTING (NEWER) CONTROL PANEL.
- 24. ALL NEW PULL STATIONS LOCATED NEAR VESTIBULES SHALL BE COORDINATED WITH ARCHITECT/FIRE DEPARTMENT PRIOR TO INSTALLATION. IN SOME CASES, THE FIRE DEPARTMENT MAY REQUIRE DEVICES TO BE INSTALLED WITHIN THE VESTIBULE. INCLUDE ALL ASSOCIATED COST FOR RELOCATION OF DEVICES TO THE VESTIBULE PER THE FIRE DEPARTMENTS DIRECTION.
- 25. INITIATING DEVICE, NOTIFICATION APPLIANCE AND SIGNALING LINE CIRCUITS: MEET NFPA 72 REQUIREMENTS.

INITIATING DEVICE CIRCUITS: CLASS A, LEVEL 1

NOTIFICATION APPLIANCE CIRCUITS: CLASS A, LEVEL 1.

SIGNALING LINE CIRCUITS: CLASS A, LEVEL 1. INSTALL NO MORE THAN 200 TOTAL ADDRESSABLE DEVICES ON EACH SIGNALING LINE CIRCUIT.

INCLUDE NO MORE THAN 125 INITIATING DEVICES AND 75 MODULES.

- 26. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PER SPECIFICATIONS. INCLUDE ONE LINE RISER DIAGRAMS AND POINT-TO-POINTS. INCLUDE ACTUAL BUILDING WIRING PLANS SHOWING WIRING OF ALL DEVICES. WIRE ALL DEVICES FROM DEVICE-TO-DEVICE. DO NOT INSTALL INTERMEDIATE JUNCTION BOXES FOR T-TAPS.
- 27. FIRE ALARM CONTRACTOR SHALL BE A LICENSED STATE OF ILLINOIS FIRE ALARM CONTRACTOR HOLDING AT LEAST A NICET LEVEL 2 CERTIFICATION.
- 28. SYSTEM INSTALLATION SHALL BE TESTED AND CERTIFIED PER NFPA 72 REQUIREMENTS. SYSTEM TESTING MUST BE REVIEWED AND ACCEPTED BY THE LOCAL FIRE DEPARTMENT.
- ALL WORK SHALL BE PERFORMED BY THE COLLEGE'S FIRE ALARM INTEGRATOR OF RECORD:

FOR SYSTEM UPGRADES, PARTS AND INSTALLATION CONTACT: BRIAN SCHMID - 630.961.5900 - b.schmid@first-sec.com

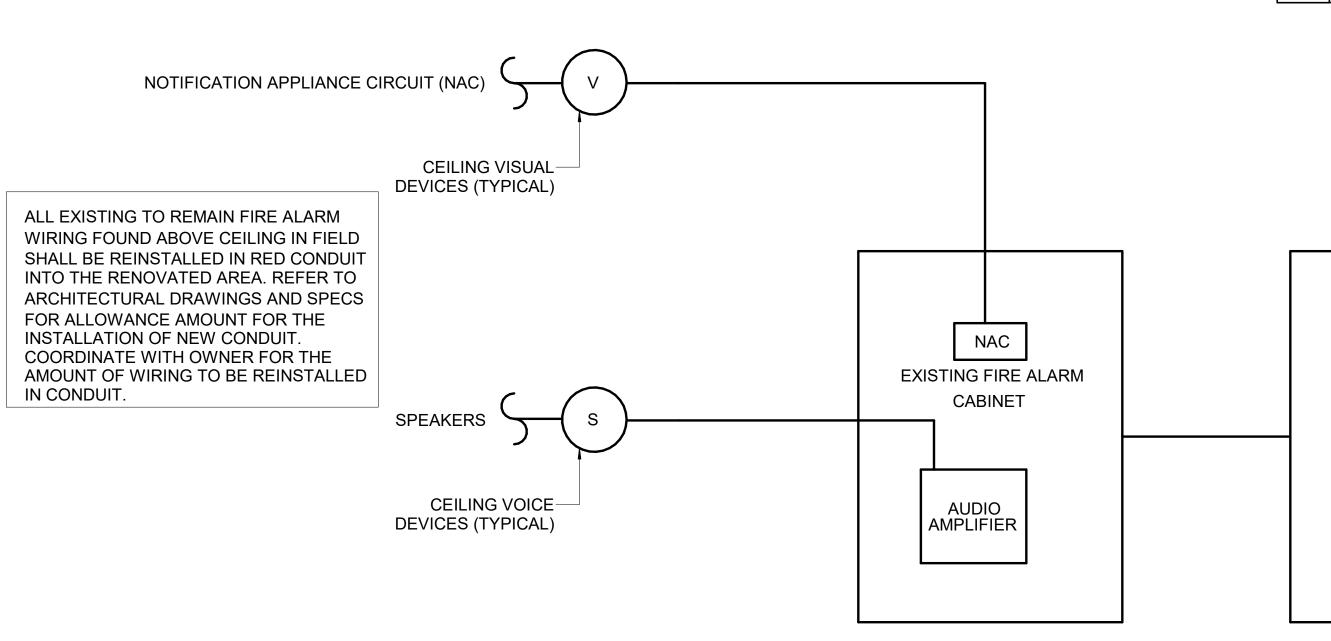
FIRST SECURITY SYSTEMS, INC. 1811 HIGH GROVE, SUITE 191, NAPERVILLE, IL 60540

FOR SYSTEM PROGRAMMING CONTACT:

STEPHEN HUPP - 847.217.7509 FIRE SAFETY & SECURITY LIFE CYCLE SALES EXECUTIVE

SIEMENS SMART INFRASTRUCTURE 585 SLAWIN CT., MOUNT PROSPECT, IL 60056

UPON COMPLETION OF ALL FIRE ALARM WORK, THE CONTRACTOR SHALL TURN OVER ALL SYSTEM PASSCODES TO THE OWNER FOR SAFEKEEPING. INCLUDE ALL DOCUMENTATION SHOWING TRANSFERRING OF PASSCODES TO THE OWNER.

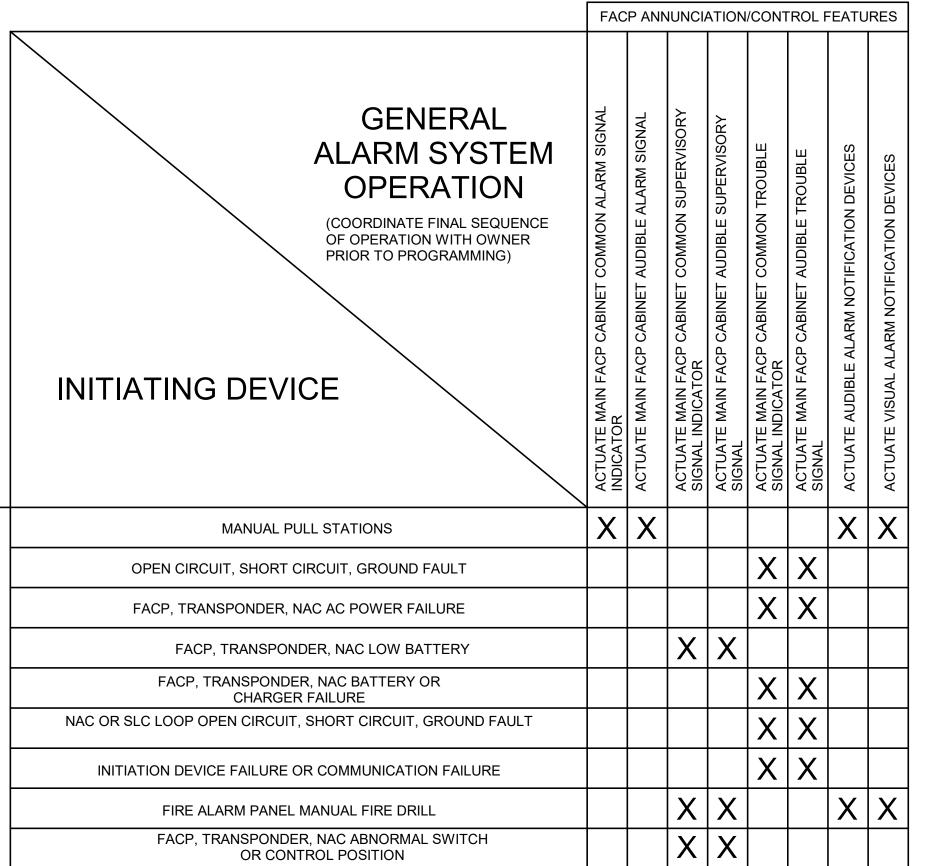


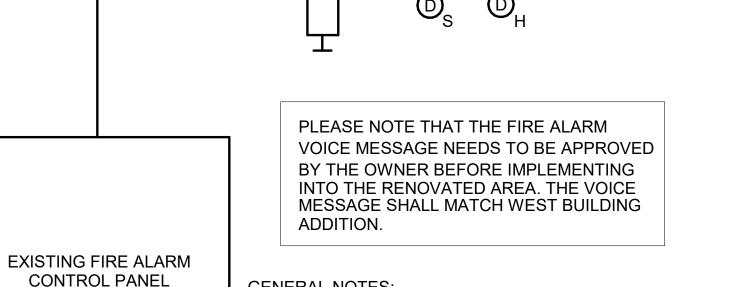
EXISTING FIRE ALARM RISER DIAGRAM - DES PLAINES



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MECHANICAL SERVICES ASSOC. CORP. 11 S. VIRGINIA STREET CRYSTAL LAKE, IL 60014





CONTRACTOR.

(SIEMENS XLS)

. THIS RISER DIAGRAM IS DIAGRAMMATICAL AND IS NOT INTENDED TO REFLECT QUANTITIES, THE NUMBER OF CIRCUITS REQUIRED, OR DISTANCES.

SINGLE LINE CIRCUIT (SLC)

- 2. THE CONTRACTOR SHALL FURNISH AND INSTALL NEW NAC AND AMP PANELS AS REQUIRED.
- 3. THE COMPLETE FIRE ALARM SYSTEM SHALL MEET ALL APPLICABLE CODES AND MANUFACTURER'S RECOMMENDATIONS.
- 4. ALL VISUAL DEVICES SHALL BE SYNCHRONIZED.
- 5. ALL +120VAC WIRING REQUIRED FOR OPERATION OF THE SYSTEM SHALL BE CONNECTED TO LOCAL 120V EMERGENCY POWER PANEL AND PROVIDED BY THE ELECTRICAL CONTRACTOR AS REQUIRED.
- 6. ALL NECESSARY RELAYS MAY NOT BE SHOWN IN THESE PLANS, BUT WHERE REQUIRED FOR PROPER OPERATION OF THE SYSTEM THEY SHALL BE FURNISHED AND INSTALLED BY THE
- 7. ALL WIRING SHALL BE INSTALLED IN RED CONDUIT ABOVE CEILINGS.
- 8. ALL ROUGH-IN FOR FIRE ALARM DEVICES SHALL BE FLUSH MOUNTED IN WALLS. CUT, PATCH, AND PAINT AS REQUIRED. NO EXPOSED RACEWAYS WILL BE ALLOWED UNLESS APPROVED BY THE ARCHITECT AND OWNER IN WRITING.

PROJECT

ADJACENCIES

RENOVATIONS

DES PLAINES CAMPUS

1600 EAST GOLF ROAD DES PLAINES, IL, 60016

KEY PLAN

ISSUE CHART

ISSUE FOR BID 021075.001

> FIRE ALARM NOTES **AND DETAILS**

> > SHEET NUMBER

TITLE

10.E51-01

PRIOR TO SUBMITTING THIS BID, THE CONTRACTOR SHALL VISIT THE PROJECT SITE AND THOROUGHLY ACQUAINT THEMSELVES WITH ALL EXISTING CONDITIONS AND DETERMINE HOW THEY EFFECTIVELY WORK, THEY SHALL INCLUDE IN THEIR BID ANY ALTERATION, RELOCATION, REPOUTING, ETC... OF EXISTING FACILITIES, WIRING, CONDUIT, PANELBOARDS REQUIRED FOR INSTALLATION OF NEW WORK. UNDER NO CIRCUMSTANCES WILL THE CONTRACTOR BE GIVEN CONSIDERATION FOR ADDITIONAL COMPENSATION DUE TO THEIR NEGLECT TO COMPLY WITH FOREGOING REQUIREMENTS.

2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE FOLLOWING CODES:

2015 INTERNATIONAL BUILDING CODE 2014 NATIONAL ELECTRICAL CODE

2015 INTERNATIONAL MECHANICAL CODE 2015 INTERNATIONAL FIRE CODE, NFPA 72 ILLINOIS ACCESSIBILITY CODE

STANDARDS AND SHALL BE U.L. LISTED.

2021 INTERNATIONAL ENERGY CONSERVATION CODE IN ADDITION TO THE ABOVE, FOLLOW ALL LOCAL CODES AND AMENDMENTS, UTILITY COMPANY REQUIREMENTS AND ANY OTHER REQUIREMENTS APPLICABLE TO THIS JOB. ELECTRICAL CONTRACTOR SHALL SUBMIT ANY REQUIRED DRAWINGS FOR APPROVAL TO ANY AGENCIES REQUIRING THEM AND OBTAIN NECESSARY PERMITS AT NO ADDITIONAL BID COSTS. ALL EQUIPMENT SHALL BE NEMA

MOUNT RECEPTACLES, DATA JACKS AND TELEPHONE JACKS AT 16" AFF TO BOTTOM UNLESS OTHERWISE INDICATED.

RECEPTACLES FOR GENERAL POWER SHALL BE NEMA 5-20R "TAMPER RESISTANT" HEAVY DUTY SPEC GRADE DUPLEX RECEPTACLE, WHITE IN COLOR UNLESS OTHERWISE DIRECTED BY THE ARCHITECT/OWNER, CONTROLLED RECEPTACLES SHALL BE NEMA 5-20R "TAMPER RESISTANT" LEGRAND TR5362 SERIES, WHITE IN COLOR UNLESS OTHERWISE DIRECTED BY THE ARCHITECT/OWNER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

REFER TO TECHNOLOGY NOTES AND DETAILS FOR ADDITIONAL INFORMATION ON DATA AND TELEPHONE JACKS

ALL SPECIAL RECEPTACLES INDICATED ON DRAWINGS BY 🕏 SHALL BE COORDINATED WITH THE OWNERS EQUIPMENT PLUG CONFIGURATION SO THAT NO CONFLICTIONS OCCUR BEFORE INSTALLATION. VERIFY WIRE SIZE AND QUANTITY WITH PLUG CONFIGURATION AS WELL (I.E. COPIER, RANGE/OVEN).

MOUNT WALL SWITCHES AT 48" AFF TO TOP. SWITCHES IDENTIFIED AS 120VOLT RATED SHALL BE 20 AMP RATED HEAVY DUTY SPEC GRADE. WHITE IN COLOR UNLESS OTHERWISE INDICATED. COORDINATE COLOR WITH ARCHITECT. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. WHEN USING LINE VOLTAGE SWITCHES, INCLUDE NEUTRAL WIRE PER CODE.

REFER TO ALL ARCHITECTURAL AND CASEWORK DRAWINGS DURING INSTALLATION OF ALL SWITCHES, RECEPTACLES, TELEPHONE JACKS, DATA JACKS, JUNCTION BOXES, CLOCKS, VISUAL STROBES/HORN DEVICES, PULL STATIONS AND OTHER DEVICES SO THAT NO CONFLICTIONS WILL BE ENCOUNTERED. INFORM ARCHITECT OF ANY CONFLICTS THAT DO OCCUR BEFORE THE INSTALLATION OF ABOVE LISTED

MOUNT CONDUIT AND ELECTRICAL DEVICES FROM THE TOP CHORD OF BAR JOISTS ONLY. DO NOT RUN CONDUITS ABOVE TOP CHORD OF BAR JOIST, THROUGH WEB OF ROOF DECKING MATERIAL ABOVE

MINIMUM SIZE OF CONDUCTORS SHALL BE #12 AWG FOR POWER AND LIGHTING BRANCH CIRCUITS. USE #10 AWG MINIMUM IF RUNS ARE OVER 75 FEET. MINIMUM SIZE FOR "EMERGENCY CIRCUITS" SUCH AS EXIT SIGN AND EMERGENCY/NIGHT LIGHTS SHALL BE MINIMUM #10 AWG. SIZE ALL CONDUCTORS IN ACCORDANCE WITH N.E.C. SECTION 310-15. MAINTAIN PROPER CONDUIT FILL CAPACITIES AND SIZE CONDUCTORS IN ACCORDANCE WITH ADJUSTMENT FACTORS LISTED IN N.E.C. 310-15 TABLE NOTE #8a (MORE THAN THREE CURRENT CARRYING CONDUCTORS IN A RACEWAY). USE MULTIPLE PARALLEL RACEWAYS TO AVOID DERATING OF CONDUCTOR CAPACITIES, OTHERWISE INCREASE SIZE OF CONDUCTORS SO AS TO FOLLOW N.E.C. REQUIREMENTS.

9. ELECTRICAL CONTRACTOR SHALL SIZE ALL CONDUCTORS OVER 75 FEET SO AS TO MAINTAIN A VOLTAGE DROP EQUAL TO OR LESS THAN 2%.

10. BALANCE ALL PHASE WIRES WITHIN 5%.

11. INSTALL A SEPARATE DEDICATED NEUTRAL CONDUCTOR FOR EACH PHASE OF BOTH LIGHTING AND POWER MULTI-WIRE BRANCH CIRCUITS. IF A MULTI-WIRE BRANCH CIRCUIT CONTAINS THREE PHASE WIRES, THE CIRCUIT WILL REQUIRE THREE DEDICATED NEUTRALS. THE USE OF MULTI-POLE BRANCH BREAKERS TO ELIMINATE NEUTRAL CONDUCTORS IS NOT ALLOWED.

12. FOR ALL RECEPTACLES AND LIGHTING FIXTURES THAT DO NOT HAVE CIRCUIT INFORMATION PROVIDED, THE CONTRACTOR WILL CONNECT THESE DEVICES TO THE NEAREST AVAILABLE POWER PANEL SPARE CIRCUIT (OF MATCHING VOLTAGE) FOR THE DEVICE. CONTRACTOR ALSO HAS THE OPTION TO CONNECT TO THE LINE SIDE OF THE NEAREST AVAILABLE CIRCUIT IN THE AREA OF SUFFICIENT SIZE, PROVIDED THERE IS NO DETRIMENTAL EFFECTS IN DOING SO TO THE CIRCUIT CONNECTED TO.

13. INSTALL GROUNDING WIRE TO ALL DEVICES. USE GREEN WIRE. CONNECT THE GROUND WIRE TO A DEDICATED GROUND TERMINAL IN ALL DEVICE BOXES AND TO THE DEVICE GROUNDING WIRE.

14. STUB CONDUITS FOR ALL TELEPHONE JACKS, DATA JACKS, VIDEO JACKS, ETC... OUT TO ABOVE ACCESSIBLE CORRIDOR CEILING OR TO CORRIDOR CABLE TRAY IF PRESENT. INSTALL END BUSHINGS AND FITTINGS ON END OF EACH CONDUIT STUB IN ORDER TO PROTECT CABLING.

15. ALL JUNCTION BOXES ABOVE CEILINGS SHALL HAVE PANEL AND CIRCUIT INFORMATION IDENTIFIED ON OUTSIDE OF COVERPLATE. ALL RECESSED WALL MOUNTED/FLOOR MOUNTED JUNCTION BOXES SHALL

HAVE PANEL AND CIRCUIT INFORMATION IDENTIFIED ON THE INSIDE OF THE JUNCTION BOX TOWARD FRONT OF BOX LIP SO AS TO BE VISIBLE WITHOUT REMOVING WIRING DEVICE.

16. ALL JUNCTION BOXES INSTALLED ABOVE LAY-IN CEILINGS MUST BE INSTALLED BELOW FIREPROOF/GYPSUM CEILING. BOXES MUST NOT BE INSTALLED WITHIN GYPSUM CEILING MATERIAL. ALL CONDUIT PENETRATIONS THROUGH GYPSUM CEILING MUST BE FIREPROOFED/PATCHED.

17 FURNISH AND INSTALL NEMA 3R FLECTRICAL DEVICES FOR ALL EXTERIOR LOCATIONS

OR WITHIN 6" OF ROOF DECK SO AS TO PREVENT DAMAGE FROM ROOFING NAILS.

18. "EMT" CONDUIT WILL NOT BE INSTALLED IN CONCRETE SLABS. ALL CONDUIT WILL BE INSTALLED PER SPECIFICATION SECTION 260533.

19. ALL UNDERGROUND WIRING WILL BE IN CONDUIT AND WILL BE INSTALLED PER N.E.C. AND LOCAL CODES AND COORDINATED IN FIELD PRIOR TO INSTALLATION.

20. SLEEVE AND FIREPROOF ALL PENETRATIONS THROUGH WALLS AND FLOORS. ALL CORING BY CONTRACTOR SHALL BE COORDINATED WITH ARCHITECT. PROVIDE AND INSTALL EXPANSION FITTINGS ON ALL CONDUITS AT BUILDING EXPANSION JOINTS. REFER TO ARCHITECTURAL.

21. CIRCUIT BREAKERS SERVING FIRE ALARM CONTROL PANEL, SECURITY CONTROL PANEL, EMERGENCY LIGHTS/NIGHT LIGHTS, EXIT SIGNS AND POWER FOR SHUNT TRIP BREAKERS SHALL HAVE LOCK OUT DEVICE INSTALLED ON BREAKER TO PREVENT ACCIDENTAL TURN OFFS.

22. ALL NEW RECESSED PANELS BEING INSTALLED SHALL HAVE A MINIMUM OF (3) SPARE 3/4" CONDUITS STUBBED UP IN WALL AND DOWN BELOW FLOOR LINE WHEN LOWER LEVEL IS PRESENT TO ABOVE ACCESSIBLE CEILING FOR FUTURE USE.

23. ALL HOUSEKEEPING PADS INDICATED ON DRAWINGS SHALL BE 4" THICK REINFORCED CONCRETE. REFER TO ARCHITECTURAL FOR PARTIAL DETAIL.

24. FOR EXISTING ELECTRICAL PANELBOARDS AFFECTED BY NEW WORK, CONTRACTOR SHALL REVIEW EXISTING PANEL CARD DIRECTORIES AND VERIFY CORRECTNESS BY TRACING BRANCH CIRCUITS. UPDATE AND RECORD INFORMATION ON NEW TYPED PANEL CARD DIRECTORY. VERIFY CURRENT ROOM NAMES AND NUMBERS IN THE FIELD. DO NOT USE ROOM NAMES AND NUMBERS INDICATED ON THE

25. INSTALL BLANK PREFINISHED STAINLESS STEEL COVERPLATES ON ALL JUNCTION BOXES IN FINISHED AREAS NO LONGER USED AND CREATED BY DEMOLITION. USE BLANK GALVANIZED STEEL COVERPLATES FOR ALL BOXES ABOVE CEILINGS OR IN EXPOSED NON-FINISHED AREAS.

26. ALL OUTLETS, VIDEO JACKS, CLOCKS, PROGRAM BELLS, FIRE ALARM DEVICES, SECURITY DEVICES, SPEAKERS, ETC., CONFLICTING WITH NEW CEILINGS/CEILING HEIGHTS SHALL BE RELOCATED AT/OR BELOW NEW CEILINGS, WHICHEVER APPLIES. CONTRACTOR SHALL FURNISH AND INSTALL NEW JUNCTION BOXES, RACEWAY AND WIRING AS REQUIRED FOR EXTENDING SYSTEMS. ALL EXPOSED

27. WHERE EXISTING CONDUIT AND WIRE CONFLICTS WITH NEW LIGHT FIXTURES BEING INSTALLED, CONTRACTOR SHALL REROUTE AROUND NEW LIGHT FIXTURE. EXTEND CONDUIT AND WIRING AS REQUIRED.

28. CONTRACTOR SHALL NOT DISTURB EXISTING COMPUTER/DATA CABLING UNLESS OTHERWISE INDICATED ON DRAWINGS.

29. ANY PORTIONS OF EXISTING CEILINGS TO BE REMOVED BY CONTRACTOR FOR INSTALLATION OF THEIR WORK SHALL BE RETURNED TO THEIR ORIGINAL CONDITION. MATCH EXISTING CEILING MATERIAL PATCH AND PAINT AS REQUIRED. CONTRACTOR SHALL ARCHIVE AND DOCUMENT ALL EXISTING CEILING CONDITIONS ELECTRONICALLY PRIOR TO BEGINNING WORK. IF ANY DAMAGE IS FOUND THEY SHALL BRING IT TO THE ATTENTION OF THE OWNER IN WRITING PRIOR TO PERFORMING WORK. IF THIS DOCUMENTATION IS NOT PROVIDED THE CONTRACTOR IS ASSUMING THE LIABILITY FOR REPLACING ALL DAMAGED TILES DISCOVERED AFTER THE COMPLETION OF THE PROJECT. ALL DAMAGED TILES FOUND WILL BE REPLACED AT THE CONTRACTORS EXPENSE.

30. ALL EXPOSED RACEWAYS INSTALLED IN FINISHED AREAS WILL ONLY BE ALLOWED WHEN APPROVED BY THE ARCHITECT AND THEN SHALL BE OF THE WIREMOLD TYPE. EXPOSED CONDUIT WILL ONLY BE INSTALLED BY PERMISSION OF THE ARCHITECT. ALL EXPOSED CONDUIT INSTALLED IN FINISHED AREAS SHALL BE PAINTED TO MATCH SURROUNDING AREAS.

31. CONTRACTOR SHALL REFER TO ARCHITECTURAL CUTTING AND PATCHING SPECIFICATIONS FOR INFORMATION REGARDING PERFORMANCE STANDARDS AND PROCEDURES.

32. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LIGHT FIXTURE ORIENTATION AND PLACEMENT. VERIFY EXACT LOCATION OF ALL CEILING DEVICES (I.E. FIRE ALARM DEVICES, CEILING SPEAKERS) WITH ARCHITECTURAL REFLECTED CEILING PLANS FOR COORDINATION PRIOR TO INSTALLATION.

ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL LIGHT FIXTURE MOUNTING HARDWARE INCLUDING PENDANTS, CANOPIES, TONG HANGERS, FLANGES, SAFETY CHAINS AND UNI-STRUT. WHEN PENDENT MOUNTING CONTINUOUS ROWS OF 4 FOOT FIXTURES, CONTRACTOR SHALL UTILIZE UNI-STRUT. PAINT OUT PENDANTS AND UNI-STRUT TO MATCH LIGHT FIXTURES. WIPE OIL FROM PENDANTS AND UNI-STRUT WITH CHEMICAL CLEANER PRIOR TO PAINTING. LIGHT FIXTURES INSTALLED IN A GRID SHALL BE SUPPORTED FROM THE STRUCTURE WITH A MINIMUM OF (4) PENCIL ROD WIRES PER EACH FIXTURE. DO NOT SUPPORT FIXTURE FROM CEILING GRID.

34. ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT ELECTRICAL REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH THE MECHANICAL CONTRACTOR AND MECHANICAL EQUIPMENT SHOP DRAWINGS PRIOR TO ORDERING CIRCUIT BREAKERS, DISCONNECT SWITCHES, STARTERS, FUSES, CONDUIT AND WIRING, ETC... ASSOCIATED WITH CONNECTION OF MECHANICAL EQUIPMENT TO ENSURE A COMPLETE WORKING INSTALLATION.

35. ALL FINAL CONNECTIONS MADE WITH FLEXIBLE CONDUIT FEEDING MECHANICAL EQUIPMENT SHALL BE LIQUIDTIGHT, FLEXIBLE METAL CONDUIT AND SHALL HAVE GROUNDING WIRE INSTALLED.

36. ALL OVERCURRENT PROTECTION AND WIRE SIZING FOR HVAC EQUIPMENT WILL BE COORDINATED BY THE CONTRACTOR WITH DRAWINGS AND MANUFACTURERS RECOMMENDATIONS.

THE CONTRACTOR SHALL FURNISH AND INSTALL JUNCTION BOX AND CONDUIT STUBBED UP TO ABOVE CEILING FOR MECHANICAL CONTRACTORS THERMOSTAT. MOUNT AT 48" TO TOP. REFER TO MECHANICAL DRAWINGS AND COORDINATE WITH TEMPERATURE CONTROL CONTRACTOR FOR ALL THERMOSTAT LOCATIONS. FOR EXISTING WALLS WHERE SURFACE MOUNTING IS REQUIRED. CONTRACTOR SHALL UTILIZE METALLIC WIREMOLD RACEWAY. IN EXISTING FINISHED AREAS WHERE NO LAY-IN CEILINGS ARE PRESENT, CONTRACTOR SHALL CONNECT THERMOSTAT TO MECHANICAL DEVICE WITH A CONTINUOUS RACEWAY SYSTEM

THE CONTRACTOR SHALL FURNISH AND INSTALL JUNCTION BOX AND CONTINUOUS CONDUIT SYSTEM TO MECHANICAL UNIT SERVING FOR MECHANICAL CONTRACTORS THERMOSTAT AND WIRING. MOUNT JUNCTION BOX AT 48" TO TOP, REFER TO MECHANICAL DRAWINGS AND COORDINATE WITH TEMPERATURE CONTROL CONTRACTOR FOR ALL THERMOSTAT LOCATIONS, FOR EXISTING WALLS WHERE SURFACE MOUNTING IS REQUIRED, CONTRACTOR SHALL UTILIZE METALLIC WIREMOLD RACEWAY. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTION OF LINE VOLTAGE THERMOSTAT TO MECHANICAL UNIT SERVING, FURNISH AND INSTALL REQUIRED WIRING, COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION.

38. THE ELECTRICAL CONTRACTOR SHALL REVIEW THE ARCHITECTURAL SPECIFICATIONS/DRAWING DOOR HARDWARE SCHEDULE FOR ALL ELECTRICAL REQUIREMENTS. INCLUDE CONDUIT, WIRING AND DEVICES AS REQUIRED FOR OPERATION OF LISTED DEVICES.

39. ELECTRICAL CONTRACTOR SHALL INCLUDE IN THEIR BID, AN ALLOWANCE FOR FURNISHING AND INSTALLING THE FOLLOWING ADDITIONAL DEVICES NOT SHOWN ON DRAWINGS: (2) DUPLEX RECEPTACLES (1) LIGHT SWITCH

(1) LIGHT FIXTURE - INSTALLATION ONLY CONTRACTOR SHALL INCLUDE ASSOCIATED BACKBOXES, COVERPLATES, CONDUIT AND WIRING FOR CONNECTION OF ABOVE ITEMS FOR AVERAGE LENGTH OF A 50 FOOT RUN **GENERAL ELECTRICAL DEMOLITION NOTES:**

VERIFY EXISTING CONDITIONS AND LOCATIONS IN FIELD PRIOR TO SUBMITTING PROPOSAL. FAILURE TO DO SO SHALL NOT RELIEVE CONTRACTOR FROM PERFORMING THE WORK REQUIRED LINDER THIS CONTRACT

MAKE NECESSARY MODIFICATIONS AND ADJUSTMENTS TO ALL ELECTRICAL ITEMS AND EQUIPMENT, BOTH NEW AND EXISTING, AS MAY BE REQUIRED BY THESE ALTERATIONS AND

3. DISCONNECT AT SOURCE AND REMOVE EXISTING ELECTRICAL MATERIALS AND EQUIPMENT AND ALL OTHER ELECTRICAL ITEMS WHICH ARE RENDERED OBSOLETE BY THESE ALTERATIONS AND ADDITIONS. THESE ARE THE PROPERTY OF THE OWNER AND SHALL EITHER BE REMOVED FROM

THE SITE OR RETURNED TO THE OWNER'S STOCK AT THE DISCRETION OF THE OWNER. DISCONNECT, REMOVE AND RELOCATE EXISTING ELECTRICAL MATERIALS AND EQUIPMENT, AND ALL OTHER ELECTRICAL ITEMS WHICH INTERFERE OR ARE INTERFERED WITH, OBSTRUCT OR ARE OBSTRUCTED BY THESE LOCATIONS AS DIRECTED. RECONNECT SUCH ITEMS IN PROPER

5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE EXISTING BUILDING IN ELECTRICAL OPERATION AT ALL TIMES DURING THE ENTIRE CONSTRUCTION PERIOD. IF IT IS ABSOLUTELY NECESSARY TO SHUT DOWN THE FACILITY AT ANY TIME, THE CONTRACTOR SHALL CONSULT WITH THE OWNER AND MAKE ARRANGEMENTS TO DO SO AT THE OWNER'S CONVENIENCE. PRIOR NOTICE SHALL BE GIVEN.

6. COORDINATE WORK WITH OTHER TRADES TO AVOID CONFLICTS AND DELAYS.

OPERATING CONDITION AT NEW LOCATIONS.

7. ALL CUTTING AND PATCHING AS REQUIRED FOR NEW WORK & ABANDONED DEVICES TO BE BY THE CONTRACTOR.

WHERE EXISTING CONDUITS HAVE BEEN MADE OBSOLETE BY THESE ALTERATIONS AND ADDITIONS AND IT IS IMPRACTICAL TO REMOVE SAME, CONTRACTOR SHALL: CUT CONDUITS OFF AT SLAB OR WALL LINE CAP ALL OBSOLETE CONDUIT.

9. WHERE THE EXISTING WIRING & CONDUIT SERVING ANY EXISTING ELECTRICAL EQUIPMENT IN AREA OF EXISTING BUILDING NOT BE ALTERED IS INTERFERED WITH, CONTRACTOR SHALL REROUTE AND RECONNECT ALL SUCH CONDUIT & WIRING.

10. THE LIGHTING CONTRACTOR MUST HOLD AN ICC ENERGY EFFICIENCY INSTALLER CERTIFICATION IN ORDER TO PERFORM LIGHTING WORK THAT WILL ALLOW THE OWNER TO OBTAIN COMED ENERGY EFFICIENCY INCENTIVES, NO EXCEPTIONS FOR DEMOLITION OF LIGHT FIXTURES, CONTRACTOR MUST FOLLOW ALL E.P.A. REQUIREMENTS FOR DISPOSAL OF FLUORESCENT LAMPS, BALLASTS AND BATTERIES. HAUL LAMPS, BALLASTS AND BATTERIES TO AN E.P.A. APPROVED DISPOSAL SITE, USE D.O.T. APPROVED CONTAINMENT FOR TRANSFER OF LAMPS. BALLASTS AND BATTERIES. PROVIDE PROPER PAPER WORK TO THE OWNER SHOWING LEGAL DISPOSAL OF LAMPS, BALLASTS AND BATTERIES. FIXTURE HOUSINGS SHALL BE DISPOSED OF AS REQUIRED. CONTRACTOR SHALL KEEP AND INVENTORY OF EXISTING AND NEW FIXTURES AND ASSIST THE OWNER WITH THE PROPER PAPER WORK AND SUBMISSION OF PAPER WORK TO COMED. THE FOLLOWING INVENTORY ITEMS SHALL BE PROVIDED FOR EACH FIXTURE TYPE: FIXTURE TYPE: RECESSED, SURFACE, PENDANT, ETC. LAMPS: QUANTITY OF EACH TYPE, LAMP TYPE, LAMP VOLTAGE, LAMP WATTAGE. BALLASTS: QUANTITY OF EACH TYPE, BALLAST TYPE, BALLAST VOLTAGE, BALLAST WATTAGE RATINGS.

NOTES RE: INSPECTING EXISTING BUILDING:

THE CONTRACTORS SHALL VISIT AND INSPECT THE EXISTING BUILDING AND SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ACTUAL JOB CONDITIONS BEFORE SIGNING CONTRACTS. NO EXTRAS WILL BE ALLOWED FOR WORK WHICH MIGHT HAVE BEEN REASONABLY FORESEEN BY AN INSPECTION OF THESE PREMISES

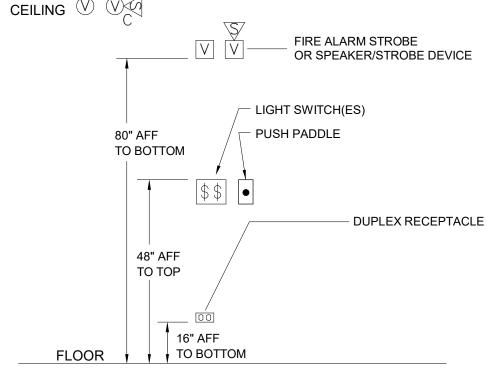
BATTERIES: QUANTITY OF EACH TYPE, BATTERY TYPE, BATTERY VOLTAGE, BATTERY CAPACITY.

WHILE THE SIZE AND LOCATION OF NEW WORK AND EQUIPMENT IN THE EXISTING BUILDING HAS REEN INDICATED ON THE DRAWINGS AS ACCURATELY AS POSSIBLE, CONTRACTOR SHALL ADJUST HIS WORK AS REQUIRED TO AVOID EXISTING DUCTS, PIPES, CONDUITS AND BEAMS NOT SHOWN ON PLANS. CONTRACTOR SHALL ADAPT HIS WORK TO MEET ALL ACTUAL CONDITIONS ON THE EXISTING PREMISES.

CONTRACTOR SHALL INSPECT THE PREMISES AND MAKE A DETAILED EXAMINATION OF ALL LOCATIONS WHERE NEW WORK IS TO BE INSTALLED AND SHALL EXAMINE EXISTING PIPING, CONDUITS, STRUCTURAL SUPPORTING BEAMS, ETC

4. CONTRACTOR AFTER INSPECTING THE PREMISES AND THE DRAWINGS SHALL CALL TO THE ATTENTION OF THE ARCHITECT ANY LACK OF ANY NECESSARY SPACE OR CLEARANCE REQUIRED BY THE VARIOUS EQUIPMENT BEFORE CONTRACT IS SIGNED. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES NECESSARY IF HE NEGLECTS TO DO SO.

ALL DEVICES SHOWN DOTTED, DASHED, OR INDICATED WITH A PLAN NOTE (INDICATING REMOVAL) ARE EXISTING TO BE REMOVED. ALL DEVICES SHOWN SOLID ARE EXISTING TO REMAIN. IF THE CONTRACTOR DEEMS IT NECESSARY FOR A DEVICE TO BE REMOVED, THEY SHALL COORDINATE IN FIELD WITH THE ARCHITECT/ENGINEER FOR APPROVAL.



- ALIGN DEVICES VERTICALLY WHERE POSSIBLE. - DEVICE BACK BOXES SHALL MATCH FACEPLATE CONFIGURATION (I.E. SINGLE-GANG, TWO-GANG, ETC...). - DEVICE ORIENTATION (HORIZONTAL OR VERTICAL) SHALL BE COORDINATED WITH THE OWNER IN ORDER TO CONFORM TO OWNERS PREFERENCE AND STANDARDS. - RECEPTACLES MOUNTED VERTICALLY SHALL HAVE THE GROUND PIN UP UNLESS

OTHERWISE DIRECTED BY THE OWNER. RECEPTACLES MOUNTED HORIZONTALLY SHALL HAVE NEUTRAL BLADE UP UNLESS OTHERWISE DIRECTED BY THE OWNER. - REFER TO GENERAL ELECTRICAL, FIRE ALARM, INTERCOM/CLOCK, SOUND SYSTEM AND TECHNOLOGY NOTES FOR ADDITIONAL INFORMATION.

ELECTRICAL DEVICE MOUNTING HEIGHT DETAIL (UNLESS OTHERWISE INDICATED ON DRAWINGS

ALL RACEWAYS TO BE CONCEALED INSIDE OF WALLS WHERE POSSIBLE, ALL EXISTING WALLS SHALL BE FISHED WITH FLEXIBLE METAL CONDUIT "FMC" TO CONCEAL WIRING UP TO ABOVE CEILING. DEVICES SHALL BE FLUSH MOUNTED IN ALL NEW AND EXISTING WALLS UNLESS THERE IS A CONDITION THAT DOES NOT ALLOW FOR THIS COORDINATE WITH ARCHITECT. CUT, PATCH, AND PAINT TO MATCH SURROUNDING AREA. WHERE UNABLE TO FISH WALL, USE METALLIC WIREMOLD RACEWAY SURFACE MOUNTED ON WALL UP TO ABOVE CEILING WHEN APPROVED BY ARCHITECT. COLOR SELECTED BY THE OWNER.

CITY OF DES PLAINES PERMIT NOTES:

THERE SHALL BE NO BACK-TO-BACK JUNCTION BOXES INSIDE A FIRE-RATED WALL UNLESS A LISTED AND APPROVED METHOD ENSURES THE INTEGRITY OF THE FIRE-RATED WALL, PURSUANT TO THE NEC.

CONDUCTORS AND CONDUITS THAT ARE UNUSED OR ABANDONED SHOULD BE

REMOVE ALL ABANDONED CABLES AND COMMUNICATION CABLES FROM THE WORK AREA.

ALL RECEPTACLES AND SWITCHES SHOULD BE RATED FOR TWENTY AMPS (20A). THIS IS DONE TO PREVENT NUISANCE TRIPPING OR OVERLOADING OF CIRCUIT BREAKERS, WHICH CAN CAUSE SUDDEN POWER OUTAGES OR **ELECTRICAL FIRES.**

REMOVED TO A SECURED JUNCTION BOX OR PANEL

ELECTRICAL INSPECTOR SHALL FIELD VERIFY A LABEL ON NEW ELECTRICAL EQUIPMENT THAT WARNS QUALIFIED PERSONS OF POTENTIAL ARC FLASH HAZARDS IF THAT REQUIMENT IS LIKELY TO REQUIRE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE WHILE ENERIZED.

ELECTRICAL INSPECTOR SHALL FIELD VERIFY THE EXIT AND EMERGENCY LIGHTING ONCE ALL EQUIPMENT, FURNITURE, ETC. ARE IN PLACE. THIS INCLUDES VERIFICATION THAT THERE IS EMERGENCY LIGHTING PROVIDED AT EXTERIOR OF EGRESS DISCHARGE LOCATIONS. ADDITIONAL EXIT SIGNS AND EMERGENCY LIGHTING FIXTURES MAY BE REQUIRED AT THE DISCRETION OF THE FIELD INSPECTOR.

LABEL ALL RTU'S, EXHAUST FANS, HEATING UNITS, AND CONDENSER UNIT OF THEIR POWER SOURCE LOCATION AND CIRCUIT NUMBER.

WNEREVER CIRCUIT CONDUCTORS ARE SPLICED IN A JUNCTION BOX, ANY ASSOCIATED EQUIPMENT GROUNDING CONDUCTORS SHALL BE BONDED ("PIGTAILED") TO THE BOX.

WHEN CORDS OR CABLES ARE DROPPED FROM THE CEILING, THEY MUST BE IN COMPLIANCE WITH NEC 400/10(B). IT IS REQUIRED THAT THE CORD OR CABLE CONFORM TO TABLE 400.5(A)(1) FOR ITS AMPACITY.

J. AT THE TIME OF INSPECTION, HAVE ALL MANUFACTURER'S SPECIFCIATION SHEETS AVAILABLE FOR THE LOCAL INSPECTOR.

GENERAL ELECTRICAL SYMBOLS SYMBOL DESCRIPTION SYMBOL DESCRIPTION SYSTEMS PANEL WALL SWITCH JUNCTION BOX RECESSED 2 X 2 LIGHT FIXTURE GROUND FAULT INTERUPTER \Leftrightarrow GFI EMERGENCY/ NIGHT LIGHT TAMPER RESISTANT EXISTING DEVICE TO REMAIN (OS) OCCUPANCY SENSOR (CEILING) MOUNTED ABOVE COUNTER FIRE ALARM VISUAL STROBE CEILING MOUNTED EMERGENCY FIXTURE SPEAKER/STROBE DEVICE CEILING MOUNTED NIGHT LIGHT FIXTURE INTERCOM/PA SYSTEM SPEAKER PUSH PADDLE

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> **PROJECT ADJACENCIES** RENOVATIONS

KEY PLAN

ISSUE CHART

GENERAL ELECTRICAL

SHEET NUMBER

10.E61-01