

CESAR CHAVEZ SCHOOL

5103 N WILLIS BLVD
PORTLAND, OR 97203

PPS PROJECT NO: MULT-2018-4572-FY18

PROJECT DIRECTORY

OWNER

PORTLAND PUBLIC SCHOOLS DISTRICT #1J
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MACKENZIE
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STRUCTURAL ENGINEERING

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CIVIL ENGINEER

MACKENZIE
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MECHANICAL / ELECTRICAL / PLUMBING

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DRAWING INDEX

GENERAL

G0.02A PROJECT GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS

CIVIL

C0.01A CIVIL NOTES AND LEGEND

C1.10A SITE, GRADING, + UTILITY PLAN
C1.11A PLAYGROUND RESTRIPIING PLAN
C5.10A CITY OF PORTLAND STANDARD DETAILS
C5.11A CIVIL DETAILS

ARCHITECTURAL

A0.01A TYPICAL DETAILS / DOOR SCHEDULE

A1.10A FOUNDATION PLAN & DETAILS
A1.11A FLOOR PLAN & BUILDING ELEVATIONS
A1.12A ROOF PLAN

A4.10A ENLARGED PLANS AND ELEVATIONS

SITE INFORMATION

LEGAL DESCRIPTION: 1N1E08BC 13300
1N1E08BC 13400
ADDRESS: 5103 N WILLIS BLVD
PORTLAND, OR 97203

PROJECT SCOPE

RELOCATION OF EXISTING PORTABLE CLASSROOM BUILDING FROM STORAGE FACILITY TO CESAR CHAVEZ ELEMENTARY SCHOOL. SCOPE OF WORK FOR MODULARS TO INCLUDE SITE ELECTRICAL AND WASTE WATER CONNECTIONS, BUILDING FOUNDATIONS, ADA ACCESS RAMP, ADA UNISEX RESTROOMS WITHIN MODULAR, FINISH UPGRADES AND MEP UPGRADES.

MECHANICAL

M0.01A SYMBOLS LISTS AND GENERAL NOTES - MECHANICAL

M1.11A FLOOR PLAN - BUILDING A - MECHANICAL

PLUMBING

P0.01A SYMBOLS LISTS AND GENERAL NOTES - PLUMBING

P1.11A LEVEL 1 FLOOR PLAN - BUILDING A - PLUMBING

FIRE ALARM

FA0.01A SYMBOLS LISTS AND GENERAL NOTES - FIRE ALARM

FA1.01A SITE PLAN - BUILDING B - FIRE ALARM
FA1.11A LEVEL 1 FLOOR PLAN - BUILDING A - FIRE ALARM

ELECTRICAL

E0.01A SYMBOLS LISTS AND GENERAL NOTES - ELECTRICAL

E1.01A SITE PLAN - BUILDING A - POWER & SIGNAL
E1.11A LEVEL 1 FLOOR PLAN - BUILDING A - ELECTRICAL

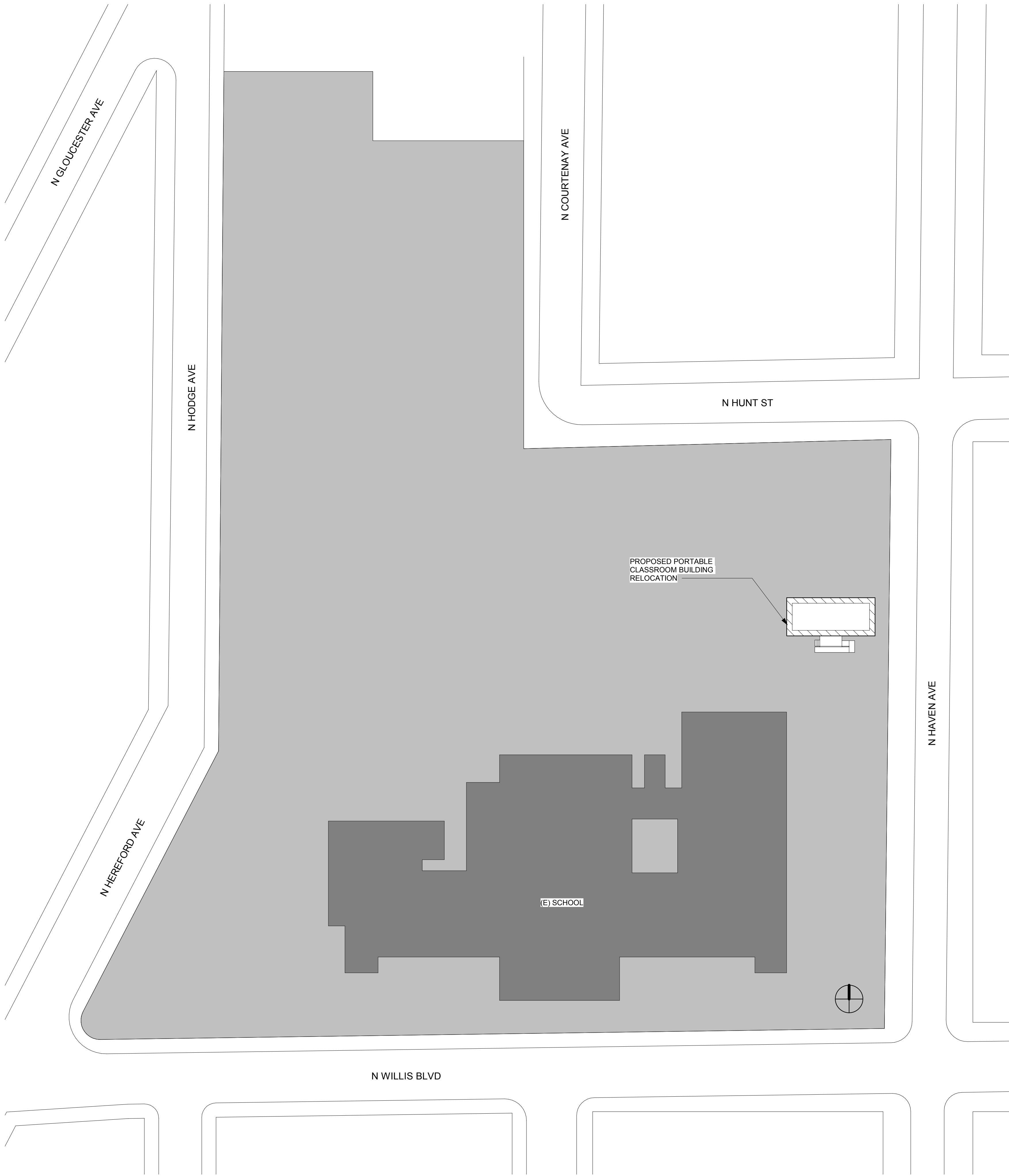
E5.10A SINGLE LINE DIAGRAM & SCHEDULES - BUILDING A - ELECTRICAL

SPECIAL INSPECTIONS

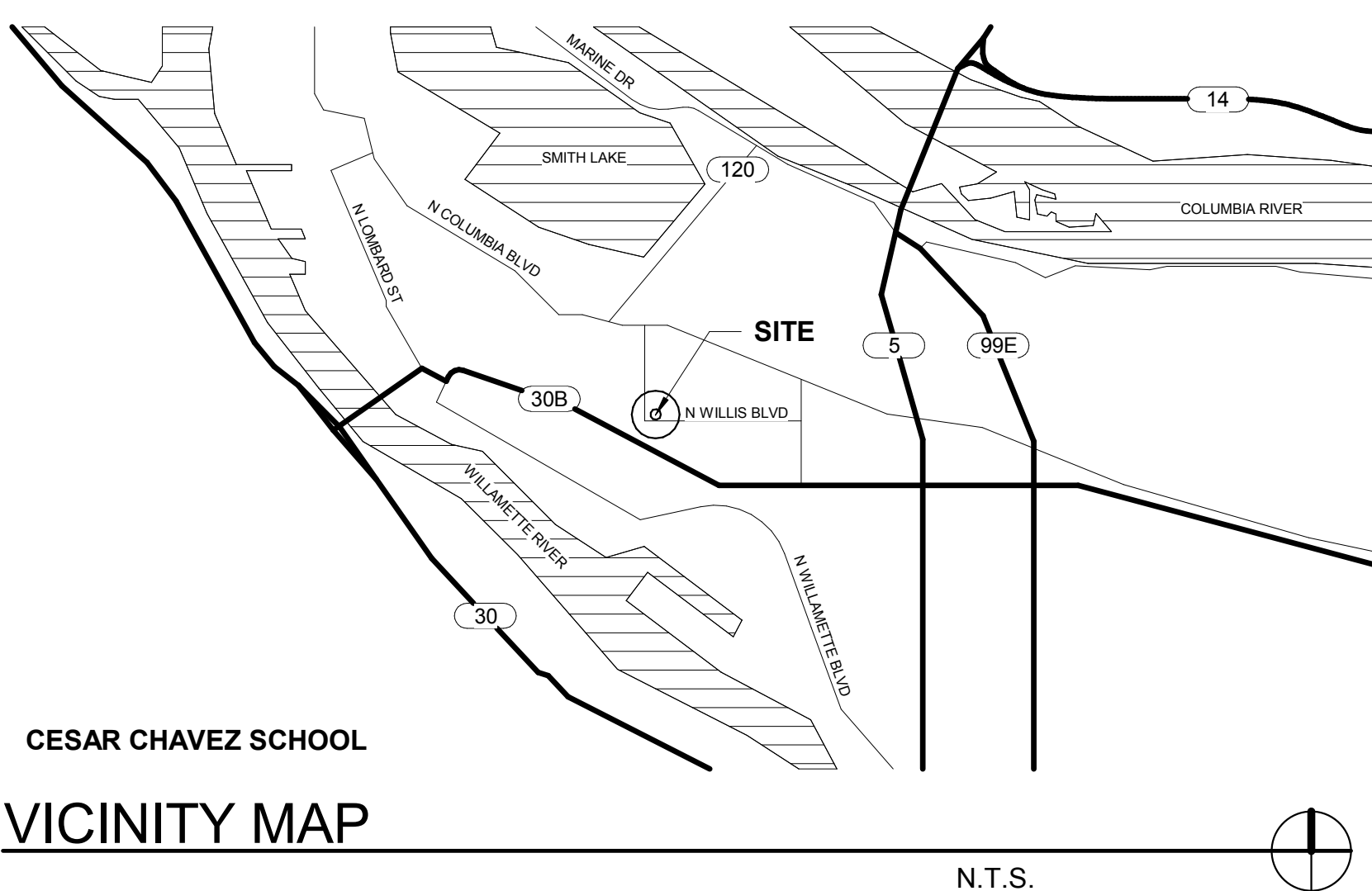
SEE SHEET A1.10A

ALTERNATES

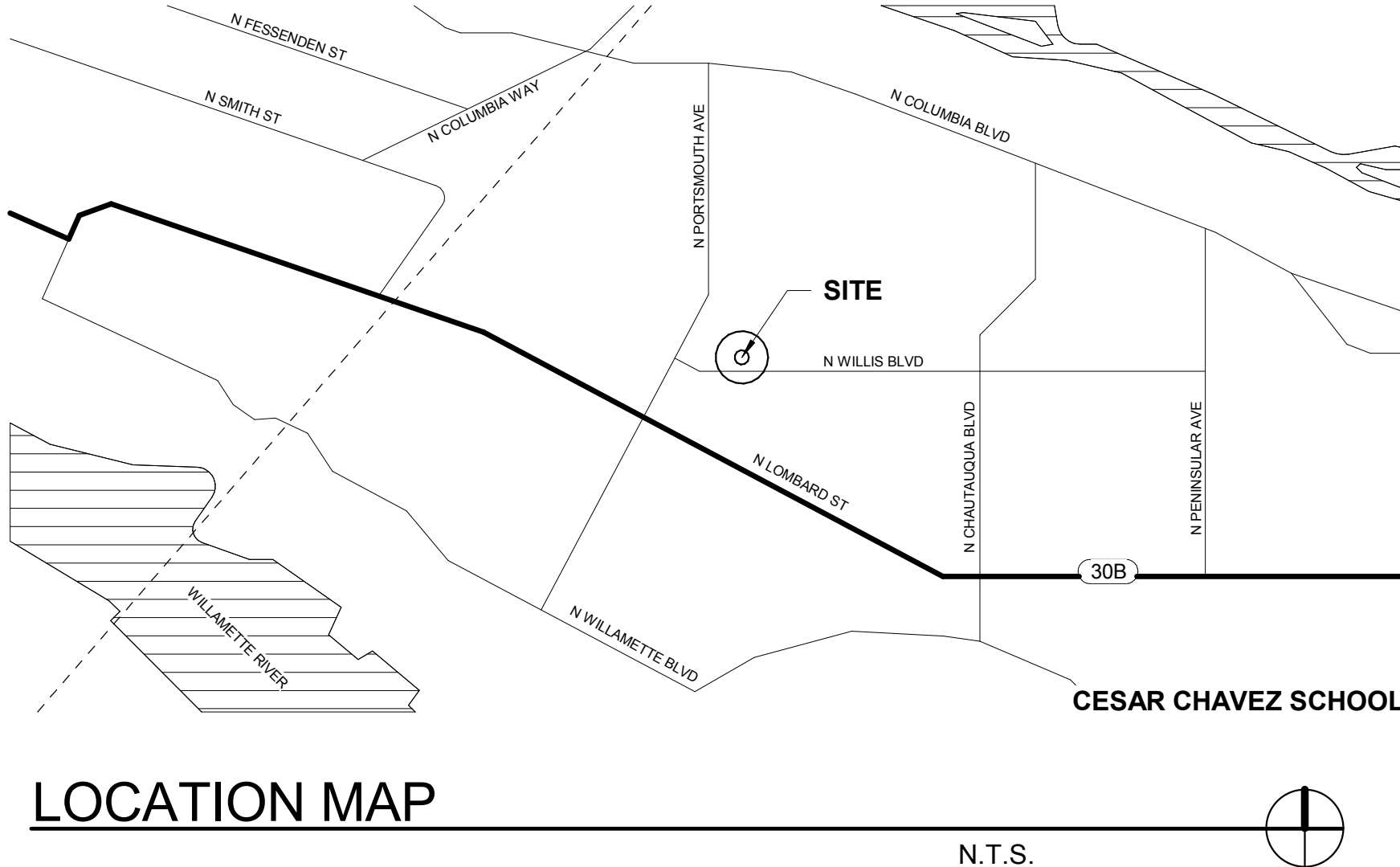
- NEW PAINT FOR ENTIRE MODULAR, A1.11A
- INSTALL WALL TILE AND BASE INSTEAD OF FRP AND RUBBER BASE IN RESTROOMS
- ADD CHAIN LINK FENCING AT PLANTERS



2 SITE PLAN - CESAR CHAVEZ
G0.01A 1" = 40'-0"



CESAR CHAVEZ SCHOOL
VICINITY MAP



LOCATION MAP

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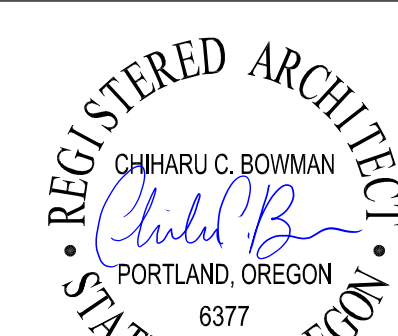
Client

Portland Public
Schools
District #1J

Project

PPS - Cesar Chavez
School Modular
Relocation
5103 N Willis Blvd
Portland, OR 97203

Mechanical/Electrical
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Revision Schedule	
Revision Delta	Issue Date

SHEET TITLE:
**TITLE SHEET
AND DRAWING
INDEX**

DRAWN BY: QNR

CHECKED BY: CCB

SHEET

G0.01A

JOB NO. 2170276.00

STANDARD ABBREVIATIONS

@	AT	EOP	EDGE OF PANEL	L	ANGLE	R	RADIUS
AB	ANCHOR BOLT	EP	EPOXY PAINT / EDGE OF PAVEMENT	LAM	LAMINATE	RAD	RADIUL
AC	ASPHALTIC CONCRETE	EPDM	ETHYLENE PROPYLENE DIENE MONOMER	LAV	LAVATORY	RB	RUBBER BASE
ACI	AMERICAN CONCRETE INSTITUTE	EQ	EQUAL	LB	LAG BOLT	RBE	ROOF BASE ELEVATION
ADA	AMERICANS WITH DISIBILITIES ACT	ES	EACH SIDE	LL	LIVE LOAD	RCP	REFLECTED CEILING PLAN
ADDL	ADDITIONAL	ETC	EPOXY TRAFFIC COATING / ETCETERA	LLV	LONG LEG VERTICAL	RD	ROOF DRAIN
ADJ	ADJACENT/ ADJUSTABLE	EW	EACH WAY	LP	LONGITUDINAL	RECEPT	RECEPTION(IST)
AESS	ARCHITECTURALLY EXPOSED	EXP	EXPOSED STRUCTURE	LSL	LOWPOINT	REF	REFERENCE / REFRIGERATOR
AFF	STRUCTURAL STEEL	EXP JT / EJ	EXPANDED JOINT	LVL	LAMINATED STRAND LUMBER	REINF	REINFORCING
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	EXT	EXTERIOR	LWC	LIGHTWEIGHT CONCRETE	REQD / REQ'D	REQUIRED
AL / ALUM	ALUMINUM	F	FACE OF	M	MIRROR	REV	REVISION
ALT	ALTERNATE	F/STUD	FACE OF STUD	ME/P	MECHANICAL / ELECTRICAL / PLUMBING OR PROCESS	RM	ROOM
APPROX	APPROXIMATE	FB	FLAT BAR	MANF	MANUFACTURER	RO	ROUGH OPENING
ARCH	ARCHITECT(URAL)	FC	FACE OF CURB	MAS	MASONRY	ROW	RIGHT OF WAY
ATR	ALL-THREAD ROD	FDC	FIRE DEPARTMENT CONNECTION	MATL	MATERIAL	S	STAIN
B/	BOTTOM OF	FE	FIRE EXTINGUISHER	MAX	MAXIMUM	SAT	SUSPENDED ACOUSTICAL TILE
BATT	BATTEN INSULATION	FF	FACTORY FINISH / FINISHED FACE	MB	MACHINE BOLT	SC	SEALED CONCRETE / SOLID CORE WOOD
BD	BOARD	FFE	FINISH FLOOR ELEVATION	MDF/MDO	MEDIUM DENSITY FIBERBOARD / OVERLAY	SCHED	SCHEDULE
BLD / BLDG	BUILDING	FIN	FINISH(ED)	MECH	MECHANICAL	SCM	STRUCTURAL CLAY MASONRY
BLK	BLOCK	FL	FLUSH	MFD	MANUFACTURED	SF	STORE FRONT / SQUARE FEET
BLKG	BLOCKING	FLR	FLOOR	MFG	MANUFACTURING	SFRS	SEISMIC FORCE RESISTING SYSTEM
BM	BENCHMARK / BEAM	FM	FACTORY MUTUAL	MFR	MANUFACTURER	SHTG / SHT'G	SHEATHING
BN	BOUNDARY NAIL	FN	FIELD NAILING	MGR	MANAGER	SIM	SIMILAR
BOT / BOTT	BOTTOM	FND	FOUNDATION	MH	MAN HOLE	SLRS	SEISMIC LOAD RESISTIVE SYSTEM
BRG	BEARING	FOC	FACE OF CONCRETE	MIN	MINIMUM	SLV	SHORT LEG VERTICAL
BSMT	BASEMENT	FOF	FACE OF FINISH	MISC	MISCELLANEOUS	SMS	SHEET METAL SCREW
BTWN	BETWEEN	FOIC	FURNISH BY OWNER INSTALL BY CONTRACTOR	MLP	METAL LINEAR PANEL	SP	SPACE(D/S)
BUR	BUILT UP ROOFING	FOM	FACE OF MASONRY	NO	MASONRY OPENING	SPEC(S)	SPECIFICATION(S)
CAB	CABINET	FOS	FACE OF STUD	NOD BIT	MODIFIED BITUMINOUS	SQ	SQUARE
CB	CATCH BASIN	FS	FAR SIDE	MP	METAL PANEL	SS	STAINLESS STEEL / SOLID SURFACE STONE
CBF	CONTROLLED DENSITY FILL	FT	FEET/FOOT FIRE TREATED	MTL	METAL	STA PT	STATION POINT
CIP	CAST IRON	FTG	FOOTING	(N)	NEW	STAGG	STAGGERED
CJ	CONTROL JOINT	GA	GAUGE	NFPA	NATIONAL FIRE PROTECTION AGENCY	STD	STANDARD
CL / CL	CENTRAL LINE	GALV	GALVANIZED	NIC	NOT IN CONTRACT	STIFF	STIFFENER
CLNG	CEILING	GEN	GENERAL	NO / #	NUMBER	STL	STEEL
CLR	CLEAR	GLB	GLULAM BEAM	NOM	NOMINAL	STRUCT	STRUCTURAL
CMP	CORRUGATED METAL PIPE	GLZ	GLAZING	NR	NON RATED	SUSP	SUSPENDED
CMU	CONCRETE MASONRY UNIT	GR	GRADE	NS	NEAR SIDE	SV	SHEET VINYL
CNTR	CENTER	GRD	GRID ONLY	NTE	NOT TO EXCEED	T	TEMPERED
CO	CLEAN OUT	GSA	U.S. GENERAL SERVICES ADMINISTRATION	NTS	NOT TO SCALE	T&B	TOP AND BOTTOM
COL	COLUMN	GYP BD	GYP SUM BOARD	O/A	OVERALL	TC	TOP OF CURB
CONC	CONCRETE	HB	HOSE BIB	OC	ON CENTER	TEMP	TEMPERATURE / TEMPORARY
CONF	CONFERENCE	HC	HOLLOW CORE / HANDICAP	OD	OUTSIDE DIAMETER	THK	THICK / THICKNESS
CONN	CONNECTION	HCM	HOLLOW CLAY MASONRY	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED	TL	TOTAL LOAD
CONN	CONNECTION	HDPPE	HIGH DENSITY POLYETHELENE	OFOI	OWNER FURNISHED, OWNER INSTALLED	TN	TOE NAIL
CONST	CONSTRUCTION	HDR	HEADER	OH	OPPOSITE HAND	TO	TOP OF
CONT	CONTINUOUS	HDWR	HARDWARE	OHD	OVERHEAD DOOR	TOF	TOP OF FOOTING
CONTR	CONTRACTOR	HGR	HANGER	OPNG	OPENING	TOS	TOP OF STEEL
COORD	COORDINATE	HL	HALF LITE	OPP	OPOSITE	TOW	TOP OF WALL
CORR	CORRUGATED(ED) (ION)	HM	HOLLOW METAL	OSF / O/FACE	OUTSIDE FACE	TPO	THERMOPLASTIC POLYOLEFIN
CPT	CARPET	HMK	HOLLOW METAL KNOCKDOWN	OSSC	OREGON STRUCTURAL SPECIALTY CODE	TRANS	TRANSVERSE
CRC	CHEMICAL RESISTANT COATING	HMW	HOLLOW METAL WELDED	OTS	OPEN TO STRUCTURE	TS	TUBE STEEL
CSK	COUNTERSINK	HORIZ	HORIZONTAL	P	PAINT	TYP	TYPICAL
CSP	CONCRETE SEWER PIPE	HR(S)	HOURS	P-LAM	PLASTIC LAMINATE	U/S	UNDERSIDE
CTOP	COUNTERTOP	HS	HEADED STUD	P.E	PROFESSIONAL ENGINEER	UC	UNDER COUNTER
CTR / CNTR	CENTER	HSB	HIGH STRENGTH BOLT	PB	PARTICLE BOARD	UL	UNDER WRITERS LABORATORIES
CW	CONCRETE WALL	HTG	HEATING	PDA / PAF	POWDER DRIVEN ANCHORS/POWDER ACTUATED FASTENER	UNO / UON	UNLESS NOTED OTHERWISE
d	PENNY(NAILS)	HVAC	HEATING, VENTILATION AND AIR CONDITIONING	PJ	PANEL JOINT	USG	UNITED STATES GYPSUM
DBA	DEFORMED BAR ANCHOR	HWS	HEADED WELD STUD	PL / PL	PLATE	VCT	VINYL COMPOSITION TILE
DBL	DOUBLE	IBC	INTERNATIONAL BUILDING CODE	PLB	PARALLAM BEAM	VERT	VERTICAL
DC	DEMAND CRITICAL WELD	ID	INSIDE DIAMETER	PLB	PLUMBING	VEST	VESTIBULE
DET / DTL	DETAIL	IE	INVERT ELEVATION	PLY / PLYWD	PLYWOOD	VFY	VERIFY
DET/DTL	DETAIL	IF	INSIDE FACE	PNL	PANEL	VIF	VERIFY IN FIELD
DF	DRINKING FOUNTAIN / DOUGLAS FIR	IPC	INTERNATIONAL FIRE CODE	PR	PAIR	VP	VISION PANEL
DIA / ø	DIAMETER	INSF	INSPECTION / INSPECTOR	PS	POUR STRIP	W/	WITH
DIAPH	DIAPHRAGM	INSP	INSULATION	PSF	POUNDS PER SQUARE FOOT	WCRC	COATING WITH CHEMICAL RESISTANCE
DIM	DIMENSION	INT	INTERIOR	PSI	POUNDS PER SQUARE INCH	W/O	WITHOUT
DL	DEAD LOAD	IPC	INTERNATIONAL PLUMBING CODE	PFL	PARALLEL STRAND LUMBER	WB	WOOD BASE
DN	DOWN	K	KIPS	PT	PRESSURE TREATED / PORCELAIN TILE	WC	WATER CLOSET / WALL COVERING
DP	DEEP	KSF	KIPS PER SQUARE FOOT	PVC	POLY VINYL CHLORIDE	WD	WOOD
DR	DOOR	KSI	KIPS PER SQUARE INCH	PVMT	PAVEMENT	WF	WIDE FLANGE BEAM
DS	DOWN SPOUT					WH	WATER HEATER
DWG	DRAWING					WP	WATER PROOF / WOOD PANELING / WORK POINT
DWLS	DOWELS					WRGB	WATER RESISTANT GYPSUM BOARD
(E) / EXIST	EXISTING					WS	WATER STOP / WELDED STUD
E/	EDGE OF					WWF	WELDED WIRE FABRIC
EA	EACH					WWR	WELDED WIRE MESH
EF	EACH FACE						
EIFS	EXTERIOR INSULATION FINISH SYSTEM						
ELECT	ELECTRICAL						
ELEV	ELEVATION						
EN	EDGE NAIL						
ENGR	ENGINEER						

PROJECT SUMMARY

LOCATION: 5103 N WILLIS BLVD
PORTLAND, OR 97203

ZONING: RS

BUILDING CODE: 2014 OREGON STRUCTURAL SPECIALTY CODE (OSSC)
2014 OREGON MECHANICAL SPECIALTY CODE (OMSC)
2017 OREGON ELECTRICAL SPECIALTY CODE (OESC) W/ STATE AMENDMENTS
2017 OREGON PLUMBING SPECIALTY (OPSC)
2014 OREGON ENERGY EFFICIENCY SPECIALTY CODE (OEESC)
2014 OREGON FIRE CODE (OFC)
2018 NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 72 (NATIONAL FIRE ALARM CODE)
2009 ICC/ANSI A117-1.09, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES, W/ STATEWIDE AMENDMENTS

CLIMATE ZONE: 9A

CODE SUMMARY

EXISTING BUILDING OCCUPANCY: E
CONSTRUCTION TYPE: TYPE V-B

CHAPTER 3 USE AND OCCUPANCY CLASSIFICATION
BUILDING USES: EDUCATIONAL

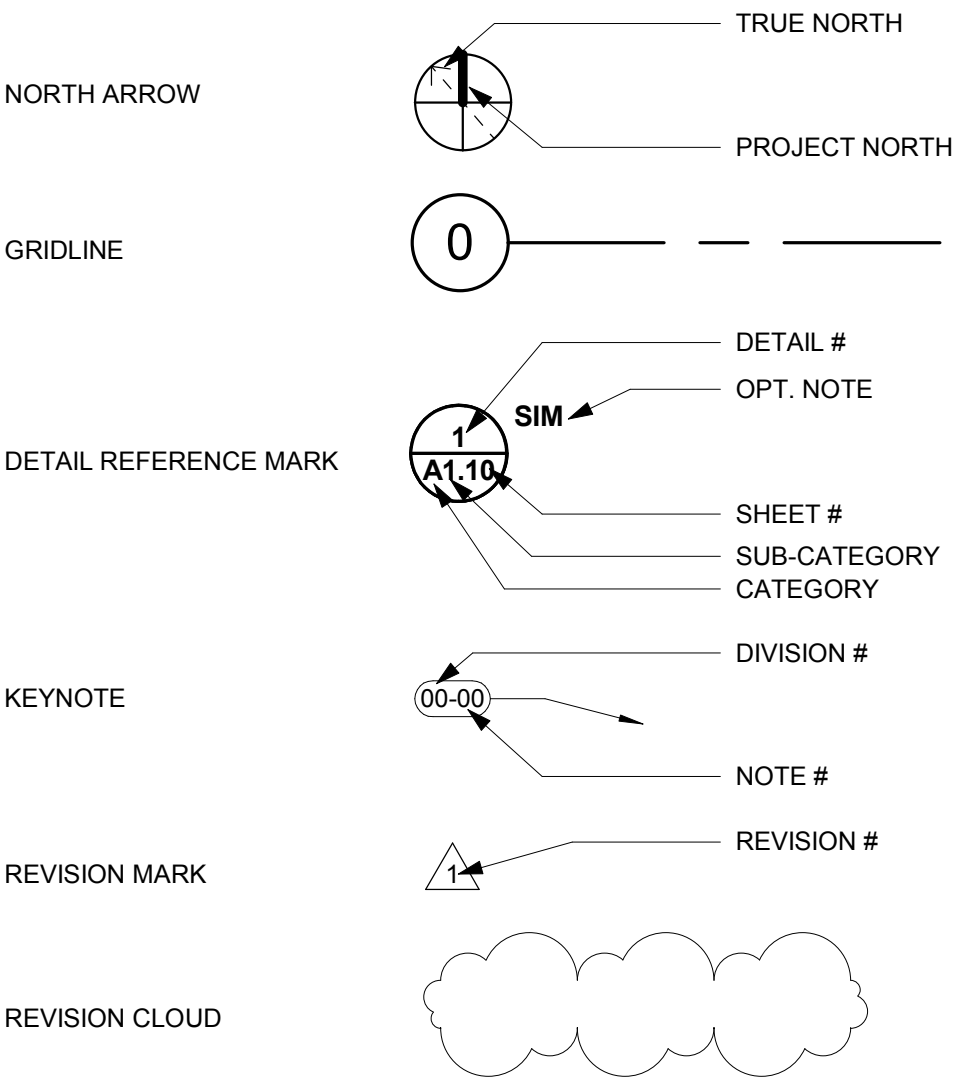
CHAPTER 5 GENERAL BUILDING HEIGHTS AND AREAS		
503	BUILDING AREA:	1,660 SF
504.2	BUILDING HEIGHT:	
	ALLOWED:	40'-0"
	PROVIDED:	13'-6"

CHAPTER 9 FIRE PROTECTION SYSTEMS
906.3.1 PORTABLE FIRE EXTINGUISHERS - CLASS A. MAXIMUM TRAVEL DISTANCE TO EXTINGUISHER SHALL BE 75'. PORTABLE FIRE EXTINGUISHER REQUIREMENTS SHALL BE DETERMINED BY THE FIRE DEPARTMENT IN ACCORDANCE WITH APPLICABLE CODES. ALL EXISTING FIRE EXTINGUISHERS ARE TO REMAIN AND BE RELOCATED AS REQUIRED.

CHAPTER 10 MEANS OF EGRESS		
1004	OCCUPANT LOAD	
	OCCUPANCY TYPE: E	
	GROUND FLOOR	
	AREA:	1,660 SF (1,482 SF NET)
	LOAD FACTOR:	20 NET
	BUILDING TOTAL:	75 OCCUPANTS
	OCCUPANCY TYPE AND LOAD UNALTERED, THEREFORE CHAPTER 34 APPLIES	
1021.2.4	NUMBER OF EXITS REQUIRED: 2 NUMBER OF EXITS PROVIDED: 2	
	MEANS OF EGRESS UNALTERED, THEREFORE CHAPTER 34 APPLIES	

CHAPTER 29 PLUMBING SYSTEMS		
TABLE 2902.1 MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES.		
	NUMBER OF REQUIRED WATER CLOSETS:	2
	NUMBER OF REQUIRED LAVATORIES:	2
	NUMBER OF REQUIRED WATER FOUNTAINS:	1
	NUMBER OF WATER CLOSETS PROVIDED:	2
	NUMBER OF LAVATORIES PROVIDED:	2
	NUMBER OF WATER FOUNTAINS PROVIDED:	2
	OCCUPANCY TYPE AND LOAD UNALTERED, THEREFORE CHAPTER 34 APPLIES	

SYMBOLS AND REFERENCES



PROJECT GENERAL NOTES

- THE DRAWINGS LOCATE PRODUCTS, SURFACES, AND MATERIALS AND THE NOTES CONVEY DESIGN INTENT. THE PROJECT INTENT IS TO PROVIDE FOR A COMPLETE, WORKING SYSTEM.
- ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE LATEST ADOPTED BUILDING CODE EDITION, AND TO CONDITIONS AND SPECIFICATIONS OF ALL GOVERNING AUTHORITIES.
- VERIFY AND CONFIRM ALL CONDITIONS, DIMENSIONS, AND LAYOUT INFORMATION PRIOR TO START OF CONSTRUCTION. NOTIFY MACKENZIE OF ANY DISCREPANCIES PRIOR TO START OF WORK. ANY CORRECTION WORK REQUIRED AS A RESULT OF NOT REPORTING SUCH DISCREPANCIES SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR AND SUBCONTRACTORS SHALL CAREFULLY EXAMINE THE SITE AND THE CONSTRUCTION DOCUMENTS OF THE ENTIRE WORK. INCONSISTENCIES IN THE PLANS OR SPECIFICATIONS SHALL BE CALLED TO THE ATTENTION OF MACKENZIE.
- REFER TO ENLARGED PLANS AND ELEVATIONS WHERE INDICATED FOR ADDITIONAL INFORMATION. ENLARGED PLANS TAKE PRECEDENCE OVER PLANS OF SMALLER SCALE, AND DETAILS TAKE PRECEDENCE OVER PLANS. IN THE CASE OF A CONFLICT, THE HIGHEST COST OPTION SHOULD BE PRICED.
- DETAIL REFERENCES SHALL BE APPLIED TO ALL INSTANCES WHERE THE SAME CONDITIONS OCCUR, UNLESS NOTED OTHERWISE.
- THE TERMS 'ABOVE FINISH FLOOR' (AFF) AND 'FINISH FLOOR ELEVATION' (FFE) REFER TO FINAL FINISHED FLOOR ELEVATION, WHETHER BUILT-UP SLAB, COMPOSITE DECK, OR RASED ACCESS FLOOR.
- DO NOT SCALE DRAWINGS.
- CUTTING AND DRILLING OF STRUCTURAL MEMBERS NOT DETAILED REQUIRES THE WRITTEN PERMISSION OF THE STRUCTURAL ENGINEER OF RECORD.
- FINISH FLOOR ELEVATION OF 0'-0" = 126.26' AS INDICATED ON CIVIL DRAWINGS.
- SAVE AND RECYCLE DEMOLITION DEBRIS AS APPLICABLE. ALL DEMOLISHED OR REMOVED EXISTING MATERIAL SHALL BE LEGALLY DISPOSED. COORDINATE WITH CITY OF PORTLAND REQUIREMENTS FOR RECYCLING/RE-USE OF DEMOLITION DEBRIS.
- THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE RESULTING FROM THEIR WORK. THE CONTRACTOR WILL COORDINATE CLEAN UP OF ALL AREAS AFFECTED BY DUST OR ANY MATERIALS, BOTH DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT, INCLUDING THE INSIDE OF ALL WINDOWS AS NECESSARY SO THAT THE SPACE IS READY FOR OCCUPANCY BY TENANT.
- ALL DESIGN-BUILD ITEMS, SYSTEMS, AND ELEMENTS ARE TO BE SUBMITTED FOR REVIEW AND APPROVED BY MACKENZIE.
- EXISTING MATERIAL NOTED TO BE RETURNED TO THE OWNER SHALL BE SAFELY STORED AND PROTECTED UNTIL IT IS REMOVED FROM THE SITE BY THE OWNER.



Architecture • Interiors
Planning • Engineering

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Revision Schedule	
Revision Delta	Issue Date

SHEET TITLE:
PROJECT
GENERAL
NOTES,
SYMBOBS,
AND
ABBREVIATIONS

1

DRAWN BY: QNR, MHB

CHECKED BY: CCB

SHEET

G0.02A

JOB NO. 2170276.00

PERMIT/BID SET 4/24/18

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GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND THE REQUIREMENTS OF CITY OF PORTLAND, PORTLAND PUBLIC SCHOOLS AND THE CURRENT AMERICAN PUBLIC WORKS ASSOCIATION STANDARDS FOR PUBLIC WORKS CONSTRUCTION.
2. THE WORKING DRAWINGS ARE GENERALLY DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND OR ELBOW REQUIRED FOR INSTALLATION IN THE SPACE PROVIDED. THEY DO NOT SHOW EVERY DIMENSION, COMPONENT PIECE, SECTION, JOINT OR FITTING REQUIRED TO COMPLETE THE PROJECT. ALL LOCATIONS FOR WORK SHALL BE CHECKED AND COORDINATED WITH EXISTING CONDITIONS IN THE FIELD BEFORE BEGINNING CONSTRUCTION. EXISTING UNDERGROUND UTILITIES LAYING WITHIN THE LIMITS OF EXCAVATION SHALL BE VERIFIED AS TO CONDITION, SIZE AND LOCATION BY UNCOVERING, PROVIDING SUCH IS PERMITTED BY LOCAL PUBLIC AUTHORITIES WITH JURISDICTION, BEFORE BEGINNING CONSTRUCTION. CONTRACTOR TO NOTIFY ENGINEER IF THERE ARE ANY DISCREPANCIES.
3. THE SURVEY INFORMATION SHOWN AS A BACKGROUND SCREEN IS BASED ON A SURVEY BY OTHERS AND IS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS WITH HIS OWN RESOURCES PRIOR TO START OF ANY CONSTRUCTION.
4. CONTRACTOR MUST COMPLY WITH O.R.S. 757.541 THROUGH 757.571 AND SHALL NOTIFY ALL UTILITY COMPANIES FOR LINE LOCATIONS SEVENTY-TWO (72) HOURS (MINIMUM) PRIOR TO START OF WORK. DAMAGE TO UTILITIES SHALL BE CORRECTED AT THE CONTRACTOR’S EXPENSE. (ONE CALL LOCATE UTILITY NOTIFICATION CENTER – PORTLAND METRO AREA 246-6699, OREGON 696-4848, ALL OTHER AREAS 1-800-332-2344).
5. CONTRACTOR SHALL ADJUST ALL STRUCTURES IMPACTED BY CONSTRUCTION IMPROVEMENTS TO NEW FINISH GRADES.
6. REQUEST BY THE CONTRACTOR FOR CHANGES TO THE PLANS MUST BE APPROVED BY THE ENGINEER.













UTILITY NOTES

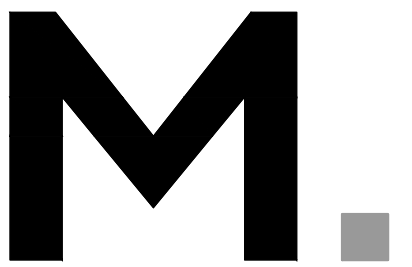
1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF LOCAL AGENCY AND THE CURRENT EDITION OF THE UNIFORM PLUMBING CODE, AND PORTLAND PUBLIC SCHOOL DESIGN STANDARDS, AND THE INTERNATIONAL BUILDING CODE. ALL WORK WITHIN THE PUBLIC R.O.W. REQUIRES A PUBLIC WORKS PERMIT.
2. PROVIDE CLEANOUTS AS REQUIRED IN THE CURRENT UNIFORM PLUMBING CODE CHAPTER 7, SECTIONS 707 AND 719, AND CHAPTER 11, SECTION 1101.12. NOTE: NOT ALL REQUIRED CLEANOUTS ARE SHOWN ON THE PLANS.
3. ALL STORM PIPING IS SIZED FOR A MANNING’S “N” VALUE = 0.013 ALL STORM PIPING IS DESIGNED USING CONCENTRIC PIPE TO PIPE AND WYE FITTINGS, UNLESS OTHERWISE NOTED.
4. ALL DOWNSPOUT LEADERS TO BE 6” AT 2.0% MIN. UNLESS NOTED OTHERWISE.
5. VERIFY LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES BY POTHOLING PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF DISCREPANCIES.
6. PROVIDE 2” PVC DRAIN LINE FROM DOMESTIC WATER METER VAULT AND BACKFLOW PREVENTER VAULT TO THE DOUBLE DETECTOR CHECK VALVE (FIRE) VAULT. PROVIDE 1/3 HP SUMP PUMP AT BASE OF FIRE VAULT AND INSTALL 2” PVC DRAIN LINE WITH BACKFLOW VALVE FROM SUMP PUMP TO DAYLIGHT AT NEAREST CURB. FURNISH ¾” DIAMETER CONDUIT FROM BUILDING ELECTRICAL ROOM TO FIRE VAULT FOR SUMP PUMP ELECTRICAL SERVICE. NOTE: COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR FLOW SENSOR INSTALLATION AND CONDUIT REQUIREMENTS.
7. SEE BUILDING PLUMBING DRAWINGS FOR PIPING WITHIN THE BUILDING AND UP TO 5’ OUTSIDE THE BUILDING, INCLUDING ANY FOUNDATION DRAINAGE PIPING.
8. CONTRACTOR TO MAINTAIN MINIMUM 3 FT OF COVER OVER ALL WATER LINES.
9. WHERE CONNECTING TO AN EXISTING PIPE, AND PRIOR TO ORDERING MATERIALS, THE CONTRACTOR SHALL EXPOSE THE END OF THE EXISTING PIPE VERIFY THE LOCATION, SIZE, AND ELEVATION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
10. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN A SPRINKER/UNDERGROUND PERMIT TO INSTALL THE ONSITE FIRE LINES AND HYDRANTS. THIS MUST BE OBTAINED FROM THE FIRE PREVENTION DIVISION OF PORTLAND FIRE AND RESCUE. THE CONTRACTOR SHOULD BE AWARE THAT THIS PERMIT COULD TAKE UP TO 2 WEEKS TO OBTAIN.

EROSION CONTROL NOTES

1. HOLD A PRE-CONSTRUCTION MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE INSPECTOR TO DISCUSS EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION LIMITS.
2. EROSION AND SEDIMENT CONTROL MEASURES INCLUDING PERIMETER SEDIMENT CONTROL MUST BE IN PLACE BEFORE VEGETATION IS DISTURBED AND MUST REMAIN IN PLACE AND BE MAINTAINED, REPAIRED, AND PROMPTLY IMPLEMENTED FOLLOWING PROCEDURES ESTABLISHED FOR THE DURATION OF CONSTRUCTION, INCLUDING PROTECTION FOR ACTIVE STORM DRAIN INLETS AND CATCH BASINS AND APPROPRIATE NON-STORMWATER POLLUTION CONTROLS.
3. THE EROSION CONTROL DRAWING IS FOR GENERAL GUIDANCE ONLY. THE CONTRACTOR SHALL MEET ALL CITY LOCAL AGENCY EROSION/SEDIMENT CONTROL REQUIREMENTS. ALL EROSION CONTROL MEASURES SHALL CONFORM TO THE AUTHORITY HAVING JURISDICTION REQUIREMENTS AND THE PLANS AND SPECIFICATIONS SPECIFIC TO THIS PROJECT.
4. CONSTRUCT EROSION CONTROL IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS. STAGE CONSTRUCTION TO INCLUDE INSTALLATION OF PERIMETER SEDIMENT FENCING AS REQUIRED.
5. METHOD OF INSTALLATION FOR SEDIMENT FENCE SHALL NOT CAUSE DAMAGE TO VEGETATED SLOPE EXCEPT AT POINT OF INSTALLATION. SIDECAST MATERIAL SHALL BE KEPT TO A MINIMUM AND SHALL BE TO THE UPHILL SIDE OF THE SEDIMENT FENCE. THE FENCE SHALL BE INSTALLED AT LEAST 4 FEET FROM ADJACENT TREES. ANY EXPOSED GROUND SHALL BE SEEDED AND COVERED WITH STRAW MULCH TO PREVENT EROSION. TEMPORARY GROUND COVER SHALL BE MAINTAINED UNTIL A HEALTHY STAND OF GRASS HAS BEEN ESTABLISHED. SEEDING SHALL BE WITH NATURAL SPECIES FOR THE AREA. SEE THE SPECIAL SPECIFICATIONS FOR PROPER SEED MIX.
6. ALL EROSION CONTROL DEVICES SHALL BE EXAMINED AND REPAIRED AFTER EACH STORM OCCURRENCE, AND INLETS SHALL BE CLEANED OF SEDIMENT WHENEVER NECESSARY.
7. HYDROSEED AND MULCH ALL DISTURBED AREAS UPON COMPLETION OF CONSTRUCTION OR AS DIRECTED BY THE INSPECTOR. THE CONTRACTOR SHALL LIMIT CONSTRUCTION TRAFFIC TO PAVED AREAS TO PREVENT AND MINIMIZE SEDIMENT TRACKING OFF-SITE. CONTRACTOR SHALL SWEEP OR VACUUM PAVED AREAS IF SEDIMENT ACCUMULATION OCCURS. DO NOT TRACK SEDIMENT TO THE PUBLIC STREET.
8. THE CONTRACTOR SHALL LIMIT CONSTRUCTION TRAFFIC TO PAVED AREAS TO PREVENT AND MINIMIZE SEDIMENT TRACKING OFF-SITE. CONTRACTOR SHALL SWEEP OR VACUUM PAVED AREAS IF SEDIMENT ACCUMULATION OCCURS. DO NOT TRACK SEDIMENT TO THE PUBLIC STREET.
9. INSTALL TEMPORARY EROSION PREVENTION SUCH AS JUTE NETTING OR GEOTEXTILE ON DISTURBED AREAS STEEPER THAN 4H:1V.
10. STAGING AND STOCKPILE AREAS TO BE DETERMINED BY CONTRACTOR AND ADJUSTED TO ACCOMMODATE THE PROGRESS OF CONSTRUCTION

LEGEND

	EXISTING	PROPOSED
RIGHT-OF-WAY LINE	— — — — —	
BOUNDARY LINE	— — — — —	
CENTERLINE	— — — — —	
FENCE LINE	— ● — ● —	— ✕ — ✕ —
POWER LINE	— — — — — PWR	— · — · —
STORM SEWER LINE	— — — — — STM	— — — — —
SANITARY SEWER LINE	— — — — — SAN	— — — — —
FIRE WATER LINE	— — — — — WAT	— — — — —
DOMESTIC WATER LINE		— · — · — · —
WATER METER		
WATER VALVE		
STORM SEWER CATCH BASIN		
SANITARY SEWER CLEAN OUT		
STORM SEWER CLEAN OUT		
AREA DRAIN		
BASKETBALL HOOP		
PROPERTY CORNER MONUMENT		
TREES		
ABBREVIATIONS		
CITY OF PORTLAND	COP	
STANDARD	STD.	
EXISTING GRADE	EX	



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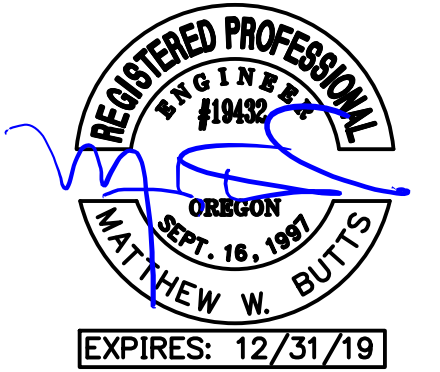
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PPS- CEASAR CHAVEZ SCHOOL MODULAR RELOCATION

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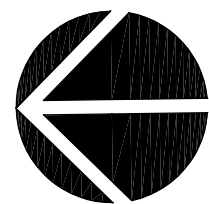
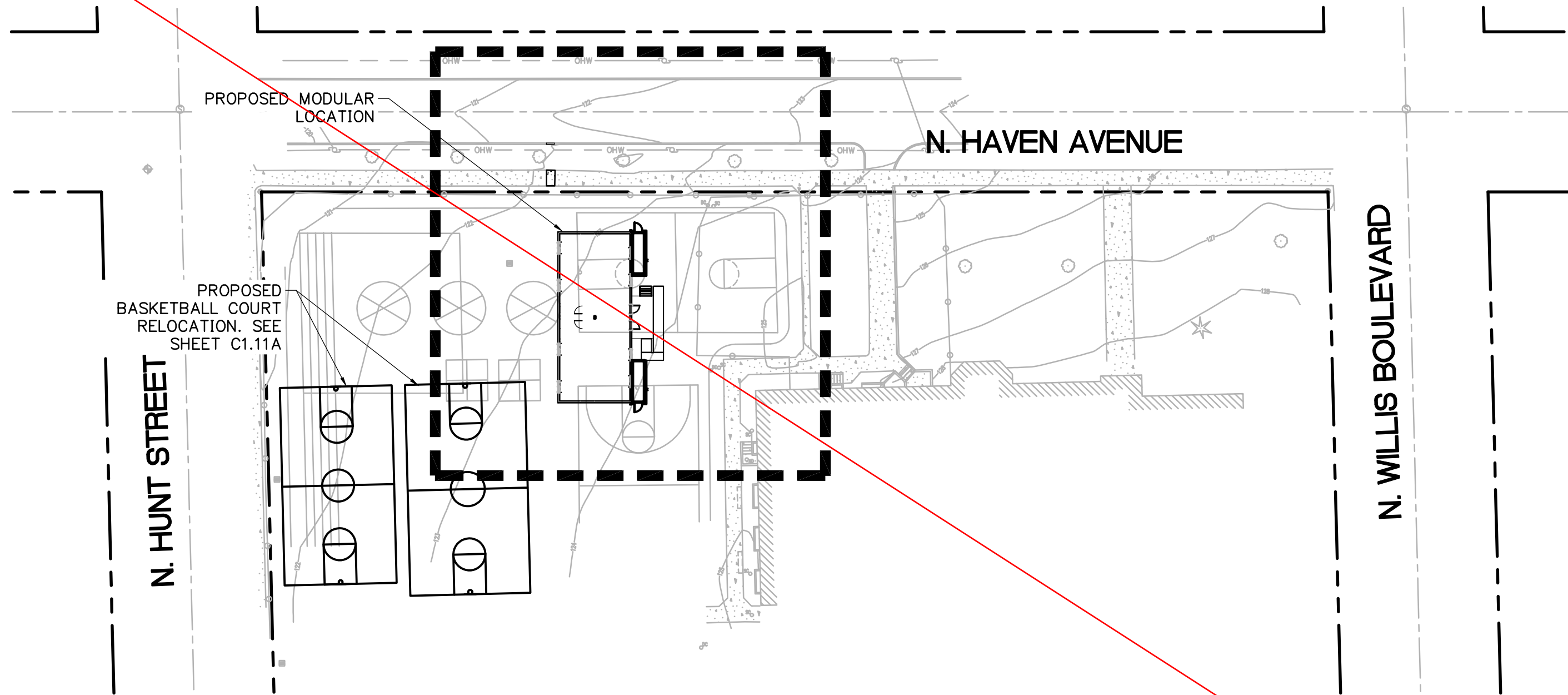
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CIVIL NOTES AND LEGEND

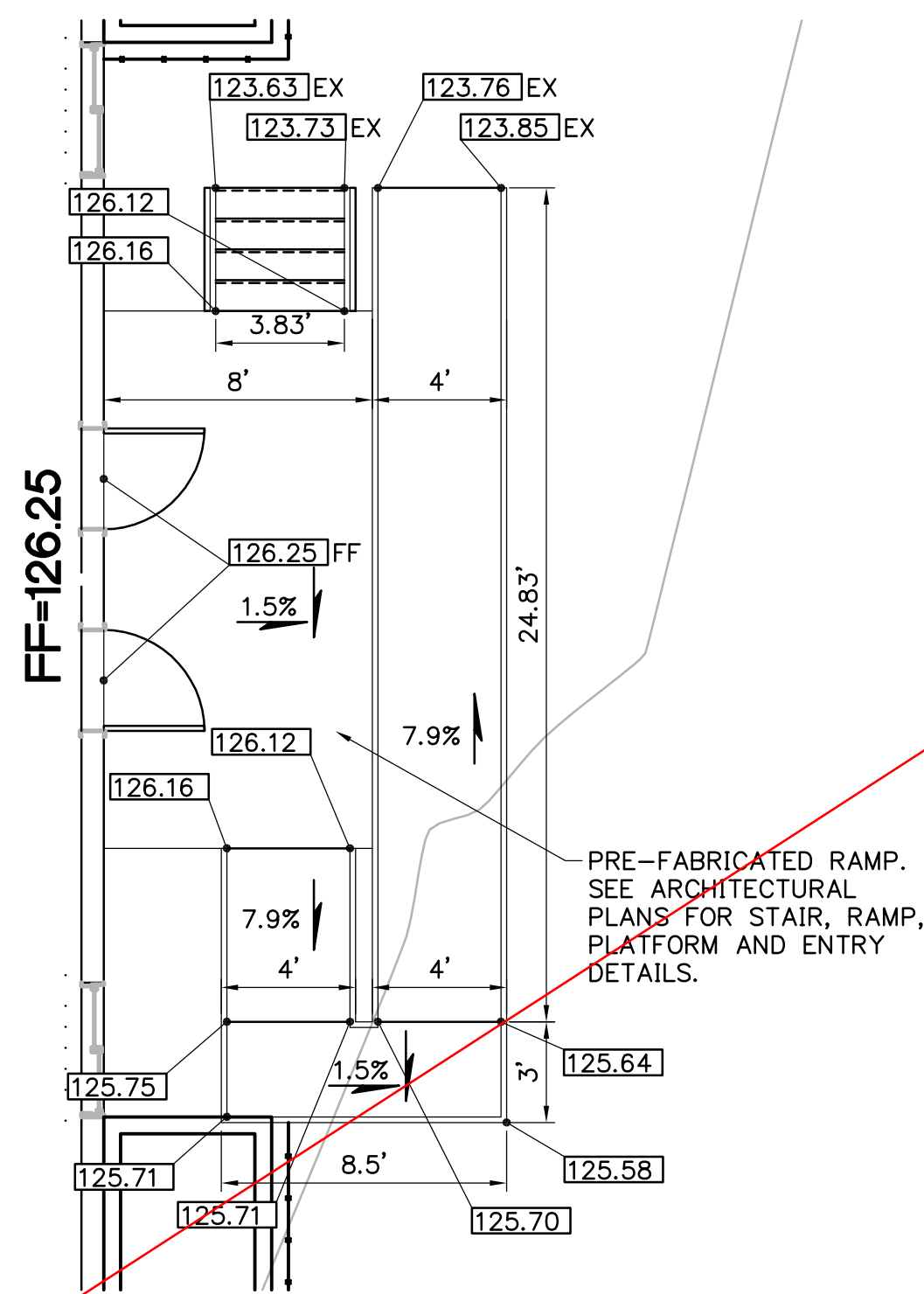
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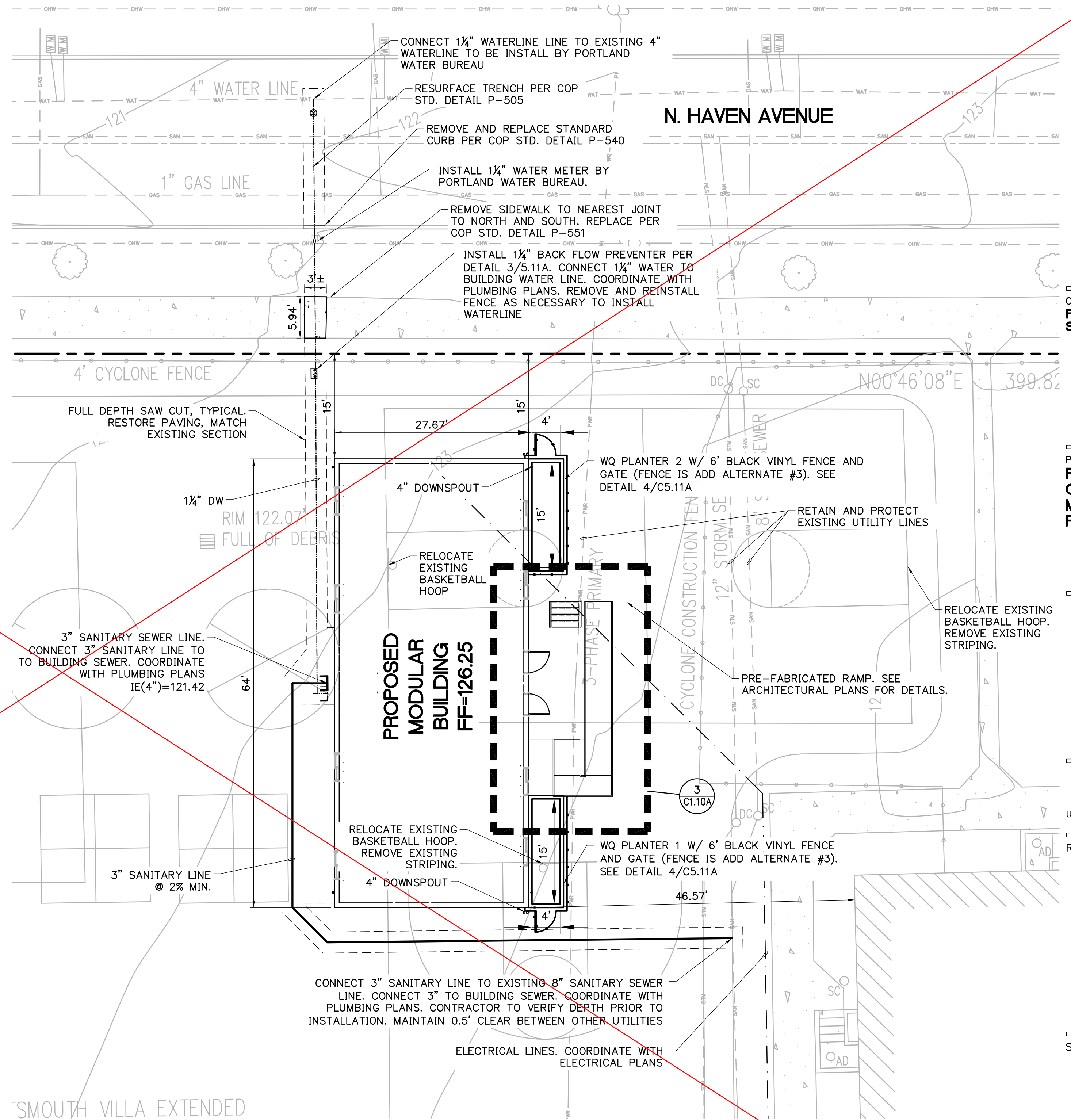
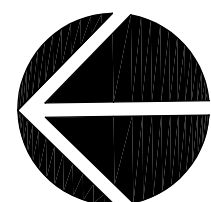
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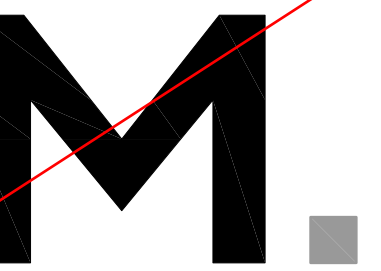
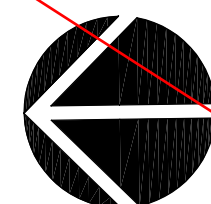
1 VICINITY MAP
C1.10A 1"=40'



3 RAMP ENLARGEMENT
C1.10A 1"=5'



2 SITE, GRADING AND UTILITY PLAN
C1.10A 1"=10'



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**SITE, GRADING,
+ UTILITY PLAN**

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C1.10A

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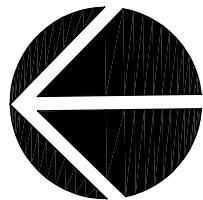
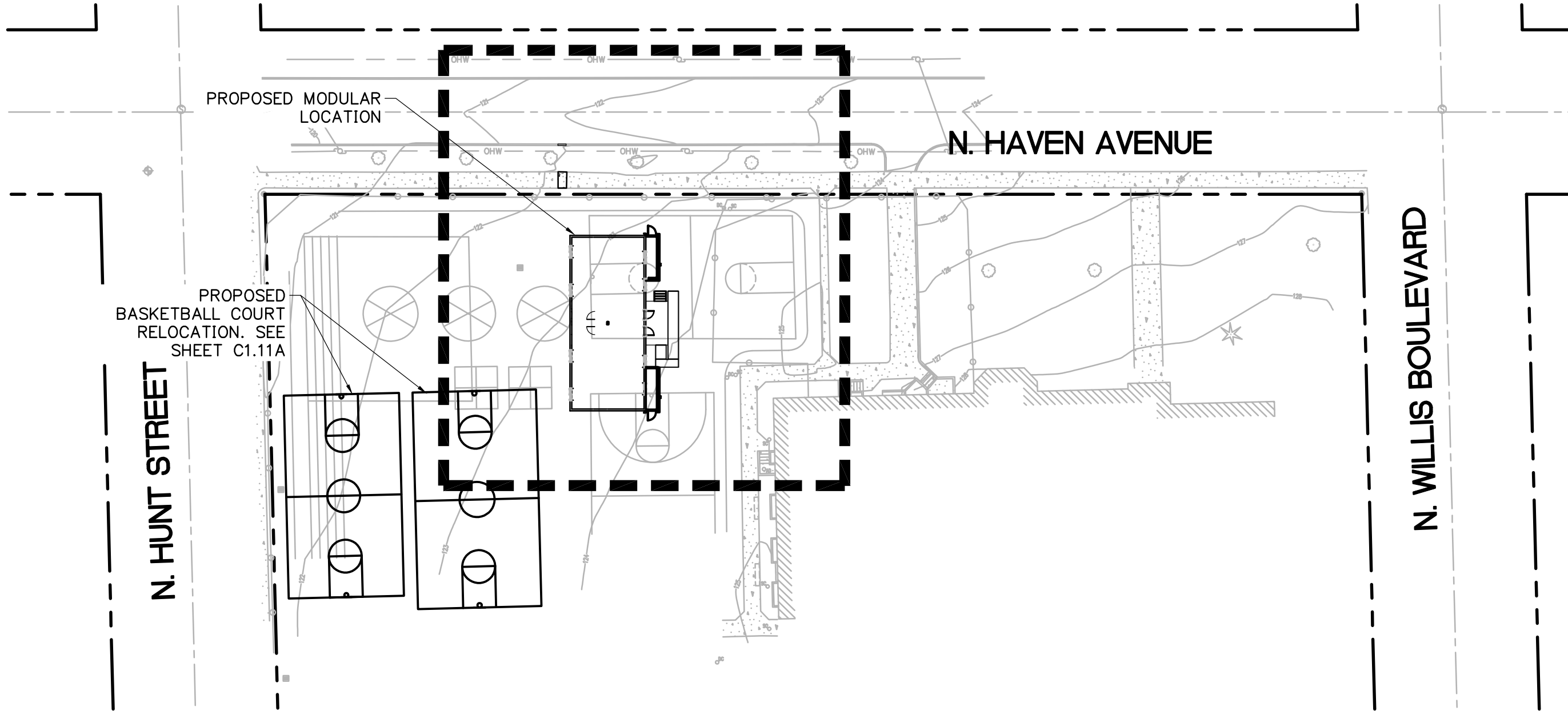
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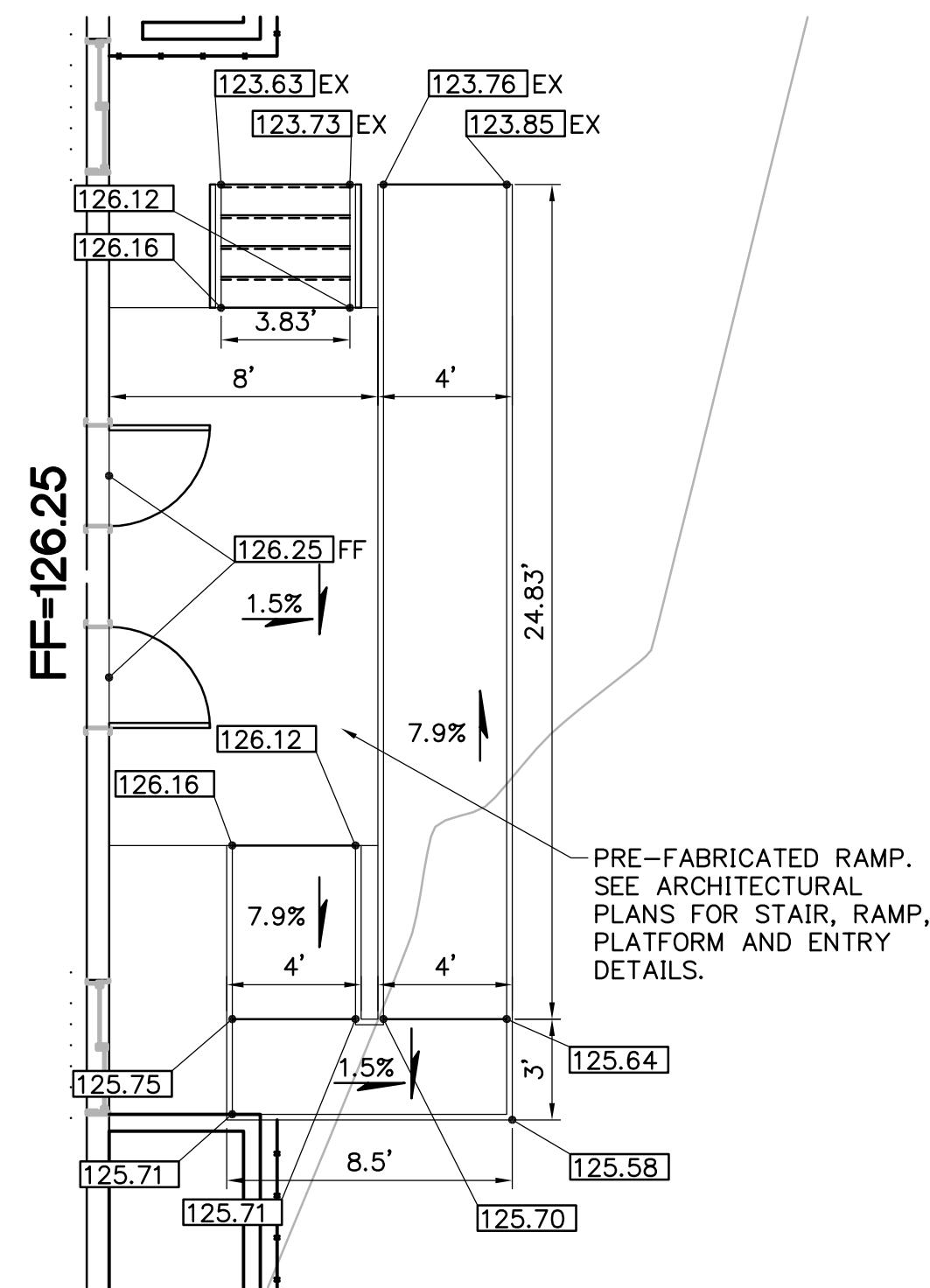
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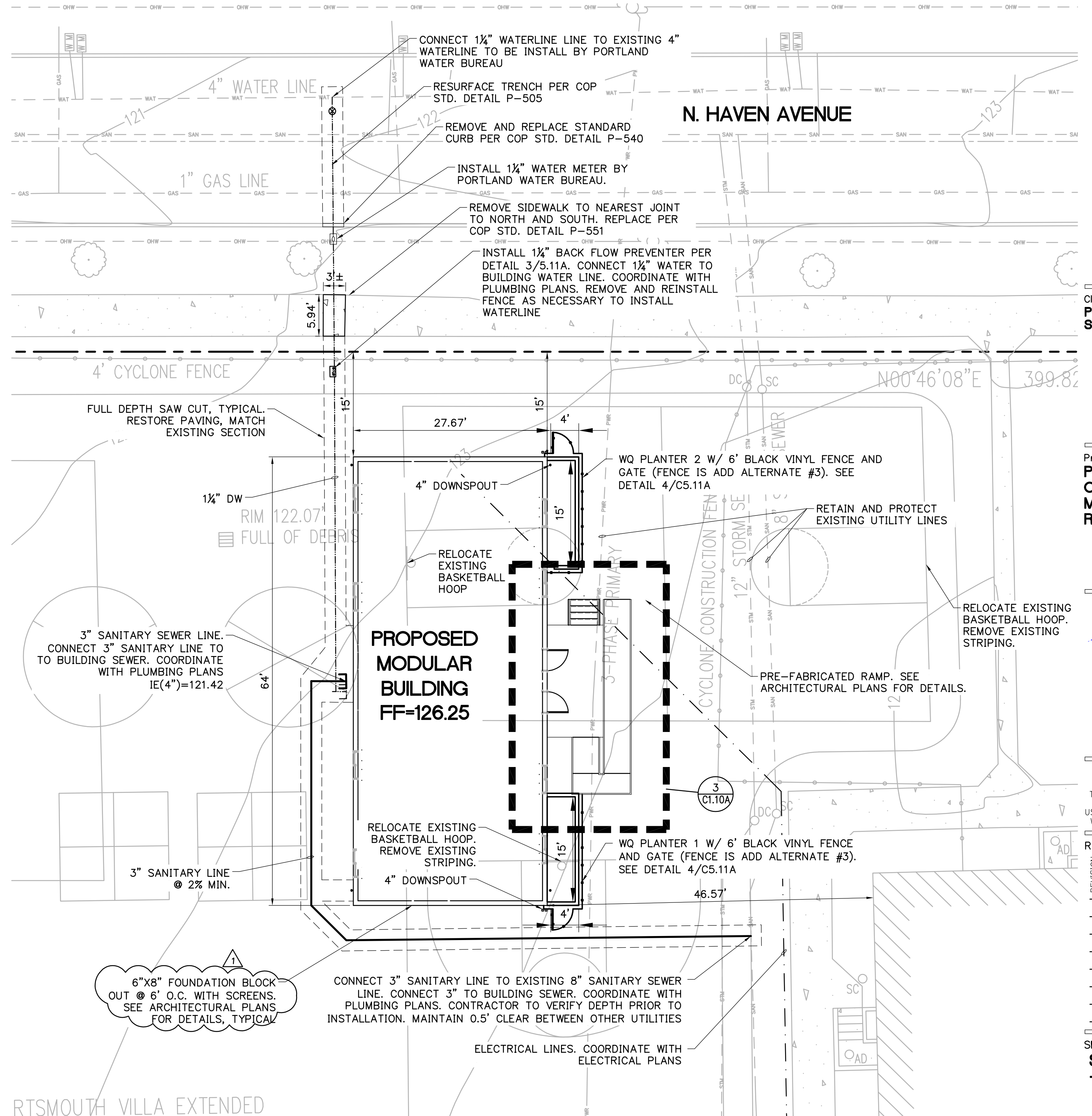
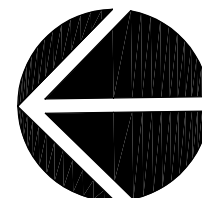
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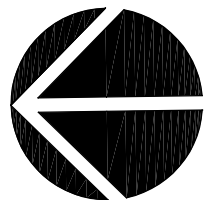
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C1.10A 1"=40'



3 RAMP ENLARGEMENT



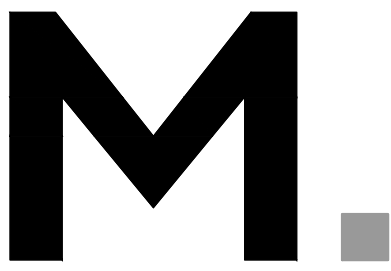
2 SITE, GRADING AND UTILITY PLAN



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ADDENDUM NO. 1 – 5/14/18
BID/PERMIT SET 4/9/2018

217027600\4_DRAWINGS\CIVIL\CESAR CHAVEZ\276-C1.10A.DWG BMR 05/09/18 15:46 1:20



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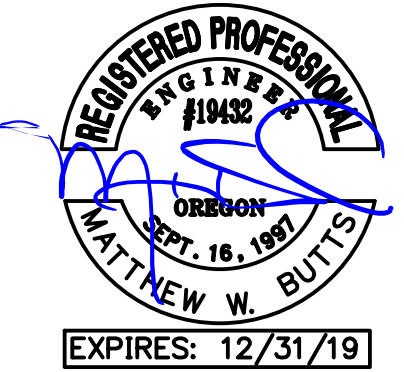
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SHEET TITLE:
**PLAYGROUND
RESTRIPING PLAN**

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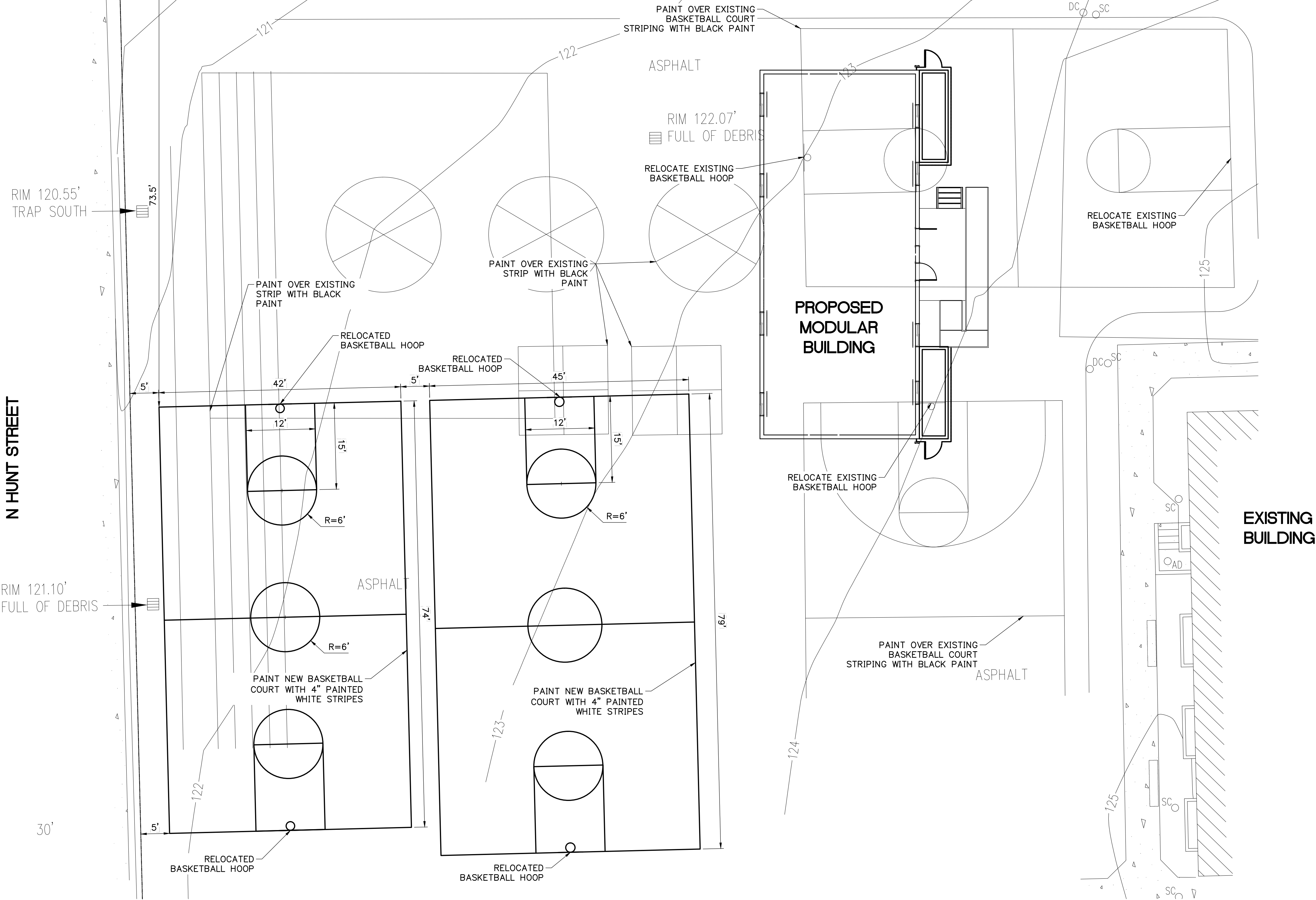
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JOB NO.
2170276.00

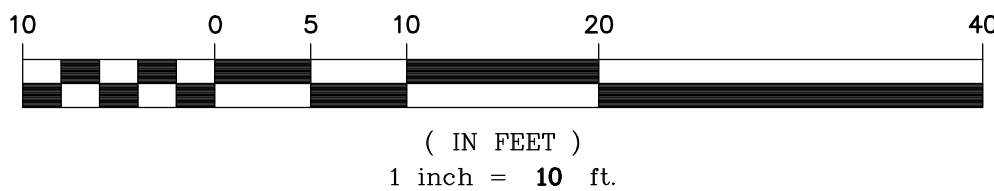
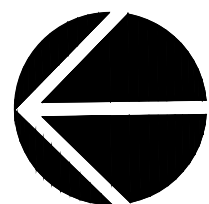
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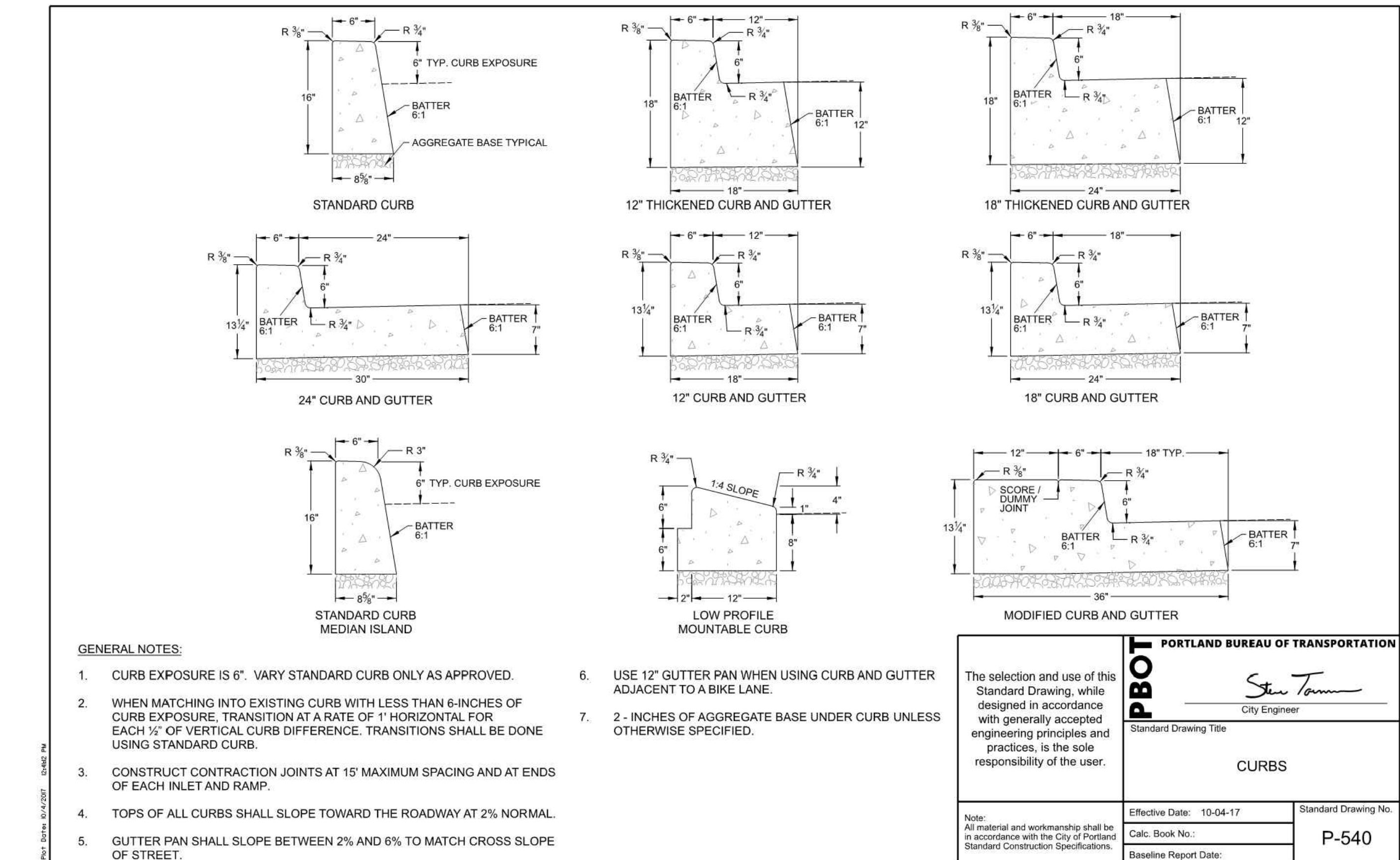
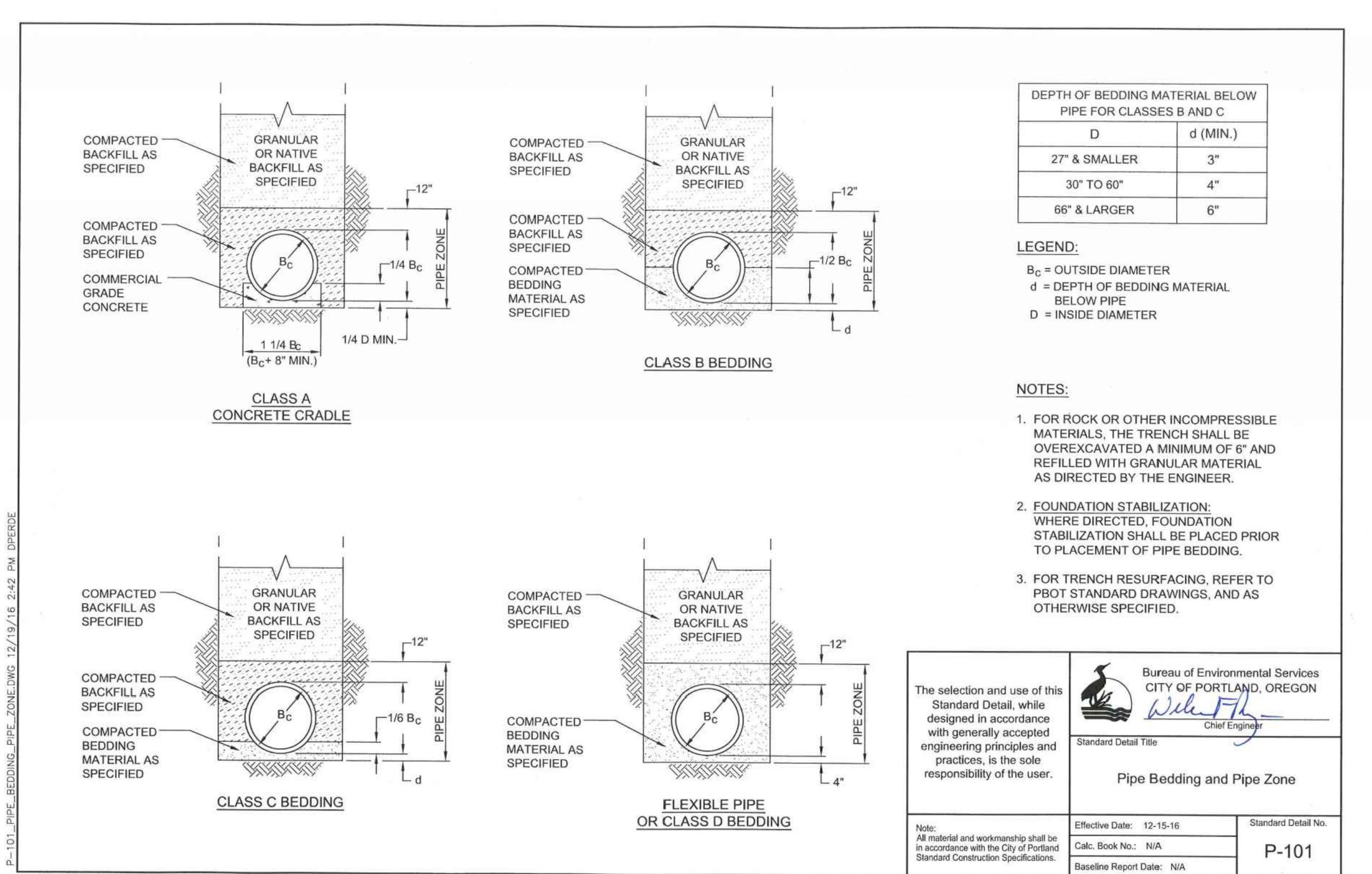
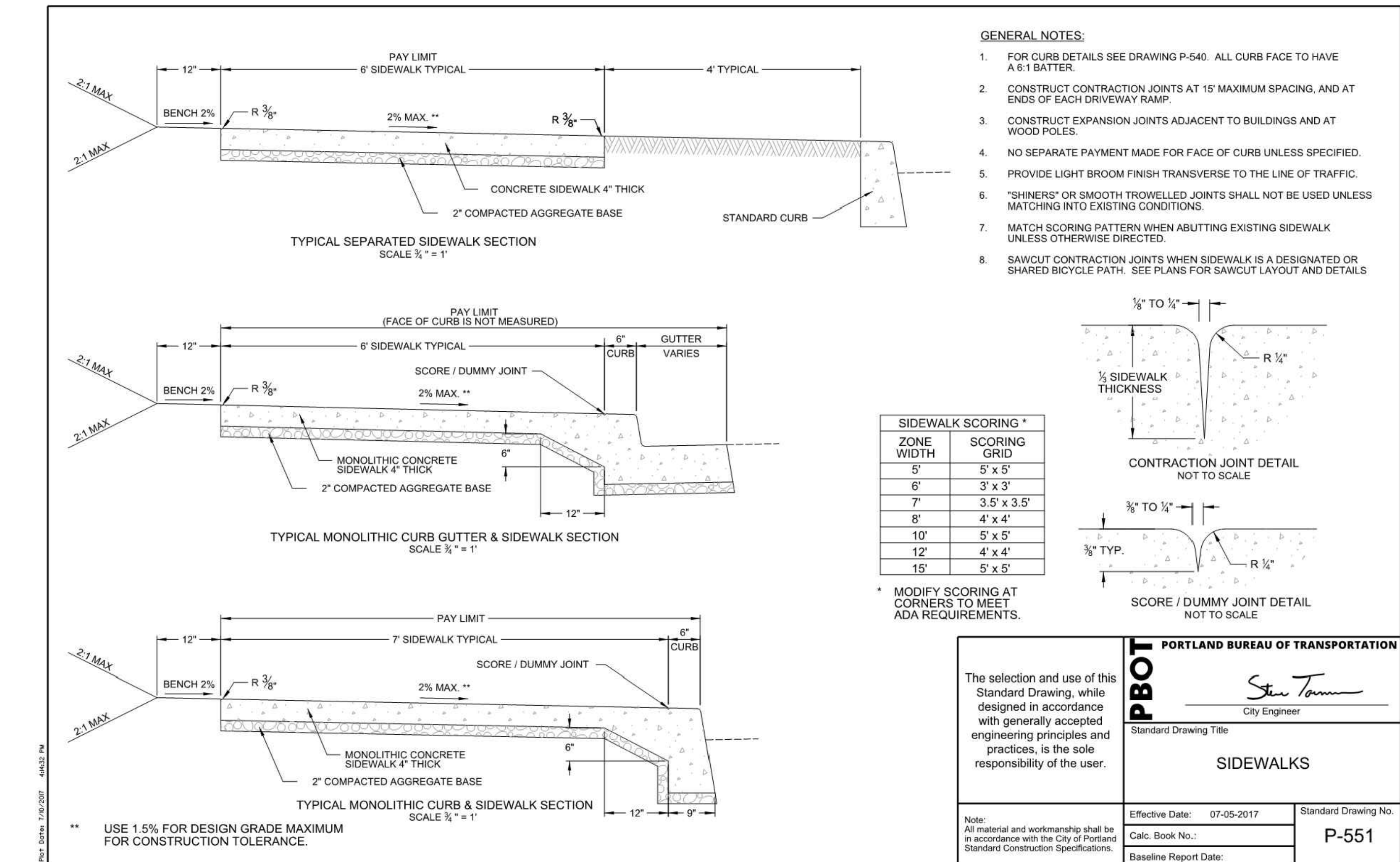
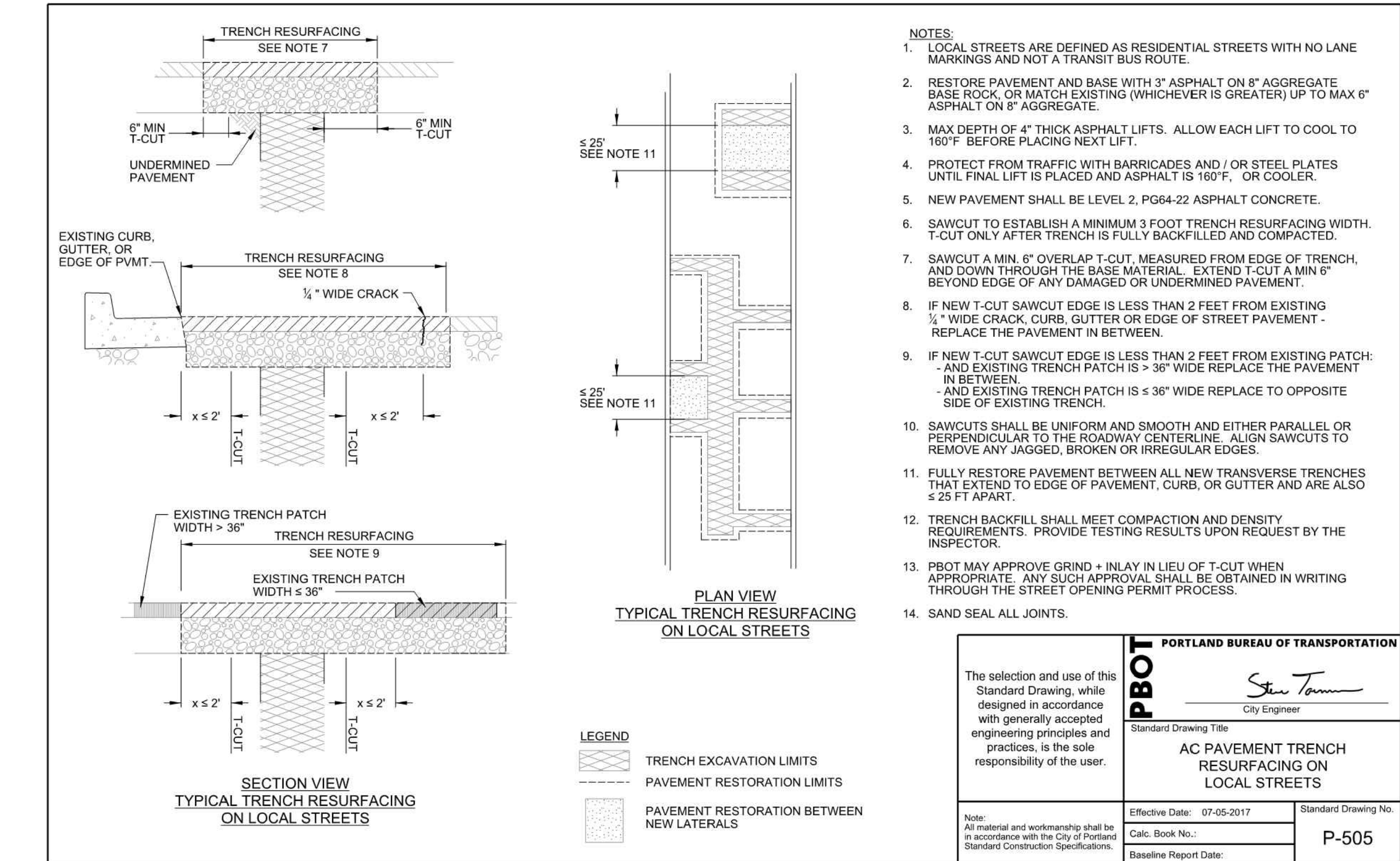
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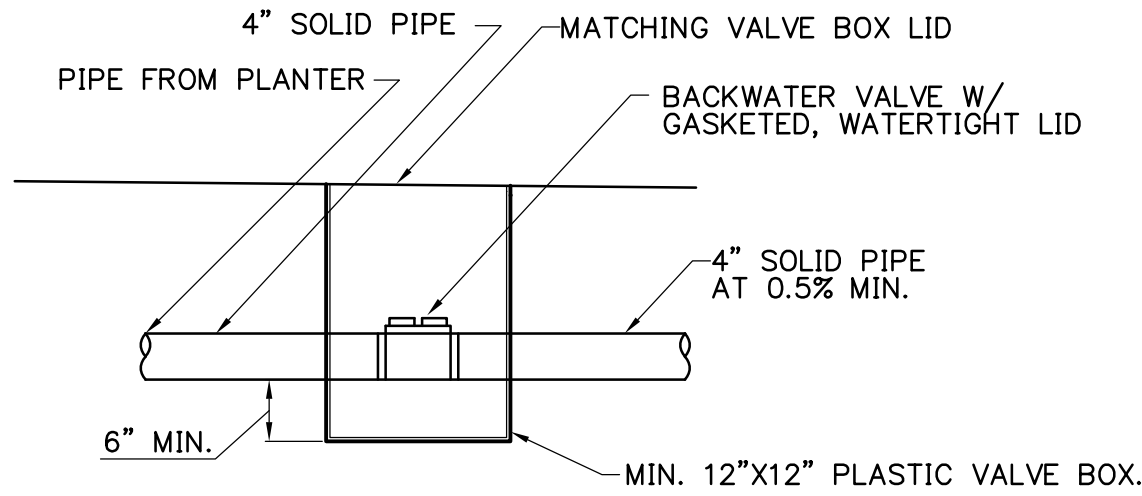
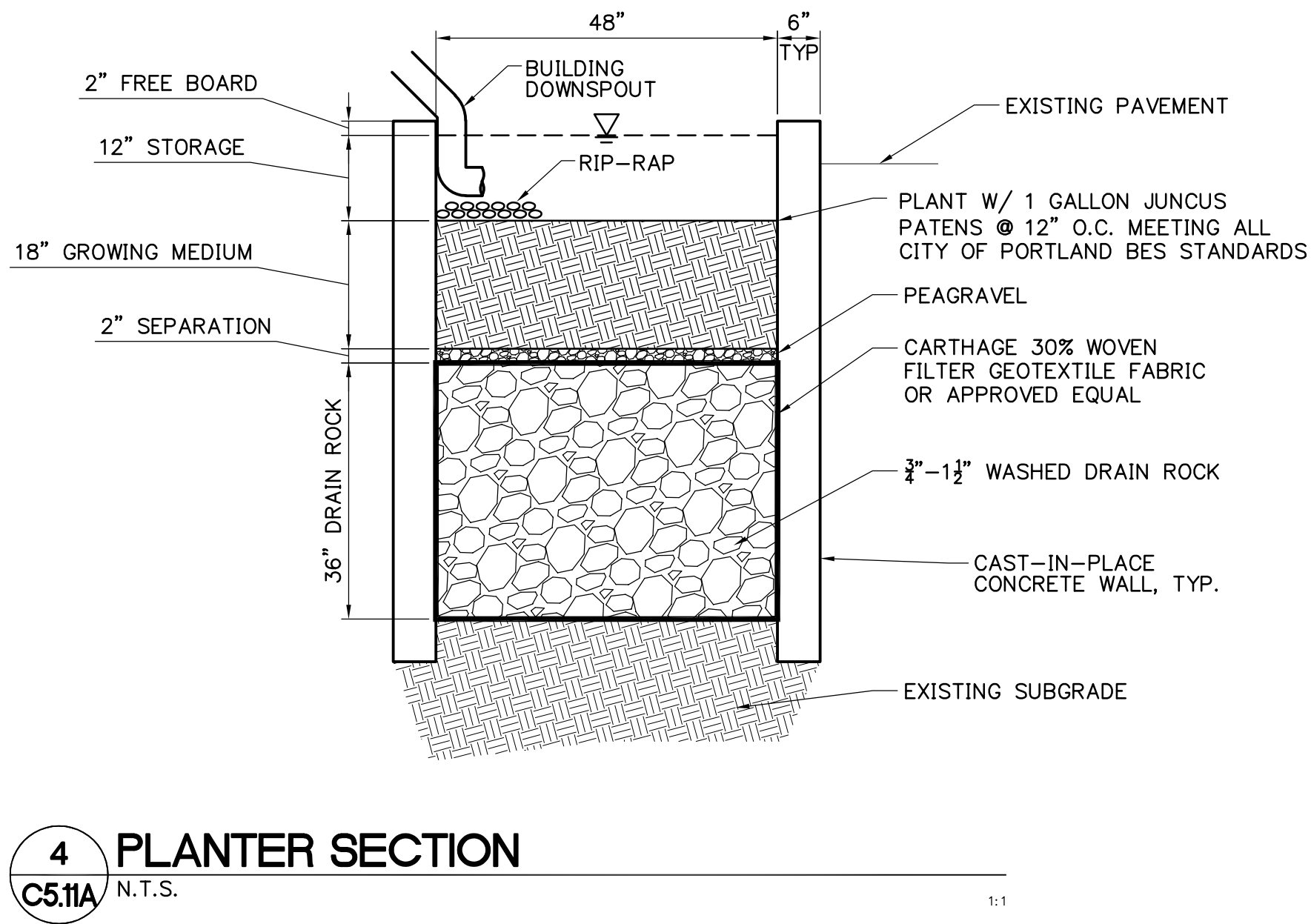
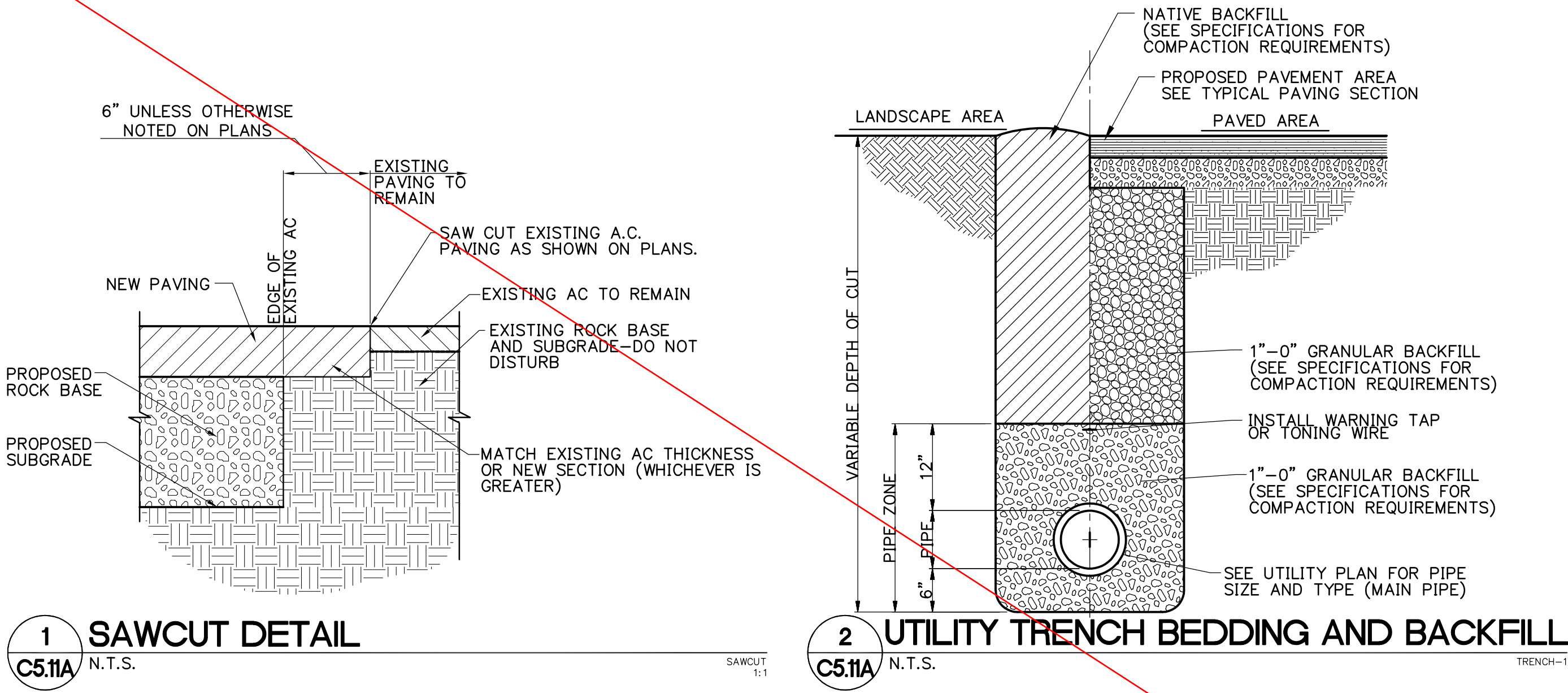
N HAVEN AVENUE



1
C1.11A **PLAYGROUND RESTRIPING**
SCALE: 1"=10'







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CIVIL DETAILS

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C5.11A
JOB NO. **2170276.00**

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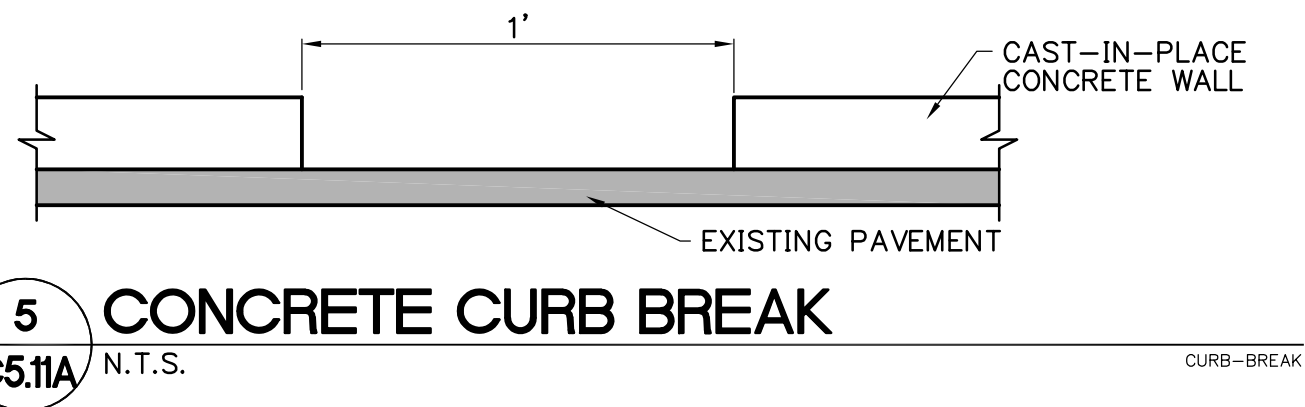
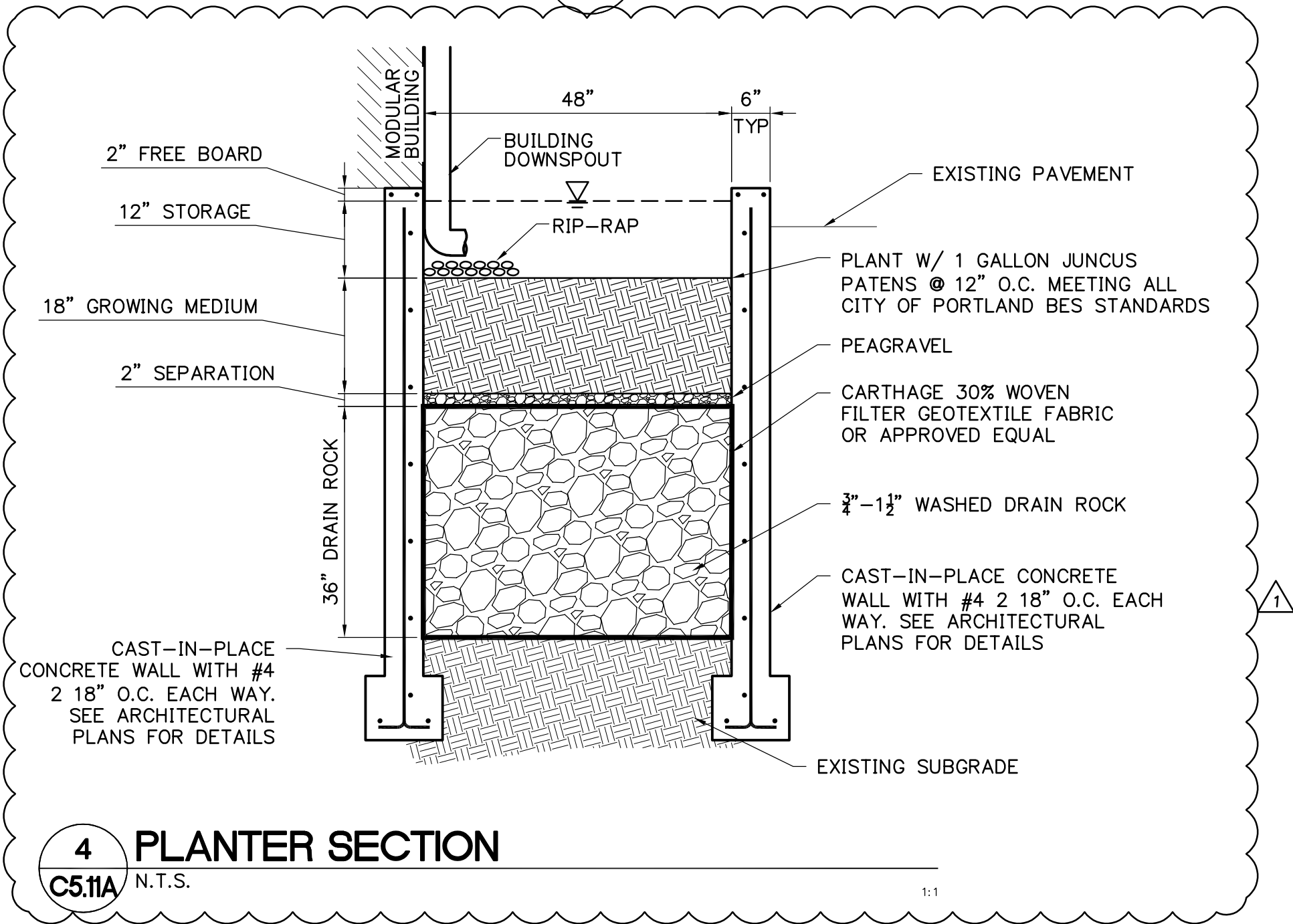
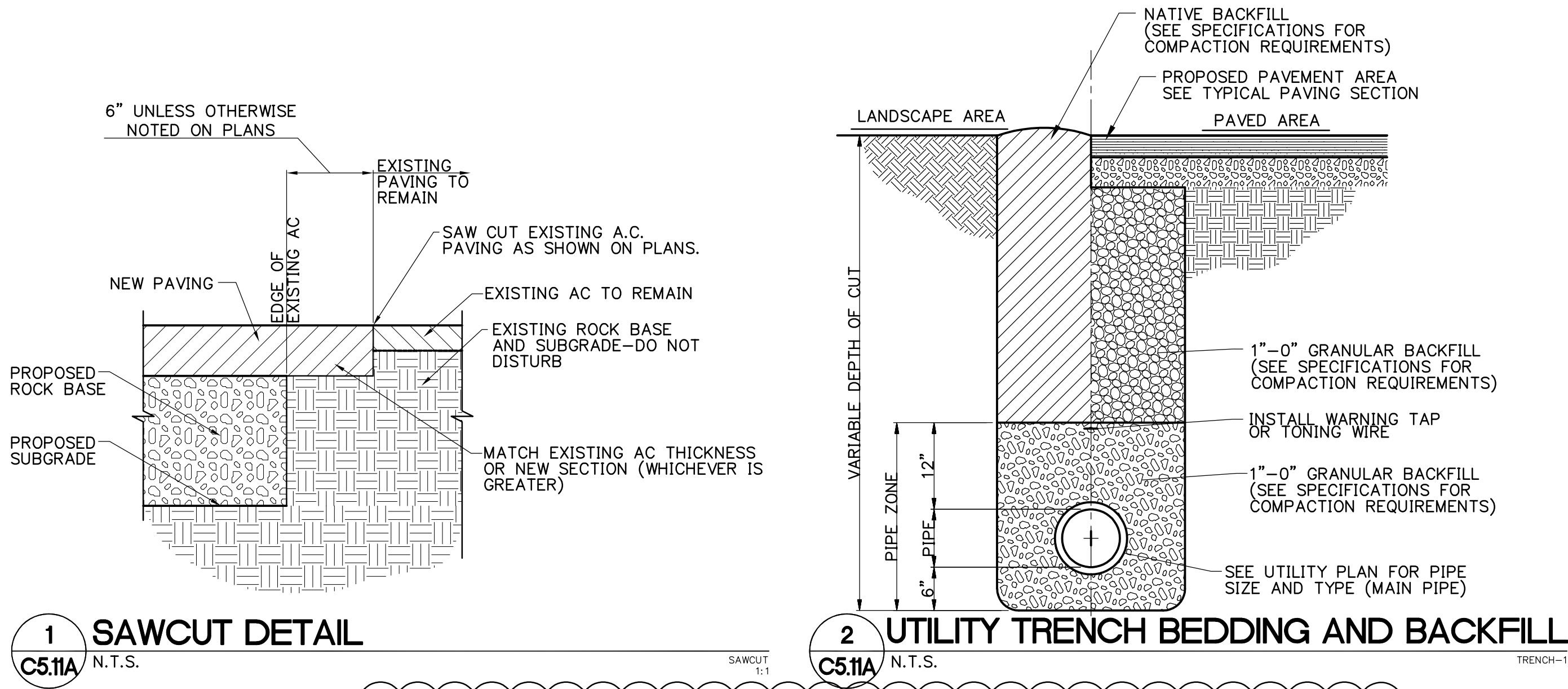
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- P1A :
• 5/8" GYP BD
• 4" WD STUDS
• SOUND ATTENUATION BATT INSULATION
• 5/8" GYP BD

- P1B:
• 5/8" GYP BD
• 6" WD STUDS
• SOUND ATTENUATION BATT INSULATION
• 5/8" GYP BD

- NOTES:
• ALL WALL EXTEND TO STRUCTURE U.N.O.
• PROVIDE ACOUSTICAL SEALANT AT BOTTOM AND TOP OF WALL THAT GO TO STRUCTURE.
• IN AREAS PRONE TO MOISTURE USE MOISTURE RESISTANT GYP BD.
• SEE STRUCTURAL DRAWINGS FOR EXACT STUD SIZE AND SPACING

- P2A :
• CERAMIC TILE ON ONE SIDE OR BOTH AS OCCURS
• 5/8" GYP BD OR GLASS MESH MORTAR UNITS AS OCCURS, BOTH SIDES
• 2x4 STUDS @ 24" ON EACH SIDE
• 3" SOUND ATTENUATION BATT INSUL
• PLUMBING CHASE BETWEEN STUDS
• 1" - 8" TOTAL ASSEMBLY FROM FINISH FACE TO FINISH FACE

- NOTE: - SEE PARTITION NOTES
- USE MOISTURE RESISTANT GYP BD

ARCHITECTURAL LEGEND

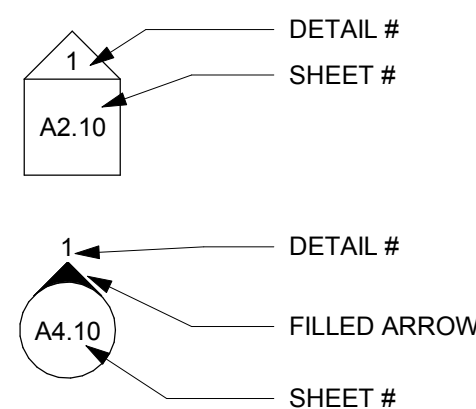
ANNOTATION SYMBOLS

ELEVATION KEY MARK

INTERIOR ELEVATION KEY MARK

ROOM/SPACE IDENTIFICATION

DOOR NUMBER SYMBOL

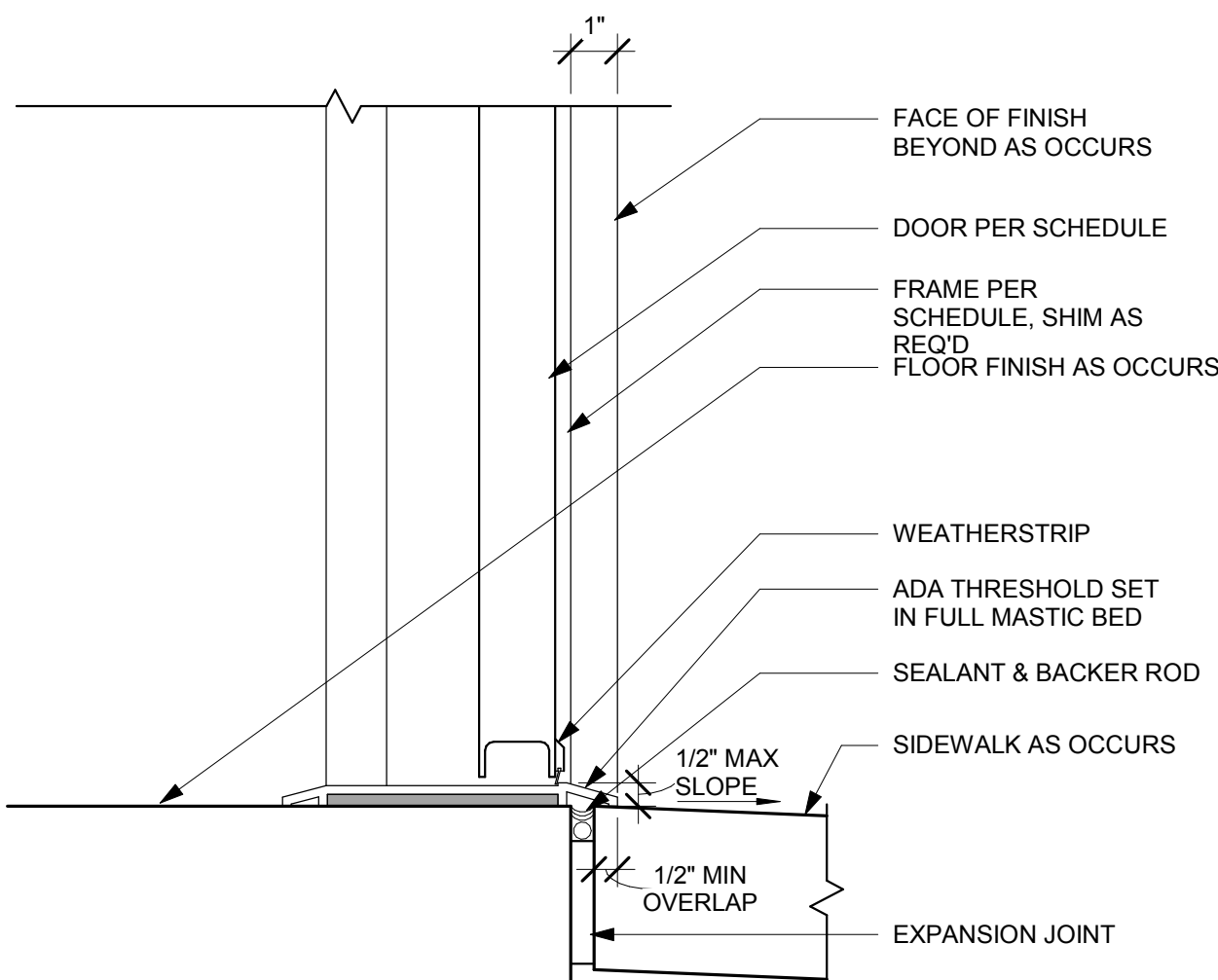


Room name ← SPACE NAME

← SPACE #

101

3 TYPICAL DOOR JAMB DETAIL (HEAD SIM)

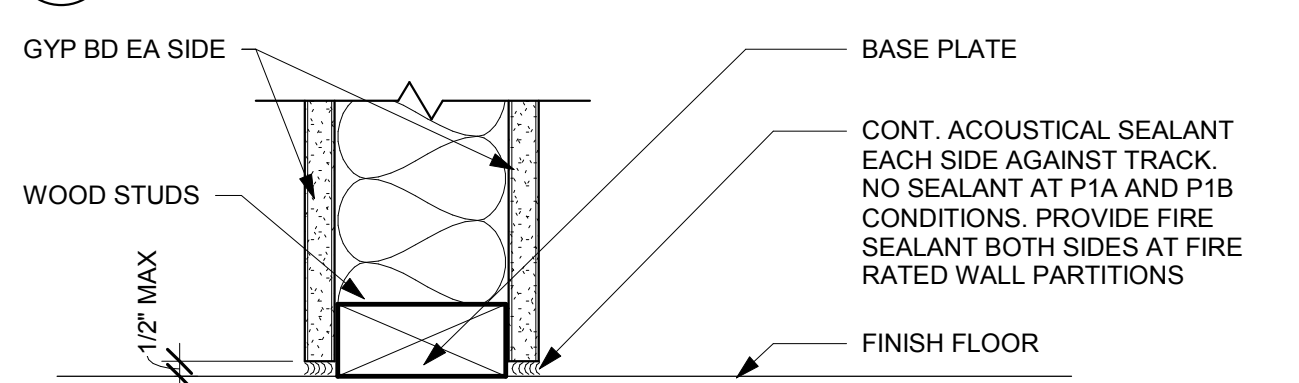


8 HOLLOW METAL DOOR SILL

3" = 1'-0"

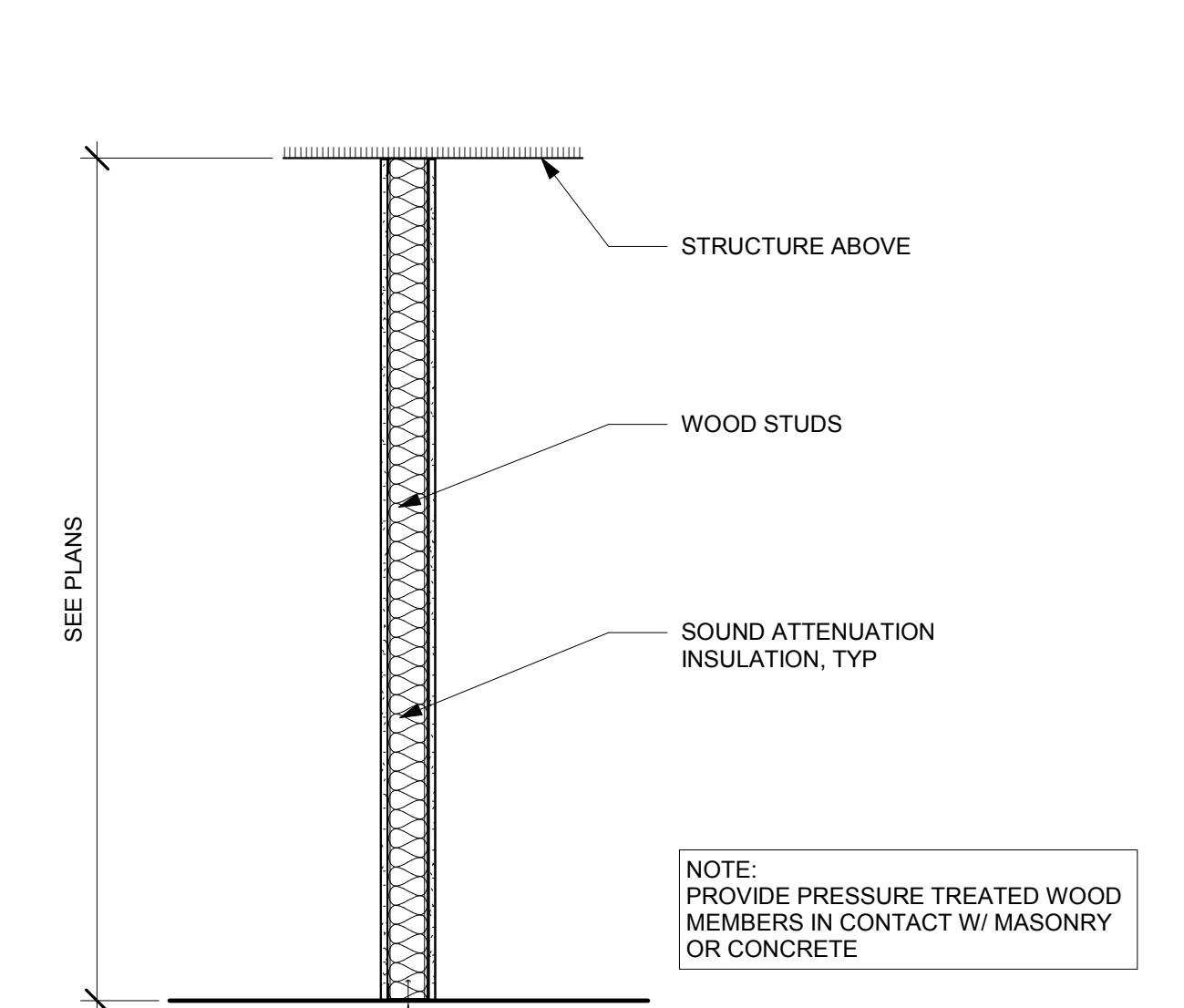
4A PARTITION HEAD

3" = 1'-0"



4B PARTITION BASE

3" = 1'-0"



9 TYPICAL INTERIOR PARTITION

3/4" = 1'-0"

DOOR SCHEDULE -- CHAVEZ													
Door	Door					Frame		Detail				Hdwr Group	Rating
	Width	Height	Thk	Typ e	Mat'l	Finish	Frame Style	Mat'l	Finish	Head	Jamb	Sill	
111A	3'-0"	7'-0"	1 3/4"	A (E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	H-1
112A	3'-0"	7'-0"	1 3/4"	B	SC	S	HM	STL	P	4/A0.01A	4/A0.01A	-/-	H-2
113A	3'-0"	7'-0"	1 3/4"	A (E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	H-1
114A	3'-0"	7'-0"	1 3/4"	B	SC	S	HM	STL	P	4/A0.01A	4/A0.01A	-/-	H-2

GENERAL NOTES

- A. ALL SIZES INDICATE ROUGH OPENING DIMENSIONS
B. FIELD VERIFY ALL DIMENSIONS.
C. SOLID GROUT ALL DOOR AND WINDOW MULLIONS AT EXTERIOR AND INTERIOR LOCATIONS.
D. ALL DOORS AND HARDWARE PER PPS STANDARDS.

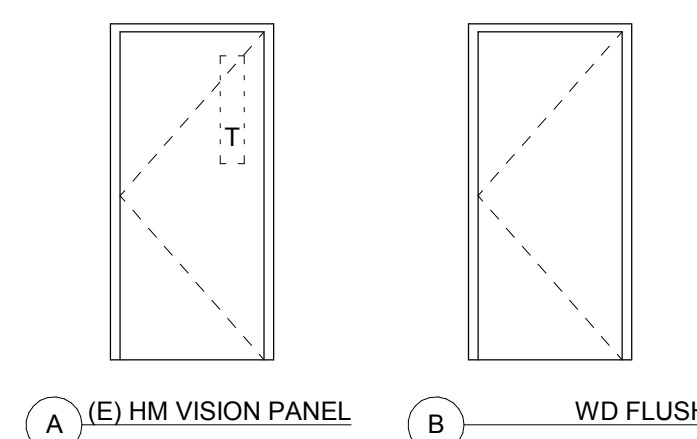
DOOR SCHEDULE ABBREVIATIONS

- AL ALUMINUM
FF FACTORY FINISH
GL GLASS
HDWR HARDWARE
HM HOLLOW METAL
MFR MANUFACTURER
OVD OVERHEAD
P PAINT
S STAIN
SF STOREFRONT
SC SOLID CORE
STL STEEL
T TEMPERED GLASS

PORTABLE BUILDING DOOR HARDWARE

DOORS	
EXTERIOR	TWO (2) (E) 36" X 84" X 1 3/4" GALVANIZED SEAMLESS STEEL DOOR; REPLACE WEATHER STRIP AS NEEDED; PROVIDE ANSI STANDARD ALUMINUM THRESHOLD, CLOSER, AND PANIC HARDWARE; PAINT
INTERIOR	TWO (2) 36" X 80" X 1 3/4" SOLID CORE, HARDWOOD FACE AND EDGES, CLEAR FINISH; PASSAGE LOCK SET, WALL STOP, CLOSER; HARDWOOD CASING WITH CLEAR FINISH.
HARDWARE	
CLOSERS	EXTERIOR: NORTON 7500SS INTERIOR: NORTON 7704 / 7500
CYLINDERS	EXTERIOR (CLASSROOM): VON DUPRIN RHODE LEVERS, BEST (IC) CYLINDERS HEAVY DUTY - ND94BD (CLASSROOM LOCK TYPE), KEY IN LEVER, 7-PIN U KEYWAY; PROVIDE CONSTRUCTION CORE. INTERIOR (RESTROOM): VON DUPRIN RHODE LEVERS, BEST (IC) CYLINDERS HEAVY DUTY - PRIVACY LOCK WITH "OCCUPIED" INDICATOR SCHLAGE MORTISE L9496 06 L283-722 L583-363, PROVIDE CONSTRUCTION CORE
PANIC HARDWARE	VON DUPRIN 99 SERIES

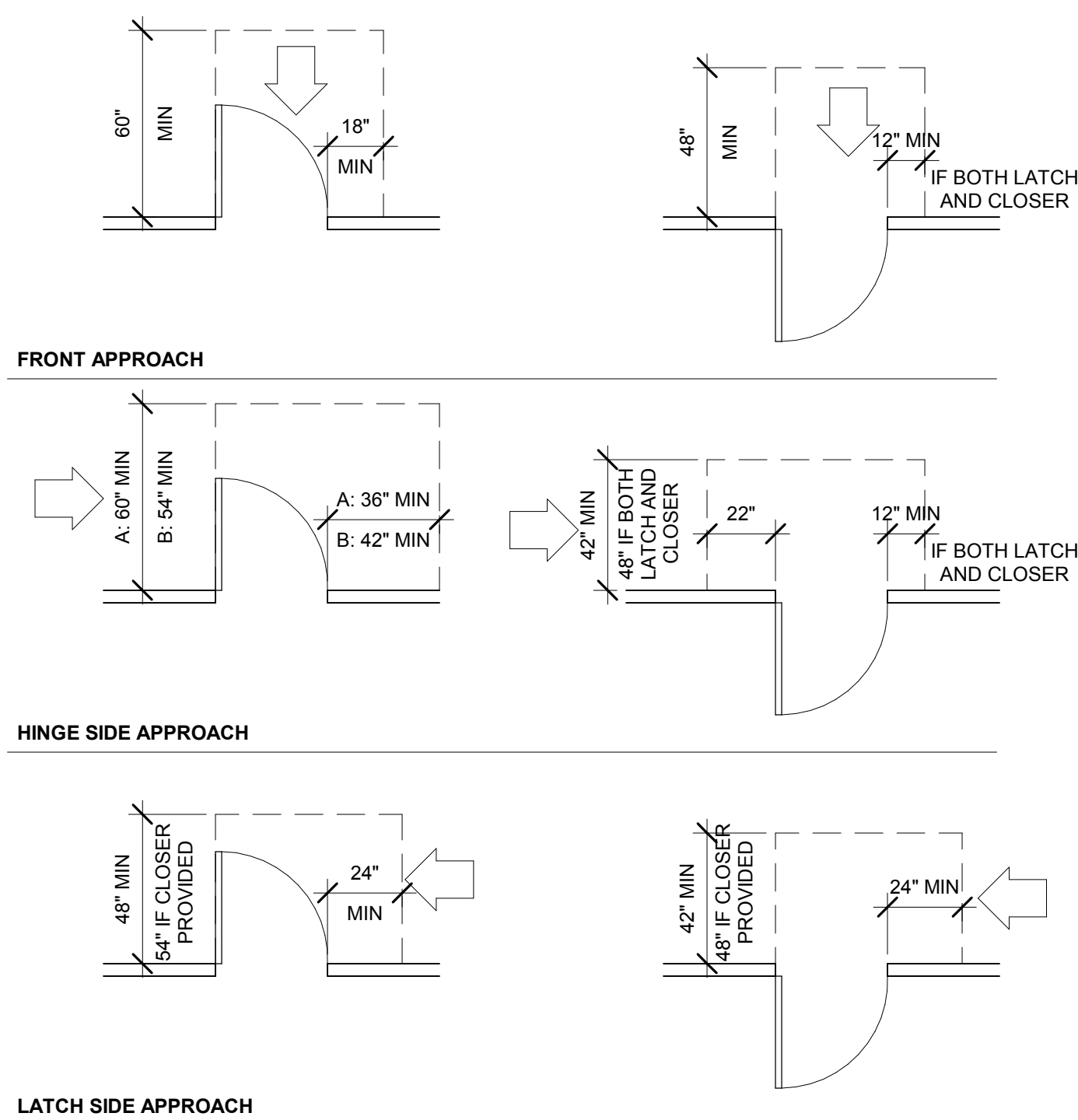
DOOR TYPES



DOOR HARDWARE SCHEDULE

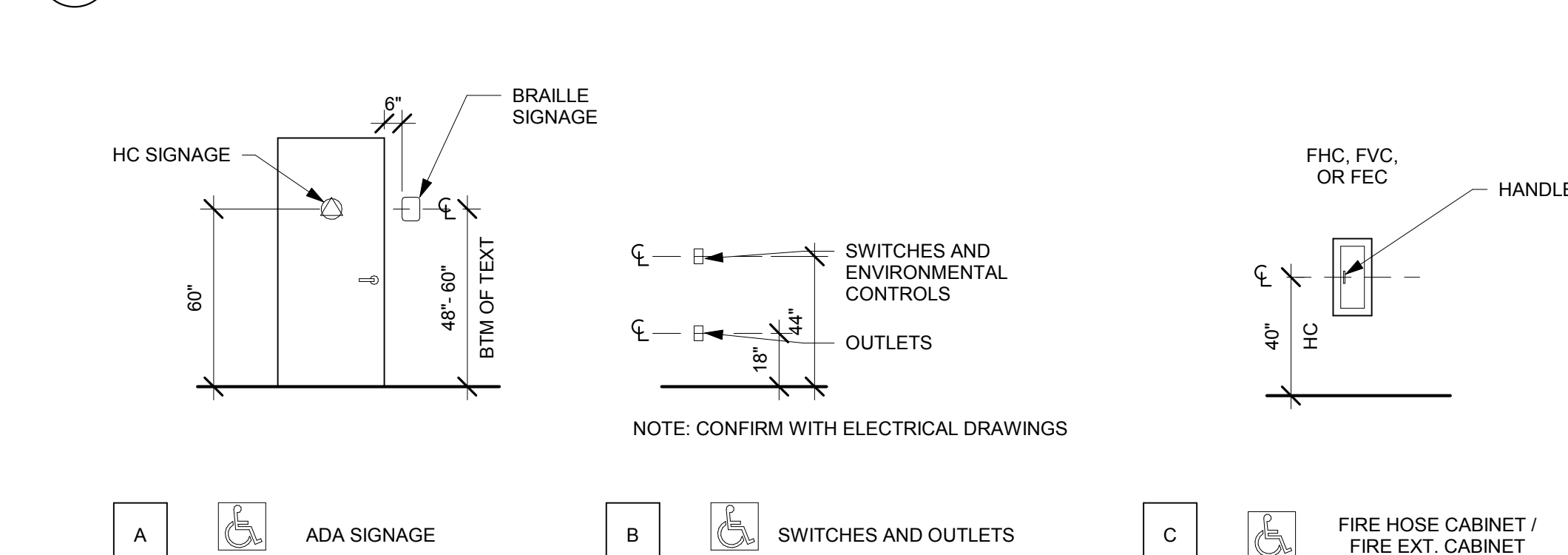
- H-1: EXTERIOR
• PANIC HARDWARE W/ LEVER FUNCTION
• SURFACE CLOSER
• KICK STOP
• HEAD DRIP
• WEATHERSTRIPPING
• THRESHOLD
• SWEEP

- H-2: RESTROOM
• LATCHSET
• DEADBOLT W/ OCCUPANCY INDICATOR AND EXTERIOR OVERRIDE
• BUTTS
• CONCEALED CLOSER
• KICK PLATE
• STOP
• SMOKE SEALS



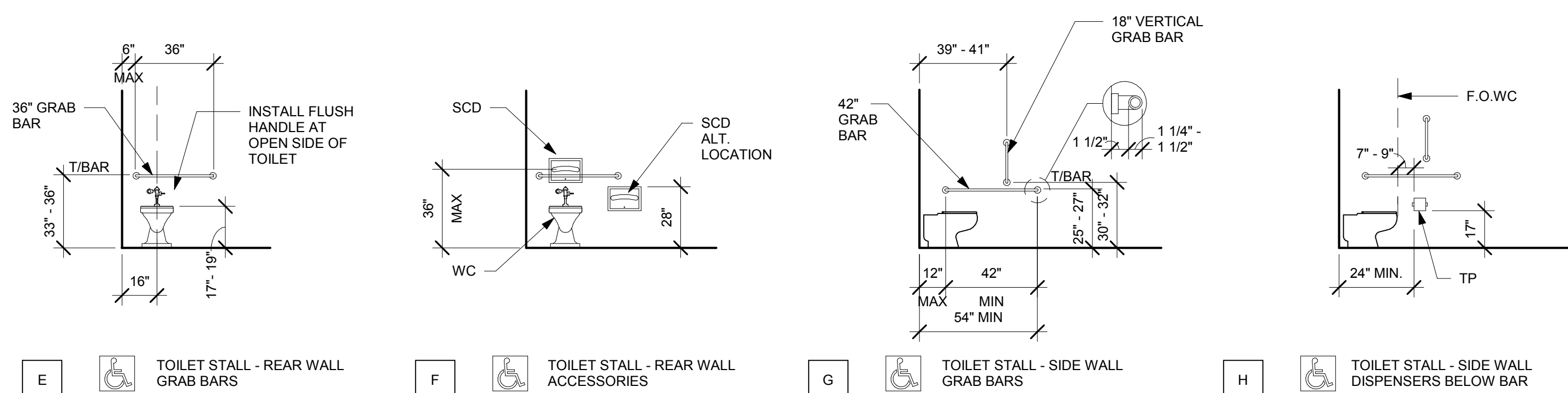
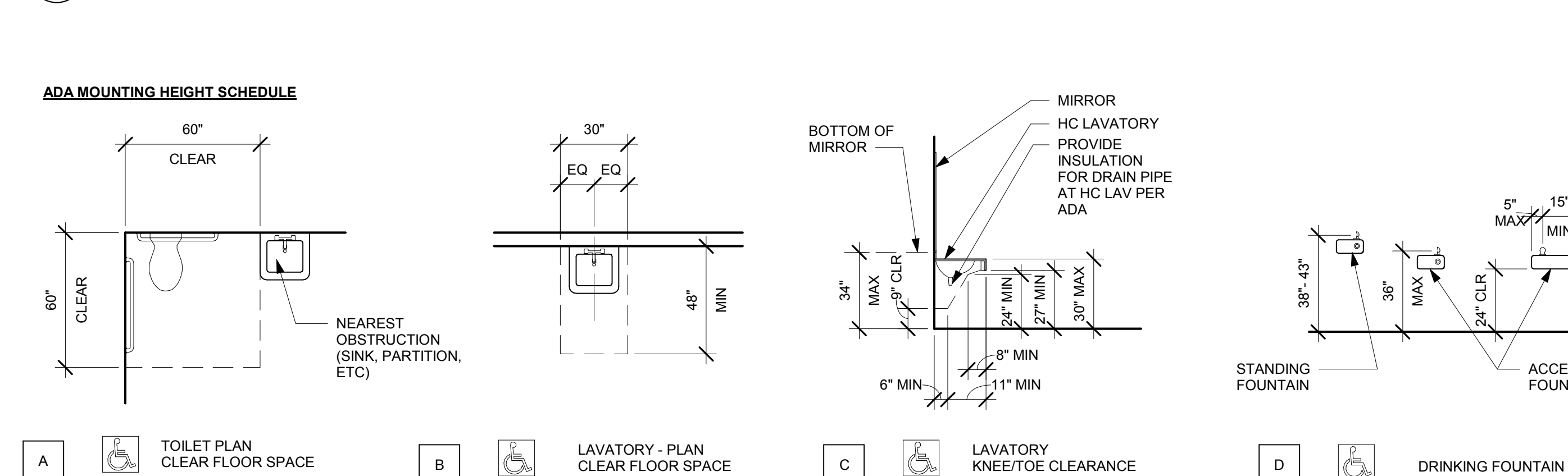
1 ADA DOOR CLEARANCES

1/4" = 1'-0"

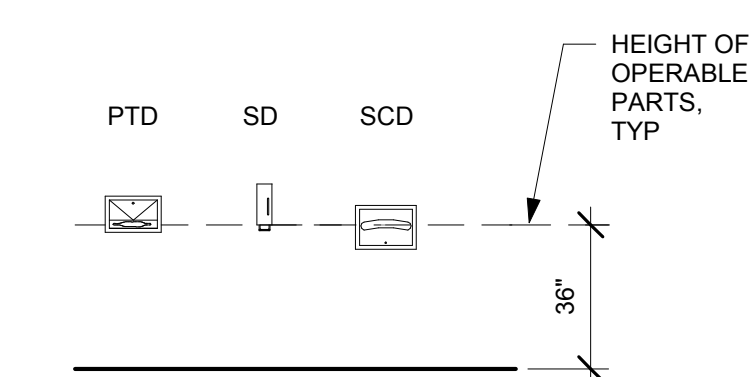


6 ADA MOUNTING HEIGHTS

1/4" = 1'-0"



STANDARD MOUNTING HEIGHT SCHEDULE



TOILET ACCESSORY ABBREVIATIONS LEGEND

- FO FACE OF
HC HANDICAP
MIN MINIMUM
PTD PAPER TOWEL DISPENSER
SD SOAP DISPENSER
SCD SEAT COVER DISPENSER
- TO TOP OF
TYP TYPICAL
TP TOILET PAPER
WR WASTE RECEPTACLE
WC WATER CLOSET

GENERAL NOTES:

1. ALL STAINLESS STEEL ACCESSORIES TO BE SATIN FINISH UNLESS OTHERWISE NOTED.
2. MOUNT ALL TOILET ROOM ACCESSORIES PER MANUFACTURER'S RECOMMENDED MOUNTING HEIGHTS, WITHIN STATED ADA TOLERANCES.
3. FLOOR DRAINS TO BE LOCATED OUTSIDE OF ADA CLEAR FLOOR AREAS, COORDINATE WITH PLUMBING.
4. WRAP ALL EXPOSED WASTE AND HOT WATER LINES PER ADA CODE.

16 ADA TOILET ROOM CLEARANCES AND MOUNTING HEIGHTS

1/4" = 1'-0"

GENERAL STRUCTURAL NOTES

DESIGN CRITERIA

1. GOVERNING BUILDING CODE: 2014 OREGON STRUCTURAL SPECIALTY CODE	
2. RISK CATEGORY	II
3. LIVE	
ROOF	20 PSF
2ND FLOOR (OFFICE)	50 PSF
4. SNOW	
GROUND SNOW (PS)	25 PSF
FLAT ROOF SNOW LOAD (PS)	25 PSF
SLOPED ROOF SNOW (PS)	25 PSF
IMPORTANCE FACTOR	1.0
(SNOW BUILD-UP IN ACCORDANCE W/ IBC)	
5. WIND	
BASIC WIND SPEED (3 SECOND GUST)	120 MPH
EXPOSURE	C
6. SEISMIC	
0.2 SEC. SPECTRAL RESPONSE ACCELERATION (S _s)	0.972
1.0 SEC. SPECTRAL RESPONSE ACCELERATION (S ₁)	0.423
DESIGN SPECTRAL ACCELERATION (SDS)	0.720
DESIGN SPECTRAL ACCELERATION (SD1)	0.444
SITE CLASSIFICATION	
SEISMIC DESIGN CATEGORY	D
IMPORTANCE FACTOR	1.0
SEISMIC FORCE RESISTING SYSTEM (SPRS)	
BUILDING	
BEARING LIGHT-FRAMED (WOOD) SHEARWALLS	
R	0.11
DESIGN RESPONSE COEFFICIENT (C _s)	6.5
BASE SHEAR (V)	V=C _s * W
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE	

GENERAL

- THE PROJECT SPECIFICATIONS, DRAWINGS, STANDARD DETAILS, DETAILS IN THE DRAWINGS, AND THE STRUCTURAL NOTES ARE TO BE COMPLEMENTARY, IN THE CASE OF AN INCONSISTENCE NOT CLARIFIED BY THE DESIGNER OF RECORD THE MOST STRINGENT, HIGHEST QUALITY AND BEST QUALITY PROVISIONS SHALL BE PROVIDED.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE CONSTRUCTION. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES DO NOT SCALE DRAWINGS. COORDINATE DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
- ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE WITH AMENDMENTS.
- SEE ARCHITECTURAL DRAWINGS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 - SIZE AND LOCATION OF ALL OPENINGS, EXCEPT AS NOTED.
 - SIZE AND LOCATION OF ALL INTERIOR AND EXTERIOR NONBEARING WALLS
 - SIZE AND LOCATION OF ALL CONCRETE CURBS, FLOOR DRAINS, SLOPES, DEPRESSED AREAS, CHANGES IN LEVEL, CHAMFERS, GROOVES, INSERTS, ETC.
 - SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS, EXCEPT AS SHOWN.
 - FLOOR AND ROOF FINISHES
 - STAIR FRAMING AND DETAILS, EXCEPT AS SHOWN.
 - DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
- SEE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 - PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, ETC., EXCEPT AS SHOWN OR NOTED.
 - ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS.
 - CONCRETE INSERTS FOR FIXTURES.
 - SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES, ANCHOR BOLTS FOR MOTOR MOUNTS.
 - SEISMIC BRACING REQUIREMENTS.
- METHODS, PROCEDURES, AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
- THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKERS AND VISITORS DURING CONSTRUCTION. SUCH MEASURE SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION LOADS, ETC. VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE REVIEW OF THE ABOVE ITEMS.
- OPENINGS, POCKETS, ETC. SHALL NOT BE PLACED IN STRUCTURAL ELEMENTS UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.
- CONSTRUCTION LOAD (MATERIAL) SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE STRUCTURES HAVE NOT ATTAINED DESIGN STRENGTH.
- WHEN A DETAIL IS IDENTICAL, THE CONTRACTOR SHALL APPLY THIS DETAIL IN ESTIMATING AND CONSTRUCTION TO EVERY LIKE CONDITION WHETHER OR NOT THE REFERENCE IS MADE IN EVERY INSTANCE.
- ANY REFERENCES TO THE RECOMMENDATIONS, GUIDELINES, OR REQUIREMENTS IN NATIONAL PUBLICATIONS, SUCH AS BUT NOT LIMITED TO ASCE, ASTM, IBC, ACI, AISC, NDS, OR AWS, IN THE CONSTRUCTION DOCUMENTS SHALL BE FOLLOWED AS IF THEY ARE SPECIFICALLY MANDATED.

FOUNDATION

- THE SUBSURFACE INFORMATION AND FOUNDATION DESIGN ARE BASED ON THE FOLLOWING GEOTECHNICAL REPORT:
REPORT PREPARED BY **RHINOONE GEOTECHNICAL**
DATED **APRIL 9, 2018**
- FOUNDATIONS FOR THE STRUCTURE HAVE BEEN DESIGNED USING THE FOLLOWING VALUES:
LONG-DURATION ALLOWABLE SOIL BEARING **2500 PSF**
SHORT-DURATION ALLOWABLE SOIL BEARING **407 (LONG DURATION)**
- THE CONTRACTOR SHALL PERFORM EXCAVATIONS, FOOTING CONSTRUCTION AND PREPARATION OF THE SUB GRADE UNDER THE SLAB ON GRADE IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT AND THE PROJECT SPECIFICATIONS.
- FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION, WHICH DIFFER FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT SHALL BE REPORTED TO THE STRUCTURAL ENGINEER AND/OR GEOTECHNICAL ENGINEER BEFORE FURTHER CONSTRUCTION IS ATTEMPTED.
- CONTRACTOR WILL PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM EITHER SURFACE, GROUND, OR SEEPAGE WATER.
- ALL ABANDONED FOOTINGS, UTILITIES, ETC., THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED.
- SITE PREPARATION, OVER-EXCAVATION / RECOMPECTION OF SOILS, AND THE INSTALLATION OF FOUNDATION AND WALL DRAINS AS REQ'D SHALL BE PERFORMED IN ACCORDANCE WITH RECOMMENDATIONS PRESENTED IN THE SOILS REPORT REFERENCED ABOVE.
- CONTRACTOR SHALL PROVIDE FOR DESIGN AND INSTALLATION OF ALL CRIBBING, SHEATHING, AND SHORING REQUIRED TO SAFELY RETAIN THE EARTH BANKS.

STRUCTURAL WOOD

- THE QUALITY OF ALL WOOD MEMBERS AND THEIR FASTENINGS SHALL CONFORM TO CHAPTER 23 OF THE IBC.
- ALL FRAMING MEMBERS AND PLYWOOD SHALL CONFORM TO THE FOLLOWING SPECIFIED TABLES, UNLESS NOTED OTHERWISE:
FRAMING MEMBERS **DF-L PORTION OF TABLE 4A & 4B (NDS)Q**
SHEATHING **TABLE 3 (APA PDS)**
- ALL STRUCTURAL SHEATHING SHALL BE FABRICATED WITH EXTERIOR GLUE CONFORMING TO U.S. PRODUCTS STANDARD PS-1 FOR CONSTRUCTION AND INDUSTRIAL SHEATHING.
- ALL FRAMING MEMBERS AND SHEATHING SHALL BE GRADE MARKED.
- FRAMING MEMBERS SHALL CONFORM TO THE FOLLOWING GRADES UNO ON PLANS:
STUDS **DF-L, STUD OR BETTER**
JOISTS **DF-L, #2 OR BETTER**
PLATES **DF-L, #2 OR BETTER**
- IBC TABLE 2304.9.1, NAILING SCHEDULE, SHALL GOVERN UNLESS MORE RESTRICTIVE NAILING IS INDICATED ON THE PLANS OR DETAILS.
- WHERE LEDGER, SILL PLATES, POSTS, OR STUDS ARE BEARING DIRECTLY ON CONCRETE OR MASONRY, PROVIDE GRACE VYCOR PLUS BARRIER BETWEEN WOOD MEMBERS AND CONCRETE OR MASONRY.
- BOLT HOLES IN WOOD SHALL BE 1/32" TO 1/16" LARGER THAN THE BOLT, DEPENDING ON BOLT SIZE.
- BOLT HOLES SHALL NOT BE LESS THAN 7x DIA. FROM THE END AND 4x DIA. FROM THE EDGE OF THE MEMBER, UNLESS NOTED OTHERWISE.
- BOLTS USED IN WOOD SHALL BE A307.
- PRE-DRILL NAIL HOLES WHERE NECESSARY TO PREVENT SPLITTING.
- EACH GLU-LAMINATED MEMBER SHALL BE STAMPED WITH AN IDENTIFYING NUMBER AND SHALL BE ACCOMPANIED BY A CERTIFICATE OF INSPECTION CERTIFYING THAT THE MEMBERS MEET THE IBC REQUIREMENTS. SUCH CERTIFICATES MUST BE MADE BY AN APPROVED AGENCY OF THE A.P.A.
- GLU-LAMINATED MEMBERS SHALL BE A COMBINATION OF 24F-1.6E-V4 (DF-L) INDUSTRIAL GRADE, AND EXTERIOR GLUE, UNLESS NOTED OTHERWISE ON PLAN.
- ALL SUSPENDED LOADS FROM SUBPURLINS ARE PROHIBITED WITHOUT PRIOR APPROVAL FROM ENGINEER.
- ALL HANGERS, POST CAPS AND BASES ARE BY SIMPSON OR APPROVED EQUIVALENT. PROVIDE SIMPSON (OR APPROVED EQUIVALENT) HANGERS FOR BEAMS, JOISTS, POST BASES AND CAPS FOR COLUMNS UNLESS NOTED ON PLANS AND DETAILS.
- WHERE DIAPHRAGM AND SHEARWALL SHEATHING NAILING IS LESS THAN 3" ON CENTER USE 3x FRAMING AND STAGGER NAILING PER SHEET **\$0.10 U.O.N.**

CONCRETE

- CONCRETE MIXES SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY AND REVIEWED BY THE ENGINEER. MIX DESIGNS SHALL BE SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT.
- AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33. AGGREGATE FOR LIGHTWEIGHT CONCRETE SHALL CONFORM TO ASTM C330. PORTLAND CEMENT SHALL BE TYPE I OR TYPE II AND SHALL CONFORM TO ASTM C150. MINIMUM COARSE AGGREGATE SIZE IS 1/2 INCH (1 1/2" FOR S.O.G.).
- ADMIXTURES MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER SEALING THE MIX DESIGN. ADMIXTURES USED TO INCREASE THE WORKABILITY OF THE CONCRETE SHALL NOT BE CONSIDERED TO REDUCE THE SPECIFIED MINIMUM CEMENT CONTENT. CALCIUM CHLORIDE SHALL NOT BE USED.
- COMPRESSIVE STRENGTHS OF CONCRETE AT 28 DAYS SHALL BE AS FOLLOWS:
FOOTINGS AND SLAB ON GRADE **3000 PSI**
- CONCRETE SLUMP SHALL BE 4 INCHES +/- 1 INCH. EXCEPTION: MIX DESIGNED WITH PLASTICIZER OR WATER REDUCER.
- MAXIMUM WEIGHT OF NORMAL-WEIGHT CONCRETE SHALL BE 160 PCF AND MAXIMUM WEIGHT OF LIGHT-WEIGHT CONCRETE SHALL BE 115 PCF.
- MIXING, TRANSPORTING, AND PLACING OF CONCRETE SHALL CONFORM TO THE LATEST EDITION OF ACI 304R AND PROJECT SPECIFICATIONS. ALL CONCRETE SURFACES AGAINST WHICH CONCRETE IS TO BE PLACED SHALL BE THOROUGHLY CLEANED. LAITANCE AND STANDING WATER SHALL BE REMOVED.
- ALL REINFORCING BARS, WELDED WIRE FABRIC, ANCHOR BOLTS, EMBEDDED PLATES AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE. PROVIDE STANDARD BAR CHAIRS AND SPACERS AS REQUIRED TO MAINTAIN CONCRETE PROTECTION SPECIFIED. "PULLING-UP" WELDED WIRE FABRIC WITH HOOKS DURING CONCRETE PLACEMENT IS NOT PERMITTED.
- CONCRETE COVER PROTECTION FOR REINFORCEMENT BARS SHALL BE AS FOLLOWS: (SEE ACI 318 SECTION 7.7 FOR CONDITIONS NOT NOTED.)
 - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH **3"**
 - CONCRETE EXPOSED TO EARTH OR WEATHER **1 1/2"**
 - CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND **2"**
 - CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND **1 1/2"**
 - SLABS, WALLS, JOISTS - #11 BARS AND SMALLER **3/4"**
 - BEAMS, COLUMNS - TIES, STIRRUPS, SPIRALS **1 1/2"**
- REINFORCING STEEL FOR CONCRETE SHALL BE GRADE 60 OR GRADE 75 AS SPECIFIED AND SHALL CONFORM TO ASTM A615 OR A706 (GRADE 60 ONLY) FOR WELD TYPE REINFORCING STEEL. REINFORCING BARS SHALL NOT BE TACK WELDED, WELDED, HEATED, OR CUT UNLESS INDICATED ON THE CONTRACT DOCUMENTS OR APPROVED BY THE STRUCTURAL ENGINEER.
- WELDING REINFORCEMENT BARS, WHEN APPROVED BY THE STRUCTURAL ENGINEER, SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STANDARD D1.4, LATEST EDITION E70XX. ELECTRODES SHALL BE USED IN WELDING A706 REINFORCING BARS TO STRUCTURAL STEEL.
- DETAILING OF CONCRETE REINFORCEMENT BARS AND ACCESSORIES SHALL CONFORM TO THE RECOMMENDATIONS OF THE LATEST EDITION OF THE ACI 315 DETAILING MANUAL.
- GROUT SHALL BE NON-SHRINKABLE GROUT CONFORMING TO ASTM C1107 AND SHALL HAVE A SPECIFIED COMPRESSIVE STRENGTH AT 28 DAYS OF 5000 PSI. PRE GROUTING OF BASE PLATES WILL NOT BE PERMITTED.
- FORMS FOR CONCRETE SHALL BE LAID OUT AND CONSTRUCTED TO PROVIDE FOR THE REQUIRED CAMBERS/SLOPES. DO NOT REMOVE FORMS OR BRACING UNTIL CONCRETE HAS GAINED THE SPECIFIED 28 DAY STRENGTH OR SURFACE STRENGTH TO CARRY ITS OWN WEIGHT AND SUPERIMPOSED LOADS PER THE APPLICABLE PROVISIONS OF ACI 347.
- CONDUIT OR PIPE SIZE (OD) SHALL NOT EXCEED 30 PERCENT OF SLAB THICKNESS AND SHALL BE PLACED BETWEEN TOP AND BOTTOM REINFORCING, UNLESS SPECIFICALLY DETAILED OTHERWISE. CONCENTRATION OF CONDUITS OR PIPES SHALL BE AVOIDED EXCEPT WHERE DETAILED OPENINGS ARE PROVIDED.
- PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING. CORING THROUGH CONCRETE IS NOT PERMITTED EXCEPT WHERE SHOWN. NOTIFY THE STRUCTURAL ENGINEER IN ADVANCE OF CONDITIONS NOT SHOWN ON THE DRAWINGS.
- CURE AND PROTECT CONCRETE IMMEDIATELY AFTER PLACEMENT IN ACCORDANCE WITH ACI 308, ACI 305, AND ACI 306. CURING COMPOUNDS USED ON CONCRETE THAT IS TO RECEIVE A RESILIENT TILE FINISH SHALL BE APPROVED BY THE TILE MANUFACTURER BEFORE USE.
- PROVIDE CONSTRUCTION JOINTS IN SLABS ON GRADE AS SHOWN IN TYPICAL DETAILS SO AS TO DIVIDE SLABS INTO APPROXIMATELY RECTANGULAR AREAS NOT OVER 225 SQUARE FEET WITH A RATIO OF LONG TO SHORT SIDES NOT OVER 1.5 AND SPACING NOT EXCEEDING 15'-0" ON CENTER. IN ADDITION, PROVIDE CONTROL JOINTS OFF OF ALL REINTRANSIT CORNERS TO INTERSECTION OF CONTROL JOINTS BEYOND. PROVIDE CONTROL JOINTS TO CONNECT OFFSET COLUMNS, PITS AND OTHER INTERRUPTIONS TO THE SLAB.
- AN INDEPENDENT TESTING AGENCY TO PERFORM FIELD QUALITY CONTROL TEST. PROVIDE FREE ACCESS TO CONCRETE OPERATIONS AT PROJECT SITE AND COOPERATE WITH APPOINTED FIRM. SUBMIT PROPOSED MIX DESIGN OF EACH CLASS OF CONCRETE TO INSPECTION AND TESTING FIRM FOR REVIEW PRIOR TO COMMENCEMENT OF CONCRETE OPERATIONS. COMPRESSIVE STRENGTH TESTS: ASTM C39/C39M. FOR EACH TEST, MOLD, AND CURE THREE CONCRETE TEST CYLINDERS. OBTAIN TEST SAMPLES FOR EVERY 100 CU YD OR LESS OF EACH CLASS OF CONCRETE PLACED. TAKE ONE ADDITIONAL THREE TEST CYLINDERS DURING COLD & HOT WEATHER CONCRETING AS DEFINED BY ACI 305 AND ACI 306. CURED ON JOB SITE UNDER SAME CONDITIONS AS CONCRETE IT REPRESENTS. PERFORM ONE SLUMP TEST FOR EACH SET OF TEST CYLINDERS TAKEN. FOLLOWING PROCEDURES OF ASTM C143/C143M. PERFORM ONE AIR CONTENT TEST FOR EACH SET OF COMPRESSIVE STRENGTH SPECIMENS. COMPLYING ASTM C231.
- WHERE INDICATED ON THE DRAWINGS, INTENTIONALLY ROUGHENED CONCRETE SHALL BE CLEAN AND FREE OF LAITANCE AND ROUGHENED TO A FULL AMPLITUDE OF 1/4".

SPECIAL INSPECTION

IN ACCORDANCE WITH IBC CHAPTER 17, THE FOLLOWING TYPES OF WORK REQUIRE SPECIAL INSPECTION. SEE THE SPECIFICATIONS AND DRAWINGS FOR ADDITIONAL REQUIREMENTS FOR INSPECTION AND TESTING. SPECIAL INSPECTION SHALL BE PAID FOR AND PROVIDED BY THE OWNER.

MATERIAL	TASK	FREQUENCY		RESPONSIBLE FIRM
		CONTINUOUS	PERIODIC	
EARTHWORK	GRADING, EXCAVATING, & FILL	INSP	-	GEOTECH OF RECORD
	FILL MATERIAL	-	TEST	GEOTECH OF RECORD
	SOIL COMPACTION	-	TEST	GEOTECH OF RECORD
CAST-IN-PLACE CONCRETE	REINFORCING STEEL INCLUDING PRESTRESSING STEEL, AND PLACEMENT	-	INSP	SPECIAL INSPECTOR
	USE OF REQUIRED CONCRETE DESIGN MIX	-	INSP	SPECIAL INSPECTOR
	SHAPE, LOCATION, & DIMENSIONS OF CONCRETE MEMBER	-	INSP	SPECIAL INSPECTOR
	BOLTS INSTALLED IN CONCRETE	INSP	-	SPECIAL INSPECTOR
	REINFORCED CONCRETE PLACEMENT	INSP	-	SPECIAL INSPECTOR
	ADHESIVE ANCHORS	INSP	-	SPECIAL INSPECTOR
	EXPANSION ANCHORS	-	INSP	SPECIAL INSPECTOR
	SPECIFIED CURING TECHNIQUES	-	INSP	SPECIAL INSPECTOR
	CONCRETE MATERIALS	-	TEST	TESTING LAB
	ALL SUB-PURLIN HANGERS	-	INSP	SPECIAL INSPECTOR
STRUCTURAL WOOD FRAMING	LATERAL FORCE RESISTING MEMBERS	-	INSP	SPECIAL INSPECTOR
	NAILING < 4" O.C. & STRAPPING OF SHEARWALLS, DIAPHRAGMS, & TOP CHORDS	-	INSP	SPECIAL INSPECTOR
STRUCTURAL WOOD FRAMING	NAILING, BOLTING, ANCHORING, & FASTENING OF OTHER ELEMENTS	-	INSP	SPECIAL INSPECTOR

- NOTES:
- SPECIAL INSPECTION OF SHOP FABRICATION AND SHOP WELDING SHALL MATCH THE REQUIREMENTS FOR FIELD FABRICATION AND FIELD WELDING UNLESS SHOP CERTIFICATION DOCUMENTS ARE REVIEWED AND ACCEPTED BY THE OWNER. IF APPROVED BY THE OWNER, SPECIAL INSPECTION OF SHOP FABRICATION AND SHOP WELDING SHALL NOT BE REQUIRED FOR CERTIFIED FABRICATORS AS REQUIRED BY THE STRUCTURAL STEEL SECTION OF THE GENERAL STRUCTURAL NOTES. EXCEPTIONS: ALL COMPLETE PENETRATING WELDS ARE REQUIRED TO BE ULTRASONICALLY TESTED BY AN INDEPENDENT TESTING LAB.
 - CONTINUOUS INSPECTION REQUIRED FOR WELDING OF REINFORCING STEEL RESISTING FLEXURAL & AXIAL FORCES IN INTERMEDIATE & SPECIAL MOMENT FRAMES. BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALL OF CONCRETE & SHEAR REINFORCEMENT. PERIODIC INSPECTION IS ACCEPTABLE FOR WELDING OF OTHER REINFORCING STEEL.

STRUCTURAL OBSERVATIONS

IN ACCORDANCE W/ IBC CH 17 & AT THE DIRECTION OF THE ENGINEER OF RECORD, THE FOLLOWING ITEMS REQUIRE PERIODIC STRUCTURAL OBSERVATION. NOTIFY ENGINEER OF RECORD AT LEAST 48 HOURS BEFORE A DESIGNATED WORK IS TO BE COVERED.

ITEM	DESCRIPTION
1. FOUNDATION	REINFORCING STEEL

ENGINEER OF RECORD REVIEWED DOCUMENTS

CONTRACTOR TO SUBMIT THE FOLLOWING BEARING THE SEAL OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT TO ARCHITECT / ENGINEER. SUBMISSION TO THE CITY/JURISDICTION IS NOT REQUIRED.

ITEM
1. CONCRETE MIX DESIGN*

*NOTE: CONCRETE MIX DESIGN(S) REQUIRE AN ENGINEER'S STAMP

STRUCTURAL DEFERRED SUBMITTALS

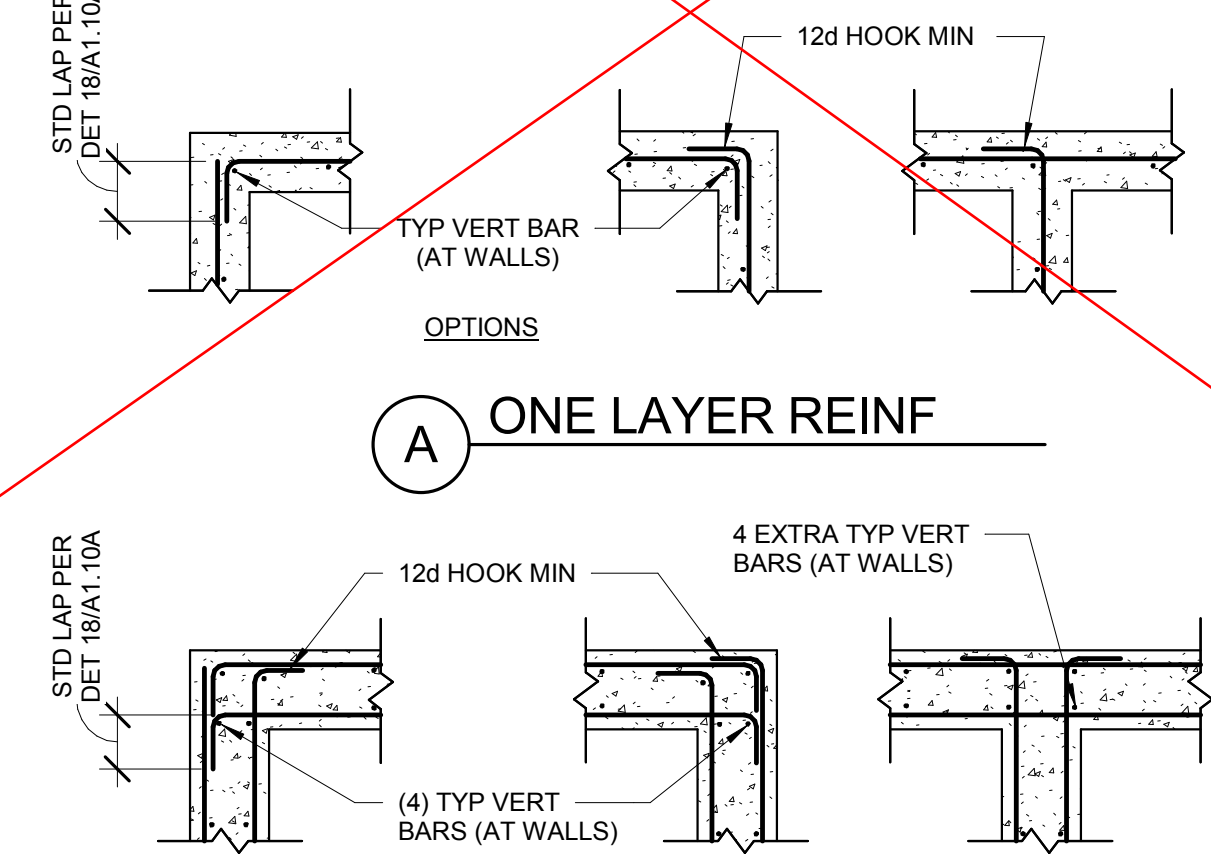
CONTRACTOR TO SUBMIT DRAWINGS & CALCULATIONS BEARING THE SEAL OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT TO ARCHITECTURE / ENGINEER BEFORE SUBMITTING TO JURISDICTION FOR REVIEW & PERMITTING

ITEM
1. DESIGN-BUILD STAIRS

*NOTE: CONCRETE MIX DESIGN(S) REQUIRE AN ENGINEER'S STAMP BUT DOES NOT NEED TO BE SUBMITTED TO JURISDICTIONS

9 FOUNDATION PLAN

A1.10A 1/8" = 1'-0"



13 REINF AT CONC WALL & FTG INTERSECTIONS

A1.10A 1 1/2" = 1'-0"

BAR	CONCRETE LAP SPLICES					
	LENGTH (L.O.N.) IN INCHES					
	F _c = 3000 PSI		F _c = 4000 PSI		F _c = 5000 PSI	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	36	21	33	19	29	17
#4	50	29	43	25	39	23
#5	61	36	55	32	48	28
#6	73	43	63	37	56	33
#7	107	63	93	55	83	49
#8	122	72	105	62	93	55
#9	137	81	120	71	107	63

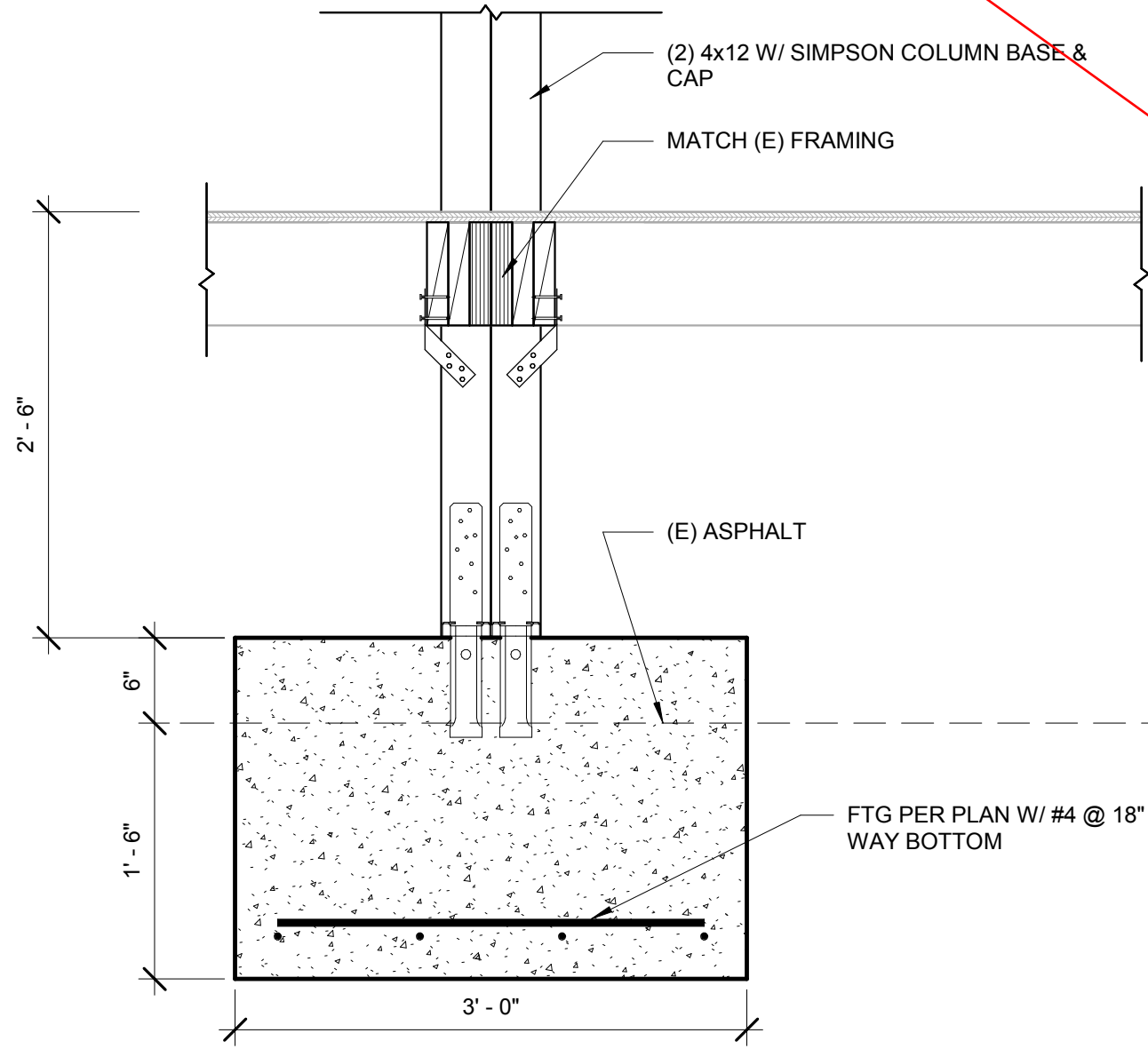
- NOTES:
- WHEN TWO BAR SIZES ARE SPLICED, USE LAP LENGTH FOR SMALLER BAR.
 - TABLE IS FOR CLASS B SPLICES.
 - TABLE DOES NOT APPLY TO SPLICES WITH EPOXY-COATED BARS.
 - FOR LIGHTWEIGHT CONCRETE MULTIPLY VALUES BY 1.3.
 - YIELD STRENGTH OF THE STEEL BARS IS ASSUMED TO BE 60,000 PSI.
 - TOP BARS ARE DEFINED AS HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST BELOW THE BARS.
 - SEE DRAWINGS FOR EXCEPTIONAL CASES.
 - AT CONTRACTOR'S OPTION, USE MECHANICAL COUPLERS PER 1350.10 TO REDUCE CONGESTION

18 TYPICAL LAP SPLICE - CONCRETE

A1.10A 1 1/2" = 1'-0"

14 INTERIOR FOOTING

A1.10A 1" = 1'-0"

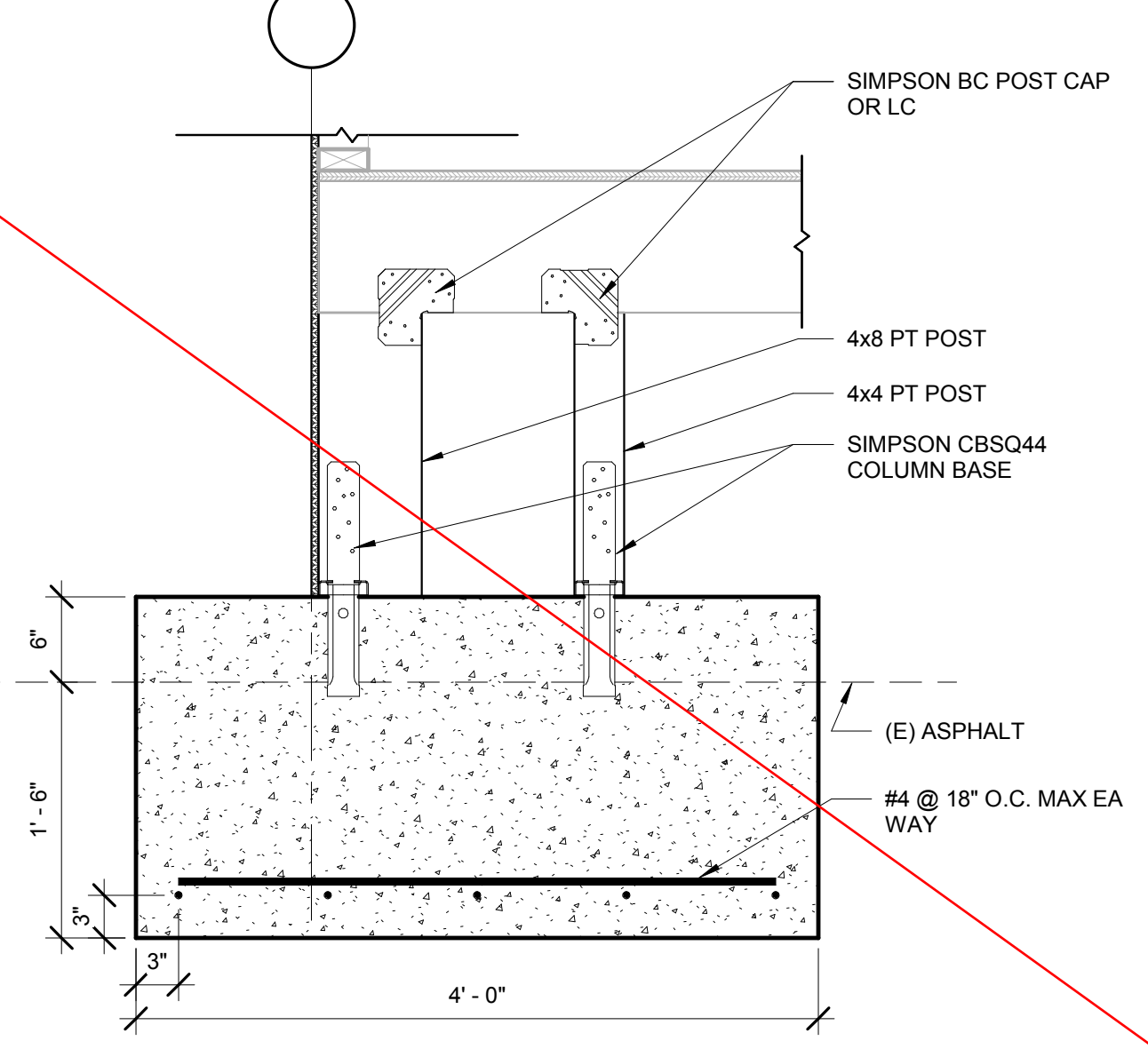


19 CENTER COLUMN FOOTING

A1.10A 1" = 1'-0"

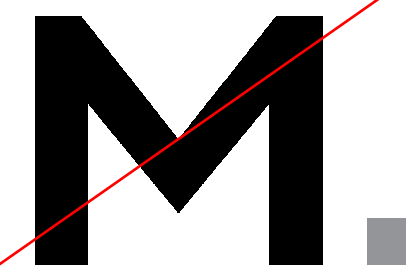
15 PERIMETER FOOTING

A1.10A 1" = 1'-0"



20 ENDWALL COLUMN FTG

A1.10A 1" = 1'-0"



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Revision Schedule	
Revision Delta	Issue Date

SHEET TITLE:
**FOUNDATION
PLAN &
DETAILS**

DRAWN BY: MHB, MGB

CHECKED BY: RRB

SHEET

A1.10A

JOB NO. **2170276.00**

PERMIT/BID SET 4/24/18

GENERAL STRUCTURAL NOTES

DESIGN CRITERIA

1. COVERING BUILDING CODE: 2014 OREGON STRUCTURAL SPECIALTY CODE	II
2. RISK CATEGORY	II
3. LIVE	20 PSF
4. SNOW	50 PSF
GROUND SNOW (Pg)	25 PSF
FLAT ROOF SNOW LOAD (Pf)	25 PSF
SLOPED ROOF SNOW (Ps)	25 PSF
IMPORTANCE FACTOR	1.0
(SNOW BUILD-UP IN ACCORDANCE W/ IBC)	
5. WIND	120 MPH
BASIC WIND SPEED (3 SECOND GUST)	
6. SEISMIC	C
0.2 SEC. SPECTRAL RESPONSE ACCELERATION (Ss)	0.972
1.0 SEC. SPECTRAL RESPONSE ACCELERATION (S1)	0.423
DESIGN SPECTRAL ACCELERATION (SDS)	0.720
DESIGN SPECTRAL ACCELERATION (SD1)	0.444
SITE CLASSIFICATION	D
SEISMIC DESIGN CATEGORY	D
IMPORTANCE FACTOR	1.0
SEISMIC FORCE RESISTING SYSTEM (SFRS)	
BUILDING	
BEARING LIGHT-FRAMED (WOOD) SHEARWALLS	
R	6.5
DESIGN RESPONSE COEFFICIENT (Cs)	0.11
BASE SHEAR (V)	V=Cs*W
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE	

GENERAL

- THE PROJECT SPECIFICATIONS, DRAWINGS, STANDARD DETAILS, DETAILS IN THE DRAWINGS, AND THE STRUCTURAL NOTES ARE TO BE COMPLEMENTARY, IN THE CASE OF AN INCONSISTENCE NOT CLARIFIED BY THE DESIGNER OF RECORD THE MOST STRINGENT, HIGHEST QUALITY AND BEST QUALITY PROVISIONS SHALL BE PROVIDED.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE CONSTRUCTION. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES DO NOT SCALE DRAWINGS. COORDINATE DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
- ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE WITH AMENDMENTS.
- SEE ARCHITECTURAL DRAWINGS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 - A. SIZE AND LOCATION OF ALL OPENINGS, EXCEPT AS NOTED.
 - B. SIZE AND LOCATION OF ALL INTERIOR AND EXTERIOR NONBEARING WALLS
 - C. SIZE AND LOCATION OF ALL CONCRETE CURBS, FLOOR DRAINS, SLOPES, DEPRESSED AREAS, CHANGES IN LEVEL, CHAMFERS, GROOVES, INSERTS, ETC.
 - D. SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS, EXCEPT AS SHOWN.
 - E. FLOOR AND ROOF FINISHES.
 - F. STAIR FRAMING AND DETAILS, EXCEPT AS SHOWN.
 - G. DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
- SEE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 - A. PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, ETC., EXCEPT AS SHOWN OR NOTED.
 - B. ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS.
 - C. CONCRETE INSERTS FOR FIXTURES.
 - D. SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES, ANCHOR BOLTS FOR MOTOR MOUNTS.
 - E. SEISMIC BRACING REQUIREMENTS.
- METHODS, PROCEDURES, AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
- THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SECURE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKERS AND VISITORS DURING CONSTRUCTION. SUCH MEASURE SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION LOADS, ETC. VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE REVIEW OF THE ABOVE ITEMS.
- OPENINGS, POCKETS, ETC. SHALL NOT BE PLACED IN STRUCTURAL ELEMENTS UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.
- CONSTRUCTION LOAD (MATERIAL) SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING AND/ OR BRACING WHERE STRUCTURES HAVE NOT ATTAINED DESIGN STRENGTH.
- WHEN A DETAIL IS IDENTIFIED, THE CONTRACTOR SHALL APPLY THIS DETAIL IN ESTIMATING AND CONSTRUCTION TO EVERY LIKE CONDITION WHETHER OR NOT THE REFERENCE IS MADE IN EVERY INSTANCE.
- ANY REFERENCES TO THE RECOMMENDATIONS, GUIDELINES, OR REQUIREMENTS IN NATIONAL PUBLICATIONS, SUCH AS BUT NOT LIMITED TO ASCE, ASTM, IBC, ACI, AISC, NDS, OR AWS, IN THE CONSTRUCTION DOCUMENTS SHALL BE FOLLOWED AS IF THEY ARE SPECIFICALLY MANDATED.

FOUNDATION

- THE SUBSURFACE INFORMATION AND FOUNDATION DESIGN ARE BASED ON THE FOLLOWING GEOTECHNICAL REPORT:
 - REPORT PREPARED BY: RHINOONE GEOTECHNICAL
 - DATED: APRIL 9, 2018
- FOUNDATIONS FOR THE STRUCTURE HAVE BEEN DESIGNED USING THE FOLLOWING VALUES:
 - LONG-DURATION ALLOWABLE SOIL BEARING: 2500 PSF
 - SHORT-DURATION ALLOWABLE SOIL BEARING: 407 (LONG DURATION)
- THE CONTRACTOR SHALL PERFORM EXCAVATIONS, FOOTING CONSTRUCTION AND PREPARATION OF THE SUB GRADE UNDER THE SLAB ON GRADE IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT AND THE PROJECT SPECIFICATIONS.
- FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION, WHICH DIFFER FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT SHALL BE REPORTED TO THE STRUCTURAL ENGINEER AND/OR GEOTECHNICAL ENGINEER BEFORE FURTHER CONSTRUCTION IS ATTEMPTED.
- CONTRACTOR WILL PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM EITHER SURFACE, GROUND, OR SEEPAGE WATER.
- ALL ABANDONED FOOTINGS, UTILITIES, ETC., THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED.
- SITE PREPARATION, OVER-EXCAVATION / RECOMPACTION OF SOILS, AND THE INSTALLATION OF FOUNDATION AND WALL DRAINS AS REQ'D SHALL BE PERFORMED IN ACCORDANCE WITH RECOMMENDATIONS PRESENTED IN THE SOILS REPORT REFERENCED ABOVE.
- CONTRACTOR SHALL PROVIDE FOR DESIGN AND INSTALLATION OF ALL CRIBBING, SHEATHING, AND SHORING REQUIRED TO SAFELY RETAIN THE EARTH BANKS.

STRUCTURAL WOOD

- THE QUALITY OF ALL WOOD MEMBERS AND THEIR FASTENINGS SHALL CONFORM TO CHAPTER 23 OF THE IBC.
- ALL FRAMING MEMBERS AND PLYWOOD SHALL CONFORM TO THE FOLLOWING SPECIFIED TABLES, UNLESS NOTED OTHERWISE:
 - FRAMING MEMBERS: DF-L PORTION OF TABLE 4A & 4B (NDS/Q SHEATHING: TABLE 3 (APA PDS)
- ALL STRUCTURAL SHEATHING SHALL BE FABRICATED WITH EXTERIOR GLUE CONFORMING TO U.S. PRODUCTS STANDARD PS-1 FOR CONSTRUCTION AND INDUSTRIAL SHEATHING.
- ALL FRAMING MEMBERS AND SHEATHING SHALL BE GRADE MARKED.
- FRAMING MEMBERS SHALL CONFORM TO THE FOLLOWING GRADES UNO ON PLANS:
 - STUDS: DF-L, STUD OR BETTER
 - JOISTS: DF-L, #2 OR BETTER
 - PLATES: DF-L, #2 OR BETTER
- IBC TABLE 2304.9.1, NAILING SCHEDULE, SHALL GOVERN UNLESS MORE RESTRICTIVE NAILING IS INDICATED ON THE PLANS OR DETAILS.
- WHERE LEDGER, SILL PLATES, POSTS, OR STUDS ARE BEARING DIRECTLY ON CONCRETE OR MASONRY, PROVIDE GRACE VYCOR PLUS BARRIER BETWEEN WOOD MEMBERS AND CONCRETE OR MASONRY.
- BOLT HOLES IN WOOD SHALL BE 1/32" TO 1/16" LARGER THAN THE BOLT, DEPENDING ON BOLT SIZE.
- BOLT HOLES SHALL NOT BE LESS THAN 7x DIA. FROM THE END AND 4x DIA. FROM THE EDGE OF THE MEMBER, UNLESS NOTED OTHERWISE.
- BOLTS USED IN WOOD SHALL BE A307.
- PRE-DRILL NAIL HOLES WHERE NECESSARY TO PREVENT SPLITTING.
- EACH GLU-LAMINATED MEMBER SHALL BE STAMPED WITH AN IDENTIFYING NUMBER AND SHALL BE ACCOMPANIED BY A CERTIFICATE OF INSPECTION CERTIFYING THAT THE MEMBERS MEET THE IBC REQUIREMENTS. SUCH CERTIFICATES MUST BE MADE BY AN APPROVED AGENCY OF THE A.P.A.
- GLU-LAMINATED MEMBERS SHALL BE A COMBINATION OF 24F-1.8E-V4 (DF-L) INDUSTRIAL GRADE, AND EXTERIOR GLUE, UNLESS NOTED OTHERWISE ON PLAN.
- ALL SUSPENDED LOADS FROM SUBPURLINS ARE PROHIBITED WITHOUT PRIOR APPROVAL FROM ENGINEER.
- ALL HANGERS, POST CAPS AND BASES ARE BY SIMPSON OR APPROVED EQUIVALENT. PROVIDE SIMPSON (OR APPROVED EQUIVALENT) HANGERS FOR BEAMS, JOISTS, POST BASES AND CAPS FOR COLUMNS UNLESS NOTED ON PLANS AND DETAILS.
- WHERE DIAPHRAGM AND SHEARWALL SHEATHING NAILING IS LESS THAN 3" ON CENTER USE 3x FRAMING AND STAGGER NAILING PER SHEET 50.10 U.O.N.

CONCRETE

- CONCRETE MIXES SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY AND REVIEWED BY THE ENGINEER. MIX DESIGNS SHALL BE SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT.
- AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33. AGGREGATE FOR LIGHTWEIGHT CONCRETE SHALL CONFORM TO ASTM C330. PORTLAND CEMENT SHALL BE TYPE I OR TYPE II AND SHALL CONFORM TO ASTM C150. MINIMUM COARSE AGGREGATE SIZE IS 1/2 INCH (1 1/2" FOR S.O.G.).
- AD MIXTURES MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER SEALING THE MIX DESIGN. ADMIXTURES USED TO INCREASE THE WORKABILITY OF THE CONCRETE SHALL NOT BE CONSIDERED TO REDUCE THE SPECIFIED MINIMUM CEMENT CONTENT. CALCIUM CHLORIDE SHALL NOT BE USED.
- COMPRESSIVE STRENGTHS OF CONCRETE AT 28 DAYS SHALL BE AS FOLLOWS:
 - FOOTINGS AND SLAB ON GRADE: 3000 PSI
 - CONCRETE SLUMP SHALL BE 4 INCHES +/- 1 INCH. EXCEPTION: MIX DESIGNED WITH PLASTICIZER OR WATER REDUCER.
 - MAXIMUM WEIGHT OF NORMAL-WEIGHT CONCRETE SHALL BE 160 PCF AND MAXIMUM WEIGHT OF LIGHT-WEIGHT CONCRETE SHALL BE 115 PCF.
- MIXING, TRANSPORTING, AND PLACING OF CONCRETE SHALL CONFORM TO THE LATEST EDITION OF ACI 304R AND PROJECT SPECIFICATIONS. ALL CONCRETE SURFACES AGAINST WHICH CONCRETE IS TO BE PLACED SHALL BE THOROUGHLY CLEANED. LAITANCE AND STANDING WATER SHALL BE REMOVED.
- ALL REINFORCING BARS, WELDED WIRE FABRIC, ANCHOR BOLTS, EMBEDDED PLATES AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE. PROVIDE STANDARD BAR CHAIRS AND SPACERS AS REQUIRED TO MAINTAIN CONCRETE PROTECTION SPECIFIED. "PULLING-UP" WELDED WIRE FABRIC WITH HOOKS DURING CONCRETE PLACEMENT IS NOT PERMITTED.
- CONCRETE COVER PROTECTION FOR REINFORCEMENT BARS SHALL BE AS FOLLOWS: (SEE ACI 318 SECTION 7.7 FOR CONDITIONS NOT NOTED.)
 - A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
 - B. CONCRETE EXPOSED TO EARTH OR WEATHER: 2"
 - C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: 1 1/2"
 - D. SLABS, WALLS, JOISTS - #11 BARS AND SMALLER: 3/4"
 - E. BEAMS, COLUMNS - TIES, STIRRUPS, SPIRALS: 1 1/2"
- REINFORCING STEEL FOR CONCRETE SHALL BE GRADE 60 OR GRADE 75 AS SPECIFIED AND SHALL CONFORM TO ASTM A615 OR A706 (GRADE 60 ONLY) FOR WELD TYPE REINFORCING STEEL. REINFORCING BARS SHALL NOT BE TACK WELDED, WELDED, HEATED, OR CUT UNLESS INDICATED ON THE CONTRACT DOCUMENTS OR APPROVED BY THE STRUCTURAL ENGINEER.
- WELDING REINFORCEMENT BARS, WHEN APPROVED BY THE STRUCTURAL ENGINEER, SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STANDARD D11.4, LATEST EDITION E70XX. ELECTRODES SHALL BE USED IN WELDING A706 REINFORCING BARS TO STRUCTURAL STEEL.
- DETAILING OF CONCRETE REINFORCEMENT BARS AND ACCESSORIES SHALL CONFORM TO THE RECOMMENDATIONS OF THE LATEST EDITION OF THE ACI 315 DETAILING MANUAL.
- GROUT SHALL BE NON-SHRINKABLE GROUT CONFORMING TO ASTM C1107 AND SHALL HAVE A SPECIFIED COMPRESSIVE STRENGTH AT 28 DAYS OF 5000 PSI. PRE GROUTING OF BASE PLATES WILL NOT BE PERMITTED.
- FORMS FOR CONCRETE SHALL BE LAID OUT AND CONSTRUCTED TO PROVIDE FOR THE REQUIRED CAMBERS/SLOPES. DO NOT REMOVE FORMS OR BRACING UNTIL CONCRETE HAS GAINED THE SPECIFIED 28 DAY STRENGTH OR SURFACING TO CARRY ITS OWN WEIGHT AND SUPERIMPOSED LOADS PER THE APPLICABLE PROVISIONS OF ACI 347.
- CONDUIT OR PIPE SIZE (OD) SHALL NOT EXCEED 30 PERCENT OF SLAB THICKNESS AND SHALL BE PLACED BETWEEN TOP AND BOTTOM REINFORCING, UNLESS SPECIFICALLY DETAILED OTHER OPENINGS ARE PROVIDED.
- PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING. CORING THROUGH CONCRETE IS NOT PERMITTED EXCEPT WHERE SHOWN. NOTIFY THE STRUCTURAL ENGINEER IN ADVANCE OF CONDITIONS NOT SHOWN ON THE DRAWINGS.
- CURE AND PROTECT CONCRETE IMMEDIATELY AFTER PLACEMENT IN ACCORDANCE WITH ACI 308, ACI 305, AND ACI 306. CURING COMPOUNDS USED ON CONCRETE THAT IS TO RECEIVE A RESILIENT TILE FINISH SHALL BE APPROVED BY THE TILE MANUFACTURER BEFORE USE.
- PROVIDE CONSTRUCTION OR SPLIT-ON-GRATE JOINTS IN SLABS ON GRADE AS SHOWN IN TYPICAL DETAILS SO AS TO DIVIDE SLABS INTO APPROXIMATELY RECTANGULAR AREAS NOT OVER 225 SQUARE FEET WITH A RATIO OF LONG TO SHORT SIDES NOT OVER 1.5 AND SPACING NOT EXCEEDING 15'-0" ON CENTER. IN ADDITION, PROVIDE CONTROL JOINTS OFF OF ALL REINTRANSIT CORNERS TO INTERSECTION OF CONTROL JOINTS BEYOND. PROVIDE CONTROL JOINTS TO CONNECT OFFSET COLUMNS, PITS AND OTHER INTERRUPTIONS TO THE SLAB.
- AN INDEPENDENT TESTING AGENCY TO PERFORM FIELD QUALITY CONTROL TEST. PROVIDE FREE ACCESS TO CONCRETE OPERATIONS AT PROJECT SITE AND COOPERATE WITH APPOINTED FIRM. SUBMIT PROPOSED MIX DESIGN OF EACH CLASS OF CONCRETE TO INSPECTION AND TESTING FIRM FOR REVIEW PRIOR TO COMMENCEMENT OF CONCRETE OPERATIONS. COMPRESSIVE STRENGTH TESTS: ASTM C39/C39M. FOR EACH TEST, MOLD, AND CURE THREE CONCRETE TEST CYLINDERS. OBTAIN TEST SAMPLES FOR EVERY 100 CU YD OR LESS OF EACH CLASS OF CONCRETE. TAKE ONE ADDITIONAL THREE TEST CYLINDERS DURING COLD & HOT WEATHER CONCRETING AS DEFINED BY ACI 305 AND ACI 306, CURED ON JOB SITE UNDER SAME CONDITIONS AS CONCRETE IT REPRESENTS. PERFORM ONE SLUMP TEST FOR EACH UNIT OF TEST CYLINDERS TAKEN, FOLLOWING PROCEDURES OF ASTM C143/C143M. PERFORM ONE AIR CONTENT TEST FOR EACH SET OF COMPRESSIVE STRENGTH SPECIMENS, COMPLYING ASTM C231.
- WHERE INDICATED ON THE DRAWINGS, INTENTIONALLY ROUGHENED CONCRETE SHALL BE CLEAN AND FREE OF LAITANCE AND ROUGHENED TO A FULL AMPLITUDE OF 1/4".

SPECIAL INSPECTION

IN ACCORDANCE WITH IBC CHAPTER 17, THE FOLLOWING TYPES OF WORK REQUIRE SPECIAL INSPECTION. SEE THE SPECIFICATIONS AND DRAWINGS FOR ADDITIONAL REQUIREMENTS FOR INSPECTION AND TESTING. SPECIAL INSPECTION SHALL BE PAID FOR AND PROVIDED BY THE OWNER.

MATERIAL	TASK	FREQUENCY		RESPONSIBLE FIRM
		CONTINUOUS	PERIODIC	
EARTHWORK	GRADING, EXCAVATING, & FILL	INSP	-	GEOTECH OF RECORD
	FILL MATERIAL	-	TEST	GEOTECH OF RECORD
	SOIL COMPACTION	-	TEST	GEOTECH OF RECORD
CAST-IN-PLACE CONCRETE	REINFORCING STEEL INCLUDING PRESTRESSING STEEL AND PLACEMENT	-	INSP	SPECIAL INSPECTOR
	USE OF REQUIRED CONCRETE DESIGN MIX	-	INSP	SPECIAL INSPECTOR
	SHAPE, LOCATION, & DIMENSIONS OF CONCRETE MEMBER	-	INSP	SPECIAL INSPECTOR
	BOLTS INSTALLED IN CONCRETE	INSP	-	SPECIAL INSPECTOR
	REINFORCED CONCRETE PLACEMENT	INSP	-	SPECIAL INSPECTOR
	ADHESIVE ANCHORS	INSP	-	SPECIAL INSPECTOR
	EXPANSION ANCHORS	-	INSP	SPECIAL INSPECTOR
	SPECIFIED CURING TECHNIQUES	-	INSP	SPECIAL INSPECTOR
	CONCRETE MATERIALS	-	TEST	TESTING LAB
	ALL SUB-FURLIN HANGERS	-	INSP	SPECIAL INSPECTOR
STRUCTURAL WOOD FRAMING	NAILING < 4" O.C. & STRAPPING OF SHEARWALLS, DIAPHRAGMS, & TOP CHORDS	-	INSP	SPECIAL INSPECTOR
	NAILING, BOLTING, ANCHORING, & FASTENING OF OTHER ELEMENTS	-	INSP	SPECIAL INSPECTOR

- NOTES:
- SPECIAL INSPECTION OF SHOP FABRICATION AND SHOP WELDING SHALL MATCH THE REQUIREMENTS FOR FIELD FABRICATION AND FIELD WELDING. SHOP CERTIFICATION DOCUMENTS ARE REVIEWED AND ACCEPTED BY THE OWNER, IF APPROVED BY THE OWNER, SPECIAL INSPECTION OF SHOP FABRICATION AND SHOP WELDING SHALL NOT BE REQUIRED FOR CERTIFICATES FOR FABRIC BY THE STRUCTURAL STEEL SECTION OF THE GENERAL STRUCTURAL NOTES. EXCEPTIONS: ALL COMPLETE-PENETRATION WELDS ARE REQUIRED TO BE ULTRASONICALLY TESTED BY AN INDEPENDENT TESTING AGENCY.
 - CONTINUOUS INSPECTION REQUIRED FOR WELDING OF REINFORCING STEEL RESISTING FLEXURAL & AXIAL FORCES IN INTERMEDIATE & SPECIAL MOMENT FRAMES. BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALL OF CONCRETE, & SHEAR REINFORCEMENT. PERIODIC INSPECTION IS ACCEPTABLE FOR WELDING OF OTHER REINFORCING STEEL.

STRUCTURAL OBSERVATIONS

IN ACCORDANCE W/ IBC CH 17 & AT THE DIRECTION OF THE ENGINEER OF RECORD, THE FOLLOWING ITEMS REQUIRE PERIODIC STRUCTURAL OBSERVATION. NOTIFY ENGINEER OF RECORD AT LEAST 48 HOURS BEFORE A DESIGNATED WORK IS TO BE COVERED.

ITEM	DESCRIPTION
1. FOUNDATION	REINFORCING STEEL

ENGINEER OF RECORD REVIEWED DOCUMENTS

CONTRACTOR TO SUBMIT THE FOLLOWING BEARING THE SEAL OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT TO ARCHITECT / ENGINEER. SUBMISSION TO THE CITY/JURISDICTION IS NOT REQUIRED.

ITEM
1. CONCRETE MIX DESIGN*

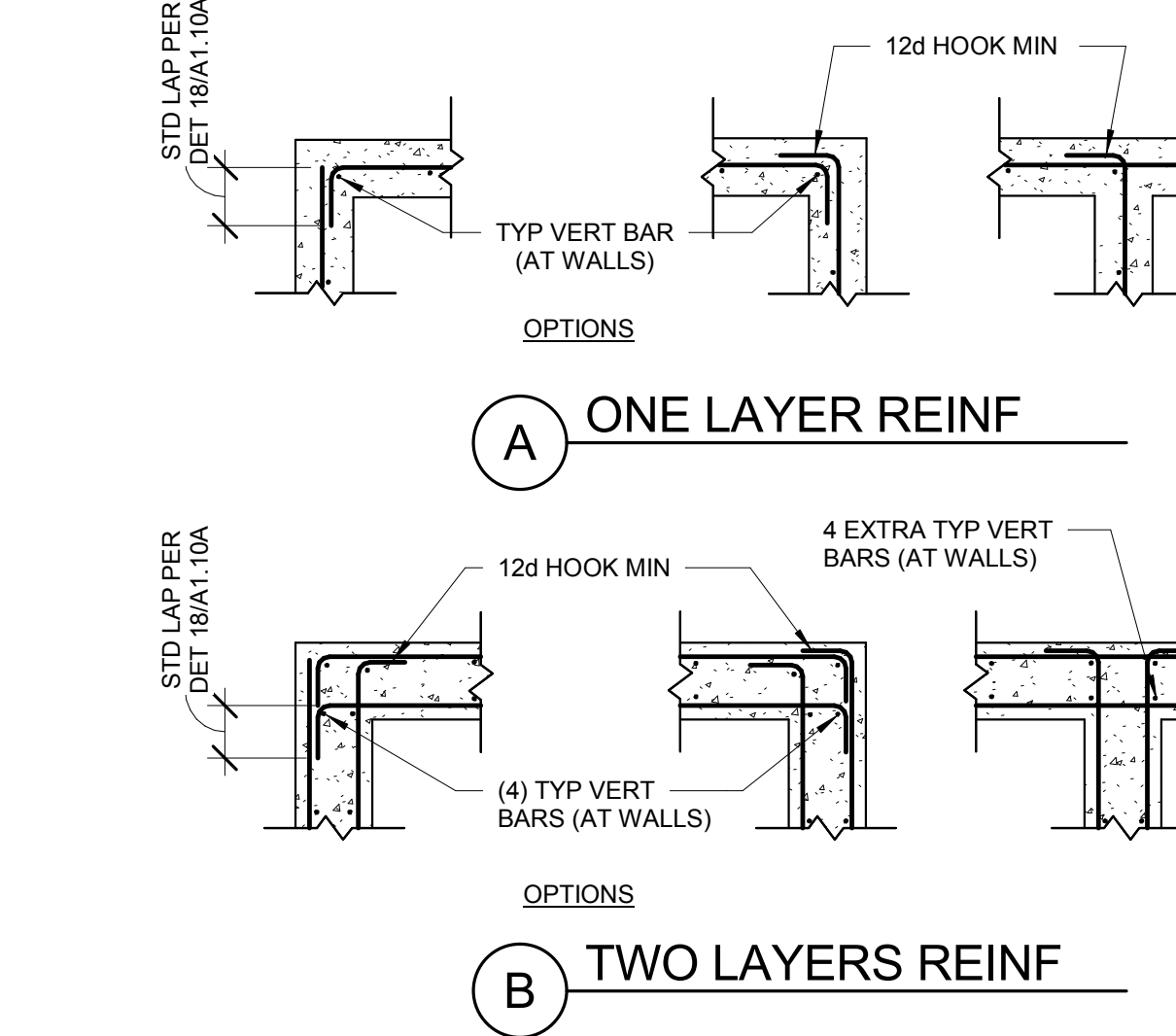
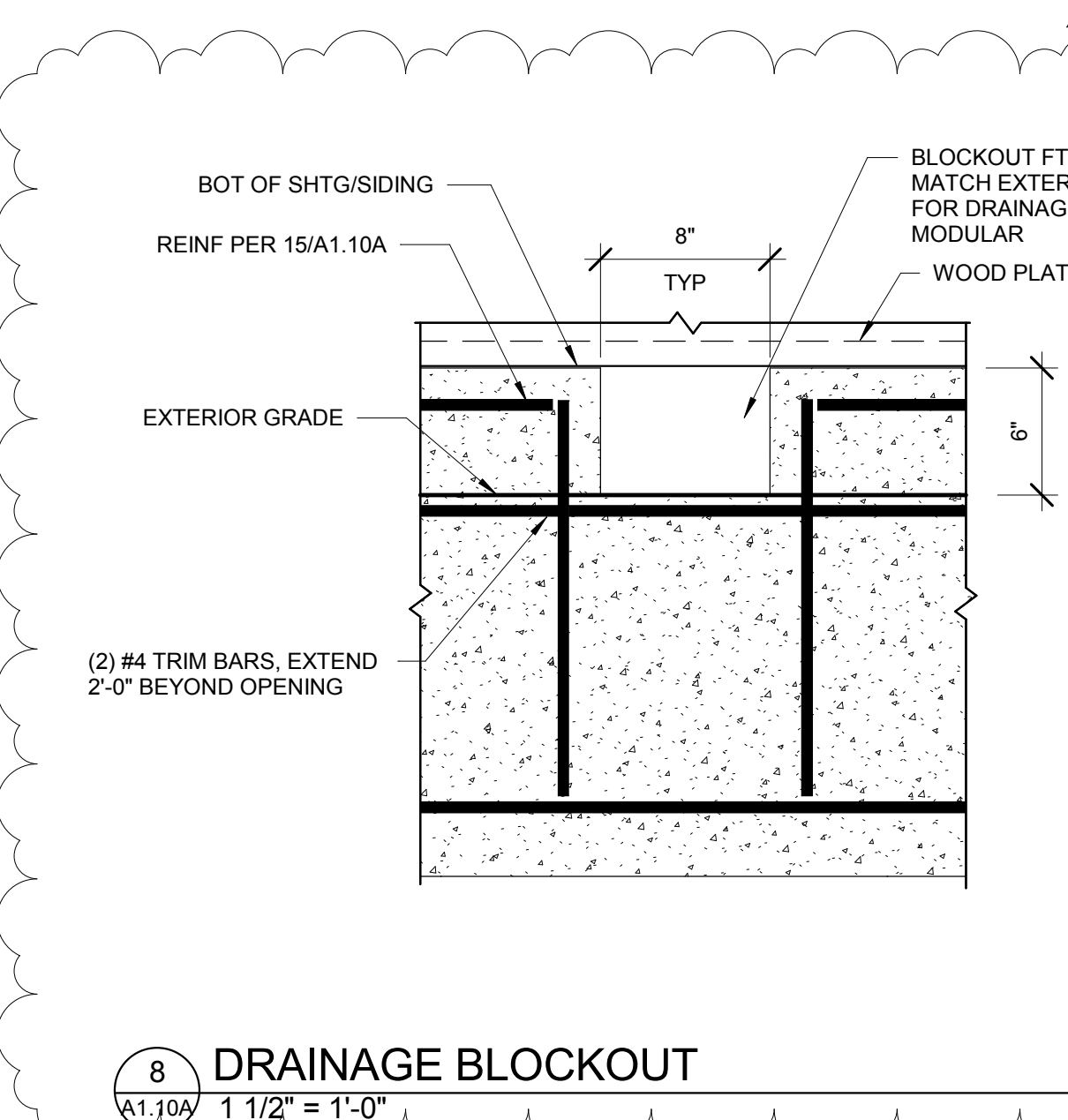
*NOTE: CONCRETE MIX DESIGN(S) REQUIRE AN ENGINEER'S STAMP

STRUCTURAL DEFERRED SUBMITTALS

CONTRACTOR TO SUBMIT DRAWINGS & CALCULATIONS BEARING THE SEAL OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT TO ARCHITECTURE / ENGINEER BEFORE SUBMITTING TO JURISDICTION FOR REVIEW & PERMITTING

ITEM
1. DESIGN-BUILD STAIRS

*NOTE: CONCRETE MIX DESIGN(S) REQUIRE AN ENGINEER'S STAMP BUT DOES NOT NEED TO BE SUBMITTED TO JURISDICTIONS



13 REINF AT CONC WALL & FTG INTERSECTIONS

1 1/2\"/>

BAR	CONCRETE LAP SPLICES					
	LENGTH (U.O.N.) IN INCHES					
	F _c = 3000 PSI		F _c = 4000 PSI		F _c = 5000 PSI	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	36	21	33	19	29	17
#4	50	29	43	25	39	23
#5	61	36	55	32	48	28
#6	73	43	63	37	56	33
#7	107	63	93	55	83	49
#8	122	72	105	62	93	55
#9	137	81	120	71	107	63

NOTES:

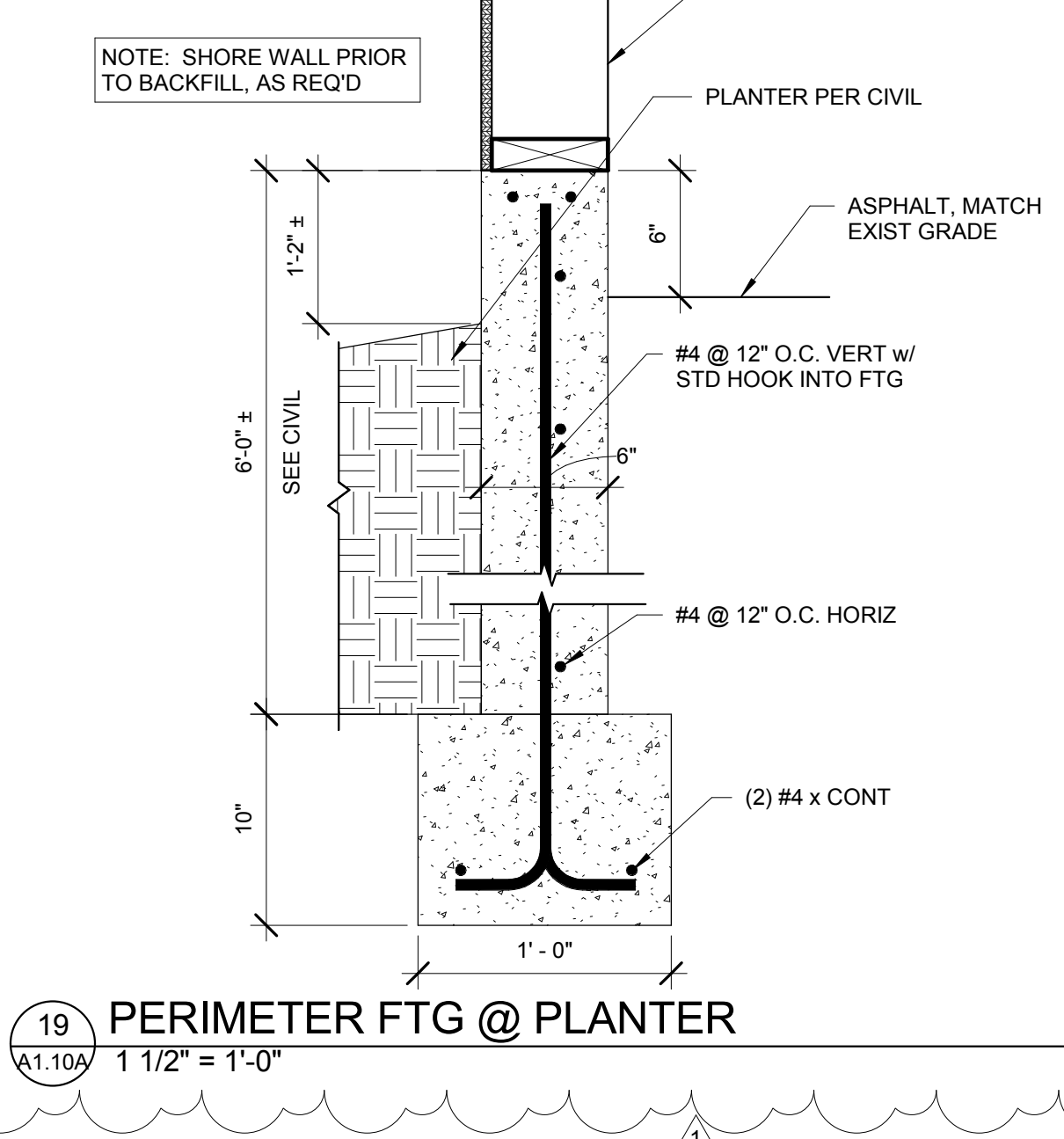
- WHEN TWO BAR SIZES ARE SPLICED, USE LAP LENGTH FOR SMALLER BAR.
- TABLE IS FOR CLASS B SPLICES.
- TABLE DOES NOT APPLY TO SPLICES WITH EPOXY-COATED BARS.
- FOR LIGHTWEIGHT CONCRETE MULTIPLY VALUES BY 1.3.
- YIELD STRENGTH OF THE STEEL BARS IS ASSUMED TO BE 60,000 PSI.
- TOP BARS ARE DEFINED AS HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST BELOW THE BARS.
- SEE DRAWINGS FOR EXCEPTIONAL CASES.
- AT CONTRACTOR'S OPTION, USE MECHANICAL COUPLERS PER 1350.10 TO REDUCE CONGESTION.

18 TYPICAL LAP SPLICE - CONCRETE

1 1/2\"/>

14 INTERIOR FOOTING

1 1/2\"/>

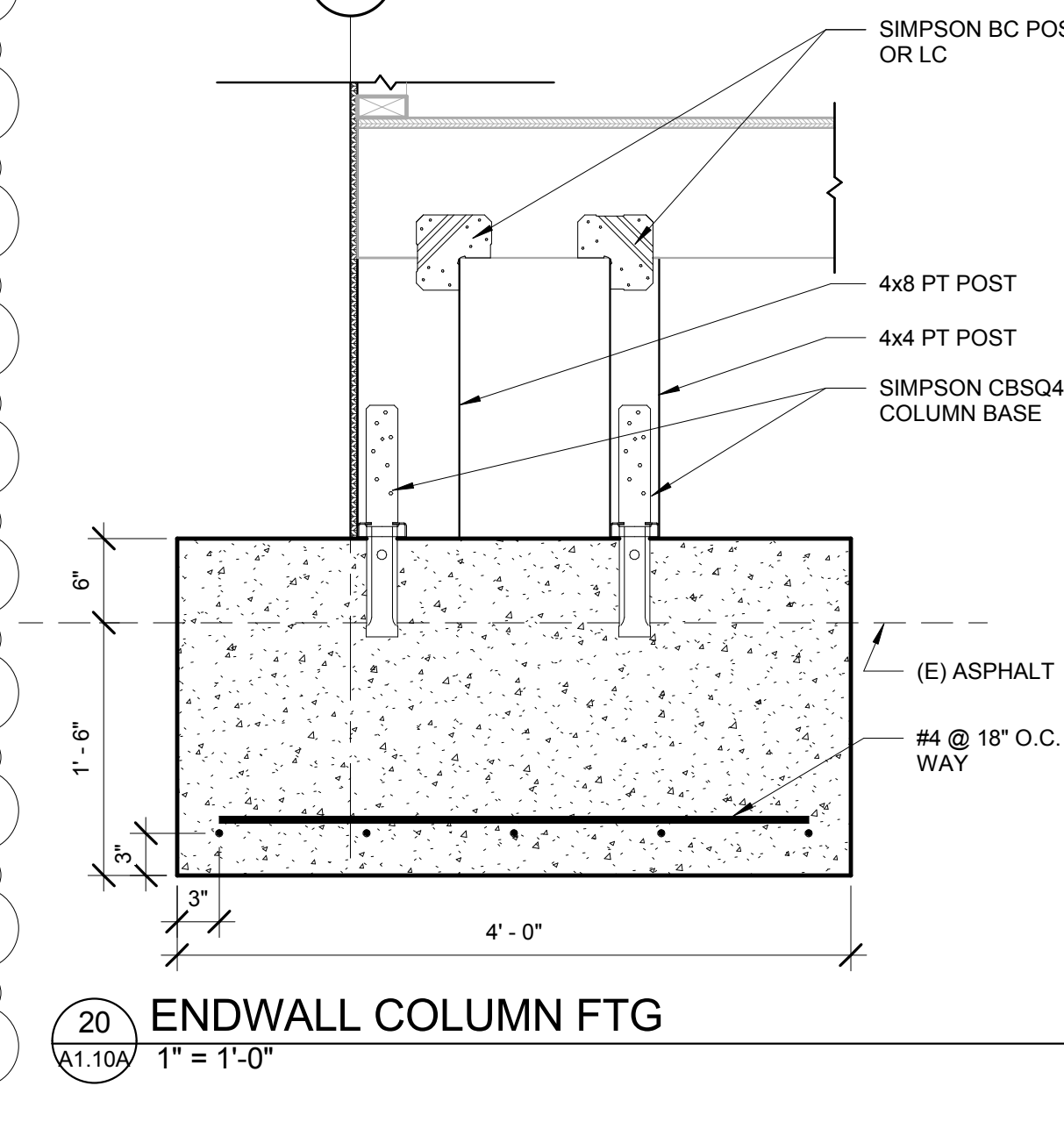


19 PERIMETER FTG @ PLANTER

1 1/2\"/>

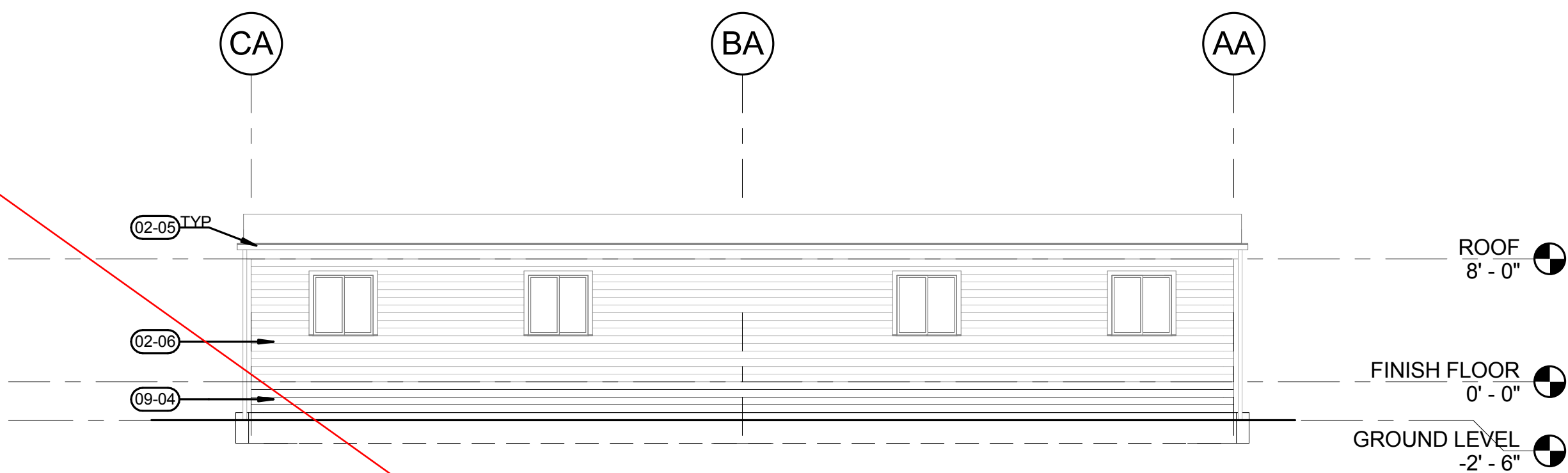
15 PERIMETER FOOTING

1\"/>

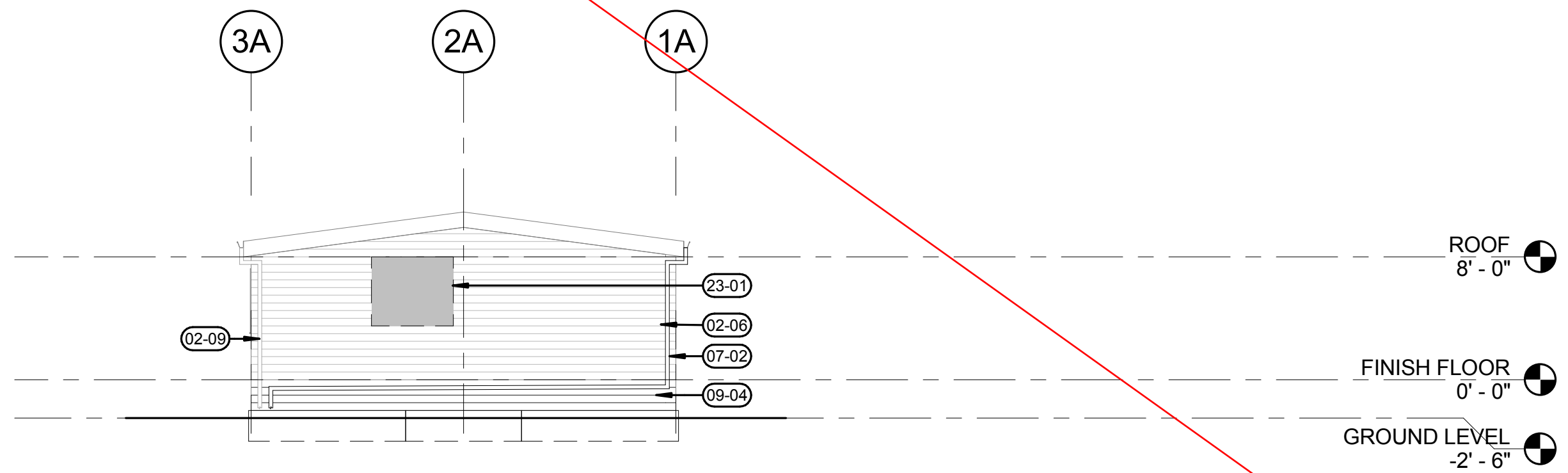


20 ENDWALL COLUMN FTG

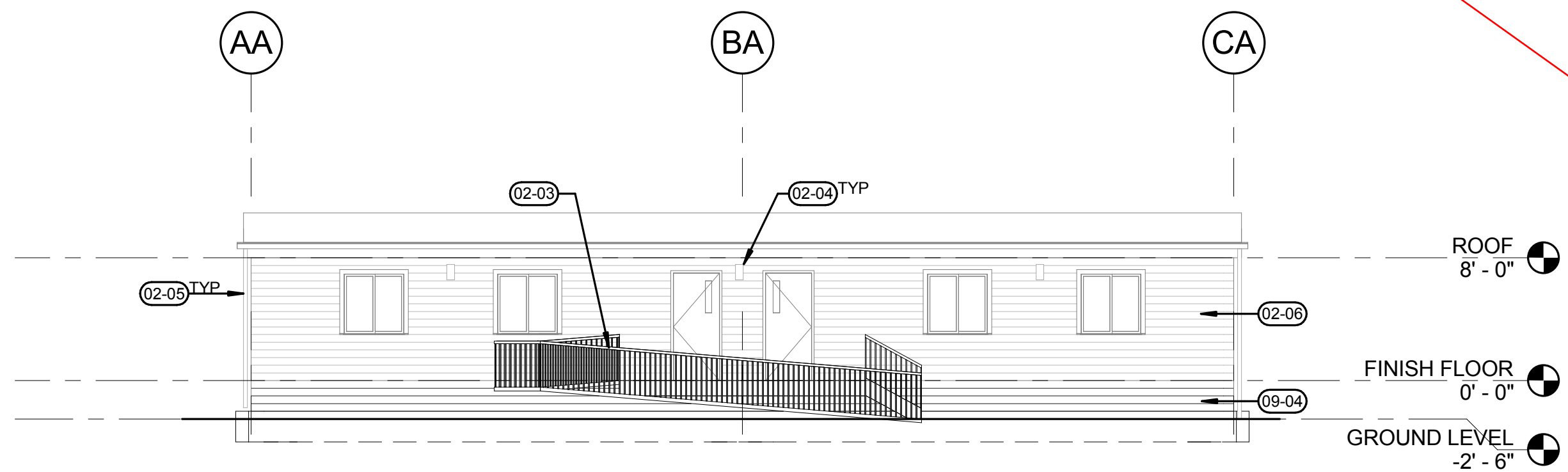
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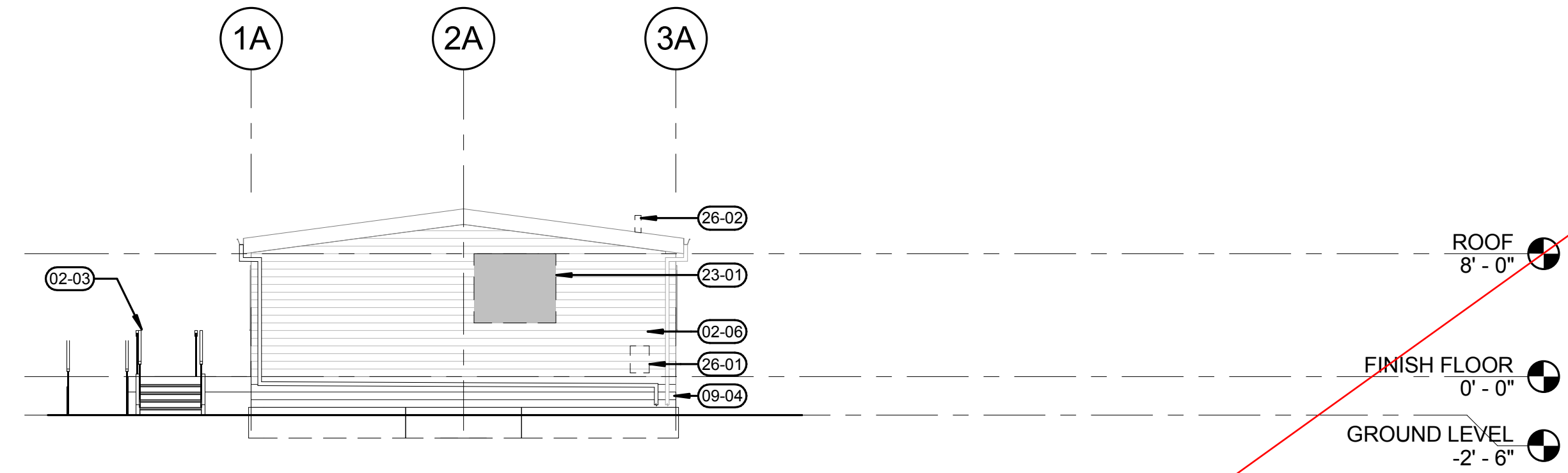
1 PORTABLE A - NORTH ELEVATION
A1.11A 1/8" = 1'-0"



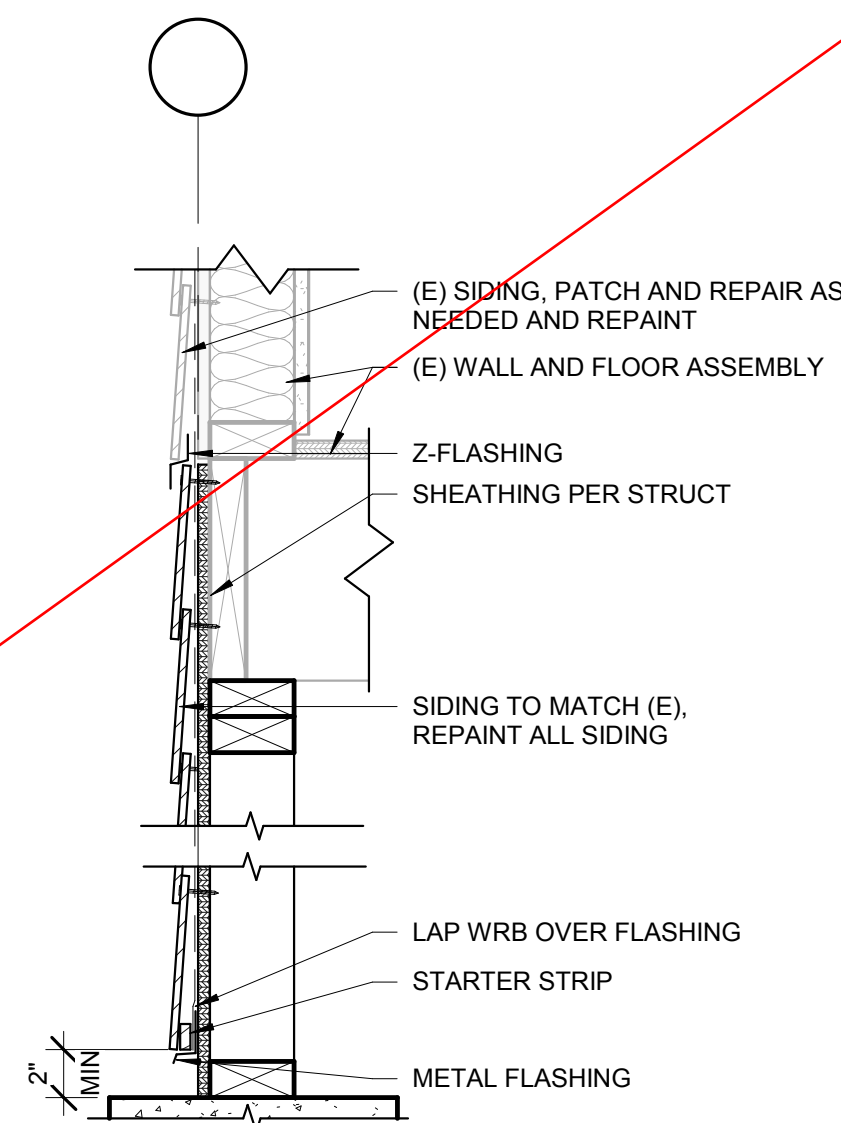
2 PORTABLE A - WEST ELEVATION
A1.11A 1/8" = 1'-0"



3 PORTABLE A - SOUTH ELEVATION
A1.11A 1/8" = 1'-0"

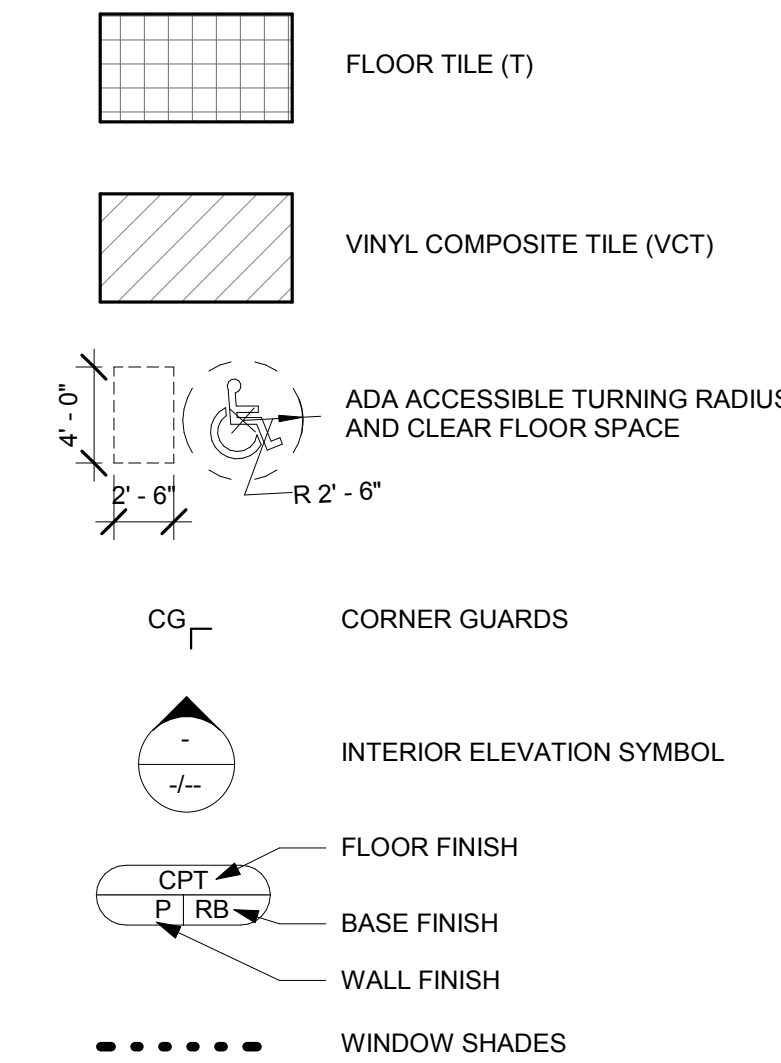


4 PORTABLE A - EAST ELEVATION
A1.11A 1/8" = 1'-0"



7 WALL DETAIL
A1.11A 1 1/2" = 1'-0"

LEGEND



SCHEDULE OF INTERIOR FINISHES

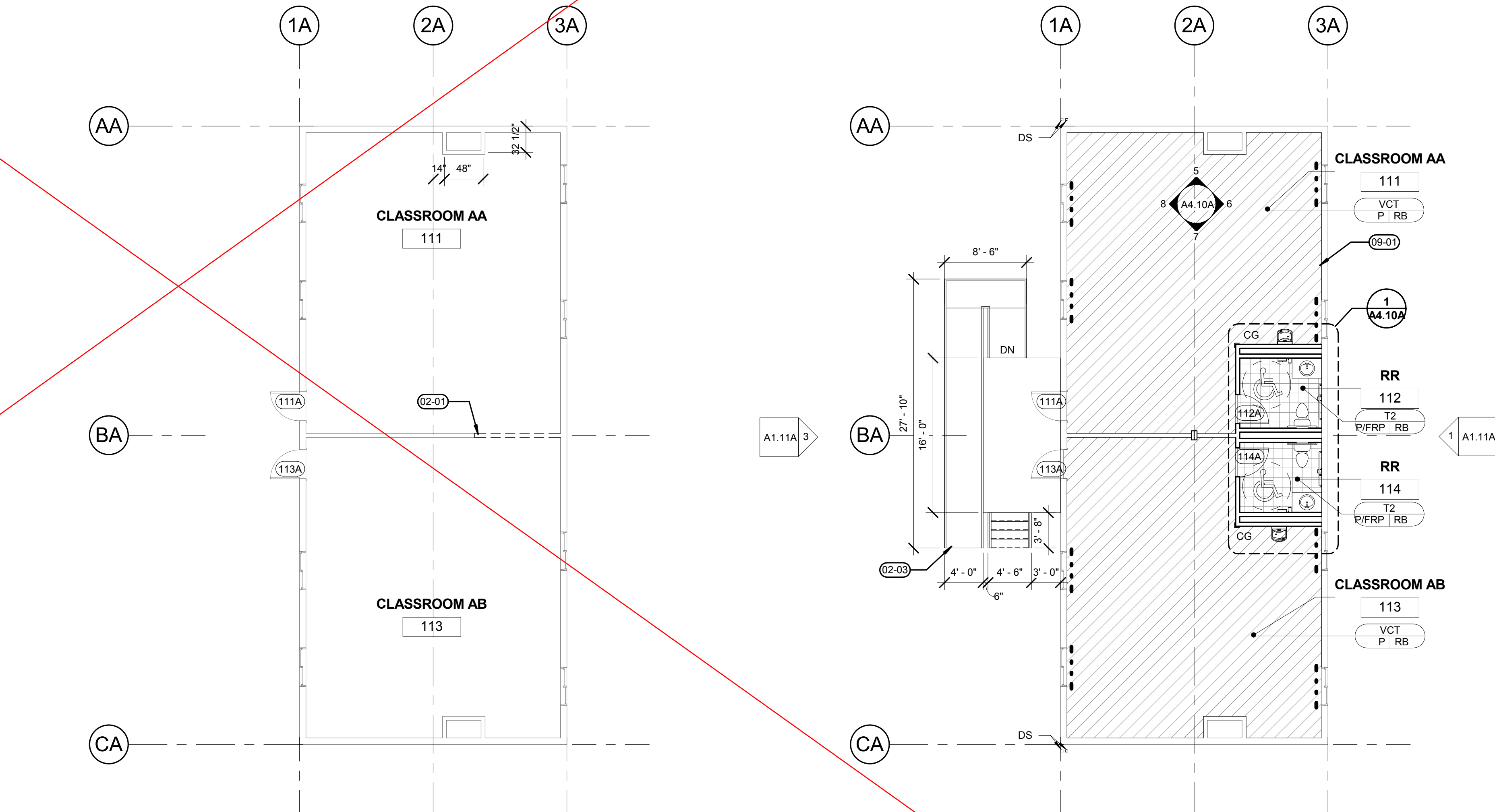
SECTION 09 30 13 - CERAMIC TILING
T1 (RESTROOM FLOOR TILE) BALTILE, PLAZA NOVA, 12"x12", GRAY FOG PN88
T2 (RESTROOM WALL TILE) SEMI-GLOSS, GLAZED TILE, 6"x6", 0147 PEPPER WHITE - **ADD ALTERNATE #2**
GROUT COLOR: LATIOPRETE PERMACOLOR 88 SILVER SHADOW
METAL TRANSITION STRIP: TBD
SECTION 09 51 00 - SUSPENDED ACOUSTICAL CEILINGS
AC1 (ACOUSTICAL TILE); REPLACE DAMAGED TILES AS NEEDED TO MATCH (E)
SECTION 09 65 00 - RESILIENT FLOORING
RB (RUBBER BASE); FLEXCO WALLFLOWERS 4" H COVE RUBBER BASE, TS-01 BLACK DAHLIA
VCT (VINYL COMPOSITE TILE); ARMSTRONG, STANDARD EXCELON, IMPERIAL, TEXTURE, 51904 STERLING
SECTION 09 77 33 - GLASS FIBER REINFORCED PLASTIC PANELS
FRP (FIBER REINFORCED PLASTIC); PANOLAM FRP, SMOOTH WHITE
SECTION 09 91 23 43 - INTERIOR PAINTING
P1 (GENERAL PAINT) OC-65 CHANTILLY LACE, GLOSS LEVEL 5
P2 (INTERIOR HOLLOW METAL DOOR FRAMES) T/M TIMELY SC103 BLACK
P3 (EXTERIOR HOLLOW METAL DOOR AND FRAMES) REPAINT, MATCH (E) DOOR COLOR, GLOSS LEVEL 5
SECTION 21 26 01 - WALL AND CORNER GUARDS
CG (CORNER GUARDS) CS ACROVYN, FS-20N, STAINLESS STEEL
SECTION 12 21 13 - WINDOW SHADES
SW MECHOSHADE, ECOVEIL 1550 SERIES, 3% OPENNESS, COLOR: 1563 GREY

GENERAL NOTES

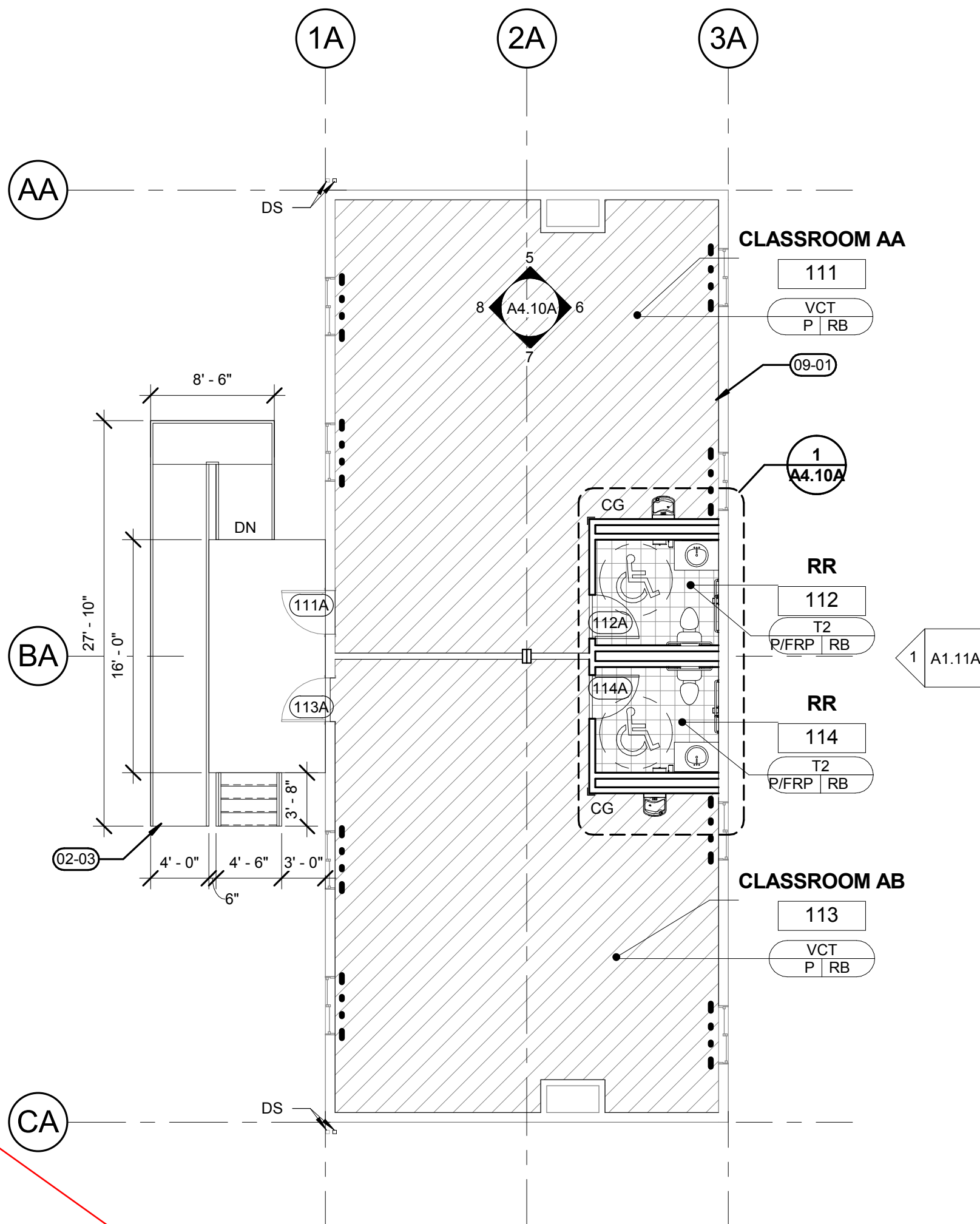
- A. SEE ARCHITECTURAL GENERAL NOTES ON A0.01 FOR ADDITIONAL INFORMATION.
B. SEE A0.01A FOR WALL TYPES
C. SEE FINISH PLAN FOR CASEWORK AND RELATED FINISH INFORMATION
D. REPAIR/PATCH/REPLACE ALL DAMAGED EXTERIOR BUILDING COMPONENTS INCLUDING BUT NOT LIMITED TO: GUTTERS, SIDING, DOORS, DOOR FRAMES, WINDOWS, WINDOW FRAMES, ROOFING, AND LIGHTING.
E. REPLACE ALL DAMAGED ACOUSTICAL CEILING TILES.

KEYNOTES

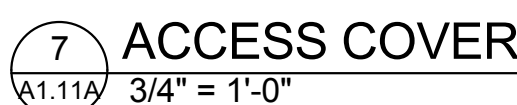
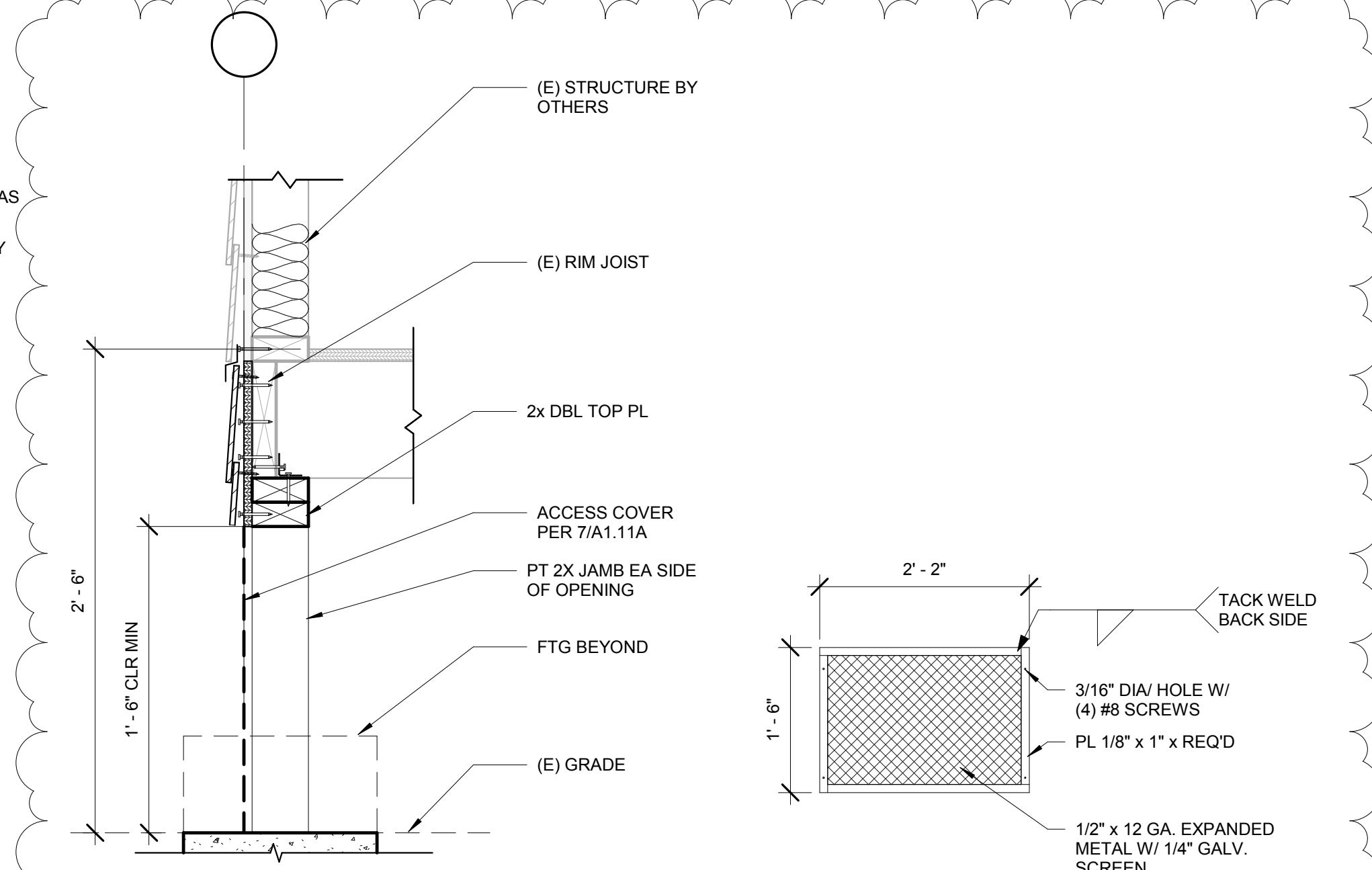
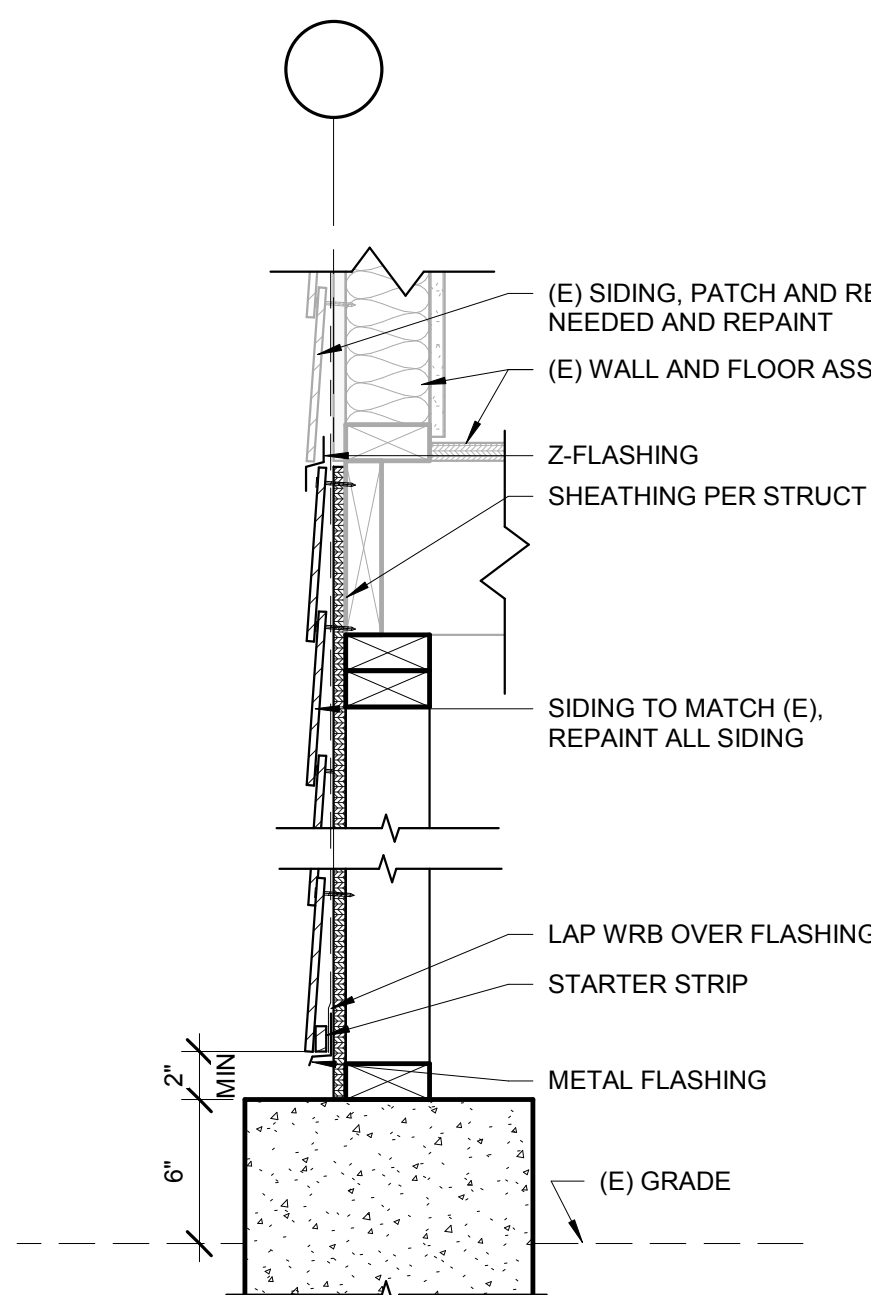
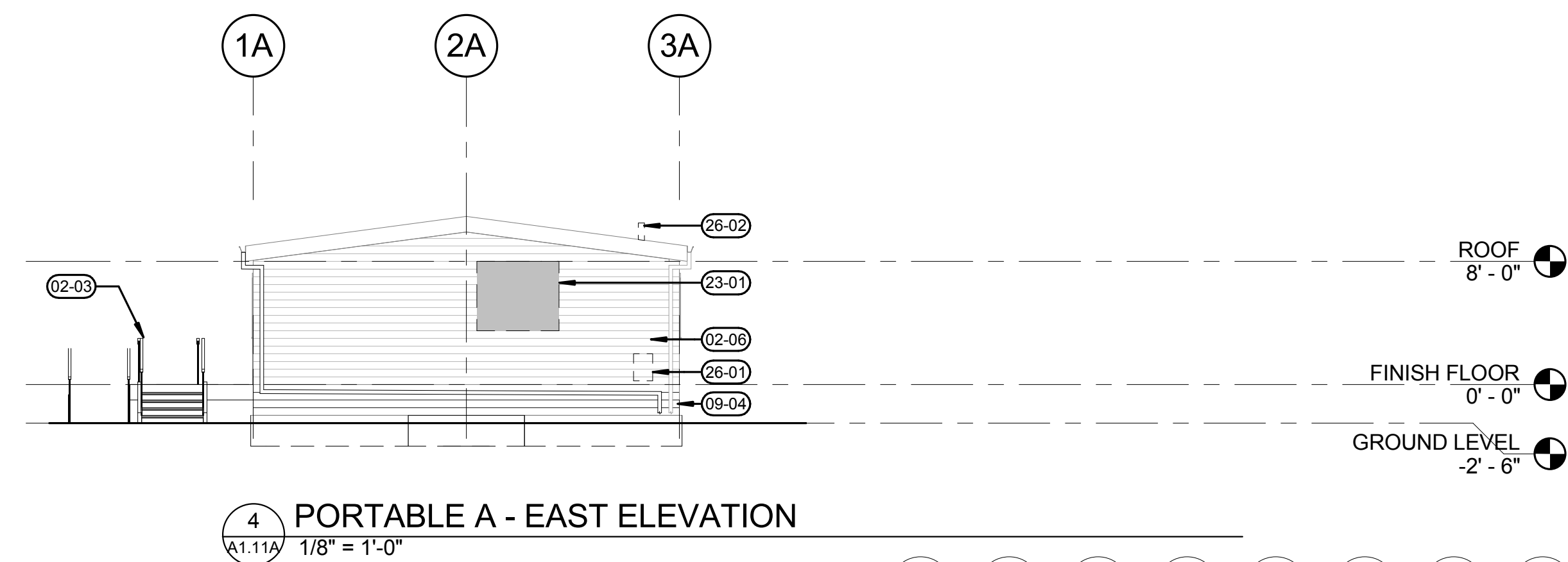
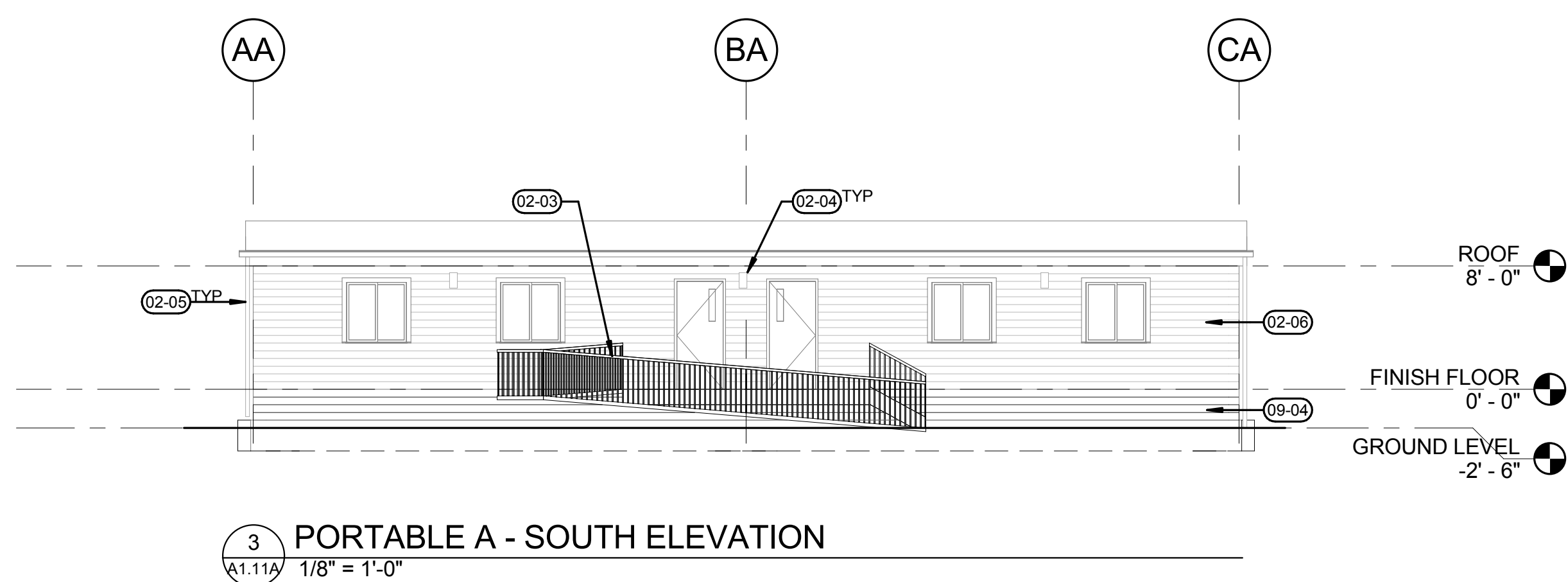
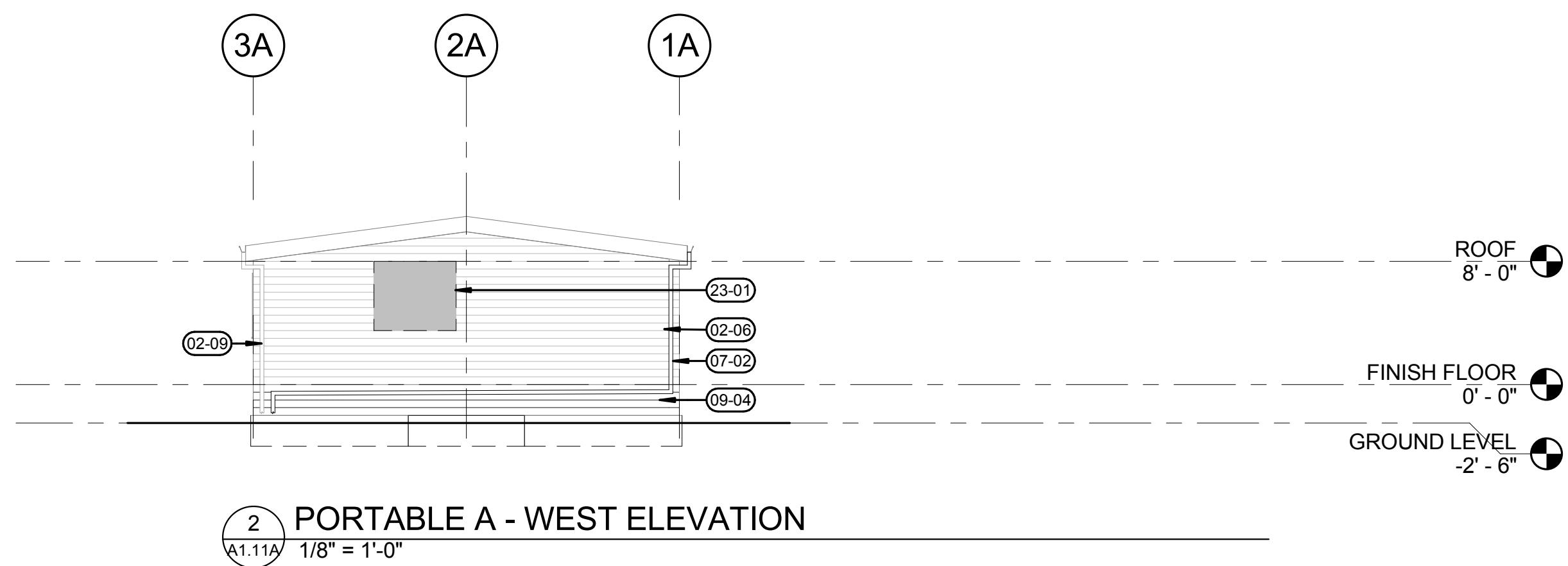
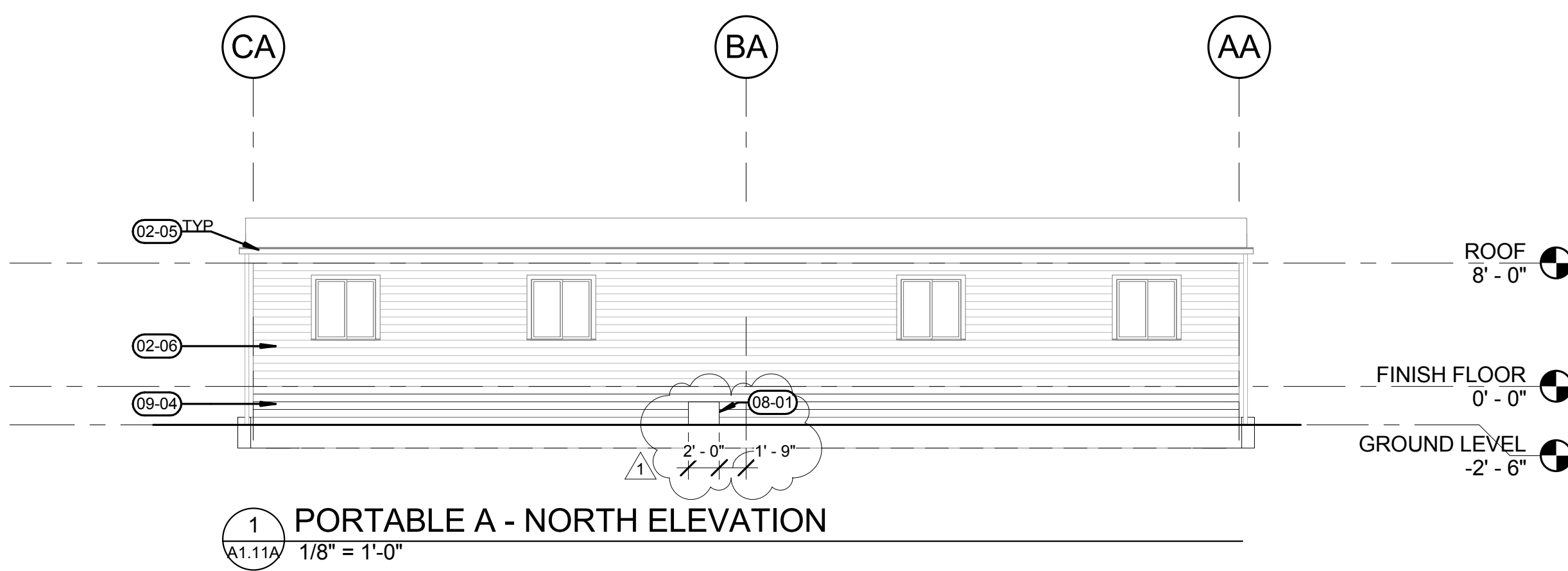
- 02-01 REMOVE PORTION OF EXISTING WALL, COORDINATE LOCATION AND EXTENT WITH ARCHITECTURAL PLAN. PATCH ADJACENT WALL SURFACES AS REQUIRED.
02-03 REINSTALL EXISTING PREMANUFACTURED RAMP AND STAIR, TO MEET ALL FEDERAL ADA REQUIREMENTS AND PROVIDE TWO HANDRAILS EACH SIDE TO MEET PORTLAND AND PUBLIC SCHOOLS ELEMENTARY SCHOOL ADA STANDARDS
02-04 EXISTING LIGHT FIXTURE TO REMAIN
02-05 EXISTING GUTTER TO REMAIN - PATCH AND REPLACE AS NEEDED
02-06 PATCH AND REPAIR EXISTING SIDING AS NEEDED, PATCH PAINT AS NEEDED
02-09 EXISTING DOWNSPOUT TO REMAIN - PATCH AND REPLACE AS NEEDED
07-02 NEW DOWNSPOUT - TERMINATE IN PLANTER
09-01 NEW PAINT THROUGHOUT, COLOR PER FINISH SCHEDULE.
09-04 SIDING TO MATCH (E), PAINT TO MATCH (E) - SEE DETAIL, S/A1.11
23-01 HEAT PUMP - SEE MECHANICAL
26-01 METER LOCATION, SEE ELECTRICAL
26-02 WEATHERHEAD LOCATION, SEE ELECTRICAL



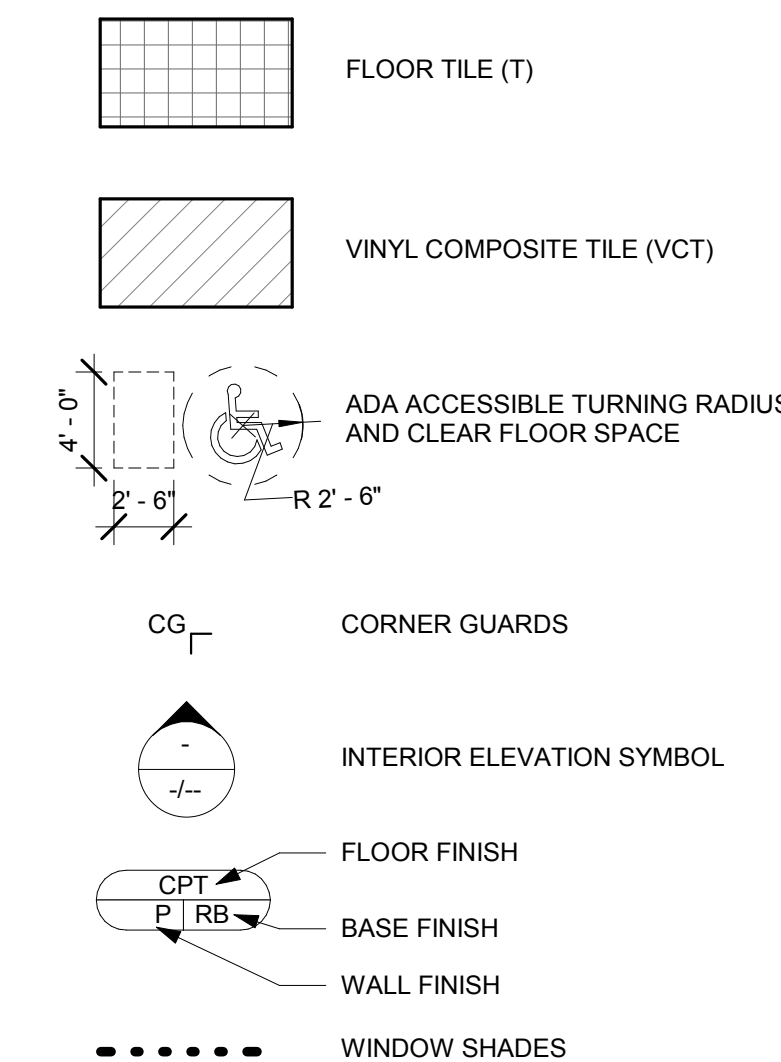
5 FLOOR PLAN - EXISTING
A1.11A 1/8" = 1'-0"



6 FLOOR PLAN - NEW
A1.11A 1/8" = 1'-0"



LEGEND



SCHEDULE OF INTERIOR FINISHES

SECTION 09 30 13 - CERAMIC TILING
T1 (RESTROOM FLOOR TILE) DALTILE, PLAZA NOVA, 12"x12", GRAY FOG PN88
T2 (RESTROOM WALL TILE) SEMI-GLOSS, GLAZED TILE, 6"x6", 0147 PEPPER WHITE - **ADD ALTERNATE #2**

GROUT COLOR: LATICRETE PERMACOLOR 88 SILVER SHADOW
METAL TRANSITION STRIP: T80

SECTION 09 51 00 - SUSPENDED ACOUSTICAL CEILINGS
AC1 (ACOUSTICAL TILE); REPLACE DAMAGED TILES AS NEEDED TO MATCH (E)

SECTION 09 65 00 - RESILIENT FLOORING
RB (RUBBER BASE); FLEXCO WALLFLOWERS 4" H COVE RUBBER BASE, TS-01 BLACK DAHLIA
VCT (VINYL COMPOSITE TILE); ARMSTRONG, STANDARD EXCELON, IMPERIAL, TEXTURE, 51904 STERLING

SECTION 09 77 33 - GLASS FIBER REINFORCED PLASTIC PANELS
FRP (FIBER REINFORCED PLASTIC); PANOLAM FRP, SMOOTH WHITE

SECTION 09 91 23 43 - INTERIOR PAINTING
P1 (GENERAL PAINT) OC-65 CHANTILLY LACE, GLOSS LEVEL 5
P2 (INTERIOR HOLLOW METAL DOOR FRAMES) T/M TIMELY SC103 BLACK
P3 (EXTERIOR HOLLOW METAL DOOR AND FRAMES) REPAINT, MATCH (E) DOOR COLOR, GLOSS LEVEL 5

SECTION 21 26 01 - WALL AND CORNER GUARDS
CG (CORNER GUARDS) CS ACROVYN, FS-20N, STAINLESS STEEL

SECTION 12 21 13 - WINDOW SHADES
SW (MECHOSHADE, ECOVEIL 1550 SERIES, 3% OPENNESS, COLOR: 1563 GREY)

GENERAL NOTES

- A. SEE ARCHITECTURAL GENERAL NOTES ON A0.01 FOR ADDITIONAL INFORMATION.
B. SEE A0.01A FOR WALL TYPES
C. SEE FINISH PLAN FOR CASEWORK AND RELATED FINISH INFORMATION
D. REPAIR/PATCH/REPLACE ALL DAMAGED EXTERIOR BUILDING COMPONENTS INCLUDING BUT NOT LIMITED TO: GUTTERS, SIDING, DOORS, DOOR FRAMES, WINDOWS, WINDOW FRAMES, ROOFING, AND LIGHTING.
E. REPLACE ALL DAMAGED ACOUSTICAL CEILING TILES.

KEYNOTES

- 02-01 REMOVE PORTION OF EXISTING WALL. COORDINATE LOCATION AND EXTENT WITH ARCHITECTURAL PLAN. PATCH ADJACENT WALL SURFACES AS REQUIRED.
02-03 REINSTALL EXISTING PREMANUFACTURED RAMP AND STAIR TO MEET ALL FEDERAL ADA REQUIREMENTS AND PROVIDE TWO HANDRAILS EACH SIDE TO MEET PORTLAND PUBLIC SCHOOLS ELEMENTARY SCHOOL ADA STANDARDS
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02-06 PATCH AND REPAIR EXISTING SIDING AS NEEDED, PATCH PAINT AS NEEDED
02-09 EXISTING DOWNSPOUT TO REMAIN - PATCH AND REPLACE AS NEEDED
07-02 NEW DOWNSPOUT ~ TERMINATE IN PLANTER
07-03 ENSURE (2) LAYERS OF TYPE X GYPSUM BOARD TO ACHIEVE 1-HR FIRE RATING
08-01 1'-6" X 2'-0" W ACCESS COVER
09-01 NEW PAINT THROUGHOUT. COLOR PER FINISH SCHEDULE. SIDING TO MATCH (E), PAINT TO MATCH (E) ~ SEE DETAIL 5/A1.11
09-04 HEAT PUMP - SEE MECHANICAL
23-01 METER LOCATION. SEE ELECTRICAL
26-01 WEATHERHEAD LOCATION. SEE ELECTRICAL
26-02



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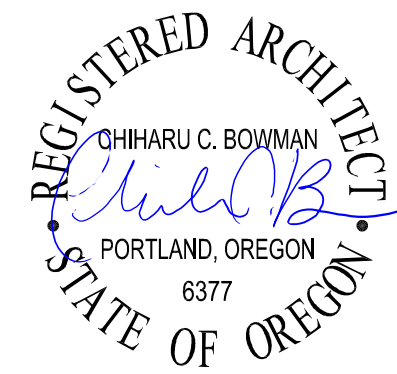
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**Portland Public
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District #1J**

Project

**PPS - Cesar Chavez
School Modular
Relocation**
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Revision Schedule

Revision Delta	Issue Date
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SHEET TITLE:

ROOF PLAN

DRAWN BY: MHB

CHECKED BY: CCB

SHEET

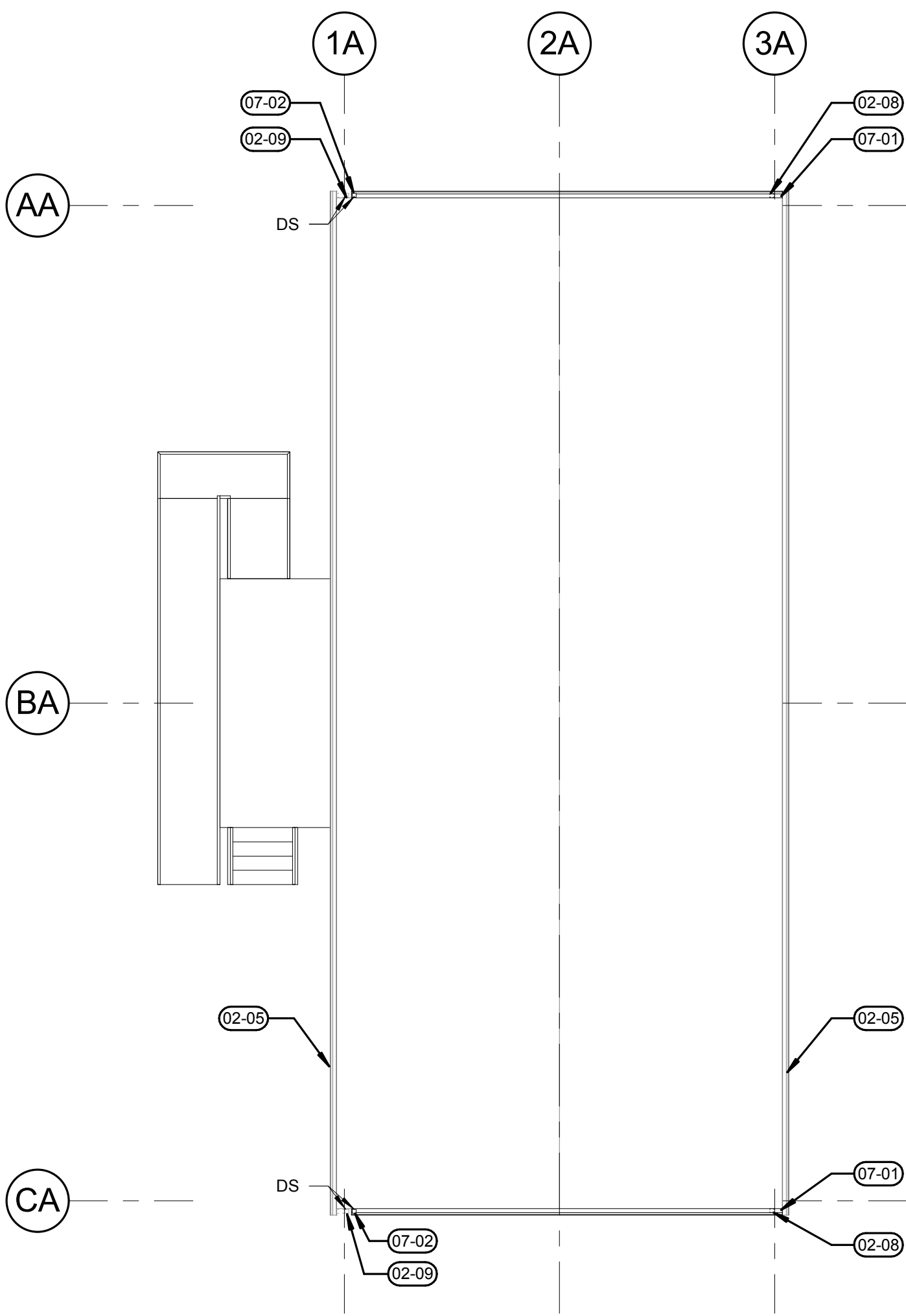
A1.12A

JOB NO.

2170276.00

PERMIT/BID SET 4/24/18

C:\Users\mhb\Documents\Revit Projects\CURRENT PROJECTS\PPS Modular\276-PPS_Modulars-L.rvt 4/23/2018 5:54:02 PM 1/8" = 1'-0"



KEYNOTES

- 02-05 EXISTING GUTTER TO REMAIN - PATCH AND REPLACE AS NEEDED
- 02-08 REMOVE EXISTING DOWNSPOUT
- 02-09 EXISTING DOWNSPOUT TO REMAIN - PATCH AND REPLACE AS NEEDED
- 07-01 NEW GUTTER – CONNECT WITH EXISTING AT CORNER
- 07-02 NEW DOWNSPOUT – TERMINATE IN PLANTER

1 ROOF PLAN
A1.12A 1/8" = 1'-0"

09-03	CERAMIC FLOOR TILE (T1)
09-05	FRP TO 6'-0" AFF
10-01	PAPER TOWEL DISPENSER -- SEE DETAIL J16/A0.01
10-03	SOAP DISPENSER -- SEE DETAIL J16/A0.01
10-04	SEAT COVER DISPENSER -- SEE DETAIL J16/A0.01
10-05	GRAB BARS -- SEE DETAILS G AND H16/A.01
10-06	MIRROR, SEE DETAIL C16/A0.01
10-07	MARKER BOARD, MAGNETIC, ENSURE ADEQUATE BACKING IS PROVIDED -- SEE SPECS
10-08	CORNER TACK BOARD, ENSURE ADEQUATE BACKING IS PROVIDED -- SEE SPECS
22-01	ACCESSIBLE DRINKING FOUNTAIN

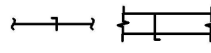


MECHANICAL ABBREVIATIONS AND SYMBOLS LIST

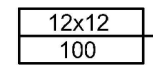
Abbreviations

AFF	ABOVE FINISHED FLOOR
AD	ACCESS DOOR
A/C	AIR CONDITION(ED)
BDD	BACKDRAFT DAMPER
BFP	BACKFLOW PREVENTER
BFF	BELOW FINISHED FLOOR
BHP	BRAKE HORSEPOWER
CD	CEILING DIFFUSER
COP	COEFFICIENT OF PERFORMANCE
CD	CONDENSATE DRAIN
CONT.	CONTINUATION
CFM	CUBIC FEET PER MINUTE
DIA	DIAMETER
DX	DIRECT EXPANSION
D	DROP
DB	DRY BULB
EFF	EFFICIENT
ELECT	ELECTRICAL
EER	ENERGY EFFICIENCY RATING
EAT	ENTERING AIR TEMPERATURE
EXH	EXHAUST
EF	EXHAUST FAN
F	FAHRENHEIT
FT	FEET
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
HP	HEAT PUMP
HTR	HEATER
HTG	HEATING
HP	HORSEPOWER
HWC	HOT WATER COIL
IN	INCHES
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
KW	KILOWATT
MAX	MAXIMUM
MIN	MINIMUM
MA	MIXED AIR
MD	MOTORIZED DAMPER
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NO	NUMBER
OC	ON CENTER
OBD	OPPOSED BLADE DAMPER
OA	OUTSIDE AIR
OD	OUTSIDE DIAMETER
PH	PHASE
LBS.	POUNDS
PSI	POUNDS PER SQUARE INCH
PD	PRESSURE DROP
PRV	PRESSURE REDUCING VALVE
QTY	QUANTITY
RET	RETURN
RA	RETURN AIR
RPM	REVOLUTIONS PER MINUTE
R	RISE
SEER	SEASONAL ENERGY EFFICIENCY RATING
SH	SENSIBLE HEAT
SOV	SHUT OFF VALVE
SF	SQUARE FEET
SP	STATIC PRESSURE
SA	SUPPLY AIR
T, TEMP	TEMPERATURE
TD	TEMPERATURE DIFFERENCE
MBH	THOUSAND BTUS PER HOUR
TH	TOTAL HEAT
TP	TOTAL PRESSURE
V	VOLT
WC	WATER COLUMN
W	WATT
W/	WITH
W/O	WITHOUT

Dampers

 VOLUME DAMPER

Diffusers and Grilles

 CD-1
100 DIFFUSER OR GRILLE IDENTIFICATION

 EXHAUST AIR

 RETURN AIR

 SUPPLY AIR

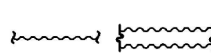
Ductwork Fittings

 ACOUSTICALLY LINED DUCT (SIZES SHOWN ARE NET INSIDE)

 CONCENTRIC SQUARE TO ROUND

 CONCENTRIC TRANSITION, RECTANGULAR OR ROUND

 ECCENTRIC TRANSITION, RECTANGULAR OR ROUND

 FLEX DUCT

 MITERED ELBOW WITH TURNING VANES

 NON-SYMMETRICAL WYE

 RECTANGULAR MAIN WITH RECTANGULAR BRANCH

 RECTANGULAR MAIN WITH ROUND BRANCH

 RECTANGULAR OFFSET LESS THAN 15% d

 RECTANGULAR OFFSET MORE THAN 15% d

 ROUND DUCT DROP

 ROUND DUCT RISER

 ROUND DUCT WITH ROUND BRANCH

 ROUND WYE

 SYMMETRICAL WYE



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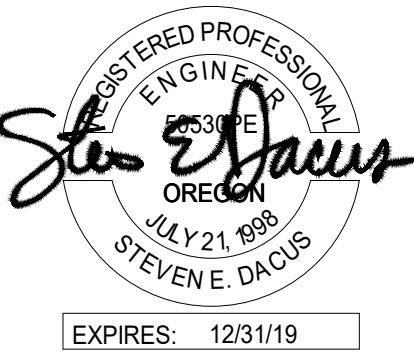
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Revision Schedule

Revision Delta Issue Date


FAN SCHEDULE-CHAVEZ ES

SYMBOL	LOCATION	AREA SERVED	BASIS OF DESIGN		TYPE	DRIVE	AIR FLOW (CFM)	ESP (IN H2O)	MAX RPM	SOUNDS SONES	ELECTRICAL			CONTROLS REF	MAX WT (LBS)	COMMENTS
			MFR	MODEL							VOLTS	PH	MHP (W)			
CEF-1C	CHAVEZ RR	CHAVEZ RR	GREENHECK	SP	CEILING	DIRECT	75	0.375	700	.15	115	1	128	OCC. SENSOR	20	ROUND DISCHARGE, OCC. SENSOR
CEF-2C	CHAVEZ RR	CHAVEZ RR	GREENHECK	SP	CEILING	DIRECT	75	0.375	700	.15	115	1	128	OCC. SENSOR	20	ROUND DISCHARGE, OCC. SENSOR

SHEET INDEX

M0.01A SYMBOLS LISTS AND GENERAL NOTES - MECHANICAL

M1.11A FLOOR PLAN - BUILDING A - MECHANICAL

PROJECT 2018-0051
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PERMIT/BID SET 4/24/18

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SHEET TITLE:

SYMBOLS
LISTS AND
GENERAL
NOTES -
MECHANICAL

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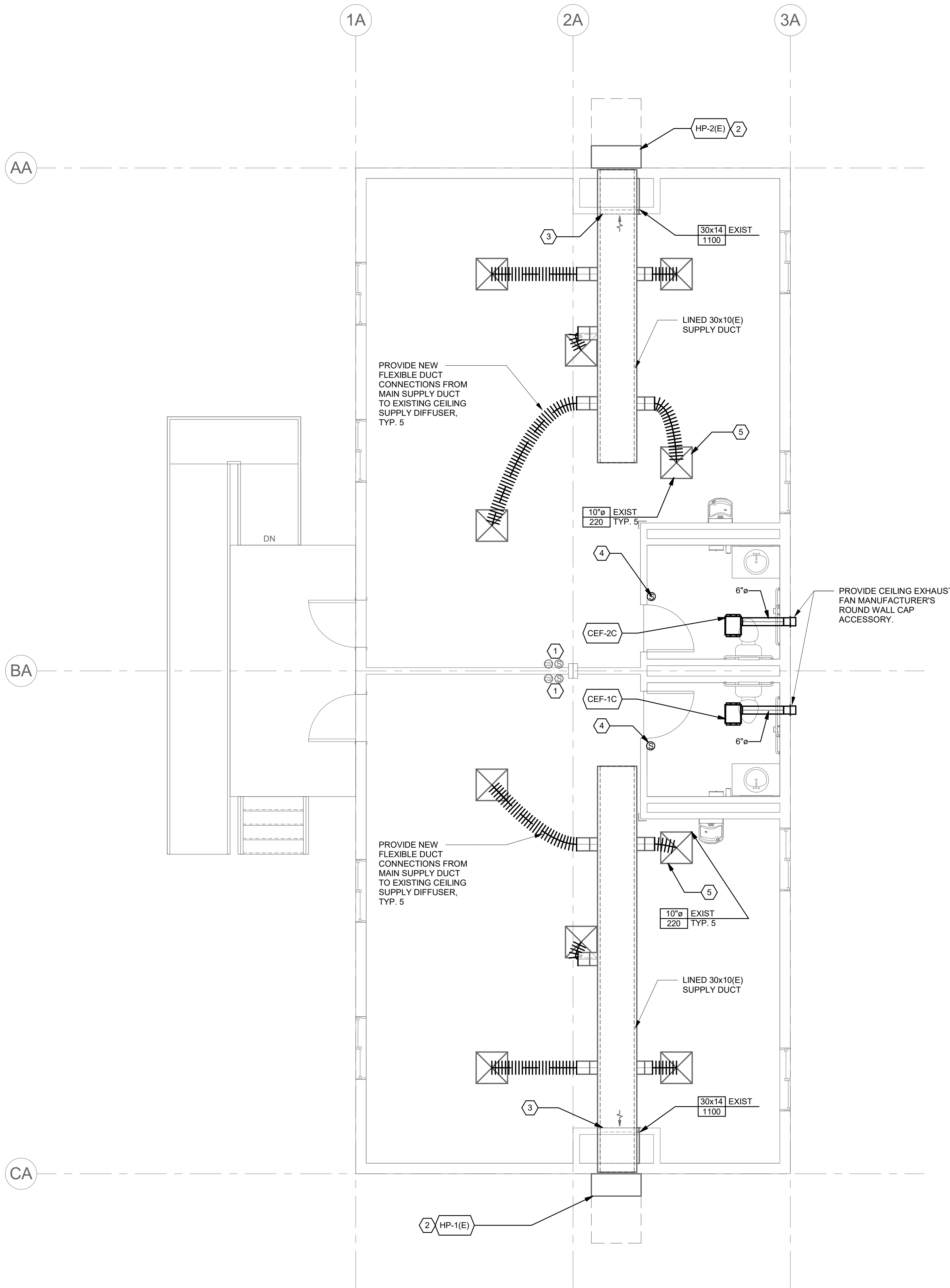
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M0.01A

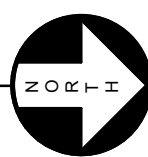
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1 LEVEL 1 FLOOR PLAN - MECHANICAL

0' 2' 4' 8'
1/4" = 1'-0"



SHEET KEYNOTES

- 1 RELOCATE EXISTING THERMOSTAT AND CARBON DIOXIDE SENSORS TO LOCATION SHOWN. PROVIDE NECESSARY WIRING AND PROGRAMMING.
- 2 BALANCE EXISTING WALL-MOUNTED HEAT PUMP TO AIRFLOWS SHOWN.
- 3 REPLACE FILTER IN EXISTING WALL-MOUNTED RETURN AIR GRILLE.
- 4 PROVIDE CEILING FAN MANUFACTURER'S WALL-MOUNTED OCCUPANCY SENSOR. PROVIDE WIRING FROM OCCUPANCY SENSOR TO EXHAUST FAN. COORDINATE WITH DIVISION 26.
- 5 RELOCATE EXISTING CEILING SUPPLY DIFFUSER TO LOCATION SHOWN.

PLUMBING SYMBOL LIST

NOTE: This is a standard symbol list and not all items listed may be used.

Abbreviations

(A) ABANDON IN PLACE
AFF ABOVE FINISHED FLOOR
AP ACCESS PANEL
& AND
A AQUASTAT, ARCHITECT, ANCHOR, AMPHERE
@ AT
BFP BACKFLOW PREVENTER
BFF BELOW FINISHED FLOOR
BTUH BRITISH THERMAL UNITS PER HOUR
BLDG BUILDING
CV CHECK VALVE
CO CLEANOUT
CW COLD WATER
CD CONDENSATE DRAIN
CONT CONTINUATION
CFH CUBIC FEET PER HOUR
CFS CUBIC FEET PER SECOND
(X) DEMOLISH
DW DISHWASHER, DOMESTIC WATER
DET DOMESTIC EXPANSION TANK
DCVA DOUBLE CHECK VALVE ASSEMBLY
DN DOWN
DS DOWNSPOUT
DSN DOWNSPOUT NOZZLE
D DRAIN
DFU DRAINAGE FIXTURE UNIT
DWV DRAINAGE, WASTE AND VENT
DF DRINKING FOUNTAIN
EWC ELECTRIC WATER COOLER
EWH ELECTRIC WATER HEATER
(E) EXISTING
FT FEET
FFE FINISHED FLOOR ELEVATION
F FIRE, FAHRENHEIT
FL FLOOR
FCO FLOOR CLEANOUT
FD FLOOR DRAIN
FV FLUSH VALVE
FOOT, FEET
(F) FUTURE
GPM GALLONS PER MINUTE
GWH GAS WATER HEATER
HVAC HEATING, VENTILATING AND AIR CONDITIONING
HZ HERTZ
HB HOSE BIBB
HW HOT WATER
HWFU HOT WATER FIXTURE UNIT
HWR HOT WATER RETURN
IN, " INCHES
IW INDIRECT WASTE
INV INVERT ELEVATION
L LAVATORY
MIN MINIMUM
MX MIXING VALVE
MS MOP SINK
(N) NEW
N NORTH
NIC NOT IN CONTRACT
NTS NOT TO SCALE
NUMBER
NO. NUMBER
OD OVERFLOW DRAIN, OUTSIDE DIAMETER
OFCI OWNER FURNISHED, CONTRACTOR INSTALLED
OFIO OWNER FURNISHED, OWNER INSTALLED
PLBG PLUMBING
P PLUMBING, PUMP
POC POINT OF CONNECTION
PSI POUNDS PER SQUARE INCH
PD PRESSURE DROP, PLUMBING DEMOLITION, PUMPED DISCHARGE
PRV PRESSURE REDUCING VALVE
QTY QUANTITY
RWL RAINWATER LEADER
RBPB REDUCED PRESSURE BACKFLOW PREVENTER
(R) RELOCATE / RELOCATED LOCATION
RD ROOF DRAIN
SAN SANITARY
SB SERVICE BOX
SHT SHEET
SA SHOCK ARRESTOR
SOV SHUT OFF VALVE
S, SK SINK
SF SQUARE FEET
SD STORM DRAIN
SP SUMP PUMP, STATIC PRESSURE
TEMP TEMPERATURE
TP TRAP PRIMER, TOTAL PRESSURE
TYP TYPICAL
U, UR URINAL
V VACUUM, VENT, VOLT
VTR VENT THRU ROOF
WCO WALL CLEANOUT
W WASTE
WC WATER COLUMN, WATER CLOSET
WHA WATER HAMMER ARRESTOR
WH WATER HEATER, WALL HYDRANT
WSFU WATER SUPPLY FIXTURE UNIT
W/ WITH

General

CONTINUATION
EQUIPMENT IDENTIFICATION
EXTENT OF DEMOLITION
FIXTURE TAG (LEVEL BELOW FIXTURE)
KEYED NOTE
POINT OF CONNECTION
DEMOLISH
EXISTING WORK
NEW WORK
PIPE OR CONDUIT BELOW GRADE

Piping Fittings

ACCESS PANEL
AQUASTAT
BLIND FLANGE
CAP
CLEANOUT TO GRADE
CONCENTRIC REDUCER
DOWNSPOUT NOZZLE
ECCENTRIC REDUCER
FLOOR CLEANOUT
FLOOR DRAIN
FLOOR SINK
FLOW DIRECTION
HOSE BIBB / WALL HYDRANT
OVERFLOW ROOF DRAIN
PIPE DROP
PIPE RISE
PUMP
ROOF DRAIN
SHOCK ABSORBER / WATER HAMMER ARRESTOR
STRAINER
T&P RELIEF VALVE WITH PIPE TO DRAIN
TEE DOWN ON PIPE
TEE UP ON PIPE
VENT THROUGH ROOF
WALL CLEANOUT

Piping Systems

COLD WATER PIPING
CONDENSATE / INDIRECT DRAIN PIPING
HOT WATER PIPING
HOT WATER RETURN PIPING
NATURAL GAS PIPING, 2 LB
NATURAL GAS PIPING, 7" WC PRESSURE
OVERFLOW DRAIN PIPING ABOVE GRADE OR FINISHED FLOOR
SANITARY VENT PIPING

SANITARY WASTE OR SOIL PIPING ABOVE GRADE OR FINISHED FLOOR
SANITARY WASTE OR SOIL PIPING BELOW GRADE OR FINISHED FLOOR
STORM DRAIN PIPING ABOVE GRADE OR FINISHED FLOOR
STORM DRAIN PIPING BELOW GRADE OR FINISHED FLOOR
TRAP PRIMER PIPING
BACKFLOW PREVENTER
CHECK VALVE
SHUTOFF VALVE, GENERAL

GENERAL PLUMBING NOTES

CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF ALL PLUMBING FIXTURES WITH ARCHITECT.

PLUMBING FIXTURE SCHEDULE

SYMBOL		FIXTURE TYPE	DESCRIPTION	MFR	MODEL	BASIS OF DESIGN		CONNECTION				NOTES
						ACCESSORIES		W	V	CW	HW	
EW-C-1		ELECTRIC WATER COOLER	WATER COOLER, WALL MOUNTED, SINGLE BOWL, STAINLESS STEEL BASIN, VANDAL RESISTANT BUBBLER, FRONT/SIDE BUSHBUTTONS, SENSOR-OPERATED BOTTLE FILLER	ELKAY	LZS8WSLP			1-1/2"	1-1/2"	1/2"	--	120V, 1 PH., 370 WATTS
FD-1		FLOOR DRAIN (VINYL FLOOR COVERING)	CAST IRON BODY, FLASHING COLLAR, 5-INCH ADJUSTABLE NICKEL BRONZE STRAINER HEAD, TRAP PRIMER, 4" WIDE FLANGE	JR SMITH	DX2005			2"	1-1/2"		--	
L-1		LAVATORY	WALL MOUNTED, ENAMELED CAST IRON, SINGLE HOLE, OVERFLOW	KOHLER	K-2812	FAUCET: MOEN 8884, 0.5 GPM, VANDAL RESISTANT, LEAD FREE, SINGLE TEMPERATURE, METERING		1-1/2"	1-1/2"	1/2"	1/2"	FLOOR MOUNTED CARRIER
WC-1		WATER CLOSET	TANK TYPE, VITREOUS CHINA, BARRIER FREE HEIGHT, ELONGATED, 1.28 GPF, TANK COVER LOCKS	KOHLER	K-3999-T	SEAT: OLSONITE, BLACK, OPEN FRONT, SELF SUSTAINING HINGE		3"	2"	1/2"	--	
NOTES: 1 SEE ARCHITECTURAL DRAWINGS FOR ALL FIXTURE MOUNTING HEIGHTS AND LOCATIONS. * UNLESS NOTED OTHERWISE ON DRAWINGS												

WATER HEATER SCHEDULE

SYMBOL	EQUIPMENT TYPE	LOCATION / SERVING	BASIS OF DESIGN		TANK CAPACITY (GALLONS)	GAS DATA INPUT (MBH)	ELECTRICAL				COMMENTS
			MFR	MODEL			VOLTS	PH	AMPS	KW	
ETWH-1	ELECTRIC TANKLESS WATER HEATER	TOILET ROOM	EEMAX	EX4208T	N/A	N/A	208	1	20	4.1	56 DEGREES FAHRENHEIT TEMPERATURE RISE, THERMOSTATICALLY CONTROLLED OUTLET, TEMPERATURE SET AT 110 DEGREES FAHRENHEIT, 0.3 GPM MINIMUM FLOW, LEAD FREE, REPLACEABLE FILTER, 1/2" COMPRESSION FITTINGS.
ETWH-2	ELECTRIC TANKLESS WATER HEATER	TOILET ROOM	EEMAX	EX4208T	N/A	N/A	208	1	20	4.1	56 DEGREES FAHRENHEIT TEMPERATURE RISE, THERMOSTATICALLY CONTROLLED OUTLET, TEMPERATURE SET AT 110 DEGREES FAHRENHEIT, 0.3 GPM MINIMUM FLOW, LEAD FREE, REPLACEABLE FILTER, 1/2" COMPRESSION FITTINGS.
NOTES:											

MISCELLANEOUS EQUIPMENT SCHEDULE

SYMBOL	EQUIPMENT TYPE	LOCATION / SERVING	BASIS OF DESIGN		CAPACITY	GAS DATA INPUT (MBH)	ELECTRICAL					COMMENTS
			MFR	MODEL			VOLTS	PH	AMPS	WATTS	HP	
TP-1	TRAP PRIMER	TOILET ROOMS	PRECISION PLUMBING PRODUCTS	MP-500			120	1	2	6.3	---	CONTROLLER INCLUDES CIRCUIT BREAKER, MANUAL SWITCH, AND TIME CLOCK. SERVES 1 TO 4 DRAINS.
NOTES:												

SHEET INDEX

P0.01A SYMBOLS LISTS AND GENERAL NOTES - PLUMBING

P1.11A LEVEL 1 FLOOR PLAN - BUILDING A - PLUMBING



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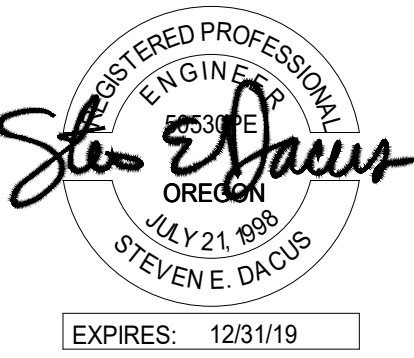
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Revision Schedule	
Revision Delta	Issue Date

SHEET TITLE:

SYMBOLS
LISTS AND
GENERAL
NOTES -
PLUMBING

1

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SHEET

PROJECT 2018-0051
CONTACT Dave Brown
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SHEET KEYNOTES

1 SHUT-OFF VALVE IN VALVE BOX.



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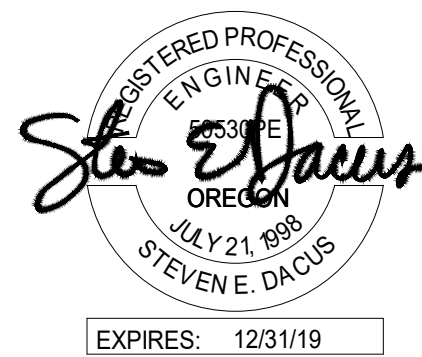
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Revision Delta	Issue Date

SHEET TITLE:
LEVEL 1
FLOOR PLAN -
BUILDING A -
PLUMBING

DRAWN BY: Author

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SHEET

P1.11A

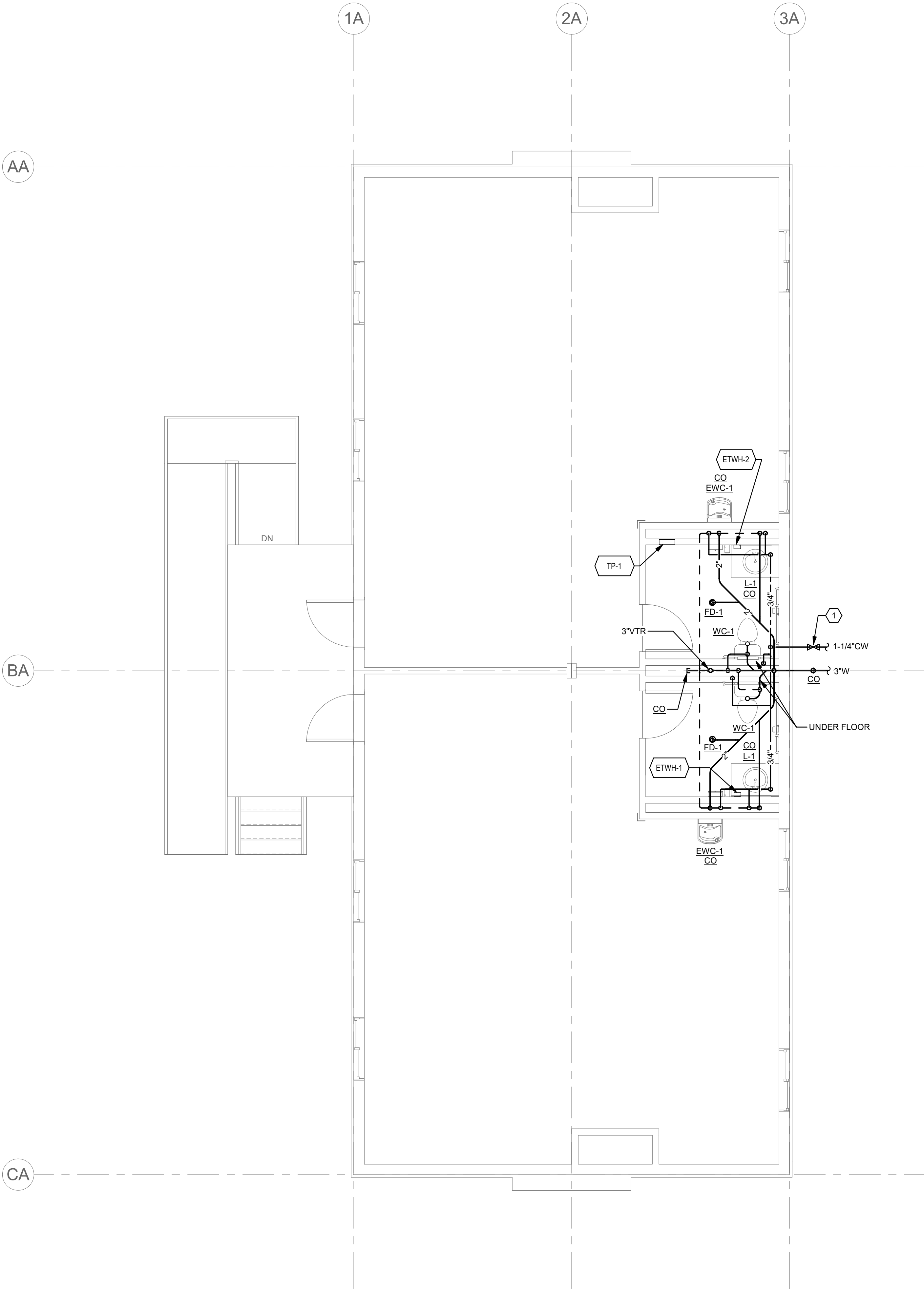
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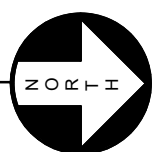
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1 LEVEL 1 FLOOR PLAN - BUILDING A - PLUMBING

0' 2' 4' 8'
1/4" = 1'-0"



PLUMBING SYMBOL LIST

NOTE: This is a standard symbol list and not all items listed may be used.

Abbreviations	
(A)	ABANDON IN PLACE
AFF	ABOVE FINISHED FLOOR
AP	ACCESS PANEL
&	AND
A	AQUASTAT, ARCHITECT, ANCHOR, AMPHERE
@	AT
BFP	BACKFLOW PREVENTER
BFF	BELOW FINISHED FLOOR
BTUH	BRITISH THERMAL UNITS PER HOUR
BLDG	BUILDING
CV	CHECK VALVE
CO	CLEANOUT
CW	COLD WATER
CD	CONDENSATE DRAIN
CONT	CONTINUATION
CFH	CUBIC FEET PER HOUR
CFS	CUBIC FEET PER SECOND
(X)	DEMOLISH
DW	DISHWASHER, DOMESTIC WATER
DET	DOMESTIC EXPANSION TANK
DCVA	DOUBLE CHECK VALVE ASSEMBLY
DN	DOWN
DS	DOWNSPOUT
DSN	DOWNSPOUT NOZZLE
D	DRAIN
DFU	DRAINAGE FIXTURE UNIT
DWV	DRAINAGE, WASTE AND VENT
DF	DRINKING FOUNTAIN
EW	ELECTRIC WATER COOLER
EW	ELECTRIC WATER HEATER
(E)	EXISTING
FT	FEET
FFE	FINISHED FLOOR ELEVATION
F	FIRE, FAHRENHEIT
FL	FLOOR
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FV	FLUSH VALVE
+	FOOT, FEET
(F)	FUTURE
GPM	GALLONS PER MINUTE
GWH	GAS WATER HEATER
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HZ	HERTZ
HB	HOSE BIBB
HW	HOT WATER
HWFU	HOT WATER FIXTURE UNIT
HW	HOT WATER RETURN
IN, "	INCHES
IN	INDIRECT WASTE
INV	INVERT ELEVATION
L	LAVATORY
MIN	MINIMUM
MX	MIXING VALVE
MS	MOP SINK
(N)	NEW
N	NORTH
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
#	NUMBER
NO	NUMBER
OD	OVERFLOW DRAIN, OUTSIDE DIAMETER
OFI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFI	OWNER FURNISHED, OWNER INSTALLED
PLBG	PLUMBING
P	PLUMBING, PUMP
POC	POINT OF CONNECTION
PSI	POUNDS PER SQUARE INCH
PD	PRESSURE DROP, PLUMBING DEMOLITION, PUMPED DISCHARGE
PRV	PRESSURE REDUCING VALVE
QTY	QUANTITY
RWL	RAINWATER LEADER
RBP	REDUCED PRESSURE BACKFLOW PREVENTER
(R)	RELOCATE / RELOCATED LOCATION
RD	ROOF DRAIN
SAN	SANITARY
SB	SERVICE BOX
SHT	SHEET
SA	SHOCK ARRESTOR
SOV	SHUT OFF VALVE
S, SK	SINK
SF	SQUARE FEET
SD	STORM DRAIN
SP	SUMP PUMP, STATIC PRESSURE
TEMP	TEMPERATURE
TP	TRAP PRIMER, TOTAL PRESSURE
TYP	TYPICAL
U, UR	URINAL
V	VACUUM, VENT, VOLT
VTR	VENT THRU ROOF
WCO	WALL CLEANOUT
W	WASTE
WC	WATER COLUMN, WATER CLOSET
WHA	WATER HAMMER ARRESTOR
WH	WATER HEATER, WALL HYDRANT
WSFU	WATER SUPPLY FIXTURE UNIT
W/	WITH

General

	CONTINUATION
	EQUIPMENT IDENTIFICATION
	EXTENT OF DEMOLITION
	FIXTURE TAG (LEVEL BELOW FIXTURE)
	KEYED NOTE
	POINT OF CONNECTION
	DEMOLISH
	EXISTING WORK
	NEW WORK
	PIPE OR CONDUIT BELOW GRADE

Piping Fittings

	ACCESS PANEL
	AQUASTAT
	BLIND FLANGE
	CAP
	CLEANOUT TO GRADE
	CONCENTRIC REDUCER
	DOWNSPOUT NOZZLE
	ECCENTRIC REDUCER
	FLOOR CLEANOUT
	FLOOR DRAIN
	FLOOR SINK
	FLOW DIRECTION
	HOSE BIBB / WALL HYDRANT
	OVERFLOW ROOF DRAIN
	PIPE DROP
	PIPE RISE
	PUMP
	ROOF DRAIN
	SHOCK ABSORBER / WATER HAMMER ARRESTOR
	STRAINER
	T&P RELIEF VALVE WITH PIPE TO DRAIN
	TEE DOWN ON PIPE
	TEE UP ON PIPE
	VENT THROUGH ROOF
	WALL CLEANOUT

Piping Systems

	COLD WATER PIPING
	CONDENSATE / INDIRECT DRAIN PIPING
	HOT WATER PIPING
	HOT WATER RETURN PIPING
	NATURAL GAS PIPING, 2 LB
	NATURAL GAS PIPING, 7" WC PRESSURE
	OVERFLOW DRAIN PIPING ABOVE GRADE OR FINISHED FLOOR
	SANITARY VENT PIPING

	SANITARY WASTE OR SOIL PIPING ABOVE GRADE OR FINISHED FLOOR
	SANITARY WASTE OR SOIL PIPING BELOW GRADE OR FINISHED FLOOR
	STORM DRAIN PIPING ABOVE GRADE OR FINISHED FLOOR
	STORM DRAIN PIPING BELOW GRADE OR FINISHED FLOOR
	TRAP PRIMER PIPING
Valves	
	BACKFLOW PREVENTER
	CHECK VALVE
	SHUTOFF VALVE, GENERAL

GENERAL PLUMBING NOTES

- A. CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF ALL PLUMBING FIXTURES WITH ARCHITECT.

PLUMBING FIXTURE SCHEDULE										
SYMBOL	FIXTURE TYPE	DESCRIPTION	MFR	MODEL	BASIS OF DESIGN	CONNECTION				NOTES
						W	V	CW	HW	
EW-C-1	ELECTRIC WATER COOLER	WATER COOLER, WALL MOUNTED, SINGLE BOWL, STAINLESS STEEL BASIN, VANDAL RESISTANT BUBBLER, FRONT/SIDE BUSHBUTTONS, SENSOR-OPERATED BOTTLE FILLER	ELKAY	LZS8WSLP	ACCESSORIES	1-1/2"	1-1/2"	1/2"	--	120V, 1 PH., 370 WATTS
FD-1	FLOOR DRAIN (VINYL FLOOR COVERING)	CAST IRON BODY, FLASHING COLLAR, 5-INCH ADJUSTABLE NICKEL BRONZE STRAINER HEAD, TRAP PRIMER, 4" WIDE FLANGE	JR SMITH	DX2005		2"	1-1/2"		--	
L-1	LAVATORY	WALL MOUNTED, ENAMELED CAST IRON, SINGLE HOLE, OVERFLOW	KOHLER	K-2812	FAUCET: MOEN 8884, 0.5 GPM, VANDAL RESISTANT, LEAD FREE, SINGLE TEMPERATURE, METERING	1-1/2"	1-1/2"	1/2"	1/2"	FLOOR MOUNTED CARRIER
WC-1	WATER CLOSET	TANK TYPE, VITREOUS CHINA, BARRIER FREE HEIGHT, ELONGATED, 1.28 GPF, TANK COVER LOCKS	KOHLER	K-3999-T	SEAT: OLSONITE, BLACK, OPEN FRONT, SELF SUSTAINING HINGE	3"	2"	1/2"	--	
NOTES:										
1	SEE ARCHITECTURAL DRAWINGS FOR ALL FIXTURE MOUNTING HEIGHTS AND LOCATIONS.									
*	UNLESS NOTED OTHERWISE ON DRAWINGS									

WATER HEATER SCHEDULE											
SYMBOL	EQUIPMENT TYPE	LOCATION / SERVING	BASIS OF DESIGN		TANK CAPACITY (GALLONS)	GAS DATA INPUT (MBH)	ELECTRICAL				COMMENTS
			MFR	MODEL			VOLTS	PH	AMPS	KW	
ETWH-1	ELECTRIC TANKLESS WATER HEATER	TOILET ROOM	EEMAX	EX4208T	N/A	N/A	208	1	20	4.1	56 DEGREES FAHRENHEIT TEMPERATURE RISE, THERMOSTATICALLY CONTROLLED OUTLET TEMPERATURE SET AT 110 DEGREES FAHRENHEIT, 0.3 GPM MINIMUM FLOW, LEAD FREE, REPLACEABLE FILTER, 1/2" COMPRESSION FITTINGS.
ETWH-2	ELECTRIC TANKLESS WATER HEATER	TOILET ROOM	EEMAX	EX4208T	N/A	N/A	208	1	20	4.1	56 DEGREES FAHRENHEIT TEMPERATURE RISE, THERMOSTATICALLY CONTROLLED OUTLET TEMPERATURE SET AT 110 DEGREES FAHRENHEIT, 0.3 GPM MINIMUM FLOW, LEAD FREE, REPLACEABLE FILTER, 1/2" COMPRESSION FITTINGS.
NOTES:											

MISCELLANEOUS EQUIPMENT SCHEDULE												
SYMBOL	EQUIPMENT TYPE	LOCATION / SERVING	BASIS OF DESIGN		CAPACITY	GAS DATA INPUT (MBH)	ELECTRICAL					COMMENTS
			MFR	MODEL			VOLTS	PH	AMPS	WATTS	HP	
TP-1	TRAP PRIMER	TOILET ROOMS	PRECISION PLUMBING PRODUCTS	MP-500			120	1	2	6.3	---	CONTROLLER INCLUDES CIRCUIT BREAKER, MANUAL SWITCH, AND TIME CLOCK. SERVES 1 TO 4 DRAINS.
NOTES:												

SHEET INDEX

P0.01A SYMBOLS LISTS AND GENERAL NOTES - PLUMBING

P1.11A LEVEL 1 FLOOR PLAN - BUILDING A - PLUMBING

PROJECT 2018-0051
CONTACT Dave Brown

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Revision Delta	Issue Date

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LISTS AND
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PLUMBING

1

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P0.01A

JOB NO.

2170276.00

SHEET KEYNOTES

1 SHUT-OFF VALVE IN VALVE BOX.



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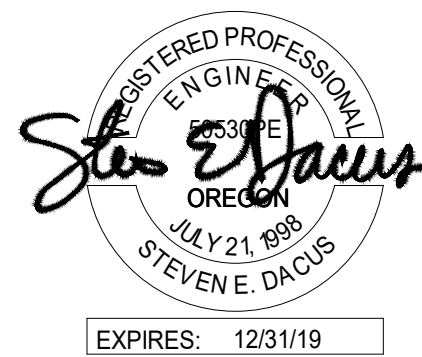
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SHEET TITLE:
LEVEL 1
FLOOR PLAN -
BUILDING A -
PLUMBING

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SHEET

P1.11A

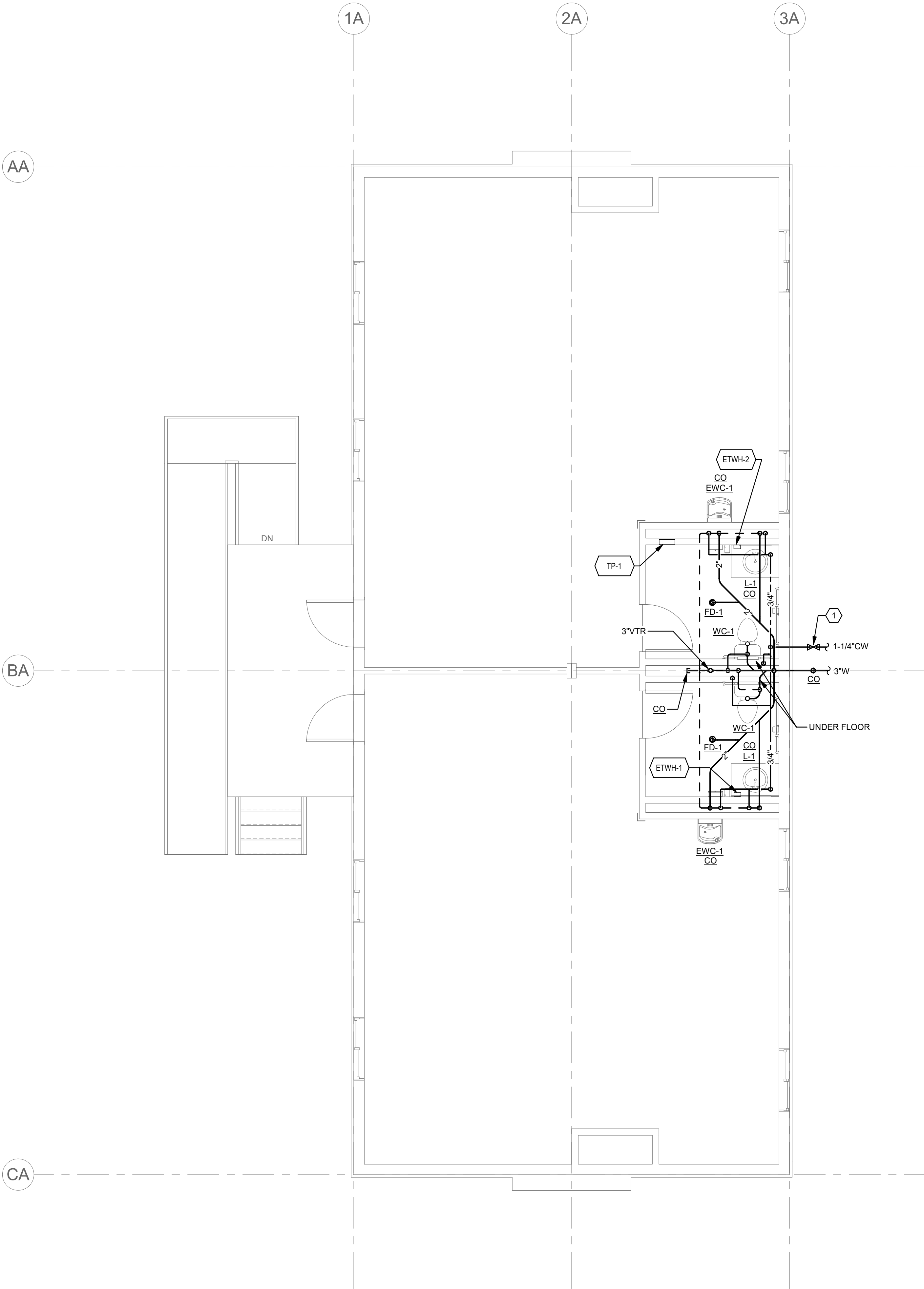
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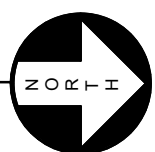
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1 LEVEL 1 FLOOR PLAN - BUILDING A - PLUMBING

0' 2' 4' 8'
1/4" = 1'-0"











FIRE ALARM SYMBOL LIST

NOTE: This is a standard symbol list and not all items listed may be used.

Abbreviations

AFF	ABOVE FINISHED FLOOR
AWG	AMERICAN WIRE GAUGE
AHJ	AUTHORITY HAVING JURISDICTION
C	CONDUIT, CLOSE, CONTROL
DIA	DIAMETER
DIV	DIVISION
EA	EACH
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FT	FOOT, FEET
G, GND	GROUND
HH	HANDHOLE
IN	INCH, INCHES
MIN	MINIMUM
MISC	MISCELLANEOUS
NTS	NOT TO SCALE
PG	PROTECTIVE GUARD
QTY	QUANTITY
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF
WG	WIRE GUARD

Fire Alarm

	NAC NOTIFICATION APPLIANCE CIRCUIT PANEL POTTER PSN-1000(E)
	PULL STATION WITH PROTECTIVE GUARD POTTER APS-DA WITH STI-1130
	SMOKE DETECTOR POTTER PSA
	SPRINKLER FLOW SWITCH WITH INPUT MODULE
	SPRINKLER TAMPER SWITCH WITH INPUT MODULE
	HORN/STROBE COMBINATION (# INDICATES MINIMUM CANDELA RATING) SYSTEM SENSOR P2RL SYSTEM SENSOR P2RK (WEATHERPROOF)
	STROBE, WALL MOUNTED (# INDICATES MINIMUM CANDELA RATING) SYSTEM SENSOR SRL
	ADDRESSABLE INPUT MODULE POTTER SCM-4

FIRE ALARM WIRE LIST (POWER LIMITED)

A	SLC - 1 PAIR 16 AWG SOLID PATHWAY CLASS DESIGNATION: CLASS B/ STYLE 4 PATHWAY SURVIVABILITY: LEVEL 0	** FPLP, FPLR, FPL
B	NOTIFICATION CIRCUIT - 1 PAIR 14 AWG SHIELDED PATHWAY CLASS DESIGNATION: CLASS B/ STYLE Y PATHWAY SURVIVABILITY: LEVEL 0	** FPLP, FPLR, FPL
P	P-LINK CIRCUIT - 2 PAIR 16 AWG TWISTED PATHWAY CLASS DESIGNATION: CLASS B/ STYLE 4 PATHWAY SURVIVABILITY: LEVEL 0	** FPLP, FPLR, FPL

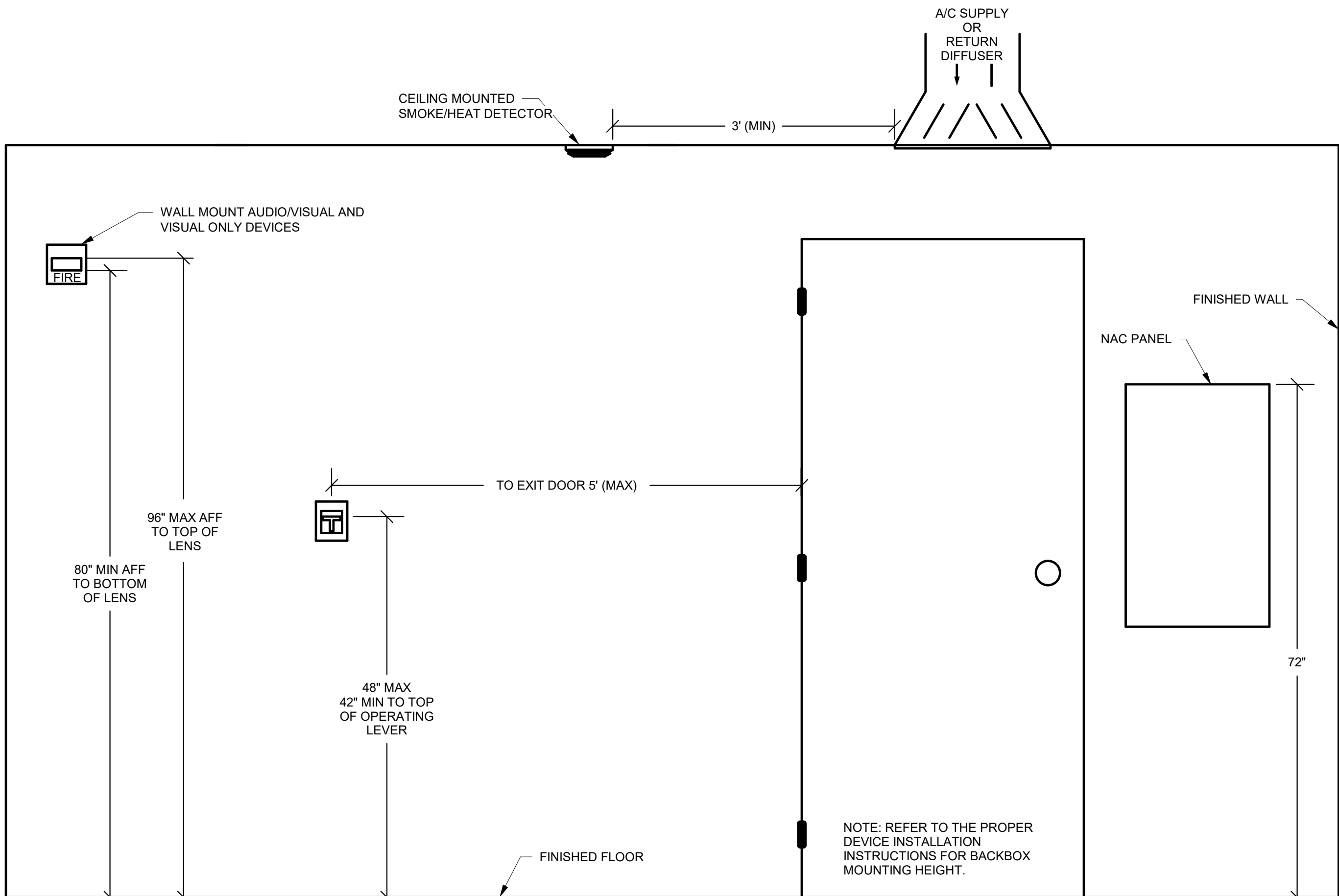
CONDUIT SIZE	CONDUCTOR AREA	CONDUIT SIZE	CONDUCTOR AREA
1/2"	0.12 SQ INCH*	1-1/8"	0.86 SQ INCH*
3/4"	0.21 SQ INCH*	1-1/2"	0.92 SQ INCH*
1"	0.34 SQ INCH*	2"	1.34 SQ INCH*

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* 40% FILL 2011 N.E.C.
** FPLP FOR PLENUM, FPLR FOR RISER AND FPL FOR ALL OTHER USES.

GENERAL FIRE ALARM NOTES

- THE SCOPE OF THIS PROJECT IS TO PROVIDE NOTIFICATION AND DETECTION IN NEW PORTABLE BUILDING.
- REPROGRAM THE EXISTING FIRE ALARM PANEL TO INCLUDE THE ADDED PORTABLE BUILDING.
- PROVIDE ACTUAL ROUTING OF FIRE ALARM CIRCUITS ON AS-BUILTS.



1 DEVICE MOUNTING HEIGHTS

NO SCALE

SHEET INDEX

FA0.01A	SYMBOLS LISTS AND GENERAL NOTES - FIRE ALARM
FA1.01A	SITE PLAN - BUILDING A - FIRE ALARM
FA1.11A	LEVEL 1 FLOOR PLAN - BUILDING A - FIRE ALARM

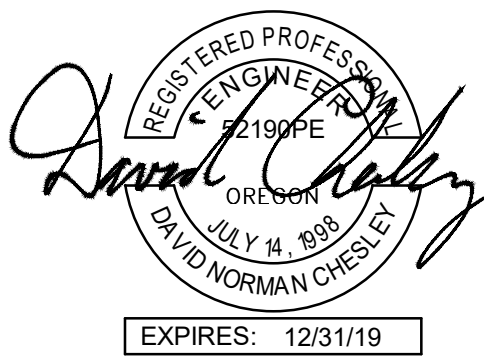
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CONTACT Jarod Myrick



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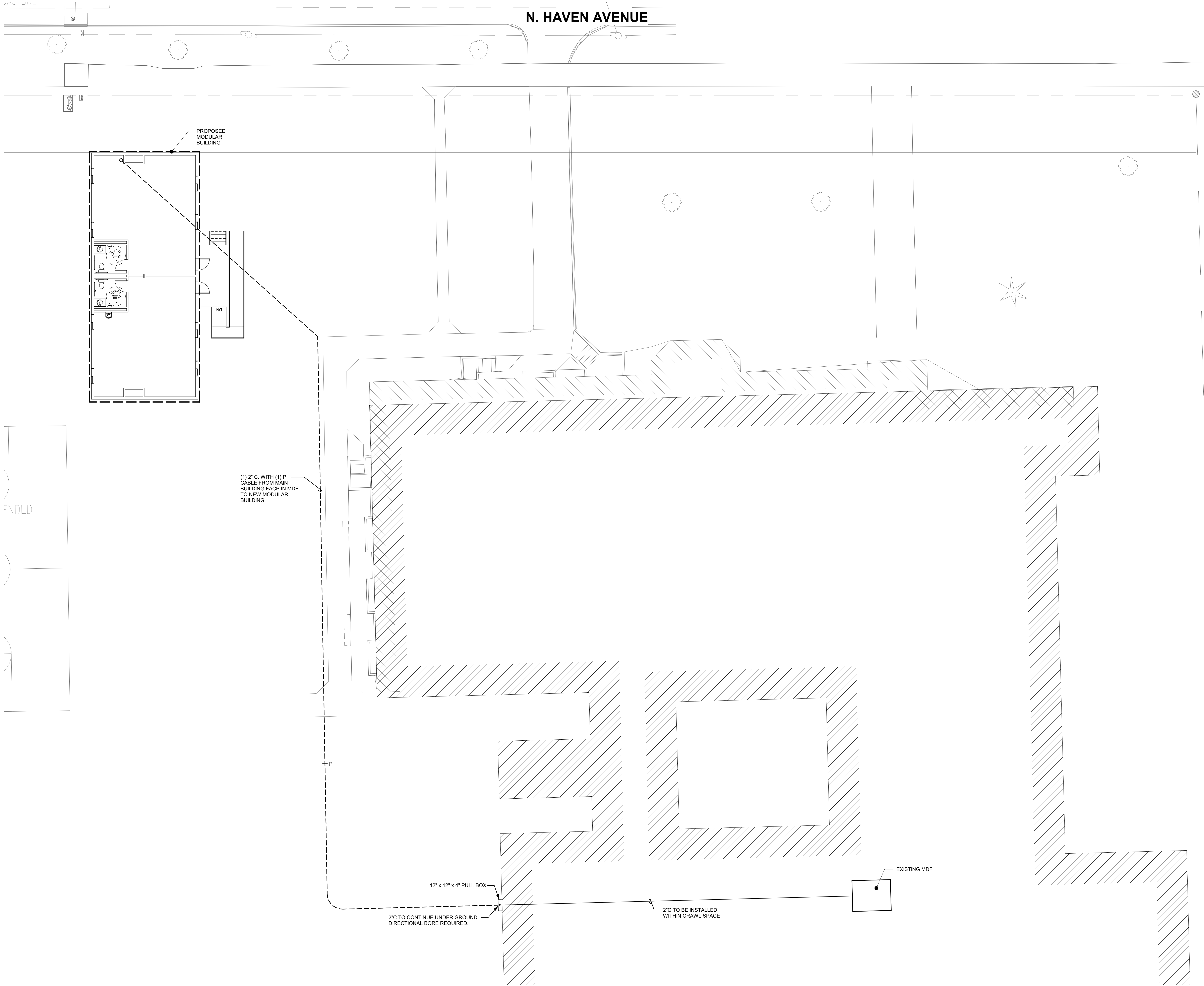
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SYMBOLS
LISTS AND
GENERAL
NOTES - FIRE
ALARM

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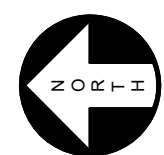
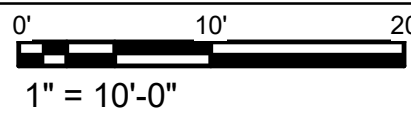
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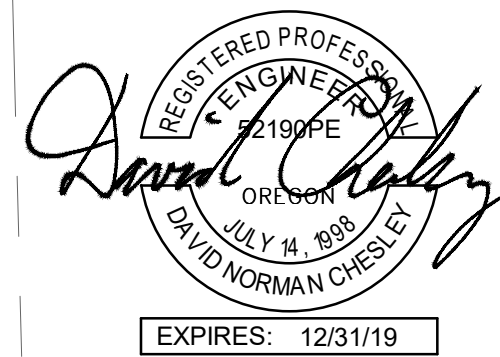
1 SITE PLAN - BUILDING A - FIRE ALARM



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CONTACT: Jarod Myrick

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Revision Delta	Issue Date

A. CONFIRM NEW SLC LOOP NUMBER AND ADJUST DEVICE ADDRESSES AS NEEDED. PROVIDE ON AS-BUILT DRAWINGS.

- SHEET KEYNOTES**

 - 1 CONFIRM LOCATION OF NEW NAC PANEL ON SITE. ADJUST AS NEEDED TO PROVIDE PROPER CLEARANCE.
 - 2 PROVIDE ADDRESSABLE INPUT MODULES TO MONITOR THE FIRE SPRINKLER SYSTEM. COORDINATE EXACT LOCATIONS AND CONNECTIONS WITH FIRE SPRINKLER DESIGN.

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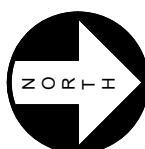
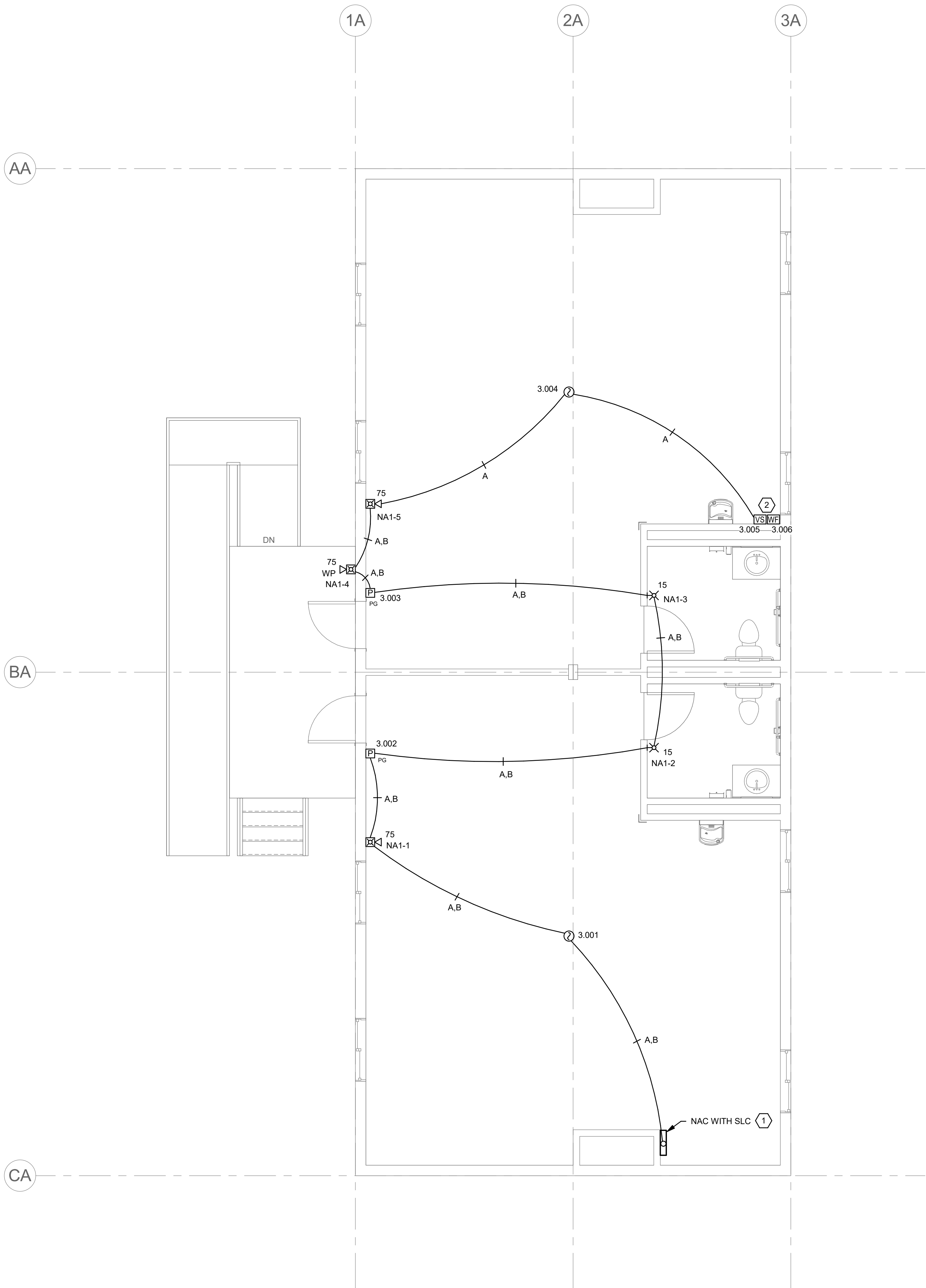
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No Scale



PSN-1000(E)
Battery & Voltage Drop Calculations

Project Name:

PPS CESAR CHAVEZ PORTABLE

Standby Hours:

24

Alarm Mins:

5

Batt Efficiency %:

90

Designed By:

JAROD MYRICK

SLC Type:

Class B

Date:

4/4/2018

NAC Source Voltage:

20.4

Model #: PSN-1000(E)

Panel ID: PORTABLE

Location: NEW PORTABLE

Max Panel Current (amps): 10

Use assumes all responsibility to ensure the quantities and current draw values in this worksheet are accurate prior to install.

Qty	Part #	Panel Description	Standby (amps) Each	Alarm (amps) Each	Total
1	PSN-1000(E)	Intelligent Power Expander	0.060	0.060	0.200
P-LINK (RS-485)			Standby	Alarm	
1	SLC-127	SLC Expander (7 Max w/ 6800 1 Max w/ 6200)	0.060	0.060	0.060
*Only enter quantity if P-LINK power is being used to power devices (Maximum current draw on P-Link limited to 1 Amp) P-LINK Standby:			0.060	P-LINK Alarm:	0.060

	PSA Devices	Standby	Alarm
2	PSA Analog Photo Smoke	0.000325	0.000650
2	APS-SAIDA Addressable Pul Strobe	0.000325	0.000650
	SCIANB Class B **		
	Current Draw from Install Manual		
	SLC Loop Alarm LED Current	0.000000	0.027000
1	Requires AUA Power (Configure Below)	SLC Standby:	0.001300
**	See the installation manual for special considerations when installing AIB. SLC devices on Class B loops.	SLC Alarm:	0.028300

NAC Circuits (See NAC Configuration below)

Ckt	Use	Description	Standby (amps) Total	Alarm (amps) Total	
1	NOTIFICATION	NA1	0.00000	0.27800	
2	SPARE		0.00000	0.00000	
3	SPARE		0.00000	0.00000	
4	SPARE		0.00000	0.00000	
5	SPARE		0.00000	0.00000	
6	SPARE		0.00000	0.00000	
NAC Standby:			0.00000	NAC Alarm:	0.27800

Battery Calculation Summary

	Standby (amps)	Alarm (amps)	
Panel Current:	0.06000	0.20000	
P-Link Current:	0.06000	0.06000	
SLC Device Current:	0.00130	0.02830	
NAC Circuit Current:	0.00000	0.27800	
Total Standby:	0.12130	Total Alarm:	0.56830
Point Capacity Needed:	24	Alarm Mins:	5
Point Capacity Actual:	2.92	AH Required:	0.05
Total Combined Standby & Alarm Amps Required:		2.07	
Efficiency Factor:		89%	
Required Battery Amps/Hours:		3.71	
Required Battery Amps Provided:		7AH	

NAC 1			MXL Circuit Current (amps): 3		Source Voltage Used (VDC): 20.4		
Usage: Notification			Description: NA1				
Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd	
#14 Solid	2.5	150	0.750	0.278	20.19	16	
Circuit Devices			Standby (amps)		Alarm (amps)		
Qty	Lookup Type	Description	Each	Total	Each	Total	
2	HORN STROBES	SYSTEM SENSOR P2RL (750d)	0.000000	0.000000	0.130000	0.260000	
2	STROBES	SYSTEM SENSOR P1L (150d)	0.000000	0.000000	0.060000	0.120000	
1	WPV HORN STROBE	SYSTEM SENSOR P2PW (150d)	0.000000	0.000000	0.150000	0.150000	
			Total Standby:	0.00000	Total Alarm:	0.27800	

REGISTERED PROFESSIONAL
ENGINEER
52190PE
OREGON
JULY 14, 1998
DAVID NORMAN CHESLEY

EXPIRES: 12/31/19

EXPIRES: 12/31/19

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Revision Schedule	
Revision Delta	Issue Date

HEET TITLE:
**LEVEL 1
FLOOR PLAN -
BUILDING A -
FIRE ALARM**

RAWN BY: Author

HECKED BY: Checker

SHEET

-A.I.I.A

2170210.00

PROJECT 2018-0051
CONTACT Jarod Myrick



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Portland, OR 97204
TEL 503.382.2266
FAX 503.382.2262
www.interfaceengineering.com

PERMIT/BID SET 4/24/18

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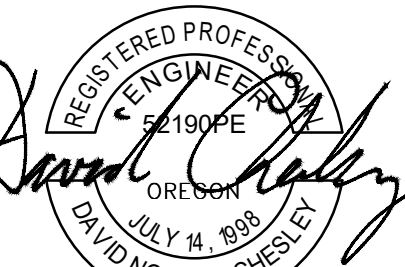
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Revision Schedule	
Revision Delta	Issue Date

SHEET TITLE:

**SYMBOLS
LISTS AND
GENERAL
NOTES -
ELECTRICAL**

DRAWN BY: Author

CHECKED BY: Checker

SHEET

E0.01A

JOB NO. **2170276.00**

PROJECT 2018-0051
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TECHNOLOGY SYMBOL LIST

Audio/Video



AUDIO-VIDEO OUTLET WITH 5-SQUARE RANDL BOX, SINGLE-GANG ADAPTER PLATE AND 1-1/4" CONDUIT TO ACCESSIBLE CEILING SPACE UON. INSTALL HDMI CABLE FROM OUTLET TO SHORT THROW PROJECTOR.

Electronic Security



CEILING MOUNTED MOTION DETECTION SENSOR



WALL MOUNTED KEYPAD

Equipment



2-POST EQUIPMENT RACK



DOUBLE-SIDED VERTICAL WIRE MANAGEMENT



MAJOR EQUIPMENT, CABINETS OR PANELS

Paging/Intercom



CEILING SPEAKER

Raceways



CABLE RUNWAY, WIDTH AS INDICATED

CONDUIT AND CONDUCTORS ABOVE GRADE

CONDUIT AND CONDUCTORS BELOW GRADE OR SLAB

CONDUIT DOWN

CONDUIT SLEEVE

CONDUIT UP

CONDUIT/WIRING CONTINUATION

FLEXIBLE CONDUIT



HANDHOLE



PULL BOX



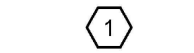
TELECOMMUNICATIONS VAULT

TELEPHONE BACKBOARD

Reference Symbols



DETAIL NUMBER AND SHEET LOCATION



KEYED NOTES



SECTION NUMBER AND SHEET LOCATION

Telecommunications



ALTERNATE COMMUNICATIONS OUTLET (X):
W= LOCATION FOR FLUSH MOUNT WIRELESS ACCESS POINT OUTLET WITH (2) CAT6A CABLES TO NEAREST MDF/IDF AND 1" ACCESSIBLE CEILING SPACE; UON.
STANDARD COMMUNICATIONS OUTLET WITH (3) CAT6 CABLE(S) TO NEAREST MDF/IDF AND 1" ACCESSIBLE CEILING SPACE.

ELECTRICAL SYMBOL LIST

NOTE: This is a standard symbol list and not all items listed may be used.

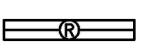
Abbreviations

AFF ABOVE FINISHED FLOOR
AC ALTERNATING CURRENT, AIR CONDITIONER
AWG AMERICAN WIRE GAUGE
A AMPERES, AMBER
AV AUDIO VISUAL
AHJ AUTHORITY HAVING JURISDICTION
AIC AVAILABLE INTERRUPTING CAPACITY
BC BARE COPPER
BAS BUILDING AUTOMATION SYSTEM
CA CABLE
CAT CATEGORY
CLG CEILING
CB CIRCUIT BREAKER
C CONDUIT, CLOSE, CONTROL
COORD COORDINATE
CU COPPER
CT CURRENT TRANSFORMER
(K) DEMOLISH
DTL DETAIL
DIA DIAMETER
DIM DIMENSION
DIV DIVISION
DN DOWN
DWG DRAWING
EA EACH
EMT ELECTRICAL METALLIC TUBING
EL ELEVATION
E EMERGENCY
EF EXHAUST FAN
(E) EXISTING
FA FIRE ALARM
FACP FIRE ALARM CONTROL PANEL
FMC FLEXIBLE METAL CONDUIT
FT FOOT, FEET
F FUSE
G, GND GROUND
GFCI GROUND FAULT CIRCUIT INTERRUPTER
GFI GROUND FAULT INTERRUPTER
GFP GROUND FAULT PROTECTION
HH HANDHOLE
HT HEIGHT
IN INCH, INCHES
IEEE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
IG ISOLATED GROUND
KV KILOVOLT
KVA KILOVOLT AMPERES
KW KILOWATT
LED LIGHT EMITTING DIODE
LNC LIQUID TIGHT FLEXIBLE NONMETALLIC CONDUIT
LFMC LIQUIDTIGHT FLEXIBLE METAL CONDUIT
LV LOW VOLTAGE
MDB MAIN DISTRIBUTION BOARD
MOCP MAXIMUM OVERCURRENT PROTECTION
MIN MINIMUM
MCA MINIMUM CIRCUIT AMPS
MISC MISCELLANEOUS
M MOTOR
MCC MOTOR CONTROL CENTER
NEC NATIONAL ELECTRIC CODE
NESC NATIONAL ELECTRIC SAFETY CODE
NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
N NEUTRAL
(N) NEW
NC NORMALLY CLOSED
NO NORMALLY OPEN
N/A NOT APPLICABLE
N.I.C. NOT IN CONTRACT
NTS NOT TO SCALE
OC ON CENTER
OFCI OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI OWNER FURNISHED, OWNER INSTALLED
PNL PANEL
PH PHASE
PVC POLY-VINYL-CHLORIDE
PWR POWER
QTY QUANTITY
(R) RELOCATE
RFI REQUEST FOR INFORMATION
REQD REQUIRED
RMC RIGID METAL CONDUIT
RM ROOM
SHT SHEET
SPKR SPEAKER
STD STANDARD
SPD SURGE PROTECTION DEVICE
SWBD SWITCHBOARD
TGB TELECOMMUNICATIONS GROUNDING BUS BAR
TBD TO BE DETERMINED
XFMR TRANSFORMER
TVSS TRANSIENT VOLTAGE SURGE SUPPRESSOR
TP TRANSITION POINT
TYP TYPICAL
UL UNDERWRITERS LABORATORIES
UPS UNINTERRUPTIBLE POWER SUPPLY
UON UNLESS OTHERWISE NOTED
VRFY VERIFY
V VOLTS, VOLTAGE
WP WEATHERPROOF
W WIRE, WHITE
W/ WITH
W/O WITHOUT

Connections / Equipment



BASEBOARD ELECTRIC HEATER



ELECTRIC RADIANT HEATER



ELECTRIC RECESSED WALL MOUNTED HEATER FAN FORCED



HEAVY DUTY FUSED DISCONNECT SWITCH

JUNCTION BOX



MOTOR CONNECTION



NON-FUSED DISCONNECT SWITCH



WALL-MOUNTED JUNCTION BOX

Fire Alarm



REMOTE TEST SWITCH



FIRE ALARM CONTROL PANEL



NOTIFICATION APPLIANCE CIRCUIT PANEL



FIRE ALARM ANNUNCIATOR PANEL

General



DETAIL NUMBER AND SHEET LOCATION



KEYED NOTE



SECTION NUMBER AND SHEET LOCATION



DEMOLISH

EXISTING WORK

NEW WORK

Lighting



COMBINATION EXIT SIGN CEILING MOUNTED AND DUAL HEAD EMERGENCY EGRESS LIGHTING WITH BATTERY PACK. ARROW(S) INDICATES DIRECTION IF SHOWN



COMBINATION EXIT SIGN WALL MOUNTED AND DUAL HEAD EMERGENCY EGRESS LIGHTING WITH BATTERY PACK. ARROW(S) INDICATES DIRECTION IF SHOWN



EMERGENCY LUMINAIRE WITH BATTERY PACK



EXIT SIGN CEILING MOUNTED, ARROW(S) INDICATES DIRECTION IF SHOWN



EXIT SIGN WALL MOUNTED, ARROW(S) INDICATES DIRECTION IF SHOWN



RECESSED 2' X 4' LUMINAIRE



RECESSED LUMINAIRE



WALL MOUNTED LUMINAIRE

Miscellaneous



BRANCH CIRCUIT WIRING. ARROW INDICATES HOME RUN TO PANEL WITH CIRCUITS AS NOTED. WIRE SIZE IS #12 AWG MINIMUM UNLESS NOTED OTHERWISE. SHORT TICK MARKS INDICATE PHASE CONDUCTORS. LONG TICK MARKS INDICATE NEUTRAL CONDUCTORS. A SINGLE CURVED TICK MARK INDICATES INSULATED GREEN GROUND CONDUCTOR. SECOND CURVED TICK MARK INDICATES "ISOLATED GROUND" (GREEN INSULATION WITH YELLOW STRIPE) CONDUCTOR.



BRANCH PANEL



CIRCUIT BREAKER



FLUSH MOUNT EQUIPMENT ENCLOSURE AS NOTED



FLUSH WALL MOUNTED BRANCH PANEL



GROUND BAR



GROUNDING POINT



POWER UTILITY POLE

Raceways

EXISTING CONDUIT CONCEALED IN WALL OR CEILING SPACE

EXISTING CONDUIT ROUTED BELOW FLOOR / GRADE

OVERHEAD PRIMARY SERVICE

OVERHEAD SECONDARY SERVICE

OVERHEAD TELEPHONE SERVICE

CONDUIT CONCEALED IN WALL OR CEILING SPACE

CONDUIT ROUTED BELOW FLOOR / GRADE

CONDUIT ELLED DOWN

CONDUIT ELLED UP

CONDUIT/WIRING CONTINUATION

CONDUIT/WIRING STUBBED OUT WITH END CAP OR INSULATED PLASTIC BUSHING

Switches and Receptacles



COMBINATION COMMUNICATIONS OUTLET AND DUPLEX RECEPTACLE, FLUSH FLOOR

DUPLEX RECEPTACLE (MULTIPLE LETTERS INDICATE MULTIPLE OPTIONS)
A = ABOVE COUNTER
B = CLOCK HANGER
C = FLUSH CEILING MOUNTED
E = EMERGENCY
F = ARC FAULT PROTECTED BY BREAKER IN PANEL
G = GROUND FAULT CIRCUIT INTERRUPTER
H = HOSPITAL GRADE
K = CHILD RESISTANT COVER
L = ISOLATED GROUND
P = PENDANT MOUNTED WITH CORD GRIPS. VERIFY PENDANT LENGTH
R1 = HALF SWITCHED BY OCCUPANCY SENSOR RELAY
R2 = FULLY SWITCHED BY OCCUPANCY SENSOR RELAY
S = SPLIT WIRED
T = TAMPER RESISTANT SHUTTERED RECEPTACLE
USB PORT(S)
W = WEATHERPROOF CONTINUOUS USE COVER, GFCI PROTECTED, WITH WEATHER-RESISTANT RECEPTACLE



DUPLEX RECEPTACLE, FLUSH FLOOR



EQUIPMENT ELECTRICAL CONNECTION



CEILING MOUNTED OCCUPANCY SENSOR
P = PASSIVE INFRARED
D = DUAL TECHNOLOGY
U = ULTRASONIC, 360 DEG RANGE
H = ULTRASONIC, HALLWAY PATTERN
V (LOWERCASE) = VACANCY CONTROL DESIGNATION
WALL MOUNTED OCCUPANCY SENSOR
P = PASSIVE INFRARED
D = DUAL TECHNOLOGY
V (LOWERCASE) = VACANCY CONTROL DESIGNATION
WALL MOUNTED OCCUPANCY SENSOR SWITCH
S = PASSIVE INFRARED WITH INTEGRAL "OFF" SWITCH
T = DUAL RELAY PASSIVE INFRARED WITH TWO INTEGRAL "OFF" SWITCHES
D = PASSIVE INFRARED WITH INTEGRAL DIMMER TO OFF.
V (LOWERCASE) = VACANCY CONTROL DESIGNATION



PHOTO ELECTRIC SWITCH
D = CONTINUOUS DIMMING PHOTOCCELL
S = SWITCHED PHOTOCCELL



SINGLE POLE SWITCH
2 = DOUBLE POLE SWITCH
3 = THREE-WAY SWITCH
4 = FOUR-WAY SWITCH
a THRU z (LOWERCASE) = LUMINAIRE CONTROL DESIGNATION
D = DIMMER
F = FAN SPEED CONTROL
K = KEY OPERATED SWITCH
L = LIGHTED HANDLE
M = MANUAL MOTOR STARTER WITH THERMAL OVERLOAD
P = SWITCH WITH PILOT LIGHT
S = SENTRY SWITCH
T = INTERVAL TIMER
W = WEATHERPROOF SWITCH
V = LOW VOLTAGE SWITCH



D = DIMMER



F = FAN SPEED CONTROL



K = KEY OPERATED SWITCH



L = LIGHTED HANDLE



M = MANUAL MOTOR STARTER WITH THERMAL OVERLOAD



P = SWITCH WITH PILOT LIGHT



S = SENTRY SWITCH



T = INTERVAL TIMER



W = WEATHERPROOF SWITCH



V = LOW VOLTAGE SWITCH

SHEET INDEX

E0.01A SYMBOLS LISTS AND GENERAL NOTES - ELECTRICAL
E1.01A SITE PLAN - BUILDING A - POWER & SIGNAL
E1.11A LEVEL 1 FLOOR PLAN - BUILDING A - ELECTRICAL
E5.10A SINGLE LINE DIAGRAM & SCHEDULES - BUILDING A - ELECTRICAL

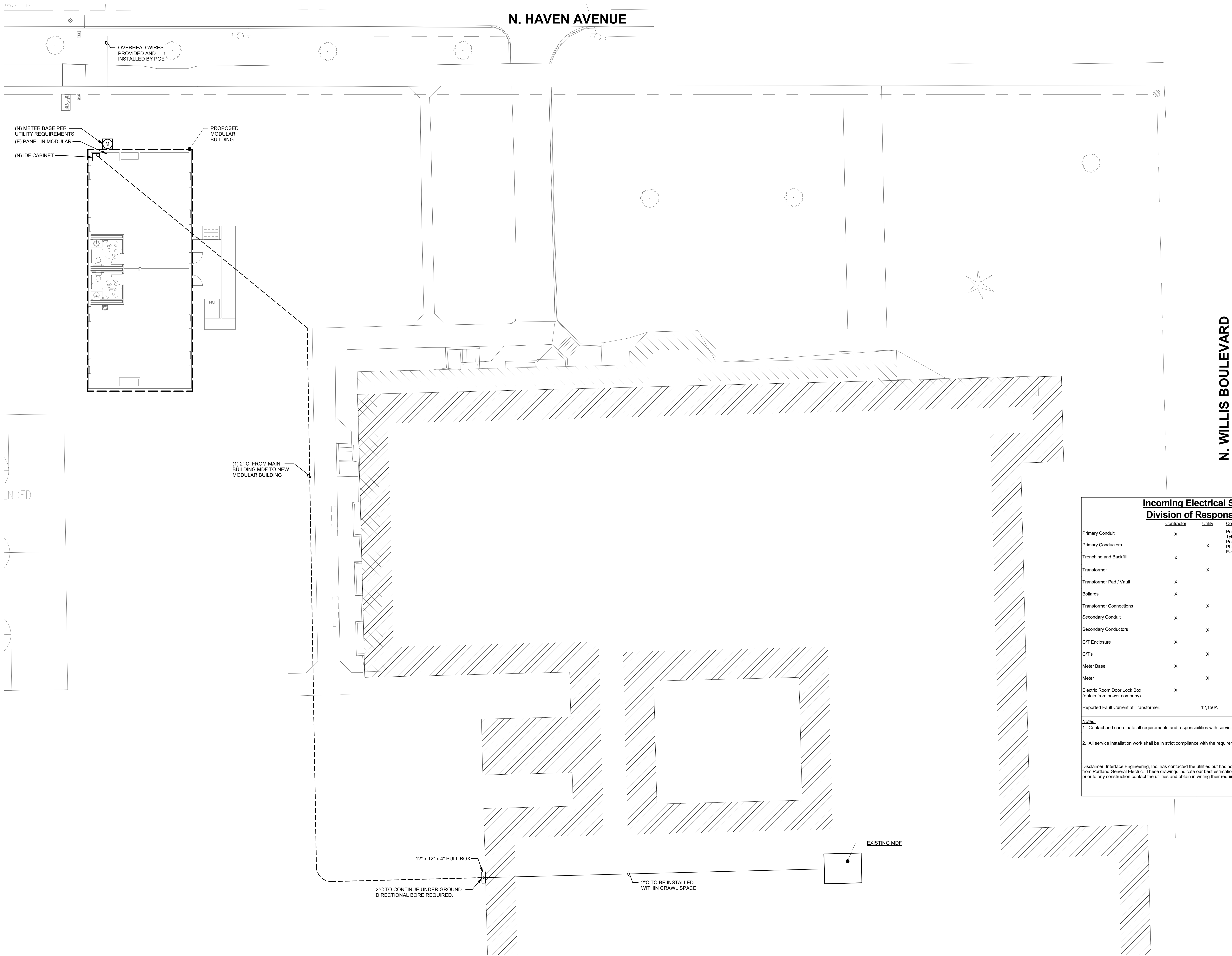
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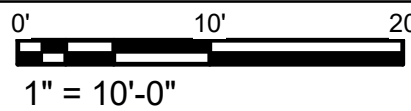
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JOB NO. **2170276.00**



1 SITE PLAN - BUILDING A - POWER & SIGNAL

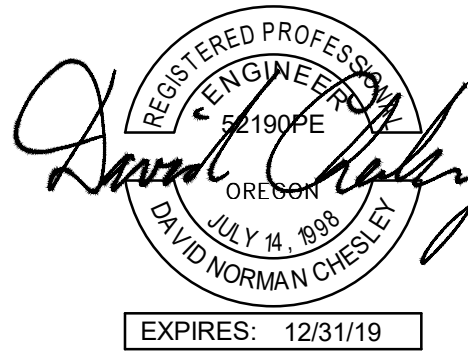


**Incoming Electrical Service
Division of Responsibility**

	Contractor	Utility	Contacts:
Primary Conduit	X		Power Utility: Tyler Lindley Portland General Electric Phone: (503) 736-6409 E-mail: tyler.lindley@pge.com
Primary Conductors		X	
Trenching and Backfill	X		
Transformer		X	
Transformer Pad / Vault	X		
Bollards	X		
Transformer Connections		X	
Secondary Conduit	X		
Secondary Conductors		X	
C/T Enclosure	X		
C/T's		X	
Meter Base	X		
Meter		X	
Electric Room Door Lock Box (obtain from power company)	X		
Reported Fault Current at Transformer:		12,156A	

- Notes:**
1. Contact and coordinate all requirements and responsibilities with serving utility companies prior to submitting bid.
 2. All service installation work shall be in strict compliance with the requirements of the serving utilities.

Disclaimer: Interface Engineering, Inc. has contacted the utilities but has not received in writing the final requirements from Portland General Electric. These drawings indicate our best estimation of their requirements. Prior to bid and prior to any construction contact the utilities and obtain in writing their requirements.



Revision Schedule	
Revision Delta	Issue Date

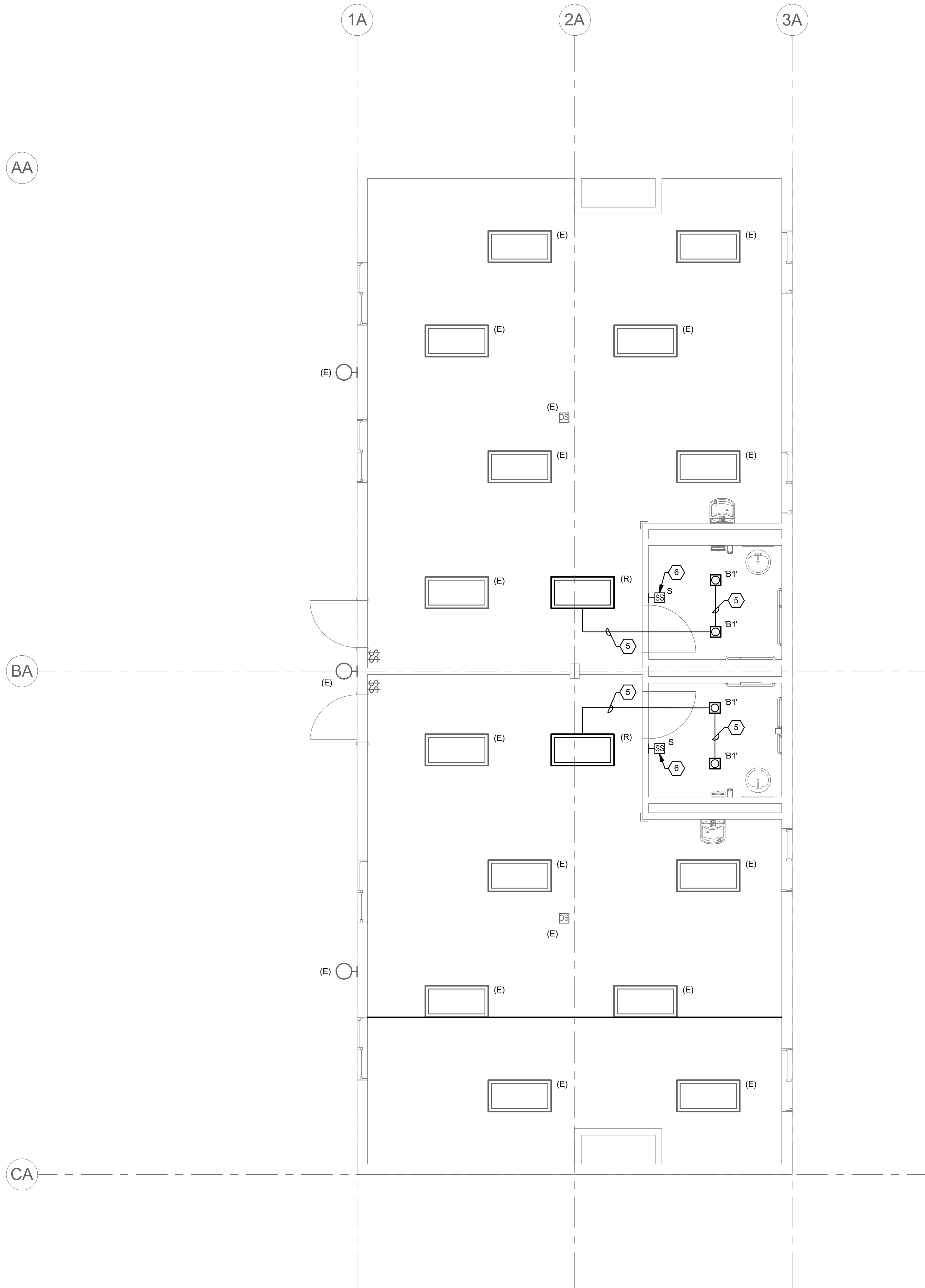


GENERAL SHEET NOTES

A. DEVICE LOCATIONS AND CIRCUITING BASED ON EXISTING DRAWINGS. FIELD
VERIFY ALL CIRCUITS AND LOCATIONS.

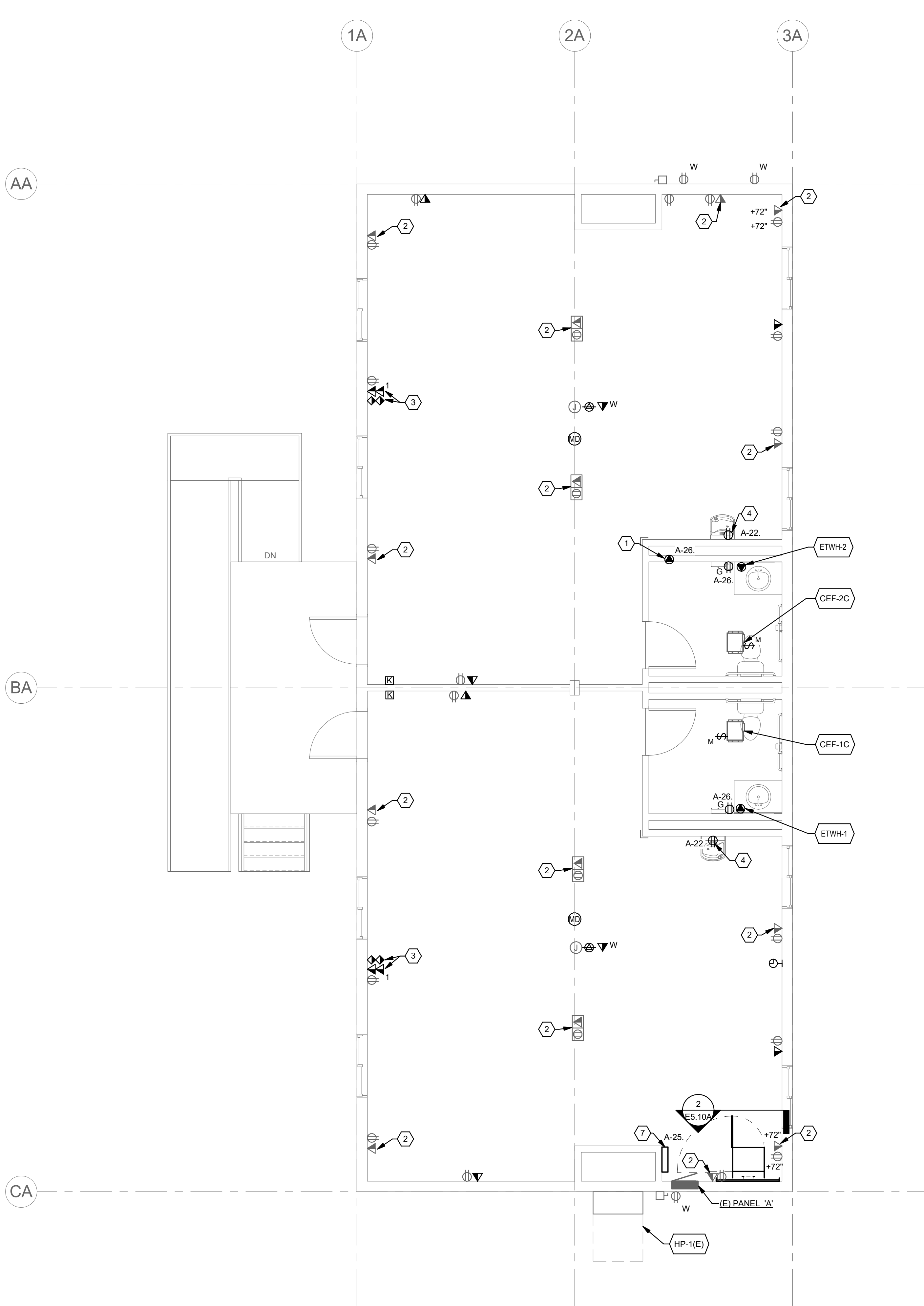
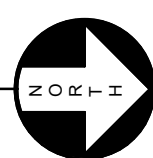
SHEET KEYNOTES

1. PROVIDE CONNECTION TO ELECTRONIC TRAP PRIMER. COORDINATE WITH
PLUMBING CONTRACTOR.
2. EXISTING LOCATION TO BE DEMOLISHED. PROVIDE BLANK COVER.
3. INSTALL ABOVE WHITE BOARD FOR OWNER FURNISHED CONTRACTOR
INSTALLED SHORT THROW PROJECTOR.
4. PROVIDE POWER FOR WATER-COOLED DRINKING FOUNTAIN. COORDINATE
RECEPTACLE LOCATION WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN.
PROVIDE GFCI BREAKER.
5. EXTENDING EXISTING LIGHTING CIRCUIT TO NEW LUMINAIRES.
6. OCCUPANCY SENSOR/SWITCH TO CONTROL BOTH LIGHTS AND CEILING EXHAUST
FAN. COORDINATE WITH DIVISION 23.
7. PROVIDE POWER TO FIRE ALARM PANEL. COORDINATE LOCATION WITH FIRE
ALARM CONTRACTOR.



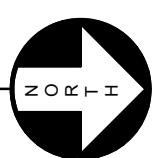
1 LEVEL 1 LIGHTING PLAN - BUILDING A

0' 2' 4' 8'
1/4" = 1'-0"



2 LEVEL 1 POWER PLAN - BUILDING A

0' 2' 4' 8'
1/4" = 1'-0"



SHEET KEYNOTES

1. VERIFY AIC RATING OF EXISTING PANEL. REPLACE PANEL AND BREAKERS WITH NEW IF EXISTING PANEL IS NOT RATED FOR NEW AVAILABLE FAULT CURRENT.



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FEEDER SCHEDULE

A.C.S.X A=Aluminum
C-Conduit only
S=Service secondary
X=Separately derived system

200S 3 #3/0 CU IN 2" C.

2018-0051

(E) Panel 'A'-BLDG A

120/240V, 1Ph, 3W., 225A Bus with 200A Main Circuit Breaker Flush Mounted Load Center

Ckt.	Description / Location	Load (VA)Type	C.B. A/Pole	Note	Ph.	Note	C.B. A/Pole	Load (VA)Type	Description / Location	Ckt.
1	(E) LIGHTS	743 L	20/1		A		60/2	5,720 M	(E) MECHANICAL UNIT A	2
3	(E) LIGHTS	704 L	20/1		C		4	30/2 M		4
5	(E) RECEPTACLES	1,080 R	20/1		A	4	30/2	M	---	6
7	(E) RECEPTACLES	1,080 R	20/1		C	4	---	M	---	8
9	(E) RECEPTACLES	1,080 R	20/1		A		60/2	5,720 M	(E) MECHANICAL UNIT B	10
11	(E) RECEPTACLES	1,080 R	20/1		C		---	5,720 M		12
13	(E) RECEPTACLES	360 R	20/1		A	4	30/2	M	---	14
15	(E) RECEPTACLES	360 R	20/1		C	4	---	M	---	16
17	(N) ETWH-1	2,400 H	25/2	1	A	20/1	500	G	(E) DEDICATED RECEPTACLE	18
19	---	2,400 H	---		C	20/1	500	G	(E) DEDICATED RECEPTACLE	20
21	(N) ETWH-2	2,400 H	25/2	1	A	1,2	20/1	1,200 G	DRINKING FOUNTAINS	22
23	---	2,400 H	---		C	1	15/1	250 M	CEF-1C, CEF-2C	24
25	FIRE ALARM PANEL	100 C	20/1	3	A	1	20/1	360 R	R - RESTROOM RECEPTACLES	26
27	(E) SPACE				C				(E) SPACE	28
29	(E) SPACE				A				(E) SPACE	30
31	(E) SPACE				C				(E) SPACE	32
33	(E) SPACE				A				(E) SPACE	34
35	(E) SPACE				C				(E) SPACE	36
37	(E) SPACE				A				(E) SPACE	38
39	(E) SPACE				C				(E) SPACE	40
41	(E) SPACE				A				(E) SPACE	42

Connected Load: Ph. A 21,663 VA 181 Amps Panel Connected Load: 41.9 KVA 174.6 Amps

Sub-Fed Connected Load: 0.0 KVA 0.0 Amps

Connected Load: Ph. C 20,248 VA 169 Amps Total Demand Load: 45.2 KVA 188.2 Amps

Notes:

1. PROVIDE NEW BREAKER, MATCH EXISTING BREAKERS MANUFACTURER AND AIC RATING.

2. PROVIDE 6mA GFCI CIRCUIT BREAKER

3. PROVIDE RED LOCK-ON BREAKER.

4. MECHANICAL UNIT HEATING LOAD NOT INCLUDED IN LOAD SUMMARY IN ACCORDANCE WITH NEC ARTICLE 220.60

BUILDING A MECHANICAL EQUIPMENT CONNECTION SCHEDULE									
ITEM	DESCRIPTION	LOCATION	VOLTS / PHASE	LOAD	MCA	MOCP	WIRE / CONDUIT	CIRCUIT	NOTES
CEF-1C	EXHAUST FAN	REST ROOM	120/1	128 W		15	202	A-24.	
CEF-2C	EXHAUST FAN	REST ROOM	120/1	128 W		15	202	A-24.	
ETWH-1	WATER HEATER	REST ROOM	240/1	20 A		25	302	A-17,19.	
ETWH-2	WATER HEATER	REST ROOM	240/1	20 A		25	302	A-21,23.	
GENERAL MECHANICAL EQUIPMENT CONNECTION SCHEDULE NOTES									
A. THE ABOVE INFORMATION IS FOR A SPECIFIC MANUFACTURER. ACTUAL MANUFACTURER FOR EQUIPMENT MAY BE DIFFERENT. COORDINATE WITH MECHANICAL EQUIPMENT SUBMITTALS FOR LOADS AND OVER CURRENT PROTECTION REQUIREMENTS PRIOR TO INSTALLATION OF WIRING.									
B. MOCP = MAXIMUM OVER CURRENT PROTECTION MCA = MINIMUM CIRCUIT AMPACITY									
C. PROVIDE DISCONNECTING MEANS FOR EACH ITEM OF EQUIPMENT LISTED IN THE SCHEDULE ABOVE, EXCEPT AS SPECIFICALLY NOTED OTHERWISE IN SCHEDULE NOTES, BELOW.									
WIRE / CONDUIT SCHEDULE									
202	2 #12 CU, 1 #12 CU GND., IN 3/4" C.								
302	2 #10 CU, 1 #10 CU GND., IN 3/4" C.								

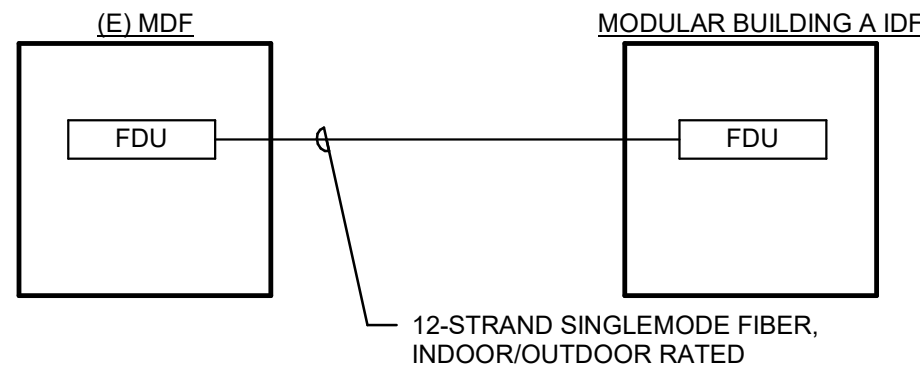
LUMINAIRE SCHEDULE										
TYPE	DESCRIPTION	HOUSING	SHIELDING	MOUNTING	FINISH	UL/IP RATING	DRIVER/POWER SUPPLY	LAMP(S)	INPUT WATTS	NOTES
B1	4" LED DOWNLIGHT	STEEL	WHITE REFLECTOR	RECESSED	WHITE	DAMP	INTEGRAL 0-10V DIMMING	575 LUMENS, 4000K, 90+ CRI	9.5	CREE CR4 575L 40K 12 E26 RC4 OR APPROVED EQUIVALENT
NOTES:										
1. THIS LUMINAIRE SCHEDULE IS NOT COMPLETE WITHOUT A COPY OF THE PROJECT MANUAL CONTAINING THE ELECTRICAL SPECIFICATIONS.										
2. DIMMING CONTROL, PROTOCOL (0-10VDC, LINE VOLTAGE, DALI, ETC.) COMPATIBLE WITH LIGHTING CONTROL SYSTEM AS SPECIFIED AND SHOWN ON DRAWINGS.										
3. COORDINATE ALL CEILING TYPES WITH LUMINAIRE LOCATIONS PRIOR TO ORDERING LUMINAIRES. COORDINATE INSTALLATION WITH REFLECTED CEILING PLAN.										
4. SPECIFIED MANUFACTURERS ARE APPROVED TO SUBMIT BID. INCLUSION DOES NOT RELIEVE MANUFACTURER FROM SUPPLYING PRODUCT AS DESCRIBED.										
5. PROVIDE SUBMITTALS THAT INCLUDE THE LUMINAIRE, LAMP AND BALLAST INFORMATION OF EACH LUMINAIRE, WITH APPLICABLE OPTIONS CLEARLY CHECKED OR HIGHLIGHTED. SUBMITTALS NOT INCLUDING THIS INFORMATION WILL BE RETURNED AS REJECTED BY THE ENGINEER OF RECORD.										
6. REMOTE BALLASTS/DRIVERS: UL LISTED FOR THEIR APPLICATION. BALLASTS/DRIVERS MARKED AS UL RECOGNIZED COMPONENT BUT NOT UL LISTED ARE SUBJECT TO REMOVAL AND REPLACEMENT AT NO COST TO OWNER.										

1 ONE-LINE POWER DISTRIBUTION DIAGRAM

NO SCALE

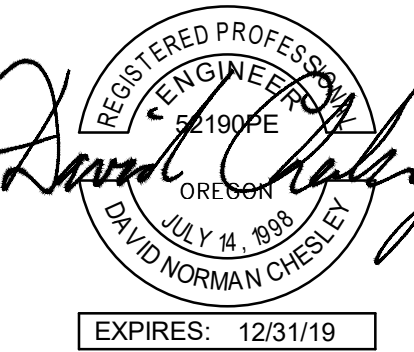
2 IDF RACK ELEVATION - BUILDING A

0' 6" 1' 2'
1" = 1'-0"



3 BACKBONE RISER

NO SCALE



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Revision Schedule	
Revision Delta	Issue Date

SHEET TITLE:

SINGLE LINE
DIAGRAM &
SCHEDULES -
BUILDING A -
ELECTRICAL

DRAWN BY: Author

CHECKED BY: Checker

SHEET

PROJECT 2018-0051
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PERMIT/BID SET 4/24/18

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