



LEHIGH ACRES PARK AND RIDE FACILITY

LEE COUNTY, FLORIDA

GENERAL NOTES:

PROJECT DESCRIPTION: 7928 G.S.F. ONE STORY, TRANSFER STATION COMPRISING OF AN BUILDING AND 4 BUS BAYS
 TYPE - II B CONSTRUCTION
 USE AND OCCUPANCY CLASSIFICATION:
 PROPOSED FINISH FLOOR ELEVATION:

PROJECT ZONING:

PROJECT STRAP #: 304427090000A001A

PROJECT ADDRESS: 1121 VILLAGE LAKES BLVD, LEHIGH ACRES, FLORIDA 33972

THESE PLANS WERE PREPARED TO COMPLY WITH:
 THE 2020 FLORIDA BUILDING CODE, BUILDING, 7TH EDITION
 THE 2020 FLORIDA BUILDING CODE, ACCESSIBILITY, 7TH EDITION
 THE 2020 FLORIDA BUILDING CODE, PLUMBING, 7TH EDITION
 THE 2020 FLORIDA BUILDING CODE, MECHANICAL, 7TH EDITION
 THE 2017 NATIONAL ELECTRIC CODE, (NFPA 70)
 THE 2020 FLORIDA FIRE PREVENTION CODE, (2018 NFPA 1, FIRE CODE AND 2018 NFPA 101, LIFE SAFETY CODE)

NOTES TO THE PLANS EXAMINER:

- THERE SHALL BE NO HIGH PILED COMBUSTIBLE STOCK.
- THIS BUILDING IS ACCESSIBLE TO THE PHYSICALLY HANDICAPPED.
- MAXIMUM ALLOWABLE HEIGHT PER CITY OF FORT MYERS CODE OF ORDINANCES = 45'-0"
 PROPOSED MAXIMUM CANOPY HEIGHT = 28'
- MAXIMUM NUMBER OF STORIES = 3 PER 2020 FBC TABLE 504.4
 PROPOSED STORIES = UL
- MAXIMUM ALLOWABLE AREA PER STORY PER 2020 FBC TABLE 506.2 = UL
 PROPOSED MAXIMUM AREA PER STORY = 9,607 S.F. (SEE BREAKDOWN THIS SHEET)

EGRESS COMPONENTS:

ALL ENTRY / EXIT DOORS AR 3'-0" WIDE (34" CLEAR).
 EGRESS CAPACITY = 170 OCCUPANTS AT EACH DOOR (.2" PER OCCUPANT PER 2020 FBC 1005.3.2)

MAXIMUM EXIT ACCESS TRAVEL DISTANCE = 200' PER 2020 FBC TABLE 1017.2 (NON-SPRINKLERED)
 MAXIMUM TRAVEL DISTANCE = 27'-3" REFER TO OVERALL FLOOR PLANS FOR EGRESS DISTANCES
 THIS PROJECT IS ACCESSIBLE TO THE PHYSICALLY HANDICAPPED
 FIRE EXTINGUISHERS ARE PROVIDED PER NFPA 10



PROJECT LOCATION



GROSS AREA BREAKDOWN

FIRST FLOOR:

BUILDING

LOUNGE: 199 S.F.
 TOILET: 54 S.F.
 ELECTRICAL: 39 S.F.
 I.T.: 39 S.F.
 CUSTODIAL: 16 S.F.
 MENS RESTROOM: 111 S.F.
 WOMENS RESTROOM: 135 S.F.

COVERED OUTDOOR SEATING: 8975 S.F.
 UNCOVERED OUTDOOR: 54 S.F.

TOTAL GROSS S.F. INCLUDING BUILDING AND COVERED SEATING AREA: 9622 S.F.

SHEET INDEX

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FA101	FLOOR PLAN - FIRE ALARM
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T001	TECHNOLOGY SYMBOLS, LEGENDS, AND NOTES
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T003	RESPONSIBILITIES MATRIX
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T102	ENLARGED SITE PLAN - TECHNOLOGY
T201	FLOOR PLAN - TECHNOLOGY
T701	TECHNOLOGY DETAILS

ARCHITECT:

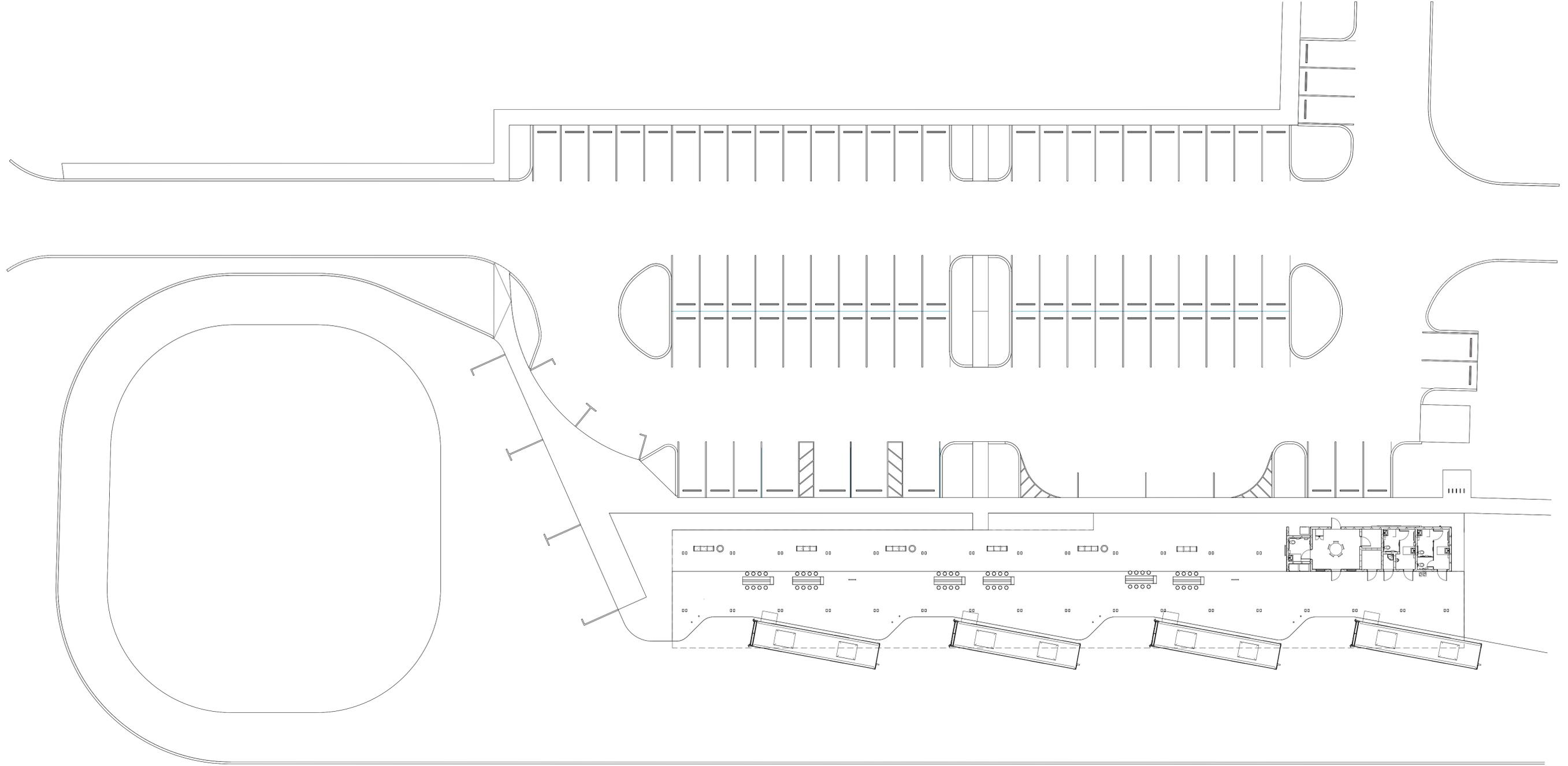
PARKER / MUDGETT / SMITH ARCHITECTS, INC.
 2136 MCGREGOR BOULEVARD
 FORT MYERS, FLORIDA 33901
 239.332.1171

STRUCTURAL:

BOB RUDE STRUCTURES
 10461 SIX MILE CYPRESS PKWY
 FORT MYERS, FLORIDA 33966
 239.277.7771

MEP:

TLC ENGINEERING SOLUTIONS
 13099 S CLEVELAND AVE SUITE 500
 FORT MYERS, FLORIDA 33907
 239.275.4240



① PARTIAL ARCHITECTURAL SITE PLAN
1/16" = 1'-0"



REVISIONS		
No.	Description	Date

FLORIDA BUILDING CODE - ACCESSIBILITY 7TH EDITION (2020)

THIS PROJECT IS DESIGNED TO BE ACCESSIBLE TO THE PHYSICALLY HANDICAPPED.

FLORIDA BUILDING CODE - PLUMBING 7TH EDITION (2020)

CLASSIFICATION: A-5 528 TOTAL OCCUPANTS (264 MALE OCCUPANTS & 264 FEMALE OCCUPANTS)

	REQUIRED	PROVIDED
WATER CLOSETS: MALE 1/500 = 264/500 = .53 = 1	1	2 (1 WATER CLOSET + 1 URINAL)
WATER CLOSETS: FEMALE 1/500 = 264/500 = .53 = 1	1	2
LAVATORIES: MALE 1/750 = 264/750 = .35 = 1	1	2
LAVATORIES: FEMALE 1/750 = 264/750 = .35 = 1	1	2
DRINKING FOUNTAINS 1/1000 = 527/1000 = .53 = 1	1	1 HI - LOW
SERVICE SINK	1	1 (MOP SINK)

CLASSIFICATION: B 4 TOTAL OCCUPANTS (2 MALE OCCUPANTS & 2 FEMALE OCCUPANTS)

	REQUIRED	PROVIDED
WATER CLOSETS: MALE 1/25 = 4/25 = 0.16 = 1	1	1
WATER CLOSETS: FEMALE 1/25 = 4/25 = 0.16 = 1	1	1
LAVATORIES: MALE 1/40 = 4/40 = 0.1 = 1	1	2
LAVATORIES: FEMALE 1/40 = 4/40 = 0.1 = 1	1	2
DRINKING FOUNTAINS 1/100 = 1/100 = 0.1 = 1	1	1 HI - LO
SERVICE SINK	1	1 (MOP SINK)

2020, 7TH EDITION OF THE FLORIDA FIRE PREVENTION CODE, INCLUDING 2021 EDITIONS NFPA 1 & 101 WITH FLORIDA SPECIFIC REQUIREMENTS

THE CANOPY OF THIS FACILITY IS AN "OPEN STRUCTURE" AS DEFINED BY NFPA 101 3.3.271.6

CHAPTER 6 CLASSIFICATION OF OCCUPANCY = ASSEMBLY PER 6.1.2.1

- CHAPTER 7 MEANS OF EGRESS
- 7.2.1.2.3.2 DOOR OPENINGS IN A MEANS OF EGRESS SHALL BE A MINIMUM OF 32" CLEAR WIDTH.
 - TABLE 7.3.3.1 - EGRESS WIDTH PER OCCUPANT SERVED (DOORS = 0.2 INCHES PER OCCUPANT)
 - TABLE 7.3.1.2 OCCUPANT LOAD FACTOR, REFER TO THE PLANS FOR THE OCCUPANCY LOADS.
 - 7.8 ILLUMINATION OF MEANS OF EGRESS - SEE THE LIFE SAFETY PLAN AND THE ELECTRICAL PLANS FOR EXIT LIGHT LOCATIONS.

FLORIDA BUILDING CODE - BUILDING 7TH EDITION (2020)

CHAPTER 3 - OCCUPANCY CLASSIFICATION: GROUP A-5 ASSEMBLY, WITH AND ACCESSORY GROUP B - BUSINESS OCCUPANCY

CHAPTER 5 - GENERAL BUILDING HEIGHTS & AREAS

TABLE 504:

	ALLOWABLE	PROPOSED
BUILDING HEIGHT	UL	+/- 21'-0"
BUILDING STORIES	UL	1
BUILDING AREA PER STORY	UL	9,612 SF

BUILDING AREA BREAKDOWN
592 GROSS SF ENCLOSED BUILDING
9020 GROSS SF UNENCLOSED

CHAPTER 6 - TYPES OF CONSTRUCTION
SECTION 602 - CONSTRUCTION CLASSIFICATION: TYPE II-B
TABLE 601 - FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (TYPE II-B)

	REQUIRED	PROVIDED
PRIMARY STRUCTURAL FRAME	0	0
BEARING WALLS - EXTERIOR (TABLE 602)	0	0
BEARING WALLS - INTERIOR	0	0
NONBEARING WALLS AND PARTITIONS - EXTERIOR (TABLE 602)	0	0
NONBEARING WALLS AND PARTITIONS - INTERIOR	0	0
FLOOR CONSTRUCTION	0	0
ROOF CONSTRUCTION	0	0

CHAPTER 8 - INTERIOR FINISHES
TABLE 803.9 - INTERIOR WALLS & CEILING FINISH REQUIREMENTS BY OCCUPANCY

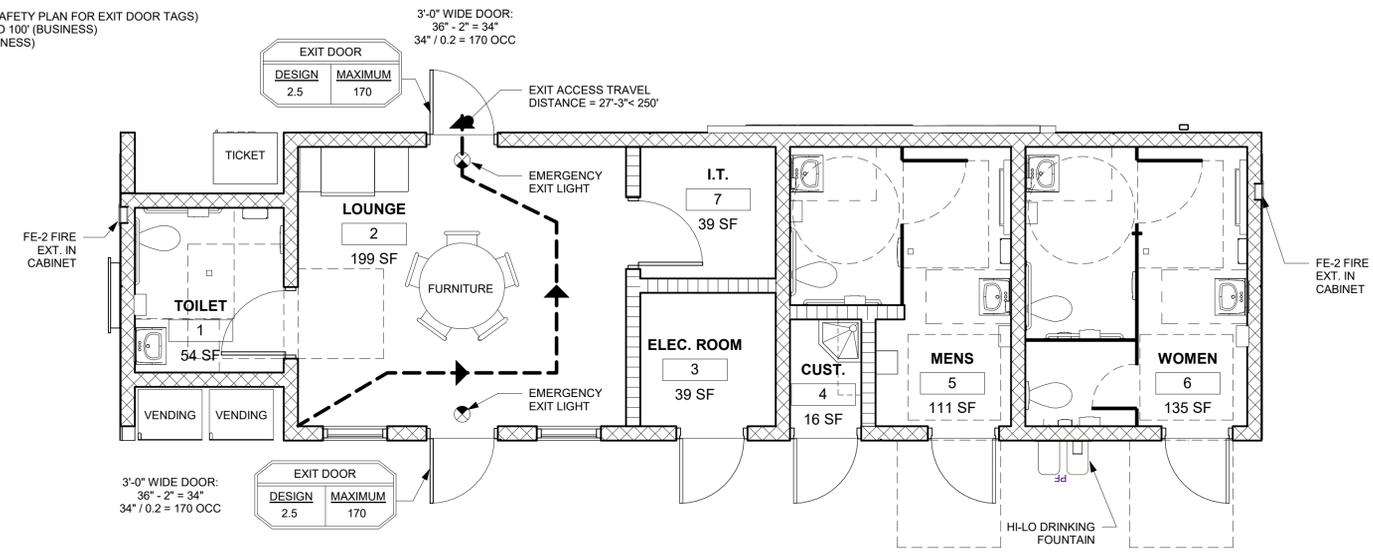
	ALLOWABLE	PROPOSED
ROOMS AND ENCLOSED SPACES	C	A

CHAPTER 9 - FIRE PROTECTION SYSTEMS:
PORTABLE EXTINGUISHES SHALL BE PROVIDED PER FBC 906.3.1 (75' MAXIMUM) AND NFPA 10 - REFER TO FLOOR PLANS FOR LOCATIONS

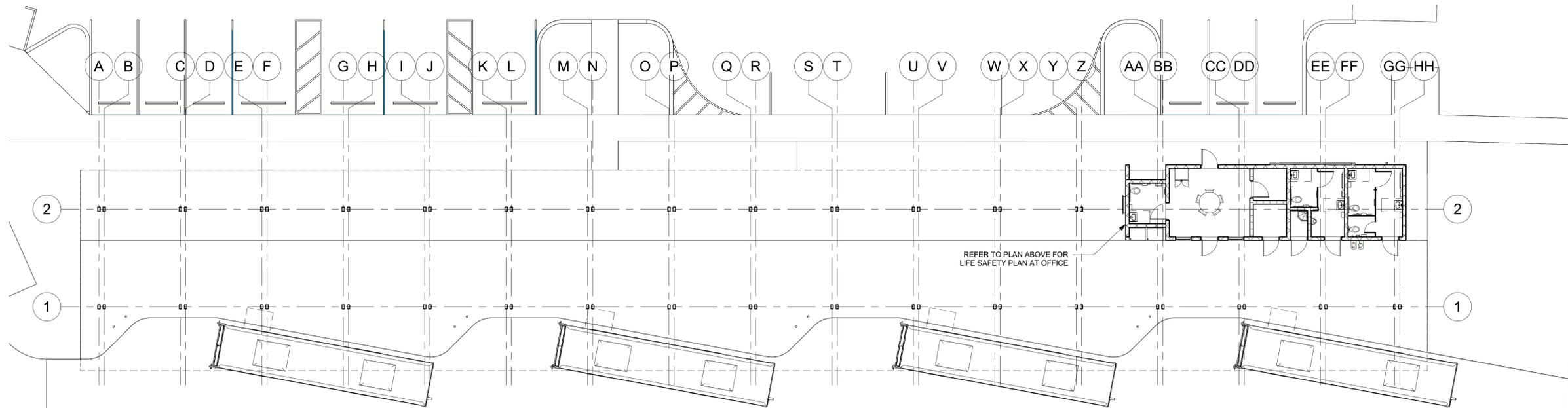
CHAPTER 10 - MEANS OF EGRESS - TABLE 1004 - DESIGN OCCUPANT LOAD = 7 TOTAL BUILDING OCCUPANTS (SEE LIFE SAFETY PLAN)

- FUNCTION OF SPACE - SEE LIFE SAFETY PLANS FOR FLOOR AREA IN SF PER OCCUPANT:
- ACCESSORY STORAGE AREAS AND MECHANICAL ROOMS = 300 S.F. GROSS PER OCC
 - BUSINESS OCCUPANCY = 100 GROSS S.F. PER OCC

SECTION 1005.1 - EGRESS WIDTH PER OCCUPANT SERVED (SEE LIFE SAFETY PLAN FOR EXIT DOOR TAGS)
TABLE 1014.3 - COMMON PATH OF EGRESS TRAVEL SHALL NOT EXCEED 100' (BUSINESS)
TABLE 1016.2 - EXIT ACCESS TRAVEL DISTANCE (EATD): 300' MAX. (BUSINESS)



1 LIFESAFETY FLOOR PLAN
1/4" = 1'-0"



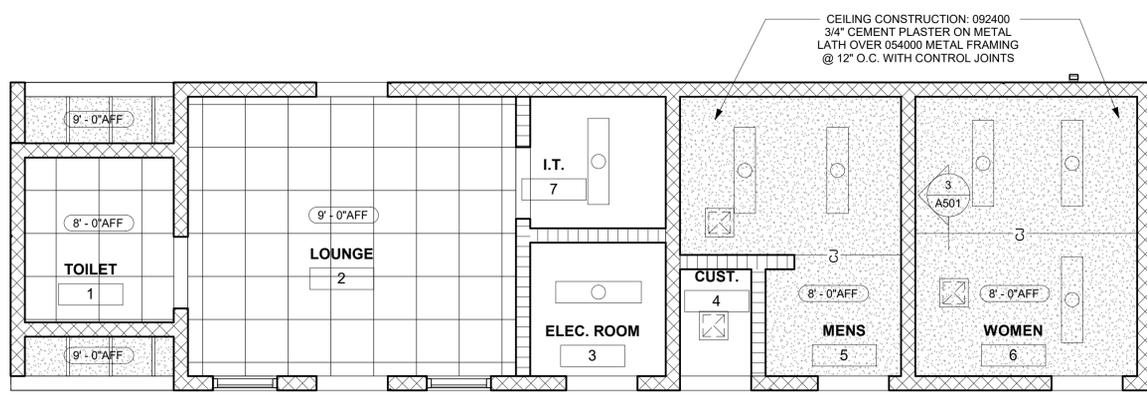
2 OVERALL LIFE SAFETY PLAN
3/32" = 1'-0"

THESE PLANS WERE PREPARED TO COMPLY WITH THE FOLLOWING

- THE 2020 FLORIDA BUILDING CODE - BUILDING, 7TH EDITION
- THE 2020 FLORIDA BUILDING CODE - ACCESSIBILITY, 7TH EDITION
- THE 2020 FLORIDA BUILDING CODE - PLUMBING, 7TH EDITION
- THE 2020 FLORIDA BUILDING CODE - MECHANICAL, 7TH EDITION
- THE 2020 FLORIDA BUILDING CODE - FUEL GAS, 7TH EDITION
- THE 2020 FLORIDA BUILDING CODE - ENERGY CONSERVATION, 7TH EDITION
- THE 2020 NATIONAL ELECTRICAL CODE
- 2020, 7TH EDITION OF THE FLORIDA FIRE PREVENTION CODE, INCLUDING 2021 EDITIONS NFPA 1 & 101 WITH FLORIDA SPECIFIC REQUIREMENTS

REVISIONS

No.	Description	Date



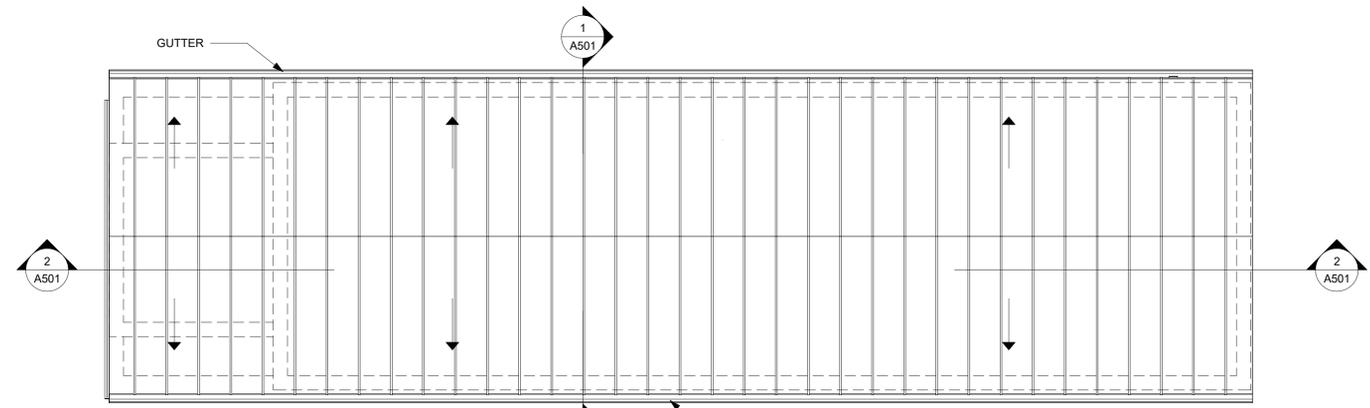
1 REFLECTED CEILING PLAN
1/4" = 1'-0"



REFLECTED CEILING PLAN LEGEND

	095113 SUSPENDED ACOUSTICAL CEILING 2' x 2' GRID.
	092400 CEMENT PLASTER CEILING ON METAL LATH

REFER TO A401 FOR CANOPY REFLECTED CEILING PLAN



2 ROOF PLAN
1/4" = 1'-0"



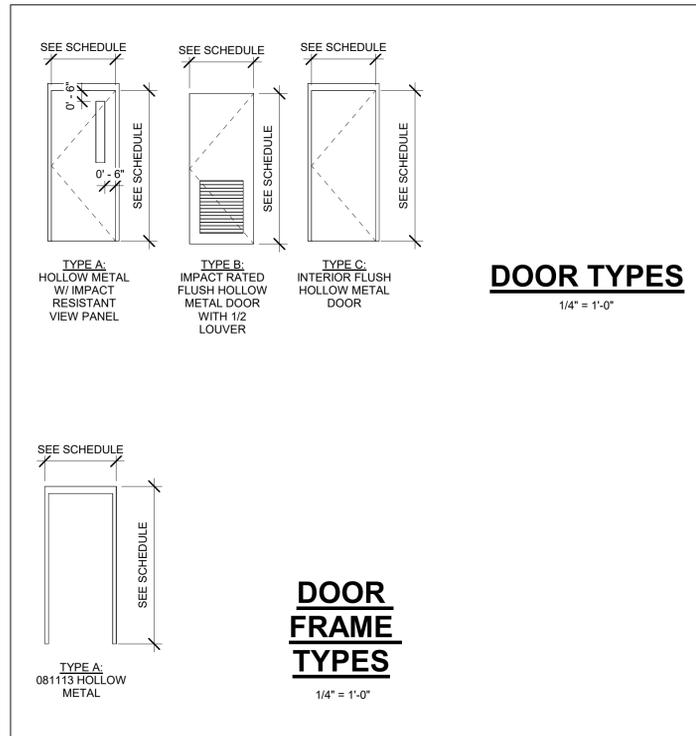
ROOF DRAINAGE NOTES

PER 2020 FBC - PLUMBING 1106.1: 100 YEAR 1-HOUR RAINFALL = 4.5"
PER 2020 FBC - PLUMBING 1106.2 (1): 4" DIAMETER DOWNSPOUT ACCOMMODATES 4, 140 S.F. OF HORIZONTALLY PROJECTED ROOF??

WINDOW NO.	WINDOW TYPE	WINDOW GLAZING	WINDOW MATERIAL	WIDTH	HEIGHT	DETAILS			WINDOW IMPACT TESTING DATA	REMARKS
						SILL	JAMB	HEAD		
W1	A	LG-1	HOLLOW METAL	3'-0"	4'-6"	1 / A504	1 / A504	1 / A504	1	
W2	A	LG-1	HOLLOW METAL	3'-0"	4'-6"	1 / A504	1 / A504	1 / A504	1	

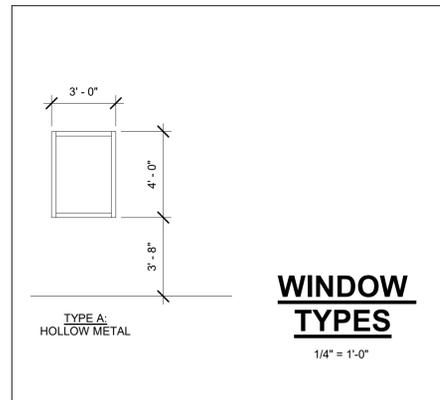
INTERIOR FINISH SCHEDULE							REMARKS
SPACE NUMBER	SPACE NAME	FLOOR	BASE	WALLS	CEILING	CEILING HEIGHT	
1	TOILET	DT	DT	HP	APC	8'-0"	
2	LOUNGE	VCT	R	HP	APC		
3	ELECTRICAL RM	SC	R	HP	-	-	
4	CUSTODIAL	SC	CT	HP	-	-	
5	MEN	SC	CT	HP	CP	8'-0"	
6	WOMEN	SC	CT	HP	CP	8'-0"	
7	I.T.	SC	R	HP / PLY	-	-	PLYWOOD BACKER PANEL UP TO 8'-0"

FLOOR: VCT = VINYL COMP. TILE, SC = SEALED CONCRETE, DT = DECORATIVE CERAMIC TILE
 BASE: R = RESILIENT WALL BASE, DT = DECORATIVE CERAMIC TILE BASE, CT = CERAMIC TILE SANITARY COVE
 WALLS: HP = HIGH PERFORMANCE PAINT ON CMU, PLY = PLYWOOD BACKER PANEL
 CEILING: APC = ACOUSTIC PANEL CEILING, CP = 092400 3/4" CEMENT PLASTER AND CONTROL JOINTS ON WIRE LATH ON 054000 3-5/8" METAL FRAMING AT 12" O.C.



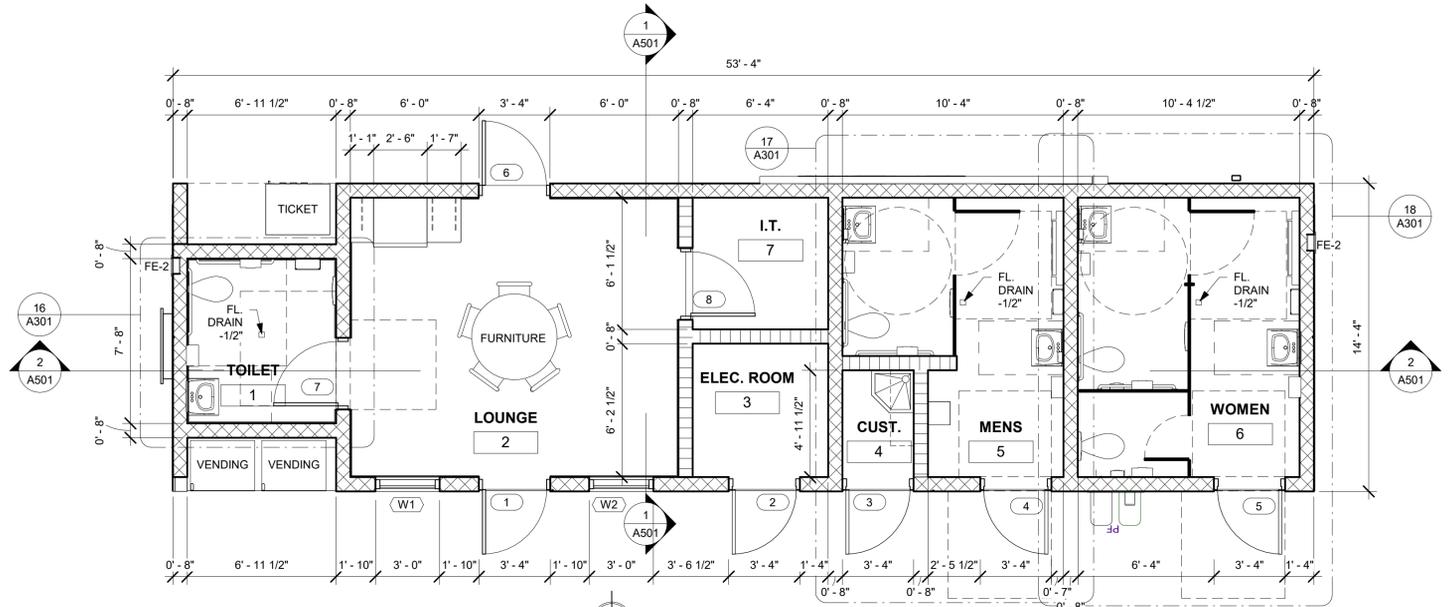
DOOR TYPES
1/4" = 1'-0"

DOOR FRAME TYPES
1/4" = 1'-0"



WINDOW TYPES
1/4" = 1'-0"

IMPACT TESTING DATA	
1.	IMPACT RATED HOLLOW METAL DOOR & FRAME, ASSA ABLLOY OR LEE COUNTY APPROVED EQUAL, SINGLE FLUSH OUTSWING COMMERCIAL STEEL DOOR WITH PEMKO LV - WSG LOUVER WITH SECURITY GRILLE AND INSECT SCREEN, LARGE MISSILE IMPACT RESISTANT, FLORIDA APPROVAL #: ????



3 FLOOR PLAN
1/4" = 1'-0"

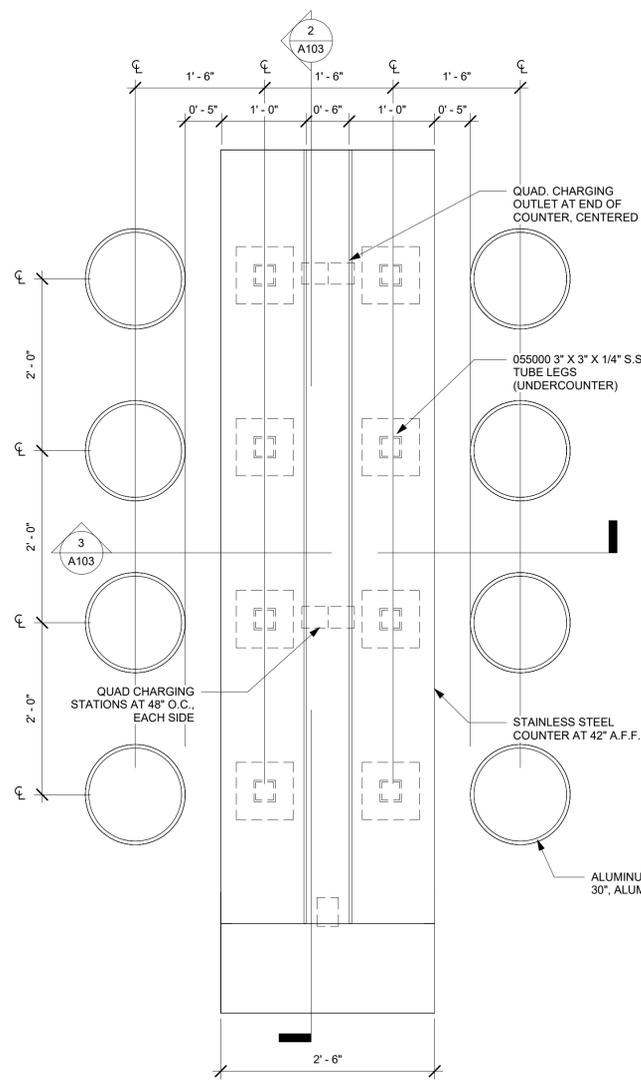


FLOOR PLAN LEGEND

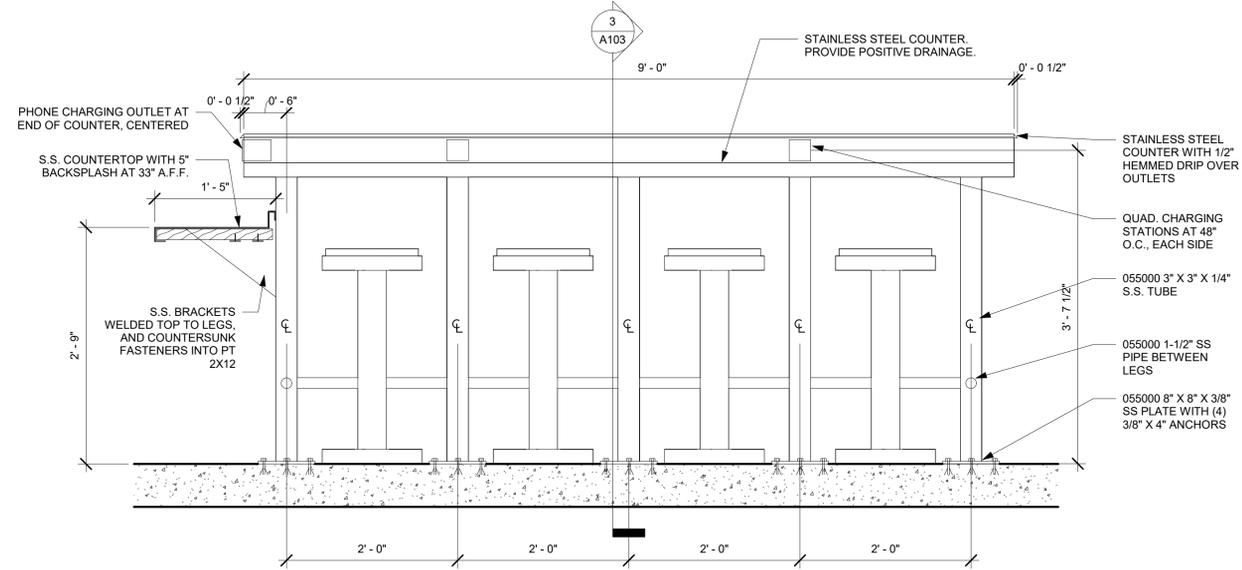
	042000 8" CMU WITH HORIZONTAL JOINT REINF. AT 16" O.C. AND 072100 FOAMED - IN - PLACE MASONRY INSULATION 033000 EXPOSED CONCRETE BEAMS AND COLUMNS TO HAVE 3/4" CHAMFERED CORNERS
	042000 8" CMU WITH HORIZONTAL JOINT REINF. AT 16" O.C. (WITHOUT INSULATION) 033000 EXPOSED CONCRETE BEAMS
(101)	DOOR NUMBER, REFER TO SCHEDULE
(11)	WINDOW NUMBER, REFER TO SCHEDULE
	104416 FIRE EXTINGUISHER IN SEMI-RECESSED CABINET

NOTE: PER 2017 FBC TABLE 803.11, ALL INTERIOR FINISHES ARE REQUIRED TO BE MINIMUM CLASS ??

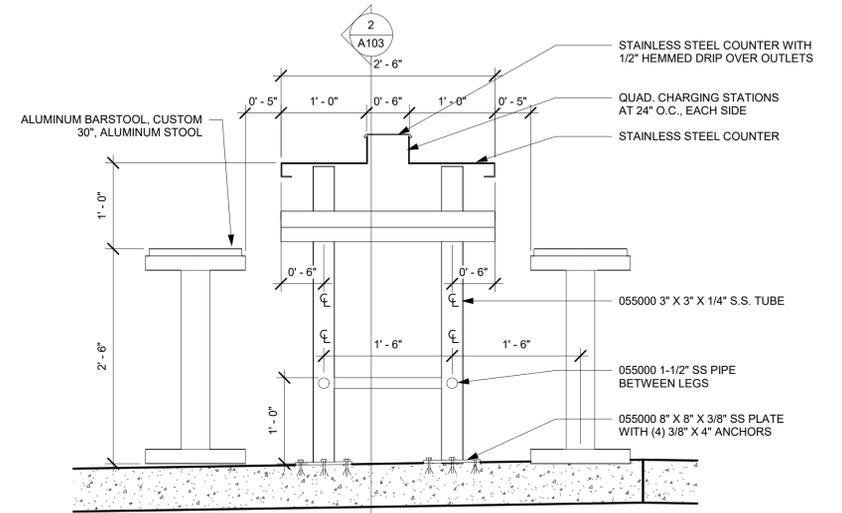
DOOR NO.	DOOR						FRAME						REMARKS	
	TYPE	WIDTH	Height	Thickness	GLAZING	MATERIAL	THRESHOLD	JAMB	HEAD	Frame Type	Frame Material	THRESHOLD		IMPACT TESTING DATA
1	A	3'-0"	7'-0"	0' - 1 3/4"	LG-1	HOLLOW METAL	7 / A504	6 / A504	5 / A504	A	HOLLOW METAL		1	CARD READER
2	B	3'-0"	7'-0"	0' - 1 3/4"	-	HOLLOW METAL	7 / A504	6 / A504	5 / A504	A	HOLLOW METAL		1	
3	B	3'-0"	7'-0"	0' - 1 3/4"	-	HOLLOW METAL	7 / A504	6 / A504	5 / A504	A	HOLLOW METAL		1	
4	B	3'-0"	7'-0"	0' - 1 3/4"	-	HOLLOW METAL	7 / A504	6 / A504	5 / A504	A	HOLLOW METAL		1	
5	B	3'-0"	7'-0"	0' - 1 3/4"	-	HOLLOW METAL	7 / A504	6 / A504	5 / A504	A	HOLLOW METAL		1	
6	A	3'-0"	7'-0"	0' - 1 3/4"	LG-1	HOLLOW METAL	7 / A504	6 / A504	5 / A504	A	HOLLOW METAL		1	CARD READER
7	C	3'-0"	7'-0"	0' - 1 3/4"	-	HOLLOW METAL	4 / A504	3 / A504	2 / A504	A	HOLLOW METAL		1	
8	C	3'-0"	7'-0"	0' - 1 3/4"	-	HOLLOW METAL	4 / A504	3 / A504	2 / A504	A	HOLLOW METAL		1	CARD READER



1 DETAIL PLAN AT BAR STOOL SEATING
1" = 1'-0"

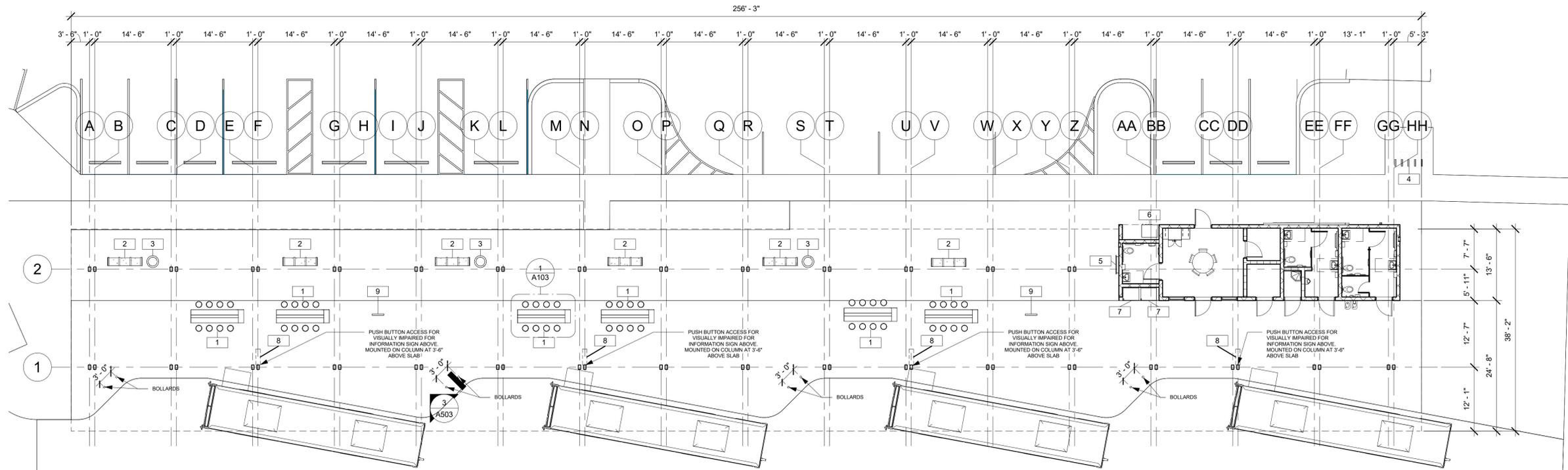


2 SECTION AT BAR STOOL SEATING
1" = 1'-0"



3 SECTION AT BAR STOOL SEATING
1" = 1'-0"

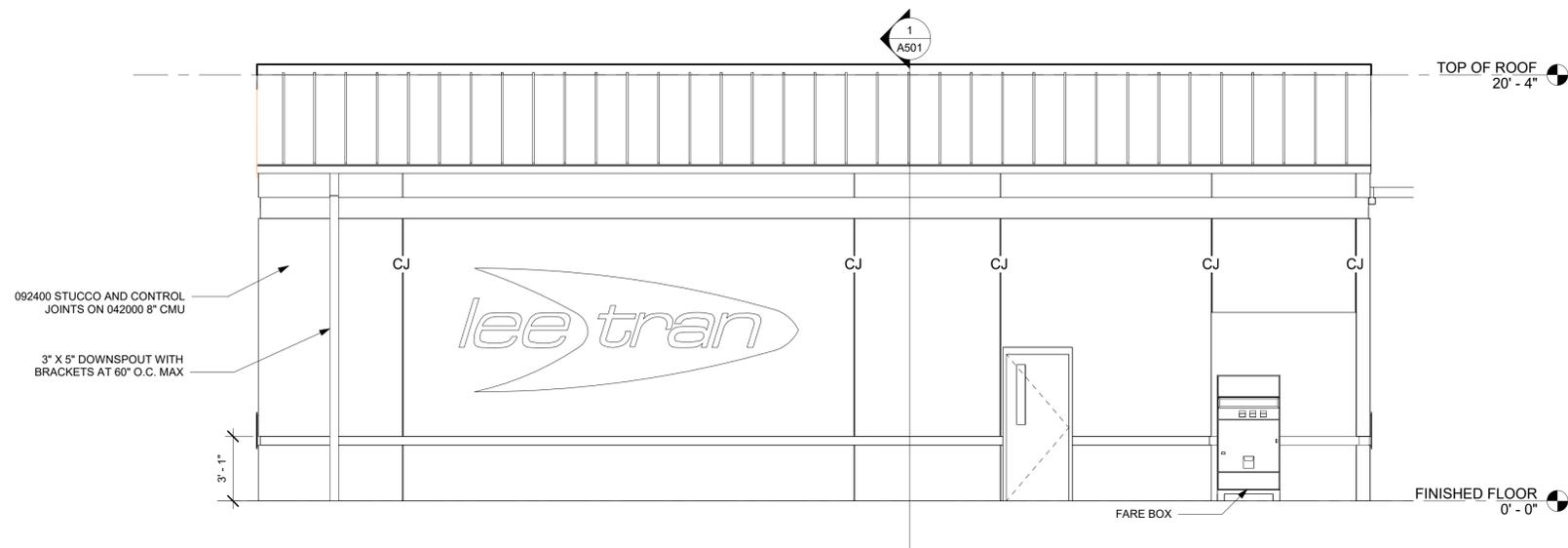
SITE FURNISHINGS	
#	DESCRIPTION
1	HIGH TOP STEEL COUNTER W/ 8 SS ADJUSTABLE BARSTOOLS
2	CONCRETE BENCH
3	CONCRETE WASTE RECEPTACLES 36 GAL.
4	BIKE RACK
5	LCD KIOSK MONITOR
6	FARE BOX
7	VENDING MACHINE (BY OWNER)
8	BUS ROUTE DIGITAL DISPLAY
9	BUS ROUTE SCHEDULE



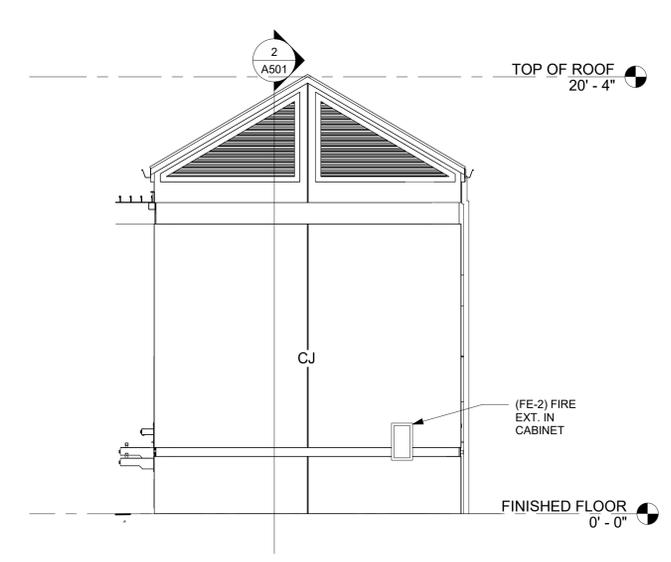
4 OVERALL FLOOR PLAN
3/32" = 1'-0"



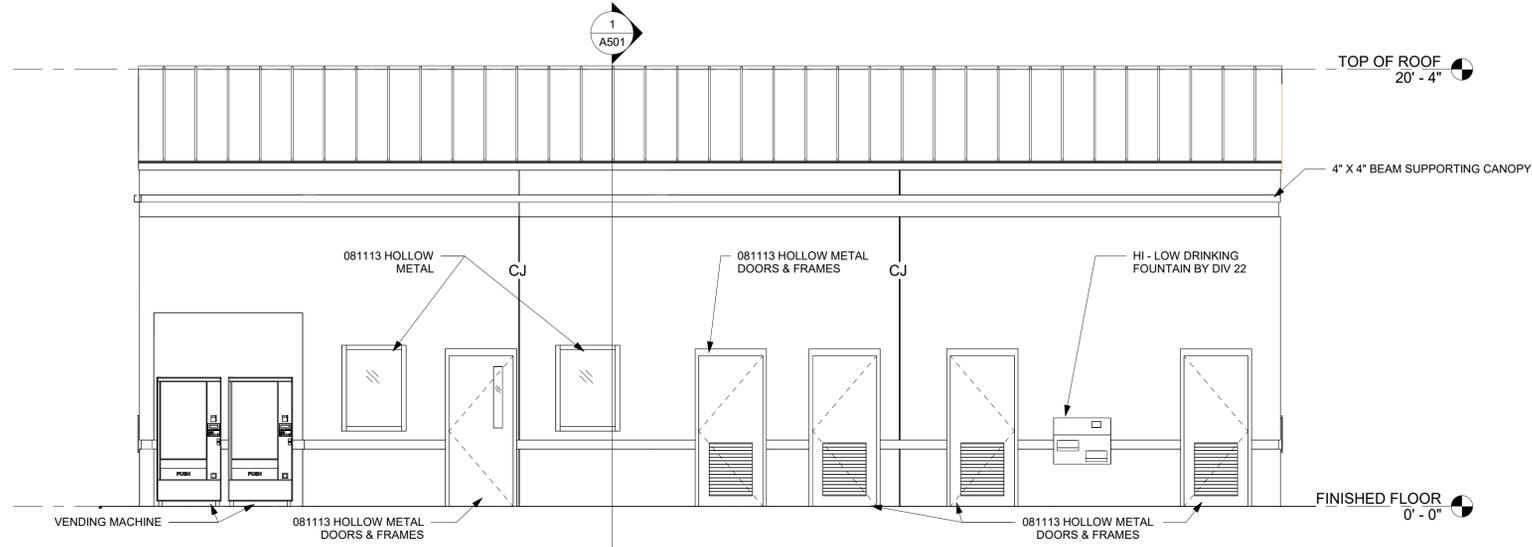
REVISIONS		
No.	Description	Date



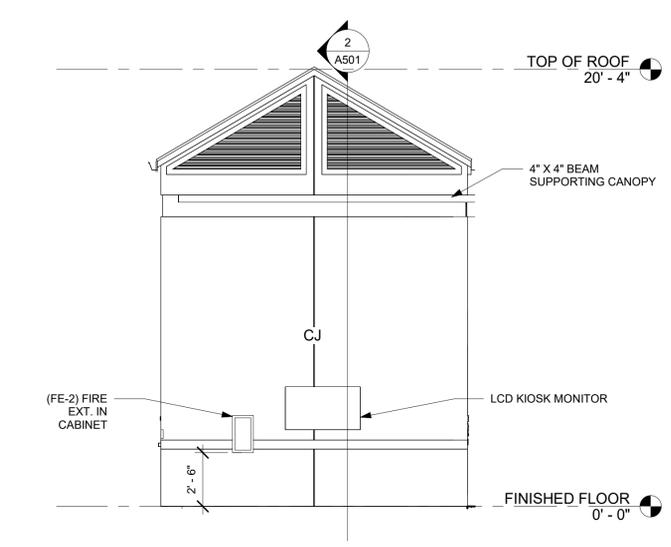
1 EXTERIOR ELEVATION - WEST
1/4" = 1'-0"



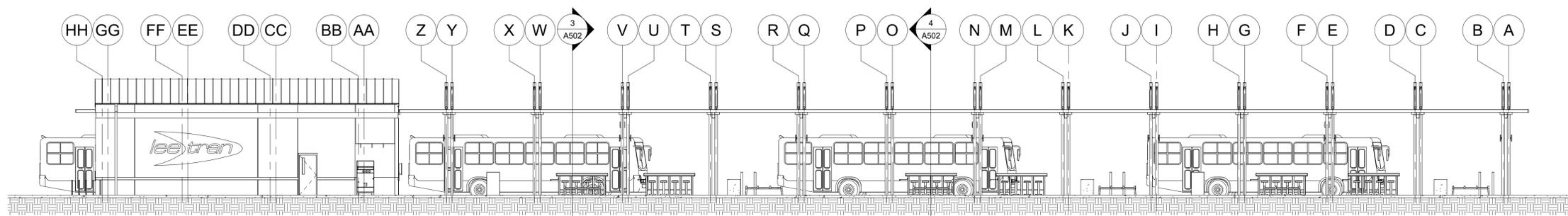
2 EXTERIOR ELEVATION - NORTH
1/4" = 1'-0"



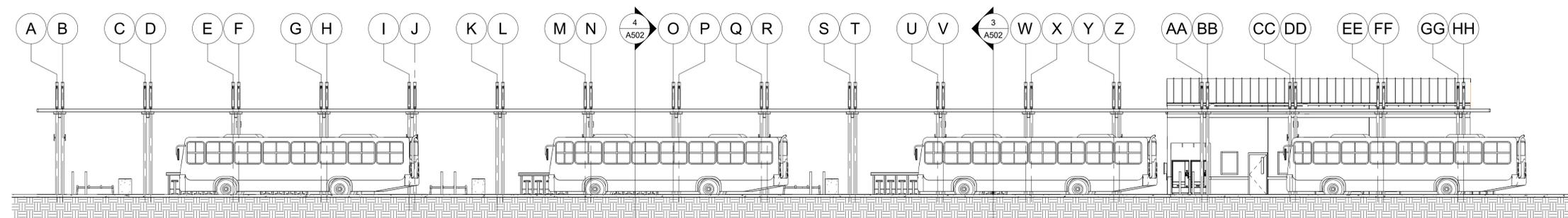
3 EXTERIOR ELEVATION - EAST
1/4" = 1'-0"



4 EXTERIOR ELEVATION - SOUTH
1/4" = 1'-0"

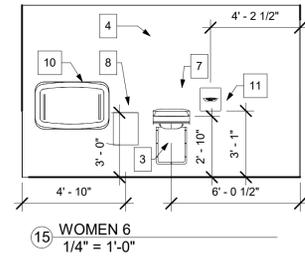
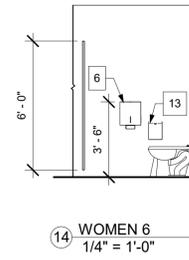
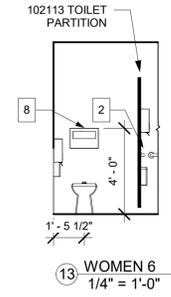
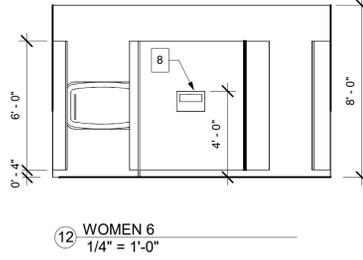
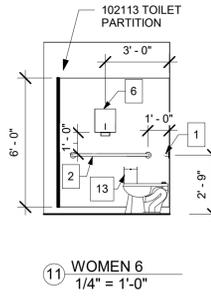
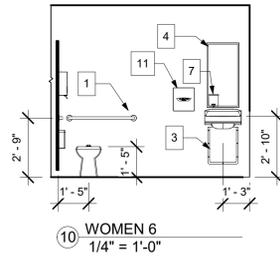
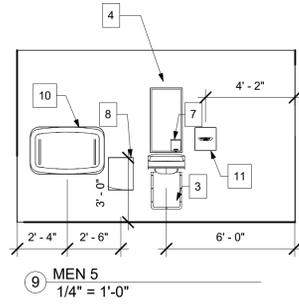
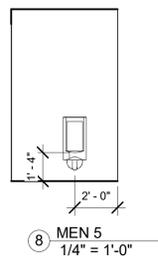
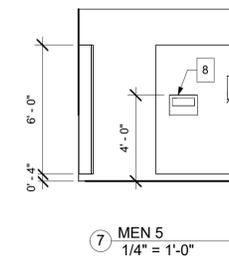
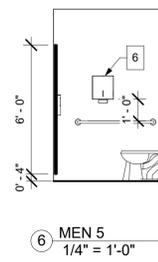
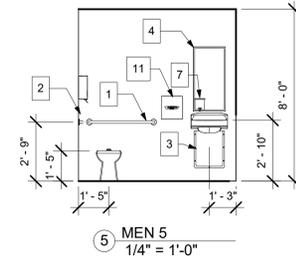
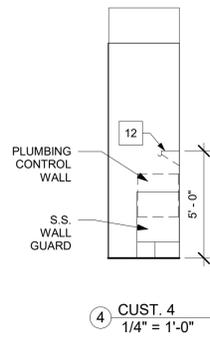
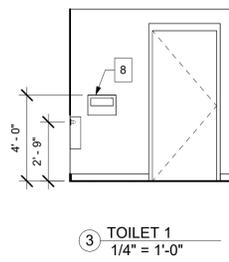
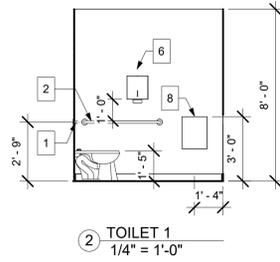
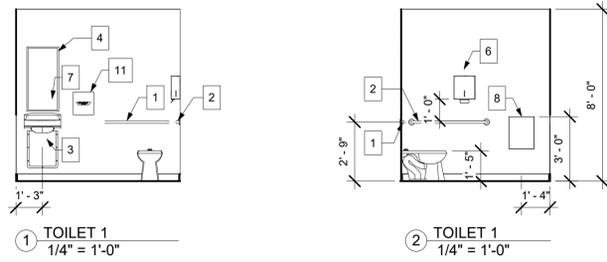


5 WEST CANOPY ELEVATION
3/32" = 1'-0"



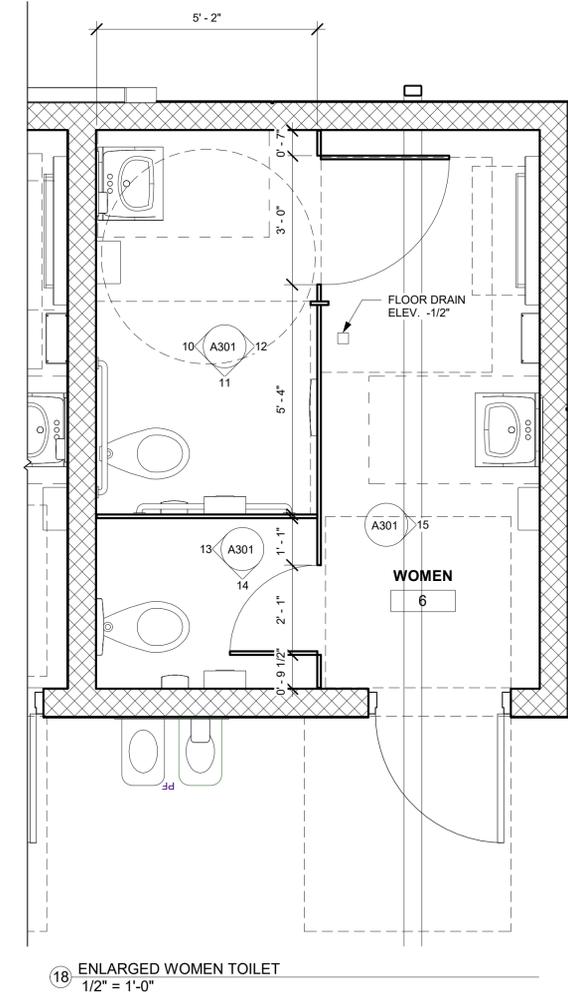
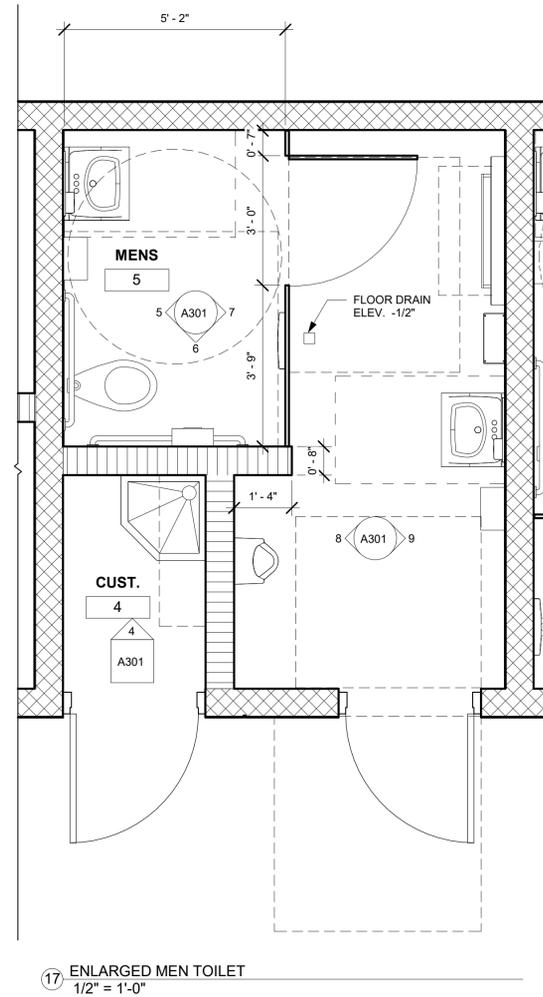
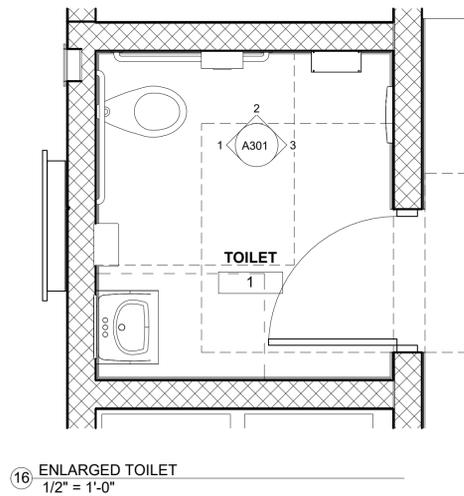
6 EAST CANOPY ELEVATION
3/32" = 1'-0"

REVISIONS		
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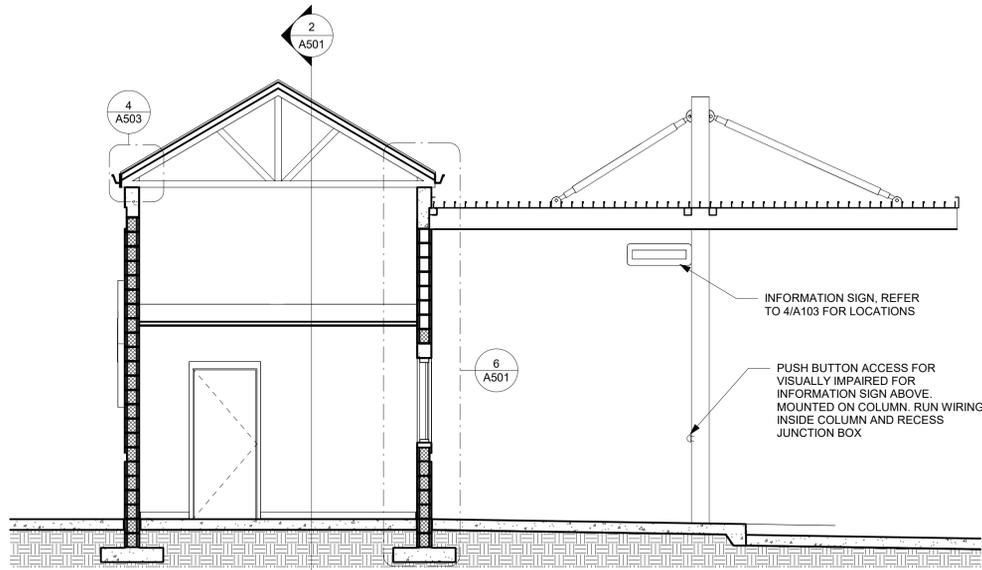


102800 TOILET ACCESSORY...

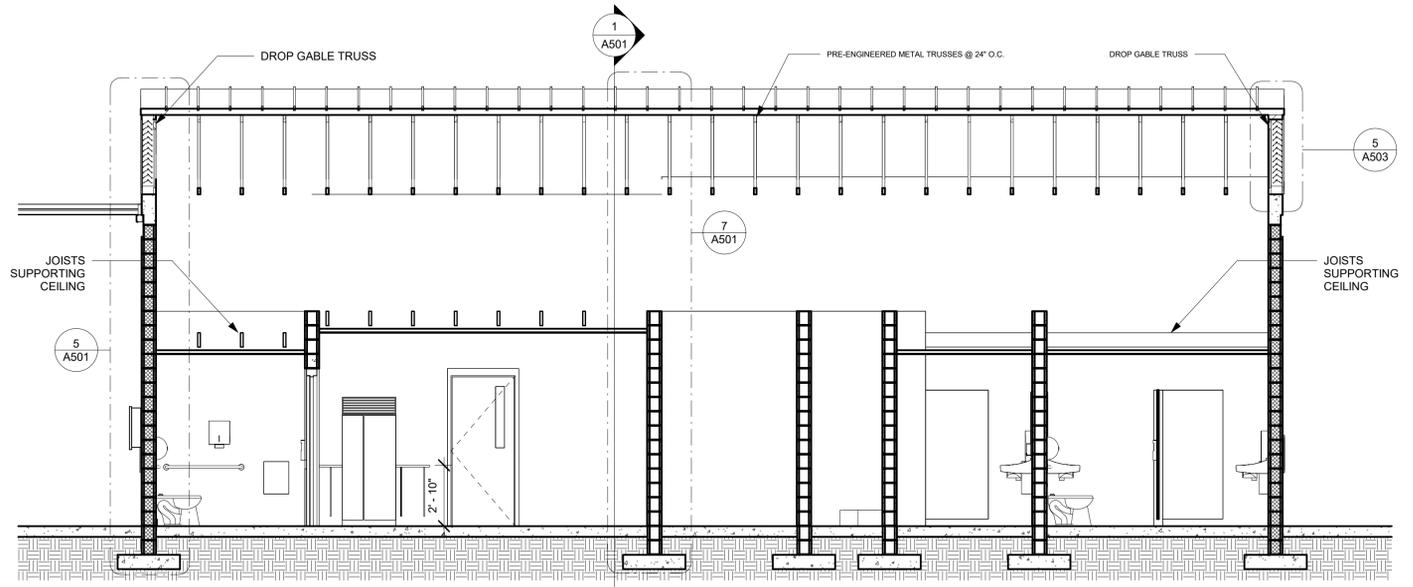
MARK	ITEM
1	GRAB BAR - 36"
2	GRAB BAR - 42"
3	PIPE COVER
4	MIRROR
5	HOOK
6	TOILET PAPER DISPENSER
7	SOAP DISPENSER
8	TOILET SEAT COVER DISPENSER
9	SURFACE MTD WASTE RECEPTACLE
10	BABY CHANGING STATION
11	ELECTRIC HAND DRYER
12	UTILITY SHELF
13	SANITARY NAPKIN DISPOSAL



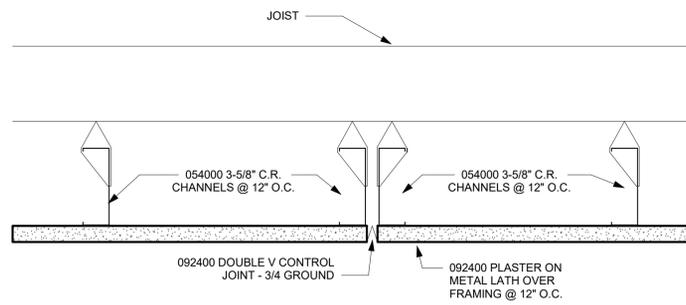
REVISIONS		
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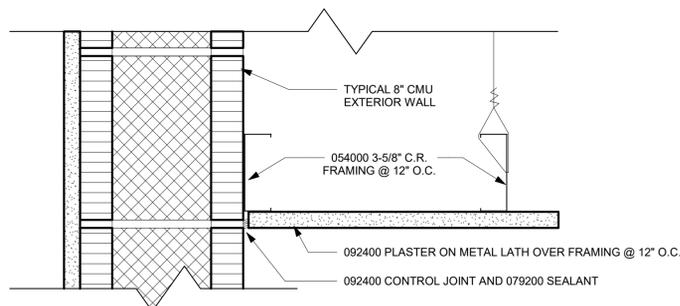
1 BUILDING SECTION
1/4" = 1'-0"



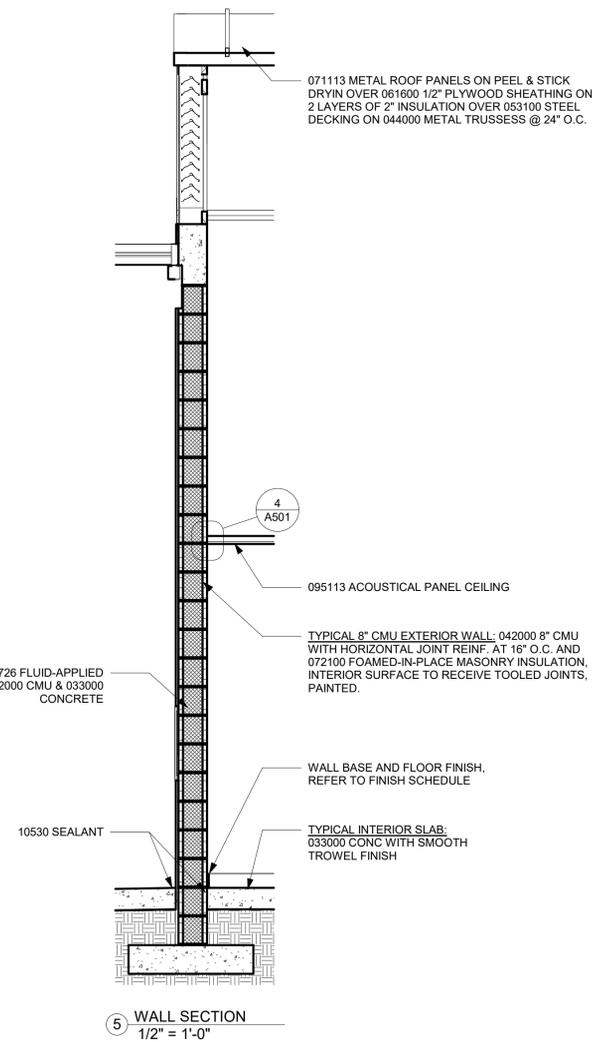
2 BUILDING SECTION
1/4" = 1'-0"



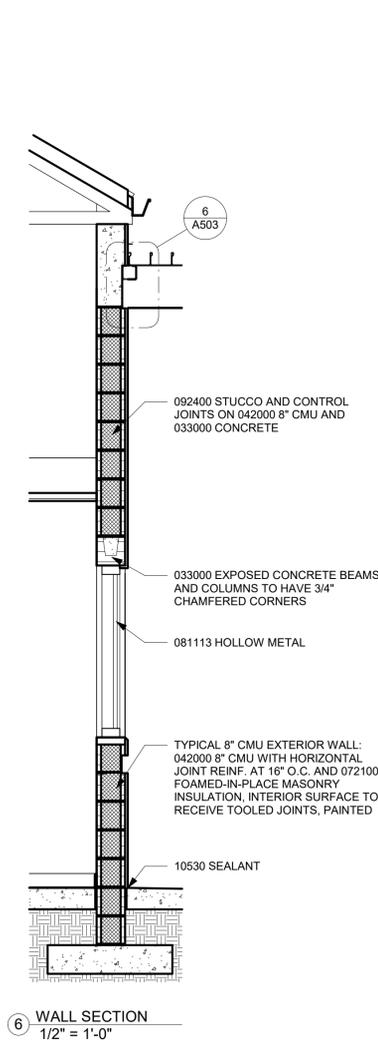
3 CEILING CONTROL JOINT
3" = 1'-0"



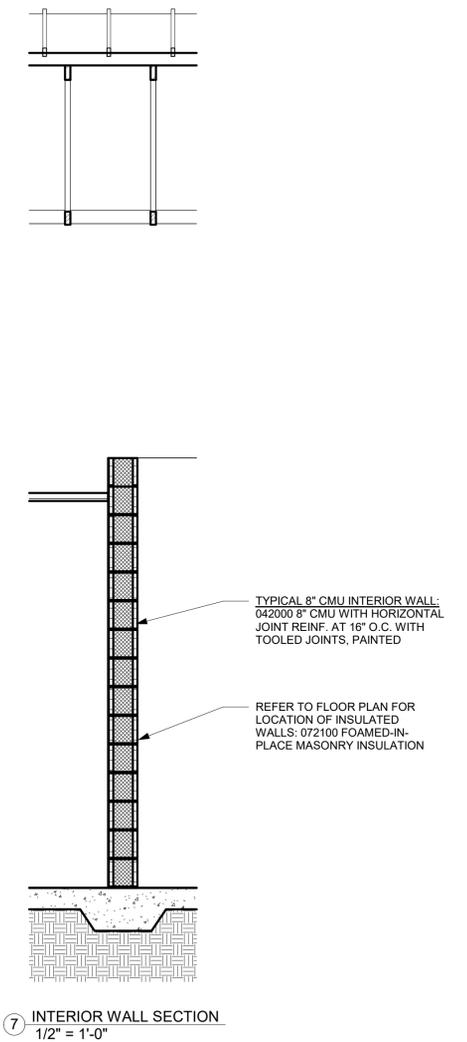
4 CEILING PERIMETER
3" = 1'-0"



5 WALL SECTION
1/2" = 1'-0"

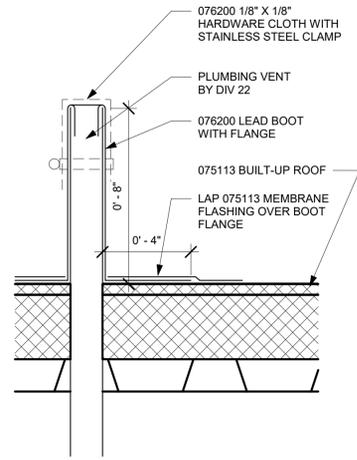


6 WALL SECTION
1/2" = 1'-0"

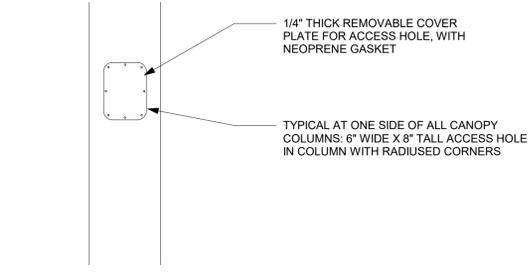


7 INTERIOR WALL SECTION
1/2" = 1'-0"

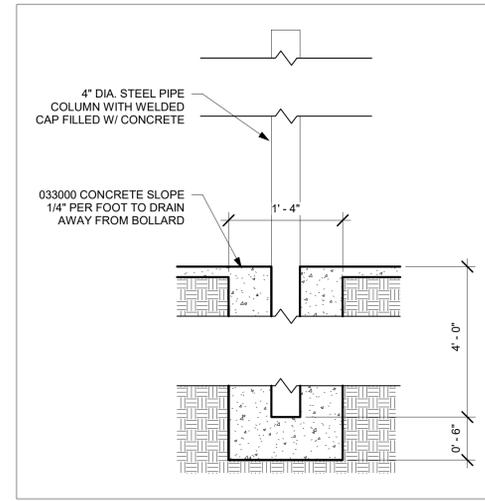
REVISIONS		
No.	Description	Date



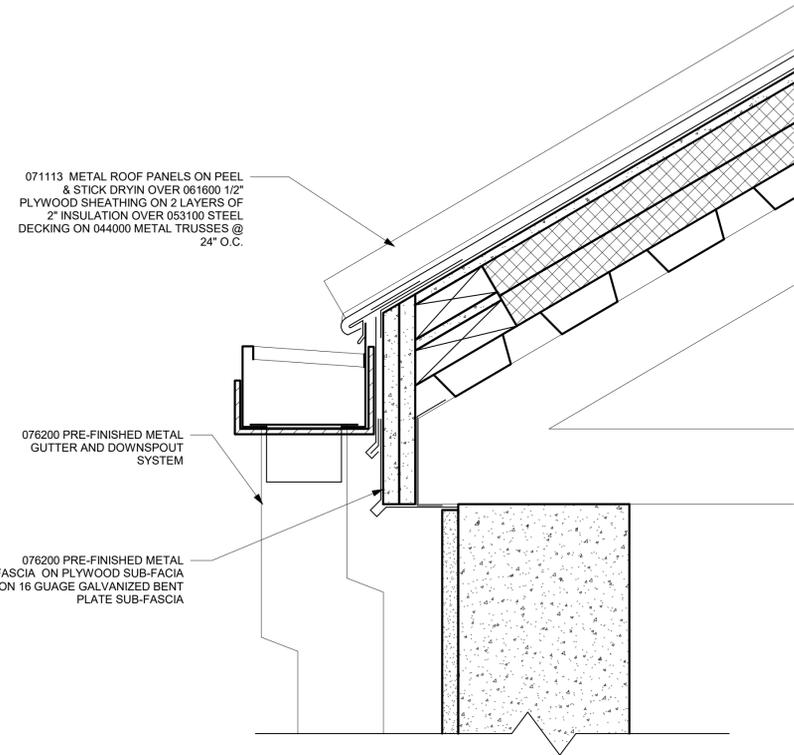
1 PLUMBING VENT DETAIL
3" = 1'-0"



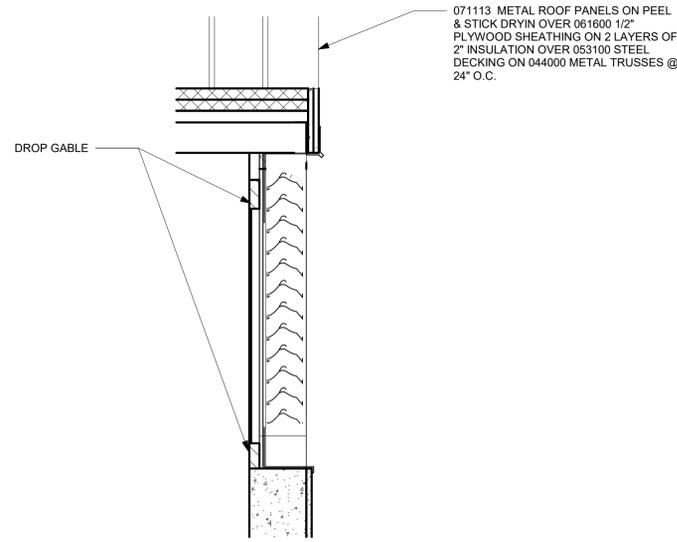
2 ACCESS PANEL
1" = 1'-0"



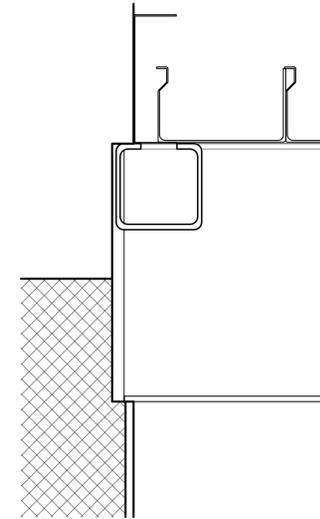
3 BOLLARD DETAIL
1" = 1'-0"



4 GUTTER DETAIL
3" = 1'-0"

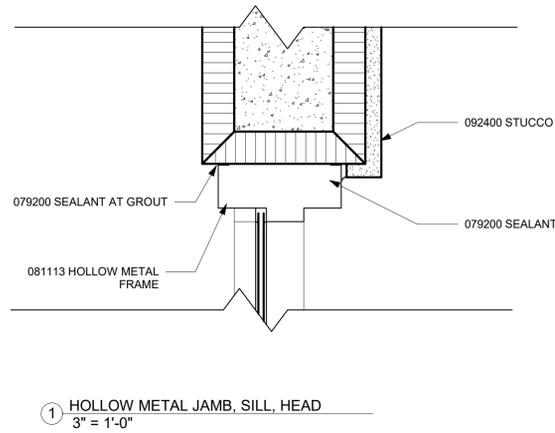


5 LOUVER DETAIL
1" = 1'-0"



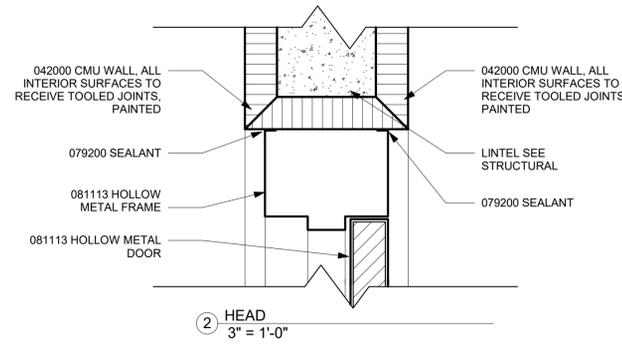
6 ALUMINUM WALKWAY DECK AT
MASONRY WALL
3" = 1'-0"

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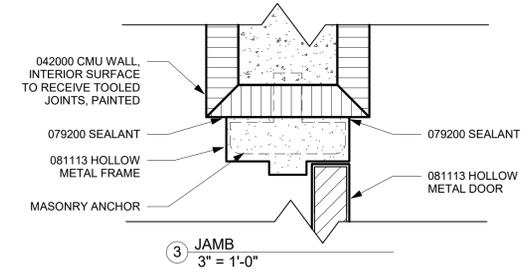


① HOLLOW METAL JAMB, SILL, HEAD
3" = 1'-0"

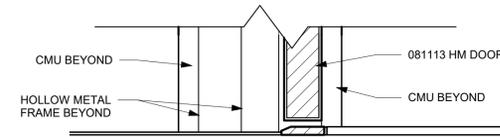
HOLLOW METAL WINDOW AT EXTERIOR C.M.U.
3" = 1'-0"



② HEAD
3" = 1'-0"

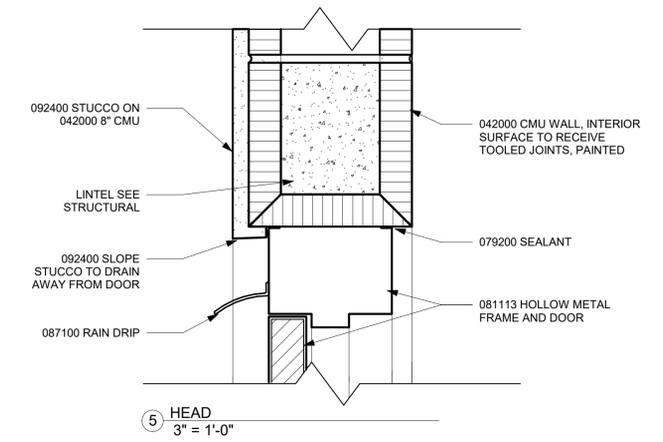


③ JAMB
3" = 1'-0"

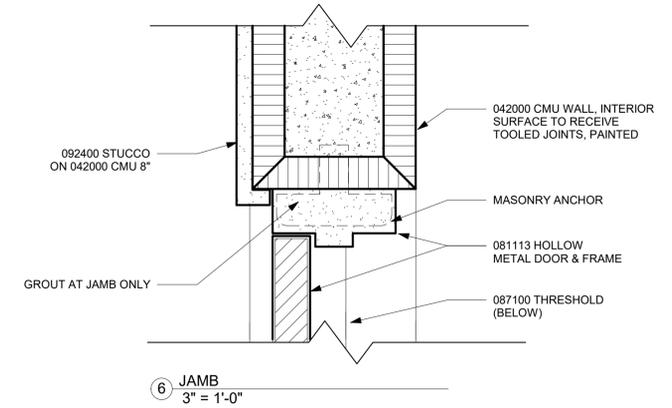


④ THRESHOLD
3" = 1'-0"

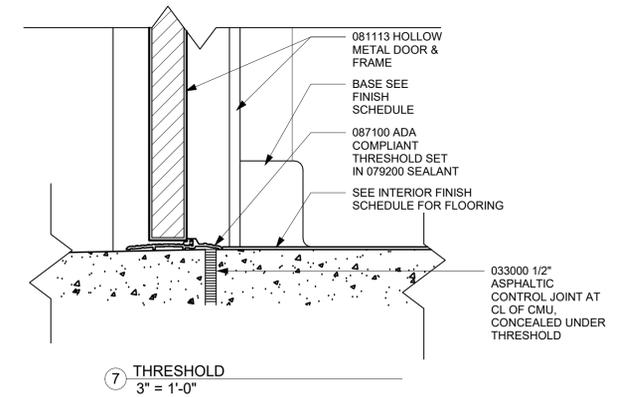
INTERIOR HOLLOW METAL DOOR FRAME DETAILS
3" = 1'-0"



⑤ HEAD
3" = 1'-0"



⑥ JAMB
3" = 1'-0"



⑦ THRESHOLD
3" = 1'-0"

HOLLOW METAL DOOR FRAME AT EXTERIOR C.M.U.
3" = 1'-0"

REVISIONS		
No.	Description	Date

GENERAL REQUIREMENTS

- A. THE GENERAL STRUCTURAL NOTES EMPLOY THE FOLLOWING DEFINITIONS AND ABBREVIATIONS:
- CONTRACT DOCUMENTS – THE LATEST SET OF DRAWINGS, SPECIFICATIONS, AND RECORDED ADDENDA AND AMENDMENTS ISSUED FOR BID OR CONSTRUCTION.
 - LICENSED PROFESSIONAL (STRUCTURAL) ENGINEER – AN ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED AND QUALIFIED TO PERFORM THE WORK REQUIRED.
 - STRUCTURAL ENGINEER OF RECORD – LICENSED PROFESSIONAL ENGINEER WHO IS IN RESPONSIBLE CHARGE FOR THE PREPARATION, SIGNING, DATING, SEALING, AND ISSUING OF STRUCTURAL ENGINEERING DOCUMENTS FOR ENGINEERING SERVICE OR CREATIVE WORK.
 - DELEGATED ENGINEER – A LICENSED PROFESSIONAL ENGINEER WHO PROVIDES SERVICES OR CREATIVE WORK REGARDING A PORTION OF THE ENGINEERING PROJECT. THE DELEGATED ENGINEER IS THE ENGINEER OF RECORD FOR THAT PORTION OF THE ENGINEERING PROJECT. TYPICALLY, DELEGATED ENGINEERS FALL INTO ONE OF THE FOLLOWING CATEGORIES:
 - AN INDEPENDENT CONSULTANT
 - AN EMPLOYEE OR OFFICER OF AN ENTITY SUPPLYING COMPONENTS TO A FABRICATOR OR CONTRACTOR
 - AN EMPLOYEE OR OFFICER OF A FABRICATOR OR CONTRACTOR
 - DELEGATED ENGINEERING DOCUMENTS – ENGINEERING DOCUMENTS THAT ARE PREPARED BY A DELEGATED ENGINEER
 - DESIGN TEAM – DESIGN PROFESSIONALS INCLUDING THE ARCHITECT, STRUCTURAL ENGINEER, CIVIL ENGINEER, MEP ENGINEER, AND ANY OTHER CONSULTANT THAT ISSUES CONTRACT DOCUMENTS.
 - CONTRACTOR – GENERAL CONTRACTOR, CONSTRUCTION MANAGER, DESIGN BUILDER, OR ANY OTHER ENTITY CONTRACTED BY THE OWNER TO PERFORM THE WORK.
 - SHOP DRAWINGS – DRAWINGS DEPICTING INSTALLATION MEANS AND METHODS AND CATALOG INFORMATION ON STANDARD PRODUCTS. SHOP DRAWINGS SHALL BE PREPARED BASED ON ENGINEERING DIRECTION CONTAINED IN CONTRACT DOCUMENTS BY A CONTRACTOR, FABRICATOR, MANUFACTURER, OR LICENSED PROFESSIONAL ENGINEER, FOR INCORPORATION INTO THE PROJECT.
 - ESTABLISHED CHANNELS – AT THE ONSET OF THE PROJECT, ARCHITECT, OWNER, AND CONTRACTOR SHALL ESTABLISH DESIRED LINES OF COMMUNICATION BETWEEN ALL PROJECT PARTIES. THESE AGREED UPON LINES OF COMMUNICATION ARE THE ESTABLISHED CHANNELS.
 - GENERAL STRUCTURAL NOTES ARE APPLICABLE TO THE DESIGN AND CONSTRUCTION OF THE ENTIRE PROJECT AND THUS ARE APPLICABLE TO EVERY SHEET WITHIN THIS SET.
 - WHERE A DETAIL, TYPICAL DETAIL, SECTION, TYPICAL SECTION, OR PLAN NOTE IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL SIMILAR OR LIKE CONDITIONS, UNLESS NOTED OTHERWISE.
 - ISOMETRIC VIEWS ARE FOR VISUALIZATION PURPOSES ONLY AND DO NOT CONVEY ALL OF THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
 - SHOULD THE CONTRACTOR ENCOUNTER A CONFLICT BETWEEN THESE DRAWINGS AND ANY OTHER CONTRACT DOCUMENT OR APPLICABLE CODE OR STANDARD OF PRACTICE DURING BIDDING, THE PROVISION RESULTING IN THE GREATER COST APPLIES. SHOULD THE CONTRACTOR ENCOUNTER A CONFLICT DURING CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST FOR CLARIFICATION TO THE DESIGN TEAM, WHO WILL PROVIDE A WRITTEN RESPONSE IN RETURN.
 - SPECIFICATIONS HAVE BEEN ISSUED ON THIS PROJECT BY THE STRUCTURAL ENGINEER OF RECORD AND ARE AN INTEGRAL PART OF THE CONTRACT DOCUMENTS. SEE SPECIFICATIONS FOR MATERIALS TESTING REQUIREMENTS. THE CONTRACTOR SHALL SUPERVISE AND DIRECT ALL WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, AND SEQUENCE. THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR THE QUALITY AND COMPLETENESS OF THE WORK.
 - THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COORDINATION OF THE STRUCTURAL WORK WITH OTHER TRADES INCLUDING, BUT NOT LIMITED TO: ARCHITECTURAL, CIVIL, AND MEP FOR FLOOR SLAB STEPS, SLOPES AND CURBS, FLOOR FINISH, OPENINGS IN STRUCTURAL FLOORS, ROOFS AND WALLS, ETC.
 - THE BUILDING HAS BEEN DESIGNED BY THE STRUCTURAL ENGINEER OF RECORD TO RESIST THE CODE REQUIRED VERTICAL AND LATERAL FORCES IN ITS FULLY COMPLETED CONDITION. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED BRACING, SHORING, AND OTHER CONSTRUCTION SUPPORTS NECESSARY TO ENSURE THE BUILDING'S STABILITY AND SAFETY THROUGHOUT THE DURATION OF CONSTRUCTION. FURTHER, THE CONTRACTOR SHALL NOT OVERLOAD THE STRUCTURE DURING CONSTRUCTION. THE CONTRACTOR SHALL RETAIN A LICENSED PROFESSIONAL ENGINEER TO PROVIDE THE ANALYSIS AND DESIGN NECESSARY TO DETERMINE POTENTIALLY OVERLOADED, UNSTABLE, OR HAZARDOUS CONDITIONS THAT MAY OCCUR AT ANY STAGE DURING CONSTRUCTION. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AND COORDINATE WITH THE CONTRACT DOCUMENTS AND SHOP DRAWINGS.
 - THE CONTRACTOR SHALL NOT EMPLOY CONSTRUCTION MEANS OR METHODS THAT MAY DAMAGE UTILITIES, ADJACENT BUILDINGS, OR PROPERTY. DOCUMENTATION OF ADJACENT CONDITIONS PRIOR TO CONSTRUCTION IS RECOMMENDED. FURTHER, THE CONTRACTOR SHALL EITHER ADEQUATELY CONFINE THE SITE OR PROTECT ADJACENT PROPERTY FROM DAMAGE.
 - THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROJECT SAFETY AND OSHA REQUIREMENTS. SHOULD THE STRUCTURAL ENGINEER OF RECORD NOTIFY THE CONTRACTOR OF A POTENTIALLY UNSAFE CONDITION, IT IS SOLELY AS A COURTESY FROM ONE PROFESSIONAL TO ANOTHER. IT SHOULD NOT BE INTERPRETED AS THE STRUCTURAL ENGINEER OF RECORD ASSUMING ANY RESPONSIBILITY FOR PROJECT SAFETY.
 - ALL STRUCTURES REQUIRE PERIODIC MAINTENANCE TO EXTEND LIFE SPAN AND ENSURE STRUCTURAL INTEGRITY FROM EXPOSURE TO THE ENVIRONMENT. A PLANNED PROGRAM OF MAINTENANCE SHALL BE ESTABLISHED BY THE BUILDING OWNER. THIS PROGRAM SHALL INCLUDE, BUT NOT BE LIMITED TO: PAINTING OF STRUCTURAL STEEL, PROTECTIVE COATINGS FOR CONCRETE, SEALANTS, CAULKED JOINTS, EXPANSION JOINTS, CONTROL JOINTS, SPALLS AND CRACKS IN CONCRETE, AND PRESSURE WASHING OF EXPOSED STRUCTURAL ELEMENTS EXPOSED TO A SALINE OR OTHER HARSH CHEMICAL ENVIRONMENT.
 - THE USE OF DE-ICING CHEMICALS ON ANY EXPOSED STRUCTURAL ELEMENT IS DISCOURAGED AND WILL ACCELERATE DEGRADATION OF STRUCTURAL ELEMENTS.
 - THE BUILDING OWNER SHALL NOT ALTER OR MODIFY ANY STRUCTURAL ELEMENT WITHOUT CONSULTING A LICENSED PROFESSIONAL ENGINEER. FURTHER, BUILDING OWNER SHALL NOT RENOVATE, REPURPOSE, ADD-ON TO, OR OTHERWISE MODIFY THE EXISTING STRUCTURAL SYSTEMS WITHOUT CONSULTING A LICENSED PROFESSIONAL ENGINEER.
 - CONTRACT DRAWINGS SHOW MAJOR OPENINGS IN FLOORS AND WALLS AND DO NOT NECESSARILY SHOW ALL OPENINGS REQUIRED. THE CONTRACTOR SHALL COORDINATE ALL OPENING SIZES AND LOCATIONS BETWEEN ALL DISCIPLINES AND TRADES. ADDITIONAL OPENINGS, BLOCKOUTS, AND SLEEVES MAY BE REQUIRED AND SHALL BE CONSTRUCTED USING THE TYPICAL DETAILS AND/OR REQUIREMENTS WITHIN THE CONTRACT DOCUMENTS. OPENINGS REQUIRED, BUT NOT SHOWN ON THE STRUCTURAL DRAWINGS, MUST BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
 - THE CONTRACTOR SHALL COORDINATE PIPING AND CONDUIT EMBEDDED IN OR ATTACHED TO SLABS, SLABS-ON-DECK, BEAMS, AND COLUMNS. ANY REQUIRED MODIFICATIONS TO STRUCTURAL MEMBERS OR THEIR REINFORCEMENT AS A RESULT OF EMBEDMENT OR ATTACHMENT SHALL BE SUBMITTED TO THE DESIGN TEAM FOR THEIR REVIEW. SEE GENERAL STRUCTURAL NOTES SECTION 'DESIGN CRITERIA' FOR LIMITATIONS OF MEP LOADING ON STRUCTURAL SYSTEMS.
 - THE STRUCTURAL ENGINEER OF RECORD'S ROLE DURING CONSTRUCTION
 - THE STRUCTURAL ENGINEER OF RECORD SHALL NOT ASSUME CONTROL OF, OR RESPONSIBILITY FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, PROJECT SAFETY, THE ACTS AND OMISSIONS OF THE CONTRACTOR, OR THEIR FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
 - STRUCTURAL ENGINEER OF RECORD SHALL NOT HAVE AUTHORITY TO STOP THE WORK OR AUTHORIZE CHANGES TO ANY CONTRACT DOCUMENTS.
 - PERIODIC SITE VISITS BY REPRESENTATIVES OF THE STRUCTURAL ENGINEER OF RECORD ARE SOLELY FOR THE PURPOSE OF BECOMING GENERALLY FAMILIAR WITH THE PROGRESS AND QUALITY OF THE WORK AND DETERMINING, IN GENERAL, IF THE WORK OBSERVED IS BEING PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THIS LIMITED OBSERVATION SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS AND THAT OBSERVATIONS ARE QUALITATIVE, NOT QUANTITATIVE. THIS LIMITED INFORMATION WILL BE USED TO ADVISE THE OWNER/CONTRACTOR/ARCHITECT OF POTENTIAL DEFICIENCIES.
 - CLARIFICATION OF POSITION OF STRUCTURALLY FRAMING ELEMENTS
 - USE ONLY DIMENSIONS INDICATED ON THE DRAWINGS, DO NOT SCALE ANY DIMENSIONS.
 - IF NOT INDICATED ON DRAWINGS, ASSUME EQUAL SPACING BETWEEN ESTABLISHED DIMENSIONS.
 - CENTER LINES OF COLUMNS AND FOUNDATIONS SHALL COINCIDE WITH GRID LINE INTERSECTION, UNLESS NOTED OTHERWISE.
 - CENTER LINES OF FOOTINGS, GRADE BEAMS, AND WALLS SHALL COINCIDE WITH CENTER LINES OF FOUNDATIONS, UNLESS NOTED OTHERWISE.
 - CENTER LINES OF FRAMING MEMBERS SHALL COINCIDE WITH COLUMN CENTER LINES, UNLESS NOTED OTHERWISE.
 - ELEVATIONS SHOWN ARE TO TOP OF FOUNDATIONS, SLABS, OR BEAMS, UNLESS NOTED OTHERWISE. SEE ARCHITECTURAL, CIVIL, MEP, AND VERTICAL TRANSPORTATION CONTRACT DOCUMENTS FOR ADDITIONAL INFORMATION RELATING TO THE COORDINATION OF STRUCTURAL COMPONENTS INCLUDING, BUT NOT LIMITED TO:
 - CIVIL
 - SITING OF BUILDING GRID LINES WITH RESPECT TO CITY BENCHMARKS
 - SITE PREPARATION
 - BACKFILLING MATERIALS AND REQUIREMENTS INCLUDING DRAINAGE ADJACENT TO RETAINING WALLS
 - SITE ELEMENTS OUTSIDE OF BUILDING ENVELOPE
 - NEW AND EXISTING SITE UTILITIES
 - ARCHITECTURAL
 - PLAN DIMENSIONS AND PROJECT DATUM
 - SLAB EDGE DIMENSIONS AND FINISH ELEVATIONS
 - WATERPROOFING AND DAM PROOFING DETAILS
 - SLAB SLOPES, STEPS AND DEPRESSIONS, RAMPS, TRENCHES
 - EMBEDMENTS, INSERTS, BLOCKOUTS, ETC.
 - CONCRETE FINISHES AND TOPPING SLABS
 - CONCRETE CURBS AND HOUSEKEEPING PADS
 - INTERIOR NON-STRUCTURAL MASONRY PARTITIONS
 - LIFE SAFETY FIRE RATING
 - METAL PAN STAIRS AND SUPPORTS
 - OPERABLE PARTITIONS
 - MEP
 - PIPE AND DUCT SIZES FOR OPENING AND SLEEVE COORDINATION
 - FLOOR DRAINS
 - UNDERFLOOR AND PERIMETER DRAINAGE SYSTEMS
 - EQUIPMENT CURBS
 - CONDUITS AND EMBEDMENTS IN WALLS AND SLABS
 - VERTICAL TRANSPORTATION
 - INSERTS, HANGERS, TRENCHES, PITS, CONDUITS IN WALLS AND SLAB
- THIS BUILDING DOES NOT QUALIFY AS A THRESHOLD BUILDING PER CHAPTER 553.71 OF THE FLORIDA STATUTES. HOWEVER, VARIOUS INSPECTIONS ARE REQUIRED TO BE PERFORMED BY THE ENFORCING AGENCY. FOR THIS PROJECT, STRUCTURAL SYSTEMS REQUIRING INSPECTION INCLUDE:
- _____
 - _____

ELECTRONIC DATA/REPRODUCTION

- A. ALL INFORMATION CONTAINED IN THE ELECTRONIC FILES OF THE CONTRACT DOCUMENTS ARE INSTRUMENTS OF SERVICE OF THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD AND SHALL NOT BE USED FOR OTHER PURPOSES, ADDITIONS TO THE PROJECT, OR THE COMPLETION OF THE PROJECT BY OTHERS. ELECTRONIC FILES OF THE STRUCTURAL DOCUMENTS REMAIN THE PROPERTY OF JEZERINAC GROUP AND IN NO CASE SHALL THEIR TRANSFER BE CONSIDERED A SALE.
- B. THE USE OF ELECTRONIC FILES OR REPRODUCTIONS OF THESE CONTRACT DOCUMENTS BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFIES THEIR ACCEPTANCE OF ALL INFORMATION SHOWN HEREIN AS CORRECT AND OBLIGATES THEMSELVES TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS OR OMISSIONS THAT MAY OCCUR HEREIN. THE USE OF ELECTRONIC FILES DOES NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY FOR PROPER CHECKING AND COORDINATION OF DIMENSIONS, DETAILS, SIZE, AND QUANTITIES.
- C. DIMENSIONS AND ELEMENT SIZES AND LOCATIONS IN THE ELECTRONIC FILES MAY NOT BE PRECISE AND, IN SOME CASES, HAVE BEEN INTENTIONALLY ALTERED FOR PRESENTATION PURPOSES. DO NOT SCALE DIMENSIONS ELECTRONICALLY OR OTHERWISE.
- D. WHEN USED FOR THE PREPARATION OF SHOP DRAWINGS, ALL INFORMATION NOT APPLICABLE TO THE SUBCONTRACT SHALL BE REMOVED FROM THE DRAWINGS, INCLUDING, BUT NOT LIMITED TO: SHEET NUMBERS, SECTION MARKS, TITLE BLOCKS, AND REFERENCES TO THE CONTRACT DOCUMENTS.

SUBMITTALS

- A. REFER TO DIVISION 01 OF SPECIFICATIONS FOR SUBMITTAL PROCEDURES AND REQUIREMENTS. REFER TO THE APPLICABLE SPECIFICATION SECTIONS FOR TECHNICAL CONTENT.
- B. SUBMIT SPECIFIC COMPONENTS SUCH AS COLUMNS, FOUNDATIONS, ETC. IN A SINGLE PACKAGE. SUBMIT SIMILAR FLOORS TOGETHER.
- C. [TEN] WORKING DAYS PRIOR TO SUBMITTING SHOP DRAWINGS, THE CONTRACTOR SHALL SUBMIT, FOR REVIEW AND COMMENT BY THE STRUCTURAL ENGINEER OF RECORD, A SCHEDULE WHICH DETAILS THE ESTIMATED QUANTITY OF SHOP DRAWINGS AND THE DATE THE SHOP DRAWINGS WILL BE RECEIVED BY THE STRUCTURAL ENGINEER OF RECORD. THE STRUCTURAL ENGINEER OF RECORD SHALL HAVE THE OPPORTUNITY TO REVIEW THE PROPOSED SCHEDULE AND SUBMIT COMMENTS TO THE CONTRACTOR. THE FINAL SHOP DRAWING SCHEDULE SHALL BE DEVELOPED AND SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD. IN ACCORDANCE WITH THE SHOP DRAWING SCHEDULE, THE STRUCTURAL ENGINEER OF RECORD WILL RETURN THE SHOP DRAWING ITEMS WITHIN TEN WORKING DAYS AFTER HAVING RECEIVED THE REPRODUCIBLE SHOP DRAWING.
- D. THE CONTRACTOR SHALL REVIEW EACH SUBMITTAL PRIOR TO FORWARDING TO ARCHITECT AND STRUCTURAL ENGINEER OF RECORD. THE CONTRACTOR SHALL STAMP EACH SUBMITTAL VERIFYING THAT THE FOLLOWING IS ADDRESSED:
 - THE SUBMITTAL IS REQUESTED
 - THE SUBMITTAL IS BASED ON THE LATEST DESIGN.
 - THE SUBMITTAL IS CLEARLY CLOUDED FOR ALL THE DIFFERENCES FROM THE CONTRACT DOCUMENTS ON THE FIRST SUBMITTAL.
 - THE SUBMITTAL IS CLEARLY CLOUDED FOR ALL CHANGES AND ADDITION FROM PREVIOUS SUBMITTAL
 - THE ARCHITECTS AND STRUCTURAL ENGINEER OF RECORD'S COMMENTS FROM ANY PREVIOUS SUBMITTALS ARE ADDRESSED.
 - THE WORK IS COORDINATED AMONGST ALL CONSTRUCTION TRADES.
 - THE SUBMITTAL IS COMPLETE.
 - THE SUBMITTAL SHALL INCLUDE A STAMP INDICATING PROJECT NAME AND LOCATION, SUBMITTAL NUMBER, AND SPECIFICATION SECTION NUMBER.
- E. THE STRUCTURAL ENGINEER OF RECORD'S REVIEW OF SUBMITTALS SHALL BE FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT.
- F. THE STRUCTURAL ENGINEER OF RECORD SHALL RETURN, WITHOUT COMMENT, SUBMITTALS WHICH THE CONTRACTOR HAS NOT STAMPED OR WHICH DO NOT MEET THE ABOVE REQUIREMENTS.
- G. FOR THE COMPONENTS DESIGNED BY A DELEGATED ENGINEER, PROVIDE SHOP DRAWINGS, DESIGN CALCULATIONS, AND A COVER LETTER SIGNED AND SEALED BY THE DELEGATED ENGINEER. THE COVER LETTER SHALL INDICATE THAT THE SHOP DRAWINGS ARE IN CONFORMANCE WITH THE DELEGATED ENGINEER'S CALCULATIONS. REFER TO APPLICABLE SPECIFICATION SECTIONS FOR ADDITIONAL REQUIREMENTS.
- H. DEFERRED SUBMITTALS ARE MANUFACTURER OR CONTRACTOR DESIGNED COMPONENTS PER THE CONTRACT DOCUMENTS. THESE ELEMENTS OF THE DESIGN ARE DEFERRED SUBMITTAL COMPONENTS AND HAVE NOT BEEN PERMITTED UNDER THE BASE BUILDING APPLICATION. DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD, WHO SHALL REVIEW THEM FOR GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING. THE CONTRACTOR SHALL SUBMIT THESE REVIEWED DEFERRED SUBMITTAL DOCUMENTS TO THE BUILDING OFFICIAL FOR APPROVAL. THESE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DESIGN TEAM HAS REVIEWED AND THE BUILDING OFFICIAL HAS APPROVED. SEE BELOW FOR THE LIST OF DEFERRED SUBMITTALS.
- I. THE FOLLOWING SUBMITTALS ARE REQUIRED TO BE SUBMITTED FOR STRUCTURAL ENGINEER OF RECORD REVIEW AS OUTLINED IN THE SPECIFICATIONS:

031000	CONCRETE FORMWORK	(SS, CALC)
032000	CONCRETE REINFORCEMENT LAYOUT	(S)
033000	CONCRETE MIX DESIGNS	(CALC, TA)
033000	CONCRETE CONSTRUCTION JOINT LAYOUT	(S)
033816	POST-TENSIONING TENDON LAYOUT	(DF, SS)
033816	POST TENSIONING TENDON FRICTION LOSS CALC	(DF, CALC)
034100	STRUCTURAL PRECAST CONCRETE ELEMENT	(DF, SS, CALC)
034100	STRUCTURAL PRECAST CONCRETE CONNECTION	(DF, SS, CALC)
034103	STRUCTURAL PRECAST CONCRETE JOIST	(DF, SS, CALC)
034713	TILT-UP CONCRETE PANEL	(DF, SS, CALC)
034713	TILT-UP CONCRETE PANEL LIFTING	(DF, SS, CALC)
042200	MASONRY REINFORCEMENT LAYOUT	(S)
051200	STRUCTURAL STEEL	(S)
051200	STRUCTURAL STEEL CONNECTIONS	(DF, S, CALC)
051200	SHEAR STUD LAYOUT	(S)
051400	STRUCTURAL ALUMINUM FRAMING	(DF, SS, CALC)
052100	STEEL JOISTS, BRIDGING, AND CONNECTIONS	(DF, SS, CALC)
053100	STEEL COMPOSITE DECK	(S)
053100	STEEL FLOOR DECK	(S)
053100	STEEL ROOF DECK	(S)
054000	COLD-FORMED METAL FRAMING USED FOR EXTERIOR EXTERIOR CLADDING SYSTEM	(SS, CALC, REC)
	SHORING AND RESHORING	(DF, SS, CALC)
133419	METAL BUILDING HANDRAIL, GUARDRAIL, RAILING	(DF, SS, CALC) (SEE ARCH)
142000	ELEVATOR	(SS, CALC, REC)
	SURVEY OF STRUCTURAL STEEL ERECTION	(SS, CALC, REC)
312319	DEWATERING	(GEO, REC)
316316	AUGER CAST PILE LAYOUT, SIZE AND LENGTH	(S)

- S = SHOP DRAWING REQUIRED
 DF = DEFERRED SUBMITTAL
 SS = SIGNED AND SEALED SHOP DRAWINGS PREPARED BY A LICENSED DELEGATED ENGINEER IN THE STATE IN WHICH THE PROJECT IS LOCATED.
 CALC = SUPPORTING CALCULATIONS REQUIRED; SIGNED AND SEALED BY A LICENSED DELEGATED ENGINEER IN THE STATE IN WHICH THE PROJECT IS LOCATED.
 REC = ITEMS SUBMITTED FOR RECORD ONLY AND WILL NOT HAVE STRUCTURAL ENGINEER OF RECORD SHOP DRAWING STAMP AFFIXED.
 GEO = ITEMS SUBMITTED TO CONSTRUCTION GEOTECHNICAL ENGINEER FOR THEIR REVIEW.
 TA = ITEMS SUBMITTED TO OWNER'S TESTING AGENCY FOR THEIR REVIEW.

GOVERNING CODES & STANDARDS

BUILDING CODE:	FBC 2020	FLORIDA BUILDING CODE, BUILDING
STANDARDS:	ASCE 7	AMERICAN SOCIETY OF CIVIL ENGINEERS: MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
	ACI 318	AMERICAN CONCRETE INSTITUTE: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
	TMS 402	THE MASONRY SOCIETY: BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
	AISC 360	AMERICAN INSTITUTE OF STEEL CONSTRUCTION: SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS
	AISC 341	AMERICAN INSTITUTE OF STEEL CONSTRUCTION: SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS
	AWS D1.1	AMERICAN WELDING SOCIETY: STRUCTURAL WELDING CODE - STEEL
	AWS D1.3	AMERICAN WELDING SOCIETY: STRUCTURAL WELDING CODE - SHEET STEEL
	AWS D1.4	AMERICAN WELDING SOCIETY: STRUCTURAL WELDING CODE - REINFORCING STEEL
	AISI S100	AMERICAN IRON AND STEEL INSTITUTE: NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS
	ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS

DESIGN CRITERIA

- A. STRUCTURE LOCATION:
 LONGITUDE: 26.620631
 LATITUDE: -81.647235
- B. LOADING:
 1. SUPERIMPOSED DEAD & LIVE LOADS:
 ALL DEAD LOADS LISTED BELOW ARE IN ADDITION TO THE STRUCTURE'S SELF-WEIGHT.

	DEAD LOAD	LIVE LOAD
ROOF:		
ENCLOSED	20 PSF	20 PSF REDUCIBLE

 2. RAIN LOAD:
 DESIGN RAINFALL: 4.57/HOUR (100-YEAR, 1-HOUR RAINFALL)
 RAINWATER AT LOWEST POINT OF ROOF SHALL NOT POND DURING DESIGN RAINFALL
 DESIGN RAIN LOAD, R: 20 PSF
3. WIND LOAD:
 ULTIMATE DESIGN WIND SPEED, V_{ult} : 160 MPH
 NOMINAL DESIGN WIND SPEED, V_{nom} : 124 MPH
 RISK CATEGORY: II
 WIND EXPOSURE CATEGORY: C
 ENCLOSURE CLASSIFICATION: OPEN (BUS SHELTER)
 ENCLOSURE (SUPPORT BUILDING)
 INTERNAL PRESSURE COEFFICIENT: +/-0.18 (ENCLOSED) AND 0.00 (OPEN)
 COMPONENTS & CLADDING DESIGN PRESSURES: SEE WIND PRESSURE DIAGRAMS

- C. FUTURE EXPANSION:
 NO PROVISIONS HAVE BEEN MADE FOR FUTURE VERTICAL OR HORIZONTAL EXPANSION OF THE STRUCTURE.
- D. SERVICEABILITY:
 1. DEFLECTION LIMITS: TOTAL LOAD DEFLECTION ONLY APPLIES TO THE DEFLECTION DUE TO THE CREEP COMPONENT OF LONG-TERM DEAD LOAD DEFLECTION PLUS THE SHORT-TERM DEFLECTION. LONG-TERM DEFLECTION OF WOOD STRUCTURAL MEMBERS SHALL BE CALCULATED IN ACCORDANCE WITH THE AWC NDS. IT IS PERMITTED TO ESTIMATE THE CREEP-COMPONENT OF THE LONG-TERM DEFLECTION AS THE IMMEDIATE DEAD LOAD DEFLECTION.
 a. ROOF MEMBERS
 • TOTAL LOAD DEFLECTION: U_{TL}
 • TRANSITORY LOAD DEFLECTION: U_{TL}
 b. EXTERIOR WALLS & CLADDING
 • WIND LOAD DEFLECTION: U_{TL}
 c. INTERIOR PARTITIONS
 • LIVE LOAD DEFLECTION: U_{TL}

EARTHWORK & FOUNDATIONS

- A. GEOTECHNICAL INVESTIGATION REPORT
 1. FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL INVESTIGATION REPORT AS FOLLOWS:
 a. REPORT TITLE: [REPORT No.]
 b. PREPARED BY: [FL]
 c. DATED: [20]
- B. SHALLOW FOUNDATIONS
 1. FOUNDATIONS ARE DESIGNED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT.
 2. FOUNDATION SIZES AND REINFORCEMENT ARE BASED ON AN ALLOWABLE BEARING PRESSURE OF U_{PSF} PER THE GEOTECHNICAL INVESTIGATION REPORT.
 3. FOUNDATIONS SHALL BEAR A MINIMUM OF 1'-11" BELOW ADJACENT EXTERIOR GRADE.
 4. FOUNDATIONS SHALL BEAR ON COMPACTED STRUCTURAL FILL, NATURAL SOILS, OR ROCK PREPARED PER THE GEOTECHNICAL INVESTIGATION REPORT.
 5. PRIOR TO PLACEMENT OF CONCRETE, A QUALIFIED GEOTECHNICAL ENGINEER SHALL VERIFY SOILS CONFORMANCE TO THE RECOMMENDATIONS AND ASSUMPTIONS IN THE GEOTECHNICAL INVESTIGATION REPORT. ALL ADVERSE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD.
 6. SOILS BELOW FOUNDATIONS NOT MEETING DESIGN BEARING PRESSURE SHALL BE REMEDIATED PER THE GEOTECHNICAL INVESTIGATION REPORT AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF THE FOUNDATIONS.
 7. CENTER ALL FOUNDATIONS UNDER THEIR RESPECTIVE COLUMNS OR WALLS, UNLESS NOTED OTHERWISE.
 8. TOP OF FOUNDATION ELEVATIONS PROVIDED ON THE CONTRACT DRAWINGS ARE FOR PURPOSE OF THE CONTRACT AND SHALL BE ADJUSTED, AS REQUIRED, AT THE TIME OF EXCAVATION TO BEAR ON PROPERLY PREPARED SUPPORT SUBGRADE (PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS).
- C. EARTHWORK AND EXCAVATION
 1. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING, BUT NOT LIMITED TO: LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS, AND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL BUILDING DEPARTMENT AND OSHA REGULATIONS.
 2. EXCAVATION SHALL NOT OCCUR WITHIN ONE FOOT OF THE ANGLE OF REPOSE OF ANY SOIL BEARING FOUNDATION UNLESS THE FOUNDATION IS PROTECTED AGAINST SETTLEMENT.
 3. THE EXTENT OF SUBGRADE PREPARATION SHALL EXTEND A MINIMUM OF 3'-0" BEYOND THE BUILDING PERIMETER.
 4. THE CONTRACTOR SHALL PROVIDE A SUBGRADE BENEATH THE SLAB-ON-GROUND PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
 5. UNLESS NOTED IN THE GEOTECHNICAL INVESTIGATION REPORT, COMPACT FILL TO 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY MODIFIED PROCTOR ASTM D-1557. EACH LAYER SHALL NOT EXCEED 8" LOOSE THICKNESS. COMPACT PRIOR TO THE PLACEMENT OF THE NEXT LAYER. COMPACTION SHALL MEET ALL RECOMMENDATIONS OF THE GEOTECHNICAL INVESTIGATION REPORT.
 6. PLACEMENT OF FILL AND COMPACTION SHALL BE MONITORED AND ACCEPTED BY A RETAINED TESTING AGENCY. PERFORM A MINIMUM OF ONE FIELD DENSITY TEST (ASTM D-1556 OR D-6938) FOR EVERY 2,500 SQUARE FEET OF EACH LAYER. THE TESTING AGENCY SHALL RANDOMLY SELECT TEST LOCATIONS.
 7. THE CONTRACTOR SHALL DETERMINE THE EXTENT OF THE CONSTRUCTION DEWATERING SYSTEMS REQUIRED FOR THE EXCAVATION. AT A MINIMUM, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING SITE.
 8. THE CONTRACTOR SHALL SUBMIT CONSTRUCTION DEWATERING PLAN TO THE GEOTECHNICAL ENGINEER FOR APPROVAL PRIOR TO BEGINNING EXCAVATION.
 9. THE CONTRACTOR SHALL INSTALL ALL NECESSARY DEWATERING SYSTEMS.

SLAB-ON-GROUND

- A. THE SLAB-ON-GROUND HAS BEEN DESIGNED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT.
 B. SLAB THICKNESSES AND REINFORCEMENT ARE BASED ON A MODULUS OF SUBGRADE REACTION OF (____) PCI PER THE GEOTECHNICAL INVESTIGATION REPORT OR AN ASSUMED VALUE OF 50 PCI.
 C. SUBGRADE PREPARATION SHALL BE PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT.
 D. FOR INTERIOR SLABS, PLACE A 10-MIL (MINIMUM) VAPOR RETARDER BETWEEN THE SOIL AND BOTTOM OF SLAB. SEE CAST-IN-PLACE CONCRETE SPECIFICATIONS FOR APPROVED VAPOR RETARDER PRODUCTS/MANUFACTURERS. DO NOT USE VAPOR RETARDERS AT EXTERIOR SLABS. SEE ARCHITECTURAL CONTRACT DOCUMENTS FOR PROJECT SPECIFIC REQUIREMENTS.
 E. IF THE SLAB-ON-GROUND HAS BEEN DESIGNATED AS A STRUCTURAL SLAB-ON-GROUND IN THE CONTRACT DOCUMENTS, NO SAW CUTTING OF THE SLAB IS PERMITTED.
 F. CONTROL JOINTS SHALL BE CUT INTO THE SURFACE OF THE SLAB, IN EACH DIRECTION. SEE THE TYPICAL SAW CUT JOINT DETAIL FOR TIME, DEPTH, AND SPACING OF JOINT REQUIREMENTS UNLESS NOTED OTHERWISE. CONTROL JOINTS SHALL BE CONSTRUCTED SUCH THAT THE AREA CONTAINED BY THE CONTROL JOINTS HAS A MAXIMUM RATIO OF LONG SIDE TO SHORT SIDE OF 1.5 TO 1 UNLESS NOTED OTHERWISE. DO NOT CONSTRUCT CONTROL JOINTS SUCH THAT L-SHAPED SLAB PANELS ARE CREATED.
 G. COLUMN ISOLATION JOINTS SHALL BE CONSTRUCTED PER THE TYPICAL COLUMN ISOLATION JOINT DETAIL IN ORDER TO PROVIDE ADEQUATE SPACE FOR COLUMN INSTALLATION.
 H. CONSTRUCTION JOINT LOCATIONS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL. SLAB CONSTRUCTION JOINTS SHALL BE DOWELED.
 I. WHERE SPECIFIED ON PLAN, WELDED WIRE REINFORCEMENT SHALL BE INSTALLED. WELDED WIRE REINFORCEMENT SHALL BE PROPERLY CHAIRED SUCH THAT IT IS LOCATED AT A DEPTH OF 1 1/2" FROM THE TOP OF SLAB.
 J. REFERENCE ARCHITECTURAL AND MEP DOCUMENTS FOR SLAB FINISHES AND SLOPES NOT REFERENCED IN THE STRUCTURAL DOCUMENTS. THE MINIMUM SLAB THICKNESS SPECIFIED IN THE CONTRACT DOCUMENTS MUST BE MAINTAINED.
 K. REFERENCE ARCHITECTURAL DOCUMENTS FOR VAPOR RETARDER AND SLAB AND CONTROL JOINT SEALANT REQUIREMENTS.
 L. CONDUITS SHALL NOT BE PLACED WITHIN THE SLAB. CONDUITS SHALL BE PLACED BENEATH THE SLAB.

CONCRETE

- A. ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH DIVISION 03 OF THE SPECIFICATIONS.
 B. FOR CONCRETE MIXTURE REQUIREMENTS SEE SCHEDULE ON SHEET [S ____]
 C. THE USE OF RECYCLED CONCRETE IS PROHIBITED WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD.
 D. NORMAL WEIGHT CONCRETE SHALL BE USED FOR ALL CONCRETE MEMBERS UNLESS NOTED OTHERWISE. NORMAL WEIGHT CONCRETE SHALL HAVE A CURED DENSITY OF 145 PCF ±5 PCF. WHERE LIGHT WEIGHT CONCRETE IS SPECIFIED THE CURED DENSITY SHALL BE 112 PCF ±3 PCF.
 E. EACH MIX SHALL BE UNIQUELY IDENTIFIED BY MIX NUMBER AND THE INTENDED LOCATION OF PLACEMENT ON THE SPECIFIC PROJECT SHALL BE CLEARLY STATED.
 F. ALL PROPOSED CONSTRUCTION JOINT LOCATIONS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL. HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE PERMITTED IN BEAMS, WALLS, AND SLABS UNLESS SPECIFICALLY SHOWN ON STRUCTURAL DRAWINGS OR BY WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD. FOR MILD REINFORCED MEMBERS, CONSTRUCTION JOINTS SHALL OCCUR WITHIN ONE THIRD OF A MEMBER'S FULL APPROVED APPROVED CONSTRUCTION JOINTS SHALL BE INDICATED, DIMENSIONED, AND DETAILED ON THE CONCRETE REINFORCEMENT SHOP DRAWINGS.
 G. GIRDBERS, BEAMS, HAUNCHES, DROP PANELS, DROP CAPS, AND CAPITALS SHALL BE POURED MONOLITHICALLY AS PART OF THE SLAB SYSTEM UNLESS NOTED OTHERWISE.
 H. PROVIDE A 1/4" INCH CHAMFER AT ALL EXPOSED CORNERS OF BEAMS, WALLS, ETC UNLESS NOTED OTHERWISE.
 I. CONCRETE CORING AND INSTALLATION OF DRILLED ANCHORS IS NOT PERMITTED WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD.
 J. REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL CONCRETE DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL COORDINATE BETWEEN THE ARCHITECTURAL, STRUCTURAL, AND MEP DRAWINGS TO FURNISH DIMENSIONED DRAWINGS THAT LOCATE AND SIZE ALL SLAB EDGES, OPENINGS, AND PENETRATIONS. THESE DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL.
 K. EMBEDDED CONDUITS, PIPES, AND SLEEVES
 1. THE OUTSIDE DIAMETER OF CONDUITS, PIPES, AND SLEEVES SHALL NOT EXCEED ONE-THIRD THE THICKNESS OF THE SLAB, WALL OR BEAM IN WHICH THEY ARE EMBEDDED. EMBEDMENTS SHALL NOT SIGNIFICANTLY REDUCE THE CAPACITY OF THE MEMBERS THEY PENETRATE.
 2. THE MINIMUM CLEAR COVER FOR CONDUITS, PIPES, AND SLEEVES SHALL BE 1 1/2" FOR CONCRETE EXPOSED TO EARTH OR WEATHER AND 3/4" FOR CONCRETE NOT EXPOSED TO EARTH OR WEATHER.
 3. ALUMINUM EMBEDMENTS AND EMBEDMENTS MADE OF ANY OTHER MATERIAL HARMFUL TO THE CONCRETE OR REINFORCEMENT ARE PROHIBITED.
 4. EMBEDMENTS NOT SHOWN ON THE CONTRACT DOCUMENTS SHALL BE DESIGNED TO RESIST THE EFFECTS OF MATERIAL PRESSURE AND TEMPERATURE FLUCTUATIONS THAT WILL BE SUBJECTED TO. THE WORK SHALL BE COORDINATED AMONGST ALL CONSTRUCTION TRADES.
 5. THE CONTENTS OF EMBEDDED PIPES SHALL NOT FLOW UNTIL THE CONCRETE HAS REACHED ITS SPECIFIED DESIGN STRENGTH.
 6. CONDUITS, PIPES, AND SLEEVES SHALL BE PLACED BETWEEN TOP AND BOTTOM LAYERS OF REINFORCEMENT IN SLABS AND BETWEEN INNER AND OUTER LAYERS OF REINFORCEMENT IN WALLS.
 7. EMBEDDED ITEMS SHALL BE FABRICATED AND INSTALLED SUCH THAT CUTTING, BENDING, OR DISPLACEMENT OF REINFORCEMENT FROM ITS SPECIFIED LOCATION IS NOT REQUIRED.

CONCRETE REINFORCEMENT

- A. ALL CONCRETE REINFORCEMENT SHALL BE INSTALLED IN ACCORDANCE WITH DIVISION 03 OF THE SPECIFICATIONS.
 B. ALL REINFORCING STEEL SHALL BE ASTM A615, GRADE 60 UNLESS NOTED OTHERWISE.
 C. WHERE WELDS ARE INDICATED FOR REINFORCING STEEL ON THE DRAWINGS, REINFORCING STEEL SHALL BE A706, GRADE 60 UNLESS OTHERWISE NOTED.
 D. WELDED WIRE REINFORCEMENT SHALL CONFORM TO THE MATERIAL REQUIREMENTS OF ASTM A1064.
 E. ALL 90°, 135°, AND 180° HOOKED REINFORCEMENT SPECIFIED AND GRAPHICALLY DEPICTED IN THE CONTRACT DOCUMENTS SHALL BE DETAILED IN ACCORDANCE WITH ACI 318 STANDARD HOOK GEOMETRY FOR DEFORMED BARS IN TENSION AND FOR STRIPS, TIES, AND HOOPS.
 F. FOR EVERY VERTICAL OR HORIZONTAL BAR DISCONTINUED BY AN OPENING, ONE BAR (MINIMUM OF 2 BARS) SHALL BE ADDED AT SITE OF OPENING (HALF TO EACH SIDE, TYPICAL).
 G. FOR CONCRETE CLEAR COVER TO REINFORCEMENT SEE SCHEDULE ON SHEET [S ____] UNLESS NOTED OTHERWISE. CLEAR COVER IN PARENTHESES () DENOTES CLEAR COVER WHEN THE AS-BUILT APPLICATION IS EXPOSED TO WEATHER.
 H. ALL LAP SPLICES SHALL BE CLASS B TENSION LAP SPLICES IN ACCORDANCE WITH ACI 318 UNLESS NOTED OTHERWISE. SEE LAP SPLICE SCHEDULE ON SHEET [S ____] FOR LAP SPLICE LENGTHS. UNLESS NOTED AS CONTINUOUS, REINFORCEMENT SHALL ONLY BE SPLICED AT LOCATIONS SHOWN ON THE CONTRACT DOCUMENTS. SPLICES AT NON-SPECIFIED LOCATIONS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL.
 I. A MINIMUM LAP SPLICE OF 8" SHALL BE PROVIDED AT ALL END AND SIDE LAP CONDITIONS FOR WELDED WIRE REINFORCEMENT UNLESS NOTED OTHERWISE.
 J. MECHANICAL SPLICES ARE REQUIRED WHERE SPECIFIED ON THE CONTRACT DOCUMENTS. MECHANICAL SPLICES ARE ALSO REQUIRED TO SPLICE #14 AND #18 BARS. MECHANICAL SPLICES MAY ALSO BE USED AT THE CONTRACTOR'S OPTION, PROVIDED THE MECHANICAL SPLICES HAVE A CURRENT ICC-ES REPORT DEMONSTRATING THEY CAN DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR IN TENSION OR COMPRESSION. MECHANICAL SPLICES SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL.
 K. THE USE OF WELDED SPLICES IS PROHIBITED UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL SUBMIT THE LOCATIONS OF WELDED SPLICES TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL. IF APPROVED, WELDED SPLICES SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.
 L. DOWELED MATCH SIZE AND SPACING OF PRIMARY REINFORCEMENT UNLESS NOTED OTHERWISE.
 M. SEE TYPICAL DETAILS FOR REINFORCEMENT REQUIRED AT OPENINGS AND PENETRATIONS.
 N. SUBMIT SHOP DRAWINGS WHICH ADEQUATELY DEPICT THE REINFORCEMENT BAR SIZES AND PLACEMENT. WRITTEN DESCRIPTION OF REINFORCEMENT WITHOUT ADEQUATE SECTIONS, ELEVATIONS, AND DETAILS IS NOT ACCEPTABLE.

STRUCTURAL DRAWING LIST	
SHEET NUMBER	SHEET NAME
S001	GENERAL NOTES
S002	GENERAL NOTES
S003	GENERAL SCHEDULES
S101	FOUNDATION & ROOF FRAMING PLANS
S201	SECTIONS & DETAILS
S202	SECTIONS & DETAILS

60%

LEHIGH PARK AND RIDE FACILITY

1121 VILLAGE LAKES BLVD., LEHIGH ACRES, FLORIDA 33972

PARKER / MUDGEIT / SMITH ARCHITECTS, INC.

2136 McGREGOR BLVD. FORT MYERS, FLORIDA 33901

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REVISIONS		
No.	Description	Date

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 FORT MYERS, FL 33966
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 www.jezerinacgroup.com
 CERTIFICATE OF AUTHORIZATION FL #30785
 #9 Proj# 22-21-011

TO THE BEST OF THE ENGINEERS' KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE BUILDING CODES AND MATERIAL SPECIFICATIONS.

TO THE BEST OF THE ENGINEERS' KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE BUILDING CODES AND MATERIAL SPECIFICATIONS.

07/01/2022

S001

CONCRETE MASONRY

- A. MANUFACTURE AND INSTALL ALL CONCRETE MASONRY IN ACCORDANCE WITH DIVISION 04 SPECIFICATIONS. ALL MASONRY DESIGN SHALL CONFORM TO TMS 402 AND ALL MASONRY CONSTRUCTION SHALL CONFORM TO TMS 602.
- B. ALL LOAD-BEARING, NON-LOAD-BEARING, AND BACKUP WALL CONCRETE MASONRY UNIT CONSTRUCTION SHALL CONFORM TO THE FOLLOWING MATERIAL STANDARDS:
1. CONCRETE MASONRY UNITS: ASTM C90, NORMAL WEIGHT (135 PCF)
 2. MORTAR: ASTM C270, TYPE 'S' OR 'M' PORTLAND CEMENT/LIME ONLY (USE TYPE 'M' MORTAR WHEN MASONRY IS IN DIRECT CONTACT WITH SOIL; TYPE 'S' IS IN ALL OTHER CONDITIONS)
 3. GROUT: ASTM C476
 4. PORTLAND CEMENT: ASTM C150, TYPE I (TYPE III MAY BE USED FOR COLD-WEATHER CONSTRUCTION)
 5. HYDRATED LIME: ASTM C207, TYPE 'S'
 6. AGGREGATE: ASTM C404 (FOR GROUT)
 7. STEEL REINFORCEMENT: ASTM A615, GRADE 60
 8. JOINT REINFORCEMENT: ASTM A1064, TRUSS OR LADDER TYPE, GALVANIZE PER ASTM A153, TYPE B-2
- C. CONCRETE MASONRY UNITS:
1. F_v SHALL BE **(2000)** PSI MINIMUM NET AREA CMU COMPRESSIVE STRENGTH SHALL BE **(2000)** PSI.
 2. LAY CONCRETE MASONRY UNITS IN RUNNING BOND UNLESS NOTED OTHERWISE WITH UNITS DESIGNED TO ALIGN WITH WEBS IN EACH COARSE.
- D. MORTAR:
1. HEAD AND BED JOINTS SHALL BE 3/8 INCHES FOR THE THICKNESS OF THE FACE SHELL. WEBS ARE TO BE FULLY MORTARED IN ALL COURSES OF PIERS, COLUMNS AND PLASTERS, IN THE STARTING COURSE, AND WHERE AN ADJACENT CELL IS TO BE GROUTED. REMOVE MORTAR PROTRUSIONS EXTENDING 1/2 INCHES OR MORE INTO CELLS TO BE GROUTED.
 2. PROVIDE FULL FACE SHELL MORTAR COVERAGE ON MASONRY UNIT HORIZONTAL AND VERTICAL (BED AND HEAD) FACE SHELL JOINTS.
- E. GROUT:
1. MASONRY GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF **(3000)** PSI AT 28-DAYS.
 2. GROUT MIX SHALL CONTAIN PORTLAND CEMENT, AGGREGATE, AND A GROUT-ENHANCING SHRINKAGE-COMPENSATING ADMIXTURE.
 3. MAXIMUM SIZE OF AGGREGATE SHALL BE 3/8 INCH. SLUMP SHALL BE 8 TO 11 INCHES. WATER REDUCING ADMIXTURES MAY BE USED.
 4. GROUT ALL MASONRY CONTAINING REINFORCEMENT, **[ALL CELLS OF 4-HOUR RATED WALLS]** AND WHERE INDICATED ON THE DRAWINGS. ALLOW MORTAR TO CURE 24 HOURS PRIOR TO GROUTING. PROVIDE CLEANOUT OPENINGS AT THE BASE OF THE CELLS CONTAINING REINFORCEMENT TO CLEAN THE CELL AND TO TIE THE VERTICAL BAR TO THE DOWEL. IN HIGH-LIFT GROUTING, USE 5'-0" (MAXIMUM) LIFTS, WITH 1/2 HOUR TO 1 HOUR BETWEEN LIFTS.
 5. GROUT SHALL BE VIBRATED WHILE PLACING TO ENSURE THAT CELLS ARE COMPLETELY FILLED.
- F. STEEL REINFORCEMENT:
1. PROVIDE VERTICAL REINFORCEMENT IN CELLS OF CONCRETE MASONRY UNITS (FULLY EMBEDDED IN GROUT) AS SHOWN ON THE PLANS AND OTHER DETAILS. MINIMUM REINFORCEMENT OF EXTERIOR MASONRY SHALL BE AS FOLLOWS:
 - a. 1-#5 AT A MAXIMUM SPACING OF 48 INCHES
 - b. 1-#5 AT EACH CORNER
 - c. HEAVIER REINFORCEMENT MAY BE REQUIRED BY PLAN NOTES OR DETAILS IN THE DRAWINGS.
 2. REINFORCE WALLS WHERE INDICATED ON THE DRAWINGS AND AT ALL INTERSECTIONS, EACH SIDE OF OPENINGS AND AT THE ENDS OF WALLS. USE BAR SPACERS AT 10 FEET ON CENTER WHERE GROUT POUR HEIGHT EXCEEDS 10 FEET.
 3. ALL VERTICAL REINFORCEMENT SHALL HAVE STANDARD HOOK INTO BOND BEAM. TERMINATE AT HIGHEST BOND BEAM IF MASONRY DOES NOT EXTEND TO ROOF OR GROUTED CELL IS NOT CONTINUOUS TO ROOF. HOOK SHALL EXTEND TO THE UPPERMOST HORIZONTAL REINFORCEMENT OF THE BOND BEAM AND HAVE A MINIMUM EMBEDMENT OF 6 INCHES.
 4. ALL HORIZONTAL REINFORCEMENT AT ENDS OF BOND BEAMS SHALL HAVE STANDARD HOOK INTO VERTICAL GROUTED CELL. PROVIDE CORNER BARS SUCH THAT HORIZONTAL REINFORCEMENT IS CONTINUOUS AROUND CORNERS.
 5. COVER TO STEEL REINFORCEMENT WITHIN MASONRY ELEMENTS SHALL NOT BE LESS THAN THE FOLLOWING:
 - a. EXPOSED TO EARTH OR WEATHER: 1 1/2 INCHES (#5 AND SMALLER BARS), 2 INCHES (#6 AND LARGER BARS)
 - b. NOT EXPOSED TO EARTH OR WEATHER: 1 1/2 INCHES
- G. JOINT REINFORCEMENT:
1. JOINT REINFORCEMENT SHALL BE LADDER TYPE, **[9 GAUGE]** SPACED VERTICALLY AT EVERY 2 COURSES UNLESS NOTED OTHERWISE.
 2. PROVIDE JOINT REINFORCEMENT SPACED VERTICALLY AT EVERY COURSE FOR MASONRY BELOW GRADE AND IN PARAPETS AND CANTILEVERED WALLS.
 3. PROVIDE TWO ROWS OF JOINT REINFORCEMENT AT EVERY COURSE AT TOP AND BOTTOM OF OPENINGS (EXTEND 24 INCHES EACH SIDE).
 4. PROVIDE TWO ROWS OF JOINT REINFORCEMENT AT EVERY COURSE AT BOND BEAMS.
 5. OVERLAP DISCONTINUOUS JOINT REINFORCEMENT BY AT LEAST 6 INCHES.
 6. USE PREFABRICATED CORNERS AND TEES.
 7. EXTEND JOINT REINFORCEMENT A MINIMUM OF 4 INCHES INTO THE TIE BEAM.
 8. REFER TO PLANS AND DETAILS FOR BONDED JOINT REQUIREMENTS AT WALL CORNERS AND INTERSECTIONS, WHERE INDICATED ON DRAWINGS, INTERLOCK WALLS WITH METAL TIES, ANCHORS, OR PREFABRICATED JOINT REINFORCEMENT UNLESS NOTED OTHERWISE ON DRAWINGS OR SEE SPECIFICATIONS.
 9. LONGITUDINAL WIRES OF JOINT REINFORCEMENT SHALL BE FULLY EMBEDDED IN MORTAR OR GROUT WITH A MINIMUM HORIZONTAL EDGE COVER OF 5/8 INCHES WHEN EXPOSED TO EARTH AND WEATHER AND 1/2 INCHES WHEN NOT EXPOSED TO EARTH OR WEATHER.
- H. REINFORCED MASONRY WALL CONSTRUCTION SHALL BE INSPECTED BY AN ENGINEER OR ARCHITECT IN ACCORDANCE WITH TMS 602.
- I. WHERE ANCHOR BOLTS, WEDGE ANCHORS, OR ANCHORS SET IN EPOXY ARE PLACED IN A MASONRY WALL, FILL CELLS WITH GROUT FOR BOLTED COURSE, ONE COURSE ABOVE AND TWO COURSES BELOW.
- J. USE PRESSURE-TREATED WOOD FOR WOOD IN CONTACT WITH MASONRY.
- K. CALCIUM CHLORIDE SHALL NOT BE USED IN MORTAR OR GROUT.
- L. REFER TO ARCHITECT'S DRAWINGS FOR THE EXTENT OF MASONRY WALLS AND DIMENSIONED LOCATION OF OPENINGS. NONLOAD BEARING WALLS MAY NOT BE SHOWN ON THE STRUCTURAL DRAWINGS.
- M. CONCRETE MASONRY UNITS SHALL BE CUT BELOW BEAMS, LINTELS, OR BOND BEAMS AS REQUIRED IN ORDER TO SET CONTINUOUS BEAM, LINTEL, OR BOND BEAMS AT THE PROPER ELEVATION.
- N. ALL CELLS BELOW GRADE AND SLAB-ON-GROUND SHALL BE FULLY GROUTED.
- O. THE FOLLOWING CRITERIA REGARDING PIPES AND CONDUITS EMBEDDED IN MASONRY SHALL BE ADHERED TO (SEE MEP DRAWINGS FOR LOCATIONS OF SLEEVES, PIPES, CONDUIT, ACCESSORIES, ETC). THESE CRITERIA WILL BE STRICTLY ENFORCED:
1. CONDUITS, PIPES, AND SLEEVES OF ANY MATERIAL NOT HARMFUL TO MASONRY AND MEETING THE CRITERIA BELOW SHALL BE PERMITTED TO BE EMBEDDED IN MASONRY. ALL OTHER CONDUITS, PIPES, AND SLEEVES SHALL NOT BE EMBEDDED WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.
 2. CONDUITS AND PIPES OF ALUMINUM SHALL NOT BE EMBEDDED IN STRUCTURAL MASONRY.
 3. CONDUITS, PIPES, AND SLEEVES PASSING THROUGH A WALL SHALL NOT SIGNIFICANTLY IMPAIR THE STRENGTH OF THE CONSTRUCTION. CONDUITS, PIPES, AND SLEEVES SHALL NOT PASS THROUGH JAMBS, LINTELS, BOND BEAMS, OR SHEAR WALLS WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.
 4. CONDUITS AND PIPES SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS OR WIDTHS ON CENTER.
 5. CONDUITS AND PIPES SHALL BE FABRICATED AND INSTALLED SO THAT CUTTING, BENDING, OR DISPLACEMENT OF REINFORCEMENT FROM ITS PROPER LOCATION WILL NOT BE REQUIRED.
 6. CONDUITS AND PIPES, WITH FITTINGS, EMBEDDED WITHIN A COLUMN OR WALL SHALL NOT DISPLACE MORE THAN 2 PERCENT OF THE NET SECTION OR AS REQUIRED BY FIRE PROTECTION.
- P. ALL MASONRY WALLS SHOWN ON THE STRUCTURAL DRAWINGS HAVE BEEN DESIGNED TO RESIST THE REQUIRED CODE VERTICAL AND LATERAL FORCES IN THE FINAL CONSTRUCTED CONFIGURATION ONLY ASSUMING FULL BRACING TOP, BOTTOM, AND/OR SIDE OF WALL AS SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROPERLY AND ADEQUATELY BRACE ALL MASONRY WALLS AT ALL STAGES DURING CONSTRUCTION TO RESIST ERECTION LOADS AND LATERAL LOADS THAT COULD OCCUR PRIOR TO THE COMPLETION OF CONSTRUCTION.
- Q. CONTROL JOINTS SHALL BE PROVIDED IN ALL CONCRETE MASONRY CONSTRUCTION. REFER TO TYPICAL CONTROL JOINT DETAIL FOR GUIDELINES AND SPACING.

POST-INSTALLED ANCHORS

- A. POST-INSTALLED ANCHORS SHALL INCLUDE MECHANICAL, SCREW, AND ADHESIVE ANCHORS OF SIZE, NUMBER, AND SPACING AS SHOWN ON THE STRUCTURAL DRAWINGS. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE STRUCTURAL DRAWINGS.
- B. MECHANICAL ANCHORS (EXPANSION ANCHORS/EXPANSION BOLTS) INTO EXISTING CONCRETE AS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE ONE OF THE FOLLOWING PRODUCTS:
1. KWIK BOLT T2 ANCHORS MANUFACTURED BY HILTI FASTENING SYSTEMS
 2. STRONG-BOLT 2 ANCHORS MANUFACTURED BY SIMPSON STRONGTIE COMPANY
 3. POWER-STUD+ SD2 ANCHORS MANUFACTURED BY DEWALT
- C. MECHANICAL ANCHORS (EXPANSION ANCHORS/EXPANSION BOLTS) INTO EXISTING CONCRETE MASONRY AS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE ONE OF THE FOLLOWING PRODUCTS:
1. KWIK BOLT 3 ANCHORS MANUFACTURED BY HILTI FASTENING SYSTEMS
 2. WEDGE-ALL ANCHORS MANUFACTURED BY SIMPSON STRONGTIE COMPANY
 3. POWER-STUD+ SD1 ANCHORS MANUFACTURED BY DEWALT
- D. SCREW ANCHORS INTO EXISTING CONCRETE AND CONCRETE MASONRY AS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE ONE OF THE FOLLOWING PRODUCTS:
1. KWIK HUS E2 ANCHORS MANUFACTURED BY HILTI FASTENING SYSTEMS
 2. TITEN HD ANCHORS MANUFACTURED BY SIMPSON STRONGTIE COMPANY
 3. SCREW-BOLT+ ANCHORS MANUFACTURED BY DEWALT
- E. ADHESIVE ANCHORS (EPOXY ANCHORS/DRILL & EPOXY) INTO EXISTING CONCRETE AS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE ONE OF THE FOLLOWING ADHESIVE PRODUCTS:
1. HIT-HY200 EPOXY ADHESIVE WITH HAS ROD MANUFACTURED BY HILTI FASTENING SYSTEMS
 2. AT XP ADHESIVE MANUFACTURED BY SIMPSON STRONGTIE COMPANY WITH AN ALL-THREAD F1554 GRADE 36 STEEL ROD
 3. PURE110+ EPOXY ADHESIVE MANUFACTURED BY DEWALT WITH AN ALL-THREAD F1554 GRADE 36 STEEL ROD
- F. ADHESIVE ANCHORS (EPOXY ANCHORS/DRILL & EPOXY) INTO EXISTING CONCRETE MASONRY AS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE ONE OF THE FOLLOWING ADHESIVE PRODUCTS:
1. HIT-HY70 INJECTION ADHESIVE WITH HAS ROD MANUFACTURED BY HILTI FASTENING SYSTEMS
 2. AT XP ADHESIVE MANUFACTURED BY SIMPSON STRONGTIE COMPANY WITH AN ALL-THREAD F1554 GRADE 36 STEEL ROD
 3. AC100+ GOLD MANUFACTURED BY DEWALT WITH AN ALL-THREAD F1554 GRADE 36 STEEL ROD
- G. ADHESIVE FOR ANCHORING REINFORCING BARS (REBAR) INTO EXISTING CONCRETE AS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE ONE OF THE FOLLOWING ADHESIVE PRODUCTS:
1. HIT-HY200 EPOXY ADHESIVE MANUFACTURED BY HILTI FASTENING SYSTEMS
 2. AT XP ADHESIVE MANUFACTURED BY SIMPSON STRONGTIE COMPANY
 3. PURE110+ EPOXY ADHESIVE MANUFACTURED BY DEWALT
- H. THE GENERAL CONTRACTOR SHALL OBTAIN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USING POST-INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST-IN-PLACE ANCHORS.
- I. SUBSTITUTION REQUESTS FOR ALTERNATIVE PRODUCTS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD WITH CALCULATIONS THAT ARE PREPARED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER. CALCULATIONS SHALL SHOW THAT THE SUBSTITUTED PRODUCT WILL ACHIEVE AN EQUIVALENT CAPACITY USING THE APPROPRIATE DESIGN PROCEDURE REQUIRED BY THE REFERENCED BUILDING CODE.
- J. ALTERNATIVE PRODUCTS SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL SHALL HAVE A VALID RESEARCH REPORT, ALSO KNOWN AS EVALUATION REPORT, INDICATING COMPLIANCE WITH APPROPRIATE ACCEPTANCE CRITERIA REQUIRED BY THE REFERENCED BUILDING CODE FOR THE INTENDED LOAD TYPE AND USE (E.G. WIND, SEISMIC, SUSTAINED TENSION, ETC). ALTERNATIVE PRODUCTS SUBMITTED SHALL INDICATE THAT THE ANCHOR IS PERMITTED FOR RESISTING LOADS IN CRACKED CONCRETE. RESEARCH REPORTS SHALL BE ISSUED BY A SOURCE APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- K. LOCATE, BY NON-DESTRUCTIVE MEANS, ALL EXISTING REINFORCEMENT, AND AVOID DURING INSTALLATION OF ANCHORS. IF EXISTING REINFORCEMENT LAYOUT PROHIBITS THE INSTALLATION OF ANCHORS AS INDICATED ON THE STRUCTURAL DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF RECORD IMMEDIATELY.
- L. HOLES SHALL BE DRILLED AND CLEANED, AND ANCHORS SHALL BE INSTALLED PER THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS. DEFECTIVE OR ABANDONED HOLES SHALL BE FILLED WITH NON-SHRINK GROUT OR AN INJECTABLE ADHESIVE MATCHING THE ADJACENT CONCRETE COMPRESSIVE STRENGTH.
- M. HOT DIPPED GALVANIZED STEEL ANCHORS SHALL BE USED AT ALL EXTERIOR LOCATIONS AND WHERE SPECIFICALLY INDICATED ON THE DRAWINGS.
- N. MASONRY ANCHORS SHALL NOT BE INSTALLED IN HOLLOW CORE MASONRY. IF INSTALLATION INTO HOLLOW CORE MASONRY IS DESIRED, SUBMIT ALTERNATIVE PRODUCT FOR REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD.
- O. MASONRY ANCHORS SHALL NOT BE INSTALLED IN HEAD JOINTS.
- P. IN ADDITION TO THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS, THE FOLLOWING GUIDELINES SHALL BE FOLLOWED FOR INSTALLATION OF ADHESIVE ANCHORS:
1. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT TIME OF ANCHOR INSTALLATION. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT THE TIME OF INSTALLATION UNLESS HIGHER STRENGTH IS REQUIRED PER THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.
 2. ADHESIVE ANCHORS SHALL BE INSTALLED IN DRY CONCRETE, AND DURING DRY CONDITIONS.
 3. ADHESIVE ANCHORS SHALL BE INSTALLED IN HOLES PREDRILLED WITH A CARBIDE TIPPED DRILL BIT.
 4. ADHESIVE ANCHORS SHALL BE INSTALLED WITHIN THE TEMPERATURE RANGE SPECIFIED IN THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS, BUT NOT OUTSIDE OF THE DESIGN TEMPERATURE RANGE. LOADS SHALL NOT BE APPLIED TO ADHESIVE ANCHORS UNTIL THE FULL CURING TIME ASSOCIATED WITH THE INSTALLATION TEMPERATURE HAS ELAPSED.
- Q. INSTALLATION OF ADHESIVE ANCHORS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPLICABLE CERTIFICATION PROGRAM. CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM, OR EQUIVALENT.
- R. SPECIAL INSPECTIONS SHALL BE PROVIDED FOR POST-INSTALLED ANCHORS IN ACCORDANCE WITH THE ANCHOR MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS AND/OR EVALUATION REPORTS, UNLESS MORE SPECIFIC REQUIREMENTS ARE SPECIFIED IN THE CONSTRUCTION DOCUMENTS.
- S. INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED TO RESIST SUSTAINED TENSILE LOADS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM. **[THESE ANCHORS ARE DESIGNATED ON THE DRAWINGS WITH (CERT)]**
- T. CONTINUOUS INSPECTION SHALL BE PROVIDED FOR ADHESIVE ANCHORS INSTALLED IN HORIZONTAL OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSILE LOADS.
- U. ADHESIVE ANCHORS SHALL BE PROOF TESTED AS REQUIRED IN THE SPECIFICATIONS. EACH TYPE AND SIZE OF ANCHOR SHALL BE PROOF TESTED IN TENSION BY AN INDEPENDENT TESTING LABORATORY. TENSION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH ASTM E488 AND ACI 355.4. THE INDEPENDENT TESTING LABORATORY SHALL SUBMIT AN ANCHORAGE TESTING PLAN TO THE STRUCTURAL ENGINEER OF RECORD TO ENSURE THE TESTING REQUIREMENTS ARE FULL FILLED.
- V. TENSION PROOF LOADS AND PERCENTAGE OF ANCHORS TO BE TESTED ARE INDICATED ON **[S, ...]** PROOF LOADING SHALL BE PERFORMED AFTER THE 28-DAY CONCRETE CURING PERIOD AND AFTER THE MINIMUM EPOXY CURING PERIOD SPECIFIED BY THE MANUFACTURER. PROOF LOADING SHALL BE PERFORMED ON PRODUCTION ANCHORS; SACRIFICIAL ANCHORS SHALL NOT BE CONSIDERED ACCEPTABLE. MAINTAIN THE PROOF LOAD AT THE REQUIRED LOAD LEVEL FOR A MINIMUM OF 10 SECONDS. **[ANCHORS WITH SUSTAINED TENSION LOADING ARE INDICATED ON THE DRAWINGS WITH (CERT)]**
- W. ANCHORS SHALL HAVE NO VISIBLE INDICATIONS OF DISPLACEMENT OR DAMAGE DURING OR AFTER PROOF LOAD APPLICATION. CONCRETE CRACKING IN THE VICINITY OF THE ANCHOR AFTER LOADING SHALL BE CONSIDERED A FAILURE.
- X. IF **[ANY, MORE THAN [5, 10, 25] PERCENT]** OF THE TESTED ANCHORS FAIL TO ACHIEVE THE SPECIFIED PROOF LOAD WITHIN THE LIMITS DEFINED IN THESE NOTES, **[100%, AN ADDITIONAL [25, 50] PERCENT]** OF THE ANCHORS OF THE SAME DIAMETER AND TYPE AS THE FAILED ANCHOR SHALL BE PROOF TESTED.
- Y. IN THE EVENT OF FAILURE TO ACHIEVE PROOF LOAD OR EXCESSIVE DISPLACEMENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO THE CONCRETE.
- Z. HOLE DRILLING AND INSTALLATION OF ADHESIVE ANCHORS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS. ANCHORS SHALL BE INSTALLED IN CONCRETE DRY CONDITION.

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TO THE BEST OF THE ENGINEERS KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE BUILDING CODES AND MATERIAL SPECIFICATIONS.

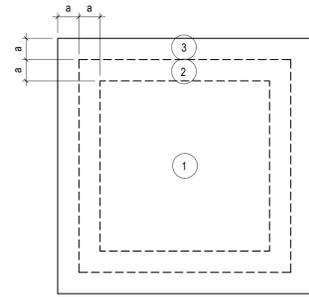
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CONCRETE MIXTURE REQUIREMENTS								
APPLICATION	EXPOSURE CLASS	f _c	TEST AGE	MODULUS OF ELASTICITY	MAXIMUM W/C/M	AIR CONTENT	NOMINAL MAXIMUM AGGREGATE	MAXIMUM CONCRETE WEIGHT
FOOTINGS	F0	3000 PSI	28 DAYS	3122 KSI	SEE NOTE 2	SEE NOTE 3	1"	150 PCF
EXTERIOR SLAB-ON-GROUND	F1	4500 PSI	28 DAYS	3824 KSI	0.55	4.5% ± 1.5%	1"	150 PCF
SLAB-ON-GROUND	F0	3000 PSI	28 DAYS	3122 KSI	SEE NOTE 2	SEE NOTE 3	1"	150 PCF
ELEVATED SLABS & BEAMS	F0	5000 PSI	28 DAYS	4031 KSI	SEE NOTE 2	SEE NOTE 3	3/4"	150 PCF

NOTES:

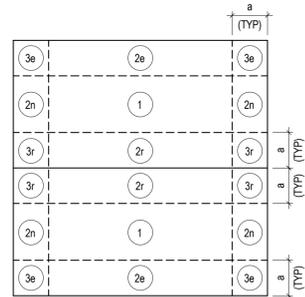
- EXPOSURE CATEGORIES AND CLASSES FOR SULFATES, PERMEABILITY, AND CORROSION PROTECTION OF REINFORCEMENT IS CLASS ZERO UNLESS NOTED OTHERWISE.
- WATER/CEMENT RATIO SHALL BE AS REQUIRED FOR THE SPECIFIED CONCRETE MIX DESIGN. THERE IS NO MAXIMUM WATER/CEMENT RATIO REQUIREMENT FOR THE EXPOSURE CLASSIFICATION ASSOCIATED WITH THIS APPLICATION. MAXIMUM WATER/CEMENT RATIO IS NOT APPLICABLE FOR DURABILITY REQUIREMENTS IN LIGHTWEIGHT CONCRETE.
- THERE IS NO MANDATORY TARGET AIR CONTENT FOR THIS APPLICATION. THE CONTRACTOR MAY CHOOSE TO ADD AIR ENTRAINMENT TO IMPROVE THE WORKABILITY AND FINISHING PROPERTIES OF THE MIX. AIR CONTENT SHALL BE AS REQUIRED FOR THE SPECIFIED CONCRETE MIX.

CAST-IN-PLACE CONCRETE (NON-PRESTRESSED) CLEAR COVER SCHEDULE			
APPLICATION	BOTTOM	TOP	SIDES
FOUNDATIONS	3"	2"	3"
SLAB-ON-GROUND	SEE DETAILS	SEE DETAILS	3"
RETAINING WALLS	N/A	N/A	2"
WALLS	N/A	N/A	1/2" (2")
COLUMNS	N/A	N/A	1 1/2" (2")
ELEVATED SLABS	3/4" (2")	3/4" (2")	3/4" (2")
BEAMS	1 1/2" (2")	1 1/2" (2")	1 1/2" (2")



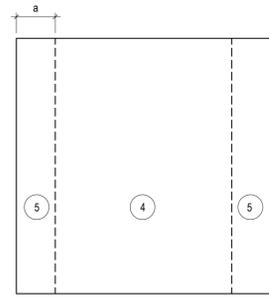
TYPICAL OPEN STRUCTURE COMPONENT AND CLADDING GROSS WIND PRESSURES (BUS CANOPY)

COMPONENTS & CLADDING EXTERNAL PRESSURE LOADS (PSF)			
EFFECTIVE WIND AREA (FT²)	1	2	3
<10	-44 48	-68 72	-133 96
20	-44 48	-68 72	-68 72
50	-44 48	-44 48	-44 48



GABLE ROOF 7° < SLOPE ≤ 45° COMPONENT AND CLADDING GROSS WIND PRESSURES (SUPPORT BUILDING)

COMPONENTS & CLADDING EXTERNAL PRESSURE LOADS (PSF)						
EFFECTIVE WIND AREA (FT²)	1	2e	2n	2r	3e	3r
<10	-97 53	-97 53	-107 53	-97 53	-131 53	-107 53
20	-83 47	-83 47	-96 47	-83 47	-116 47	-96 47
50	-63 39	-63 39	-81 39	-63 39	-97 39	-81 39
>100	-48 33	-48 33	-69 33	-48 33	-82 33	-69 33



WALL ELEVATION

COMPONENTS & CLADDING EXTERNAL PRESSURE LOADS (PSF)		
EFFECTIVE WIND AREA (FT²)	4	5
<10	-63 58	-78 58
50	-57 49	-66 49
100	-54 43	-60 43
500	-48 43	-48 43

NOTES:

- FOR COMPONENTS HAVING EFFECTIVE AREAS IN BETWEEN TABULATED VALUES, DESIGN LOADS MAY BE INTERPOLATED. OTHERWISE DESIGN LOAD SHALL BE TAKEN FROM THE NEXT LOWEST TABULATED EFFECTIVE AREA/CH.
- DESIGN VALUES SHOWN IN THIS TABLE ARE ULTIMATE VALUES FOR USE WITH LRFD DESIGN. VALUES MAY BE MULTIPLIED BY 0.6 FOR USE WITH SERVICE LEVEL OR ASD DESIGN. REFER TO THE BUILDING CODE FOR APPLICABLE LOAD COMBINATIONS.
- a = "-": SEE ROOF PLAN MAP BELOW FOR LOCATION OF a-ZONES. WALL a-ZONE LOCATIONS TO MATCH ROOF a-ZONES.
- POSITIVE PRESSURE VALUES REFER TO FORCES ACTING TOWARDS BUILDING OR COMPONENT FACE. NEGATIVE PRESSURE VALUES REFER TO FORCES ACTING AWAY FROM BUILDING OR COMPONENT FACE.
- EACH COMPONENT AND ITS CONNECTION SHALL BE DESIGNED FOR MAXIMUM POSITIVE AND NEGATIVE FORCES.
- PARAPET COMPONENTS AND CLADDING ARE THOSE ELEMENTS WHICH EXIST ABOVE THE HORIZONTAL PLANE OF THE ROOF AND SHALL BE DESIGNED FOR:
 - POSITIVE AND NEGATIVE PRESSURES 4 OR 5 APPLIED TO THE SHEATHING OR PANELING AND ITS CONNECTION ON OUTSIDE FACE.
 - POSITIVE PRESSURES 4 OR 5 APPLIED TO THE SHEATHING OR PANELING AND ITS CONNECTION ON ROOF SIDE FACE.
 - NEGATIVE PRESSURES 2 OR 3 APPLIED TO THE SHEATHING OR PANELING AND ITS CONNECTION ON ROOF SIDE FACE.
 - P4/5 SHALL BE APPLIED TO THE DESIGN OF THE STRUCTURAL ELEMENT OF THE PARAPET AND ITS CONNECTION, INCLUDING BUT NOT LIMITED TO THE STUD FRAMING OF THE PARAPET.
- A DESIGN WIND PRESSURE HORIZONTAL VALUE OF ... PSF AND VERTICAL VALUE OF ... PSF SHALL BE APPLIED TO COMPONENTS WHICH ARE EITHER ROOFTOP STRUCTURES OR ROOFTOP APPURTENANCES AND THEIR CONNECTION. EXAMPLES OF THIS ARE RTUs, AHUs, AND SCREEN WALLS.
- ROH# : DENOTES DESIGN WIND PRESSURE VALUES WHICH SHALL BE APPLIED AT ROOF OVERHANGS TO TOP SURFACE CLADDING OR SHEATHING AND ITS CONNECTION. SOFFIT CLADDING OR SHEATHINGS SHALL BE DESIGNED FOR SIMILAR PRESSURE TO THE ADJACENT WALL PRESSURE. A COMBINATION OF THESE FORCES SHALL BE APPLIED TO THE STRUCTURAL ELEMENT OF THE OVERHANG AND ITS CONNECTION, INCLUDING BUT NOT LIMITED TO THE STUD FRAMING OF THE OVERHANG.
- ALL DOORS TO BE RATED TO RESIST DESIGN WIND PRESSURES SPECIFIED.

ABBREVIATIONS		ABBREVIATIONS	
ADOL	ADDITIONAL	KSI	KIPS PER SQUARE INCH
ADJ	ADJACENT		
AFF	ABOVE FINISHED FLOOR	L	LENGTH
ALT	ALTERNATE	LB(S)	POUND(S)
APPROX	APPROXIMATE	LL	LIVE LOAD
ARCH	ARCHITECT OR ARCHITECTURAL	LLH	LONG LEG HORIZONTAL
ASD	ALLOWABLE STRESS DESIGN	LLV	LONG LEG VERTICAL
		LONG	LONGITUDINAL
B/	BOTTOM OF	LRFD	LOAD RESISTANCE FACTORED DESIGN
B/B	BACK-TO-BACK	LSH	LONG SIDE HORIZONTAL
BLDG	BUILDING	LSV	LONG SIDE VERTICAL
BLKG	BLOCKING	LTS	LAP TENSION SPLICE
BP	BASE PLATE	LW	LIGHT WEIGHT
BRG	BEARING	LWC	LIGHT WEIGHT CONCRETE
BOT	BOTTOM		
BTWN	BETWEEN	M	MOMENT
		MAX	MAXIMUM
C	COMPRESSION	MC	MOMENT CONNECTION(S)
CFS	COLD-FORMED STEEL	MECH	MECHANICAL
CIP	CAST-IN-PLACE	MEP	MECHANICAL, ELECTRICAL, PLUMBING,
CJ	CONTROL JOINT		FIRE PROTECTION
CJP	COMPLETE JOINT PENETRATION	MFR	MANUFACTURER
CL	CENTER LINE	MID	MIDDLE
CLR	CLEAR OR CLEARANCE	MIN	MINIMUM
CMU	CONCRETE MASONRY UNIT	MISC	MISCELLANEOUS
COL	COLUMN		
CONC	CONCRETE	NIC	NOT IN CONTRACT
CONN(S)	CONNECTION(S)	NS	NEAR SIDE
CONST	CONSTRUCTION	NTS	NOT TO SCALE
CONT	CONTINUOUS	NWC	NORMAL WEIGHT CONCRETE
COORD	COORDINATE		
		OC	ON CENTER
D&E	DRILL & EPOXY	OD	OUTSIDE DIAMETER
db	REINFORCING BAR DIAMETER	OF	OUTSIDE FACE
DBA	DEFORMED BAR ANCHOR	OH	OPPOSITE HAND
DCW	DEMAND CRITICAL WELD	OPNG(S)	OPENING(S)
°	DEGREE(S)	OPP	OPPOSITE
Ø	DIAMETER	OSL	OUTSTANDING LEG
DIAG	DIAGONAL		
DIM(S)	DIMENSION(S)	PAF	POWDER ACTUATED FASTENER
DL	DEAD LOAD	PERP	PERPENDICULAR
DWG(S)	DRAWING(S)	PJF	PREFORMED JOINT FILLER
		PJP	PARTIAL JOINT PENETRATION
		PL	PLATE
EA	EACH	PLF	POUNDS PER LINEAL FOOT
EF	EACH FACE	PCST	PRECAST
EJ	EXPANSION JOINT	PREFAB	PRE-FABRICATED
EL	ELEVATION	PSF	POUNDS PER SQUARE FOOT
ELEV	ELEVATOR	PSI	POUNDS PER SQUARE INCH
EOS	EDGE-OF-SLAB	PT	POST-TENSIONED
EQ	EQUAL		
EQUIP	EQUIPMENT		
EW	EACH WAY	REF	REFERENCE
EXIST	EXISTING	REINF	REINFORCE(D) (ING OR (MENT)
EXP	EXPANSION	REQ(D)	REQUIRE(D)
EXT	EXTERIOR	REV	REVISION
		RTU	ROOF TOP UNIT
F/F	FACE-TO-FACE	SCHED	SCHEDULE(D)
FD	FLOOR DRAIN	SDL	SUPERIMPOSED DEAD LOAD
FF	FINISH FLOOR	SER	STRUCTURAL ENGINEER OF RECORD
FND	FOUNDATION	SF	SQUARE FOOT (FEET)
FS	FAR SIDE	SIM	SIMILAR
FT	FEET	SLRS	SEISMIC LOAD RESISTING SYSTEM
FTG	FOOTING	SOG	SLAB-ON-GROUND
		SP	SPACE
GA	GAGE, GAUGE	SPEC(S)	SPECIFICATION(S)
GALV	GALVANIZED	SS	STAINLESS STEEL
GB	GRADE BEAM	STD	STANDARD
GC	GENERAL CONTRACTOR	STIFF	STIFFENER
GDR	GIRDER	STR	STRUCTURE OR STRUCTURAL
GEN	GENERAL	SYM	SYMMETRICAL
GYP	GYPHUM		
		T	TENSION
HCA	HEADED CONCRETE ANCHORS	T&B	TOP AND BOTTOM
HORIZ	HORIZONTAL	T&G	TONGUE & GROOVE
HSS	HOLLOW STRUCTURAL SECTION	TJ	TOP OF
		TEMP	TEMPERATURE OR TEMPORARY
ID	INSIDE DIAMETER	TYP	TYPICAL
IF	INSIDE FACE		
IN	INCH	UNO	UNLESS NOTED OTHERWISE
INFO	INFORMATION		
INT	INTERIOR	V	SHEAR
ICC-ES	INTERNATIONAL CODE COUNCIL - EVALUATION SERVICE	VERT	VERTICAL
		VIF	VERIFY IN FIELD
JST(S)	JOIST(S)	W	WITH
K	KIPS (1,000 POUNDS)	W/O	WITHOUT
KLF	KIP PER LINEAR FOOT	WP	WORK POINT
KSF	KIP PER SQUARE FOOT	WWR	WELDED WIRE REINFORCEMENT



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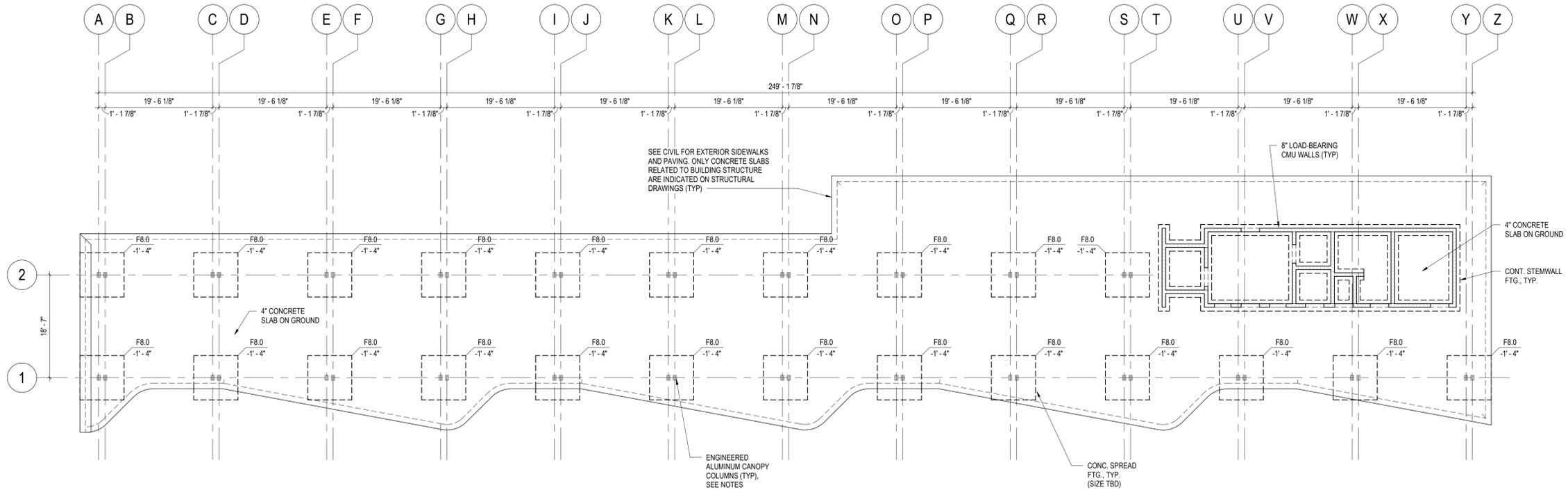
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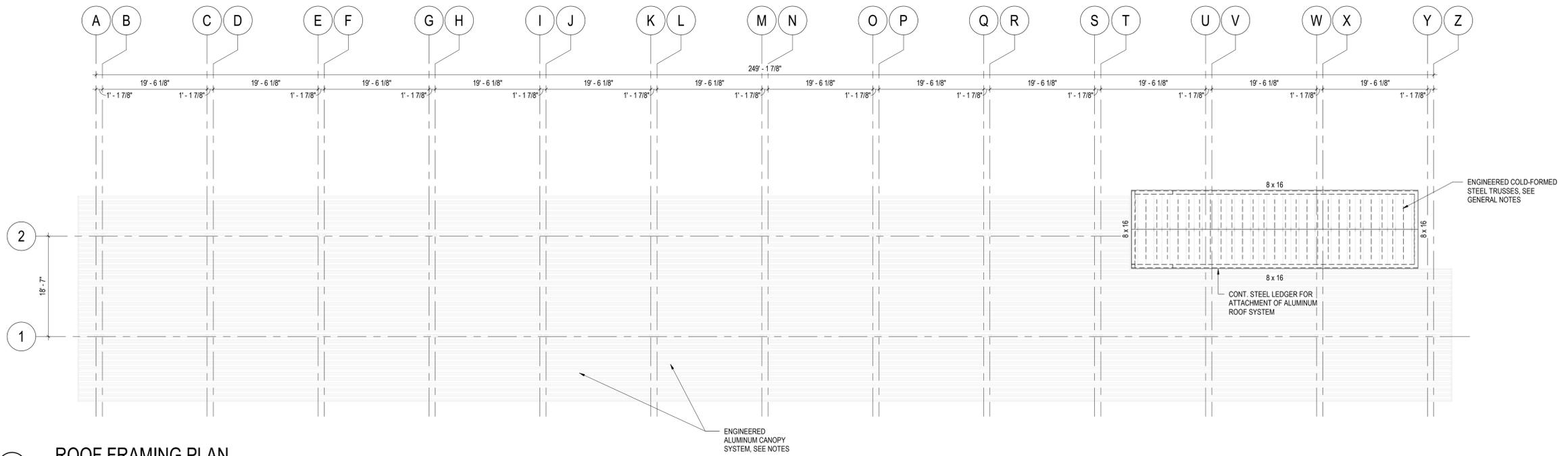
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1 FOUNDATION PLAN
3/32" = 1'-0"



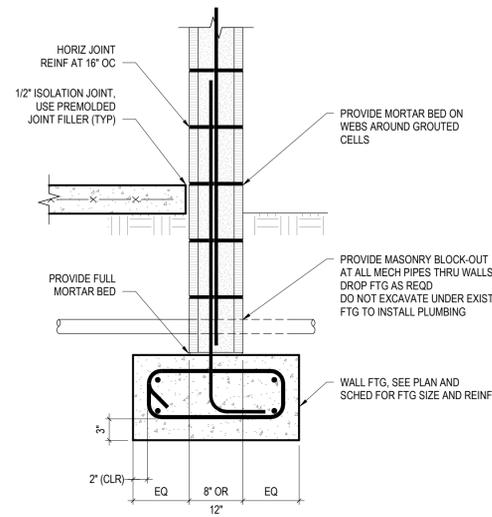
2 ROOF FRAMING PLAN
3/32" = 1'-0"

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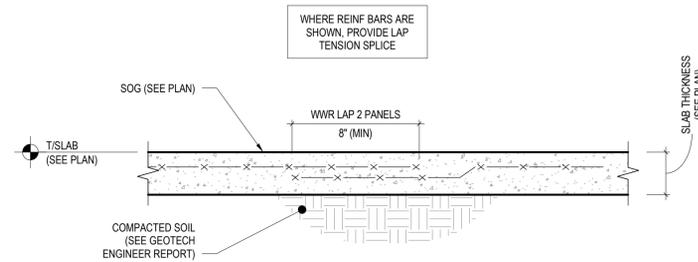
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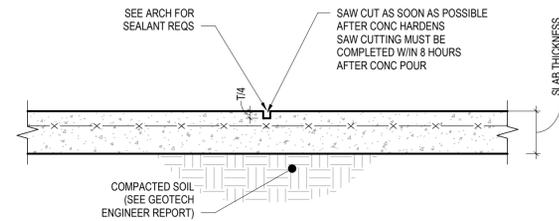


WALL FOOTING DETAIL AT EXTERIOR

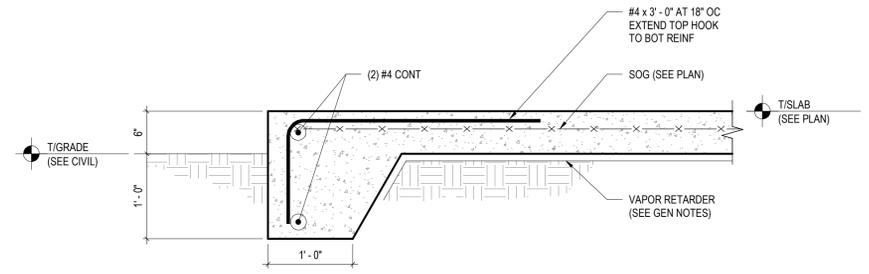
1
1" = 1'-0"



SLAB-ON-GROUND

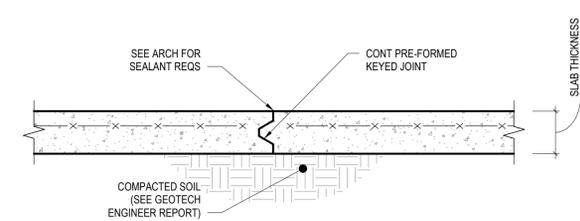


SAW CUT JOINT



TYPICAL SLAB EDGE

2
1" = 1'-0"



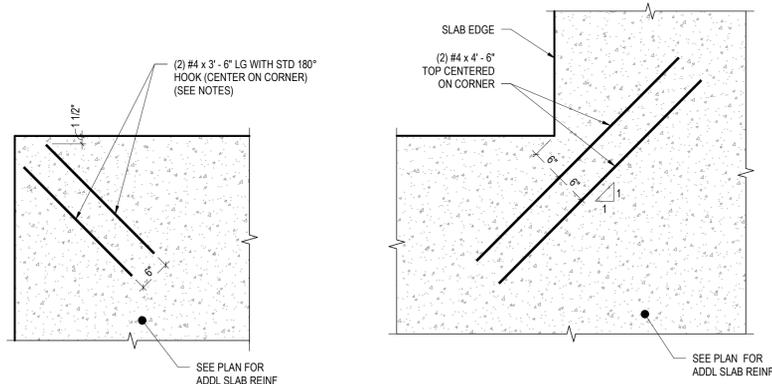
CONSTRUCTION JOINT

NOTES:

- WHERE NOT INDICATED ON PLAN PROVIDE JOINTS AT COLUMN CENTER LINES AND BETWEEN COLUMN CENTER LINES WITH SPACING OF JOINTS NOT TO EXCEED 36 TIMES THE SLAB THICKNESS

TYPICAL SLAB-ON-GROUND DETAILS

3
1" = 1'-0"

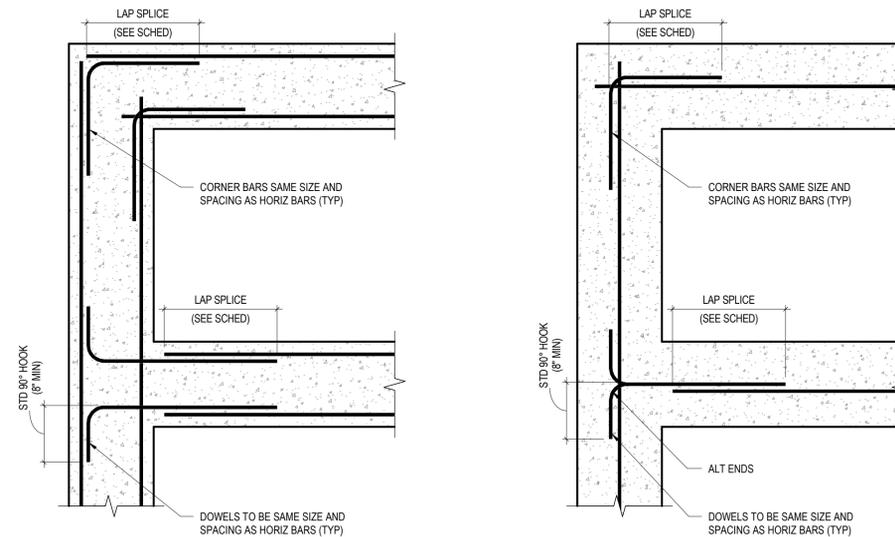


TYPICAL ADDITIONAL SLAB CORNER REINFORCEMENT

NOTES:

- INSTALL BELOW TOP LAYER OF SLAB REINFORCING.

4
3/4" = 1'-0"



TYPICAL CORNER BARS FOR CONCRETE WALL AND FOOTING CONSTRUCTION

5
1" = 1'-0"

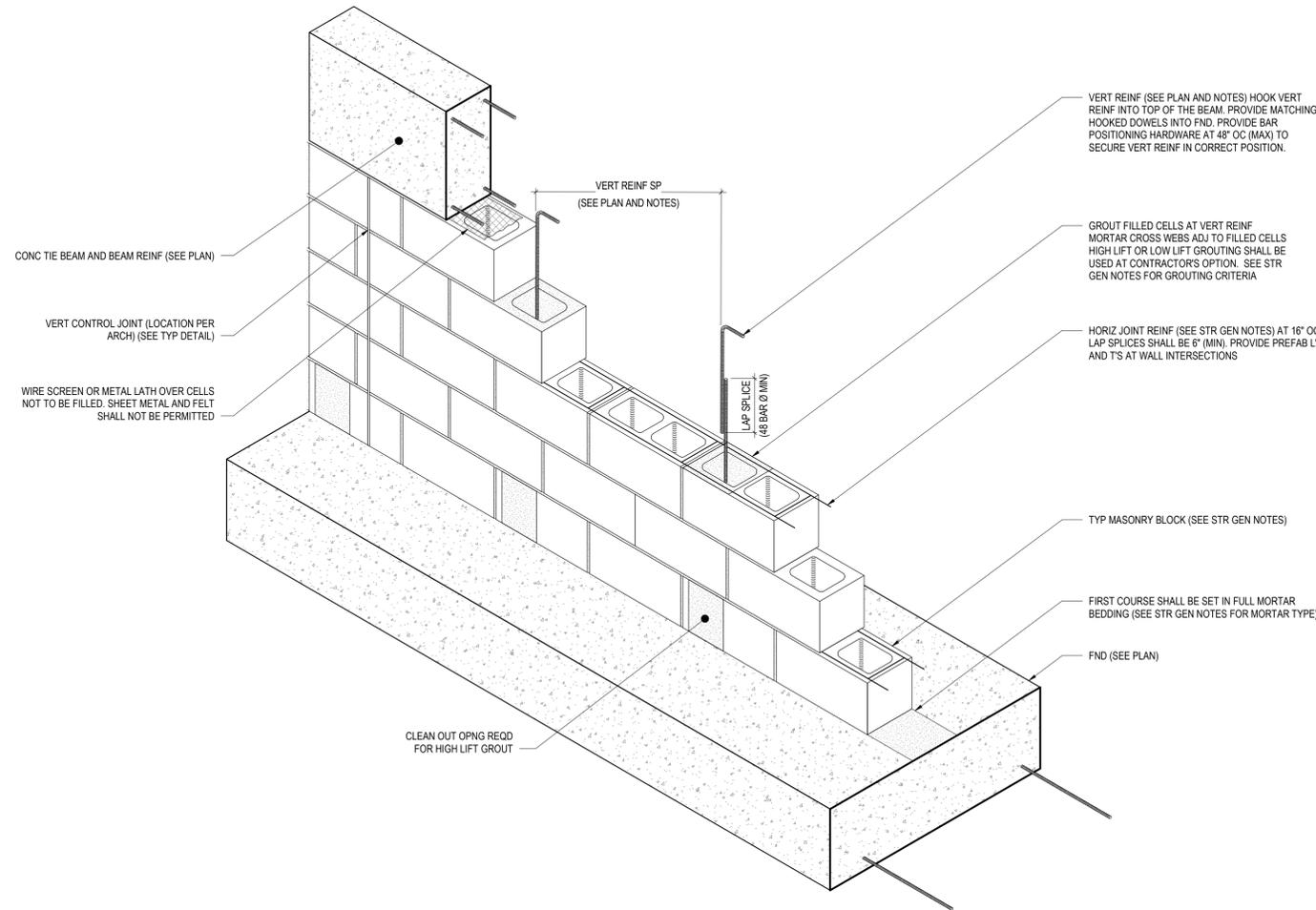
REVISIONS		
No.	Description	Date



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T 239.277.7771
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JC Project #: 22-21-011

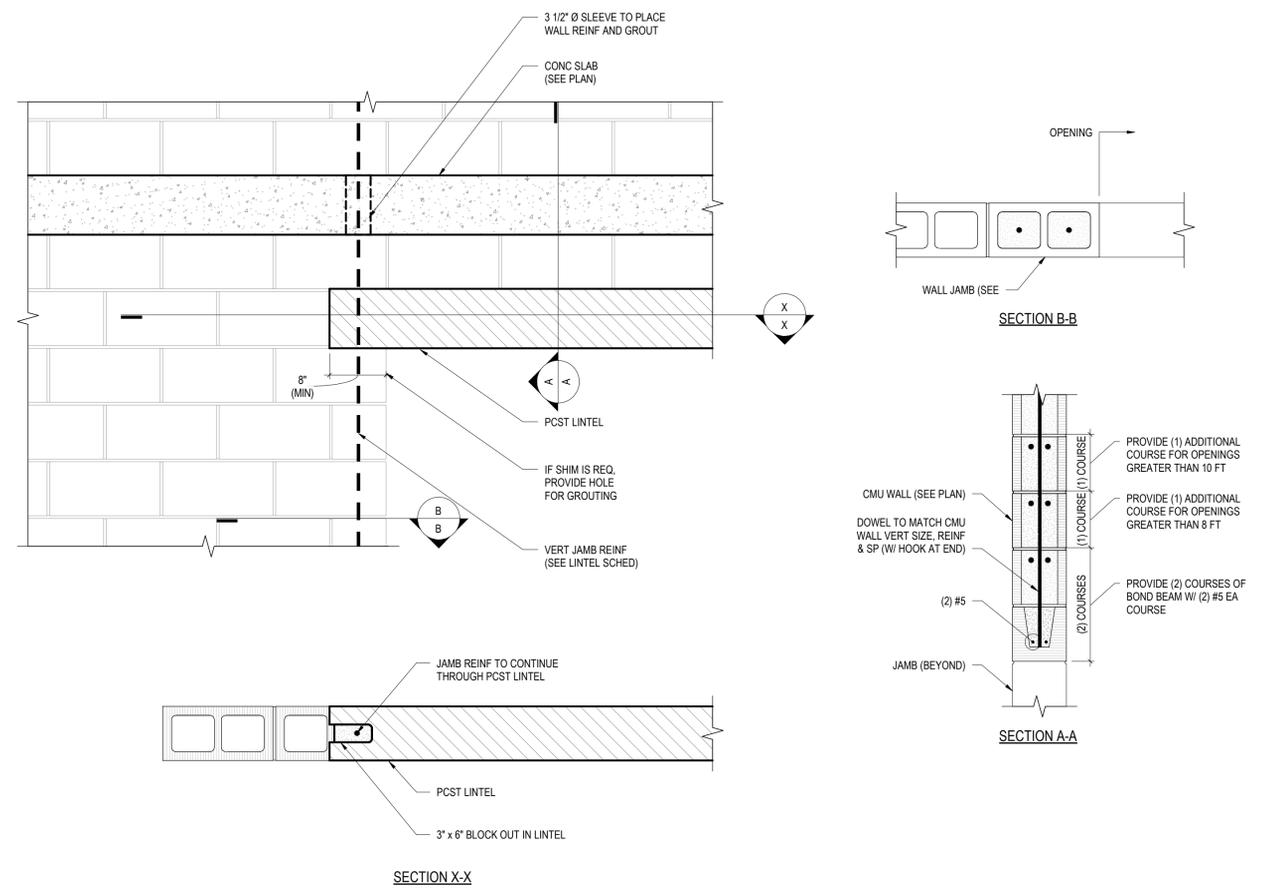
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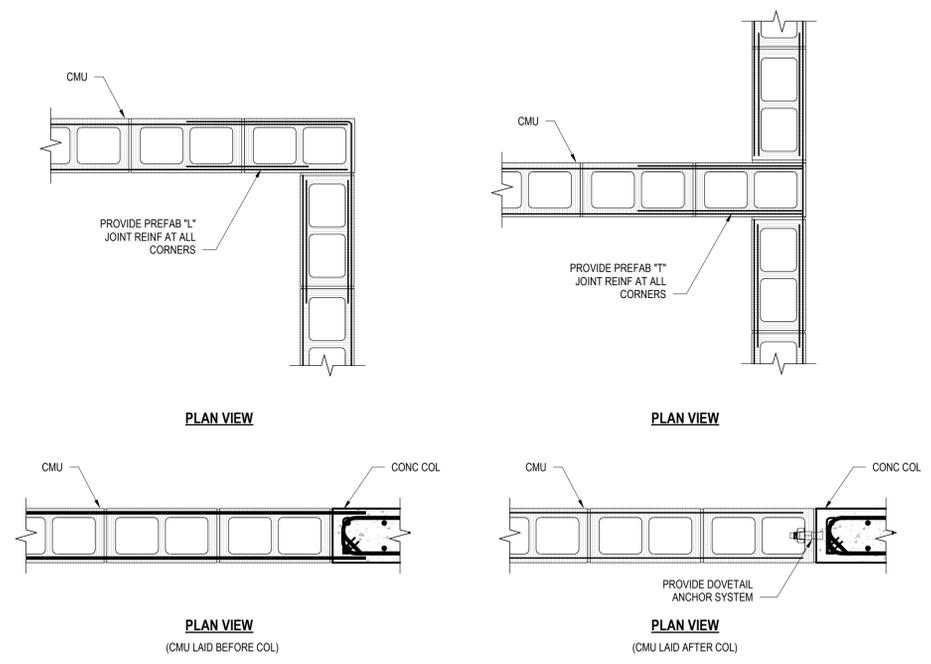
CMU WALL CONSTRUCTION

1 DETAIL
1" = 1'-0"



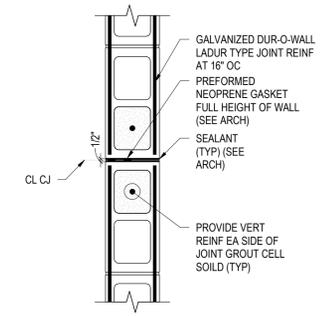
CMU PRECAST LINTEL SUPPORT

2 SECTION
1" = 1'-0"



TYPICAL CMU JOINT REINFORCEMENT

3 DETAIL
1" = 1'-0"



- NOTES:
- HORIZONTAL JOINT REINFORCING SHALL BE STOPPED EACH SIDE OF CONTROL JOINT. THE BEAM REINFORCING SHALL BE CONTINUOUS THROUGH CONTROL JOINT.
 - CMU CONTROL JOINT LOCATIONS SHALL BE AS SPECIFIED BY ARCHITECT. JOINTS SHALL NOT OCCUR WITHIN 24" FROM THE CENTERLINE OF REINFORCED PILASTERS OR WITHIN 24" OF WALL OPENINGS.

CMU CONTROL JOINT

4 DETAIL
1" = 1'-0"

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No.	Description	Date

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CERTIFICATE OF AUTHORIZATION FL #30785
JC Project #: 22.0111

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HVAC SYMBOL LEGEND				HVAC ABBREVIATIONS				HVAC GENERAL NOTES							
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION				
	CEILING DIFFUSER, ROUND NECK (CEILING DIFFUSERS ARE 4-WAY THROW UNO)		FIRE DAMPER (WITH ACCESS PANEL)		TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT	AFD	-ADJUSTABLE FREQUENCY DRIVE	LD	-LINEAR DIFFUSER	<p>1. CONNECTION TO EQUIPMENT SHALL BE VERIFIED WITH MANUFACTURER'S CERTIFIED DRAWINGS. TRANSITIONS TO ALL EQUIPMENT SHALL BE VERIFIED AND PROVIDED FOR EQUIPMENT FURNISHED.</p> <p>2. DIMENSIONS SHALL BE FIELD VERIFIED AND COORDINATED PRIOR TO PROCUREMENT OR FABRICATION. COORDINATE THE WORK WITH OTHER TRADES INVOLVED. FIELD MODIFICATIONS SUCH AS OFFSETS IN PIPING OR DUCTWORK (INCLUDING DIVIDED DUCTWORK) NEEDED DUE TO OBSTRUCTIONS OR INTERFERENCES SHALL BE PROVIDED AT NO ADDITIONAL COST. FOR PROJECTS INVOLVING RENOVATION, COORDINATE NEW WORK WITH EXISTING ELEMENTS SUCH AS THE BUILDING STRUCTURE AND ARCHITECTURAL FEATURES, SPRINKLER PIPING, LIGHTS, PLUMBING, AND ELECTRICAL CONDUIT.</p> <p>3. DUCT CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE SMACNA HVAC DUCT CONSTRUCTION STANDARD.</p> <p>4. SEE SPECIFICATIONS FOR GAUGES, THICKNESS, BRACING, REQUIREMENTS, ETC., OF DUCTWORK.</p> <p>5. PROVIDE AIR TURNING VANES IN ALL 90 DEGREE RECTANGULAR DUCT ELBOWS.</p> <p>6. DUCT SIZES AND ALL OPENINGS THROUGH BUILDING CONSTRUCTION SHALL SUIT EQUIPMENT FURNISHED.</p> <p>7. COORDINATE DIFFUSER, GRILLE AND REGISTER LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND EQUIPMENT OF ALL TRADES.</p> <p>8. LOCATE THERMOSTATS, TEMPERATURE SENSORS, HUMIDISTATS, AND HUMIDITY SENSORS AT 48" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE. COORDINATE LOCATIONS WITH OTHER EQUIPMENT, FURNITURE, AND DOOR SWINGS.</p> <p>9. ALL EQUIPMENT, DUCTWORK, ETC., SHALL BE SUPPORTED AS DETAILED AND/OR SPECIFIED. PROVIDE ADDITIONAL SUPPORTS AS REQUIRED TO PROVIDE A VIBRATION-FREE, RIGID INSTALLATION.</p> <p>10. ALL DUCT SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS.</p> <p>11. DAMPERS AND INSIDES OF DUCTS VISIBLE THROUGH GRILLES, REGISTERS AND DIFFUSERS SHALL BE PAINTED FLAT BLACK.</p> <p>12. REFER TO TYPICAL DETAILS FOR PIPING AND INSTALLATION OF EQUIPMENT.</p> <p>13. TRAPPED CONDENSATE DRAINS FROM ALL MECHANICAL EQUIPMENT SHALL BE PROVIDED FOR PROPER DRAINAGE TO SUIT EQUIPMENT FURNISHED.</p> <p>14. ACCESS PANELS IN DUCTWORK AND CEILINGS SHALL BE PROVIDED WHERE REQUIRED FOR OPERATION, BALANCING OR MAINTENANCE OF ALL MECHANICAL EQUIPMENT.</p> <p>15. ALL DUCTWORK AND PIPING IS SHOWN SCHEMATICALLY. PROVIDE ALL TRANSITIONS, TURNING VANES, ELBOWS, FITTINGS, ETC., TO ALLOW SMOOTH FLOWS. ALL SPLIT DUCT FITTINGS SHALL TRANSITION TO FULL SIZE OF THE SUM OF BOTH BRANCHES, UPSTREAM OF CONCRETE.</p> <p>16. PROVIDE CONCRETE HOUSEKEEPING PAD UNDER ALL FLOOR-MOUNTED EQUIPMENT. REFER TO SPECIFICATIONS FOR DETAILED REQUIREMENTS.</p> <p>17. VERIFY FINISH WITH ARCHITECT PRIOR TO PURCHASING GRILLES, REGISTERS, DIFFUSERS, LOUVERS AND OTHER AIR DISTRIBUTION DEVICES.</p> <p>18. PROVIDE FLEXIBLE DUCT CONNECTIONS ON ALL DUCTWORK CONNECTING TO EACH FAN, AIR HANDLING UNITS, AND FAN COIL UNITS.</p> <p>19. PROVIDE TRANSITIONS AT DIFFUSER NECKS AS REQUIRED TO MATCH SIZES OF FLEX DUCTS TO BE CONNECTED.</p> <p>20. INTERRUPTIONS TO EXISTING SERVICES SHALL BE SCHEDULED FOR TIMES OTHER THAN NORMAL OPERATING HOURS (SUCH AS NIGHTS AND WEEKENDS). SUCH INTERRUPTIONS TO SERVICES SHALL NOT BE MADE WITHOUT THE PRIOR WRITTEN CONSENT OF THE OWNER'S REPRESENTATIVE AND PROPER COORDINATION WITH OTHER TRADES. PRE-WORK SHALL BE PERFORMED TO MAKE THE SHUTDOWN PERIOD AS BRIEF AS POSSIBLE.</p> <p>21. ALL EQUIPMENT, DUCTWORK, ETC., TO BE REMOVED SHALL REMAIN PROPERTY OF THE OWNER OR DISPOSED OF LEGALLY, AS DIRECTED BY OWNER.</p> <p>22. MAINTAIN CLEARANCE OF A MINIMUM OF 6" BETWEEN DUCTWORK, PIPING, EQUIPMENT, ETC., AND ALL FIRE RATED AND FIRE-SMOKE RATED PARTITIONS, TO ALLOW FOR INSPECTIONS OF RATED WALLS.</p> <p>23. LOCATE ALL OUTSIDE AIR INTAKES A MINIMUM OF 10' CLEAR FROM ALL PLUMBING VENTS AND EXHAUST AIR DISCHARGE LOCATIONS.</p> <p>24. DUCT RUNOUTS TO DIFFUSERS SHALL MATCH THE SIZE OF THE DIFFUSER NECK.</p> <p>25. WATER PRESSURE DROPS THROUGH COIL CONTROL VALVES SHALL NOT EXCEED 5 PSI.</p> <p>26. UNLESS OTHERWISE NOTED, ALL EQUIPMENT AND VALVE DRAINS SHALL BE INDEPENDENTLY PIPED FULL SIZE TO THE NEAREST PLUMBING DRAIN.</p> <p>27. SLEEVE AND SEAL ALL PIPING PENETRATIONS THROUGH BUILDING PARTITIONS. PROVIDE MANUAL AIR VENTS AT ALL HIGH POINTS IN CHILLED WATER AND HOT WATER PIPING.</p> <p>28. PIPING, DUCTWORK, LEAK PROTECTION APPARATUS, OR OTHER EQUIPMENT FOREIGN TO ELECTRICAL SWITCHBOARDS, PANELBOARDS, DISTRIBUTION BOARDS, OR MOTOR CONTROL CENTERS SHALL NOT BE INSTALLED WITHIN THE REQUIRED SPACE FOR WORKING CLEARANCES OR DEDICATED SPACES OF THE ELECTRICAL EQUIPMENT EXTENDING IN FRONT OF AND FROM FLOOR TO STRUCTURAL CEILING WITH A WIDTH AND DEPTH OF THE ELECTRICAL EQUIPMENT IN ACCORDANCE WITH NEC-110.26.</p>					
	ROUND DIFFUSER		FIRE & SMOKE DAMPER (WITH ACCESS PANEL)		TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT	AFF	-ABOVE FINISHED FLOOR	MBH	-THOUSAND BTUs PER HOUR						
	CEILING RETURN		EXISTING FIRE DAMPER TO REMAIN		TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME, FAN POWERED	AFR	-ABOVE FINISHED ROOF	MCA	-MINIMUM CIRCUIT AMPS						
	CEILING EXHAUST		EXISTING FIRE & SMOKE DAMPER TO REMAIN		TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME, FAN POWERED, WITH ELECTRIC HEAT	AHU	-AIR HANDLING UNIT	MCCP	-MAXIMUM OVER CURRENT PROTECTION						
	CEILING DIFFUSER, RECTANGULAR OR SQUARE NECK (CEILING DIFFUSERS ARE 4-WAY THROW UNO)		-SOUND ATTENUATOR		TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME, FAN POWERED, WITH ELECTRIC HEAT	AP	-ACCESS PANEL	MOD	-MOTOR OPERATED CONTROL DAMPER (MOD)						
	SUPPLY REGISTER OR GRILLE (VERTICAL MOUNT, SIDEWALL)		-MOTOR OPERATED CONTROL DAMPER (MOD)		ELECTRIC DUCT HEATER (W/ PANEL CLEARANCE)	BOP	-BOTTOM OF PIPE	NC	-NORMALLY CLOSED						
	RETURN/EXHAUST REGISTER OR GRILLE (VERTICAL MOUNT, SIDEWALL)		-AIR FLOW MEASURING STATION		HYDRONIC REHEAT COIL	BHP	-BRAKE HORSEPOWER	NO	-NORMALLY OPEN						
	REVISION REFERENCE		-MANUAL BALANCING DAMPER		IN-LINE CENTRIFUGAL FAN	BTU	-BRITISH THERMAL UNIT	NTS	-NOT TO SCALE						
	DETAIL REFERENCE: TOP-DETAILS, BOTTOM-DRAWINGS# SHOWN ON		-DOOR GRILLE		PACKAGED TERMINAL AIR CONDITIONER (PTAC)	CL	-CENTER LINE	OA	-OUTSIDE AIR						
	-THERMOSTAT/TEMPERATURE SENSOR		-ACCESS DOORS, VERTICAL OR HORIZONTAL		CHANGE OF ELEVATION	CFM	-CFM (CUBIC FEET PER MINUTE)	OAL	-OUTSIDE AIR LOUVER						
	HUMIDISTAT/HUMIDITY SENSOR		-STAINLESS STEEL DUCTWORK		FLEXIBLE CONNECTION	CD	-CEILING DIFFUSER	PRV	-PRESSURE REDUCING VALVE						
	DUCT SMOKE DETECTOR		-FLEXIBLE CONNECTION		NEW FLAT OVAL DUCT	CT	-COOLING TOWER	PRS	-PRESSURE REDUCING STATION						
	-CONNECT TO EXISTING		NEW FLAT OVAL DUCT		NEW DUCTWORK, FIRST DIMENSION IS SIDE SHOWN	CV	-CONSTANT AIR VOLUME	PSI	-POUNDS PER SQUARE INCH						
	-DEMOLISH TO POINT INDICATED		EXISTING DUCTWORK TO REMAIN		EXISTING DUCTWORK TO REMAIN	ΔP	-CHANGE IN PRESSURE	PSIG	-PSI GAUGE						
	-MOTORIZED CONTROL DAMPER		EXISTING DUCTWORK TO BE REMOVED		DUCT ELBOW, POSITIVE PRESSURE (SUPPLY), FIRST DIMENSION INDICATES SIDE TO WHICH ARROW IS POINTING	ΔT	-CHANGE IN TEMPERATURE	PTAC	-PACKAGED TERMINAL AIR CONDITIONER						
	-TEMPERATURE SENSOR		DUCT ELBOW, EXHAUST		DUCT ELBOW, NEGATIVE PRESSURE, RETURN	CFM	-CUBIC FEET PER MINUTE	PVC	-POLYVINYL CHLORIDE PIPE						
	-PRESSURE SENSOR		DUCT ELBOW, NEGATIVE PRESSURE, RETURN		DUCT ELBOW UP THROUGH ROOF OR SLAB ABOVE	CJ	-CONDENSING UNIT	RA	-RETURN AIR						
	BACKDRAFT DAMPER		DUCT ELBOW UP THROUGH ROOF OR SLAB ABOVE		RECTANGULAR DUCT SECTION UP, POSITIVE PRESSURE, SUPPLY OR OUTSIDE AIR	DDC	-DIRECT DIGITAL CONTROLS	RHC	-REHEAT COIL						
	NEUTRAL RELATIVE PRESSURE		RECTANGULAR DUCT SECTION UP, POSITIVE PRESSURE, SUPPLY OR OUTSIDE AIR		RECTANGULAR DUCT SECTION UP, NEGATIVE PRESSURE, RETURN	DN	-DOWN	RHP	-ROOFTOP HEAT PUMP						
	POSITIVE RELATIVE PRESSURE		RECTANGULAR DUCT SECTION UP, NEGATIVE PRESSURE, RETURN		ROUND DUCT SECTION UP	EAT	-ENTERING AIR TEMPERATURE	RPM	-REVOLUTIONS PER MINUTE						
	NEGATIVE RELATIVE PRESSURE		RECTANGULAR DUCT SECTION UP, EXHAUST		FLAT OVAL DUCT SECTION UP	ESP	-EXTERNAL STATIC PRESSURE	RSL	-REFRIGERANT SUCTION & LIQUID LINES						
	SHEET NOTE CALLOUT		ROUND DUCT SECTION UP		FLAT OVAL DUCT SECTION UP	EWT	-ENTERING WATER TEMPERATURE	RTU	-ROOFTOP AIR HANDLING UNIT						
	SHEET NOTE CALLOUT		FLAT OVAL DUCT SECTION UP			FCU	-FAN COIL UNIT	SA	-SUPPLY AIR						
	SHEET NOTE CALLOUT		FLAT OVAL DUCT SECTION UP			FD	-FIRE DAMPER	SP	-STATIC PRESSURE						
	CEILING MOUNTED ACCESS DOOR		FLAT OVAL DUCT SECTION UP			FF	-FINAL FILTERS	TSP	-TOTAL STATIC PRESSURE						
	SQUARE THROAT ELBOW WITH TURNING VANES		FLAT OVAL DUCT SECTION UP			FLA	-FULL LOAD AMPS	UNO	-UNLESS NOTED OTHERWISE						
	RADIUS ELBOW		FLAT OVAL DUCT SECTION UP			FPM	-FEET PER MINUTE	VIPH	-VOLTS/PHASE						
	RADIUS ELBOW		FLAT OVAL DUCT SECTION UP			GPM	-GALLONS PER MINUTE	VAV	-VARIABLE AIR VOLUME						
	RECTANGULAR/ROUND BRANCH TAKE-OFF OR ROUND/ROUND BRANCH TAKE-OFF		FLAT OVAL DUCT SECTION UP			KW	-KILOWATT	VFD	-VARIABLE FREQUENCY DRIVE						
	EXHAUST DUCT UP THROUGH SLAB W/ FAN ON ROOF ABOVE		FLAT OVAL DUCT SECTION UP			LAT	-LEAVING AIR TEMPERATURE								
	EXHAUST FAN ON ROOF W/ DUCT DOWN THROUGH ROOF		FLAT OVAL DUCT SECTION UP			LWT	-LEAVING WATER TEMPERATURE								

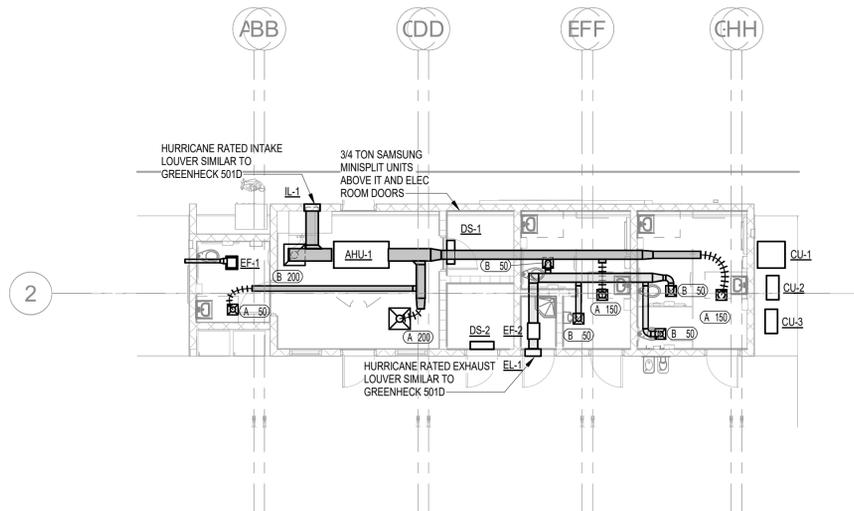
HVAC PIPING SYMBOL LEGEND				HVAC EQUIPMENT TAGS			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	CONDENSER WATER SUPPLY		-FLOW DIRECTION		-P-TRAP		-AIR DISTRIBUTION DEVICE
	CONDENSER WATER RETURN		GATE VALVE		TWO-WAY CHECK VALVE		AHU NUMBER
	CHILLED WATER SUPPLY		BALL VALVE		MANUAL VENT		AHU-1
	CHILLED WATER RETURN		CALIBRATING BALANCING VALVE		PRESSURE GAUGE		RHC-1-1
	CONDENSATE		BUTTERFLY VALVE		RELIEF VALVE		TERMINAL UNIT TYPE
	CONDENSATE RETURN		GAS COCK		FLOW METER		VTU - VARIABLE TERMINAL UNIT
	PUMPED CONDENSATE		UNION		WATER METER		CTU - CONSTANT TERMINAL UNIT
	HOT WATER RETURN		STRAINER		IN-LINE PUMP		PTU - PARALLEL TERMINAL UNIT
	HOT WATER SUPPLY		CONTROL VALVE		IN-LINE PUMP		STU - SERIES TERMINAL UNIT
	HIGH PRESSURE STEAM SUPPLY		SOLENOID VALVE		VALVE ON RISER		
	MEDIUM PRESSURE STEAM SUPPLY		PSI REG		CAP		
	LOW PRESSURE STEAM SUPPLY		CHECK VALVE		CONNECTION, BOTTOM		
	HIGH PRESSURE STEAM RETURN		FLOW SWITCH		CONNECTION, TOP		
	MEDIUM PRESSURE STEAM RETURN		SLOPE DIRECTION (DOWN)		COUPLING		
	LOW PRESSURE STEAM RETURN		FLEX CONNECTION		ELBOW, 90°		
	REFRIGERANT LIQUID		O.S.&Y. GATE VALVE		ELBOW, 45°		
	REFRIGERANT SUCTION		STEAM TRAP		ELBOW, TURNED DOWN		
	TEE, OUTLET DOWN		THREE-WAY CONTROL VALVE		ELBOW, TURNED UP		
	TEE, OUTLET UP		THERMOMETER				
	45° PIPE RISE (R) / DROP (D)						
	PIPE ANCHORS						
	CONCENTRIC REDUCER						
	ECCENTRIC REDUCER						

NOTE: SOME SYMBOLS SHOWN ON THIS LEGEND MAY NOT PERTAIN TO THIS PROJECT

MECHANICAL DRAWING INDEX

SHEET	DESCRIPTION
M001	MECHANICAL LEGEND SHEET INDEX AND GENERAL NOTES
M101	MECHANICAL FLOOR PLAN
M300	MECHANICAL SCHEDULES

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1 FLOOR PLAN - MECHANICAL
1/8" = 1'-0"

REVISIONS		
No.	Description	Date

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Luminaire Schedule							
Symbol	Qty	Label	Arrangement	Lum. Lumens	LLF	Description	(MANUFAC)
□	2	B4	SINGLE	12757	1.000	ECF-S-32L-1A-NW-G2-4	SIGNIFY GARDCO
□	6	B4-H	SINGLE	110033	1.000	ECF-S-32L-1A-NW-G2-4-HS	SIGNIFY GARDCO
□	3	B5-2	BACK-BACK	13462	1.000	ECF-S-32L-1A-NW-G2-5	SIGNIFY GARDCO
□	2	C4-2	BACK-BACK	9062	1.000	2@180 ECF-S-32L-760-NW-G2-4	SIGNIFY GARDCO

Calculation Summary								
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	Description
BOUNDARY	Illuminance	Fc	0.22	0.5	0.0	N/A	N/A	readings take at grade
DRIVE	Illuminance	Fc	3.74	3.9	0.9	2.10	4.86	readings take at grade
ENTRY A	Illuminance	Fc	1.96	3.2	1.2	1.63	2.67	readings take at grade
ENTRY B	Illuminance	Fc	1.58	3.3	0.8	1.98	4.13	readings take at grade
PARKING	Illuminance	Fc	3.27	4.4	0.8	2.84	5.20	readings take at grade

NOTES:
- LUMINAIRES PLACED AT PROPOSED LOCATIONS

TARGETING: LEE COUNTY
PARKING:
-0.8 FC MIN
-4.1 AVGMIN
BOUNDARY:
-0.5 FC MAX

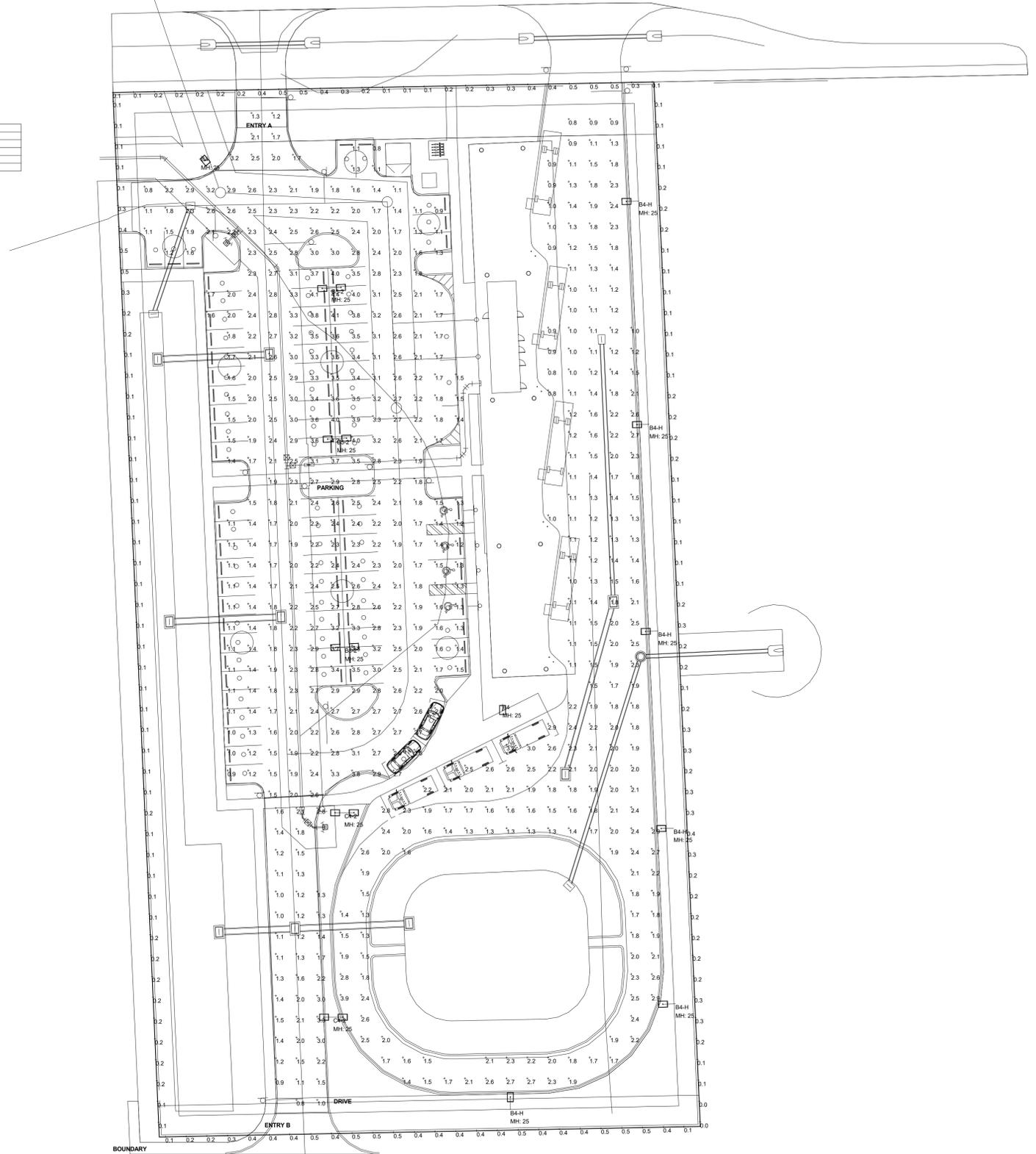


Site & Area

EcoForm

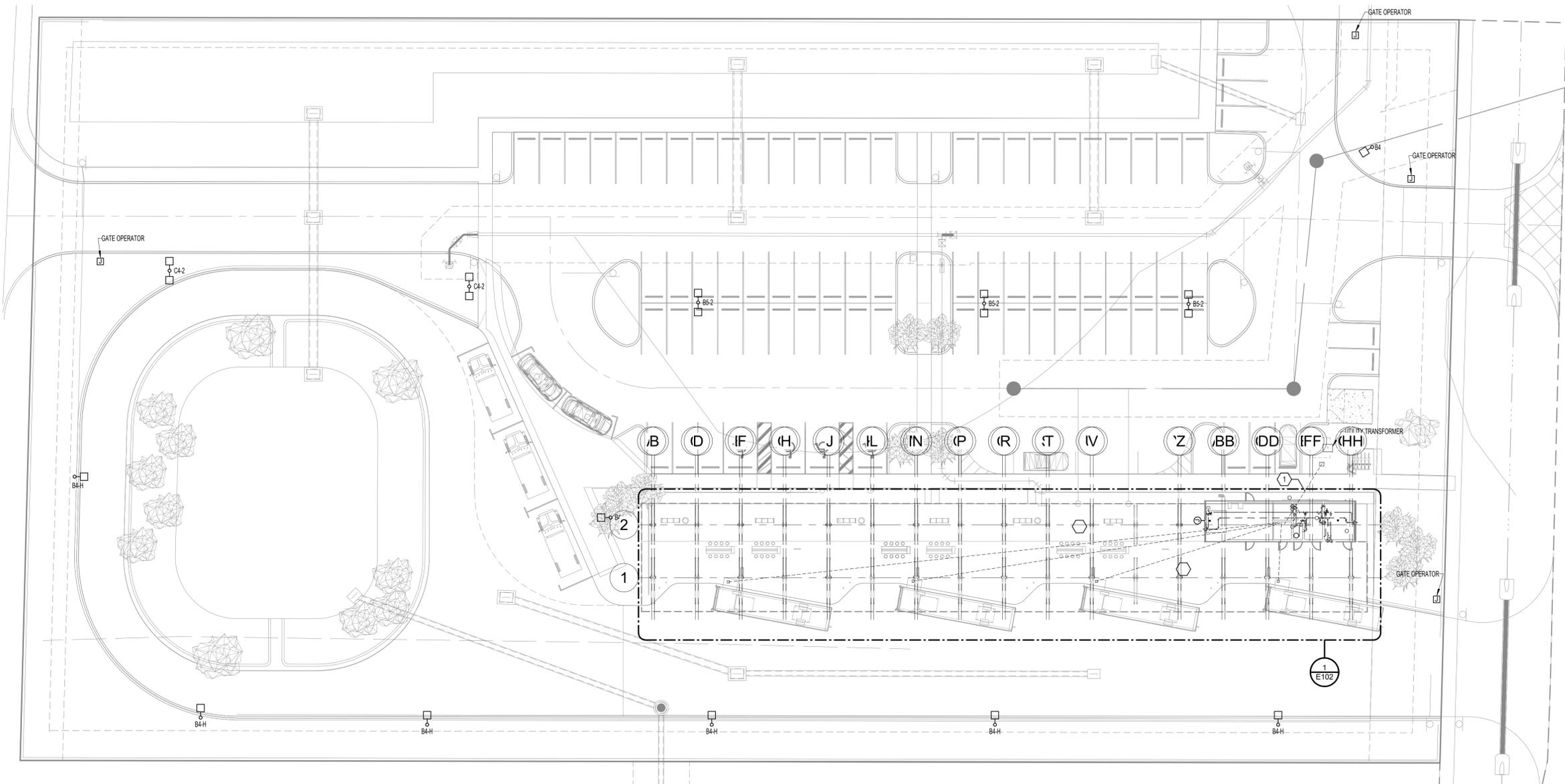
ECF-S small area light





1 SITE PLAN - LIGHTING
PHOTOMETRICS
1" = 30'-0"

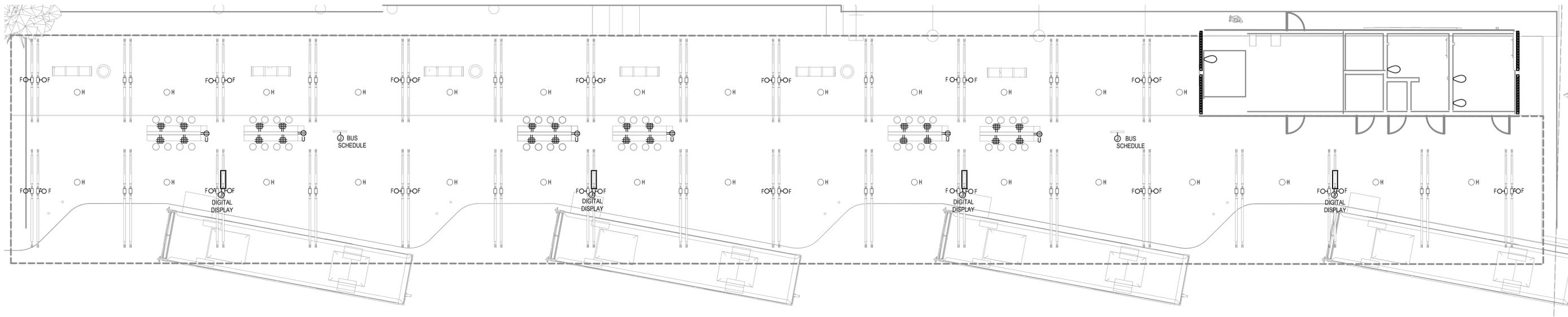
REVISIONS		
No.	Description	Date



1 SITE PLAN - ELECTRICAL
1" = 20'-0"

ELECTRICAL KEY NOTES	
#	KEYNOTE TEXT
	ROUTE 1 - 4" CONDUIT WITH PULL STRING FROM ELECTRICAL ROOM TO INGROUND BOX FOR FUTURE EV BUS CHARGING STATION. COORDINATE LOCATION.
1	ROUTE 3 - 4" CONDUITS WITH PULL STRING FROM INGROUND JUNCTION BOX STUBBED UP IN ELECTRICAL ROOM FOR FUTURE 480V SERVICE.
2	ROUTE 1 - 4" CONDUIT WITH PULL STRING FROM ELECTRICAL ROOM TO INGROUND BOX FOR FUTURE EV BUS CHARGING STATION. COORDINATE LOCATION.

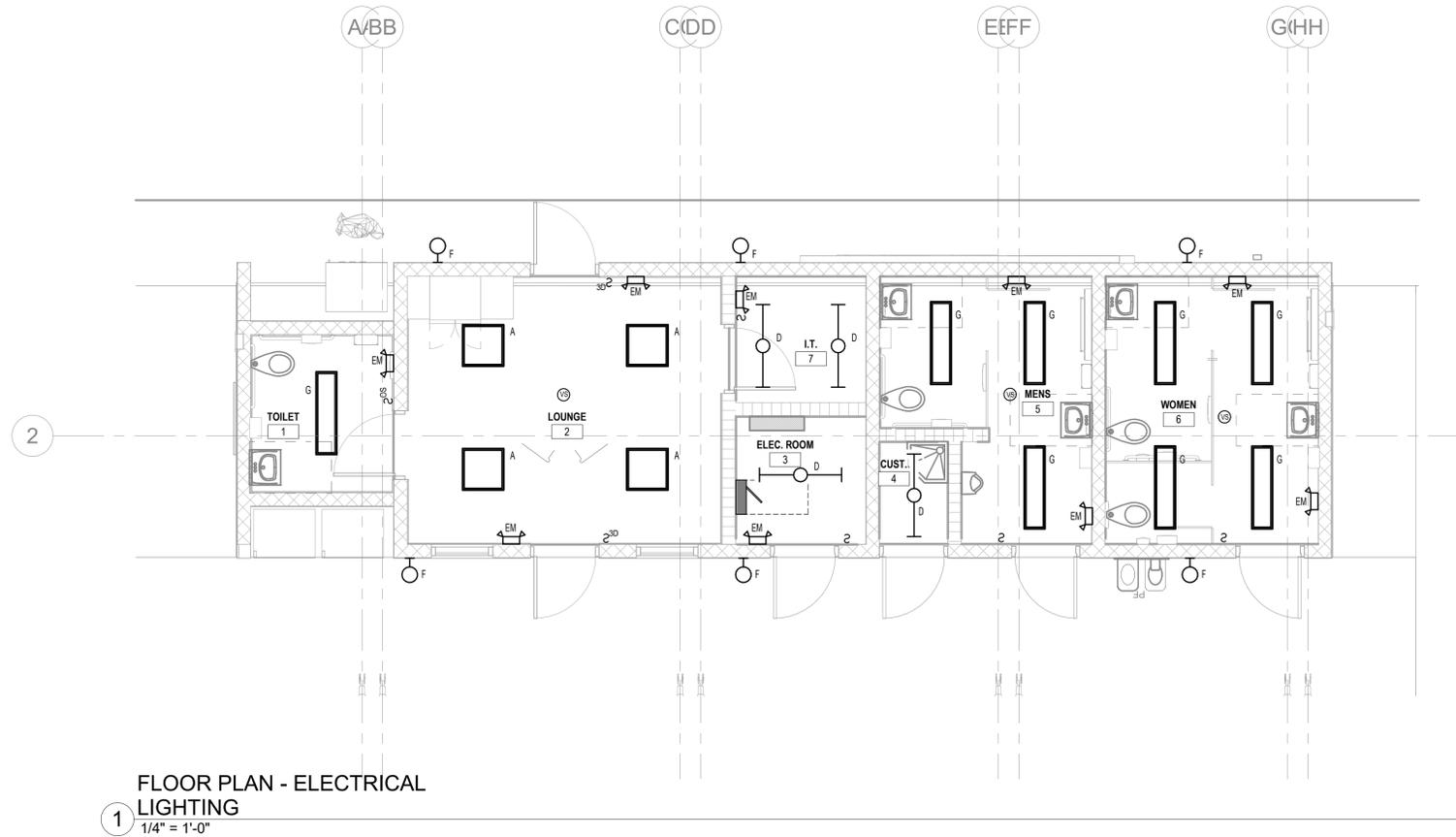
REVISIONS		
No.	Description	Date



1 ENLARGED SITE PLAN - ELECTRICAL
1/8" = 1'-0"

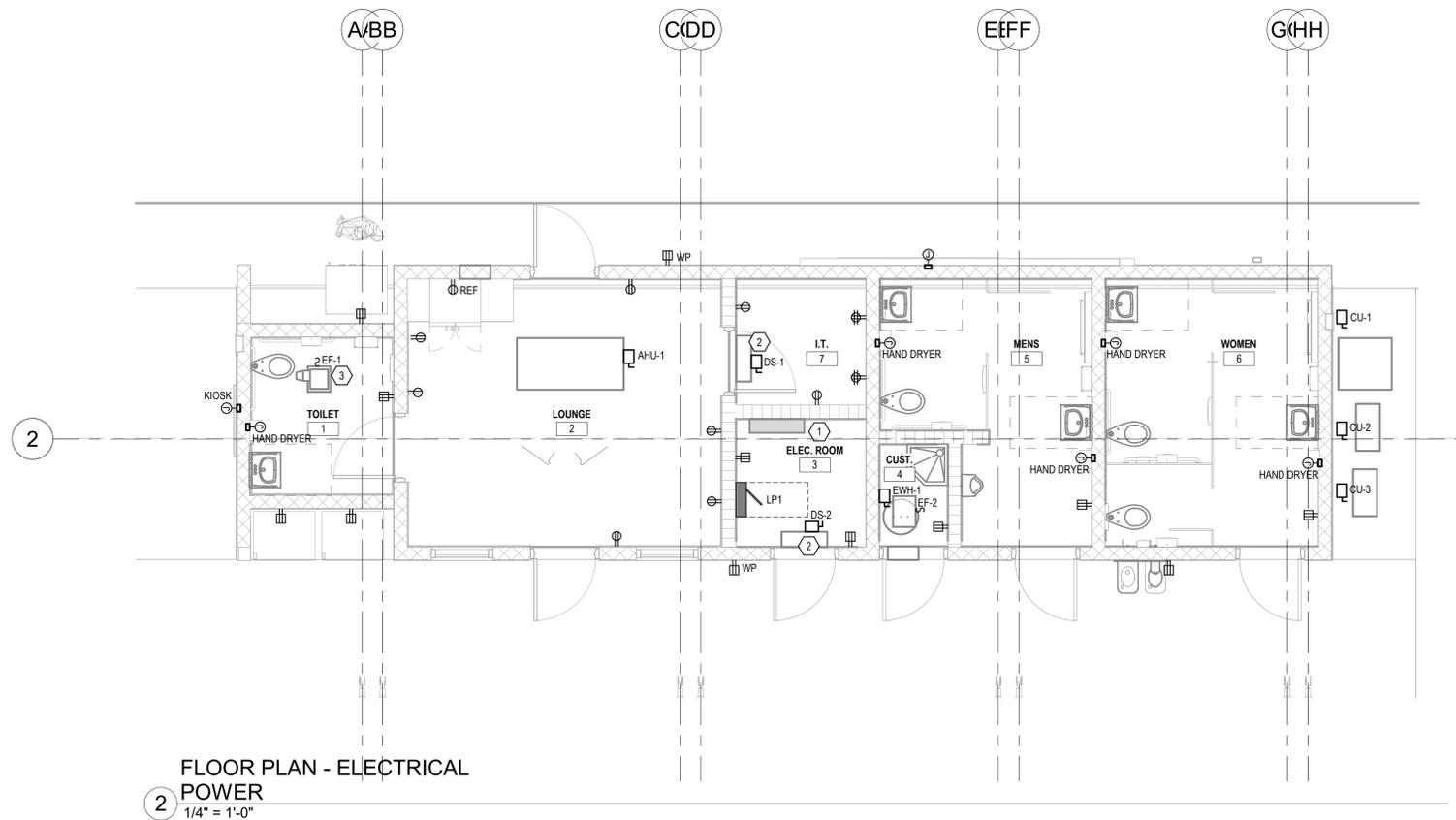
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#	KEYNOTE TEXT
1	FUTURE 480V DISTRIBUTION PANEL FOR BUS BY CHARGING.
2	INDOOR UNIT RECEIVES POWER FROM THE OUTDOOR UNIT. PROVIDE ALL INTERCONNECTING WIRING.
3	EXHAUST FAN TO BE CONTROLLED WITH LIGHT FIXTURES THROUGH OCCUPANCY SENSOR. CONNECT TO THE 120V LIGHTING CIRCUIT SERVING THE ROOM.

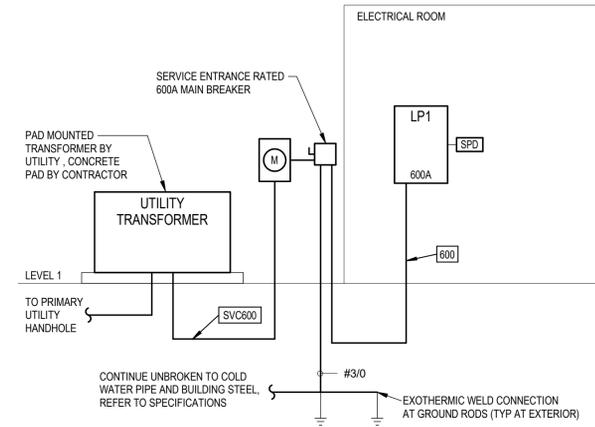
1 FLOOR PLAN - ELECTRICAL LIGHTING
1/4" = 1'-0"



2 FLOOR PLAN - ELECTRICAL POWER
1/4" = 1'-0"

REVISIONS		
No.	Description	Date

ELECTRICAL MECHANICAL EQUIPMENT SCHEDULE													
TAG	HP	FLA (AMPS)	LOAD	VOLTAGE	PHASE	CONDUIT/WIRE (AWG)	PANEL	CIRCUIT NUMBER	DISCONNECT			COMMENTS	
									SWITCH SIZE	NO. OF POLES	ENCLOS. TYPE		FURN. BY (DIV.)
AHU-1			1080 VA	208 V	3				30A	3	NEMA 1	26	AHU-1
CU-1			5400 VA	208 V	3				30A	3	NEMA 1	26	CU-1
CU-2			3924 VA	208 V	3				30A	3	NEMA 1	26	CU-2
CU-3			3924 VA	208 V	3				30A	3	NEMA 1	26	CU-3



1 ELECTRICAL RISER DIAGRAM
N.T.S.

COPPER CONDUCTOR/FEEDER SCHEDULE (90/75 RATED)						
SYMBOL	NUMBER OF SETS	PHASE CONDUCTORS (QUANTITY) SIZE - AWG	NEUTRAL CONDUCTORS (QUANTITY) SIZE - AWG	GROUNDING CONDUCTORS (QUANTITY) SIZE - AWG	CONDUIT SIZE (QUANTITY) SIZE	REMARKS
600	2	(3) #350 KCMIL	(1) #350 KCMIL	(1) #1	(1) 3" FOR EACH RUN	
SVC600	2	(3) #350 KCMIL	(1) #350 KCMIL	---	(1) 3" FOR EACH RUN	

Panel: LP1												
Location: ELEC. ROOM 3			Mounting: SURFACE			Dist. / Phase / Wires: 120/208 Wye / 3 / 4			K.A.I.C. Rating: BUS Rating: 600 A			
Supply From: UTILITY			Enclosure: TYPE 1			Max Height Busing: Yes			Mains Type: MCB MCB Rating: 600			
KN	CKT	Circuit Description	Trip(A)	P	A (KVA)	B (KVA)	C (KVA)	P	Trnp(A)	Circuit Description	CKT	KN
	1											
	3											
	5											
	7											
	9											
	11											
	13											
	15											
	17											
	19											
	21											
	23											
	25											
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	39											
	41											
	43											
	45											
	47											
	49											
	51											
	53											
	55											
	57											
	59											
					Connected Phase Load (KVA)	0.000	0.000	0.000				
					Connected Phase Amps (A)	0.000	0.000	0.000				
Load Classification			Connected Load	Demand Factor	Demand Load		Panel Totals					
							Total Connected Load (KVA): 0.000					
							Total Demand Load (KVA): 0.000					
							Total Demand Current (A): 0					
Panel Keynotes (KN):												

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER / MODEL	LAMP SOURCE	FIXTURE WATTAGE W / LF	COMMENTS
A	2' X 2' LED RECESSED FIXTURE, 3600 LUMENS, 4000K, 125 FROSTED PATTERN 1/2 ACRYLIC LENS, DIMMABLE	DAYBRITE 21038L840-2 FS10F-UNV-DIM	EDIT ME	40.00 W	
B4	SITE LIGHTING LED POLE MOUNTED FIXTURE, 14,000 LUMEN, 4000K, TYPE 4 DISTRIBUTION	SIGNIFY GARDDO ECF-S-32L-1A-NW-G2-4		106.00 W	
B4H	SITE LIGHTING LED POLE MOUNTED FIXTURE, 14,000 LUMEN, 4000K, TYPE 4 DISTRIBUTION, WITH HOUSE SIDE SHIELD	SIGNIFY GARDDO ECF-S-32L-1A-NW-G2-4-HIS		106.00 W	
B5-2	SITE LIGHTING LED POLE MOUNTED BACK TO BACK FIXTURES, 14,000 LUMEN EACH, 4000K, TYPE 5 DISTRIBUTION	SIGNIFY GARDDO 180-ECF-S-32L-1A-NW-G2-5		212.00 W	
C4-2	SITE LIGHTING LED POLE MOUNTED BACK TO BACK FIXTURES, 10,000 LUMEN EACH, 4000K, TYPE 4 DISTRIBUTION	SIGNIFY GARDDO 180-ECF-S-32L-32L-NW-G2-4		146.00 W	
D	FLUXSTREAM LED LINEAR STRIP 4, FROSTED ACRYLIC DIFFUSER, COLD ROLLED STEEL HOUSING, 4000 LUMENS, 4000K	SIGNIFY - FSS440L840-UNV-DIM	LED	31.00 W	
EM					
F	WET LOCATION EXTERIOR WALL SCONCE, 4000K, TYPE 3 DISTRIBUTION, UNIVERSAL WALL MOUNT, BRONZE FINISH, 3000 LUMEN, WITH 10W INTEGRAL EMERGENCY BATTERY	TBD	LED	36.00 W	
G	1' X 4' SURFACE MOUNT LED, VAPOR TIGHT, VANDAL RESISTANT	TBD	LED	40.00 W	
H	WET LOCATION ROUND LED SURFACE MOUNT	TBD	LED		

PARKER / MUDGETT / SMITH ARCHITECTS, INC.
 2136 MCGREGOR BLVD. FORT MYERS, FLORIDA 33901
 (239) 332-1171

REVISIONS		
No.	Description	Date

60%
LEHIGH ACRES PARK AND RIDE
 1121 VILLAGE LAKES BLVD., LEHIGH ACRES, FLORIDA

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 TLC No.: 721030
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 COA 15
 THINK. LISTEN. CREATE.

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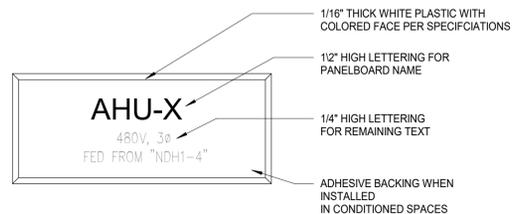


TYPICAL 120/208V PANELBOARD

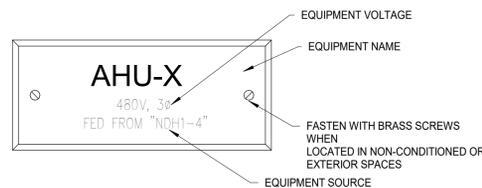


TYPICAL 277/480V PANELBOARD

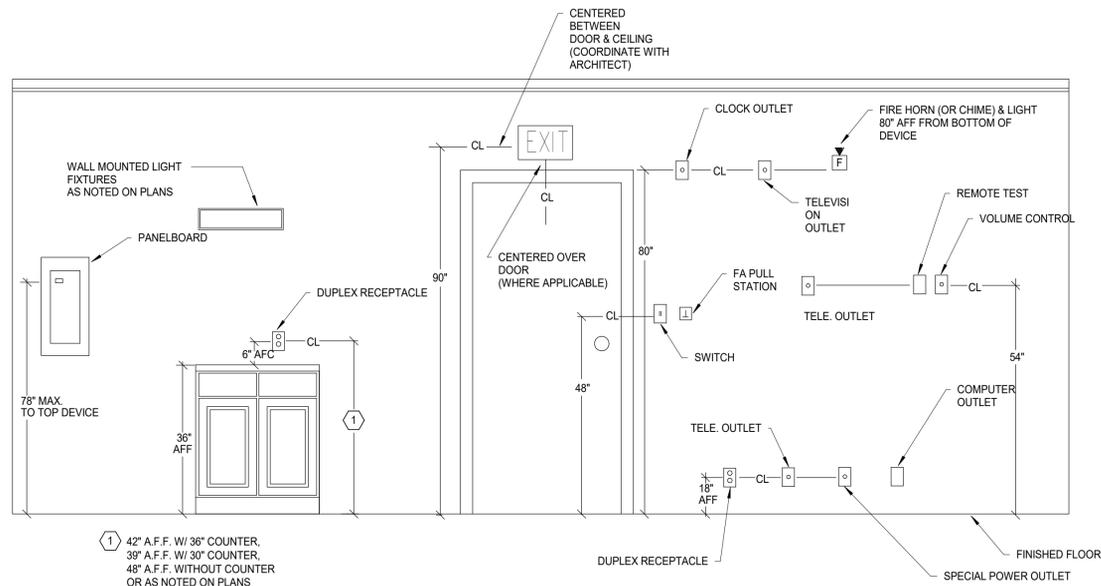
3 PANELBOARD NAMEPLATE
N.T.S.



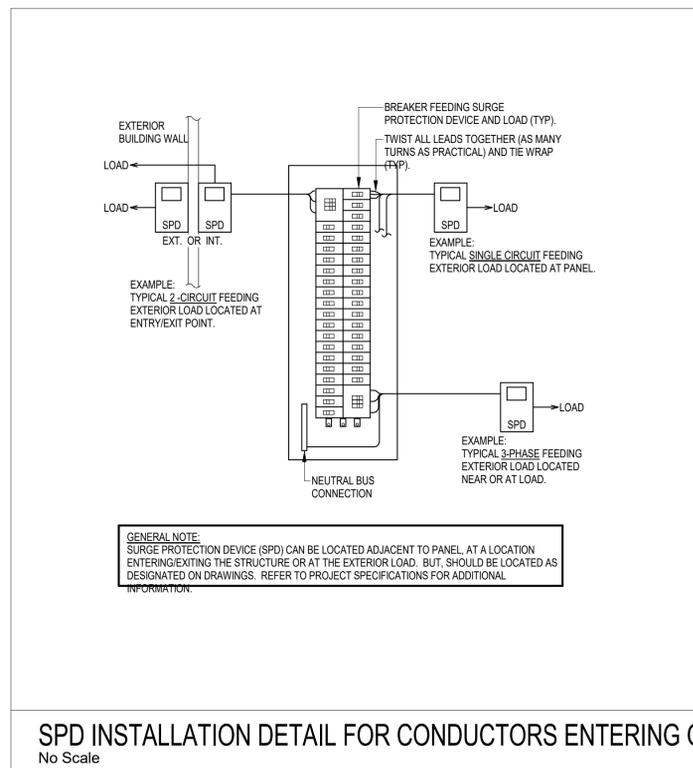
TYPICAL EQUIPMENT



EQUIPMENT NAMEPLATE
2 DETAIL
N.T.S.



1 E - Mounting Heights
N.T.S.



SPD INSTALLATION DETAIL FOR CONDUCTORS ENTERING OR EXITING STRUCTURE
No Scale

5 SPD INSTALLATION DETAIL
N.T.S.

SPECIFICATION "ADD-IN SECTION" TO SURGE PROTECTION SECTION 264313 FOR EXTERIOR LOAD CIRCUIT PROTECTION

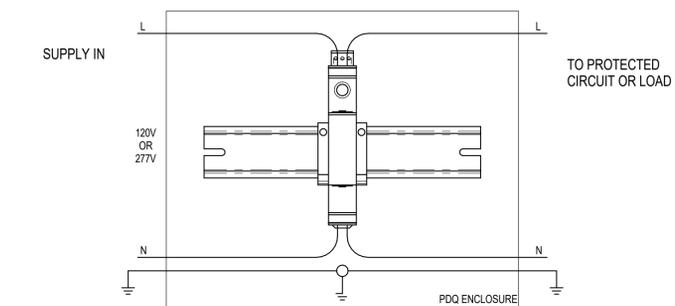
PROVIDE INDIVIDUAL EXTERIOR CIRCUIT SURGE PROTECTION DEVICES (SPD) AS INDICATED ON PANEL BOARD SCHEDULE(S) AND LOCATED AS SHOWN ON DRAWINGS OR AS ACCEPTABLE BY INSPECTOR. REFER TO DRAWING DETAIL FOR ADDITIONAL INFORMATION. SPD'S SHALL BE LISTED TO THE CURRENT UL 1449 EDITION AND LISTED TYPE 2, 20KA-IN, WITH VISUAL FAILURE INDICATION PER CIRCUIT.

SINGLE POLE, TWO POLE AND THREE PHASE - WYE CIRCUITS SHALL HAVE L-NIG PROTECTION MODE. THREE PHASE GROUND DELTA CIRCUITS SHALL HAVE L-G PROTECTION MODE. SPD'S SHALL BE MODULAR WITH FIELD REPLACEABLE MODULES, DRY CONTACTS FOR REMOTE MONITORING AND HAVE A 5 YEAR FACTORY WARRANTY.

ENCLOSURE RATING SHALL BE NEMA 4/12 INDOOR AND OUTDOOR AND INCORPORATE A HINGED DOOR WITH A VIEWING WINDOW AND GROUNDING TERMINAL(S). FOR PDM SERIES THERE SHALL BE ONE GROUNDING TERMINAL FOR EVERY THREE CIRCUITS. SPD TERMINALS TO ACCEPT #6 - #14 AWG CONDUCTORS.

BASIS OF DESIGN IS PQ PROTECTION PQD SERIES AND APPROVED EQUALS ONLY.

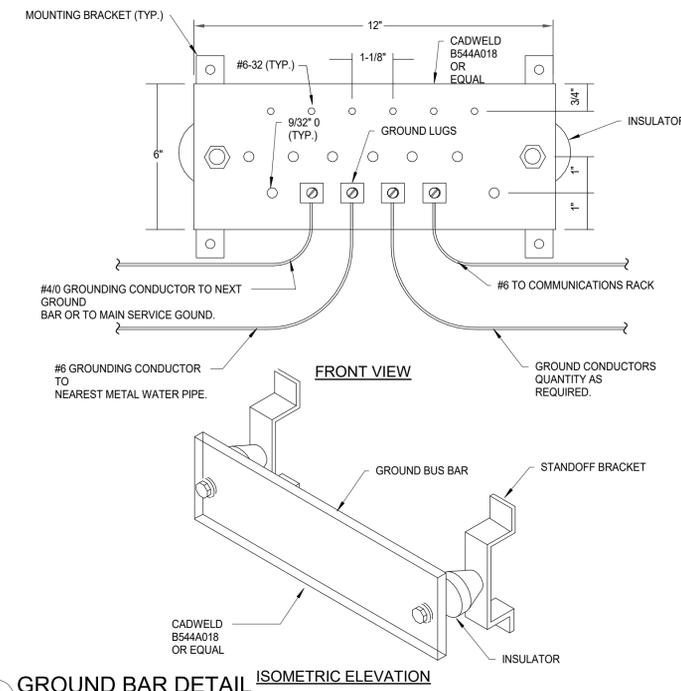
TYPICAL CIRCUIT WIRING DIAGRAM



SINGLE POLE (1P)
PART # EXAMPLE PQDX-X-1P-XXX

REFER TO MANUFACTURER'S
INSTALLATION MANUAL FOR
DETAILED WIRING CONNECTION
DIAGRAM

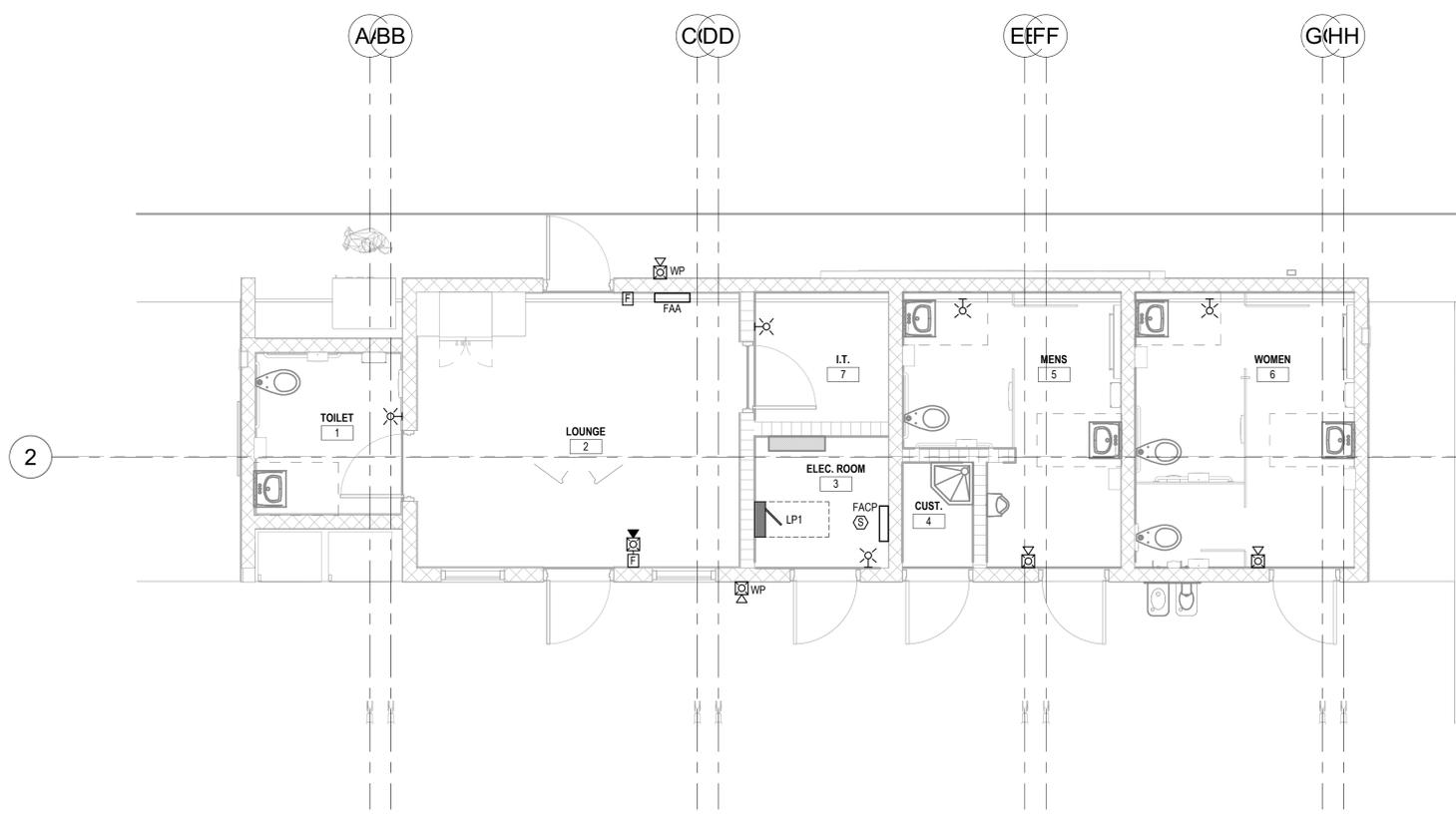
NOTE:
WIRING SHOWN IS TYPICAL FOR ONE CIRCUIT. MULTIPLE
CIRCUITS MAY BE INCLUDED IN ONE ENCLOSURE. WIRE EACH
CIRCUIT INDIVIDUALLY AS SHOWN IN WIRING DIAGRAM.



4 GROUND BAR DETAIL ISOMETRIC ELEVATION
N.T.S.

FIRE ALARM SYSTEM NOTES

- ALL FIRE ALARM EQUIPMENT IS TO BE NEW, UL LISTED FOR FIRE SERVICE, AND SHALL BE COMPATIBLE WITH THE SYSTEM BEING USED.
- ALL WIRING AND CONDUIT IS TO CONFORM TO NEC ARTICLE 760. WIRING SHALL BE UL LISTED, MINIMUM 300V TYPE FPLP PLENUM RATED SOLID COPPER OR STRANDED COPPER WITH MAXIMUM 19 STRANDS.
- LOW VOLTAGE CONDUCTORS: PROVIDE CONDUCTORS IN ACCORDANCE WITH NFPA 70 AND NFPA 72, AND AS RECOMMENDED BY THE FIRE ALARM SYSTEM MANUFACTURER. CONDUCTORS SHALL BE COPPER, MINIMUM NO. 14 AWG, TWISTED SHIELDED PAIR.
- SURVIVABILITY: A 2-HOUR RATED CABLE ASSEMBLY SHALL BE PROVIDED FOR NOTIFICATION APPLIANCE CIRCUITS AND ANY OTHER CIRCUITS NECESSARY FOR THE OPERATION OF THE NOTIFICATION APPLIANCE CIRCUITS FROM THE POINT AT WHICH THEY EXIT THE CONTROL UNIT UNTIL THE POINT THAT THEY ENTER THE NOTIFICATION ZONE THAT THEY SERVE.
- MANUAL PULL STATIONS ARE TO BE INSTALLED AT 42" TO BOTTOM OF DEVICE AND NO HIGHER THAN 48" TO HANDLE ABOVE FINISHED FLOOR.
- PROVIDE MINIMUM 3/4" CONDUIT AND WIRING BETWEEN EACH FIRE ALARM DEVICE AND FROM LAST DEVICE TO FACP UNLESS OTHERWISE NOTED.
- PROVIDE DUCT DETECTOR (AND FIRE ALARM RELAY WHERE APPLICABLE) CONNECTED TO FIRE ALARM SYSTEM, WITHIN 5' OF ALL DUCT PENETRATIONS THROUGH FIRE/SMOKE WALLS, WHETHER INDICATED ON ELECTRICAL OR MECHANICAL PLANS OR NOT.
- FIRE ALARM CONTROL PANEL IS TO BE PROVIDED WITH DEDICATED 120V CIRCUIT WITH EQUIPMENT GROUND CONNECTION PER MANUFACTURER'S RECOMMENDATIONS AND ARTICLE 760 OF THE NEC. PROVIDE MINIMUM #12 AWG FOR GROUND CONNECTION. NOTE: PANEL NEUTRAL OR CONDUIT GROUND IS NOT ACCEPTABLE.
- SECONDARY BACK-UP POWER SHALL BE PROVIDED BY INTEGRAL BATTERIES WITHIN THE FIRE ALARM CONTROL PANEL TO SUPPLY POWER TO THE SYSTEM UNDER QUIESCENT LOAD FOR A MINIMUM OF 24 HOURS, AND THEN BE CAPABLE OF AN ADDITIONAL 5 MINUTES ALARM OPERATION AT MAXIMUM CONNECTED LOAD.
- ALL FIRE ALARM POWER CIRCUITS SHALL HAVE A DEDICATED 120V 20A BREAKER THAT SHALL BE RED IN COLOR AND MECHANICALLY PROTECTED (LOCKABLE IN THE "ON" POSITION), MARKED AS "FIRE ALARM CIRCUIT".
- A SUPERVISORY SIGNAL SHALL BE ANNUNCIATED UPON ANY TAMPER SWITCH ACTIVATION, FAILURE OR REMOVAL OF ANY DETECTOR OR MANUAL DEVICE SHALL ACTIVATE A TROUBLE SIGNAL.
- A CERTIFICATION OF COMPLETION AND LISTING SHALL BE ISSUED AND INSTALLED ON THE FIRE ALARM CONTROL PANEL. SUBMIT NFPA RECORD OF COMPLETION FORM ALONG WITH SMOKE DETECTOR SENSITIVITY REPORT FOR ALL DETECTORS WITHIN THE PROJECT AREA TO ENGINEER AND MAKE AVAILABLE AT FINAL INSPECTION.
- MINIMUM CANDELA RATING OF STROBES IS 75, 110" ADJACENT TO DEVICE INDICATES 110 CANDELA RATING. PROVIDE SYNCHRONIZATION OF STROBES IN ALL ADJACENT AREAS WHERE STROBES ARE VISIBLE TO EACH OTHER.
- ALL STROBES SHALL ACTIVATE UPON INITIATION OF THE GENERAL ALARM.
- ALL STROBES SHALL BE INSTALLED PER ADA MOUNTING HEIGHT REQUIREMENTS. WALL MOUNTED STROBES SHALL BE INSTALLED SO THAT THE BOTTOM OF THE STROBE LENS IS 80" AFF.
- STROBES SHALL BE INSTALLED WITHIN 15' OF THE ENDS OF ALL CORRIDORS.
- FIRE ALARM DEVICES INSTALLED OUTSIDE OR IN AREAS OPEN TO THE EXTERIOR SHALL BE WEATHERPROOF DEVICES IN APPROVED RACKBOXES.
- SMOKE DETECTORS SHALL BE PHOTO-ELECTRIC ADDRESSABLE TYPE, UNLESS SPECIFICALLY NOTED OTHERWISE.
- SMOKE DETECTORS ARE TO BE INSTALLED PER NFPA 72. WALL MOUNTED SMOKE DETECTORS SHALL BE MOUNTED 4'-12" BELOW THE CEILING AND AWAY FROM CORNERS.
- DUCT DETECTORS SHALL BE PHOTO-ELECTRIC ADDRESSABLE TYPE, AND RATED FOR VELOCITIES UP TO 5000 FT/MIN.
- HEAT DETECTORS SHALL BE ADDRESSABLE, FIXED TYPE @ 135 DEG F, UNLESS OTHERWISE NOTED.
- PROVIDE AN ADDRESSABLE FIRE ALARM SYSTEM PER NFPA AND ALL STATE AND LOCAL CODE REQUIREMENTS. COMPLY WITH NFPA 72 AND ADA REQUIREMENTS.
- FIELD VERIFY LOCATION OF AREA SMOKE DETECTORS AND HEAT DETECTORS. DO NOT LOCATE WITHIN 36" OF AN HVAC DIFFUSER (SUPPLY OR RETURN), IN DIRECT AIR FLOW PATH, OR WITHIN 24" OF A SPRINKLER HEAD UNLESS NOTED OTHERWISE.
- PROVIDE LABELS FOR REMOTE ALARM INDICATORS FOR DUCT MOUNTED SMOKE DETECTORS (I.E., AHU-1 SUPPLY, AHU-2 RETURN, FIRE/SMOKE DAMPER, ETC.). DUCT DETECTORS SHOULD BE LOCATED WITHIN 6 TO 10 EQUIVALENT DIAMETERS OF STRAIGHT, UNINTERRUPTED DUCTWORK. DUCT DETECTORS FOR FIRE/SMOKE DAMPERS SHOULD BE LOCATED BETWEEN THE LAST INLET OR OUTLET UPSTREAM OF THE DAMPER AND THE FIRE INLET OR OUTLET DOWNSTREAM OF THE DAMPER, AND WITHIN FIVE FEET OF THE FIRE/SMOKE WALL.
- EQUIPMENT SHUT DOWN FIRE ALARM RELAYS SHALL BE LOCATED WITHIN THREE (3) FEET OF THE EQUIPMENT CONTROLS AND THE WIRING TO THE RELAY SHALL BE MONITORED BY THE FIRE ALARM SYSTEM.
- ALL FIRE ALARM CABLE SHALL BE INSTALLED IN CONDUIT; NO FIRE ALARM CONDUIT SHALL BE INSTALLED UNDER SLAB. PROVIDE MANUFACTURED RED CONDUIT UNLESS OTHERWISE NOTED.
- MINIMIZE EXPOSURE OF DETECTORS TO DIRT AND DUST FROM CONSTRUCTION. PROVIDE PLASTIC COVERS DURING CONSTRUCTION.
- STATE CERTIFIED AND LICENSED FIRE ALARM CONTRACTOR SHALL PREPARE AND SUBMIT SIGNED AND SEALED DRAWINGS FOR THE LOCAL AUTHORITY HAVING JURISDICTION FIRE MARSHAL.
- ALL NOTIFICATION DEVICES SHALL BE RED.
- FIRE ALARM CIRCUITS SHALL BE CLASS "B".
- NOTIFICATION DEVICES SHALL BE ADDRESSABLE ELECTRIC-VIBRATING-POLARIZED HORNS, SELECTABLE FOR HIGH OR LOW dbA OUTPUT. THEY SHALL HAVE A SOUND PRESSURE LEVEL OF 90dbA MEASURED 10 FEET FROM HORN, USING CODED SIGNAL PER NFPA 72.
- FIRE ALARM CONTRACTOR/VENDOR SHALL PREPARE FLORIDA LICENSE P.E. WORKING DRAWINGS INCORPORATING THE FIRE ALARM CRITERIA DESIGN AND CONFIRMING TO AHJ REQUIREMENTS. CONTRACTOR SHALL PROVIDE ALL MATERIAL REQUIRED PER AHJ AND DESIGN CRITERIA FOR A FULLY FUNCTIONING AND PERMITTABLE FIRE ALARM SYSTEM. SUBMIT TO DESIGN PROFESSIONAL AS A SHOP DRAWING FOR REVIEW. SUBMIT COMPLETE SIGNED & SEALED DRAWINGS TO PERMITTING AGENCY AND FOR CERTIFICATE OF OCCUPANCY COMPLETED FIRE ALARM CERTIFICATION SHALL BE PROVIDED TO OWNER AT COMPLETION OF CONSTRUCTION.
- FIRE ALARM DESIGN IS IN ACCORDANCE WITH FLORIDA STATUTES CHAPTER §1615-32 WHERE A FIRE ALARM RISER IS INDICATED, IT IS DIAGRAMMATIC IN NATURE AND NOT INTENDED TO REPRESENT A COMPLETE WIRING AND DEVICE DISPLAY. ALL WIRING AND DEVICES SHALL BE IN ACCORDANCE WITH SELECTED VENDOR'S POINT-BY-POINT WIRING DIAGRAM. REFER TO FLOOR PLAN FOR DESIGN INTENT AND PROPOSED QUANTITY OF FIRE ALARM SYSTEM COMPONENTS.



1 FLOOR PLAN - FIRE ALARM

1/4" = 1'-0"

FIRE ALARM SYSTEM WIRE SCHEDULE

- (A) SIGNALING LINE CIRCUIT: (2) CONDUCTOR #18 AWG, SOLID, SHIELDED, TWISTED PAIRS. TYPE "FPLR" CABLE. CLASS B - SURVIVABILITY LEVEL 1. (INTRA-BUILDING)
- (B) NOTIFICATION APPLIANCE CIRCUIT: 2 CONDUCTOR #14 AWG, SOLID, SHIELDED CABLE. TYPE "FPLR" CABLE. CLASS B - SURVIVABILITY LEVEL 1.
- (C) INITIATING DEVICE CIRCUIT (IDC): 2 CONDUCTOR #18 AWG, SOLID, SHIELDED TWISTED PAIRS. TYPE "FPLR" CABLE. CLASS B, SURVIVABILITY LEVEL 1

NOTE:

- * FIRE ALARM SYSTEM WIRING SHALL BE POWER LIMITED.
- * ALL WIRING BELOW GRADE TO BE LISTED FOR WET LOCATIONS.
- * REFER TO POWER AND SYSTEMS PLANS FOR DEVICE LOCATION AND QUANTITY.
- * ALL STROBES SHALL BE 75cd MINIMUM UNLESS OTHERWISE NOTED ON THE FLOOR PLANS.

FIRE ALARM SYSTEM SEQUENCE OF OPERATION

No Scale

- TYPE OF SYSTEM:**
- FULLY ADDRESSABLE FIRE ALARM SYSTEM AND STANDBY BATTERY MONITORED BY CENTRAL STATION
 - 24 HOURS OF STANDBY; 5 MINUTES OF ALARM USED FOR BATTERY CALCULATIONS
 - VOICE EVACUATION WITH PRE-RECORDED DIGITAL MESSAGE AND MANUAL ANNOUNCEMENT VIA MICROPHONE

- TYPE OF CIRCUITS:**
- SIGNALING LINE CIRCUIT (SLC) = CLASS B, SURVIVABILITY LEVEL 1
 - NOTIFICATION APPLIANCE CIRCUIT (NAC) = CLASS B, SURVIVABILITY LEVEL 1

- WIRING METHOD:**
- "FPLR" CABLE IN CONDUIT.
 - WET LOCATION LISTED CABLE FOR UNDERGROUND, SLAB, AND UNCONDITIONED SPACE CONDUIT.

GENERAL ALARM SEQUENCE:

- ACTIVATION OF AN ALARM INITIATING DEVICE WILL CAUSE THE NOTIFICATION DEVICES (SPEAKERS AND STROBES) TO ACTIVATE THROUGHOUT THE BUILDINGS. ALL ALARM CONDITIONS WILL BE ANNUNCIATED AT THE FIRE ALARM CONTROL PANEL (FACP) AND REMOTE ANNUNCIATOR AND WILL BE TRANSMITTED TO THE OWNER-SELECTED OFFSITE MONITORING COMPANY.
- SUPERVISORY CONDITIONS WILL BE ANNUNCIATED AT THE FACP AND REMOTE ANNUNCIATOR. A SUPERVISORY CONDITION WILL BE TRANSMITTED BY THE FACP TO THE OWNER-SELECTED OFFSITE MONITORING COMPANY.
- TROUBLE CONDITIONS WILL BE ANNUNCIATED AT THE FACP AND REMOTE ANNUNCIATOR. A TROUBLE CONDITION WILL BE TRANSMITTED BY THE FACP TO THE OWNER-SELECTED OFFSITE MONITORING COMPANY.
- SPRINKLER FLOW SWITCH: THE FIRE PROTECTION SPRINKLER SYSTEM MAIN FLOW SWITCH SHALL BE CONNECTED AS AN ALARM INITIATING DEVICE AND SHALL BE ANNUNCIATED SEPARATELY. FIRE PROTECTION SPRINKLER SYSTEM ZONE FLOW SWITCHES SHALL BE CONNECTED AS AN AUTOMATIC INITIATING DEVICE AND EACH SWITCH SHALL BE SEPARATELY ANNUNCIATED.
- SPRINKLER FLOW SWITCH SHALL TRANSMIT A SEPARATE ALARM SIGNAL FROM OTHER ALARM CONDITIONS.
- SPRINKLER SYSTEM TAMPER SWITCH: TAMPER SWITCHES CONNECTED TO THE VALVES OF THE FIRE PROTECTION SYSTEM SHALL BE ANNUNCIATED AS SUPERVISORY CONDITION.

ALARM SILENCE:

- AUDIBLE NOTIFICATION DEVICES MAY BE SILENCED.
- VISUAL DEVICES WILL REMAIN ON UNTIL THE SYSTEM IS RESET.

INITIATING DEVICE OPERATIONS:

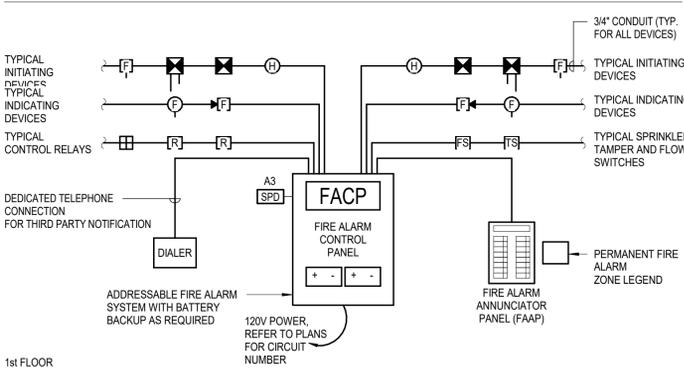
- PULL STATIONS WILL CAUSE A GENERAL ALARM.
- SPRINKLER FLOW SWITCHES WILL CAUSE A GENERAL ALARM.
- DUCT DETECTORS WILL CAUSE A SUPERVISORY CONDITION.
- ANY TAMPER SWITCH WILL CAUSE A SUPERVISORY CONDITION.
- SMOKE/HEAT DETECTORS WILL CAUSE A GENERAL ALARM AFTER AN ALARM VERIFICATION PROCESS.

AUXILIARY CONTROLS:

- AIR HANDLING UNITS CONTROLLED BY THE FIRE ALARM SYSTEM WILL SHUTDOWN THROUGHOUT THE BUILDING ON AN ALARM CONDITION. UPON SILENCING FIRE ALARM SYSTEM HVAC SYSTEM SHALL AUTOMATICALLY RETURN TO NORMAL OPERATION STATUS.

FIRE ALARM NOTES:

- ALL EQUIPMENT AND DEVICES SHALL BE U.L. LISTED.
- ALL WIRING SHALL CONFORM TO NFPA 72 AND NEC ARTICLE 760 USING FPLR COPPER CABLING IN CONDUIT.
- COLOR CODING AND PROPER LABELING SHALL APPLY TO ALL SYSTEMS WIRING.
- ROUTE FIRE ALARM SYSTEM CONDUIT ACCORDING TO FIRE ALARM CONTRACTOR SHOP DRAWINGS. COORDINATE WITH THE ELECTRICAL CONTRACTOR.
- ALL FIRE ALARM VISUAL SIGNALS IN OPEN AREA SHALL HAVE A THREE PLUS TEMPORAL PATTERN. MULTIPLE STROBES SIMULTANEOUSLY IN VIEW SHALL BE SYNCHRONIZED.
- ALL FIRE ALARM AUDIBLE SIGNALS SHALL HAVE A SOUND LEVEL AT LEAST 15 db ABOVE THE AVERAGE AMBIENT OR 5 db ABOVE THE MAXIMUM SOUND LEVEL, WHICHEVER IS GREATER.
- MOUNT FIRE ALARM SYSTEM STROBES AND HORN/STROBES AT 80" AFF OR 6" BELOW CEILING, WHICH EVER IS LOWER.
- SMOKE DETECTOR INSTALLATIONS SHALL BE AS PER NFPA 72.
- ADDRESSABLE MONITOR MODULES SHALL BE PROVIDED WITHIN 3' OF ANY NON-ADDRESSABLE INITIATING DEVICES.
- FIRE ALARM CONTROL PANEL SHALL INCLUDE BATTERIES.
- PROVIDE CERTIFICATE OF COMPLETION AT THE FINAL INSPECTION OF THE FIRE ALARM SYSTEM.
- FIRE ALARM CONTRACTOR SHALL PROVIDE A DETAILED SET OF SHOP DRAWINGS (INCLUDING DEVICE CUT-SHEETS), A COMPLETE POINT TO POINT WIRING DIAGRAM, COMPLETE BATTERY CALCULATIONS, & VOLTAGE DROP CALCULATIONS TO THE AUTHORITY HAVING JURISDICTION AT THE TIME OF APPLICATION FOR BUILDING PERMIT.
- PROVIDE THE OWNER WITH A COMPLETE FIRE ALARM SYSTEM OPERATING AND INSTALLATION MANUAL COVERING ALL SYSTEM EQUIPMENT INSTALLED FOR THIS PROJECT. KEEP AT THE FIRE ALARM CONTROL PANEL.
- THE FIRE ALARM SYSTEM SHALL BE MONITORED BY AN OFFSITE CENTRAL STATION.



2 FIRE ALARM RISER

N.T.S.

REVISIONS		
No.	Description	Date

PLUMBING SYMBOLS		PLUMBING ABBREVIATIONS		PLUMBING GENERAL NOTES	
SYMBOL	DESCRIPTION	ABBREVIATION	DESCRIPTION		
	- CONDENSATE DRAIN PIPING	CA	- COMPRESSED AIR	1.	REFERENCE THE SPECIFICATIONS FOR MATERIAL AND EQUIPMENT INSTALLATION STANDARDS.
	- DOMESTIC COLD WATER PIPING	AFF	- ABOVE FINISH FLOOR	2.	THE PLUMBING INSTALLATION SHALL COMPLY WITH ALL STATE AND LOCAL CODES.
	- DOMESTIC HOT WATER PIPING	AW	- ACID WASTE	3.	UTILITIES AND SERVICES INDICATED ARE TAKEN FROM VARIOUS OLD AND NEW SURVEYS. AS-BUILT RECORDS AND FIELD INVESTIGATIONS. UNFORSEEN CONDITIONS PROBABLY EXIST AND NEW WORK MAY NOT BE FIELD LOCATED EXACTLY AS SHOWN ON DRAWINGS. COOPERATION WITH OTHER TRADES IN ROUTING AND BURIAL DEPTHS, AS DETERMINED DURING CONSTRUCTION, WILL BE NECESSARY.
	- DOMESTIC HOT WATER RETURN PIPING	AV	- ACID VENT	4.	FIELD VERIFY EXISTING INSTALLATIONS, MODIFY EXISTING PLUMBING SYSTEMS, WHICH ARE TO REMAIN ACTIVE, TO FACILITATE RECONNECTION AND EXTENSION OF THE NEW WORK.
	- SANITARY WASTE PIPING	CB	- CATCH BASIN	5.	NOTIFY OWNER AT LEAST 24 HOURS PRIOR TO INTERRUPTING EXISTING SERVICE. SCHEDULE DISCONNECTION AND TIE-INS TO MINIMIZE DISRUPTION OF SERVICES. SERVICES ARE NOT TO BE LEFT DISRUPTED DURING NON-NORMAL CONTRACTOR WORKING HOURS.
	- VENT PIPING	CD	- CONDENSATE DRAIN	6.	PLANS ARE NOT COMPLETELY TO SCALE. PIPE ROUTING SHOWN IS SCHEMATIC AND IS NOT INTENDED TO INDICATE EXACT ROUTING. CONTRACTOR SHALL PROVIDE ANY ADDITIONAL OFFSETS AND FITTINGS REQUIRED FOR PROPER INSTALLATION AND TO MAINTAIN CLEARANCES. VERIFY STRUCTURAL, MECHANICAL AND ELECTRICAL INSTALLATIONS AND OTHER POTENTIAL OBSTRUCTIONS AND ROUTE PIPING TO AVOID INTERFERENCES.
	- STORM DRAIN PIPING	CFH	- CUBIC FEET PER HOUR	7.	PROVIDE ALL OFFSETS AND FITTINGS AND MAKE CONNECTION TO SITE UTILITIES.
	- OVERFLOW STORM DRAIN PIPING	CO	- CLEANOUT	8.	CONCEAL PIPING ABOVE CEILINGS, WITHIN WALLS OR CHASES EXCEPT IN MECHANICAL ROOMS OR AS SPECIFICALLY NOTED.
	- FUEL GAS PIPING	COANT	- CONTINUATION	9.	PROVIDE ACCESS PANELS FOR ALL VALVES CONCEALED IN WALLS OR ABOVE NON-ACCESSIBLE CEILINGS.
	- HOSE BIBB OR WALL HYDRANT	COV	- DOMESTIC COLD WATER	10.	SLEEVE AND/OR FIRESTOP ALL PENETRATIONS THROUGH RATED WALLS, CEILINGS, AND FLOORS WITH UL LISTED ASSEMBLIES. FIRESTOP ASSEMBLIES SHALL BE EQUAL TO OR EXCEED THE RATING OF THE WALL, CEILING OR FLOOR. SEE ARCHITECTURAL DRAWINGS FOR FINAL FINISHES.
	- CLEANOUT PLUG	DI	- DEIONIZED WATER	11.	FLASH AND COUNTER-FLASH ROOF PENETRATIONS.
	- WALL CLEANOUT	DN	- DOWN	12.	WHEN BEAM SLEEVE PENETRATIONS ARE NECESSARY, COORDINATE PENETRATIONS WITH ALL TRADES, THE ARCHITECT AND THE STRUCTURAL ENGINEER.
	- FLOOR CLEANOUT / EXTERIOR CLEANOUT	DS	- DOWNSPOUT	13.	PROVIDE FOUNDATION PAD PENETRATION SLEEVES. ALLOW 1" MINIMUM CLEARANCE BETWEEN SLEEVE INSIDE SURFACE AND PIPE EXTERIOR.
	- FLOOR DRAIN	DWG	- DRAWING	14.	SEE ARCHITECTURAL DRAWINGS FOR FIXTURE LOCATIONS AND MOUNTING HEIGHTS.
	- FLOOR SINK	EXIST	- EXISTING	15.	PROVIDE AUTOMATIC TRAP PRIMERS FOR FLOOR DRAIN TRAP SEALS.
	- DECK DRAIN	F	- DEGREE FAHRENHEIT	16.	PROVIDE AN AIR GAP, WHEN REQUIRED BY CODE, SERVING INDIVIDUAL FIXTURES, DEVICES, APPLIANCES AND APPARATUS.
	- SHUT-OFF VALVE	FCO	- FLOOR CLEANOUT	17.	ALL EXPOSED PIPE AND FITTINGS IN FINISHED AREAS SHALL BE CHROME PLATED.
	- BALL VALVE	FD	- FLOOR DRAIN	18.	MOUNT HOSE BIBBS 24" ABOVE FINISHED GRADE.
	- CALIBRATED BALANCING VALVE	FOF	- FUEL OIL FILL	19.	PROVIDE CLEANOUTS IN ACCORDANCE WITH ALL STATE AND LOCAL CODES. INSTALL CLEANOUT WITH COVER FLUSH TO FINISH SURFACE.
	- CHECK VALVE (SWING)	FOG	- FUEL OIL GAGE	20.	COORDINATE EXACT FLOOR DRAIN LOCATIONS WITH ARCHITECTURAL DRAWINGS. SET FLOOR DRAINS BELOW FINISHED FLOOR TO ALLOW FOR FLOOR SLOPING TO THE DRAIN.
	- PRESSURE REDUCING VALVE	FOR	- FUEL OIL RETURN	21.	COORDINATE PIPING WITH ALL ELECTRICAL EQUIPMENT (PANELS, TRANSFORMERS, ETC.) PRIOR TO ANY INSTALLATION. DO NOT ROUTE ANY PIPING OVER ANY ELECTRICAL PANELS UNDER ANY CIRCUMSTANCES. ANY PIPING RUN OVER PANELS SHALL BE RE-ROUTED AT NO ADDITIONAL COST.
	- SOLENOID OPERATING VALVE	FOS	- FUEL OIL SUPPLY	22.	ALL WALL MOUNTED LAVATORIES SHALL BE ATTACHED TO FLOOR MOUNTED CARRIER DESIGNED TO WITHSTAND A VERTICAL LOAD OF 250 POUNDS ON THE FRONT OF THE FIXTURE.
	- GAS COCK	FOV	- FUEL OIL VENT	23.	PROVIDE SANITARY WASTE, VENT, DOMESTIC WATER, ETC. ROUGH-IN AND MAKE FINAL CONNECTIONS (TO INCLUDE PROVIDING ALL NECESSARY RELATED STOPS, VALVES, TRAPS, ETC. AND MAKE READY FOR USE) TO ALL EQUIPMENT, WHETHER FURNISHED BY THIS CONTRACTOR OR FURNISHED BY OTHERS.
	- GAS PRESSURE REGULATOR	FS	- FLOOR SINK	24.	ALL MATERIALS AND EQUIPMENT INSTALLED IN RETURN AIR PLENUMS SHALL BE NON-COMBUSTIBLE AND UL APPROVED FOR USE IN A RETURN AIR PLENUM SPACE. IF MATERIALS ARE NOT NON-COMBUSTIBLE IN RETURN AIR PLENUMS, THEY SHALL BE REPLACED OR WRAPPED WITH A UL LISTED FIRE RATED FIRE WRAP (I.E. FIREWRAP 0.5 PLENUM INSULATION OR APPROVED EQUAL) AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S UL LISTED DETAILS AND RECOMMENDATIONS AT NO ADDITIONAL COST. (NOTE: REFER TO MECHANICAL DRAWINGS FOR RETURN AIR PLENUM LOCATIONS.)
	- DETAIL REFERENCE	FSE#	- FOODSERVICE EQUIPMENT NUMBER	25.	PIPING, INSULATION, FITTINGS, MATERIALS, COVERS AND FINISHES IN RETURN AIR PLENUM SHALL HAVE A MAXIMUM FLAME SPREAD RATING OF 25 AND A MAXIMUM SMOKE DEVELOPED RATING OF 50.
	- PIPE TAG	G	- GAS		
	- REVISION REFERENCE	GPH	- GALLONS PER HOUR		
		GPM	- GALLONS PER MINUTE		
		GR	- KITCHEN WASTE (GREASE)		
		HB	- HOSE BIBB		
		HD	- HUB DRAIN		
		HW	- DOMESTIC HOT WATER		
		HWR	- DOMESTIC HOT WATER RECIRCULATING		
		IE	- INVERT ELEVATION		
		IW	- INDIRECT WASTE		
		KW	- KILOWATT		
		LBS	- POUNDS		
		MH	- MANHOLE		
		NC	- NORMALLY CLOSED		
		NIC	- NOT IN CONTRACT		
		NO	- NORMALLY OPEN		
		NP	- NON-POTABLE WATER		
		NTS	- NOT TO SCALE		
		OD	- OUTSIDE DIAMETER		
		PRV	- PRESSURE REDUCING VALVE		
		PSI	- POUNDS PER SQUARE INCH		
		PVC	- POLYVINYL CHLORIDE PIPE		
		RD	- ROOF DRAIN		
		RFBP	- REDUCED PRESSURE BACKFLOW PREVENTOR		
		SAN	- SANITARY		
		SD	- STORM DRAIN		
		SF	- SQUARE FEET		
		SH	- SHEET		
		ST	- STORM		
		STO	- OVERFLOW STORM DRAIN		
		SW	- SOFT COLD WATER		
		V	- VENT		
		VAC	- VACUUM		
		VC	- VACUUM CLEANING		
		VTR	- VENT THRU ROOF		
		WCO	- WALL CLEANOUT		
		WTR	- WATER		

NOTE: SOME SYMBOLS SHOWN ON THIS LEGEND MAY NOT PERTAIN TO THIS PROJECT

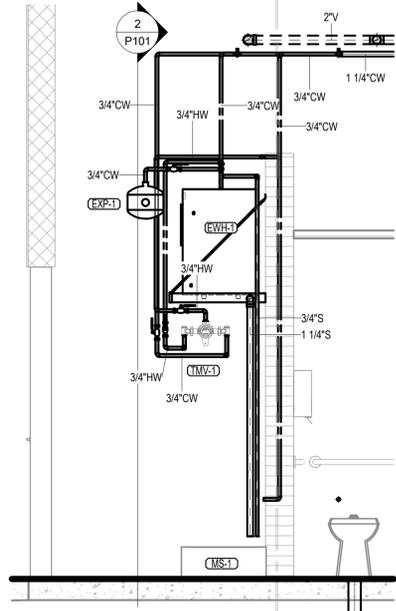
PLUMBING FIXTURE AND EQUIPMENT SCHEDULE

EWHD	ELECTRIC WATER HEATER, STORAGE TANK TYPE
	BASIS OF DESIGN: WATER HEATER: "A.O. SMITH", MODEL # DEN-30, 4.5 KW UPPER AND LOWER NON-SIMULTANEOUS OPERATION, 208 VOLT, 3 PHASE, 25 GPH RECOVERY AT 70 DEGREE F TEMPERATURE RISE. PROVIDE STRUCTURAL SHELF WITH INTEGRAL DRAIN PAN MOUNTED AT 8'-6" ABOVE FINISHED FLOOR. STRUCTURAL SHELF BASIS OF DESIGN: "HOLDRITE", MODEL # 40-SHWP-W.
EXPT	WATER HEATER THERMAL EXPANSION TANK
	BASIS OF DESIGN: EXPANSION TANK, "AMTROL", MODEL #ST-5C
TMVT	TEMPERING VALVE
	BASIS OF DESIGN: TEMPERING VALVE, "SYMMONS", MODEL # 8210CK, MIN. FLOW 0.25 GPM, 2.74 GPM AT 20.0 PSI FLOW RATE. PROVIDE WALL MOUNTING BRACKET.
WCFT	WATER CLOSET, FLOOR MOUNTED, MANUAL FLUSH VALVE, 1.6 GPF
	BASIS OF DESIGN: WATER CLOSET: "AMERICAN STANDARD", MODEL #3043001.020 FLUSH VALVE: "SLOAN", MODEL # REGAL 111-1.6, (Code #3080053) SEAT: "AMERICAN STANDARD", MODEL # 5901.100SS
LVFT	LAVATORY, WALL MOUNTED, MANUAL METERED FAUCET, 0.6 GPF
	BASIS OF DESIGN: LAVATORY: "AMERICAN STANDARD", MODEL #3055.012 FAUCET: "T&S BRASS", MODEL # DRAIN: "MCGUIRE MANUFACTURING", MODEL # PTRAP: "MCGUIRE MANUFACTURING", MODEL # CARRIER: "DURY", MODEL # INSULATING KIT FOR WASTE AND SUPPLIES: "TRUEBRO", MODEL # LAV-GUARD 2.
URFT	URINAL, WALL MOUNTED, MANUAL FLUSH VALVE
	BASIS OF DESIGN: URINAL: "AMERICAN STANDARD", MODEL #3055.012 FLUSH VALVE: "SLOAN", MODEL #
MSFT	MOP SINK, SERVICE FAUCET
	BASIS OF DESIGN: URINAL: "AMERICAN STANDARD", MODEL #3055.012 FLUSH VALVE: "SLOAN", MODEL #

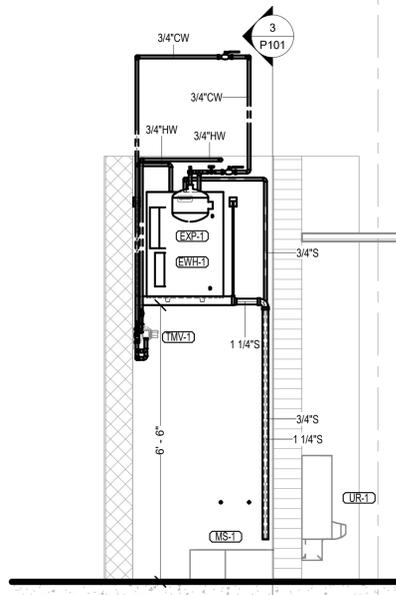
PLUMBING DRAWING INDEX	
SHEET	DESCRIPTION
P001	PLUMBING SYMBOLS, LEGEND, NOTES AND INDEX
P101	FLOOR PLAN - PLUMBING

FIRE PROTECTION GENERAL NOTES:	
1.	THIS PROJECT IS UNDER 49 SPRINKLER HEADS TO PROVIDE A COMPLETE SPRINKLER SYSTEM WITH COVERAGE OF THE ENTIRE BUILDING PER THE 2020 FLORIDA BUILDING CODE, BUILDING, 7TH EDITION, SECTION # 105.3.1.2(2). ENGINEERING DESIGN DRAWINGS FROM THE ENGINEER ARE NOT REQUIRED FOR THE FIRE PROTECTION SCOPE OF WORK. 2020 FLORIDA BUILDING CODE, BUILDING, 7TH EDITION, SECTION # 105.3.1.2(2), STATES THAT PERSONNEL AS AUTHORIZED BY CHAPTER 633 FLORIDA STATUTES, MAY DESIGN A FIRE SPRINKLER SYSTEM OF 49 OR FEWER HEADS AND MAY DESIGN THE ALTERNATION OF AN EXISTING FIRE SPRINKLER SYSTEM IF THE ALTERNATION OF AN EXISTING FIRE SPRINKLER SYSTEM CONSISTS OF THE RELOCATIONS, ADDITION OR DELETION OF NOT MORE THAN 49 HEADS, NOTWITHSTANDING THE SIZE OF THE EXISTING FIRE SPRINKLER SYSTEM.
2.	PER NFPA 13, THE SPRINKLER HEAD SPACING SHALL NOT EXCEED 225 SQFT. THE FIRE HAZARD FOR THE SPACE IS LIGHT HAZARD WITH A DENSITY OF 0.10 GPM/SQFT OVER 1500 SQFT.

REVISIONS		
No.	Description	Date



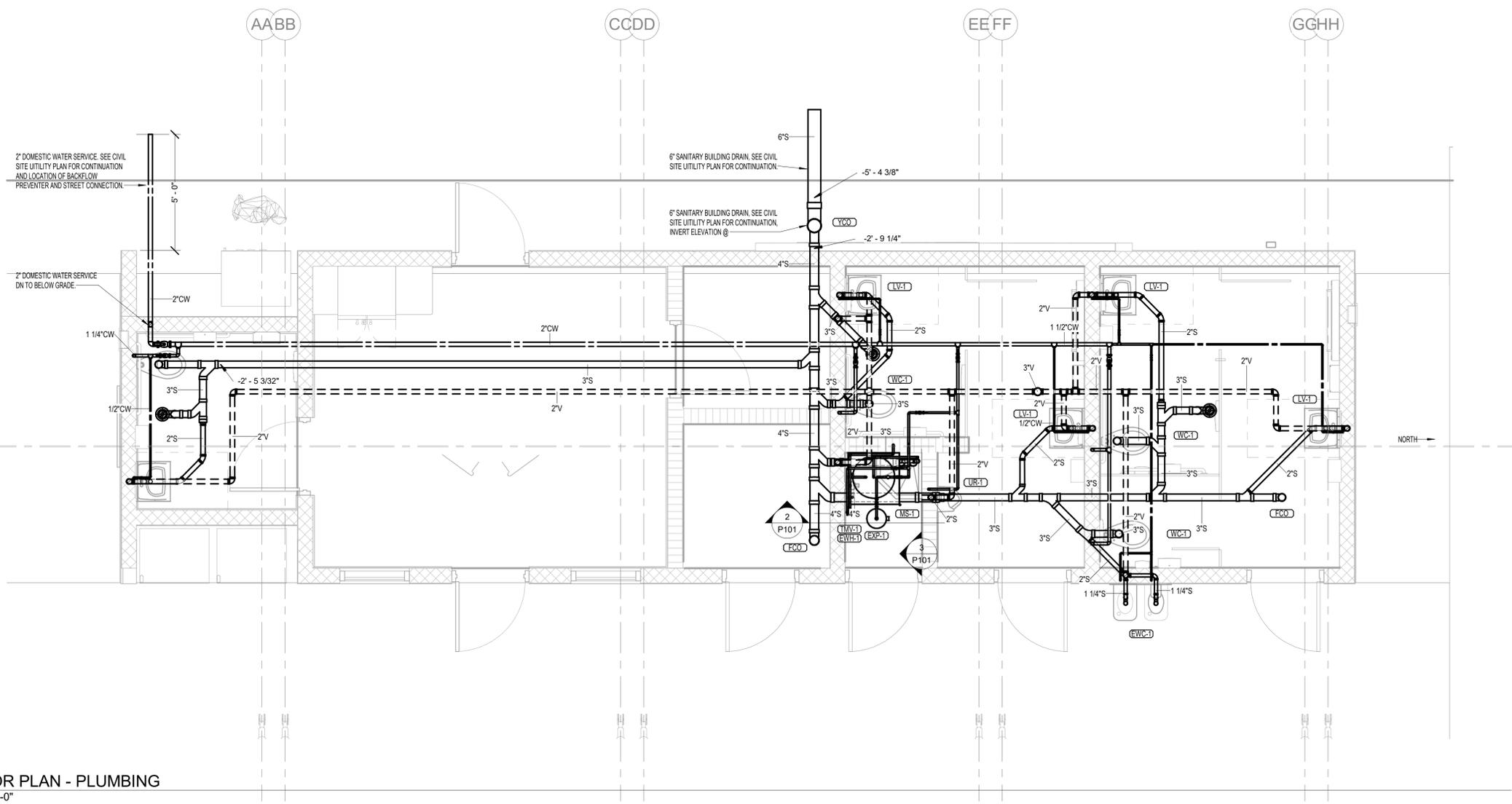
3 WATER HEATER ELEVATION #2
P101 1/2" = 1'-0"



2 WATER HEATER ELEVATION #1
P101 1/2" = 1'-0"

2

1



1 FLOOR PLAN - PLUMBING
P101 3/8" = 1'-0"

EE

REVISIONS		
No.	Description	Date

TECHNOLOGY SYSTEMS GENERAL NOTES	
1. REFER TO SPECIFICATION SECTION "TECHNOLOGY GENERAL PROVISIONS" FOR MORE INFORMATION ABOUT DRAWINGS AND BID DOCUMENTS.	
2. MANY SYMBOLS USED IN THIS PROJECT HAVE A TYPE ASSOCIATED WITH THEM. SEE SHEETS WITH DETAILS AND PROJECT SPECIFICATIONS FOR MORE INFORMATION ON THE DESCRIPTION OF EACH TYPE.	
3. ALL CONDUIT FOR TECHNOLOGY SYSTEMS INDOOR ABOVE GRADE SHALL BE EMT AND ALL CONDUIT FOR BELOW GRADE SHALL BE PVC.	
4. SEE LIFE SAFETY PLANS FOR LOCATIONS OF FIRE RATED PARTITIONS IN THIS PROJECT. PROVIDE AN APPROVED FIRE STOP SYSTEMS FOR EACH RACEWAY OR CABLE GOING THROUGH A RATED WALL. SEE SPECIFICATION "RACEWAYS FOR TECHNOLOGY" FOR MORE INFORMATION.	
5. WORKING CLEARANCES AROUND ELECTRICAL EQUIPMENT SHALL BE MAINTAINED IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE ARTICLE 110. COORDINATE EQUIPMENT INSTALLATION TO MAINTAIN REQUIRED CLEARANCES.	
6. SYMBOLS USED ON THE TECHNOLOGY DRAWINGS ARE NOT THE SAME SIZE AS THE ACTUAL OBJECT BEING REPRESENTED. THEREFORE LOCATIONS OF THE SYMBOLS ON THE FLOOR PLANS ARE AN APPROXIMATION TO THE ACTUAL LOCATION OF THE DEVICE AND NEED TO BE CAREFULLY COORDINATED WITH OTHER ELEMENTS IN THE VICINITY. AS A GENERAL GUIDELINE: A. VOICE/DATA OUTLET FOR WORK-AREAS SHALL BE INSTALLED WITHIN 6 INCHES OF A POWER OUTLET INDICATED IN ELECTRICAL DRAWINGS. B. TV OUTLETS SHALL BE INSTALLED WITHIN 6 INCHES OF A POWER OUTLET SHOWN ON THE ELECTRICAL DRAWINGS. C. WHEN MULTIPLE TECHNOLOGY SYSTEMS OUTLETS ARE INDICATED NEXT TO EACH OTHER WITH SYMBOLS, THE SPACING BETWEEN OUTLETS SHALL BE CONSISTENT IF NO ELEVATION IS SHOWN ON THE DRAWINGS. D. WHEN INSTALLER IS NOT CERTAIN ABOUT SPECIFIC ADJACENCIES OF A DEVICE, THE QUESTION SHALL BE ASKED TO THE ENGINEER PRIOR TO INSTALLATION.	
7. FOR EXACT LOCATION OF CEILING MOUNTED EQUIPMENT REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN. LOCATIONS OF EQUIPMENT NOT INCLUDED ON THE REFLECTED CEILING PLAN SHALL BE COORDINATED WITH THOSE ITEMS SHOWN. COORDINATION OF CEILING MOUNTED EQUIPMENT SHALL BE PRIOR TO ANY ROUGH-IN. NOTIFY ENGINEER OF ANY DISCREPANCY.	
8. LOCATIONS OF FLOOR BOXES AND FLOOR PENETRATIONS SHALL NOT BE MEASURED FROM THIS SET OF DRAWINGS. INSTALLER SHALL REQUEST PRECISE LOCATIONS FROM ARCHITECT.	
9. EACH VOICE/DATA RJ45 JACK SHALL BE CONNECTED TO A DEDICATED 4 PR CABLE.	
10. THE RESPONSIBILITY OF RACEWAY INSTALLATION SHALL BE AS DIRECTED BY THE CONSTRUCTION MANAGER OR GENERAL CONTRACTOR, BUT ALL RACEWAYS FOR TECHNOLOGY ARE TO BE INCLUDED IN THIS CONTRACT.	
11. WHEN CONDUIT RUNS ARE INDICATED ABOVE GRADE OR BELOW GRADE ON THESE DRAWINGS, NOT EVERY SINGLE JUNCTION BOX (OR COMMUNICATIONS VAULT) REQUIRED IS INDICATED ON THE DRAWINGS. TYPICALLY ONLY END POINT LOCATIONS OR SPECIFIC PASS-THROUGH LOCATIONS WHERE THE ENGINEER DESIRES A BOX ARE SHOWN ON THE DRAWINGS. SEE SPECIFICATION "RACEWAYS FOR TECHNOLOGY" FOR REQUIREMENTS THAT INDICATE ADDITIONAL JUNCTION BOXES OR COMMUNICATION VAULTS THAT SHALL BE PROVIDED UNDER THIS CONTRACT. SUCH REQUIREMENTS INCLUDE ADDITIONAL BOXES REQUIRED BECAUSE OF NUMBER OF CONDUIT BENDS OR CHANGES IN ELEVATION.	
12. SOME SYMBOLS INCLUDED IN THE SYMBOL LEGEND MAY NOT BE USED IN THESE PROJECT DRAWINGS.	
13. UNDER NO CONDITIONS, CONDUITS FOR LOW VOLTAGE FOR FLOOR BOXES SHALL BE DAISY CHAINED TOGETHER BETWEEN ADJACENT FLOOR BOXES. ALL CONDUITS FOR FLOOR BOXES SHALL BE HOME RUNS TO NEAREST ACCESSIBLE CEILING SPACE.	
14. THIS SET OF DRAWINGS DOES NOT INDICATE ALL GROUNDING AND BONDING REQUIREMENTS FOR TECHNOLOGY SYSTEMS. REFER TO SPECIFICATION SECTION "GROUNDING FOR TELECOMMUNICATION SYSTEM" FOR ADDITIONAL REQUIREMENTS.	
15. ALL CABLES FOR TECHNOLOGY SYSTEMS RUN UNDER SLAB OR BELOW GRADE IN CONDUITS STUBBING UP INSIDE THE TELECOM ROOM SHALL BE INDOOR/OUTDOOR RATED. FOR CONDUITS STUBBING UP IN OTHER LOCATIONS DIFFERENT FROM TELECOM ROOMS AND FURTHER THAN 50 FT. FROM A TELECOM ROOM, DO NOT USE INDOOR/OUTDOOR RATED CABLES.	
16. GRAPHICS USED FOR EQUIPMENT IN ELEVATIONS AND CHANNELS (LINE DRAWINGS) DO NOT NECESSARILY REPRESENT THE PART NUMBER OF THE EQUIPMENT SPECIFIED. THE PART NUMBERS LISTED IN THE DRAWINGS AND SPECIFICATIONS ARE TO BE FOLLOWED FOR BASIS OF DESIGN, NOT THE GRAPHICS.	
17. THE TECHNOLOGY DRAWINGS DO NOT SHOW ALL REQUIRED CONDUITS/RACEWAYS TO BE PROVIDED UNDER THIS CONTRACT. TYPICALLY CONDUIT SLEEVES SMALLER THAN 2" ARE NOT SHOWN ON THE DRAWINGS. SEE SPECIFICATIONS "RACEWAYS FOR TECHNOLOGY" AND DRAWING DETAILS FOR ADDITIONAL RACEWAY REQUIREMENTS.	
18. DEFINITION OF ACRONYMS USED IN THESE DRAWINGS: A. NIC (N.I.C.) = NOT IN CONTRACT B. OFE (O.F.E.) = OWNER FURNISHED EQUIPMENT. SEE RESPONSIBILITY MATRIX FOR MORE INFORMATION. C. DHI (D.H.I.) = DOOR HARDWARE INSTALLER D. USC (U.S.C.) = UNDER SEPARATE CONTRACT.	
19. ALL REQUIRED WALL PENETRATIONS, EXISTING AND NEW, SHALL MAINTAIN THE NEW WALL RATING AFTER CABLING HAS BEEN INSTALLED OR REMOVED.	
20. ALL SPEAKERS MOUNTED IN A CEILING TILE SHALL BE CENTERED IN THE CEILING TILE.	

SECURITY SYSTEM GENERAL NOTES

1. SYMBOLS USED TO REPRESENT DEVICES SUCH AS CCTV CAMERAS, INTERCOM STATIONS, SECURITY WORKSTATIONS, CALL STATIONS, AND EMERGENCY PHONE STATIONS REQUIRE ONE (1) DATA DROP FOR SUCH DEVICE. THIS DATA DROP IS NOT SHOWN ON THE VOICE/DATA FLOOR PLANS, BUT SHALL BE PROVIDED FOLLOWING ALL REQUIREMENTS FOR VOICE/DATA DROPS INDICATED IN THE DRAWING DETAILS AND IN THE SPECIFICATION "STRUCTURED CABLING SYSTEM".	
2. ANY DATA DROPS FOR SECURITY DEVICES EXCEEDING 295 FT. OF PERMANENT LINK DISTANCE TO THE TELECOM ROOM WHERE CAMERA WILL BE WIRED TO, SHALL BE WIRED WITH FIBER OPTICS FOR HORIZONTAL CABLING AND A 2 CONDUCTOR AWG-16 CL2P) CABLE. THE FIBER CABLE SHALL BE AS DESCRIBED IN SPECIFICATION "STRUCTURED CABLING SYSTEM". IF NO INDICATION IN SUCH SPECIFICATION, FIBER OPTIC CABLE SHALL BE A 2-STRAND OM3 CABLE WITH A SUITABLE JACKET FOR THE APPLICATION.	
3. ALL DOUBLE DOORS THAT ARE SHOWN WITH TWO DOOR POSITIONS SWITCHES ARE TO RECEIVE (1) DOOR POSITION SWITCH ON EACH DOOR LEAF AND SHALL REPORT AS ONE ALARM POINT.	
4. ALL CAMERAS, CARD READERS AND/OR KEYPADS DEDICATED FOR ELEVATOR FLOOR SELECTION CONTROL ARE SHOWN INSIDE THE ELEVATOR CAB ON THE LOWEST LEVEL FLOOR PLAN TO WHICH THE ELEVATOR TRAVELS.	
5. LOCATION OF SURVEILLANCE CAMERAS SHALL BE CLOSELY COORDINATED WITH OTHER TRADES TO AVOID OBSTRUCTIONS IN THE FIELD OF VIEW. IT IS NOT REQUIRED FOR CAMERAS TO BE MOUNTED IN CENTER OF A CEILING TILE (OR CENTER OF A HALLWAY) IF THAT LOCATION CAUSES AN OBSTRUCTION IN THE FIELD OF VIEW OF THE CAMERA. ALL CAMERAS ARE TO BE INSTALLED AS CLOSE AS PHYSICALLY POSSIBLE TO THE CORNER OF THE ROOM TO GAIN THE BEST FIELD OF VIEW FOR THAT CAMERA.	
6. SURVEILLANCE CAMERAS INDICATED IN THE CORNER OF A ROOM SHALL BE INSTALLED AS CLOSE AS PHYSICALLY POSSIBLE TO THE CORNER OF THE ROOM TO GAIN THE BEST FIELD OF VIEW FOR THAT CAMERA.	
7. EACH ACCESS CONTROLLED DOOR IN THE PROJECT HAS A DOOR IDENTIFIER SYMBOL THAT ASSOCIATES THE DOOR TO A CORRESPONDING ROUGH-IN DETAIL IN THE DRAWINGS AND A SPECIFIC FUNCTIONALITY OF THE DOOR IN THE SECURITY SPECIFICATIONS.	

TECHNOLOGY DRAWING INDEX

SHEET	DESCRIPTION
T001	TECHNOLOGY SYMBOLS, LEGEND, NOTES AND INDEX
T002	TECHNOLOGY RESPONSIBILITY MATRIX
T003	IT EQUIPMENT SCHEDULE
T101	SITE PLAN - TECHNOLOGY
T102	ENLARGED SITE PLAN - TECHNOLOGY
T201	FLOOR PLAN - TECHNOLOGY
T701	TECHNOLOGY DETAILS
xT501	TECHNOLOGY RISER DIAGRAMS

BASIC MATERIALS	
	CONDUIT TURNED UP
	CONDUIT TURNED DOWN
	CAPPED CONDUIT
	CONDUIT STUBBED AND BUSHED INTO ACCESSIBLE CEILING CAVITY
	CONDUIT CONTINUED
	CONDUIT SLEEVES X= QTY OF SLEEVES Y= SIZE OF CONDUITS SLEEVES PENETRATING WALL ABOVE CEILING SPACE.
	IF NO QUANTITY INDICATED USE AS MANY SLEEVES AS REQUIRED TO MATCH CROSS SECTIONAL AREA OF CABLE TRAY NEXT TO SLEEVE.
	TUBULAR RUNWAY, HUNG ABOVE CEILING OR AS NOTED
	CABLE TRAY (TYPE), HUNG ABOVE CEILING OR AS NOTED
	SURFACE MOUNTED ENCLOSED TECHNOLOGY SYSTEMS. SEE SHEETS WITH DETAILS FOR ADDITIONAL INFORMATION
	JUNCTION BOX WALL MOUNTED. SIZE PER NEC IF NOT INDICATED ON DRAWING. NEMA 1 FOR INTERIOR, NEMA 4X FOR EXTERIOR USE WITH HINGED COVER AND LOCKING COVER
	JUNCTION BOX CEILING MOUNTED. SIZE PER NEC IF NOT INDICATED ON DRAWING. NEMA 1 FOR INTERIOR, NEMA 4X FOR EXTERIOR USE WITH HINGED COVER AND LOCKING COVER
	TELECOMMUNICATIONS GROUND VAULT. SEE DETAILS AND SPECS FOR MORE INFORMATION
	TELECOMMUNICATIONS PULLBOX. SEE DETAILS AND SPECS FOR MORE INFORMATION
	TECHNOLOGY POLE. SEE SHEETS WITH DETAILS FOR ADDITIONAL INFORMATION

GENERAL	
	NEW EQUIPMENT
	EXISTING WORK AND/OR EQUIPMENT REFERENCE. SHOWN ON MULTIPLE DRAWINGS
	DEVICE TO BE REMOVED (DEMO PLANS) UNDERFLOOR CONDUIT (NEW PLANS)
	MATCH LINE REFERENCING CONTINUATION ON OTHER DRAWINGS
	DETAIL AND/OR SECTION REFERENCE
	CABLE ROUTING BOUNDARY
	FUTURE WORK

DRAWING NOTES AND DESIGNATIONS	
	DRAWING KEYED NOTES
	CABLE ROUTING NOTES
	DETAIL OR SECTION REFERENCE TAG

VOICE AND DATA SYSTEM

	TELECOMMUNICATION OUTLET X= MOUNTING: (E= EXISTING, F= FLUSH, S= SURFACE, M= MODULAR FURNITURE ADAPTER, P= POLE, L= FLOOR, R= RACEWAY) N= NUMBER OF DATA CABLES IN THE FACEPLATE Y= NOT USED Z= NUMBER OF FIBER OPTIC STRANDS IN THE FACEPLATE U= USER(IF APPLICABLE) += INSTALLATION HEIGHT IN INCHES AT CENTER OF OUTLET, COORDINATE WITH ELECTRICAL. IF NOT SHOWN INSTALL AT TYPICAL RECEPTACLE HEIGHT. W= WALL TELEPHONE FACEPLATE WITH SUPPORT STUDS, INSTALLED AT 48" AFF AT CENTER OF OUTLET AND 12" FROM EDGE OF WALL. WP=WEATHERPROOF
	EXAMPLE: F2 = TWO DATA JACKS IN A SINGLE FACEPLATE, FLUSH MOUNTED
	OUTLET FOR MECHANICAL/ELECTRICAL/FIRE ALARM/ELEVATOR/STAR CONNECTION Y: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET += IF NOT SHOWN, COORDINATE EXACT LOCATION WITH DEVICE
	CEILING MOUNTED INFORMATION OUTLET. MOUNTED ON FINISHED CEILING XY: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET
	OUTLET FOR WIRELESS ACCESS POINT, WALL MOUNTED Y: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 8'-0" AFF
	OUTLET FOR WIRELESS ACCESS POINT, MOUNTED ON FINISHED CEILING XY: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET
	FLOOR BOX FOR TECHNOLOGY SYSTEMS AND POWER OUTLETS. REFER TO POKE-THRU/ FLOORBOX SCHEDULE FOR MORE INFORMATION F= FLOOR CONDITION: (C= CONCRETE TYPE, G= GRADE, R= RAISED FLOOR, W= WOOD) Y= DENOTES # OF GANGS (1,2,3,...) Z= DENOTES PLATE TYPE (A,B,C,...), A= NO AUDIO/VISUAL LN= AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET
	POKE-THRU FOR TECHNOLOGY SYSTEMS AND POWER OUTLETS. REFER TO POKE-THRU & FLOOR BOX SCHEDULE FOR MORE INFORMATION Y= DENOTES POKE-THRU SIZE (4"-4", 6"-6", 8"-8",...) Z= DENOTES PLATE TYPE (A,B,C,...), A= NO AUDIO/VISUAL LN= AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET
	WALL MOUNTED FURNITURE FEED USED TO FEED CABLES TO MODULAR FURNITURE OR CABLES
	FLOOR BOX USED TO FEED CABLES TO MODULAR FURNITURE. REFER TO DETAIL SHEET X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT
	POKE-THRU USED TO FEED CABLES TO MODULAR FURNITURE. REFER TO DETAIL SHEET X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT
	AV BACKBOX, INSTALLED BEHIND DISPLAY/ CREDENZA RACK, COORDINATE BACKBOX PRIOR TO ROUGH-IN. REFER TO DETAIL & SCHEDULE FOR MORE INFORMATION G= DENOTES # OF GANGS += AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET += MOUNTING HEIGHT IN INCHES AT CENTER OF DEVICE
	RECESS IN-WALL STORAGE BOX, INSTALLED BEHIND DISPLAY, COORDINATE BACKBOX PRIOR TO ROUGH-IN. REFER TO DETAIL & SCHEDULE FOR MORE INFORMATION G= DENOTES # OF GANGS += AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET += MOUNTING HEIGHT IN INCHES AT CENTER OF DEVICE

BROADBAND TELEVISION SYSTEM	
	RX ANTENNA
	TX ANTENNA
	TX/RX ANTENNA
	2 WAY SPLITTER
	3 WAY SPLITTER
	4 WAY SPLITTER
	8 WAY SPLITTER
	SATELLITE DISH
	CATV AMPLIFIER I= INPUT LEG O= OUTPUT LEG T= TEST PORT X= AMPLIFIER TYPE - SP: SERVICE PROVIDER, H: HEADEND AMPLIFIER, D: DISTRIBUTION AMPLIFIER
	DISTRIBUTION TAP I= INPUT LEG O= OUTPUT LEG T= TAP LEGS, QTY AS INDICATED IN RISER
	DIRECTIONAL COUPLER I= INPUT LEG O= OUTPUT LEG T= TAP LEGS, QTY AS INDICATED IN RISER
	CATV TAP DEFINITION TAG X= NUMBER OF TAP LEGS Y= TAP VALUE IN dB
	CATV EQUALIZER X= EQUALIZING VALUE IN dB I= INPUT LEG O= OUTPUT LEG
	TERMINATOR
	SURGE SUPPRESSOR AT BUILDING ENTRY POINT
	TELEVISION OUTLET, COORDINATE ROUGH-IN WITH TV MOUNT INSTALLER, CEILING MOUNTED X= DENOTES TYPE OF OUTLET. SEE DETAIL FOR MORE INFORMATION U=USER(IF APPLICABLE). THIS ONLY APPLIES TO DATA AND FIBER NOT COAX += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 7'-0" AFF
	TELEVISION OUTLET, COORDINATE ROUGH-IN WITH TV MOUNT INSTALLER, WALL MOUNTED X= DENOTES TYPE OF OUTLET. SEE DETAIL FOR MORE INFORMATION U=USER(IF APPLICABLE). THIS ONLY APPLIES TO DATA AND FIBER NOT COAX += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 7'-0" AFF

AUDIO VISUAL EQUIPMENT

	CEILING MOUNTED SPEAKER X= SPEAKER TYPE Y= SPEAKER ZONE Z= DENOTES SPEAKER # IN ZONE W= DENOTES SPEAKER WATTAGE TAP NO ZONE INDICATES LOCAL ZONE FOR AV SYSTEM IN ROOM
	WALL MOUNTED SPEAKER X= SPEAKER TYPE Y= SPEAKER ZONE Z= DENOTES SPEAKER # IN ZONE W= DENOTES SPEAKER WATTAGE TAP += MOUNTING HEIGHT IN INCHES AT CENTER OF DEVICE NO ZONE INDICATES LOCAL ZONE FOR AV SYSTEM IN ROOM
	VOLUME CONTROL, WALL MOUNTED += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 4'-0" AFF
	FLIP TOP DEVICE MOUNTED ON TABLE
	SENS MICROPHONE FOR AMBIENT NOISE, WALL MOUNTED += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 8'-0" AFF
	SENS MICROPHONE FOR AMBIENT NOISE, CEILING MOUNTED
	MICROPHONE, DESK MOUNTED X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT
	MICROPHONE, WALL MOUNTED X= DENOTES TYPE OF OUTLET, IF NOT SHOWN, ONLY ONE TYPE += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET
	MICROPHONE, CEILING MOUNTED X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT
	WIRELESS ANTENNA FOR WIRELESS MICROPHONE, WALL MOUNTED += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 8'-0" AFF
	TOUCH SCREEN FOR AUDIO/VIDEO CONTROL, DESK MOUNTED X= DENOTES TYPE OF OUTLET. SEE RISER FOR MORE INFO, IF NOT SHOWN, ONLY ONE TYPE
	TOUCH SCREEN FOR AUDIO/VIDEO CONTROL, WALL MOUNTED, INCLUDES BACK BOX X= DENOTES TYPE OF OUTLET. SEE RISER FOR MORE INFO, IF NOT SHOWN, ONLY ONE TYPE += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 4'-0" AFF
	CAMERA FOR AV SYSTEM, WALL MOUNTED X= DENOTES TYPE OF OUTLET. SEE RISER FOR MORE INFO, IF NOT SHOWN, ONLY ONE TYPE += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET
	CAMERA FOR AV SYSTEM, CEILING MOUNTED X= DENOTES TYPE OF OUTLET. SEE RISER FOR MORE INFO, IF NOT SHOWN, ONLY ONE TYPE
	ASSISTED LISTENING TRANSMITTER, WALL MOUNTED += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET
	ROOM SCHEDULING PANEL, WALL MOUNTED, INCLUDES BACK BOX X= DENOTES TYPE OF OUTLET. SEE RISER FOR MORE INFO, IF NOT SHOWN, ONLY ONE TYPE += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 4'-0" AFF
	OCCUPANCY SENSOR, CEILING MOUNTED X= TYPE, C= CRESNET, E= ETHERNET
	AUDIO VISUAL DISPLAY TT= DISPLAY TYPE WITH MOUNT +=XX= SCREEN SIZE YY= HEIGHT TO CENTER OF SCREEN
	INTERACTIVE WHITEBOARD TT= DISPLAY TYPE WITH MOUNT +=XX= SCREEN SIZE YY= HEIGHT TO CENTER OF SCREEN
	OVERHEAD PROJECTOR WITH MOUNT X= TYPE Y= LENS THROW RATIO
	PULLDOWN PROJECTION SCREEN X= DIAGONAL DIMENSION IN INCHES
	MOTORIZED PROJECTION SCREEN X= DIAGONAL DIMENSION IN INCHES
	WALL SWITCH FOR MOTORIZED SCREEN
	PODIUM FOR AV EQUIPMENT, REFER TO DETAIL SHEETS X= DENOTES TYPE OF OUTLET, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT
	AV PLATE OUTLET, REFER TO DETAIL SHEETS X= DENOTES TYPE OF OUTLET. SEE DETAIL FOR MORE INFO, IF NOT SHOWN, ONLY ONE TYPE += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 1'-6" AFF
	SOUND BAR WITH CAMERA, WALL MOUNTED += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 8'-0" AFF

ELECTRONIC SECURITY SYSTEM	
	CARD READER, WALL MOUNTED
	CARD READER WITH INTEGRATED KEYPAD, WALL MOUNTED
	BIOMETRIC ACCESS CONTROL DEVICE, WALL MOUNTED
	KEYPAD, WALL MOUNTED
	WIRED IP LOCK, DOOR MOUNTED
	WIRELESS MORTISE LOCK, DOOR MOUNTED
	WIRELESS CYLINDRICAL LOCK, DOOR MOUNTED
	INTRUSION ALARM KEYPAD
	ELECTRIC MORTISE LOCK OR ELECTRIC TRIM
	DELAYED EGRESS LATCH LOCK
	DELAYED EGRESS MAG LOCK
	ELECTRIC CYLINDRICAL LOCK
	ELECTRIC LATCH RETRACTION LOCK
	ELECTROMAGNETIC LOCK
	ELECTRONIC DETENTION LOCK
	ELECTRIC DOOR STRIKE
	ELECTRIC DOOR OPERATOR (ACTUATOR ARM)
	DOOR POSITION SWITCH
	BALANCED MAGNETIC SWITCH
	PIM MODULE FOR WIRELESS LOCKS, WALL MOUNTED += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 7'-0" AFF
	ALARM, BLUE LIGHT, WALL MOUNTED += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 7'-0" AFF
	LOCAL ALARM - HORN/STROBE, WALL MOUNTED += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 7'-0" AFF
	SIREN ALARM FOR INTRUSION DETECTION, WALL MOUNTED += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 7'-0" AFF
	ASSISTANCE STATION, WALL MOUNTED X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT, REFER TO SPECIFICATION FOR TYPE += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 4'-0" AFF
	ASSISTANCE STATION (BLUE LIGHT), TOWER STATION X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT, REFER TO SPECIFICATION FOR TYPE
	INTERCOM SUBSTATION (DOOR STATION), WALL MOUNTED X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT, REFER TO RISER FOR TYPE += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 4'-0" AFF
	INTERCOM MASTER STATION, DESK MOUNTED X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT, REFER TO RISER FOR TYPE
	INTERCOM MASTER STATION, WALL MOUNTED X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT, REFER TO RISER FOR TYPE += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 4'-0" AFF
	CALL STATION (THROUGH PHONE LINE) FOR BUILDING ENTRY, WALL MOUNTED += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 4'-0" AFF
	DOOR TYPE IDENTIFIER X= TYPE (A1, C3, B6...) REFER TO SECURITY DOOR DETAILS
	DOOR RELEASE BUTTON, WALL MOUNTED X= A: ADA ACCESSIBLE - (PALM ACTUATOR), W: HAND WAVE, NO TYPE: REGULAR PUSH BUTTON
	DOOR RELEASE BUTTON, DESK MOUNTED
	REQUEST TO EXIT DEVICE (IR SENSOR), MOUNT CENTERED ABOVE DOOR FRAME
	GLASS BREAK SENSOR, WALL MOUNTED += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 7'-0" AFF
	GLASS BREAK SENSOR, CEILING MOUNTED
	GATE PEDESTAL
	ELECTRIC GATE OPERATOR
	DURESS PANIC BUTTON, WALL MOUNTED += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 4'-0" AFF
	DURESS PANIC BUTTON, MOUNTED UNDER DESK
	MOTION DETECTOR, WALL MOUNTED, MOUNT 6" BELOW CEILING OR 8"-0" AFF MAW
	MOTION DETECTOR, 360 DEGREE SENSOR, CEILING MOUNTED
	INFANT ABDUCTION SYSTEM, WALL MOUNTED += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 8'-0" AFF
	INFANT ABDUCTION SYSTEM, CEILING MOUNTED ABOVE DOOR
	LINE BETWEEN SECURITY DEVICES, INDICATES ASSOCIATED EQUIPMENT
	CONTROLLED DOOR INTERLOCK GROUP, PROGRAMMED SO ONLY ONE DOOR CAN BE OPEN AT A TIME.
	ACCESS CONTROL DOOR DIRECTION, A1/A2 - REPRESENTS ACCESS CONTROL PATH FREE - NO ACCESS CONTROL
	CR - CARD READER
	BIOMETRIC - BIOMETRIC READER
	CR/Keypad - CARD READER AND KEYPAD
	MONITORED - DOOR MONITORED

VIDEO SURVEILLANCE SYSTEMS

	PAN/TILT/ZOOM CCTV CAMERA, WALL MOUNTED X,C X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER
	PAN/TILT/ZOOM CCTV CAMERA, CEILING MOUNTED X,C X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER
	FIXED CCTV CAMERA, WALL MOUNTED X,C X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER
	FIXED CCTV CAMERA, CEILING MOUNTED X,C X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER
	180° CCTV CAMERA, WALL MOUNTED X,C X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER
	180° CCTV CAMERA, CEILING MOUNTED X,C X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER
	180° MULTI-MAGER CCTV CAMERA, WALL MOUNTED X,C X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER
	180° MULTI-MAGER CCTV CAMERA, CEILING MOUNTED X,C X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER
	360° CCTV CAMERA, WALL MOUNTED X,C X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER
	360° CCTV CAMERA, CEILING MOUNTED X,C X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER
	360° MULTI-MAGER CCTV CAMERA, WALL MOUNTED X,C X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER
	360° MULTI-MAGER CCTV CAMERA, CEILING MOUNTED X,C X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION, C = CAMERA NUMBER
	CCTV FLAT PANEL DISPLAY WITH MOUNT +=XX= SCREEN SIZE +=YY= HEIGHT TO CENTER OF SCREEN

LeeTran Park & Ride Expansion					
DESIGN AND CONSTRUCTION RESPONSIBILITIES					
ITEM	SYSTEM	SCOPE	DESIGN RESPONSIBILITY	PROCUREMENT RESPONSIBILITY	CONSTRUCTION RESPONSIBILITY
1.00 VOICE SYSTEM (TELEPHONE COMMUNICATIONS SYSTEM ALL AREAS)					
1.01	RACEWAYS	Conduit, boxes, cable tray, etc.	A&E	CM	CM
1.02	INSIDE PREMISE WIRING	Structured cabling system	A&E	CM	CM
1.03	OUTSIDE PREMISE WIRING IN PRIVATE CAMPUS	Structured cabling system	A&E	CM	CM
1.04	OUTSIDE PREMISE WIRING FROM SERVICE PROVIDERS	Fiber and copper for services	A&E/Owner	S.P.	S.P.
1.05	PHONE SWITCH - ADMIN PHONES	Equipment selection, sizing, equipment layout, RFP	OWNER	C.M.	OWNER
2.00 DATA SYSTEM (COMPUTER NETWORKS ALL AREAS)					
2.01	RACEWAYS	Conduit, boxes, cable tray, etc.	A&E	CM	CM
2.02	INSIDE PREMISE WIRING	Structured cabling system	A&E	CM	CM
2.03	PATCHING OF DATA LINES	Patching at patch panel and work areas (Does not include patch cords)	A&E	N.A.	OWNER
2.04	ACTIVE ELECTRONICS (NETWORKING EQUIPMENT, SWITCHES, ROUTERS, SERVERS AND COMPUTERS)	Equipment selection, sizing, equipment layout, RFP	OWNER	CM	OWNER
2.05	WIRELESS SURVEY	Modeling to predict location of WAPs, including measured survey after building shell is completed	A&E	N.A.	OWNER
2.06	WAPs	Wireless access points, including installation labor, support materials	OWNER	CM	CM
3.00 TELECOM ROOM OUTFIT					
3.01	PLYWOOD AND WALL SLEEVES	Plywood and sleeves for cables	A&E	CM	CM
3.02	GROUNDING SYSTEM	Ground bar and ground bus	A&E	CM	CM
3.02	RACKS, WIRE MANAGERS AND LADDER TRAY	Racks and all passive elements	A&E	CM	CM
4.00 CATV DISTRIBUTION (CABLE TV FOR ALL AREAS)					
4.01	RACEWAYS	Conduit, boxes, cable tray, etc.	A&E	CM	CM
4.02	INSIDE PREMISE WIRING	Coaxial cable	A&E	CM	CM
4.03	DISTRIBUTION DEVICES	Taps, amplifiers, splitters, etc.	S.P.	S.P.	S.P.
4.04	DISPLAYS	Displays/Monitors/TVs	A&E/Owner	CM	CM
4.05	MOUNTS FOR TVS	Mounts for the TVS	A&E/Owner	CM	CM
5.00 TWO-WAY COMMUNICATON SYSTEM & WAYSIDE SIGNAGE					
5.01	RACEWAYS	Conduit, boxes, cable tray, etc.	A&E	CM	CM
5.02	INSIDE PREMISE WIRING	Wiring for paging and digital signage systems	A&E	CM	CM
5.03	ACTIVE ELECTRONICS	Paging system	A&E	CM	CM
5.04	WAYSIDE SIGNAGE	Wayside Signage	A&E	CM	CM
6.00 SECURITY SYSTEMS, BUILDING CCTV, AND ACCESS CONTROL					
6.01	RACEWAYS	Conduit, boxes, cable tray, etc.	A&E	CM	CM
6.02	INSIDE PREMISE WIRING	Cables for cameras and card access	A&E	CM	CM
6.03	CCTV ACTIVE ELECTRONICS	Cameras	A&E/Owner	CM	CM
6.04	CCTV SOFTWARE LICENSES	Software licenses for cameras	A&E/Owner	CM	OWNER
6.05	CCTV VIDEO MANAGEMENT SYSTEM	DVRs	A&E/Owner	CM	OWNER
6.06	ACCESS CONTROL ACTIVE ELECTRONICS	Access control panels, readers, panic buttons, etc.	A&E	CM	CM
6.07	LOCKING DEVICES	Magnets, electric mortise locks	A&E	CM	CM
7.00 EMERGENCY POWER BACKUP (UPS) FOR ACTIVE EQUIPMENT					
7.01	POWER WIRING	Conduit, cables and circuits	A&E	CM	CM
7.02	POWER DISTRIBUTION UNITS	ePDUs to be installed in racks and cabinets	A&E	CM	CM
7.03	ACTIVE EQUIPMENT - SMALL UNITS < 10KVA	UPS units in racks or cabinets	A&E	CM	CM
7.04	ACTIVE EQUIPMENT - LARGE UNITS >10KVA	Central UPS system	A&E	CM	CM
8.00 FIRE ALARM AND BUILDING MANAGEMENT SYSTEM					
8.01	RACEWAYS	Conduit, boxes, cable tray, etc.	A&E	CM	CM
8.02	INSIDE PREMISE WIRING	Cabling, grounding	A&E	CM	CM
8.03	ACTIVE ELECTRONICS	Data gathering panels, sensors, etc.	A&E	CM	CM
9.00 DISTRIBUTED ANTENNA SYSTEM (LIFESAFETY)					
9.01	RACEWAYS	Conduit, boxes, cable tray, etc.	A&E	CM	CM
9.02	INSIDE PREMISE WIRING	Cabling, grounding	A&E	CM	CM
9.03	ACTIVE ELECTRONICS	Head end system, BDA, TX/RX and antennas	A&E	CM	CM
10.00 DISTRIBUTED ANTENNA SYSTEM (CELL PHONES)					
10.01	RACEWAYS	Conduit, boxes, cable tray, etc.	N/A	N/A	N/A
10.02	INSIDE PREMISE WIRING	Cabling, grounding	N/A	N/A	N/A
10.03	ACTIVE ELECTRONICS	Head end system, BDA, TX/RX and antennas	N/A	N/A	N/A

NOTES: A&E: STANTEC AND ALL CONSULTANTS WORKING UNDER ARCHITECT, LIKE TLC ENGINEERING SOLUTIONS
CM: CONSTRUCTION MANAGER/GENERAL CONTRACTOR
S.P.: SERVICE PROVIDER
VENDOR: A SYSTEM INSTALLER HIRED DIRECTLY BY THE OWNER FOR A SPECIFIC SYSTEM

REVISIONS		
No.	Description	Date



GENERAL NOTES:

1. THE EQUIPMENT IN THIS SCHEDULE IS REQUIRED TO BE PROCURED AS PART OF THIS PROJECT.

LeeTran Lehigh Acres Park and Ride

Responsibilities Matrix

6/13/2022

Building Network Connectivity	Manuf./Model No.	Location	Furnished and Purchased By	Installed By	Notes
Conduit for fiber lateral	4" conduit with mule tape from MDF to nearest fiber handhole		General Contractor	General Contractor	ITG will provide specifications
Provide and install hand hole every 500'	(TBD) 24" x 36" x 24", 20K polycarbonate box with non-locking lid.		General Contractor	General Contractor	ITG will provide specifications
Provide 24 Count Single mode Fiber Optic Lateral			General Contractor	General Contractor	ITG will provide specifications
Ring cut and fusion splice 8 strands and provide splice case			General Contractor	General Contractor	ITG will provide specifications
Provide mule tape and locate wire inside of the lateral conduit			General Contractor	General Contractor	ITG will provide specifications
Fiber Patch Panel / tray / LC type modules (Fiber feed from County Fiber Backbone Terminate Here)	(1) - rack mounted pull out Fiber Optic patch tray with 12-coupler panels. Provide fiber patch cables with LC type connectors.		General Contractor	General Contractor	ITG will provide specifications
Fusion splice 8 strands into fan kit / couplers					ITG will provide specifications
Telecom Service Conduits	(3) 2" conduits from MDF to property line.		General Contractor	General Contractor	ITG will provide specifications
Equipment Racking	Manuf./Model No.	Location	Furnished and Purchased By	Installed By	Notes
2-Post 19" Equipment Rack	(1), 7' tall, 19" wide		General Contractor	General Contractor	ITG will provide specifications
Wire Management - Vertical	Front and back, both sides of rack		General Contractor	General Contractor	ITG will provide specifications
Wire Management - 2RU, Horizontal	(12), 2RU management units		General Contractor	General Contractor	ITG will provide specifications
Wiring	Manuf./Model No.	Location	Furnished and Purchased By	Installed By	Notes
Horizontal Network Wiring	CAT 6		General Contractor	General Contractor	ITG will provide specifications
Copper Patch cables (equipment room and office)	CAT 6 patch cables		General Contractor	ITG	ITG will provide specifications
Patch Panel	(1), 48 port patch panel, (Should support shielded, grounded or be modular to support STP cable.		General Contractor	General Contractor	ITG will provide specifications
Certified CAT6 Patch Cables	Lee County ITG Standards		General Contractor	General Contractor	ITG will provide specifications
Faceplates \ RJ45 connectors	For Walls		General Contractor	General Contractor	ITG will provide specifications
Networking Equipment:	Manuf./Model No.	Location	Furnished and Purchased By	Installed By	Notes
Wireless Access Points and Mounts		General	General Contractor	General Contractor	ITG will provide specifications
Network Switch		IT Room	General Contractor	ITG	ITG will provide specifications
SONET, Fujitsu Equipment		IT Room	General Contractor	ITG	ITG will provide specifications
All Patch Cords		General	General Contractor	ITG	ITG will provide specifications
All network cabling and infrastructure pathways by Contractor		General	General Contractor	General Contractor	ITG will provide specifications
Media Conversion	Manuf./Model No.	Location	Furnished and Purchased By	Installed By	Notes
Media Conversion Chassis, redundant supplies \ management	(1) Rack mountable		General Contractor	ITG	ITG will provide specifications
Chassis Cards			General Contractor	ITG	ITG will provide specifications
Endpoint media Converter & power supply			General Contractor	ITG	ITG will provide specifications
Radio Equipment	Manuf./Model No.	Location	Furnished and Purchased By	Installed By	Notes
Radio Antenna?					
Racked Equipment					
Radio Console on Desktop PC					
Surveillance	Manuf./Model No.	Location	Furnished and Purchased By	Installed By	Notes
Security Cameras , building and poles	Axis	General	General Contractor	General Contractor	ITG will provide specifications
Security Camera Mounts		General	General Contractor	General Contractor	ITG will provide specifications
Software licenses for cameras		General	General Contractor	ITG	ITG will provide specifications
Video Management System		General	General Contractor	ITG	ITG will provide specifications
Connectivity to cameras, CAT6 / Fiber			General Contractor	General Contractor	ITG will provide specifications
Patch cords CAT6 / Fiber			General Contractor	General Contractor	ITG will provide specifications
Employee PC Equipment	Manuf./Model No.	Location	Furnished and Purchased By	Installed By	Notes
PC, Monitors, Phones etc..			General Contractor	ITG	ITG will provide specifications
Access Control:	Manuf./Model No.	Location	Furnished and Purchased By	Installed By	Notes
New Card Readers	Kantech	General	General Contractor	General Contractor	
Contractor to contact County ITG for IP addresses		General	General Contractor	General Contractor	ITG will provide IP Address
UPS:	Manuf./Model No.	Location	Furnished and Purchased By	Installed By	Notes
Confirm UPS Requirements		IT Room (confirm)	General Contractor	General Contractor	ITG will review the recommendations of EE
IT Equipment/Communication Systems:	Manuf./Model No.	Location	Furnished and Purchased By	Installed By	Notes
New Public Address Two way speaker system		At each bus berth. Similar to Beach Park and Ride	General Contractor	General Contractor	ITG will provide specifications
Configure PA System			n/a	ITG	Lee Tran will provide parameters
PA System Licenses		General	General Contractor	ITG	ITG will provide specifications
Interior Phone Handsets - LeeTran	Not Applicable	NA	General Contractor	ITG	ITG will provide specifications
Fire Alarm (2) B1 phone lines or cellular			General Contractor	General Contractor	Cellular, B1 lines not needed
Clever Devices	Manuf./Model No.	Location	Furnished and Purchased By	Installed By	Notes
Bus Route Wayside Signs at Berths	Clever		General Contractor	General Contractor	(1) CAT6 by GC, Per LeeTran they would like GC to furnish
Kiosk (Clever) and Display	Clever		General Contractor	General Contractor	(1) CAT6 by GC for each display, Displays specification will be changed. Beach P&R displays no longer available. Steve Manhertz is researching requirements for engineering team.
Clever Software	Clever	General	General Contractor	General Contractor	
Furniture/FFE/Toilet Accessories:					
Vending Machines - Public		Relocate to Exterior	General Contractor	General Contractor	Provide Data at each machine
Ticket Vending Machine		Under canopy next to building	General Contractor	General Contractor	Provide 2 port data at ticketing
Toilet Accessories			General Contractor	General Contractor	
Signage:					
Exterior/Interior Room Signage		General	General Contractor	General Contractor	
Exterior Signage - Large LeeTran Logo		East side of Canopy	General Contractor	General Contractor	LeeTran to furnish specifications/branding info.
Exterior Signage - FDOT required			General Contractor	General Contractor	
Exterior Signage - Site Wayfinding			General Contractor	General Contractor	
Exterior Monument Sign - Lighted			General Contractor	General Contractor	
Other:					
Landscape Waste Containers		Exterior platform	General Contractor	General Contractor	
Landscape Bicycle Racks		Exterior platform	General Contractor	General Contractor	
Landscape Benches		Exterior platform	General Contractor	General Contractor	
Bus Route Schedule holders		Exterior platform	General Contractor	General Contractor	Should be ADA Accessible
Lighting Control System		Electric Room	General Contractor	General Contractor	
Irrigation Control System		Electric Room	General Contractor	General Contractor	
Fire Extinguishers and FE Cabinets		General	General Contractor	General Contractor	

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No.	Description	Date

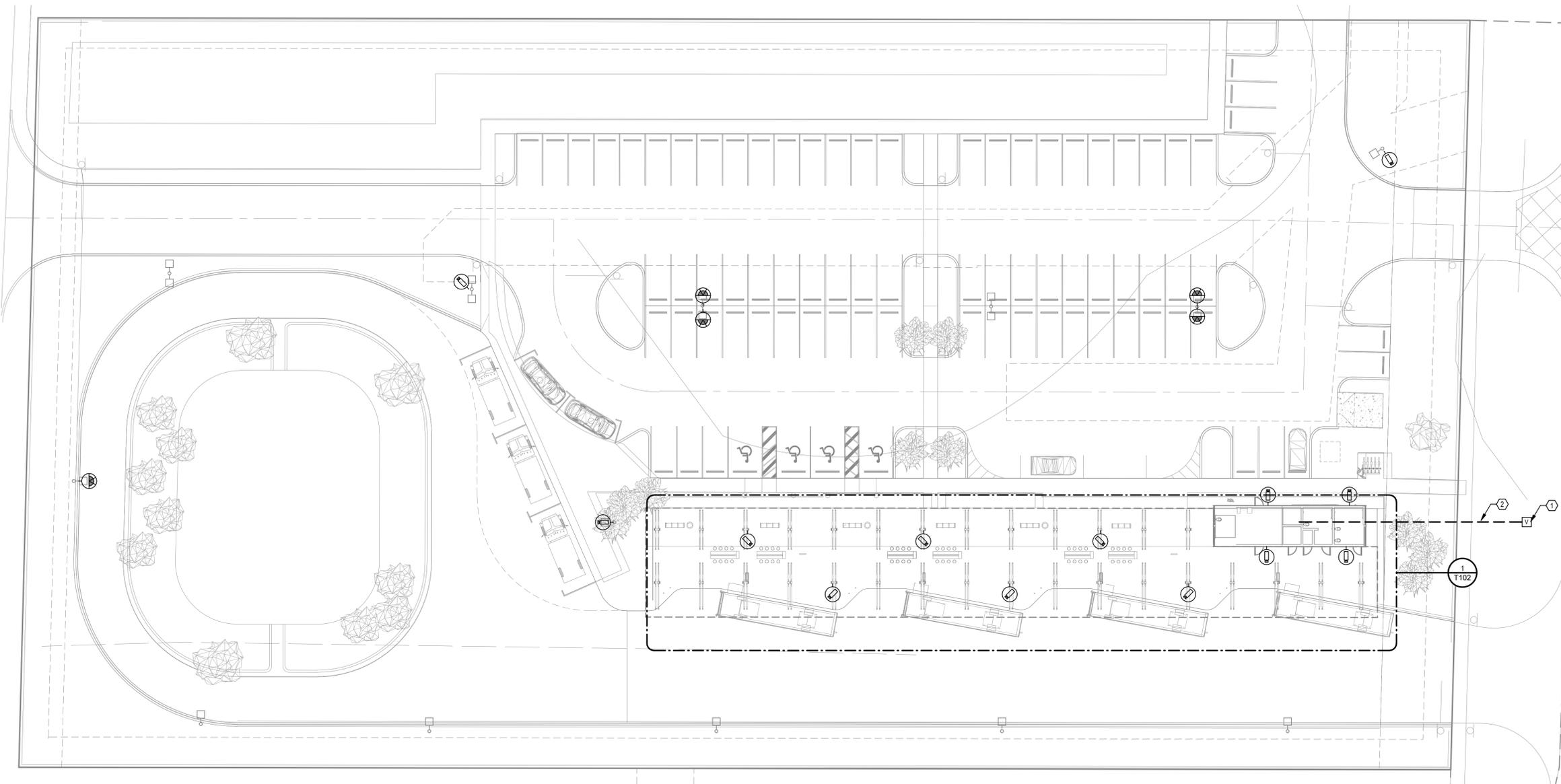
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07/01/2022

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GENERAL NOTES:

1. THE SAME SECURITY CAMERAS ARE SHOWN IN MULTIPLE VIEWS/SHEETS IN ORDER TO BETTER SHOW COVERAGE ACROSS THE SITE. THIS IS NOTED TO AVOID COUNTING DUPLICATES.

KEYNOTES 

1. PROVIDE POLYMER CONCRETE COMMUNICATIONS VAULT. THE DIMENSIONS SHALL BE A MINIMUM OF 3'-0" L X 2'-0" W X 2'-0" D. ENGRAVE ON TOP LID "COMMUNICATIONS" IN 2" LETTERS. REFER TO DETAIL FOR MORE INFORMATION.
2. PROVIDE THREE (3) 2" CONDUITS TO I.T. ROOM. REFER TO FLOOR PLAN FOR STUB UP LOCATION.

HORIZONTAL DISTRIBUTION NOTES 

1. TERMINATE STRUCTURED TELECOMMUNICATIONS DATA CABLING IN THIS AREA ON PATCH PANEL INSTALLED IN RACKS IN I.T. ROOM, UNLESS OTHERWISE NOTED.
2. TERMINATE SECURITY SYSTEM CABLING IN THIS AREA AT SECURITY EQUIPMENT INSTALLED IN I.T. ROOM, UNLESS OTHERWISE NOTED.
3. TERMINATE PUBLIC ADDRESS SYSTEM CABLING IN I.T. ROOM, UNLESS OTHERWISE NOTED.

1 SITE PLAN - TECHNOLOGY   
1" = 20'-0"

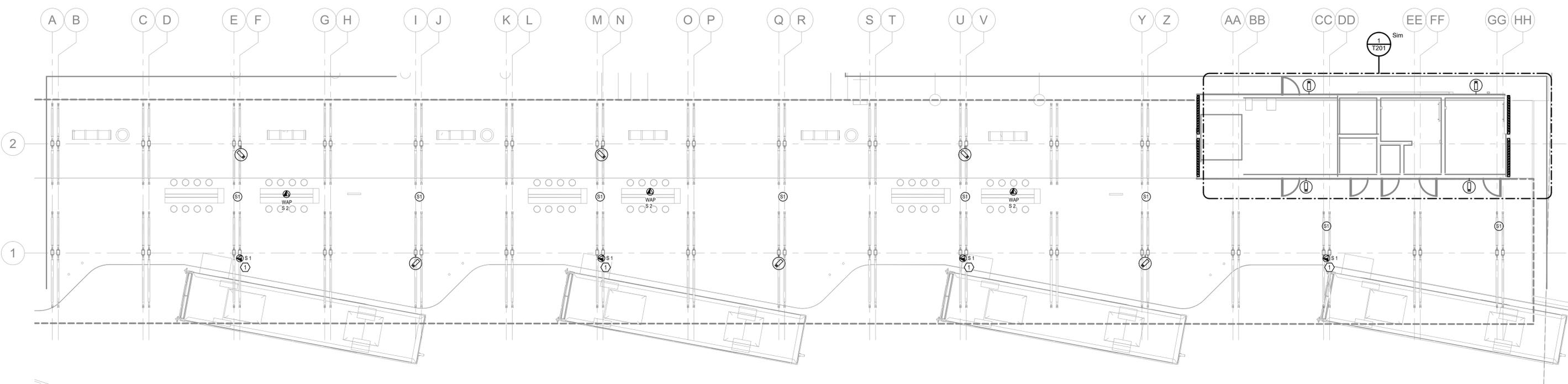
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GENERAL NOTES:
 1. THE SAME SECURITY CAMERAS ARE SHOWN IN MULTIPLE VIEWS/SHEETS IN ORDER TO BETTER SHOW COVERAGE ACROSS THE SITE. THIS IS NOTED TO AVOID COUNTING DUPLICATES.

KEYNOTES:
 1. DATA DEDICATED FOR CLEVER SIGN. PROVIDE 6"X 6" ELECTRICAL BOX WITH SINGLE GANG DEVICE ADAPTER AND A SURFACE MOUNT OUTLET (BISCUIT JACK) WITH SINGLE CATEGORY JACK MOUNTED INSIDE.

HORIZONTAL DISTRIBUTION NOTES:
 1. TERMINATE STRUCTURED TELECOMMUNICATIONS DATA CABLING IN THIS AREA ON PATCH PANEL INSTALLED IN RACKS IN I.T. ROOM, UNLESS OTHERWISE NOTED.
 2. TERMINATE SECURITY SYSTEM CABLING IN THIS AREA AT SECURITY EQUIPMENT INSTALLED IN I.T. ROOM, UNLESS OTHERWISE NOTED.
 3. TERMINATE PUBLIC ADDRESS SYSTEM CABLING IN I.T. ROOM, UNLESS OTHERWISE NOTED.



1 SITE PLAN - TECHNOLOGY - ENLARGED PLAN
 1/8" = 1'-0" 1 2 3

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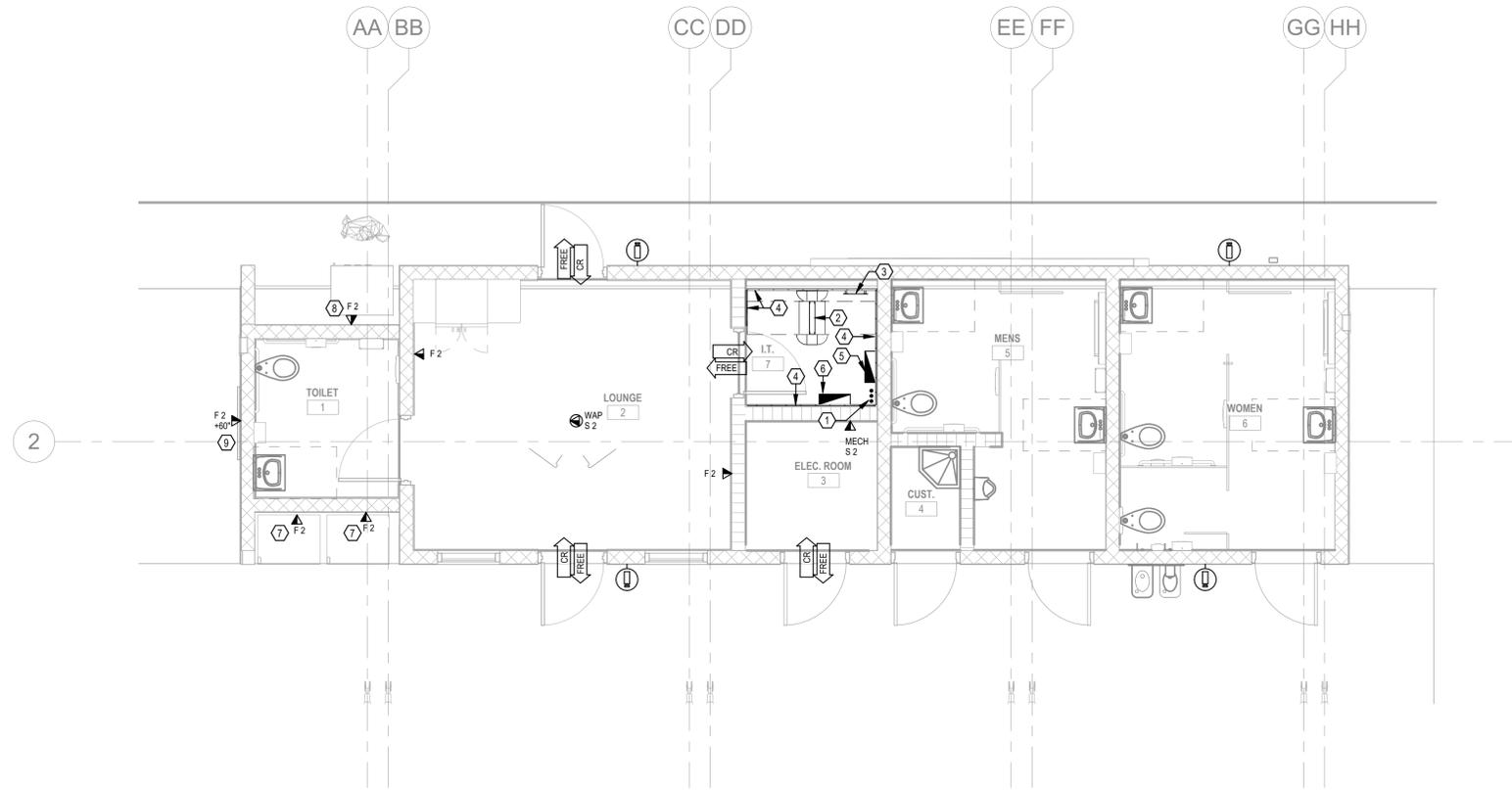
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LEHIGH ACRES PARK AND RIDE
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 07/01/2022

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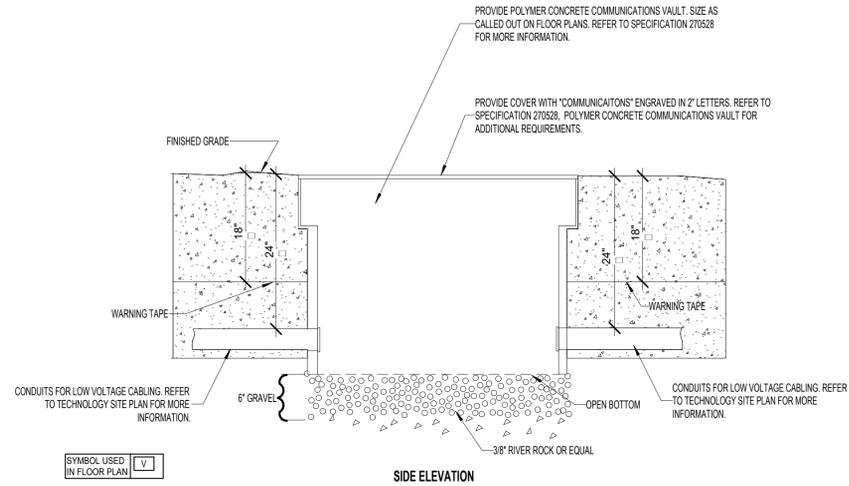
1 FLOOR PLAN - TECHNOLOGY
1/4" = 1'-0"

GENERAL NOTES:
 1. THE SAME SECURITY CAMERAS ARE SHOWN IN MULTIPLE VIEWS/SHEETS IN ORDER TO BETTER SHOW COVERAGE ACROSS THE SITE. THIS IS NOTED TO AVOID COUNTING DUPLICATES.

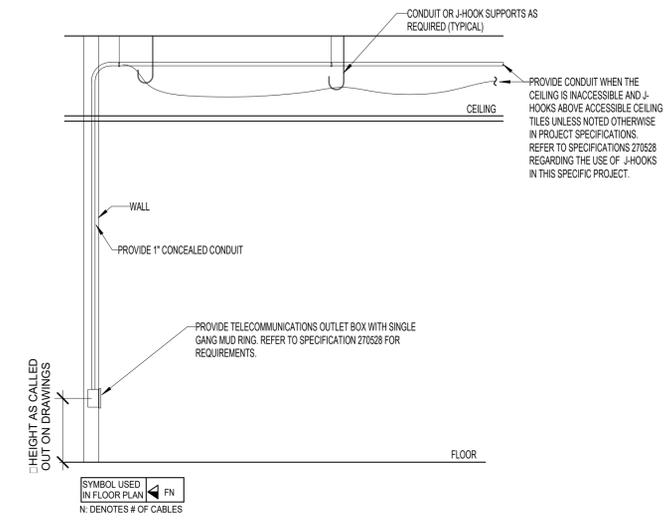
- KEYNOTES:**
1. LOCATE 4" CONDUIT STUBS FROM COMMUNICATION VAULT HERE AND AS CLOSE TO WALL AS POSSIBLE TO ELIMINATE INTERFERING WITH EQUIPMENT CLEARANCES.
 2. PROVIDE 2 POST RACK WITH 6" VERTICAL WIRE MANAGERS ON EACH SIDE.
 3. PROVIDE GROUND BUSBAR.
 4. PROVIDE 8' H X 4' W X 3/4" D PLYWOOD. INSTALL AT 4" AFF TO 8-4" AFF.
 5. SPACE DEDICATED FOR WALL MOUNTED ACCESS CONTROL EQUIPMENT.
 6. SPACE DEDICATED FOR DEMARC / SERVICE PROVIDER EQUIPMENT.
 7. DATA DEDICATED FOR VENDING MACHINE.
 8. DATA DEDICATED FOR TICKET VENDING MACHINE.
 9. DATA DEDICATED FOR CLEVER MONITOR.

- HORIZONTAL DISTRIBUTION NOTES:**
1. TERMINATE STRUCTURED TELECOMMUNICATIONS DATA CABLING IN THIS AREA ON PATCH PANEL INSTALLED IN RACKS IN I.T. ROOM, UNLESS OTHERWISE NOTED.
 2. TERMINATE SECURITY SYSTEM CABLING IN THIS AREA AT SECURITY EQUIPMENT INSTALLED IN I.T. ROOM, UNLESS OTHERWISE NOTED.
 3. TERMINATE PUBLIC ADDRESS SYSTEM CABLING IN I.T. ROOM, UNLESS OTHERWISE NOTED.

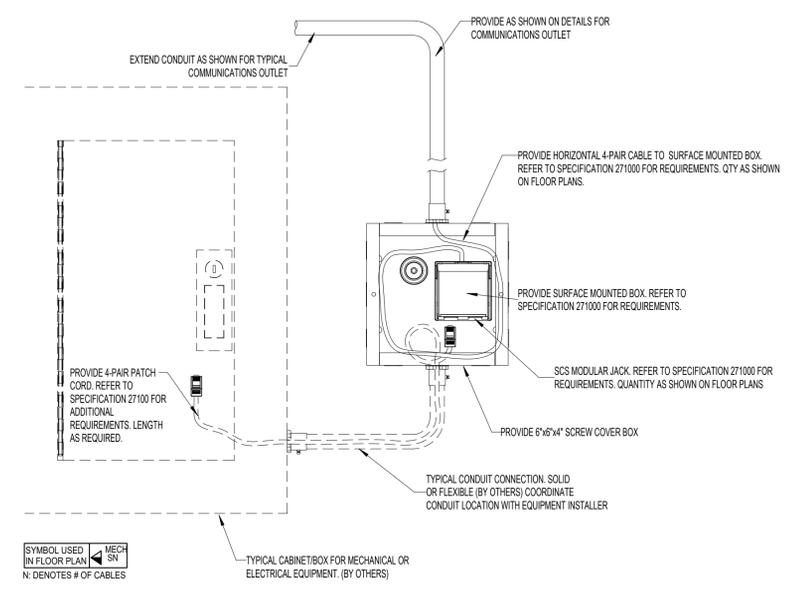
REVISIONS		
No.	Description	Date



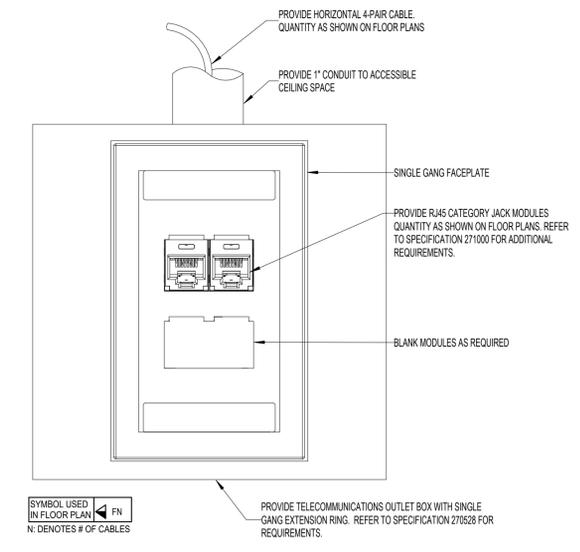
4 TELECOMMUNICATIONS VAULT
- POLYMER CONCRETE WITH
OPEN BOTTOM
1" = 1'-0"



1 COMMUNICATIONS BACKBOX
OUTLET AND CONDUIT
1/2" = 1'-0"



2 OUTLET FOR MECH/ELEC/ELEV
CONNECTION - TYPE 1
1" = 1'-0"



3 FLUSH MOUNTED OUTLET
1" = 1'-0"

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