* NOTE: THIS IS AN ARTISTIC RENDERING FOR PLANNING PURPOSES ONLY. NOT BE ACCURATE IN DETAIL OR DIMENSION.

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WEST INNOVATIVE COMMERCIAL BUILDING

DEFERRED SUBMITTALS

FIRE SPRINKLER DRAWINGS
FIRE ALARM DRAWINGS
TRUSS DRAWINGS
PARKING CANOPIES

SPECIAL INSPECTIONS

EIFS
CONCRETE
STEEL
MASONRY
WELDING
BOLTS

CIVIL ENGINEERING	LANDSCAPE ARCHITECT	STRUCTURAL ENGINEER	MECHANICAL / PLUMBING	ELECTRICAL ENGINEER	INTERIOR DESIGN
BOWMAN CONSULTING GROUP 1600 N. Desert Drive Suite #210 Tempe, AZ 85288 (480) 332-0773	TJ McQUEEN & ASSOC, INC. 8433 East Cholla Street Suite #101 Scottsdale, AZ 85260 (602) 265-0320	CARUSO TURLEY SCOTT 1215 West Rio Salado Parkway Tempe, AZ 85281 (480) 774-1700	MECHANICAL DESIGNS, INC. 7227 North 16th Street Suite #200 Phoenix, AZ 85020 (602) 943-6608	HAWKINS DESIGN GROUP 1140 West Harwell Road Gilbert, AZ 85233 (480) 813-9000	CAWLEY DESIGN STUDIO 730 North 52nd Street Suite #203 Phoenix, AZ 85008 (602) 393-5060

SHEET SCHEDULE

3RD SUBM'L -XX-XX-2022
2ND SUBM'L -XX-XX-2022
1ST SUBM'L -XX-XX-2022

SYMBOL LEGEND
● ORIGINAL SHEET
△ REVISED SHEET
□ FOR REFERENCE ONLY

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A0.1	COVER SHEET
A0.2	PROJECT DATA (CODE ANALYSIS)
A0.3	EXITING PLAN AND PROJECT DATA
A0.4	EXITING PLAN AND PROJECT DATA MEZZANINE
A0.5	PARTITION DETAILS
A0.6	STANDARD MOUNTING HEIGHT DETAILS
A0.7	ADA STANDARD DETAILS
A0.8	ADA STANDARD DETAILS
C1.1	GRADING AND DRAINAGE COVER SHEET
C1.2	GRADING AND DRAINAGE NOTES AND DETAILS
C1.3	GRADING AND DRAINAGE DETAILS
C1.4	PAVING PLAN
C1.5	GRADING AND DRAINAGE PLAN
C1.6	STORM DRAIN PROFILES
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C2.1	WATER AND SEWER PLANS COVER SHEET
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LA0.2	LANDSCAPE PLAN
LA0.3	IRRIGATION PLAN
LA0.4	IRRIGATION PLAN
LA0.5	LANDSCAPE PLAN
LA0.6	SHADE STUDY PLAN
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A2.5	ROOF PLAN
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A4.3	WINDOW ELEVATIONS AND DETAILS
A5.1	BUILDING SECTIONS
A5.2	BUILDING SECTIONS
A6.1	WALL SECTIONS
A6.2	WALL SECTIONS
A6.6	CANOPY PLANS AND SECTIONS
A6.8	MEZZANINE STAIR PLAN AND SECTION
A6.10	STANDARD STAIR DETAILS
A7.1	EXTERIOR ELEVATIONS
A8.1	ARCHITECTURAL DETAILS
A8.2	ARCHITECTURAL DETAILS
A8.3	ARCHITECTUAL EIFS DETAILS
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S1.1B	GENERAL STRUCTURAL NOTES
S1.2	TYPICAL STRUCTURAL DETAILS
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M3.1	MECHANICAL NOTES
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E5.1	ELECTRICAL PANEL SCHEDULES
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ES3.2	ELECTRICAL SITE LIGHTING PLAN - POST CURFEW PHOTOMETRICS

REVISIONS NOTES

ANY FUTURE CHANGES, REVISIONS, TO THESE PLANS, SHALL BE SUBMITTED TO THE CITY FOR REVIEW, AND APPROVAL PRIOR TO COMMENCING ANY WORK. ALL CHANGES AND OR REVISIONS SHALL BE NOTED ON THE PLANS BY "CLOUDING" THE AREAS AFFECTED BY THE REVISIONS OR CHANGES, AND WITH "DELTAS" INDICATING THE NUMBER OF TIMES THE CHANGES MAY OCCUR IN ADDITION, INDICATE THE DATE OF THE CHANGES, REVISIONS, OCCURRED. THUS DATA SHALL ALSO BE PLACED IN THE TITLE BLOCK, IN AN APPROPRIATE BULLETIN OR SCHEDULE.

CITY REFERENCE NUMBERS

PRE-APPLICATION #: 04-3332A3

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REGISTERED ARCHITECT
CERTIFICATE NO. 35
RAYMOND A. LANCETT
Date Signed 2/21/2024
ARIZONA, U.S.A.
PRELIMINARY

COMMERCIAL BUILDING INNOVATIVE DRIVE

4121 W. INNOVATIVE DR.
PHOENIX, AZ 85086

DATE
75% PROGRESS SET
11-20-2024

DRAWN BY: BC

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COVER SHEET

Project:22105

A0.1

PROJECT NARRATIVE

THE CONSTRUCTION OF A NEW OFFICE/WAREHOUSE BUILDING. THE OFFICE INCLUDESD BUT IS NOT LIMITED TO: LOBBY, OFFICES, BREAK ROOM, CONFERENCE ROOM, TOILET ROOMS PER CODE, AND OTHER COMPLIMENTARY SPACES. THE WAREHOUSE SPACE WILL BE FINISHED FOR MOVE-IN, ICLUDING FINISHED WALL SURFACE 10'-0", LIGHTING, ELECTRICL AND HVAC.

PHOENIX BUILDING CODE DATA

A. GOVERNING BUILDING CODES. (SEC. 106.3.3 AS AMENDED) ALL CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING CODES AND AMENDMENTS PER THEIR ADOPTING ORDINANCES.

2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL MECHANICAL CODE
2017 NATIONAL ELECTRIC CODE / NHPA-70
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL FUEL GAS CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
2018 PHOENIX FIRE CODE
2010 ASME A17.6 SAFETY CODE FOR ELEVATORS & ESCALATORS
2010 AMERICAN DISABILITIES ACT - ADAAS & 2017 ICC A-117.1.
CITY OF PHOENIX ADMINISTRATIVE PROVISIONS FOR THE ABOVE CODES
ALL CITY AMENDMENTS TO THE ABOVE CODES

B. SEISMIC ZONE - SEE STRUCTURAL

C. ALL PRODUCTS LISTED BY ICC-ES NUMBERS / NER NUMBERS SHALL BE INSTALLED PER THE REPORT AND MANUFACTURERS WRITTEN INSTRUCTION. PRODUCT SUBSTITUTIONS FOR PRODUCTS LISTED SHALL ALSO HAVE ICC APPROVED EVALUATION REPORT OR BE APPROVED AND LISTED BY OTHER NATIONALLY RECOGNIZABLE TESTING AGENCIES.

ENERGY CODE REQUIREMENTS PER 2018 IECC APPLICABLE AT NEW EXTERIOR ENVELOPE AREAS

2018 IEEC CHAPTER 4
- FOR NEW CONSTRUCTION ONLY AT THERMAL ENVELOPE
- PER IECC CHAPTER 3: ARIZONA IS CLASSIFIED AS CLIMATE ZONE # 2.

NEW OPAQUE THERMAL ENVELOPE REQUIREMENTS - PER TABLE C402.1.3 AND TABLE C402.1.4		
WALLS, ABOVE GRADE	U-FACTOR	ADDITIONAL NOTES
METAL FRAMED	U-0.077	NO CHANGE TO EXISTING - NOT APPLICABLE
PER TABLE C402.2		
(ROOFS) ATTIC & OTHERS	R-38	NO CHANGE TO EXISTING - NOT APPLICABLE
(OPAQUE DOORS) SWINGING	U-0.61	APPLY TO NEW OPAQUE DOORS
NEW - FENESTRATIONS PER TABLE C402.3		
U-FACTOR		
FIXED FENESTRATION		
OPERABLE FENESTRATION		
ENTRANCE DOORS	R-38	NO CHANGE TO EXISTING - NOT APPLICABLE
SHGC	U-0.61	APPLY TO NEW OPAQUE DOORS

2018 INTERNATIONAL ENERGY CONSERVATION CODE

DESCRIPTION:
THIS BUILDING PROJECT IS BEING CONSTRUCTED WITH THREE PRIMARY WALL ASSEMBLIES AND ONE ROOF ASSEMBLY. EXTERIOR APPLIED CONTINUOUS INSULATION HAS BEEN INSTALLED AT ALL ROOF AREAS AND AT THE WALLS OF THE GYMNASIUM UNDER THE SHELL PERMIT.
THIS TENANT IMPROVEMENT PERMIT WILL INCLUDE ALL CLIMATE CONTROL SYSTEMS (WITH THE EXCEPTION OF THE ELEVATOR SHAFT, THIS WAS INSTALLED UNDER THE SHELL PERMIT) AND ALL EXTERIOR THERMAL INSULATIONS THAT ARE TO BE INSTALLED TO THE INTERIOR SIDE OF THE THERMAL ENVELOPE.

SEE ENERGY COMCHECK AND CODE REQUIREMENTS ON SHEET X.X

SITE DATA

A.P.N.:	203-03-022
LEGAL DESCRIPTION:	SEE CIVIL
ZONING:	CP/GCP/PCD
SITE AREA:	51,165 S.F / 1.22 ACRES
BUILDINGS FOOTPRINT:	15,735 S.F.
LOT COVERAGE:	30%

OCCUPANCY & CONSTRUCTION TYPE

IBC CHAPTER 3 AND SECTION 601, 602

OCCUPANCY TYPE(s):	B / S-1
CONSTRUCTION TYPE:	V-B w/ A.F.E.S.
REQUIRED SEPARATIONS:	-
OPENING PROTECTION:	-

BUILDING HEIGHT & AREA

IBC SECTION 503, 504, TABLE 504.3, 504.4

FOR MIXED OCCUPANCY BUILDINGS PER NON-SEPARATED - SECTION 508.3.1

NUMBER OF STORIES:	2
ALLOWED:	2
BUILDING HEIGHT:	34'-2"
ALLOWED:	60'-0"

AREAS	ACTUAL
BUILDING AREA (FIRST FLOOR)	15,328 S.F.
MEZZANINE	1,650 S.F.
BUILDING AREA TOTAL:	16,978 S.F.
CANOPY #1	445 S.F.
UNDER ROOF:	15,773 S.F.

NOTE : SEE SHEET A0.3 FOR LOCATIONS OF CANOPIES AND EXTERIOR SOFFITS

ALLOWABLE AREA

IBC SECTION 503 , SECTION 506, TABLE 503

TABULAR AREA:	B/S-1 OCCUPANCY, V-B
SPRINKLER INCREASE:	+300% TABULAR AREA (SINGLE STORY BLDG.) +200% (MULTI-STORY)
ALLOWABLE AREA:	XXX,XXX S.F. PER FLOOR XXX,XXX S.F. PER BLDG.

B OCCUPANCY

AREA ALLOWED: 36,000 S.F.

ACTUAL: 15,328 S.F. (FIRST FLOOR)
445 S.F. (CANOPY)
15,773S.F. TOTAL

S-1 OCCUPANCY

AREA ALLOWED: 36,000 S.F.

ACTUAL: 13,630 S.F. (WAREHOUSE FLOOR)
650 S.F. (MEZZANINE FLOOR)
14,280 S.F. TOTAL

INTERIOR WALL & CEILING FINISH REQUIREMENTS BY OCCUPANCY

REQUIRED FLAME SPREAD CLASS RATING IBC 803.1 THRU 808 & TABLE 803.13

NONSPRINKLERED			
OCCUPANCY GROUP	INTERIOR EXIT STAIRWAYS, RAMPS AND EXIT PASSAGEWAYS	CORRIDORS AND ENCLOSURE OF EXIT ACCESS STAIRWAYS AND EXIT ACCESS RAMPS	ROOMS AND ENCLOSED SPACES
(B) BUSINESS	CLASS B 26 - 75	CLASS C 76 - 200	CLASS C 76 - 200
(S) STORAGE	CLASS C 76 - 200	CLASS C 76 - 200	CLASS C 76 - 200

CLASS A: FLAME SPREAD INDEX 0-25, SMOKE-DEVELOPED INDEX 0-450
CLASS B: FLAME SPREAD INDEX 26-75, SMOKE-DEVELOPED INDEX 0-450
CLASS C: FLAME SPREAD INDEX 76-200, SMOKE-DEVELOPED INDEX 0-450
* CLASS B MATERIAL IS REQUIRED WHERE THE BUILDING EXCEEDS TWO STORIES

STAIR DATA

IBC 1003, 1004, 1005.3.1 ADAAS 504, 505

STAIR NUMBER	FLOOR TO FLOOR HEIGHT	STAIR WIDTH	TREAD WIDTH	RISER HEIGHT	NUMBER OF HANDRAILS REQUIRED	HEIGHT OF HANDRAIL	DIAMETER OF HANDRAIL
112	14'-0"	4'-0"	11"	7"	2	34" - 38"	1 1/4" - 2" Ø

EXIT ACCESS STAIRWAY

PER IBC SECTION 1009

STAIR #1

SECTION 1009.3 - EXIT ACCESS STAIRWAY ENCLOSURE
EXCEPTION 4 USED - OPENINGS ARE NOT REQUIRED TO BE ENCLOSED WITH AUTOMATIC SPRINKLER SYSTEM, NOT CONNECTED MORE THAN FOUR (4) STORIES, PROTECTED BY A DRAFT CURTAIN AND SPRINKLERS PER NFPA 13.

SECTION 1016.2 - TRAVEL DISTANCE
TABLE 1016.2
250' MAXIMUM DISTANCE WITH SPRINKLER SYSTEM
TRAVEL DISTANCE FROM THIRD FLOOR TO FIRST FLOOR EXIT = 244'
SEE SHEET A0.3 FOR DIAGRAM

INTERIOR EXIT STAIRWAY

PER IBC SECTION 1022

STAIR #2

SECTION 1022.2 - CONSTRUCTION
1-HOUR FIRE BARRIER

STAIR #2 EXTENSION
1-HOUR CONSTRUCTION

PLUMBING FIXTURES

PER IBC TABLE 2902.1

REQUIRED

OCCUPANCY	OCCUP. LOAD M & W	REQUIRED WC / URNL		REQUIRED LAVATORIES		REQUIRED DRINKING FOUNTAINS*
		MEN	WOMEN	MEN	WOMEN	
(B) BUSINESS	5/5	1/25		1/25		1/100
(S) STORAGE	17/17	1/100	1/100	1/100	1/100	1/100
TOTAL	22/22	0.27 = 1	0.27 = 1	0.27 = 1	0.27 = 1	0.22 = 1

PROVIDED

OCCUPANCY	OCCUP. LOAD M & W	PROVIDED WC / URNL		PROVIDED LAVATORIES		PROVIDED DRINKING FOUNTAINS*
		MEN	WOMEN	MEN	WOMEN	
ALL OCCUPANCIES	22	1	1	1	1	1

NOTE:
1. ONE (1) SERVICE OR JANITOR'S SINK PER FLOOR OR SUITE
2. *DRINKING FOUNTAINS SHALL NOT BE REQUIRED FOR AN OCCUPANT LOAD OF 50 OR FEWER

ACCESSIBILITY NOTES

1. ACCESSIBILITY SHALL BE PROVIDED IN ACCORDANCE WITH IBC SECTION 1101 AS AMENDED, THE ADA, AND ADAAS.
2. AN ACCESSIBLE ROUTE OF TRAVEL SHALL BE PROVIDED TO ALL PORTIONS OF THE BUILDING AND BETWEEN THE BUILDING AND THE PUBLIC WAY.
3. ACCESSIBLE MEANS OF EGRESS SHALL BE PROVIDED IN THE SAME NUMBER AS REQUIRED FOR EXITS BY IBC CHAPTER 10.
4. TOILETS ARE DESIGNED FOR ACCESSIBILITY FOR THE DISABLED PER 2009 ICC/ANSI A117.1.
5. AN ACCESSIBLE ROUTE OF TRAVEL SHALL NOT PASS THROUGH KITCHENS, STORAGE ROOMS, TOILETS AND OTHER SIMILAR SPACES.
6. THE PRIMARY ENTRY TO THE BUILDING OR SUITES SHALL BE ACCESSIBLE. ALL OTHER ENTRANCES WHICH ARE LOCATED WITHIN 12 INCHES OF ADJACENT GROUND SHALL BE ACCESSIBLE.
7. ACCESSIBLE ENTRANCES TO THE BUILDING SHALL BE IDENTIFIED BY THE INTERNATIONAL SYMBOL OF ACCESSIBILITY.
8. EXTERIOR EXITS WHICH ARE LOCATED ADJACENT TO ACCESSIBLE AREAS AND WITHIN 12 INCHES OF ADJACENT GROUND LEVEL SHALL BE ACCESSIBLE.
9. SIGNS DESIGNATING COMMON USE ROOMS AND SPACES SHALL MEET ADAAS 703 REQUIREMENTS.

AUTOMATIC FIRE - EXTINGUISHING SYSTEM

1. SPRINKLER SYSTEM SHALL BE INSTALLED TO COMPLY WITH MINIMUM NFPA 13 AND 14 CRITERIA AND CITY AMENDMENTS.

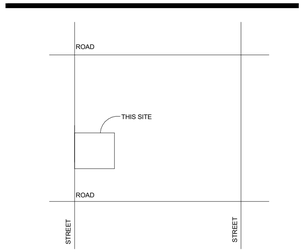
BACKFLOW PREVENTION

BACKFLOW PREVENTION ASSEMBLY REQUIRED AS PER CITY ORD. TO BE INSTALLED ON INCOMING POTABLE WATER PIPING AND FIRE LINE AT AN APPROVED LOCATION, AS PER CITY STANDARD DETAIL. SEE PLUMBING SITE PLAN, FIRE LINE PLAN, UTILITIES PLAN AND/OR IRRIGATION PLAN.

NO SMOKING SIGNAGE

VICINITY MAP

N
N.T.S.



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REGISTERED ARCHITECT
CERTIFICATE NO. 35
KEVIN J. LANCETT
Signed 2/21/2024
ARIZONA, U.S.A.
PRELIMINARY

COMMERCIAL BUILDING INNOVATIVE DRIVE

4121 W. INNOVATIVE DR.
PHOENIX, AZ 85086

DATE
75% PROGRESS SET
11-20-2024

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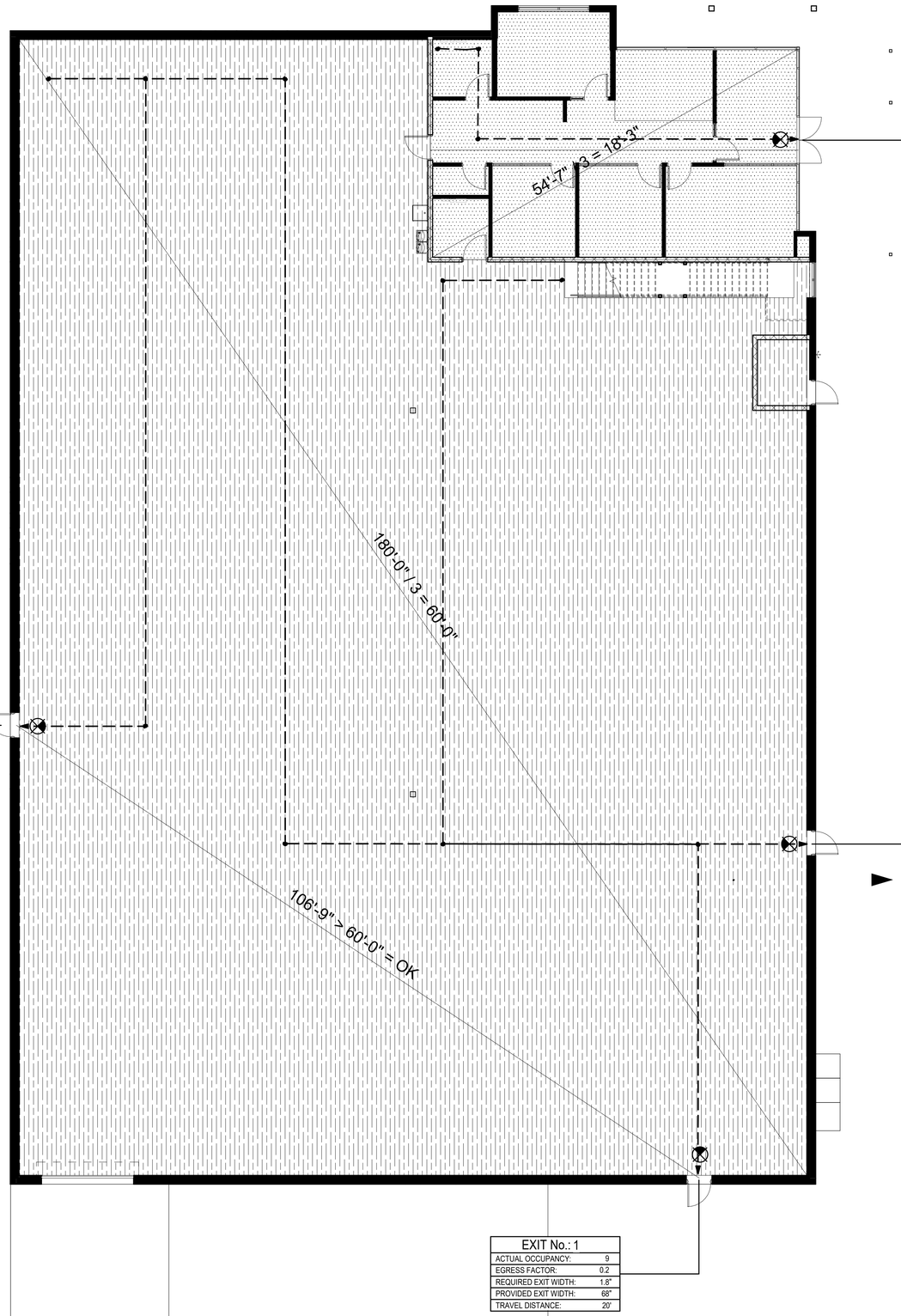
PROJECT DATA (CODE ANALYSIS)

Project:22105

A0.2



EXIT No.: 1	
ACTUAL OCCUPANCY:	10
EGRESS FACTOR:	0.2
REQUIRED EXIT WIDTH:	2"
PROVIDED EXIT WIDTH:	68"
TRAVEL DISTANCE:	20'

EXIT No.: 1	
ACTUAL OCCUPANCY:	9
EGRESS FACTOR:	0.2
REQUIRED EXIT WIDTH:	1.8"
PROVIDED EXIT WIDTH:	68"
TRAVEL DISTANCE:	20'

EXIT No.: 1	
ACTUAL OCCUPANCY:	16
EGRESS FACTOR:	0.2
REQUIRED EXIT WIDTH:	3.2"
PROVIDED EXIT WIDTH:	68"
TRAVEL DISTANCE:	20'

EXIT No.: 1	
ACTUAL OCCUPANCY:	9
EGRESS FACTOR:	0.2
REQUIRED EXIT WIDTH:	1.8"
PROVIDED EXIT WIDTH:	68"
TRAVEL DISTANCE:	20'

OCCUPANT LOAD & REQUIRED EXITS

IBC CHAPTER 10, SECTION 1004 AND TABLE 1004.5

OCCUPANCY	SF / FACTOR	OCCUPANTS	EXITS REQ'D	EXITS PROV'D	MIN. WIDTH REQ'D		WIDTH PROV'D	
					DOOR *	STAIR *	DOOR	STAIR
(B) BUSINESS AREAS	1,396 /150	10	2	-	-	-	-	-
(S) STORAGE	13,630 / 500	28	2	-	-	-	-	-
TOTAL	-	38	4	4	-	-	-	-

* - EGRESS WIDTH OF DOORS PER SECTION 1005.3.2 EXCEPTION USED = 0.15 PER OCCUPANT
**- EGRESS WIDTH OF STAIRWAY PER SECTION 1005.3.1 EXCEPTION USED = 0.2 PER OCCUPANT

FUNCTION OF SPACE LEGEND

IBC TABLE 1004.5

FURTHEST TRAVEL DISTANCE FROM EXIT
COMMON PATH OF TRAVEL

'B' OCCUPANCY

OFFICE AREAS
1/150

'S' OCCUPANCY

ACCESSORY
STORAGE
1/300

EXITING PLAN

PER CHAPTER 10 IBC
PER IBC 1005 AND 1015.1 PER IBC 1015

NOT TO SCALE

NUMBER OF REQUIRED EXITS PER 1006.2.1 & 1006.3.2 = 2
NUMBER OF PROVIDED EXITS = X

COMMON PATH OF TRAVEL PER 1006.2.1:

B OCCUPANCY = 100' WITH SPRINKLERS
S OCCUPANCY = 100' WITH SPRINKLERS

TRAVEL DISTANCE PER TABLE 1017.2:

B OCCUPANCY = 300' WITH SPRINKLERS
S OCCUPANCY = 250' WITH SPRINKLERS

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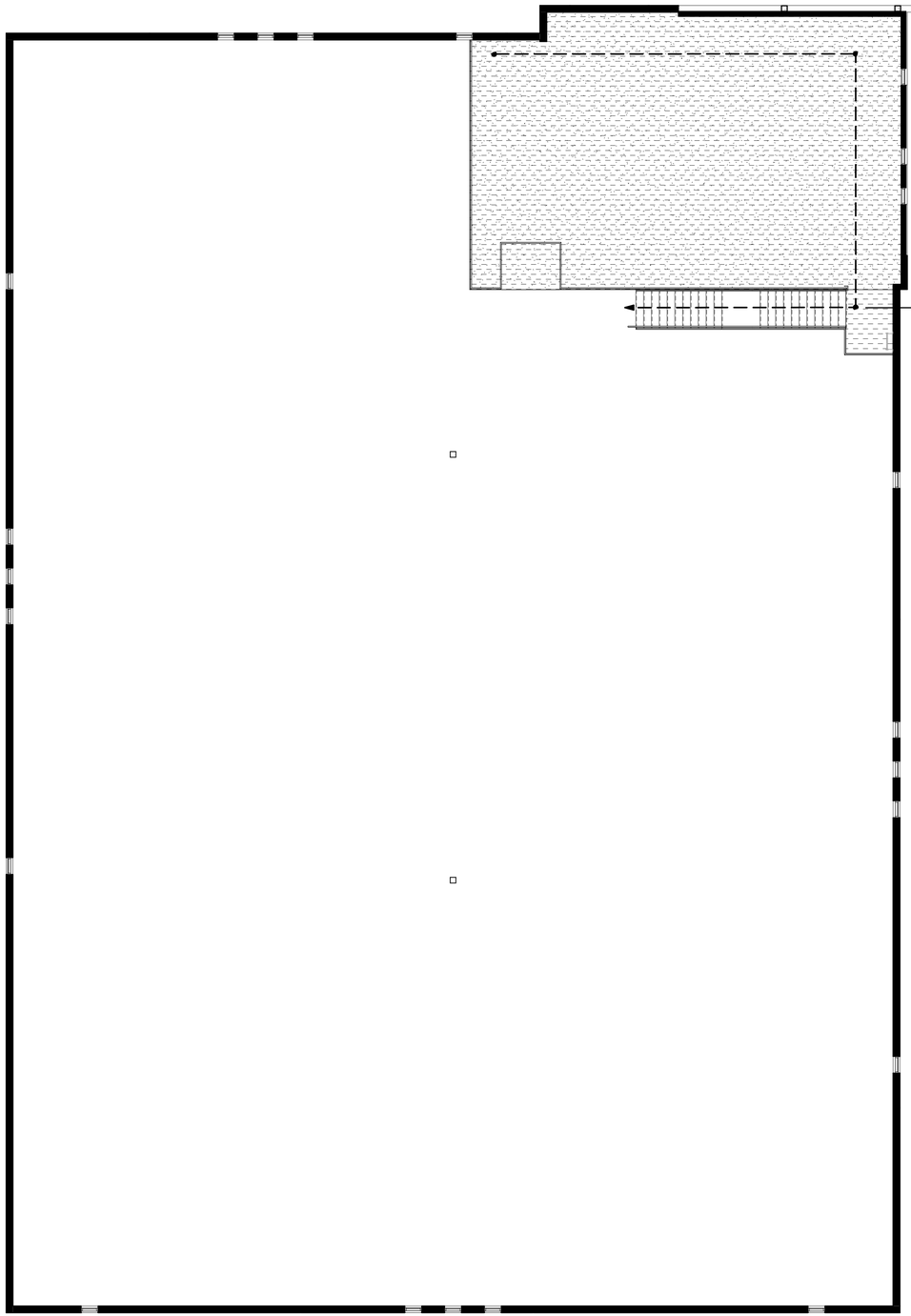
EXITING PLAN AND PROJECT DATA

Project:22105

A0.3



EXIT #-		
	MAX. TRAVEL DIST.:	233' (FROM 2ND FLR)
	1ST FLR ACTUAL OCC:	10 OCC.
	2ND FLR ACTUAL OCC:	6 OCC.
	TOTAL OCC:	16 OCC.
DOOR	EGRESS CALC:	0.2" PER OCC. @ (TOTAL OCC.)
	REQ'D EXIT WIDTH:	3.2 "
	PROV'D EXIT WIDTH:	36"
STAIRS	EGRESS CALC:	0.3" PER OCC. @ (2ND FLR OCC.)
	REQ'D EXIT WIDTH:	4.8"
	PROV'D EXIT WIDTH:	XX"

OCCUPANT LOAD & REQUIRED EXITS

IBC CHAPTER 10, SECTION 1004 AND TABLE 1004.5

OCCUPANCY	SF / FACTOR	OCCUPANTS	EXITS REQ'D	EXITS PROV'D	MIN. WIDTH REQ'D		WIDTH PROV'D	
					DOOR *	STAIR *	DOOR	STAIR
(S) STORAGE	1,650 / 300	6	-	-	-	-	-	-
TOTAL	-	6	-	-	-	-	-	-

* - EGRESS WIDTH OF DOORS PER SECTION 1005.3.2 EXCEPTION USED = 0.15 PER OCCUPANT
**- EGRESS WIDTH OF STAIRWAY PER SECTION 1005.3.1 EXCEPTION USED = 0.2 PER OCCUPANT

FUNCTION OF SPACE LEGEND

IBC TABLE 1004.5

FURTHEST TRAVEL DISTANCE FROM EXIT
COMMON PATH OF TRAVEL

'B' OCCUPANCY

OFFICE AREAS
1/150

'S' OCCUPANCY

ACCESSORY
STORAGE
1/300

EXITING PLAN

PER CHAPTER 10 IBC
PER IBC 1005 AND 1015.1 PER IBC 1015

NOT TO SCALE

NUMBER OF REQUIRED EXITS PER 1006.2.1 & 1006.3.2 = 2
NUMBER OF PROVIDED EXITS = X

COMMON PATH OF TRAVEL PER 1006.2.1:

B OCCUPANCY = 100' WITH SPRINKLERS
S OCCUPANCY = 100' WITH SPRINKLERS

TRAVEL DISTANCE PER TABLE 1017.2:

B OCCUPANCY = 300' WITH SPRINKLERS
S OCCUPANCY = 250' WITH SPRINKLERS

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P 602.393.5060

CawleyArchitects.com

REGISTERED ARCHITECT
CERTIFICATE NO. 35
KEVIN M. LANCETT
Date Signed 2/21/2024
ARIZONA, U.S.A.
PRELIMINARY

COMMERCIAL BUILDING INNOVATIVE DRIVE

4121 W. INNOVATIVE DR.
PHOENIX, AZ 85086

DATE

75% PROGRESS SET
11-20-2024

DRAWN BY: BC

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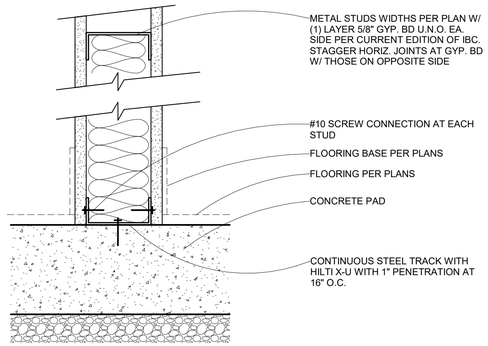
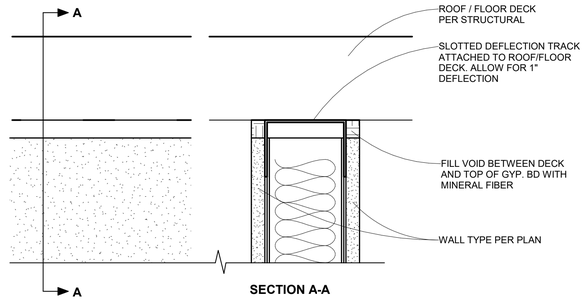
EXITING PLAN AND PROJECT DATA MEZZANINE

Project:22105

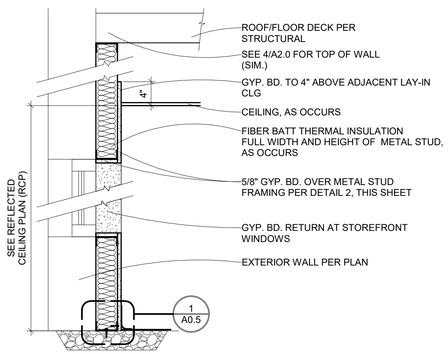
A0.4



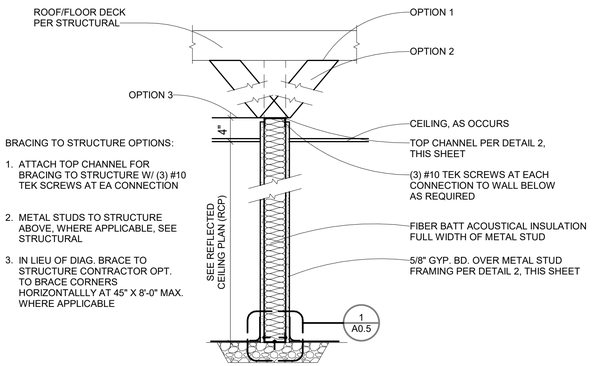
1 BOTTOM OF WALL
3" = 1'-0"



2 TOP OF FULL HEIGHT WALL
3" = 1'-0"



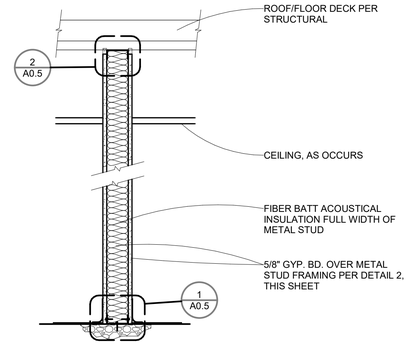
F3 FURRING WALL
1" = 1'-0"



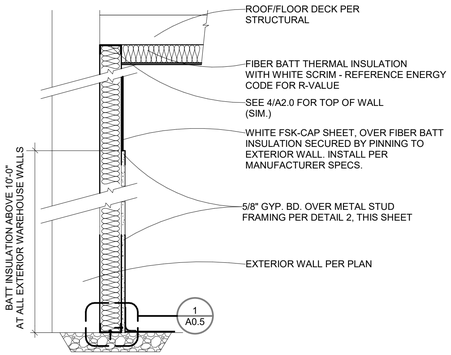
BRACING TO STRUCTURE OPTIONS:

1. ATTACH TOP CHANNEL FOR BRACING TO STRUCTURE W/ (3) #10 TEK SCREWS AT EA CONNECTION
2. METAL STUDS TO STRUCTURE ABOVE, WHERE APPLICABLE, SEE STRUCTURAL
3. IN LIEU OF DIAG. BRACE TO STRUCTURE CONTRACTOR OPT. TO BRACE CORNERS HORIZONTALLLY AT 45" X 8'-0" MAX. WHERE APPLICABLE

P3 P6 PARTITION WALL
1" = 1'-0"



D6 FULL HEIGHT WALL
1" = 1'-0"



W3 WAREHOUSE FURRING WALL
1" = 1'-0"

GENERAL NOTES

1. REFER TO IECC COMPLIANCE REPORT FOR ROOF INSULATION.
2. FOR INTERIOR FINISHES REFER TO INTERIOR FINISH SCHEDULE
3. AT WET LOCATIONS WALLBOARD SHALL BE WATER RESISTANT.
4. ALL WOOD BLOCKING TO BE FIRE-RETARDANT TREATED WOOD.

WALL TAG LEGEND

XX

INDICATES PARTITION TYPE:

P= PARTITON
D= FULL HEIGHT WALL
F= FURRING
L= LOW WALL
A= ACOUSTICAL PARTITON

INDICATES WIDTH OF CORE MATERIAL

2= 2"/2 1/2"
3= 3 5/8
6= 6" STUD
8= 8" STUD

XXX

INDICATES RATING WHEN REQUIRED

1= 1 HOUR RATED
2= 2 HOUR RATED
3= 3 HOUR RATED
4= 4 HOUR RATED

NON-STRUCTURAL INT. STEEL STUDS

ALL COLD FORMED STEEL COMPONENTS INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE PER SSMA PER ICC ESR-3064P. COMPONENTS SHALL BE FABRICATED ERECTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND IN ACCORDANCE WITH THE LATEST EDITION OF 'SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS' BY THE AISI. STEEL FOR COLD FORMED MEMBERS SHALL A MIN. YIELD STRENGTH OF 33 KSI FOR 43 MIL THICKNESS AND LESS, AND MINIMUM YIELD STRENGTH OF 50 KSI FOR 54 MIL THICKNESS AND GREATER. STEEL FOR BRIDGING SHALL HAVE A MIN. YIELD STRENGTH OF 33 KSI. STEEL SHALL BE GALVANIZED AT LOCATIONS EXPOSED TO WEATHER AND AS NOTED.

SCREWED CONNECTIONS SHALL BE HILTI SELF-DRILLING TAPPING SCREWS PER ICC ESR-2196 OR ICC APPROVED EQUIVALENT. SCREW SIZE SHALL BE #10X3/4" MIN. AND MUST PROTRUDE THROUGH AND BEYOND THE CONNECTED STEEL MEMBERS A MINIMUM OF THREE FULL THREADS. SCREWS SHALL BE INSTALLED W/ A MINIMUM EDGE AND END DISTANCE OF THREE SCREW DIAMETERS.

MANUFACTURER: LISTED COMPANIES/MANUFACTURERS AS LISTED IN TABLE 2, ICC ESR-3064P

MIL THICKNESS / GAGE NUMBER REFERENCE:
27 MIL - 22 GA / 33 MIL - 20 GA / 43 MIL - 18 GA / 54 MIL - 16 GA / 68 MIL - 14 GA / 97 MIL - 12 GA

SSMA NON-STRUCTURAL/NON-BEARING INTERIOR STEEL STUDS & TRACKS SHALL BE AS FOLLOWS, U.N.O. (DESIGN BASIS = 5 PSF INTERIOR LOAD, DEFLECTION LIMIT L/240)

MAXIMUM WALL HEIGHT	STUD SIZE - MILS	STUD SPACING	TRACK SIZE - MILS	GA / MIL
0'-0" TO 9'-11"	3 5/8" - 362S125-18	24" O.C	362T125-27	18 / 54
0'-0" TO 12'-2"	3 5/8" - 362S125-18	16" O.C	362T125-27	18 / 54
0'-0" TO 14'-0"	3 5/8" - 362S125-33	24" O.C	362T125-33	20 / 43
0'-0" TO 16'-0"	3 5/8" - 362S125-33	16" O.C	362T125-33	20 / 43
0'-0" TO 20'-8"	6" - 600S125-33	24" O.C	600T125-27	20 / 43
0'-0" TO 23'-9"	6" - 600S125-33	16" O.C	600T125-27	20 / 43
23'-10" AND HIGHER - NOTIFY ARCHITECT / STRUCTURAL ENGINEER				

CAWLEY ARCHITECTS

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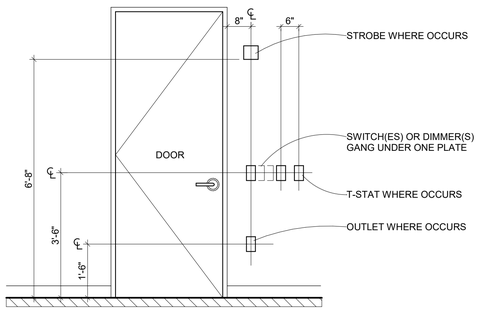
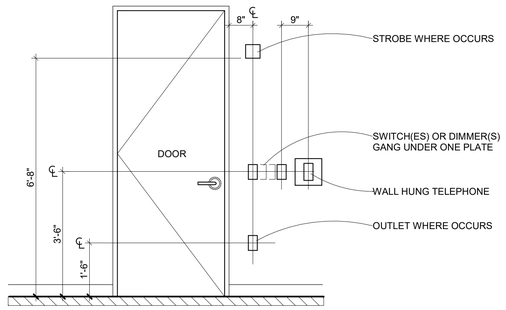
PARTITION DETAILS

Project:22105

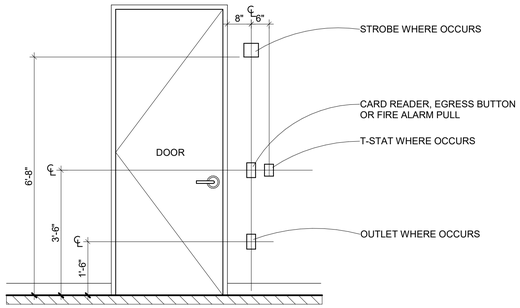
A0.5



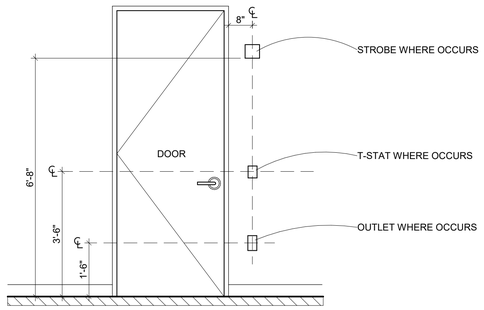
1 LOCATIONS AT DOOR JAMBS FOR SWITCH AND THERMOSTAT
1/2" = 1'-0"



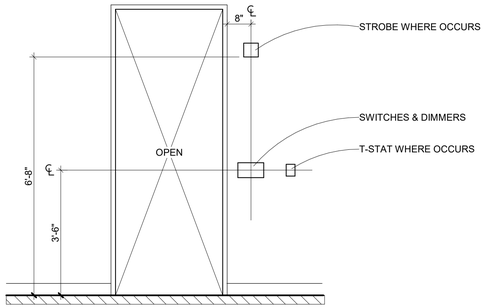
2 LOCATIONS AT DOOR JAMBS FOR SWITCH AND TELEPHONE
1/2" = 1'-0"



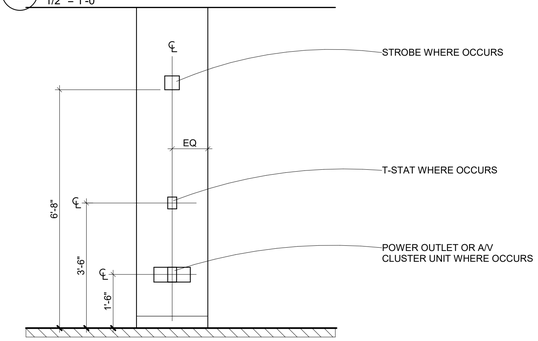
3 LOCATIONS AT DOOR JAMBS FOR CARD READER, EGRESS BUTTON OR FIRE ALARM PULL
1/2" = 1'-0"



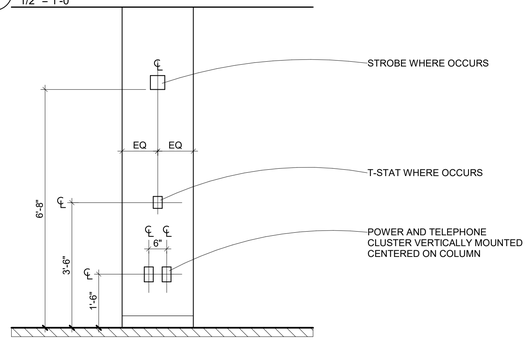
4 LOCATIONS AT DOOR JAMBS FOR THERMOSTAT, STROBE AND OUTLET
1/2" = 1'-0"



5 LOCATIONS AT OPENINGS FOR SWITCHES, STROBES AND THERMOSTATS
1/2" = 1'-0"



6 LOCATIONS AT COLUMNS, BETWEEN DOORS, ETC. OUTLETS, STROBES AND THERMOSTATS
1/2" = 1'-0"



7 LOCATIONS AT COLUMNS, BETWEEN DOORS, ETC. OUTLET GROUPS, STROBES, AND THERMOSTATS
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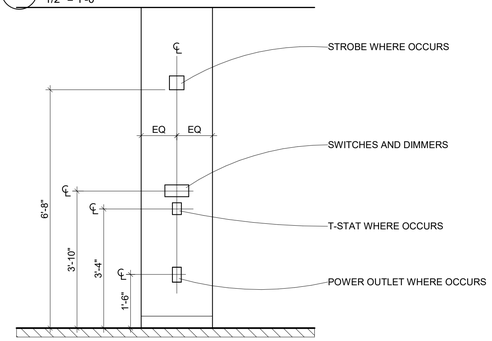
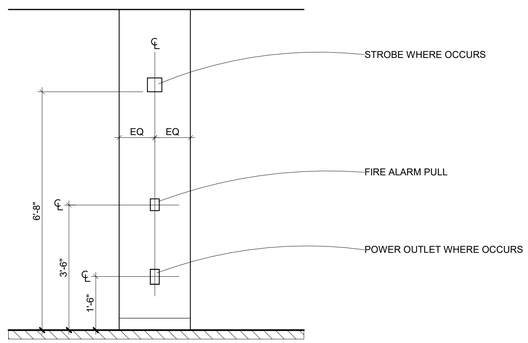
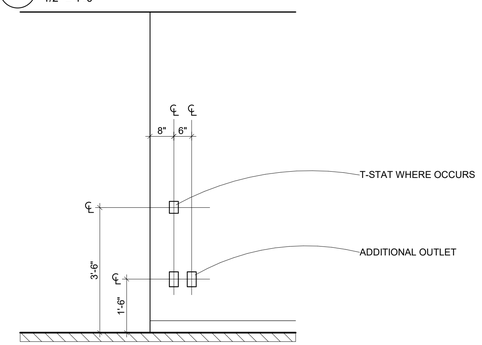


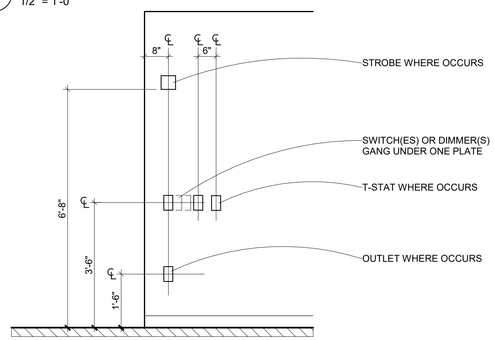
8 LOCATIONS AT COLUMNS, BETWEEN DOORS, ETC. SWITCHES, STROBES, AND THERMOSTATS
1/2" = 1'-0"



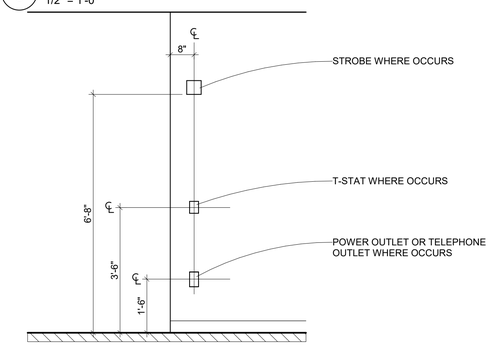
9 LOCATIONS AT COLUMNS, BETWEEN DOORS, ETC. OUTLETS, STROBES AND FIRE ALARM PULLS
1/2" = 1'-0"



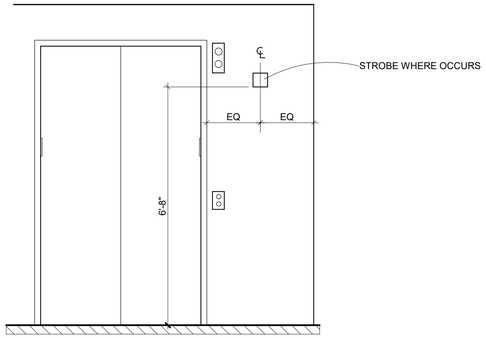
10 LOCATIONS AT CORNERS FOR OUTLETS
1/2" = 1'-0"



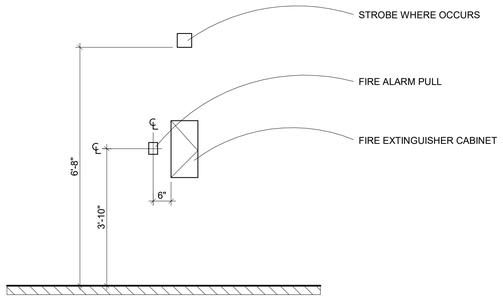
11 LOCATIONS AT CORNERS FOR SWITCHES OUTLETS, STROBES AND THERMOSTATS
1/2" = 1'-0"



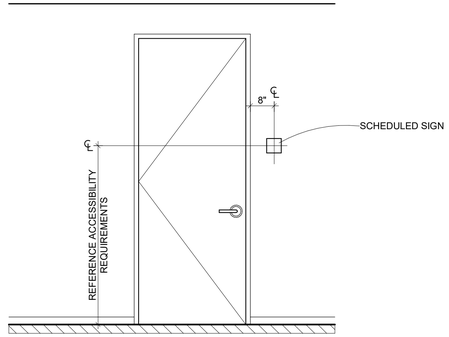
12 LOCATIONS AT CORNERS FOR OUTLETS, STROBES AND THERMOSTATS
1/2" = 1'-0"



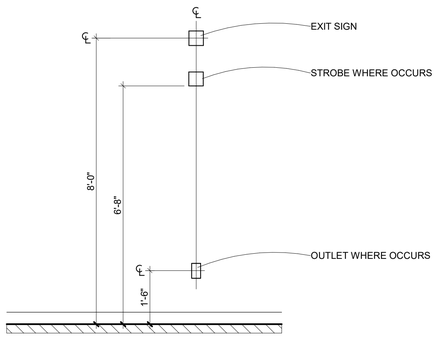
13 LOCATIONS AT FREIGHT ELEVATORS FOR STROBES
1/2" = 1'-0"



14 LOCATIONS AT FIRE EXTINGUISHER CABINET FOR STROBES AND FIRE ALARM PULLS
1/2" = 1'-0"



15 LOCATION FOR TYPICAL SIGNS
1/2" = 1'-0"



16 LOCATION FOR WALL MOUNTED EXIT SIGNS
1/2" = 1'-0"

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REGISTERED ARCHITECT CERTIFICATE NUMBER 35-[illegible] KEVIN M. LANCETT ARIZONA U.S.A.
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STANDARD MOUNTING HEIGHT DETAILS

Project:22105

A0.6

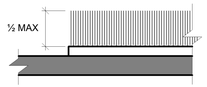


FIGURE 302.2
CARPET ON FLOOR OR GROUND SURFACES

302 GENERAL.
FLOOR OR GROUND SURFACES SHALL BE STABLE, FIRM AND SLIP RESISTANT, AND SHALL COMPLY WITH ICC/ANSI A117.1-1998 SECTION 302.
302.2 CARPET.
PILE HEIGHT SHALL BE ½" MAXIMUM. EXPOSED EDGES OF CARPET SHALL BE FASTENED TO FLOOR OR GROUND AND SHALL HAVE TRIM ALONG ENTIRE LENGTH OF EXPOSED EDGE. CARPET EDGE TRIM SHALL COMPLY WITH ICC/ANSI A117.1-1998 SECTION 303. (FIG. 302.2)

(A) 302 FLOOR OR GROUND SURFACES

FIGURE 303.2
VERTICAL CHANGES IN LEVEL

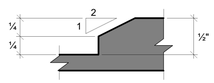


FIGURE 303.3
BEVELED CHANGES IN LEVEL

303.2 VERTICAL.
CHANGES IN LEVEL OF ¼" HIGH MAXIMUM SHALL BE PERMITTED TO BE VERTICAL. (FIG. 303.2)
303.3 BEVELED.
CHANGES IN LEVEL BETWEEN ¼" AND ½" HIGH MAXIMUM SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1:2 (FIG. 303.3)
303.4 RAMPED.
CHANGES IN LEVEL GREATER THAN ½" SHALL BE RAMPES AND SHALL COMPLY WITH ICC/ANSI A117.1-1998 SECTION 405 AND 406.

(B) 303 CHANGES IN LEVEL

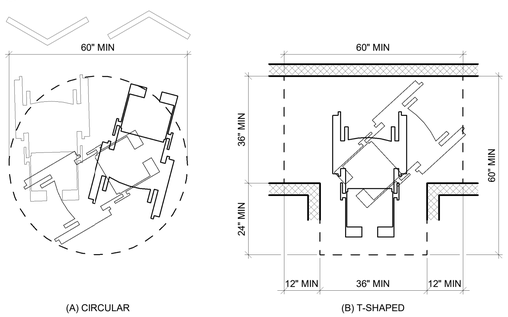


FIGURE 304.3
SIZE OF WHEELCHAIR TURNING SPACE

304.2 FLOOR OR GROUND SURFACE.
FLOOR OR GROUND SURFACES OF A WHEELCHAIR TURNING SPACE SHALL HAVE A SLOPE NOT STEEPER THAN 1:48 AND SHALL COMPLY WITH ICC/ANSI A117.1-1998 SECTION 302.
304.3 SIZE.
WHEELCHAIR TURNING SPACE SHALL COMPLY WITH ICC/ANSI A-117.1-1998 SECTIONS 304.3.1 OR 304.3.2. (FIG. 304.3)

(C) 304 WHEELCHAIR TURNING SPACE

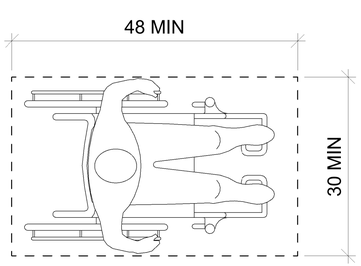


FIGURE 305.3
SIZE OF CLEAR GROUND SPACE

305.2 FLOOR OR GROUND SURFACE.FLOOR OR GROUND SURFACES OF A CLEAR GROUND SPACE SHALL HAVE A SLOPE NOT STEEPER THAN 1:48 AND SHALL COMPLY WITH ICC/ANSI A117.1-1998 SECTION 302.
305.3 SIZE. CLEAR GROUND SPACE SHALL BE 30" MINIMUM BY 48" MINIMUM.(FIG. 304.3)
305.5 POSITION. UNLESS OTHERWISE SPECIFIED, THE CLEAR FLOOR OR GROUND SPACE SHALL BE POSITIONED FOR EITHER FORWARD OR PARALLEL APPROACH TO AN ELEMENT.

(D) 305 CLEAR GROUND SPACE

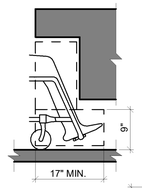


FIGURE 306.2
TOE CLEARANCE

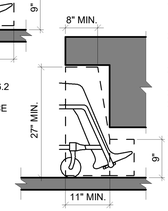


FIGURE 306.3
KNEE CLEARANCE

306.1 GENERAL.
WHERE SPACE BENEATH AN ELEMENT IS INCLUDED AS PART OF CLEAR FLOOR OR GROUND SPACE AT AN ELEMENT, CLEARANCE AT AN ELEMENT, OR A WHEELCHAIR TURNING SPACE, THE SPACE SHALL COMPLY WITH SECTION 306. ADDITIONAL SPACE BEYOND KNEE AND TOE CLEARANCE SHALL BE PERMITTED BENEATH ELEMENTS.
306.2 TOE CLEARANCE.
306.2.1 GENERAL.
SPACE UNDER AN ELEMENT BETWEEN THE FLOOR OR GROUND AND 9 INCHES (230 MM) ABOVE THE FLOOR OR GROUND SHALL BE TOE CLEARANCE AND SHALL COMPLY WITH SECTION 306.2.
306.2.2 MAXIMUM DEPTH.
TOE CLEARANCE SHALL BE PERMITTED TO EXTEND 25 INCHES (635 MM) MAXIMUM UNDER AN ELEMENT.
306.2.3 MINIMUM DEPTH.
WHERE TOE CLEARANCE IS REQUIRED AT AN ELEMENT AS PART OF A CLEAR FLOOR OR GROUND SPACE, THE TOE CLEARANCE SHALL EXTEND 17 INCHES (430 MM) MINIMUM BENEATH THE ELEMENT.
306.2.4 ADDITIONAL CLEARANCE.
SPACE EXTENDING GREATER THAN 6 INCHES (150 MM) BEYOND THE AVAILABLE KNEE CLEARANCE AT 9 INCHES (230 MM) ABOVE THE FLOOR OR GROUND SHALL NOT BE INCLUDED IN TOE CLEARANCE.
306.2.5 WIDTH.
TOE CLEARANCE SHALL BE 30 INCHES (760 MM) WIDE MINIMUM.
306.3 KNEE CLEARANCE.
306.3.1 GENERAL.
SPACE UNDER AN ELEMENT BETWEEN 9 INCHES (230 MM) AND 27 INCHES (685 MM) ABOVE THE FLOOR OR GROUND SHALL BE KNEE CLEARANCE AND SHALL COMPLY WITH SECTION 306.3.
306.3.2 MAXIMUM DEPTH.
KNEE CLEARANCE SHALL BE PERMITTED TO EXTEND 25 INCHES (635 MM) MAXIMUM UNDER AN ELEMENT AT 9 INCHES (230 MM) ABOVE THE FLOOR OR GROUND.
306.3.3 MINIMUM DEPTH.
WHERE KNEE CLEARANCE IS REQUIRED BENEATH AN ELEMENT AS PART OF A CLEAR FLOOR OR GROUND SPACE, THE KNEE CLEARANCE SHALL BE 11 INCHES (280 MM) DEEP MINIMUM AT 9 INCHES (230 MM) ABOVE THE FLOOR OR GROUND, AND 8 INCHES (205 MM) DEEP MINIMUM AT 27 INCHES (685 MM) ABOVE THE FLOOR OR GROUND.
306.3.4 CLEARANCE REDUCTION.
BETWEEN 9 INCHES (230 MM) AND 27 INCHES (685 MM) ABOVE THE FLOOR OR GROUND, THE KNEE CLEARANCE SHALL BE PERMITTED TO BE REDUCED AT A RATE OF 1 INCH (26 MM) FOR EACH 6 INCHES (150 MM) IN HEIGHT.
306.3.5 WIDTH.
KNEE CLEARANCE SHALL BE 30 INCHES (760 MM) WIDE MINIMUM.

(E) 306 KNEE AND TOE CLEARANCE

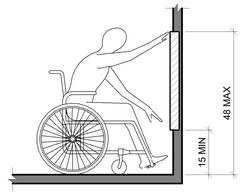


FIGURE 308.2.1
UNOBSTRUCTED FORWARD REACH

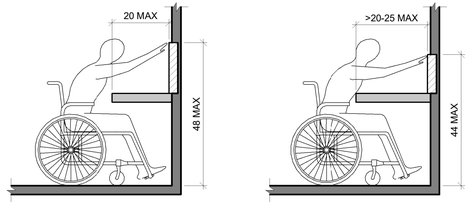


FIGURE 308.2.2
OBSTRUCTED HIGH FORWARD REACH

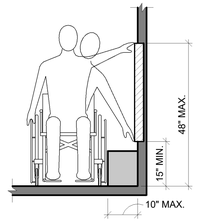
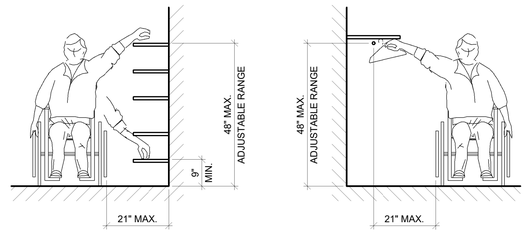


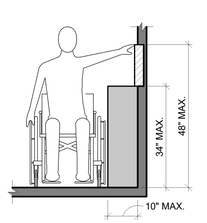
FIGURE 308.3.1
UNOBSTRUCTED SIDE REACH



This Drawing Produced by the U.S. Access Board

(a) SHELVES
(b) CLOSETS

FIG. 38
STORAGE SHELVES AND CLOSETS



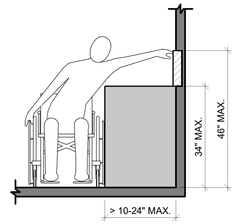
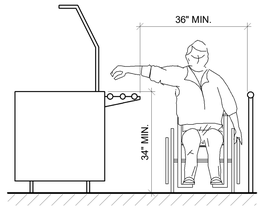
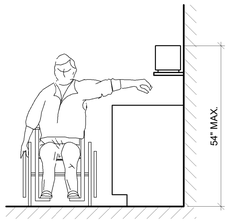


FIGURE 308.3.2
OBSTRUCTED HIGH SIDE REACH
This Drawing Produced by the U.S. Access Board



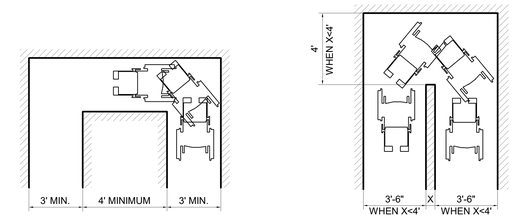
FOOD SERVICE LINES



TABLEWARE AREAS

308.2 FORWARD REACH.
308.2.1 UNOBSTRUCTED. WHERE A FORWARD REACH IS UNOBSTRUCTED, THE HIGH FORWARD REACH SHALL BE 48" MAXIMUM AND THE LOW FORWARD REACH SHALL BE 15" MINIMUM ABOVE THE FLOOR OR GROUND.
308.2.2 OBSTRUCTED HIGH REACH. WHERE A HIGH FORWARD REACH IS OVER AN OBSTRUCTION, THE CLEAR FLOOR OR GROUND SPACE SHALL EXTEND BENEATH THE ELEMENT FOR A DISTANCE NOT LESS THANK THE REQUIRED REACH DEPTH OVER THE OBSTRUCTION. THE HIGH FORWARD REACH SHALL BE 48" MAXIMUM WHERE THE REACH DEPTH IS 20" MAXIMUM. WHERE THE REACH DEPTH EXCEEDS 20", THE HIGH FORWARD REACH SHALL BE 44" MAXIMUM AND THE REACH DEPTH SHALL BE 25" MAXIMUM.
308.3 SIDE REACH.
308.3.1 UNOBSTRUCTED. WHERE A CLEAR FLOOR OR GROUND SPACE ALLOWS A PARALLEL APPROACH TO AN ELEMENT AND THE SIDE REACH IS UNOBSTRUCTED, THE HIGH SIDE REACH SHALL BE 48" MAXIMUM AND THE LOW SIDE REACH SHALL BE 15" MINIMUM ABOVE THE FLOOR OR GROUND.
EXCEPTION: EXISTING ELEMENTS SHALL BE PERMITTED AT 54" MAXIMUM ABOVE THE FLOOR OR GROUND.
308.3.2 OBSTRUCTED HIGH REACH. WHERE A CLEAR FLOOR OR GROUND SPACE ALLOWS A PARALLEL APPROACH TO AN OBJECT AND THE HIGH SIDE REACH IS OVER AN OBSTRUCTION, THE HEIGHT OF THE OBSTRUCTION SHALL BE 34" MAXIMUM AND THE DEPTH OF THE OBSTRUCTION SHALL 24" MAXIMUM. THE HIGH SIDE REACH SHALL BE 48" MAXIMUM FOR A REACH DEPTH OF 10" MAXIMUM. WHERE THE REACH DEPTH EXCEEDS 10", THE HIGH SIDE REACH SHALL BE 46" MAXIMUM FOR A REACH DEPTH OF 24" MAXIMUM.

(F) 308 REACH RANGES



(a) 90° TURN
(b) TURNS AROUND AN OBSTRUCTION

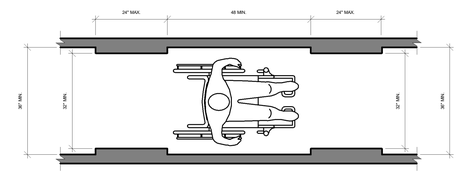


FIGURE 403.5
CLEAR WIDTH OF AN ACCESSIBLE ROUTE

SEGMENT LENGTH	A MINIMUM SEGMENT WIDTH
LESS THAN OR EQUAL TO 24"	32" (SEE NOTE)
GREATER THAN 24"	36"
Note: Consecutive segments of 32" wide must be separated by a route segment 48" long minimum and 36" wide minimum.	

TABLE 403.5
CLEAR WIDTH OF AN ACCESSIBLE ROUTE

(G) 403.5 CLEAR WIDTH OF AN ACCESSIBLE ROUTE

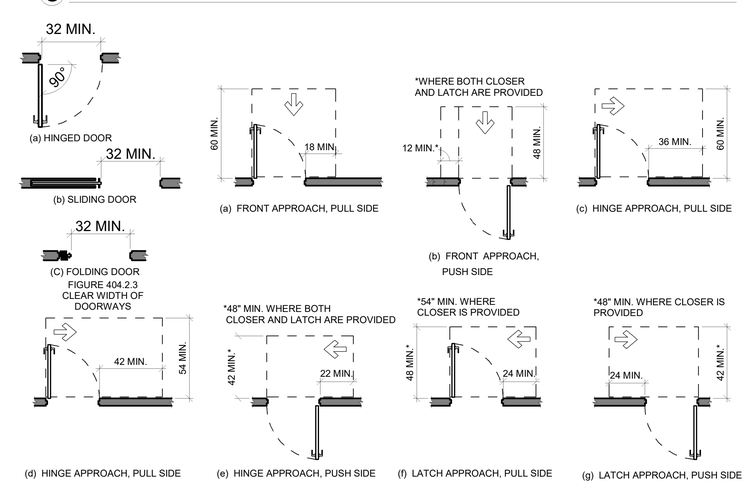


FIGURE 404.2.3
CLEAR WIDTH OF DOORWAYS

FIGURE 404.2.4.1
MANEUVERING CLEARANCES AT SWINGING DOORS

TYPE OF USE		MINIMUM CLEARANCES	
APPROACH DIRECTION	DOOR SIDE	PERPENDICULAR TO DOOR (1)	BEYOND LATCH PARALLEL TO DOOR
FROM FRONT	PULL	60"	18"
FROM FRONT	PUSH	48"	0" (2)
FROM HINGE	PULL	60" 54"	36" 42"
FROM HINGE	PUSH	42"(3)	54"
FROM LATCH	PULL	48"(4)	24"
FROM LATCH	PUSH	42" (4)	24"
NOTES: (1) MANEUVERING SPACE SHALL INCLUDE FULL WIDTH OF DOORWAY. (2) ADD 12" IF CLOSER AND LATCH PROVIDED. (3) ADD 6" IF CLOSER AND LATCH PROVIDED (4) ADD 6" IF CLOSER PROVIDED.			

TABLE 404.2.4.1 – MANEUVERING CLEARANCES OF MANUAL SWINGING DOORS

(H) 404 DOORS AND DOORWAYS

CAWLEY ARCHITECTS
730 N. 52nd St. Ste. 203
Phoenix, Arizona 85008
P 602.393.5060
CawleyArchitects.com

REGISTERED ARCHITECT
CERTIFICATE NO. 35
JAMES W. LAMCETT
Date Signed 10/21/2024
ARIZONA, U.S.A.
PRELIMINARY

COMMERCIAL BUILDING INNOVATIVE DRIVE

4121 W. INNOVATIVE DR.
PHOENIX, AZ 85086

DATE
75% PROGRESS SET
11-20-2024

DRAWN BY: BC

OWNERSHIP OF DOCUMENTS:
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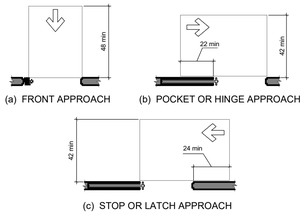
DISCREPANCIES AND CONFLICTS:
All discrepancies found in these documents or conflicts between these documents and field conditions shall be reported to Cawley Architects Inc. for resolution before the commencement of the work.

ADA STANDARD DETAILS

Project:22105

A0.7



(a) FRONT APPROACH (b) POCKET OR HINGE APPROACH

(c) STOP OR LATCH APPROACH

FIGURE 404.2.4.2 -- MANEUVERING CLEARANCES AT SLIDING AND FOLDING DOORS

APPROACH DIRECTION	MINIMUM CLEARANCES	
	PERPENDICULAR TO DOOR (1)	PARALLEL TO DOOR
FROM FRONT	48"	0"
FROM HINGE SIDE	42"	54" (2)
FROM LATCH SIDE	42"	24" (2)

NOTES:
(1) MANEUVERING SPACE SHALL INCLUDE FULL WIDTH OF DOORWAY.
(2) FROM LATCH SIDE TOWARDS THE DOORWAY

TABLE 404.2.4.2 -- MANEUVERING CLEARANCES FOR SLIDING AND FOLDING DOORS

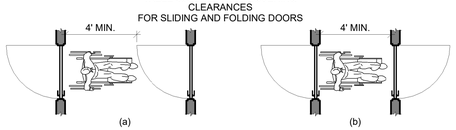


FIGURE 404.2.6 TWO DOORS IN SERIES

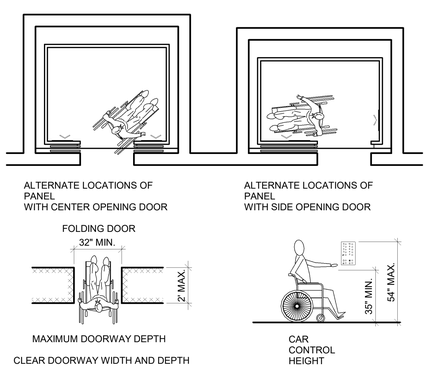
APPROACH DIRECTION	MINIMUM CLEARANCES
	PERPENDICULAR TO DOORWAY (1)
FROM FRONT	48"
FROM SIDE	42"

NOTES:
(1) MANEUVERING SPACE SHALL INCLUDE FULL WIDTH OF DOORWAY.

TABLE 404.2.4.3 -- MANEUVERING CLEARANCES FOR DOORWAYS WITHOUT DOORS

404.2.1 REVOLVING DOORS AND TURNSTILES.
REVOLVING DOORS OR TURNSTILES SHALL NOT BE PART OF AN ACCESSIBLE ROUTE,
404.2.2 DOUBLE-LEAF DOORWAYS.
AT LEAST ONE OF THE ACTIVE LEAVES OF DOORWAYS WITH TWO INDEPENDENTLY OPERATED LEAVES SHALL COMPLY WITH ICC/ANSI A117.1-1998 SECTIONS 404.2.3 AND 404.2.4.
404.2.3 CLEAR WIDTH.
DOORWAYS SHALL HAVE A CLEAR OPENING OF 32" MINIMUM. CLEAR OPENING OF DOORWAYS WITH SWINGING DOORS SHALL BE MEASURES BETWEEN THE FACE OF DOOR AND STOP, WITH THE DOOR OPEN 90°. OPENINGS MORE THAN 24" DEEP SHALL PROVIDE A CLEAR OPENING OF 36" MINIMUM. THERE SHALL BE NO PROJECTIONS INTO THE CLEAR OPENING WIDTH LOWER THAN 34" ABOVE THE FLOOR AND GROUND. PROJECTIONS INTO THE MINIMUM CLEAR OPENING WIDTH MORE THAN 34" AND UP TO 80" ABOVE THE FLOOR OR GROUND ARE PERMITTED BUT SHALL NOT EXCEED 4". (FIG. 404.2.3)
404.2.4 MANEUVERING CLEARANCES AT DOORS.
(SEE TABLES 404.2.4.1, 404.2.4.2 AND 404.2.4.3; AND SEE FIGS. 404.2.4.1, 404.2.4.2 AND 404.2.6
404.2.4.1 SWINGING DOORS.
SWINGING DOORS SHALL HAVE MANEUVERING CLEARANCES COMPLYING WITH TABLE 404.2.4.1
404.2.4.2 SLIDING AND FOLDING DOORS.
SLIDING DOORS AND FOLDING DOORS SHALL HAVE MANEUVERING CLEARANCES COMPLYING WITH TABLE 404.2.4.2.
404.2.4.3 DOORWAYS WITHOUT DOORS.
DOORWAYS WITHOUT DOORS THAT ARE LESS THAN 36" WIDE SHALL HAVE MANEUVERING CLEARANCES COMPLYING WITH TABLE 404.2.4.3.
404.2.4.4 RECESSED DOORS.
WHERE THE PLANE OF THE DOORWAY IS RECESSED CLEARANCES FOR FRONT APPROACH SHALL BE PROVIDED.
404.2.4.5 FLOOR OR GROUND SURFACES.
FLOOR OR GROUND SURFACES WITHIN THE MANEUVERING CLEARANCES SHALL HAVE A SLOPE NOT STEEPER THAN 1:48 AND SHALL COMPLY WITH SECTION 302.
404.2.5 THRESHOLDS AT DOORWAYS.
THRESHOLDS, IF PROVIDED, AT DOORWAYS SHALL BE ½" HIGH MAXIMUM. RAISED THRESHOLDS AND CHANGES IN LEVEL AT DOORWAYS MUST COMPLY WITH SECTIONS 302 AND 303.
404.2.6 TWO DOORS IN SERIES.
DISTANCE BETWEEN TWO HINGED OR PIVOTED DOORS IN SERIES SHALL BE 48" MINIMUM PLUS THE WIDTH OF ANY DOOR SWINGING INTO THE SPACE.
404.2.7 DOOR HARDWARE.
HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERABLE PARTS ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST TO OPERATE. SUCH HARDWARE SHALL BE 34" MINIMUM AND 48" MAXIMUM ABOVE THE FLOOR OR GROUND. WHERE SLIDING DOORS ARE IN THE FULLY OPEN POSITION, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES.
EXCEPTION: LOCKS USED ONLY FOR SECURITY PURPOSES AND NOT USED FOR NORMAL OPERATION ARE PERMITTED IN ANY LOCATION.

(H) 404 DOORS AND DOORWAYS



(J) 407 ELEVATORS

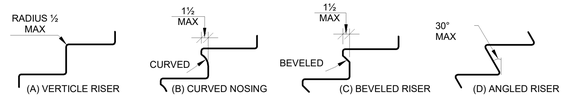


FIGURE 504.5 STAIR NOSINGS

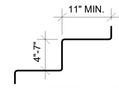


FIGURE 504.2 TREADS AND RISERS FOR ACCESSIBLE STAIRWAYS

504.2 TREADS AND RISERS.
ALL STEPS ON A FLIGHT OF STAIRS SHALL HAVE UNIFORM RISER HEIGHTS AND UNIFORM TREAD DEPTH. RISERS SHALL BE 4" HIGH MINIMUM AND 7" MAXIMUM. TREADS SHALL BE 11" DEEP MINIMUM, MEASURED FROM RISER TO RISER. (FIG. 504.2)
504.3 OPEN RISERS.
OPEN RISERS SHALL NOT BE PERMITTED.
504.4 TREAD SURFACE.
STAIR TREADS SHALL COMPLY WITH SECTION 302.
504.5 NOSINGS.
THE RADIUS OF CURVATURE AT THE LEADING EDGE OF THE TREAD SHALL BE 1/2" MAXIMUM. NOSINGS THAT PROJECT BEYOND RISERS SHALL HAVE THE UNDERSIDE OF THE LEADING EDGE CURVED OR BEVELED. RISERS SHALL BE PERMITTED TO SLOPE UNDER THE TREAD AT AN ANGLE OF 30° MAXIMUM FROM VERTICAL. THE PERMITTED PROJECTION OF THE NOSING SHALL BE 1/2" MAXIMUM BEYOND THE TREAD BELOW.
504.6 HANDRAILS.
STAIRS SHALL HAVE HANDRAILS COMPLYING WITH SECTION 505.

(K) 504 STAIRWAYS

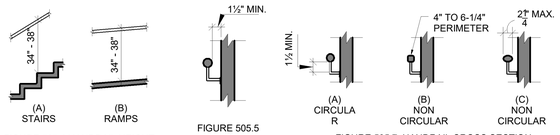


FIGURE 504.4 HANDRAIL HEIGHT

FIGURE 505.5 HANDRAIL CLEARANCE

FIGURE 505.7 HANDRAIL CROSS SECTION

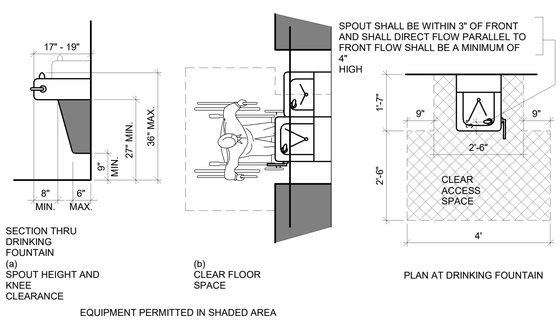
FIGURE 505.10.1 TOP AND BOTTOM HANDRAIL EXTENSIONS AT RAMPS

FIGURE 505.10.2 TOP HANDRAIL EXTENSIONS AT STAIRS

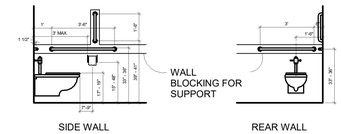
FIGURE 505.10.3 BOTTOM HANDRAIL EXTENSIONS AT STAIRS

505.2 LOCATION.
HANDRAILS SHALL BE PROVIDED ON BOTH SIDES OF STAIRS AND RAMPS.
505.3 CONTINUITY.
HANDRAILS SHALL BE CONTINUOUS WITHIN THE FULL LENGTH OF EACH STAIR FLIGHT OR RAMP RUN. INSIDE HANDRAILS ON SWITCHBACK OR DOGLEG STAIRS OR RAMPS SHALL BE CONTINUOUS BETWEEN FLIGHTS OR RUNS. OTHER HANDRAILS SHALL COMPLY WITH SECTIONS 505.10 AND 307.
505.4 HEIGHT.
TOP OF GRIPPING SURFACES OF HANDRAILS SHALL BE 34" MINIMUM AND 38" MAXIMUM VERTICALLY ABOVE STAIR NOSINGS AND RAMP SURFACES. HANDRAILS SHALL BE AT A CONSISTENT HEIGHT ABOVE STAIR NOSINGS AND RAMP SURFACES.
505.5 CLEARANCE.
CLEAR SPACE BETWEEN HANDRAIL AND WALL SHALL BE 1-1/2" MINIMUM.
505.6 GRIPPING SURFACE.
GRIPPING SURFACES SHALL BE CONTINUOUS, WITHOUT INTERRUPTION BY NEWELL POSTS, OR OTHER CONSTRUCTION ELEMENTS OR OBSTRUCTIONS.
505.7 CROSS SECTION.
HANDRAILS SHALL HAVE A CIRCULAR CROSS-SECTION WITH AN OUTSIDE DIAMETER OF 1- 1/4" MINIMUM AND 2" MAXIMUM, OR SHALL PROVIDE EQUIVALENT GRASPABILITY COMPLYING WITH SECTION 505.7.1.
505.7.1 NON-CIRCULAR CROSS SECTIONS.
HANDRAILS WITH OTHER SHAPES SHALL BE PERMITTED PROVIDED THEY HAVE A PERIMETER DIMENSION OF 4" MINIMUM AND 6- 1/2" MAXIMUM, AND PROVIDED THEIR LARGEST CROSS-SECTION DIMENSION IS 2- 1/4" MAXIMUM.
505.10.1 TOP AND BOTTOM EXTENSION AT RAMPS.
RAMP HANDRAILS SHALL EXTEND HORIZONTALLY 12" MINIMUM BEYOND THE TOP AND BOTTOM OF RAMP RUNS. SUCH EXTENSION SHALL RETURN TO A WALL, GUARD, OR THE WALKING SURFACE, OR SHALL BE CONTINUOUS TO THE HANDRAIL OF AN ADJACENT RAMP RUN.
505.10.2 TOP EXTENSIONS AT STAIRS.
AT THE TOP OF A STAIR FLIGHT, HANDRAILS SHALL EXTEND HORIZONTALLY ABOVE THE LANDING FOR 12" MINIMUM, BEGINNING DIRECTLY ABOVE THE FIRST RISER NOSING. SUCH EXTENSON SHALL RETURN TO A WALL, GUARD OR THE WALKING SURFACE, OR SHALL BE CONTINUOUS TO THE HANDRAIL OF AN ADJACENT STAIR FLIGHT.
505.10.3 BOTTOM EXTENSION AT STAIRS.
AT THE BOTTOM OF A STAIR FLIGHT, HANDRAILS SHALL EXTEND AT THE SLOPE OF THE STAIR FLIGHT FOR A DISTANCE EQUAL TO ONE TREAD DEPTH BEYOND THE LAST RISER NOSING. SUCH EXTENSION SHALL CONTINUE WITH A HORIZONTAL EXTENSION OR SHALL BE CONTINUOUS TO THE HANDRAIL OF AN ADJACENT STAIR FLIGHT, OR SHALL RETURN TO A WALL, GUARD OR THE WALKING SURFACE. IF PROVIDED AT THE BOTTOM OF A STAIR FLIGHT, A HORIZONTAL EXTENSION OF A HANDRAIL SHALL BE 12" LONG, MINIMUM, AND A HEIGHT EQUAL TO THAT OF THE SLOPING PORTION OF THE HANDRAIL, AS MEASURED ABOVE THE STAIR NOSINGS. SUCH EXTENSION SHALL RETURN TO A WALL, GUARD OR THE WALKING SURFACE, OR SHALL BE CONTINUOUS TO THE HANDRAIL OF AN ADJACENT STAIR FLIGHT.

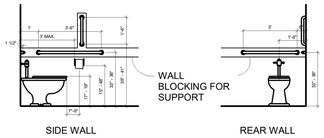
(L) 505 HANDRAILS



(M) 602 DRINKING FOUNTAINS

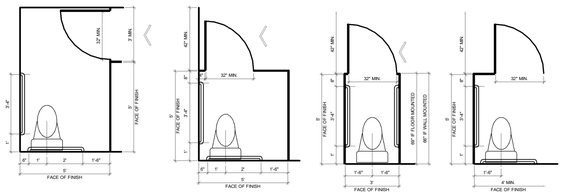


WALL MOUNTED TOILET



FLOOR MOUNTED TOILET

CLEAR FLOOR SPACE AT WATER CLOSETS

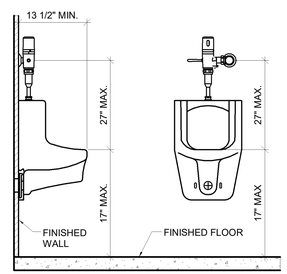


(a-1) STANDARD STALL (END OF ROW)

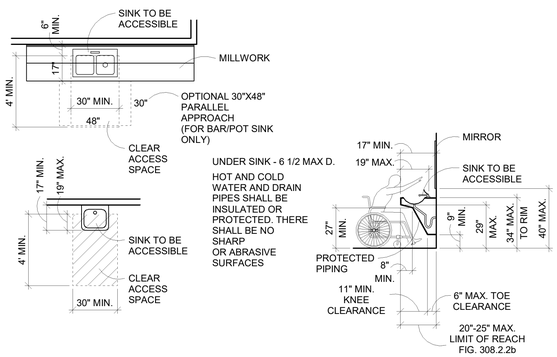
(a) STANDARD STALL

(b) ALTERNATE STALLS

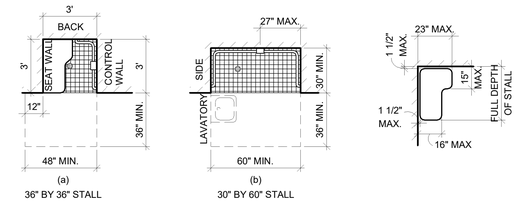
(N) 604 WATER CLOSETS AND TOILET COMPARTMENTS



(P) 605 URINALS

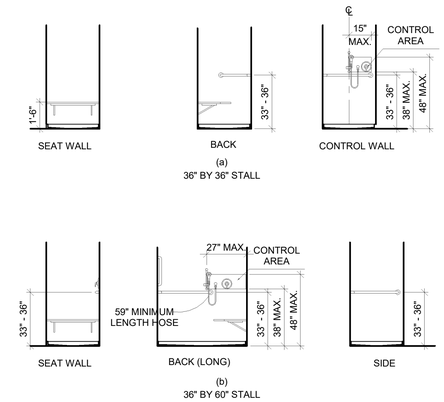


(Q) 606 LAVATORIES AND SINKS



SHOWER SIZE AND CLEARANCES

SHOWER SEAT DESIGN



NOTE: SHOWERHEAD AND CONTROL AREA MAY BE ON BACK (LONG) WALL (AS SHOWN) OR ON EITHER SIDE WALL WHEN NO SEAT IS OFFERED

(R) 608 SHOWER COMPARTMENTS

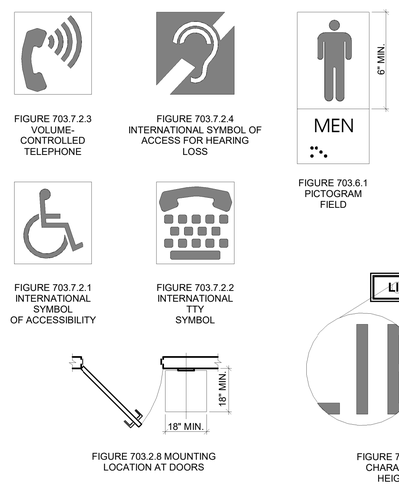


FIGURE 703.7.2.3 VOLUME-CONTROLLED TELEPHONE

FIGURE 703.7.2.4 INTERNATIONAL SYMBOL OF ACCESS FOR HEARING LOSS

FIGURE 703.6.1 PICTOGRAM FIELD

FIGURE 703.7.2.1 INTERNATIONAL SYMBOL OF ACCESSIBILITY

FIGURE 703.7.2.2 INTERNATIONAL TTY SYMBOL

FIGURE 703.2.8 MOUNTING LOCATION AT DOORS

FIGURE 703.2.4.4 CHARACTER HEIGHT

(S) 703 SIGNS

CAWLEY ARCHITECTS
730 N. 52nd St. Ste. 203
Phoenix, Arizona 85008
P 602.393.5060
CawleyArchitects.com

REGISTERED ARCHITECT CERTIFICATE NO. 35401 KEVIN LINCETT Date Signed 10/21/2024 ARIZONA, U.S.A. PRELIMINARY NOT FOR CONSTRUCTION

COMMERCIAL BUILDING INNOVATIVE DRIVE

4121 W. INNOVATIVE DR. PHOENIX, AZ 85086

DATE
75% PROGRESS SET
11-20-2024

DRAWN BY: BC

OWNERSHIP OF DOCUMENTS:
This drawing, including the architectural concept, design, and data, is an instrument of service and shall remain the property of Cawley Architects Inc. This drawing is for use at the location described herein and shall not be used in other locations. Any other use or release of these drawings may result in civil damages.

DISCREPANCIES AND CONFLICTS:
All discrepancies found in these documents or conflicts between these documents and field conditions shall be reported to Cawley Architects Inc. for resolution before the commencement of the work.

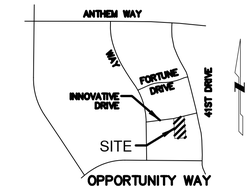
ADA STANDARD DETAILS

Project:22105

A0.8

ANTHEM COMMERCE PARK
GRADING & DRAINAGE PLANS
WITH OFFSITE IMPROVEMENTS
4121 WEST INNOVATIVE DRIVE
PHOENIX, AZ 85086

LOCATED IN THE NORTHWEST QUARTER OF SECTION 15, TOWNSHIP 6 NORTH, RANGE 2 EAST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.



CITY OF PHOENIX GRADING & DRAINAGE NOTES

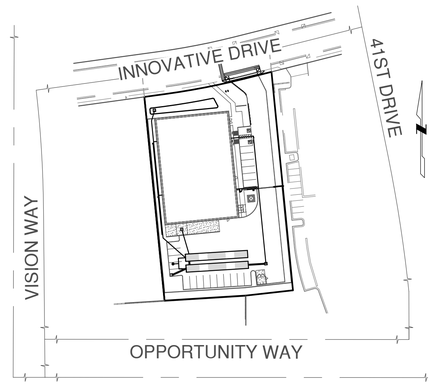
1. A GRADING PERMIT IS REQUIRED UNDER PCC CHAPTER 32A.
2. WHEN HAUL PERMITS ARE REQUIRED, THEY MUST BE OBTAINED PRIOR TO OR CONCURRENTLY WITH THE G&D PERMIT.
3. EXCAVATING CONTRACTOR MUST GIVE LOCATION FOR WASTING EXCESS EXCAVATION AND A LETTER FROM OWNER GIVING PERMISSION FOR DUMPING PRIOR TO STARTING ON-SITE CONSTRUCTION. IF EXCESS EXCAVATION EXCEEDS 100 CUBIC YARDS, THE DISPOSAL SITE WILL ALSO REQUIRE A G&D PERMIT.
4. PLANNING & DEVELOPMENT DEPARTMENT FIELD INSPECTION GROUP SHALL BE NOTIFIED 48 HOURS BEFORE ANY ON-SITE AND/OR OFF-SITE CONSTRUCTION BEGINS, TELEPHONE (602) 262-7811 OR 7-1-1 (TTY).
5. BUILDING PAD CERTIFICATIONS WILL BE REQUIRED ON ALL LOTS WITHIN THE SUBDIVISION AND SUBMITTED TO THE CIVIL/SITE INSPECTOR PRIOR TO ANY CONCRETE CONSTRUCTED IN THE R/W. BUILDING PAD CERTIFICATION CAN BE SUBMITTED TO THE CIVIL/SITE INSPECTOR BY EITHER SUBMITTING ONE APPROVED BLACK-LINE AS-BUILT GRADING AND DRAINAGE PLAN OR IN LETTER FORMAT SHOWING THE DESIGN AND AS-BUILT BUILDING PAD ELEVATIONS AS SHOWN ON THE APPROVED GRADING AND DRAINAGE PLAN. IT IS REQUIRED THAT THE AS-BUILT PLAN AND LETTER BE SEALED BY A CIVIL PROFESSIONAL ENGINEER OR LAND SURVEYOR REGISTERED IN THE STATE OF ARIZONA.
6. A SEPARATE PERMIT IS NECESSARY FOR ANY OFFSITE CONSTRUCTION.
7. AN APPROVED G&D PLAN SHALL BE ON THE JOB SITE AT ALL TIMES. DEVIATIONS FROM THE PLAN MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
8. G&D PLAN APPROVAL INCLUDES THE CONSTRUCTION OF ALL SURFACE IMPROVEMENTS SHOWN ON THE APPROVED PLAN, INCLUDING, BUT NOT LIMITED TO, RETENTION AREAS, SEDIMENTATION BASINS, AND/OR OTHER DRAINAGE FACILITIES, DRAINAGE PATTERNS, WALLS, CURBS, ASPHALT PAVEMENT, AND BUILDING FLOOR ELEVATION.
9. GRADES SHOWN IN RETENTION BASINS ARE DESIGN FINISHED GRADES. SHOULD THE CONTRACTOR OR ANY SUB- CONTRACTOR PLAN TO PLACE SPOIL DIRT FROM FOOTINGS, UTILITY TRENCHES, LANDSCAPING, SWIMMING POOLS, ETC. IN THE BASINS, THE BASINS SHOULD BE SUFFICIENTLY OVER-EXCAVATED DURING THE ROUGH GRADING OPERATION TO ALLOW FOR THE PLACEMENT OF THE FILL OR LANDSCAPING MATERIALS.
10. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND CONFIRMING DEPTHS OF ALL THE EXISTING UTILITY LINES WITHIN PROPOSED RETENTION BASIN AREAS. IF THE BASIN CANNOT BE CONSTRUCTED PER PLAN BECAUSE OF CONFLICTS, THE CONTRACTOR SHOULD DISCUSS MODIFICATION OF BASIN CONFIGURATION WITH THE CITY INSPECTOR TO DETERMINE IF A PLAN REVISION OR A FIELD CHANGE IS REQUIRED.
11. ALL DRAINAGE PROTECTIVE DEVICES SUCH AS SWALES, INTERCEPTOR DITCHES, PIPES, PROTECTIVE BERMS, BARRIER WALLS, CONCRETE CHANNELS, OR OTHER MEASURES DESIGNED TO PROTECT ADJACENT BUILDINGS OR PROPERTY FROM STORM RUNOFF MUST BE COMPLETED PRIOR TO BUILDING CONSTRUCTION.
12. PER SECTION 6.8.7 OF THE CITY STORM WATER POLICIES AND STANDARDS, SIDE SLOPES OF STORM WATER STORAGE FACILITIES SHALL BE NO STEEPER THAN 5:1 FOR IRRIGATED GRASS AREAS AND 3:1 FOR LANDSCAPE AREAS. SLOPE STABILIZATION MEASURES ARE REQUIRED FOR ALL SLOPES GREATER THAN 5:1. THE SLOPE STABILIZATION MEASURES MUST BE READILY MAINTAINABLE USING COMMON MAINTENANCE EQUIPMENT AND BE DESIGNED WITH CONSIDERATION TO AESTHETICS. THE SLOPE STABILIZATION MEASURES SHALL BE CONSISTENT WITH COMMONLY USED ENGINEERING PRACTICES. UN-STABILIZED DECOMPOSED GRANITE IS NOT ALLOWED ON SLOPES GREATER THAN 5:1.
13. ALL RETAINING WALLS ARE TO BE REVIEWED, PERMITTED, AND INSPECTED BY THE BUILDING SAFETY BRANCH OF THE PLANNING & DEVELOPMENT DEPARTMENT. ALL RETAINING WALLS ARE TO BE IN ACCORDANCE WITH SECTION 703 OF THE ZONING ORDINANCE AND SECTION 32-32 OF THE SUBDIVISION ORDINANCE FOR SPECIFIC WALL HEIGHT REQUIREMENTS.
NOTE: USE PERMIT FOR IS REQUIRED FOR ALL OVER-HEIGHT RETAINING WALLS.
15. ALL RAMPS MUST MEET 2010 AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS FOR ACCESSIBLE DESIGN AND CITY OF PHOENIX SUPPLEMENT TO MAG UNIFORM STANDARD SPECIFICATIONS AND DETAILS; 2% MAX CROSS SLOPES AND 12:1 MAX LONGITUDINAL SLOPES.
16. CERTIFICATE OF OCCUPANCY (C OF O) AND/OR FINAL ELECTRICAL CLEARANCE FOR ANY BUILDING IS DENIED UNTIL ALL G&D IMPROVEMENTS ARE COMPLETED.
17. EXISTING OR NEWLY DAMAGED AND/OR DISPLACED CONCRETE CURB, GUTTER, SIDEWALK, OR DRIVEWAY SLAB THAT IS WITHIN THE R/W SHALL BE REPAIRED OR REPLACED, AS NOTED BY CITY INSPECTORS, BEFORE FINAL ACCEPTANCE OF THE WORK.
18. THE ENGINEERING DESIGN ON THESE PLANS IS ONLY APPROVED BY THE CITY IN SCOPE AND NOT IN DETAIL. CONSTRUCTION QUANTITIES ON THESE PLANS ARE NOT VERIFIED BY THE CITY. APPROVAL OF THESE PLANS ARE FOR PERMIT PURPOSES ONLY AND SHALL NOT PREVENT THE CITY FROM REQUIRING CORRECTION OF ERRORS IN THE PLANS WHERE SUCH ERRORS ARE SUBSEQUENTLY FOUND TO BE IN VIOLATION OF ANY LAW, ORDINANCE, HEALTH, SAFETY, OR OTHER DESIGN ISSUES.
19. THE CITY POLICE DEPARTMENT ENFORCES LAWS REGULATING THE OPERATION OF COMMERCIAL VEHICLES. THIS INCLUDES ENFORCEMENT OF FEDERAL, STATE, COUNTY AND LOCAL LAWS AND ORDINANCES. QUESTIONS REGARDING COMMERCIAL VEHICLE ENFORCEMENT MAY BE DIRECTED TO THE COMMERCIAL VEHICLE ENFORCEMENT SUPERVISOR AT (602) 495-7813 (TRAFFIC BUREAU SOUTH) OR (602) 495-6784 (TRAFFIC BUREAU NORTH), OR 7-1-1 (TTY).
20. PLAN APPROVAL IS VALID FOR 12 MONTHS. PRIOR TO PLAN APPROVAL EXPIRATION, ALL ASSOCIATED PERMITS SHALL BE PURCHASED OR THE PLANS SHALL BE RESUBMITTED FOR EXTENSION OF PLAN APPROVAL. THE EXPIRATION, EXTENSION, AND REINSTATEMENT OF CIVIL ENGINEERING PLANS AND PERMITS SHALL FOLLOW THE SAME GUIDELINES AS THOSE INDICATED IN THE PHOENIX BUILDING CONSTRUCTION CODE ADMINISTRATIVE PROVISIONS SECTION 105.3 FOR BUILDING PERMITS.
21. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR REGISTERING THE DRYWELL SHOWN ON THE G&D PLAN WITH THE ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (ADEQ). FOR INFORMATION ABOUT SPECIFIC REQUIREMENTS, CONTACT THE WATER PERMITS UNIT AT (602) 771-1440
22. DRYWELLS MUST BE DRILLED A MINIMUM OF 10 FEET INTO PERMEABLE POROUS STRATA OR PERCOLATIONS TEST WILL BE REQUIRED. THE G&D INSPECTOR MUST BE PRESENT BEFORE BACKFILL OR WELL PIPES ARE PLACED WITHIN ANY DRY WELLS.
23. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR INSTALLING DRYWELL(S) SHOULD THE RETENTION BASINS FAIL TO DRAIN WITHIN 36 HOURS

THIS SET OF CONSTRUCTION PLANS HAVE BEEN SUBMITTED TO THE FOLLOWING UTILITY COMPANIES FOR REVIEW AND TO DETERMINE ANY POTENTIAL CONFLICTS.

UTILITY COMPANY	COMPANY CONTACT	DATE SUBMITTED
SALT RIVER PROJECT - POWER	SRPNET.SHAREPOINT.COM	-
COX COMMUNICATIONS	DIANA CARPENTER	-
CENTURYLINK	JEANNETTE DEBOARD	-
SOUTHWEST GAS CORPORATION	ADAM SHOCHAT	-

LEGEND

1210	EXISTING CONTOUR
P=1210.92	EXISTING PAVEMENT ELEVATION
VG=1210.56	EXISTING VALLEY GUTTER GRADE
18.0	FINISH CONTOUR ELEVATION
P=	FINISH PAVEMENT ELEVATION
GR=	TOP OF GRATE ELEVATION
TC=	FINISH TOP OF CURB ELEVATION
G=	FINISH GUTTER ELEVATION
FG=	FINISH GRADE
INV=	PIPE INVERT
HWE=	HIGHWATER ELEVATION
BOT=	BOTTOM OF BASIN
100 CF	RETENTION VOLUME PROVIDED
DA	DRAINAGE AREA
	DRAINAGE AREA BOUNDARY
FFE=	FINISH FLOOR ELEVATION
2.0%	DIRECTION & SLOPE OF DRAINAGE
W	WATER
S	SEWER
F	FIRE LINE
	CATCH BASIN
	DRYWELL
	STORM DRAIN PIPE



KEY MAP
1"=100'

Sheet List Table	
Sheet Number	Sheet Title
C1.1	COVER SHEET
C1.2	NOTES & DETAILS
C1.3	DETAILS
C1.4	PAVING PLAN
C1.5	GRADING & DRAINAGE PLAN
C1.6	STORM DRAIN PROFILES
C1.7	GRADING SECTIONS

OFFSITE QUANTITIES

CONCRETE SIDEWALK	1474 SF
CURB & GUTTER	836 LF
DRIVEWAY PER MAG 260	1 EA
REMOVE EX, DRIVEWAY	1 EA

EARTHWORK

CUT = - CU. YD
FILL = - CU. YD

NOTE: ENGINEER'S ESTIMATED EARTHWORK QUANTITIES ARE FOR INFORMATION PURPOSES ONLY. CONTRACTOR SHALL PERFORM HIS/HER OWN QUANTITY TAKEOFF FOR BIDDING PURPOSES.

RETENTION CALCULATIONS (ONSITE)

VOLUME REQUIRED (V_R) =C (P/12)(A)
P=2.09 INCHES (100 YEAR, 2 HOUR STORM)
A=AREA (SQUARE FEET) = 53,165 SF
C=0.90
V_R =(0.90)(2.72/12)(53,165) = 10,846+25%=13,557 CF
V_P = (174)(78.5) = 13,659 CF

PROJECT DESCRIPTION

THE SITE IS A 1.17 ACRE PARCEL LOCATED AT 4121 WEST INNOVATIVE DRIVE. THIS IS AN EXISTING LOT IN AN INDUSTRIAL AREA. THE PROPOSED USE IS A COMMERCIAL OFFICE / WAREHOUSE BUILDING. ACCESS WILL BE PROVIDED BY A PROPOSED DRIVE ENTRANCE FROM INNOVATIVE DRIVE. THE SITE WILL BE SERVICED BY NEW WATER AND SEWER BUILDING CONNECTIONS WHICH WILL TIE INTO THE EXISTING WATER AND SEWER MAINS IN INNOVATIVE DRIVE. THE SITE WILL PROVIDE ONSITE RETENTION FOR THE 100 YEAR, 2 HOUR STORM EVENT.

ENGINEERING SUMP STATEMENT

THIS PROPERTY IS BEING DEVELOPED AS AN 'ENGINEER SUMP CONDITION'. THE FINISH FLOOR ELEVATION FOR NEW CONSTRUCTION SHALL BE A MINIMUM OF 14" (1.17') ABOVE THE OUTFALL OR 6" (0.5') ABOVE THE MAXIMUM WATER SURFACE ELEVATION, WHICHEVER IS GREATER.

RETENTION SUMMARY						
BASIN	DRAINAGE AREA (SF)	WTD.C	VOLUME REQUIRED (CF)	VOLUME PROVIDED (CF)	AS-BUILT VOLUME	COMMENTS
A	53,165	0.90	13,557	13,659		-
B		0.90				-
TOTALS	53,165	0.90	13,557	13,659		

SITE DATA

SITE ADDRESS:	4121 WEST INNOVATIVE DRIVE PHOENIX, AZ 85086
APN:	203-03-022
EXISTING ZONING:	CP/GCP
PROPOSED ZONING:	CP/GCP
SITE AREA:	53,165 SF / 1.17 ACRES
DISTURBED AREA:	53,165 SF / 1.17 ACRES

PARKING CALCULATION

PARKING REQUIRED:	22 SPACES
PARKING PROVIDED:	22 SPACES
ADA SPACES REQUIRED:	2
ADA SPACES PROVIDED:	2

FLOOD ZONE CERTIFICATION

THIS PROPERTY LIES IN ZONE "X" AND IS NOT LOCATED WITHIN ANY PRESENTLY ESTABLISHED 100-YEAR FLOOD PLAIN, AS SHOWN BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP FOR THE CITY OF PHOENIX, ARIZONA COMMUNITY PANEL NUMBER 04013C0835L EFFECTIVE DATE OCTOBER 168. 2013.

DRAINAGE STATEMENT

1. THIS SITE IS NOT WITHIN A SPECIAL FLOOD HAZARD AREA.
2. NO OFFICE FLOWS ENTER THE SITE
3. RETENTION WILL BE PROVIDED FOR THE 100 YEAR, 2 HOUR STORM
4. EXTREME OUTFALL IS LOCATED AT THE SOUTHWEST CORNER OF THE SITE AT ELEVATION OF 1853.0

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED ENGINEER/LAND SURVEYOR

DATE

REGISTRATION NUMBER

DEVELOPER
CFC OPPORUNITY WAY LP
1807 SOUTH SAN GABRIEL BLVD.
SAN GABRIEL, CA 91776

ARCHITECT
CAWLEY ARCHITECTS
730 N. 52ND STREET, SUITE 203
PHOENIX, AZ 85008
PHONE: (602) 393-5060
CONTACT: D. CHRISTOPHER BARTA
EMAIL: CHRISTOPHERB@CRAWLEYARCHITECTS.COM

ENGINEER
BOWMAN CONSULTING
1600 N. DESERT DRIVE SUITE 210
TEMPE, AZ 85288
PHONE: (480) 629-8830
CONTACT: JEFF RYBARCZYK
EMAIL:JRYBARCZYK@BOWMAN.COM
REG NO 28117

BASIS OF BEARINGS

THE WEST LINE OF THE NORTHWEST QUARTER OF SECTION 15, USING A BEARING OF NORTH 0 DEGREES 10 MINUTES 8 SECONDS EAST, AS PER THE RECORD OF SURVEY IN BOOK 714, PAGE 5, RECORDS OF MARICOPA COUNTY, ARIZONA.

BENCHMARK

THE CITY OF PHOENIX UNIQUE POINT ID: 1914, BEING A CHISELED SQUARE ON TOP OF CURB, LOCATED AT EAST END OF NORTHEAST RETURN, EAST SIDE OF BRIDGE OVER I-17, HAVING AN ELEVATION OF 1908.53', NGVD29.

LEGAL DESCRIPTION

LOT 12 AS SHOWN ON FINAL PLAT OF ANTHEM COMMERCE PARK 33.2 RECORDED IN THE OFFICE OF MARICOPA COUNTY RECORDER, BOOK 537, PAGE 26 THEREOF

KIVA PROJECT #: 04-3332A3
SDEV #: 0401420
PAPP #: 2208465
QS #: 68-19
MEETING DATE: 12/27/2022

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

Bowman

Bowman Consulting Group Ltd
1600 N. Desert Drive, Ste 210
Tempe, Arizona 85288
Phone: (480) 629-8830
www.bowman.com

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COVER SHEET
ANTHEM COMMERCE PARK
4121 WEST INNOVATIVE DRIVE
PHOENIX, AZ 85086
MARICOPA COUNTY

PROJECT NUMBER

REGISTERED PROFESSIONAL ENGINEER (CIVIL)
CERTIFICATE NO. 28117
JEFFREY SCOTT RYBARCZYK
Date Signed 10.31.24
ARIZONA U.S.A.

PLAN STATUS

DATE	DESCRIPTION	
JSR DESIGN	JMB DRAWN	JSR CHKD
SCALE	H: 1"=20' V: N.T.S	
JOB No. 051881-01-001		
DATE : 10.31.2024		

SHEET 1 OF 7
C1.1

BOWMAN CONSULTING NOTES

1. THESE PLANS ARE SUBJECT TO THE INTERPRETATION OF INTENT BY THE ENGINEER. ALL QUESTIONS REGARDING THESE PLANS SHALL BE PRESENTED TO THE ENGINEER. ANYONE WHO TAKES UPON THEMSELVES THE INTERPRETATION OF THE DRAWINGS OR MAKES REVISIONS TO THE SAME WITHOUT CONFERRING WITH THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR THE CONSEQUENCES THEREOF.

2. THE ESTIMATED QUANTITIES SHOWN ARE FOR INFORMATION PURPOSES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETENESS AND ACCURACY OF A DETAILED ESTIMATE BASED ON THESE PLANS, CURRENT CODES, AND SITE VISITATION.

3. ALL EARTHWORK CONSTRUCTION SHALL CONFORM TO THE LATEST MARICOPA ASSOCIATION OF GOVERNMENTS STANDARD DETAILS AND/OR SPECIFICATIONS INCLUDING ANY SUPPLEMENTS THERETO, AND ALL ADDENDA. THE CONTRACTOR IS TO FOLLOW THE RECOMMENDATION OF THE PROJECT SOIL INVESTIGATION REPORT AND LETTER.

4. PRIOR TO BIDDING THE WORK, THE CONTRACTOR SHALL THOROUGHLY SATISFY THEMSELVES AS TO THE ACTUAL CONDITIONS, REQUIREMENTS OF THE WORK AND EXCESS OR DEFICIENCY IN QUANTITIES. NO CLAIMS SHALL BE MADE AGAINST THE OWNER/DEVELOPER OR ENGINEER FOR ANY EXCESS OR DEFICIENCY THEREIN, ACTUAL OR RELATIVE.

5. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS OR PROGRAMS UTILIZED IN CONNECTION WITH THE WORK, AND WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

6. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR COORDINATING THE RELOCATION OF UTILITIES, POWER POLES, ETC.

7. THE CONTRACTOR IS TO VERIFY THE LOCATION, ELEVATION, CONDITION, AND PAVEMENT CROSS-SLOPE OF ALL EXISTING SURFACES AT POINTS OF TIE-IN AND MATCHING, PRIOR TO COMMENCEMENT OF GRADING, PAVING, CURB AND GUTTER OR OTHER SURFACE CONSTRUCTION. SHOULD EXISTING LOCATIONS, ELEVATIONS, CONDITION, OR PAVEMENT CROSS-SLOPE DIFFER FROM THAT SHOWN ON THESE PLANS, RESULTING IN THE DESIGN INTENT REFLECTED ON THE PLANS NOT ABLE TO BE CONSTRUCTED, THE CONTRACTOR SHALL NOTIFY THE OWNER'S AGENT IMMEDIATELY FOR DIRECTION ON HOW TO PROCEED PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR ALL COSTS ASSOCIATED WITH CORRECTIVE ACTION IF THESE PROCEDURES ARE NOT FOLLOWED.

8. EXISTING UTILITIES SHOWN ON THESE PLANS HAVE BEEN LOCATED ACCORDING TO INFORMATION PROVIDED BY THE AGENCY OPERATING EACH UTILITY. LOCATIONS SHOWN ARE APPROXIMATE ONLY, AND SHOULD BE CONSIDERED APPROXIMATE. CALL ARIZONA BLUE STAKE FOR FIELD LOCATION AT 8-1-1 or 1-800-STAKE-IT A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO EXCAVATION. THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING UTILITIES ON THE SITE NOT NOTED FOR RELOCATION OR REMOVAL. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN OR NOT ON THE DRAWING, SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S EXPENSE. EXISTING SURFACE FEATURES AND FENCING OUTSIDE OF THE CONSTRUCTION LIMITS SHALL BE REPLACED IN KIND IF DISTURBED.

9. THE ENGINEER AND APPLICABLE AGENCY MUST APPROVE, PRIOR TO CONSTRUCTION, ANY ALTERATION, OR VARIANCE FROM THESE PLANS. ANY VARIATIONS FROM THESE PLANS SHALL BE PROPOSED ON CONSTRUCTION FIELD PRINTS AND TRANSMITTED TO THE ENGINEER.

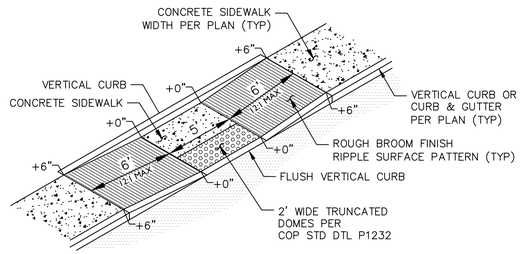
10. ANY INSPECTION BY THE CITY, COUNTY, ENGINEER, OR OTHER JURISDICTIONAL AGENCY, SHALL NOT, IN ANY WAY, RELIEVE THE CONTRACTOR FROM ANY OBLIGATION TO PERFORM THE WORK IN STRICT COMPLIANCE WITH APPLICABLE CODES AND AGENCY REQUIREMENTS.

11. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL UNDERGROUND FACILITIES FROM DAMAGE DURING CONSTRUCTION. THE DEPTH OF COVER IS DESIGNED FOR FINAL GRADE. THEREFORE, EXTRA CARE SUCH AS BERMING OVER PIPES, FLAGGING OR SIGNAGE SHOULD BE USED DURING CONSTRUCTION TO MAINTAIN COVER OR PROTECT THE UNDERGROUND FACILITIES.

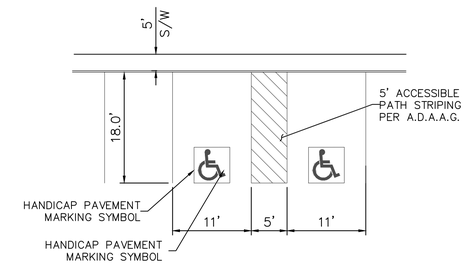
12. THE ENGINEER MAKES NO REPRESENTATION OR GUARANTEE REGARDING EARTHWORK QUANTITIES OR THAT THE EARTHWORK FOR THIS PROJECT WILL BALANCE DUE TO THE VARYING FIELD CONDITIONS, CHANGING SOIL TYPES, ALLOWABLE CONSTRUCTION TOLERANCES AND CONSTRUCTION METHODS THAT ARE BEYOND THE CONTROL OF THE ENGINEER. EARTHWORK QUANTITIES SHOWN ARE RAW, AND DO NOT ACCOUNT FOR SOIL SHRINK, SWELL OR GROUND SCARIFICATION.

13. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING PIPE AT PROPOSED CONNECTIONS PRIOR TO NEW PIPE INSTALLATION. NOTIFY ENGINEER IMMEDIATELY OF CONFLICTS OR DISCREPANCIES FROM THE PLANS.

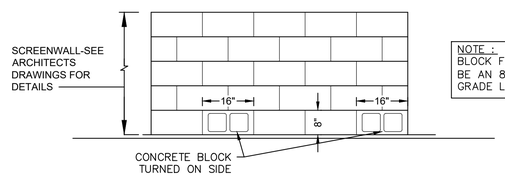
14. CONTRACTOR TO COMPLY WITH ALL ADA REQUIREMENTS RELATING TO CONSTRUCTION.



DETAIL 'A'
ACCESSIBLE RAMP DETAIL
N.T.S.



DETAIL 'B'
ACCESSIBLE PARKING DETAIL
N.T.S.



NOTE :
BLOCK FENCING SHALL HAVE EVERY THIRD BLOCK BE AN 8"X16" BLOCK PLACED ON ITS SIDE AT GRADE LEVEL. NO DECO BLOCK IS ALLOWED

WALL OPENING DETAIL
N.T.S.

Bowman

Bowman Consulting Group Ltd
5500 W Broad Street, Suite 210
Tempe, Arizona 85282

Phone: (480) 629-8830

www.bowman.com

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NOTES & DETAILS

ANTHEM COMMERCE PARK

4121 WEST INNOVATIVE DRIVE

PHOENIX, AZ 85086

MARICOPA COUNTY

PROJECT NUMBER

REGISTERED PROFESSIONAL ENGINEER (CIVIL)
CERTIFICATE NO.
28117
JEFFREY SCOTT
RYBARCZYK
Date Signed 10.31.2024
ARIZONA U.S.A.

PLAN STATUS

DATE	DESCRIPTION	
JSR	JMB	JSR
DESIGN	DRAWN	CHKD

SCALE H: 1"=20' V: N.T.S

JOB No. 051881-01-001

DATE : 10.31.2024

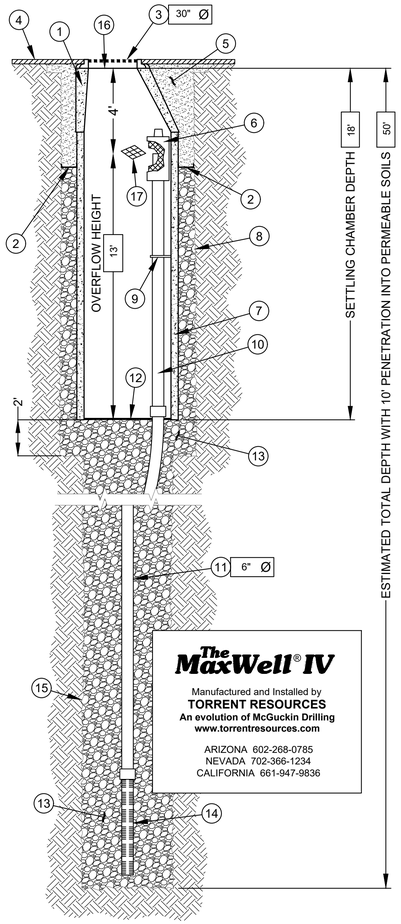
C1.2

SHEET 2 OF 7

The MaxWell® IV Drainage System Detail And Specifications

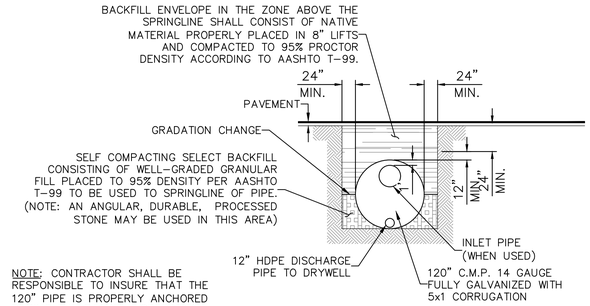
NOTES

1. **MANHOLE CONE** - MODIFIED FLAT BOTTOM.
2. **MOISTURE MEMBRANE** - 6 MIL. PLASTIC. APPLIES ONLY WHEN NATIVE MATERIAL IS USED FOR BACKFILL. PLACE MEMBRANE SECURELY AGAINST ECCENTRIC CONE AND HOLE SIDEWALL.
3. **BOLTED RING & GRATE** - DIAMETER AS SHOWN. CLEAN CAST IRON WITH WORDING **"STORM WATER ONLY"** IN RAISED LETTERS. **BOLTED IN 2 LOCATIONS** AND SECURED TO CONE WITH MORTAR. RIM ELEVATION ±0.02' OF PLANS.
4. **GRADED BASIN OR PAVING** (BY OTHERS).
5. **STABILIZED BACKFILL** - 1 SACK SLURRY.
6. **PUREFLO® DEBRIS SHIELD** - ROLLED 16 GA. STEEL X 24" LENGTH WITH VENTED ANTI-SIPHON AND INTERNAL .265" MAX. SWO FLATTENED EXPANDED STEEL SCREEN X 12" LENGTH. **FUSION BONDED EPOXY COATED.**
7. **PRE-CAST LINER** - 4000 PSI CONCRETE 48" ID. X 54" OD. **CENTER IN HOLE** AND ALIGN SECTIONS TO **MAXIMIZE BEARING SURFACE**.
8. **MIN. 6' Ø DRILLED SHAFT**.
9. **SUPPORT BRACKET** - FORMED 12 GA. STEEL. **FUSION BONDED EPOXY COATED**.
10. **OVERFLOW PIPE** - SCH. 40 PVC MATED TO DRAINAGE PIPE AT BASE SEAL.
11. **DRAINAGE PIPE** - ADS HIGHWAY GRADE WITH TRI-A COUPLER. SUSPEND PIPE DURING BACKFILL OPERATIONS TO PREVENT BUCKLING OR BREAKAGE. DIAMETER AS NOTED.
12. **BASE SEAL** - GEOTEXTILE OR CONCRETE SLURRY.
13. **ROCK** - WASHED, SIZED BETWEEN 3/8" AND 1-1/2" TO **BEST COMPLEMENT SOIL CONDITIONS**.
14. **FLOFAST® DRAINAGE SCREEN** - SCH. 40 PVC 0.120" SLOTTED WELL SCREEN WITH 32 SLOTS PER ROW/FT. 120" OVERALL LENGTH WITH TRI-B COUPLER.
15. **MIN. 4' Ø SHAFT** - DRILLED TO **MAINTAIN PERMEABILITY** OF DRAINAGE SOILS.
16. **FABRIC SEAL** - U.V. RESISTANT GEOTEXTILE - **TO BE REMOVED BY CUSTOMER** AT PROJECT COMPLETION.
17. **ABSORBENT** - HYDROPHOBIC PETROCHEMICAL SPONGE. MIN. 128 OZ. CAPACITY.



AZ Lic. ROC070465 A, ROC047067 B-4, ADWR 363
CA Lic. 529080, C-42, HAZ.
NV Lic 0035350 A - NM Lic. 90504 GF04

U.S. Patent No. 4,923,330 - ™ Trademark 1974, 1990, 2004



NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THAT THE 120" PIPE IS PROPERLY ANCHORED DURING THE BACKFILL OPERATION

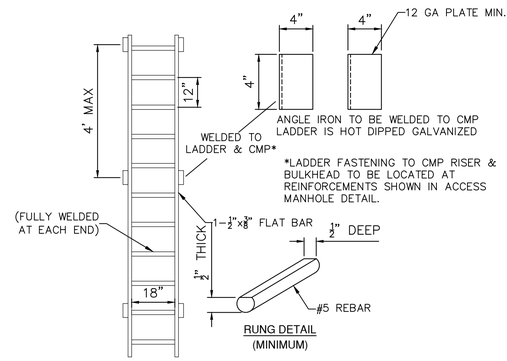
120" C.M.P. DETENTION SYSTEM CROSS SECTION

N.T.S.

NOTE: ALL C.M.P. SHOWN ON THESE PLANS ARE DESIGNED FOR STANDARD HIGHWAY LOADINGS. THE STANDARD SATISFACTORY MINIMUM COVER REQUIREMENTS AS ESTABLISHED BY THE PIPE MANUFACTURER MAY NOT ALWAYS BE ADEQUATE DURING CONSTRUCTION. WHEN CONSTRUCTION EQUIPMENT, FREQUENTLY HEAVIER THAN TRAFFIC LOADS FOR WHICH THE PIPE HAS BEEN DESIGNED, IS DRIVEN OVER OR CLOSE TO THE BURIED PIPE, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. THE ADEQUACY OF THE COVER REQUIREMENTS FOR PIPES SHALL BE ANALYZED AND CHECKED BY THE CONTRACTOR TO ADDRESS LOADING CONDITIONS IMPOSED BY CONSTRUCTION ACTIVITY. ANY PIPE DAMAGE BY CONSTRUCTION ACTIVITY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

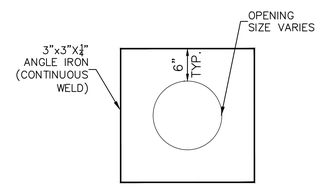
THE INSTALLATION OF CORRUGATED METAL PIPE FOR UNDERGROUND RETENTION STORAGE TANK SYSTEMS SHALL BE IN ACCORDANCE WITH MAG SECTION 621. EXCAVATION, BEDDING, AND BACKFILL SHALL BE IN ACCORDANCE WITH MAG SECTION 601, MATERIAL PER MAG SECTION 760, AND C-509.

ALL JOINTS IN THE UNDERGROUND RETENTION STORAGE TANK SYSTEM WILL BE WATER-TIGHT, MANUFACTURED JOINTS UNLESS THE FOUNDATION HAS BEEN APPROVED FOR SATURATED FOUNDATION CONDITION, AND AN INFILTRATION TEST HAS BEEN PERFORMED.



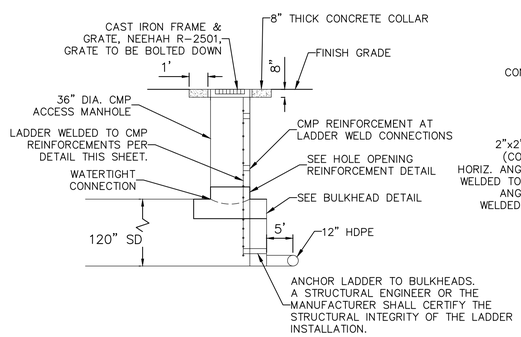
LADDER DETAIL FOR ACCESS MANHOLES AT BULKHEAD

N.T.S.



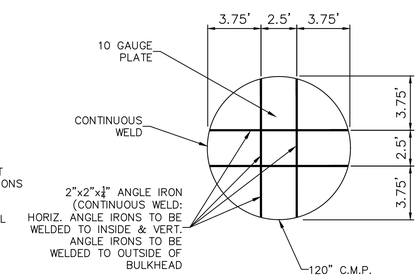
TYPICAL HOLE OPENING REINFORCEMENT MANHOLE + BULKHEAD OPENING

N.T.S.



CATCH BASIN/ACCESS MANHOLE

N.T.S.



BULKHEAD DETAIL

N.T.S.

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DETAILS
ANTHEM COMMERCE PARK
4121 WEST INNOVATIVE DRIVE
PHOENIX, AZ 85086
MARICOPA COUNTY

PROJECT NUMBER

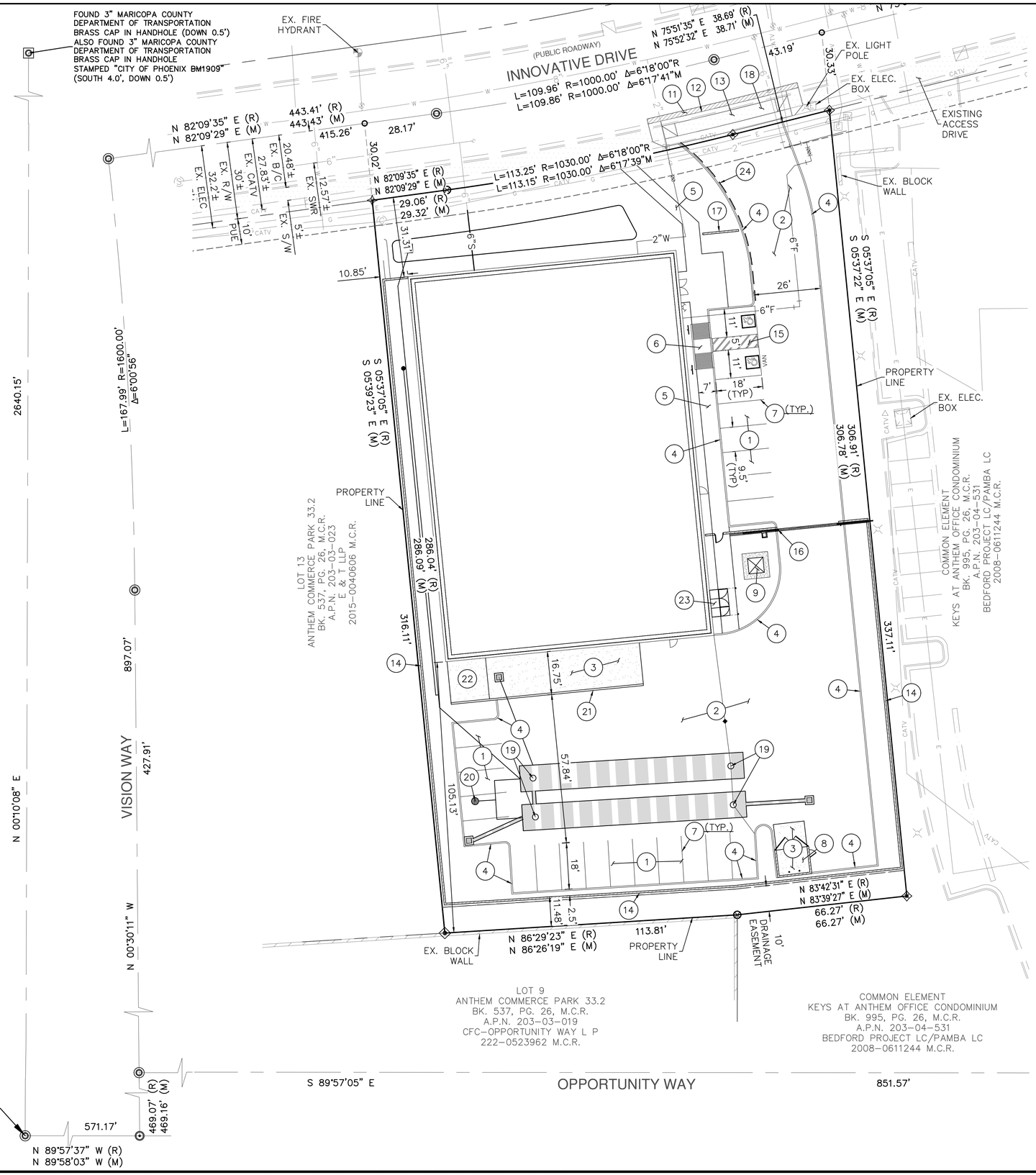
REGISTERED PROFESSIONAL ENGINEER (CIVIL)
CERTIFICATE NO. 28117
JEFFREY SCOTT RYBARCZYK
Date Signed 10.31.24
ARIZONA U.S.A.

PLAN STATUS

DATE	DESCRIPTION	
JSR DESIGN	JMB DRAWN	JSR CHKD
SCALE	H: 1"=20' V: N.T.S	
JOB No. 051881-01-001		
DATE : 10.31.2024		

C1.3

SHEET 3 OF 7



PAVING CONSTRUCTION NOTES

1. INSTALL 2" AC ON 4" ABC OVER PREPARED SUBGRADE PER MAG SPECIFICATIONS AND SOILS REPORT BY _____ DATED _____
2. INSTALL 3" AC ON 6" ABC OVER PREPARED SUBGRADE PER MAG SPECIFICATIONS AND SOILS REPORT BY _____ DATED _____
3. 6" PCCP OVER PREPARED SUBGRADE PER MAG SPECIFICATIONS AND SOILS REPORT BY _____ DATED _____
4. 6" SINGLE CURB PER MAG STD. DETAIL 222, TYPE 'A'
5. INSTALL CONCRETE SIDEWALK PER C.O.P. STD. DETAIL P1230
6. PROVIDE ADA RAMP PER DETAIL 'A' ON SHEET C1.2
7. PROVIDE 4" WIDE PAING STRIPING
8. CONSTRUCT TRASH ENCLOSURE, SEE ARCHITECTURAL PLANS FOR DETAILS
9. TRANSFORMER
11. SAWCUT, REMOVE AND REPLACE EXISTING AC PAVEMENT IN KIND, 2' MIN.
12. SAWCUT AND REMOVE EXISTING VERTICAL CURB AND GUTTER AS NECESSARY TO CONSTRUCT DRIVEWAY
13. SAWCUT AND REMOVE EXISTING SIDEWALK AS NECESSARY TO CONSTRUCT DRIVEWAY
14. CONSTRUCT FENCE WALL PER ARCHITECTURAL PLANS
15. PROVIDE ADA PARKING SPACE WITH STRIPING & SIGNAGE. PAVEMENT SLOPE NOT TO EXCEED 2% IN ANY DIRECTION. SEE DETAIL 'B' ON SHEET C1.2
16. SECURITY GATE – SEE ARCHITECTURAL PLANS FOR DETAILS
17. MONUMENT SIGN – SEE ARCHITECTURAL PLANS FOR DETAILS
18. CONSTRUCT CONCRETE DRIVEWAY ENTRANCE PER C.O.P. STD. DETAIL P-1255-1
19. ADJUST MANHOLE FRAME AND COVER TO GRADE PER MAG STD DETAIL 422 & MAG SPEC. 345
20. ADJUST DRYWELL FRAME AND COVER TO GRADE PER MAG STD DETAIL 422 MAG SPEC. 345
21. RETAINING WALL – SEE STRUCTURAL PLANS
22. CONCRETE LOADING DOCK – SEE ARCHITECTURAL PLANS
23. PROPOSED S.E.S.
24. FIRE LANE MARKING – PAINTED RED CURB

KIVA PROJECT #: 04-3332A3
SDEV #: 0401420
PAPP #: 2208465
QS #: 68-19
MEETING DATE: 12/27/2022

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Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

Bowman

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PAVING PLAN
ANTHEM COMMERCE PARK
4121 WEST INNOVATIVE DRIVE
PHOENIX, AZ 85086
MARICOPA COUNTY

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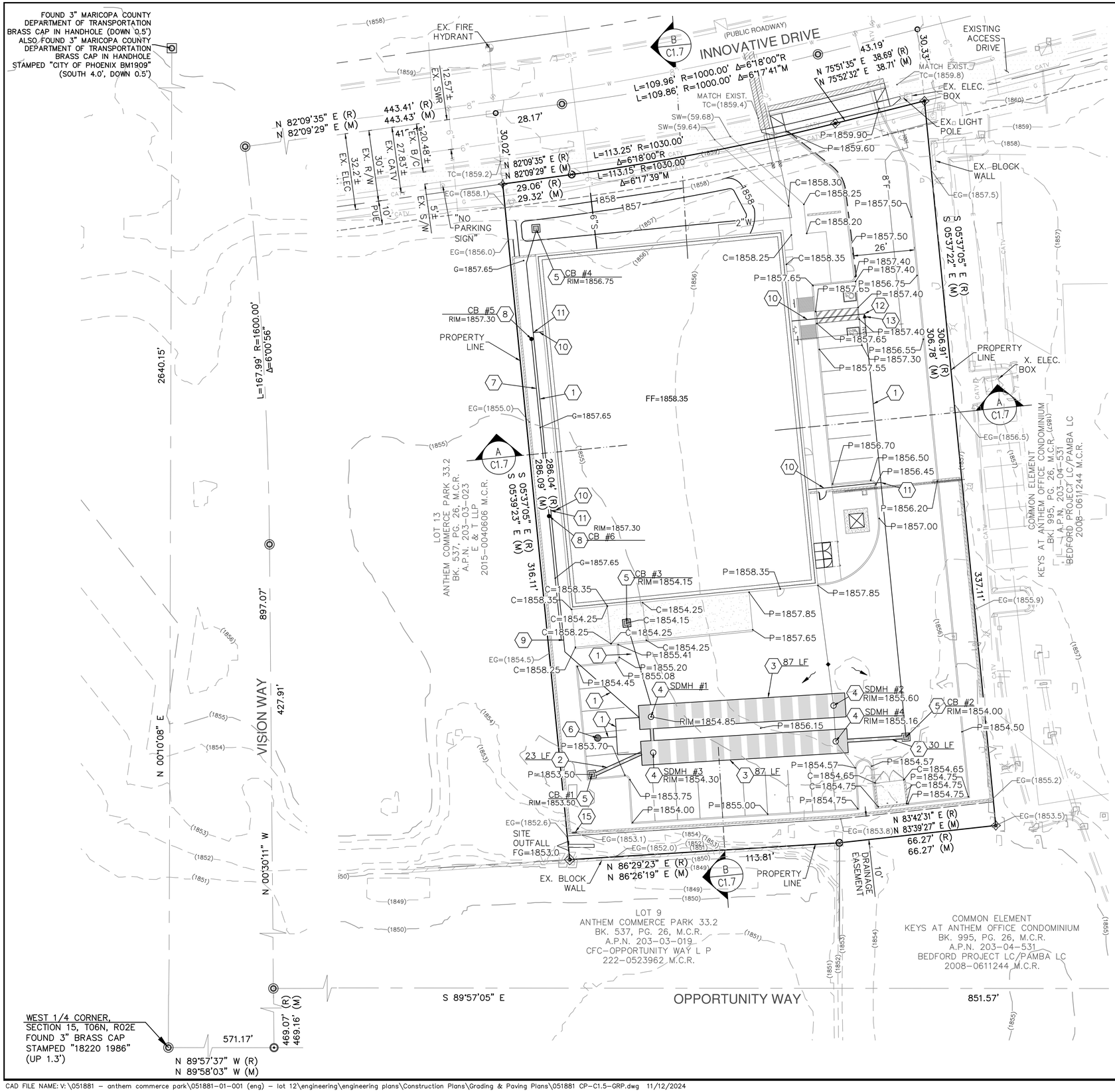
JOB No. 051881-01-001
DATE : 10.31.2024

SHEET C1.4
4 OF 7

CAD FILE NAME: V:\051881 – anthem commerce park\051881-01-001 (eng) – lot 12\engineering\engineering plans\Construction Plans\Grading & Paving Plans\051881 CP-C1.4-PAV.dwg 11/06/2024



STORM CONSTRUCTION NOTES

1. INSTALL 12" HDPE PIPE
2. INSTALL 15" HDPE PIPE
3. INSTALL 120" CMP PIPE, 14 GAUGE GALVANIZED WITH 5X1 CORRUGATION INSTALLATION PER MAG SPEC. 621, EXCAVATION PER MAG SPEC. 601. MATERICAL PER MAG SPEC 760. SEE DETAIL ON SHEET C1.3
4. INSTALL GRATED ACCESS MANHOLE WITH 8" THICK CONCRETE COLLAR PER DETAILS ON SHEET C1.3
5. INSTALL SINGLE CATCH BASIN TYPE 'G' PER MAG STD DETAIL 537
6. INSTALL MAXWELL IV DRYWELL PER DETAIL ON SHEET C1.3
7. INSTALL 4" HDPE PIPE
8. INSTALL NYLOPLAST 8" INLINE DRAIN WITH 4" ADAPTER TO MEET 4" PIPE
9. INSTALL 4"x90° BEND AND CONNECT TO 12" PIPE WITH 12"x4" TEE
10. INSTALL 8" HDPE PIPE
11. INSTALL 8"x12" HDPE TEE
12. INSTALL 8"x8" HDPE 90° BEND
13. INSTALL 12" HDPE INCREASER
15. PROVIDE WALL OPENING PER DETAIL ON SHEET C1.2. PROVIDE TOTAL OF 4 BLOCKS TURNED ON SIDE

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GRADING & DRAINAGE PLAN
ANTHEM COMMERCE PARK
4121 WEST INNOVATIVE DRIVE
PHOENIX, AZ 85086
MARICOPA COUNTY

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SCALE H: 1"=20' V: N.T.S

JOB No. 051881-01-001

DATE : 10.31.2024

SHEET C1.5 5 OF 7

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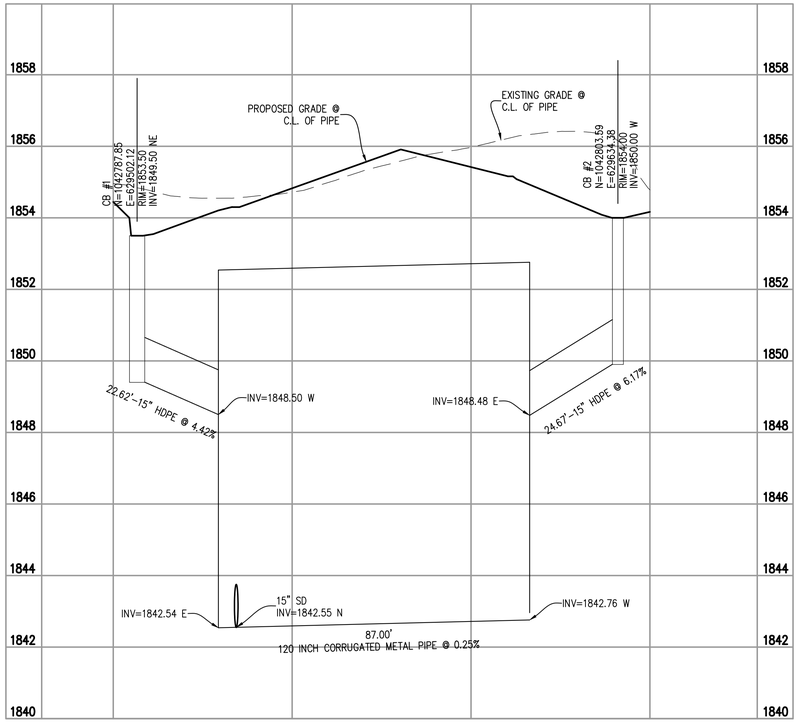
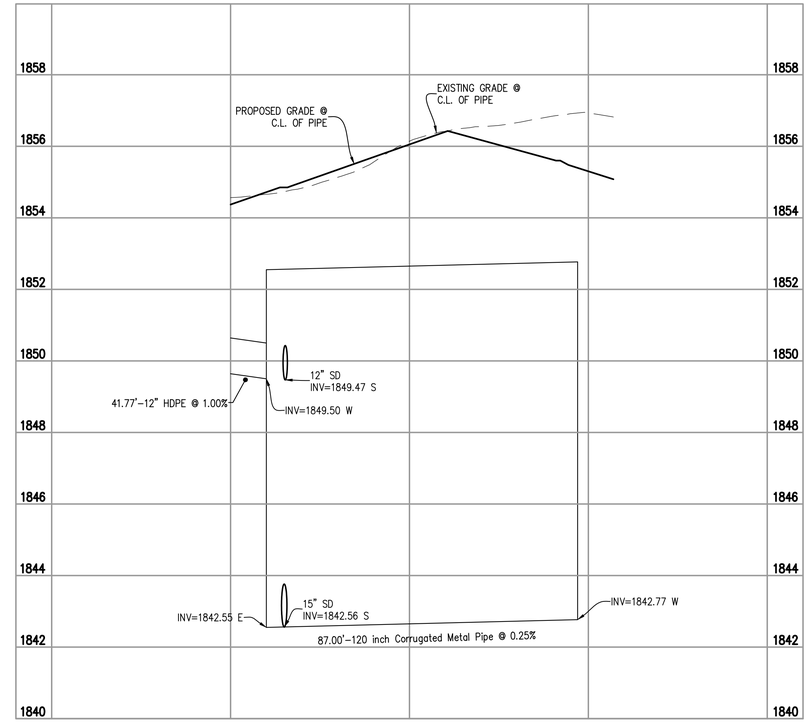


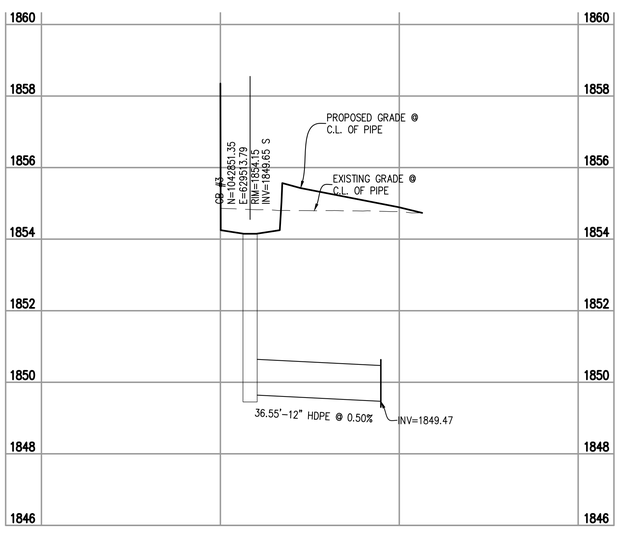
SD PROFILE #1

SCALE: 1" = 20h
SCALE: 1" = 2'v
SEE SHEET C1.5



SD PROFILE #2

SCALE: 1" = 20h
SCALE: 1" = 2'v
SEE SHEET C1.5



SD PROFILE #3

SCALE: 1" = 20h
SCALE: 1" = 2'v
SEE SHEET C1.5

KIVA PROJECT #: 04-3332A3
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PAPP #: 2208465
QS #: 68-19
MEETING DATE: 12/27/2022

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STORM DRAIN PROFILES
ANTHEM COMMERCE PARK
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PHOENIX, AZ 85086
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SHEET	C1.6 6 OF 7	

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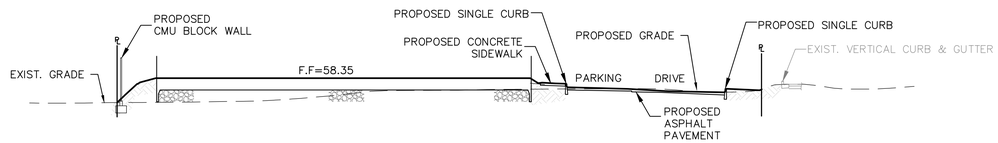
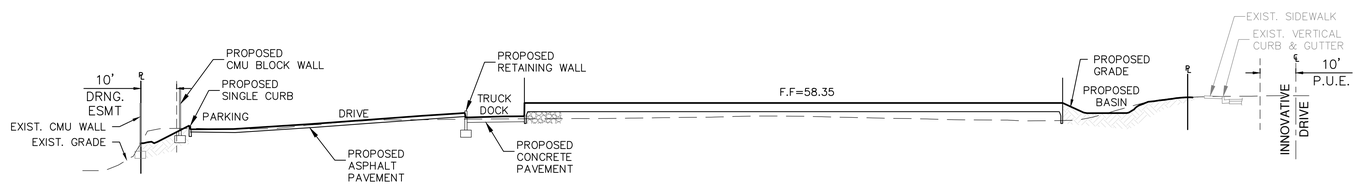


SECTION A

SCALE: 1" = 20h
SCALE: 1" = 2'v
SEE SHEET C1.5



SECTION B

SCALE: 1" = 20h
SCALE: 1" = 2'v
SEE SHEET C1.5

KIVA PROJECT #: 04-3332A3
SDEV #: 0401420
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GRADING SECTIONS
ANTHEM COMMERCE PARK
4121 WEST INNOVATIVE DRIVE
PHOENIX, AZ 85086
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SHEET 7 OF 7
C1.7

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ANTHEM COMMERCE PARK

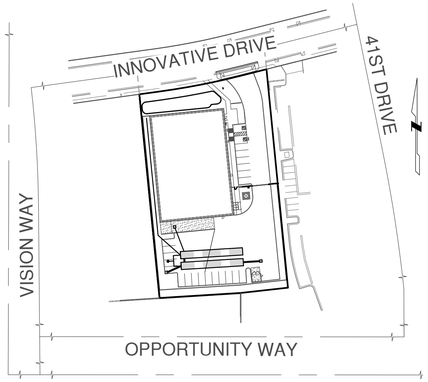
WATER & SEWER PLANS

4121 WEST INNOVATIVE DRIVE
PHOENIX, AZ 85086

LOCATED IN THE NORTHWEST QUARTER OF SECTION 15, TOWNSHIP 6 NORTH, RANGE 2 EAST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

PRIVATE WATER & SEWER NOTES

1. ALL CONSTRUCTION TO CONFORM TO THE 2018 INTERNATIONAL PLUMBING CODE. MAINTENANCE IS THE RESPONSIBILITY OF PRIVATE WATER AND SEWER OWNER.
2. PROVIDE PIPE, FITTING, PIPE TAPPING, VALVE, TESTING, AND BACKFILL SUBMITTAL TO ENGINEER AND CITY OF PHOENIX BUILDING OFFICIAL FOR REVIEW AND APPROVAL PRIOR TO ORDER AND START OF INSTALLATION, IPC 106.3.1.
3. PROVIDE WATER PIPE SPECIFICATION. WATER SERVICE PIPE SHALL CONFORM TO NSF 61 AND SHALL CONFORM TO ONE OF LISTED STANDARDS IN IPC TABLE 605.3. WATER DISTRIBUTION PIPE SHALL CONFORM TO NSF 61 AND SHALL CONFORM TO ONE OF LISTED STANDARDS IN IPC TABLE 605.4. PIPE FITTINGS SHALL CONFORM TO NSF 61 AND SHALL CONFORM TO TABLE IPC TABLE 605.5.
4. PROVIDE TRACER WIRES FOR ALL UNDERGROUND PLASTIC PIPING.
5. TEST ALL SEWER AND WATER PIPING PRIOR TO BACKFILL AND COVER. CALL FOR INSPECTION AND WITNESS TESTING PRIOR TO CONCEALING WATER AND SEWER PIPING, IPC 107.2, 312.0.
6. FLUSH AND DISINFECT ALL POTABLE WATER PIPING PRIOR TO OCCUPANCY, IPC 610.
7. PROVIDE COMPLETE AS-BUILTS AFTER INSTALLATION SHOWING PIPE SIZE, INSTALLATION, INVERTS, MANHOLES, AND TIE-IN TO PUBLIC SEWER SYSTEM. SUBMIT ALL REQUIRED DOCUMENTATION UNDER SEAL AND SIGNATURE OF THE PROFESSIONAL REGISTRANT.
8. ALL MANHOLES NEWLY CONSTRUCTED OR EXISTING THAT ARE WORKED IN FOR CONNECTIONS SHALL BE PAINTED WITH INSECTICIDE PAINT PER CITY OF PHOENIX SUPPLEMENT TO M.A.G. SECTION 627.
9. ALL CONSTRUCTION IN CITY OF PHOENIX RIGHT-OF-WAY, OR EASEMENT, IS TO CONFORM TO M.A.G. SPECIFICATIONS AND DETAILS AND CITY OF PHOENIX SUPPLEMENT TO M.A.G. SPECIFICATIONS AND DETAILS, UNLESS OTHERWISE MODIFIED ON THE PLANS.
10. NEW MANHOLES ARE TO BE BUILT WITHOUT STEPS.
11. COMPACTION SHALL COMPLY WITH M.A.G. SECTION 601 AND CITY OF PHOENIX SUPPLEMENTS.
12. A SIX (6) FOOT MINIMUM HORIZONTAL SEPARATION FROM ANY UNDERGROUND UTILITY SHALL BE PROVIDED FOR SEWER MAINS, SEWER SERVICES, WATER MAINS AND WATER SERVICES. THE MINIMUM HORIZONTAL SEPARATION IS MEASURED FROM OUTSIDE OF SEWER MAIN, SEWER SERVICE, WATER MAIN OR WATER SERVICE TO OUTSIDE OF UNDERGROUND UTILITY.
13. A ONE (1) FOOT MINIMUM VERTICAL SEPARATION FROM ANY DRY UNDERGROUND UTILITY CROSSING SHALL BE PROVIDED FOR SEWER MAINS, SEWER SERVICES, WATER MAINS AND WATER SERVICES. THE MINIMUM VERTICAL SEPARATION IS MEASURED FROM OUTSIDE OF SEWER MAIN, SEWER SERVICE, WATER MAIN OR WATER SERVICE TO OUTSIDE OF DRY UNDERGROUND UTILITY.
14. A TWO (2) MINIMUM VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN ANY SEWER MAIN OR STORM DRAIN MAIN CROSSING A WATER MAIN. THE MINIMUM VERTICAL SEPARATION IS MEASURED FROM OUTSIDE OF WATER MAIN TO OUTSIDE OF SEWER MAIN OR STORM DRAIN MAIN. SEE M.A.G. STANDARD DETAIL 404 FOR ADDITIONAL INFORMATION AND/OR PROVISIONS FOR CLEARANCE.
15. EXCEPTIONS OR DEVIATIONS FROM THE ABOVE MINIMUM CLEARANCES MUST BE APPROVED AND SHOWN ON THE APPROVED WATER AND SEWER PLANS. WHEN UTILITY CONFLICTS ARE FOUND DURING CONSTRUCTION, ALL CHANGES AND REVISIONS MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
16. ANY AND ALL MORE STRINGENT SEPARATION REQUIREMENTS REQUIRED BY FEDERAL, STATE, COUNTY OR LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
17. ANY SEWER LINES THAT ARE INSTALLED WITH LESS THAN .004FT/FT SLOPE MUST BE INSTALLED USING A LASER.
18. CONCRETE OR ASPHALT DAMAGED DURING THE COURSE OF CONSTRUCTION SHALL BE REMOVED AND REPLACED IN KIND PRIOR TO FINAL INSPECTION.



KEY MAP
1"=100'

QUANTITIES

UTILITY:

WATER SERVICE LINE	60 LF
SEWER SERVICE LINE	24 LF

LEGEND

- CENTER LINE
- EASEMENT
- RIGHT-OF-WAY
- FLUSH BRASS CAP SURVEY MARKER PER MAG 120-1B
- W — WATER LINE
- S — SEWER LINE
- F — FIRE LINE
- FIRE HYDRANT
- WATER VALVE
- EX WATER VALVE
- TAPPING SLEEVE AND VALVE
- REDUCER
- 8"S — SEWER LINE
- SEWER MANHOLE

R/W	RIGHT-OF-WAY
CL	CENTER LINE
B/C	BACK OF CURB
TC	TOP OF CURB
EX	EXISTING
GB	GRADE BREAK
LF	LINEAR FEET
SF	SQUARE FEET
SY	SQUARE YARDS
CY	CUBIC YARDS
INV	INVERT ELEVATION
FF	FINISHED FLOOR ELEVATION
FP	FINISHED PAD ELEVATION

FLOOD ZONE CERTIFICATION

THIS PROPERTY LIES IN ZONE "X" AND IS NOT LOCATED WITHIN ANY PRESENTLY ESTABLISHED 100-YEAR FLOOD PLAIN, AS SHOWN BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP FOR THE CITY OF PHOENIX, ARIZONA COMMUNITY PANEL NUMBER 04013C0835L EFFECTIVE DATE OCTOBER 168. 2013.

THIS SET OF CONSTRUCTION PLANS HAVE BEEN SUBMITTED TO THE FOLLOWING UTILITY COMPANIES FOR REVIEW AND TO DETERMINE ANY POTENTIAL CONFLICTS.

UTILITY COMPANY	COMPANY CONTACT	DATE SUBMITTED
SALT RIVER PROJECT – POWER	SRPNET.SHAREPOINT.COM	1
COX COMMUNICATIONS	RYAN KANN	
CENTURYLINK	DEB COULTER	
SOUTHWEST GAS CORPORATION	ZACH STEVENSON	

PROJECT DESCRIPTION

THE SITE IS A 1.17 ACRE PARCEL LOCATED AT 4121 WEST INNOVATIVE DRIVE. THIS IS AN EXISTING LOT IN AN INDUSTRIAL AREA. THE PROPOSED USE IS A COMMERCIAL OFFICE / WAREHOUSE BUILDING. ACCESS WILL BE PROVIDED BY A PROPOSED DRIVE ENTRANCE FROM INNOVATIVE DRIVE. THE SITE WILL BE SERVICED BY NEW WATER AND SEWER BUILDING CONNECTIONS WHICH WILL TIE INTO THE EXISTING WATER AND SEWER MAINS IN INNOVATIVE DRIVE. THE SITE WILL PROVIDE ONSITE RETENTION FOR THE 100 YEAR, 2 HOUR STORM EVENT.

SITE DATA

SITE ADDRESS:	4121 WEST INNOVATIVE DRIVE PHOENIX, AZ 85086
APN:	203-03-022
EXISTING ZONING:	CP/GCP
PROPOSED ZONING:	CP/GCP
SITE AREA:	53,165 SF / 1.17 ACRES
DISTURBED AREA:	53,165 SF / 1.17 ACRES

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED ENGINEER/LAND SURVEYOR _____ DATE _____

REGISTRATION NUMBER _____

APPROVAL FOR:

THE CITY OF PHOENIX

COUNTY HEALTH DELEGATE DEVELOPMENT SERVICES DEPARTMENT _____ DATE _____

DEVELOPER

CFC OPPORUNITY WAY LP
1807 SOUTH SAN GABRIEL BLVD.
SAN GABRIEL, CA 91776

ARCHITECT

CAWLEY ARCHITECTS
730 N. 52ND STREET, SUITE 203
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ENGINEER

BOWMAN CONSULTING
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TEMPE, AZ 85288
PHONE: (480) 629-8830
CONTACT: JEFF RYBARCZYK
EMAIL:JRYBARCZYK@BOWMAN.COM
REG NO 28117

BASIS OF BEARINGS

THE WEST LINE OF THE NORTHWEST QUARTER OF SECTION 15, USING A BEARING OF NORTH 0 DEGREES 10 MINUTES 8 SECONDS EAST, AS PER THE RECORD OF SURVEY IN BOOK 714, PAGE 5, RECORDS OF MARICOPA COUNTY, ARIZONA.

BENCHMARK

THE CITY OF PHOENIX UNIQUE POINT ID: 1914, BEING A CHISELED SQUARE ON TOP OF CURB, LOCATED AT EAST END OF NORTHEAST RETURN, EAST SIDE OF BRIDGE OVER I-17, HAVING AN ELEVATION OF 1908.53', NGVD29.

LEGAL DESCRIPTION

LOT 12 AS SHOWN ON FINAL PLAT OF ANTHEM COMMERCE PARK 33.2 RECORDED IN THE OFFICE OF MARICOPA COUNTY RECORDER, BOOK 537, PAGE 26 THEREOF

KIVA PROJECT #: 04-3332A3
SDEV #: 0401420
PAPP #: 2208465
QS #: 68-19
MEETING DATE: 12/27/2022

Call at least two full working days before you begin excavation.
ARIZONA 811
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COVER SHEET
ANTHEM COMMERCE PARK
4121 WEST INNOVATIVE DRIVE
PHOENIX, AZ 85086
MARICOPA COUNTY

PROJECT NUMBER

REGISTERED PROFESSIONAL ENGINEER (CIVIL)
CERTIFICATE NO.
28117
JEFFREY SCOTT RYBARCZYK
Date Signed 10.31.2024
ARIZONA U.S.A.

PLAN STATUS

DATE	DESCRIPTION	
JSR	JMB	JSR
DESIGN	DRAWN	CHKD

SCALE H: 1"=20' V: N.T.S

JOB No. 051881-01-001

DATE : 10.31.2024

C2.1

SHEET 1 OF 3

CAD FILE NAME: V:\051881 – anthem commerce park\051881-01-001 (eng) – lot 12\engineering\engineering plans\Construction Plans\Water & Sewer Plans\051881 CP-C2.1-CVR.dwg 11/04/2024

BOWMAN CONSULTING NOTES

1. THESE PLANS ARE SUBJECT TO THE INTERPRETATION OF INTENT BY THE ENGINEER. ALL QUESTIONS REGARDING THESE PLANS SHALL BE PRESENTED TO THE ENGINEER. ANYONE WHO TAKES UPON THEMSELVES THE INTERPRETATION OF THE DRAWINGS OR MAKES REVISIONS TO THE SAME WITHOUT CONFERRING WITH THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR THE CONSEQUENCES THEREOF.

2. THE ESTIMATED QUANTITIES SHOWN ARE FOR INFORMATION PURPOSES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETENESS AND ACCURACY OF A DETAILED ESTIMATE BASED ON THESE PLANS, CURRENT CODES, AND SITE VISITATION.

3. ALL EARTHWORK CONSTRUCTION SHALL CONFORM TO THE LATEST MARICOPA ASSOCIATION OF GOVERNMENTS STANDARD DETAILS AND/OR SPECIFICATIONS INCLUDING ANY SUPPLEMENTS THERETO, AND ALL ADDENDA. THE CONTRACTOR IS TO FOLLOW THE RECOMMENDATION OF THE PROJECT SOIL INVESTIGATION REPORT AND LETTER.

4. PRIOR TO BIDDING THE WORK, THE CONTRACTOR SHALL THOROUGHLY SATISFY THEMSELVES AS TO THE ACTUAL CONDITIONS, REQUIREMENTS OF THE WORK AND EXCESS OR DEFICIENCY IN QUANTITIES. NO CLAIMS SHALL BE MADE AGAINST THE OWNER/DEVELOPER OR ENGINEER FOR ANY EXCESS OR DEFICIENCY THEREIN, ACTUAL OR RELATIVE.

5. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS OR PROGRAMS UTILIZED IN CONNECTION WITH THE WORK, AND WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

6. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR COORDINATING THE RELOCATION OF UTILITIES, POWER POLES, ETC.

7. THE CONTRACTOR IS TO VERIFY THE LOCATION, ELEVATION, CONDITION, AND PAVEMENT CROSS-SLOPE OF ALL EXISTING SURFACES AT POINTS OF TIE-IN AND MATCHING, PRIOR TO COMMENCEMENT OF GRADING, PAVING, CURB AND GUTTER OR OTHER SURFACE CONSTRUCTION. SHOULD EXISTING LOCATIONS, ELEVATIONS, CONDITION, OR PAVEMENT CROSS-SLOPE DIFFER FROM THAT SHOWN ON THESE PLANS, RESULTING IN THE DESIGN INTENT REFLECTED ON THE PLANS NOT ABLE TO BE CONSTRUCTED, THE CONTRACTOR SHALL NOTIFY THE OWNER'S AGENT IMMEDIATELY FOR DIRECTION ON HOW TO PROCEED PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR ALL COSTS ASSOCIATED WITH CORRECTIVE ACTION IF THESE PROCEDURES ARE NOT FOLLOWED.

8. EXISTING UTILITIES SHOWN ON THESE PLANS HAVE BEEN LOCATED ACCORDING TO INFORMATION PROVIDED BY THE AGENCY OPERATING EACH UTILITY. LOCATIONS SHOWN ARE APPROXIMATE ONLY, AND SHOULD BE CONSIDERED APPROXIMATE. CALL ARIZONA BLUE STAKE FOR FIELD LOCATION AT 8-1-1 or 1-800-STAKE-IT A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO EXCAVATION. THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING UTILITIES ON THE SITE NOT NOTED FOR RELOCATION OR REMOVAL. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN OR NOT ON THE DRAWING, SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S EXPENSE. EXISTING SURFACE FEATURES AND FENCING OUTSIDE OF THE CONSTRUCTION LIMITS SHALL BE REPLACED IN KIND IF DISTURBED.

9. THE ENGINEER AND APPLICABLE AGENCY MUST APPROVE, PRIOR TO CONSTRUCTION, ANY ALTERATION, OR VARIANCE FROM THESE PLANS. ANY VARIATIONS FROM THESE PLANS SHALL BE PROPOSED ON CONSTRUCTION FIELD PRINTS AND TRANSMITTED TO THE ENGINEER.

10. ANY INSPECTION BY THE CITY, COUNTY, ENGINEER, OR OTHER JURISDICTIONAL AGENCY, SHALL NOT, IN ANY WAY, RELIEVE THE CONTRACTOR FROM ANY OBLIGATION TO PERFORM THE WORK IN STRICT COMPLIANCE WITH APPLICABLE CODES AND AGENCY REQUIREMENTS.

11. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL UNDERGROUND FACILITIES FROM DAMAGE DURING CONSTRUCTION. THE DEPTH OF COVER IS DESIGNED FOR FINAL GRADE. THEREFORE, EXTRA CARE SUCH AS BERMING OVER PIPES, FLAGGING OR SIGNAGE SHOULD BE USED DURING CONSTRUCTION TO MAINTAIN COVER OR PROTECT THE UNDERGROUND FACILITIES.

12. THE ENGINEER MAKES NO REPRESENTATION OR GUARANTEE REGARDING EARTHWORK QUANTITIES OR THAT THE EARTHWORK FOR THIS PROJECT WILL BALANCE DUE TO THE VARYING FIELD CONDITIONS, CHANGING SOIL TYPES, ALLOWABLE CONSTRUCTION TOLERANCES AND CONSTRUCTION METHODS THAT ARE BEYOND THE CONTROL OF THE ENGINEER. EARTHWORK QUANTITIES SHOWN ARE RAW, AND DO NOT ACCOUNT FOR SOIL SHRINK, SWELL OR GROUND SCARIFICATION.

13. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING PIPE AT PROPOSED CONNECTIONS PRIOR TO NEW PIPE INSTALLATION. NOTIFY ENGINEER IMMEDIATELY OF CONFLICTS OR DISCREPANCIES FROM THE PLANS.

14. CONTRACTOR TO COMPLY WITH ALL ADA REQUIREMENTS RELATING TO CONSTRUCTION.

KIVA PROJECT #: 04-3332A3
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NOTES & DETAILS
ANTHEM COMMERCE PARK
4121 WEST INNOVATIVE DRIVE
PHOENIX, AZ 85086
MARICOPA COUNTY

PROJECT NUMBER

REGISTERED PROFESSIONAL ENGINEER (CIVIL)
CERTIFICATE NO.
28117
JEFFREY SCOTT RYBARCZYK
Date Signed 10.31.2024
ARIZONA U.S.A.

PLAN STATUS

DATE	DESCRIPTION	
JSR	JMB	JSR
DESIGN	DRAWN	CHKD

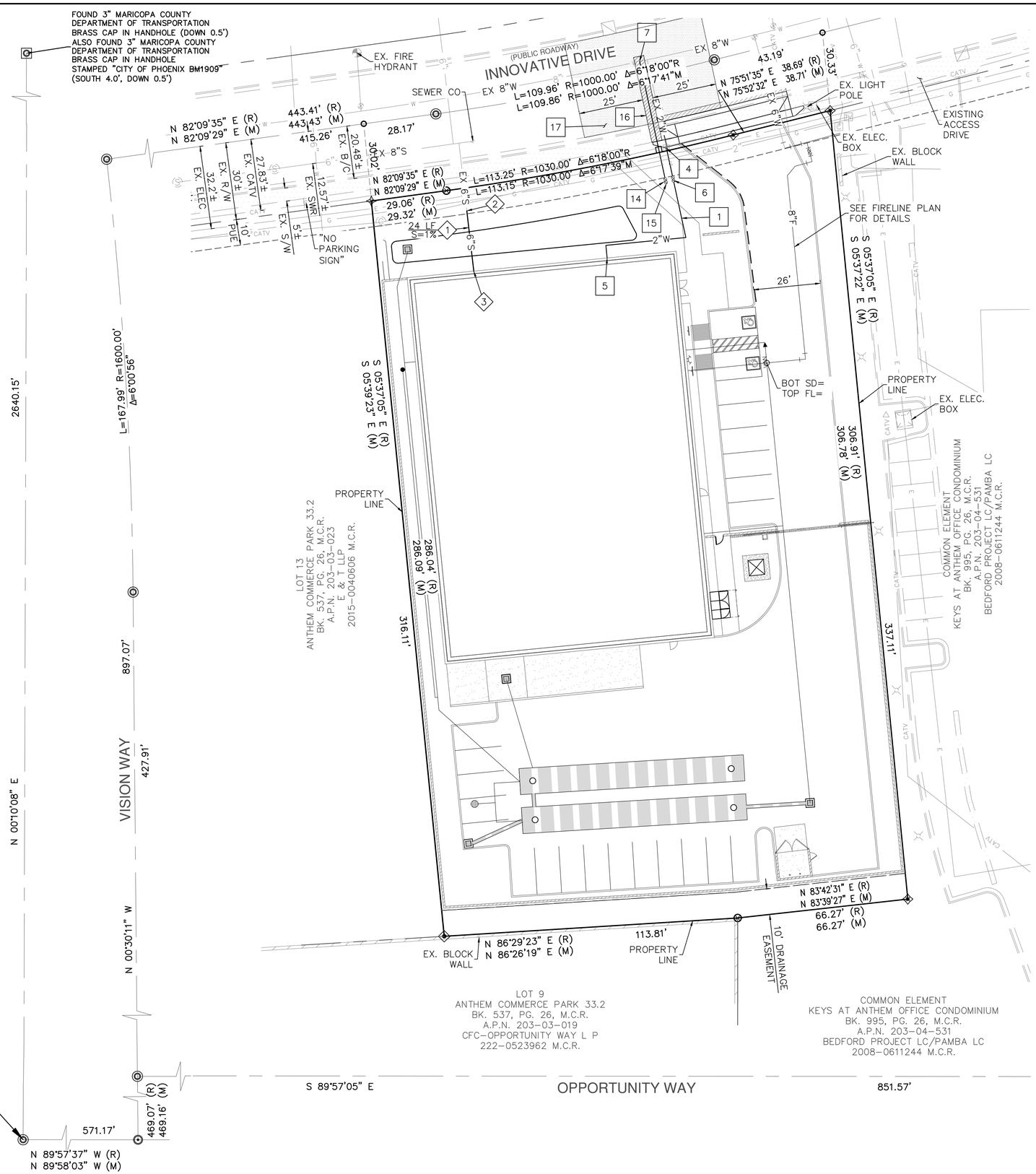
SCALE H: 1"=20' V: N.T.S

JOB No. 051881-01-001

DATE : 10.31.2024

SHEET 2 OF 3 C2.2

CAD FILE NAME: V:\051881 – anthem commerce park\051881-01-001 (eng) – lot 12\engineering\engineering plans\Construction Plans\Water & Sewer Plans\051881 CP-C2.1-CVR.dwg 11/04/2024



WATER CONSTRUCTION NOTES

1. INSTALL 2" PVC (SCH80) WATER LINE
4. INSTALL 2" WATER METER IN EXISTING METER BOX AND CONNECT NEW DOMESTIC WATER SERVICE LINE PER C.O.P. STD DETAIL P1342. IF NECESSARY, ADJUST METER BOX TO AVOID CONFLICT WITH PROPOSED SIDEWALK
5. SEE PLUMBING PLANS FOR CONTINUATION
6. INSTALL 2" REDUCED PRESSURE PRINCIPAL ASSEMBLY PER C.O.P. STD DETAIL P1354
7. INSTALL 1" COPPER LANDSCAPE WATER SERVICE, METER BOX WITH 1"METER AND COVER PER C.O.P. STD. DETAIL P1342, P1363, & P1315. TAP AND METER TO BE INSTALLED BY CITY FORCES AFTER PROPER APPLICATION AND PAYMENT OF PREVAILING FEES
14. INSTALL 1" REDUCED PRESSURE PRINCIPAL ASSEMBLY PER C.O.P. STD DETAIL P-1354
15. SEE LANDSCAPE PLANS FOR CONTINUATION
16. SAWCUT, REMOVE AND REPLACE EXISTING AC PAVEMENT PER C.O.P. STD DETAIL P-1200, TYPE 'A', BY CITY FORCES AFTER PROPER APPLICATION AND PAYMENT OF PREVAILING FEES
17. PERFORM CRACK FILL AND SEAL TO EXISTING PAVEMENT. APPLY SLURRY SEAL PER C.O.P. PAVEMENT CUT POLICY

SEWER CONSTRUCTION NOTES

1. INSTALL 6" PVC SDR 35 SEWER LINE
2. REMOVE EXISTING PLUG AND CONNECT TO EXISTING SEWER LINE
3. SEE PLUMBING PLANS FOR CONTINUATION

KIVA PROJECT #: 04-3332A3
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www.bowman.com
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WATER & SEWER PLAN
ANTHEM COMMERCE PARK
4121 WEST INNOVATIVE DRIVE
PHOENIX, AZ 85086
MARICOPA COUNTY

PROJECT NUMBER

REGISTERED PROFESSIONAL ENGINEER (CIVIL)
CERTIFICATE NO. 28117
JEFFREY SCOTT RYBARCZYK
Date Signed 10-31-24
ARIZONA U.S.A.

PLAN STATUS

DATE	DESCRIPTION	
JSR	JMB	JSR
DESIGN	DRAWN	CHKD

SCALE H: 1"=20' V: N.T.S

JOB No. 051881-01-001

DATE : 10.31.2024

SHEET C2.3 3 OF 3

CAD FILE NAME: V:\051881 - anthem commerce park\051881-01-001 (eng) - lot 12\engineering\engineering plans\Construction Plans\Water & Sewer Plans\051881 CP-C2.3-UTP.dwg 11/12/2024

ANTHEM COMMERCE PARK

FIRELINE COMBO PLANS

4121 WEST INNOVATIVE DRIVE
PHOENIX, AZ 85086

LOCATED IN THE NORTHWEST QUARTER OF SECTION 15, TOWNSHIP 6 NORTH, RANGE 2 EAST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

FIRE LINE NOTES (CITY OF PHOENIX) :

1. ALL CONSTRUCTION IN CITY OF PHOENIX R.O.W. IS TO CONFORM TO M.A.G. SPECIFICATIONS AND DETAILS AND CITY OF PHOENIX SUPPLEMENT TO M.A.G. SPECIFICATIONS AND DETAILS, UNLESS MODIFIED ON THE PLANS.
2. PLANNING & DEVELOPMENT DEPARTMENT'S CIVIL/SITE INSPECTION STAFF SHALL BE NOTIFIED 48 HOURS BEFORE ANY CONSTRUCTION BEGINS, TELEPHONE (602) 262-7811.
3. IT IS REQUIRED THAT A FORMAL WRITTEN REQUEST FOR A FIRE LINE TURN-ON BE RECEIVED BY CIVIL ENGINEERING OF THE PLANNING & DEVELOPMENT DEPARTMENT FROM CITY OF PHOENIX FIRE PREVENTION UPON COMPLETION OF THE FIRE LINE WORK. THIS JOB IS NOT COMPLETE UNTIL THIS HAS BEEN DONE AND THE LINE TURNED ON BY THE WATER SERVICES DEPARTMENT.
4. THE FOLLOWING M.A.G. DETAILS ARE SPECIFICALLY NOT APPROVED:
   - 390 CURB STOP WITH FLUSHING PIPE
   - 391-1 VALVE BOX INSTALLATION
   - 346 FIRE LINE DETECTOR CHECK VAULT
5. 6" X 2" TAPPED CAP WITH BALL VALVE RATE 300 PSI OR GREATER AT THE END OF OFFSITE WORK IS REQUIRED IF ONSITE WORK IS NOT CONCURRENT WITH OFFSITE CONSTRUCTION. THE TAPPED CAP MUST BE INSTALLED BEFORE THE BACKFLOW PREVENTION DEVICE.
6. FIRE LINE CONNECTION TO CITY MAINS SHALL BE USED FOR FIRE PROTECTION SYSTEM ONLY. NO METERED SERVICES CAN BE CONNECTED TO A FIRE LINE.
7. BACKFLOW PREVENTION DEVICES ARE REQUIRED ON ALL FIRE LINES. CONNECTIONS ARE TO BE IN ACCORDANCE WITH UNIVERSITY OF SOUTHERN CALIFORNIA - MANUAL OF CROSS-CONNECTION CONTROL. SEE BUILDING SAFETY FOR DETAILS. BACKFLOW DEVICES ARE TO BE SHOWN ON THE OFFSITE PLAN. FIRE LINES THAT ARE PROPOSED WITH BACKFLOW PREVENTION DEVICES SHALL BE REQUIRED TO PROVIDE A CERTIFICATE OF APPROVAL FROM THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH (USC - FCCCHR), PRIOR TO FIRE LINE PERMIT ISSUANCE, PER ARIZONA ADMINISTRATIVE CODE R18-4-115D.
8. BACKFLOW PREVENTION DEVICES SHALL NOT BE LOCATED IN DRIVEWAYS, VISIBILITY TRIANGLES, OR OTHER LOCATIONS WHERE ACCIDENTAL DAMAGE OR VISIBILITY OBSTRUCTION WOULD BE A LIKELY CONSEQUENCE.
9. BACKFLOW PREVENTION DEVICES SHALL BE INSTALLED OUTSIDE OF RIGHT-OF-WAY AT (OR NEAR) THE PROPERTY LINE (POINT OF SERVICE) AND SHALL BE FULLY ACCESSIBLE FOR THE PERIODIC TESTING, REPAIRS, AND REPLACEMENT. THERE SHALL BE AN UNOBSTRUCTED RADIUS OF NO LESS THAN THREE (3) FEET FROM THE OUTER PERIMETER OF THE BACKFLOW PREVENTION DEVICE PER THE 2006 PHOENIX FIRE CODE (INTERNATIONAL FIRE CODE) SECTION 901.10.
10. IN THE ABSENCE OF SPECIFIC PRESSURE DROP INFORMATION, THE DIAMETER OF THE INLET OR OUTLET OF ANY BACKFLOW PREVENTION DEVICE OR ITS CONNECTING PIPING SHALL NOT BE LESS THAN THE DIAMETER OF SUCH WATER DISTRIBUTION PIPING TO THE FIXTURES SERVED BY THE DEVICE, PER UPC 610.2. IF AVAILABLE, PRESSURE DROP INFORMATION SHALL BE PROVIDED WITH THE SUBMITTED PLANS.
11. LOOPED ONSITE FIRE LINE SYSTEMS SHALL BE PROVIDED A BACKFLOW PREVENTER AT EACH POINT OF CONNECTION TO THE PUBLIC WATER SYSTEM, PER UPC 603.3.11.
12. ALL WORK MUST COMPLY WITH REQUIREMENTS OF THE CURRENT CITY OF PHOENIX TRAFFIC BARRICADE MANUAL.
13. PAVEMENT REPLACEMENT THICKNESS AND TYPE ARE TO BE PER M.A.G. SECTION 336 AND C.O.P. DETAIL P1200 - TYPE B. CURB AND GUTTER REPLACEMENT SHALL BE A MINIMUM OF ONE (1) FULL SECTION, PER M.A.G. STANDARD DETAIL 220. SIDEWALK REPLACEMENT SHALL BE A MINIMUM OF ONE (1) FULL PANEL PER C.O.P. DETAIL P1230. AT THE DISCRETION OF THE CITY OF PHOENIX PLANNING & DEVELOPMENT OFFSITE INSPECTOR, TUNNELING UNDER EXISTING CURB AND GUTTER, IN CITY OF PHOENIX R.O.W., WILL BE ALLOWED. TUNNELING UNDER EXISTING SIDEWALK WILL NOT BE ALLOWED IN THE CITY OF PHOENIX R.O.W.
14. MINIMUM COVERAGE OVER THE TOP OF PIPE SHALL BE FOUR (4) FEET IF THE MAIN IS LOCATED IN A MAJOR STREET OR THE MAIN IS 12" OR LARGER. OTHERWISE, THREE (3) FEET OF COVER OVER THE TOP OF THE PIPE IS REQUIRED.
15. COMPACTION SHALL COMPLY WITH M.A.G. SEC. 601, 95% MINIMUM IN A PUBLIC STREET.
16. ASPHALT RESTORATION IS REQUIRED FOR ANY STREET CUT. REFER TO STREET PAVEMENT CUT POLICY (TRT 00164 AND ORDINANCE G-6308).
17. APPROVAL OF THESE PLANS SHALL NOT PREVENT THE CITY FROM REQUIRING CORRECTION OF ERRORS IN THE PLANS WHERE SUCH ERRORS ARE SUBSEQUENTLY FOUND TO BE IN VIOLATION OF ANY LAW, ORDINANCE OR OTHER HEALTH/SAFETY ISSUE.
18. PLAN APPROVAL IS VALID FOR 12 MONTHS. PRIOR TO PLAN APPROVAL EXPIRATION, ALL ASSOCIATED PERMITS SHALL BE PURCHASED OR THE PLANS SHALL BE RESUBMITTED FOR EXTENSION OF PLAN APPROVAL. THE EXPIRATION, EXTENSION, AND REINSTATEMENT OF CIVIL ENGINEERING PLANS AND PERMITS SHALL FOLLOW THE SAME GUIDELINES AS THOSE INDICATED IN THE PHOENIX BUILDING CONSTRUCTION CODE ADMINISTRATIVE PROVISIONS SECTION 105.3 FOR BUILDING PERMITS.

FLOOD ZONE CERTIFICATION

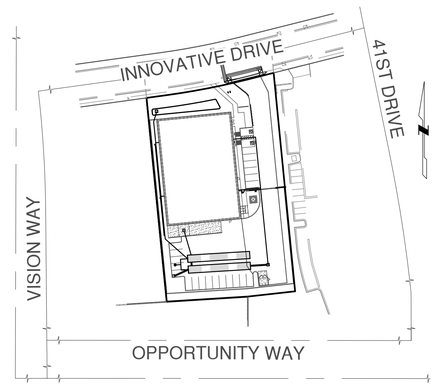
THIS PROPERTY LIES IN ZONE "X" AND IS NOT LOCATED WITHIN ANY PRESENTLY ESTABLISHED 100-YEAR FLOOD PLAIN, AS SHOWN BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP FOR THE CITY OF PHOENIX, ARIZONA COMMUNITY PANEL NUMBER 04013C0835L EFFECTIVE DATE OCTOBER 168. 2013.

ADDITIONAL NOTES:

1. AN UNDERGROUND FIRELINE STUB-OUT PERMIT IS REQUIRED

THIS SET OF CONSTRUCTION PLANS HAVE BEEN SUBMITTED TO THE FOLLOWING UTILITY COMPANIES FOR REVIEW AND TO DETERMINE ANY POTENTIAL CONFLICTS.

UTILITY COMPANY	COMPANY CONTACT	DATE SUBMITTED
SALT RIVER PROJECT – POWER	SRPNET.SHAREPOINT.COM	1
COX COMMUNICATIONS	RYAN KANN	
CENTURYLINK	DEB COULTER	
SOUTHWEST GAS CORPORATION	ZACH STEVENSON	



KEY MAP
1"=100'

LEGEND

- CENTER LINE
- EASEMENT
- RIGHT–OF–WAY
- FLUSH BRASS CAP SURVEY MARKER PER MAG 120–1B
- W — WATER LINE
- S — SEWER LINE
- F — FIRE LINE
- FIRE HYDRANT
- WATER VALVE
- EX WATER VALVE
- TAPPING SLEEVE AND VALVE
- REDUCER
- 8"S — SEWER LINE
- SEWER MANHOLE

R/W	RIGHT–OF–WAY
CL	CENTER LINE
B/C	BACK OF CURB
TC	TOP OF CURB
EX	EXISTING
GB	GRADE BREAK
LF	LINEAR FEET
SF	SQUARE FEET
SY	SQUARE YARDS
CY	CUBIC YARDS
INV	INVERT ELEVATION
FF	FINISHED FLOOR ELEVATION
FP	FINISHED PAD ELEVATION

QUANTITIES

ONSITE (PRIVATE):

6–INCH DIP FIRE LINE	108 LF
6–INCH BACKFLOW PREVENTER	1 EA
6–INCH 90° BEND	1 EA

Sheet List Table	
Sheet Number	Sheet Title
C3.1	COVER SHEET
C3.2	NOTES & DETAILS
C3.3	FIRELINE COMBO PLAN

BUILDING DATA

BUILDING AREA = 18,000 SF
BUILDING CONSTRUCTION TYPE = VB WITH A.F.E.S.
FIRE SPRINKLER SYSTEM TYPE = WET PIPE SYSTEM

PROJECT DESCRIPTION

THE SITE IS A 1.17 ACRE PARCEL LOCATED AT 4121 WEST INNOVATIVE DRIVE. THIS IS AN EXISTING LOT IN AN INDUSTRIAL AREA. THE PROPOSED USE IS A COMMERCIAL OFFICE / WAREHOUSE BUILDING. ACCESS WILL BE PROVIDED BY A PROPOSED DRIVE ENTRANCE FROM INNOVATIVE DRIVE. THE SITE WILL BE SERVICED BY NEW WATER AND SEWER BUILDING CONNECTIONS WHICH WILL TIE INTO THE EXISTING WATER AND SEWER MAINS IN INNOVATIVE DRIVE. THE SITE WILL PROVIDE ONSITE RETENTION FOR THE 100 YEAR, 2 HOUR STORM EVENT. THIS SITE WILL CONNECT TO AN EXISTING 6" FIRELINE STUB. THE FIRELINE WILL EXTEND INTO THE SITE TO PROVIDE FIRELINE SERVICE TO THE PROPOSED BUILDING.

SITE DATA

SITE ADDRESS:	4121 WEST INNOVATIVE DRIVE PHOENIX, AZ 85086
APN:	203-03-022
EXISTING ZONING:	CP/GCP
PROPOSED ZONING:	CP/GCP
SITE AREA:	53,165 SF / 1.17 ACRES
DISTURBED AREA:	53,165 SF / 1.17 ACRES

PARKING CALCULATION

PARKING REQUIRED:	22 SPACES
PARKING PROVIDED:	22 SPACES
ADA SPACES REQUIRED:	2
ADA SPACES PROVIDED:	2

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED ENGINEER/LAND SURVEYOR — DATE

REGISTRATION NUMBER

APPROVAL FOR:

THE CITY OF PHOENIX

COUNTY HEALTH DELEGATE
DEVELOPMENT SERVICES DEPARTMENT — DATE

DEVELOPER

CFC OPPORUNITY WAY LP
1807 SOUTH SAN GABRIEL BLVD.
SAN GABRIEL, CA 91776

ARCHITECT

CAWLEY ARCHITECTS
730 N. 52ND STREET, SUITE 203
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CONTACT: D. CHRISTOPHER BARTA
EMAIL: CHRISTOPHERB@CRAWLEYARCHITECTS.COM

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CONTACT: JEFF RYBARCZYK
EMAIL:JRYBARCZYK@BOWMAN.COM
REG NO 28117

BASIS OF BEARINGS

THE WEST LINE OF THE NORTHWEST QUARTER OF SECTION 15, USING A BEARING OF NORTH 0 DEGREES 10 MINUTES 8 SECONDS EAST, AS PER THE RECORD OF SURVEY IN BOOK 714, PAGE 5, RECORDS OF MARICOPA COUNTY, ARIZONA.

BENCHMARK

THE CITY OF PHOENIX UNIQUE POINT ID: 1914, BEING A CHISELED SQUARE ON TOP OF CURB, LOCATED AT EAST END OF NORTHEAST RETURN, EAST SIDE OF BRIDGE OVER I-17, HAVING AN ELEVATION OF 1908.53', NGVD29.

LEGAL DESCRIPTION

LOT 12 AS SHOWN ON FINAL PLAT OF ANTHEM COMMERCE PARK 33.2 RECORDED IN THE OFFICE OF MARICOPA COUNTY RECORDER, BOOK 537, PAGE 26 THEREOF

KIVA PROJECT #: 04-3332A3
SDEV #: 0401420
PAPP #: 2208465
QS #: 68-19
MEETING DATE: 12/27/2022

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COVER SHEET
ANTHEM COMMERCE PARK
4121 WEST INNOVATIVE DRIVE
PHOENIX, AZ 85086
MARICOPA COUNTY

PROJECT NUMBER

REGISTERED PROFESSIONAL ENGINEER (CIVIL)
CERTIFICATE NO.
28117
JEFFREY SCOTT RYBARCZYK
Date Signed 10-31-24
ARIZONA U.S.A.

PLAN STATUS

DATE	DESCRIPTION	
JSR	JMB	JSR
DESIGN	DRAWN	CHKD

SCALE H: 1"=20' V: N.T.S

JOB No. 051881-01-001

DATE : 10.31.2024

SHEET C3.1
1 OF 3

CAD FILE NAME: V:\051881 – Anthem Commerce Park\051881-01-001 (ENG) – Lot 12\Engineering\Engineering Plans\Construction Plans\Fire Line Plans\051881 CP-C3.1-CVR.dwg 11/12/2024

BOWMAN CONSULTING NOTES

1. THESE PLANS ARE SUBJECT TO THE INTERPRETATION OF INTENT BY THE ENGINEER. ALL QUESTIONS REGARDING THESE PLANS SHALL BE PRESENTED TO THE ENGINEER. ANYONE WHO TAKES UPON THEMSELVES THE INTERPRETATION OF THE DRAWINGS OR MAKES REVISIONS TO THE SAME WITHOUT CONFERRING WITH THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR THE CONSEQUENCES THEREOF.

2. THE ESTIMATED QUANTITIES SHOWN ARE FOR INFORMATION PURPOSES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETENESS AND ACCURACY OF A DETAILED ESTIMATE BASED ON THESE PLANS, CURRENT CODES, AND SITE VISITATION.

3. ALL EARTHWORK CONSTRUCTION SHALL CONFORM TO THE LATEST MARICOPA ASSOCIATION OF GOVERNMENTS STANDARD DETAILS AND/OR SPECIFICATIONS INCLUDING ANY SUPPLEMENTS THERETO, AND ALL ADDENDA. THE CONTRACTOR IS TO FOLLOW THE RECOMMENDATION OF THE PROJECT SOIL INVESTIGATION REPORT AND LETTER.

4. PRIOR TO BIDDING THE WORK, THE CONTRACTOR SHALL THOROUGHLY SATISFY THEMSELVES AS TO THE ACTUAL CONDITIONS, REQUIREMENTS OF THE WORK AND EXCESS OR DEFICIENCY IN QUANTITIES. NO CLAIMS SHALL BE MADE AGAINST THE OWNER/DEVELOPER OR ENGINEER FOR ANY EXCESS OR DEFICIENCY THEREIN, ACTUAL OR RELATIVE.

5. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS OR PROGRAMS UTILIZED IN CONNECTION WITH THE WORK, AND WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

6. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR COORDINATING THE RELOCATION OF UTILITIES, POWER POLES, ETC.

7. THE CONTRACTOR IS TO VERIFY THE LOCATION, ELEVATION, CONDITION, AND PAVEMENT CROSS-SLOPE OF ALL EXISTING SURFACES AT POINTS OF TIE-IN AND MATCHING, PRIOR TO COMMENCEMENT OF GRADING, PAVING, CURB AND GUTTER OR OTHER SURFACE CONSTRUCTION. SHOULD EXISTING LOCATIONS, ELEVATIONS, CONDITION, OR PAVEMENT CROSS-SLOPE DIFFER FROM THAT SHOWN ON THESE PLANS, RESULTING IN THE DESIGN INTENT REFLECTED ON THE PLANS NOT ABLE TO BE CONSTRUCTED, THE CONTRACTOR SHALL NOTIFY THE OWNER'S AGENT IMMEDIATELY FOR DIRECTION ON HOW TO PROCEED PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR ALL COSTS ASSOCIATED WITH CORRECTIVE ACTION IF THESE PROCEDURES ARE NOT FOLLOWED.

8. EXISTING UTILITIES SHOWN ON THESE PLANS HAVE BEEN LOCATED ACCORDING TO INFORMATION PROVIDED BY THE AGENCY OPERATING EACH UTILITY. LOCATIONS SHOWN ARE APPROXIMATE ONLY, AND SHOULD BE CONSIDERED APPROXIMATE. CALL ARIZONA BLUE STAKE FOR FIELD LOCATION AT 8-1-1 or 1-800-STAKE-IT A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO EXCAVATION. THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING UTILITIES ON THE SITE NOT NOTED FOR RELOCATION OR REMOVAL. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN OR NOT ON THE DRAWING, SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S EXPENSE. EXISTING SURFACE FEATURES AND FENCING OUTSIDE OF THE CONSTRUCTION LIMITS SHALL BE REPLACED IN KIND IF DISTURBED.

9. THE ENGINEER AND APPLICABLE AGENCY MUST APPROVE, PRIOR TO CONSTRUCTION, ANY ALTERATION, OR VARIANCE FROM THESE PLANS. ANY VARIATIONS FROM THESE PLANS SHALL BE PROPOSED ON CONSTRUCTION FIELD PRINTS AND TRANSMITTED TO THE ENGINEER.

10. ANY INSPECTION BY THE CITY, COUNTY, ENGINEER, OR OTHER JURISDICTIONAL AGENCY, SHALL NOT, IN ANY WAY, RELIEVE THE CONTRACTOR FROM ANY OBLIGATION TO PERFORM THE WORK IN STRICT COMPLIANCE WITH APPLICABLE CODES AND AGENCY REQUIREMENTS.

11. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL UNDERGROUND FACILITIES FROM DAMAGE DURING CONSTRUCTION. THE DEPTH OF COVER IS DESIGNED FOR FINAL GRADE. THEREFORE, EXTRA CARE SUCH AS BERMING OVER PIPES, FLAGGING OR SIGNAGE SHOULD BE USED DURING CONSTRUCTION TO MAINTAIN COVER OR PROTECT THE UNDERGROUND FACILITIES.

12. THE ENGINEER MAKES NO REPRESENTATION OR GUARANTEE REGARDING EARTHWORK QUANTITIES OR THAT THE EARTHWORK FOR THIS PROJECT WILL BALANCE DUE TO THE VARYING FIELD CONDITIONS, CHANGING SOIL TYPES, ALLOWABLE CONSTRUCTION TOLERANCES AND CONSTRUCTION METHODS THAT ARE BEYOND THE CONTROL OF THE ENGINEER. EARTHWORK QUANTITIES SHOWN ARE RAW, AND DO NOT ACCOUNT FOR SOIL SHRINK, SWELL OR GROUND SCARIFICATION.

13. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING PIPE AT PROPOSED CONNECTIONS PRIOR TO NEW PIPE INSTALLATION. NOTIFY ENGINEER IMMEDIATELY OF CONFLICTS OR DISCREPANCIES FROM THE PLANS.

14. CONTRACTOR TO COMPLY WITH ALL ADA REQUIREMENTS RELATING TO CONSTRUCTION.

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NOTES & DETAILS
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4121 WEST INNOVATIVE DRIVE
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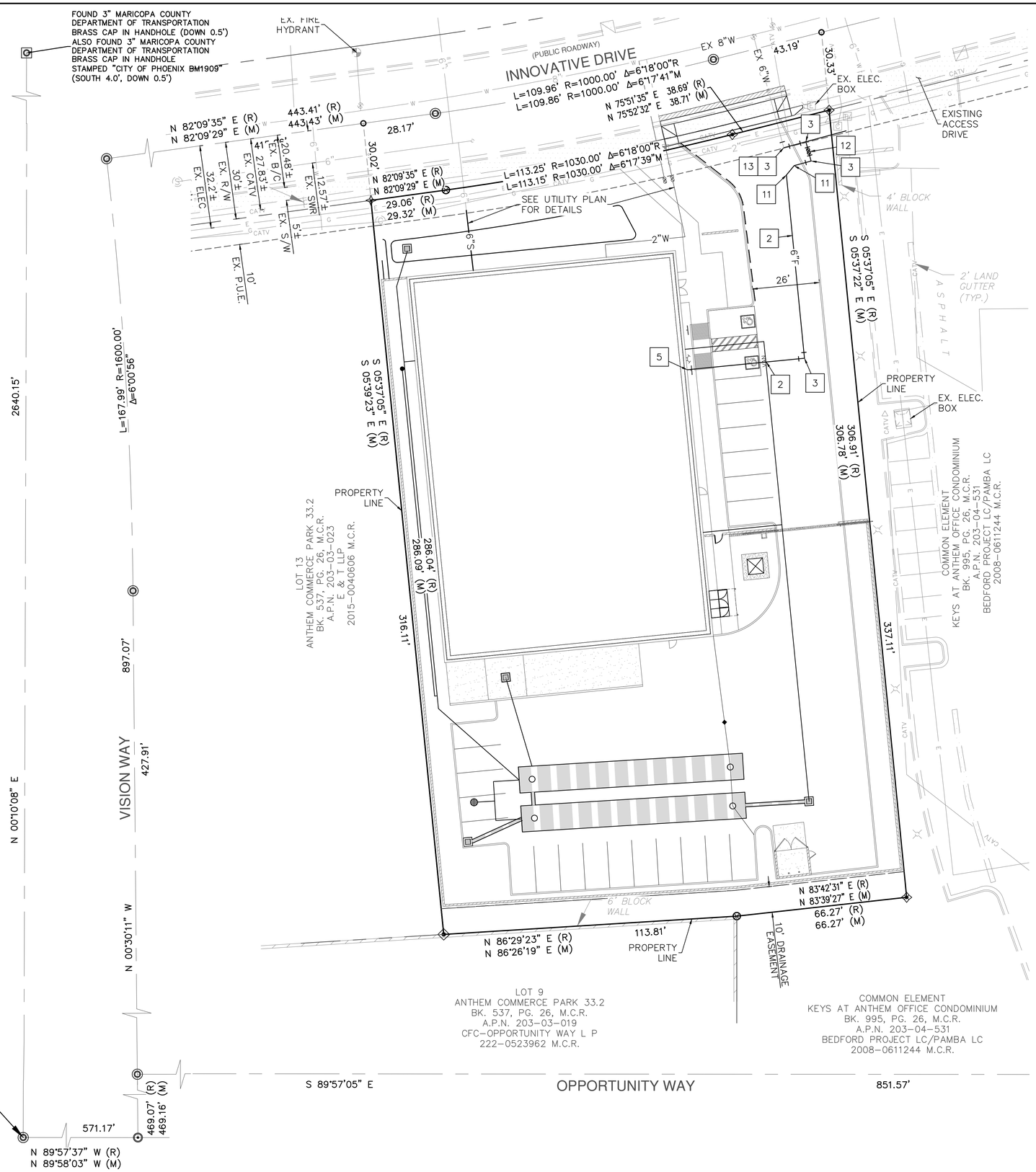
C3.2

SHEET 2 OF 3

CAD FILE NAME: V:\051881 – Anthem Commerce Park\051881-01-001 (ENG) – Lot 12\Engineering\Engineering Plans\Construction Plans\Fire Line Plans\051881 CP-C3.1-CVR.dwg 11/11/2024



WATER CONSTRUCTION NOTES

2	6" D.I.P. FIRE LINE (CLASS 350 MINIMUM) PER MAG SPECIFICATION 610
3	6"x90° D.I.P. BEND
5	SEE PLUMBING PLANS FOR CONTINUATION
11	6"x45° D.I.P. BEND
12	INSTALL 6" DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY PER C.O.P. STD. DETAIL P 1352
13	REMOVE PLUG AND CONNECT TO EXISTING WATER LINE

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FIRELINE COMBO PLAN
ANTHEM COMMERCE PARK
4121 WEST INNOVATIVE DRIVE
PHOENIX, AZ 85086
MARICOPA COUNTY

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SHEET 3 OF 3

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ANTHEM COMMERCE PARK

STORMWATER MANAGEMENT PLANS

4121 WEST INNOVATIVE DRIVE
PHOENIX, AZ 85086

LOCATED IN THE NORTHWEST QUARTER OF SECTION 15, TOWNSHIP 6 NORTH, RANGE 2 EAST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

STORM WATER MANAGEMENT PLAN (CITY OF PHOENIX) GENERAL NOTES:

1. A COPY OF THE APPROVED GRADING AND DRAINAGE PLAN FOR THIS PROJECT, TOGETHER WITH A COPY OF THE NOI, AND SWMP, SHALL BE MAINTAINED ON THE SITE AND AVAILABLE FOR REVIEW. THOSE ELEMENTS OF THE GRADING AND DRAINAGE PLAN PERTINENT TO OR REFERENCED ON THE CONSTRUCTION SWMP SHALL BE CONSIDERED A PART OF THE CONSTRUCTION SWMP.
2. PLANNING & DEVELOPMENT DEPARTMENT'S CIVIL/SITE INSPECTION GROUP SHALL BE NOTIFIED 48 HOURS BEFORE ANY ON-SITE AND/OR OFF-SITE CONSTRUCTION BEGINS, AT (602)262-7811.
3. THE OPERATOR SHALL OBTAIN A DUST CONTROL PERMIT FROM MARICOPA COUNTY'S AIR QUALITY DEPARTMENT AND PERFORM MEASURES AS REQUIRED BY THE PERMIT TO PREVENT EXCESS DUST.
4. THE OPERATOR SHALL PERFORM, AT A MINIMUM, A VISUAL INSPECTION OF THE CONSTRUCTION SITE ONCE EVERY MONTH AND WITHIN 24 HOURS OF RAINFALL GREATER THAN OR EQUAL TO A HALF OF INCH OR MORE. THE OPERATOR SHALL PREPARE A REPORT DOCUMENTING HIS/HER FINDINGS ON THE CONDITIONS OF THE BMP'S AND NOTE ANY EROSION PROBLEM AREAS PER TECHNICAL REVIEW TEAM (TRT) DOCUMENT #00318, STORM WATER POLLUTION PLAN - SAMPLE LETTER. THE OPERATOR'S REPORT IS TO BE SUBMITTED TO THE PLANNING & DEVELOPMENT DEPARTMENT CIVIL/SITE INSPECTOR FOR REVIEW AND APPROVAL. FACILITIES SHALL BE MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING. IN ADDITION, ALL TEMPORARY SILTATION CONTROLS SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED, PERMANENT DRAINAGE FACILITIES ARE OPERATIONAL, AND THE POTENTIAL FOR EROSION HAS PASSED.
5. THE OPERATOR SHALL AMEND THE SWMP AS NECESSARY DURING THE COURSE OF CONSTRUCTION TO RESOLVE ANY PROBLEM AREAS, WHICH BECOME EVIDENT DURING THE CONSTRUCTION AND/OR DURING RAINFALLS.
6. THE PERMITTEE SHOULD FILE A N.O.T. AFTER COMPLETION OF CONSTRUCTION AND PLACEMENT OF FINAL LANDSCAPE MATERIALS, AND/AS REQUIRED BY ADEQ'S CONSTRUCTION ACTIVITY GENERAL PERMIT (CGP). INFORMATION CAN BE FOUND HERE: ADEQ STORMWATER CGP INFORMATION PAGE
7. THE PERMITTEE SHALL SAVE ALL RECORDS, INCLUDING BUT NOT LIMITED TO THE THE N.O.I., SWMP, N.O.T., AND INSPECTION REPORTS ON FILE FOR MINIMUM OF THREE (3) YEARS FROM THE DATE THE PERMIT COVERAGE EXPIRES OR IS TERMINATED, AND/OR AS REQUIRED BY ADEQ.
8. THE IMPLEMENTATION OF THESE PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE FACILITIES IS THE RESPONSIBILITY OF THE PERMITTEE/CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED BY THE PLANNING & DEVELOPMENT DEPARTMENT CIVIL/SITE INSPECTOR.
9. THE FACILITIES SHOWN ON THE CONSTRUCTION SWMP MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES IN SUCH A MANNER AS TO INSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS AND MUST BE INSTALLED AND IN OPERATION PRIOR TO ANY GRADING OR LAND CLEARING. WHEREVER POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.
10. PLAN APPROVAL IS VALID FOR 180 DAYS. PRIOR TO PLAN APPROVAL EXPIRATION, ALL ASSOCIATED PERMITS SHALL BE PURCHASED OR THE PLANS SHALL BE RESUBMITTED FOR EXTENSION OF PLAN APPROVAL. THE EXPIRATION, EXTENSION, AND REINSTATEMENT OF CIVIL ENGINEERING PLANS AND PERMITS SHALL FOLLOW THE SAME GUIDELINES AS THOSE INDICATED IN THE PHOENIX BUILDING CONSTRUCTION CODE ADMINISTRATIVE PROVISIONS SECTION 105.3 FOR BUILDING PERMITS.

LEGEND

- CONSTRUCTION NOTE CALLOUT
- STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED DRAINAGE PATTERN
- F.F.E. FINISHED FLOOR
- DUST CONTROL
- DRY WELL
- SILT FENCE
- STORM OUTFALL
- LIMITS OF DISTURBANCE
- STAGING AREA
- WASH DOWN AREA

PROJECT DESCRIPTION

THE SITE IS A 1.17 ACRE PARCEL LOCATED AT 4121 WEST INNOVATIVE DRIVE. THIS IS AN EXISTING LOT IN AN INDUSTRIAL AREA. THE PROPOSED USE IS A COMMERCIAL OFFICE / WAREHOUSE BUILDING. ACCESS WILL BE PROVIDED BY A PROPOSED DRIVE ENTRANCE FROM INNOVATIVE DRIVE. THE SITE WILL BE SERVICED BY NEW WATER AND SEWER BUILDING CONNECTIONS WHICH WILL TIE INTO THE EXISTING WATER AND SEWER MAINS IN INNOVATIVE DRIVE. THE SITE WILL PROVIDE ONSITE RETENTION FOR THE 100 YEAR, 2 HOUR STORM EVENT.

SITE DATA

SITE ADDRESS:	4121 WEST INNOVATIVE DRIVE PHOENIX, AZ 85086
APN:	203-03-022
EXISTING ZONING:	CP/GCP
PROPOSED ZONING:	CP/GCP
SITE AREA:	53,165 SF / 1.17 ACRES
DISTURBED AREA:	53,165 SF / 1.17 ACRES

DEVELOPER

CFC OPPORUNITY WAY LP
1807 SOUTH SAN GABRIEL BLVD.
SAN GABRIEL, CA 91776

ARCHITECT

CAWLEY ARCHITECTS
730 N. 52ND STREET, SUITE 203
PHOENIX, AZ 85008
PHONE: (602) 393-5060
CONTACT: D. CHRISTOPHER BARTA
EMAIL: CHRISTOPHERB@CRAWLEYARCHITECTS.COM

ENGINEER

BOWMAN CONSULTING
1600 N. DESERT DRIVE SUITE 210
TEMPE, AZ 85288
PHONE: (480) 629-8830
CONTACT: JEFF RYBARCZYK
EMAIL:JRYBARCZYK@BOWMAN.COM
REG NO 28117

BASIS OF BEARINGS

THE WEST LINE OF THE NORTHWEST QUARTER OF SECTION 15, USING A BEARING OF NORTH 0 DEGREES 10 MINUTES 8 SECONDS EAST, AS PER THE RECORD OF SURVEY IN BOOK 714, PAGE 5, RECORDS OF MARICOPA COUNTY, ARIZONA.

BENCHMARK

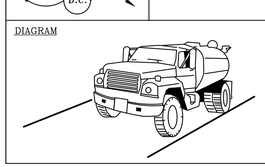
THE CITY OF PHOENIX UNIQUE POINT ID: 1914, BEING A CHISELED SQUARE ON TOP OF CURB, LOCATED AT EAST END OF NORTHEAST RETURN, EAST SIDE OF BRIDGE OVER I-17, HAVING AN ELEVATION OF 1908.53', NGVD29.

LEGAL DESCRIPTION

LOT 12 AS SHOWN ON FINAL PLAT OF ANTHEM COMMERCE PARK 33.2 RECORDED IN THE OFFICE OF MARICOPA COUNTY RECORDER, BOOK 537, PAGE 26 THEREOF

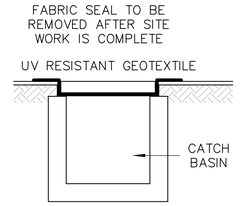
SYMBOL: D.C.
DUST CONTROL
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DIAGRAM

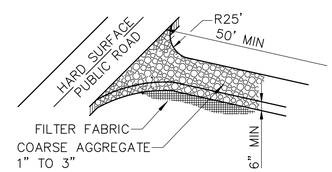


CONDITIONS WHERE PRACTICE APPLIES
- ___ PERIMETER CONTROL
- * SLOPE PROTECTION
- ___ SEDIMENT TRAPPING
- ___ DRAINAGEWAY & STREAM PROTECTION
- * TEMPORARY STABILIZATION
- ___ PERMANENT STABILIZATION & EXPOSURE LIMITS
- ___ NON-SEDIMENT POLLUTION CONTROL

BMP EC-7
N.T.S.



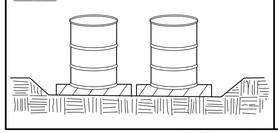
GEOTEXTILE FABRIC SEAL
N.T.S.



STABILIZED CONSTRUCTION ENTRANCE
BMP EC-5
N.T.S.

SYMBOL: P.S.A.
PROTECTED CHEMICAL AND MATERIALS STORAGE AREA
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DIAGRAM



CONDITIONS WHERE PRACTICE APPLIES
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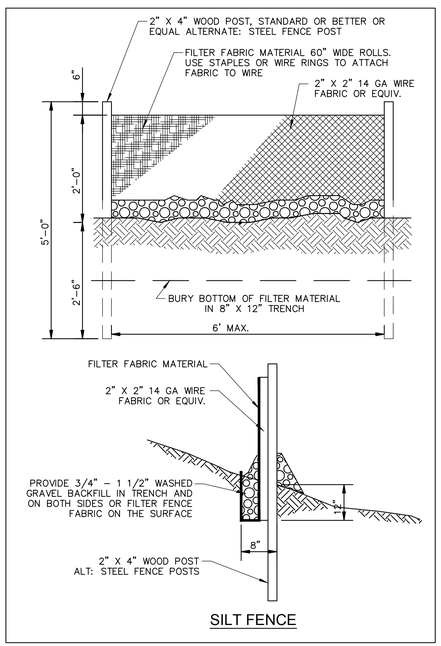
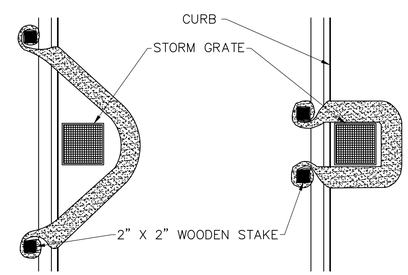
- ___ SLOPE PROTECTION
- ___ SEDIMENT TRAPPING
- ___ DRAINAGEWAY & STREAM PROTECTION
- ___ TEMPORARY STABILIZATION
- ___ PERMANENT STABILIZATION & EXPOSURE LIMITS
- * NON-SEDIMENT POLLUTION CONTROL

BMP GH-1
N.T.S.



SILT FENCE

BMP SPC-5
N.T.S.



CURBSIDE STORM GRATE OPTION "A" PLAN VIEW

CURBSIDE STORM GRATE OPTION "B" PLAN VIEW

BMP SPC-1
N.T.S.

SYMBOL: S.W.M.
SOLID WASTE MANAGEMENT
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

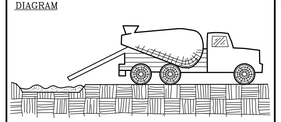
DIAGRAM

CONDITIONS WHERE PRACTICE APPLIES
- ___ PERIMETER CONTROL
- ___ SLOPE PROTECTION
- ___ SEDIMENT TRAPPING
- ___ DRAINAGEWAY & STREAM PROTECTION
- ___ TEMPORARY STABILIZATION
- ___ PERMANENT STABILIZATION & EXPOSURE LIMITS
- * NON-SEDIMENT POLLUTION CONTROL

BMP GH-2
N.T.S.

SYMBOL: W.A.
DESIGNATED WASHOUT AREA
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

DIAGRAM



CONDITIONS WHERE PRACTICE APPLIES
- ___ PERIMETER CONTROL
- ___ SLOPE PROTECTION
- ___ SEDIMENT TRAPPING
- ___ DRAINAGEWAY & STREAM PROTECTION
- ___ TEMPORARY STABILIZATION
- ___ PERMANENT STABILIZATION & EXPOSURE LIMITS
- * NON-SEDIMENT POLLUTION CONTROL

BMP GH-4
N.T.S.

Road Sweeping / Trackout Cleaning

Road sweeping

GENERAL INFORMATION

PERIMETER AND ACCESS CONTROLS – HIGH DEBRIS MANAGEMENT, CLEANUP, AND WASHOUT. HIGH EFFECTIVENESS.

BMP GH-6
N.T.S.

FLOOD ZONE CERTIFICATION

THIS PROPERTY LIES IN ZONE "X" AND IS NOT LOCATED WITHIN ANY PRESENTLY ESTABLISHED 100-YEAR FLOOD PLAIN, AS SHOWN BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP FOR THE CITY OF PHOENIX, ARIZONA COMMUNITY PANEL NUMBER 04013C0835L EFFECTIVE DATE OCTOBER 168. 2013.

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SHEET 1 OF 2

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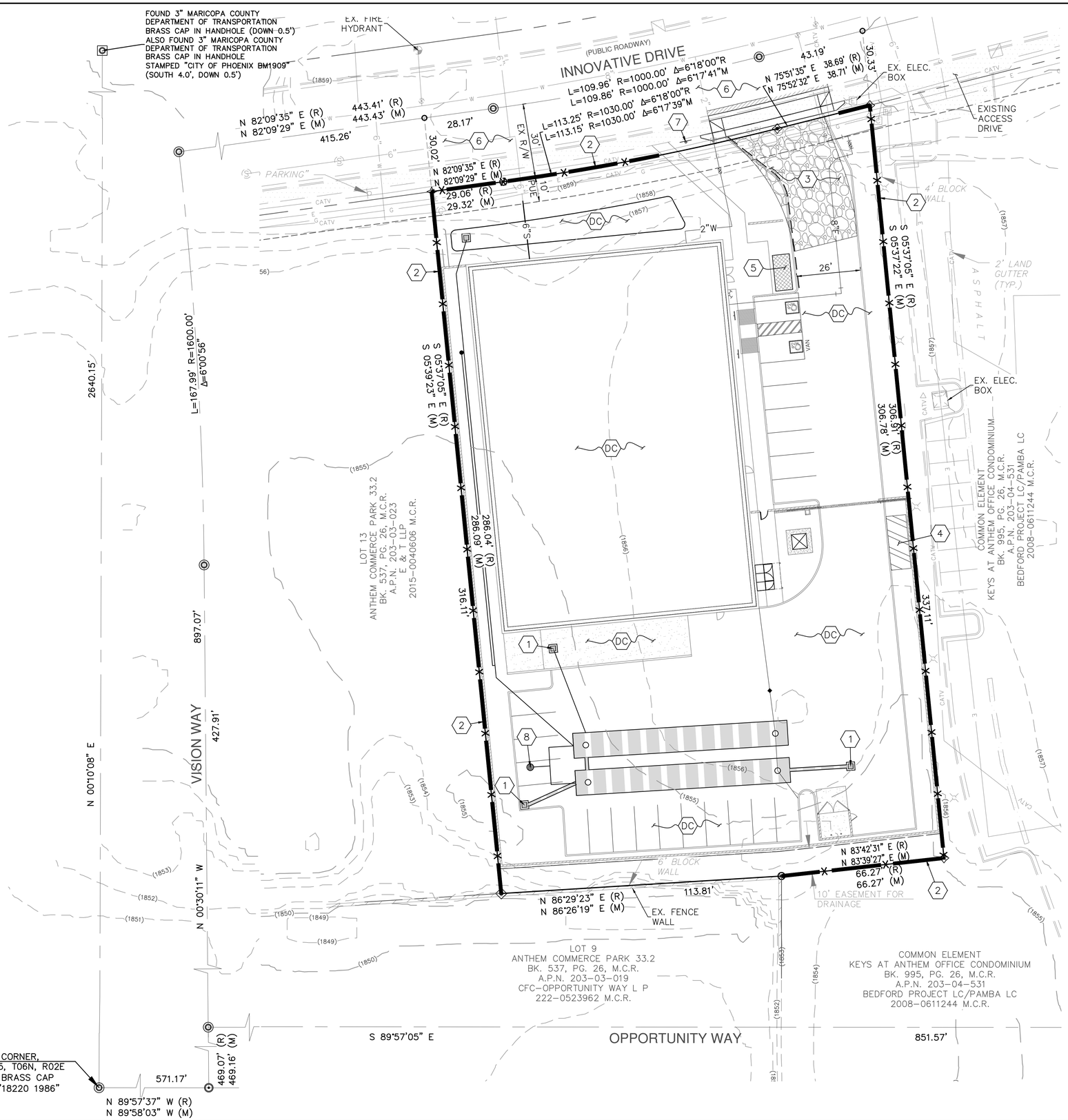

CONSTRUCTION NOTES

1. CATCH BASIN AND SPILLWAY INLETS SHALL BE PROTECTED WITH ORGANIC FILTER BARRIER PER BMP SPC-1
2. INSTALL SILT FENCE PER BMP SPC-5
3. CONSTRUCT AND MAINTAIN 30' WIDE X 50' LONG STABILIZED CONSTRUCTION ENTRANCE PER THE EROSION CONTROL BMP EC-5.
4. STAGING AREA FOR EQUIPMENT MAINTENANCE AND EQUIPMENT STORAGE PER THE GOOD HOUSEKEEPING BMP GH-1 AND BMP GH-2.
5. WASH DOWN AREA PER THE GOOD HOUSEKEEPING BMP GH-4.
6. PAVED ROAD SHALL BE SWEPT WHEN TRACKOUT PRESENT PER BMP GH-6.
7. POST SIGN AT ENTRANCE WITH AZPDES AUTHORIZATION NUMBER, NAME & TELEPHONE OF CONTACT PERSON AND BRIEF DESCRIPTION OF PROJECT.
8. CONSTRUCT DRYWELLS IN ACCORDANCE WITH THE GRADING AND DRAINAGE PLAN. DRYWELL INLETS SHALL BE COVERED WITH GEOTEXTILE FABRIC OR SURROUNDED BY FIBER ROLLS TO PREVENT SEDIMENT FROM ENTERING.

DC APPLY DUST CONTROL MEASURES OVER DISTURBED AREAS PER BMP EC-7.

LEGEND

1	CONSTRUCTION NOTE CALLOUT	X	SILT FENCE
	STABILIZED CONSTRUCTION ENTRANCE		STORM OUTFALL
	PROPOSED DRAINAGE PATTERN		LIMITS OF DISTURBANCE
FF	FINISHED FLOOR		STAGING AREA
DC	DUST CONTROL		WASH DOWN AREA
	DRY WELL		

N

GRAPHIC SCALE 1" = 20'

KIVA PROJECT #: 04-3332A3
SDEV #: 0401420
PAPP #: 2208465
QS #: 68-19
MEETING DATE: 12/27/2022

Call at least two full working days before you begin excavation. ARIZONA 811 Arizona Blue Stake, Inc. Dial 8-1-1 or 1-800-STAKE-IT (782-5348) In Maricopa County: (602) 263-1100

Bowman

Bowman Consulting Group Ltd
Eastern Market Place Ste 210
Tempe, Arizona 85285
Phone: (480) 629-8830
www.bowman.com
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STORMWATER MANAGEMENT PLAN
ANTHEM COMMERCE PARK
4121 WEST INNOVATIVE DRIVE
PHOENIX, AZ 85086
MARICOPA COUNTY

PROJECT NUMBER

REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 28117 JEFFREY SCOTT RYBARCZYK Date Signed 10.31.24 ARIZONA U.S.A.

PLAN STATUS

DATE	DESCRIPTION	
JSR	JMB	JSR
DESIGN	DRAWN	CHKD

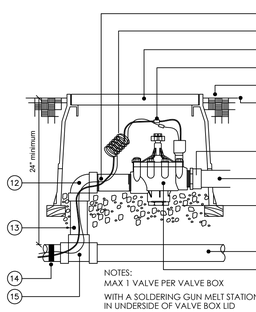
SCALE H: 1"=20' V: N.T.S

JOB No. 051881-01-001

DATE : 10.31.2024

SHEET C4.2 2 OF 2

CAD FILE NAME: V:\051881 - Anthem Commerce Park\051881-01-001 (ENG) - Lot 12\Engineering\Engineering Plans\Construction Plans\Stormwater Management Plans\051881 CP C4.1 ESP.dwg 11/11/2024

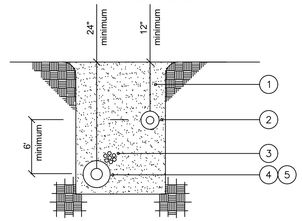


NOTES:
MAX 1 VALVE PER VALVE BOX
WITH A SOLDERING GUN MELT STATION NO. IN UNDERSIDE OF VALVE BOX LID

1. SCH. 80 PVC NIPPLE 6" LONG
2. #14 CONTROL WIRE
3. RECTANGULAR PLASTIC VALVE BOX WITH LOCKING LID
4. EPOXY WIRE CONNECTORS
5. 1" IN TURF AREAS. 2" IN D.G AREAS
6. FINISH GRADE
7. PVC MALE ADAPTER
8. PVC LATERAL LINE (SIZE PER PIPE SCHEDULE)
9. 6" DEPTH 3.8" PEA-GRAVEL WITH 1" CLEARANCE BETWEEN BOTTOM OF VALVE AND TOP OF PEA-GRAVEL
10. PVC MAINLINE PER MAINLINE
11. ELECTRIC CONTROL VALVE
12. PVC ELBOW
13. SCH 80 PVC
14. TAPE WIRES 8" O.C TO MAINLINE
15. PVC MAINLINE TEE OR ELBOW

CONTROL VALVE DETAIL
NOT TO SCALE

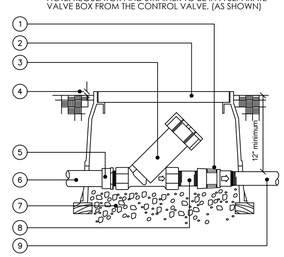
NOTES:
WATER SETTLE AND COMPACT ALL TRENCHES
ALL SLEEVES TO BE A MIN. OF 24" DEEP
USE COMMON TRENCHES WHEN POSSIBLE
RUN TRENCHES PARALLEL TO BUILDING'S AND WALKWAY'S
(THE PLAN MY BE DIAGRAMMATIC)
SHADE ALL PIPE AND WIRES WITH SAND IN ROCKY CONDITIONS, MIN 2" CLEAR ALL SIDES



1. CLEAN BACK FILL NO ROCKS OVER 1/2" DIA.
2. LATERAL LINE SIZE PER PIPE SCHEDULE
3. CONTROLLER WIRES TAPE TO MAINLINE 8" O.C
4. MAINLINE SIZE PER PLAN
5. SLEEVE PER PLAN AND SCHEDULE

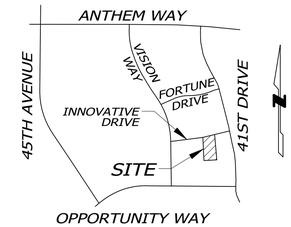
TRENCHING / SLEEVING DETAIL
NOT TO SCALE

NOTE: REGULATOR AND STRAINER TO BE IN A SEPARATE VALVE BOX FROM THE CONTROL VALVE. (AS SHOWN)



1. PRESSURE REGULATOR SENNINGER PMR-MF (UNLESS OTHERWISE NOTED)
2. RECTANGULAR VALVE BOX WITH LOCKING LID
3. 'Y' STRAINER AG. PRODUCTS (UNLESS OTHERWISE NOTED)
4. 2" IN GRANITE AREAS
5. PVC MALE ADATPER
6. 1" PVC CLASS 200 SUB MAINLINE FROM VALVE
7. 6" DEPTH OF 3.8" PEA GRAVEL
8. SCH 80 PVC NIPPLE 4" LONG
9. LATERAL LINE SIZE PER PIPE SCHEDULE

DRIP ASSEMBLY DETAIL
THIS DETAIL TO BE USED WITH CONTROL VALVE DETAIL
NOT TO SCALE

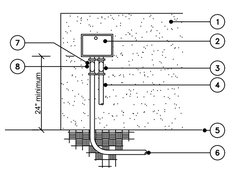


VICINITY MAP
NOT TO SCALE

OWNERSHIP INFO:
CFC - OPPORTUNITY WAY LP
C/O JUSTEN CASSIDY
4121 W. INNOVATIVE DR.
PHOENIX, AZ 85086
JUSTENC@CAWLEYARCHITECTS.COM
602-393-5060

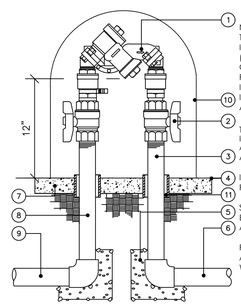
VICINITY MAP / OWNER'S INFO:
NOT TO SCALE

NOTES:
ALL WIRING INSTALLED PER LOCAL CODES
SEE CONTROLLER MANUAL FOR MOUNTING INSTRUCTIONS
THE IRRIGATION CONTRACTOR IS TO SUPPLY 2 KEYS, AND INSTRUCTION MANUAL TO OWNER



1. WALL OR BUILDING
2. WALL MOUNTED CONTROLLER
3. 1" JUNCTION BOX
4. 120v POWER AND GROUND SOURCE BY GENERAL CON. UNLESS OTHERWISE NOTED
5. FINISH GRADE
6. STEEL CONDUIT TO 18" POST SWEEP DIRECT BURIAL WIRES TO CONTROL VALVE
7. CONTROL WIRE CONNECTIONS
8. COMMON WIRE CONNECTIONS

CONTROLLER DETAIL
WALL MOUNTED
NOT TO SCALE

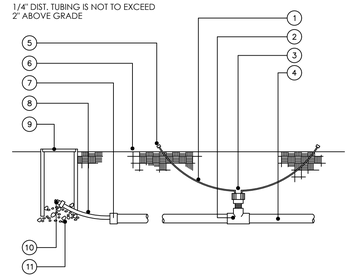


NOTES:
THE IRRIGATION CON. IS TO SUPPLY AND INSTALL (2)-4" DIA. CONCRETE FILLED GALV. PIPE AS BOLLARDS TO PROTECT THE DEVICE IF THE ASSEMBLY IS INSTALLED WITHIN 3' OF ANY AUTO TRAFFIC AREA
THE IRRIGATION CON. IS RESPONSIBLE FOR ANY AND ALL REQUIRED FEES AND PERMITS
INSTALL R.P. ASSEMBLY PER ALL LOCAL CODES
SUPPLY AND INSTALL BPDI METAL CAGE AROUND THE R.P DEVICE
PAINT THE R.P ASSEMBLY AND CAGE TO MATCH THE WALL OR BLDG

1. FEBCO 825-YA (SIZE PER LEGEND)
2. (2) NIBCO BRASS GATE VALVES SAME AS R.P ASSEMBLY
3. TYPE 'K' COPPER
4. FINISH GRADE
PROVIDE TRUST BLOCKS ON ALL ASSY. 2-1/2" AND LARGER
5. 2-C.U.FT. CONCRETE TRUST BLOCK
6. ADAPT TO PVC MAINLINE
7. 4" CONCRETE FOOTING
8. TYPE 'K' COPPER
9. ADAPT TO WATER SOURCE
10. CAGE BY 'BPDI'
11. 2" SCH. 40 PVC SLEEVE

REDUCED PRESSURE
PRINCIPLE ASSEMBLY
NOT TO SCALE

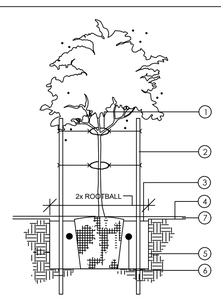
NOTES:
IN SLOPE CONDITIONS ALWAYS PLACE EMITTER ON HIGH SIDE OF SLOPE
1/4" DIST. TUBING IS NOT TO EXCEED 2' ABOVE GRADE



1. 1/4" DIST. TUBING MAX LENGTH 5'
2. LATERAL LINE FITTING W/ NIPPLE
3. EMITTER SEE LEGEND
4. PVC LATERAL LINE PIPE SIZE PER PIPE SCHEDULE
5. SALCO BUG CAP
6. FINISH GRADE
7. PVC TP PLOT FITTING
8. POLY TUBING 3' MAX LENGTH
9. 6" ROUND VALVE BOX
10. SELF FLUSHING CAP
11. 6" DEPTH OF 3.8" PEA-GRAVEL

EMITTER DETAIL
NOT TO SCALE

NOT TO SCALE

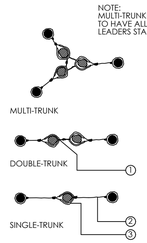


1. 1/2" RUBBER HOSE WITH #10 WIRE
2. TWO 2" ROUND BY 10' LONG GREEN TREE STAKES BURY 3' BELOW GRADE
3. 4" BASIN
4. GRADE (PRIOR TO GRANITE)
5. ROUGHEN SIDES OF PLANT PIT TO PREVENT GLAZING
6. AGRIFORM TABLETS
7. 2" DEPTH OF DECOMPOSED GRANITE. (SEE LEGEND FOR TYPE)

BACKFILL PLANT PIT WITH SOIL MIX PER PHX MAG SUPLEMENT.

DOUBLE STAKING DETAIL
NOT TO SCALE

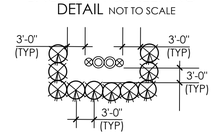
NOTE:
MULTI-TRUNKED TREES TO HAVE ALL MAJOR LEADERS STAKED

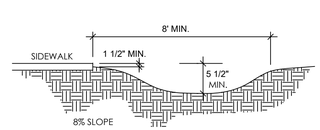


1. NOTCH TUBING LOOP WIRE THROUGH EXPOSED WIRE
2. #10 WIRE RUBBER COATED
3. 1/2" RUBBER HOSE

TREE GUYING DETAIL
NOT TO SCALE

BACKFLOW SCREENING DETAIL
NOT TO SCALE

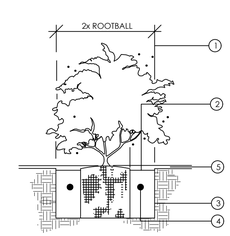




NOTE:
ALL EARTHWORK TO BE DONE SO THAT ALL WATER DRAINS AWAY FROM ALL SIDEWALKS AND STRUCTURES

SWALE DETAIL

CITY OF PHOENIX STANDARD DETAILS
NOT TO SCALE



1. MINIMUM DIMENSION FOR 5 GAL. PLANTS
2. 1" BASIN
3. ROUGHEN SIDES OF PLANT PIT TO PREVENT GLAZING
4. AGRIFORM TABLETS SEE SPECS. FOR RATIO
5. 2" DEPTH OF DECOMPOSED GRANITE. (SEE LEGEND FOR TYPE)

BACKFILL PLANT PIT WITH SOIL MIX PER PHX MAG SUPLEMENT.

SHRUB PLANTING DETAIL
NOT TO SCALE

CITY OF PHOENIX GENERAL LANDSCAPE NOTES:

THE CITY OF PHOENIX GENERAL NOTES ARE THE ONLY NOTES APPROVED ON THIS PLAN. ADDITIONAL GENERAL NOTES GENERATED BY THE SEALANT AND PLACED ON THE PLANS ARE NOT APPROVED AS PART OF THIS PLAN AND ARE NOTED AS SUCH ON THE PLANS.

THE DESIGN ON THESE PLANS IS ONLY APPROVED BY THE CITY IN SCOPE AND NOT IN DETAIL. CONSTRUCTION QUANTITIES ON THESE PLANS ARE NOT VERIFIED BY THE CITY. APPROVAL OF THESE PLANS ARE FOR PERMIT PURPOSES ONLY AND SHALL NOT PREVENT THE CITY FROM REQUIRING CORRECTION OF ERRORS IN THE PLANS WHERE SUCH ERRORS ARE SUBSEQUENTLY FOUND TO BE IN VIOLATION OF ANY LAW, ORDINANCE, HEALTH, SAFETY, OR OTHER DESIGN ISSUES.

CONSTRUCTION WITHIN THE RIGHT-OF-WAY SHALL CONFORM TO THE LATEST APPLICABLE MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) UNIFORM STANDARD SPECIFICATIONS AND DETAILS AND THE LATEST CITY OF PHOENIX SUPPLEMENT TO THE MAG UNIFORM STANDARD SPECIFICATIONS AND DETAILS.

FINAL BUILDING PERMIT CANNOT BE OBTAINED UNTIL BONDING OR APPROVED ASSURANCES ARE PROVIDED FOR THE LANDSCAPING WITHIN THE RIGHT-OF-WAY.

NO PLANT SUBSTITUTIONS, TYPE, SIZE, OR QUANTITY, OR DEVIATIONS FROM THE APPROVED LANDSCAPE OR IRRIGATION PLANS ARE ALLOWED WITHOUT PRIOR APPROVAL FROM THE CITY OF PHOENIX LANDSCAPE SECTION AT 602-262-7811.

ALL PLANT MATERIAL AND SPECIFICATIONS SHALL CONFORM TO THE ARIZONA NURSERYMAN ASSOCIATION STANDARDS.

ALL RIGHT-OF-WAY AND CITY-REQUIRED (PERIMETER, RETENTION, AND PARKING) PLANT MATERIAL SHALL BE IN COMPLIANCE WITH THE DEPARTMENT OF WATER RESOURCES LOW WATER USE PLANT LIST. HERE IS A LINK ADWR LIST.

HTTPS://NEW.AZWATER.GOV/SITES/DEFAULT/FILES/MEDIA/PHOENIXAMA_4MP_LWUPL.PDF

CONTACT THE PARKS AND RECREATION DEPARTMENT FORESTRY SUPERVISOR AT 602-262-6862 TO VERIFY OWNERSHIP OF ANY PLANT MATERIAL IN THE PUBLIC R.O.W. PRIOR TO ANY PLANT RE-LOCATIONS OR REMOVALS. OBTAIN WRITTEN PERMISSION FROM THE PARKS AND RECREATION DEPARTMENT PRIOR TO THE RE-LOCATION OR REMOVAL OF ANY CITY PLANT MATERIAL OR EQUIPMENT.

CONTACT THE STREET TRANSPORTATION DEPARTMENT, HORTICULTURIST AT 602-262-6284 PRIOR TO THE RE-LOCATION OR REMOVAL OF EXISTING PLANT MATERIAL IN THE A.D.O.T. R.O.W. THAT IS ON THE CITY'S SIDE OF THE SOUND WALL. OBTAIN WRITTEN PERMISSION FROM THE STREET TRANSPORTATION DEPARTMENT PRIOR TO THE RE-LOCATION OR REMOVAL OF ANY PLANT MATERIAL OR EQUIPMENT.

ALL EXISTING TREES AND SHRUBS IN RIGHT-OF-WAY DESIGNATED TO REMAIN BUT ARE DAMAGED OR DESTROYED WILL BE REPLACED IN LIKE SIZE AND KIND BY THE CONTRACTOR.

THE PROPOSED IRRIGATION SYSTEM SHALL INCLUDE ANY MODIFICATIONS REQUIRED TO TIE INTO THE EXISTING CITY OF PHOENIX IRRIGATION SYSTEM IN RIGHT-OF-WAY TO THE PROPOSED SYSTEM. ALL THOUGH IRRIGATION SYSTEMS IN THE RIGHT-OF-WAY SHALL BE MAINTAINED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CAPPING AND/OR ABONDONING EXISTING IRRIGATION TO PLANT MATERIALS AND PROVIDING NEW IRRIGATION TO THE EXISTING PLANT MATERIAL IN THE RIGHT-OF-WAY PER THE APPROVED PLAN.

WALLS ARE NOT APPROVED AS PART OF THE LANDSCAPE PLAN BUT ARE SHOWN FOR REFERENCE ONLY.

TREES ADJACENT TO PEDESTRIAN WALKWAYS SHOULD HAVE A MINIMUM CANOPY CLEARANCE OF SIX FEET EIGHT INCHES (6' 8") PER SECTION 507 TAB A.II.A.3.1.10 OF THE CITY OF PHOENIX ZONING ORDINANCE.

PVC PIPE LATERALS ARE REQUIRED A MAXIMUM OF FIVE FEET (5') OF POLY TUBING OFF OF THE PVC PIPE LATERAL IS ALLOWED. NO POLY TUBING LATERALS ARE ALLOWED.

PLANT QUANTITIES AND CALIPER SIZES PER THE ZONING REQUIREMENTS FOR THIS SITE PROVIDED IN THE LEGEND ON THE APPROVED PLANS ARE REQUIRED TO BE INSTALLED IN THE FIELD. ANY DEVIATIONS FROM THE PLAN WILL REQUIRE A REVISION TO THE APPROVED PLAN.
NOTE: MINIMUM CALIPER SIZE IS A ZONING REQUIREMENT. IF THE MINIMUM CALIPER CANNOT BE MET AT BOX SIZE THAT IS SPECIFIED, THEN THE BOX SIZE MUST BE INCREASED TO MEET CALIPER REQUIREMENTS.

PLAN APPROVAL IS VALID FOR 1 YEAR (12 MONTHS). PRIOR TO PLAN APPROVAL EXPIRATION, ALL ASSOCIATED PERMITS SHALL BE PURCHASED OR THE PLANS SHALL BE RESUBMITTED FOR EXTENSION OF PLAN APPROVAL. THE EXPIRATION, EXTENSION, AND REINSTATEMENT OF LANDSCAPE PLANS AND PERMITS SHALL FOLLOW THE SAME GUIDELINES AS THOSE INDICATED IN THE PHOENIX BUILDING CONSTRUCTION CODE ADMINISTRATIVE PROVISIONS SECTION 105.3 FOR BUILDING PERMITS.

MISC. LANDSCAPE NOTES
THESE NOTES ARE NOT REVIEWED OR APPROVED BY THE CITY OF PHOENIX.
- THE ENTIRE SITE WILL BE MAINTAINED IN ACCORDANCE WITH PHOENIX STANDARDS.
- TREES ADJACENT TO PEDESTRIAN WALKWAYS SHOULD HAVE A MIN. CANOPY OF 6'-8".
- USE PVC LATERALS WITH A MAXIMUM A 5' OF POLY TUBING OFF OF PVC. NO POLY LATERALS WILL BE ACCEPTED.
- PLANT QUANTITIES AND CALIPER SIZES PROVIDED ON THE APPROVED PLAN AND IN THE LEGEND ARE REQUIRED TO BE INSTALLED IN THE FIELD.
- ALL NEW AND DISTURBED LANDSCAPE AREAS WILL RECEIVE A 2" TOP-DRESS OF MATCHING DECOMPOSED GRANITE (MIN. 1/2" MINUS).
- PLANT MATERIAL WITHIN THE CITY OF PHOENIX SIGHT DISTANCE TRIANGLES IF EXISTING WILL BE MAINTAINED AT A MAXIMUM 24" IN HEIGHT, TREES WILL BE MAINTAINED WITH A 7' MINIMUM CLEAR CANOPY.
- NO PLANT SUBSTITUTIONS, TYPE,SIZE OR QUANTITY DEVIATIONS FROM THE APPROVED LANDSCAPE OR IRRIGATION PLANS WITHOUT PRIOR APPROVAL FROM THE CITY OF PHOENIX LANDSCAPE SECTION AT (602) 262-7811
- NO SLOPES ARE GREATER THAN 4:1
- THERE IS NO OVERHEAD POWER LINES ON SITE
- NO SALVAGED PLANT MATERIAL

LANDSCAPE ARCHITECT	CITY OF PHOENIX	DATE

ESTIMATED RIGHT-OF-WAY COST $_____ ESTIMATED S.F. OF LANDSCAPE IN RIGHT-OF-WAY _____
MAINTENANCE BY: ( ) CITY (x) OWNER TOTAL ACRES (OR PORTIONS) LANDSCAPED AREAS _____
SQUARE FOOTAGE OF TURF _____ DATE OF PRELIMINARY SITE PLAN APPROVAL _____

KIVA NO: 04-3332A3
PAPP NO: 2208465
SDEV NO: 0401420
ZONING: CP/GCP PCD*
Q-S NO: Q68-19
LSIS:
LSPL:
Z: Z-62-98

LANDSCAPE ARCHITECT CERTIFICATE NO. 27166 TIMOTHY J. McQUEEN Date Signed 09.03.24 ARIZONA, U.S.A. EXPIRES 06/30/2026

T.J. McQUEEN & ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE
URBAN DESIGN
SITE PLANNING
10446 N. 74th Street , Suite 150
Scottsdale, Arizona 85258
P.(602)265-0320
EMAIL: timmcqueen@tjmla.net

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Phoenix, Arizona 85008
P 602.393.5060
CawleyArchitects.com

COMMERCIAL BUILDING
INNOVATIVE

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INNOVATIVE DR
PHOENIX
ARIZONA
85086

DATE
PRE -APPLICATION
OPTION 2
06-21-2024

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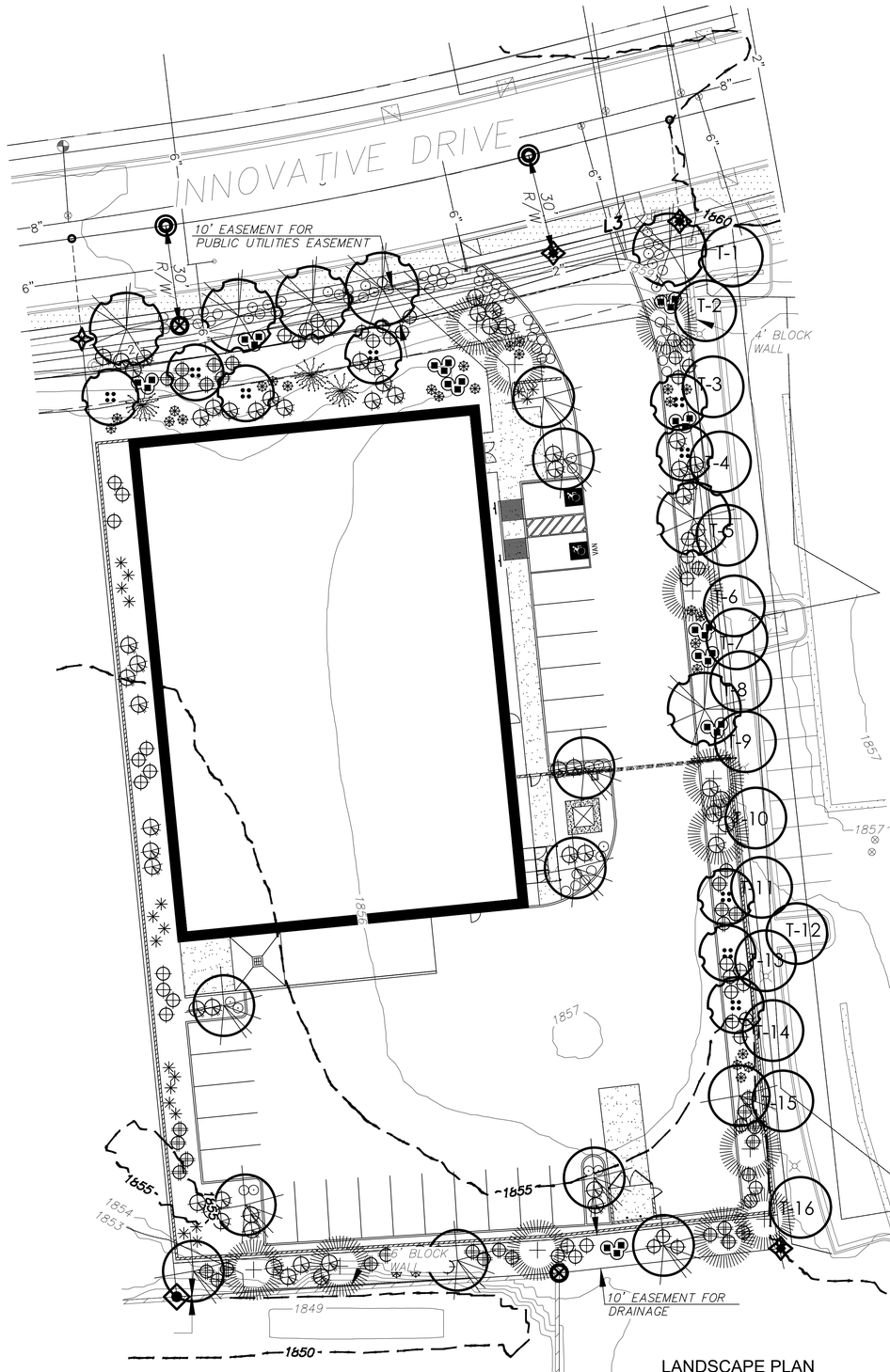
LANDSCAPE PLAN

Project: 22105

La.01



LANDSCAPE LEGEND

- CERCIDIUM FLORIDUM
  BLUE PALO VERDE
  2" CALIP., 6.5'T, 4.5'W
- PROSOPIS 'RIO-SALADO'
  HYBRID THORNLESS MESQUITE
  1.5" CALIP., 6'T, 3.5'W
- OLNEYA TESOTA
  IRONWOOD
  2" CALIP., 5'T,3.5'W
- CHILOPSIS LINEARIS 'ART'S SEEDLESS'
  DESERT WILLOW
  2" CALIP., 5.5'T,4'W
- FOUQUIERIA SPLENDENS
  OCOTILLO
  10 CANE MIN. 7'T MIN.
- LEUCOPHYLLUM FRUTESCENS
  'GREEN CLOUD'
  5 GALLON
- HESPERALOE PARVIFLORA
  RED YUCCA
  5 GALLON
- DASYLIRION WHEELERII
  DESERT SPOON
  5 GALLON
- ECHINOCACTUS GRUSONII
  GOLDEN BARREL CACTUS
  10" ROUND (MATCHING)
- MUHLENBERGIA CAPILLARIS
  REGAL MIST
  5 GALLON
- OPUNTIA 'SANTA RITA'
  SANTA RITA CACTUS
  5 PAD MIN. 2'5' TALL MIN
- HYMENOXYS ACAULIS
  ANGELITA DAISY
  1 GALLON
- SALVIA GREGGII
  AUTUMN SAGE
  1 GALLON
- 3'x3'x3' SURFACE SELECT
  GRANITE BOULDER (BURY 1/3)
  MINIMUM 2000lbs EACH
- 1" MINUS SADDLEBACK BROWN
  DECOMPOSED GRANITE
  2" DEPTH IN ALL LANDSCAPE AREAS

LANDSCAPE PLAN

0' 10' 20' 40'
SCALE: 1"=20'-00"

KIVA NO: 04-3332A3
PAPP NO: 2208465
SDEV NO: 0401420
ZONING: CP/GCP PCD*
Q-S NO: Q68-19
LSIS:
LSPL:
Z: Z-62-98

LANDSCAPE ARCHITECT
CERTIFICATE NO.
27166
TIMOTHY J.
McQUEEN
Date Signed 08.03.24
ARIZONA, U.S.A.
EXPIRES 06/30/2026

T.J. McQUEEN & ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE
URBAN DESIGN
SITE PLANNING

10446 N. 74th Street , Suite 150
Scottsdale, Arizona 85258
P.(602)265-0320

EMAIL: timmcqueen@tjmla.net

TJ&M ASSOCIATES

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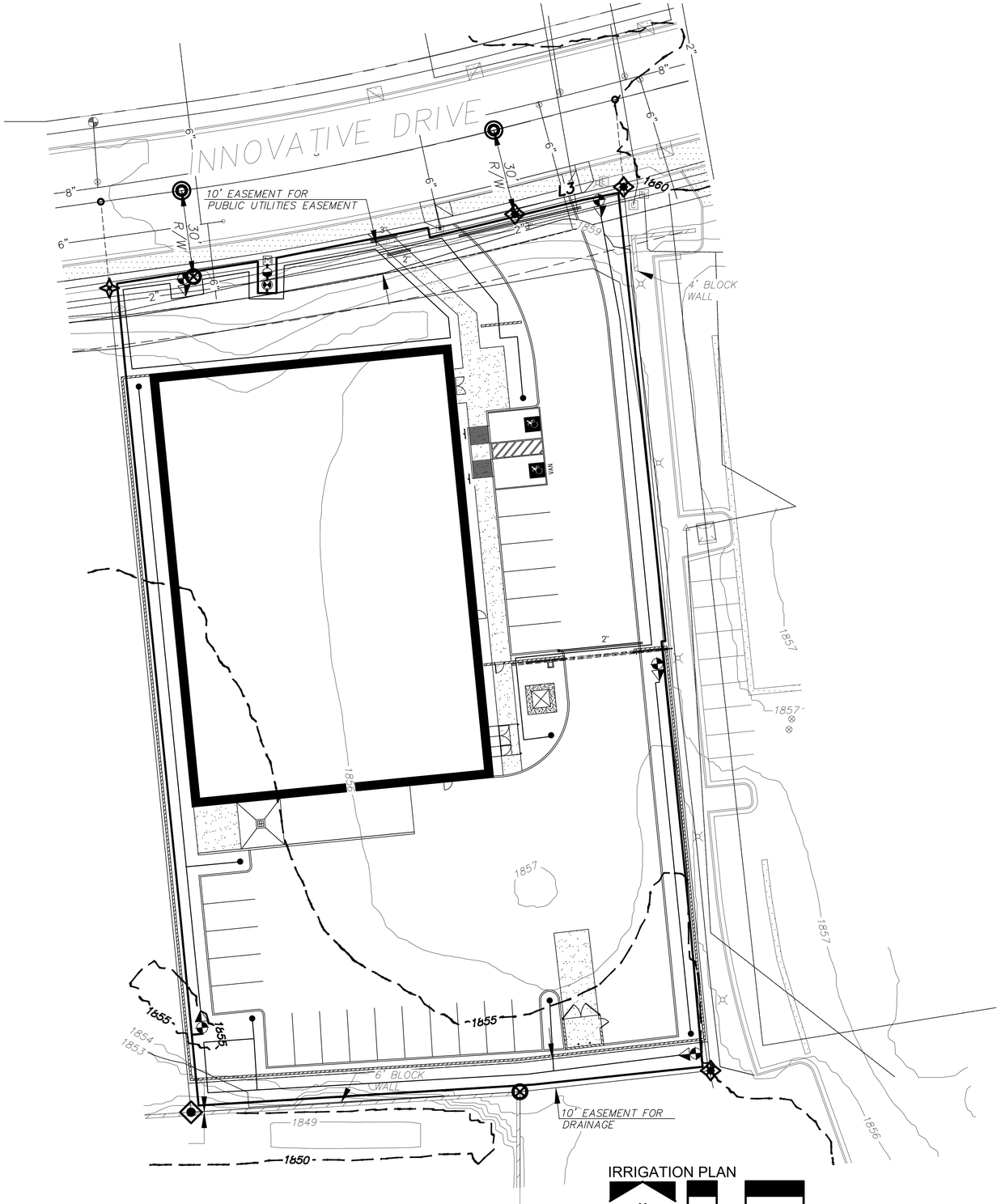
LANDSCAPE PLAN

Project: 22105

La.02



IRRIGATION PLAN

0' 10' 20' 40'

SCALE: 1"=20'-00"

CLARITY NOTE:

FOR GRAPHIC CLARITY THE EMITTERS HAVE NOT BEEN SHOWN
VERIFY EMITTER COUNT WITH PLANT COUNT AND EMITTER SCHEDULE.

FOR GRAPHIC CLARITY THE SLEEVES HAVE NOT BEEN SHOWN. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR ALL SLEEVES PER THE FOLLOWING SCHEDULE.

SLEEVING SCHEDULE:

WIRES 2" SCH. 40 PVC (QTY AS REQUIRED)
MAIN LINE 4" SCH. 40 PVC (OR DBL THE MAINLINE SIZE)
DRIP LATERAL 2" SCH. 40 PVC
TURF LATERAL 3" SCH. 40 PVC (OR DBL THE LATERAL LINE SIZE)

EMITTER SCHEDULE

PLANT SIZE	GA. PER HR.	EMITTER SIZE
36" BOX	6	(1) HUNTER MPE-20
24" BOX	4	(1) HUNTER MPE-20
15 GALLON	4	(1) HUNTER MPE-10
5 GALLON	1	(1) HUNTER HEB-10
1 GALLON	1	(1) HUNTER HEB-10

NOTES:

EMITTER SIZING AND QUANTITES MAY VARY DEPENDING ON SOIL TYPE AND CLIMATE CONDITIONS VERIFY PRIOR TO BID. ALL NON-METALIC WATER AND IRRIGATION PIPING LARGER THAN 2" REQUIRE MIN. 18 AWA INSULATED COPPER TRACER WIRE SUITABLE FOR DIRECT BURIAL

THE IRRIGATION CONTRACTOR MAY SUBSTITUTE (1) MULTI EMITTER FOR (6) SINGLE EMITTERS IN GROUND AREAS AS LONG AS DIST. TUBING DOES NOT EXCEED 5 FT

FOUNDATION NOTE:

NO END CAPS ARE TO BE PLACED WITHIN 15' OF ANY FOUNDATION OR FOOTING. ADJUST LAYOUT AS REQUIRED.
NO HIGH WATER USE, OR HIGH FLOW PRODUCTS ARE TO BE USED WITHIN 15' OF ANY FOUNDATION OR FOOTING. THE IRRIGATION IS TO BE MONITORED ON A REGULAR BASIS TO AVOID SOIL SATURATION AROUND FOUNDATIONS AND FOOTINGS. THIS IRRIGATION PLAN IS DIAGRAMATIC ADJUST LAYOUT AS REQUIRED.

IRRIGATION LEGEND

- 1" LANDSCAPE METER
- FEBCO 825-YA-1" R.P. ASSY. W/ GUARDSHACK CAGE PAINTED TO MATCH BUILDING
- HUNTER ICV-(SIZE PER MAINLINE) MASTER VALVE INSTALL IN VALVE BOX ADJACENT TO BACKFLOW
- HUNTER DRIP CONTROL ZONE KIT PCZ-101-25 (30gph to 600gph) (.5gpm to 10gpm) ICZ-101-25 (601gph to 1,200gph) (10gpm to 20gpm)
- HUNTER ICC2-800M-EZDS DECODER(MODULES AS REQUIRED) 8 STATION BASE CONTROLLER W/ MODULES AS REQUIRED (POWER PER GENERAL CONTRACTOR) (PROVIDE ALL REQUIRED DECODER GROUNDING)

YES	NO	REQUIRED CONTROLLER OPTION
☐	◉	SOLAR SYNC
☐	◉	WI-FI, LAN, CELL KIT
☐	◉	RAIN-CLICK
☐	◉	FLOW-SYNC

NOT SHOWN FOR GRAPHIC CLARITY

- HUNTER HEB-10 (1/2" THREADED) PRESSURE COMP. SINGLE PORT EMITTER
- HUNTER MPE-(SIZE PER SCHEDULE) (1/2" THREADED) PRESSURE COMP. MULTI PORT EMITTER
- 1.5" MAINLINE (SCH40)
- CLASS 200-3/4" DRIP LATERAL LINE
- AG. PRODUCTS SELF FLUSHING ENDCAP (SEE FOUNDATION NOTE)
- SCH 40 PVC SLEEVE (SEE SLEEVING SCHEDULE)

PIPE SCHEDULE

PIPE SIZE	GPM	PIPE CLASS
1/2"	0-5	315
3/4"	6-10	200
1"	11-15	200
1 1/4"	16-25	200
1 1/2"	26-35	200
2"	36-60	200

KIVA NO: 04-3332A3
PAPP NO: 2208465
SDEV NO: 0401420
ZONING: CP/GCP PCD*
Q-S NO: Q68-19
LSIS:
LSPL:
Z: Z-62-98

REGISTERED LANDSCAPE ARCHITECT 27166 TIMOTHY J. McQUEEN Date Signed 08/03/24 ARIZONA, U.S.A. EXPIRES 06/30/2026

T.J. McQUEEN & ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE
URBAN DESIGN
SITE PLANNING

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TJ&M ASSOCIATES

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COMMERCIAL BUILDING
INNOVATIVE

4121 W
INNOVATIVE DR
PHOENIX
ARIZONA
85086

DATE

PRE -APPLICATION
OPTION 2
06-21-2024

DRAWN BY: BC

OWNERSHIP OF DOCUMENTS:
This drawing, including the architectural concept, design, and data, is an instrument of service and shall remain the property of Cawley Architects Inc. This drawing is for use at the location described herein and shall not be used in other locations. Any other use or release of these drawings may result in civil damages.

DISCREPANCIES AND CONFLICTS:
All discrepancies found in these documents or conflicts between these documents and field conditions shall be reported to Cawley Architects Inc. for resolution before the commencement of the work.

IRRIGATION PLAN

Project: 22105

La.03

UNDERGROUND SPRINKLER SYSTEM

Part 1 – General

1.01 WORK INCLUDED

A. The work included under these specifications shall consist of the furnishing of all labor, materials, permits, tools, and equipment necessary for the complete installation of a sprinkler irrigation system in accordance with the following specifications and accompanying drawings.

B. It is the intent of these drawings and specifications to form a guide for a complete installation, and although some items may not be specifically noted, but are reasonably necessary for a complete installation, they shall be furnished under this contract. Sprinklers shall be located and spaced so that adequate overlapping of the spray will provide uniform head to head(100%) coverage. The system shall efficiently and evenly irrigate all areas, and shall be complete in every respect, ready for operation by the Owner.

C. It is the responsibility of the Irrigation Contractor to provide 100% coverage to all landscape areas.

1.02 CONTRACTOR'S QUALIFICATIONS

A. Installers shall be licensed irrigation contractors with experience in the installation of automatic underground lawn sprinkling systems. All work shall be performed in a professional workmanlike manner by mechanics skilled in the trade.

B. The contractor is responsible for any damage to any existing conditions until final acceptance of his work.

C. The Contractor shall obtain all permits from, pay required fees to, and arrange any necessary inspections by any government agency having jurisdiction over the work.

1.03 VERIFICATION OF DRAWINGS AND SPECIFICATIONS

A. It shall be the Contractor's responsibility to carefully examine the drawings and specifications, and to visit the site in order to check existing conditions prior to bidding. Any conflict or errors shall be immediately brought to the attention of the Landscape Architect for interpretation or instructions. Otherwise, any changes necessary to meet existing conditions, shall be made at the Contractor's expense.

B. It is the Irrigation Contractor's responsibility to verify water pressure, water source, and size in the field prior to construction. Should a discrepancy exist between design pressure and the field pressure the Landscape Architect shall be notified immediately.

1.04 WORKING CONDITIONS

A. The Contractor shall confine his operations to the areas allotted to him by the Owner, for his work for material and equipment storage.

B. The Contractor shall continuously maintain a competent superintendent, satisfactory to the Owner, on the work during progress, with authority to act for the Contractor in all matters pertaining to the work.

C. The Contractor shall not assign nor sublet any portion of this work without written approval by the Owner.

D. The Contractor shall be responsible for staking out the system from the drawings, using the property lines and building dimensions as a guide.

E. The Contractor shall coordinate his work with that of the other trades, so as to avoid any conflict, and carry the installations to a rapid completion without any unnecessary delays.

PART 2 – PRODUCTS

2.01 PIPING

A. All pressure main piping, on the supply side of the zone valves, shall be class 200 PVC with integrally formed bell–tite joint couplers. All fittings shall be solvent welded, schedule 40 PVC.

B. All lateral piping, on the discharge side of the zone valves, two inches (2") and under, shall be class 200 PVC. Fittings shall be schedule 40 PVC material. 1/2" pvc to be class 315

C. All plastic to metal shall be made with PVC schedule 40 male adapters or PVC schedule 80 nipples. Joint compound for such connections shall be Permatex Type II teflon tape or a prior approved equivalent.

D. Where pipes are installed under roads, drives, parking areas or walks, schedule 40 PVC sleeves shall be provided for the lines. In planting areas, where cultivation might damage shallow plastic piping, protective sleeves must be provided, unless copper tubing is installed. Risers in flower beds and shrubbery shall be schedule 80 PVC.

2.02 SPRINKLER HEADS

A. Emitter heads shall be on PVC laterals, or prior approved equivalent.

2.03 AUTOMATIC CONTROLLER

A. Unit features shall include mechanical time control design, adjustable time setting up to 60 minutes per station, 24–hour clock, 14–day calendar, and automatic rapid advance. Unit shall be UL listed and shall operate on 120 volt, 1 phase, 60 Hertz power. General Contractor to bring power to controller. Irrigation Contractor to hardwired to controller, see detail.

2.04 QUICKCOUPLING VALVES

A. Furnish and install where shown on the drawings quick–coupler with swivel and hose bib, 3/4" size or prior approved equivalent. They shall be mounted on one inch (1") copper swing joint risers, and the tops shall be set flush with the top of the planters. Furnish and deliver to the Owner double–lug coupler key complete with one inch (1") hose swivel for connecting to the above valves. Also furnish two (2) locktop cover key.

2.05 ELECTRICAL CONTROL CABLE

A. All electrical control and ground wire shall be irrigation control cable of size as required. All wiring to be used for connecting the automatic remote control valve to the automatic controllers shall be Type "UF", 600 volt, stranded, or solid copper, single conductor wire with PVC insulation and bear UL approval for direct underground burial feeder cable.

B. All control or "hot" wires shall be on one color and all common or "ground" wire shall be or another color(white).

C. Verifications of wire types and installation procedures shall be checked to conform to local codes.

D. All electric control cable shall be of size as determined by the equipment manufacturer and shall be installed in the piping trenches wherever possible and in the manner recommended by the manufacturer, leaving slack in the wire. Expansion joints in the wire may be provided at 200–foot intervals by making 5 or 6 turns of the wire around a piece of 1/2 inch pipe. Where it is necessary to run wire in a separate trench, the wire shall be a minimum cover of twelve (12") inches.

PART 3 – INSTALLATION

3.01 PROTECTION OF UTILITIES, IRRIGATION SYSTEM, ETC.

A. The Contractor shall verify the location of all utilities and note location of utilities, irrigation piping and underground obstructions. The contractor shall be responsible for the cost of repairing buried conduit, cables or pipelines damaged during the installation of the irrigation system.

B. The Contractor shall clearly make and maintain markers showing locations of irrigation system wiring and piping installed in order that other contractors may avoid damaging this work.

C. The Contractor shall take necessary precautions to protect site conditions and plant materials which are to remain. Should damage be incurred, Contractor shall repair damage to its original condition or furnish and install equal replacement at his expense.

D. The Contractor shall coordinate with the Landscape Architect to provide irrigation to existing materials.

E. contact blue stake prior to digging.

3.02 EXCAVATION

A. The Contractor shall do all necessary excavation for the proper installation of his work. Machine trenchers used on the site shall be of an approved type to cut smooth–bottom trenches on uniform slopes. Trenches shall be no wider than necessary to lay the pipe, except where necessary to make joints. Over excavating shall be backfilled and carefully tamped to proved a smooth and firm bearing surface for laying the pipe. When necessary, Contractor must provide barricades and lights for pubic protection. Minimum depth of cover shall be at least twenty four 24" depth for the main piping, and at least twelve 12" depth for the lateral branch lines.

3.03 PIPE INSTALLATION

A. All pipe lines shall be installed in the locations and of the sizes indicated, and of the materials specified. Parallel piping may be installed in the same trench. Piping shall be laid accurately to the line and grade required, with full uniform bearing on the trench bottom. No piping shall be laid on soft fill or other unstable material. No direct contact, with other piping or structures, will be permitted at crossing. Interior of piping shall be kept clear of foreign matter before installation, and shall be kept clean by means of plugged or capped ends after lowering into the trench. The supply main lines shall be flushed out and tested for leaks, with control valves in place, before backfilling the joints. All lateral piping sections shall be flushed out before sprinkler heads are attached. All pipe shall be installed in strict accordance with recommendations of the manufacturer. This shall apply to thrust blocking, handling, storage, depth of cover, expansion allowance, testing, etc.

B. Under existing drives or sidewalks, the Contractor shall either saw cut concrete and replace it to the former condition or install the pipe by boring or jacking under the area. pvc sleeves to be at a 24" depth

3.04 BACKFILLING

A. As soon as the work has been installed, inspected and accepted, all excavations and trenches shall be filled and water settled with fine earth materials, free from clods, rocks, or other unsuitable substances. Trenches must be left flush with adjacent finished grade after compacting to the original density of the soil. Flooding of trenches will be permitted downstream of zone valves. Care shall be taken to place any previously tilled and fertilized soil in the top portion of the trench, and subsoil will not be allowed in the top six (6) inches of the backfill.

?3.05 SPRINKLER HEADS

A. Sprinklers shall be set plumb and level with the turf at locations shown on the drawings. In lawn areas where grass has not been established, the heads shall be installed in temporary risers at least three (3) inches above the grade. After the turf is established, the Contractor shall, within then (10) days after notification, lower the heads to their permanent positions flush with the finished grade. This elevation is critical and Contractor shall exercise care to set them exactly at grade – never below.

3.06 AUTOMATIC VALVES

A. Each sprinkler zone shall be operated by automatic electric valves in the sizes indicated on the drawings. Each valve shall be provided with a built–in pressure regulator capable of holding a steady downstream pressure, regardless of fluctuations in the main supply pressure. The valves shall be installed where shown and supplied with a tag on which the valve's zone number shall be plainly marked.

B. All valves to be in valve boxes. valve boxes to have a pea–gravel sump per detail.

C. Each valve shall be housed in an Ametex valve box, or prior approved equivalent. Place valve boxes in an orderly fashion. In the lawn place valve boxes in such a manner that mowing and weeding can easily be performed.

3.07 WATER SUPPLY

A. Connection shall be made to the sprinkler outside the building as shown on the drawings.

B. Water meter to be supplied by general contractor. Unless otherwise noted.

3.08 ELECTRICAL WORK

A. The Electrical Contractor will provide a single source of electrical power for the irrigation system as shown on the drawings. The Underground Sprinkler System Contractor shall furnish and install complete and properly operating all the required electrical work for the lawn irrigation system. This shall include all power and control wiring along with switches, safety switches, relays, transformers, fuses, conduit, wiring devices, etc. required for a properly operating system.

B. All electrical work shall be done in accordance with the National Electrical Code and local ordinances.

C. All wire connections, at remote control valves (either direct buried or in control boxes) and at all wire splices, shall be left with sufficient "slack" so that in case of repair the valve bonnet or splice may be brought to the surface without disconnecting the wires.

D. Each remote control valve or group of remote control valves, which are to be connected to one station of a controller, shall have wire sizes as shown in the wiring diagrams on the drawings or as specified. All remote control valves, which are to be connected to the same controller, shall be connected to a common ground wire to size as shown on the drawings or as specified. Each individual controller shall have a separate common ground wire system entirely independent of the common ground wire system of all other controllers Only those remote control valves which are being controlled by one specific controller shall be connected to that controller's common ground wire system.

3.09 TESTING

A. After all supports, anchors, and thrust blocks are in place, the line shall be tested at a pressure of 150 psi for 30 minutes. Should any leaks be found, they shall be repaired and the line retested until satisfactory Zone lines shall be tested at 80 psi in like manner. After testing, the system shall be thoroughly flushed out before the heads may be installed. Upon completion, an operating test shall be performed to visually check the coverage of the system. Any heads, which do not function according to the manufacturer's data shall be replaced with sprinklers that do or the installation shall be otherwise corrected to provide satisfactory performance. Final adjustment to the sprinkler heads and automatic equipment will be done by the Contractor upon completion of the installation to the satisfaction of the Landscape Architect. Minor adjustment from then on shall be made by the Owner's Maintenance Staff.

3.10 DRAWINGS OF RECORD

A. The Contractor shall provide and keep up to date a complete "as–built" record set of mylar sepias which shall be corrected to show any changes from the original drawings. These record drawings shall show location of all control lines, valves, valve boxes, main lines, flush caps, controllers, and any substitutions as well as any deviation in piping or location of buried valves, etc. with accurate dimensions indicated.

B. After completion of the sprinkler installation, the Contractor shall deliver to the Owner three prints of the correct and completed "as–built" set of drawings, along with the bound instruction folders covering the equipment installed. Contractor shall present the above information as a condition precedent tot he completion payment.

3.11 GUARANTEE

A. Within ten (10) days after the Contractor's notification that the sprinkler installation is complete, the Landscape Architect will inspect the system and, if necessary, submit a "punch list" to the Contractor. Acceptance by the Landscape Architect of these corrections will signify final acceptance by the Owner.

B. The entire irrigation system shall be guaranteed for a period of two years from this final acceptance date. The Contractor shall promptly replace, without cost to the Owner, any defective materials of faulty workmanship which may develop within this guarantee period, including restoration of any property damaged during repairs. He shall also be responsible for damages resulting from leaks which may occur in the piping system installed by him, and he shall repair, at his expense, all damage so caused, in a manner satisfactory to the Owner. However the Contractor shall not be held liable for damages occasioned by strikes, fire, weather, violence or theft, acts of God, acts of other contractors, or any other caused beyond the control of the Contractor.

C. It will be the Owner's responsibility to maintain the system in working order during the guarantee period, performing necessary minor maintenance, keeping grass from obstructing the sprinkler heads, protecting against vandalism and preventing damage during the landscape maintenance operation.

D. The Contractor shall service the system at the Owner's request during the guarantee period, and shall be paid for work performed which is not covered by the guarantee, in accordance with a predetermined schedule of fees.

LANDSCAPING

PART 1 – GENERAL

1.01 WORK INCLUDED

A. The work included under these specifications shall consist of the furnishing of all labor, material, permits, tools, and equipment necessary for the complete installation of the landscaping materials as shown on the drawings and as described in the following specifications.

1.02 QUALITY ASSURANCE

A. For standard products, the manufacturer's analysis will be acceptable. For all other materials, analysis shall be by a recognized laboratory.

B. Analysis shall be made in accordance with the current methods of the Association of Official Agricultural Chemists.

C. Soils shall be analyzed for their composition and fertility in sustaining plant growth and health.

D. All plants furnished under this specification shall be from nursery grown stock, and they shall meet the ARIZONA NURSERY ASSOCIATION of the American Association of Nurserymen, inc. requirements as to sizing, grading, and quality. Plant materials as specified shall conform with the nomenclature of STANDARDIZED PLANT NAMES, Second Edition. The Landscape Architect reserves the right to refuse all plant material based on overall appearance and quality regardless of specifications.

E. Plants of the species specified shall be furnished in the variety, size, grade and quality indicated. Specifications and planting plans shall be strictly adhered to and no changes or substitutions will be allowed prior to bidding without written permission of the Landscape Architect, Owner, or Owner's Representative.

F. By submitting a proposal and accepting award of the Contract, the Contractor acknowledges that he has investigated the supply of planting stock available and has obtained firm commitments from his suppliers assuring delivery of the specific plant materials as required for execution of the project.

G. All plant materials shall be grown in accordance with good horticulture practices and shall bear evidence of proper nursery care during growth under climatic conditions similar to those in the locality of the project for at least two years. They shall have been previously transplanted or root pruned according to standard nursery practice and inspected by State Control Agencies.

H. All plants shall be freshly dug. No heeled in plant or plants from cold storage will be accepted. Plants shall be typical of their species or variety and have normal habits of growth, be healthy and vigorous, well branched and have dense foliage when in leaf. All plants, including root systems, shall be free of disease, disfiguring knots, sunscald, inspect pests, eggs or larvae, dead or broken branches, bark abrasions, and have healthy well developed root systems. The root system of container grown plants shall be sufficiently developed to hold the earth intact upon removal of the container.

I. Planting, sodding and seeding shall be performed by personnel familiar with planting procedures and under the supervision of a qualified planting foreman.

1.03 SUBMITTALS

A. Submit a soil fertility test of the planting soil for approval by the Landscape Architect prior to delivery of soil to the project site. Test reports shall indicate the location of the source for soil.

B. Upon completion of the work, submit a schedule satisfactory to the Landscape Architect for the maintenance of all plant material.

PART 2 – PRODUCTS

2.01 SOD

A. Approved nursery grade cultivated grass sod; species and cultivar as indicated on the drawings with strong, fibrous root system, free from stones and burned or bare spots.

2.02 PLANTING SOIL FOR PLANT PITS AND BEDS

A. Fertile, friable, natural loam containing a liberal amount of humus, capable of sustaining vigorous plant growth. The Ph value of the planting soil shall not be higher than 7.5 or lower than 5.5. It shall be free of any admixture of subsoil, stones, lumps, clods or hard earth, plants, or their roots, sticks, and other extraneous matter. Do not use planting soil for planting operations while in a frozen or muddy condition

2.03 PEAT

A. Acceptable peat moss consisting of at least 73% organic content of natural occurrence. It shall be brown, clean, low in content of mineral and woody materials, mildly acid, and granulated or shredded.

2.04 FERTILIZER

A. Commercial Fertilizer: A complete fertilizer, conforming to FS O–F–241, Type I, Grade A, part of the elements of which are derived from organic sources containing the following percentages by weight:
10% nitrogen 5% nitrogen
10% phosphoric acid–or–10% phosphoric acid
10% potash 5% potash

B. Organic Fertilizer: An organic activated fertilizer containing a minimum of five percent nitrogen, three percent phosphoric acid and other basic elements by weight.

C. Deliver fertilizer mixed as specified in standard size bags, showing weights, analysis and name of manufacturer. Store in weatherproof storage place in such manner that it will be kept dry and its effectiveness not impaired.

D. The Landscape Architect reserves the right to vary the percentages of the components of the fertilizers subject to the results of the soil fertility tests.

2.05 WATER

A. Shall be furnished by the Owner. The Contractor shall furnish all necessary hose, equipment, attachments, and accessories for the adequate irrigation of all planted areas as may be required to complete the work as specified.

2.06 PLANT MATERIAL

A. All old abrasions and cuts shall be completely calloused over. All shrubs shall be measured when their branches are in their normal position. Height and spread dimensions specified refer to the main body of the plant and not from branch or root tip to tip.

B. Shrubs shall be matched specimens from single block source.

C. Evergreen trees not fully branched from top to bottom will be rejected, and those with terminal leaders exceeding twelve (12) inches in length will also be rejected. During the spring planting seasons, any evergreen plant delivered with new growth in an advanced stage of candling out will be rejected.

D. Plants shall not be pruned before delivery. Trees which have damaged or crooked leaders, or multiple leaders, unless specified will be rejected. Trees with bark abrasions, sunscald, disfiguring knots, or fresh cuts of limb over 1 1/4 inches which have not completely calloused will be rejected. Plants shall be freshly dug or container grown. Heeled in plants or plants from cold storage will not be accepted.

E. Plants shall be true to species and variety, and shall conform to measurements specified on the Drawings. Plants larger than specified may be used if approved by the Landscape Architect. Use of such plants shall not increase contract price. If larger plants are approved, the ball of earth shall be increased proportionally with the size of the plant.

F. Substitutions of plant materials will not be permitted unless authorized in writing by the Landscape Architect. Proof must be submitted that use of nearest equivalent size of variety with corresponding adjustment of Contract Price. Such proof shall be substantiated and submitted in writing.

G. It shall be the responsibility of the Contractor to determine required quantities of plants, as no compensation will be made for error in plant quantities. If plant counts occur on plant legend, it is for the convenience of the contractor only. Verify plant counts with plan. In case of discrepancy, plan shall govern.

H. Each plant shall be properly identified with legible waterproof tags securely fastened. Tags shall remain on the plants until after final acceptance and then be promptly removed by the Contractor.

PART 3 – INSTALLATION

3.01 INSPECTION OF PLANT MATERIAL

A. Plants shall be subject to inspection and approval by Landscape Architect at place of growth and upon delivery. Written request for inspection of plant materials at place of growth shall be submitted to Landscape Architect at least ten (10) calendar days prior to delivery. This written request shall state place of growth and quantity of plants to be inspected. Landscape Architect reserves the right to waive inspection. Such approval shall not impair the right of inspection and rejection upon delivery at the project site or during the progress of the work for size and condition of balls or roots, diseases, insects, and latent defects or injuries. Rejected plants must be immediately removed from the project site.

B. Certificates of inspection of plant materials as may be required by Federal, State or other authorities to accompany shipments and be furnished to Owner upon completion of project.

3.02 DIGGING AND HANDLING

A. Digging shall be done the same season of planting and shall be done by hand as to not injure plants and to meet size requirements. No plant other than the required samples shall be dug or delivered to the site until the required inspections have been made and the plants or samples approved.

B. Dig balled and burlapped (BB) plants with firm, unbroken natural balls of earth, of sufficient diameter and depth to include the fibrous and feeding roots. No synthetic or mudded in balls will be accepted. No plants moved with a ball will be accepted if the ball is cracked or broken before or during planting operations.

C. Roots or balls of all plants shall be adequately protected at all times from excessive exposure to wind, sun, rain, hail, etc. Balled and burlapped plants that cannot be planted immediately on delivery shall be set on the ground and well protected with soil, wet moss and other acceptable material. Bare rooted plants shall be planted or heeled–in immediately upon delivery.

D. All plant material shall be handled carefully to prevent injury to rootballs, trunks, or branches. Any plant suffering damage sufficient to impair its health and/or natural form will be rejected. No plant shall be bound with wire or rope at any time so as to damage the bark or break branches.

3.03 TIME OF PLANTING

A. The contractor shall notify the Landscape Architect in writing when other divisions of the work have progressed sufficiently to commence landscaping work, including placing of topsoil to finish grade. Thereafter, conduct planting operations under favorable weather conditions.

B. Any plant material installed during typical off seasons (hot summer months or freezing winter months) shall be done at the Contractor's own risk and the Contractor shall be held responsible for replacement of any plant material damaged due to these adverse conditions.

3.04 PLANTING OPERATIONS

A. General

1. The Contractor shall coordinate all aspects o the landscape operations with all aspects of the site construction. The work shall proceed as the indicated portions of the site become available, consistent with the seasonal limitations for landscape planting.
2. The Contractor shall be responsible for any damage to utilities construction, sitework construction, and underground sprinkler systems and shall bear the full cost to repair the damage. Accomplishment of repairs shall be equal to the original installation prior to damage. Any damage shall be immediately reported to the Landscape Architect and repairs shall be approved by him before it is buried.
3. Maintain all trench or grade stakes for work under other Sections until their removal is approved by the Landscape Architect.
4. The Contractor shall stake plant location, shrub pits and other planting areas and secure the Landscape Architects's approval before starting excavation of same, making adjustments as necessary.
5. Unless otherwise directed by Landscape Architect, indication of plant on drawings is to be interpreted as including digging of hole, furnishing plant of specified size, work of planting, mulching, guying, staking, wrapping and watering.

B. Plant Pits and Beds

1. Plant pits shall be excavated with vertical sides, large enough to allow twelve (12) inches of space around the ball in all directions. Adjust depth as necessary to permit a minimum of twelve (12) inches planting soil under the ball when the plant is set at the proper depth.
2. Planting pit backfill for all trees and shrub shall be as follows:
   1. 2/3 parts by volume on site soil.
   2. 1/3 parts by volume forest mulch.
   3. One pound 16–20–0 per cubic yard of mix.
3. Planting pits shall be backfilled with prepared backfill and be water settled to a grade sufficient that in the setting of the plant, the finish grade level after settlement will be the same as that at which plants were grown. Agriform tablets to be used with each planting (six for 36–inch box, three for 15 gallon, two for 5 gallon, and one for 1 gallon).

C. Installations

1. Set plants in center of pits, plumb and straight and at such a level that after settlement the crown of the plant shall be two (2) inches below the finish grade and forming a shallow trough directly over the ball of earth and slightly smaller than the pit to facilitate watering. Space all plants as shown.
2. Set balled and burlapped plants upon a well tamped layer of planting soil. Backfill around ball with planting soil in six to eight (6 – 8) inch lifts, each thoroughly tamped and puddled to top of pit. Avoid air pockets. Remove all ropes and wires from tops and sides of balls. No burlap shall be pulled out from under the balls.
3. Plants supplied in containers shall be installed immediately upon being removed from their containers. Removal of plants rom containers shall be in a manner that will not disturb the root system of the soil in which they were planted. Under no conditions shall the plant be removed from the containers by pulling on the main stem or plant growth. No plants shall be installed with their containers remaining attached.
4. Before install bare root plants, planting soil shall be placed and compacted to a depth of twelve (12) inches in the bottom of the plant pit. The plants shall be installed with their roots evenly distributed and spread in their natural position, with the planting soil being carefully placed and compacted around the roots so as to leave no air space.

D. Pruning, Wrapping, Mulching, Staking and Spraying
1. Pruning
   a. Plants shall not be pruned prior to delivery unless Landscape Architect gives written permission. Pruning will occur only at time of planting and according to standard horticultural practice and at the direction of the Landscape Architect. Amount of pruning shall be limited and is not to exceed thirty–three percent (33%) of total plant as necessary to remove dead or injured twigs and branches and to compensate for root loss resulting rom transplanting. Do not cut leaders.
   b. Remove all dead wood, suckers, and broken or badly bruised branches.
   c. Pruning shall be done with clean, sharp tools according to standard horticultural practices. Cuts shall be made flush leaving no splits.
   d. Cuts over 1/2 inch diameter shall be painted over with approved tree paint. Paint shall cover all exposed cambium as well as other exposed living tissue. Injured cambium and bruises and scars shall be tracked back to living tissue and removed. Smooth and shave wounds so as not to retain water. Treat wound with paint.
2. Staking and Guying
   a. Stake or guy all trees per detail. Trees which blow down, sway excessively, or are otherwise injured because of improper bracing shall be replaced at Contractor's expense.
3. Spraying
   a. All ground cover and non–lawn areas shall be treated with pre–emergent.
4. Decomposed Granite
   a. Prior to placing, the area shall be totally free of weeds using chemical control. Apply a pre–emergence control (Surflan or prior approved equivalent) according to manufacturer's recommendations. The decomposed granite shall be evenly distributed at the designated areas to a depth of two (2) inches. After placing and grading, lightly water to remove fine material from the surface and water settle or roll to an extent satisfactory to the Landscape Architect. Apply second application of pre–emergence control according to manufacturer's recommendations.
   b. Decomposed granite shall be "Madison Gold" in color, 1/2 inch minus in size, shall be free from lumps or balls of clay and shall not contain calcareous coating, caliche, organic matter or deleterious substances. Color and source of decomposed granite shall be approved by Landscape Architect. All material shall be from a single production source and shall present a uniform appearance. Material containing clumps which will not disintegrate with a shovel blow shall be rejected.
5. Workmanship – Decomposed Granite
   a. Install rock to a depth as indicated on the plans (typically two inches thick).
6. Workmanship – Berms
   a. Earth berms (mounding) shall take the form indicated on the plans. The Landscape Architect shall inspect and approve all finished grades prior to any planting.
7. Cleaning Up
   a. Keep all areas of this project in a clean, neat and orderly condition at all times. Trash burning and disposal shall not be done on the site. Prior to acceptance put all areas of the work in a finished condition acceptable to the Landscape Architect.

3.05 OBSTRUCTIONS BELOW GROUND

A. In the event that rock or underground construction work or obstructions are encountered in the excavation of plants pits, alternate locations may be selected by the Landscape Architect. Where locations cannot be changed, remove the obstructions (but not new construction work) to a depth of not less than six (6) inches below the required pit depth.

B. Proper drainage of plant pits is necessary. Bring subsoil conditions permitting the retention of water in planting pits for more than twenty–four hours to that attention of the Landscape Architect with proposals for corrections. If soil conditions indicate modifications as directed by Landscape Architect, the changes required will not increase the contract price.

C. The Contractor is responsible for any damage to underground utilities resulting form landscape operations and bear the full cost to repair the damage. Accomplishment of repairs shall be equal to the original installation prior to damage. Report damage immediately to Landscape Architect who shall approve repairs before they are buried.

3.06 MAINTENANCE

A. Protect and maintain plant material (trees, shrubs, groundcover, lawn and vines) immediately after planting. Maintenance to be provided for sixty (60) days from acceptance by the Landscape Architect. At the end of sixty (60) days the Landscape Architect may extend the maintenance period if during that period the maintenance is not acceptable. maintenance includes watering, weeding, cultivating, mulching, tightening and repairing of guys, removal of dead material, resetting plants to proper grade or upright positions and restoration of the plating saucer and other construction work until acceptance.

3.09 INSPECTION FOR ACCEPTANCE

A. Inspection of the landscaping work to determine completion of contract work, exclusive of the possible replacement of plants, will be made by the Landscape Architect at the conclusion of the maintenance period.

B. Acceptance: After inspection, the Contractor will be notified in writing by the Landscape Architect of acceptance of all work of this Section, exclusive of the possible replacement of plants subject to reinspection and guarantee, or if there are any deficiencies of the requirements for completion of the work.

C. Upon acceptance made by the Landscape Architect, the Contractor maintenance is terminated and the guarantee period begins.

3.10 PLANT GUARANTEE AND REPLACEMENT/FINAL ACCEPTANCE

A. The tree guarantee is for a period of one year from date of acceptance by the Landscape Architect. The guarantee is for all new plant material.

b. The shrub and ground cover guarantee is for a period of 90 days from date of acceptance by the Landscape Architect. the guarantee is for all new plant material.

c. At the end of the guarantee period, the Landscape Architect shall reinspect all guaranteed work for Final Acceptance upon written request of Contractor. Request shall be received at least ten (10) calendar days before anticipated date for final inspection.
Upon final inspection and reinspection of replacements or repairs necessary in judgement of Landscape Architect at that time, Landscape Architect shall certify in writing to Owner as to Final Acceptance of plantings.
Contractor shall replace, without cost to Owner, as soon as weather conditions permit, and within specified planting period, all dead plants and all plants not in vigorous, thriving conditions as determined by Landscape Architect at end of guarantee period. Plants shall be free of dead or dying branches and branch tips, and shall bear foliage of normal density, size and color. Replacements shall closely match adjacent specimens of same species and shall be equal in size to previously planted specimens, including increased growth since planting Replacement shall be subject to all requirements of this Specification.

d. Portions of lawns and/or plantings may be accepted in part upon Landscape Architect's approval.

PART 4 – MISCELLANEOUS AND GENERAL NOTES

4.01 FINISH GRADING AND GRADING

A. The General Contractor to provide Landscape Contractor finish grade within + 0.1 of a foot as shown on the civil grading plan and landscape plan.

B. All mounding, berms and finish grading to be approved by the Landscape Architect prior to planting or irrigation work.

4.02 GENERAL NOTES

A. The Landscape Contractor at his own expense shall procure all permits, certificates, and licenses required of him by law for the execution of this work. He shall comply with all state, county, and local laws, ordinances, rules or regulations relating to the performance of this work All deductions or additions will be made though a change order issued by the Architect. Changes made without a change order are not considered part o the contract and payment cannot be guaranteed.

B. The Contractor shall visit and inspect site to thoroughly inform himself of all existing conditions. Any discrepancies between existing conditions and those shown on drawings should immediately be brought to the attention of the Landscape Architect.

NOTES:

1. Field locate all irrigation equipment in landscape areas – some lines are schematic.
2. Coordinate programs to avoid station overlap.
3. Reduce radius as necessary to prevent overspray on turf and shrub sprays.
4. Size and provide Schedule 40 PVC sleeves (approx. twice diameter of pipe) under all walkways, kooldeck, curbs & drives as necessary on all irrigation equipment. at a depth of 24" below grade
5. Contractor shall install all equipment per manufacturer's specifications and as per city codes.
6. Any substitutions are to be approved by the Landscape Architect.
7. Length of poly to be no greater than five (5) feet from PVC lateral (typical for all rigid drip systems).
8. Install vacuum breaker twelve (12) inches above highest head or lateral pipe in system. Install per local plumbing codes.
9. Contractor shall guarantee 100% coverage in all landscape areas.
10. Contour or berm planter areas to achieve adequate coverage from flood bubblers.
11. All heads to be adjusted so that there is minimum overthrow onto pavement, walls and buildings.
12. All pots and palms to be on a separate valve.
13. Contractor to receive a minimum 48 hour notice prior to sleeving.
14. Mainline to have a minimum of twenty four (24) inches of cover. Lateral lines to have a minimum twelve (12) inches of cover. Lines under paying shall be Sch. 40 PVC. All trenches to be backfilled, compacted, and water settled.
15. All drawings to be bid per plan. No value engineering or substitutions will be accepted during bidding.

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PAPP NO: 2208465
SDEV NO: 0401420
ZONING: CP/GCP PCD*
Q-S NO: Q68-19
LSIS:
LSPL:
Z: Z-62-98

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO. 27166
TIMOTHY J. McQUEEN
Date Signed 08/03/24
ARIZONA, U.S.A.
EXPIRES 06/30/2026

T.J. McQUEEN & ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE
URBAN DESIGN
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TJ&M ASSOCIATES

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COMMERCIAL BUILDING INNOVATIVE

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ARIZONA
85086

DATE
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OPTION 2
06-21-2024

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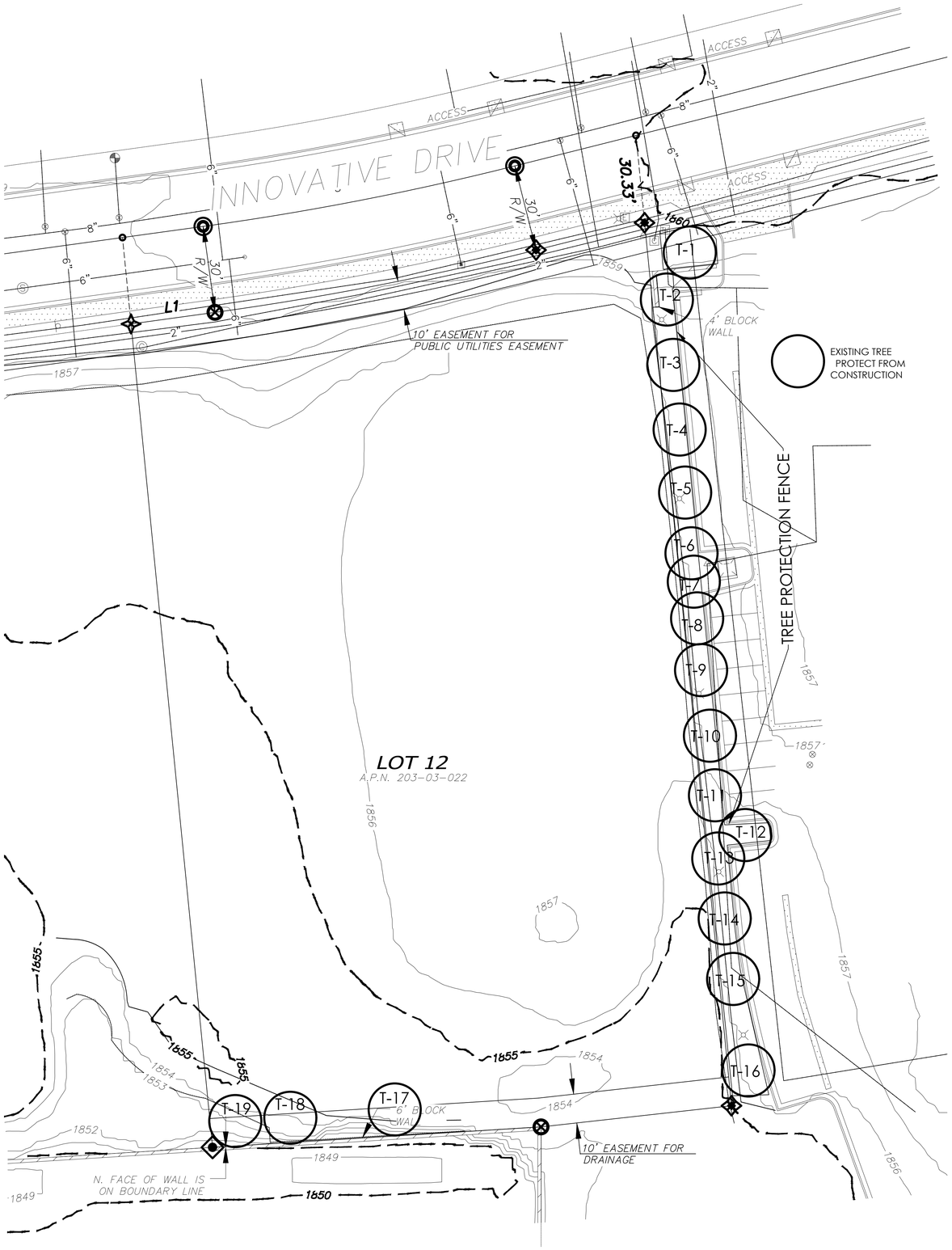
IRRIGATION PLAN

Project: 22105

La.04



INVENTORY LEGEND

INVENTORY DESIGNATION	TAG NO.	COMMON NAME	BOTANICAL NAME	Caliper (in)	Height (ft)	Width (ft)	PLANT CONDITION	INTENDED DESIGNATIONS	REASON FOR NS
NS	T-1	PALO VERDE	CERCIDIUM FLORIDIUM	14	22	15	GOOD CONDITION	REMAIN	NEIGHBORS PROPERTY
NS	T-2	DESERT WILLOW	CHILOPSIS LINEARIS	40	10	8	GOOD CONDITION	REMAIN	NEIGHBORS PROPERTY
NS	T-3	DESERT WILLOW	CHILOPSIS LINEARIS	24	8	6	GOOD CONDITION	REMAIN	NEIGHBORS PROPERTY
NS	T-4	DESERT WILLOW	CHILOPSIS LINEARIS	15	6	8	GOOD CONDITION	REMAIN	NEIGHBORS PROPERTY
NS	T-5	DESERT WILLOW	CHILOPSIS LINEARIS	16	6	8	GOOD CONDITION	REMAIN	NEIGHBORS PROPERTY
NS	T-6	DESERT WILLOW	CHILOPSIS LINEARIS	12	10	8	GOOD CONDITION	REMAIN	NEIGHBORS PROPERTY
NS	T-7	PALO VERDE	CERCIDIUM FLORIDIUM	8	18	12	GOOD CONDITION	REMAIN	NEIGHBORS PROPERTY
NS	T-8	DESERT WILLOW	CHILOPSIS LINEARIS	12	8	10	GOOD CONDITION	REMAIN	NEIGHBORS PROPERTY
NS	T-9	DESERT WILLOW	CHILOPSIS LINEARIS	8	12	10	GOOD CONDITION	REMAIN	NEIGHBORS PROPERTY
NS	T-10	DESERT WILLOW	CHILOPSIS LINEARIS	12	10	12	GOOD CONDITION	REMAIN	NEIGHBORS PROPERTY
NS	T-11	DESERT WILLOW	CHILOPSIS LINEARIS	6	7	8	GOOD CONDITION	REMAIN	NEIGHBORS PROPERTY
NS	T-12	PALO VERDE	CERCIDIUM FLORIDIUM	8	11	14	GOOD CONDITION	REMAIN	NEIGHBORS PROPERTY
NS	T-13	DESERT WILLOW	CHILOPSIS LINEARIS	12	8	8	GOOD CONDITION	REMAIN	NEIGHBORS PROPERTY
NS	T-14	DESERT WILLOW	CHILOPSIS LINEARIS	10	12	10	GOOD CONDITION	REMAIN	NEIGHBORS PROPERTY
NS	T-15	DESERT WILLOW	CHILOPSIS LINEARIS	10	10	8	GOOD CONDITION	REMAIN	NEIGHBORS PROPERTY
NS	T-16	DESERT WILLOW	CHILOPSIS LINEARIS	12	10	10	GOOD CONDITION	REMAIN	NEIGHBORS PROPERTY
NS	T-17	PALO VERDE	CERCIDIUM FLORIDIUM	8	12	12	GOOD CONDITION	DEMO	SUNSCALING/ PROX. TO WALL
NS	T-18	PALO VERDE	CERCIDIUM FLORIDIUM	12	18	12	GOOD CONDITION	DEMO	SUNSCALING/ PROX. TO WALL
NS	T-19	PALO VERDE	CERCIDIUM FLORIDIUM	10	20	10	GOOD CONDITION	DEMO	SUNSCALING/ PROX. TO WALL

CITY OF PHOENIX GENERAL INVENTORY / SALVAGE NOTES:

- The City of Phoenix general Notes are the only notes approved on this plan. Additional general notes generated by the sealant and placed on the plans are not approved as part of this plan and are noted as such on the plans.
- Plant material must be individually tagged in the field at the time the Inventory Plans are submitted. Tagged material must be clearly marked with waterproof ink and include the number which corresponds to the number shown on the plan. A field review will not occur until clearly marked tags are in place on each plant to be included in the inventory. Additional fees may be charged for additional site visits.
- Tags must be attached so that they will remain on the plant for the duration of salvage and nursery storage period. Plant materials without numbered tags in the nursery will not be counted towards total requirement for the project.
- All salvageable material is to be clearly flagged with tape or plastic tags visible from all directions. Tags shall be numbered to correspond with the plant inventory plan and legend.

Color code as follows:
Red - salvage and relocate
White - preserve and protect in place
Blue - destroy, not salvageable and cannot remain in place.

- A Salvage permit shall be obtained and completed prior to the Grading and Drainage permit being issued. No clearing or grubbing may occur prior to the purchase of the Salvage Permit, field approval of the construction fence, and all salvaged plants placed in the nursery and field inspected.
- All protective fencing shall be in place before any earth moving equipment is moved onto the site and before any salvage, clearing or grubbing takes place. Call 602-262-7811 to schedule an inspection of construction fence.
- All materials to be salvaged shall be removed and placed in the designated nursery area before any clearing or grading takes place Call 602-262-7811 to schedule an inspection after salvage is completed.
- All tagged materials must remain in nursery or on-site until nursery check is approved.
- No nails, wires or other objects that damage the cambium or cause injury to the tree may be used during the salvage process All efforts shall be taken by using padding or other methods to preserve the integrity of the bark.
- No nails, wires or other objects that damage the cambium or cause injury to the tree may be used during the salvage process. All efforts shall be taken by using padding or other methods to preserve the integrity of the bark.
- Trees and protected plant material or material noted for salvage that are destroyed or die during the salvage, relocation, or maintenance period will be replaced with a plant of equal or greater size and type responsible party a minimum of 90 days before the completion of the project. No Certificates or Occupancy will be issued before all required material has been replaced. All replacement material shall be approved by the Planning and Development Services Landscape Architect. A maximum of 10% of the salvageable plant material will not be required to be replaced if lost.
- All requirements of the State of Arizona, including the "Notice of Intent to Clear Land," shall be met notwithstanding any approvals by the City of Phoenix.
- File Notice of Intent (NOI) to clear land within the state of Arizona, 602-542-6408. provide a copy of the NOI permit to the inspector. http://www.azda.gov/ESD/clearland.pdf
- Provide a copy of the County Dust Control Permit to the inspector.
- No salvage material shall be removed from the site without Planning and Development Landscape Architect approval.

Knowingly or negligently providing false or misleading information to the City of Phoenix regarding salvageable materials may result in delays and/or suspension or permits and inspections.

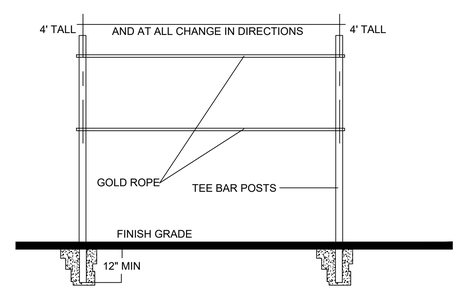
- Plan approval is valid for 1 year (12 months). Prior to plan approval expiration, all associated permits shall be purchased or the plans shall be resubmitted for extension of plan approval. The expiration, extension, and reinstatement of Inventory / Salvage combination plans and permits shall fallow the same guidelines as those indicated in the Phoenix Building Construction Code Administrative Provisions Section 105.3 for Building permits.

T-15 TAG NO.

INVENTORY KEY:

S	SALVAGABLE
NS	NON-SALVAGEABLE
R	REMAIN IN PLACE
D	DEMOLISH

TREES TO REMAIN REPLACEMENT COST:
$ 300.00 PER CALIPER INCH (249"x$300.00=$74,700.00)
SALVAGE / REPLACEMENT COST (APPROX):
$300.00 PER CALIPER INCH (0"x$300.00=$000.00)
ESTIMATE TIME OF CONSTRUCTION:
AUGUST 2024
IRRIGATION FOR EXISTING PLANT MATERIAL NOTE:
This site is irrigated by an existing drip irrigation system and is to remain watering the existing trees and shrubs.



TEMPORARY TREE PROTECTION FENCE
GOLD ROPE FENCE DETAIL NOT TO SCALE

I, TIMOTHY J. MCQUEEN, UNDERSTAND THAT WINTER SALVAGE OPERATIONS
DEVELOPER / DEVELOPER'S REPRESENTATIVE
OF SONORAN PLANT MATERIAL HAVE AN INCREASED POTENTIAL FOR LOSS OF PLANT MATERIAL (LOW SURVIVABILITY RATE). I ALSO UNDERSTAND THAT THE CITY OF PHOENIX ONLY ALLOWS A TEN PERCENT LOSS DURING THE SALVAGE PROCESS. ANY ADDITIONAL LOSS OF PLANT MATERIALS (BEYOND THE ALLOWED TEN PERCENT) MUST BE REPLACED WITH LIKE KIND AND LIKE SIZED PLANT MATERIAL.

SIGNATURE

DATE 03.10.24

Inventory / Salvage Plan Approval, CITY OF PHOENIX				Date
TOTALS & PERCENTAGES	QTY TREES	QTY CACTI	2	ACRES OF AREA BEING EVALUATED FOR USABLE MATERIAL
REMAIN/PROTECT IN PLACE	16(90%)	0		
SALVAGE	0 (0%)	0	19	TOTAL NUMBER OF PLANTS INVENTORIED ON SITE
DESTROY	3 (10%)	0		

KIVA NO: 04-3332A3
PAPP NO: 2208465
SDEV NO: 0401420
ZONING: CP/GCP PCD*
Q-S NO: Q68-19
LSIS:
LSPL:
Z: Z-62-98

LANDSCAPE ARCHITECT CERTIFICATE
27166
TIMOTHY J. McQUEEN
Date Signed 09.03.24
ARIZONA, U.S.A.
EXPIRES 06/30/2026

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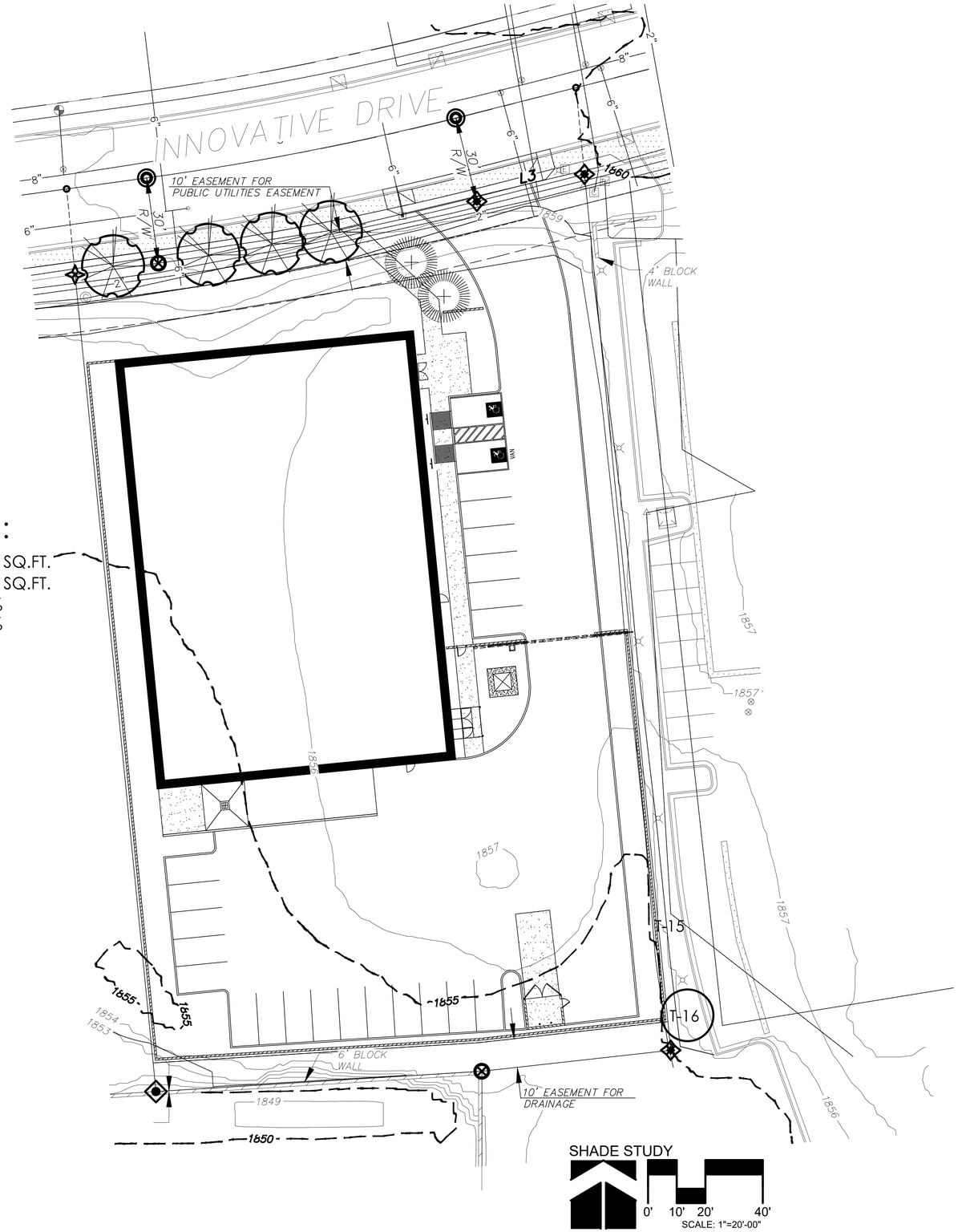
LANDSCAPE PLAN

Project: 22105

La.02



SHADE CALCULATIONS:

SIDEWALK REQUIRING SHADING:	517 SQ.FT.
SIDEWALK SHADING PROVIDED:	585 SQ.FT.
PERCENT SHADING REQUIRED:	50%
PERCENT SHADING PROVIDED:	60%

SHADE STUDY

0' 10' 20' 40'

SCALE: 1"=20'-00"

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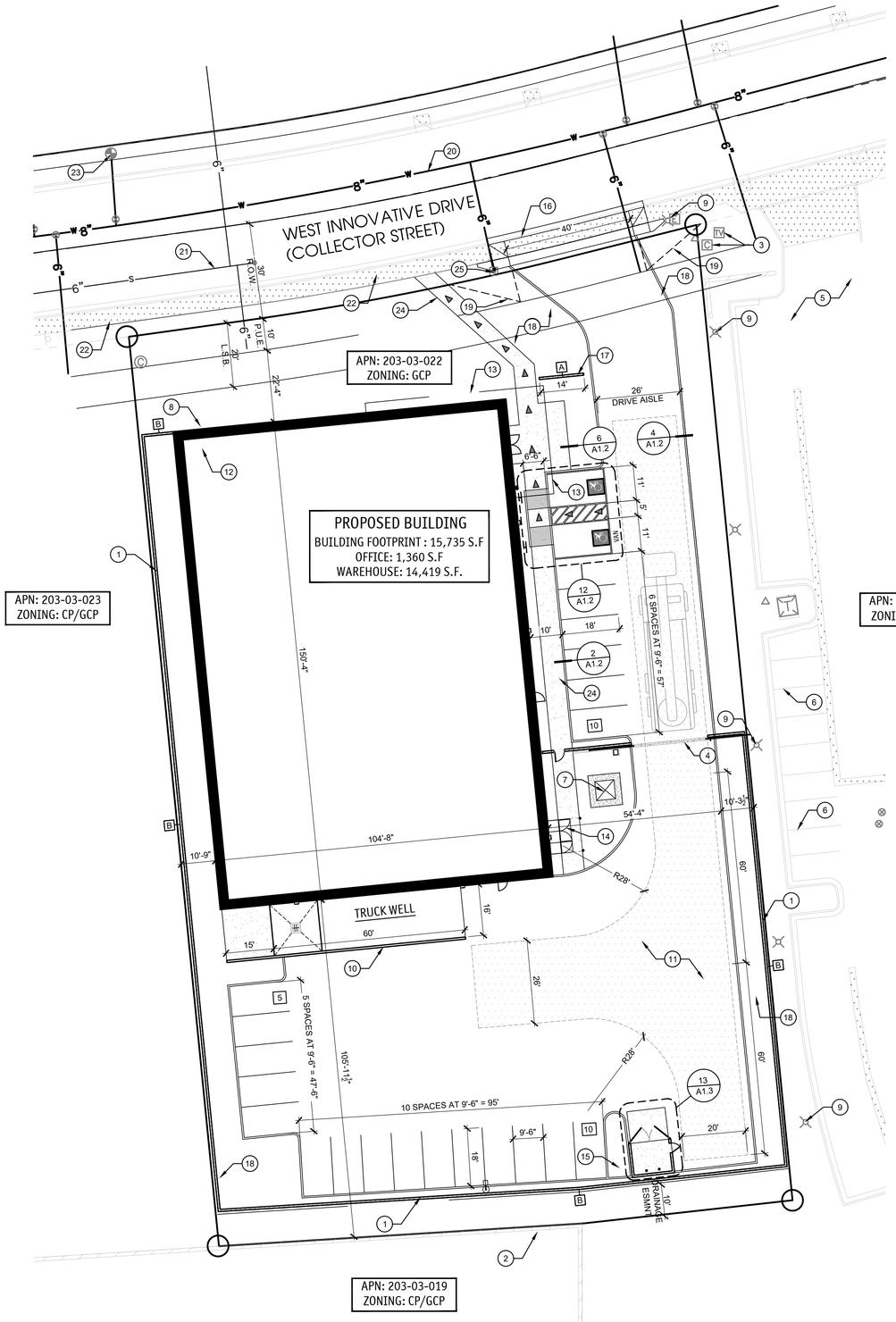
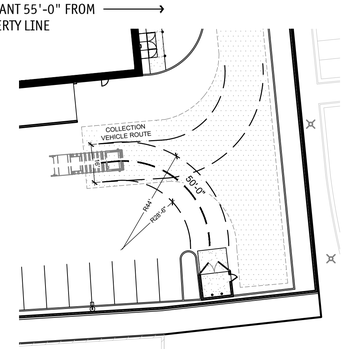
SHADE STUDY PLAN

Project: 22105

SS.01





1 ENLARGED REFUSE PATH
SCALE: 1" = 30'-0"

CITY OF PHOENIX DISTRICT REGULATIONS

1. SMOKE, GAS, AND ODOR EMISSIONS SHALL COMPLY WITHE THE REGULATION III OF MARICOPA COUNTY AIR POLLUTION CONTROL RULES AND REGULATIONS.
2. THE DISPOSAL OF ALL WASTE MATERIALS SHALL COMPLY WITH TITLE 9, CHAPTER 8, ARTICLES 18 AND 4 OF THE HAZARDOUS WASTE REGULATIONS AS ADOPTED BY THE ARIZONA HEALTH DEPARTMENT.
3. THE AVERAGE NOISE LEVEL, MEASURED AT THE PROPERTY LINE, SHALL NOT EXCEED FIFTY-FIVE DB (LDN) WHEN MEASURED ON AN " A WEIGHTED" SOUND LEVEL METER AND ACCORDING TO THE PROCEDURES OF AN ENVIRONMENTAL PROTECTION AGENCY.
4. EXPLOSIVE OR HAZARDOUS PROCESSES: CERTIFICATION SHALL BE PROVIDED BY THE PHOENIX FIRE DEPARTMENT PREVENTION BUREAU THAT ALL MANUFACTURING, STORAGE AND WASTE PROCESSES ON THE SITE SHALL MEET SAFETY AND ENVIRONMENTAL STANDARDS AS ADMINISTERED BY THE BUREAU.
5. OUTDOOR LIGHTING SHALL BE SHIELDED SO THAT:

   A. NO SOURCE OF ILLUMINATION IS DIRECTLY VISIBLE FROM A PUBLIC STREET OR FROM A RESIDENTIALLY ZONED PROPERTY.

   B. LIGHT INTENSITY DOES NOT EXCEED ONE FOOT CANDLE ON ANY ADJACENT RESIDENTIALLY ZONED PROPERTY .

CITY OF PHOENIX GENERAL SITE PLAN NOTES

1. DEVELOPMENT AND USE OF THIS SITE WILL CONFORM WITH ALL APPLICABLE CODES AND ORDINANCES.
2. ALL NEW OR RELOCATED UTILITIES WILL BE PLACED UNDERGROUND.
3. STRUCTURES AND LANDSCAPING WITHIN A TRIANGLE MEASURED BACK 10' FROM THE PROPERTY LINE AND 20' ALONG THE PROPERTY LINE ON EACH SIDE OF THE DRIVEWAY ENTRANCES WILL BE MAINTAINED FOR A MAXIMUM HEIGHT OF 3'.
4. STRUCTURES AND LANDSCAPING WITHIN A TRIANGLE MEASURING 33' X 33' ALONG THE PROPERTY LINES WILL BE MAINTAINED At A MAXIMUM HEIGHT OF 3'.
5. ANY LIGHTING WILL BE PLACED SO AS TO DIRECT LIGHT AWAY FROM THE ADJACENT RESIDENTIAL DISTRICTS AND WILL NOT EXCEED ONE-FOOT CANDLE AT THE PROPERTY LINE. NO NOISE, ODOR, OR VIBRATION WILL BE EMITTED SO THAT EXCEEDS THE GENERAL LEVEL OF NOISE, ODOR, OR VIBRATION EMITTED BY THE USES OUTSIDE THE SITE.
6. OWNERS OF PROPERTY ADJACENT TO PUBLIC RIGHT OF WAY WILL HAVE THE RESPONSIBILITY FOR MAINTAINING ALL LANDSCAPING WITHIN THE RIGHTS OF WAY IN ACCORDANCE WITH APPROVED PLANS,
7. ALL ROOFTOP EQUIPMENT AND SATELLITE DISHES SHALL BE SCREENED TO THE HEIGHT OF THE TALLEST EQUIPMENT.
8. ALL SERVICE AREAS SHALL BE SCREENED TO CONCEAL TRASH CONTAINERS, LOADING DOCKS, TRANSFORMERS, BACK FLOW PREVENTERS AND OTHER MECHANICAL OR ELECTRICAL EQUIPMENT FROM EYE LEVEL ADJACENT TO ALL PUBLIC STREETS.
9. BARBED, RAZOR, OR CONCERTINA WIRE (OR SIMILAR) SHALL NOT BE USED ON THIS SITE WHERE VISIBLE FROM PUBLIC STREETS OR ADJACENT RESIDENTIAL AREAS.
10. ALL SIGNAGE REQUIRES SEPARATE REVIEWS, APPROVALS, AND PERMITS, NO SIGNS ARE APPROVED PER THIS PLAN.
11. GATES ARE TO REMAIN OPEN, OR ARE TO OPEN AUTOMATICALLY, BETWEEN THE HOURS OF.
12. THIS PROJECT IS LOCATED IN THE CITY OF PHOENIX WATER SERVICE AREA AND HAS BEEN DESIGNATED AS HAVING AN ASSURED WATER SUPPLY.

PLEASE SIGN AND DATE:

I CONSENT TO THE REPRODUCTION OF THIS SITE PLAN PROVIDED THAT IF MODIFICATIONS ARE MADE, THE ARCHITECTS WHO MAKE SUCH CHANGES ASSUME FULL RESPONSIBILITY AND LIABILITY FOR THE MODIFIED PORTION OF THE PLAN.

SIGNATURE OF COPYRIGHT OWNER — DATE: 10/ 09/2024

KEVIN FAWCETT
PRINTED NAME OF COPYRIGHT OWNER

LEGAL DESCRIPTION

LOT 12 OF ANTHEM COMMERCE PARK 33.2, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA, RECORDED IN BOOK 537 OF MAPS, PAGE 26.

SHEET KEYNOTES

1. 6'-0" CMU PERIMETER SCREEN WALL - SEE SITE DETAILS
2. EXISTING SCREEN WALL TO REMAIN
3. EXISTING UTILITY JUNCTION BOX
4. ROLLING STEEL GATE WITH HOLD BACKS AT WALL AND KNOX PADLOCK, GATE TO REMAIN OPEN DURING BUSINESS HOURS - SEE SITE DETAILS
5. EXISTING ASPHALT DRIVE, TYP.
6. EXISTING PARKING TO REMAIN, TYP.
7. FUTURE TRANSFORMER ON CONCRETE PAD, PROVIDE CONDUIT LINES TO LOCATION - SEE CIVIL AND ELECTRICAL DRAWINGS
8. FIRE DEPARTMENT CONNECTION (F.D.C.) - SEE CIVIL DRAWINGS
9. EXISTING LIGHT POLE, TYP. - SEE CIVIL AND ELECTRICAL DRAWINGS
10. TRUCK WELL WITH LOADING/UNLOADING ZONE
11. FIRE TRUCK HAMMERHEAD MANEUVERING SPACE PER THE 2018 IFC APPENDIX D.
12. FIRE RISER - SEE CIVIL DRAWINGS
13. LINE OF ENTRY CANOPY - SEE CANOPY DRAWINGS AND EXTERIOR ELEVATIONS
14. SERVICE ENTRANCE SECTION (S.E.S.) - SEE ELECTRICAL DRAWINGS
15. REFUSE ENCLOSURE PER CITY STANDARDS - SEE SITE DETAILS
16. CURB CUT AND DRIVEWAY PER CITY STANDARDS - SEE SITE DETAILS
17. 3'- 4" PARKING SCREEN WALL, TYP. - SEE SITE DETAILS
18. LANDSCAPING, TYP. - SEE LANDSCAPE DRAWINGS
19. 10' X 20' SITE VISIBILITY TRIANGLE (S.V.T.), TYP. PER CITY STANDARDS
20. EXISTING WATER LINE
21. EXISTING SEWER LINE
22. EXISTING SIDEWALK TO REMAIN
23. EXISTING FIRE HYDRANT TO REMAIN - SEE CIVIL DRAWINGS
24. CONCRETE SIDEWALK, TYP.
25. EXISTING WATER METER

SITE DATA

PROJECT:	COMM. BUILDING INNOVATIVE	
ADDRESS:	4121 WEST INNOVATIVE DRIVE PHOENIX 85086	
OWNER:	CFC-OPPORTUNITY WAY LP	
OWNER CONTACT:	MIKE ASCIONE EMAIL: mike@ipgworks.com	
OWNER ADDRESS :	1807 S SAN GABRIEL BLVD. SAN GABRIEL, CA 91776	
SCOPE:	A NEW COMMERCIAL BUILDING	
ASSESSOR PARCEL NO.:	203-03-022	
ZONING:	CP/GCP/PCD	
GROSS SITE AREA:	51,165 S.F.	+/- 1.22 ACRES
NET SITE AREA:	51,165 S.F.	+/- 1.22 ACRES
BUILDING AREA:	15,700 S.F.	
STORIES:	1 STORY	
LOT COVERAGE:	30%	
LANDSCAPE AREA:	12,360 S.F.	
LANDSCAPE COVERAGE:	24 %	
OCCUPANCY:	B/S-1	
CONSTRUCTION TYPE:	V-B w/ A.F.E.S.	
ALLOWABLE AREA:	-	
CLEAR HEIGHT:	24'-0"	
BUILDING HEIGHT:	34'-2"	

PARKING CALCULATIONS

BUILDING AREA CALCULATIONS

OCCUPANCY	1ST FLOOR	TOTALS
OFFICE	1,316	1,316
WAREHOUSE	14,419	14,419
TOTAL:	15,735	15,735

REQUIRED PARKING CALCULATIONS

OCCUPANCY	S.F.	FACTOR	TOTAL
OFFICE	1,316	1/300	4.3
WAREHOUSE	14,419	1/1,000	14.4
TOTAL:			18.7 = 19

PARKING PROVIDED

TOTAL REGULAR SPACES	22
TOTAL ACCESSIBLE SPACES	2
TOTAL SPACES ON SITE	24

BICYCLE PARKING CALCULATIONS

RATIO	REQUIRED	PROVIDED
1/25 PARKING SPACES	1	2

LEGEND

- PROPERTY LINE
- EASEMENT / SETBACK LINE
- CAR OVERHANG, MEASURED FROM FACE OF CURB AS DIMENSIONED ON SITE PLAN
- 6" CURB
- SITE WALL
- SALT FINISH CONCRETE SIDEWALK
- PAINT STRIPING ON PAVEMENT
- NEW FIRE HYDRANT
- EXISTING FIRE HYDRANT
- FDC — FIRE DEPARTMENT CONNECTION
- ACCESSIBLE ROUT / PATH OF TRAVEL
- FIRE RISER
- A — SITE WALL, SEE SHEET A1.5 FOR SITE WALL SCHEDULE

C.O.P. APPROVAL STAMPS

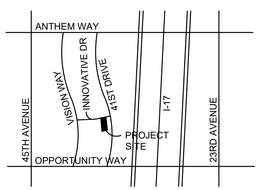
KIVA #04-3332A3 SDEV #0401420 PAPP # 2404808 QS # Q68-19 Z-62-98

The site plan has been prepared without the benefit of a survey. Depictions may not be accurate or fully reflect all dimensions, data, etc. which may affect the design and usability of this site. All design shown here is strictly conceptual.

SITE PLAN

1" = 20'-0"
0 5 10 20 40

VICINITY MAP N.T.S.



CAWLEY ARCHITECTS
730 N. 52nd St. Ste. 203
Phoenix, Arizona 85008
P 602.393.5060
CawleyArchitects.com

REGISTERED ARCHITECT CERTIFICATE NO. 35431 KEVIN LANCETT PRELIMINARY Not for construction ARIZONA, U.S.A.

COMMERCIAL BUILDING
INNOVATIVE DRIVE

4121 W
INNOVATIVE DR
PHOENIX
ARIZONA
85086

DATE
75% PROGRESS SET
11-20-2024

DRAWN BY: BC

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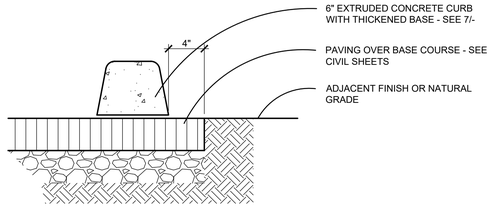
DISCREPANCIES AND CONFLICTS:
All discrepancies found in these documents or conflicts between these documents and field conditions shall be reported to Cawley Architects Inc. for resolution before the commencement of the work.

SITE PLAN

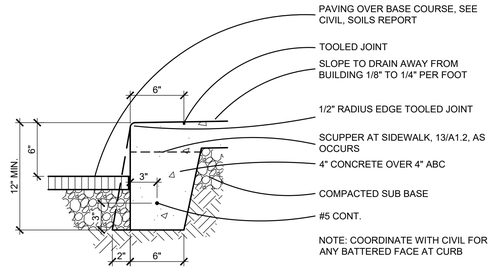
Project: 22105

A1.1

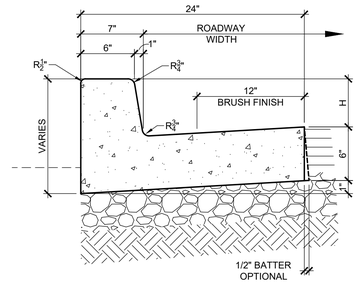
NOTES:
1. EXTRUDED CURB SHALL HAVE A TOOLED JOINT EVERY 10'-0" AND AT LEAST 3 PER EACH SMALL RADIUS CURVE
2. TACK OIL BONDING SHALL BE USED ON ASPHALT AND EPOXY BONDING CONCRETE. BONDING AGENT SHALL COVER THE ENTIRE CONTACT SURFACE
3. EXTRUDED CURB SHALL BE PLACED BY QUALIFIED APPLICATORS.



1 EXTRUDED CURB
SCALE: 1 1/2" = 1'-0"



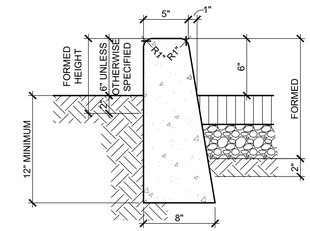
2 SIDEWALK / CURB AT ASPHALT
SCALE: 1 1/2" = 1'-0"



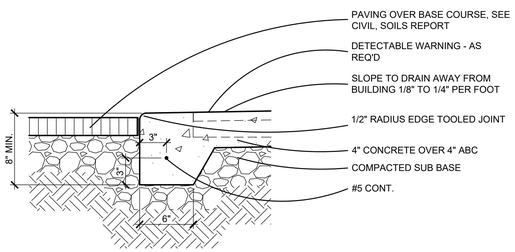
NOTES:
1. ALL EXPOSED SURFACES TO BE TROWEL FINISHED EXCEPT AS SHOWN. SEE SECT. 340.
2. H=6" OR AS SPECIFIED OF PLANS.
3. CONSTRUCTION JOINT SPACING 10' MAXIMUM.
4. EXPANSION JOINTS AS PER SECT. 340.
5. CLASS 'B' CONCRETE PER 725.
6. WHEN THE ADJACENT PAVEMENT SECTION SLOPES AWAY FROM THE GUTTER, THE SLOPE OF THE GUTTER PAN SHALL MATCH PAVEMENT CROSS SLOPE.

3 VERTICAL CURB M.A.G. STD. DET. #220
SCALE: 1 1/2" = 1'-0"

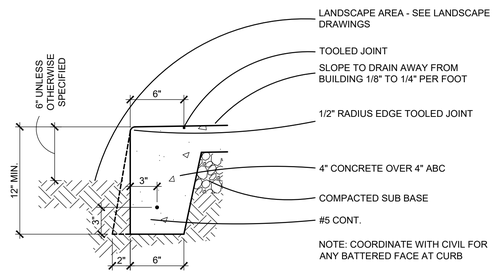
NOTES:
1. ALL VERTICAL SURFACES TO FORMED
2. VERTICAL SURFACES DOWN FROM 2" BELOW UNDISTURBED SOIL MAY BE PLACED AGAINST NEAT CUT IF APPROVED BY THE ENGINEER AND CONCRETE WILL NOT EXTEND MORE THAN 1" BEYOND THEORETICAL FACE.
3. ALL EXPOSED SURFACES TO BE STRIPED GREEN AND TROWEL FINISHED.
4. CONCRETE CURBS CONFORM TO SECT. 340.
5. MAXIMUM SPACING OF CONSTRUCTION JOINTS IS 10'-0".
6. CONCRETE TO BE CLASS 'B' PER SECT. 725.
7. WHEN PAVEMENT AND BASE COURSE EQUALS OR EXCEEDS 10" IN DEPTH, THE ENTIRE ROADWAY SIDE OF THE CURB SHALL BE FORMED. THE TOTAL CURB HEIGHT REMAINS 18" UNLESS NOTED OTHERWISE



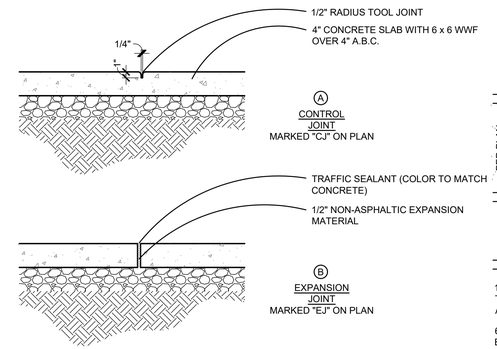
4 CURB TERMINATION M.A.G. STD. DET. #222
SCALE: 1 1/2" = 1'-0"



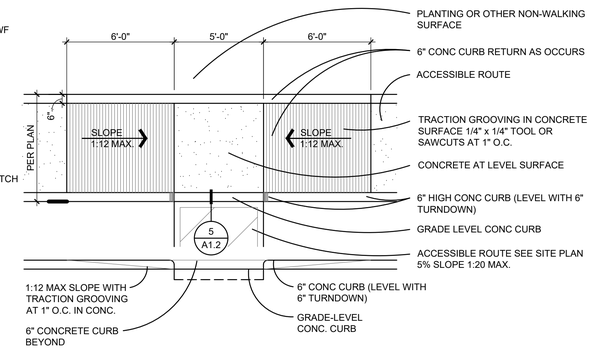
5 SIDEWALK / CROSSWALK CURB CUT AT ASPHALT
SCALE: 1 1/2" = 1'-0"



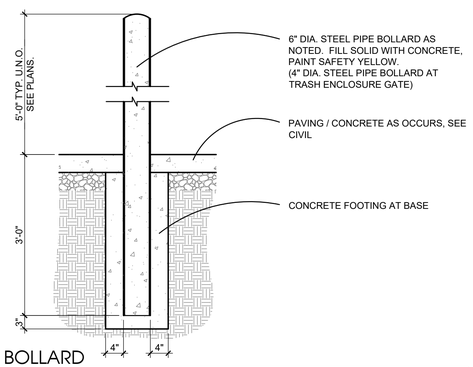
6 SIDEWALK AT LANDSCAPE
SCALE: 1 1/2" = 1'-0"



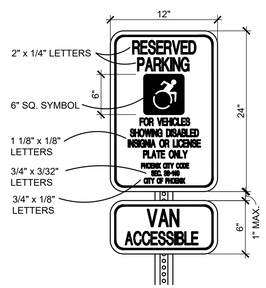
7 SIDEWALK CONTROL JOINTS
SCALE: 1" = 1'-0"



8 CURB RAMP
SCALE: 1/4" = 1'-0"



9 PIPE BOLLARD
SCALE: 3/4" = 1'-0"



NOTE:
PROVIDE VAN ACCESIBLE SIGNAGE ONLY WHERE INDICATED ON PLAN

NOTE: THE BOTTOM OF THE SIGN SHOULD BE NO LESS THAN 36" AND NO MORE THAN 54" ABOVE FINISH GRADE.

SIGNS SHALL BE PROPERLY CENTERED WITHIN THE PARKING SPACE

THE SIGN FACE SHOULD BE LOCATED NO FURTHER THAN 6'-0" FROM THE FRONT OF EACH PARKING SPACE

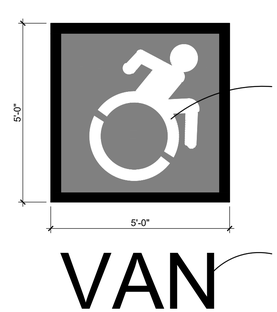
ALL LETTERING SERIES 'C', BLUE COLOR

INTERNATIONAL SYMBOL OF ACCESSIBILITY SHOWN WHITE ON 6" x 6" BLUE FIELD WITH 1/2" RADIUS CORNERS.

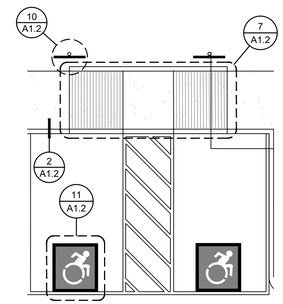
SIGNS ARE TO HAVE A WHITE REFLECTIVE BACKGROUND WITH 3/8" WIDE BLUE COLOR BAND

ACCESSIBLE PARKING SIGN STANDARD 2" OR IN 6"x24" CONC POSTHOLE

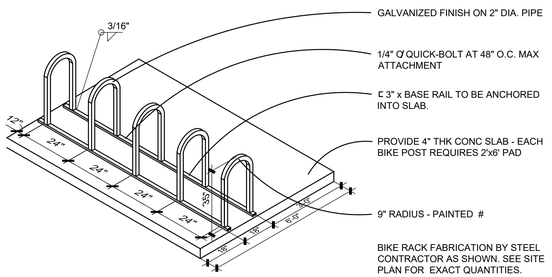
10 ACCESSIBLE PARKING SIGN
SCALE: 1 1/2" = 1'-0"



11 PAINTED ACCESSIBLE PAVEMENT SYMBOL
SCALE: 1/2" = 1'-0"

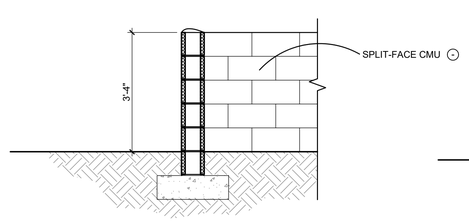


12 ADA PARKING STALL
SCALE: 1/8" = 1'-0"

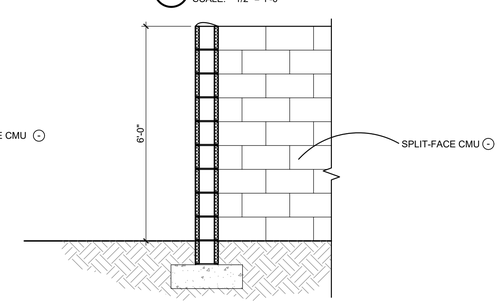


ISOMETRIC VIEW

13 BIKE RACK
SCALE: 3/4" = 1'-0"



A 3'-4" HIGH PARKING SCREEN WALL
- 8x8x16 SPLIT-FACE CMU, PAINTED FINISH, COLOR TO BE DUNN EDWARDS DE 6108 'ENGLISH SCONE'
- SPLIT FACE TO BE ONE SIDE (STREET SIDE)
- SEE SITE PLAN FOR WALL LOCATIONS



B 6'-0" HIGH TRASH / SCREEN WALL
- 8x8x16 SPLIT-FACE CMU, PAINTED FINISH, COLOR TO BE DUNN EDWARDS DE6108 'ENGLISH SCONE'
- SPLIT FACE TO BE ONE SIDE (STREET SIDE)
- SEE SITE PLAN FOR WALL LOCATIONS

SITE WALL NOTES

1. PARKING SCREEN WALLS ARE TO BE A MINIMUM OF THREE FEET AND A MAXIMUM OF FOUR FEET ABOVE THE HIGHEST FINISHED GRADE OF THE PARKING AREA OR STREET CURB, WHICHEVER IS HIGHER.
2. PROVIDE STEPPED FOOTINGS PER THE STRUCTURAL DRAWINGS AT SCREEN WALLS IN RETENTION AREAS AS REQUIRED BY THE CIVIL GRADING AND DRAINAGE PLANS.
3. GROUT SOLID ALL CELLS BELOW GRADE.
4. SEE STRUCTURAL DRAWINGS, SC-1. FOR ALL FOOTING AND REINFORCING INFORMATION.
5. COORDINATE OPENINGS AND WEEPS IN BOTTOM OF WALLS WITH CIVIL DRAWINGS.

14 SITE WALL
SCALE: 1/2" = 1'-0"

CAWLEY ARCHITECTS
730 N. 52nd St. Ste. 203
Phoenix, Arizona 85008
P 602.393.5060
CawleyArchitects.com

REGISTERED ARCHITECT CERTIFICATE NO. 35431 KEVIN J. LANCETT Date Signed 11-20-24 ARIZONA, U.S.A. PRELIMINARY

COMMERCIAL BUILDING
INNOVATIVE DRIVE

4121 W INNOVATIVE DR
PHOENIX
ARIZONA
85086

DATE
75% PROGRESS SET
11-20-2024

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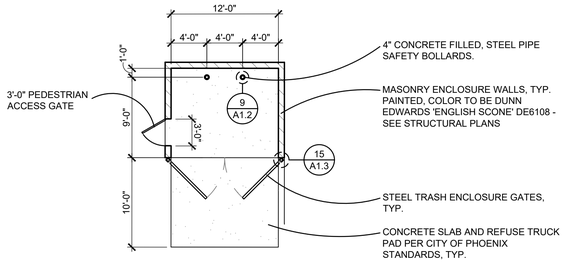
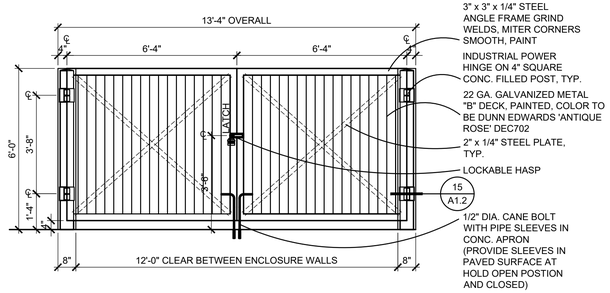
SITE DETAILS

Project: 22105

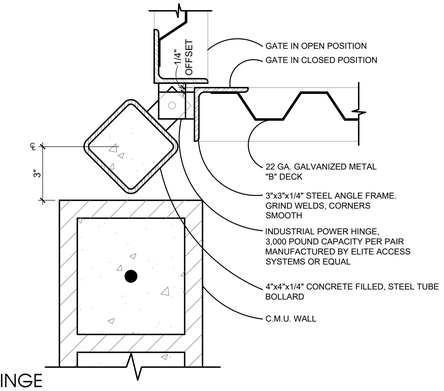
A1.2



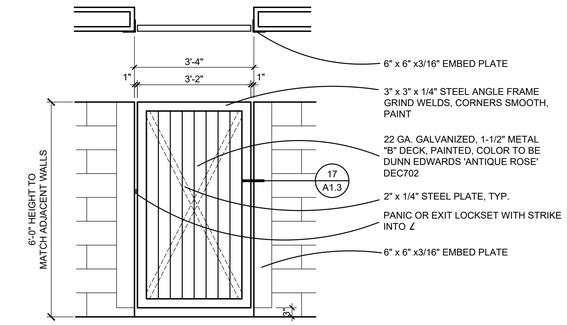
13 TRASH ENCLOSURE
SCALE: 1/8" = 1'-0"



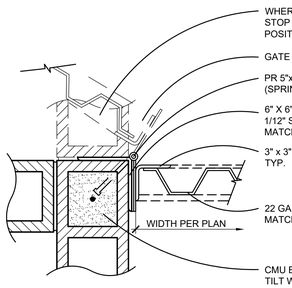
14 TRASH ENCLOSURE GATE
SCALE: 3/8" = 1'-0"



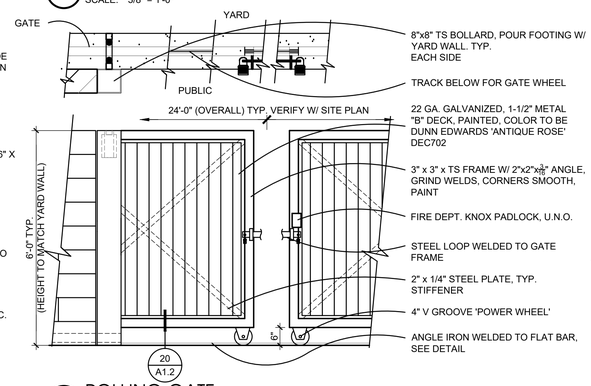
15 GATE HINGE
SCALE: 3" = 1'-0"



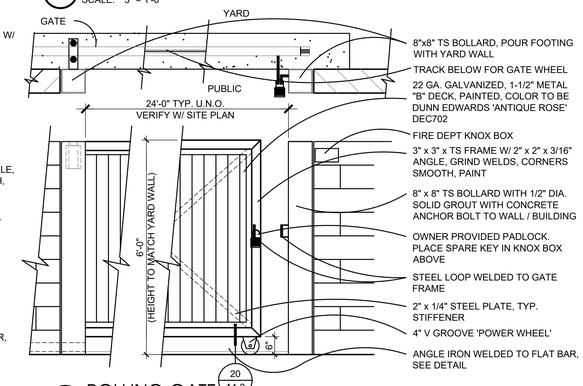
16 YARD ACCESS GATE
SCALE: 1/2" = 1'-0"



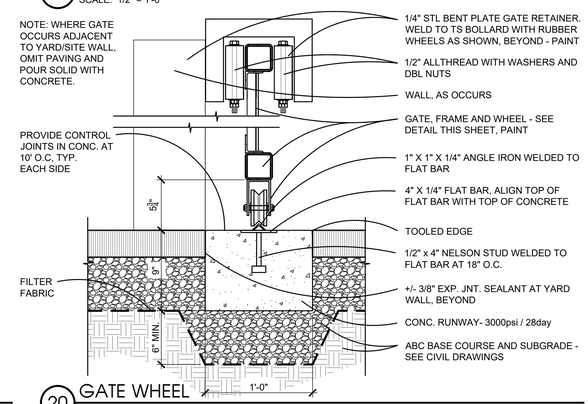
17 EXIT GATE HINGE
SCALE: 1 1/2" = 1'-0"



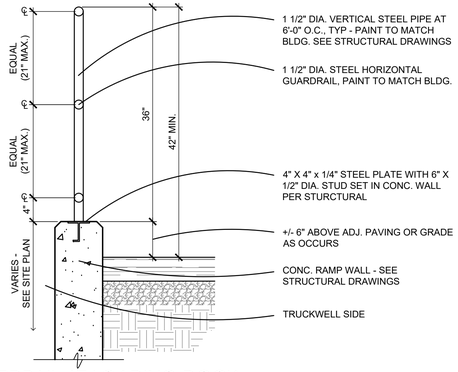
18 ROLLING GATE
SCALE: 1/2" = 1'-0"



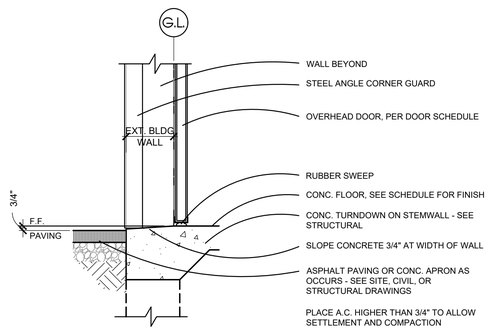
19 ROLLING GATE
SCALE: 1/2" = 1'-0"



20 GATE WHEEL
SCALE: 1 1/2" = 1'-0"



21 GUARDRAIL AT LOADING DOCK
SCALE: 1" = 1'-0"



22 THRESHOLD AT OVERHEAD DOOR
SCALE: 1" = 1'-0"

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730 N. 52nd St. Ste. 203
Phoenix, Arizona 85008
P 602.393.5060
CawleyArchitects.com

REGISTERED ARCHITECT CERTIFICATE NO. 35-[illegible] KEVIN LANCETT ARIZONA, U.S.A. PRELIMINARY Not for signed construction

COMMERCIAL BUILDING
INNOVATIVE DRIVE

4121 W INNOVATIVE DR
PHOENIX
ARIZONA
85086

DATE
75% PROGRESS SET
11-20-2024

DRAWN BY: BC

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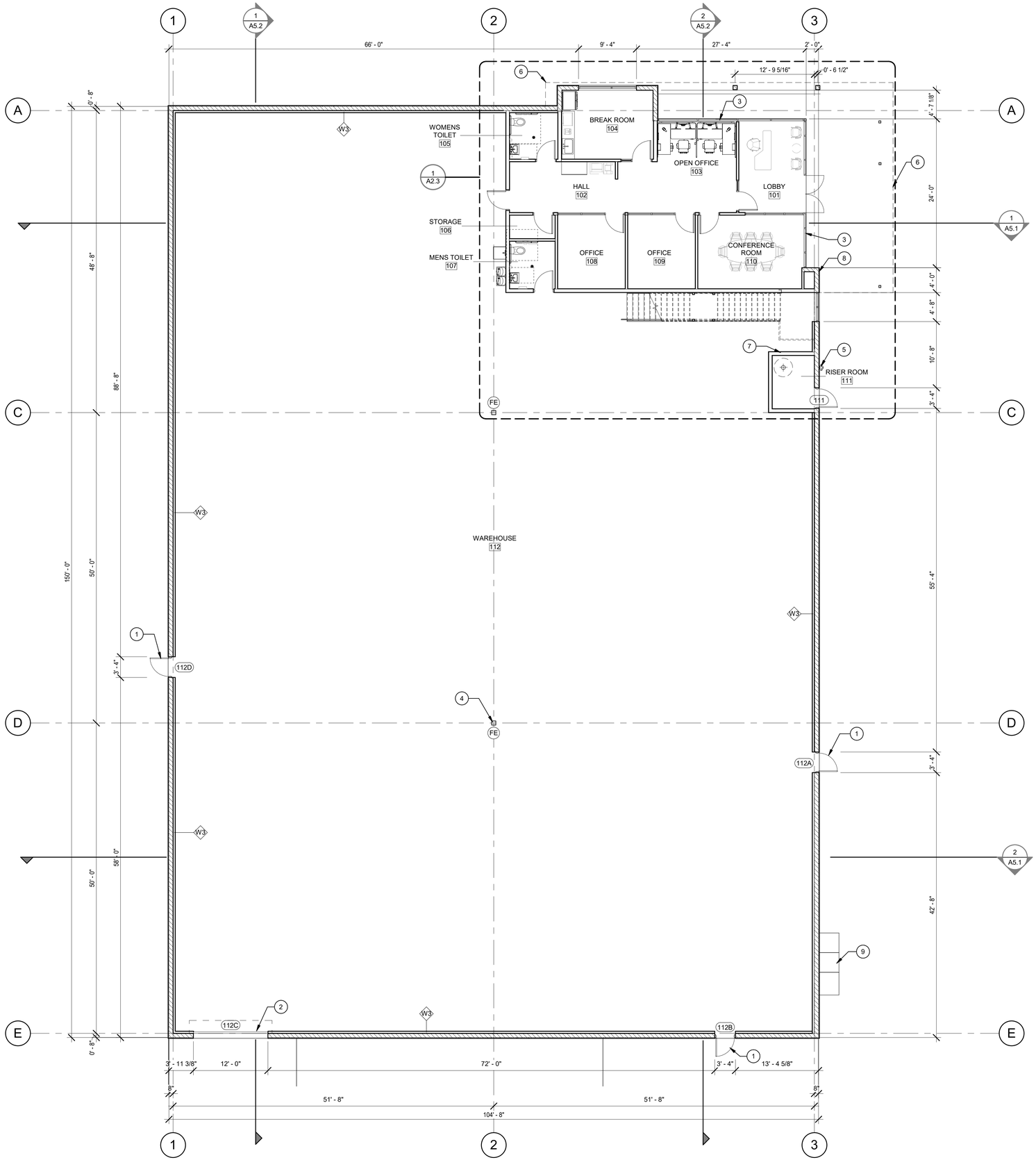
SITE DETAILS

Project: 22105

A1.3



FLOOR PLAN

1/8" = 1'-0"

GENERAL NOTES

1. DIMENSIONS AS NOTED IN THE DRAWINGS ARE TO THE CENTERLINE OF INTERIOR PARTITION WALLS AND TO THE EXTERIOR FACE OF SHEATHING FOR STUD FRAMED WALLS, U.N.O.
2. REFER TO MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR ALL EQUIPMENT LOCATIONS DIMENSIONS, AND OTHER REQUIREMENTS.
3. MAINTAIN A MINIMUM OF 48" CLEAR UNOBSTRUCTED EMERGENCY EXIT AISLE TO DESIGNATED EXITS.
4. PROVIDE LEVEL FLOOR OR LANDING ON EACH SIDE OF ALL DOORS. THRESHOLD SHALL BE LESS THAN 1/2" HIGH AND BEVELED 1:2.
5. SEE SSMA NON-STRUCTURAL/NON BEARING INTERIOR STEEL STUDS AND TRACKS DETAIL FOR LIMITING HEIGHTS, GAUGE, SPACING - SEE SHEET A0.4

DRAWING LEGEND

- MASONRY WALL WITH EIFS
- DOOR NUMBER
- DOOR NUMBER
- 1 WINDOW TYPE
- P3 PARTITION TYPE KEY, SEE SHEET A0.4
- X SHEET KEYNOTE
- FE 3A 40BC FIRE EXTINGUISHER MOUNTED ON BRACKET @ 48" AFF
- FEC 3A 40BC FIRE EXTINGUISHER RECESSED IN CABINET @ 48" AFF
- X / X.X DETAIL NUMBER / DETAIL KEY / SHEET NUMBER
- 1 / A101 / SIM SECTION NUMBER / BUILDING SECTION / SHEET NUMBER
- 0 GRID BUBBLE

X FLOOR PLAN KEYNOTES

1. HOLLOW METAL DOOR, TYP.
2. HIGH-LIFT OVERHEAD DOOR - SEE DOOR SCHEDULE
3. ALUMINUM STOREFRONT SYSTEM - SEE EXTERIOR ELEVATIONS
4. STEEL COLUMN, TYP. - SEE STRUCTURAL DRAWINGS
5. FIRE DEPARTMENT CONNECTION (F.D.C.) - SEE CIVIL DRAWINGS
6. LINE OF CANOPY - SEE CANOPY DRAWINGS AND EXTERIOR ELEVATIONS
7. FIRE RISER - SEE CIVIL DRAWINGS
8. KNOX BOX PER CITY FIRE DEPARTMENT REGULATIONS
9. SERVICE ENTRANCE SECTION (S.E.S.) - SEE ELECTRICAL DRAWINGS

CAWLEY ARCHITECTS

730 N. 52nd St. Ste. 203
Phoenix, Arizona 85008
P 602.393.5060

CawleyArchitects.com

REGISTERED ARCHITECT CERTIFICATE NO. 35431 KEVIN LANCETT Date Signed 2/21/2025 ARIZONA, U.S.A. PRELIMINARY

COMMERCIAL BUILDING INNOVATIVE DRIVE

4121 W. INNOVATIVE DR.
PHOENIX, AZ 85086

DATE

75% PROGRESS SET

11-20-2024

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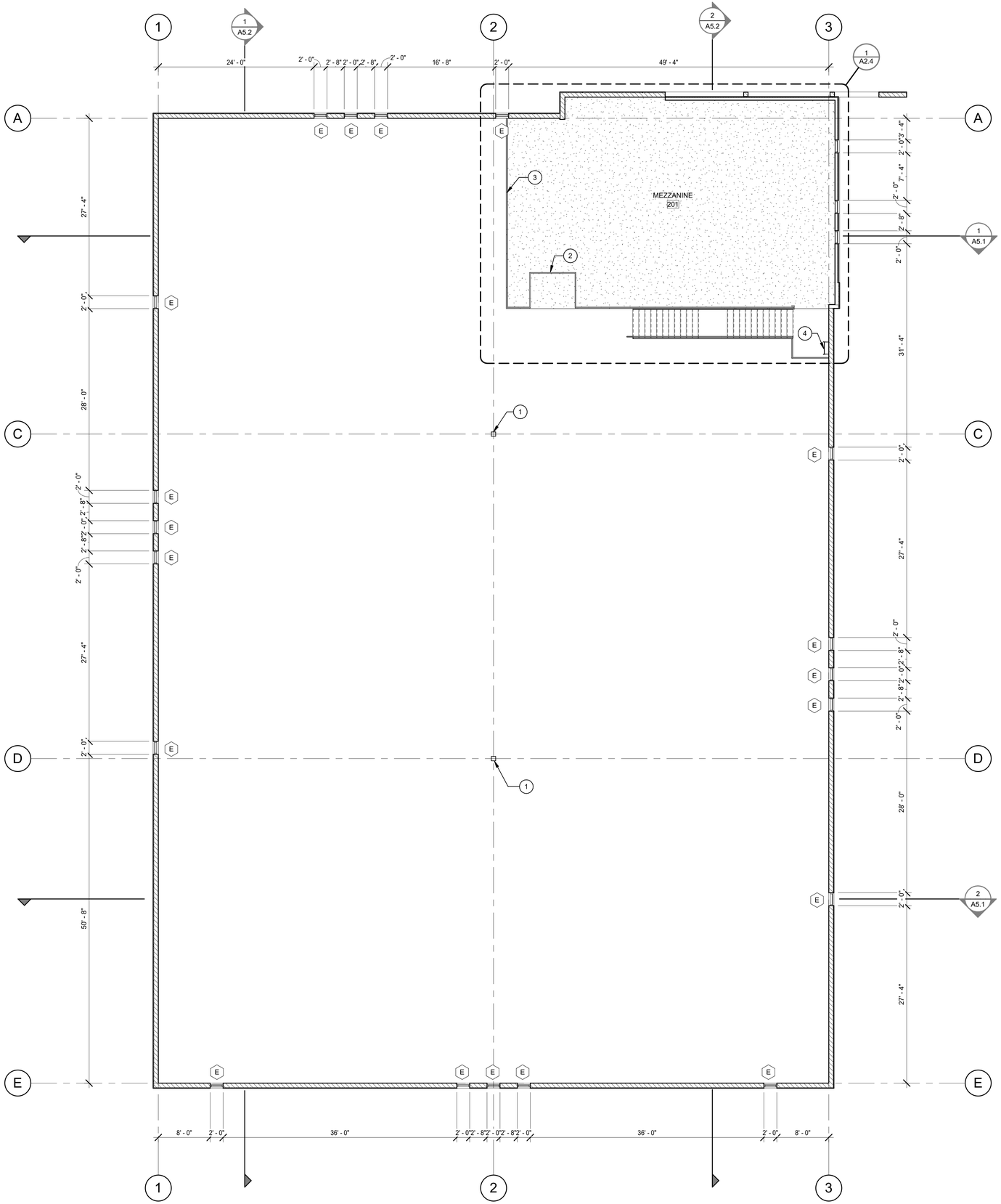
FLOOR PLAN

Project:22105

A2.1



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DRAWING LEGEND

- MASONRY WALL WITH EIFS
- DOOR NUMBER
- DOOR NUMBER
- 1 — WINDOW TYPE
- P3 — PARTITION TYPE KEY, SEE SHEET A0.4
- X — SHEET KEYNOTE
- FE — 3A 40BC FIRE EXTINGUISHER MOUNTED ON BRACKET @ 48" AFF
- FEC — 3A 40BC FIRE EXTINGUISHER RECESSED IN CABINET @ 48" AFF
- X / X.X — DETAIL NUMBER, DETAIL KEY, SHEET NUMBER
- 1 / A101 / SIM — SECTION NUMBER, BUILDING SECTION, SHEET NUMBER
- 0 — GRID BUBBLE

(X) FLOOR PLAN KEYNOTES

1. STEEL COLUMN, TYP. - SEE STRUCTURAL DRAWINGS
2. MEZZANINE SAFETY GATE - SEE SPECIFICATIONS
3. 42" HIGH GUARDRAIL - SEE WALL SECTION AND DETAIL SHEETS
4. ROOF LADDER - SEE DETAIL SHEETS

CLERESTORY FLOOR PLAN

1/8" = 1'-0"

0' 4' 8' 16'

CAWLEY ARCHITECTS
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Phoenix, Arizona 85008
P 602.393.5060
CawleyArchitects.com

REGISTERED ARCHITECT CERTIFICATE NUMBER 35[illegible] KEVIN J. LANCETT Date Signed 2/21/2024 ARIZONA, U.S.A. PRELIMINARY

COMMERCIAL BUILDING INNOVATIVE DRIVE

4121 W. INNOVATIVE DR.
PHOENIX, AZ 85086

DATE
75% PROGRESS SET
11-20-2024

DRAWN BY: BC

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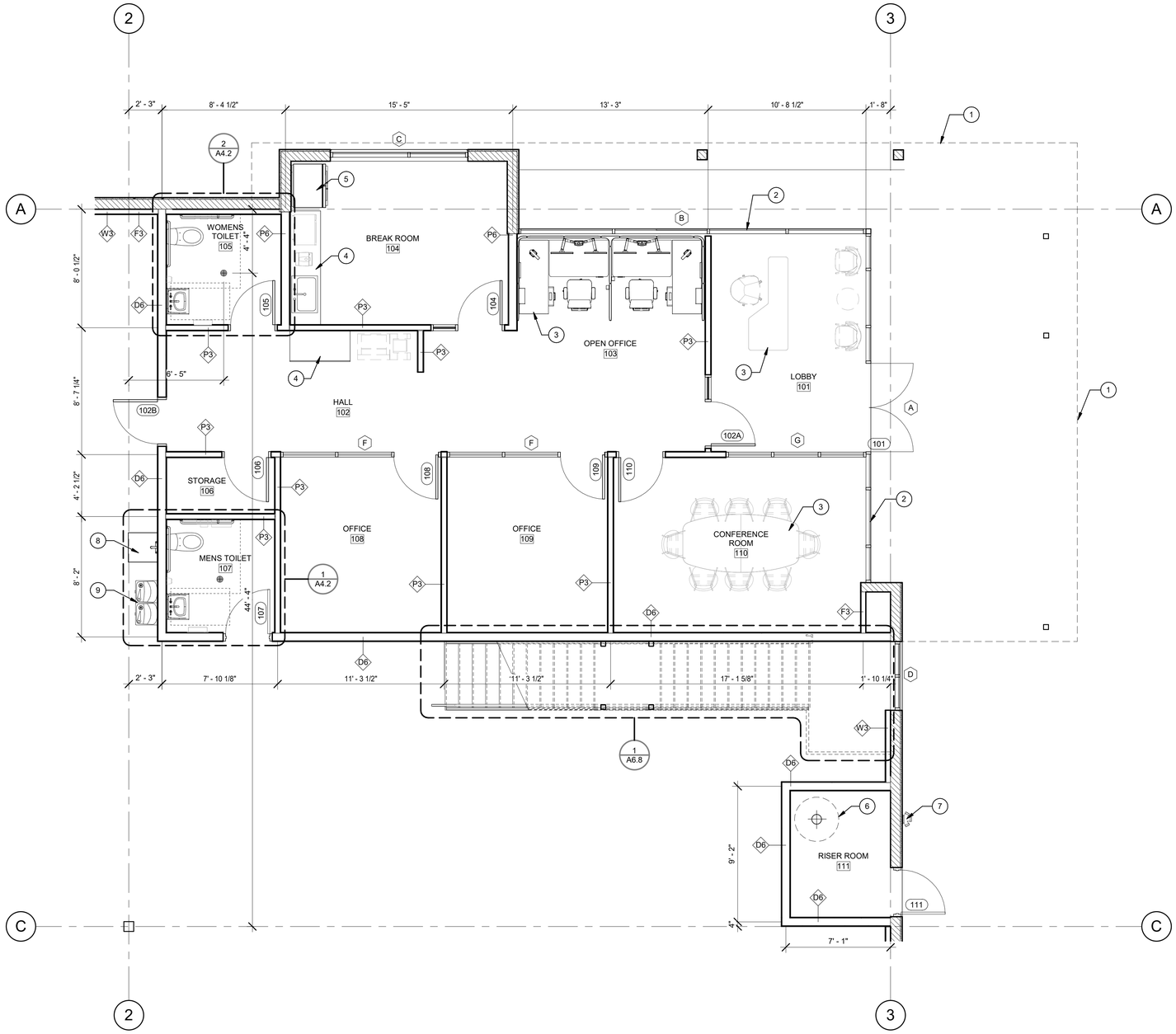
CLERESTORY FLOOR PLAN

Project:22105

A2.2



ENLARGED FIRST FLOOR PLAN

1/4" = 1'-0"

GENERAL NOTES

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5. SEE SSMA NON-STRUCTURAL/NON BEARING INTERIOR STEEL STUDS AND TRACKS DETAIL FOR LIMITING HEIGHTS, GAUGE, SPACING - SEE SHEET A0.4

DRAWING LEGEND

- MASONRY WALL WITH EIFS
- DOOR NUMBER
- DOOR NUMBER
- 1 WINDOW TYPE
- P3 PARTITION TYPE KEY, SEE SHEET A0.4
- X SHEET KEYNOTE
- FE 3A 40BC FIRE EXTINGUISHER MOUNTED ON BRACKET @ 48" AFF
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- X / X.X DETAIL NUMBER / DETAIL KEY / SHEET NUMBER
- 1 / A101 / SIM SECTION NUMBER / BUILDING SECTION / SHEET NUMBER
- 0 GRID BUBBLE

(X) FLOOR PLAN KEYNOTES

1. LINE OF CANOPY - SEE CANOPY DRAWINGS AND EXTERIOR ELEVATIONS
2. ALUMINUM STOREFRONT SYSTEM - SEE EXTERIOR ELEVATIONS
3. FURNITURE (SHOWN DASHED) - PROVIDED BY OWNER
4. MILLWORK - SEE MILWORK DRAWINGS
5. REFRIGERATOR - PROVIDED BY OWNER
6. FIRE RISER - SEE CIVIL DRAWINGS
7. FIRE DEPARTMENT CONNECTION (F.D.C.) - SEE CIVIL DRAWINGS
8. MOP SINK - SEE PLUMBING DRAWINGS
9. HI-LO ELECTRICAL WATER COOLER (E.W.C.) WITH 30"x48" CLEAR FLOOR SPACE

CAWLEY ARCHITECTS

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CawleyArchitects.com

REGISTERED ARCHITECT CERTIFICATE NO. 35 KEVIN LANCETT Signed 01/11/2024 ARIZONA, U.S.A. PRELIMINARY

COMMERCIAL BUILDING INNOVATIVE DRIVE

4121 W. INNOVATIVE DR.
PHOENIX, AZ 85086

DATE
75% PROGRESS SET
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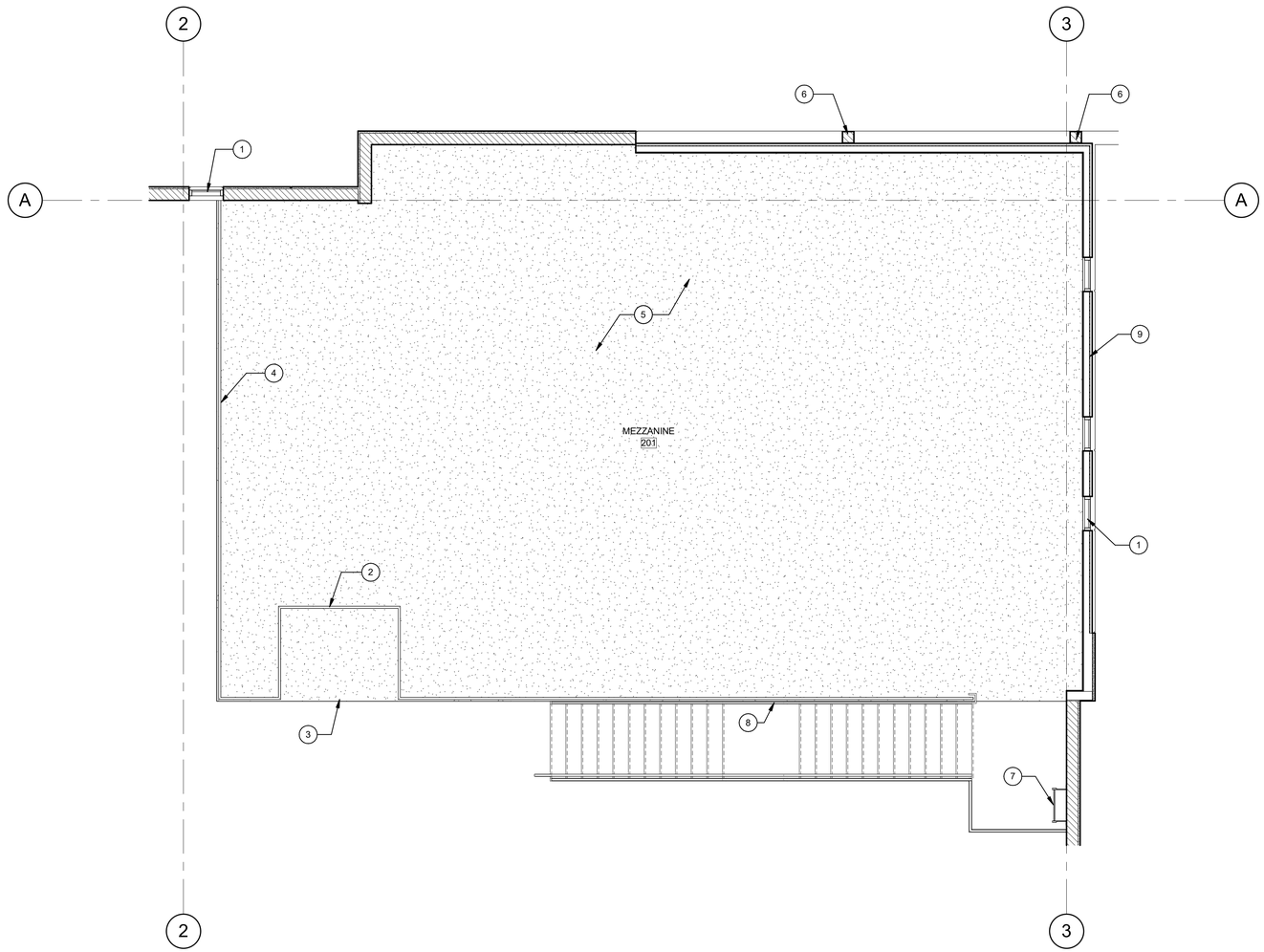
ENLARGED FLOOR PLAN

Project:22105

A2.3



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5. SEE SSMA NON-STRUCTURAL/NON BEARING INTERIOR STEEL STUDS AND TRACKS DETAIL FOR LIMITING HEIGHTS, GAUGE, SPACING - SEE SHEET A0.4

DRAWING LEGEND

- MASONRY WALL WITH EIFS
- DOOR NUMBER
- DOOR NUMBER
- 1 WINDOW TYPE
- P3 PARTITION TYPE KEY, SEE SHEET A0.4
- X SHEET KEYNOTE
- FE 3A 40BC FIRE EXTINGUISHER MOUNTED ON BRACKET @ 48" AFF
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- X / X.X DETAIL NUMBER / DETAIL KEY / SHEET NUMBER
- 1 / A101 / SIM SECTION NUMBER / BUILDING SECTION / SHEET NUMBER
- 0 GRID BUBBLE

X FLOOR PLAN KEYNOTES

1. CLERESTORY WINDOW SYSTEM - SEE WINDOW ELEVATIONS
2. MEZZANINE SAFETY GATE - SEE SPECIFICATIONS
3. EDGE OF CONCRETE SLAB - SEE STRUCTURAL DRAWINGS
4. 42" HIGH GUARDRAIL - SEE WALL SECTION AND DETAIL SHEETS
5. CONCRETE SLAB OVER METAL DECK - SEE STRUCTURAL DRAWINGS
6. STEEL COLUMN, TYP. - SEE STRUCTURAL DRAWINGS
7. ROOF LADDER - SEE DETAIL SHEETS
8. 42" HIGH GUARDRAIL WITH 36" HIGH HANDRAIL, PAINT - SEE STRUCTURAL DRAWINGS
9. PRE-FINISHED METAL PANEL - SEE SPECIFICATIONS

N

ENLARGE SECOND FLOOR PLAN

1/4" = 1'-0"

0' 4' 8' 16'

CAWLEY ARCHITECTS

730 N. 52nd St. Ste. 203
Phoenix, Arizona 85008
P 602.393.5060

CawleyArchitects.com

REGISTERED ARCHITECT
CERTIFICATE NO. 35431
KEVIN LANCETT
Signed 12/11/2024
ARIZONA, U.S.A.
PRELIMINARY

COMMERCIAL BUILDING INNOVATIVE DRIVE

4121 W. INNOVATIVE DR.
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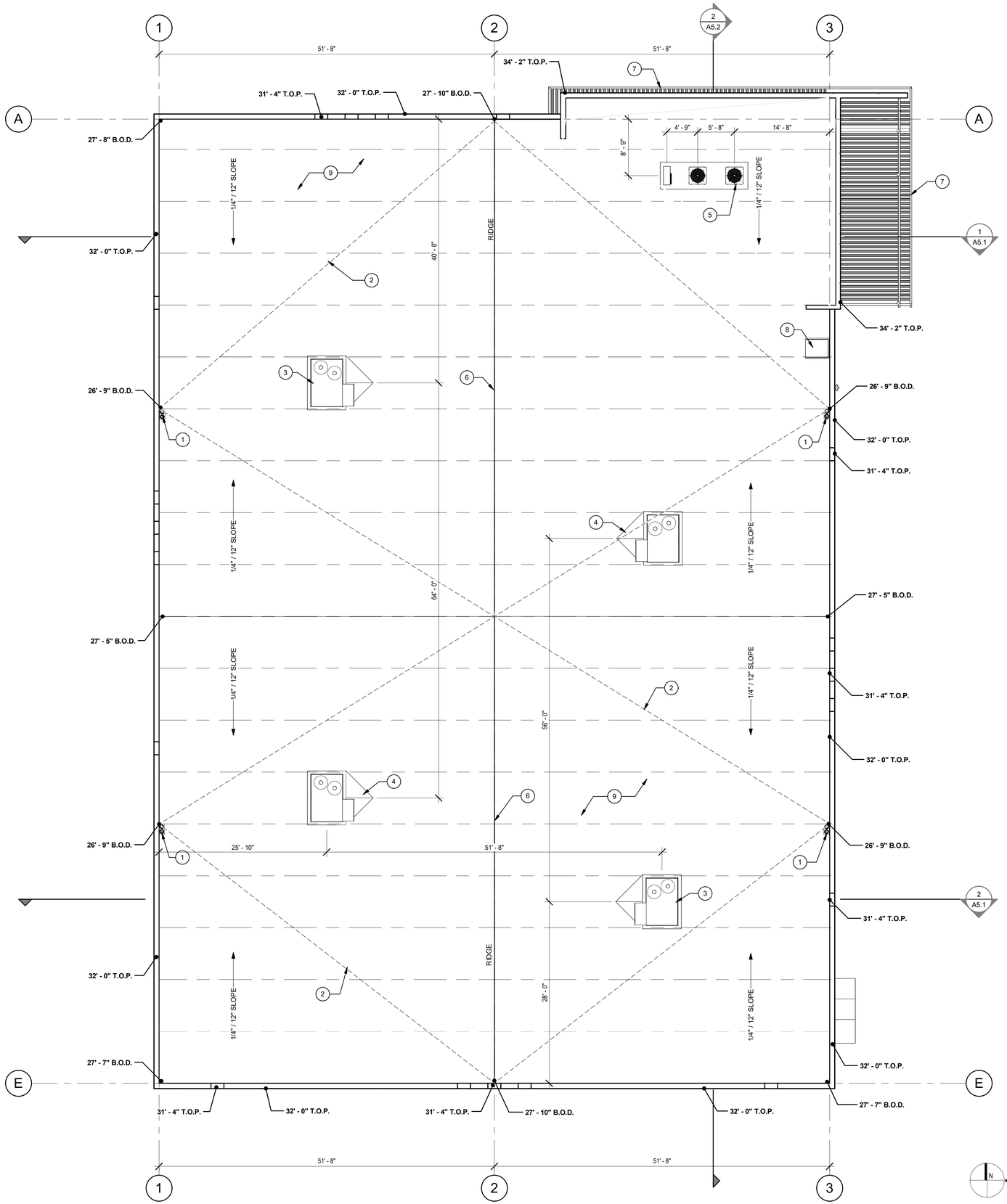
ENLARGED MEZZANINE PLAN

Project:22105

A2.4



ROOF PLAN

1/8" = 1'-0"

0' 4' 8' 16'

GENERAL NOTES

1. VERIFY WITH MECHANICAL DRAWINGS FOR ALL REQUIRED UNIT CLEARANCES.
2. DIMENSIONS ARE TO THE CENTER OF ALL MECHANICAL UNITS AND SKYLIGHTS.
3. SEE MECHANICAL DRAWINGS FOR CURB DETAILS.
4. ROOF/CRICKET SLOPES TO BE A MINIMUM OF 1/4" SLOPE.

DRAWING LEGEND

- SKYLIGHT W/ RELIEF VENT OR SMOKE VENT W/ SKYLIGHT
- ROOFTOP MECHANICAL UNITS, SEE MECHANICAL
- MECHANICAL SYMBOLS, SEE MECHANICAL
- ROOF DRAIN
- X'-X" B.O.D. — BOTTOM OF DECK ELEVATION FROM FINISHED FLOOR
- X'-X" T.O.P. — TOP OF PARAPET ELEVATION FROM FINISHED FLOOR
- DETAIL NUMBER / DETAIL KEY / SHEET NUMBER
- SECTION NUMBER / BUILDING SECTION / SHEET NUMBER (1 / A101 / SIM)

NOTE:
EQUIPMENT SCREENING BASED UPON MECHANICAL UNIT AT 3'-0" (36") MAXIMUM TOTAL HEIGHT INCLUDING 8" CURB - CONTRACTOR TO VERIFY ALL DIMENSIONS AND CLEARANCES PRIOR TO ROUGH-IN.

NOTE:
PROVIDE R-38 BATT INSULATION WITH WHITE SCRIM SHEETS ON UNDERSIDE OF ROOF DECK

T.P.O. ROOFING

1. MECHANICALLY ATTACHED SINGLE-PLY MEMBRANE ROOFING SYSTEM INSTALLED OVER WOOD DECK.
2. WARRANTY WIND SPEED: 72 MPH COVERAGE.
3. WARRANTY DURATION: 25 YEARS.
4. MEMBRANE: 60 MIL (0.060 INCH) THERMOPLASTIC-POLYOLEFIN (T.P.O.).
5. COVER BOARD: SYSTEM MANUFACTURER'S SPECIFIED COVERBOARD PRODUCT.
6. WOOD ROOF DECK: AS SPECIFIED IN THE GENERAL STRUCTURAL NOTES IN THE CONSTRUCTION DOCUMENTS SET.
7. FASTENER TYPE AND PATTERN: AS SPECIFIED BY THE SYSTEM MANUFACTURER TO PROVIDE THE SPECIFIED WARRANTY PERFORMANCE.
8. PERFORM ON-SITE FASTENER PULLOUT RESISTANCE TESTING AS SPECIFIED BY THE SYSTEM MANUFACTURER.
9. SYSTEM MANUFACTURER INSPECTION AND APPROVAL OF THE ROOFING SYSTEM INSTALLATION AS REQUIRED FOR THE WARRANTY.
10. QUALITY ASSURANCE INSPECTIONS OF THE ROOFING SYSTEM INSTALLATION ARE TO BE CONDUCTED BY A THIRD-PARTY INSPECTOR RETAINED BY THE OWNER.
11. QUALITY ASSURANCE INSPECTION SCHEDULING IS TO BE COORDINATED THROUGH THE GENERAL CONTRACTOR.

(X) ROOF PLAN KEYNOTES

1 ROOF DRAIN AND OVER FLOW- SEE BUILDING DETAILS AND PLUMBING DRAWINGS
2 LINE OF WARPED ROOF DECK
3 ROOFTOP MECHANICAL UNIT - SEE MECHANICAL DRAWINGS
4 FOAM CRICKET AT EACH MECHANICAL UNIT, TYP.
5 CONDENSING UNIT ON CURB - SEE MECHANICAL DRAWINGS
6 ROOF RIDGE LINE
7 CANOPY BELOW - SEE CANOPY DRAWINGS AND STRUCTURAL DRAWINGS
8 ROOF HATCH - SEE DETAIL SHEETS
9 45"MIL TPO ROOF ON 1.5' INSULATION BOARD OVER PLYWOOD SHEATHING WITH 20 YEAR WARRANTY

CAWLEY ARCHITECTS
730 N. 52nd St. Ste. 203
Phoenix, Arizona 85008
P 602.393.5060
CawleyArchitects.com

REGISTERED ARCHITECT CERTIFICATE NO. 35 KEVIN LANCETT Date Signed 2/21/2024 ARIZONA, U.S.A. PRELIMINARY

COMMERCIAL BUILDING INNOVATIVE DRIVE

4121 W. INNOVATIVE DR. PHOENIX, AZ 85086

DATE
75% PROGRESS SET
11-20-2024

DRAWN BY: BC

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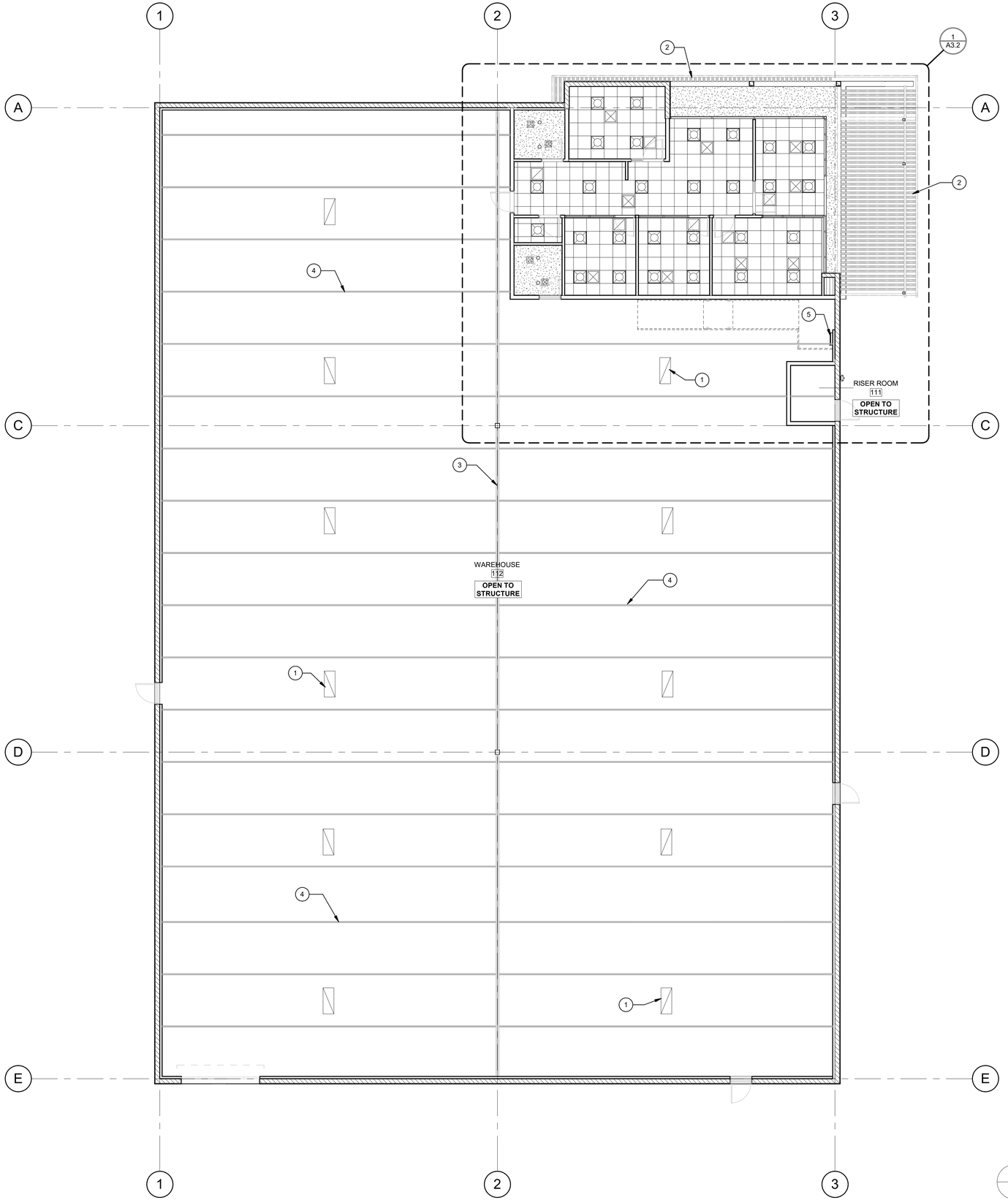
ROOF PLAN

Project:22105

A2.5



GENERAL NOTES

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2. WEIGHT DISTRIBUTION AND CODE COMPLIANCE FOR ALL ROOF MOUNTED EQUIPMENT TO BE VERIFIED BY CONTRACTOR PRIOR TO ROUGH-IN.
3. FOR CEILING MOUNTED SMOKE DETECTORS SEE ELECTRICAL DRAWINGS.
4. ROUT CEILING PANELS AT CUT EDGES TO FIT LEVEL IN GRID.
5. AT ALL A/C SPACES, PROVIDE FIBER BATT THERMAL INSULATION WIRE TIED TO UNDERSIDE OF ROOF DECK. R-VALUE PER THERMAL INSULATION SCHEDULE (SHEET A0.2)
6. ALL CEILING/SOFFIT HEIGHTS ARE NOTED TO BE ABOVE FINISHED FLOOR.
7. COORDINATE FRAMING AT EXTERIOR SOFFIT AREAS WITH RECESSED DOWNLIGHTS, SPRINKLER HEADS AND VENTS.

DRAWING LEGEND

- 2' X 2' SUSPENDED LAY-IN CEILING ARMSTRONG DUNE TEGULAR 9/16 WHITE
- 5/8" GYPSUM BOARD CEILING
- EXTERIOR SOFFIT - DIRECT FINISH OVER 5/8" WATER RESISTANCE GYPSUM BOARD SYSTEM, REFERENCE ESR-3087. SEE WALL SECTIONS
- LINE OF EXPOSED JOIST
- LIGHTING SYMBOLS, REFER TO ELECTRICAL
- MECHANICAL SYMBOLS, REFER TO MECHANICAL

(X) CEILING PLAN KEYNOTES

1. LIGHT FIXTURE - SEE ELECTRICAL
2. CANOPY FRAMING - SEE DETAILS AND STRUCTURAL DRAWINGS
3. STEEL JOIST GIRDER - SEE STRUCTURAL DRAWINGS
4. STEEL JOIST, TYP. - SEE STRUCTURAL DRAWINGS
5. ROOF LADDER - SEE DETAIL SHEETS

REFLECTED CEILING PLAN

1/8" = 1'-0"

0' 4' 8' 16'

CAWLEY ARCHITECTS

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Phoenix, Arizona 85008
P 602.393.5060

CawleyArchitects.com

REGISTERED ARCHITECT CERTIFICATE NUMBER 35[illegible] KEVIN M. LANCETT Date Signed 2/21/2024 ARIZONA, U.S.A. PRELIMINARY

COMMERCIAL BUILDING INNOVATIVE DRIVE

4121 W. INNOVATIVE DR.
PHOENIX, AZ
85086

DATE

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11-20-2024

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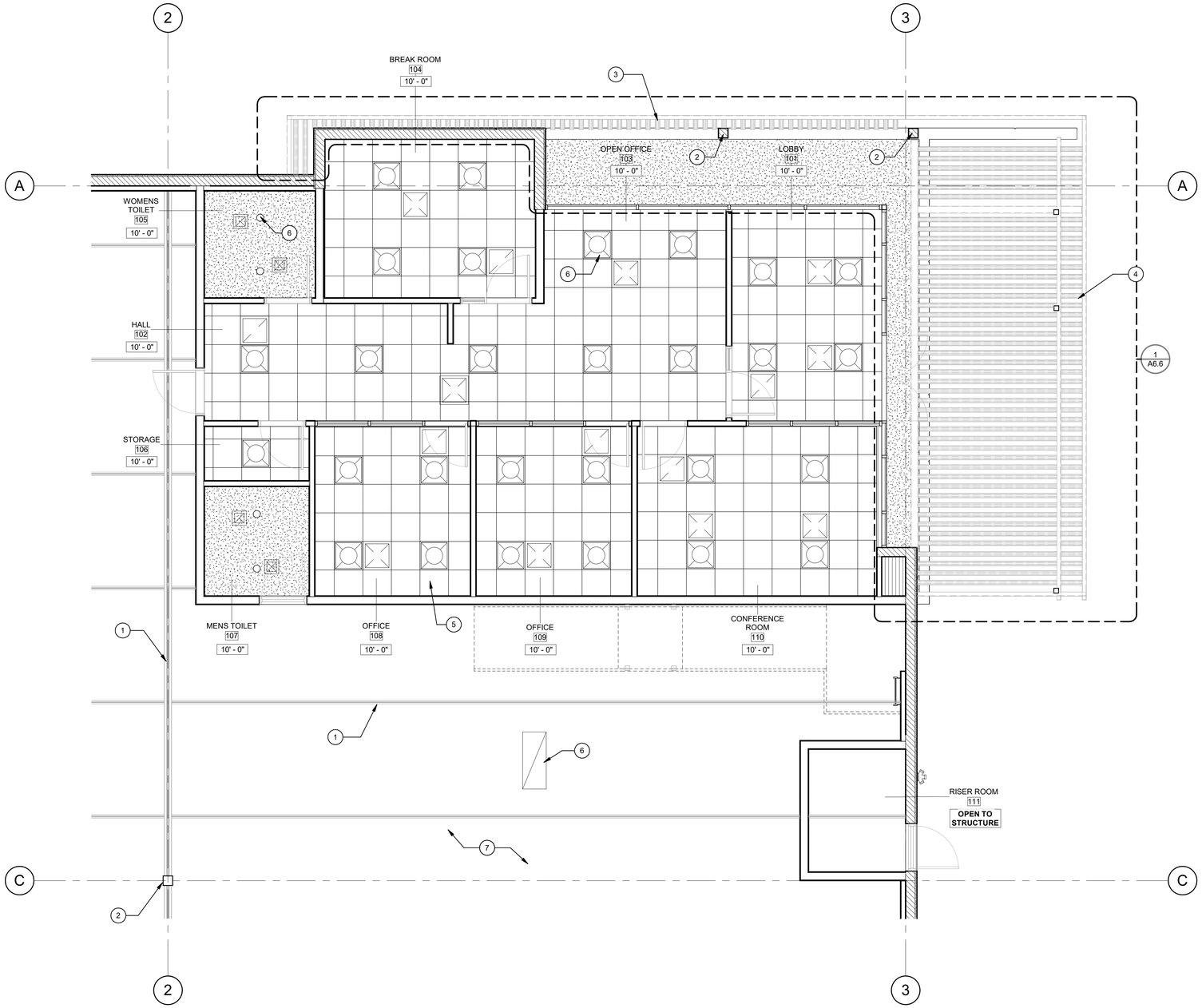
REFLECTED CEILING PLAN

Project:22105

A3.1



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3. FOR CEILING MOUNTED SMOKE DETECTORS SEE ELECTRICAL DRAWINGS.
4. ROUT CEILING PANELS AT CUT EDGES TO FIT LEVEL IN GRID.
5. AT ALL A/C SPACES, PROVIDE FIBER BATT THERMAL INSULATION WIRE TIED TO UNDERSIDE OF ROOF DECK. R-VALUE PER THERMAL INSULATION SCHEDULE (SHEET A0.2)
6. ALL CEILING/SOFFIT HEIGHTS ARE NOTED TO BE ABOVE FINISHED FLOOR.
7. COORDINATE FRAMING AT EXTERIOR SOFFIT AREAS WITH RECESSED DOWNLIGHTS, SPRINKLER HEADS AND VENTS.

DRAWING LEGEND

- 2' X 2' SUSPENDED LAY-IN CEILING ARMSTRONG DUNE TEGULAR 9/16 WHITE
- 5/8" GYPSUM BOARD CEILING
- EXTERIOR SOFFIT - DIRECT FINISH OVER 5/8" WATER RESISTANCE GYPSUM BOARD SYSTEM, REFERENCE ESR-3087. SEE WALL SECTIONS
- LINE OF EXPOSED JOIST
- LIGHTING SYMBOLS, REFER TO ELECTRICAL
- MECHANICAL SYMBOLS, REFER TO MECHANICAL

(X) CEILING PLAN KEYNOTES

1 STEEL JOIST, TYP. - SEE STRUCTURAL DRAWINGS
2 STEEL COLUMN, TYP. - SEE STRUCTURAL DRAWINGS
3 CANOPY FRAMING - SEE DETAILS AND STRUCTURAL DRAWINGS
4 CANOPY FRAMING - SEE STRUCTURAL DRAWINGS
5 NEW CEILING TILE AND GRID
6 LIGHT FIXTURE - SEE ELECTRICAL
7 OPEN TO STRUCTURE ABOVE, TYP.

ENLARGED REFLECTED CEILING PLAN

1/4" = 1'-0"

0' 4' 8' 16'

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ENLARGED REFLECTED CEILING PLAN

Project:22105

A3.2

DOOR SCHEDULE

DOOR NO.	TYPE	SIZE WIDTH	SIZE HEIGHT	DOOR MTR'L	FINISH	FRAME MTR'L	REMARKS	HDWE. SET No.	REQ'D RAT'G (MINS)
101	A	6' - 0"	8' - 0"	GL	EA	EA	STOREFRONT ENTRY DOOR	AL-04	-
102A	C	3' - 0"	8' - 0"	SC	PRE	EA	W/ 2'-0" SIDELITE	204	-
102B	C	3' - 0"	8' - 0"	HM	PLAM	HM		203	-
104	C	3' - 0"	8' - 0"	SC	PRE	EA	W/ 2'-0" SIDELITE	205	-
105	C	3' - 0"	8' - 0"	SC	PLAM	EA	SINGLE-USER RESTROOM	208	-
106	C	3' - 0"	8' - 0"	SC	PLAM	EA	STORAGE CLOSET	204	-
107	B	3' - 0"	8' - 0"	HM	PTD	HM	SINGLE-USER RESTROOM	207	-
108	C	3' - 0"	8' - 0"	SC	PLAM	EA		204	-
109	C	3' - 0"	8' - 0"	SC	PLAM	EA		204	-
110	C	3' - 0"	8' - 0"	SC	PLAM	EA		205	-
111	B	3' - 0"	8' - 0"	HM	PTD	HM	FIRE RISER/FIRE LADDER	103	-
112A	B	3' - 0"	7' - 0"	HM	PTD	HM	FIRE ACCESS SIGNAGE	101	-
112B	B	3' - 0"	8' - 0"	HM	PTD	HM	FIRE ACCESS SIGNAGE	101	-
112C	C	12' - 0"	12' - 0"		PTD		COILING DOOR	-	-
112D	B	3' - 0"	7' - 0"		PTD	HM	FIRE ACCESS SIGNAGE	101	-

GENERAL NOTES:
1. PROVIDE 4" JAMBS FOR ALL EVEN NUMBER WIDTH IN CMU DOOR OPENINGS
2. PROVIDE 4" HEADS FOR ALL 7'-0" DOORS IN CMU OPENINGS

DOOR SCHEDULE KEY

AG ALUMINUM GLASS DOOR TO MATCH STOREFRONT

SC SOLID CORE WOOD (VENEER FACE - 5 PLY) STAIN GRADE DOORS
MANUFACTURER: MASONITE ARCHITECTURAL
TYPE: SOLID CORE WOOD STAIN GRADE DOORS
SPECIES: WHITE BIRCH
CUT: ROTARY CUT
STAIN COLOR: -

HM 18 GAUGE HOLLOW METAL DOOR - TYPE 1,
16 GAUGE HOLLOW METAL FRAME,
EXTERIOR HOLLOW METAL FRAME TO HAVE 2" JAMBS AND HEAD
(4" HEAD FOR C.M.U.)
INSULATED WHERE NOTES (R-8)

EA EXTRUDED ALUMINUM PREMANUFACTURED & PREFINISHED
FRAMES
MANUFACTURER: WESTERN INTEGRATED
STYLE: 300 SERIES
FINISH: -
SIZE: PER DOOR SCHEDULE

PTD ALL SURFACES TO RECIEVE 2 COATS OF PAINT AND PRIMER.

AL ALUMINUM

PRE PREFINISHED

LAM LAMINATED FINISH
MANUFACTURER: WILSONART
COLOR: -
FINISH: -

GL GLASS

CMU CONCRETE MASONRY UNIT

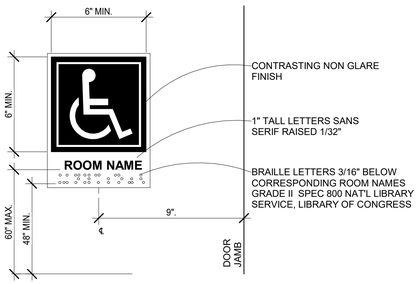
CD COILING DOOR - SEE STRUCT FOR WALL BRACING
- 12'W x 14'H (VERIFY OPENING SIZE)
- 12 GA. FLAT SLAT GALVANIZED STEEL W/ LIGHT GRAY PRIMER FOR FIELD PAINTING
- UNINSULATED
- NOT FIRE OR SMOKE RATED
- WEATHER SEALS @ HOOD, JAMBS, & SILL
- CHAIN OPERATION - COUNTERBALANCED
- PADLOCK LOCKING - SLIDE BOLT OR CHAIN HOLDER
- STEEL GUIDE-TRACKS & HOOD ATTACHED TO INSIDE FACE OF CMU OR STEEL FRAMED OPENING.

DOOR NOTES

1. ALL EXIT DOORS ARE TO BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE.
2. KEY LOCKING HARDWARE WITH 'LOCKED' INDICATOR MAY BE USED ON THE MAIN ENTRY DOOR ONLY IN CONJUNCTION WITH A SIGN STATING "THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED". THE SIGN SHALL BE IN LETTERS NOT LESS THAN 1 INCH HIGH ON A CONTRASTING BACKGROUND. OPERABLE PARTS SHALL BE OPENABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPENABLE PARTS SHALL BE 5-POUNDS MAXIMUM.
3. ALL HARDWARE AND KEYING COORDINATED WITH OWNER AND INSTALLED ACCORDING TO IBC AND ADA STANDARDS INCLUDING LEVER HARDWARE THROUGHOUT.
4. MANUALLY OPERATED EDGE- OR SURFACE-MOUNTED FLUSH OR SURFACE BOLTS ARE PROHIBITED ON REQ'D EXIT DOORS.
5. ANY ELEVATION CHANGE AT THRESHOLDS, ALONG ACCESSIBLE ROUTE, SHALL BE LESS THAN 1/2" AND BEVELED 1:2.
6. PROVIDE IDENTIFICATION SIGNS AT COMMON USE ROOM DOORS PER 2010 ADA STANDARDS SECTION 701.
7. PAIRS OF DOORS TO HAVE ACTIVE RH AND INACTIVE LH LEAVES. COORDINATORS NOT INCLUDED UNLESS REQUIRED BY CODE SUCH AS AT FIRE RATED ASSEMBLIES.
8. HANG ALL DOORS PLUMB WITH UNIFORM 1/8" CLEARANCE BETWEEN DOOR AND FRAME ON ALL SIDES. DOORS, WHEN HUNG, SHALL NOT SWING BY GRAVITY IN EITHER DIRECTION. (DO NOT UNDERCUT DOORS FOR AIR CONDITIONING). DOORS TO BE LOCATED 4" FROM ADJACENT WALL UNLESS NOTED OTHERWISE.
9. GROUT SOLID ALL EXTERIOR DOOR FRAMES IN CONC. OR CMU WALLS.
10. CAULK ALL EXTERIOR DOOR FRAMES WITH "DYMERIC" SEALANT.
11. ALL OVERHEAD OR COILING DOORS TO BE PAINTED ON THE EXTERIOR SURFACE ONLY.
12. GENERAL CONTRACTOR TO PROVIDE BLOCKING FOR HARDWARE AS REQUIRED BY FIELD CONDITIONS.
13. GENERAL CONTRACTOR (VENDOR) SHALL COORDINATE DOOR & HARDWARE WITH SECURITY AND CARD KEY SYSTEM PER OWNER/TENANTS REQUIREMENTS.
14. HARDWARE SUPPLIER TO FURNISH CONSTRUCTION CORES AT EXTERIOR DOORS, STORAGE, MECHANICAL/IDF ROOMS.
15. HARDWARE SUPPLIER TO INCLUDE MASTER KEYING AND PERMANENT CORES AS DIRECTED BY OWNER.

ACCESSIBLE SIGNS

ADA-AS 216, 703



MOUNT SIGN ON WALL ADJACENT TO LATCH SIDE OF DOOR 48" TO 60" ABOVE FLOOR.
CAL-ROYAL, HAGER, O/E CHANDLER ARC WORKSHOP

LOCATION	QUANTITY
MEN'S TOILET	1
WOMEN'S TOILET	2
ENTRY	1
CONFERENCE	1
STAIRS	1
EXITS	4

HARDWARE SETS

GENERAL HARDWARE REQUIREMENTS:

1. ALL DOORS OVER 36" WIDE TO HAVE HEAVY WEIGHT HINGES 5" X 4.5"
2. VERIFY CYLINDER TYPE AND FINISH REQUIRED FOR THE ALUMINUM DOORS
3. HARDWARE SUPPLIER TO INCLUDE ALL MASTER KEYEING & KEY CHARGES
4. HARDWARE SUPPLIER TO SUBMIT PROPOSED KEYING SCHEDULE FOR REVIEW

HARDWARE GROUP NO. AL-04 - ALUMINUM/GLASS PAIR EXTERIOR-STOREFRONT EXIT HARDWARE

PROVIDE EACH PR DOOR(S) WITH THE FOLLOWING:

DESCRIPTION	CATALOG NUMBER	FINISH	MFR
CONT. HINGE	112HD	628	IVE
PANIC HARDWARE	3349A-EO	626	VON
PANIC HARDWARE	3349A-T-360T	626	VON
RIM CYLINDER	20-057 ICX	626	SCH
FSIC CORE	23-030 C123 MK	626	SCH
LONG DOOR PULL	9264F 60" CONCEALED MOUNTING	630 316	IVE
SURFACE CLOSER	4040XP SCUSH	689	LCN
SPACER/BRKT/PLATE	4040XP-XX AS REQUIRED	689	LCN
RAIN DRIP	142AA	AA	ZER
GASKETING	8303AA	AA	ZER
MEETING STILE STEALS	BY DOOR MANUFACTURER	AL	
DOOR SWEEP	8197AA	AA	ZER
THRESHOLD	102A-MSLA	A	ZER

HEX DOG DEVICE DURING BUSINESS HOURS

HARDWARE GROUP NO. 101 - EXT EXIT WAREHOUSE

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

DESCRIPTION	CATALOG NUMBER	FINISH	MFR
HINGE	5BB1 4.5 X 4.5 NRP 5" HW OVER 36" WIDTH	630	IVE
PANIC HARDWARE	25-R-L-NL-DANE	626	FAL
MORTISE CYLINDER	20-061 ICX	626	SCH
FSIC CORE	23-030 C123 MK	626	SCH
SURFACE CLOSER	4040XP SCUSH	689	LCN
RAIN DRIP	142AA	AA	ZER
GASKETING	8303AA	AA	ZER
DOOR SWEEP	8197AA	AA	ZER
THRESHOLD	8655A	A	ZER

HARDWARE GROUP NO. 103 - EXT FIRE RISER

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

DESCRIPTION	CATALOG NUMBER	FINISH	MFR
HINGE	5BB1 4.5 X 4.5 NRP 5" HW OVER 36" WIDTH	630	IVE
STOREROOM W/DEADBOLT	L9480T 06A 09-544	626	SCH
FSIC CORE	23-030 C123 MK	626	SCH
LOCK GUARD	LG12	630	IVE
SURFACE CLOSER	4040XP SCUSH	689	LCN
RAIN DRIP	142AA	AA	ZER
GASKETING	8303AA	AA	ZER
DOOR SWEEP	8197AA	AA	ZER
THRESHOLD	8655A	A	ZER

HARDWARE GROUP NO. 203 - AC OFFICE TO AC WAREHOUSE - WALL STOP UP TO 180 DEGREE

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

DESCRIPTION	CATALOG NUMBER	FINISH	MFR
HINGE	5BB1 4.5 X 4.5 NRP	652	IVE
CLASSROOM LOCK	ALX70T RHO	626	SCH
FSIC CORE	23-030 C123 MK	626	SCH
SURFACE CLOSER	4040XP SCUSH	689	LCN
KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
WALL STOP	WS406/407CCV	630	IVE
GASKETING	188SBK PSA	BK	ZER

HARDWARE GROUP NO. 205 - NON SECURED OFFICE

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

DESCRIPTION	CATALOG NUMBER	FINISH	MFR
HINGE	5BB1 4.5 X 4.5 NRP	652	IVE
PASSAGE SET	ALX10 RHO	626	SCH
WALL STOP	WS406/407CCV	630	IVE
GASKETING	188SBK PSA	BK	ZER

HARDWARE GROUP NO. 204 - SECURED OFFICE

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

DESCRIPTION	CATALOG NUMBER	FINISH	MFR
HINGE	5BB1 4.5 X 4.5 NRP	652	IVE
ENTRANCE LOCK	ALX53T RHO	626	SCH
FSIC CORE	23-030 C123 MK	626	SCH
WALL STOP	WS406/407CCV	630	IVE
GASKETING	188SBK PSA	BK	ZER

HARDWARE GROUP NO. 207 - SINGLE USE TOILET - AC TO WAREHOUSE

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

DESCRIPTION	CATALOG NUMBER	FINISH	MFR
HINGE	5BB1 4.5 X 4.5	652	IVE
PRIVACY W/COIN TURN	L9044 06A L583-363 L283-722 ADA/INDICATOR	626	SCH
SURFACE CLOSER	4040XP SCUSH	689	LCN
KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
WALL STOP	WS406/407CCV	630	IVE
GASKETING	188SBK PSA	BK	ZER
THRESHOLD	545A - MSLA-10	A	ZER

HARDWARE GROUP NO. 208 - SINGLE USE TOILET - OFFICE

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

DESCRIPTION	CATALOG NUMBER	FINISH	MFR
HINGE	5BB1 4.5 X 4.5	652	IVE
PRIVACY W/COIN TURN	L9044 06A L583-363 L283-722 ADA/INDICATOR	626	SCH
SURFACE CLOSER	1450 REG OR PA AS REQ FC	689	LCN
WALL STOP	WS406/407CCV	630	IVE
GASKETING	188SBK PSA	BK	ZER

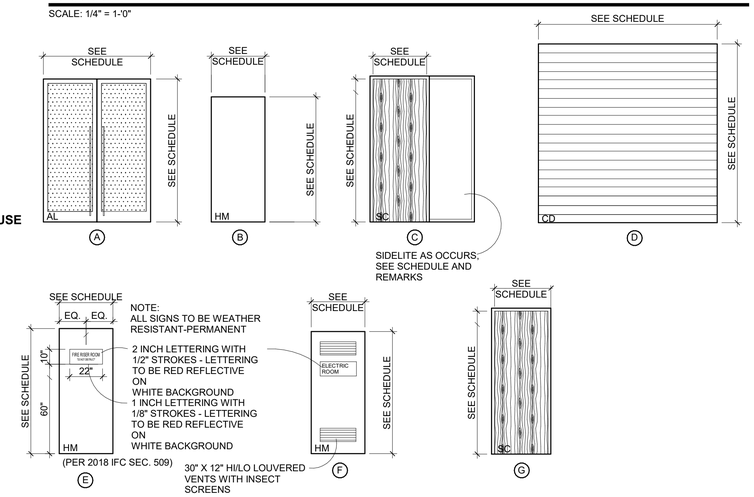
HARDWARE GROUP NO. 210 - STORAGE/JANITOR

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

DESCRIPTION	CATALOG NUMBER	FINISH	MFR
HINGE	5BB1 4.5 X 4.5 NRP	652	IVE
STOREROOM LOCK	ALX80T RHO	626	SCH
FSIC CORE	23-030 C123 MK	626	SCH
KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
WALL STOP	WS406/407CCV	630	IVE
GASKETING	188SBK PSA	BK	ZER

DOOR TYPES

SCALE: 1/4" = 1'-0"



DENOTES TEMPERING AT GLASS PER IBC 2406.4 HAZARDOUS LOCATIONS

FINISH KEY

CODE	DESCRIPTION	BASE MATERIAL	U.S. EQUIVALENT
626/630	SATIN CHROMIUM PLATED / SATIN STAINLESS STEEL	BRASS, BRONZE / STAINLESS STEEL	US26D
652	SATIN CHROMIUM PLATED	STEEL	US26D
689	ALUMINUM PAINTED	ANY	US28
695	DARK BRONZE PAINTED	ANY	(DARK BRONZE ALUMINUM HARD COAT)
643E	AGED BRONZE PLATED, BLACKENED, RELIEVED	ANY	(B-BRONE, F-STEEL)

CONTRACTOR (OR VENDOR) SHALL COORDINATE KEYING & FINISHES WITH OWNER (TENANT) BEFORE ORDERING

APPROVED MANUFACTURERS

THE SPECIFIED HARDWARE LISTED IN THE HARDWARE SETS IS THE FIRST MANUFACTURER LISTED BELOW.

HINGES, CONTINUOUS HINGES:	IVES / HAGER / SELECT HINGES
PIVOTS:	IVES, RIXSON
FLUSH BOLTS:	IVES / DCI / ROCKWOOD
EXIT DEVICES:	FALCON / PRECISION / DORMA / VON DUPRIN
EXIT DEVICES ALUM. DOORS:	ADAMS-RITE / FALCON / VON DUPRIN
LOCKS AND LATCHES:	SCHLAGE / FALCON
LOCKS AND LATCHES:	SCHLAGE / FALCON
PULLS, PLATE:	IVES / TRIMCO / HAGER
HARDWARE FULL GLASS:	CRL
HARDWARE DOUBLE ACTING:	ELIASON
CLOSERS:	LCN / FALCON / SARGENT
OVERHEAD STOPS:	TRIMCO / RIXSON / GLYNN-JO
TRACKS - BIFOLD / SLIDING:	BRIO / STANLEY / HAFELE / JOHNSON / SCHLAGE
WALL STOPS:	IVES / HAGER / TRIMCO
THRESHOLDS / SWEEPS / SEALS:	ZERO / NPG / REESE
GLASS:	GUARDIAN / VITRO
ALUMINUM:	ARCADIA
WOOD DOORS:	MARSHFIELD
INTERIOR FRAMES:	WESTERN INTEGRATED
HOLLOW METAL DOORS:	STEELCRAFT / CECO
HOLLOW METAL FRAMES:	STEELCRAFT / CECO
VISION PANELS & LOUVERS:	AIR LOUVERS / ADVANTAGE
COILING DOORS:	COOKSON / CORNELL
OVERHEAD DOORS:	CORNELL / CLOPAY

NOTE: SEE MECHANICAL, PLUMBING, FIRE PROTECTION, FIRE ALARM AND ELECTRICAL DRAWINGS FOR APPROVED FIXTURE AND EQUIPMENT TYPES.

ABBREVIATIONS: PER ARCHITECTURAL GRAPHIC STANDARDS

SUBMITTALS AND SHOP DRAWINGS

1. **ALL V.E. OR SUBSTITUTIONS WILL BE REJECTED BY THE ARCHITECT. NO EXCEPTIONS.**
2. SCHEDULE FORMAT TO BE CONSISTENT WITH RECOMMENDATIONS FOR VERTICAL FORMAT AS SET FORTH IN THE DOOR AND HARDWARE INSTITUTES (DHI) PUBLICATION 'SEQUENCE AND FORMAT FOR HARDWARE SCHEDULE'
3. HARDWARE SETS SHALL BE CONSOLIDATED TO GROUP MULTIPLE DOOR OPENINGS WHICH SHARE SIMILAR HARDWARE REQURIEMENTS.
4. SCHEDULE SHALL INCLUDE THE FOLLOWING INFORMATION:
   - A. DOOR NUMBER, LOCATION, SIZE, HANDING AND RATING
   - B. DOOR AND FRAME MATERIAL
   - C. DEGREE OF SWING
   - D. MANUFACTURER, PRODUCT DESCRIPTION AND CATALOG NUMBER, SIZE, STYLE AND FINISH

CAWLEY ARCHITECTS
730 N. 52nd St. Ste. 203
Phoenix, Arizona 85008
P 602.393.5060
CawleyArchitects.com

REGISTERED ARCHITECT CERTIFICATE NO. 35-[illegible] KEVIN LANCETT Signed 01.01.2024 ARIZONA, U.S.A. PRELIMINARY

COMMERCIAL BUILDING INNOVATIVE DRIVE

4121 W. INNOVATIVE DR.
PHOENIX, AZ 85086

DATE
75% PROGRESS SET
11-20-2024

DRAWN BY: BC

OWNERSHIP OF DOCUMENTS:
This drawing, including the architectural concept, design, and data, is an instrument of service and shall remain the property of Cawley Architects Inc. This drawing is for use at the location described herein and shall not be used in other locations. Any other use or release of these drawings may result in civil damages.

DISCREPANCIES AND CONFLICTS:
All discrepancies found in these documents or conflicts between these documents and field conditions shall be reported to Cawley Architects Inc. for resolution before the commencement of the work.

DOOR SCHEDULE

Project:22105

A4.1

APPROVED E.I.F.S. MANUFACTURER INFORMATION

MANUFACTURER: SENERGY AND DRYVIT

E.F.I.S. SYSTEM: SENERFLEX CLASSIC PB AND DRYVIT SYSTEMS CLASS PB

ICC REPORT #: ESR-1878 AND ESR 3295

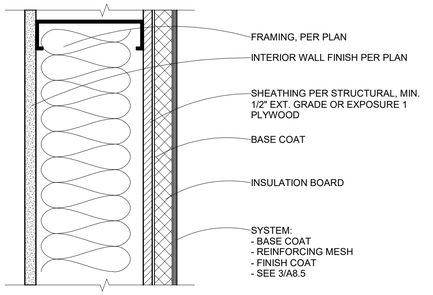
COLOR: AS NOTED ON EXTERIOR ELEVATIONS. ACTUAL COLOR SAMPLES SUBMITTED TO AND APPROVED BY THE ARCHITECT PRIOR TO APPLICATION.

TEXTURE: FINE, U.N.O

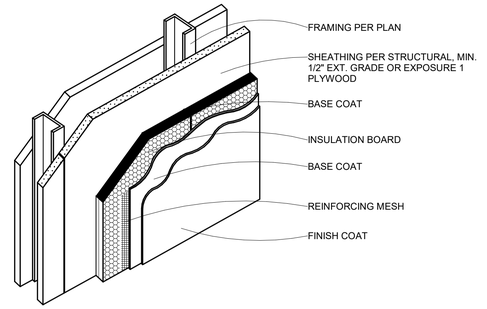
PER ESR-1794, IN JURISDICTIONS ENFORCING THE IBC CODE, ALL SENERFLEX SYSTEMS ARE SUBJECT TO SPECIAL INSPECTIONS, EXCEPT WHERE INSTALLATION IS OVER CONCRETE AND MASONRY SUBSTRATES.

ALTERNATE MANUFACTURERS REQUIRE ARCHITECT APPROVAL FOR ANY SUBSTITUTION. CONTRACTOR TO PROVIDE DATA THAT THE ALTERNATE SYSTEM EQUALS OR EXCEEDS THIS SYSTEM.

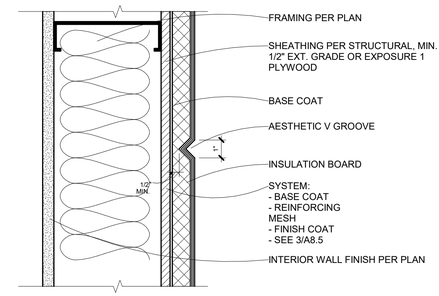
1 E.I.F.S. SPECIFICATION
SCALE: 3" = 1'-0"



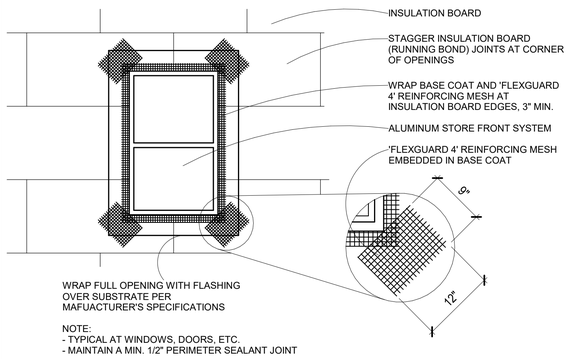
2 PLAN VIEW APPLICATION
SCALE: 3" = 1'-0"



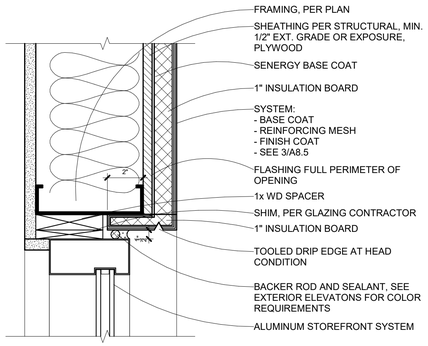
3 ISOMETRIC VIEW APPLICATION
SCALE: 3" = 1'-0"



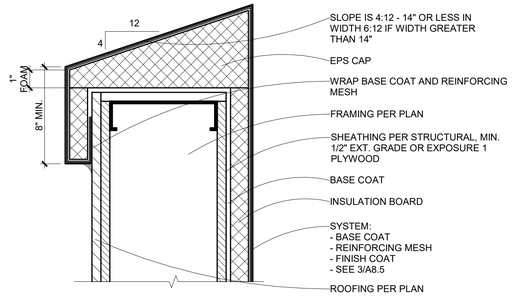
4 TYPICAL AESTHETIC GROOVE (PLAN VIEW)
SCALE: 3" = 1'-0"



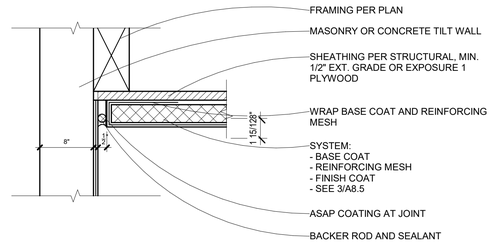
5 REINFORCING MESH AT OPENINGS
SCALE: **N.T.S.**



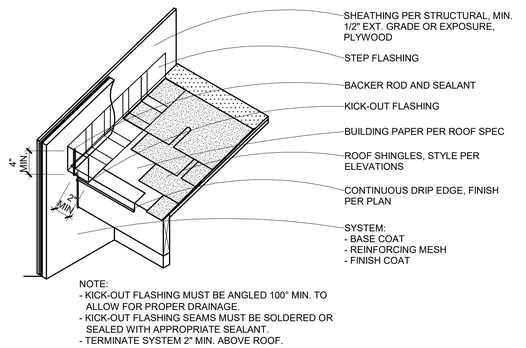
6 HEAD/JAMB AT ALUMINUM STOREFRONT
SCALE: 3" = 1'-0"



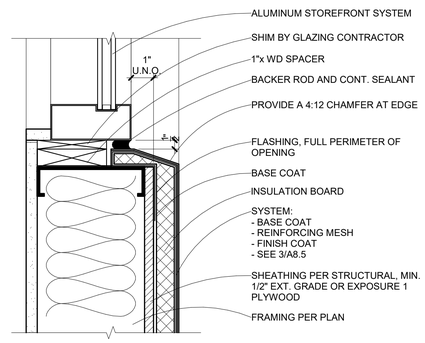
7 TYPICAL PARAPET
SCALE: 3" = 1'-0"



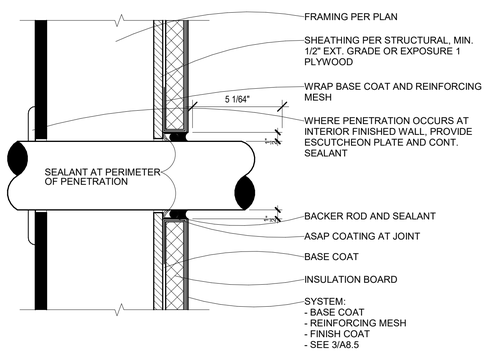
8 TYPICAL EXPANSION JOINT AT FRAMING TO CMU
SCALE: 3" = 1'-0"



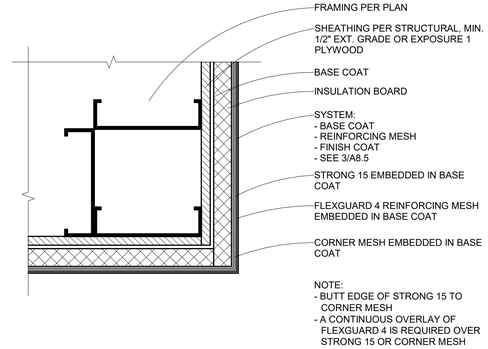
9 TYPICAL KICK OUT FLASHING
SCALE: N.T.S.



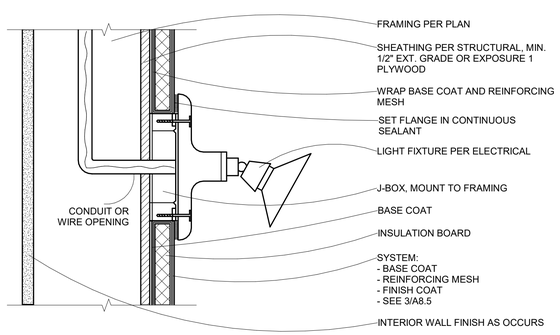
10 SILL AT ALUMINUM STOREFRONT
SCALE: 3" = 1'-0"



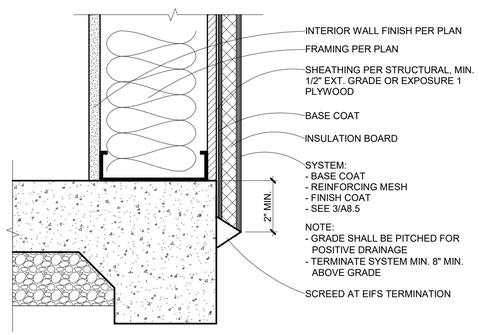
11 TYPICAL PIPE PENETRATION
SCALE: 3" = 1'-0"



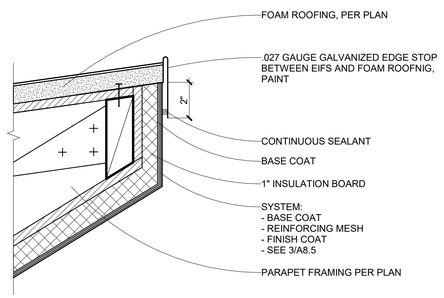
12 TYPICAL CORNER MESH APPLICATION
SCALE: 3" = 1'-0"



13 TYPICAL EIFS FINISH AT LIGHT FIXTURE
SCALE: **3" = 1'-0"**



14 REINFORCING MESH AT OPENINGS
SCALE: **3" = 1'-0"**



15 EIFS TERMINATION AT FRAMED PARAPET
SCALE: 3" = 1'-0"

CAWLEY ARCHITECTS

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CawleyArchitects.com

REGISTERED ARCHITECT
CERTIFICATE NO. 35
KEVIN J. LANCETT
Date signed 10.21.2024
ARIZONA, U.S.A.
PRELIMINARY

COMMERCIAL BUILDING INNOVATIVE DRIVE

4121 W. INNOVATIVE DR.
PHOENIX, AZ 85086

DATE

75% PROGRESS SET

11-20-2024

DRAWN BY: BC

OWNERSHIP OF DOCUMENTS:
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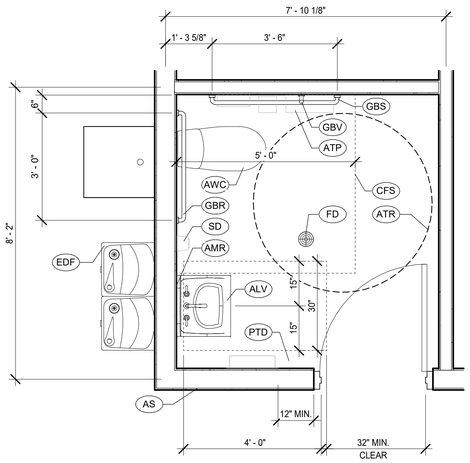
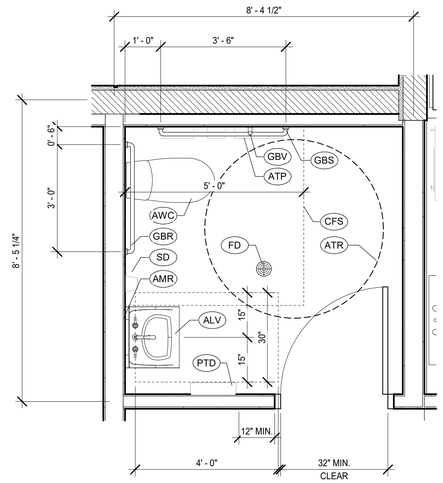
ARCHITECTUAL EIFS DETAILS

Project:22105

A8.3



1 ENLARGED RESTROOM 107
1/2" = 1'-0"



2 ENALRGED RESTROOM 105
1/2" = 1'-0"

TOILET FIXTURE AND ACCESSORIES KEY

- AMR — 24" X 36" X 1/4" PLATE MIRROR MOUNTED 40" A.F.F TO BOTTOM EDGE OF REFLECTING SURFACE
- AMS — ACCESSIBLE MEDICAL SHELF 5" A 14" MIN. (FOLDING OR FIXED) OR COMBINED W/ ATP
- AS — ACCESSIBLE SIGNAGE - SEE DETAIL ON SHEET A4.1
- ATR — ACCESSIBLE 60" TURNING RADIUS
- AWC — ACCESSIBLE TOILET FIXTURE - TOP OF SEAT AT 17"-19" A.F.F 16"-18" FROM SIDEWALL
- CLV — COUNTER SET LAVATORY - AT LEAST 1 ACCESSIBLE BY WHEELCHAIR
- CWC — CLEARANCE AROUND A WATER CLOSET SHALL BE 60" MINIMUM MEASURED PERPENDICULAR FROM THE SIDE WALL AND 56" MINIMUM FROM THE REAR WALL
- CFS — CLEAR FLOOR SPACE AT LAVATORIES AND SINKS SHALL BE 30" MINIMUM X 48" MINIMUM
- EDF — HI-LO ELECTRIC DRINKING FOUNTIAN
- FD — FLOOR DRAIN
- GBR — 1 1/2" DIA. X 36" GRAB BAR MOUNTED HORIZONTALLY 33'-36" A.F.F MOUNT BAR 4"-6" FROM SIDE WALL OF TOILET
- GBS — 1 1/2" DIA. X 42" GRAB BAR MOUNTED HORIZONTALLY 36" A.F.F. MOUNT BAR 12" MAX. FROM REAR WALL
- GBV — 1 1/2" DIA. X 18" GRAB BAR MOUNTED VERTICALLY 40" A.F.F., 40" FROM BACK WALL
- PTD — COMBO UNIT PAPER TOWEL DISPENSER & RECEPTANCE (C-FOLD)
- SD — SOAP DISPENSER BY TENANT OR OWNER
- SNR — SANITARY NAPKIN RECEPTACLE MOUNTED 15"-48" A.F.F
- TPD — TOILET PAPER DISPENSER MOUNTED AT 19" A.F.F. AND 30" FROM BACK WALL

CAWLEY ARCHITECTS
730 N. 52nd St. Ste. 203
Phoenix, Arizona 85008
P 602.393.5060
CawleyArchitects.com

REGISTERED ARCHITECT
CERTIFICATE NO. 35
KEVIN J. LANCETT
Signed 01/01/2024
ARIZONA, U.S.A.
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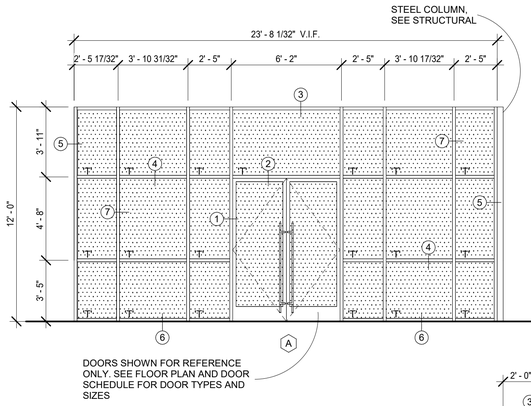
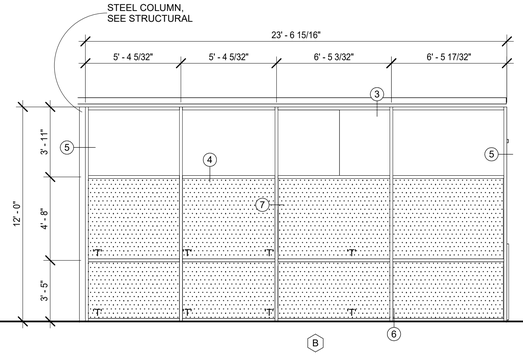
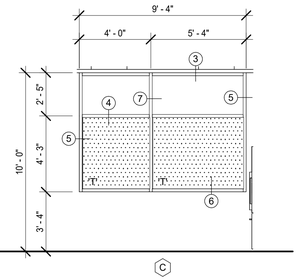
ENLARGED ADA TOILET ROOM PLANS

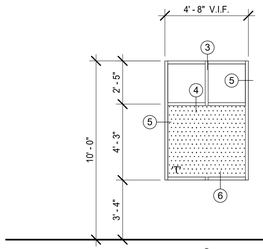
Project:22105

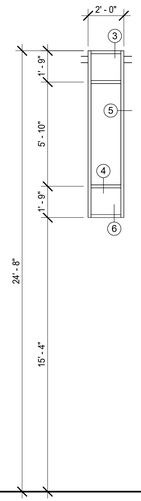
A4.2

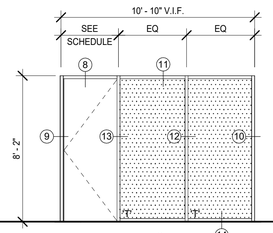


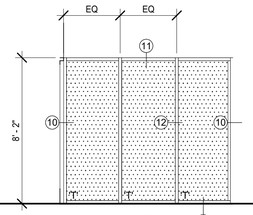








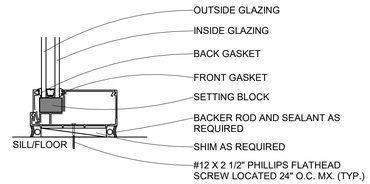




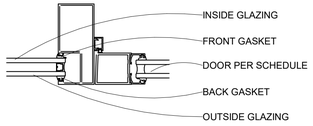
WINDOW ELEVATIONS

1. INTERIOR GLAZING AT BUTT GLAZED SYSTEMS TO BE A MIN, OF 1/2" TEMPERED CLEAR GLAZING. COLOR MATCH INTERIOR DOOR FRAMES UNLESS NOTED OTHERWISE.
2. INTERIOR GLAZING AT TIMELY FRAMES TO BE 1/4" CLEAR GLAZING. COLOR MATCH INTERIOR DOOR FRAMES UNLESS NOTED OTHERWISE.
3. SEE EXTERIOR ELEVATIONS FOR GLAZING AND FRAME TYPES

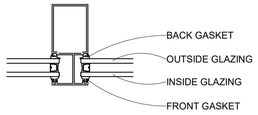
DENOTES TEMPERING AT GLASS PER IBC 2406.4 HAZARDOUS LOCATIONS



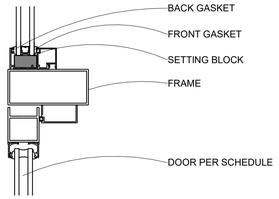
6 STOREFRONT GLAZING AT SILL
3" = 1'-0"



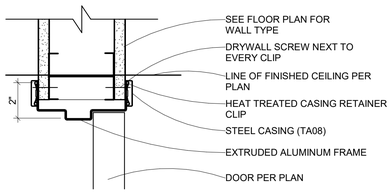
1 STOREFRONT DOOR AT JAMB
3" = 1'-0"



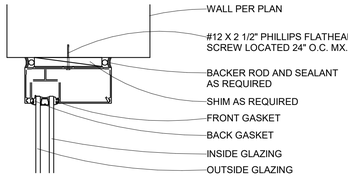
7 STOREFRONT GLAZING AT VERTICAL MULLION
3" = 1'-0"



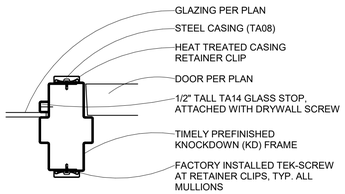
2 STOREFRONT DOOR AT TRANSOM
3" = 1'-0"



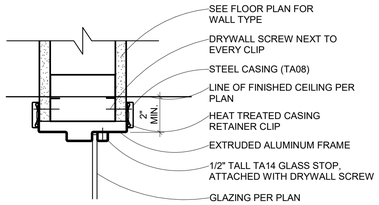
8 EXTRUDED ALUM. FRAME DOOR AT HEAD
3" = 1'-0"



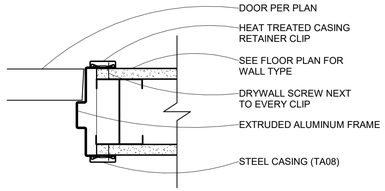
3 STOREFRONT GLAZING AT HEAD
3" = 1'-0"



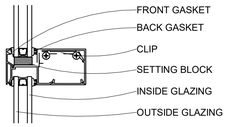
13 EXTRUDED ALUM. FRAME GLAZING/DOOR AT JAMB
3" = 1'-0"



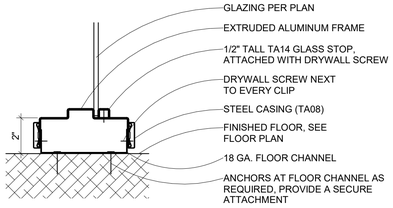
11 EXTRUDED ALUM. FRAME GLAZING AT HEAD
3" = 1'-0"



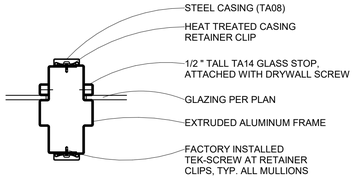
9 EXTRUDED ALUM. FRAME DOOR AT JAMB
3" = 1'-0"



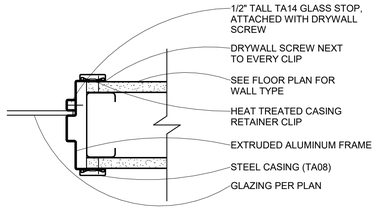
4 STOREFRONT AT HORIZONTAL MULLION
3" = 1'-0"



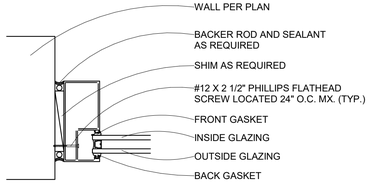
14 EXTRUDED ALUM. FRAME GLAZING SILL AT FLOOR
3" = 1'-0"



12 EXTRUDED ALUM. FRAME GLAZING AT MULLION
3" = 1'-0"



10 EXTRUDED ALUM. FRAME GLAZING AT JAMB
3" = 1'-0"



5 STOREFRONT GLAZING AT JAMB
3" = 1'-0"

CAWLEY ARCHITECTS
730 N. 52nd St. Ste. 203
Phoenix, Arizona 85008
P 602.393.5060
CawleyArchitects.com

REGISTERED ARCHITECT CERTIFICATE NUMBER 35[illegible] KEVIN LANCETT DATE SIGNED 10/31/2024 ARIZONA, U.S.A. PRELIMINARY

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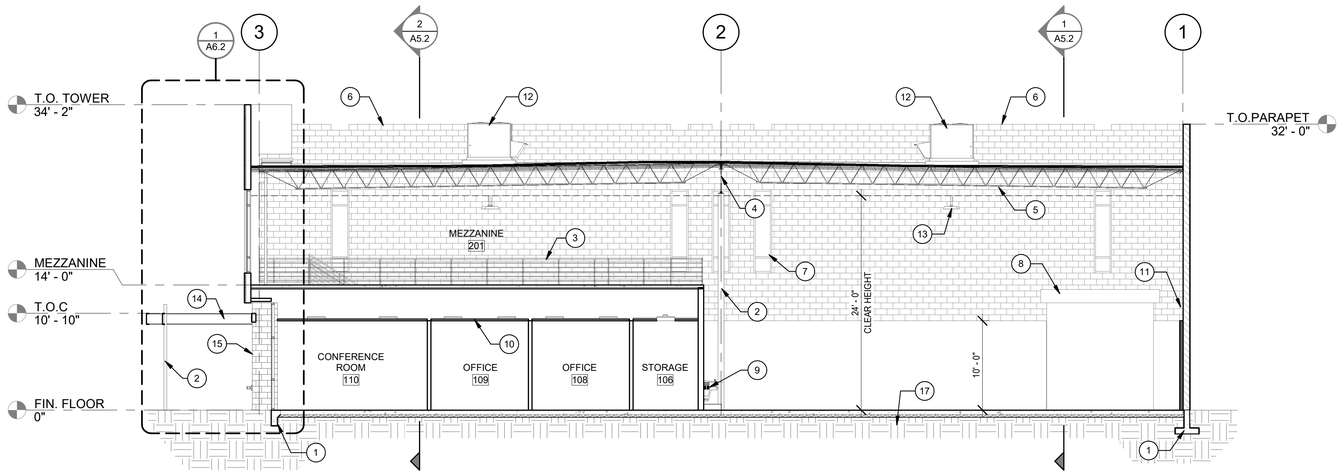
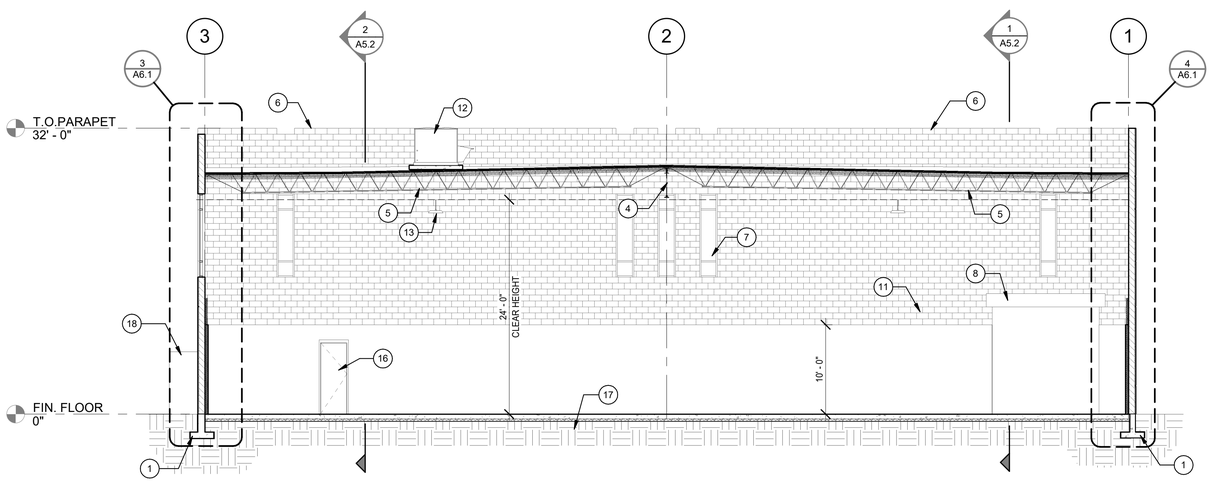
WINDOW ELEVATIONS AND DETAILS

Project:22105

A4.3



1 BUILDING SECTION
1/8" = 1'-0"



2 BUILDING SECTION
1/8" = 1'-0"

X BUILDING SECTION KEYNOTES

1. STRUCTURAL FOOTING, TYP. - SEE STRUCTURAL DRAWINGS
2. STEEL COLUMN, TYP. - SEE STRUCTURAL DRAWINGS
3. 42" HIGH GUARDRAIL - SEE WALL SECTION AND DETAIL SHEETS
4. STEEL JOIST GIRDER - SEE STRUCTURAL DRAWINGS
5. STEEL JOIST, TYP. - SEE STRUCTURAL DRAWINGS
6. LINE OF PARAPET BEYOND
7. CLERESTORY WINDOW SYSTEM - SEE WINDOW ELEVATIONS
8. COILING DOOR - SEE DOOR SCHEDULE
9. HI-LO ELECTRICAL WATER COOLER (E.W.C.) WITH 30"x48" CLEAR FLOOR SPACE
10. NEW CEILING TILE AND GRID
11. GYP. BD. OVER METAL FURRING AT EXTERIOR WALL, TYP.
12. ROOFTOP MECHANICAL UNIT - SEE MECHANICAL DRAWINGS
13. LIGHT FIXTURE - SEE ELECTRICAL
14. CANOPY FRAMING - SEE STRUCTURAL DRAWINGS
15. LINE OF WALL BEYOND
16. HOLLOW METAL DOOR, TYP.
17. CONCRETE SLAB OVER ABC FILL AND VAPOR BARRIER - SEE STRUCTURAL DRAWINGS
18. SERVICE ENTRANCE SECTION (S.E.S.) - SEE ELECTRICAL DRAWINGS

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CERTIFICATE NO. 35
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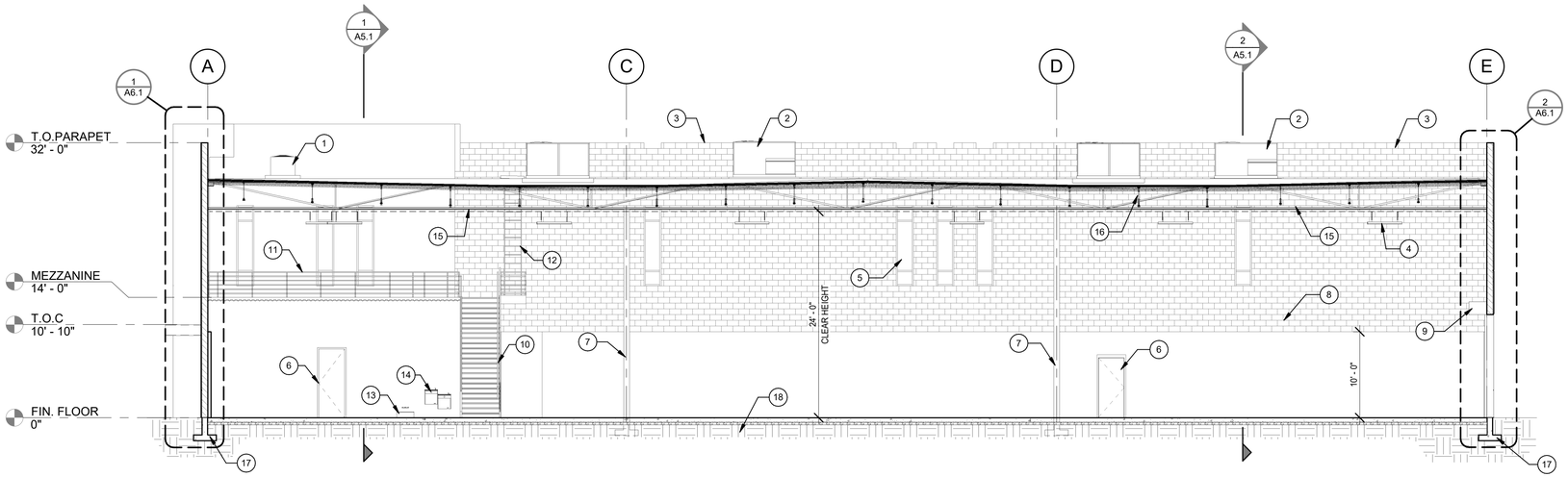
BUILDING SECTIONS

Project:22105

A5.1



1 BUILDING SECTION
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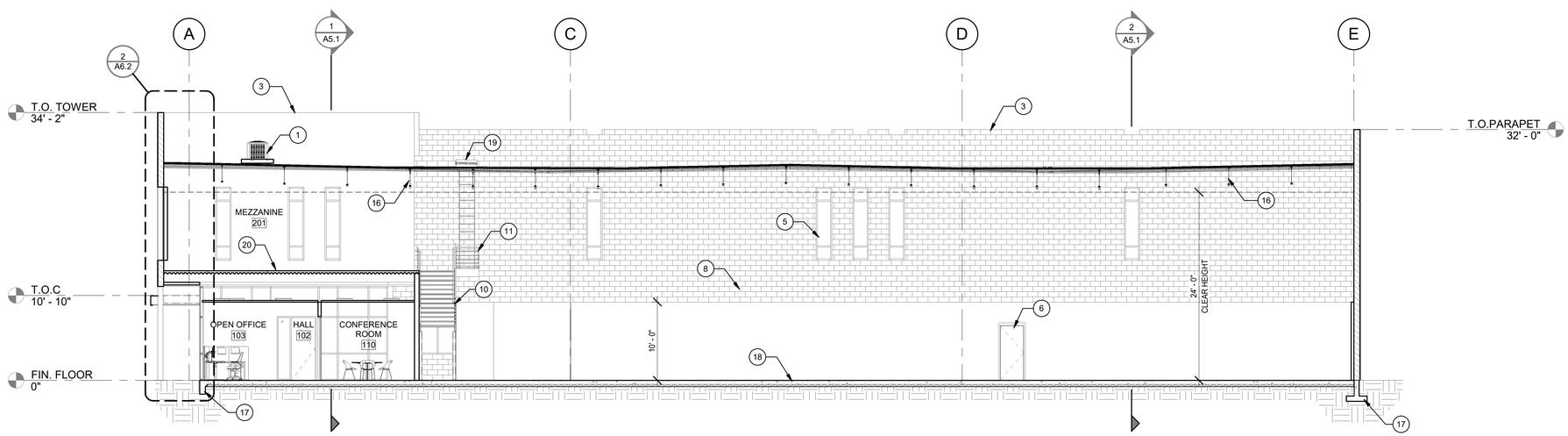

2 BUILDING SECTION
1/8" = 1'-0"

(X) BUILDING SECTION KEYNOTES

1. CONDENSING UNIT ON CURB - SEE MECHANICAL DRAWINGS
2. ROOFTOP MECHANICAL UNIT - SEE MECHANICAL DRAWINGS
3. LINE OF PARAPET BEYOND
4. LIGHT FIXTURE - SEE ELECTRICAL
5. CLERESTORY WINDOW SYSTEM - SEE WINDOW ELEVATIONS
6. HOLLOW METAL DOOR, TYP.
7. STEEL COLUMN, TYP. - SEE STRUCTURAL DRAWINGS
8. GYP. BD. OVER METAL FURRING AT EXTERIOR WALL, TYP.
9. COILING DOOR - SEE DOOR SCHEDULE
10. 42" HIGH GUARDRAIL WITH 36" HIGH HANDRAIL, PAINT - SEE STRUCTURAL DRAWINGS
11. 42" HIGH GUARDRAIL - SEE WALL SECTION AND DETAIL SHEETS
12. ROOF LADDER - SEE DETAIL SHEETS
13. MOP SINK - SEE PLUMBING DRAWINGS
14. HI-LO ELECTRICAL WATER COOLER (E.W.C.) WITH 30"x48" CLEAR FLOOR SPACE
15. STEEL JOIST GIRDER - SEE STRUCTURAL DRAWINGS
16. STEEL JOIST, TYP. - SEE STRUCTURAL DRAWINGS
17. STRUCTURAL FOOTING, TYP. - SEE STRUCTURAL DRAWINGS
18. CONCRETE SLAB OVER ABC FILL AND VAPOR BARRIER - SEE STRUCTURAL DRAWINGS
19. ROOF HATCH - SEE DETAIL SHEETS
20. CONCRETE SLAB OVER METAL DECK - SEE STRUCTURAL DRAWINGS

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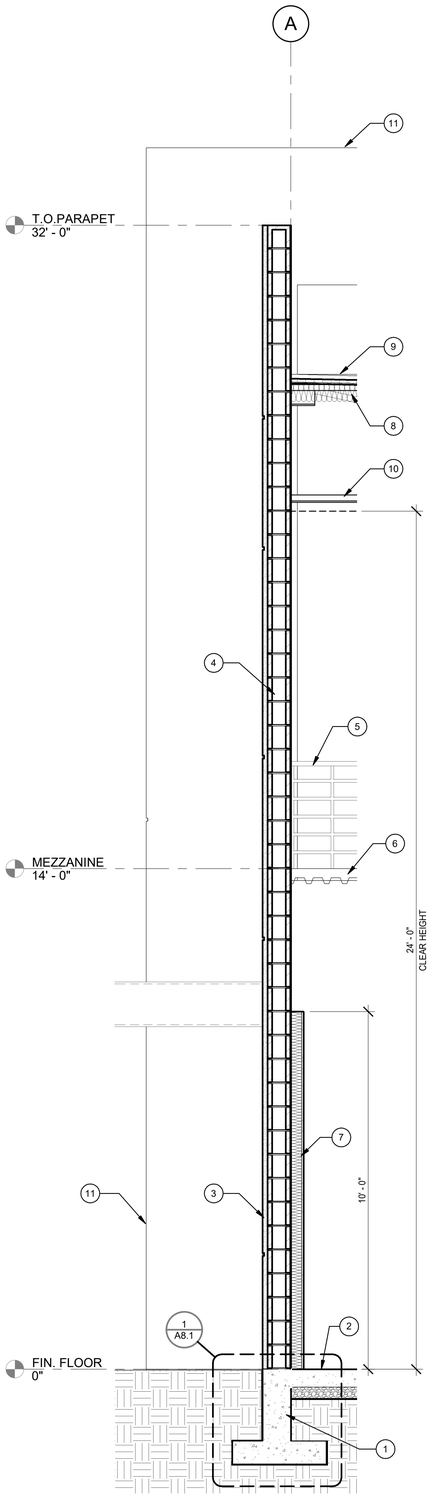
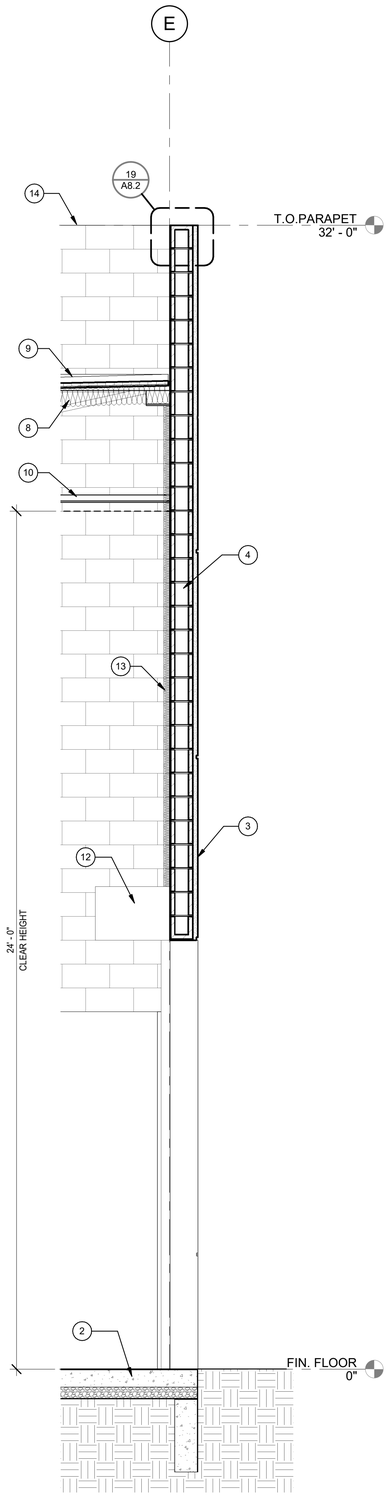
BUILDING SECTIONS

Project:22105

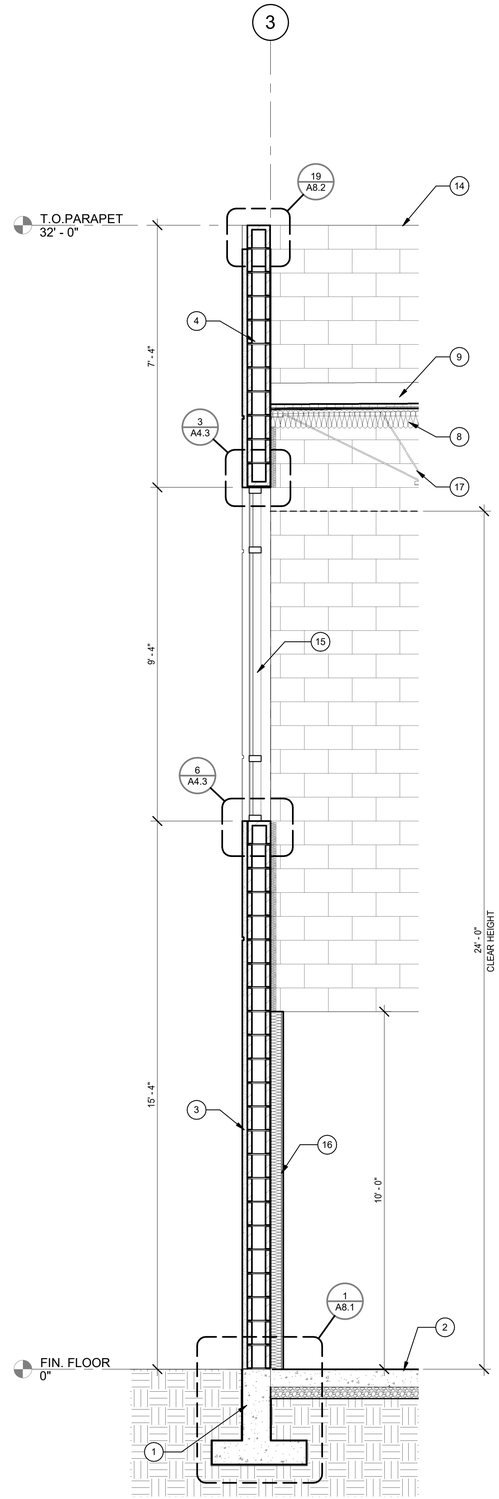
A5.2



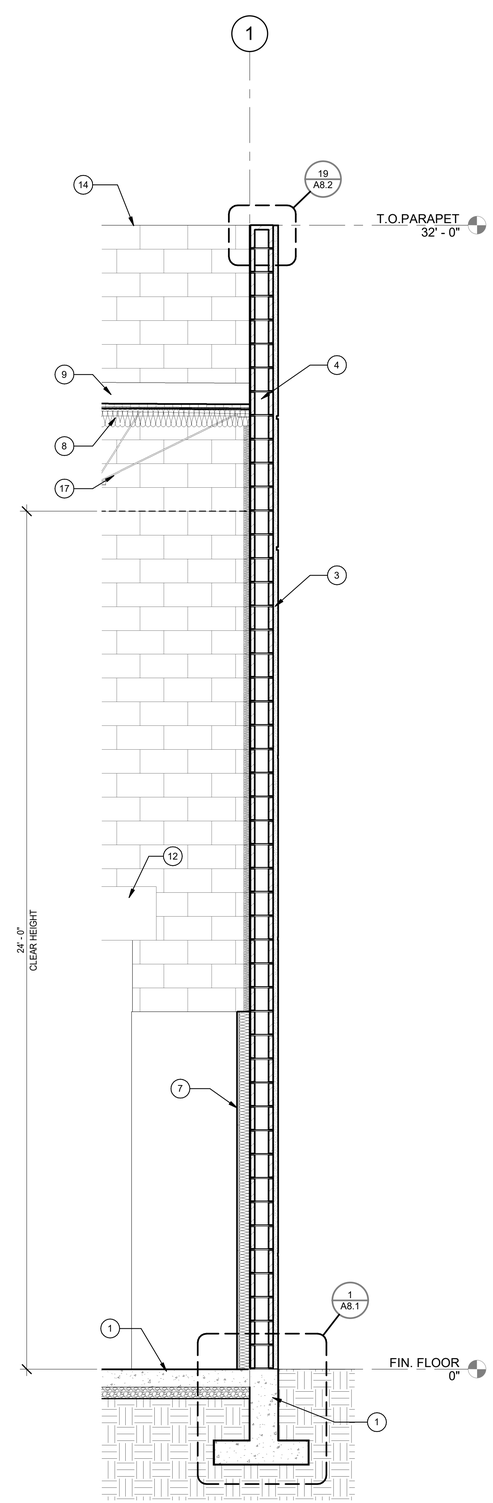
1 WALL SECTION
1/2" = 1'-0"



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



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



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

(X) WALL SECTION KEYNOTES

1. STRUCTURAL FOOTING, TYP. - SEE STRUCTURAL DRAWINGS
2. CONCRETE SLAB OVER ABC FILL AND VAPOR BARRIER - SEE STRUCTURAL DRAWINGS
3. EXTERIOR INSULATED FINISH SYSTEM (EIFS) OVER EXTERIOR MASONRY WALL, TYP.
4. MASONRY WALL PER PLAN
5. 42" HIGH GUARDRAIL - SEE WALL SECTION AND DETAIL SHEETS
6. CONCRETE SLAB OVER METAL DECK - SEE STRUCTURAL DRAWINGS
7. GYP. BD. OVER METAL FURRING AT EXTERIOR WALL, TYP.
8. THERMAL INSULATION AT ROOF DECK WITH WHITE SCRIM SHEETS - REFERENCE ENERGY CODE FOR R-VALUE
9. 45"MIL TPO ROOF ON 1.5' INSULATION BOARD OVER PLYWOOD SHEATHING WITH 20 YEAR WARRANTY
10. STEEL JOIST GIRDER - SEE STRUCTURAL DRAWINGS
11. LINE OF WALL BEYOND
12. COILING DOOR - SEE DOOR SCHEDULE
13. THERMAL INSULATION WITH SCRIM SHEETS, TYP. - REFERENCE ENERGY CODE FOR R-VALUE
14. LINE OF PARAPET BEYOND
15. CLERESTORY WINDOW SYSTEM - SEE WINDOW ELEVATIONS
16. GYP. BD. OVER METAL FRAMING, TYP.
17. STEEL JOIST, TYP. - SEE STRUCTURAL DRAWINGS

CAWLEY ARCHITECTS
730 N. 52nd St. Ste. 203
Phoenix, Arizona 85008
P 602.393.5060
CawleyArchitects.com

REGISTERED ARCHITECT
CERTIFICATE NO. 35431
KEVIN J. LANCETT
Date Signed 2/21/2024
ARIZONA, U.S.A.
PRELIMINARY

COMMERCIAL BUILDING INNOVATIVE DRIVE

4121 W. INNOVATIVE DR.
PHOENIX, AZ 85086

DATE
75% PROGRESS SET
11-20-2024

DRAWN BY: BC

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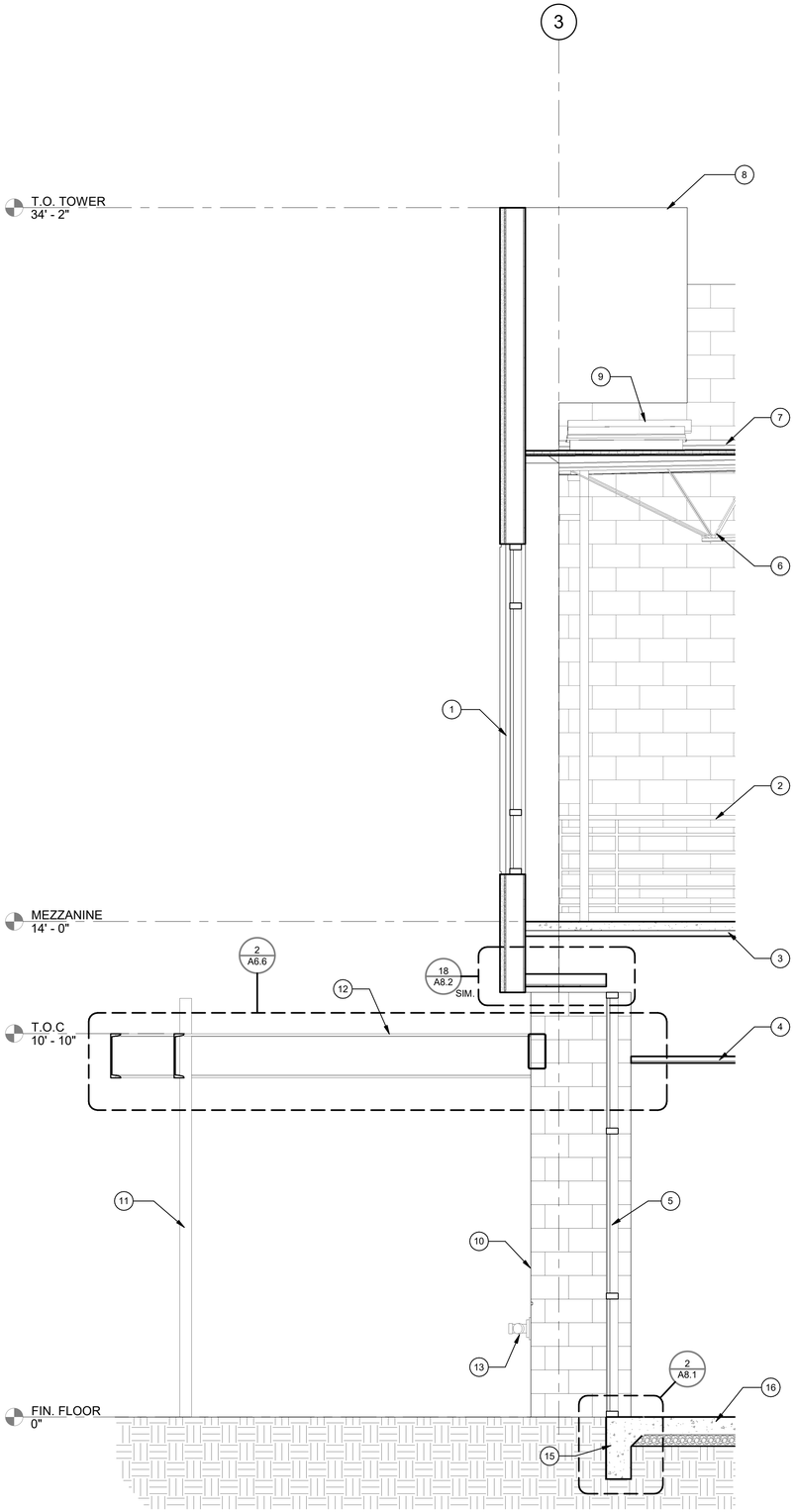
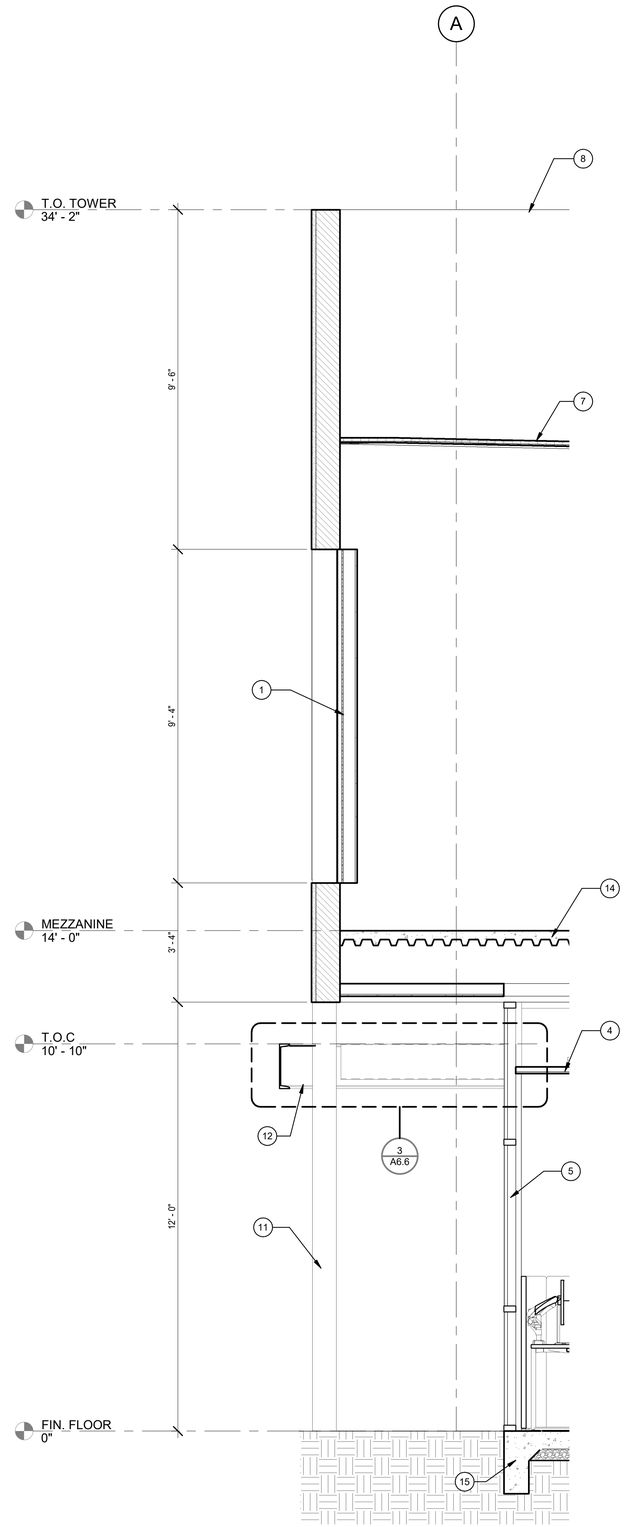
WALL SECTIONS

Project:22105

A6.1



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



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

X WALL SECTION KEYNOTES

1 CLERESTORY WINDOW SYSTEM - SEE WINDOW ELEVATIONS
2 42" HIGH GUARDRAIL - SEE WALL SECTION AND DETAIL SHEETS
3
4 NEW CEILING TILE AND GRID
5 ALUMINUM STOREFRONT SYSTEM - SEE EXTERIOR ELEVATIONS
6 STEEL JOIST, TYP. - SEE STRUCTURAL DRAWINGS
7 45'MIL TPO ROOF ON 1.5' INSULATION BOARD OVER PLYWOOD SHEATHING WITH 20 YEAR WARRANTY
8 LINE OF PARAPET BEYOND
9 ROOF HATCH - SEE DETAIL SHEETS
10 LINE OF WALL BEYOND
11 STEEL COLUMN, TYP. - SEE STRUCTURAL DRAWINGS
12 CANOPY FRAMING - SEE STRUCTURAL DRAWINGS
13 FIRE DEPARTMENT CONNECTION (F.D.C.) - SEE CIVIL DRAWINGS
14 CONCRETE SLAB OVER METAL DECK - SEE STRUCTURAL DRAWINGS
15 STRUCTURAL FOOTING, TYP. - SEE STRUCTURAL DRAWINGS
16 CONCRETE SLAB OVER ABC FILL AND VAPOR BARRIER - SEE STRUCTURAL DRAWINGS

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REGISTERED ARCHITECT
CERTIFICATE NO. 35
KEVIN M. LANCETT
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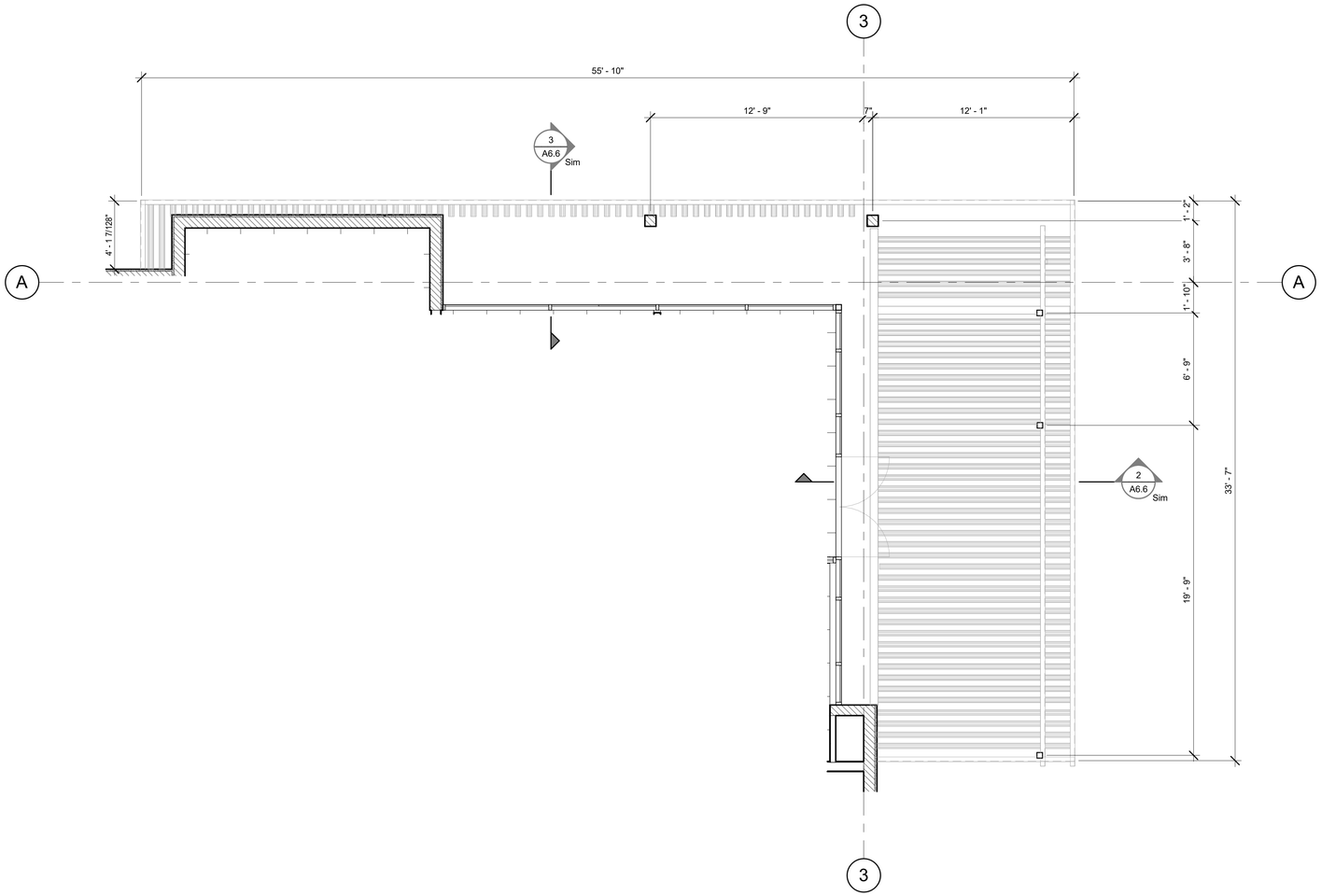
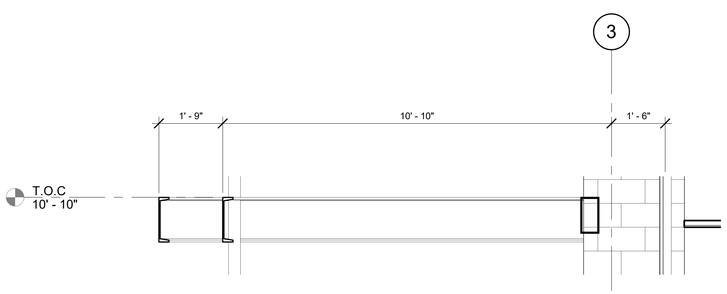
WALL SECTIONS

Project:22105

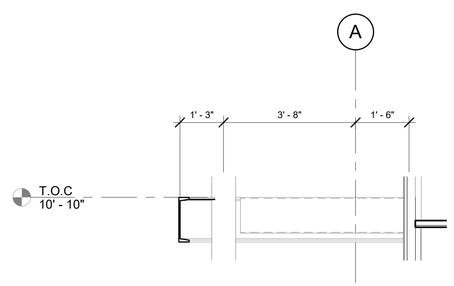
A6.2



1 CANOPY PLAN
1/4" = 1'-0"



2 CANOPY SECTION
1/2" = 1'-0"



3 CANOPY SECTION
1/2" = 1'-0"

X CANOPY PLAN KEYNOTES

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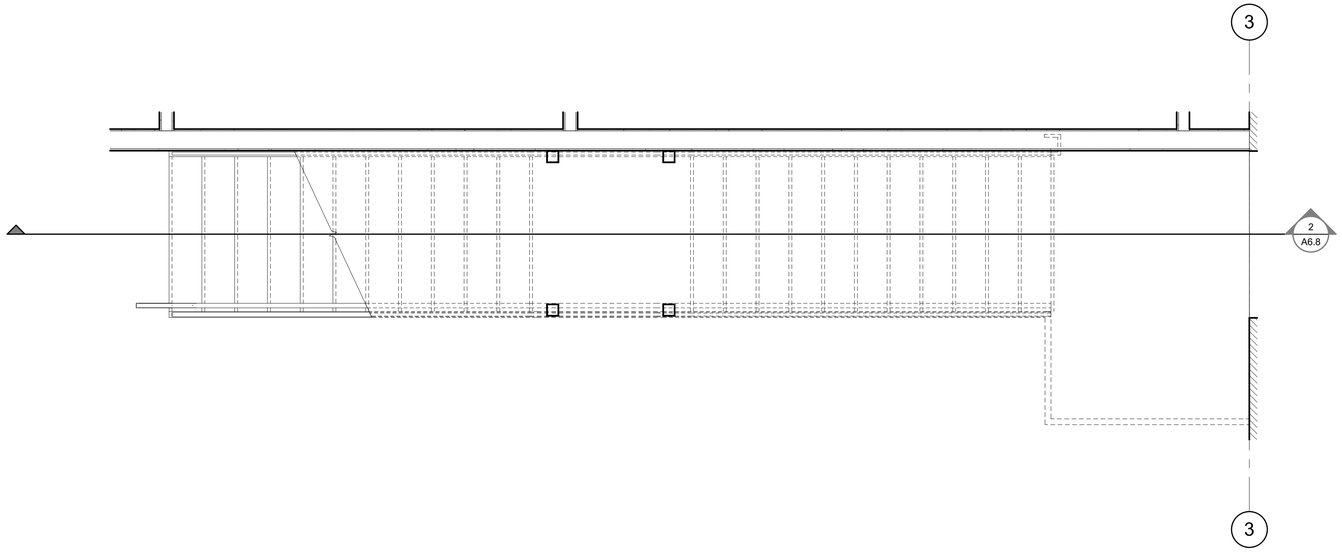
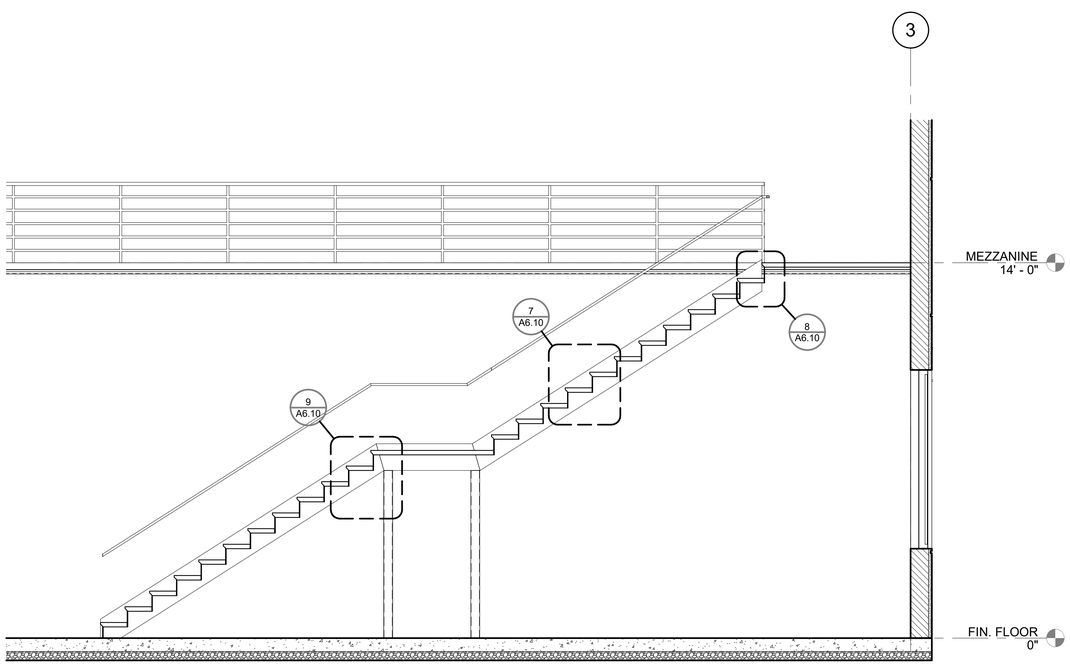
CANOPY PLANS AND SECTIONS

Project:22105

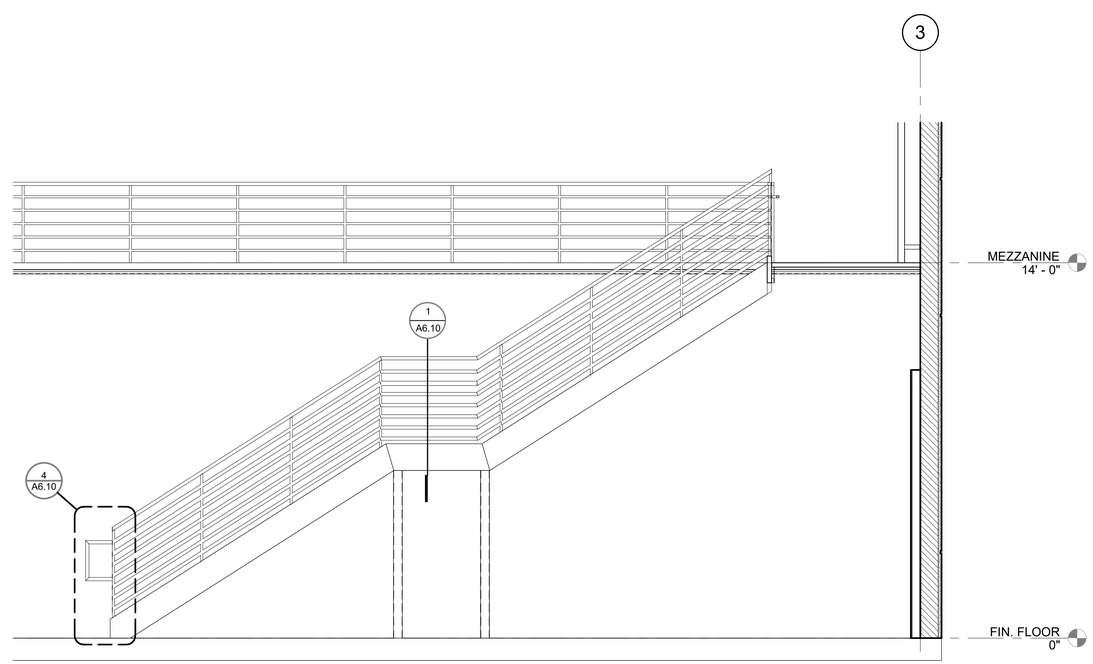
A6.6



1 MEZZANINE STAIR PLAN
1/2" = 1'-0"



2 MEZZANINE STAIR SECTION
3/8" = 1'-0"



3 MEZZANINE STAIR
3/8" = 1'-0"

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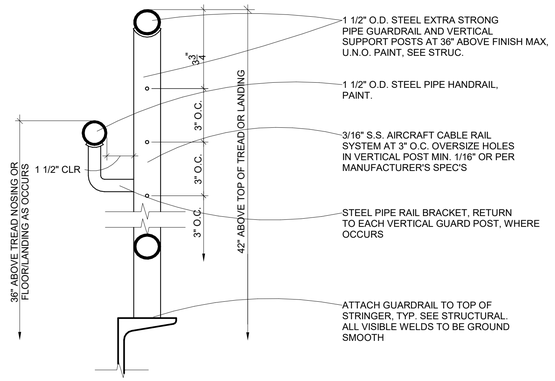
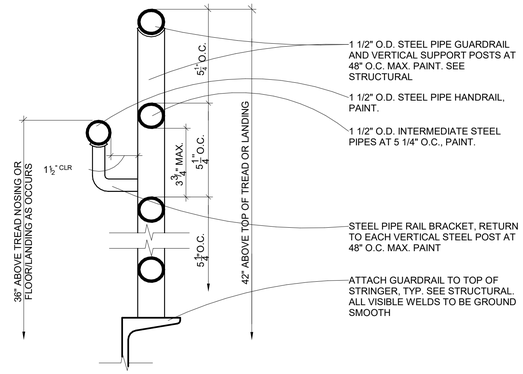
MEZZANINE STAIR PLAN AND SECTION

Project:22105

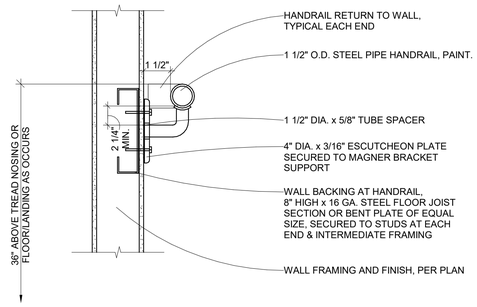
A6.8



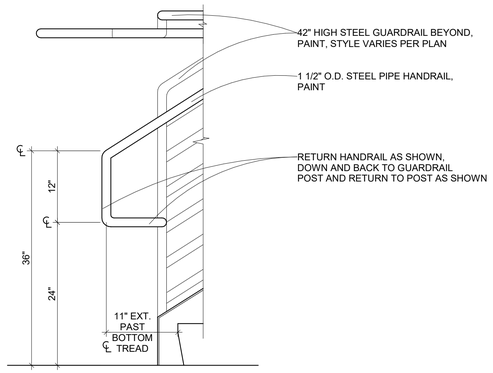
1 AIRCRAFT GUARDRAIL WITH HANDRAIL
3" = 1'-0"



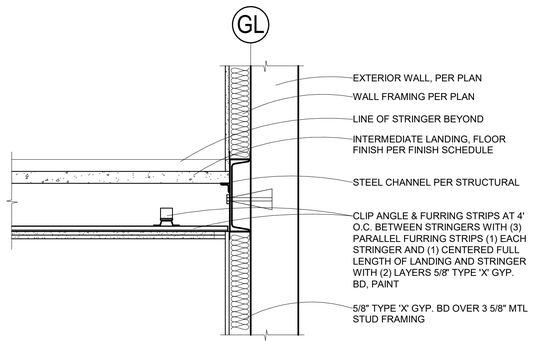
2 GUARDRAIL WITH HANDRAIL
3" = 1'-0"



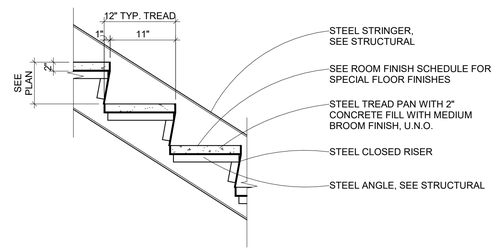
3 HANDRAIL AT WALL MOUNTING DETAIL
3" = 1'-0"



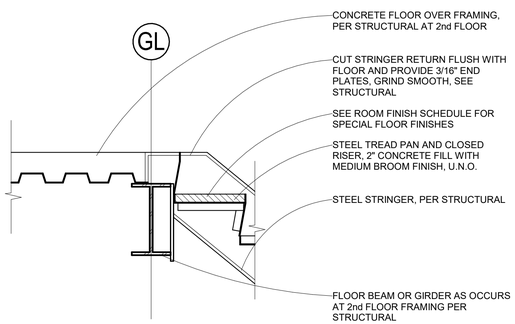
4 HANDRAIL RETURN AT STEEL GUARDRAIL
1" = 1'-0"



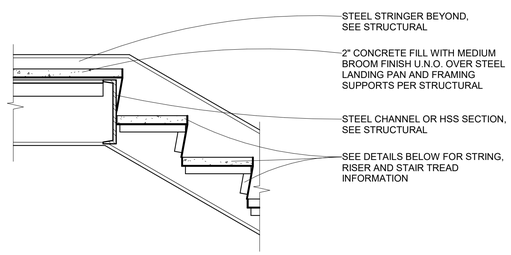
6 INTERMEDIATE LANDING AT EXTERIOR WALL
1" = 1'-0"



7 RISER AND STAIR TREAD
1" = 1'-0"



8 RISER AT FLOOR LANDING
1" = 1'-0"



9 RISER AT INTERMEDIATE LANDING
1" = 1'-0"

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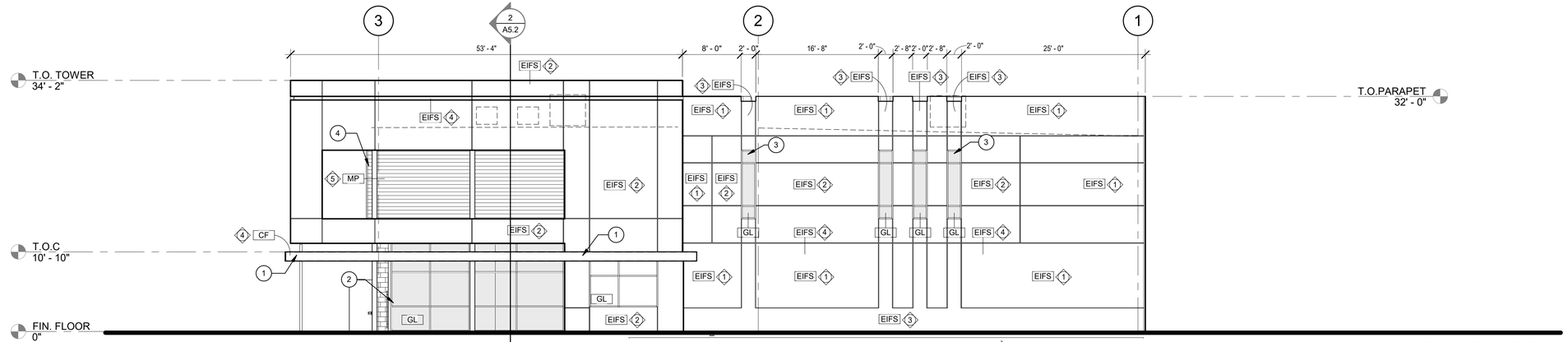
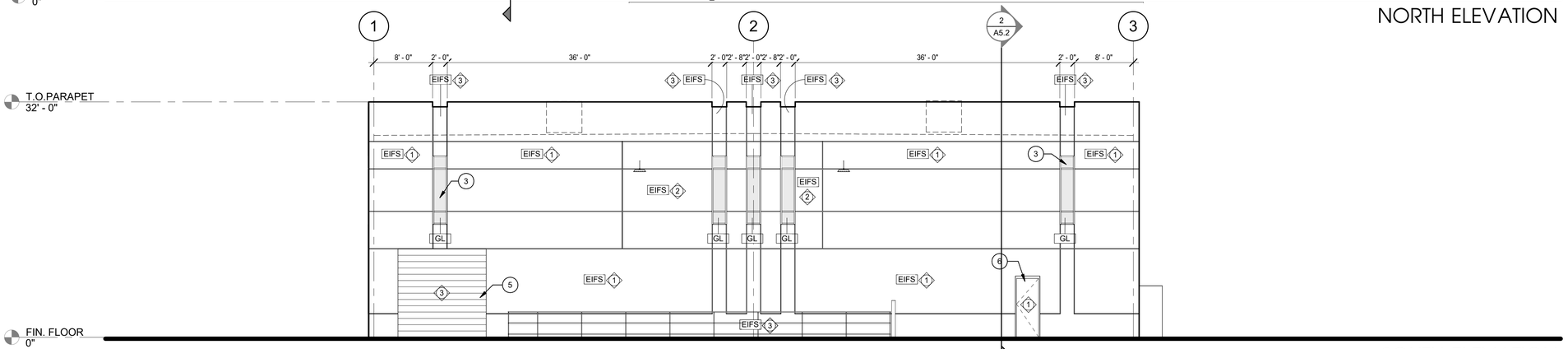
STANDARD STAIR DETAILS

Project:22105

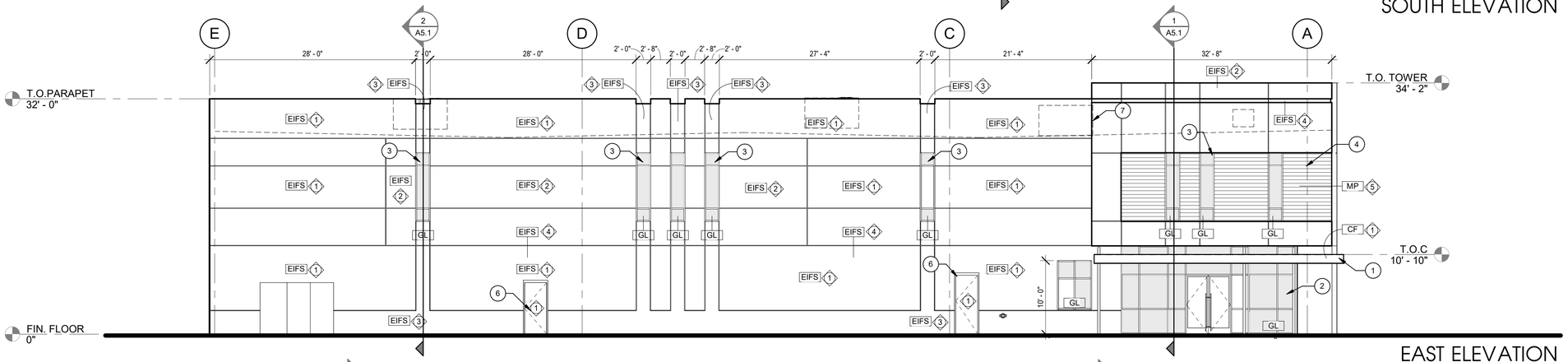
A6.10



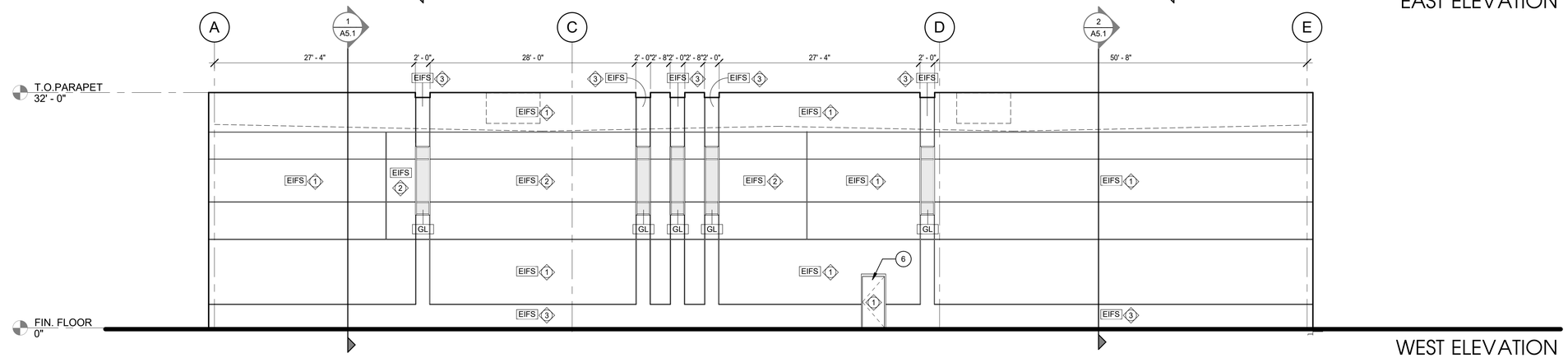
NORTH ELEVATION



SOUTH ELEVATION



EAST ELEVATION



WEST ELEVATION

GENERAL NOTES

1. ALL SIGNAGE UNDER SEPARTE PERMIT.
2. SEE STRUCTURAL FOR LINTEL INFORMATION.
3. SEE DOOR SCHEDULE FOR DOOR HEIGHTS.
4. SEE STRUCTUAL FOR CONTROL JOINTS.

MATERIAL SAMPLE APPROVAL

1. PRIOR TO ORDERING, G.C. TO PROVIDE INDIVIDUAL SAMPLES OF ALL BUILDING COLORS AND MATERIALS FOR REVIEW AND APPROVAL BY THE ARCHITECT AND OWNER. (ie. PAINTED CMU, ETC.)
2. ALL INDIVIDUAL SAMPLES TO BE PRESENTED AT ONE TIME, ONSITE IN SIZES OF NO LESS THAN 12" X 12".

MATERIAL KEY

MATERIAL	DESCRIPTION
EIFS	EXTERIOR INSULATED FINISH SYSTEM (SMOOTH)
CJ	E.I.F.S. CONTROL JOINT
CF	CANOPY FRAME = 12" STEEL CHANNEL, PAINTED
MP	PRE-FINISHED ATAS DSH120 PANEL

COLOR KEY

KEY	MANUF. - DUNN EDWARDS COLOR NAME:
1	'ENGLISH SCONE' DE6108
2	'GEORGIA CLAY' DE5181
3	'ANTIQUE ROSE' DEC702
4	'COOL DECEMBER' DEW383
5	'ATAS CLASSIC BRONZE'

KEY	MATERIAL	NOTE
1	HOLLOW METAL DOOR	

1. PROVIDE PRIMER AND FINISH COATS IN ACCORDANCE WITH SPECIFICATION SECTIONS 09 91 13 - EXTERIOR PAINTING, 09 91 23 - INTERIOR PAINTING.
2. SEALANTS FOR PROJECTS TO MATCH ADJACENT MATERIAL COLORS - NO WHITE OR OFF WHITE COLORS.
3. G.C. IS RESPONSIBLE FOR SUBMITTING ALL PRE-MANUFACTURED MATERIALS AND COLORS TO ARCHITECT FOR REVIEW AND APPROVAL.
4. G.C. TO OBTAIN APPROVAL FROM UTILITY COMPANY BEFORE PAINTING TRANSFORMER.

STOREFRONT/GLAZING KEY

MATERIAL		COLOR
FRAMES	F1	'CLEAR ANODIZED ALUMINUM
GLAZING	GL	GLAZING 1" INSULATED CLEAR REFLECTIVE

INSULATED GLAZING SYSTEM SPECIFICATION:

VITRO ARCHITECTURA GLASS OR EQUAL - 1" INSULATED GLAZING SYSTEM

U-FACTOR: 0.29
SOLAR HEAT GAIN COEFFICIENT (SHGC) : 0.17

OUTBOARD: 1/4" PPG SOLARCOOL GRAY (SRF #2)

AIRSPACE: 1/2" (AIR FILLED)

INBOARD: 1/4" PPG SOLARBAN 60 ON CLEAR (SRF #3)

1. 'S' AT WINDOW LOCATIONS INDICATES SPANDREL PANELS.
2. SEE WINDOW TYPES FOR LOCATIONS OF TEMPERED GLASS.

(X) ELEVATIONS KEYNOTES

1 STEEL CANOPY
2 CLEAR ANODIZED STOREFRONT WITH CLEAR REFLECTIVE GLASS, TYP.
3 CLERESTORY WINDOW SYSTEM - SEE WINDOW ELEVATIONS
4 METAL WALL PANEL SYSTEM WITH CONCEALED PANEL CLIPS
5 OVERHEAD ROLL-UP DOOR - SEE DOOR SCHEDULE
6 HOLLOW METAL DOOR, TYP.
7 FUTURE ROOFTOP MECHANICAL UNIT - SEE MECHANICAL DRAWINGS

EXTERIOR ELEVATIONS

1/8" = 1'-0"

0' 4' 8' 16'

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Date Signed 10-21-2024
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EXTERIOR ELEVATIONS

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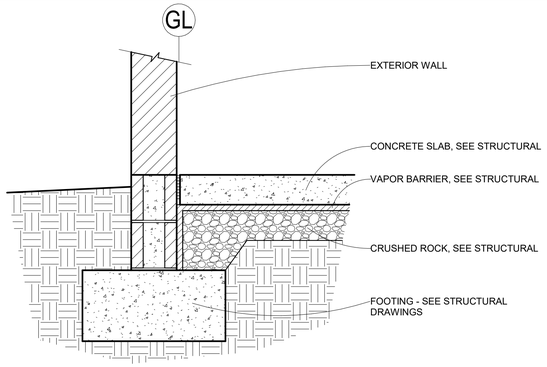
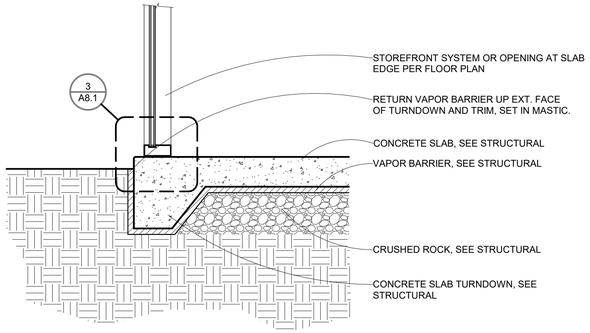
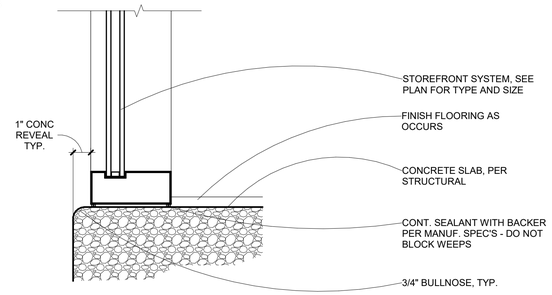
A7.1



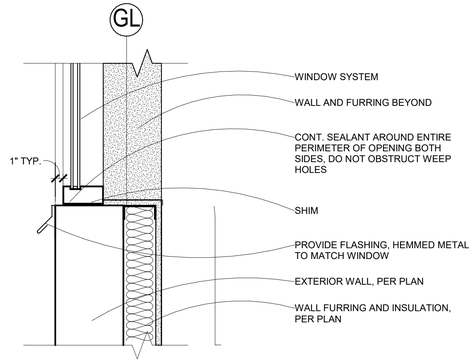
1 VAPOR BARRIER AT FOOTING/STEM WALL
1" = 1'-0"



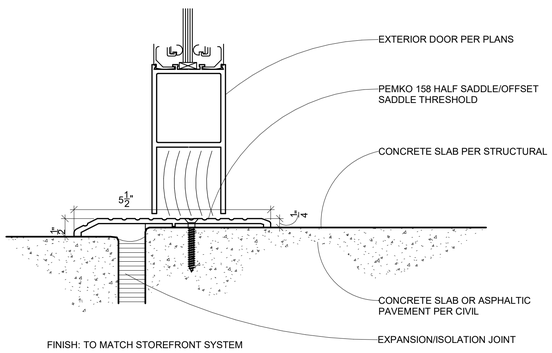
2 VAPOR BARRIER AT TURNDOWN
1" = 1'-0"



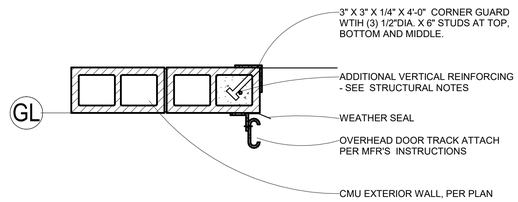
3 SILL AT TURNDOWN
3" = 1'-0"



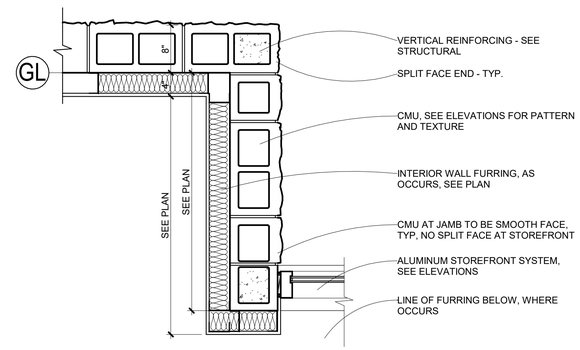
4 WINDOW SILL (SIM AT HEAD AND JAMB)
1 1/2" = 1'-0"



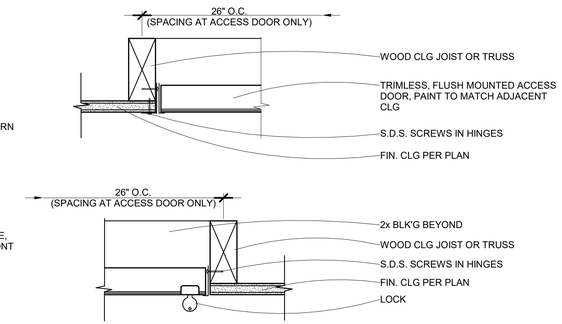
5 THRESHOLD
6" = 1'-0"



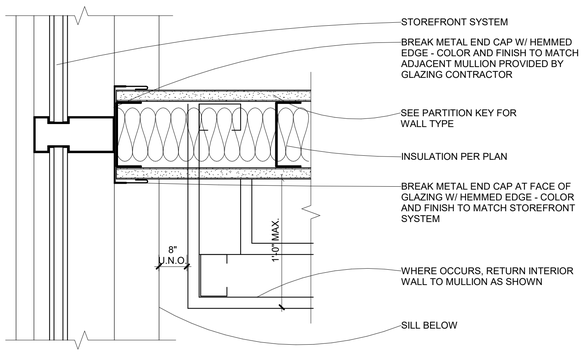
6 OVERHEAD DOOR JAMB
1" = 1'-0"



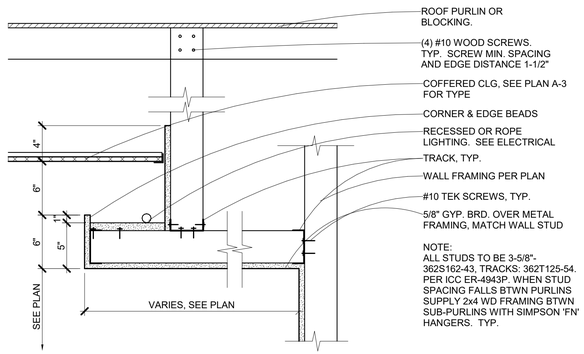
7 GLAZING AT CMU CORNER, TYP.
1" = 1'-0"



8 24" X 24" CEILING ACCESS DOOR
3" = 1'-0"

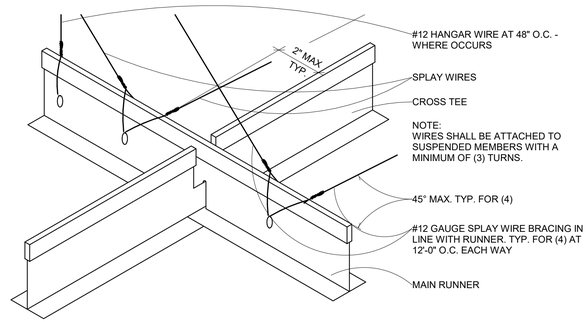


9 WALL TERMINATION AT STOREFRONT
3" = 1'-0"



NOTE:
ALL STUDS TO BE 3-5/8"-362S162-43, TRACKS: 362T125-54. PER ICC ER-4943P. WHEN STUD SPACING FALLS BTWN PURLINS SUPPLY 2x4 WD FRAMING BTWN SUB-PURLINS WITH SIMPSON 'FN' HANGERS. TYP.

10 COVE LIGHTING AT GYP. BD SOFFIT
1 1/2" = 1'-0"



11 4-WAY TEE BRACE
1" = 1'-0"

CAWLEY ARCHITECTS
730 N. 52nd St. Ste. 203
Phoenix, Arizona 85008
P 602.393.5060
CawleyArchitects.com

REGISTERED ARCHITECT CERTIFICATE NO. 35 KEVIN LANCETT Date Signed 2/21/2024 ARIZONA, U.S.A. PRELIMINARY

COMMERCIAL BUILDING INNOVATIVE DRIVE

4121 W. INNOVATIVE DR.
PHOENIX, AZ 85086

DATE
75% PROGRESS SET
11-20-2024

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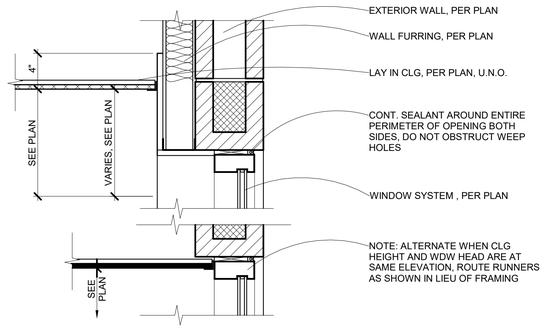
ARCHITECTURAL DETAILS

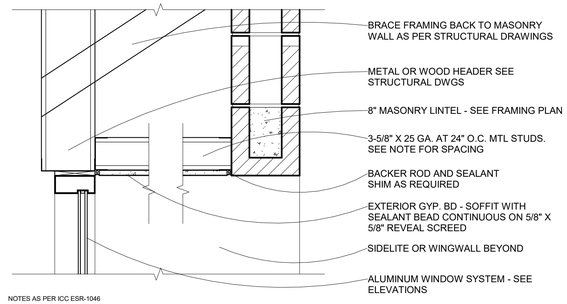
Project:22105

A8.1



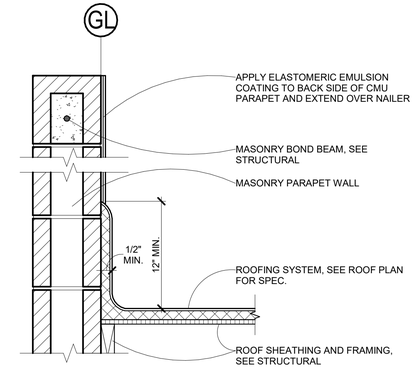
ALTERNATE WHEN CLG AND WDW HEAD ALIGN

17 CEILING TRANSITION AT GLAZING HEAD
1 1/2" = 1'-0"

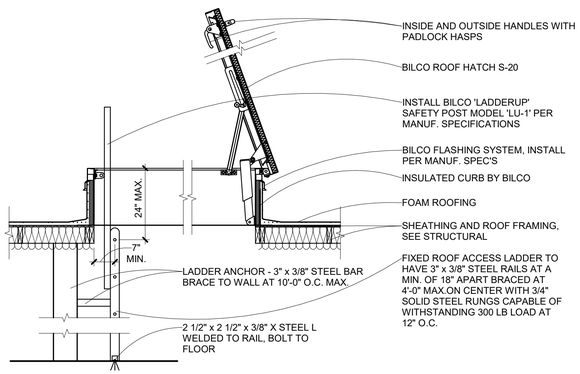


NOTES AS PER ICC ESR-1046
1. SPACING OF EXPANSION JOINTS SHALL NOT EXCEED 30'-0".
2. TEXTURE AND FINISH WITH (2) COATS OF EXTERIOR ACRYLIC BASE PAINT.

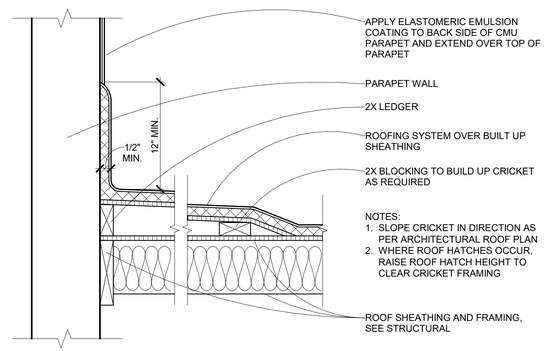
18 SOFFIT (ICC ESR-1046)
1 1/2" = 1'-0"



19 PARAPET
1 1/2" = 1'-0"



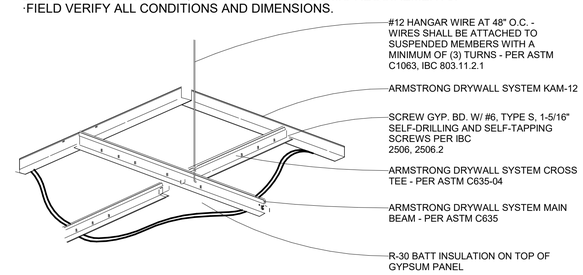
20 ROOF HATCH BILCO TYPE S-20
1/2" = 1'-0"



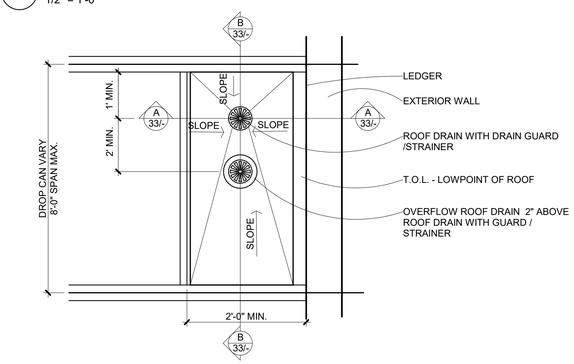
21 ROOF CRICKET
1 1/2" = 1'-0"

GENERAL NOTES FOR STANDARD CEILING SYSTEMS:

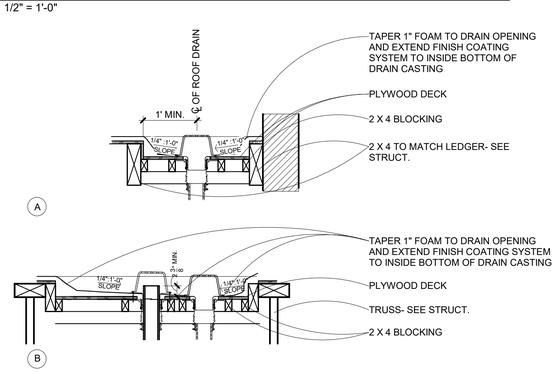
·INSTALL SCREW ATTACHED GYPSUM PANEL PER IBC 2506, 2506.2 IBC 803, PER ASTM E84, ASTM C635, ASTM C636, ICC ESR-1289, NFPA 286, AND PRODUCT INSTALLATION INSTRUCTIONS
·CONSULT YOUR LOCAL BUILDING CODE FOR ADDITIONAL REQUIREMENTS OUTSIDE OF THE ARMSTRONG INSTALLATION INSTRUCTIONS. THIS INCLUDES BUT IS NOT LIMITED TO BRACING OF TRANSITIONS, AND ADDITIONALSEISMIC REQUIREMENTS.
·FIELD VERIFY ALL CONDITIONS AND DIMENSIONS.



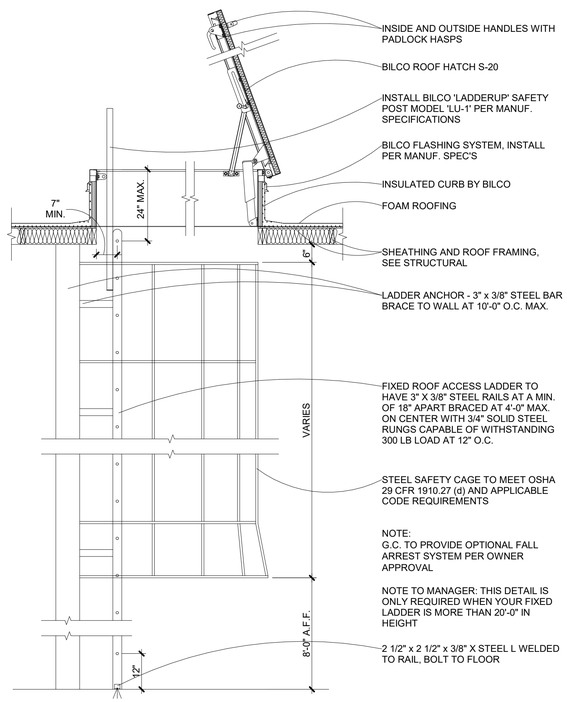
22 SUSPENSION SYSTEM FOR GYP.BD CEILING FULL SCALE



23 ROOF DRAIN
3/4" = 1'-0"



24 SECTION THROUGH ROOF DRAIN
3/4" = 1'-0"

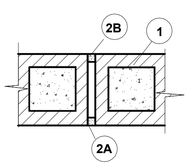


27 FIXED ROOF LADDER WITH CAGE
1/2" = 1'-0"

1. **Wall Assembly -- Min 7-1/2 in. thick UL Classified Concrete Blocks* or min 7-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.**
2. **Joint System -- Max width of joint is 1/2 in. The joint system shall consist of the following:**

A. Forming Material -- Nom 3/4 in. diameter polyethylene backer rod compressed and installed into joint. Packing material to be recessed from each surface of wall as required to accommodate the required thickness of fill material.

B. Fill, Void or Cavity Material* -- Min 1/4 in. thickness of fill material applied within the joint, flush with both surfaces of wall. 3M COMPANY -- FD 150+ *Bearing the UL Classification Mark

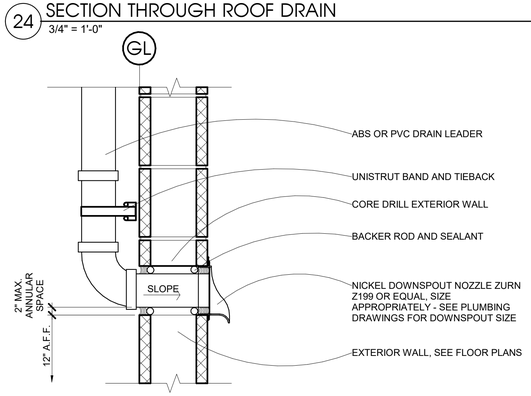


System No. WW-S-0034

August 03, 2001

Assembly Rating -- 1 Hr
L Rating At Ambient -- 4 CFM/Lin Ft
L Rating At 400 F -- 6 CFM/Lin Ft
Joint Width --1/2 in. Max

25 ONE HOUR CONSTRUCTION JOINT
1 1/2" = 1'-0"



26 ROOF DRAIN PENETRATION
1 1/2" = 1'-0"

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REGISTERED ARCHITECT CERTIFICATE NO. 35431 KEVIN LANCETT ARIZONA, U.S.A. Date Signed 11-21-2024
PRELIMINARY NOT FOR CONSTRUCTION

COMMERCIAL BUILDING INNOVATIVE DRIVE

4121 W. INNOVATIVE DR.
PHOENIX, AZ 85086

DATE
75% PROGRESS SET
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ARCHITECTURAL DETAILS

Project:22105

A8.2

ABBREVIATIONS

ABBREV1

NOTE: ABBREVIATIONS MAY OR MAY NOT HAVE PERIODS, BUT SHALL BE READ AS SAME.

A.B.	ANCHOR BOLT
A.B.C.	AGGREGATE BASE COURSE
ACI	AMERICAN CONCRETE INSTITUTE
A/C	AIR CONDITIONER
A.F.F.	ABOVE FINISHED FLOOR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION
ALT.	ALTERNATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APA	AMERICAN PLYWOOD ASSOCIATION
ARCH'L	ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
A.W.T.S.	AUTOMATIC WELDED THREADED STUDS
BM	BEAM
B.F.F	BELOW FINISHED FLOOR
BLK	BLOCK
B.O.B.	BOTTOM OF BEAM
B.O.D.	BOTTOM OF DECK
B.O.F.	BOTTOM OF FOOTING
BRG	BEARING
C	CAMBER
C.C.	CENTERLINE TO CENTERLINE
CFS	COLD FORMED STEEL
C.G.	CENTER OF GRAVITY
C.I.P.	CAST IN PLACE
C.L.	CENTERLINE
C.L.B.	CENTERLINE OF BEAM
C.L.C.	CENTERLINE OF COLUMN
C.L.F.	CENTERLINE OF FOOTING
C.L.W.	CENTERLINE OF WALL
CLR	CLEAR
CONC	CONCRETE
CONC C.J.	CONCRETE CONTROL JOINT
CONC S.J.	CONCRETE SAWCUT JOINT
C.M.U.	CONCRETE MASONRY UNIT
CONN	CONNECTION
CONT	CONTINUOUS
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
D.F. (D.F.L.)	DOUGLAS FIR LARCH
DL	DEAD LOAD
DIA	DIAMETER
DN	DOWN
DWG(S)	DRAWING(S)
E.C.	END TO CENTERLINE
E.E.	END TO END
E.O.S.	EDGE OF SLAB
EQ	EQUAL
EQUIP	EQUIPMENT
EXP. BOLT (E.B.)	EXPANSION BOLT
EXP. JT (E.J.)	EXPANSION JOINT
E.W.	EACH WAY
(E)	EXISTING
F.F.	FINISHED FLOOR
F.O.M.	FACE OF MEMBER
F.O.S.	FACE OF STEEL
F.O.W.	FACE OF WALL
GA	GAGE (UNIT OF MEASUREMENT)
GALV	GALVANIZED
G.S.N.	GENERAL STRUCTURAL NOTES
GLB (GLULAM)	GLUED-LAMINATED BEAM
H.F.	HEM FIR
HORIZ	HORIZONTAL REINFORCING
H.S.	HEADED STUDS
IBC	INTERNATIONAL BUILDING CODE
ICC	INTERNATIONAL CODE COUNCIL
ICF	INSULATED CONCRETE FORMS
I.F.W.	INSIDE FACE OF WALL
I.O.D.	INTERPRETATION OF DRAWINGS
JST	JOIST
K(KIP)	1000 POUNDS
KLF	KIPS PER LINEAR FOOT
LBS (#)	POUNDS
LGR	LEDGER
LGS	LIGHT GAGE STEEL
LGSEA	LIGHT GAGE STEEL ENGINEERS ASSOCIATION
L.O.D.	LOCATION OF DETAILS
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
MAS	MASONRY
MAS C.J.	MASONRY CONTROL JOINT
MAX	MAXIMUM
MBMA	METAL BUILDING MANUFACTURERS ASSOCIATION
MECH'L	MECHANICAL
MFR'D	MANUFACTURED
MFR('S)	MANUFACTURER('S)
MIN	MINIMUM
N/A	NOT APPLICABLE
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.F.W.	OUTSIDE FACE OF WALL
OPP	OPPOSITE
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PCI	PRECAST/PRESTRESSED CONCRETE INSTITUTE
P.C.	PRECAST CONCRETE
PCF	POUNDS PER CUBIC FOOT
PLF	POUNDS PER LINEAR FOOT
±	PLUS OR MINUS
PREFAB	PREFABRICATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POST-TENSIONED
PTI	POST-TENSIONING INSTITUTE
REINF	REINFORCING
SDI	STEEL DECK INSTITUTE
SLH	SHORT LEG HORIZONTAL
SLV	SHORT LEG VERTICAL
SJI	STEEL JOIST INSTITUTE
SIM	SIMILAR
SQ.	SQUARE
SSMA	STEEL STUD MANUFACTURERS ASSOCIATION
STD	STANDARD
STL	STEEL
TL	TOTAL LOAD
T.O.B.	TOP OF BEAM
T.O.C.T.	TOP OF CONCRETE TOPPING
T.O.D.	TOP OF DECK
T.O.F.	TOP OF FOOTING
T.O.L.	TOP OF LEDGER
T.O.M.	TOP OF MASONRY
T.O.P.	TOP OF PLATE
T.O.P.C.	TOP OF PRECAST CONCRETE
T.O.S.	TOP OF STEEL
T.O.W.	TOP OF WALL
TPI	TRUSS PLATE INSTITUTE
TYP	TYPICAL
T&G	TONGUE AND GROOVE
U.N.O.	UNLESS NOTED OTHERWISE
VERT	VERTICAL REINFORCING
WCLA	WEST COAST LUMBER ASSOCIATION
WCLIB	WEST COAST LUMBER INSPECTION BUREAU
W.W.F.	WELDED WIRE FABRIC
WWPA	WESTERN WOOD PRODUCTS ASSOCIATION
W/C	WATER TO CEMENT RATIO
W/O	WITHOUT

GENERAL STRUCTURAL NOTES

Applies unless noted otherwise on drawings

BUILDING CODE:

2018 EDITION OF THE INTERNATIONAL BUILDING CODE AND STANDARDS REFERENCED THEREIN, WITH CITY OF PHOENIX AMENDMENTS.

LOADS:

ROOFS:

ROOF LIVE LOAD = 20 PSF (REDUCIBLE).
ROOF DEAD LOAD TO PURLINS = 16 PSF.
ROOF DEAD LOAD TO GIRDERS = 17 PSF.
NET WIND UPLIFT = 10 PSF. (DESIGN BASED ON 0.6D – 0.6W)
STEEL ROOF JOISTS SHALL BE DESIGNED FOR A SUPERIMPOSED FUTURE MECHANICAL LOAD OF 700 LBS. AT ANY PANEL POINT.
STEEL ROOF JOIST GIRDERS SHALL BE DESIGNED FOR A SUPERIMPOSED FUTURE MECHANICAL LOAD OF 1,000 LBS. AT EACH PANEL POINT.
MECHANICAL LOADS SHOWN ON PLANS SHALL BE IN ADDITION TO THE REQUIREMENTS NOTED ABOVE.
MECHANICAL UNIT WEIGHTS SHOWN ON FRAMING PLANS HAVE BEEN INCREASED BY A FACTOR OF 1.2.

ROOF LOADS INCLUDE 1.5 PSF ALLOWANCE FOR FIRE SPRINKLER PIPE BRANCH LINES. DESIGNERS OF STRUCTURAL MEMBERS ENGINEERED BY OTHERS SHALL COORDINATE WITH CONTRACTOR THE WEIGHTS AND LOCATIONS OF ALL FIRE SPRINKLER BRANCH LINES GREATER THAN 3" DIA. THESE BRANCH LINES SHALL BE SHOWN ON SHOP DRAWINGS SUBMITTED FOR REVIEW.

FLOORS:

LIGHT FLOOR STORAGE LIVE LOAD = 125 PSF (NON-REDUCIBLE) (25% FOR SEISMIC).
FLOOR DEAD LOAD = 50 PSF.
STAIR LIVE LOAD = 100 PSF.

FLOOR LOADS INCLUDE 1.5 PSF ALLOWANCE FOR FIRE SPRINKLER PIPE BRANCH LINES. DESIGNERS OF STRUCTURAL MEMBERS ENGINEERED BY OTHERS SHALL COORDINATE WITH CONTRACTOR THE WEIGHTS AND LOCATIONS OF ALL FIRE SPRINKLER BRANCH LINES GREATER THAN 3" DIA. THESE BRANCH LINES SHALL BE SHOWN ON SHOP DRAWINGS SUBMITTED FOR REVIEW.

LATERAL:

WIND:

BASIC DESIGN WIND SPEED (3-SECOND GUST), V(ult) = 101 MPH.
RISK CATEGORY, II.
EXPOSURE C.

SEISMIC:

RISK CATEGORY, II.
SEISMIC IMPORTANCE FACTOR, I = 1.0.
MAPPED SHORT PERIOD SPECTRAL ACCELERATION, Ss = 0.256.
MAPPED ONE SECOND SPECTRAL ACCELERATION, S1 = 0.081.
SOIL SITE CLASS, D.
DESIGN SHORT PERIOD SPECTRAL ACCELERATION, Sds = 0.273.
DESIGN ONE SECOND SPECTRAL ACCELERATION, Sd1 = 0.129.
SEISMIC DESIGN CATEGORY, B.
BASIC SEISMIC-FORCE-RESISTING SYSTEM = INTERMEDIATE REINFORCED MASONRY SHEAR WALLS AND STEEL SYSTEM NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE.
DESIGN BASE SHEAR = 9 k.
SEISMIC RESPONSE COEFFICIENT, Cs = 0.078.
RESPONSE MODIFICATION FACTOR (R) = 3.5. (INTERMEDIATE MASONRY SHEAR WALLS.)
RESPONSE MODIFICATION FACTOR (R) = 3.0. (STEEL SYSTEM NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE.)
ANALYSIS PROCEDURE USED = EQUIVALENT LATERAL FORCE PROCEDURE

FOR DEFLECTION/CAMBER CRITERIA OF STRUCTURAL MEMBERS ENGINEERED BY OTHERS, SEE SPECIFIC MEMBER'S SECTION BELOW.

FOUNDATIONS:

GEOTECHNICAL REPORT BY SPEEDIE AND ASSOCIATES; JOB NO. 241246SA.

SHALLOW SPREAD FOOTINGS SHALL BEAR ON A MINIMUM OF 1.5 FEET OF ENGINEERED FILL PLUS 8 INCHES PRE-COMPACTED SUBGRADE EXTENDING AT LEAST 5 FEET BEYOND THE FOOTING EDGES AS STATED IN GEOTECHNICAL REPORT. FOUNDATION DEPTH TO BE A MINIMUM OF 1.5 FT. FOUNDATION DEPTH REFERS TO MINIMUM DEPTH TO BOTTOM OF FOOTING BELOW LOWEST ADJACENT FINISHED EXTERIOR GRADE WITHIN 5 FEET OF THE STRUCTURE.
DESIGN SOIL BEARING VALUE = 2,500 PSF. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION PRIOR TO COMMENCEMENT OF EARTHWORK. GEOTECHNICAL ENGINEER SHALL INSPECT FOUNDATION EXCAVATIONS PRIOR TO PLACEMENT OF CONCRETE.

CONCRETE:

SPECIFIED 28 DAY COMPRESSIVE STRENGTH F'c:

FOUNDATIONS (DESIGN BASED ON 2,500 PSI)---------- 3,000 PSI
EXTERIOR SLAB ON GRADE---------- 3,000 PSI
SLAB ON GRADE ---------- 3,500 PSI
TOPPING FOR STEEL DECK ----------3,000 PSI

GENERAL:

ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE REFERENCED EDITION OF THE ACI STANDARDS. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED UNLESS NOTED OTHERWISE. ADMIXTURES CONTAINING CHLORIDES SHALL NOT BE USED. NO OTHER ADMIXTURES PERMITTED WITHOUT APPROVAL. FOR CONCRETE WITHOUT PLASTICIZER, MAXIMUM SLUMP 4 1/2" AT POINT OF PLACEMENT U.N.O. IF PLASTICIZER IS USED, A HIGHER FINAL SLUMP MAY BE ALLOWED UPON STRUCTURAL ENGINEER'S APPROVAL.

FOR REINFORCING INFORMATION, SEE REINFORCING SECTION OF G.S.N., PLANS, SCHEDULES AND DETAILS.

UNLESS NOTED OTHERWISE ON THE DRAWINGS, THE EMBEDMENT OF CONDUITS, PIPES, SLEEVES, ETC. OF ANY MATERIAL SHALL NOT BE PERMITTED WITHIN ANY CONCRETE STRUCTURAL ELEMENT (IE: COLUMNS, BEAMS, ELEVATED SLABS, ETC.) OR STRUCTURAL CONCRETE TOPPINGS WITHOUT THE EXPRESSED APPROVAL OF THE STRUCTURAL ENGINEER.

FLY ASH – IF PERMITTED BY ARCHITECTURAL SPECIFICATIONS, SHALL BE LIMITED TO 25% OF TOTAL CEMENTITIOUS MATERIALS BY WEIGHT. FLY ASH SHALL BE INCLUDED IN THE CALCULATION OF W/C RATIOS SPECIFIED ABOVE. FLY ASH ADDITIVES SHALL NOT BE USED ON SLABS WITH A BURNISHED OR ACID FINISH.

TEST DATA FOR EACH CONCRETE MIX SHALL BE SUBMITTED FOR REVIEW PER CHAPTER 5 OF ACI 318. REFERENCE FIGURE R5.3 FOR SUBMITTAL REQUIREMENTS AND OPTIONS. CONCRETE MIX DESIGNS THAT ARE SUBMITTED WITHOUT THE APPROPRIATE TEST DATA CANNOT BE REVIEWED.

SLABS ON GRADE:

MAXIMUM SLUMP WITHOUT PLASTICIZER AT POINT OF PLACEMENT SHALL BE 5 INCHES. MIX DESIGN SHALL HAVE A MINIMUM AMOUNT OF CEMENTITIOUS MATERIALS (CEMENT PLUS FLY ASH), 540 POUNDS PER CUBIC YARD (FOR 3/4 INCH NOMINAL MAXIMUM AGGREGATE SIZE) PER ACI 302.1R-15, FIGURE 8.9.2.3). MIX DESIGNS SHALL TAKE CARE TO PROVIDE THE LARGEST POSSIBLE SIZE OF COARSE AGGREGATE WHILE MAINTAINING CONCRETE WORKABILITY. NOMINAL MAXIMUM AGGREGATE SIZE SHALL NOT BE LESS THAN 3/4 INCH NOR MORE THAN 1/3 THE DEPTH OF THE SLAB.

FOR SLABS ON GRADE, PROVIDE CONCRETE WITH AN ULTIMATE SHRINKAGE LESS THAN 0.05% AT 28 DAYS. LABORATORY TEST RESULTS SHALL BE SUBMITTED INDICATING THAT THE CONCRETE SLAB ON GRADE MIX DESIGN (OR COMPARABLE) MEETS THE ULTIMATE SHRINKAGE REQUIREMENTS. SHRINKAGE VALUES FOR CONCRETE SPECIMENS SHALL BE TESTED PER ASTM C157 AND THE PROCEDURES IN ACI 209R TO PREDICT THE ULTIMATE DRYING SHRINKAGE.

CONCRETE SHALL BE MIXED, PLACED, FINISHED AND CURED PER REFERENCED EDITION OF ACI 302.1 FOR THE APPROPRIATE FLOOR CLASS TYPE PER TABLE 2.1 AND CHAPTER 7 AND 8. CURING COMPOUND SHALL BE COMPATIBLE WITH ARCHITECTURAL FLOOR FINISH. SLABS SHALL BE PLACED ON A FLAT, SMOOTH, FIRM, COMPACTED SUBGRADE.

ALL REINFORCING SHALL BE CHAIRED OR POSITIONED USING REBAR SPACERS TO ENSURE PROPER CLEARANCES. ALL REINFORCING SHALL BE SECURED IN PLACE PRIOR TO CONCRETE PLACEMENT. SUPPORT OF SLAB ON GRADE REINFORCING SHALL BE SUPPORTED AND TIED FROM THE LOWER MAT OF REINFORCING SUCH THAT THE REINFORCING MAT'S DO NOT MOVE DURING CONCRETE PLACEMENT. SUPPORT OF SLAB ON GRADE REINFORCING MUST PROVIDE ISOLATION FROM MOISTURE/CORROSION BY USE OF A PLASTIC OR CONCRETE CHAIR. DUCT-TAPE COVERED REINFORCING IS NOT AN ACCEPTABLE CHAIR.

SLABS ON GRADE SHALL BE VIBRATED ONLY AT TRENCHES, FLOOR DUCTS, TURNDOWNS, ETC. CAST CLOSURE POUR AROUND COLUMNS AFTER COLUMN DEAD LOAD IS APPLIED. UNLESS APPROVED OTHERWISE IN WRITING BY THE ARCHITECT, ALL CONCRETE SLABS ON GRADE SHALL BE BOUND BY CONTROL JOINTS (CONSTRUCTION OR SAW CUT) PER TYPICAL DETAILS, AS SHOWN ON THE FOUNDATION PLAN, SUCH THAT THE ENCLOSED AREA DOES NOT EXCEED 150 SQUARE FEET. CONSTRUCTION CONTROL JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING POURING, ALL OTHER JOINTS MAY BE SAW CUT. SLAB REINFORCING, WHERE SHOWN, SHALL NOT EXTEND MORE THAN 125 FEET WITHOUT STOPPING THE REINFORCEMENT AT A CONTROL JOINT.

SLAB DOWELS WHERE SPECIFIED, SHALL CONSIST OF TAPERED PLATE DOWELS AT SAWCUT JOINTS AND PLATE DOUBLE DOWELS AT FORMED CONSTRUCTION JOINT. TAPERED PLATE DOWELS SHALL BE INSTALLED WITH PREMANUFACTURED DOWEL BASKETS AND DIAMOND PLATE DOWELS SHALL BE ATTACHED TO THE FORM WITH A PREFABRICATED SLEEVE. DOWELS, BASKETS, AND SLEEVES SHALL BE MANUFACTURED BY PNA CONSTRUCTION TECHNOLOGIES (PNA-INC.COM) OR APPROVED EQUAL.

JOINTS SHALL BE FILLED OR SEALED AS SPECIFIED IN ARCHITECTURAL SPECIFICATIONS. AT A MINIMUM, JOINTS IN SLABS SUBJECT TO SOLID RUBBER, HARD URETHANE, OR NYLON CASTERS OR STEEL WHEEL TRAFFIC SHALL BE FILLED WITH A SEMI-RIGID EPOXY OR POLYUREA CONSISTING OF 100 PERCENT SOLIDS AND A MINIMUM SHORE HARDNESS OF A-80 PER ASTM D2240. FILLER MATERIAL SHOULD BE INSTALLED THE FULL JOINT DEPTH, WITHOUT A BACKER ROD, AND FLUSH WITH THE FLOOR SURFACE VIA OVERFILLING THEN SHAVED FLAT. JOINT FILLING SHOULD BE DELAYED AS LONG AS POSSIBLE TO ACCOMMODATE THE MAXIMUM POSSIBLE SLAB SHRINKAGE.

VAPOR BARRIER, IF REQUIRED BY ARCHITECTURAL SPECIFICATION OR SOILS REPORT SHALL CONSIST OF A MINIMUM 15 MIL MATERIAL LAPPED A MINIMUM OF 6 INCHES AND TAPED PER MANUFACTURER RECOMMENDATIONS. ANY DAMAGE TO VAPOR BARRIER SHALL BE REPAIRED PRIOR TO CONCRETE PLACEMENT. THE FLOOR SLAB SHALL BE PLACED DIRECTLY ON THE VAPOR BARRIER. THE VAPOR BARRIER SHALL BE PLACED ON TOP OF A SMOOTH FOUR INCH LAYER OF COMPACTED AGGREGATE BASE COURSE. CARE SHALL BE TAKEN TO KEEP MOISTURE AWAY FROM THE COMPACTED SUBBASE. SAND IS NOT AN ALTERNATIVE FOR THE BASE COURSE. GENERAL CONTRACTOR SHALL PROVIDE A LOW SHRINKAGE CONCRETE MIX DESIGN TO MINIMIZE POTENTIAL SLAB CURL. SLABS PLACED DIRECTLY ON VAPOR BARRIERS SHALL BE REINFORCED, SEE FOUNDATION PLAN.

TOPPINGS:

ALL TOPPINGS OVER ELEVATED STRUCTURAL FRAMING SHALL BE NORMAL WEIGHT CONCRETE, U.N.O. AND BE BOUND BY CONTROL JOINTS (KEYED OR SAWCUT) PER TYPICAL DETAILS, SUCH THAT THE ENCLOSED AREA DOES NOT EXCEED 225 SQUARE FEET. WHERE TOPPINGS ARE OVER FRAMING ENGINEERED BY OTHERS, VERIFY LOCATION OF JOINTS WITH SAID MANUFACTURER. CONTRACTOR TO VERIFY, AND BE RESPONSIBLE FOR VARIATIONS IN CONCRETE QUANTITY DUE TO CAMBER, CONSTRUCTION DEAD LOAD DEFLECTIONS AND/OR TOLERANCES OF STRUCTURAL ELEMENTS (I.E. BEAMS, DECK, ETC.)

ALL REINFORCING SHALL BE CHAIRED OR POSITIONED USING REBAR SPACERS TO ENSURE PROPER CLEARANCES AND PLACEMENT WITHIN THE SLAB. ALL REINFORCING SHALL BE SECURED IN PLACE PRIOR TO CONCRETE PLACEMENT.

MASONRY:

GENERAL:

ALL MASONRY CONSTRUCTION SHALL BE PER THE REFERENCED ACI 530/530.1 AND TMS 402/602, BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES. CONCRETE MASONRY ASSEMBLY SHALL BE PLACED IN A RUNNING BOND PATTERN AND HAVE A NET COMPRESSIVE STRENGTH OF F'm = 2,000 PSI AND BE COMPRISED OF THE FOLLOWING COMPONENTS: NORMAL WEIGHT, GRADE N, HOLLOW CONCRETE MASONRY UNITS PER ASTM C90 WITH A NET COMPRESSIVE STRENGTH OF 2,000 PSI , MORTAR SHALL BE TYPE S PER ASTM C270 WITH A MINIMUM COMPRESSIVE STRENGTH OF 1,800 PSI, GROUT SHALL BE PER ASTM C476 WITH A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI. DETERMINATION OF COMPRESSIVE STRENGTH FOR EACH CONCRETE MASONRY ASSEMBLY SHALL BE PER THE UNIT STRENGTH METHOD OR THE PRISM TEST METHOD PER TMS 602. PRISM TESTING IS NOT REQUIRED IF THE UNIT STRENGTH METHOD IS USED.

MECHANICALLY VIBRATE GROUT IMMEDIATELY AFTER GROUTING AND AGAIN 5 TO 10 MINUTES LATER. PROVIDE CLEANOUTS IF GROUT LIFT EXCEEDS 5'-0" IN BLOCK WALLS. MAXIMUM GROUT LIFT SHALL BE 5'-0". WHEN APPROVED BY THE STRUCTURAL ENGINEER AND BUILDING OFFICIAL, GROUT LIFTS MAY BE GREATER THAN 5'-0" IF IT CAN BE DEMONSTRATED BY THE CONTRACTOR THAT THE GROUT SPACES CAN BE PROPERLY FILLED. FILL CELLS SOLIDLY WITH GROUT IN LIFTS AND STOP POURS 1 1/2" BELOW THE TOP OF A COURSE TO FORM A KEY AT POUR POINTS. UNLESS NOTED OTHERWISE ON THE PLANS, PLACE CONTROL JOINTS IN MASONRY WALLS SUCH THAT NO STRAIGHT RUNS OF WALL EXCEEDS 24'-0". CONTROL JOINTS SHALL NOT OCCUR AT WALL CORNERS, INTERSECTIONS, ENDS, WITHIN 24" OF CONCENTRATED POINTS OF BEARING OR JAMBS, OR OVER OPENINGS UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS. ALL MASONRY BELOW FINISHED FLOOR OR GRADE SHALL BE GROUTED SOLID.

VERTICAL REINFORCING:

1 #5 IN CENTER OF GROUT AT CENTER OF WALL, CONTINUOUS FULL HEIGHT OF WALL AT ALL CORNERS, INTERSECTIONS, WALL ENDS, BEAM BEARINGS, JAMBS, EACH SIDE OF CONTROL JOINTS AND AT INTERVALS NOT TO EXCEED 48" O.C. UNLESS NOTED OTHERWISE. TIE AT 8'-0" VERTICALLY, WITH SINGLE WIRE LOOP TIE BY A.A. WIRE PRODUCTS COMPANY. DOWEL VERTICAL REINFORCING TO FOUNDATION WITH DOWELS TO MATCH VERTICAL REINFORCING.

HORIZONTAL REINFORCING:

2 #5 IN MINIMUM 16" DEEP GROUTED CONTINUOUS BOND BEAM AT ELEVATED FRAMING ASSEMBLIES. 1 #5 IN MINIMUM 8" DEEP GROUTED CONTINUOUS BOND BEAM AT TOP OF PARAPETS AND FREESTANDING WALLS. PLACE THESE BARS CONTINUOUS THRU CONTROL JOINTS PER TYPICAL DETAIL. TO MAINTAIN BOND BEAM CONTINUITY, INSTALL BENT BARS PER TYPICAL DETAILS TO MATCH HORIZONTAL BOND BEAM REINFORCING AT CORNERS AND INTERSECTIONS. STANDARD WEIGHT (NO. 9 GAGE WIRE) HOHMANN AND BARNARD INC. OR EQUIVALENT LADDER MESH TYPE JOINT REINFORCEMENT AT 16" O.C. ALL JOINT REINFORCING SHALL BE EITHER HOT-DIPPED GALVANIZED OR STAINLESS STEEL. FOR INTERIOR WALLS ONLY – JOINT REINFORCING MAY BE MILL GALVANIZED AT CONTRACTORS OPTION.

LAP SPLICES:

LAP SPLICES FOR VERTICAL AND HORIZONTAL REINFORCING SHALL BE PER TYPICAL DETAIL. DO NOT SPLICE WITHIN 8'-0" OF CONTROL JOINTS. LAP HORIZONTAL LADDER TYPE JOINT REINFORCING 12" MINIMUM.

FOR ADDITIONAL REINFORCING INFORMATION, SEE REINFORCING SECTION OF G.S.N., PLANS, SCHEDULES AND DETAILS.

MISCELLANEOUS LINTELS:

UNLESS NOTED OTHERWISE OR SHOWN, PROVIDE THE FOLLOWING LINTELS IN 8" MASONRY WALLS. USE THESE LINTEL ANGLES FOR OPENINGS REQUIRED BY OTHER DISCIPLINES (MECHANICAL, ELECTRICAL, PLUMBING, ETC.). PROVIDE MINIMUM 5" BEARING OF ANGLES ON JAMBS. SEE SKETCH BELOW WHERE THESE LINTEL ANGLES MAY BE USED. (NOTE: WHERE THE REQUIREMENTS OF THIS SKETCH ARE NOT POSSIBLE, NOTIFY THE STRUCTURAL ENGINEER PRIOR TO START OF MASONRY CONSTRUCTION.)

OPENING WIDTH	LINTEL ANGLES
0'-0" TO 3'-4"	2 – 3 1/2" X 2-1/2" X 1/4" (SLV)
3'-5" TO 4'-8"	2 – 3 1/2" X 3" X 1/4" (SLV)
4'-9" TO 6'-0"	2 – 3 1/2" X 3 1/2" X 1/4"
6'-1" OR GREATER	NOTIFY STRUCTURAL ENGINEER

THESE LINTELS, OR THE OPENING THEY SPAN, SHALL NOT BE PLACED SO AS TO INTERFERE WITH THE REQUIREMENTS OF OTHER STRUCTURAL ELEMENTS (I.E. BOND BEAMS, LINTELS, CONTROL JOINTS, CONCENTRATED POINTS OF BEARING, ETC.) WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.

SOLID GROUT SHALL BE PROVIDED BETWEEN WEBS AND MASONRY FACE SHELLS FOR FULL LENGTH OF ALL STEEL LINTELS. MORTAR MAY BE USED FOR GROUT FOR THIS PURPOSE ONLY. FACE UNITS, SOAPS, ROMANS, ETC., SHALL BE LAID WITH FULL HEAD AND BED JOINTS.

FOR ADDITIONAL INFORMATION AT OPENINGS IN MASONRY WALLS, SEE TYPICAL DETAILS.

REINFORCING:

ALL REINFORCING PER CRSI SPECIFICATIONS AND HANDBOOK. ASTM A615 (Fy = 60 KSI / GRADE 60) DEFORMED BARS FOR ALL BARS #5 AND LARGER. ASTM A615 (Fy = 40 KSI / GRADE 40) DEFORMED BARS FOR ALL BARS #4 AND SMALLER. WHERE SHOWN ON DRAWINGS ALL GRADE 60 REINFORCING TO BE WELDED SHALL BE ASTM A706. WELDED WIRE REINFORCING AND WIRE PER ASTM A1064. NO TACK WELDING OF REINFORCING BARS ALLOWED WITHOUT PRIOR REVIEW OF PROCEDURE WITH THE STRUCTURAL ENGINEER. REFERENCED ACI STANDARDS AND DETAILING MANUAL APPLY. CLEAR CONCRETE COVERAGES AS FOLLOWS:

CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH ---------- 3"
EXPOSED TO EARTH OR WEATHER
#6 OR LARGER ---------- 2"
#5 AND SMALLER ---------- 1 1/2"
ALL OTHER PER REFERENCED EDITION OF ACI 318

ALL REINFORCING SHALL BE CHAIRED OR POSITIONED USING REBAR SPACERS TO ENSURE PROPER CLEARANCES. ALL REINFORCING SHALL BE SECURED IN PLACE PRIOR TO CONCRETE PLACEMENT. SUPPORT OF FOUNDATION REINFORCING MUST PROVIDE ISOLATION FROM MOISTURE/CORROSION BY USE OF A PLASTIC OR CONCRETE CHAIR. DUCT-TAPE COVERED REINFORCING IS NOT AN ACCEPTABLE CHAIR.

ALL DIMENSIONS REFERENCED IN DRAWINGS AS "CLEAR" SHALL BE FROM FACE OF STRUCTURE TO EDGE OF REINFORCING, AND SHALL NOT BE LESS THAN STATED, NOR GREATER THAN "CLEAR" DIMENSION PLUS 3/8". ALL OTHERS SHALL BE PLUS OR MINUS 1/4" TYPICAL UNLESS NOTED OTHERWISE.

FIELD BENDING OR STRAIGHTENING OF DEFORMED BARS SHALL BE LIMITED TO #5 BARS AND SMALLER AND SHALL BE FIELD BENT OR STRAIGHTENED ONLY ONCE. ANY BEND SHALL BE LIMITED TO 90 DEGREES. IF FIELD BENDING OR STRAIGHTENING OF #6 BARS OR LARGER IS REQUIRED, OR IF A SECOND BEND IS REQUIRED FOR #5 BARS AND SMALLER, HEAT SHALL BE APPLIED FOR BENDING OR STRAIGHTENING. CONTRACTOR SHALL SUBMIT PROCEDURE FOR APPLYING HEAT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO BENDING OR STRAIGHTENING BARS.

LAP SPLICES IN CONCRETE:

ALL SPLICE LOCATIONS SUBJECT TO APPROVAL BY THE STRUCTURAL ENGINEER. PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT ALL CORNERS AND INTERSECTIONS PER TYPICAL DETAILS. REINFORCING BAR SPACING GIVEN ARE MAXIMUM ON CENTERS. DOWEL VERTICAL REINFORCING TO FOUNDATION WITH STANDARD 90-DEGREE HOOKS UNLESS NOTED OTHERWISE. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE.

LAP SPLICES, UNLESS NOTED OTHERWISE, SHALL BE CLASS "B" TENSION LAP SPLICES PER REFERENCED EDITION OF ACI 318.

LAPS IN WELDED WIRE REINFORCING SHALL BE MADE SO THAT THE OVERLAP, MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH REINFORCING SHEET, IS NOT LESS THAN THE SPACING OF CROSS WIRES PLUS 2 INCHES.

DRYPACK:

DRYPACK SHALL BE 5,000 PSI NON-SHRINK GROUT, FIVE STAR OR EQUIVALENTS. INSTALL DRYPACK UNDER BEARING PLATES BEFORE FRAMING MEMBER IS INSTALLED. AT COLUMNS, INSTALL DRYPACK UNDER BASE PLATES AFTER THE STRUCTURAL STEEL FRAME HAS BEEN PLUMBED BUT PRIOR TO SUPPORTED DECKING BEING INSTALLED.

ANCHORAGE:

ANCHOR RODS:

ANCHOR RODS INCLUDE HOOKED, HEADED, AND THREADED AND NUTTED ANCHORS. THE TERMS ANCHOR BOLT AND ANCHOR ROD ARE USED SYNONYMOUSLY THROUGHOUT THESE DOCUMENTS. ALL ANCHOR ROD MATERIAL SHALL BE PER ASTM F1554 GRADE 36, U.N.O. A307 ANCHOR RODS MAY BE SUBSTITUTED FOR ASTM F1554 GRADE 36 AT CONTRACTOR'S OPTION. ALL ANCHOR RODS SHALL BE SECURED IN PLACE PRIOR TO CONCRETE PLACEMENT. ALL ANCHOR RODS SHALL BE INSTALLED WITH STEEL WASHERS AT OVERSIZED ROUND HOLES USING SNUG TIGHT INSTALLATION, UNLESS NOTED OTHERWISE.

THE ANCHORING MECHANISM FOR NUTTED ANCHOR RODS SHALL CONSIST OF DOUBLE NUTS WITH A WASHER BETWEEN. THE NUTS AND WASHER ARE TO BE EMBEDDED INTO THE CONCRETE PER THE DETAILS AND PLANS. THE WASHER SHALL BE 1/4"X4"X4" U.N.O. THE CONTRACTOR SHALL PREVENT THE NUTS FROM SPINNING OFF DURING THE VIBRATION OF THE CONCRETE. THIS COULD BE ACCOMPLISHED BY TIGHTENING THE NUTS AGAINST EACH OTHER THEREBY LOCKING THEM IN PLACE OR BY TACK WELDING EACH NUT TO THE ANCHOR ROD.

WHERE THE ANCHORS ARE TO BE GALVANIZED, THE ANCHOR ROD AND THE NUTS SHALL BE GALVANIZED WITH THE SAME PROCESS TO ENSURE THE THREADS MATCH.

AT CONTRACTOR'S OPTION HEADED ANCHORS PER ABOVE MAY BE SUBSTITUTED FOR CONVENTIONAL ANCHORS AND MACHINE BOLTS (REVERSE SUBSTITUTION NOT ALLOWABLE).

PROPRIETARY ANCHORS SHALL BE INSTALLED PER THE MANUFACTURES INSTRUCTIONS AND DETAILS. SUBSTITUTIONS FOR PROPRIETARY ANCHORS ARE NOT PERMITTED WITHOUT APPROVAL OF THE ENGINEER OF RECORD. ALL REQUESTS FOR SUBSTITUTION MUST BE SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO BEING INSTALLED IN THE FIELD.

POST-INSTALLED ANCHORS:

GENERAL:

ALL POST-INSTALLED ANCHORS SHALL UTILIZE THE EXACT ANCHORAGE SYSTEM SPECIFIED IN THE STRUCTURAL DETAILS. WHERE ANCHORAGE "PER GSN" IS SPECIFIED, SEE BELOW. ANCHORAGE PRODUCTS MAY NOT BE SWAPPED BETWEEN MANUFACTURERS WITHOUT APPROVAL OF THE ENGINEER OF RECORD. ALL REQUESTS FOR EQUIVALENT ANCHORAGE PRODUCTS MUST BE SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO BEING INSTALLED IN THE FIELD.

UNLESS NOTED OTHERWISE POST INSTALLED ANCHORS SHALL NOT BE IN

ABBREVIATIONS

ABBREV1

NOTE: ABBREVIATIONS MAY OR MAY NOT HAVE PERIODS, BUT SHALL BE READ AS SAME.

A.B.	ANCHOR BOLT
A.B.C.	AGGREGATE BASE COURSE
ACI	AMERICAN CONCRETE INSTITUTE
A/C	AIR CONDITIONER
A.F.F.	ABOVE FINISHED FLOOR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION
ALT.	ALTERNATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APA	AMERICAN PLYWOOD ASSOCIATION
ARCH'L	ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
A.W.T.S.	AUTOMATIC WELDED THREADED STUDS
BM	BEAM
B.F.F	BELOW FINISHED FLOOR
BLK	BLOCK
B.O.B.	BOTTOM OF BEAM
B.O.D.	BOTTOM OF DECK
B.O.F.	BOTTOM OF FOOTING
BRG	BEARING
C	CAMBER
C.C.	CENTERLINE TO CENTERLINE
CFS	COLD FORMED STEEL
C.G.	CENTER OF GRAVITY
C.I.P.	CAST IN PLACE
C.L.	CENTERLINE
C.L.B.	CENTERLINE OF BEAM
C.L.C.	CENTERLINE OF COLUMN
C.L.F.	CENTERLINE OF FOOTING
C.L.W.	CENTERLINE OF WALL
CLR	CLEAR
CONC	CONCRETE
CONC C.J.	CONCRETE CONTROL JOINT
CONC S.J.	CONCRETE SAWCUT JOINT
C.M.U.	CONCRETE MASONRY UNIT
CONN	CONNECTION
CONT	CONTINUOUS
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
D.F. (D.F.L.)	DOUGLAS FIR LARCH
DL	DEAD LOAD
DIA	DIAMETER
DN	DOWN
DWG(S)	DRAWING(S)
E.C.	END TO CENTERLINE
E.E.	END TO END
E.O.S.	EDGE OF SLAB
EQ	EQUAL
EQUIP	EQUIPMENT
EXP. BOLT (E.B.)	EXPANSION BOLT
EXP. JT (E.J.)	EXPANSION JOINT
E.W.	EACH WAY
(E)	EXISTING
F.F.	FINISHED FLOOR
F.O.M.	FACE OF MEMBER
F.O.S.	FACE OF STEEL
F.O.W.	FACE OF WALL
GA	GAGE (UNIT OF MEASUREMENT)
GALV	GALVANIZED
G.S.N.	GENERAL STRUCTURAL NOTES
GLB (GLULAM)	GLUED-LAMINATED BEAM
H.F.	HEM FIR
HORIZ	HORIZONTAL REINFORCING
H.S.	HEADED STUDS
IBC	INTERNATIONAL BUILDING CODE
ICC	INTERNATIONAL CODE COUNCIL
ICF	INSULATED CONCRETE FORMS
I.F.W.	INSIDE FACE OF WALL
I.O.D.	INTERPRETATION OF DRAWINGS
JST	JOIST
K(KIP)	1000 POUNDS
KLF	KIPS PER LINEAR FOOT
LBS (#)	POUNDS
LGR	LEDGER
LGS	LIGHT GAGE STEEL
LGSEA	LIGHT GAGE STEEL ENGINEERS ASSOCIATION
L.O.D.	LOCATION OF DETAILS
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
MAS	MASONRY
MAS C.J.	MASONRY CONTROL JOINT
MAX	MAXIMUM
MBMA	METAL BUILDING MANUFACTURERS ASSOCIATION
MECH'L	MECHANICAL
MFR'D	MANUFACTURED
MFR('S)	MANUFACTURER('S)
MIN	MINIMUM
N/A	NOT APPLICABLE
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.F.W.	OUTSIDE FACE OF WALL
OPP	OPPOSITE
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PCI	PRECAST/PRESTRESSED CONCRETE INSTITUTE
P.C.	PRECAST CONCRETE
PCF	POUNDS PER CUBIC FOOT
PLF	POUNDS PER LINEAR FOOT
±	PLUS OR MINUS
PREFAB	PREFABRICATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POST-TENSIONED
PTI	POST-TENSIONING INSTITUTE
REINF	REINFORCING
SDI	STEEL DECK INSTITUTE
SLH	SHORT LEG HORIZONTAL
SLV	SHORT LEG VERTICAL
SJI	STEEL JOIST INSTITUTE
SIM	SIMILAR
SQ.	SQUARE
SSMA	STEEL STUD MANUFACTURERS ASSOCIATION
STD	STANDARD
STL	STEEL
TL	TOTAL LOAD
T.O.B.	TOP OF BEAM
T.O.C.T.	TOP OF CONCRETE TOPPING
T.O.D.	TOP OF DECK
T.O.F.	TOP OF FOOTING
T.O.L.	TOP OF LEDGER
T.O.M.	TOP OF MASONRY
T.O.P.	TOP OF PLATE
T.O.P.C.	TOP OF PRECAST CONCRETE
T.O.S.	TOP OF STEEL
T.O.W.	TOP OF WALL
TPI	TRUSS PLATE INSTITUTE
TYP	TYPICAL
T&G	TONGUE AND GROOVE
U.N.O.	UNLESS NOTED OTHERWISE
VERT	VERTICAL REINFORCING
WCLA	WEST COAST LUMBER ASSOCIATION
WCLIB	WEST COAST LUMBER INSPECTION BUREAU
W.W.F.	WELDED WIRE FABRIC
WWPA	WESTERN WOOD PRODUCTS ASSOCIATION
W/C	WATER TO CEMENT RATIO
W/O	WITHOUT

GENERAL STRUCTURAL NOTES

Applies unless noted otherwise on drawings

STEEL JOISTS AND JOIST GIRDERS:

FRAMING MEMBERS SHALL BE DESIGNED, FABRICATED, WELDED AND ERECTED IN ACCORDANCE WITH THE REFERENCED EDITION OF SJI "STANDARD SPECIFICATIONS", AND SHALL CONFORM TO THE FIRE RATING SPECIFIED IN THE ARCHITECTURAL DOCUMENTS. FABRICATOR SHALL HAVE AN ICC APPROVAL OR BE AN APPROVED FABRICATOR ACCORDING TO THE BUILDING JURISDICTION.

FRAMING MEMBER SIZES INDICATED ON PLANS ARE MINIMUMS. FABRICATOR SHALL ADD ADDITIONAL WEB MEMBERS AS REQUIRED AND ADJUST CHORD AND WEB SIZES ACCORDINGLY, BUT SHALL NOT ALTER DEPTH OF MEMBERS. LIVE LOAD (LL) AND TOTAL LOAD (TL) DEFLECTIONS, INCLUDING CAMBERING WHERE REQUIRED, SHALL BE ACCORDING TO STEEL JOIST INSTITUTE STANDARDS. ALL FRAMING MEMBERS OR OTHER POINT LOADS SHALL BEAR AT A PANEL POINT, AND SHALL BE EQUALLY SPACED BETWEEN COLUMN LINES – TYPICAL U.N.O. WHERE BOTTOM CHORD WELDING IS INDICATED, DO NOT WELD BOTTOM CHORD TO SUPPORT UNTIL FULL DEAD LOAD IS IN PLACE.

VERIFY SIZE, WEIGHT AND LOCATION OF SUPPORTED EQUIPMENT WITH ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, SPRINKLER AND THEIR RELATED DRAWINGS. FABRICATOR SHALL DESIGN JOIST SHOES WHERE BEARING LENGTH IS LESS THAN 4" AT LH SERIES JOIST AND LESS THAN 3" AT K SERIES JOIST. UNLESS NOTED OTHERWISE ON DRAWINGS, WHERE DISSIMILAR SERIES JOISTS BEAR ON THE SAME FRAMING SUPPORT MEMBER, ALL SAID JOISTS SHALL HAVE MATCHING BEARING SHOE DEPTH OF THE LARGEST SERIES. IF HIGH STRENGTH BOLTS OR FULL PENETRATION WELDS ARE UTILIZED, CONTRACTOR SHALL RETAIN AN INDEPENDENT TESTING LABORATORY TO CERTIFY COMPLIANCE WITH AISC AND AWS SPECIFICATIONS RESPECTIVELY.

INSTALL BRIDGING AS REQUIRED PER SJI SPECIFICATIONS AND TYPICAL DETAILS. WHERE BRIDGING INTERFERES WITH MECHANICAL INSTALLATIONS, REMOVE THIS BRIDGING AFTER TOTAL DEAD LOAD IS APPLIED AND REPLACE WITH HORIZONTAL ANGLES 2" X 2" X 3/16" AT TOP AND BOTTOM CHORDS.

CONTRACTOR SHALL SUBMIT LAYOUT SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. CONTRACTOR SHALL SUBMIT UPDATED LAYOUT SHOP DRAWINGS, WITH DESIGN CALCULATIONS SEALED BY A REGISTERED ENGINEER FOR ALL MEMBERS INSTALLED, FOR REVIEW AND APPROVAL PRIOR TO ERECTION (EXCEPTION: PARALLEL CHORD JOISTS WITH UNIFORM LOADS AND CONTINUOUSLY SUPPORTED COMPRESSION CHORDS PER SJI STANDARD LOAD TABLES). SHOP DRAWINGS AND CALCULATIONS SHALL INCLUDE DEFLECTION AND CAMBER REQUIREMENTS, DETAILS OF ANY OPTIONAL FIELD SPLICES AND SUPERIMPOSED LOADS FOR FRAMING SUPPORTED EQUIPMENT.

COLD FORMED STRUCTURAL STEEL FRAMING:

GENERAL:

ALL COLD FORMED STEEL COMPONENTS INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE PER SSMA. COMPONENTS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND IN ACCORDANCE WITH THE REFERENCED EDITION OF "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" BY THE AISI AND ICC ESR-3064P OR APPROVED ICC EQUIVALENT. STEEL FOR COLD FORMED MEMBERS SHALL HAVE A MINIMUM YIELD STRENGTH OF 33 KSI FOR 43 MIL THICKNESS AND LESS, AND MINIMUM YIELD STRENGTH OF 50 KSI FOR 54 MIL THICKNESS AND GREATER. STEEL FOR BRIDGING SHALL HAVE A MINIMUM YIELD STRENGTH OF 33 KSI. STEEL SHALL BE GALVANIZED AT LOCATIONS EXPOSED TO WEATHER AND WHEREVER NOTED.

ALL COLD FORMED LIGHT GAGE STEEL HORIZONTAL STRUCTURAL ELEMENTS (I.E.: JOISTS, BOXED BEAMS, HEADERS, ETC) SHALL BE FABRICATED FROM UNPUNCHED COMPONENTS.

WHERE WELDING IS SHOWN ON DRAWINGS IT SHALL BE PERFORMED BY WELDERS CERTIFIED IN LIGHT GAGE STRUCTURAL STEEL FRAMING WORK. DO NOT NOTCH FLANGES OF MEMBERS WITHOUT EXPRESSED APPROVAL OF THE ENGINEER OF RECORD.

SCREWED COLD FORMED TO COLD FORMED CONNECTIONS (I.E.: 97 MIL TO 97 MIL MAX) SHALL BE HILTI SELF-DRILLING AND SELF-PIERCING SCREWS PER ICC ESR-2196, OR APPROVED ICC EQUIVALENT. SCREW SIZE SHALL BE #10 X 3/4" MINIMUM AND MUST PROTRUDE THROUGH AND BEYOND THE CONNECTED STEEL MEMBERS A MINIMUM OF THREE FULL THREADS. SCREWS SHALL BE INSTALLED WITH A MINIMUM EDGE AND END DISTANCE OF THREE SCREW DIAMETERS.

MIL THICKNESS / GAGE NUMBER REFERENCE:

27 MIL	22 GA	54 MIL	16 GA
33 MIL	20 GA	68 MIL	14 GA
43 MIL	18 GA	97 MIL	12 GA

WALLS:

STRUCTURAL STEEL STUD WALLS SHOWN ON PLAN SHALL BE INSTALLED PER STUD/SPACING AS NOTED BELOW, AND BOTTOM TRACKS SHALL BE INSTALLED WITH 1/2" DIA ANCHOR BOLTS AT 32" O.C. TYPICAL U.N.O. ATTACHMENT OF STUDS TO TRACKS PER TYPICAL DETAILS U.N.O. ALL STUDS SHALL BE SECURELY SEATED FOR FULL END BEARING ON TOP AND BOTTOM TRACK. UNLESS NOTED OTHERWISE, INSTALL DOUBLE STUDS AT ALL JAMBS, CORNERS, INTERSECTIONS AND ISOLATED BEARING POINTS OF FRAMING MEMBERS ABOVE. BRIDGING SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATION WITH THE FOLLOWING MINIMUM REQUIREMENTS:

FOR AXIAL LOAD BEARING WALLS, INSTALL BRIDGING PER TYPICAL DETAILS. FOR WALLS WITH NO AXIAL LOAD, INSTALL BRIDGING AT MID-HEIGHT FOR WALLS LESS THAN OR EQUAL TO 10'-0" HIGH, AND 5'-0" O.C. MAXIMUM FOR WALLS GREATER THAN 10'-0" HIGH. IN ADDITION, BRIDGING SHALL BE INSTALLED AT ROOF LINES AND ELSEWHERE AS NOTED ON THE DRAWINGS. SOLID BLOCKING SHALL BE INSTALLED IN LIEU OF BRIDGING WHERE NOTED ON THE DRAWINGS. FOR NON-BEARING PARTITIONS AND SOFFITS, SEE ARCHITECTURAL DRAWINGS.

SSMA STRUCTURAL STEEL STUDS AND TRACKS SHALL BE AS FOLLOWS – TYPICAL U.N.O.:

STUD SIZE-MILS	SPACING	TRACK SIZE-MILS
3 5/8" – 362S162-43	16" O.C	362T125-54
4" – 400S162-43	16" O.C.	400T125-54
6" – 600S162-43	16" O.C.	600T125-54

SSMA NON-STRUCTURAL/NON-BEARING INTERIOR STEEL STUDS AND TRACKS SHALL BE AS FOLLOWS – TYPICAL U.N.O.: (DESIGN BASIS = 5 PSF INTERIOR LOAD, DEFLECTION LIMIT = L/240).

MAX WALL HEIGHT	STUD SIZE-MILS	STUD SPACING	TRACK SIZE-MILS
0'-0" TO 9'-11"	3 5/8" 362S125-18	24" O.C	362T125-27
0'-0" TO 12'-2"	3 5/8" 362S125-18	16" O.C.	362T125-27
0'-0" TO 14'-0"	3 5/8" 362S125-33	24" O.C.	362T125-33
0'-0" TO 16'-0"	3 5/8" 362S125-33	16" O.C.	362T125-33
0'-0" TO 20'-8"	6" 600S125-33	24" O.C.	600T125-33
0'-0" TO 23'-9"	6" 600S125-33	16" O.C.	600T125-33

23'-10" AND GREATER ? NOTIFY ARCHITECT AND STRUCTURAL ENGINEER FOR ADDITIONAL INFORMATION, SEE ARCHITECTURAL DRAWINGS.

JOISTS:

SSMA JOIST SIZE AND SPACING SHALL BE AS NOTED ON PLANS OR DETAILS. ALL JOISTS SHALL BE SECURELY SEATED FOR FULL END BEARING AT SUPPORTING MEMBER. PROVIDE BLOCKING AT SUPPORTS OF ALL JOISTS. DOUBLE UP FLOOR JOISTS AND BLOCKING UNDER LOAD BEARING PARTITIONS UNLESS NOTED OTHERWISE.

WOOD:

GENERAL:

WOOD FRAMING MEMBERS SHALL NOT BE NOTCHED OR DRILLED WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER THROUGH THE ARCHITECT. STRUCTURAL WOOD FRAMING MEMBERS SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 19% WHEN DELIVERED TO THE JOB SITE. ALL NAILING NOT NOTED SHALL BE PER TYPICAL DETAIL AND COMMON NAIL DIAMETER TABLE BELOW. ALL BOLTING SHALL BE PER STRUCTURAL STEEL SECTION. WOOD CONNECTORS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC. OR OTHER MANUFACTURER WITH CURRENT AND EQUIVALENT ICC APPROVAL. WHERE "TYPE" OF CONNECTOR IS INDICATED ON THE DRAWINGS, THE CONNECTOR AND ATTACHMENT SHALL BE PER THE MAXIMUM MODEL NUMBER BASED ON THE SIZE OF THE MEMBERS CONNECTED.

NAIL TYPE	REQ'D DIA	REQ'D GA	LENGTH	NAIL TYPE	REQ'D DIA	REQ'D GA	LENGTH
6d	0.113"	11 1/2	2"	12d	0.148"	9	3 1/4"
8d	0.131"	10 1/4	2 1/2"	16d	0.162"	8	3 1/2"
10d	0.148"	9	3"	20d	0.192"	6	4"

IN STUD WALLS, UNLESS NOTED OTHERWISE, INSTALL DOUBLE STUDS AT ALL JAMBS, CORNERS, INTERSECTIONS AND AT ISOLATED BEARING POINTS OF FRAMING MEMBERS ABOVE. STUD WALLS SHALL HAVE A SIMPSON RSP TIE TOP AND BOTTOM OF STUDS AT 32" O.C. MAXIMUM, EXCEPT AT THOSE WALLS WHERE WOOD SHEATHING IS NAILED DIRECTLY TO THE TOP AND BOTTOM PLATES. PROVIDE 2X SOLID BLOCKING AT MID-HEIGHT OF STUD WALLS.

PROVIDE A MINIMUM OF 0.229" X 3" X 3" GALVANIZED STEEL PLATE WASHER UNDER EACH NUT AT FOUNDATION ANCHORS OF SHEAR WALLS. THE HOLE IN THE PLATE WASHER IS PERMITTED TO BE DIAGONALLY SLOTTED WITH A WIDTH OF UP TO 3/16" LARGER THAN THE BOLT DIAMETER AND A SLOT LENGTH NOT TO EXCEED 1-3/4", PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT.

PROVIDE 2" SOLID BLOCKING AT SUPPORTS OF ALL JOISTS. DOUBLE UP FLOOR JOISTS AND BLOCKING UNDER PARTITIONS.

SAWN LUMBER:

FRAMING LUMBER SHALL COMPLY WITH THE REFERENCED EDITION OF THE GRADING RULES OF THE WWPA OR THE WCLIB. ALL SAWN LUMBER SHALL BE STAMPED WITH THE GRADE MARK OF AN APPROVED LUMBER GRADING AGENCY AND SHALL HAVE MINIMUM PROPERTIES WHICH MEET OR EXCEED THE FOLLOWING WOOD TYPES:

	WOOD TYPE
JOISTS	
– 2 X 4	D.F.L. STND
– 2 X 6 OR LARGER	D.F.L. #2
LEDGERS AND TOP PLATES	D.F.L. #2

WOOD SHEATHING:

ALL WOOD SHEATHING SHALL BE APA RATED SHEATHING, EXPOSURE 1 NOMINAL 4' X 8' SHEETS AND SHALL BEAR THE STAMP OF AN APPROVED TESTING AGENCY. LAY UP SHEATHING WITH FACE GRAIN PERPENDICULAR TO SUPPORTS. (ON ROOFS WHERE SHEATHING IS LAID UP WITH FACE GRAIN PARALLEL TO SUPPORTS, USE A MINIMUM OF 5-PLY SHEATHING). STAGGER JOINTS. ALL NAILING SHALL BE COMMON NAILS. WOOD SCREWS SHALL BE USED WHERE SCREWS ARE INDICATED FOR WOOD TO WOOD ATTACHMENTS. THE TERMS WOOD SHEATHING, WOOD STRUCTURAL PANELS (WSP) AND PLYWOOD SHEATHING ARE USED SYNONYMOUSLY THROUGHOUT THESE DOCUMENTS. ALL SHEATHING SHALL BE OF THE FOLLOWING PERFORMANCE CATEGORY, SPAN RATING AND SHALL BE ATTACHED AS FOLLOWS UNLESS NOTED OTHERWISE:

USE	PERFORMANCE CATEGORY	SPAN RATING	ATTACHMENT EDGE / FIELD
ROOF	15/32	32/16	8d AT 6" O.C. / 8d AT 12" O.C.

ALL SHEATHING SHALL BE GAPPED 1/8" ON THE EDGES AND ENDS. ROOF SHEATHING SHALL HAVE PANEL SHEATHING CLIPS APPROPRIATELY INSTALLED BETWEEN THE TRUSSES.

ATTACHMENT AT STEEL MEMBERS SHALL BE HILTI X-U SERIES, 0.157" DIAMETER X 1 1/2" LONG (3/4" WOOD SHEATHING MAX), POWDER DRIVEN FASTENERS INSTALLED PER ICC ESR-2269, SECTION 4.2.8., OR APPROVED EQUIVALENT. SPACING SHALL BE AS NOTED ABOVE FOR NAILS.

VERIFY SHEATHING REQUIREMENTS WITH OWNER AND ARCHITECT. VERIFY SHEATHING MEETS ROOFING OR WATERPROOFING SYSTEM MANUFACTURERS REQUIREMENTS WHERE ROOFING, BALCONY WATERPROOFING, OR OUTDOOR DECK WATERPROOFING IS TO BE GUARANTEED.

SHOP DRAWINGS:

SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS IN ADDITION TO ITEMS REQUIRED BY ARCHITECTURAL SPECIFICATIONS. CONTRACTOR SHALL PROVIDE A MINIMUM OF 2 HARD COPY SUBMITTAL SETS OF EACH ITEM TO CTS FOR REVIEW, UNLESS NOTED OTHERWISE IN ARCHITECTURAL SPECIFICATIONS. ELECTRONIC SUBMITTALS ARE ALSO ACCEPTABLE.

THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMITTAL. ITEMS NOT IN ACCORDANCE WITH CONTRACT DOCUMENTS SHALL BE FLAGGED UPON CONTRACTOR'S REVIEW.

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS AND FIELD CONDITIONS.

MANUFACTURER OR FABRICATOR SHALL CLOUD ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM CONTRACT DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CHANGES, APPROVALS AND THE COORDINATION OF THE WORK WITH ALL RELATED TRADES AND SUPPLIERS. ANY OF THE AFOREMENTIONED WHICH ARE NOT CLOUDED OR FLAGGED BY SUBMITTING PARTIES, SHALL NOT BE CONSIDERED APPROVED AFTER ENGINEER'S REVIEW, UNLESS NOTED ACCORDINGLY.

THE ENGINEER HAS THE RIGHT TO APPROVE OR DISAPPROVE ANY CHANGES TO CONTRACT DOCUMENTS AT ANYTIME BEFORE OR AFTER SHOP DRAWING REVIEW.

THE SHOP DRAWINGS DO NOT REPLACE THE CONTRACT DOCUMENTS. ITEMS OMITTED OR SHOWN INCORRECTLY AND ARE NOT FLAGGED BY THE STRUCTURAL ENGINEER OR ARCHITECT SHALL NOT BE CONSIDERED CHANGES TO CONTRACT DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ITEMS ARE CONSTRUCTED TO CONTRACT DOCUMENTS.

THE ADEQUACY OF ENGINEERING DESIGNS AND LAYOUT PERFORMED BY OTHERS RESTS WITH THE DESIGNING OR SUBMITTING AUTHORITY.

REVIEWING IS INTENDED ONLY AS AN AID TO THE CONTRACTOR IN OBTAINING CORRECT SHOP DRAWINGS. RESPONSIBILITY FOR CORRECTNESS SHALL REST WITH THE CONTRACTOR.

DEFERRED SUBMITTALS:

SHOP DRAWING SUBMITTALS REQUIRED BY THESE GENERAL STRUCTURAL NOTES WHICH CONTAIN DESIGN CALCULATIONS SEALED BY A REGISTERED ENGINEER OTHER THAN THE ENGINEER OF RECORD, SHALL BE SUBMITTED DURING CONSTRUCTION TO THE CITY FIELD INSPECTOR FOR REVIEW. THE DOCUMENTS WILL FIRST BE REVIEWED BY THE ENGINEER OF RECORD AND DETERMINED TO BE IN GENERAL CONFORMANCE WITH THE BUILDING DESIGN. THESE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL. THE FOLLOWING ITEMS SHALL BE SUBMITTED PER THIS SECTION:

STEEL JOISTS AND JOIST GIRDERS
ALTERNATIVE STAIR DESIGNS
QUICKFRAMES ADJUSTABLE ROOF FRAMES BELOW ROOF TOP MECHANICAL UNITS OR OPENINGS

GENERAL NOTES:

THE STRUCTURAL CONSTRUCTION DOCUMENTS REPRESENT THE FINISHED STRUCTURE. EXCEPT WHERE NOTED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. THE STRUCTURAL ENGINEER OF RECORD SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURE OF CONSTRUCTION, OR THE SAFETY PRECAUTIONS AND THE PROGRAMS INCIDENT THERETO (NOR SHALL OBSERVATION VISITS TO THE SITE INCLUDE INSPECTION OF THESE ITEMS).

WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE REFERENCED EDITION AND/OR ADDENDA. ANY ENGINEERING DESIGN, PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW, SHALL BEAR THE SEAL OF A REGISTERED ENGINEER RECOGNIZED BY THE BUILDING CODE JURISDICTION OF THIS PROJECT.

NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN.

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS AND FIELD CONDITIONS. BUILDING DIMENSIONS AND ELEVATIONS, WHERE SHOWN, WERE PROVIDED BY THE ARCHITECT AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND COORDINATE ALL DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK. ANY DISCREPANCIES SHALL BE RESOLVED THROUGH THE ARCHITECT. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING AND ELECTRICAL ITEMS WITH THE APPROPRIATE TRADE DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.

TYPICAL DETAILS MAY NOT NECESSARILY BE CUT ON PLANS, BUT APPLY UNLESS NOTED OTHERWISE.

CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED CONSTRUCTION. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.

OPTIONS AND SUBSTITUTIONS ARE FOR CONTRACTOR'S CONVENIENCE. IF AN OPTION OR SUBSTITUTION IS CHOSEN, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CHANGES, APPROVALS AND THE COORDINATION OF THE WORK WITH ALL RELATED TRADES AND SUPPLIERS.

SPECIAL INSPECTION – STRUCTURAL ONLY:

FOR SPECIAL STRUCTURAL INSPECTIONS:
CONTACT CARUSO TURLEY SCOTT, INC. AT 480-774-1700 PRIOR TO CONSTRUCTION:

SPECIAL INSPECTION IS TO BE PROVIDED FOR THE ITEMS LISTED BELOW IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE BUILDING JURISDICTION. "SPECIAL STRUCTURAL INSPECTION" SHALL NOT RELIEVE THE OWNER OR THEIR AGENT FROM REQUESTING THE BUILDING JURISDICTION INSPECTIONS REQUIRED BY SECTION 110 OF THE INTERNATIONAL BUILDING CODE. SPECIAL INSPECTION IS REQUIRED PER CHAPTER 17 FOR THE FOLLOWING:

CONCRETE CONSTRUCTION:

1. CONCRETE:
A. DURING THE TAKING OF TEST SPECIMENS.
B. CONTINUOUS INSPECTION DURING THE PLACEMENT OF ALL REINFORCED CONCRETE, UNLESS NOTED OTHERWISE.
C. CONTINUOUS INSPECTION OF BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING THE PLACEMENT OF CONCRETE AROUND BOLTS.
(EXCEPTION: NO INSPECTION IS REQUIRED FOR PLACEMENT OF CONCRETE AROUND FOUNDATION ANCHOR BOLTS.)
D. NO INSPECTION IS REQUIRED FOR PLACEMENT OF SLAB ON GRADE CONCRETE. INSPECTION OF SLAB ON GRADE REINFORCING IS REQUIRED PER "REINFORCING STEEL" SECTION BELOW.
E. NO INSPECTION IS REQUIRED FOR THE PLACEMENT OF FOUNDATION CONCRETE. INSPECTION OF FOUNDATION REINFORCING IS REQUIRED PER "REINFORCING STEEL" SECTION BELOW.

2. REINFORCING STEEL: INSPECTION OF IN-PLACE REINFORCING FOR CONFORMANCE PRIOR TO THE CLOSING OF FORMS OR THE DELIVERY OF CONCRETE TO THE JOBSITE FOR THE FOLLOWING:
A. REINFORCING FOR ALL CONCRETE REQUIRED TO HAVE INSPECTION NOTED ABOVE.
B. REINFORCING FOR CONCRETE FOUNDATIONS.
C. REINFORCING FOR SLABS ON GRADE.
D. REINFORCING FOR ALL MASONRY REQUIRED TO HAVE INSPECTION NOTED BELOW.

STEEL CONSTRUCTION:

1. WELDING:
A. VERIFICATION OF VALID WELDER'S CERTIFICATES.
B. PERIODIC VISUAL INSPECTION OF ALL SHOP AND FIELD WELDS.
C. ALL STRUCTURAL STEEL FABRICATORS SHALL EMPLOY AN AWS CERTIFIED INDEPENDENT TESTING AGENCY TO PROVIDE SHOP WELD INSPECTIONS PER CODE. INSPECTION REPORTS AND REQUIRED DOCUMENTATION SHALL BE SUBMITTED TO ENGINEER OF RECORD PRIOR TO STEEL INSTALLATION. EXCEPTION: NO SHOP INSPECTION IS REQUIRED IF THE FABRICATOR IS ON THE CITY OF PHOENIX APPROVED STEEL FABRICATOR LIST.
D. CONTINUOUS INSPECTION OF ALL MULTIPASS FILLET WELDS, SINGLE PASS FILLET WELDS LARGER THAN 5/16", COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS, PLUG AND SLOT WELDS.
E. NON-DESTRUCTIVE TESTING OF ALL COMPLETE PENETRATION WELDS BY AN AWS CERTIFIED INDEPENDENT TESTING AGENCY AT THE CONTRACTORS EXPENSE.

2. STEEL FRAMES: VERIFICATION OF BRACING, STIFFENING, MEMBER LOCATIONS, AND PROPER JOINT DETAIL APPLICATION AT ALL STEEL FRAME CONNECTIONS.

3. HIGH STRENGTH BOLTING:
A. VERIFICATION OF SNUG TIGHT BOLT INSTALLATION FOR ASTM F3125 BOLTS.

MASONRY CONSTRUCTION:

1. STRUCTURAL MASONRY:
A. DURING PREPARATION OF PRISMS.
B. INSPECTION OF IN-PLACE REINFORCING FOR CONFORMANCE PRIOR TO THE DELIVERY OF GROUT TO THE JOBSITE.
C. CONTINUOUS INSPECTION DURING PLACEMENT OF GROUT.
D. CLEANOUTS PRIOR TO CLOSING.

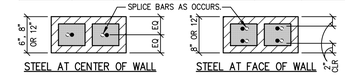
SPECIAL CASES:

1. EXPANSION, EPOXY, ADHESIVE, AND SCREW ANCHORS: DURING THE PLACEMENT OF ALL ANCHORS SHOWN ON STRUCTURAL DRAWINGS. ADDITIONAL INSPECTIONS REQUIRED FOR REPAIR DETAILS SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE.
A. INSPECTION OF HOLE DIAMETER, HOLE DEPTH AND DRILL BIT CONFORMANCE.
B. INSPECTION OF HOLE CLEANING WITH WIRE BRUSH AND COMPRESSED AIR.
C. INSPECTION OF ANCHOR INSTALLATION USING SPECIFIED PRODUCT AND MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES.
D. INSPECTION OF EXPANSION ANCHORS SHALL INCLUDE THE VERIFICATION OF THE TIGHTENING TORQUE THAT IS SPECIFIED BY THE ANCHOR MANUFACTURER.

GEOTECHNICAL INSPECTIONS – SOILS:

1. PERIODIC VERIFICATION THAT MATERIALS BELOW GRADE ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.
2. PERIODIC VERIFICATION THAT EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.
3. PERFORM PERIODIC CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.
4. CONTINUOUS VERIFICATION THAT USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.
5. PERIODIC VERIFICATION PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED P

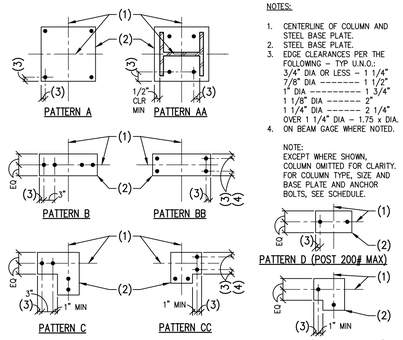
REBAR SIZE (METRIC)	REBAR GRADE	MASONRY LAP SPLICE LENGTH				
		STEEL AT CENTER OF WALL			STEEL AT FACE OF WALL (& BOND BEAMS)	
		6" BLK	8" BLK	12" BLK	8" BLK	12" BLK
#4 (13)	40	20"	20"	20"	20"	20"
#4 (13)	60	26"	26"	26"	26"	26"
#5 (16)	60	32"	32"	32"	35"	35"
#6 (19)	60	N/A	39"	39"	54"	54"
#7 (22)	60	N/A	52"	52"	N/A	63"
#8 (25)	60	N/A	N/A	72"	N/A	72"



STEEL AT CENTER OF WALL STEEL AT FACE OF WALL

NOTES:
1. LAPS APPLY TO BOTH VERTICAL AND HORIZONTAL REINFORCING.
2. PROVIDE BENT BARS TO MATCH HORIZONTAL BOND BEAM REINFORCING, AT CORNERS AND WALL INTERSECTION TO MAINTAIN BOND BEAM CONTINUITY.
3. DO NOT SPLICE HORIZONTAL BARS WITHIN 8'-0" OF CONTROL JOINTS.
4. FOR LADDER TYPE HORIZONTAL REINFORCING, SEE G.S.N.
5. LAP LENGTHS ARE BASED ON A CALCULATED STEEL STRESS (fs) NOT EXCEEDING 80 PERCENT OF THE ALLOWABLE STEEL STRESS (Fs).

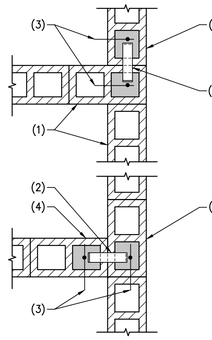
16 ULTIMATE STRENGTH OR ALLOWABLE STRESS MASONRY LAP SPLICES FOR REINFORCING STEEL – 2018 IBC
501-105 NO SCALE



NOTES:
1. CENTERLINE OF COLUMN AND STEEL BASE PLATE.
2. STEEL BASE PLATE.
3. EDGE CLEARANCES PER THE FOLLOWING – TYP U.N.O.:
   3/4" DIA OR LESS – 1 1/4"
   7/8" DIA -------- 1 1/2"
   1" DIA ---------- 1 3/4"
   1 1/8" DIA ------ 2"
   1 1/4" DIA ------ 2 1/4"
   OVER 1 1/4" DIA – 1.75 x DIA.
4. ON BEAM GAGE WHERE NOTED.

NOTE:
EXCEPT WHERE SHOWN, COLUMN OMITTED FOR CLARITY. FOR COLUMN TYPE, SIZE AND BASE PLATE AND ANCHOR BOLTS, SEE SCHEDULE.

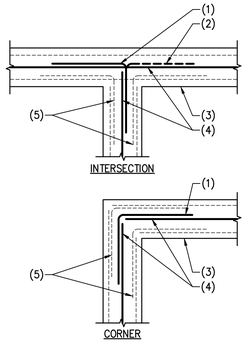
12 PLAN – TYPICAL STEEL COLUMN BASE PLATE PATTERNS
401-31 NO SCALE



NOTES:
1. CONTINUOUS MASONRY WALL.
2. 1/8" THICK x 1 1/4" WIDE x 2"x8"x2" BENT STEEL "Z" PLATES AT 48" O.C.
3. VERTICAL REINFORCING TO MATCH WALL REINFORCING AT CORNER OR INTERSECTION.
4. MASONRY WALL WHICH ABUTS CONTINUOUS MASONRY WALL AND IS NOT "TOOTHED" INTO IT.

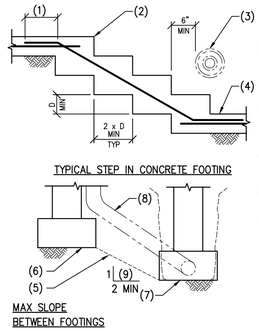
NOTE:
THIS DETAIL FOR ABUTTING WALLS ONLY. FOR WALL REINFORCING, SEE PLANS.

08 PLAN – TYPICAL CONNECTION FOR NON-TOOTHED ABUTTING MASONRY WALLS
501-06 NO SCALE



NOTES:
1. CORNER BARS SAME SIZE AND SPACING AS HORIZONTAL REINFORCING. LAP PER TYPICAL DETAIL (24" MINIMUM).
2. ALTERNATE BEND.
3. CONCRETE STEM WALL OR FOOTING.
4. REINFORING PER PLANS AND/OR DETAILS.
5. CORNER BARS AT MULTIPLE REINFORCING.

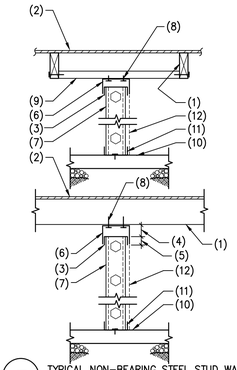
04 PLAN – CORNER REINFORCING IN CONCRETE FOOTING, STEM OR WALL
105-02M NO SCALE



NOTES:
1. LAP PER TYPICAL DETAIL (24" MIN.) – TYPICAL.
2. TOP OF WALL FOOTING.
3. PIPE THRU STEM WALL AS OCCURS – SEE TYPICAL DETAIL.
4. RETURN TO FOOTING THICKNESS AS SHOWN ON PLAN.
5. MAXIMUM SLOPE BETWEEN BOTTOM OF FOOTINGS SHALL BE PER SKETCH. STEP FOOTINGS AS REQUIRED – SEE TYPICAL DETAIL.
6. BOTTOM OF CONCRETE FOOTING.
7. BOTTOM OF ADJACENT FOOTING OR TRENCH.
8. PIPE ADJACENT TO STEM WALL TO NOT INTERFERE WITH FOOTING.
9. TYPICAL UNLESS NOTED OTHERWISE IN SOIL REPORT.

NOTE:
D = 2'-0" MAXIMUM. FOR ADDITIONAL INFORMATION, SEE PLANS AND DETAILS.

01 TYPICAL STEP IN CONCRETE FOOTING MAXIMUM SLOPE BETWEEN ADJACENT FOOTING OR TRENCH
105-10M NO SCALE



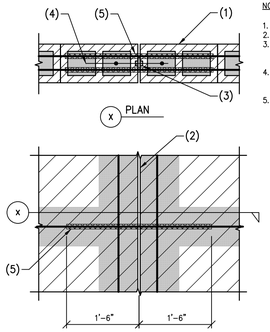
NOTES:
1. WOOD JOIST (STIFFENER).
2. PLYWOOD SHEATHING.
3. STEEL STUD TRACK.
4. 1" CLEAR MIN – TYP.
5. 1" MIN – TYP.
6. 14 GA. CONTINUOUS BENT PLATE OR (DEEP LEG 14 GA. SLIP TRACK BY STUD MFR.
7. STEEL STUD WALL.
8. 2 #10 x 1 1/2" SCREWS AT EACH JOIST OR BLOCK.
9. 2x4 BLOCK AT 4'-0" O.C. WITH 2-10d NAILS EACH END.
10. CONCRETE SLAB ON GRADE.
11. CONTINUOUS TRACK WITH HILTI DX POWDER ACTUATED FASTENERS AT 32" O.C. OR EQUIVALENT.
12. WALL COVERING WHERE OCCURS – DO NOT ATTACH TO SLIP TRACK OR BENT PLATE.

17 TYPICAL NON-BEARING STEEL STUD WALL TO WOOD JOIST
407-81M NO SCALE

CONNECTION (COMMON NAILS ONLY)	NAILING
JOIST TO SILL OR GIRDER, TOENAIL	3 – 8d
BRIDGING TO JOIST, TOENAIL EACH END	2 – 8d
SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANEL	16d AT 16" O.C. 3-16d PER 16"
TOP PLATE TO STUD, END NAIL	2 – 16d
STUD TO SOLE PLATE	4 – 8d, TOENAIL OR: 2 – 16d, END NAIL
DOUBLED STUDS, FACE NAIL	16d AT 24" O.C.
DOUBLED TOP PLATES, TYPICAL FACE NAIL DOUBLED TOP PLATES, LAP SPLICE	16d AT 16" O.C. 8 – 16d
BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3 – 8d
RIM JOIST TO TOP PLATE, TOENAIL	8d AT 6" O.C.
TOP PLATE, LAPS AND INTERSECTIONS, FACE NAIL	2 – 16d
CONTINUOUS HEADER, TWO PIECES	16d AT 16" O.C. ALONG EACH EDGE
CEILING JOISTS TO PLATE, TOENAIL	3 – 8d
CONTINUOUS HEADER TO STUDS, TOENAIL	4 – 8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3 – 16d
CEILING JOIST TO PARALLEL RAFTERS, FACE NAIL	3 – 16d
RAFTER TO PLATE, TOENAIL	3 – 8d
BUILT-UP CORNER STUDS	16d AT 24" O.C.
BUILT-UP GIRDER AND BEAMS	20d AT 32" O.C. TOP AND BOTTOM, AND STAGGERED 2-20d EACH END AND SPLICES

NOTE: FOR COMMON NAIL MINIMUM REQUIREMENTS, SEE G.S.N.

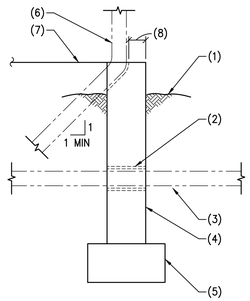
13 NAILING SCHEDULE – U.N.O.
601-01 NO SCALE



NOTES:
1. MASONRY WALL.
2. CONTROL JOINT.
3. CONTROL JOINT MATERIAL PER ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
4. VERTICAL REINFORCING TO MATCH WALL REINFORCING EACH SIDE OF CONTROL JOINT.
5. CONTINUOUS BOND BEAM BARS – WRAP BARS WITH MASTIC FOR BOND BREAK.

NOTE:
BOND BEAM BARS SHALL NOT BE LAPPED WITHIN 8'-0" OF CONTROL JOINT.

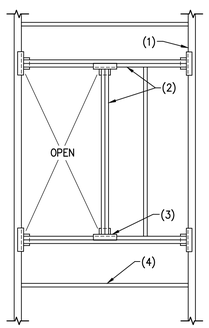
09 CONTROL JOINT IN MASONRY WALL
507-01 NO SCALE



NOTES:
1. FINISHED GRADE WHERE OCCURS.
2. SLEEVE – PROVIDE 1/2" MINIMUM CLEARANCE AROUND PIPE/CONDUIT.
3. HORIZONTAL PIPE OR CONDUIT.
4. STEM WALL.
5. CONCRETE FOOTING.
6. VERTICAL PIPE OR CONDUIT WHEN LOCATED AT STEM WALL – TRANSITION AT FLOOR LINE.
7. FINISHED FLOOR LINE.
8. 1 1/2" MIN CLEAR EXTERIOR FACE OF WALL AND NOTCH. NO REINFORCING MAY BE CUT. DAMAGE TO STEM WALL SHALL BE REPAIRED AND PATCHED TO MATCH ADJACENT WALL.

NOTE:
A. NO PIPE SHALL PASS THRU FOOTINGS OR UNDER COLUMN FOOTINGS.
B. FOR ADDITIONAL INFORMATION, SEE PLANS AND DETAILS.

02 PIPE AT FOUNDATION STEM WALL
105-24 NO SCALE



NOTES:
1. STEEL JOIST WITH NAILER.
2. DOUBLE 2x6 WITH 16d AT 12" O.C. – STAGGERED.
3. F26-2 JOIST HANGER AT EACH END OF DOUBLE 2x6 – TYPICAL.
4. WOOD JOIST (STIFFENER).

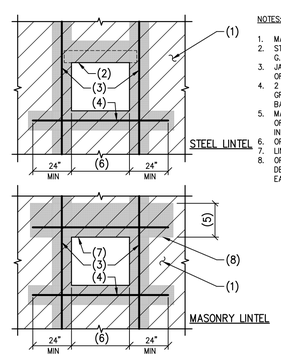
18 PLAN – SKYLIGHT FRAMING
640-76M NO SCALE

TYPICAL STEEL STUD CEILING JOIST SCHEDULE

NOTES:
1. CEILING JOISTS AT 24" O.C. MAXIMUM.
2. CONTINUOUS BRIDGING TOP AND BOTTOM OF JOIST WITH 1 #10 S.M. SCREW PER JOIST SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED "S" (SPACING). BRIDGING MAY BE OMITTED ON SIDES WITH CONTINUOUS SHEATHING.
3. IF JOIST SPANS ARE ENCOUNTERED IN EXCESS OF THOSE TABULATED BELOW, NOTIFY THE STRUCTURAL ENGINEER.
4. JOISTS DESIGNED FOR 5 PSF DEAD LOAD AND 10 PSF LIVE LOAD. IF LOADS ENCOUNTERED ARE GREATER, NOTIFY THE STRUCTURAL ENGINEER.
5. FOR GENERAL NOTES REGARDING LEDGERS, SEE LEDGER SCHEDULE.
6. S.M. (SHEET METAL) SCREWS PER G.S.N.
7. FOR ADDITIONAL INFORMATION, SEE TYPICAL STEEL STUD DETAILS, G.S.N. AND ARCHITECTURAL DRAWINGS.

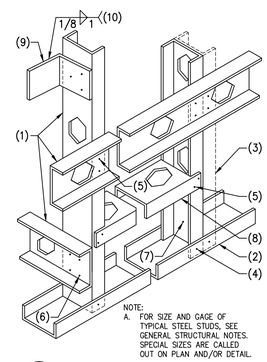
JOIST SIZE	MAXIMUM SPAN	MAXIMUM SPACING "S"	STEEL TRACK AT MASONRY WALL	STEEL TRACK AT STUD WALL
362S137-33	8'-0"	4'-0"	362T125-43 WITH 3/4" DIA ANCHOR BOLTS AT 32" O.C.	362T125-43 WITH 2-#10 S.M. SCREWS PER STUD
600S137-33	10'-0"	5'-0"	600T125-43 WITH 3/4" DIA ANCHOR BOLTS AT 32" O.C.	600T125-43 WITH 2-#10 S.M. SCREWS PER STUD
800S137-43	16'-0"	6'-0"	800T125-54 WITH 3/4" DIA ANCHOR BOLTS AT 32" O.C.	800T125-54 WITH 3-#10 S.M. SCREWS PER STUD

14 TYPICAL STEEL STUD CEILING JOIST SCHEDULE
407-91M NO SCALE



NOTES:
1. MASONRY WALL.
2. STEEL LINTEL PER PLAN OR G.S.N. – GROUT SOLID.
3. JAMB REINFORCING PER G.S.N. OR DETAILS CUT ON PLAN.
4. 2 #5 IN 8" DEEP SOLID GROUTED BOND BEAM – BEND BARS UP AT WALL CORNERS.
5. MASONRY LINTEL – SEE PLAN OR DETAILS FOR ADDITIONAL INFORMATION.
6. OPENING WIDTH.
7. LINTEL BLOCK AT OPENING.
8. OPEN ENDED BLOCK FULL DEPTH OF LINTEL. EXTEND 24" EACH SIDE.

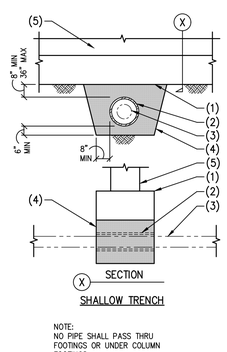
10 TYPICAL OPENING IN MASONRY WALL WITH STEEL OR MASONRY LINTEL
505-76 NO SCALE



NOTES:
1. STEEL STUD.
2. UNPUNCHED STEEL STUD TRACK – ATTACHMENT REQUIRED 1/2" DIA. EXPANSION BOLTS AT 48" O.C. (2 MINIMUM) OR .157 DIA x 3/4" LONG POWDER DRIVEN PINS AT 12" O.C. FASTENER SHALL HAVE I.C.C. REPORT FOR SAME INSTALLATION.
3. MULTIPLE OR INTERSECTING STUDS WHERE OCCUR. CONNECT WITH 2 ROWS #10 S.M. SCREWS AT 24" O.C. STAGGERED SPACING. AT INTERSECTING STUDS 1 ROW OF SCREWS.
4. #10 S.M. SCREWS EACH SIDE, EACH STUD.
5. 2#10 S.M. SCREWS.
6. 4#10 S.M. SCREWS.
7. #10 S.M. SCREWS AT 12" O.C. AT DOUBLE STUDS.
8. STUD BLOCKING.
9. 18 GA CLIP ANGLE BY STUD MFR WITH 3#10 S.M. SCREWS AT EACH STUD WHERE SHOWN IN DETAILS.
10. TYP WELD CLIP TO FRAMING MEMBER OR AS NOTED IN DETAILS.

NOTE:
A. FOR SIZE AND GAGE OF TYPICAL STEEL STUDS, SEE GENERAL STRUCTURAL NOTES. SPECIAL SIZES ARE CALLED OUT ON PLAN AND/OR DETAIL.
B. INSTALL ALL SCREWS PER STEEL STUD MANUFACTURES ASSOC. SPECIFICATIONS.
C. S.M. (SHEET METAL) SCREWS PER G.S.N.

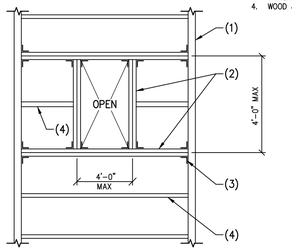
06 TYPICAL STEEL STUD WALL – SCREW CONNECTION
407-22M NO SCALE



NOTES:
1. CONCRETE FOOTING.
2. SLEEVE – PROVIDE 1/2" MINIMUM CLEARANCE AROUND PIPE OR CONDUIT.
3. PIPE OR CONDUIT.
4. CONCRETE FILL TO BE PLACED BEFORE FOOTING IS POURED – FORM SAME AS FOOTING AND POUR FULL WIDTH OF PIPE TRENCH.
5. STEM WALL.
6. 1'-6" MAXIMUM – WHERE TRENCH EXCEEDS 1'-6", NOTIFY STRUCTURAL ENGINEER PRIOR TO PLACEMENT OF FOOTING. BACKFILL AND RECOMPACT TRENCH PER SOILS REPORT AND SPECIFICATIONS.
7. BOTTOM OF TRENCH.

NOTE:
NO PIPE SHALL PASS THRU FOOTINGS OR UNDER COLUMN FOOTINGS.

03 PIPE PASSING UNDER WALL FOOTING
105-30 NO SCALE



NOTES:
1. STEEL JOIST WITH NAILER.
2. DOUBLE 2x6 WITH 16d AT 12" O.C. – STAGGERED.
3. F26-2 JOIST HANGER AT EACH END OF DOUBLE 2x6 – TYPICAL.
4. WOOD JOIST (STIFFENER).

19 TYPICAL SMALL ROOF OPENING
695-51.02M NO SCALE

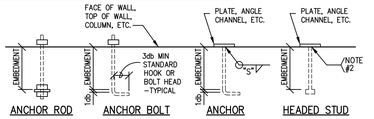
	CLASS B TENSION SPLICE LENGTHS						COMP. BARS
CONC PSI	f'c=2,500/3,000 PSI		f'c = 4,000 PSI		f'c = 5,000 PSI		f'c = ≧ 3,000
BAR LOCATION / SIZE (METRIC)	REGULAR	TOP	REGULAR	TOP	REGULAR	TOP	STD LAP	ENCLOSED W/ SPIRAL TIES
#3 (10)	24"	31"	19"	24"	17"	22"	12"	12"
#4 (13)	32"	41"	25"	32"	22"	29"	15"	12"
#5 (16)	39"	51"	31"	40"	28"	36"	19"	14"
#6 (19)	47"	61"	37"	48"	33"	43"	23"	17"
#7 (22)	69"	89"	54"	70"	49"	63"	26"	20"
#8 (25)	78"	102"	62"	80"	55"	72"	30"	23"
#9 (29)	88"	115"	70"	91"	63"	81"	34"	25"
#10 (32)	99"	129"	79"	102"	70"	91"	38"	28"
#11 (36)	110"	143"	87"	113"	78"	101"	42"	31"

NOTES:
1. TOP BARS ARE ANY HORIZONTAL BARS PLACED SO THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCEMENT.
2. LAP SPLICES SHALL BE CLASS "B" TENSION LAP SPLICES PER LATEST EDITION OF ACI 318 UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS OR SCHEDULES.
3. CONTACT STRUCTURAL ENGINEER IF CLEAR SPACING OF REINFORCEMENT IS LESS THAN OR ≦ EQUAL TO 2 BAR DIAMETERS (2db), OR IF CLEAR COVER IS LESS THAN THE BAR DIAMETER (db).
4. THIS TABLE IS BASED ON NORMAL WEIGHT CONCRETE.
5. FOR ADDITIONAL INFORMATION, SEE G.S.N., PLANS, SCHEDULES AND DETAILS.

15 LAP SCHEDULE FOR REINFORCING STEEL IN CONCRETE
201-31.01 NO SCALE

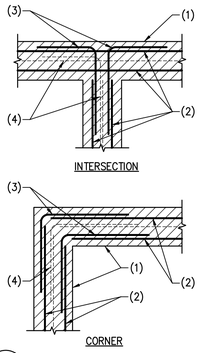
BOLT DIAMETER (db)	VERT BOLT EMBEDMENT LENGTH	HORIZ BOLT EMBEDMENT LENGTH	ANCHOR FILLET WELD SIZE, "S".
1/2"	6"	4"	1/4"
5/8"	6"	4"	5/16"
3/4"	7"	5"	5/16"
7/8"	8"	6"	5/16"
1"	9"	7"	3/8"
1 1/8"	10"	8"	-----
1 1/4"	11"	9"	-----

NOTES:
1. PROVIDE ANCHORS, ANCHOR RODS AND ANCHOR BOLTS PER THIS SCHEDULE UNLESS NOTED OTHERWISE ON PLANS, SCHEDULES OR DETAILS.
2. AUTOMATIC WELDED TO DEVELOP FULL CAPACITY OF HIGH STRENGTH HEADED STUDS.
3. THICKNESS OF DRYPACK DOES NOT APPLY TOWARDS EMBEDMENT.
4. BOLT/PLATE EDGE CLEARANCES PER THE FOLLOWING – TYP U.N.O.:
   3/4" DIA OR LESS – 1 1/4"
   7/8" DIA -------- 1 1/2"
   1" DIA ---------- 1 3/4"
   1 1/8" DIA ------ 2"
   1 1/4" DIA ------ 2 1/4"
   OVER 1 1/4" DIA -- 1.75xDIA



NOTE: SEE G.S.N FOR ADDITIONAL INFORMATION – TYPICAL.

11 TYPICAL ANCHOR ROD, ANCHOR BOLT, ANCHOR AND HEADED STUD SCHEDULE AND BOLT/PLATE EDGE CLEARANCES 401-02 NO SCALE



NOTES:
1. MASONRY WALL.
2. BOND BEAM REINFORCING.
3. CORNER BARS SAME SIZE AND SPACING AS HORIZONTAL REINFORCING – LAP PER TYPICAL DETAIL (24" MINIMUM).
4. SINGLE BAR REINFORCING WHERE OCCURS. ALTERNATE BEND OF CORNER BARS AT INTERSECTION.

NOTE:
SEE TYPICAL DETAIL FOR NON-TOOTHED ABUTTING WALLS AS OCCURS.

07 MASONRY BOND BEAM AT INTERSECTING WALLS
510-01M NO SCALE

FOR ADDITIONAL INFORMATION SHOWN BUT NOT NOTED, SEE GENERAL STRUCTURAL NOTES ON SHEET S1.1 AND TYPICAL DETAIL SHEETS.

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PROJECT NUMBER 24–0696	PROJECT MANAGER BKN
PROJECT ENGINEER BKN	PROJECT DRAFTER EDM

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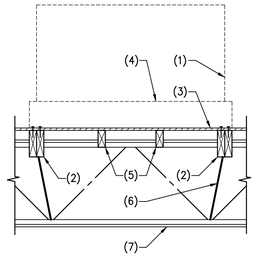
TYPICAL DETAILS

S1.2

Project: 22105

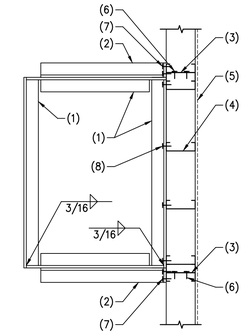


NOTES:

1. MECHANICAL UNIT AND CURB BY OTHERS.
2. DOUBLE JOISTS (PER SCHEDULE BELOW) FROM PURLIN TO PURLIN WITH 16d AT 12" O.C. – STAGGERED BOTH SIDES.
3. PLYWOOD SHEATHING.
4. CURB PER MECH'L UNIT MFR.
5. WOOD JOIST, (STIFFENER).
6. STEEL JOIST PURLIN MAY REQUIRE STRENGTHENING PER DETAIL 311 – VERIFY WITH PURLIN MFR.
7. LINE OF STEEL JOIST PURLIN BEYOND.

WEIGHT OF MECH'L UNIT	SIZE OF DOUBLE JOISTS	JOIST HANGER
650# MAX	2 – 2x6	F26–2
1200# MAX	2 – 2x8	WNP28–2
1600# MAX	2 – 2x10	WNP210–2

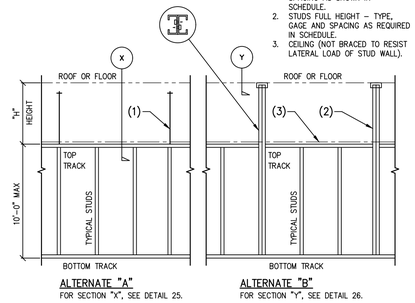
36 MECHANICAL UNIT PLATFORM AT PANELIZED ROOF
640–31.02M NO SCALE



NOTES:

1. 3"x3"x3/16" STEEL ANGLE FRAME.
2. 3"x3"x3/16" STEEL ANGLE BRACE.
3. DOUBLE 6"x22 GA. STUDS AT ANGLE BRACE.
4. 4–6"x22 GA. STUDS AT ANGLE FRAME – EQUALLY SPACED. SHEATHING PER ARCH'L.
5. 2 #10 SCREWS AT EACH STUD.
6. 4 #10 SCREWS AT ANGLE BRACE TO DOUBLE STUDS.
7. 2 #10 SCREWS AT 16" O.C. AT DOUBLE STUD.

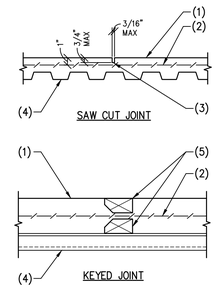
32 PLAN – WATER HEATER SUPPORT FRAME
24–0696 NO SCALE



NOTES:

1. DIAGONAL TENSION BRACING AT SPACING AS SHOWN IN SCHEDULE.
2. STUDS FULL HEIGHT – TYPE, GAGE AND SPACING AS REQUIRED IN SCHEDULE.
3. CEILING (NOT BRACED TO RESIST LATERAL LOAD OF STUD WALL).

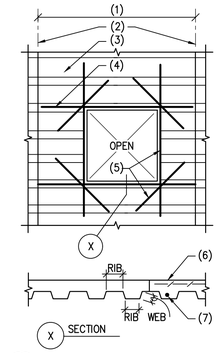
28 ELEVATION–NON BEARING CEILING HEIGHT INTERIOR WALL BRACING TO FLOOR/ROOF
407–86M NO SCALE



NOTES:

1. CONCRETE OVER STEEL DECK – FOR DIRECTION OF DECK, SEE PLAN.
2. WELDED WIRE FABRIC – CONTINUOUS THRU CONTROL JOINT.
3. SAW CUT SHALL BE MADE SOON ENOUGH TO PREVENT CRACKING, BUT NOT SO SOON AS TO CAUSE SPALLING OF THE CONCRETE WHILE SAWING.
4. STEEL DECK.
5. WOOD BLOCK WITH 3/4" CHAMFER AS SHOWN (TO BE REMOVED).

24 CONTROL JOINTS IN CONCRETE OVER STEEL DECK
401–51 NO SCALE



NOTES:

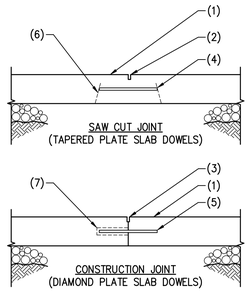
1. SPACING OF SUPPORT MEMBER.
2. CENTERLINE OF SUPPORT MEMBER.
3. STEEL DECK.
4. 1 #5 EACH SIDE OF OPENING.
5. #4 x 4'–0" – TYPICAL.
6. BLOCK OUT CONCRETE FOR OPENING. DO NOT CUT DECK UNTIL ADJACENT CONCRETE HAS REACHED DESIGN STRENGTH–DO NOT OVER CUT.
7. 1 #5 CONTINUOUS BETWEEN SUPPORT.

NOTE:
WHEN ONE RIB IS CUT NO REINFORCING IS REQUIRED.

WHEN TWO RIBS ARE CUT AND ADJACENT OPENINGS ARE GREATER THAN 4'–0" O.C., REINFORCE SLAB AS SHOWN.

WHEN MORE THAN TWO RIBS ARE CUT OR OPENINGS ARE CLOSER THAN 4'–0" O.C., FRAME OPENING WITH TYPICAL DETAIL USING STEEL ANGLES PER DETAILS 22 AND 23.

21 TYPICAL SMALL OPENING IN CONCRETE OVER STEEL DECK
401–55.26M NO SCALE



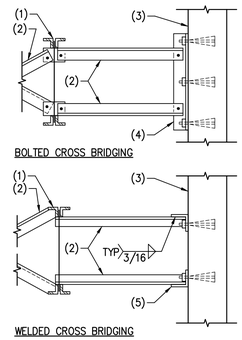
NOTES:

1. CONCRETE SLAB ON GRADE.
2. SAWCUT – 1/8" WIDE x 1/4 SLAB THICKNESS IN DEPTH – CUT SHALL BE MADE SOON ENOUGH TO PREVENT SHRINKAGE CRACKING, BUT NOT SO SOON AS TO CAUSE SPALLING OF THE CONCRETE WHILE SAWING. WORK MUST BE ACCOMPLISHED WITHIN 4 TO 12 HOURS OF CONCRETE FINISH.
3. BUTT JOINT WITH 1" SAWCUT.
4. TAPERED PLATE SLAB DOWELS REQUIRED AT SAWCUT JOINTS. SEE SAWCUT JOINT TAPERED PLATE DOWEL SCHEDULE DETAIL 34. LOCATE AT MIDHEIGHT OF SLAB JOINT.
5. DIAMOND PLATE SLAB DOWELS REQUIRED AT CONSTRUCTION JOINTS. SEE CONSTRUCTION JOINT DIAMOND PLATE DOWEL SCHEDULE DETAIL 35. LOCATE AT MIDHEIGHT OF SLAB JOINT.
6. LINE OF PREFAB DOWEL BASKET.
7. LINE OF PREFAB POCKET FORMER.

NOTE:
CONSTRUCTION JOINT SPACING SHALL NOT EXCEED 125'–0" ON CENTER.

NOTE: BUTT JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING PLACEMENT UNLESS SPECIFICALLY NOTED ON THE PLANS.

33 CONTROL JOINTS IN CONCRETE SLAB ON GRADE
(H)101–01.02 NO SCALE

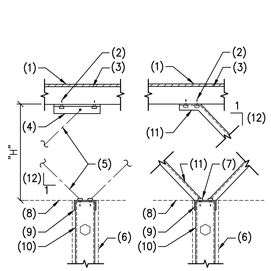


NOTES:

1. STEEL JOIST.
2. BRIDGING AS REQUIRED BY JOIST MANUFACTURER.
3. WALL – FOR SIZE AND TYPE, SEE PLAN.
4. STEEL ANGLE 3"x3"x1/4"x AS REQUIRED WITH (3) 5/8" DIA EXPANSION BOLTS.
5. STEEL ANGLE 3"x3"x1/4"x10" LONG WITH (2) 5/8" DIA EXPANSION BOLT.

NOTE:
AT MASONRY WALLS, INSTALL EXPOXIED ANCHORS PER G.S.N. IN SOLID GROUTED CELLS, IN LIEU OF EXPANSION BOLTS.

29 STEEL JOIST CROSS BRIDGING AT WALL
434–41.02 NO SCALE

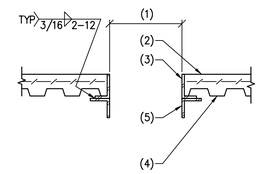


NOTES:

1. PLYWOOD SHEATHING.
2. 2 #10 WOOD SCREWS.
3. WOOD JOIST – INSTALL 2x BLOCKING WHERE REQUIRED.
4. STEEL ANGLE 1 1/2"x1 1/2"x18 GA. x 12" LONG.
5. NO. 12 GAGE WIRES LOOPED AROUND TRACK AT STUD.
6. WALL COVERING WHERE OCCURS.
7. 2 #10 S.M. SCREWS AT EACH BRACE.
8. CEILING LINE.
9. TOP TRACK.
10. STUD AT BRACE ATTACH TO TRACK.
11. DIAGONAL TENSION BRACE – 362S125–18 STUD EACH SIDE.
12. "1" VERT WHERE "H" IS 8'–0" OR LESS. "2" MAX WHERE "H" IS GREATER THAN 8'–0".

NOTE:
S.M. (SHEET METAL) SCREWS PER G.S.N.

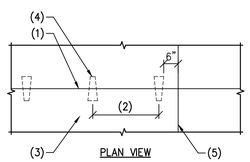
25 NON BEARING TOP TRACK SUPPORT DETAIL – TOP CONNECTION
407–88.01M NO SCALE



NOTES:

1. WIDTH OF OPENING.
2. CONCRETE OVER STEEL DECK – FOR DIRECTION OF DECK, SEE PLAN.
3. 3/16" BENT STEEL PLATE.
4. STEEL DECK.
5. STEEL ANGLE FRAME PER DETAIL 23.

22 FRAMING AROUND OPENING IN STEEL DECK
401–54M NO SCALE



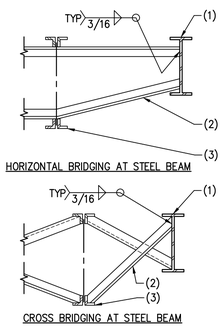
NOTES:

1. SAWCUT CONTROL JOINT.
2. SPACING PER SCHEDULE, LOCATE 6" FROM CORNERS OR TRANSVERSE JOINTS.
3. CONCRETE SLAB.
4. FLAT TAPERED PLATE DOWEL.
5. TRANSVERSE JOINT AS OCCURS.

SCHEDULE		
SLAB THICKNESS	TAPERED PLATE SIZE	TAPERED PLATE SPACING
5" TO 6"	3/8" x 2" x 12"	18" O.C.
7" TO 8"	1/2" x 2 1/2" x 12"	18" O.C.
9" TO 11"	3/4" x 2 1/2" x 12"	18" O.C.

NOTE:
INSTALL "PNA" TAPERED PLATE DOWELS, AND BASKET ASSEMBLY OR APPROVED MANUFACTURED EQUIVALENT PER MANUFACTURERS RECOMMENDATIONS. LOCATE AT MID HEIGHT OF SLAB JOINT. PLATE SIZE WIDTH IS AVERAGE WIDTH ACROSS JOINTS.

34 SAWCUT JOINT TAPERED PLATE DOWEL SCHEDULE
101–01.15 NO SCALE

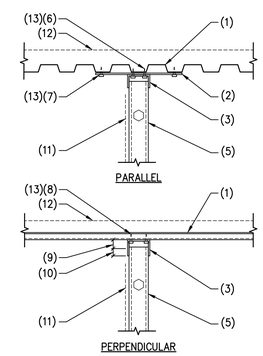


NOTES:

1. STEEL BEAM.
2. BRIDGING PER MFR'S RECOMMENDATIONS – FOR CONNECTION AT JOIST, SEE OTHER DETAILS.
3. STEEL JOIST.

NOTE:
FOR CLARITY, STEEL DECK OMITTED. FOR ADDITIONAL INFORMATION, SEE PLAN AND G.S.N.

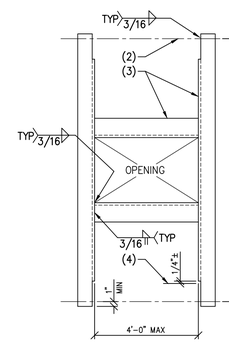
30 STEEL JOIST BRIDGING TO STEEL BEAM
434–41.01 NO SCALE



NOTES:

1. STEEL DECK WHERE OCCURS.
2. 18 GA x 4"x6" PLATE AT 48" O.C.
3. CONTINUOUS DEEP LEG SLIP TRACK.
4. NOT USED.
5. STEEL STUD WALL.
6. 2 #10 SCREWS EACH PLATE.
7. 3 #10 SCREWS AT RIBS.
8. #10 SCREWS AT 12" O.C. – STAGGER SIDES.
9. 1" CLEAR MIN – TYP.
10. 1" MIN – TYP.
11. WALL COVERING WHERE OCCURS – DO NOT ATTACH TO SLIP TRACK OR BENT PLATE.
12. CONCRETE SLAB WHERE OCCURS.
13. SUBSTITUTE HILTI DN .148" DIA POWDER DRIVEN SCREWS AT CONCRETE SLAB

26 TYPICAL NON–BEARING STEEL STUD TOP TRACK CONNECTION
407–81M NO SCALE

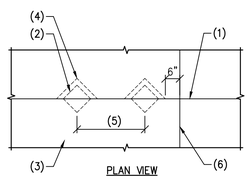


NOTES:

1. SEE PLAN FOR SPACING (8'–0" MAXIMUM).
2. CENTERLINE OF FRAMING MEMBER.
3. ANGLE 4"x4"x1/4".
4. FACE OF FRAMING MEMBER.

NOTE:
A. FOR CLARITY, ROOF DECK OMITTED.
B. VERIFY OPENING SIZE WITH APPROPRIATE TRADE.

23 PLAN – TYPICAL OPENING IN FRAMING
401–55.01 NO SCALE



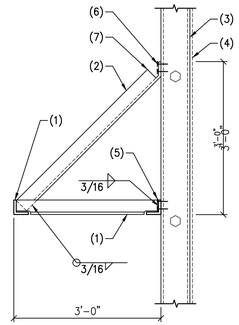
NOTES:

1. CONSTRUCTION JOINT.
2. DIAMOND SHAPED LOAD PLATE.
3. CONCRETE SLAB.
4. EXPANSION SLEEVE.
5. SPACING PER SCHEDULE, LOCATE 6" FROM CORNERS OR TRANSVERSE JOINTS.
6. TRANSVERSE JOINT AS OCCURS.

SCHEDULE		
SLAB THICKNESS	DIAMOND PLATE SIZE	DIAMOND PLATE SPACING
5" TO 6"	1/4" x 4 1/2" x 4 1/2"	18" O.C.
7" TO 8"	3/8" x 4 1/2" x 4 1/2"	18" O.C.
9" TO 11"	3/4" x 4 1/2" x 4 1/2"	18" O.C.

NOTE:
INSTALL "PNA" DIAMOND PLATE DOWELS OR APPROVED MANUFACTURED EQUIVALENT PER MANUFACTURERS RECOMMENDATIONS. LOCATE AT MID HEIGHT OF SLAB JOINT. ATTACH TO EDGE FORM WITH PREFABRICATED ALIGNMENT PIECE.

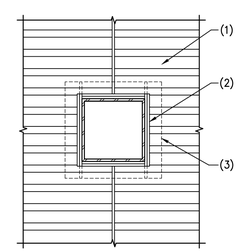
35 CONSTRUCTION JOINT DIAMOND PLATE DOWEL SCHEDULE
101–01.17 NO SCALE



NOTES:

1. 3"x3"x3/16" STEEL ANGLE FRAME.
2. 3"x3"x3/16" STEEL ANGLE BRACE.
3. STEEL STUDS PER SK28.
4. SHEATHING PER ARCH'L.
5. 2 #10 SCREWS AT EACH STUD.
6. 4 #10 SCREWS AT ANGLE ATTACHMENT.
7. COPE VERTICAL LEG AND BEND HORIZONTAL LEG AS REQUIRED.

31 SECTION – WATER HEATER SUPPORT FRAME
24–0696 NO SCALE



NOTES:

1. STEEL DECK – FOR DIRECTION OF DECK, SEE PLAN.
2. FIELD CUT STEEL DECK TO CLEAR COLUMN – PROVIDE AND INSTALL SHEET METAL FILLERS, FLASHING, CLOSURES, ETC. AS REQUIRED. TACK WELD IN PLACE.
3. ANGLE 3"x3"x1/4" WELDED TO COLUMN AND BEAM AS REQUIRED TO SUPPORT STEEL DECK RIBS.

27 PLAN – STEEL DECK AT COLUMN
401–76 NO SCALE

FOR ADDITIONAL INFORMATION SHOWN BUT NOT NOTED, SEE GENERAL STRUCTURAL NOTES ON SHEET S1.1 AND TYPICAL DETAIL SHEETS.

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PROJECT NUMBER	24–0696	PROJECT MANAGER	BKN
PROJECT ENGINEER	BKN	PROJECT DRAFTER	EDM

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TYPICAL DETAILS

S1.3

Project: 22105

JOIST (J) SCHEDULE

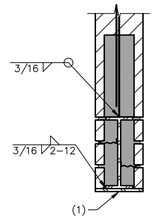
928–22

NOTE:
1. TYPICAL JOIST SPACING = 8'–0" O.C. MAX. PROVIDE JOIST LAYOUT AS SHOWN ON PLAN.
2. USE 1/2" X 6" X 9" STEEL BEARING PLATE WITH 2–3/4" DIA ANCHORS – TYP U.N.O.
3. FOR ADDITIONAL INFORMATION, SEE G.S.N., PLAN(s) AND DETAILS.
4. LIVE LOAD SHOWN HAS BEEN REDUCED.
5. FUTURE MECHANICAL LOAD PER G.S.N., IS NOT INCLUDED.
6. MFR SHALL DESIGN ALL JOIST TOP CHORDS AND JOIST SEATS TO TRANSFER 6.3K (0.7E), 3.7 (0.6W) AXIAL – TYP U.N.O.
7. JOIST DEAD LOAD = 16 PSF (INCLUDES 2 PSF SELF–WEIGHT).

MARK	DEPTH	TYPE	LOAD PLF		REMARKS
			TOTAL	LIVE	
J1	30"	K	256	128	·

STEEL LINTEL (SL) SCHEDULE

937–12



NOTES:
1. CONTINUOUS 1/4" X 7 1/2" STEEL PLATE. FOR 12" WALLS, SEE BELOW.
2. WHEN SPAN EXCEEDS 6'–8", SHORE LINTEL DURING INSTALLATION.
3. WELD DOWELS TO LINTELS TO MATCH AND LAP VERTICAL WALL REINFORCING.
4. GROUT ALL CELLS SOLID TO 1'–4" MINIMUM ABOVE LINTELS.
5. USE VENEER TIES AT 16" O.C. EACH SIDE OF BEAM. TACK WELD TIES TO WEB OF BEAM.
6. EXTEND BOTTOM PLATE TO END OF BEAM.
7. 5" MINIMUM BEARING EACH END UNLESS NOTED OTHERWISE. INSTALL ON FRESH MORTAR BED.
8. WELD ALL LINTEL STEEL CONTINUOUS FOR LENGTH OF BEARING EACH END.

MARK	LINTEL SIZE	REMARKS
SL1	W24x55	---
SL2	W24x62	---
SL3	W16x36	---

GIRDER (G) SCHEDULE

928–26

NOTE:
1. LIVE LOAD SHOWN HAS BEEN REDUCED.
2. MFR SHALL DESIGN ALL GIRDER TOP CHORDS FOR 39.2K (0.7E), 22.7 (0.6W) AXIAL LOAD.
3. FUTURE 1K ADD LOAD AT EACH PANEL POINT PER G.S.N. IS INCLUDED IN PANEL POINT LOADS.
4. FOR ADDITIONAL INFORMATION, SEE G.S.N., PLAN(s) AND DETAILS.

MARK	DEPTH	JOIST SPACES	KIP LOAD AT PANEL POINT		REMARKS
			TOTAL	LIVE	
G1	36"	6	13.0	5.0	---

STEEL LEDGER (L) SCHEDULE

934–03

STEEL LEDGER NOTES:
1. ALL LEDGERS SHALL HAVE MINIMUM OF 2 WELD PLATES OR ANCHOR BOLTS AS NOTED BELOW.
2. WELD PLATES OR ANCHOR BOLTS SHALL BE LOCATED NOT LESS THAN 6" NOR MORE THAN 1'–4" FROM END OF LEDGER OR LEDGER SPLICE.
3. FOR ADDITIONAL INFORMATION, SEE PLAN AND TYPICAL DETAILS, AND GENERAL STRUCTURAL NOTES.

MARK	SIZE	CONNECTION
L1	4"x4"x1/4"	WELD PLATES CENTERED BETWEEN BEAMS
L2	4"x4"x1/4"	WELD PLATES AT 48" O.C.

BEAM (B) SCHEDULE

919–01

MARK	SIZE	CAMBER	REMARKS
B1	HSS 8x4x1/4	·	CANOPY FRAMING

COLUMN (C) SCHEDULE

910–01

NOTE: FOR ANCHOR BOLT PATTERN, SEE TYPICAL DETAIL 12

MARK	SIZE	BASE CONNECTION	BOLT PATTERN AND/OR REMARKS
C1	HSS8x8x5/16	3/4"x12"x12" STEEL PLATE WITH (4) 3/4" DIA. ANCHOR BOLTS	A
C2	HSS6x6x1/4	3/4"x12"x12" STEEL PLATE WITH (4) 3/4" DIA. ANCHOR BOLTS	A
C3	HSS4x4x1/4	3/8"x14"x4" STEEL PLATE WITH (4) 3/4" DIA. ANCHOR BOLTS	A

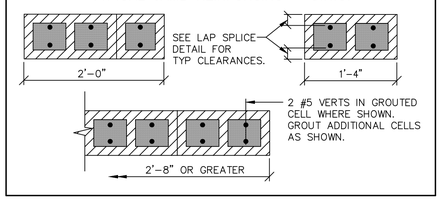
MASONRY WALL REINFORCING (W) SCHEDULE

913–06

NOTE:
1. ALL REINFORCING SHOWN ON PLAN AND AS NOTED BELOW SHALL BE FULL HEIGHT OF WALL U.N.O.
2. FOR LAP SPLICES, SEE TYPICAL DETAIL.
3. HORIZONTAL REINFORCING PER G.S.N. U.N.O.

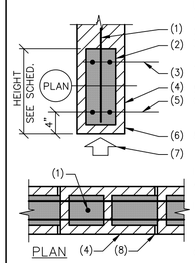
MARK	VERTICAL REINFORCING	REMARKS
W1	#5 AT 32" O.C. EACH FACE	---
W2	#5 AT 48" O.C. EACH FACE	---

TYPICAL JAMB REINFORCING – U.N.O.



MASONRY LINTEL (ML) SCHEDULE

937–01



NOTES:
1. VERTICAL WALL REINFORCING.
2. TOP OF SOLID GROUT.
3. TOP REINFORCING WHERE INDICATED IN LINTEL SCHEDULE.
4. OPEN END BLOCKS – BLOCKS OPEN ONE SIDE.
5. REINFORCING – SEE SCHEDULE.
6. LINTEL "U" BLOCK.
7. SHORE LINTEL UNTIL GROUT REACHES DESIGN STRENGTH.
8. FULL MORTAR JOINTS ON VERTICAL AND HORIZONTAL FACE SHELLS.

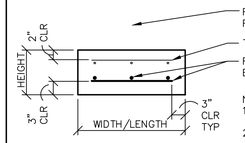
NOTE:
A. VERTICAL REINFORCING TO MATCH AND LAP WALL REINFORCING PER G.S.N.
B. EXTEND GROUT, OPEN END MASONRY UNITS AND REINFORCING 24" PAST EACH JAMB. INSTALL CORNER BARS WHERE 24" CANNOT BE ACHIEVED.
C. DO NOT LAP SPLICE REINFORCING IN SINGLE SPAN LINTELS. WHERE SPLICES ARE REQUIRED IN MULTIPLE SPANS, LAP BOTTOM REINFORCING AT SUPPORTS AND TOP REINFORCING AT MIDSPAN.
D. FOR CONTROL JOINTS IN MASONRY LINTELS, SEE DETAIL 316 AND 317.

SEE G.S.N. FOR ADDITIONAL INFORMATION.

MARK	HEIGHT	REINFORCING	REMARKS
ML1	48"	2 #6 AT BOTTOM 2 #6 ONE COURSE ABOVE BOTTOM	12" BLOCK EXTEND BARS 54" PAST EACH JAMB
ML2	40"	2 #5 AT BOTTOM	12" BLOCK
ML3	32"	2 #5 AT BOTTOM	12" BLOCK
ML4	16"	2 #5 AT BOTTOM	12" OR 8" BLOCK

ISOLATED FOOTING (F) SCHEDULE

901–11

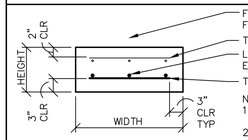


NOTE:
1. FOR DEPTH OF FOOTING, SEE G.S.N. U.N.O.
2. CENTER FOOTING ON CONSTRUCTION ABOVE U.N.O.

MARK	DIMENSIONS			FOOTING REINFORCING	REMARKS
	HEIGHT	WIDTH	LENGTH		
F1	12"	6'–0"	6'–0"	6 #5 EACH WAY	---
F2	12"	3'–0"	3'–0"	3 #5 EACH WAY	---
F3	12"	3'–9"	3'–9"	4 #5 EACH WAY	---

CONTINUOUS FOOTING (WF) SCHEDULE

901–01



NOTE:
1. FOR DEPTH OF FOOTING, SEE G.S.N. U.N.O.
2. CENTER FOOTING ON CONSTRUCTION ABOVE U.N.O.
3. EXTEND FOOTINGS 12" BEYOND JAMBS U.N.O.

MARK	DIMENSIONS		FOOTING REINFORCING		REMARKS
	HEIGHT	WIDTH	LONGITUDINAL	TRANSVERSE	
WF1	12"	2'–0"	2 #5	·	---
WF2	12"	3'–0"	3 #5	·	---
WF3	12"	3'–6"	3 #5	·	---
WF4	12"	4'–6"	4 #5 TOP AND BOTTOM	#5 AT 24" O.C. TOP AND BOTTOM	---

FOR ADDITIONAL INFORMATION SHOWN BUT NOT NOTED, SEE GENERAL STRUCTURAL NOTES ON SHEET S1.1 AND TYPICAL DETAIL SHEETS.

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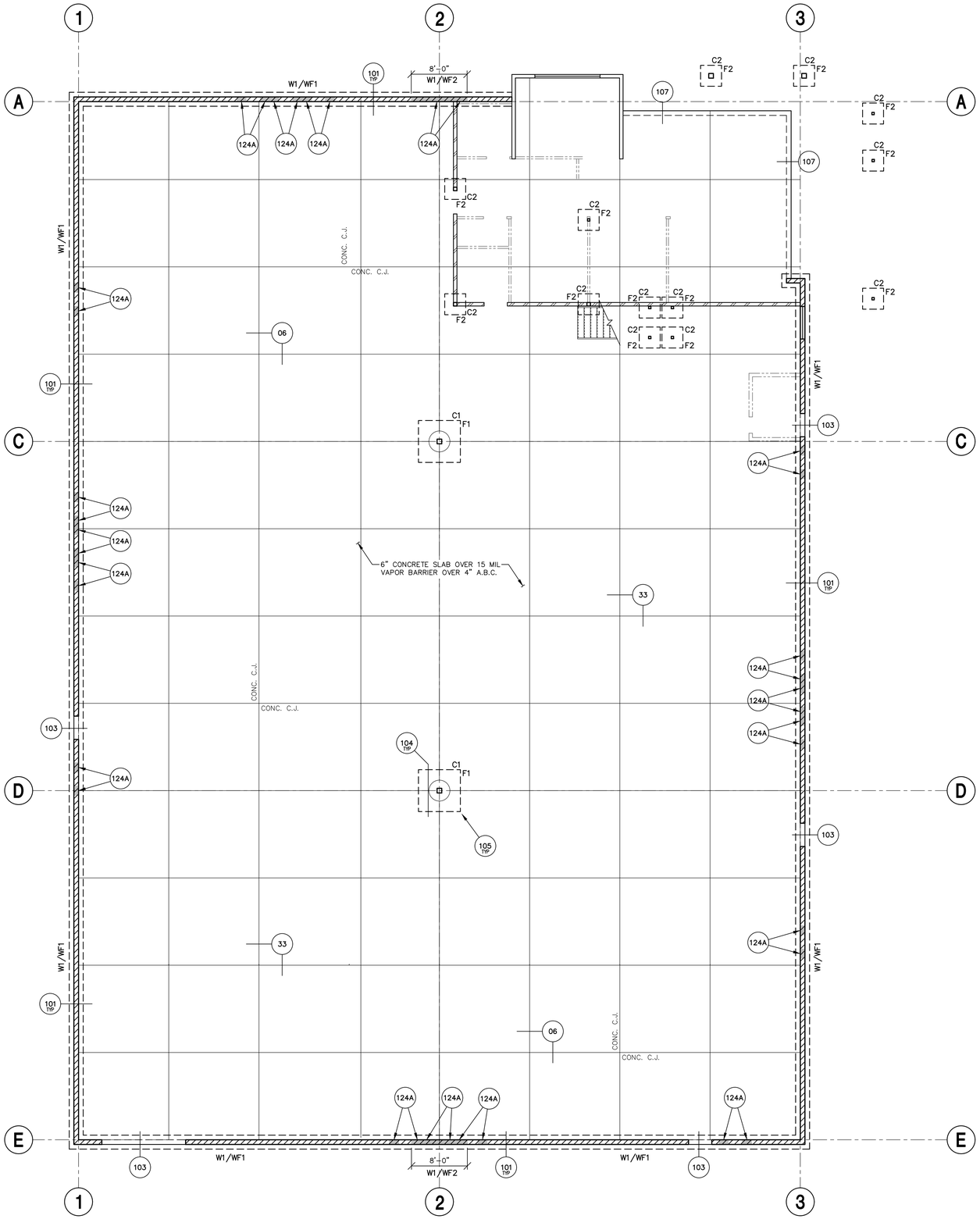
SCHEDULES

S1.4

Project: 22105



FOUNDATION NOTES – TYP U.N.O.:

1. **VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS AND FIELD CONDITIONS. BUILDING DIMENSIONS AND ELEVATIONS, WHERE SHOWN, WERE PROVIDED BY THE ARCHITECT AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND COORDINATE ALL DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK. ANY DISCREPANCIES SHALL BE RESOLVED THROUGH THE ARCHITECT.**
2. SCHEDULED MARK DESIGNATIONS ARE TYPICAL TO THE PROJECT AND MAY NOT NECESSARILY BE FOUND ON THIS PLAN.
3. (X), (X), ETC. – AS SHOWN ON PLAN INDICATES KEYNOTES, SEE FOUNDATION KEYNOTES ON THIS SHEET. KEYNOTE DESIGNATIONS ARE TYPICAL TO THE PROJECT AND MAY NOT NECESSARILY BE FOUND ON THIS PLAN.
4. – AS SHOWN ON PLAN INDICATES 8" MASONRY WALL, SEE G.S.N., TYPICAL DETAILS, PLANS AND DETAILS FOR ADDITIONAL INFORMATION. ALL REINFORCING SHOWN AND/OR NOTED SHALL BE FULL HEIGHT OF WALL – TYP U.N.O.
5. – AS SHOWN ON PLAN INDICATES STEEL STUD WALL, SEE PLAN FOR SIZES. STEEL STUDS SHALL BE SPACED AT 16" O.C. FOR LINTELS IN STEEL STUD WALLS, SEE DETAIL 114 – TYP U.N.O. SEE G.S.N., TYPICAL DETAILS, PLANS AND OTHER DETAILS FOR ADDITIONAL INFORMATION.
6. – AS SHOWN ON PLAN INDICATES NON-STRUCTURAL ARCHITECTURAL WALL. FOR ADDITIONAL INFORMATION, SEE ARCH'L DRAWINGS, G.S.N. AND TYPICAL DETAILS, OR AS NOTED ON PLANS AND DETAILS.
7. – AS SHOWN ON PLAN INDICATES STRUCTURAL BEARING AND/OR SHEAR WALL BELOW.
8. WF1, WF2, ETC – AS SHOWN ON PLAN INDICATES CONTINUOUS WALL FOOTING, SEE SCHEDULE THIS SHEET.
9. F1, F2, ETC – AS SHOWN ON PLAN INDICATES ISOLATED FOOTING, SEE SCHEDULE THIS SHEET.
10. UNLESS NOTED OTHERWISE ON PLANS AND/OR DETAILS, DEPTH OF FOOTING DIMENSIONS INDICATED IN THE G.S.N. ARE MINIMUMS. FOUNDATION CONTRACTOR SHALL COORDINATE WITH SOIL REPORT AND ALL TRADES TO INSURE THAT THESE MINIMUMS ARE SUFFICIENT FOR THE WORK. SEE TYPICAL DETAILS FOR ADDITIONAL REQUIREMENTS.
11. C1, C2, ETC – AS SHOWN ON PLAN INDICATES STEEL COLUMN, SEE SCHEDULE THIS SHEET.
12. W1, W2, ETC – AS SHOWN ON PLAN INDICATES MASONRY WALL REINFORCING, SEE SCHEDULE THIS SHEET. FOR ADDITIONAL INFORMATION, SEE G.S.N.
13. BUILDING CONCRETE SLAB ON GRADE SHALL BE AS NOTED ON PLAN. VERIFY EXACT SIZE AND LOCATION OF DEPRESSED AND/OR RAISED SLABS WITH ARCH'L DRAWINGS. FOR SIDEWALK LOCATION, SEE ARCH'L DRAWINGS. FOR ADDITIONAL INFORMATION, SEE G.S.N. AND TYPICAL DETAILS.
14. CONC C.J. – AS SHOWN ON PLAN INDICATES LOCATION OF EITHER KEYED OR SAWCUT CONTROL JOINT IN CONCRETE SLAB ON GRADE AT CONTRACTOR'S OPTION, SEE G.S.N. AND TYPICAL DETAILS.
15. MAS C.J. – AS SHOWN ON PLAN INDICATES MASONRY CONTROL JOINT IN MASONRY WALL AND/OR LINTEL, SEE G.S.N. AND TYPICAL DETAILS. JOINTS ARE FULL HEIGHT OF STRUCTURE U.N.O.
16. COLUMN FOOTING SIZES ARE PRELIMINARY SIZES TO BE VERIFIED BY STRUCTURAL ENGINEER OF RECORD PRIOR TO CONSTRUCTION. PRE-ENGINEERED BUILDING MANUFACTURER SHALL SUBMIT DESIGN CALCULATIONS PRIOR TO FABRICATING BUILDING COMPONENTS. CALCULATIONS SHALL SHOW ALL FOOTING LOADS PER METAL BUILDING MANUFACTURER'S ASSOCIATION RECOMMENDED DESIGN PRACTICES MANUAL.
17. CONCRETE TOPPINGS SHALL BE AS NOTED ON PLAN. VERIFY EXACT SIZE AND LOCATION OF DEPRESSED AND/OR RAISED SLABS WITH ARCH'L DRAWINGS. CONTROL JOINTS SHALL BE PER G.S.N. AND TYPICAL DETAILS. FOR ADDITIONAL INFORMATION, SEE G.S.N. AND DETAILS. CONTRACTOR TO VERIFY, AND BE RESPONSIBLE FOR VARIATIONS IN CONCRETE QUANTITY DUE TO CAMBER, CONSTRUCTION DEAD LOAD DEFLECTIONS, AND/OR TOLERANCES OF STRUCTURAL ELEMENTS (i.e. BEAMS, DECK, ETC.).
18. THE EXISTING CONDITIONS DEPICTED ON THESE DRAWINGS ARE BASED ON THE BEST AVAILABLE INFORMATION AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER IMMEDIATELY.

FOUNDATION PLAN

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

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PROJECT NUMBER	24–0696	PROJECT MANAGER	BKN
PROJECT ENGINEER	BKN	PROJECT DRAFTER	EDM

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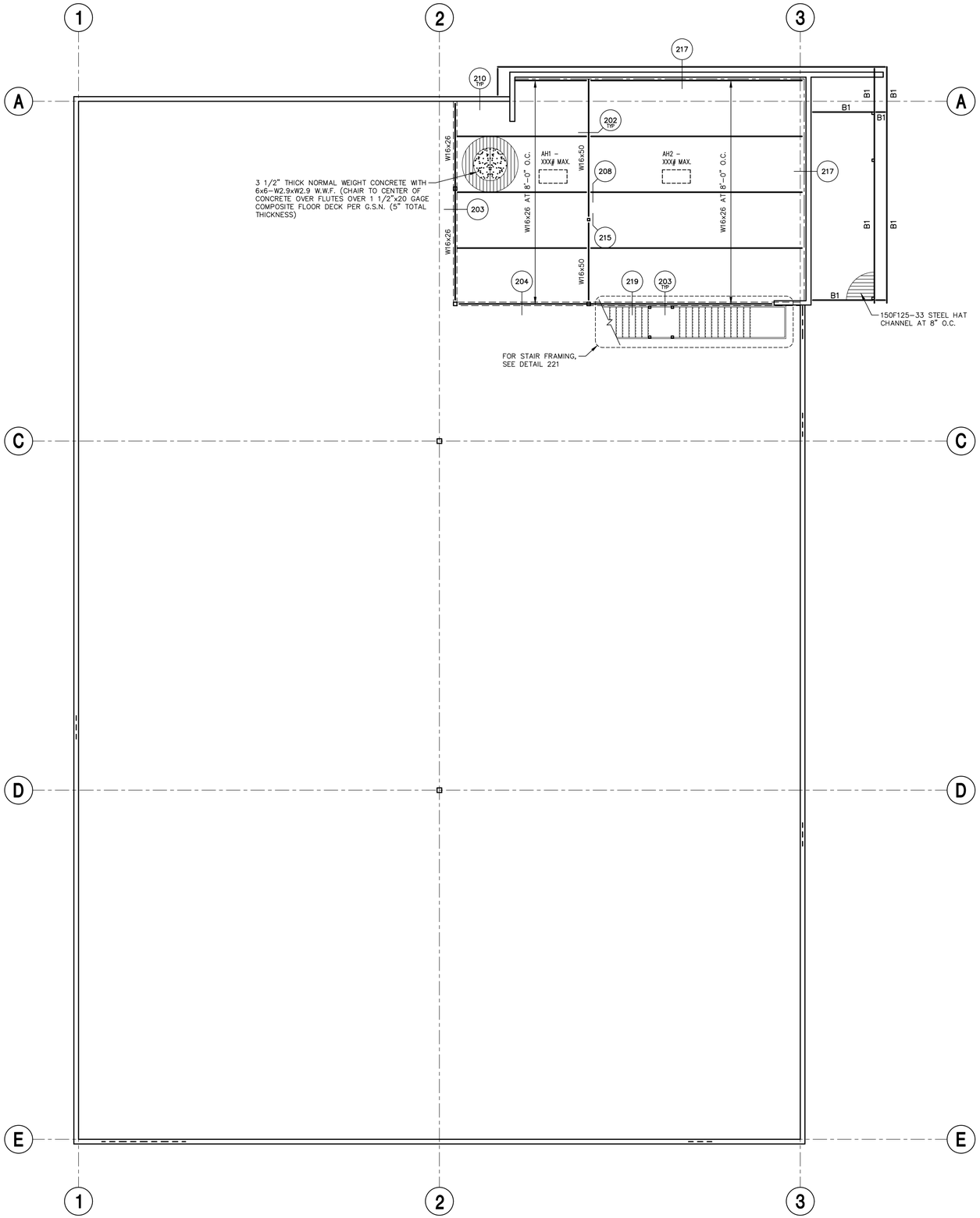
FOUNDATION PLAN

Project: 22105

S2.1



FLOOR FRAMING NOTES – TYP U.N.O.:

1. **VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS AND FIELD CONDITIONS. BUILDING DIMENSIONS AND ELEVATIONS, WHERE SHOWN, WERE PROVIDED BY THE ARCHITECT AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND COORDINATE ALL DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK. ANY DISCREPANCIES SHALL BE RESOLVED THROUGH THE ARCHITECT.**
2. SCHEDULED MARK DESIGNATIONS ARE TYPICAL TO THE PROJECT AND MAY NOT NECESSARILY BE FOUND ON THIS PLAN.
3. (X), (X), ETC. – AS SHOWN ON PLAN INDICATES KEYNOTES, SEE FLOOR FRAMING KEYNOTES ON THIS SHEET. KEYNOTE DESIGNATIONS ARE TYPICAL TO THE PROJECT AND MAY NOT NECESSARILY BE FOUND ON THIS PLAN.
4. – AS SHOWN ON PLAN INDICATES 8" MASONRY WALL, SEE G.S.N., TYPICAL DETAILS, PLANS AND DETAILS FOR ADDITIONAL INFORMATION. ALL REINFORCING SHOWN AND/OR NOTED SHALL BE FULL HEIGHT OF WALL – TYP U.N.O.
5. – AS SHOWN ON PLAN INDICATES STEEL STUD WALL, SEE PLAN FOR SIZES. STEEL STUDS SHALL BE SPACED AT 16" O.C. FOR LINTELS IN STEEL STUD WALLS, SEE DETAIL 114 – TYP U.N.O. SEE G.S.N., TYPICAL DETAILS, PLANS AND OTHER DETAILS FOR ADDITIONAL INFORMATION.
6. – AS SHOWN ON PLAN INDICATES NON–STRUCTURAL ARCHITECTURAL WALL. FOR ADDITIONAL INFORMATION, SEE ARCH'L DRAWINGS, G.S.N. AND TYPICAL DETAILS, OR AS NOTED ON PLANS AND DETAILS.
7. – AS SHOWN ON PLAN INDICATES STRUCTURAL BEARING AND/OR SHEAR WALL BELOW.
8. ML1, ML2, ETC – AS SHOWN ON PLAN INDICATES MASONRY LINTEL, SEE SCHEDULE THIS SHEET, G.S.N. AND TYPICAL DETAILS.
9. SL1, SL2, ETC – AS SHOWN ON PLAN INDICATES STEEL LINTEL, SEE SCHEDULE THIS SHEET, G.S.N. AND TYPICAL DETAILS.
10. FOR MISCELLANEOUS LINTELS NOT SHOWN, SEE G.S.N. AND TYPICAL DETAILS. MASONRY CONTRACTOR SHALL COORDINATE WITH OTHER TRADES FOR EXACT SIZE AND LOCATION REQUIREMENTS.
11. L1, L2, ETC – AS SHOWN ON PLAN INDICATES STEEL LEDGER, SEE SCHEDULE THIS SHEET, G.S.N. AND TYPICAL DETAILS.
12. MAS C.J. – AS SHOWN ON PLAN INDICATES MASONRY CONTROL JOINT IN MASONRY WALL AND/OR LINTEL, SEE G.S.N. AND TYPICAL DETAILS. JOINTS MAY BE SHOWN, BUT NOT NOTED ON THIS PLAN. SEE FOUNDATION PLAN FOR NOTED LOCATIONS.
13. CONCRETE TOPPING SHALL BE AS NOTED ON PLAN. VERIFY EXACT SIZE AND LOCATION OF DEPRESSED AND/OR RAISED SLABS WITH ARCH'L DRAWINGS. CONTROL JOINTS SHALL BE PER G.S.N. AND TYPICAL DETAILS. FOR ADDITIONAL INFORMATION, SEE G.S.N. AND DETAILS. CONTRACTOR TO VERIFY, AND BE RESPONSIBLE FOR VARIATIONS IN CONCRETE QUANTITY DUE TO CAMBER, CONSTRUCTION DEAD LOAD DEFLECTIONS, AND/OR TOLERANCES OF STRUCTURAL ELEMENTS (i.e. BEAMS, DECK, ETC.).
14. FOR CLARITY, DETAILS MAY SHOW ONLY ONE SIDE OF FRAMING CONDITIONS. ALL OPENINGS MAY NOT BE SHOWN ON THIS PLAN. FOR EXACT SIZE, NUMBER AND LOCATION OF OPENINGS, SEE ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, SPRINKLER AND THEIR RELATED DRAWINGS. FOR FRAMING AT OPENINGS, SEE TYPICAL DETAILS.
15. VERIFY EXACT SIZE, WEIGHT AND LOCATION OF EQUIPMENT AND SUPPORTS INDICATED ON PLAN WITH ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, SPRINKLER AND THEIR RELATED DRAWINGS. EQUIPMENT INDICATED ARE ONLY THOSE THAT EXCEED LOADS SPECIFIED IN THE G.S.N. FOR SUPPORT OF EQUIPMENT, SEE TYPICAL DETAILS AND OTHER TRADES.
16. THE EXISTING CONDITIONS DEPICTED ON THESE DRAWINGS ARE BASED ON THE BEST AVAILABLE INFORMATION AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER IMMEDIATELY.

MEZZANINE FRAMING PLAN

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

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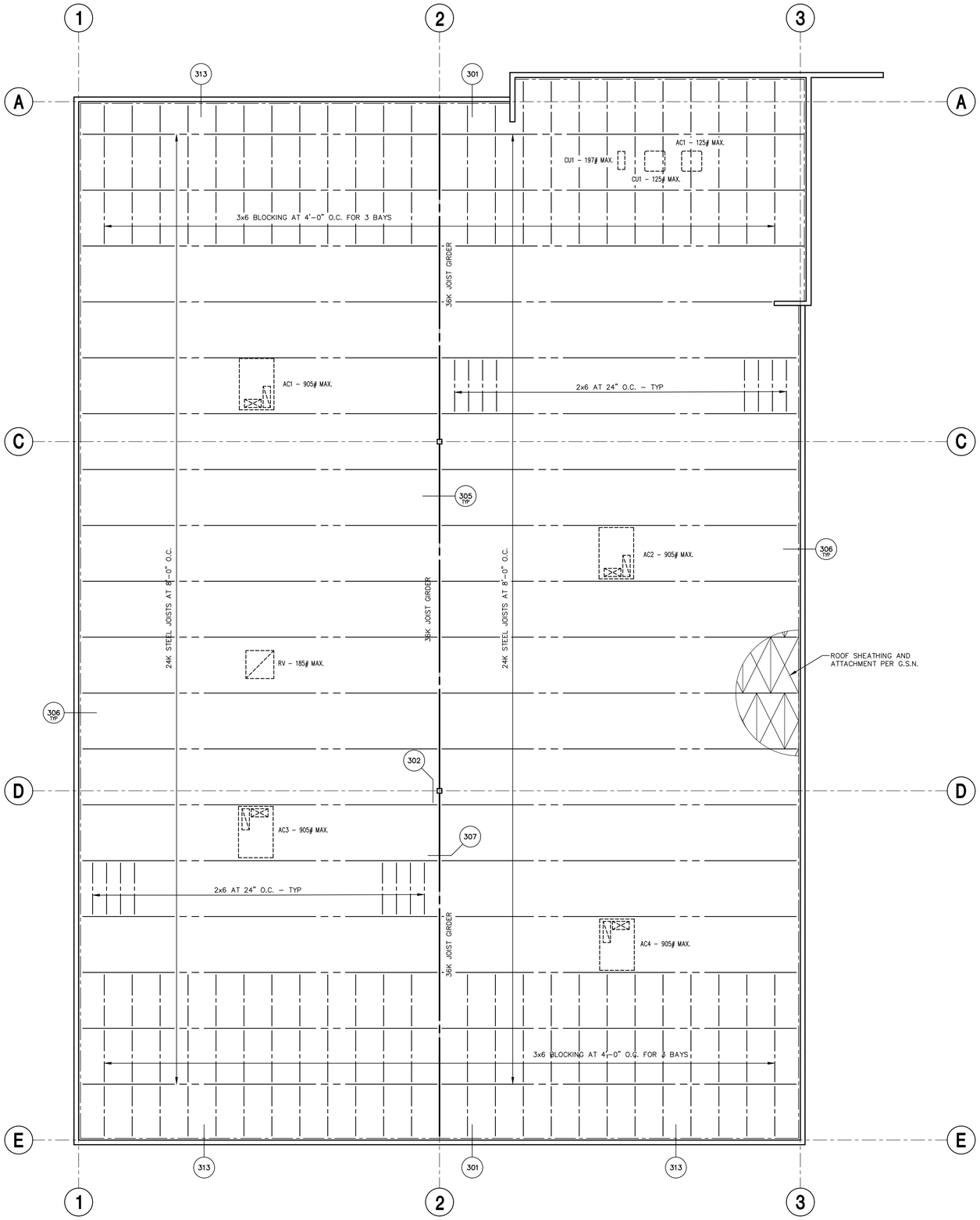
MEZZANINE FRAMING PLAN

Project: 22105

S2.2



ROOF FRAMING NOTES – TYP U.N.O.:

1. **VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS AND FIELD CONDITIONS. BUILDING DIMENSIONS AND ELEVATIONS, WHERE SHOWN, WERE PROVIDED BY THE ARCHITECT AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND COORDINATE ALL DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK. ANY DISCREPANCIES SHALL BE RESOLVED THROUGH THE ARCHITECT.**
2. SCHEDULED MARK DESIGNATIONS ARE TYPICAL TO THE PROJECT AND MAY NOT NECESSARILY BE FOUND ON THIS PLAN.
3. (X), (X), ETC. – AS SHOWN ON PLAN INDICATES KEYNOTES, SEE FLOOR FRAMING KEYNOTES ON THIS SHEET. KEYNOTE DESIGNATIONS ARE TYPICAL TO THE PROJECT AND MAY NOT NECESSARILY BE FOUND ON THIS PLAN.
4. – AS SHOWN ON PLAN INDICATES 8" MASONRY WALL, SEE G.S.N., TYPICAL DETAILS, PLANS AND DETAILS FOR ADDITIONAL INFORMATION. WALLS ONLY SHOW HATCHING WHEN CONTINUOUS TO LEVEL ABOVE.
5. – AS SHOWN ON PLAN INDICATES STRUCTURAL BEARING AND/OR SHEAR WALL BELOW.
6. J1, J2, ETC – AS SHOWN ON PLAN INDICATES (*****) JOIST, SEE SCHEDULE THIS SHEET.
7. G1, G2, ETC – AS SHOWN ON PLAN INDICATES STEEL JOIST GIRDER, SEE SCHEDULE THIS SHEET.
8. ML1, ML2, ETC – AS SHOWN ON PLAN INDICATES MASONRY LINTEL, SEE SCHEDULE THIS SHEET, G.S.N. AND TYPICAL DETAILS.
9. SL1, SL2, ETC – AS SHOWN ON PLAN INDICATES STEEL LINTEL, SEE SCHEDULE THIS SHEET, G.S.N. AND TYPICAL DETAILS.
10. L1, L2, ETC – AS SHOWN ON PLAN INDICATES STEEL LEDGER, SEE SCHEDULE THIS SHEET, G.S.N. AND TYPICAL DETAILS.
11. MAS C.J. – AS SHOWN ON PLAN INDICATES MASONRY CONTROL JOINT IN MASONRY WALL AND/OR LINTEL, SEE G.S.N. AND TYPICAL DETAILS. JOINTS MAY BE SHOWN, BUT NOT NOTED, ON THIS PLAN. SEE FOUNDATION PLAN FOR NOTED LOCATIONS.
12. FOR CLARITY, DETAILS MAY SHOW ONLY ONE SIDE OF FRAMING CONDITIONS. ALL OPENINGS MAY NOT BE SHOWN ON THIS PLAN. FOR EXACT SIZE, NUMBER AND LOCATION OF OPENINGS, SEE ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, SPRINKLER AND THEIR RELATED DRAWINGS. FOR FRAMING AT OPENINGS, SEE TYPICAL DETAILS.
13. VERIFY EXACT SIZE, WEIGHT AND LOCATION OF EQUIPMENT AND SUPPORTS INDICATED ON PLAN WITH ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, SPRINKLER AND THEIR RELATED DRAWINGS. EQUIPMENT INDICATED ARE ONLY THOSE THAT EXCEED LOADS SPECIFIED IN THE G.S.N. FOR SUPPORT OF EQUIPMENT, SEE TYPICAL DETAILS AND OTHER TRADES.
14. THE EXISTING CONDITIONS DEPICTED ON THESE DRAWINGS ARE BASED ON THE BEST AVAILABLE INFORMATION AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER IMMEDIATELY.

ROOF FRAMING PLAN

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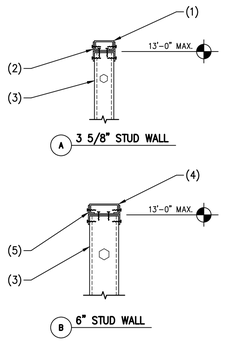
ROOF FRAMING PLAN

Project: 22105

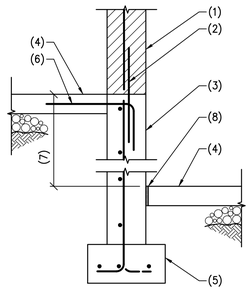
S3.1



NOTES:

1. CONTINUOUS 362S125-33 NESTED STEEL STUD.
2. CONTINUOUS 362T125-33 BACK-TO-BACK STEEL TRACK WITH 2 #10 SCREWS AT 16" O.C.
3. STEEL STUD WALL PER PLAN.
4. CONTINUOUS 600S137-27 NESTED STEEL STUD.
5. CONTINUOUS 600T150-43 BACK-TO-BACK STEEL TRACK WITH 2 #10 SCREWS AT 16" O.C.

116 STEEL STUD WALL TOP TRACK ASSEMBLY — 24-0696 — NO SCALE

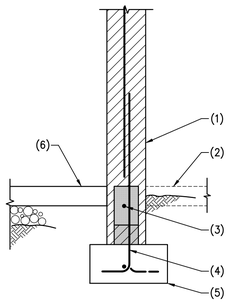


NOTES:

1. MASONRY WALL.
2. DOWELS TO MATCH AND LAP VERTICAL WALL REINFORCING LAP AND EMBED PER TYPICAL DETAIL – ALTERNATE BENDS.
3. 8" CONCRETE STEM WALL WITH #5 VERTICALS AT 12" O.C. EACH WAY – CENTERED.
4. CONCRETE SLAB ON GRADE.
5. CONCRETE FOOTING.
6. #4 SLAB DOWELS AT 16" O.C. BEND 16" x 48" (SLV).
7. SEE ARCHITECTURAL DRAWINGS, 4'-0" MAX.
8. 1/2" EXPANSION JOINT MATERIAL.

NOTE:
PROVIDE CORNER BARS AT ALL HORIZONTAL REINFORCING PER TYPICAL DETAIL.

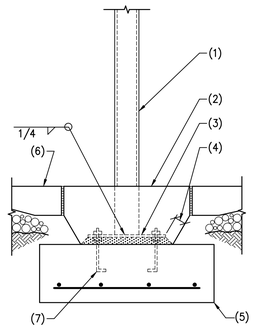
112 MASONRY RAMP WALL AND FOOTING — 24-0696 — NO SCALE



NOTES:

1. MASONRY WALL.
2. FINISHED GRADE OR CONCRETE SLAB AS OCCURS.
3. 1 #4 CONTINUOUS IN 8" DEEP GROUTED BOND BEAM.
4. DOWELS TO MATCH AND LAP VERTICAL WALL REINFORCING PER TYPICAL LAP DETAIL – ALTERNATE BENDS.
5. CONCRETE FOOTING.
6. CONCRETE SLAB ON GRADE.

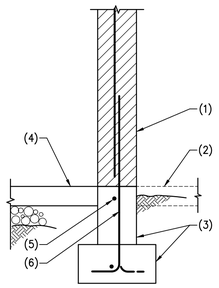
108 MASONRY WALL FOOTING — 108-51M — NO SCALE



NOTES:

1. STEEL COLUMN.
2. CONCRETE CLOSURE POUR PER TYPICAL DETAIL.
3. STEEL BASE PLATE OVER 1 1/2"± DRYPACK.
4. 3" MIN CONCRETE COVER ALL AROUND STEEL BELOW GRADE.
5. CONCRETE FOOTING.
6. CONCRETE SLAB ON GRADE.
7. ANCHOR BOLTS WITH DOUBLE NUTS.

104 STEEL COLUMN FOOTING — 138-21 — NO SCALE

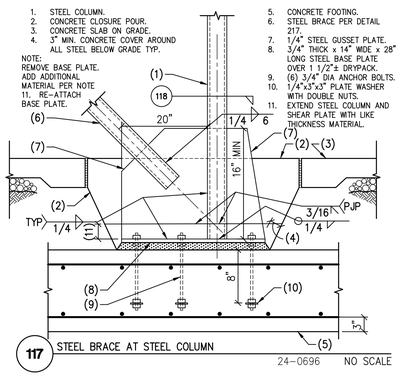


NOTES:

1. MASONRY WALL.
2. FINISHED GRADE OR CONCRETE SLAB AS OCCURS.
3. CONCRETE STEM WALL AND FOOTING.
4. CONCRETE SLAB ON GRADE.
5. 1 #4 CONTINUOUS.
6. DOWELS TO MATCH AND LAP VERTICAL WALL REINFORCING PER TYPICAL LAP DETAIL – ALTERNATE BENDS.

NOTE:
FOR MASONRY STEM WALL ALTERNATE, SEE DETAIL 108.

101 MASONRY WALL FOOTING — 108-01M — NO SCALE



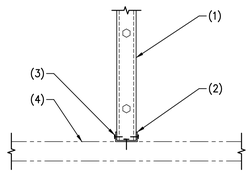
NOTES:

1. STEEL COLUMN.
2. CONCRETE CLOSURE POUR.
3. CONCRETE SLAB ON GRADE.
4. 3" MIN. CONCRETE COVER AROUND ALL STEEL BELOW GRADE TYP.

NOTE:
REMOVE BASE PLATE.
ADD ADDITIONAL MATERIAL PER NOTE 11. RE-ATTACH BASE PLATE.

5. CONCRETE FOOTING.
6. STEEL BRACE PER DETAIL 217.
7. 1/4" STEEL GUSSET PLATE.
8. 3/4" THICK x 14" WIDE x 28" LONG STEEL BASE PLATE OVER 1 1/2"± DRYPACK.
9. (6) 3/4" DIA ANCHOR BOLTS.
10. 1/4"x3"x3" PLATE WASHER WITH DOUBLE NUTS.
11. EXTEND STEEL COLUMN AND SHEAR PLATE WITH LIKE THICKNESS MATERIAL.

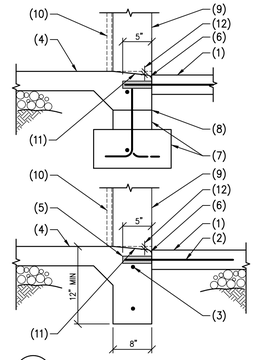
117 STEEL BRACE AT STEEL COLUMN — 24-0696 — NO SCALE



NOTES:

1. STEEL STUD WALL.
2. CONTINUOUS STEEL TRACK WITH HILTI X-U WITH 1" PENETRATION AT 16" O.C.
3. #10 SCREW CONNECTION AT EACH STUD.
4. EXISTING CONCRETE SLAB.

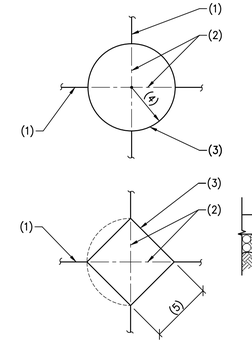
113 STEEL STUD WALL BASE CONNECTION — 24-0696 — NO SCALE



NOTES:

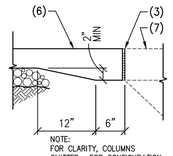
1. EXTERIOR CONCRETE SLAB.
2. #4 DOWELS x 24" LONG AT 12" O.C.
3. 1 #4 CONTINUOUS TOP AND BOTTOM.
4. CONCRETE SLAB ON GRADE.
5. DRILL AND EPOXY DOWEL PER G.S.N.
6. TOOLED EDGE.
7. CONCRETE STEM WALL AND FOOTING WITH REINFORCING CONTINUOUS FROM BEYOND.
8. DEPRESS STEM WALL 8" MIN.
9. WALL BEYOND.
10. OVERHEAD DOOR PER ARCH'L DRAWINGS.
11. SLOPE CONCRETE WITH A 1:10 SLOPE FROM FACE OF OVERHEAD DOOR TO EXTERIOR FACE OF WALL.
12. 3/4" MIN, 1" MAX.

109 CONCRETE SLAB AT OVERHEAD DOOR — LGE MASTER — NO SCALE



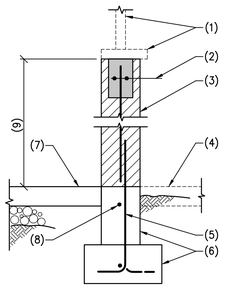
NOTES:

1. "CONC. C.J." WHERE SHOWN ON PLAN.
2. CENTERLINE OF COLUMN.
3. BUTT JOINT WITH ELASTOMERIC JOINT SEALANT IN THE UPPER 1" AND PREFORMED JOINT FILLER BELOW.
4. RADIUS 1'-6" MINIMUM/3'-0" MAXIMUM.
5. 2'-0" MINIMUM/4'-0" MAXIMUM.
6. CONCRETE SLAB ON GRADE.
7. LINE OF CONCRETE CLOSURE POUR OR SLAB AS OCCURS.



NOTE:
FOR CLARITY, COLUMNS OMITTED. FOR CONFIGURATION OF SPECIFIC CLOSURE POURS, SEE PLAN.

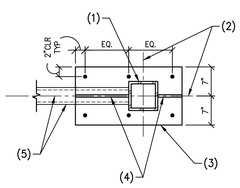
105 TYPICAL COLUMN CLOSURE POUR AT CONCRETE SLAB ON GRADE — 101-24.51 — NO SCALE



NOTES:

1. WINDOW AND/OR SILL – SEE ARCH'L DRAWINGS.
2. BOND BEAM PER TYPICAL DETAIL OR G.S.N.
3. MASONRY WALL.
4. FINISHED GRADE OR CONCRETE SLAB WHERE OCCURS. DOWELS TO MATCH AND LAP VERTICAL WALL REINFORCING PER TYPICAL LAP DETAIL – ALTERNATE BENDS.
6. CONCRETE STEM WALL AND FOOTING.
7. CONCRETE SLAB ON GRADE.
8. 1 #4 CONTINUOUS.
9. 4'-0" MAX. – SEE ARCH'L DRAWINGS.

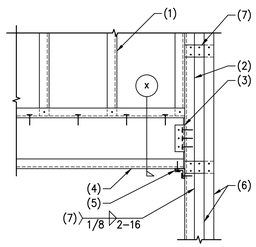
102 MASONRY WALL AT WINDOW OPENING — 108-91.01M — NO SCALE



NOTES:

1. STEEL COLUMN.
2. CENTERLINE OF COLUMN.
3. STEEL BASE PLATE WITH ANCHOR BOLTS PER DETAIL 117.
4. STEEL GUSSET PLATE CENTERED AS SHOWN – KNIFE INTO BRACE.
5. STEEL CROSS BRACE – MATCH CENTERLINE OF STEEL COLUMN AND BASE PLATE.

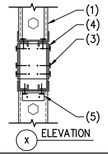
118 PLAN – STEEL COLUMN BASE PLATE AT X-BRACE — 24-0696 — NO SCALE



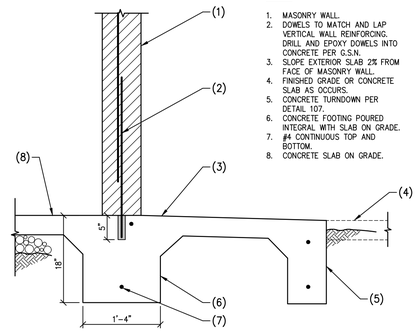
NOTES:

1. STEEL STUD WALL.
2. CONTINUOUS JAMB STUD.
3. STEEL TRACK WITH 6 #10 SCREWS TO JAMB STUD AND STEEL STUD LINTEL.
4. STEEL STUD LINTEL PER SCHEDULE.
5. 1 1/2"x1 1/2"x20 GA. (1/2" SHORTER THAN STUD WIDTH) CLIP ANGLE WITH 2 #10 SCREW EACH LEG.
6. LINE OF ADDITIONAL JAMB STUDS PER SCHEDULE, BACK-TO-BACK.
7. AT CONTRACTORS OPTION: PROVIDE 2"x18 GA. STRAP WITH 2 #10 SCREWS AT EACH STUD – TYP EACH SIDE OF KING STUDS AT 48" O.C. IN LIEU OF WELDED CONNECTION.

ROUGH OPENING WIDTH	LINTEL SIZE	ADD'L JAMB STUDS EACH SIDE OF OPNG.
0'-0" TO 8'-0"	(2) 362S162-33	–
8'-1" TO 15'-0"	(2) 600S162-33	1
15'-1" TO 18'-0"	(2) 800S162-43	1



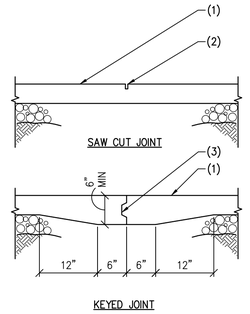
114 STEEL STUD LINTEL TO JAMB CONNECTION — 24-0696 — NO SCALE



NOTES:

1. MASONRY WALL.
2. DOWELS TO MATCH AND LAP VERTICAL WALL REINFORCING. DRILL AND EPOXY DOWELS INTO CONCRETE PER G.S.N.
3. SLOPE EXTERIOR SLAB 2% FROM FACE OF MASONRY WALL.
4. FINISHED GRADE OR CONCRETE SLAB AS OCCURS.
5. CONCRETE TURNDOWN PER DETAIL 107.
6. CONCRETE FOOTING POURED INTEGRAL WITH SLAB ON GRADE.
7. #4 CONTINUOUS TOP AND BOTTOM.
8. CONCRETE SLAB ON GRADE.

110 MASONRY WALL AT SES DOOR — LGE MASTER — NO SCALE

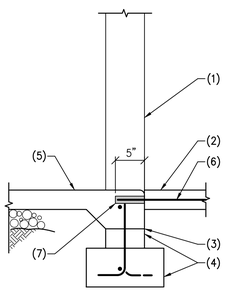


NOTES:

1. CONCRETE SLAB ON GRADE.
2. SAWCUT – 1/8" WIDE x 1/4 SLAB THICKNESS IN DEPTH – CUT SHALL BE MADE SOON ENOUGH TO PREVENT SHRINKAGE CRACKING, BUT NOT SO SOON AS TO CAUSE SPALLING OF THE CONCRETE WHILE SAWING. WORK MUST BE ACCOMPLISHED WITHIN 24 HOURS OF CONCRETE PLACEMENT.
3. CONTINUOUS KEY – SEE TYPICAL KEY IN TYPICAL DETAIL.

NOTE:
KEYED JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING PLACEMENT UNLESS SPECIFICALLY NOTED ON THE PLANS. "TOOL WET JOINT", "ZIP STRIP", ETC. SHALL MATCH SAWCUT REQUIREMENTS.

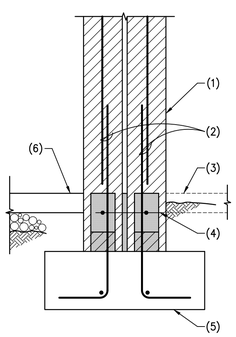
106 CONTROL JOINTS IN CONCRETE SLAB ON GRADE — 101-01M — NO SCALE



NOTES:

1. MASONRY WALL BEYOND.
2. CONCRETE SLAB ON GRADE.
3. DEPRESS STEM WALL 8" MIN.
4. CONCRETE STEM WALL AND FOOTING WITH REINFORCING CONTINUOUS FROM BEYOND.
5. CONCRETE SLAB ON GRADE – TOOLED EDGE AT OPENING.
6. #4 DOWELS x 24" LONG AT 12" O.C.
7. DRILL AND EPOXY DOWEL. PER G.S.N.

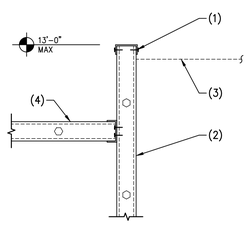
103 MASONRY WALL FOOTING AT OPENING — 109-01M — NO SCALE



NOTES:

1. DOUBLE MASONRY WALL. GROUT ALL MASONRY AND VOIDS SOLID BELOW GRADE.
2. DOWELS TO MATCH AND LAP VERTICAL WALL REINFORCING PER TYPICAL DETAIL.
3. FINISHED GRADE OR CONCRETE SLAB AS OCCURS.
4. 1 #5 CONTINUOUS IN 8" DEEP GROUTED BOND BEAM EACH WALL.
5. CONCRETE FOOTING.
6. CONCRETE SLAB ON GRADE.

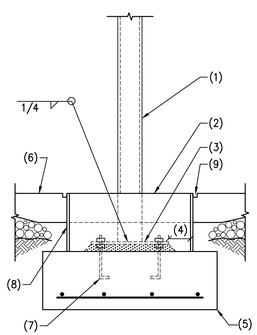
119 DOUBLE MASONRY WALL FOOTING — 112-51.01 — NO SCALE



NOTES:

1. CONTINUOUS STEEL TRACK.
2. STEEL STUD WALL.
3. LINE OF CEILING PER ARCH'L.
4. CEILING FRAMING PER DETAIL 09.

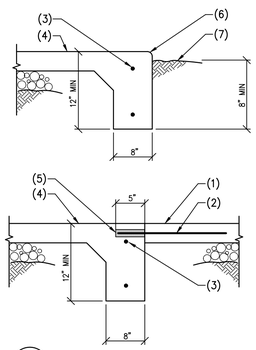
115 STEEL STUD WALL — 24-0696 — NO SCALE



NOTES:

1. STEEL COLUMN.
2. CONCRETE CLOSURE POUR.
3. STEEL BASE PLATE OVER 1 1/2"± DRYPACK.
4. 3" MIN. CONCRETE COVER ALL AROUND STEEL BELOW GRADE.
5. CONCRETE FOOTING.
6. CONCRETE SLAB ON GRADE.
7. ANCHOR BOLTS WITH DOUBLE NUTS.
8. 24" DIA. MINIMUM PVC PIPE.
9. SAW CUT JOINT.

111 STEEL COLUMN FOOTING – OPTION — 138-21M — NO SCALE



NOTES:

1. EXTERIOR CONCRETE SLAB.
2. #4 DOWELS x 24" LONG AT 12" O.C.
3. 1 #4 CONTINUOUS TOP AND BOTTOM.
4. CONCRETE SLAB ON GRADE.
5. DRILL AND EPOXY DOWEL PER G.S.N.
6. TOOLED EDGE.
7. FINISHED GRADE AS OCCURS.

107 CONCRETE TURNDOWN AT BUILDING EDGE — 102-01M — NO SCALE

FOR ADDITIONAL INFORMATION SHOWN BUT NOT NOTED, SEE GENERAL STRUCTURAL NOTES ON SHEET S1.1 AND TYPICAL DETAIL SHEETS.

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PROJECT NUMBER	24–0696	PROJECT MANAGER	BKN
PROJECT ENGINEER	BKN	PROJECT DRAFTER	EDM

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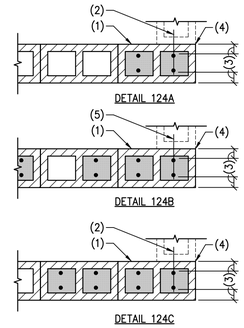
FOUNDATION DETAILS

S4.1

Project: 22105



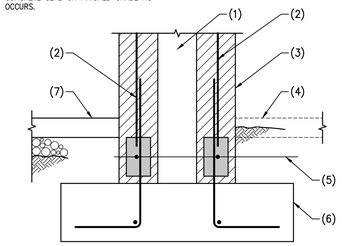
NOTES:

1. MASONRY WALL.
2. 2 #5 FULL WALL HEIGHT AS SHOWN.
3. FOR CLEARANCES, SEE TYPICAL LAP DETAIL.
4. END OF WALL, JAMB OR CORNER AS OCCURS.
5. 2 #6 FULL WALL HEIGHT AS SHOWN.

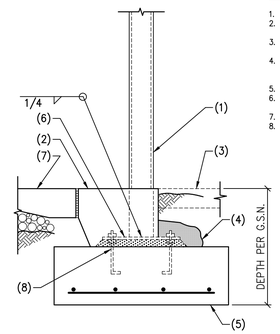
124 PLAN – SPECIAL MASONRY WALL REINFORCING
124A 124B 124C AS NOTED — 24–0696 — NO SCALE

NOTES:

1. VOIDED SPACE.
2. DOWELS TO MATCH AND LAP VERTICAL WALL REINFORCING PER TYPICAL DETAILS.
3. DOUBLE MASONRY WALL WITH SPACE BETWEEN AND VOIDS SOLID BELOW GRADE.
4. CONCRETE SLAB OR FINISHED GRADE AS OCCURS.
5. 1 #5 CONTINUOUS IN 8" DEEP GROUTED BOND BEAM, EACH WALL.
6. CONCRETE FOOTING.
7. CONCRETE SLAB ON GRADE.



121 CONCRETE FOOTING WITH DOUBLE MASONRY WALL WITH VOID BETWEEN
24–0696 — NO SCALE



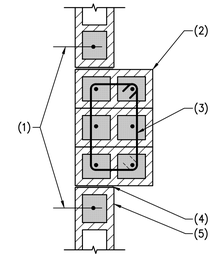
NOTES:

1. STEEL COLUMN.
2. CONCRETE CLOSURE POUR PER TYPICAL DETAIL.
3. FINISHED GRADE OR CONCRETE SLAB AS OCCURS.
4. 3" MINIMUM CONCRETE COVER AROUND ALL STEEL BELOW GRADE.
5. CONCRETE FOOTING.
6. BASE PLATE OVER 1 1/2"± DRYPACK.
7. CONCRETE SLAB ON GRADE.
8. ANCHOR BOLTS WITH DOUBLE NUTS.

125 STEEL COLUMN FOOTING
138–02.01 — NO SCALE

NOTES:

1. VERTICAL REINFORCING IN SOLID GROUTED CELL EACH SIDE OF COLUMN – SEE G.S.N.
2. #3 TIES AT 48" O.C. VERTICALLY. INSTALL PER TYPICAL DETAIL. ALTERNATE LAP AS SHOWN.
3. MASONRY COLUMN.
4. MASONRY CONTROL JOINT.
5. MASONRY WALL.

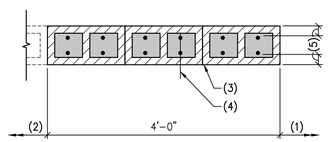


NOTE:
CONTINUE HORIZONTAL JOINT REINFORCING THROUGH COLUMN.

122 PLAN – MASONRY BUMPOUT AT MASONRY WALL
24–0696 — NO SCALE

NOTES:

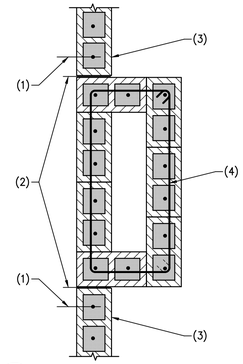
1. OPENING.
2. WALL CONTINUOUS WHERE SHOWN ON PLAN.
3. MASONRY WALL.
4. 2 #5 IN EACH CELL – GROUT SOLID.
5. FOR CLEARANCES, SEE TYPICAL LAP DETAIL.



126 PLAN – SPECIAL MASONRY WALL REINFORCING
501–51.04 — NO SCALE

NOTES:

1. VERTICAL REINFORCING IN SOLID GROUTED CELL EACH SIDE OF BUMPOUT – SEE G.S.N.
2. MASONRY CONTROL JOINT.
3. MASONRY WALL.
4. #3 TIES AT 48" O.C. VERTICALLY. INSTALL PER TYPICAL DETAIL. ALTERNATE LAP AS SHOWN.



NOTE:
CONTINUE HORIZONTAL JOINT REINFORCING THROUGH COLUMN.

123 PLAN – MASONRY BUMPOUT AT MASONRY WALL
24–0696 — NO SCALE

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PROJECT NUMBER	24–0696	PROJECT MANAGER	BKN
PROJECT ENGINEER	BKN	PROJECT DRAFTER	EDM

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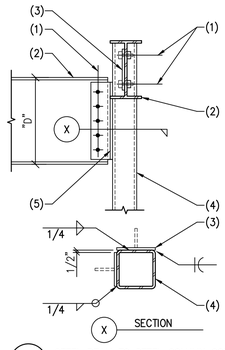
FOUNDATION DETAILS

S4.2

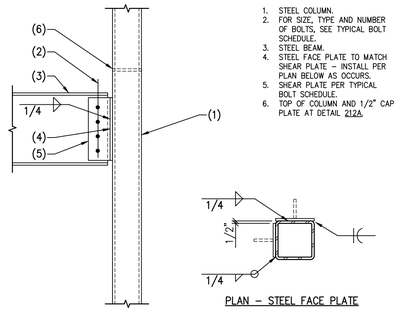
Project: 22105



NOTES:

1. FOR SIZE, TYPE AND NUMBER OF BOLTS, SEE TYPICAL BOLT SCHEDULE.
2. STEEL BEAM.
3. STEEL FACE PLATE TO MATCH SHEAR PLATE – INSTALL PER PLAN BELOW AS OCCURS.
4. STEEL COLUMN.
5. SHEAR PLATE PER TYPICAL BOLT SCHEDULE.

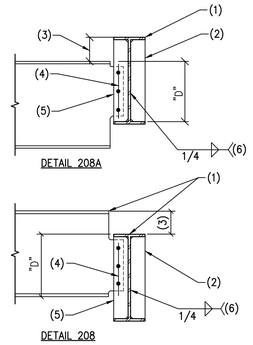
216 STEEL BEAM TO STEEL COLUMN CONNECTION — 415–82M — NO SCALE



NOTES:

1. STEEL COLUMN.
2. FOR SIZE, TYPE AND NUMBER OF BOLTS, SEE TYPICAL BOLT SCHEDULE.
3. STEEL BEAM.
4. STEEL FACE PLATE TO MATCH SHEAR PLATE – INSTALL PER PLAN BELOW AS OCCURS.
5. SHEAR PLATE PER TYPICAL BOLT SCHEDULE.
6. TOP OF COLUMN AND 1/2" CAP PLATE AT DETAIL 212A.

212 STEEL BEAM TO STEEL COLUMN CONNECTION
212A AS NOTED — 414–61M — NO SCALE

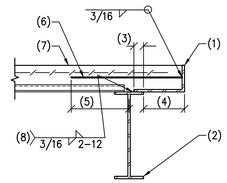


NOTES:

1. STEEL BEAM.
2. 3/8" STIFFENER PLATE.
3. DEPTH TO MATCH JOIST BEARING UNLESS NOTED OTHERWISE.
4. FOR SIZE, TYPE AND NUMBER OF BOLTS, SEE TYPICAL BOLT SCHEDULE.
5. SHEAR PLATE, PER TYPICAL CONNECTION DETAIL.
6. WELD 3 SIDES – TYPICAL.

NOTE:
WHERE ONE BOLT LESS THAN SCHEDULE CAN BE INSTALLED, INSTALL BOLTS ONE DIA SIZE LARGER THAN SCHEDULE. WHERE TWO LESS BOLT THAN SCHEDULE CAN BE INSTALL, NOTIFY ENGINEER OF RECORD PRIOR TO PROCEEDING.

208 STEEL BEAM TO STEEL BEAM CONNECTION
208A AS NOTED — 413–37M — NO SCALE



NOTES:

1. 1/4" CONTINUOUS BENT STEEL PLATE.
2. STEEL BEAM.
3. 2" TYPICAL.
4. 0" TO 6" NO REINFORCING REQUIRED. 6" TO 12" ADD #4 REINFORCING AT 12" O.C.
5. 2'–0" MINIMUM.
6. REINFORCING WHERE REQUIRED.
7. CONCRETE OVER STEEL DECK – FOR DIRECTION OF DECK, SEE PLANS.
8. WELD ANGLE TO BEAM – TYP.

NOTE:
WHEN 1/4" BENT PLATE EXCEEDS 6" IN LENGTH, PLATE MUST BE SHORED UNTIL CONCRETE REACHES DESIGN STRENGTH.

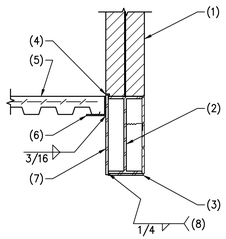
204 STEEL DECK AT STEEL BEAM — 466–01.02M — NO SCALE

FRAMING NOTES:

1. THE TYPICAL STEEL BEAM TO STEEL COLUMN OR STEEL BEAM TO STEEL BEAM CONNECTION CONSISTS OF 3/8" SINGLE SHEAR PLATES WITH BOLTS PER SCHEDULE. USE 5/8" SHEAR PLATES WHERE "D" = 27" OR GREATER.
2. ALL BOLTS SHALL BE INSTALLED THROUGH "SHORT" SLOTTED HOLES IN EITHER THE BEAM WEB OR SHEAR PLATE. INSTALL WASHERS AND TIGHTEN "SNUG TIGHT" U.N.O.

NOMINAL BEAM DEPTH "D"	NUMBER OF 7/8" DIA ASTM F3125 GRADE A325 BOLTS
UP TO 7"	2
8" – 11"	2
12" – 14"	3
15" – 17"	4
18" – 20"	5
21" – 23"	6
24" – 29"	7
30" – 32"	8
33" – 35"	9
36"	10

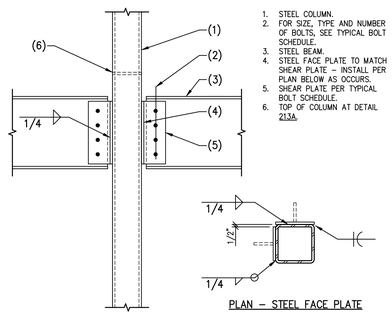
201 BOLT SCHEDULE FOR TYPICAL STEEL CONNECTIONS — 401–11.04M — NO SCALE



NOTES:

1. FOR MASONRY CONSTRUCTION AT STEEL LINTEL, SEE STEEL LINTEL SCHEDULE.
2. STEEL LINTEL.
3. CONTINUOUS STEEL PLATE PER STEEL LINTEL SCHEDULE.
4. NOTCH MASONRY AS REQUIRED TO AVOID CONFLICT WITH STEEL PLATE.
5. CONCRETE OVER STEEL DECK.
6. CONTINUOUS STEEL LEDGER.
7. 3/8" THICK x 4" WIDE STEEL PLATE. SPACE PLATES AT 4'–0" O.C. MAX.
8. 3/8" STEEL PLATE TO STEEL LINTEL, TOP AND BOTTOM.

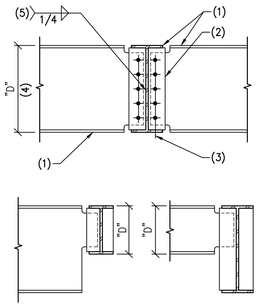
217 STEEL LEDGER AT STEEL LINTEL — 24–0696 — NO SCALE



NOTES:

1. STEEL COLUMN.
2. FOR SIZE, TYPE AND NUMBER OF BOLTS, SEE TYPICAL BOLT SCHEDULE.
3. STEEL BEAM.
4. STEEL FACE PLATE TO MATCH SHEAR PLATE – INSTALL PER PLAN BELOW AS OCCURS.
5. SHEAR PLATE PER TYPICAL BOLT SCHEDULE.
6. TOP OF COLUMN AT DETAIL 213A.

213 STEEL BEAMS TO STEEL COLUMN CONNECTION
213A AS NOTED — 414–62M — NO SCALE

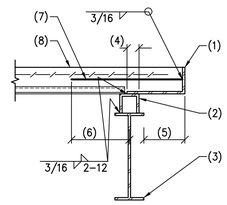


NOTES:

1. STEEL BEAM.
2. 3/8" STEEL SHEAR PLATE – USE 5/8" STEEL SHEAR PLATE WHERE "D" = 27" OR GREATER.
3. FOR SIZE, TYPE AND NUMBER OF BOLTS, SEE TYPICAL BOLT SCHEDULE.
4. "D" = LESSER OF BEAM DEPTHS AS OCCURS.
5. WELD 3 SIDES TYPICAL – USE SAME CONNECTION AT STIFFENER PLATES WHEN REQUIRED.

NOTE:
A. AT ONE SIDED CONNECTIONS, INSTALL 3/8" STIFFENER PLATE OPPOSITE SHEAR PLATE.
B. EDGE CLEARANCES PER THE FOLLOWING – TYP U.N.O.:
3/4" DIA OR LESS – 1 1/4"
7/8" DIA -------- 1 1/2"
1" DIA --------- 1 3/4"
1 1/8" DIA ------ 2"
1 1/4" DIA ------ 2 1/4"
OVER 1 1/4" DIA -- 1.75xDIA

209 TYPICAL CONNECTION WIDE FLANGE BEAM TO BEAM — 413–01 — NO SCALE

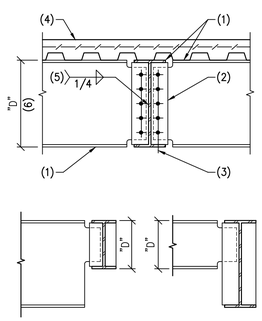


NOTES:

1. 1/4" CONTINUOUS BENT STEEL PLATE.
2. 1/4" CONTINUOUS BENT STEEL INVERTED "U" PLATE TO MATCH JOIST BEARING DEPTH.
3. STEEL BEAM.
4. 2" TYPICAL.
5. 0" TO 6" NO REINFORCING REQUIRED; 6" TO 12" ADD #4 REINFORCING AT 12" O.C.
6. 2'–0" MINIMUM.
7. REINFORCING WHERE REQUIRED.
8. CONCRETE OVER STEEL DECK – FOR DIRECTION OF DECK, SEE PLANS.

NOTE:
WHEN 1/4" BENT PLATE EXCEEDS 6" IN LENGTH, PLATE MUST BE SHORED UNTIL CONCRETE REACHES DESIGN STRENGTH.

205 STEEL DECK AT STEEL BEAM — 466–01.03M — NO SCALE

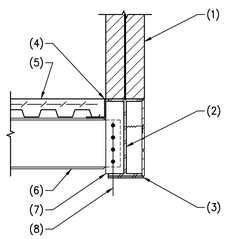


NOTES:

1. STEEL BEAM.
2. 3/8" STEEL SHEAR PLATE – USE 5/8" STEEL SHEAR PLATE WHERE "D" = 27" OR GREATER.
3. FOR SIZE, TYPE AND NUMBER OF BOLTS, SEE TYPICAL BOLT SCHEDULE.
4. CONCRETE OVER STEEL DECK.
5. WELD 3 SIDES TYPICAL – USE SAME CONNECTION AT STIFFENER PLATES WHEN REQUIRED.
6. "D" = LESSER OF BEAM DEPTHS AS OCCURS.

NOTE:
A. AT ONE SIDED CONNECTIONS, INSTALL 3/8" STIFFENER PLATE OPPOSITE SHEAR PLATE.
B. EDGE CLEARANCES PER THE FOLLOWING – TYP U.N.O.:
3/4" DIA OR LESS – 1 1/4"
7/8" DIA -------- 1 1/2"
1" DIA --------- 1 3/4"
1 1/8" DIA ------ 2"
1 1/4" DIA ------ 2 1/4"
OVER 1 1/4" DIA -- 1.75xDIA

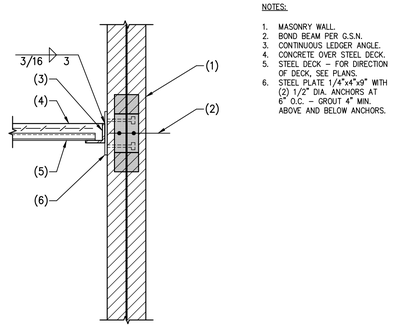
202 TYPICAL CONNECTION WIDE FLANGE BEAM TO BEAM — 413–01 — NO SCALE



NOTES:

1. FOR MASONRY CONSTRUCTION AT STEEL LINTEL, SEE STEEL LINTEL SCHEDULE.
2. STEEL LINTEL.
3. CONTINUOUS STEEL PLATE PER STEEL LINTEL SCHEDULE.
4. CONTINUOUS STEEL LEDGER.
5. CONCRETE OVER STEEL DECK.
6. STEEL BEAM.
7. SHEAR PLATE PER TYPICAL BOLT SCHEDULE.
8. FOR SIZE, TYPE, AND NUMBER OF BOLTS, SEE TYPICAL BOLT SCHEDULE.

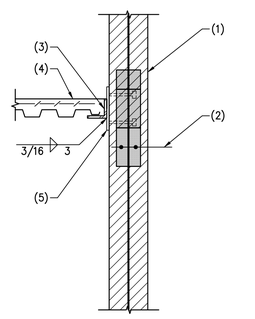
218 STEEL LEDGER AT STEEL LINTEL — 24–0696 — NO SCALE



NOTES:

1. STEEL BEAM.
2. BOND BEAM PER G.S.N.
3. CONTINUOUS LEDGER ANGLE.
4. CONCRETE OVER STEEL DECK.
5. STEEL DECK – FOR DIRECTION OF DECK, SEE PLANS.
6. STEEL PLATE 1/4"x4"x9" WITH (2) 1/2" DIA. ANCHORS AT 6" O.C. – GROUT 4" MIN. ABOVE AND BELOW ANCHORS.

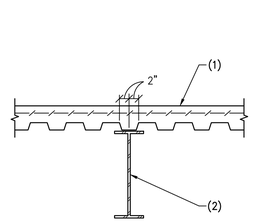
214 LEDGER ANGLE AND STEEL DECK AT MASONRY WALL — 462–21M — NO SCALE



NOTES:

1. MASONRY WALL.
2. BOND BEAM PER G.S.N.
3. CONTINUOUS LEDGER ANGLE.
4. CONCRETE TOPPING OVER STEEL DECK – FOR DIRECTION OF DECK, SEE PLANS.
5. STEEL PLATE 1/4"x4"x9" WITH (2) 1/2" DIA ANCHORS AT 6" O.C. – GROUT 4" MIN ALL AROUND ANCHORS.

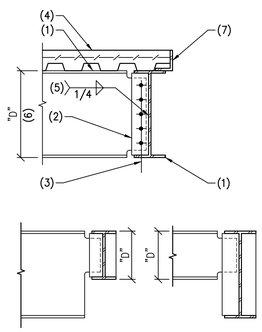
210 LEDGER ANGLE AND STEEL DECK AT MASONRY WALL — 462–22 — NO SCALE



NOTES:

1. CONCRETE OVER STEEL DECK – FOR DIRECTION OF DECK, SEE PLANS.
2. STEEL BEAM.

206 STEEL DECK AT STEEL BEAM — 466–12.01M — NO SCALE



NOTES:

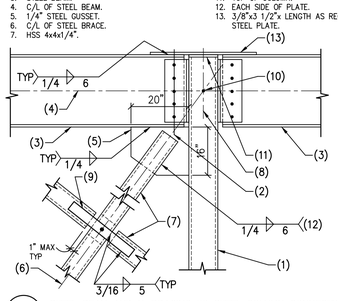
1. STEEL BEAM.
2. 3/8" STEEL SHEAR PLATE – USE 5/8" STEEL SHEAR PLATE WHERE "D" = 27" OR GREATER.
3. FOR SIZE, TYPE AND NUMBER OF BOLTS, SEE TYPICAL BOLT SCHEDULE.
4. CONCRETE OVER STEEL DECK.
5. WELD 3 SIDES TYPICAL – USE SAME CONNECTION AT STIFFENER PLATES WHEN REQUIRED.
6. "D" = LESSER OF BEAM DEPTHS AS OCCURS.
7. CONTINUOUS 1/4" BENT PLATE PER DETAIL 205.

NOTE:
A. AT ONE SIDED CONNECTIONS, INSTALL 3/8" STIFFENER PLATE OPPOSITE SHEAR PLATE.
B. EDGE CLEARANCES PER THE FOLLOWING – TYP U.N.O.:
3/4" DIA OR LESS – 1 1/4"
7/8" DIA -------- 1 1/2"
1" DIA --------- 1 3/4"
1 1/8" DIA ------ 2"
1 1/4" DIA ------ 2 1/4"
OVER 1 1/4" DIA -- 1.75xDIA

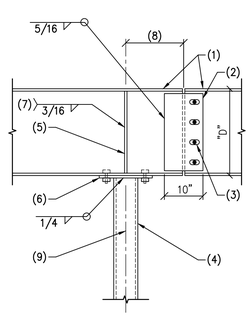
203 TYPICAL CONNECTION WIDE FLANGE BEAM TO BEAM — 413–01M — NO SCALE

NOTES:

1. STEEL COLUMN.
2. FOR SIZE, TYPE AND NUMBER OF BOLTS, SEE TYPICAL BOLT SCHEDULE.
3. STEEL BEAM.
4. C/L OF STEEL BEAM.
5. 1/4" STEEL GUSSET.
6. C/L OF STEEL BRACE.
7. HSS 4x4x1/4".
8. C/L OF COLUMN.
9. 1/4"x2 1/2"x18" LONG PLATE – EACH SIDE.
10. WORK POINT.
11. TOP OF COLUMN.
12. EACH SIDE OF PLATE.
13. 3/8"x3 1/2"x LENGTH AS REQUIRED FOR WELD STEEL PLATE.



219 STEEL BEAM AND X-BRACING TO STEEL COLUMN CONNECTION — 24–0696 — NO SCALE

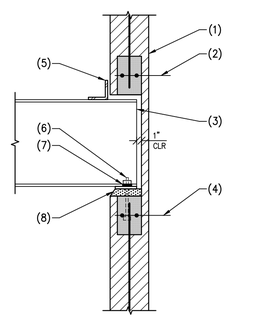


NOTES:

1. STEEL BEAM.
2. STEEL SHEAR PLATE – FOR PLATE, SIZE AND NUMBER OF BOLTS, SEE BOLT SCHEDULE.
3. 1 1/2" LONG HORIZONTALLY SLOTTED HOLE IN BEAM WEB. TIGHTEN NUTS "SNUG TIGHT" (DING THREADS).
4. STEEL COLUMN.
5. 3/8" STEEL STIFFENER BOTH SIDES OF BEAM. WHERE INTERSECTING STEEL BEAM OCCURS INSTALL SHEAR PLATE PER TYPICAL BEAM TO BEAM CONNECTION DETAIL.
6. 1/2" CAP PLATE WITH (4) 3/4" DIA BOLTS ON BEAM GAGE.
7. WELD 3 SIDES – TYP.
8. 12" MAX UNLESS NOTED OTHERWISE ON PLAN. 1/2" MAX GAP BETWEEN BEAMS.
9. CENTERLINE OF COLUMN.

NOTE:
STUDS WELDED TO BOTTOM OF BEAM FLANGE MAY BE USED IN LIEU OF BOLTS.

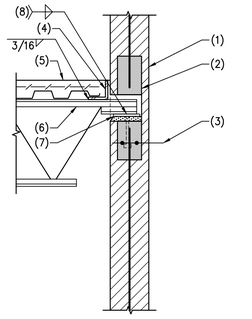
215 STEEL BEAMS TO STEEL COLUMN CONNECTION — 415–52.04 — NO SCALE



NOTES:

1. MASONRY WALL.
2. BOND BEAM PER G.S.N.
3. STEEL BEAM.
4. 2 #5 x 3'–6" LONG IN 8" DEEP x 4'–0" LONG GROUTED BOND BEAM.
5. CONTINUOUS LEDGER ANGLE.
6. (2) 3/4" DIA. AUTOMATIC WELDED THREADED STUDS ON BEAM GAGE (TIGHTEN NUTS FINGERTIGHT).
7. 1 1/2" LONG SLOTTED HOLES ON BEAM GAGE – TO RECEIVE STUDS.
8. 3/4"x6"x12" STEEL BEARING PLATE WITH (2) 3/4" DIA. ANCHORS OVER 1" ± DRYPACK.

211 STEEL BEAM AT MASONRY WALL — 420–01M — NO SCALE



NOTES:

1. MASONRY WALL.
2. GROUT SOLID.
3. BOND BEAM PER G.S.N.
4. CONTINUOUS STEEL LEDGER.
5. CONCRETE OVER STEEL DECK.
6. STEEL JOIST.
7. 5"x10"x1/2" STEEL BEARING PLATE WITH (2) 3/4" DIA. ANCHOR BOLTS OVER 1"± DRYPACK.
8. 1/8"x2" AT K JOISTS 1/4"x2" AT LH JOIST.

207 STEEL JOIST AT MASONRY WALL — 447–04M — NO SCALE

FOR ADDITIONAL INFORMATION SHOWN BUT NOT NOTED, SEE GENERAL STRUCTURAL NOTES ON SHEET S1.1 AND TYPICAL DETAIL SHEETS.

THESE DRAWINGS/CALCULATIONS ARE CONSIDERED PRELIMINARY –NOT FOR CONSTRUCTION OR RECORDING UNLESS THE STRUCTURAL ENGINEER OF RECORD'S SEAL IS AFFIXED WITH WRITTEN SIGNATURE.

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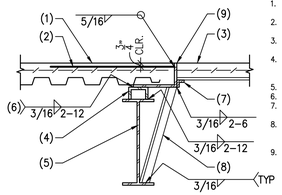
DISCREPANCIES AND CONFLICTS:
All discrepancies found in these documents or conflicts between these documents and field conditions shall be reported to Cawley Architects Inc. for resolution before the commencement of the work.

MEZZANINE DETAILS

S5.1

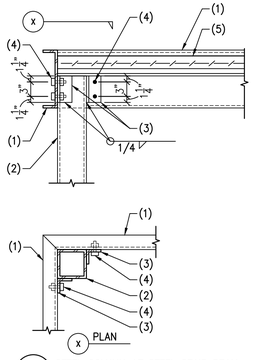
Project: 22105



NOTES:

1. CONCRETE OVER STEEL DECK PER PLAN.
2. #4 x 24" LONG WELDABLE A706 REBAR AT 18" O.C.
3. CONCRETE TOPPING OVER STEEL PAN.
4. 1/4" THICK BENT 'U' PLATE. DEPTH TO MATCH BEAM BEARING HEIGHT.
5. STEEL BEAM AS OCCURS.
6. WELD PLATE TO PLATE.
7. 1 1/4"x1 1/4"x 3/16" STEEL ANGLE.
8. 2"x2"x1/4" STEEL ANGLE. LOCATE 2 AT STAIR LANDING – EQUALLY SPACED.
9. STEEL STAIR BEAM PER PLAN.

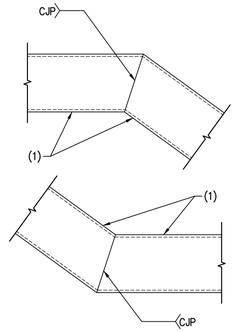
232 STAIR LANDING AT MEZZANINE — 24–0696 — NO SCALE



NOTES:

1. BEAM PER PLAN.
2. POST PER PLAN.
3. 3"x3"x1/4" STEEL ANGLE.
4. 2– 3/4" DIA. A325N BOLTS IN LEG OF ANGLE.
5. 2" CONCRETE OVER 12 GA. STEEL PAN.

228 STEEL COLUMN AT STEEL STAIR BEAM — 24–0696 — NO SCALE

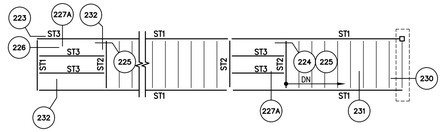


NOTES:

1. STEEL STAIR BEAM.

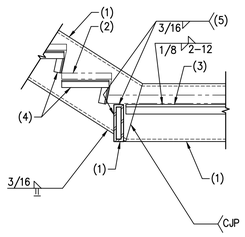
NOTE:
FOR CLARITY, STAIR TREADS, RISERS AND LANDING NOT SHOWN.

224 TYPICAL SPLICE AT STEEL BEAM — 730–06M — NO SCALE



NOTE:
REFER TO DETAIL 402 FOR SCHEDULE.

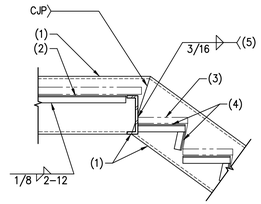
221 STAIR FRAMING PLAN — 24–0696 — NO SCALE



NOTES:

1. STEEL STAIR BEAM.
2. FOR TREADS, RISERS AND LANDING, SEE ARCH'L DRAWINGS.
3. LANDING EDGE ANGLE.
4. TREAD AND RISER SUPPORTS.
5. TYP STAIR BEAM TO BEAM U.N.O.

229 STEEL STAIR BEAM CONNECTIONS AT LANDING PAN — 24–0696 — NO SCALE



NOTES:

1. STEEL STAIR BEAM.
2. LANDING EDGE ANGLE.
3. FOR TREADS, RISERS AND LANDING, SEE ARCHITECTURAL DRAWINGS.
4. TREAD AND RISER SUPPORTS.
5. TYP STAIR BEAM TO BEAM U.N.O.

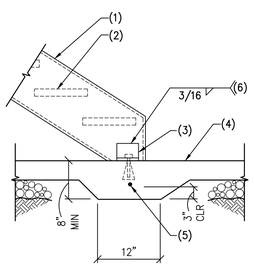
225 STEEL STAIR BEAM CONNECTIONS AT LANDING PAN — 24–0696 — NO SCALE

STEEL STAIR BEAM (ST) SCHEDULE	
MARK	BEAM SIZE
ST1	C12 x 20.7
ST2	C8 x 18.75
ST3	ANGLE 3 1/2"x3 1/2"x1/4" AT 16" O.C. MAX.

PERFORMANCE SPECIFICATIONS FOR ALTERNATIVE STAIR DESIGNS:

1. STAIRS SHALL BE DESIGNED FOR SELF WEIGHT PLUS A LIVE LOAD EQUAL TO 100 PSF. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WITH DESIGN CALCULATIONS SEALED BY A REGISTERED ENGINEER FOR REVIEW PRIOR TO MFR.
2. LANDING PANS SHALL BE 12 GAGE MINIMUM. TREAD PANS SHALL BE 14 GAGE MINIMUM. CONCRETE FILL SHALL BE 2" MIN THICK WITH 6x6 – W1.4xW1.4 W.W.F. CENTERED.
3. FOR ACTUAL LANDING AND STAIR PAN CONFIGURATIONS, SEE ARCH'L DRAWINGS.

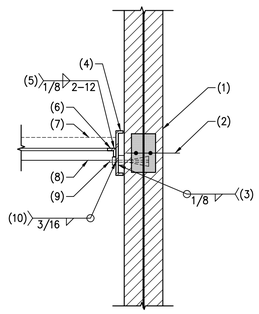
222 TYPICAL STEEL STAIR BEAM SCHEDULE AND NOTES — 24–0696 — NO SCALE



NOTES:

1. STEEL STAIR BEAM.
2. FOR TREADS, SEE ARCH'L.
3. STEEL ANGLE 4"x3"x1/4" (SLV) x 3" LONG WITH 1–3/4" DIA. EXPANSION BOLT WITH 3" EMBEDMENT.
4. CONCRETE SLAB ON GRADE.
5. 1 #4 CONTINUOUS.
6. WELD 3 SIDES TYP.

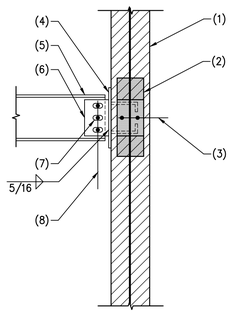
230 STEEL STAIR BEAM AT CONCRETE SLAB ON GRADE — 750–01M — NO SCALE



NOTES:

1. MASONRY WALL.
2. CONTINUOUS GROUTED BOND BEAM PER G.S.N.
3. WELD PIPE SPACER TO BEAM.
4. STEEL STAIR BEAM – 1/8" MAXIMUM CLEARANCE AT MASONRY FOR ERECTION.
5. WELD ANGLE TO BEAM.
6. STEEL ANGLE 1 1/4"x1 1/4"x3/16" – TYPICAL BETWEEN BEAMS.
7. FOR LANDING, SEE ARCH'L DRAWINGS.
8. STEEL STAIR BEAM.
9. 3/4" DIA. EXPANSION BOLTS AT 24" O.C. WITH PIPE SPACERS.
10. WELD BEAM TO BEAM.

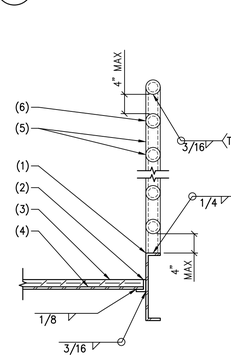
226 STEEL STAIR BEAM AT MASONRY WALL — 732–01 — NO SCALE



NOTES:

1. MASONRY WALL.
2. 4" MIN GROUT ALL AROUND ANCHORS.
3. CONTINUOUS 8" DEEP GROUTED BOND BEAM.
4. 3/8"x12"x12" STEEL PLATE WITH (4) 3/4" DIA ANCHORS AT 9" O.C.
5. STEEL BEAM.
6. 3/8" STEEL SHEAR PLATE.
7. 1 1/2" SLOTTED HOLES.
8. FOR SIZE, TYPE AND NUMBER OF BOLTS SEE TYPICAL BOLT SCHEDULE.

223 STEEL BEAM TO MASONRY WALL CONNECTION — 420–21M — NO SCALE

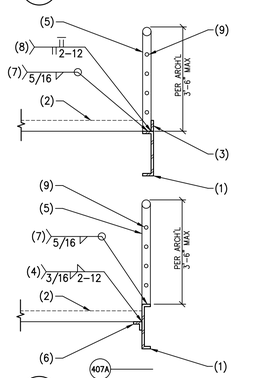


NOTES:

1. STEEL STAIR BEAM.
2. 2"x2"x1/4" STEEL ANGLE.
3. CONCRETE TOPPING.
4. STEEL PAN.
5. 1 1/2" SCHEDULE 80 PIPE RAILS AND POSTS, POSTS ARE SPACED AT 4'–0" O.C. MAX.
6. SPACE HORIZONTALS SO THAT CLEAR DISTANCE DOES NOT EXCEED 4".

NOTE:
SEE DETAIL 407 FOR LOCATION OF CABLE OR PIPE.

231 STEEL PAN TO STEEL BEAM — 730–36M — NO SCALE



NOTES:

1. STEEL STAIR BEAM.
2. FOR TREADS AND LANDING, SEE ARCH'L DRAWINGS.
3. 3/16" CONTINUOUS STEEL PLATE.
4. WELD LEDGER TO BEAM AT 407A.
5. 1 1/2" DIA STD PIPE GUARD RAIL AND POST PER ARCH'L PLAN AS OCCURS 4'–0" O.C. MAX.
6. CONTINUOUS STEEL LEDGER 1 1/4"X1 1/4"x3/16" AT 407A.
7. GUARDRAIL TO BEAM.
8. STEEL PLATE TO BEAM.
9. 3/4" DIA PIPE PER ARCH'L AT DETAIL 401. A/C CABLE PER ARCH'L AT DETAIL 402.

227 STAIR LANDING AT STEEL STAIR BEAM — 736–21M — NO SCALE
227A AS NOTED

FOR ADDITIONAL INFORMATION SHOWN BUT NOT NOTED, SEE GENERAL STRUCTURAL NOTES ON SHEET S1.1 AND TYPICAL DETAIL SHEETS.

THESE DRAWINGS/CALCULATIONS ARE CONSIDERED PRELIMINARY –NOT FOR CONSTRUCTION OR RECORDING UNLESS THE STRUCTURAL ENGINEER OF RECORD'S SEAL IS AFFIXED WITH WRITTEN SIGNATURE.

PROJECT NUMBER	24–0696	PROJECT MANAGER	BKN
PROJECT ENGINEER	BKN	PROJECT DRAFTER	EDM

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A TENANT IMPROVEMENT FOR
COMMERCIAL BUILDING
INNOVATIVE DRIVE

4121 W INNOVATIVE DR
PHOENIX
ARIZONA
85086

DATE
75% PROGRESS SET
11-20-2024

DRAWN BY: EDM

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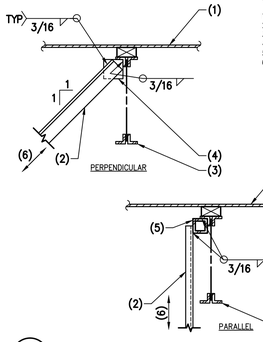
DISCREPANCIES AND CONFLICTS:
All discrepancies found in these documents or conflicts between these documents and field conditions shall be reported to Cawley Architects Inc. for resolution before the commencement of the work.

MEZZANINE DETAILS

Project: 22105

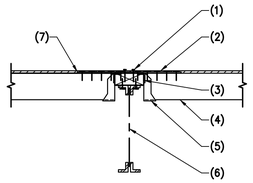
S5.2



NOTES:

1. PLYWOOD SHEATHING.
2. STEEL ANGLE BRACE.
3. STEEL JOIST.
4. STEEL PLATE 4"x4"x1/4".
5. HSS 3x3x3/16 x12" LONG.
6. FORCE = 2000# DUE TO WIND OR SEISMIC.

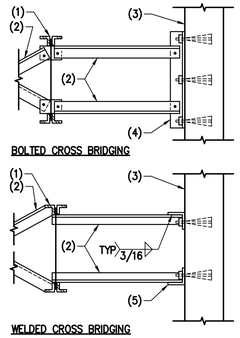
316 STEEL ANGLE BRACE AT STEEL JOIST OR BEAM
LGE MASTER NO SCALE



NOTES:

1. DOUBLE EDGE NAILING.
2. PLYWOOD SHEATHING.
3. CONTINUOUS WOOD NAILER PER DETAIL 309. – 3x MIN.
4. 3x6 WOOD STIFFENERS AT 8'–0" O.C.
5. SIMPSON F TYPE HANGER.
6. STEEL JOIST.
7. SIMPSON ST6236 STRAP WITH 10d NAILS CENTERED OVER JOIST AT 8'–0" O.C.

308 WOOD STIFFENERS AT STEEL JOIST
666–01.01M NO SCALE

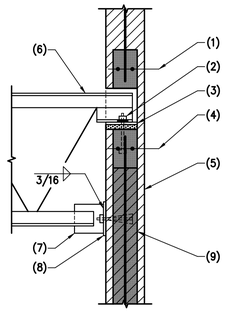


NOTES:

1. STEEL JOIST.
2. BRIDGING AS REQUIRED BY JOIST MANUFACTURER.
3. WALL – FOR SIZE AND TYPE, SEE PLAN.
4. STEEL ANGLE 3"x3"x1/4"x AS REQUIRED WITH (3) 5/8" DIA EXPANSION BOLTS.
5. STEEL ANGLE 3"x3"x1/4"x10" LONG WITH (2) 5/8" DIA EXPANSION BOLT.

NOTE:
AT MASONRY WALLS, INSTALL EXPOXIED ANCHORS PER G.S.N. IN SOLID GROUTED CELLS, IN LIEU OF EXPANSION BOLTS.

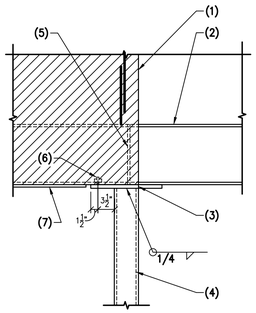
304 STEEL JOIST CROSS BRIDGING AT WALL
434–41.02 NO SCALE



NOTES:

1. BOND BEAM PER G.S.N.
2. (2) 3/4" DIA AUTOMATIC WELDED THREADED STUDS IN 1 1/2" LONG HORIZONTALLY SLOTTED HOLES – TIGHTEN NUTS FINGERTIGHT.
3. 1"x6"x14" STEEL BEARING PLATE WITH (2) 3/4" DIA. ANCHORS AT 8" O.C. OVER 1"± DRYPACK.
4. 2 #5 x 5'–6" LONG IN 6'–0" LONG x 8" DEEP BOND BEAM.
5. MASONRY WALL.
6. STEEL JOIST GIRDER.
7. STABILIZER PLATE PER GIRDER MFR.
8. 1/2"x8"x1" GREATER THAN HEIGHT OF STABILIZER PLATE WITH (2) 3/4" DIA EXPANSION ANCHORS AT 6" O.C. IN SOLID GROUTED CELLS (4" MIN COVERAGE ALL AROUND).
9. GROUT CELLS UNDER BEARING PLATE 2'–0" EACH SIDE.

301 STEEL JOIST GIRDER AT MASONRY WALL
447–21M NO SCALE

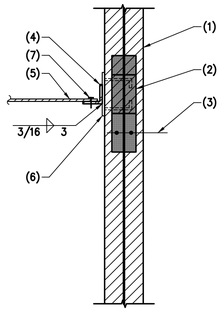


NOTES:

1. MASONRY WALL.
2. STEEL LINTEL CONTINUOUS BEYOND MASONRY WALL.
3. STEEL CAP PLATE, WIDTH TO MATCH LINTEL PLATE.
4. STEEL COLUMN.
5. 3/8" STIFFENER EACH SIDE OF BEAM.
6. (2) 3/4" DIA AUTOMATIC WELDED THREADED STUDS ON BEAM GAGE.
7. STEEL LINTEL WITH 1 1/2" LONG SLOTTED HOLES FOR 3/4" STUDS.

NOTE:
FOR ADDITIONAL INFORMATION, SEE LINTEL SCHEDULE.

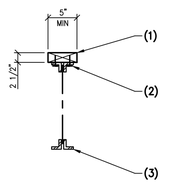
317 STEEL LINTEL AT STEEL COLUMN
24–0696 NO SCALE



NOTES:

1. MASONRY WALL.
2. GROUT CONTINUOUS FROM BOND BEAM TO 4" ABOVE ROOF LINE.
3. BOND BEAM PER G.S.N.
4. CONTINUOUS LEDGER ANGLE.
5. PLYWOOD SHEATHING.
6. STEEL PLATE 1/4"x4"x9" WITH (2) 1/2" DIA ANCHORS AT 7 1/2" O.C. – GROUT 4" MIN ALL AROUND ANCHORS.
7. EDGE ATTACHMENT PER G.S.N.

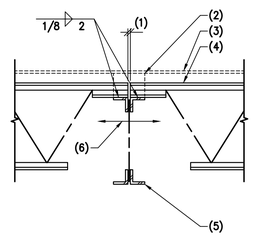
313 NON–BEARING STEEL LEDGER AT MASONRY WALL
462–02M NO SCALE



NOTES:

1. CONTINUOUS 3x WOOD NAILER (SHOP INSTALLED).
2. 2 #14 x 2" LONG WOOD SCREWS THRU 9/32" DIA HOLE IN TOP CHORD OF PURLIN AT 12" O.C.
3. STEEL JOIST PURLIN.

309 WOOD NAILER ON STEEL JOIST PURLIN
LGE MASTER NO SCALE

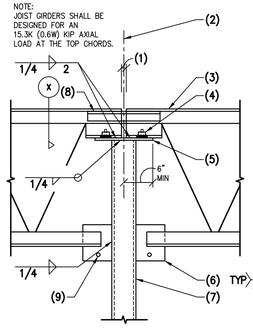


NOTES:

1. 1/2" MAXIMUM.
2. WOOD BLOCKING BY GIRDER MFR. WHERE NOTED ON PLAN. INSTALL DOUBLE EDGE NAILING OF PLYWOOD TO BLOCKING.
3. LINE OF PLYWOOD ROOF SHEATHING.
4. STEEL JOIST.
5. STEEL JOIST GIRDER.
6. JOIST GIRDERS SHALL BE DESIGNED FOR AN 15.3K (0.6W) KIP AXIAL LOAD AT THE TOP CHORDS.

NOTE:
PLYWOOD DECK AND WOOD PLATES AND BLOCKING NOT SHOWN FOR CLARITY.

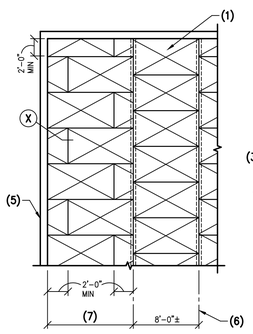
305 STEEL JOIST AT STEEL JOIST GIRDER
435–04M NO SCALE



NOTES:

1. 1/2" CLEAR.
2. CENTERLINE OF COLUMN.
3. STEEL JOIST GIRDER.
4. (2) 3/4" DIA AUTOMATIC WELDED THREADED STUDS IN 1 1/2" LONG HORIZONTALLY SLOTTED HOLES – TIGHTEN NUTS FINGERTIGHT.
5. 3/4" CAP PLATE.
6. MIN 6"x6" STEEL STABILIZER PLATE PER GIRDER MFR. DO NOT WELD BOTTOM CHORD TO PLATE U.N.O.
7. STEEL COLUMN.
8. STEEL ANGLE 1 1/2"x1 1/2"x1/4"x12" LONG EACH SIDE OF GIRDER.
9. 13/16" DIA HOLE IN PLATE.

302 STEEL JOIST GIRDER AT STEEL COLUMN
444–51M NO SCALE

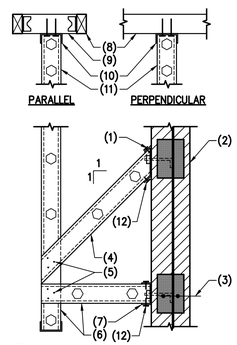


NOTES:

1. PLYWOOD SHEATHING.
2. DOUBLE EDGE NAILING.
3. WOOD JOIST (STIFFENER).
4. 4x BLOCKING.
5. WALL LINE.
6. PURLIN CENTERLINE.
7. VARIES 12'–0" MAXIMUM.
   1. 8'–1" TO 10'–0" INSTALL 2x6 JOISTS.
   2. 10'–1" TO 12'–0" INSTALL 2x8 JOISTS.

NOTE:
THIS DETAIL TO OCCUR AT PURLIN END BAY WHERE PURLIN SPACING EXCEEDS 8'–0" O.C. SEE G.S.N. AND PLANS FOR ADDITIONAL INFORMATION.

318 PLYWOOD LAYOUT CONFIGURATION AT END BAY
695–21 NO SCALE



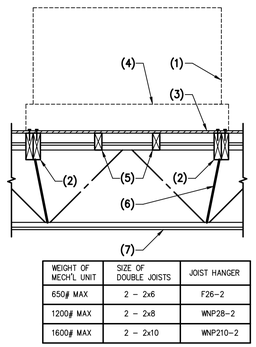
NOTES:

1. 18 GA CONTINUOUS BENT STEEL PLATE WITH 2" FLANGES AND (2) 1/2" DIA. ANCHOR BOLTS AT 8" O.C. AT EACH BRACE.
2. MASONRY WALL OR LINTEL.
3. 2 #5 IN 8" DEEP CONTINUOUS GROUTED BOND BEAM.
4. STEEL STUD BRACE AT 24" O.C.
5. 3 #10 SCREWS TYP AT EACH CONNECTION.
6. STEEL STUDS AND TRACKS AS SHOWN.
7. CONTINUOUS STUD TRACK WITH 1/2" DIA. ANCHOR BOLTS AT 48" O.C.
8. WOOD STIFFENER.
9. 2x WOOD BLOCKING WITH SIMPSON A34 EACH END AT 24" O.C.
10. CONTINUOUS STUD TRACK WITH 2 #10 x 2" WOOD SCREWS AT EACH STIFFENER OR BLOCKING AS OCCURS.
11. STEEL STUD WALL.
12. 2 #10 SCREWS PER STUD TYP.

NOTE:

A. 4" MINIMUM GROUT COVERAGE ABOVE AND BELOW ANCHOR BOLTS TYPICAL.
B. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

314 STEEL STUD SOFFIT AT MASONRY WALL
408–51M NO SCALE

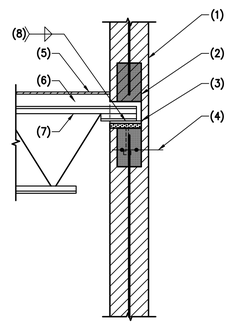


WEIGHT OF MECH'L UNIT	SIZE OF DOUBLE JOISTS	JOIST HANGER
650# MAX	2 – 2x6	F26–2
1200# MAX	2 – 2x8	WNP28–2
1600# MAX	2 – 2x10	WNP210–2

NOTES:

1. MECHANICAL UNIT AND CURB BY OTHERS.
2. DOUBLE JOISTS (PER SCHEDULE BELOW) FROM PURLIN TO PURLIN WITH 16d AT 12" O.C. – STAGGERED BOTH SIDES.
3. PLYWOOD SHEATHING.
4. CURB PER MECH'L UNIT MFR.
5. WOOD JOIST, (STIFFENER).
6. STEEL JOIST PURLIN MAY REQUIRE STRENGTHENING PER DETAIL 311. – VERIFY WITH PURLIN MFR.
7. LINE OF STEEL JOIST PURLIN BEYOND.

310 MECHANICAL UNIT PLATFORM AT PANELIZED ROOF
640–31.02M NO SCALE

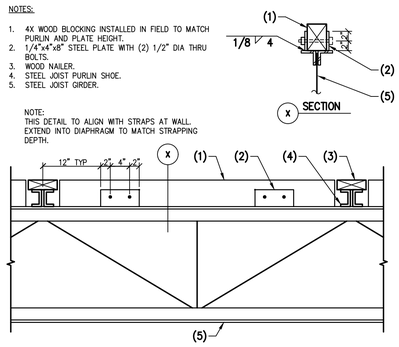


NOTES:

1. MASONRY WALL.
2. GROUT SOLID.
3. 1/2"x5"x10" STEEL BEARING PLATE WITH (2) 3/4" DIA x 10" ANCHORS AT 7 1/2" O.C. OVER 1"± DRYPACK.
4. BOND BEAM PER G.S.N.
5. PLYWOOD SHEATHING.
6. WOOD NAILER PER DETAIL 309.
7. STEEL JOIST.
8. 1/8"x2" AT K JOISTS.

NOTE:
JOIST MFR TO DESIGN JOIST BEARING SHOE AND TOP CHORD FOR 2.72K (0.6W) KIP AXIAL LOAD (WIND).

306 STEEL JOIST AT MASONRY WALL
447–01M NO SCALE

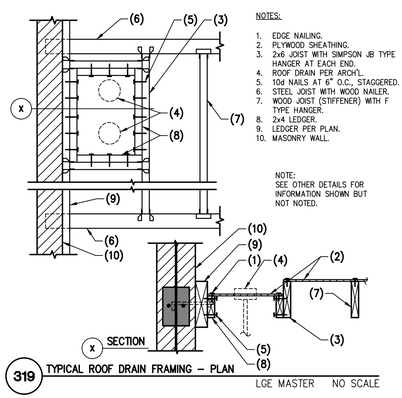


NOTES:

1. 4X WOOD BLOCKING INSTALLED IN FIELD TO MATCH PURLIN AND PLATE HEIGHT.
2. 1/4"x4"x8" STEEL PLATE WITH (2) 1/2" DIA THRU BOLTS.
3. WOOD NAILER.
4. STEEL JOIST PURLIN SHOE.
5. STEEL JOIST GIRDER.

NOTE:
THIS DETAIL TO ALIGN WITH STRAPS AT WALL. EXTEND INTO DIAPHRAGM TO MATCH STRAPPING DEPTH.

303 WOOD NAILER ON STEEL JOIST GIRDER
456–51.04M NO SCALE

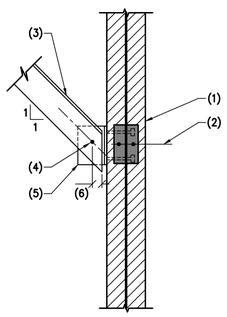


NOTES:

1. EDGE NAILING.
2. PLYWOOD SHEATHING.
3. 2x6 JOIST WITH SIMPSON JB TYPE HANGER AT EACH END.
4. ROOF DRAIN PER ARCH'L.
5. 10d NAILS AT 6" O.C., STAGGERED.
6. STEEL JOIST WITH WOOD NAILER.
7. WOOD JOIST (STIFFENER) WITH F TYPE HANGER.
8. 2x4 LEDGER.
9. LEDGER PER PLAN.
10. MASONRY WALL.

NOTE:
SEE OTHER DETAILS FOR INFORMATION SHOWN BUT NOT NOTED.

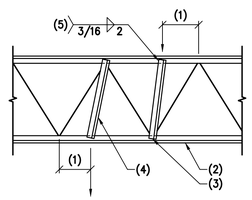
319 TYPICAL ROOF DRAIN FRAMING – PLAN
LGE MASTER NO SCALE



NOTES:

1. MASONRY WALL.
2. 2 #5 CONTINUOUS IN 8" DEEP GROUTED BOND BEAM.
3. STEEL ANGLE BRACE 3 1/2"x3 1/2"x1/4", SEE PLAN FOR LOCATION.
4. (1) 3/4" DIA. THRU–BOLT.
5. STEEL ANGLE 6"x3 1/2"x5/16" x 8" LONG WITH (2) 1/2" DIA. ANCHORS.
6. 2" MINIMUM.

315 WALL BRACE AT MASONRY LINTEL
516–02.01M NO SCALE

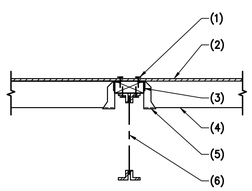


NOTES:

1. ADDITIONAL MEMBER REQUIRED WHEN LOAD IS MORE THAN 3" FROM PANEL POINT.
2. STEEL JOIST.
3. STEEL ANGLE 2"x2"x3/16" EACH SIDE FROM TOP CHORD TO NEAREST BOTTOM CHORD PANEL POINT.
4. STEEL ANGLE 2"x2"x3/16" EACH SIDE FROM BOTTOM CHORD TO NEAREST TOP CHORD PANEL POINT.
5. TYP EACH ANGLE EACH END.

NOTE:
PROVIDE THIS DETAIL WHEN CONCENTRATED LOAD EXCEEDS 100 LBS. –NOTIFY ENGINEER WHEN LOAD EXCEEDS 400 LBS.

311 ADDITIONAL WEB MEMBERS FOR CONCENTRATED LOAD OCCURRING AWAY FROM JOIST PANEL POINT
434–01 NO SCALE



NOTES:

1. DOUBLE EDGE NAILING.
2. PLYWOOD SHEATHING.
3. CONTINUOUS WOOD NAILER PER DETAIL 309. – 3x MIN.
4. WOOD JOIST, (STIFFENER).
5. SIMPSON F TYPE HANGER.
6. STEEL JOIST.

307 WOOD STIFFENERS AT STEEL JOIST
666–01.01M NO SCALE

FOR ADDITIONAL INFORMATION SHOWN BUT NOT NOTED, SEE GENERAL STRUCTURAL NOTES ON SHEET S1.1 AND TYPICAL DETAIL SHEETS.

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PROJECT ENGINEER	BKN	PROJECT DRAFTER	EDM

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PRELIMINARY NOT FOR CONSTRUCTION OR BIDDING

A TENANT IMPROVEMENT FOR
COMMERCIAL BUILDING
INNOVATIVE DRIVE

4121 W
INNOVATIVE DR
PHOENIX
ARIZONA
85086

DATE
75% PROGRESS SET
11-20-2024

DRAWN BY: EDM

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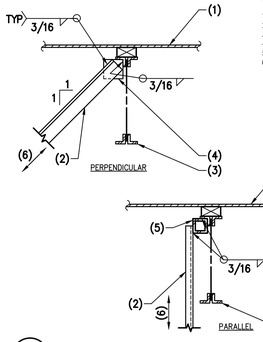
ROOF FRAMING DETAILS

S6.1

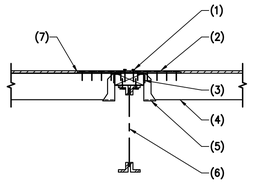
Project: 22105



NOTES:

1. PLYWOOD SHEATHING.
2. STEEL ANGLE BRACE.
3. STEEL JOIST.
4. STEEL PLATE 4"x4"x1/4".
5. HSS 3x3x3/16 x12" LONG.
6. FORCE = 2000# DUE TO WIND OR SEISMIC.

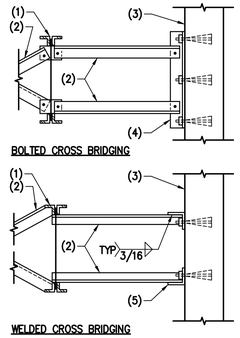
316 STEEL ANGLE BRACE AT STEEL JOIST OR BEAM
LGE MASTER NO SCALE



NOTES:

1. DOUBLE EDGE NAILING.
2. PLYWOOD SHEATHING.
3. CONTINUOUS WOOD NAILER PER DETAIL 309. – 3x MIN.
4. 3x6 WOOD STIFFENERS AT 8'–0" O.C.
5. SIMPSON F TYPE HANGER.
6. STEEL JOIST.
7. SIMPSON ST6236 STRAP WITH 10d NAILS CENTERED OVER JOIST AT 8'–0" O.C.

308 WOOD STIFFENERS AT STEEL JOIST
666–01.01M NO SCALE

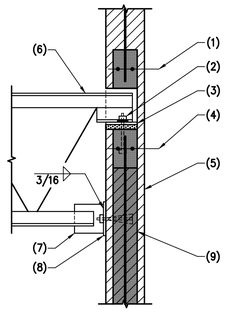


NOTES:

1. STEEL JOIST.
2. BRIDGING AS REQUIRED BY JOIST MANUFACTURER.
3. WALL – FOR SIZE AND TYPE, SEE PLAN.
4. STEEL ANGLE 3"x3"x1/4"x AS REQUIRED WITH (3) 5/8" DIA EXPANSION BOLTS.
5. STEEL ANGLE 3"x3"x1/4"x10" LONG WITH (2) 5/8" DIA EXPANSION BOLT.

NOTE:
AT MASONRY WALLS, INSTALL EXPOXIED ANCHORS PER G.S.N. IN SOLID GROUTED CELLS, IN LIEU OF EXPANSION BOLTS.

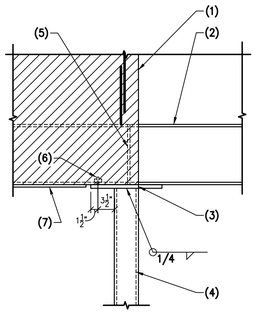
304 STEEL JOIST CROSS BRIDGING AT WALL
434–41.02 NO SCALE



NOTES:

1. BOND BEAM PER G.S.N.
2. (2) 3/4" DIA AUTOMATIC WELDED THREADED STUDS IN 1 1/2" LONG HORIZONTALLY SLOTTED HOLES – TIGHTEN NUTS FINGERTIGHT.
3. 1"x6"x14" STEEL BEARING PLATE WITH (2) 3/4" DIA. ANCHORS AT 8" O.C. OVER 1"± DRYPACK.
4. 2 #5 x 5'–6" LONG IN 6'–0" LONG x 8" DEEP BOND BEAM.
5. MASONRY WALL.
6. STEEL JOIST GIRDER.
7. STABILIZER PLATE PER GIRDER MFR.
8. 1/2"x8"x1" GREATER THAN HEIGHT OF STABILIZER PLATE WITH (2) 3/4" DIA EXPANSION ANCHORS AT 6" O.C. IN SOLID GROUTED CELLS (4" MIN COVERAGE ALL AROUND).
9. GROUT CELLS UNDER BEARING PLATE 2'–0" EACH SIDE.

301 STEEL JOIST GIRDER AT MASONRY WALL
447–21M NO SCALE

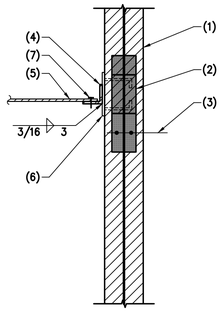


NOTES:

1. MASONRY WALL.
2. STEEL LINTEL CONTINUOUS BEYOND MASONRY WALL.
3. STEEL CAP PLATE, WIDTH TO MATCH LINTEL PLATE.
4. STEEL COLUMN.
5. 3/8" STIFFENER EACH SIDE OF BEAM.
6. (2) 3/4" DIA AUTOMATIC WELDED THREADED STUDS ON BEAM GAGE.
7. STEEL LINTEL WITH 1 1/2" LONG SLOTTED HOLES FOR 3/4" STUDS.

NOTE:
FOR ADDITIONAL INFORMATION, SEE LINTEL SCHEDULE.

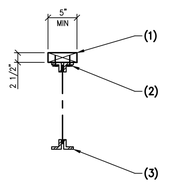
317 STEEL LINTEL AT STEEL COLUMN
24–0696 NO SCALE



NOTES:

1. MASONRY WALL.
2. GROUT CONTINUOUS FROM BOND BEAM TO 4" ABOVE ROOF LINE.
3. BOND BEAM PER G.S.N.
4. CONTINUOUS LEDGER ANGLE.
5. PLYWOOD SHEATHING.
6. STEEL PLATE 1/4"x4"x9" WITH (2) 1/2" DIA ANCHORS AT 7 1/2" O.C. – GROUT 4" MIN ALL AROUND ANCHORS.
7. EDGE ATTACHMENT PER G.S.N.

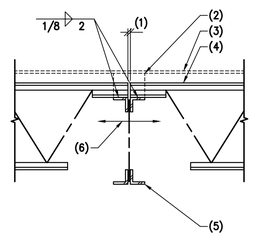
313 NON–BEARING STEEL LEDGER AT MASONRY WALL
462–02M NO SCALE



NOTES:

1. CONTINUOUS 3x WOOD NAILER (SHOP INSTALLED).
2. 2 #14 x 2" LONG WOOD SCREWS THRU 9/32" DIA HOLE IN TOP CHORD OF PURLIN AT 12" O.C.
3. STEEL JOIST PURLIN.

309 WOOD NAILER ON STEEL JOIST PURLIN
LGE MASTER NO SCALE

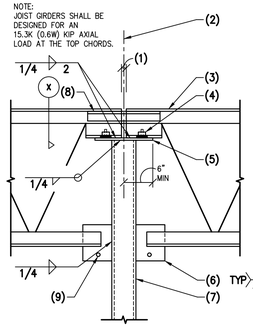


NOTES:

1. 1/2" MAXIMUM.
2. WOOD BLOCKING BY GIRDER MFR. WHERE NOTED ON PLAN. INSTALL DOUBLE EDGE NAILING OF PLYWOOD TO BLOCKING.
3. LINE OF PLYWOOD ROOF SHEATHING.
4. STEEL JOIST.
5. STEEL JOIST GIRDER.
6. JOIST GIRDERS SHALL BE DESIGNED FOR AN 15.3K (0.6W) KIP AXIAL LOAD AT THE TOP CHORDS.

NOTE:
PLYWOOD DECK AND WOOD PLATES AND BLOCKING NOT SHOWN FOR CLARITY.

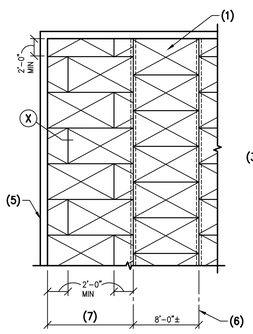
305 STEEL JOIST AT STEEL JOIST GIRDER
435–04M NO SCALE



NOTES:

1. 1/2" CLEAR.
2. CENTERLINE OF COLUMN.
3. STEEL JOIST GIRDER.
4. (2) 3/4" DIA AUTOMATIC WELDED THREADED STUDS IN 1 1/2" LONG HORIZONTALLY SLOTTED HOLES – TIGHTEN NUTS FINGERTIGHT.
5. 3/4" CAP PLATE.
6. MIN 6"x6" STEEL STABILIZER PLATE PER GIRDER MFR. DO NOT WELD BOTTOM CHORD TO PLATE U.N.O.
7. STEEL COLUMN.
8. STEEL ANGLE 1 1/2"x1 1/2"x1/4"x12" LONG EACH SIDE OF GIRDER.
9. 13/16" DIA HOLE IN PLATE.

302 STEEL JOIST GIRDER AT STEEL COLUMN
444–51M NO SCALE

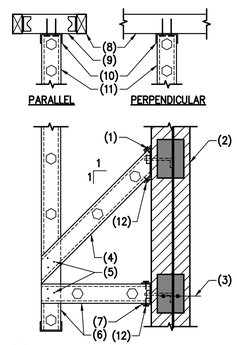


NOTES:

1. PLYWOOD SHEATHING.
2. DOUBLE EDGE NAILING.
3. WOOD JOIST (STIFFENER).
4. 4x BLOCKING.
5. WALL LINE.
6. PURLIN CENTERLINE.
7. VARIES 12'–0" MAXIMUM.
   1. 8'–1" TO 10'–0" INSTALL 2x6 JOISTS.
   2. 10'–1" TO 12'–0" INSTALL 2x8 JOISTS.

NOTE:
THIS DETAIL TO OCCUR AT PURLIN END BAY WHERE PURLIN SPACING EXCEEDS 8'–0" O.C. SEE G.S.N. AND PLANS FOR ADDITIONAL INFORMATION.

318 PLYWOOD LAYOUT CONFIGURATION AT END BAY
695–21 NO SCALE



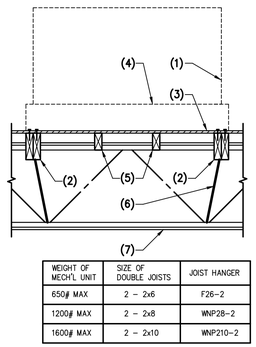
NOTES:

1. 18 GA CONTINUOUS BENT STEEL PLATE WITH 2" FLANGES AND (2) 1/2" DIA. ANCHOR BOLTS AT 8" O.C. AT EACH BRACE.
2. MASONRY WALL OR LINTEL.
3. 2 #5 IN 8" DEEP CONTINUOUS GROUTED BOND BEAM.
4. STEEL STUD BRACE AT 24" O.C.
5. 3 #10 SCREWS TYP AT EACH CONNECTION.
6. STEEL STUDS AND TRACKS AS SHOWN.
7. CONTINUOUS STUD TRACK WITH 1/2" DIA. ANCHOR BOLTS AT 48" O.C.
8. WOOD STIFFENER.
9. 2x WOOD BLOCKING WITH SIMPSON A34 EACH END AT 24" O.C.
10. CONTINUOUS STUD TRACK WITH 2 #10 x 2" WOOD SCREWS AT EACH STIFFENER OR BLOCKING AS OCCURS.
11. STEEL STUD WALL.
12. 2 #10 SCREWS PER STUD TYP.

NOTE:

A. 4" MINIMUM GROUT COVERAGE ABOVE AND BELOW ANCHOR BOLTS TYPICAL.
B. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

314 STEEL STUD SOFFIT AT MASONRY WALL
408–51M NO SCALE

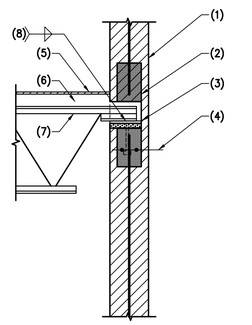


WEIGHT OF MECH'L UNIT	SIZE OF DOUBLE JOISTS	JOIST HANGER
650# MAX	2 – 2x6	F26–2
1200# MAX	2 – 2x8	WNP28–2
1600# MAX	2 – 2x10	WNP210–2

NOTES:

1. MECHANICAL UNIT AND CURB BY OTHERS.
2. DOUBLE JOISTS (PER SCHEDULE BELOW) FROM PURLIN TO PURLIN WITH 16d AT 12" O.C. – STAGGERED BOTH SIDES.
3. PLYWOOD SHEATHING.
4. CURB PER MECH'L UNIT MFR.
5. WOOD JOIST, (STIFFENER).
6. STEEL JOIST PURLIN MAY REQUIRE STRENGTHENING PER DETAIL 311. – VERIFY WITH PURLIN MFR.
7. LINE OF STEEL JOIST PURLIN BEYOND.

310 MECHANICAL UNIT PLATFORM AT PANELIZED ROOF
640–31.02M NO SCALE

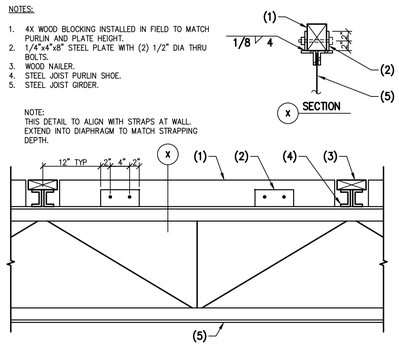


NOTES:

1. MASONRY WALL.
2. GROUT SOLID.
3. 1/2"x5"x10" STEEL BEARING PLATE WITH (2) 3/4" DIA x 10" ANCHORS AT 7 1/2" O.C. OVER 1"± DRYPACK.
4. BOND BEAM PER G.S.N.
5. PLYWOOD SHEATHING.
6. WOOD NAILER PER DETAIL 309.
7. STEEL JOIST.
8. 1/8"x2" AT K JOISTS.

NOTE:
JOIST MFR TO DESIGN JOIST BEARING SHOE AND TOP CHORD FOR 2.72K (0.6W) KIP AXIAL LOAD (WIND).

306 STEEL JOIST AT MASONRY WALL
447–01M NO SCALE

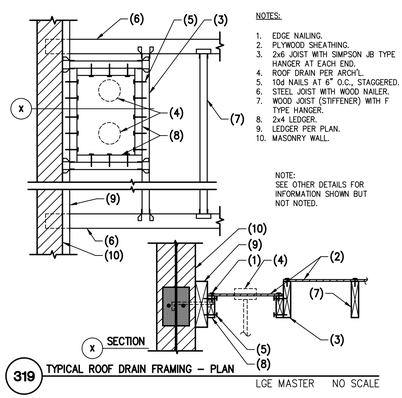


NOTES:

1. 4X WOOD BLOCKING INSTALLED IN FIELD TO MATCH PURLIN AND PLATE HEIGHT.
2. 1/4"x4"x8" STEEL PLATE WITH (2) 1/2" DIA THRU BOLTS.
3. WOOD NAILER.
4. STEEL JOIST PURLIN SHOE.
5. STEEL JOIST GIRDER.

NOTE:
THIS DETAIL TO ALIGN WITH STRAPS AT WALL. EXTEND INTO DIAPHRAGM TO MATCH STRAPPING DEPTH.

303 WOOD NAILER ON STEEL JOIST GIRDER
456–51.04M NO SCALE

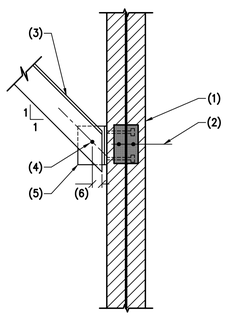


NOTES:

1. EDGE NAILING.
2. PLYWOOD SHEATHING.
3. 2x6 JOIST WITH SIMPSON JB TYPE HANGER AT EACH END.
4. ROOF DRAIN PER ARCH'L.
5. 10d NAILS AT 6" O.C., STAGGERED.
6. STEEL JOIST WITH WOOD NAILER.
7. WOOD JOIST (STIFFENER) WITH F TYPE HANGER.
8. 2x4 LEDGER.
9. LEDGER PER PLAN.
10. MASONRY WALL.

NOTE:
SEE OTHER DETAILS FOR INFORMATION SHOWN BUT NOT NOTED.

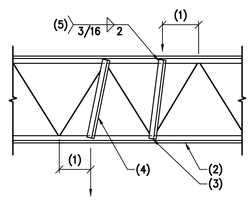
319 TYPICAL ROOF DRAIN FRAMING – PLAN
LGE MASTER NO SCALE



NOTES:

1. MASONRY WALL.
2. 2 #5 CONTINUOUS IN 8" DEEP GROUTED BOND BEAM.
3. STEEL ANGLE BRACE 3 1/2"x3 1/2"x1/4", SEE PLAN FOR LOCATION.
4. (1) 3/4" DIA. THRU–BOLT.
5. STEEL ANGLE 6"x3 1/2"x5/16" x 8" LONG WITH (2) 1/2" DIA. ANCHORS.
6. 2" MINIMUM.

315 WALL BRACE AT MASONRY LINTEL
516–02.01M NO SCALE

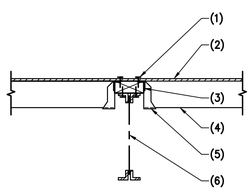


NOTES:

1. ADDITIONAL MEMBER REQUIRED WHEN LOAD IS MORE THAN 3" FROM PANEL POINT.
2. STEEL JOIST.
3. STEEL ANGLE 2"x2"x3/16" EACH SIDE FROM TOP CHORD TO NEAREST BOTTOM CHORD PANEL POINT.
4. STEEL ANGLE 2"x2"x3/16" EACH SIDE FROM BOTTOM CHORD TO NEAREST TOP CHORD PANEL POINT.
5. TYP EACH ANGLE EACH END.

NOTE:
PROVIDE THIS DETAIL WHEN CONCENTRATED LOAD EXCEEDS 100 LBS. –NOTIFY ENGINEER WHEN LOAD EXCEEDS 400 LBS.

311 ADDITIONAL WEB MEMBERS FOR CONCENTRATED LOAD OCCURRING AWAY FROM JOIST PANEL POINT
434–01 NO SCALE



NOTES:

1. DOUBLE EDGE NAILING.
2. PLYWOOD SHEATHING.
3. CONTINUOUS WOOD NAILER PER DETAIL 309. – 3x MIN.
4. WOOD JOIST, (STIFFENER).
5. SIMPSON F TYPE HANGER.
6. STEEL JOIST.

307 WOOD STIFFENERS AT STEEL JOIST
666–01.01M NO SCALE

FOR ADDITIONAL INFORMATION SHOWN BUT NOT NOTED, SEE GENERAL STRUCTURAL NOTES ON SHEET S1.1 AND TYPICAL DETAIL SHEETS.

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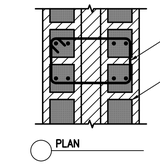
ROOF FRAMING DETAILS

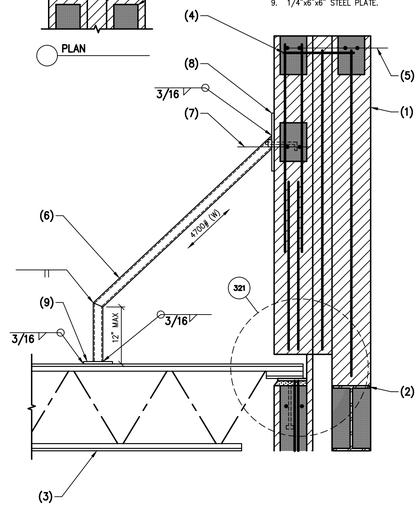
S6.1

Project: 22105

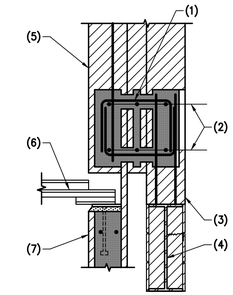


NOTES:

1. MASONRY WALL.
2. STEEL LINTEL PER PLAN.
3. STEEL JOIST.
4. #3 TIES AT EACH END OF ELEVATED MASONRY. TIES TO EXTEND 2 CELLS. TIES TO OCCUR 8" O.C. HORIZONTALLY.
5. BOND BEAM PER G.S.N.
6. 2" STANDARD PIPE PARAPET BRACE.
7. (2) #5 CONTINUOUS IN 8" DEEP GROUTED BOND BEAM.
8. 1/4"x12"x12" STEEL PLATE WITH (2) 3/4" DIA ANCHORS AT 8" O.C.
9. 1/4"x6"x6" STEEL PLATE.



324 PARAPET BRACE AT TWO-WYTHE MASONRY WALL
24-0696 NO SCALE



NOTES:

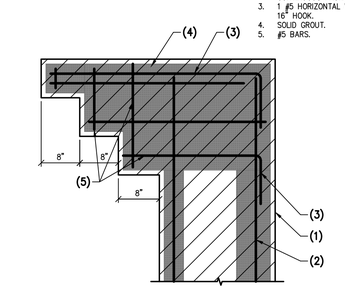
1. #3 "U" BARS WITH 12" LEGS AT 16" O.C. BREAK OUT FACE SHELLS AS REQUIRED.
2. 3 #5 CONTINUOUS IN GROUTED BOND BEAM.
3. MASONRY WALL.
4. STEEL LINTEL.
5. MASONRY PARAPET. FOR BRACING, SEE RELATED DETAILS.
6. STEEL JOIST.
7. BOND BEAM.

NOTE:
SEE RELATED DETAILS FOR INFORMATION SHOWN BUT NOT NOTED.

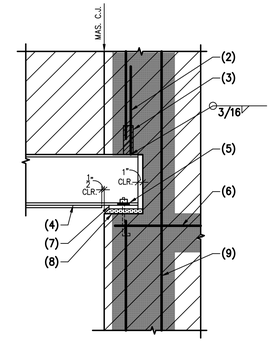
321 STEEL JOIST AT MASONRY WALL
24-0696 NO SCALE

NOTES:

1. MASONRY WALL.
2. VERTICAL REINFORCING CONTINUOUS FROM BELOW.
3. 1 #5 HORIZONTAL WITH A 16" HOOK.
4. SOLID GROUT.
5. #5 BARS.



322 MASONRY RETURN AT PARAPET – TYP
24-0696 NO SCALE



NOTES:

1. MASONRY WALL.
2. DOWELS AT EACH END AND TO MATCH AND LAP VERTICAL WALL REINFORCING.
3. WRAP WITH 1/4" THICK x 6" LONG MASTIC.
4. STEEL BEAM.
5. 1 1/2" LONG HORIZONTALLY SLOTTED HOLES EACH SIDE OF BEAM WEB. TIGHTEN NUTS FINGER-TIGHT.
6. 2 #5 x 3'-6" IN 4'-0" LONG x 8" DEEP GROUTED BOND BEAM.
7. 3/4"x8"x6" BEARING PLATE WITH GREASED BEARING SURFACE.
8. 1"± DRYPACK.
9. CONTINUOUS BAR IN CELL ADJACENT TO JAMB.

323 STEEL LINTEL BEAM BEARING AT MASONRY WALL
420-52M NO SCALE

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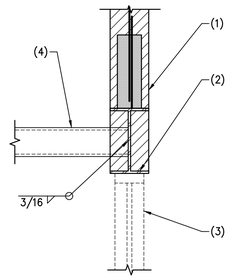
ROOF FRAMING DETAILS

S6.2

Project: 22105

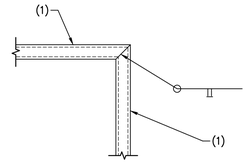


NOTES:

1. MASONRY WALL.
2. STEEL LINTEL PER PLAN.
3. STOREFRONT PER ARCH'L.
4. STEEL BEAM.

404 STEEL BEAM AT STEEL LINTEL

24–0696 NO SCALE

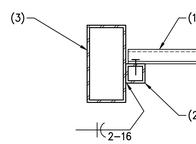


NOTES:

1. STEEL FASCIA BEAM.

401 PLAN – MITERED CONNECTION AT CANOPY FASCIA BEAM

24–0696 NO SCALE

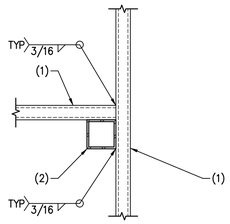


NOTES:

1. 150F125–33 STEEL HAT CHANNEL AT 8" O.C.
2. CONTINUOUS HSS 2"x2"x3/16" STEEL LEDGER.
3. STEEL BEAM.

405 STEEL DECK AT STEEL BEAM

24–0696 NO SCALE

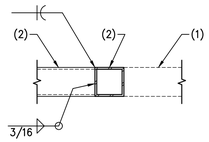


NOTES:

1. STEEL FASCIA BEAM.
2. STEEL COLUMN.

402 PLAN – MITERED CONNECTION AT CANOPY FASCIA BEAM

24–0696 NO SCALE

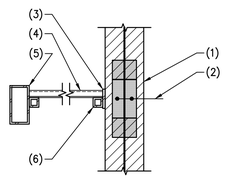


NOTES:

1. STEEL BEAM AS OCCURS.
2. STEEL BEAM.

406 STEEL BEAM TO STEEL BEAM

24–0696 NO SCALE



NOTES:

1. MASONRY WALL.
2. BOND BEAM PER G.S.N.
3. STEEL PLATE 1/4"x4"x9" WITH (2) 1/2" DIA. ANCHORS AT 7 1/2" O.C. – GROUT 4" MIN. ALL AROUND ANCHORS.
4. 150F125–33 STEEL HAT CHANNEL AT 8" O.C.
5. STEEL BEAM
6. HSS 2x2x1/4".

407 STEEL CANOPY TO MASONRY

24–0696 NO SCALE

FOR ADDITIONAL INFORMATION SHOWN BUT NOT NOTED, SEE GENERAL STRUCTURAL NOTES ON SHEET S1.1 AND TYPICAL DETAIL SHEETS.

THESE DRAWINGS/CALCULATIONS ARE CONSIDERED PRELIMINARY –NOT FOR CONSTRUCTION OR RECORDING UNLESS THE STRUCTURAL ENGINEER OF RECORD'S SEAL IS AFFIXED WITH WRITTEN SIGNATURE.

PROJECT NUMBER	24–0696	PROJECT MANAGER	BKN
PROJECT ENGINEER	BKN	PROJECT DRAFTER	EDM

CARUSO TURLEY SCOTT structural engineers
1215 West Rio Salado Parkway
Suite 200
Tempe, Arizona 85281
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CAWLEY ARCHITECTS
730 N. 52nd St. Ste. 203
Phoenix, Arizona 85008
P 602.393.5060
CawleyArchitects.com

PRELIMINARY NOT FOR CONSTRUCTION OR BIDDING

A TENANT IMPROVEMENT FOR
COMMERCIAL BUILDING
INNOVATIVE DRIVE

4121 W INNOVATIVE DR
PHOENIX
ARIZONA
85086

DATE

75% PROGRESS SET
11-20-2024

DRAWN BY: EDM

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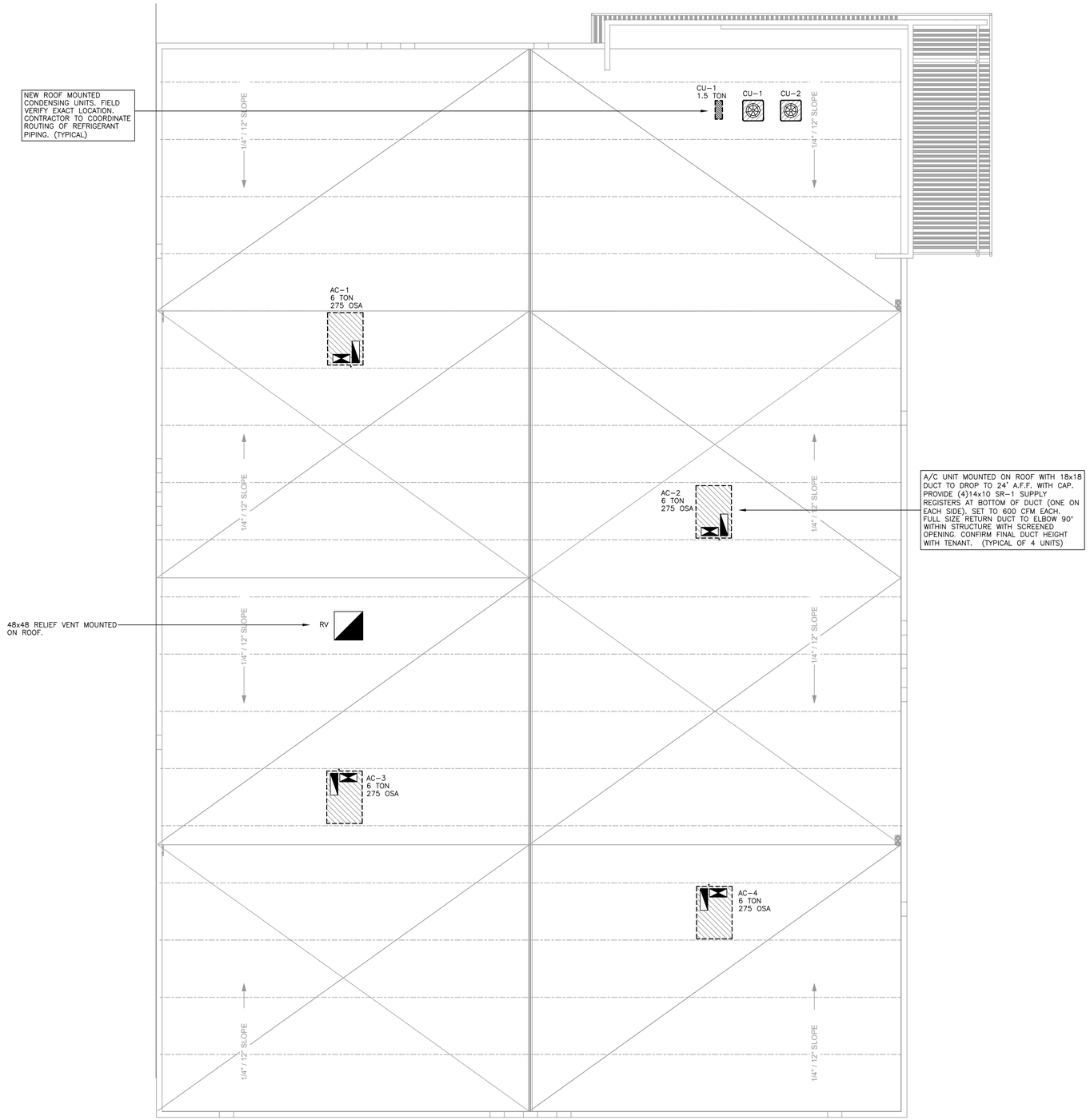
CANOPY FRAMING DETAILS

Project: 22105

S7.1



MECHANICAL ROOF PLAN

1/8"=1'-0"

NORTH

CAWLEY ARCHITECTS
730 N. 52nd St. Ste. 203
Phoenix, Arizona 85008
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CawleyArchitects.com

COMMERCIAL BUILDING
INNOVATIVE DRIVE

4121 W
INNOVATIVE DR
PHOENIX
ARIZONA
85086

DATE
75% PROGRESS SET
11-20-2024

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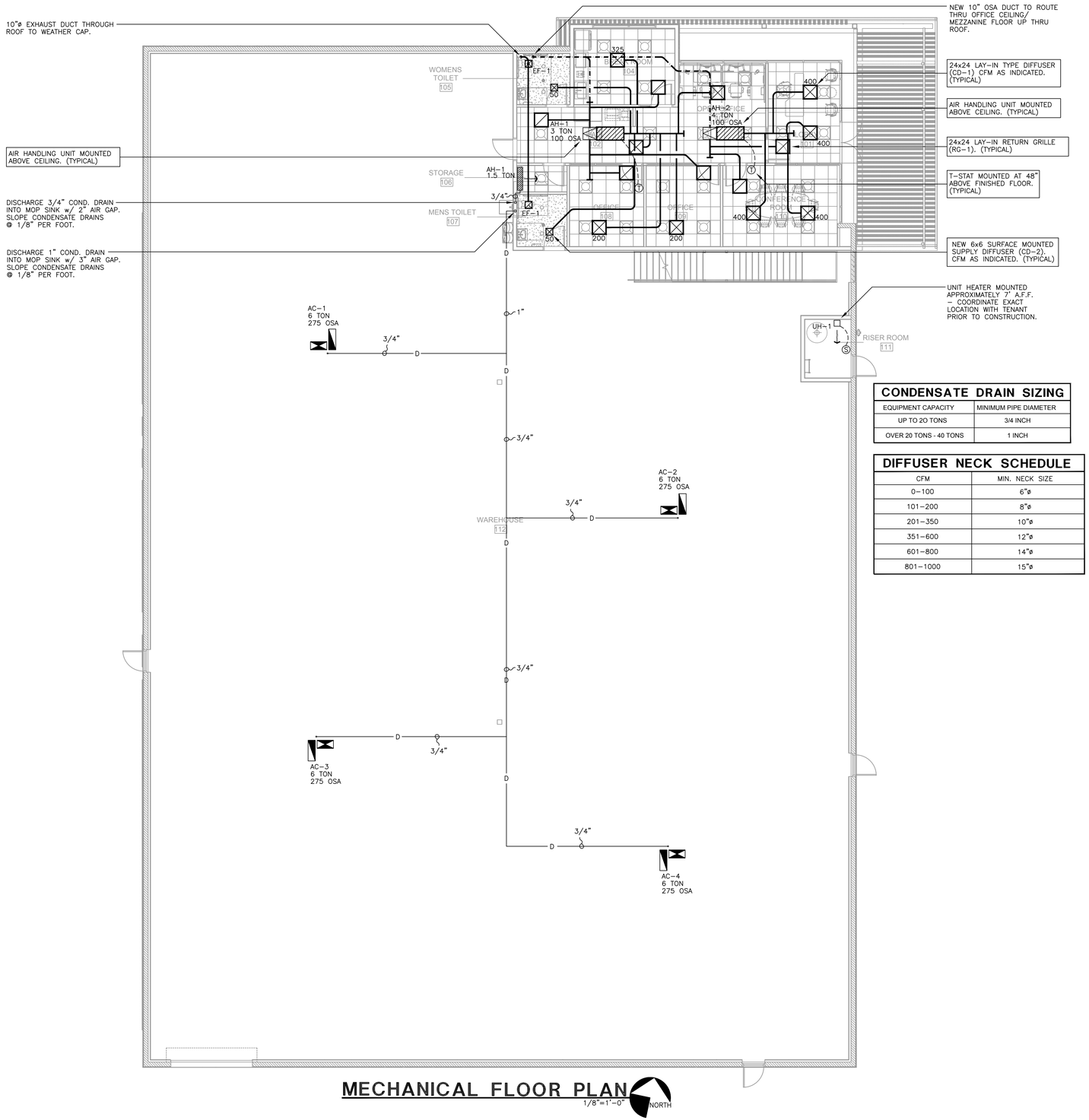
MECHANICAL FLOOR PLAN

MECHANICAL DESIGNS INC
MDI
Consulting Engineers
7227 N. 16th Street, Suite 200, Phoenix, AZ 85020
Job No 20420
Phone (602) 943-6608
Fax (602) 943-6181
Web: MechDesigns.com

Project: 22105

M1.1



MECHANICAL FLOOR PLAN

1/8"=1'-0"

CONDENSATE DRAIN SIZING

EQUIPMENT CAPACITY	MINIMUM PIPE DIAMETER
UP TO 20 TONS	3/4 INCH
OVER 20 TONS - 40 TONS	1 INCH

DIFFUSER NECK SCHEDULE

CFM	MIN. NECK SIZE
0–100	6"ø
101–200	8"ø
201–350	10"ø
351–600	12"ø
601–800	14"ø
801–1000	15"ø

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7227 N. 16th Street, Suite 200, Phoenix, AZ 85020
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Project: 22105

M2.1

2018 IECC COMPLIANCE REPORT - MECHANICAL

MECHANICAL SYSTEMS LIST AND REQUIREMENTS

ROOFTOP PACKAGE HEAT PUMP - WITH ECONOMIZER

TONNAGE	QUANTITY	COOLING CAPACITY	HEATING CAPACITY	ECONOMIZER?	COOLING EFFICIENCY REQ/PROV	HEATING EFFICIENCY REQ/PROV
6.0	1	72 kBTU/HR	72 kBTU/HR	YES	11.0 EER REQ/11.2 EER PROV	3.3 COP REQ/3.4 COP PROV

[X] INTEGRATED AIR ECONOMIZER IS REQUIRED FOR INDIVIDUAL COOLING SYSTEMS AND ALLOWS MODULATION OF OUTDOOR AIR AND RETURN AIR DAMPERS TO PROVIDE UP TO 100% OF THE DESIGN SUPPLY AIR QUANTITY AS OUTDOOR AIR FOR COOLING. ALL AIR ECONOMIZERS SHALL BE CAPABLE OF AUTOMATICALLY REDUCING OUTDOOR AIR INTAKE TO THE DESIGN MINIMUM OUTDOOR AIR QUANTITY WHEN OUTDOOR AIR INTAKE WILL NO LONGER REDUCE COOLING ENERGY USAGE.

[ ] AIR ECONOMIZER DAMPERS CAN BE SEQUENCED WITH THE COOLING EQUIPMENT AND NOT CONTROLLED EXCLUSIVELY BY MIXED AIR TEMPERATURE
EXCEPTION(S):
[X] SYSTEM CONTROLLED FROM SPACE TEMPERATURE (SUCH AS SINGLE-ZONE SYSTEMS)

[X] COOLING SYSTEM PROVIDES A MEANS TO RELIEVE EXCESS OUTDOOR AIR DURING ECONOMIZER OPERATION (BAROMETRIC DAMPER OR POWER EXHAUST)

SPLIT SYSTEM HEAT PUMP - NO ECONOMIZER PER LESS THAN 54K BTU EXCEPTION

TONNAGE	QUANTITY	COOLING CAPACITY	HEATING CAPACITY	ECONOMIZER?	COOLING EFFICIENCY REQ/PROV	HEATING EFFICIENCY REQ/PROV
3.0	1	36 kBTU/HR	36 kBTU/HR	NO	14.0 SEER REQ/15.0 SEER PROV	7.7 HSPF REQ/8.2 HSPF PROV
4.0	1	48 kBTU/HR	48 kBTU/HR	NO	14.0 SEER REQ/14.0 SEER PROV	7.7 HSPF REQ/8.2 HSPF PROV

GENERIC REQUIREMENTS

[X] PLANT EQUIPMENT AND SYSTEM CAPACITY NO GREATER THAN NEEDED TO MEET LOADS
EXCEPTION(S):
[ ] STANDBY EQUIPMENT AUTOMATICALLY OFF WHEN PRIMARY SYSTEM IS OPERATING
[ ] MULTIPLE UNITS CONTROLLED TO SEQUENCE OPERATION AS A FUNCTION OF LOAD

[X] MINIMUM ONE TEMPERATE CONTROL DEVICE PER SYSTEM

[ ] MINIMUM ONE HUMIDITY CONTROL DEVICE PER INSTALLED HUMIDIFICATION/DEHUMIDIFICATION SYSTEM

[X] LOAD CALCULATIONS PER ASHRAE/ACCA STANDARD 183

[X] AUTOMATIC CONTROLS: SETBACK TO 55°F (HEAT) AND 85°F (COOL)/7-DAY CLOCK/2-HR OCCUPANT OVERRIDE/10-HR BACKUP
EXCEPTION(S):
[ ] CONTINUOUSLY OPERATING ZONES
[ ] 2 KW DEMAND OR LESS (SUBMIT CALCULATIONS)

[X] AUTOMATIC START CONTROLS THAT CAN AUTOMATICALLY ADJUST THE DAILY START TIME OF THE HVAC SYSTEM ARE PROVIDED FOR EACH SYSTEM

[X] OUTSIDE AIR SOURCE FOR VENTILATION; SYSTEM CAPABLE OF REDUCING OSA TO REQUIRED MINIMUM

[X] R-6 SUPPLY/RETURN AND DUCT INSULATION IN UNCONDITIONED SPACES
R-8 SUPPLY/RETURN DUCT INSULATION OUTSIDE THE BUILDING
R-8 INSULATION BETWEEN DUCTS AND THE BUILDING EXTERIOR WHERE DUCTS ARE PART OF THE BUILDING ASSEMBLY
EXCEPTION(S):
[ ] DUCTS LOCATED WITHIN EQUIPMENT
[ ] DUCTS WITH INTERIOR AND EXTERIOR TEMPERATURE DIFFERENCE NOT EXCEEDING 15°F (I.E. EXPOSED DUCTWORK)

[X] DUCTS SEALED - LONGITUDINAL SEAMS ON RIGID DUCTS/TRANSVERSE SEAMS ON ALL DUCTS/UL 181A OR 181B TAPES AND MASTICS

[ ] OPERATION AND MAINTENANCE MANUAL PROVIDED TO BUILDING OWNER (WILL BE PROVIDED BY CONTRACTOR)

[ ] DEMAND CONTROL VENTILATION (DCV) PRESENT FOR HIGH DESIGN OCCUPANCY AREAS (>25 PERSON PER 1000 SQ.FT. IN SPACES >500 SQ.FT.) AND SERVED BY SYSTEMS WITH ANY ONE OF:
1) AN AIR SIDE ECONOMIZER
2) AUTOMATIC MODULATING CONTROL OF THE OUTDOOR AIR DAMPER
3) A DESIGN OUTDOOR AIRFLOW GREATER THAN 3000 CFM
EXCEPTION(S):
[ ] SYSTEMS WITH HEAT RECOVERY
[ ] MULTIPLE-ZONE SYSTEMS WITHOUT DDC OF INDIVIDUAL ZONES COMMUNICATING WITH A CENTRAL CONTROL PANEL
[X] SYSTEMS WITH A DESIGN OUTDOOR AIRFLOW LESS THAN 1200 CFM
[ ] SPACES WHERE THE SUPPLY AIRFLOW RATE MINUS ANY MAKEUP OR OUTGOING TRANSFER AIR REQUIREMENT IS LESS THAN 1200 CFM
[ ] VENTILATION FOR PROCESS LOADS ONLY

[ ] AUTOMATIC CONTROLS FOR FREEZE PROTECTION SYSTEMS PRESENT

[ ] EACH FAN SYSTEM HAS AN ENERGY RECOVERY SYSTEM WHEN ONE OF THE FOLLOWING CONDITIONS ARE MET:
50% ≥ POA < 60% AND DAF ≥ 26000 CFM
60% ≥ POA < 60% AND DAF ≥ 12000 CFM
70% ≥ POA AND DAF ≥ 5000 CFM
WHERE POA = PERCENT OUTDOOR AIR AT FULL DESIGN AIRFLOW RATE AND DAF = DESIGN SUPPLY AIRFLOW RATE
EXCEPTION(S):
[ ] LABORATORY FUME HOOD SYSTEMS WITH A TOTAL EXHAUST RATE ≤ 5000 CFM
[ ] SYSTEMS SERVING SPACES THAT ARE NOT COOLED AND HEATED TO < 60°F
[ ] SYSTEMS WITH MORE THAN 60% OF THE OUTDOOR HEATING ENERGY PROVIDED FROM SITE-RECOVERED OR SITE SOLAR ENERGY
[ ] SYSTEMS EXHAUSTING TOXIC, FLAMMABLE, PAINT OR CORROSIVE FUMES OR DUST
[ ] SYSTEMS REQUIRING DEHUMIDIFICATION WITH COOLING COIL ENERGY RECOVERY IN SERIES WITH THE COOLING COIL
[ ] SYSTEMS EXPECTED TO OPERATE < 20 HOURS PER WEEK WHEN OUTDOOR AIR PERCENTAGE ≥ 30%
[ ] WHERE THE LARGEST EXHAUST SOURCE IS LESS THAN 75% OF THE DESIGN OUTDOOR AIRFLOW

[ ] MECHANICAL SYSTEMS SHALL MEET COMMISSIONING AND COMPLETION REQUIREMENTS IN SECTION C408.2

COMPLIANCE STATEMENT:

THE PROPOSED MECHANICAL DESIGN REPRESENTED IN THIS DOCUMENT IS CONSISTENT WITH THE BUILDING PLANS, SPECIFICATIONS AND OTHER CALCULATIONS SUBMITTED WITH THIS PERMIT APPLICATION. THE PROPOSED MECHANICAL SYSTEMS HAVE BEEN DESIGNED TO MEET THE 2018 IECC, CHAPTER 8 AND TO COMPLY WITH THE MANDATORY REQUIREMENTS IN THE REQUIREMENTS CHECKLIST.

MATT MOERTL	Matt Moertl	11/18/24
NAME - TITLE	SIGNATURE	DATE

POST CONSTRUCTION COMPLIANCE STATEMENT

[ ] HVAC RECORD DRAWINGS OF THE ACTUAL INSTALLATION, SYSTEM CAPACITIES, CALIBRATION INFORMATION AND PERFORMANCE DATA FOR EACH PIECE OF EQUIPMENT PROVIDED TO THE OWNER
[ ] HVAC OPERATION AND MAINTENANCE DOCUMENTS FOR ALL MECHANICAL EQUIPMENT AND SYSTEM PROVIDED TO THE OWNER BY THE MECHANICAL CONTRACTOR
[ ] WRITTEN HVAC BALANCING AND OPERATIONS REPORT PROVIDED TO THE OWNER

THE ABOVE POST CONSTRUCTION REQUIREMENTS HAVE BEEN COMPLETED

PRINCIPAL MECHANICAL DESIGNER	SIGNATURE	DATE

DIFFUSER, REGISTER AND GRILLE SCHEDULE

MARK	DESCRIPTION	MANUFAC	MODEL #	MATERIAL	FRAME	FACE	DAMPER	FINISH
CD-1	CEILING DIFFUSER	PRICE	SCD	STEEL	LAY-IN	SQUARE BLADE	NO	WHITE
CD-2	CEILING DIFFUSER	PRICE	SMD	STEEL	SURFACE	SQUARE BLADE	NO	WHITE
RG-1	RETURN GRILLE	PRICE	530	STEEL	LAY-IN	BAR TYPE	NO	WHITE
SR-1	SUPPLY REGISTER	PRICE	520	STEEL	SURFACE	DBL DEFLECT	DBD	WHITE

NOTES: 1) ALL BLOW PATTERN ARE FOUR WAY UNLESS NOTED OTHERWISE.
2) CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR COORDINATION OF ALL CEILING FRAMES.
3) COORDINATE PAINTING OF AIR DISTRIBUTION WITH ARCHITECT AND GENERAL CONTRACTOR.

OUTSIDE AIR CALCULATION

PER 2018 I.M.C. SECTION 403.3 AND TABLE 403.3.1.1

OFFICE/BREAK AREA:
Rp = 5 CFM/PERSON
Pz = 5 PEOPLE/1000 SQ. FT. = 6 PEOPLE
Ra = 0.06 CFM/SQ. FT.
Az = 614 SQ. FT.
V = RP x PZ + RA x AZ = 68 CFM OSA
Ez = 0.8
68 / 0.8 (ZONE EFFECTIVENESS) = 85 CFM OF OUTSIDE AIR IS REQUIRED.

CONFERENCE:
Rp = 5 CFM/PERSON
Pz = 50 PEOPLE/1000 SQ. FT. = 10 PEOPLE
Ra = 0.06 CFM/SQ. FT.
Az = 201 SQ. FT.
V = RP x PZ + RA x AZ = 62 CFM OSA
Ez = 0.8
62 / 0.8 (ZONE EFFECTIVENESS) = 78 CFM OF OUTSIDE AIR IS REQUIRED.

WAITING/LOBBY:
Rp = 5 CFM/PERSON
Pz = 10 PEOPLE/1000 SQ. FT. = 2 PEOPLE
Ra = 0.06 CFM/SQ. FT.
Az = 155 SQ. FT.
V = RP x PZ + RA x AZ = 17 CFM OSA
Ez = 0.8
17 / 0.8 (ZONE EFFECTIVENESS) = 21 CFM OF OUTSIDE AIR IS REQUIRED.

CORRIDOR/HALLWAY:
Rp = N/A
Pz = N/A
Ra = 0.06 CFM/SQ. FT.
Az = 194 SQ. FT.
V = 0.06 x 194 = 12 CFM OSA
Ez = 0.8
12 / 0.8 (ZONE EFFECTIVENESS) = 15 CFM OF OUTSIDE AIR IS REQUIRED.

STORAGE ROOMS:
Rp = N/A
Pz = N/A
Ra = 0.12 CFM/SQ. FT.
Az = 28 SQ. FT.
V = 0.12 x 28 = 3 CFM OSA
Ez = 0.8
3 / 0.8 (ZONE EFFECTIVENESS) = 4 CFM OF OUTSIDE AIR IS REQUIRED.

WAREHOUSE:
Rp = N/A
Pz = N/A
Ra = 0.06 CFM/SQ. FT.
Az = 13832 SQ. FT.
V = 0.06 x 13832 = 830 CFM OSA
Ez = 0.8
830 / 0.8 (ZONE EFFECTIVENESS) = 1038 CFM OF OUTSIDE AIR IS REQUIRED.

1241 TOTAL CFM OF OUTSIDE AIR IS REQUIRED.

____ CFM OF OUTSIDE AIR IS PROVIDED.

SEE FLOOR PLAN FOR OSA VALUES OF EACH UNIT.

MECHANICAL EQUIPMENT SCHEDULE

MECHANICAL CONTRACTOR SHALL COORDINATE AMPERAGE, VOLTAGE AND PHASE OF ALL EQUIPMENT WITH ELECTRICAL CONTRACTOR PRIOR TO ORDERING ANY EQUIPMENT.

A/C SYSTEM - ROOFTOP PACKAGE HEAT PUMP

6 TON: NOM 2400 CFM @ 0.5" ESP; 55.8 MBH SENS COOL @ 80/67/115; 8.5 RLA COMPR; 0.8 FLA IDF; 2.6 FLA IDF; 460V-3PH; 14 MCA; 20 MOCP; CARRIER 50FCQM07; MINIMUM 11.2 EER; 3.4 COP
HEIGHT: 49-3/8" + 8" CURB = 57-3/8" / 905 LBS.

NOTES:
1. PROVIDE 8" HIGH FACTORY CURB.
2. PROVIDE 25% MANUAL OSA INTAKE, ECO BLUE VANE AXIAL FAN WITH DIRECT DRIVE ECM MOTOR.
3. PROVIDE 2" FILTER RACK FOR ALL UNITS.
4. PROVIDE ULTRA LOW LEAK ECONOMIZER ON 6 TON UNIT.

A/C SYSTEM - SPLIT SYSTEM HEAT PUMP W/NO AUX HEAT

3 TON - 25.6 MBH SENS COOL @ 80/67/115; MINIMUM 15.0 SEER

AIR HANDLER: NOM 1200 CFM @ 0.5" ESP/4.1 FLA/208V-1PH/5.1 MCA/15 MOCP/CARRIER FX4DNF037/157 LBS.
CONDENSING UNIT: 3.85 RLA COMPR/0.6 FLA FAN/460V-3PH/5.4 MCA/15 MOCP/CARRIER 25HCE436/170 LBS.

4 TON - 33.06 MBH SENS COOL @ 80/67/115; MINIMUM 14.0 SEER

AIR HANDLER: NOM 1600 CFM @ 0.5" ESP/6.0 FLA/208V-1PH/7.5 MCA/15 MOCP/CARRIER FX4DNF049/185 LBS.
CONDENSING UNIT: 6.0 RLA COMPR/0.77 FLA FAN/460V-3PH/8.3 MCA/15 MOCP/CARRIER 25HCE448/197 LBS.

NOTES:
1. PROVIDE AIR HANDLERS WITH FACTORY-INSTALLED TXV'S.
2. PROVIDE AIR HANDLERS WITH SECONDARY DRAIN PAN AND CONDENSATE CUT-OFF SWITCH.

A/C SYSTEM - WALL MOUNTED A/C MINI-SPLIT HEAT PUMP

1.5 TON - 12.0 MBH SENS COOL @ 80/67/115; MINIMUM 21.5 SEER

AH-1 AIR HANDLER: NOM 600 CFM/POWERED BY OUTDOOR UNIT CARRIER #40MAHB018XA3/35 LBS.
CU-1 CONDENSING UNIT: 208V-1PH/16.0 MCA/25 MOCP/CARRIER #38MARB018AA3/125 LBS.

NOTES:
1. PROVIDE WITH CARRIER ACCESSORY CONDENSATE PUMP FOR DUCTLESS SPLIT SYSTEMS.
2. PROVIDE WITH LOW AMBIENT CONTROLS.
3. INDOOR UNIT POWERED BY OUTDOOR UNIT.

EXHAUST FANS

EF-1 CEILING MOUNTED CENTRIFUGAL/100 CFM @ .25" ESP/0.62 AMP MOTOR/120V SINGLE PHASE/GREENHECK #SP-A125 w/ 6" DUCT & BDD.

NOTES: 1. EF SHALL BE TIED INTO RESTROOM LIGHTING - COORD. W/ELECTRICAL

GRAVITY RELIEF VENT

RV UNITED METAL PRODUCTS #GV4848/9600 CFM @ 600 FPM/ROOF OPENING 48"x48"/185 LBS/PROVIDE COMPLETE WITH BAROMETRIC DAMPER AND ROOF CURB

NOTES:
1. PROVIDE WITH BIRD SCREEN.
2. FREE AREA OF HOOD MUST BE EQUAL OR GREATER THAN FREE AREA OF THROAT.

UNIT HEATER

UH-1 ELECTRIC HEATER/2.2 kW/1/100 HP/208/240V SINGLE PHASE/DAYTON #8D471D/PROVIDE w/ LINE VOLTAGE T-STAT/77 LBS.

MECHANICAL NOTES

(ALL WORK DONE TO BE IN COMPLIANCE WITH 2018 INTERNATIONAL MECHANICAL CODE, 2018 IECC AND LOCAL AMENDMENTS).

GENERAL
1) BUILDING IS NEW WAREHOUSE SPACE WITH ONE STORY OFFICE AND MEZZANINE.
2) FURNISH ALL LABOR, MATERIALS, TOOLS EQUIPMENT, FEES, PERMITS, CERTIFICATE OF INSPECTION, ETC. NECESSARY OR REASONABLY REQUIRED FOR THE COMPLETE INSTALLATION OF ALL AIR CONDITIONING WORK. THE WORK SHALL BE IN STRICT ACCORDANCE WITH THE ASHRAE GUIDE, AND ALL LOCAL AND STATE CODES, ORDINANCES AND REGULATIONS.
3) COORDINATE ALL MECHANICAL WORK WITH ARCHITECT AND OTHER TRADES PRIOR TO WORK.
4) ALL OUTSIDE AIR INTAKES SHALL BE MINIMUM 10 FEET FROM ANY EXHAUST OR PLUMBING VENTS - COORDINATE WITH PLUMBING CONTRACTOR.
5) EXHAUST DUCTS MUST TERMINATE 10 FEET HORIZONTALLY FROM OR 3 FEET ABOVE ALL AIR INTAKES.
6) SUBMITTALS SHALL BE PROVIDED FOR ALL MECHANICAL EQUIPMENT.
7) CONTRACTOR SHALL VERIFY SCALE OF DRAWINGS WITH ARCHITECTURAL DRAWINGS BEFORE SUBMITTING ANY BID.

EQUIPMENT
1) MECHANICAL CONTRACTOR TO VERIFY AND COORDINATE AVAILABLE VOLTAGE WITH ELECTRICAL CONTRACTOR PRIOR TO ORDERING EQUIPMENT.
2) ALL MECHANICAL EQUIPMENT LOCATION TO COMPLY WITH THE 2018 I. M. C.
3) SET A/C UNITS TO OUTSIDE AIR QUANTITIES AS SPECIFIED ON FLOOR PLAN.
4) ALL HVAC EQUIPMENT (A/C UNITS, EXHAUST FANS, ETC.) SHALL BE U. L. LISTED.
5) ALL MOTORS SHALL BE INHERENTLY THERMALLY PROTECTED.
6) CONTRACTOR SHALL MOUNT ALL MECHANICAL EQUIPMENT LEVEL IN CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS, MAINTAINING ALL MINIMUM RECOMMENDED CLEARANCES.
7) PROVIDE ONE SET OF FARR 30-30 THROWAWAY FILTERS AND ONE SET OF FINAL FILTERS, FRAMES, MOUNTING HARDWARE AND ACCESSORIES. PROVIDE ONE SET OF THROWAWAY FILTERS FOR USE DURING THE CONSTRUCTION PERIOD. REMOVE THE FIRST SET OF THROWAWAY FILTERS AFTER THE CONSTRUCTION PERIOD AND INSTALL THE SECOND SET OF FINAL FILTERS (PRIOR TO BALANCING THE SYSTEM).
8) AIR ECONOMIZER SHALL BE PROVIDED ON ALL 7.5 TON UNITS. AND BE CAPABLE OF RELIEVING OUTDOOR AIR PRESSURE.

DUCTWORK
1) PROVIDE SPIN-IN BALANCING DAMPERS AT ALL BRANCH CONNECTIONS.
2) THE MAXIMUM LENGTH OF ANY FLEX DUCT SHALL NOT EXCEED 8 FEET.
3) ALL BRANCH CONNECTIONS SHALL BE A MINIMUM OF 2 FEET AWAY FROM ANY ELBOW.
4) ALL DUCTS SHALL BE GALVANIZED SHEET METAL. ALL NEW DUCTWORK TO BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH ASHRAE GUIDELINES, THE LATEST SMACNA STANDARDS, THE 2018 I. E. C. C. AND CHAPTER 6 OF THE 2018 INTERNATIONAL MECHANICAL CODE FOR LOW PRESSURE DESIGN.
5) ALL FLEX DUCTS SHALL BE THERMAFLEX TYPE KM MIN R-6 VALUE OR APPROVED EQUAL CONFORMING TO UL 181, NFBA 90A AND 90B.
6) MECHANICAL CONTRACTOR SHALL VERIFY THAT ALL DUCTWORK WILL FIT WHERE INDICATED WITHOUT INTERFERENCES.
7) DUCTS SHALL CONFORM TO DIMENSIONS ON THE DRAWINGS UNLESS LOCATION OF STRUCTURAL MEMBERS PROHIBIT. IN CASE OF A CHANGE IN DIMENSIONS, CROSS SECTIONAL AREAS SHALL BE MAINTAINED.
8) ALL DUCTS SHALL BE SUBSTANTIALLY SUPPORTED WITH HANGERS TO THE STRUCTURE. PLACING SUPPORTS NOT OVER 8 FEET APART ALONG THE LENGTH OF THE DUCT. SHEET METAL SHALL BE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:
UP TO 12" WIDTH 26 GAUGE STEEL
13" TO 30" WIDTH 24 GAUGE STEEL
9) EXHAUST DUCTS SHALL BE MINIMUM 26 GAUGE GALVANIZED STEEL - SEE MECH EQUIPMENT SCHEDULE OR FLOOR PLAN FOR SIZE & TERMINATION POINT.
10) ALL "FACTORY MADE" DUCT MUST BE CLASS "0" OR CLASS "1".
11) PROVIDE FULL RADIUS ELBOWS, TURNING VANES, AND SPLITTER DAMPERS IN BRANCHES AND EXTRACTORS WHERE APPLICABLE.
12) DUCT SIZES SHOWN ARE "CLEAR INSIDE" DIMENSIONS.
13) ALL SUPPLY AND RETURN DUCTS LOCATED IN UNCONDITIONED SPACES SHALL HAVE A MINIMUM OF R-6 INSULATION.
14) ALL JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS AND CONNECTIONS IN DUCTWORK, SHALL BE SECURELY FASTENED AND SEALED WITH WELDS, GASKETS, MASTICS (ADHESIVES), MASTIC-PLU-EMBEDD-FABRIC SYSTEMS OR TAPES. TAPES AND MASTICS USED TO SEAL DUCTWORK SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A AND SHALL BE MARKED 181A-P FOR PRESSURE SENSITIVE TAPE. TAPES AND MASTICS USED TO SEAL FLEXIBLE AIR AIR DUCT AND FLEXIBLE CONNECTORS SHALL COMPLY WITH UL 181B AND SHALL BE MARKED 181B-FX FOR PRESSURE SENSITIVE TAPE OR 181M FOR MASTIC. DUCT CONNECTION TO FLANGES OF AIR DISTRIBUTION SYSTEM EQUIPMENT SHALL BE SEALED AND MECHANICALLY FASTENED. UNLISTED DUCT TAPE IS NOT PERMITTED AS SEALANT ON ANY METAL DUCTS.

OUTLETS
1) THE MECHANICAL CONTRACTOR SHALL COORDINATE EXACT DIFFUSER AND GRILLE LOCATIONS WITH ELECTRICAL CONTRACTOR AND ALL OTHER TRADES AND ALSO COORDINATE SPACE AVAILABILITY FOR DUCTWORK ABOVE RECESSED LIGHTING TO AVOID RELOCATING DUCTWORK AT THE MECHANICAL CONTRACTORS EXPENSE.
2) ALL AIR DISTRIBUTION DEVICES IN LAY-IN CEILINGS SHALL BE SUPPORTED IN COMPLIANCE WITH SECTION 2.3.1.3 OF NFPA 90A & 2018 INTERNATIONAL BUILDING CODE.

CONTROLS
1) THERMOSTATS SHALL BE AUTOMATIC SETBACK TO 55°(HEAT) AND 85°(COOL); 7-DAY PROGRAMMABLE, 2-HOUR OCCUPANT OVERRIDE, 10 HOUR BACKUP.
2) CONTRACTOR AND TENANT TO COORDINATE EXACT T-STAT LOCATIONS.

PIPING
1) HANGERS AND SUPPORTS:
CLEVIS HANGERS ADJUSTABLE HEIGHT, MAXIMUM 10'C., 3/8" ROD UP TO 5' PIPE, 5/8" ROD FOR 6" AND LARGER. WHERE EXTRA HANGER SUPPORTS ARE REQUIRED, THEY SHALL BE PROVIDED BY CONTRACTOR. TRAPEZE HANGERS WITH ROLLERS MAY BE USED FOR MULTIPLE LINES OR WHERE SPACE IS LIMITED.
2) DRAINS
1) FURNISH AND INSTALL ALL CONDENSATE DRAINS. DRAINS SHALL BE TYPE M, COPPER WITH WROUGHT COPPER FITTINGS AND 95-5 SILVER SOLDER.
2) SLOPE CONDENSATE DRAINS AT 1/8" PER FOOT TOWARDS DISCHARGE LOCATION.

INSULATION
1) ALL INSULATION, MATERIAL, COVERINGS, ADHESIVES, VAPOR-BARRIERS AND TAPES SHALL CONFORM TO NFPA '90A, FLAME SPREAD CLASSIFICATION NOT TO EXCEED 25 AND SMOKE DEVELOPMENT NOT TO EXCEED 50.
2) PROVIDE 1/2" LINER IN SUPPLY AND RETURN DUCTWORK OF AIR CONDITIONING SYSTEMS WITHIN 15 FEET OF AHU AND A/C UNIT.
3) INSULATE ALL SHEET METAL DUCTWORK FOR AIR CONDITIONING SYSTEMS WITH A MINIMUM VALUE OF R-6, 3/4 LB. DENSITY EXTERIOR INSULATION, WITH FSK JACKET AND VAPOR BARRIER WITHIN THE BUILDING ENVELOPE AND R-8 OUTSIDE OF BUILDING ENVELOPE.

TESTING
1) TEST AND BALANCE ALL AIR SYSTEMS PER AABC OR NEBB LATEST STANDARDS. SUBMIT REPORT TO ENGINEER WITHIN 10 DAYS OF COMPLETING TEST AND BALANCE.
2) COPY OF THE AIR BALANCE REPORT SHALL BE PROVIDED TO THE MECHANICAL INSPECTOR FOR FINAL APPROVAL. REPORT SHALL BE SEALED AND WET SIGNED.

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85086

DATE
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11-20-2024

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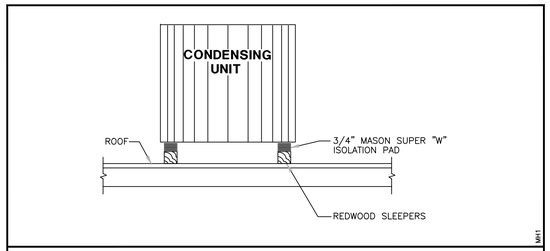
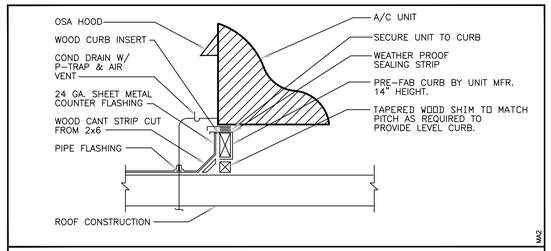
Project: 22105

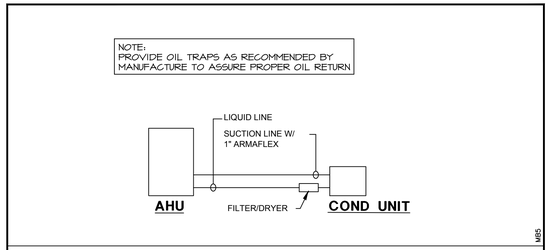
M3.1



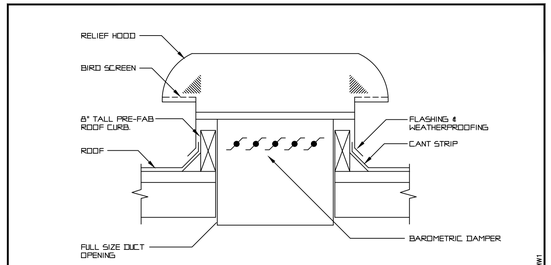
CONDENSING UNIT MOUNTING DETAIL NTS



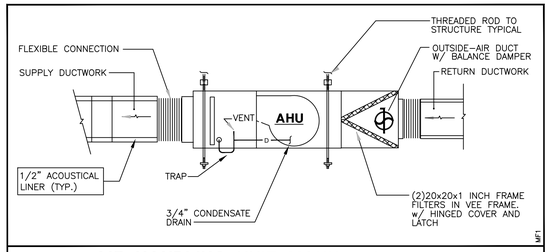
A/C UNIT MOUNTING DETAIL NTS



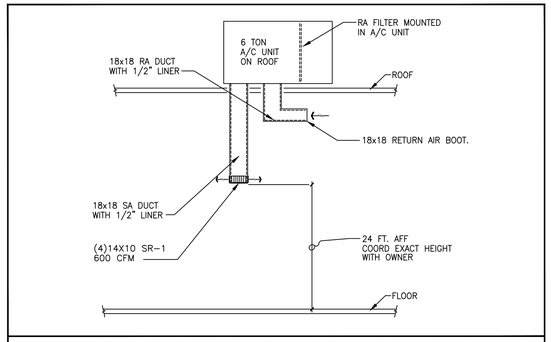
REFRIG PIPING DETAIL NTS



RELIEF VENT MOUNTING DETAIL NTS



AIR HANDLING UNIT MOUNTING DETAIL NTS



6 TON A/C UNIT AT WAREHOUSE DETAIL NTS

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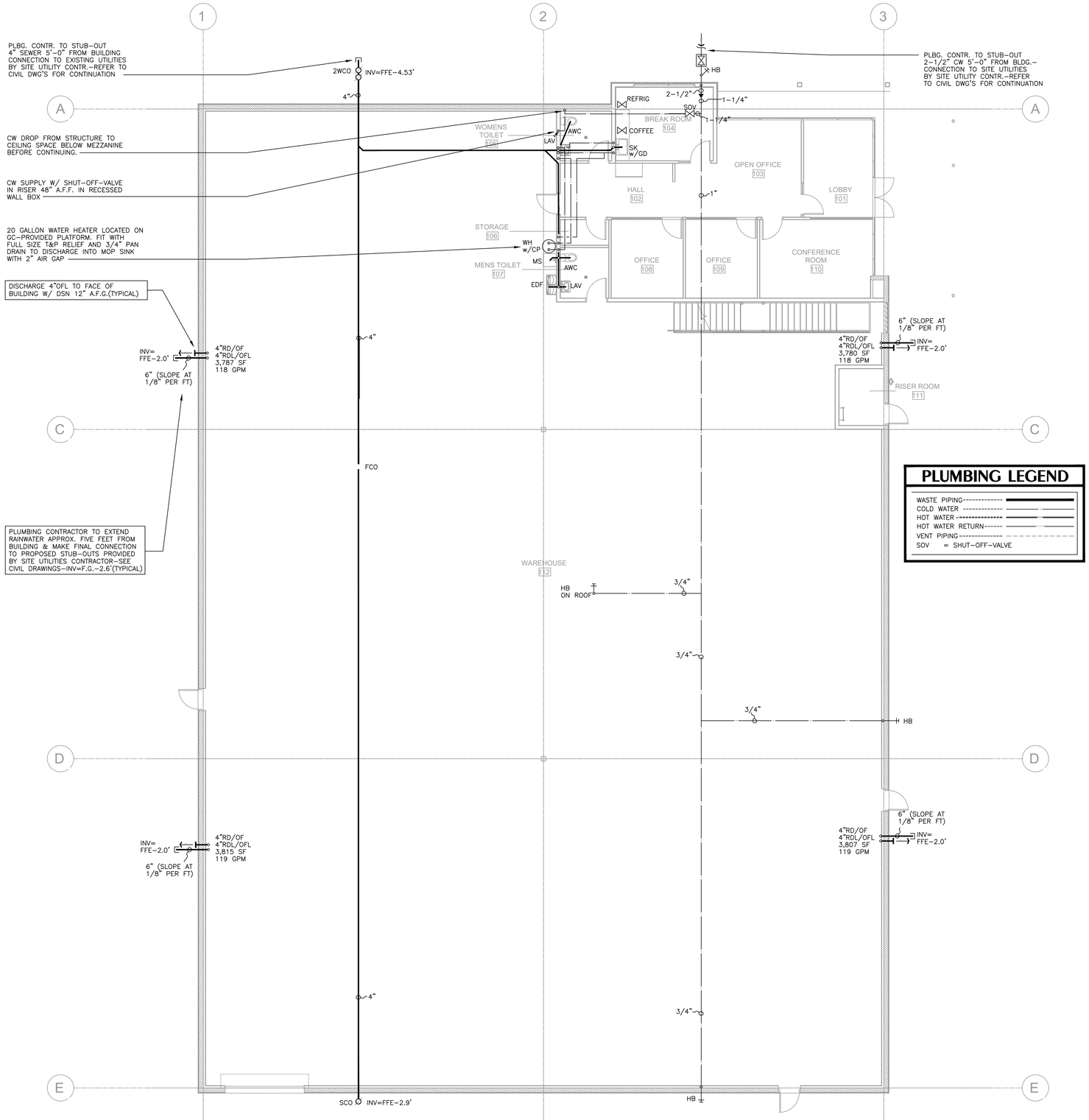

PLUMBING FLOOR PLAN

1/8"=1'-0" NORTH

PLUMBING LEGEND

WASTE PIPING	
COLD WATER	
HOT WATER	
HOT WATER RETURN	
VENT PIPING	
SOV	= SHUT-OFF-VALVE

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2018 IECC COMPLIANCE REPORT - PLUMBING

MECHANICAL SYSTEMS LIST AND REQUIREMENTS

ELECTRIC TANK TYPE WATER HEATERS

GALLONS	QUANTITY	EFFICIENCY	MINIMUM REQUIRED EFFICIENCY	CIRCULATION PUMP?
20	1	--	NO MINIMUM APPLIES	YES

- [X] WITH CIRCULATING PUMP: ALL PIPING IN CIRCULATING SYSTEM IS INSULATED WITH MINIMUM 1" INSULATION HAVING A CONDUCTIVITY NOT EXCEEDING 0.27 BTU PER INCH/HxSQFTx°F
- [X] CIRCULATING PUMPS SHALL BE ARRANGED TO TURN OFF EITHER AUTOMATICALLY OR MANUALLY WHEN THERE IS LIMITED HOT WATER DEMAND
- [ ] WITHOUT CIRCULATING PUMP: THE FIRST 8 FEET OF PIPING IN NON CIRCULATING SYSTEMS SHALL BE INSULATED WITH 0.5" OF MATERIAL HAVING A CONDUCTIVITY NOT EXCEEDING 0.27 BTU PER INCH/HxSQFTx°F
- [X] HOT WATER STORAGE TEMPERATURE CONTROLS THAT ALLOW SETPOINT OF 90°F FOR NON-DWELLING UNITS AND 110°F FOR DWELLING UNITS
- [X] HEAT TRAPS PROVIDED ON INLET AND OUTLET OF STORAGE TANKS
- [X] OUTLET TEMPERATURE AT LAVATORIES IN PUBLIC FACILITY RESTROOMS SHALL BE LIMITED TO 110°F

COMPLIANCE STATEMENT:

THE PROPOSED MECHANICAL DESIGN REPRESENTED IN THIS DOCUMENT IS CONSISTENT WITH THE BUILDING PLANS, SPECIFICATIONS AND OTHER CALCULATIONS SUBMITTED WITH THIS PERMIT APPLICATION. THE PROPOSED MECHANICAL SYSTEMS HAVE BEEN DESIGNED TO MEET THE 2018 IECC, SECTION C404 AND TABLE C404.2 AND TO COMPLY WITH THE MANDATORY REQUIREMENTS IN THE REQUIREMENTS CHECKLIST.

MATT MOERTL	Matt Moertl	MM/DD/YY
NAME - TITLE	SIGNATURE	DATE

PIPE SIZING CHART

PIPE SIZE	GPM	FIXTURE UNITS
1/2"	2	2
3/4"	5	6
1"	12	17
1 1/4"	21	31
1 1/2"	32	58
2"	68	220
2 1/2"	120	475

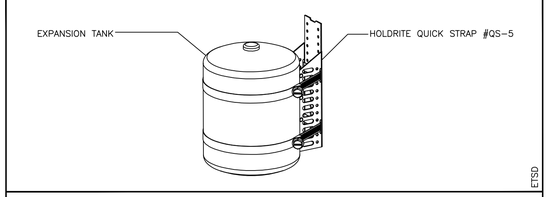
TRAPARM SCHEDULE

SIZE OF TRAP (INCHES)	SLOPE (INCH PER FOOT)	DISTANCE IN IN FEET FROM TRAP TO VENT
1 1/4"	1/4	5
1 1/2"	1/4	6
2"	1/4	8
3"	1/8	12
4" & LARGER	1/8	16

PLUMBING FIXTURE SCHEDULE

PLUMBING CONTRACTOR SHALL COORDINATE AMPERAGE, VOLTAGE AND PHASE OF ALL EQUIPMENT WITH ELECTRICAL CONTRACTOR PRIOR TO ORDERING ANY EQUIPMENT.

WH-WATER HEATER	20 GALLON/4,500 WATT @ 208v SINGLE PHASE/GLASSLINED/ A.O. SMITH #DEL-20/PROVIDE w/TEMPERATURE CONTROLS, HEAT TRAPS, SAFEPAN AND WATER LEAK DETECTION SYSTEM
CP-CIRC PUMP	TACO #005-SF2/1/35 HP/120V SINGLE PHASE/ALL STAINLESS STEEL/ PROVIDE WITH TACO AQUASTAT OR EQUAL
ET-EXPANSION TANK	AMTROL #ST-5/2.0 GALLON CAPACITY/3/4" CONNECTION
EDF-ELEC. DRINKING FOUNTAIN	DUAL LEVEL WITH BOTTLE FILLER AND FILTER/STAINLESS STEEL/ELKAY #LZSTL8WSSP/8 GPH/4.8 FLA/115V SINGLE PHASE/ADA COMPLIANT
GD-GARBAGE DISPOSAL	1/2 HP/120V SINGLE PHASE/ IN-SINK-ERATOR #BADGER 5



THERMAL EXPANSION TANK MOUNTING BRACKET DETAIL

NTS

WATER CALCULATIONS

QUANTITY	FIXTURE	LOAD VALUE COLD	LOAD VALUE HOT	TOTAL LOAD VALUE VALUE	TOTAL FIXTURE UNITS
2	WC (FLUSH TANK)	5	-	5	10
2	LAVATORY	1.5	1.5	2	4
1	SINK	1.5	1.5	2	2
1	SERVICE SINK	2.25	2.25	3	3
1	DRINKING FOUNTAIN	0.25	-	0.25	0.25
2	HOSE BIBBS	2.5	-	2.5	5
1	MISCELLANEOUS	1	-	1	1

NUMBER OF NEW FIXTURE UNITS = 25.25

NUMBER OF POSSIBLE FUTURE FIXTURE UNITS = 354.75

TOTAL NUMBER OF FIXTURE UNITS = 380 @ 100 GPM

PRESSURE @ METER = 65 PSI - 10 PSI (BFP) - 10 PSI (ML) = 45 PSI

USE 1-1/2" WATER METER

45 - [25 + (20 x .43)] = 11.4 PSI

ALLOWABLE LOSS/100 FEET OF TOTAL DEVELOPED LENGTH OF PIPE:

100 x 11.4 / 304 FEET = 3.7 PSI

PLUMBING CONTRACTOR TO VERIFY AND COORDINATE EXACT STREET PRESSURE AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

PLUMBING CONTRACTOR TO PROVIDE A PRESSURE REDUCING VALVE (PRV) ON CUSTOMER SIDE OF WATER METER IF THE STREET PRESSURE EXCEED 80 PSI, PRV TO BE SET @ 80 PSI

THE PLUMBING CONTRACTOR TO VERIFY THAT A REDUCED PRESSURE BACKFLOW ASSEMBLY IS EXISTING. IF ONE IS NOT EXISTING. PLUMBING CONTRACTOR TO PROVIDE AND INSTALL A WATTS #LF909 OR EQUAL REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER SAME SIZE AS WATER METER BETWEEN WATER METER AND BUILDING. BACKFLOW PREVENTER SHALL BE READILY ACCESSIBLE FOR INSPECTION.

"BEFORE THE LOCAL JURISDICTION WILL ACCEPT AN INSTALLED BACKFLOW DEVICE FOR APPROVAL, THE FOLLOWING MUST BE ACCOMPLISHED. THE DEVICE MUST BE TESTED BY A STATE CERTIFIED BACKFLOW TESTER AND TEST RESULTS FORWARDED TO THE LOCAL JURISDICTION BACKFLOW SPECIALIST. THE LOCAL JURISDICTION WILL PROVIDE AN UP-TO-DATE LIST OF CERTIFIED TESTERS FROM WHICH TO BE SELECTED. TESTER FEES WILL BE AT THE EXPENSE OF THE INSTALLER."

PLUMBING NOTES

(ALL WORK DONE TO BE IN COMPLIANCE WITH 2018 IPC, IECC AND CURRENT CITY AMENDMENTS)

GENERAL

1) PLUMBING CONTRACTOR SHALL SEAL ALL PIPE PENETRATIONS ON RATED FLOOR, CEILING, WALL AND ROOF WITH U.L. LISTED MATERIALS.
2) PLUMBING CONTRACTOR TO VERIFY THAT THE FINISH FLOOR ELEVATION IS A MINIMUM OF 1" ABOVE THE RIM OF THE UPSTREAM MANHOLE PRIOR TO ANY CONSTRUCTION TO ENSURE THAT BACKWATER VALVES ARE NOT REQUIRED - NOTIFY ENGINEER IF REQUIRED.
3) BUILDING IS NEW SINGLE STORY.
4) PLBR TO PROVIDE STUB-OUT FOR LAWN SPRINKLER SYSTEM -- COORDINATE EXACT SIZE AND LOCATION WITH SPRINKLER CONTRACTOR.
5) SUBMITTALS SHALL BE PROVIDED FOR ALL PLUMBING EQUIPMENT. ALL DATA SHALL BE CLEARLY MARKED FOR THE SPECIFIC EQUIPMENT TO BE PROVIDED AND CONTAINING ALL DATA REQUIRED FOR THE PROJECT INCLUDING ALL ELECTRICAL INFORMATION (EX. VOLTAGE, AMPS, PHASE,HORSEPOWER)
6) CONTRACTOR SHALL VERIFY SCALE OF DRAWINGS WITH ARCHITECTURAL DRAWINGS BEFORE SUBMITTING ANY BID.

ABBREVIATIONS

1) FFE = FINISH FLOOR ELEVATION
   2WCO = TWOWAYCLEAN OUT
   SCO = SURFACE CLEAN OUT
   FCO = FLOOR CLEAN OUT
   INV = INVERT
   RD = ROOF DRAIN
   RDL = ROOF DRAIN LEADER
   OF = ROOF DRAIN OVERFLOW
   OFL = ROOF DRAIN OVERFLOW LEADER
   POC = POINT OF CONNECTION
   CO = WALL CLEANOUT
   VTR = VENT THRU ROOF
   SOV = SHUT OFF VALVE
2) PLUMBING FIXTURES TO HAVE THE FOLLOWING MAXIMUM RATE OF FLOW:
   WC = 1.6 GAL PER FLUSH
   UR = 0.5 GAL PER FLUSH
   SK = 2.2 GPM
   LAV = 0.5 GPM

WASTE

1) DRAIN WASTE & VENT: IAPMO APPROVED ABS OR PVC PIPE AND FITTINGS.
2) SLOPE ALL SEWER 3" & LARGER @ 1% (1/8" PER FOOT), UNLESS OTHERWISE NOTED.
   SLOPE ALL SEWER 2" & SMALLER @ 2% (1/4" PER FOOT)
3) EACH CLEAN OUT SHALL BE READILY ACCESSIBLE AND SO LOCATED AS TO SERVE ITS INTENDED PURPOSE.
4) OFFSET ALL PLUMBING VENTS MINIMUM 10'-0" AWAY FROM ANY OUTSIDE AIR INTAKES. REFER TO MECHANICAL DRAWINGS AND COORDINATE WITH MECHANICAL CONTRACTOR.
5) ALL VENT PIPING, WATER PIPING, ETC. PENETRATING ROOF SHALL BE PROPERLY FLASHED WITH MINIMUM 26 GAUGE GALVANIZED STEEL CAULKED TO PIPING AND EXTENDED 6" INTO ROOFING. COORDINATE WITH GENERAL CONTRACTOR & ROOFING SUB-CONTRACTOR.
6) ALL SURFACE CLEAN OUTS SHALL EXTEND TO GRADE.
7) TEST ALL WASTE PIPING PRIOR TO BACKFILL AND CONCEALMENT. CONTRACTOR SHALL CALL FOR INSPECTION AND WITNESS TESTING PRIOR TO CONCEALING WASTE PIPING.

WATER

1) POTABLE WATER: TYPE "L" HARD COPPER THROUGHOUT WITH LEAD FREE SILVER SOLDER.
2) WATER DISTRIBUTION PIPE SHALL CONFORM TO NSF 61 AND SHALL BE A LISTED STANDARD IN IPC TABLE 605.5
3) WRAP HOT WATER AND DRAIN PIPING FROM HANDICAPPED LAVATORY TO WALL WITH PLUMBEREX HANDY SHIELD SAFETY COVER OR OTHER EQUAL. ASTM E84 CLASS A MATERIAL WITH A MAXIMUM 25 FLAME/450 SMOKE SAFETY COVERS OR EQUAL INSULATION AS REQUIRED PER HANDICAPPED REQUIREMENTS. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.
4) WATER PIPING INSULATION SHALL BE 1" WITH A CONDUCTIVITY NOT EXCEEDING 0.27 BTU PER INCH/HR FT2 F, FOR THE FIRST 8' OF HOT WATER PIPING AT WATER HEATER TANK.
5) INSULATE ALL HOT WATER (105°F-140°F) PIPING AS FOLLOWS:

NOMINAL PIPE SIZE	INSULATION THICKNESS
1/2" TO 1-1/4"	1"

6) PIPING INSULATION FOR 105-140° FAHRENHEIT SHALL HAVE A CONDUCTIVITY OF 0.21-0.27 BTU PER INCH/(HR° FT2° FAHRENHEIT).
7) TEST ALL WATER PIPING PRIOR TO BACKFILL AND CONCEALMENT. CONTRACTOR SHALL CALL FOR INSPECTION AND WITNESS TESTING PRIOR TO CONCEALING WATER PIPING.

CONDENSATE

1) COORDINATE WITH MECHANICAL CONTRACTOR TERMINATION OF ALL A/C CONDENSATE DRAINS CONDENSATE DRAIN PIPING SHALL BE TYPE M COPPER WITH LEAD FREE SOLDER.

FIXTURES

1) ALL FIXTURES APPLIANCES AND APPURTENANCES SHALL HAVE SHUT-OFF VALVES.
2) ALL HOSE BIBBS (HB) ARE 3/4" W/VACUUM BREAKER COMPLETE W/LOOSE KEY HANDLES.

ROOF DRAINS

1) RAIN WATER: IAPMO APPROVED ABS OR PVC PIPE AND FITTINGS.
2) THE OVERFLOW DRAIN SHALL BE PROVIDED WITH A STRAINER AND SHALL BE 2" ABOVE ADJACENT ROOF DRAIN.
3) THE OVERFLOW SYSTEM MAY NOT JOIN THE PRIMARY ROOF DRAIN SYSTEM
4) ROOF DRAIN ASSEMBLY SHALL BE CAST IRON INCLUDING DOME STRAINER.
5) ROOF DRAIN SHALL SLOPE NO MORE THAN 45 DEGREES FROM VERTICAL.
6) PROVIDE APPROVED EXPANSION JOINTS AS REQUIRED.

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ELECTRICAL SYMBOL LEGEND

SOME SYMBOLS AND ABBREVIATIONS MAY NOT BE USED FOR THIS PROJECT.

A. GENERAL

- JUNCTION BOX (4" SQUARE MINIMUM)
- INDICATES HOMERUN.
- CIRCUIT CONDUCTORS LONG DASH INDICATES NEUTRAL CONDUCTOR. SHORT DASH INDICATES PHASE CONDUCTORS. CODE SIZED EQUIPMENT GROUND NOT INDICATED BUT REQUIRED.
- ISOLATED GROUNDING CONDUCTOR. GREEN, INSULATED WITH YELLOW STRIPE.
- GROUNDING CONDUCTOR. GREEN, INSULATED, SIZE PER PLAN.
- SURFACE PANELBOARD
- FLUSH PANELBOARD
- TRANSFORMER. (KVA SIZE AS NOTED). GROUNDING SYSTEM TO BUILDING STEEL (IF APPLICABLE).
- CONDUIT STUB-UP ABOVE CEILING
- CONDUIT STUB-DOWN TO FLOOR BELOW
- CONDUIT IN UNDERGROUND/SLAB
- CONDUIT STUB-UP WITH CAP
- CONDUIT SEAL-OFF
- FLEXIBLE CONDUIT. PROVIDE LIQUID TIGHT FLEX IN WET OR EXTERIOR LOCATIONS AND AT CONNECTIONS TO VIBRATING EQUIPMENT AND/OR TRANSFORMERS.
- CONDUIT CONCEALED IN WALLS OR ABOVE CEILING.

B. POWER

- 20A SPEC GRADE SINGLE RECEPTACLE MOUNTED AT +15" TO BOTTOM OR AS NOTED
- 20A SPEC GRADE DUPLEX RECEPTACLE MOUNTED AT +15" TO BOTTOM OR AS NOTED
- 20A SPEC GRADE FOURPLEX RECEPTACLE MOUNTED AT +15" TO BOTTOM OR AS NOTED
- 20A SPEC GRADE DUPLEX CONVENIENCE OUTLET MOUNTED ABOVE COUNTER. VERIFY EXACT HEIGHT WITH ARCHITECTURAL ELEVATIONS.
- 20A SPEC GRADE FOURPLEX CONVENIENCE OUTLET MOUNTED ABOVE COUNTER. VERIFY EXACT HEIGHT WITH ARCHITECTURAL ELEVATIONS.
- SPECIAL OUTLET AS NOTED ON DRAWINGS - VERIFY NEMA RATING BEFORE INSTALLATION
- SPECIAL OUTLET AS NOTED ON DRAWINGS

X =
C - MOUNTED IN CEILING
DW - DISHWASHER
MW - MICROWAVE
P - PEDISTAL MOUNTED
PD - PEDIATRIC SAFE
RF - REFRIGERATOR
SD - SINK DISPOSAL. PROVIDE SWITCH ABOVE COUNTER.
UCR - UNDERCOUNTER REFRIGERATOR
VM - VENDING MACHINE

- ISOLATED GROUNDING OUTLET AT +15" TO BOTTOM OR AS NOTED. "LEVITON" #5362-IG (ORANGE) RECEPTACLE WITH ISOLATED GROUND.
- 20A SPEC GRADE HALF SWITCHED DUPLEX RECEPTACLE AT +15" TO BOTTOM OR AS NOTED.
- DUAL COMPARTMENT POWER/TELE DATA POLE
- FLUSH FLOOR POWER OUTLET - WITH 20A SPEC GRADE RECEPTACLES DUPLEX OR FOURPLEX. HUBBELL, THOMAS & BETTS, CARLON OR EQUAL. RATED FOR SCRUB WATER.
- 20A SPEC GRADE GFCI DUPLEX RECEPTACLE AT +15" TO BOTTOM OR AS NOTED.
- 20A SPEC GRADE GFCI DUPLEX RECEPTACLE AT +6" ABOVE COUNTER TO BOTTOM OR AS NOTED.
- DROP CORD POWER OUTLET - WITH 20A SPEC GRADE RECEPTACLES DUPLEX OR FOURPLEX. HUBBELL, THOMAS & BETTS, CARLON OR EQUAL.
- "J" BOX PLUSH MOUNTED IN WALL FOR SYSTEMS FURNITURE POWER. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH SUPPLIER PRIOR TO ROUGH-IN. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FINAL CONNECTION TO SYSTEM FURNITURE.
- WIRE MOLD. LENGTH AND TYPE AS NOTED ON DRAWINGS. MOUNT AS NOTED ON THE DRAWINGS.

C. COMMUNICATIONS

- FLUSH FLOOR COMBINATION TELEPHONE/DATA OUTLET - PROVIDE 1" MIN CONDUIT TO ABOVE ACCESSIBLE CEILING. HUBBELL, THOMAS & BETTS, CARLON OR EQUAL. RATED FOR SCRUB WATER.
- DATA OUTLET AT +15" A.F.F. TO BOTTOM OF WALL FIXTURE OR AS NOTED. PROVIDE 3/4" CONDUIT STUBBED TO +4" ABOVE FINISHED CEILING.
- TELEPHONE OUTLET AT +15" A.F.F. TO BOTTOM OF WALL FIXTURES OR AS NOTED. PROVIDE 3/4" CONDUIT STUBBED TO +4" ABOVE FINISHED CEILING OR AS NOTED:

X=
P - PAY PHONE
W - WALL PHONE OUTLET MOUNTED AT +44" A.F.F.

- COMBINATION TELEPHONE/DATA OUTLET AT +15" A.F.F. TO BOTTOM OF WALL FIXTURES OR AS NOTED. PROVIDE 3/4"C. STUBBED TO +4" ABOVE FINISHED CEILING.
- DIGITAL CABLE TELEVISION OUTLET
- TELEVISION OUTLET WITH DEVICES
- "J" BOX PLUSH MOUNTED IN WALL FOR SYSTEMS FURNITURE TELE/DATA WITH 1-1/4" EMPTY CONDUIT STUBBED ABOVE CEILING. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH SUPPLIER PRIOR TO ROUGH-IN. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FINAL CONNECTION TO SYSTEM FURNITURE.
- TELEPHONE TERMINAL BOARD "TMB". 3/4" PLYWOOD TELEPHONE MOUNTING BOARD WITH #6 COPPER GROUND & DEDICATED FOURPLEX CONVENIENCE OUTLET. FURNISH IN ACCORDANCE WITH TELEPHONE COMPANY'S REQUIREMENTS. SIZE AS NOTED ON DRAWINGS. PLYWOOD SHALL BE TYPE "CDX".

D. LIGHTING

- STANDARD SWITCH AND COVER PLATE WITH LOCKING DEVICE (BRADY NO. 2AF98 OR EQUAL)
- SINGLE POLE SWITCH MOUNTED AT +44" TO CENTER OF DEVICE OR AS NOTED.
- TWO POLE SWITCH MOUNTED AT +44" TO CENTER OF DEVICE OR AS NOTED.
- THREE WAY SWITCH MOUNTED AT +44" TO CENTER OF DEVICE OR AS NOTED.
- FOUR WAY SWITCH MOUNTED AT +44" TO CENTER OF DEVICE OR AS NOTED.
- SINGLE POLE SWITCH WITH PILOT LIGHT AT +44" TO CENTER OF DEVICE OR AS NOTED.
- 2000W SLIDE CONTROL DIMMER AT AT +44" TO CENTER OF DEVICE OR AS NOTED.
- SWITCH KEY OPERATED MTD AT +44" TO CENTER OF DEVICE OR AS NOTED.
- LOW VOLTAGE SLIDE CONTROL DIMMER WITH PRESET AT +44". CONTRACTOR SHALL SUPPLY SPECIFIC (ELECTRONIC AND/OR MAGNETIC) TO SUIT LOADS.
- WALL MOUNTED OCCUPANCY SENSOR. LUTRON-DUAL TECHNOLOGY OR EQUAL. IN RESTROOMS: LUTRON-ULTRASONIC. PROGRAM. MANUAL ON/AUTO OFF UNLESS NOTED OTHERWISE.
- SINGLE POLE UP-OFF-DOWN SWITCH FOR CONTROL OF PROJECTION SCREEN. MOUNTED AT +44" TO CENTER OF DEVICE OR AS NOTED.
- LOW VOLTAGE PUSH BUTTON CONTROL STATION AS NOTED. VERIFY MOUNTING HEIGHT.
- ROOF MOUNTED PHOTOCELL (AIM NORTH) INTERMATIC #K1121.
- ASTRONOMIC ELECTRONIC 4 POLE LIGHTING TIMESWITCH, INTERMATIC #ET70415CR.
- CEILING MOUNTED OCCUPANCY SENSOR 360°. LUTRON-DUAL TECHNOLOGY OR EQUAL. IN RESTROOMS: LUTRON-ULTRASONIC. IN WAREHOUSE: LUTRON-HIGHBAY. (WR) WIDE ANGLE (LR) LONG RANGE.
- OCCUPANCY SENSOR - POWER PACK OR SLAVE PACK.
- FLUORESCENT STRIP LIGHTING FIXTURE - AS NOTED ON DRAWINGS.
- FLUORESCENT LIGHTING FIXTURE - AS NOTED ON DRAWINGS SURFACE MOUNTED.
- RECESSED GRID W/FLEXIBLE CONNECTION.
- INDICATES NIGHTLIGHT (NL) AND/OR EMERGENCY FIXTURE WITH 1400 LUMEN MINIMUM (UNSWITCHED) - AS NOTED ON DRAWING.
- WALL MOUNTED LIGHTING FIXTURE - AS NOTED ON DRAWINGS.
- CEILING MOUNTED LIGHTING FIXTURE - AS NOTE ON DRAWINGS.
- H.I.D. HIGH/LOW BAY FIXTURE
- WALL WASH LIGHTING FIXTURE. AIM AS DIRECTED BY ARCHITECT.
- TRACK LIGHTING SYSTEM WITH TRACK FIXTURE HEADS AS INDICATED ON PLANS. VERIFY TYPE LINE OR LOW VOLTAGE.
- POLE MOUNTED AREA LIGHT (ARM MOUNTED) VERIFY HEIGHT SEE POLE DETAIL.
- POLE MOUNTED AREA LIGHT (POST TOP) VERIFY HEIGHT SEE POLE DETAIL.
- WALL PACK.
- SINGLE FACE EXIT SIGN. SEE LIGHTING FIXTURE SCHEDULE FOR SPECIFICATION. DIRECTIONAL ARROW AS INDICATED ON PLANS (CEILING OR WALL.)
- COMBINATION EMERGENCY EXIT SIGN WITH DUAL HEAD LIGHTS WITH EMERGENCY BATTERY BACK-UP.
- DOUBLE FACE EXIT SIGN. SEE LIGHTING FIXTURE SCHEDULE FOR SPECIFICATION. DIRECTIONAL ARROW AS INDICATED ON PLANS (CEILING OR WALL)
- DUAL HEAD EMERGENCY BATTERY PACK. SEE LIGHTING FIXTURE SCHEDULE FOR SPECIFICATIONS.

E. MECHANICAL

- CONTACTOR - FURNISHED AND INSTALL BY OTHERS
- CONTACTOR - FURNISHED/INSTALLED BY ELECTRICAL CONTRACTOR SIZE AS NOTED
- MOTOR STARTER/CONTROLLER- FURNISHED WITH MOTOR.
- MOTOR STARTER/CONTROLLER - FURNISHED/INSTALLED BY ELECTRICAL CONTRACTOR.
- MOTOR - SIZE AS INDICATED ON DRAWINGS.
- DISCONNECT SWITCH - SIZE AND FUSES AS PER MANUFACTURER'S RECOMMENDATIONS (WEATHERPROOF WHERE OUTDOES). N.F. INDICATES NON-FUSED.
- COMBINATION FUSIBLE DISCONNECT/MOTOR CONTROLLER - 30/3P WITH MIN. SIZE 1 MAGNETIC STARTER (UNLESS NOTED OTHERWISE). PROVIDE FUSES PER MANUFACTURER'S REQUIREMENTS. N.F. INDICATES NON-FUSED.
- HORSEPOWER RATED MANUAL MOTOR STARTER WITH THERMAL OVERLOAD(S). OVERLOAD HEATERS TO BE SIZED PER HORSEPOWER AND MANUFACTURER'S REQUIREMENTS.

F. FIRE ALARM

- FIRE ALARM PULL STATION AT +48".
- FIRE ALARM STROBE: +80" AFF OR 6" BELOW CEILING, WHICHEVER IS LOWER.
- FIRE ALARM HORN/STROBE: +80" AFF OR 6" BELOW CEILING, WHICHEVER IS LOWER.
- FIRE ALARM MAGNETIC DOOR HOLDER
- FIRE ALARM BELL
- FAAP — FIRE ALARM ANNUNCIATOR PANEL
- FACP — FIRE ALARM CONTROL PANEL
- FIRE ALARM HEAT DETECTOR.
- FIRE ALARM SMOKE DETECTOR.
- FIRE ALARM DUCT SMOKE DETECTOR.
- CO — CARBON MONOXIDE DETECTOR.
- FIRE ALARM TAMPER SWITCH.
- FIRE ALARM FLOW SWITCH.
- SPEAKER.

G. ONE LINE DIAGRAM

- (M) METER, (S) SOCKET, (B) BLANK
- (M) METER, (S) SOCKET, (B) BLANK, WITH CURRENT TRANSFORMERS.
- BREAKER AS INDICATED.
- FUSED SWITCH.
- BREAKER WITH SHUNT TRIP (SIZE AS INDICATED)
- PULLOUT FUSE

H. SECURITY

- KR — LOW VOLTAGE CARD READER
- KP — LOW VOLTAGE KEYPAD
- SURVEILLANCE CAMERA

I. ABBREVIATIONS

A	AMPERE
AIC	AVAILABLE INTERRUPTING CURRENT
AI	ALUMINUM
AFC	AVAILABLE FAULT CURRENT
ARCI	ARC FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AH	AIR HANDLER UNIT
APS	**ARIZONA PUBLIC SERVICE - (UTILITY CO.)**
C	CONDUIT
CCT	CORRECTED COLOR TEMP.
CRI	COLOR RENDERING INDEX
CU	COPPER
D	DEDICATED
DP	DUST - IGNITION PROOF
E	EXISTING
EC	EMPTY CONDUIT
EDF	ELECTRIC DRINKING FOUNTAIN
EF	EXHAUST FAN
EG	EQUIPMENT GROUND
EM	EMERGENCY LIGHT. BYPASS LOCAL SWITCHING AND PROVIDED BATTERY PACK.
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GND	GROUND/BOND CONDUCTOR
GWH	GAS WATER HEATER
IAW	IN ACCORDANCE WITH
IG	ISOLATED GROUND
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MLO	MAIN LUG ONLY
N	NEW ITEM
NR	NEW LOCATION OF RELOCATED EXISTING ITEM
NL	NIGHT LIGHT. BYPASS LOCAL SWITCHING.
PNL	PANELBOARD
R	EXISTING TO BE RELOCATED
SES	SERVICE ENTRANCE SECTION
SRP	SALT RIVER PROJECT - (UTILITY CO.)
SWBD	SWITCHBOARD
TEP	TUCSON ELECTRONIC POWER
TMB	3/4" PLYWOOD TELEPHONE MOUNTING BOARD WITH #6 CU. SOLID GROUND.
TTC	TELEPHONE TERMINAL CABINET (SIZE INDICATED ON DRAWINGS)
UFER	CONCRETE ENCASED ELECTRODE
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
VA	VOLT AMPERES
W	WATT
WG	WIRE GUARD
WH	WATER HEATER
WP	WEATHERPROOF (RAIN TIGHT) WEATHER RESISTANT NEMA 3R OR NEMA 4 IN-USE
WR	WEATHER RESISTANT
X	EXISTING TO BE REMOVED
XP	EXPLOSION PROOF

ELECTRICAL SPECIFICATIONS

UPDATED: 03-31-2014

SOME SPECIFICATIONS MAY NOT BE USED FOR THIS PROJECT.

1.0 INTENT

1.1 FURNISH AND INSTALL A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.

1.2 ALL DRAWINGS ARE SCHEMATIC IN NATURE AND THE REQUIRED INSTALLATION IS NOT LIMITED TO WHAT IS SHOWN. ALL APPURTENANCES NECESSARY TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM MUST BE INCLUDED IN THE CONTRACTORS BID AND WORK.

2.0 GENERAL

2.1 THE CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS WHICH MAY AFFECT HIS BID OR WORK. NO ALLOWANCES WILL BE MADE FOR EXISTING CONDITIONS OR THE CONTRACTORS FAILURE TO ACCOMMODATE EXISTING CONDITIONS ON HIS BID.

2.2 IT IS THE CONTRACTORS RESPONSIBILITY TO OBTAIN CLARIFICATION OF ANY APPARENT CONFLICT OR INCONSISTENCY IN THE DRAWINGS, SPECIFICATION, OR DESIGN, PRIOR TO HIS BID AND IN WRITING WITH THE ENGINEER. OTHERWISE THE CONTRACTOR ACCEPTS RESPONSIBILITY TO CORRECT (AT HIS COST) ANY SUCH ITEMS TO MEET THE INTENT AS INTERPRETED BY THE ENGINEER.

2.3 ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE MOST RECENT ADOPTED EDITIONS OF THE NFPA, NATIONAL ELECTRIC CODE, IBC, APPLICABLE CITY AND STATE CODES AND ORDINANCES, THE AMERICANS WITH DISABILITIES ACT, E.P.A. REGULATIONS (INCLUDING EPACT 1992), INTERNATIONAL ENERGY CONSERVATION CODE (IECC)/TITLE 24/ASHRAE 90.1 AND UTILITY COMPANY REQUIREMENTS. THE FOREGOING CODES AND REGULATIONS ARE REQUIREMENTS AND ARE INCORPORATED IN THIS SPECIFICATION FOR THIS WORK BY REFERENCE.

2.4 THE CONTRACTOR SHALL COORDINATE AND PROVIDE INFORMATION AS REQUIRED TO ALL SERVING UTILITIES IN A TIMELY MANNER AS NECESSARY TO PROVIDE THE SERVICE REQUIRED AND MEET UTILITY REQUIREMENTS IMMEDIATE COORDINATION WILL BE REQUIRED FOR MOST PROJECTS. FIELD COORDINATE ALL REQUIREMENTS WITH UTILITY Co. PRIOR TO TRENCHING.

2.5 REFER TO ARCHITECTURAL, MECHANICAL, CIVIL, STRUCTURAL, AND/OR EQUIPMENT SUPPLIERS DRAWINGS AND SPECIFICATIONS FOR EXACT EQUIPMENT LOCATIONS, LOADS AND ADDITIONAL REQUIREMENTS. REPRESENTATIONS OF THE WORK SPECIFIC TO THE OTHER DISCIPLINES IS SHOWN ON THE ELECTRICAL DRAWINGS FOR CLARITY ONLY.

2.6 THE CONTRACTOR ASSUMES RESPONSIBILITY FOR ALL EQUIPMENT HE SUPPLIES. ALL EQUIPMENT SHALL BE INSTALLED STRICTLY PER MANUFACTURERS RECOMMENDATIONS. OTHERWISE THE CONTRACTOR ASSUMES RESPONSIBILITY (AT HIS COST) TO CORRECT AND REMEDY ANY INSTALLATION NOT IN COMPLIANCE WITH THE MANUFACTURES RECOMMENDATIONS AND INTENTIONS AS INTERPRETED BY THE ENGINEER.

2.7 ANY VARIANCE OR EXCEPTIONS TO THE DRAWINGS AND SPECIFICATIONS MUST BE REQUESTED AND APPROVED IN WRITING. WITHOUT WRITTEN VERBAL APPROVALS WILL ONLY BE PROVIDED WHEN THE ENGINEER DETERMINES THIS TO BE JUSTIFIED AND MUST BE CONFIRMED IN WRITING TO BE FINAL.

2.8 THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS, VARIANCES, AND APPROVALS, ETC. (AT HIS COST) WHICH MAY BE REQUIRED FOR COMPLETION OF THIS WORK.

2.9 PRIOR TO ROUGH-IN, THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ALL LIGHT FIXTURES AND WIRING DEVICES: TO INCLUDE MOUNTING HEIGHT AND LOCATIONS WITH ARCHITECT/OWNER. ALL CONFLICTS SHALL BE REPORTED TO THE ENGINEER/ARCHITECT.

2.10 THE ELECTRICAL CONTRACTOR SHALL PROVIDE EQUIPMENT AND SUPPORT FOR PROGRESS AND FINAL INSPECTIONS. THIS INCLUDES COMPLETE ACCESS TO ALL EQUIPMENT. ADDITIONALLY A COMPLETE SET OF SPARE FUSES FOR ALL FUSES USED AND A 5% SUPPLY OF ALL LIGHT BULBS PROVIDED IN FIXTURES (TO A MAXIMUM OF 15 FOR EACH STYLE) SHALL BE PROVIDED TO THE OWNER AT FINAL INSPECTION.

2.11 RECONSTRUCTION: THE ENGINEER HAS MADE REASONABLE EFFORTS TO INDICATE OF EXISTING FACILITIES AND EQUIPMENT SHALL REQUIRE COMPLETE RENOVATION (MAKE GOOD AS NEW) FOR ALL EXISTING EQUIPMENT UPON WHICH WORK IS PERFORMED OR EQUIPMENT WHICH IS AFFECTED BY THE WORK PERFORMED. THIS WILL INCLUDE THESE FOLLOWING REQUIREMENTS:
2.11.1 VERIFICATION OF EXISTING SES COMPLIANCE WITH NEC "GROUNDING" ARTICLES.
2.11.2 VERIFICATION OF CABLE SIZE AND AMPACITY OF EXISTING FEEDERS AND BRANCH CIRCUITS WITH NEC TABLES.
2.11.3 EXISTING LIGHT FIXTURES TO BE REUSED MUST BE CLEANED, RE-LAMPED, AND RESTORED TO "LIKE NEW" CONDITION.
2.11.4 EXISTING PANEL BOARDS, SWITCH BOARDS, AND TRANSFORMERS WHICH ARE INCLUDED IN THE PROJECT WORK SHALL HAVE PREVENTATIVE MAINTENANCE PERFORMED TO INCLUDE RE-TORQUING OF ALL LUGS, CLEANING AND INSPECTION.
2.11.5 VERIFY PROPER WORKING CONDITION OF ALL EXISTING EMERGENCY FIXTURES AND EXIT SIGNS. REPAIR OR REPLACE AS REQUIRED.

IN THE EVENT THAT INSPECTION REVEALS DISCREPANCIES AND/OR NONCOMPLIANCE THE OWNER AND THE ENGINEER SHALL BE NOTIFIED IN WRITING, AND EQUIPMENT BROUGHT INTO COMPLIANCE.

3.0 MACTERIALS AND METHODS

3.1 THE USE OF **EMT** IS ACCEPTABLE IN ACCORDANCE WITH NEC ARTICLE "ELECTRICAL METALLIC TUBING". EMT SHALL NOT BE USED WHERE IT IS SUBJECT TO SEVERE PHYSICAL DAMAGE. EMT FITTINGS SHALL BE COMPRESSION TYPE. MINIMUM TRADE CONDUIT SIZE IS 1/2" AND 3/4" FOR HOME RUNS.

3.2 **CONDUCTORS** SHALL BE 600V COPPER (98 % CONDUCTIVITY). MINIMUM LINE VOLTAGE WIRE SIZE IS #12 A.W.G. #6 AND SMALLER SHALL HAVE THHN/THWN INSULATION. #4 AND LARGER SHALL HAVE XHHW/XHHW-2 INSULATION. ALL CONDUCTORS SHALL HAVE 90° RATED INSULATION. ALL 120V, 20A BRANCH CIRCUIT CONDUCTORS (#12) OVER 100' IN LENGTH TO BE #10'S MINIMUM. ALL 277V, 20A BRANCH CIRCUIT CONDUCTORS (#12) OVER 200' IN LENGTH TO BE #10'S MINIMUM.

3.3 WHEN SEPARATE BRANCH CIRCUIT NEUTRAL CONDUCTORS ARE USED WITH EACH PHASE CONDUCTOR OR SYSTEMS FURNITURE IS INDICATED, THE MINIMUM NEUTRAL CONDUCTOR SIZE SHALL BE #10 A.W.G. STRANDED COPPER.

3.4 ALL WIRING DEVICES SHALL BE SPECIFICATION GRADE. (MINIMUM 20 AMPS RATED FOR RECEPTACLES AND SWITCHES). HUBBELL, PASS & SEYMOUR, BRYANT, OR LEVITON ARE ACCEPTABLE. ALL SPECIAL RECEPTACLES AND GROUND FAULT PROTECTION DEVICES MUST BE PERMANENTLY MARKED WITH ENGRAVED COVER PLATES. INDICATE USE AND CIRCUIT NUMBER.

3.5 COVER PLATES AND DEVICES SHALL BE PHENOLIC PLASTIC (WHITE OR COLOR SELECTED BY ARCHITECT) IN OFFICE/COMMERCIAL/OR LIVING AREAS, AND GALVANIZED STEEL IN WAREHOUSE/INDUSTRIAL/MANUFACTURING AREAS OR AREAS SUBJECT TO PHYSICAL ABUSE.

3.6 ALL CONDUCTORS TO BE CONCEALED EXCEPT TO SURFACE MOUNTED PANELS AND AT THE CEILING OF EXPOSED STRUCTURE AREAS. CONDUITS WILL BE RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES.

3.7 FLEXIBLE METAL CONDUIT (SEAL TITE FOR EXTERIOR APPLICATIONS) SHALL BE USED FOR CONNECTIONS TO EQUIPMENT SUBJECT TO VIBRATION (E.G. MOTORS) WITH A MAX. OF 6ft.

3.8 THE USE OF **MC CABLE** IS ACCEPTABLE (UPON OWNER NOTIFICATION AND APPROVAL) AND MAY BE USED IN ACCORDANCE WITH NEC ARTICLE "METAL-CLAD CABLE: TYPE MC", BUT LIMITED TO USE FOR CONCEALED BRANCH CIRCUITS ONLY. ADDITIONALLY MC CABLE MAY NOT BE USED FOR HOME RUNS OR OUTDOORS.

3.9 NON-METALLIC CONDUIT (MIN. SCHEDULE 40) MAY BE USED ONLY IN OR UNDER SLABS & IN CONCRETE OR MASONRY WALLS. MIN. 24" COVER REQUIRED FOR UNDERGROUND USE.

3.10 **FUSES** SHALL BE BUSSMAN, LITTLEFUSE, OR GOULD SHAWMUT.

3.11 CONDUCTORS WILL BE SOLID AND/OR STRANDED WITH INSULATION CONTINUOUSLY COLOR CODED UP TO AND INCLUDING SIZE #6 A.W.G. GROUNDING/BONDING CONDUCTORS SHALL BE U.L. LABELED ROPE STRAND.

3.12 CONNECTIONS OR SPLICES SHALL BE EXOTHERMIC WELD (CAD WELD OR THOMAS AND BETTS FURSEWELD) FOR GROUNDING/BONDING CONDUCTORS.

3.13 NEW CONDUCTORS SHALL BE CONTINUOUS. HYDRAULIC CRIMP SPLICES OR CONNECTIONS ARE EXCEPTIONS AND REQUIRE SPECIFIC APPROVAL IN WRITING BY HAWKINS DESIGN GROUP.

3.14 ALL CONDUIT SUPPORT SYSTEMS SHALL BE INSTALLED ON THE BUILDING STRUCTURE. UNISTRUT, BEELINE, SUPERSTRUT STEEL CITY SPRING STEEL FASTENERS OR CADDY MOUNTING SYSTEMS ARE ACCEPTABLE. NO CONDUIT WILL BE SUPPORTED BY THE CEILING WIRES, TIE WIRE OR GRID SYSTEM. PERFORATED STRAPS OR OTHER PIPING AND CONDUIT STRAPS ARE NOT ACCEPTABLE SUPPORTS.

3.15 ACCEPTABLE MANUFACTURES FOR **SWITCH GEAR, DISTRIBUTION GEAR** AND RELATED COMPONENTS ARE: EATON, SQUARE D, ACME TRANSFORMERS, GENERAL ELECTRIC, SIEMENS, HPS. AND CUTLER-HAMMER.

3.16 CONDUCTORS SHALL BE COLOR CODED FOR BRANCH CIRCUITS AND PHASE LEGS OF FEEDERS TO PANEL BOARDS, SWITCHBOARDS, ETC. IN ACCORDANCE WITH NEC AND LOCAL MUNICIPAL REQUIREMENTS. SPECIFIC REQUIREMENTS INCLUDE THE FOLLOWING.
- 120-V, 2-WIRE CIRCUIT: GROUNDED NEUTRAL-WHITE; UNGROUNDED LEG-BLACK.
- 208Y/120-V, 3-PHASE, 4-WIRE, GROUNDED NEUTRAL-WHITE;PHASE A-BLACK; PHASE B-RED; PHASE C-BLUE.
- 240/120-V, 3 WIRE, SINGLE PHASE CIRCUIT: GROUNDED NEUTRAL-WHITE; PHASE A-BLACK; PHASE B-RED.
- 240-V, DELTA, 3-PHASE, 3-WIRE: PHASE A-BLACK; PHASE B-RED; PHASE C-BLUE.
- 240/120-V, 3-PHASE, 4-WIRE, HIGH-LEG DELTA; GROUNDED NEUTRAL-WHITE;HIGH LEG (208-V TO NEUTRAL)-ORANGE; PHASE A-BLACK; PHASE C-BLUE.
- 480Y/277-V, 3-PHASE, 4-WIRE, GROUNDED NEUTRAL-GRAY;PHASE A-BROWN; PHASE B-ORANGE: PHASE C-YELLOW.
- 480-V, DELTA, 3-PHASE, 3-WIRE: PHASE A-BROWN; PHASE B-ORANGE; PHASE C-YELLOW.
- 480-V, DELTA, 3-PHASE, 3-WIRE: PHASE A-BROWN; PHASE B-ORANGE; PHASE C-YELLOW. EQUIPMENT GROUNDING CONDUCTORS-GREEN; ISOLATED GROUNDS-GREEN WITH A YELLOW STRIPE.

3.17 ALL INSTALLATIONS WITHIN PLENUM RATED CEILING SPACE SHALL BE IN ACCORDANCE WITH NEC ARTICLE "WIRING METHODS" WITH REGARDS TO SMOKE DEVELOPMENT AND FLAME SPREAD.

3.18 ALL UNDERGROUND CABLE, PIPE AND CONDUITS SHALL BE DETECTABLE (METALLIC) OR HAVE A DETECTABLE UNDERGROUND LOCATION DEVICE INSTALLED WITH IT. THE RECOMMENDED DETECTABLE UNDERGROUND LOCATION DEVICE IS A #18 OR LARGER COPPER TRACER WIRE SECURELY ATTACHED TO THE TOP OF ANY NON-METALLIC CABLE, PIPE OR CONDUIT AT 6" OC AND SHALL HAVE A MINIMUM OF 12" OF TRACER WIRE ACCESSIBLE AT ALL ABOVE GRADE TERMINATIONS.

3.19 ALL HORIZONTAL UNDERGROUND CONDUIT RUNS (INCLUDING UNDER CONCRETE SLABS) SHALL BE A MINIMUM OF 24" BELOW GRADE.

3.20 ALL MATERIAL & DEVICES USED EXTERIOR OF THE BUILDING SHALL BE LISTED U.L. FOR WATERPROOF APPLICATIONS.

4.0 SCUBMITTALS

4.1 SUBMIT 6 SETS OF SHOP DRAWINGS AND SAMPLES FOR ALL EQUIPMENT PRIOR TO ORDERING IN A TIMELY MANNER. SUBMITTALS SHALL INCLUDE LIGHT FIXTURES (INCLUDING LIGHT POLES), LIGHTING CONTROLS, SWITCHBOARDS, PANELBOARDS, BREAKERS, STARTERS, HVAC ELECTRICAL EQUIPMENT AND TRANSFORMERS.
4.1.1 SHOP DRAWINGS SHALL INCLUDE LAYOUT DIMENSIONS AND IDENTIFICATION OF SPECIFIC EQUIPMENT FOR INSTALLATION, MINIMUM NEC CLEARANCES SHALL BE INDICATED.
4.1.2 THE CONTRACTOR SHALL INCLUDE COMPARISON DATA AND SAMPLES FOR BOTH THE SUBSTITUTE AND SPECIFIED ITEMS WHEN SUBSTITUTIONS ARE PROPOSED. THE CONTRACTOR REMAINS RESPONSIBLE TO PROVIDE THE ORIGINALLY SPECIFIED INSTALLATION IN ACCORDANCE WITH THE ORIGINAL DELIVERY DATE (AT HIS COST) WHEN SUBSTITUTIONS ARE NOT APPROVED.

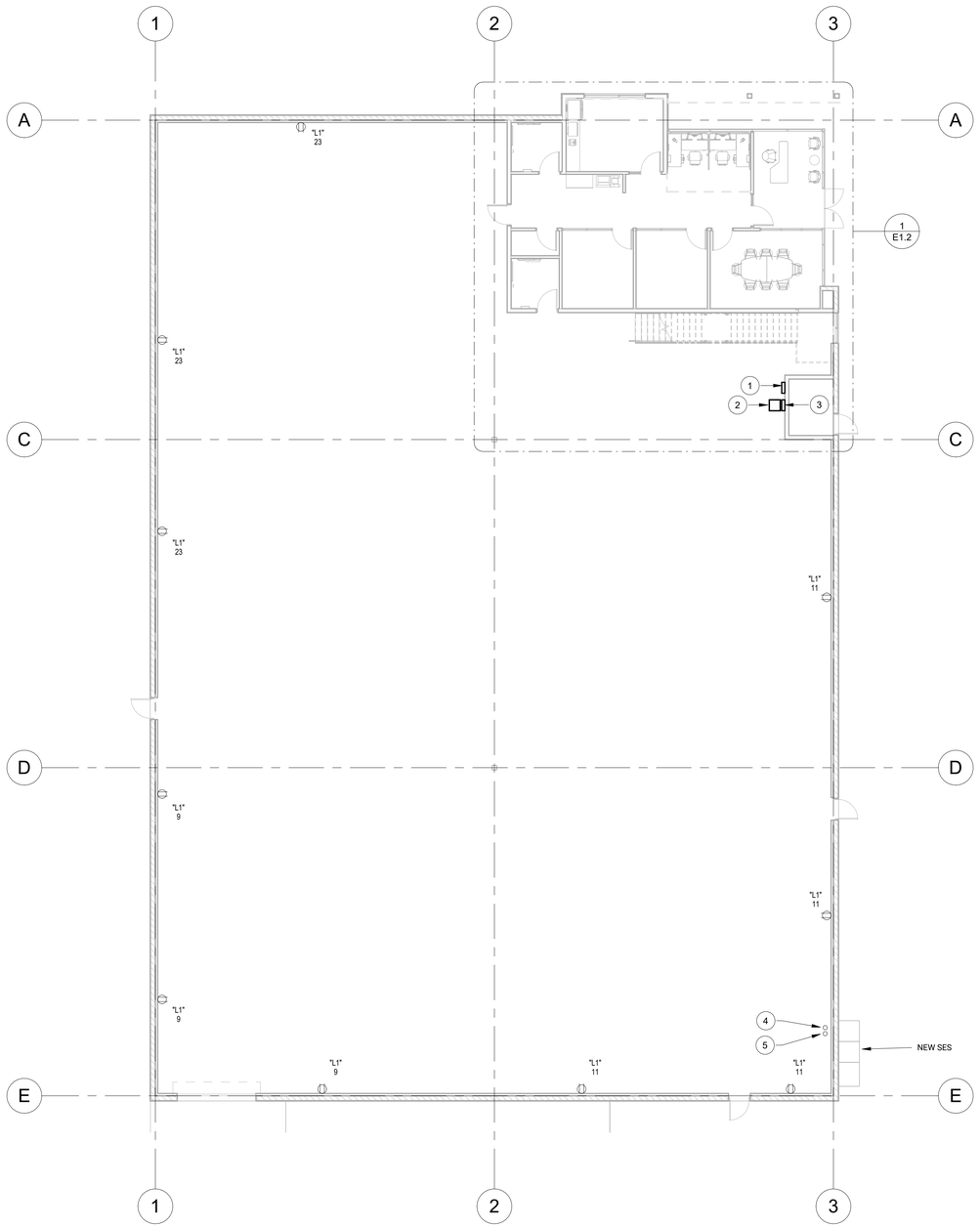
4.2 THE CONTRACTOR SHALL PROVIDE PROOF OF PERFORMANCE BOND WITH HIS INITIAL SUBMITTALS (E.G. SHOP DRAWINGS) TO INCLUDE WARRANTY FOR THE WARRANTY PERIOD (2 YEARS).

4.3 THE CONTRACTOR SHALL SUBMIT COMPLETE AND ACCURATE "AS BUILT" DRAWING TO THE OWNER AND ENGINEER WITHIN 2 WEEKS OF OWNER ACCEPTANCE. PROVIDE 4 SETS OF BLUELINES OR REPRODUCIBLES. FAILURE TO COMPLY WILL RESULT IN WITHHOLDING OF PAYMENTS DUE. AND ASSESSMENT OF CHARGES (AGAINST THE CONTRACTOR) FOR AS-BUILT DEVELOPMENT BY THE ENGINEER AT THE CURRENT HOURLY RATE.

4.4 PROVIDE A LETTER TO THE OWNER AND ENGINEER CERTIFYING ALL EQUIPMENT AND TERMINATION'S ARE PROPERLY TORQUED. THIS CERTIFICATION SHALL BE EXECUTED BY A LICENSED CONTRACTOR, AND WRITTEN CERTIFICATION PROVIDED ON COMPANY LETTERHEAD.

4.5 PROVIDE 2 COPIES OF ALL MANUFACTURERS/SUPPLIER WARRANTIES AND GUARANTEES TO THE OWNER AND ENGINEER WITHIN 2 WEEKS OF FINAL ACCEPTANCE BY THE OWNER.

4.6 TESTS
4.6.1 SUBMIT 2 COPIES OF ALL INDEPENDENT TEST RESULTS FOR THE ELECTRICAL POWER DISTRIBUTION SYSTEM AS A COMPLETE PACKAGE TO THE OWNER AND ENGINEER. PACKAGE MUST PROVIDE SPECIFIC VALUES OF TEST DATA OBTAINED AGAINST ACCEPTANCE CRITERIA (SIMPLE PASS/FAIL ALONE IS INADEQUATE).
4.6.2 TESTING PERSONAL SHALL BE CERTIFIED BY THE NATIONAL ELECTRIC TESTING ASSOCIATION (NETA) OR NATIOANL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES (NICET).
4.6.3 ALL TESTING SHALL BE DONE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS OR NATIONALLY RECOGNIZED STANDARDS AND PRACTICES.
4.6.4 GROUNDING SYSTEM FALL OF POTENTIAL (RESISTANCE TO GROUND) TESTING.
4.6.4.1 GROUND SHALL PROVIDE 5 OHMS OR LESS RESISTANCE TO GROUND AND LESS THAN 0.5 OHMS POINT-TO-POINT BETWEEN THE MAIN GROUNDING ELECTRODE SYSTEM AND ELECTRICAL EQUIPMENT FRAMES, SYSTEM NEUTRAL AND/OR GROUNDED NEUTRAL POINTS (REFERENCE IEEE STANDARDS 81-1983 AND 81-1991) AND SHALL NOT BE PERFORMED WITHIN 24 HOURS AFTER RAINFALL.
4.6.5 OVER-POTENTIAL (HI-POT) TESTING
4.6.5.1 SHALL BE PERFORMED ON ALL BUSSES 1000A OR GREATER OR ON MODIFICATIONS OF SERVICES GREATER THAN 400 AMPS.
4.6.5.2 TEST BOTH PHASE-TO-PHASE AND PHASE-TO-GROUND FOR AT LEAST ONE MINUTE.
4.6.6 GROUND FAULT PROTECTION TESTING
4.6.6.1 PROVIDE GROUND-FAULT PROTECTION TESTING BY CURRENT INJECTION TYPE SENSOR.
4.6.6.2 TEST PRIMARY CONTROL VOLTAGE TO NOT EXCEED 57% OF THE RATED VOLTAGE.
4.6.6.3 VERIFY PICK-UP TIME AND TIME-DELAY SETTINGS PROVIDED BY ENGINEER.
4.6.6.4 TEST GFP RELAY TIMING.
4.6.6.5 TEST INTEGRITY OF GROUNDED CONDUCTOR AND ITS



1 ELECTRICAL POWER PLAN - WAREHOUSE
3/32" = 1'-0"

GENERAL NOTES - POWER

1. REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND COMPLETE CONTRACTUAL OBLIGATIONS.
2. THE ELECTRICAL CONTRACTOR SHALL (PRIOR TO HIS BID) a) VISIT THE SITE AND FIELD VERIFY ALL EXISTING CONDITIONS AND b)TAKE ALL CONSIDERATIONS INTO ACCOUNT AT THE TIME OF BID. NO ADDITIONAL CONSIDERATIONS WILL BE GRANTED THE CONTRACTOR AFTER THE BID IS ACCEPTED.
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KEYED NOTES

#

1 NEW PANEL "H1".

2 NEW 75KVA STEP DOWN TRANSFORMER NEMA 1. 480V 3P 3W PRIMARY 120Y/208V 3P 4W SECONDARY. Z% = 3.5 (MIN.) MOUNTED ABOVE NEW PANEL "L1". REFER TO TRANSFORMER MOUNTING DETAIL ON SHEET E1.2

3 NEW PANEL "L1".

4 PROVIDE (4) 2 1/2" (FOR FUTURE 200AMP CONNECTION) UNDERGROUND EMPTY CONDUIT FROM SES AND INTO ACCESSIBLE BUILDING SPACE FOR FUTURE USE.

5 PROVIDE (4) 3" (FOR FUTURE 400AMP CONNECTION) UNDERGROUND EMPTY CONDUIT FROM SES AND INTO ACCESSIBLE BUILDING SPACE FOR FUTURE USE.

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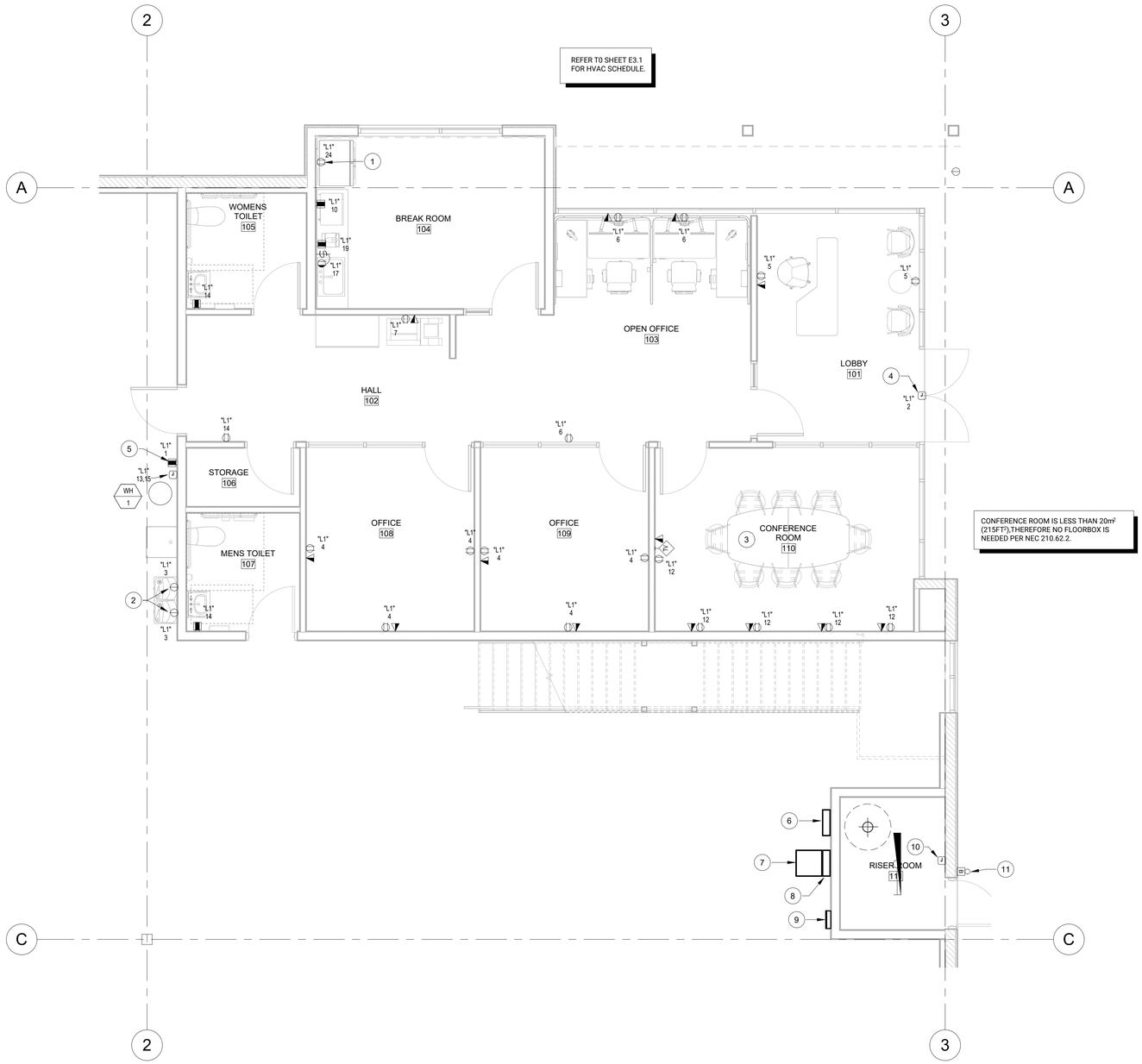
ELECTRICAL POWER PLAN - WAREHOUSE

Project:X

E1.1



1 ENLARGED ELECTRICAL POWER PLAN - OFFICE
1/4" = 1'-0"

GENERAL NOTES - POWER

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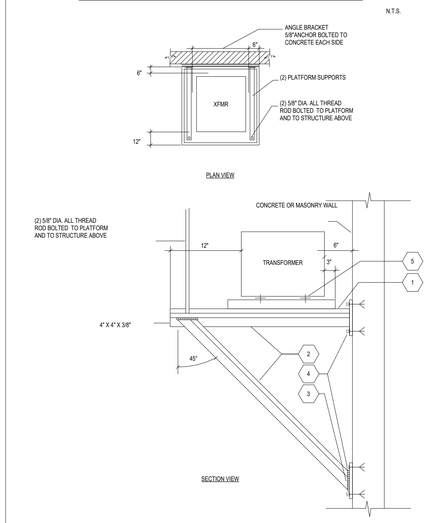
KEYED NOTES

#	
1	PROVIDE 120V 20A RECEPT FOR 120V, 7A REFRIGERATOR WITH GFCI CIRCUIT BREAKER TO COMPLY WITH NEC 210.8 READILY ACCESSIBLE REQUIREMENT.
2	PROVIDE SINGLE RECEPT FOR EDF POWER WITH GFCI CIRCUIT BREAKER TO COMPLY WITH NEC READILY ACCESSIBLE REQUIREMENT. PROVIDE MOTOR-RATED SWITCH AS DISCONNECTING MEANS WHEN HARD-WIRED EDF POWER CONNECTION IS REQUIRED.
3	RECEPTACLE QUANTITY/LOCATIONS IN THIS ROOM HAS BEEN DETERMINED BY REQUIREMENTS IN 2017 NEC "MEETING ROOMS" SECTION 210.71.
4	W.P. J.BOX FOR TENANT SIGNAGE. VERIFY EXACT LOCATION WITH TENANT PRIOR TO ROUGH-IN. CIRCUIT CONTROLLED VIA LIGHTING RELAY CONTROL PANEL. PROVIDE TOGGLE SWITCH IN WEATHERPROOF ENCLOSURE AS DISCONNECTING MEANS PER NEC 600.6.
5	PROVIDE 120V, 20A GFCI RECEPTACLE FOR 120V FRACTIONAL H.P. CIRC PUMP.
6	NEW PANEL "H1".
7	NEW 75KVA STEP DOWN TRANSFORMER NEMA 1. 480V 3P 3W PRIMARY 120Y/208V 3P 4W SECONDARY. Z% = 3.5 (MIN.) MOUNTED ABOVE NEW PANEL "L1". REFER TO TRANSFORMER MOUNTING DETAIL THIS SHEET.
8	NEW PANEL "L1".
9	DIMMING LIGHTING RELAY CONTROL PANEL TO COMPLY WITH 2018 IECC EXTERIOR LIGHTING CONTROLS. PROVIDE (1) 20A 277 HID RATED RELAY PER CIRCUIT ROUTED THRU RELAY CONTROL PANEL. PROVIDE A VOLTAGE BARIER AND ALL NECESSARY COMPONENTS FOR A SYSTEM IN COMPLIANCE WITH IECC 405. ENCLOSURE SHALL BE LISTED MINIMUM 10k SCCR.
10	PROVIDE J.BOX WITH 120V, 20A CIRCUIT FOR FIRE ALARM CONTROL PANEL.
11	FIRE ALARM BELL.

TRANSFORMER MTG. DETAIL

N.T.S.



KEYED NOTES

1	1-1/4" THICK STEEL METAL GRATING TACK WELDED TO ANGLE IRON BRACKET
2	2-1/2" X 2-1/2" X 3/8" THICK ANGLE IRON WELDED TO EACH OTHER AND TO WALL STEEL PLATES.
3	6" X 6" X 3/8" THICK STEEL PLATE (FORMED TO COL.) WELDED TO ANGLE IRON
4	5/8" DIA. X 4" LONG CAPSUL ANCHORS WITH HEX. HEAD NUT, 4 REQUIRED AT EACH PLATE
5	7/8" THRUBOLT W/ 1/4" STEEL PLATE WASHERS DOUBLE NUTTED TO STEEL GRATING. (TYP. OF EACH LEG)

NOTE:
DETAIL IS SHOWN FOR MOUNTING HARDWARE AND BRACKET MATERIAL. INSTALLATION TO WALL TYPE SHALL BE APPROVED BY REGISTERED PROFESSIONAL STRUCTURAL ENGINEER.

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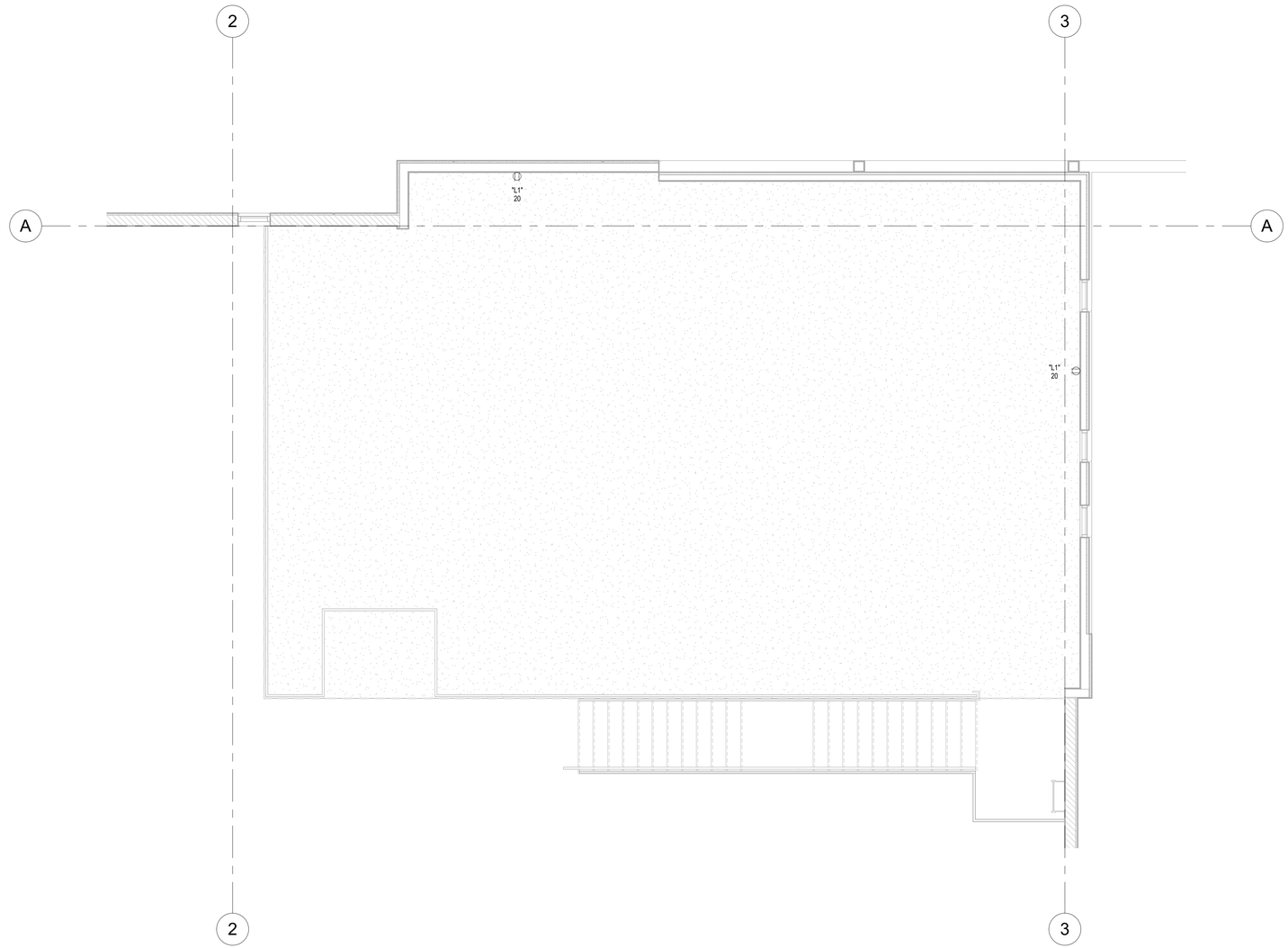
ENLARGED ELECTRICAL POWER PLAN - OFFICE

Project:X

E1.2



1 ELECTRICAL POWER PLAN - MEZZANINE
1/4" = 1'-0"

N

GENERAL NOTES - POWER

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KEYED NOTES

(#)

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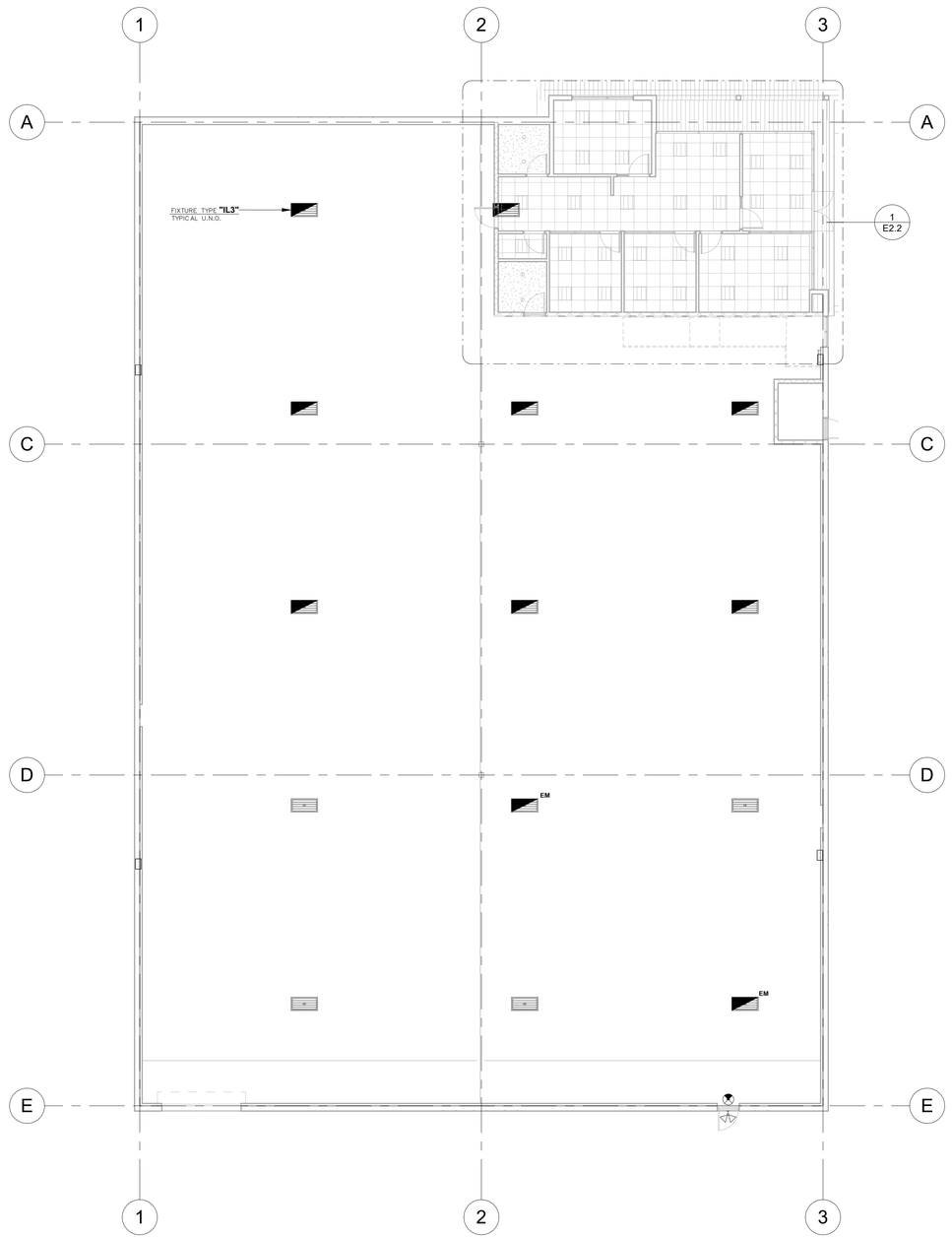
ELECTRICAL POWER PLAN - MEZZANINE

Project:X

E1.3



1 ELECTRICAL LIGHTING PLAN - WAREHOUSE
3/32" = 1'-0"

INTERIOR LUMINAIRE SCHEDULE

Fixture Type	Manufacturer	Model	Voltage	Lamps CRI/CCT Input Watts	Remarks
IL1	KEYSTONE TECHNOLOGIES	KT-BPLED40PS-22-8CSA-VDIM G2	277 V	LED 80CRI/3500K 40 VA	RECESSED 2X2 LED TROFFER MOUNTED 10' AFF. PROVIDE WITH 10W BATTERY BACKUP WHEN NOTED "EM".
IL2	KEYSTONE TECHNOLOGIES	KT-BPLED14PS-6A-9CSF-VDIM	277 V	LED 80CRI/3500K 14 VA	RECESSED 6" LED DOWNLIGHT MOUNTED AT 10' AFF.
IL3	KEYSTONE TECHNOLOGIES	KT-HBLED270-4F-850-VDIM-P-G2	277 V	LED 80CRI/4000K 270 VA	LED HI-BAY MOUNTED AT 27' AFF. PROVIDE WITH 10W BATTERY BACKUP WHEN NOTED "EM".
IL4	KEYSTONE TECHNOLOGIES	KT-MSLED44PS-4-8CSA-VDIM	277 V	LED 80CRI/4000K 44 VA	4' STRIPLIGHT WITH 0-10V DIMMING. PROVIDE WITH 10W BATTERY BACKUP WHEN NOTED "EM".
X	DUAL LITE	LES SERIES	277 V	LED 5 VA	EMERGENCY EXIT SIGN WITH 90MINUTE BATTERY BACK UP.
XEM2	ISOLITE	ODLM-10-EM-MMR	277 V	LED 5 VA	MULLION MOUNT EXTERIOR EMERGENCY SIGN WITH 90MINUTE BATTERY BACK UP.

LUMINAIRE SCHEDULE NOTES

1. PROVIDE 90 MINUTE EMERGENCY BATTERY BACK-UP FOR ALL EMERGENCY FIXTURES. SEE SCHEDULE ABOVE FOR SPECIFICATIONS AND LUMEN REQUIREMENTS
2. MODULAR WIRING SYSTEM FOR LIGHT FIXTURES IS AN ACCEPTIBLE ALTERNATE.
3. BASE BID FOR LUMINAIRES SHALL BE BASED ON MANUFACTURERS LISTED IN CONTRACT DOCUMENTS. UPON AWARD OF PROJECT, ALTERNATES PROPOSED BY CONTRACTOR SHALL BE SUBMITTED WITH WRITTEN OWNER'S APPROVAL & AN ITEMIZED DEDUCT TO BASE BID.
4. ALTERNATE FIXTURE SELECTIONS MAY REQUIRE ADDITIONAL TIME FOR SUBMITTAL REVIEW & POSSIBLE ENGINEERING DESIGN CHANGES, TO BE BILLED TO THE CONTACTOR.

GENERAL NOTES - LIGHTING

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5. ALL FIXTURES INSTALLED OUTDOORS SHALL BE RATED FOR DAMP/WET LOCATIONS AS REQUIRED. THE CONTRACTOR SHALL COORDINATE DAMP/WET LOCATION RATING AND INSTALLATION PER NEC ARTICLE "FIXTURE LOCATIONS".
6. ALL RECESSED LIGHT FIXTURES SHALL BE I.C. RATED OR A MINIMUM OF 3" FROM COMBUSTIBLE MATERIAL PER NEC ARTICLE "LUMINAIRES, LAMPHOLDERS AND LAMPS - CLEARANCE AND INSTALLATION".
7. ELECTRICAL CONTRACTOR TO VERIFY A MINIMUM OF 1 FOOT-CANDLE AT 1 FOOT ABOVE FLOOR ALONG EXIT PATH PER IBC ARTICLE "MEANS OF EGRESS ILLUMINATION".
8. LIGHT SWITCHES SHALL BE INSTALLED TO CONFORM TO NEC 404.8 ARTICLE "SWITCHES - ACCESSIBILITY AND GROUPING".
9. ALL INDOOR FLUORESCENT FIXTURES WITH DOUBLE ENDED LAMPS SHALL HAVE INTEGRAL DISCONNECTS.
10. J-BOXES INTENDED FOR THE USE OF SWITCHES CONTROLLING LIGHTING LOADS AND CONTAINING A GROUNDED GENERAL-PURPOSE BRANCH CIRCUIT FOR LIGHTING SHALL CONTAIN A NEUTRAL CONDUCTOR AS REQUIRED PER NEC 404.2.

IECC WATT PER SQUARE FOOT COMPLIANCE

WAREHOUSE = 13766 s.f. x 0.48 W= 6607.68 W
OFFICE = 1469 s.f. x 0.79 W= 1160.51 W

Fixture Type	Count x Apparent Load=	Total Watts Used
IL1	26 x 40 VA=	1040 W
IL2	3 x 14 VA=	42 W
IL3	14 x 270 VA=	3780 W
IL4	7 x 44 VA=	308 W
X	1 x 5 VA=	5 W
XEM2	1 x 5 VA=	5 W
Total Watts Used		5180 W

TOTAL AVAILABLE WATTS = 7768.19W
CODE COMPLIANCE BY = 2588.19W

TABLE PROVIDED AS COMPIANCE MATERIAL TO MEET IECC POWER ALLOWANCE. METHOD IS ACCEPTABLE PER IECC C101.5.1

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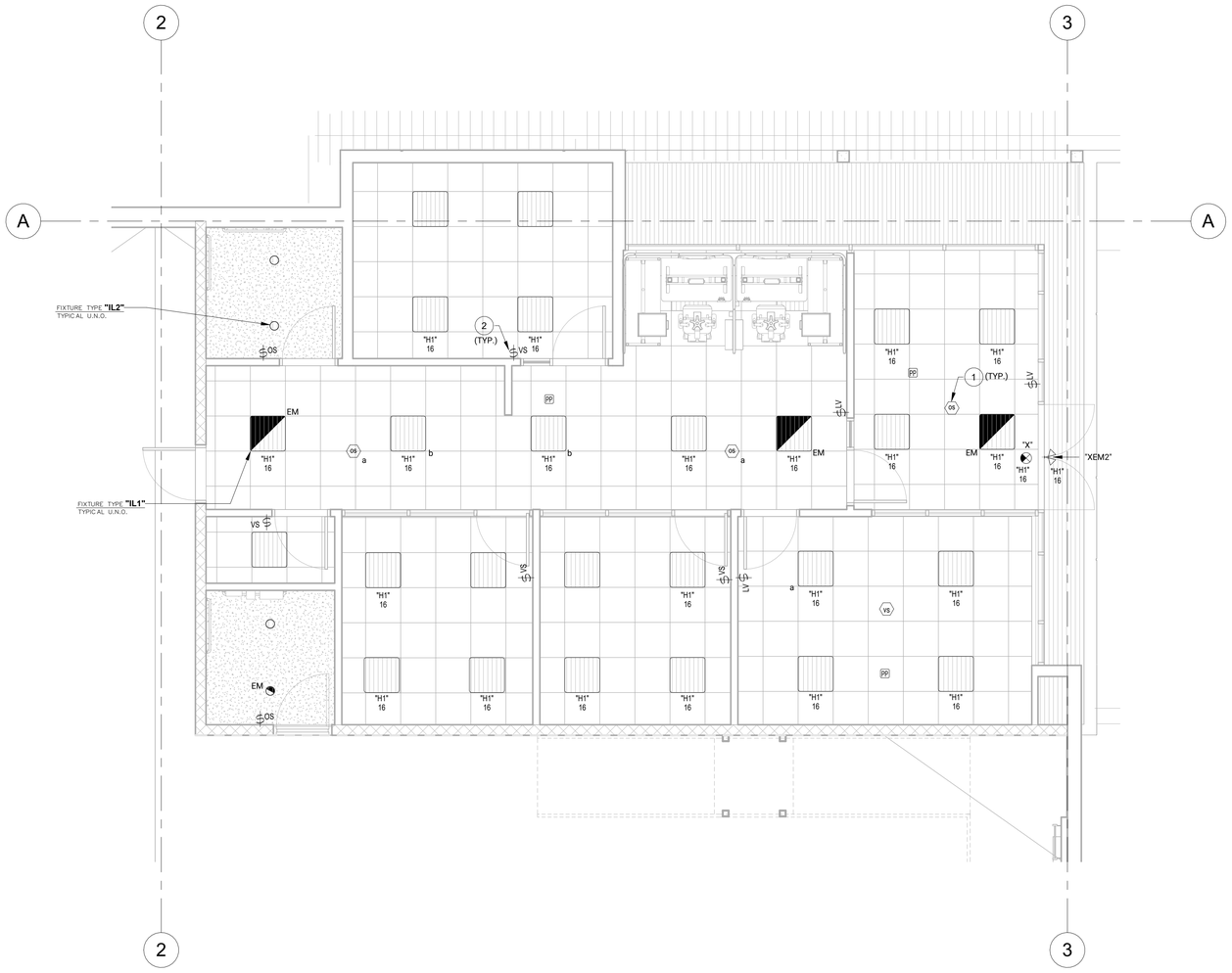
ELECTRICAL LIGHTING PLAN - WAREHOUSE

Project:X

E2.1



1 ENLARGED ELECTRICAL LIGHTING PLAN - OFFICE
1/4" = 1'-0"

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7. ELECTRICAL CONTRACTOR TO VERIFY A MINIMUM OF 1 FOOT-CANDLE AT 1 FOOT ABOVE FLOOR ALONG EXIT PATH PER IBC ARTICLE "MEANS OF EGRESS ILLUMINATION".
8. LIGHT SWITCHES SHALL BE INSTALLED TO CONFORM TO NEC 404.8 ARTICLE "SWITCHES - ACCESSIBILITY AND GROUPING".
9. ALL INDOOR FLUORESCENT FIXTURES WITH DOUBLE ENDED LAMPS SHALL HAVE INTEGRAL DISCONNECTS.
10. J-BOXES INTENDED FOR THE USE OF SWITCHES CONTROLLING LIGHTING LOADS AND CONTAINING A GROUNDED GENERAL-PURPOSE BRANCH CIRCUIT FOR LIGHTING SHALL CONTAIN A NEUTRAL CONDUCTOR AS REQUIRED PER NEC 404.2.

KEYED NOTES

#	
1	WALL/CEILING MOUNTED OCCUPANCY SENSOR SHALL BE PROGRAMMED FOR AUTO ON/AUTO OFF MODE. TYPICAL.
2	WALL/CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR SHALL BE PROGRAMMED AS VACANCY SENSOR, MANUAL ON/AUTO OFF.

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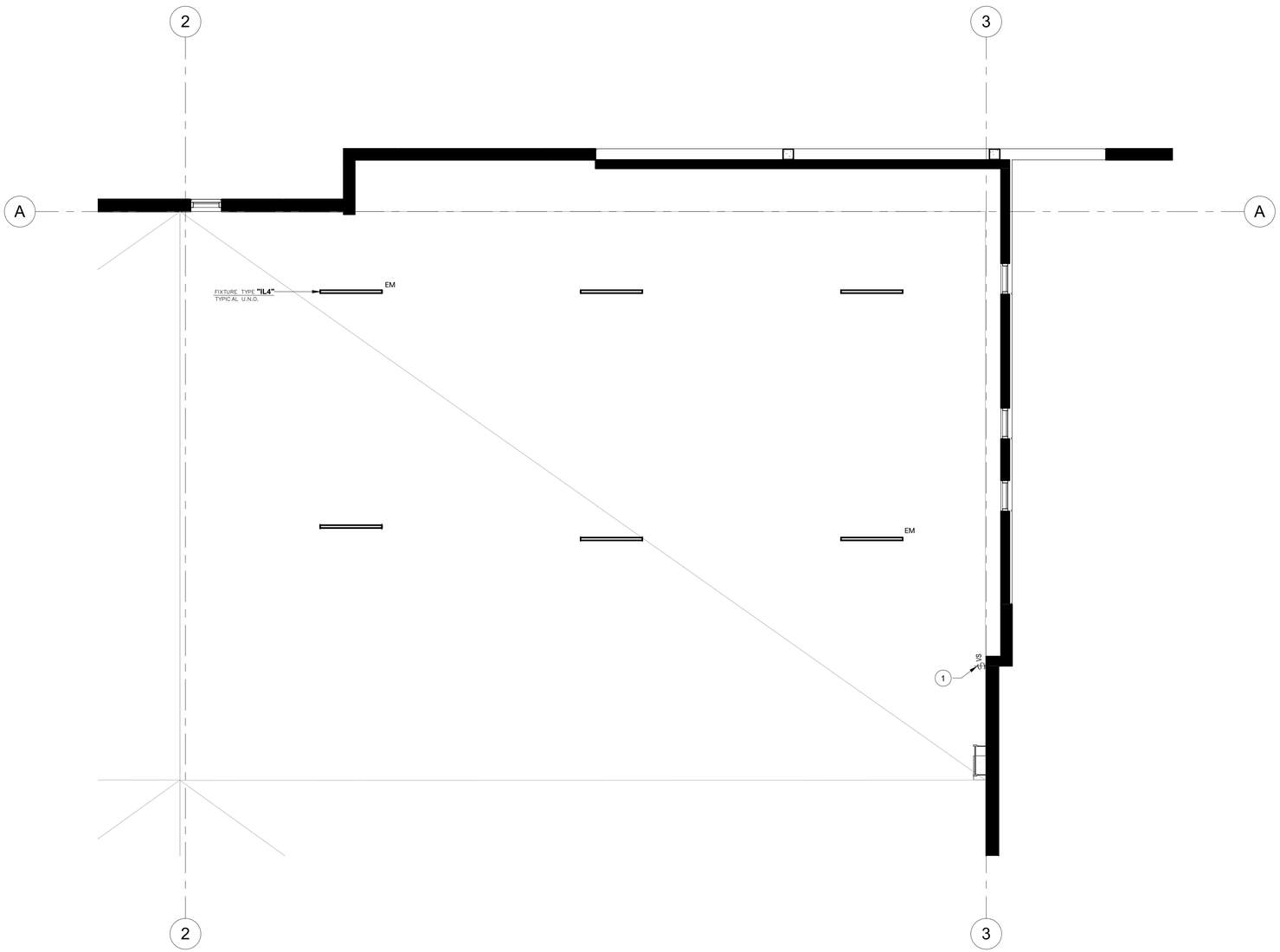
Project:X

E2.2



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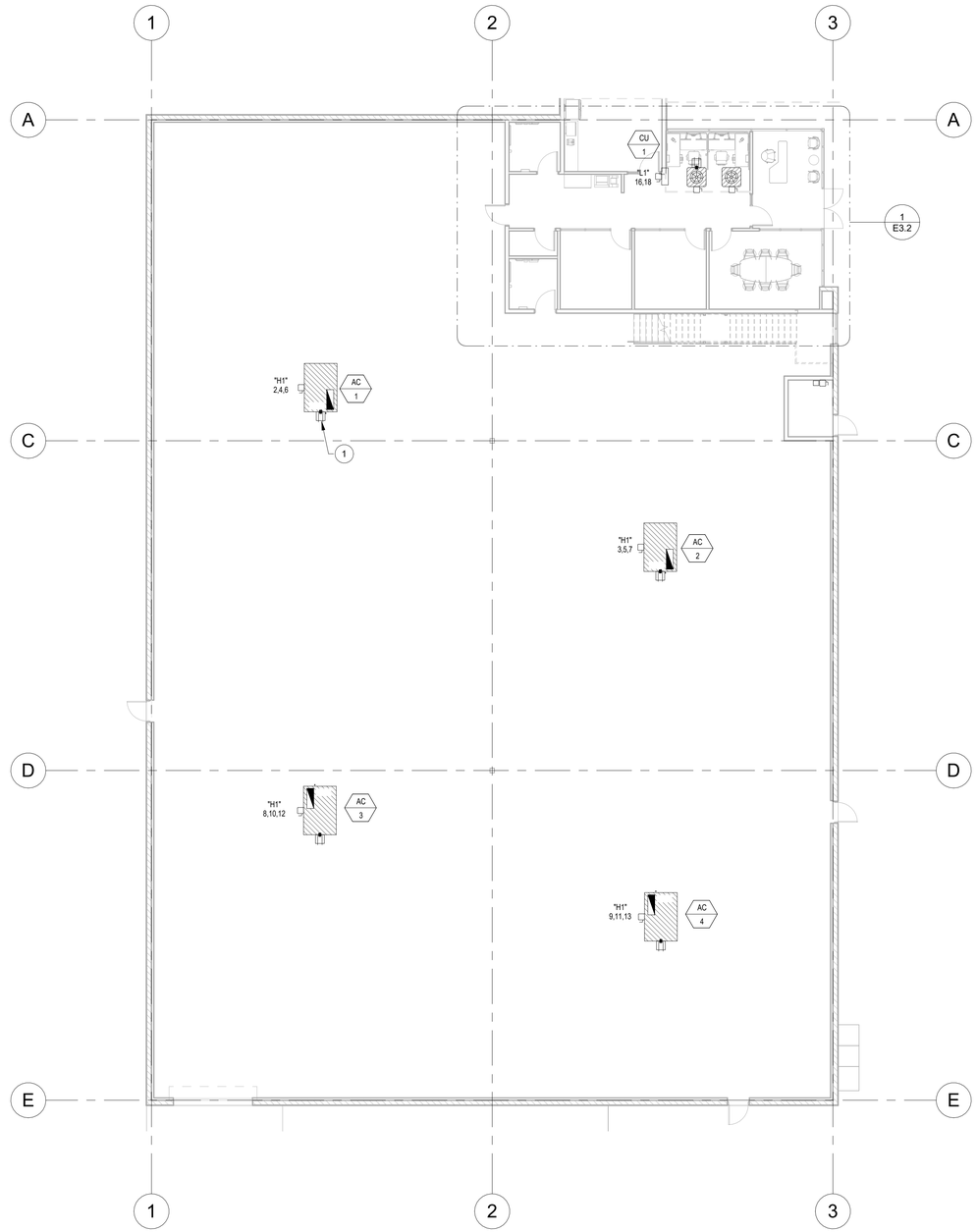
ELECTRICAL LIGHTING PLAN - MEZZANINE

Project:X

E2.3



1 ELECTRICAL HVAC PLAN - WAREHOUSE
3/32" = 1'-0"

N

GENERAL NOTES - HVAC

1. REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND COMPLETE CONTRACTUAL OBLIGATIONS.
2. THE ELECTRICAL CONTRACTOR SHALL (PRIOR TO HIS BID) a) VISIT THE SITE AND FIELD VERIFY ALL EXISTING CONDITIONS AND b)TAKE ALL CONSIDERATIONS INTO ACCOUNT AT THE TIME OF BID. NO ADDITIONAL CONSIDERATIONS WILL BE GRANTED THE CONTRACTOR AFTER THE BID IS ACCEPTED.
3. ALL ELECTRICAL METALLIC TUBING (EMT), RIGID NON-METALLIC CONDUIT, FLEXIBLE METALLIC CONDUIT, FLEXIBLE NON-METALLIC CONDUITS, "SEALTIGHT" TYPE CONDUITS AND ALL OTHER CONDUITS THAT DO NOT CONTAIN A CODE SIZED GROUND WIRE SHALL HAVE A CODE SIZED BOND WIRE PER NEC TABLE 250.122 INSTALLED WITH THE CIRCUIT CONDUCTORS.
4. RECEPTACLES LOCATED WITHIN 6'-0" OF SINKS OR WATER SHALL BE CONNECTED EITHER TO A GROUND FAULT CIRCUIT INTERRUPTER TYPE CIRCUIT BREAKER OR TO A GROUND FAULT CIRCUIT INTERRUPTER TYPE RECEPT.
5. PRIOR TO ROUGH-IN, THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ALL HVAC UNITS AND SUPPLY AIR DUCT SMOKE DETECTORS WITH THE MECHANICAL DRAWINGS.
6. PROVIDE ROOF TOP WEATHER PROOF / WEATHER RESISTANT G.F.C.I. WITHIN 25'-0" OF ALL ROOF TOP HVAC EQUIPMENT IN ACCORDANCE WITH NEC ARTICLE "HEATING, AIR-CONDITIONING AND REFRIGERATION EQUIPMENT OUTLET". THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THESE RECEPTACLES IN THE FIELD REGARDLESS PLAN LAYOUT.
7. ALL DISCONNECTS SHALL BE OF THE HEAVY DUTY TYPE AND FUSED PER THE NAMEPLATE RATING OF THE HVAC UNIT OR MOTOR.
8. THE EC SHALL - PRIOR TO ROUGH-IN, FIELD VERIFY ALL HVAC VOLTAGES AND AMPERAGES AGAINST PLAN REQUIREMENTS. FAILURE TO VERIFY AND NOTIFY ENGINEER/ ARCHITECT PRIOR TO ROUGH-IN SHALL INDICATE THAT THE EC SHALL ASSUME ALL RESPONSIBILITY FOR DESIGN AND INSTALLATION REQUIREMENTS.
9. THE ELECTRICAL CONTRACTOR SHALL ENSURE FINAL COORDINATION OF THE MANUFACTURERS RECOMMENDED FUSE SIZE FOR HVAC EQUIPMENT WITH THE SIZE DISCONNECT PRIOR TO OR DURING ROUGH-IN. ADVISE ENGINEER IF CHANGES IN THE FINAL SELECTION OF HVAC EQUIPMENT HAVE IMPACTED DISCONNECT, BREAKER, OR CONDUCTOR SIZE.
10. ALL ROOF TOP UNITS EXPOSED TO AMBIENT TEMPERATURES AND WEATHER SHALL HAVE NEMA 3R MINIMUM RATED DISCONNECTS.
11. MAXIMUM TAP CONDUCTOR LENGTH SHALL BE 25'-0" PER NEC ARTICLE 240 "FEEDER TAPS" AND "TRANSFORMER SECONDARY CONDUCTORS" AND SHALL NOT BE SMALLER THAN 1/3 THE AMPACITY OF FEEDER CONDUCTORS.
12. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR AND FIRE ALARM CONTRACTOR REGARDING SMOKE DUCT DETECTORS TO INCLUDE PURCHASE, INSTALLATION, AND FINAL CONNECTIONS.
13. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE OWNER OR OTHER SUPPLIERS REGARDING ANY REQUIREMENTS FOR MOTOR STARTERS IN ADDITION TO THAT WHICH IS INDICATED FOR THE HVAC SYSTEM. THIS INCLUDES FURNISH AND INSTALL STARTERS TO INTERFACE WITH ANY ENERGY MANAGEMENT SYSTEM OR OTHER SPECIAL SYSTEMS.
14. ELECTRICAL CONTRACTOR SHALL PROVIDE CORRECT SIZE/ TYPE/ VOLTAGE/ QUANTITY OF DUAL-ELEMENT, TIME-DELAY FUSE(S) SIZED PER HVAC EQUIPMENT MANUFACTURER UNLESS OTHERWISE SPECIFIED BY UNIT NAMEPLATE/ MANUFACTURER DATA.

HVAC ELEC. REQUIREMENTS

Load Name	Voltage	Number of Poles	MCA	MOCP	Disconnecting Means	Conductor/Conduit
AC-1	480 V	3	14	20	HEAVY DUTY 30AMP 600V 3P/3F NEMA 3R DISCONNECT SWITCH	(3)#10's Cu., (1)#10 Cu. E.G.- 3/4"C.
AC-2	480 V	3	14	20	HEAVY DUTY 30AMP 600V 3P/3F NEMA 3R DISCONNECT SWITCH	(3)#10's Cu., (1)#10 Cu. E.G.- 3/4"C.
AC-3	480 V	3	14	20	HEAVY DUTY 30AMP 600V 3P/3F NEMA 3R DISCONNECT SWITCH	(3)#10's Cu., (1)#10 Cu. E.G.- 3/4"C.
AC-4	480 V	3	14	20	HEAVY DUTY 30AMP 600V 3P/3F NEMA 3R DISCONNECT SWITCH	(3)#10's Cu., (1)#10 Cu. E.G.- 3/4"C.
AH-1 1.5T	208 V	2			PROVIDE 208V, 20A MOTOR RATED SWITCH	POWERED BY OUTDOOR UNIT
AH-1 3T	208 V	2	5.1	15	PROVIDE 208V, 20A MOTOR RATED SWITCH	(3)#12's Cu., (1)#12 Cu. E.G.- 3/4"C.
AH-2	208 V	2	7.5	15	HEAVY DUTY 30AMP 250V 2P/2F NEMA 3R DISCONNECT SWITCH	(3)#12's Cu., (1)#12 Cu. E.G.- 3/4"C.
CU-1	208 V	2	16	25	HEAVY DUTY 30AMP 250V 2P/2F NEMA 3R DISCONNECT SWITCH	(3)#10's Cu., (1)#10 Cu. E.G.- 3/4"C.
UH-1	208 V	2	14	20	HEAVY DUTY 30AMP 250V 2P/2F NEMA 3R DISCONNECT SWITCH	(3)#10's Cu., (1)#10 Cu. E.G.- 3/4"C.
WH-1	208 V	2	24	30	CIRCUIT BREAKER W/ LOCK-OFF DEVICE AS MEANS OF DISCONNECT	(3)#10's Cu., (1)#10 Cu. E.G.- 3/4"C.

- DISCONNECTING MEANS ELECTRICAL CONTRACTOR SHALL PROVIDE CORRECT SIZE/TYPE/VOLTAGE/QUANTITY OF DUAL -ELEMENT, TIME DELAY FUSE(S) SIZED PER HVAC EQUIPMENT MANUFACTURER UNLESS OTHERWISE SPECIFIED BY UNIT NAMEPLATE/MANUFACTURER DATA.
- ALL CONDUCTORS SHALL BE IN ACCORDANCE WITH THE ELECTRICAL SYSTEM SPEC'S (3.2). ALL TAP CONDUCTORS SHALL MEET THE REQUIREMENTS OF NEC ARTICLE 240.21(B)(2). MAXIMUM TAP CONDUCTOR LENGTH SHALL BE 25'-0" PER NEC ARTICLE 240 "FEEDER TAPS" AND "TRANSFORMER SECONDARY CONDUCTORS" AND SHALL NOT BE SMALLER THAN 1/3 THE AMPACITY OF THE FEEDER OCPD.
- STARTER/OVERLOAD PROTECTION MOTOR-DRIVEN EQUIPMENT SHALL BE INSTALLED WITH OVERLOAD PROTECTION PER NEC ARTICLE 430 PART III AND MOTOR CONTROLLER REQUIREMENTS PER NEC ARTICLE 430 PART VII. ADJUSTABLE SPEED DRIVES SHALL PROVIDE MOTOR OVERTEMPERATURE PROTECTION PER NEC 430.126. MOTOR-DRIVEN AIR-CONDITIONING AND REFRIGERATING EQUIPMENT SHALL COMPLY WITH NEC ARTICLE 440.
- EQUIPMENT INDICATED HERE SHALL BE LISTED TO THE APPROPRIATE U.L. LISTING FOR THE USE AND BEAR A NAMEPLATE WITH THIS INFORMATION. WHEN REQUIRED, ANY NON-COMPLIANT EQUIPMENT MUST BE MADE COMPLIANT AT THE OWNER'S EXPENSE AND IS NOT A PART OF THIS WORK EFFORT.

KEYED NOTES

#	
1	PROVIDE HVAC MAINTENANCE W.P. GFCI PER NEC SECTION 210.63 WITH WHILE-IN-USE COVER AND OUTLET BOX HOOD SHALL BE LISTED AND IDENTIFIED AS "EXTRA-DUTY" PER NEC 406.9(B)(1).

PRELIMINARY
NOT FOR CONSTRUCTION

CAWLEY ARCHITECTS
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COMMERCIAL BUILDING INNOVATIVE DRIVE

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DATE
CLIENT SIGN-OFF
10-22-2024

DRAWN BY: KL

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ELECTRICAL HVAC PLAN - WAREHOUSE

Project:X

E3.1

GENERAL NOTES - HVAC

1. REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND COMPLETE CONTRACTUAL OBLIGATIONS.
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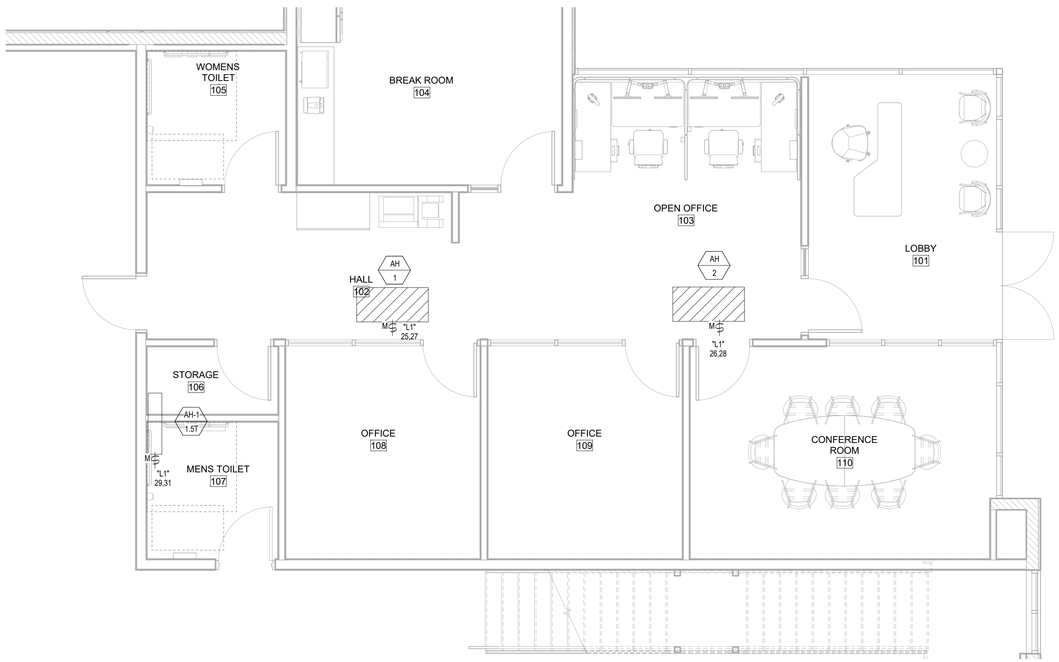

1 ENLARGED ELECTRICAL HVAC PLAN - OFFICE
1/4" = 1'-0"

N

PRELIMINARY
NOT FOR CONSTRUCTION

CAWLEY ARCHITECTS

730 N. 52nd St. Ste. 203
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ENLARGED ELECTRICAL HVAC PLAN - OFFICE

Project:X

E3.2

"SES" LOAD SUMMARY

CONNECTED LOAD ON PANEL "H1" = - VA

TOTAL REVISED LOAD ON S.E.S. = - VA

TOTAL REVISED LOAD ON S.E.S. @ 480V 3Ø = - A

PER NEC 2017 110.16(B), ELECTRICAL CONTRACTOR SHALL VERIFY THAT A PERMANENT LABEL HAS BEEN FIELD OR FACTORY APPLIED TO SERVICE EQUIPMENT RATED 1200 AMPS OR MORE. LABEL SHALL MEET THE REQUIREMENTS OF 110.21(B) AND CONTAIN THE FOLLOWING INFORMATION:

1. NOMINAL VOLTAGE
2. AVAILABLE FAULT CURRENT AT THE SERVICE OVERCURRENT PROTECTIVE DEVICES.
3. THE CLEARING TIME OF SERVICE OVERCURRENT PROTECTIVE DEVICES BASED ON THE AVAILABLE FAULT CURRENT AT THE SERVICE EQUIPMENT.
4. THE DATE LABEL WAS APPLIED.

PER NEC 2017 240.67 & 240.87, ELECTRICAL CONTRACTOR SHALL COORDINATE A METHOD TO REDUCE CLEARING TIME FOR ARC ENERGY REDUCTION WITH MANUFACTURER FOR ANY FUSE OR CIRCUIT BREAKER RATED 1200A OR HIGHER. REFER TO NEC 240.67(B) & 240.87(B) FOR APPROVED METHODS.

ELECTRICAL SPECIAL INSPECTIONS

CITY OF PHOENIX OR TEMPE

(YES/NO)	(TYPE)
YES	SWITCHBOARDS, PANELBOARDS AND MCC'S ≥ 1000A OR > 600V
NO	≥ 300KVA TRANSFORMER
NO	EMERGENCY AND STANDBY POWER SYSTEMS
NO	SELECTIVE COORDINATION
YES	GFP (MAIN OR POI)
NO	CONDUCTORS (FOR ELECTRICAL EQUIP. ≥ 1000A)
NO	SITE PHOTOMETRICS (TEMPE ONLY)
YES	ARC-FLASH REDUCTION/CLEARING TIME PER NEC 240.67 & 110.16(B)

NOTE:
1. CONTRACTOR SHALL COORDINATE ON-SITE VISUAL ELECTRICAL SPECIAL INSPECTION DAY/TIME WITH ENGINEER OF RECORD A MINIMUM OF 5 BUSINESS DAYS PRIOR TO ENERGIZING ELECTRICAL EQUIPMENT AND FINAL CITY INSPECTION.

BONDING & GROUND DETAIL

KEY NOTES - GROUNDING DIAGRAM

(A) CONCRETE ENCASED ELECTRODE (UFER) (GROUNDING ELECTRODE #1). REFER TO CHART FOR SIZE. MINIMUM 20'.

(B) MINIMUM 10 MIL ANNEALED COPPER CLAD STEEL GROUND ROD. (GROUNDING ELECTRODE #2). REFER TO CHART FOR SIZE. GROUND RODS ARE NOT OPTIONAL, MUST BE INSTALLED.

(C) GROUNDING ELECTRODE CONDUCTOR. REFER TO CHART FOR SIZE.

(D) INTEGRATED (FACTORY BONDED) BUS BAR MAIN BONDING JUMPER. REFER TO CHART FOR MINIMUM CONDUCTOR SIZE. (AMPACITY SHALL BE 150% RATED)

(E) METALLIC PIPING BOND WIRE. REFER TO CHART FOR MINIMUM SIZE. BOND TO ALL METALLIC PIPING (WATER, SPRINKLER, GAS, PNEUMATIC LINES, ETC.) WITHIN THE FIRST ACCESSIBLE 5' OF PIPES ENTRY INTO BUILDING.

(F) BUILDING STEEL BOND WIRE (IF REQUIRED PER BUILDING CONSTRUCTION TYPE). REFER TO CHART FOR MINIMUM SIZE.

(G) BOND WIRE FOR USE WITH MULTIPLE SERVICE's (WHEN PRESENT). REFER TO CHART FOR MINIMUM SIZE.

(H) INTEGRATED (FACTORY BONDED) BUS BAR CASE BOND. REFER TO CHART FOR MINIMUM CONDUCTOR SIZE.

(J) INTEGRATED (FACTORY INSTALLED) GROUND BUS BAR. SHALL BE SIZED TO ACCOMMODATE GROUND WIRE LUGS AS INDICATED ON THE ONE-LINE DIAGRAM.

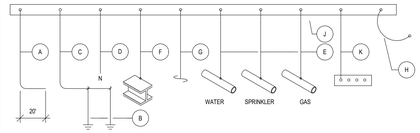
(K) INTERSYSTEM BONDING TERMINATION BAR AT SERVICE EQUIPMENT, W/ MIN. 3 POINTS OF CONNECTION FOR OTHER SYSTEMS. CONDUCTOR SHALL BE MIN. #6 CU, UNLESS SPECIFIED ELSEWHERE. INSTALL PER NEC 250.94.

CONDUCTOR SIZE CHART

SES AMPACITY	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
2000 AMP	#4	5/8" x 10' (x2)	#4	#350	#3/0	#3/0		#350

ALL SIZES SHOWN ARE FOR COPPER CONDUCTORS. ALUMINUM IS NOT PERMITTED.

GROUNDING DIAGRAM



GENERAL NOTES - GROUNDING DIAGRAM

1. THIS DETAIL IS PROVIDED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE ARTICLE 250 PERTAINING TO THE "GROUNDING ELECTRODE SYSTEM".
2. SPLICING OF CONDUCTORS SHALL BE ACCOMPLISHED VIA EXOTHERMIC WELD (CAD WELD) ONLY.
3. ALL CONNECTIONS TO GROUND RODS BELOW GRADE OR IN CONCRETE SHALL BE MADE VIA EXOTHERMIC WELD (CAD WELD) ONLY. CONNECTIONS MADE ABOVE GROUND LEVEL CAN BE ACCOMPLISHED UTILIZING A U.L. LISTED MECHANICAL CLAMP SUITABLE FOR THE PURPOSE.
4. ANY VARIANCE FROM THIS DRAWING AND/OR SPECIFICATION MUST BE REQUESTED AND APPROVED IN WRITING PRIOR TO INSTALLATION.
5. ALL INSTALLATIONS SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF ARTICLE 250 (ALL SUBPARAGRAPHS) OF THE NATIONAL ELECTRICAL CODE AND ALL STATE AND LOCAL CODE REQUIREMENTS.
6. THE GROUNDING SYSTEM SHALL PROVIDE NO GREATER THAN (5) FIVE OHMS RESISTANCE TO GROUND AT THE SERVICE CONNECTION. THE RESULTS SHALL BE VERIFIED BY AN INDEPENDENT TESTING AGENCY VIA GROUND TEST (FALL-OF-POTENTIAL) AND SUBMITTED IN ACCORDANCE WITH THE ELECTRICAL SPECIFICATIONS CONTAINED HEREIN.
7. THE GROUNDING ELECTRODE SYSTEM SHALL CONSIST OF GROUNDING ELECTRODES, ITEMS A (CONCRETE-ENCASED ELECTRODE (A.K.A. UFER), AND GROUND ROD(S) ITEM B. METAL UNDERGROUND WATER PIPE WITH 10' IN CONTACT WITH EARTH, AS DEFINED IN NEC 250.52(A)(1) AND METAL IN-GROUND SUPPORT STRUCTURE IN CONTACT WITH EARTH AS DEFINED IN 2017 NEC 250.52(A)(2) SHALL BE BONDED WITH ITEMS A & B AS PART OF THE GROUNDING ELECTRODE SYSTEM.
8. GROUNDING ELECTRODE CONDUCTORS , ITEMS: A AND C, ((F) CONNECTION TO METAL FRAME AND (E) CONNECTION TO UNDERGROUND WATER PIPE, WHEN CONSIDERED A GROUNDING ELECTRODE), SHALL EACH BE MADE IN SEPARATE CONDUCTORS AND SUITABLY PROTECTED BY CONDUIT. WHERE EXPOSED TO DAMAGE OR THEFT, CONDUITS THAT ARE NOT CONTINOUS FROM GROUNDING ELECTRODE TO CABINET/ENCLOSURE SHALL BE BONDED TO THE GEC PER NEC 250.64(E).
9. EXPOSED STRUCTURAL METAL AND METAL PIPING (NOT CONSIDERED A GROUNDING ELECTRODE) SHALL BE BONDED TO THE GROUNDING ELECTRODE SYSTEM AS INDICATED ON DETAIL, CONNECTIONS E AND F, IN ACCORDANCE WITH BONDING REQUIREMENT IN ARTICLE 250 PART V.

FAULT CALCULATIONS

The following calculations are based on the "Point-to-Point" method

Three Phase: $F_x = \frac{\sqrt{3} \times L \times Isc_1}{C \times Vp}$ $M=1/(1+F)$ $Isc_2=Isc_1 \times M$

Single Phase: $F_x = \frac{2 \times L \times Isc_1}{C \times Vp}$ $M=1/(1+F)$ $Isc_2=Isc_1 \times M$

Three Phase Xfmr: $F_x = \frac{\sqrt{3} \times Isc_1 \times Vp \times \%Z}{100{,}000 \times kVA}$ $Isc_2=Vp \times Mx\ Isc_1 / Vs$

Single Phase Xfmr: $F_x = \frac{Isc_1 \times Vp \times \%Z}{100{,}000 \times kVA}$ $Isc_2=Vp \times Mx\ Isc_1 / Vs$

NOTE:
CONDUCTOR LENGTHS SHOWN ARE SHORTEST-PATH FOR USE IN CALCULATIONS ONLY AND ARE NOT INTENDED FOR USE IN BIDDING OR CONSTRUCTION. ACTUAL LENGTHS MUST BE MEASURED & VERIFIED BY THE CONTRACTOR, AND **REPORTED TO ENGINEER** IF DESIGN CHANGES ARE REQUIRED.

F_x	SOURCE	Isc_1	C.	(SETS) OF WIRE SIZE	TYP.	"C" VALUE	Vp(Vs)	Ø	"L" feet	Xfmr kVA	Xfmr %Z	Isc_2
1	SES	36271	NM	(2) OF #3/0's	Cu.	13923	480	3	20	N/A	N/A	30531
2	SES	36271	N/A	(-) OF N/A	N/A	N/A	480 /208	3	N/A	75	3.5	5553
3	"H1"	30531	NM	(1) OF #12/0's	Cu.	1000	480	3	20	N/A	N/A	9531

COPPER CONDUCTOR/CONDUIT SCHEDULE

NOTE: NOT ALL CONDUCTOR SIZES MAY BE USED.

TAG LEGEND

3.120U1
- INDICATES SPECIAL CASE:
  - U = CONDUCTORS HAVE BEEN UPSIZED FOR VOLTAGE DROP.
  - X = SECONDARY OF TRANSFORMER, GROUND WIRE SIZED PER TRANSFORMER GROUNDING DETAIL ON SHEET EX.X.
  - # = IDENTIFYING NUMBER OF SPECIAL CASES.
- INDICATES: AMPACITY OF CONDUCTORS.
- INDICATES: QUANTITY OF PHASE (AND NEUTRAL) CONDUCTORS.

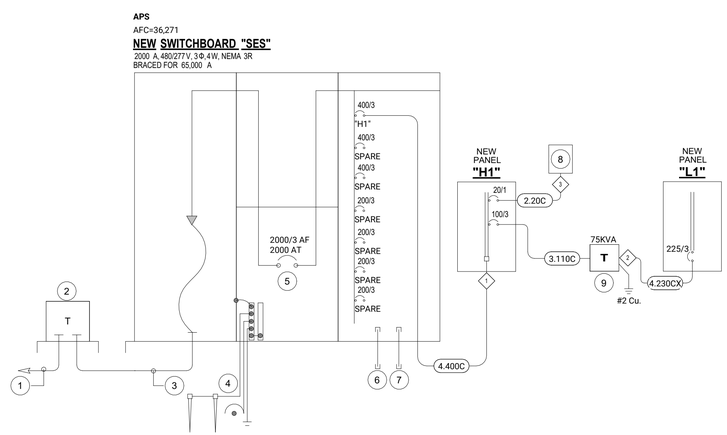
WIRE SIZE	WIRE CONDUIT AND CONDUCTOR
2.20C	(2) #12's Cu., (1) #12 Cu. E.G. - 3/4" C.
3.110C	(3) #1's Cu., (1) #6 Cu. E.G. - 1 1/2" C.
4.230CX	(4) #4/0's Cu., (1) #2 Cu. SUPPLY SIDE BONDING JUMPER - 2" C.
4.400C	(2) SETS OF (4) #3/0's Cu., (1) #2 Cu. E.G. - 2 1/2" C. EACH SET

GENERAL NOTES - ONE-LINE

1. THE ELECTRICAL CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS TO FULLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS PRIOR TO BID. NO ADDITIONAL CONSIDERATIONS WILL BE ALLOWED AFTER THE BID.
2. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL INDICATED EQUIPMENT TO CODE COMPLIANT CLEARANCES. PROVIDE SUBMITTALS AS INDICATED IN SPECIFICATIONS TO PROPERLY COORDINATE PHYSICAL LOCATIONS OF NEW AND/OR EXISTING EQUIPMENT.
3. REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND COMPLETE CONTRACTUAL OBLIGATIONS.
4. ALL DASHED LINES ARE INDICATING EXISTING EQUIPMENT.
5. THE ELECTRICAL CONTRACTOR SHALL PROVIDE CIRCUIT DIRECTORY OR CIRCUIT IDENTIFICATION FOR PANELBOARDS AND SOURCE OF SUPPLY FOR SWITCHBOARDS AND PANELBOARDS SUPPLIED BY A FEEDER IN OTHER THAN ONE- TWO-FAMILY DWELLINGS IN ACCORDANCE WITH NEC 408.4(A)&(B).
6. WHERE A RACEWAY ENTERS A BUILDING OR STRUCTURE FROM AN UNDERGROUND DISTRIBUTION SYSTEM, ELECTRICAL CONTRACTOR SHALL PROVIDE RACEWAY SEALS PER NEC 225.27.
7. THE ELECTRICAL CONTRACTOR SHALL PROVIDE FOR AND COORDINATE ALL TESTING AND INSPECTIONS REQUIRED BY THE AUTHORITY HAVING JURISDICTION, AND SHALL PROVIDE WRITTEN REPORTS TO THE ENGINEER OF ALL TEST RESULTS AND INSPECTION REPORTS FOR THIS DISCIPLINE.
8. WHERE SPECIAL INSPECTION/OBERVATION IS REQUIRED, QUALIFIED 3RD PARTY INDIVIDUALS ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION SHALL WORK DIRECTLY FOR THE OWNER TO PERFORM ALL REQUIRED TESTING & INSPECTION.
9. UPON SUBSTANTIAL COMPLETION, THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE ENGINEER AND SHALL ALLOW, AT THE ENGINEERS DISCRETION, FOR THE INSPECTION OF NEW WORK PRIOR TO ENERGIZING.
10. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ARC-FLASH HAZARD WARNING FIELD LABELING TO ELECTRICAL EQUIPMENT IN ACCORDANCE WITH NEC 110.16.
11. THE ELECTRICAL CONTRACTOR SHALL PROVIDE MAXIMUM AVAILABLE FAULT CURRENT FIELD LABELING TO SERVICE EQUIPMENT INSTALLED IN OTHER THAN DWELLING UNITS IN ACCORDANCE WITH NEC 110.24.
12. GFP MUST BE ON-SITE TESTED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. ELECTRICAL CONTRACTOR SHALL PROVIDE COPY OF MANUFACTURER'S INSTRUCTIONS AND TEST RESULTS TO AUTHORITY HAVING JURISDICTION.
13. ALL EQUIPMENT RATED @ 1000 AMPS OR MORE SHALL BE TESTED IN CONFORMANCE WITH UL STANDARD 869 OR 891 FOR INSULATION BREAKDOWN PRIOR TO ITS BEING ENERGIZED. THIS TEST SHALL BE PERFORMED BY A TESTING FACILITY APPROVED BY THE BUILDING OFFICIAL. (SEE SECTION 4.6 OF ELECTRICAL SYSTEM SPECIFICATIONS)
14. ALL UNDERGROUND CONDUITS ENTERING BUILDING/STRUCTURE FROM OUTSIDE SHALL BE SEALED PER NEC 225.27

KEYED NOTES

#	
1	UNDERGROUND PRIMARY CONDUITS PER UTILITY Co. REQUIREMENTS. COORDINATE EXACT LENGTHS AND POINT OF TERMINATION WITH APS PRIOR TO ROUGH-IN.
2	NEW UTILITY COMPANY PAD-MOUNTED TRANSFORMER.
3	PROVIDE (5) 4" UNDERGROUND SECONDARY CONDUITS TO UTILITY Co. PAD MOUNTED TRANSFORMER PER UTILITY Co. REQUIREMENTS.
4	REFER TO S.E.S. BONDING AND GROUNDING DETAIL THIS SHEET.
5	GROUND FAULT PROTECTION (GFP) DEVICE. ELECTRICAL CONTRACTOR SHALL PROVIDE GFP SETTING BASED ON DEVICE COORDINATION STUDY AS NOTED IN ELECTRICAL SPECIFICATIONS SECTION 6.11 "PROTECTIVE DEVICE COORDINATION STUDY".
6	PROVIDE (4) 2 1/2" (FOR FUTURE 200AMP CONNECTION) UNDERGROUND EMPTY CONDUIT FROM SES AND INTO ACCESSIBLE BUILDING SPACE FOR FUTURE USE.
7	PROVIDE (4) 3" (FOR FUTURE 400AMP CONNECTION) UNDERGROUND EMPTY CONDUIT FROM SES AND INTO ACCESSIBLE BUILDING SPACE FOR FUTURE USE.
8	DIMMING LIGHTING RELAY CONTROL PANEL TO COMPLY WITH 2018 IECC EXTERIOR LIGHTING CONTROLS. PROVIDE (1) 20A 277 HID RATED RELAY PER CIRCUIT ROUTED THRU RELAY CONTROL PANEL. PROVIDE A VOLTAGE BARIER AND ALL NECESSARY COMPONENTS FOR A SYSTEM IN COMPLIANCE WITH IECC 405. ENCLOSURE SHALL BE LISTED MINIMUM 10k SCCR.
9	NEW 75KVA STEP DOWN TRANSFORMER NEMA 1. 480V 3P 3W PRIMARY 120V/208V 3P 4W SECONDARY. Z% = 3.5 (MIN.) MOUNTED ABOVE NEW PANEL "L1". REFER TO TRANSFORMER MOUNTING DETAIL THIS SHEET.



1 ELECTRICAL ONE-LINE DIAGRAM
N.T.S.

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ELECTRICAL ONE-LINE DIAGRAM

Project:X

E4.1

NEW PANELBOARD SCHEDULE "L1"

TYPE: **PANELBOARD**	NEMA TYPE:	MAIN TYPE:
VOLTAGE: **120/208 Wye**	AFC:	FEED THRU: **NO**
MOUNTING: **Recessed**	C/B RATING:	ISO GROUND: **NO**
BUS AMPS: **225 A**	C/B AIC:	SERVICE RATED: **NO**

#	Circuit Description	C/B	Poles	A		B		C		Poles	C/B	Circuit Description	#
1	CIRC PUMP	20 A	1	180 VA	500 VA					1	20 A	SIGN	2
3	EDF	20 A	1			360 VA	1080 VA			1	20 A	RECEPTS - OFFICE	4
5	RECEPTS - LOBBY	20 A	1					360 VA	540 VA	1	20 A	RECEPTS - OPEN OFFICE/HALL/BREAK	6
7	PRINTER	20 A	1	900 VA	1200 VA					1	20 A	GATE MOTOR	8
9	RECEPTS - WAREHOUSE(a)	20 A	1			540 VA	1500 VA			1	20 A	MICROWAVE	10
11	RECEPTS - WAREHOUSE(b)	20 A	1					720 VA	900 VA	1	20 A	RECEPTS - CONFERENCE	12
13	WH-1	20 A	2	2250 VA	540 VA					1	20 A	RECEPTS - RR/HALL	14
15	--	--	--			2250 VA	1332 VA			2	20 A	CU-1	16
17	DISPOSAL	20 A	1					1176 VA	1332 VA	--	--	--	18
19	COFFEE MAKER	20 A	1	1500 VA	360 VA					1	20 A	RECEPTS - MEZZANINE	20
21	IRRIGATION CONTROLLER	20 A	1			500 VA							22
23	RECEPTS - WAREHOUSE(c)	20 A	1					540 VA	840 VA	1	20 A	REFRIGERATOR	24
25	AH-1 3T	20 A	2	416 VA	624 VA					2	20 A	AH-2	26
27	--	--	--			416 VA	624 VA			--	--	--	28
29	AH-1 1.5T	20 A	2					0 VA					30
31	--	--	--	0 VA									32
33													34
35													36
37													38
39													40
41													42
			Total Load:	8470 VA		8602 VA		6408 VA					
			Total Amps:	73 A		74 A		53 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Continuous	4500 VA	125.00%	5625 VA		
Equipment	0 VA	0.00%	0 VA	**Total Conn. Load:**	23479 VA
Lighting	0 VA	0.00%	0 VA	**Total Est. Demand:**	23586 VA
Receptacle	12036 VA	91.54%	11018 VA	**Total Conn.:**	65 A
Kitchen Equipment - Non-Dwelling Unit	0 VA	0.00%	0 VA	**Total Est. Demand:**	65 A
HVAC	0 VA	0.00%	0 VA		

NEW PANELBOARD SCHEDULE "H1"

TYPE: **PANELBOARD**	NEMA TYPE: **Type 1**	MAIN TYPE:
VOLTAGE: **480/277 Wye**	AFC:	FEED THRU: **NO**
MOUNTING: **Recessed**	C/B RATING:	ISO GROUND: **NO**
BUS AMPS: **400 A**	C/B AIC:	SERVICE RATED: **NO**

#	Circuit Description	C/B	Poles	A		B		C		Poles	C/B	Circuit Description	#
1	LRCP	20 A	1	0 VA	3047 VA					3	20 A	AC-1	2
3	AC-2	20 A	3			3047 VA	3047 VA			--	--	--	4
5	--	--	--					3047 VA	3047 VA	--	--	--	6
7	--	--	--	3047 VA	3047 VA					3	20 A	AC-3	8
9	AC-4	20 A	3			3047 VA	3047 VA			--	--	--	10
11	--	--	--					3047 VA	3047 VA	--	--	--	12
13	--	--	--	3047 VA	700 VA					1	20 A	LIGHTING - BUILDING	14
15	LIGHTING - POLE	20 A	1			290 VA	845 VA			1	20 A	Lighting	16
17	LIGHTING - MEZZANINE	20 A	1					264 VA					18
19													20
21													22
23													24
25													26
27													28
29													30
31													32
33													34
35													36
37					8470 VA					3	20 A	"T-1"	38
39							8602 VA			--	--	--	40
41									6408 VA	--	--	--	42
			Total Load:	21358 VA		21925 VA		18860 VA					
			Total Amps:	78 A		81 A		68 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Continuous	4500 VA	125.00%	5625 VA		
Equipment	0 VA	0.00%	0 VA	**Total Conn. Load:**	62142 VA
Lighting	2099 VA	100.00%	2099 VA	**Total Est. Demand:**	62249 VA
Receptacle	12036 VA	91.54%	11018 VA	**Total Conn.:**	75 A
Kitchen Equipment - Non-Dwelling Unit	0 VA	0.00%	0 VA	**Total Est. Demand:**	75 A
HVAC	36564 VA	100.00%	36564 VA		

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"H1"	"L1"

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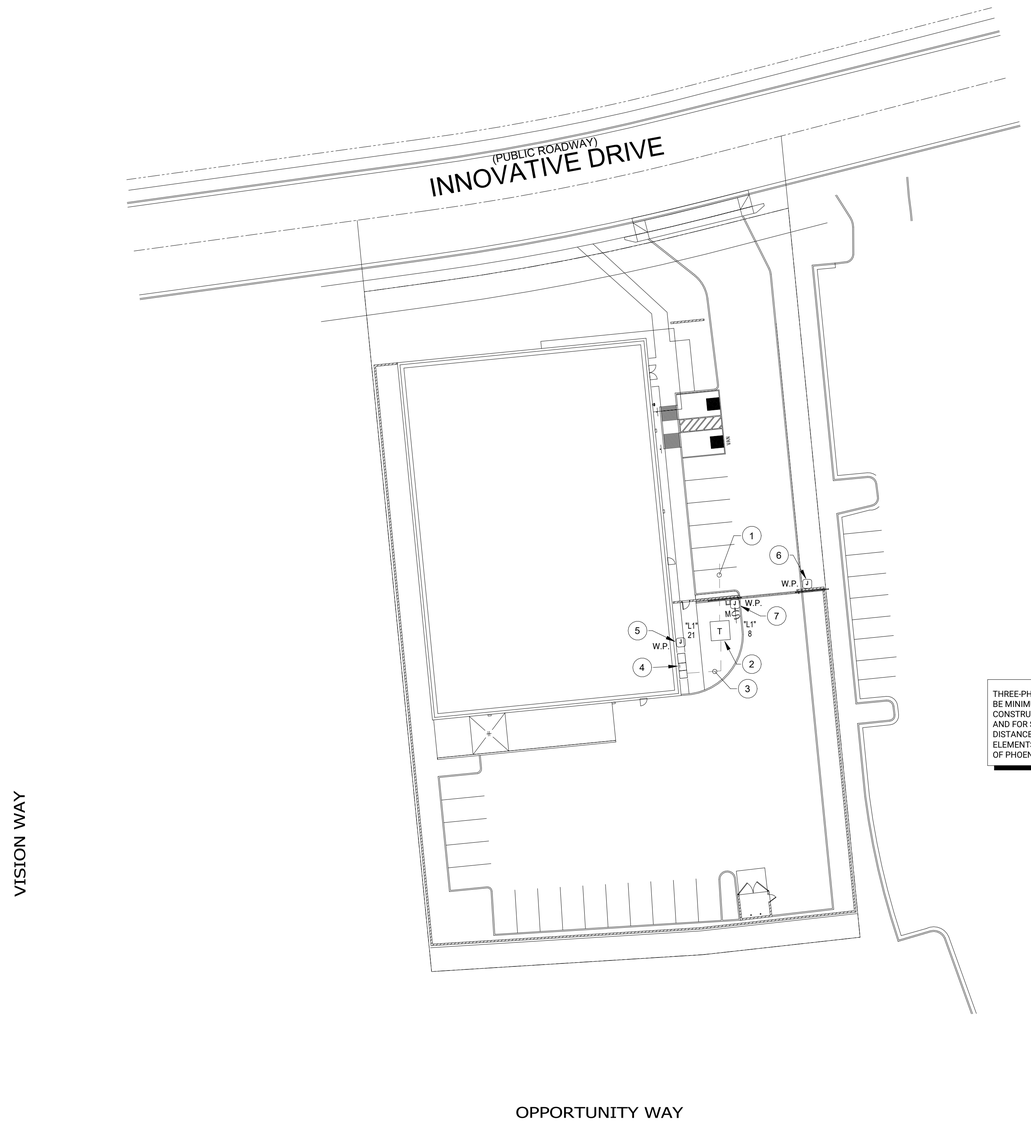
ELECTRICAL PANEL SCHEDULES

Project:X

E5.1



1 ELECTRICAL SITE POWER PLAN
1" = 30'-0"

THREE-PHASE UTILITY TRANSFORMER OF LESS THAN 500 GALLONS SHALL BE MINIMUM 25' HORIZONTAL DISTANCE TO BUILDING OF COMBUSTIBLE CONSTRUCTION TYPE; 15' FOR NON-COMBUSTIBLE; 5' FROM 2-HOUR RATED AND FOR SINGLE-PHASE TRANSFORMERS, 10' MINIMUM HORIZONTAL DISTANCE TO COMBUSTIBLE CONSTRUCTION. A MINIMUM 10' FROM ELEMENTS OF THE MEANS OF EGRESS SUCH AS EXIT DOORS etc. PER CITY OF PHOENIX TRANSFORMER, OUTDOOR OIL-INSULATED GUIDELINE.

GENERAL NOTES - SITE

1. REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND COMPLETE CONTRACTUAL OBLIGATIONS.
2. ELECTRICAL CONTRACTOR SHALL CONTACT TELEPHONE COMPANY REGARDING EXACT LOCATION OF ALL PRIMARY SERVICE EQUIPMENT, TRENCH LOCATION, ETC.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY TELEPHONE TRENCHING, BACKFILL, AND CONDUIT STUBS INTO TRENCH AS REQUIRED BY TELEPHONE COMPANY AND TO THEIR SPECIFICATIONS.
4. ALL WIRING FOR OUTSIDE LIGHTING SHALL BE A MINIMUM OF #10 COPPER WITH TYPE THWN INSULATION. RUN UNDERGROUND CIRCUITS IN P.V.C. AND PROVIDE A #10 COPPER BOND IN ADDITION TO CIRCUIT CONDUCTORS. UNDERGROUND WIRING SHALL COMPLY WITH APPLICABLE CODES OF THE NEC.
5. ELECTRICAL CONTRACTOR SHALL PROVIDE NECESSARY SECONDARY CONDUCTORS, POWER TRENCHING, BACKFILL AND CONCRETE PADS FOR TRANSFORMERS AND SERVICE EQUIPMENT. ADDITIONALLY PROVIDE CONDUIT
STUBS INTO TRENCH PER POWER COMPANY SPECIFICATIONS AND REQUIREMENTS.
6. ALL WIRING SHALL BE COPPER. WIRING #4 AWG AND LARGER SHALL BE XHHW TYPE INSULATION.

UTILITY COMPANY NOTES

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH SERVING UTILITY COMPANY AND THEIR SPECIFIC REQUIREMENTS WITHIN (5) DAYS OF AWARD OF CONTRACT.
2. PROVIDE SERVING UTILITY COMPANY WITH ONE (1) FULL SET OF PLANS INCLUDING SITE PLAN, ONE-LINE DIAGRAM, AND TOTAL LOAD SUMMARY.
3. CONFIRM ALL UTILITY COMPANY REQUIREMENTS PRIOR TO TRENCHING.
4. CONTRACTOR SHALL COORDINATE WITH SERVING UTILITY COMPANY IF AN UPGRADE IS REQUIRED TO UTILITY TRANSFORMER OR SECONDARY CONDUIT AND CONDUCTORS.
5. CONTRACTOR SHALL COORDINATE EXACT COSTS (PER AMP CHARGE, ECT.) OF ANY ADDITIONAL WORK WITH SERVING UTILITY COMPANY PRIOR TO START OF CONSTRUCTION.

UTILITY COMPANY CONTACT
Power Company:
APS
Representative:
APS BUISNESS CENTER
Telephone #:
(602) 371-6767

PRIOR TO ANY GROUND EXCAVATION CALL
BLUE STAKE
(602) 263-1100
(800) 782-5348

KEYED NOTES

#	
1	UNDERGROUND PRIMARY CONDUITS TO UTILITY COMPANY PAD MOUNTED TRANSFORMER. COORDINATE EXACT QUANTITY AND SIZES WITH UTILITY CO.
2	NEW PAD AND NEW PAD MOUNTED TRANSFORMER. VERIFY EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH SERVING UTILITY COMPANY.
3	UNDERGROUND SECONDARY CONDUITS SEE ONE-LINE DIAGRAM FOR QUANTITIES.
4	SERVICE ENTRANCE SECTION SEE ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
5	PROVIDE WEATHERPROOF JUNCTION BOX FOR CONNECTION TO IRRIGATION CONTROLLER. VERIFY LOCATION WITH LANDSCAPE PLANS PRIOR TO ROUGH-IN.
6	W.P. J-BOX FOR KEYPAD ACCESS WITH 3/4" EMPTY CONDUIT STUBBED INTO BUILDING ACCESSIBLE CEILING SPACE. COORDINATE EXACT LOCATION WITH OWNER/ARCHITECT PRIOR TO ROUGH-IN.
7	W.P. J-BOX AT +6" A.F.G. FOR 120 VOLT MOTORIZED GATE COMPLETE WITH OVERCURRENT PROTECTION. (VERIFY OCPD MEETS MOTOR LOCAL DISCONNECT MEANS PER NEC 430.109. PROVIDE MOTOR-RATED SWITCH IF NOT COMPLIANT) VERIFY ALL REQUIREMENTS AND LOCATION PRIOR TO ROUGH-IN.

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ELECTRICAL SITE POWER PLAN

Project:X

ES1.1

EXTERIOR LUMINAIRE SCHEDULE				
Manufacturer	Model	Voltage	Lamps CRI/CCT Input Watts	Remarks
KEYSTONE TECHNOLOGIES	KT-ALED140 -M2-OSA-N M-840-VDIM	277 V	LED 80CRI/4000 K 140 VA	LED WALLPACK MOUNTED 15' AFG.
KEYSTONE TECHNOLOGIES	KT-ALED290 -L2-OSA-NM -840-VDIM	277 V	LED 80CRI/4000 K 290 VA	LED SINGLE POLE FIXTURE. REFER TO MOUNTING DETAIL ON THIS SHEET.

EXTERIOR IECC WATT PER SQUARE FOOT COMPLIANCE

WATTS USED

Fixture Type	Count x Apparent Load=	Total Watts Used
SA	1 x 290 VA=	290 W
SW	5 x 140 VA=	700 W
Total Watts Used		990 W

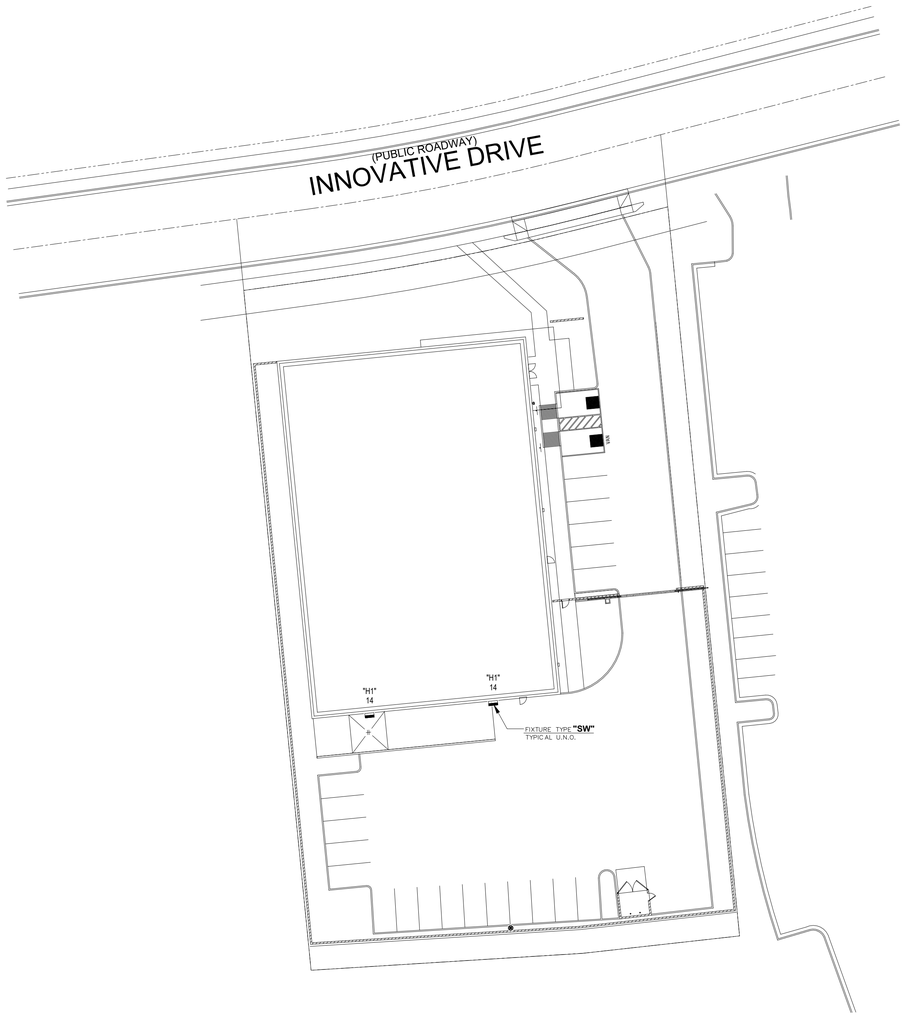
WATTS ALLOWED - TRADEABLE AREA

PARKING AREAS & DRIVES	0	x	0.03W/s.f.	=	0	W
WALKWAYS & RAMPS	0	x	0.5W/l.f.	=	0	W
PED & VEHICLE ENTRIES	0	x	14 W/ft.	=	0	W
TOTAL INDIVIDUAL AREA WATTS ALLOWED				=	0	W

COMPLIANCE

BASE SITE ALLOWANCE	=	350	W
TOTAL AREA ALLOWANCES	=	0	W
TOTAL WATTS USED	=	990	W
TOTAL COMPLIANCE BY	=	-640	W

TABLE PROVIDED AS COMPLIANCE MATERIAL TO MEET IECC 2018 SECTION C405.4.2 FOR LIGHTING POWER ALLOWANCE WITHIN ZONE1 (C405.4.2(1)). METHOD IS ACCEPTABLE PER IECC C101.5.1.



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

N

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ELECTRICAL SITE LIGHTING PLAN

Project:X

ES2.1

Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
	5	KT-ALED140-M2-OSA-NM-840-VDIM	Single	19951.4	0.900	Single Area Light 140w Type 4
	1	KT-ALED290-L2-OSA-NM-840-VDIM	Single	41906.5	0.900	Single Area Light 290w Type 4

Calculation Summary								
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	Workplane Height
Lot	Illuminance	Fc	3.11	14	0	N.A.	N.A.	0

NOTE:
PRE-CURFEW DESIGN HOURS SHALL BE DEFINED FROM NOT LATER THAN ONE HOUR AFTER BUSINESS CLOSING AND POST-CURFEW DESIGN HOURS SHALL BE DEFINED AS NOT EARLIER THAN ONE HOUR BEFORE BUSINESS OPENING. ALL EXTERIOR LIGHTS SHALL BE DIMMED BY NOT LESS THAN 30% DURING POST-CURFEW TO COMPLY WITH IECC 2018 C405.2.6. EXTERIOR LIGHTING CONTROLS.

1 ELECTRICAL SITE LIGHTING PLAN - PRE NEW CURFEW PHOTOMETRICS
1" = 30'-0"

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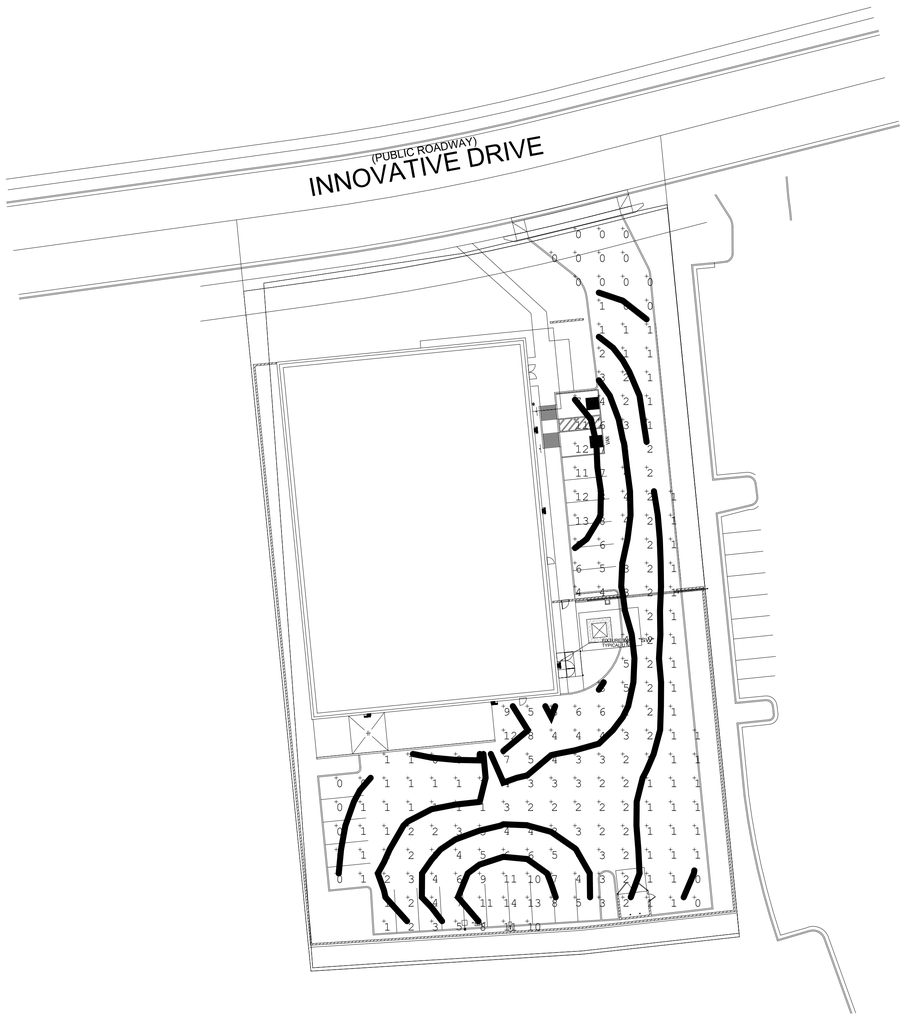
ELECTRICAL SITE LIGHTING PLAN - PRE CURFEW PHOTOMETRICS

Project:X

ES3.1



Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
	5	KT-ALED140-M2-OSA-NM-840-VDIM	Single	19951.4	0.900	30% Area Light 140w Type 4
	1	KT-ALED290-L2-OSA-NM-840-VDIM	Single	41906.5	0.900	30% Area Light 290w Type 4

Calculation Summary								
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	Workplane Height
Lot	Illuminance	Fc	0.87	4	0	N.A.	N.A.	0

NOTE:
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1 ELECTRICAL SITE LIGHTING PLAN - POST NEW CURFEW PHOTOMETRICS
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ELECTRICAL SITE LIGHTING PLAN - POST CURFEW PHOTOMETRICS

Project:X

ES3.2