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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL STADIUM IMPROVEMENTS - 2019

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ABBREVIATIONS

&	AND	EXP.	EXPANSION
∠	ANGLE	EXT.	EXTERIOR
℄	CENTERLINE	EXIST.	EXISTING
°	DEGREES	F.D.	FLOOR DRAIN
Ø	DIAMETER OR ROUND	FDN.	FOUNDATION
⊥	PERPENDICULAR	F.E.	FIRE EXTINGUISHER
℄	PLATE	F.E.C.	FIRE EXTINGUISHER CAB.
#	POUND OR NUMBER	F.H.C.	FIRE HOSE CABINET
SQ.	SQUARE	FIN.	FINISH
A.B.	ANCHOR BOLT	FLR.	FLOOR
ACOUST.	ACOUSTICAL	FLUOR.	FLUORESCENT
ADJ.	ADJUSTABLE	F.O.C.	FACE OF CONCRETE
A.F.F.	ABOVE FINISH FLOOR	F.O.F.	FACE OF FINISH
ALT.	ALTERNATE	F.O.S.	FACE OF STUDS
ALUM.	ALUMINUM	FT.	FOOT OR FEET
A.N.S.I.	AMERICAN NATIONAL STANDARDS INSTITUTE A117.1-1980	FTG.	FOOTING
ARCH.	ARCHITECTURAL	GA.	GAUGE
ASPH.	ASPHALT	GALV.	GALVANIZED
A/V	AUDIO/VIDEO	GC	GENERAL CONTRACTOR
BD.	BOARD	GLB.	GLUE LAMINATED BEAM
BIT.	BITUMINOUS OR BITUMEN	G.M.U.	GLASS MASONRY UNIT
BLDG.	BUILDING	GYP.	GYPSUM
BLK.	BLOCK	H.B.	HOSE BIB
BLKG.	BLOCKING	H.C.	HOLLOW CORE
BM.	BEAM	HDR.	HEADER
B.O.	BOTTOM OF	H.M.	HOLLOW METAL
B.O.C.	BOTTOM OF CURB	HORIZ.	HORIZONTAL
BRNG.	BEARING	HR.	HOUR
BTM.	BOTTOM	HT.	HEIGHT
CAB.	CABINET	I.D.	INSIDE DIAMETER OR INSIDE DIMENSION
C.B.	CATCH BASIN	INSUL.	INSULATION
C.I.	CAST IRON	INT.	INTERIOR
CJ	CONTROL JOINT	JT.	JOINT
CL.	CLOSET	LAM.	LAMINATE
CLG.	CEILING	LAV.	LAVATORY
CLR.	CLEAR	LT.	LIGHT
CMU	CONCRETE MASONRY UNIT	MAX.	MAXIMUM
CO	CLEANOUT	M.B.	MACHINE BOLT
COL.	COLUMN	M.D.O.	MEDIUM DENSITY OVERLAY
CONC.	CONCRETE	MECH.	MECHANICAL
CONN.	CONNECT OR CONNECTION	MEMB.	MEMBRANE
CONST.	CONSTRUCTION	MFR. OR MANUF.	MANUFACTURER
CONT.	CONTINUOUS	M.H.	MAN HOLE
COORD.	COORDINATE	MIN.	MINIMUM
CORR.	CORRIDOR	MISC.	MISCELLANEOUS
CTR.	CENTER	M.O.	MASONRY OPENING
CUST.	CUSTODIAL	MOD.	MODIFIED
DBL.	DOUBLE	BIT.	BITUMEN
D.F.	DRINKING FOUNTAIN	MTL.	METAL
DIA.	DIAMETER	N.I.C.	NOT IN CONTRACT
DIAG.	DIAGONAL	NO. OR #	NUMBER
DIM.	DIMENSION	NOM.	NOMINAL
DISP.	DISPENSER	N.T.S.	NOT TO SCALE
DN.	DOWN	O.C.	ON CENTER
DR.	DOOR	O.D.	OUTSIDE DIAMETER
DS	DOWNSPOUT	O.F.C.I.	OWNER FURNISHED CONTRACTOR INSTALLED
DTL.	DETAIL	O.F.O.I.	OWNER FURNISHED OWNER INSTALLED
DWG	DRAWING	OPNG.	OPENING
EJ	EXPANSION JOINT	OPP.	OPPOSITE
EL.	ELEVATION	O.S.S.C.	OREGON STRUCTURAL SPECIALTY CODE
ELEC.	ELECTRICAL		
ELEV.	ELEVATOR		
EQ.	EQUAL		

PL.	PLATE
PLAM	PLASTIC LAMINATE
PLYWD.	PLYWOOD
PR.	PAIR
P.T.	PRESSURE TREATED
PTD	PAPER TOWEL DISPENSER
PTD/R	COMBINATION PAPER TOWEL DISPENSER / RECEPTACLE
PTN.	PARTITION
Q.T. R.	QUARRY TILE RISER
RAD.	RADIUS
R.D.	ROOF DRAIN
REF.	REFRIGERATOR OR REFERENCE
REINF.	REINFORCED
REQ'D.	REQUIRED
REQMTS.	REQUIREMENTS
RESIL.	RESILIENT
REV.	REVERSE
RM.	ROOM
R.O.	ROUGH OPENING
S.C.	SOLID CORE
S.C.D.	SEAT COVER DISPENSER
SCHED.	SCHEDULE
SD	SOAP DISPENSER
SECT.	SECTION
S.F. OR SQ. FT.	SQUARE FEET
SHTG.	SHEATHING
SIM.	SIMILAR
S.M.	SHEET METAL
SND	SANITARY NAPKIN DISPENSER
SNR	SANITARY NAPKIN RECEPTACLE
SPEC.	SPECIFICATION
S.S.	STAINLESS STEEL
STL.	STEEL
STOR.	STORAGE
STRUCT.	STRUCTURAL
SUSP. T.	SUSPENDED TREAD
T&G	TONGUE AND GROOVE
TEL.	TELEPHONE
TEMP.	TEMPERED
T.O.	TOP OF
T.O.C.	TOP OF CURB
T.O.P.	TOP OF PAVEMENT
T.O.W.	TOP OF WALL
TPD	TOILET PAPER DISPENSER
T.S.	TUBE STEEL
TYP.	TYPICAL
U.B.C.	UNIFORM BUILDING CODE
U.O.N.	UNLESS OTHERWISE NOTED
VERT.	VERTICAL
VEST.	VESTIBULE
V.P.	VENEER PLASTER
W/ W.C.	WITH WATER CLOSET
WD.	WOOD
W.H.	WATER HEATER
W/O	WITHOUT
WP.	WATERPROOF
WT.	WEIGHT

DEFERRED SUBMITTALS

MANUFACTURED STEEL STAIRS
GRANDSTANDS

STANDARD SYMBOLS

- EXTERIOR ELEVATION TAG (1 / A2.1)
- BUILDING SECTION FLAG (1 / A3.1)
- WALL SECTION FLAG (1 / A3.2)
- INTERIOR ELEVATION TAG (A / B / C / D, A4.1)
- DETAIL FLAG (SIM. / A5.1)
- DETAIL CALLOUT (SIM. / A5.1)
- NORTH ARROW (N)
- GRID BUBBLE & GRID LINE (Ø)
- DOOR TAG (1 / 101)
- KEYNOTE TAG (Ø000)
- SHEET NOTE TAG (8)
- DEMOLITION NOTE TAG (8)
- REVISION TAG (1)
- WINDOW TYPE TAG (A)
- WALL TYPE TAG (A)
- CEILING HEIGHT TAG (1'-Ø")
- ROOM NAME / 101 — FLOOR PLAN ROOM LABEL & NUMBER
- Ø'-Ø" A.F.F. — ELEVATION TAG

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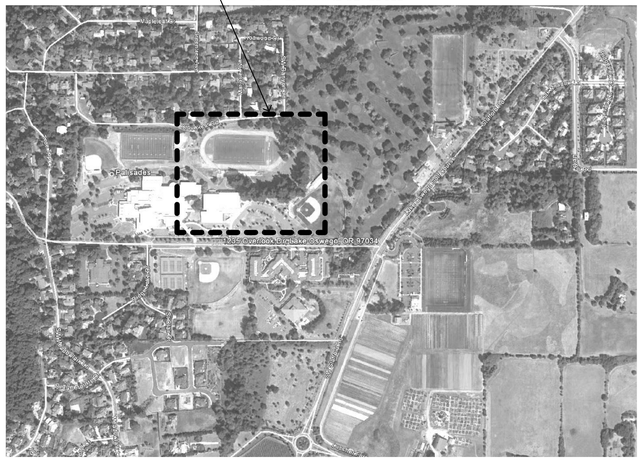
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PROJECT SITE



LOCATION MAP
N.T.S.

AREA OF WORK



VICINITY MAP
N.T.S.

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1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034

TITLE SHEET

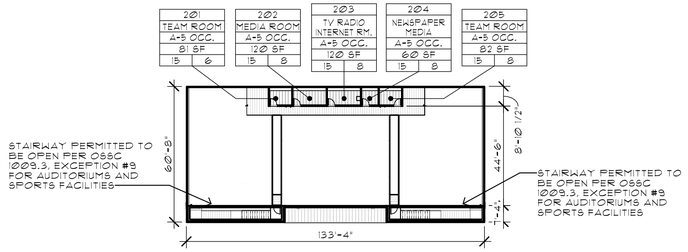
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PROJECT NUMBER
20 SEP 2019
DATE
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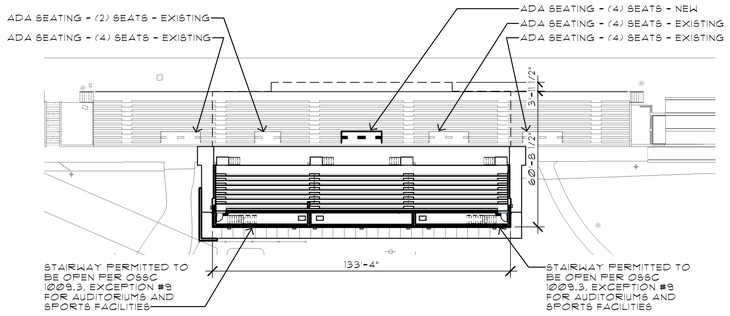
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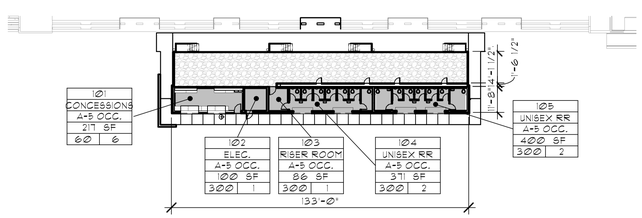
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1 G2 CODE PLAN - PRESS BOX FLOOR PLAN / ROOF PLAN
1/32" = 1'-0"

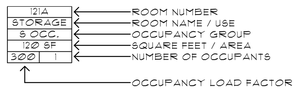


2 G2 CODE PLAN - FLOOR PLAN
1/32" = 1'-0"



3 G2 CODE PLAN - LOWER FLOOR PLAN
1/32" = 1'-0"

CODE PLAN LEGEND



CODE SUMMARY

APPLICABLE CODE 2014 OSSC

BUILDING CONSTRUCTION DATA

CONSTRUCTION TYPE	II-B
ALLOWABLE BUILDING HEIGHT	50'
BUILDING HEIGHT	45'
BUILDING AREA	10,750 S.F.
MAIN LEVEL	8,090 S.F. (TOTAL COVERED AREA, INCLUDES NEW EXISTING SEATING.)
PRESS BOX LEVEL	861 S.F.
LOWER FLOOR AREA	1,728 S.F.
ALLOWABLE AREA	UNLIMITED
ALLOWABLE NUMBER OF STORIES	UNLIMITED
NUMBER OF STORIES	2
SETBACK FROM PROPERTY LINE	301 FT.
SET BACK FROM OTHER STRUCTURES	78 FT.

BUILDING OCCUPANCY DATA

LOCATION	OCCUPANCY GROUP	NET FLOOR AREA
LOWER LEVEL		
CONCESSIONS	A-5	307 S.F.
ELECTRICAL	A-5	100 S.F.
RISER ROOM	A-5	86 S.F.
UNISEX R.R.	A-5	371 S.F.
UNISEX R.R.	A-5	400 S.F.
TOTAL		1,264 S.F.
MAIN LEVEL		
GRANDSTAND	A-5	8,090 S.F.
STAIRS	A-5	581 S.F.
TOTAL		8,671 S.F.
PRESS BOX LEVEL		
PRESS BOX	A-5	529 S.F.
COVERED VIEWING	A-5	332 S.F.
FLOOR AREA	A-5	1,261 S.F.
TOTAL		11,202 S.F.

OCCUPANCY LOAD ANALYSIS

SPECTATOR SEATING		
EXISTING GRANDSTANDS		
FIXED SEATING (18" PER PERSON)	1,282	
ACCESSIBLE SEATING WITH COMPANION SEATING	14	
NEW SEATING	600	
TOTAL	1,896	
LOWER FLOOR OCCUPANTS	18	
PRESS BOX LEVEL (ASSEMBLY TABLES AND CHAIRS) 1/15	44	
NUMBER OF EXITS REQUIRED	2	
NUMBER OF EXITS PROVIDED	2	OK

ACCESSIBLE SEATING

TOTAL SEATING	1,896	
REQUIRED		
FOR 1 - 500 SEATS	6	
FOR 501 - 1,896 SEATS (1/150)	10	
TOTAL REQUIRED	16	
PROVIDED	18	OK

FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (TABLE 601)

BUILDING ELEMENTS	TYPE II-B
PRIMARY STRUCTURE FRAME	0
BEARING WALLS EXTERIOR	0
BEARING WALLS INTERIOR	0
EXTERIOR NON-BEARING WALLS AND PARTITIONS	0
INTERIOR BEARING WALLS AND PARTITIONS	0
FLOOR CONSTRUCTION	0
ROOF CONSTRUCTION	0

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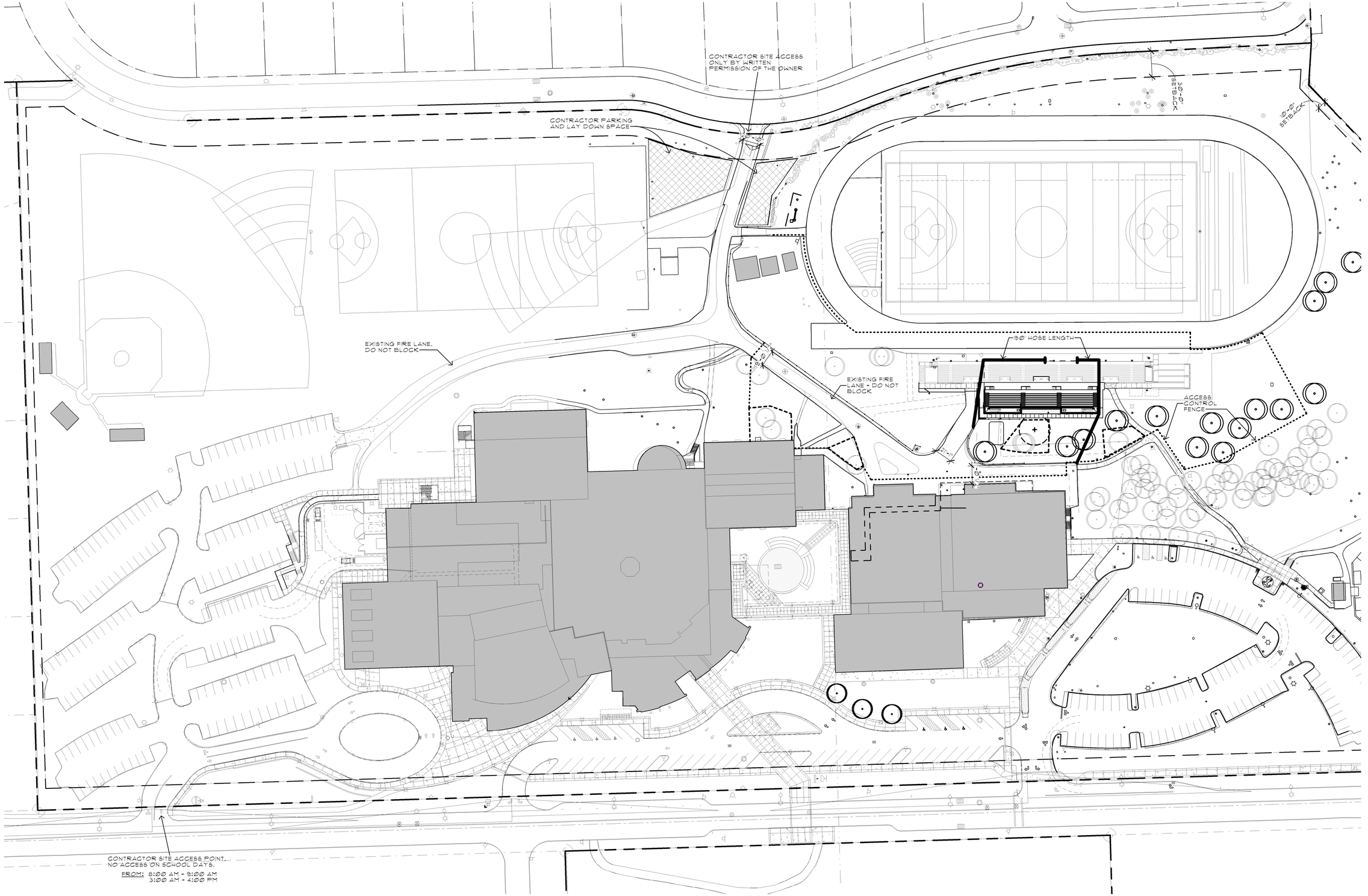
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1 G3 SITE ACCESS PLAN
1" = 50'-0"

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SITE ACCESS PLAN

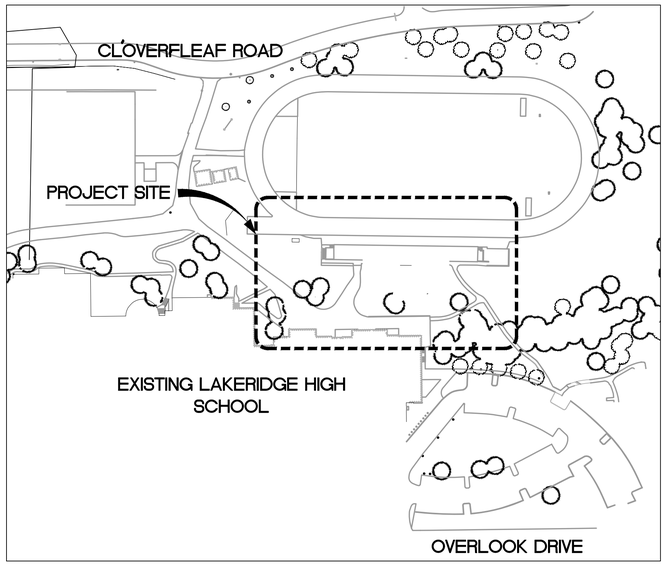
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20 SEP 2019
DATE

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SITE MAP

SCALE: 1"=120'

GENERAL NOTES

1. ALL CONSTRUCTION, MATERIALS, AND WORKMANSHIP SHALL CONFORM TO THE LATEST STANDARDS AND PRACTICES OF THE OREGON STRUCTURAL SPECIALTY CODE (BUILDING CODE), OREGON PLUMBING SPECIALTY CODE (PLUMBING CODE), AND THE OREGON FIRE CODE (FIRE CODE), LATEST EDITIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND SCHEDULING ALL WORK WITH THE OWNER.
3. ALL PERMITS AND LICENSES NECESSARY FOR THE EXECUTION AND COMPLETION OF THE WORK SHALL BE SECURED BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION.
4. ALL EXCAVATORS MUST COMPLY WITH THE RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER, INCLUDING NOTIFICATION OF ALL OWNERS OF UNDERGROUND UTILITIES AT LEAST 48 BUSINESS DAY HOURS, BUT NOT MORE THAN 10 BUSINESS DAYS, BEFORE COMMENCING AN EXCAVATION. THOSE RULES ARE SET FORTH IN OAR 952–001–0010 THROUGH OAR 952–001–0090 AND ORS 757.541 TO 757.57. THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS 503–232–1987 AND THE LOCAL "CALL 48 HOURS BEFORE YOU DIG NUMBER" IS 503–246–6699.
5. THE LOCATION OF EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS IS FOR INFORMATION ONLY AND IS NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL VERIFY ELEVATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WITH CONSTRUCTION AND SHALL BRING ANY DISCREPANCIES TO THE ATTENTION OF MGH ASSOCIATES. POTHOLE ALL CROSSINGS AS NECESSARY BEFORE CONSTRUCTION TO PREVENT GRADE AND ALIGNMENT CONFLICTS.
6. THE ENGINEER OR OWNER IS NOT RESPONSIBLE FOR THE SAFETY OF THE CONTRACTOR OR HIS CREW. ALL O.S.H.A. REGULATIONS SHALL BE STRICTLY ADHERED TO IN THE PERFORMANCE OF THE WORK.
7. TEMPORARY AND PERMANENT EROSION CONTROL MEASURES SHALL BE USED AS NEEDED. THE CONTRACTOR SHALL ADHERE TO THE CITY OF LAKE OSWEGO EROSION CONTROL STANDARDS AS NECESSARY FOR EROSION CONTROL MEASURES.
8. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL ROADWAYS CLEAN AND FREE OF CONSTRUCTION MATERIALS AND DEBRIS.
9. BEFORE BACKFILLING ANY SUBGRADE UTILITY IMPROVEMENTS CONTRACTOR TO SURVEY AND RECORD MEASUREMENTS OF EXACT LOCATION AND DEPTH.
10. CONTRACTOR TO ADJUST ALL EXISTING OR NEW FLEXIBLE UTILITIES (WATER, GAS, TV, TELEPHONE, ELEC., ETC.) TO CLEAR ANY EXISTING OR NEW GRAVITY DRAIN UTILITIES (STORM DRAIN, SANITARY SEWER, ETC.) IF CONFLICT OCCURS.
11. MGH ASSOCIATES, INC. ASSUMES NO RESPONSIBILITY FOR ANY DISCREPANCIES ENCOUNTERED BETWEEN THE CURRENT FIELD CONDITIONS AND THE INFORMATION SHOWN ON THE SURVEY MAP. THE CONTRACTOR IS RESPONSIBLE FOR REPORTING ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE.

GRADING NOTES

1. ALL SURFACES NOT OTHERWISE SPECIFIED SHALL HAVE MINIMUM 2.0% SLOPE AND SHALL MEET EXISTING GRADES SMOOTHLY AND EVENLY. MAINTAIN CONSTANT SLOPES UNLESS OTHERWISE NOTED ON PLANS.
2. CONTRACTOR RESPONSIBLE FOR MAINTAINING EXISTING SITE AND DRAINAGE PATTERNS AND PROTECTION OF EXISTING ENGINEERED DRAINAGE FACILITIES.
3. CONTRACTOR SHALL EXERCISE CARE IN ALL OPERATIONS TO PROTECT EXISTING UNDERGROUND UTILITIES. ANY DAMAGE RESULTING FROM THIS WORK MUST BE RESTORED AT THE CONTRACTOR'S EXPENSE TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE.
4. CONTRACTOR SHALL REPLACE AND RESTORE AREAS NOT SCHEDULED FOR CONSTRUCTION TO THEIR ORIGINAL CONDITION AND TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE.
5. CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING IN AREAS ADJACENT TO EXISTING TREES IN ORDER TO MINIMIZE DISTURBANCES TO TREE ROOTS. CONTRACTOR SHALL INSTALL TREE PROTECTION FENCING AS INDICATED ON PLANS OR AT DRIP–LINE OF EXISTING TREES. SEE TREE PROTECTION SPECIFICATIONS AND NOTES. NO PARKING VEHICLES UNDER TREES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AND DISPOSAL OF EXISTING AC, CURBS, SIDEWALKS AND OTHER SITE ELEMENTS WITHIN THE PROJECT AREA. DISPOSE OF DEMOLISHED ITEMS OFF–SITE IN A LEGAL MANNER.
7. ACTUAL LINES AND GRADES OF EXCAVATION SHALL BE STAKED BY QUALIFIED SURVEYOR, BASED ON DIMENSIONS AND BEARINGS AS SHOWN ON THE PLANS CONTRACTOR SHALL RETAIN A SURVEYOR LICENSED IN OREGON.
8. ADJUST ALL INCIDENTAL STRUCTURES, MANHOLE LIDS, VALVE BOXES, ETC. TO FINISH GRADE.

MATERIAL NOTES

1. MATERIALS SHALL BE NEW. THE USE OF MANUFACTURER'S NAMES, MODELS, AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, AND USEFULNESS. PROPOSED SUBSTITUTIONS WILL REQUIRE WRITTEN APPROVAL FROM ENGINEER PRIOR TO INSTALLATION.
2. ALL ON–SITE WATER, STORM AND SANITARY SEWER PIPE MATERIALS, FITTINGS SHALL CONFORM TO THE OREGON STATE PLUMBING SPECIALTY CODE, LATEST EDITION.
3. ON–SITE STORM SEWER PIPE WITH LESS THAN 2' OF COVER SHALL BE HDPE PIPE.

PAVING NOTES

1. STREET SIGNS AND STRIPING TO BE INSTALLED BY THE CONTRACTOR PER MUTCD
2. ALL PAVEMENT SHALL BE CUT STRAIGHT PRIOR TO PAVING. EXISTING PAVEMENT SHALL BE REMOVED AS NECESSARY TO PROVIDE A SMOOTH TRANSITION FOR BOTH RIDE AND DRAINAGE.
3. PAVING WILL NOT BE ALLOWED DURING WET OR COLD WEATHER, PER ODOT SPECIFICATIONS.
4. CONTRACTOR TO INSTALL ADA WHEELCHAIR RAMPS AND SIDEWALKS AS SHOWN ON PLANS AND ON THE DETAIL SHEETS.
5. ALL CONSTRUCTION WITHIN THE CITY OF LAKE OSWEGO RIGHT–OF–WAY SHALL HAVE AN APPROVED TRAFFIC CONTROL PLAN AND RIGHT–OF–WAY PERMIT PRIOR TO ANY ON–SITE CONSTRUCTION ACTIVITY.

UTILITY NOTES

1. ALL WATER, STORM, AND SANITARY SEWER FACILITIES AND THE INSTALLATION THEREOF, SHALL FOLLOW THE CURRENT OREGON STATE PLUMBING SPECIALTY CODE DURING CONSTRUCTION.
2. ALL TRENCH BACKFILL SHALL BE AS SHOWN ON THE PIPE BEDDING AND BACKFILL DETAIL. FLOODING OR JETTING THE BACKFILLED TRENCHES WITH WATER IS NOT PERMITTED.
3. CONNECTIONS TO EXISTING UTILITIES SHALL CONFORM WITH THE CITY OF LAKE OSWEGO ENGINEERING DESIGN MANUAL AND STANDARD DRAWINGS.
4. ALL WATER AND FIRE PROTECTION PIPE SHALL HAVE MINIMUM 36–INCH COVER TO FINISHED GRADE.
5. ALL WATER LINES SHALL BE THOROUGHLY FLUSHED, CHLORINATED AND TESTED IN ACCORDANCE WITH THE OREGON STATE HEALTH DEPARTMENT PRIOR TO ANY METER HOOK–UP SERVICE.
6. BEGIN LAYING STORM AND SANITARY SEWER PIPE AT THE LOW POINT OF THE SYSTEM TRUE TO GRADE AND ALIGNMENT INDICATED WITH UNBROKEN CONTINUITY OF INVERT. ESTABLISH LINE AND GRADE FOR THE STORM AND SANITARY SEWER PIPE BY THE USE OF A LASER.
7. CONTRACTOR SHALL PREVENT SEDIMENTS FROM ENTERING THE STORM DRAINAGE SYSTEM.
8. CONTRACTOR TO MAINTAIN A MINIMUM 10' HORIZONTAL AND 18" VERTICAL SEPARATION BETWEEN ALL EXISTING AND PROPOSED WATER AND SEWER LINES.
9. FOR CROSSINGS OF SANITARY SEWER LINES, THE OREGON STATE HEALTH DEPARTMENT CRITERIA SHALL APPLY.

DUST CONTROL NOTES:

1. DUST SHALL BE MINIMIZED TO THE EXTENT PRACTICABLE, UTILIZING ALL MEASURES NECESSARY, INCLUDING, BUT NOT LIMITED TO:
   - A. SPRINKLER HAUL AND ACCESS ROADS AND OTHER EXPOSED DUST PRODUCING AREAS.
   - B. APPLYING AGENCY–APPROVED DUST PALLIATIVES ON ACCESS AND HAUL ROADS.
   - C. ESTABLISHING TEMPORARY VEGETATIVE COVER.
   - D. PLACING WOOD CHIPS OR OTHER EFFECTIVE MULCHES ON VEHICLE AND PEDESTRIAN USE AREAS.
   - E. MAINTAINING THE PROPER MOISTURE CONDITION ON ALL FILL SURFACES.
   - F. PREWETTING CUT AND BORROW AREA SURFACES.
   - G. USE OF HAUL EQUIPMENT.
2. CONTRACTOR SHALL FURNISH AND INSTALL EQUIPMENT TO HAUL AND PLACE WATER. AN ADEQUATE SUPPLY OF WATER SHALL BE MAINTAINED AT ALL TIMES.

EROSION CONTROL NOTES

1. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT LEAVE THE WORK SITE. THE CONTRACTOR SHALL USE ALL AVAILABLE MEANS TO ACHIEVE THIS RESULT.
2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED, AND VEGETATION/LANDSCAPING IS ESTABLISHED.
3. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS.
4. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT–LADEN WATER DOES NOT LEAVE THE SITE.
5. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE INSPECTOR DURING STORM RUNOFF OR SNOWMELT AND AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF RAIN PER 24–HOUR PERIOD.
6. THE ESC FACILITIES ON SITES INACTIVE FOR MORE THAN 7 CONSECUTIVE CALENDAR DAYS SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE EVERY 2 WEEKS.
7. ALL STORM INLETS SHALL BE PROTECTED TO PREVENT SEDIMENT FROM LEAVING THE PROJECT SITE. CLEANING OF CATCH BASINS SHALL OCCUR WHEN DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
8. ALL AREAS DISTURBED BY CONSTRUCTION OF THIS PROJECT, NOT RECEIVING A HARD, DURABLE SURFACE SHALL BE GRASSED AND/OR LANDSCAPED AT EARLIEST PRACTICABLE TIME.
9. IN GENERAL, CONSTRUCTION SHALL PROGRESS FROM DOWNSTREAM TO UPSTREAM. THE CONTRACTOR SHALL CONSTRUCT ESC FACILITIES IN CONJUNCTION WITH ALL CLEARING, GRADING AND OTHER LAND ALTERATION ACTIVITIES.
10. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. THE LOCATION OF THESE ENTRANCES SHALL BE COORDINATED WITH THE CITY PRIOR TO CONSTRUCTION OR RELOCATION. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL EXISTING PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
11. TEMPORARY EROSION CONTROL MEASURES SHALL REMAIN FUNCTIONAL AND IN PLACE UNTIL THEIR REMOVAL IS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL COMPLETELY RESTORE ALL AREAS DISTURBED BY REMOVAL OF TEMPORARY EROSION CONTROL MEASURES. REMOVED MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR TO BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS AND JURISDICTIONS.
12. CONTRACTOR WILL PROVIDE TRUCKS THAT ARE WELL SEALED FOR TRANSPORTATION OF SATURATED SOILS/MATERIAL FROM THE SITE. A TRUCK MUST NOT LEAK LIQUIDS AT ANY RATE GREATER THAN 1 GAL./HR.
13. EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE CITY OF LAKE OSWEGO EROSION AND SEDIMENT CONTROL REQUIREMENTS.
14. SUPPLEMENTARY WET WEATHER MEASURES SHALL BE IN PLACE AND FUNCTIONING BY OCTOBER 1 AND REMAIN OPERATIONAL UNTIL MAY 31.
15. SUPPLEMENTARY WET WEATHER MEASURES ARE IN ADDITION TO BASE MEASURES.
16. WHEN CONCRETE TRUCKS ARE USED, A SHALLOW PIT SHALL BE DUG FOR RESIDUAL CONCRETE, AGGREGATE AND WATER. TRUCKS THAT RECYCLE THIS RESIDUAL BACK INTO THE TRUCK MAY BE USED IN LIEU OF THE PIT.
17. IF FERTILIZERS ARE USED TO ESTABLISH VEGETATION, THE APPLICATION RATES SHALL FOLLOW THE MANUFACTURER'S GUIDELINES AND THE APPLICATION SHALL BE DONE IN SUCH A WAY TO MINIMIZE NURTRIENT–LADEN RUNOFF TO RECEIVING WATERS.
18. STOCKPILES SHALL BE LOCATED AWAY FROM THE CONSTRUCTION ACTIVITY AND SHALL BE STABILIZED OR COVERED AT THE END OF EACH WORKDAY.
19. SIGNIFICANT AMOUNTS OF SEDIMENT THAT LEAVE THE SITE SHALL BE CLEANED UP WITHIN 24 HOURS AND PLACED BACK ON THE SITE OR PROPERLY DISPOSED.
20. ALL EROSION AND SEDIMENT CONTROLS NOT IN THE DIRECT PATH OF WORK SHALL BE INSTALLED BEFORE ANY LAND DISTURBANCE.

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		MANHOLE
		CATCH BASIN
CO		CLEAN OUT
		FIRE HYDRANT
WM		WATER METER
		WATER VALVE
		BLOW OFF
		THRUST BLOCK
		LIGHT
		JUNCTION BOX
		UTILITY POLE
TR		TRANSFORMER
		PLUG
		SIGN
		BIOBAG
		PROPERTY LINE/LOT LINE
		CENTERLINE
		EASEMENT LINE
288	288	CONTOUR
		EDGE OF AC OR GRAVEL
		CURB
XSD	SD	STORM DRAIN
XW	W	WATER
XSS	SS	SANITARY SEWER
T	T	UNDERGROUND TELEPHONE
OH	OH	OVERHEAD UTILITIES
CTV	CTV	CABLE TELEVISION
G	G	GAS
E	E	UNDERGROUND POWER
X	X	4' BLACK CHAINLINK FENCE
		SILT FENCE
		WATTLES

ABBREVIATIONS

AC	ASPHALTIC CONCRETE	GV	GATE VALVE
AD	AREA DRAIN	IE	INVERT ELEVATION
ASSY	ASSEMBLY	IRR	IRRIGATION
BO	BLOWOFF	LT	LEFT
BOW	BACK OF WALK	L/S	LANDSCAPE
BV	BUTTERFLY VALVE	MAX	MAXIMUM
CB	CATCH BASIN	MH	MANHOLE
C	CENTERLINE	MIN	MINIMUM
CJ	CONSTRUCTION JOINT	NTS	NOT TO SCALE
COLO	CITY OF LAKE OSWEGO	NO	NUMBER
CONC	CONCRETE	OH	OVERHEAD
CONST	CONSTRUCT	OHW	OVERHEAD WIRE
COTG	CLEAN OUT TO GRADE	PC	POINT OF CURVATURE
CP	CONTROL POINT	PIV	POST INDICATOR VALVE
DC	DOUBLE CHECK	PNT	POINT
DDC	DOUBLE DETECTOR CHECK	PRC	POINT OF REVERSE
DI	DUCTILE IRON	PT	CURVATURE
D/W	DRIVEWAY	PVMT	POINT OF TANGENCY
DWG	DRAWING	RD	PAVEMENT
EJ	EXPANSION JOINT	RT	ROOF DRAIN
ELEV	ELEVATION	ROW	RIGHT
EP	EDGE OF PAVEMENT	S=	RIGHT–OF–WAY
ER	END OF RETURN	SD	SLOPE EQUALS
EXIST	EXISTING	SHT	STORM DRAIN
FDC	FIRE DEPT. CONNECTION	SS	SHEET
FDCL	FIRE DEPT. CONNECTION LINE	ST	SANITARY SEWER
FF	FINISHED FLOOR ELEV.	STD	STREET
FG	FINISHED GRADE	S/W	STANDARD
FH	FIRE HYDRANT	TC	SIDEWALK
FL	FLOW LINE	TEL	TOP OF CURB
FP	FIRE PROTECTION	TEMP	TELEPHONE
FWL	FIRE WATER LINE	TP	TEMPORARY
G	GAS	TYP	TOP OF PAVEMENT
G=	GUTTER EQUALS	W	TYPICAL
GB	GRADE BREAK	W/	WATER
		WV	WITH
		WSE	WATER VALVE
			WATER SURFACE ELEVATION

CONTACTS

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LANDSCAPE ARCHITECT
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CONTACT: WILLIAM BRANNAN, PE

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PHONE: 503.635.4425
CONTACT: DOUG PRUITT

SURVEY

SURVEY PROVIDED BY CHASE, JONES & ASSOCIATES, INC. DATED DECEMBER 2013. ELEVATIONS ARE BASED ON CITY OF LAKE OSWEGO BENCHMARK NO. 12–N–1, ELEV. = 487.06

SHEET INDEX

C0.00	CIVIL COVER
C1.00	EXISTING CONDITIONS, DEMOLITION AND EROSION CONTROL PLAN
C2.00	LAYOUT AND GRADING PLAN
C3.00	UTILITY PLAN
C3.01	UTILITY PLAN
C4.00	CIVIL DETAILS
C4.01	CIVIL DETAILS
C5.00	PUBLIC STORM COVER SHEET (FOR REFERENCE ONLY, UNDER SEPARATE PERMIT)
C5.01	PUBLIC STORM PLAN AND PROFILE (FOR REFERENCE ONLY, UNDER SEPARATE PERMIT)
C5.02	PUBLIC STORM DETAILS (FOR REFERENCE ONLY, UNDER SEPARATE PERMIT)

REGISTERED PROFESSIONAL ENGINEER 84500 OREGON JUNE 1, 2007 WILLIAM G. BRANNAN
EXPIRES 12–31–19

BBL ARCHITECTS
ARCHITECTURE ■ PLANNING ■ INTERIOR DESIGN
200 North State Street ■ Lake Oswego, Oregon 97034

LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL STADIUM
IMPROVEMENTS – 2019
2500 COUNTRY CLUB ROAD, LAKE OSWEGO, OREGON 97034

CIVIL COVER

18079.00.L
PROJECT NUMBER
20 SEP 2019
DATE

REVISIONS

C0.00

PERMIT SET

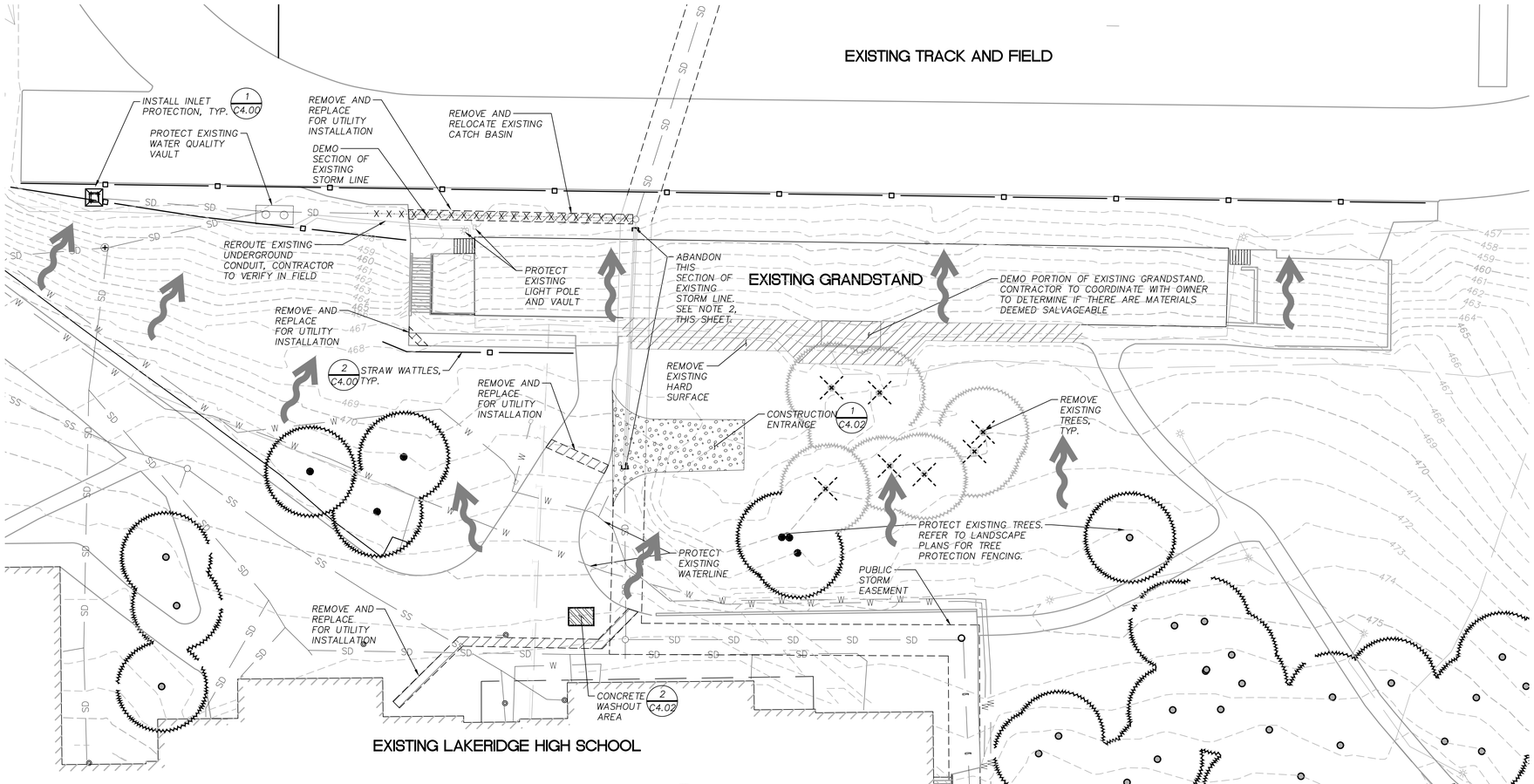
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SHEET LEGEND

ITEM	DESCRIPTION	REFERENCE
—— □ ——	STRAW WATTLES	
	EXISTING TREE TO BE REMOVED	
	DEMO EXISTING HARD SURFACE	
— — 288 — —	EXISTING CONTOUR	
	DRAINAGE FLOW DIRECTION	
· X · X · X · X · X ·	REMOVE EXISTING STRUCTURE	
	ABANDON EXISTING STRUCTURE	
	INLET PROTECTION	

SHEET NOTES

1. INSTALL INLET PROTECTION ON ALL STORM INLETS 100' FROM SITE.
2. ABANDON EXISTING STORM LINE. FILL WITH GROUT AND CAP BOTH ENDS.



1 **EXISTING CONDITIONS AND DEMO PLAN**
SCALE: 1"=20'

GRAPHIC SCALE
0 20 40
1 inch = 20 ft.

REGISTERED PROFESSIONAL ENGINEER 64500 OREGON JUNE 1, 2007 WILLIAM G. BRANNAN
EXPIRES 12-31-19

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL STADIUM IMPROVEMENTS – 2019
2500 COUNTRY CLUB ROAD, LAKE OSWEGO, OREGON 97034

EXISTING CONDITION AND DEMOLITION PLAN

18079.00.L PROJECT NUMBER
20 SEP 2019 DATE
REVISIONS

C1.00

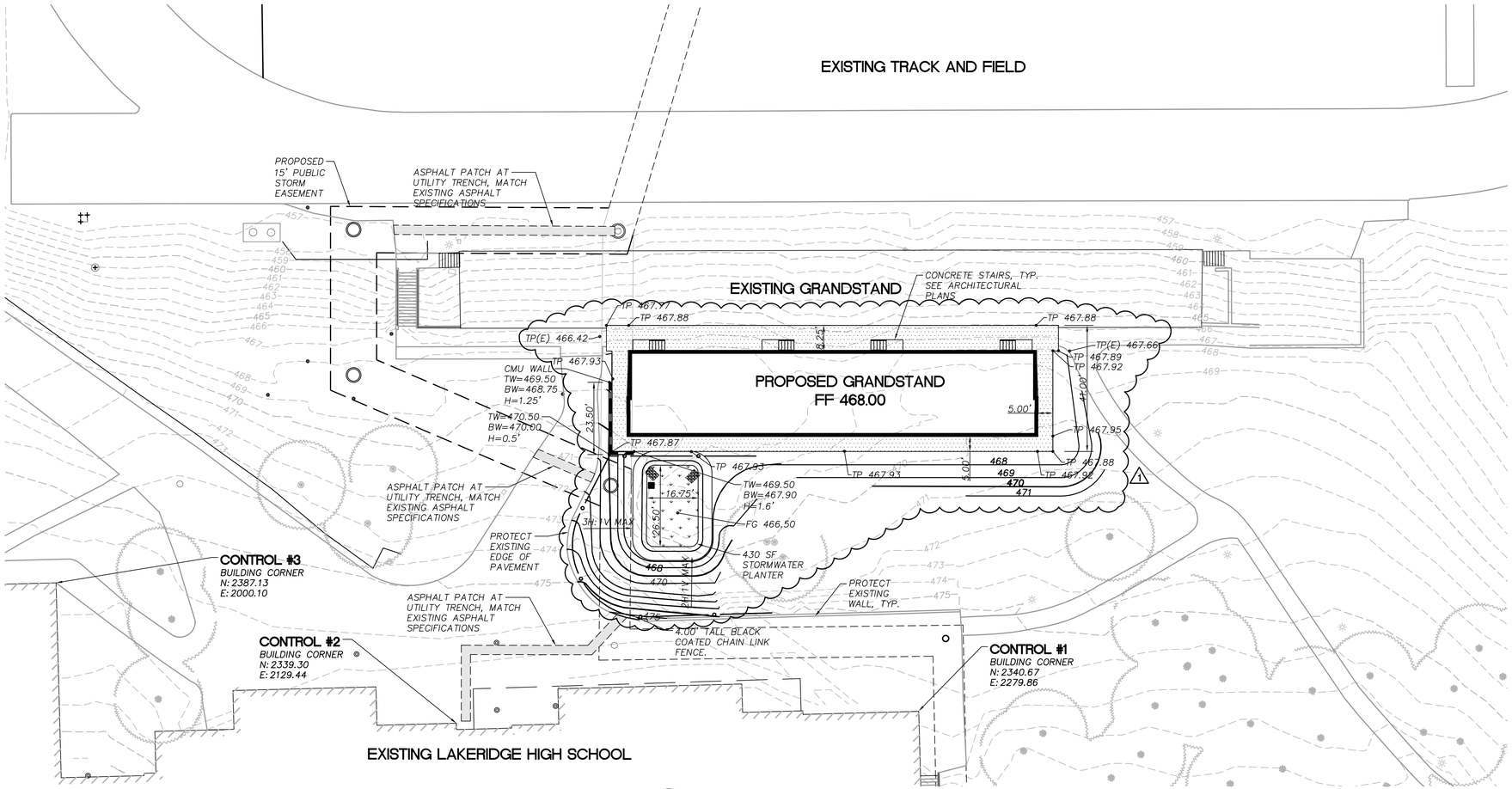
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LEGEND		
ITEM	DESCRIPTION	REFERENCE
	NEW SIDEWALK	
	SITE WALL	
	INLET PROTECTION	
	ASPHALT PAVEMENT	

SHEET NOTES

1. COORDINATE PROPOSED GRANDSTANDS BUILDING BASED OFF OF ARCHITECTURAL PLANS.
2. CONTROL REFERENCE POINTS IN DRAWING PERTAIN TO PROPOSED SITE FURNISHING ONLY AND HAVE A PRECISION TOLERANCE OF 0.10'.



1 LAYOUT AND GRADING PLAN
SCALE: 1"=20'

REGISTERED PROFESSIONAL ENGINEER 64500 OREGON JUNE 1, 2012 WILLIAM G. BRAMMAN
EXPIRES 12-31-19

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL STADIUM IMPROVEMENTS – 2019
2500 COUNTRY CLUB ROAD, LAKE OSWEGO, OREGON 97034

LAYOUT AND GRADING PLAN

18079.00L PROJECT NUMBER
20 SEP 2019 DATE
R1 30 SEP 2019 REVISIONS

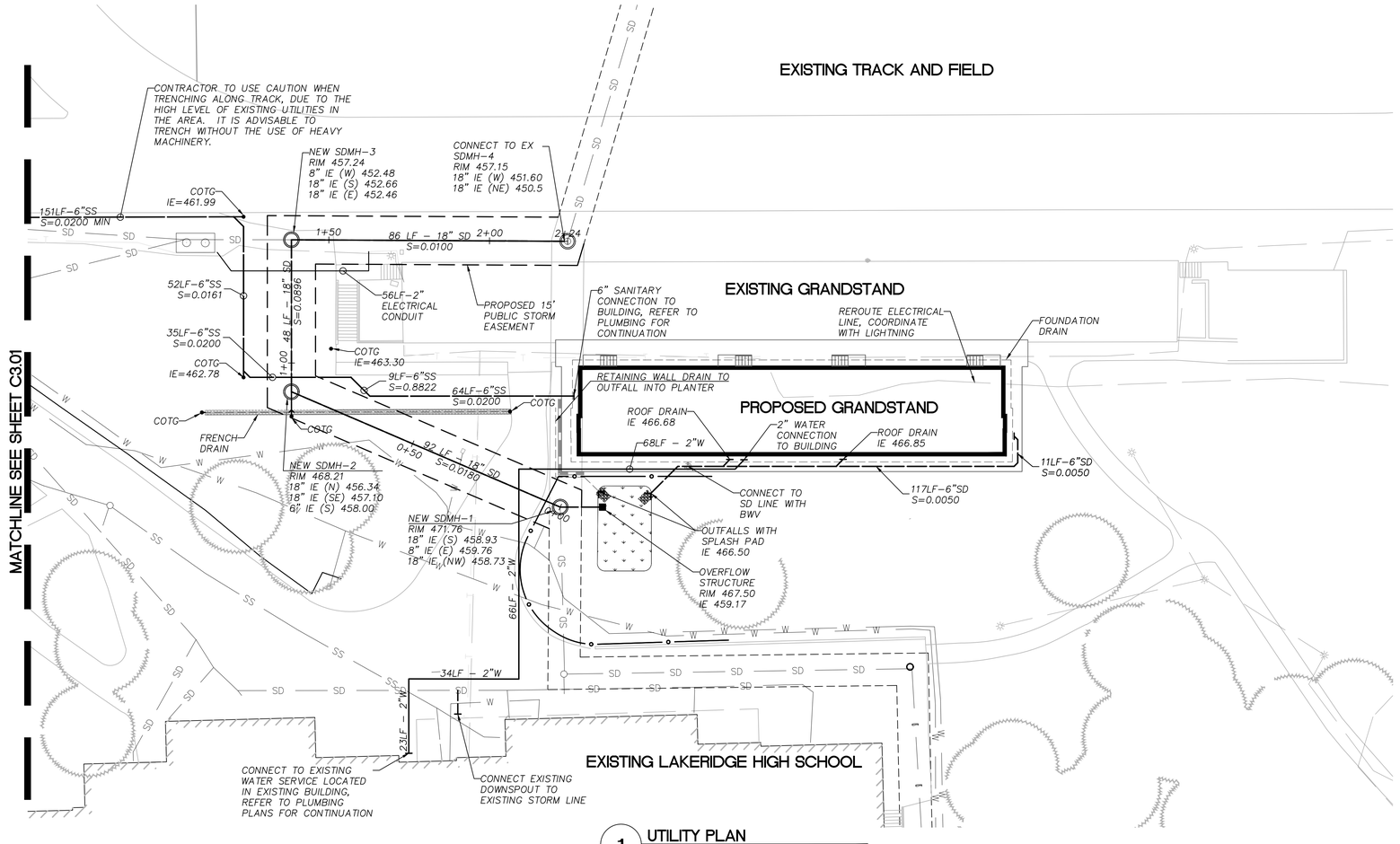
GRAPHIC SCALE
0 20 40
1 inch = 20 ft.

C2.00

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LEGEND		
ITEM	PROPOSED UTILITY	REFERENCE
—— —— ——	STORM SEWER	
- - - - - - - -	PERF PIPE	
—— —— ——	SANITARY SEWER	
——————	WATER	
■	AREA DRAIN	
●	CLEAN OUT	
═══	DIRECTIONAL BORE	



1 UTILITY PLAN
SCALE: 1"=20'

GRAPHIC SCALE
0 20 40
1 inch = 20 ft.

REGISTERED PROFESSIONAL ENGINEER
64500
OREGON
JUNE 1, 2012
WILLIAM G. BRANNAN
EXPIRES 12-31-19

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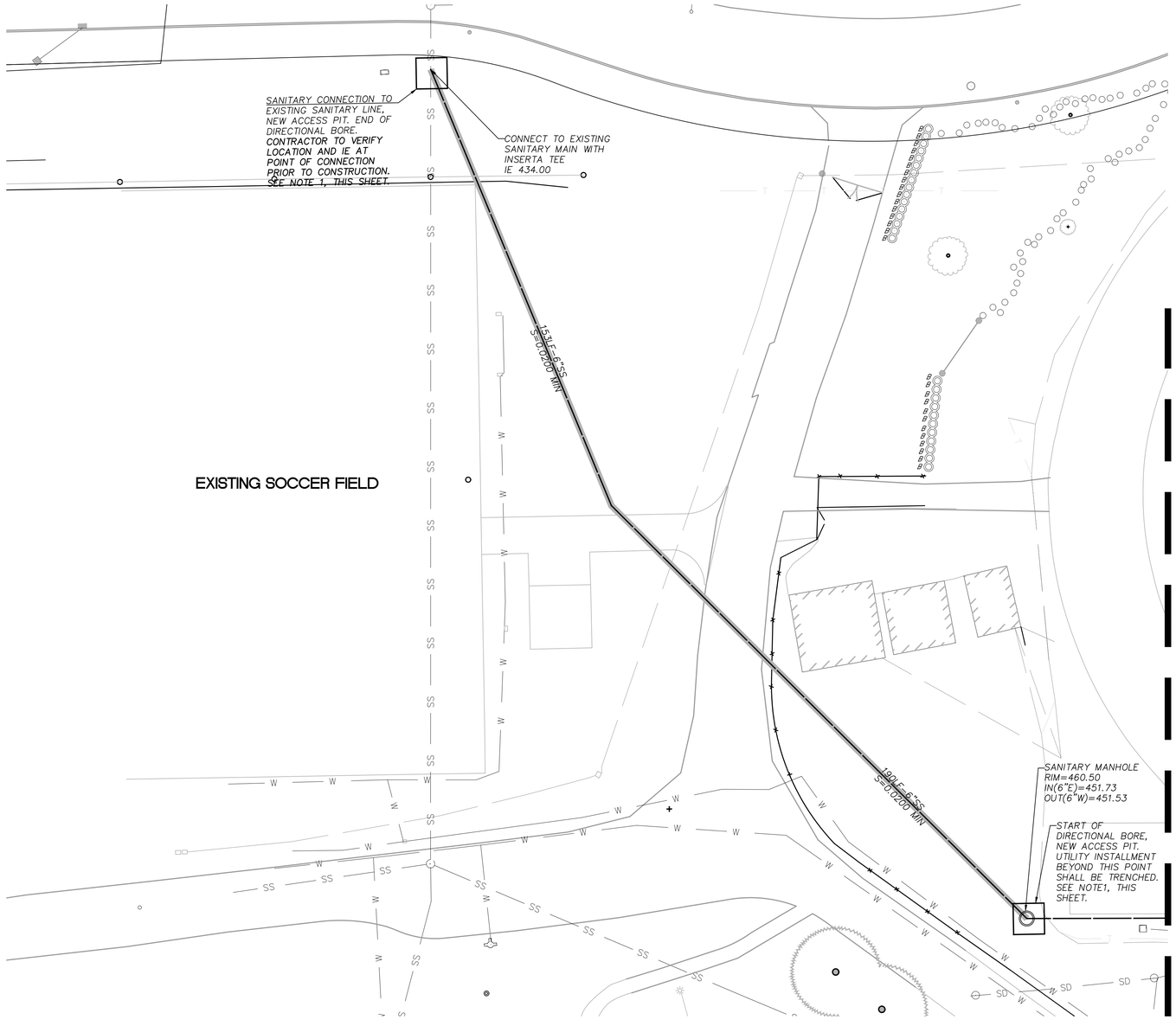
UTILITY PLAN

18079.00.L
PROJECT NUMBER
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1 **UTILITY PLAN**
SCALE: 1"=20'

LEGEND

ITEM	PROPOSED UTILITY	REFERENCE
— — — —	STORM SEWER	
- - - - - - - -	PERF PIPE	
— — — —	SANITARY SEWER	
———	WATER	
■	AREA DRAIN	
●	CLEAN OUT	
═══	DIRECTIONAL BORE	

SHEET NOTES

1. CONTRACTOR TO COORDINATE WITH SCHOOL PRIOR TO DIGGING ANY BORE PITS ON SITE.

GRAPHIC SCALE
0 20 40
1 inch = 20 ft.

REGISTERED PROFESSIONAL ENGINEER 64500 OREGON JUNE 1, 2012 WILLIAM G. BRANNAN
EXPIRES 12-31-19

BBL ARCHITECTS
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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL STADIUM IMPROVEMENTS – 2019
2500 COUNTRY CLUB ROAD, LAKE OSWEGO, OREGON 97034

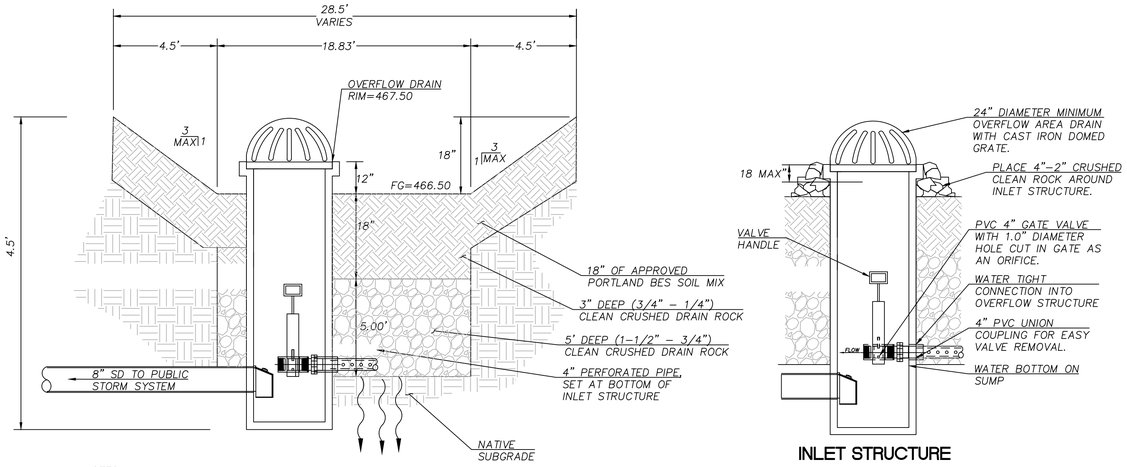
UTILITY PLAN

18079.00.L PROJECT NUMBER
20 SEP 2019 DATE
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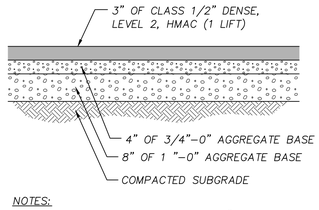
INLET STRUCTURE

NOTES:

1. PUBLIC WATER QUALITY AND/OR QUANTITY SYSTEM
2. PROVIDE OVERFLOW CONVEYANCE SYSTEM, OVERFLOW CONVEYANCE HEIGHT TO ALLOW 12" MAXIMUM PONDING, PIPING TO A MINIMUM OF THE PLUMBING CODE OR CONVEY THE 10 YEAR STORM.
3. IF USING THE NATIVE SOIL INFILTRATION FOR SIZING THE RATE SHALL BE DETERMINED BY ASTM STANDARD TESTING METHODS.
4. FLOW DISSIPATERS SHOULD BE USED IF ENTRY SLOPE TO THE BASIN IS GREATER THAN 3:1. FLOW DISSIPATORS SHALL BE CONSTRUCTED OUT OF ROCK OR GRAVEL PER DESIGN FLOW VELOCITY AT ENTRY OF THE FACILITY.
5. TREATMENT AREA SHALL HAVE HIGH DENSITY JUTE OR COCONUT MATTING OVER 18" MINIMUM OF GROWING MEDIUM OR BASE STABILIZATION METHOD AS APPROVED BY THE DISTRICT.
6. VEGETATION TO BE USED IN WET AREAS OF THE BASIN IS PER APPENDIX "A" OF R&O 07–20 FOR THE WET MOISTURE CONDITIONS.
7. VEGETATION TO BE USED IN OTHER AREAS OF BASIN CONFORMS TO PLANT LIST APPROVED BY DISTRICT.
8. IMPERMEABLE LINER MAY BE REQUIRED AT THE BOTTOM OF THE PLANTER PER THE RECOMMENDATION GEOTECHNICAL ENGINEER.

5 VEGETATED STORMWATER RAINGARDEN

NTS

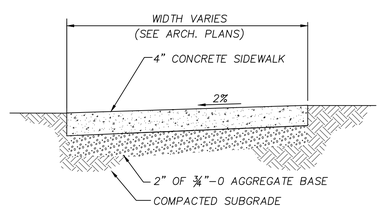


NOTES:

1. AGGREGATE BASE AND THE UPPER 12" OF THE SUBGRADE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY DETERMINED IN ACCORDANCE WITH ASTM D1557.
2. AC PAVEMENT SHALL BE COMPACTED TO 91% OF THE RICE DENSITY OF THE MIX.
3. CONSTRUCT TO THIS SECTION OR MATCH EXISTING, WHICHEVER IS GREATER.

4 TYPICAL PAVEMENT SECTION - MATCH EXISITNG

NTS



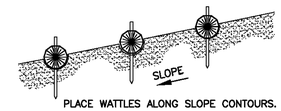
NOTE:

1. CONCRETE SHALL BE 4000 PSI, SLUMP RANGE 3" TO 5".

IN LANDSCAPE

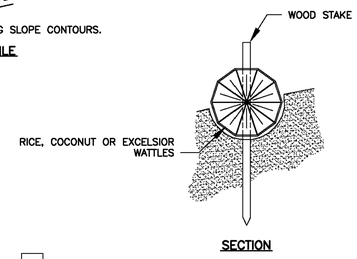
3 4" CONCRETE SIDEWALK

NTS

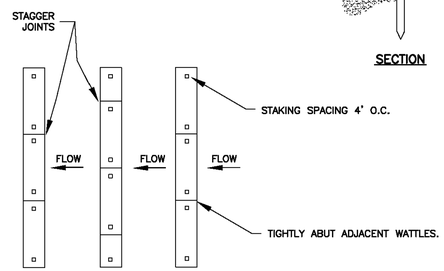


PLACE WATTLES ALONG SLOPE CONTOURS.

PROFILE



SECTION



PLAN VIEW

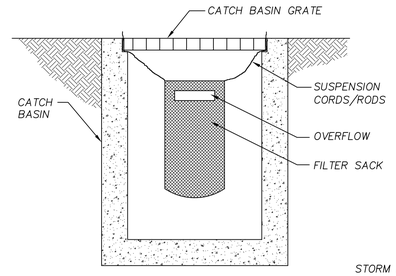
NOTES:

1. STAKING SPECIFICATIONS:
   a. 1"X2" WOODEN STAKES
   b. ADDITIONAL STAKES MAY BE INSTALLED ON DOWNHILL SIDE OF WATTLES, ON STEEP SLOPE OR HIGHLY EROSIVE SOILS.
2. SPACING IN ACCORDANCE WITH DETAIL 940.

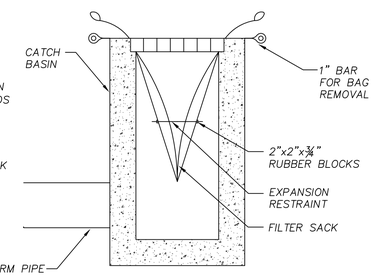
FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

2 STRAW WATTLES

NTS



INSERT SACK
FRONT VIEW



INSERT SACK
SIDE VIEW

NOTE:

REPLACE BIOFILTER BAGS WITH INSERT SACKS AFTER THE FIRST LIFT OF PAVING.

1 INLET PROTECTION

NTS

REGISTERED PROFESSIONAL ENGINEER
64500
OREGON
JUNE 1, 2010
WILLIAM G. BRANMAN

EXPIRES 12-31-19

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL STADIUM
IMPROVEMENTS – 2019
2500 COUNTRY CLUB ROAD, LAKE OSWEGO, OREGON 97034

CIVIL DETAILS

18079.00.L
PROJECT NUMBER

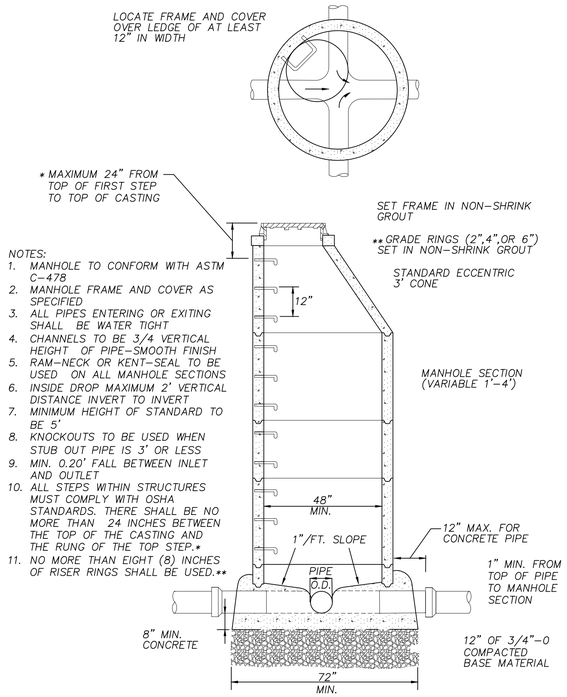
20 SEP 2019
DATE

REVISIONS

C4.00

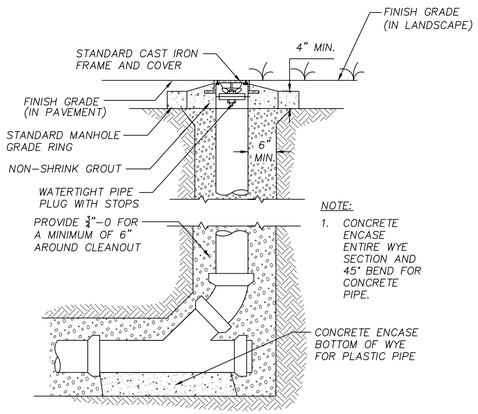
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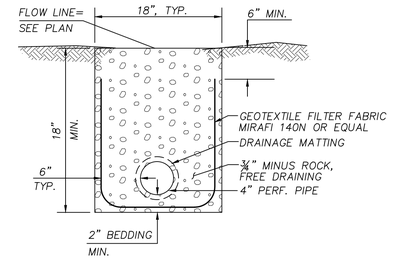
NOTES:
1. MANHOLE TO CONFORM WITH ASTM C-478
2. MANHOLE FRAME AND COVER AS SPECIFIED
3. ALL PIPES ENTERING OR EXITING SHALL BE WATER TIGHT
4. CHANNELS TO BE 3/4 VERTICAL HEIGHT OF PIPE-SMOOTH FINISH
5. RAM-NECK OR KENT-SEAL TO BE USED ON ALL MANHOLE SECTIONS
6. INSIDE DROP MAXIMUM 2' VERTICAL DISTANCE INVERT TO INVERT
7. MINIMUM HEIGHT OF STANDARD TO BE 5'
8. KNOCKOUTS TO BE USED WHEN STUB OUT PIPE IS 3' OR LESS
9. MIN. 0.20' FALL BETWEEN INLET AND OUTLET
10. ALL STEPS WITHIN STRUCTURES MUST COMPLY WITH OSHA STANDARDS. THERE SHALL BE NO MORE THAN 24 INCHES BETWEEN THE TOP OF THE CASTING AND THE RUNG OF THE TOP STEP.*
11. NO MORE THAN EIGHT (8) INCHES OF RISER RINGS SHALL BE USED.**

8 STANDARD MANHOLE
NTS

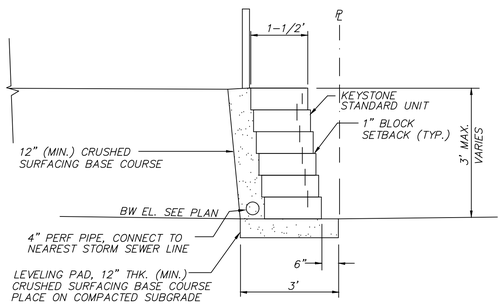


NOTE:
1. CONCRETE ENCASE ENTIRE WYE SECTION AND 45° BEND FOR CONCRETE PIPE.

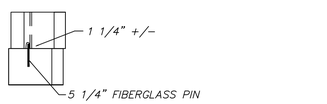
4 CLEAN OUT
NTS



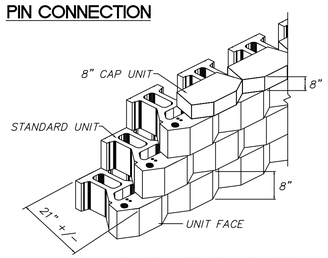
2 FRENCH DRAIN
NTS



SECTION A-A

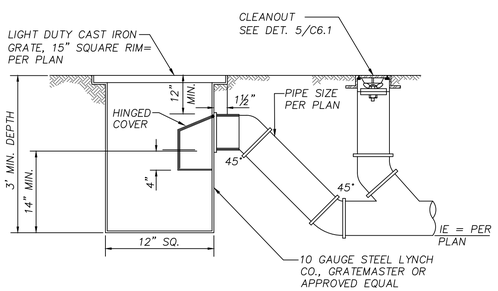


PIN CONNECTION



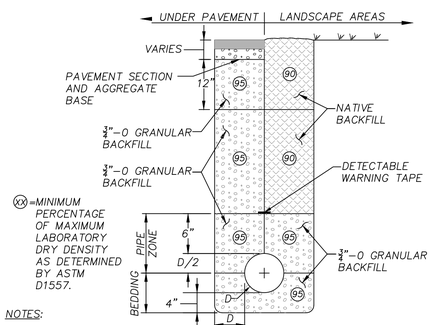
KEYSTONE STANDARD UNIT

5 KEYSTONE WALL
NTS



NOTES:
1. ALL STEEL WELDED CONSTRUCTION.
2. COATED INSIDE AND OUT WITH ASPHALTUM PAINT.
3. TRAP TO INCLUDE CLEANOUT.

3 TRAPPED AREA DRAIN
NTS



NOTES:
1. ALL CUT EDGES SHALL BE SAND SEALED WITH CRS-1 OR CRS-2 EMULSIFIED ASPHALT OR EQUAL.
2. THIS TRENCH BACKFILL REQUIREMENT APPLIES TO ALL UTILITIES.
3. LIGHTLY COMPACT WITHIN TWO DIAMETERS OR 18 INCHES, WHICHEVER IS GREATER, ABOVE BREAKABLE CONDUITS.

1 TRENCH BACKFILL
NTS

REGISTERED PROFESSIONAL ENGINEER 64500 OREGON JUNE 1, 2007 WILLIAM G. BRANNAN
EXPIRES 12-31-19

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CIVIL DETAILS

18079.00.L
PROJECT NUMBER
20 SEP 2019
DATE
REVISIONS

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PUBLIC STORM LINE IMPROVEMENTS - LAKERIDGE HIGH SCHOOL

LEGAL DESCRIPTION

TAX LOT NO. 100. THE CITY OF LAKE OSWEGO, CLACKAMAS COUNTY, OREGON.
TAX MAP: 21E 16.

EXISTING LAND USE

ZONE CI – CAMPUS INSTITUTIONAL DISTRICT
FILE NO. LU 19–0024 – 1981

PROJECT PURPOSE

REROUTE OF EXISTING PUBLIC STORM LINE WITHIN THE LAKERIDGE HIGH SCHOOL PROPERTY.

BENCHMARK

SURVEY PROVIDED BY CHASE, JONES & ASSOCIATES, INC. DATED DECEMBER 2013. ELEVATIONS ARE BASED ON CITY OF LAKE OSWEGO BENCHMARK NO. 12–N–1, ELEV. = 487.06

HORIZONTAL DATUM

THESE DRAWINGS ARE BASED ON OREGON STATE PLANE COORDINATE SYSTEM (NAD 83/91).

OWNER

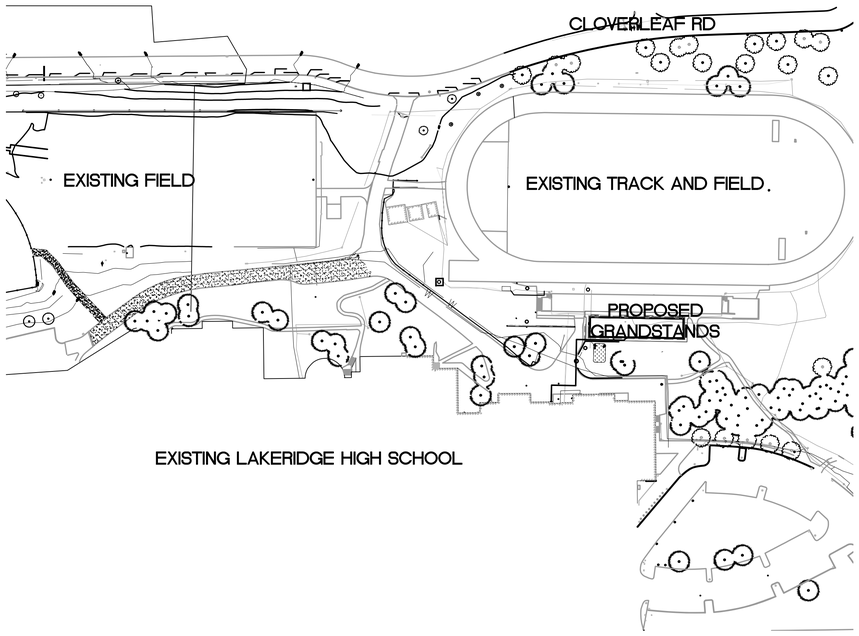
LAKE OSWEGO SCHOOL DISTRICT
2455 COUNTRY CLUB ROAD
LAKE OSWEGO, OR 97034
PHONE: 503.534.2215
FAX: 503.534.2237
CONTACT: STEVE BAUMGARDNER

ENGINEER

HUMBER DESIGN GROUP, INC.
117 SE TAYLOR STREET SUITE 001
PORTLAND, OR 97214
PHONE: 503.946.6632
CONTACT: WILLIAM BRANNAN, PE

LEGEND

EXISTING	PROPOSED	DESCRIPTION
D		STORM MANHOLE
□	■	CATCH BASIN
	●	CLEAN OUT
		FIRE HYDRANT
WM		WATER METER
		WATER VALVE
		UTILITY POLE
T		TRANSFORMER
		SIGN
	S	SANITARY MANHOLE
		PROPERTY LINE/LOT LINE
		CENTERLINE
		EASEMENT LINE
288	288	CONTOUR
		EDGE OF AC OR GRAVEL
		CURB
XSD	SD	STORM DRAIN
XW	W	WATER
XSS	SS	SANITARY SEWER
T	T	UNDERGROUND TELEPHONE
OH	OH	OVERHEAD UTILITIES
CTV	CTV	CABLE TELEVISION
G	G	GAS
E	E	UNDERGROUND POWER
X	X	4' BLACK CHAINLINK FENCE
		RETAINING WALL
		SIDEWALK



GENERAL SITE MAP

SCALE: 1"=100'

NOTICE TO EXCAVATORS:
ATTENTION: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952–001–0010 THROUGH OAR 952–001–0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER.
(NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS (503)–232–1987).

POTENTIAL UNDERGROUND FACILITY OWNERS

Dig Safely.

Call the Oregon One-Call Center
DIAL 811 or 1-800-332-2344

EMERGENCY TELEPHONE NUMBERS

NW NATURAL	
M–F 7am–6pm	503–226–4211 Ext.4313
AFTER HOURS	503–226–4211
PGE	503–464–7777
QWEST	1–800–573–1311
VERIZON	1–800–483–1000

NOTE: THIS SET OF PLANS PERMITS PUBLIC IMPROVEMENT WORK ONLY.

SHEET INDEX

C5.00 PUBLIC STORM COVER SHEET
C5.01 PUBLIC STORM PLAN AND PROFILE
C5.02 PUBLIC STORM DETAILS

FOR REFERENCE ONLY
C0.00 CIVIL COVER
C1.00 EXISTING CONDITIONS, DEMOLITION AND EROSION CONTROL PLAN
C2.00 LAYOUT AND GRADING PLAN
C3.00 UTILITY PLAN
C3.01 UTILITY PLAN
C4.00 CIVIL DETAILS
C4.01 CIVIL DETAILS

UTILITY CONTACTS

WATER & SEWER
CITY OF LAKE OSWEGO ENGINEERING DEPARTMENT
CONTACT: ED MARSOUN
380 A AVENUE
LAKE OSWEGO, OR 97219
503–635–0270

COMCAST
CONTACT: KEN WILLIS
971–801–5641
KENNETH_WILLIS@CABLE.COMCAST.COM

CENTURYLINK
CONTACT: KEN SCIULLI
503–242–0304
KENNETH.SCIULLI@CENTURYLINK.COM

PGE
CONTACT: CHRIS JEWETT
503–672–5481
CHRIS.JEWETT@PGN.COM

NW NATURAL
CONTACT: SID STAFFORD
503–220–2394
SID.STAFFORD@NWNATURAL.COM

REGISTERED PROFESSIONAL ENGINEER 64500 OREGON JUNE 1, 2001 WILLIAM G. BRANNAN
EXPIRES 12–31–19

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2500 COUNTRY CLUB ROAD, LAKE OSWEGO, OREGON 97034

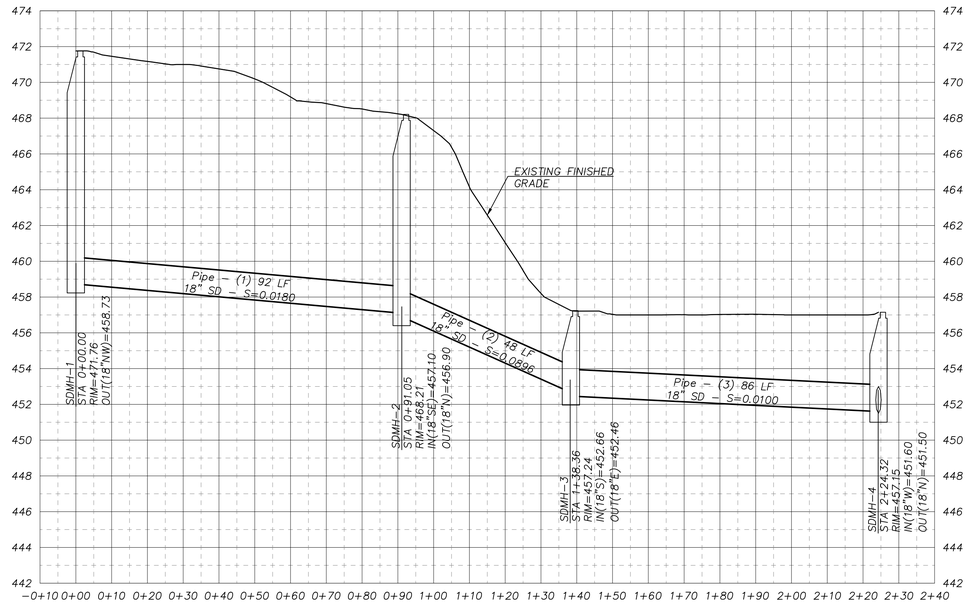
PUBLIC STORM COVER

18079.00.L PROJECT NUMBER
20 SEP 2019 DATE
REVISIONS

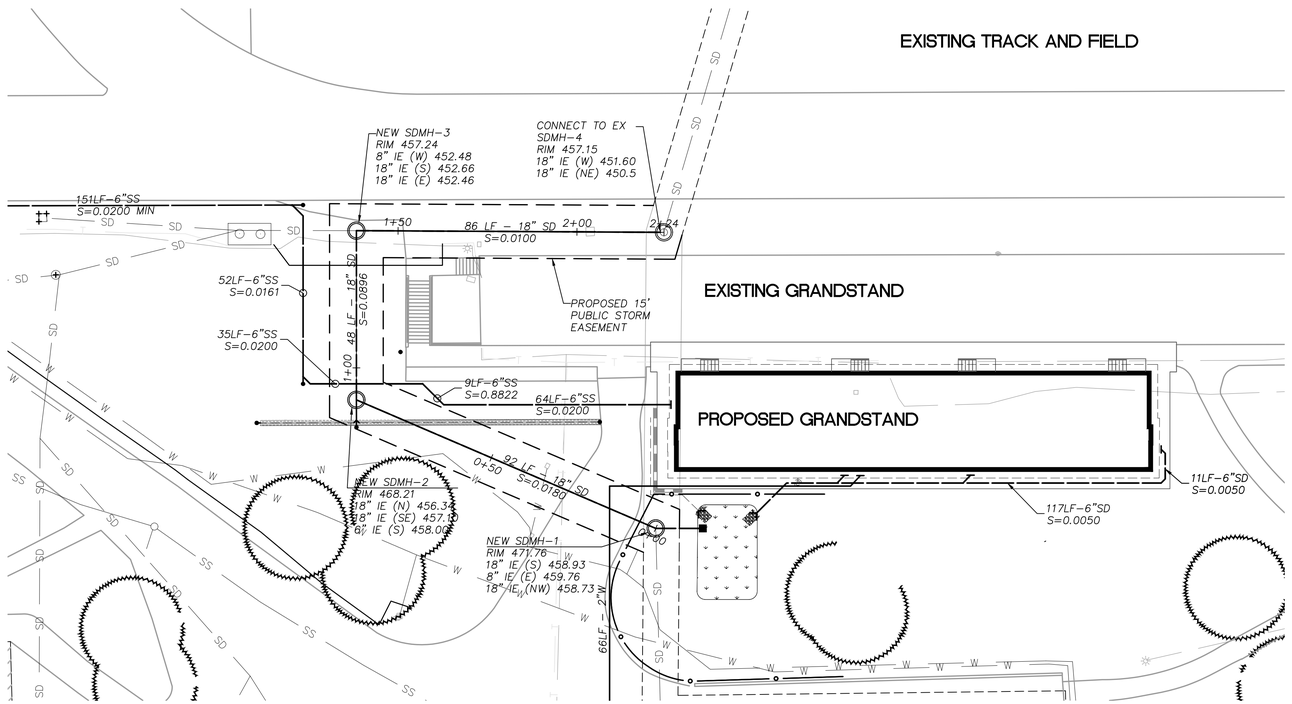
C5.00

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2 PUBLIC STORM SEWER REROUTE PROFILE
H: 1"=20'
V: 1"=2'



1 PUBLIC STORM SEWER REROUTE PLAN
SCALE: 1"=20'

GRAPHIC SCALE
0 20 40
1 inch = 20 ft.

REGISTERED PROFESSIONAL ENGINEER 64500 OREGON JUNE 1, 2007 WILLIAM G. BRAMMAN
EXPIRES 12–31–19

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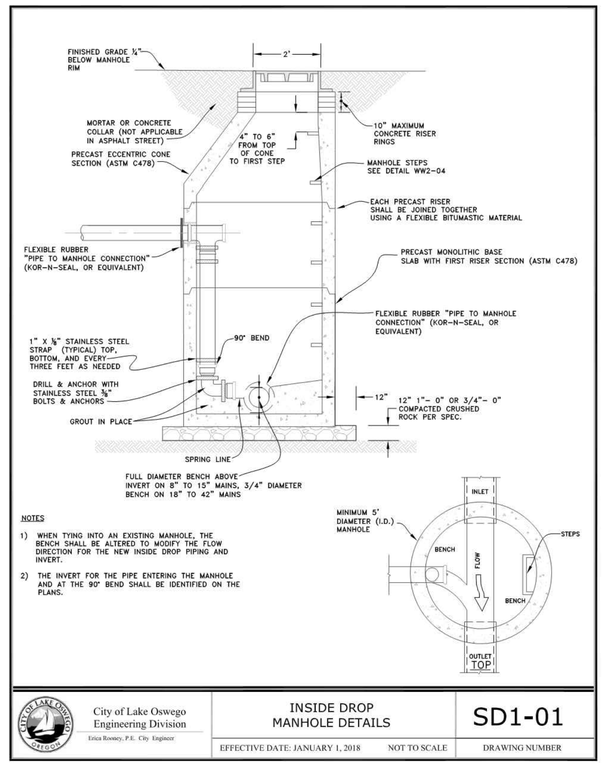
PUBLIC STORM PLAN AND PROFILE

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C5.01

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NOTES

1) WHEN TYING INTO AN EXISTING MANHOLE, THE BENCH SHALL BE ALTERED TO MODIFY THE FLOW DIRECTION FOR THE NEW INSIDE DROP PIPING AND INVERT.

2) THE INVERT FOR THE PIPE ENTERING THE MANHOLE AND AT THE 90° BEND SHALL BE IDENTIFIED ON THE PLANS.

City of Lake Oswego
Engineering Division
Erica Rooney, P.E. City Engineer

INSIDE DROP MANHOLE DETAILS

EFFECTIVE DATE: JANUARY 1, 2018 NOT TO SCALE

SD1-01

DRAWING NUMBER

REGISTERED PROFESSIONAL ENGINEER 64500 OREGON JUNE 1, 2010 WILLIAM G. BRANNAN

EXPIRES 12-31-19

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PUBLIC STORM DETAILS

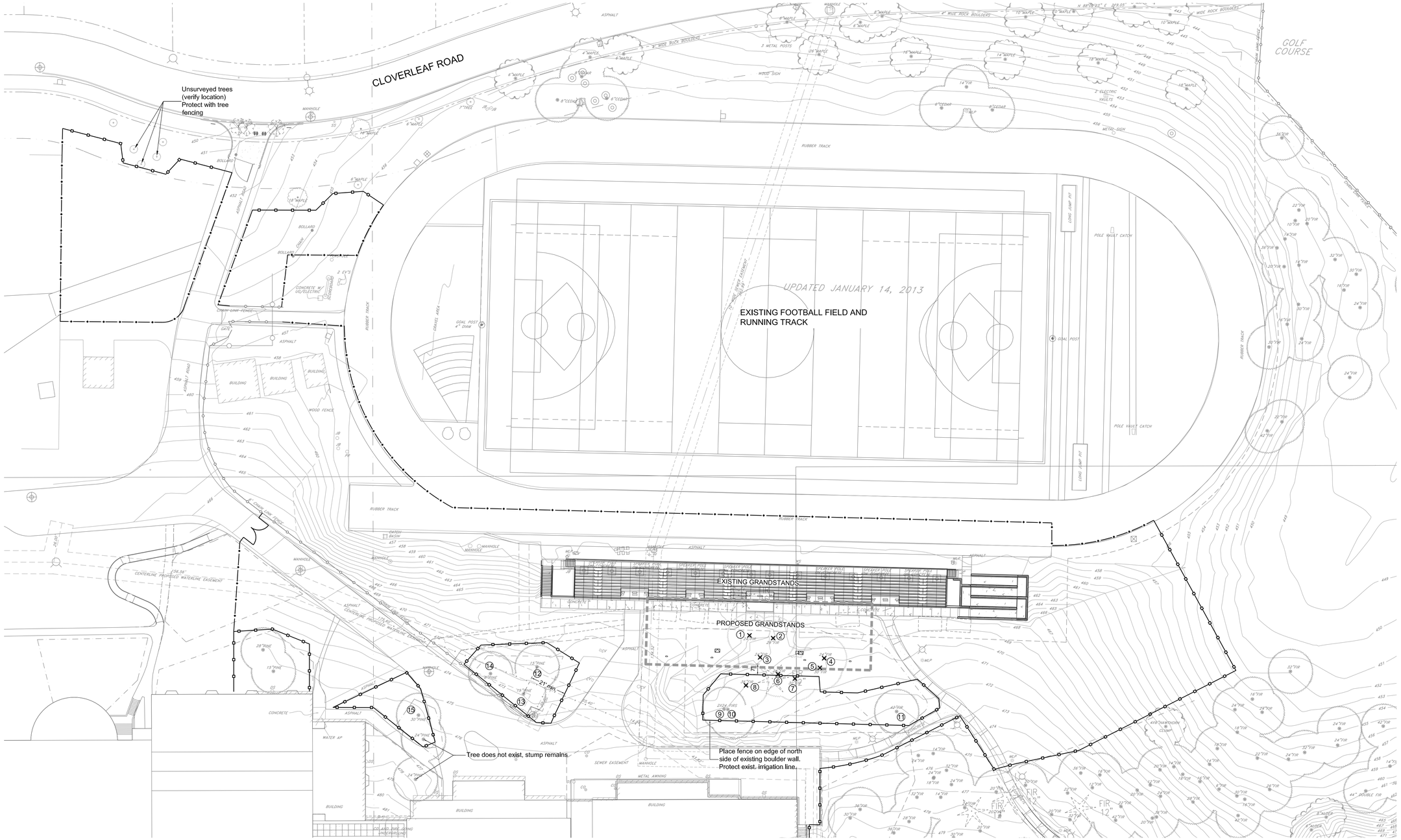
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Tree Protection Legend

Symbol

- Tree protection fence (Detail 2, L3.0)
- Construction fence (Detail 2, L3.0)
- Existing chain link fence
- Existing Tree To Remain
- Existing Tree To Be Removed (See Tree Removal Schedule right). Symbol indicates correspondence with Tree Removal Schedule and Arborist Report

Tree Removal Schedule

Symbol	DBH/species*
1.	27" Douglas fir
2.	24" Douglas fir
3.	25" Douglas fir
4.	25" Douglas fir
5.	35" Douglas fir
6.	30" Douglas fir
7.	35" Douglas fir
8.	39" Douglas fir

*DBH (diameter breast height) noted on plan is from survey. DBH on schedule above has been field verified by arborist. Where sizes differ, field verified DBH in schedule above shall be deemed accurate. See arborist report.

Notes:

1. Except as otherwise determined by the City of Lake Oswego, all required tree protection measures set forth in this tree protection plan shall be instituted prior to any development activities, including, but not limited to clearing, grading, excavation or demolition work, and shall be removed only after completion of all construction activity, including landscaping and irrigation installation.
2. No construction activity shall occur within the tree protection zone, including, but not limited to dumping or storage of materials such as building supplies, soil, waste items, or parked vehicles or equipment.
3. The tree protection zone shall remain free of chemically injurious materials and liquids such as paints, thinners, cleaning solutions, petroleum products, and concrete or dry wall excess, construction debris, or run-off.
4. No excavation, trenching, grading, root pruning or other activity shall occur within the tree protection zone unless directed by an arborist present on site and approved by the City of Lake Oswego.

0 15 30 75 FEET

REGISTERED
NICHOLAS G. WILSON
OREGON
LANDSCAPE ARCHITECT

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
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1235 OVERLOOK DRIVE, LAKE OSWEGO, OREGON 97034

TREE PROTECTION PLAN

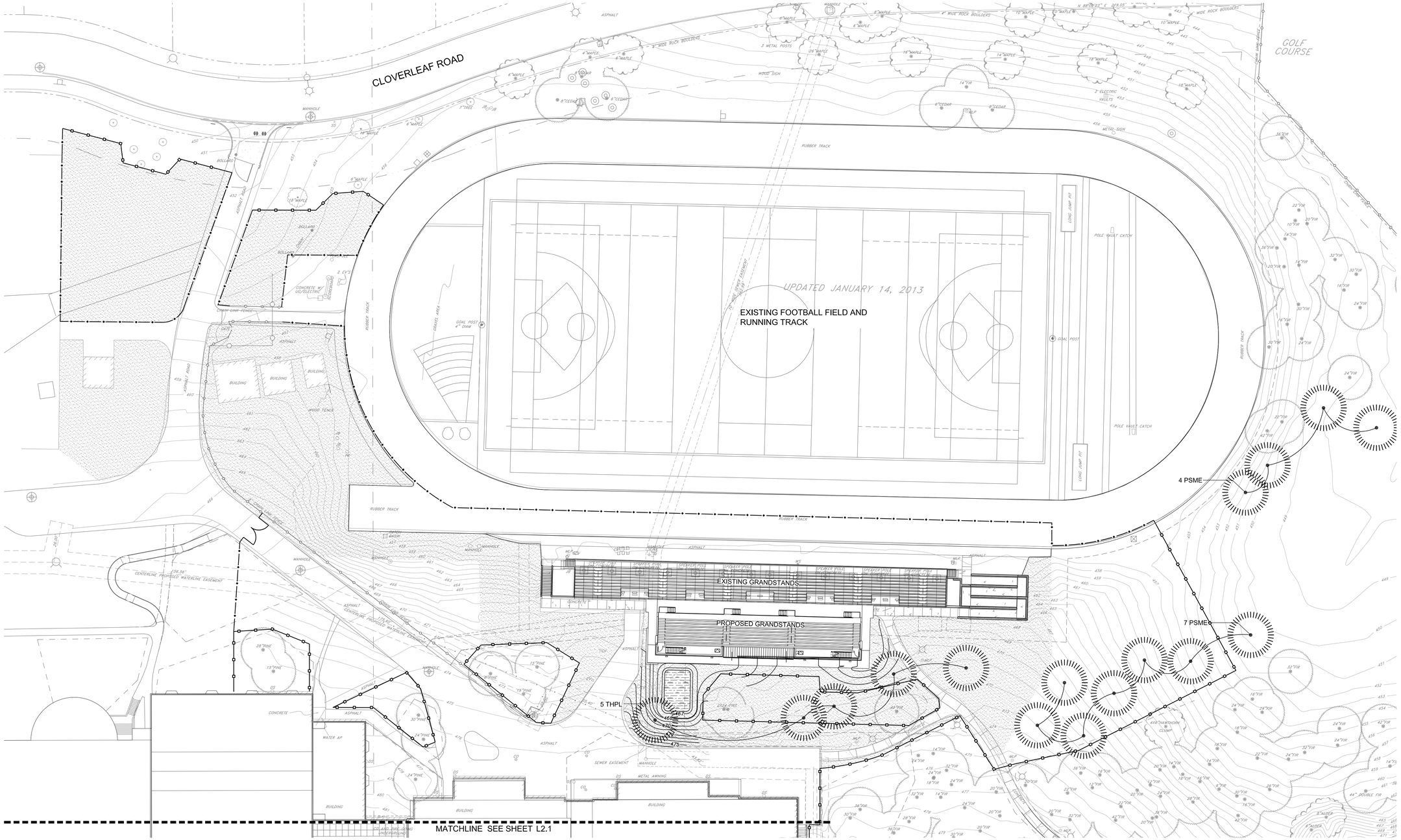
ATLAS
LANDSCAPE ARCHITECTURE
12562 SW Main Street
Tigard, Oregon 97223
503.224.5238
atlas4s.com

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20 SEP 2019 DATE
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PLANT LEGEND

	KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	#
	MITIGATION TREES					
	PSME	Pseudotsuga mensiesii	Douglas Fir	6'	See plan	11
	THPL	Thuja plicata	Western Red Cedar	6'	See plan	5
	OTHER TREES					
	ULPA	Ulmus parvifolia	Lacebark Elm	2"	See plan	1
	ZLGV	Zelkova serrata 'Village Green'	Village Green Zelkova	2" cal.	See plan	3
	GROUND COVERS					
	LAWN	Festuca rubra var. litoralis	Slender Creeping Fescue	50/50		
	MIX	Lolium perrenne	Perennial Ryegrass	Seed Mix	8 lbs./1000 s.f.	
	WET	25% Carex obnupta	Slough Sedge	1" x 6" plug	12" o.c.	460
		25% Carex rossi	Rossi Sedge			
		25% Juncus patens	Spreading Rush			
		25% Scriptus microcarpus	Small-fruited bulrush			

Note: Design intent is to re-seed all lawn disturbed by construction. Pattern indicates likely extent of re-seeding required. Actual areas depend on contractor's operations. Reseed all areas disturbed by construction whether indicated or not.

0 15 30 75 FEET

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Tigard, Oregon 97223
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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
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TREE MITIGATION AND LANDSCAPE PLAN

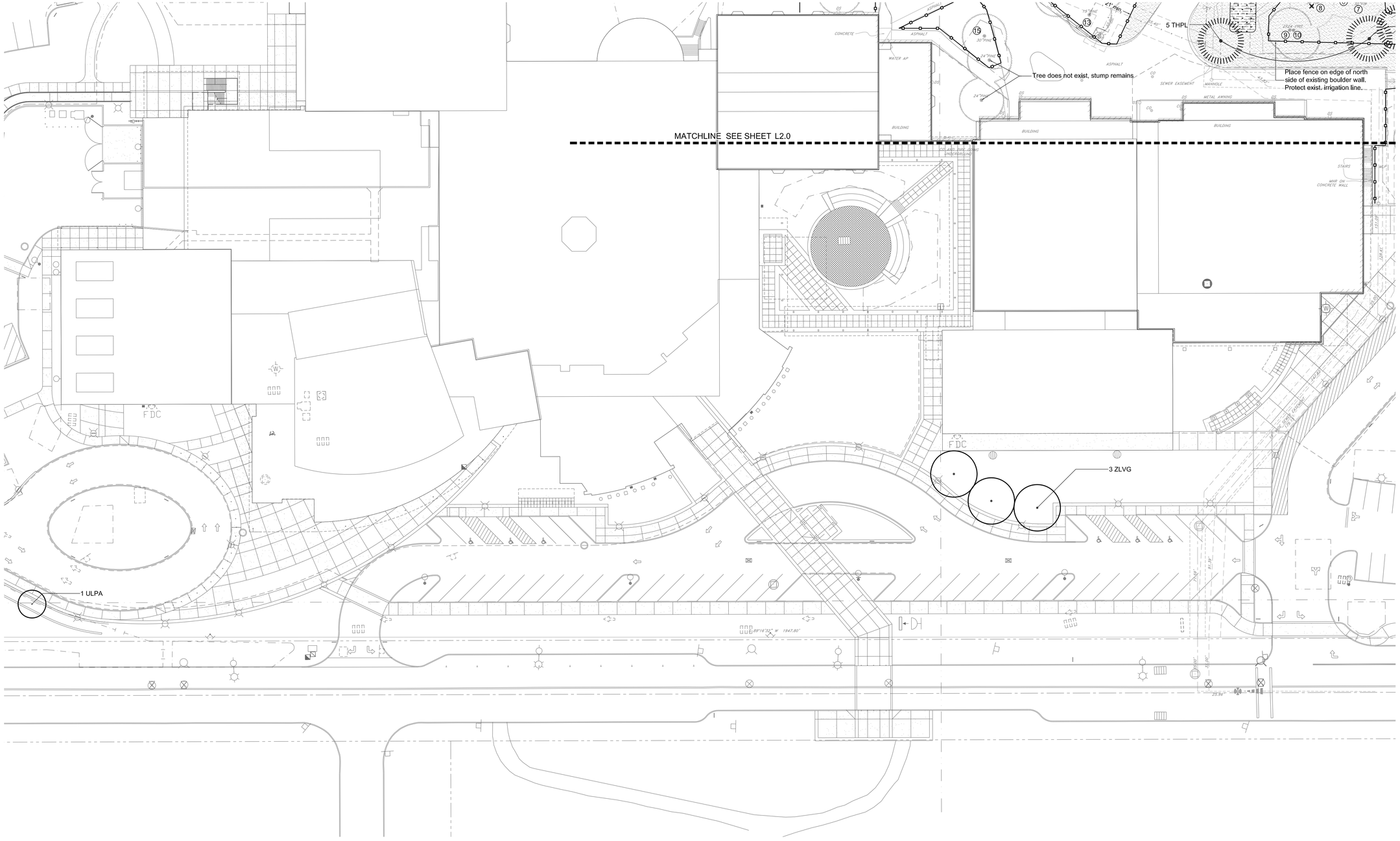
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PROJECT NUMBER
20 SEP 2019
DATE

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PLANT LEGEND

KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	#
MITIGATION TREES					
PSME	Pseudotsuga mensiesii	Douglas Fir	6'	See plan	11
THPL	Thuja plicata	Western Red Cedar	6'	See plan	5
OTHER TREES					
ULPA	Ulmus parvifolia	Lacebark Elm	2"	See plan	1
ZLGV	Zelkova serrata 'Villlage Green'	Village Green Zelkova	2" cal.	See plan	3
GROUND COVERS					
LAWN	Festuca rubra var. litoralis	Slender Creeping Fescue	50/50		
MIX	Lolium perrenne	Perennial Ryegrass	Seed Mix	8 lbs./1000 s.f.	
WET	25% Carex obnupta 25% Carex rossi 25% Juncus oatens	Slough Sedge Rossi Sedge Screading Rush	1" x 6" plug	12" o.c.	460

0 15 30 75 FEET

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OREGON
LANDSCAPE ARCHITECT

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OREGON 97034

TREE MITIGATION AND LANDSCAPE PLAN

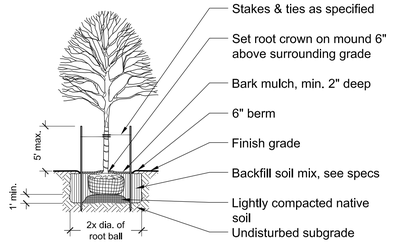
1807.00.L
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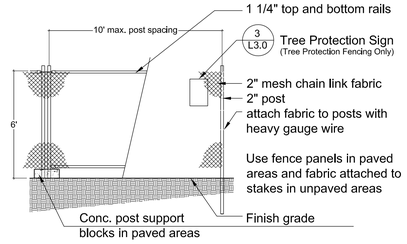
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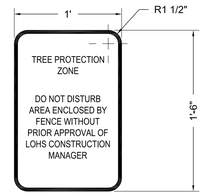
1. Tree Planting

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



2. Temporary Protection Fence

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



Letters shall be 3/4" high with 5/16" leading.

Font shall be Helvetica.

Background shall be blue; Text shall be white
Border shall be 3/8".

Sign shall be waterproof and resistant to wind damage.

Fix signs to tree protection fencing at 30' intervals.

3. Temporary Tree Protection Sign

Scale: 1-1/2" = 1'-0"

ATLAS
LANDSCAPE ARCHITECTURE
12562 SW Main Street
Tigard, Oregon 97223
503.224.5238
atlas-la.com

REGISTERED
229
NICHOLAS G. WILSON
OREGON
LANDSCAPE ARCHITECT

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OREGON 97034

TREE PROTECTION AND MITIGATION DETAILS

18079.00.L
PROJECT NUMBER

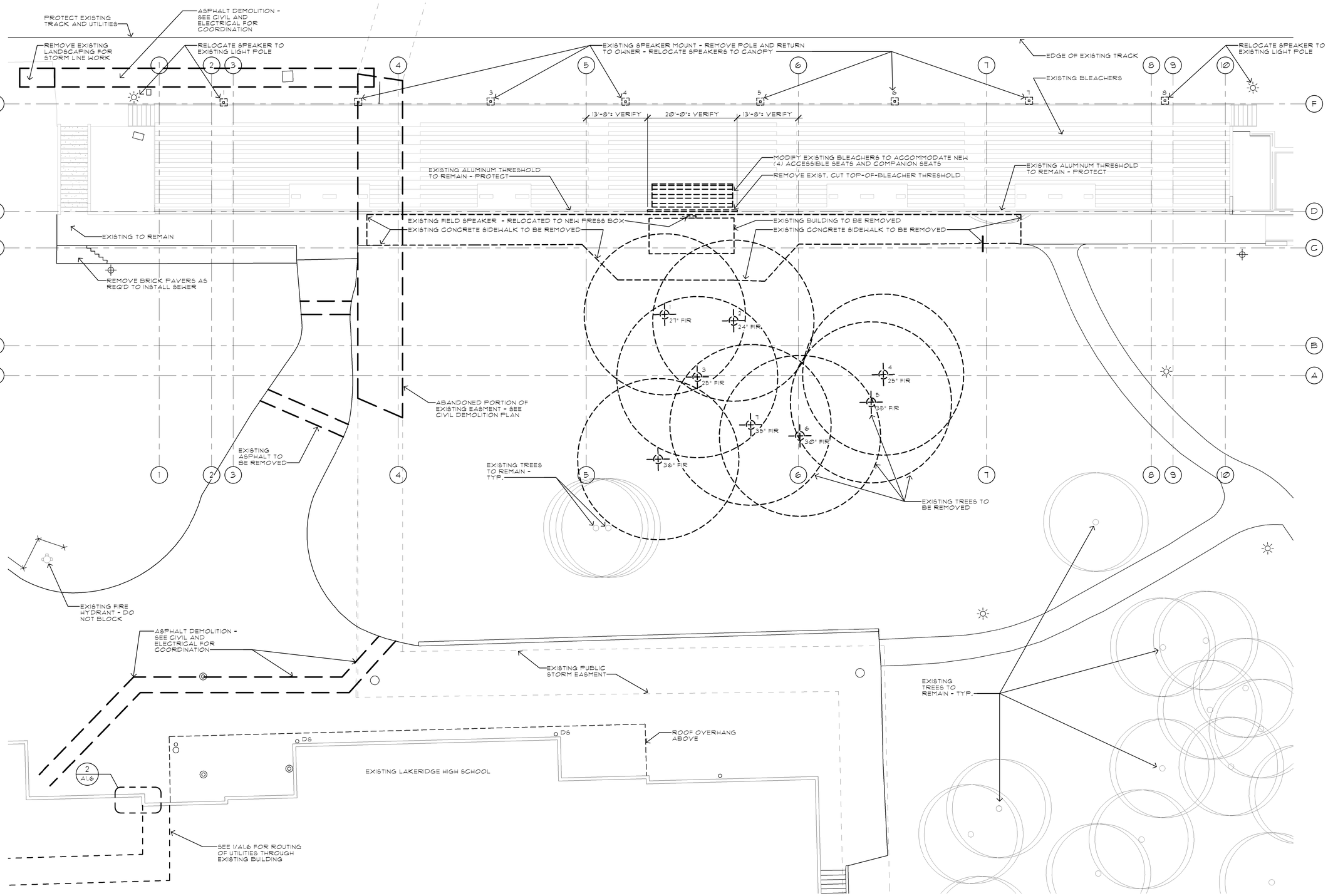
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1 D0.1 ENLARGED SITE DEMOLITION PLAN
1" = 10'-0"

9/23/2019 2:00:37 PM

REGISTERED ARCHITECT · DOUGLAS A. PRUITT · 12-6-1983 · STATE OF OREGON

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034

ENLARGED SITE DEMOLITION PLAN

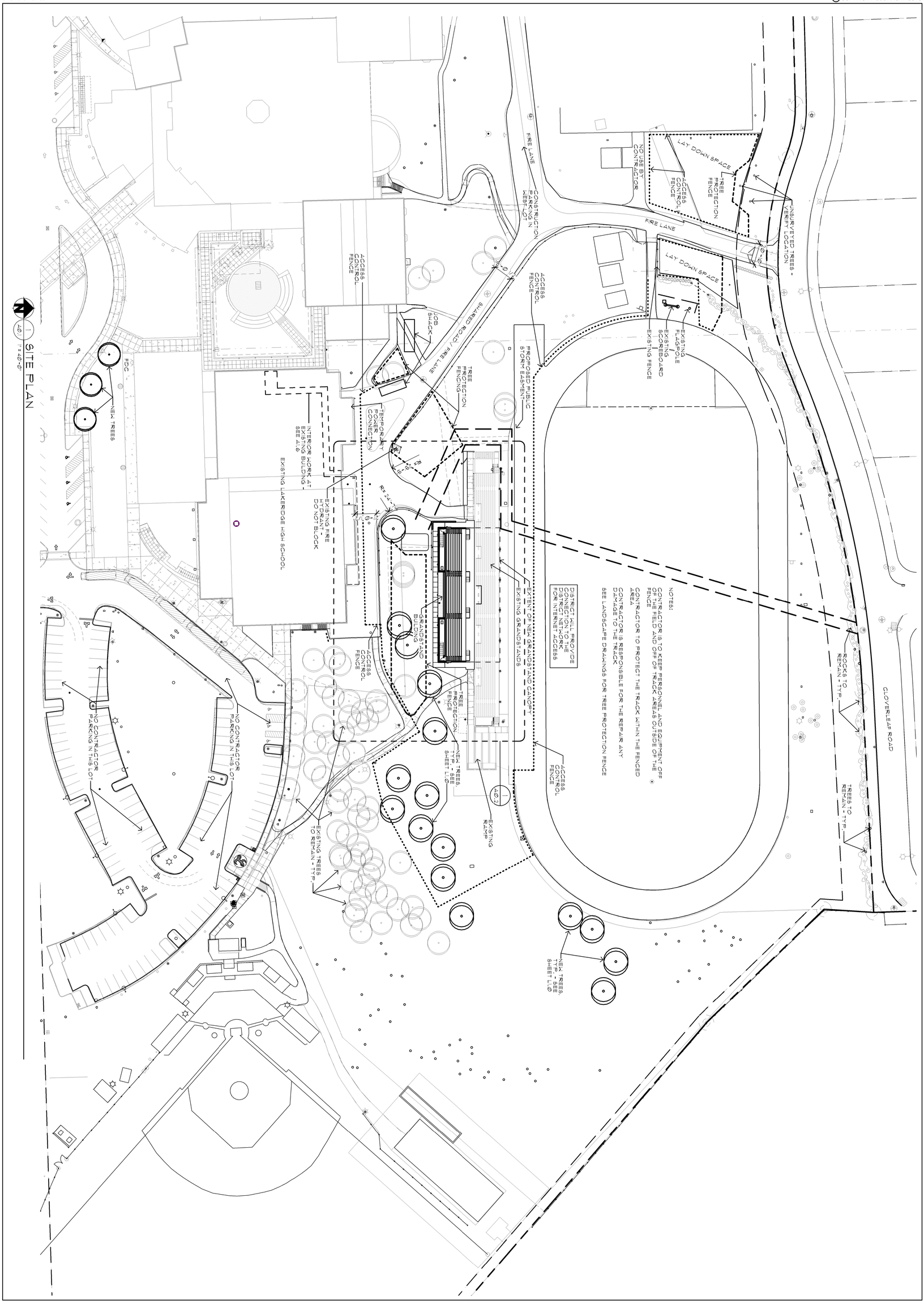
18079.00L
PROJECT NUMBER
20 SEP 2019
DATE

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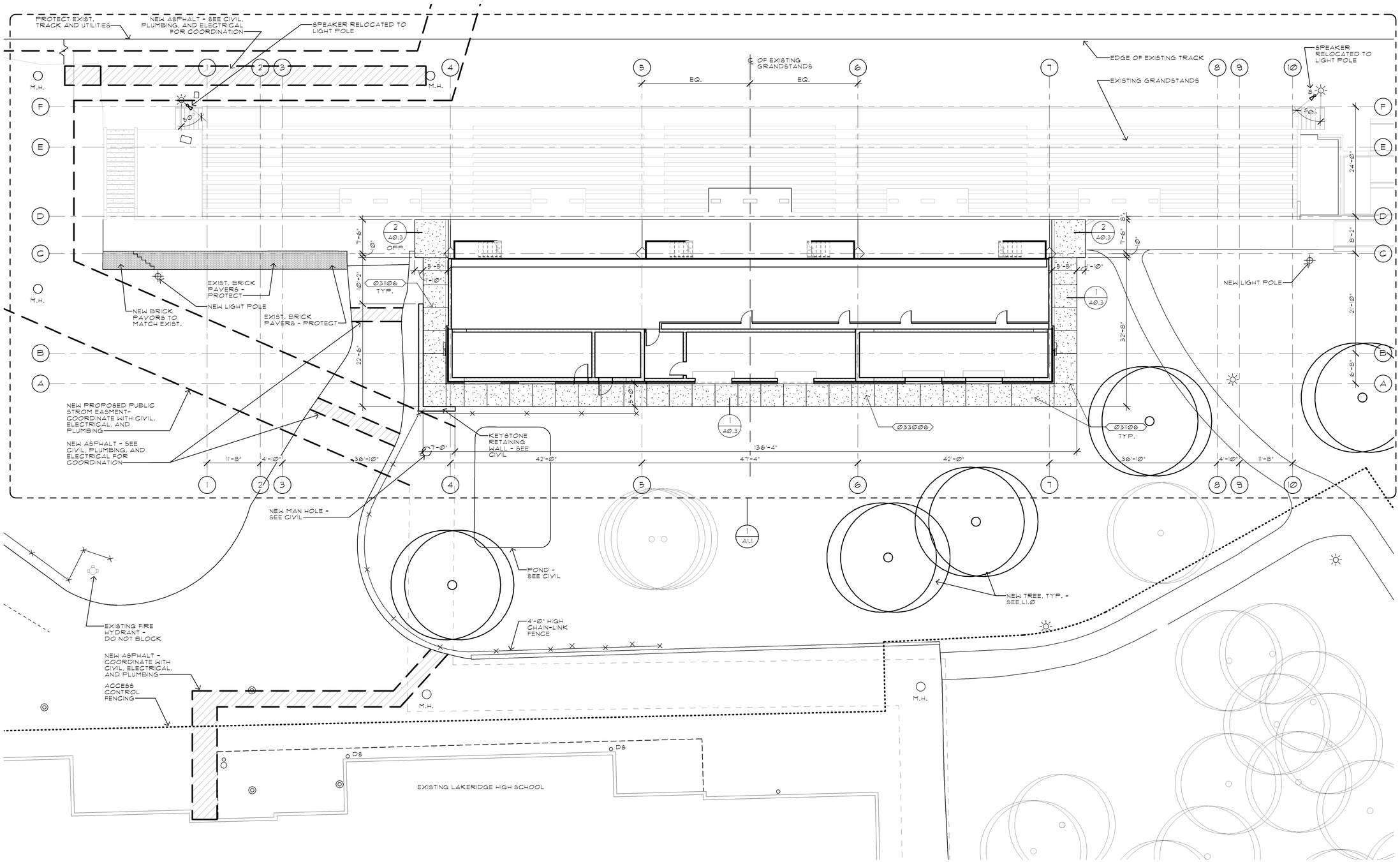
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SITE PLAN

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1 A0.3 ENLARGED SITE PLAN / OVERALL FLOOR PLAN
1" = 1Ø'-Ø"

KEYNOTES

Ø31Ø6	CONTROL JOINT
Ø33ØØ6	CONCRETE SIDEWALK

NOTE:
SEE FLOOR PLAN FOR ADDITIONAL INFORMATION

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ENLARGED SITE PLAN

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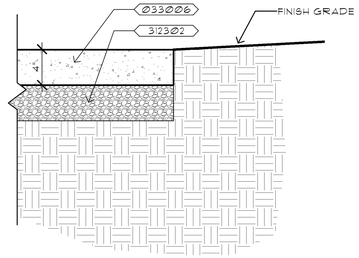
REVISIONS

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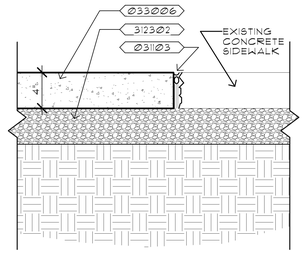
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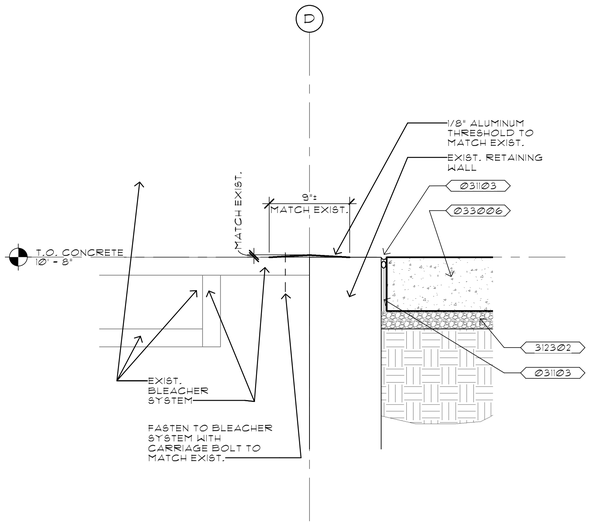
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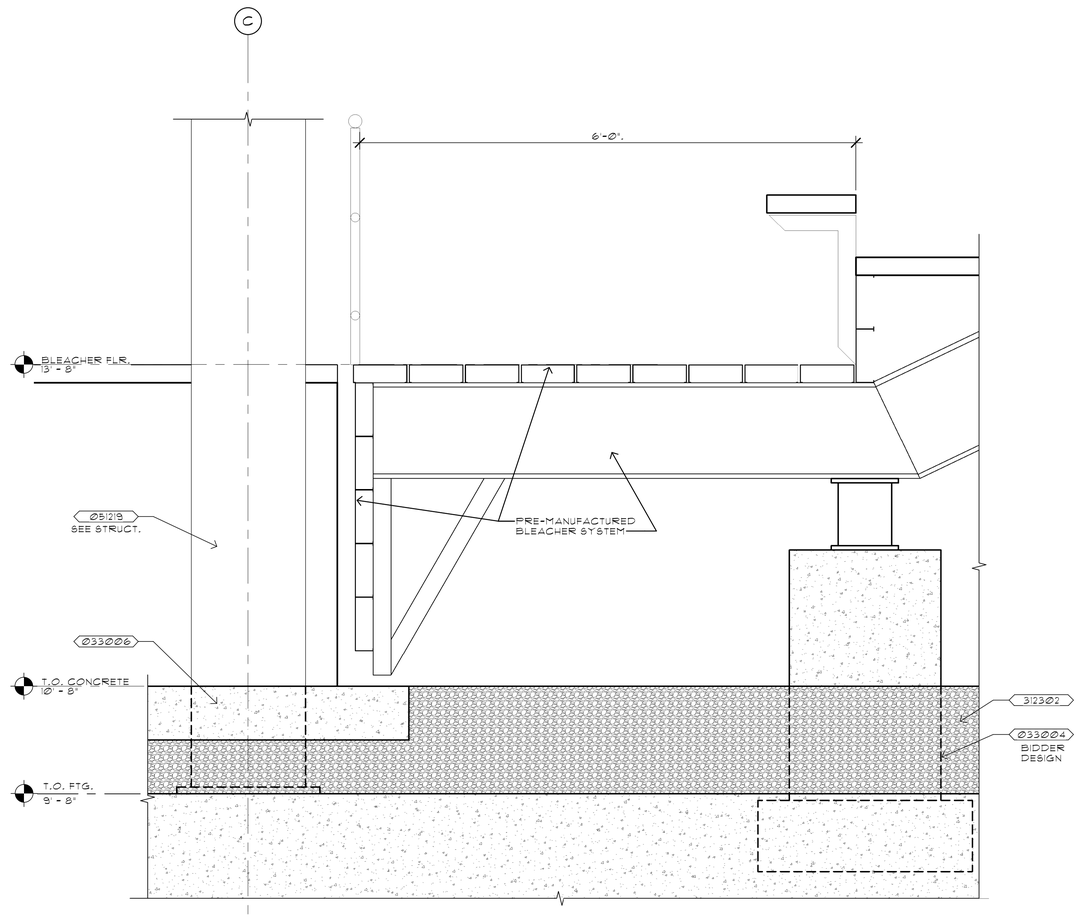
1 AØ.3 SIDEWALK EDGE
1 1/2" = 1'-Ø"



2 AØ.3 SIDEWALK JOINT
1 1/2" = 1'-Ø"



4 AØ.3 EXISTING TOP-OF-BLEACHER TRESHOLD
1 1/2" = 1'-Ø"



3 AØ.3 BLEACHERS AT CONCRETE
1 1/2" = 1'-Ø"

KEYNOTES

Ø311Ø3	EXPANSION AND ISOLATION JOINT FILLERS
Ø33ØØ4	CONCRETE FOOTING
Ø33ØØ6	CONCRETE SIDEWALK
Ø51219	STEEL PIPE COLUMN
312302	COMPACTED BASE AGGREGATE

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SITE DETAILS

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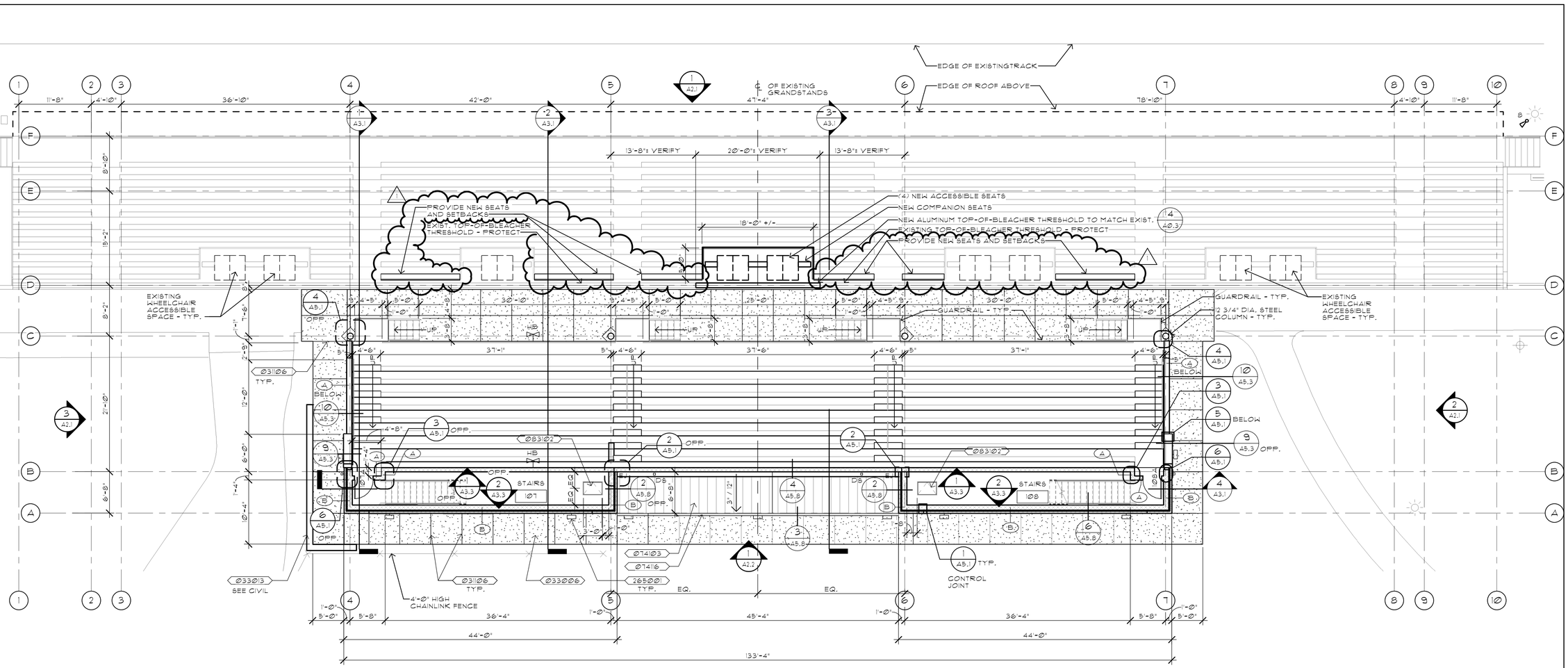
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FLOOR PLAN

1/8" = 1'-0"

KEYNOTES

Ø31106	CONTROL JOINT
Ø33006	CONCRETE SIDEWALK
Ø33013	CONCRETE RETAINING WALL
Ø74103	METAL ROOF PANEL SYSTEM
Ø74116	METAL ROOF SYSTEM GUTTER
Ø83102	FIRE RATED ACCESS PANEL
265001	LIGHT FIXTURE

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FLOOR PLAN

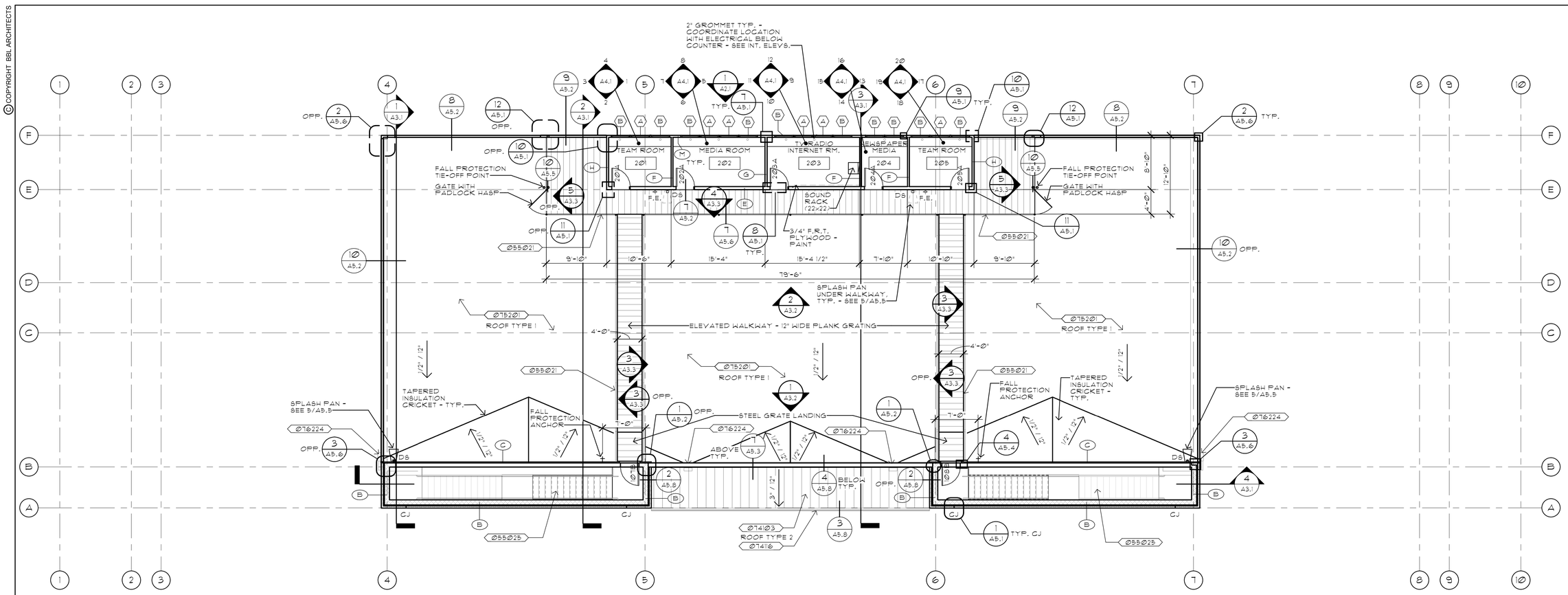
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1 30 SEP 2019
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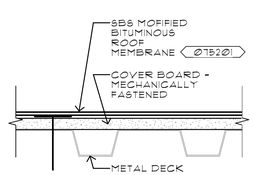
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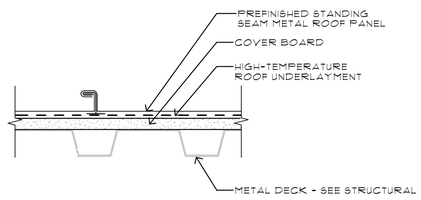
1 PRESS BOX FLOOR PLAN / ROOF PLAN
A1.2 1/8" = 1'-0"

KEYNOTES

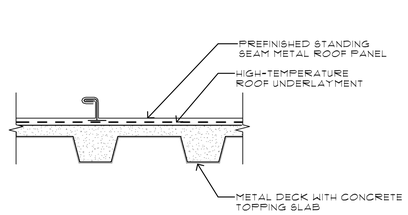
Ø5502I	STEEL PIPE RAILINGS AND HANDRAILS
Ø5502S	STEEL STAIR SYSTEM
Ø7520I	MODIFIED BITUMINOUS MEMBRANE ROOFING SYSTEM



2 ROOF TYPE 1
A1.2 3" = 1'-0"



3 ROOF TYPE 2
A1.2 3" = 1'-0"



4 ROOF TYPE 3
A1.2 3" = 1'-0"

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PRESS BOX FLOOR PLAN / ROOF PLAN

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20 SEP 2019 DATE

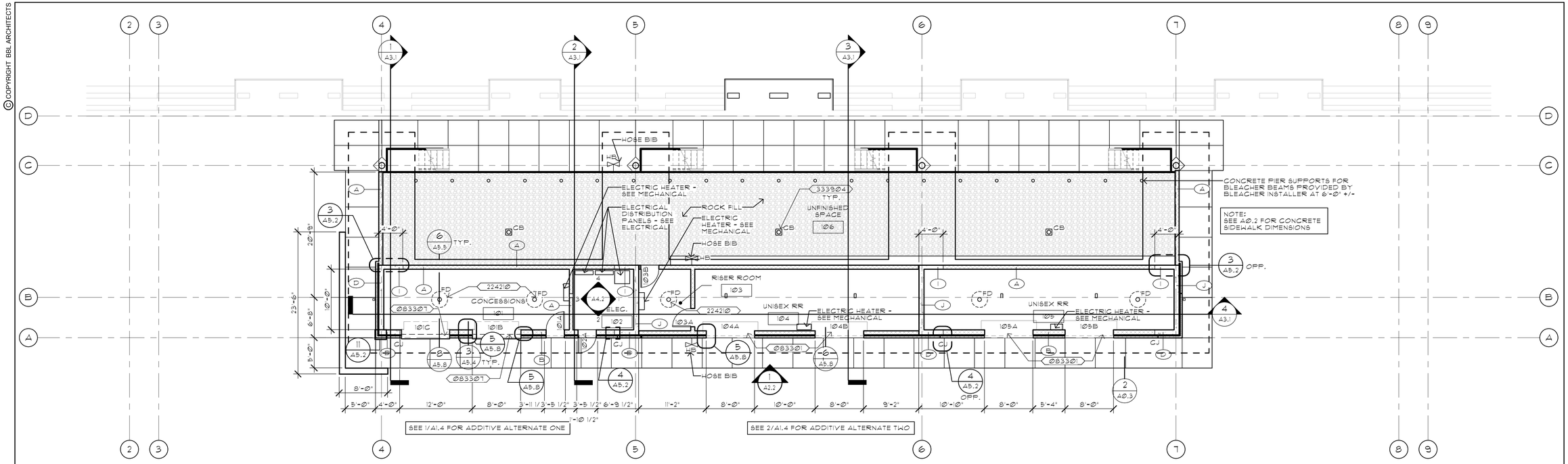
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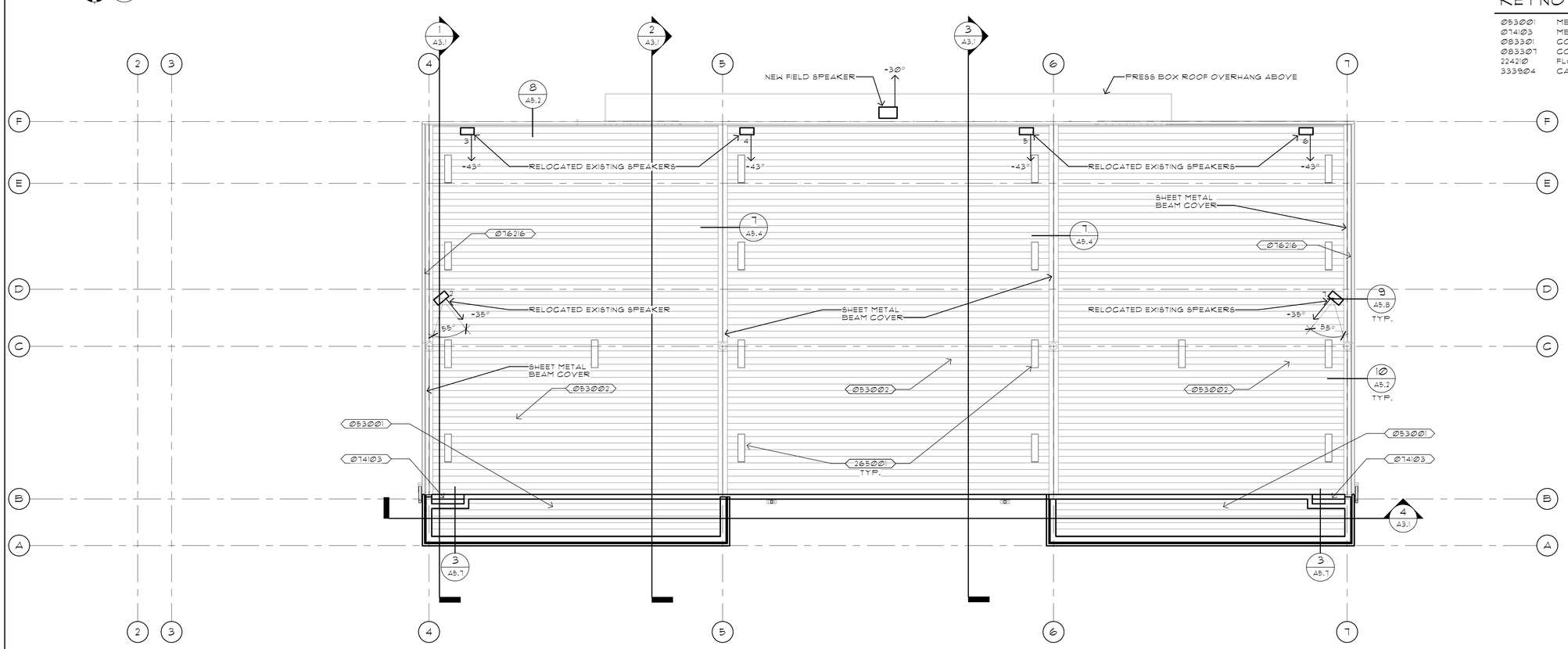
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1 A1.3 LOWER FLOOR PLAN - BASE BID
1/8" = 1'-0"



2 A1.3 REFLECTED CEILING PLAN
1/8" = 1'-0"

KEYNOTES

Ø53001	METAL ROOF DECK
Ø74103	METAL ROOF PANEL SYSTEM
Ø8330I	COILING DOOR
Ø8330T	COILING COUNTER DOOR
22421Ø	FLOOR DRAIN
333Ø4	CATCH BASIN

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LOWER FLOOR PLAN, REFLECTED CEILING PLAN

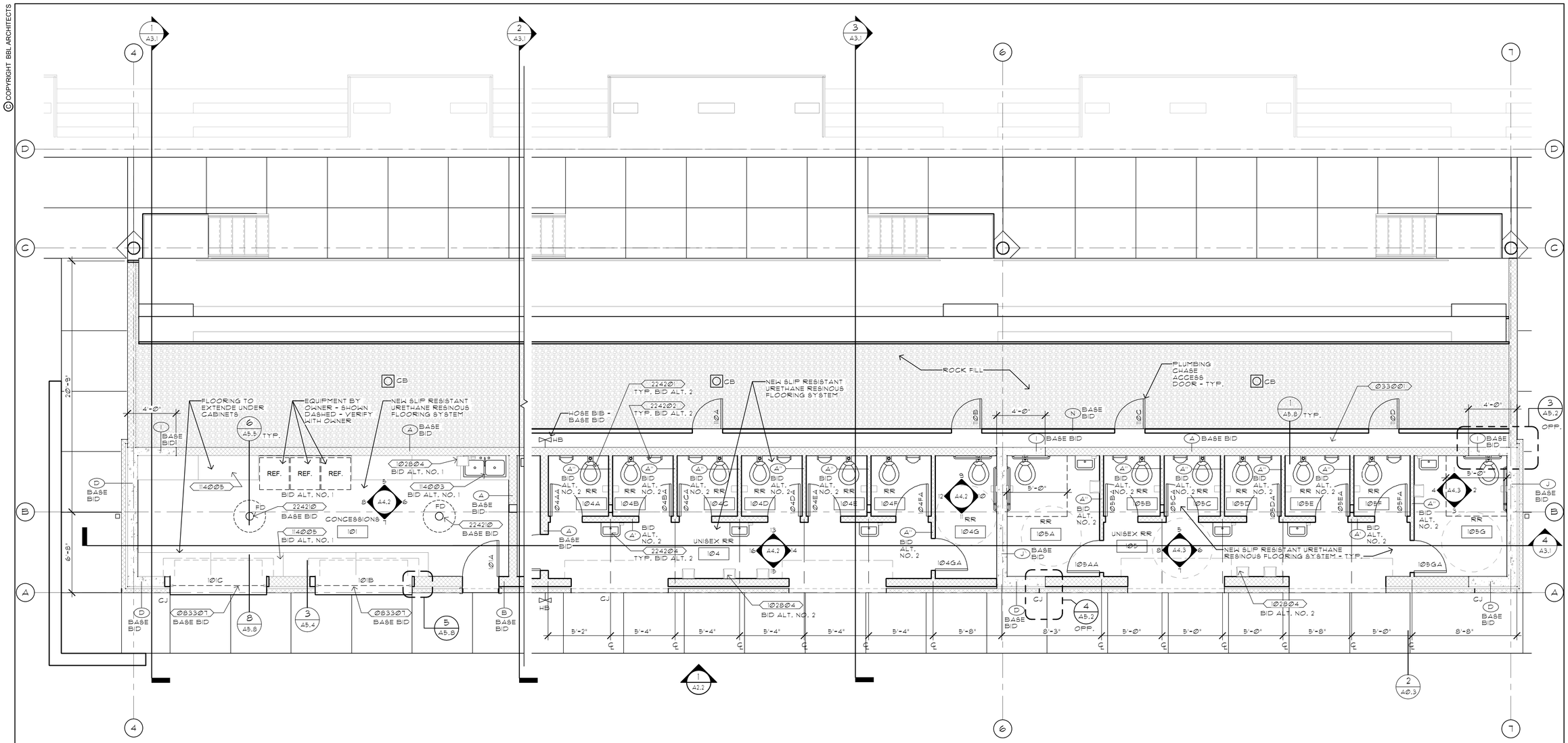
18019.00.L PROJECT NUMBER
20 SEP 2019 DATE
REVISIONS

A1.3

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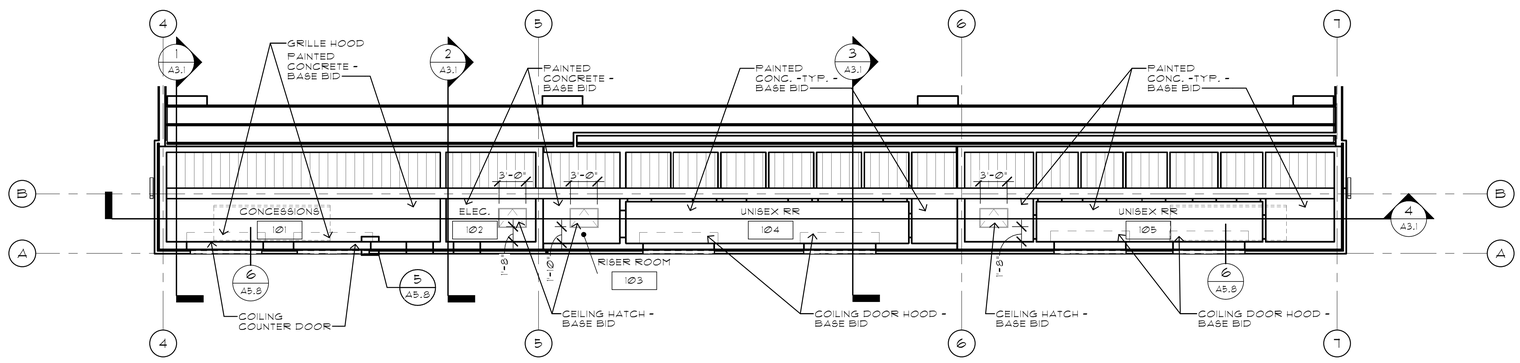
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1 A1.4 LOWER FLOOR PLAN - ADDITIVE ALTERNATE ONE
1/4" = 1'-Ø"

2 A1.4 LOWER FLOOR PLAN - ADDITIVE ALTERNATE TWO
1/4" = 1'-Ø"



3 A1.4 LOWER FLOOR REFLECTED CEILING PLAN
1/8" = 1'-Ø"

KEYNOTES

Ø33001	CAST-IN-PLACE CONCRETE SLAB
Ø83307	COILING COUNTER DOOR
1Ø28Ø4	PAPER TOWEL DISPENSER
114Ø03	STAINLESS STEEL SINK
114Ø05	STAINLESS STEEL COUNTER
22421Ø	WATER CLOSET
22422Ø	URINAL
22422Ø4	SINK
22421Ø	FLOOR DRAIN

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ADDITIVE ALT. 1 & ALT. 2 FLOOR PLANS, REFLECTED CEILING PLAN

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PROJECT NUMBER
20 SEP 2019
DATE

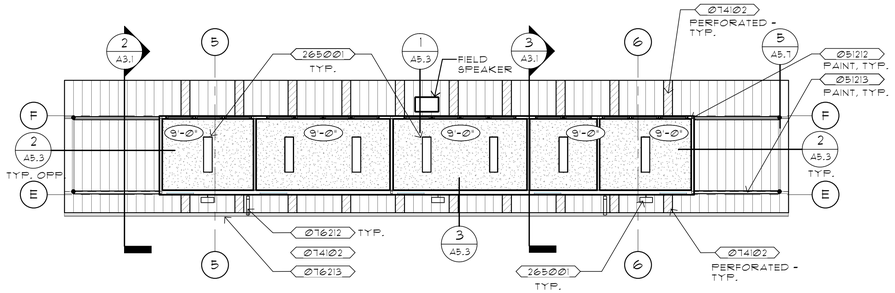
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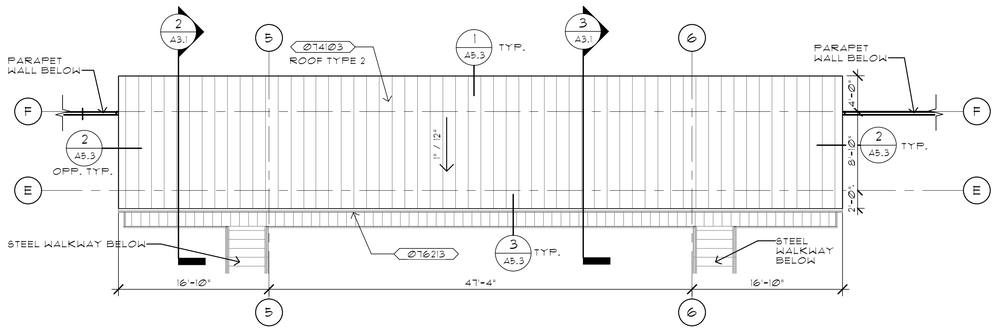
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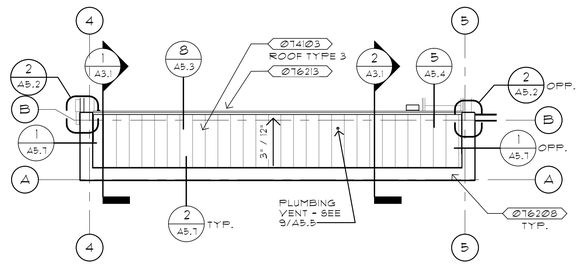
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1 A1.5 PRESS BOX REFLECTED CEILING PLAN
1/8" = 1'-Ø"



2 A1.5 PRESS BOX ROOF PLAN
1/8" = 1'-Ø"



3 A1.5 STAIRWELL ROOF PLAN
1/8" = 1'-Ø"

KEYNOTES

Ø5121Ø	STEEL COLUMN
Ø5121Ø	STEEL BEAM
Ø7414Ø2	METAL SOFFIT PANEL SYSTEM
Ø7414Ø3	METAL ROOF PANEL SYSTEM
Ø76208	PREFINISHED SHEET METAL COPING W/ 1" STANDING SEAMS AT 1Ø'-Ø" O.C. MAX. - EQUALLY SPACED BETWEEN CORNERS
Ø76212	METAL DOWNSPOUT
Ø76213	METAL GUTTER
265ØØ1	LIGHT FIXTURE

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PRESS BOX REFLECTED CEILING PLAN, ROOF PLANS

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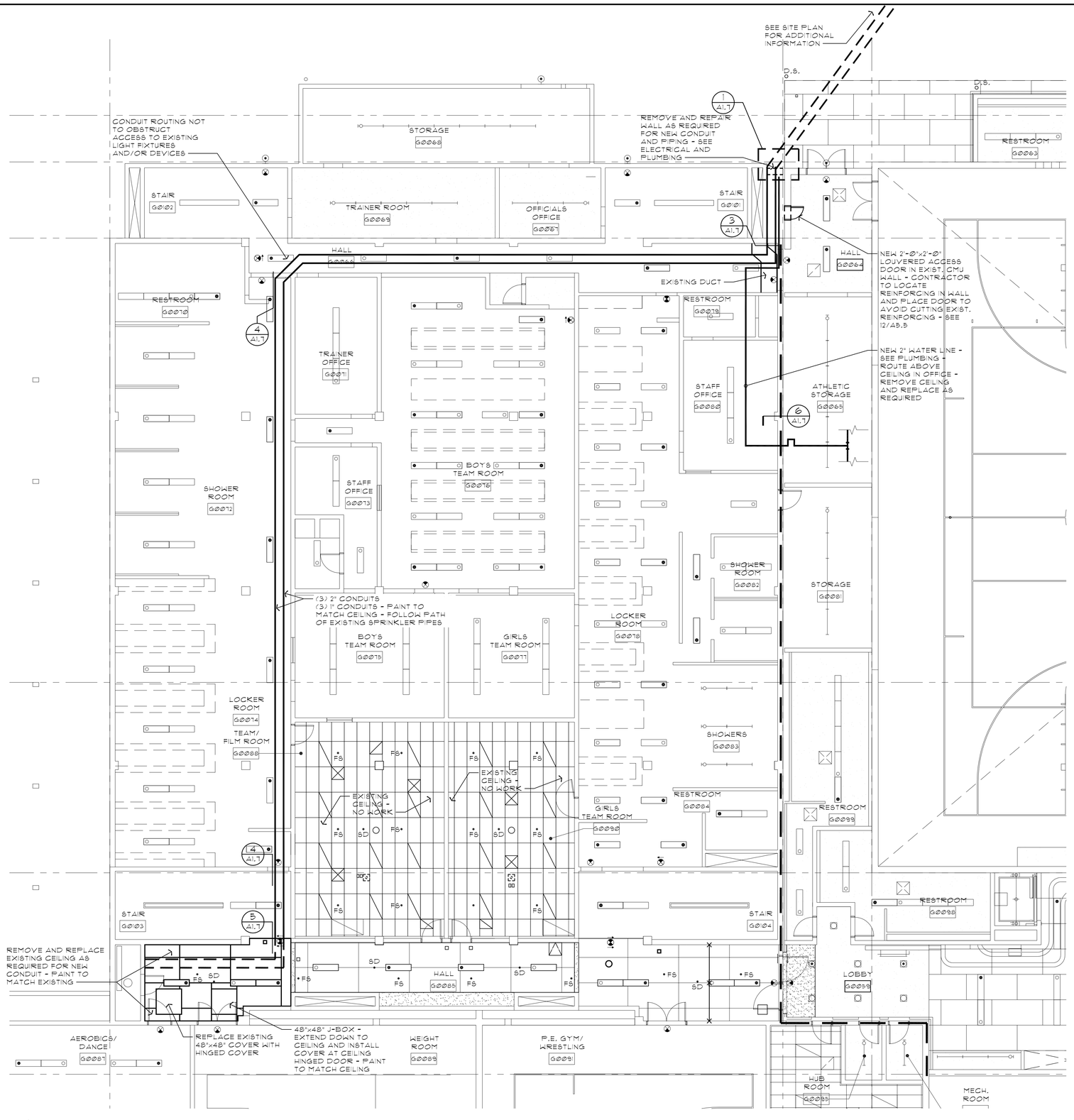
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1 A1.6 LOWER FLOOR REFLECTED CEILING PLAN - ATHLETIC BUILDING
1/8" = 1'-0"

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REFLECTED CEILING PLAN AT LOWER LEVEL OF EXIST. BLDG.

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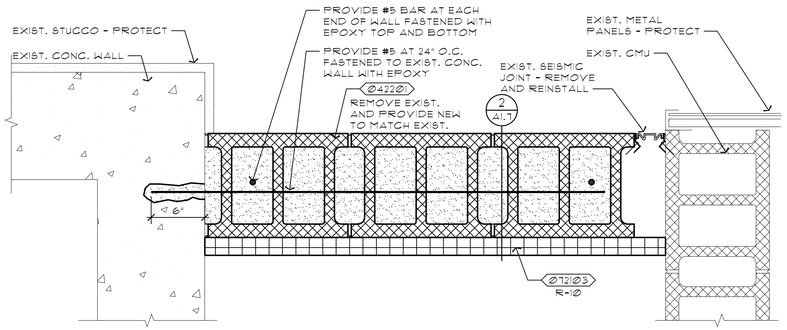
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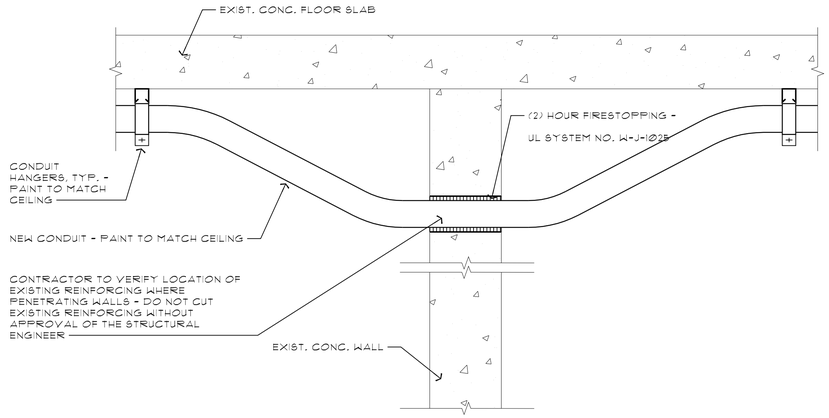
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KEYNOTES

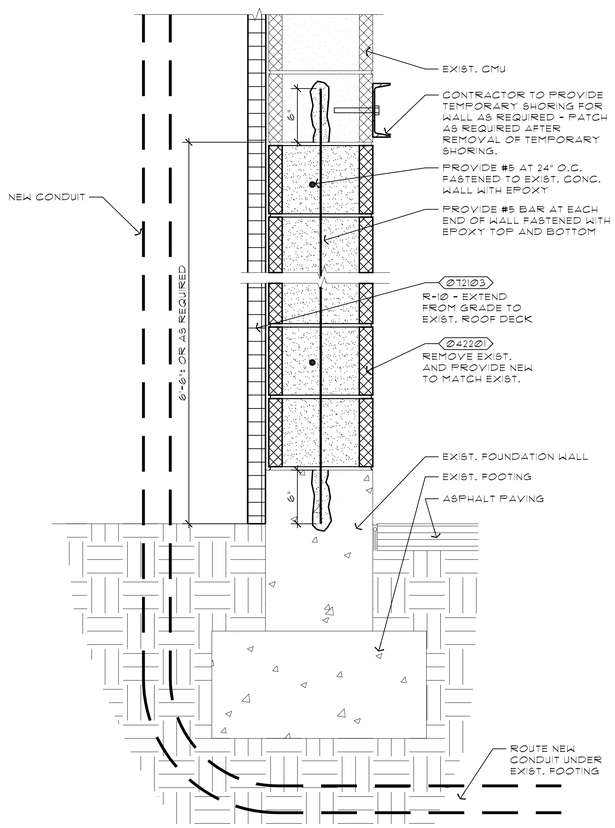
Ø422Ø1	CONCRETE MASONRY UNITS
Ø721Ø3	RIGID INSULATION BOARD
Ø792Ø3	BACKER ROD AND SEALANT



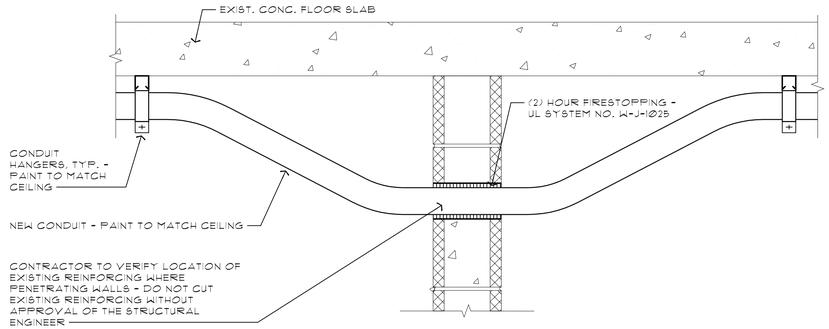
1 A1.7 **EXTERIOR CMU WALL**
1 1/2" = 1'-Ø"



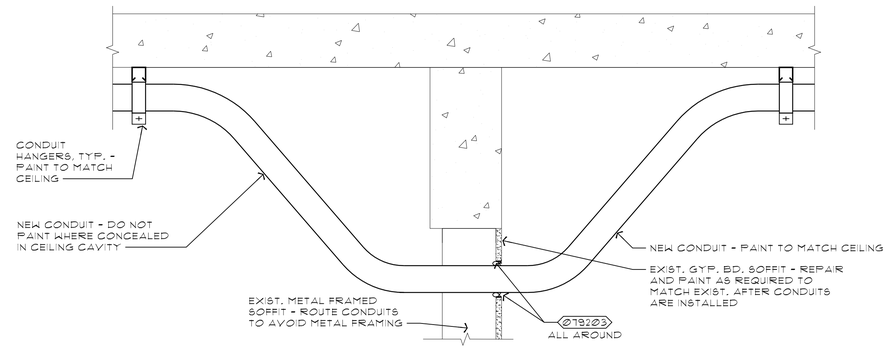
3 A1.7 **INTERIOR CONCRETE WALL CONDUIT PENETRATION**
1 1/2" = 1'-Ø"



2 A1.7 **EXTERIOR CMU WALL**
1 1/2" = 1'-Ø"



4 A1.7 **INTERIOR CMU WALL CONDUIT PENETRATION**
1 1/2" = 1'-Ø"



5 A1.7 **INTERIOR GYP. BD. SOFFIT CONDUIT PENETRATION**
1 1/2" = 1'-Ø"

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
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DETAILS

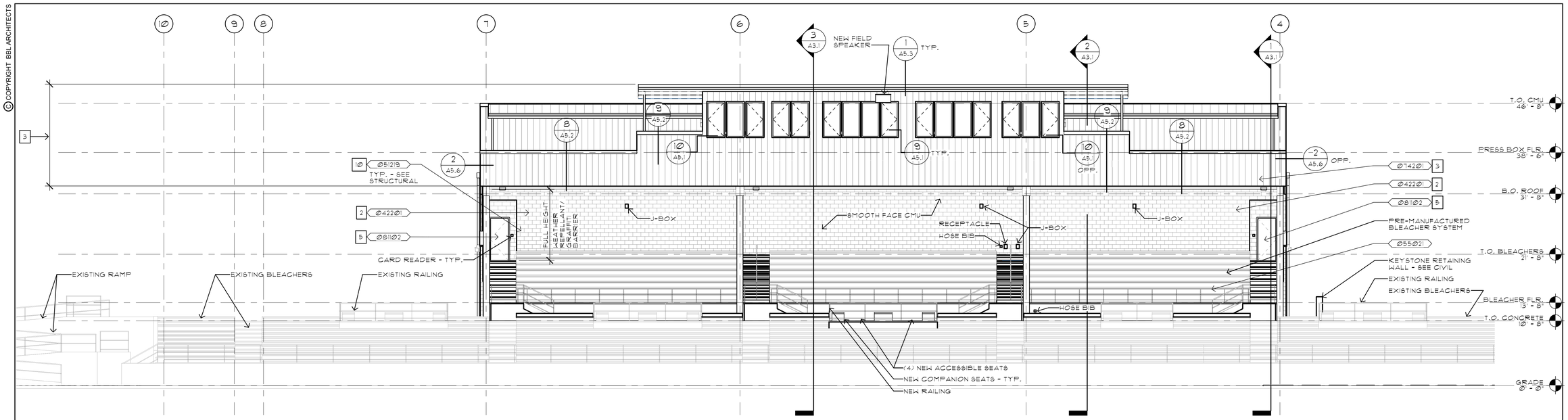
18Ø19.ØØ1 PROJECT NUMBER
20 SEP 2019 DATE

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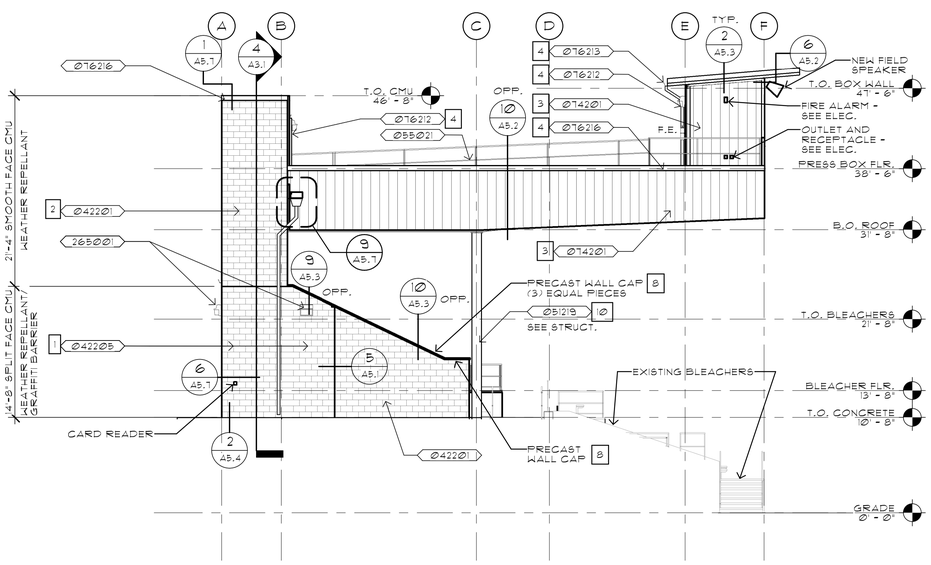
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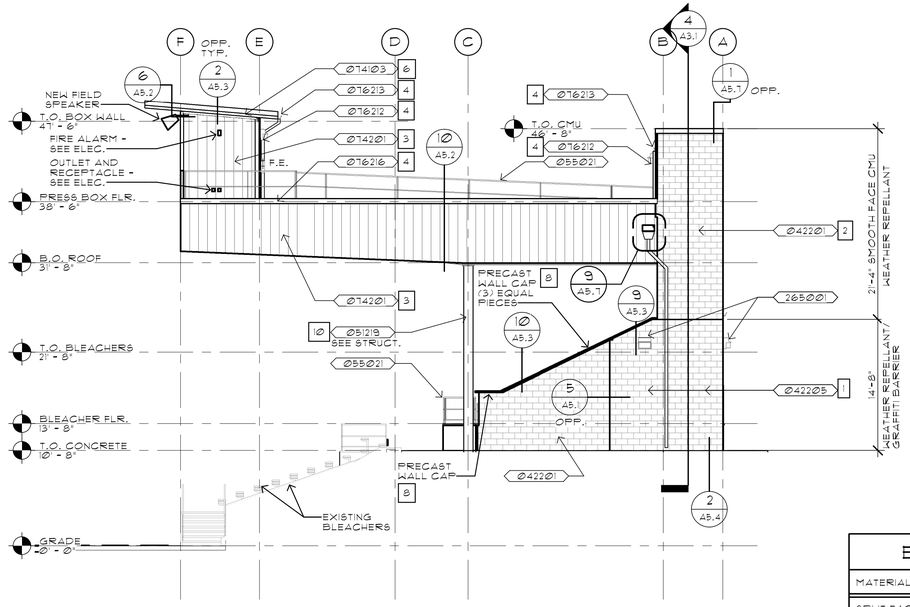
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1 A2.1 NORTH ELEVATION
1/8" = 1'-0"



2 A2.1 EAST ELEVATION
1/8" = 1'-0"



3 A2.1 WEST ELEVATION
1/8" = 1'-0"

KEYNOTES

Ø4220I	CONCRETE MASONRY UNITS
Ø4220S	CONCRETE MASONRY VENEER
Ø5I2I9	STEEL PIPE COLUMN
Ø55Ø2I	STEEL PIPE RAILINGS AND HANDRAILS
Ø74I03	METAL ROOF PANEL SYSTEM
Ø7420I	METAL WALL PANEL SYSTEM
Ø76212	METAL DOWNSPOUT
Ø76213	METAL GUTTER
Ø76216	PREFINISHED SHEET METAL FLASHING
Ø8II02	HOLLOW METAL DOOR (SEE SCHEDULE)
265ØØI	LIGHT FIXTURE

EXTERIOR FINISH SCHEDULE

MATERIAL	COLOR	SYMBOL
SPLIT FACE CMU	CHARCOAL	1
SMOOTH FACE CMU	CHARCOAL	2
METAL WALL PANEL SYSTEM	SILVER	3
PRE-FINISHED SHEET METAL	SILVER (TO MATCH EXISTING)	4
PAINTED DOOR AND FRAME	ELK SKIN	5
METAL ROOF PANEL SYSTEM	SILVER	6
SMOOTH FACE CMU	NATURAL	7
PRECAST CONCRETE	NATURAL	8
NOT USED	N/A	9
PAINTED STEEL	WHITE	10
SPLIT FACE CMU	NATURAL	11
COILING DOOR	RAL 5024	12

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EXTERIOR ELEVATIONS

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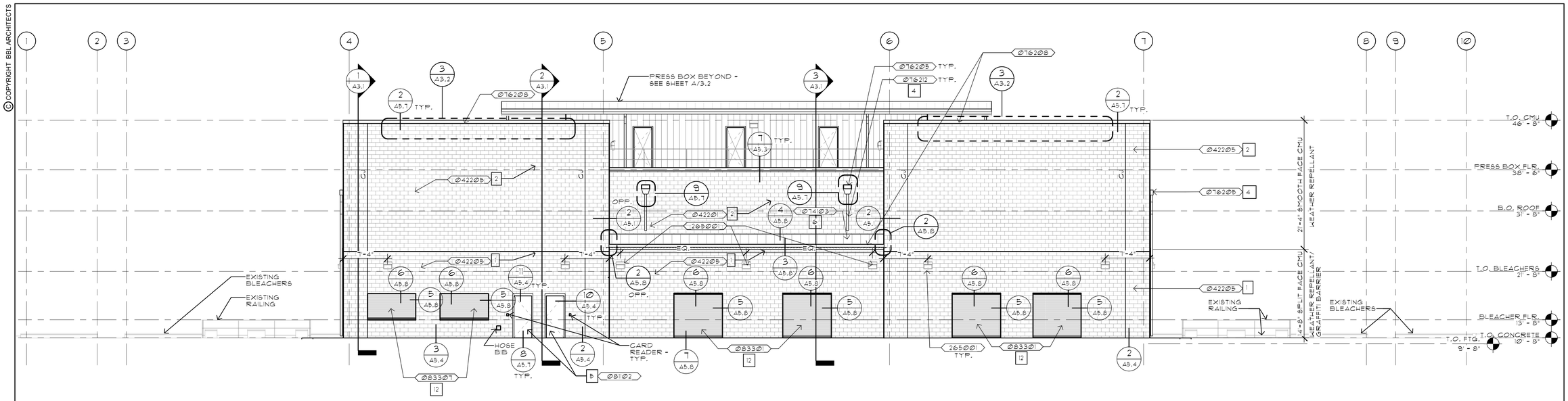
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1 A2.2 SOUTH ELEVATION
1/8" = 1'-0"

KEYNOTES

Ø42201	CONCRETE MASONRY UNITS
Ø42205	CONCRETE MASONRY VENEER
Ø74103	METAL ROOF PANEL SYSTEM
Ø76205	STAINLESS STEEL SCUPPER
Ø76208	PREFINISHED SHEET METAL COPING W/ 1" STANDING SEAMS AT 10'-0" O.C. MAX. - EQUALLY SPACED BETWEEN CORNERS
Ø76212	METAL DOWNSPOUT
Ø81102	HOLLOW METAL DOOR (SEE SCHEDULE)
Ø83301	COILING DOOR
Ø83307	COILING COUNTER DOOR
26500	LIGHT FIXTURE

EXTERIOR FINISH SCHEDULE

MATERIAL	COLOR	SYMBOL
SPLIT FACE CMU	CHARCOAL	1
SMOOTH FACE CMU	CHARCOAL	2
METAL WALL PANEL SYSTEM	SILVER	3
PRE-FINISHED SHEET METAL	SILVER (TO MATCH EXISTING)	4
PAINTED DOOR AND FRAME	ELK SKIN	5
METAL ROOF PANEL SYSTEM	SILVER	6
SMOOTH FACE CMU	NATURAL	7
PRECAST CONCRETE	NATURAL	8
NOT USED	N/A	9
PAINTED STEEL	WHITE	10
SPLIT FACE CMU	NATURAL	11
COILING DOOR	RAL 5024	12

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1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034

EXTERIOR ELEVATIONS

18079.001 PROJECT NUMBER
20 SEP 2019 DATE

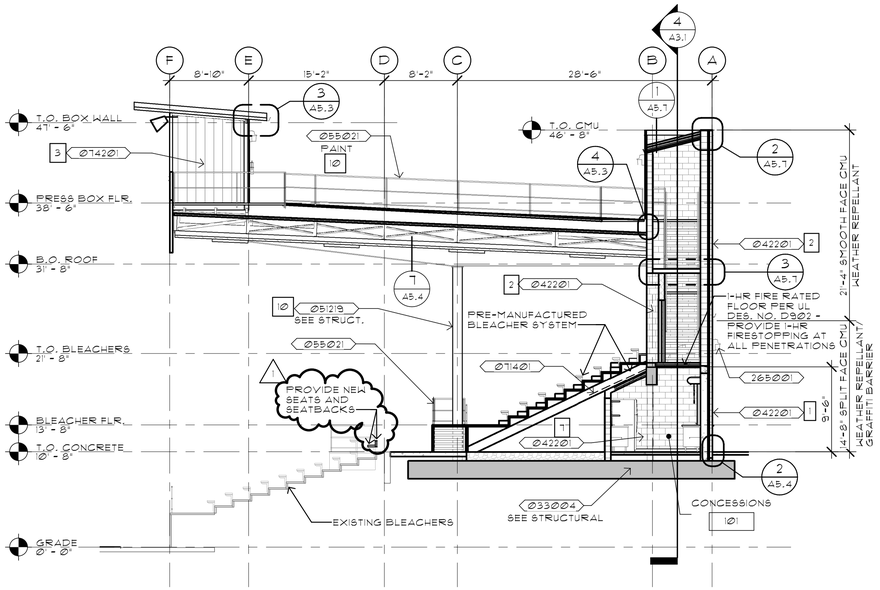
REVISIONS

A2.2

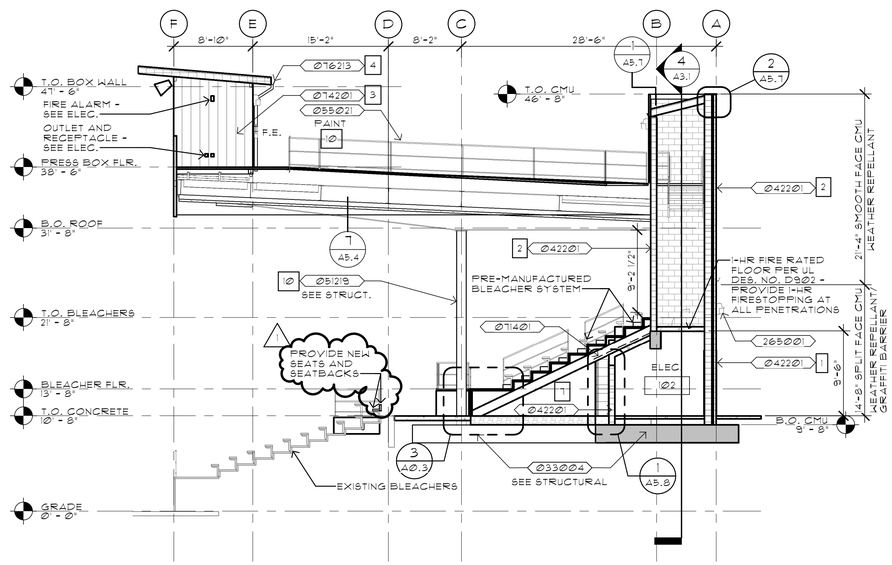
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1 A3.1 SECTION AT BLEACHER STAIRS
1/8" = 1'-0"



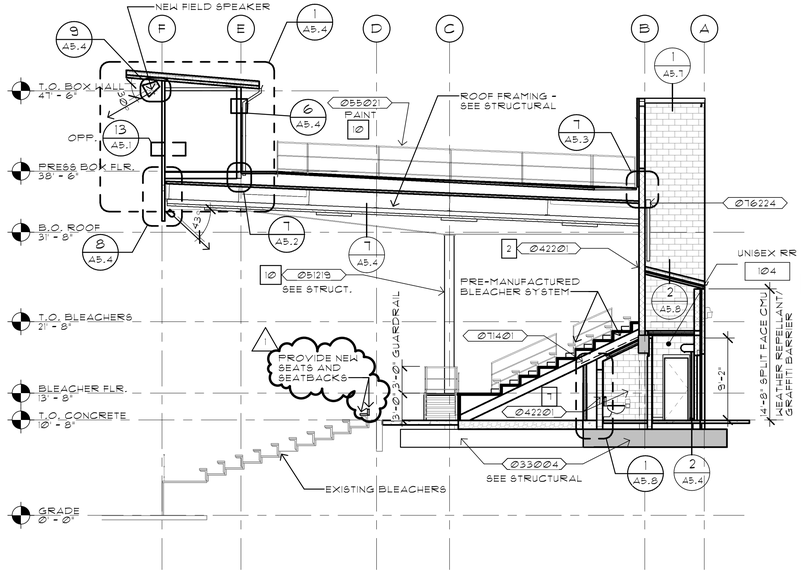
2 A3.1 SECTION AT STORAGE ROOM
1/8" = 1'-0"

KEYNOTES

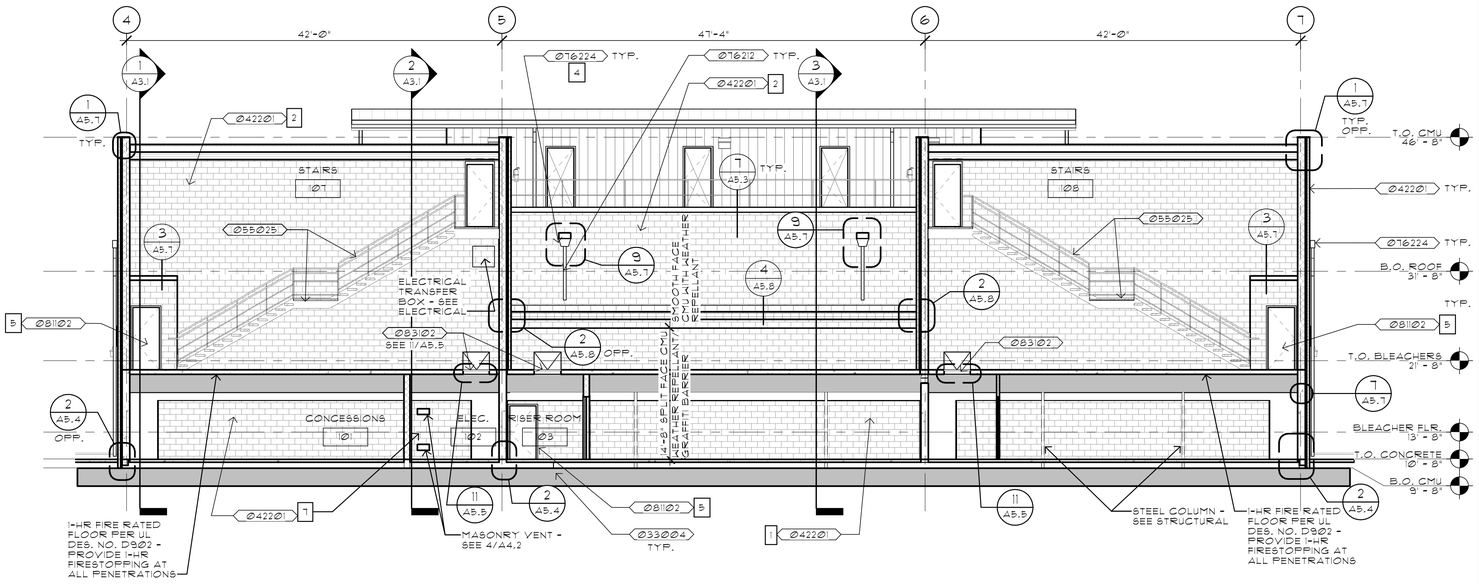
Ø33Ø04	CONCRETE FOOTING
Ø422Ø1	CONCRETE MASONRY UNITS
Ø51219	STEEL PIPE COLUMN
Ø55Ø21	STEEL PIPE RAILINGS AND HANDRAILS
Ø55Ø25	STEEL STAIR SYSTEM
Ø71401	FLUID-APPLIED WATERPROOFING SYSTEM
Ø74201	METAL WALL PANEL SYSTEM
Ø76212	METAL DOWNSPOUT
Ø76213	METAL GUTTER
Ø76224	PREFINISHED SHEET METAL SCUPPER
Ø81Ø2	HOLLOW METAL DOOR (SEE SCHEDULE)
Ø831Ø2	FIRE RATED ACCESS PANEL
265Ø1	LIGHT FIXTURE

EXTERIOR FINISH SCHEDULE

MATERIAL	COLOR	SYMBOL
SPLIT FACE CMU	CHARCOAL	1
SMOOTH FACE CMU	CHARCOAL	2
METAL WALL PANEL SYSTEM	SILVER	3
PRE-FINISHED SHEET METAL	SILVER (TO MATCH EXISTING)	4
PAINTED DOOR AND FRAME	ELK SKIN	5
METAL ROOF PANEL SYSTEM	SILVER	6
SMOOTH FACE CMU	NATURAL	7
PRECAST CONCRETE	NATURAL	8
NOT USED	N/A	9
PAINTED STEEL	WHITE	10
SPLIT FACE CMU	NATURAL	11
COILING DOOR	RAL 5024	12



3 A3.1 SECTION AT PRESS BOX
1/8" = 1'-0"



4 A3.1 SECTION AT STAIRWELLS
1/8" = 1'-0"

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DOUGLAS A. PRUITT
OREGON
STATE OF OREGON

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034

BUILDING SECTIONS

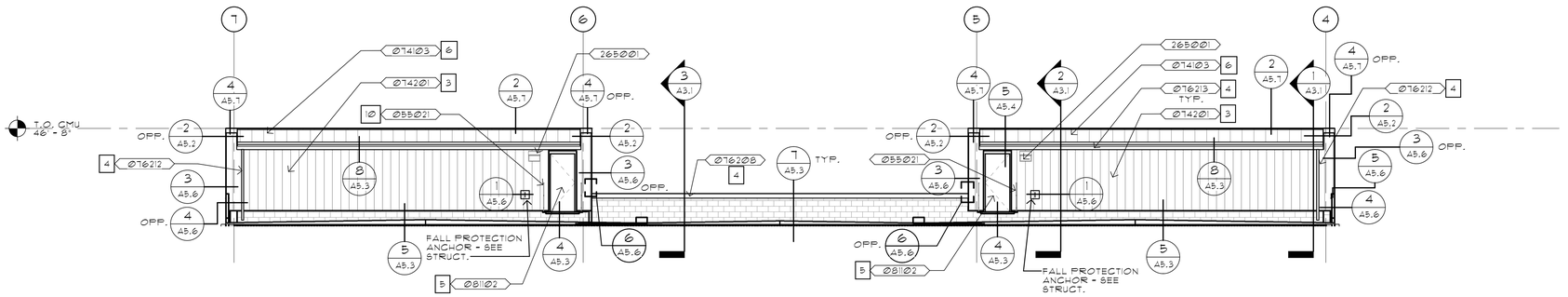
18079.001
PROJECT NUMBER
20 SEP 2019
DATE
1 30 SEP 2019
REVISIONS

A3.1

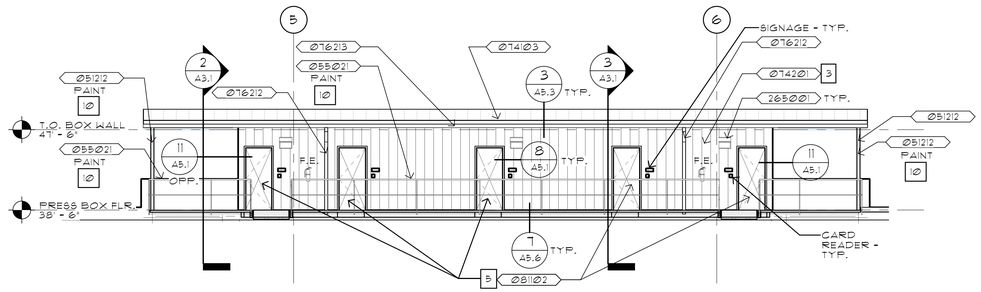
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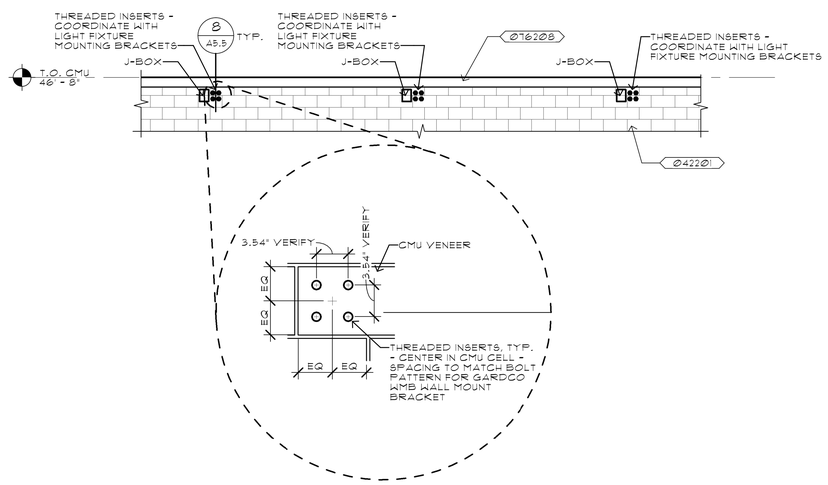
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1 A3.2 NORTH ELEVATION AT PRESS BOX
1/8" = 1'-0"



2 A3.2 SOUTH ELEVATION AT PRESS BOX
1/8" = 1'-0"



3 A3.2 PARTIAL ENLARGED SOUTH ELEVATION
1/4" = 1'-0"

KEYNOTES

Ø42201	CONCRETE MASONRY UNITS
Ø51212	STEEL COLUMN
Ø55021	STEEL PIPE RAILINGS AND HANDRAILS
Ø74103	METAL ROOF PANEL SYSTEM
Ø74201	METAL WALL PANEL SYSTEM
Ø76208	PREFINISHED SHEET METAL COPING W/ 1" STANDING SEAMS AT 18'-0" O.C. MAX. - EQUALLY SPACED BETWEEN CORNERS
Ø76212	METAL DOWNSPOUT
Ø76213	METAL GUTTER
Ø81102	HOLLOW METAL DOOR (SEE SCHEDULE)
26500I	LIGHT FIXTURE

EXTERIOR FINISH SCHEDULE

MATERIAL	COLOR	SYMBOL
SPLIT FACE CMU	CHARCOAL	1
SMOOTH FACE CMU	CHARCOAL	2
METAL WALL PANEL SYSTEM	SILVER	3
PRE-FINISHED SHEET METAL	SILVER (TO MATCH EXISTING)	4
PAINTED DOOR AND FRAME	ELK SKIN	5
METAL ROOF PANEL SYSTEM	SILVER	6
SMOOTH FACE CMU	NATURAL	7
PRECAST CONCRETE	NATURAL	8
NOT USED	N/A	9
PAINTED STEEL	WHITE	10
SPLIT FACE CMU	NATURAL	11
COILING DOOR	RAL 5024	12

REGISTERED ARCHITECT
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STATE OF OREGON

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1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034

PRESS BOX ELEVATIONS

1809.00.L
PROJECT NUMBER
20 SEP 2019
DATE

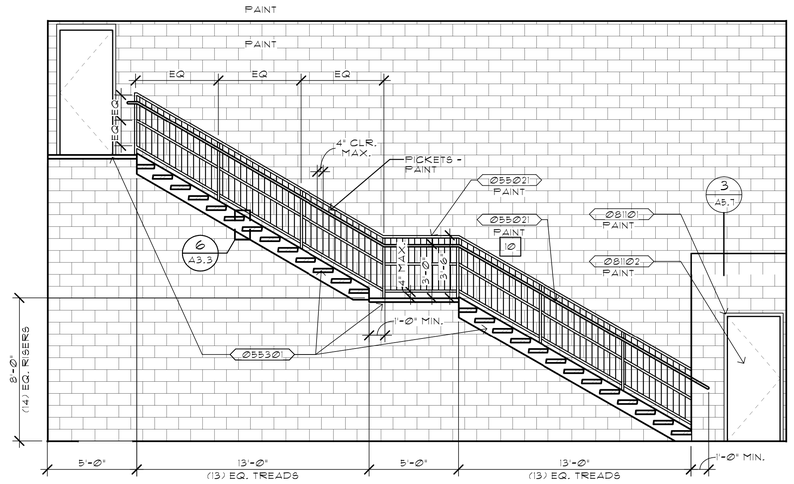
REVISIONS

A3.2

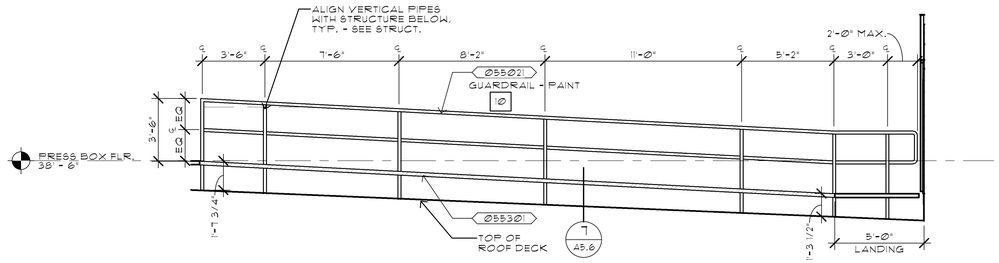
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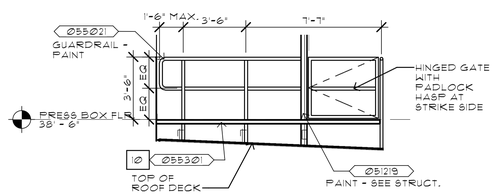
1 A3.3 GUARDRAIL ELEVATION - NORTH WALL OF STAIR
1/4" = 1'-Ø"



3 A3.3 GUARDRAIL ELEVATION - WALKWAY
1/4" = 1'-Ø"

KEYNOTES

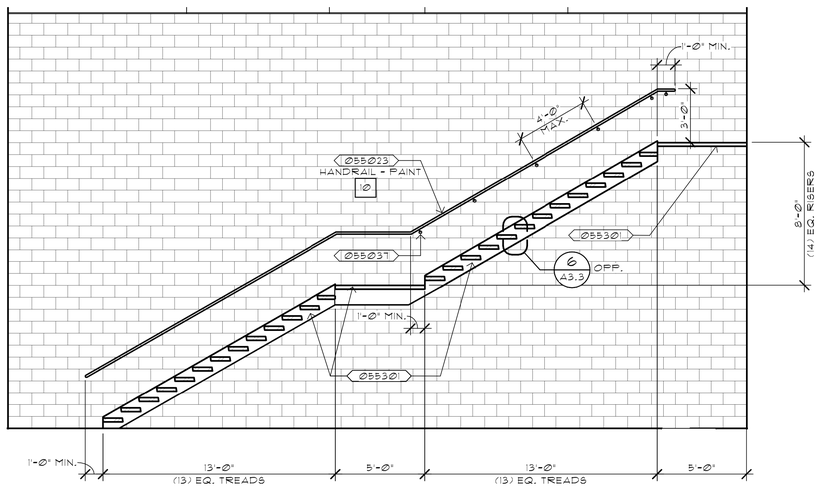
Ø5121Ø	STEEL PIPE COLUMN
Ø5502I	STEEL PIPE RAILINGS AND HANDRAILS
Ø5502Z3	STAINLESS STEEL HANDRAIL AND RAILINGS
Ø5503T	HANDRAIL BRACKET
Ø553Ø1	INTERLOCKING PLANK GRATING
Ø811Ø1	HOLLOW METAL DOOR FRAME (SEE SCHEDULE)
Ø811Ø2	HOLLOW METAL DOOR (SEE SCHEDULE)



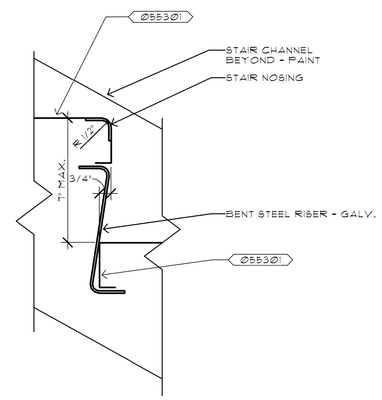
5 A3.3 GUARDRAIL AT DECK - EAST
1/4" = 1'-Ø"

EXTERIOR FINISH SCHEDULE

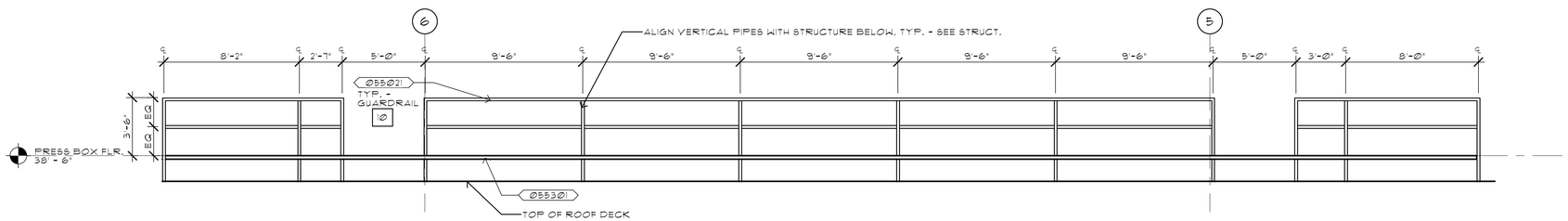
MATERIAL	COLOR	SYMBOL
SPLIT FACE CMU	CHARCOAL	1
SMOOTH FACE CMU	CHARCOAL	2
METAL WALL PANEL SYSTEM	SILVER	3
PRE-FINISHED SHEET METAL	SILVER (TO MATCH EXISTING)	4
PAINTED DOOR AND FRAME	ELK SKIN	5
METAL ROOF PANEL SYSTEM	SILVER	6
SMOOTH FACE CMU	NATURAL	7
PRECAST CONCRETE	NATURAL	8
NOT USED	N/A	9
PAINTED STEEL	WHITE	10
SPLIT FACE CMU	NATURAL	11
COILING DOOR	RAL 5Ø24	12



2 A3.3 HANDRAIL ELEVATION - SOUTH WALL OF STAIR
1/4" = 1'-Ø"



6 A3.3 STAIR RISER
3" = 1'-Ø"



4 A3.3 GUARDRAIL AT DECK - SOUTH
1/4" = 1'-Ø"

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STAIR HANDRAIL ELEVATIONS

18079.00L
PROJECT NUMBER
20 SEP 2019
DATE

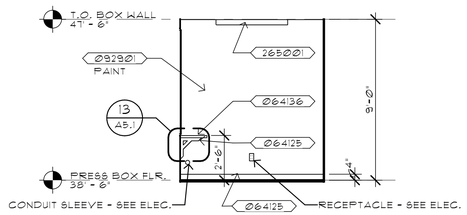
REVISIONS

A3.3

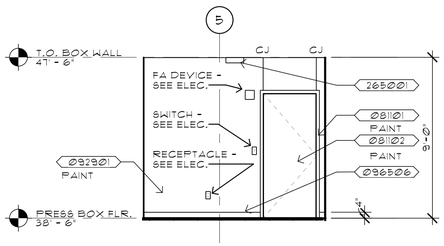
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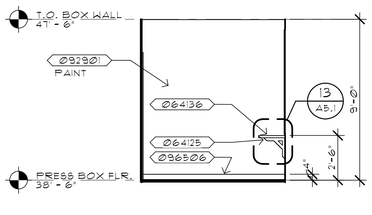
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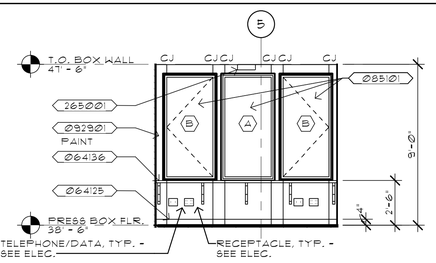
1 A4.1 TEAM ROOM 201 - A
1/4" = 1'-0"



2 A4.1 TEAM ROOM 201 - B
1/4" = 1'-0"



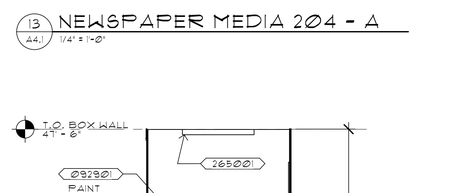
3 A4.1 TEAM ROOM 201 - C
1/4" = 1'-0"



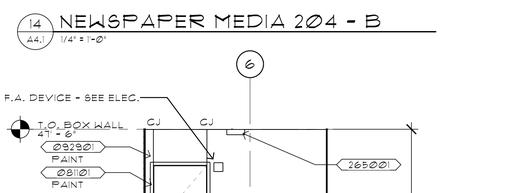
4 A4.1 TEAM ROOM 201 - D
1/4" = 1'-0"

KEYNOTES

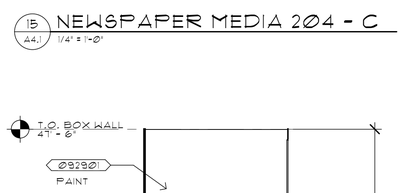
Ø64125	COUNTERTOP SUPPORT BRACKET
Ø64136	PLASTIC LAMINATE COUNTERTOP
Ø811Ø1	HOLLOW METAL DOOR FRAME (SEE SCHEDULE)
Ø811Ø2	HOLLOW METAL DOOR (SEE SCHEDULE)
Ø851Ø1	ALUMINUM WINDOW
Ø9290I	GYPSUM BOARD
Ø936506	RESILIENT BASE
265001	LIGHT FIXTURE



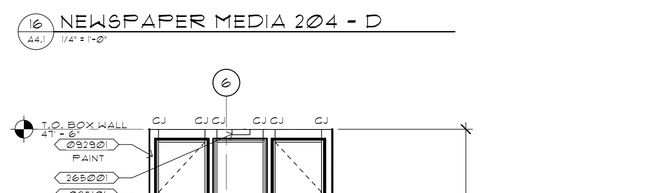
5 A4.1 MEDIA ROOM 202 - A
1/4" = 1'-0"



6 A4.1 MEDIA ROOM 202 - B
1/4" = 1'-0"



7 A4.1 MEDIA ROOM 202 - C
1/4" = 1'-0"



8 A4.1 MEDIA ROOM 202 - D
1/4" = 1'-0"

9 A4.1 TV RADIO INTERNET RM. 203 - A
1/4" = 1'-0"

10 A4.1 TV RADIO INTERNET RM. 203 - B
1/4" = 1'-0"

11 A4.1 TV RADIO INTERNET RM. 203 - C
1/4" = 1'-0"

12 A4.1 TV RADIO INTERNET RM. 203 - D
1/4" = 1'-0"

13 A4.1 NEWSPAPER MEDIA 204 - A
1/4" = 1'-0"

14 A4.1 NEWSPAPER MEDIA 204 - B
1/4" = 1'-0"

15 A4.1 NEWSPAPER MEDIA 204 - C
1/4" = 1'-0"

16 A4.1 NEWSPAPER MEDIA 204 - D
1/4" = 1'-0"

17 A4.1 TEAM ROOM 205 - A
1/4" = 1'-0"

18 A4.1 TEAM ROOM 205 - B
1/4" = 1'-0"

19 A4.1 TEAM ROOM 205 - C
1/4" = 1'-0"

20 A4.1 TEAM ROOM 205 - D
1/4" = 1'-0"

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REGISTERED ARCHITECT
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STATE OF OREGON

LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034

INTERIOR ELEVATIONS

1807.00.L
PROJECT NUMBER
20 SEP 2019
DATE

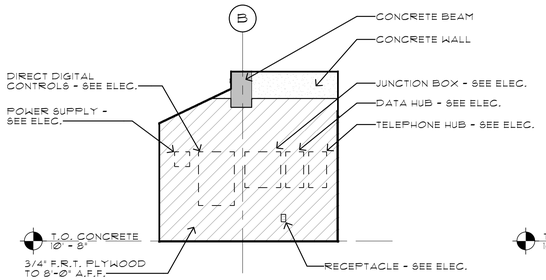
REVISIONS

A4.1

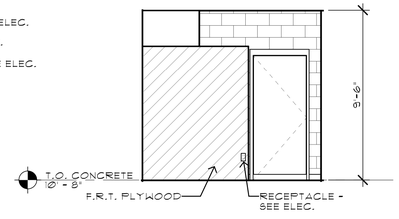
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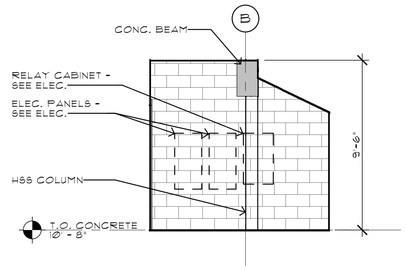
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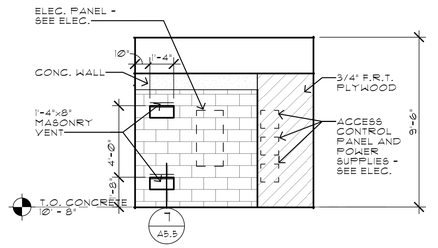
1 A4.2 ELEC. 102 - A - BASE BID
1/4" = 1'-Ø"



2 A4.2 ELEC. 102 - B - BASE BID
1/4" = 1'-Ø"



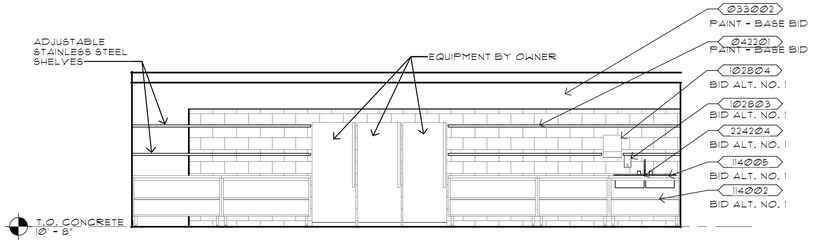
3 A4.2 ELEC. 102 - C - BASE BID
1/4" = 1'-Ø"



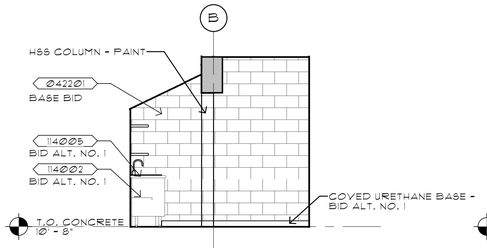
4 A4.2 ELEC. 102 - D - BASE BID
1/4" = 1'-Ø"

KEYNOTES

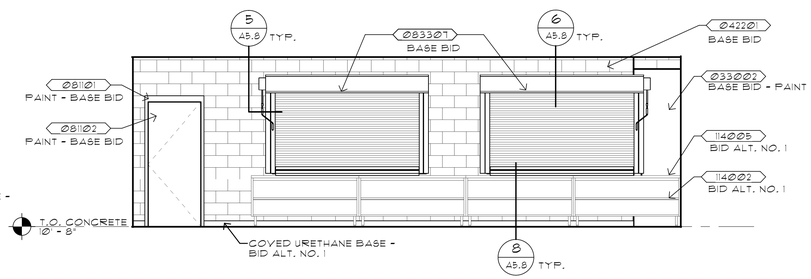
Ø33Ø02	CAST-IN-PLACE CONCRETE WALL
Ø42Ø1	CONCRETE MASONRY UNITS
Ø6413Ø	PLASTIC LAMINATE COUNTERTOP
Ø76Ø2Ø8	PREFINISHED SHEET METAL COPING W/ 1" STANDING SEAMS AT 1Ø-Ø" O.C. MAX. - EQUALLY SPACED BETWEEN CORNERS
Ø81Ø1	HOLLOW METAL DOOR FRAME (SEE SCHEDULE)
Ø81Ø2	HOLLOW METAL DOOR (SEE SCHEDULE)
Ø833Ø1	COILING DOOR
Ø833Ø7	COILING COUNTER DOOR
1Ø28Ø2	MIRROR
1Ø28Ø3	SOAP DISPENSER
1Ø28Ø4	PAPER TOWEL DISPENSER
1Ø28Ø5	TOILET PAPER DISPENSER
114Ø02	STAINLESS STEEL SHELF
114Ø05	STAINLESS STEEL COUNTER
224201	WATER CLOSET
224203	LAVATORY
224204	SINK



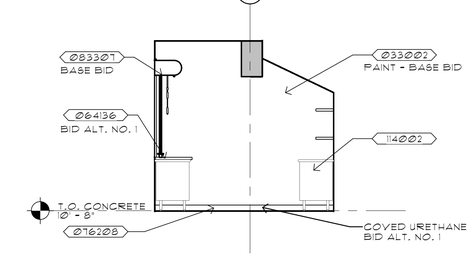
5 A4.2 CONCESSIONS 101 - A - BID ALT. NO. 1
1/4" = 1'-Ø"



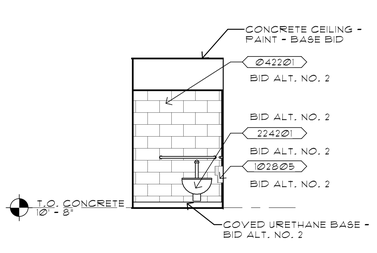
6 A4.2 CONCESSIONS 101 - B
1/4" = 1'-Ø"



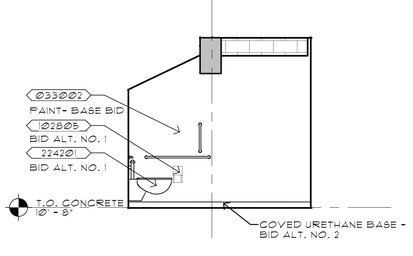
7 A4.2 CONCESSIONS 101 - C
1/4" = 1'-Ø"



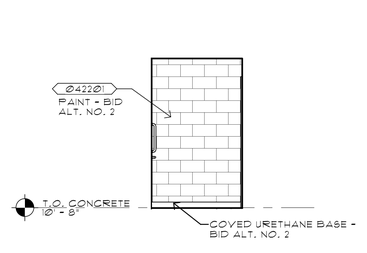
8 A4.2 CONCESSIONS 101 - D
1/4" = 1'-Ø"



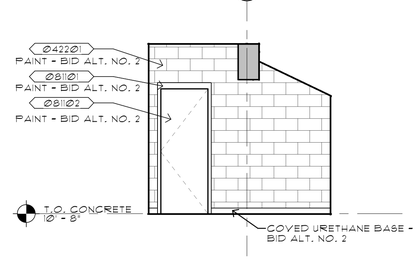
9 A4.2 RESTROOM 104G - A - BID ALT. NO. 1
1/4" = 1'-Ø"



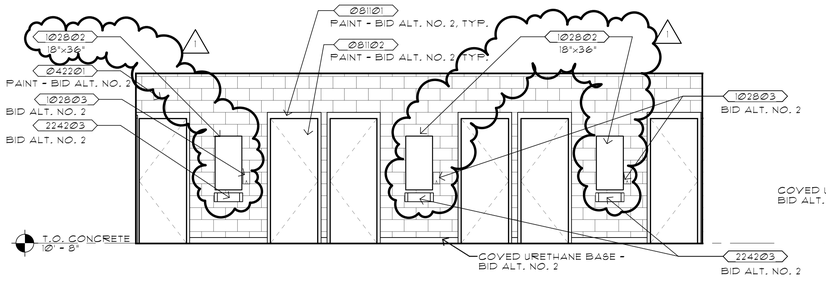
10 A4.2 RESTROOM 104G - B
1/4" = 1'-Ø"



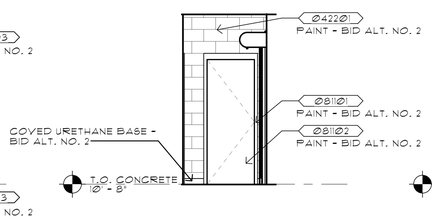
11 A4.2 RESTROOM 104G - C - BID ALT. NO. 1
1/4" = 1'-Ø"



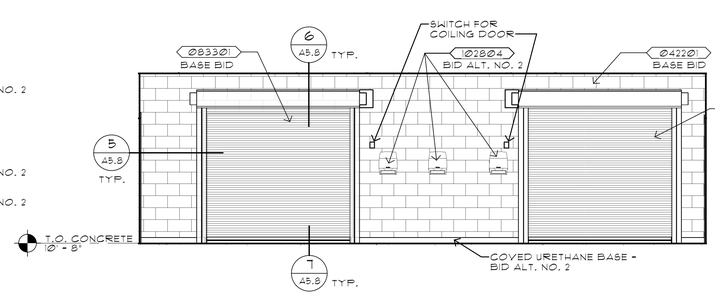
12 A4.2 RESTROOM 104G - D
1/4" = 1'-Ø"



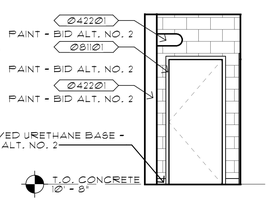
13 A4.2 UNISEX RR 104 - A - BID ALT. NO. 2
1/4" = 1'-Ø"



14 A4.2 UNISEX RR 104 - B
1/4" = 1'-Ø"



15 A4.2 UNISEX RR 104 - C
1/4" = 1'-Ø"



16 A4.2 UNISEX RR 104 - D
1/4" = 1'-Ø"

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INTERIOR ELEVATIONS

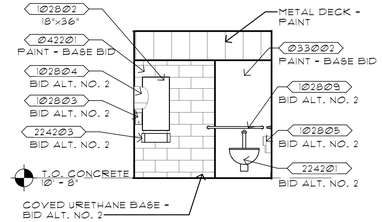
18079.001 PROJECT NUMBER
20 SEP 2019 DATE
1 30 SEP 2019 REVISIONS

A4.2

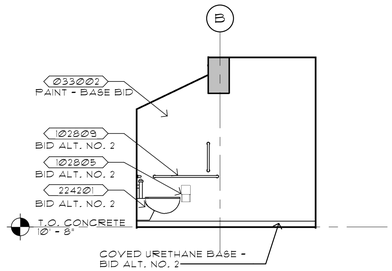
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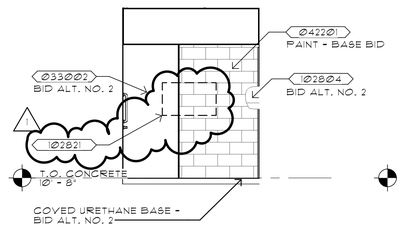
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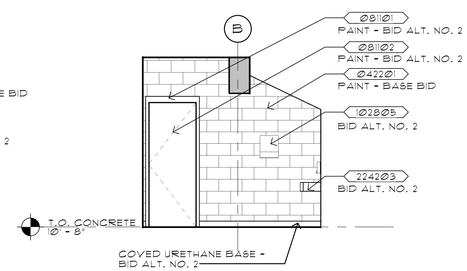
1 A4.3 RESTROOM 105G - A
1/4" = 1'-0"



2 A4.3 RESTROOM 105G - B
1/4" = 1'-0"



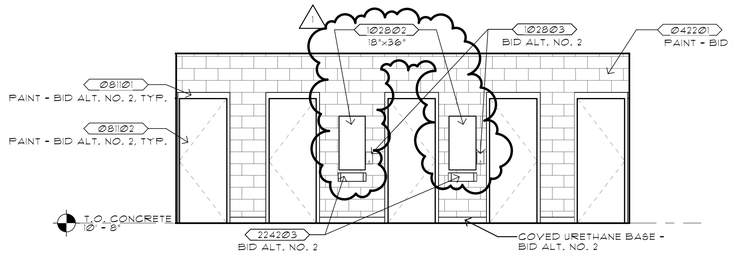
3 A4.3 RESTROOM 105G - C
1/4" = 1'-0"



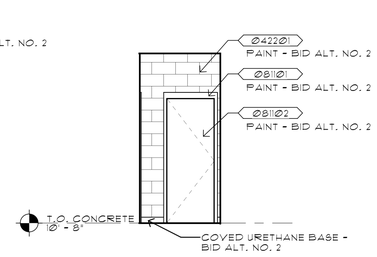
4 A4.3 RESTROOM 105G - D
1/4" = 1'-0"

KEYNOTES

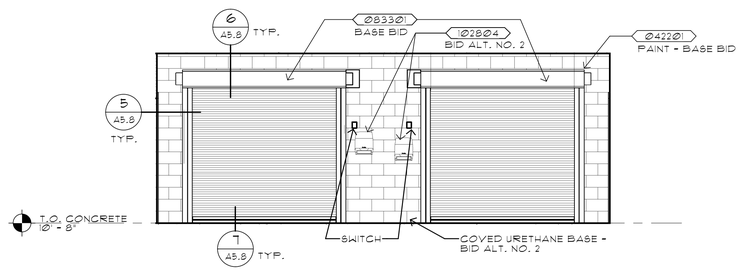
033002	CAST-IN-PLACE CONCRETE WALL
042201	CONCRETE MASONRY UNITS
081101	HOLLOW METAL DOOR FRAME (SEE SCHEDULE)
081102	HOLLOW METAL DOOR (SEE SCHEDULE)
083301	COILING DOOR
102802	MIRROR
102803	SOAP DISPENSER
102804	PAPER TOWEL DISPENSER
102805	TOILET PAPER DISPENSER
102809	GRAB BAR
102821	DIAPER CHANGING STATION
224201	WATER CLOSET
224203	LAVATORY



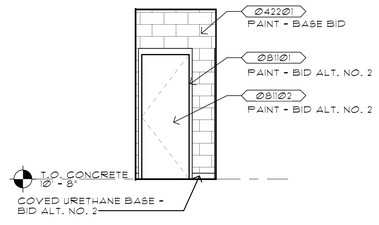
5 A4.3 UNISEX RR 105 - A - BID ALT. NO. 2
1/4" = 1'-0"



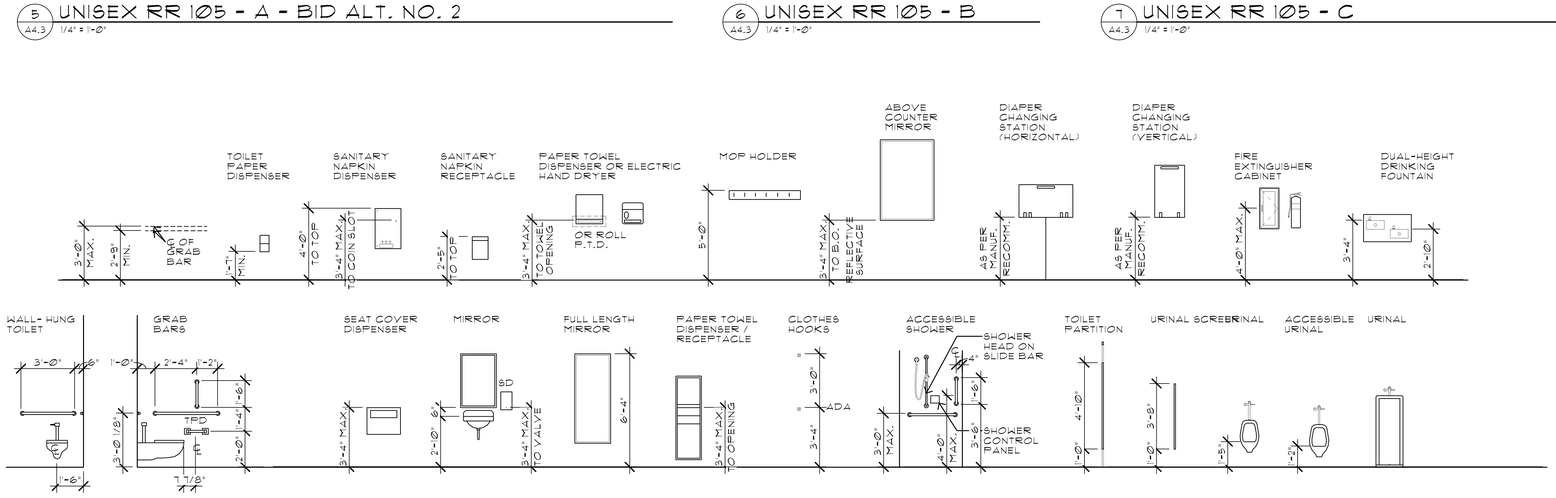
6 A4.3 UNISEX RR 105 - B
1/4" = 1'-0"



7 A4.3 UNISEX RR 105 - C
1/4" = 1'-0"



8 A4.3 UNISEX RR 105 - D
1/4" = 1'-0"



TOILET ACCESSORY AND EQUIPMENT MOUNTING HEIGHTS
1/4" = 1'-0"

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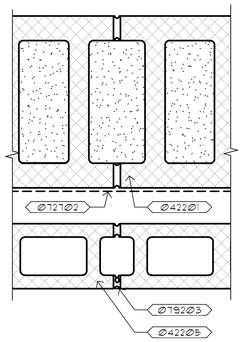
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PROJECT NUMBER
20 SEP 2019
DATE
1 30 SEP 2019
REVISIONS

A4.3

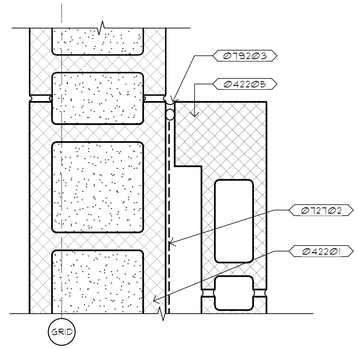
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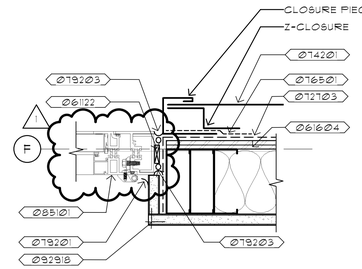
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1 A5.1 — TYPICAL CONTROL JOINT
3" = 1'-Ø"



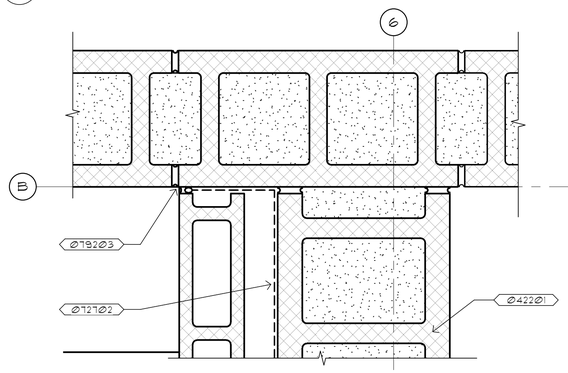
5 A5.1 — CMU VENEER RETURN
3" = 1'-Ø"



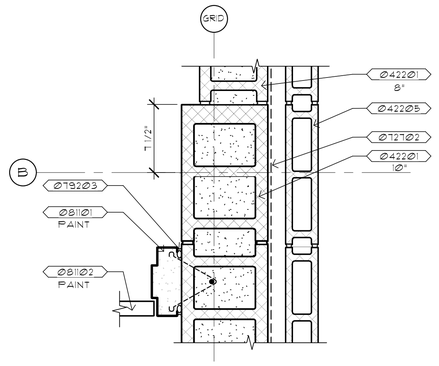
9 A5.1 — WINDOW JAMB AT PRESS BOX - HEAD SIM.
3" = 1'-Ø"

KEYNOTES

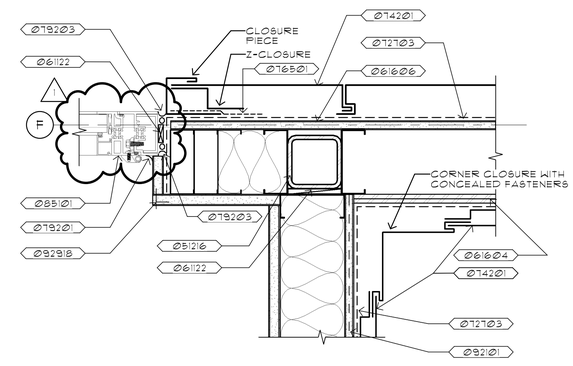
Ø42201	CONCRETE MASONRY UNITS
Ø42205	CONCRETE MASONRY VENEER
Ø51216	TUBE STEEL COLUMN
Ø51219	STEEL PIPE COLUMN
Ø55Ø2Ø	STEEL FRAMED STAIRS
Ø55Ø21	STEEL PIPE RAILINGS AND HANDRAILS
Ø5530Ø1	INTERLOCKING PLANK GRATING
Ø61122	SHIM
Ø61604	FIRE RETARDANT TREATED PLYWOOD
Ø61606	GYPSUM WALL SHEATHING
Ø64125	COUNTERTOP SUPPORT BRACKET
Ø64136	PLASTIC LAMINATE COUNTERTOP
Ø7121Ø1	THERMAL BLANKET INSULATION
Ø7127Ø2	FLUID-APPLIED MEMBRANE AIR BARRIER
Ø7127Ø3	AIR BARRIER
Ø7142Ø1	METAL WALL PANEL SYSTEM
Ø7162Ø2	STAINLESS STEEL FLASHING
Ø7162Ø8	PREFINISHED SHEET METAL COPING W/ 1" STANDING SEAMS AT 1Ø'-Ø" O.C. MAX. - EQUALLY SPACED BETWEEN CORNERS
Ø76216	PREFINISHED SHEET METAL FLASHING
Ø7651Ø1	FLEXIBLE FLASHING
Ø79201	SEALANT
Ø79203	BACKER ROD AND SEALANT
Ø81101	HOLLOW METAL DOOR FRAME (SEE SCHEDULE)
Ø81102	HOLLOW METAL DOOR (SEE SCHEDULE)
Ø85101	ALUMINUM WINDOW
Ø92101	STEEL AND GYPSUM COMPOSITE PANEL
Ø92901	GYPSUM BOARD
Ø92905	METAL STUDS
Ø92913	ACOUSTICAL INSULATION
Ø92918	METAL EDGES - TYP.



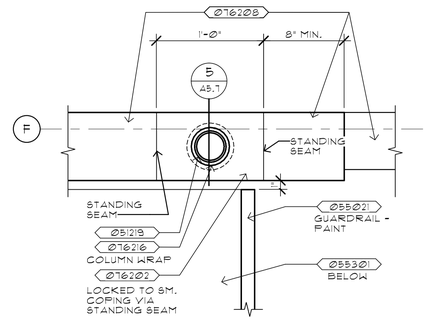
2 A5.1 — CONC. AND CMU CORNER INTERSECTION
3" = 1'-Ø"

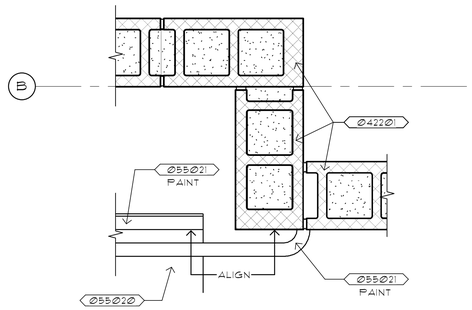


6 A5.1 — CMU INTERSECTION
1 1/2" = 1'-Ø"

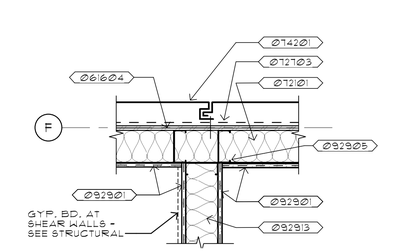


10 A5.1 — PRESS BOX WALL - NORTH INTERSECTION
3" = 1'-Ø"

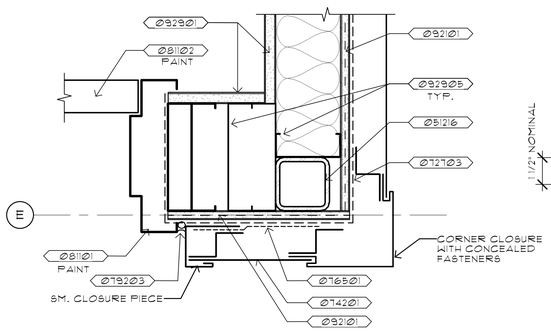




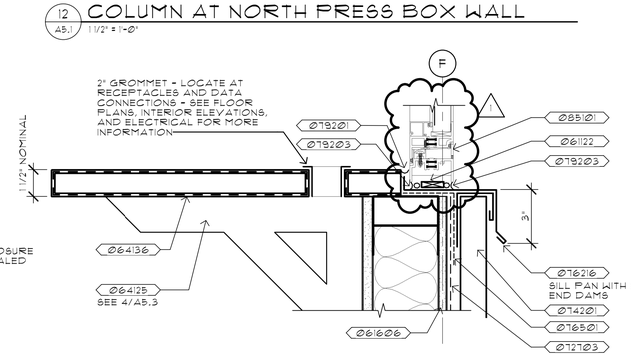
3 A5.1 — CMU WALL JOG
1 1/2" = 1'-Ø"



7 A5.1 — PRESS BOX WALL INTERSECTION
1 1/2" = 1'-Ø"

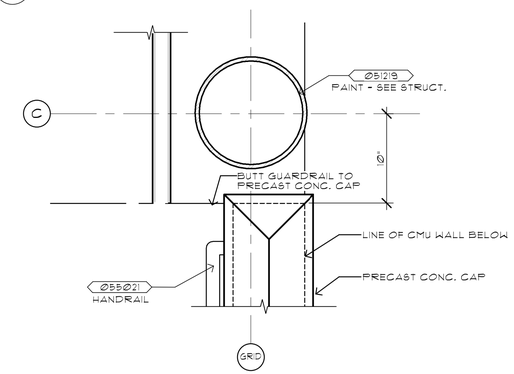


11 A5.1 — PRESS BOX WALL - SOUTH INTERSECTION
3" = 1'-Ø"

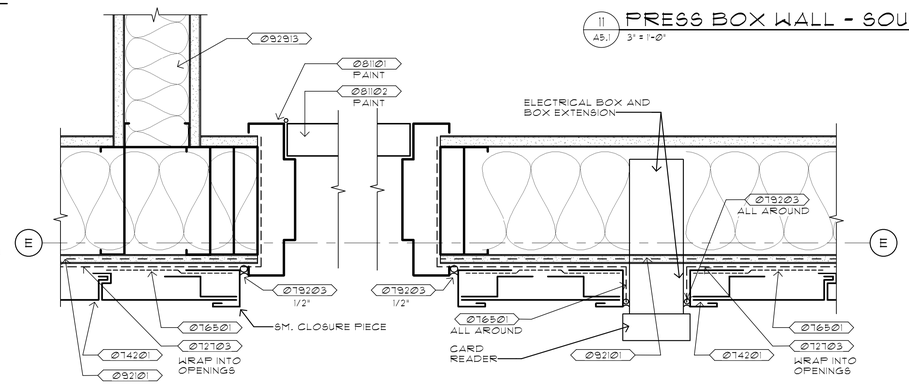


12 A5.1 — COLUMN AT NORTH PRESS BOX WALL
1 1/2" = 1'-Ø"

13 A5.1 — WINDOW SILL AT COUNTER
3" = 1'-Ø"



4 A5.1 — CMU AT STEEL COLUMN
1 1/2" = 1'-Ø"



8 A5.1 — PRESS BOX WALL
3" = 1'-Ø"

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DETAILS

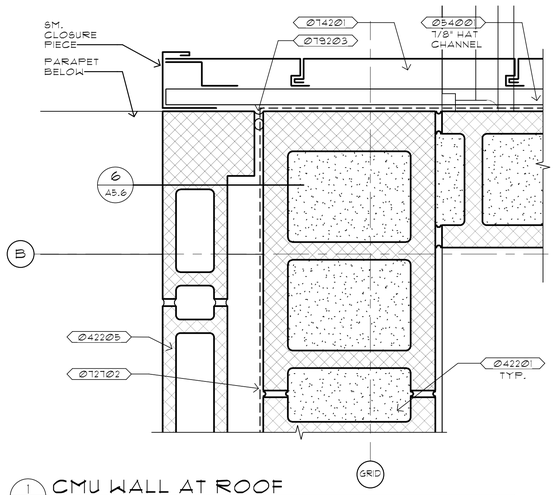
18079.001
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A5.1

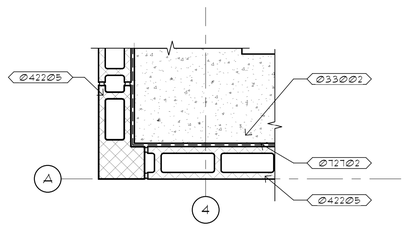
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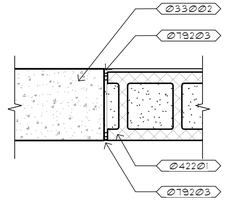
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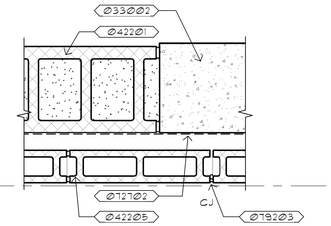


1 A5.2 — CMU WALL AT ROOF
3" = 1'-Ø"

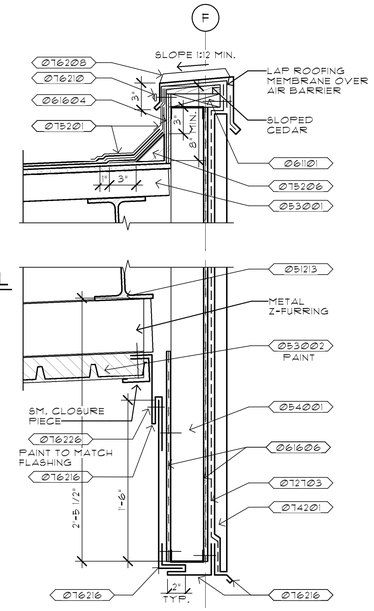


11 A5.2 — CORNER AT CMU/CONCRETE WALL
1 1/2" = 1'-Ø"





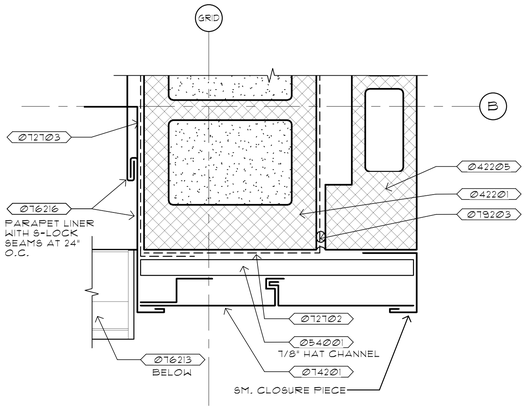
4 A5.2 — JOINT AT CMU / CONCRETE WALL
1 1/2" = 1'-Ø"



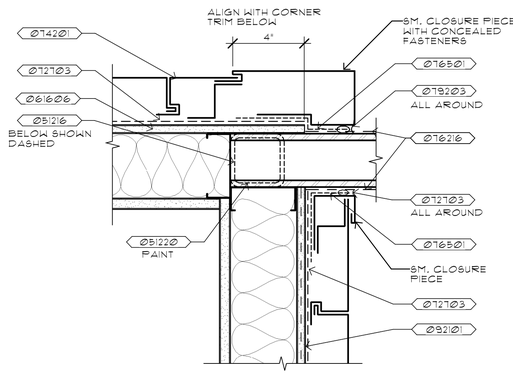
8 A5.2 — ROOF AT NORTH WALL
1 1/2" = 1'-Ø"

KEYNOTES

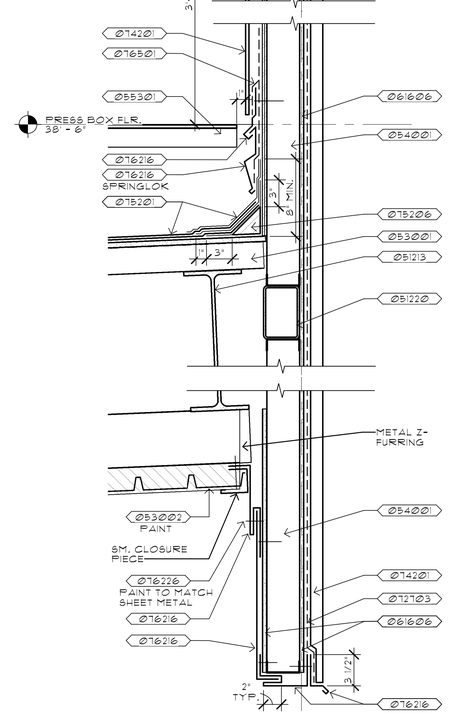
Ø3300Ø2	CAST-IN-PLACE CONCRETE WALL
Ø4220Ø1	CONCRETE MASONRY UNITS
Ø4222Ø5	CONCRETE MASONRY VENEER
Ø5121Ø3	STEEL BEAM
Ø5121Ø4	STEEL ANGLE
Ø5121Ø6	TUBE STEEL COLUMN
Ø5122Ø	STEEL TUBE BEAM
Ø5300Ø1	METAL ROOF DECK
Ø5300Ø2	ACOUSTIC METAL ROOF DECK
Ø5400Ø1	COLD-FORMED METAL FRAMING
Ø5400Ø2	COLD-FORMED METAL FRAMING JOIST
Ø5530Ø1	INTERLOCKING PLANK GRATING
Ø6110Ø1	WOOD FRAMING
Ø6160Ø4	FIRE RETARDANT TREATED PLYWOOD
Ø6160Ø6	GYPSUM WALL SHEATHING
Ø6161Ø	CEMENTITIOUS SHEATHING
Ø7127Ø2	FLUID-APPLIED MEMBRANE AIR BARRIER
Ø7127Ø3	AIR BARRIER
Ø7142Ø1	METAL WALL PANEL SYSTEM
Ø7192Ø1	MODIFIED BITUMINOUS MEMBRANE ROOFING SYSTEM
Ø7520Ø6	CANT STRIP
Ø7620Ø8	PREFINISHED SHEET METAL COPING W/ 1" STANDING SEAMS AT Ø'-Ø" O.C. MAX. - EQUALLY SPACED BETWEEN CORNERS
Ø7621Ø	FASTENER W/ NEOPRENE WASHER OR RIVET (AT 12" O.C. MAX.)
Ø7621Ø3	METAL GUTTER
Ø7621Ø6	PREFINISHED SHEET METAL FLASHING
Ø7622Ø	CONTINUOUS CLEAT
Ø7622Ø6	FASTENER W/ NEOPRENE WASHER
Ø7650Ø1	FLEXIBLE FLASHING
Ø7920Ø3	BACKER ROD AND SEALANT
Ø8110Ø2	HOLLOW METAL DOOR (SEE SCHEDULE)
Ø8710Ø4	THRESHOLD - SEE HARDWARE SCHEDULE
Ø9210Ø1	STEEL AND GYPSUM COMPOSITE PANEL



2 A5.2 — CMU AT STAIR TOWER ROOF
3" = 1'-Ø"

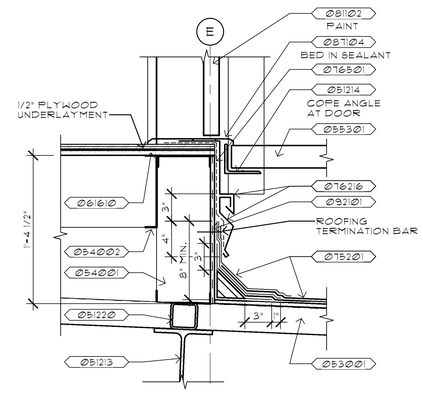


6 A5.2 — BEAM PENETRATION AT PRESS BOX
3" = 1'-Ø"

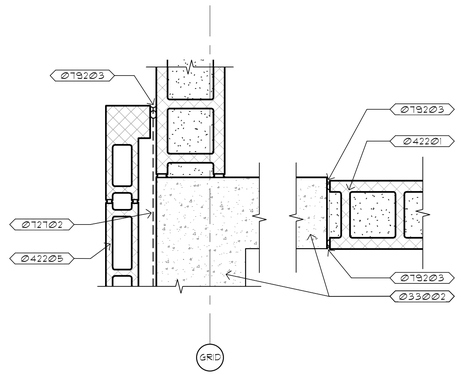


9 A5.2 — NORTH WALL AT DECK
1 1/2" = 1'-Ø"

10 A5.2 — ROOF EDGE
1 1/2" = 1'-Ø"



7 A5.2 — DOOR THRESHOLD AT PRESS BOX
1 1/2" = 1'-Ø"



3 A5.2 — CMU VENEER RETURN AT CONC. WALL
1 1/2" = 1'-Ø"

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1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034

18079.00
PROJECT NUMBER
20 SEP 2019
DATE

REVISIONS

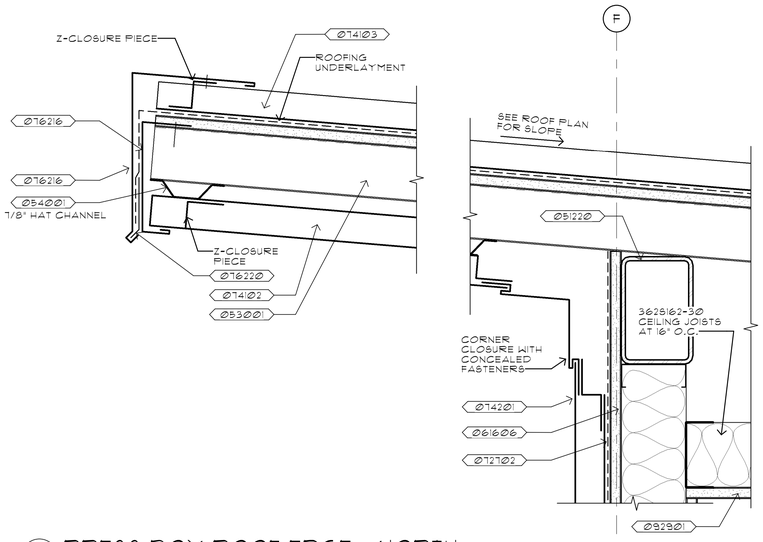
DETAILS

A5.2

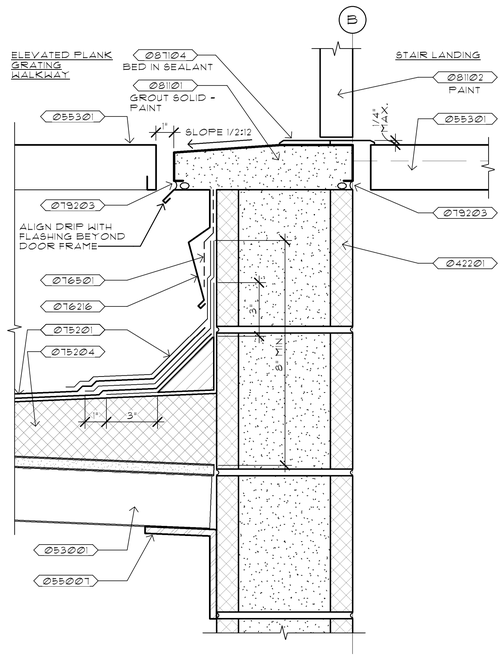
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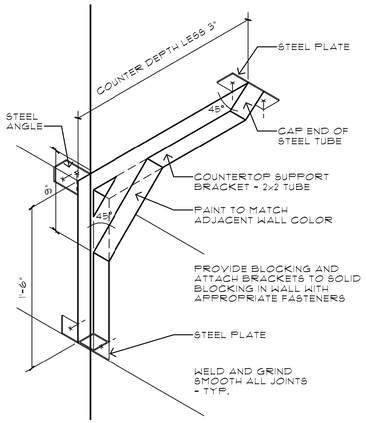
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1 A5.3 — PRESS BOX ROOF EDGE - NORTH
3" = 1'-0"



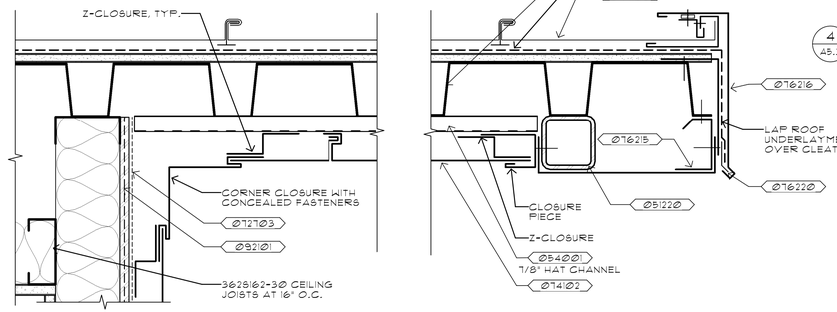
4 A5.3 — STAIRWAY DOOR THRESHOLD
3" = 1'-0"



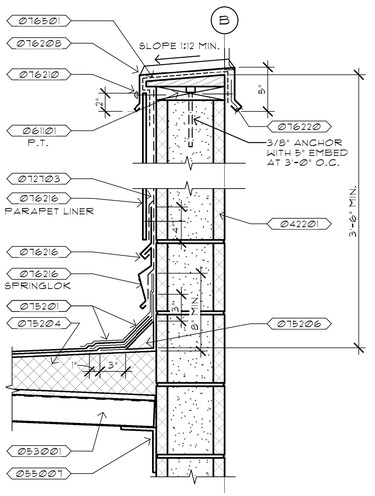
6 A5.3 — COUNTERTOP SUPPORT BRACKET
1 1/2" = 1'-0"

KEYNOTES

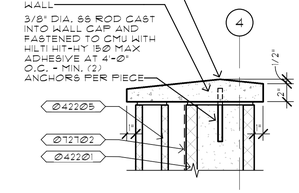
Ø42201	CONCRETE MASONRY UNITS
Ø42205	CONCRETE MASONRY VENEER
Ø51201	STEEL PLATE
Ø51214	STEEL ANGLE
Ø51220	STEEL TUBE BEAM
Ø53001	METAL ROOF DECK
Ø54001	COLD-FORMED METAL FRAMING
Ø55007	BENT STEEL PLATE
Ø55301	INTERLOCKING PLANK GRATING
Ø61101	WOOD FRAMING
Ø61606	GYPSUM WALL SHEATHING
Ø72702	FLUID-APPLIED MEMBRANE AIR BARRIER
Ø72703	AIR BARRIER
Ø74102	METAL SOFFIT PANEL SYSTEM
Ø74103	METAL ROOF PANEL SYSTEM
Ø74201	METAL WALL PANEL SYSTEM
Ø75201	MODIFIED BITUMINOUS MEMBRANE ROOFING SYSTEM
Ø75204	TAPERED INSULATION
Ø75206	CANT STRIP
Ø76208	PREFINISHED SHEET METAL COPING W/ 1" STANDING SEAMS AT 10'-0" O.C. MAX. - EQUALLY SPACED BETWEEN CORNERS
Ø76210	FASTENER W/ NEOPRENE WASHER OR RIVET (AT 12" O.C. MAX.)
Ø76213	METAL GUTTER
Ø76214	GUTTER STRAP
Ø76215	GALV. SHEET METAL ANGLE
Ø76216	PREFINISHED SHEET METAL FLASHING
Ø76220	CONTINUOUS CLEAT
Ø76501	FLEXIBLE FLASHING
Ø78203	BACKER ROD AND SEALANT
Ø81101	HOLLOW METAL DOOR FRAME (SEE SCHEDULE)
Ø81102	HOLLOW METAL DOOR (SEE SCHEDULE)
Ø87104	THRESHOLD - SEE HARDWARE SCHEDULE
Ø92101	STEEL AND GYPSUM COMPOSITE PANEL
Ø92901	GYPSUM BOARD



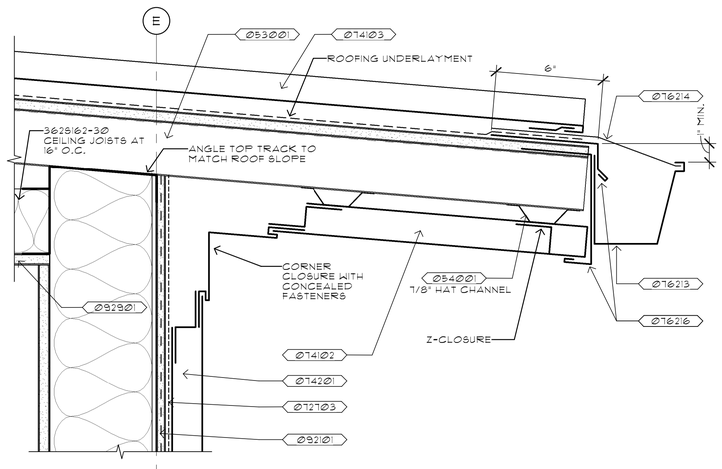
2 A5.3 — PRESS BOX ROOF EDGE
3" = 1'-0"



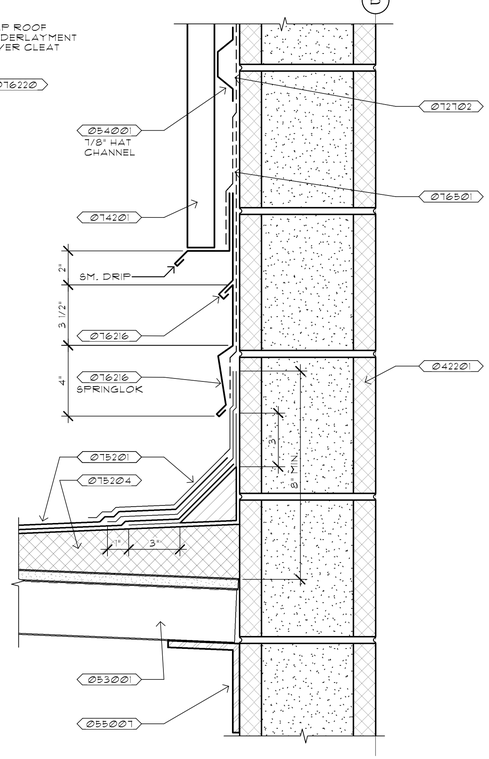
7 A5.3 — CMU PARAPET
1 1/2" = 1'-0"



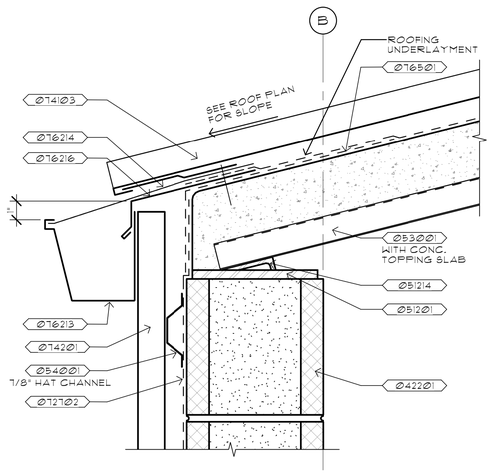
9 A5.3 — PRECAST WALL CAP AT CMU VENEER
1 1/2" = 1'-0"



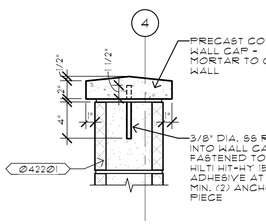
3 A5.3 — PRESS BOX ROOF EDGE - SOUTH
3" = 1'-0"



5 A5.3 — ROOF TERMINATION AT METAL PANEL
3" = 1'-0"



8 A5.3 — STAIR ROOF GUTTER
3" = 1'-0"



10 A5.3 — PRECAST WALL CAP AT CMU WALL
1 1/2" = 1'-0"

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LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034

DETAILS

18079.00.L
PROJECT NUMBER
20 SEP 2019
DATE

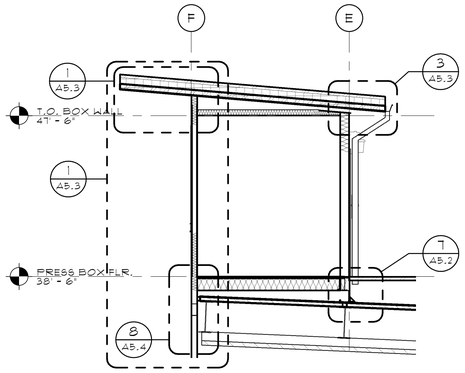
REVISIONS

A5.3

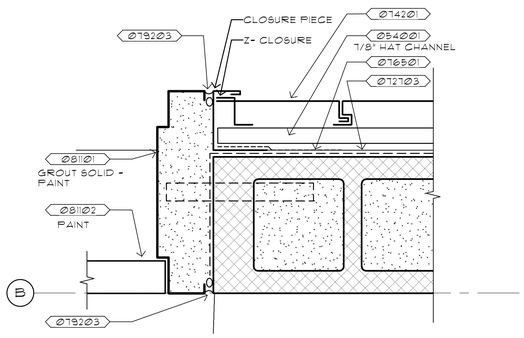
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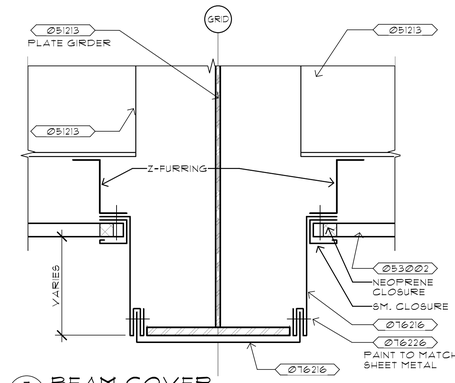
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1 A5.4 SECTION AT PRESS BOX
1/4" = 1'-0"



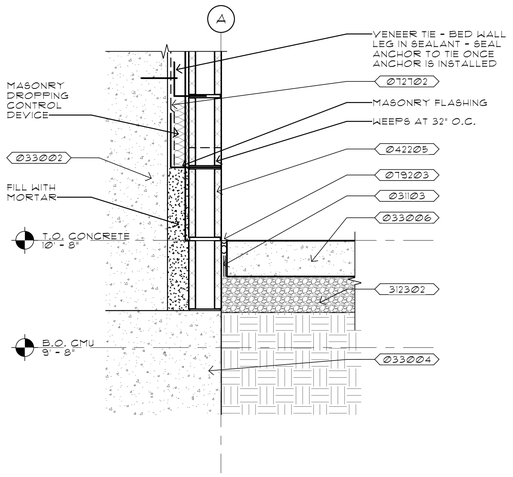
4 A5.4 DOOR JAMB - CMU AND MTL. PANEL
3" = 1'-0"



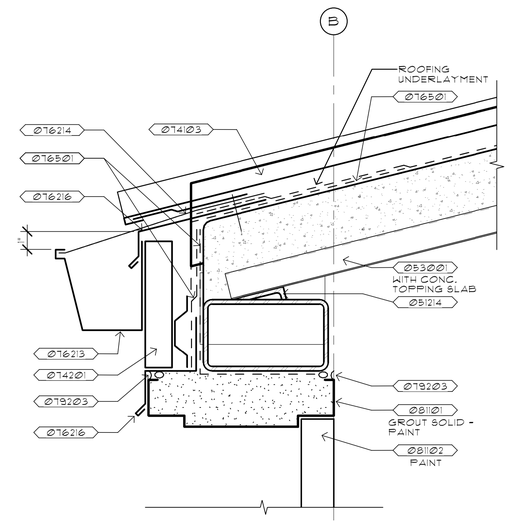
7 A5.4 BEAM COVER
1 1/2" = 1'-0"

KEYNOTES

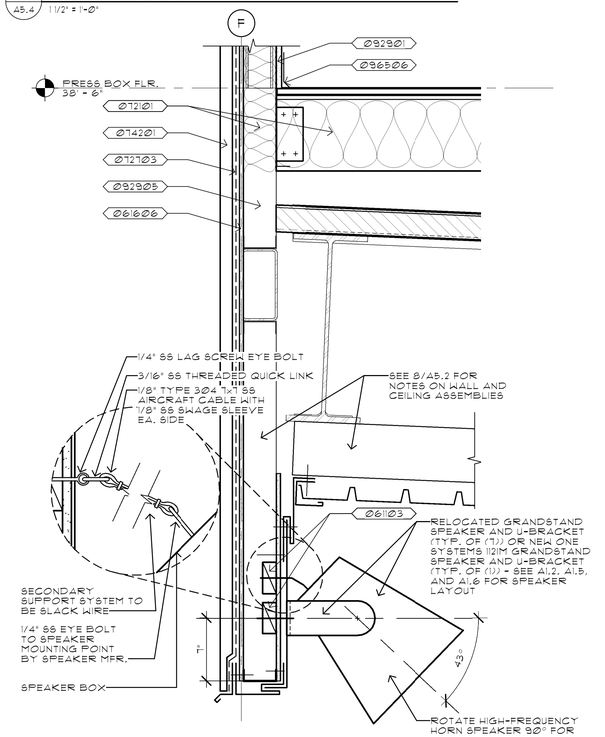
Ø31103	EXPANSION AND ISOLATION JOINT FILLERS
Ø33002	CAST-IN-PLACE CONCRETE WALL
Ø33004	CONCRETE FOOTING
Ø33006	CONCRETE SIDEWALK
Ø42201	CONCRETE MASONRY UNITS
Ø42205	CONCRETE MASONRY VENEER
Ø51213	STEEL BEAM
Ø51214	STEEL ANGLE
Ø53001	METAL ROOF DECK
Ø53002	ACOUSTIC METAL ROOF DECK
Ø54201	COLD-FORMED METAL FRAMING
Ø61103	WOOD BLOCKING
Ø61606	GYPSUM WALL SHEATHING
Ø72101	THERMAL BLANKET INSULATION
Ø72102	FLUID-APPLIED MEMBRANE AIR BARRIER
Ø72103	AIR BARRIER
Ø74103	METAL ROOF PANEL SYSTEM
Ø74201	METAL WALL PANEL SYSTEM
Ø76213	METAL GUTTER
Ø76214	GUTTER STRAP
Ø76216	PREFINISHED SHEET METAL FLASHING
Ø76226	FASTENER W/ NEOPRENE WASHER
Ø76501	FLEXIBLE FLASHING
Ø79201	SEALANT
Ø79203	BACKER ROD AND SEALANT
Ø81101	HOLLOW METAL DOOR FRAME (SEE SCHEDULE)
Ø81102	HOLLOW METAL DOOR (SEE SCHEDULE)
Ø92101	STEEL AND GYPSUM COMPOSITE PANEL
Ø92901	GYPSUM BOARD
Ø92905	METAL STUDS
Ø96506	RESILIENT BASE
312302	COMPACTED BASE AGGREGATE



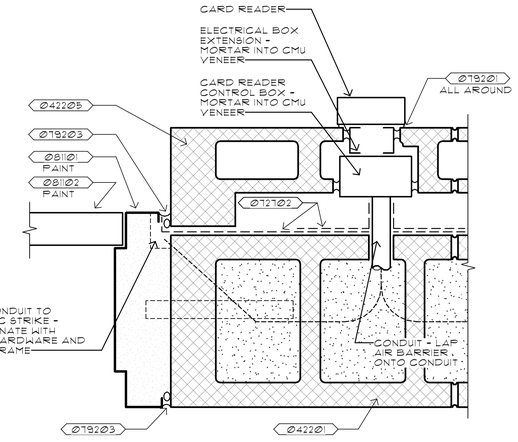
2 A5.4 CMU VENEER BASE - CONCRETE WALL
1 1/2" = 1'-0"



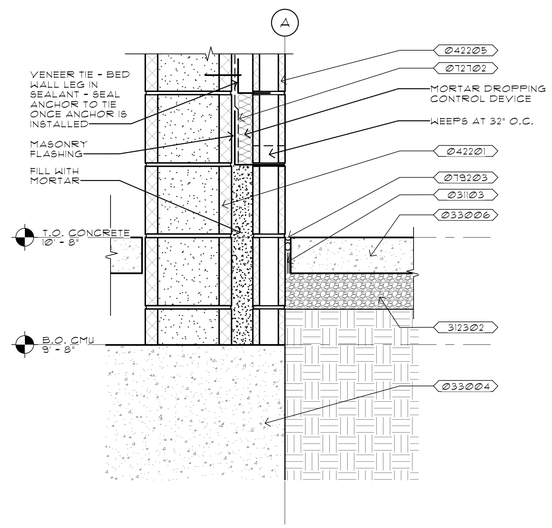
5 A5.4 DOOR HEAD - CMU AND MTL. PANEL
3" = 1'-0"



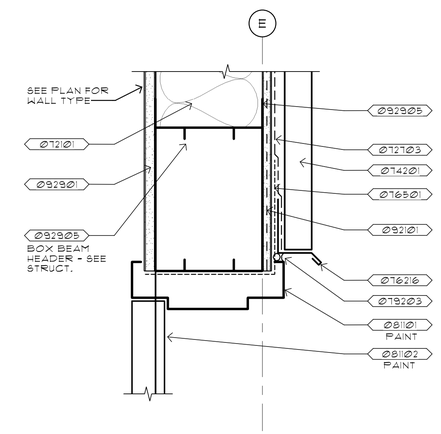
8 A5.4 SPEAKER AT ROOF OVERHANG
1 1/2" = 1'-0"



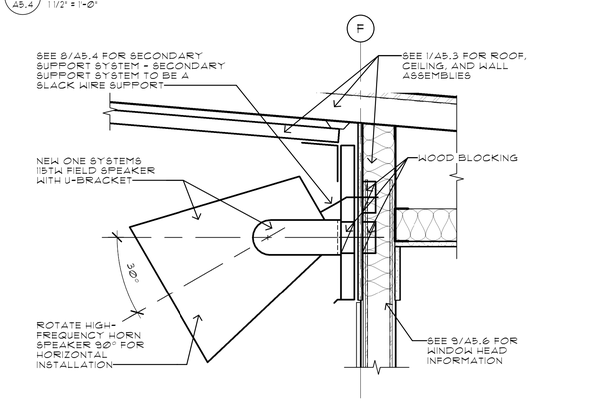
10 A5.4 DOOR JAMB - CMU VENEER
3" = 1'-0"



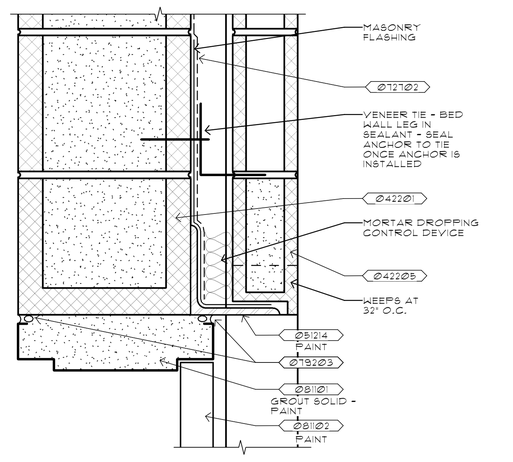
3 A5.4 CMU VENEER BASE - TYP.
1 1/2" = 1'-0"



6 A5.4 DOOR HEAD - MTL. PANEL
3" = 1'-0"



9 A5.4 FIELD SPEAKER AT PRESS BOX ROOF OVERHANG
1 1/2" = 1'-0"



11 A5.4 DOOR HEAD - CMU VENEER
3" = 1'-0"

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18079.00
PROJECT NUMBER
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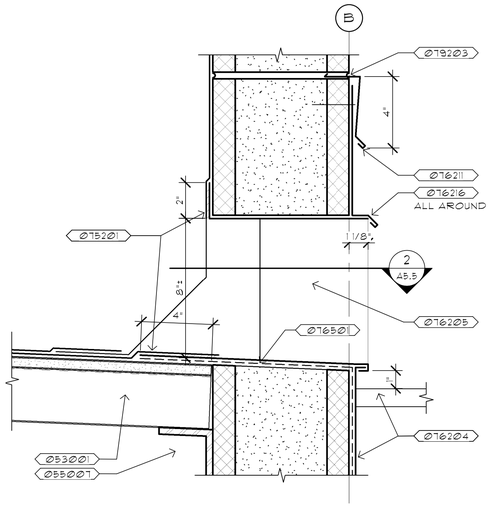
REVISIONS

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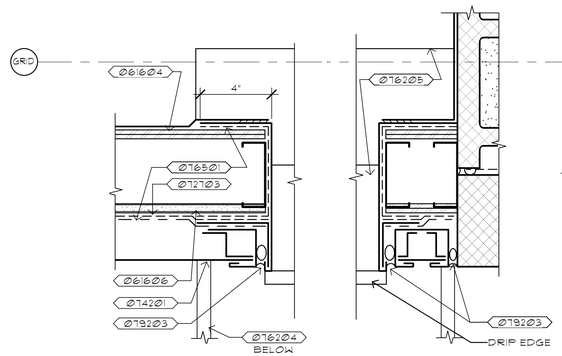
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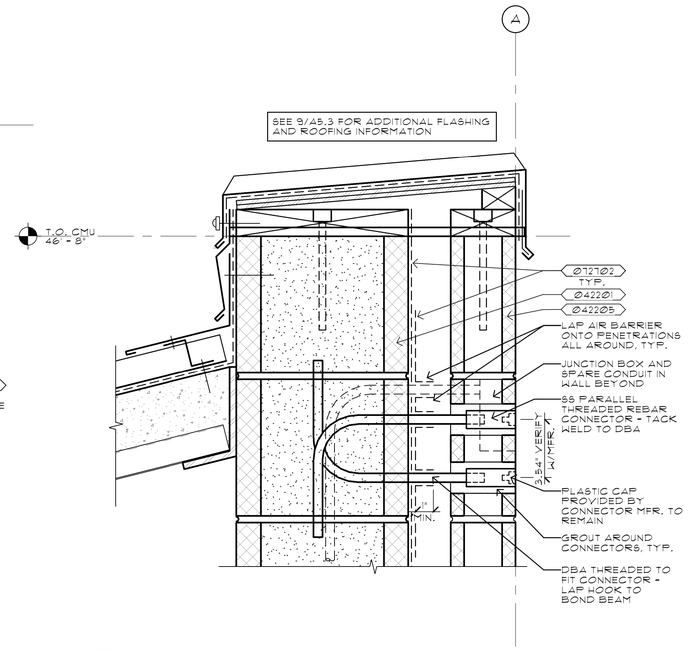
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1 A5.5 SCUPPER AT CMU - SECTION
3" = 1'-Ø"



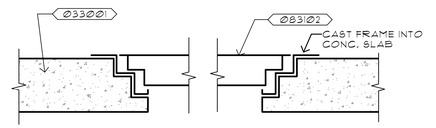
4 A5.5 SCUPPER AT METAL PANEL - PLAN
3" = 1'-Ø"



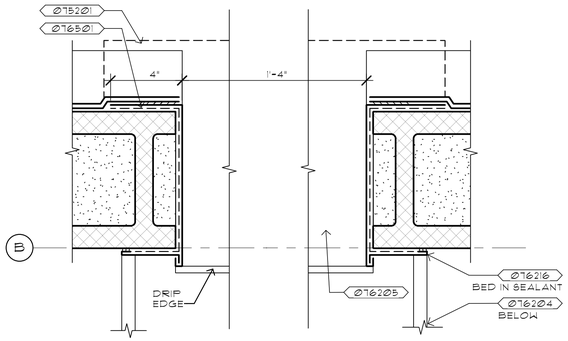
8 A5.5 THREADED INSERTS
3" = 1'-Ø"

KEYNOTES

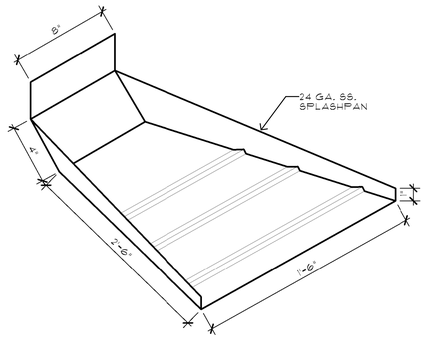
Ø33ØØ1	CAST-IN-PLACE CONCRETE SLAB
Ø4221Ø1	CONCRETE MASONRY UNITS
Ø4222Ø5	CONCRETE MASONRY VENEER
Ø51219	STEEL PIPE COLUMN
Ø53ØØ1	METAL ROOF DECK
Ø55ØØ7	BENT STEEL PLATE
Ø6112Ø	SHIM
Ø6164Ø4	FIRE RETARDANT TREATED PLYWOOD
Ø6166Ø6	GYPSUM WALL SHEATHING
Ø7127Ø2	FLUID-APPLIED MEMBRANE AIR BARRIER
Ø7127Ø3	AIR BARRIER
Ø7141Ø3	METAL ROOF PANEL SYSTEM
Ø7142Ø1	METAL WALL PANEL SYSTEM
Ø7152Ø1	MODIFIED BITUMINOUS MEMBRANE ROOFING SYSTEM
Ø7612Ø4	LEADER BOX
Ø7612Ø5	STAINLESS STEEL SCUPPER
Ø76211	REGLET
Ø76216	PREFINISHED SHEET METAL FLASHING
Ø7650Ø1	FLEXIBLE FLASHING
Ø7892Ø1	SEALANT
Ø7892Ø3	BACKER ROD AND SEALANT
Ø8312Ø	FIRE RATED ACCESS PANEL



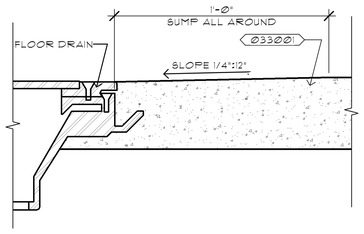
11 A5.5 FLOOR ACCESS DOOR
1 1/2" = 1'-Ø"



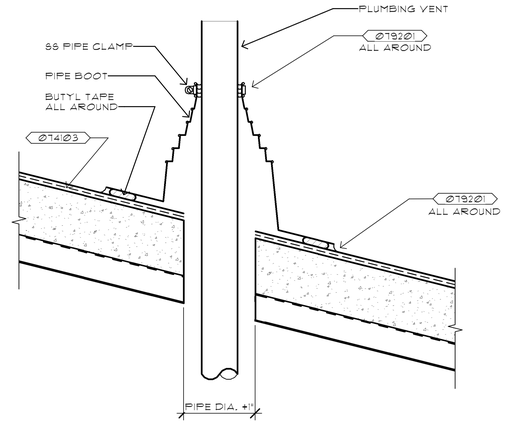
2 A5.5 SCUPPER AT CMU - PLAN
3" = 1'-Ø"



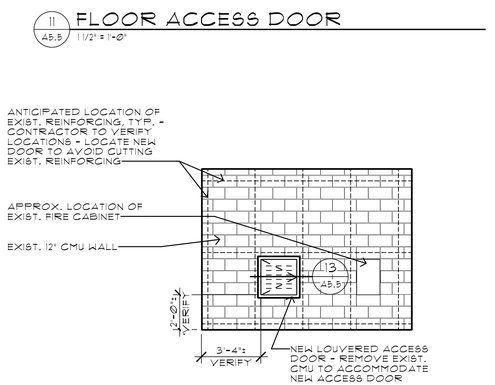
5 A5.5 SPLASH PAN
3" = 1'-Ø"



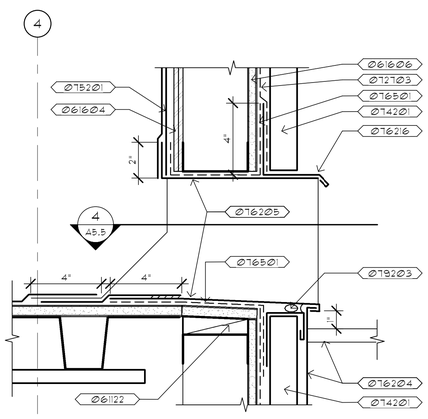
6 A5.5 FLOOR DRAIN
3" = 1'-Ø"



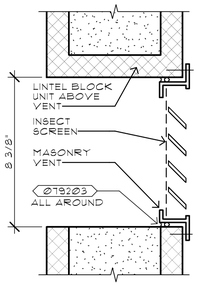
9 A5.5 PIPE PENETRATION AT METAL ROOF
3" = 1'-Ø"



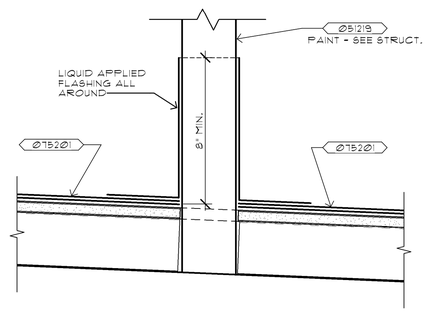
12 A5.5 ACCESS DOOR ELEVATION
1/4" = 1'-Ø"



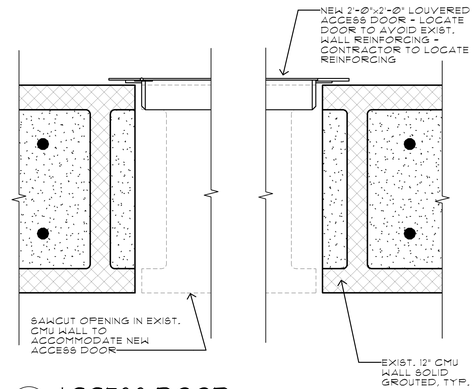
3 A5.5 SCUPPER AT METAL PANEL - SECTION
3" = 1'-Ø"



7 A5.5 MASONRY VENT
3" = 1'-Ø"



10 A5.5 STANCHION PENETRATION AT ROOF
3" = 1'-Ø"



13 A5.5 ACCESS DOOR
3" = 1'-Ø"

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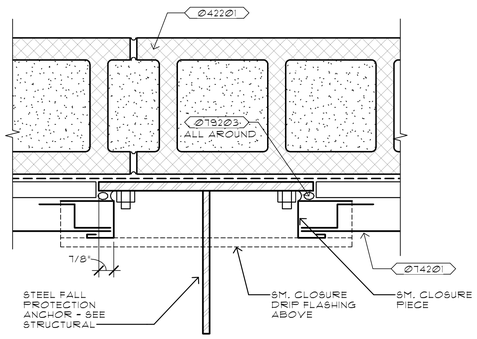
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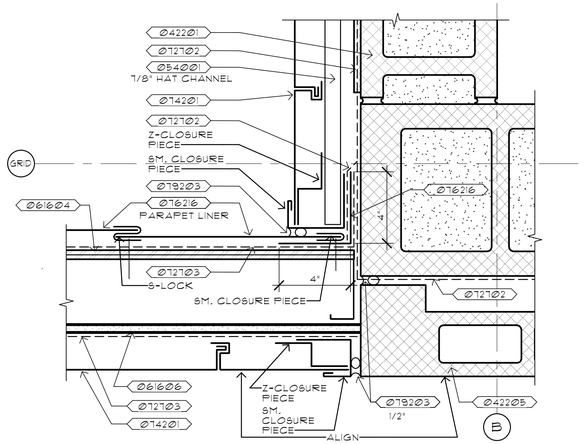
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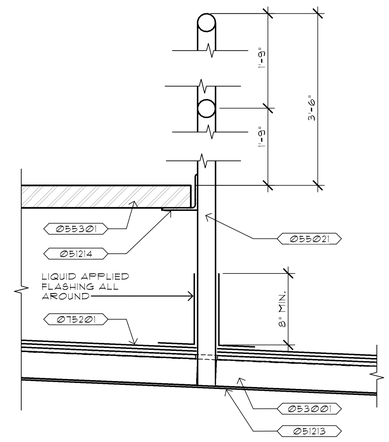
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1 / A5.6 — FALL PROTECTION ANCHOR AT CMU
3" = 1'-0"



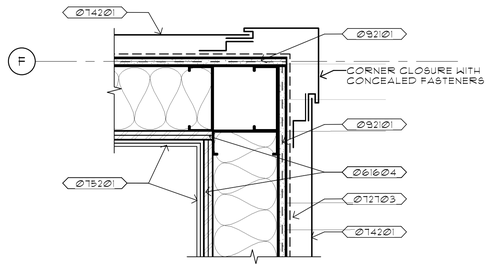
4 / A5.6 — PERIMETER WALL INTERSECTION
3" = 1'-0"



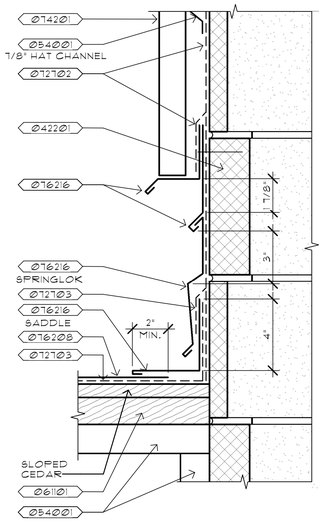
7 / A5.6 — DECK EDGE AT PRESS BOX
1 1/2" = 1'-0"

KEYNOTES

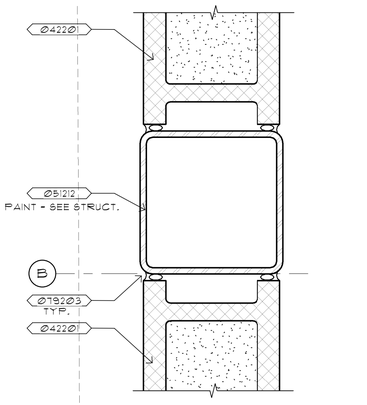
Ø42201	CONCRETE MASONRY UNITS
Ø42205	CONCRETE MASONRY VENEER
Ø51212	STEEL COLUMN
Ø51213	STEEL BEAM
Ø51214	STEEL ANGLE
Ø53001	METAL ROOF DECK
Ø54001	COLD-FORMED METAL FRAMING
Ø55021	STEEL PIPE RAILINGS AND HANDRAILS
Ø55301	INTERLOCKING PLANK GRATING
Ø61101	WOOD FRAMING
Ø61121	PRESSURE TREATED NAILER
Ø61122	SHIM
Ø61604	FIRE RETARDANT TREATED PLYWOOD
Ø61606	GYPSUM WALL SHEATHING
Ø72101	THERMAL BLANKET INSULATION
Ø72702	FLUID-APPLIED MEMBRANE AIR BARRIER
Ø72703	AIR BARRIER
Ø74201	METAL WALL PANEL SYSTEM
Ø75201	MODIFIED BITUMINOUS MEMBRANE ROOFING SYSTEM
Ø76202	STAINLESS STEEL FLASHING
Ø76208	PREFINISHED SHEET METAL COPING W/ 1" STANDING SEAMS AT 10'-0" O.C. MAX. - EQUALLY SPACED BETWEEN CORNERS
Ø76216	PREFINISHED SHEET METAL FLASHING
Ø76501	FLEXIBLE FLASHING
Ø79201	SEALANT
Ø79203	BACKER ROD AND SEALANT
Ø85101	ALUMINUM WINDOW
Ø92101	STEEL AND GYPSUM COMPOSITE PANEL
Ø92901	GYPSUM BOARD
Ø92918	METAL EDGES - TYP.



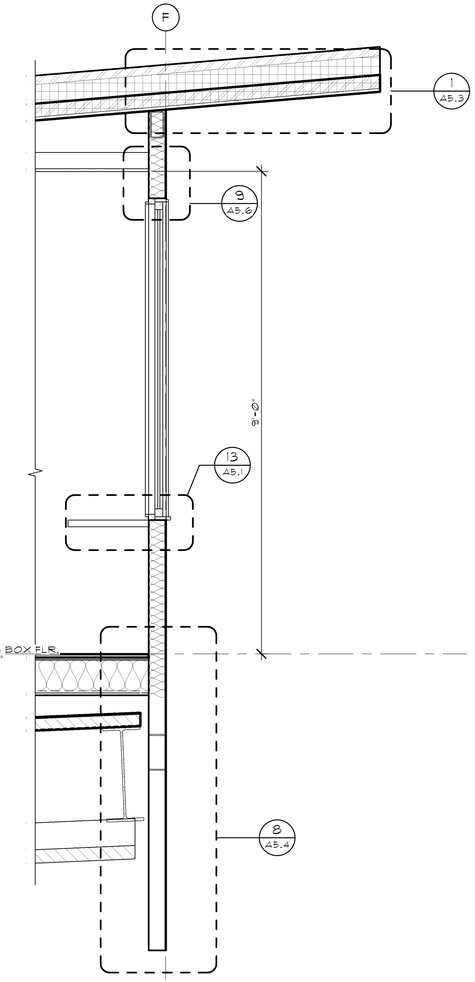
2 / A5.6 — ROOF CORNER
3" = 1'-0"

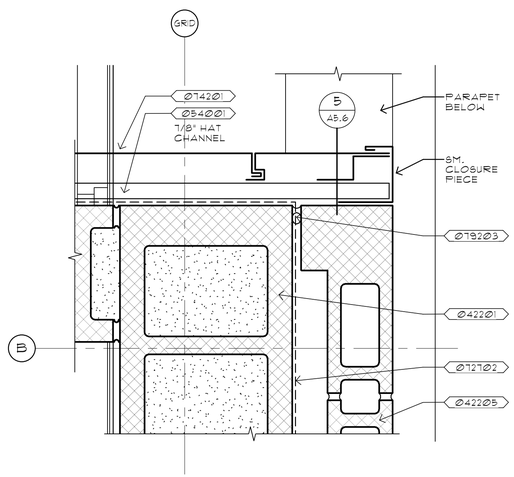


5 / A5.6 — SADDLE FLASHING AT METAL PANEL
3" = 1'-0"

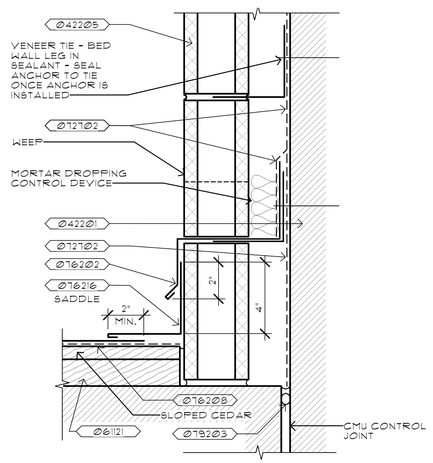


8 / A5.6 — CMU AT COLUMN
3" = 1'-0"

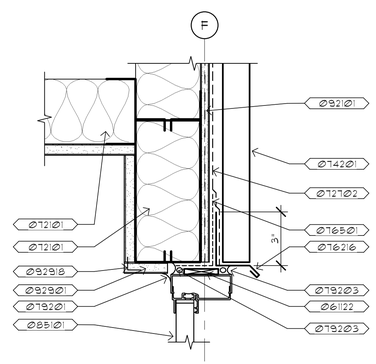




3 / A5.6 — ROOF AT CMU WALL
3" = 1'-0"



6 / A5.6 — SADDLE AT CMU VENEER
3" = 1'-0"



9 / A5.6 — WINDOW HEAD AT PRESS BOX
3" = 1'-0"

10 / A5.6 — NORTH WALL AT PRESS BOX
3/4" = 1'-0"

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BBL ARCHITECTS
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200 North State Street ■ Lake Oswego, Oregon 97034

LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034
DETAILS

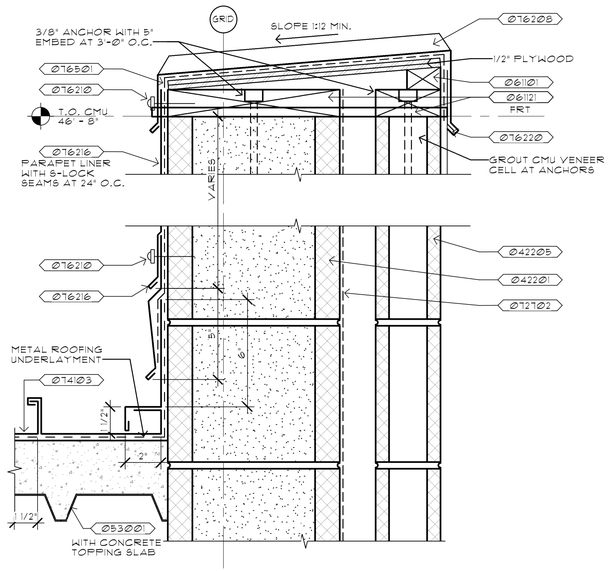
18079.00 L — PROJECT NUMBER
20 SEP 2019 — DATE
REVISIONS

A5.6

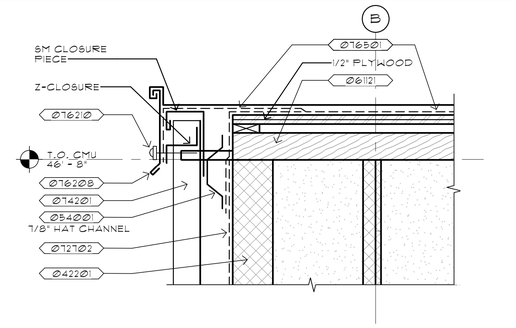
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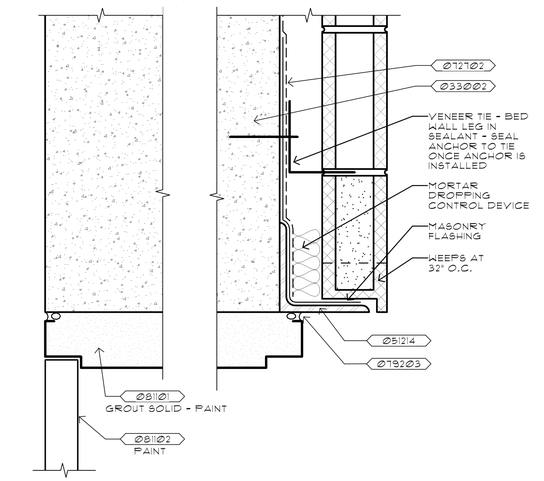
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1 A5.7 TOP OF WALL AT STAIRS
3" = 1'-0"



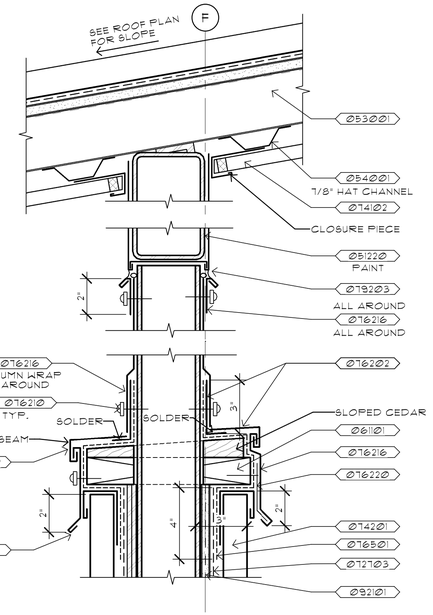
4 A5.7 METAL WALL PANEL HEAD
3" = 1'-0"



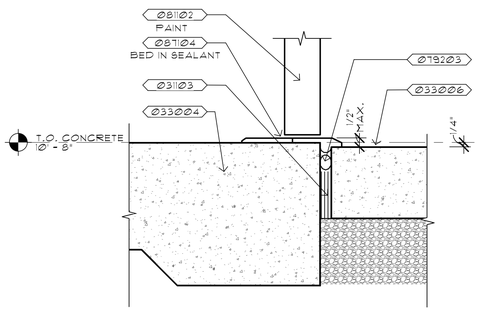
7 A5.7 DOOR HEAD - CONC. WALL
3" = 1'-0"

KEYNOTES

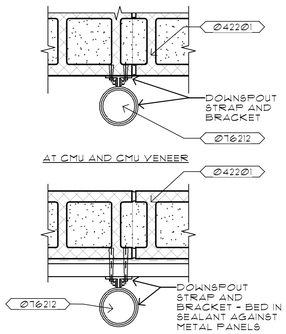
Ø3110S	EXPANSION AND ISOLATION JOINT FILLERS
Ø3300Z	CAST-IN-PLACE CONCRETE WALL
Ø3300Ø4	CONCRETE FOOTING
Ø3300Ø6	CONCRETE SIDEWALK
Ø4220I	CONCRETE MASONRY UNITS
Ø4220S	CONCRETE MASONRY VENEER
Ø5121Ø	STEEL ANGLE
Ø5122Ø	STEEL TUBE BEAM
Ø5300I	METAL ROOF DECK
Ø5300Z	ACOUSTIC METAL ROOF DECK
Ø5400I	COLD-FORMED METAL FRAMING
Ø5400Z	COLD-FORMED METAL FRAMING JOIST
Ø5500T	BENT STEEL PLATE
Ø6110I	WOOD FRAMING
Ø6112I	PRESSURE TREATED NAILER
Ø7270Z	FLUID-APPLIED MEMBRANE AIR BARRIER
Ø7270S	AIR BARRIER
Ø7410Z	METAL SOFFIT PANEL SYSTEM
Ø7410S	METAL ROOF PANEL SYSTEM
Ø7420I	METAL WALL PANEL SYSTEM
Ø7620Z	STAINLESS STEEL FLASHING
Ø7620Ø4	LEADER BOX
Ø7620B	PREFINISHED SHEET METAL COPING W/ 1" STANDING SEAMS AT Ø-Ø" O.C. MAX. - EQUALLY SPACED BETWEEN CORNERS
Ø7621Ø	FASTENER W/ NEOPRENE WASHER OR RIVET (AT 12" O.C. MAX.)
Ø7621Z	METAL DOWNSPOUT
Ø7621S	PREFINISHED SHEET METAL FLASHING
Ø7622Ø	CONTINUOUS CLEAT
Ø7650I	FLEXIBLE FLASHING
Ø7920S	BACKER ROD AND SEALANT
Ø8110I	HOLLOW METAL DOOR FRAME (SEE SCHEDULE)
Ø8110Z	HOLLOW METAL DOOR (SEE SCHEDULE)
Ø8110S	HOLLOW METAL DOOR FRAME - DRILLED AND DIMPLED - FILL AFTER INSTALLATION
Ø8710Ø4	THRESHOLD - SEE HARDWARE SCHEDULE
Ø9210I	STEEL AND GYPSUM COMPOSITE PANEL



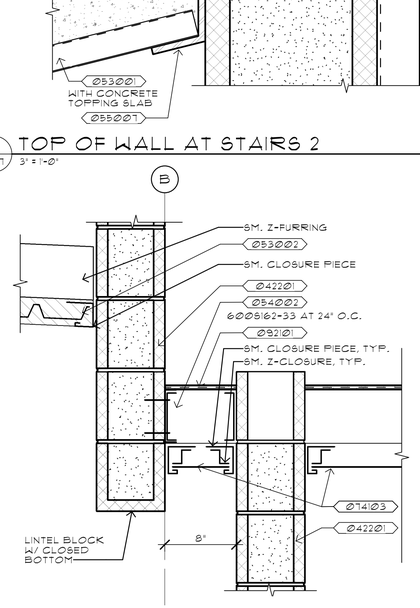
5 A5.7 COLUMN AT PARAPET WALL
3" = 1'-0"



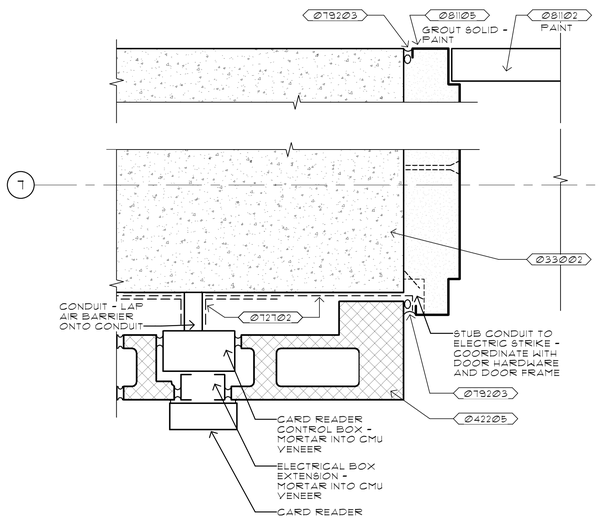
8 A5.7 DOOR THRESHOLD - TYP.
3" = 1'-0"



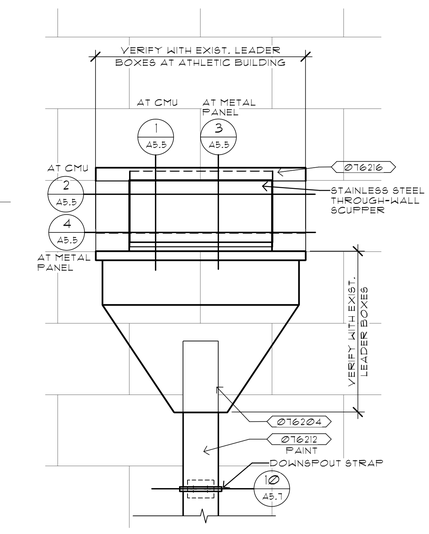
10 A5.7 DOWNSPOUT STRAP AND BRACKET
1 1/2" = 1'-0"



3 A5.7 STAIRWAY DOOR RECESS
1 1/2" = 1'-0"



6 A5.7 DOOR JAMB - CONC. WALL
3" = 1'-0"



9 A5.7 LEADER BOX
1 1/2" = 1'-0"

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034

DETAILS

18079.00.L
PROJECT NUMBER
20 SEP 2019
DATE

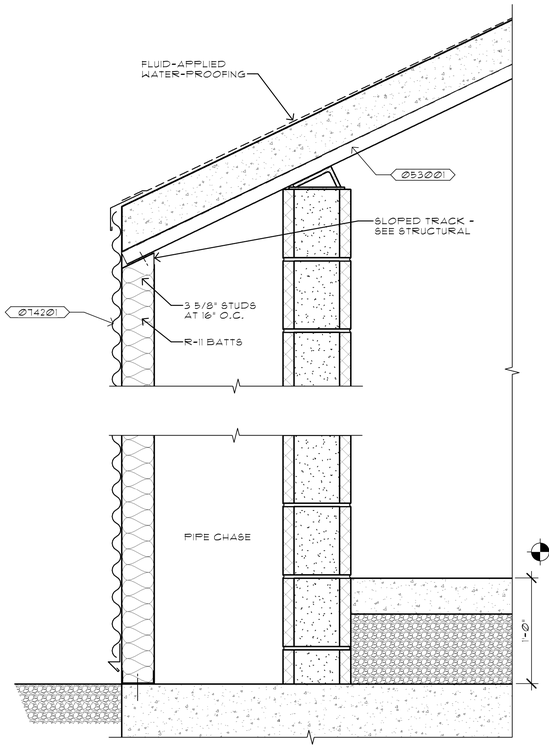
REVISIONS

A5.7

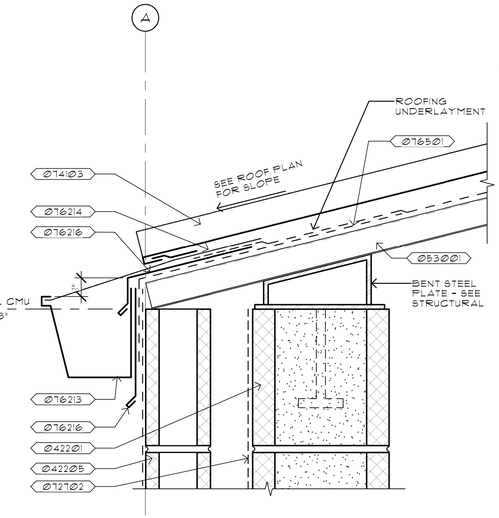
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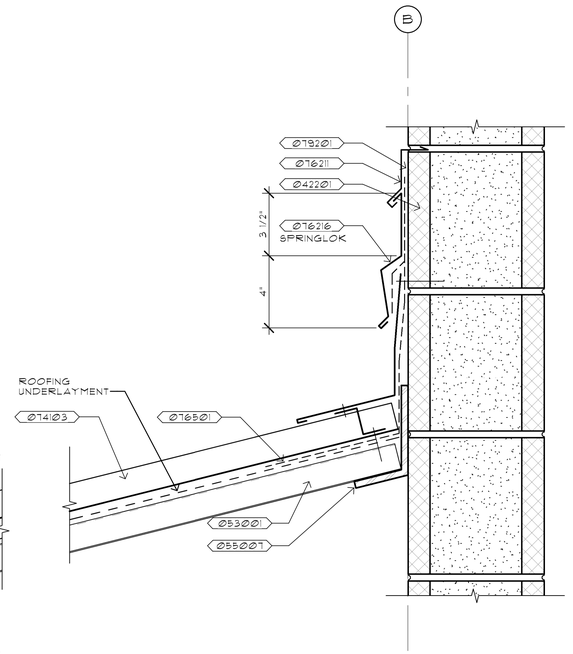
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1 A5.8 SECTION AT CHASE - BID ALT. NO. 2
1 1/2" = 1'-0"



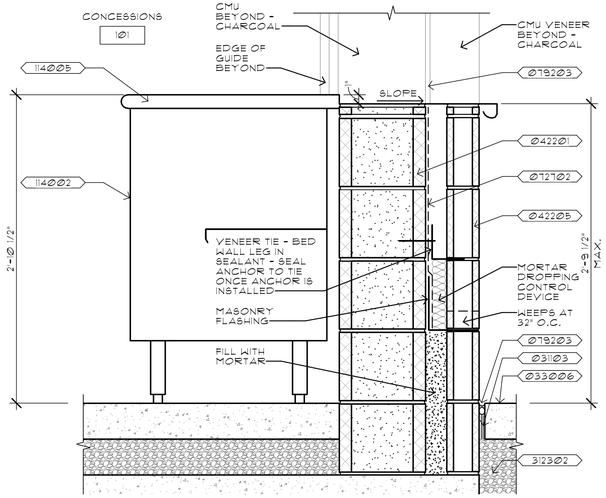
3 A5.8 ROOF AT CMU 2
3" = 1'-0"



4 A5.8 ROOF AT CMU 3
3" = 1'-0"

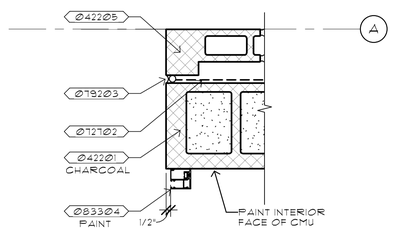
KEYNOTES

Ø31103	EXPANSION AND ISOLATION JOINT FILLERS
Ø33001	CAST-IN-PLACE CONCRETE SLAB
Ø33004	CONCRETE FOOTING
Ø33006	CONCRETE SIDEWALK
Ø42201	CONCRETE MASONRY UNITS
Ø42205	CONCRETE MASONRY VENEER
Ø51213	STEEL BEAM
Ø51214	STEEL ANGLE
Ø53001	METAL ROOF DECK
Ø53002	ACOUSTIC METAL ROOF DECK
Ø55007	BENT STEEL PLATE
Ø61604	FIRE RETARDANT TREATED PLYWOOD
Ø72702	FLUID-APPLIED MEMBRANE AIR BARRIER
Ø72703	AIR BARRIER
Ø74103	METAL ROOF PANEL SYSTEM
Ø74201	METAL WALL PANEL SYSTEM
Ø76210	FASTENER W/ NEOPRENE WASHER OR RIVET (AT 12" O.C. MAX.)
Ø76211	REGLET
Ø76213	METAL GUTTER
Ø76214	GUTTER STRAP
Ø76216	PREFINISHED SHEET METAL FLASHING
Ø76226	FASTENER W/ NEOPRENE WASHER
Ø76501	FLEXIBLE FLASHING
Ø79201	SEALANT
Ø79203	BACKER ROD AND SEALANT
Ø83301	COILING DOOR
Ø83304	COILING DOOR GUIDES
114002	STAINLESS STEEL SHELF
114005	STAINLESS STEEL COUNTER
312302	COMPACTED BASE AGGREGATE

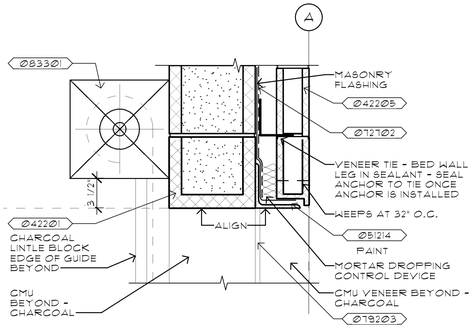


8 A5.8 COUNTER AT COILING DOOR
1 1/2" = 1'-0"

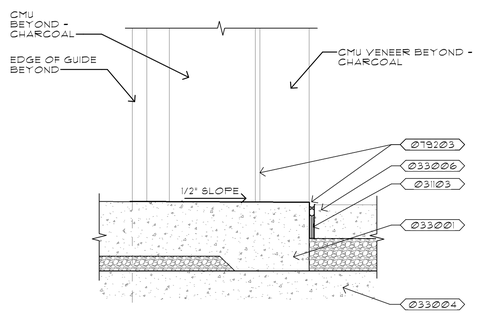
2 A5.8 ROOF AT CMU 1
3" = 1'-0"



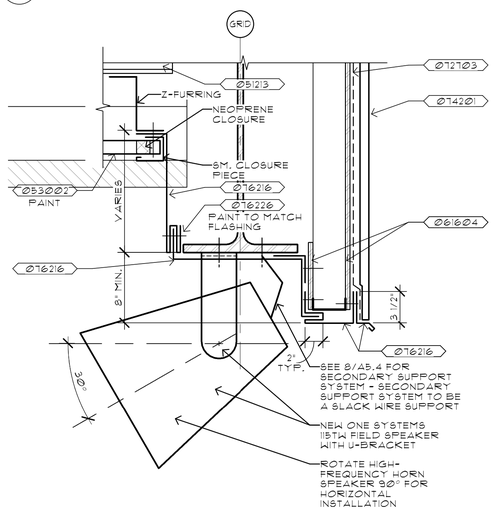
5 A5.8 COILING DOOR JAMB
1 1/2" = 1'-0"



6 A5.8 SECTION AT COILING DOOR
1 1/2" = 1'-0"



7 A5.8 COILING DOOR THRESHOLD
1 1/2" = 1'-0"



9 A5.8 ROOF EDGE AT SPEAKER
1 1/2" = 1'-0"

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OREGON
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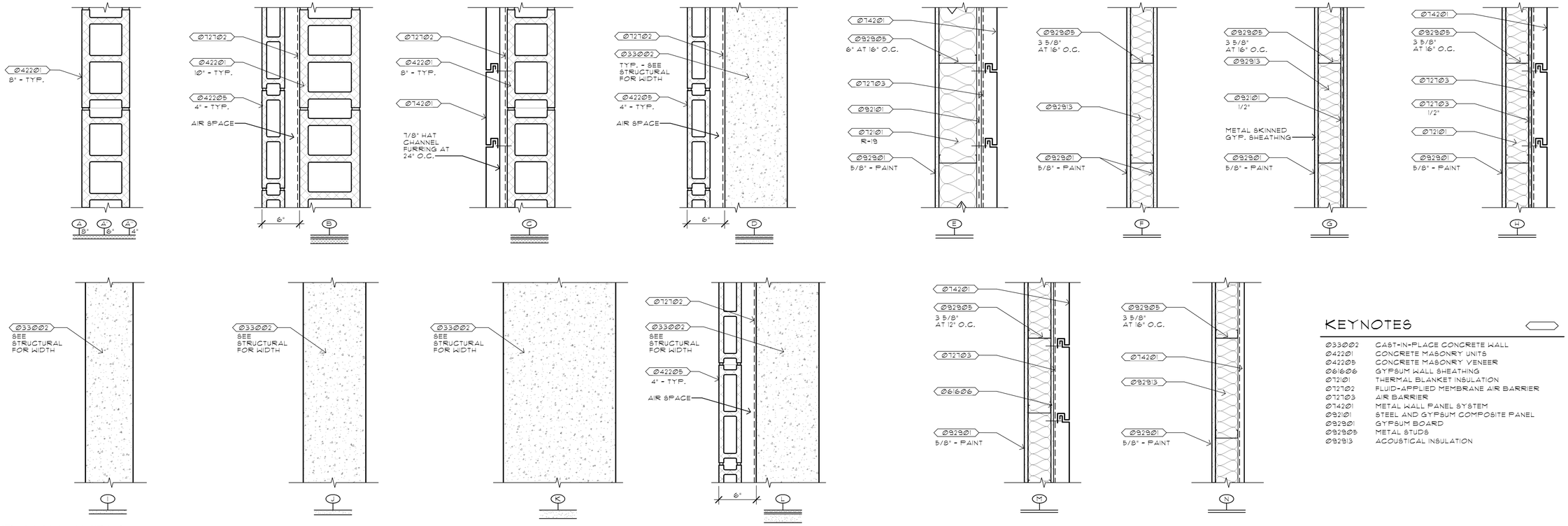
REVISIONS

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KEYNOTES

Ø33ØØ2	CAST-IN-PLACE CONCRETE WALL
Ø4221	CONCRETE MASONRY UNITS
Ø42205	CONCRETE MASONRY VENEER
Ø61606	GYPSUM WALL SHEATHING
Ø72101	THERMAL BLANKET INSULATION
Ø72102	FLUID-APPLIED MEMBRANE AIR BARRIER
Ø72103	AIR BARRIER
Ø74201	METAL WALL PANEL SYSTEM
Ø92101	STEEL AND GYPSUM COMPOSITE PANEL
Ø92901	GYPSUM BOARD
Ø92905	METAL STUDS
Ø92913	ACOUSTICAL INSULATION

1 A6.1 WALL TYPES
1 1/2" = 1'-Ø"

ROOM FINISH SCHEDULE

NUMBER	ROOM NAME	FLOOR	BASE	WALLS N	WALLS E	WALLS S	WALLS W	CEILING	REMARKS
1Ø1	CONCESSIONS	UR#1	2#1	P	P	P	P#2	P	BID ALT. NO. 1
1Ø2	ELEC.	SC	-	FRT	FRT	FRT	-	-	
1Ø3	RISER ROOM	SC	-	-	-	-	-	-	
1Ø4	UNISEX RR	UR#2	2#2	P#2	P#2	P#2	P#2	P	BID ALT. NO. 2
1Ø4A	RR	UR#2	2#2	P	P#2	P#2	P#2	P	BID ALT. NO. 2
1Ø4B	RR	UR#2	2#2	P	P#2	P#2	P#2	P	BID ALT. NO. 2
1Ø4C	RR	UR#2	2#2	P	P#2	P#2	P#2	P	BID ALT. NO. 2
1Ø4D	RR	UR#2	2#2	P	P#2	P#2	P#2	P	BID ALT. NO. 2
1Ø4E	RR	UR#2	2#2	P	P#2	P#2	P#2	P	BID ALT. NO. 2
1Ø4F	RR	UR#2	2#2	P	P#2	P#2	P#2	P	BID ALT. NO. 2
1Ø4G	RR	UR#2	2#2	P	P	P	P#2	P	BID ALT. NO. 2
1Ø5	UNISEX RR	UR#2	2#2	P#2	P#2	P	P	P	BID ALT. NO. 2
1Ø5A	RR	UR#2	2#2	P	P#2	P	P	P	BID ALT. NO. 2
1Ø5B	RR	UR#2	2#2	P	P#2	P#2	P#2	P	BID ALT. NO. 2
1Ø5C	RR	UR#2	2#2	P	P	P#2	P#2	P	BID ALT. NO. 2
1Ø5D	RR	UR#2	2#2	P	P#2	P#2	P	P	BID ALT. NO. 2
1Ø5E	RR	UR#2	2#2	P	P#2	P#2	P#2	P	BID ALT. NO. 2
1Ø5F	RR	UR#2	2#2	P	P#2	P#2	P#2	P	BID ALT. NO. 2
1Ø5G	RR	UR#2	2#2	P	P	P	P#2	P	BID ALT. NO. 2
1Ø6	UNFINISHED SPACE	-	-	-	-	-	-	-	GRAVEL BASE AT FLOOR
1Ø7	STAIRS	SC	-	-	-	-	-	-	
1Ø8	STAIRS	SC	-	-	-	-	-	-	
2Ø1	TEAM ROOM	PW	1	PG	PG	PG	PG	PG	
2Ø2	MEDIA ROOM	PW	1	PG	PG	PG	PG	PG	
2Ø3	TV RADIO INTERNET RM.	PW	1	PG	PG	PG	PG	PG	
2Ø4	NEWSPAPER MEDIA	PW	1	PG	PG	PG	PG	PG	
2Ø5	TEAM ROOM	PW	1	PG	PG	PG	PG	PG	

ROOM FINISH KEY

FLOORS

PW - PLYWOOD - PAINT
SC - SEALED CONCRETE
UR - NON-SLIP URETHANE FLOORING SYSTEM

BASE

1. 4" COVED RUBBER BASE
2. 6" COVED URETHANE BASE

WALLS

PG - GYPSUM BOARD (PAINT)
FRT - 3/4" FIRE RETARDANT TREATED PLYWOOD OVER CMU
P - PAINTED WALL

CEILINGS

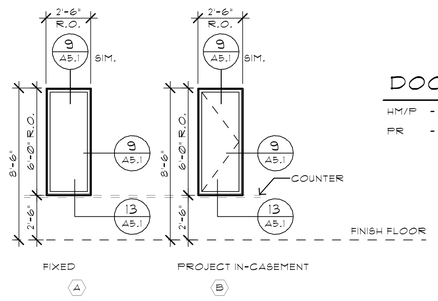
PG - GYPSUM BOARD (PAINT)
P - PAINTED SURFACE

NOTES

- NO WORK REQUIRED
SEE INTERIOR ELEVATIONS

WINDOW SCHEDULE

COUNT	WIDTH	HEIGHT	TYPE	MATERIAL	REMARKS
6	3' - Ø"	6' - Ø"	A		
1Ø	3' - Ø"	6' - Ø"	B		

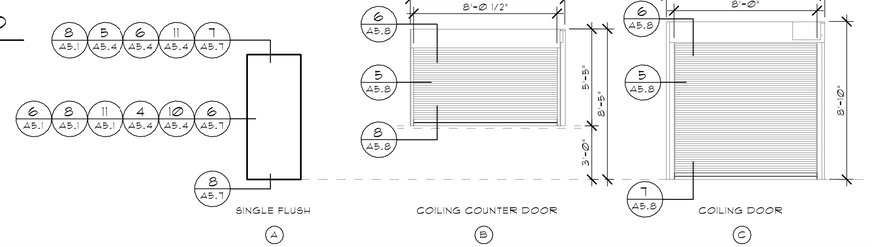


DOOR SCHEDULE

DOOR NO.	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR SIZE THICK.	DOOR TYPE	DOOR MATERIAL/FINISH	FRAME MATERIAL/FINISH	HW GROUP	FIRE RATING	REMARKS
1ØlA	3' - Ø"	7' - Ø"	1 3/4"	A	HM/P	HM / P	2	-	BASE BID
1ØlB	8' - Ø"	4' - 4"		B	MFR	MFR		-	BASE BID
1ØlC	8' - Ø"	4' - 4"		B	MFR	MFR		-	BASE BID
1Ø2A	3' - Ø"	7' - Ø"	1 3/4"	A	HM/P	HM / P	7	-	BASE BID
1Ø3A	3' - Ø"	7' - Ø"	1 3/4"	A	HM/P	HM / P		-	BASE BID
1Ø3B	3' - Ø"	6' - Ø"	1 3/4"	A	HM/P	HM / P		-	BASE BID
1Ø4A	8' - Ø"	7' - 3"		C	MFR	MFR		-	BASE BID
1Ø4AA	2' - 8"	7' - Ø"	1 3/4"	A	HM/P	HM / P	7	-	BID ALT. NO. 1
1Ø4B	8' - Ø"	7' - 3"		C	MFR	MFR		-	BASE BID
1Ø4BA	2' - 8"	7' - Ø"	1 3/4"	A	HM/P	HM / P	7	-	BID ALT. NO. 1
1Ø4CA	2' - 8"	7' - Ø"	1 3/4"	A	HM/P	HM / P	7	-	BID ALT. NO. 1
1Ø4DA	2' - 8"	7' - Ø"	1 3/4"	A	HM/P	HM / P	7	-	BID ALT. NO. 1
1Ø4EA	2' - 8"	7' - Ø"	1 3/4"	A	HM/P	HM / P	7	-	BID ALT. NO. 1
1Ø4FA	2' - 8"	7' - Ø"	1 3/4"	A	HM/P	HM / P	7	-	BID ALT. NO. 1
1Ø4GA	2' - 8"	7' - Ø"	1 3/4"	A	HM/P	HM / P	7	-	BID ALT. NO. 1
1Ø5A	8' - Ø"	7' - 3"		C	MFR	MFR		-	BASE BID
1Ø5AA	2' - 8"	7' - Ø"	1 3/4"	A	HM/P	HM / P	7	-	BID ALT. NO. 2
1Ø5B	8' - Ø"	7' - 3"		C	MFR	MFR		-	BASE BID
1Ø5BA	2' - 8"	7' - Ø"	1 3/4"	A	HM/P	HM / P	7	-	BID ALT. NO. 2
1Ø5CA	2' - 8"	7' - Ø"	1 3/4"	A	HM/P	HM / P	7	-	BID ALT. NO. 2
1Ø5DA	2' - 8"	7' - Ø"	1 3/4"	A	HM/P	HM / P	7	-	BID ALT. NO. 2
1Ø5EA	2' - 8"	7' - Ø"	1 3/4"	A	HM/P	HM / P	7	-	BID ALT. NO. 2
1Ø5FA	2' - 8"	7' - Ø"	1 3/4"	A	HM/P	HM / P	7	-	BID ALT. NO. 1
1Ø5GA	2' - 8"	7' - Ø"	1 3/4"	A	HM/P	HM / P	7	-	BID ALT. NO. 2
1Ø7A	3' - Ø"	7' - Ø"	1 3/4"	A	HM/P	HM / P	4	-	BASE BID
1Ø7B	3' - Ø"	7' - Ø"	1 3/4"	A	HM/P	HM / P	5	-	BASE BID
1Ø8A	3' - Ø"	7' - Ø"	1 3/4"	A	HM/P	HM / P	4	-	BASE BID
1Ø8B	3' - Ø"	7' - Ø"	1 3/4"	A	HM/P	HM / P	5	-	BASE BID
11ØA	2' - 6"	4' - Ø"	1 3/4"	A	HM/P	HM / P		-	BASE BID
11ØB	2' - 6"	4' - Ø"	1 3/4"	A	HM/P	HM / P		-	BASE BID
11ØC	2' - 6"	4' - Ø"	1 3/4"	A	HM/P	HM / P		-	BASE BID
11ØD	2' - 6"	4' - Ø"	1 3/4"	A	HM/P	HM / P		-	BASE BID
2ØlA	3' - Ø"	7' - Ø"	1 3/4"	A	HM/P	HM / P	6	-	BASE BID
2Ø2A	3' - Ø"	7' - Ø"	1 3/4"	A	HM/P	HM / P	6	-	BASE BID
2Ø3A	3' - Ø"	7' - Ø"	1 3/4"	A	HM/P	HM / P	6	-	BASE BID
2Ø4A	3' - Ø"	7' - Ø"	1 3/4"	A	HM/P	HM / P	6	-	BASE BID
2Ø5A	3' - Ø"	7' - Ø"	1 3/4"	A	HM/P	HM / P	6	-	BASE BID

DOOR SCHEDULE LEGEND

HM/P - HOLLOW METAL - PAINT
PR - PAIR



REGISTERED ARCHITECT
DOUGLAS A. PRUITT
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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034
WALL TYPES, DOOR TYPES, WINDOW TYPES, ROOM FINISH SCHEDULE

1801900.L
PROJECT NUMBER
20 SEP 2019
DATE

REVISIONS

A6.1

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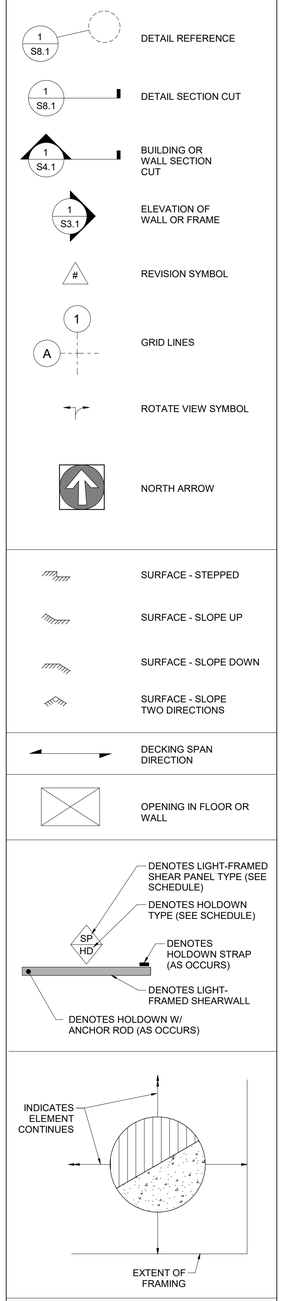
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STRUCTURAL ABBREVIATIONS

#	NUMBER OR POUNDS
AB	ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
ADDL	ADDITIONAL
ADJ	ADJACENT
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL
AFF	ABOVE FINISH FLOOR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNATE
ALUM	ALUMINUM
APA	AMERICAN PLYWOOD ASSOCIATION
ARCH	ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
ASSY	ASSEMBLY
ATR	ALL THREAD ROD
ATR/A	ALL THREAD ROD WITH ADHESIVE
AWS	AMERICAN WELDING SOCIETY
B/	BOTTOM OF
BF	BRACED FRAME
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BN	BOUNDARY NAIL
BOT	BOTTOM
BRBF	BUCKLING RESTRAINED BRACED FRAME
BRNG	BEARING
BSMT	BASEMENT
BTWN	BETWEEN
BU	BUILT-UP
C	CAMBER OR CHANNEL (AMERICAN STANDARD)
CANT	CANTILEVER
CIP	CAST IN PLACE
CG	CENTER OF GRAVITY
CGS	CENTER OF GRAVITY OF (PRESTRESSING) STEEL
CJ	CONTROL OR CONSTRUCTION JOINT
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE
CLG	CEILING
CLR	CLEARANCE; CLEAR
CLSM	CONTROLLED LOW STRENGTH MATERIAL
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CSA	CONCRETE SCREW ANCHOR
d	PENNY (NAIL)
db	NOMINAL BAR DIAMETER
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DBO	DESIGNED BY OTHERS
DEG	DEGREE
DEMO	DEMOLISH; DEMOLITION
DF/L	DOUGLAS FIR-LARCH
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIST	DISTANCE
DL	DEAD LOAD
DN	DOWN
DTL	DETAIL
DWG	DRAWING
(E)	EXISTING
EA	EACH
EB	EXPANSION BOLT
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
EN	EDGE NAIL
EQ	EQUAL; EARTHQUAKE
EW	EACH WAY
EXT	EXTERIOR
EXTD	EXTEND; EXTENDED
fc	28 DAY CONC COMPRESSIVE STRENGTH
FF	FINISH FLOOR
FN	FIELD NAIL
FLR	FLOOR
FDN	FOUNDATION
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FT	FEET
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GLB	GLUE LAMINATED BEAM
GWB	GYPSUM WALL BOARD
HDG	HOT-DIP GALVANIZED
HDR	HEADER
HF	HEM-FIR
HORIZ	HORIZONTAL
HSA	HEADED STUD ANCHOR
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
ID	INSIDE DIAMETER
IN	INCH
INT	INTERIOR
JST	JOIST
JT	JOINT
K	KIP(S) (1,000 POUNDS)
KSI	KIPS PER SQUARE INCH
L OR 2L	ANGLE OR DOUBLE ANGLE
LF	LINEAR FOOT
LL	LIVE LOAD
LLBB	LONG LEGS BACK TO BACK
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LVL	LAMINATED VENEER LUMBER
LWC	LIGHT WEIGHT CONCRETE
MAX	MAXIMUM
MC	MISCELLANEOUS CHANNEL
MECH	MECHANICAL
MF	MOMENT FRAME
MFR	MANUFACTURER
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MSA	MASONRY SCREW ANCHOR
(N)	NEW
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTE	NOT TO EXCEED
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPP	OPPOSITE
OWJ	OPEN WEB JOIST
PAF	POWER-ACTUATED FASTENER
PC	PRECAST
PCF	POUNDS PER CUBIC FOOT
PERP	PERPENDICULAR
PJP	PARTIAL JOINT PENETRATION
PL	PLATE
PLF	POUNDS PER LINEAL FOOT
PLYWD	PLYWOOD
PSI	POUNDS PER SQUARE INCH
PSF	POUNDS PER SQUARE FOOT
PT	PRESSURE TREATED OR POST TENSIONED
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
RAD	RADIUS
REF	REFERENCE
RAD	REFERENCE ARCH DOCUMENTS
REINF	REINFORCING
REQD	REQUIRED
REV	REVISED, REVISION
RO	ROUGH OPENING
SC	SLIP CRITICAL
SER	STRUCTURAL ENGINEER OF RECORD
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
SLBB	SHORT LEGS BACK TO BACK
SMS	SHEET METAL SCREW
SOG	SLAB ON GRADE
SQ	SQUARE
SS	STAINLESS STEEL
SSL	SHORT SLOTTED (HOLES)
STD	STANDARD
STL	STEEL
SQ	SQUARE
SYM	SYMMETRICAL
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROVE
T/	TOP OF
TRANS	TRANSVERSE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
URM	UNREINFORCED MASONRY
UT	ULTRASONIC TEST
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT
WD	WOOD
WF	WIDE FLANGE
WP	WORK POINT
WTS	WELDED THREADED STUDS
WWR	WELDED WIRE REINFORCING

STRUCTURAL DRAWING SYMBOLS



STRUCTURAL DRAWING INDEX

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S0.2	STRUCTURAL NOTES	•
S0.3	STRUCTURAL NOTES	•
S0.4	SPECIAL INSPECTIONS	•
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S1.1	FOUNDATION PLAN	•
S1.2	STAIRWELL FLOOR FRAMING PLAN	•
S1.3	ROOF FRAMING PLAN	•
S1.4	PRESS BOX, STAIRWELL	•
S1.5	PRESS BOX ENLARGED PLANS	•
S2.1	STRUCTURAL ELEVATIONS	•
S2.2	STRUCTURAL ELEVATIONS	•
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S7.3	PRESS BOX DETAILS	•
S8.1	MASONRY DETAILS	•
S8.2	MASONRY DETAILS	•
S8.3	MASONRY DETAILS	•

GENERAL NOTES

THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION AND CORRELATION OF ALL ITEMS AND WORK NECESSARY FOR COMPLETION OF THE PROJECT AS INDICATED BY THE CONTRACT DOCUMENTS. SHOULD ANY QUESTION ARISE REGARDING THE CONTRACT DOCUMENTS OR SITE CONDITIONS, THE CONTRACTOR SHALL REQUEST INTERPRETATION AND CLARIFICATION FROM THE ENGINEER BEFORE BEGINNING THE PROJECT. THE ABSENCE OF SUCH REQUEST SHALL SIGNIFY THAT THE CONTRACTOR HAS REVIEWED AND FAMILIARIZED HIMSELF WITH ALL ASPECTS OF THE PROJECT AND HAS COMPLETE COMPREHENSION THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMANCE TO ALL SAFETY REGULATIONS DURING CONSTRUCTION.

THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE SPECIFICALLY NOTED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION OR CONSTRUCTION LOADS. ONLY THE CONTRACTOR SHALL PROVIDE ALL METHODS, DIRECTION AND RELATED EQUIPMENT NECESSARY TO PROTECT THE STRUCTURE, WORKMEN AND OTHER PERSONS AND PROPERTY DURING CONSTRUCTION. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE WHERE AND HOW TEMPORARY PRECAUTIONARY MEASURES SHALL BE USED AND INSPECT SAME IN THE FIELD. ANY MATERIAL NOT AS SPECIFIED OR IMPROPER MATERIAL INSTALLATION OR WORKMANSHIP SHALL BE REMOVED AND REPLACED WITH SPECIFIED MATERIAL IN A WORKMANLIKE MANNER AT THE CONTRACTOR'S EXPENSE.

THESE PLANS, SPECIFICATIONS, ENGINEERING AND DESIGN WORK ARE INTENDED SOLELY FOR THE PROJECT SPECIFIED HEREIN. MILLER CONSULTING ENGINEERS DISCLAIMS ALL LIABILITY IF THESE PLANS AND SPECIFICATIONS OR THE DESIGN, ADVICE AND INSTRUCTIONS ATTENDANT THERETO ARE USED ON ANY PROJECT OR AT ANY LOCATION OTHER THAN THE PROJECT AND LOCATION SPECIFIED HEREIN. OBSERVATION VISITS TO THE JOB SITE AND SPECIAL INSPECTIONS ARE NOT PART OF THE STRUCTURAL ENGINEER'S RESPONSIBILITY UNLESS THE CONTRACT DOCUMENTS SPECIFY OTHERWISE.

NON-STRUCTURAL PORTIONS OF PROJECT, INCLUDING BUT NOT LIMITED TO PLUMBING, FIRE SUPPRESSION, ELECTRICAL, MECHANICAL, LAND USE, SITE PLANNING, EROSION CONTROL FLASHING AND WATER-PROOFING ARE BEYOND THE SCOPE OF THESE DRAWINGS AND ARE PROVIDED BY OTHERS.

TEMPORARY SHORING
WHEREVER SHORING IS REQUIRED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A SHORING SYSTEM THAT PREVENTS SETTLEMENT AND/OR DAMAGE TO EXISTING FACILITIES AND PROTECTS PERSONNEL, THE PUBLIC, AND THE BUILDING, SUPPORTING STREETS, WALKWAYS, UTILITIES, IMPROVEMENTS AND EXCAVATION AGAINST LOSS OF GROUND OR CAVING OF EMBANKMENTS DURING CONSTRUCTION, AS REQUIRED. THE CONTRACTOR SHALL LOCATE THE SYSTEM CLEAR WITHOUT OBSTRUCTION OF THE PERMANENT STRUCTURE AND TO PERMIT CONSTRUCTION TO PROCEED.

BUILDING CODE
ALL PHASES OF THE WORK SHALL CONFORM TO THE 2014 OREGON STRUCTURAL SPECIALTY CODE, BASED ON THE 2012 INTERNATIONAL BUILDING CODE (IBC), INCLUDING ALL REFERENCE STANDARDS, UNLESS NOTED OTHERWISE.

SPECIAL INSPECTION / STRUCTURAL OBSERVATION
SPECIAL INSPECTION AND/OR TESTING IS REQUIRED IN ACCORDANCE WITH IBC SECTION 1704. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE TO ALLOW SCHEDULING OF SPECIAL INSPECTION. IT IS THE OWNER'S RESPONSIBILITY TO PROVIDE SPECIAL INSPECTION AND TESTING BY A QUALIFIED THIRD PARTY, SUCH AS A TESTING AGENCY REVIEWED BY THE ENGINEER.

STRUCTURAL OBSERVATION SHALL VERIFY BY PERIODIC VISUAL OBSERVATION THAT THE STRUCTURAL SYSTEM HAS GENERAL CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AT SIGNIFICANT STAGES OF CONSTRUCTION AND AT COMPLETION AS REQUIRED IN ACCORDANCE WITH IBC SECTION 1710.THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE TO ALLOW SCHEDULING FOR A STRUCTURAL OBSERVATION. STRUCTURAL OBSERVATION SHALL BE BY THE ENGINEER OF RECORD.

REFERENCE THE SPECIAL INSPECTION TABLE ON SHEET S0.3 FOR ITEMS REQUIRING SPECIAL INSPECTION, TESTING, AND STRUCTURAL OBSERVATION.

SHOP DRAWINGS/SUBMITTALS
SHOP DRAWINGS FOR SPECIFIC PRODUCTS GENERATED BY SUPPLIER SHALL BE SUBMITTED FOR THE ITEMS NOTED IN THE SUBMITTAL SCHEDULE. DRAWINGS SHALL BE TO SCALE AND ACCURATELY INDICATE ALL PERTINENT ASPECTS OF THE ITEM(S) AND METHOD OF CONNECTION TO THE WORK. SHOP DRAWINGS SHALL INDICATE ERECTION AND TEMPORARY BRACING INFORMATION FOR CONTRACTOR'S USE.

THE DESIGN OF DEFERRED SUBMITTAL ITEMS NOTED IN THE SUBMITTAL SCHEDULE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. DOCUMENTS FOR THE DESIGN AND FABRICATION OF DEFERRED SUBMITTAL ITEMS (INCLUDING STRUCTURAL CALCULATIONS AND DRAWINGS) SHALL BEAR THE SEAL AND SIGNATURE OF A LICENSED ENGINEER REGISTERED IN THE STATE THAT THE PROJECT IS BEING CONSTRUCTED.

THE CONTRACTOR SHALL REVIEW AND MODIFY ALL SUBMITTALS AS REQUIRED FOR CONFORMANCE WITH DATE AND SIGNATURE ON ALL SETS OF DOCUMENTS PRIOR TO SUBMITTAL TO THE ENGINEER. THE CONTRACTOR SHALL SCHEDULE SUBMITTALS TO ALLOW SUFFICIENT TIME FOR REVIEW AND POSSIBLE RE-SUBMITTAL.

SUBMITTAL SCHEDULE

ITEM	SUBMITTAL	SHOP DRAWINGS	DEFERRED SUBMITTAL
CONCRETE MIX DESIGNS	X		
CONCRETE REINFORCING STEEL	X	X	
CONCRETE ANCHORAGE	X		
EMBEDDED STEEL ITEMS	X	X	
STRUCTURAL STEEL	X	X	
STEEL WELDING PRODECURES	X		
STEEL DECKING	X	X	
STEEL FASTENERS	X		
LIGHT GAUGE STEEL FRAMING	X		
PREFABRICATED STEEL CONNECTORS	X		
CONCRETE MASONRY UNITS	X		
GROUT MIX DESIGNS	X		
MORTAR	X		
CMU REINFORCING STEEL	X	X	
STAIRS AND RAILINGS		X	X
MEP EQUIPMENT ANCHORAGE AND BRACING		X	X

STRUCTURAL DESIGN CRITERIA

LIVE LOAD REDUCTION FOR BEAMS AND COLUMNS WAS NOT USED. DESIGN FOR MECHANICAL LOADS INCLUDES ONLY THOSE INDICATED ON STRUCTURAL DRAWINGS. THE FOLLOWING ARE THE DESIGN REQUIREMENTS:

STRUCTURAL DESIGN CRITERIA

RISK CATEGORY	III
DESIGN DEAD LOADS	
MAIN ROOF & PRESSBOX ROOF	14 PSF
PRESS BOX FLOOR	9 PSF
PRESS BOX EXTERIOR WALLS	8 PSF
PRESS BOX INTERIOR SHEAR WALLS	8 PSF
PRESS BOX INTERIOR NON-SHEAR WALLS	6 PSF
FLOOR LIVE LOAD	
PRESS BOX FLOOR	50 PSF
PRESS BOX WALKWAYS/DECKS	50 PSF
STAIRS	100 PSF
ROOF LIVE LOAD	SNOW LOAD CONTROLS DESIGN
ROOF SNOW LOAD	
DESIGN ROOF SNOW LOAD	27 PSF
SNOW DRIFTING	AS NOTED ON PLANS (IF OCCURS)
IMPORTANCE FACTOR	Is = 1.1
GROUND SNOW LOAD	Pg = 15 PSF
EXPOSURE FACTOR	Ce = 1.0
THERMAL FACTOR	Ct = 1.2
FLAT ROOF SNOW LOAD	Pf = 14 PSF
WIND DESIGN DATA	
BASIC WIND SPEED (3 SEC GUST)	130 MPH
EXPOSURE	B
INTERNAL PRESSURE COEF (GRANDSTAND)	Gcpi = +/- 0.55
INTERNAL PRESSURE COEF (PRESS BOX)	Gcpi = +/- 0.18
WALL COMPONENTS/CLADDING (BASED ON 10 SF EFFECTIVE AREA)	
PRESS BOX INTERIOR ZONES (ZONE 4)	38 PSF
PRESS BOX END ZONES (ZONE 5)	47 PSF
GRANDSTAND INTERIOR ZONES (ZONE 4)	46 PSF
GRANDSTAND END ZONES (ZONE 5)	54 PSF
ROOF COMPONENTS/CLADDING (BASED ON 10 SF EFFECTIVE AREA)	
GRANDSTAND INTERIOR ZONES (ZONE 1)	63 PSF
GRANDSTAND END ZONES (ZONE 2)	63 PSF
GRANDSTAND CORNER ZONES (ZONE 3)	94 PSF
PRESS BOX INTERIOR ZONES (ZONE 1)	67 PSF
PRESS BOX END ZONES (ZONE 2)	67 PSF
PRESS BOX CORNER ZONES (ZONE 3)	100 PSF
SEISMIC DESIGN DATA	
IMPORTANCE FACTOR	IE = 1.25
SPECTRAL RESPONSE ACCELERATIONS	SS = 0.977, S1 = 0.419
SITE CLASS	D
SPECTRAL RESPONSE COEFFICIENTS	SDS = 0.72, SD1 = 0.44
SEISMIC DESIGN CATEGORY	D
BASIC SEISMIC FORCE RESISTING SYSTEM	SPECIAL REINFORCED MASONRY AND CONCRETE SHEAR WALLS
DESIGN BASE SHEAR	222 KIPS
SEISMIC RESPONSE COEFFICIENT	CS = 0.192
RESPONSE MODIFICATION FACTOR	R = 5
ANALYSIS PROCEDURE USED	ASCE 7-10 EQUIVALENT LATERAL FORCE
SOIL DESIGN DATA	
ALLOWABLE BEARING PRESSURE	2,500 PSF
MAT FOUNDAITON SUBGRADE MODULUS	35 PCI (STATIC LOADS), 50 PCI (DYNAMIC LOADS)

FOUNDATION CRITERIA
ALL FOUNDATION ELEMENTS SHALL BE SUPPORTED ON SUBGRADE PER THE GEOTECHNICAL REPORT DATD APRIL 5, 2019 BY GRI. STRUCTURAL FILL MATERIAL AND PLACEMENT SHALL COMPLY WITH THE PROVISIONS SPECIFIED IN THE GEOTECHNICAL REPORT.

CONCRETE

MIXING, BATCHING, TRANSPORTING, PLACING AND CURING OF CONCRETE SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE, ACI 318, ACI 301 AND IBC CHAPTER 19.

CONCRETE MIX DESIGNS SHALL MEET THE FOLLOWING REQUIREMENTS:

CONCRETE MIX DESIGN REQUIREMENTS

MEMBER TYPE/LOCATION	COMPRESSIVE STRENGTH AT 28 DAYS, f'c (PSI)	MAXIMUM AGGREGATE SIZE	MAXIMUM W/CM RATIO
FOOTINGS AND MAT FOUNDATIONS	5000	1"	0.50
SHEAR WALLS	5000	3/4"	0.50
INTERIOR SLAB ON GRADE	3000	1"	0.45
EXTERIOR SLABS ON GRADE, WALLS	4500	1"	0.45
SLAB ON METAL DECK	4000	1"	0.45

ALL EXTERIOR CONCRETE SUBJECT TO FREEZE/THAW CYCLES, AND/OR CONTINUOUS MOISTURE OR DEICING CHEMICALS, INCLUDING SIDEWALKS, SLABS AND WALLS, SHALL HAVE A MAXIMUM W/CM RATIO OF 0.45 AND A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, F'C = 4500 PSI, AND SHALL MEET THE FOLLOWING AIR CONTENT REQUIREMENTS:

CONCRETE MIX AIR CONTENT REQUIREMENTS

MAXIMUM AGGREGATE SIZE	CONCRETE SUBJECT TO FREEZE/THAW CYCLES	CONCRETE SUBJECT TO CONTINUOUS MOISTURE AND/OR DEICING CHEMICALS
3/8"	6%	7.5%
1/2"	5.5%	7%
3/4"	5%	6%
1"	4.5%	6%
1-1/2"	4.5%	5.5%

THE AIR-ENTRAINING ADMIXTURE SHALL CONFORM TO ASTM C260. ALL CONCRETE WITH REINFORCEMENT SHALL HAVE NO CHLORINE OR CHLORIDES. NO WATER MAY BE ADDED TO THE CONCRETE IN THE FIELD UNLESS SPECIFICALLY APPROVED IN WRITING BY THE CONCRETE SUPPLIER IN CONJUNCTION WITH THE APPROVED CONCRETE MIX DESIGN.

SLEEVES, OPENINGS, CONDUIT, AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER BEFORE PLACING CONCRETE.

WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE, THE EXISTING CONCRETE SURFACE SHALL BE CLEANED AND ROUGHENED TO A MINIMUM 1/4" AMPLITUDE PER ACI 318 11.6.9.

DESIGN OF FORMWORK, SHORING AND RE-SHORING DESIGN IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM TO ACI 347R-14 AND ACI 347.2R-17.

CONCRETE REINFORCING STEEL
ALL REINFORCING STEEL SHALL BE DEFORMED BARS PER ASTM A615 OR A706, GRADE 60 UNLESS NOTED OTHERWISE.

VERTICAL REINFORCING IN SHEAR WALLS SHALL BE DEFORMED BARS CONFORMING TO ASTM A706 GRADE 60. ASTM A615, GRADE 60 REINFORCEMENT MAY BE USED IN THESE MEMBERS IF THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED THE SPECIFIED YIELD STRENGTH BY MORE THAN 18,000 PSI AND THE RATIO OF THE ACTUAL ULTIMATE TENSILE STRENGTH TO THE ACTUAL TENSILE YIELD STRENGTH IS NOT LESS THAN 1.25. IF MILL REPORTS ARE NOT AVAILABLE, THE REINFORCING SHALL BE TESTED AT THE CONTRACTOR'S EXPENSE.

ALL REINFORCING STEEL SHALL BE SUPPORTED ON WELL-CURED CONCRETE BLOCKS, PLASTIC CHAIRS OR APPROVED METAL CHAIRS, AS SPECIFIED BY THE CRSI MANUAL OF STANDARD PRACTICE, MSP-1 AND SECURELY TIED IN PLACE WITH #16 ANNEALED IRON WIRE PRIOR TO PLACING CONCRETE. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," ACI 315. BAR LENGTHS DETAILED ARE OUT TO OUT AND DO NOT INCLUDE ALLOWANCE FOR HOOKS OR BENDS.

WELDING OR TACK WELDING OF REINFORCING BARS TO OTHER BARS OR EMBEDDED STEEL ITEMS IS PROHIBITED EXCEPT WHERE SPECIFICALLY APPROVED BY THE ENGINEER. WHERE WELDING IS APPROVED, REINFORCING STEEL SHALL CONFORM TO ASTM A706, AND WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS USING E9018 OR APPROVED ELECTRODES. WELDING PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.4.

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER
65401PE
OREGON
June 29, 2012
ANDREW RYAN LEIGH
EXPIRES: 12 - 31 - 2020

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OREGON 97034

STRUCTURAL NOTES

18436 PROJECT NUMBER
20 SEP 2019 DATE
REVISIONS

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UNLESS NOTED OTHERWISE, CAST-IN-PLACE CONCRETE COVER OVER REINFORCING STEEL SHALL BE AS FOLLOWS:

CONCRETE COVER (UNLESS NOTED OTHERWISE)

BAR SIZE	CONCRETE CAST AGAINST EARTH	CONCRETE EXPOSED TO EARTH / WEATHER	SLABS & JOISTS	WALLS	BEAMS & COLUMNS (TIES, STIRRUPS, SPIRALS)
#5 & SMALLER	3"	1 1/2"	TOP BARS: 3/4" BOTTOM BARS: 1"	1"	1 1/2"
#6 TO #11		2"			
#14 & #18			1 1/2"	1 1/2"	

SPECIFIED CONCRETE COVER SHALL BE MAINTAINED TO ALL REINFORCEMENT AT CONCRETE REVEALS AND INSETS. SHOP DRAWINGS SHOWING CONCRETE REVEALS AND OTHER INSETS SHALL BE SUBMITTED FOR REVIEW.

REINFORCING BARS SHALL BE LAP SPLICED PER THE TABLE ON SHEET [S0.02]. AT THE CONTRACTOR'S OPTION, MECHANICAL COUPLINGS MAY BE USED FOR ANY BAR SIZE AND AT ANY LOCATION, PROVIDED A CURRENT ICC-ES REPORT DEMONSTRATES THE COUPLING CAN ACHIEVE A MINIMUM TENSILE STRENGTH OF 125 PERCENT OF THE SPECIFIED YIELD STRENGTH OF THE BAR AND 100 PERCENT OF THE SPECIFIED TENSILE STRENGTH OF THE SPLICED BAR.

HEADED BARS OR TERMINATORS SHALL BE PROVIDED WHERE INDICATED ON THE DRAWINGS OR AT THE CONTRACTOR'S OPTION FOR CONGESTED AREAS OF REINFORCEMENT SUBJECT TO THE ENGINEER'S APPROVAL. HEADED BARS OR TERMINATORS SHALL MEET THE REQUIREMENTS OF ACI 318 AND ASTM A970 AND HAVE A CURRENT ICC-ES REPORT.

AT EACH RE-ENTRANT CORNER IN SLABS, PROVIDE ONE #4 X 4'-0" DIAGONALLY CENTERED ON THE CORNER AT EACH LAYER OF REINFORCING STEEL.

WELDED WIRE REINFORCEMENT
WELDED WIRE REINFORCEMENT SHALL BE ELECTRICALLY WELDED AND CONFORM TO ASTM A185. LAP EDGES AND ENDS OF FABRIC A MINIMUM OF ONE MESH SPACING PLUS 2 INCHES, BUT NOT LESS THAN 6 INCHES. WELDED WIRE REINFORCEMENT SHALL BE SUPPORTED ON CHAIRS IN ACCORDANCE WITH THE CRSI MANUAL OF STANDARD PRACTICE.

CONCRETE ANCHORS
ALL CAST IN PLACE ANCHOR BOLTS SHALL BE SECURELY TIED IN THEIR FINAL POSITION PRIOR TO PLACING CONCRETE (WET-SETTING OF ANCHOR BOLTS IS NOT PERMITTED). ANCHOR RODS SHALL CONFORM TO ASTM F1554 GRADE 36. FURNISH ANCHOR RODS WITH MATCHING DOUBLE HEAVY HEX NUTS JAMMED AT THE END EMBEDDED IN CONCRETE. HOOKED ANCHOR RODS SHALL NOT BE USED EXCEPT WHERE NOTED.

ALL HEADED STUD ANCHORS (HSA) SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.1, TYPE B, AND ASTM A108. DEFORMED BAR ANCHORS (DBA) SHALL CONFORM TO ASTM A1064. ALL HSA AND DBA SHALL BE WELDED WITH AUTOMATIC STUD WELDING EQUIPMENT PER THE RECOMMENDATIONS OF THE STUD AND EQUIPMENT MANUFACTURER, UNLESS OTHERWISE SPECIFIED.

POST INSTALLED CONCRETE ANCHORS SHALL CONSIST OF THE FOLLOWING UNLESS NOTED OTHERWISE:

EXPANSION BOLTS:	HILTI KWIK BOLT TZ
SCREW ANCHORS:	HILTI KWIK HUS-EZ
ADHESIVE ANCHORS:	HILTI HIT-RE 500 V3
POWER-ACTUATED FASTENERS:	HILTI X-U P8 (1" EMBEDMENT)

ALL POST INSTALLED CONCRETE ANCHORS SHALL BE INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S INSTALLATION CRITERIA AND PER THE CURRENT ICC EVALUATION REPORT.

NON-SHRINK GROUT
ALL NON-SHRINK GROUT SHALL BE NON-METALLIC GROUT CONFORMING TO ASTM C1107, AND SHALL HAVE A SPECIFIED MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF AT LEAST 1000 PSI HIGHER THAN THE SUPPORTING CONCRETE STRENGTH. GROUT SHALL BE MIXED, APPLIED AND CURED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS. PRE-GROUTING OF BASE PLATES IS NOT PERMITTED.

EMBEDDED ELECTRICAL CONDUIT
ELECTRICAL CONDUIT SHALL BE RIGID STEEL CONDUIT OR FLEXIBLE PLASTIC CONDUIT. ALUMINUM CONDUIT IS PROHIBITED.

FOR CONDUIT PLACED IN SLABS ON STEEL DECKING, CONDUIT SHALL RUN IN THE STEEL DECK FLUTES AND MAINTAIN 3/4" COVER TO THE STEEL DECK. CONDUIT PLACED ABOVE DECK FLUTES SHALL HAVE A MAXIMUM OUTSIDE DIAMETER OF 1 INCH WITH A MINIMUM OF 3/4 INCH OF CONCRETE COVER ABOVE AND BELOW THE CONDUIT, AND SHALL NOT CROSS ANY OTHER CONDUIT ABOVE DECK FLUTES. MINIMUM SPACING OF CONDUITS SHALL BE 12 INCHES.

CONDUIT SHALL BE FIRMLY CHAIRED AND TIED TO PREVENT DISPLACEMENT DURING POURING. FOR GROUPS OF (3) OR MORE CONDUITS, PLACE #4 AT 12 INCHES ADDITIONAL REINFORCING ABOVE CONDUIT RUNNING ABOVE STEEL DECK FLUTES AND ABOVE AND BELOW CONDUIT IN CONCRETE SLABS, PERPENDICULAR TO THE CONDUIT. THE ADDED REINFORCING SHALL EXTEND 1'-0" PAST THE CONDUIT ON BOTH SIDES.
IN COMPLIANCE WITH ASTM C42. CORES THAT CONTAIN REINFORCEMENT SHALL BE GRADED IN ACCORDANCE WITH ACI 506.2.

STRUCTURAL STEEL

DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (AISC 360-10).

ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO THE FOLLOWING MATERIAL STANDARDS:

STRUCTURAL STEEL MATERIAL STANDARDS

SHAPE	ASTM SPECIFICATION	YIELD STRESS
W-SECTIONS	A992	50 KSI
RECTANGULAR HSS	A500, GRADE C	50 KSI
ROUND HSS	A500, GRADE C	46 KSI
PIPE	A53, GRADE B, TYPE E OR S	35 KSI
ALL OTHER SECTIONS AND PL	A36, UNO	36 KSI

ALL ZINC (GALV.) COATINGS ON IRON AND STEEL PRODUCTS SHALL CONFORM TO ASTM A123. REPAIRS OF GALVANIZED COATINGS ARE TO CONFORM TO ASTM A780. HOT DIP GALVANIZED COATINGS ON ASTM A325 FASTENER ASSEMBLIES SHALL CONFORM TO ASTM A153. SURFACE PREPARATION OF GALVANIZED STEEL TO RECEIVE A FINISH COAT OF PAINT SHALL CONFORM TO ASTM D6386.

STRUCTURAL STEEL WELDING
ALL WELDING SHALL CONFORM TO AMERICAN WELDING SOCIETY (AWS) D1.1 USING E70XX ELECTRODES. WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS FOR WELD TYPES SPECIFIED. WELD LENGTHS SHOWN ARE EFFECTIVE AS SPECIFIED PER THE SPECIFICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC). WHERE WELD LENGTHS ARE NOT SHOWN, THE WELD SHALL BE FULL LENGTH OF MEMBERS BEING JOINED. FIELD WELDING SYMBOLS HAVE NOT NECESSARILY BEEN INDICATED ON THE DRAWINGS. WHERE SHOWN, PROPER FIELD WELDING PER AWS D1.1 SHALL BE USED. WHERE NO FIELD WELDING SYMBOLS ARE SHOWN, IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE USE OF SHOP AND FIELD WELDS.

ALL PARTIAL JOINT PENETRATION GROOVE WELD SIZES SHOWN ON THE DRAWINGS REFER TO THE EFFECTIVE THROAT THICKNESS. ALL BUTT WELDS SHALL BE FULL PENETRATION WELDS UNLESS NOTED OTHERWISE ON STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE JOINT PREPARATION AND WELDING PROCEDURES THAT INCLUDE, BUT ARE NOT LIMITED TO: REQUIRED ROOT OPENINGS, ROOT FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPES, SURFACE ROUGHNESS VALUES, AND TAPERS AND TRANSITIONS OF UNEQUAL PARTS. ALL WELDS DENOTED AS 'DEMAND CRITICAL' SHALL BE MADE WITH A FILLER METAL CAPABLE OF PROVIDING A MINIMUM CHARPY V-NOTCH TOUGHNESS AS INDICATED IN SECTION 7.3B OF AISC 341.

ALL WELDS SHALL RECEIVE THE SAME FINISH COATING AS THE MEMBER BEING WELDED.

STEEL ROOF DECK
STEEL ROOF DECKING SHALL BE: 3" DEEP VERCO PLN-24, 20 GAUGE (GA) WITH THE FOLLOWING MINIMUM PROPERTIES: +Seff = 0.443 in^3/ft –Seff = 0.531 in^3/ft Id = 0.908 in^4/ft (SINGLE SPAN), Id =1.032 in^4/ft (MULTISPAN) COMPOSED OF ASTM A653 SS DESIGNATION, GRADE 50 (MINIMUM) WITH PROFILE AND GAUGE AS SHOWN ON THE STRUCTURAL DRAWINGS, AND SHALL HAVE A CURRENT ICC-ES REPORT. ROOF DECKING SHALL HAVE A MINIMUM G60 GALVANIZED COATING (G90 WHERE PERMANENTLY EXPOSED TO WEATHER), AND SHALL BE CONTINUOUS OVER THREE OR MORE SPANS, EXCEPT WHERE THE FRAMING DOES NOT PERMIT.

DECKING UNITS SHALL BE CONNECTED TO SUPPORTING STEEL MEMBERS AT THE ENDS OF THE UNITS AND AT INTERMEDIATE SUPPORTS BY A MINIMUM OF FOUR CONNECTIONS PER 2'-0" OF WIDTH. WHERE TWO UNITS ABUT, EACH UNIT SHALL BE CONNECTED TO THE STEEL FRAMING. THE DECKING UNITS SHALL BE CONNECTED TO STEEL SUPPORTS AT THE SIDE BOUNDARIES WITH A MAXIMUM SPACING OF 12" OC AND SHALL HAVE SIDE LAP CONNECTIONS AT 12" OC. CONNECTIONS TO SUPPORTS SHALL BE MADE BY HILTI X-ENP-19 L15. SIDE LAP CONNECTIONS SHALL BE VSC2 (VERCO SIDELAP CONNECTION 2) MADE USING VERCO PUNCHLOK II TOOL. AN ACCEPTABLE VSC2 CONNECTION HAS BEEN MADE WHEN THE SIDELAP MATERIAL HAS BEEN SHEARED AND OFFSET SO THE SHEARED SURFACE OF THE INNER LEG IS VISIBLE.

WHERE STEEL MEMBERS ARE PARALLEL TO THE DECK FLUTES AND AT THE SAME ELEVATION AS THE BOTTOM OF THE DECK, ADJUST DECK LAYOUT AND CONNECT DECK TO STEEL WITH SAME CONNECTIONS AS REQUIRED FOR SIDE BOUNDARIES NOTED ABOVE.

ALTERNATE METHODS OF CONNECTION USING EQUIVALENT WELDS, POWER-ACTUATED FASTENERS, PNEUMATIC PINS, SCREWS, OR MECHANICAL CRIMPING, MAY BE APPROVED PROVIDED THE CONTRACTOR PRESENTS CALCULATIONS WITH CURRENT ICC-ES EVALUATION REPORTS DEMONSTRATING EQUIVALENT VALUES OR SHEAR CAPACITY, DECK CAPACITY, AND DECK FLEXIBILITY. WELDERS SHALL BE AWS CERTIFIED FOR LIGHT GAUGE STEEL WELDING.

STEEL COMPOSITE DECK
STEEL COMPOSITE DECKING SHALL CONFORM TO ASTM A653 WITH PROFILE AND GAUGE AS SHOWN ON THE STRUCTURAL DRAWINGS, AND SHALL HAVE A CURRENT ICC-ES REPORT. COMPOSITE DECK UNITS SHALL BE FORMED WITH DEFORMATIONS TO PROVIDE AN INTERLOCK BETWEEN THE CONCRETE AND STEEL. THE MINIMUM DECK GAUGE IS SPECIFIED FOR IN-SERVICE CONDITIONS. THE CONTRACTOR MAY INCREASE THE DECK GAUGE IF REQUIRED BASED ON SPAN CONDITIONS, SHORING REQUIREMENTS, AND CONSTRUCTION LOADING. MINIMUM DECK THICKNESS IS 20 GAUGE. COMPOSITE DECKING SHALL HAVE A MINIMUM G60 GALVANIZED COATING (G90 WHERE PERMANENTLY EXPOSED TO WEATHER), AND SHALL BE CONTINUOUS OVER THREE OR MORE SPANS, EXCEPT WHERE THE FRAMING DOES NOT PERMIT.

DECKING UNITS SHALL BE CONNECTED TO THE STEEL SUPPORTS AT THE ENDS OF THE UNITS AND AT INTERMEDIATE SUPPORTS AT 12" OC. WHERE TWO UNITS ABUT, EACH UNIT SHALL BE FASTENED TO THE STEEL SUPPORTS. THE DECKING UNITS SHALL BE CONNECTED TO STEEL SUPPORTS AT THE SIDE BOUNDARIES WITH A MAXIMUM SPACING OF 12" OC AND SHALL HAVE SIDE LAP CONNECTIONS AT 24" OC. CONNECTIONS SHALL BE MADE WITH 3/4" DIAMETER PUDDLE WELDS AND 1 ½" LONG TOP SEAM WELDS OR BUTTON PUNCHED. 3/4" DIAMETER SHEAR STUDS WELDED THROUGH THE DECK MAY BE USED IN PLACE OF PUDDLE WELDS. WELDERS SHALL BE AWS CERTIFIED FOR LIGHT GAUGE STEEL WELDING.

WHERE STEEL MEMBERS ARE PARALLEL TO THE DECK FLUTES AND AT THE SAME ELEVATION AS THE BOTTOM OF THE DECK, ADJUST DECK LAYOUT AND CONNECT DECK TO STEEL WITH SAME WELDING AS REQUIRED FOR SIDE BOUNDARIES.

THE CONTRACTOR SHALL PROVIDE ALL ACCESSORIES (OPENING REINFORCING ANGLES, CLOSURES, ETC.) TO PROVIDE A COMPLETE DIAPHRAGM READY TO RECEIVE CONCRETE.

COMPOSITE FLOOR SYSTEM
DUE TO STEEL DEFLECTION DURING CONCRETE PLACEMENT, ADDITIONAL CONCRETE WILL BE REQUIRED TO MAINTAIN A LEVEL FLOOR SURFACE, AND THE CONTRACTOR SHALL ACCOUNT FOR THE ADDED CONCRETE. CAMBER SHOWN FOR STEEL BEAMS HAS BEEN CALCULATED BASED ON THE DEFLECTION OF THE BEAM DUE TO THE WEIGHT OF THE STEEL AND CONCRETE SLAB. FLOOR TOLERANCE REQUIREMENTS SHALL BE AS SPECIFIED BY THE ARCHITECTURAL DRAWINGS OR SPECIFICATIONS.

MINIMUM SLAB REINFORCING IS WWF 6X6-W4XW4, UNLESS NOTED OTHERWISE.

MASONRY

ALL CONCRETE MASONRY UNITS (CMU) SHALL BE CONSTRUCTED IN ACCORDANCE WITH IBC CHAPTER 21 AND TMS 602. CMU SHALL BE MEDIUM WEIGHT SAND UNITS (115 LBS PER CUBIC FOOT) CONFORMING TO ASTM C90 WITH LINEAR DRYING SHRINKAGE LIMITED TO 0.065% AND RATE OF ABSORPTION NOT EXCEEDING 0.035 OUNCES OF WATER PER SQ. IN. OF SURFACE AT THE TIME OF PLACEMENT. THE NET AREA COMPRESSIVE STRENGTH OF CONCRETE MASONRY UNITS SHALL BE 2,800 PSI. CMU SHALL BE INSTALLED IN A RUNNING BOND PATTERN UNLESS NOTED OTHERWISE.

THE COMPRESSIVE STRENGTH OF THE MASONRY ASSEMBLY SHALL BE A MINIMUM OF F'M=2000 PSI ON NET AREA BY UNIT STRENGTH METHOD.

HOT AND COLD WEATHER CONSTRUCTION REQUIREMENTS PER ACI 530.1/ASCE6/TMS 602 SPECIFICATIONS SHALL APPLY. TEMPORARY BRACING OF MASONRY WALLS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

CONTROL JOINTS ARE TO BE SPACED AT 1 ½ TIMES THE WALL HEIGHT WITH A MAXIMUM OF 25 FT.

UNLESS OTHERWISE SPECIFIED ON THE ARCHITECTURAL CONSTRUCTION DOCUMENTS, ALL MASONRY EXPOSED TO THE WEATHER TO RECEIVE (2) COATS OF MOISTURE PROOF SEALANT APPLIED PER MANUFACTURER'S INSTRUCTIONS, AND MASONRY EXPOSED TO THE SOIL SHALL HAVE TWO COATS OF WATERPROOF EMULSION APPLIED. INSTALL COMPATIBLE PAINT PER OWNER'S REQUIREMENTS.

MASONRY MORTAR
ALL MORTAR SHALL CONFORM TO ASTM C270 TYPE M. MORTAR SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT 28 DAYS. COMPLETELY COVER THE BEDDING AREA OF THE UNITS AT ALL BED, HEAD AND WEB JOINTS WITH MORTAR (100% MORTAR FILLING IS REQUIRED).

MASONRY GROUT
ALL GROUT TO BE FINE GROUT CONFORMING TO ASTM C476 WITH A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT 28 DAYS. ALL CELLS CONTAINING VERTICAL BARS AND ALL BOND BEAMS SHALL BE FILLED WITH GROUT. FULLY GROUT ALL STRUCTURAL MASONRY WALLS UNLESS NOTED OTHERWISE.

GROUT LIFTS SHALL NOT EXCEED 5'-4" IN HEIGHT. CONSOLIDATION MUST BE PERFORMED IN EACH GROUTED CELL IMMEDIATELY AFTER GROUT PLACEMENT WITH A MECHANICAL VIBRATOR. RODDING IS NOT AN ACCEPTABLE MEANS OF GROUT CONSOLIDATION. GROUT POURS SHALL BE RECONSOLIDATED BY MECHANICAL VIBRATION AFTER INITIAL WATER LOSS AND SETTLEMENT HAS OCCURRED. ALL PROCEDURES FOR HIGH LIFT GROUTING ARE OPTIONAL AND ARE TO BE REVIEWED AND ACCEPTED BY THE ENGINEER OF RECORD PRIOR TO GROUTING.

CLEAN OUTS SHALL BE PROVIDED IN THE BOTTOM COURSE OF MASONRY FOR EACH GROUT POUR WHEN THE GROUT POUR HEIGHT EXCEEDS 5'-4". WHERE REQUIRED, CLEANOUTS SHALL BE PROVIDED AT EVERY VERTICAL BAR BUT SHALL NOT BE SPACED MORE THAN 32 INCHES ON CENTER FOR SOLID GROUTED MASONRY. CONSTRUCT CLEANOUTS WITH AN OPENING OF SUFFICIENT SIZE TO PERMIT REMOVAL OF DEBRIS, WITH A MINIMUM OPENING DIMENSION OF 3 INCHES. CLEANOUTS SHALL BE ADEQUATELY SEALED AFTER INSPECTION AND BEFORE GROUTING TO RESIST GROUT PRESSURE.

MASONRY REINFORCING STEEL
ALL REINFORCING STEEL SHALL BE DEFORMED BARS PER ASTM A615 OR A706 GRADE 60. ALL REINFORCING STEEL TO BE WELDED SHALL BE ASTM A706. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," ACI 315.

REINFORCING STEEL EXCEPT WHERE OTHERWISE NOTED SHALL BE AS FOLLOWS:

(2) #5 IN GROUTED LINTEL OVER OPENINGS
(2) #5 IN GROUTED CELLS AT JAMBS AND WALL ENDS
(2) #5 IN GROUTED BOND BEAMS AT SILLS AND TOP OF WALLS.

EXTEND ALL REINFORCING STEEL A MINIMUM OF 24 INCHES BEYOND EDGES OF OPENING. PROVIDE MATCHING CORNER BARS FOR ALL BOND BEAMS. VERTICAL REINFORCING STEEL IN MASONRY WALLS TO BE AT CENTER LINE OF WALL UNLESS INDICATED OTHERWISE. REINFORCEMENT MUST BE RESTRAINED TO PREVENT MOVEMENT FROM CONSTRUCTION LOADS AND DURING PLACEMENT OF MORTAR AND GROUT. WIRE-TYING OR PREFABRICATED POSITIONERS ARE METHODS OF PROVIDING THE NECESSARY RESTRAINT FOR REINFORCEMENT. WET-SETTING OF REINFORCEMENT IS NOT PERMITTED.

SEE LAP SPLICE TABLE ON SHEET S0.2 FOR LAP SPLICES. USE MINIMUM 30" LAP FOR #4 BAR AND SMALLER UNLESS NOTED OTHERWISE (UNO). USE MINIMUM 36" LAP FOR #5 BAR UNO.

CMU VENEER
CMU VENEER SHALL BE PER IBC SECTIONS 1404.4 AND 1405 WITH TYPE S MORTAR. ANCHORAGE OF VENEER SHALL BE PER SECTION 1405 OF THE IBC. PROVIDE AT LEAST ONE ANCHOR TIE FOR EACH 2 SQUARE FEET OF WALL AREA, BUT ANCHOR TIE SPACING SHALL NOT EXCEED 32 INCHES ON CENTER HORIZONTALLY AND 24 INCHES ON CENTER VERTICALLY. PROVIDE ADDITIONAL ANCHOR TIES WITHIN 12 INCHES OF OPENINGS, SPACED AT A MAXIMUM OF 3 FEET ON CENTER AROUND THE OPENING. ANCHOR TIES SHALL BE ANCHORED TO A NO. 9 GAUGE HORIZONTAL JOINT REINFORCING WIRE. THE JOINT REINFORCING SHALL BE CONTINUOUS WITH BUTT SPLICES CENTERED BETWEEN TIES PERMITTED.

MASONRY ANCHORS
ALL CAST IN PLACE ANCHOR BOLTS SHALL BE SECURELY TIED IN THEIR FINAL POSITION PRIOR TO GROUTING WALL (WET-SETTING OF ANCHOR BOLTS IS NOT PERMITTED). ANCHOR RODS SHALL CONFORM TO ASTM F1554 GRADE 36. FURNISH ANCHOR RODS WITH MATCHING DOUBLE HEAVY HEX NUTS JAMMED AT THE END EMBEDDED IN CONCRETE. HOOKED ANCHOR RODS SHALL NOT BE USED EXCEPT WHERE NOTED.

ALL HEADED STUD ANCHORS (HSA) SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.1, TYPE B, AND ASTM A108. DEFORMED BAR ANCHORS (DBA) SHALL CONFORM TO ASTM A496. ALL HSA AND DBA SHALL BE WELDED WITH AUTOMATIC STUD WELDING EQUIPMENT PER THE RECOMMENDATIONS OF THE STUD AND EQUIPMENT MANUFACTURER, UNLESS OTHERWISE SPECIFIED.

POST INSTALLED MASONRY ANCHORS SHALL CONSIST OF THE FOLLOWING UNLESS NOTED OTHERWISE:

EXPANSION BOLTS:	HILTI KWIK BOLT 3
SCREW ANCHORS:	HILTI KWIK HUS-EZ
ADHESIVE ANCHORS:	HILTI HIT-HY 70

ALL POST INSTALLED MASONRY ANCHORS SHALL BE INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S INSTALLATION CRITERIA AND PER THE CURRENT ICC EVALUATION REPORT.

COLD-FORMED STEEL

ALL COLD-FORMED STEEL FRAMING SHALL CONFORM TO THE AISI "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" WITH SUPPLEMENTS. ALL LATERAL SYSTEMS UTILIZING COLD-FORMED STEEL FRAMING SHALL CONFORM TO THE "NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL FRAMING-LATERAL DESIGN" WITH SUPPLEMENTS. OTHER REFERENCED DOCUMENTS CITED PER THE REFERENCED STANDARDS OF THE IBC SHALL BE UTILIZED IN DESIGN AS APPROPRIATE. MEMBER TYPES AND SIZES SHOWN ON THE DRAWINGS REFER TO MEMBERS AS DEFINED BY THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA). SEE THE CONTRACT DRAWINGS AS SPECIFIED ON TABLE [1.02] AND SHEET [S0.02] FOR REQUIRED THICKNESSES AND JOIST/BEAM DESIGNATIONS.

ALL STRUCTURAL COLD-FORMED STEEL MEMBERS SHALL BE MILL CERTIFIED PRIME STEEL MEETING ASTM A653 STRUCTURAL QUALITY; GRADE 33 FOR STEELS THINNER THAN 16 GAGE (54 MILS) AND GRADE 50 FOR STEELS 16 GAGE (54 MILS) AND THICKER. GRADE 33 STEEL SHALL HAVE A FY = 33000 PSI AND FU = 45000 PSI. GRADE 50 STEEL SHALL HAVE A FY =50000 PSI AND FU = 60000 PSI. ALL COLD-FORMED STEEL SHALL BE GALVANIZED PER ASTM A653 WITH MINIMUM COATING OF G60 FOR EXTERIOR AND/OR LOAD BEARING MEMBERS AND G40 FOR INTERIOR NON-LOAD BEARING MEMBERS.

STEEL STUDS SHALL BE A MINIMUM 1 5/8" FLANGE X WIDTH NOTED. STUDS SHALL HAVE A MINIMUM UNCOATED BASE METAL THICKNESS OF 0.033" (20 GAGE). STUDS SHALL BE OF ADEQUATE SIZE, GAGE AND SPACING TO SUSTAIN PRESCRIBED CODE APPLIED STRUCTURAL LOADING. TRACK SHALL BE THE SAME GAUGE AS STUDS SPECIFIED UNLESS NOTED OTHERWISE AND SHALL BE UNPUNCHED TYPE AT THE TOP AND BOTTOM OF WALL. THE MINIMUM TRACK FLANGE WIDTH SHALL BE 1.5 INCHES. TRACK SHALL BE OF ADEQUATE SIZE TO DEVELOP FULL STUD BEARING AT LOAD-BEARING WALLS AND SHALL BE SIZED TO FIT STUDS. PROVIDE COMPLETE, UNIFORM, AND LEVEL SUPPORT FOR THE BOTTOM TRACK AT EACH STUD. VERIFY THAT LOAD BEARING STUDS ARE PROPERLY SEATED IN TRACKS PRIOR TO FASTENING.

BRIDGING FOR COLD-FORMED MEMBERS SHALL BE PER THE MANUFACTURER'S RECOMMENDATIONS IN ORDER TO DEVELOP THE FULL STRENGTH OF THE STRUCTURAL MEMBER. SHEATHING ON THE WALL SHALL NOT BE CONSIDERED EFFECTIVE TO BRACE FRAMING UNLESS SHEATHING IS APPLIED ON BOTH FACES OF THE MEMBER. COLD-ROLLED STRAPPING, SIMPSON TB/LTB BRIDGING OR SPAZZER BRIDGING BARS MAY BE UTILIZED FOR BRIDGING.

COLD-FORMED STEEL CONNECTORS
BOLTED CONNECTIONS ARE TO USE AS A MINIMUM EITHER ASTM A307 (TYPE A) OR ASTM A325, STRUCTURAL BOLTS. ALL SCREWS SHALL BE A #10 MINIMUM SIZE AND CONFORM TO ASTM C1513 STEEL TAPPING SCREWS, ASTMC-1002 AND ASTM C-954 TYPE S AND/OR TYPE S-12. SCREWS TO BE TESTED IN ACCORDANCE WITH SAE J78 STANDARDS. LENGTH OF SCREW SHOULD BE APPROXIMATELY 3/8" TO 1/2" LONGER THAN THE TOTAL MATERIAL THICKNESS AND A MINIMUM OF 3 EXPOSED THREADS SHOULD EXTEND THROUGH THE STEEL. ALL SCREWS SHALL BE THREAD-FORMING OR THREAD-CUTTING, WITH OR WITHOUT A SELF-DRILLING POINT. SCREWS SHALL BE INSTALLED AND TIGHTENED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ALL FASTENERS THAT FASTEN DISSIMILAR METALS (SUCH AS ALUMINUM AND STEEL) ARE TO BE STAINLESS STEEL OR ZINC-PLATED CORROSION RESISTANT SCREWS.

PREFABRICATED METAL CONNECTORS ARE TO BE MANUFACTURED BY THE STEEL NETWORK OR SIMPSON STRONG-TIE, AND SHALL BE INSTALLED AS NOTED ON THE DRAWINGS. OTHER SUBSTITUTIONS OF METAL CONNECTORS REQUIRE REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO INSTALLATION.

COLD-FORMED STEEL ANCHORAGE TO CONCRETE AND STEEL
WHERE INDICATED ON THE DRAWINGS, POWER-ACTUATED FASTENERS TO SUPPORTING FRAMING SHALL CONSIST OF THE FOLLOWING:

PAF TO CONCRETE:	HILTI X-U P8 (1" EMBEDMENT)
PAF TO STEEL:	HILTI X-U P8 (FULL STEEL PENETRATION OR 1/2" MIN)

PAF SHALL BE INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S INSTALLATION CRITERIA AND PER THE CURRENT ICC EVALUATION REPORT.

COLD-FORMED STEEL WALL SHEATHING
ALL SHEATHING AT COLD-FROMED STEEL SHEAR WALLS SHALL BE SURE-BOARD SERIES 200 WALL PANELS. THE PANELS SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.

COLD-FORMED STEEL FASTENING SCHEDULE
SCREWS SHALL BE INSTALLED PER THE FASTENER SCHEDULE BELOW UNLESS OTHERWISE NOTED ON THE DRAWINGS. SCREWS SHALL NOT BE OVERDRIVEN.

ALTERNATE FASTENING OF PINS MUST BE REVIEWED AND ACCEPTED BY THE REGISTERED DESIGN PROFESSIONAL.

TYPICAL SCREW DESIGNATION: #10 SIZE, 0.190" NOMINAL DIAMETER WITH 3/8" WASHER DIAMETER.

COLD-FORMED STEEL FASTENING SCHEDULE

ITEM	FASTENERS
TRACK TO STUDS	(1) #10 EACH FACE
BUILT-UP MEMBERS	#10 AT 8" OC STAGGERED
TACK SPLICES	LSTA15 STRAP AT EA FLANGE
TACK TO HEADER (TOP AND BOTTOM)	#10 AT 8" OC
HEADER TO STUD	L50 CLIP
WEB STIFFENER TO HEADER	(6) #10 EA STIFFENER STAGGERED
FLOOR JOIST TO SUPPORT	(2) #10
RIM JOIST TO TOP TRACK	#10 AT 16" OC
BOT TRACK THROUGH SUB-FLOOR TO RIM TRACK	#10 AT 16" OC
BOT TRACK THROUGH SUB-FLOOR TO JOIST/BLKG	(2) #10 EA STIFFENER STAGGERED
RIM JOIST TO JOIST/BLKG	(1) #10 AT TOP OF RIM FLANGE
INTERMEDIATE WEB STIFFENER TO JOIST	(3) #10 FROM WEB OF STIFFENER TO WEB OF JOIST
BLOCKING TO JOIST	(2) #10 WEB OF BLKG TO WEB OF JOIST (BEND WEB MIN 3" AT END AS REQD)
JOIST BRACING	FIRST AND LAST TWO BAYS SHALL BE BLOCKED AT A MAX OF 8'-0" OC. AT THESE LOCATIONS, USE MIN 1 1/2" x 20 GA FLAT STRAP CONT AT BOT OF JOISTS. ATTACH TO EA JOIST W/ (1) #10 SCREW. LAP SPLICE STRAPS A MIN OF 8" AND FASTEN W/ (6) #10 SCREWS
WALL BRACING	MIN 1 1/2" x 20 GA FLAT STRAP CONT AT MID-HEIGHT OF WALL UNO W/ (1) #10 SCREW TO STUD. LAP SPLICE STRAPS A MIN OF 4" AND FASTEN W/ (2) #10 SCREWS. ADD BLKG AT WALL WHERE LAPS OCCUR
HEADER WEB EXTENSIONS	EXTEND WEBS OF HEADERS A MIN OF 3" OR (2) STUD FLANGE WIDTHS. FASTEN WEB OF HEADER TO STUD FLANGES W/ A MIN OF (8) #10 SCREWS - (4) SCREWS EA STUD FLANGE EA SIDE
JOIST LAP SPLICES OVER INTERMEDIATE BEARING	(4) #10
SHEATHING	
ROOF	#10 SCREWS AT 6" OC AT ALL SUPPORTED PANEL EDGES AND ROOF PERIMETER AND 12" OC AT ALL INTERMEDIATE SUPPORTS
FLOORS	#10 SCREWS AT 6" OC AT ALL SUPPORTED PANEL EDGES AND FLOOR PERIMETER AND 12" OC AT ALL INTERMEDIATE SUPPORTS
WALLS	#10 SCRES AT 6" OC AT ALL PANELS EDGES AND AT 12" OC AT ALL INTERMEDIATE FRAMING MEMEBERS. ALL PENLS EDGES TO BE BACKED W/ A LIGHT-GAUGE FRAMING MEMBER

STRUCTURAL
REGISTERED PROFESSIONAL ENGINEER
65401PE
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June 29, 2007
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STRUCTURAL NOTES

18136 PROJECT NUMBER
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PERMIT SET

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TABLE A - COLD-FORMED STEEL MATERIAL THICKNESSES AND IDENTIFICATION

THICKNESS - STEEL COMPONENTS

REFERENCE ONLY GAUGE NO.	MINIMUM THICKNESS[1] (MILS)	DESIGN THICKNESS (INCHES)	INSIDE CORNER RADII (INCHES)
25	18	0.0188	0.0843
22	27	0.0283	0.0796
20 - DRYWALL	30	0.0312	0.0781
20 - STRUCTURAL	33	0.0346	0.0764
18	43	0.0451	0.0712
16	54	0.0566	0.0849
14	68	0.0713	0.1069
12	97	0.1017	0.1525

[1] MINIMUM THICKNESS REPRESENTS 95% OF THE DESIGN THICKNESS AND IS THE MINIMUM ACCEPTABLE THICKNESS DELIVERED TO THE JOB SITE BASED ON SECTION A2.4 OF THE AISI/COS/NASPEC 2001 SPECIFICATION.

DESIGN STIFFENING LIP LENGTH

SECTION	FLANGE WIDTH	DESIGN STIFFENING LIP LENGTH (IN.)
S125	1 1/4"	0.188
S137	1 3/8"	0.375
S162	1 5/8"	0.500
S200	2"	0.625
S250	2 1/2"	0.625

LIGHT GAUGE STEEL PRODUCT IDENTIFICATION

ALL SSMA PRODUCTS HAVE A FOUR PART IDENTIFICATION CODE WHICH IDENTIFIES THE SIZE (BOTH DEPTH AND FLANGE WIDTH), STYLE, AND MATERIAL THICKNESS OF EACH MEMBER.

EXAMPLE:

MEMBER DEPTH:
(EXAMPLE: 6"=600x1/100 INCHES)
ALL MEMBERS DEPTHS ARE TAKEN IN 1/100 INCHES.
FOR ALL "T" SECTIONS MEMBER DEPTH IS THE INSIDE TO INSIDE DIMENSION

FLANGE WIDTH:
(EXAMPLE: 1 5/8"=1.625" 162x1/100 INCHES)
ALL FLANGE WIDTHS ARE TAKEN IN 1/100 INCHES.

STYLE:
(EXAMPLE: STUD OR JOIST SECTION=S)
THE FOUR ALPHA CHARACTERS UTILIZED BY THE DESIGNATOR SYSTEM ARE:
S=STUD OR JOIST SECTIONS
T=TRACK SECTIONS
U=CHANNEL SECTIONS
F=FURRING CHANNEL SECTIONS

MATERIAL THICKNESS:
(EXAMPLE: 0.054 IN.=54 MILS; 1 MIL=1/100 INCHES)
MATERIAL THICKNESS IS THE MINIMUM BASE METAL THICKNESS IN MILS. MINIMUM BASE METAL THICKNESS REPRESENTS 95% OF THE DESIGN THICKNESS.

NOTE: FOR THOSE SECTIONS WHERE TWO DIFFERENT YIELD STRENGTHS (33 KSI AND 50 KSI) ARE SHOWN, THE YIELD STRENGTH USED IN THE DESIGN, IF GREATER THAN 33 KSI, NEEDS TO BE IDENTIFIED ON THE DESIGN AND ORDERING OF STEEL. (I.E., 600S162-54 (50 KSI))

1 COLD FORMED STEEL DIMENSIONS AND IDENTIFICATION

S0.3 | 12" = 1'-0"

TYPICAL LAP SPLICE LENGTH SCHEDULE

Bar Size	f'c = 2500 PSI		f'c = 3000 PSI		f'c = 4000 PSI		f'c = 5000 PSI		f'c = 6000 PSI	
	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2
#3	24	36	22	32	19	28	17	25	16	23
#4	32	47	29	43	25	37	23	34	21	31
#5	39	59	36	54	31	47	28	42	26	38
#6	47	71	43	65	37	56	34	50	31	46
#7	69	103	63	94	54	81	49	73	44	67
#8	78	117	72	107	62	93	56	83	51	76
#9	88	132	81	121	70	105	63	94	57	86
#10	100	149	91	136	79	118	71	106	64	96
#11	110	165	101	151	87	131	78	117	71	107
#14	102*	153*	93*	140*	81*	121*	72*	108*	66*	99*
#18	136*	204*	124*	186*	107*	161*	96*	144*	88*	132*

TYPICAL TOP BAR LAP SPLICE LENGTH SCHEDULE

Bar Size	f'c = 2500 PSI		f'c = 3000 PSI		f'c = 4000 PSI		f'c = 5000 PSI		f'c = 6000 PSI	
	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2
#3	32	47	29	42	25	37	23	33	21	30
#4	42	62	38	56	33	49	30	45	28	41
#5	51	77	47	71	41	62	37	55	34	50
#6	62	93	56	85	49	73	45	65	41	60
#7	90	134	82	123	71	106	64	95	58	88
#8	102	153	94	140	81	121	73	108	67	99
#9	115	172	106	158	91	137	82	123	75	112
#10	130	194	119	177	103	154	93	138	84	125
#11	143	215	132	197	114	171	102	153	93	140
#14	133*	199*	121*	182*	106*	158*	94*	141*	86*	129*
#18	177*	266*	162*	242*	140*	210*	125*	188*	115*	172*

f'c INDICATES 28-DAY CONCRETE COMPRESSIVE STRENGTH

LAP LENGTHS INDICATED ARE IN INCHES

* NO LAP LENGTHS ALLOWED, NUMERICAL VALUES ARE FOR DEVELOPMENT LENGTH ONLY

NOTES:
1. DIMENSIONS ARE IN INCHES
2. CASE 1 AND 2 ARE DEFINED AS FOLLOWS (d_b=BAR DIAMETER)
   BEAMS OR COLUMNS: CASE 1: COVER $\geq d_b$ AND c-c SPACING $\geq 2\,d_b$
   CASE 2: COVER $< d_b$ AND c-c SPACING $< 2\,d_b$
   ALL OTHERS: CASE 1: COVER $\geq d_b$ AND c-c SPACING $\geq 3\,d_b$
   CASE 2: COVER $< d_b$ AND c-c SPACING $< 3\,d_b$
3. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.
4. LAP LENGTHS ARE BASED ON CLASS B SPLICES.

ACI HOOK DEVELOPMENT LENGTHS PER f'c (psi), l_{dh}							
Bar Size	2500	3000	4000	5000	6000	7000	8000
#3	9"	9"	7"	7"	6"	6"	6"
#4	12"	11"	10"	9"	8"	7"	7"
#5	15"	14"	12"	11"	10"	9"	9"
#6	18"	17"	15"	13"	12"	11"	10"
#7	21"	19"	17"	15"	14"	13"	12"
#8	24"	22"	19"	17"	16"	15"	14"
#9	27"	25"	22"	19"	18"	16"	15"
#10	31"	28"	24"	22"	20"	19"	17"
#11	34"	31"	27"	24"	22"	21"	19"
#14	41"	37"	32"	29"	27"	25"	23"
#18	55"	50"	43"	39"	35"	33"	31"

NOTES:
1. TABULATED VALUES ARE BASED ON GRADE 60 REINFORCING BARS AND NORMAL WEIGHT CONCRETE.
2. FOR BAR SIZES #3 THROUGH #11 ONLY:
   a. IF CONCRETE COVER PER ACI 318-11, SECTION 12.5.3.a, THEN A MODIFICATION FACTOR OF 0.7 MAY BE APPLIED BUT THE LENGTH MUST NOT BE LESS THAN 8.0 BAR DIAMETERS NOR 6 IN.
   b. IF HOOK IS ENCLOSED IN TIES OR STIRRUPS PER ACI 318-11, SECTION 12.5.3.b-c., THEN A MODIFICATION FACTOR OF 0.8 MAY BE APPLIED BUT THE LENGTH MUST NOT BE LESS THAN 8.0 BAR DIAMETERS NOR 6 IN.
3. FOR EPOXY-COATED HOOKS, MULTIPLY THE TABULATED VALUES BY 1.2.

2 TYPICAL REBAR LAP SPLICE LENGTH SCHEDULE

S0.3 | 12" = 1'-0"

ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	NOMINAL DIMENSIONS		
	DIAMETER (in.)	AREA ($in.^2$)	MASS (lb/ft)
#3	0.375	0.11	0.376
#4	0.500	0.20	0.668
#5	0.625	0.31	1.043
#6	0.750	0.44	1.502
#7	0.875	0.60	2.044
#8	1.000	0.79	2.670
#9	1.128	1.00	3.400
#10	1.270	1.27	4.303
#11	1.410	1.56	5.313
#14	1.693	2.25	7.65
#18	2.257	4.00	13.6

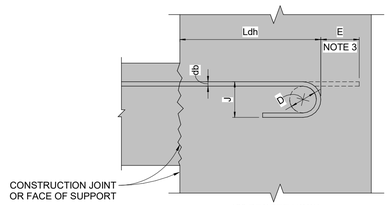
1. ASTM A615 GRADE 40 IS LIMITED TO BAR SIZES #3 THROUGH #6
2. CHECK AVAILABILITY WITH LOCAL SUPPLIERS FOR BAR SIZES #14 AND #18

3 STANDARD REBAR DIMENSIONS

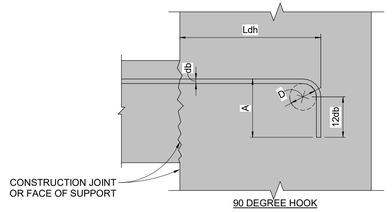
S0.3 | 1 1/2" = 1'-0"

END HOOKS, ALL GRADES OF STEEL

BAR SIZE	D	180° HOOKS		90° HOOKS
		E	J	A
#3	2 1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"
#6	4 1/2"	8"	6"	1'-0"
#7	5 1/4"	10"	7"	1'-2
#8	6"	11"	8"	1'-4
#9	9 1/2"	1'-3	11 3/4"	1'-7
#10	10 3/4"	1'-5	1'-1 1/4 "	1'-10"
#11	12"	1'-7"	1'-2 3/4"	2'-0"
#14	18 1/4"	2'-3"	1'-9 3/4"	2'-7"
#18	24"	3'-0"	2'-4 1/2"	3'-5"



180 DEGREE HOOK

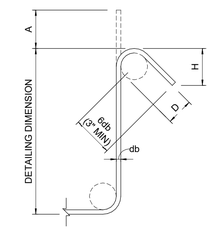


90 DEGREE HOOK

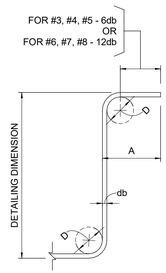
STIRRUP HOOKS (TIE BENDS SIMILAR)

BAR SIZE	D	90°	135°	
		A	A	H*
#3	1 1/2"	4"	4 1/4"	3"
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"
#6	4 1/2"	1'-0"	8"	4 1/2"
#7	5 1/4"	1'-2""	9"	5 1/4"
#8	6"	1'-4"	10 1/2"	6"

* H DIMENSION IS APPROXIMATE



135 DEGREE BEND



90 DEGREE BEND

4 STIRRUP HOOKS AND TIE BENDS

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TABLE 2
REQUIRED STRUCTURAL SPECIAL INSPECTIONS

SYSTEM or MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			Continuous	Periodic	
CONCRETE					
INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE	1901.1 TABLE 1705.3	ACI 318: 3.8.6, 8.1.3, 21.1.8		X	SPECIAL INSPECTIONS APPLY TO ANCHOR PRODUCT NAME, TYPE, AND DIMENSIONS, HOLE DIMENSIONS, COMPLIANCE WITH DRILL BIT REQUIREMENTS, CLEANLINESS OF THE HOLE AND ANCHOR, ADHESIVE EXPIRATION DATE, ANCHOR/ADHESIVE INSTALLATION, ANCHOR EMBEDMENT, AND TIGHTENING TORQUE
REINFORCING STEEL PLACEMENT	1705.3 1910.4 1901.3.2	ACI 318: 3.5 ACI 318: 7.1-7.7		X	TOLERANCES AND REINFORCING PLACEMENT PER ACI 7.5; SPACING LIMITS FOR REINFORCING ACI 7.6 PROTECTION OF REINFORCEMENT PER ACI 7.7
PLACEMENT OF ANCHOR BOLTS	TABLE 1704.4 1911.5 1912.1	ACI 318: 1.3.2.C ACI 318: 8.1.3 ACI 318: 21.1.8 ACI 318 - APPENDIX D		X	ALL BOLTS VISUALLY INSPECTED
VERIFYING USE OF REQUIRED MIX DESIGN(S)	TABLE 1705.3 1904 1904.2 1910.2 1910.3	ACI 318: CHAPTER 4 ACI 318: 5.2-5.4		X	
CONCRETE PLACEMENT	TABLE 1705.3	ACI 318: 1.3.2.D ACI 318: 5.9 - 5.10	X		
CONCRETE PLACEMENT AT COMPOSITE SLABS		ASCE 9, CHAPTER 3	X		
CONCRETE/SHOTCRETE CURING	TABLE 1705.3 1910.9.1-3	ACI 318: 5.11-5.13		X	
MASONRY					
MASONRY LEVEL B					
TABLE 1.19.2 - LEVEL B QUALITY ASSURANCE					
INSPECTION					
INSPECTION TASK	**REFERENCE CODE OR STANDARD FOR CRITERIA**		**FREQUENCY (a)**		**REMARKS**
	TMS 402/ ACI 530/ ASCE 5	**TMS 602/ ACI 530.1/ ASCE 6**	**Continuous**	**Periodic**	
1. VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS		Art. 1.5		X	
2. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:					
a. PROPORTIONS OF SITE-PREPARED MORTAR		Art. 2.1, 2.6 A		X	
b. CONSTRUCTION OF MORTAR JOINTS		Art. 3.3 B		X	
c. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES		Art. 2.4 B, 2.4 H		X	
d. LOCATION OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES		Art. 3.4, 3.6 A		X	
3. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:				X	
a. GROUT SPACE		Art. 3.2 D, 3.2 F			
b. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES	Sec. 1.16	Art. 2.4, 3.4		X	
c. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES	Sec. 1.16	Art. 3.2 E, 3.4, 3.6 A		X	
d. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS		Art. 2.6 B, 2.4 G.1.b		X	
e. CONSTRUCTION MORTAR JOINTS		Art. 3.3 B		X	
4. VERIFY DURING CONSTRUCTION:					
a. SIZE AND LOCATION OF STRUCTURAL ELEMENTS		Art. 3.3 F		X	
b. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION	Sec. 1.16.4.3, 1.17.1			X	
c. WELDING OF REINFORCEMENT	Sec. 2.1.7.7.2, 3.3.3.4 (c), 8.3.3.4 (b)		X		
d. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F (4.4°C)) OR HOT WEATHER (TEMPERATURE ABOVE 90°F (32.2°C))		Art. 1.8 C, 1.8 D		X	
e. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	Art. 3.6 B		X		
f. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE	Art. 3.5, 3.6 C		X		Art. 3.5, 3.6 C
5. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS		Art. 1.4 B.2.a.3, 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.3, 1.4 B.4		X	

TABLE 2
REQUIRED STRUCTURAL SPECIAL INSPECTIONS

SYSTEM or MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			Continuous	Periodic	
STEEL					
MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS, AND WASHERS		AISC 360 A3.3 AISC 360 N 3.2 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS RCSC 2.1		X	MANUFACTURER'S CERTIFIED TEST REPORTS
SNUG-TIGHT JOINT HIGH-STRENGTH BOLT INSTALLATION	1705.2.1.1	RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS SECTION 9 AISC 360, SECTION M2.5		X	ALL CONNECTIONS INSPECTED AND VERIFIED SNUG
MATERIAL VERIFICATION OF STRUCTURAL STEEL	1705.2.1 2203.1 TABLE 1705.2	ASTM A6 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS AISC 360 N3.2 AISC 360 A3.1 AISC 360 M5.5		X	CERTIFIED MILL TEST REPORTS
MATERIAL VERIFICATION OF WELD FILLER METALS	TABLE 1705.2	AISC 360 N3.2 AISC 360 A3.5 APPLICABLE AWS A5 DOCUMENTS		X	MANUFACTURER'S CERTIFICATE OF COMPLIANCE
COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS	TABLE 1705.2	AWS D1.1 SECTION 6	X		ALL WELDS VISUALLY INSPECTED PER AWS D1.1 6.9
MULTIPASS FILLET WELDS	TABLE 1705.2	AWS D1.1 SECTION 6	X		ALL WELDS VISUALLY INSPECTED PER AWS D1.1 6.9
SINGLE PASS FILLET WELDS GREATER THAN 5/16"	TABLE 1705.2	AWS D1.1 SECTION 6	X		ALL WELDS VISUALLY INSPECTED PER AWS D1.1 6.9
PLUG AND SLOT WELDS	TABLE 1705.2	AWS D1.1 SECTION 6	X		ALL WELDS VISUALLY INSPECTED PER AWS D1.1 6.9
SINGLE PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16"	TABLE 1705.2	AWS D1.1 SECTION 6		X	ALL WELDS VISUALLY INSPECTED PER AWS D1.1 6.9
FLOOR AND ROOF DECK WELDS	TABLE 1705.2	AWS D1.3 SECTION 7		X	ALL WELDS INSPECTED PER AWS D1.3 7.1
MATERIAL VERIFICATION OF REINFORCING STEEL FOR WELDING	TABLE 1705.2 1705.2.2.1.2	ACI 318: 3.5.2 AWS D1.4		X	CERTIFIED MILL TEST REPORTS
MATERIAL VERIFICATION OF ANCHOR BOLTS AND THREADED RODS		AISC 360 N3.2 AISC 360 A3.4 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS		X	MANUFACTURER'S CERTIFIED TEST REPORTS
VERIFYING USE OF PROPER WPS'S	TABLE 1705.2	AISC 360 N3.2			COPY OF WELDING PROCEDURE SPECIFICATIONS
VERIFYING WELDER AND WELDING INSPECTOR QUALIFICATIONS	1705.2.2.1			X	COPY OF QUALIFICATION CARDS
INSTALLATION OF COMPOSITE SLAB DECKING	1705.1.1	ICC EVALUATION REPORT ASCE 9 CHAPTER 3		X	SPECIAL INSPECTIONS APPLY TO DECKING TYPE, DEPTH, GAGE, AND FASTENING
INSTALLATION OF ROOF DECKING	1705.1.1	ICC EVALUATION REPORT		X	SPECIAL INSPECTIONS APPLY TO DECKING TYPE, DEPTH AND GAGE, POWER ACTUATED FASTENERS, SCREWS, PROPRIETARY SIDE SEAM ATTACHMENTS, BUTTON PUNCHES AND SHEAR CONNECTORS
WELDING STUDS EXCEPT AS NOTED OTHERWISE		AISC 360 N6 AWS D1.1 SECTION 7	X		CONTINUOUS INSPECTION IS NOT REQUIRED WHEN WELDS INSTALLED WITH AN AUTOMATICALLY TIMED STUD WELDING MACHINE PER SECTION 7 OF AWS D1.1 (ONLY PERIODIC), 1705.2 (3)
WELDING STUDS IN STRUCTURAL DIAPHRAGMS				X	ALL WELDS VISUALLY INSPECTED PER AWS D1.1 7.8.1
WELDING STAIR AND RAILING SYSTEMS	1705.2 (2.5)	AWS D1.1 SECTION 6		X	ALL WELDS VISUALLY INSPECTED PER AWS D1.1 6.9

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TABLE 1
REQUIRED TESTING for SPECIAL INSPECTIONS

SYSTEM or MATERIAL	TESTING				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			Continuous	Periodic	
SOILS					
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	TABLE 1705.6		**PER THE GEOTECHNICAL REPORT**		BY THE GEOTECHNICAL ENGINEER
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	TABLE 1705.6				
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	TABLE 1705.6 1803.5.1				TESTING OF COMPACTED FILL MATERIALS (SEE TABLE 5)
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	TABLE 1705.6				BY THE GEOTECHNICAL ENGINEER
PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	TABLE 1705.6				

TABLE 5
REQUIRED TESTING for SPECIAL INSPECTIONS

SYSTEM or MATERIAL	TESTING				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			Continuous	Periodic	
GEOTECHNICAL					
GEOTECHNICAL ENGINEER TO PERFORM TESTING OT COMPACTED FILL MATERIALS	1803		**PER THE GEOTECHNICAL REPORT**		TESTING PER THE GEOTECHNICAL REPORT
FILL IN-PLACE DENSITY OR PREPARED SUBGRADE DENSITY	1705.6				BY THE GEOTECHNICAL ENGINEER
MATERIAL VERIFICATION		VARIES; CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS			BY THE GEOTECHNICAL ENGINEER
CONCRETE					
AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	TABLE 1704.4	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	**X**		FABRICATE SPECIMENS AT TIME FRESH CONCRETE IS PLACED ONCE EACH DAY FOR A GIVEN CLASS OF CONCRETE, OR LESS THAN ONCE FOR EACH 150 YDS OF CONCRETE, OR LESS THAN ONCE FOR EACH 5,000 FT2 OF SURFACE AREA FOR SLABS/WALLS. ONCE EACH SHIFT FROM IN-PLACE WORK OR FROM TEST PANEL AND MINIMUM ONE SPECIMEN FOR EACH 50 CUBIC YARDS. PRECONSTRUCTION TESTS AS REQUIRED PER THE BUILDING OFFICIAL.
CONCRETE STRENGTH	TABLE 1704.4 1903 1905	ASTM C39	**X**		
CONCRETE SLUMP		ASTM C143	**X**		
CONCRETE AIR CONTENT		ASTM C231	**X**		
CONCRETE TEMPERATURE		ASTM C1064	**X**		
MASONRY					
UNIT STRENGTH METHOD	2105.2.2.1 TABLE 2105.2.2.1.1 TABLE 2105.2.2.1.2	ASTM C62 ASTM C216 ASTM C652 ASTM C476 ASTM C55 ASTM C90	TESTING EVERY 5,000 FT2 AT LEVEL C QUALITY ASSURANCE		
COMPRESSIVE STRENGTH OF MORTAR		MSJC ASTM C270			
COMPRESSIVE STRENGTH OF GROUT		MSJC ASTM C270			

TABLE 9
STRUCTURAL OBSERVATION

SYSTEM or MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			Continuous	Periodic	
PRIOR TO CONCRETE PLACEMENT AT MAT FOUNDATION	1704.5			**X**	
DURING MASONRY WALL CONSTRUCTION	1704.5			**X**	
AFTER STRUCTUAL STEEL ERECTION	1704.5			**X**	

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181436
PROJECT NUMBER
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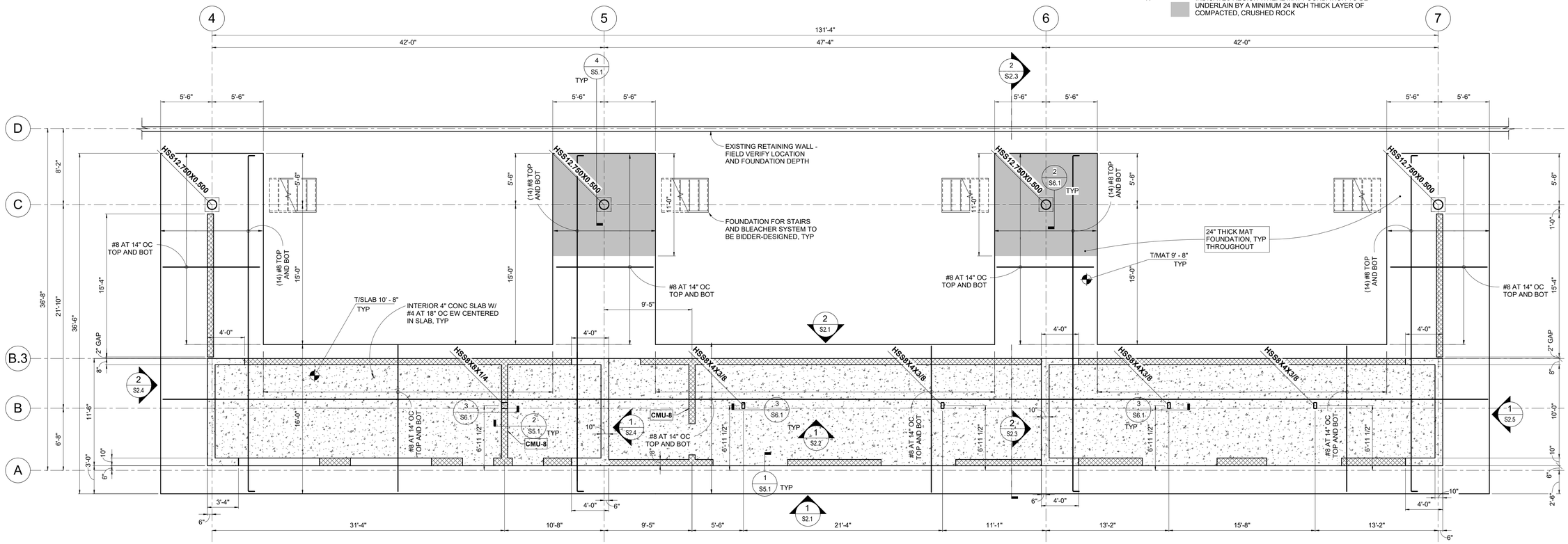
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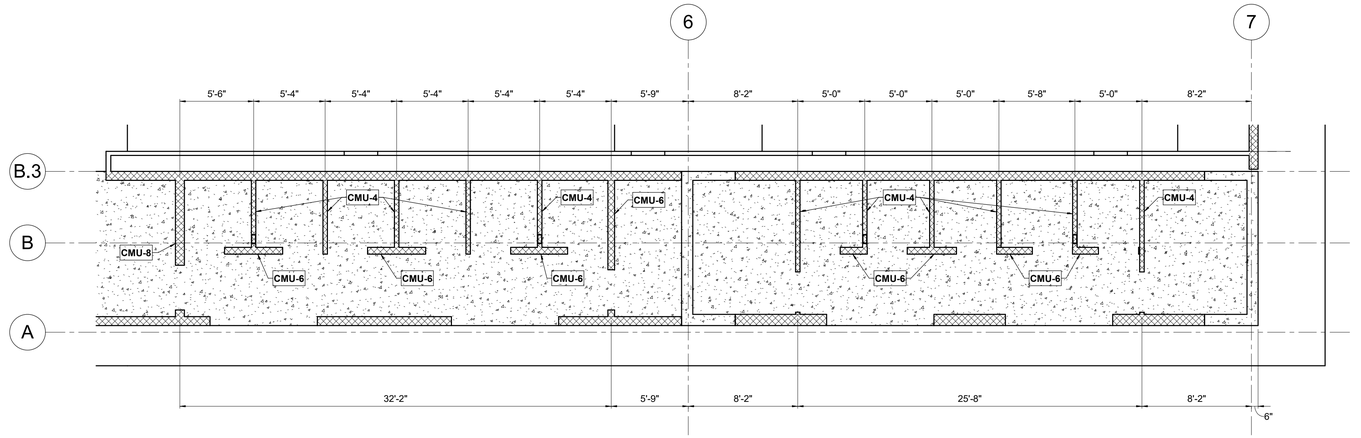
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CMU WALL SCHEDULE				
Mark	Thickness	Vert Reinf	Horiz Reinf	Notes
CMU-4	4"	#4 AT 24" OC	#4 AT 32" OC	SOLID GROUT
CMU-6	6"	#4 AT 24" OC	#4 AT 32" OC	SOLID GROUT
CMU-8	8"	#4 AT 24" OC	#4 AT 32" OC	SOLID GROUT

NOTES:
1. TYPIICAL MAT FOUNDATION DEPTH TO BE 24" THROUGHOUT
2. UNLESS NOTED OTHERWISE, TOP BARS IN NORTH-SOUTH DIRECTION TO BE SET AT 2" CLEAR AND TOP BARS IN EAST-WEST DIRECTION TO BE SET AT 3" CLEAR
3. BOTTOM BARS IN NORTH-SOUTH DIRECTION TO BE SET AT 3" CLEAR AND BOTTOM BARS IN EAST-WEST DIRECTION TO BE SET AT 4" CLEAR
4. AT INTERIOR SLAB ON GRADE ABOVE MAT FOUNDATION, PROVIDE CONTROL JOINTS AT A MAX SPACING OF 24-36 TIMES THE SLAB THICKNESS. CONTRACTOR TO SUBMIT CONTROL JOINT LAYOUT PLAN FOR APPROVAL - SEE 3 / S5.1
5. SEE SHEET S8.1 FOR TYPICAL MASONRY WALL DETAILS
6. MAT FOUNDATION TO BE UNDERLAIN BY A MINIMUM 12 INCH THICK LAYER OF COMPACTED, CRUSHED ROCK UNO
7. INDICATES REGION WHERE MAT FOUNDATION TO BE UNDERLAIN BY A MINIMUM 24 INCH THICK LAYER OF COMPACTED, CRUSHED ROCK



1 FOUNDATION PLAN - BASE BID
S1.1 | 3/16" = 1'-0"



2 ADDITIVE ALTERNATE TWO
S1.1 | 3/16" = 1'-0"

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FOUNDATION PLAN

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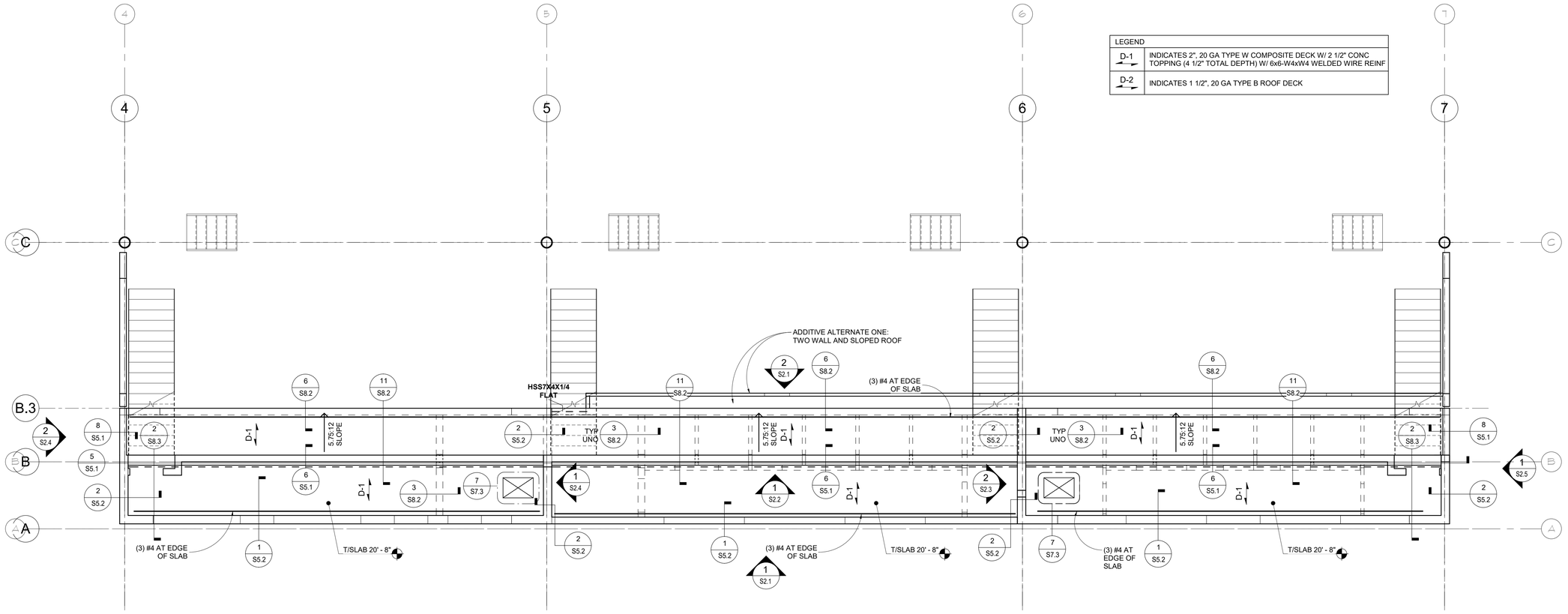
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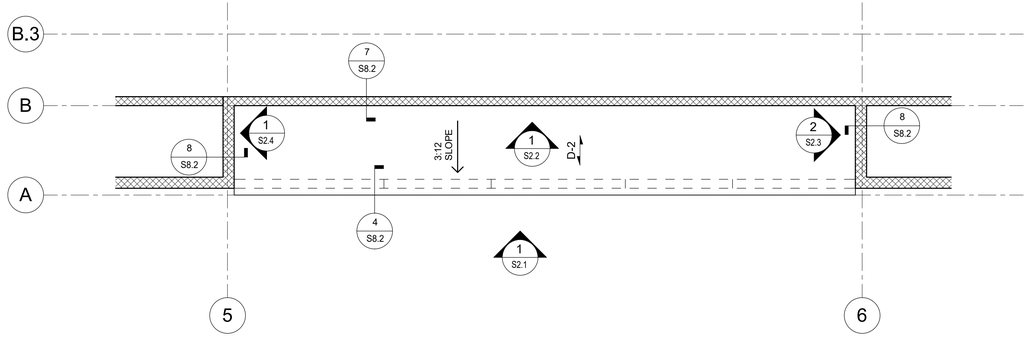
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LEGEND	
D-1	INDICATES 2", 20 GA TYPE W COMPOSITE DECK W/ 2 1/2" CONC TOPPING (4 1/2" TOTAL DEPTH) W/ 6x6-W4xW4 WELDED WIRE REINF
D-2	INDICATES 1 1/2", 20 GA TYPE B ROOF DECK



1 STAIRWELL FLOOR FRAMING PLAN

S1.2 | 3/16" = 1'-0"



2 ATTIC ROOF FRAMING PLAN

S1.2 | 3/16" = 1'-0"

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STAIRWELL FLOOR FRAMING PLAN

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PROJECT NUMBER
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DATE

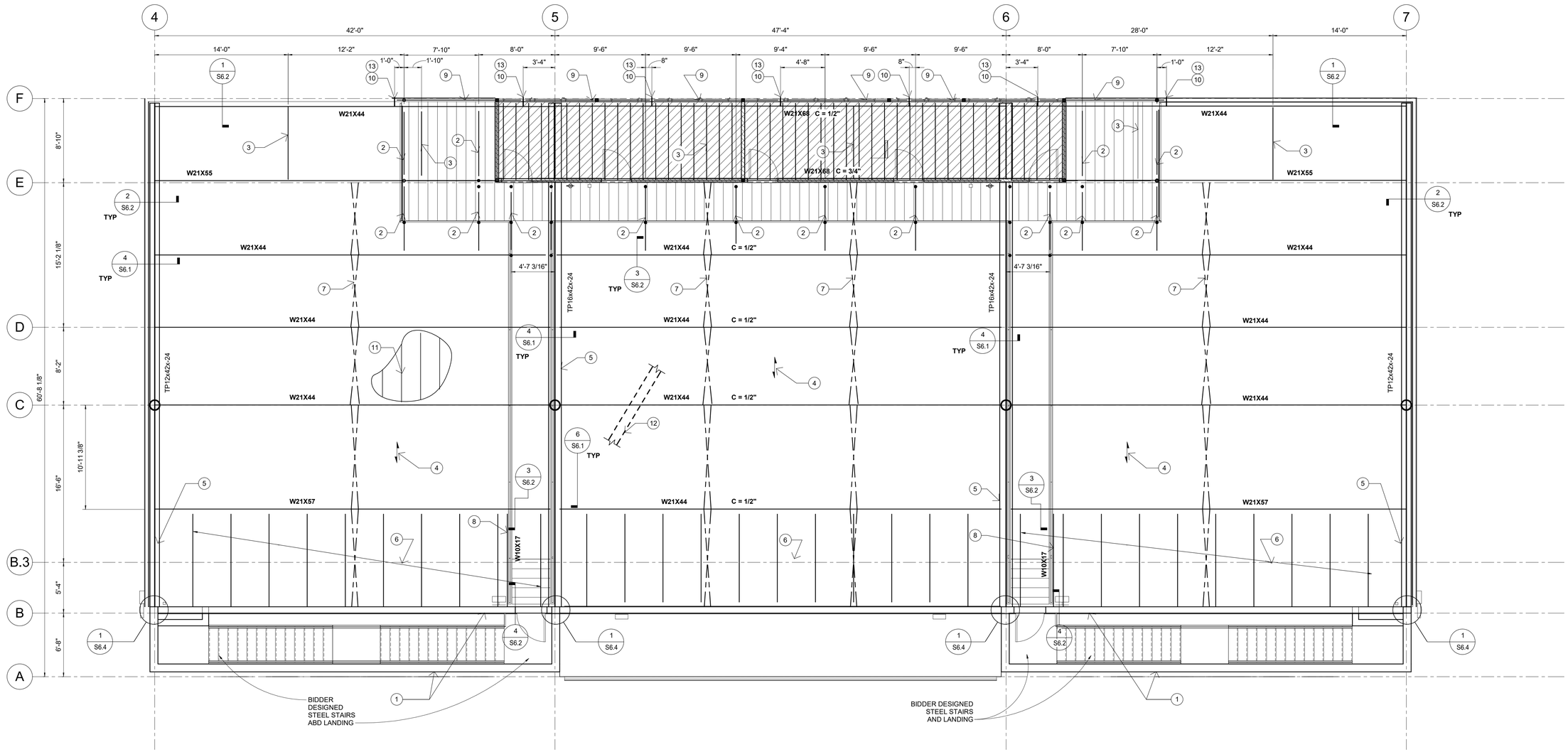
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1 MAIN ROOF FRAMING

S1.3 | 3/16" = 1'-0"

KEYNOTES	
1	MASONRY WALL
2	W10x17 AT WALKWAY SUPPORT.
3	L 4x4x3/8 SOFFIT BRACE SEE DETAIL 6 / S6.3
4	DECKING TO BE VERCO 20 GA PLN-24 3" ROOF DECK SIDE LAPS CONNECTED W/ PUNCHLOK II TOOL AT 12" OC PROVIDE MIN (4) HILTI X-ENP-19-L15 AT EA SUPPORT. SHEETS MAY BE INSTALLED IN SINGLE. DOUBLE, OR TRIPLE SPAN CONDITION
5	PROVIDE HILTI X-ENP-19-LI5 AT 12" OC ALONG TAPERED PLATE GIRDERS (TYP)
6	L 4x4x1/4 AT 4'-0" OC FOR WALL ANCHORAGE SEE 9 / S8.2
7	FOR BRIDGING SEE DETAIL 5 / S6.3
8	ALIGN BEAM WITH WALKWAY COLUMNS
9	HSS 8x4x3/8 (MAX SPAN 16'-0") BELOW PRESSBOX WALL
10	PRESS BOX WALL SUPPORT CONNECTION SEE 4 / S7.1
11	CEILING FRAMING (BELOW) TO BE 600Z250-54 AT 24" OC FOR SPANNING 10'-9" (MAX) AND 3'-0" OC AT JOISTS SPANNING 8'-0" OR LESS FOR JOIST CONN SEE 2 / S7.3
12	AT ELECT. CONDUIT SEE 1 / S7.3 FOR CEILING FRAMING
13	DIMENSIONS ARE TAKEN FROM CENTER LINE OF CONN PLATE

GENERAL NOTES

1. REFERENCE S0.1 AND S0.3 FOR GENERAL STRUCTURAL NOTES
2. ◄—► INDICATES DIRECTION OF METAL DECKING SPAN
3. TP16x42-24 TP12x42-24 INDICATES TAPERED PLATE GIRDER SEE DETAIL 1 / S6.1
4. SEE ARCH. FOR ALL DIMENSIONS NOT SHOWN

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ROOF FRAMING PLAN

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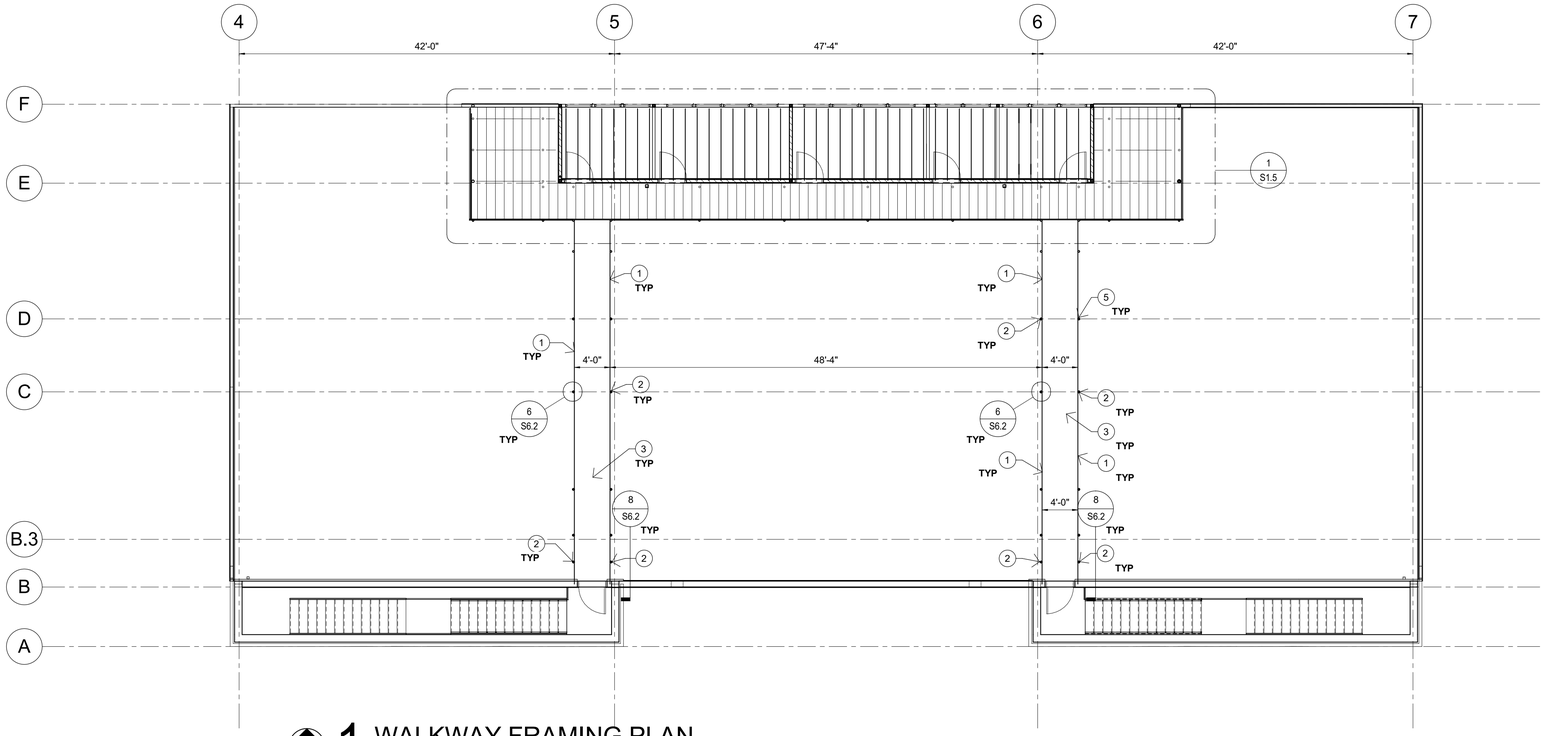
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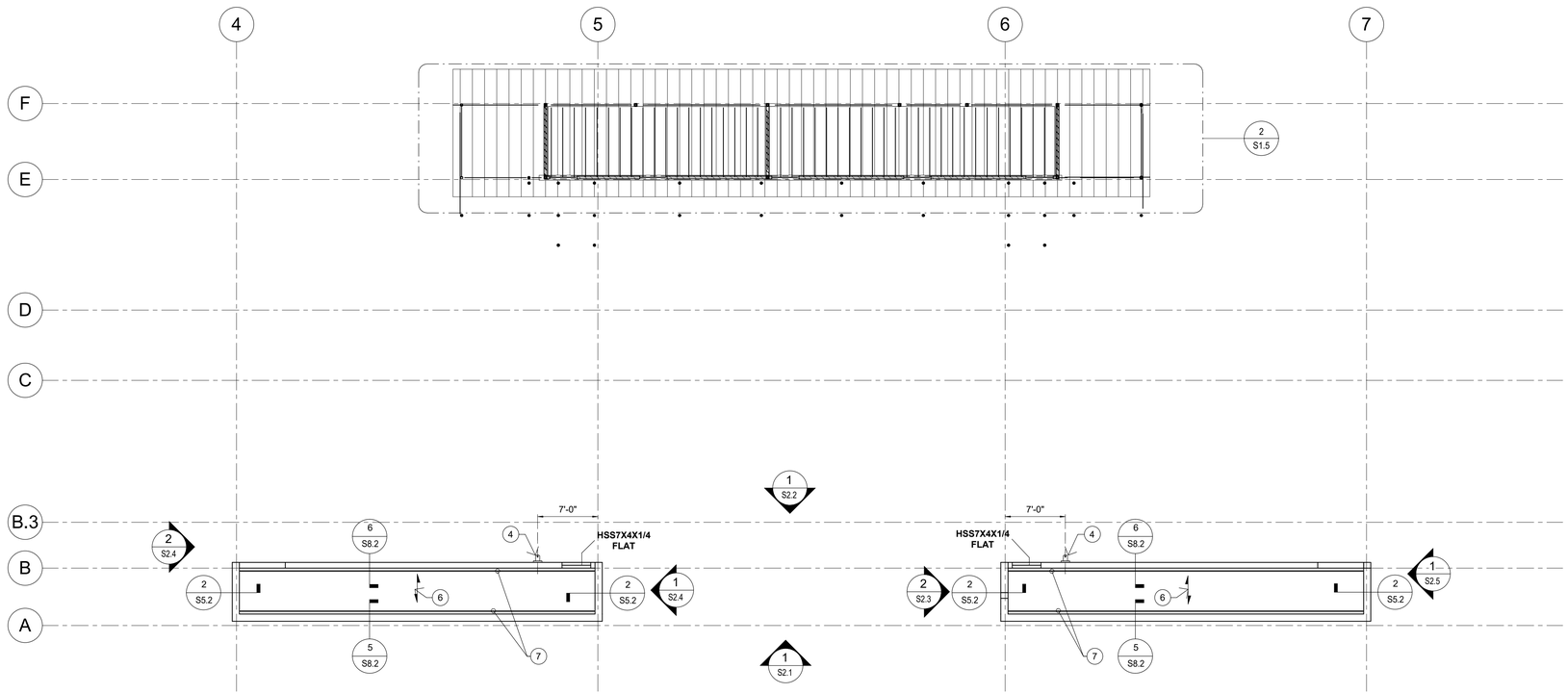
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KEYNOTES	
1	L 4x4x1/2 WALKWAY SUPPORT TYP U.N.0.
2	2" DIA SCH. 40 PIPE WALK WAY COLUMNS (ALIGN W/ BEAM BELOW)
3	12"x2 1/2"x18 GAUGE UNISTRUT PLANK GRATING (TYP)
4	FALL PROTECTION ANCHOR PLACED 3'-6" ABOVE ROOF, SEE DETAIL 5 / S6.2
5	FOR BASE CONN 7 / S6.3 TYP
6	INDICATES 2", 20 GA TYPE W COMPOSITE DECK W/ 2 1/2" CONC TOPPING (4 1/2" TOTAL DEPTH) W/ 6x6-W4xW4 WELDED WIRE REINF
7	(3) #4 AT EDGE OF SLAB

1 WALKWAY FRAMING PLAN

S1.4 | 1/8" = 1'-0"



2 PRESS BOX & STAIRWELL ROOF FRAMING

S1.4 | 1/8" = 1'-0"

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PRESS BOX, STAIRWELL

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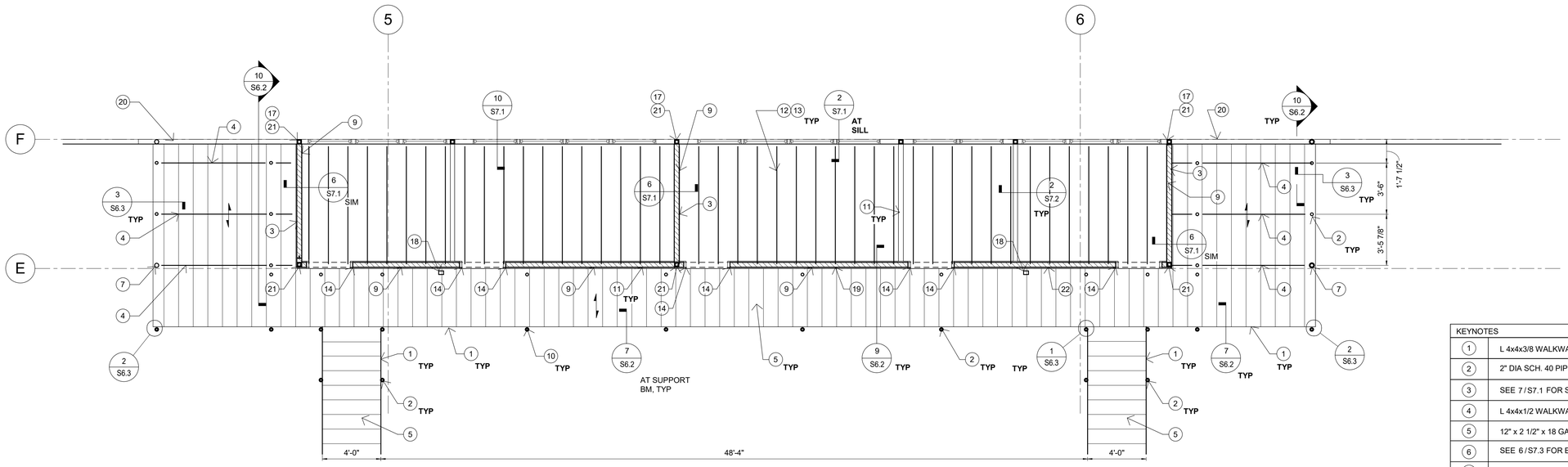
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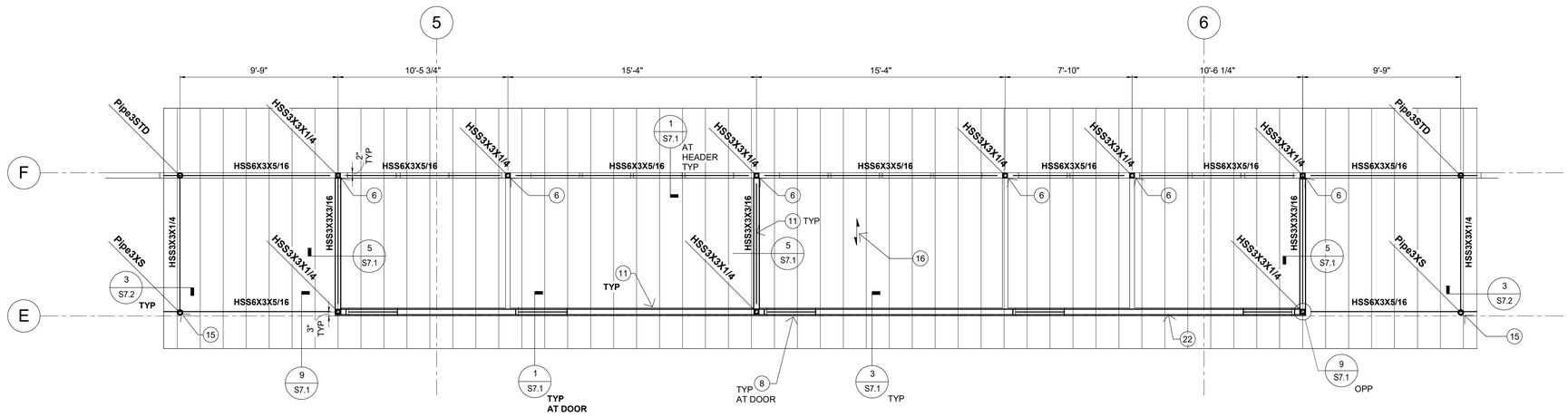
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1 ENLARGED PRESS BOX FLR. FRAMING PLAN

S1.5 | 1/4" = 1'-0"



2 ENLARGED PRESS BOX ROOF FRAMING

S1.5 | 1/4" = 1'-0"

KEYNOTES	
1	L 4x4x3/8 WALKWAY SUPPORT TYP U.N.0.
2	2" DIA SCH. 40 PIPE WALK WAY COLUMNS (ALIGN W/ BEAM BELOW)
3	SEE 7 / S7.1 FOR SUPPORT AT WALL
4	L 4x4x1/2 WALKWAY SUPPORT
5	12" x 2 1/2" x 18 GAUGE UNISTRUT PLANK GRATING (TYP)
6	SEE 6 / S7.3 FOR BEAM CONNECTION
7	AT COLUMN SEE 8 / S6.3 FOR WALKWAY FRAMING
8	(2) 800 S162-54 HEADER
9	SHEAR WALL SHEATHED W/ 1/2" SUREBOARD SERIES 200 STRUCTURAL PANELS W/ #8 X 1 1/4 SCREWS (0.138 INCH DIA) AT 6" OC AT PANEL EDGES AND INTERMEDIATE FRAMING MEMBERS PROVIDE BLKG AT PANEL EDGES
10	FOR BASE CONN SEE 7 / S6.3, TYP
11	WALL STUDS TO BE 362 S162-43 AT 16" OC (U.N.O.)
12	FLOOR TO BE SHEATHED W/ 3/4" SURE BOARD TYPE 200 S-F W/ NO. 8 SELF-DRILLING, SELF-TAPPING SCREWS AT 6" OC ALL FRAMING MEMBERS
13	FLOOR JOISTS TO BE 800 S200-54 JOISTS SPACED AT 16" OC (MAX)
14	SEE 6 / S7.2 FOR HOLDOWN CONN EA. END OF SHEAR WALL
15	COLUMN HAS BEEN DESIGNED TO WITHSTAND A 5000LB FALL PROTECTION LOAD AT 6 INCHES MAX ABOVE THE DECK WALKING SURFACE
16	DECKING TO BE VERCO 20 GA PLN-24, 3" ROOF DECK SIDE LAPS CONNECTED W/ PUNCHLOK TOOL AT 12" O. C.
17	SEE 11 / S7.1 FOR FRONT WALL SUPPORT
18	AT LOCATIONS WHERE DOWNSPOUTS PENETRATE WALK WAY, SEE 9 / S6.3
19	SEE 4 / S7.2 FOR WALL/ FLOOR SUPPORT
20	SEE 7 / S7.2
21	SEE 2 / S6.4 FOR SHEARWALL INTERSECTIONS
22	WALL STUDS AT SOUTH EXTERIOR WALL TO BE 600S162-43 AT 16" OC

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PRESS BOX ENLARGED PLANS

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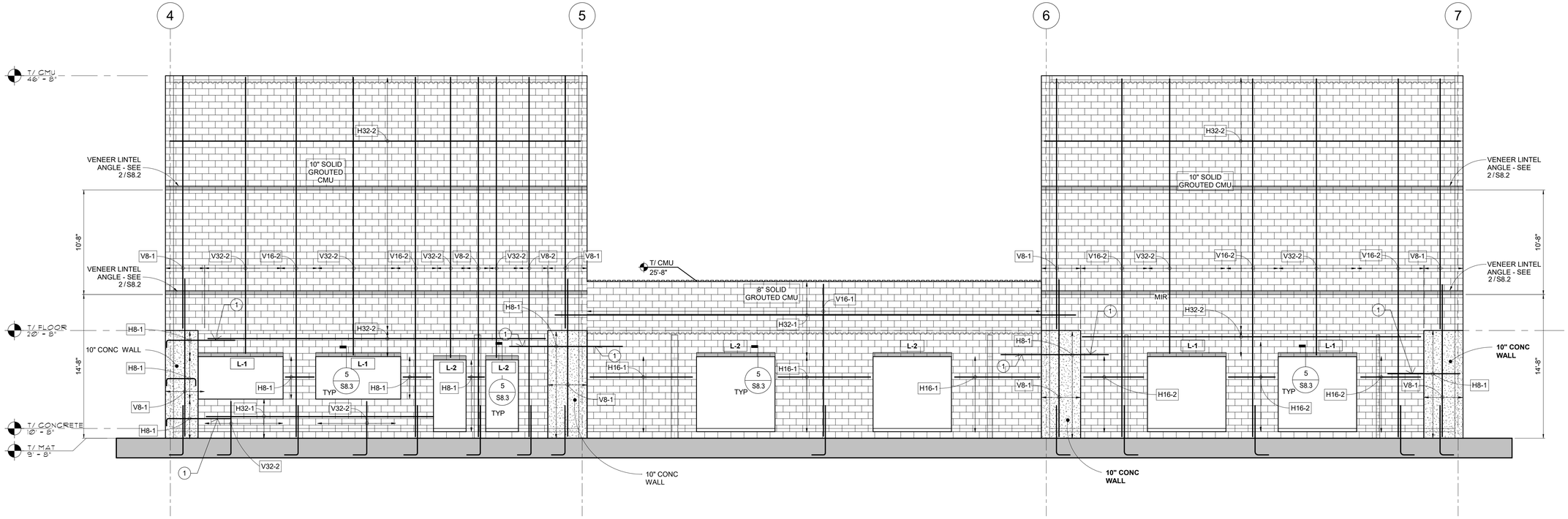
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1 GRID A WALL ELEVATION

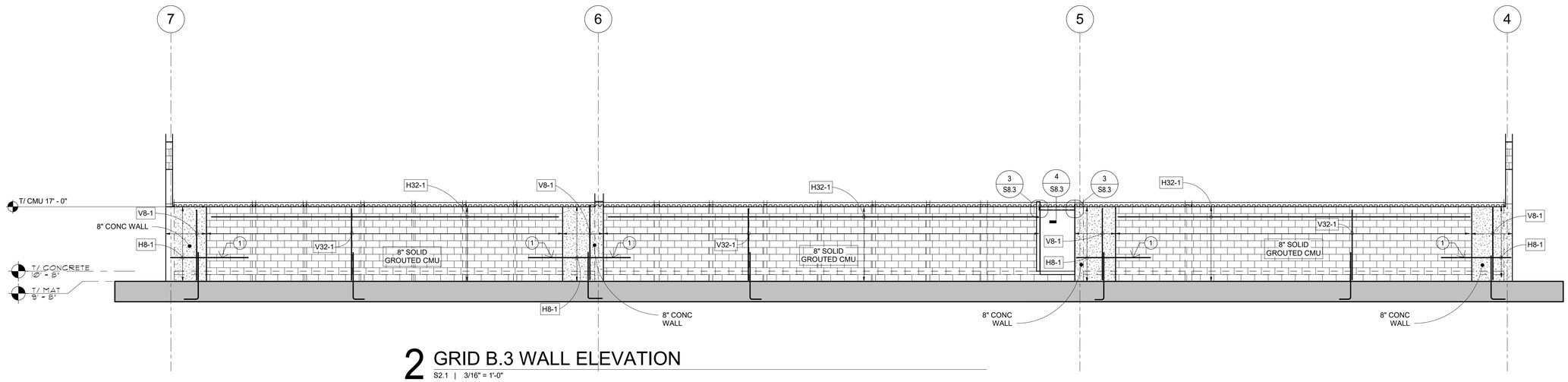
S2.1 | 3/16" = 1'-0"

VERTICAL WALL REINF SCHEDULE	
Mark	Reinforcement
V32-2	#5 AT 32" OC VERT EF
V32-1	#5 AT 32" OC VERT
V16-2	#5 AT 16" OC VERT EF
V16-1	#5 AT 16" OC VERT
V8-2	#5 AT 8" OC VERT EF
V8-1	#5 AT 8" OC VERT

HORIZONTAL WALL REINF SCHEDULE	
Mark	Reinforcement
H32-2	(2) #5 AT 32" OC HORIZ EF
H32-1	#5 AT 32" OC HORIZ
H16-2	(2) #5 AT 16" OC HORIZ EF
H16-1	#5 AT 16" OC HORIZ
H8-2	(2) #5 AT 8" OC HORIZ EF
H8-1	#5 AT 8" OC HORIZ

KEYNOTES	
1	EXTEND HORIZ REINF 3'-0" INTO CMU WALL

LEGEND	
L-#	INDICATES LINTEL PER SCHEDULE ON 6 / S8.1



2 GRID B.3 WALL ELEVATION

S2.1 | 3/16" = 1'-0"

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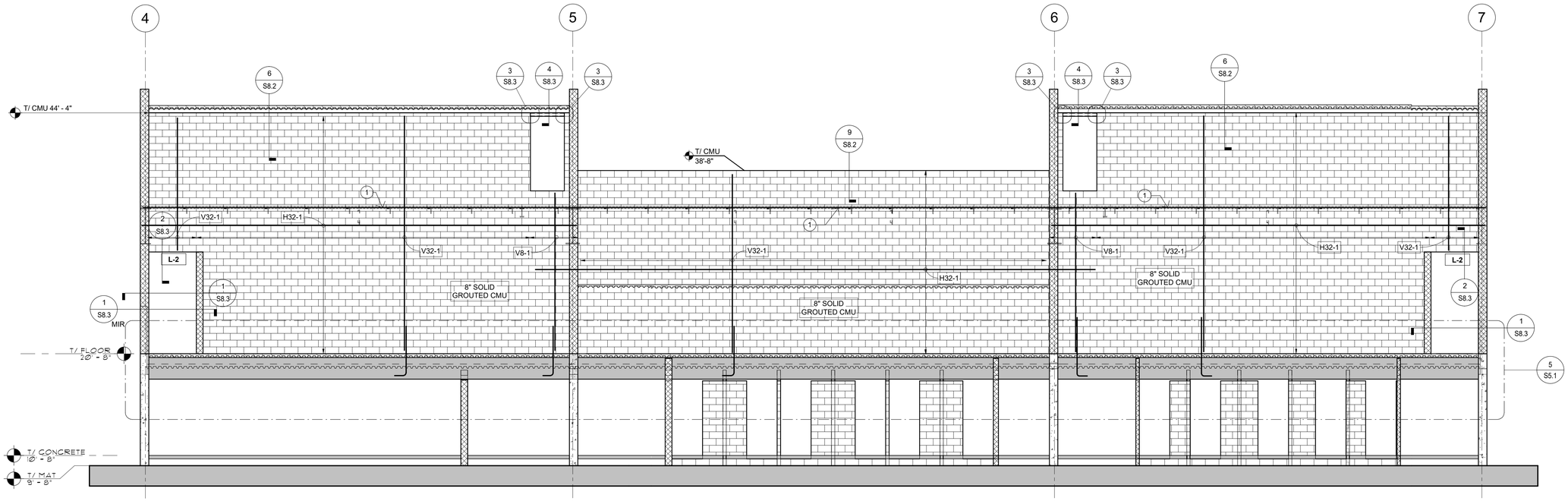
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VERTICAL WALL REINF SCHEDULE	
Mark	Reinforcement
V32-2	#5 AT 32" OC VERT EF
V32-1	#5 AT 32" OC VERT
V16-2	#5 AT 16" OC VERT EF
V16-1	#5 AT 16" OC VERT
V8-2	#5 AT 8" OC VERT EF
V8-1	#5 AT 8" OC VERT

HORIZONTAL WALL REINF SCHEDULE	
Mark	Reinforcement
H32-2	(2) #5 AT 32" OC HORIZ EF
H32-1	#5 AT 32" OC HORIZ
H16-2	(2) #5 AT 16" OC HORIZ EF
H16-1	#5 AT 16" OC HORIZ
H8-2	(2) #5 AT 8" OC HORIZ EF
H8-1	#5 AT 8" OC HORIZ

KEYNOTES	
1	PROVIDE (4) #5 BOND BEAM AT ROOF ELEVATION

1 GRID B WALL ELEVATION

S2.2 | 3/16" = 1'-0"

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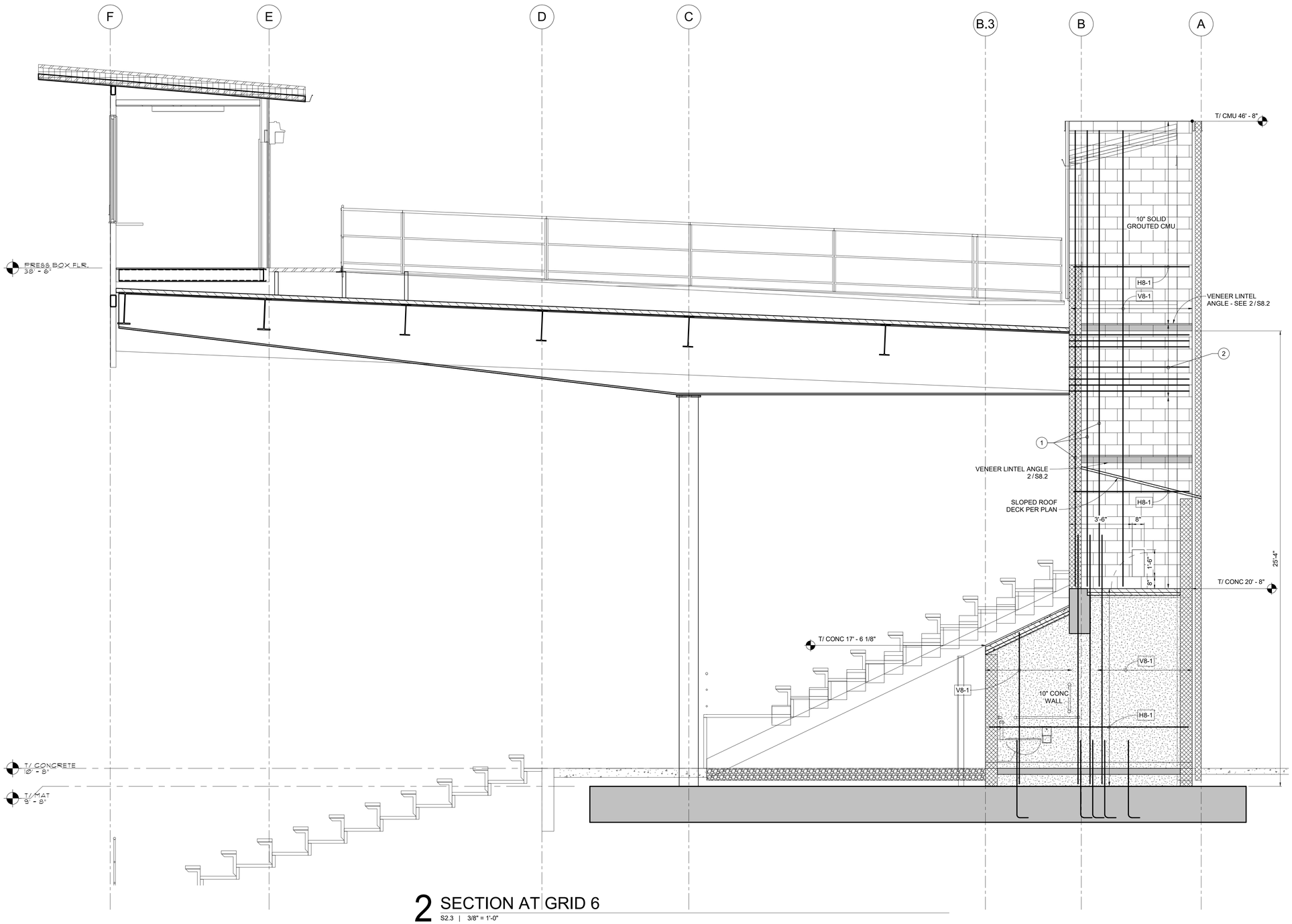
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VERTICAL WALL REINF SCHEDULE	
Mark	Reinforcement
V32-2	#5 AT 32" OC VERT EF
V32-1	#5 AT 32" OC VERT
V16-2	#5 AT 16" OC VERT EF
V16-1	#5 AT 16" OC VERT
V8-2	#5 AT 8" OC VERT EF
V8-1	#5 AT 8" OC VERT

HORIZONTAL WALL REINF SCHEDULE	
Mark	Reinforcement
H32-2	(2) #5 AT 32" OC HORIZ EF
H32-1	#5 AT 32" OC HORIZ
H16-2	(2) #5 AT 16" OC HORIZ EF
H16-1	#5 AT 16" OC HORIZ
H8-2	(2) #5 AT 8" OC HORIZ EF
H8-1	#5 AT 8" OC HORIZ

KEYNOTES	
1	(2) #6 EA CELL VERT REINF AT GIRDER CONNECTION PER 1 / S6.4
4	HORIZ REINF AT GIRDER PER 1 / S6.4



2 SECTION AT GRID 6

S2.3 | 3/8" = 1'-0"

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S2.3

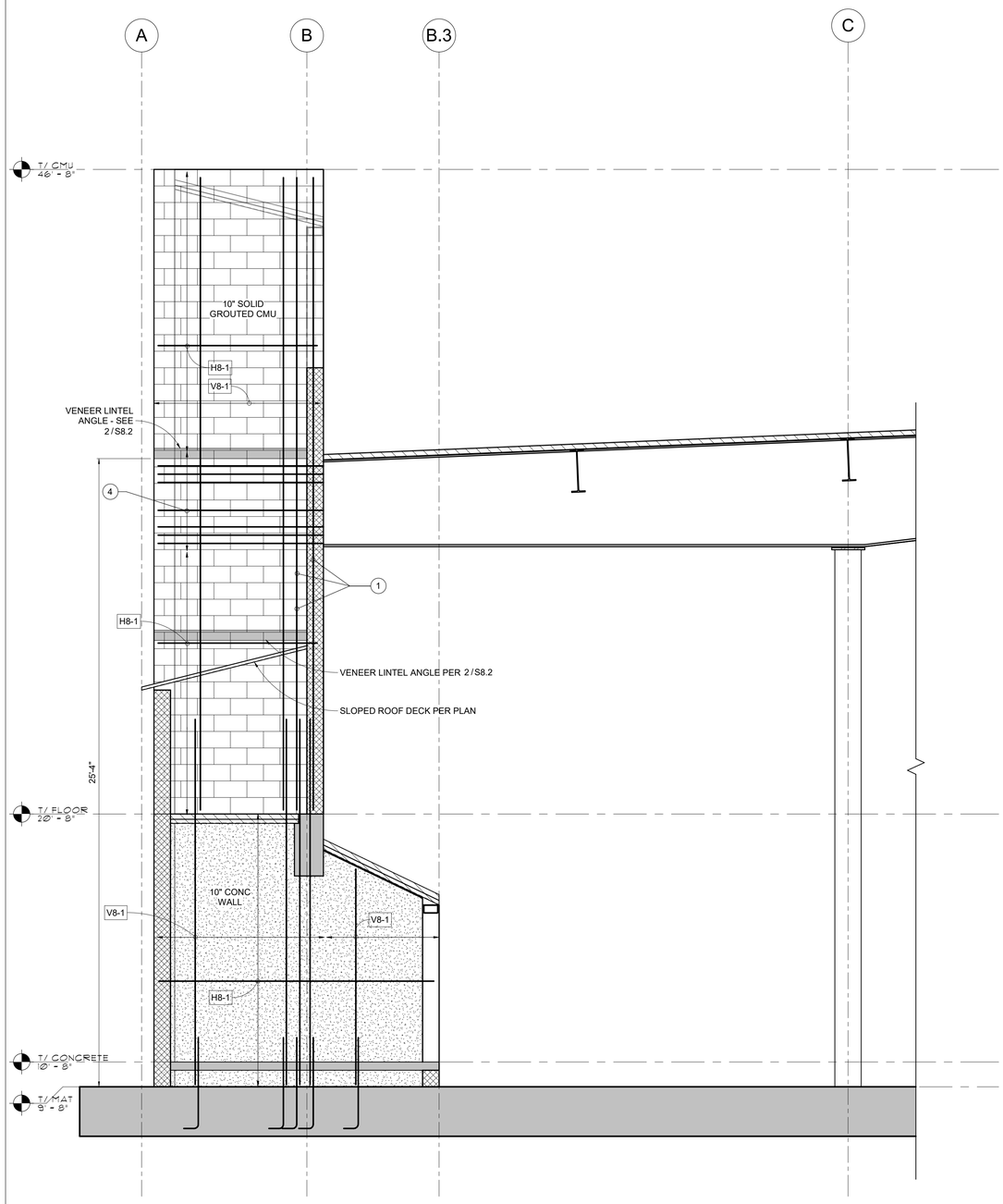
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VERTICAL WALL REINF SCHEDULE	
Mark	Reinforcement
V32-2	#5 AT 32" OC VERT EF
V32-1	#5 AT 32" OC VERT
V16-2	#5 AT 16" OC VERT EF
V16-1	#5 AT 16" OC VERT
V8-2	#5 AT 8" OC VERT EF
V8-1	#5 AT 8" OC VERT

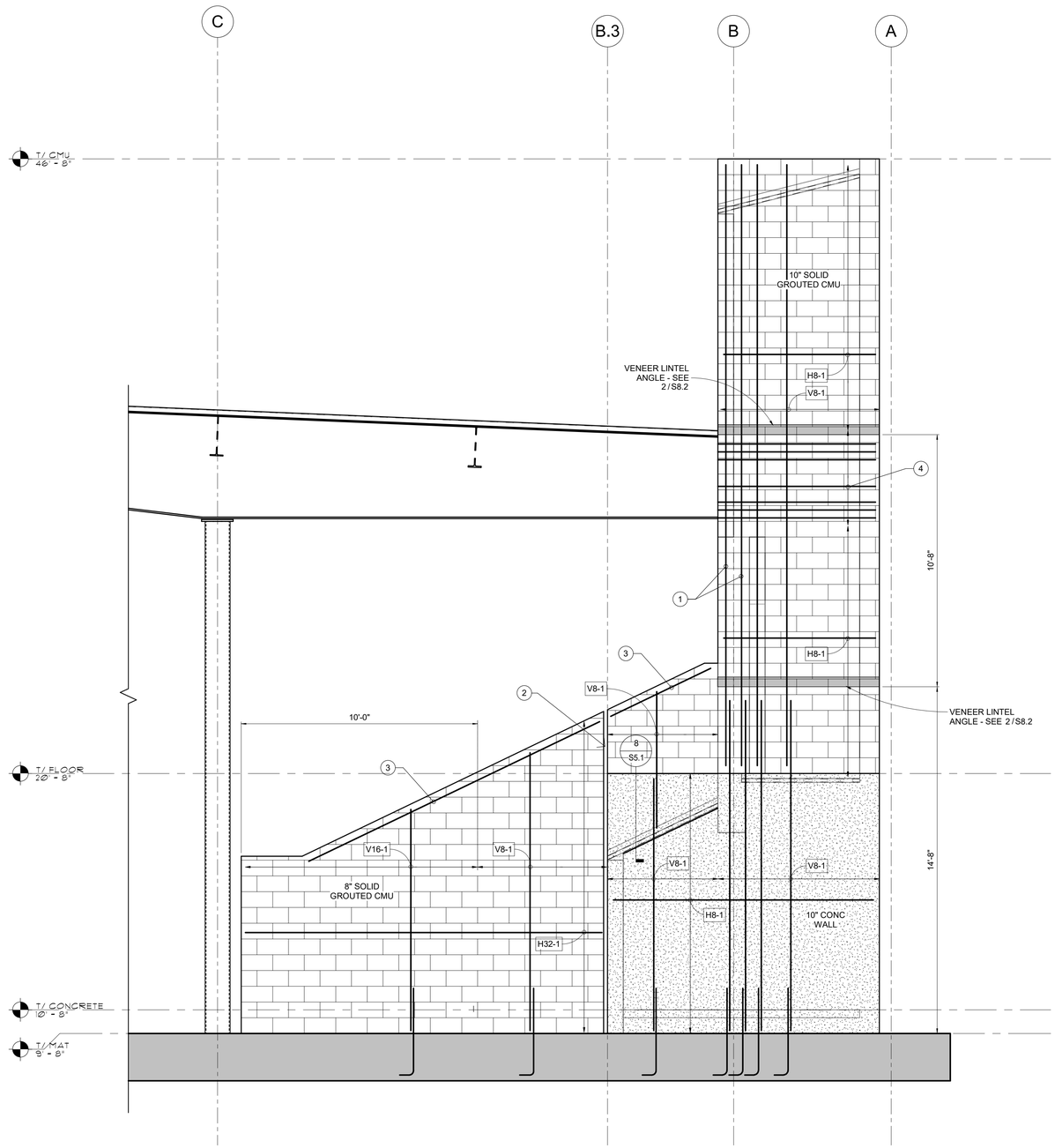
HORIZONTAL WALL REINF SCHEDULE	
Mark	Reinforcement
H32-2	(2) #5 AT 32" OC HORIZ EF
H32-1	#5 AT 32" OC HORIZ
H16-2	(2) #5 AT 16" OC HORIZ EF
H16-1	#5 AT 16" OC HORIZ
H8-2	(2) #5 AT 8" OC HORIZ EF
H8-1	#5 AT 8" OC HORIZ

KEYNOTES	
1	(2) #6 EA CELL VERT REINF AT GIRDER CONNECTION PER 1/S6.4
2	2" WIDE SEISMIC JOINT
3	#5 CONT AT T/WALL
4	HORIZ REINF AT GIRDER PER 1/S6.4



1 GRID 5 WALL ELEVATION

S2.4 | 3/8" = 1'-0"



2 GRID 4 WALL ELEVATION

S2.4 | 3/8" = 1'-0"

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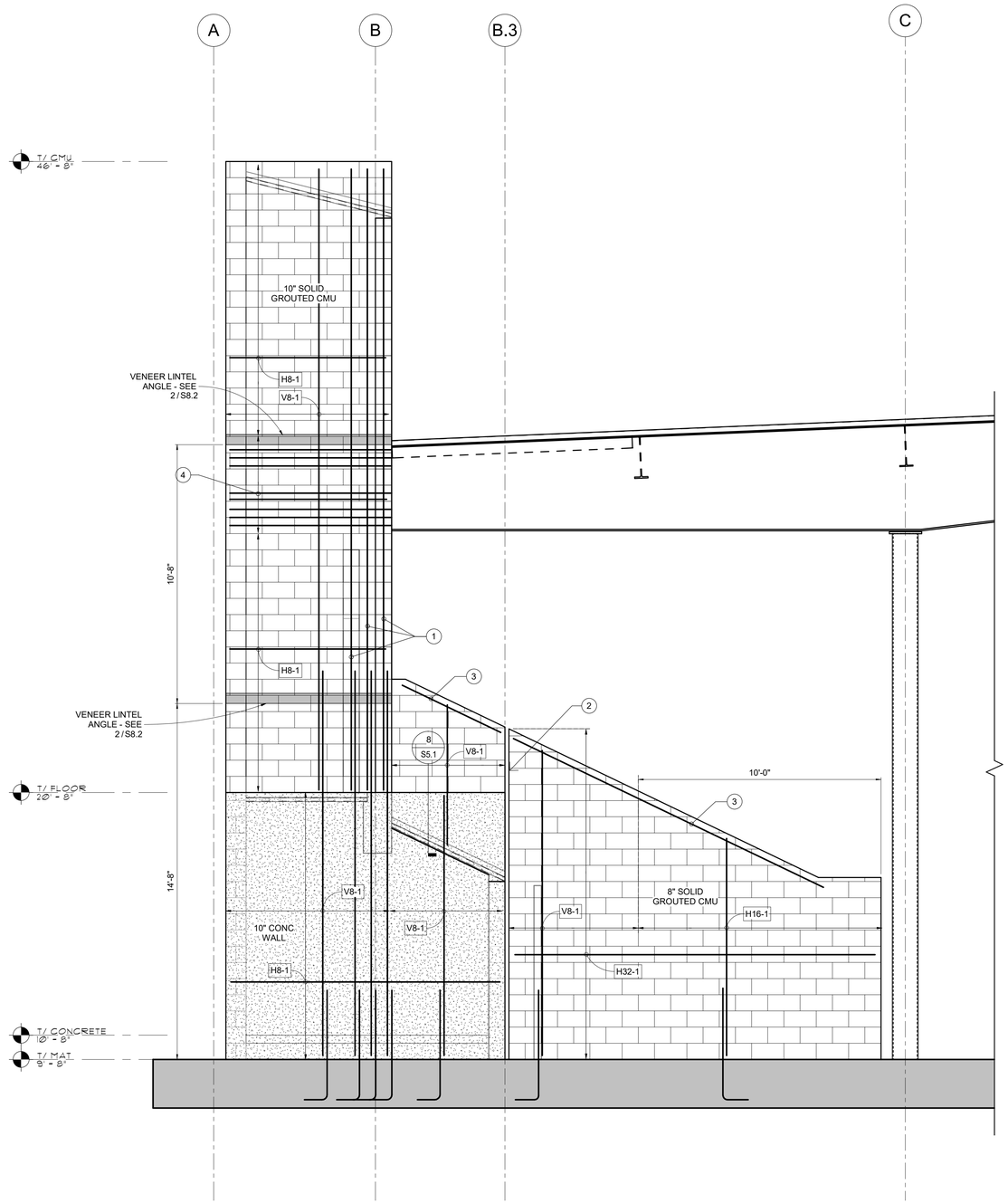
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1 GRID 7 WALL ELEVATION

S2.5 | 3/8" = 1'-0"

VERTICAL WALL REINF SCHEDULE	
Mark	Reinforcement
V32-2	#5 AT 32" OC VERT EF
V32-1	#5 AT 32" OC VERT
V16-2	#5 AT 16" OC VERT EF
V16-1	#5 AT 16" OC VERT
V8-2	#5 AT 8" OC VERT EF
V8-1	#5 AT 8" OC VERT

HORIZONTAL WALL REINF SCHEDULE	
Mark	Reinforcement
H32-2	(2) #5 AT 32" OC HORIZ EF
H32-1	#5 AT 32" OC HORIZ
H16-2	(2) #5 AT 16" OC HORIZ EF
H16-1	#5 AT 16" OC HORIZ
H8-2	(2) #5 AT 8" OC HORIZ EF
H8-1	#5 AT 8" OC HORIZ

KEYNOTES	
1	(2) #6 EA CELL VERT REINF AT GIRDER CONN PER 9 / S6.3
2	2" WIDE SEISMIC JOINT
3	#5 CONT AT T/WALL
4	HORIZ REINF AT GIRDER CONN PER 9 / S6.3

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OREGON
June 29, 2012
ANDREW RYAN LEIGHTY
EXPIRES: 12 - 31 - 2020

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200 North State Street ■ Lake Oswego, Oregon 97034

LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OREGON 97034

STRUCTURAL ELEVATIONS

18146
PROJECT NUMBER
20 SEP 2019
DATE

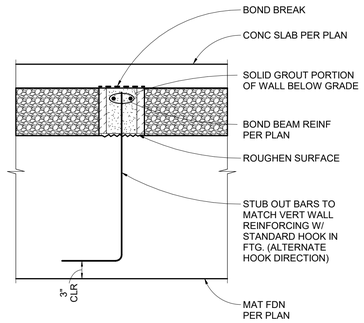
REVISIONS

S2.5

PERMIT SET

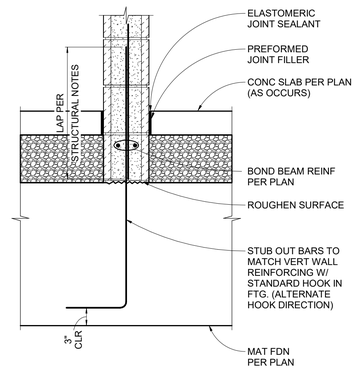
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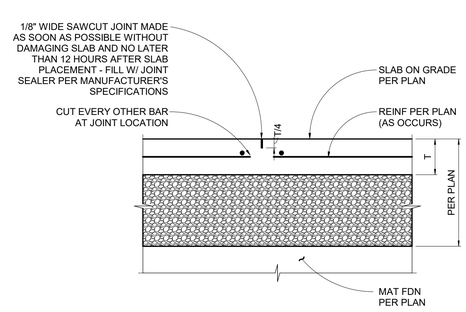
1 CMU WALL AT DOOR OPENING

S5.1 | 1" = 1'-0"



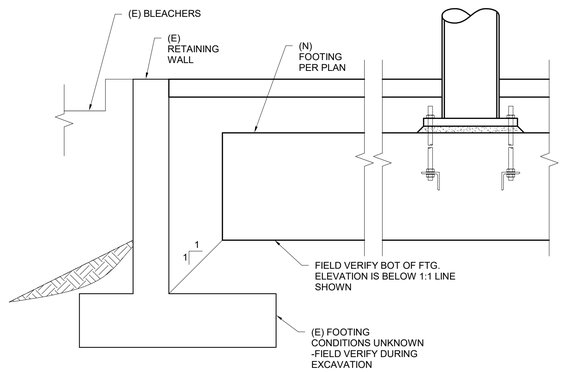
2 TYPICAL CMU WALL - FOUNDATION

S5.1 | 1" = 1'-0"



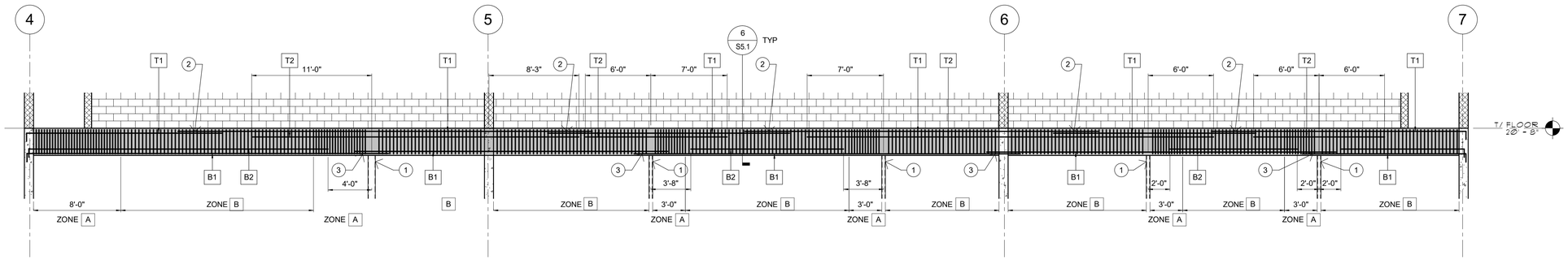
3 TYP SLAB ON GRADE CONTROL JOINT

S5.1 | 1 1/2" = 1'-0"



4 SECTION AT FOOTING

S5.1 | 3/4" = 1'-0"



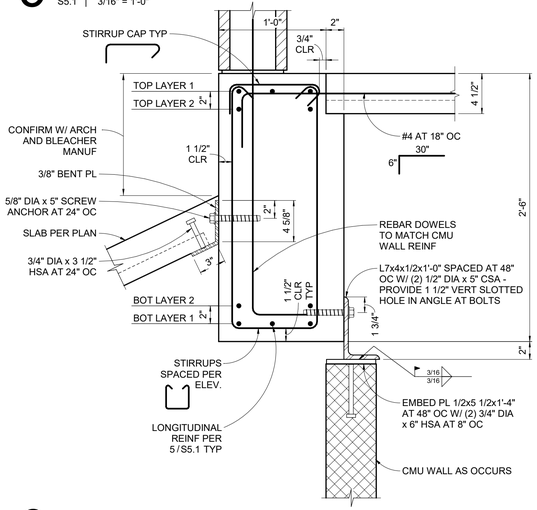
5 CONCRETE BEAM ELEVATION

S5.1 | 3/16" = 1'-0"

KEYNOTES	
1	HSS COL PER PLAN - SEE 7 / S5.1
2	LAP TOP BARS AT BEAM MID-SPAN
3	LAP BOT BARS AT COLUMN / WALL

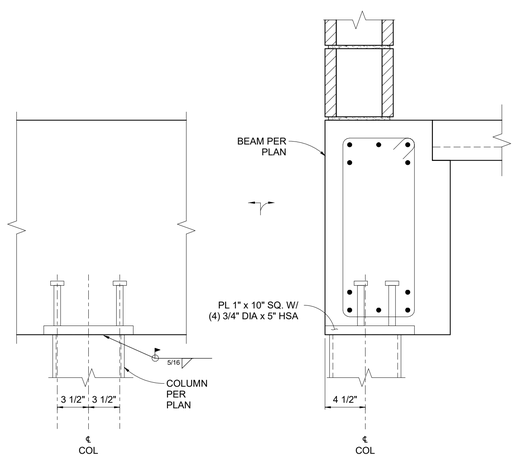
LONGITUDINAL REINFORCING SCHEDULE			
MARK	LOCATION	BAR SIZE	BAR QTY
T1	TOP, LAYER 1	#6	(3)
T2	TOP, LAYER 2	#6	(2)
B1	BOT, LAYER 1	#6	(3)
B2	BOT, LAYER 2	#6	(2)

SHEAR REINFORCING SCHEDULE		
MARK	BAR SIZE	SPACING
ZONE A	#3	3" OC
ZONE B	#3	4" OC



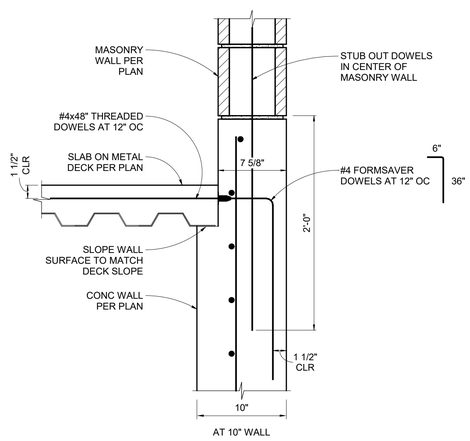
6 CONCRETE BEAM SECTION

S5.1 | 1 1/2" = 1'-0"



7 COLUMN BEAM CONNECTION

S5.1 | 1 1/2" = 1'-0"



8 SECTION AT WALL STEP

S5.1 | 1 1/2" = 1'-0"

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CONCRETE DETAILS

181436
PROJECT NUMBER
20 SEP 2019
DATE

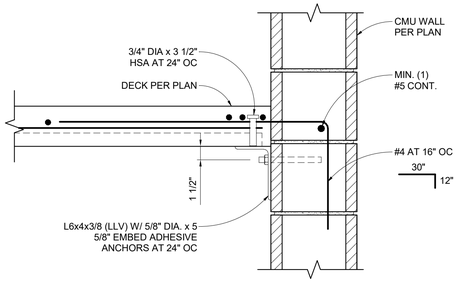
REVISIONS

S5.1

PERMIT SET

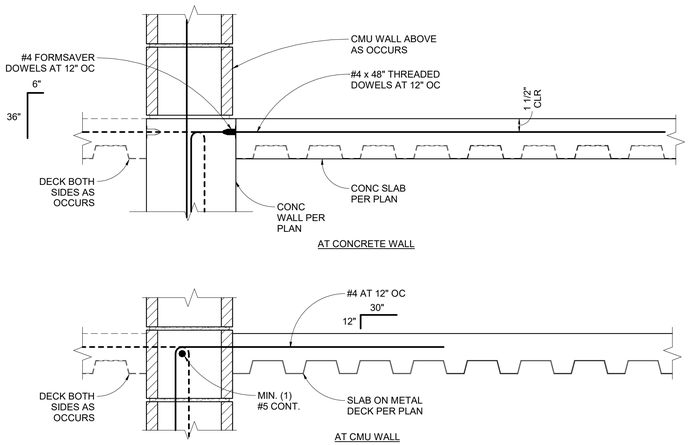
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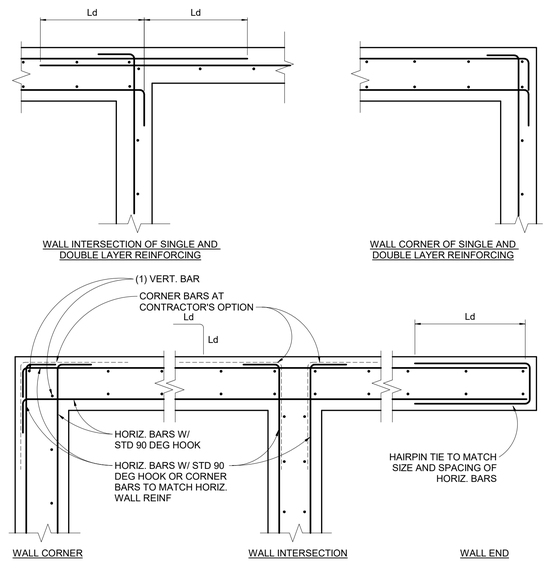
1 SECTION AT DECK LEDGER

S5.2 | 1 1/2" = 1'-0"



2 SLAB WALL CONN.

S5.2 | 1 1/2" = 1'-0"



3 PLAN VIEW TYP. CONC. WALL REINF.

S5.2 | 3/4" = 1'-0"

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CONCRETE DETAILS

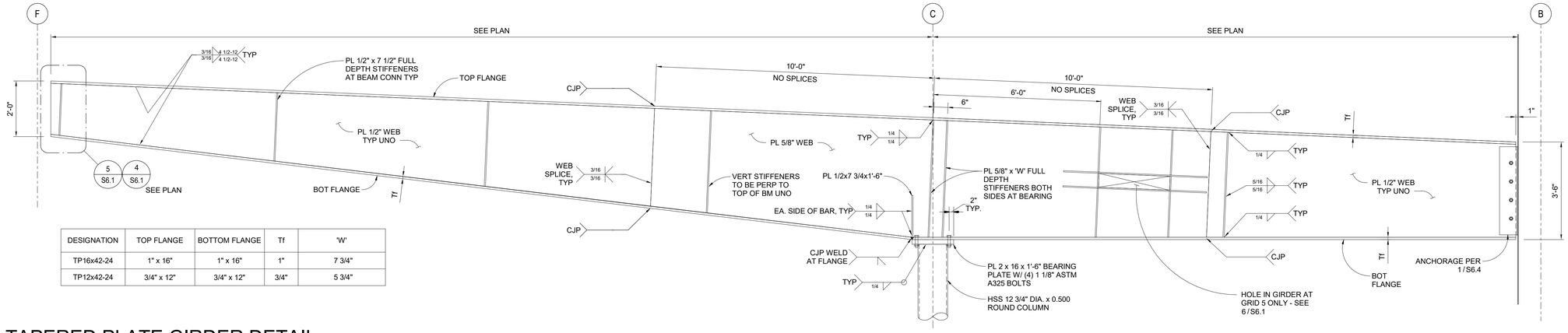
18436 PROJECT NUMBER
20 SEP 2019 DATE
REVISIONS

S5.2

PERMIT SET

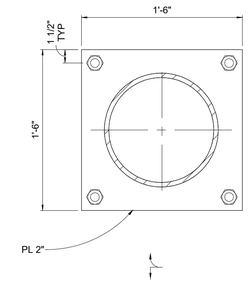
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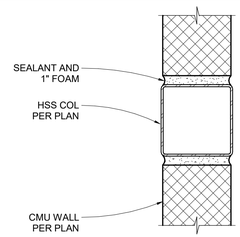


DESIGNATION	TOP FLANGE	BOTTOM FLANGE	Tf	'W'
TP16x42-24	1" x 16"	1" x 16"	1"	7 3/4"
TP12x42-24	3/4" x 12"	3/4" x 12"	3/4"	5 3/4"

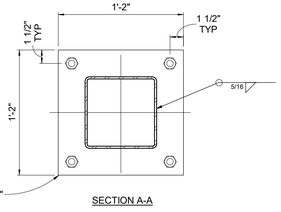
1 TAPERED PLATE GIRDER DETAIL
S6.1 | 1/2" = 1'-0"



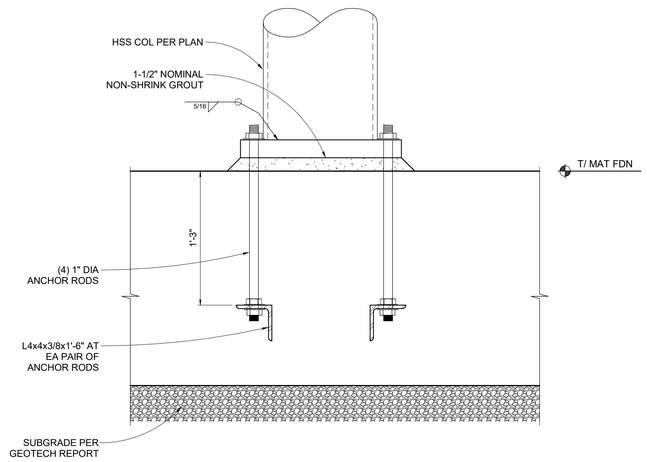
2 CANOPY ROOF HSS COL BASE CONN
S6.1 | 1 1/2" = 1'-0"



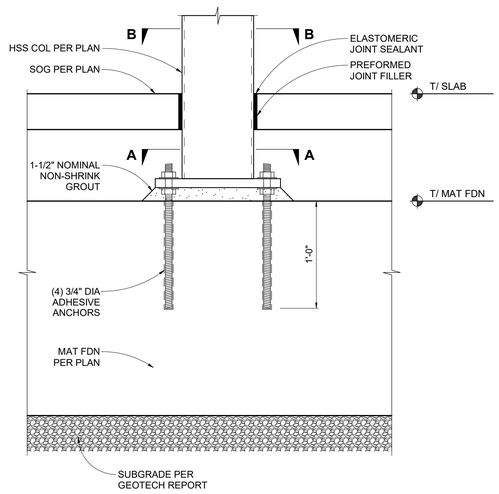
SECTION B-B

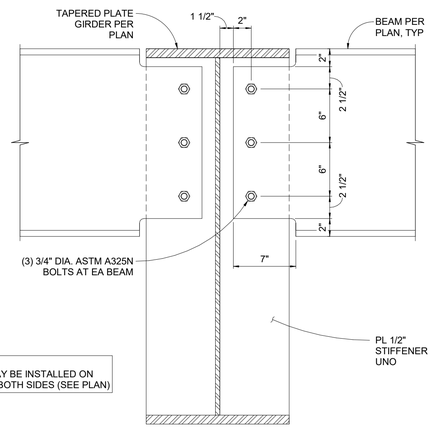


SECTION A-A

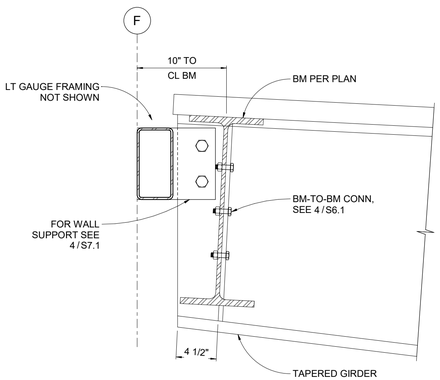


3 INTERIOR HSS COL CONN
S6.1 | 1 1/2" = 1'-0"

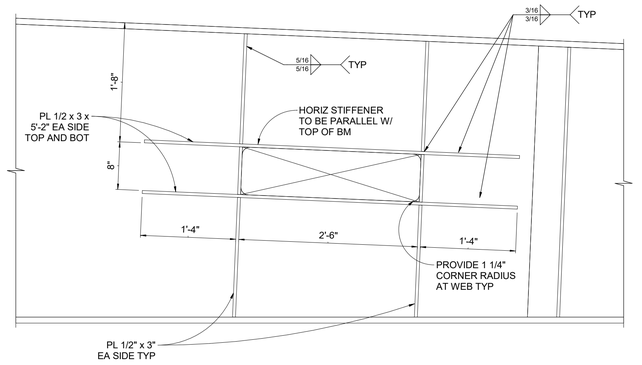




4 BEAM SHEAR PLATE CONN
S6.1 | 1 1/2" = 1'-0"



5 BEAM END CONN
S6.1 | 1 1/2" = 1'-0"



6 HOLE AT PLATE GIRDER
S6.1 | 1" = 1'-0"

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STEEL FRAMING DETAILS

REVISIONS

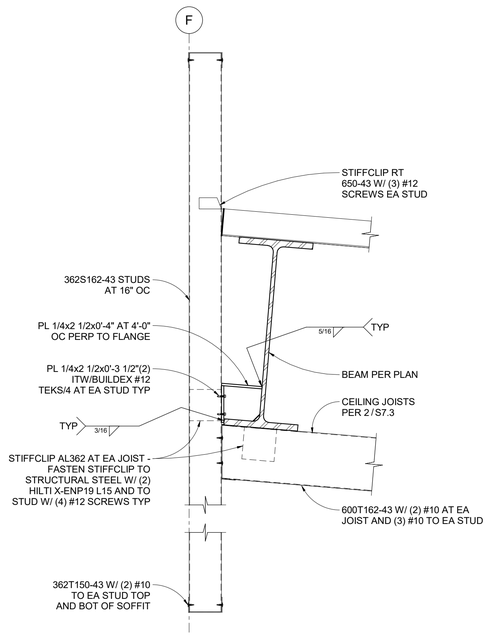
18436 PROJECT NUMBER
20 SEP 2019 DATE

S6.1

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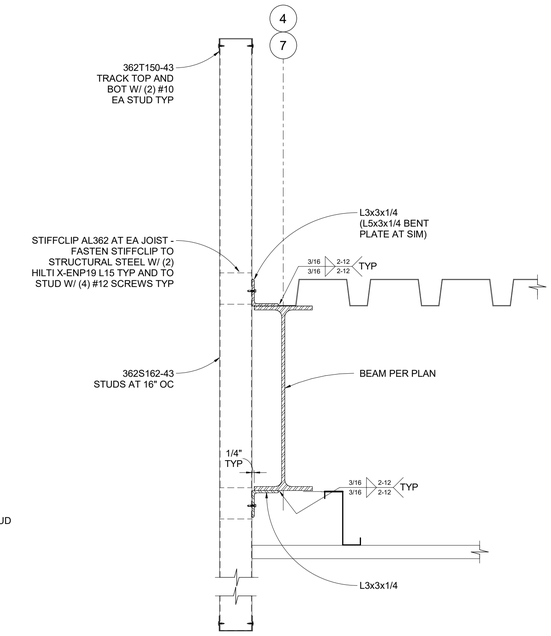
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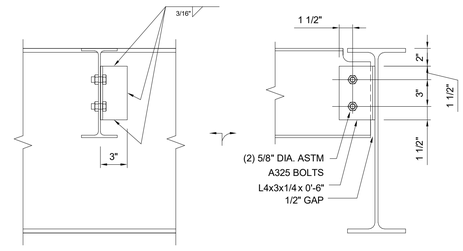
1 GIRDER COLUMN CONNECTION

S6.2 | 1 1/2" = 1'-0"



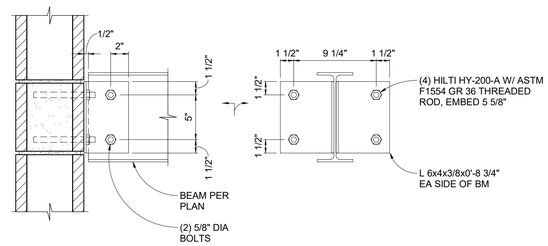
2 SOFFIT ANCHORAGE

S6.2 | 1 1/2" = 1'-0"



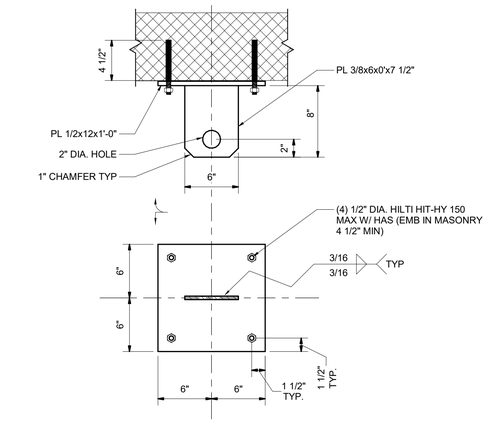
3 SINGLE ANGLE BEAM CONNECTION

S6.2 | 1 1/2" = 1'-0"



4 WALKWAY BEAM CONNECTION

S6.2 | 1 1/2" = 1'-0"



5 FALL PROTECTION ON ANCHOR AT CMU

S6.2 | 1 1/2" = 1'-0"

6 WALKWAY GUARDRAIL CONN.

S6.2 | 1 1/2" = 1'-0"

7 WALKWAY GUARDRAIL SECTION

S6.2 | 1 1/2" = 1'-0"

8 WALKWAY SUPPORT AT CANT. LEVEL

S6.2 | 1 1/2" = 1'-0"

9 WALKWAY SUPPORT AT PRESS BOX WALL

S6.2 | 1 1/2" = 1'-0"

10 DECK AREA FRAMING

S6.2 | 1 1/2" = 1'-0"

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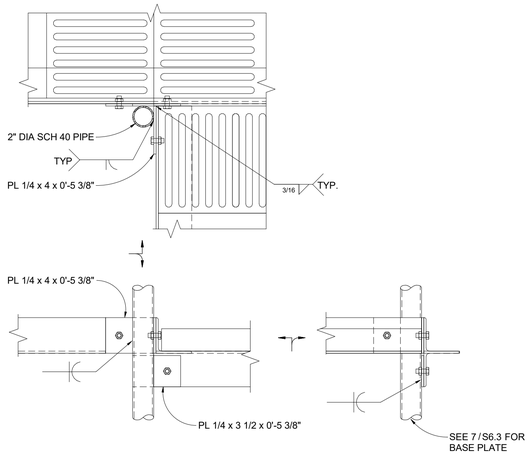
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DATE

REVISIONS

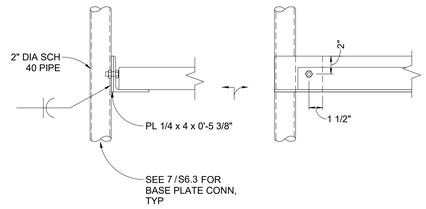
S6.2

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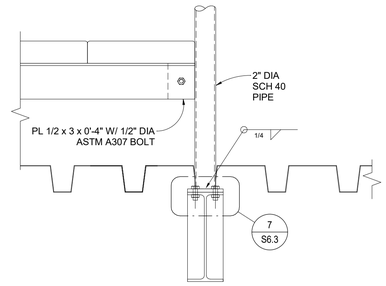
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1 WALKWAY CORNER CONN
S6.3 | 1 1/2" = 1'-0"



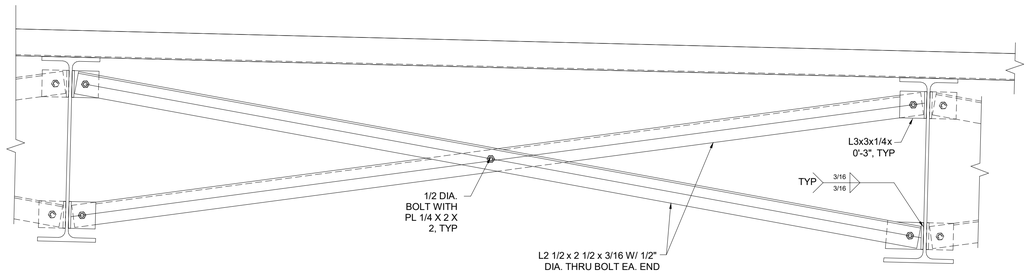
2 WALKWAY END CONNECTION
S6.3 | 1 1/2" = 1'-0"



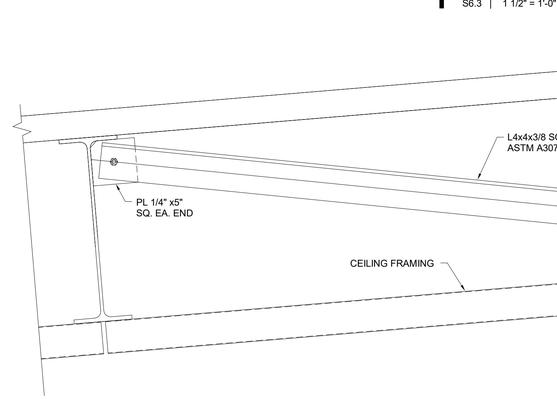
3 SECTION AT WALKWAY
S6.3 | 1 1/2" = 1'-0"

NOT USED

4 SKEWED BEAM TO WALL CONN.
S6.3 | 1 1/2" = 1'-0"

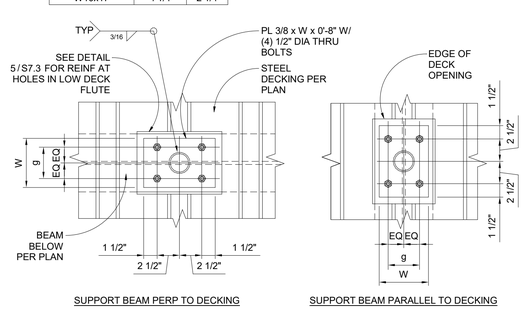


5 BEAM BRIDGING DETAIL
S6.3 | 1 1/2" = 1'-0"

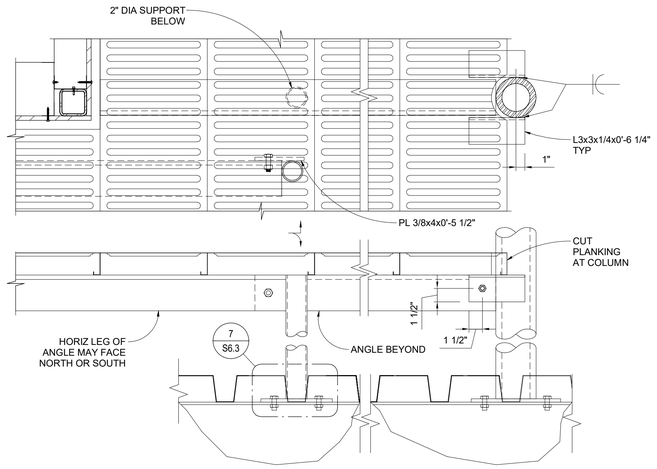


6 END BEAM BRACE
S6.3 | 1 1/2" = 1'-0"

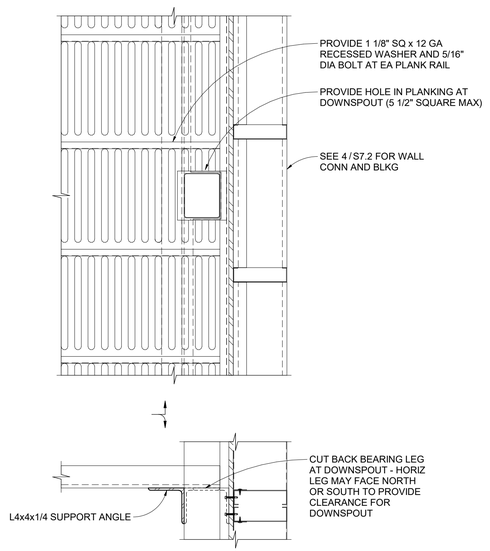
SUPPORT BEAM	W	g
W21x44	5 1/2	3 1/2
W21x55	5 1/2	3 1/2
W21x57	7 1/2	5 1/2
W10x17	4 1/4	2 1/4



7 TYPICAL WALKWAY BASE CONN.
S6.3 | 1 1/2" = 1'-0"



8 WALKWAY SUPPORT AT BLDG COL.
S6.3 | 1 1/2" = 1'-0"



9 HOLE IN WALKWAY
S6.3 | 1 1/2" = 1'-0"

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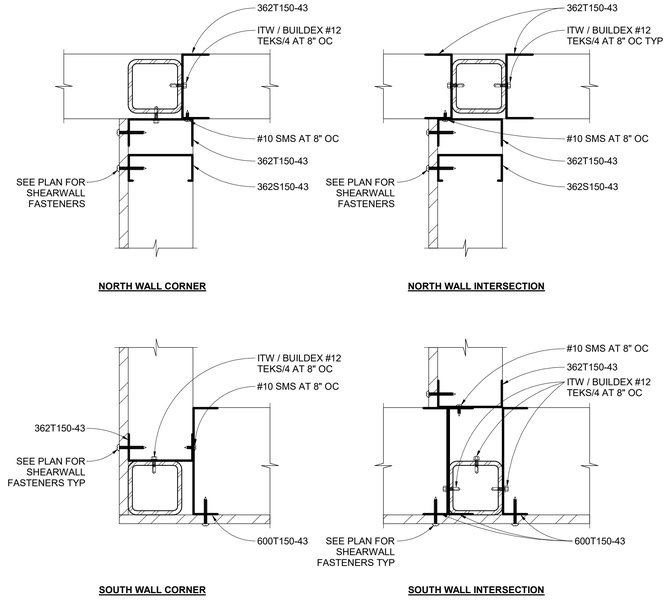
18436
PROJECT NUMBER
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DATE

REVISIONS

S6.3

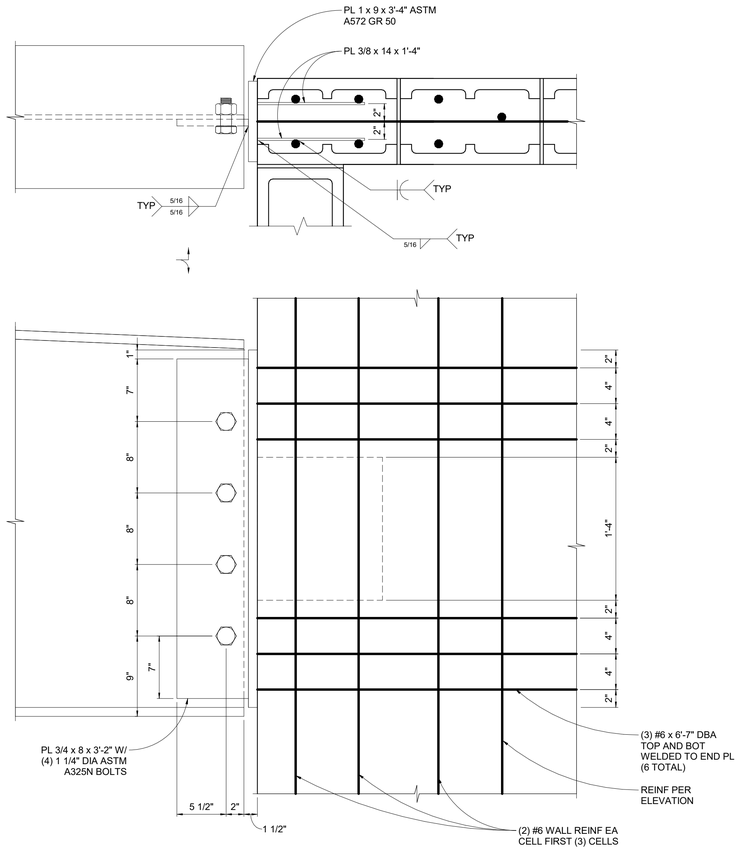
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2 SHEAR WALL END CONN

S6.4 | 3" = 1'-0"



1 PLATE GIRDER TO SHEARWALL CONN.

S6.4 | 1 1/2" = 1'-0"

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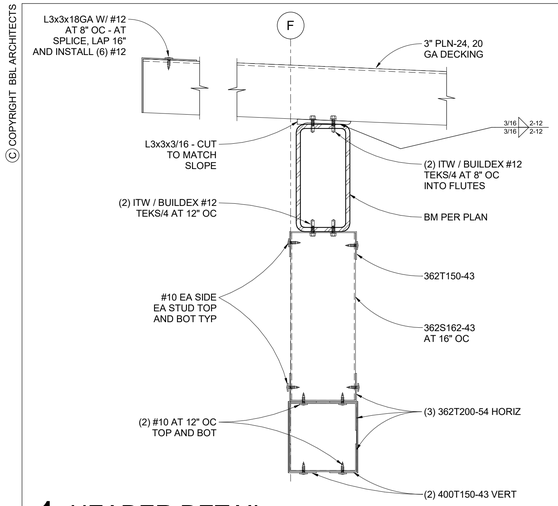
REVISIONS

S6.4

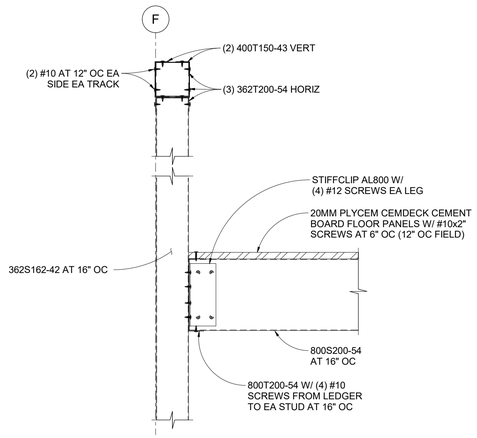
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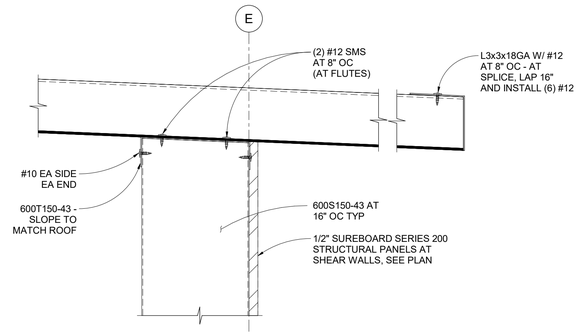
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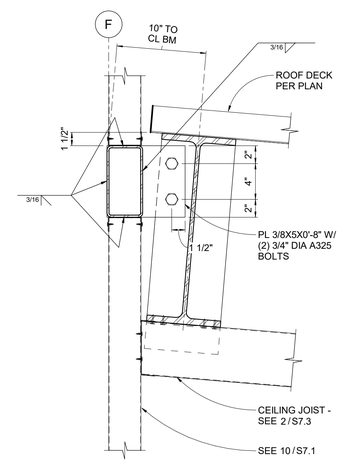
1 HEADER DETAIL
S7.1 | 3" = 1'-0"



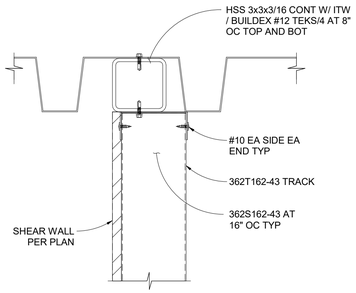
2 SILL DETAIL
S7.1 | 1 1/2" = 1'-0"



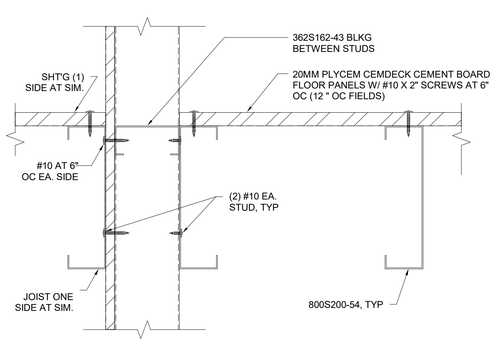
3 REAR WALL TO ROOF CONN
S7.1 | 3" = 1'-0"



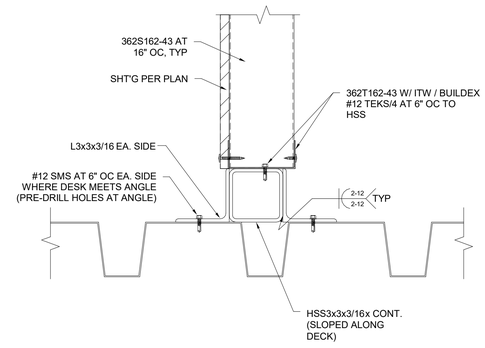
4 FRONT WALL SUPPORT
S7.1 | 1 1/2" = 1'-0"



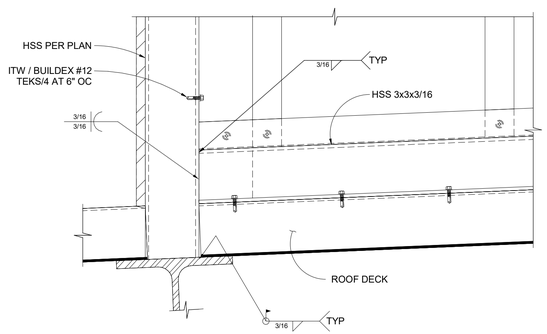
5 TOP SHEARWALL CONN.
S7.1 | 3" = 1'-0"



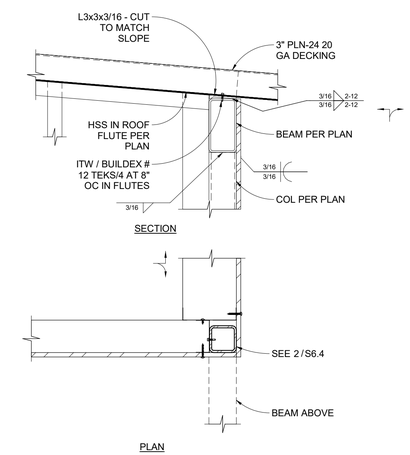
6 SHEAR WALL TO FLOOR CONN.
S7.1 | 3" = 1'-0"



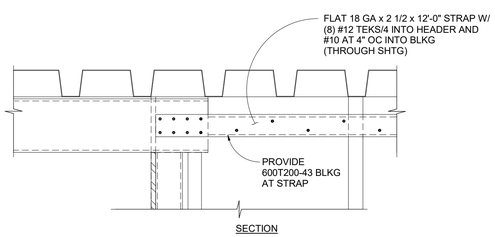
7 SHEAR WALL BASE CONN
S7.1 | 3" = 1'-0"

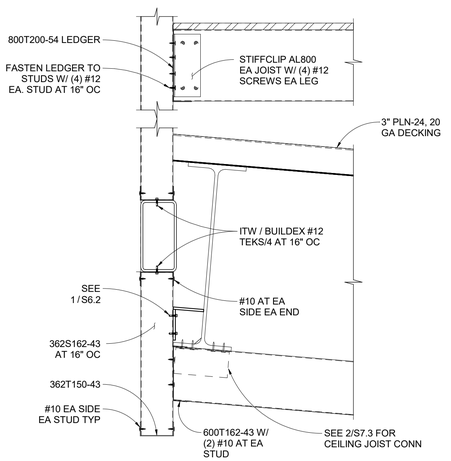


8 SHEAR WALL BASE END CONN
S7.1 | 3" = 1'-0"

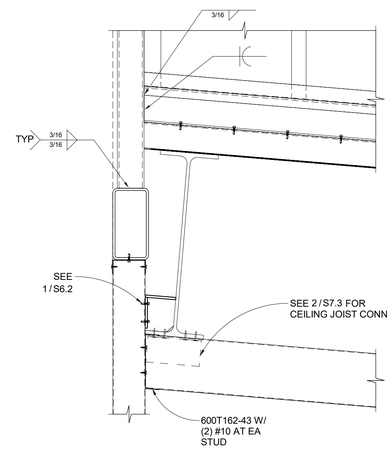


9 PRESS BOX BEAM CORNER CONN.
S7.1 | 1 1/2" = 1'-0"





10 PRESS BOX FRONT WALL SUPPORT
S7.1 | 1 1/2" = 1'-0"



11 FRONT WALL COLUMN SUPPORT
S7.1 | 1 1/2" = 1'-0"

STRUCTURAL
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June 29, 2012
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PRESS BOX DETAILS

181436
PROJECT NUMBER
20 SEP 2019
DATE

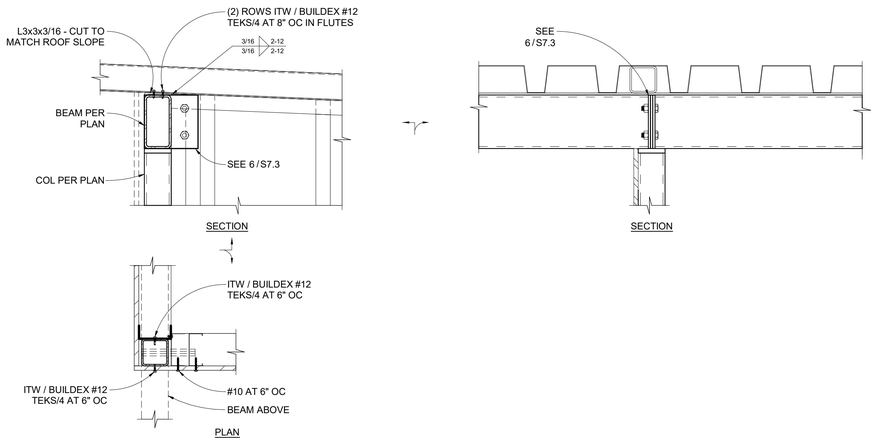
REVISIONS

S7.1

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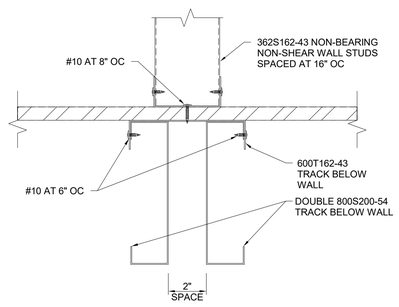
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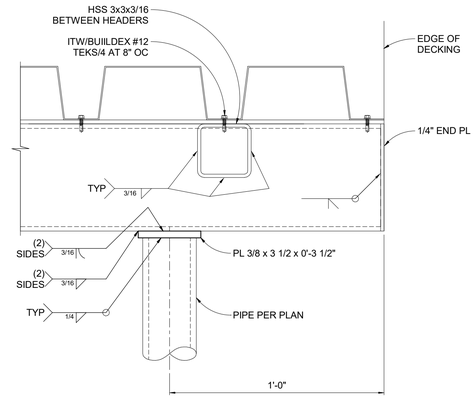
1 FRONT BEAM CORNER CONN

S7.2 | 1 1/2" = 1'-0"



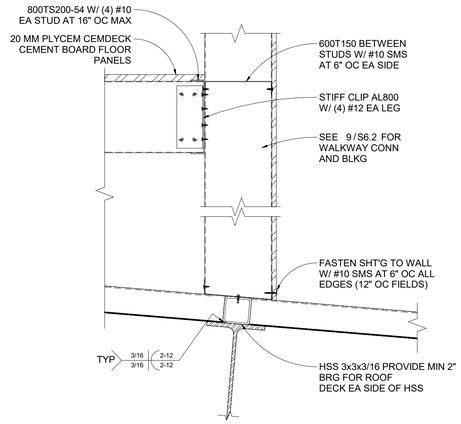
2 PARTITION WALL SUPPORT

S7.2 | 3" = 1'-0"



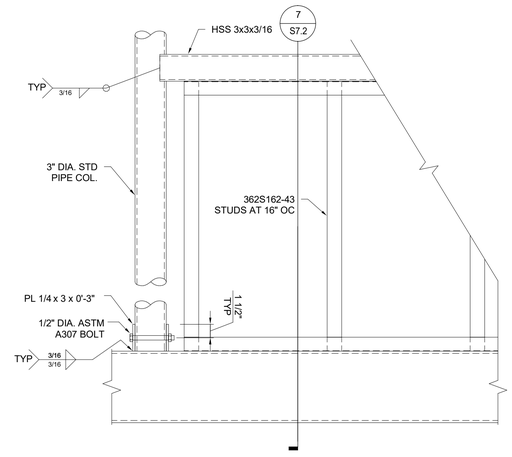
3 ROOF COLUMN CONN

S7.2 | 3" = 1'-0"



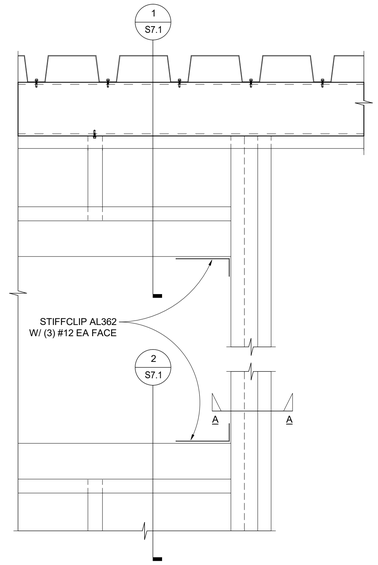
4 REAR WALL / FLOOR SUPPORT

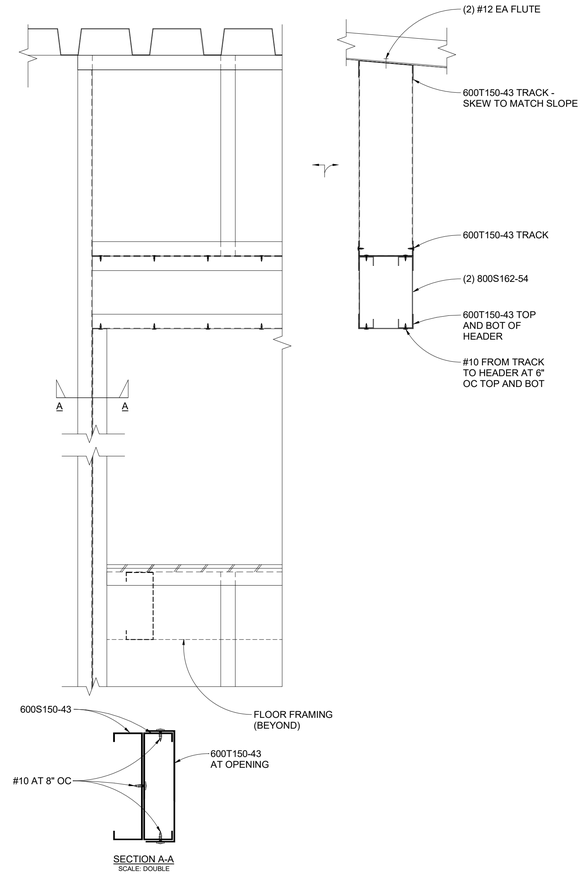
S7.2 | 1 1/2" = 1'-0"

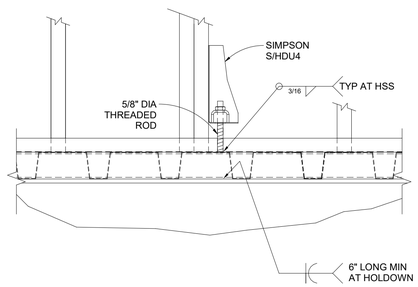


5 FRONT COLUMN AT DECK AREA

S7.2 | 1 1/2" = 1'-0"

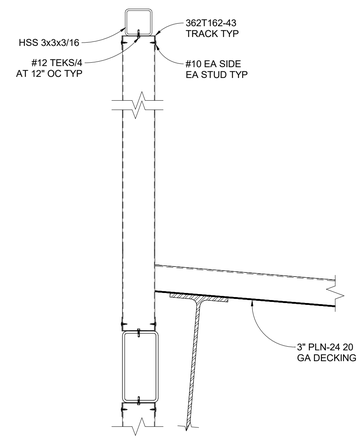






6 HOLDOWN CONNECTION

S7.2 | 1 1/2" = 1'-0"



7 FRONT GUARD RAIL SUPPORT

S7.2 | 1 1/2" = 1'-0"

8 FRONT WINDOW FRAMING

S7.2 | 1 1/2" = 1'-0"

9 FRAMING AT PRESS BOX DOORS

S7.2 | 1 1/2" = 1'-0"

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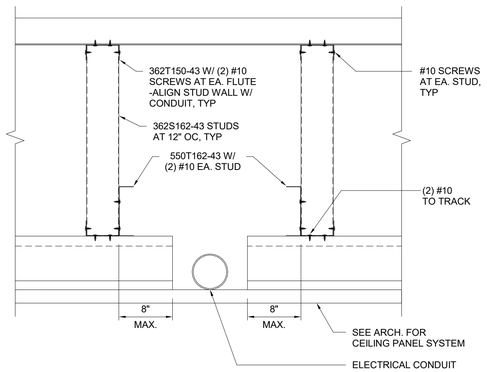
REVISIONS

S7.2

PERMIT SET

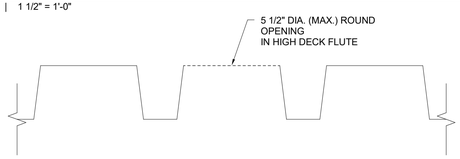
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1 FURRING SUPPORT AT CONDUIT

S7.3 | 1 1/2" = 1'-0"

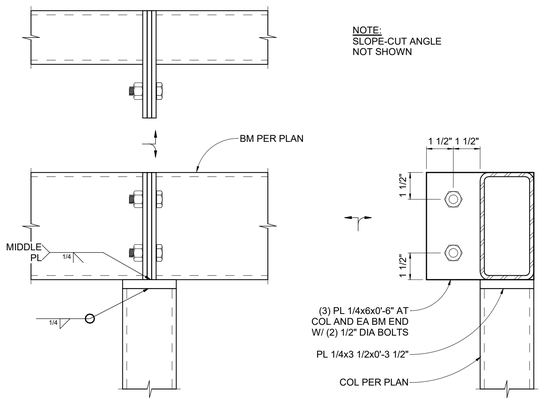


NOTES:
1. REFERENCE 9 / S7.3 FOR OPENINGS LARGER THAN NOTED ABOVE
2. HOLE DIMENSIONS PARALLEL TO FLUTES NOT TO EXCEED 30"
3. ADJACENT HOLES TO BE SPACED AT LEAST 32" APART (EDGE TO EDGE)

3" TYPE N ROOF DECK WITHOUT CONCRETE

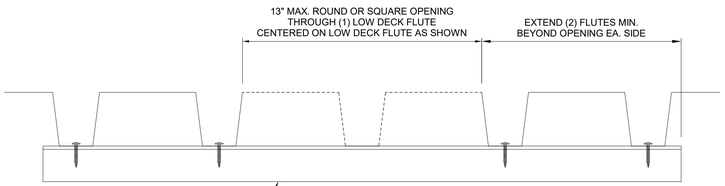
5 ROOF DECK HOLES

S7.3 | 3" = 1'-0"



6 BEAM COL CONN

S7.3 | 3" = 1'-0"



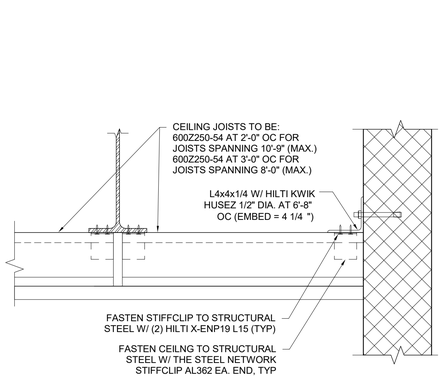
3" TYPE N ROOF DECK WITHOUT CONC

NOTES:
1. HOLE DIMENSION PARALLEL TO FLUTES NOT TO EXCEED 32 INCHES

ADJUST HOLES TO BE SPACED AT LEAST 32" (EDGE TO EDGE)

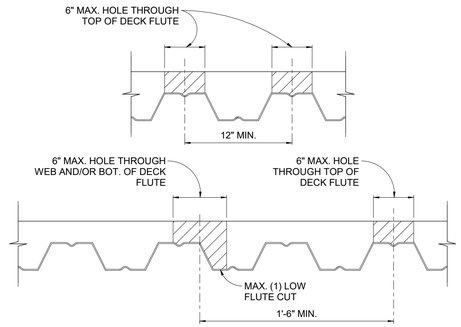
9 ROOF DECK HOLES W/ REINF

S7.3 | 3" = 1'-0"



2 TYPICAL FURRING CONNECTIONS

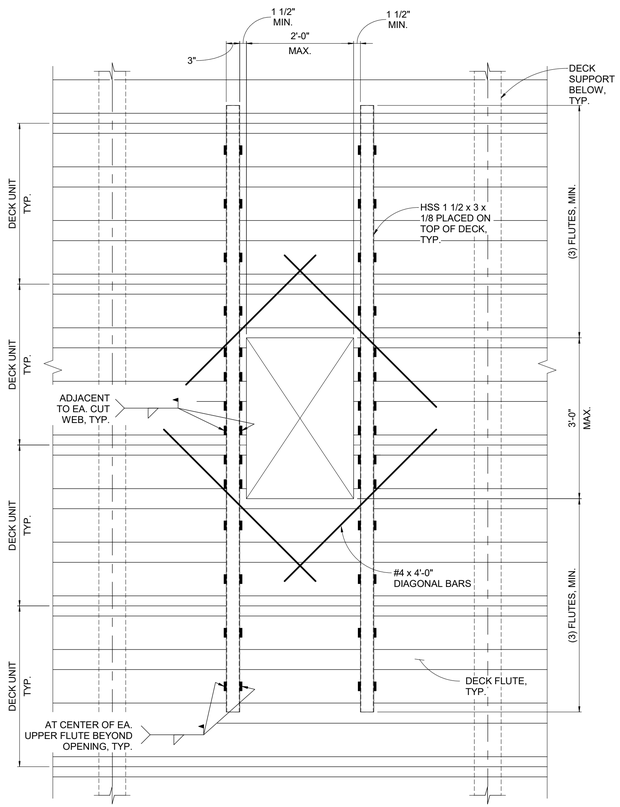
S7.3 | 1 1/2" = 1'-0"



NOTES:
1. REFERENCE 7 / S7.3 FOR OPEINGS THAT DO NOT MEET THE REQUIREMENTS OF THIS DETAIL. REINFORCE ALL OPENINGS THAT IMPACT (2) ADJACENT LOW FLUTES.
2. REFERENCE 8 / S7.3 FOR DIMENSION REQUIREMENTS WHERE ADJACENT HOLES MUST BE CONSIDERED AS ONE OPENING.
3. OPENINGS THAT MEET THE REQUIRMENTS OF THIS DETAIL MAY BE FORMED PRIOR TO CONCRETE POUR OF CORE DRILLED AFTER PLACEMENT.

3 COMPOSITE DECK HOLES WITHOUT REINFORCING

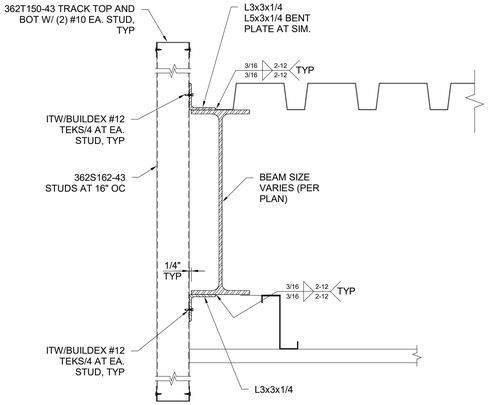
S7.3 | 1 1/2" = 1'-0"



NOTES:
1. REFERENCE DETAIL 9 / S7.3 FOR DIMENSION REQUIREMENTS WHERE ADJACENT HOLES MUST BE CONSIDERED AS ONE OPENING.
2. IF THE OPENING OR GROUP OF OPENINGS OCCURS IN ONE DECKING UNIT, THE OPENING OR OPENING GROUP MAY BE CUT PRIOR TO POURING OF CONCRETE.
3. IF, AS SHOWN IN THE DETAIL ABOVE, THE OPENING OR OPENING GROUP CUTS THROUGH TWO DECK UNITS, THE DECKING SHALL NOT BE CUT UNTIL CONCRETE HAS BEEN PLACE AND CURED. AT THE TIME OF POURING, SUITABLE SLEEVES OR BULKHEADS SHALL BE PLACED AROUND THE OPENING.
4. WHEN THE MAXIMUM DIMENSION OF AN OPENING OR OPENINGS GROUP EXCEEDS 24", PLACE HEADER BEAMS AROUND OPENING, NOTIFY ENGINEER FOR DESIGN.

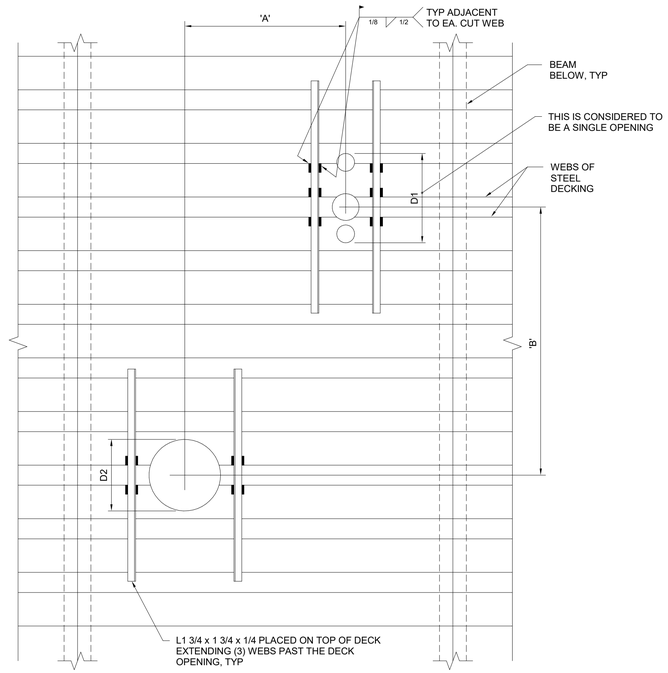
7 COMPOSITE DECK REINFORCING AT LARGE PENETRATIONS

S7.3 | 3/4" = 1'-0"



4 SOFFIT ANCHORAGE

S7.3 | 1 1/2" = 1'-0"



NOTES:
1. THIS DETAIL IS APPLICABLE FOR HOLES CUTTING NO MORE THAN (3) ADJACENT WEBS FOR 6" AND 8" MODULE DECK AND NO MORE THAN (2) ADJACENT WEBS FOR 12" MODULE DECK.
2. HOLES 6" DIAMETER AND LESS LOCATED AT RANDOM DO NOT REQUIRE REINFORCING - SEE 3 / S7.3
3. THE CONTRACTOR SHALL REINFORCE OR SHORE THE DECK AS REQUIRED TO SUPPORT LOADS DURING CONCRETE PLACEMENT.
4. IF DIMENSION 'A' IS GREATER THAN 4D1, 4D2 OR 32" WHICHEVER IS LARGER, THEN THERE IS NO RESTRICTION ON DIMENSION 'B'.
5. IF DIMENSION 'B' IS GREATER THAN 4D1, 4D2 OR 32" WHICHEVER IS LARGER, THEN THERE IS NO RESTRICTION ON DIMENSION 'A'.
6. IF DIMENSION 'A' AND 'B' ARE LESS THAN 4D1, 4D2 OR 32" WHICHEVER IS LARGER, THE OPENING GROUP WILL BE CONSIDERED AS A SINGLE HOLE, AND MUST BE REINFORCED AS REQUIRED FOR THE LARGER OPENING.

8 COMPOSITE METAL DECK W/ CONCRETE HOLE REINF.

S7.3 | 3/4" = 1'-0"

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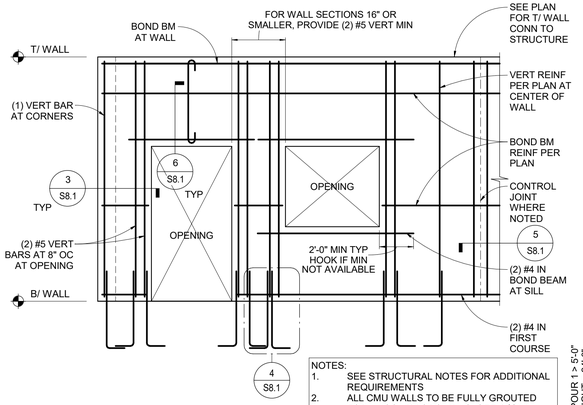
REVISIONS

S7.3

PERMIT SET

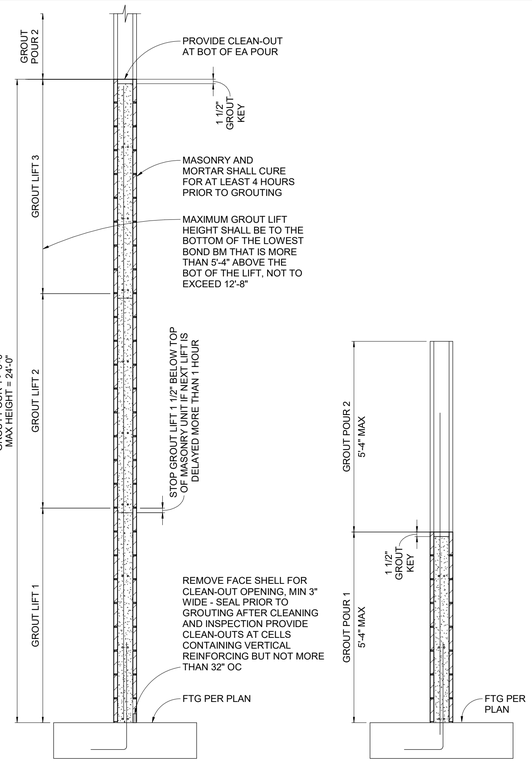
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NOTES:
1. SEE STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS
2. ALL CMU WALLS TO BE FULLY GROUTED
3. FOR MASONRY GROUTING, SEE 2 / S8.1
4. FOR CONDUIT REQUIREMENTS, SEE 7 / S8.1
5. FOR REBAR PLACEMENT, SEE 8 / S8.1
6. HORIZ REBAR AT WALL ENDS TO TERMINATE PER 10 / S8.1 OR 11 / S8.1
7. FOR TYP REBAR BENDING REQUIREMENTS, SEE 9 / S8.1

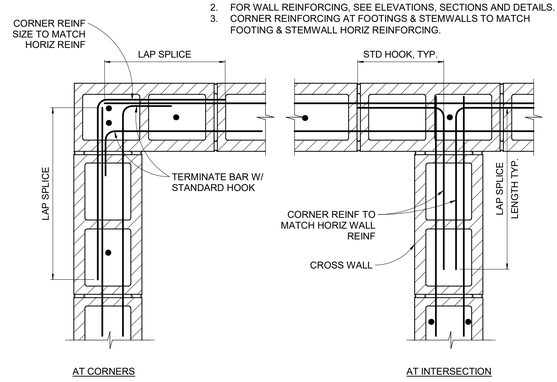
1 TYP REINF. IN CMU WALL
S8.1 | 1/2" = 1'-0"



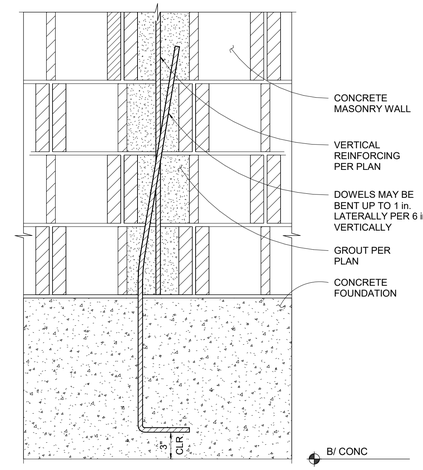
NOTE:
GROUT MUST BE CONSOLIDATED WITH A MECHANICAL VIBRATOR AND RECONSOLIDATED AFTER INITIAL WATER LOSS AND SETTLEMENT HAS OCCURRED

2 TYP MASONRY GROUTING DETAIL
S8.1 | 1/2" = 1'-0"

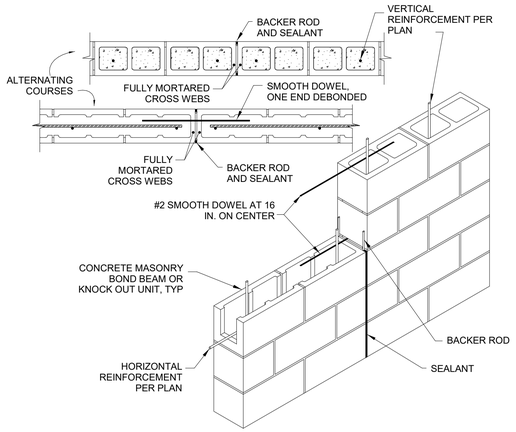
NOTES:
1. FOR LAP LENGTHS, SEE REINFORCING LAP SPLICE & DEVELOPMENT LENGTH SCHEDULE FOR CMU.
2. FOR WALL REINFORCING, SEE ELEVATIONS, SECTIONS AND DETAILS.
3. CORNER REINFORCING AT FOOTINGS & STEMWALLS TO MATCH FOOTING & STEMWALL HORIZ REINFORCING.



3 TYPICAL CORNER REINFORCING AT CMU WALLS
S8.1 | 1 1/2" = 1'-0"

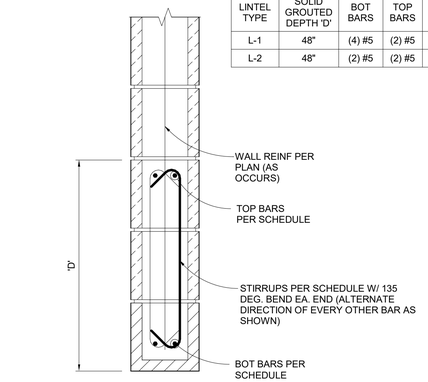


4 FOUNDATION DOWEL ALIGNMENT
S8.1 | 1 1/2" = 1'-0"

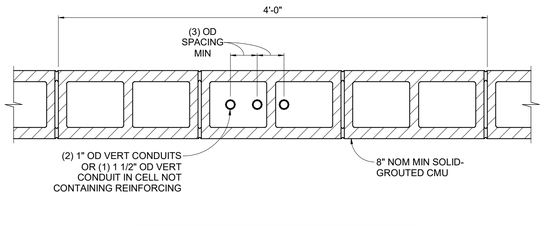


5 CONTROL JOINT DETAIL
S8.1 | 3/4" = 1'-0"

CMU LINTEL SCHEDULE				
LINTEL TYPE	SOLID GROUTED DEPTH 'D'	BOT BARS	TOP BARS	STIRRUPS
L-1	48"	(4) #5	(2) #5	NOT REQD
L-2	48"	(2) #5	(2) #5	NOT REQD

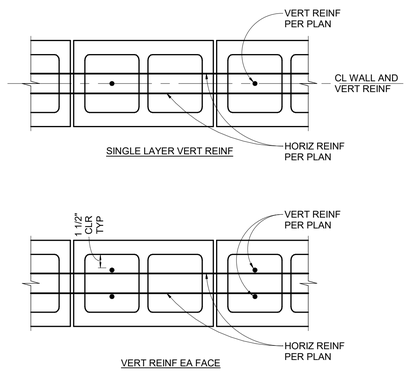


6 TYPICAL CMU LINTEL
S8.1 | 1 1/2" = 1'-0"

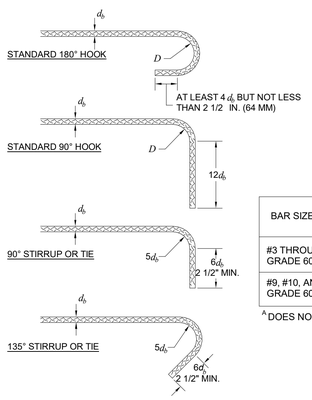


NOTES:
1. ALUMINUM CONDUITS ARE NOT PERMITTED
2. PIPES CONTAINING LIQUID, GAS, OR VAPORS AT TEMPERATURES HIGHER THAN 150° F ARE NOT PERMITTED TO BE EMBEDDED INTO CMU WALLS
3. PIPES UNDER PRESSURE IN EXCESS OF 55 PSI ARE NOT PERMITTED TO BE EMBEDDED IN CMU WALLS
4. PIPES CONTAINING WATER OR OTHER LIQUIDS SUBJECT TO FREEZING ARE NOT PERMITTED TO BE EMBEDDED IN CMU WALLS
5. A MAX OF (2) CELLS PER 48" OF CMU WALL IS PERMITTED TO CONTAIN CONDUITS HORIZ RUNS MUST BE LESS THAN 16"

7 TYP CONDUITS IN CMU WALL
S8.1 | 1 1/2" = 1'-0"



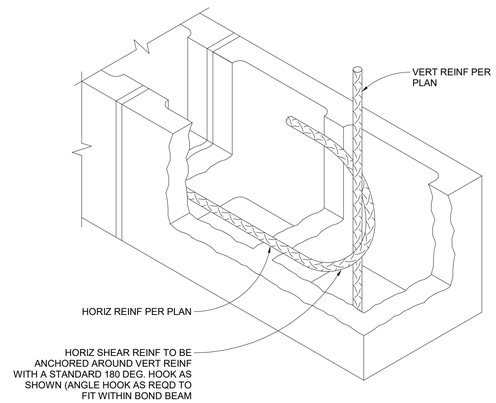
8 TYP REBAR PLACEMENT
S8.1 | 1 1/2" = 1'-0"



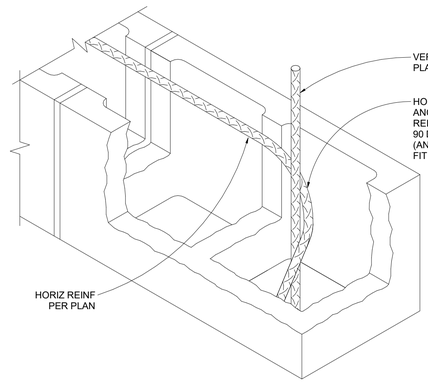
BAR SIZE AND TYPE	MINIMUM DIAMETER OF BEND, D^A
#3 THROUGH #8 GRADE 60	6 BAR DIAMETERS
#9, #10, AND #11 GRADE 60	8 BAR DIAMETERS

A DOES NOT APPLY TO STIRRUPS OR TIES

9 TYPICAL REINFORCING STEEL BENDS
S8.1 | 1 1/2" = 1'-0"



10 HORIZONTAL REINF. AT END OF WALL
S8.1 | 3" = 1'-0"



11 HORIZ. REINF. AT END OF WALL
S8.1 | 3" = 1'-0"

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STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 65401PE OREGON June 29, 2012 ANDREW RYAN LEITCH
EXPIRES: 12 - 31 - 2020

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OREGON 97034

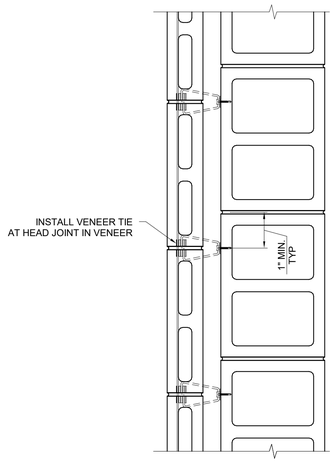
MASONRY DETAILS

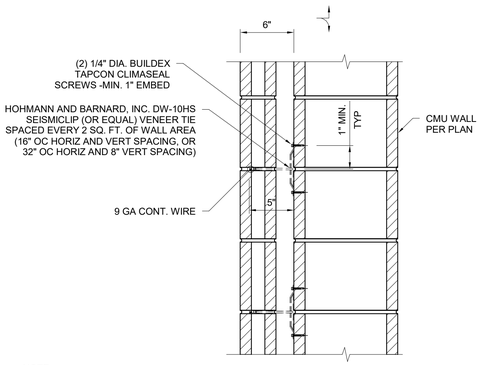
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20 SEP 2019 DATE
REVISIONS

S8.1

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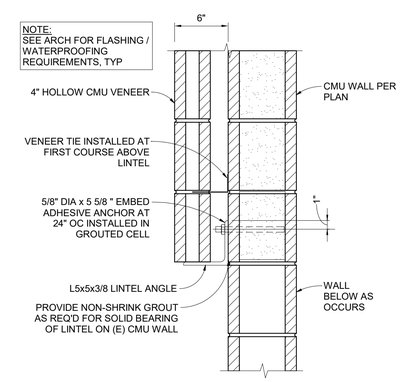
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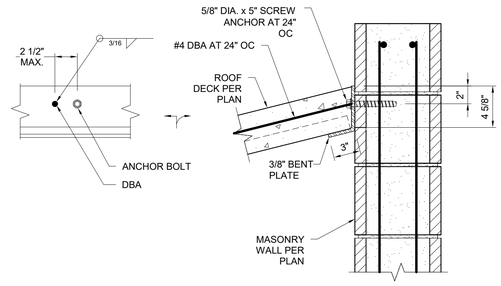


NOTE:
PROVIDE ADDITIONAL VENEER TIES AROUND OPENING LARGER THAN 16" IN EITHER DIMENSION. SPACE ANCHORS AROUND PERIMETER OF OPENING AT A MAXIMUM OF 3'-0" OC PLACE ANCHORS WITHIN 12" OF OPENING

1 TYPICAL VENEER TIES
S8.2 | 1 1/2" = 1'-0"

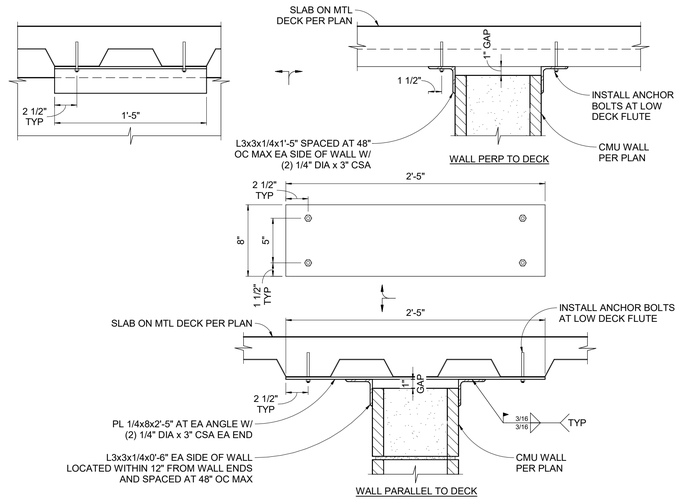


2 SECTION AT LINTEL ANGLE
S8.2 | 1 1/2" = 1'-0"

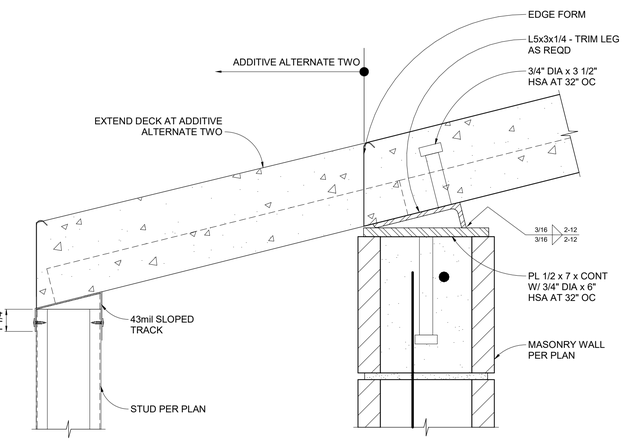


5 SECTION AT DECK-WALL
S8.2 | 1 1/2" = 1'-0"

8 SECTION AT ROOF LEDGER
S8.2 | 1 1/2" = 1'-0"



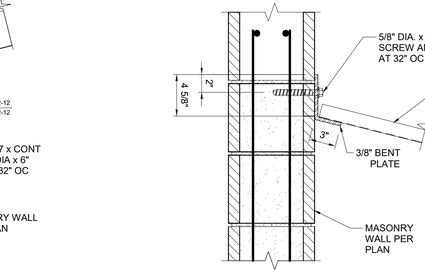
3 CMU PARTITION CONN
S8.2 | 1 1/2" = 1'-0"



6 DECK-WALL ANCHORAGE
S8.2 | 3" = 1'-0"

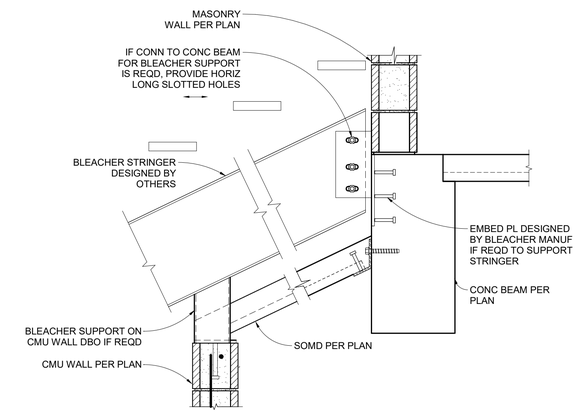
10 SECTION AT MASONRY WALL
S8.2 | 1 1/2" = 1'-0"

9 WALL OUT-OF-PLANE ANCHORAGE
S8.2 | 1 1/2" = 1'-0"



4 SECTION AT TOP OF WALL
S8.2 | 1 1/2" = 1'-0"

7 ROOF DECK LEDGER
S8.2 | 1 1/2" = 1'-0"



11 BLEACHER WALL CONNECTION
S8.2 | 1" = 1'-0"

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MASONRY DETAILS

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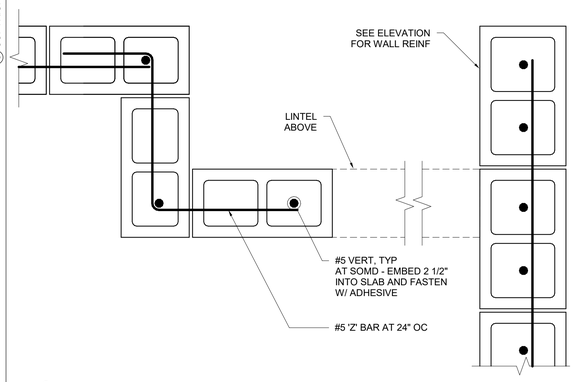
REVISIONS

S8.2

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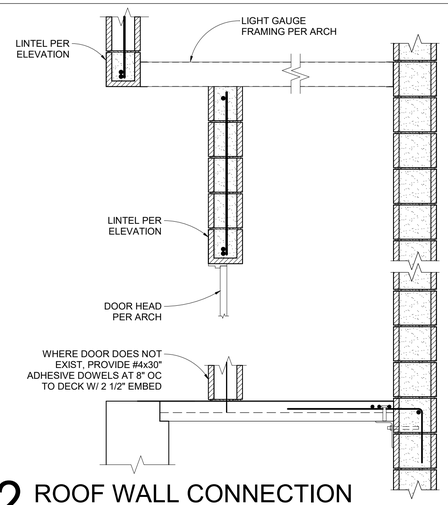
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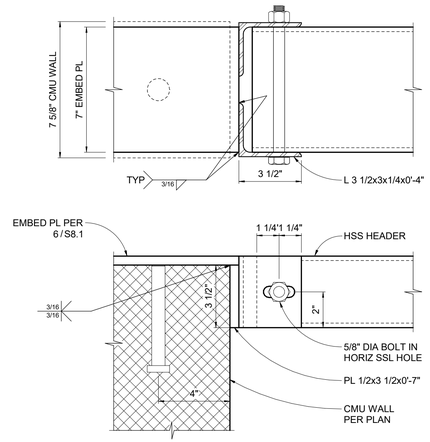
1 WALL REINF. AT ALCOVE

S8.3 | 1 1/2" = 1'-0"



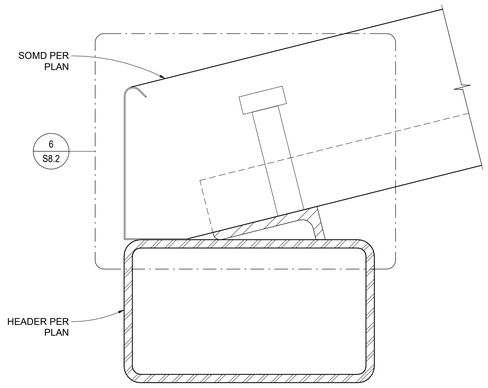
2 ROOF WALL CONNECTION

S8.3 | 3/4" = 1'-0"



3 HEADER SUPPORT DETAIL

S8.3 | 3" = 1'-0"



4 SECTION AT HEADER

S8.3 | 6" = 1'-0"

5 LINTEL ANGLE AT OPENING

S8.3 | 1 1/2" = 1'-0"

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June 29, 2012
ANDREW RYAN LEIGHTON
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REGISTERED PROFESSIONAL ENGINEER
82212PE
OREGON
FEBRUARY 08, 2019
CHRISTOPHER JOEL CHURCHILL
EXPIRES 12/31/19

SEMI-HEATED SPACES

SPACE	AREA	MAXIMUM HEAT ALLOWED		HEAT SUPPLIED
	SQ. FT.	BTUH/SQ. FT.	BTUH	BTUH
TOTAL	1,720	10	17,200	16,207

ELECTRIC HEATERS

EQUIPMENT TAG	AREA SERVED	TYPE	BASIS OF DESIGN		HEAT OUTPUT	AIRFLOW	ELECTRICAL			WEIGHT	NOTES
			MAKE	MODEL			HEATER				
							VOLTAGE	AMP	POWER		
					BTU/HR	CFM	V	A	KW	LBS	
EH-1	101 CONCESSIONS	ELECTRIC WALL HEATER	QMARK	CWH1101DSF	3,412	65	120	8.4	1.00	15	1, 2
EH-2	103 RISER ROOM	ELECTRIC WALL HEATER	QMARK	CWH1151DSF	2,559	65	120	6.3	0.75	15	1, 2
EH-3	104 UNISEX RR	ELECTRIC WALL HEATER	QMARK	CWH1101DSF	3,412	65	120	8.4	1.00	15	1, 2
EH-4	105 UNISEX RR	ELECTRIC WALL HEATER	QMARK	CWH1101DSF	3,412	65	120	8.4	1.00	15	1, 2
EH-5	PLUMBING CHASE	UTILITY WELL HOUSE HEATER	QMARK	WHT500	1,706	65	240/1PH	2.1	0.50	10	2
EH-6	PLUMBING CHASE	UTILITY WELL HOUSE HEATER	QMARK	WHT500	1,706	65	240/1PH	2.1	0.50	10	2

NOTES:
1) PROVIDE WITH SURFACE MOUNTING FRAME FOR INSTALLATION ON CONCRETE WALL.
2) HEATER IS FOR FREEZE PROTECTION ONLY. SET THERMOSTAT TO 45 °F MAXIMUM.

EXHAUST FANS

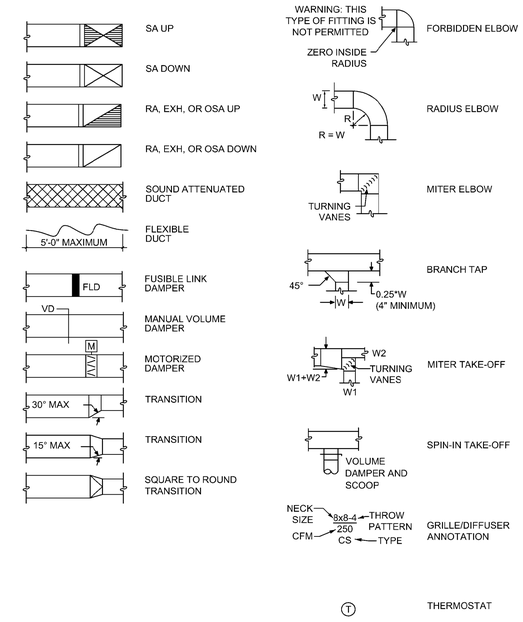
EQUIPMENT TAG	AREA SERVED	TYPE	CONTROL	BASIS OF DESIGN		AIRFLOW	ESP	ELECTRICAL		WEIGHT	NOTES
				MAKE	MODEL			VOLTAGE	POWER		
						CFM	INWC	V	W	LBS	
EF-1	104 UNISEX RR	DIRECT DRIVE, IN LINE CABINET FAN	ON WHEN OCCUPIED	GREENHECK	CSP-A700-VG	420	0.50	115	216	50	1, 2, 3
EF-2	105 UNISEX RR	DIRECT DRIVE, IN LINE CABINET FAN	ON WHEN OCCUPIED	GREENHECK	CSP-A700-VG	420	0.50	115	216	50	1, 2, 3

NOTES:
1) PROVIDE WITH MOTORIZED CONTROL DAMPER BELOW ROOF AND AT INTAKE WALL LOUVERS TO OPEN/CLOSE WITH FAN START/STOP. SEE PLANS.
2) PROVIDE WITH FACTORY MOUNTED AND WIRED SPEED CONTROL.
3) ADJUST SPEED IN FIELD TO DESIGN FLOW RATE.

SEISMIC DESIGN CRITERIA

BUILDING SYSTEM	RISK CATEGORY	SEISMIC DESIGN CATEGORY	COMPONENT IMPORTANCE FACTOR (Ip)
HVAC	II	D	1.0

MECHANICAL LEGEND



ABBREVIATIONS

8Ø	ROUND DUCT DIAMETER, INCHES	FC	FAN COIL
12X8	RECTANGULAR DUCT SIZE, INCHES	FSD	FUSIBLE LINK DAMPER
		HP	HEAT PUMP
BDD	BACKDRAFT DAMPER	HR	HIGH RETURN
CRD	CEILING RADIATION FIRE DAMPER	MD	MOTORIZED DAMPER
CS	CEILING SUPPLY	OBD	OPPOSED BLADE DAMPER
CR	CEILING RETURN	OSA	OUTSIDE AIR
DN	DOWN	RA	RETURN AIR
EF	EXHAUST FAN	REL	RELIEF AIR
EXH	EXHAUST AIR	SA	SUPPLY AIR
FA	FRESH AIR	TYP	TYPICAL

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MECHANICAL LEGENDS, SCHEDULES, AND GENERAL NOTES

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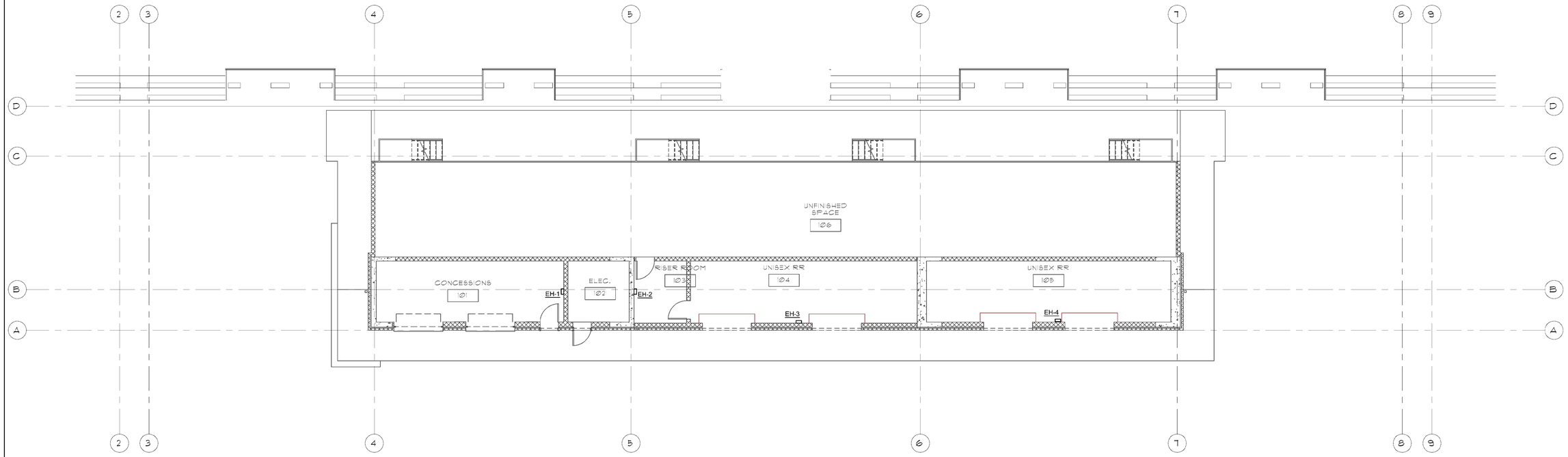
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1 M1.3 LOWER MECHANICAL PLAN - BASE BID
1/8" = 1'-0"

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EXPIRES 12/31/19

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LOWER MECHANICAL PLAN - BASE BID

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M1.3

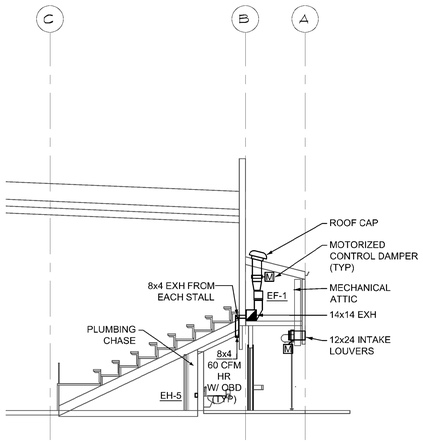
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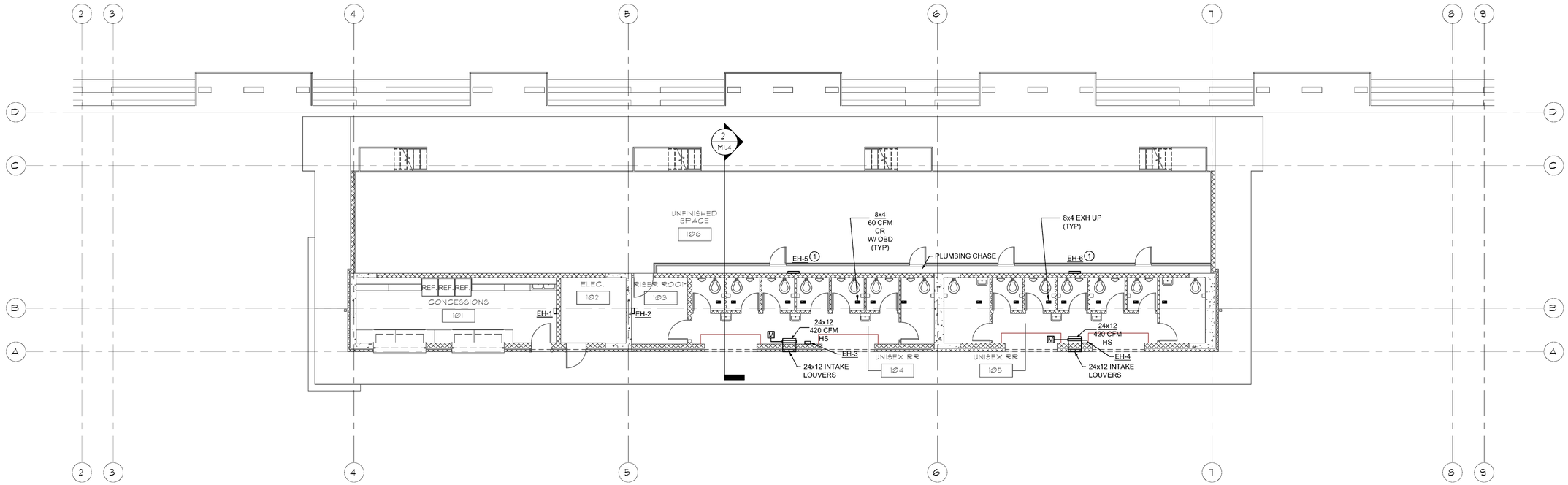
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OREGON
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CHRISTOPHER JOEL CHURCHILL
EXPIRES 12/31/19



2 M1.4 MECHANICAL SECTION
1/8" = 1'-0"

KEYED NOTES

1. PROVIDE INSULATED ACCESS PANEL FOR HEATER ACCESS.



1 M1.4 LOWER MECHANICAL PLAN - ADDITIVE ALTERNATES ONE AND TWO
1/8" = 1'-0"

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LOWER MECHANICAL PLAN - ADDITIVE ALTERNATES ONE AND TWO

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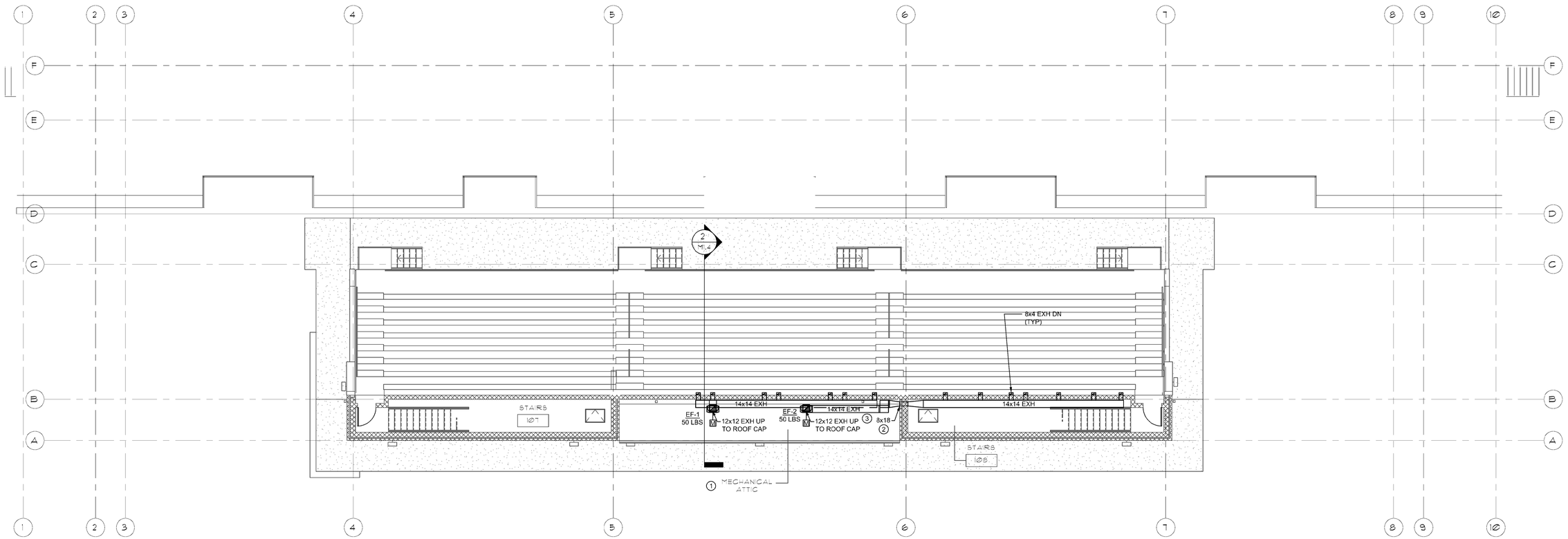
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FEBRUARY 08, 2019
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EXPIRES 12/31/19

KEYED NOTES ○

1. MAINTAIN FAN SERVICE CLEARANCES AND GENERAL SERVICE CLEARANCE REQUIREMENTS IN MECHANICAL ATTIC.
2. PENETRATE 8x18 EXH THRU WALL. COORDINATE EXACT SIZE AND LOCATION REQUIREMENTS WITH ARCHITECT.
3. ALL MITERED ELBOWS SHALL HAVE TURNING VANES.



1 MECHANICAL PLAN - ADDITIVE ALTERNATES ONE AND TWO
M1.5 1/8" = 1'-0"

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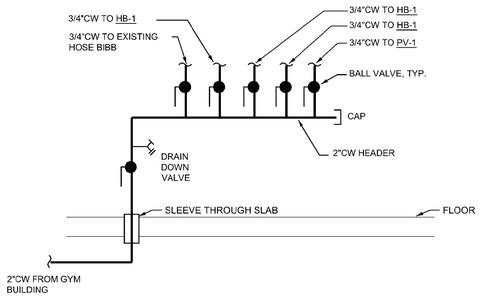
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STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034
MECHANICAL PLAN - ADDITIVE ALTERNATES ONE AND TWO

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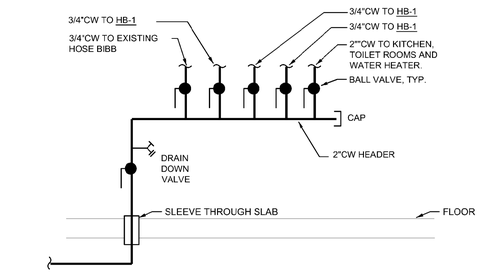
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PLUMBING CONTRACTOR TO LABEL EACH VALVE/ LINE AS TO WHAT IT IIS SERVING.

1 / P1.0 WATER SERVICE MANIFOLD - BASE BID

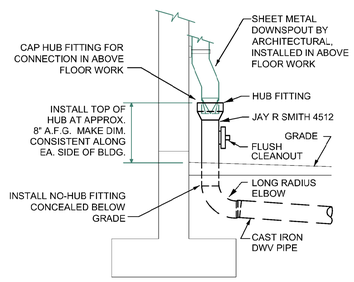
NOT TO SCALE



PLUMBING CONTRACTOR TO LABEL EACH VALVE/ LINE AS TO WHAT IT IIS SERVING.

2 / P1.0 WATER SERVICE MANIFOLD - ALTERNATE 1

NOT TO SCALE



3 / P1.0 DOWNSPOUT CONNECTION DETAIL

NOT TO SCALE

PLUMBING CONNECTION SCHEDULE

MARK	FIXTURE	CW	HW	W	V	REMARKS
FD-1	FLOOR DRAIN	-	-	2"	1-1/4"	PRIME
AD-1	AREA DRAIN	-	-	4"	2"	PRIME
PV-1	TRAP PRIMER, TIMER	3/4"	-	-	-	W/MANIFOLD TO FLOOR AND AREA DRAINS. MOUNT 5' ABOVE FINISHED FLOOR 120 VOLT COORDINATE ELECTRICAL WITH ELECTRICAL CONTRACTOR.
PV-2	TRAP PRIMER, PRESSURE ACTIVATED	1/2"	-	-	-	W/MANIFOLD TO FLOOR AND AREA DRAINS. MOUNT 5' ABOVE FINISHED FLOOR.
WC-1	WATER CLOSET	1-1/4"	-	4"	2"	
WC-2	WATER CLOSET, ADA	1-1/4"	-	4"	2"	
U-1	URINAL, ADA	1/2"	1/2"	2"	1-1/2"	
L-1	LAVATORY, ADA	1/2"	1/2"	2"	1-1/2"	
HB-1	HOSE BIBB	3/4"				VACUUM BREAKER, FREEZE PROOF

PLUMBING EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	ELECTRICAL
WH-1	WATER HEATER; ELECTRIC, 80 GALLON CAPACITY, TWO SIMULTANEOUS 4500 WATT ELEMENTS, 150 PSI WORKING PRESSURE, COMMERCIAL GRADE; 45 GAL PER HOUR RECOVERY AT 80 DEGREE RISE. GLASS LINED STEEL TANK. MAGNESIUM ANODE ROD. SET TEMPERATURE TO 115 DEGREES F. PROVIDE SEISMIC BRACING. BASIS OF DESIGN: DEN 80	9000 WATTS 480V, 3 PH
ET-1	EXPANSION TANK: DIAPHRAGM TYPE, PRE-CHARGED, STEEL OUTER SHELL WITH POLYPROPYLENE LINER. 4.4 GAL MIN. TANK REQ'D. BASIS OF DESIGN: AMTROL ST-12	
HWRP-1	HOT WATER RECIRCULATING PUMP: DOMESTIC HOT WATER CIRCULATING PUMP: IN-LINE, OIL LUBRICATED, 2 GPM AT 5 FEET OF HEAD. BASIS OF DESIGN: GRUNDFOS UP 15-18 B5	115V, 0.74 AMPS 1/25 HP
GI-1	GREASE INTERCEPTOR. SEE GREASE INTERCEPTOR SIZING TABLE ON THIS SHEET.	

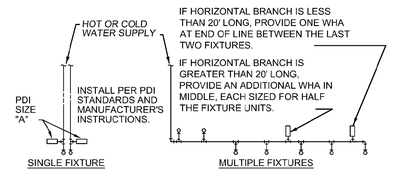
GREASE INTERCEPTOR SIZING

FIXTURE	QTY	SANITARY FIXTURE UNITS	TOTAL FIXTURE UNITS
FLOOR DRAIN	2	2	4
SINK	1	3	3
			7

HYDROMECHANICAL GREASE INTERCEPTOR TO HAVE MINIMUM (HGI) FLOW OF 20 GPM PER TABLE 10-2 OREGON PLUMBING SPECIALTY CODE.

GREASE INTERCEPTOR BASIS OF DESIGN:
MANUFACTURER= SCHIER PRODUCTS
MODEL= GB3
MAXIMUM FLOW RATE= 75 GPM FLOW RATE

19 GALLONS SOLIDS CAPACITY, 40 GALLONS LIQUID CAPACITY. INDOOR/OUTDOOR INSTALLATION. INTEGRAL FLOW CONTROL. PROVIDE MANUFACTURER'S 3" INLET AND OUTLET ADAPTORS AND RISER EXTENSIONS AS REQUIRED.



PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD
A	1/2"	1-11
B	3/4"	12-32
C	1"	33-60
D	1-1/4"	61-113
E	1-1/2"	114-154
F	2"	154-330

FIXTURE UNIT TABULATION		
FIXTURE	COLD	HOT
WATER CLOSET	10	--
URINAL	5	--
LAVATORY/HAND SINK	1.5	1.5
SINK/JANITOR'S SINK	3	3

PLUMBING CONTRACTOR TO PROVIDE WATER HAMMER ARRESTORS BY SIOUX CHIEF, PRECISION PLUMBING PRODUCTS OR WATTS WITH PISTON AND O-RING CONSTRUCTION, HAVING PDI #WH-201, ASSE #1010 AND ANSI #A112.26.1M CERTIFICATION. INSTALL IN THE HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. PROVIDE ACCESS DOOR FOR SERVING.

4 / P1.0 WATER HAMMER ARRESTOR DETAIL

DIAGRAMATIC

PLUMBING LEGEND

CW	COLD WATER
HW	HOT WATER
HWR	HOT WATER RECIRCULATION
	PIPE BELOW FLOOR OR GRADE
V	VENT
W	SANITARY WASTE ABOVE FLOOR OR GRADE
W	SANITARY WASTE BELOW FLOOR OR GRADE
SD	STORM DRAIN ABOVE FLOOR OR GRADE
SD	STORM DRAIN BELOW FLOOR OR GRADE
CTG	CLEANOUT TO GRADE
FCO	FLOOR CLEANOUT
WCO,CO	WALL CLEANOUT, CLEANOUT
	SHUTOFF VALVE, BALL VALVE
	PIPE UP
	PIPE DOWN

ABBREVIATIONS LEGEND

AFF	ABOVE FINISHED FLOOR
BFF	BELOW FINISHED FLOOR
DN	DOWN
IE	INVERT ELEVATION
TYP	TYPICAL
VTR	VENT THROUGH ROOF

WATER SERVICE PRESSURE LOSS CALCULATION

Static Pressure:	70
Total Building Fixture Units	130
Design gpm Flow Rate (Flush Valves)	66
Elevation Loss - 10 ft. x .433 psi	4.3
Water Meter Loss - psi	6
Double Check Valve Loss - psi	7
Flush Valve Required Operating Pressure - psi	25
Pressure Loss Available for Branch Piping-psi	27.5
Design Friction Loss - psi/100 ft 315 ft	9

PIPE SIZE inches	GPM	FT FU*	FV FU*	VELOCITY
1/2"	3	3	0	5
3/4"	9	12	0	6
1"	18	26	0	7
1-1/4"	30	54	13	8
1-1/2"	40	86	28	8
2"	82	284	158	8

FIXTURE LOAD SCHEDULE

FIXTURE	QTY	H2O F.U.'S	H2O F.U. TOTAL	WASTE F.U.'S	WASTE F.U. TOTAL
WATER CLOSET, FLUSH VALVE	14	5	70	4	56
URINAL	12	4	48	2	24
LAVATORY	7	1	7	1	7
SINK	1	1.5	2	2	2
HOSE BIBB	4	1@2.5, 3@1	5.5	-	-
FLOOR/AREA DRAIN	21	-	-	2	42
TOTAL			132		131

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FEBRUARY 08, 1974
CHRISTOPHER JOEL CHURCHILL
EXPIRES 12/31/19

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
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PLUMBING LEGENDS, SCHEDULES AND DETAILS

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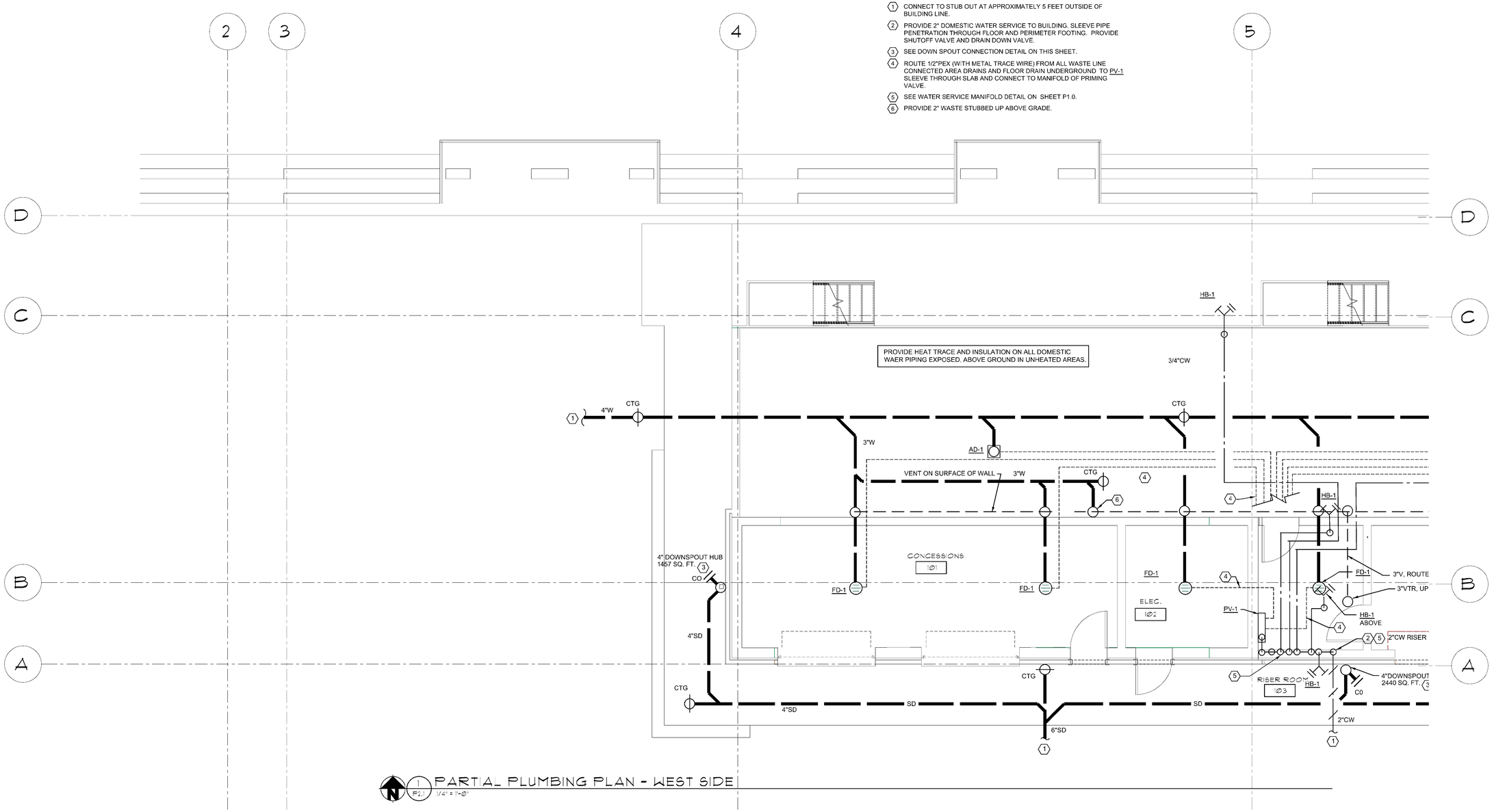
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KEY NOTES

1. CONNECT TO STUB OUT AT APPROXIMATELY 5 FEET OUTSIDE OF BUILDING LINE.
2. PROVIDE 2" DOMESTIC WATER SERVICE TO BUILDING. SLEEVE PIPE PENETRATION THROUGH FLOOR AND PERIMETER FOOTING. PROVIDE SHUTOFF VALVE AND DRAIN DOWN VALVE.
3. SEE DOWN SPOUT CONNECTION DETAIL ON THIS SHEET.
4. ROUTE 1/2"PEX (W/TH METAL TRACE WIRE) FROM ALL WASTE LINE CONNECTED AREA DRAINS AND FLOOR DRAIN UNDERGROUND TO PV-1 SLEEVE THROUGH SLAB AND CONNECT TO MANIFOLD OF PRIMING VALVE.
5. SEE WATER SERVICE MANIFOLD DETAIL ON SHEET P1.0.
6. PROVIDE 2" WASTE STUBBED UP ABOVE GRADE.



1 PARTIAL PLUMBING PLAN - WEST SIDE
P2.1 1/4" = 1'-0"

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PARTIAL PLUMBING PLAN - WEST SIDE

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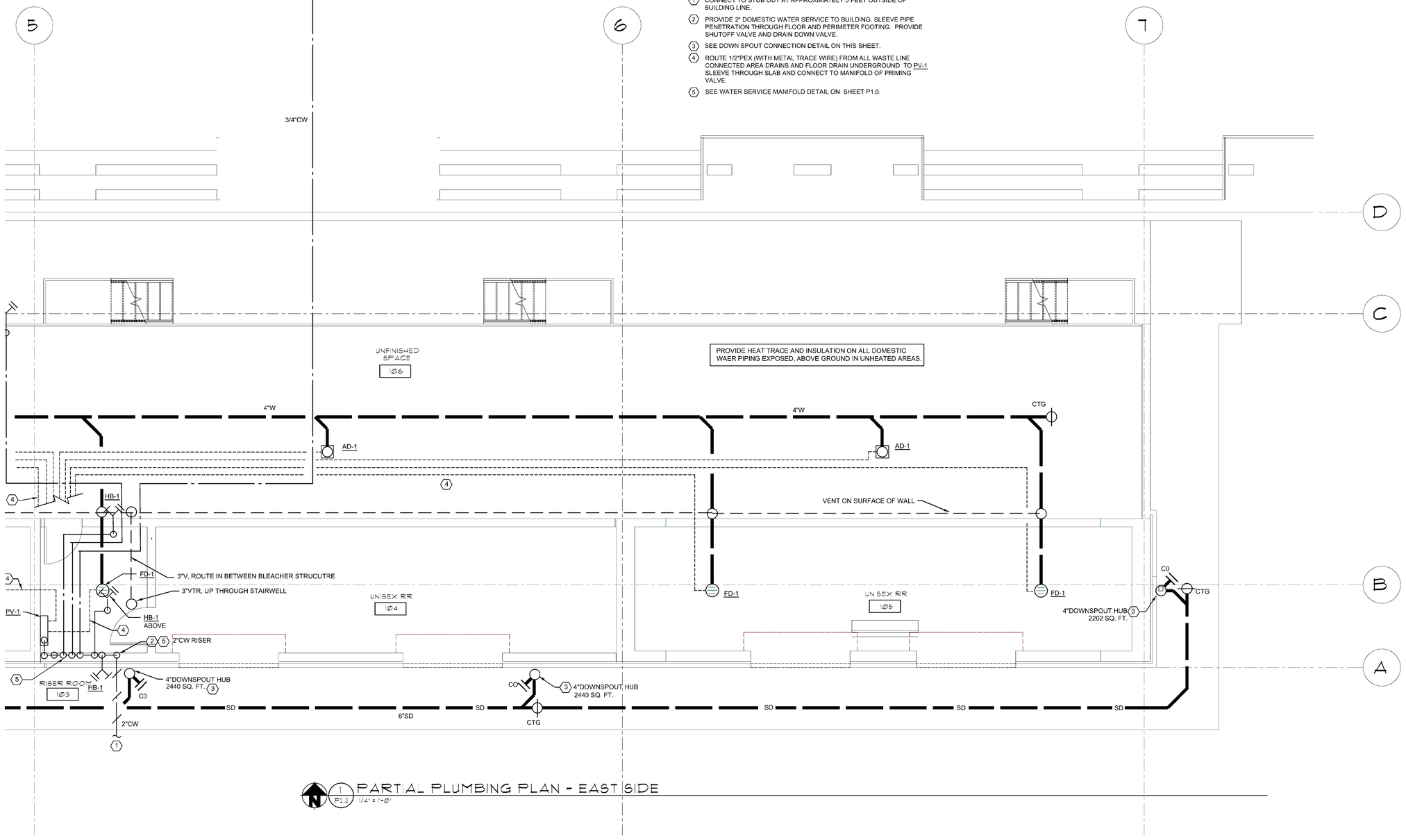
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EXISTING HOSE BIB

DISCONNECT EXISTING HOSE BIBB FROM EXISTING SUPPLY, REMOVE EXPOSED PIPING AND CAP. RECONNECT TO NEW CW PIPING.

KEY NOTES

1. CONNECT TO STUB OUT AT APPROXIMATELY 5 FEET OUTSIDE OF BUILDING LINE.
2. PROVIDE 2" DOMESTIC WATER SERVICE TO BUILDING. SLEEVE PIPE PENETRATION THROUGH FLOOR AND PERIMETER FOOTING. PROVIDE SHUTOFF VALVE AND DRAIN DOWN VALVE.
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5. SEE WATER SERVICE MANIFOLD DETAIL ON SHEET P1.0.



1 P2.2 PARTIAL PLUMBING PLAN - EAST SIDE

1/4" = 1'-0"

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PARTIAL PLUMBING PLAN - EAST SIDE

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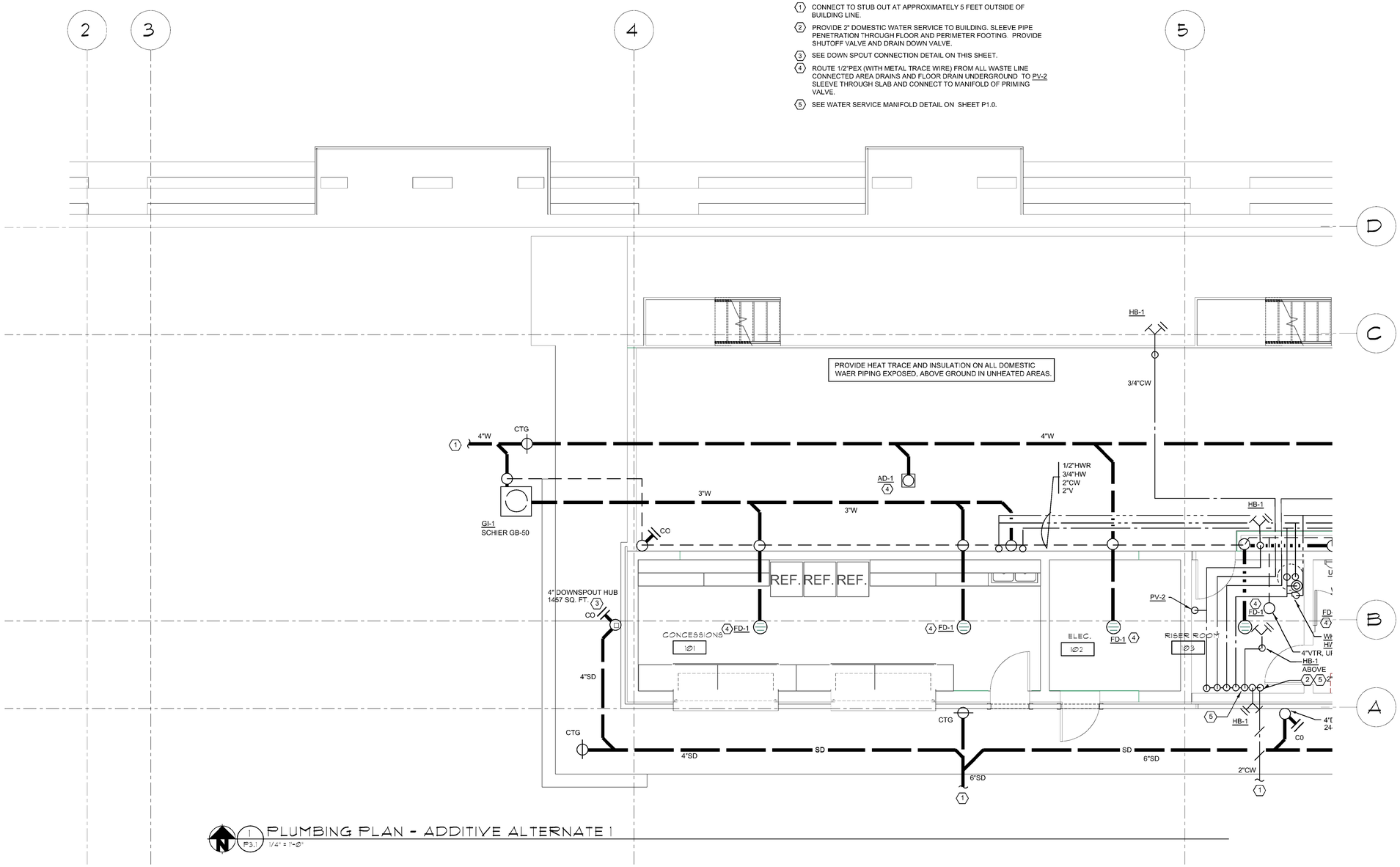
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4. ROUTE 1/2"PEX (WITH METAL TRACE WIRE) FROM ALL WASTE LINE CONNECTED AREA DRAINS AND FLOOR DRAIN UNDERGROUND TO PV-2 SLEEVE THROUGH SLAB AND CONNECT TO MANIFOLD OF PRIMING VALVE.
5. SEE WATER SERVICE MANIFOLD DETAIL ON SHEET P1.0.



1 P3.1 PLUMBING PLAN - ADDITIVE ALTERNATE 1
1/4" = 1'-0"

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PLUMBING PLAN - ADDITIVE ALT. 1

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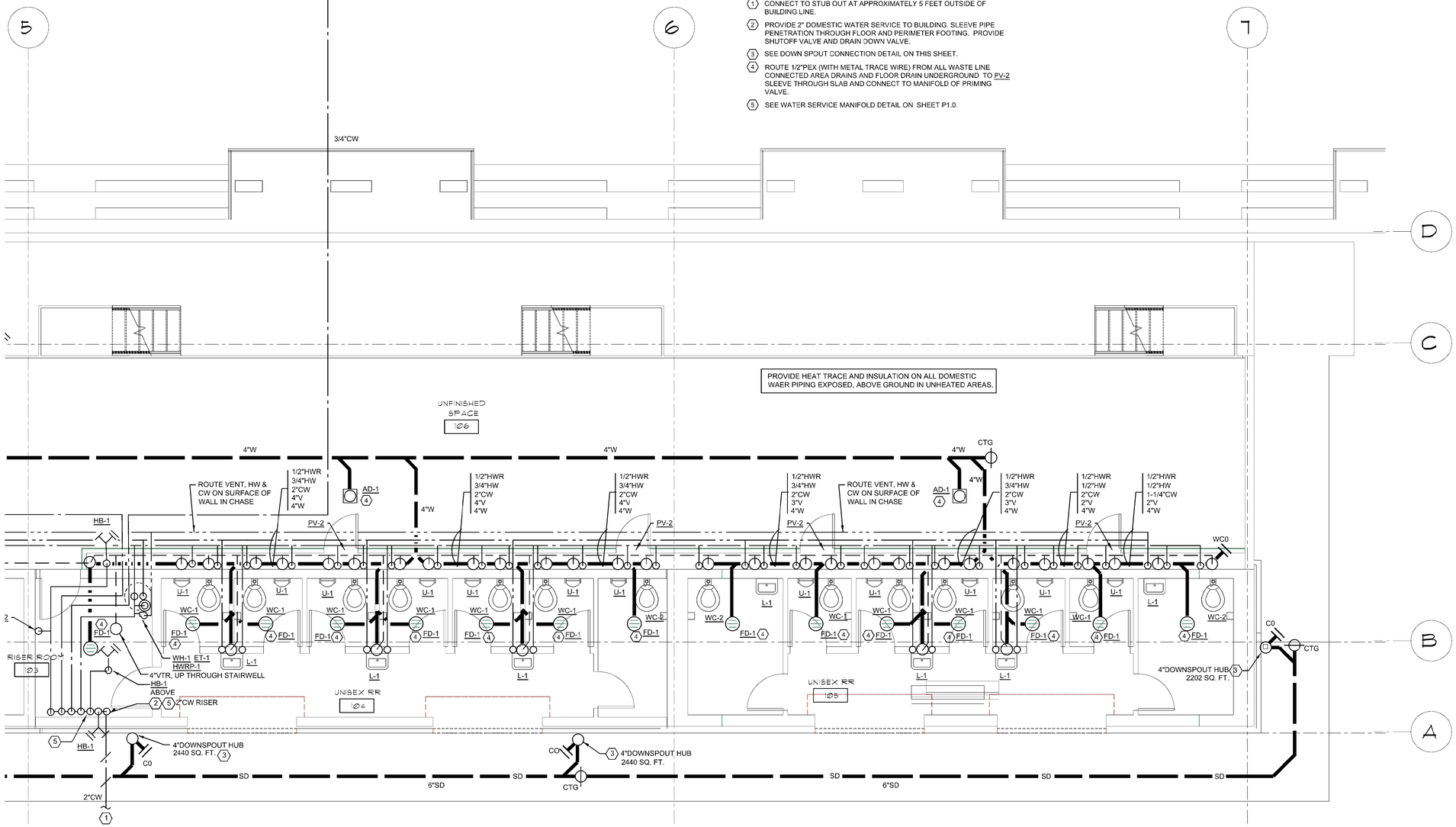
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DISCONNECT EXISTING HOSE BIBB FROM EXISTING SUPPLY, REMOVE EXPOSED PIPING AND CAP. RECONNECT TO NEW CW PIPING.

KEY NOTES

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5. SEE WATER SERVICE MANIFOLD DETAIL ON SHEET P1.0.



1 P3.2 PLUMBING PLAN - ADDITIVE ALTERNATE 2
1/4" = 1'-0"

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PLUMBING PLAN - ADDITIVE ALT. 2

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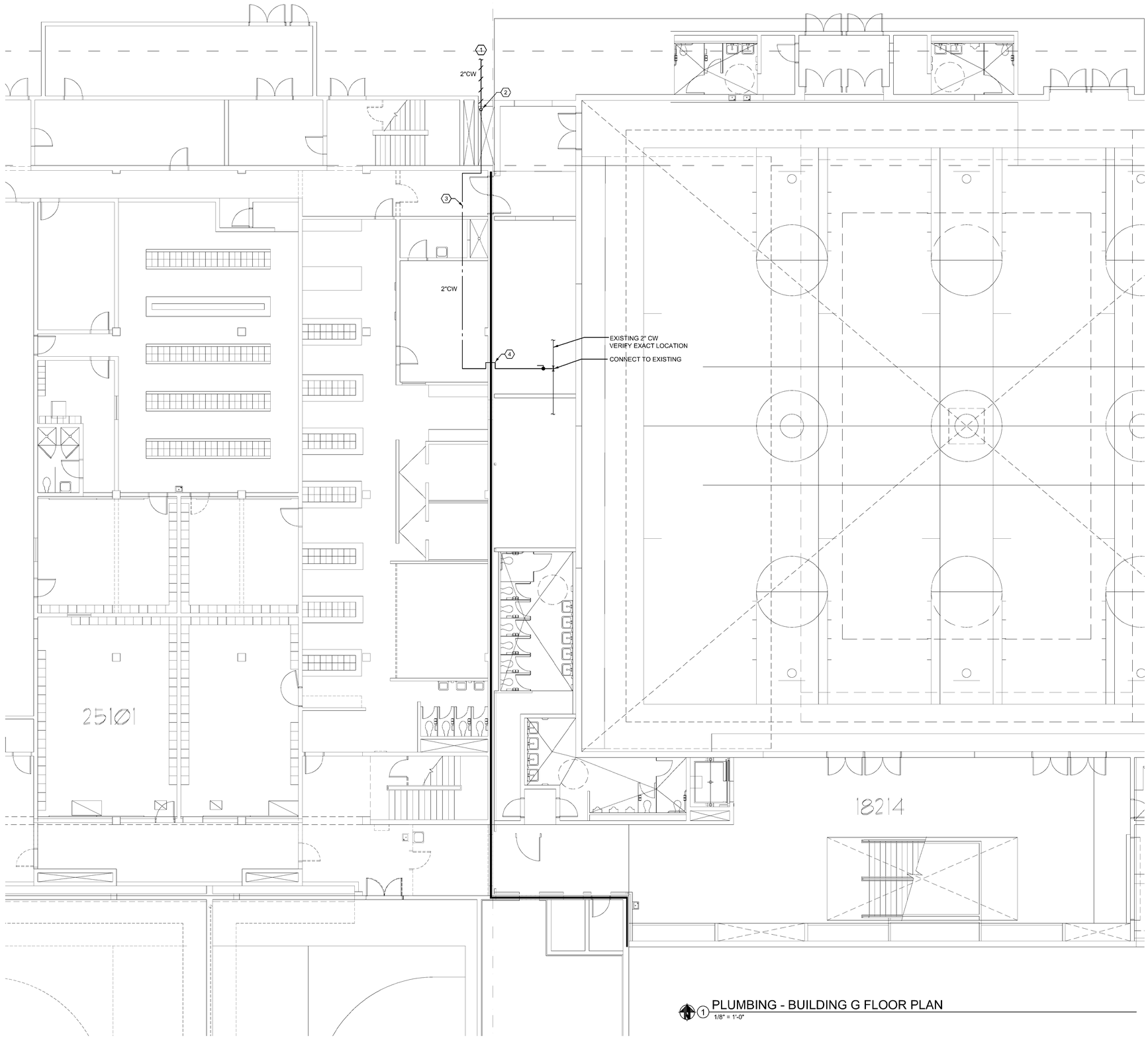
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1 PLUMBING - BUILDING G FLOOR PLAN
1/8" = 1'-0"

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PLUMBING LEGEND

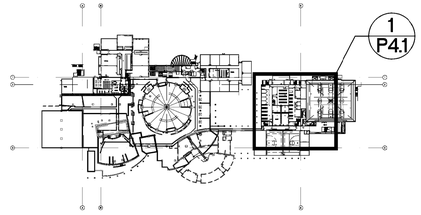
	CW	COLD WATER
		PIPE BELOW FLOOR OR GRADE
	V	VENT
	W	SANITARY WASTE ABOVE FLOOR OR GRADE
	W	SANITARY WASTE BELOW FLOOR OR GRADE
CTG	CTG	CLEANOUT TO GRADE
FCO	FCO	FLOOR CLEANOUT
WCO CO	WCO,CO	WALL CLEANOUT, CLEANOUT
		SHUTOFF VALVE, BALL VALVE
		PIPE UP
		PIPE DOWN

ABBREVIATIONS LEGEND

AFF	ABOVE FINISHED FLOOR
BFF	BELOW FINISHED FLOOR
DN	DOWN
IE	INVERT ELEVATION
TYP	TYPICAL
VTR	VENT THROUGH ROOF

KEY NOTES

1. CONNECT TO STUB OUT AT APPROXIMATELY 5 FEET OUTSIDE OF BUILDING LINE.
2. PROVIDE 2" DOMESTIC WATER SERVICE FROM BUILDING. SLEEVE PIPE PENETRATION THROUGH FLOOR AND PERIMETER FOOTING. .
3. COORDINATE PIPE SUPPORT WITH ELECTRICAL CONTRACTOR. PIPING SHARE SUPPORTING STRUCTURES WHERE RUN IN PARALLEL.
4. PROVIDE OFFSET PIPING TO PROVIDE FOR 1-1/2" OF MOVEMENT ACROSS SEISMIC JOINT.



KEY PLAN

REGISTERED PROFESSIONAL ENGINEER
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OREGON
FEBRUARY 08, 2019
CHRISTOPHER JOEL CHURCHILL
EXPIRES 12/31/19

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034
PLUMBING PLAN - BUILDING G

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JOHN FRANK ROGERS
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ELECTRICAL LEGEND

LIGHTING

- CEILING LUMINAIRE: SURFACE, RECESSED
- WALL LUMINAIRE: SURFACE, RECESSED
- WALL WASHER: SURFACE, RECESSED
- FLUORESCENT LUMINAIRE: SURFACE, RECESSED
- FLUORESCENT LUMINAIRE: WALL MOUNTED
- FLUORESCENT LUMINAIRE: STRIP
- EXIT LIGHT: CEILING, WALLS (ARROWS AS SHOWN)
- DESIGNATES LIGHT ON EMERGENCY
- EMERGENCY BATTERY LIGHT
- $ WALL SWITCH: SINGLE POLE, 2 POLE
- $3 $4 WALL SWITCH: 3 WAY, 4 WAY
- $K WALL SWITCH: KEYED
- $T WALL SWITCH: TIMER
- $SW-8 WALL SWITCH: LOW VOLTAGE (LTG CONTROL PANEL) NUMBER DENOTES SWITCH SEE E2.4 & E2.5
- $OS WALL SWITCH: OCCUPANCY SENSOR SEE DETAILS FOR TYPE
- $OS-2 WALL SWITCH: OCCUPANCY SENSOR 2 POLE SEE DETAILS FOR TYPE
- OS OS SENSOR: OCCUPANCY SENSOR, CEILING, WALL SEE DETAILS FOR TYPES
- DS PHOTO DAYLIGHTING SENSOR SEE DETAILS FOR TYPES
- $D DIMMER, AS NOTED
- $FD DIMMER: FLUORESCENT
- $VC WALL SWITCH: VOLUME CONTROL
- PUSHBUTTON: AS NOTED
- PHOTOELECTRIC CELL
- B DESIGNATES LUMINAIRE TYPE
- NL DESIGNATES NIGHT LIGHT CIRCUIT
- (E) EXISTING TO REMAIN
- (R) EXISTING TO BE RELOCATED
- (X) EXISTING TO BE REMOVED
- (1) ELECTRICAL SHEET NOTE LABEL DESIGNATOR

POWER

- CEILING RECEPTACLE: DUPLEX
- SPECIAL PURPOSE OUTLET AS NOTED
- FLUSH IN FLOOR OUTLET: DUPLEX, TELECOMMUNICATIONS
- SURFACE OUTLET STRIP: DIMENSIONS AS SHOWN
- JUNCTION BOX
- F DISCONNECT SWITCH: FUSED, NON FUSED
- MOTOR CONNECTION
- $OL MOTOR STARTER: MANUAL, MAGNETIC, COMBINATION
- C R S CONTACTOR, RELAY, SOLENOID
- T TRANSFORMER
- CONDUIT ELL
- PANELBOARD: SURFACE, RECESSED
- CABINET: SURFACE, RECESSED
- $MS SWITCH: MOTORIZED SHADE CONTROL
- $FAN SWITCH: FAN CONTROL, AS NOTED
- M MOTORIZED DAMPER, PROVIDE 120V CONNECTION. MAX. (5) DAMPERS ON A DEDICATED CIRCUIT.

POWER

- HA-3.5. CONDUIT HOMERUN TO PANELBOARD "LA" WITH CIRCUIT 3.5.
- LCP1-24.26. CONDUIT HOMERUN TO LIGHTING CONTROL PANEL "LCP1" WITH RELAYS 24.26. SEE SCHEDULE FOR HOMERUN TO PANELBOARDS
- DENOTES NEUTRAL
- DENOTES HOT OR SWITCH LEG
- DENOTES ISOLATE GREEN GROUND WIRE
- DENOTES GROUND CONNECTION

PER LIGHTING PLANS:

- CONDUIT WITH 2 #12 WIRES, 3/4" MIN.
- CONDUIT WITH 3 #12 WIRES, 3/4" MIN.
- CONDUIT WITH 4 #12 WIRES, 3/4" MIN.
- CONDUIT WITH 5#12 WIRES, 3/4" MIN.
- CONDUIT WITH 6#12 WIRES, 3/4" MIN.

PER POWER & EQUIPMENT PLANS:

- 3/4" CONDUIT WITH 2#12 WIRES, 1 #12 GREEN INSULATED GROUND WIRE
- 3/4" CONDUIT WITH 3#12 WIRES, 1 #12 GREEN INSULATED GROUND WIRE
- DUPLEX RECEPTACLE OUTLET, 15 AMPS, 125 VOLTS, FLUSH WALL MOUNTED, +18" AFF OR AS NOTED ON DRAWINGS. PROVIDE 20 AMPS RATING FOR SINGLE RECEPTACLE ON 20 AMPS DEDICATED CIRCUIT.
- 20A DUPLEX RECEPTACLE OUTLET, 20 AMPS, 125 VOLTS, FLUSH WALL MOUNTED, +18" AFF OR AS NOTED ON DRAWINGS ON DEDICATED 20 AMPS DEDICATED CIRCUIT.
- GFCI DUPLEX RECEPTACLE OUTLET, 20 AMPS, 125 VOLTS, FLUSH WALL MOUNTED, +18" AFF OR AS NOTED ON DRAWINGS. PROVIDE 20 AMPS RATING FOR SINGLE RECEPTACLE ON 20 AMPS DEDICATED CIRCUIT.
- DOUBLE DUPLEX RECEPTACLE OUTLET, 15 AMPS, 125 VOLTS, FLUSH WALL MOUNTED, +18" AFF OR AS NOTED ON DRAWINGS. PROVIDE 20 AMPS RATING FOR SINGLE RECEPTACLE ON 20 AMPS DEDICATED CIRCUIT.
- D RECEPTACLE ON DEDICATED CIRCUIT.

SIGNAL

- F MANUAL FIRE ALARM STATION
- I R DETECTOR: IONIZATION, RATE OF RISE
- H P DETECTOR: HEAT, PHOTOELECTRIC
- I DUCT DETECTOR, TYPE AS NOTED
- F F FIRE ALARM: HORN, HORN WITH VISUAL
- S FIRE ALARM: VISUAL STROBE ONLY
- WALL OUTLET: TELECOMMUNICATIONS
- WALL OUTLET: TELEPHONE ONLY
- WALL OUTLET: TELEVISION
- WALL OUTLET: CCTV CAMERA
- WALL CLOCK (PROVIDE DUPLEX RECEPTACLE)
- PENDANT CLOCK (PROVIDE DUPLEX RECEPTACLE)

NOTE: NOT ALL SYMBOLS SHOWN ON LEGEND APPEAR ON DRAWINGS.

ABBREVIATIONS

A	AMPERE (AMP)
ACT	ABOVE COUNTER TOP
ADA	AMERICAN WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
ARCH	ARCHITECT
C	CONDUIT
C/B	CIRCUIT BREAKER
CKT	CIRCUIT
CLG	CEILING
CU	COPPER
CT	CURRENT TRANSFORMER
EC	ELECTRICAL CONTRACTOR
EMERG	EMERGENCY
EMT	ELECTRIC METALLIC TUBING
EXT	EXTERIOR
FA	FIRE ALARM
FLA	FULL LOAD AMPS
FLUOR	FLUORESCENT
FCIC	FURNISHED BY CONTRACTOR INSTALLED BY CONTRACTOR
FOIC	FURNISHED BY OWNER INSTALLED BY CONTRACTOR
FOIO	FURNISHED BY OWNER INSTALLED BY OWNER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GRC	GALVANIZED RIGID CONDUIT
GRD	GROUND
HLO	HANDLE LOCK OFFS
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HZ	HERTZ
INC	INCANDESCENT
JB	JUNCTION BOX
KVA	KILOVOLT AMP
LV	LOW VOLTAGE
LTG	LIGHTING
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MH	METAL HALIDE
MLO	MAIN LUGS ONLY
MV	MERCURY VAPOR
NIC	NOT IN CONTRACT
PA	PUBLIC ADDRESS
PE	PHOTOELECTRIC CELL
PNL	PANEL BOARD
PVC	POLYVINYL CHLORIDE CONDUIT
PWR	POWER
SDP	SUB-DISTRIBUTION PANEL
STR	STARTER
SV	SOLENOID VALVE
SW	SWITCH
TBF	TO BOTTOM OF FIXTURE
TD	TIME DELAY
TP	TAMPERPROOF
TTB	TELEPHONE TERMINAL BOARD
TTC	TELEPHONE TERMINAL CABINET
TV	TELEVISION
TYP	TYPICAL
UG	UNDERGROUND
V	VOLTAGE
W	WATTS
WP	WEATHER PROOF
XFMR	TRANSFORMER

LIGHTING COMMISSIONING:

PROVIDE COMMISSIONING FOR LIGHTING CONTROLS PER C408.3 WHICH INCLUDE DAYLIGHT OR OCCUPANT SENSING AUTOMATIC CONTROLS, AUTOMATIC SHUT-OFF CONTROLS, OCCUPANCY SENSORS, OR AUTOMATIC TIME SWITCHES, THE LIGHTING CONTROLS SHALL BE TESTED TO ENSURE THAT CONTROL DEVICES, COMPONENTS, EQUIPMENT, AND SYSTEMS ARE CALIBRATED, ADJUSTED AND OPERATE IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS. SEQUENCES OF OPERATION SHALL BE FUNCTIONALLY TESTED TO ENSURE THEY OPERATE IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS. A COMPLETE REPORT OF TEST PROCEDURES AND RESULTS SHALL BE PREPARED AND FILED WITH THE OWNER.

PERMITS:

ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL PERMITS ASSOCIATED WITH SCOPE OF WORK SHOWN IN SPECIFICATIONS AND ON DRAWINGS INCLUDING BUT NOT LIMITED TO ELECTRICAL, FIRE ALARM, TELECOMMUNICATION, SECURITY AND OTHER LOW VOLTAGE SYSTEMS.

PROJECT GENERAL NOTES

1. PROVIDE PATCHING IN AREAS OF WORK NOT SHOWN ON ARCHITECTURAL FINISH SCHEDULES AND DRAWINGS, COORDINATE WITH ARCHITECTURAL DRAWINGS AND ELEVATIONS. PATCHING SHALL MATCH EXISTING, PROVIDE ALL LABOR AND MATERIAL AS REQUIRED.
2. VERIFY PHASING OF PROJECT WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL PROVIDE ADDITIONAL MATERIAL AND LABOR AS REQUIRED TO ENERGIZE AREAS OF PROJECT TO REMAIN IN OPERATION DURING CONSTRUCTION AND PROVIDE ALL TEMPORARY POWER AS REQUIRED.
3. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC, REFERENCE ARCHITECTURAL FLOOR PLANS, ELEVATIONS AND DETAILS FOR DEVICE LOCATIONS AND MOUNTING HEIGHTS, INCLUDING BUT NOT LIMITED TO LUMINAIRES, AND FIRE ALARM DEVICES. IT SHALL BE THE ELECTRICAL CONTRACTORS RESPONSIBILITY TO COORDINATE WITH DRAWINGS, IF CONFLICTS ARISE CONTACT THE ARCHITECT AND/OR ENGINEER.
4. REFERENCE ARCHITECTURAL SPECIFICATIONS AND DOOR SCHEDULES FOR ADDITIONAL ELECTRICAL CONNECTIONS REQUIRED. PROVIDE ALL MATERIAL AND LABOR AS REQUIRED FOR A COMPLETE AND OPERATIONAL INSTALLATION WHETHER SPECIFICALLY SHOWN ON THE ELECTRICAL DRAWINGS.
5. MOUNT ELECTRICAL DEVICES PER CURRENT ADA REQUIREMENTS, COORDINATE WITH CODE OFFICIALS HAVING JURISDICTION. THERMOSTATS, SWITCHES AND RECEPTACLES INSTALLED IN AREAS EQUIPPED FOR THE DISABLED SHALL BE LOCATED AT NOT MORE THAN 48" MEASURED FROM THE TOP OF BOX TO FINISH FLOOR. THE BOTTOM OF THE BOX FOR THERMOSTATS, SWITCHES AND RECEPTACLES SHALL BE NO LOWER THAN 15" TO FINISH FLOOR, PER 2013 U.B.C. 11B-308.
6. ALL WORK TO COMPLY WITH THE LATEST ADDITION OF THE NATIONAL ELECTRICAL CODE, OREGON SPECIALTY CODE AS AMENDED AND ADOPTED BY THE CITY WITH THE AUTHORITY HAVING JURISDICTION.
7. ELECTRICAL DEDICATED SPACES: NO PIPING, DUCTS, EQUIPMENT FOREIGN TO ELECTRICAL EQUIPMENT SHALL BE PERMITTED WITHIN THE DEDICATED SPACE ABOVE THE ELECTRICAL EQUIPMENT.
8. DUPLEX, DOUBLE DUPLEX AND GFCI RECEPTACLES PER SECTION 26 27 26 WILL BE 20 AMPS.
9. EQUIPMENT WIRING TERMINAL WILL BE LISTED FOR 75 DEGREE C WIRING TERMINATION.
10. CONDUIT WILL BE EMT, MC CABLE IS NOT ALLOWED EXCEPT FOR POWER WHIP FROM JUNCTION BOX DIRECTLY ABOVE THE LUMINAIRE DOWN TO THE LUMINAIRE.
11. CONDUCTORS WILL BE COPPER ONLY, TYPE THHN/THWN.
12. LIGHTING AND MECHANICAL FIXTURES MUST BE SUPPORTED BY ADDITIONAL INDEPENDENT NO. 12 GAGE WIRES ATTACHED TO EACH CORNER OF FIXTURE. PENDANT MOUNTED LUMINAIRES THE SUPPORTS WILL BE PERPENDICULAR TO THE FLOOR. PROVIDED ADDITIONAL SUPPORT AS REQUIRED.
13. ALL ELECTRICAL DEVICES AND UTILIZATION EQUIPMENT SHALL BE LISTED BY AN APPROVED TESTING AGENCY.
14. SEE MECHANICAL PLANS FOR ADDITIONAL ELECTRICAL CONNECTIONS.
15. CONTRACTOR SHALL FURNISH AND INSTALL A GROUND WIRE IN ALL PVC CONDUIT. GROUND WIRES MAY NOT BE SHOWN, BUT SHALL BE INCLUDED IN THE ELECTRICAL CONTRACTOR'S BASE BID AND SIZED PER CURRENT CODE.
16. CONTRACTOR TO TAG/IDENTIFY ALL CONDUCTORS FOR EQUIPMENT INSTALLATION.
17. FITTINGS: GALVANIZED STEEL TYPE ONLY, DIE CAST NOT PERMITTED.
18. SLEEVES: PROVIDE SLEEVES FOR ALL RACEWAYS AND/OR WIRING THROUGH ALL FIRE-RATED WALLS, CEILINGS AND CONCRETE STEEL FLOORS, SEAL SLEEVES, AFTER INSTALLING RACEWAYS, WITH APPROVED FIRE-RATING MATERIAL OF EQUAL RATING AS ORIGINAL FIRE-RATING.
19. ALL CONDUIT ONLY (C.O.) SHALL HAVE A PULL WIRE.

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034

ELECTRICAL LEGENDS AND SCHEDULES

BBL1822
18079.001
PROJECT NUMBER
20 SEP 2019
DATE

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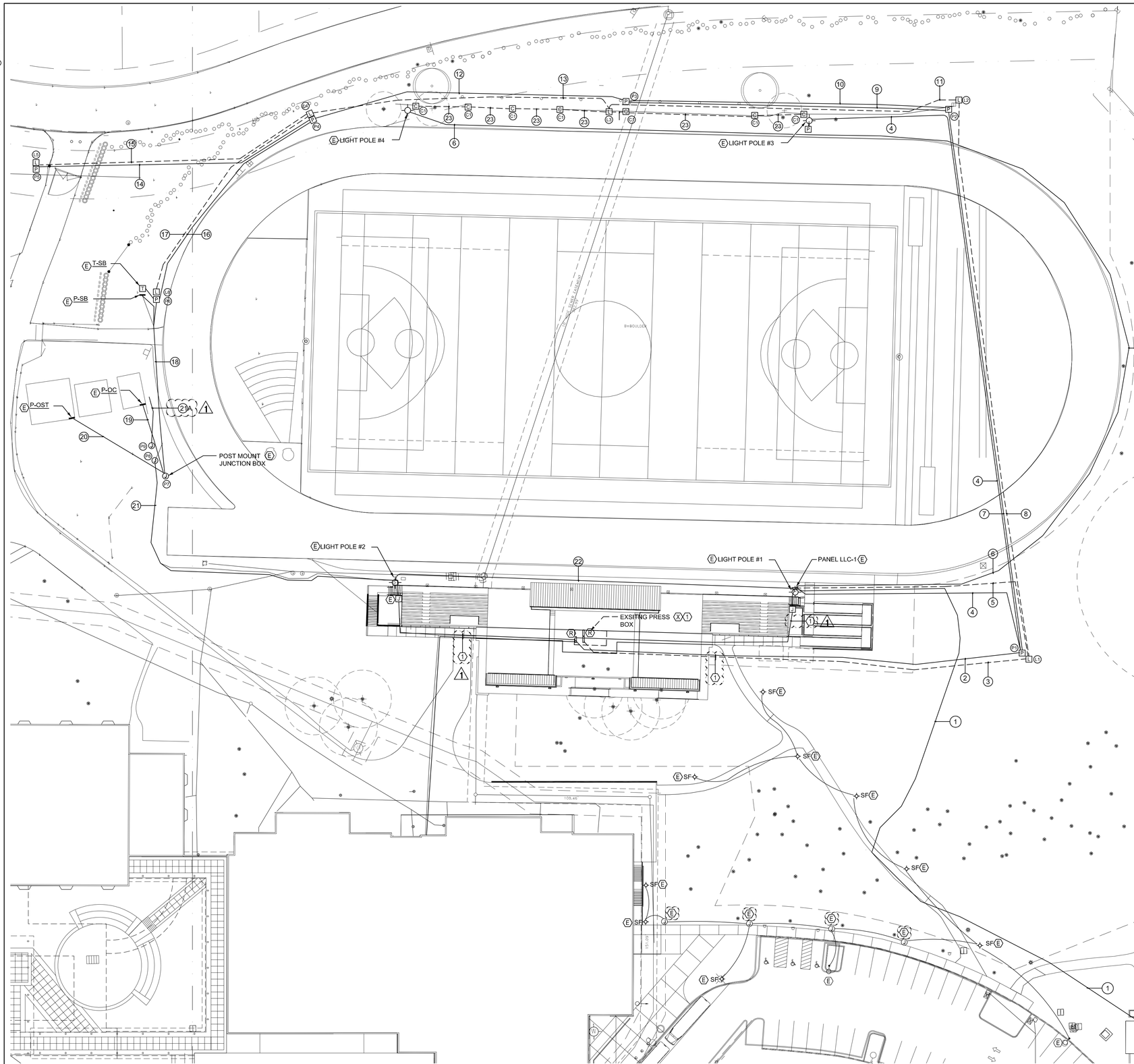
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SYSTEM DESIGN CONSULTANTS INC.
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503-248-0227 FAX 248-0240
CONTACT: JEFFREY DAVIS

REGISTERED PROFESSIONAL ENGINEER
18197
OREGON
DEC. 6, 1955
JOHN FRANK ROGERS
EXPIRES 12/31/20



SITE PLAN - ELECTRICAL
1" = 30'-0"

CONDUIT SCHEDULE - EXISTING

	Designation	Quantity	Size		FROM	TO	NOTES :
1	1	1	2"	(E)	SDP - BB	LLC-1	
	2	1	2"	(E)	P1	PRESS BOX (EXIST)	PWR
	2	1	1-1/2"	(E)	P1	PRESS BOX (EXIST)	PWR
	3	2	2"	(E)	L1	PRESS BOX (EXIST)	LV
	3	2	1-1/2"	(E)	L1	PRESS BOX (EXIST)	LV
	4	1	1-1/2"	(E)	LLC-1	LP #3 thru P1	Power to LP #3
	5	1	1-1/2"	(E)	L1	LLC-1	Stadium Lighting Control
	6	1	2"	(E)	LLC-1	LP #4	Power to LP #4
	7	1	2"	(E)	P1	P2	PWR
	7	3	1-1/2"	(E)	P1	P2	PWR
	8	2	2"	(E)	L1	L2	LV
	8	2	1-1/2"	(E)	L1	L2	LV
	9	1	1-1/2"	(E)	P2	P3	PWR
	10	1	2"	(E)	P2	P3	PWR
	10	2	1-1/2"	(E)	P2	P3	PWR
	11	2	2"	(E)	L2	L3	LV
	11	2	1-1/2"	(E)	L2	L3	LV
	12	1	2"	(E)	P3	P4	PWR
	12	2	1-1/2"	(E)	P3	P4	PWR
1	13	2	2"	(E)	L3	L4	LV
	13	2	1-1/2"	(E)	L3	L4	LV
	14	1	1-1/2"	(E)	P4	P5	PWR
	15	1	1-1/2"	(E)	L4	L5	LV
	16	2	1-1/2"	(E)	P4	P6	PWR
	17	1	1-1/2"	(E)	L4	L6	LV
	18	1	2"C	(E)	P6	P7	PWR
	19	1	1-1/2"	(E)	P7	P-OC	PWR
	20	1	1-1/2"	(E)	P7	P-OST	PWR
1	21	1	1"C	(E)	P8	UNKNOWN	PWR - 2#8, 1#8 GRD
	21A	1	1"C	(E)	P9	UNKNOWN	PWR
	22	1	1-1/2"	(E)	LLC-1	LP #4	Power to LP #4
	23	1	1-1/2"	(E)	L3	C1	SPEAKERS

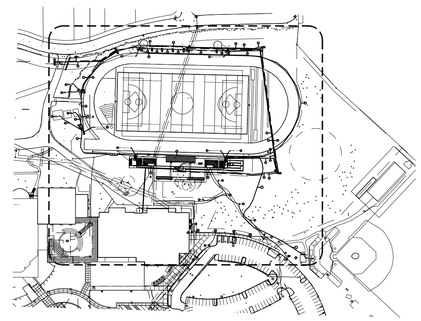
Notes: (E) DENOTES EXISTING IN-GRADE JUNCTION BOX

SHEET NOTES:

1. EXISTING PRESS BOX WILL BE REMOVED. ELECTRICAL CONTRACTOR WILL PROVIDE LABOR AND MATERIAL TO REMOVE ALL ELECTRICAL EQUIPMENT INCLUDING BUT NOT BE LIMITED TO LUMINAIRES, JUNCTION BOXES, CONDUIT AND CABLES. LUCENT GAS FUSSES WILL BE RELOCATED TO ELEC 103. CABLES REMOVED WILL BE RETURNED TO OWNER. INTERCEPT EXISTING CONDUITS OUTSIDE CONSTRUCTION AREA AND EXTEND INTO ELEC 103. PROVIDE #12 CU SOLID FOR A PULL WIRE BACK TO FIRST JUNCTION BOX WITH TRACER WIRE. PROVIDE A RECORD DRAWING INDICATING A MINIMUM OF TWO (2) DIMENSIONS FROM PERMANENT STRUCTURES FOR FUTURE SCHOOL REFERENCE.

PARTIAL LEGEND: 1

- P — POWER - IN-GRADE JUNCTION BOX
- L — LOW VOLTAGE - IN-GRADE JUNCTION BOX
- P1 — POWER JUNCTION BOX, DESIGNATION
- L1 — LOW VOLTAGE JUNCTION BOX, DESIGNATION
- 1 — CONDUIT, DESIGNATION (SEE SCHEDULE)
- 1 — SHEET NOTE, DESIGNATION
- CONDUIT - POWER
- CONDUIT - LOW VOLTAGE



KEY PLAN
NTS

BBL ARCHITECTS
ARCHITECTURE ■ PLANNING ■ INTERIOR DESIGN
200 North State Street ■ Lake Oswego, Oregon 97034

LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034
SITE PLAN - ELECTRICAL

BBL1822
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REGISTERED PROFESSIONAL ENGINEER
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EXPIRES 12/31/20

BBL ARCHITECTS
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200 North State Street ■ Lake Oswego, Oregon 97034

Designation		Quantity	Size		FROM	TO	NOTES :
1		1	2"	(E)	P10	LLC-1	EMPTY
2		1	2"	(E)	P1	ELEC 103	SEE DETAIL 2/E4.0
2		1	1-1/2"	(E)	P1	ELEC 103	SEE DETAIL 2/E4.0
3		2	2"	(E)	L1	ELEC 103	SEE DETAIL 2/E4.0
3		2	1-1/2"	(E)	L1	ELEC 103	SEE DETAIL 2/E4.0
4		1	1-1/2"	(E)	LLC-1	LP #3 thru P1	SHEET NOTE 4
5		2	1-1/2"	(E)	L1	LLC-1	SEE DETAIL 1/E6.2, LTG CONTROLS, NOTE 6
6		1	2"	(E)	LLC-1	LP #4	Power to LP #4, EXISTING
7		1	2"	(E)	P1	P2	PWR
7		3	1-1/2"	(E)	P1	P2	PWR
8		2	2"	(E)	L1	L2	LV
8		2	1-1/2"	(E)	L1	L2	LV
9		1	1-1/2"	(E)	P2	P3	PWR
10		1	2"	(E)	P2	P3	PWR
10		2	1-1/2"	(E)	P2	P3	PWR
11		2	2"	(E)	L2	L3	LV
11		2	1-1/2"	(E)	L2	L3	LV
12		1	2"	(E)	P3	P4	PWR
12		2	1-1/2"	(E)	P3	P4	PWR
13		2	2"	(E)	L3	L4	LV
13		2	1-1/2"	(E)	L3	L4	LV
14		1	1-1/2"	(E)	P4	P5	PWR
15		1	1-1/2"	(E)	L4	L5	LV
16		2	1-1/2"	(E)	P4	P6	PWR
17		1	1-1/2"	(E)	L4	L6	LV
18		1	2"C	(E)	P6	P7	PWR
19		1	1-1/2"	(E)	P7	P-OC	PWR
20		1	1-1/2"	(E)	P7	P-OST	PWR
21		1	1"C	(E)	P8	UNKNOWN	PWR - 2#8, 1#8 GRD
21A		1	1"C	(E)	P9	UNKNOWN	PWR
22		1	1-1/2"	(E)	LLC-1	LP #4	Power to LP #4
23		1	1-1/2"	(E)	L3	C1	SHEET NOTE 3
24		1	1"C	(N)	TRACK POST	IDF	(2) CAT 5E
25		1	1"C	(N)			2 #8, #10 GRD
26		1	2"C	(N)	P11	SDP-BB	EMPTY
27		1	2"C	(E)	P11	ELEC 103 THRU P10	SHEET NOTE 2
28		1	2"C	(N)	LLC-1	4GS VIA P10	POWER FOR LLC-1, SEE E5.0
29		2	2"C	(N)	P12	PANEL 2GS	SEE DETAIL 1/E5.0
30		1	2"C	(N)	P13	PANEL 4GS	SEE DETAIL 1/E5.0
31		1	2"C	(N)	L7	ELEC 103	SEE DETAIL 1/E5.0
32		1	2"C	(N)	P13	P6	POWER FOR T-SB
33		2	1-1/2"	(N)	L1	LCP-1	SEE DETAIL 1/E6.2, LTG CONTROLS, NOTE 6

Notes: (E) DENOTES EXISTING IN-GRADE JUNCTION BOX
(N) DENOTES NEW IN-GRADE JUNCTION BOX

GENERAL NOTES:

1. PROVIDE #12 STRANDED PULL WIRE THHN IN ALL EMPTY CONDUITS.
2. ALL CONDUITS WILL BE MARKED TERMINATION LOCATION WITH A PERMANENT SYSTEM APPROVED BY THE OWNER.
3. ALL CONDUITS WILL ENTER FLUSH IN-GRADE JUNCTION BOXES FROM THE BOTTOM. ALL CONDUITS WILL HAVE SWEEPING 90 DEGREE BENDS.
4. DETAIL 6/E6.0 APPLIES TO ALL IN-GRADE BOXES THAT ARE NEW, RELOCATED OR RAISED TO ACCOMMODATE NEW GRADE LEVELS, TYPICAL ALL ELECTRICAL SHEETS.
5. ALL NEW IN-GRADE BOXES WILL BE 12"X24"X24", SIMILAR TO EXISTING P1 / L1 BOXES, MATCH EXISTING MANUFACTURER OR APPROVED EQUIVALENT

SHEET NOTES:

1. EXISTING PRESS BOX WILL BE REMOVED. ELECTRICAL CONTRACTOR WILL PROVIDE LABOR AND MATERIAL TO REMOVE ALL ELECTRICAL EQUIPMENT INCLUDING BUT NOT BE LIMITED TO LUMINAIRES, JUNCTION BOXES, CONDUIT AND CABLES. LUCENT GAS FUSSES WILL BE RELOCATED TO ELEC 103. CABLES REMOVED WILL BE RETURNED TO OWNER. INTERCEPT EXISTING CONDUITS OUTSIDE CONSTRUCTION AREA AND EXTEND INTO ELEC 103. PROVIDE #12 CU SOLID FOR A PULL WIRE BACK TO FIRST JUNCTION BOX WITH TRACER WIRE. PROVIDE A RECORD DRAWING INDICATING A MINIMUM OF TWO (2) DIMENSIONS FROM PERMANENT STRUCTURES FOR FUTURE SCHOOL REFERENCE.
2. PROVIDE IN EXISTING 2"C, SEE SHEET E6.2
   (1) 10-3 W/ GRD MC CABLE (4GS-2.4., LTG) - SEE DETAILS 1/E6.0 & 1/E6.2
   (1) 10-3 W/ GRD MC CABLE (2GS-8.10., PWR)
   (1) 6 STRAND ARMOR 50 MICRON FIBER - SEE DETAIL 1/E6.1
3. REMOVE EXISTING SPEAKER CONDUCTOR, PROVIDE A NEW SPEAKER WIRE IN EXISTING CONDUIT, ONE (1) HOMERUN PER SPEAKER LOCATION, (8) TOTAL. REINSTALL EXISTING FEMALE CONNECTOR ON TO SPEAKER WIRE. ROUTE CABLE TO SOUND RACK ON PRESS BOX LEVEL ROOM 203, NO SPLICES WILL BE ALLOWED IN EACH HOMERUN.
4. REMOVE EXISTING CONDUCTORS, PROVIDE NEW 3 #8, #10 GROUND FOR CONNECTION TO LIGHT POLE #4
5. PROVIDE 3 #10, #10 GRD FOR DUPLEX RECEPTACLES AT THE VISITOR BLEACHERS, UTILIZE EXISTING CIRCUITS IN PANEL P-SB.
6. PROVIDE (20) #18 TFFN FROM LLC-1 STADIUM CONTACT ORS AND CONTROLS TO DDC LCP-1 IN ELEC 103.

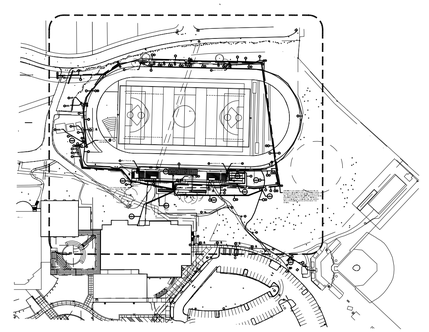
EXISTING FLUSH GRADE JUNCTION BOXES WILL BE REMOVED AND REINSTALLED FLUSH TO NEW GRADE. EXTEND CONDUITS UP, ALL EXISTING CONDUCTORS WILL BE REMOVED. PROVIDE NEW WIRE AS SHOWN ON DRAWINGS. PROVIDE #12 SOLID PULL WIRE IN ALL EMPTY CONDUITS. ALL CONDUITS WILL BE MARKED WITH A PERMANENT SYSTEM APPROVED BY THE OWNER.

PARTIAL LEGEND: 1

- P — POWER - IN-GRADE JUNCTION BOX
- L — LOW VOLTAGE - IN-GRADE JUNCTION BOX
- P1 — POWER JUNCTION BOX, DESIGNATION
- L1 — LOW VOLTAGE JUNCTION BOX, DESIGNATION
- 1 — CONDUIT, DESIGNATION (SEE SCHEDULE)
- 1 — SHEET NOTE, DESIGNATION
- CONDUIT - POWER
- CONDUIT - LOW VOLTAGE

SITE PLAN - ELECTRICAL

1" = 30'-0"



KEY PLAN

NTS

LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034
SITE PLAN - ELECTRICAL

BBL1022
18079.001
PROJECT NUMBER
20 SEP 2019
DATE
1 26 SEP 2019
REVISIONS

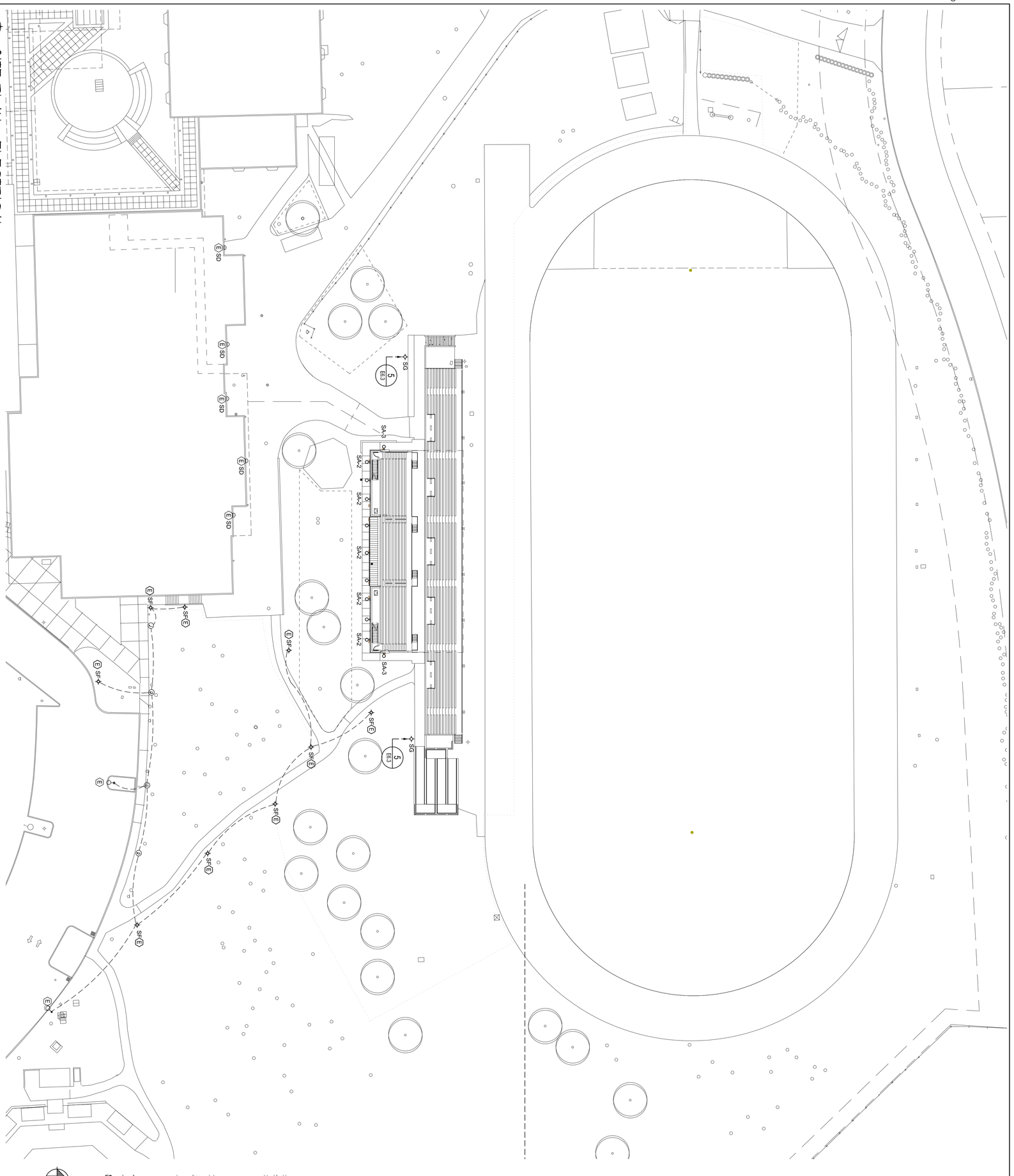
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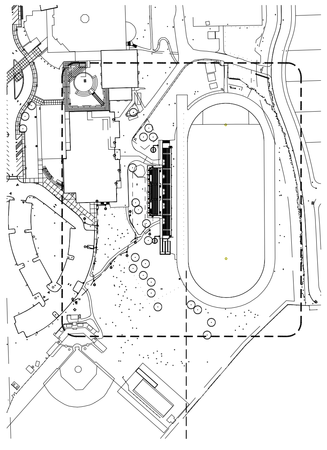
SITE PLAN - ELECTRICAL

1" = 30'-0"



KEY PLAN

NTS



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20 SEP 2019
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LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034

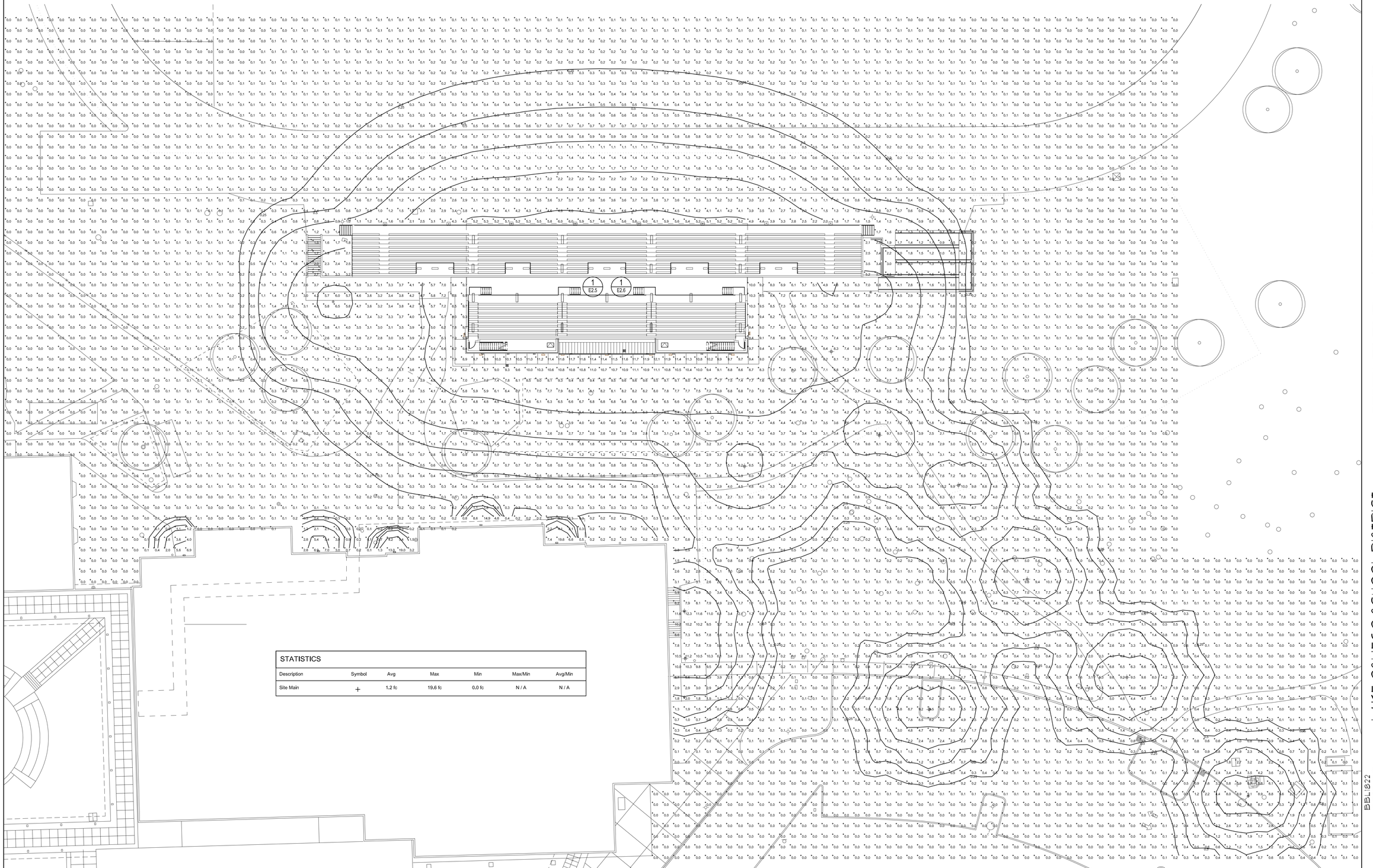
SITE PLAN - LIGHTING

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ARCHITECTURE ■ PLANNING ■ INTERIOR DESIGN
200 North State Street ■ Lake Oswego, Oregon 97034

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 6, 1993
CHARLES FRANK RODGERS
EXPIRES: 12/31/20

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CONTACT: JEFFREY DAVIS



STATISTICS						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Site Main	+	1.2 fc	19.6 fc	0.0 fc	N / A	N / A

SITE PLAN - BASE OF PROJECT SCOPE
1" = 20'-0"

REGISTERED PROFESSIONAL ENGINEER
18197
OREGON
DEC. 6, 1995
JOHN FRANK ROGERS
EXPIRES 12/31/20

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034
SITE PLAN - PHOTOMETRICS

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PROJECT NUMBER
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DATE

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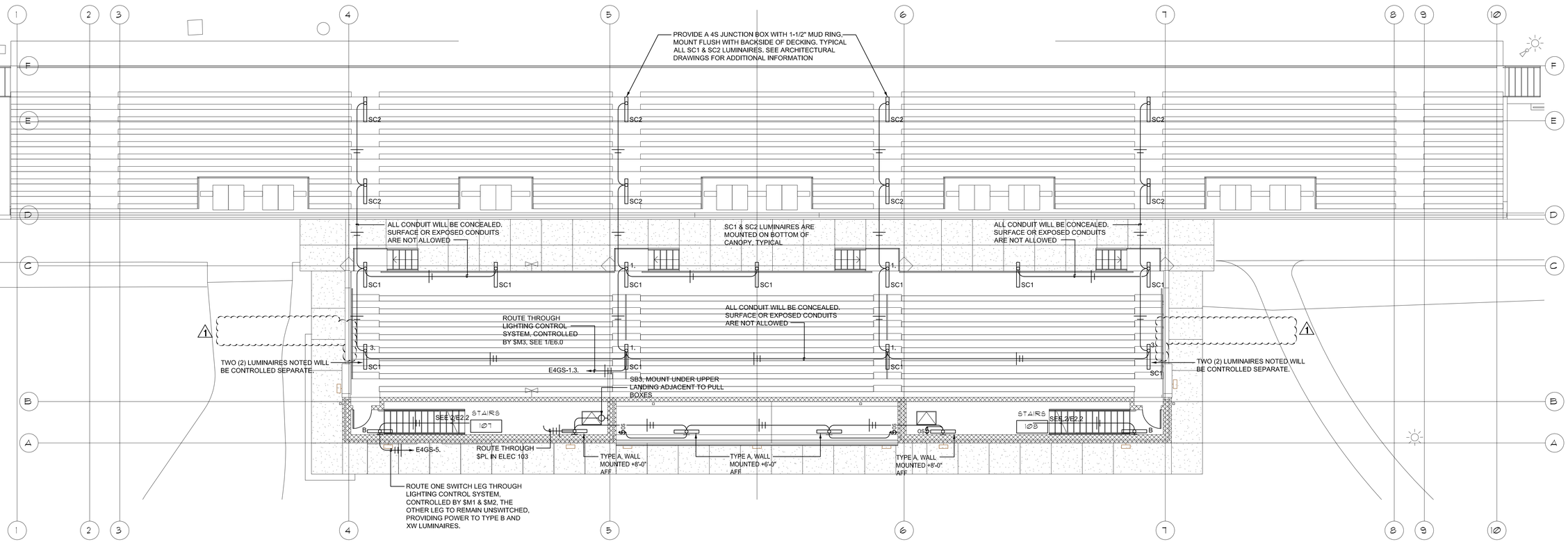
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18197
OREGON
DEC 6, 1995
JOHN FRANK ROGERS
EXPIRES 12/31/20



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

MOMENTARY SWITCH SCHEDULE:

$M1 - CONTROLS SA2 & SA3 LUMINAIRES ON PRESS BOX LEVEL. WP COVER

$M2 - CONTROLS SA2 & SA3 LUMINAIRES ON PRESS BOX LEVEL. WP COVER

$M3 - CONTROLS SC1 & SC2 LUMINAIRES ON CANOPY LEVEL. PROVIDE ENGRAVED NAMEPLATE "CANOPY LTG"

$M4 - CONTROLS SA2 LUMINAIRES ON CONCESSION LEVEL. PROVIDE ENGRAVED NAMEPLATE "BUILDING LTG"

$M5 - SPARE W/ WIRE

$M6 - SPARE W/ WIRE

NOTES:
1. SWITCHES WILL BE 2-POLE MOMENTARY
2. PROVIDE 4 GANG JUNCTION BOX FOR SWITCHES 4-6

SHEET NOTES:

1. PROVIDE WALL SWITCH, WATTSTOPPER AS100, WITH GROUND WIRE.

GENERAL NOTES:

1. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO REFERENCE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE FOR CONDUIT FILL FOR THE EXACT TYPE OF CONDUCTOR BEING INSTALLED AND SIZE THE CONDUIT AS REQUIRED BY CODE.
2. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO VERIFY VOLTAGE DROP FOR EXACT ROUTING AND LENGTH OF ALL CONDUCTORS.
3. VERIFY AND CONFIRM ALL DIMENSIONS AND CONDITIONS PRIOR TO START OF WORK. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO START OF WORK.
4. PATCH AND REPAIR EXISTING WORK DAMAGED DURING CONSTRUCTION OF NEW CONDITION.
5. ALL WIRING WILL BE IN A RIGID CONDUIT, 3/4" MINIMUM. MC CABLE OR FLEXIBLE METAL CONDUIT WILL NOT BE ALLOWED.
6. NO SURFACE MOUNTED CONDUIT WILL BE ALLOWED ON FACE OF BUILDING
7. LABEL EVERY CONDUIT WITH THE TERMINATION POINT.

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034
FLOOR PLAN - LIGHTING

BBL1822
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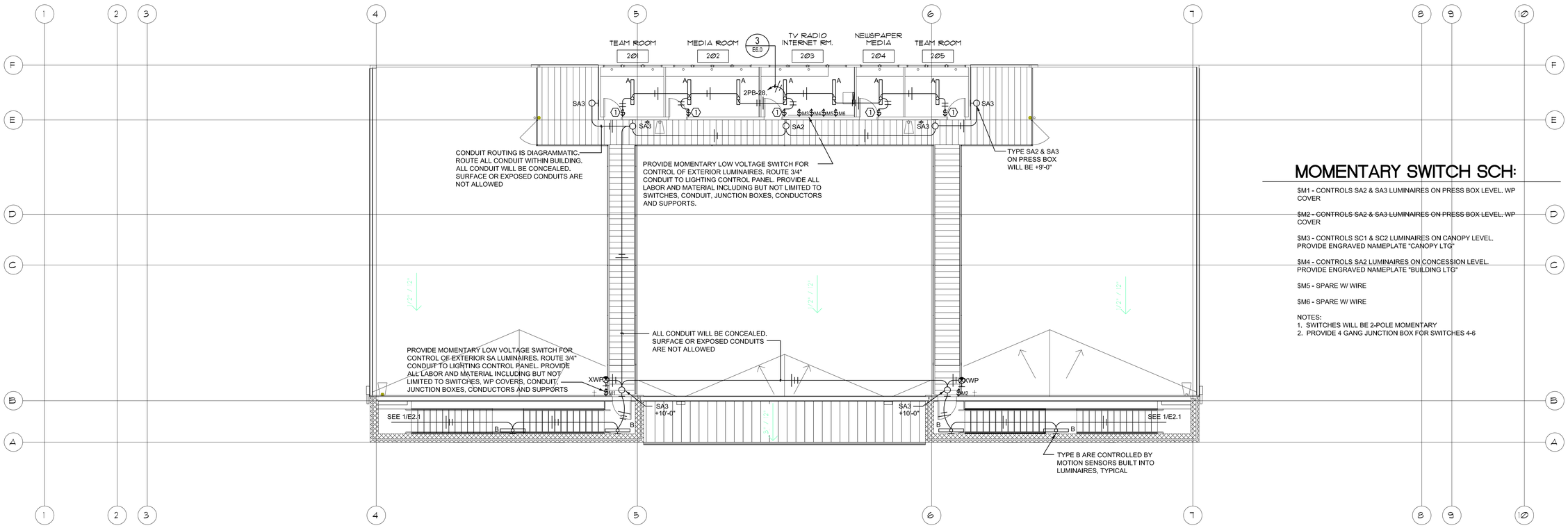
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REGISTERED PROFESSIONAL ENGINEER
18197
OREGON
DEC 6, 1995
JOHN FRANK ROGERS
EXPIRES 12/31/20



1 PRESS BOX FLOOR PLAN
1/8" = 1'-0"

MOMENTARY SWITCH SCH:

$M1 - CONTROLS SA2 & SA3 LUMINAIRES ON PRESS BOX LEVEL. WP COVER

$M2 - CONTROLS SA2 & SA3 LUMINAIRES ON PRESS BOX LEVEL. WP COVER

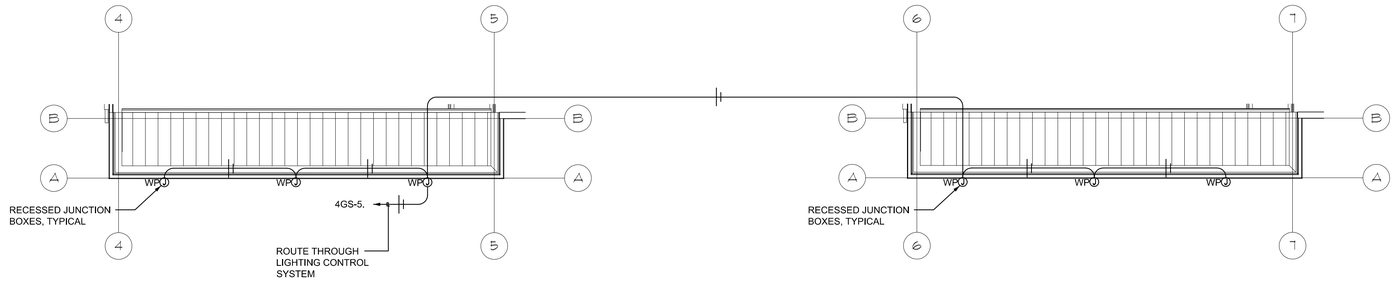
$M3 - CONTROLS SC1 & SC2 LUMINAIRES ON CANOPY LEVEL. PROVIDE ENGRAVED NAMEPLATE "CANOPY LTG"

$M4 - CONTROLS SA2 LUMINAIRES ON CONCESSION LEVEL. PROVIDE ENGRAVED NAMEPLATE "BUILDING LTG"

$M5 - SPARE W/ WIRE

$M6 - SPARE W/ WIRE

NOTES:
1. SWITCHES WILL BE 2-POLE MOMENTARY
2. PROVIDE 4 GANG JUNCTION BOX FOR SWITCHES 4-6



2 STAIRWELL ROOF PLAN
1/8" = 1'-0"

GENERAL NOTES:

1. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO REFERENCE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE FOR CONDUIT FILL FOR THE EXACT TYPE OF CONDUCTOR BEING INSTALLED AND SIZE THE CONDUIT AS REQUIRED BY CODE.
2. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO VERIFY VOLTAGE DROP FOR EXACT ROUTING AND LENGTH OF ALL CONDUCTORS.
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6. NO SURFACE MOUNTED CONDUIT WILL BE ALLOWED ON FACE OF BUILDING
7. LABEL EVERY CONDUIT WITH THE TERMINATION POINT.

SHEET NOTES:

(1) PROVIDE WALL SWITCH, WATTSTOPPER AS100, WITH GROUND WIRE.

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034

FLOOR PLAN - PRESS BOX - LIGHTING

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PROJECT NUMBER
20 SEP 2019
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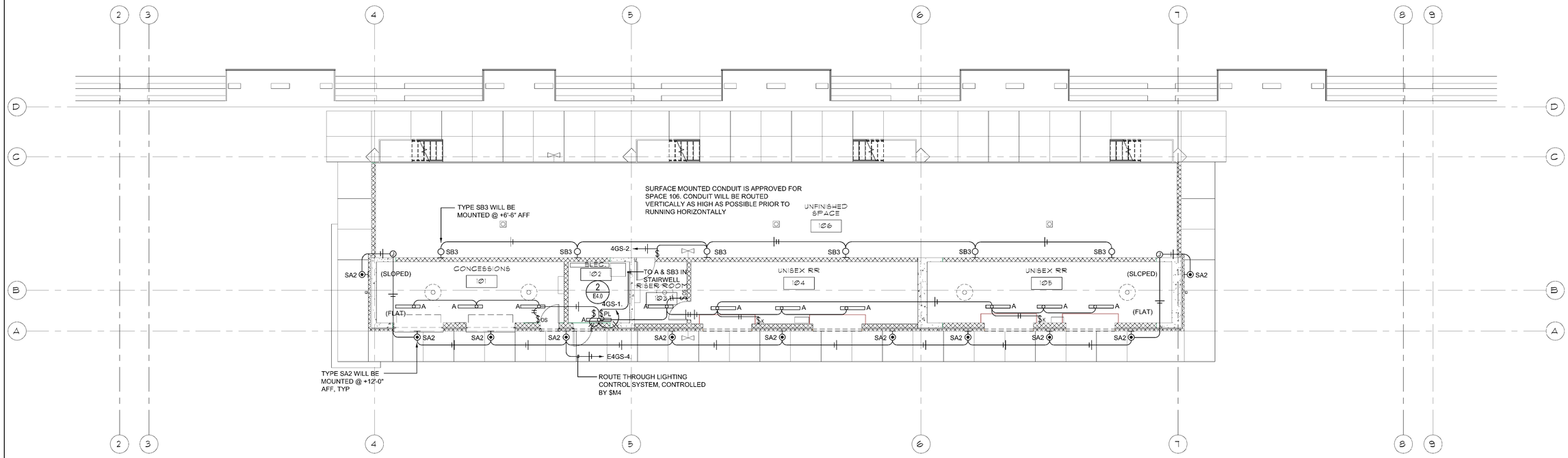
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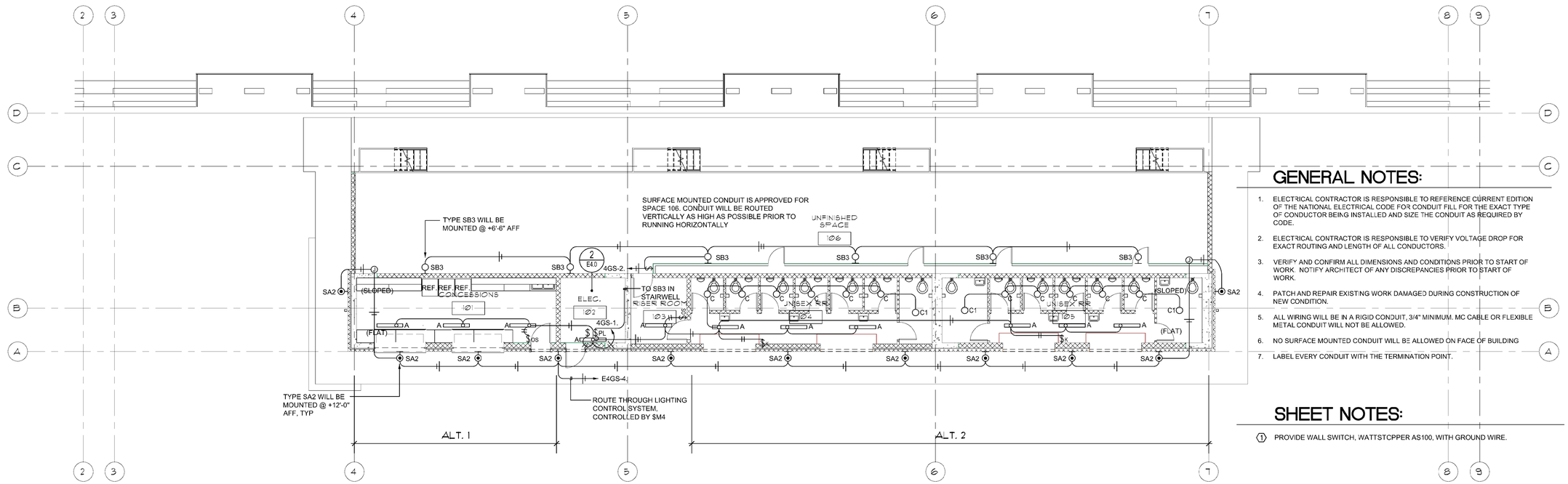
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CONTACT: JEFFREY DAVIS

REGISTERED PROFESSIONAL ENGINEER
18197
OREGON
DEC 6, 1995
JOHN FRANK ROGERS
EXPIRES 12/31/20



1 LOWER LEVEL FLOOR PLAN - BASE BID
1/8" = 1'-0"



2 LOWER LEVEL FLOOR PLAN - ALT. 1 AND ALT. 2
1/8" = 1'-0"

GENERAL NOTES:

1. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO REFERENCE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE FOR CONDUIT FILL FOR THE EXACT TYPE OF CONDUCTOR BEING INSTALLED AND SIZE THE CONDUIT AS REQUIRED BY CODE.
2. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO VERIFY VOLTAGE DROP FOR EXACT ROUTING AND LENGTH OF ALL CONDUCTORS.
3. VERIFY AND CONFIRM ALL DIMENSIONS AND CONDITIONS PRIOR TO START OF WORK. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO START OF WORK.
4. PATCH AND REPAIR EXISTING WORK DAMAGED DURING CONSTRUCTION OF NEW CONDITION.
5. ALL WIRING WILL BE IN A RIGID CONDUIT, 3/4" MINIMUM. MC CABLE OR FLEXIBLE METAL CONDUIT WILL NOT BE ALLOWED.
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SHEET NOTES:

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FLOOR PLAN - LOWER LEVEL - LIGHTING

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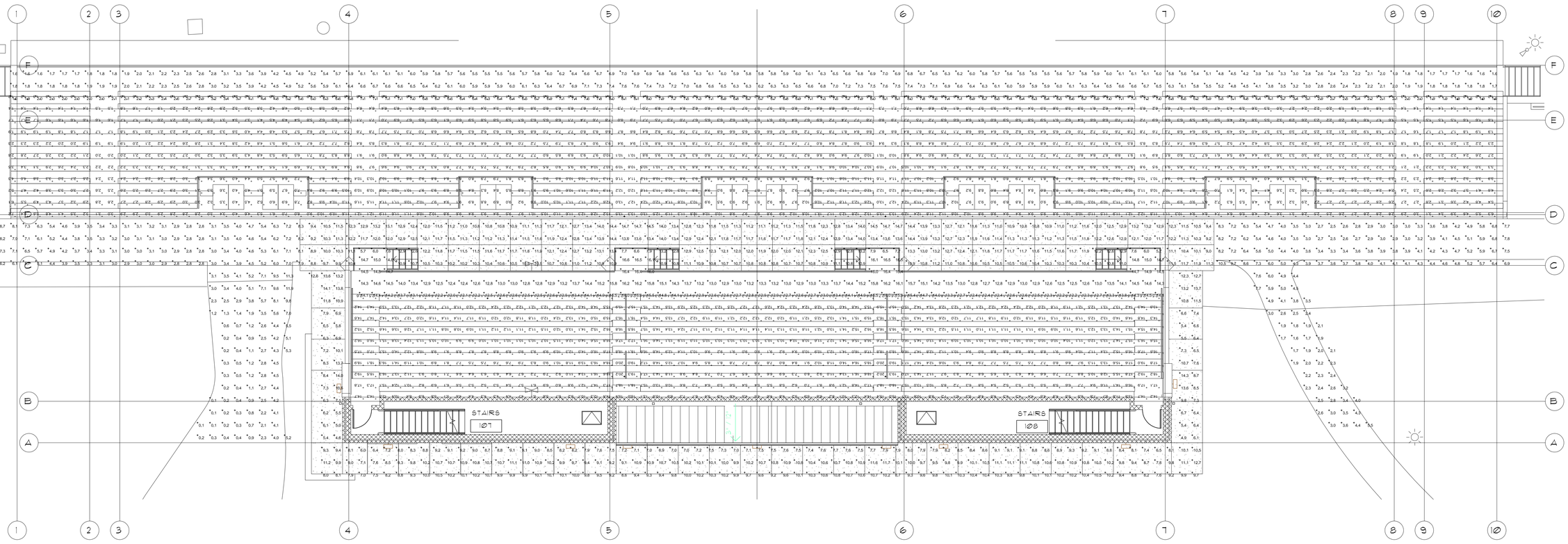
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1 FLOOR PLAN
1/8" = 1'-0"

STATISTICS						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Flat - Level 1	+	5.1 fc	8.1 fc	1.6 fc	5.1:1	3.2:1
Level 2	+	8.0 fc	14.7 fc	0.1 fc	147.0:1	80.0:1
Level 3	+	13.9 fc	16.6 fc	12.0 fc	1.4:1	1.2:1
Lower Seats	+	6.3 fc	13.5 fc	1.2 fc	11.3:1	5.3:1
Upper Seats	+	10.7 fc	20.2 fc	1.1 fc	18.4:1	9.7:1

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LAKE OSWEGO SCHOOL DISTRICT
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FLOOR PLAN - EGRESS PHOTOMETRICS

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PROJECT NUMBER
20 SEP 2019
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REVISIONS

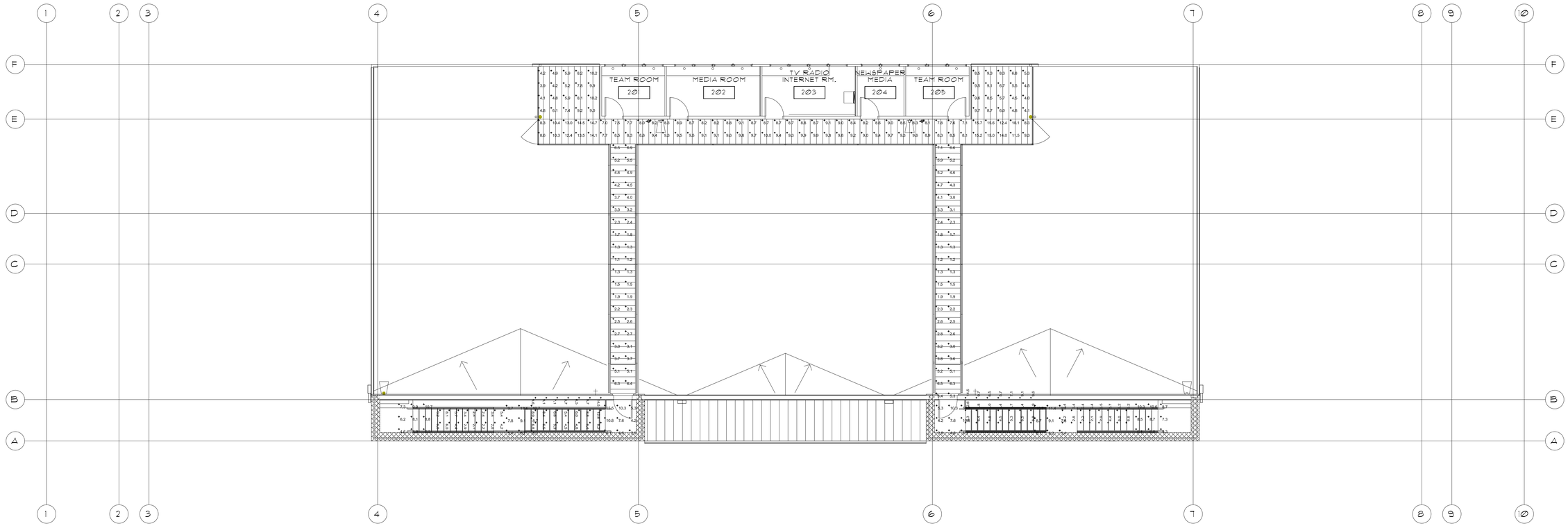
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1 FLOOR PLAN - PRESS BOX

1/8" = 1'-0"

STATISTICS						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Stair R - Lower Steps	+	4.5 fc	9.2 fc	2.1 fc	4.4:1	2.1:1
Stair R - Upper Steps	+	7.7 fc	14.5 fc	4.5 fc	3.2:1	1.7:1
Stair R - Landing Center	+	8.3 fc	11.4 fc	5.4 fc	2.1:1	1.5:1
Stair R - Landing Upper	+	7.5 fc	15.5 fc	2.9 fc	5.3:1	2.6:1
Stair L - Lower Steps	+	4.5 fc	9.2 fc	2.1 fc	4.4:1	2.1:1
Stair L - Upper Steps	+	7.7 fc	14.5 fc	4.5 fc	3.2:1	1.7:1
Stair L - Landing Center	+	8.3 fc	11.4 fc	5.4 fc	2.1:1	1.5:1
Stair L - Landing Upper	+	7.5 fc	15.5 fc	2.9 fc	5.3:1	2.6:1
Press Box - Roof	+	6.5 fc	15.7 fc	1.1 fc	14.3:1	5.9:1
Stair L - Landing Lower	+	7.5 fc	10.7 fc	4.6 fc	2.3:1	1.6:1
Strair R - Landing Lower	+	8.0 fc	10.6 fc	5.3 fc	2.0:1	1.5:1

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LAKE OSWEGO SCHOOL DISTRICT
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FLOOR PLAN - PRESS BOX - EGRESS PHOTOMETRICS

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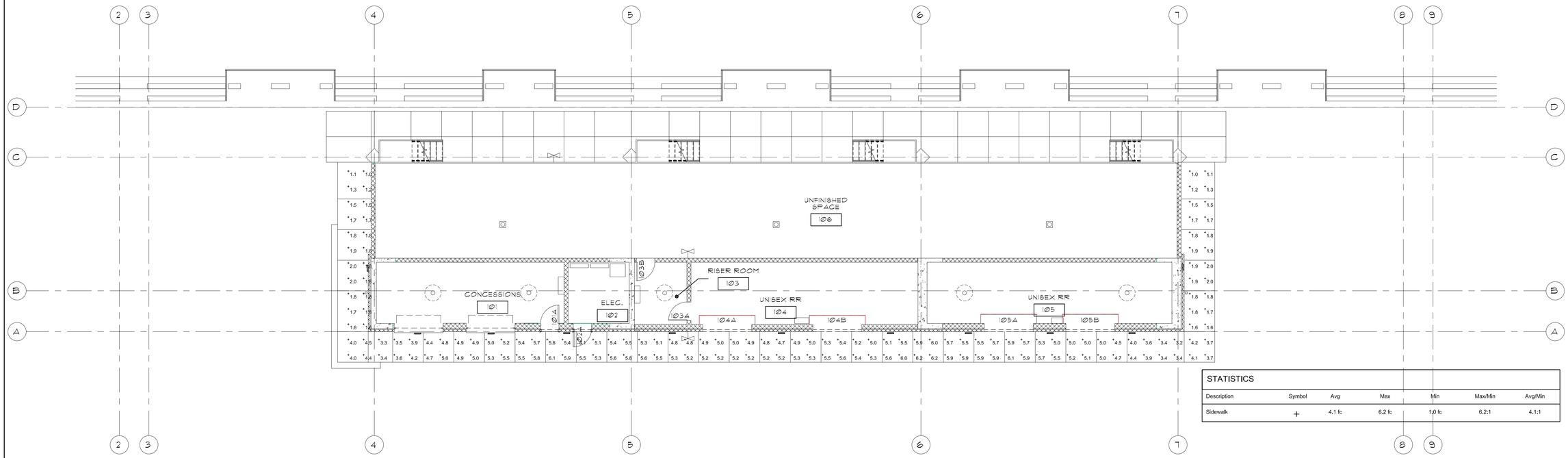
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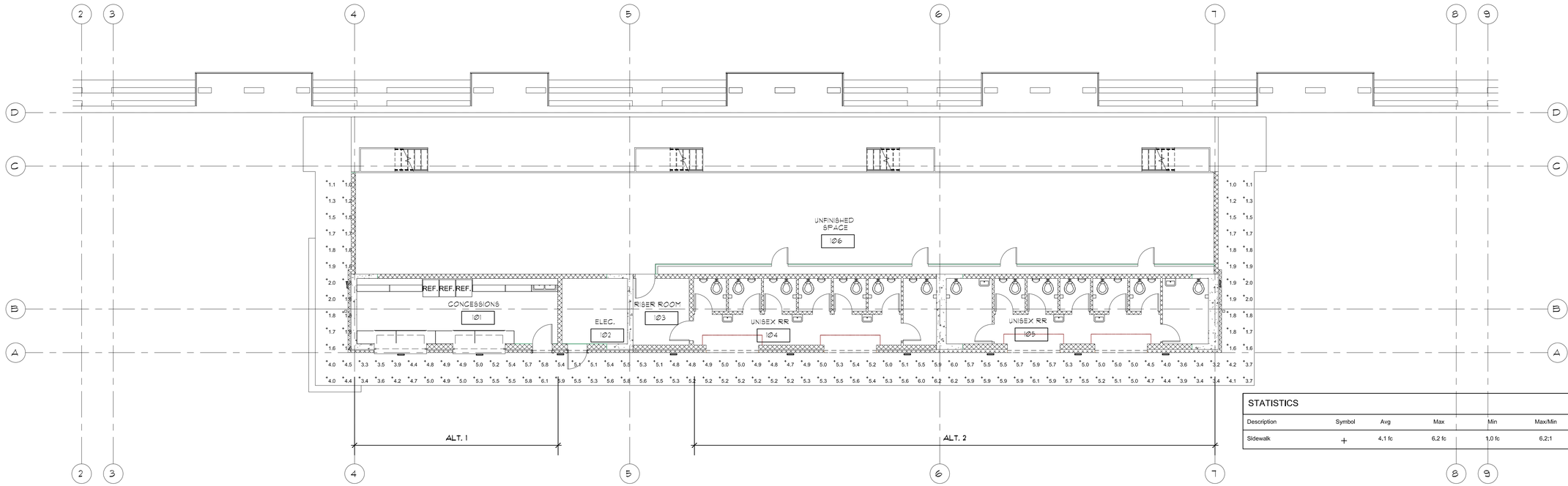
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STATISTICS						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Sidewalk	+	4.1 fc	6.2 fc	1.0 fc	6.2:1	4.1:1

1 LOWER LEVEL FLOOR PLAN - BASE BID
1/8" = 1'-0"



STATISTICS						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Sidewalk	+	4.1 fc	6.2 fc	1.0 fc	6.2:1	4.1:1

2 LOWER LEVEL FLOOR PLAN - ALT. 1 AND ALT. 2
1/8" = 1'-0"

LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034
FLOOR PLAN - LOWER LEVEL - EGRESS PHOTOMETRICS

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20 SEP 2019
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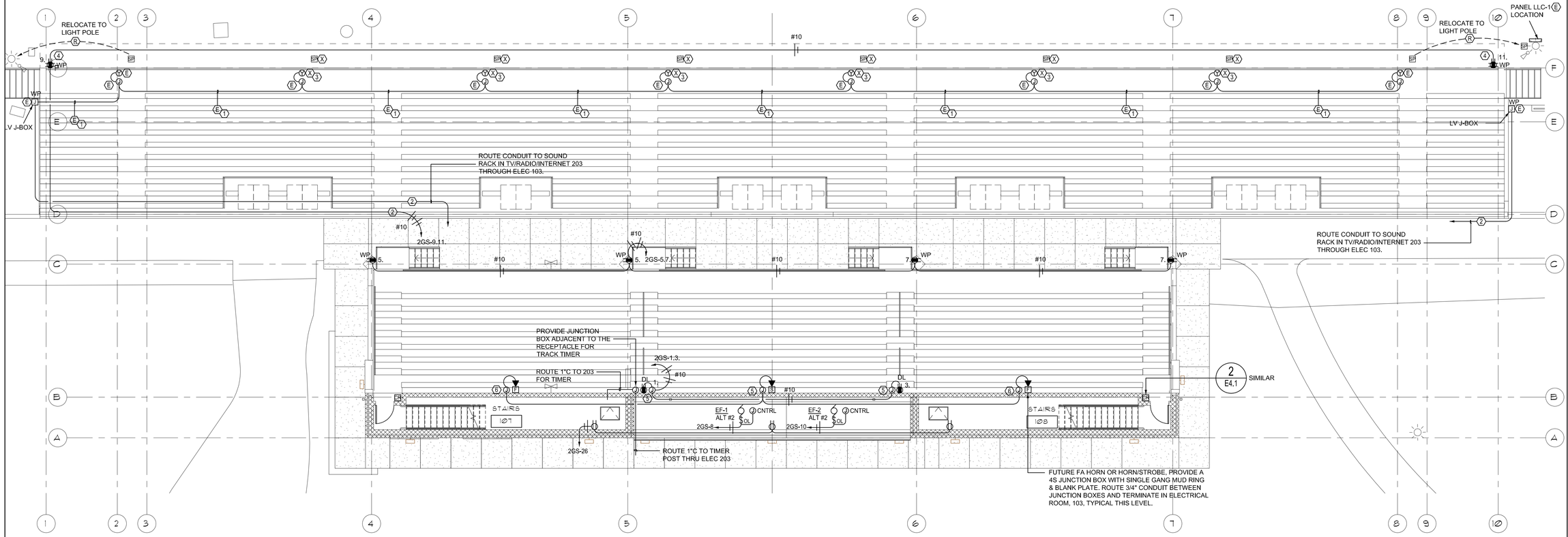
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1 FLOOR PLAN - BASE BID & ALT #2

1/8" = 1'-0"

SHEET NOTES:

1. EXISTING CONDUIT TO REMAIN. REMOVE EXISTING SPEAKER CABLES AND RETURN TO OWNER. PROVIDE NEW DEDICATED SPEAKER CABLES, ONE (1) FOR EACH SPEAKER LOCATION WITH A #12 SOLID PULL WIRE. RECONNECT TO EXISTING FEMALE SPEAKER CONNECTOR (NLT-4M), CABLE WILL ROUTE FROM EACH SPEAKER LOCATION TO SOUND RACK LOCATED IN TV/RADIO/INTERNET ON PRESS BOX LEVEL. NO SPLICES WILL BE ALLOWED IN SPEAKER HOMERUN.
2. INTERCEPT EXISTING 1"C AND EXTEND TO LOCATION DESIGNATED.
3. REMOVE EXISTING FEMALE SPEAKER CONNECTOR (NLT-4M) AND RELOCATE CONNECTOR TO NEW SPEAKER LOCATION, SEE 2/E3.2.
4. REMOVE EXISTING DEVICES AND PLATES, PROVIDE NEW GFCI RECEPTACLES AND WP COVERS.
5. LOCATE JUNCTION BOX BELOW BLEACHERS AND ABOVE CEILING, ROUTE CONDUIT VERTICALLY TO DEVICE.
6. LOCATE JUNCTION BOX BELOW BLEACHERS, ROUTE CONDUIT VERTICALLY TO DEVICE.

GENERAL NOTES:

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6. NO SURFACE MOUNTED CONDUIT WILL BE ALLOWED ON FACE OF BUILDING
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OREGON
DEC 6, 1995
JOHN FRANK ROGERS
EXPIRES 12/31/20

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034
FLOOR PLAN - POWER & SIGNAL

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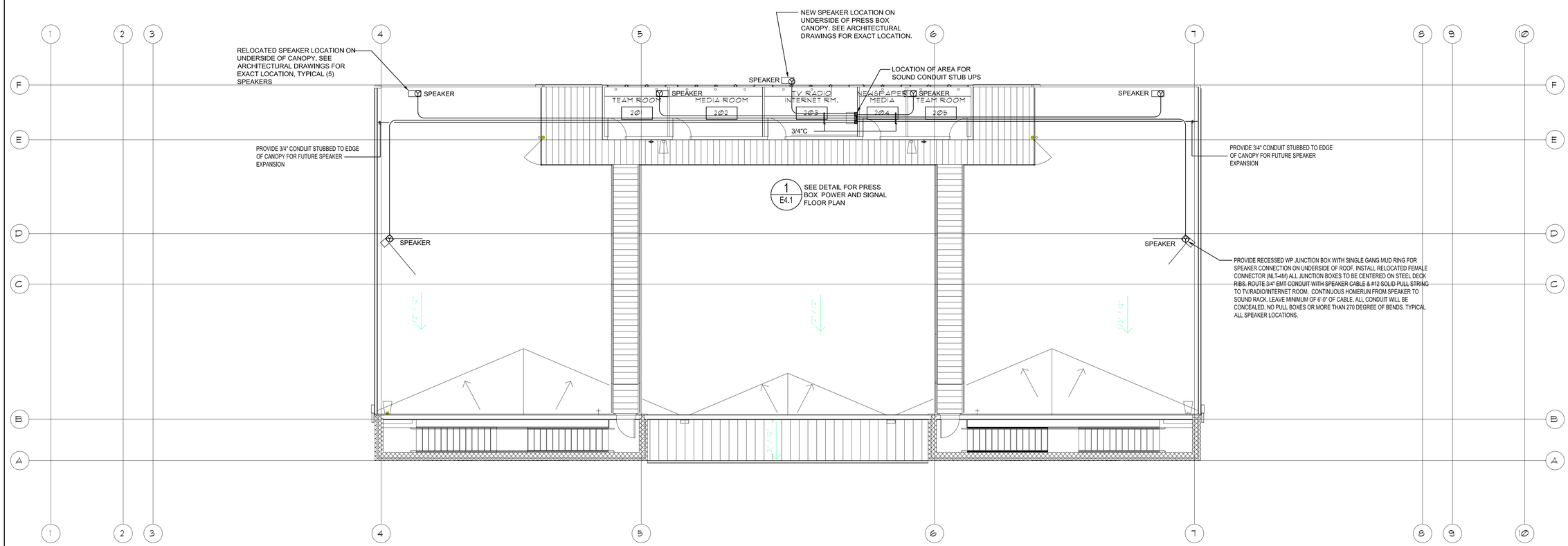
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OREGON
DEC 6, 1995
JOHN FRANK ROGERS
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1 PRESS BOX FLOOR PLAN
1/8" = 1'-0"

GENERAL NOTES:

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034
PRESS BOX FLOOR PLAN - POWER & SIGNAL

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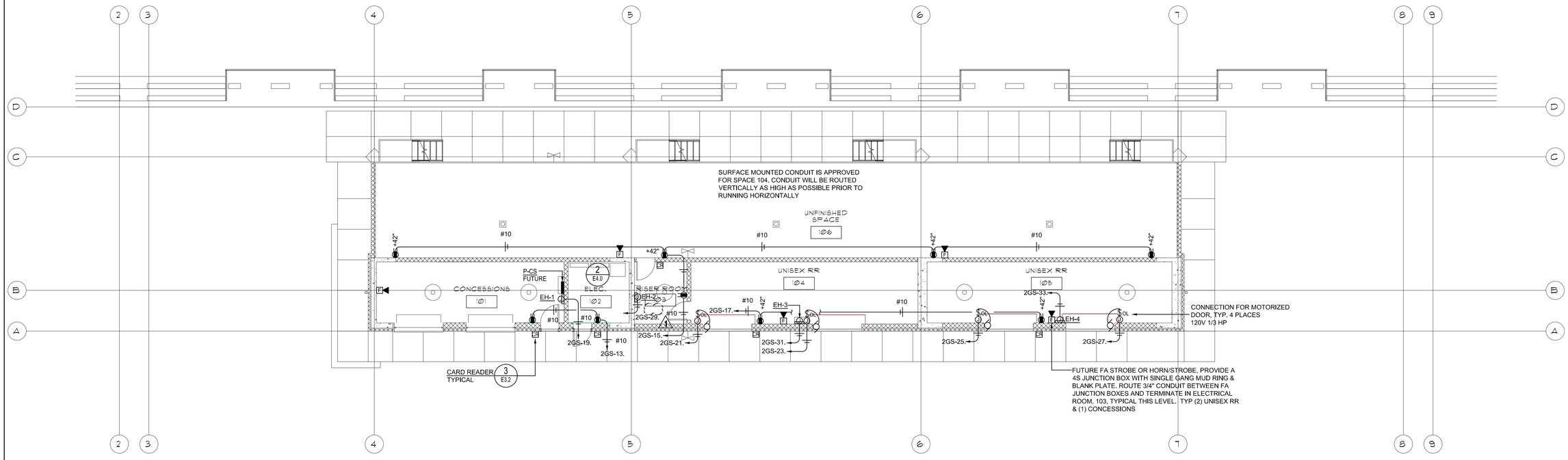
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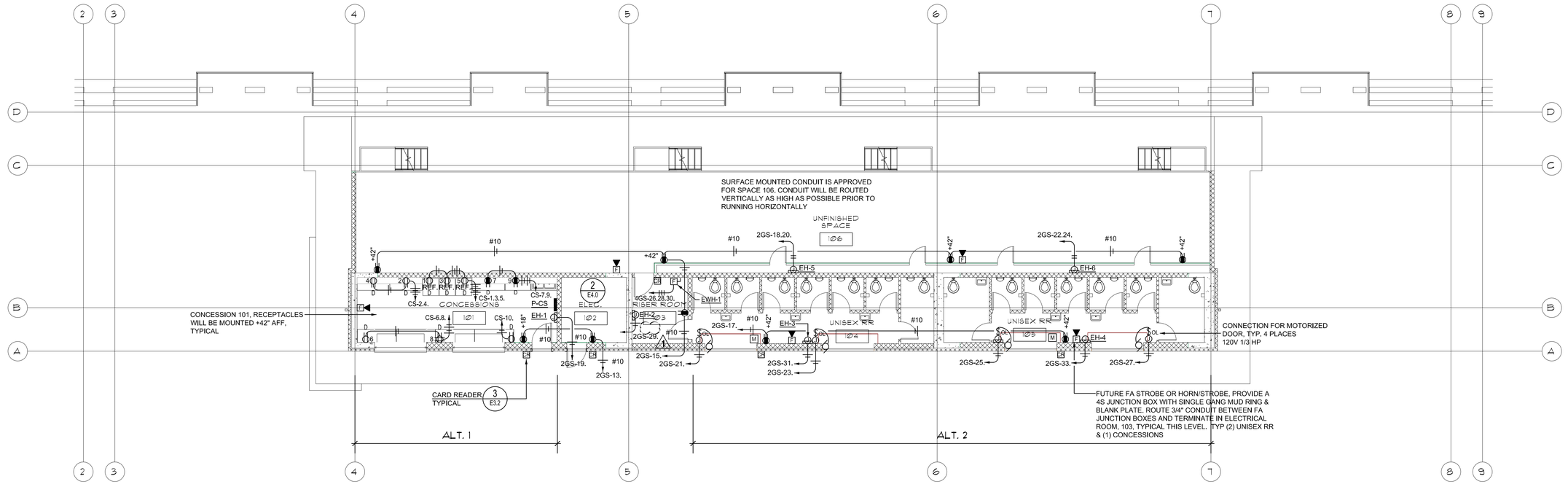
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1 LOWER LEVEL FLOOR PLAN - BASE BID
1/8" = 1'-0"



2 LOWER LEVEL FLOOR PLAN - ALT. 1 & ALT. 2
1/8" = 1'-0"

LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034
FLOOR PLAN - LOWER LEVEL - POWER & SIGNAL

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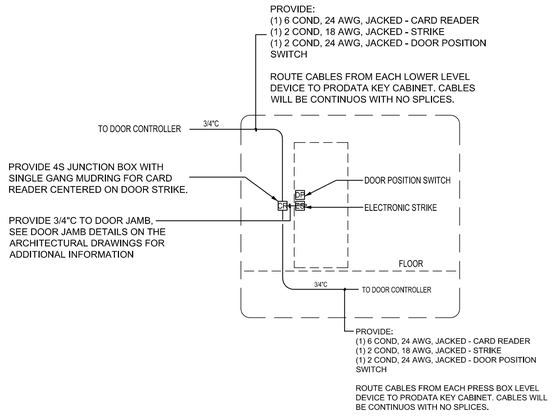
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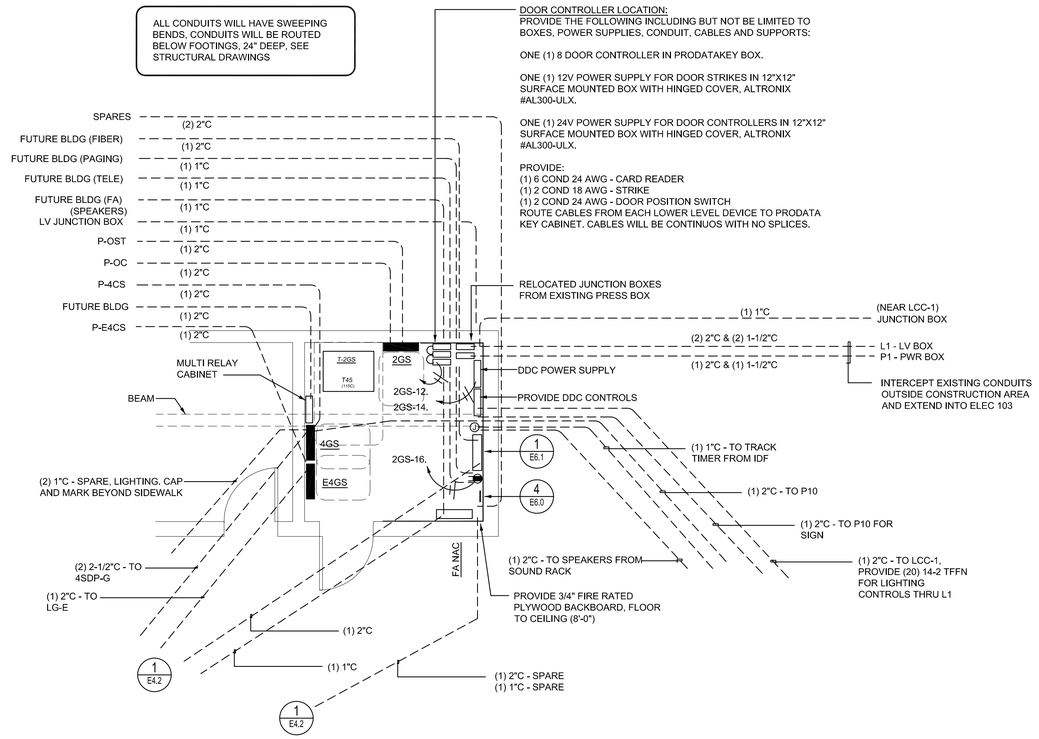
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DEC 6, 1995
JOHN FRANK ROGERS
EXPIRES 12/31/20



1 DETAIL - CARD READER DIAGRAM

NONE



2 DETAIL - ENLARGE FLOOR PLAN - ELECTRICAL 103

NONE

GENERAL NOTES:

1. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO REFERENCE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE FOR CONDUIT FILL FOR THE EXACT TYPE OF CONDUCTOR BEING INSTALLED AND SIZE THE CONDUIT AS REQUIRED BY CODE.
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STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034
ENLARGE FLOOR PLAN - ELECTRICAL

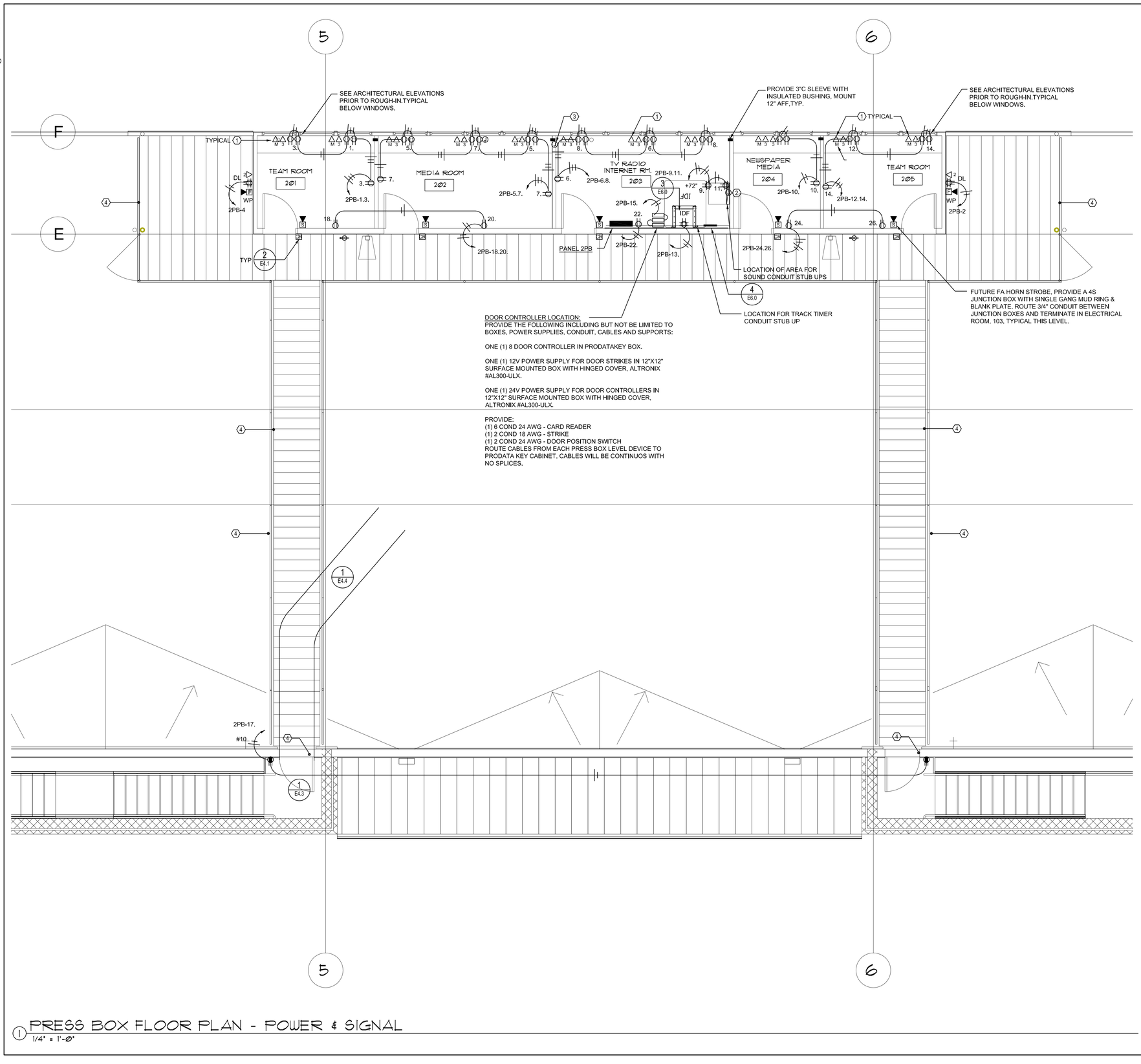
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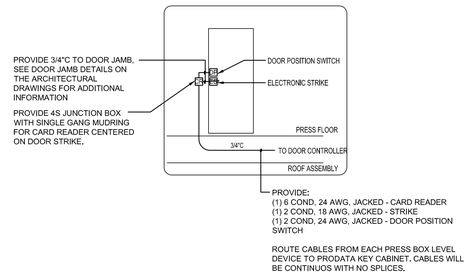
1 PRESS BOX FLOOR PLAN - POWER & SIGNAL
1/4" = 1'-0"

GENERAL NOTES:

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5. ALL WIRING WILL BE IN RIGID TYPE CONDUIT, 3/4" MINIMUM.
6. MC CABLE OR FLEXIBLE METAL CONDUIT WILL NOT BE ALLOWED.
7. HOMERUNS WILL NOT BE COMBINED OR CIRCUITING CHANGED. MINOR DEVIATIONS MAY BE CHANGED MADE DUE TO CONSTRUCTION BUT THE INTENT WILL NOT.
8. TELEPHONE / DATA OUTLET: PROVIDE 4S JUNCTION BOX WITH SINGLE GANG P-RING AND 3/4" CONDUIT WITH PULL STRING TO IDF RACK. CONDUIT WILL BE INCREASED WITH CABLE FILL, NO MORE THAN THREE (3) OUTLETS LOCATIONS PER HOMERUN, CONDUIT NOT TO EXCEED 1-1/2".

SHEET NOTES:

1. PROVIDE XLR JACK, CONDUCTOR, 4X4 JUNCTION BOX WITH SINGLE GANG MUD-RING. CONDUCTOR WILL BE 24 AWG STRANDED HIGH-CONDUCTIVITY COPPER CONDUCTORS, POLYETHYLENE INSTALLATION, TINNED COPPER BRAID SHIELD, PVC JACKET, BELDEN 1192A, ROUTE ONE (1) 3/4"C TO AUDIO RACK. EACH ROOM WILL DAISY CHAIN IN ONE (1) CONDUIT, TOTAL OF FIVE (5) HOMERUNS.
2. PROVIDE 4X4 DEEP JUNCTION BOX FOR ANTENNA. MOUNT 4'-4" AFF TO CENTER LINE. ROUTE ONE (1) 1"C WITH #12 COPPER PULL STRING FROM JUNCTION BOX TO EXTERIOR OF BUILDING. EXTEND CONDUIT 8" FROM WALL WITH A 22 DEGREE BEND DOWNWARDS. CENTER JUNCTION BOX ON SOUND RACK.
3. PROVIDE 4X4 DEEP JUNCTION BOX FOR ANTENNA. MOUNT 4'-4" AFF TO CENTER LINE. ROUTE ONE (1) 1"C WITH #12 COPPER PULL STRING FROM JUNCTION BOX TO EXTERIOR OF BUILDING. EXTEND CONDUIT 8" FROM WALL WITH A 22 DEGREE BEND DOWNWARDS. JUNCTION BOX WILL BE LOCATED 12" FOR WALL.
4. PROVIDE INSULATED BONDING WIRE TO ALL METAL COMPONENTS ON THE ROOF INCLUDING BUT NOT BE LIMITED TO DOOR JAMBS, HANDRAILS & METAL WALKING PADS. THE BONDING WIRE WILL CADWELDED TO METAL COMPONENTS.



PROVIDE:
(1) 6 COND, 24 AWG, JACKED - CARD READER
(1) 2 COND, 18 AWG, JACKED - STRIKE
(1) 2 COND, 24 AWG, JACKED - DOOR POSITION SWITCH

ROUTE CABLES FROM EACH PRESS BOX LEVEL DEVICE TO PRODATA KEY CABINET. CABLES WILL BE CONTINUOS WITH NO SPLICES.

2 DETAIL - CARD READER DIAGRAM
NONE

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LAKE OSWEGO SCHOOL DISTRICT
LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034
ENLARGE FLOOR PLAN - PRESS BOX

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CONDUITS WILL TRANSITION FROM CEILING TO BELOW SLAB AT WALL IN WALL SPACE. PROVIDE SWEEPING BENDS. COORDINATE LOCATION OF FOOTING. LIMIT TO 270 DEGREES OF BENDS WITH NO ADDITIONAL PULL BOXES FROM CEILING TO ELECTRICAL 103 IN GRANDSTAND BUILDING.

PULL BOXES AND TRANSITION LOCATION, COORDINATE EXACT LOCATION WITH OWNER

(2) 2-1/2"C - 4SDP-G (NORMAL 480V)
(1) 2"C - LG-E (EMERG 480V)
(1) 2"C - SPARE (FROM BY 4SDP-G)
(1) 1"C - SPARE (FROM BY 4SDP-G)
(1) 1"C - SPARE (FA)

EXISTING 2" CONDUIT, EXACT ROUTING UNKNOWN, LOCATE EXISTING 2" CONDUIT AT EXISTING PRESS BOX TO BE REMOVED. TRENCH BACK TO OUTSIDE CONSTRUCTION AREA COORDINATE WITH GENERAL CONTRACTOR. (1/E6.1)

REMOVE EXISTING CABLES:
(1) 25 PAIR TELEPHONE CU CABLE
(1) FIBER CABLE
(2) CAT 5E CABLES
(2) INTERCOM CABLES
RETURN CABLES TO OWNER.

2" CONDUIT WILL BE EXTENDED TO NEW ELECTRICAL ROOM 103 IN GRANDSTANDS. PROVIDE NEW CABLES IN CONDUIT TO NEW LOCATIONS. NO SPLICES WILL BE ALLOWED.

PROVIDE NEW CABLES:
(1) 25 PAIR TELEPHONE CU CONSTRUCTION CABLE (ELEC 103)
(1) TWELVE (12) STRAND 50 MICRON ARMOR MULTIMODE FIBER (ELEC 103)
(4) 14-2 AWG STRANDED, JACKED TFFN (2 PA, 2 SPARE) (IDF IN 203)

CONDUIT ROUTING, REMOVE ALL CEILINGS ALONG ROUTE. CONDUITS WILL BE CONCEALED. AREAS OF OPEN STRUCTURE CONDUITS WILL BE MOUNTED TIGHT TO STRUCTURE. ROUTING WILL BE APPROVED WITH OWNER PRIOR TO ANY WORK BEING STARTED.

2'-0" ELEVATION CHANGE

(E) LG-E
(E) 4SDP-G
JAN RM G0068
(1) 1"C SPARE (FA)
(1) 1"C SPARE (FA)

REMOVE EXISTING SCREW COVER AND PROVIDE A NEW LOCKABLE HINGED DOOR COVER ON FLUSH 48" X 48" JUNCTION BOX.

EXTEND EXISTING 48" X 48" JUNCTION BOX TO BE FLUSH WITH CEILING. REMOVE EXISTING SCREW COVER AND PROVIDE A NEW LOCKABLE HINGED DOOR COVER ON FLUSH JUNCTION BOX.

EXSTING HUB ROOM LOCATION

HUB RM G0095

1/E4.2 BUILDING G FLOOR PLAN
1/8" = 1'-0"

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LAKERIDGE HIGH SCHOOL
STADIUM IMPROVEMENTS - 2019
1235 OVERLOOK DRIVE, LAKE OSWEGO, OR 97034
FLOOR PLANS - EXISTING HIGH SCHOOL BUILDING G

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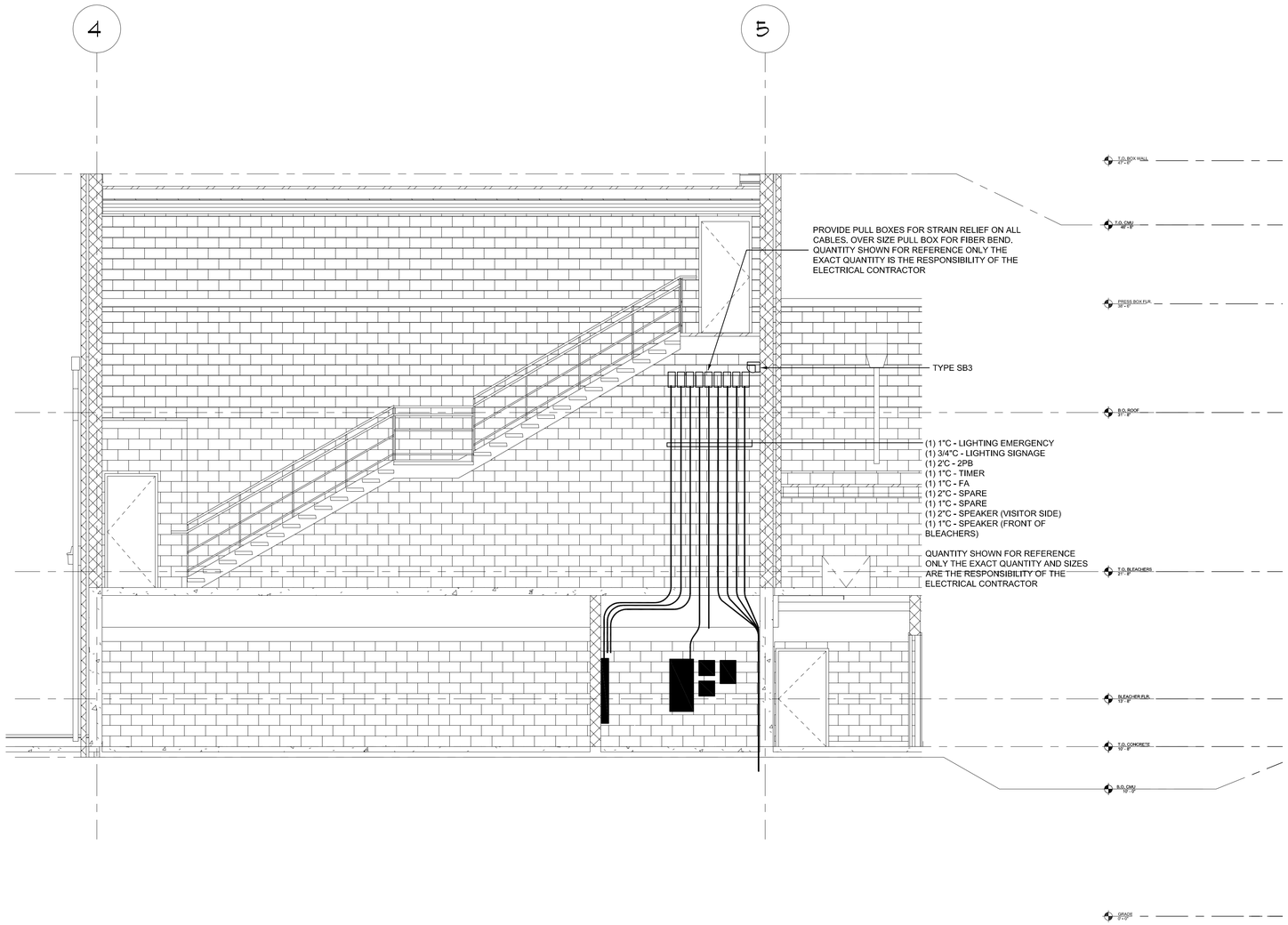
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1 SECTIONS
1/4" = 1'-0"

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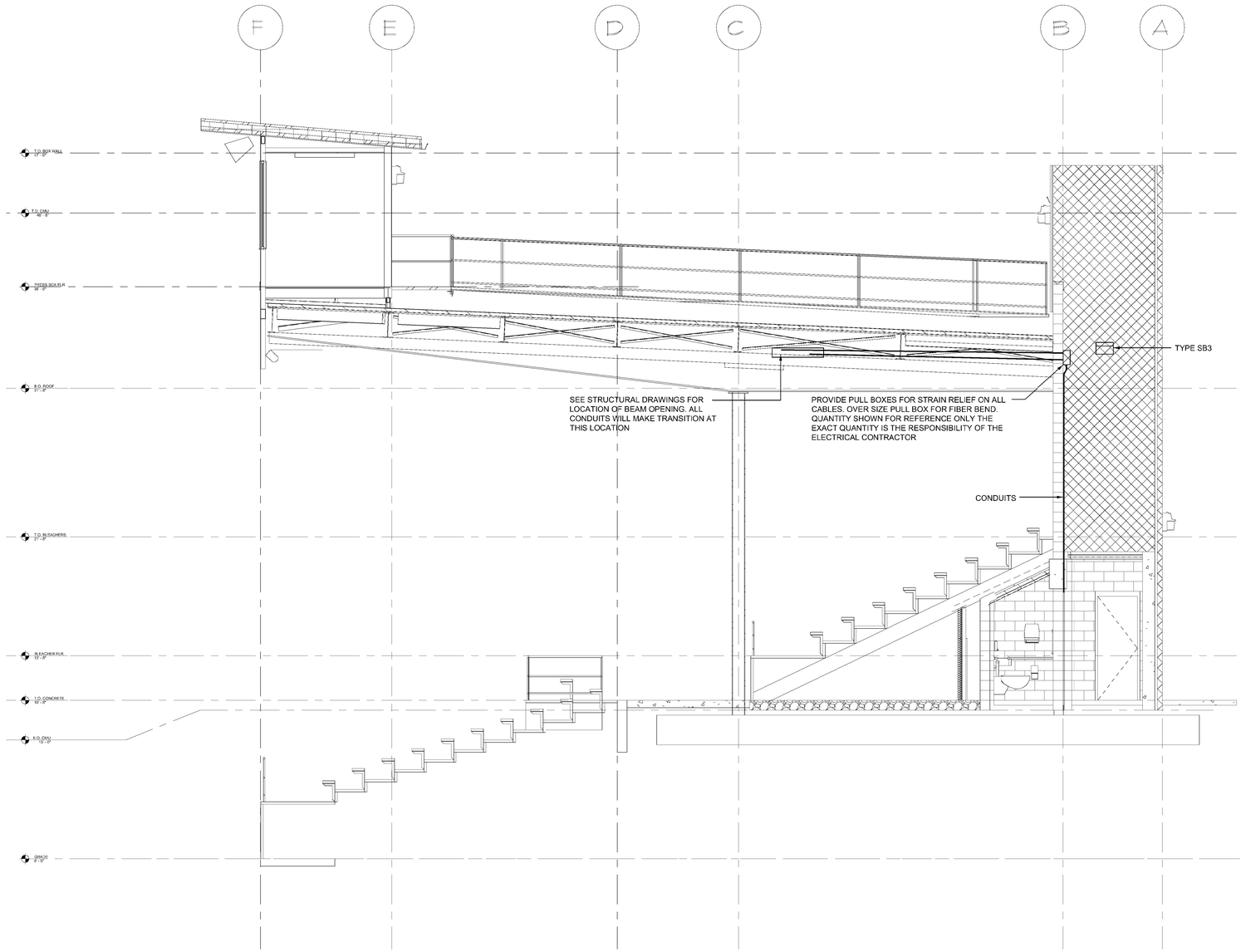
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② SECTIONS
1/4" = 1'-0"

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LOAD SUMMARY

4SDP-G - OWNER INSTALLED A METER ON THE FEEDER BETWEEN 4MDP AND 4SDP-G.
DATE START: JANUARY 27, 2014
END DATE: MARCH 4, 2014

HIGH DEMAND: 191.2 KW (230 AMPS)

PANEL 4GS: 253.4 kw (305 AMPS) TOTAL CONNECTED
NOTE: LOADS FOR 4CS ARE ESTIMATED FOR FUTURE BUILDING

TOTAL CONNECTED LOADS TO 4SDP-G:
WATTAGE: 444.60 KW
AMPACITY: 535 AMPS

PANEL 4SDP-G (EXISTING)
480Y/277 VOLT, THREE PHASE, 4 WIRE
800 AMPS

SHEET NOTES

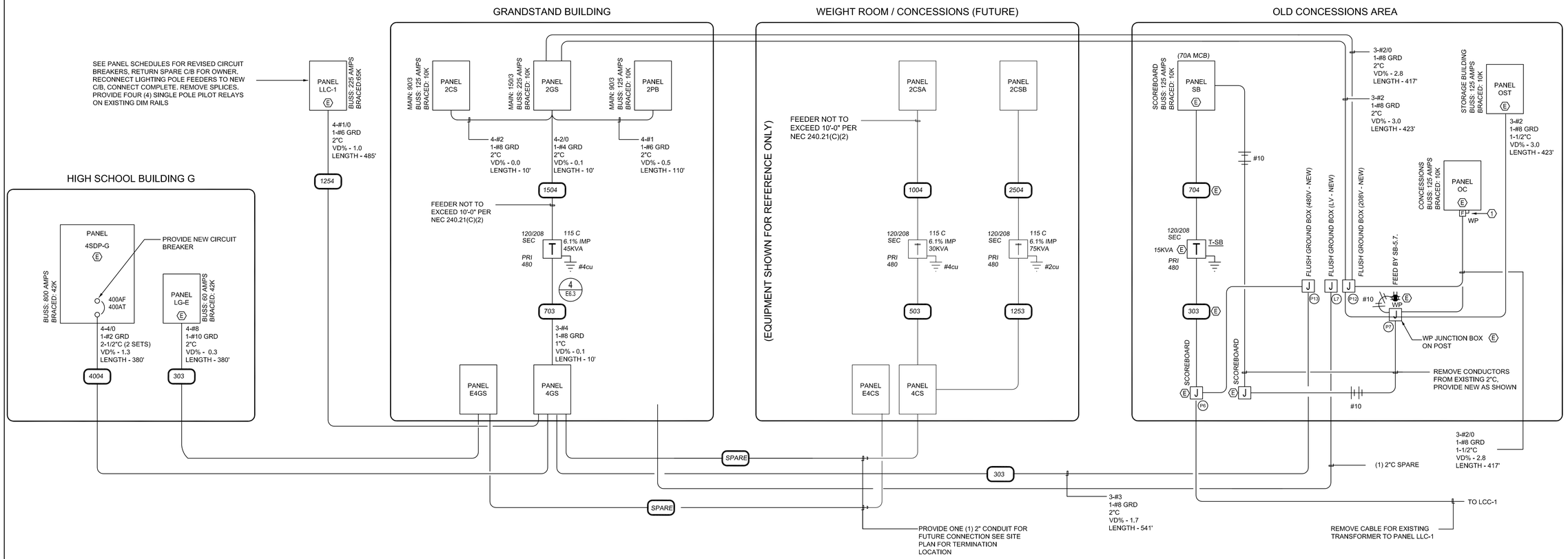
1. REMOVE EXISTING CONDUCTORS IN 2"C BACK TO PANEL SB. INTERCEPT EXISTING CONDUIT AND ROUTE TO NEW J-BOX. PROVIDE A NEW NEMA 3R, SERVICE RATED, 100/2 FUSED DISCONNECT ON EXTERIOR OF BUILDING, CONNECT COMPLETE TO EXISTING PANEL OC. REMOVE MC/B AND PROVIDE MLO LUGS

GENERAL NOTES

1. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO REFERENCE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE FOR CONDUIT FILL FOR THE EXACT TYPE OF CONDUCTOR BEING INSTALLED AND SIZE THE CONDUIT AS REQUIRED BY CODE.
2. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO VERIFY VOLTAGE DROP FOR EXACT ROUTING AND LENGTH OF ALL CONDUCTORS.
3. ELECTRICAL CONTRACTOR TO PROVIDE ALL DISCONNECTS AT MECHANICAL UNITS.
4. PROVIDE DUCT DETECTORS IN ALL MECHANICAL UNITS AS REQUIRED BY CODE AND/OR THE FIRE MARSHAL.
5. CONTRACTOR WILL BE RESPONSIBLE TO VERIFY DIMENSIONS OF ALL EQUIPMENT AND MAINTAIN ALL CODE REQUIRED CLEARANCES. EQUIPMENT BASED ON SIEMENS EQUIPMENT, PROVIDE SEISMIC SUPPORTS AS REQUIRED.
6. ALL ELECTRICAL WORK WILL COMPLY WITH THE CURRENT NATIONAL ELECTRICAL CODE (NEC) APPROVED BY OREGON WTIH ALL AMENDED ELECTRICAL CODES.
7. SWITCHBOARDS, PANELBOARDS, CONTROL PANELS AND MOTOR CONTROL CENTERS AND HVAC UNITS WILL BE FIELD MARKED TO WARN QUALIFIED PERSONNEL OF THE POTENTIAL ARC FLASH HAZARDS AND THE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (PPE) PER 02 NEC ART 110-16 AND NFPA 70E-2000. THE MARKINGS SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF THE EQUIPMENT.
8. DRY TYPE TRANSFORMERS EQUAL TO OR GREATER THAN 15 KVA SHALL BE NEMA TP-1-2000 TO COMPLY WITH ENERGY CODE.
9. DRY TYPE TRANSFORMERS SEPARATELY DERIVED SYSTEMS, SHALL TERMINATE TO BUILDING STELL AND WATER, PER NEC ART 250.30(A)(4) AND 250.104(A)(4)
10. FUSES WILL BE PROVIDED WITH REJECTION TYPE FUSE HOLDERS.

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1 **ELECTRICAL ONE LINE DIAGRAM - 480Y/277 VOLT, 3 PHASE, 4 WIRE**
NO SCALE

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ELECTRICAL RISER & SCHEDULES

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Panel **4GS** ☐ MIo Volts 277 /480
Location Elec 400A ☒ MB Amps 400

	Service	P	Amps	Watts	Watts	Watts		Service	P	Amps	Watts	Watts	Watts
1	L - Building	1	20	488			2	L - unfinished	1	20	180		
3	L - Site	1	20		880		4	Spare	1	20			
5	L - Wall	1	20			450	6	Spare	1	20			
7	Spare	1	20				8	Spare	1	20			
9	Spare	1	20				10	Spare	1	20			
11	Spare	1	20				12	Spare	1	20			
13	Spare	1	20				14	Spare	1	20			
15	Spare	1	20				16	Spare	1	20			
17	Spare	1	20				18	Spare	1	20			
19	Spare	1	20				20	Spare	1	20			
21	Space						22	Space					
23	Space						24	Space					
25	Space						26				3000		
27	Space						28	EWH-1 (9kw)	3	20		3000	
29	Space						30						3000
31				5000			32				10554		
33	T - SB	3	30		5000		34	T - 2GS	3	70		13051	
35						5000	36						13985
37				44670			38				13335		
39	P - 4CS	3	200		44670		40	P - LCC-1 (Sports Ltg)	3	125		13335	
41						44670	42						13335

(Factor)

Phase A	77,227	Watts	279	Amp	Lighting :	60000	125% 75000
Phase B	79,936	Watts	289	Amp	Motors :	39000	100% 39000
Phase C	80,440	Watts	290	Amp	Largest - Motor :	3000	125% 3750
					Other :	135603	100% 135603
Total	237,603	Watts	286	Amp	Total :	237603	Watts

SUB FEED LUGS : ☐ Total Watts : 253353
Total Amps : 305

Panel Bracing: 42KAIC SC Fully Rated **Note: Loads include Sub-Pnls -**

Panel **E4GS** ☐ MIo Volts 277 /480
Location Elec 30A ☒ MB Amps 60

	Service	P	Amps	Watts	Watts	Watts		Service	P	Amps	Watts	Watts	Watts
1	L - Grandstand	1	20	2050			2	Spare	1	20			
3	L - Grandstand	1	20		100		4	L - Building Ltg	1	20		612	
5	L - Stariwells	1	20			615	6	Spare	1	20			
7	Spare	1	20				8	Spare	1	20			
9	Spare	1	20				10	Spare	1	20			
11	Spare	1	20				12	Spare	1	20			
13	Spare	1	20				14	Spare	1	20			
15	Space						16	Space					
17	Space						18	Space					
19	Space						20	Space					
21	Space						22	Space					
23	Space						24	Space					
25	Space						26	Space					
27	Space						28	Space					
29	Space						30	Space					
31	Space						32	Space					
33	Space						34	Space					
35	Space						36	Space					
37	Space						38	Space					
39	Space						40	Space					
41	Space						42	Space					

(Factor)

Phase A	2,050	Watts	7	Amp	Lighting :	3377	125% 4221
Phase B	712	Watts	3	Amp	Motors :		100% 0
Phase C	615	Watts	2	Amp	Largest - Motor :		125% 0
					Other :		100% 0
Total	3,377	Watts	4	Amp	Total :	3377	Watts

SUB FEED LUGS : ☐ Total Watts : 4221
Total Amps : 5

Panel Bracing: 42KAIC SC Fully Rated **Note: Loads include Sub-Pnls -**

Panel **LCC-1** ☒ MIo Volts 277 /480
Location Existing ☐ MB Amps 225

	Service	P	Amps	Watts	Watts	Watts		Service	P	Amps	Watts	Watts	Watts
1				6666			2				6666		
3	LP#1 & LP#2	3	50		6666		4	LP#3 & LP#4	3	50		6666	
5						6666	6						6666
7				5000			8	Space					
9	T-SB	3	30		5000		10	Space					
11						5000	12	Space					
13	T-LLC-1	2	35	1500			14	Space					
15					1500		16	Space					
17	Space						18	Space					

(Factor)

Phase A	19,832	Watts	72	Amp	Lighting :	20000	125% 25000
Phase B	19,832	Watts	72	Amp	Motors :		100% 0
Phase C	18,332	Watts	66	Amp	Largest - Motor :		125% 0
					Other :	37996	100% 37996
Total	57,996	Watts	70	Amp	Total :	57996	Watts

SUB FEED LUGS : ☐ Total Watts : 62996
Siemens - Match circuit breakers Total Amps : 76

Panel Bracing: 65KAIC SC Fully Rated **Note: Loads include Sub-Pnls -**

Panel **LCC-1** ☒ MIo Volts 277 /480
Location Revised ☐ MB Amps 225

	Service	P	Amps	Watts	Watts	Watts		Service	P	Amps	Watts	Watts	Watts
1				3333			2				3336		
3	LP#1	3	30		3336		4	LP#3	3	30		3333	
5						3333	6						3333
7				3333			8				3333		
9	LP#2	3	30		3333		10	LP#4	3	30		3333	
11						3336	12						3336
13	T-LLC-1	2	35	1500			14	Space					
15					1500		16	Space					
17	Space						18	Space					

(Factor)

Phase A	14,835	Watts	54	Amp	Lighting :	20000	125% 25000
Phase B	14,835	Watts	54	Amp	Motors :		100% 0
Phase C	13,338	Watts	48	Amp	Largest - Motor :		125% 0
					Other :	23008	100% 23008
Total	43,008	Watts	52	Amp	Total :	43008	Watts

SUB FEED LUGS : ☐ Total Watts : 48008
Siemens - Match circuit breakers Total Amps : 58

Panel Bracing: 65KAIC SC Fully Rated **Note: Loads include Sub-Pnls -**

Panel **2GS** ☐ MIo Volts 120 / 208
Location Elec 150 MCB ☒ MB Amps 225

	Service	P	Amps	Watts	Watts	Watts		Service	P	Amps	Watts	Watts	Watts
1	R - Bleachers	1	20	360			2				2880		
3	R - Bleachers	1	20		360		4	P - 2PB	3	90		3281	
5	R - Bleachers	1	20			360	6						2880
7	R - Bleachers	1	20	540			8	EF-1	1	20			
9	R - Bleachers	1	20		360		10	EF-2	1	20			
11	R - Bleachers	1	20			360	12	Door Controller	1	20			250
13	R - Elec	1	20	540			14	DDC Controls	1	20	500		
15	R - Space	1	20		900		16	R - TTB	1	20		180	
17	R - Storage	1	20			180	18	Wall Htr EH-5	2	15			250
19	Wall Htr EH-1	1	20	500			20				250		
21	Motorized door	1	20		864		22	Wall Htr EH-6	2	15		250	
23	Motorized door	1	20			864	24						250
25	Motorized door	1	20	864			26	R - Mech Space	1	20	540		
27	Motorized door	1	20		864		28	Spare	1	20			
29	Wall Htr EH-2	1	20			750	30	Spare	1	20			
31	Wall Htr EH-3	1	20	1000			32	Spare	1	20			
33	Wall Htr EH-4	1	20		1000		34	Spare	1	20			
35	Spare	1	20				36	P - OST	2	60			2850
37				1470			38				3120		
39	P-CS	3	90		1290		40	P - OC	2	100		4992	
41						930	42						4992

(Factor)

Phase A	12,564	Watts	105	Amp	Lighting :		125% 0
Phase B	14,341	Watts	120	Amp	Motors :	864	100% 864
Phase C	14,916	Watts	124	Amp	Largest - Motor :	2592	125% 3240
					Other :	38365	100% 38365
Total	41,821	Watts	116	Amp	Total :	41821	Watts

SUB FEED LUGS : ☐ Total Watts : 42469
Total Amps : 118

Panel Bracing: 10KAIC SC Fully Rated **Note: Loads include Sub-Pnls -**

Panel **2PB** ☐ MIo Volts 120 / 208
Location Press Box 90 MCB ☒ MB Amps 125

	Service	P	Amps	Watts	Watts	Watts		Service	P	Amps	Watts	Watts	Watts
1	R- Team	2	20	360			2	R - Exterior GFCI	1	20	360		
3	R- Team				540		4	R - Exterior GFCI	1	20		360	
5	R - Media	2	20			720	6	R - TV RM	2	20			720
7	R - Media			540			8	R - TV RM			720		
9	R - Sound Rack	1	20		360		10	R - Newspaper	1	20		540	
11	R - Sound Rack	1	20			360	12	R - Visitor	2	20			360
13	Spare	1	20				14	R - Visitor			540		
15	Door controller	1	20		500		16	R - IDF	1	20		360	
17	R - Stairwells	1	20			360	18	R - Team	1	20			180
19	Spare	1	20				20	R - Media	1	20	180		
21	Spare	1	20				22	R - TV RM	1	20		180	
23	Spare	1	20				24	R - Newspaper	1	20			180
25	Spare	1	20				26	R - Visitor	1	20	180		
27	Spare	1	20				28	L - Lighting	1	20		441	
29	Spare	1	20				30	Spare	1	20			
31	Space						32	Space					
33	Space						34	Space					
35	Space						36	Space					
37	Space						38	Space					
39	Space						40	Space					
41	Space						42	Space					

(Factor)

Phase A	2,880	Watts	24	Amp	Lighting :	441	125% 551
Phase B	3,281	Watts	27	Amp	Motors :		100% 0
Phase C	2,880	Watts	24	Amp	Largest - Motor :		125% 0
					Other :	8600	100% 8600
Total	9,041	Watts	25	Amp	Total :	9041	Watts

SUB FEED LUGS : ☐ Total Watts : 9151
Total Amps : 25

Panel Bracing: 10KAIC SC Fully Rated **Note: Loads include Sub-Pnls -**

Panel **2CS** ☐ MIo Volts 120 / 208
Location Concession - Alt 1 90 MCB ☒ MB Amps 125

	Service	P	Amps	Watts	Watts	Watts		Service	P	Amps	Watts	Watts	Watts
1	R - Ref	1	20	750			2	R - Concessions	1	20	180		
3	R - Ref	1	20		750		4	R - Concessions	1	20		180	
5	R - Ref	1	20			750	6	R - Concessions	1	20			180
7	R - Concessions	1	20	180			8	R - Concessions	1	20	360		
9	R - Concessions	1	20		180		10	R - Concessions	1	20		180	
11	Spare	1	20				12	Spare	1	20			
13	Spare	1	20				14	Spare	1	20			
15	Spare	1	20				16	Spare	1	20			
17	Spare	1	20				18	Spare	1	20			
19	Spare	1	20				20	Spare	1	20			
21	Spare	1	20				22	Spare	1	20			
23	Spare	1	20				24	Spare	1	20			
25	Spare	1	20				26	Spare	1	20			
27	Spare	1	20				28	Spare	1	20			
29	Spare	1	20				30	Spare	1	20			
31	Space						32	Space					
33	Space						34	Space					
35	Space						36	Space					
37	Space						38	Space					
39	Space						40	Space					
41	Space						42	Space					

(Factor)

Phase A	1,470	Watts	12	Amp	Lighting :		125% 0
Phase B	1,290	Watts	11	Amp	Motors :		100% 0
Phase C	930	Watts	8	Amp	Largest - Motor :		125% 0
					Other :	3690	100% 3690
Total	3,690	Watts	10	Amp	Total :	3690	Watts

SUB FEED LUGS : ☐ Total Watts : 3690
Total Amps : 10

Panel Bracing: 10KAIC SC Fully Rated Note: Loads include Sub-Pnls -

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LAKERIDGE HIGH SCHOOL
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ELECTRICAL PANEL SCHEDULES

BBL1822
19039.00
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20 SEP 2019
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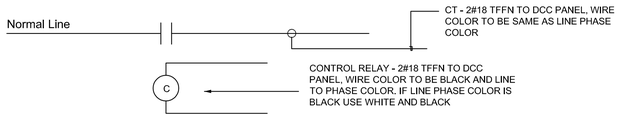
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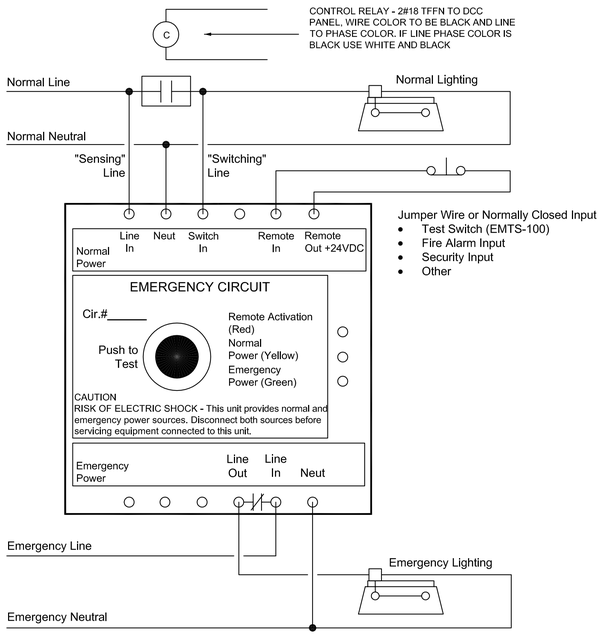
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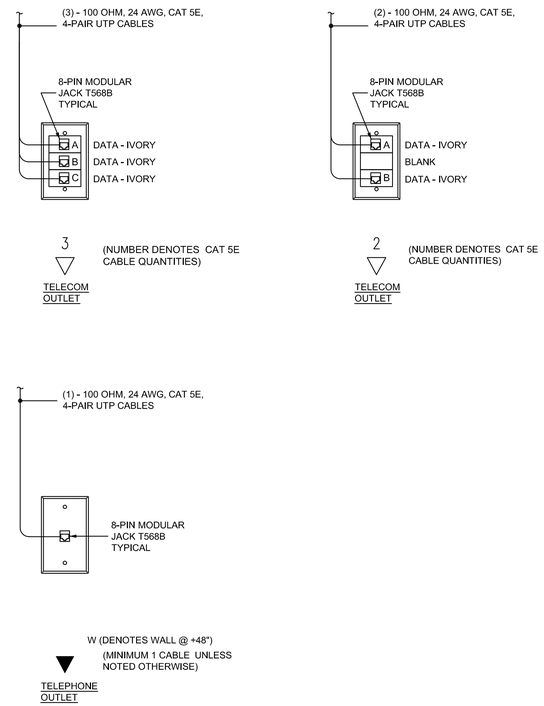
TYPICAL NORMAL LIGHTING CONTROL

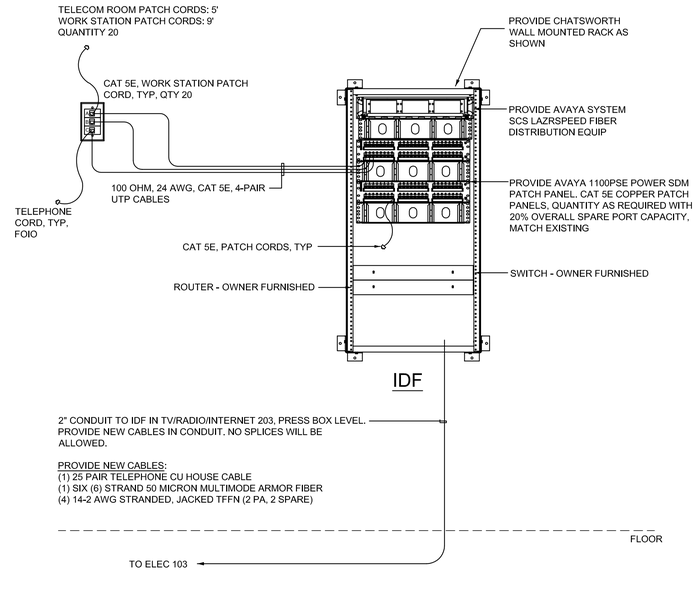


TYPICAL EMERGENCY LIGHTING CONTROL



Jumper Wire or Normally Closed Input
- Test Switch (EMTS-100)
- Fire Alarm Input
- Security Input
- Other





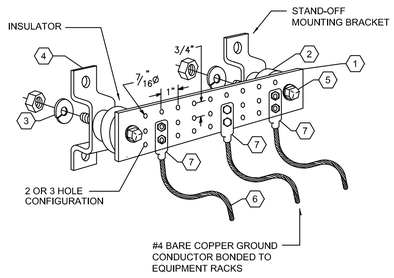
1 DETAIL - EMERGENCY LIGHTING CONTROL UNIT
NO SCALE

2 DETAIL - TELECOM OUTLET CONFIGURATIONS
1" = 1'-0"

PROVIDE ALL EQUIPMENT AS INDICATED ON TELECOM DETAIL AND DRAWINGS. MANUFACTURER WILL BE COMSCOPE. SYSTEM WILL BE WARRANTY

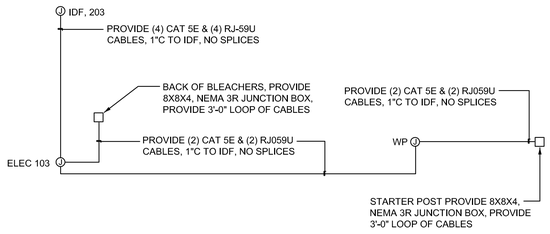
3 DETAIL - TELECOM FLOOR MOUNTED RACK
1"= 1'-0"

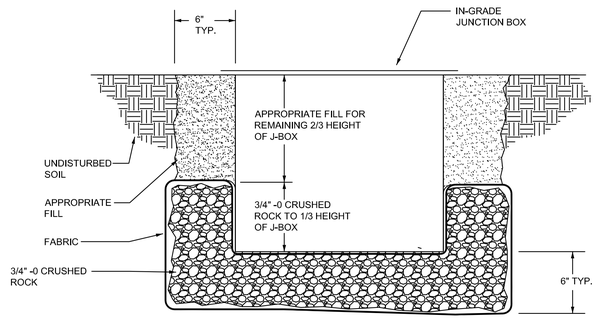
PROVIDE ALL EQUIPMENT AS INDICATED ON TELECOM DETAIL AND DRAWINGS. MANUFACTURER WILL BE COMSCOPE. SYSTEM WILL BE WARRANTY



KEYNOTES THIS DETAIL:

1. COPPER GROUND BAR, 1/4" X 4" X 12", HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION
2. INSULATORS
3. 5/8" LOCK WASHERS
4. WALL MOUNTING BRACKET LAG BOLT TO WALL PLYWOOD
5. 5/8-11 X 1" H.H.C.S.BOLTS
6. 4/0 BARE COPPER GROUND CONDUCTOR TO MAIN SERVICE EQUIPMENT GROUND.
   2 HOLE LUG. CPI, ERICO/CADWELD, SQUARE D OR APPROVED SUBSTITUTE
7.





REMOVE SOIL 6" DEEPER THAN JUNCTION BOX AND AROUND ALL EDGES. INSTALL FABRIC OVER THE SOIL, THEN PROVIDE 6" OF 3/4" -0 CRUSHED ROCK. SET JUNCTION BOX ON ROCK. PROVIDE CRUSHED ROCK AROUND THE J-BOX TO 1/3 THE HEIGHT. PULL FABRIC OVER THE ROCK, CREATING A SOCK OF ROCK AROUND THE J-BOX. PROVIDE APPROPRIATE FILL WITHIN THE REMAINING 2/3 HEIGHT OF THE J-BOX.

4 DETAIL - GROUND BUS BAR - 103 @ DDC AND 203 @ IDF
1" = 1'-0"

5 DETAIL - TRACK TIMER DIAGRAM
NO SCALE

6 DETAIL - IN-GRADE JUNCTION BOX
NO SCALE

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18079.001
PROJECT NUMBER
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DATE

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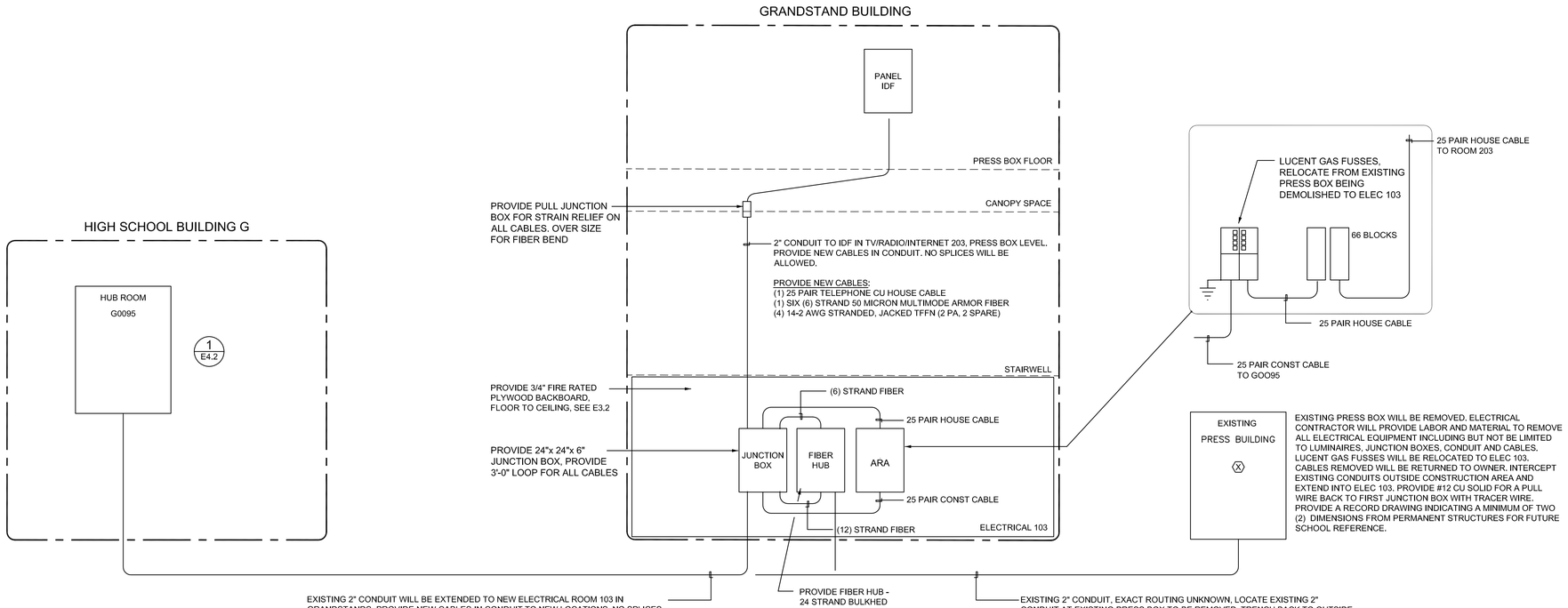
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1 DETAIL - TELECOM DISTRIBUTION
NO SCALE

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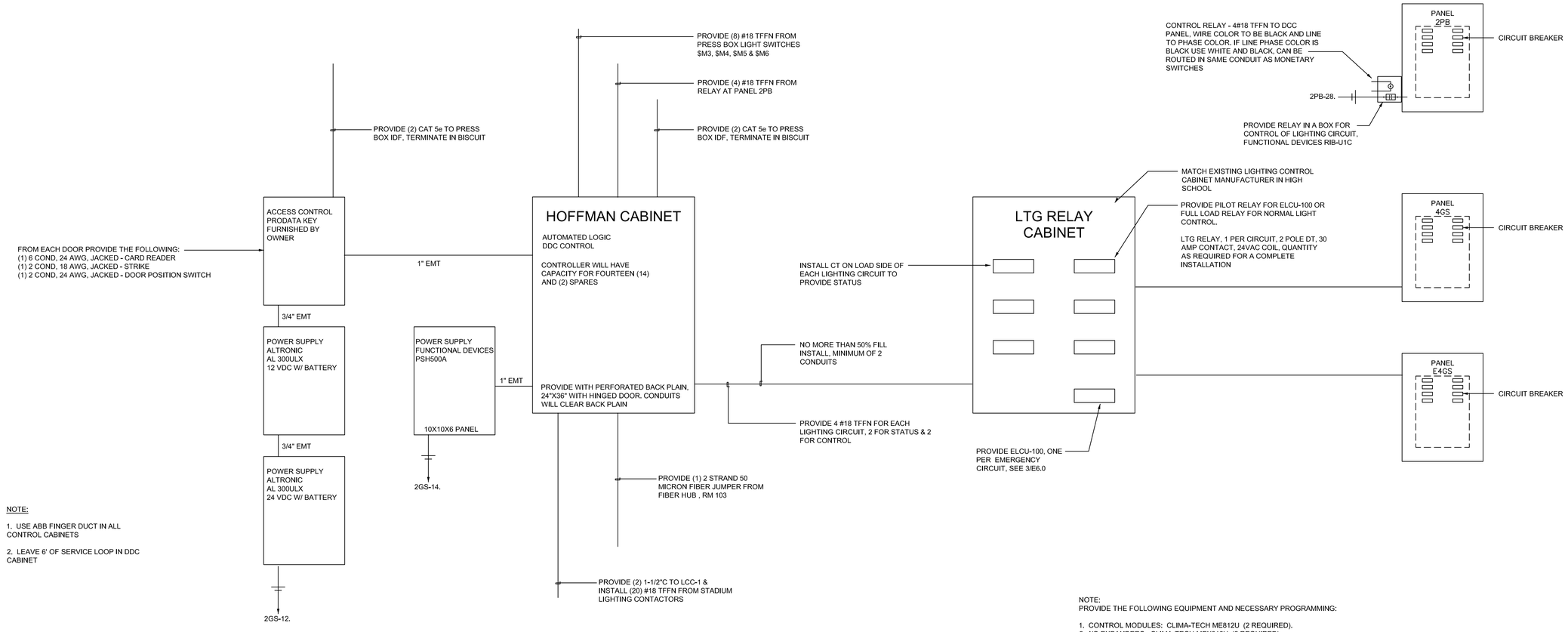
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NOTE:

1. USE ABB FINGER DUCT IN ALL CONTROL CABINETS

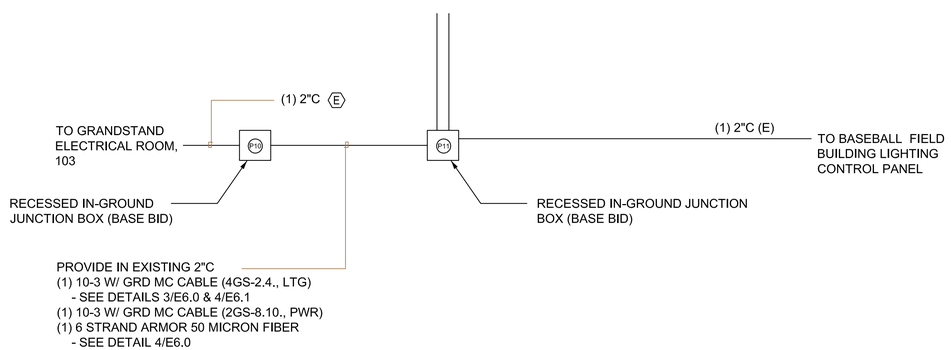
2. LEAVE 6' OF SERVICE LOOP IN DDC CABINET

NOTE:
PROVIDE THE FOLLOWING EQUIPMENT AND NECESSARY PROGRAMMING:

1. CONTROL MODULES: CLIMA-TECH ME812U (2 REQUIRED).
2. I/O EXPANDERS: CLIMA-TECH MEX816U (2 REQUIRED).
3. FIBER TO COPPER REPEATERS: CLIMA-TECH FIBER TO COPPER REPEATERS (2 REQUIRED).

1 DETAIL - LIGHTING CONTROL PANEL @ RM 103

NO SCALE



2 DETAIL - PARTIAL LIGHTING CONTROL DISGRAM

NO SCALE

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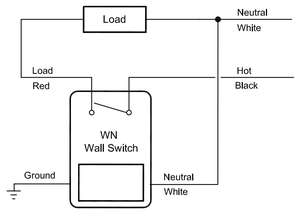
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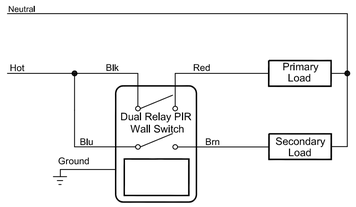
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SINGLE LEVEL WIRING
$OS

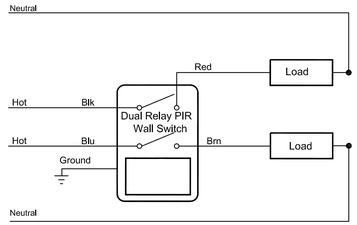


DUAL LEVEL
$OS-2

LTG & EX FAN
$OS-EF

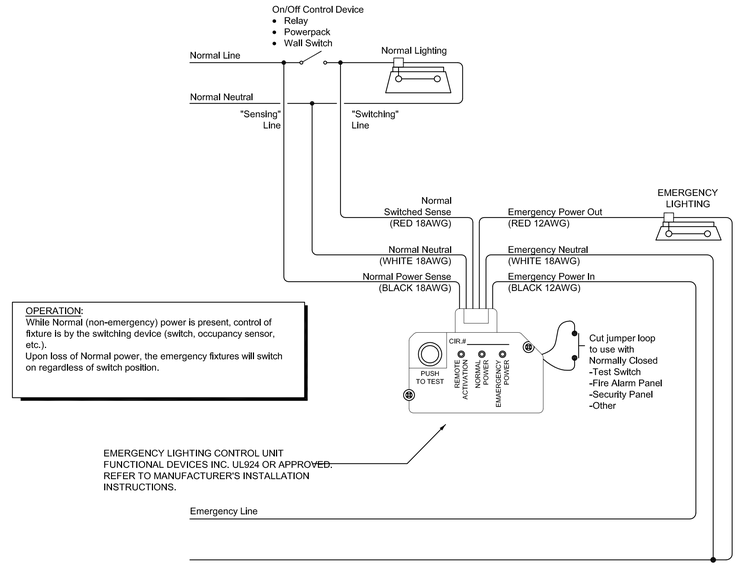
PRIMARY LOAD: OUTSIDE LAMPS FIXTURE LAMPS
SECONDARY LOAD: INSIDE LAMP EXHAUST FAN

NOTE: PRIMARY & SECONDARY LOADS ARE SAME VOLTAGE
SENSOR SWITCH WSD-2P SERIES



PRIMARY LOAD: OUTSIDE LAMPS FIXTURE LAMPS
SECONDARY LOAD: INSIDE LAMP EXHAUST FAN

NOTE: PRIMARY & SECONDARY LOADS ARE DIFFERENT VOLTAGE
SENSOR SWITCH WSD-2P SERIES

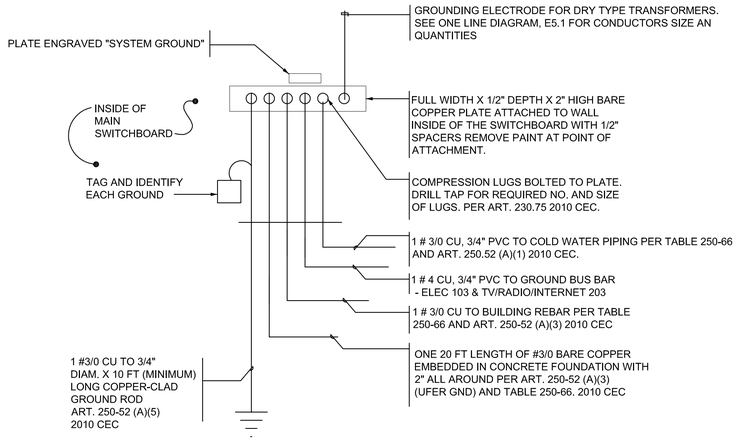


OPERATION:
While Normal (non-emergency) power is present, control of fixture is by the switching device (switch, occupancy sensor, etc.).
Upon loss of Normal power, the emergency fixtures will switch on regardless of switch position.

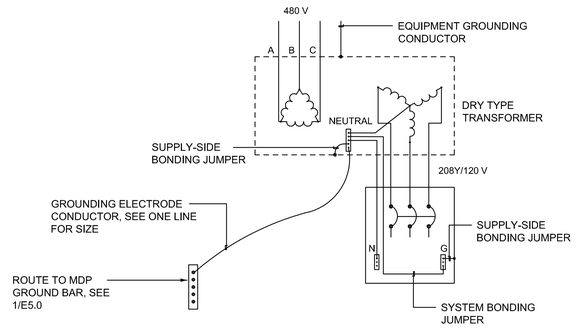
1 DETAIL - MOTION SENSOR CONTROL
NO SCALE

WATT STOPPER OR APPROVED EQUAL

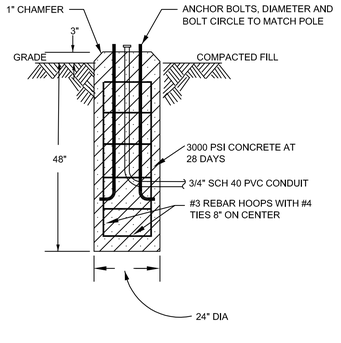
2 DETAIL - EMERGENCY ONLY LIGHTING SWITCHING
NO SCALE



3 DETAIL - SERVICE GROUNDING
NONE



4 DETAIL - DRY TYPE XFRM GROUND
NONE



5 DETAIL - PARKING LOT POLE BASE
NO SCALE

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LUMINAIRE SCHEDULE

Type : A
Description : LED - Surface Mounted Wraparound
Ballast : Electronic 0-10V Dimming — Housing : Steel
Voltage : 120-277v — Lens / Optics : Acrylic Drop Lens
Lamp Type : LED - 3500K — Reflector :
Lamp Quantity : 1 — Distribution :
Efficiency : 3000 Lumens - 80 CRI — Finish : White
Options : Wire Guard — Wattage: 42

Manufacturer : Lithonia ZL1D-L48-SMR-3000LM-FST-MV-35K-80CRI-WH-WGZ48 series
Metalux or Approved Equivalent

Type : A1
Description : LED - Surface Mounted Wraparound
Ballast : Electronic 0-10V Dimming — Housing : Steel
Voltage : 120-277v — Lens / Optics : Acrylic Drop Lens
Lamp Type : LED - 3500K — Reflector :
Lamp Quantity : 1 — Distribution :
Efficiency : 7000 Lumens - 80 CRI — Finish : White
Options : Wire Guard — Wattage: 42

Manufacturer : Lithonia ZL1D-L48-SMR-7000LM-FST-MV-35K-80CRI-WH-WGZ48 series
Metalux or Approved Equivalent

Type : B
Description : LED - Surface Mounted
Ballast : Electronic 0-10V Dimming — Housing : Steel
Voltage : 120-277v — Lens / Optics : Virgin Acrylic
Lamp Type : LED - 3500K — Reflector :
Lamp Quantity : 1 — Distribution :
Efficiency : 4000 Lumens - 80 CRI — Finish : White
Options : Intreral occupancy sensor — Wattage: 43
ELDOLED Dims to 1%
Dims to 10% when unoccupied
Manufacturer : Lithonia WL4-40L-MV-EZ1-LP835-MSD7-DIM10-WH Series
Metalux or Approved Equivalent

Type : C
Description : LED - Surface Mounted
Ballast : Electronic 0-10V Dimming — Housing : Steel
Voltage : 120-277v — Lens / Optics : Diffused Lens
Lamp Type : LED - 3500K — Reflector :
Lamp Quantity : 1 — Distribution :
Efficiency : 700 Lumens - 90 CRI — Finish : White
Options : — Wattage: 10

Manufacturer : Juno JSF-5IN 07LM-35K-90CRIMVOLT ZT Series
or Approved Equivalent

Type : C1
Description : LED - Surface Mounted
Ballast : Electronic 0-10V Dimming — Housing : Steel
Voltage : 120-277v — Lens / Optics : Diffused Lens
Lamp Type : LED - 3500K — Reflector :
Lamp Quantity : 1 — Distribution :
Efficiency : 1300 Lumens - 90 CRI — Finish : White
Options : — Wattage: 15

Manufacturer : Juno JSF-11IN 13LM-35K-90CRIMVOLT ZT Series
or Approved Equivalent

Type : SA2
Description : LED - Wall Mounted
Ballast : Electronic Dimming Driver — Housing : Die cast aluminum
Voltage : 120-277v — Lens / Optics : Tempered Glass
Lamp Type : LED - 3000K — Reflector : Sharp Cut-Off
Lamp Quantity : 1 — Distribution : Type 2
Efficiency : 3000 Lumens Minimum, 450 mA — Finish : Bronze
Options : Tamper Resistance Fasteners — Wattage: 30

Manufacturer : McGraw-Edison IST-AF-450-LED-E1-T2-BZ-7030-TR Series
Lithonia, Gardco, or Approved Equivalent

Type : SA3
Description : LED - Wall Mounted
Ballast : Electronic Dimming Driver — Housing : Die cast aluminum
Voltage : 120-277v — Lens / Optics : Tempered Glass
Lamp Type : LED - 3000K — Reflector : Sharp Cut-Off
Lamp Quantity : 1 — Distribution : Type 3
Efficiency : 4200 Lumens Minimum, 600 mA — Finish : Bronze
Options : Tamper Resistance Fasteners — Wattage: 38

Manufacturer : McGraw-Edison IST-AF-450-LED-E1-T2-BZ-7030-TR Series
Lithonia, Gardco, or Approved Equivalent

Type : SB3
Description : LED - Wall Mounted
Ballast : Electronic Dimming Driver — Housing : Die cast aluminum
Voltage : 120-277v — Lens / Optics : Borosilicate Glass
Lamp Type : LED - 4000K — Reflector : Semi Cut-Off
Lamp Quantity : 1 — Distribution :
Efficiency : 3000 Lumens Minimum, 600 mA — Finish : Black
Options : Tamper Resistance Fasteners — Wattage: 27

Manufacturer : McGraw-Edison LD-WP-GL-3B-MT-BK-7040
or Approved Equivalent

Type : SC1
Description : LED - Surface Mounted Wraparound
Ballast : Electronic 0-10V Dimming — Housing : Extruded Marine Grade Aluminum
Voltage : 120-277v — Lens / Optics : Pearlescent Polycarbonite
Lamp Type : LED - 3500K — Reflector :
Lamp Quantity : 1 — Distribution :
Efficiency : 7200 Lumens - 80 CRI — Finish : White
Options : Flat end caps — Wattage: 73

Manufacturer : Kenall MLHA8-48-F-MW-PP-67L35K-DCC-DV-PH-9500 Series
Luminaire, or Approved Equivalent

Type : SC2
Description : LED - Surface Mounted Wraparound
Ballast : Electronic 0-10V Dimming — Housing : Extruded Marine Grade Aluminum
Voltage : 120-277v — Lens / Optics : Pearlescent Polycarbonite
Lamp Type : LED - 3500K — Reflector :
Lamp Quantity : 1 — Distribution :
Efficiency : 9200 Lumens - 80 CRI — Finish : White
Options : Flat end caps — Wattage: 98

Manufacturer : Kenall MLHA8-48-F-MW-PP-90L35K-DCC-DV-PH-9500 Series
Luminaire, or Approved Equivalent

Type : SE
Description : Wall Sconce (Existing)
Ballast : Electronic — Housing : Die Cast Aluminum
Voltage : 120-277v — Lens / Optics : Virgin Acrylic
Lamp Type : 42w TRT — Reflector : Sharp Cut-Off
Lamp Quantity : 1 — Distribution : Medium Throw
Efficiency : — Finish : Natural Aluminum
Options : — Wattage:

Manufacturer : Gardco 101-MT-42TRF-UNIV-NP

Type : SF
Description : Post Top Mount HID (Existing)
Ballast : Electronic — Housing : Aluminum
Voltage : 277v — Lens / Optics : Tempered Glass
Lamp Type : 175 MH — Reflector : Sharp Cut-Off
Lamp Quantity : 1 — Distribution : Type V
Efficiency : — Finish : Natural Aluminum
Options : Tamper Resistance Fasteners — Wattage:
Mount on 10'-0" pole with pole base
Manufacturer : Gardco CP17-1713-175MH-NP

Type : SG
Description : LED - Post Top Mount
Ballast : Electronic Driver — Housing : Aluminum
Voltage : 120-277v — Lens / Optics : Tempered Glass
Lamp Type : LED - 110LA — Reflector : Sharp Cut-Off
Lamp Quantity : 1 — Distribution : Type V
Efficiency : — Finish : Natural Aluminum
Options : Tamper Resistance Fasteners — Wattage: 96
Color - Match existing Natural Aluminum
Provide 10'-0" pole with pole base, match existing
Manufacturer : Gardco CP17L-32L-900-NW-G2-Verify w/ existing-5-UNV-F1-CC Series

Type : SH
Description : LED - Wall Mounted - Flood
Ballast : Electronic Driver — Housing : Die cast aluminum
Voltage : 120-277 — Lens / Optics : Tempered Glass
Lamp Type : LED - 50LA — Reflector : Semi Cut-Off
Lamp Quantity : 1 — Distribution : Wide
Efficiency : — Finish : Dark Bronze
Options : Tamper Resistance Fasteners — Wattage: 45
Cold Temperature Rated
Notes : Type SH will not be installed. Provide six (6) units in unopened boxes to the Owner's Representative.
Manufacturer : Lithonia OFL1-LED P2-40K-THK-DDBXD-MB Series
or Approved Equivalent

Type : XWP
Description : Exit Sign - Weather Proof
Ballast : Electronic — Housing : Thermoplastic
Voltage : 120/277 — Lens / Optics :
Lamp Type : LED — Reflector :
Lamp Quantity : — Distribution :
Efficiency : — Finish : White
Options : UL Listed Wet Location,

Manufacturer : Lithonia LV-S-W-1-R-120/277-UM Series
Dual-Lite, Evenlite with CT Option, or Approved Equivalent

LIGHTING COMMISSIONING:

PROVIDE COMMISSIONING FOR LIGHTING CONTROLS PER C408.3 WHICH INCLUDE DAYLIGHT OR OCCUPANT SENSING AUTOMATIC CONTROLS, AUTOMATIC SHUT-OFF CONTROLS, OCCUPANCY SENSORS, OR AUTOMATIC TIME SWITCHES, THE LIGHTING CONTROLS SHALL BE TESTED TO ENSURE THAT CONTROL DEVICES, COMPONENTS, EQUIPMENT, AND SYSTEMS ARE CALIBRATED, ADJUSTED AND OPERATE IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS. SEQUENCES OF OPERATION SHALL BE FUNCTIONALLY TESTED TO ENSURE THEY OPERATE IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS. A COMPLETE REPORT OF TEST PROCEDURES AND RESULTS SHALL BE PREPARED AND FILED WITH THE OWNER.

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