

ALTERNATIVE #2:
REMOVE AND REPLACE
PAVING FOR PROPOSED
SANITARY SEWER LINE.
SEE CIVIL PLANS

SALVAGE EXISTING GARDEN BEDS AND
GARDEN BENCH. RELOCATE AS SHOWN
ON SITE PLAN AND DETAILS.

SALVAGE EXISTING BIKE
RACKS AND RE-INSTALL
PER SITE PLAN.


SALVAGE EXISTING 2'x2' PAVERS.
RE-INSTALL AS SHOWN ON SITE PLAN
AND DETAILS (QTY 21, ALLOWANCE FOR
2 TO BE DAMAGED)

REFER TO ARBORIST RECOMMENDATIONS
TO MINIMIZE IMPACTS TO TREE
DURING CONSTRUCTION

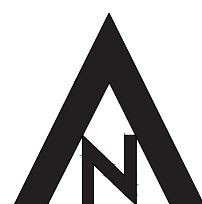
GENERAL NOTES

1. Refer to architectural, electrical and civil for additional demolition or protection measures required.
2. Verify exact locations and routing of existing underground utilities prior to starting excavation. Repair any damage to existing pipes, utilities or related facilities at Contractor's expense in a manner approved by Owner's Representative.
3. Barricade and protect trunks, limbs, roots and root zones beyond dripline of existing trees and plant materials to remain as directed by Owner's Representative. Cut no limbs or roots larger than 2" in diameter without approval of Owner's Representative. Notify Owner's Representative prior to performing any excavation within protection areas.

GENERAL NOTES

- SAWCUT LINE
-  DEMO PAVING/HARDSCAPE. SEE CIVIL, ELECTRICAL, AND ARCHITECTURAL FOR ADDITIONAL WORK
- CRZ — CRZ — CRITICAL ROOT ZONE OF EXISTING TREES
INSTALL TREE PROTECTION FENCE
SEE SECTION 01 56 39

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



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Z:\Beaverton Vose ES Addition 2030\ACAD
1/21/2020

SW DENNY ROAD

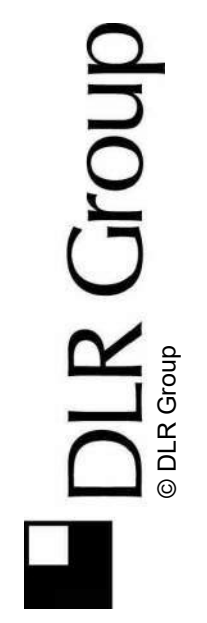
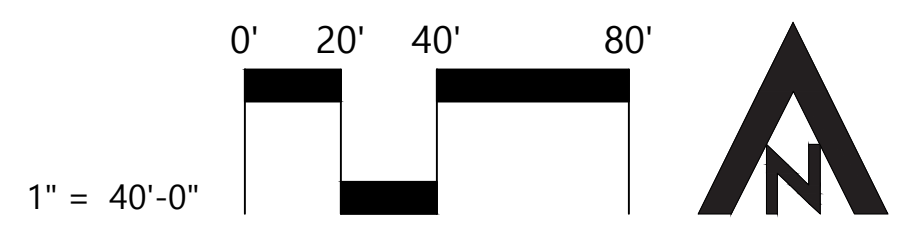
WORK AREA
SEE ENLARGEMENT SHEET L2.01

GENERAL SITE PLAN NOTES

1. All survey information provided by:
2. Verify exact locations and routing of existing underground utilities prior to starting excavation. Repair any damage to existing pipes, utilities or related facilities at Contractor's expense in a manner approved by Owner's Representative.
3. Barricade and protect trunks, limbs, roots and root zones beyond dripline of existing trees and plant materials to remain as directed by Owner's Representative. Cut no limbs or roots larger than 2" in diameter without approval of Owner's Representative. Notify Owner's Representative prior to performing any excavation within protection areas.
4. Install new utilities so that rim elevations are flush with finish grades at pavement, lawn and plant beds. Adjust rim elevations of existing utilities accordingly.
5. All accessible components including, but not limited to signs, ramps, tactile warning, markings, etc. shall conform to all Oregon State Standards for parking and access for the disabled. Obtain Owner's Representative approval prior to installing any related work.
6. Verify existing elevations where new work abuts existing to remain. Notify Owner's Representative of any discrepancies.

LEGEND

PEDESTRIAN CIRCULATION



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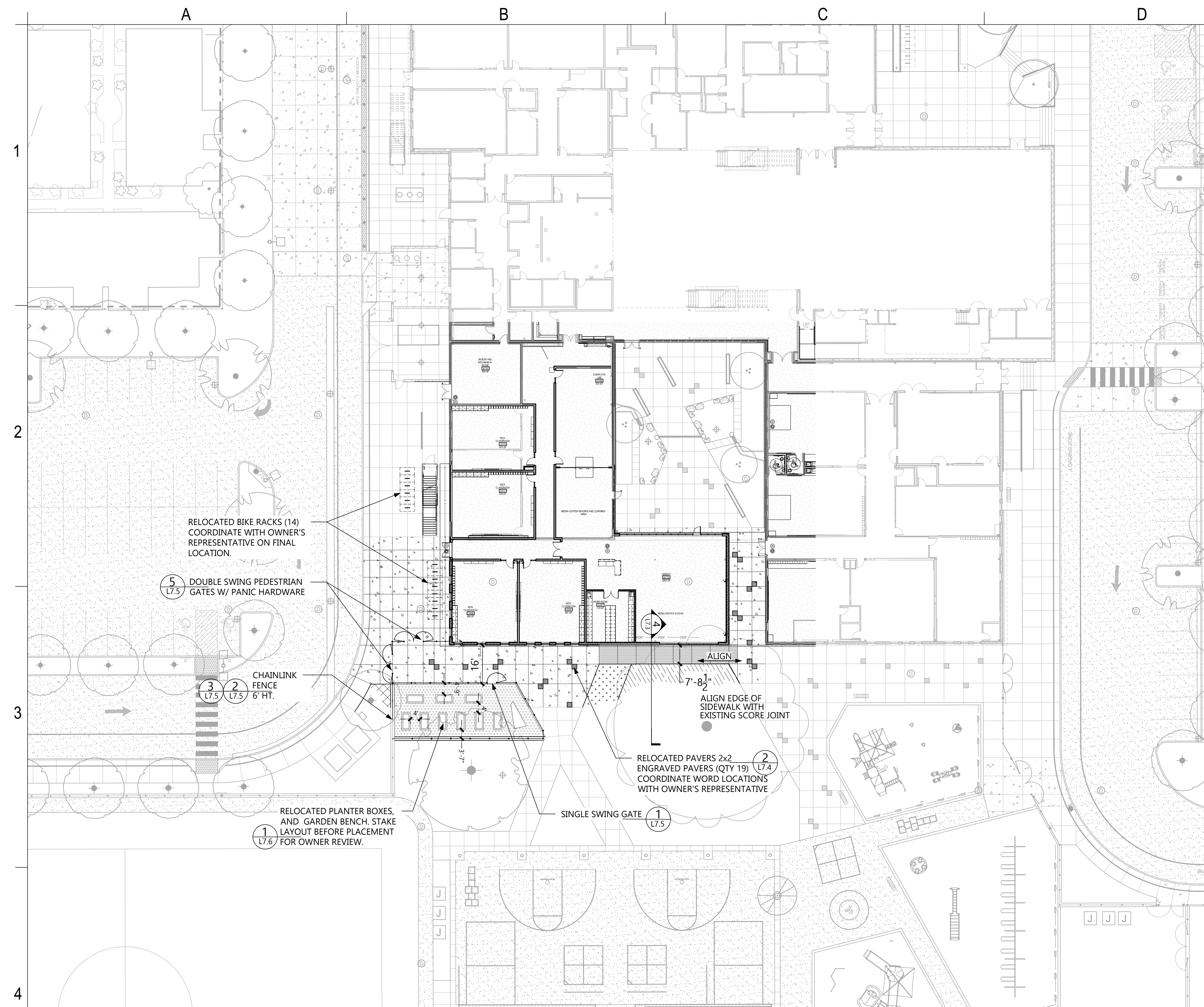
VOSE ES ADDITION
BEAVERTON SCHOOL DISTRICT
11350 SW DENNY ROAD
BEAVERTON, OR 97008

100% CD
2/28/2021
REVISIONS

74-21102-00

OVERALL
SITE PLAN

L2.0



GENERAL SITE PLAN NOTES

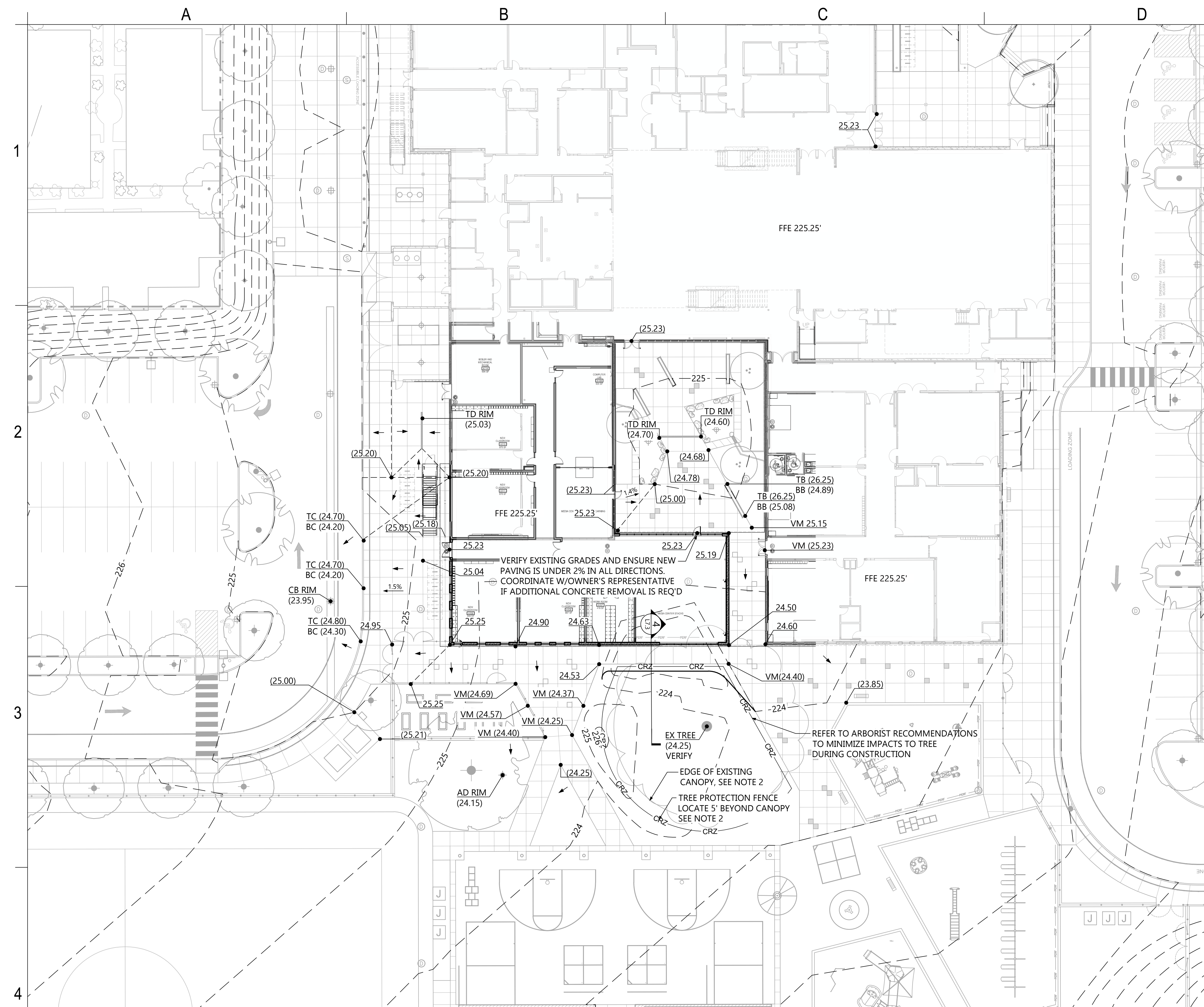
1. Verify exact locations and routing of existing underground utilities prior to starting excavation. Repair any damage to existing pipes, utilities or related facilities at Contractor's expense in a manner approved by Owner's Representative.
2. Barricade and protect trunks, limbs, roots and root zones beyond dripline of existing trees and plant materials to remain as directed by Owner's Representative. Cut no limbs or roots larger than 2" in diameter without approval of Owner's Representative. Notify Owner's Representative prior to performing any excavation within protection areas.
3. Install new utilities so that rim elevations are flush with finish grades at pavement, lawn and plant beds. Adjust rim elevations of existing utilities accordingly.
4. All accessible components including, but not limited to signs, ramps, tactile warning, markings, etc. shall conform to all Oregon State Standards for parking and access for the disabled. Obtain Owner's Representative approval prior to installing any related work.
5. Verify existing elevations where new work abuts existing to remain. Notify Owner's Representative of any discrepancies.
6. Structural soil to be used under reinforced concrete within 5' of tree dripline. Structural soil to be installed at a depth of 36" min. Refer to detail and specifications listed under detail 4/L7.3.
7. Prepare and install new soil material to be used in salvaged raised garden beds.
8. Clean or replace plexiglass windows at salvaged raised garden beds.
9. Install sod at any lawn areas damaged by construction activity.

LEGEND

	EXISTING TREES
	RELOCATED BIKE RACK (3) L7.4
	(E) CONCRETE PAVING - PEDESTRIAN
	(E) ASPHALT PAVING
	LAWN REPAIR
	MULCH AREA
	RELOCATED PAVERS (2) L7.4
	CONCRETE PAVING - PEDESTRIAN (1) L7.3
	CONCRETE PAVING - REINFORCED (2) L7.3
	CRUSHED ROCK SURFACING (1) L7.4

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





GENERAL GRADING NOTES

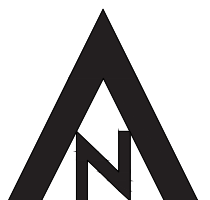
1. Add 200 to all proposed spot elevations shown on plan. elevations have been simplified for clarity.
2. Verify exact locations and routing of existing underground utilities prior to starting excavation. Repair any damage to existing pipes, utilities or related facilities at Contractor's expense in a manner approved by Owner's Representative.
3. All earthwork performed within 5' of the dripline of existing trees to be done with a hydro vacuum. Do not damage or cut roots larger than 1.5 inches without arborist approval.
4. All accessible components including, but not limited to signs, ramps, tactile warning, markings, etc. shall conform to all Oregon State Standards for parking and access for the disabled. Obtain Owner's Representative approval prior to installing any related work.
5. Install new utilities so that rim elevations are flush with finish grades at pavement, lawn and plant beds. Adjust rim elevations of existing utilities accordingly.
6. Verify existing elevations where new work abuts existing to remain. Notify Owner's Representative of any discrepancies prior to any construction.
7. Adjust rim elevations of existing utilities so that rims are flush with finish grade at new paving and lawns.
8. Blend all new elevations back to existing grade to create a uniform slope. Maximum slope, 4:1.
9. Construct smooth transitions between new paving improvements and existing paving to remain.

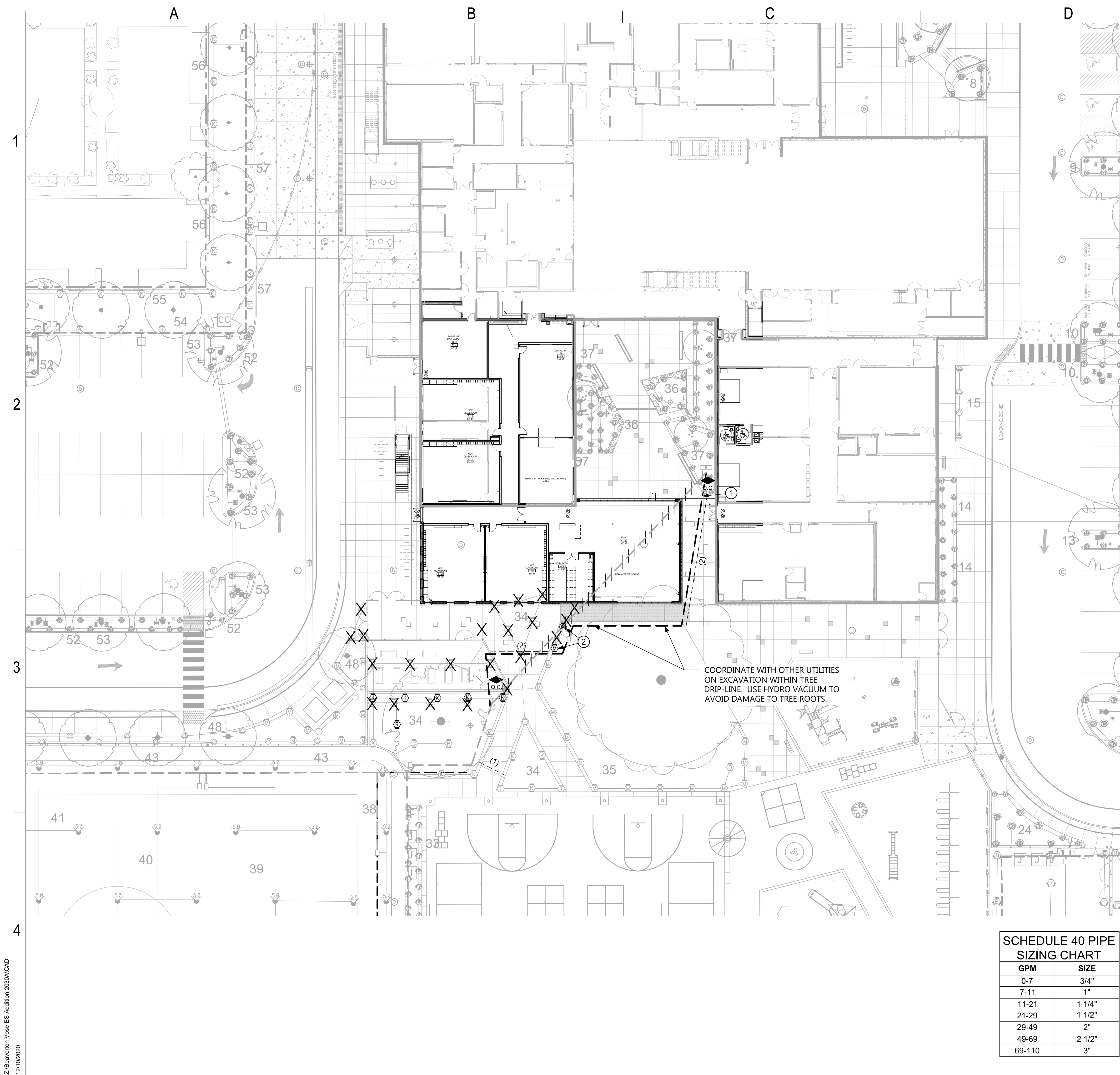
GENERAL LEGEND

FFE	FINISH FLOOR ELEVATION
— 222 —	EXISTING CONTOUR (1' INTERVAL)
— 222 —	NEW CONTOUR (1' INTERVAL)
XX.XX	SPOT ELEVATION SEE NOTE 1
VM(XX.XX)	VERIFY / MATCH EXISTING ELEVATION
TC XX.XX BC XX.XX	TOP OF CURB ELEVATION ELEVATION BOTTOM OF CURB SEE NOTE 1
TW XX.XX BW XX.XX	TOP OF WALL ELEVATION BOTTOM OF WALL ELEVATION SEE NOTE 1
TS XX.XX BS XX.XX	TOP OF STAIR ELEVATION BOTTOM OF STAIR ELEVATION SEE NOTE 1
CB RIM XX.XX	CATCH BASIN RIM ELEVATION SEE NOTE 1
AD RIM XX.XX	AREA DRAIN RIM ELEVATION SEE NOTE 1
DD RIM XX.XX	DECK DRAIN RIM ELEVATION SEE NOTE 1
TD RIM XX.XX	TRENCH DRAIN RIM ELEVATION SEE NOTE 1
VG XX.XX	VALLEY GUTTER ELEVATION
	BREAK IN PLANE ARROW INDICATES DIRECTION OF FLOW
	PERFORATED PIPE

1" = 20'-0"

0' 10' 20' 40'





SCHEDULE 40 PIPE SIZING CHART	
GPM	SIZE
0-7	3/4"
7-11	1"
11-21	1 1/4"
21-29	1 1/2"
29-49	2"
49-69	2 1/2"
69-110	3"

IRRIGATION LEGEND

-
- EXISTING (E) IRRIGATION HEADS, TYP.

IRRIGATION HEAD SCHEDULE

NON-ROTOR TYPE HEADS

SYMBOL	MANUFACTURER/MODEL	PSI
	Hunter MP1000 PROS-06-PRS40-CV	40
	Hunter MP2000 PROS-06-PRS40-CV	40

IRRIGATION NOTES

1. VERIFY EXACT LOCATIONS AND ROUTING OF EXISTING AND PROPOSED UNDERGROUND UTILITIES PRIOR TO STARTING ANY EXCAVATION. ANY DAMAGE TO EXISTING PIPES, UNDERGROUND UTILITIES OR RELATED FACILITIES TO BE REPAIRED AT CONTRACTOR'S EXPENSE IN A MANNER APPROVED BY OWNER'S REPRESENTATIVE.
2. BARRICADE AND PROTECT TRUNKS, LIMBS, ROOTS AND ROOT ZONES BEYOND DRIP LINE OF EXISTING TREES AND PLANT MATERIALS TO REMAIN AS DIRECTED BY OWNER'S REPRESENTATIVE. CUT NO LIMBS OR ROOTS LARGER THAN 1.5" IN DIAMETER WITHOUT APPROVAL OF OWNER'S REPRESENTATIVE.
3. IRRIGATION LAYOUT IS DIAGRAMMATIC. IT IS INTENDED THAT ALL IRRIGATION LINES WILL BE ROUTED THROUGH LAWNS AND PLANT BEDS EXCEPT WHERE NOTED ON DRAWINGS. ADJUST ROUTING OF IRRIGATION, HEADS, AND SLEEVES AS NECESSARY FOR ANY EXISTING OR PROPOSED UTILITIES. LOCATE IRRIGATION MAIN LINE, LATERAL LINES, AND VALVE BOXES TO AVOID CONFLICT WITH THE TREE PLANTINGS.
4. LOCATE IRRIGATION ZONE VALVE ASSEMBLIES WITHIN PLANT BEDS WHERE POSSIBLE. ANY IRRIGATION ZONE VALVES DIAGRAMMATICALLY LOCATED IN PAVEMENT ARE TO BE INSTALLED IN ADJACENT PLANT BED OR LAWN.
5. INSTALL SPRAY HEADS 3" FROM ADJACENT PAVEMENT, CURBS, AND PLANTING EDGES; 6" FROM CURBS IN PARKING AREAS UNLESS DIRECTED OTHERWISE BY OWNER'S REPRESENTATIVE. INSTALL SPRINKLERS 2 FEET FROM FACE OF CURB AT PLANT BEDS PARALLEL TO PARKING LOT STALLS.
6. ADJUST RADIUS ON SPRAY HEADS AS NECESSARY TO MINIMIZE OVERSPRAY WHILE ACHIEVING FULL AND EVEN COVERAGE OF PLANTED AREAS.
7. VERIFY STATIC PRESSURE OF 70 PSI AT POINT OF CONNECTION. NOTIFY OWNER'S REPRESENTATIVE PRIOR TO ANY CONSTRUCTION IF PRESSURE IS LOWER THAN 70 PSI.
8. PROVIDE ALL NECESSARY WIRING REQUIRED TO MAKE THE IRRIGATION SYSTEM A FULLY SERVICEABLE AND OPERATIONAL CONTROLLED SYSTEM AT THE COMPLETION OF THE PROJECT.
9. INSTALL IRRIGATION CONTROL, COMMON, AND COMMUNICATION WIRE IN UNDERGROUND CONDUIT WHERE ROUTING DOES NOT FOLLOW NEW OR EXISTING MAIN LINE.
10. INSTALL MANUAL DRAIN VALVES AT ALL LOW POINTS IN MAIN LINE. PROVIDE ADEQUATE NUMBER OF DRAIN VALVES TO FULLY DRAIN SYSTEM FOR WINTERIZATION.
11. VERIFY ALL PIPE SIZING WITH SCHEDULE 40 PIPE CHART.

KEYNOTES

1. Connect new mainline and associated wires at this approximate location.
2. Shift irrigation head to be in new planting areas.

1" = 20'-0"

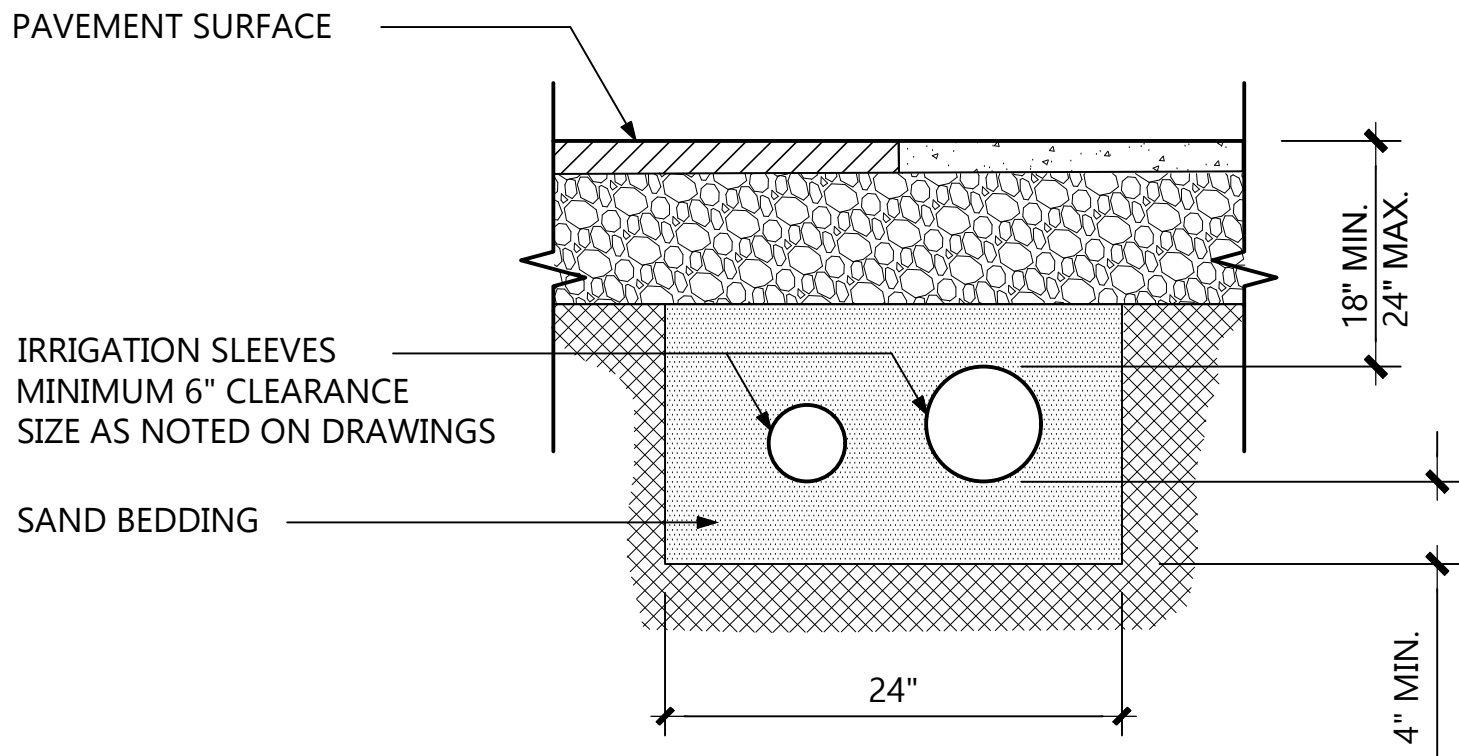


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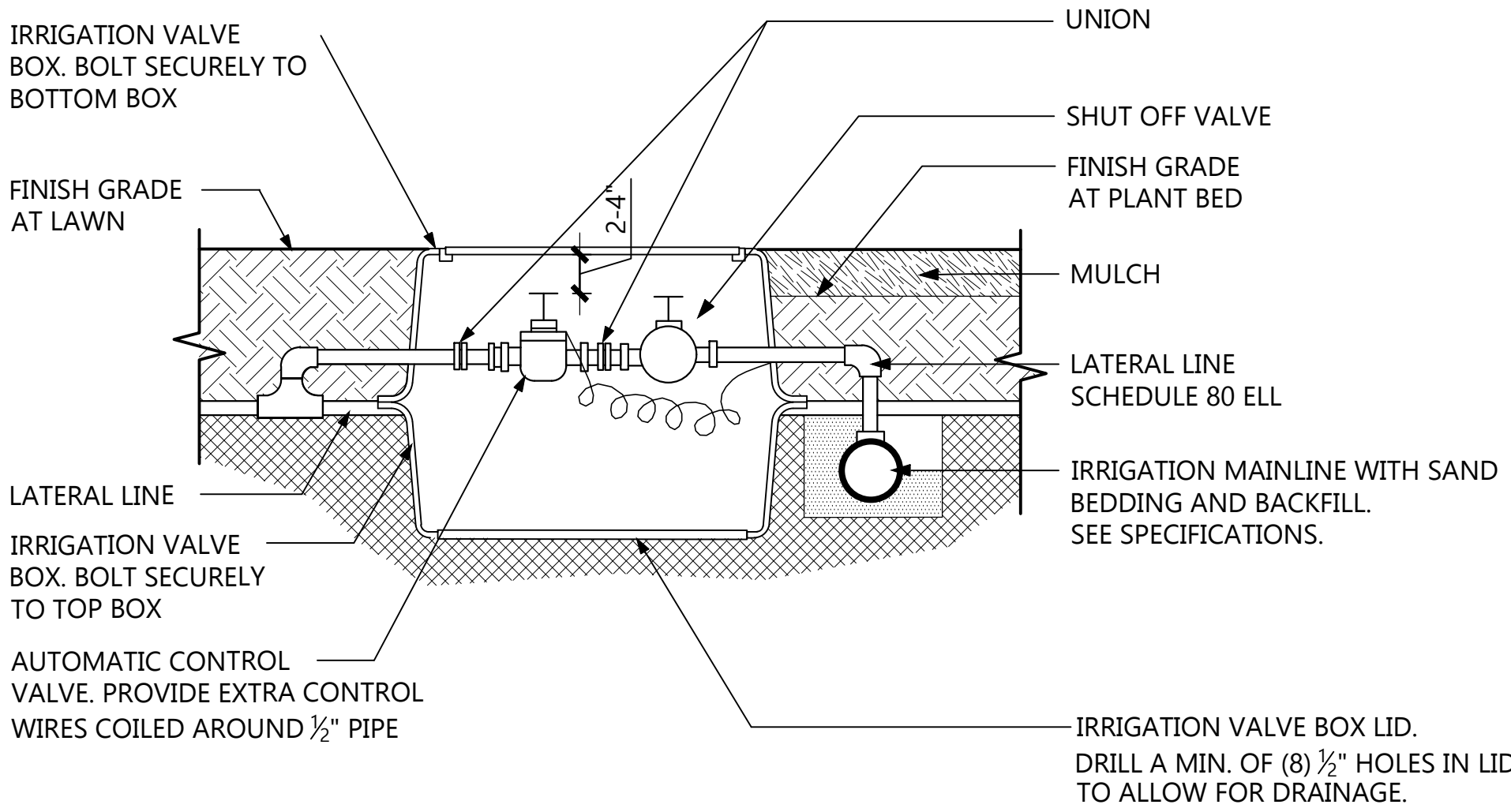
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- NOTES**
1. EXTEND SLEEVES BEYOND PAVEMENT EDGE OR BACK OF CURB AS NOTED IN SPECIFICATION. COVER OPEN ENDS WITH DUCT TAPE
 2. INSTALL 2 X 4 RED-TOP, WOOD LOCATION STAKES @ BOTH ENDS OF SLEEVES AND LEAVE 2" ABOVE TOP OF CURB OR PAVEMENT.

IRRIGATION SLEEVE

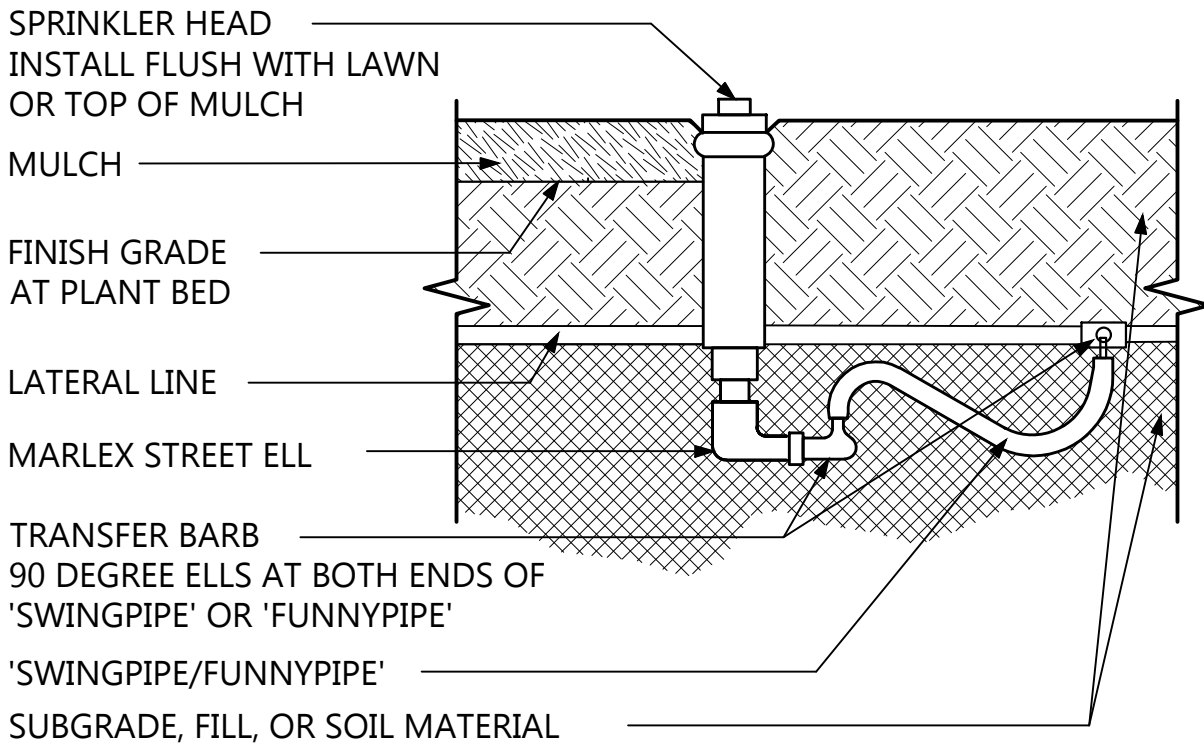
NTS 1



- NOTES**
1. USE TEFLON TAPE ONLY ON ALL THREADED PIPE JOINTS.

ZONE VALVE ASSEMBLY

NTS 2



- NOTES**
1. USE TEFLON TAPE ON ALL THREADED PIPE JOINTS.

FLEX RISER ASSEMBLY

NTS 3



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SITE
DETAILS

L7.1

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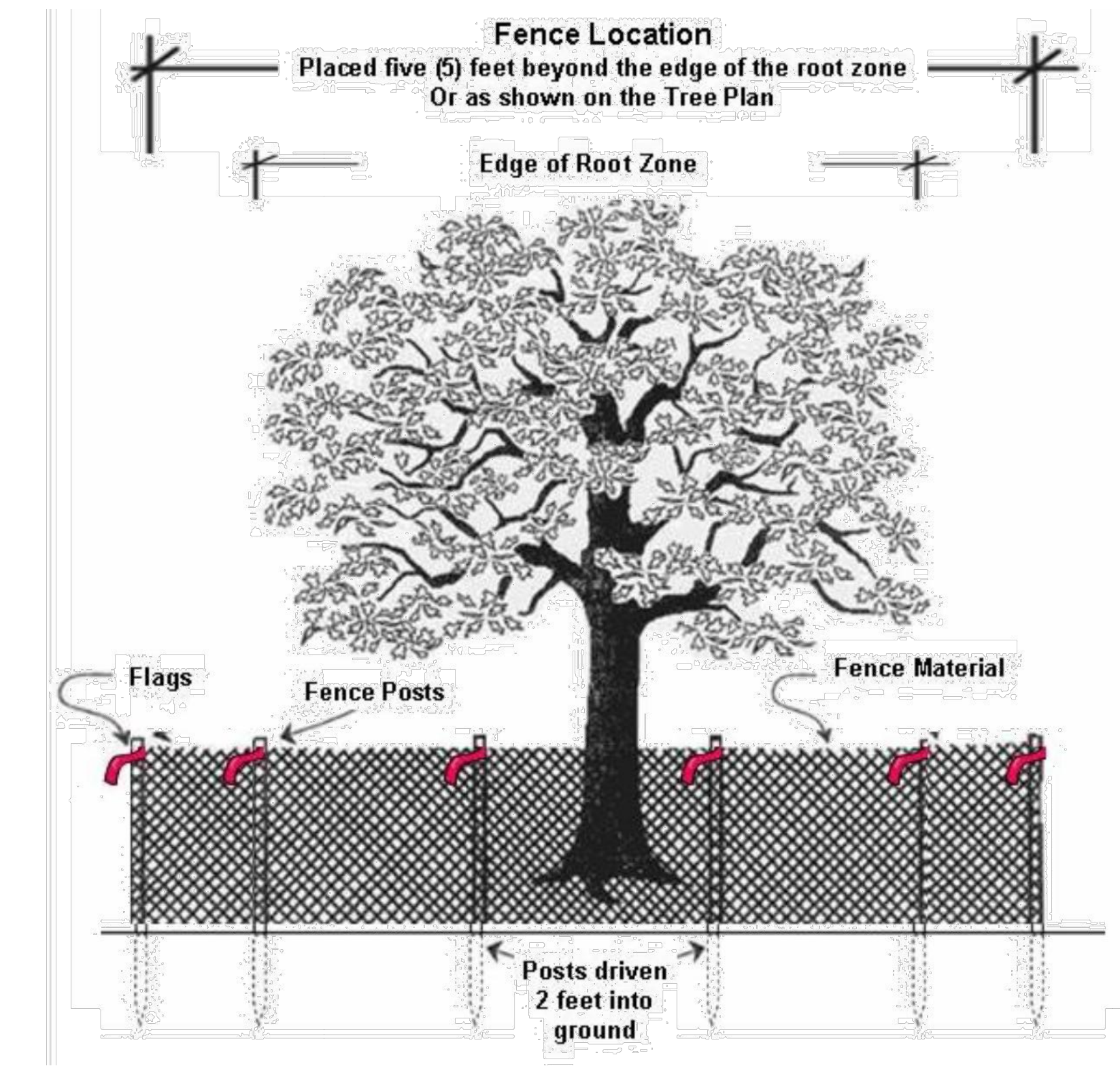
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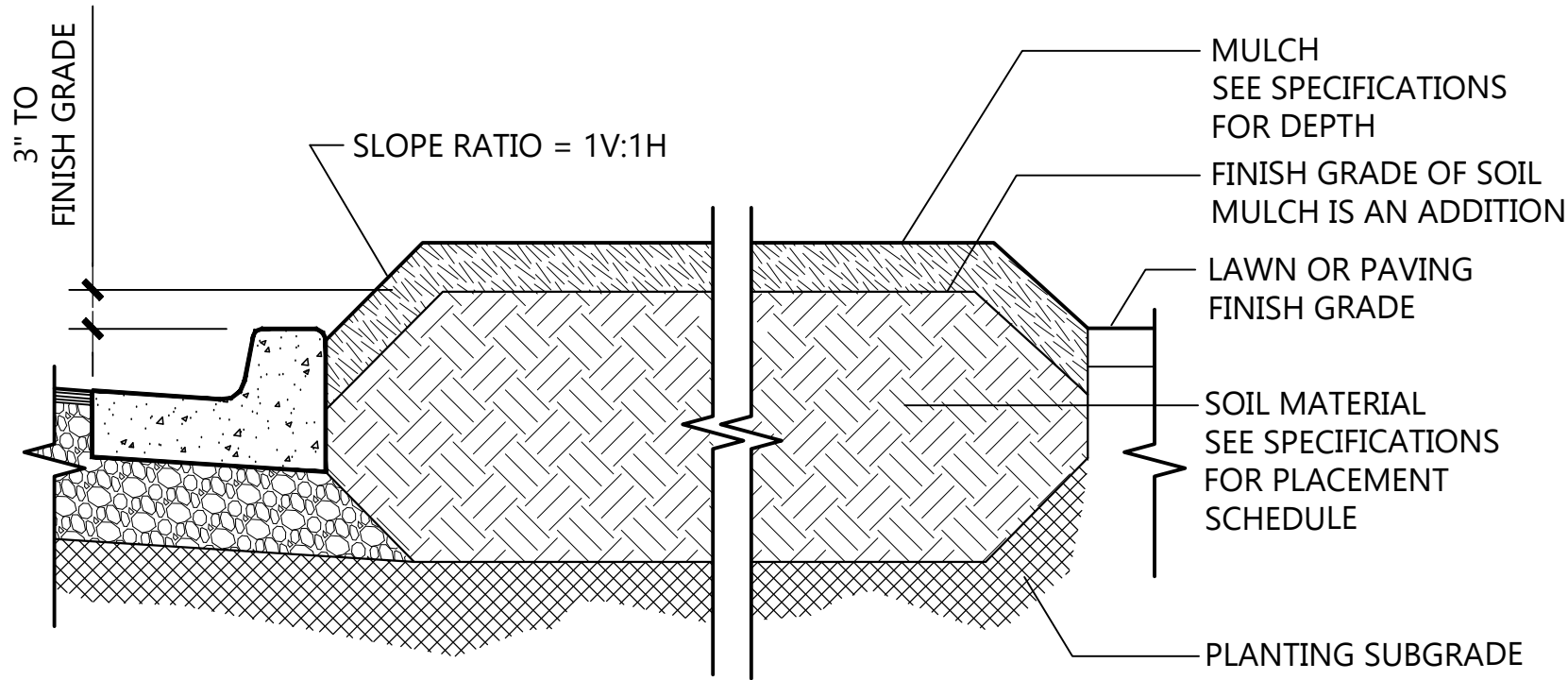
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NOTES
1. SEE SPEC SECTION 015369.

TREE PROTECTION DETAIL
CITY OF BEAVERTON

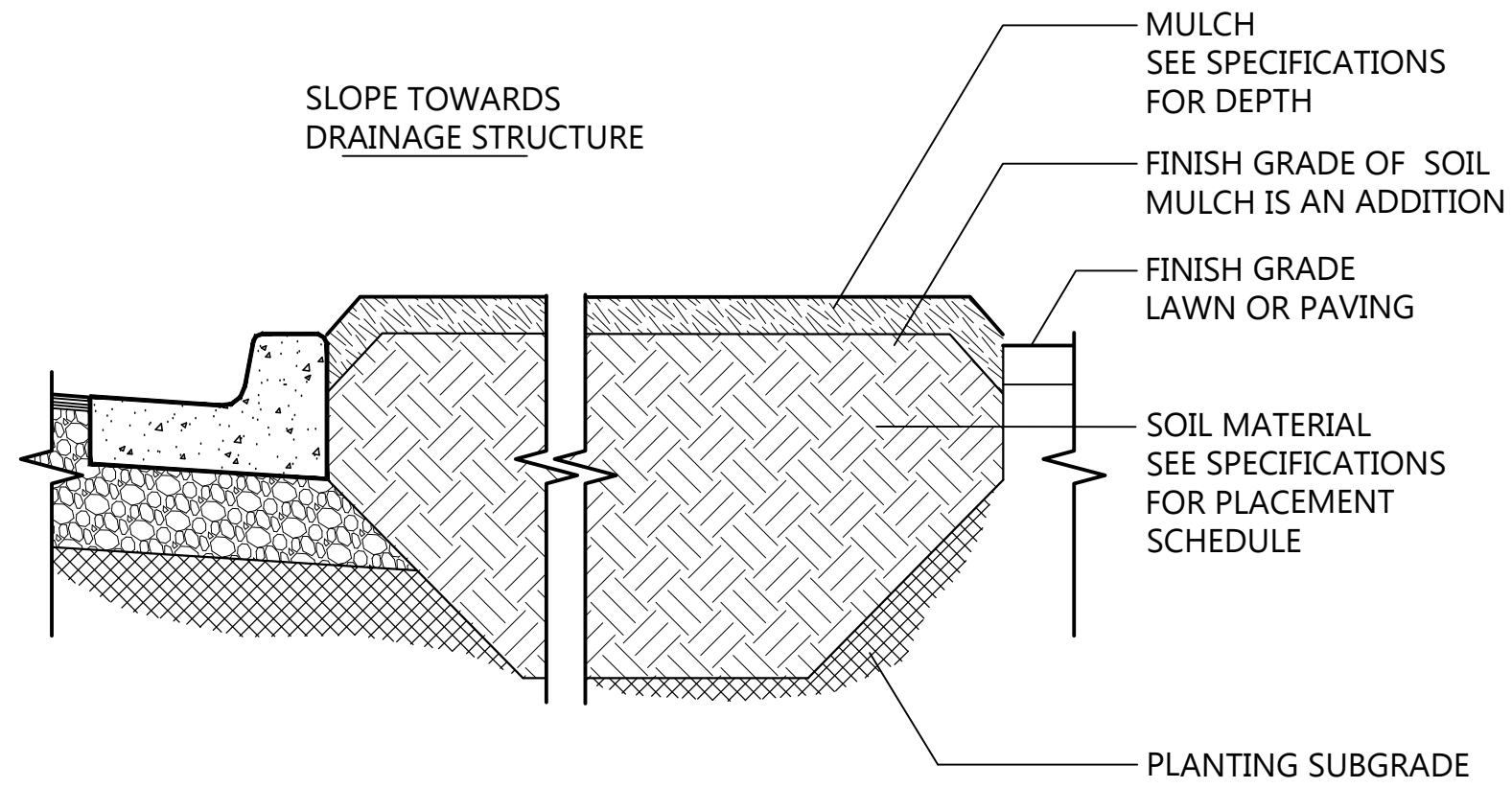
NTS 4



NOTES
1. FINISH GRADE, UNLESS SPECIFICALLY IDENTIFIED OTHERWISE, IS COMPRISED OF A HORIZONTAL PLANE 3" ABOVE HIGHEST ADJACENT EDGE.

PLANT BED PROFILE - ABOVE GRADE

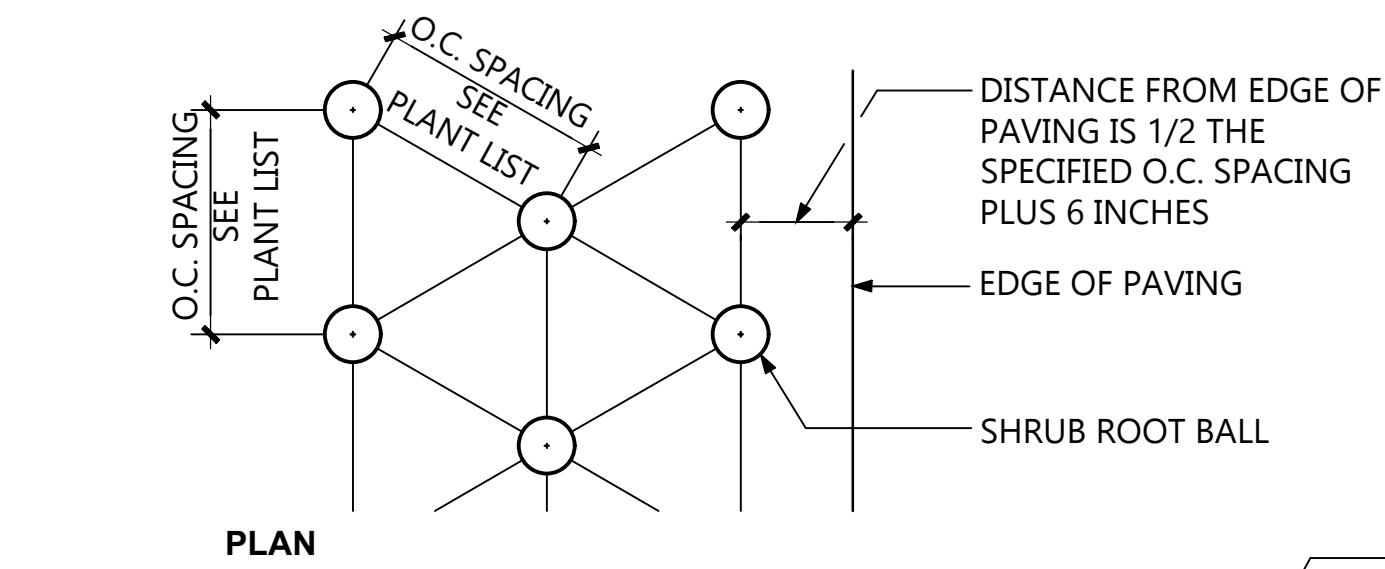
NTS 1



NOTES
1. INSTALL SOIL/MULCH TO ALLOW ADJACENT PAVED SURFACE TO FLOW INTO LANDSCAPED AREA.

PLANT BED PROFILE - AT GRADE

NTS 2



PLANT SPACING AND PROFILE

NTS 3

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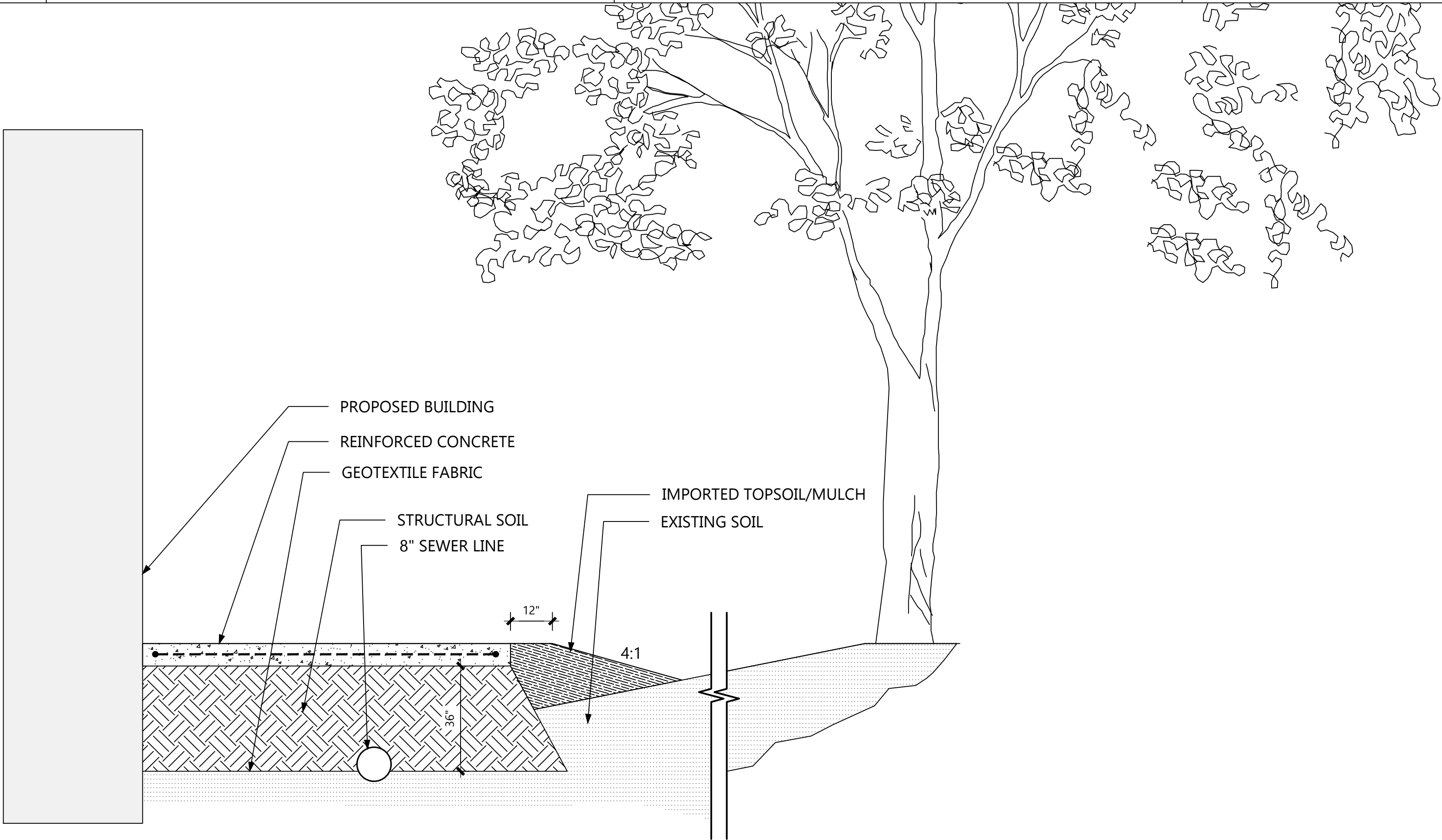
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STRUCTURAL SOIL SPECIFICATIONS:

PART 1. STRUCTURAL SOIL MATERIALS

- A. COVERED SOIL SHALL CONSIST OF THE FOLLOWING MIXTURE OF GRAVEL, SOIL AND ADMIXTURES;
- I. CRUSHED ROCK, GRADATION OF 100% PASSING 1.25 INCH, MAX. 30% PASSING 0.75 INCH;
 - II. LOAM/ORGANIC TOPSOIL;
 - III. SOIL BINDER SUCH AS STABILIZER; AND
 - IV. WATER.

PART 2. PROPORTIONS OF STRUCUTRAL SOIL MATERIALS

- A. THE PROPORTIONS OF STRUCUTRAL SOIL MATERIALS SHALL BE AS FOLLOWS:

MATERIAL	AMOUNT FOR 1 CY OF COVERED SOIL	AMOUNT FOR 4.6 CY OF COVERED SOIL
CRUSHED ROCK	23.2 CUBIC FEET	4 CUBIC YARDS
TOPSOIL	5.9 CUBIC FEET	1 CUBIC YARD
SOIL BINDER	13.7 OZ	4 LBS
WATER	1.6 GALLON	46 GALLONS

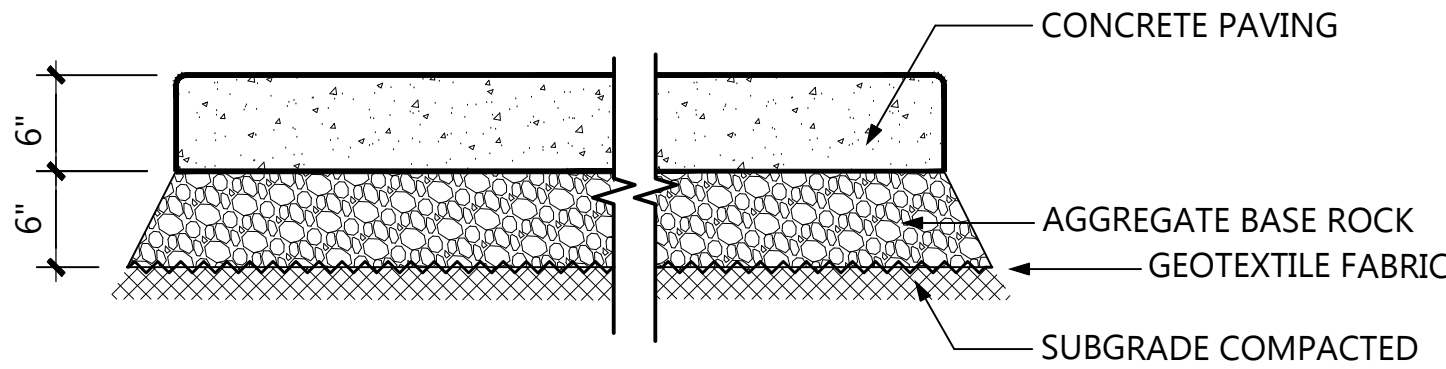
- B. THE TARGET MOISTURE CONTENT IS 20% BY WEIGHT OF THE TOPSOIL WEIGHT. THE ABOVE WATER CONTENTS ASSUME THE TOP IS DRY. THE AMOUNT OF WATER THAT WILL NEED TO BE ADDED WILL BE DEPENDENT ON THE MOISTURE CONTENT OF THE RAW MATERIALS. ACTUAL AMOUNTS OF WATER USED SHALL BE DETERMINED DURING MIXING.

PART 3. STRUCTURAL SOIL MIXING PROCEDURES

- A. MIX COVERED SOIL IN BATCHES OF AN APPROPRIATE SIZE FOR THE EQUIPMENT BEING USED. THE END RESULTS IS TO BE A MATERIAL THAT IS UNIFORMLY BLENDED TOGETHER. DO NO BATCH IN QUANTITIES THAT WILL NOT ALLOW THE EQUIPMENT TO COMPLETELY MIX THE MATERIAL. DETERMINE BATCH SIZE AND QUANTITIES OF EACH MATERIAL NEEDED FOR THE BATCH.
- B. START WITH HALF OF THE CRUSHED ROCK MATERIAL.
- C. ADD ALL OF THE TOPSOIL MATERIAL.
- D. ADD THE SOIL BINDER.
- E. ADD HALF OF THE ESTIMATED WATER.
- F. ADD THE OTHER HALF OF THE CRUSHED ROCK MATERIAL.
- G. MIX THE MATERIAL TOGETHER.
- H. SLOWLY ADD WATER TO THE MIXTURE AND CONTINUE TO MIX. THE FINAL AMOUNT OF WATER WILL VARY WITH MOISTURE CONTENT OF THE CRUSHED ROCK AND TOPSOIL. ADD WATER IN INCREMENTAL AMOUNTS AND MIX THE MATERIAL BETWEEN THE ADDITIONS OF WATER.
- I. STOP ADDING WATER AND MIXING WHEN THERE IS A MINUTE AMOUNT OF FREE TOPSOIL REMAINING. THE TOPSOIL WILL COAT THE CRUSHED ROCK AND NOT FALL OUT OF THE MATERIAL. ALL OF THE CRUSHED ROCK SHALL BE UNIFORMLY COATED WITH TOPSOIL. THERE SHALL BE NO CLUMPS OF TOPSOIL OR UNCOVERED CRUSHED ROCK IN THE MIXTURE.
- J. IF TOO MUCH WATER IS ADDED TO THE MIXTURE, WATER WILL DRAIN OUT OF THE MATERIAL AND THE TOPSOIL WILL WASH OFF OF THE CRUSHED ROCK. IF THIS OCCURS THE BATCH OF MATERIAL SHALL BE DISCARDED AND SHALL NOT BE INCORPORATED INTO THE COMPLETED WORK.

PART 4. PLACEMENT OF COVERED SOIL

- A. PROTECT SOILS AND MIXES FROM ABSORBING EXCESS WATER AND FROM EROSION AT ALL TIMES. DO NOT STORE MATERIALS UNPROTECTED FROM RAINFALL EVENTS. DO NOT ALLOW EXCESS WATER TO ENTER SITE PRIOR TO COMPACTION. IF WATER IS INTRODUCED INTO THE MATERIAL AFTER GRADING, ALLOW MATERIAL TO DRAIN OR AERATE TO OPTIMUM COMPACTION MOISTURE CONTENT.
- B. ALL AREAS TO RECEIVE COVERED SOIL MIXTURE SHALL BE INSPECTED BY THE PROJECT LANDSCAPE ARCHITECT AND/OR PROJECT ENGINEER BEFORE STARTING PLACEMENT OF MIXTURE. ALL DEFECTS SUCH AS INCORRECT GRADING, COMPACTION AND INADEQUATE DRAINAGE, ETC., SHALL BE CORRECTED PRIOR TO BEGINNING PLACEMENT OF COVERED SOIL.
- C. CONFIRM THAT THE SUBGRADE IS AT THE PROPER ELEVATION AND COMPACTED AS REQUIRED. SUB-GRADE ELEVATIONS SHALL SLOPE PARALLEL TO THE FINISHED GRADE. CLEAR THE EXCAVATION OF ALL CONSTRUCTION DEBRIS, TRASH, RUBBLE AND FOREIGN MATERIAL. FILL ANY OVER EXCAVATION WITH APPROVED FILL AND COMPACT TO THE REQUIRED SUB-GRADE COMPACTION.
- D. INSTALL COVERED SOIL IN 6-INCH LIFTS AND SPREAD UNIFORMLY OVER THE AREA. COMPACT EACH LIFT TO THE REQUIRED PERCENT OF MAXIMUM DENSITY. DELAY PLACEMENT 24 HOURS IF MOISTURE CONTENT EXCEEDS MAXIMUM ALLOWABLE. PROTECT COVERED SOIL WITH PLASTIC OR PLYWOOD DURING DELAY. TAKE PARTICULAR CARE NOT TO DAMAGE UTILITIES WHEN INSTALLING COVERED SOIL. COVERED SOIL THAT WILL BE THE BEDDING FOR UTILITY LINES SHALL BE COMPACTED TO CONFORM TO THE REQUIRED GRADE OF THE UTILITY LINE. DO NOT COMPACT THE IMMEDIATE VICINITY ABOVE A UTILITY LINE UNTIL A FILL DEPTH OF AT LEAST 12-INCHES ABOVE THE UTILITY LINE IS REACHED.
- E. BRING COVERED SOILS TO FINISHED GRADES AS SHOWN IN THE APPROVED DRAWINGS. IMMEDIATELY PROTECT THE COVERED SOIL MATERIAL FROM CONTAMINATION BY WATER BY COVERING WITH PLASTIC OR PLYWOOD



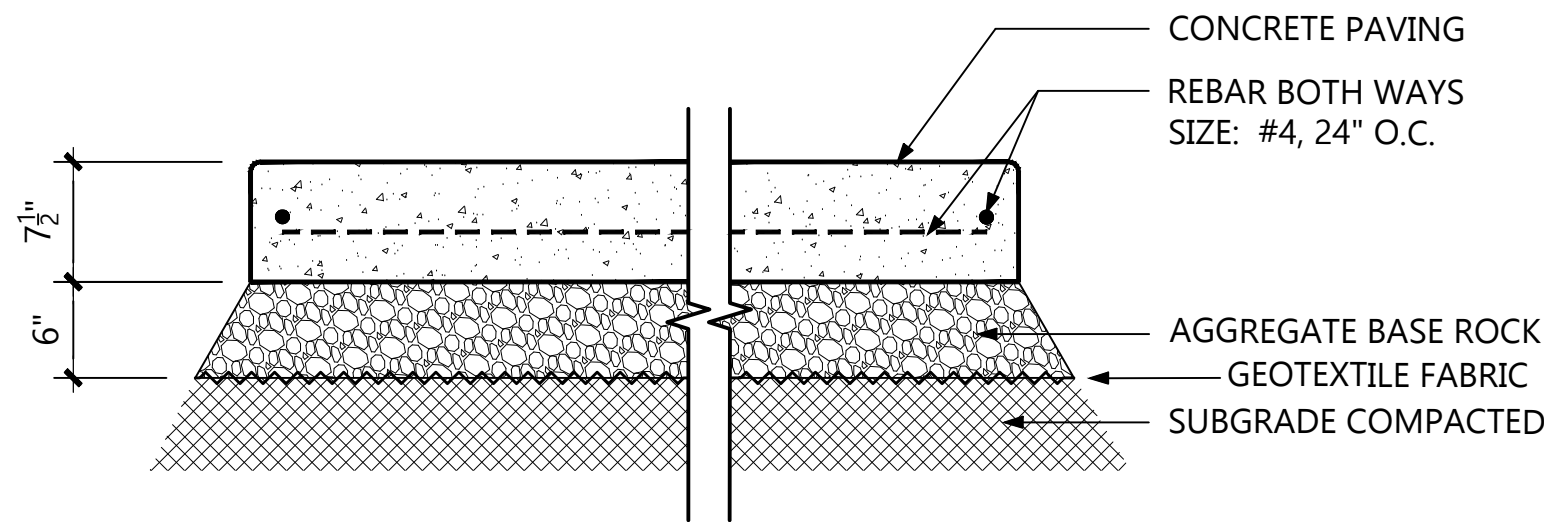
NOTES

1. CONSTRUCT 1/4 INCH RADIUS AT EDGE OF PAVING.
2. SEE GEOTECHNICAL REPORT BY GRI, DATED 10/12/2017, FOR SITE PREPARATION AND PAVEMENT RECOMMENDATIONS.

CONCRETE PAVING - STANDARD

NTS

1



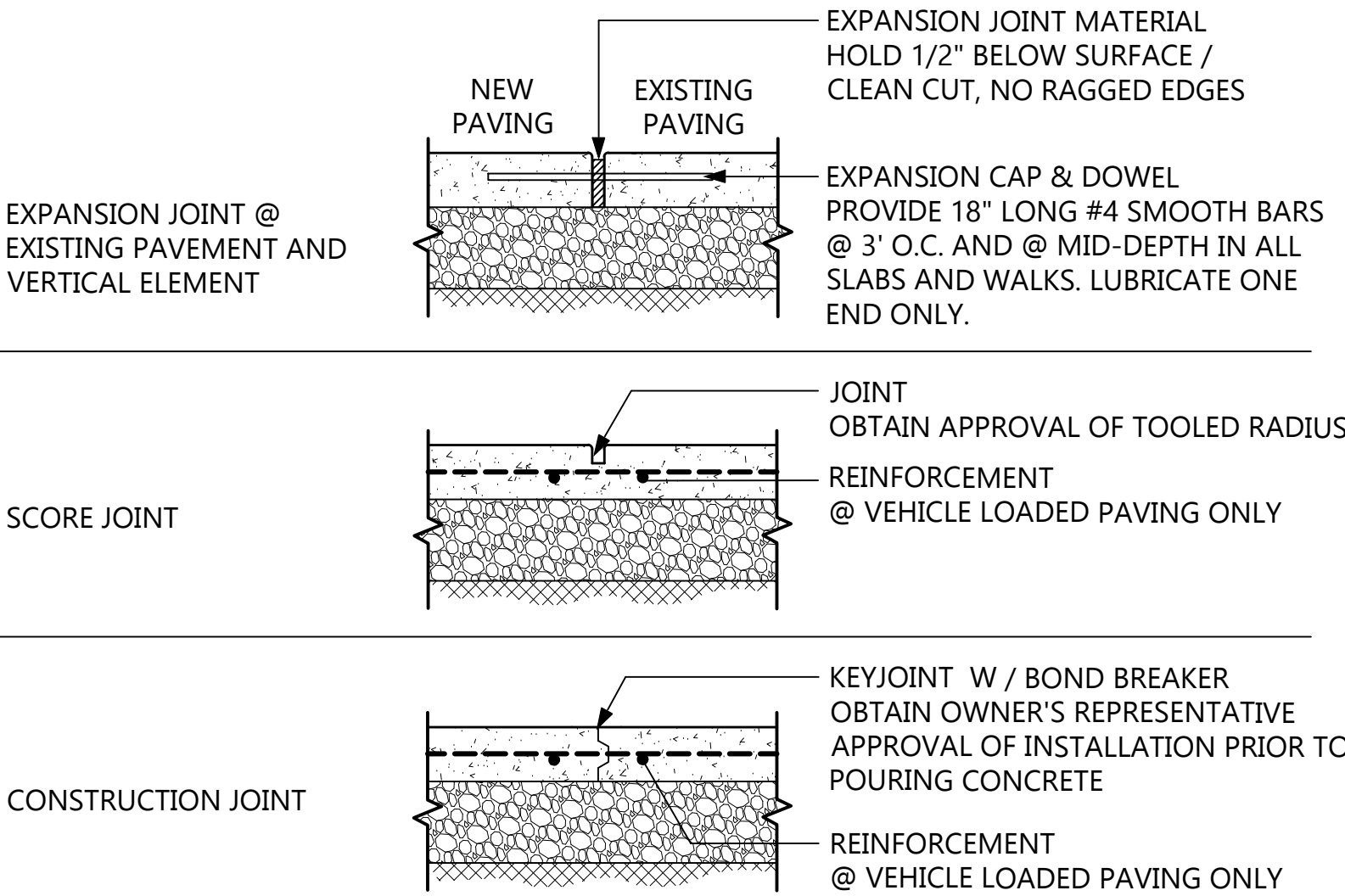
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1. CONSTRUCT 1/4 INCH RADIUS AT EDGE OF PAVING.
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CONCRETE PAVING - REINFORCED

NTS

2



NOTES

1. LOCATE JOINTS WHERE SHOWN ON DRAWINGS AND AS SPECIFIED.
2. PROVIDE SAMPLE OF CONCRETE JOINT FINISHING TOOLS FOR APPROVAL OF JOINT RADIUS AND DEPTH.
3. EXPANSION JOINTS ADJACENT TO VERTICAL SURFACES (WHERE ABUTTING BUILDING WALLS AND RETAINING ELEMENTS) ARE TO HAVE FULLY FILLED SANDED JOINTS.

CONCRETE JOINTS

NTS

3

CONCRETE WALKWAY OVER STRUCTURAL SOIL

NTS

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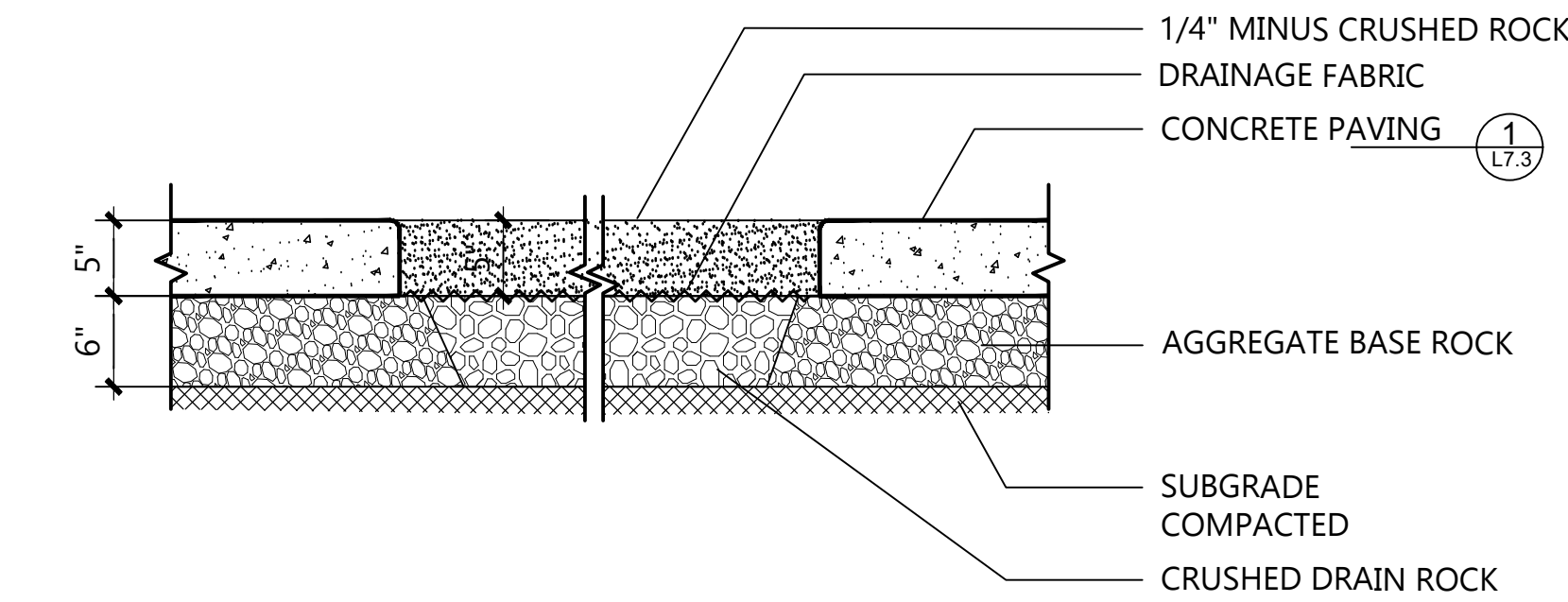
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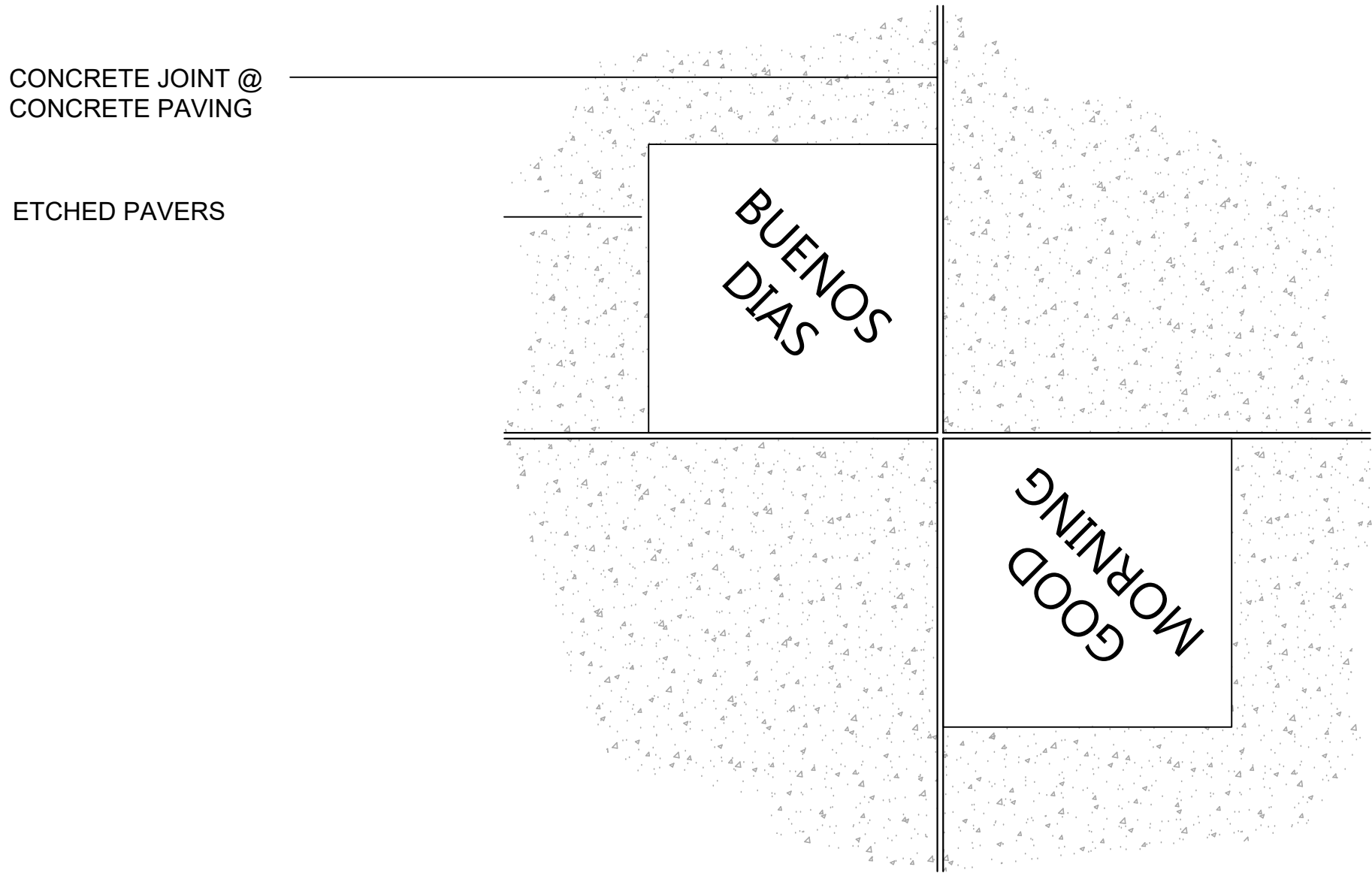
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CRUSHED ROCK SURFACING

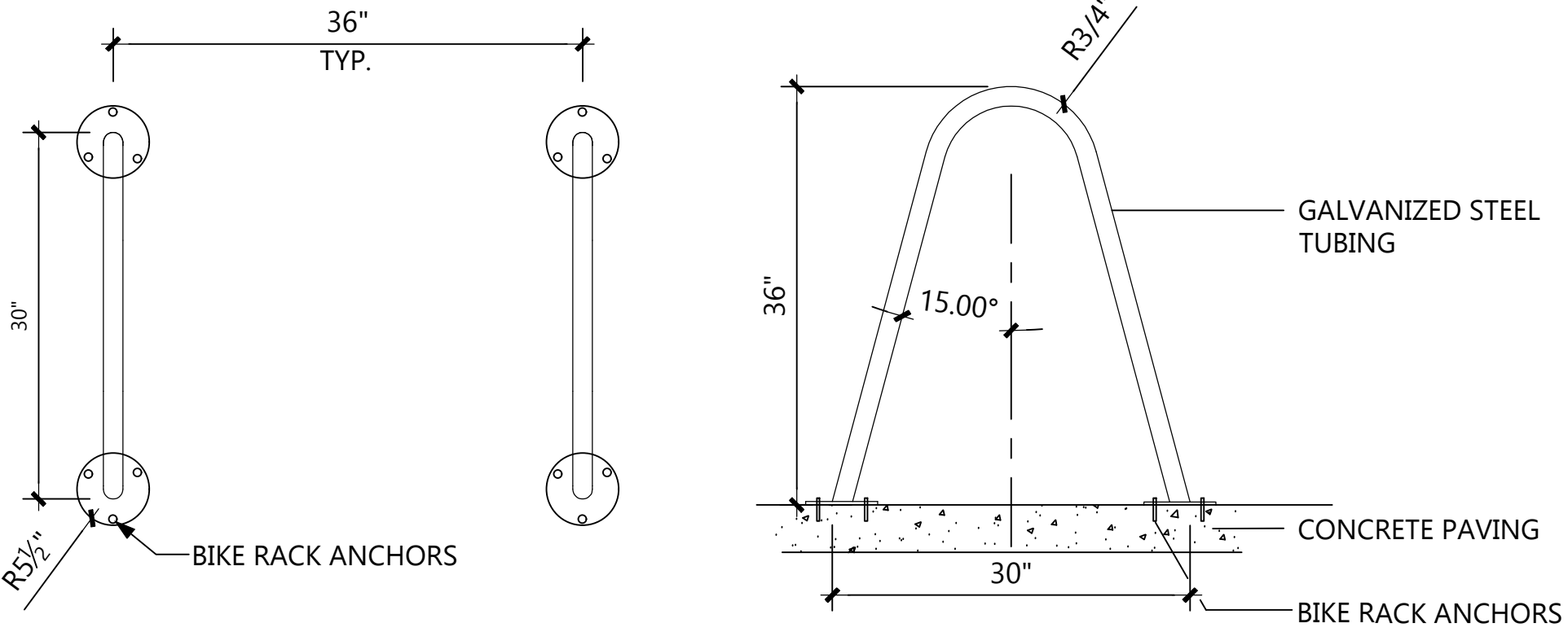
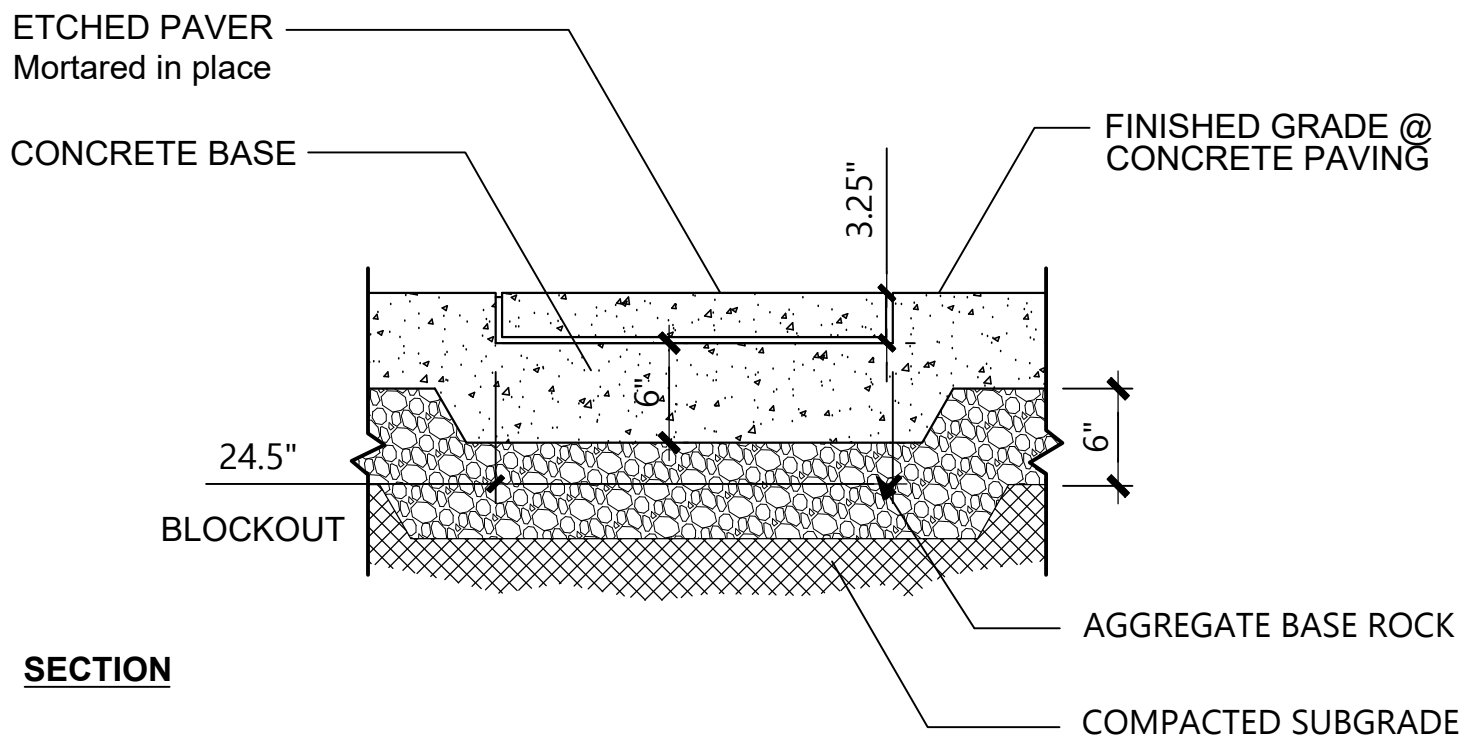
NTS 1



- NOTES**
1. Coordinate etched paver word selection and location of paver with Owner's Representative in field prior to installation.

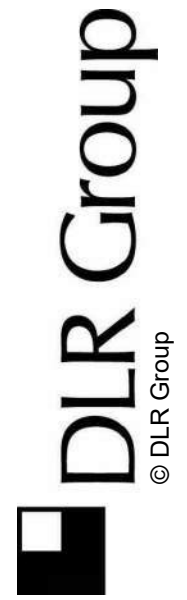
CONCRETE UNIT PAVING

NTS 2



BIKE RACK

NTS 3



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SITE
DETAILS

L7.4

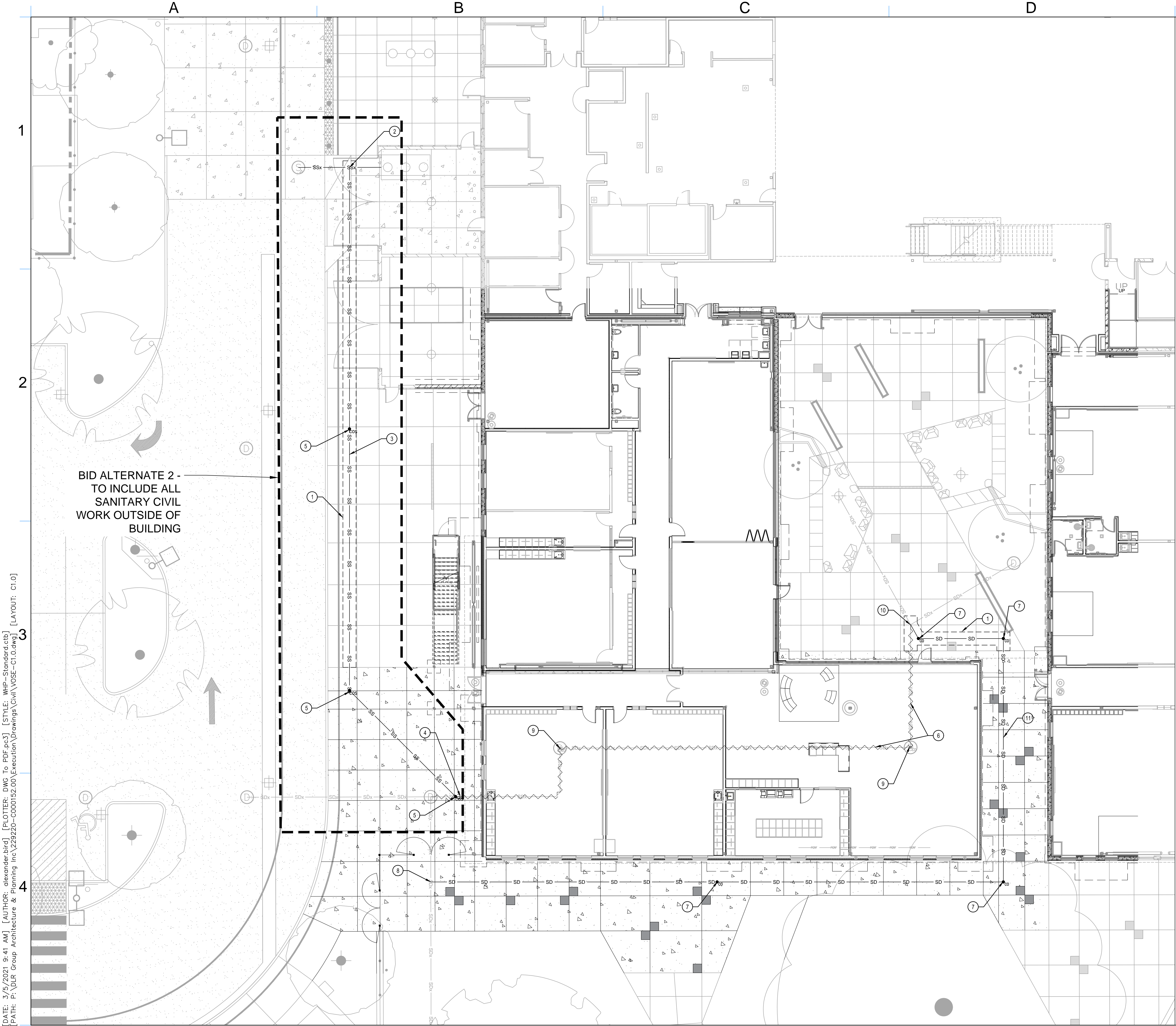


L7.5

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12/10/2020



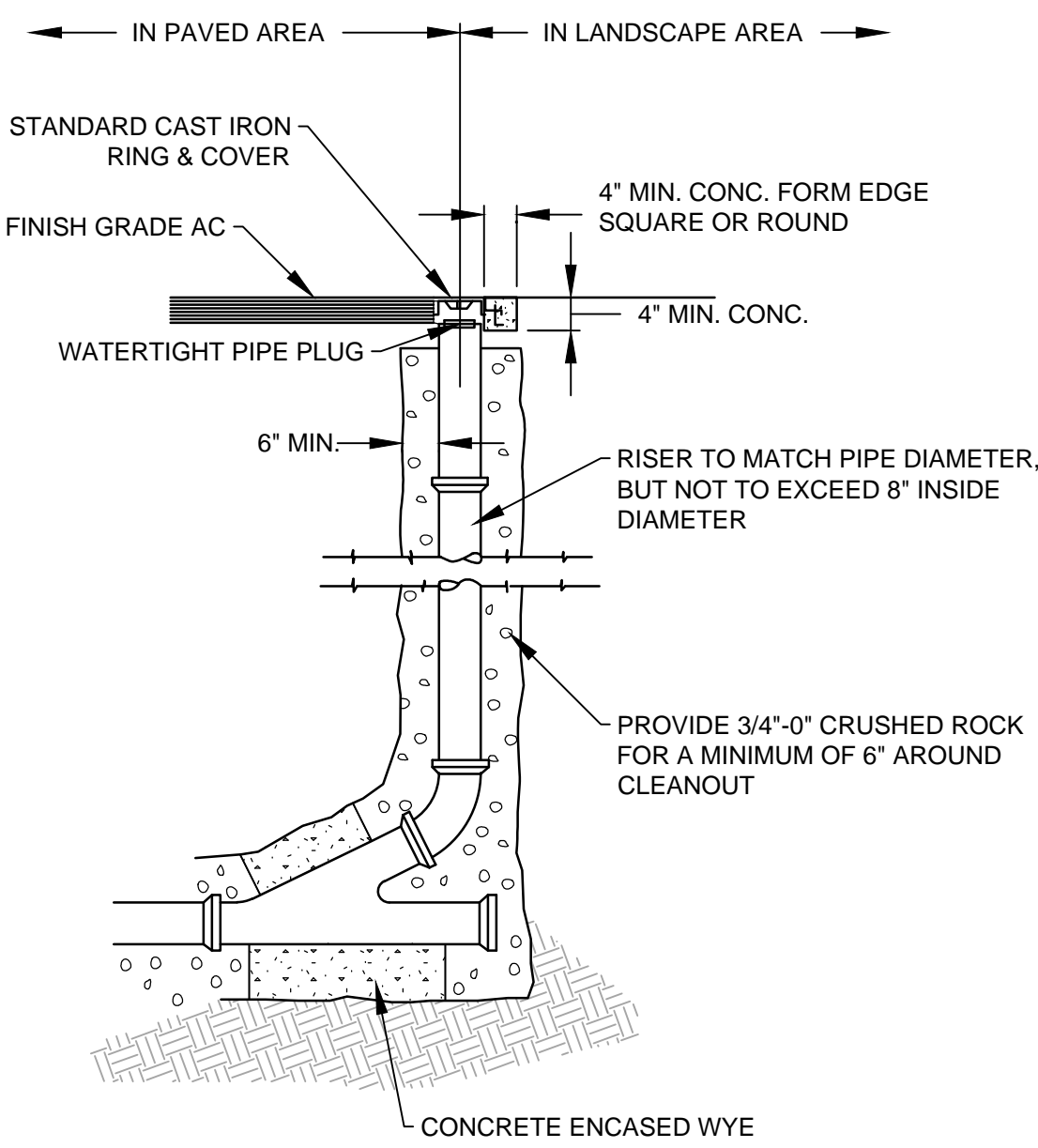
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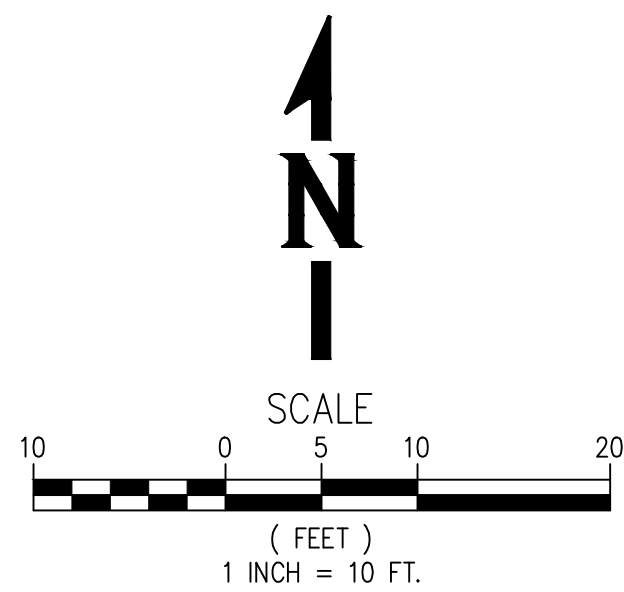
- ① CONSTRUCTION KEYNOTES:
1. SAWCUT LIMITS FOR UTILITY TRENCHING.
 2. CONNECT TO EXISTING SANITARY SEWER LINE. CONTRACTOR TO VERIFY INVERT ELEVATION IN FIELD.
 3. INSTALL APPROX. 155 LF SANITARY SEWER PIPE AT 1% MIN.
 4. 4" SANITARY SEWER CONNECTION I.E. APPROX. 220.75'. CONTRACTOR TO VERIFY INVERT ELEVATION IN FIELD.
 5. INSTALL 4" SANITARY SEWER CLEANOUT STRUCTURE AT THE CONNECTION JOINT PER DETAIL 1 SHEET C1.0.
 6. APPROX. 148 LF OF EXISTING 8" STORM PIPE TO BE REMOVED.
 7. INSTALL 8" STORM CLEANOUT PER DETAIL 1 SHEET C1.0.
 8. STORM SEWER POINT OF CONNECTION. I.E. APPROX. 217.10
 9. REMOVE EXISTING CLEANOUT
 10. REMOVE EXISTING WYE AND INSTALL 8" TEE. I.E. APPROX. 219.68
 11. INSTALL 210 LF 8" STORM LINE AT 1% MINIMUM SLOPE.

GENERAL NOTES:

1. ALL STORM, SANITARY, AND WATER PIPES AND STRUCTURES ARE PRIVATELY OWNED.



STORM/SANITARY CLEAN OUT (C.O.) 1
SCALE: N.T.S. C1.0



[DATE: 3/5/2021 9:41 AM] [AUTHOR: alexander.bird] [PLOTTER: DWG To PDF.pc3] [STYLE: WHP-Standard.ctb] [LAYOUT: C1.0]
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REGISTERED PROFESSIONAL ENGINEER
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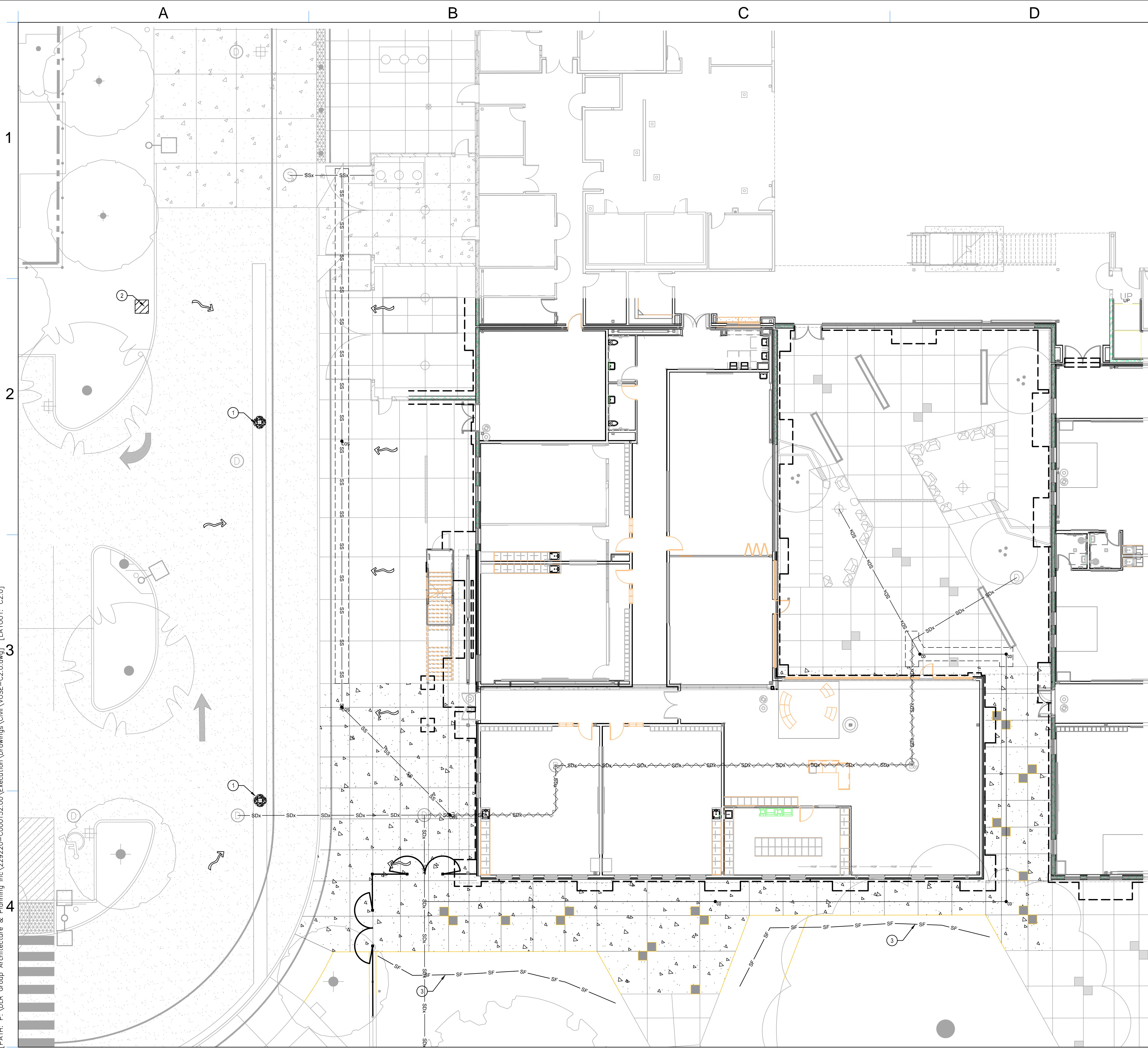
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100% CD
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REVISIONS

74-21102-00
UTILITY PLAN

C1.0

[DATE: 3/5/2021 9:42 AM] [AUTHOR: alexander.bird] [PLOTTER: DWG To PDF.pc3] [STYLE: WHP-Standard.ctb] [LAYOUT: C2.0]
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GRADING, STREET AND UTILITY EROSION AND SEDIMENT CONSTRUCTION NOTES:





- SEED USED FOR TEMPORARY SEEDING SHALL BE COMPOSED OF ONE OF THE FOLLOWING MIXTURES, UNLESS OTHERWISE AUTHORIZED:
 - VEGETATED CORRIDOR AREAS REQUIRE NATIVE SEED MIXES. SEE RESTORATION PLAN FOR APPROPRIATE SEED MIX.
 - DWARF GRASS MIX (MIN. 100 LB./AC.)
 - DWARF PERENNIAL RYEGRASS (80% BY WEIGHT)
 - CREeping RED FESCUE (20% BY WEIGHT)
 - STANDARD HEIGHT GRASS MIX (MIN. 100LB./AC.)
 - ANNUAL RYEGRASS (40% BY WEIGHT)
 - TURF-TYPE FESCUE (60% BY WEIGHT)
- SLOPE TO RECEIVE TEMPORARY OR PERMANENT SEEDING SHALL HAVE THE SURFACE ROUGHENED BY MEANS OF TRACK-WALKING OR THE USE OF OTHER APPROVED IMPLEMENTS. SURFACE ROUGHENING IMPROVES SEED BEDDING AND REDUCES RUN-OFF VELOCITY.
- LONG TERM SLOPE STABILIZATION MEASURES SHALL INCLUDE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER VIA SEEDING WITH APPROVED MIX AND APPLICATION RATE.
- TEMPORARY SLOPE STABILIZATION MEASURES SHALL INCLUDE: COVERING EXPOSED SOIL WITH PLASTIC SHEETING, STRAW MULCHING, WOOD CHIPS, OR OTHER APPROVED MEASURES.
- STOCKPILED SOIL OR STRIPPINGS SHALL BE PLACED IN A STABLE LOCATION AND CONFIGURATION, DURING "WET WEATHER" PERIODS, STOCKPILES SHALL BE COVERED WITH PLASTIC SHEETING OR STRAW MULCH. SEDIMENT FENCE IS REQUIRED AROUND THE PERIMETER OF THE STOCKPILE.
- EXPOSED CUT OR FILL AREAS SHALL BE STABILIZED THROUGH THE USE OF TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS OR MATS, MID-SLOPE SEDIMENT FENCES OR WATTLES, OR OTHER APPROPRIATE MEASURES. SLOPES EXCEEDING 25% MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES.
- AREAS SUBJECT TO WIND EROSION SHALL USE APPROPRIATE DUST CONTROL MEASURES INCLUDING THE APPLICATION OF A FINE SPRAY OF WATER, PLASTIC SHEETING, STRAW MULCHING, OR OTHER APPROVED MEASURES.
- CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, TIRE WASHES, STREET SWEEPING, AND VACUUMING MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
- ACTIVE INLETS TO STORM WATER SYSTEMS SHALL BE PROTECTED THROUGH THE USE OF APPROVED INLET PROTECTION MEASURES. ALL INLET PROTECTION MEASURES ARE TO BE REGULARLY INSPECTED AND MAINTAINED AS NEEDED.
- SATURATED MATERIALS THAT ARE HAULED OFF-SITE MUST BE TRANSPORTED IN WATER-TIGHT TRUCKS TO ELIMINATE SPILLAGE OF SEDIMENT AND SEDIMENT-LADEN WATER.
- AN AREA SHALL BE PROVIDED FOR THE WASHING OUT OF CONCRETE TRUCKS IN A LOCATION THAT DOES NOT PROVIDE RUN-OFF THAT CAN ENTER THE STORM WATER SYSTEM. IF THE CONCRETE WASH-OUT AREA CAN NOT BE CONSTRUCTED GREATER THAN 50' FROM ANY DISCHARGE POINT, SECONDARY MEASURES SUCH AS BERMS OR TEMPORARY SETTLING PITS MAY BE REQUIRED. THE WASH-OUT SHALL BE LOCATED WITHIN SIX FEET OF TRUCK ACCESS AND BE CLEANED WHEN IT REACHES 50% OF THE CAPACITY.
- SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE SHALL NOT BE TRANSFERRED TO THE STORM WATER SYSTEM. SWEEPINGS SHALL BE PICKED UP AND DISPOSED IN THE TRASH.
- AVOID PAVING IN WET WEATHER WHEN PAVING CHEMICALS CAN RUN-OFF INTO THE STORM WATER SYSTEM.
- USE BMPs SUCH AS CHECK-DAMS, BERMS, AND INLET PROTECTION TO PREVENT RUN-OFF FROM REACHING DISCHARGE POINTS.

EROSION AND SEDIMENT CONTROL BMP IMPLEMENTATION:

- ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
- ALL "SEDIMENT BARRIERS (TO BE INSTALLED AFTER GRADING)" SHALL BE INSTALLED IMMEDIATELY FOLLOWING ESTABLISHMENT OF FINISHED GRADE AS SHOWN ON THESE PLANS.
- LONG TERM SLOPE STABILIZATION MEASURES "INCLUDING MATTING" SHALL BE IN PLACE OVER ALL EXPOSED SOILS BY OCTOBER 1.
- THE STORM WATER FACILITY SHALL BE CONSTRUCTED AND LANDSCAPED PRIOR TO THE STORM WATER SYSTEM FUNCTIONING AND SITE PAVING.
- INLET PROTECTION SHALL BE IN-PLACE IMMEDIATELY FOLLOWING PAVING ACTIVITIES.

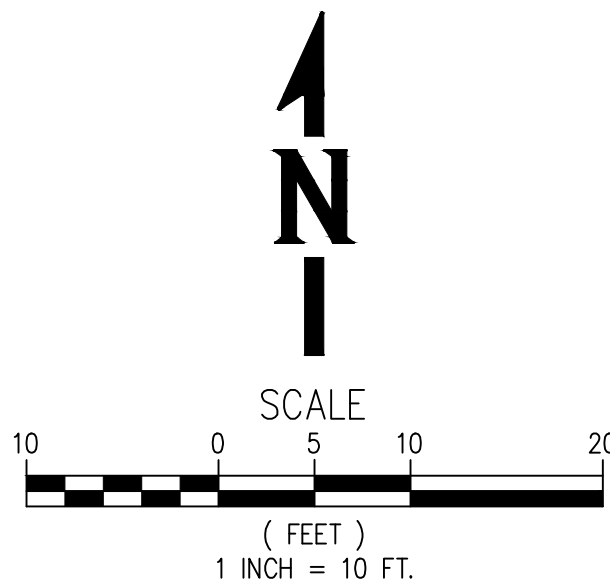
THESE EROSION AND SEDIMENT CONTROL PLANS ASSUME "DRY WEATHER" CONSTRUCTION. "WET WEATHER" CONSTRUCTION MEASURES NEED TO BE APPLIED BETWEEN OCTOBER 1ST AND MAY 31ST.

EROSION CONTROL LEGEND

-  INLET PROTECTION
-  CONCRETE WASHOUT
-  SEDIMENT FENCE
-  FLOW ARROW

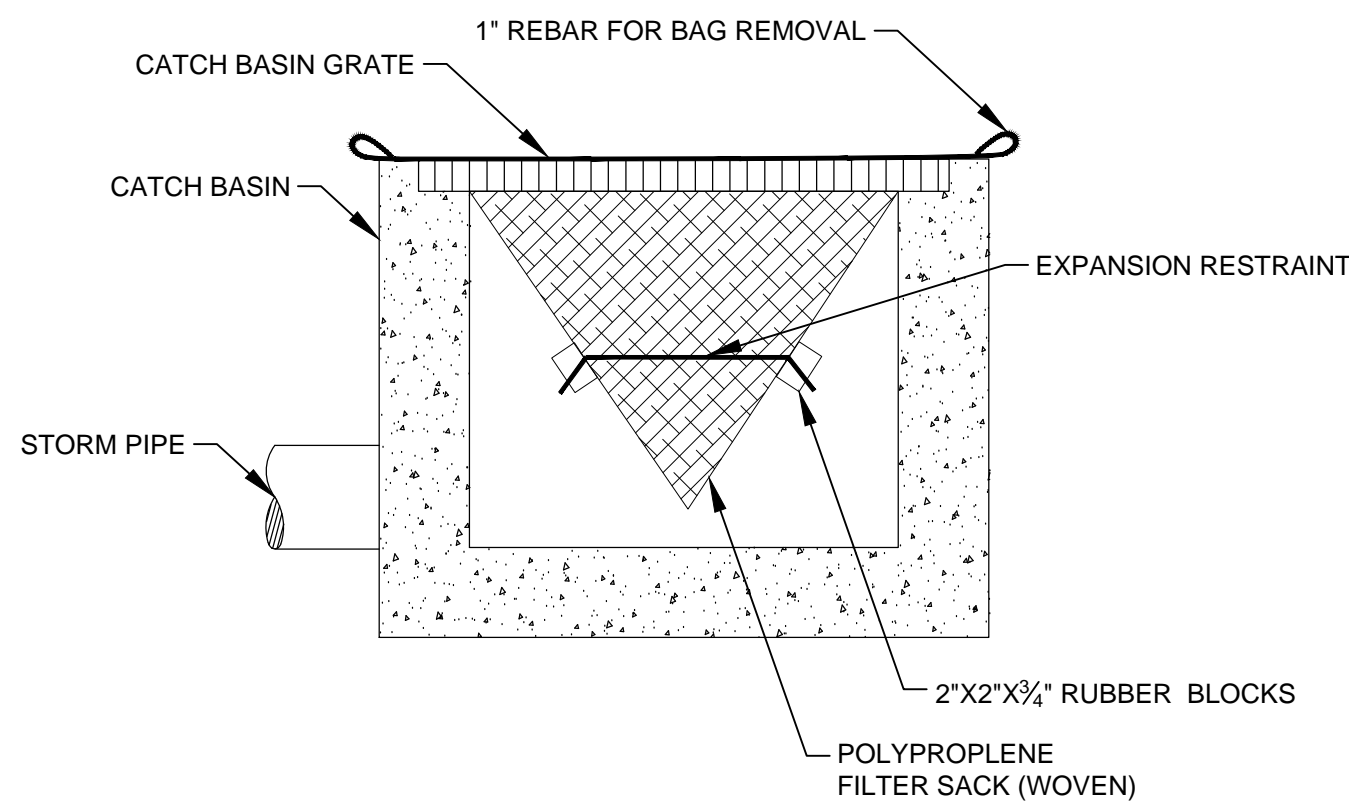
CONSTRUCTION KEYNOTES

- INSTALL INLET PROTECTION PER DETAIL 1 SHEET C2.1
- INSTALL CONCRETE WASHOUT PER DETAIL 2 SHEET C2.1.
- INSTALL SEDIMENT FENCE PER DETAIL 3 SHEET C2.1



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1

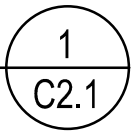


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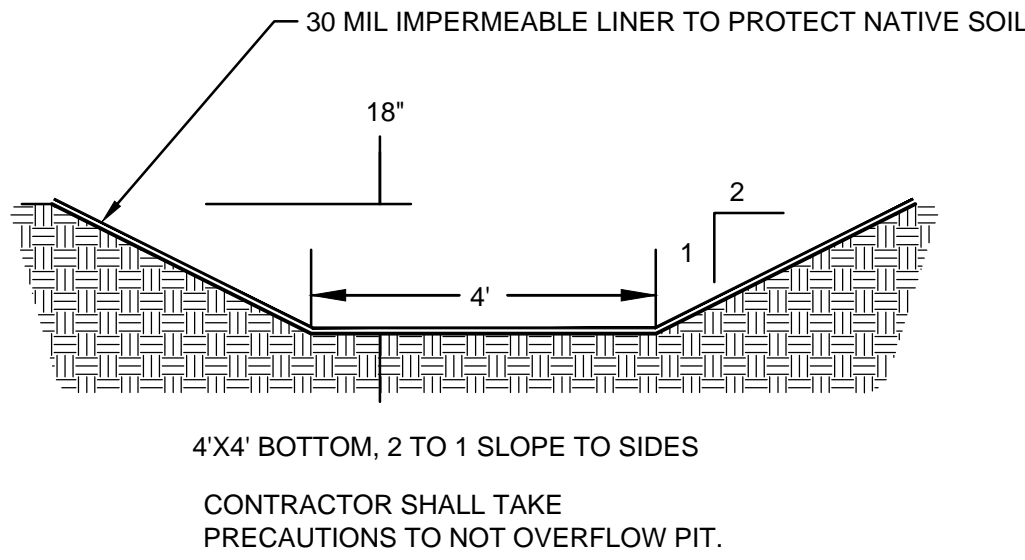
NOTES:

1. RECESSED CURB INLET CATCH BASINS MUST BE BLOCKED WHEN USING FILTER FABRIC INLET SACKS.
2. SIZE OF FILTER FABRIC INLET SACKS TO BE DETERMINED BY MANUFACTURER.

INLET PROTECTION
SCALE: N.T.S.

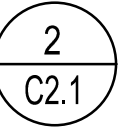


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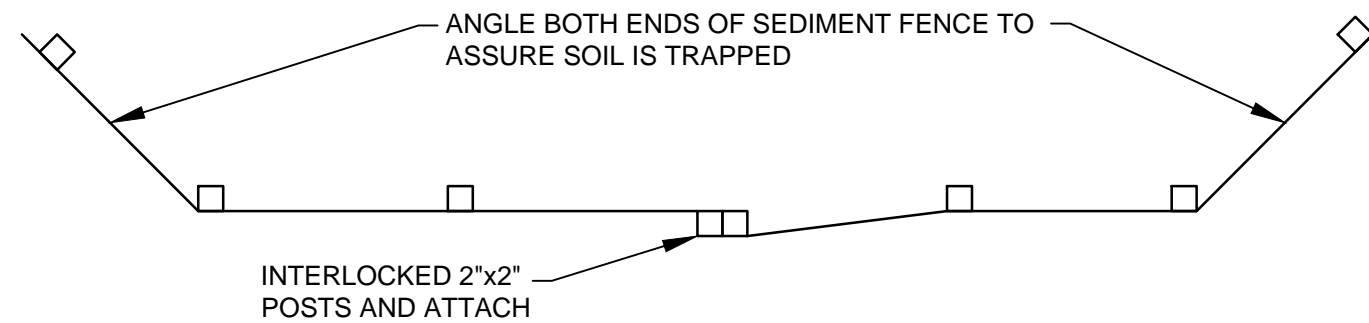
NOTE: CONTRACTOR CAN USE MANUFACTURED TRAYS (ECO-PAN OR EQUAL), OR A LINED PIT AS SHOWN ABOVE.

CONCRETE TRUCK CHUTE WASHOUT
SCALE: N.T.S.

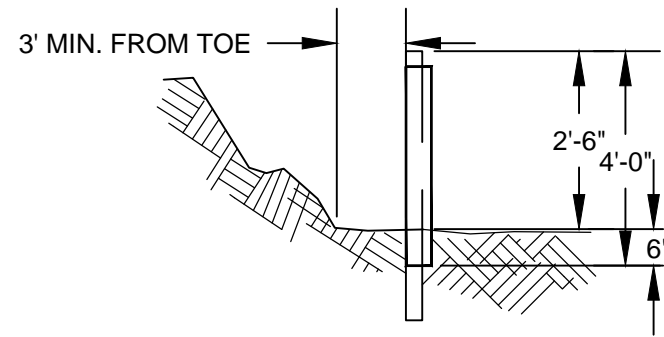


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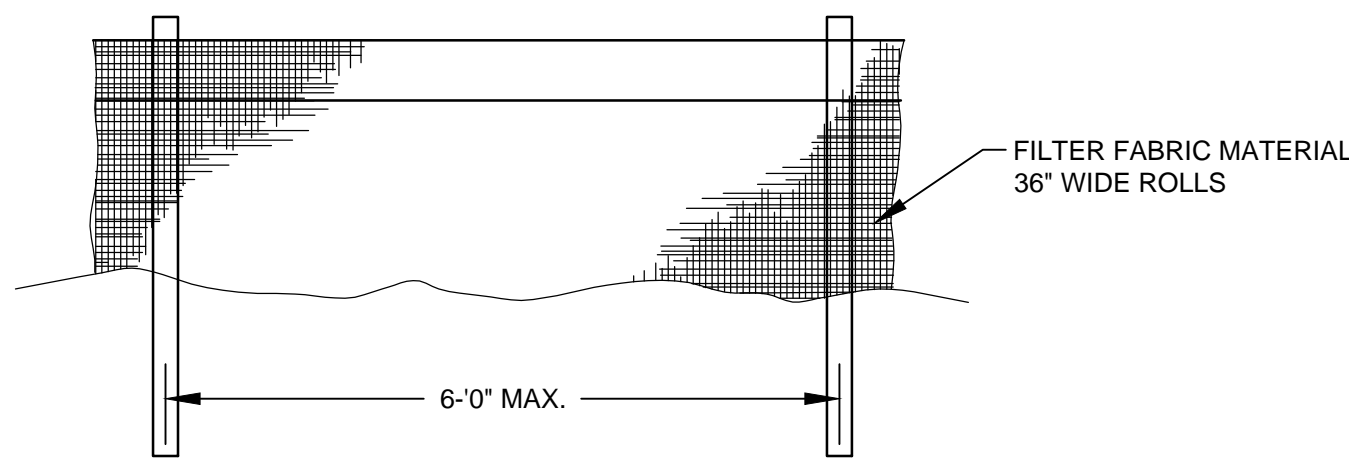
3



TOP VIEW

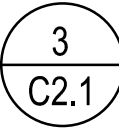


SIDE VIEW



FRONT VIEW

SEDIMENT FENCE
SCALE: N.T.S.



NOTES:

1. BURY BOTTOM OF FILTER FABRIC 6" MIN. VERTICALLY BELOW FINISHED GRADE.
2. 2"x2" FIR, PINE, OR STEEL FENCE POSTS.
3. STITCHED LOOPS TO BE INSTALLED UPHILL SIDE OF SLOPE.
4. COMPACT NATIVE FILL IN ALL AREAS OF FILTER FABRIC TRENCH.

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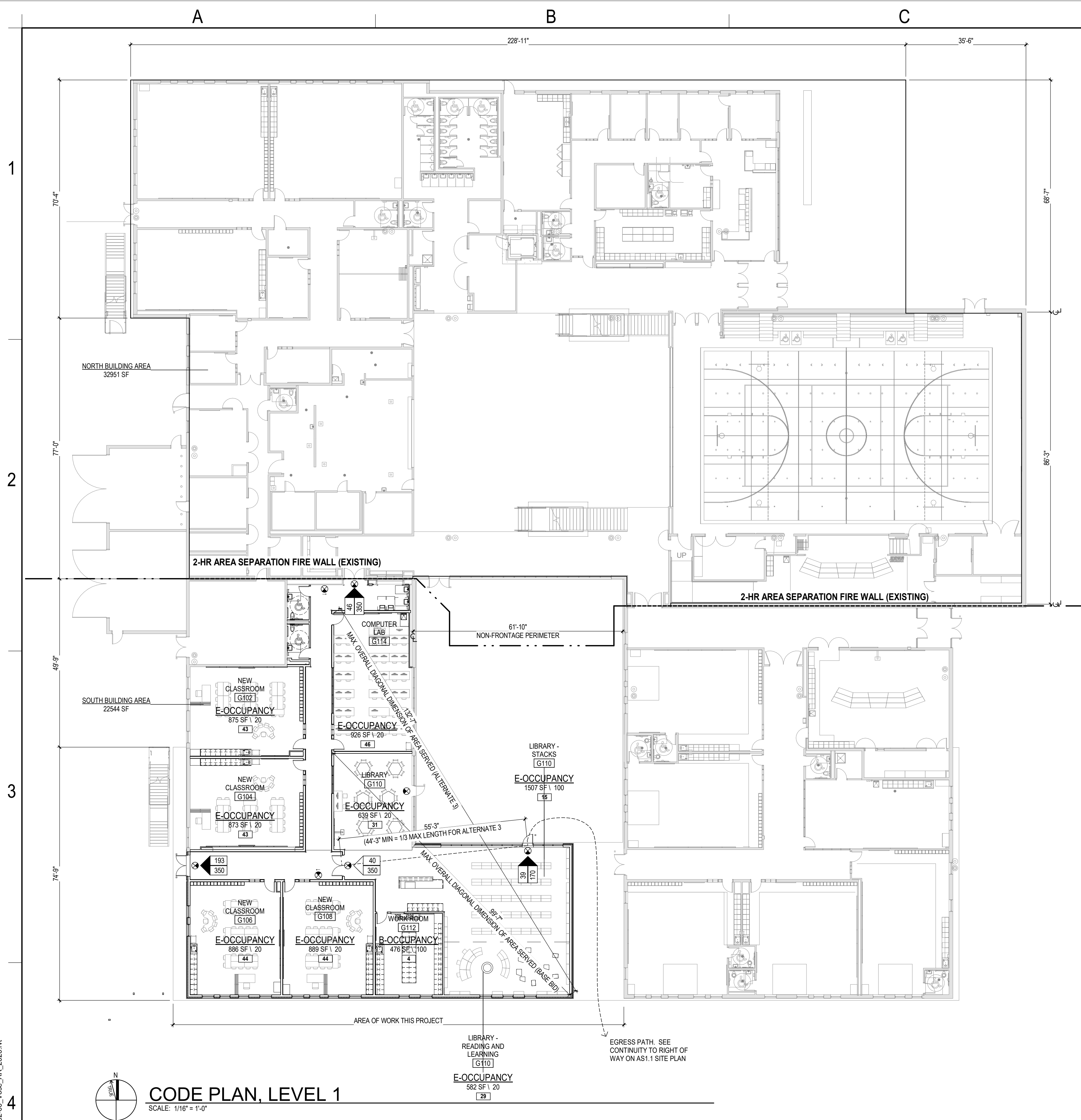
EROSION CONTROL
DETAILS

C2.1

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REGISTERED PROFESSIONAL
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TYLER J. OTT
MAR 8, 2016
OREGON
EXPIRES: 12/31/2022

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ENERGY CODE ANALYSIS

Per 2019 Oregon Energy Efficiency Specialty Code

Opaque Assemblies, per Table 502.1.1

R-20.1 minimum = Roofs, Insulation entirely above deck
R-13 + R-5.6:1. minimum = Metal Framed walls above grade
R-7.5 minimum = Walls, Below Grade
NR = Slab-on-Grade Floors
U-0.70 maximum = Swinging Doors

Fenestration, per Table 502.3

U-0.35 maximum for fixed, operable, and doors with greater than 50% glazing
U-0.45 maximum for metal framing fixed fenestration (including curtain wall/storefront)
U-0.80 maximum for metal framing entrance doors
U-0.45 maximum for metal framing non-entrance doors (no operable windows in the project)
SHGC = 0.40
Vertical fenestration area (not including opaque doors) shall not exceed 30% of above-grade wall

Skylights, per Table 502.3 (NO NEW SKYLIGHTS THIS PROJECT. EXISTING TO REMAIN.)

U-0.80 maximum
SHGC = 0.40
Skylight area shall not exceed 3% of roof area

Air Leakage Testing of fenestration and doors, per 502.4.3

Testing shall be done by an accredited, independent testing laboratory and labeled by the manufacturer

Air Barrier Testing, per 502.4.2

The completed building shall be tested and the air leakage rate of the building envelope shall not exceed 0.40 cfm per sf at a pressure differential of 0.3 inches water gauge in accordance with ASTM E779

Vestibules, per 502.4.6, shall be provided at exterior doors

Exception 1 - Doors not intended to be used as a building entrance door

Plumbing Fixtures

Per Table 2902.1

Educational Mode Occupant Load

- Assembly spaces (gym and cafeteria-commons) are considered non-concurrent use in the educational mode of operation.
- Total Occupant Load = 2020 occupants; 2020 occupants / sex = 1010 male and 1010 female occupants
- Required:
 - Male WC = 1 per 50 occupants = 1010/50 = 21 water closets
 - Female WC = 1 per 50 occupants = 1010/50 = 21 water closets
 - Lavs = 1 per 50 occupants = 2020/50 = 41 lavatories
- Provided:
 - Male WC = 23 (24 if Additive Alternate 1 is accepted)
 - Female WC = 27 (28 if Additive Alternate 1 is accepted)
 - Lavs = 41 (43 if Additive Alternate 1 is accepted)

BELOW IS FOR REFERENCE ONLY. NO CHANGES THIS PROJECT FOR ASSEMBLY MODE

- Assembly Mode Occupant Load = A-3 for indoor public events and activities; will not be used concurrently with educational occupancy mode.
- The majority of educational spaces will be closed to the public in this mode of operation. Rooms available in this mode of operation will include the office area, gym (and associated storage and office spaces), stage (and associated storage space), cafeteria / commons (and associated storage spaces), kitchen (and associated storage spaces), and the library (and associated workrooms and computer lab).
 - Total Occupant Load = 1437 occupants; 1437 occupants / sex = 719 male and 719 female
 - Required:
 - Male WC = 1 per 125 occupants = 719/125 = 6 WC
 - Female WC = 1 per 65 occupants = 719/65 = 12 WC
 - Lavatories = 1 per 200 occupants = 1437/200 = 8 Lavs
 - Provided:
 - Male WC = 3 WC and 4 Unials
 - Female WC = 11 WC + 1 unisex restroom
 - Lavs = 11

SYMBOL LEGEND

- ### - OCCUPANCY LOAD
- ⊕ - ACCESSORY USE AREA (OCCUPANCY LOAD IS NOT INCLUDED IN LOADS BEYOND THIS ROOM)
- 0 - COMBINED OCCUPANT LOAD AT A GIVEN DOOR OR STAIR (THE CAPACITY OF DOORS ARE DETERMINED AS FOLLOWS: CLEAR OPENING WIDTH IN INCHES DIVIDED BY 0.2 THE CAPACITY OF STAIRS ARE DETERMINED AS FOLLOWS: WIDTH IN INCHES DIVIDED BY 0.3)
- 0 - COMBINED OCCUPANT LOAD AT A GIVEN EXIT DOOR. (SUM OF THESE EQUALS TOTAL OCCUPANT LOAD) TOTAL EXIT CAPACITY OF DOOR (THE CAPACITY OF DOORS ARE DETERMINED AS FOLLOWS: CLEAR OPENING WIDTH IN INCHES DIVIDED BY 0.2)
- PD - PANIC DEVICE XX MIN - DOOR FIRE RATING
- ⊙ - EXIT SIGN
- ⊙ - EXIT SIGN WITH ARROW

WALL SEPARATION LEGEND

WALL HOURLY RATING		WALL FIRE RATING TYPE
0 = 0 HOUR	■■■■■■■■■■	C = CORRIDOR
5 = 1/2 HOUR	■■■■■■■■■■	EW = EXTERIOR WALL
1 = 1 HOUR	■■■■■■■■■■	FB = FIRE BARRIER
2 = 2 HOUR	■■■■■■■■■■	FP = FIRE PARTITION
3 = 3 HOUR	■■■■■■■■■■	FW = FIRE WALL
4 = 4 HOUR	■■■■■■■■■■	HX = HORIZONTAL EXIT
SP = SMOKE PARTITION	■■■■■■■■■■	SB = SMOKE BARRIER
		VS = VERTICAL SHAFT
		VX = VERTICAL EXIT
		XP = EXIT PASSAGEWAY

BUILDING CODE ANALYSIS

Applicable Codes

- 2019 Oregon Structural Specialty Code
- 2019 Oregon Zero Energy Ready Commercial Code (ASHRAE Standard 90.1)
- 2009 ICC / ANSI A117.1 Accessibility Code
- 2019 Oregon Mechanical Specialty Code
- 2017 Oregon Plumbing Specialty Code
- 2017 Oregon Electrical Specialty Code
- 2019 Oregon Fire Code
- Washington County Environmental Health

Deferred Submittals:

- Fire Sprinkler & Fire Alarm Design: Fire Alarm plan review and installation must be completed prior to final inspection per OFC 907.2.3.

Construction Type

- Business Group B (uses for office or service-type transactions, including storage of records and accounts; counseling, administration, teacher offices, etc.)
- Education Group E (use by six or more personas at any one time for education purposes through the 12th grade)

Building Type:

- II-B

Fire Protection:

- Automatic sprinkler system installed in accordance with 903.3.1.1 or 903.3.1.2
- Emergency voice/alarm communication system in accordance with Section 907.5.2.2
- Fire Extinguisher Cabinets

Building element fire rating requirement (Per Table 601):

- 0 HR = Primary structural frame
- 0 HR = Bearing Walls, Exterior
- 0 HR = Bearing Walls, Interior
- 0 HR = Non-bearing walls and partitions, Exterior (Per Table 602), if greater than 10'-0" fire separation distance
- 0 HR = Non-bearing walls and partitions, Interior
- 0 HR = Floor construction and secondary members
- 0 HR = Roof construction and secondary members

Allowable Building Area

Definition:

- Area, Building: The area included within the surrounding exterior walls (or exterior walls and fire walls), exclusive of vent shafts and courts. Areas of the building not provided with surroundings walls shall be included in the building area if such areas are included within the horizontal projection of the roof or floor above.

Allowable Building Area Calculation:

Per 506.1, the building areas indicated by Table 506.2 include:

Occupancy Classification	E
Type of Construction	II-B
Multiple Stories	SM
Tabular Allowable Area Factor (At)	43,500 SF

Proposed Building Area:

NOTE: This project involves south building Level 1 only. (See adjacent code plan diagram.)
South Building, Level 1 22,544 SF

Interior Finish Requirements

Controls, operating mechanisms and hardware intended for operation by the occupant, including switches that control lighting and ventilation and electrical convenience outlets, in accessible spaces, along accessible routes or as parts of accessible elements shall be accessible. Per Section 1109.13 (OSSC)

Combustible trim, excluding handrail and guardrails, shall not exceed 10 percent of the specific wall or ceiling area to which it is attached. Per Section 806.5 (OSSC)

Interior floor-wall base that is 6 inches or less in height shall be tested in accordance with Section 804.2 and shall not be less than Class II. Per Section 806.6 (OSSC)

Per Table 803.9

- Occupancy Type A-2
 - Class B = Vertical enclosures and exit passageways
 - Class B = Corridors
 - Class C = Rooms and enclosed spaces
- Occupancy Types B and E
 - Class B = Vertical enclosures and exit passageways
 - Class C = Corridors
 - Class C = Rooms and enclosed spaces

Definitions:

- Class B = Flame spread index 26-75; smoke developed index 0-450
- Class C = Flame spread index 76-200; smoke developed index 0-450

Occupant Loads

Maximum floor area allowances per occupant per Table 1004.1.1. See code plan for egress calculations per room.

Room	Floor Area in SF per Occupant
Assembly - Concentrated	7 net
Assembly - Unconcentrated	15 net
Classroom	20 net
Library - Reading rooms	50 net
Business areas	100 gross
Library - Stack area	100 gross
Kitchens, commercial	200 gross
Accessory storage areas, mechanical equipment room	300 gross

Means of Egress

Minimum egress width per 1005.1:

- Stairways 0.3 inches per occupant
- Other egress components 0.2 inches per occupant

Maximum Common Path of Egress Travel (per Table 1014.3 with sprinkler system):

- 100 ft = B Occupancy
- 75 ft = E Occupancy
- 30 ft = A Occupancy with fixed seating per 1028.8

Maximum exit access travel distance (per Table 1016.2 with sprinkler system):

- 250 ft = A and E Occupancies
- 300 ft = B Occupancy

Corridors

- Fire-resistance = 0 HR per Table 1018.1 (A, E, and B Occupancy types with sprinkler system)

- Corridor width per Table 1018.2
 - 44" minimum per 1005.1
 - 72" minimum in Group E occupancy where the corridor has the required capacity of 100 or more

- 1018.4 Dead ends
 - Where more than one exit or exit access doorway is required, the exit access shall be arranged such that there are no dead ends in corridors more than 20 feet.
 - Exception 2 - In occupancies in Groups B and E, where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 the length of the dead-end corridors shall not exceed 50 feet.
 - Exception 3 - A dead-end corridor shall not be limited in length where the length of the dead-end corridor is less than 2.5 times the least width of the dead-end corridor

Minimum Number of Exits

Occupant Load (persons per story)	Minimum number of exits (per story)
1 - 500	2
501-1,000	3
More than 1,000	4

ARCHITECTURAL ABBREVIATIONS

A/E	ARCHITECT/ENGINEER	FLASH	FLASHING
AB	AIR BARRIER	FLBX	FLEXIBLE
ABS	ASBESTOS	FLOS	FLOORING
ACC	ADA ACCESSIBLE	FLM	FULL LENGTH MIRROR
ACR	ACRYLIC	FLUOR	FLUORESCENT
ACT	ACOUSTIC CEILING TILE	FO	FINISH OPENING
AD	ACCESS DOOR	FOC	FACE OF CONCRETE
ADJ	ADJUSTABLE	FOF	FACE OF FINISH
ADJT	ADJACENT	FOM	FACE OF MASONRY
ADMIN	ADMINISTRATION	FOS	FACE OF STUD
AEC	AUTOMATED EXTERNAL DEFIBRILLATORS	FOW	FACE OF WALL
AL	ALUMINUM	FP	FIREPROOFING
ALUM	ALUMINUM	FR	FIRE RESISTANT
AP	ACCESS PANEL	FRP	FIBERGLASS REINFORCED PANEL
APC	ACOUSTIC PANEL CEILING	FRT	FIRE RESISTANCE TREATED
ASPH	ASPHALT	FS	FLOOR SINK
AUTO	AUTOMATIC	FSS	FOLDING SHOWER SEAT
AVG	AVERAGE	FTG	FOOTING
AWP	ACOUSTIC WALL PANEL	FVC	FIRE VALVE CABINET
		FWC	FABRIC WALL COVERING
		G	GROUT
B.O.	BOTTOM OF	GA	GAUGE
BOS	BABY CHANGING STATION	GAL	GALLON
BD	BOARD	GALV	GALVANIZED
BLK	BLOCK	GB	GRAB BAR
BLKG	BLOCKING	GD	GARBAGE DISPOSAL
BLKHD	BULKHEAD	GEN	GENERAL
BM(S)	BEAM(S)	GFA	GROSS FLOOR AREA
BOT	BOTTOM	GL	GLUE LAMINATED
BRDG	BRIDGING	GL	GLASS
BRG	BEARING	GMP	GUARANTEED MAXIMUM PRICE
BRKT	BRACKET	GR	GUARD RAIL
BT	BATHTUB	GR	GRADE
BTWN	BETWEEN	GRS	GALVANIZED RIGID STEEL
		GWB	GYPSPUM WALL BOARD
		GYP	GYPSPUM
CAB	CABINET	HC	HOLLOW CORE
CBD	CHALKBOARD	HD	HAND DRYER
CER	CERAMIC	HDF	HIGH DENSITY FIBERBOARD
CF	CUBIC FEET	HDR	HEADER
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED	HDWR	HARDWOOD
CFMF	COLD-FORMED METAL FRAMING	HDWR	HARDWARE
CG	CLEAR FLOAT GLASS	HM	HOLLOW METAL
CI	CAST IRON	HR	HOUR
CIG	CLEAR INSULATING GLASS	HR	HANDRAIL
CIP	CAST IN PLACE	HS	HARDWARE SET
CJ	CONTROL JOINT	HSS	HOLLOW STRUCTURAL SHAPE
CJA	CONTROL JOINT ABOVE	HVC	HEATING VENTILATING AND AIR CONDITIONING
CLO	CLOSET		
CLR	CLEAR	IAW	IN ACCORDANCE WITH
CMU	CONCRETE MASONRY UNIT	ID	INSIDE DIAMETER
COL	COLUMN	IF	INSIDE FACE
COM	COMMON	IIP	INSULATED INFILL PANEL GLASS
COMB	COMBINATION	IJ	ISOLATION JOINT
COMM	COMMUNICATIONS	IS	IN JOIST SPACE
COMPR	COMPRESSIBLE	INC	INCLUDE(ING)
CONF	CONFERENCE	INSUL	INSULATION
CONFIG	CONFIGURATION	JAN	JANITOR
CORR	CORRIDOR	JBE	JOIST BEARING ELEVATION
CP	COVER PLATE	JCT	JUNCTION
CPT	CARPET	JFB	JOINT FILLER BOARD
CR	CHAIR RAIL	JST	JOIST
CS	COUNTERSINK	JT	JOINT
CSTJ	CONSTRUCTION JOINT	KCJ	KEYED CONSTRUCTION JOINT
CSWK	CASEWORK	KD	KNOCKDOWN
CT	CERAMIC TILE	KH	KITCHEN HOOD
CTG	CLEAR TEMPERED FLOAT GLASS	KIT	KITCHEN
CTIG	CLEAR TEMPERED INSULATING GLASS		
CU	COPPER	L	ANGLE
CU	COMBINATION UNIT	LAB	LABORATORY
CV	CONDOM VENDOR	LAM	LAMINATED
CY	CUBIC YARD	LAV	LAVATORY
CYL	CYLINDER	LBR	LUMBER
		LDG	LOADING
DB	DECIBEL	LF	LINEAR FOOT
DBL	DOUBLE	LG	LENGTH (LONG)
DC	DUST COLLECTOR	LG	LAMINATED GLASS
DEPR	DEPRESS(ION)(ED)	LIN	LINEAR
DEPT	DEPARTMENT	LINO	LINOLEUM
DET	DETENTION	LKR	LOCKER
DF	DRINKING FOUNTAIN	LOC	LOCATION
DG	DOOR GRILLE	LONG	LONGITUDINAL
DIAG	DIAGONAL	LSC	LIFE SAFETY CODE
DPFG	DAMPPOOFING	LTG	LIGHTING
DR	DOOR	LV	LOUVER
DSN	DOWNSPOUT NOZZLE	LVT	LUXURY VINYL TILE
DW	DISHWASHER		
DWL(S)	DOWEL(S)	MAG	MAGNETIC
DWR	DRAWER	MAINT	MAINTENANCE
		MAN	MANUAL
EB	EXPANSION BOLT	MAS	MASONRY
EE	EACH END	MATL	MATERIAL
EEWS	EMERGENCY EYE WASH	MB	MOP BASIN
EFF	EFFICIENCY	MBD	MARKER BOARD
EJ	EXPANSION JOINT	MBH	MOP/BROOM HOLDER
ELAS	ELASTOMERIC	MC	MEDICINE CABINET
ELEV	ELEVATOR	MEMB	MEMBRANE
EMER	EMERGENCY	MH	MANHOLE
ENCL	ENCLOSURE	MR/S	MIRROR WITH SHELF
ENTR	ENTRANCE	MTD	MOUNTED
ERF	EPOXY RESIN FLOORING	MTG	MOUNTING
EUI	ENERGY USE INTENSITY	MUL	MULLION
EW	EACH WAY		
EWG	ELECTRIC WATER COOLER	NC	NOISE CRITERIA
EXP	EXPANSION	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
EXP	EXPOSED	NOM	NOMINAL
		O to O	OUT TO OUT
F	FABRIC	OA	OVERALL
F.O.	FACE OF	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
FAB	FABRICATE(D)	OFF	OFFICE
FB	FACE BRICK	OFOI	OWNER FURNISHED OWNER INSTALLED
FD	FLOOR DRAIN	OH	OPPOSITE HAND
FDN	FOUNDATION	OPG(S)	OPENING(S)
FE	FIRE EXTINGUISHER		
FEC	FIRE EXTINGUISHER CABINET		
FF	FINISH FLOOR		
FH	FIRE HYDRANT		
FHC	FIRE HOSE CABINET		
FIG	FIGURE		
FIX	FIXTURE		

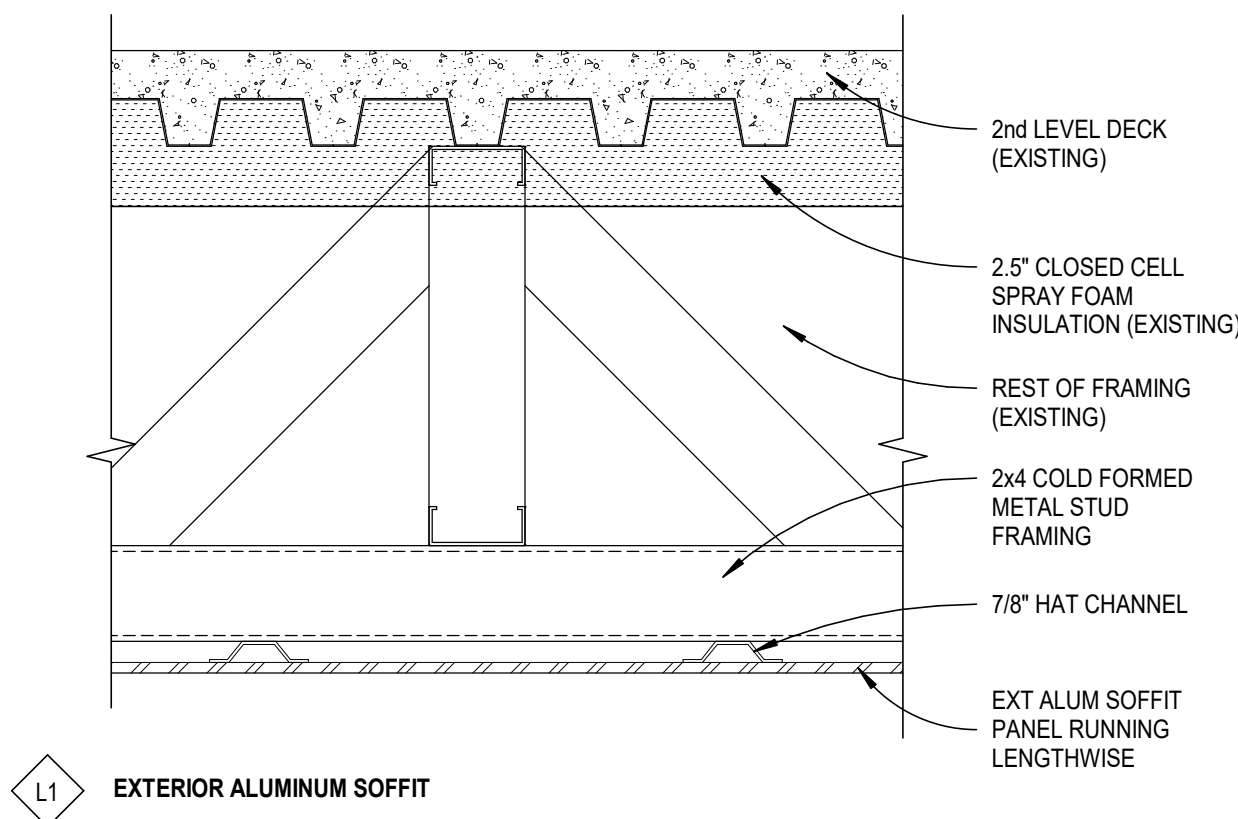
OSHA	OPERATIONAL SAFETY AND HEALTH ADMINISTRATION
OTB	OPEN TO BELOW
OVFL	OVERFLOW
P	PAINT
PAN B	PANIC BOLT
PB	PARTICLE BOARD
PC	PRECAST CONCRETE
PCD	PAPER CUP DISPENSER
PCT	PORCELAIN CERAMIC TILE
PD	PANIC DEVICE
PERF	PERFORATED
PERP	PERPENDICULAR
PG	PATTERN GLASS
PIC	PORTABLE INSTRUMENT CONNECTION
PIG	PATTERN INSULATING GLASS
PL	PLATE
PL	PROPERTY LINE
PL	PLASTIC LAMINATE
PLAM	PLASTIC LAMINATE
PLBG	PLUMBING
PR	PAIR
PREFAB	PREFABRICATED
PROJ	PROJECT(OR) (ION)
PS	PROJECTION SCREEN
PT	POINT
PTD	PAPER TOWEL DISPENSER
PTDR	COMBINATION TOWEL DISPENSER/RECEPTACLE
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
PWL	SOUND POWER LEVEL
QT	QUARRY TILE
QTR RND	QUARTER ROUND
R	RISER
RAD	RADIUS
RB	RUBBER BASE
RC	REMOTE CONTROL
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REF	REFERENCE
REFL	REFLECTED
REM	REMOVABLE
RESIL	RESILIENT
RF	RESILIENT FLOORING
RF	RUBBER FLOOR
RFM	RECESSED FLOOR MAT
RH	ROBE HOOK
Ri&C	ROUGH IN AND CONNECT
S	SINK
SAT	SPRAYED ACOUSTIC TREATMENT
SAW	SOUND ABSORBING WALL UNITS
SB	SPLASH BLOCK
SC	SOLID CORE
SC	SHOWER CURTAIN
SCD	SEAT COVER DISPENSER
SCH	SHOWER CURTAIN HOOK
SCR	SHOWER CURTAIN ROD
SCT	STRUCTURAL CLAY TILE
SD	SOAP DISPENSER
SECY	SECRETARY
SF	SQUARE FEET
SG	SPANDREL GLASS
SGL	SINGLE
SH	SHOWER
SHM	SECURITY HOLLOW METAL
SLNT	SEALANT
SM	SHEET METAL
SND	SANITARY NAPKIN DISPOSAL
SNV	SANITARY NAPKIN VENDOR

SPL	SOUND PRESSURE LEVEL
SQ	SQUARE
SS	SOLID SURFACE
SSA	STORM SHELTER AREA
SSS	STAINLESS STEEL SHELF
SST	STAINLESS STEEL
ST	STONE
ST	STAIR
STAG'D	STAGGERED
STC	SOUND TRANSMISSION CLASS
STGR	STRINGER
SUBFL	SUBFLOOR
SURF	SURFACE
SUSP	SUSPENDED
SVF	SHEET VINYL FLOORING
T	TREAD
T&G	TONGUE AND GROOVE
T.O.	TOP OF
TAN	TANGENT
TB	TOWEL BAR
TBD	TACK BOARD
TCP	TOILET COMPARTMENT PARTITION
TERR	TERRAZZO
TFG	TINTED FLOAT GLASS
TG	TEMPERED GLASS
TH	THRESHOLD
THK	THICK(NESS)
TI	TENANT IMPROVEMENT
TIG	TINTED INSULATING GLASS
TMR	TILT MIRROR UNIT
TOIL	TOILET
TOP	TOP OF PAVING
TRANS	TRANSVERSE
TT	TERRAZZO TILE
TTD	TOILET TISSUE DISPENSER
TTG	TINTED TEMPERED FLOAT GLASS
TTIG	TINTED TEMPERED INSULATING GLASS
TW	TACK WALL
UL	UNDERWRITERS LABORATORIES
UR	URINAL
US	UTILITY SHELF
UTIL	UTILITY
VB	VAPOR BARRIER
VB	VINYL BASE
VCB	VENTED COVE BASE
VF	VINYL FLOOR
VOC	VOLITILE ORGANIC COMPOUND
VOL	VOLUME
VP	VENEER PLASTER
VT	VINYL TILE
VWC	VINYL WALL COVERING
W	WIDE
WB	WALL BASE
WC	WATER CLOSET
WC	WALL COVERING
WCL	WATER CLOSET/LAVATORY COMBINATION
WD	WOOD
WDF	WOOD FLOORING
WDW	WINDOW
WG	POLISHED WIRE GLASS
WI	WROUGHT IRON
WOM	WALK OFF MAT
WR	WASTE RECEPTACLE
WRB	WEATHER RESISTANT BARRIER
WW	WARM WHITE
WWF	WELDED WIRE FABRIC
YD	YARD

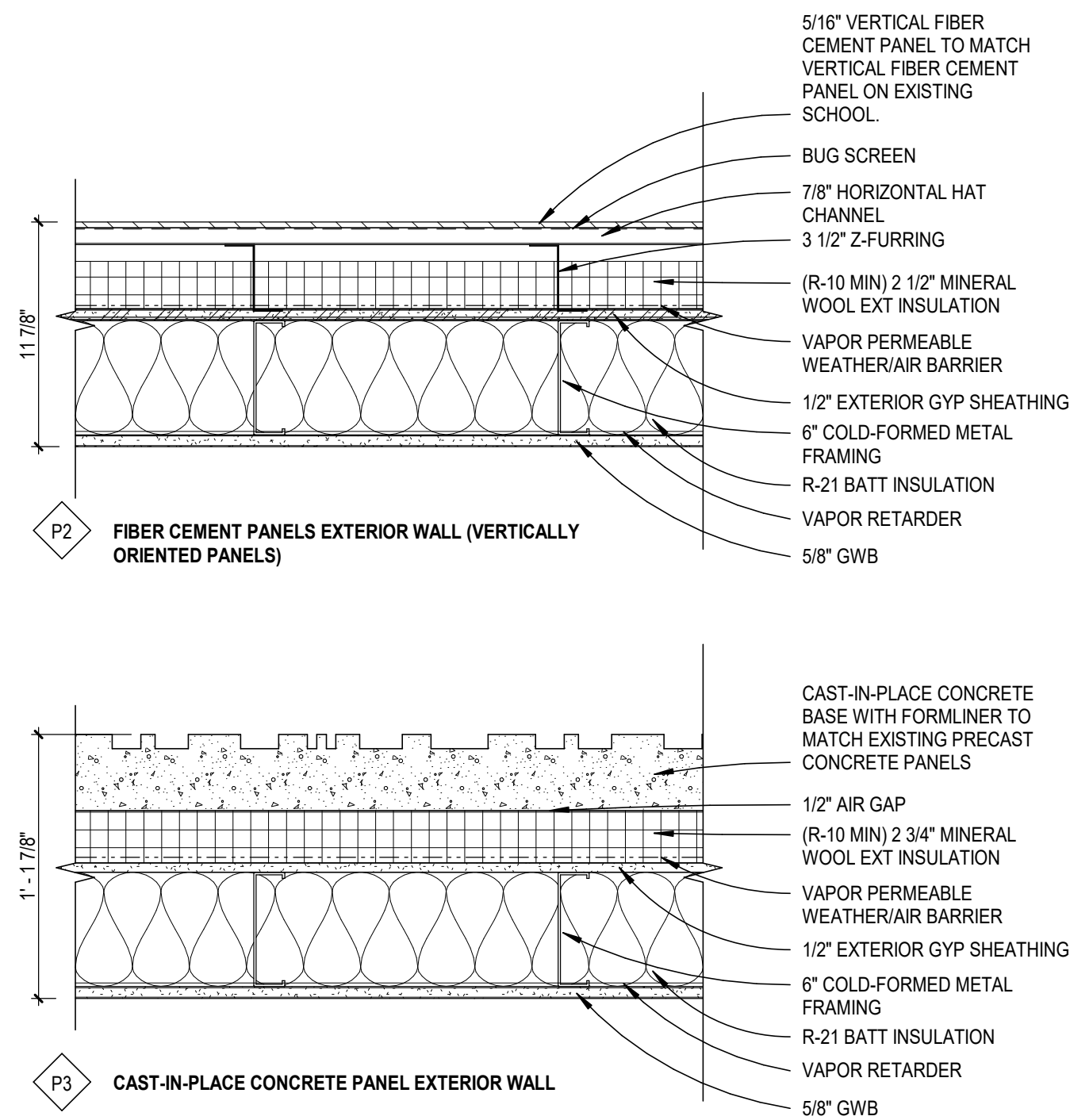
GENERAL SYMBOLS

	DETAIL NUMBER		EARTH
	CROSS REFERENCE		GRAVEL
	SHEET NUMBER		SAND
	BUILDING ELEVATION		CONCRETE
	INTERIOR ELEVATION		PRECAST CONCRETE
	SIMILAR OR TYPICAL REFERENCE		STEEL
	WALL SECTION		STONE
	DETAIL REFERENCE		CONCRETE MASONRY UNIT
	BUILDING SECTION		BRICK VENEER
	SHEET NOTE		STEEL (LARGE SCALE)
	REFERENCE KEYNOTE		GYM FLOOR
	COLUMN GRID LINE		WOOD (CONTINUOUS BLOCKING)
	ROOM NAME		WOOD (NON-CONTINUOUS BLOCKING)
	ROOM NUMBER/NAME		WOOD (TRIM/FINISH)
	REVISION NUMBER		GLASS
	LEVEL ELEVATION		SHINGLES
	FINISH FLOOR ELEVATION		PLYWOOD (LARGE SCALE)
	SPOT ELEVATION		GYPSPUM WALL BOARD
			BLANKET INSULATION
			RIGID INSULATION
			SPRAY FOAM INSULATION
			MINERAL WOOL INSULATION
			PROTECTION BOARD
			CARPET (LARGE SCALE)
			ACOUSTIC TILE (LARGE SCALE)
			TILE (LARGE SCALE)

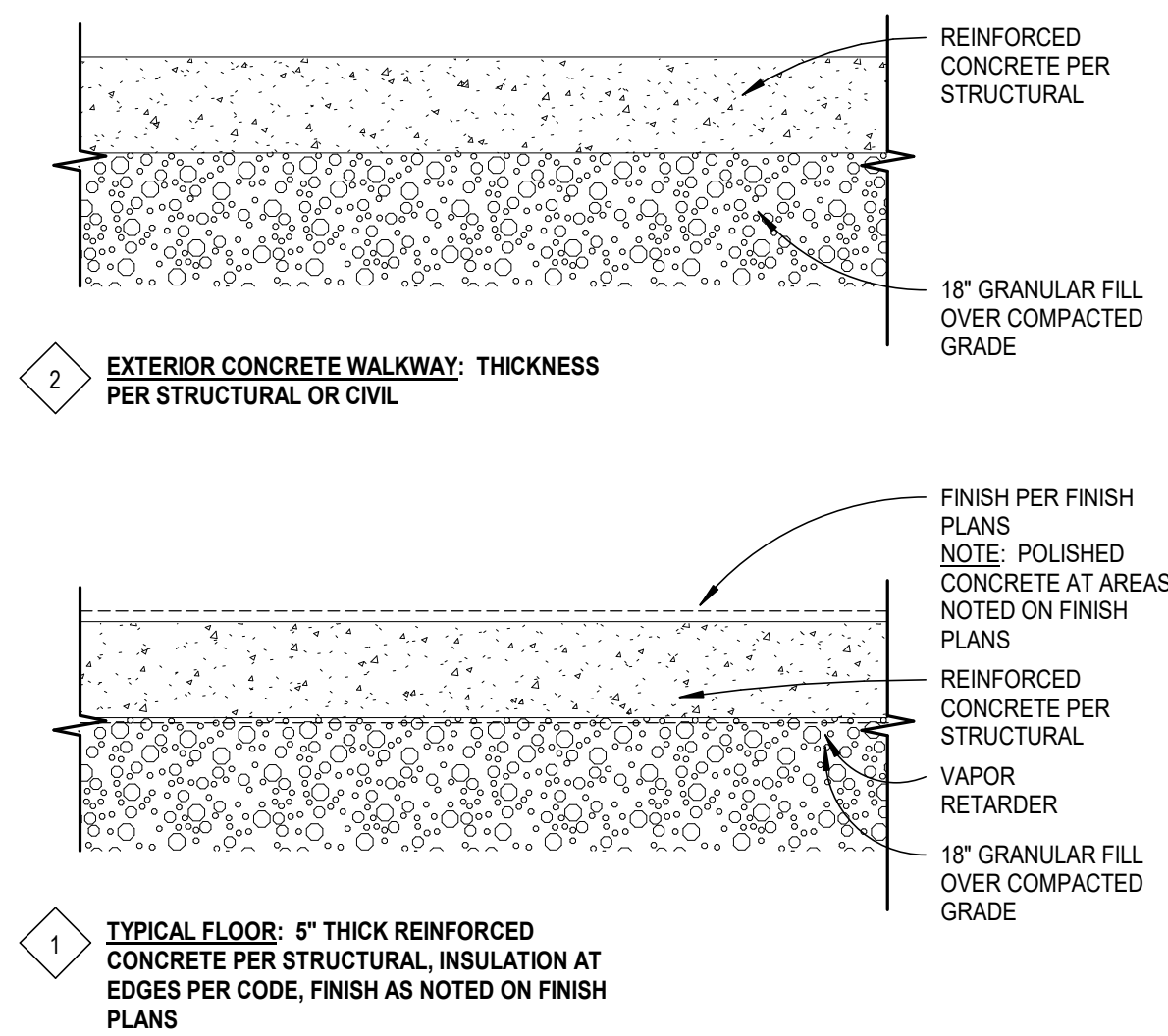
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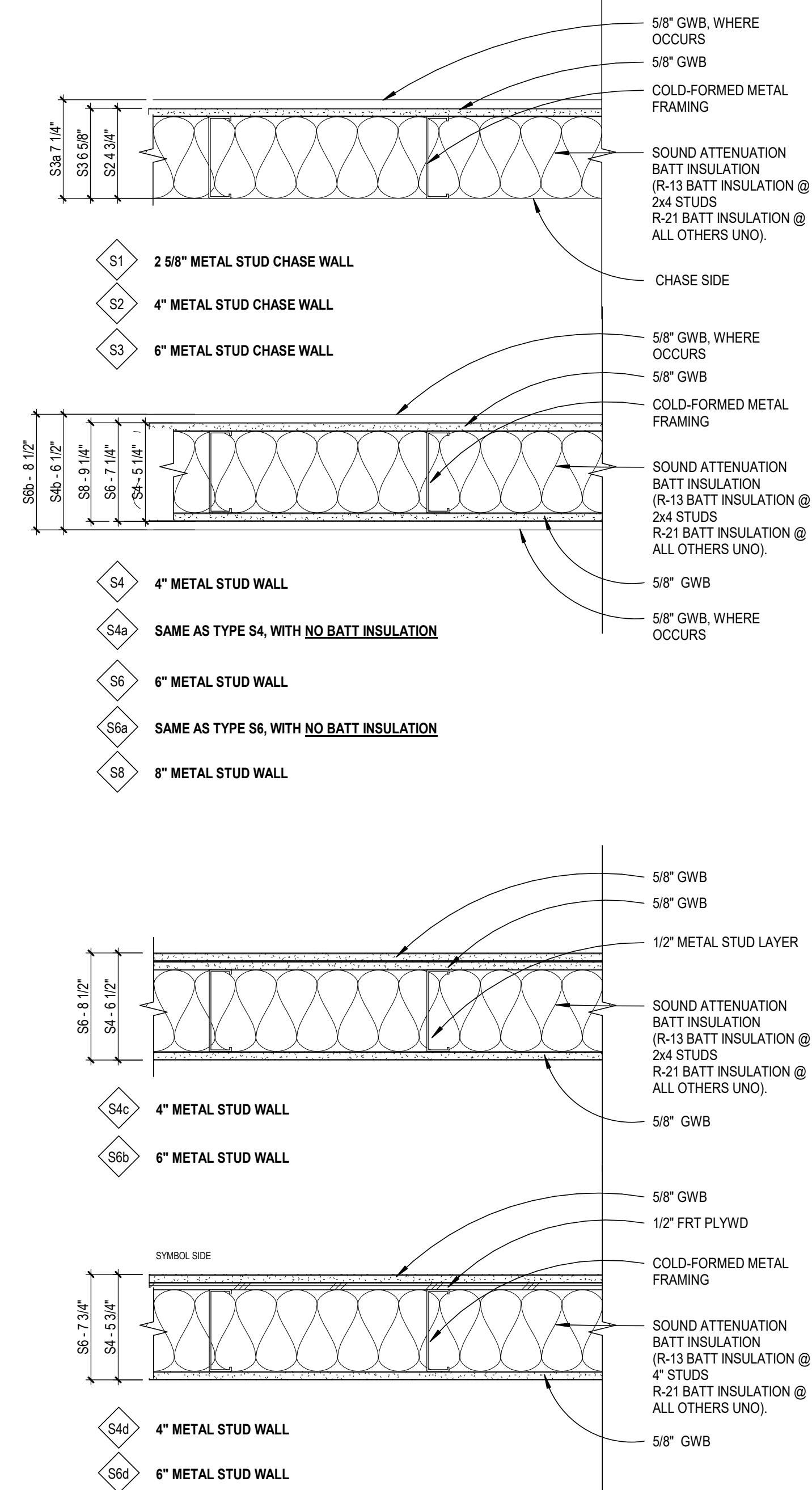
EXTERIOR SOFFIT ASSEMBLY



EXTERIOR WALL TYPES



FLOOR ASSEMBLY



INTERIOR WALL TYPES

A

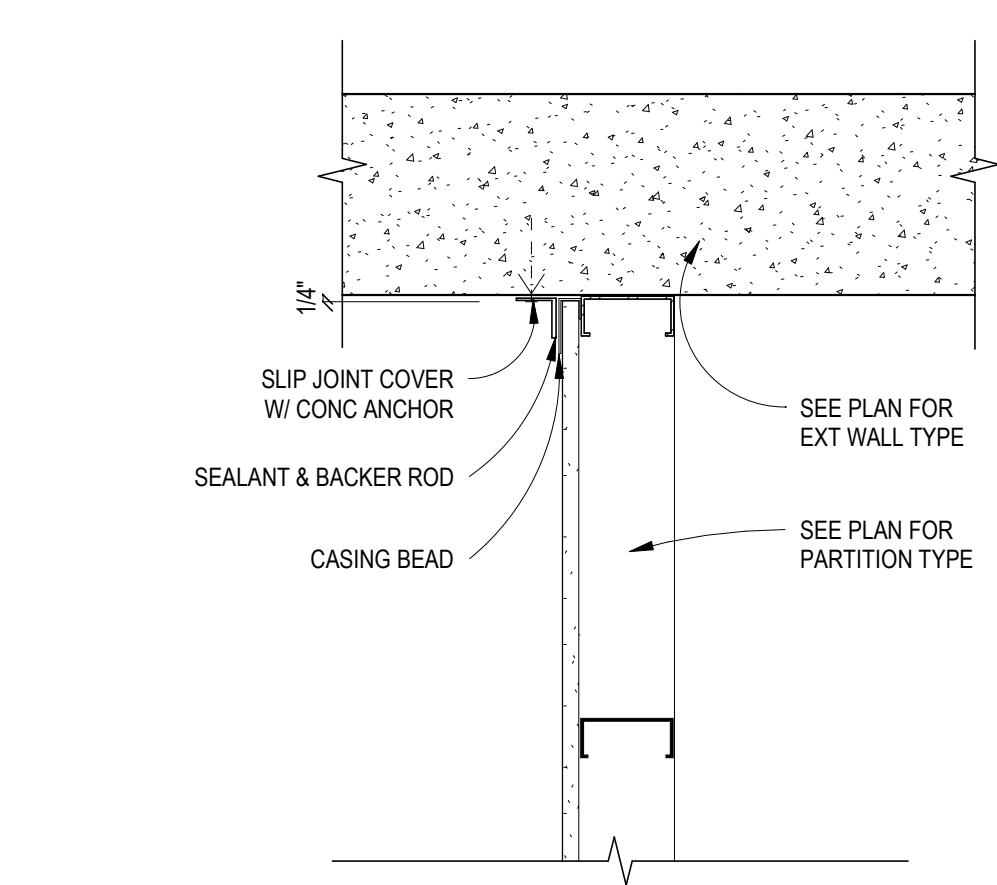
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C

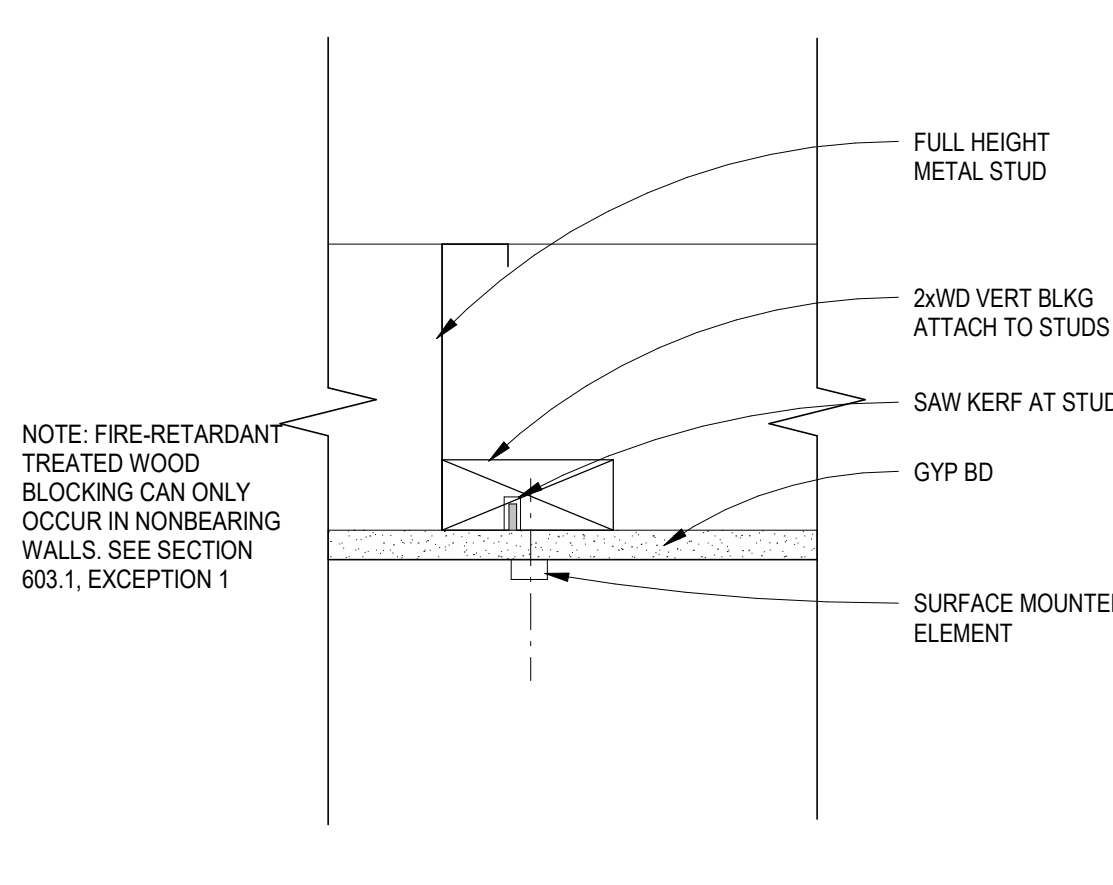
D

E

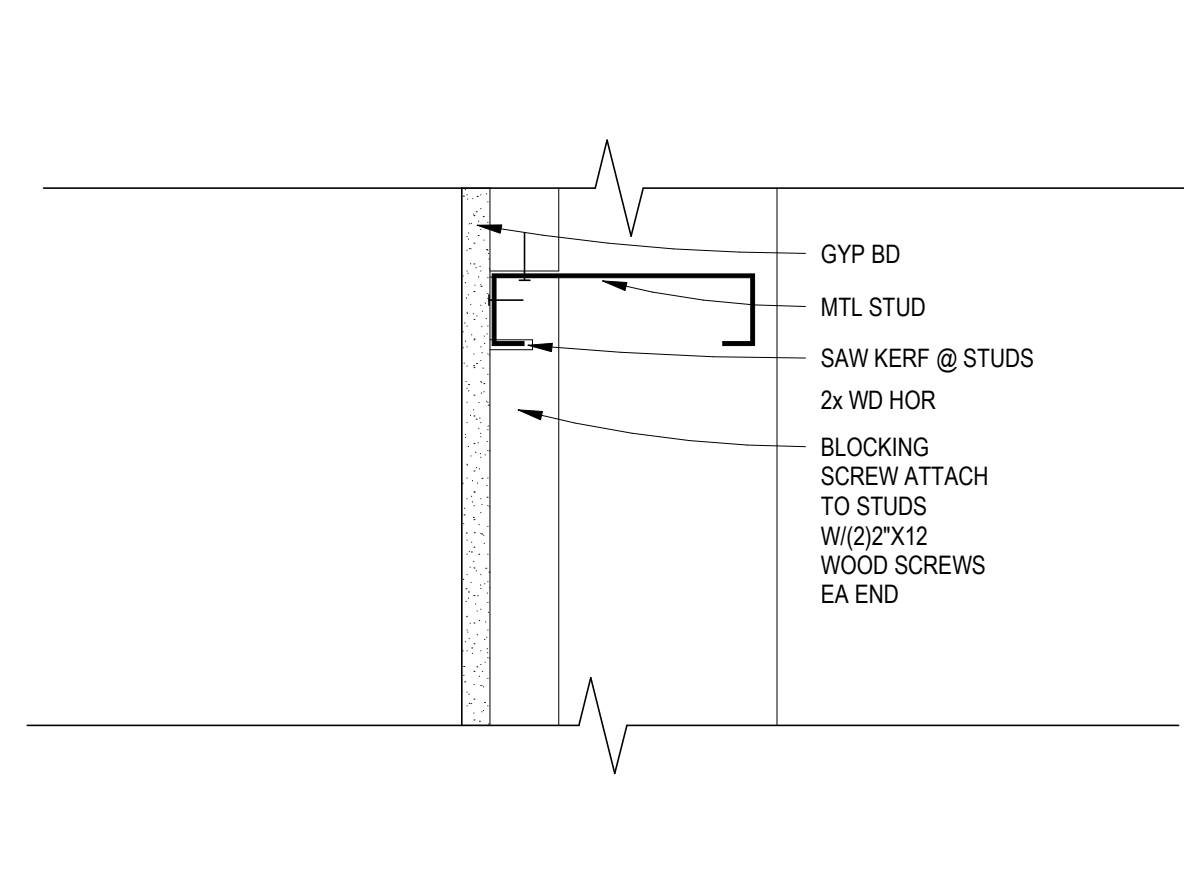
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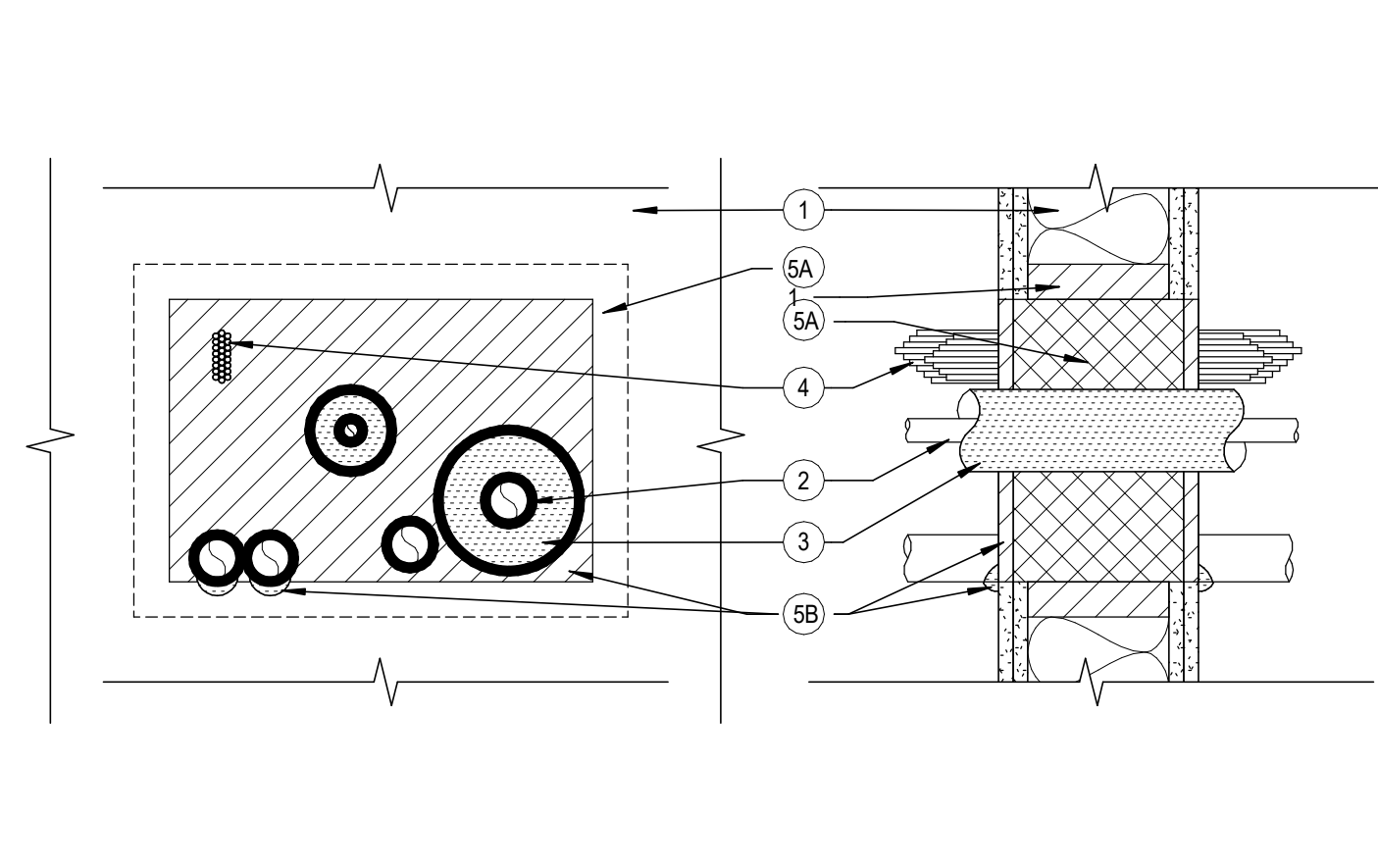
1A GYP BD PARTITION @ EXTERIOR WALL
A0.4 SCALE: 1 1/2" = 1'-0"



1B VERTICAL BLOCKING @ INTERIOR WALL
A0.4 SCALE: 3" = 1'-0"



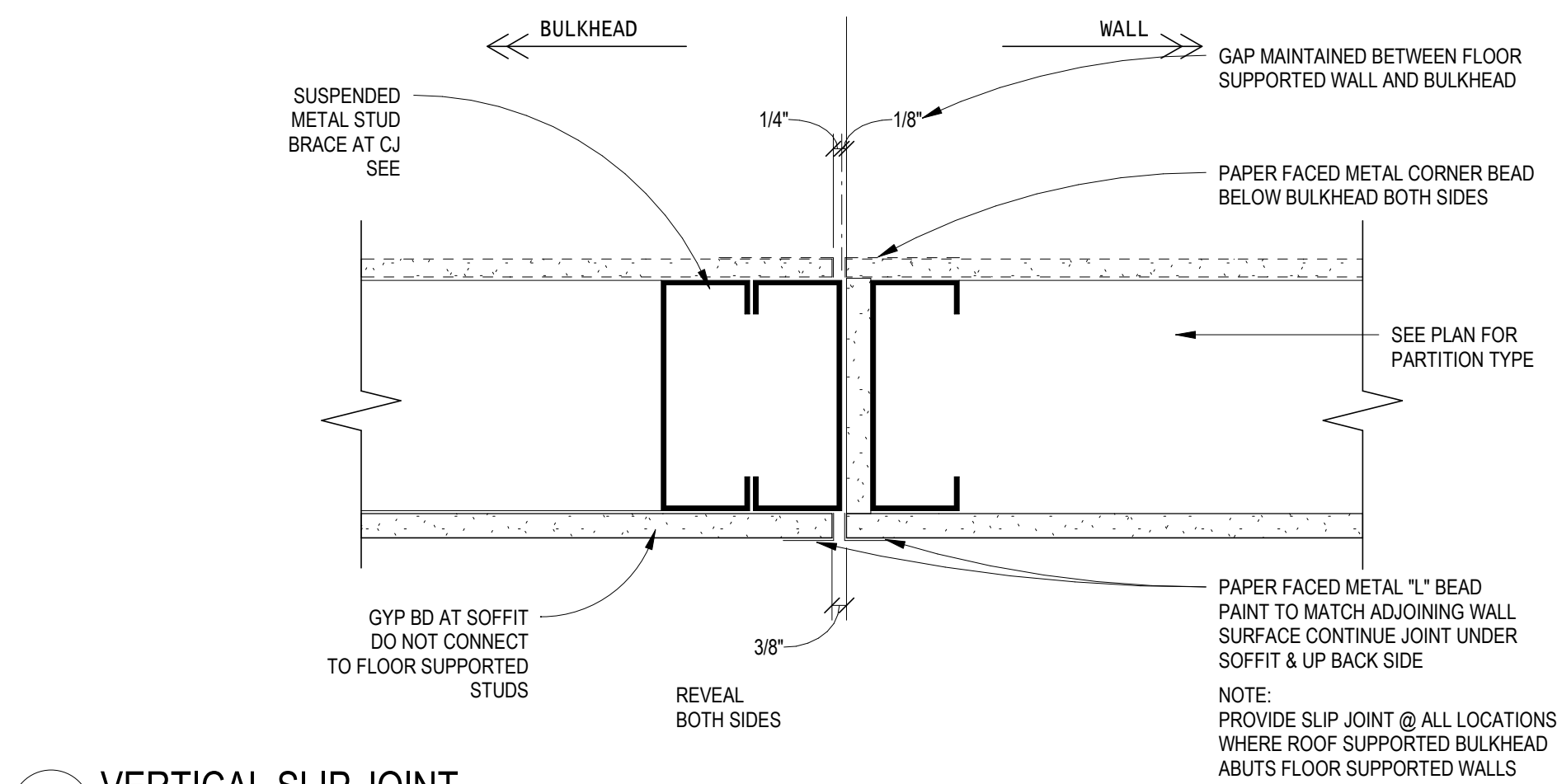
1C HORIZONTAL BLOCKING @ INTERIOR WALL
A0.4 SCALE: 3" = 1'-0"



1D MULTIPLE PENETRATION FIRESTOP
A0.4 SCALE: 1 1/2" = 1'-0"

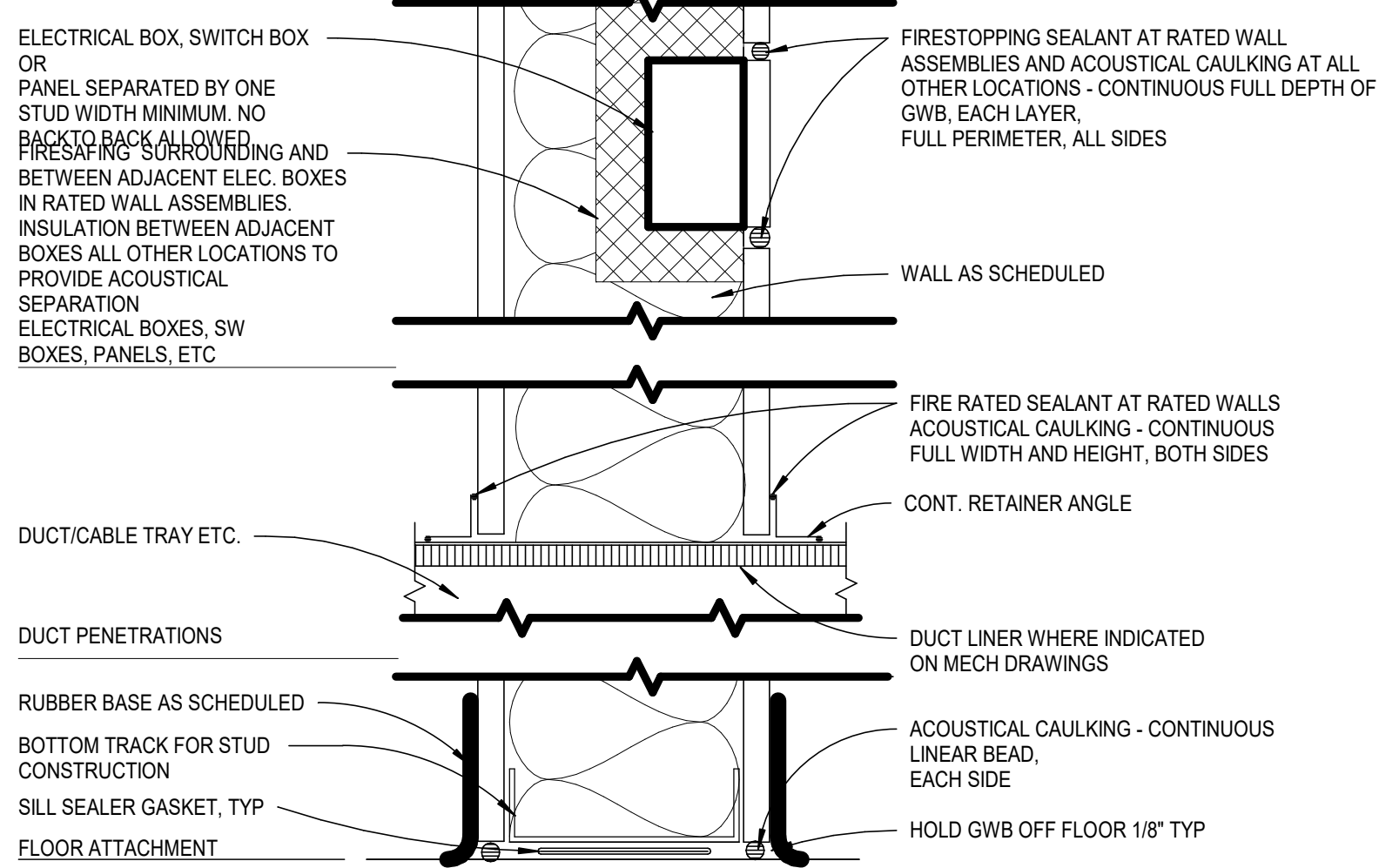
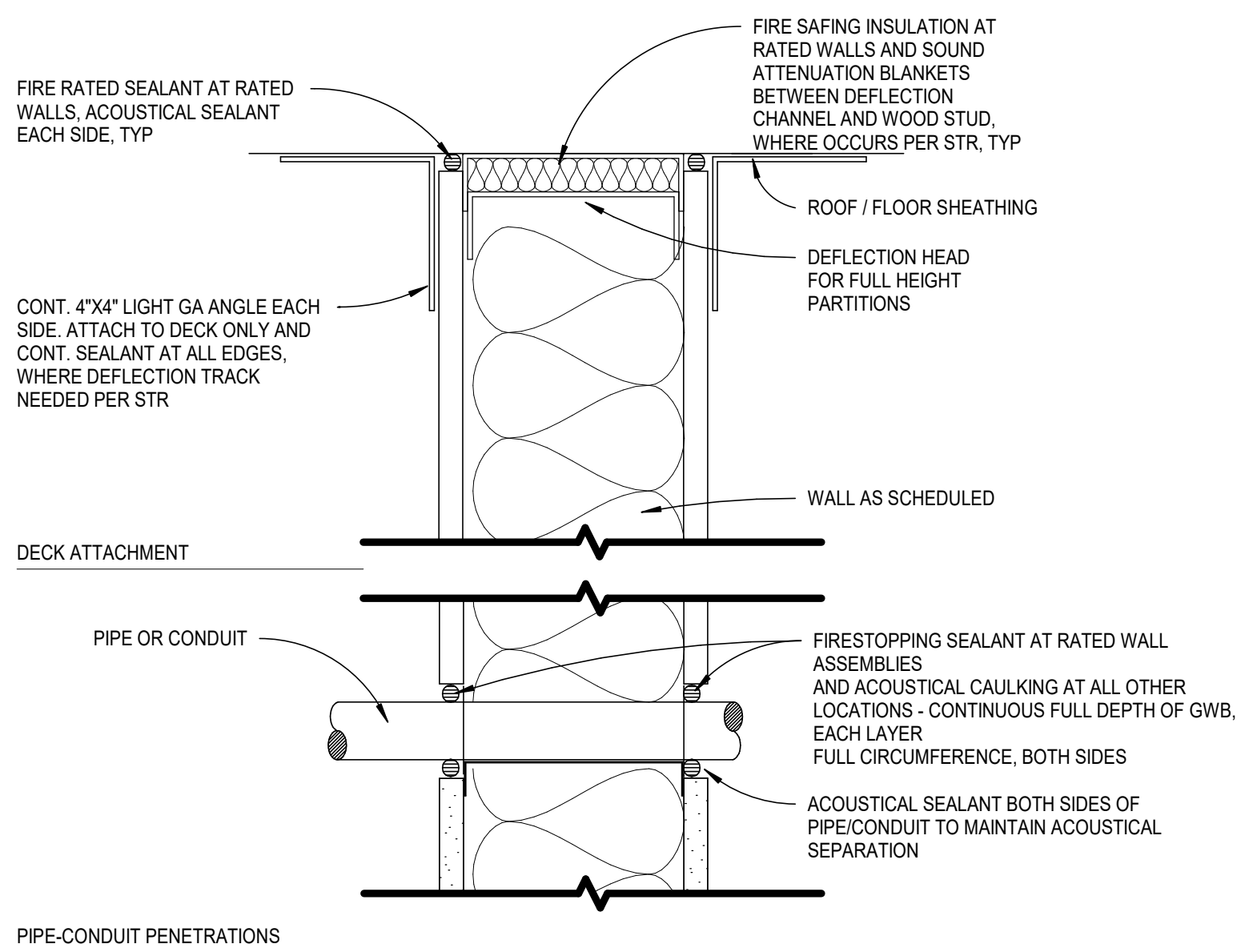
- 1 WALL TYPE PER PLAN
 - 2 ONE OR MORE PIPES, CONDUIT, OR TUBES MAY BE INSTALLED WITHIN THE OPENING. THE TOTAL NUMBER OF THROUGH-PENETRATIONS IS DEPENDENT ON THE SIZE OF THE OPENING AND THE TYPES AND SIZES OF THE PENETRATIONS, REFER TO UL W-L-8079 FOR ADDITIONAL RESTRICTIONS
 - 3 ONE OF MORE METALLIC PENETRATIONS MAY BE INSULATED, REFER TO UL W-L-8079 FOR ADDITIONAL RESTRICTIONS
 - 4 ONE MAX 3 IN. DIAM BUNDLE OF CABLES INSTALLED WITHIN THE OPENING, REFER TO UL W-L-8079 FOR ADDITIONAL RESTRICTIONS
 - 5A MIN 4-3/4" THICKNESS OF MIN 4 PCF MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL RECESSED FROM BOTH SURFACES OF THE WALL TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL
 - 5B PACKING MATERIAL MIN 1-1/4" THICKNESS OF MIN 4 PCF MINERAL WOOL BATT INSULATION FIRMLY PACKED AS A BACKER AROUND THE PERIMETER OF OPENING AS A PERMANENT FORM
- SEALANT 5/8" MIN THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL, AT THE POINT CONTACT LOCATION BETWEEN THROUGH PENETRANTS AND GYPSUM BOARD. A MIN 1/2" DIAM BEAN OF FILL MATERIAL SHALL BE APPLIED AT THE GYPSUM BOARD / THROUGH PENETRANT INTERFACE ON BOTH SURFACES OF WALL

2



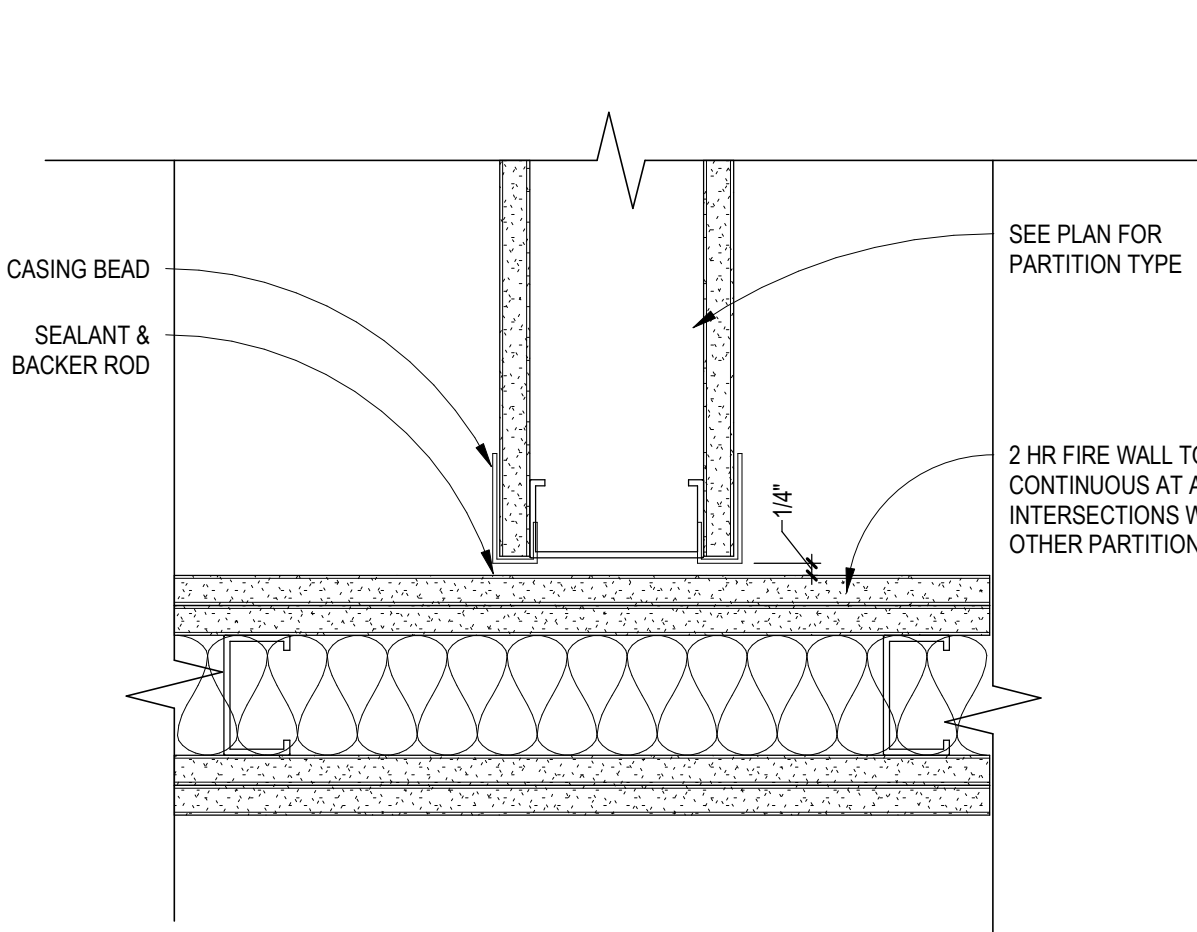
2A VERTICAL SLIP JOINT
A0.4 SCALE: 3" = 1'-0"

3

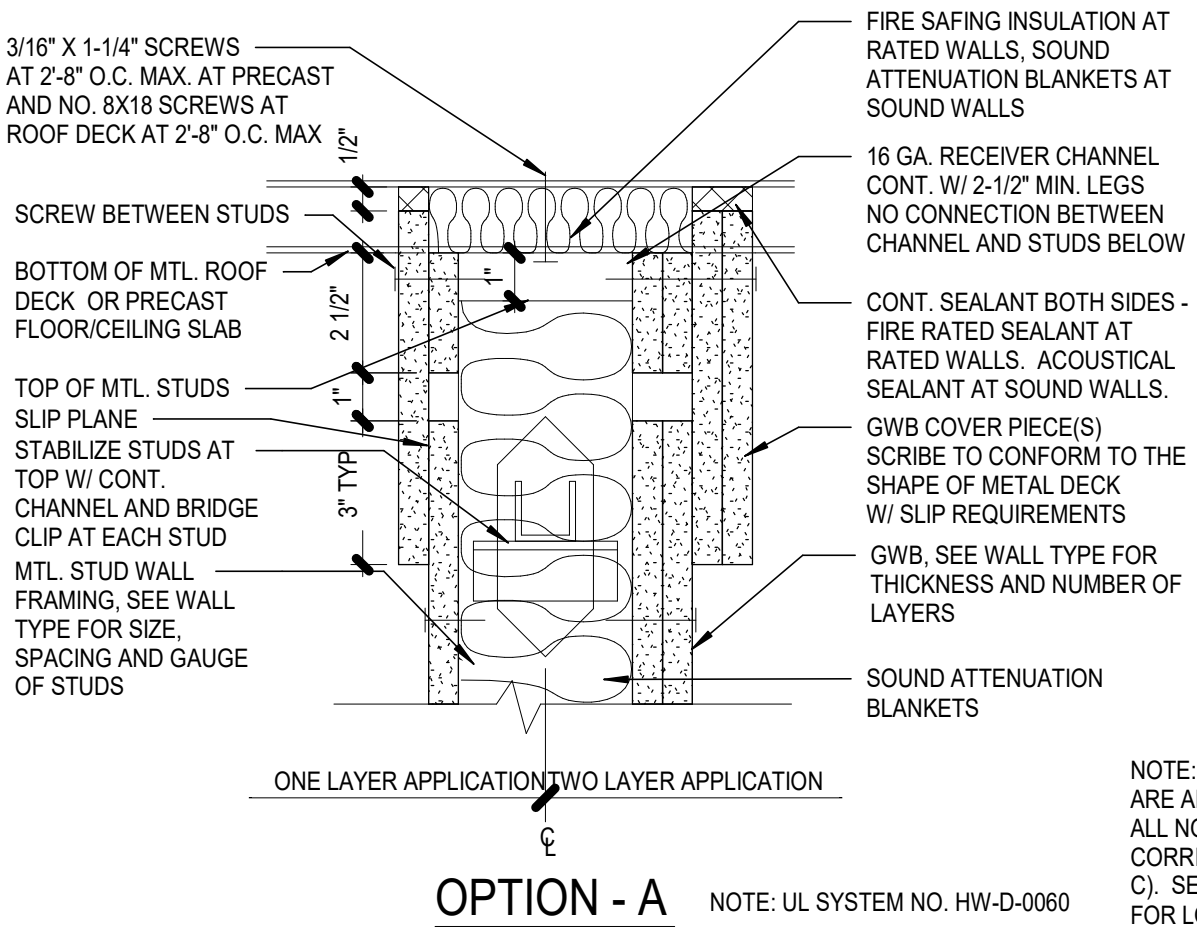


- NOTE
1. ALL CAULKING TO BE ACOUSTICAL CAULKING.
 2. DETAIL IS SHOWING TYPICAL ACOUSTICAL CAULKING LOCATIONS. PROVIDE RATED CAULKING AT ALL FIRE AND SMOKE RATED ASSEMBLIES. SEE SHEET A0.1 AND FLOOR PLANS FOR WALL TYPES.
 3. REFER TO 41A103.3 FOR PENETRATIONS AT CMU WALLS

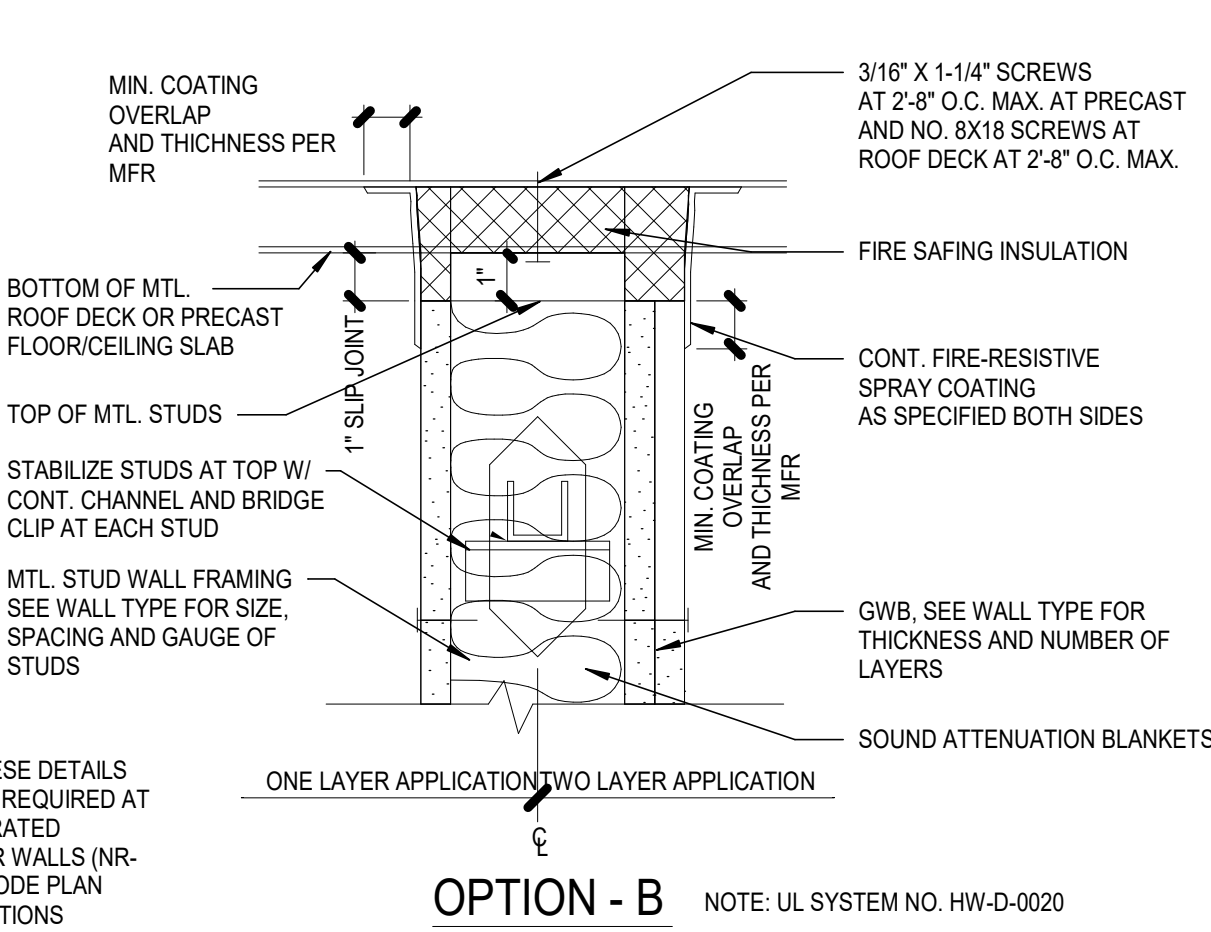
4



4A FIRE WALL/PARTITION INTERSECTION
A0.4 SCALE: 3" = 1'-0"

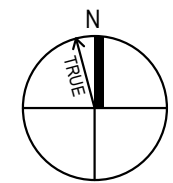


4B STUD WALL SLIP CONNECTION FOR SMOKESTOP AND FIRE-RATED WALLS
A0.4 SCALE: 1 1/2" = 1'-0"



4C HEAD, SILL & WALL PENETRATIONS
A0.4 SCALE: 3" = 1'-0"

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ARCHITECTURAL SITE PLAN

SCALE: 1" = 30'-0"

1

2

3

4

A

B

C

D

E

EXISTING FIRE HYDRANT LOCATION

EXISTING FDC LOCATION

EXISTING FIRE HYDRANT LOCATION

DASHED AREA SHOWS APPROXIMATE LOCATION OF PROPOSED SITE IMPROVEMENTS

EXISTING FIRE LANE

SHADED AREA SHOWS APPROXIMATE AREA OF WORK
LIGHT GRAY AREA SHOWS PORTION OF EXISTING
BUILDING TO BE REMODELED.
DARK GRAY AREA SHOWS PROPOSED ADDITION.

EGRESS PATH TO RIGHT OF WAY

EXISTING FIRE LANE

ARIAL ACCESS

EXISTING FIRE LANE

EXISTING FIRE LANE

EXISTING FIRE HYDRANT LOCATION

EERC SYSTEM TO BE A DEFERRED SUBMITTAL

VOSE ES ADDITION

BEAVERTON SCHOOL DISTRICT

11350 SW DENNEY RD
BEAVERTON, OR 97008

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REVISIONS

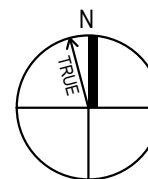
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ARCHITECTURAL
SITE PLAN

AS1.1



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FIRST FLOOR DEMOLITION PLAN

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

DEMOLITION GENERAL NOTES

DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.

THE CONTRACTOR SHALL:

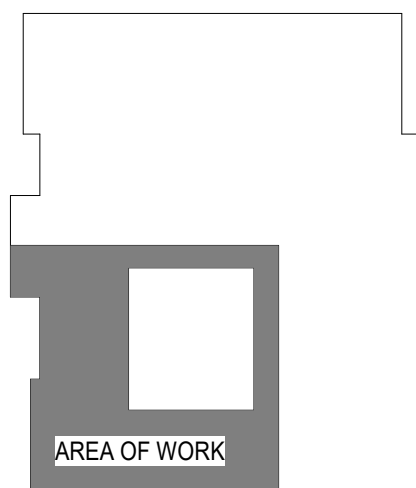
- COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE FOR USER'S SAFETY.
- COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
- CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
- MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
- VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
- REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILING, SOFFITS, MARKERBOARDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
- THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
- PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
- REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
- EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
- VERIFY AND MAINTAIN THE LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.
- PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
- CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
- SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
- AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL ENGINEER.
- WHERE CMU WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY REMOVING CMU IN TOOTH-IN PATTERN BOTH SIDES OF DEMOLITION FOR CONTRACTOR TO TOOTH-IN NEW CMU PATCHES.
- WHERE PLASTER/STUD WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.

REFERENCE KEYNOTES

SHEET NOTES

- DEMO EXTERIOR WALL
- DEMO GLAZING AND FRAME
- DEMO EXISTING EXTERIOR SLAB-ON-GRADE IN ITS ENTIRETY TAKING CARE NOT TO DAMAGE EXISTING COLUMNS, FOUNDATIONS, CONCRETE PEDESTALS, AND PROTECTIVE CONCRETE ENCASUREMENT AROUND EXISTING COLUMNS. SEE STRUCTURAL.
- DEMO INTERIOR PARTITION
- DEMO HM FRAME AND DOOR
- SALVAGE FIRE EXTINGUISHER AND RECESSED CABINET FOR NEW WORK
- SALVAGE WALL MOUNTED SHORT THROW PROJECTOR AND INSTALL IN NEW CONSTRUCTION
- PROTECT EXISTING BRACE FRAME FURRED WALL. PATCH AS NEEDED FOR NEW CONSTRUCTION.
- DEMO FINISH FLOOR (CARPET, VIF) AND WALL BASE
- DEMO FINISH FLOOR (VCT, VIF) AND WALL BASE
- NEATLY SAW CUT EXISTING SLAB-ON-GRADE AS REQUIRED TO INSTALL NEW FOOTINGS. REFER TO STRUCTURAL DRAWINGS FOR NEW FOOTINGS AND SLAB INFILL DETAIL.

KEY PLAN



VOSE ES ADDITION

BEAVERTON SCHOOL DISTRICT

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BEAVERTON, OR 97008

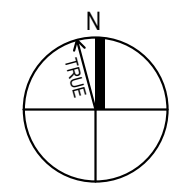
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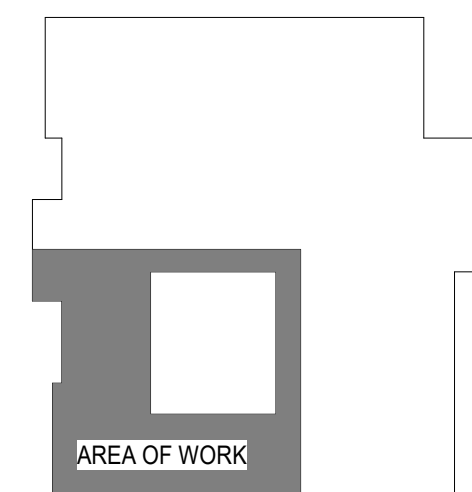
FIRST FLOOR
DEMOLITION
PLAN

AD1.1

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FIRST FLOOR
REFLECTED
CEILING
DEMOLITION
PLAN

AD3.1



VOSE ES ADDITION

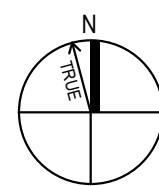
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BEAVERTON, OR 97008



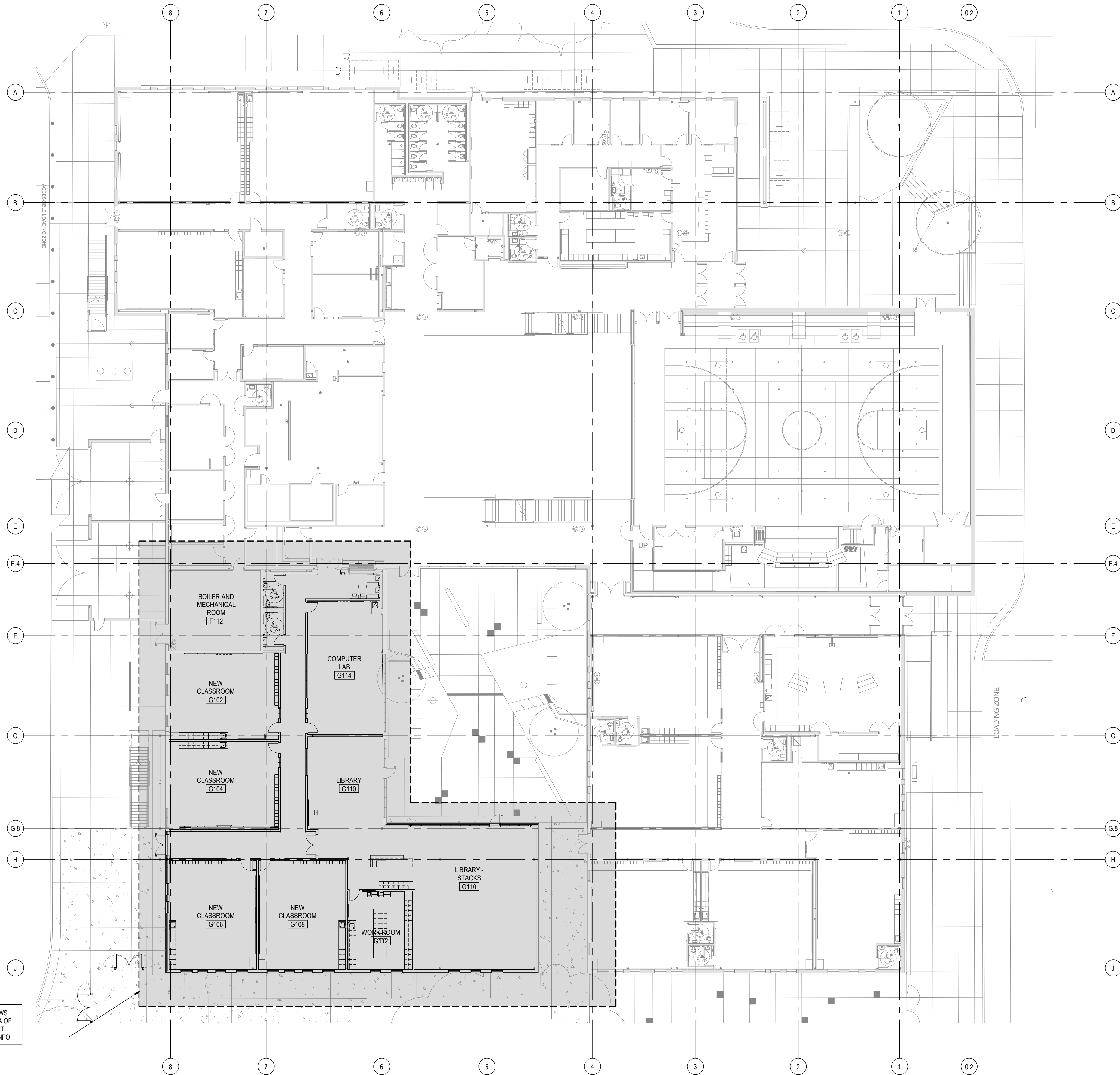
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SHADED AREA SHOWS
APPROXIMATE AREA OF
WORK. SEE PROJECT
PLANS FOR MORE INFO

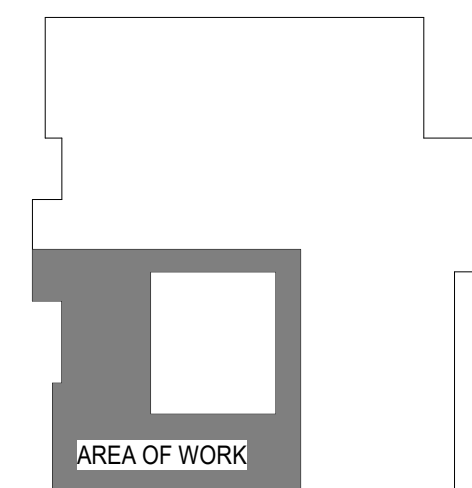


OVERALL FIRST FLOOR PLAN DIAGRAM (AREA OF WORK)

SCALE: 1/16" = 1'-0"



KEY PLAN



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OVERALL FIRST
FLOOR PLAN

OP.1

DLR Group
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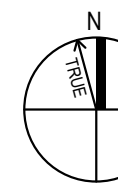
VOSE ES ADDITION

BEAVERTON SCHOOL DISTRICT

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BEAVERTON, OR 97008

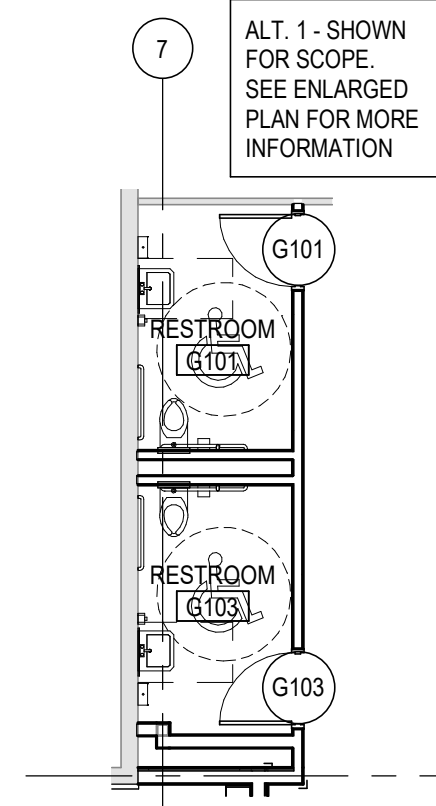
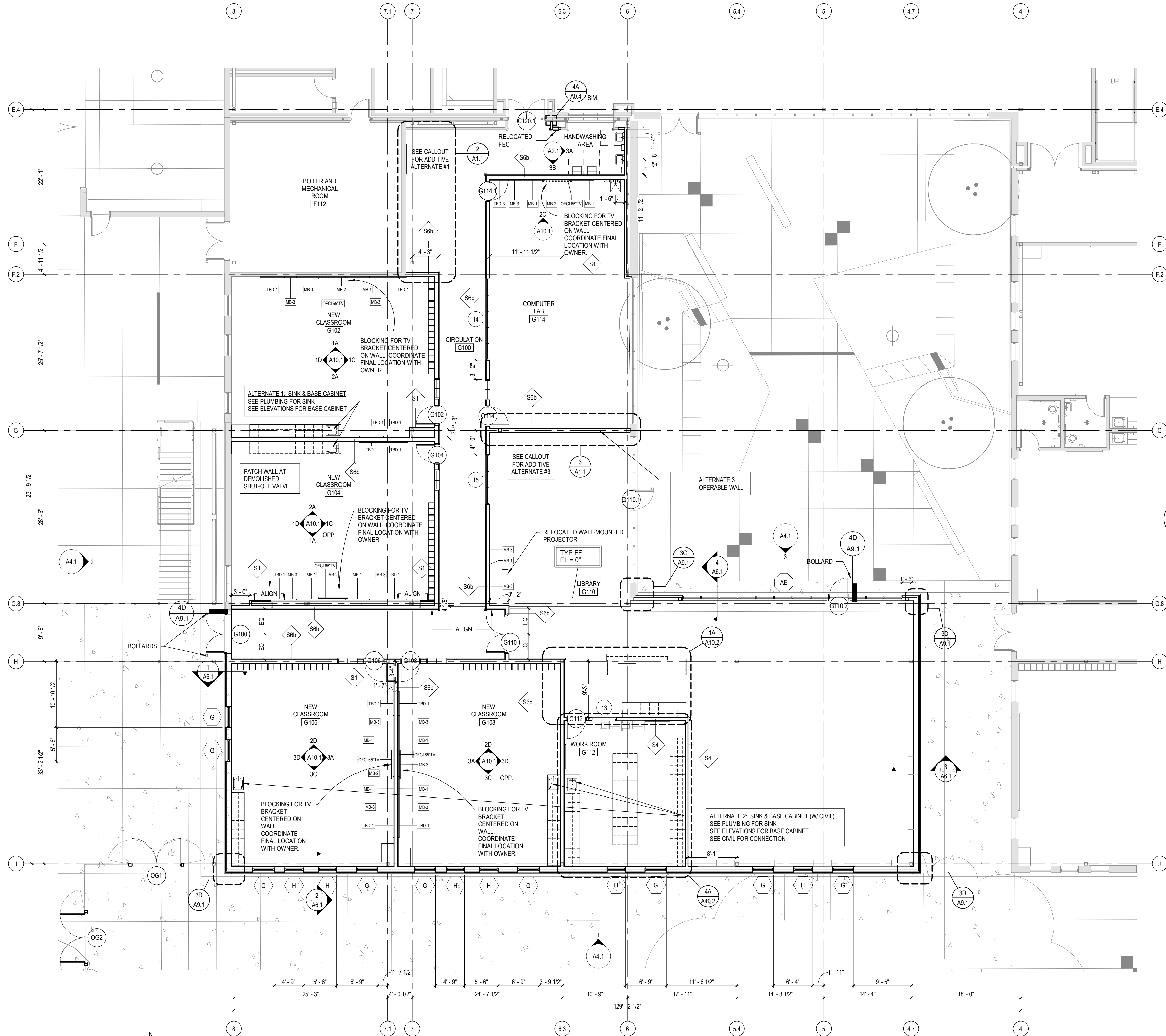


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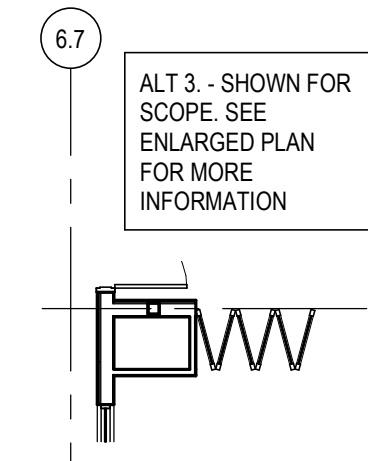
FIRST FLOOR PLAN

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



ALT. 1 - RR

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



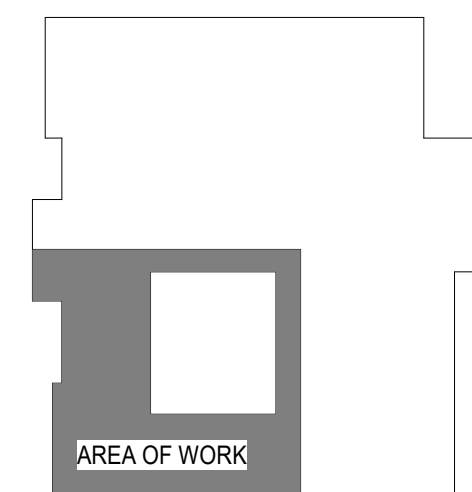
ALT. 3 - OPER. WALL

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

CASEWORK GENERAL NOTES:

- CASEWORK AND MILLWORK GENERAL NOTES APPLY TO ALL CASEWORK AND MILLWORK SHEETS.
- ELEVATIONS DENOTED AS MILLWORK ARE SPECIFIED UNDER DIVISION 06. OTHERS CONSIDERED CASEWORK SPECIFIED UNDER DIVISION 12, UNLESS NOTED OTHERWISE.
- BASE AND TALL STORAGE CABINETS: 24 INCHES DEEP, UNLESS NOTED OTHERWISE.
- WALL CABINETS: 14 INCHES DEEP, UNLESS NOTED OTHERWISE.
- TALL STORAGE UNITS TO BE 24 INCHES DEEP, UNLESS NOTED OTHERWISE.
- PROVIDE ADJUSTABLE SHELVING IN CASEWORK, UNLESS NOTED OTHERWISE.
- PROVIDE SUBSTRATE OF MARINE GRADE PLYWOOD FOR ALL COUNTERTOPS FITTED WITH SINKS.
- PROVIDE SUBSTRATE OF MDO FOR ALL COUNTERTOPS NOT FITTED WITH SINKS.
- INDICATES CASEWORK TO BE BID AS AN ALTERNATE. SEE PROJECT MANUAL FOR ALTERNATE DESCRIPTIONS.
- WHERE ELECTRICAL DEVICES ARE LOCATED IN CASEWORK, CASEWORK CONTRACTOR SHALL PROVIDE FINISHED OPENINGS. COORDINATE LOCATION AND QUANTITY WITH ELECTRICAL CONTRACTOR.
- PROVIDE JOINT SEALANT AT PERIMETER JOINTS WHERE COUNTERTOPS, BACK AND SIDE SPLASHES, CASEWORK, AND MILLWORK ABUT WALLS.
- FIELD VERIFY DIMENSIONS OF CABINET LOCATIONS IN BUILDING PRIOR TO FABRICATION.
- PROVIDE FINISHED ENDS AT ALL EXPOSED ENDS OF CASEWORK AND MILLWORK.
- ALL EXPOSED SURFACES IN OPEN SHELVING SHALL BE PLASTIC LAMINATE COVERED.
- WHEN LINEAR PATTERN ON PLAM, SOLID SURFACE OR RESIN/PLASTIC PANELS OCCURS, PATTERN TO RUN VERTICALLY, UNLESS NOTED OTHERWISE.
- PROVIDE T-MOLDING AT ALL EXPOSED EDGES OF CABINETS, OR CUBBIES UNO, T-MOLDING TO MATCH COLOR OF ADJACENT PLAM UNO.
- PROVIDE WD-1 BEVELED HARDWOOD EDGE BAND AT ALL PLAM COUNTERTOPS. PROVIDE WF-1 SEALER ON EDGE BAND TYP.
- ALL CABINETS TO BE PLAM-1 UNO, ALL COUNTERTOPS & BACKSPLASH TO BE PLAM-2 UNO.
- FURNISH AND INSTALL FIRE-RETARDANT-TREATED WOOD BLOCKING IN STEEL STUD PARTITIONS FOR PROPER ANCHORAGE OF WALL ATTACHED ITEMS, I.E. TOILET ACCESSORIES, TOILET PARTITIONS, CASEWORK, MILLWORK, WAINSCOT PANELS, WALL-MOUNTED FIXTURES, MARKERBOARDS, TACKBOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS, ETC.

KEY PLAN



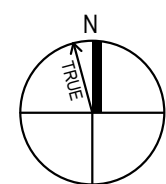
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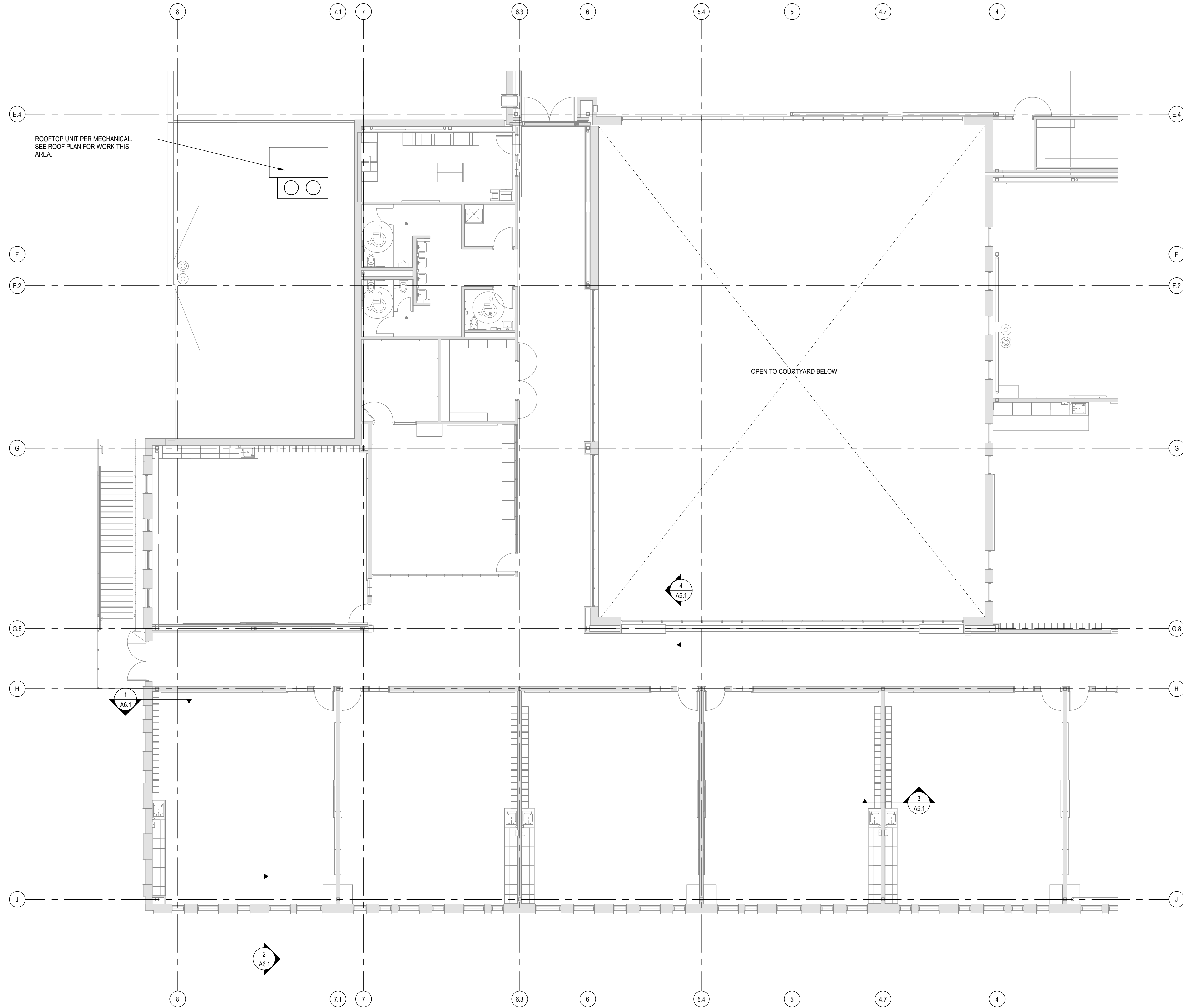
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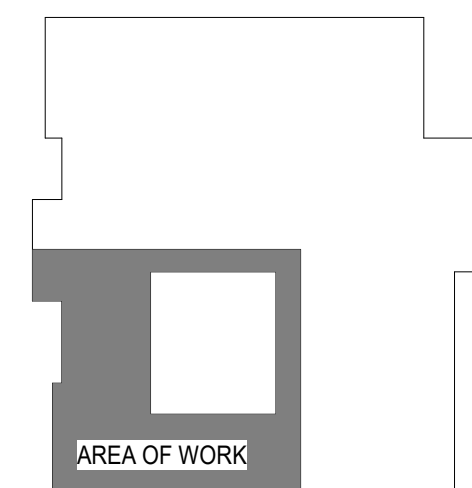
SECOND FLOOR PLAN

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

DRAWING PRIMARILY FOR REFERENCE AND WALL SECTION TAGS.
SEE ROOF DETAILS FOR MECHANICAL UNIT CURB INFO.
NO INTERIOR WORK THIS FLOOR.



KEY PLAN



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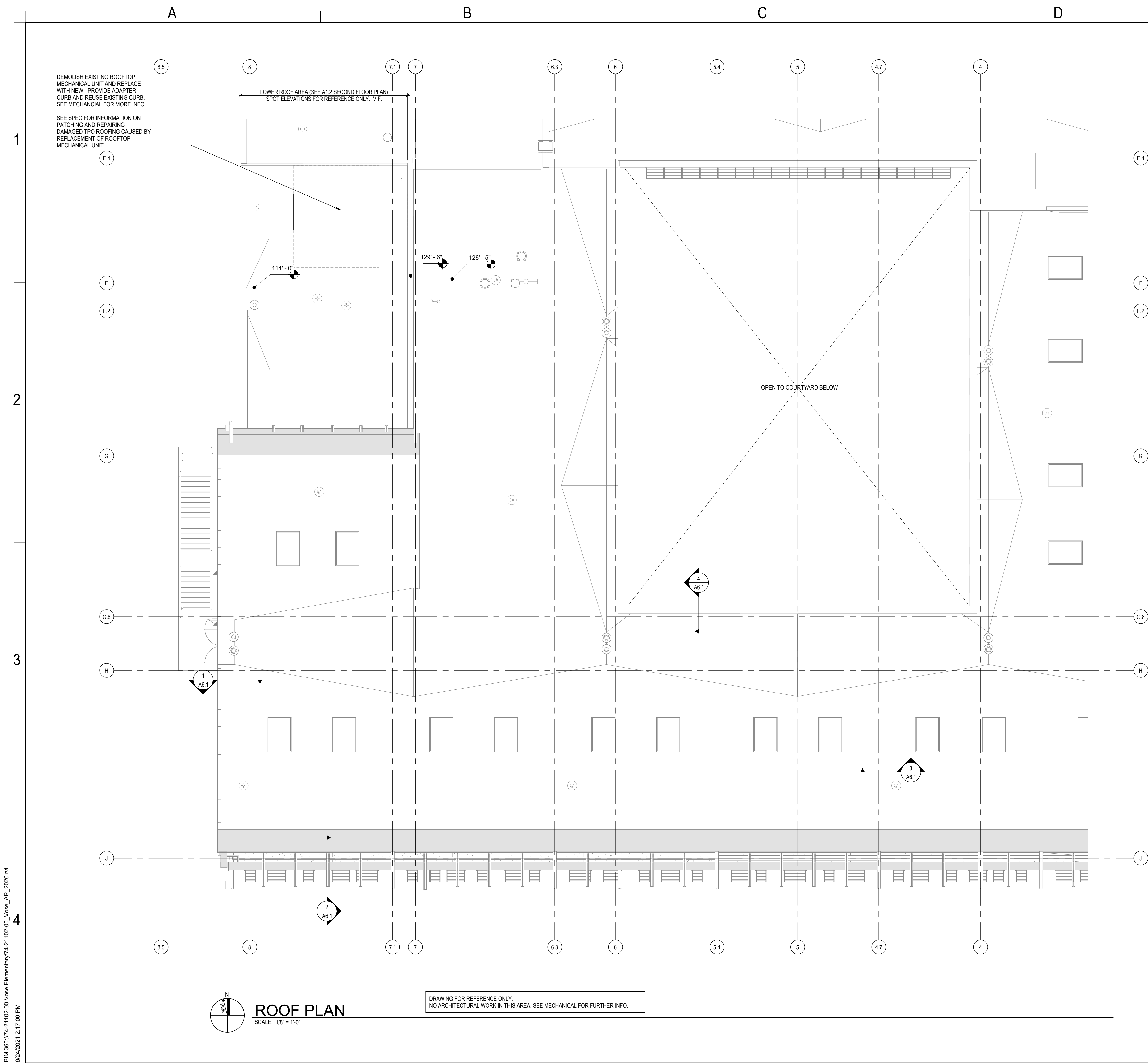
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SECOND FLOOR
PLAN

A1.2

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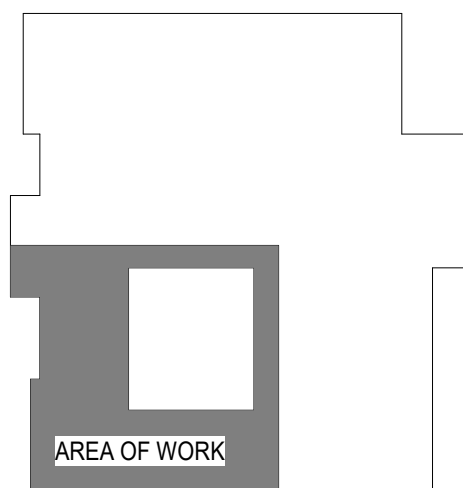
ROOF PLAN GENERAL NOTES

- ROOF PLAN GENERAL NOTES APPLY TO ALL ROOF PLAN SHEETS.
- ROOF SLOPES ARE CREATED BY SLOPING THE ROOF STRUCTURE UNLESS NOTED OTHERWISE. SEE STRUCTURAL DRAWINGS FOR ELEVATIONS OF THE HIGH AND LOW POINTS TO DETERMINE PROPER TAPER IN INSULATION.
- TAPERED INSULATION SHALL PROVIDE A MINIMUM OF 1/4-INCH PER FOOT OF SLOPE TO ROOF DRAINS, UNLESS NOTED OTHERWISE.
- AREAS MARKED WITH A HATCHED PATTERN INDICATE TAPERED INSULATION.
- ALL ROOF CURBS TO BE A MINIMUM OF 8 INCHES ABOVE ROOFING LEVELS. PROVIDE TAPERED INSULATION ROOF SADDLES AT ROOF CURBS TO PROVIDE DRAINAGE AROUND CURB.
- SEE STRUCTURAL DRAWINGS FOR FRAMING AROUND ROOF PENETRATIONS.
- COORDINATE THE SIZE AND LOCATION OF ROOF PENETRATIONS FOR MECHANICAL AND ELECTRICAL EQUIPMENT. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR PENETRATIONS NOT SHOWN ON THIS DRAWING.
- FLASH DRAINS, CURBS, VENTS AND STACKS PER MANUFACTURER'S RECOMMENDATIONS IF DETAIL NOT SHOWN ON DRAWINGS.
- NO ROOF PENETRATIONS ALLOWED WITHIN 4'-0" EACH SIDE OF FIREWALL. SEE CODE PLAN FOR FIRE WALL LOCATIONS.

REFERENCE KEYNOTES

SHEET NOTES

KEY PLAN



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ROOF PLAN

A1.3

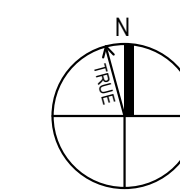
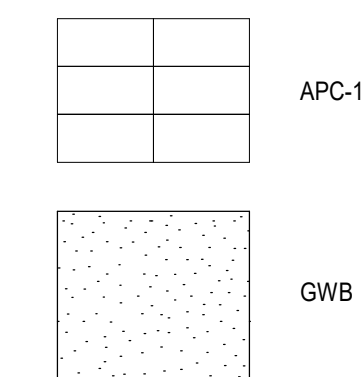
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REFLECTED CEILING PLAN GENERAL NOTES

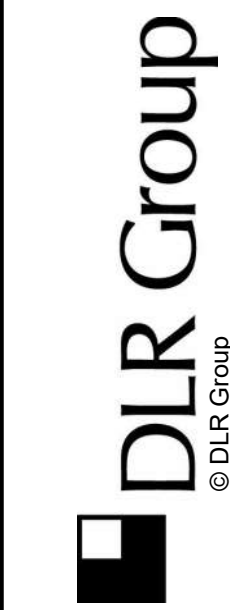
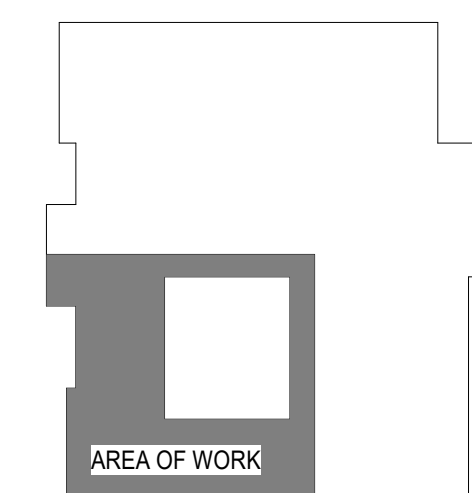
- REFLECTED CEILING PLAN GENERAL NOTES APPLY TO ALL REFLECTED CEILING PLAN SHEETS.
- ALL CEILING GRIDS/PANELS SHALL BE CENTERED IN EACH ROOM UNLESS NOTED OTHERWISE.
- CEILING HEIGHTS ARE NOTED ON THE REFLECTED CEILING PLANS ARE MEASURED FROM THE FINISH FLOOR OF THE ROOM.
- ALL ELECTRICAL FIXTURES, SPEAKERS, SMOKE AND THERMAL DETECTORS, MECHANICAL GRILLES, SPRINKLER HEADS, AND OTHER CEILING MOUNTED DEVICES, SHALL BE CENTERED BETWEEN CEILING GRIDS UNLESS NOTED OTHERWISE. SPRINKLER HEADS SHALL BE WITHIN A 3-INCH RADIUS CENTERED BETWEEN CEILING GRIDS.
- IN ACOUSTICAL CEILING PANELS WITH SCORE IN THE CENTER, CENTER DEVICES REFERENCE IN NOTE D IN ONE HALF OF THE TILE. DO NOT LOCATE ON THE SCORE. FOR APC WITH MULTIPLE SCORED PATTERNS, COORDINATE LOCATION WITH THE ARCHITECT.
- PROVIDE SUSPENSION SYSTEM AROUND ELECTRICAL FIXTURES, MECHANICAL GRILLES, DIFFUSERS, AND OTHER CEILING MOUNTED DEVICES. AT ACOUSTICAL PANEL CEILINGS.
- ALL DIMENSIONS ON REFLECTED CEILING PLANS ARE ACTUAL AND ARE TO THE FOLLOWING UNLESS NOTED OTHERWISE:
 - FACE OF FINISHED WALL
 - FACE OF FINISHED BULKHEADS
 - CENTERLINE OF COLUMNS
 - CENTERLINE OF TEES
- IN AREAS WITH EXPOSED STRUCTURE CEILINGS, COORDINATE EXACT LOCATIONS OF MECHANICAL GRILLES, DIFFUSERS, DUCTWORK AND ELECTRICAL FIXTURES WITH EACH REPRESENTATIVE SUBCONTRACTOR.
- ALL WALLS EXTEND TO UNDERSIDE OF DECK EXCEPT THOSE SHOWN SHADED IN WHICH GYPSUM BOARD OR MASONRY EXTENDS MIN 4 INCHES ABOVE FINISHED CEILING. ALL METAL STUDS EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK.

CEILING KEY



ALT.1 - RR RCP
SCALE: 1/8" = 1'-0"

KEY PLAN



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FIRST FLOOR
REFLECTED
CEILING PLAN

A3.1

A

B

C

D

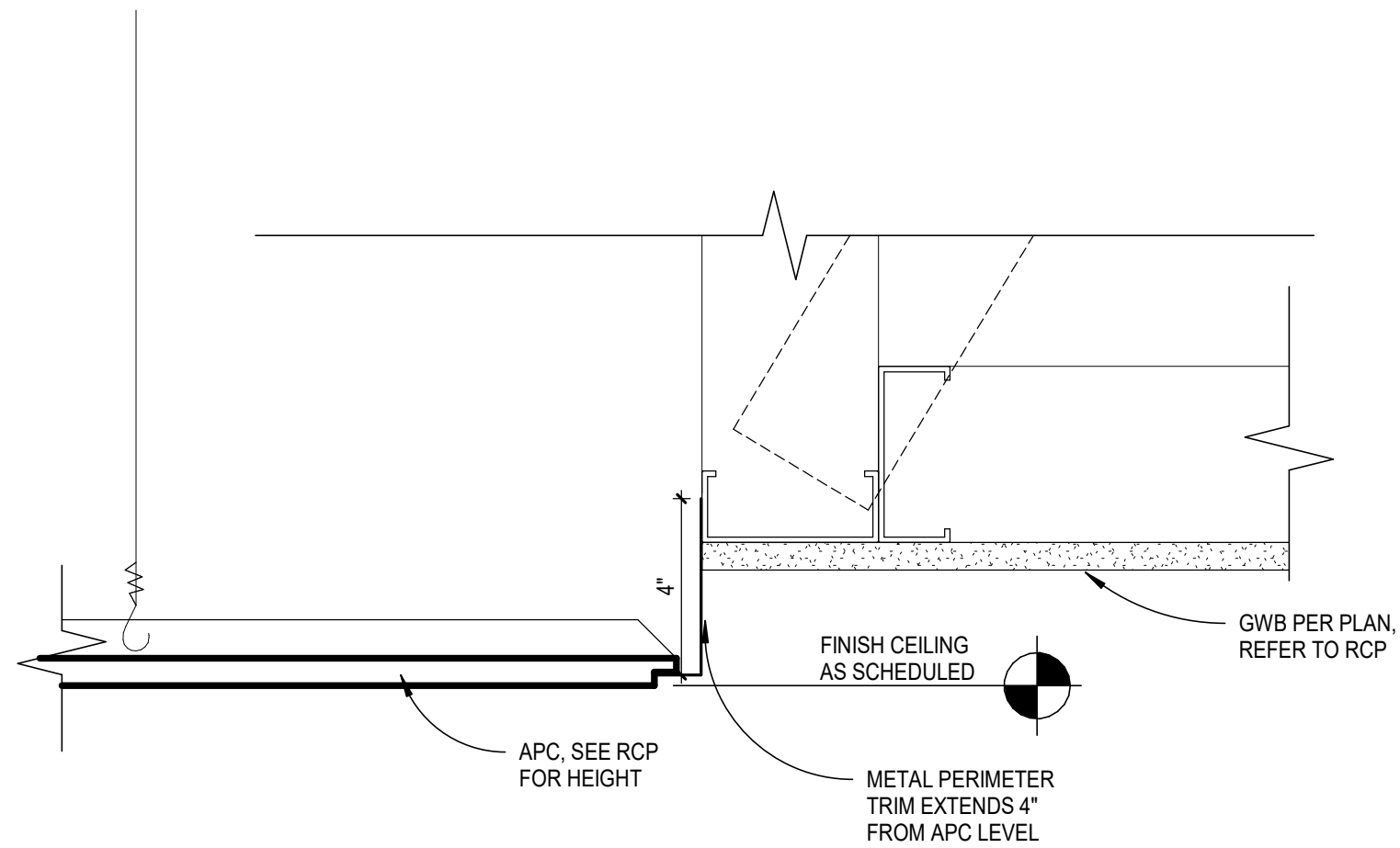
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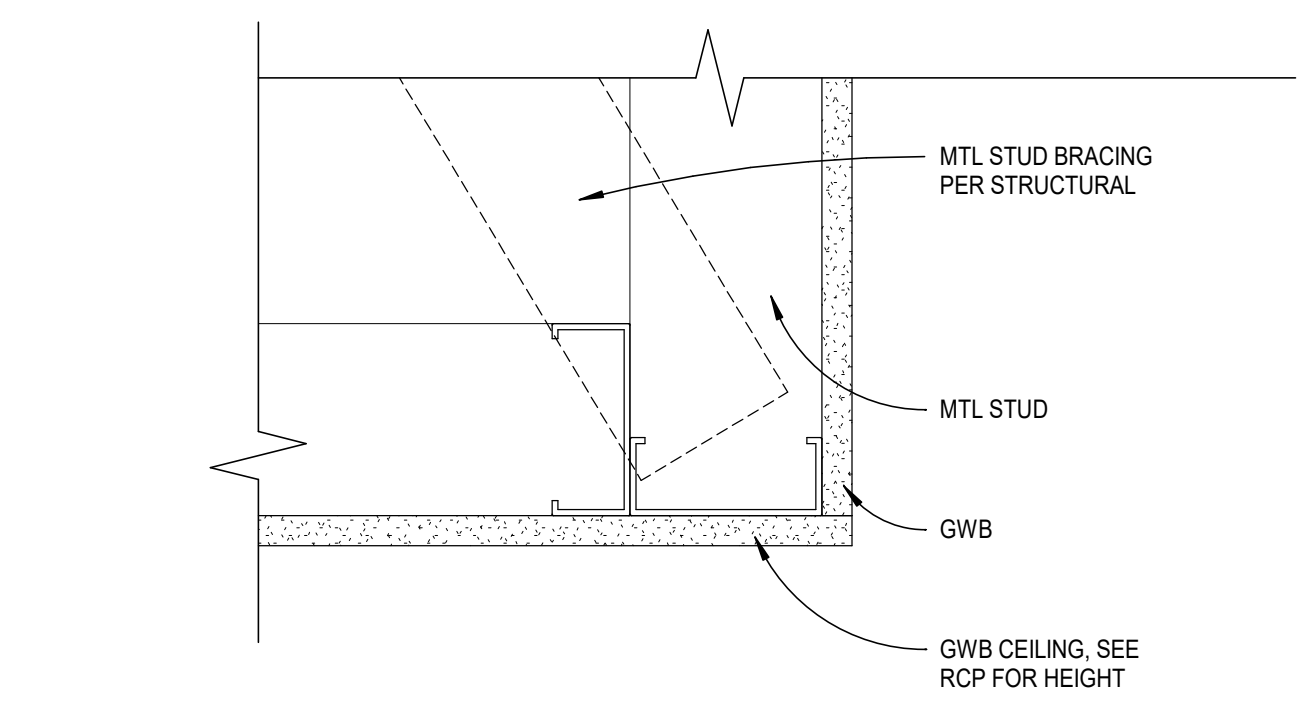
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3

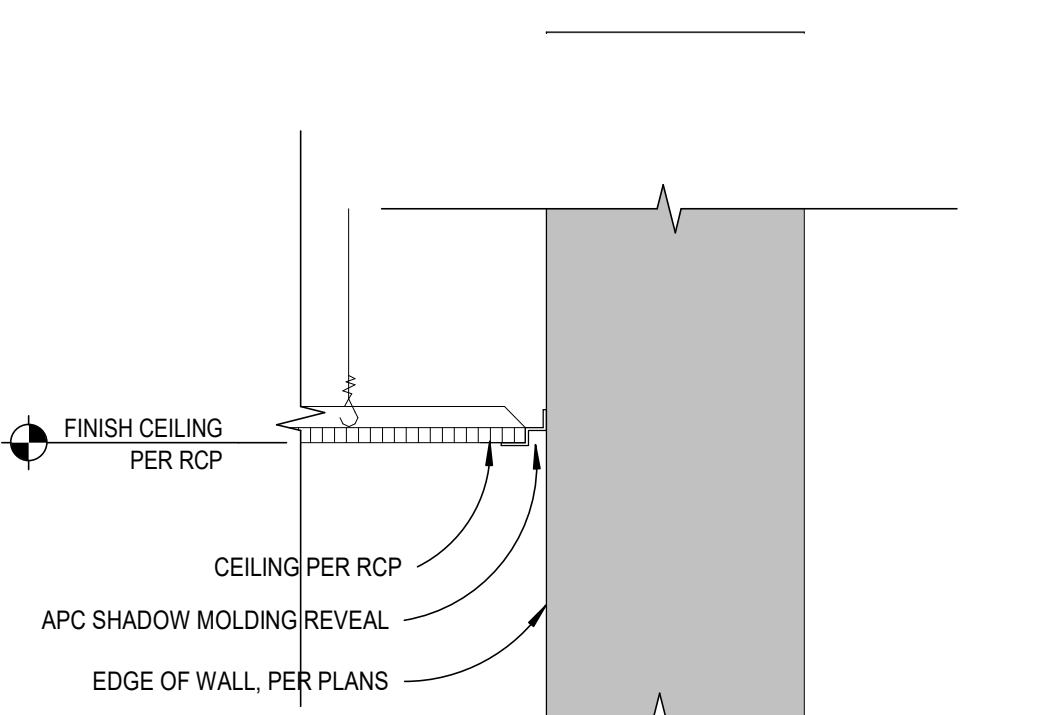
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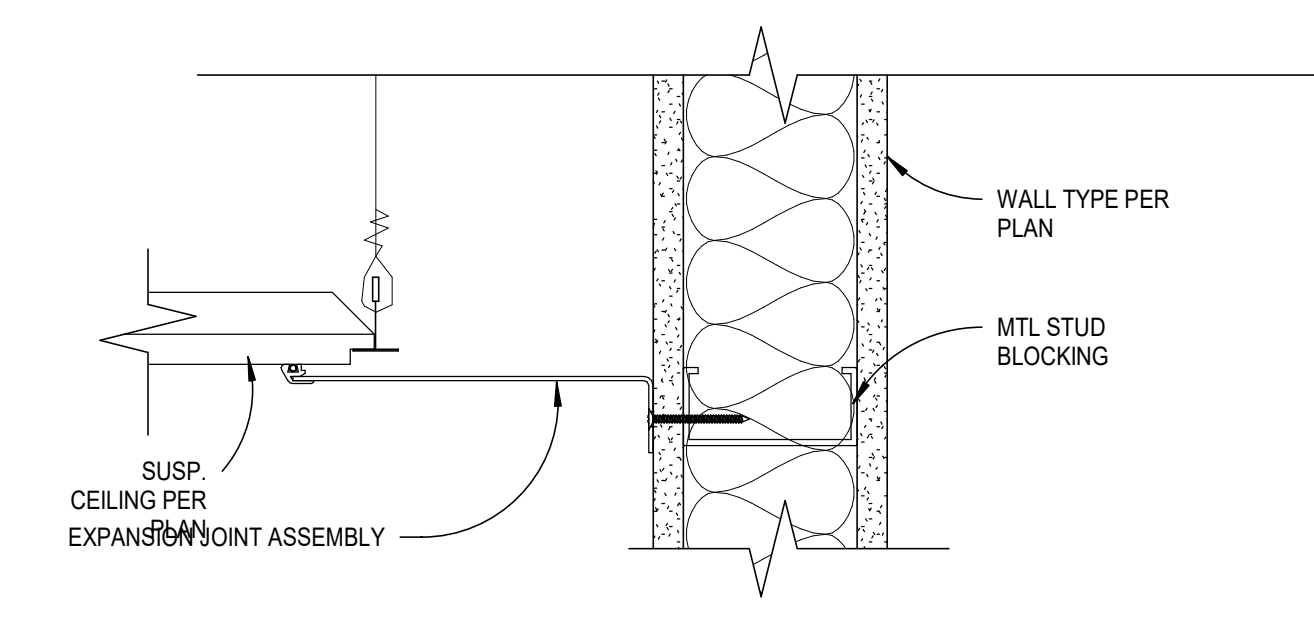
2C APC CLOUD EDGE CLOSER GYP. ABOVE
A3.8 SCALE: 3" = 1'-0"



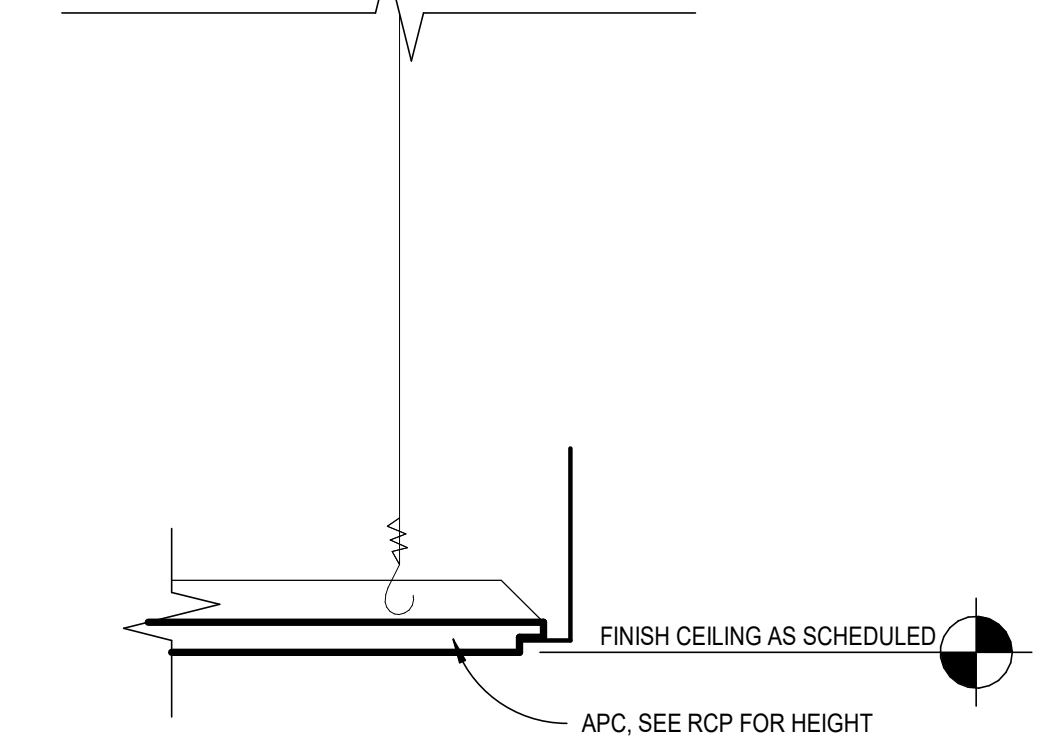
1D GWB CEILING TO BULKHEAD TRANSITION
A3.8 SCALE: 3" = 1'-0"



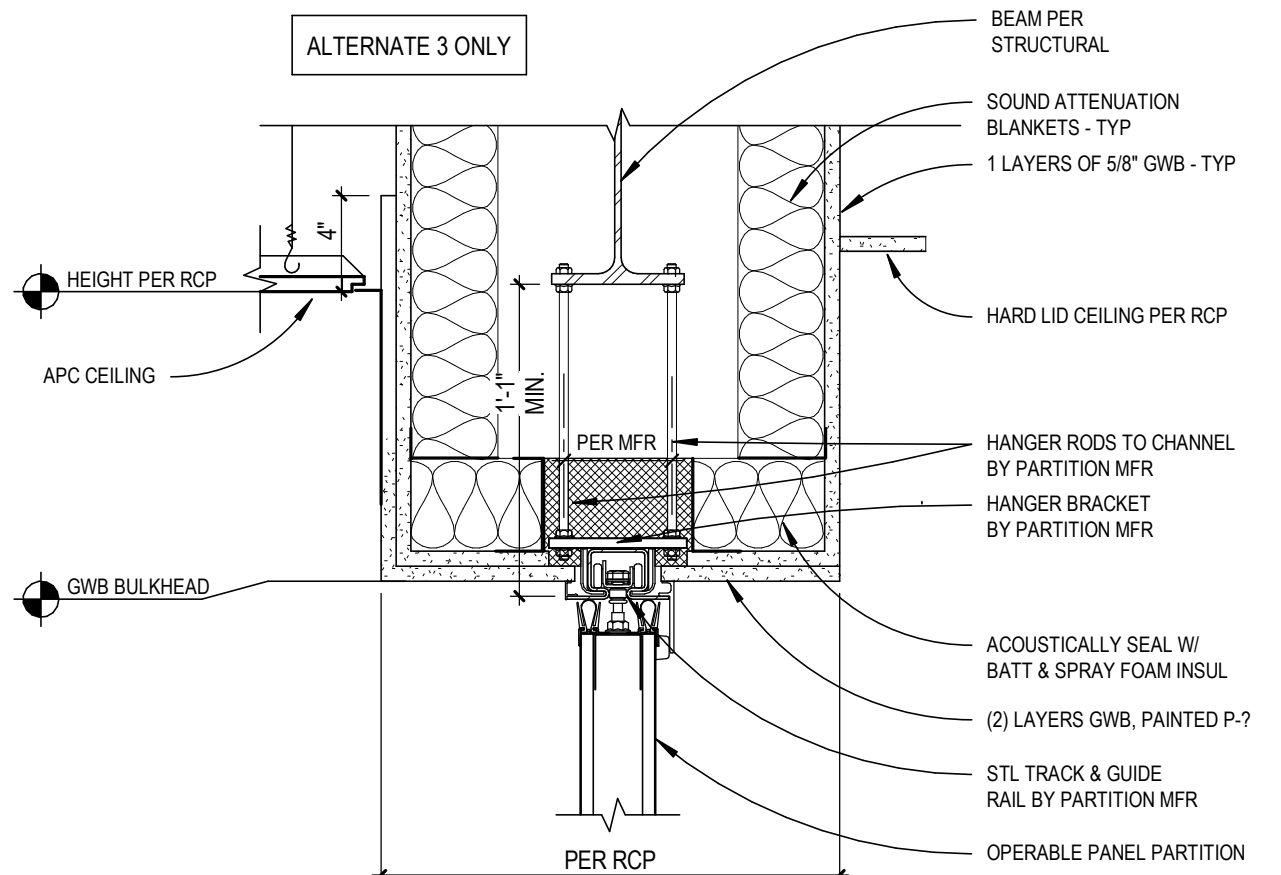
1E TYPICAL APC CEILING DETAIL AT WALL
A3.8 SCALE: 1 1/2" = 1'-0"



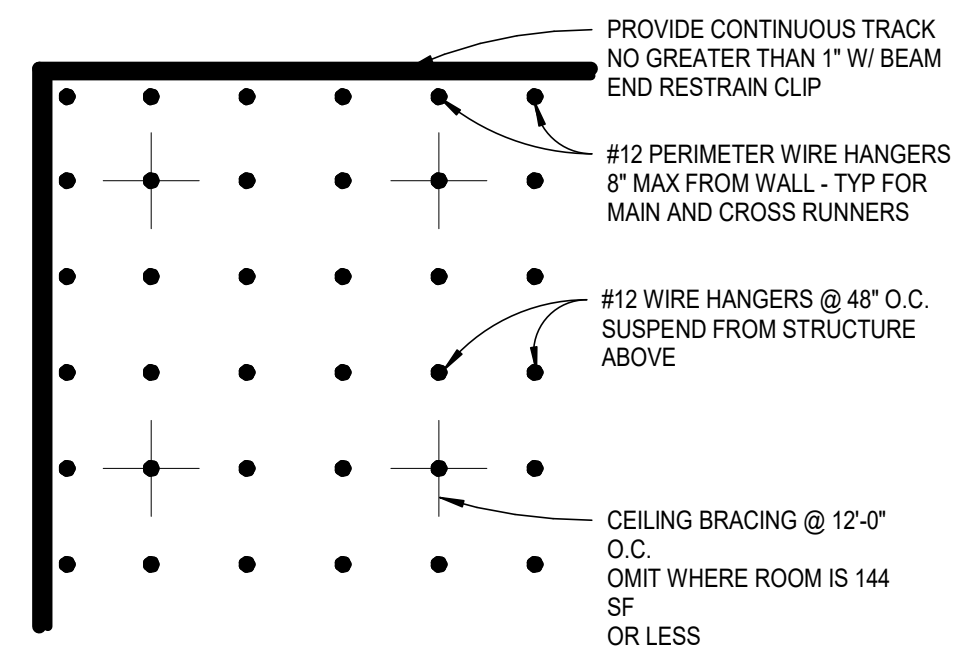
2D SUSPENDED CEILING @ EXPANSION JOINT
A3.8 SCALE: 3" = 1'-0"



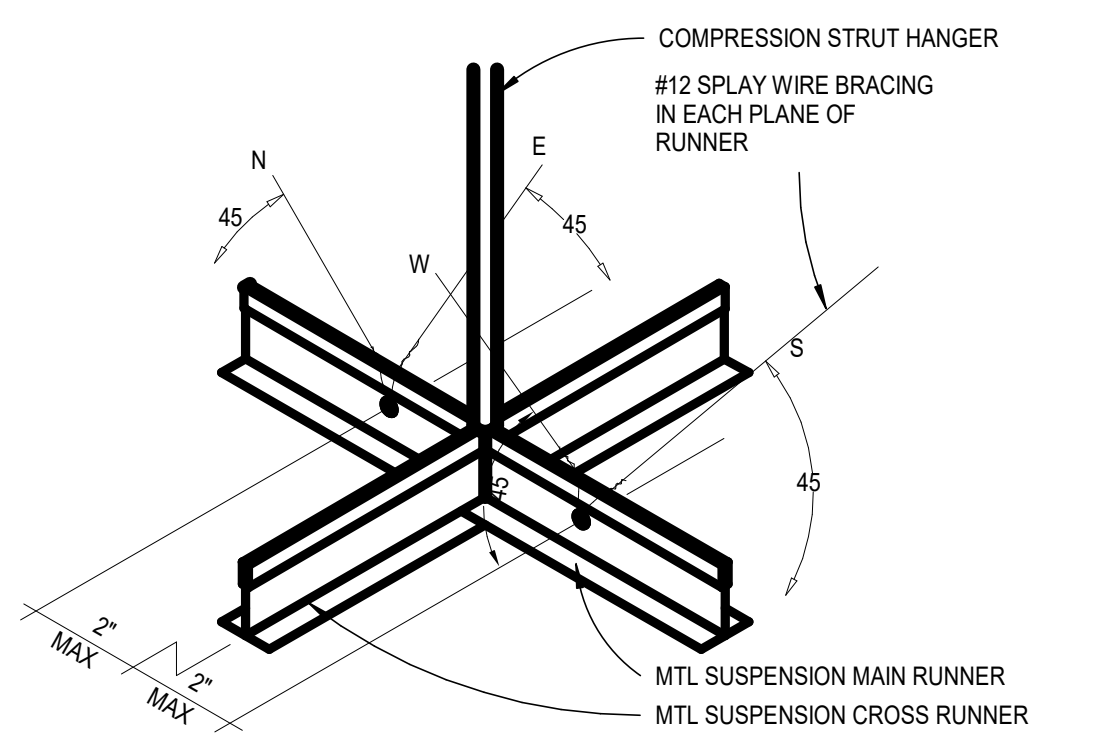
2E APC CLOUD EDGE CLOSER
A3.8 SCALE: 3" = 1'-0"



4C APC - OPERABLE PANEL
A3.8 SCALE: 1 1/2" = 1'-0"



4D TYPICAL BRACING LAYOUT
A3.8 SCALE: 1 1/2" = 1'-0"



4E CEILING BRACING
A3.8 SCALE: 1 1/2" = 1'-0"



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CEILING DETAILS

A3.8

A

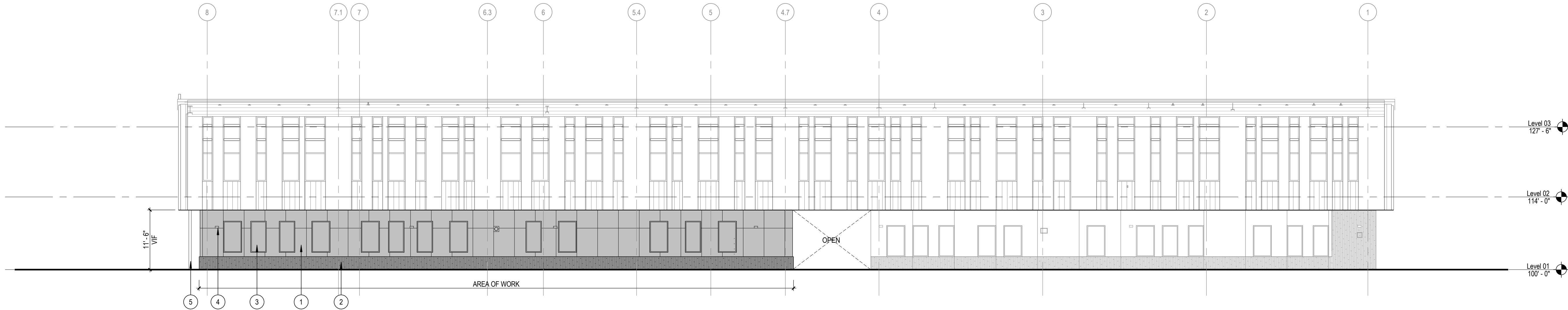
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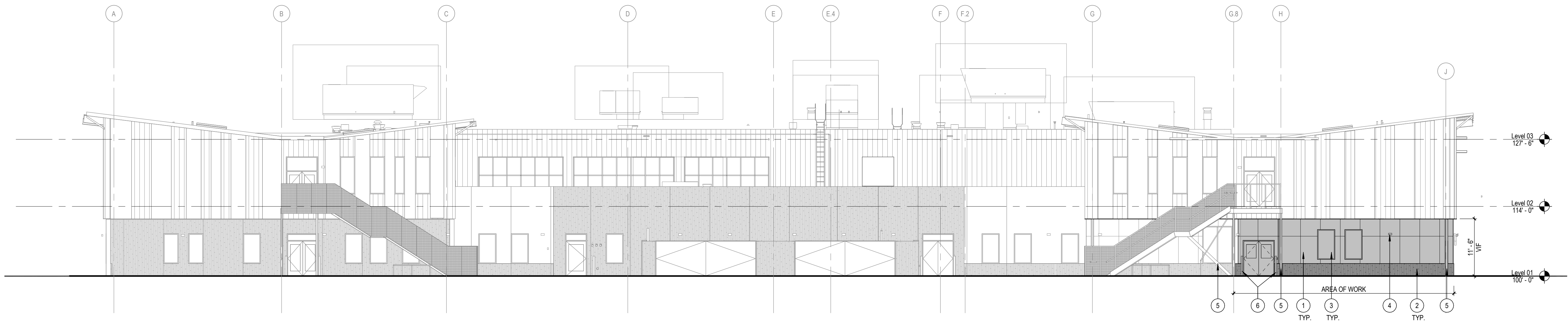
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1



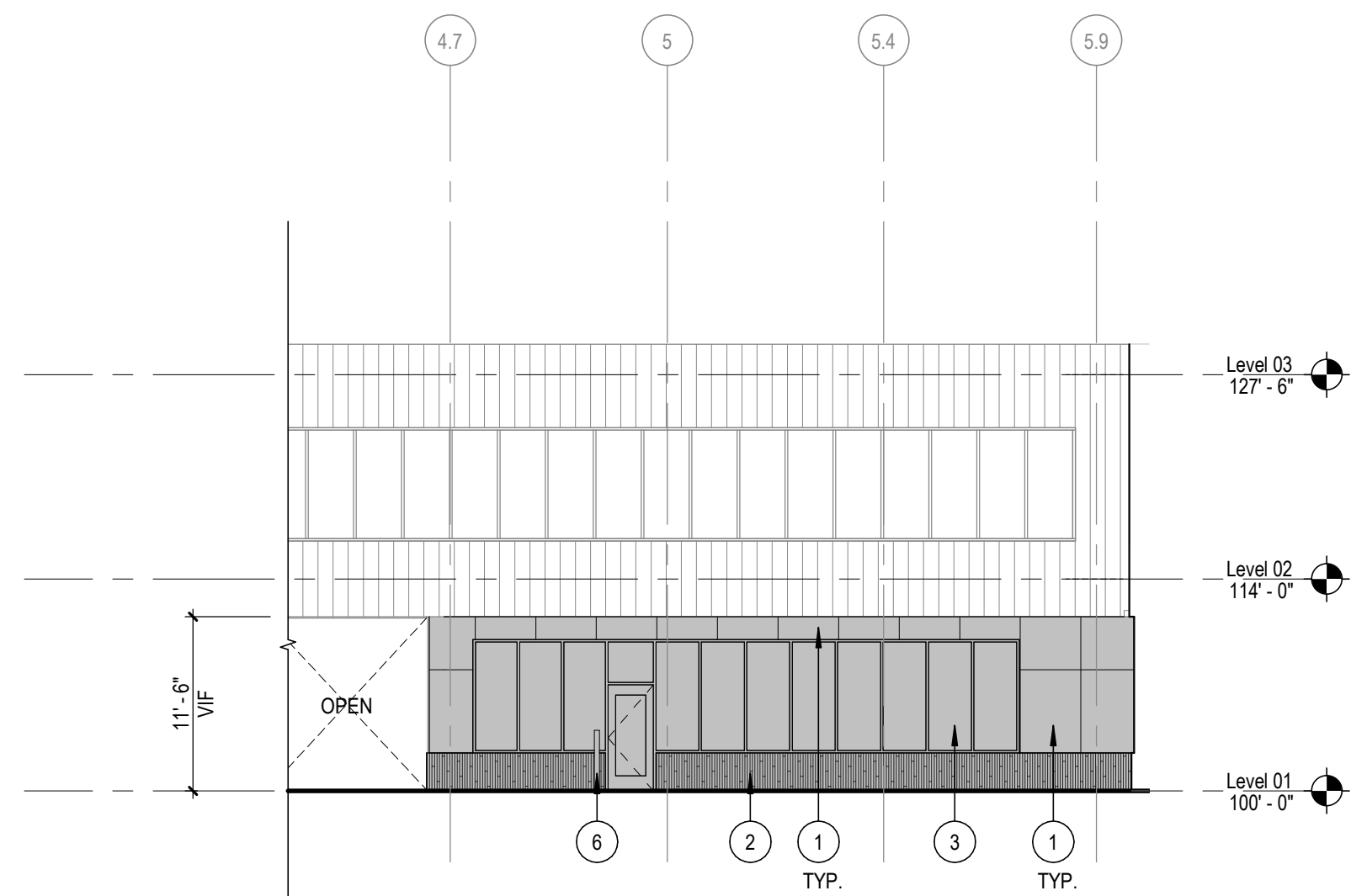
1 SOUTH ELEVATION
A4.1 SCALE: 3/32" = 1'-0"

2



2 WEST ELEVATION
A4.1 SCALE: 3/32" = 1'-0"

3



3 COURTYARD SOUTH ELEVATION
A4.1 SCALE: 3/32" = 1'-0"

SHEET NOTES

- 1 FIBER CEMENT PANEL.
- 2 CONCRETE BASE. SEE TYPICAL EXTERIOR WALL SECTION.
- 3 GLAZING. SEE PLANS FOR FRAME CALLOUTS AND A8.3 FOR DIMENSIONS.
- 4 WALL MOUNTED LIGHT FIXTURE. SEE ELECTRICAL.
- 5 EXISTING EXTERIOR STEEL STRUCTURE (COLUMNS & BRACED FRAMES) TO REMAIN.
- 6 BOLLARD AT DOOR. SEE DETAIL ON A9.1.

SEE PLANS FOR WINDOW TAGS AND WALL SECTION TAGS

DARK GRAY HATCH SHOWS APPROXIMATE AREA OF WORK.
OTHER ELEVATIONS SHOWN FOR REFERENCE ONLY.

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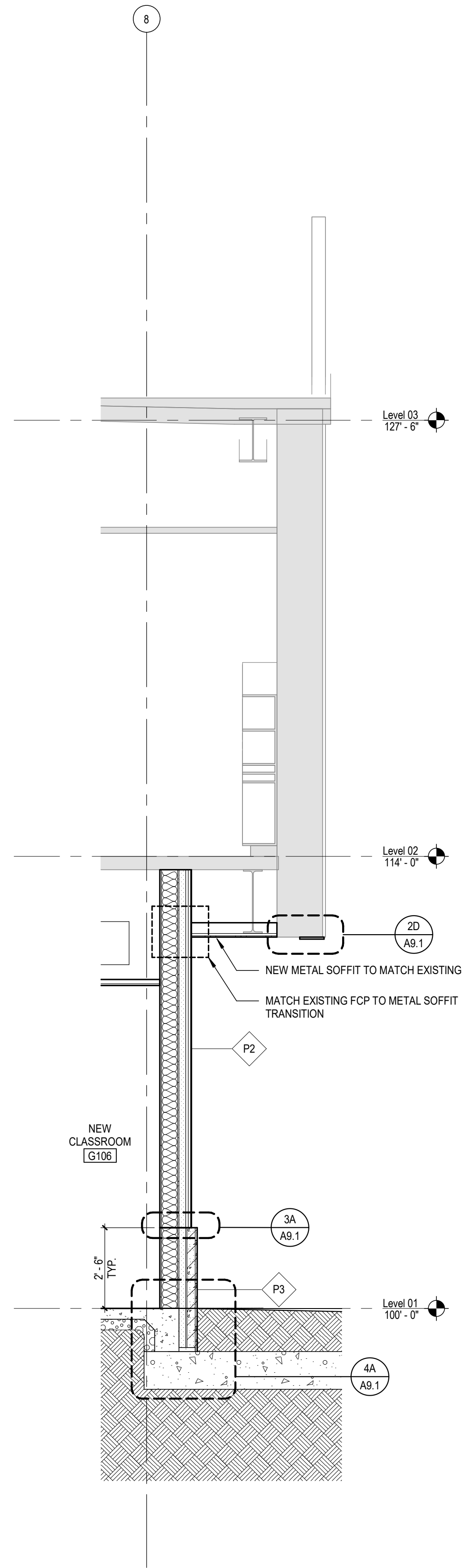
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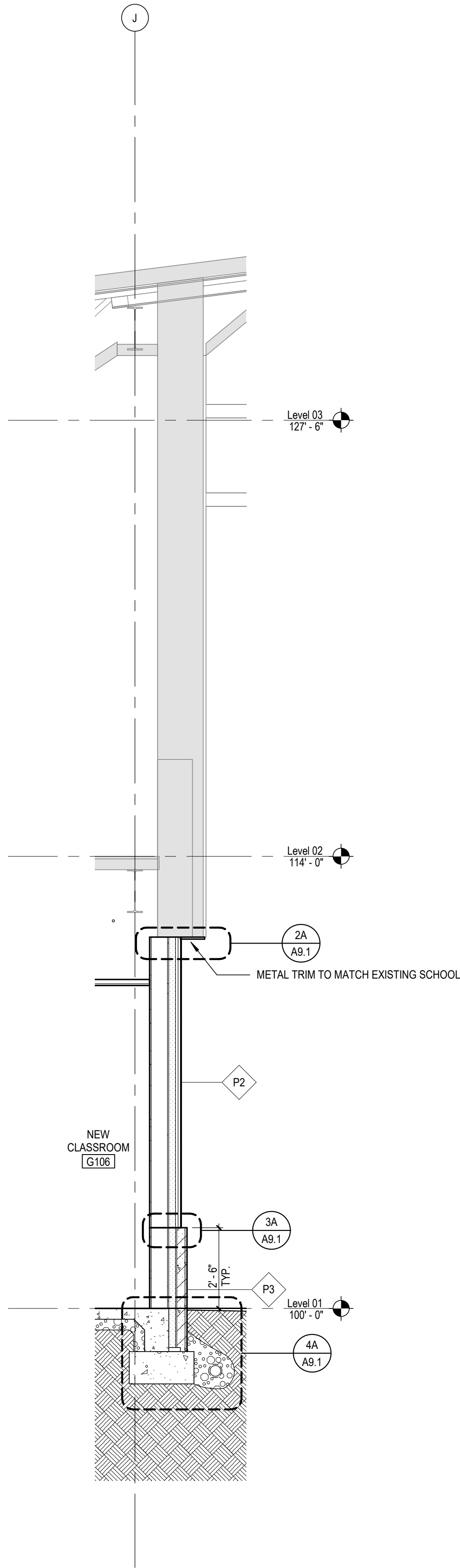
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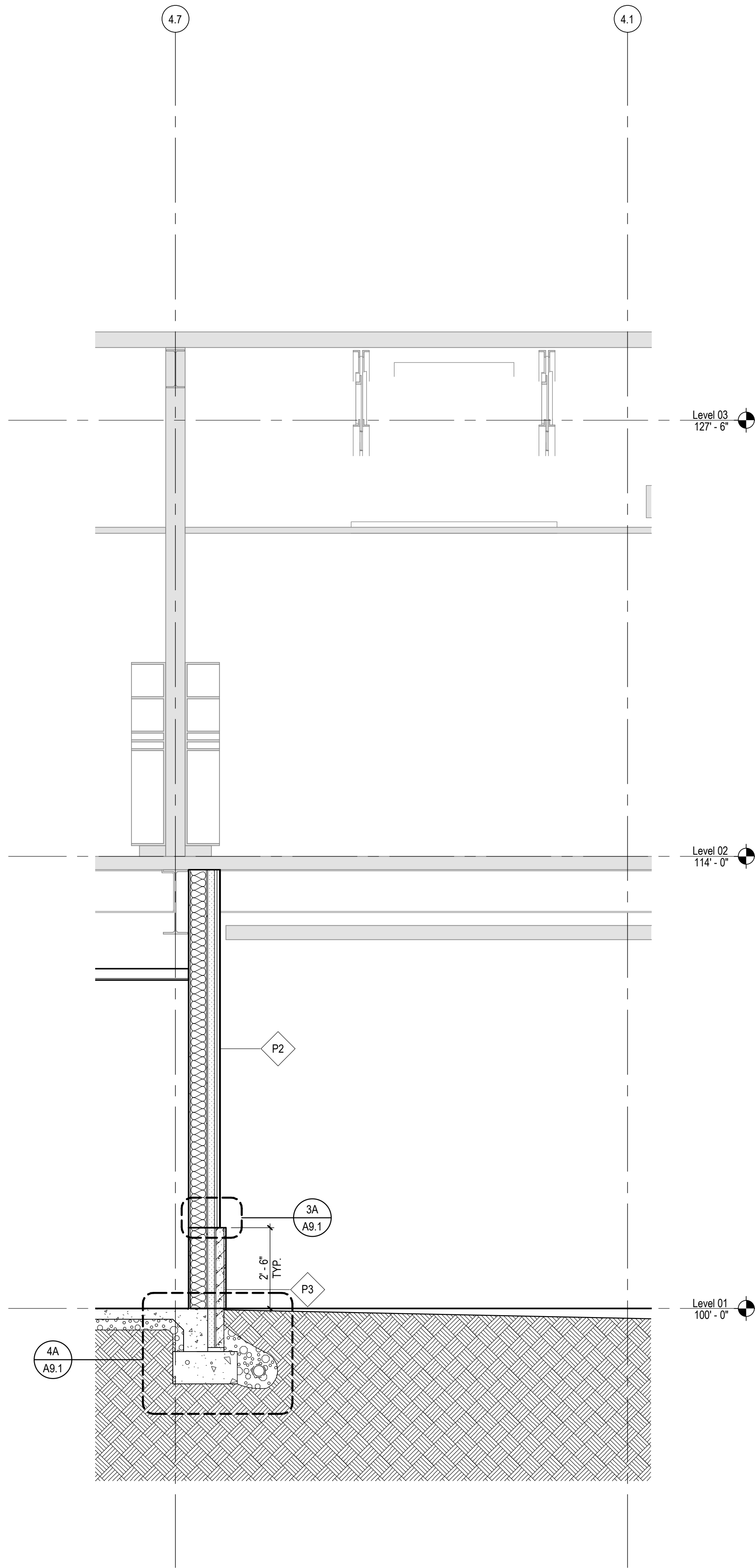
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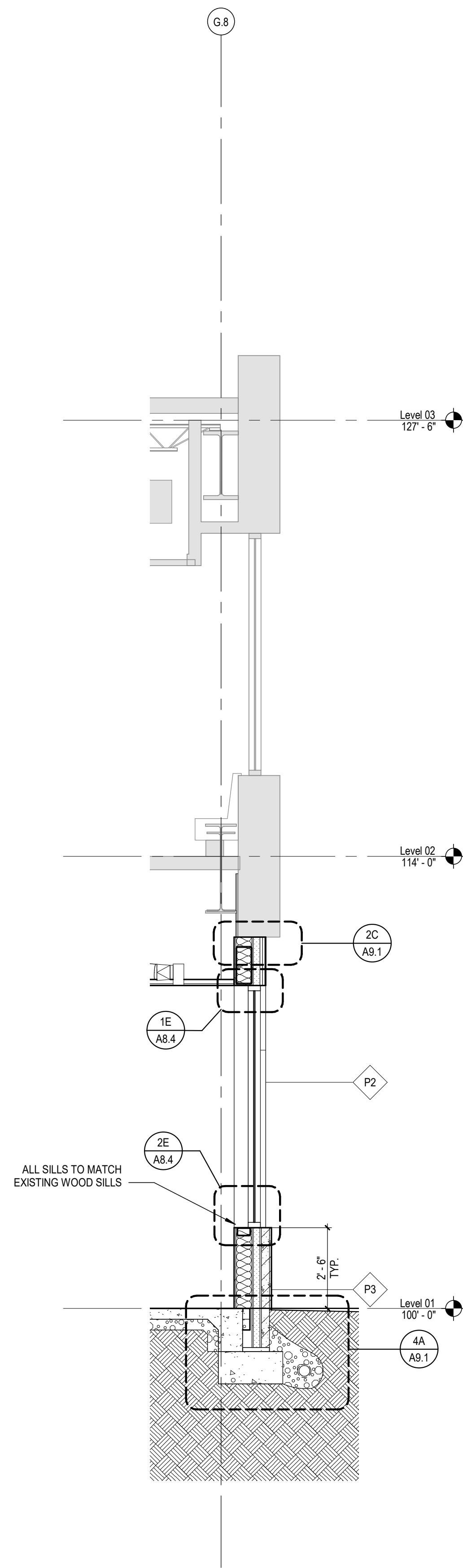
1 WALL SECTION
A6.1 SCALE: 3/8" = 1'-0"



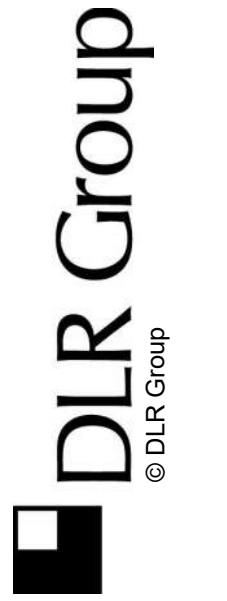
2 WALL SECTION
A6.1 SCALE: 3/8" = 1'-0"



3 WALL SECTION
A6.1 SCALE: 3/8" = 1'-0"



4 WALL SECTION
A6.1 SCALE: 3/8" = 1'-0"

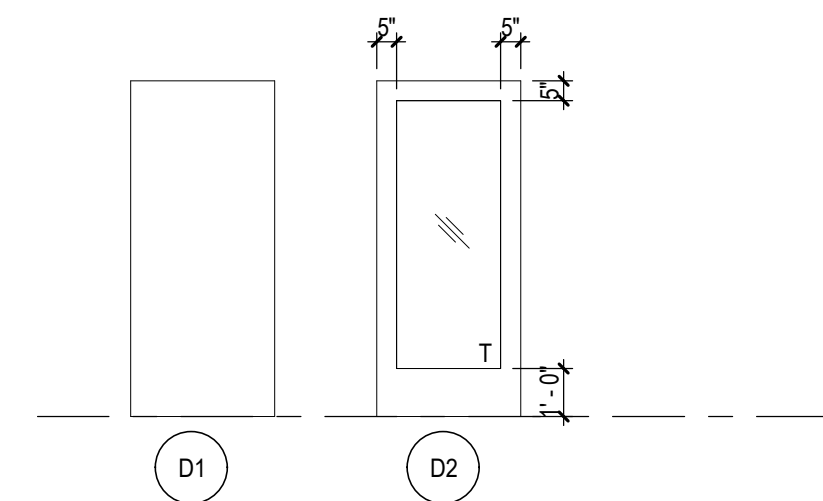


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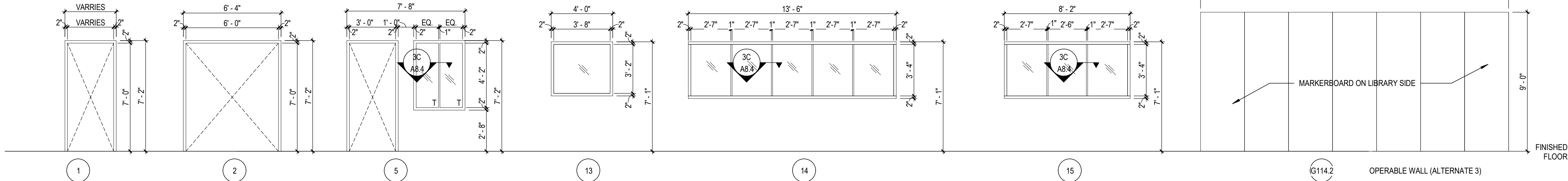
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WALL SECTIONS

A6.1



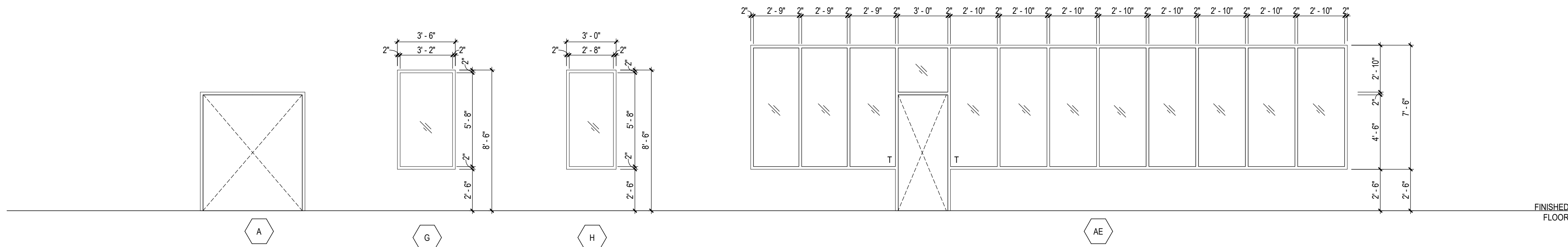
DOOR PANEL TYPES

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



INTERIOR FRAME ELEVATIONS

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



EXTERIOR FRAME ELEVATIONS

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

WINDOW SCHEDULE							
TYPE MARK	FRAME		DETAILS				COMMENTS
	DEPTH	MATERIAL	HEAD	JAMB LEFT	JAMB RIGHT	SILL	
13	5 3/4"	HM	1C/A8.4	3B/A8.4	3B/A8.4	3D/A8.4	
14	4 1/2"	HM	1C/A8.4	3B/A8.4	3B/A8.4	3D/A8.4	
AE	7 1/2"	ALUM	1E/A8.4	3E/A8.4	3E/A8.4	2E/A8.4	
F	4 1/2"	HM	1C/A8.4	3B/A8.4	3B/A8.4	3D/A8.4	
G	4 1/2"	ALUM	1E/A8.4	3E/A8.4	3E/A8.4	2E/A8.4	
H	4 1/2"	ALUM	1E/A8.4	3E/A8.4	3E/A8.4	2E/A8.4	
I	4 1/2"	HM	1C/A8.4	3B/A8.4	3B/A8.4	3D/A8.4	
K							

DOOR AND FRAME SCHEDULE																		
DOOR	TO ROOM	DOOR PANEL							DOOR FRAME				DETAILS				COMMENTS	
		NO. OF PANELS	WIDTH	HEIGHT	THICKNESS	MAT'L	GLAZE	TYPE	WIDTH	MAT'L	TYPE	HEAD	JAMB LEFT	JAMB RIGHT	SILL			
G100	CIRCULATION	2	3'-0"	7'-0"	1 3/4"	ALUM	CTG	D2	2"	ALUM	A	1E/A8.4	3E/A8.4 & 4E/A8.4	3E/A8.4 & 4E/A8.4	4C/A8.4	ADA OPERATOR AND CARD READER. LOCATE ON SQUARE BOLLARDS. TEMPERED GLAZING		
G102	CLASSROOM	1	3'-0"	7'-0"	1 3/4"	WD	-	D1	2"	HM	5	1B/A8.4 & 1C/A8.4	2C/A8.4 & 3B/A8.4	2D/A8.4 & 3B/A8.4	3D/A8.4	TEMPERED GLAZING IN RELITE		
G104	CLASSROOM	1	3'-0"	7'-0"	1 3/4"	WD	-	D1	2"	HM	5	1B/A8.4 & 1C/A8.4	2D/A8.4 & 3B/A8.4	2C/A8.4 & 3B/A8.4	3D/A8.4	TEMPERED GLAZING IN RELITE		
G106	CLASSROOM	1	3'-0"	7'-0"	1 3/4"	WD	-	D1	2"	HM	5	21/A9.7	2C/A8.4 & 3B/A8.4	2D/A8.4 & 3B/A8.4	3D/A8.4	TEMPERED GLAZING IN RELITE		
G108	CLASSROOM	1	3'-0"	7'-0"	1 3/4"	WD	-	D1	2"	HM	5	1B/A8.4 & 1C/A8.4	2D/A8.4 & 3B/A8.4	2C/A8.4 & 3B/A8.4	3D/A8.4	TEMPERED GLAZING IN RELITE		
G110	LIBRARY	2	3'-0"	7'-0"	1 3/4"	WD	-	D1	2"	HM	1	1B/A8.4	2D/A8.4	2D/A8.4				
G110.2	COURTYARD	1	3'-0"	7'-0"	1 3/4"	ALUM	CTG	D2	2"	ALUM	AE	1E/A8.4	4D/A8.4 & 4E/A8.4	4D/A8.4 & 4E/A8.4	4C/A8.4	TEMPERED GLAZING AT DOOR PANEL		
G112	LIBRARY WORK ROOM	1	3'-0"	7'-0"	1 3/4"	WD	-	D1	2"	WD	1	1B/A8.4	2D/A8.4	2C/A8.4				
G114	COMPUTER LAB/MAKER SPACE	1	3'-0"	7'-0"	1 3/4"	WD	-	D1	2"	HM	5	1B/A8.4 & 1C/A8.4	2D/A8.4 & 3B/A8.4	2C/A8.4 & 3B/A8.4	3D/A8.4	TEMPERED GLAZING IN RELITE		
G114.1	COMPUTER LAB/MAKER SPACE	1	3'-0"	7'-2"	1 3/4"	WD	-	D1	2"	HM	1	1B/A8.4	2C/A8.4	2D/A8.4				
OG1	PLAYGROUND	2	4'-0"	7'-0"	1 3/4"	Steel	GATE	D8	2"	Steel	SEE LANDSCAPE					LOCKABLE GATE WITH PANIC BAR. SEE L7.5		
OG2	PLAYGROUND	2	4'-0"	7'-0"	1 3/4"	Steel	GATE	D8	2"	Steel	SEE LANDSCAPE					LOCKABLE GATE WITH PANIC BAR. SEE L7.5		

DOOR AND FRAME SCHEDULE ALTERNATES																
DOOR	TO ROOM	DOOR PANEL					DOOR FRAME			DETAILS					COMMENTS	
		NO. OF PANELS	WIDTH	HEIGHT	THICKNESS	MAT'L	GLAZE	TYPE	WIDTH	MAT'L	TYPE	HEAD	JAMB LEFT	JAMB RIGHT		SILL
G101	UNISEX RESTROOM	1	3'-0"	7'-0"	1 3/4"	WD	-	D1	2"	WD	1	1B/A8.4	2D/A8.4	2B/A8.4	-	
G103	UNISEX RESTROOM	1	3'-0"	7'-0"	1 3/4"	WD	-	D1	2"	WD	1	1B/A8.4	2B/A8.4	2D/A8.4	-	
G114.2	COMPUTER LAB/MAKER SPACE	7	2'-6 219/256"	9'-0"	2"	ALUM	-		0"	ALUM						OPERABLE PARTITION. SEE SPEC. MARKERBOARD FINISH LIBRARY SIDE

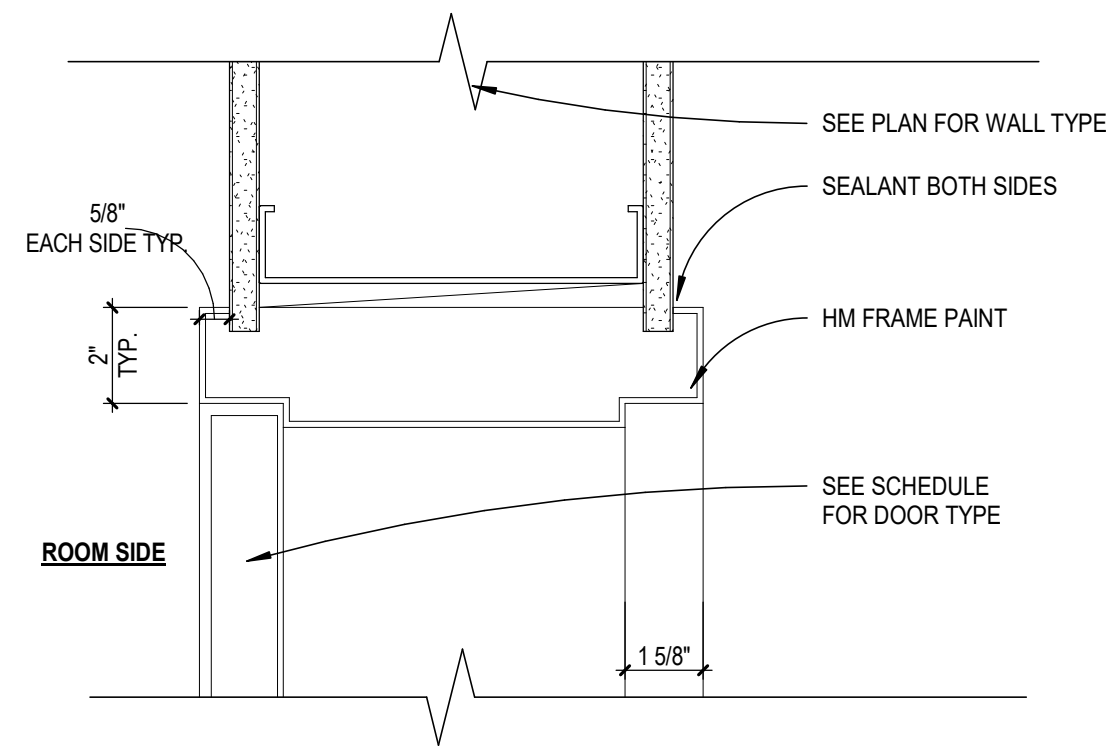
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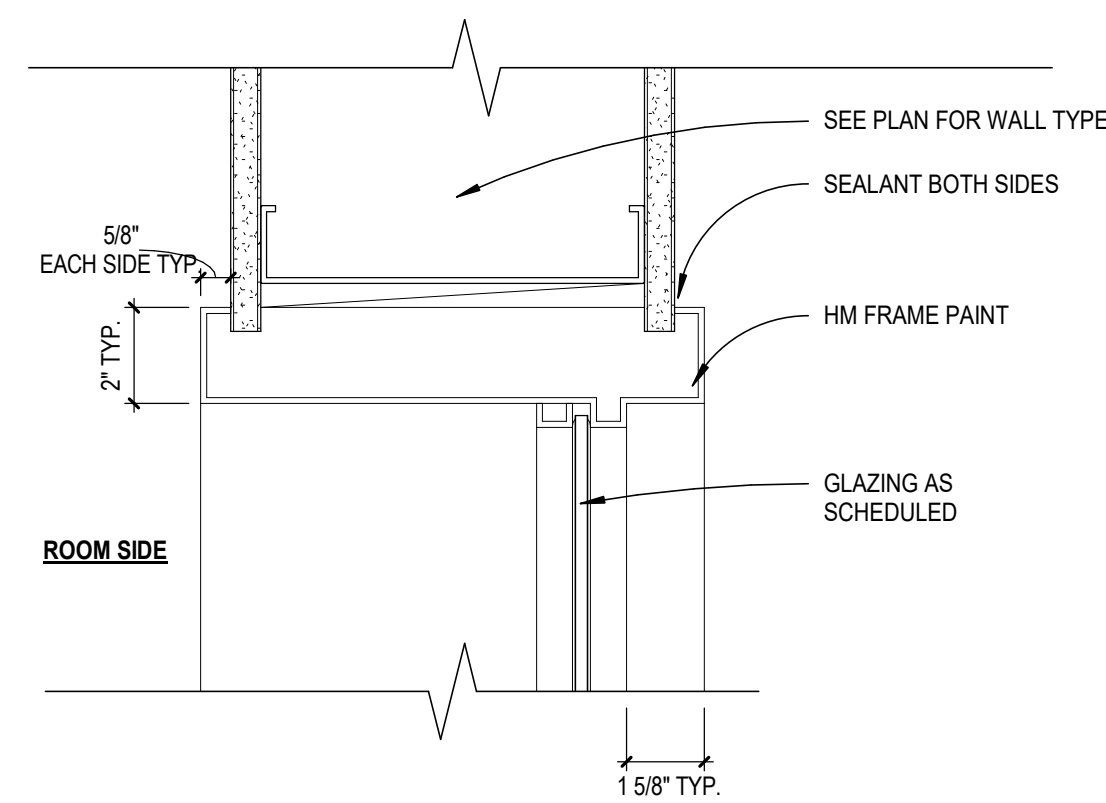
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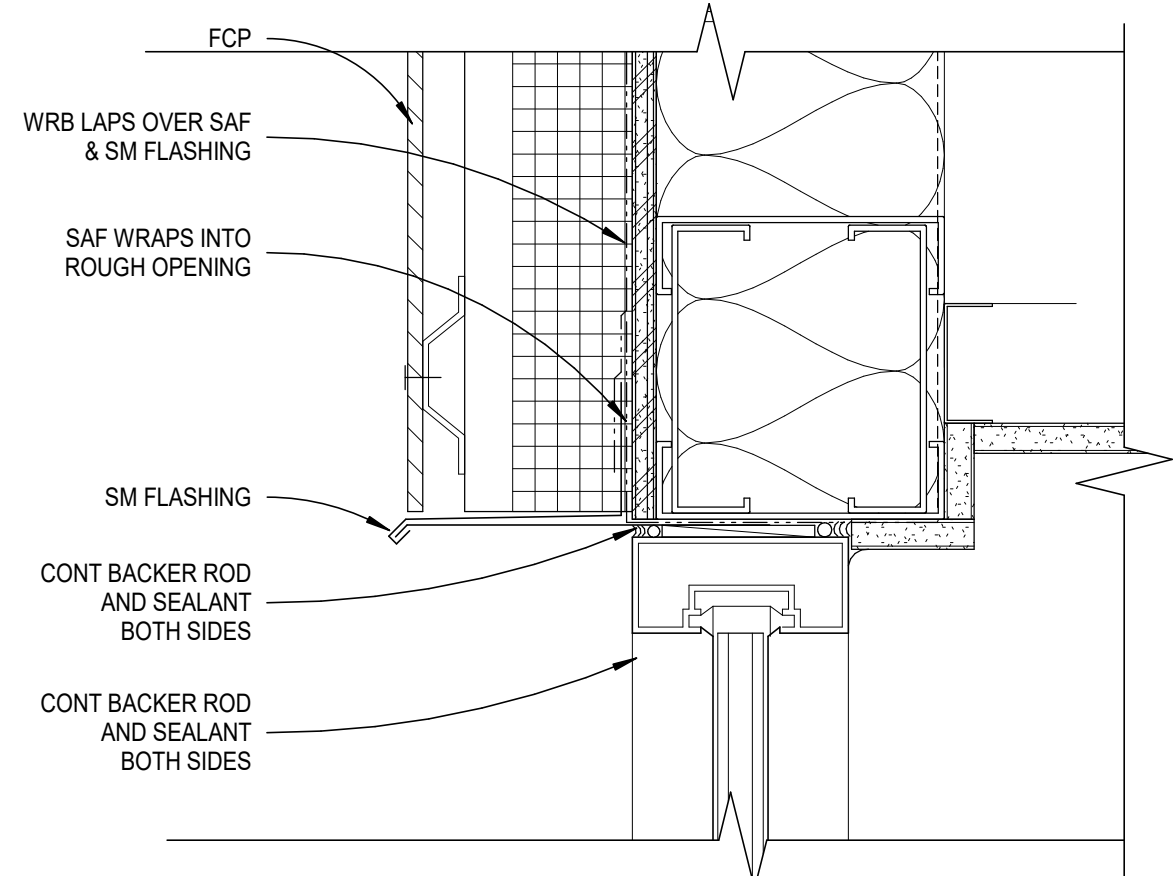
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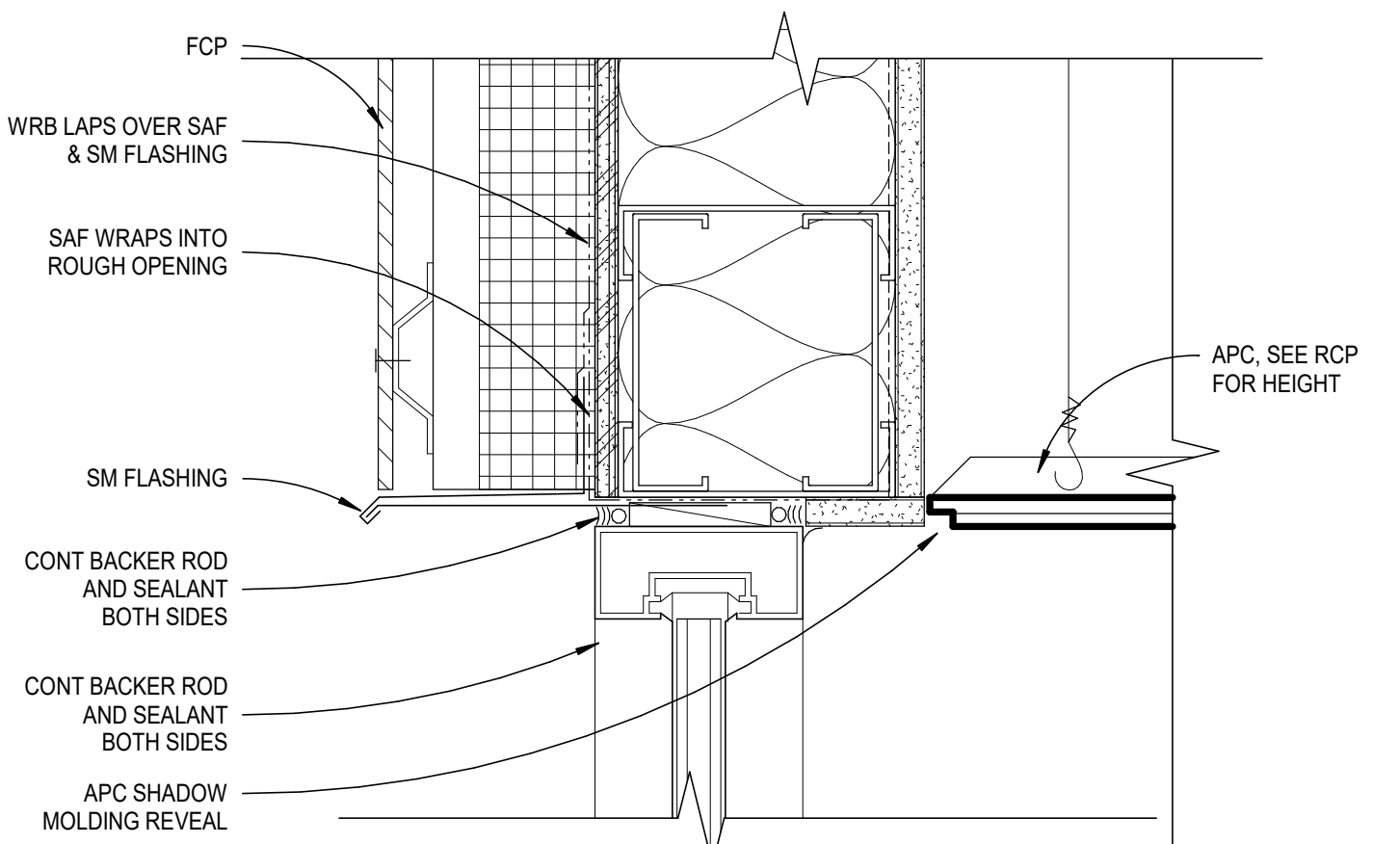
1B
A8.4
HM HEAD AT DOOR
SCALE: 3" = 1'-0"



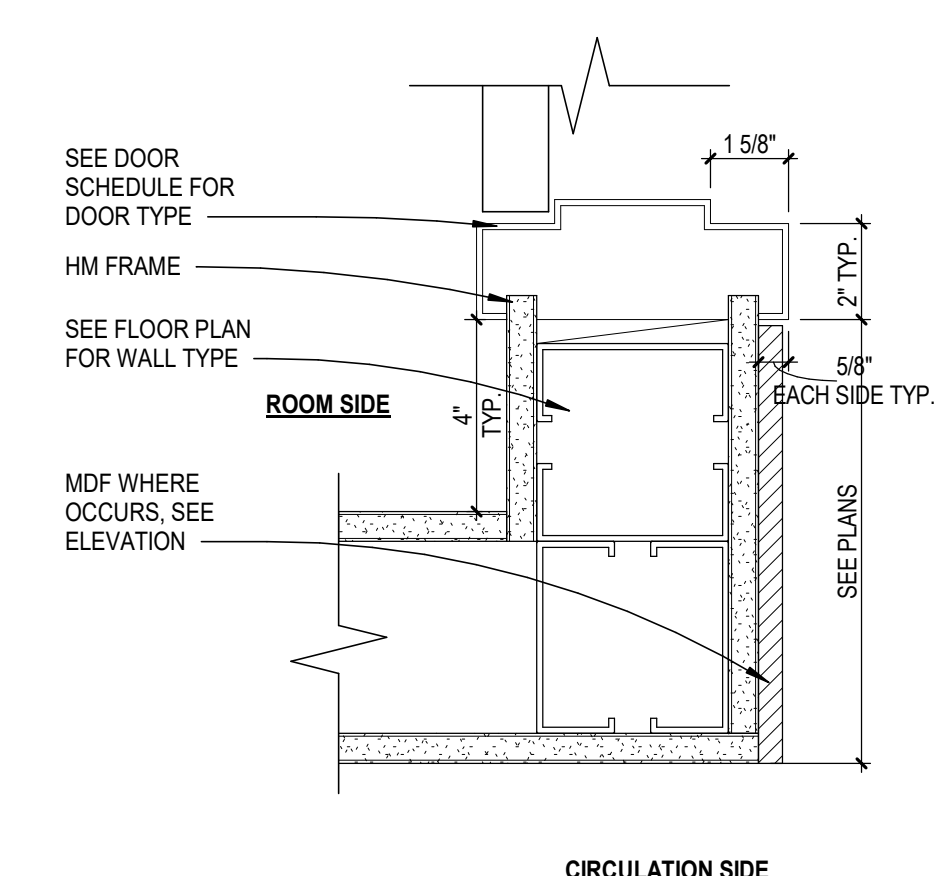
1C
A8.4
HM HEAD AT RELITE
SCALE: 3" = 1'-0"



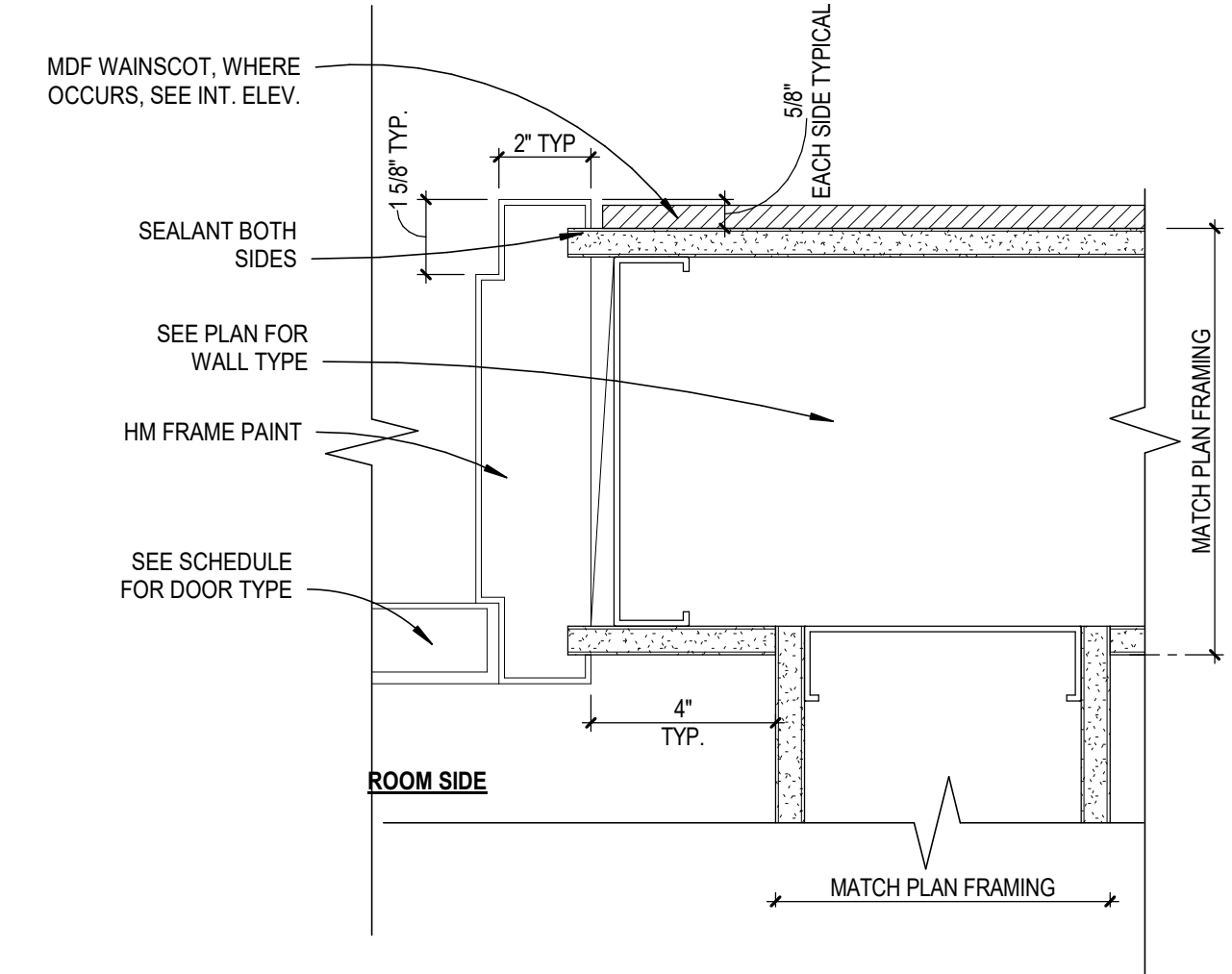
1D
A8.4
SF HEAD @ FCP/HARD LID CEILING
SCALE: 3" = 1'-0"



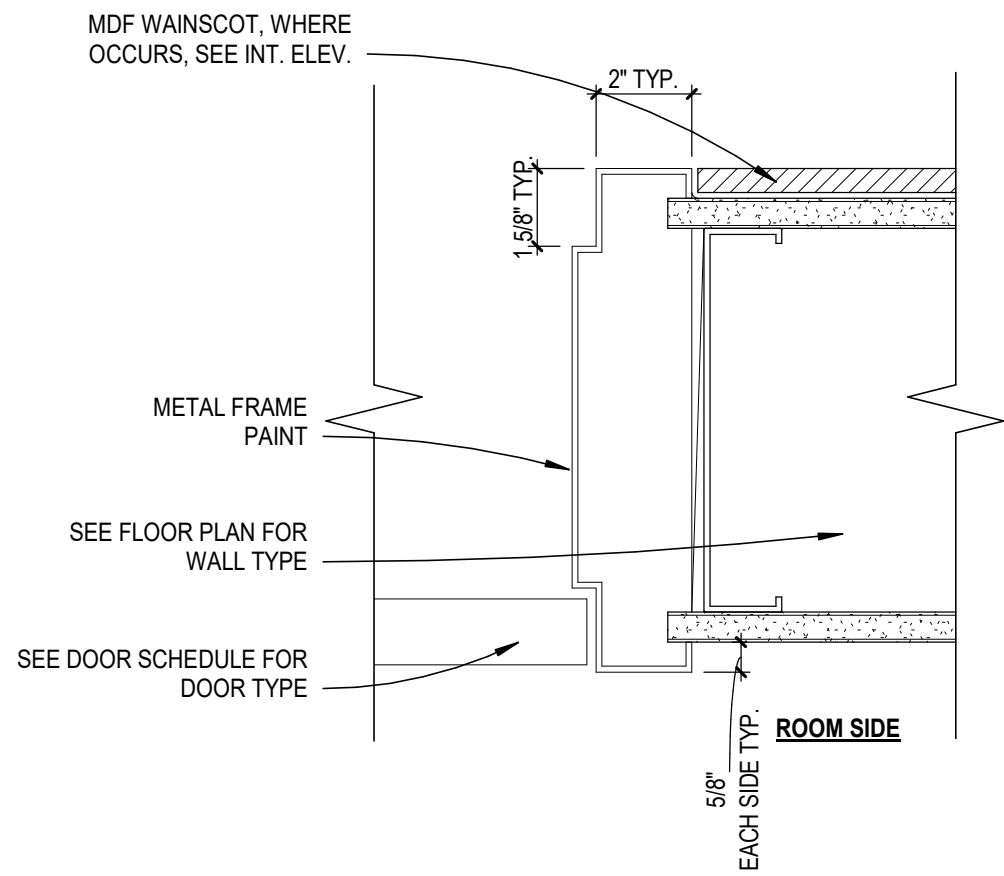
1E
A8.4
SF HEAD @ FCP/APC CEILING
SCALE: 3" = 1'-0"



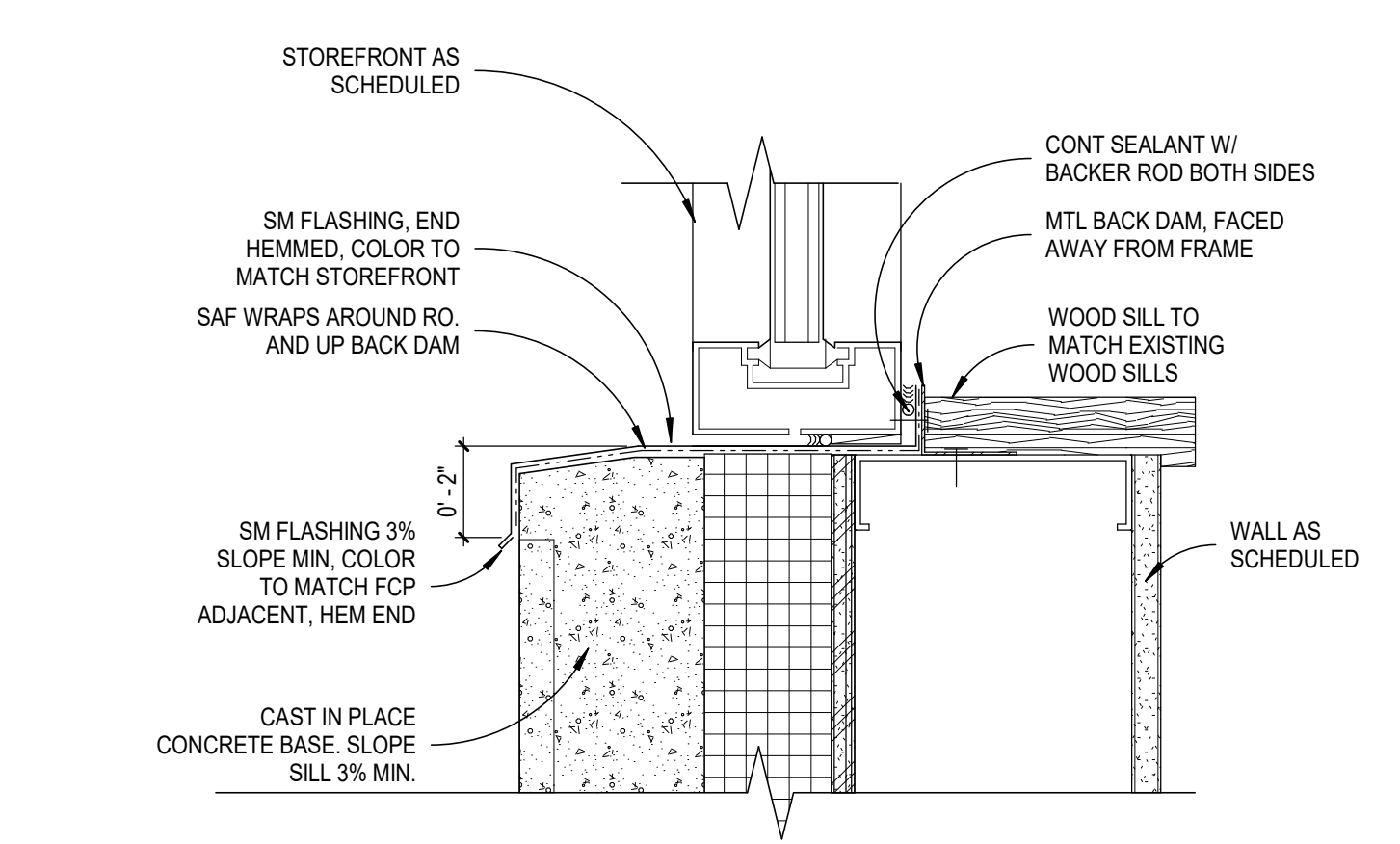
2B
A8.4
HM JAMB DETAIL AT OUTSIDE CORNER
SCALE: 3" = 1'-0"



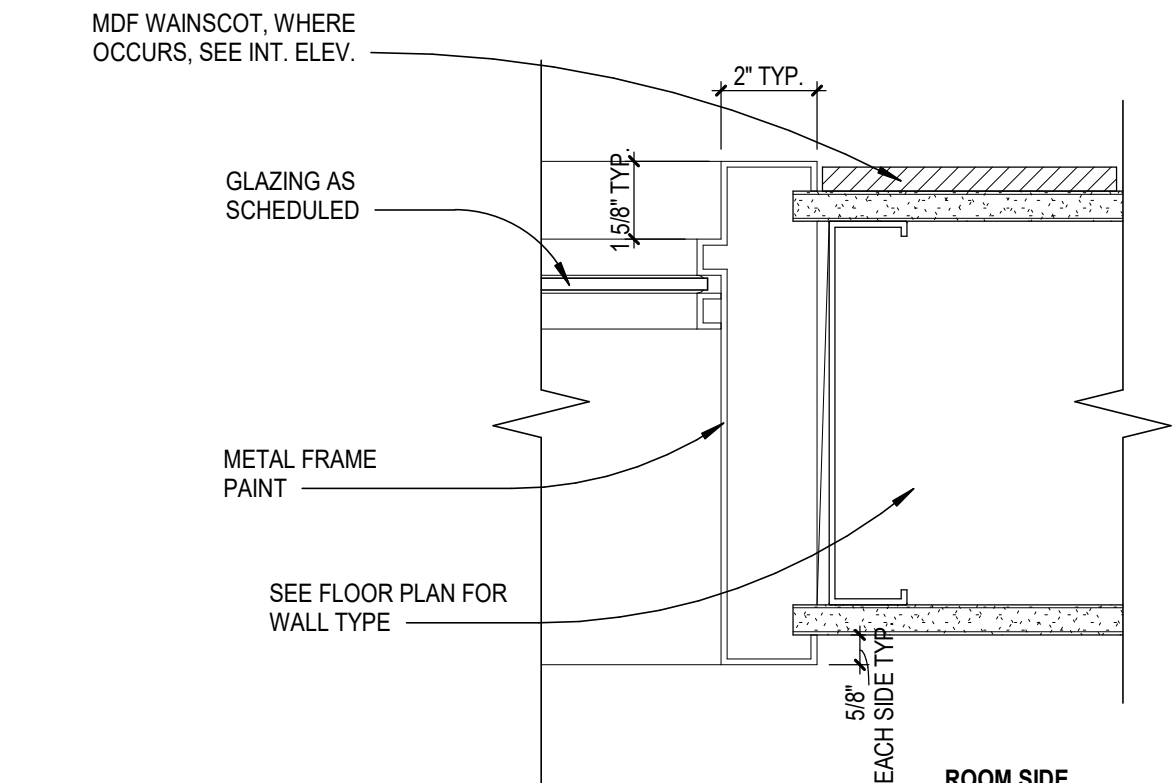
2C
A8.4
HM JAMB DETAIL AT INSIDE CORNER
SCALE: 3" = 1'-0"



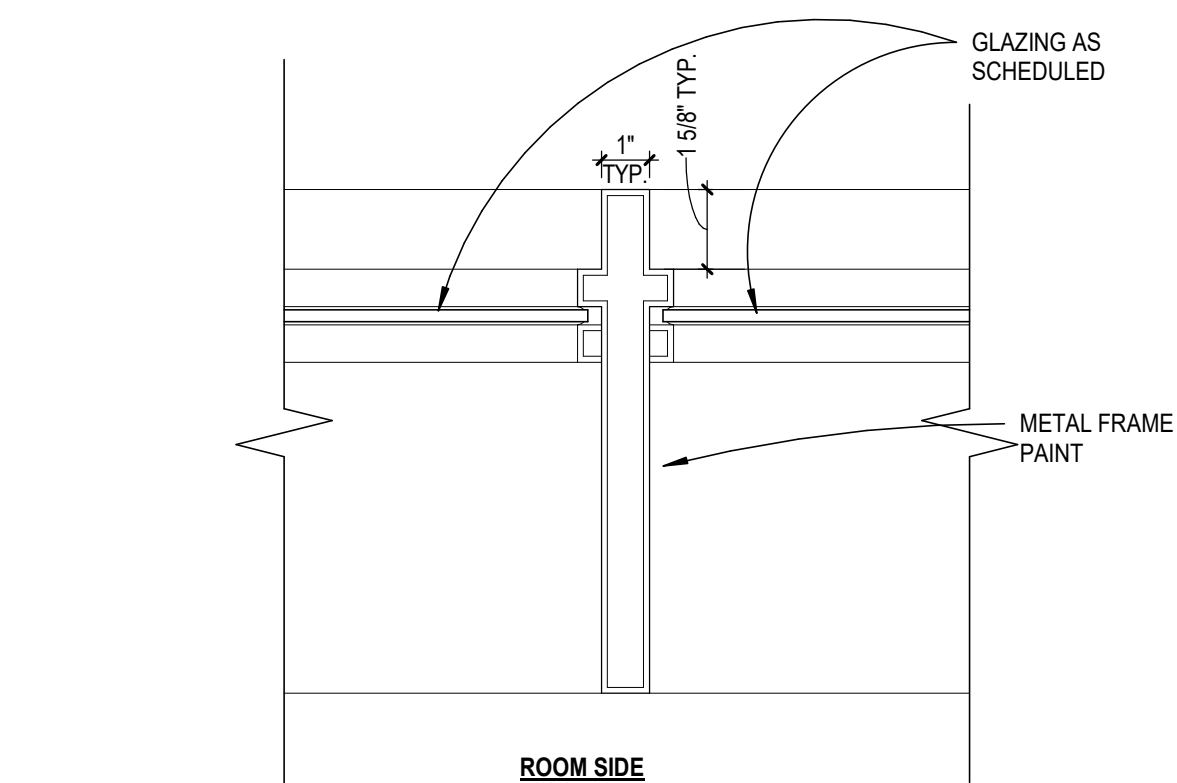
2D
A8.4
HM JAMB AT WAINSCOT
SCALE: 3" = 1'-0"



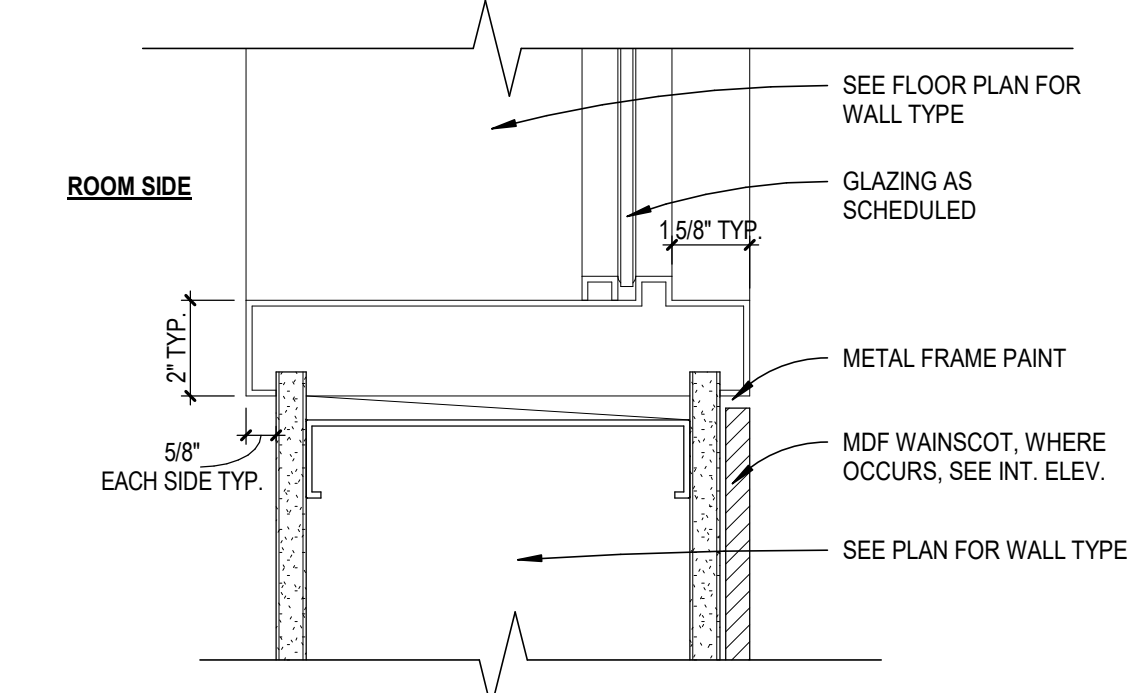
2E
A8.4
SF SILL @ CONCRETE STEM WALL
SCALE: 3" = 1'-0"



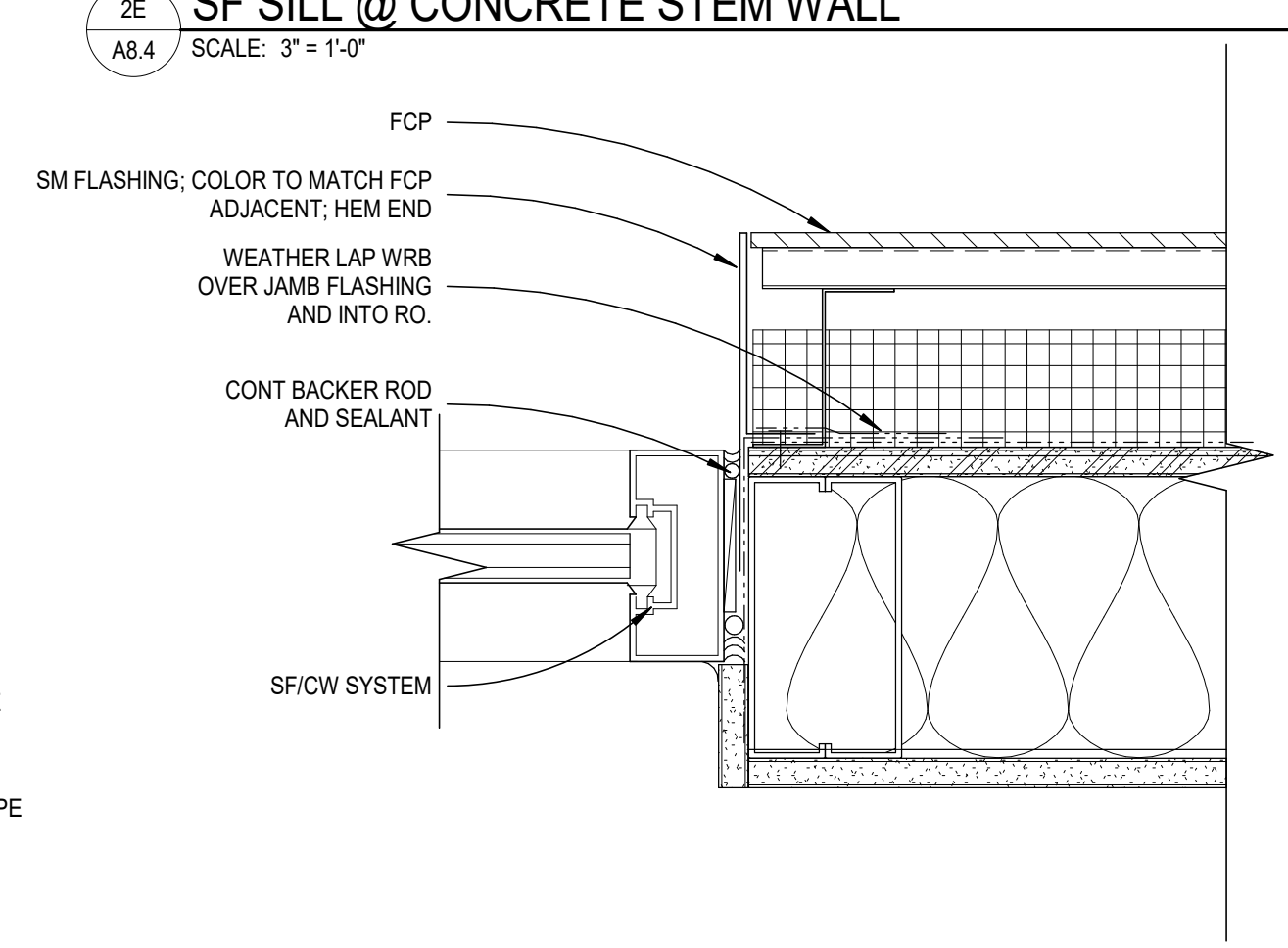
3B
A8.4
HM JAMB AT RELITE
SCALE: 3" = 1'-0"



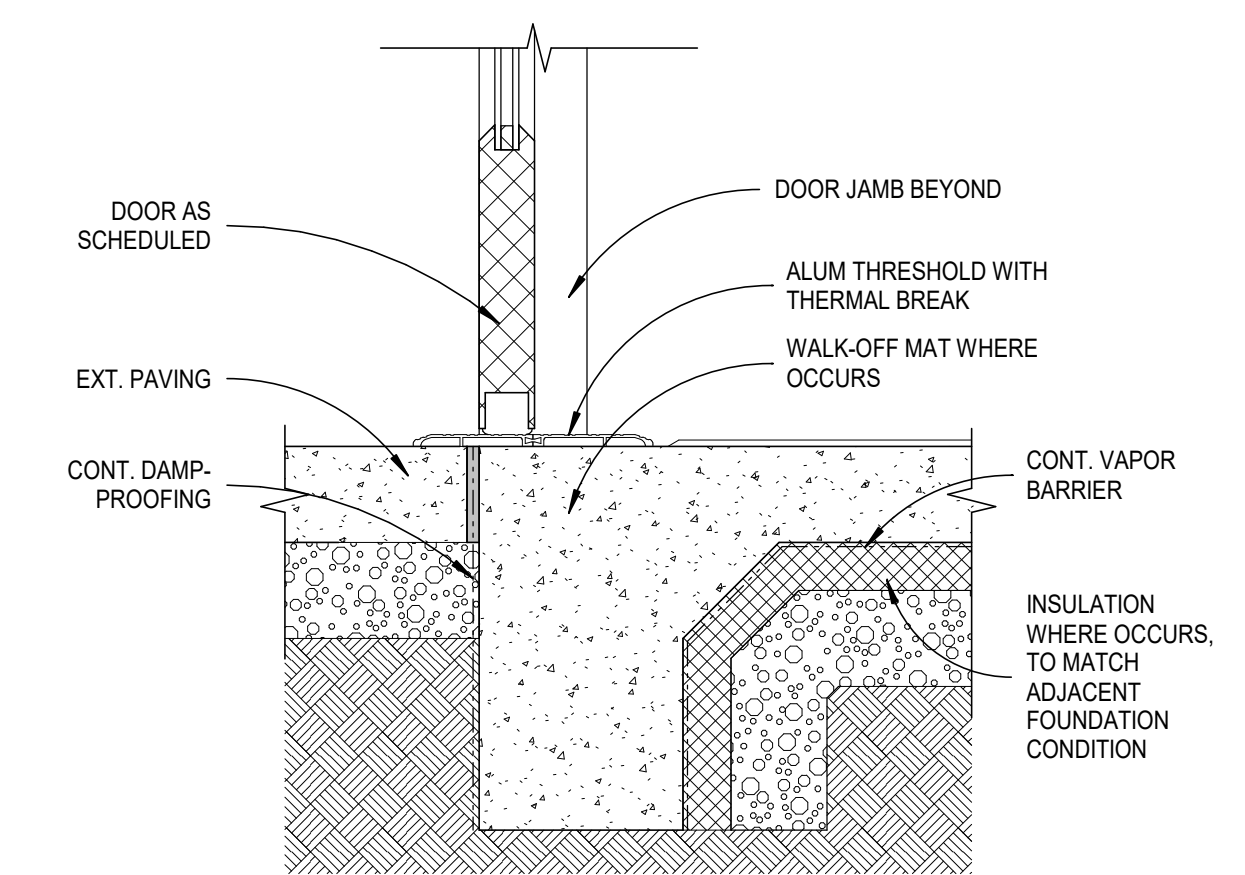
3C
A8.4
JAMB AT VERTICAL RELITE
SCALE: 3" = 1'-0"



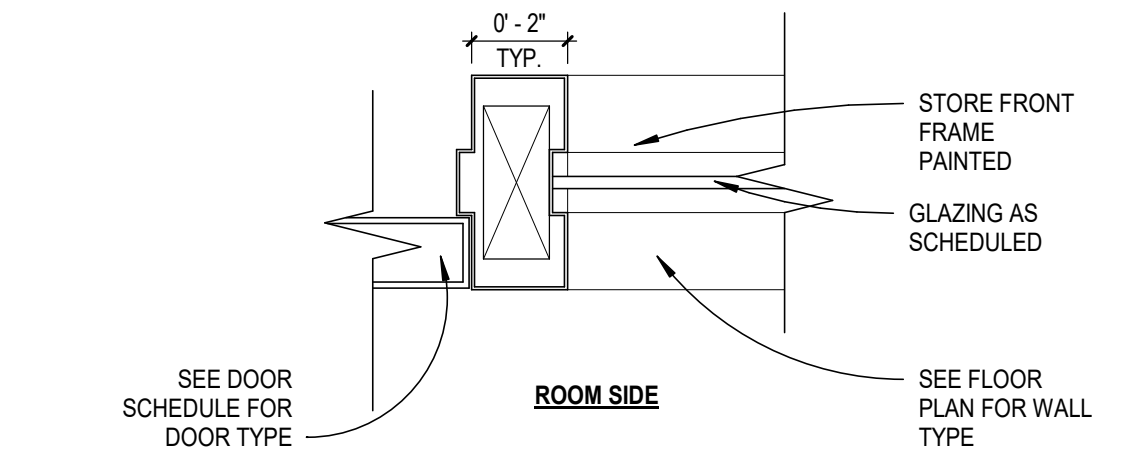
3D
A8.4
HM/RELITE SILL AT WAINSCOT
SCALE: 3" = 1'-0"



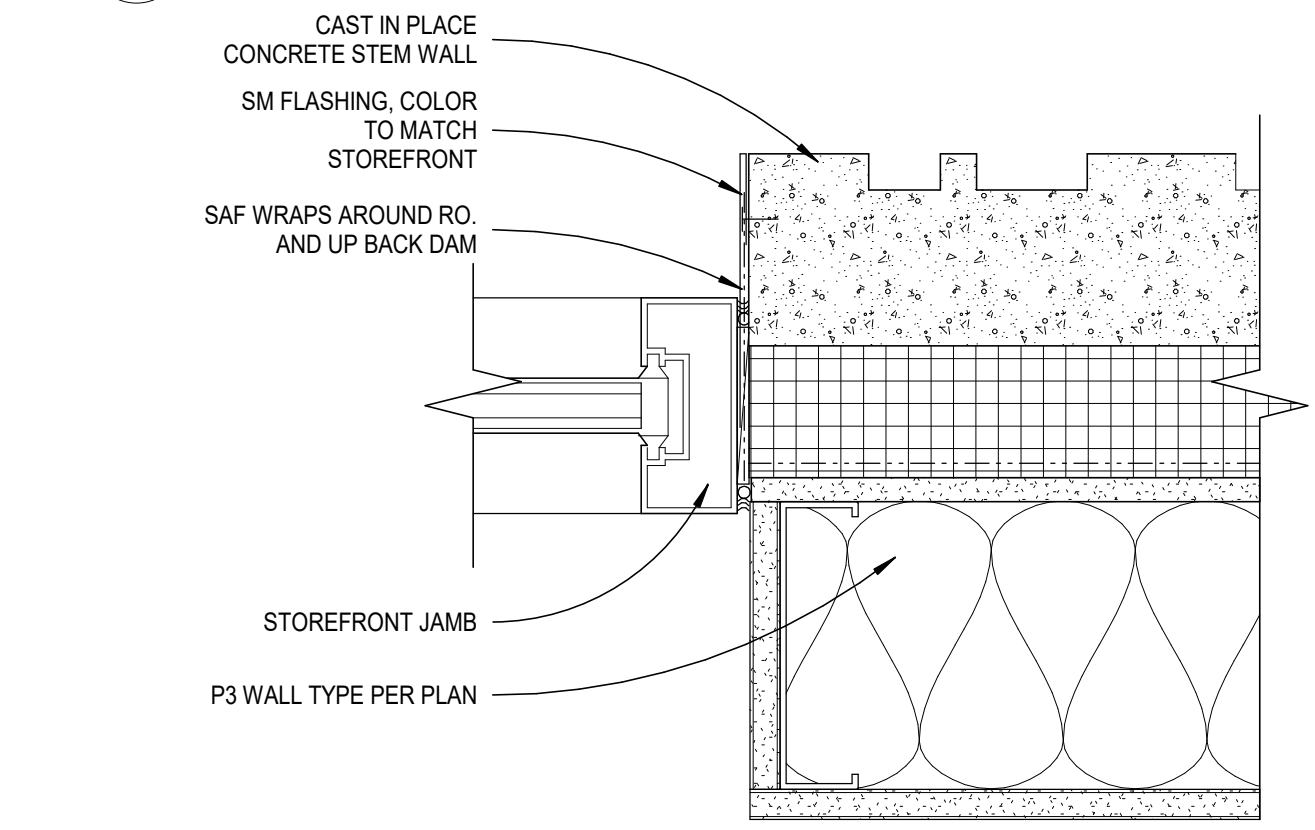
3E
A8.4
SF JAMB @ FCP
SCALE: 3" = 1'-0"



4C
A8.4
STOREFRONT DOOR SILL
SCALE: 1 1/2" = 1'-0"



4D
A8.4
SF DOOR/WINDOW JAMB
SCALE: 3" = 1'-0"

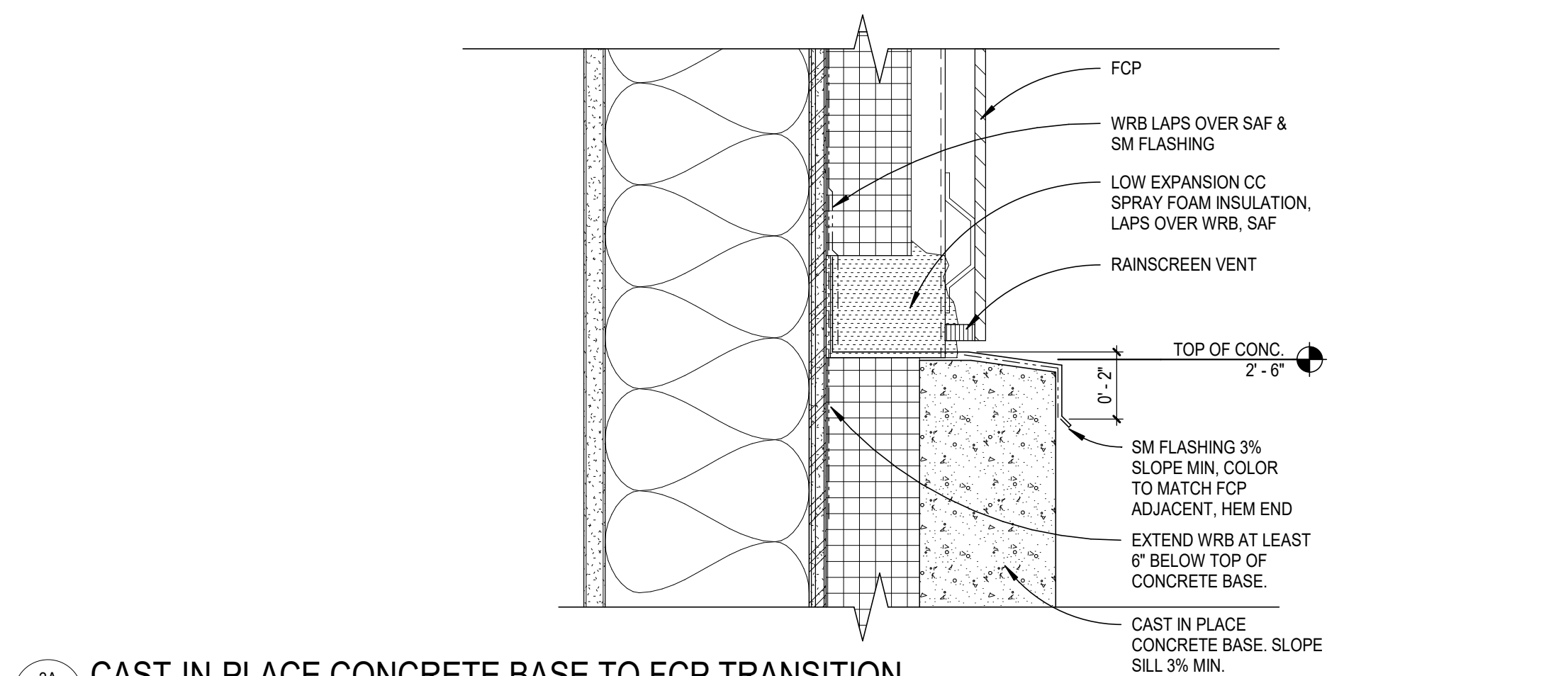


4E
A8.4
SF JAMB @ CONCRETE STEM WALL
SCALE: 3" = 1'-0"

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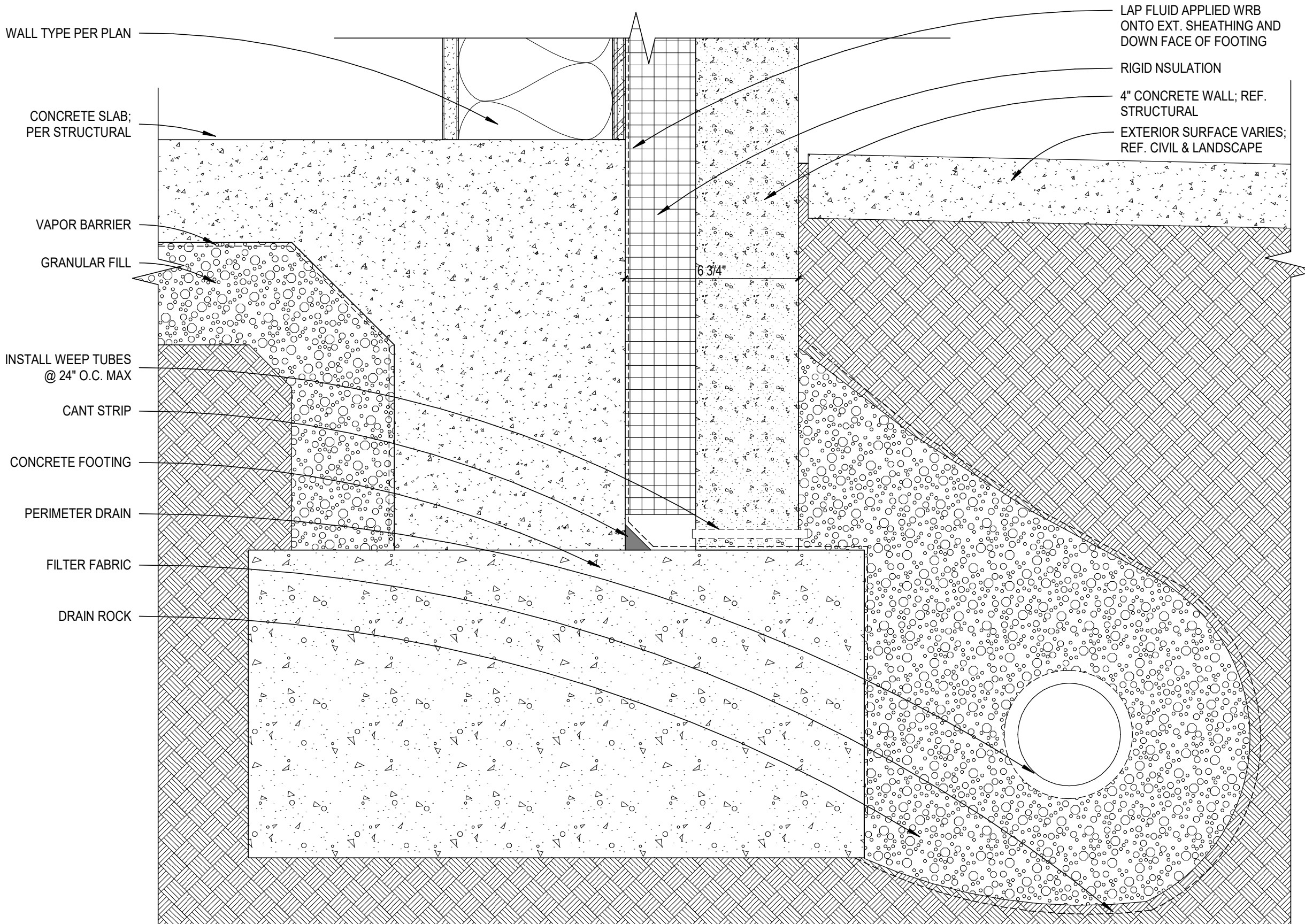
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2A FCP TO EXISTING SECOND LEVEL MWP TRANSITION - PERIMETER
A9.1 SCALE: 3" = 1'-0"



2

3A CAST-IN-PLACE CONCRETE BASE TO FCP TRANSITION
A9.1 SCALE: 3" = 1'-0"



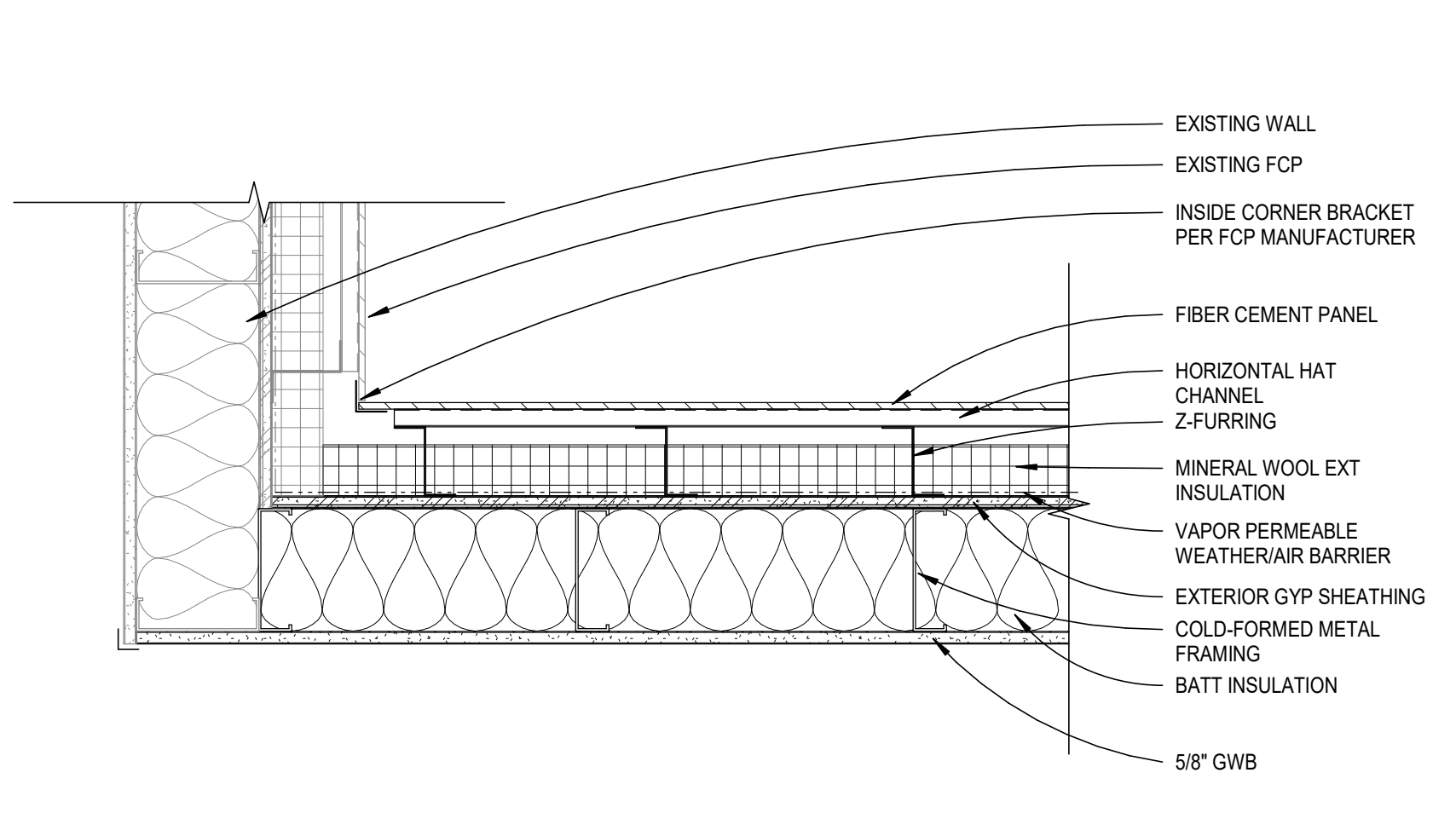
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4

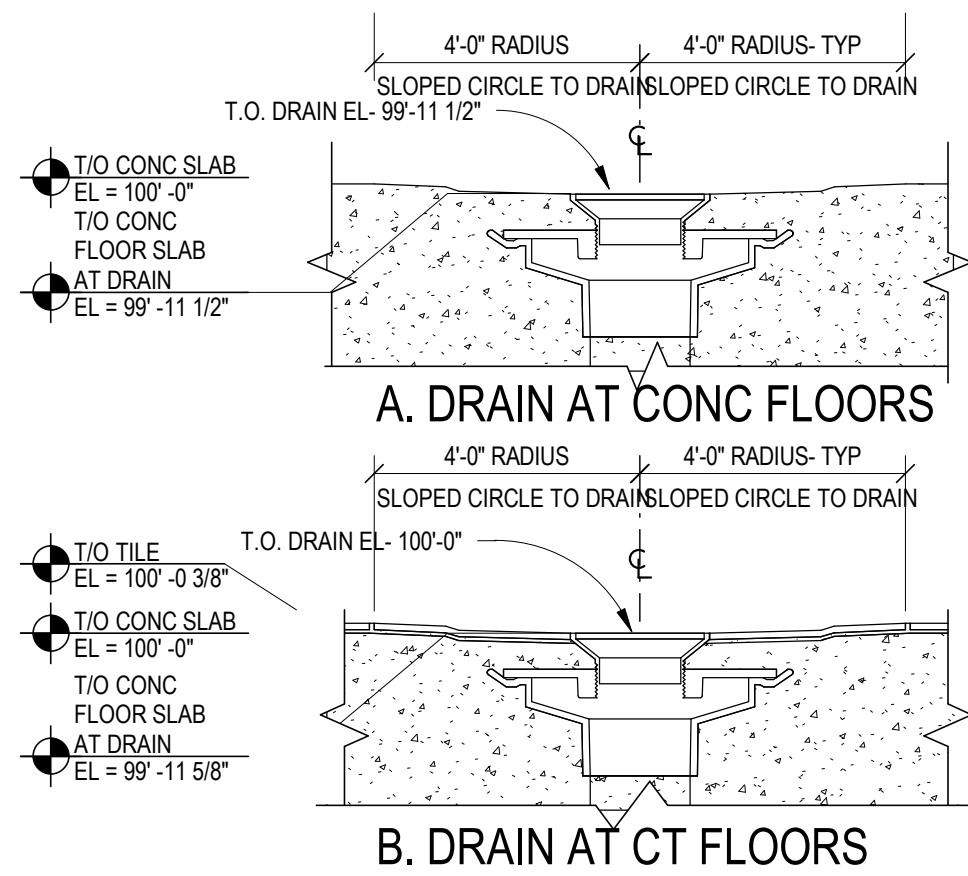
4A FOUNDATION @ TYP. EXTERIOR WALL
A9.1 SCALE: 3" = 1'-0"

1

2C FCP TO EXISTING SECOND LEVEL MWP TRANSITION - COURTYARD
A9.1 SCALE: 3" = 1'-0"



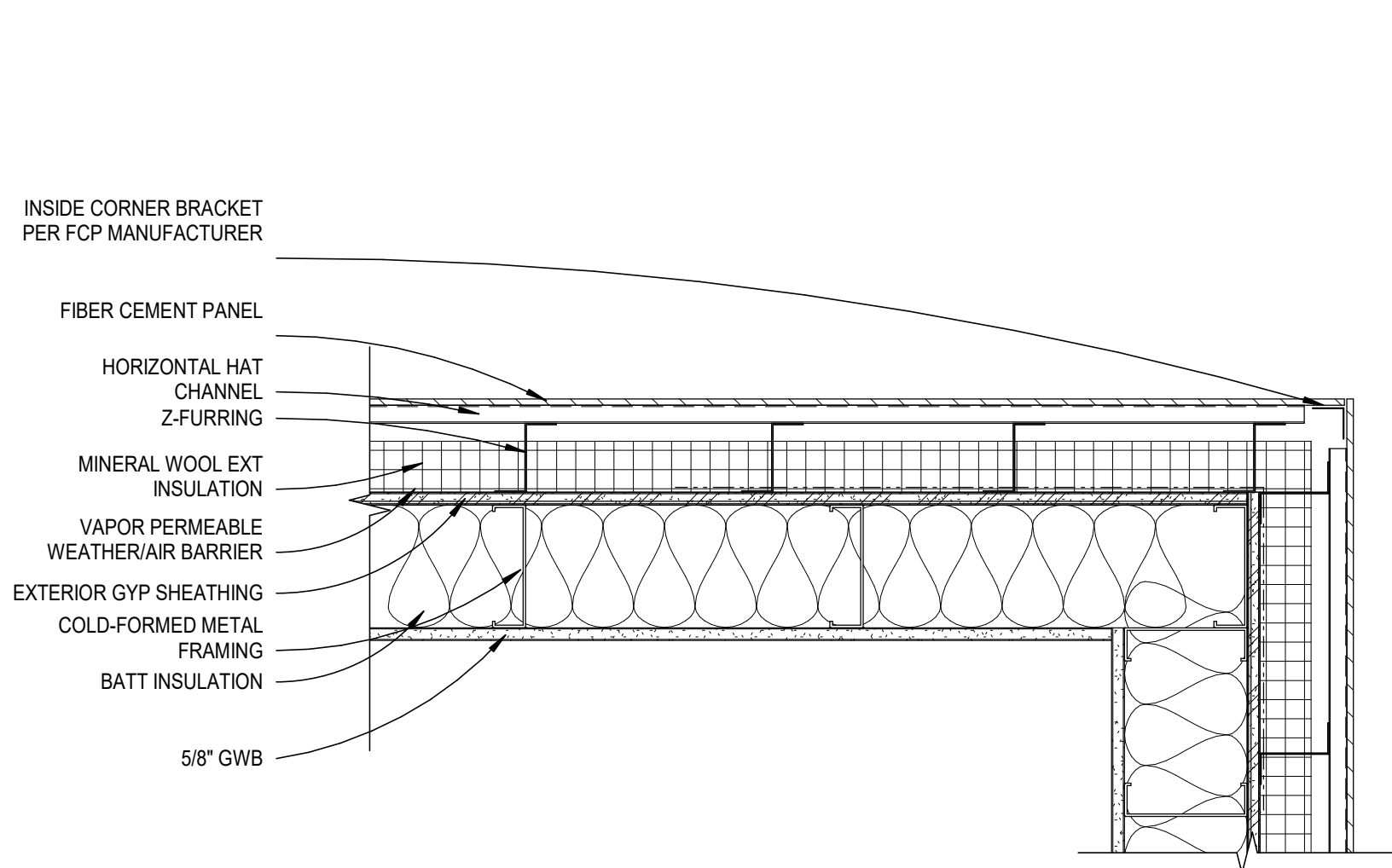
3C P2 WALL - INSIDE CORNER - PLAN DETAIL
A9.1 SCALE: 1 1/2" = 1'-0"



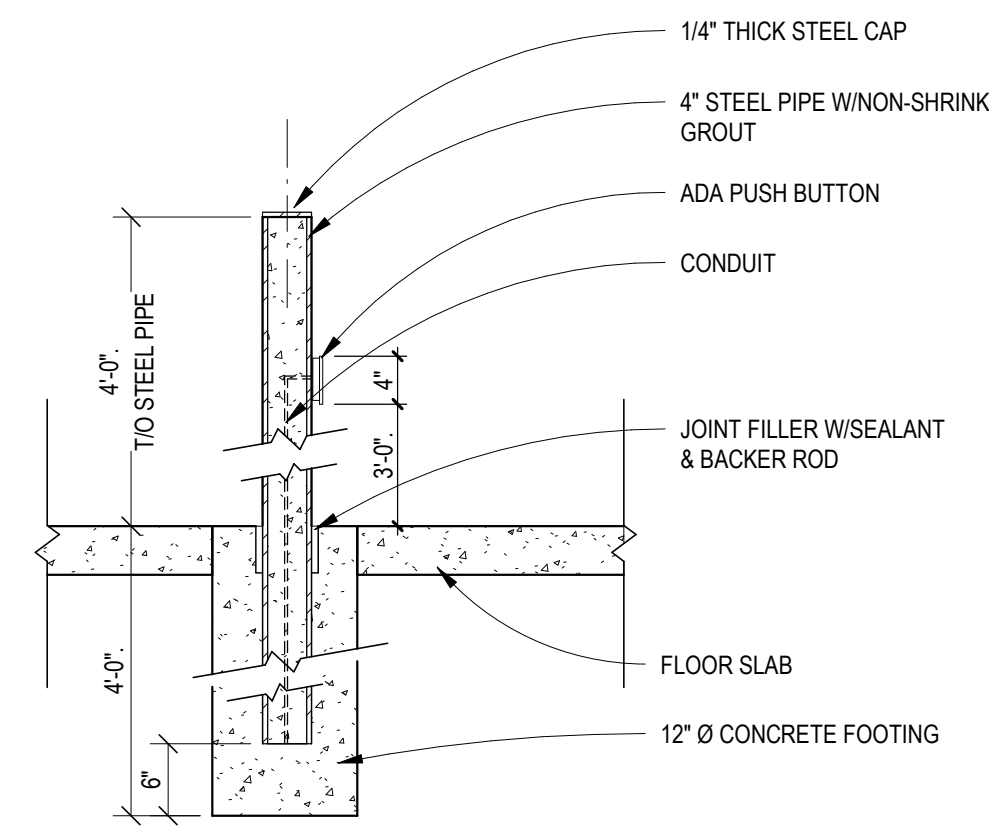
4C FLOOR DRAIN DETAILS
A9.1 SCALE: 1 1/2" = 1'-0"

1

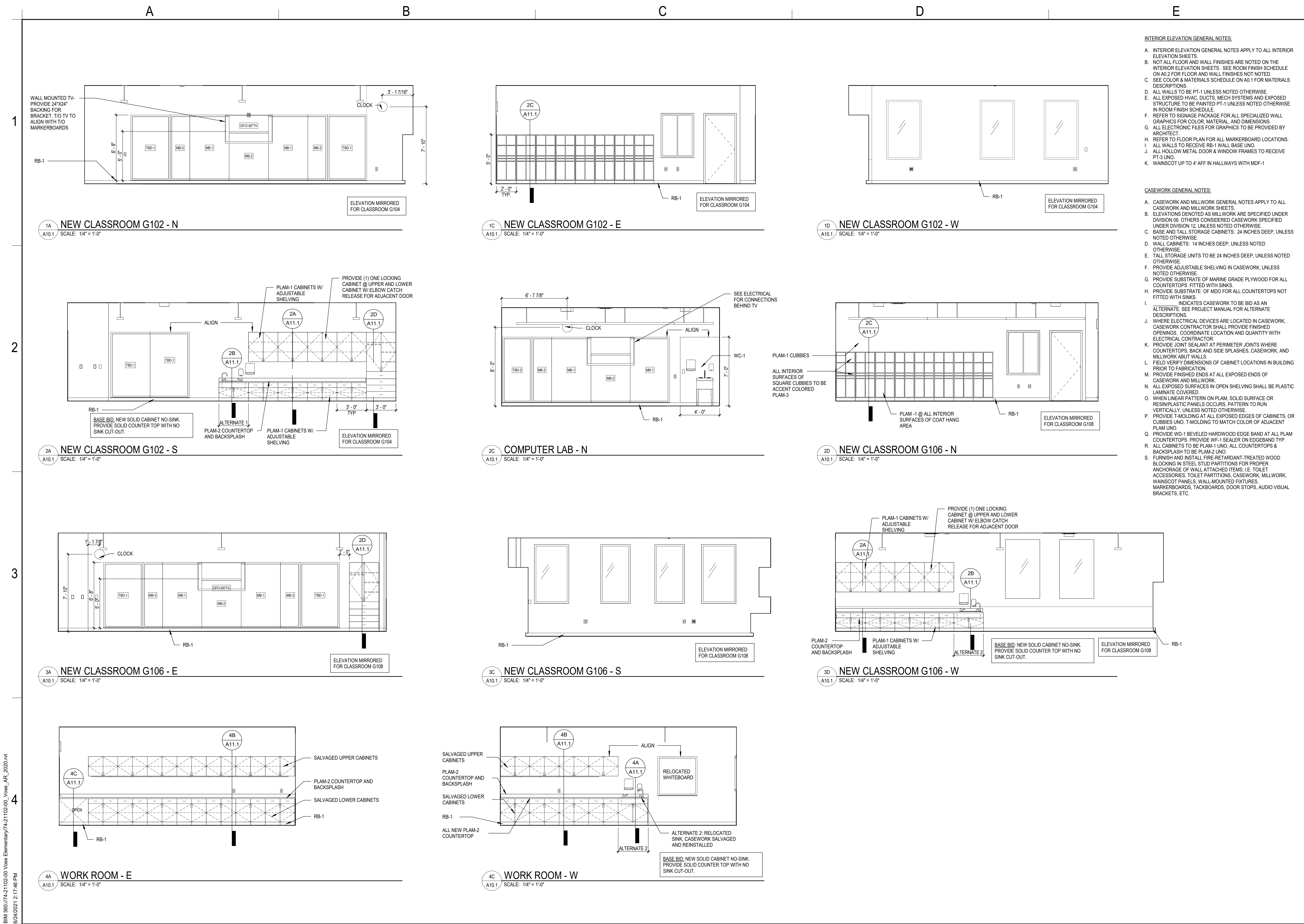
2D SOFFIT TRANSITION TRIM
A9.1 SCALE: 1 1/2" = 1'-0"



3D P2 WALL - OUTSIDE CORNER - PLAN DETAIL
A9.1 SCALE: 1 1/2" = 1'-0"



4D TYPICAL BOLLARD
A9.1 SCALE: 3/4" = 1'-0"



INTERIOR ELEVATION GENERAL NOTES:

A. INTERIOR ELEVATION GENERAL NOTES APPLY TO ALL INTERIOR ELEVATION SHEETS.

B. NOT ALL FLOOR AND WALL FINISHES ARE NOTED ON THE INTERIOR ELEVATION SHEETS. SEE ROOM FINISH SCHEDULE ON A0.2 FOR FLOOR AND WALL FINISHES NOT NOTED.

C. SEE COLOR & MATERIALS SCHEDULE ON A0.1 FOR MATERIALS DESCRIPTIONS.

D. ALL WALLS TO BE PT-1 UNLESS NOTED OTHERWISE.

E. ALL EXPOSED HVAC, DUCTS, MECH SYSTEMS AND EXPOSED STRUCTURE TO BE PAINTED PT-1 UNLESS NOTED OTHERWISE IN ROOM FINISH SCHEDULE.

F. REFER TO SIGNAGE PACKAGE FOR ALL SPECIALIZED WALL GRAPHICS FOR COLOR, MATERIAL, AND DIMENSIONS.

G. ALL ELECTRONIC FILES FOR GRAPHICS TO BE PROVIDED BY ARCHITECT.

H. REFER TO FLOOR PLAN FOR ALL MARKERBOARD LOCATIONS.

I. ALL WALLS TO RECEIVE RB-1 WALL BASE UNO.

J. ALL HOLLOW METAL DOOR & WINDOW FRAMES TO RECEIVE PT-3 UNO.

K. WAINSCOT UP TO 4' AFF IN HALLWAYS WITH MDF-1.

CASEWORK GENERAL NOTES:

A. CASEWORK AND MILLWORK GENERAL NOTES APPLY TO ALL CASEWORK AND MILLWORK SHEETS.

B. ELEVATIONS DENOTED AS MILLWORK ARE SPECIFIED UNDER DIVISION 06 OTHERS CONSIDERED CASEWORK SPECIFIED UNDER DIVISION 12 UNLESS NOTED OTHERWISE.

C. BASE AND TALL STORAGE CABINETS: 24 INCHES DEEP, UNLESS NOTED OTHERWISE.

D. WALL CABINETS: 14 INCHES DEEP, UNLESS NOTED OTHERWISE.

E. TALL STORAGE UNITS TO BE 24 INCHES DEEP, UNLESS NOTED OTHERWISE.

F. PROVIDE ADJUSTABLE SHELVING IN CASEWORK, UNLESS NOTED OTHERWISE.

G. PROVIDE SUBSTRATE OF MARINE GRADE PLYWOOD FOR ALL COUNTERTOPS FITTED WITH SINKS.

H. PROVIDE SUBSTRATE OF MDO FOR ALL COUNTERTOPS NOT FITTED WITH SINKS.

I. INDICATES CASEWORK TO BE BID AS AN ALTERNATE. SEE PROJECT MANUAL FOR ALTERNATE DESCRIPTIONS.

J. WHERE ELECTRICAL DEVICES ARE LOCATED IN CASEWORK, CASEWORK CONTRACTOR SHALL PROVIDE FINISHED OPENINGS. COORDINATE LOCATION AND QUANTITY WITH ELECTRICAL CONTRACTOR.

K. PROVIDE JOINT SEALANT AT PERIMETER JOINTS WHERE COUNTERTOPS, BACK AND SIDE SPLASHES, CASEWORK, AND MILLWORK ABUT WALLS.

L. FIELD VERIFY DIMENSIONS OF CABINET LOCATIONS IN BUILDING PRIOR TO FABRICATION.

M. PROVIDE FINISHED ENDS AT ALL EXPOSED ENDS OF CASEWORK AND MILLWORK.

N. ALL EXPOSED SURFACES IN OPEN SHELVING SHALL BE PLASTIC LAMINATE COVERED.

O. WHEN LINEAR PATTERN ON PLAM, SOLID SURFACE OR RESIN/PLASTIC PANELS OCCURS, PATTERN TO RUN VERTICALLY, UNLESS NOTED OTHERWISE.

P. PROVIDE T-MOLDING AT ALL EXPOSED EDGES OF CABINETS, OR CUBBIES UNO. T-MOLDING TO MATCH COLOR OF ADJACENT PLAM UNO.

Q. PROVIDE WD-1 BEVELED HARDWOOD EDGE BAND AT ALL PLAM COUNTERTOPS. PROVIDE WF-1 SEALER ON EDGE/BAND TYP.

R. ALL CABINETS TO BE PLAM-1 UNO, ALL COUNTERTOPS & BACKSPLASH TO BE PLAM-2 UNO.

S. FURNISH AND INSTALL FIRE-RETARDANT-TREATED WOOD BLOCKING IN STEEL STUD PARTITIONS FOR PROPER ANCHORAGE OF WALL ATTACHED ITEMS, I.E. TOILET ACCESSORIES, TOILET PARTITIONS, CASEWORK, MILLWORK, WAINSCOT PANELS, WALL-MOUNTED FIXTURES, MARKERBOARDS, TACKBOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS, ETC.

A

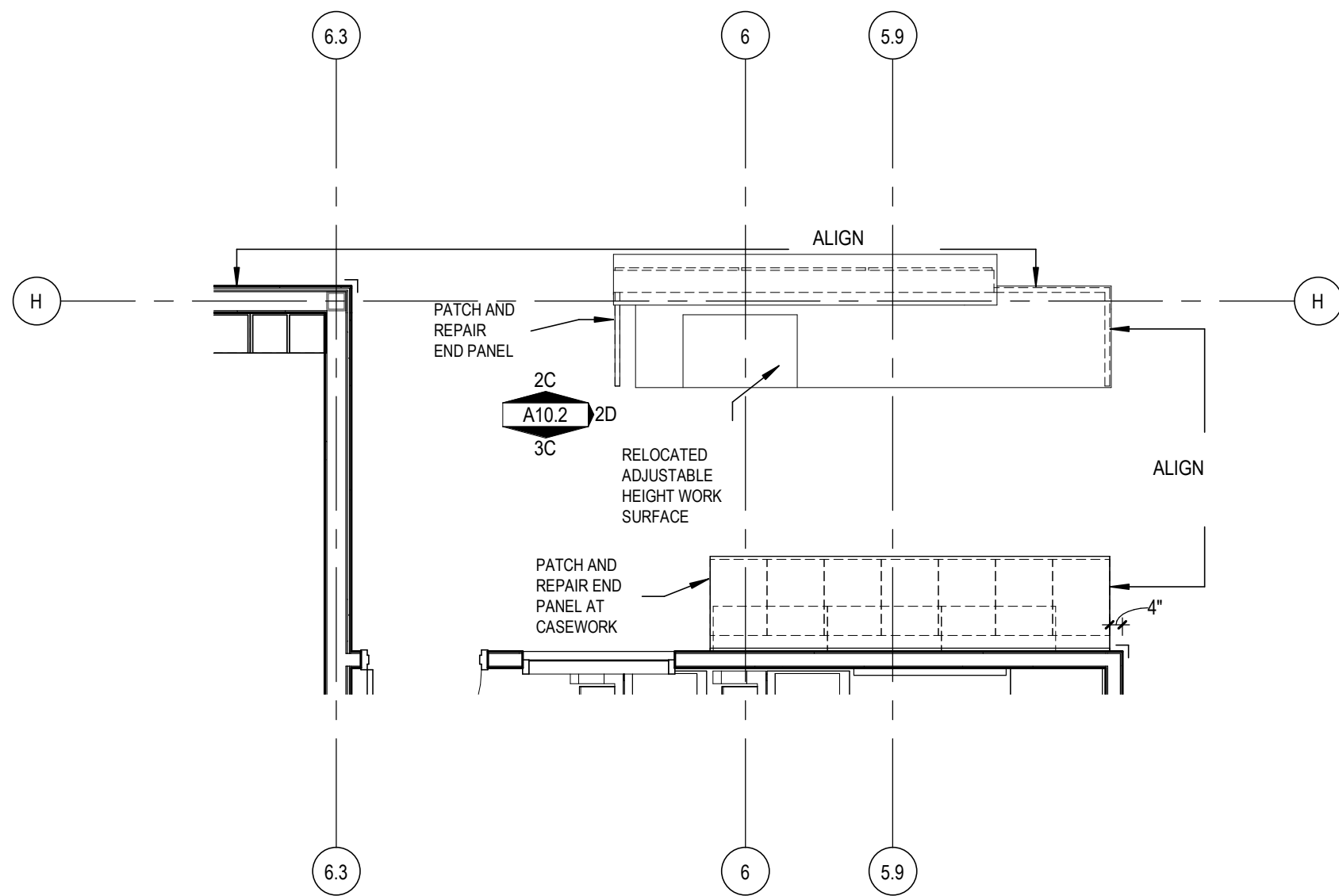
B

C

D

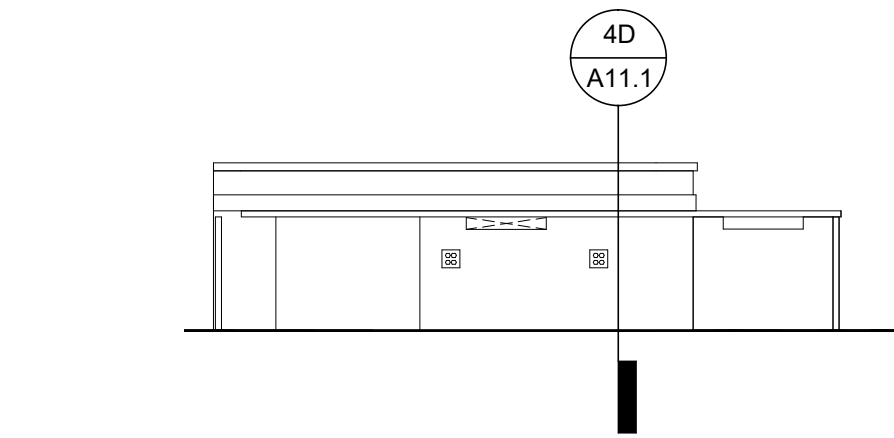
E

1

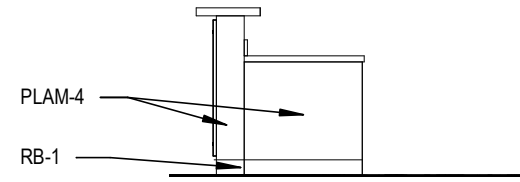


1A LIBRARY CIRCULATION DESK - PLAN
A10.2 SCALE: 1/4" = 1'-0"

2

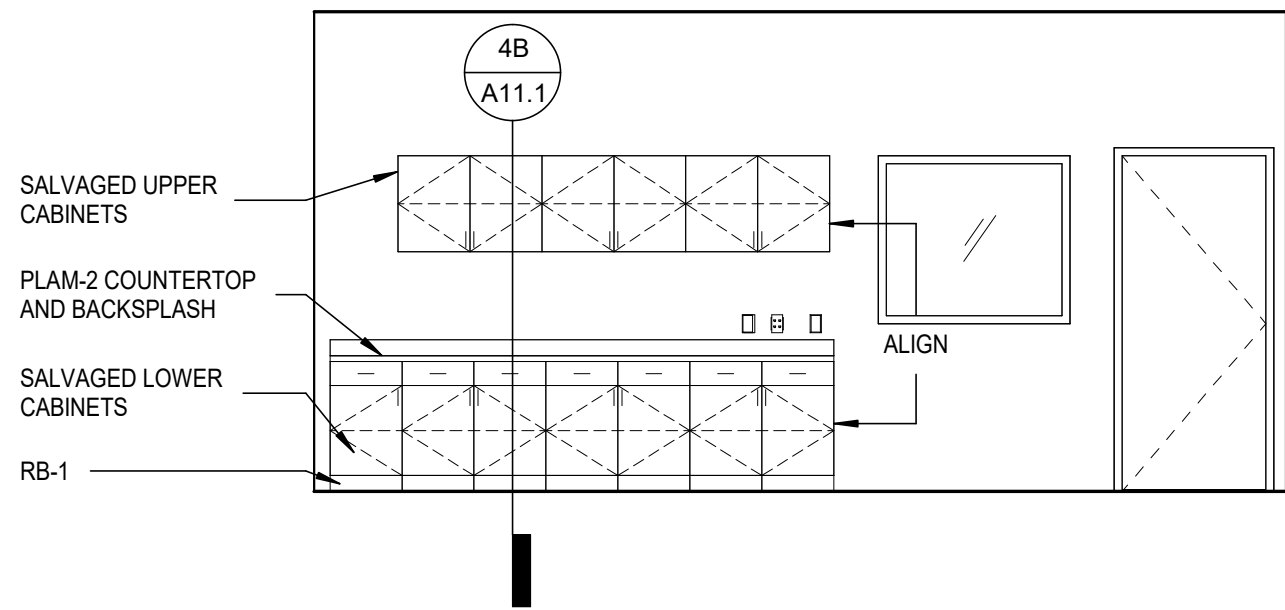


2C RELOCATED LIBRARY CIRCULATION DESK - NORTH
A10.2 SCALE: 1/4" = 1'-0"



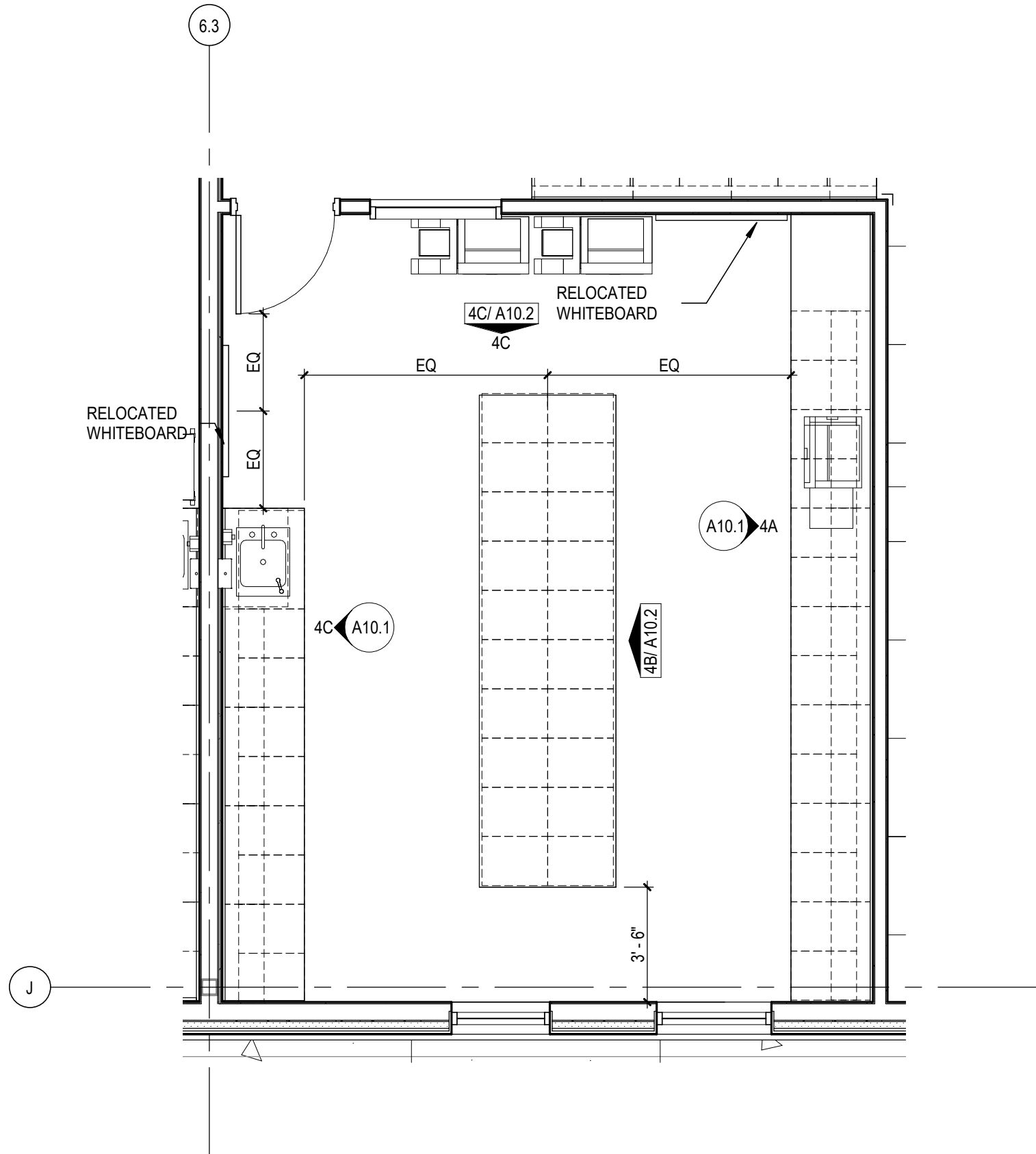
2D RELOCATED LIBRARY CIRCULATION DESK - EAST
A10.2 SCALE: 1/4" = 1'-0"

3

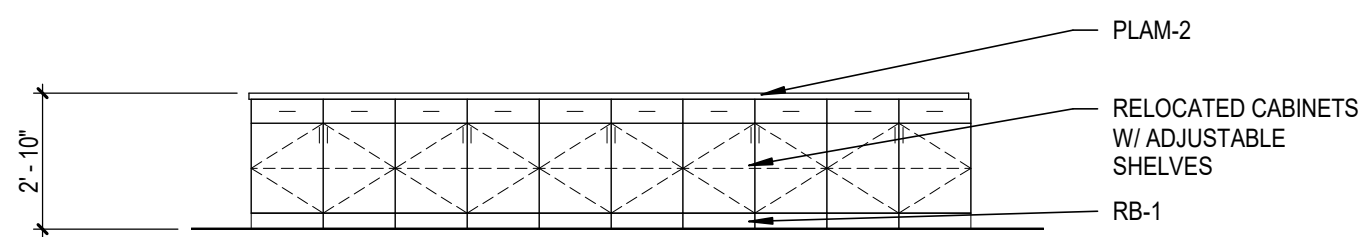


3C LIBRARY CIRCULATION DESK - RELOCATED WALL CASEWORK
A10.2 SCALE: 1/4" = 1'-0"

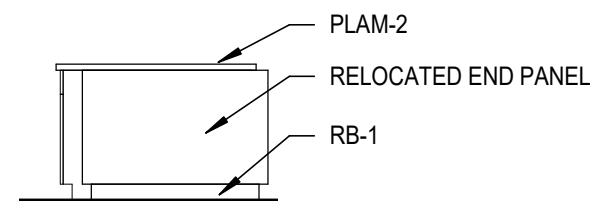
3



4A WORK ROOM CASEWORK - ENLARGED PLAN
A10.2 SCALE: 1/4" = 1'-0"



4B WORK ROOM CASEWORK - E
A10.2 SCALE: 1/4" = 1'-0"



4C WORK ROOM CASEWORK - S
A10.2 SCALE: 1/4" = 1'-0"

CASEWORK GENERAL NOTES:

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- Q. PROVIDE WD-1 BEVELED HARDWOOD EDGE BAND AT ALL PLAM COUNTERTOPS. PROVIDE WF-1 SEALER ON EDGE/BAND TYP.
- R. ALL CABINETS TO BE PLAM-1 UNO, ALL COUNTERTOPS & BACKSPLASH TO BE PLAM-2 UNO.
- S. FURNISH AND INSTALL FIRE-RETARDANT-TREATED WOOD BLOCKING IN STEEL STUD PARTITIONS FOR PROPER ANCHORAGE OF WALL ATTACHED ITEMS, I.E. TOILET ACCESSORIES, TOILET PARTITIONS, CASEWORK, MILLWORK, WAINSCOT PANELS, WALL-MOUNTED FIXTURES, MARKERBOARDS, TACKBOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS, ETC.



VOSE ES ADDITION
BEAVERTON SCHOOL DISTRICT
11350 SW DENNEY RD
BEAVERTON, OR 97008

100% CD
2/26/2021
REVISIONS

74-21102-00

CASEWORK
ELEVATIONS

A10.2

4

A

B

C

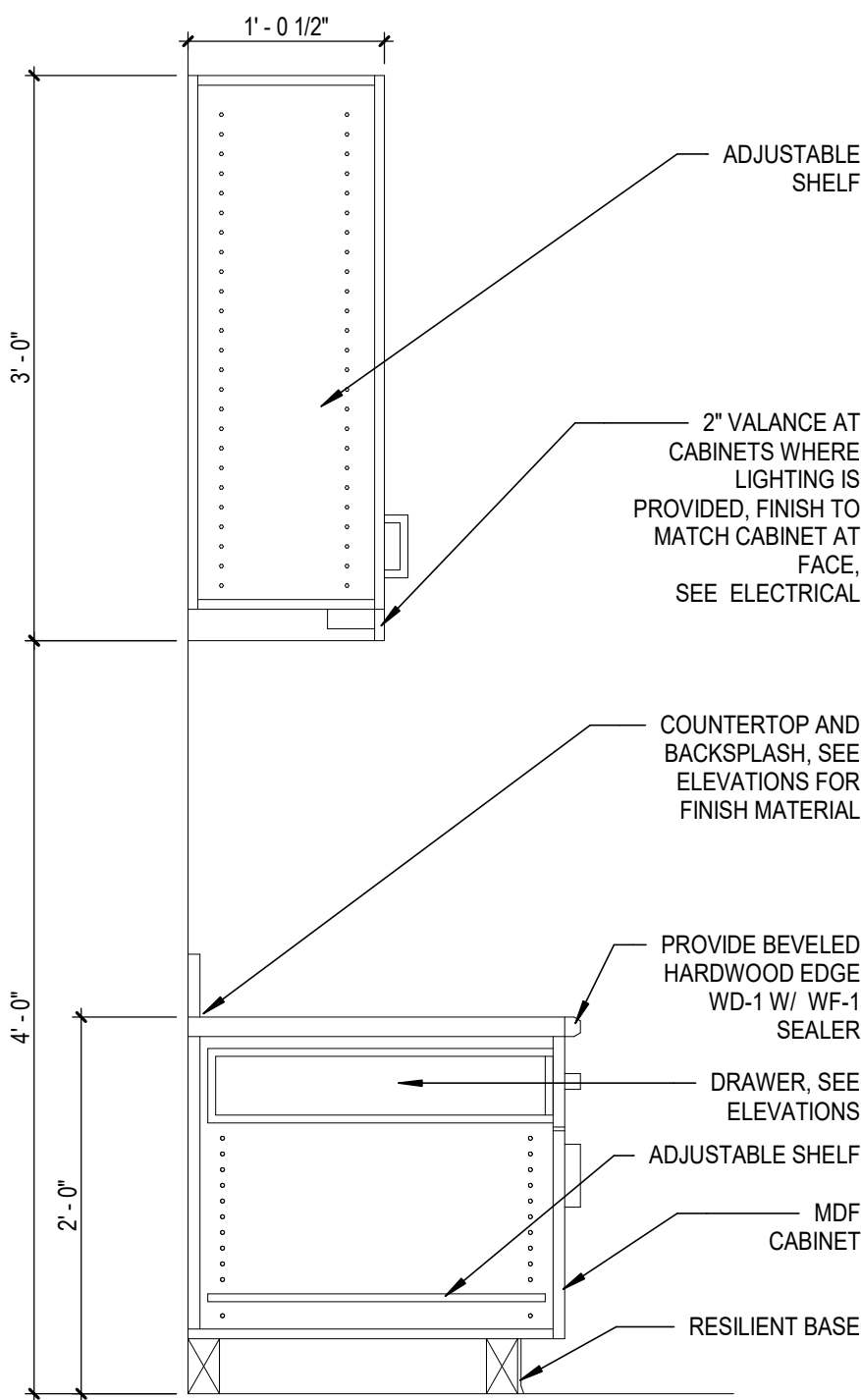
D

E

CASEWORK AND MILLWORK
GENERAL NOTES

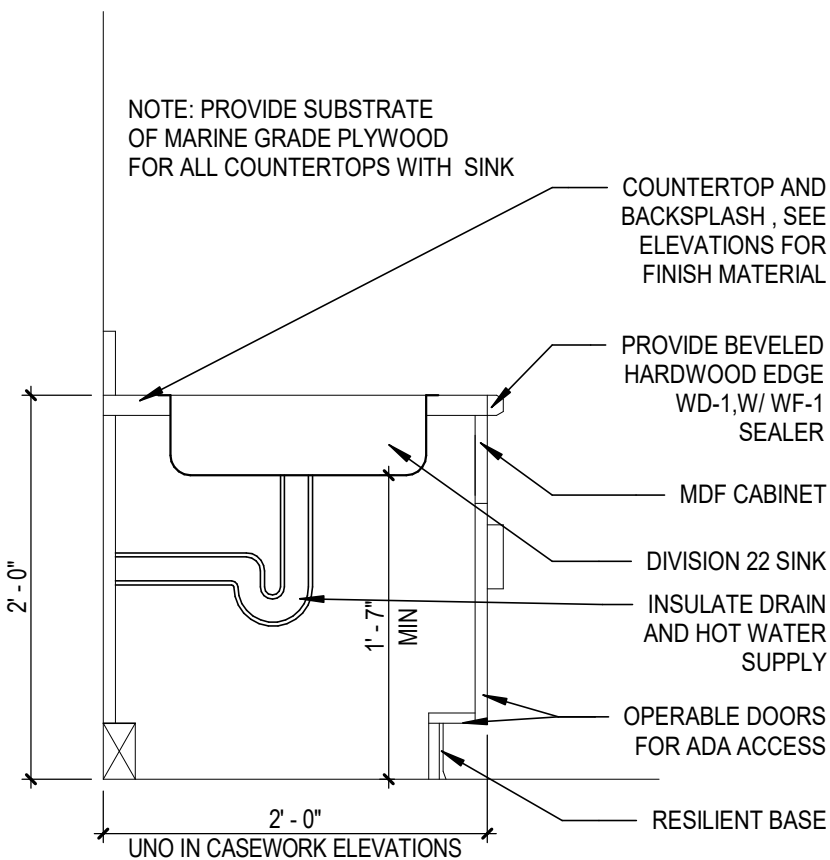
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- Q. PROVIDE WD-1 BEVELED HARDWOOD EDGE BAND AT ALL PLAM COUNTERTOPS. PROVIDE WF-1 SEALER ON EDGE/BAND TYP.
- R. ALL CABINETS TO BE PLAM-1 UNO, ALL COUNTERTOPS & BACKSPLASH TO BE PLAM-2 UNO.

1

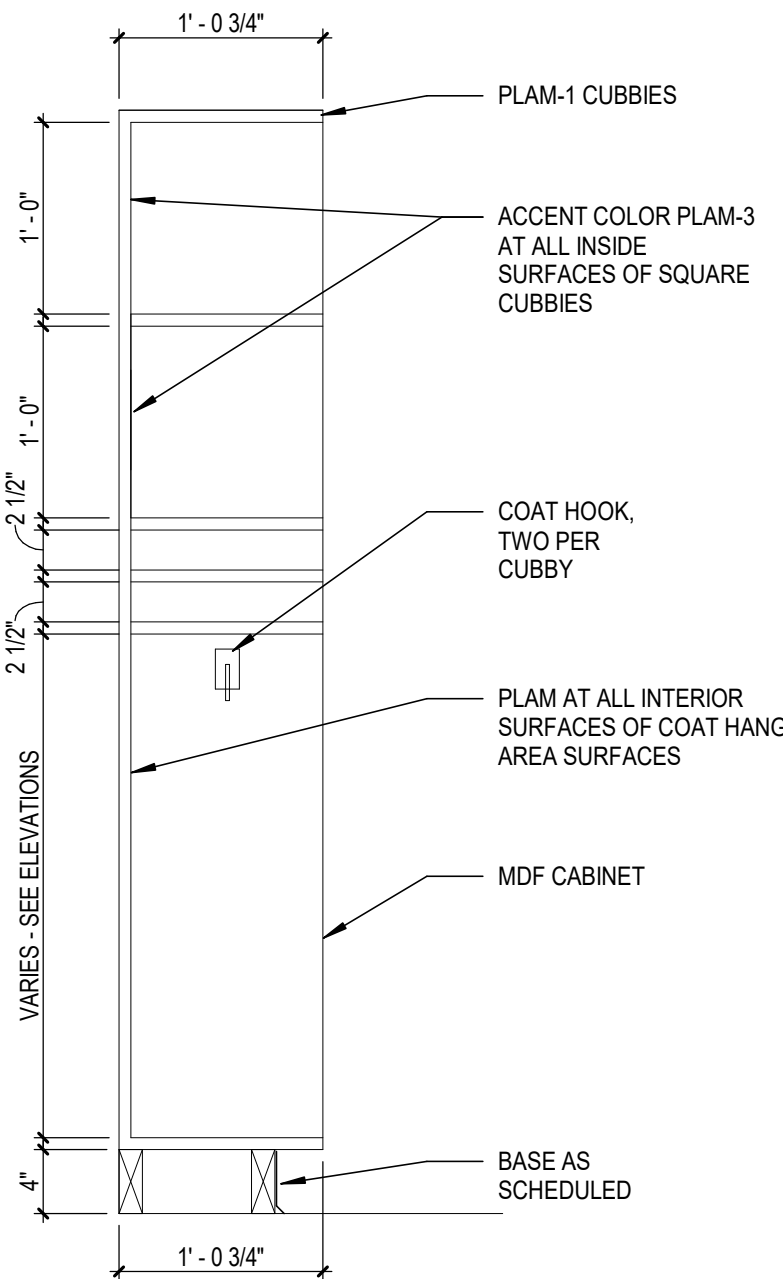


2A TYP. BASE CABINET W/ UPPER (CLASSROOMS)
SCALE: 1" = 1'-0"

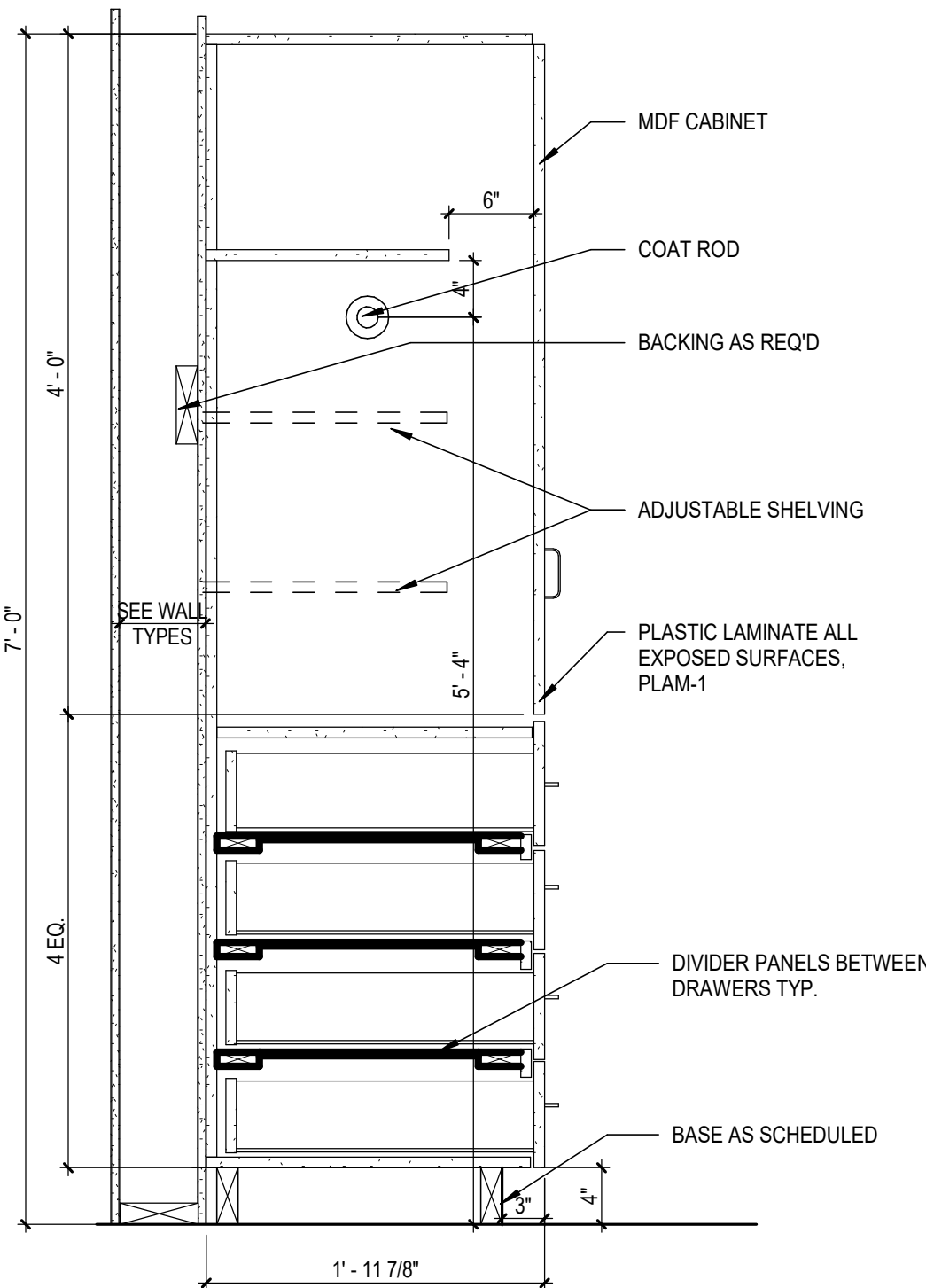
2



2B TYP. BASE CABINET AT CLASSROOM SINK
SCALE: 1" = 1'-0"

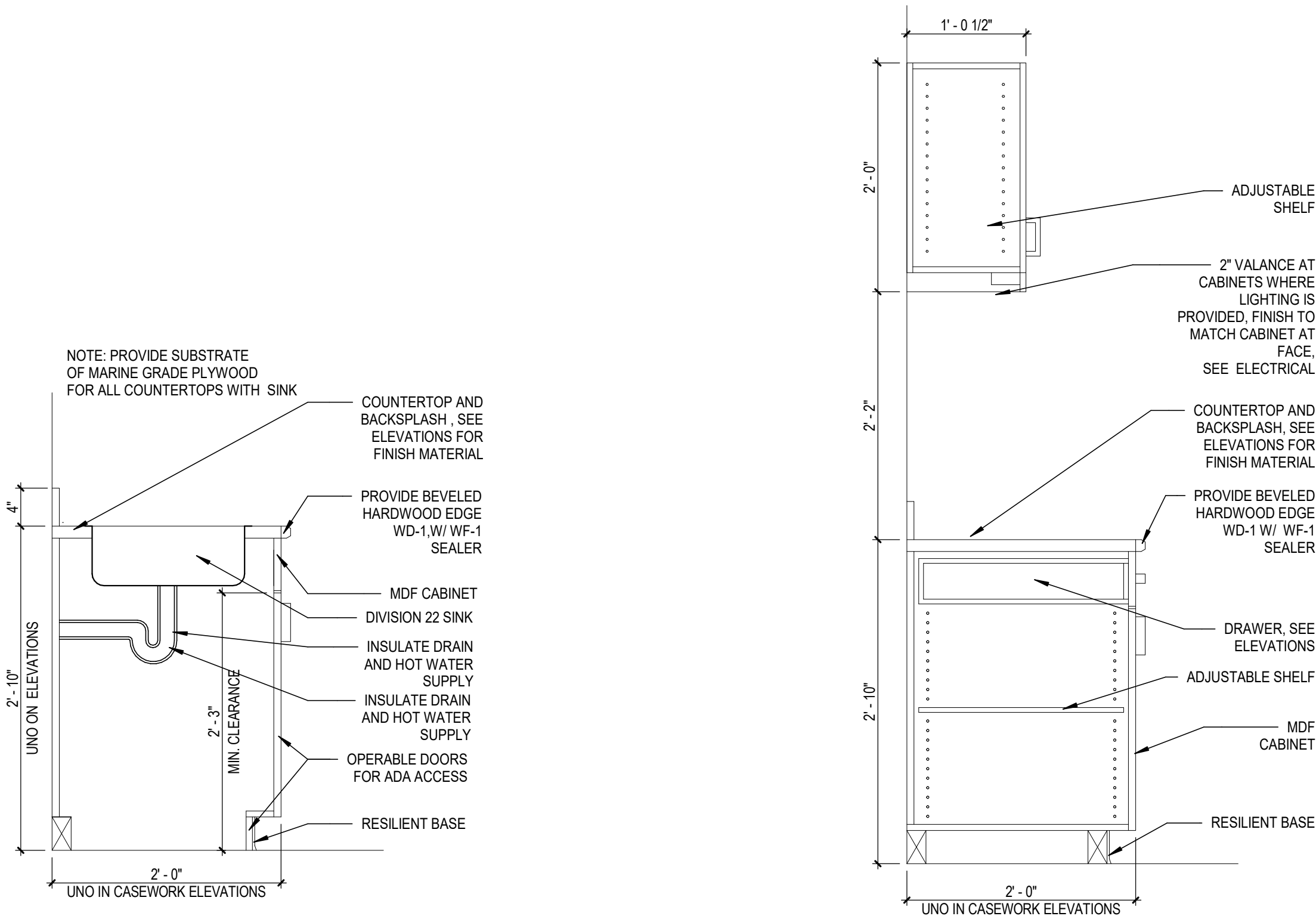


2C TYP. CLASSROOM CUBBIES
SCALE: 1" = 1'-0"



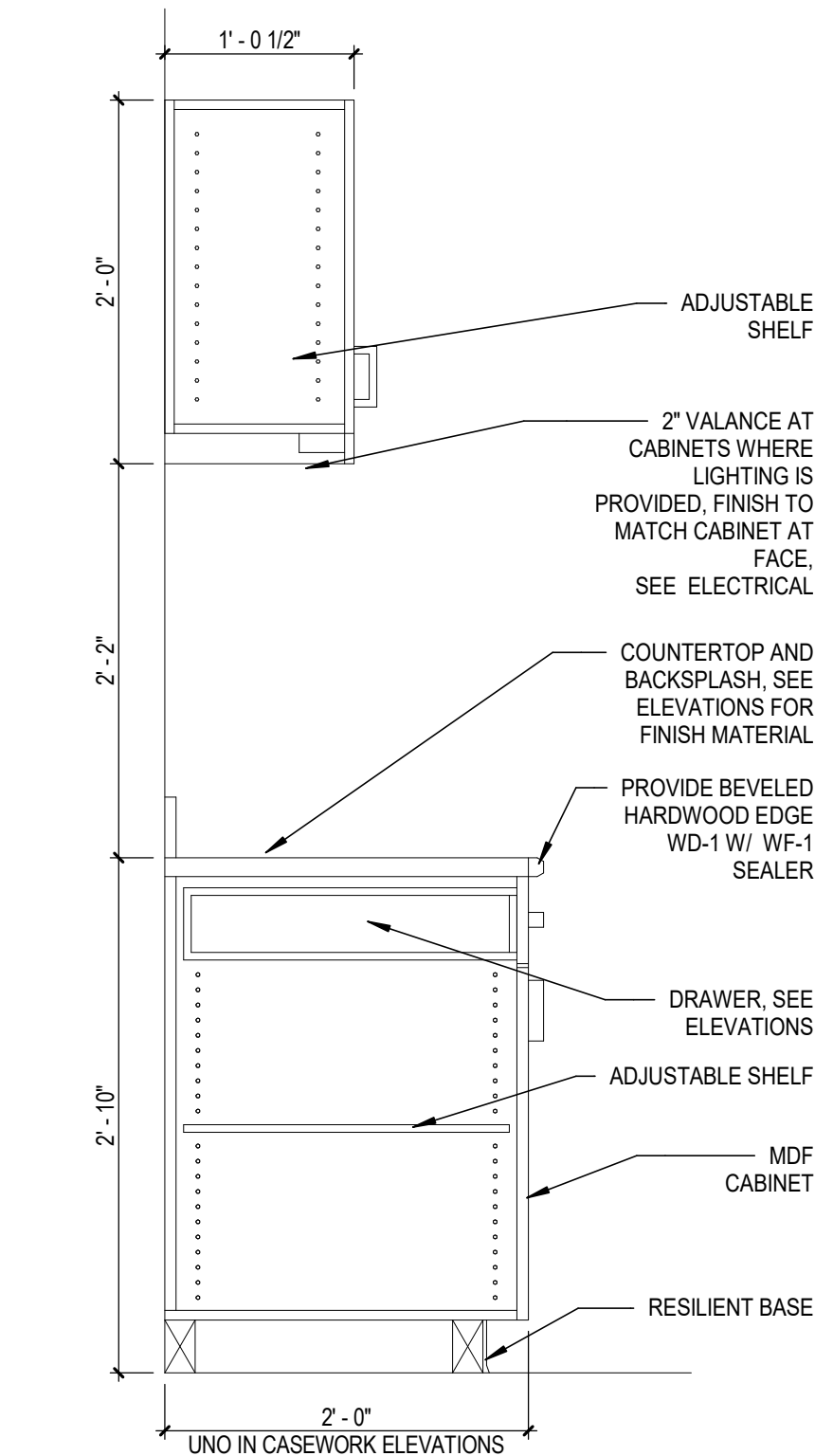
2D WARDROBE / TALL STORAGE CABINET
SCALE: 1" = 1'-0"

3

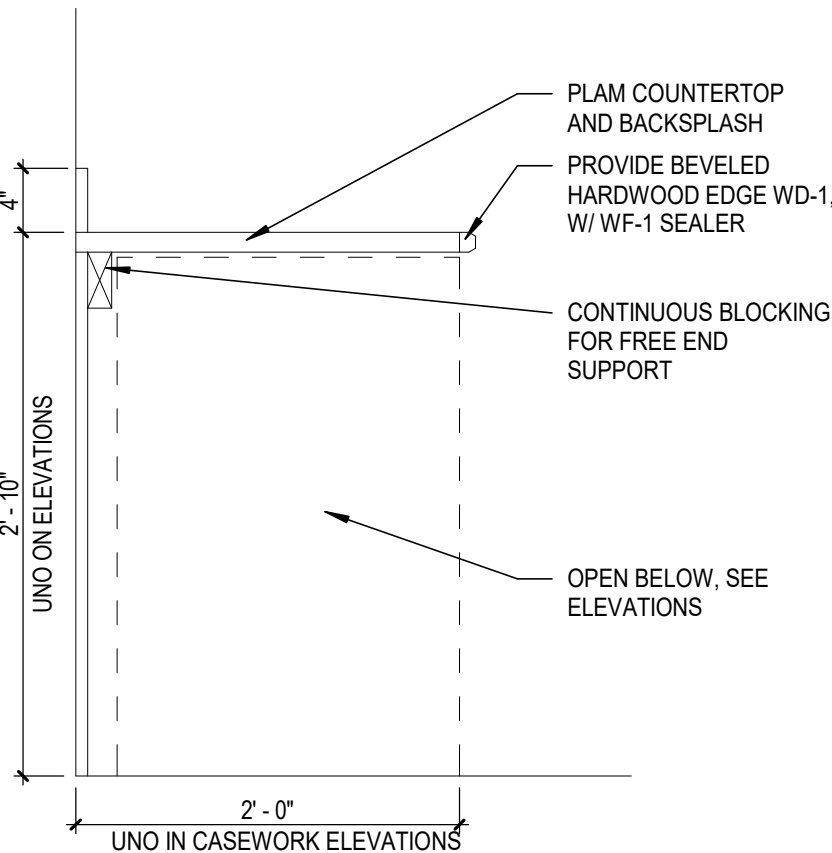


4A TYP. BASE CABINET AT SINK
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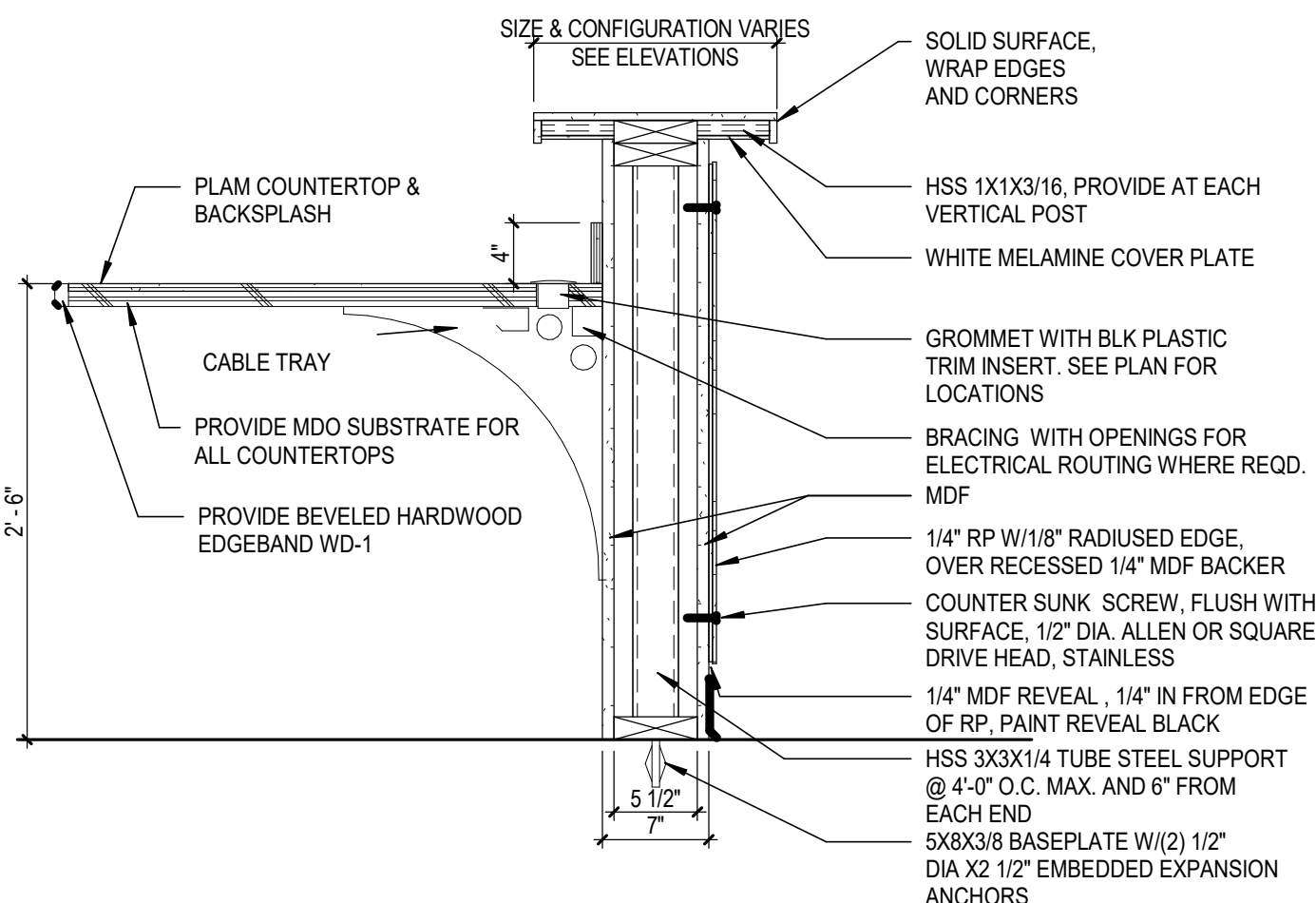
4



4B TYP. BASE CABINET W/ UPPER
SCALE: 1" = 1'-0"



4C TYP. BASE CABINET OPEN BELOW
SCALE: 1" = 1'-0"



4D LIBRARY CIRCULATION DESK SECTION (EXISTING - FOR REFERENCE ONLY)
SCALE: 1" = 1'-0"

A

B

C

D

E

_COLOR AND MATERIALS SCHEDULE - BASIS OF DESIGN						
	GENERAL_ LOCATION	MANUFACTURER	PRODUCT NAME	COLOR / FINISH	SIZE	REMARKS
ACOUSTICAL CEILING						
APC-1	CLASSROOMS, GENERAL	ARMSTRONG	FINE FISSURED, LAY-IN	WHITE W/ SATIN ALUMINUM PRELUDE XL 15/16"	24" X 48" X 5/8"	
CARPET						
CPT-1	GENERAL	INTERFACE	HARMONIZE	GRAVEL 104043	25CM X 1M PLANK	INSTALL IN ASHLAR PATTERN
CPT-2	ACCENT IN LIBRARY	INTERFACE	GROUND WAVES	GRAVEL/COLORS 104055	25CM X 1M PLANK	INSTALL IN ASHLAR PATTERN
CONCRETE FLOORING						
PC	CORRIDORS / DINING COMMONS / WORK ROOM	RETROPLATE	RETROPLATE	NATURAL, NO FINISH/DYE	-	
SC	MISC.	-	-	SEALED CONCRETE	-	
CORNER GUARD						
CG-1	CORNERS, TYP. WHERE GWB & MDF OCCURS	INPRO CORP.	TAPE-ON CORNER GUARD 430, 16-GAUAGE	STAINLESS STEEL	4'-0" x 0'-1 1/2"	START INSTALL ABOVE BASE
COVE BASE						
CB-1	COVE BASE AT HANDWASHING AREAS	ALTRO	COVE FORMER	C-8 CAP TILE, WHITE	4"H	COVE BASE FOR RES-1, ALTROMASTIC FOR TRANSITION TO RB-1
GROUT						
G-1	WALL TILE	LATICRETE	EPOXY	78 STERLING SILVER	-	
G-2	FLOOR TILE	LATICRETE	EPOXY	60 DUSTY GREY	-	
MARKERBOARDS						
MB-1	CLASSROOMS	CLARIDGE	STANDARD MAGNETIC MARKERBOARD	WHITE W/ SQUARE MITERED WHITE TRIM	4' W x HEIGHT AS INDICATED ON DRAWINGS	INCLUDE MAGNETIC ACCESSORY TRAY 1'-0" POWDER COAT WHITE
MB-2	CLASSROOMS	CLARIDGE	STANDARD MAGNETIC MARKERBOARD	WHITE W/ SQUARE MITERED WHITE TRIM	4' W x HEIGHT AS INDICATED ON DRAWINGS	NO ACCESSORY TRAY
MB-3	CLASSROOMS	CLARIDGE	STANDARD MAGNETIC MARKERBOARD	WHITE W/ SQUARE MITERED WHITE TRIM	2' W x HEIGHT AS INDICATED ON DRAWINGS	NO ACCESSORY TRAY
PAINT						
PT-1	GENERAL WALL	SHERWIN WILLIAMS	-	PURE WHITE 7005	-	
PT-2	ACCENT GREEN, COLUMNS	SHERWIN WILLIAMS		PARADISE 6770		COLUMNS, UNO
PT-3	HM DOOR FRAMES, DARK GREY	SHERWIN WILLIAMS		THUNDER GRAY 7645		COLUMN COLOR WHERE NOTED ON FINISH PLAN
PLASTIC LAMINATE						
PLAM-1	CABINETS	FORMICA	-	RATTAN CANE 3699-58 MATTE	-	GRAIN DIRECTION TO RUN VERTICAL UNLESS NOTED OTHERWISE ON A11s
PLAM-2	GENERAL COUNTERTOPS	FORMICA	-	MINERAL SPA 6920-58 MATTE	-	
PLAM-3	CASEWORK INTERIOR CUBBIES, BLUE	NEVAMAR	-	PATRIOT BLUE S3Q48T TEXTURED	-	
PLAM-4	CIRCULATION DESK, BODY	FORMICA		GRAPHITE TWILL 8829-58 MATTE		GRAIN DIRECTION TO RUN VERTICAL UNLESS NOTED OTHERWISE ON A11s
RESILIENT BASE						
RB-1	GENERAL	JOHNSONITE	TRADITIONAL RUBBER BASE	STORM CLOUD 71	4" H	
RESILIENT SHEET						
RES-1	HANDWASHING AREA	ALTRO	SYMPHONIA	PH2025 LAKESIDE	ROLL	
SCHLUTER SYSTEMS						
SCHL-1	EDGING AT FLASH COVE BASE AREAS	SCHLUTER	SCHIENE	SATIN ANODIZED ALUMINUM	-	
SCHL-2	PROFILE FOR OUTSIDE CORNERS AT WALL TILE	SCHLUTER	RONDEC	SATIN ANODIZED ALUMINUM		
TACKBOARD						
TBD-1	GENERAL TACK BOARDS	CLARIDGE/FORBO	BULLETIN BOARD	MUSHROOM MEDLEY	4' W x HEIGHT AS INDICATED ON DRAWINGS	FRAME PER ELEVATION
TBD-2	CORRIDOR TACK STRIP	CLARIDGE/FORBO	BULLETIN BOARD TACK STRIP	MUSHROOM MEDLEY	VARIES	TOP OF TACKSTRIP FRAME ALIGNS WITH TOP OF DOOR FRAME
TBD-3	TACK BOARDS	CLARIDGE/FORBO	BULLETIN BOARD	MUSHROOM MEDLEY	3' W x HEIGHT AS INDICATED ON DRAWINGS	FRAME PER ELEVATION
TILING						
CT-1	FLOOR TILE IN TOILET ROOMS (ALTERNATE 1)	DALTILE	KEYSTONES	SUEDE GRAY SPECKLE D208	2" X 2"	
CT-2	GENERAL WALL TILE IN TOILET ROOMS (ALTERNATE 1)	DALTILE	SEMI-GLOSS	DESERT GRAY X114	4.25" X 4.25"	5" WAINSCOT MIXED W/CT-3
CT-2A	GENERAL BULLNOSE WALL TILE IN TOILET ROOMS (ALTERNATE 1)	DALTILE	SEMI-GLOSS - BULLNOSE S4449	DESERT GRAY X114	4.25" X 4.25"	TOP ROW OF WALL TILE
CT-2B	GENERAL COVE BASE WALL TILE IN TOILET ROOMS W/ FLAT TOP (ALTERNATE 1)	DALTILE	SEMI-GLOSS - COVE BASE A3401	DESERT GRAY X114	4.25" X 4.25"	BOTTOM ROW OF WALL TILE
CT-2C	SANITARY COVE BASE WALL TILE IN TOILET ROOMS WITH BULL NOSE (ALTERNATE 1)	DALTILE	SEMI-GLOSS - COVE BASE S-3419T	DESERT GRAY X114	4.25" X 6"	COVE BASE ON NON-WET WALL
CT-3	GENERAL WALL TILE IN TOILET ROOMS (ALTERNATE 1)	DALTILE	SEMI-GLOSS	ARCTIC WHITE 0190	4.25" X 4.25"	5" WAINSCOT MIXED W/CT-2
WALL CLADDING						
WC-1	HANDWASHING WALLS	INPRO	SANI-SURFACE HYGIENIC WALL CLADDING	PURE WHITE 0383	4'-0" X 8'-0"	CUT IN FIELD TO ALIGN WITH ADJACENT WHITEBOARDS
WINDOW SHADES						
HLB-1	HORIZONTAL LOUVER BLINDS	LEVOLOR	METAL BLINDS - RIVIERA	WHITE	FIELD MEASURE	INSTALL ON INTERIOR RELITES
SHADE-1	GENERAL	MECHOSHADE	MANUAL CLUTCH ROLLER SHADE - 3% OPENNESS	5310 NICKEL	FIELD MEASURE	ALL EXTERIOR WINDOWS
WOOD						
MDF-1	MDF WAINSCOT IN CORRIDORS	-	MDF	CLEAR COAT (WF-1)		WAINSCOT UP TO 4' A.F.F
WD-1	COUNTERTOP HARDWOOD EDGING	-	ASH HARDWOOD	CLEAR COAT (WF-1)	3/4"	EDGE BANDING FOR PLAM COUNTERTOPS
WOOD FINISH						
WF-1	CLEAR COAT FOR MDF-1 & WD-1	LENMAR	DURALAQ-WB 1WB.10x	CLEAR COAT, SATIN FINISH		SPRAY 3 COATS, SAND BETWEEN COATS

ROOM FINISH SCHEDULE										
ROOM		FLOOR FINISH	BASE FINISH	WALL				CEILING FINISH	WDW SHADES	COMMENTS
NUMBER	NAME			NORTH	EAST	SOUTH	WEST			
G106	NEW CLASSROOM	PC, CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	APC-1	SHADE-1,HLB-1	
G108	NEW CLASSROOM	PC, CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	APC-1	SHADE-1,HLB-1	
G114	COMPUTER LAB	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1/EXP	APC-1	SHADE-1,HLB-1	
G102	NEW CLASSROOM	PC, CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	APC-1	SHADE-1,HLB-1	
G104	NEW CLASSROOM	PC, CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	APC-1	SHADE-1,HLB-1	
G110	LIBRARY	CPT-1, CPT-2	RB-1	PT-1	PT-1	PT-1	PT-1	GWB, APC-1	SHADE-1,HLB-1	
G101	RESTROOM	CT-1	CT-2B/CT-2C	PT-1	PT-1	CT-2/CT-3/CT-2A/PT-1	CT-2/CT-3/CT-2A/PT-1	GWB		ALT.1 OPTION - SEE ELEVATIONS FOR TILE AND WALL BASE LAYOUT
G103	RESTROOM	CT-1	CT-2B/CT-2C	CT-2/CT-3/CT-2A/PT-1	CT-2/CT-3/CT-2A/PT-1	PT-1	PT-1	GWB		ALT.1 OPTION - SEE ELEVATIONS FOR TILE AND WALL BASE LAYOUT
G112	WORK ROOM	PC	RB-1	PT-1	PT-1	PT-1	PT-1	APC-1	HLB-1	
G100	CIRCULATION	PC	RB-1	PT-1	PT-1	PT-1	PT-1	PT-1		SEE FINISH PLAN FOR MDF-1 AND TBD-2 WAINSCOT EXTENTS

- COLOR AND MATERIAL
SCHEDULE GENERAL NOTES
- A. SEE SPECIFICATIONS FOR PAINTING OF ITEMS NOT NOTED IN THE ROOM FINISH SCHEDULE.

B. REFER TO INTERIOR FINISH PLANS (A12 SERIES), INTERIOR ELEVATIONS (A10 SERIES), AND REFLECTED CEILING PLANS (A3 SERIES) FOR MORE INFORMATION ON FINISH EXTENTS AND PATTERNS AND CEILING HEIGHTS.

C. EXPOSED CONCRETE FLOOR SLABS NOT SCHEDULED TO RECEIVE A FINISH SHALL RECEIVE A CURING AND SEALING COMPOUND UNLESS OTHERWISE NOTED.

D. ALL GWB CEILINGS, SOFFITS, AND BULKHEADS SHALL BE PAINTED PT-1 UNLESS OTHERWISE NOTED.

E. CEILING HEIGHTS, AS NOTED ON THE REFLECTED CEILING, PLANS ARE MEASURED FROM THE FINISH FLOOR OF THE ROOM.

F. FURNISH AND INSTALL WALL BASE AROUND CASEWORK AND MILLWORK.

G. WHERE FLOOR FINISH CHANGES FROM ONE ROOM TO ANOTHER, SET JOINT OF THE MATERIALS AT THE CENTER OF THE COMMUNICATING DOOR.

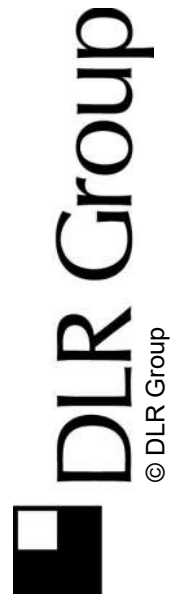
H. SEE REFLECTED CEILING PLANS FOR CEILING TYPES AND HEIGHT.

I. REFER TO DOOR SCHEDULE FOR ADDITIONAL INFORMATION OF PAINTING AND STAINING OF DOORS AND FRAMES.

J. PAINT ALL ACCESS PANELS TO MATCH ADJACENT WALL FINISH.

K. ALL EXTERIOR WINDOWS RECEIVE SHADE-1, ALL INTERIOR WINDOWS RECEIVE HLB-1, UNO.

L. EXTERIOR DOORS WITH GLAZING TO RECEIVE SHADE-1 ON UPPER HALF (ABOVE EGRESS BAR).



VOSE ES ADDITION
BEAVERTON SCHOOL DISTRICT

11350 SW DENNEY RD
BEAVERTON, OR 97008

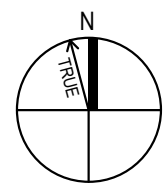
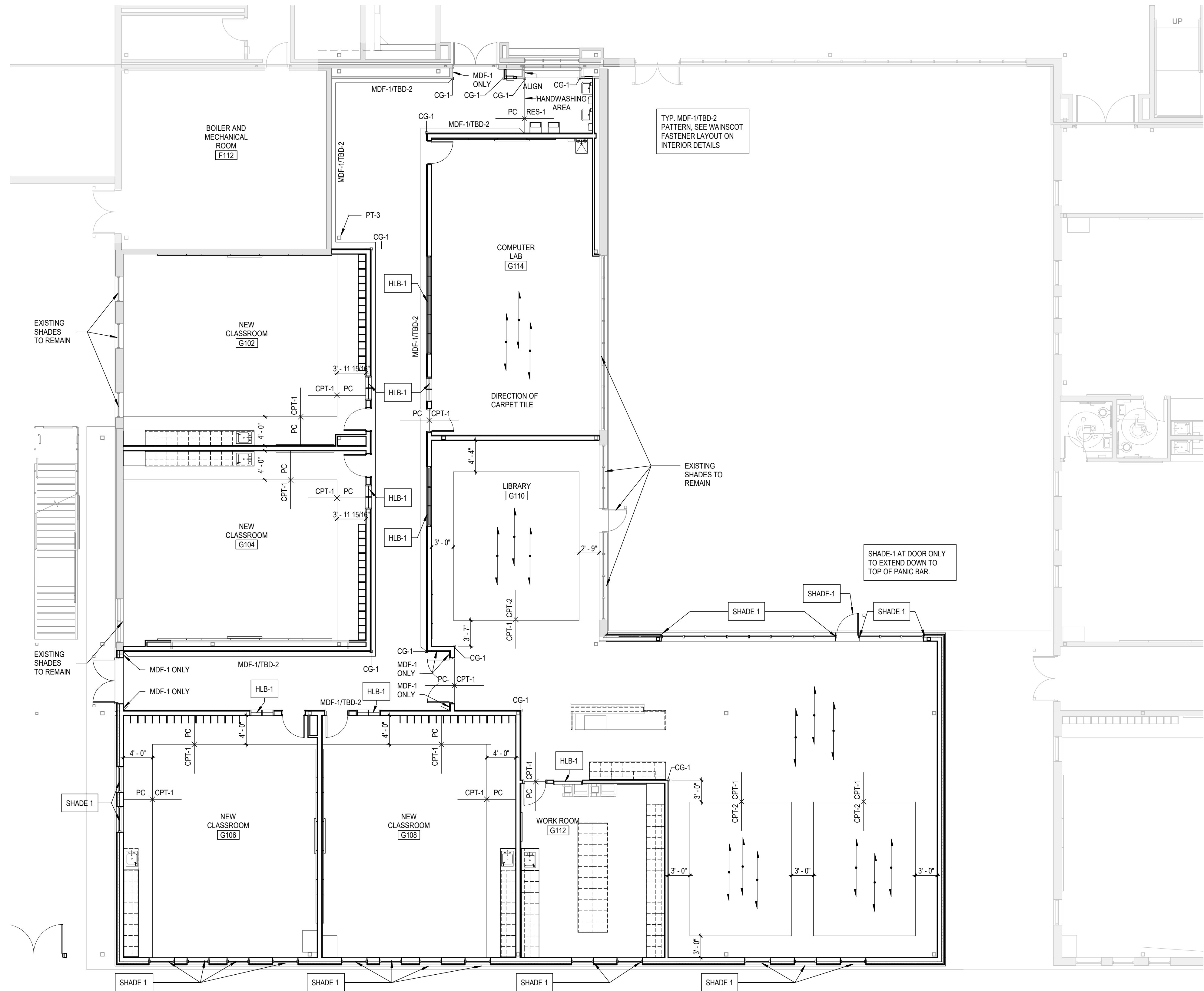
100% CD
2/26/2021
REVISIONS

74-21102-00

FINISH
SCHEDULES

A12.1

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FIRST FLOOR FINISH PLAN

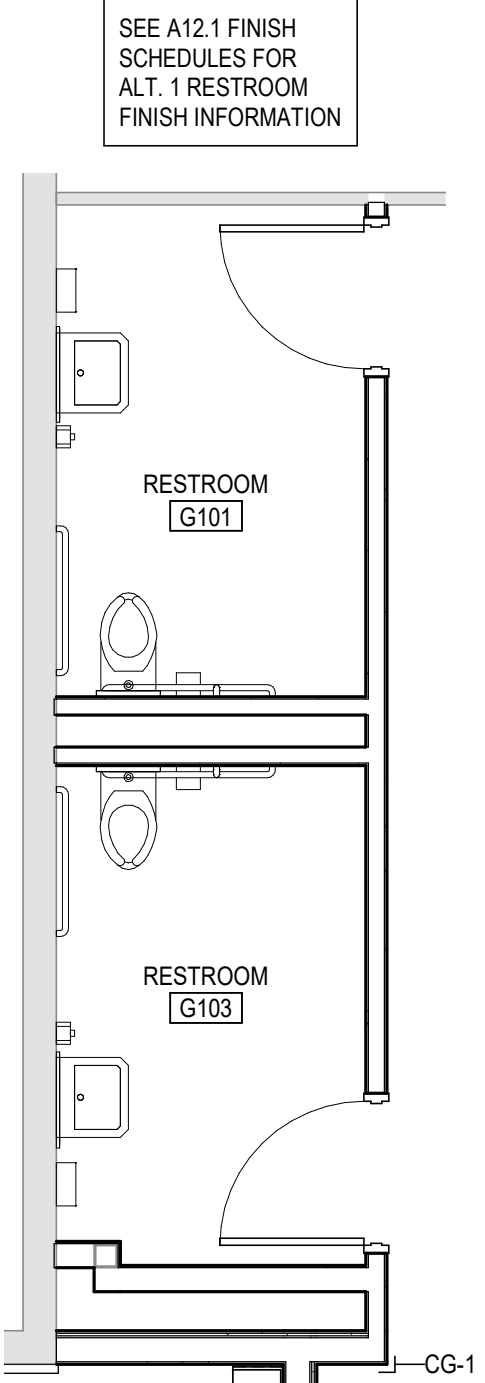
SCALE: 1/8" = 1'-0"

INTERIOR FINISH PLAN GENERAL NOTES

- INTERIOR PLAN GENERAL NOTES APPLY TO ALL INTERIOR FINISH PLAN SHEETS.
- NOT ALL FLOOR AND WALL FINISHES ARE NOTED ON THE INTERIOR FINISH PLANS AND INTERIOR ELEVATION SHEETS. SEE ROOM FINISH SCHEDULE ON A12.1 FOR FLOOR AND WALL FINISHES NOT NOTED.
- SEE COLOR & MATERIALS SCHEDULE ON A12.1 FOR MATERIALS DESCRIPTIONS & LOCATIONS.
- FLOOR PATTERN DIMENSIONS AND LOCATIONS ARE APPROXIMATE. MINOR ADJUSTMENTS MAY BE MADE FOR LAYOUT AND TO MINIMIZE WASTE WITH THE APPROVAL OF THE ARCHITECT, AS LONG AS THE DESIGN INTENT IS MAINTAINED.
- FOR FLOOR TILE PRODUCTS, ADJUST LAYOUT AS NECESSARY TO AVOID USING CUT WIDTHS THAT EQUAL LESS THAN ONE-HALF OF A TILE AT ROOM PERIMETER.
- ALL WALLS TO BE PT-1 UNLESS NOTED OTHERWISE.
- ALL EXPOSED HVAC, DUCTS, MECH SYSTEMS TO BE PAINTED PT-1 UNLESS NOTED OTHERWISE IN ROOM FINISH SCHEDULE.
- ALL ELECTRONIC FILES FOR GRAPHICS TO BE PROVIDED BY ARCHITECT.
- WHERE TWO DIFFERENT MATERIALS MEET AT DOOR, CENTER TRANSITION IN DOORWAY.
- FOR CERAMIC TILE FLOORS, PROVIDE TILE COVE BASE AT BOTH TILED AND UN-TILED WALLS.
- EXPOSED CONCRETE WALLS TO REMAIN UNPAINTED UNO. PAINT ALL EXPOSED PRECAST CONCRETE WALL STEEL CONNECTIONS TO MATCH ADJACENT CONCRETE.
- PAINT ALL INTERIOR EXPOSED COLUMNS PT-2 UNO.
- PAINT ALL EXTERIOR EXPOSED COLUMNS AND BRACE FRAMES PT-3.

ALT. 1 - RR FINISH PLAN

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



VOSE ES ADDITION

BEAVERTON SCHOOL DISTRICT

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FIRST FLOOR
FINISH PLAN

A12.2

ABBREVIATIONS

& @ %&D, DEG (E), EXIST # NO # LB	-AND -AT -DEGREE -DIAMETER -EXISTING -NUMBER -POUND
AB ABV ADDL ADH ADJ AFS ALT ALUM APPROX AR ARCH ASPH ASMBY	-ANCHOR BOLT -ABOVE -ADDITIONAL -ADHESIVE -ADJACENT -ABOVE FINISHED SLAB -ALTERNATE -ALUMINUM -APPROXIMATE -AS REQUIRED -ARCHITECTURAL -ASPHALT -ASSEMBLY
BASE PL BLDG BLKG BLW BM(S) BO xxx BOT BRB BRG BS BTWN	-BASE PLATE -BUILDING -BLOCKING -BELOW -BEAM(S) -BOTTOM OF xxx -BOTTOM -BUCKLING RESTRAINED BRACE -BEARINGS -BOTH SIDES -BETWEEN
C CANT CDF CEM PLAS CIP CJ	-CHANNEL -CANTILEVER -CONTROLLED DENSITY FILL -CEMENT PLASTER -CAST-IN-PLACE -CONSTRUCTION JOINT/CONTROL JOINT
CJP CL CLR CLSM CMU COL CONC CONN CONSTR COORD CSK CTR	-COMPLETE JOINT PENETRATION WELD -CENTER LINE -CLEAR(ANCE) -CONTROLLED LOW STRENGTH MATERIAL -CONCRETE MASONRY UNIT -COLUMN -CONCRETE -CONNECTION -CONTRACTOR -COORDINATE -COUNTER SUNK -CENTER(ED)
DC DBL DEG DEMO DET DEV DIAG DIM DIST DN DWG DWL	-DEPTH/DEEP -DEMAND CRITICAL -DOUBLE -DEGREE -DEMOLITION -DETAIL -DEVELOPMENT/DEVELOPER -DIAGONAL/DIAGRAM -DIMENSION -DISTANCE -DOWN -DRAWING -DOWEL

EA EF EJ EL ELEC ELEV EMBED EOS EOD EQ EQ SPCD EQUIP ES ESC EW EXP EXT	-EACH -EACH FACE -EXPANSION JOINT -ELEVATION -ELECTRICAL -ELEVATOR -EMBEDMENT/EMBEDDED -EDGE OF SLAB -EDGE OF DECK -EQUAL -EQUALLY SPACED -EQUIPMENT -EACH SIDE -ESCALATOR -EACH WAY -EXPANSION -EXTERIOR
FIN FLG FLR FO xxx FOC FOF FOS FP FRT FS FT FTG	-FINISH(ED) -FLANGE -FLOOR -FACE OF xxx -FACE OF CONCRETE -FACE OF FINISH -FACE OF STEEL -FIREPROOF(ING)/FIRE PROTECTION -FIRE RETARDANT TREATED -FAR SIDE -FOOT, FEET -FOOTING
GA GALV GEN GLB GGR GB GR GYP BD	-GAGE/GAUGE -GALVANIZED -GENERAL -GLUE LAMINATED TIMBER -GRADE -GRADE BEAM -GYPSUM BOARD
H BEAM HGR HLDN HORIZ HSS HT HVAC	-HIGH -HEADER -HANGER -HOLD/DOWN -HORIZONTAL -HOLLOW STRUCTURAL SECTIONS -HEIGHT -HEATING, VENTILATION AND AIR CONDITIONING
ID IF IJ IL IN INFO INSUL INT	-INSIDE DIAMETER -INSIDE FACE -ISOLATION JOINT -INSIDE LAYER -INCHES -INFORMATION -INSULATE/INSULATION -INTERIOR
JST JT K / KIP KSI KWY	-JOIST -JOINT -1,000 POUNDS -KIPS PER SQUARE INCH -KEYWAY

L LBR LLBB LLH LLV LOC LSH	-ANGLE/LENGTH -LUMBER -LONG LEG BACK TO BACK -LONG LEG HORIZONTAL -LONG LEG VERTICAL -LOCATION -LONG SLOTTED HOLE
MAX MB MBR MECH MEZZ MTL MFR MRR REC	-MAXIMUM -MACHINE BOLT -MEMBER -MECHANICAL -MEZZANINE -METAL -MANUFACTURE(R/D) -MANUFACTURER'S RECOMMENDATIONS -MANHOLE
MH MID MIN MISC	-MIDDLE -MINIMUM -MISCELLANEOUS
NA NIC NIP NORM NS NTS	-NOT APPLICABLE -NOT IN CONTRACT -NOT IN PERMIT -NORMAL -NEAR SIDE -NOT TO SCALE
OC OD OF OFS OL OPH OPNG OPP OVS	-ON CENTER -OUTSIDE DIAMETER -OUTSIDE FACE -OUTSIDE FACE OF STUDS -OUTSIDE LAYER -OPPOSITE HAND -OPENING -OPPOSITE -OVERSIZED
PAF PAR PC PEN PIL FJP	-POWER ACTUATED FASTENER -PARALLEL/PARAPET -PRECAST CONCRETE -PENETRATE/PENETRATION -PLASTER -PARTIAL JOINT PENETRATION
PL PLCS PNL PREFAB PSF PSI PT PUR	-PLATE -PLACES -PANEL -PREFABRICATED -POUNDS PER SQUARE FOOT -POUNDS PER SQUARE INCH -POST TENSIONED/PRESSURE TREATED -PURLINS
R RC RD REF REIN REQD RO RTU	-RADIUS -REINFORCED CONCRETE -ROOF DRAIN -REFERENCE -REINFORCING -REQUIRED -ROUGH OPENING -ROOFTOP UNIT

USE OF DRAWINGS

- ALL TYPICAL DETAILS AND NOTES SHOWN IN THE DRAWINGS SHALL APPLY UNLESS NOTED OTHERWISE. TYPICAL DETAILS MAY NOT NECESSARILY BE INDICATED ON THE PLANS BUT SHALL STILL APPLY AS SHOWN OR DESCRIBED IN THE DETAILS. WHERE TYPICAL DETAILS ARE NOTED ON THE DRAWINGS, THE SPECIFIED TYPICAL DETAIL SHALL BE USED. WHERE NO DETAIL IS NOTED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CHOOSE THE APPROPRIATE TYPICAL DETAIL FROM THOSE PROVIDED. THE CONTRACTOR SHALL SUBMIT ALL PROPOSED ALTERNATE TYPICAL DETAILS TO THOSE PROVIDED WITH RELATED CALCULATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO SHOP DRAWING PRODUCTION AND FIELD USE.
- NOTES ON THE STRUCTURAL GENERAL NOTES SHEETS ARE APPLICABLE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.
- USE STRUCTURAL DRAWINGS IN CONJUNCTION WITH ARCHITECTURAL, CIVIL, MECHANICAL AND OTHER DRAWINGS FOR BIDDING AND CONSTRUCTION. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR EMBEDS, OPENINGS, SLEEVES, ETC NOT SHOWN ON THE STRUCTURAL DRAWINGS. COORDINATE WORK AND VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY BETWEEN TRADES AND EQUIPMENT PURCHASED. NOTIFY OWNER'S REPRESENTATIVE OF DISCREPANCIES PRIOR TO CONSTRUCTION.
- NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES PRIOR TO CONSTRUCTION.
- DIMENSIONS NOTED PLUS OR MINUS (+/-) OR AS 'FIELD VERIFY' INDICATE UN-VERIFIED DIMENSIONS THAT REQUIRE CONFIRMATION OR DETERMINATION BY THE CONTRACTOR PRIOR TO FABRICATION AND CONSTRUCTION. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF CONFLICTS OR VARIATIONS FROM INDICATED DIMENSIONS.
- IF ANY ERRORS OR OMISSIONS APPEAR TO EXIST IN THESE DRAWINGS, SPECIFICATIONS, OR OTHER CONTRACT DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OR ARCHITECT IN WRITING OF SUCH OMISSION OR ERROR BEFORE PROCEEDING WITH THE WORK.
- IF ANY STRUCTURAL NOTES ARE IN CONFLICT WITH EACH OTHER ARCHITECTURAL, OTHER DRAWINGS, OR THE SPECIFICATIONS, USE THE MOST STRINGENT REQUIREMENT FOR BIDDING AND CONSTRUCTING THE WORK.
- ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF AN ENGINEER REGISTERED IN THE STATE OF THE PROJECT AND BE ACCOMPANIED BY SUBSTANTIATING CALCULATIONS.

MEANS AND METHODS

- DLR GROUP, NOR ANY OF ITS EMPLOYEES, SHALL NOT HAVE CONTROL OF, OR BE RESPONSIBLE FOR, THE CONSTRUCTION MEANS AND METHODS, TECHNIQUES, PROCEDURES, SEQUENCES, ACTS OR OMISSIONS OF THE CONTRACTOR OR ANY OTHER PERSONS PERFORMING THE WORK, OR FOR THE FAILURE OF ANY OF INDIVIDUAL OR COMPANY TO SAFELY CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL PROVIDE NECESSARY BRACING AND SHORING AS REQUIRED UNTIL THE BUILDING'S STRUCTURAL SYSTEMS HAVE BEEN COMPLETED. THE STRUCTURE SHALL NOT BE CONSIDERED STABLE UNTIL ALL STRUCTURAL ELEMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL RETAIN A QUALIFIED LICENSED STRUCTURAL ENGINEER WHO SHALL DETERMINE WHERE TEMPORARY SHORING/BRACING IS REQUIRED AND PROVIDE ITS DESIGN. PROVIDE TEMPORARY BRACING AS REQUIRED TO STABILIZE THE STRUCTURE AND ITS COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED ACCORDING TO THE CONTRACT DOCUMENTS.
- THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE STRUCTURE DURING CONSTRUCTION. WHERE CONSTRUCTION SEQUENCING AND STAGING ARE LIKELY TO CREATE OVERLOADING, THE CONTRACTOR SHALL RETAIN A QUALIFIED STRUCTURAL ENGINEER TO DETERMINE HOW TO TEMPORARILY SHORE AND SUPPORT THE OVERLOADED ELEMENTS IN A MANNER THAT DOES NOT EXCEED THE STRESS LIMITS OF THE ELEMENTS AND THE SUPPORTING FOUNDATION AS DEFINED BY THE APPLICABLE BUILDING CODES.

STRUCTURAL OBSERVATION

- STRUCTURAL OBSERVATION IS REQUIRED FOR THE STRUCTURAL SYSTEM IN ACCORDANCE WITH BUILDING CODE SECTION 1704.6. STRUCTURAL OBSERVATION IS THE VISUAL OBSERVATION OF THE ELEMENTS AND CONNECTIONS OF THE STRUCTURAL SYSTEMS AT SIGNIFICANT CONSTRUCTION STAGES AND THE COMPLETED STRUCTURE FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS. STRUCTURAL OBSERVATION DOES NOT WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED PER BUILDING CODE SECTION 110 OR SPECIAL INSPECTION IN ACCORDANCE WITH IBC SECTION 1705.
- THE OWNER SHALL EMPLOY AN ENGINEER OR ARCHITECT LICENSED TO PERFORM STRUCTURAL OBSERVATION IN THE PROJECT JURISDICTION.
- THE STRUCTURAL OBSERVER SHALL PROVIDE A LETTER TO BE SUBMITTED TO THE BUILDING OFFICIAL BEFORE THE FIRST SITE VISIT IDENTIFYING THE FREQUENCY AND EXTENT OF STRUCTURAL OBSERVATIONS.
- THE STRUCTURAL OBSERVER SHALL SUBMIT A WRITTEN STATEMENT TO THE BUILDING OFFICIAL AT THE CONCLUSION OF ALL STRUCTURAL WORK THAT SITE VISITS HAVE OCCURRED AND THE OBSERVER SHALL REPORT ANY DEFICIENCIES THAT HAVE NOT BEEN RESOLVED.
- THE CONTRACTOR SHALL SCHEDULE EACH OBSERVATION AT LEAST TWO WEEKS PRIOR TO DATE OF THE PROPOSED OBSERVATION.
- THE STRUCTURAL OBSERVER SHALL PERFORM OBSERVATIONS AT THE FOLLOWING SIGNIFICANT CONSTRUCTION STAGES:
CONSTRUCTION STAGES ELEMENTS/CONNECTIONS TO BE OBSERVED
 - PRIOR TO CONCRETE PLACEMENT, OBSERVE FOUNDATION REINFORCEMENT AND ANCHOR BOLTS.
 - AT SUBSTANTIAL COMPLETION OF THE PRIMARY STRUCTURE.

SUBMITTALS

- THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION/ERECTION/INSTALLATION. THESE ITEMS ARE IN ADDITION TO ANY SUBMITTAL REQUIREMENTS SPECIFIED ON THESE PLANS OR IN THE PROJECT SPECIFICATIONS.

STRUCTURAL SUBMITTALS					
ITEM	PROD DATA	SHOP DWGS	TEST RESULTS	CALCS	DEFERRED SUBMITTAL
STRUCTURAL STEEL	-	YES	-	-	-
CONCRETE MATERIALS	YES	-	YES	-	-
BASEPLATE GROUT	YES	-	-	-	-
COLD FORMED STEEL	YES	YES	-	YES	YES
EPOXY AND EXP ANCHORS	YES	-	-	-	-
ANCHORAGE FOR MECH/ELEC EQUIPMENT	-	YES	-	YES	YES
MEP EQUIPMENT/CONDUIT SEISMIC BRACING	YES	YES	-	YES	YES
ACOUSTICAL PANEL CEILING SEISMIC BRACING	YES	YES	-	YES	YES

- "PROD DATA" - SUBMIT ADEQUATE DOCUMENTATION THAT THE PRODUCT PROPOSED TO BE USED MEETS THE REQUIREMENTS ON THESE PLANS AND THE PROJECT SPECIFICATIONS.
- "SHOP DWGS" - SUBMIT COMPLETE SHOP DRAWINGS SUFFICIENT TO SHOW QUANTITIES AND KINDS OF MATERIALS, METHODS OF ASSEMBLY, AND ALL DATA REQUIRED FOR FABRICATION, ERECTION, AND INSTALLATION. THE PURPOSE OF THESE DRAWINGS IS TO DEMONSTRATE THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT DOCUMENTED HEREIN. SUBMITTALS CONSISTING OF DRAWINGS TAKEN DIRECTLY FROM THESE PLANS WILL NOT BE APPROVED.
- "TEST RESULTS" - SUBMIT RESULTS FOR ANY TESTING REQUIRED BY BUILDING CODE OR THESE PLANS.
- "CALCS" - SUBMIT CALCULATIONS SIGNED AND SEALED BY A DESIGN PROFESSIONAL AUTHORIZED TO PERFORM WORK IN THE PROJECT JURISDICTION.
- "DEFERRED SUBMITTAL" - SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW, ONCE REVIEWED, CONTRACTOR SHALL FORWARD TO THE BUILDING DEPARTMENT FOR APPROVAL. FABRICATION AND/OR INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT OCCUR UNTIL APPROVAL OF THE BUILDING DEPARTMENT IS RECEIVED.

BUILDING CODE

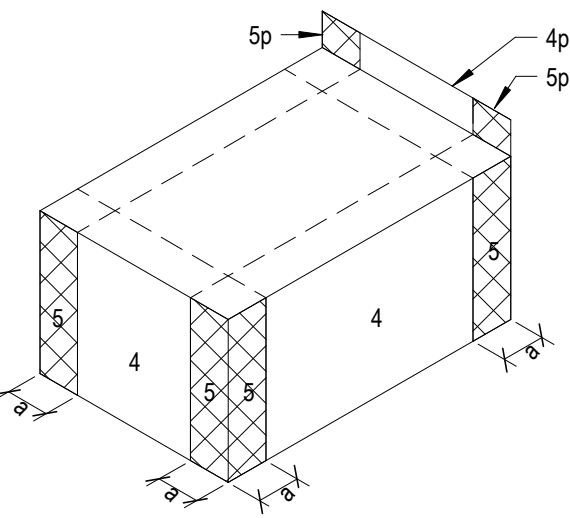
- ALL CONSTRUCTION, MATERIALS, AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THESE DRAWINGS, SPECIFICATIONS, AND THE CODES, RULES AND REGULATIONS OF THE 2019 OREGON SPECIALTY STRUCTURAL CODE HEREIN AFTER REFERRED TO AS THE BUILDING CODE.
- WHERE NOTED IN THE STRUCTURAL NOTES, CONSTRUCTION, MATERIALS, AND WORKMANSHIP SHALL ALSO CONFORM TO THE STANDARD AS REFERENCED BY THE BUILDING CODE.

DESIGN CRITERIA

- SNOW LOAD CRITERIA
GROUND SNOW LOAD, P_g 10 PSF
FLAT ROOF SNOW LOAD, P_f 27 PSF (COD MIN, INCLUDES RAIN-ON-SNOW)
SNOW EXPOSURE FACTOR, C_e 1.0
SNOW LOAD IMPORTANCE FACTOR, I_s 1.1
THERMAL FACTOR, C_t 1.0
- WIND DESIGN CRITERIA
RISK CATEGORY III
ULTIMATE DESIGN WIND SPEED, V_{ult} 103 MPH
NOMINAL DESIGN WIND SPEED, V_{nom} 80 MPH
EXPOSURE CATEGORY C
INTERNAL PRESSURE COEFFICIENT, GC_{pi} +/- 0.18

COMPONENTS AND CLADDING DESIGN ULTIMATE WIND PRESSURES (PSF)				
WALLS				
ZONE	10 SF	100 SF	500 SF	
4	+24.0	+20.5	+18.0	
	-26.0	-22.5	-20.0	
5	+24.0	+20.5	+18.0	
	-32.1	-25.0	-20.0	

NOTES:
1. TABLE PRESSURES ARE FOR THE SQUARE FOOT TRIBUTARY AREA SHOWN. FOR OTHER TRIBUTARY AREAS, LINEARLY INTERPOLATE BETWEEN VALUES SHOWN ABOVE.
2. POSITIVE PRESSURES ACT TOWARD THE SURFACES. NEGATIVE PRESSURES ACT AWAY FROM THE SURFACES.
 $a = 11 \text{ FT}$



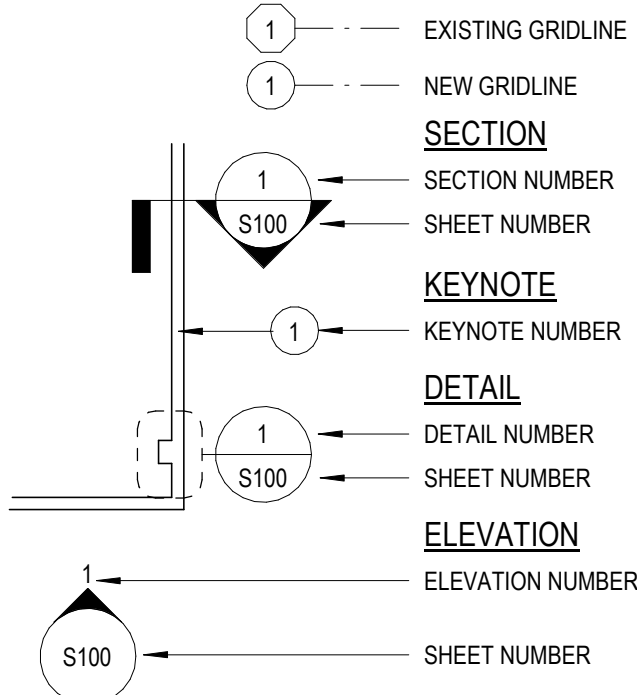
WALLS (GENERIC BUILDING SHOWN)

- SEISMIC DESIGN CRITERIA
SITE CLASS D
 S_s 0.872
 S_1 0.401
 S_{DS} 0.669
 S_{D1} 0.508
SEISMIC DESIGN CATEGORY D
LATITUDE 45.4684
LONGITUDE -122.7394
RISK CATEGORY IV (USED FOR SEISMIC DESIGN ONLY)
IMPORTANCE FACTOR, I_h 1.50 (USED FOR SEISMIC DESIGN ONLY)

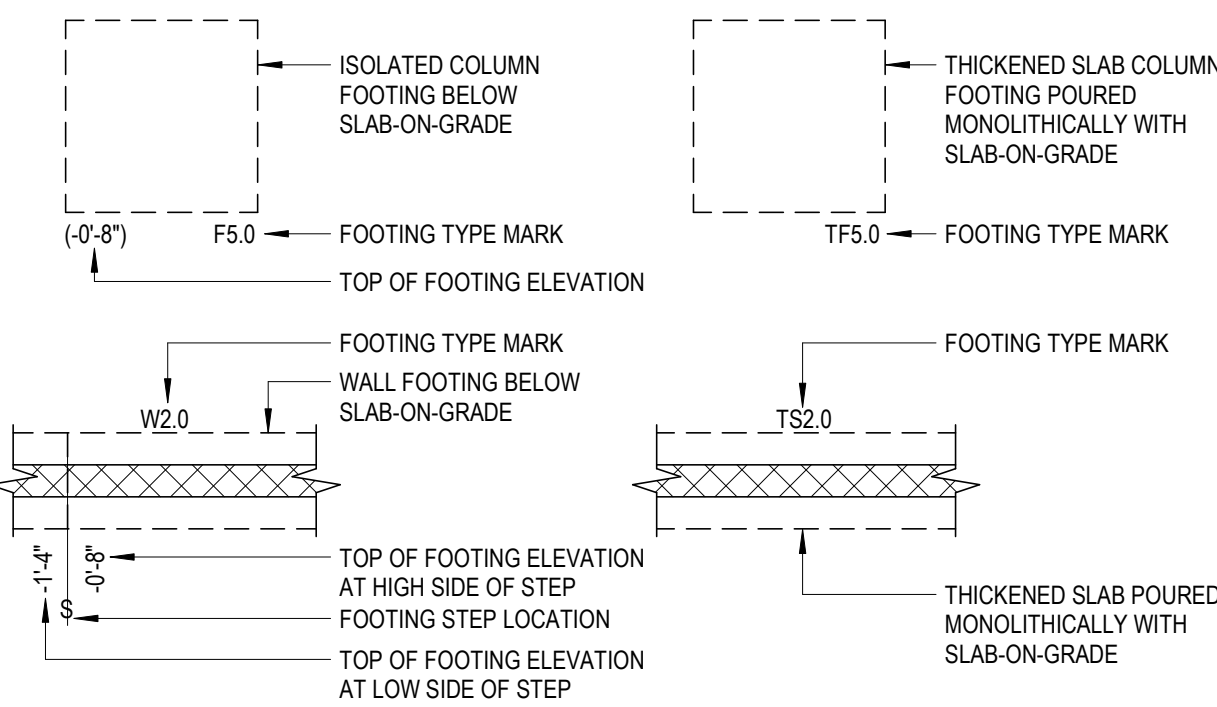
FOUNDATIONS

- THE FOUNDATIONS WERE DESIGNED TO THE REQUIREMENTS PROVIDED IN THE PROJECT GEOTECHNICAL REPORT PREPARED BY GEODESIGN, VOSE JOB NO. BEAVSCHOOL-49-01, DATED MARCH 2, 2016. THREE REPORT WAS PREPARED FOR THE ORIGINAL SCHOOL CONSTRUCTION. THE CONTRACTOR SHALL UTILIZE THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT TO ACHIEVE THE DESIGN PARAMETERS LISTED IN THESE DRAWINGS.
ALLOWABLE BEARING PRESSURE: 2,500 PSF
MINIMUM BEARING DEPTH: 18 INCHES BELOW GRADE
LATERAL EARTH PRESSURES:
AT REST PRESSURE: 50 PSF/FT (ASSUMED)
ACTIVE PRESSURE: 35 PSF/FT (ASSUMED)
PASSIVE PRESSURE: 250 PSF/FT
COEFFICIENT OF FRICTION: 0.40
- THE GEOTECHNICAL ENGINEER SHALL OBSERVE AND APPROVE PREPARED SOIL BEARING SURFACES PRIOR TO PLACEMENT OF REINFORCING STEEL AND CASTING OF FOOTING. THE GEOTECHNICAL ENGINEER OR AN APPROVED TESTING LAB SHALL OBSERVE SOIL COMPACTION WORK.
- SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS SHALL CONFORM STRICTLY TO THE CONTRACT DOCUMENTS, THE RECOMMENDATIONS GIVEN IN THE GEOTECHNICAL REPORT, AND AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- DETERMINE THE LOCATION OF ALL NEW/EXISTING UNDERGROUND UTILITIES IN AND ADJACENT TO THE AREA OF WORK PRIOR TO COMMENCING EXCAVATION. COORDINATE UTILITY LOCATIONS WITH FOUNDATIONS AS REQUIRED.
- CONTRACTOR SHALL CONFIRM THE AS-BUILT LOCATION OF ANY POTENTIAL NEW OR EXISTING STRUCTURES OR OBJECTS WITHIN THE ZONE OF EXCAVATION INCLUDING WORK PERFORMED AS A PORTION OF THIS PROJECT BEFORE EXCAVATING OR INSTALLING FOUNDATION ELEMENTS. NOTIFY THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY EXCAVATIONS OR OTHER SITE WORK. IF THE EXCAVATION WILL CUT BELOW AN ADJACENT STRUCTURE'S BOTTOM OF FOOTING ELEVATION OR IF AN ADJACENT STRUCTURE IS UP SLOPE FROM THE PLANNED SITE WORK.
- BACKFILL FOOTINGS AND FOUNDATION WALLS WITH FREE DRAINING GRANULAR FILL. PROVIDE A SUBSURFACE DRAINAGE SYSTEM FOR FOUNDATION AND RETAINING WALLS BASED ON THE GEOTECHNICAL REPORT RECOMMENDATIONS. DO NOT BACKFILL BEHIND WALLS BEFORE ADJACENT SUPPORTING ELEMENTS ARE COMPLETE AND CURED. ALTERNATIVELY, PROVIDE DESIGN AND CONSTRUCTION OF TEMPORARY BRACING THAT PROTECTS THE WALL AGAINST OVERSTRESS OR MOVEMENT.
- AGGREGATE BASE (GRANULAR FILL) BELOW CONCRETE SLAB-ON-GRADE SHALL CONSIST OF MATERIAL AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER AND BASED ON LOCAL AVAILABILITY.
- FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH, CONTROLLED, COMPACTED STRUCTURAL FILL OR BOTH AT LEAST MINIMUM BEARING DEPTH BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS AND DETAILS ARE MINIMUM. NOTIFY ENGINEER OF ANY NECESSARY DEVIATIONS FROM THE FOOTING ELEVATIONS SHOWN ON THE DRAWINGS PRIOR TO CONSTRUCTING THE FOOTINGS.
- THE EXTERIOR VERTICAL FACE OF ALL EXPOSED SLAB TURNDOWNS SHALL BE FORMED. THE SIDES OF FOOTINGS MAY BE EARTH FORMED SO LONG AS THE SOIL WILL MAINTAIN A VERTICAL FACE. ALL FOUNDATION STEM WALLS AND RETAINING WALLS SHALL BE FORMED ON BOTH SIDES OF THE WALL.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, UNDERPINNING AND PROTECTION OF EXISTING CONSTRUCTION. COMPLY WITH ALL APPLICABLE OSHA REGULATIONS.

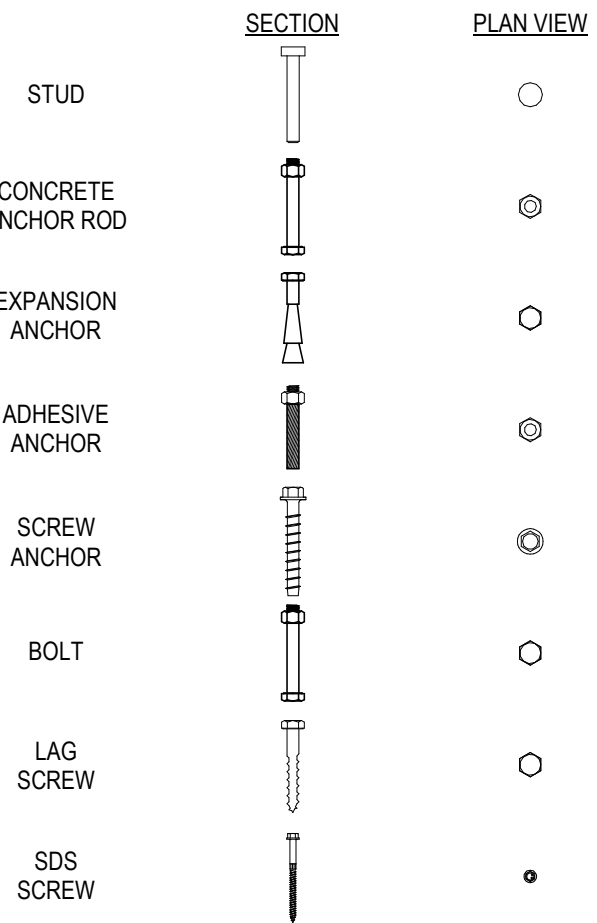
STRUCTURAL SHEET LIST	
S0.1	STRUCTURAL NOTES
S0.2	STRUCTURAL NOTES
S1.1	FOUNDATION PLAN
S2.1	FLOOR FRAMING PLAN
S3.1	TYPICAL CONCRETE DETAILS
S3.2	SECTIONS AND DETAILS



4B MISCELLANEOUS PLAN SYMBOLS
S0.1 NO SCALE



4C FOOTING SYMBOLS & SCHEDULE MARKS
S0.1 NO SCALE



4D CONNECTOR SYMBOLS
S0.1 NO SCALE



EXPIRES: 12/31/2022

VOSE ES ADDITION
BEAVERTON SCHOOL DISTRICT

100% CD
02.26.2021
REVISIONS

74-21102-00
STRUCTURAL
NOTES

S0.1

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SPECIAL STRUCTURAL INSPECTIONS:

1. SPECIAL INSPECTIONS SHALL BE IN ACCORDANCE WITH THE BUILDING CODE, SECTION 1704, AS NOTED BELOW. TESTING AND INSPECTION SHALL BE BY AN INDEPENDENT TESTING/INSPECTION FIRM UNDER THE SUPERVISION OF A LICENSED ENGINEER EMPLOYED BY THAT FIRM. THIS ENGINEER SHALL BE DEEMED THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS PERFORMED BY HIS FIRM OR HIS CONSULTANTS. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
2. THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS SHALL BE RESPONSIBLE FOR DEFINING THE ACTIVITIES OF THE INSPECTORS, FOR CERTIFYING THE QUALIFICATIONS OF THE INSPECTORS WITH THE BUILDING OFFICIAL, AND TO ATTEND THE PRE-CONSTRUCTION MEETING TO DEFINE THEIR SCOPE OF SERVICES AND THE TESTING OR TEST PROCEDURES THAT ARE REQUIRED AS OUTLINED IN THE BUILDING CODE.
3. SPECIAL INSPECTION IS TO BE PROVIDED IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE LOCAL DEPARTMENT OF BUILDING SAFETY AND SHALL NOT BE CONSTRUED TO RELIEVE THE OWNER OR HIS AUTHORIZED AGENT FROM REQUESTING THE PERIODIC AND CALLED INSPECTIONS REQUIRED BY SECTION 110 OF THE BUILDING CODE.
4. CONCRETE: PER SECTION 1705.3 AND TABLE 1705.3, THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION: ALL CONCRETE EXCEPT: SIDE WALKS, AND DRIVEWAYS.
5. PROVIDE INSPECTION PER SECTION 1704.2.5 FOR STRUCTURAL LOADING-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP. THESE INSPECTIONS SHALL BE AT CONTRACTOR'S EXPENSE IF THE FABRICATOR IS NOT AN APPROVED FABRICATOR PER SECTION 1704.2.5.2.
6. STEEL CONSTRUCTION: SPECIAL INSPECTIONS FOR STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360 AS AMENDED BY THE BUILDING CODE AND THE REQUIREMENTS OF SECTION 1705.2 AND TABLE 1705.2 OF THE BUILDING CODE.
7. SPECIAL INSPECTION FOR SEISMIC RESISTANCE IS REQUIRED AND SHALL COMPLY WITH SECTION 1705.11 INCLUDING ARCHITECTURAL, ELECTRICAL, AND MECHANICAL COMPONENTS.
8. STEEL DETAILING: THE SPECIAL INSPECTOR SHALL PERFORM AN INSPECTION OF THE STEEL FRAME TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE APPROVED CONSTRUCTION DOCUMENTS, SUCH AS BRACING, STIFFENING, MEMBER LOCATIONS, AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.
9. SOILS: PER SECTION 1705.6 AND TABLE 1705.6. SEE CIVIL DRAWINGS AND SPECIFICATION DIVISION 2.
10. EXPANSION BOLT, SCREW ANCHOR AND ADHESIVE ANCHOR: INSPECTOR TO VERIFY INSTALLATION IN ACCORDANCE WITH ESR REPORTS NOTED PREVIOUSLY OR APPROVED EQUAL.
11. THE INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO VERIFY CONFORMANCE TO THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.
12. THE INSPECTOR SHALL FURNISH DAILY INSPECTION REPORTS ON THE WORK TO THE BUILDING OFFICIAL AND TO THE ENGINEER. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, AND, IF UNCORRECTED, TO THE ENGINEER AND THE BUILDING OFFICIAL.
13. THE TESTING/INSPECTION FIRM'S ENGINEER SHALL COMPLETE, SIGN AND SEAL A FINAL REPORT CERTIFYING THAT TO THE BEST OF HIS KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.

COLD FORMED METAL FRAMING

1. ALL COLD FORMED METAL FRAMING, EXTERIOR AND INTERIOR, SHALL BE DESIGNED BY THE CONTRACTOR'S DELEGATED ENGINEER. COLD FORMED METAL FRAMING SHOWN IN THESE DRAWINGS SHALL BE THE MINIMUM REQUIRED WHERE INDICATED. TYPICAL DETAILS AND SECTIONS ARE PROVIDED TO SHOW INTENT ONLY.
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND SUPPORTING CALCULATIONS SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROJECT STATE FOR REVIEW PRIOR TO CONSTRUCTION. SHOP DRAWING SUBMITTAL SHALL CONTAIN THE FOLLOWING MINIMUM INFORMATION:
 - A. PLANS INDICATING FRAMING LAYOUT
 - B. SECTIONS SHOWING MEMBER SIZE, CONNECTION GEOMETRY, CLIPS, AND REQUIRED FASTENERS
 - C. ELEVATIONS INDICATING OPENING FRAMING
 - D. FRAMING MEMBER PHYSICAL AND MATERIAL PROPERTIES
 - E. ALL FASTENERS AND CLIPS - PHYSICAL AND MATERIAL PROPERTIES
 - F. SUPPORTING CALCULATIONS
3. 16 GAUGE (54 MIL) AND HEAVIER COLD FORMED STRUCTURAL TRACKS, STUDS AND JOISTS SHALL BE FORMED FROM ASTM A653 WITH A MINIMUM YIELD STRENGTH OF 50 KSI. ALL 18 GAUGE (43 MIL) AND LIGHTER COLD FORMED STRUCTURAL TRACKS, STUDS AND JOISTS SHALL BE FORMED FROM ASTM A653, WITH A MINIMUM YIELD STRENGTH OF 33 KSI. ALL STUDS, TRACKS AND JOISTS SHALL BE GALVANIZED ACCORDING TO ASTM A924. STUDS, RUNNERS (TRACK), BRACING AND BRIDGING SHALL BE MANUFACTURED PER ASTM C955.
4. ALL EXTERIOR METAL FRAMING AND METAL FRAMING BACKING UP MASONRY VENEER SHALL BE 18 GAUGE (43 MIL) MINIMUM.
5. EXTERIOR METAL FRAMING SPACING SHALL NOT EXCEED 16" ON CENTER.
6. ALIGN PREPUNCHED HOLES IN STUDS FOR PLUMBING AND ELECTRICAL CONDUITS.
7. SPLICING OF FRAMING COMPONENTS SHALL NOT BE PERMITTED.

POST INSTALLED ANCHORAGE

1. ADHESIVE ANCHORAGES, WHERE SPECIFIED ON THE DRAWINGS, SHALL CONFORM TO THE FOLLOWING:
 - A. CONCRETE HILTI HIT-RE 500-V3 ESR-3814
2. INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS AND IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
3. HOLES FOR INSTALLING REINFORCING BARS, BOLTS, THREADED RODS AND INSERTS SHALL BE DRILLED USING THE ICC APPROVED DRILLING METHOD FOR THE ANCHOR TO BE INSTALLED. NON-DESTRUCTIVELY LOCATE EXISTING REINFORCING PRIOR TO DRILLING. DO NOT CUT EXISTING REINFORCING.
4. SPECIAL CONDITIONS SUCH AS WATER SATURATED CONCRETE, WATER-FILLED HOLES, UNDERWATER AND OVERHEAD INSTALLATIONS MUST BE APPROVED BY THE ENGINEER OF RECORD AND COMPLY WITH THE APPLICABLE ICC-ES REPORT.
5. STEEL ANCHORING ELEMENTS SHALL BE THE SIZE AND GRADE SHOWN ON THE DRAWINGS AND MUST BE CLEAN, DRY AND FREE OF ANY CONTAMINANTS.
6. SUBSTITUTIONS FOR ANCHOR SYSTEMS MUST BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO INSTALLATION AND SHALL HAVE A VALID ICC-ES EVALUATION IN ACCORDANCE WITH THE APPLICABLE BUILDING CODE.
7. ALL ANCHOR EMBED DEPTHS SPECIFIED ON THESE DRAWINGS ARE EFFECTIVE EMBEDMENT DEPTHS. ADDITIONAL ANCHOR LENGTH AND OR HOLE DEPTH SHALL BE PROVIDED AS REQUIRED BY THE ANCHOR MANUFACTURER AND ASSOCIATED CODE APPROVALS.
8. ADHESIVE ANCHORS MUST BE INSTALLED IN CONCRETE AGED A MINIMUM OF 21 DAYS.
9. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL ARRANGE FOR A MANUFACTURER'S FIELD REPRESENTATIVE TO PROVIDE INSTALLATION TRAINING FOR ALL PRODUCTS TO BE USED. ONLY TRAINED INSTALLERS SHALL PERFORM POST INSTALLED ANCHOR INSTALLATION. A RECORD OF TRAINING SHALL BE KEPT ON SITE AND BE MADE AVAILABLE TO THE EOR AS REQUESTED.

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL DESIGN, DETAILING, FABRICATION, AND ERECTION SHALL CONFORM TO THE AISC STEEL CONSTRUCTION MANUAL, LOAD AND RESISTANCE FACTOR DESIGN AND THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.
2. STRUCTURAL STEEL FABRICATION AND ERECTION SHALL CONFORM TO AISC REQUIREMENTS AND THE PROJECT SPECIFICATIONS.
3. STRUCTURAL STEEL DETAILING, FABRICATION AND ERECTION OF ELEMENTS AND CONNECTIONS MARKED 'SFRS' SHALL CONFORM TO AISC-341.
4. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING, UNLESS OTHERWISE NOTED ON THE STRUCTURAL DRAWINGS:
 - A. WIDE FLANGE SHAPES ASTM A992, Fy=50 KSI
 - B. COLUMN BASE PLATES ASTM 572, GRADE 50 (Fy = 50 KSI)
 - C. PLATES AND BARS ASTM A36, Fy=36 KSI
 - D. CHANNELS AND ANGLES ASTM A572 GRADE 50 WHERE NOTED AS GRADE 50
 - E. HOLLOW ROUND SECTIONS ASTM A36, Fy=36 KSI
 - F. HOLLOW RECTANGULAR SECTIONS ASTM A500C, Fy=46 KSI
 - G. ROUND PIPE ASTM A500C, Fy=50 KSI
 - H. COLUMN ANCHOR RODS ASTM A500C, Fy=50 KSI
 - I. THREADED RODS FOR EPOXY ANCHORAGE ASTM F1554 GRADE 55 (S1)
 - J. CONNECTION BOLTS ASTM A193 GRADE B7
 - K. WELDING ELECTRODES F3125 GRADE A325N (7/8" DIA)
 - L. WELDED HEADED STUDS (WHS) E70XX
 - M. WELDED THREADED STUDS (WTS) ASTM A108, Fu=65 KSI, TYPE B
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ERECTION AIDS AND JOINT PREPARATIONS THAT INCLUDE, BUT ARE NOT LIMITED TO, ERECTION ANGLES, LIFT HOLES AND OTHER AIDS, WELDING PROCEDURES, REQUIRED ROOT OPENINGS, ROOT FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPES, SURFACE ROUGHNESS VALUES, AND TAPERS OF UNEQUAL PARTS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION OF A METHOD TO TRANSFER GRAVITY AND LATERAL LOADS FROM NON-STRUCTURAL ITEMS OCCURRING BETWEEN STRUCTURAL FRAMING TO ADJACENT FRAMING MEMBERS. IF STRUCTURAL FRAMING CONSISTS OF JOISTS OR JOIST GIRDERS, SPECIAL PROVISIONS APPLY. SEE STEEL JOIST AND JOIST GIRDER NOTES FOR FURTHER INFORMATION.
7. STRUCTURAL STEEL AND CONNECTIONS EXPOSED TO WEATHER SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN COMPLIANCE WITH ASTM A123. GALVANIZE BOLTS AND SIMILAR THREADED FASTENERS EXPOSED TO WEATHER IN ACCORDANCE WITH ASTM A153. CLASS C AND D, AS APPLICABLE. ALL FIELD WELDS EXPOSED TO WEATHER SHALL BE COATED WITH BRUSH APPLIED ZINC-RICH PAINT COMPLYING WITH ASTM A780 (GALVACON OR EQUIVALENT).
8. PROTECT ALL STEEL BELOW GRADE BY ENCASING IN CONCRETE OR PAINTING WITH BITUMASTIC PAINT.
9. COLUMN ANCHOR RODS: PROVIDE HEAVY HEX NUTS AND WASHERS COMPLYING WITH THE REQUIREMENTS OF TABLE 14-2 IN THE AISC STEEL CONSTRUCTION MANUAL. UNLESS THICKER AND/OR LARGER WASHERS ARE NOTED ON THE DRAWINGS, HOLE DIAMETER IN WASHERS SHALL BE THE ANCHOR ROD DIAMETER + 1/16 INCH IN LIEU OF HEADED RODS, THREADED RODS WITH A HEAVY HEX NUT FULLY ENGAGED AND TACK WELDED TO THE EMBEDDED END MAY BE USED.
10. COLUMN ANCHOR BOLT HOLES SHALL BE OVERSIZED IN ACCORDANCE WITH THE FOLLOWING:
 - A. ROD DIAMETERS 3/4 INCH TO 1 INCH - 5/16 INCH OVERSIZE
 - B. ROD DIAMETERS 1 INCH TO 2 INCH - 1/2 INCH OVERSIZE
 - C. ROD DIAMETERS OVER 2 INCH - 1 INCH OVERSIZE
11. GROUT USED UNDER COLUMN BASE PLATES SHALL BE CEMENT BASED, NON-SHRINK, NON-METALLIC GROUT. THE GROUT SHALL EXHIBIT NO SHRINKAGE IN ACCORDANCE WITH ASTM C827 AND SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 7,000 PSI WHEN TESTED IN ACCORDANCE WITH ASTM C109.
12. BASE PLATE CONNECTIONS ARE NOT DESIGNED TO PROVIDE STABILITY OF COLUMNS DURING ERECTION. COLUMNS SHALL BE TEMPORARILY BRACED BY THE ERECTOR PRIOR TO RELEASE OF THE COLUMN FROM THE HOISTING EQUIPMENT.
13. MINIMUM CONNECTIONS: ALL BOLTED CONNECTIONS SHALL BE MADE WITH A MINIMUM OF TWO 7/8 INCH DIAMETER ASTM A325 BOLTS IN SINGLE SHEAR BEARING TYPE CONNECTIONS UNLESS NOTED OTHERWISE. IN NO CASE SHALL THE LENGTH OF A CONNECTION BE LESS THAN ONE HALF OF THE TEE DIMENSION OF THE BEAM WEB. ALL BOLTS IN BEARING TYPE CONNECTIONS SHALL BE TIGHTENED TO AT LEAST THE SNUG TIGHT CONDITION AS DEFINED BY AISC. BOLTS IN CONNECTIONS THAT ARE DESIGNATED AS SLIP CRITICAL, FULLY TENSIONED, OR SUBJECT TO TENSION LOADS, SHALL BE FULLY TENSIONED USING LOAD INDICATING WASHERS OR TENSION CONTROL BOLTS. ALL BEAM-TO-BEAM AND BEAM-TO-COLUMN CONNECTIONS SHALL BE SIMPLE OR PARTIALLY-RESTRAINED (PR) MOMENT CONNECTIONS IN ACCORDANCE WITH AISC SPECIFICATION B3.6. ALL STEEL BEAM CONNECTIONS NOT DETAILED ON THE DRAWINGS SHALL BE DESIGNED BY THE STRUCTURAL STEEL FABRICATOR BASED ON THESE NOTES.
14. BOLTED CONNECTIONS OF MEMBERS MARKED 'SFRS' SHALL BE PRETENSIONED AND SHALL MEET THE REQUIREMENTS FOR A CLASS A FAYING SURFACE. CONNECTIONS AT THESE MEMBERS SHALL BE MADE USING STANDARD HOLES IN ALL PLYS.
15. HARDENED WASHERS SHALL BE INSTALLED OVER SHORT SLOTTED OR OVERSIZE HOLES OCCURRING IN THE OUTER PLY OF A CONNECTION. A PLATE WASHER AT LEAST 5/16 INCH THICK WITH STANDARD HOLES SHALL BE INSTALLED OVER LONG SLOTTED HOLES OCCURRING IN AN OUTER PLY OF A CONNECTION.
16. TENSION CONTROL BOLTS MAY BE SUBSTITUTED FOR THE BOLTS SPECIFIED IN THESE PLANS AT THE DISCRETION OF THE CONTRACTOR. ASTM F3125 GRADE F1882 BOLTS MAY BE SUBSTITUTED FOR ASTM F3125 GRADE A325 BOLTS AND ASTM F3125 GRADE 2280 BOLTS MAY BE SUBSTITUTED ASTM F3125 GRADE A490 BOLTS.
17. A449, A193 GRADE B7, OR F1554 GRADE 105 THREADED ROD SHALL BE USED WHERE THRU BOLT LENGTH DOES NOT ALLOW FOR STANDARD F3125 GRADE A325 BOLTS. PROVIDE ASTM A563 NUTS WITH MATCHED WASHERS AT BOTH ENDS.
18. USE DOUBLE NUTS OR SINGLE NUT AND PEENED THREADS AT BOLTED CONNECTIONS WITH LONG SLOT HOLES.
19. WELDING SHALL BE IN CONFORMANCE WITH AISC AND AWS STANDARDS. ALL WELDS SHALL BE PREQUALIFIED AND SHALL BE PERFORMED BY AWS CERTIFIED WELDERS USING ASTM E70 SERIES ELECTRODES FOR SHOP WELDING A36 STEEL, AND E70 SERIES LOW HYDROGEN ELECTRODES FOR ALL WELDING OF HIGH STRENGTH STEELS AND FOR ALL FIELD WELDING.
20. ONLY PREQUALIFIED WELDS AS DEFINED BY AWS SHALL BE USED. WELDS SHOWN ON THE DRAWINGS ARE THE MINIMUM SIZE. INCREASE WELD SIZE TO AWS MINIMUM SIZES BASED ON PLATE THICKNESS. MINIMUM WELD SIZE SHALL BE 3/16 INCH. SHOP DRAWINGS SHALL SHOW ALL WELDING WITH AWS A2.4 SYMBOLS.
21. WHEN WELDS ARE NOT CALLED-OUT ON DRAWINGS, THEY ARE MINIMUM SIZE CONTINUOUS FILLET WELDS IN ACCORDANCE WITH AWS D1.1. FILLET WELDS NOT SPECIFIED AS TO LENGTH SHALL BE CONTINUOUS.
22. PROVIDE FILLET WELDS AT ALL CONTACT JOINTS BETWEEN STEEL MEMBERS SUFFICIENT TO DEVELOP THE ALLOWABLE TENSILE STRENGTH OF THE SMALLER MEMBER AT THE JOINT.
23. ALL FILLET WELDS BY EACH WELDER SHALL BE VISUALLY INSPECTED. ALL COMPLETE PENETRATION GROOVE WELDS SHALL BE INSPECTED BY ULTRASONIC TESTING.
24. IN ALL CASES, SUPPORT OF THE METAL DECK AROUND COLUMN CLOSURES AND SCREED PLATES AROUND OPENINGS AND SLAB EDGES SHALL BE PROVIDED BY THE CONTRACTOR.
25. SHEAR STUDS SHALL BE 3/4-INCH DIAMETER UNLESS NOTED OTHERWISE AND AUTOMATICALLY END WELDED IN THE FIELD THROUGH THE METAL DECK TO STEEL BEAMS ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. STUD LENGTHS AFTER WELDING SHALL BE AS SHOWN ON THE DRAWINGS. STEEL STUD MATERIAL, WELDING, AND INSPECTION SHALL BE IN ACCORDANCE WITH AWS D1.1.
26. BEAMS AND GIRDERS SHALL NOT SUPPORT PIPING LARGER THAN 10" DIAMETER WITHOUT THE REVIEW OF THE STRUCTURAL ENGINEER OF RECORD.

CONCRETE

1. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED, AND PLACED IN ACCORDANCE WITH IBC SECTION 1905 AND ACI 301.
2. THE CONCRETE MIX TABLE SHOWN BELOW SHALL APPLY TO ALL CONCRETE MIX DESIGNS USED ON THIS PROJECT. MIX DESIGN SUBMITTALS SHALL BE IDENTIFIED FOR INTENDED STRUCTURAL USE AND SUBMITTED TO THE OWNER'S REPRESENTATIVE AND STRUCTURAL ENGINEER FOR REVIEW TWO WEEKS PRIOR TO PLACING ANY CONCRETE.
3. ALL CONCRETE MIX DESIGNS SHALL BE PROPORTIONED IN ACCORDANCE WITH SECTION 5.3 (FIELD EXPERIENCE AND/OR TRIAL MIXTURES) OF ACI 318. SUBMIT MIX DESIGN FOR EACH CLASS OF CONCRETE IF A STANDARD DEVIATION ANALYSIS IS USED. THE CONCRETE SHALL ACHIEVE AN AVERAGE STRENGTH IN ACCORDANCE WITH TABLE 5.3.2.2 OF ACI 318. SUBMITTALS MADE WHICH DO NOT CONFORM TO ACI 318 SECTION 5.3 SHALL BE REJECTED.

SEE ADDITIONAL REQUIREMENTS THIS SHEET FOR SLAB ON GRADE
4. SCHEDULE CEMENT CONTENT IS THE MINIMUM TOTAL CEMENTITIOUS MATERIALS CONTENT INCLUDING PORTLAND CEMENT AND FLY ASH.
5. FLY ASH SHALL CONFORM TO ASTM C618, TYPE C OR F. PERCENTAGE SCHEDULED IS BY WEIGHT OF TOTAL CEMENTITIOUS MATERIAL INCLUDING ASTM C150, C595, C845, AND C1157 CEMENT. DO NOT USE FLY ASH IF CONTENT WITHIN THE PERCENTAGES SHOWN CANNOT BE ACHIEVED.
6. WATER-REDUCING ADMIXTURES CONFORMING TO ASTM C494 MAY BE INCORPORATED IN THE CONCRETE MIX DESIGNS AND BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CALCIUM CHLORIDE OR OTHER WATER-SOLUBLE CHLORIDE ADMIXTURES SHALL NOT BE USED.
7. AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260 SHALL BE USED IN ALL CONCRETE MIXES FOR WORK THAT IS EXPOSED TO WEATHER. WHERE ENTRAINED AIR IS NOT SCHEDULED, DO NOT ALLOW THE AIR CONTENT OF SLABS TO EXCEED 3% NATURALLY. THE AMOUNT OF ENTRAINED AIR SHALL BE MEASURED IN THE FIELD AT THE DISCHARGE END OF THE PLACING HOSE.
8. SCHEDULED SLUMP IS THE MAXIMUM ALLOWED AND SHALL BE ACHIEVED PRIOR TO ADDING ANY WATER REDUCING ADMIXTURES OR PLASTICIZERS.
9. LABORATORY TESTING WILL BE REQUIRED IN ACCORDANCE WITH ASTM C31. PERFORM COMPRESSION TEST PER ASTM C39. AIR CONTENT TEST PER ASTM C138 (GRAVIMETRIC METHOD), ASTM C173 (VOLUMETRIC METHOD), OR ASTM C231 (PRESSURE METHOD); SLUMP TEST PER ASTM C143.
10. LABORATORY SHALL TEST THE NUMBER OF CYLINDERS SPECIFIED BELOW FOR EACH 100 CUBIC YARDS OR FRACTION THEREOF:
2 AT 7 DAYS FOR INFORMATION
2 AT 28 DAYS FOR ACCEPTANCE
11. REFER TO DRAWINGS OF OTHER DISCIPLINES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES NOT SHOWN ON STRUCTURAL DRAWINGS.
12. WHEN RUN IN SLABS, ELECTRICAL CONDUIT SHALL BE RUN AT MID-DEPTH OF THE SLAB AND CONDUIT SIZE SHALL NOT EXCEED 33 PERCENT OF THE SLAB DEPTH. NO CONDUIT SHALL BE PLACED IN SLABS WITH ACTUAL CONCRETE THICKNESS LESS THAN 3 INCHES, NOT INCLUDING METAL DECK DEPTH. THERE SHALL BE A MINIMUM OF 3 INCHES OF CLEAR SPACE BETWEEN CONDUITS. ALUMINUM CONDUIT IS PROHIBITED. ADDITIONAL REINFORCEMENT, #3 AT 12" OC, SHALL BE PLACED PERPENDICULAR TO THE CONDUIT ABOVE AND BELOW THE CONDUIT. THE ADDED REINFORCING SHALL EXTEND 1'-0" BEYOND THE CONDUITS ON BOTH SIDES.
13. REINFORCING STEEL MATERIALS:
 - DEFORMED BARS ASTM A615, GRADE 60
 - SPECIAL DUCTILE QUALITY WELDABLE DEFORMED BARS ASTM A706, GRADE 60 LOW ALLOY
 - SMOOTH WELDED WIRE FABRIC (WWF) ASTM A185 (Fy = 65,000 PSI)
14. SPECIAL DUCTILE QUALITY (SDQ) REBAR SHALL BE USED IN DUCTILE FRAME MEMBERS AND SHEAR WALL BOUNDARY MEMBERS. GRADE 60 REINFORCEMENT COMPLYING WITH ACI 318 SECTION 21.1.5.2 SHALL BE PERMITTED.
15. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH ACI 315 - DETAILS AND DETAILING OF CONCRETE REINFORCEMENT.
16. ALL REINFORCEMENT SHALL BE HELD SECURELY IN POSITION WITH STANDARD ACCESSORIES IN CONFORMANCE WITH CRSI MANUAL OF STANDARD PRACTICE AND ACI 315 DURING CONCRETE PLACEMENT. REINFORCING PLACEMENT SHALL BE APPROVED BY THE ARCHITECT OR THEIR AUTHORIZED REPRESENTATIVE BEFORE CONCRETE IS PLACED.
17. LAP REINFORCING BARS AS NOTED ON THE DRAWINGS. WHERE SPLICE LENGTH IS NOT SHOWN, USE TYPE 1'S SPLICE PER DEVELOPMENT AND SPLICE LENGTH SCHEDULE. MECHANICAL OR WELDED BUTT SPLICES SHALL BE SUBJECT TO STRUCTURAL ENGINEER'S APPROVAL. MECHANICAL SPLICES, WHERE ALLOWED ON THE PLANS, SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE SPLICED BARS IN BOTH TENSION AND COMPRESSION. LAP SPLICES OF BOTTOM BARS SHALL OCCUR AT A SUPPORT. LAP SPLICES OF TOP STEEL SHALL OCCUR AT MID SPAN.
18. NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY DETAILED AS SUCH OR APPROVED BY THE STRUCTURAL ENGINEER.
19. REINFORCING BARS SHALL NOT BE WELDED OR TACK WELDED TO OTHER BARS OR TO PLATES, ANGLES, ETC. UNLESS SPECIFICALLY APPROVED BY THE ENGINEER. WELDING SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.4. WELDING SHALL BE DONE BY AWS CERTIFIED WELDERS QUALIFIED FOR WELDS USING APPROVED ELECTRODES.
20. CONCRETE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:
EXPOSED TO EARTH.....3"
EXPOSED TO EARTH OR WEATHER
#5 OR SMALLER.....1 1/2"
#6 OR LARGER.....2"

NOT EXPOSED TO EARTH OR WEATHER OR IN CONTACT WITH GROUND
SLABS, WALLS, JOISTS
#11 OR SMALLER.....3/4"
ALL OTHER.....1 1/2"

BEAMS, COLUMNS
PRIMARY REINFORCEMENT,
TIES, STIRRUPS, SPIRALS.....1 1/2"
21. CONTRACTOR SHALL PROVIDE ADEQUATE BRACING FOR ALL CONCRETE WALLS DURING CONSTRUCTION AND UNTIL LATERAL SUPPORTS AND DIAPHRAGMS HAVE BEEN ATTACHED AND CONCRETE HAS ATTAINED THE SPECIFIED DESIGN STRENGTH. BACK FILLING SHALL NOT OCCUR UNTIL PERMANENT LATERAL RESTRAINTS ARE INSTALLED IN THEIR ENTIRETY.
22. PROVIDE 3/4" CHAMFER AT ALL EXPOSED CORNERS OF BEAMS, WALLS, ETC UNLESS NOTED OTHERWISE.
23. COORDINATE CONCRETE EQUIPMENT PAD AND HOUSE KEEPING PAD LOCATIONS AND DIMENSIONS WITH ARCH, MECHANICAL, ELECTRICAL, PLUMBING, AND OWNER REQUIREMENTS.
24. STRUCTURAL RIGID FOAM SHALL CONFORM TO ASTM D6817 AND THE PROJECT SPECIFICATIONS. UNLESS OTHERWISE NOTED, FOAM SHALL BE EPS22 WITH 7.3 PSI CAPACITY AT 1% DEFORMATION.

DLR Group

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STRUCTURAL
REGISTERED PROFESSIONAL
ENGINEER
94665
William S. Ragland III
OREGON
March 12, 2019
WILLIAM STEVEN RAGLAND III

EXPIRES: 12/31/2022

VOSE ES ADDITION
BEAVERTON SCHOOL DISTRICT

100% CD
02.26.2021
REVISIONS

74-21102-00
STRUCTURAL
NOTES

S0.2

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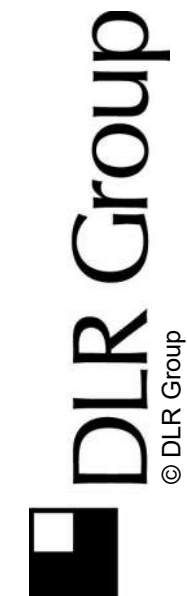
B

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E

- FLOOR FRAMING PLAN NOTES:
1. FIELD VERIFY ALL EXISTING FRAMING ELEVATIONS.
 2. FOR ELEVATIONS, WALL SECTIONS, AND DIMENSIONS NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
- NEW RTU NOTES
1. EXISTING CURB AND SUPPORT FRAMING TO REMAIN.
 2. PROVIDE ADAPTER CURB FOR NEW UNIT & UTILIZE EXISTING CURB.
 3. CONTRACTOR'S DESIGNATED ENGINEER IS RESPONSIBLE FOR ANALYZING EXISTING CURB, NEW ADAPTER, CONNECTIONS, AND SEISMIC BRACING OR CURBS AND NEW UNIT.
 4. MAXIMUM WEIGHT OF EXISTING CURB, NEW CURB ADAPTER, AND NEW UNIT = 6,000 LBS TOTAL.



EXPIRES: 12/31/2022

VOSE ES ADDITION

BEAVERTON SCHOOL DISTRICT

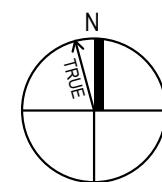
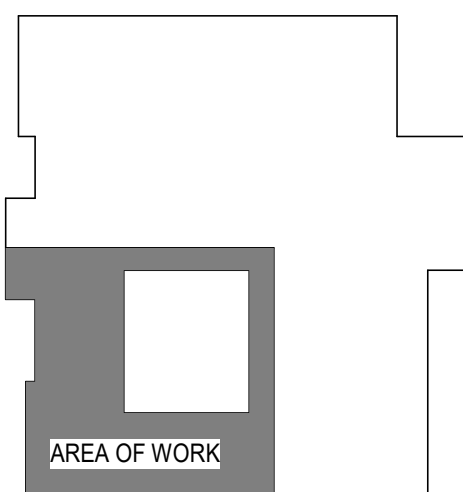
100% CD
02.26.2021
REVISIONS

74-21102-00

FLOOR FRAMING
PLAN

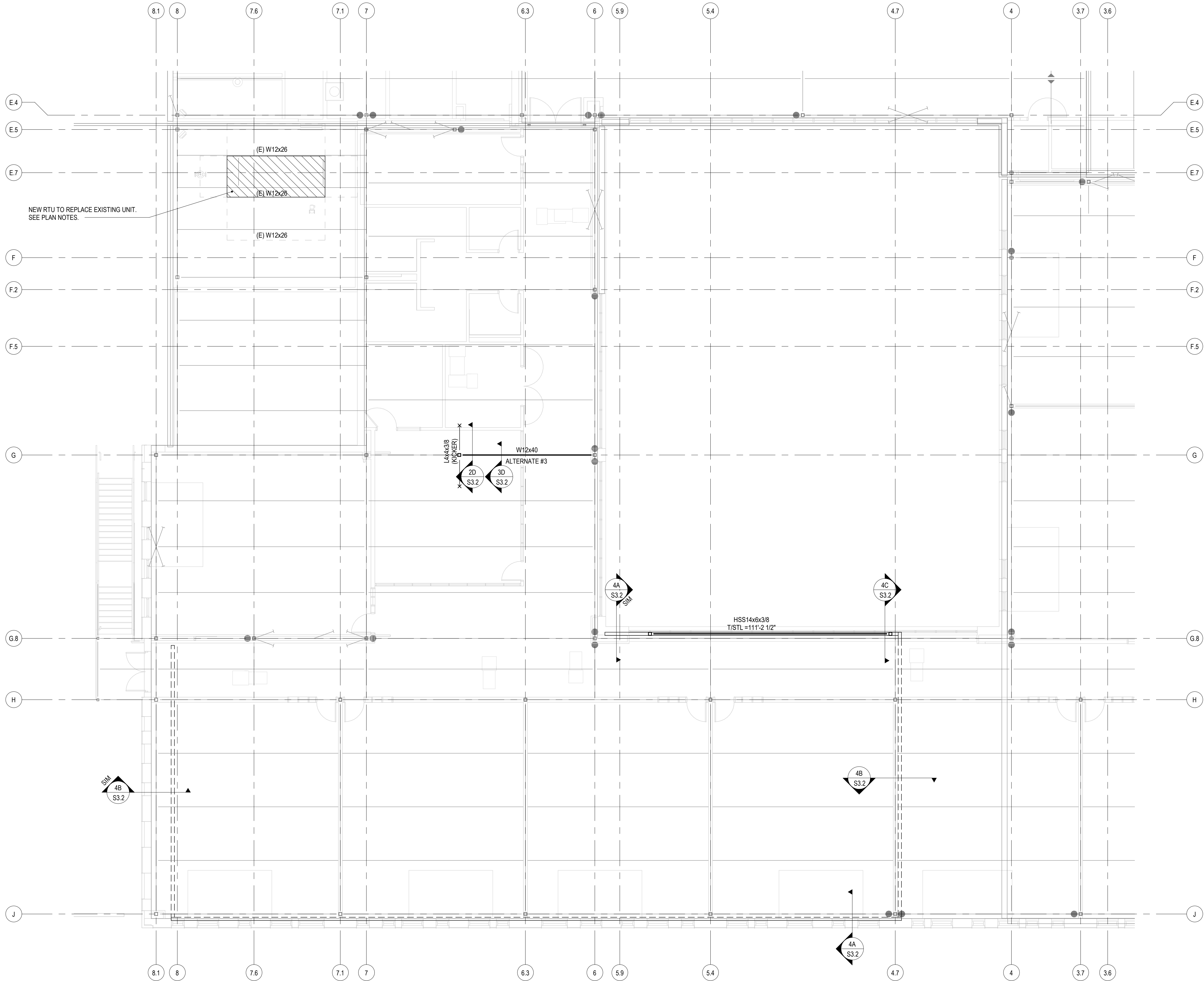
S2.1

KEY PLAN



FRAMING PLAN, LEVEL 02

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



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A

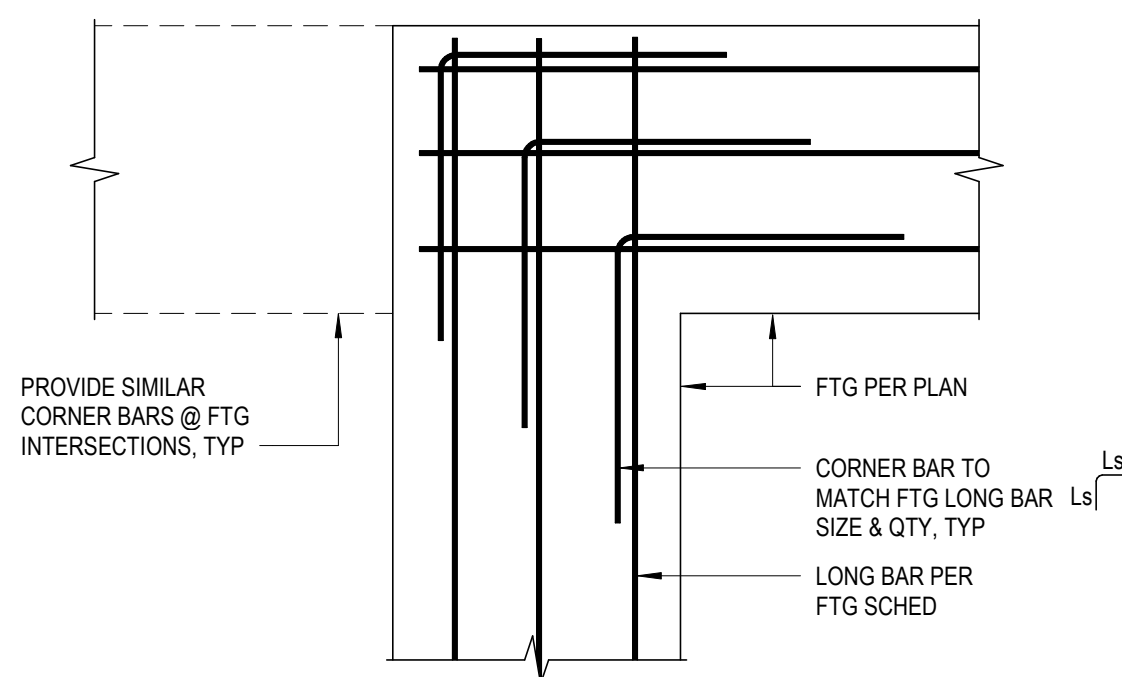
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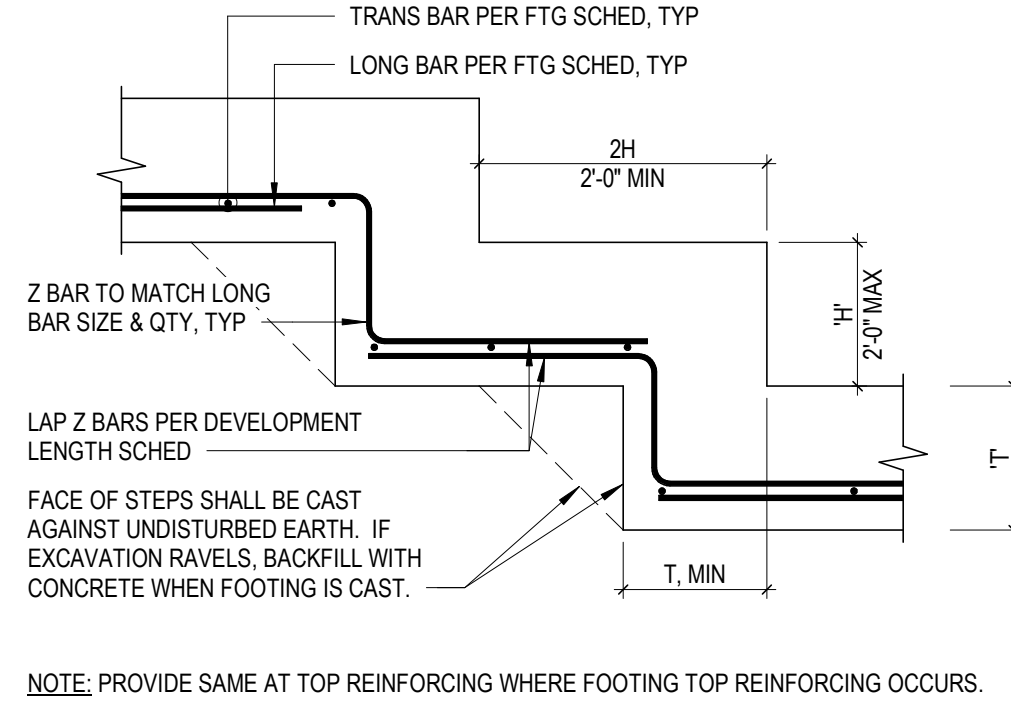
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1



1A TYPICAL FOOTING CORNER BARS
S3.1 NO SCALE

1B



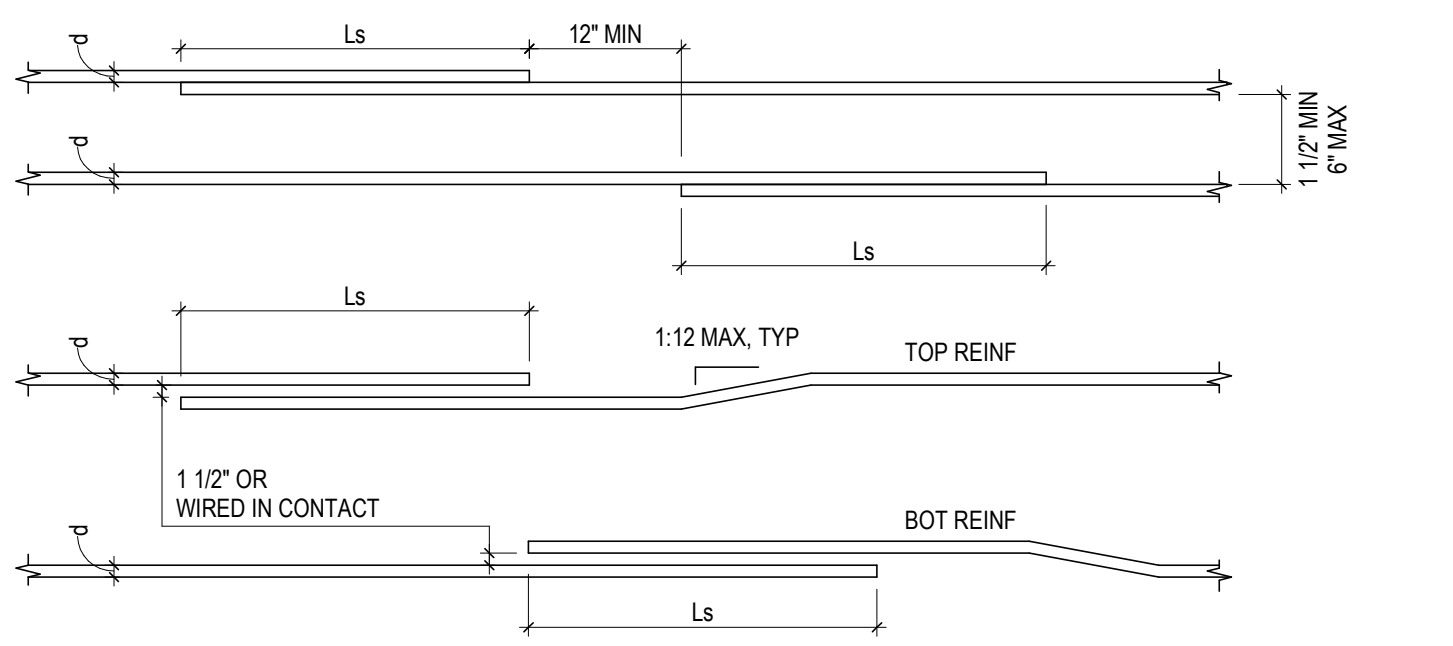
1B TYPICAL FOOTING STEP
S3.1 NO SCALE

1C

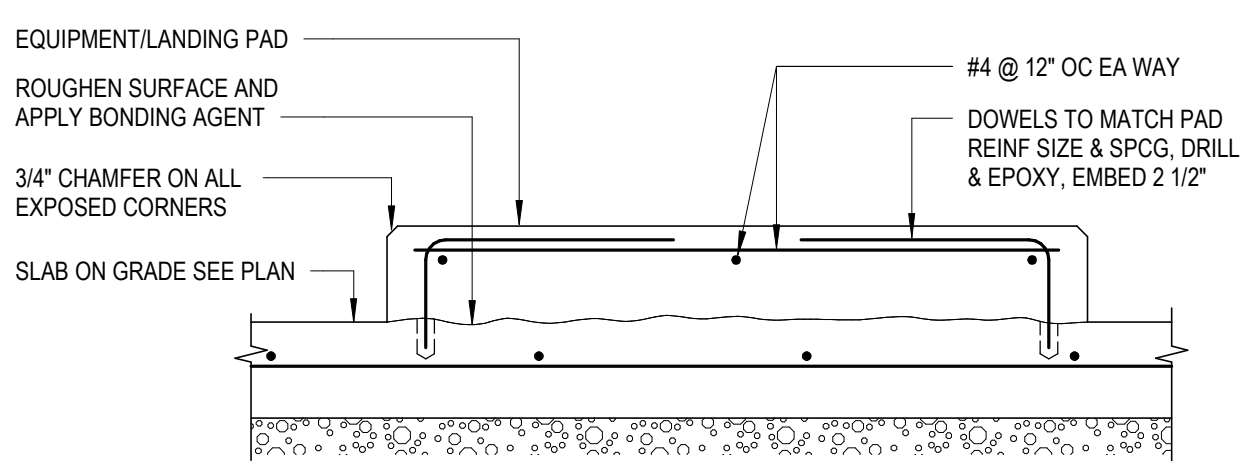
NORMAL WEIGHT CONCRETE F _c (psi)	CONCRETE SPLICE OR DEVELOPMENT LENGTH (INCHES)																	
	"CLASS B" TENSION LAP SPLICE "L _s " SCHEDULE																	
	0.375"		0.500"		0.625"		0.750"		0.875"		1.00"		1.128"		1.270"		1.410"	
	#3	T	#4	T	#5	T	#6	T	#7	T	#8	T	#9	T	#10	T	#11	T
3000	28	22	38	29	47	36	56	43	81	63	93	72	105	81	116	90	128	98
4000	25	19	33	25	41	31	49	37	71	54	81	62	91	70	101	78	111	85
5000	22	17	29	23	36	28	44	34	63	49	72	56	81	63	90	69	99	76
6000	20	16	27	21	33	26	40	31	58	45	66	51	74	57	82	63	90	70
DEVELOPMENT LENGTH "L _d " SCHEDULE																		
3000	22	17	29	22	36	28	43	33	63	48	72	55	81	62	90	69	98	76
4000	19	15	25	19	31	24	37	29	54	42	62	48	70	54	78	60	85	66
5000	17	13	23	17	28	22	34	26	49	38	56	43	63	48	69	54	76	59
6000	16	12	21	16	26	20	31	24	45	34	51	39	57	44	63	49	70	54

1C CONCRETE REINFORCING SPLICE SCHEDULE
S3.1 NO SCALE

- NOTES:
- SCHEDULE APPLIES TO UNCOATED GRADE 60 BARS IN NORMAL WEIGHT CONCRETE. FOR STRENGTHS NOT SHOWN, USE NEXT LOWEST STRENGTH SHOWN.
 - FOR LIGHTWEIGHT CONCRETE, MULTIPLY LENGTH IN SCHEDULE BY 1.3.
 - ALL SPLICES SHALL BE CLASS B SPLICES UNLESS OTHERWISE NOTED.
 - TOP BARS (INDICATED WITH "T" IN SCHEDULE) ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.
 - BOTTOM BARS (INDICATED WITH "B" IN SCHEDULE) ARE HORIZONTAL BARS WITH LESS THAN 12" OF CONCRETE CAST BELOW THE BARS. ALL VERTICAL BARS ARE CONSIDERED BOTTOM BARS UNLESS OTHERWISE NOTED.
 - ANY PORTION OF A STRAIGHT BAR EMBEDMENT LENGTH NOT WITHIN THE CONFINED CORE SHALL BE INCREASED BY A FACTOR OF 1.6.
 - ALL HORIZONTAL SPLICES SHALL BE STAGGERED AS SHOWN. IF MORE THAN 50% OF VERTICAL REINFORCING IS LAP SPICED WITHIN THE REQUIRED LAP SPLICE LENGTH, THE LAP SPLICE LENGTH SHALL BE INCREASED BY 33%.

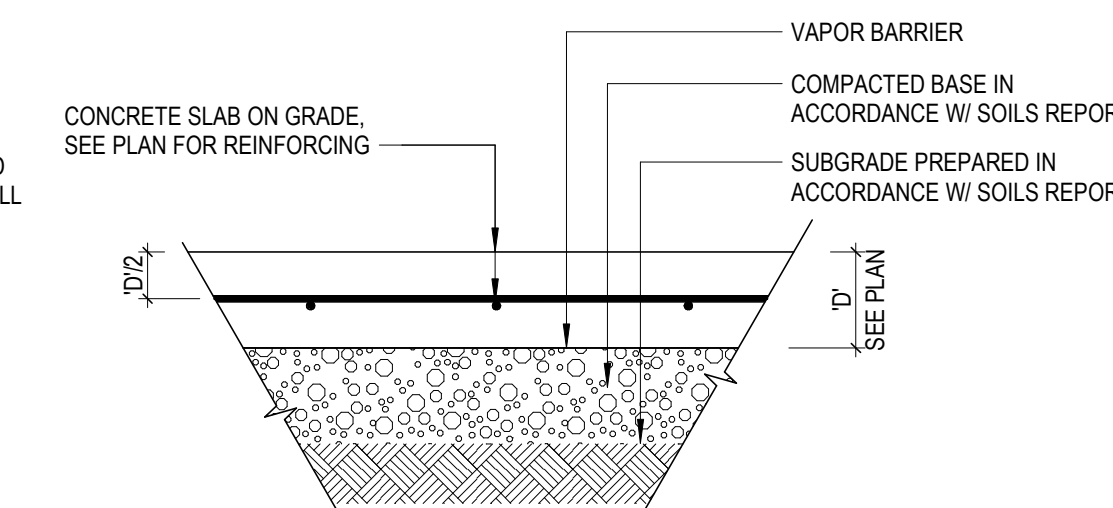


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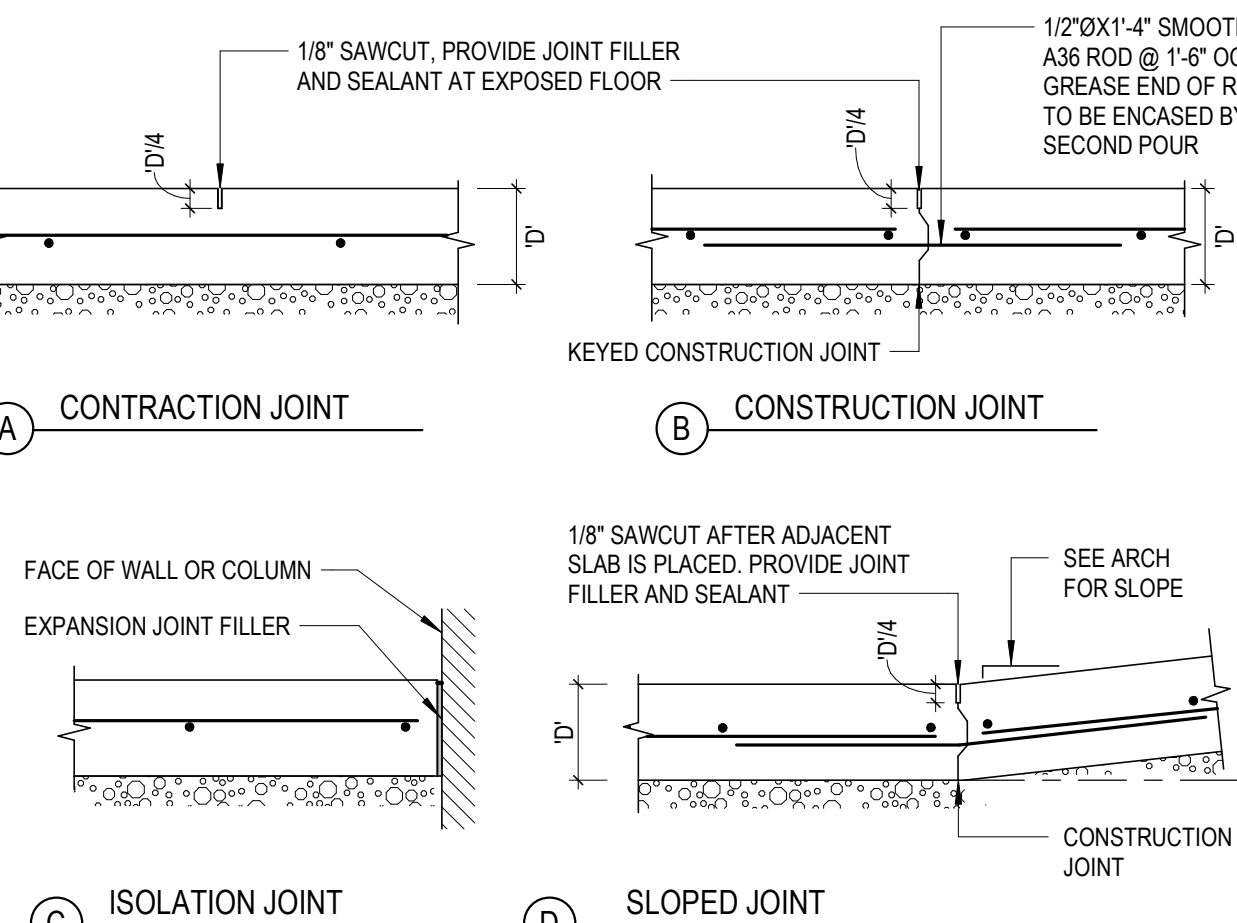


NOTE: VERIFY HEIGHT, PLAN DIMENSIONS, AND EXACT LOCATION WITH MECHANICAL AND ELECTRICAL.

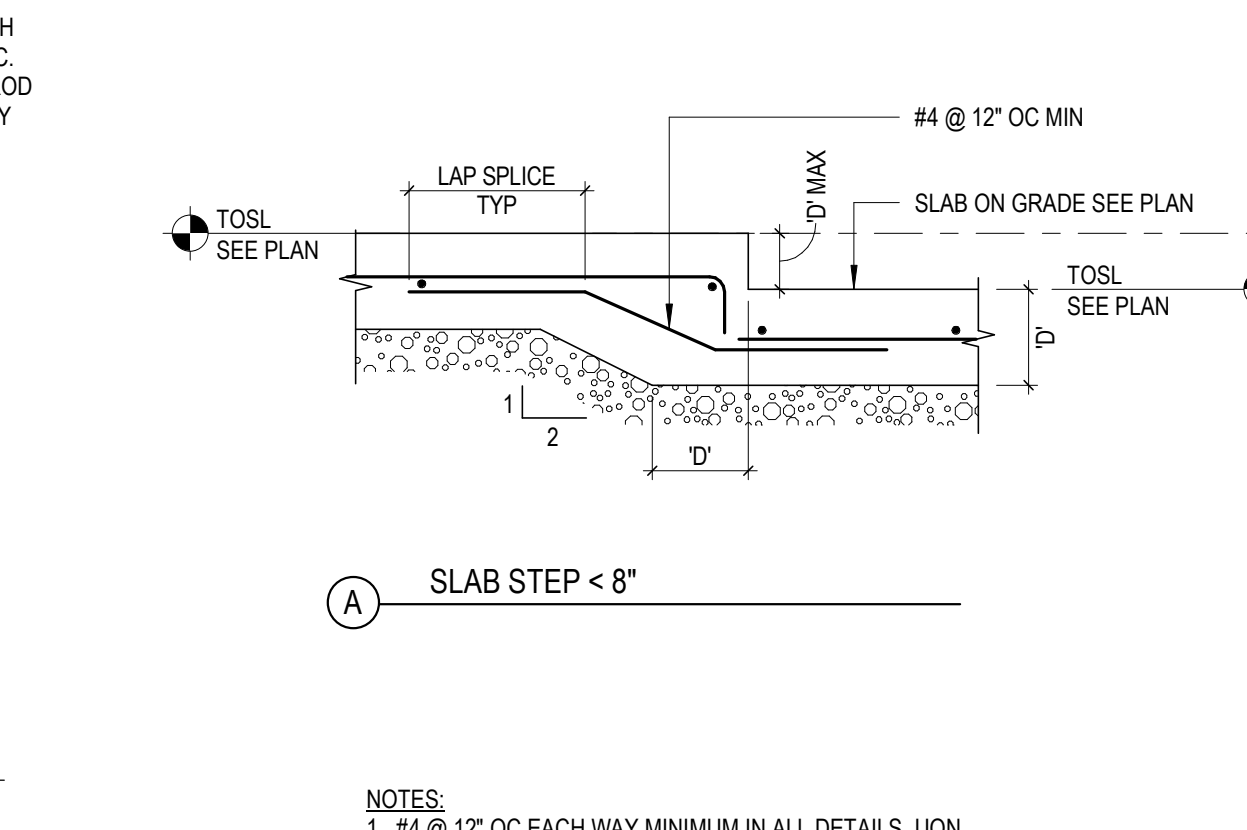
2A EQUIPMENT/HOUSEKEEPING PAD
S3.1 SCALE: 1" = 1'-0"



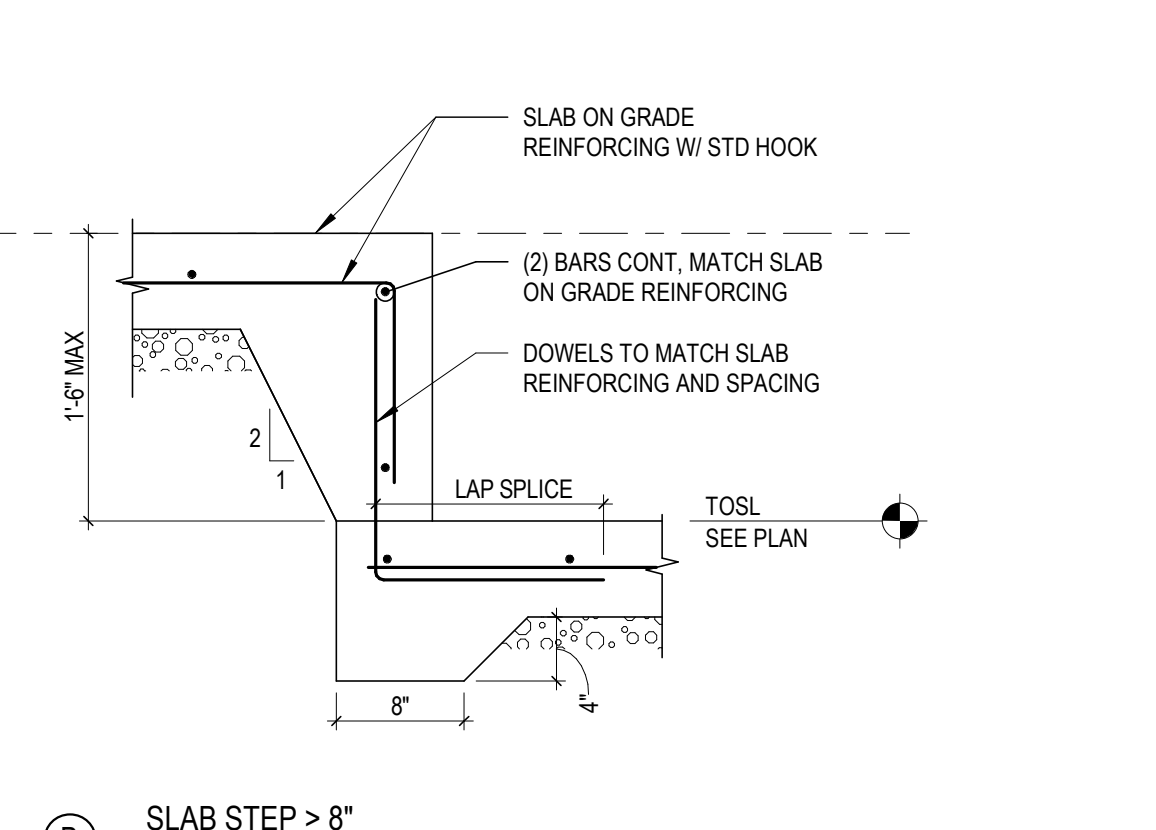
2B SLAB ON GRADE
S3.1 NO SCALE



2C SLAB ON GRADE JOINTS
S3.1 NO SCALE

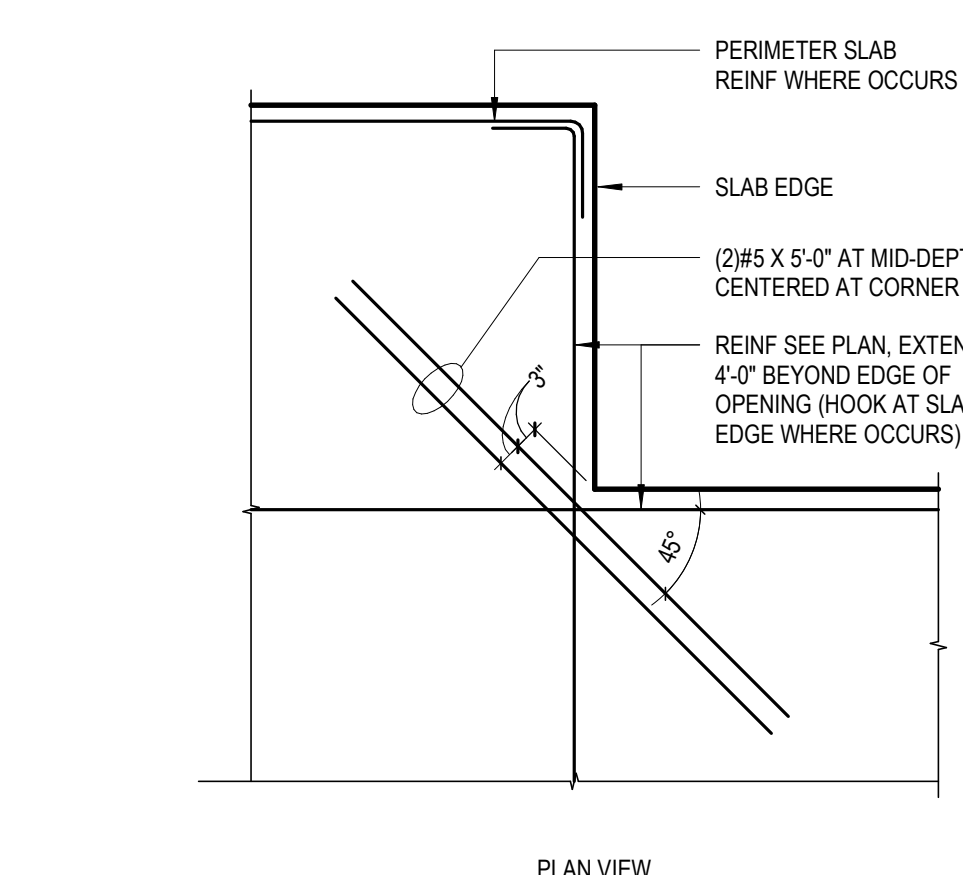


2D TYPICAL SLAB STEPS
S3.1 SCALE: 1" = 1'-0"

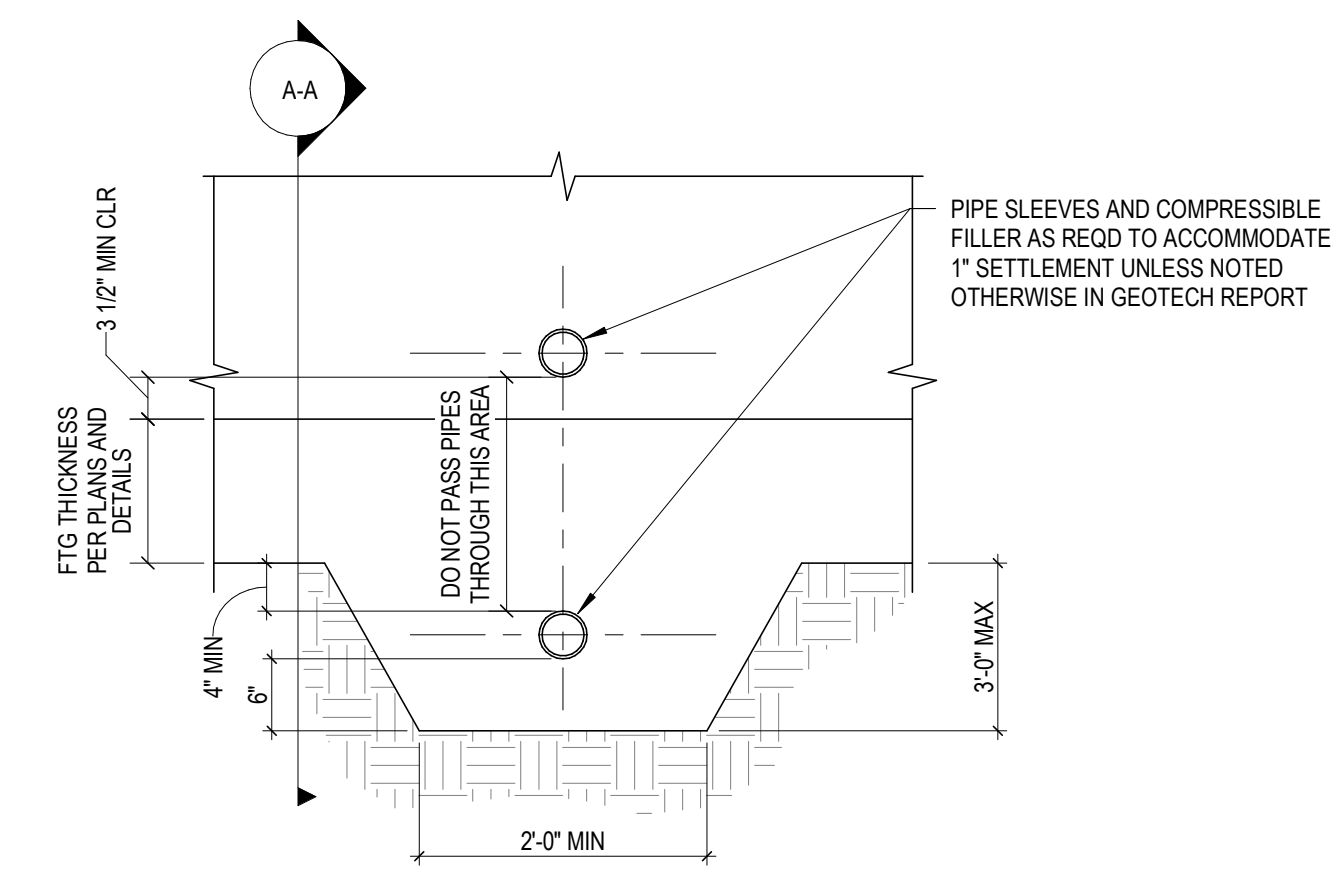


2E TYPICAL WALL DOWEL AT FOUNDATION
S3.1 NO SCALE

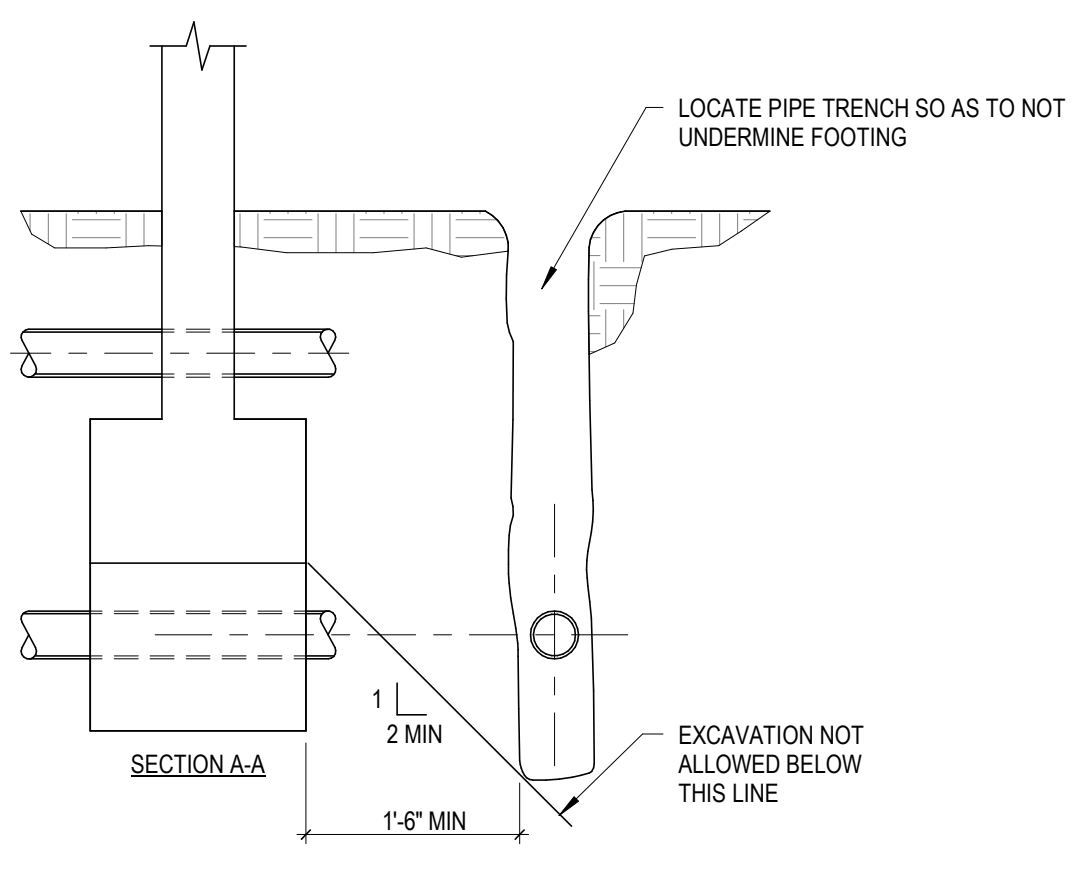
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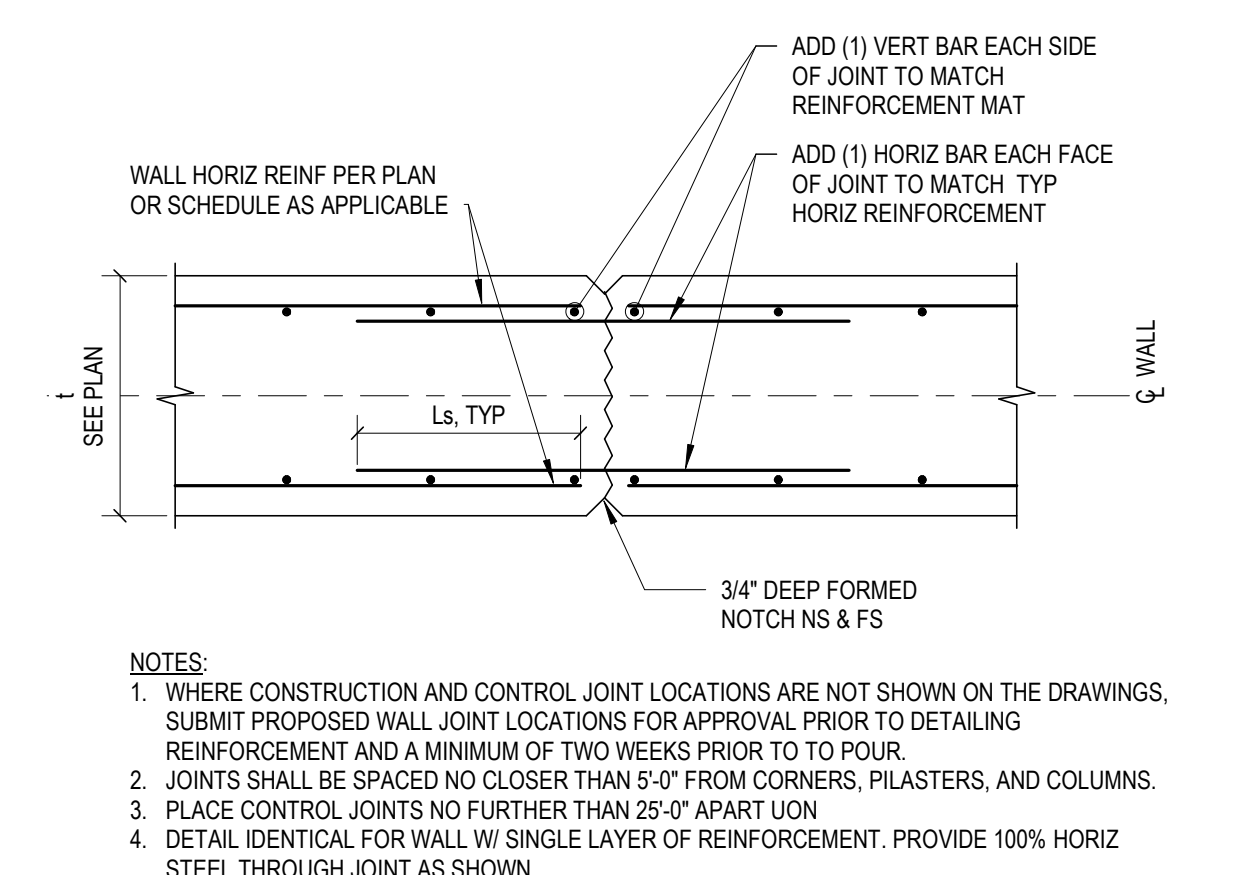
3A RE-ENTRANT CORNER AT SLAB EDGE
S3.1 NO SCALE



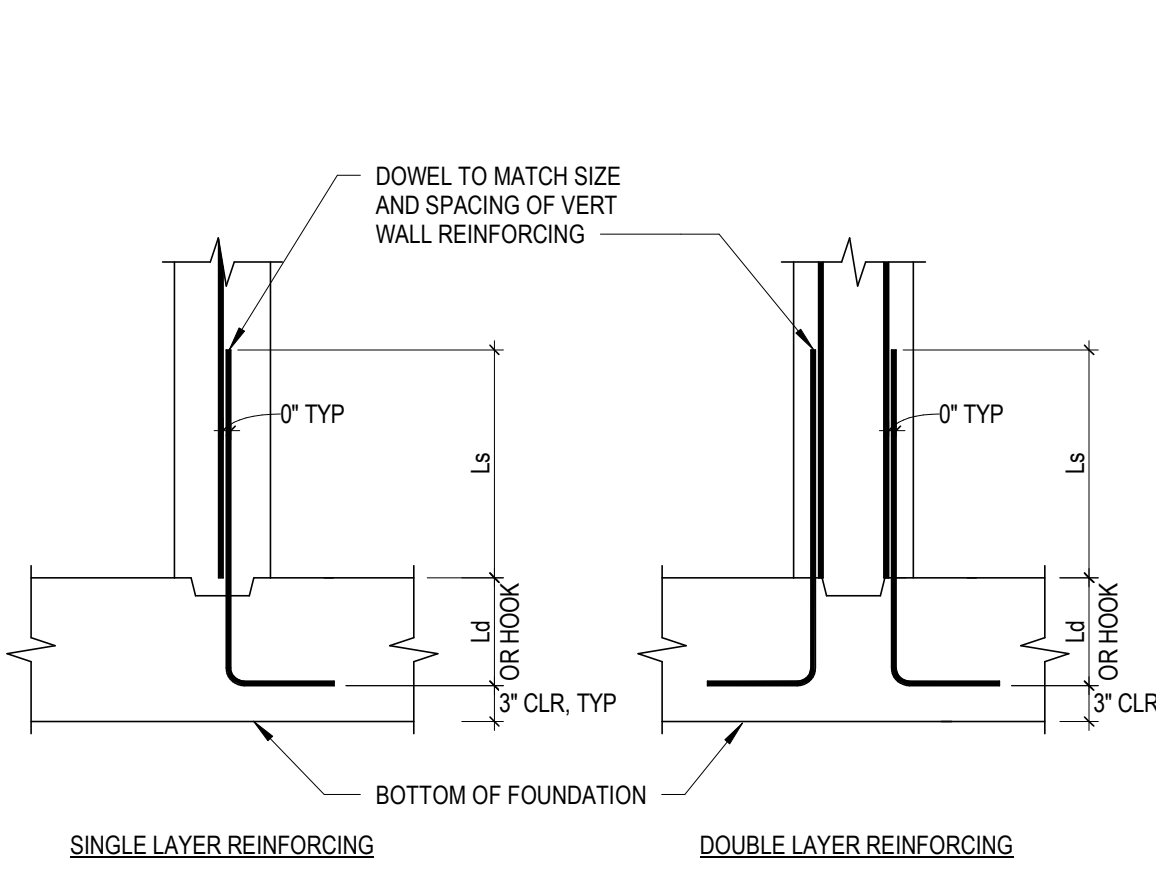
3B TYP PIPE PENETRATIONS AT FOOTINGS / WALLS
S3.1 NO SCALE



3C TYP CONC WALL CONTROL JOINT
S3.1 SCALE: 3/4" = 1'-0"



3D TYP CONC WALL CONTROL JOINT
S3.1 SCALE: 3/4" = 1'-0"



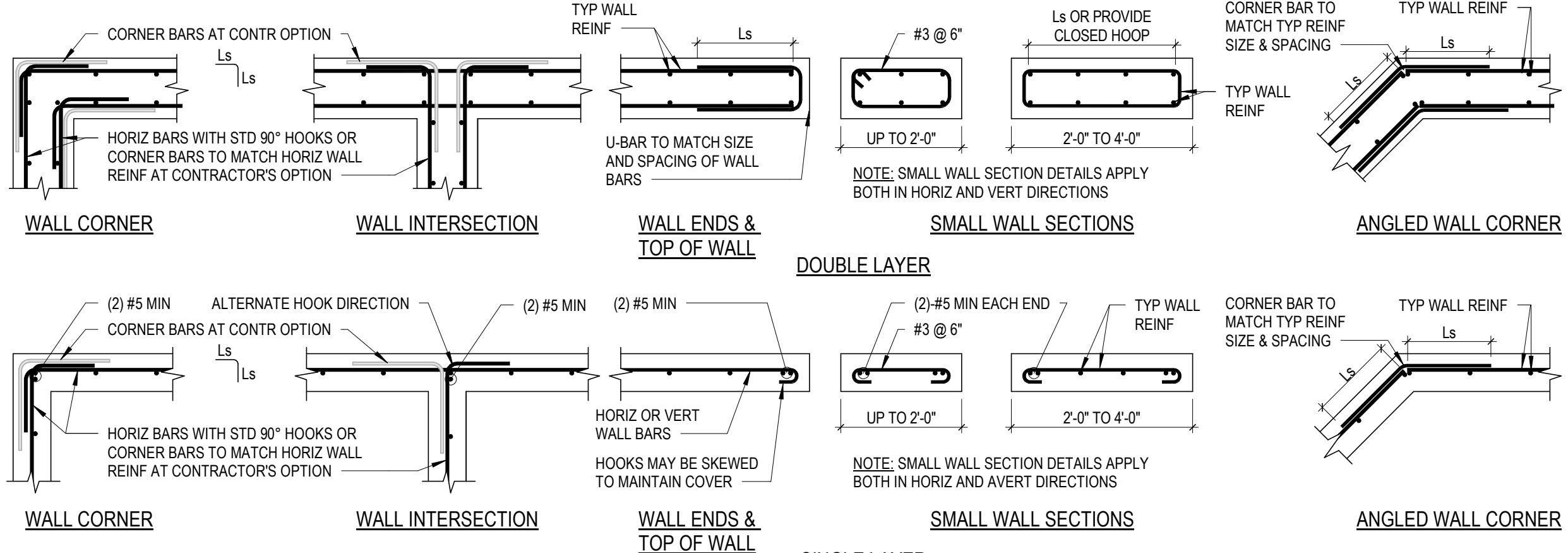
3E TYPICAL WALL DOWEL AT FOUNDATION
S3.1 NO SCALE

4

WALL FOOTING SCHEDULE				
MARK	WIDTH	THICKNESS	LONGITUDINAL REINFORCEMENT	TRANSVERSE REINFORCEMENT
WF2.0	2'-0"	1'-0"	(3) #5 CONT T&B	#5 @ 1'-6" OC T&B

SPREAD FOOTING SCHEDULE				
MARK	LENGTH	WIDTH	THICKNESS	REINFORCEMENT
F3.0	3'-0"	3'-0"	1'-0"	(4) #5 EW
F4.0	4'-0"	4'-0"	1'-0"	(5) #5 EW

4B FOOTING SCHEDULES
S3.1 SCALE: 3/4" = 1'-0"



4C TYP CONCRETE WALL REINFORCEMENT DETAILS
S3.1 NO SCALE

MINIMUM CONCRETE WALL REINFORCEMENT			
WALL THICKNESS	HORIZONTAL BARS	VERTICAL BARS	LOCATION
6"	#4 @ 12" OC	#4 @ 12" OC	CENTERLINE
8"	#5 @ 12" OC	#5 @ 12" OC	CENTERLINE
10"	#5 @ 12" OC	#5 @ 12" OC	CENTERLINE
12"	#5 @ 12" OC	#5 @ 12" OC	EACH FACE

- NOTES:
- CONCRETE WALLS SHALL HAVE THE MINIMUM REINFORCING SHOWN IN THE TABLE. UON.
 - LAP WALL REINFORCING L_s AT SPLICES.
 - ALL VERTICAL REINFORCING IN CONCRETE WALLS SHALL BE CONTINUOUS FROM STRUCTURAL FLOOR TO STRUCTURAL FLOOR, OR FROM FOUNDATION TO FIRST STRUCTURAL FLOOR ABOVE, UON.
 - START HORIZONTAL AND VERTICAL BARS TWO INCHES CLEAR OF EDGE OF OPENINGS.
 - SPACE REINFORCING BARS AT EQUAL SPACES NOT TO EXCEED REQUIRED SPACING.
 - STAGGER LAP SPLICE OF HORIZ REINF.
 - STAGGER LAP SPLICES OF VERT REINF WHERE TWO CURTAINS ARE USED.

4E TYP CONCRETE WALL REINFORCING SCHEDULE
S3.1 NO SCALE

A

B

C

D

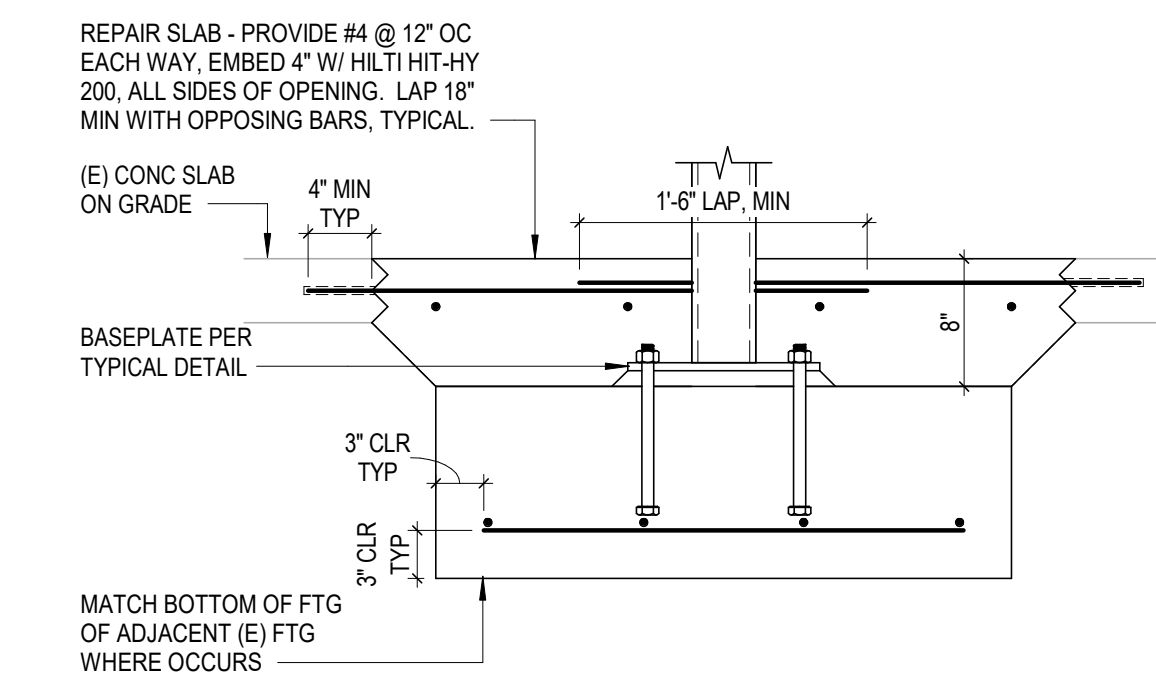
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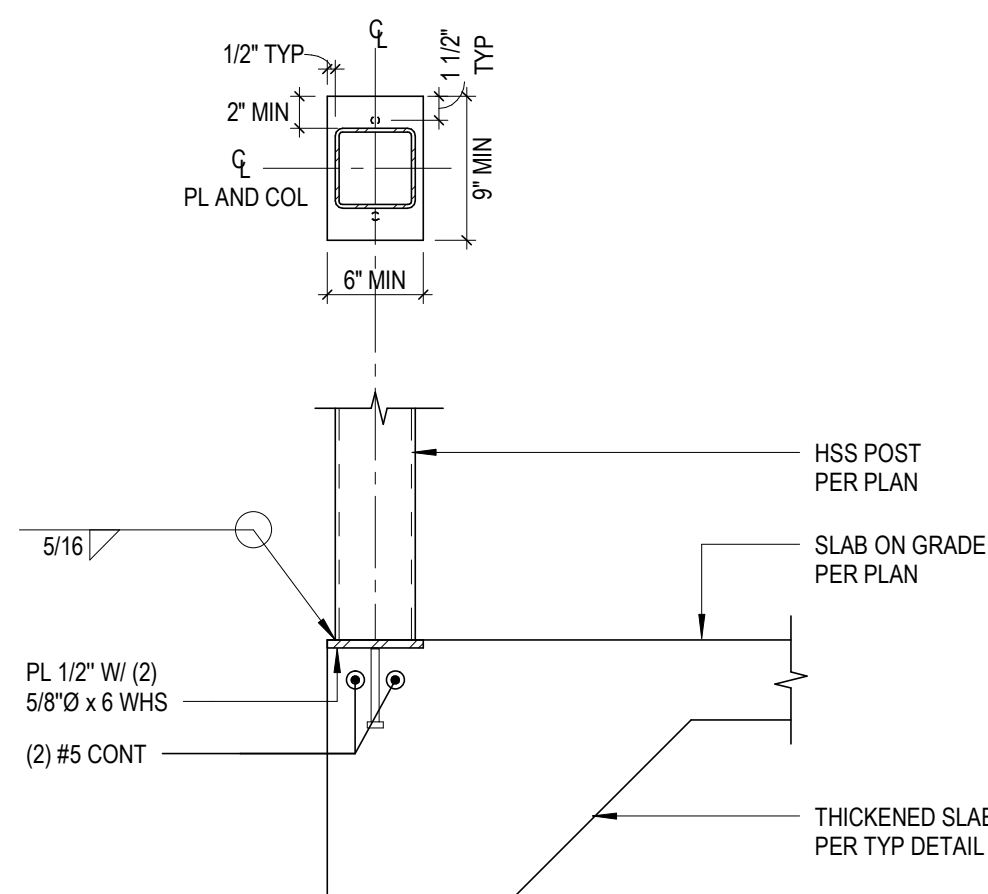
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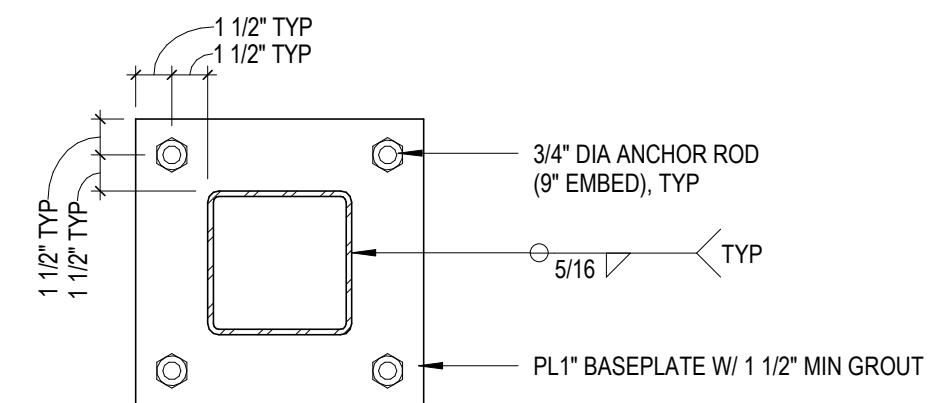
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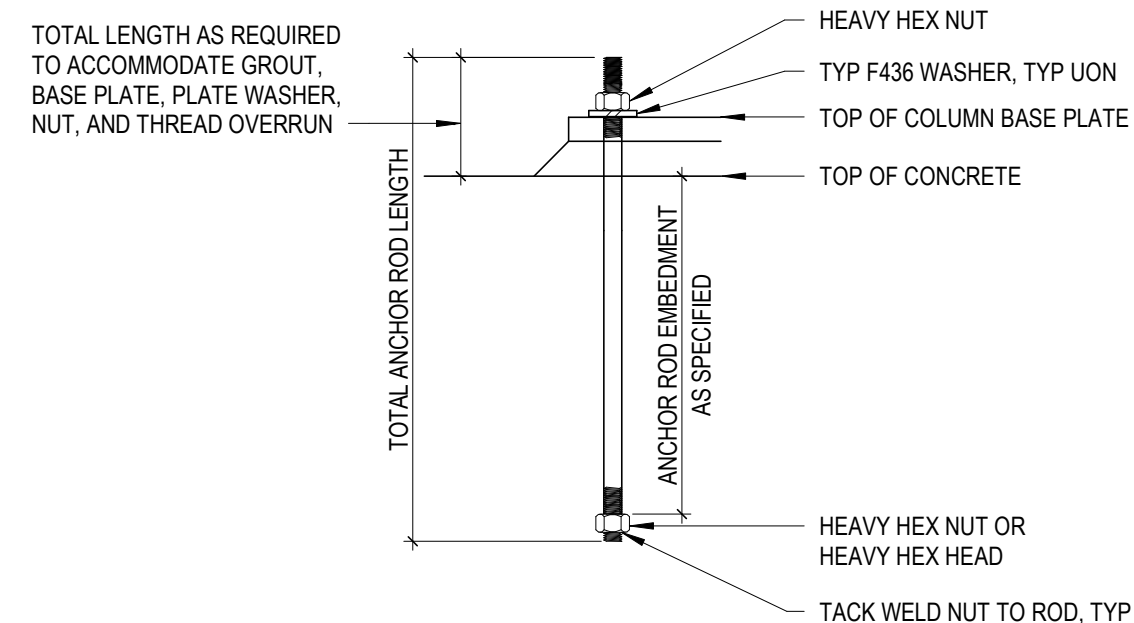
1C TYPICAL OPERABLE PARTITION FOOTING DETAIL
S3.2 NO SCALE



2C TYPICAL HSS EMBED @ WINDOW SUPPORT POST
S3.2 NO SCALE

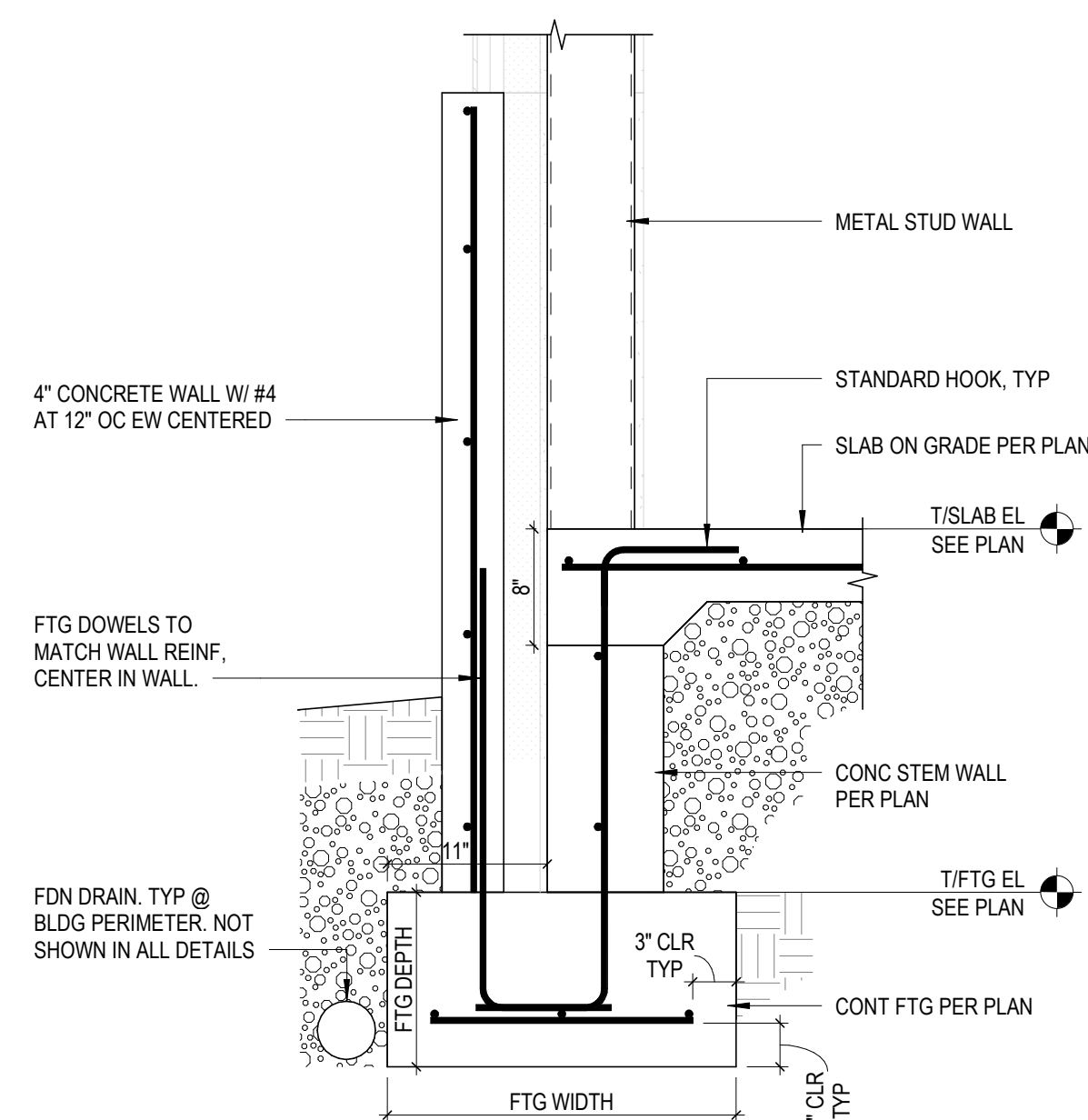


1D TYPICAL COLUMN BASEPLATE DETAIL
S3.2 NO SCALE

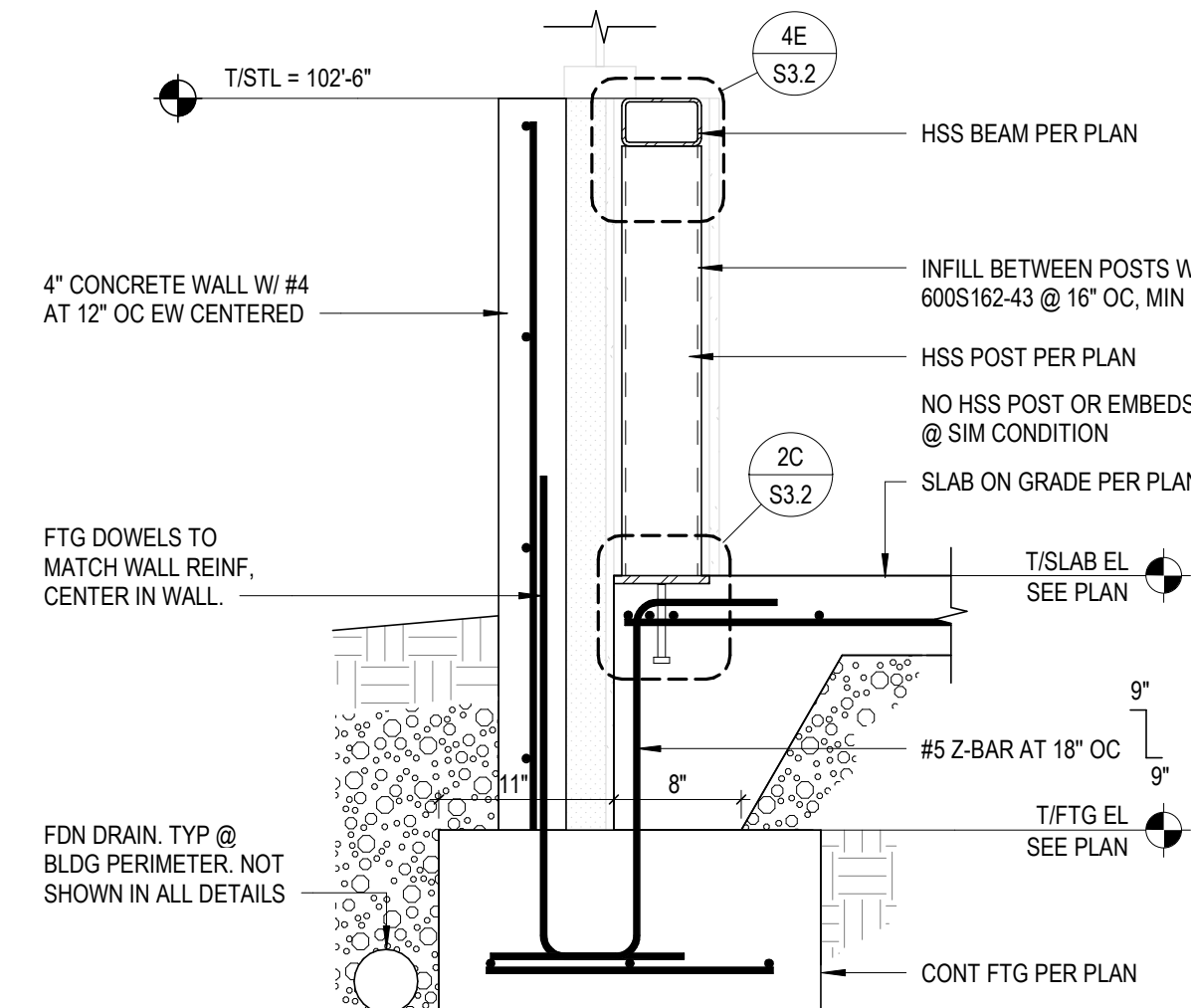


- NOTES:
- SEE STEEL COLUMN SCHEDULE AND DETAILS FOR ANCHOR ROD SIZE AND EMBEDMENT
 - UNLESS NOTED OTHERWISE, ALL ANCHOR ROD NUTS SHALL BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISC AFTER THE CONCRETE IS AT LEAST 14 DAYS OLD.
 - HOLE IN PLATE WASHER SHALL BE 1/16" LARGER THAN THE ROD DIAMETER.

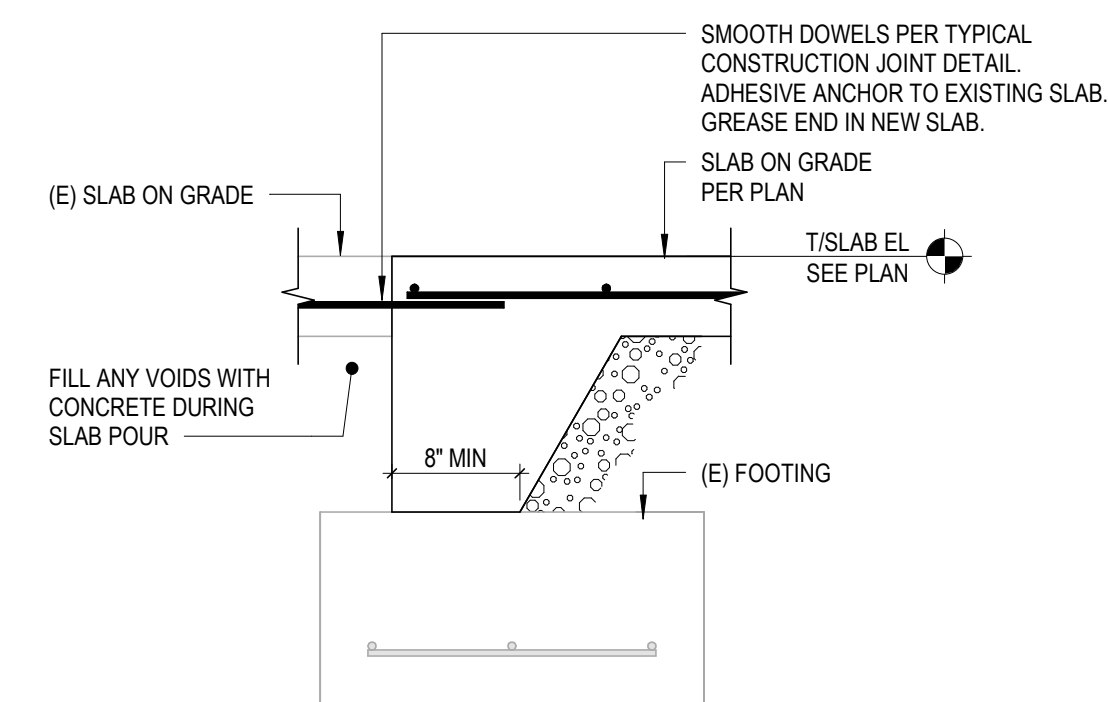
1E TYPICAL COLUMN ANCHOR ROD
S3.2 NO SCALE



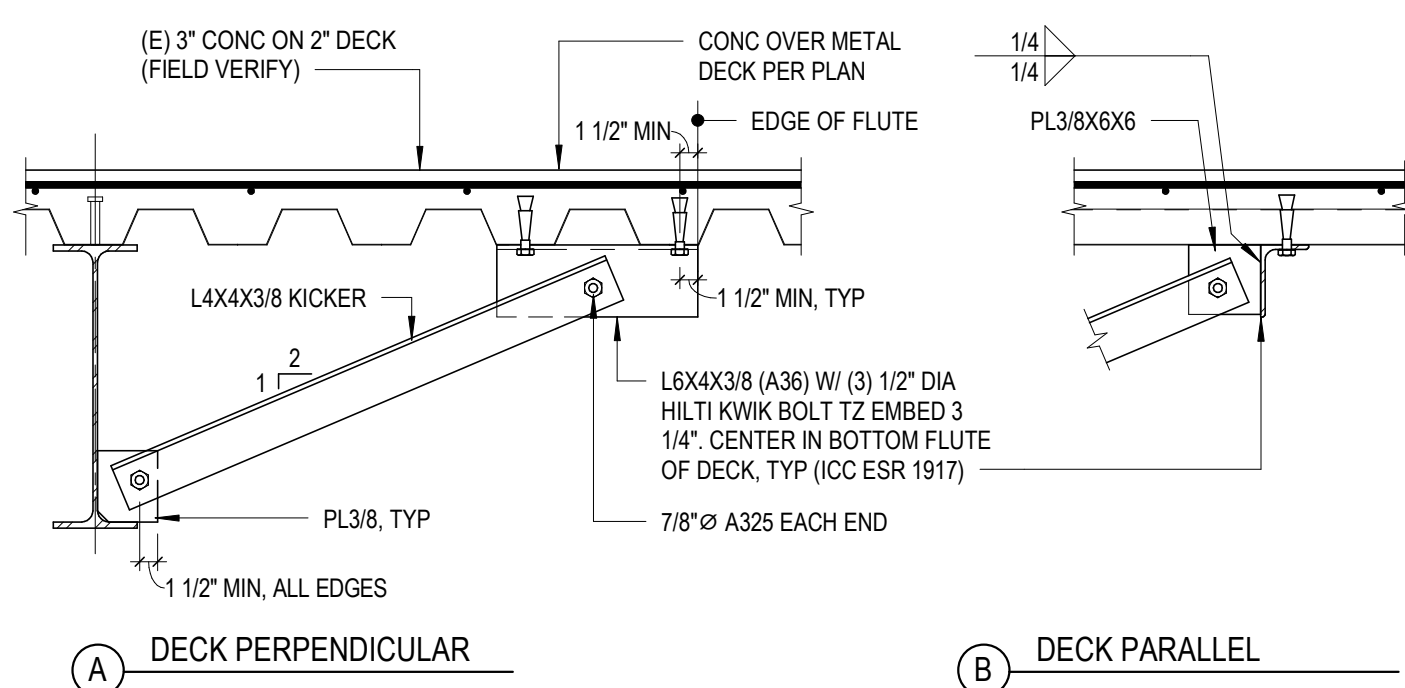
2A TYPICAL EXTERIOR WALL FOOTING
S3.2 SCALE: 1" = 1'-0"



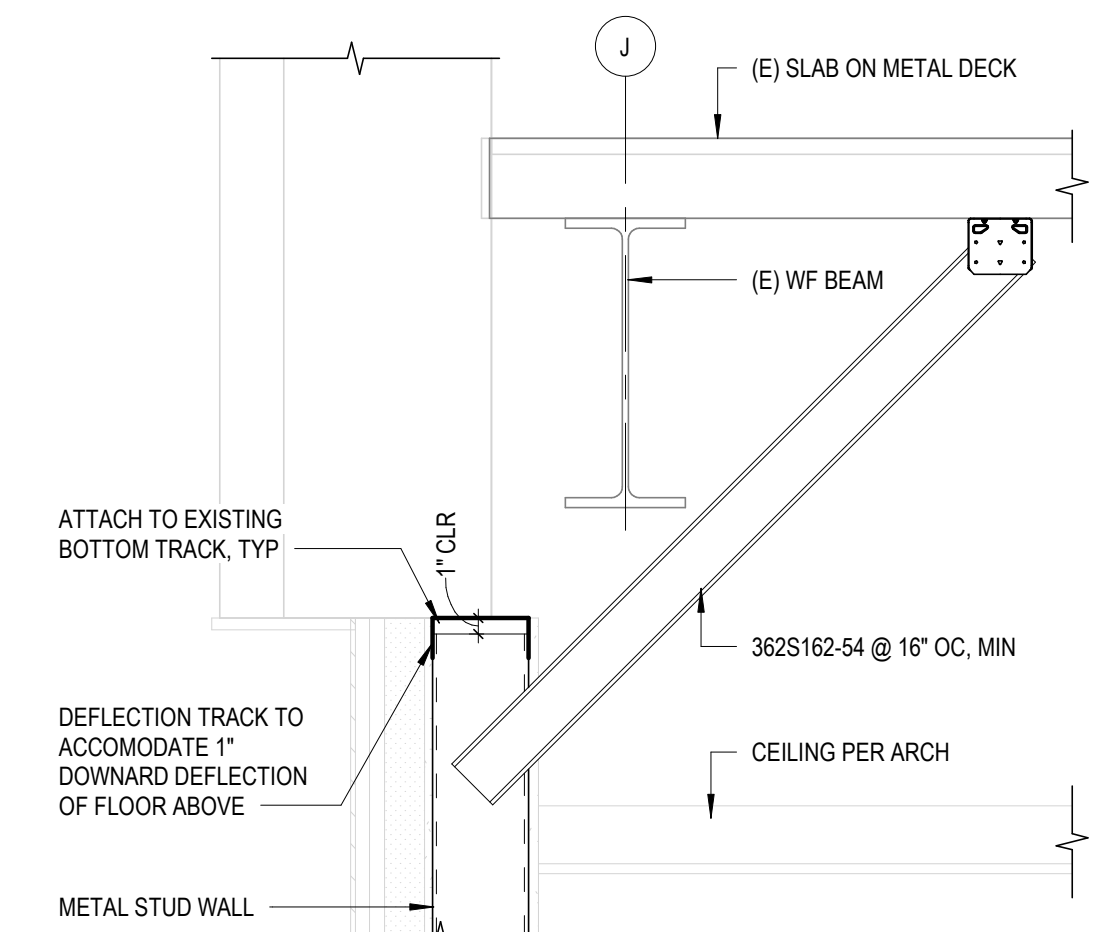
2B EXTERIOR WALL AT LARGE OPENING
S3.2 SCALE: 1" = 1'-0"



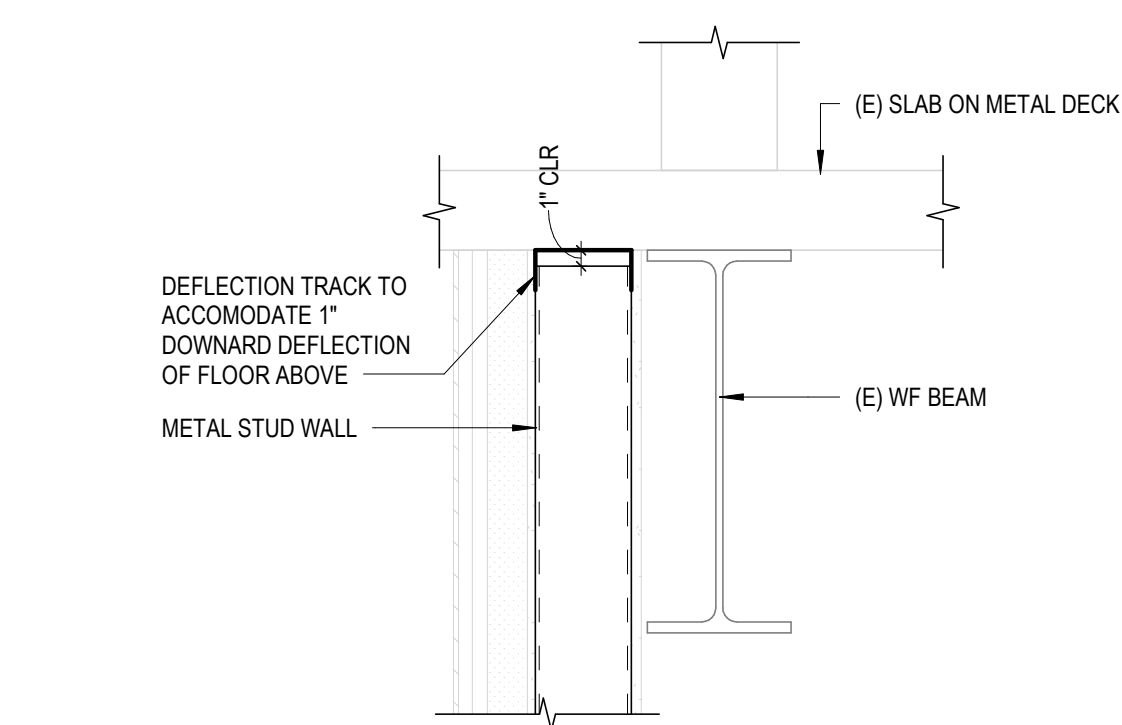
3A NEW SLAB AT EXISTING SLAB
S3.2 SCALE: 1" = 1'-0"



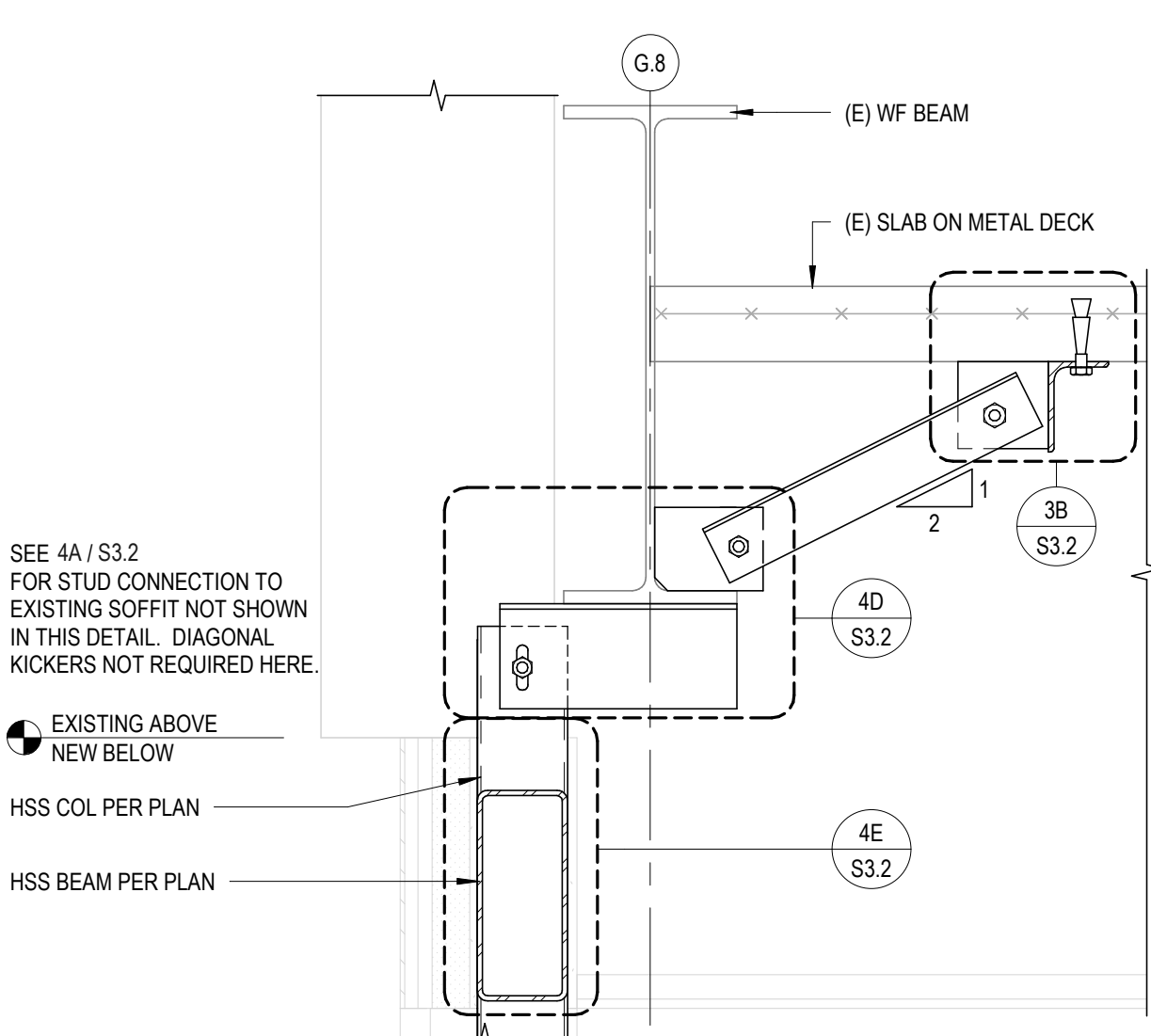
3B TYPICAL KICKER TO COMPOSITE DECK
S3.2 NO SCALE



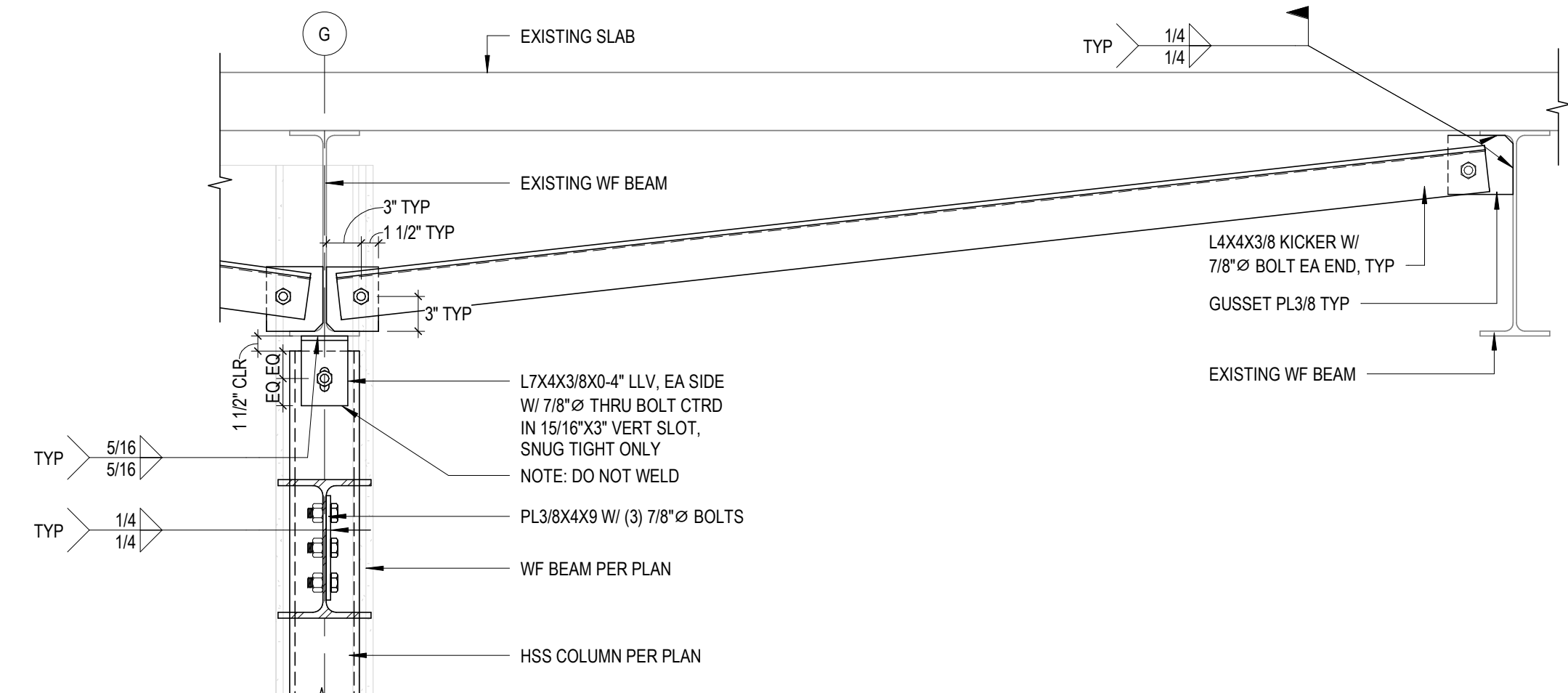
4A EXTERIOR WALL TO EXISTING SOFFIT
S3.2 SCALE: 1" = 1'-0"



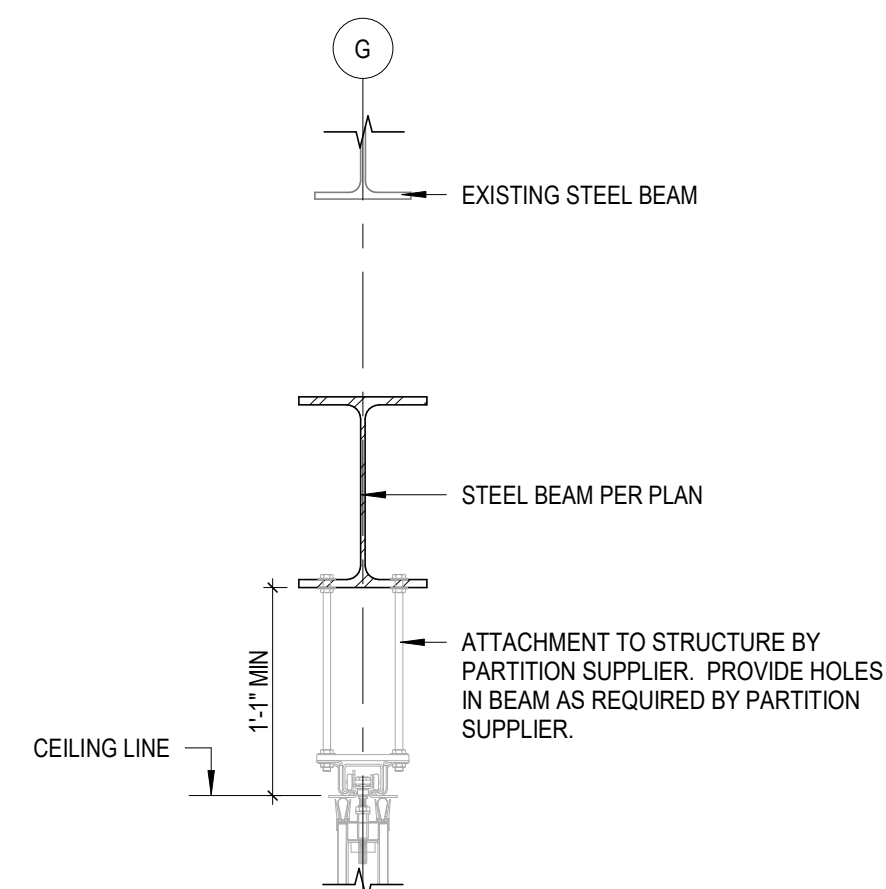
4B EXTERIOR WALL TO EXISTING SLAB
S3.2 NO SCALE



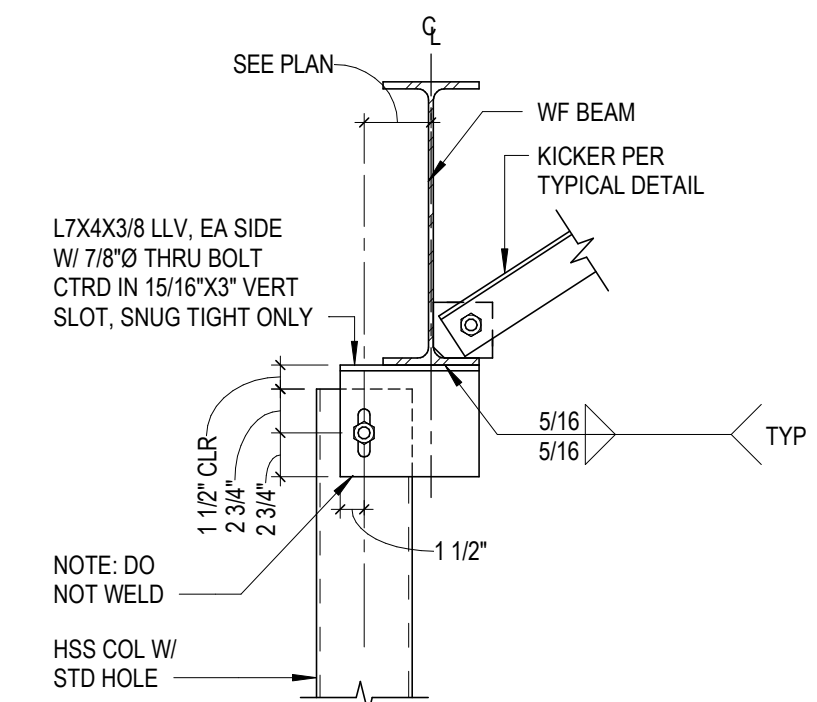
4C LARGE OPENING HEADER SECTION
S3.2 NO SCALE



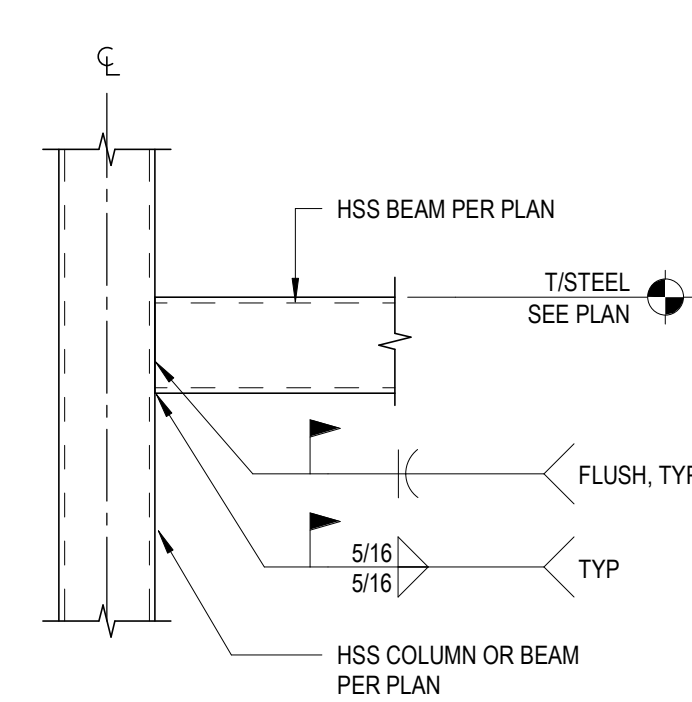
2D PARTITION BRACING DETAIL (ALTERNATE #3)
S3.2 SCALE: 1" = 1'-0"



3D PARTITION SUPPORT DETAIL (ALTERNATE #3)
S3.2 SCALE: 1" = 1'-0"



4D HSS POST TO BEAM CONNECTION
S3.2 NO SCALE



4E TYPICAL HSS-HSS CONNECTION
S3.2 NO SCALE

GENERAL NOTES

- 1
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GENERAL HVAC NOTES

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- 7

GENERAL PLUMBING NOTES

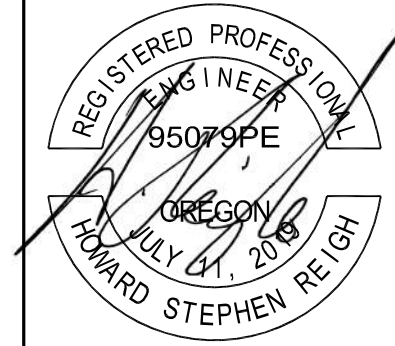
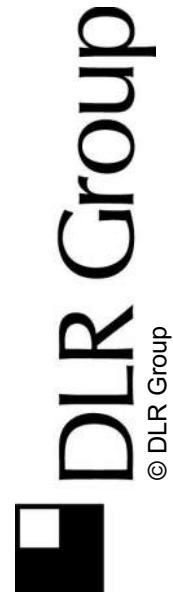
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GENERAL FIRE PROTECTION NOTES

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- 16
- 17

* NOTE *

ALL OF NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET.
THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.



VOSE ES ADDITION

BEAVERTON SCHOOL DISTRICT

11350 SW DENNEY RD
BEAVERTON, OR 97008

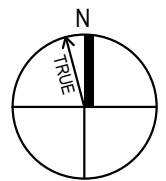
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REVISIONS

74-21102-00

MECHANICAL
GENERAL NOTES

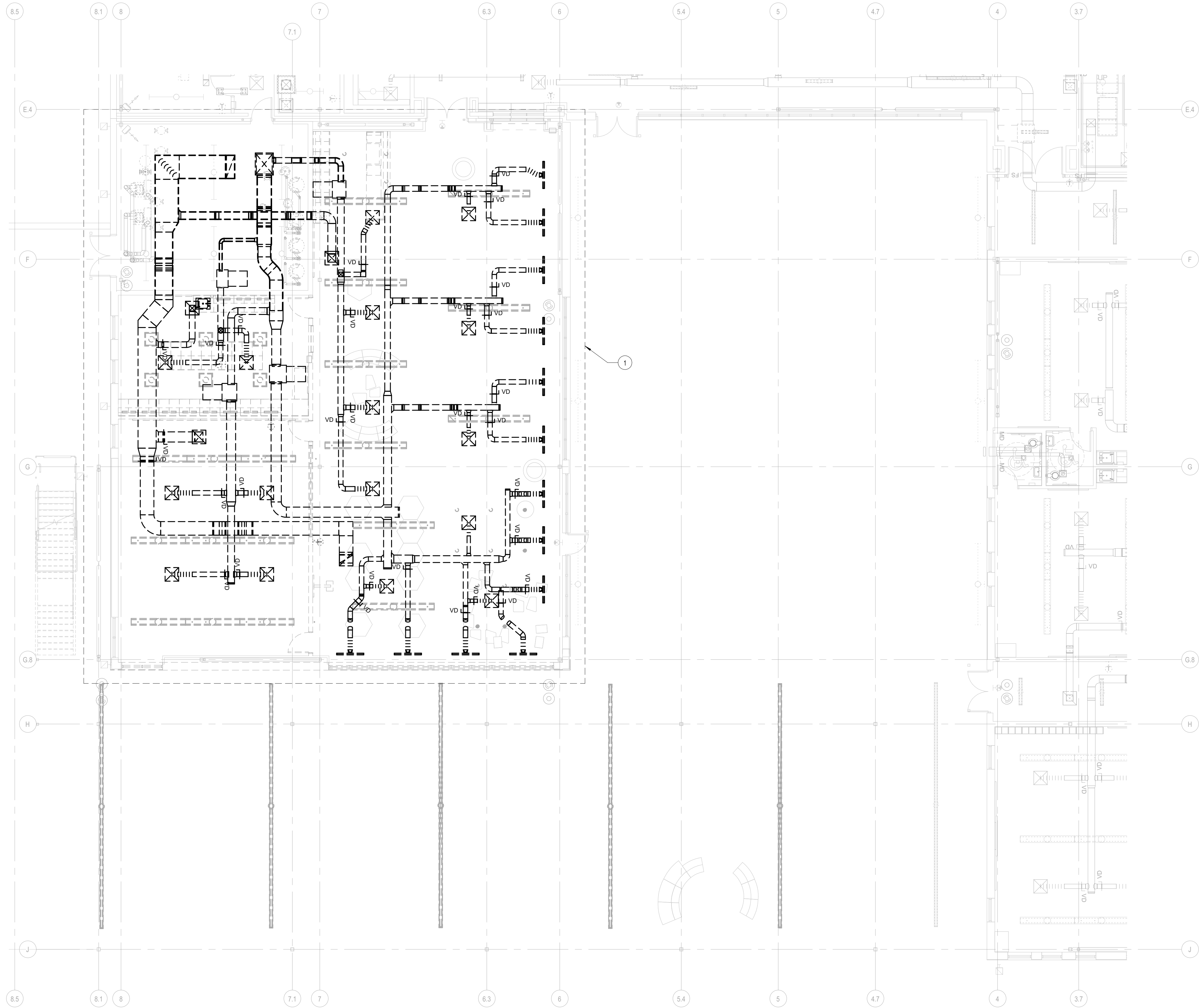
M0.2

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FIRST LEVEL HVAC DEMOLITION PLAN - AREA C

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

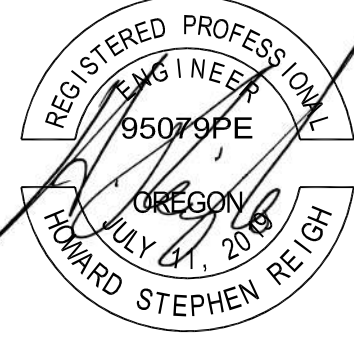
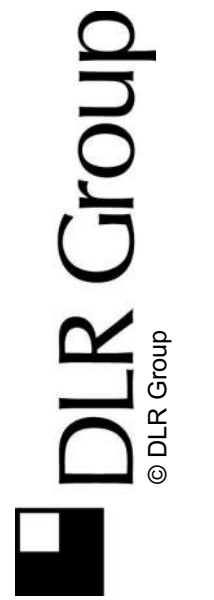


SHEET NOTES

- 1 REMOVE ALL DUCTWORK, DIFFUSERS, GRILLES, ROOFTOP UNIT, AND ACCESSORIES. PREPARE FOR NEW WORK (SEE SHEET M1.1). SALVAGE AND REUSE EXISTING THERMOSTATS AND AIR TERMINAL BOXES AT NEW LOCATIONS SHOWN ON M1.1.

GENERAL NOTES

- A
B



EXPIRES: 12/31/2022

VOSE ES ADDITION

BEAVERTON SCHOOL DISTRICT
11350 SW DENNEY RD
BEAVERTON, OR 97008

100% CD
2/26/2021
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74-21102-00

FIRST FLOOR
MECHANICAL
DEMOLITION
PLAN - AREA C

MD1.1

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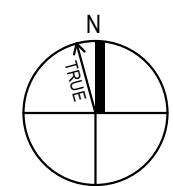
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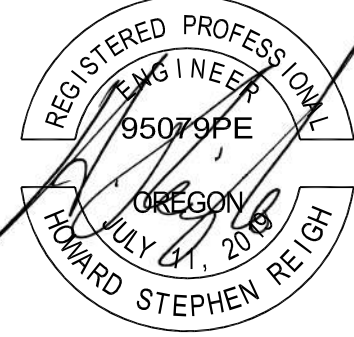
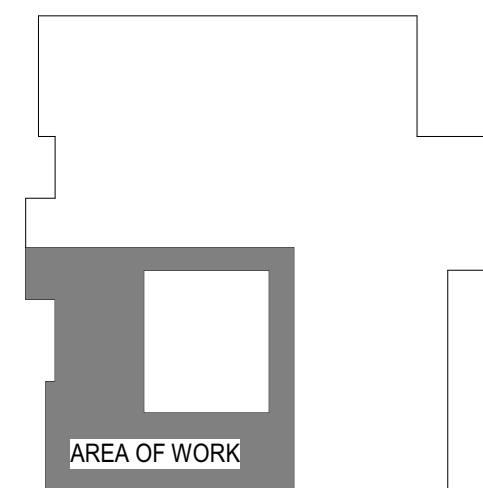
MECHANICAL PIPING DEMO - AREA C

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

DEMO EXISTING HEATING WATER
SUPPLY AND RETURN BRANCH TO
PREPARE FOR NEW LAYOUT



KEY PLAN



VOSE ES ADDITION

BEAVERTON SCHOOL DISTRICT
11350 SW DENNEY RD
BEAVERTON, OR 97008

100% CD
2/26/2021
REVISIONS

74-21102-00

MECHANICAL
PIPING DEMO -
AREA C

MD2.1



A

B

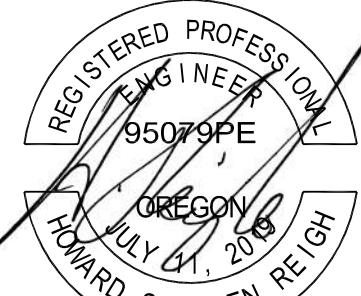
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SHEET NOTES

- ROUTE 6" DIA. EXHAUST DUCT UP THROUGH ROOF TO A GOOSENECK AT A MIN. OF 10'-0" AWAY FROM ANY BUILDING INTAKES.
- PROVIDE OPENING ABOVE CEILING FOR VAV BOX CLEARANCE.



EXPIRES: 12/31/2022

VOSE ES ADDITION

BEAVERTON SCHOOL DISTRICT

11350 SW DENNEY RD
BEAVERTON, OR 97008

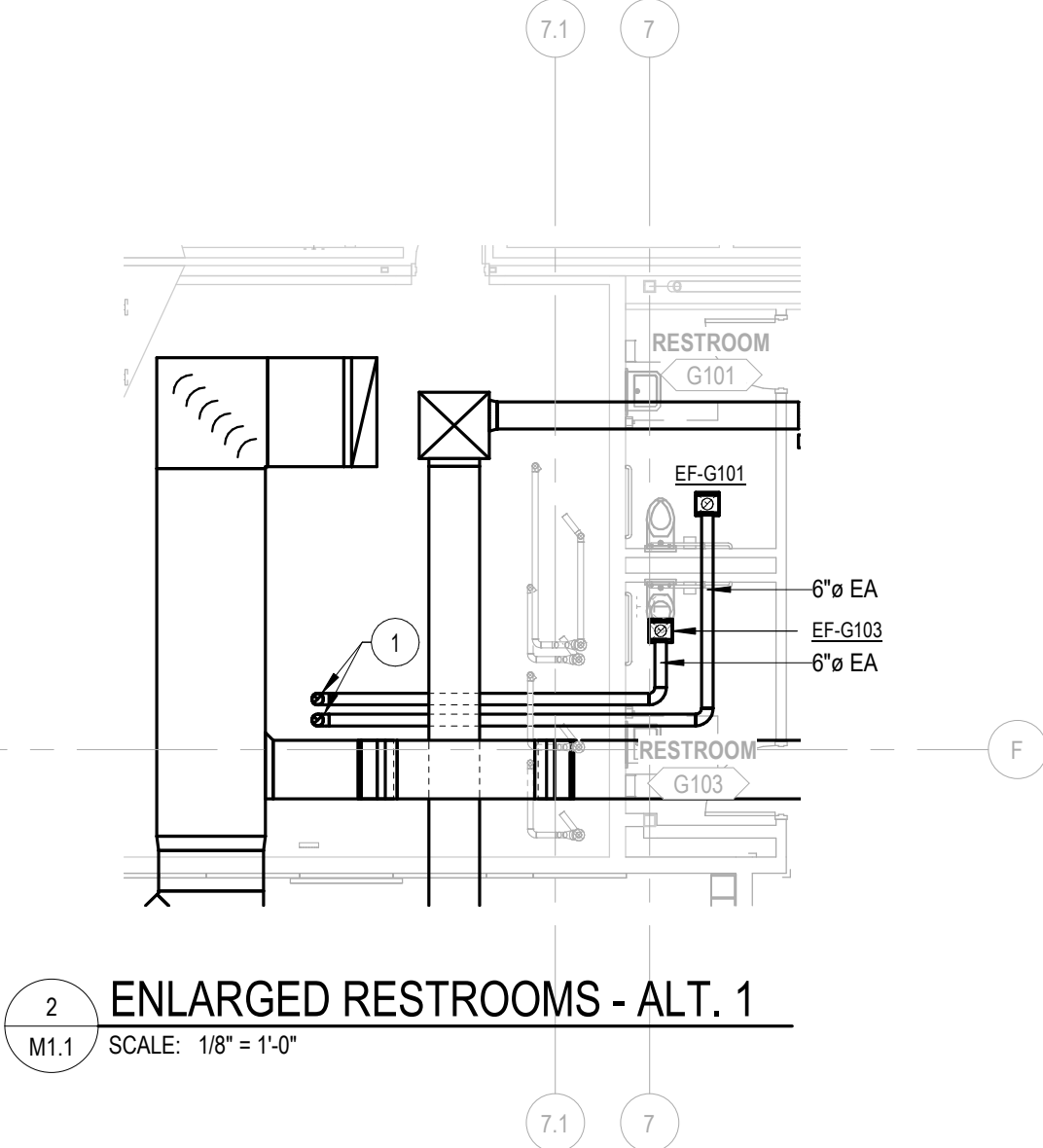
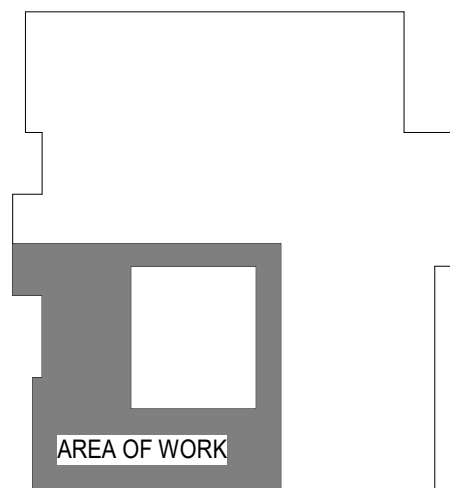
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REVISIONS

74-21102-00

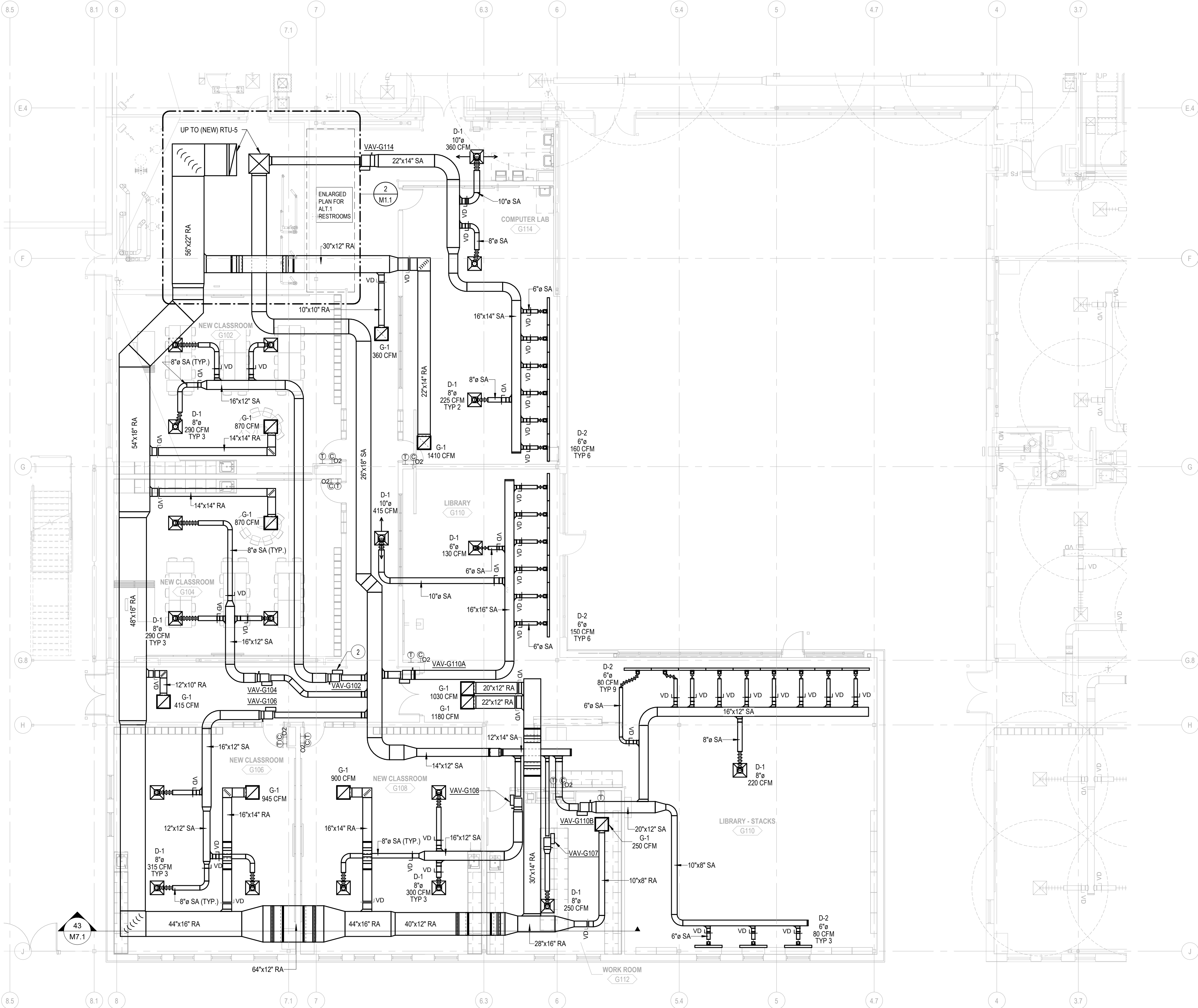
FIRST FLOOR
HVAC PLAN -
AREA C

M1.1

KEY PLAN

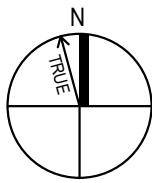


2 ENLARGED RESTROOMS - ALT. 1
M1.1 SCALE: 1/8" = 1'-0"



FIRST LEVEL HVAC PLAN - AREA C

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



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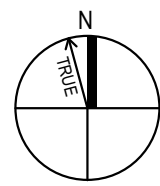
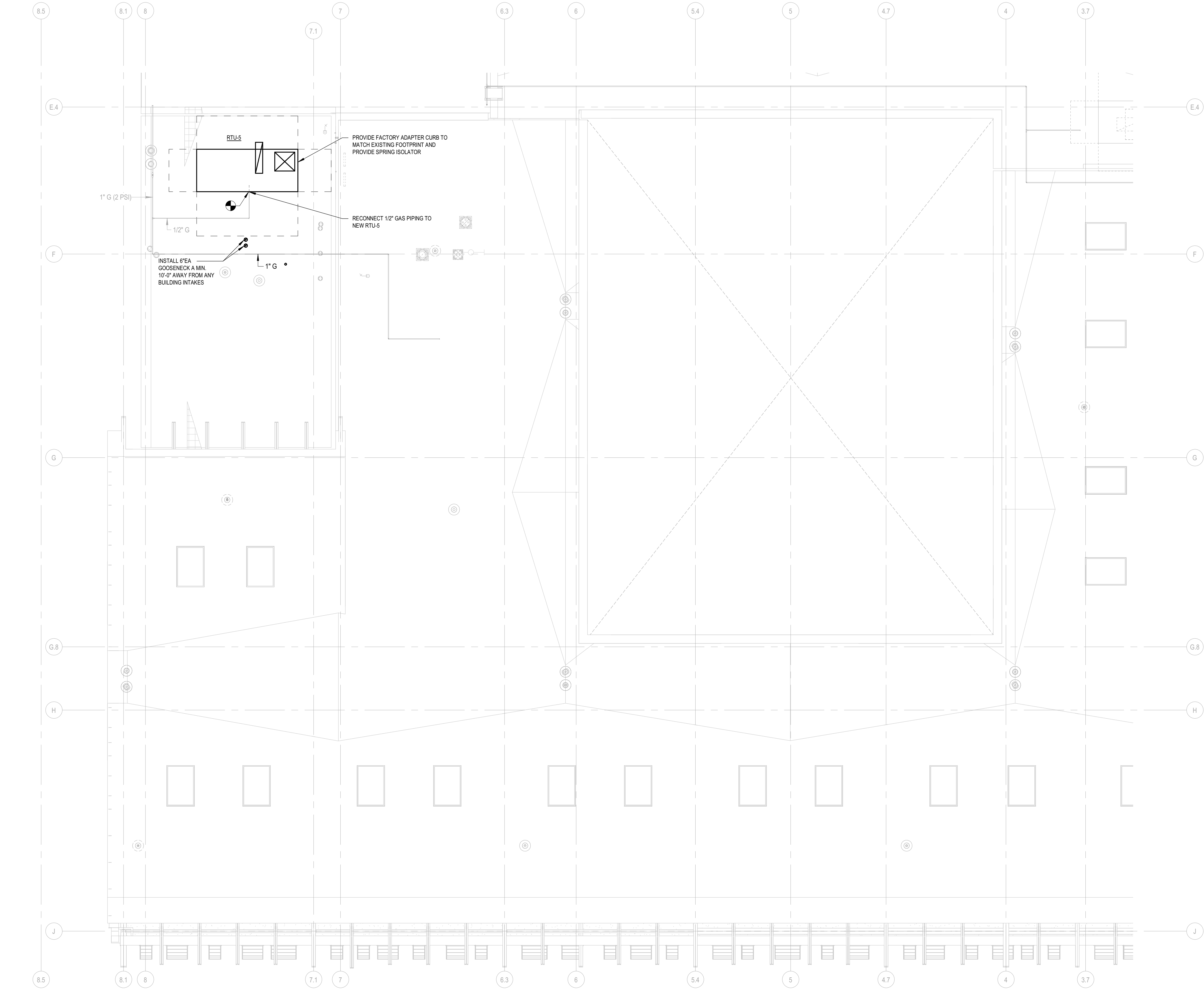
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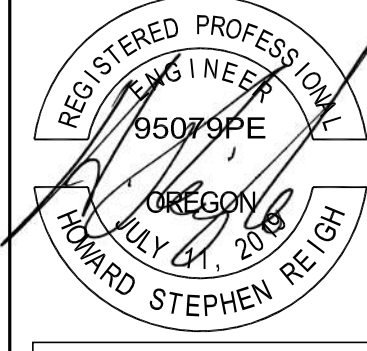


ROOF MECHANICAL PLAN - AREA C

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

GENERAL NOTES

A FOR SYMBOLS AND ABBREVIATIONS SEE DRAWING M0.1.



VOSE ES ADDITION

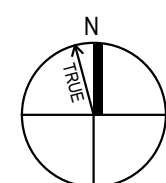
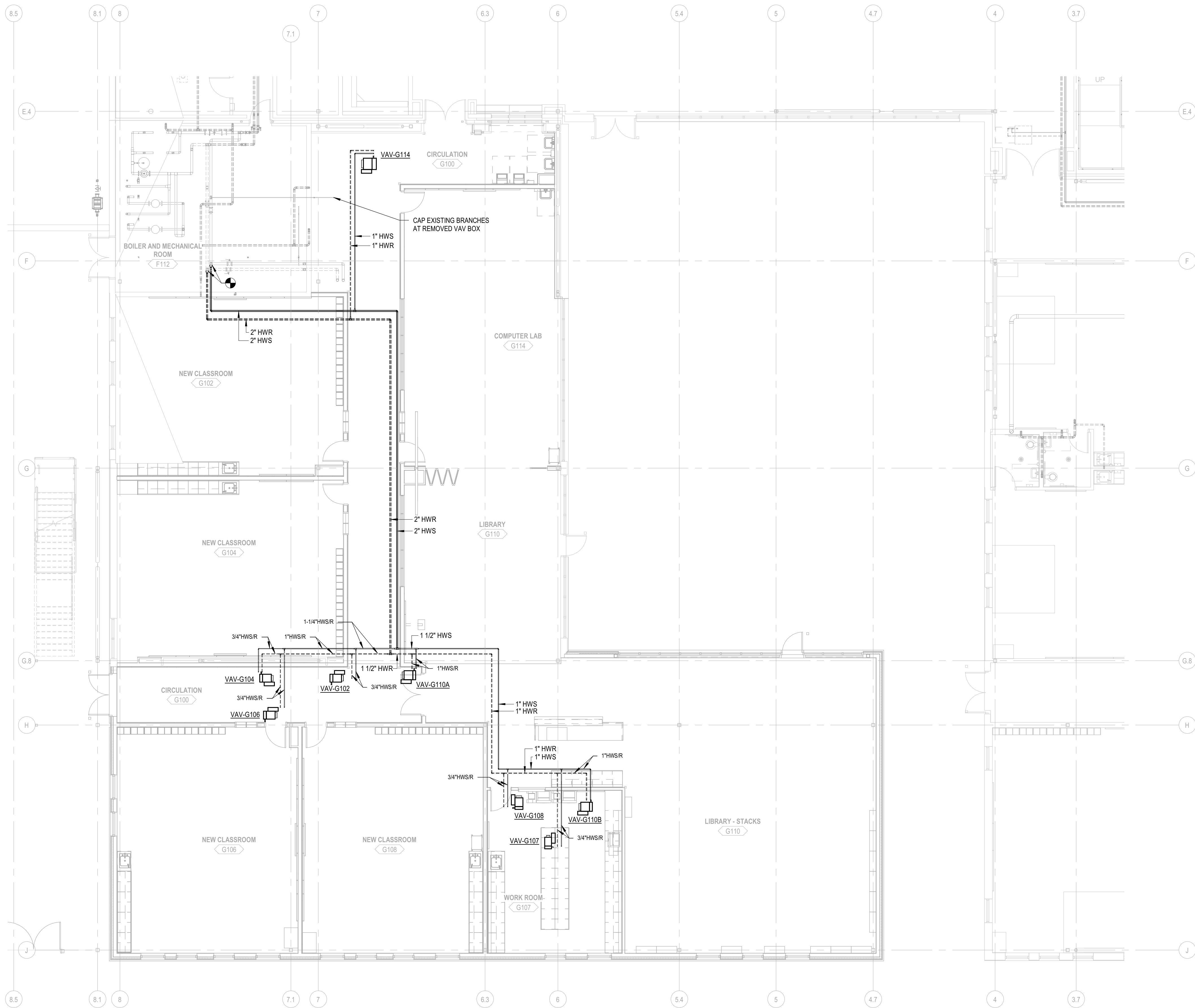
BEAVERTON SCHOOL DISTRICT
11350 SW DENNEY RD
BEAVERTON, OR 97008

100% CD
2/26/2021
REVISIONS

74-21102-00

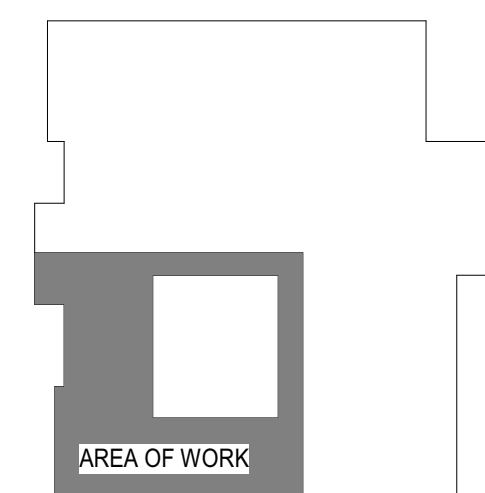
ROOF
MECHANICAL
PLAN - AREA C

M1.3



FIRST LEVEL MECHANICAL PIPING PLAN - AREA C
SCALE: 1/8" = 1'-0"

KEY PLAN



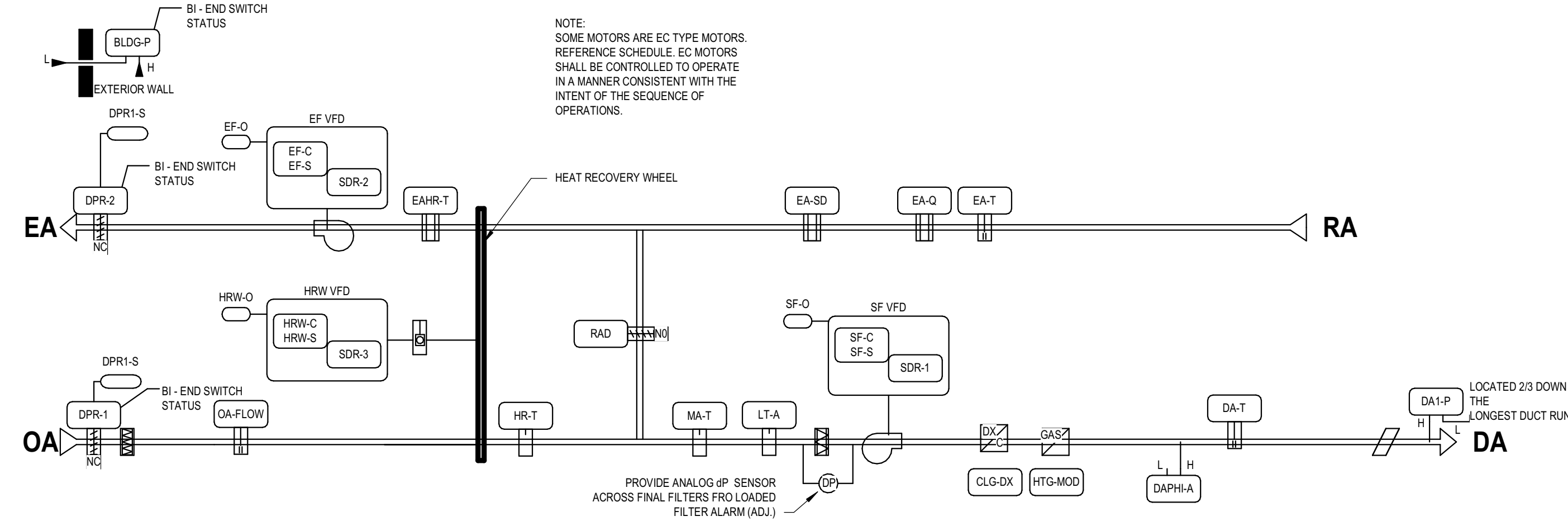
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RUN CONDITIONS:
THE UNIT SHALL RUN BASED UPON SIGNAL RECEIVED FROM THE BUILDING AUTOMATION SYSTEM VIA BACNET, WHICH SHALL BE BASED ON A USER DEFINABLE SCHEDULE AND SPACE CONDITIONS. OCCUPIED/UNOCCUPIED MODE SHALL BE DETERMINED BY THE BUILDING AUTOMATION SYSTEM.

SUPPLY FAN CONTROL:
THE SUPPLY FAN SHALL RUN ANYTIME THE UNIT IS COMMANDED TO RUN.

- ALARMS SHALL BE PROVIDED AS FOLLOWS:
- SUPPLY FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
 - SUPPLY FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
 - SUPPLY FAN RUNTIME EXCEEDED: STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.) (FOR FILTER CHANGE NOTIFICATION).

SUPPLY AIR DUCT STATIC PRESSURE CONTROL: THE BUILDING AUTOMATION SYSTEM SHALL MEASURE DUCT STATIC PRESSURE. UNIT CONTROLLER SHALL MODULATE THE SUPPLY FAN SPEED TO MAINTAIN THE DUCT STATIC PRESSURE SETPOINT AS RECEIVED FROM THE CENTRAL DDC SYSTEM VIA BACNET. THE SPEED SHALL NOT DROP BELOW 30% (ADJ.). THE STATIC PRESSURE SETPOINT SHALL BE RESET BASED ON ZONE COOLING REQUIREMENTS.

- THE INITIAL DUCT STATIC PRESSURE SETPOINT SHALL BE 2.0 IN. H₂O (ADJ.).
- THE BUILDING AUTOMATION SYSTEM SHALL CONTINUOUSLY MONITOR THE DAMPER POSITION OF ALL VAV TERMINAL UNITS. THE DISCHARGE DUCT STATIC PRESSURE SHALL BE SENSED IN A NON-TURBULENT LOCATION 2/3 OF THE WAY DOWN THE DUCT TEN DUCT WIDTHS FROM ANY ELBOW.
- PRESSURE SETPOINT SHALL BE RESET UPWARD BY 5% (ADJ.) OF THE MAXIMUM SYSTEM STATIC PRESSURE SETPOINT AT A FREQUENCY OF 10 MINUTES (ADJ.) UNTIL NO DAMPER IS MORE THAN 95% OPEN OR THE STATIC PRESSURE SETPOINT HAS RESET UPWARD TO THE SYSTEM MAXIMUM SETTING OR THEIR MAXIMUM FREQUENCY DRIVE ARE AT THEIR MAXIMUM SETTING.
- WHEN ALL DAMPERS ARE LESS THAN 85% (ADJ.) OPEN, THE SUPPLY FAN DISCHARGE DUCT STATIC PRESSURE SETPOINT SHALL BE RESET DOWNWARD BY 5% (ADJ.) OF THE MAXIMUM SYSTEM STATIC PRESSURE SETPOINT AT A FREQUENCY OF 10 MINUTES (ADJ.) UNTIL ANY DAMPER IS MORE THAN 85% OPEN OR THE STATIC PRESSURE SETPOINT HAS RESET DOWNWARD TO THE SYSTEM MINIMUM SETTING OR THE VARIABLE FREQUENCY DRIVE ARE AT THEIR MINIMUM SETTING.
- THE CONTROL BANDS, SETPOINT INCREMENT VALUES, SETPOINT DECREMENT VALUES AND ADJUSTMENT FREQUENCIES SHALL BE ADJUSTED TO MAINTAIN MAXIMUM STATIC PRESSURE OPTIMIZATION WITH STABLE SYSTEM CONTROL AND MAXIMUM COMFORT CONTROL.
- THE CONTRACTOR SHALL SUBMIT A WRITTEN SEQUENCE OF OPERATION AND SAMPLE PROGRAMMING REQUIRED TO DETERMINE THE DUCT STATIC PRESSURE SETPOINT.
- PRIOR TO FINAL SYSTEM ACCEPTANCE, A TREND LOG OF ACTUAL AIR SYSTEM OPERATION OVER A TYPICAL FORTY- EIGHT HOUR PERIOD SHALL BE REQUIRED BY THE ENGINEER AND OWNER. SYSTEM OPERATING CONDITIONS TO BE LOGGED INCLUDE: VAV BOX AIR VALVE POSITIONS, DUCT STATIC PRESSURE, DUCT STATIC PRESSURE SETPOINT AND VARIABLE SPEED DRIVE SPEED INDICATION AT 10-MINUTE INTERVALS.

- ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH SUPPLY AIR STATIC PRESSURE: IF THE SUPPLY AIR STATIC PRESSURE IS 25% (ADJ.) GREATER THAN SETPOINT.
 - LOW SUPPLY AIR STATIC PRESSURE: IF THE SUPPLY AIR STATIC PRESSURE IS 25% (ADJ.) LESS THAN SETPOINT.
 - SUPPLY FAN VFD FAULT.

EXHAUST FAN CONTROL:
OCCUPIED MODE:

- WHEN THE OUTSIDE AIR DAMPER IS 100% (ADJ.) OPEN, ACTIVATE RTU EXHAUST FAN. BUILDING AUTOMATION SYSTEM WILL READ THE SUPPLY FAN SPEED AND SEND BACK UNIT EXHAUST FAN SPEED. EXHAUST FAN SPEED WILL BE DETERMINED BY TRACKING WITH THE SPEED OF THE SUPPLY FAN MINUS AN OFFSET (ADJ.) AS DETERMINED BY THE TEST AND BALANCE CONTRACTOR. OFFSET SHALL ACCOUNT FOR EXHAUST AIRFLOW DRIVEN BY EXHAUST FANS IN THE ZONE OF ASSOCIATED RTU. BUILDING STATIC PRESSURE, MEASURED WITH REFERENCE TO OUTSIDE, WILL BE MONITORED BUT, WILL NOT BE USED TO DETERMINE SPEED OF EXHAUST FAN. DEACTIVATE EXHAUST FAN WHEN OSA DAMPER DECREASES TO LESS THAN 80% (ADJ.).
- DEACTIVATE HEAT WHEEL WHEN EXHAUST FAN IS TURNED OFF DUE TO ECON DAMPER POSITION.

UNOCCUPIED MODE:

- WHEN THE OUTSIDE AIR DAMPER IS 100% (ADJ.) OPEN, ACTIVATE RTU EXHAUST FAN. BUILDING AUTOMATION SYSTEM WILL READ THE SUPPLY FAN SPEED AND SEND BACK UNIT EXHAUST FAN SPEED. EXHAUST FAN SPEED WILL BE DETERMINED BY TRACKING WITH THE SPEED OF THE SUPPLY FAN MINUS AN OFFSET (ADJ.) AS DETERMINED BY THE TEST AND BALANCE CONTRACTOR. BUILDING STATIC PRESSURE, MEASURED WITH REFERENCE TO OUTSIDE, WILL BE MONITORED BUT, WILL NOT BE USED TO DETERMINE SPEED OF EXHAUST FAN. DEACTIVATE EXHAUST FAN WHEN OSA DAMPER DECREASES TO LESS THAN 80% (ADJ.).
- DEACTIVATE HEAT WHEEL WHEN EXHAUST FAN IS TURNED OFF DUE TO ECON DAMPER POSITION.

- ALARMS SHALL BE PROVIDED AS FOLLOWS:
- EXHAUST FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
 - EXHAUST FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
 - EXHAUST FAN RUNTIME EXCEEDED: STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.).
 - EXHAUST FAN VFD FAULT.

SUPPLY AIR DISCHARGE TEMPERATURE SETPOINT:
OCCUPIED MODE:

- THE UNIT CONTROLLER SHALL MONITOR THE SUPPLY AIR TEMPERATURE AND SHALL MAINTAIN SUPPLY AIR TEMPERATURE SETPOINT RECEIVED FROM BUILDING AUTOMATION SYSTEM VIA BACNET.
- THE SUPPLY AIR TEMPERATURE SETPOINT SHALL BE RESET BY THE BUILDING AUTOMATION SYSTEM FOR COOLING BASED ON ZONE COOLING REQUIREMENTS AS FOLLOWS:
- HEATING AND COOLING CONTROL: THE HEATING AND COOLING SHALL MODULATE IN SEQUENCE TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT OF 60° F (ADJ.).
- IF THE VARIABLE SPEED DRIVE RAMP TO 100% (ADJ.), THE DISCHARGE AIR SETPOINT SHALL BE RESET 5° F LOWER TO 55° F (ADJ.).
- THE DISCHARGE AIR SETPOINT SHALL REMAIN AT 55° F, UNTIL THE VARIABLE SPEED DRIVE SLOWS TO 90% (ADJ.) AT WHICH POINT THE DISCHARGE AIR TEMPERATURE SHALL BE RESET HIGHER BY 5° F FOLLOWING THE SEQUENCE IN REVERSE.

UNOCCUPIED MODE:
THE UNIT CONTROLLER SHALL MONITOR THE SUPPLY AIR TEMPERATURE AND SHALL MAINTAIN SUPPLY AIR TEMPERATURE SETPOINT RECEIVED FROM BUILDING AUTOMATION SYSTEM VIA BACNET.

- COOLING DISCHARGE AIR TEMPERATURE SETPOINT: 55°F
- HEATING DISCHARGE AIR TEMPERATURE SETPOINT: 95°F

HEAT RECOVERY:
THE HEAT RECOVERY WHEEL (HRW-C) SPEED WILL BE CONTROLLED BY UNIT CONTROLLER TO MAINTAIN DISCHARGE AIR TEMPERATURE AND SHALL BE ENABLED WHEN THE ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN THE RETURN AIR TEMPERATURE (RA-T) AND THE OUTDOOR AIR TEMPERATURE (OA-T) IS GREATER THAN THE HEAT RECOVERY SETPOINT (HRT-SP). ON A DROP IN EXHAUST AIR TEMPERATURE (EAHR-T) BELOW THE HEAT RECOVERY LOW LIMIT SETPOINT (HRL-SP), THE HEAT RECOVERY LOOP WILL CHANGE MODES TO MAINTAIN A MINIMUM EXHAUST AIR TEMPERATURE (EAHR-T) TO PREVENT FREEZING. UPON A LOSS OF HEAT RECOVERY WHEEL STATUS (HRW-S), THE HEAT RECOVERY WHEEL WILL ATTEMPT TO AUTOMATICALLY RESTART UNTIL POSITIVE STATUS IS RECEIVED.

DX COOLING:
THE UNIT CONTROLLER WILL MODULATE THE COOLING COIL TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT (DAT-SP).

- COOLING SHALL BE ENABLED WHENEVER:
- OUTSIDE AIR TEMPERATURE IS GREATER THAN 60° F (ADJ.).
 - AND THE SUPPLY FAN STATUS IS ON.
 - AND HEATING IS NOT ACTIVE.

- ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS 5° F (ADJ.) GREATER THAN SETPOINT.

HEATING (GAS):

- UNIT CONTROLLER SHALL MODULATE GAS HEATING TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT (DAT-SP). THE CONTROLLER SHALL MEASURE THE SUPPLY AIR TEMPERATURE AND MODULATE THE HEATING TO MAINTAIN ITS HEATING SETPOINT HEATING SHALL BE ENABLED WHENEVER:
- OUTSIDE AIR TEMPERATURE IS LESS THAN 65° F (ADJ.).
- AND THE SUPPLY FAN STATUS IS ON.
- AND THE COOLING IS NOT ACTIVE.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
LOW SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS 5°(ADJ.) LESS THAN SETPOINT.

RTU OPTIMAL START:
THE BUILDING AUTOMATION SYSTEM SHALL START THE UNIT PRIOR TO SCHEDULED OCCUPANCY BASED ON THE TIME NECESSARY FOR THE ZONES TO REACH THEIR OCCUPIED SETPOINTS. THE START TIME SHALL AUTOMATICALLY ADJUST BASED ON CHANGES IN OUTSIDE AIR TEMPERATURE AND ZONE TEMPERATURES.

- MORNING WARM UP SUPPLY AIR SETPOINT: 75° F (ADJ.)
- MORNING COOL DOWN SUPPLY AIR SETPOINT: 60° F (ADJ.)

UNOCCUPIED OVERRIDE:
A TIMED LOCAL OVERRIDE CONTROL SHALL ALLOW AN OCCUPANT TO OVERRIDE THE SCHEDULE AND PLACE THE UNIT INTO AN OCCUPIED MODE FOR AN ADJUSTABLE PERIOD OF TIME, AT THE EXPIRATION OF THIS TIME, CONTROL OF THE UNIT SHALL AUTOMATICALLY RETURN TO THE SCHEDULE. PROVIDE A PANEL OF SWITCHES/BUTTONS TIED TO A LOCAL CONTROLLER IN THE MECHANICAL ROOM WITH COMMUNICATION TO EACH UNIT OVER THE NETWORK.

SMOKE DETECTION:THE UNIT SHALL SHUT DOWN AND GENERATE AN ALARM UPON RECEIVING A RETURN AIR SMOKE DETECTOR STATUS AND/OR RETURN AIR SMOKE DETECTOR STATUS. UNIT SHALL BE ALLOWED TO RESTART UP TO 3 TIMES IN ANY 24 HOUR PERIOD (ADJ.) UPON ACKNOWLEDGEMENT OF ALARM AT USER INTERFACE. UPON 4TH ALARM IN 24 HOUR PERIOD (ADJ.), LOCAL MANUAL RESET SHALL BE REQUIRED.

MINIMUM OUTSIDE AIR

UNIT CONTROLLER SHALL MONITOR OUTSIDE AIR FLOW AT AIRFLOW MEASURING STATION AND SHALL MODULATE OA & RA DAMPER IN SEQUENCE TO MAINTAIN MINIMUM OUTSIDE AIR SETPOINT AS DETERMINED BY BUILDING AUTOMATION SYSTEM. DURING UNOCCUPIED MODE, MINIMUM OUTSIDE AIR SHALL BE SET TO ZERO. DURING OCCUPIED MODES, MINIMUM OUTSIDE AIR SHALL BE AS SCHEDULED FOR EACH INDIVIDUAL UNIT.

ECONOMIZER:

ECONOMIZER SHALL BE ENABLED WHENEVER:
THE OUTSIDE AIR TEMPERATURE IS LESS THAN THE RETURN AIR TEMPERATURE BY 3° F (ADJ.) AND THE SUPPLY FAN STATUS IS ON.

- ECONOMIZER SHALL CLOSE WHENEVER:
- THE OUTSIDE AIR TEMPERATURE IS MORE THAN THE RETURN AIR TEMPERATURE
 - MIXED AIR TEMPERATURE DROPS BELOW 40° F (ADJ.)
 - OR THE FREEZESTAT IS ON.
 - OR ON LOSS OF SUPPLY FAN STATUS.

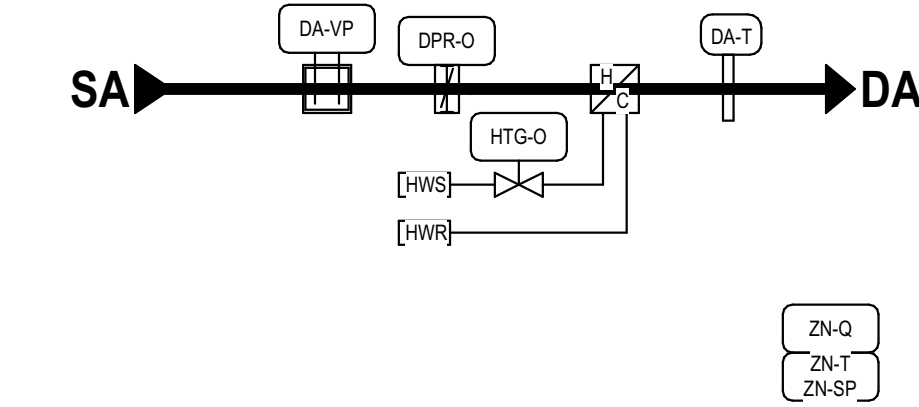
EMERGENCY SHUTDOWN:
UPON A SIGNAL BY A MANUAL SWITCH LOCATED IN THE ADMIN AREA, THE RTU UNIT WILL STOP RUNNING. THE RTU WILL BE ABLE TO BE REACTIVATED USING A NETWORK COMMAND.

EMERGENCY VENTILATION:
IF SIGNAL INDICATING EMERGENCY GENERATOR IS RUNNING IS DETECTED, RTU UNIT WILL OPERATE IN VENTILATION MODE ONLY. POWER TO THE COOLING SECTION WILL BE SHUT DOWN. FANS WILL OPERATE TO PROVIDE UNCONDITIONED AIRFLOW EQUAL TO THE LOW LIM. CFM VALUE LISTED IN THE RTU SCHEDULE. WHEN EMERGENCY GENERATOR OPERATION SIGNAL IS OFF, RTU WILL RETURN BACK TO REGULAR SCHEDULED OPERATION MODE.

ADDITIONAL POINTS MONITORED BY THE BMS:

- EXHAUST AIR CO₂ (EA-Q)
- BUILDING STATIC PRESSURE (BLDG-P)
- HEAT RECOVERY TEMPERATURE (HR-T)
- EXHAUST FAN STATUS (EF-S)
- OTHER POINTS AS SHOWN ON SCHEMATIC

TYPE	NAME	DESCRIPTION
AI	BLDG-P	BUILDING STATIC PRESSURE
AO	CLG1-DX	COOLING MODULATION
AI	DA1-P	DISCHARGE AIR STATIC PRESSURE 1
AI	DA-T	DISCHARGE AIR TEMPERATURE
BO	HTG1-MOD	HEATING MODULATION
BI	LT-A	LOW TEMPERATURE ALARM
AI	MA-T	MIXED AIR TEMPERATURE
AO	OAO-O	OUTDOOR AIR DAMPER OUTPUT
AI	PFLT-DP	PREFILTER DIFFERENTIAL PRESSURE
AO	RAD-O	RETURN AIR DAMPER OUTPUT
AI	RA-Q	RETURN AIR CO2 LEVEL
BO	RLF-C	RELIEF FAN COMMAND
AO	RLF-O	RELIEF FAN OUTPUT
BI	RLF-S	RELIEF FAN STATUS
BO	SF-C	SUPPLY FAN COMMAND
AO	SF-O	SUPPLY FAN OUTPUT
BI	SF-S	SUPPLY FAN STATUS
BO	SDR-1	SHUT DOWN RELAY - SUPPLY FAN VFD
BO	SDR-2	SHUT DOWN RELAY - EXHAUST FAN VFD
BO	SDR-3	SHUT DOWN RELAY - HEAT RECOVERY WHEEL VFD



OCCUPIED MODE:
WHEN THE ZONE TEMPERATURE (ZN-T) IS BETWEEN THE OCCUPIED HEATING (EFFHTG-SP) AND COOLING (EFFCLG-SP) SETPOINTS (INSIDE OF THE BIAS), THE PRIMARY AIR DAMPER (DPR-O) WILL BE AT THE MINIMUM CFM (SA-F) AND THERE WILL BE NO MECHANICAL HEATING. ON A RISE IN ZONE TEMPERATURE (ZN-T) ABOVE THE COOLING SETPOINT (EFFCLG-SP), THE PRIMARY AIR DAMPER (DPR-O) WILL INCREASE THE CFM (SA-F) AND THERE WILL BE NO MECHANICAL HEATING. ON A DROP IN ZONE TEMPERATURE (ZN-T) BELOW THE HEATING SETPOINT (EFFHTG-SP), THE REHEAT COIL WILL BE USED TO MAINTAIN THE ZONE TEMPERATURE (ZN-T) AND THE DAMPER (DPR-O) IS CONTROLLED TO PROVIDE A MINIMUM CFM (SA-F) WHEN ADDITIONAL HEATING IS REQUIRED AFTER DISCHARGE AIR TEMPERATURE REACHES THE MAXIMUM SETPOINT OF 85° F (ADJ.). ZONE DAMPER SHALL MODULATE BETWEEN MINIMUM COOLING CFM AND MAXIMUM HEATING CFM.

UNOCCUPIED MODE:
WHEN IN THIS MODE, WHILE THE ZONE TEMPERATURE (ZN-T) IS BETWEEN THE UNOCCUPIED HEATING (EFFHTG-SP) AND COOLING (EFFCLG-SP) SETPOINTS (INSIDE OF THE BIAS), THE PRIMARY AIR DAMPER (DPR-O) WILL BE AT THE MINIMUM CFM (SA-F) AND THERE WILL BE NO MECHANICAL HEATING. ON A RISE IN ZONE TEMPERATURE (ZN-T) ABOVE THE UNOCCUPIED COOLING SETPOINT (EFFCLG-SP), THE PRIMARY AIR DAMPER (DPR-O) WILL INCREASE THE CFM (SA-F) (IF AVAILABLE) AND THERE WILL BE NO MECHANICAL HEATING. ON A DROP IN ZONE TEMPERATURE (ZN-T) BELOW THE UNOCCUPIED HEATING SETPOINT (EFFHTG-SP), THE REHEAT COIL WILL BE USED TO MAINTAIN THE ZONE TEMPERATURE (ZN-T) AND THE PRIMARY AIR DAMPER (DPR-O) WILL BE AT THE MINIMUM CFM (SA-F).

CO2 FLOW RESET:
THE CO2 LEVEL IN THE ZONE (ZN-Q) WILL BE MONITORED AND WILL RESET THE MINIMUM FLOW SETPOINTS FOR THE BOX AS SCHEDULED. ON RISING CO2 CONCENTRATIONS, OVERRIDING NORMAL DAMPER OPERATION TO MAINTAIN A CO2 SETPOINT OF NOT MORE THAN 800 PPM (ADJ.).

ALARMS SHALL BE PROVIDED AS FOLLOWS: HIGH ZONE CARBON DIOXIDE CONCENTRATION: IF THE ZONE CO2 CONCENTRATION IS GREATER THAN 1000 PPM (ADJ.).

OPTIMAL START:
PROVIDE OPTIMAL START ALGORITHM FOR MORNING START-UP. ALGORITHM SHALL MINIMIZE THE UNOCCUPIED WARM-UP/COOL-DOWN PERIOD WHILE STILL ACHIEVING COMFORT CONDITIONS BY THE START OF SCHEDULED OCCUPIED PERIOD. START TIME SHALL AUTOMATICALLY ADJUST BASED ON CHANGES IN OUTSIDE AIR TEMPERATURE AND ZONE TEMPERATURES. START UP SHALL INITIALLY UTILIZE THE MAXIMUM CFM THAT CAN BE DELIVERED TO THE SPACE TO REDUCE THE TIME TO MEET SETPOINTS.

TEMPERATURE SETPOINT:

OCCUPIED MODE:
COOLING: 74° F (ADJ.) PLUS 1° F OFFSET
HEATING: 70° F (ADJ.) MINUS 1° F OFFSET
DEADBAND = 5° F (MINIMUM DIFFERENCE BETWEEN COOLING AND HEATING SETPOINT)
*WHEN OCCUPANCY SENSOR INDICATES NO OCCUPANCY, SET POINT SHALL BE REDUCED BY 1° F (ADJ.)

UNOCCUPIED MODE:
COOLING: 81° F (ADJ.)
HEATING: 69° F (ADJ.)

ZONE SETPOINT ADJUST:DDC SHALL ADJUST ZONE TEMPERATURE FROM FRONT END. THE OCCUPANT SHALL NOT BE ABLE TO ADJUST THE ZONE TEMPERATURE HEATING AND COOLING SETPOINTS AT THE ZONE SENSOR.

ALARMS:
ALARMS SHALL BE PROVIDED AS FOLLOWS:
HIGH ZONE TEMP: IF THE ZONE TEMPERATURE IS GREATER THAN THE COOLING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).
LOW ZONE TEMP: IF THE ZONE TEMPERATURE IS LESS THAN THE HEATING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).

UNIT ENABLE:
A NETWORK UNIT ENABLE (UNITEN-MODE) SIGNAL WILL CONTROL THE MODE OF THE BOX.

NETWORK WARMUP/COOLDOWN:
WARM-UP AND COOLDOWN MODES WILL BE ACTIVATED BY A NETWORK COMMAND (WC-Q), WHEN THE ZONE TEMPERATURE (ZN-T) IS BELOW THE EFFECTIVE HEATING SETPOINT (EFFHTG-SP), THE BOX WILL USE WARM AIR FLOW, THEN REHEAT COIL TO MAINTAIN THE ZONE TEMPERATURE (ZN-T). WHEN THE BOX IS SATISFIED THE FLOW WILL REMAIN AT THE WARM-UP MINIMUM POSITION UNTIL THE WARM COMMAND HAS BEEN REMOVED.

TYPE	NAME	DESCRIPTION
AI	DA-VP	DISCHARGE AIR VELOCITY PRESSURE
AI	DA-T	DISCHARGE AIR TEMPERATURE
PAO	DPR-O	SUPPLY AIR DAMPER OUTPUT
PAO	HTG-O	HEATING OUTPUT
MO	OCC-MODE	OCCUPANCY STATUS DISPLAY
AI	ZN-Q	ZONE CO2
AI	ZN-SP	ZONE SETPOINT
AI	ZN-T	ZONE TEMPERATURE

2 VAV WITH HYDRONIC HEAT & CO2
M5.1 NO SCALE

1 DX COOLING, GAS HEATING, VARIABLE AIR VOLUME UNIT (RTU-5)
M5.1 NO SCALE

A

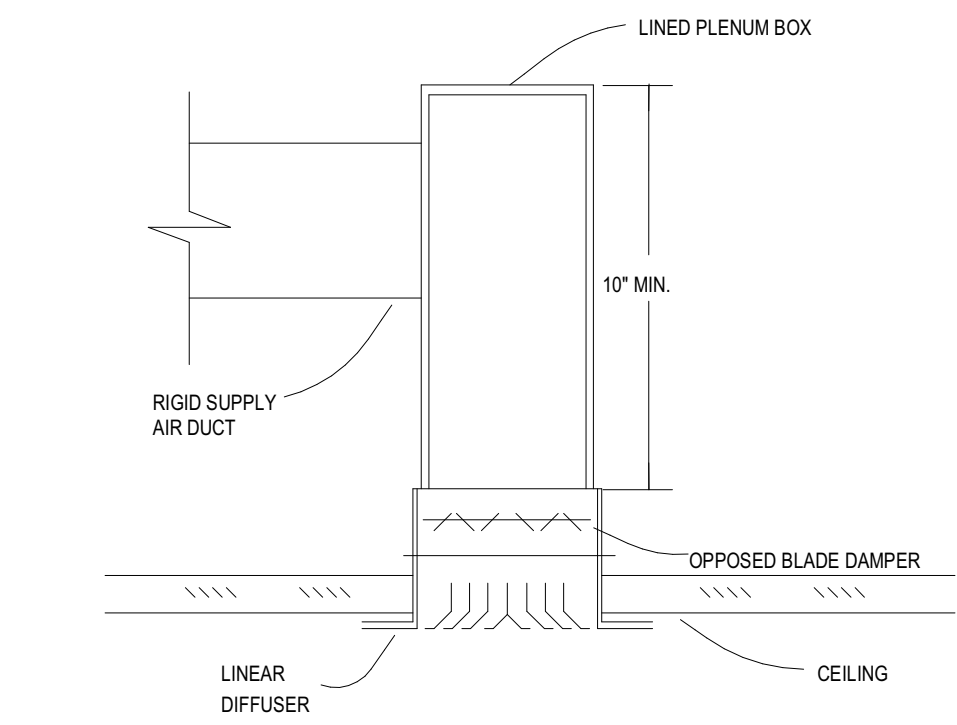
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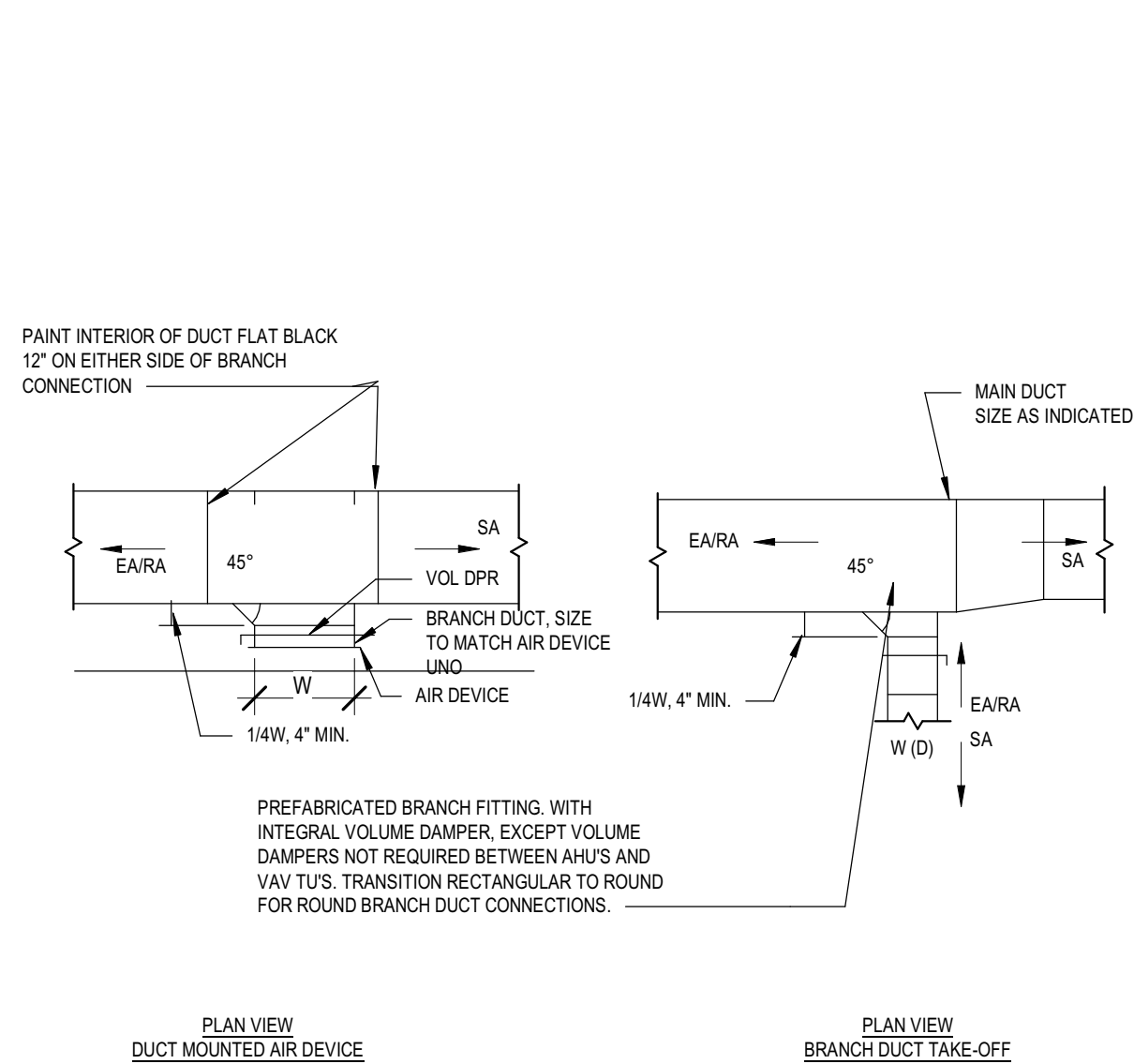
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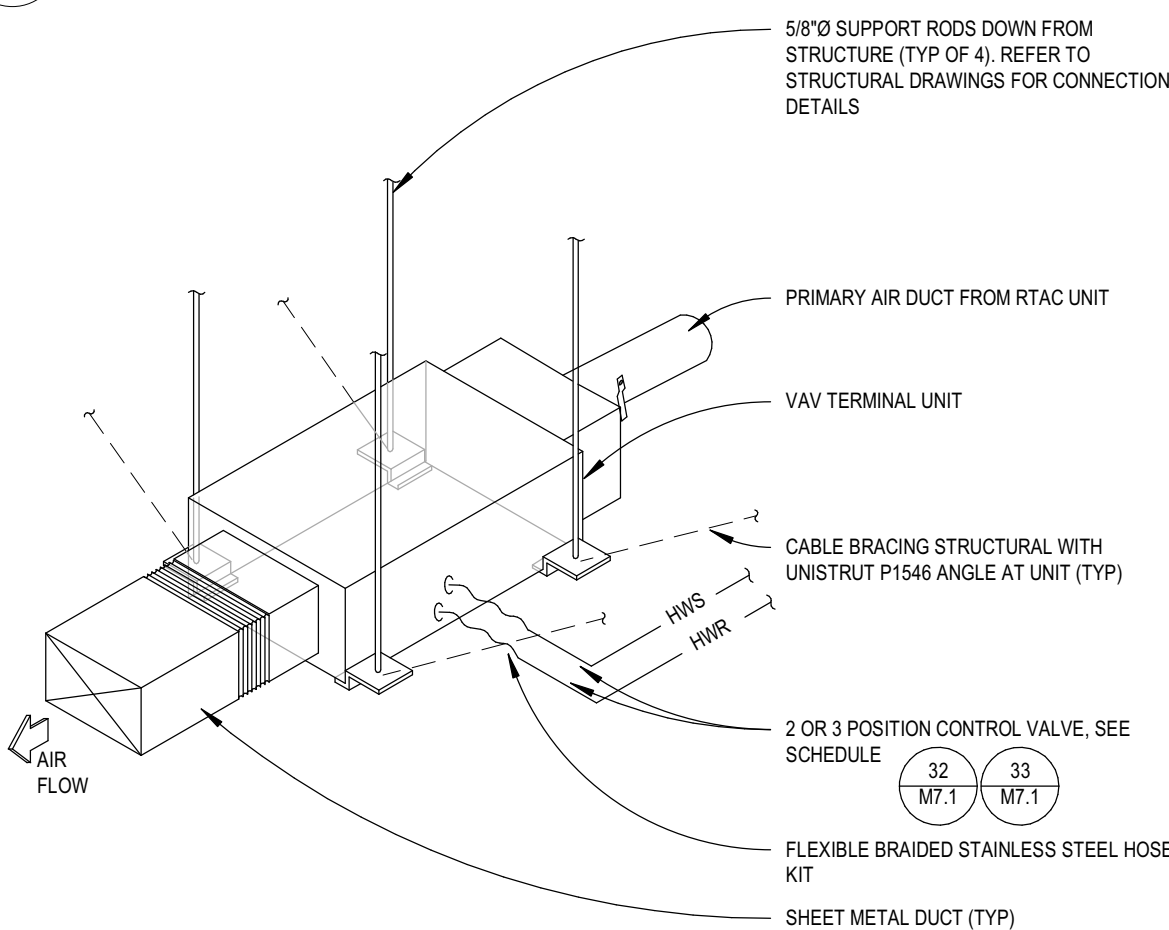
11 LINEAR DIFFUSER DETAIL
M7.1 NO SCALE

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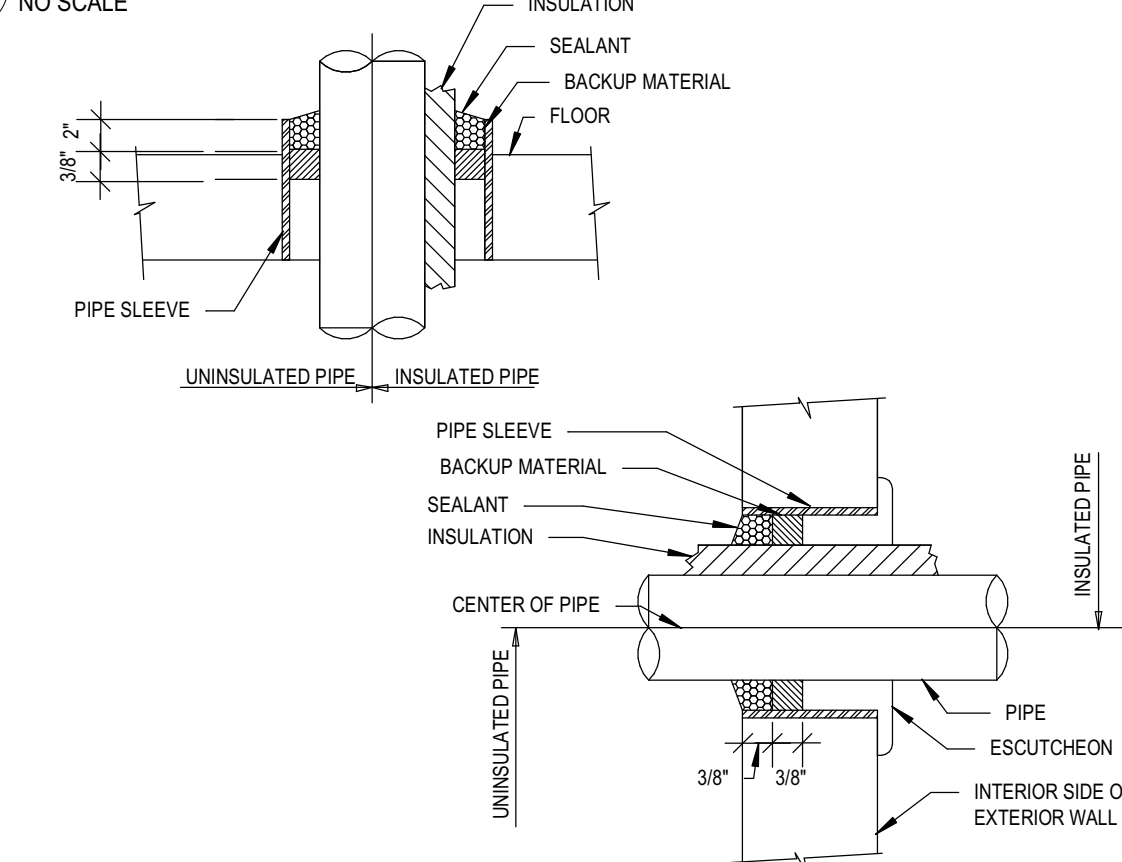
21 DUCT TAKE-OFF DETAILS
M7.1 NO SCALE

3



31 VAV BOX - SEISMIC
M7.1 NO SCALE

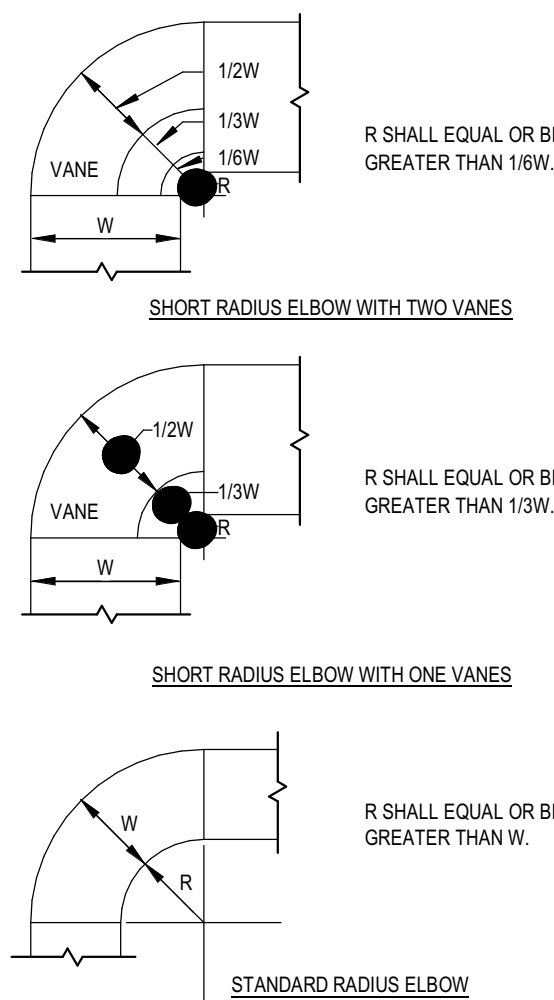
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41 PIPE PENETRATIONS DETAIL
M7.1 NO SCALE

12

RESTRICTED CEILING SUPPLY DIFFUSER PLENUM HEAD CONNECTION
M7.1 NO SCALE

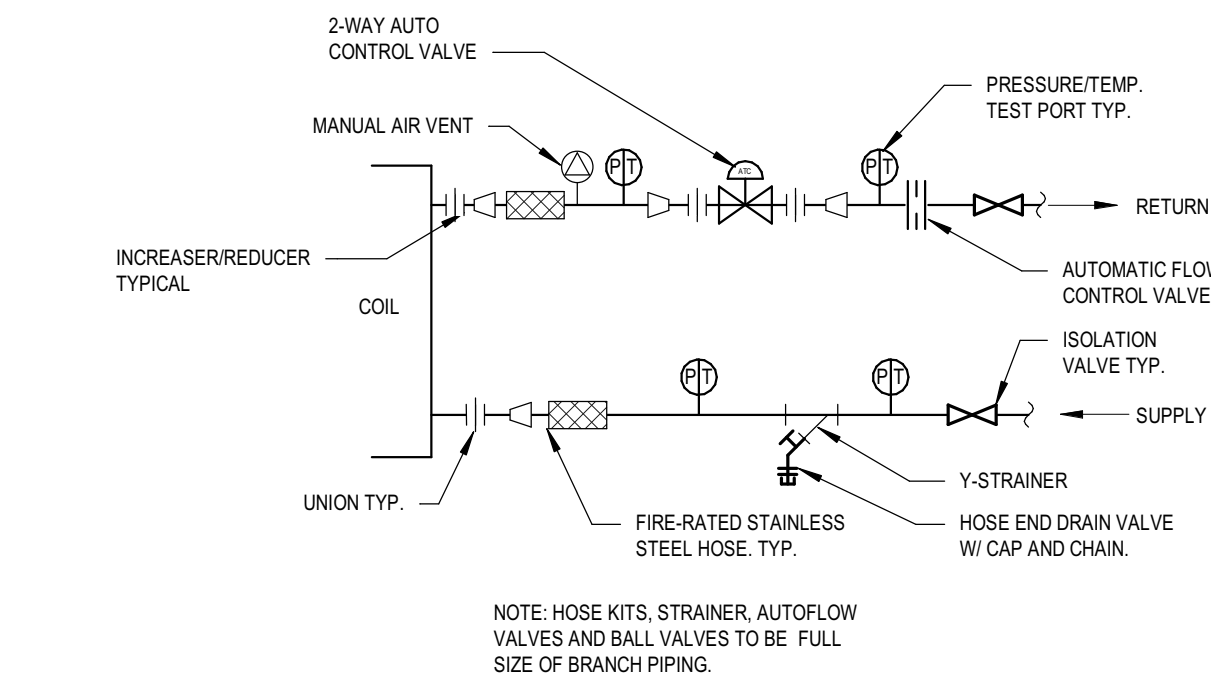


NOTES: 1. ALL STANDARD RADIUS ELBOWS SHOWN ON PLANS MAY BE MADE SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

22 RADIUS ELBOW DETAILS
M7.1 NO SCALE

32

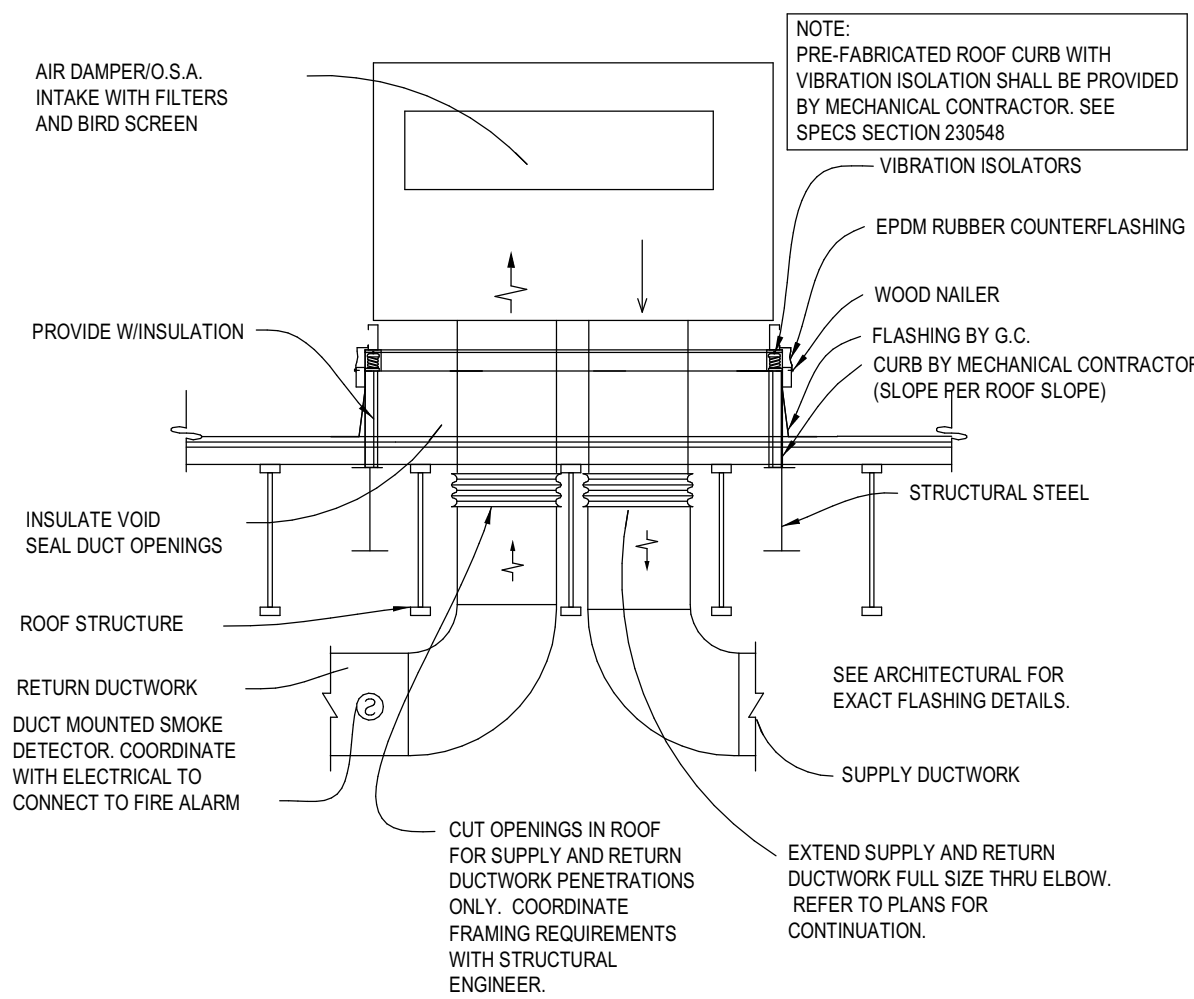
2-WAY COIL DETAIL
M7.1 NO SCALE



NOTE: HOSE KITS, STRAINER, AUTOFLOW VALVES AND BALL VALVES TO BE FULL SIZE OF BRANCH PIPING.

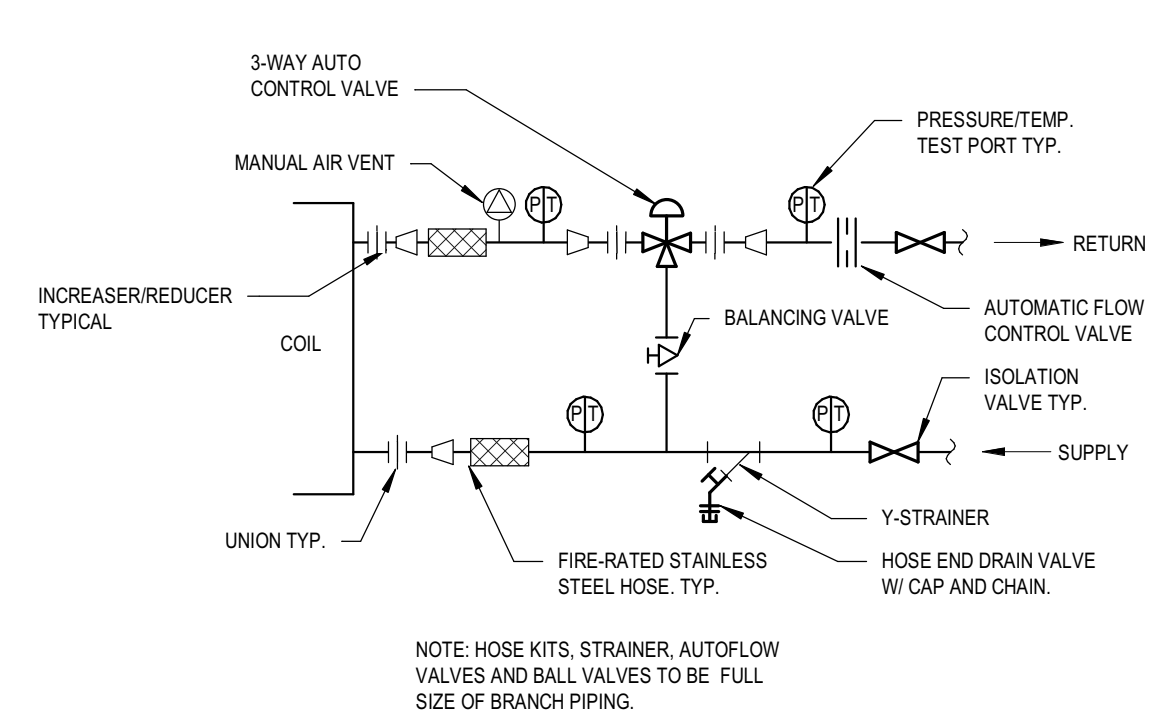
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CEILING SUPPLY DIFFUSER CONNECTION DETAIL
M7.1 NO SCALE



23

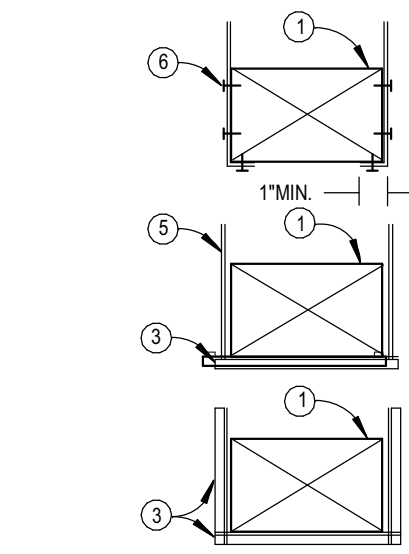
PACKAGED OUTDOOR ROOF TOP UNIT
M7.1 NO SCALE



NOTE: HOSE KITS, STRAINER, AUTOFLOW VALVES AND BALL VALVES TO BE FULL SIZE OF BRANCH PIPING.

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3-WAY COIL DETAIL
M7.1 NO SCALE



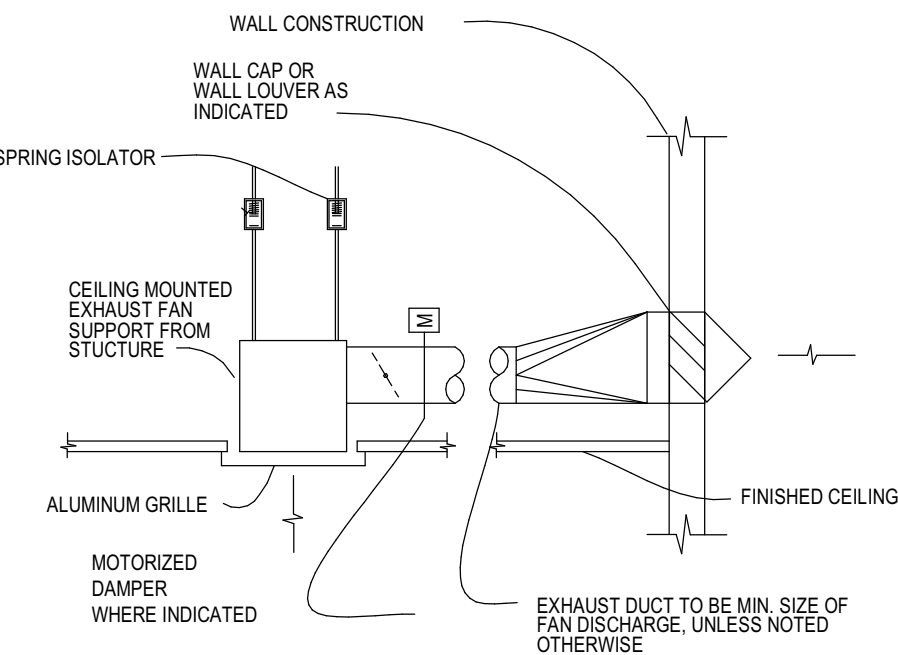
KEY NOTES:

- 1 DUCT
- 2 SHEET METAL STRAP 1" (25.4mm) WIDE, OF SAME METAL GAUGE AS DUCT
- 3 STEEL ANGLE, NOT LESS THAN 1"x1"x1/8" (25.4 x 25.4 x 3 mm), SIZED TO MATCH DUCT.
- 4 SHEET METAL BAND, 1" (25.4mm) WIDE OF SAME METAL GAUGE AS DUCT.
- 5 ALL THREAD HANGER ROD WITH ACCESSORIES AS USED FOR LIGHT PIPE HANGER.
- 6 SELF TAPPING CADMIUM PLATED HEX HEADED SHEET METAL SCREW STRAPS TO BE TIGHT AGAINST DUCT.

HANGER SIZES FOR RECTANGULAR DUCT			
MAX. LENGTH ANY SIDE	HANGER	HORIZONTAL SUPPORT ANGLE	MAXIMUM SPACING
30"	1"x18 GAUGE STRAP	NONE REQUIRED	10'-0"
36"	1/4" ROUND ROD	1-1/2" x 1-1/2" x 1/8"	8'-0"
48"	1/4" ROUND ROD	2" x 2" x 1/8"	8'-0"
60"	5/16" ROUND ROD	2" x 2" x 1/8"	8'-0"
84"	3/8" ROUND ROD	2" x 2" x 1/8"	8'-0"

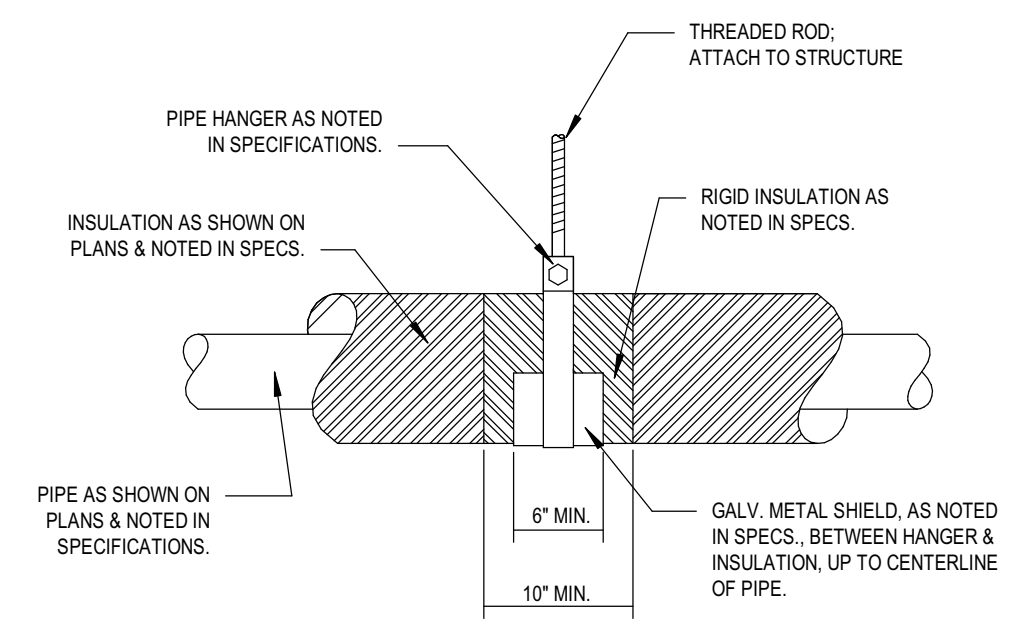
14

DUCT HANGING DETAIL
M7.1 NO SCALE



24

CEILING-MOUNTED EXHAUST FAN DETAIL
M7.1 NO SCALE

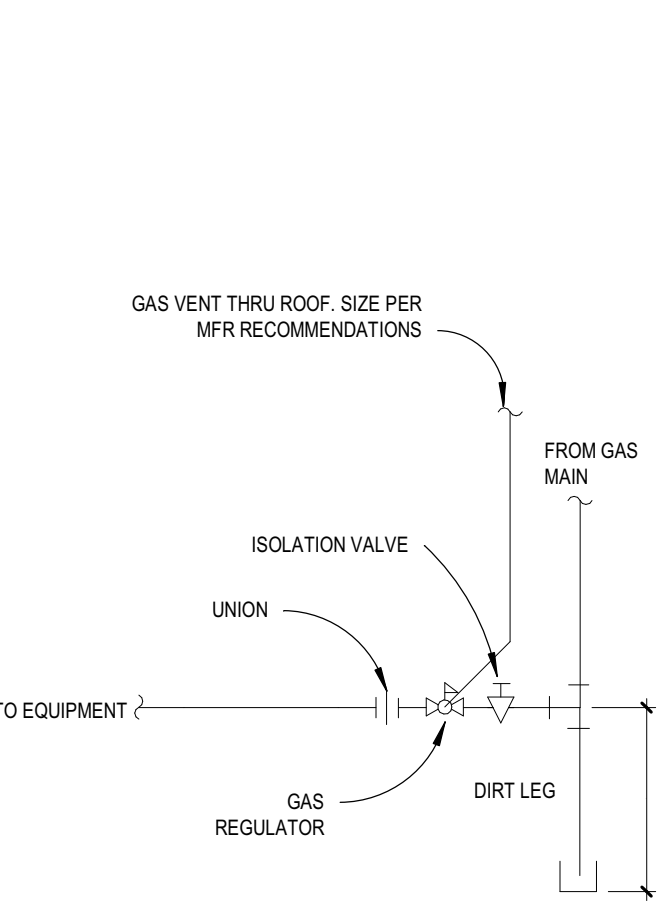


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INSULATED PIPE HANGER DETAIL
M7.1 NO SCALE

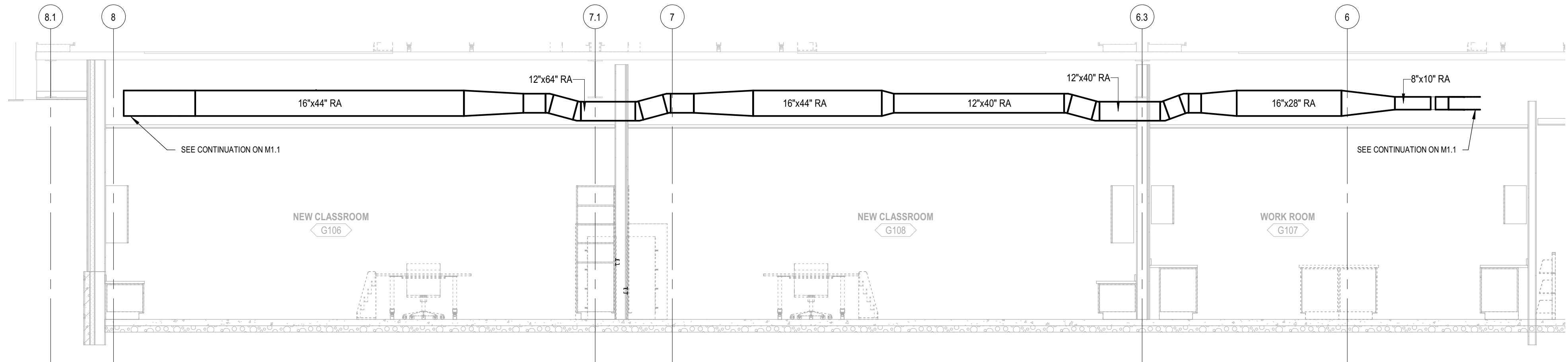
42

GAS CONNECTION DETAIL
M7.1 NO SCALE



43

RETURN DUCT ELEVATION - G106 & G108 CLASSROOM AND G107 WORKROOM
M7.1 SCALE: 1/4" = 1'-0"



ROOFTOP UNIT SCHEDULE - DX COOLING, INDIRECT GAS FIRED HEATING, VARIABLE VOLUME UNIT																																										
MARK	SERVICE	SUPPLY FAN					EXHAUST FAN				OUTSIDE AIR		ENERGY RECOVERY (SUMMER)					ENERGY RECOVERY (WINTER)			DX COOLING COIL						GAS HEATING					CONDENSER FAN DATA		COMPRESSOR DATA		ELECTRICAL DATA				APPROX. WEIGHT (LBS)	MANUFACTURER & MODEL (DAIKIN)	NOTES
		SA MAX CFM	SA MIN CFM	ESP (IN. WG)	FAN RPM	MOTOR HP	EA DESIGN CFM	ESP (IN. WG)	FAN RPM	MOTOR HP	UPPER LIMIT CFM	LOWER LIMIT CFM	AIRFLOW CFM	EAT DB (F)	EAT WB (F)	MAX LAT DB (F)	MAX LAT WB (F)	AIRFLOW CFM	EAT DB (F)	MIN LAT DB (F)	AIRFLOW CFM	EAT DB (F)	EAT WB (F)	LAT DB (F)	LAT WB (F)	MAX APD (IN. WC)	AIRFLOW CFM	EAT DB (F)	LAT DB (F)	MIN OUTPUT (MBH)	MIN. TURNDOWN	QUANTITY	FLA (TOTAL)	QUANTITY	RLA (EACH)	V/PH	FLA	MCA	MOCP			
RTU-5	AREA C - LIBRARY, COMP LAB, CLASSROOMS	7,500	4500	1.5"	1660	15	7500	1"	2140	(2) 4	4500	1100	4500	89	67	84	66	4500	17	48	7500	80.1	64	53	53.0	0.5	6280	53	87.2	240	12:1	1	3.5	1	30.1	480/3	59.3	66.8	90	5000	DPS020A	1, 2, 3, 4, 5

GENERAL NOTES:

A. ALL UNITS TO BE PROVIDED WITH 100% RECIRCULATION CAPABILITIES AND 100% OA ECONOMIZER CAPABILITIES.

B. REVIEW MANUFACTURER'S RIGGING AND LIFTING INSTRUCTIONS PRIOR TO INSTALLATION.

C. MINIMUM COOLING EFFICIENCIES BASED ON AHRI 340/360.

D. PROVIDE MFG'R'S FACTORY MOUNTED CONTROLLER WITH INTERFACE TO EMCS.

E. ALL STARTERS TO BE PROVIDED AS PART OF DIVISION 23 WORK.

F. PROVIDE FACTORY MOUNTED DISCONNECT(S).

G. UNITS SHALL HAVE MINIMUM 65,000 SCOR RATING.

H. ALL AHU'S SHALL MEET REQUIREMENTS OF 2016 ASHRAE 90.1, TABLE 6.8.1.1.

I. PROVIDE VARIABLE FREQUENCY DRIVE FOR SUPPLY AND EXHAUST FANS.

J. ALL BURNERS AND INDIRECT FIRED HEAT EXCHANGERS TO BE STAINLESS STEEL.

K. ALL UNITS TO BE DOUBLE WALL CONSTRUCTION.

L. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POWER AND CONTROL WIRING, INCLUDING CONDUIT TO PROVIDE A FULLY FUNCTIONAL SYST M. REFRIGERANT IS R-410a.

NOTES:

1. DX COIL FACE VELOCITY SHALL BE LESS THAN 500 FPM.

2. HEAT RECOVERY CAPACITIES BASED ON 75/62.6° F DB/WB SUMMER INTERIOR AND 70° F DB WINTER.

3. PROVIDE VARIABLE SPEED HEAT RECOVERY WHEEL. NO BYPASS ON RECOVERY WHEEL.

4. MIN EER = 11

5. PROVIDE FACTORY ADAPTER CURB TO MATCH EXISTING FOOTPRINT AND PROVIDE SPRING ISOLATOR.

VAV TERMINAL UNIT SCHEDULE																										
NEW TAG	ROOM SERVED	NEW OR EXISTING	EXISTING TAG	UNIT	PRIMARY AIR CFM			MAX PD @ MAX FULL CFM (N W.C.)	INLET SIZE (IN)	STATIC PRESSURE		SOUND		FACTORY SOUND ATTENUATOR	HOT WATER COIL DATA						BASIS OF DESIGN					
					MAX.	COOLING MIN	HEATING CFM			INLET MAX (N W.C.)	DOWN STREAM (N W.C.)	MAX DISCHARGE NC	MAX RADIATED NC		EAT (F)	LAT (F)	CAPACITY (MBH)	GPM	MAX P.D. (FT)	EWT (F)			BRANCH SIZE TO COIL (IN)	CONTROL VALVE		
VAV-G102	G102 CLASSROOM	NEW VAV BOX	-	RTU-5	865	260	705	0.5	10"	1.0	0.5	< 20	< 20	Y	55.0	85.0	22.9	2.50	6	125	3/4	2-WAY	PRICE SDVS	1-8		
VAV-G104	G104 CLASSROOM	NEW VAV BOX	-	RTU-5	865	260	705	0.5	10"	1.0	0.5	< 20	< 20	Y	55.0	85.0	22.9	2.50	6	125	3/4	2-WAY	PRICE SDVS	1-8		
VAV-G106	G106 CLASSROOM	NEW VAV BOX	-	RTU-5	945	285	710	0.5	10"	1.0	0.5	< 20	< 20	Y	55.0	85.0	23.1	2.50	6	125	3/4	2-WAY	PRICE SDVS	1-8		
VAV-G107	G107 WORKROOM	EXISTING TO BE RELOCATED	VAV-5-103	RTU-5	255	80	220	0.5	6"	1.0	0.5	< 20	< 20	Y	55.0	85.0	7.2	0.75	6	125	1/2	3-WAY	-	1-8		
VAV-G108	G108 CLASSROOM	EXISTING TO BE RELOCATED	VAV-5-101A	RTU-5	915	275	705	0.5	10"	1.0	0.5	< 20	< 20	Y	55.0	85.0	22.9	2.50	6	125	3/4	2-WAY	-	1-8		
VAV-G110A	G110 LIBRARY N	EXISTING TO BE RELOCATED	VAV-5-102	RTU-5	1,445	435	1,010	0.5	12"	1.0	0.5	< 20	< 20	Y	55.0	85.0	32.9	3.50	6	125	1	2-WAY	-	1-8		
VAV-G110B	G110 LIBRARY S	NEW VAV BOX	-	RTU-5	1,180	355	960	0.5	12"	1.0	0.5	< 20	< 20	Y	55.0	85.0	31.9	3.33	6	125	1	2-WAY	PRICE SDVS	1-8		
VAV-G114	G114 COMPUTER LAB	EXISTING TO BE RELOCATED	VAV-5-101B	RTU-5	1,775	355	1,245	0.5	14"	1.0	0.5	< 20	< 20	Y	55.0	85.0	40.5	4.67	6	125	1	2-WAY	-	1-8		

NOTES:

1. FACTORY INSTALL CONTROLS FURNISHED AS PART OF SPECIFICATION 230900.

2. BOTTOM ACCESS, DOUBLE WALL CONSTRUCTION.

3. WIDTH DIMENSION INCLUDES CONTROL ENCLOSURE.

4. NC RATINGS BASED ON 1.0" WC PRESSURE DROP.

5. MINIMUM COOLING CFM BASED ON MFG'R'S DATA FOR MODEL INDICATED AT 0.03" WC MIN TRANSDUCER DIFFERENTIAL PRESSURE. ACTUAL MINIMUM COOLING CFM TO BE BASED ON EQUIPMENT PROVIDED.

6. HEATING COIL SHALL BE SIZED AT 30 F DELTA TEMP ON AIR SIDE AND 20 F ON WATER SIDE. SELECTION BASED ON WATER (NO PROPYLENE GLYCOL).

7. THE DUCT BRANCH TO VAV BOXES SHALL BE ONE SIZE HIGHER THAN THE BOX CONNECTION SIZE.

8. MINIMUM 2-ROW HEATING COIL

FAN SCHEDULE (ALTERNATE #1)															
MARK	SERVICE	FAN TYPE	WHEEL TYPE	FAN DATA CFM	EXTERNAL S.P. (IN WG)	FAN RPM	SOUND (SONES)	MOTORIZED DAMPER	CONTROL	DRIVE TYPE	MOTOR			BASIS OF DESIGN	NOTES
											WATTS	V	PH		
EF-G101	G101 RESTROOM	CEILING MOUNT	CENTRIFUGAL	70	0.25	1161	0.5	YES	LIGHTING OCC	DIRECT	20.7	120	1	PANASONIC FV-11VQ5	1, 2, 3, 4
EF-G103	G103 RESTROOM	CEILING MOUNT	CENTRIFUGAL	70	0.25	1161	0.5	YES	LIGHTING OCC	DIRECT	20.7	120	1	PANASONIC FV-11VQ5	1, 2, 3, 4

NOTES:

1. DISCONNECT SWITCH BY ELECTRICAL. STARTERS BY MECHANICAL.

2. PROVIDE CLASS 1 MOTORIZED EXHAUST DAMPER AS PART OF 230900.

3. CONTROL BY SECTION 230900 UNO. DAMPER INTERLOCKED WITH FAN.

4. PROVIDE WITH EC MOTOR.

DIFFUSER, REGISTER & GRILLE SCHEDULE							
MARK	MAX STATIC PD (IN WG)	MAX NC	MATERIAL	DAMPER (Y/N)	SURFACE	BASIS OF DESIGN	MECH NOTES
D-1	0.1	20	STEEL	N	LAY-IN	TITUS OMNI (24X24)	1,2,3
D-2	0.1	20	STEEL	N	SURFACE	TITUS FL-10, 1-SLOT, 48" LENGTH	1,2,3
G-1	0.1	20	ALUM	N	LAY-IN	TITUS 350RS	1,2,3

NOTES:

1. CONTRACTOR SHALL COORDINATE MOUNTING AND SURFACE CONSTRUCTION PRIOR TO FURNISHING MATERIAL.


2. SEE PLANS FOR LOCATION, FRAME TYPE, AND CFM

3. NECK SIZE SHALL MATCH CONNECTED DUCT SIZE. REFERENCE PLAN FOR DUCT SIZE.

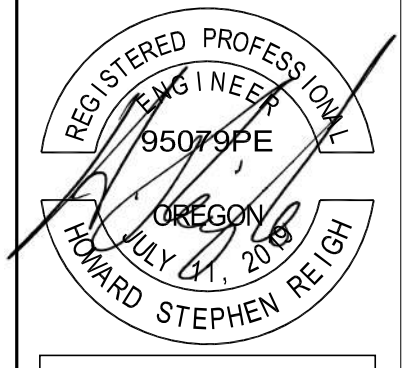
System name and number	RTU-5
Condition analyzed (Impacts Ez, Vz, Vpz and Vps)	Heating
All zones are included in the VRP calculation	Yes

Zone Name and Number	Occupancy Category	Zone Floor Area	Are you using default value for zone population?	Zone Population	Zone Air Distribution Effectiveness	Zone Outdoor Airflow	Zone Discharge Airflow	Zone Primary Airflow	Zone Secondary Recirculation Fraction	Zone Primary Air Fraction
		Az		Pz	Ez	Voz	Vdz	Vpz	Er	Ep
		(sq ft)		(people)		(cfm)	(cfm)	(cfm)		
CORRIDOR N	Corridors	572	No	0.00	0.80	42.90	139	139	0.75	1.00
CORRIDOR S	Corridors	572	No	0.00	0.80	42.90	157	157	0.75	1.00
G102 CLASSROOM	Classrooms (ages 5-8)	875	No	31.00	0.80	518.75	701	701	0.75	1.00
G104 CLASSROOM	Classrooms (ages 5-8)	873	No	31.00	0.80	518.45	701	701	0.75	1.00
G106 CLASSROOM	Classrooms (ages 5-8)	886	No	31.00	0.80	520.40	707	707	0.75	1.00
G107 WORKROOM	Wood / metal shop	476	No	2.00	0.80	132.10	219	219	0.75	1.00
G108 CLASSROOM	Classrooms (ages 5-8)	869	No	31.00	0.80	520.65	704	704	0.75	1.00
G110 LIBRARY N	Libraries	857	No	25.00	0.80	284.80	478	478	0.75	1.00
G110 LIBRARY S	Libraries	1,863	No	30.00	0.80	466.95	975	975	0.75	1.00
G114 COMPUTER LAB	Classrooms (ages 5-8)	912	No	37.00	0.80	599.30	809	809	0.75	1.00

System area	As	(sq ft)	8,779	Net occupable floor area served by the ventilation system
System population	Ps	(people)	218.00	
Sum of zone population	sum of Pz	(people)	218.00	$\sum Pz$
Occupant diversity	D		1.00	$P_s / \sum Pz$
Uncorrected outdoor air intake	Vou	(cfm)	2,917.920	$\sum (Rp Pz) + \sum (Ra Az)$
System primary airflow (at condition analyzed)	Vps	(cfm)	7,200	
Average outdoor air fraction	Xs		0.40	Vou / Vps
Which method from ASHRAE 62.1 is being used to determine system ventilation efficiency (Ev)?				Appendix A
Ventilation efficiency	Ev		0.66	Ventilation efficiency from critical zone
Outdoor air intake flow (required by 62.1)	Vot	(cfm)	4,421	Vou / Ev
Outdoor air intake flow provided (measured or design)		(cfm)	4,500	



DLR Group
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REGISTERED PROFESSIONAL ENGINEER
No. 95079PE
OREGON
JULY 01, 2016
HOWARD STEPHEN REIGEL

EXPIRES: 12/31/2022

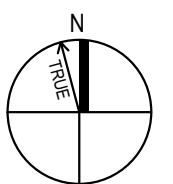
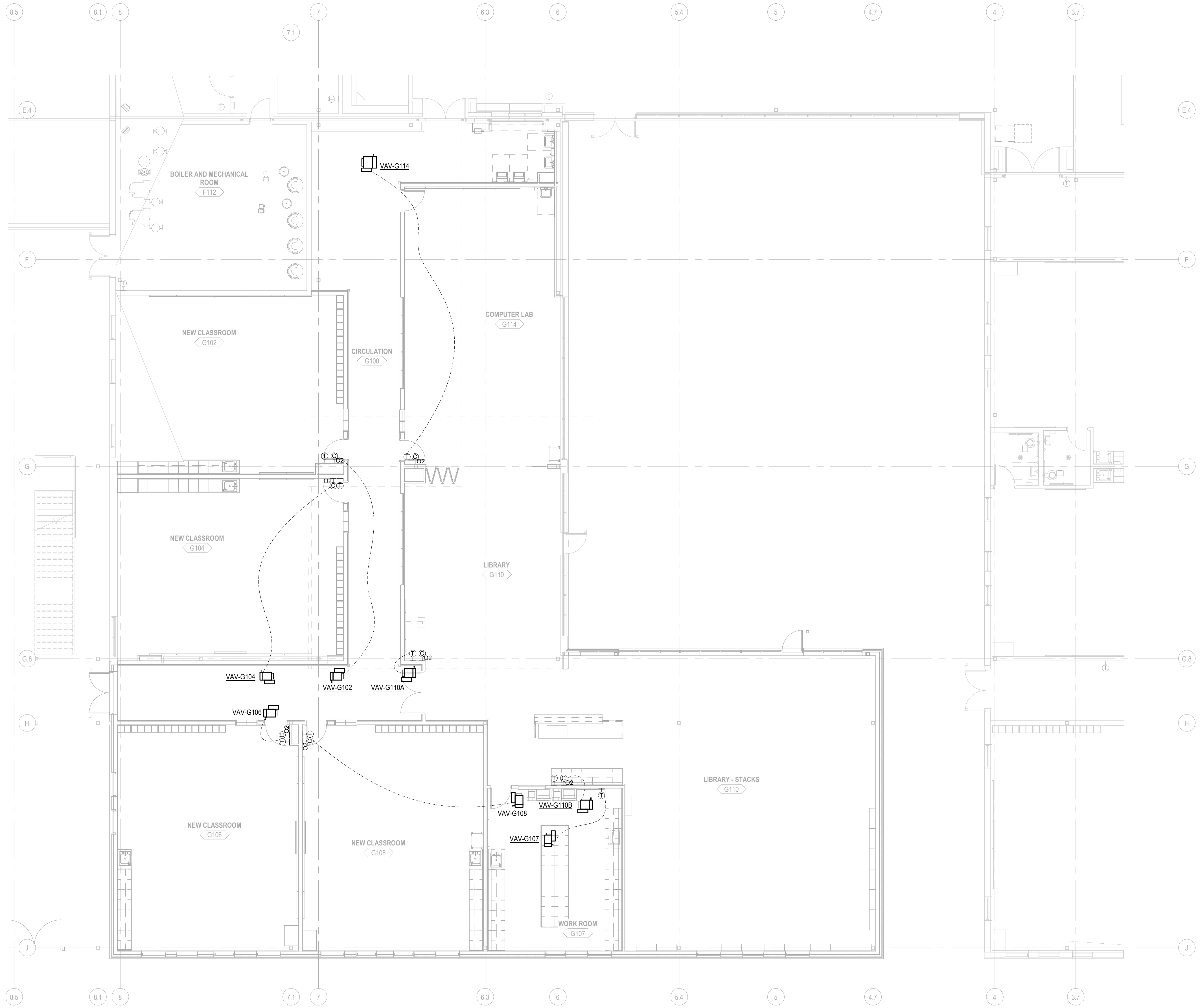
VOSE ES ADDITION
BEAVERTON SCHOOL DISTRICT
11350 SW DENNEY RD
BEAVERTON, OR 97008

100% CD
2/26/2021
REVISIONS

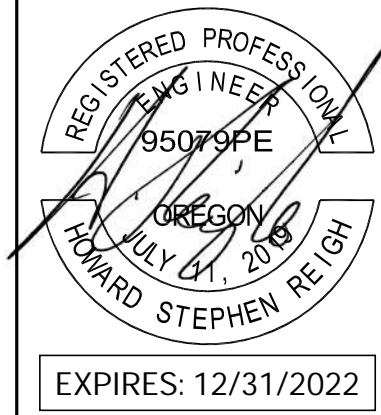
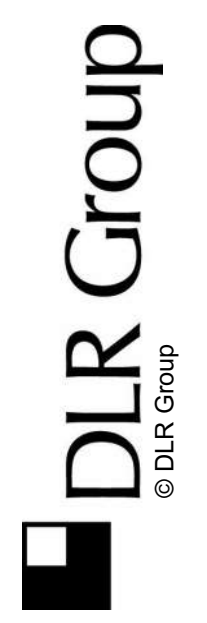
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MECHANICAL SCHEDULES

M8.1

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FIRST LEVEL THERMAL ZONE DIAGRAM - AREA C
SCALE: 1/8" = 1'-0"



VOSE ES ADDITION
BEAVERTON SCHOOL DISTRICT
11350 SW DENNEY RD
BEAVERTON, OR 97008

100% CD
2/26/2021
REVISIONS

74-21102-00
FIRST LEVEL
THERMAL ZONE
DIAGRAM - AREA
C

M9.1

1

2

3

4

ABBREVIATIONS

(D)	DEMOLISHED			WF	WASH FOUNTAIN
(E)	EXISTING	IAW	IN ACCORDANCE WITH	WFMD	WATER FLOW MEASURING DEVICE
(R)	RELOCATED	ID	INSIDE DIAMETER	WH	WALL HYDRANT
°C	DEGREES CELSIUS	IE	INVERT ELEVATION	WH	WATER HEATER
°F	DEGREES FAHRENHEIT	IES	ILLUMINATING ENGINEERING SOCIETY	WHA	WATER HAMMER ARRESTOR
Ø	DIAMETER	INSUL	INSULATION	WPB	WHIRLPOOL BATH
		IP	IRON PIPE	WSP	WET STAND PIPE
		IW	INDIRECT WASTE		
A/C	AIR CONDITIONING(ER)			YH	YARD HYDRANT
AAV	AUTOMATIC AIR VENT				
ACC	ACCESSIBLE	JAN	JANITOR		
AD	AREA DRAIN			ZCB	ZONE CONTROL BOX
ADJ	ADJUSTABLE	LAV	LAVATORY	ZCV	ZONE CONTROL VALVE
AGF	AIR GAP FITTING	LF	LINEAR FOOT		
AHU	AIR HANDLING UNIT	LG	LENGTH (LONG)		
ANCH	ANCHOR	LIN	LINEAR		
AR	ACID RESISTING	LPG	LIQUIFIED PETROLEUM GAS		
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	LS	LAWN SPRINKLER		
AUTO	AUTOMATIC	LWT	LEAVING WATER TEMPERATURE		
AV	AUDIO-VIDEO, AUDIO-VISUAL				
AV	ACID VENT	MAINT	MAINTENANCE		
AV	AIR VENT	MAN	MANUAL		
		MATL	MATERIAL		
BBO	BOILER BLOW OFF	MAV	MANUAL AIR VENT		
BC	BALANCING COCK	MFRG	MANUFACTURING		
BF	BOILER FEED	MH	MANHOLE		
BFF	BELOW FINISH FLOOR	MPG	MEDIUM PRESSURE GAS		
BFP	BACKFLOW PREVENTER	MTD	MOUNTED		
BFV	BUTTERFLY VALVE	MTG	MOUNTING		
BLKG	BLOCKING	MV	MEDICAL VACUUM		
BLKHD	BULKHEAD				
BOT	BOTTOM	N	NITROGEN		
BPMP	BOILER PLANT INSTRUMENTATION PANEL	N2O	NITROUS OXIDE		
BV	BALL VALVE	N.C.	NORMALLY CLOSED		
		N.O.	NORMALLY OPEN		
C	CONDUIT	NO	NUMBER		
C	CONDENSER WATER	NO2	NITROGEN DIOXIDE		
CD	CONDENSATE DRAIN	NOM	NOMINAL		
CD	CONSTRUCTION DOCUMENTS				
CF	CUBIC FEET	O&M	OPERATION AND MAINTENANCE		
CI	CAST IRON	OD	OUTSIDE DIAMETER		
CI	CURB INLET	ORD	OVERFLOW ROOF DRAIN		
CIP	CAST IRON PIPE	OS&Y	OUTSIDE SCREW AND YOKE		
CIRC	CIRCULATING	OVFL	OVERFLOW		
CLR	CLEAR	OX	OXYGEN		
CO	CLEAN OUT				
COMB	COMBINATION	P	PUMP		
CR	CORROSION RESISTANT	P/T	PRESSURE/TEMPERATURE TEST PORT		
CS	COUNTERSINK	PC	PUMPED CONDENSATE		
CS	COMBINATION SEWER	PCF	POUNDS PER CUBIC FOOT		
CSP	COMBINATION STANDPIPE	PD	PRESSURE DROP		
CT	COOLING TOWER	PD	PUMP DISCHARGE		
CU	CONDENSING UNIT	PDI	PLUMBING & DRAINAGE INSTITUTE		
CW	COLD WATER	PG	PRESSURE GAUGE		
		PI	PRESSURE INDICATOR		
D	DRAIN	PIV	POST INDICATOR VALVE		
DBL	DOUBLE	PLBG	PLUMBING		
DE	DEIONIZED WATER	POC	POINT OF CONNECTION		
DEPT	DEPARTMENT	PR	PAIR		
DFR	DRINKING FOUNTAIN	PSI	POUNDS PER SQUARE INCH		
DF	DIESEL FUEL RETURN	PT	PLASTER TRAP		
DFS	DIESEL FUEL SUPPLY	PVC	POLYVINYL CHLORIDE		
DFV	DIESEL FUEL VENT				
DISCH	DISCHARGE	R	RISER		
DSN	DOWNSPOUT NOZZLE	RAD	RADIUS		
DSP	DRY STANDPIPE	RCP	REFLECTED CEILING PLAN		
DW	DISHWASHER	RCP	REINFORCED CONCRETE PIPE		
		RD	ROOF DRAIN		
EA	EACH	REM	REMOVABLE		
EEW	EMERGENCY EYE WASH	RS	REFRIGERANT SUCTION		
EEWS	EMERGENCY EYE WASH SHOWER	RTU	ROOF TOP UNIT		
ELEV	ELEVATOR				
EMER	EMERGENCY	S	SANITARY SEWER		
EWC	ELECTRIC WATER COOLER	S	SPRINKLER LINE		
EXP	EXPOSED	SAN	SANITARY WASTE		
		SCW	SOFT COLD WATER		
F	FAHRENHEIT	SD	STORM DRAIN		
F	FIRELINE	SE	STEAM EXHAUST VENT		
F.V.	FIELD VERIFY	SH	SHOWER		
FAB	FABRICATE(D)	SHW	SOFT HOT WATER		
FCO	FLOOR CLEAN OUT	SK	SINK		
FCU	FAN COIL UNIT	SM	SPRINKLER MAIN		
FD	FLOOR DRAIN	SP	STATIC PRESSURE (H2O)		
FDC	FIRE DEPARTMENT CONNECTION	SP	STAND PIPE		
FDNDR	FOUNDATION DRAIN	SPD	SURGE PROTECTION DEVICE		
FF	FINISH FLOOR	SPK	SPRINKLER		
FH	FIRE HYDRANT	SQ	SQUARE		
FHC	FIRE HOSE CABINET	SS	STAINLESS STEEL		
FIX	FIXTURE	SS	SERVICE SINK		
FLEX	FLEXIBLE	SST	SECONDARY STORM DRAINAGE		
FM	FIRE MAIN	ST	STORM DRAINAGE		
FM	FORCE MAIN	STOR	STORAGE		
FOF	FUEL OIL FILL	SUSP	SUSPENDED		
FOR	FUEL OIL RETURN				
FOS	FUEL OIL SUPPLY	T	TEMPERED		
FOV	FUEL OIL VENT	TEMP	TEMPERATURE		
FPD	FIRE PUMP DISCHARGE	THK	THICK(NESS)		
FPM	FEET PER MINUTE	TMV	THERMOSTATIC MIXING VALVE		
FS	FLOW SWITCH	TOIL	TOILET		
FS	FLOOR SINK	TPV	TRAP PRIMER		
FVC	FIRE VALVE CABINET	TS	TEMPERATURE SENSOR		
		TT	TEMPERATURE TRANSMITTER		
G	NATURAL GAS				
GA	GAUGE	UC	UNIT COOLER		
GAL	GALLON	UG	UNDERGROUND		
GCO	GRADE CLEAN OUT	UR	URINAL		
GPD	GALLONS PER DAY	UTIL	UTILITY		
GPM	GALLONS PER HOUR				
GPM	GALLONS PER MINUTE	V	VENT		
GV	GATE VALVE	V	VACUUM		
GV	GREASE VENT	VA	VALVE		
GVBF	GREASE VENT BELOW FLOOR	VBF	VENT BELOW FLOOR		
GW	GREASE WASTE	VCP	VITRIFIED CLAY PIPE		
		VOL	VOLUME		
		VP	VACUUM PUMP		
HB	HOSE BIB	VTR	VENT THROUGH ROOF		
HGR	HANGER				
HID	HIGH INTENSITY DISCHARGE				
HP	HEAT PUMP	W	WATER SERVICE		
HP	HIGH PRESSURE	W	WASTE (PLUG)		
HR	HOUR	WC	WATER COLUMN		
HUM	HUMIDIFIER	WC	WATER CLOSET		
HVAC	HEATING VENTILATING AND AIR CONDITIONING	WCC	WATER COOLED CONDENSER		
HW	DOMESTIC HOT WATER	WCL	WATER CLOSET/LAVATORY COMBINATION		
HWC	DOMESTIC HOT WATER RECIRCULATING	WCO	WALL CLEAN OUT		

WF	WASH FOUNTAIN
WFMD	WATER FLOW MEASURING DEVICE
WH	WALL HYDRANT
WH	WATER HEATER
WHA	WATER HAMMER ARRESTOR
WPB	WHIRLPOOL BATH
WSP	WET STAND PIPE
YH	YARD HYDRANT
ZCB	ZONE CONTROL BOX
ZCV	ZONE CONTROL VALVE

GENERAL SYMBOLS

	POINT OF DISCONNECT - DEMOLITION REMOVED FROM EXISTING
	POINT OF CONNECTION - NEW CONNECTS TO EXISTING
	AREA NOT IN CONTRACT

GENERAL NOTES

- REMOVE ALL UNUSED PIPING, DUCTWORK AND ACCESSORIES.
- THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING, PRIOR TO FINAL BID, ALL EXISTING CONDITIONS FOR PLUMBING AND MECHANICAL SYSTEMS WITHIN TENANT SPACE AND WITHIN CLOSE PROXIMITY OF TENANT SPACE.
- THE MECHANICAL CONTRACTOR SHALL PERFORM SERVICE AND REPAIR ON THE EXISTING EQUIPMENT AND ITS ACCESSORIES AS FOLLOWS: CLEAN ALL COILS, REPLACE THE FILTERS AND BELTS, INSPECT, REPAIR OR REPLACE THE ECONOMIZERS, DRIVES AND FAN BEARINGS, MOTORS, CONTROL COMPONENTS, VALVES AND ANY OTHER ITEM NECESSARY FOR A COMPLETE AND PROPER OPERATING SYSTEM. THIS CONTRACTOR SHALL ALSO VISIT THE SITE, PRIOR TO FINAL BIDDING, AND VERIFY ALL EXISTING SITE CONDITIONS. PROVIDE ALL MATERIAL AND COMPONENTS AS NEEDED TO BRING THE UNITS TO FULL COMPLIANCE OF THE LANDLORD'S CRITERIA AND LOCAL AUTHORITY HAVING JURISDICTION.
- WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK. UNSEAL DRAINS AT COMPLETION OF CONSTRUCTION.
- COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY, STRUCTURE, AND EQUIPMENT TO PREVENT CONFLICTS.
- THE CONTRACTOR SHALL BE FAMILIAR WITH ALL THE CONDITIONS BOTH EXISTING AND THOSE ILLUSTRATED BY THESE DOCUMENTS AS WELL AS THOSE WHICH CAN BE REASONABLY ANTICIPATED INCLUDING, BUT NOT LIMITED TO ARCHITECTURAL, ELECTRICAL, VENTILATION, PLUMBING, AND OTHER SYSTEMS INVOLVED ON THIS PROJECT.
- FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
- LOCATE EQUIPMENT REQUIRING ACCESS 2'-0" MAXIMUM ABOVE CEILING.
- ALL ROOF MOUNTED EQUIPMENT SHALL BE A MINIMUM 10'-0" FROM EDGE OF ROOF.
- LOCATE DUCTWORK, PIPING AND MECHANICAL EQUIPMENT AWAY FROM THE SPACE ABOVE ELECTRICAL PANELS, TRANSFORMERS AND OTHER ELECTRICAL EQUIPMENT.
- FIRE SEAL AROUND DUCT AND PIPING PENETRATIONS OF FIRE RATED WALLS. REFER TO SPECIFICATION.
- PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS, WALLS, AND ROOF.
- ADJUST PIPING AND DUCTWORK SIZES TO PROPERLY CONNECT TO MECHANICAL EQUIPMENT.
- REFER TO PLUMBING SERIES DRAWINGS FOR GAS AND A.C. CONDENSATE DRAIN PIPING.
- PIPE SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN.
- FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS.
- INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.
- LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.
- INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.

GENERAL PLUMBING NOTES

- FIELD VERIFY ALL NEW WATER, WASTE, AND VENT PIPING CONNECTIONS AND PROVIDE NEW CONNECTIONS AS REQUIRED FOR PROPERLY OPERATING SYSTEMS.
- PITCH UNDERFLOOR SANITARY WASTE PIPING AT 1/4" PER FOOT, UNLESS NOTED OTHERWISE.
- PITCH UNDERFLOOR STORM PIPING 3" AND GREATER AT 1/8" PER FOOT, UNLESS NOTED OTHERWISE. PITCH ALL OTHER STORM PIPING AT 1/4" PER FOOT UNLESS OTHERWISE NOTED.
- FIELD VERIFY LOCATION AND INVERTS OF SITE UTILITIES PRIOR TO INSTALLATION.
- ROUTE DOMESTIC WATER, FIRE PROTECTION, SANITARY SEWER, AND STORM SEWER SERVICES TO SITE UTILITIES 5'-0" FROM BUILDING UNLESS NOTED OTHERWISE. REFER TO CIVIL PLANS.
- WASTE AND VENT PIPING BELOW FLOOR AND THROUGH FLOOR SHALL BE 2" MINIMUM.
- PROVIDE CLEANOUT IN ACCESSIBLE LOCATION AT THE BASE OF ALL PLUMBING RISERS.

PLUMBING SYMBOLS

SCHEMATIC	3D	DESCRIPTION
		DOMESTIC COLD WATER
		DOMESTIC COLD WATER (LINETYPE)
		DOMESTIC HOT WATER
		DOMESTIC HOT WATER (LINETYPE)
		DOMESTIC HOT WATER (110 °F)
		DOMESTIC HOT WATER (140 °F)
		DOMESTIC HOT WATER RECIRCULATING
		DOMESTIC HOT WATER RECIRCULATING (LINETYPE)
		DOMESTIC HOT WATER RECIRCULATING (110 °F)
		DOMESTIC HOT WATER RECIRCULATING (140 °F)
		ROOF DRAIN
		OVERFLOW ROOF DRAIN
		STORM DRAIN
		COMBINATION WASTE AND VENT
		FORCED MAIN
		INDIRECT WASTE
		PUMP DISCHARGE
		SANITARY WASTE
		SANITARY VENT
		FOUNDATION DRAIN
		CLEAN OUT
		WALL CLEAN OUT
		FLOOR CLEAN OUT
		GRADE CLEAN OUT (DOUBLE CLEAN OUT)
		FLOOR DRAIN / FLOOR SINK
		ROOF DRAIN / OVERFLOW DRAIN
		DOWNSPOUT NOZZLE
		WALL HYDRANT
		HOSE BIBB
		WATER HAMMER ARRESTER
		RISER TAG
		PLUMBING FIXTURE TAG

SHEET INDEX

- P0.1 GENERAL NOTES, PLUMBING SYMBOLS & ABBREVIATIONS
- PD0.1 OVERALL FIRST FLOOR PLUMBING DEMOLITION PLAN
- P2.1 FIRST FLOOR PLUMBING PLAN
- P4.1 DOMESTIC WATER, WASTE & VENT RISER DIAGRAM
- P5.1 PLUMBING DETAILS & SCHEDULES

PIPING ANNOTATIONS

SCHEMATIC	3D	DESCRIPTION
		EXISTING TO REMAIN - (E) or EXIST
		ITEM TO BE DEMOLISHED - (D) or DEMO
		PIPE SIZE TAG (DIAMETER WITH SYSTEM NAME)
		ABOVE GROUND PIPING
		BELOW GROUND PIPING
		PIPE SLOPE
		PIPE INVERT ELEVATION
		MECHANICAL EQUIPMENT TAG
		MECHANICAL EQUIPMENT CLEARANCE

PIPING VALVES AND FITTINGS

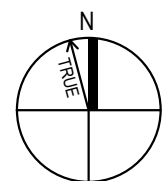
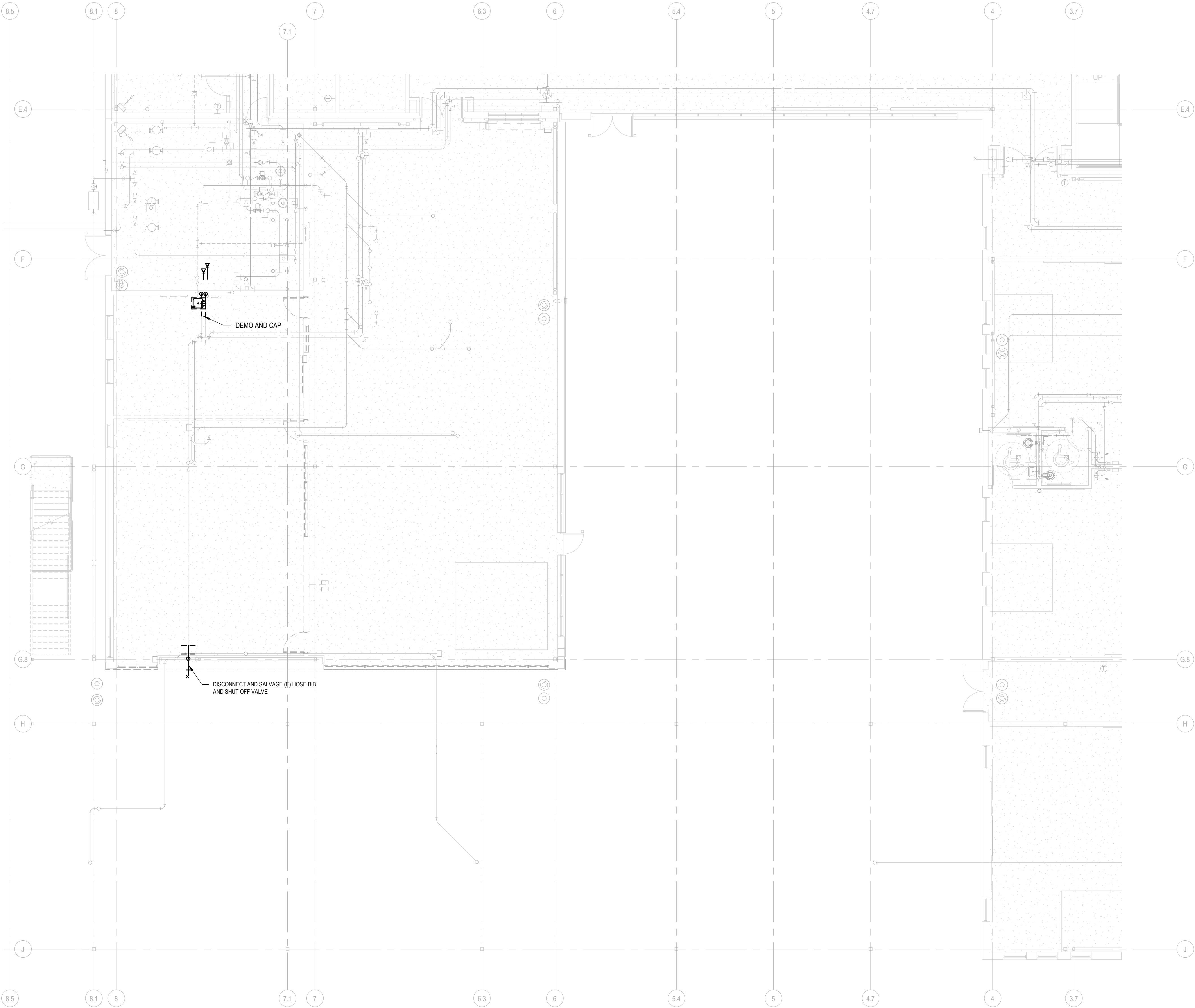
SCHEMATIC	3D	DESCRIPTION
		PIPE DROP
		PIPE RISE
		PIPE TEE DOWN
		PIPE TEE UP
		CONCENTRIC REDUCER
		ECCENTRIC REDUCER
		PIPE CAP
		PIPE ALIGNMENT GUIDE
		PIPE ANCHOR
		FLOW DIRECTION
		EXPANSION JOINT
		FLEXIBLE CONNECTION
		UNION
		DIRECTION OF PIPE PITCH
		AQUASTAT
		EXPANSION LOOP
		BALANCING VALVE
		BALANCING VALVE W/ METERING POINTS
		BALL VALVE
		BUTTERFLY VALVE
		CHECK VALVE
		STEAM TRAP
		GATE VALVE
		MANUAL AIR VENT
		AUTOMATIC AIR VENT
		PLUG VALVE
		PRESSURE GAUGE
		PLUG VALVE
		ANGLE VALVE
		AUTOMATIC CONTROL VALVE 2-WAY
		AUTOMATIC CONTROL VALVE 3-WAY
		AUTOMATIC FLOW CONTROL VALVE
		STRAINER
		PRESSURE AND TEMPERATURE TEST PORT
		THERMOMETER
		PRESSURE REDUCING VALVE (WATER SYSTEMS)
		PRESSURE REGULATING VALVE (GAS SYSTEMS)
		RELIEF VALVE
		FLOW MEASURING DEVICE
		BACKFLOW PREVENTER

* NOTE *

ALL OF NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET.
THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

A B C D E

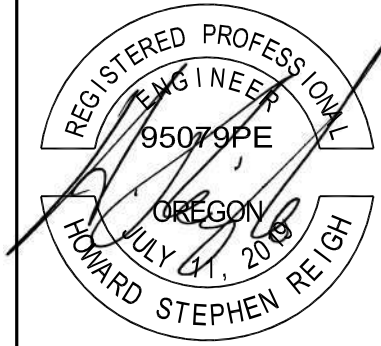
SHEET NOTES



OVERALL FIRST LEVEL PLUMBING DEMOLITION PLAN

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

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VOSE ES ADDITION

BEAVERTON SCHOOL DISTRICT

11350 SW DENNEY RD
BEAVERTON, OR 97008

100% CD
2/26/2021
REVISIONS

74-21102-00

OVERALL FIRST
FLOOR PLUMBING
DEMOLITION
PLAN

PD2.1

A

B

C

D

E

SHEET NOTES

- 1 TRENCH (E/FLOOR FOR INSTALLATION OF NEW 2"W.
- 2 TRENCH (E/FLOOR FOR INSTALLATION OF NEW WASTE PIPES SERVING NEW PLUMBING FIXTURES IN G100 CORRIDOR AND (ALTERNATE #1) G101 & G103 RESTROOMS.
- 3 STARTING FROM THIS POINT, ALL DOMESTIC WATER PIPING, ACCESSORIES, AND PLUMBING FIXTURES SERVING G101 & G103 RESTROOMS AND G102 & G104 CLASSROOMS SHALL BE INCLUDED IN ADDITIVE ALTERNATE #1.
- 4 STARTING FROM THIS POINT, ALL DOMESTIC WATER PIPING, ACCESSORIES, AND PLUMBING FIXTURES SERVING G106 & G108 CLASSROOMS AND G107 WORKROOM SHALL BE INCLUDED IN ADDITIVE ALTERNATE #2.
- 5 STARTING FROM THIS POINT, ALL VENT PIPING & ACCESSORIES SERVING G102 CLASSROOM SHALL BE INCLUDED IN ADDITIVE ALTERNATE #1.
- 6 STARTING FROM THIS POINT, ALL VENT PIPING & ACCESSORIES SERVING G101 & G103 RESTROOMS SHALL BE INCLUDED IN ADDITIVE ALTERNATE #1.
- 7 STARTING FROM THIS POINT, ALL VENT PIPING & ACCESSORIES SERVING PLUMBING FIXTURES IN G106 & G108 CLASSROOMS AND G107 WORKROOM SHALL BE INCLUDED IN ADDITIVE ALTERNATE #2.
- 8 STARTING FROM THIS POINT, ALL WASTE PIPING AND ACCESSORIES SERVING G101 & G103 RESTROOMS SHALL BE INCLUDED IN ADDITIVE ALTERNATE #1.
- 9 PROVIDE WALL CLEANOUT UNDER LAVATORY.
- 10 PROVIDE WALL CLEANOUT UNDER SINK.



EXPIRES: 12/31/2022

VOSE ES ADDITION

BEAVERTON SCHOOL DISTRICT

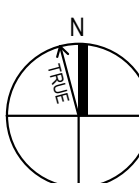
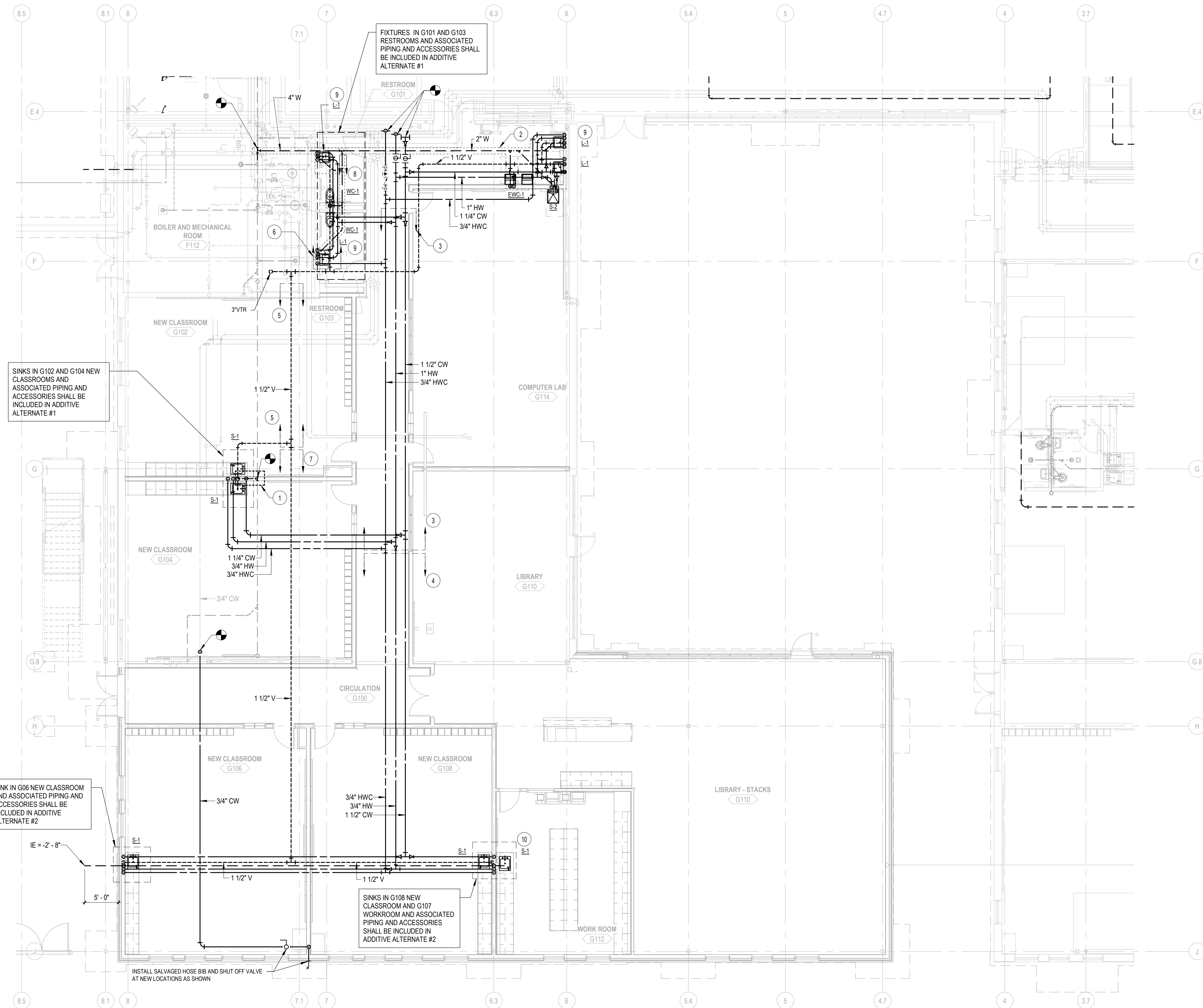
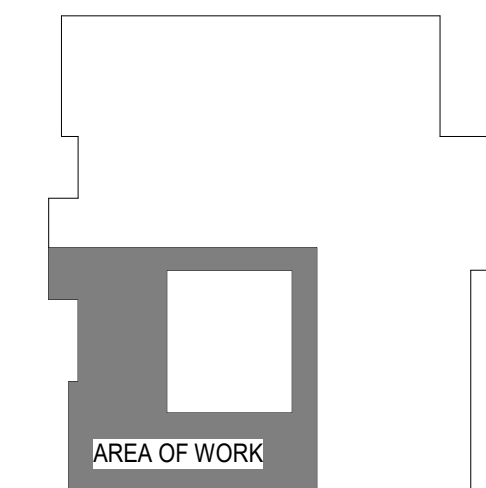
11350 SW DENNEY RD
BEAVERTON, OR 97008100% CD
2/26/2021
REVISIONS

74-21102-00

FIRST FLOOR
PLUMBING PLAN

P2.1

KEY PLAN



FIRST LEVEL PLUMBING PLAN

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

SCALE:

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A

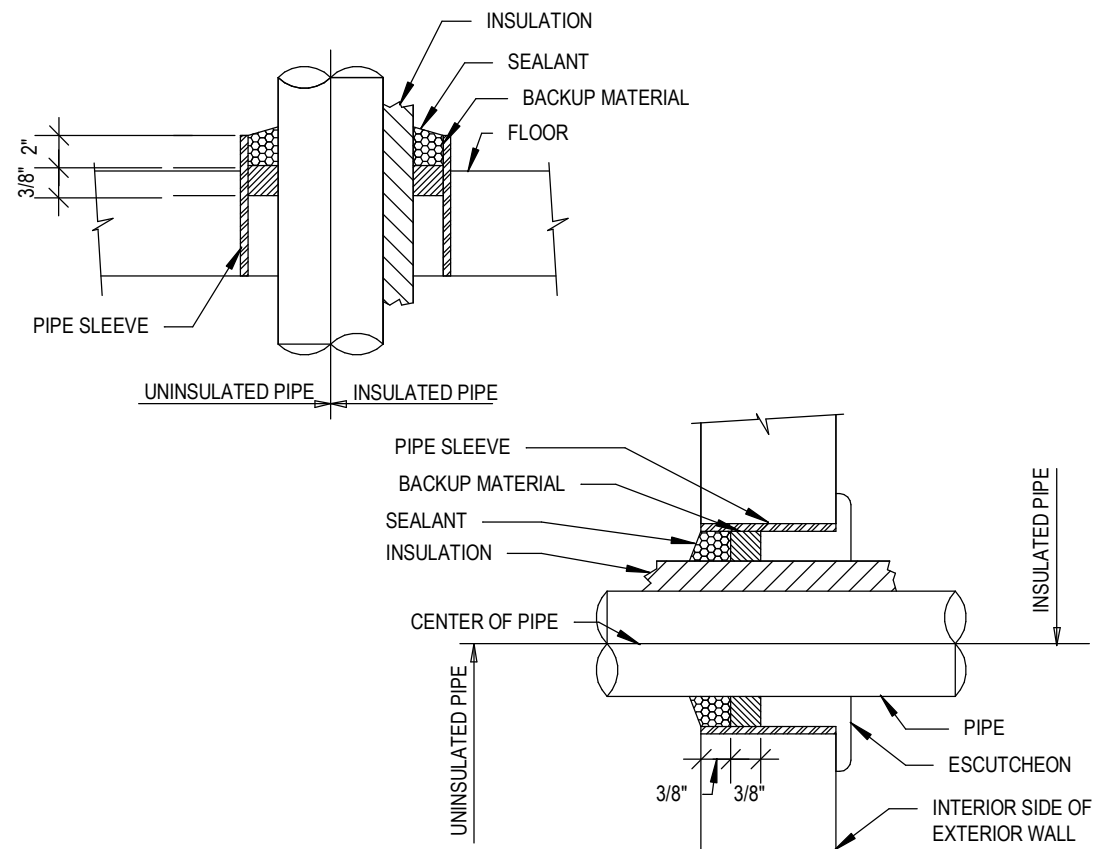
B

C

D

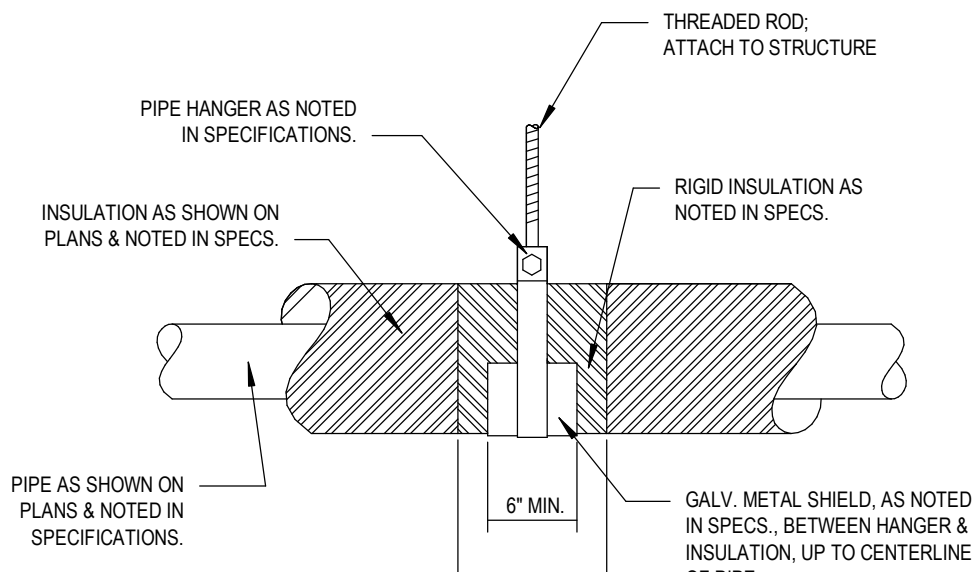
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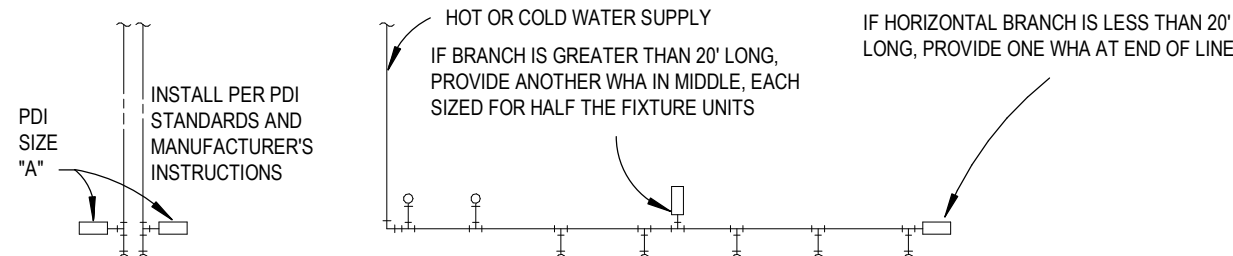
3 PIPE PENETRATIONS DETAIL

P5.1 NO SCALE



2 INSULATED PIPE HANGER DETAIL

P5.1 NO SCALE

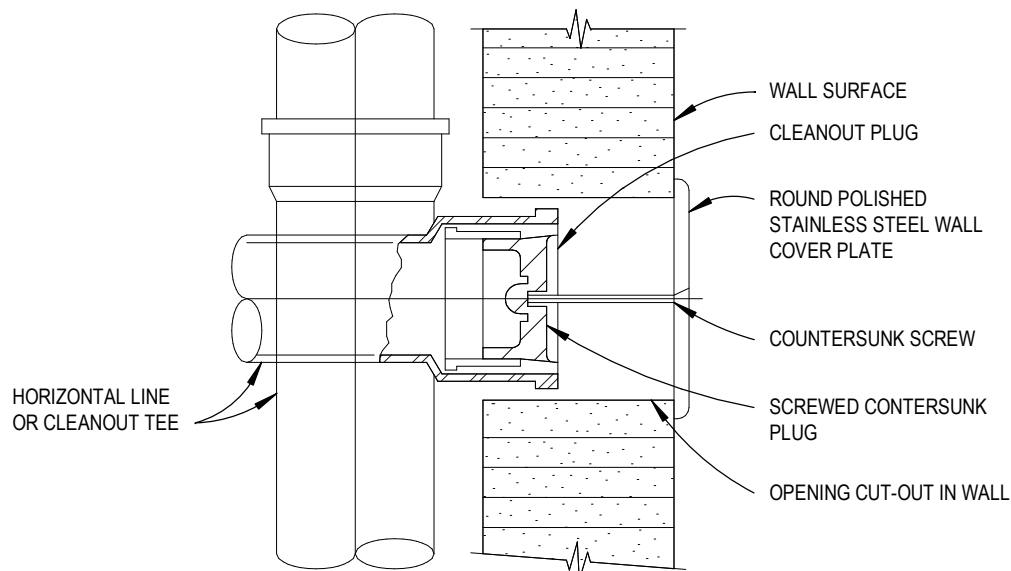


SINGLE FIXTURE			MULTIPLE FIXTURES		
PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD	FIXTURE UNIT TABULATION		
A	1/2"	1-11	FIXTURE	COLD	HOT
B	3/4"	12-32	VALVE WATER CLOSET	10	--
C	1"	33-60	TANK WATER CLOSET	5	--
D	1-1/4"	61-113	URINAL	5	--
E	1-1/2"	114-154	LAVATORY/SINK	1.5	1.5
F	2"	154-330	JANITOR'S SINK	3	3
			SHOWER/BATHTUB	2	2

INSTALL WATER HAMMER ARRESTERS IN WATER PIPING ACCORDING TO PDI-WH 201. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. SIZE THE UNITS AS SHOWN IN PDI-WH 201 OR PER THE TABLES SHOWN ABOVE. PROVIDE WHA ON HWIOW FOR ALL TOILET GROUPS AND CLOTHES WASHERS.

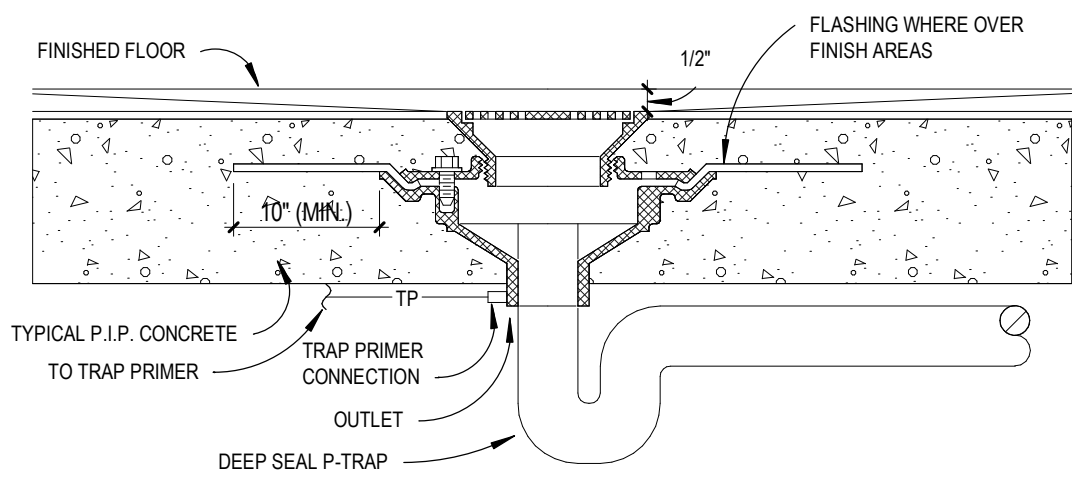
1 WATER HAMMER ARRESTOR DETAIL

P5.1 NO SCALE



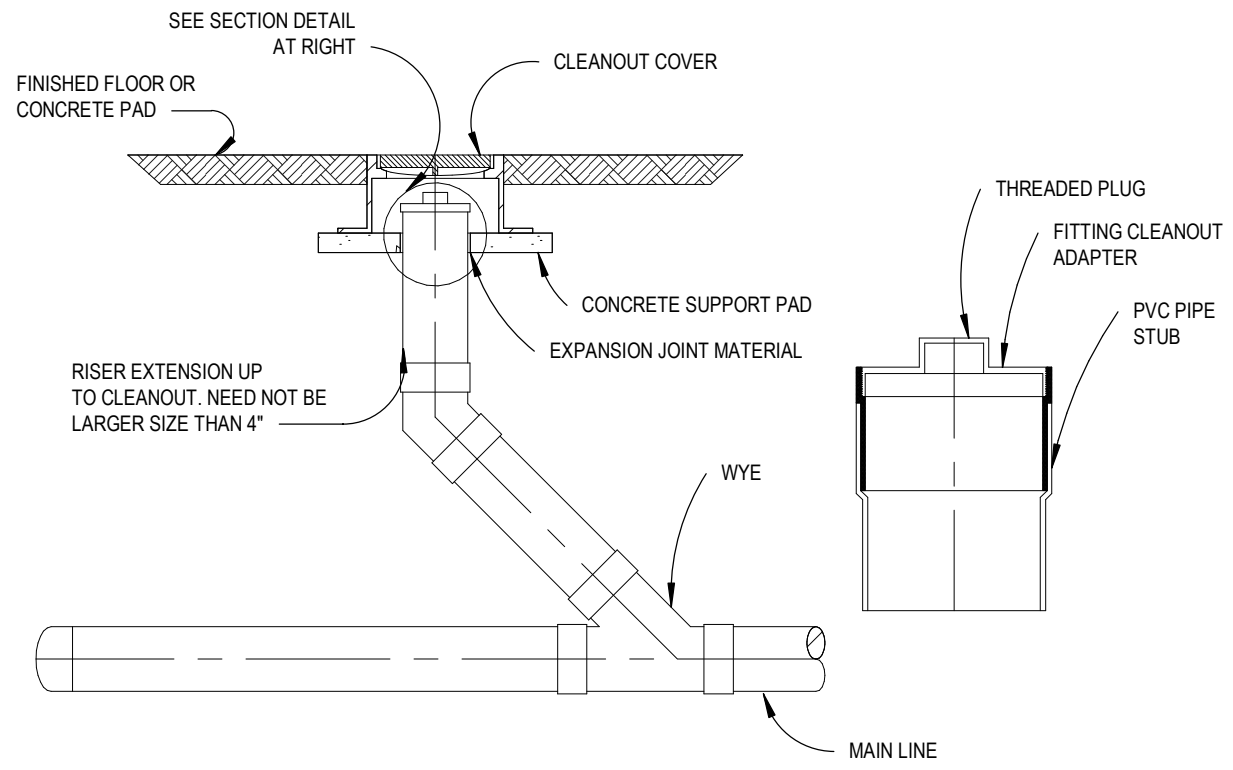
6 WALL CLEANOUT DETAIL

P5.1 NO SCALE



5 TYPICAL FLOOR DRAIN DETAIL

P5.1 NO SCALE



4 FINISHED FLOOR CLEANOUT DETAIL

P5.1 NO SCALE

PLUMBING FIXTURE SCHEDULE									
MARK	FIXTURE	LOCAL CONNECTIONS (INCHES)				BASIS OF DESIGN	NOTES		
		WASTE	VENT	COLD WATER	HOT WATER				
EW-1	ELECTRIC WATER COOLER, BI-LEVEL FILTERED COOLER WITH BOTTLE FILLING STATION	1-1/2"	1-1/2"	1/2"	-	ELKAY MODEL LZSTLR8WS WITH LKAPREZL APRON, WALL CARRIER MLP200	-		
L-1	LAVATORY - WALL MOUNTED - ADA	1-1/2"	1-1/2"	1/2"	1/2"	WALL HUNG, AMERICAN STANDARD LUCERNE 0355.012 WHITE LAVATORY W/ CHICAGO 802-VE2805-665ABCP	1, 2		
S-1	CLASSROOM SINK W/ BUBBLER	2"	1-1/2"	1/2"	1/2"	ELKAY #DRKAD2517 W/ CHICAGO FAUCET 50-ABCP, BUBBLER 748-665ABCP	-		
S-2	UTILITY SINK, WALL MOUNT - ADA	2"	1-1/2"	1/2"	1/2"	WALL MOUNTED ELKAY EWMADA2420 W/ CHICAGO 631-XXABCP, PROVIDE W/CLAY TRAP, JAY R SMITH 8730 SUSPENDED CLAY TRAP	-		
WC-1	WATER CLOSET, WALL MOUNT - ADA	4"	2"	1"	-	AMERICAN STANDARD AFWALL MILLENNIUM FLOWWISE ELONGATED WHITE TOILET WITH SLOAN ROYAL 111-1.28 (1.28 GPF) - MOUNT AT ADA HEIGHT	-		

NOTES:
1. PROVIDE LAVS/SINKS WITH DRAINS, TRAPS, AND APPURTENANCES PER SPECS. PROVIDE ALL LAVS WITH TRUEBRO LAVGUARD 2 103E-Z FOR TWO SUPPLIES, TRAP, AND OFFSET TAILPIECE.
2. PROVIDE FAUCET STEM WITH DOUBLE NUTS.

ABBREVIATIONS

(D)	DEMOLISHED
(E)	EXISTING
(R)	RELOCATED
Ø	DIAMETER
AAP	ALARM ANNUNCIATOR PANEL
ACC	ACCESSIBLE
ADO	AUTOMATIC DOOR OPENER
AFC	ABOVE FINISHED COUNTER
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BAT	BATTERY
BC	BARE COPPER
BFF	BELOW FINISH FLOOR
C	CONDUIT
CD	CONSTRUCTION DOCUMENTS
CF	CUBIC FEET
CKT	CIRCUIT
COMM	COMMUNICATIONS
DB	DECIBEL
DC	DIRECT CURRENT
EA	EACH
ELEV	ELEVATOR
F.V.	FIELD VERIFY
FA	FIRE ALARM
FAA	FIRE ALARM ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
FD	FIRE DAMPER
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FHC	FIRE HOSE CABINET
FS	FLOW SWITCH
FSD	FIRE SMOKE DAMPER
HZ	HERTZ (FREQUENCY)
JB	JUNCTION BOX
MTD	MOUNTED
MTG	MOUNTING
NEC	NATIONAL ELECTRIC CODE
NOM	NOMINAL
PB	PULL BOX
PERP	PERPENDICULAR
PV	POST INDICATOR VALVE
PNL	PANEL
PWR	POWER
RAD	RADIUS
RCP	REFLECTED CEILING PLAN
REF	REFERENCE
SD	SMOKE DAMPER
STOR	STORAGE
SUSP	SUSPENDED
SWBD	SWITCHBOARD
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
V	VOLT
VA	VOLT-AMPERE
W	WIRE
W	WATT
WG	WIRE GUARD
WP	WEATHER-PROOF (NEMA 3R)

SHEET INDEX

- FP0.1 GENERAL NOTES, FIRE PROTECTION SYMBOLS & ABBREVIATIONS
- FP1.1 FIRST FLOOR FIRE PROTECTION PLAN - AREA C

GENERAL SYMBOLS

	POINT OF DISCONNECT - DEMOLITION REMOVED FROM EXISTING
	POINT OF CONNECTION - NEW CONNECTS TO EXISTING
	AREA NOT IN CONTRACT

FIRE PROTECTION SYMBOLS

SCHEMATIC	3D	DESCRIPTION
		COMBINATION FIRE AND DOMESTIC WATER
		FIRE PROTECTION DRY
		FIRE PROTECTION OTHER
		FIRE PROTECTION PRE-ACTION
		FIRE PROTECTION WET
		ALARM VALVE, WET
		ALARM VALVE, DRY
		FIRE PROTECTION RISER
		FIRE DEPARTMENT CONNECTION
		SPRINKLER HEAD, PENDANT
		SPRINKLER HEAD, PENDANT
		SPRINKLER HEAD, SIDE WALL
		FLOW SWITCH
		PRESSURE SWITCH
		OS&Y VALVE
		OS&Y VALVE (INDICATING)

PIPING ANNOTATIONS

SCHEMATIC	3D	DESCRIPTION
		EXISTING TO REMAIN - (E) or EXIST
		ITEM TO BE DEMOLISHED - (D) or DEMO
		PIPE SIZE TAG (DIAMETER WITH SYSTEM NAME)
		ABOVE GROUND PIPING
		BELOW GROUND PIPING
		PIPE SLOPE
		PIPE INVERT ELEVATION
		MECHANICAL EQUIPMENT TAG
		MECHANICAL EQUIPMENT CLEARANCE

PIPING VALVES AND FITTINGS

SCHEMATIC	3D	DESCRIPTION
		PIPE DROP
		PIPE RISE
		PIPE TEE DOWN
		PIPE TEE UP
		CONCENTRIC REDUCER
		ECCENTRIC REDUCER
		PIPE CAP
		PIPE ALIGNMENT GUIDE
		PIPE ANCHOR
		FLOW DIRECTION
		EXPANSION JOINT
		FLEXIBLE CONNECTION
		UNION
		DIRECTION OF PIPE PITCH
		AQUASTAT
		EXPANSION LOOP
		BALANCING VALVE
		BALANCING VALVE W/ METERING POINTS
		BALL VALVE
		BUTTERFLY VALVE
		CHECK VALVE
		STEAM TRAP
		GATE VALVE
		MANUAL AIR VENT
		AUTOMATIC AIR VENT
		PLUG VALVE
		PRESSURE GAUGE
		PLUG VALVE
		ANGLE VALVE
		AUTOMATIC CONTROL VALVE 2-WAY
		AUTOMATIC CONTROL VALVE 3-WAY
		AUTOMATIC FLOW CONTROL VALVE
		STRAINER
		PRESSURE AND TEMPERATURE TEST PORT
		THERMOMETER
		PRESSURE REDUCING VALVE (WATER SYSTEMS)
		PRESSURE REGULATING VALVE (GAS SYSTEMS)
		RELIEF VALVE
		FLOW MEASURING DEVICE
		BACKFLOW PREVENTER

NOTE

ALL OF NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET.

THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

GENERAL NOTES

- REMOVE ALL UNUSED PIPING, DUCTWORK AND ACCESSORIES.
- THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING, PRIOR TO FINAL BID, ALL EXISTING CONDITIONS FOR PLUMBING AND MECHANICAL SYSTEMS WITHIN TENANT SPACE AND WITHIN CLOSE PROXIMITY OF TENANT SPACE.
- THE MECHANICAL CONTRACTOR SHALL PERFORM SERVICE AND REPAIR ON THE EXISTING EQUIPMENT AND ITS ACCESSORIES AS FOLLOWS: CLEAN ALL COILS, REPLACE THE FILTERS AND BELTS, INSPECT, REPAIR, OR REPLACE THE ECONOMIZERS, DRIVES AND FAN BEARINGS, MOTORS, CONTROL COMPONENTS, VALVES AND ANY OTHER ITEM NECESSARY FOR A COMPLETE AND PROPER OPERATING SYSTEM. THIS CONTRACTOR SHALL ALSO VISIT THE SITE, PRIOR TO FINAL BIDDING, AND VERIFY ALL EXISTING SITE CONDITIONS. PROVIDE ALL MATERIAL AND COMPONENTS AS NEEDED TO BRING THE UNITS TO FULL COMPLIANCE OF THE LANDLORD'S CRITERIA AND LOCAL AUTHORITY HAVING JURISDICTION.
- WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK. UNSEAL DRAINS AT COMPLETION OF CONSTRUCTION.
- COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY, STRUCTURE, AND EQUIPMENT TO PREVENT CONFLICTS.
- THE CONTRACTOR SHALL BE FAMILIAR WITH ALL THE CONDITIONS BOTH EXISTING AND THOSE ILLUSTRATED BY THESE DOCUMENTS AS WELL AS THOSE WHICH CAN BE REASONABLY ANTICIPATED INCLUDING, BUT NOT LIMITED TO ARCHITECTURAL, ELECTRICAL, VENTILATION, PLUMBING, AND OTHER SYSTEMS INVOLVED ON THIS PROJECT.
- FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
- LOCATE EQUIPMENT REQUIRING ACCESS 2'-0" MAXIMUM ABOVE CEILING.
- ALL ROOF MOUNTED EQUIPMENT SHALL BE A MINIMUM 10'-0" FROM EDGE OF ROOF.
- LOCATE DUCTWORK, PIPING AND MECHANICAL EQUIPMENT AWAY FROM THE SPACE ABOVE ELECTRICAL PANELS, TRANSFORMERS AND OTHER ELECTRICAL EQUIPMENT.
- FIRE SEAL AROUND DUCT AND PIPING PENETRATIONS OF FIRE RATED WALLS. REFER TO SPECIFICATION.
- PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS, WALLS, AND ROOF.
- ADJUST PIPING AND DUCTWORK SIZES TO PROPERLY CONNECT TO MECHANICAL EQUIPMENT.
- REFER TO PLUMBING SERIES DRAWINGS FOR GAS AND A.C. CONDENSATE DRAIN PIPING.
- PIPE SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN.
- FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS.
- INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.
- LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.
- INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.

GENERAL FIRE PROTECTION NOTES

- PROVIDE ALTERATIONS TO THE EXISTING FIRE PROTECTION SYSTEM AS REQUIRED TO ACCOMMODATE THE NEW FLOOR PLAN AND NEW CEILING TYPES. PROVIDE A COMPLETE WET TYPE SYSTEM INCLUDING NEW MAINS, BRANCHES, HEADS, VALVES, AND ACCESSORIES AS REQUIRED. REUSE EXISTING SYSTEM EQUIPMENT WHERE APPLICABLE. THE SYSTEM SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS AND AS PER REQUIREMENTS OF THE STATE BUILDING CODE, LOCAL FIRE DEPARTMENT, AND ALL FEDERAL, STATE, AND LOCAL AUTHORITIES, NFPA, AND FACTORY MUTUAL.
- THE BUILDINGS COMPLETE OPERATIONAL FIRE PROTECTION SYSTEMS SHALL REMAIN IN PLACE. THIS CONTRACTOR SHALL REPAIR ANY DAMAGE TO THIS SYSTEM CREATED BY THE REMOVAL OF ANY OTHER MECHANICAL SYSTEMS OR COMPONENTS.
- THIS CONTRACTOR SHALL COORDINATE PHASING OF SPRINKLER WORK WITH THE GENERAL CONTRACTOR PRIOR TO STARTING WORK.
- PROVIDE A COMPLETE WET TYPE FIRE PROTECTION SYSTEM AS REQUIRED TO ACCOMMODATE THE FLOOR PLAN AND CEILING TYPES INCLUDING MAINS, BRANCHES, HEADS, VALVES, AND ACCESSORIES AS REQUIRED. THE SYSTEM SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS OF THE STATE BUILDING CODE, LOCAL FIRE DEPARTMENT, AND ALL FEDERAL, STATE, AND LOCAL AUTHORITIES, NFPA, AND FACTORY MUTUAL.
- THE SPRINKLER SYSTEM SHALL BE DESIGNED BASED UPON ACTUAL WATER FLOW TEST DATA OBTAINED AT OR NEAR THE JOB SITE.
- REFER TO REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION REGARDING SPRINKLER HEAD LOCATION AND PIPE, UNLESS NOTED OTHERWISE.
- DIVISION 21 CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR PROPER INSTALLATION OF THE FIRE PROTECTION SYSTEMS ALARM DEVICES INVOLVED WITH FIRE SPRINKLER SYSTEM.
- ALL SPRINKLER SYSTEM PIPING SHALL BE CONCEALED ABOVE THE SUSPENDED CEILING SYSTEM, UNLESS NOTED OTHERWISE. WRITTEN AUTHORIZATION SHALL BE OBTAINED FROM THE ARCHITECT PRIOR TO EXPOSING ANY PIPING IN ANY ROOM WHICH HAS A SUSPENDED CEILING.
- THIS CONTRACTOR SHALL PROVIDE ALL ADDITIONAL SPRINKLER HEADS AS REQUIRED TO ENSURE AN APPROVED FIRE PROTECTION SYSTEM AT NO ADDITIONAL COST TO THE OWNER.
- AUXILIARY DRAINS SHALL BE EXPOSED WITH 1" DRAIN VALVES. WHEN 5 OR MORE GALLONS ARE TRAPPED, THIS CONTRACTOR SHALL PROVIDE FIXED PIPING TO AN ADEQUATELY SIZED RECEPTOR WHICH IS CAPABLE OF ACCEPTING THE FULL FLOW OF THE DRAIN. WHEN LESS THAN 5 GALLONS ARE TRAPPED, A HOSE BIB SHALL BE PROVIDED AT THE DRAIN VALVE.
- AUXILIARY DRAINS SHALL NOT BE LOCATED ABOVE PLASTER OR GYPSUM BOARD CEILING SYSTEMS. ONLY BY A SPECIFIC WRITTEN INSTRUCTION FROM THE ENGINEER WILL A VARIANCE BE PROVIDED.
- AN INSPECTOR'S TEST CONNECTION SHALL BE PROVIDED FOR EACH FIRE SPRINKLER ZONE. THIS CONTRACTOR SHALL PROVIDE FIXED PIPING FROM THE TEST CONNECTION TO AN ADEQUATELY SIZED RECEPTOR WHICH IS CAPABLE OF ACCEPTING THE FULL FLOW OF THE TEST. EXTERIOR DISCHARGE OF THE TEST CONNECTION SHALL BE PERMITTED ONLY BY SPECIFIC WRITTEN INSTRUCTION FROM THE ENGINEER.
- SHOW ALL ROOM NUMBERS ON SHOP DRAWING PLANS.
- FLOW TEST DATA FROM ### INDICATES THE FOLLOWING: STATIC PRESSURE # PSI, RESIDUAL PRESSURE: # PSI AT ## GPM. THE HYDRANTS TESTED ARE APPROXIMATELY ### FEET AWAY FROM THE CENTER OF THE SITE LOCATED OFF THE ##" WATER MAIN IN ## STREET AT AN ELEVATION OF ### FEET ABOVE SEA LEVEL. SEE CIVIL PLANS FOR HYDRANT LOCATION. THE CONTRACTOR SHALL PERFORM A FIRE FLOW TEST IN ACCORDANCE WITH NFPA 291 TO VERIFY THE FLOW TEST DATA GIVEN ABOVE. THE DATA GIVEN ABOVE SHALL BE THE BASIS OF DESIGN UNLESS THE AVAILABLE PRESSURE OR FLOW HAS DECREASED. NOTIFY OWNERS REPRESENTATIVE IF FLOW TEST DATA DIFFERS FROM THE DATA ABOVE. A FIRE PROTECTION ENGINEER OR AN ENGINEER EXPERIENCED IN WATER FLOW TESTING SHALL PERFORM OR WITNESS THE REQUIRED FLOW TESTING AND SIGN THE REPORT PRIOR TO THE FIRST SPRINKLER SYSTEM SUBMITTAL.
- ROUTE SPRINKLER PIPING SUCH THAT IT DOES NOT RUN ABOVE ELECTRICAL PANELS, SWITCHGEAR, OR SIMILAR EQUIPMENT. SPRINKLER MAINS SHALL NOT RUN THROUGH ELECTRICAL OR COMMUNICATION ROOMS. SPRINKLER HEADS IN THESE ROOMS SHALL BE SERVED BY A DEDICATED BRANCH LINE FOR EACH ROOM.
- THIS DRAWING INDICATES A GENERAL PIPING ARRANGEMENT AND SUGGESTED SIZING ONLY. THIS CONTRACTOR SHALL DETERMINE THE ACTUAL PIPE SIZING REQUIRED AND COORDINATE WORK WITH ALL OTHER TRADES TO AVOID CONFLICTS.
- THIS CONTRACTOR SHALL PREPARE HYDRAULIC CALCULATIONS BASED UPON THE CONFIGURATION OF THE ACTUAL SYSTEM DESIGN AS SHOWN ON THIS CONTRACTOR'S SHOP DRAWINGS.

A

B

C

D

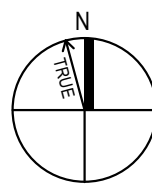
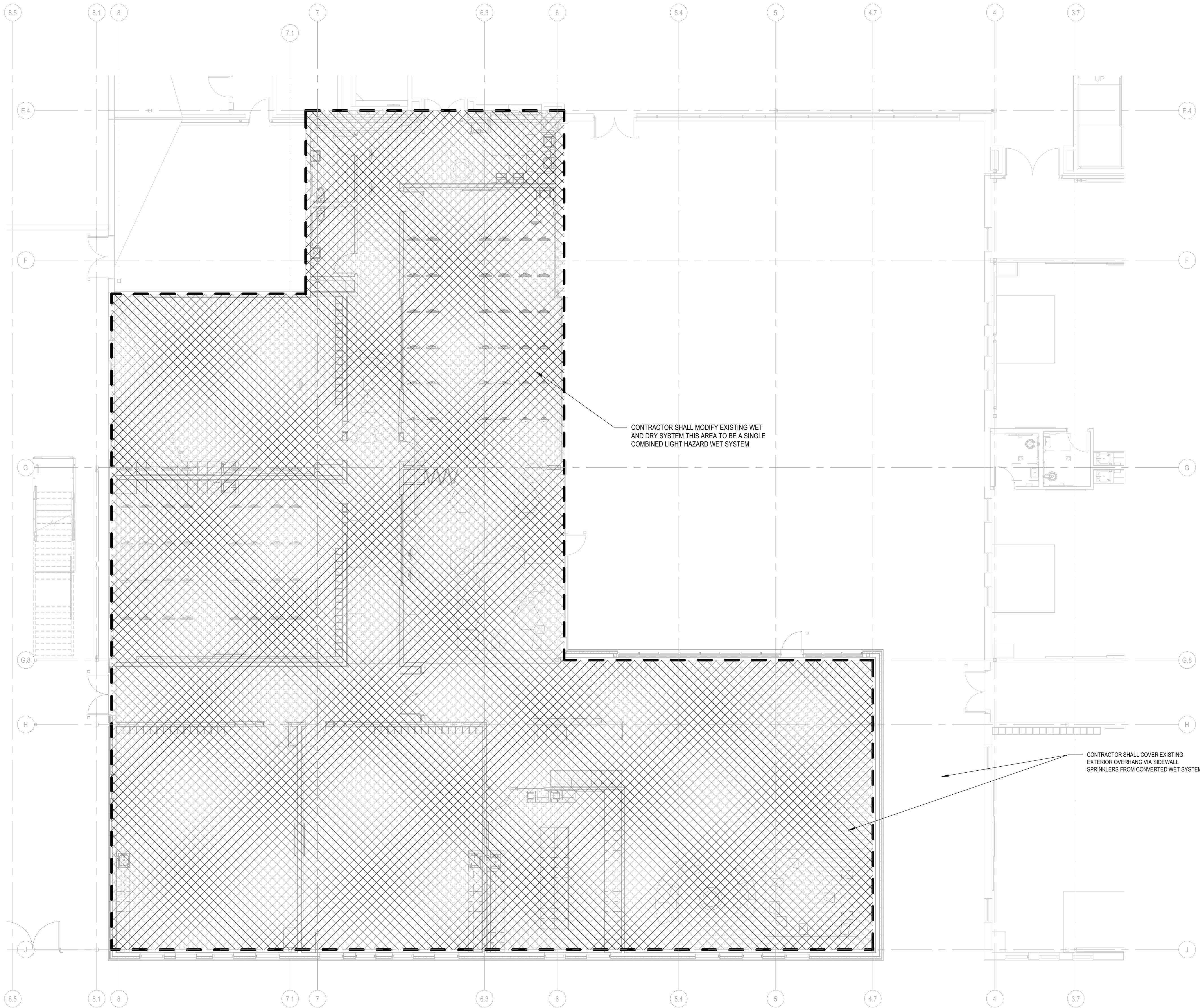
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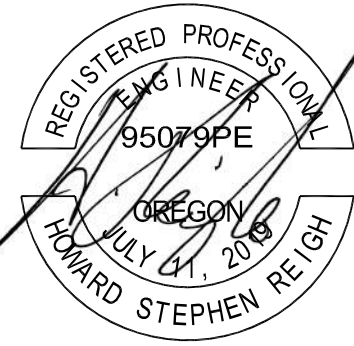
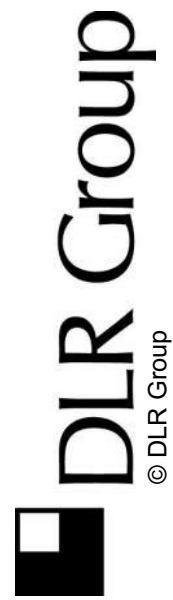
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FIRST LEVEL FIRE PROTECTION PLAN - AREA C

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

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EXPIRES: 12/31/2022

VOSE ES ADDITION

BEAVERTON SCHOOL DISTRICT

11350 SW DENNEY RD
BEAVERTON, OR 97008

100% CD
2/26/2021
REVISIONS

74-21102-00

FIRST FLOOR
FIRE
PROTECTION
PLAN - AREA C

FP1.1

ABBREVIATIONS

(D)	DEMOLISHED
(E)	EXISTING
(R)	RELOCATED
Ø	PHASE
A AMP	AMPERE
AC	ABOVE COUNTER
AF	AMP FRAME (CIRCUIT BREAKER)
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
AP	WIRELESS ACCESS POINT
AT	AMP TRIP (CIRCUIT BREAKER OR FUSE)
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO-VIDEO, AUDIO-VISUAL
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BJ	BONDING JUMPER
BKR	BREAKER
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CKT	CIRCUIT
CU	COPPER
DB	DECIBEL
DC	DIRECT CURRENT
DISC	DISCONNECT
DP	DISTRIBUTION PANELBOARD
DW	DISHWASHER
ECS	EMERGENCY COMMUNICATION SYSTEM
EGB	ELECTRICAL GROUNDING BUSBAR
EMD	ESTIMATED MAXIMUM DEMAND
EMGB	ELECTRICAL MAIN GROUNDING BUSBAR
EP	EXPLOSION PROOF
ER	EXISTING (TO BE) RELOCATED
ERMS	ENERGY REDUCTION MAINTENANCE SWITCH
EWC	ELECTRIC WATER COOLER
FA	FIRE ALARM
FAA	FIRE ALARM ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
FC	FOOT CANDLE
FLA	FULL LOAD AMPS
FS	FLOW SWITCH
FSD	FIRE SMOKE DAMPER
G	EQUIPMENT GROUNDING CONDUCTOR
GEN	GENERATOR
GFI, GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GPPE	GROUND FAULT PROTECTION OF EQUIPMENT
GND	EQUIPMENT GROUNDING CONDUCTOR
HH	HANDHOLE
HOA	HAND-OFF-AUTOMATIC
HP	HORSE POWER
IC	INTERCOM
IG	ISOLATED GROUND
JB	JUNCTION BOX
KAIC	THOUSAND AMPERE INTERRUPTING CIRCUIT
KV	KILOVOLT
KVA	KILOVOLT AMPERES
KW	KILOWATT
LT	LIGHT
LTG	LIGHTING
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MH	MANHOLE
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MRTS	MOTOR RATED TOGGLE SWITCH
MSB	MAIN SWITCHBOARD
MTD	MOUNTED
MTG	MOUNTING
MTS	MAIN TRANSFER SWITCH
N	NEUTRAL
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NF	NON-FUSED
NL	NIGHT LIGHT
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OS&Y	OUTSIDE SCREW AND YOKE
P	POLE(S)
PA	PUBLIC ADDRESS
PB	PULL BOX
PH	PHASE
PIV	POST INDICATOR VALVE
PWR	POWER
RCP	REFLECTED CEILING PLAN
RECPT	RECEPTACLE
REF	REFERENCE
SCCR	SHORT CIRCUIT CURRENT RATING
SD	SMOKE DAMPER
SEC	SECONDARY
SPD	SURGE PROTECTION DEVICE
SWBD	SWITCHBOARD
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TC	TIME CLOCK
TGB	TELECOMMUNICATIONS GRONDING BUSBAR
TIMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
TO	TELECOMMUNICATIONS OUTLET
TR	TELECOMMUNICATIONS ROOM
TS	TAMPER SWITCH
TV	TELEVISION
UG	UNDERGROUND
UPS	UNINTERRUPTABLE POWER SUPPLY
V	VOLT
VA	VOLT-AMPERE
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE
WA	TELECOMMUNICATIONS WORK AREA
WG	WIRE GUARD
WP	WEATHER-PROOF (NEMA 3R)
XFMR	TRANSFORMER

GENERAL NOTES

- PENETRATIONS IN WALLS REQUIRING PROTECTED OPENINGS MUST BE FIRESTOPPED WITH AN APPROVED MATERIAL.

GENERAL DEMOLITION NOTES

- SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR PHASES OF DEMOLITION AND CONSTRUCTION. COORDINATE WITH GENERAL CONSTRUCTION.
- DISCONNECT AND REMOVE ALL ELECTRICAL DEVICES AND LIGHTING FIXTURES IN DEMOLITION AREAS UNLESS NOTED OTHERWISE.
- DISCONNECT AND REMOVE ALL ELECTRICAL DEVICES IN WALLS TO BE DEMOLISHED. WALLS TO BE DEMOLISHED ARE SHOWN DASHED. DISCONNECT AND REMOVE ASSOCIATED CONDUIT AND WIRE BACK TO LAST REMAINING DEVICE. FURNISH AND INSTALL CONDUIT AND WIRE AS NECESSARY FOR CONTINUITY OF CIRCUIT(S) TO ANY EXISTING DEVICES TO REMAIN. COORDINATE AND VERIFY REQUIREMENTS WITH NEW WORK IN AREA.
- FURNISH AND INSTALL CONDUIT AND WIRE AS NECESSARY FOR CONTINUITY OF ANY FEEDERS OR BRANCH CIRCUITS ORIGINATING OUTSIDE THE DEMOLITION AREA THAT SERVES ANY ELECTRICAL EQUIPMENT OR DEVICES TO REMAIN AFTER DEMOLITION. MODIFY OR REPLACE AS REQUIRED.
- FURNISH AND INSTALL CONDUIT AND/OR COMMUNICATIONS/DATA WIRING AS NECESSARY FOR CONTINUITY OF ANY WIRING ORIGINATING OUTSIDE THE DEMOLITION AREA THAT SERVES ANY COMMUNICATIONS/DATA EQUIPMENT OR DEVICES TO REMAIN AFTER DEMOLITION. MODIFY OR REPLACE AS REQUIRED.
- DISCONNECT AND REMOVE LIGHT SWITCHES IN DEMOLITION AREAS AS NECESSARY TO ACCOMMODATE NEW DOOR CONFIGURATIONS.
- DISCONNECT AND REMOVE ANY EXISTING ELECTRICAL DEVICES AND BACK BOXES AS NECESSARY WHERE NEW WALL CONSTRUCTION WILL INTERSECT AN EXISTING WALL. FURNISH AND INSTALL CONDUIT AND WIRE AS REQUIRED FOR CONTINUITY OF CIRCUIT(S).
- FURNISH AND INSTALL BLANK COVER PLATES OVER ALL EXISTING UNUSED OPENINGS.

GENERAL SITE PLAN NOTES

- ALL LIGHTING AND POWER CONDUCTORS SHALL BE INSTALLED BETWEEN 24" (MINIMUM) AND 36" (MAXIMUM) BELOW FINISHED GRADE.
- ALL COMMUNICATIONS CONDUIT AND CABLES SHALL BE INSTALLED 36" (MINIMUM) BELOW FINISHED GRADE.
- ALL CONDUCTORS FOR EXTERIOR LIGHTING AND POWER CIRCUITS SHALL BE #10 AWG MINIMUM.
- PROVIDE TRANSFORMER BASE AT ALL POLE MOUNTED FIXTURES. TAP 2 LEGS OF THREE PHASE FEEDER (CIRCUITS DENOTED), PROVIDE BALLAST FUSES AT TAP, AND PROVIDE BRANCH CIRCUITS TO FIXTURES.

GENERAL SITE DEMOLITION NOTES

- SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR PHASES OF DEMOLITION AND CONSTRUCTION. COORDINATE WITH GENERAL CONSTRUCTION.
- DISCONNECT AND REMOVE ALL ELECTRICAL DEVICES AND LIGHTING FIXTURES IN DEMOLITION AREAS UNLESS NOTED OTHERWISE.
- COORDINATE AND VERIFY REQUIREMENTS WITH NEW WORK IN AREA.
- ALL RECESSED LIGHTING FIXTURES IN LAY-IN CEILINGS SHALL BE INSTALLED WITH 6' LONG FLEXIBLE METAL CONDUIT.
- ALL MOUNTING HEIGHTS FOR LIGHTING FIXTURES ARE TO THE BOTTOM OF THE FIXTURES UNLESS INDICATED OTHERWISE.
- SEE ARCHITECTURAL EXTERIOR ELEVATIONS FOR MOUNTING HEIGHTS OF EXTERIOR LIGHTING FIXTURES.
- REFER TO SECTION 26 0519 FOR MINIMUM CONDUCTOR SIZE ADJUSTMENTS FOR VOLTAGE DROP.
- **FOR TYPICAL PROJECTS WHERE WIRING IS SHOWN (EDIT AS NEEDED).
- WIRE COUNTS FOR CIRCUIT CONDUCTORS ARE NOT SHOWN. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUIT AND SWITCHING CONNECTIONS SHOWN.
- MODIFICATIONS TO NUMBER OF CONDUCTORS IN HOME RUNS IN ADDITION TO CIRCUITS INDICATED ON THIS DRAWING ARE PROHIBITED.
- **FOR TYPICAL PROJECTS WHERE WIRING IS NOT SHOWN (EDIT AS NEEDED).
- CIRCUIT WIRING IS NOT SHOWN EXCEPT FOR SWITCHING INTENT OF FIXTURES AND CONTROL OF DEVICES.
- PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUITING AND SWITCHING SHOWN.
- CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANELBOARD BREAKERS (SEE PANELBOARD SCHEDULE). BRANCH CIRCUITS SHALL BE SIZED ACCORDING TO THE CIRCUIT BREAKER RATING. UNLESS INDICATED OTHERWISE ON THE ELECTRICAL EQUIPMENT SCHEDULE.

GENERAL LIGHTING NOTES

- ALL RECESSED LIGHTING FIXTURES IN LAY-IN CEILINGS SHALL BE INSTALLED WITH 6' LONG FLEXIBLE METAL CONDUIT.
- ALL MOUNTING HEIGHTS FOR LIGHTING FIXTURES ARE TO THE BOTTOM OF THE FIXTURES UNLESS INDICATED OTHERWISE.
- SEE ARCHITECTURAL EXTERIOR ELEVATIONS FOR MOUNTING HEIGHTS OF EXTERIOR LIGHTING FIXTURES.
- REFER TO SECTION 26 0519 FOR MINIMUM CONDUCTOR SIZE ADJUSTMENTS FOR VOLTAGE DROP.
- **FOR TYPICAL PROJECTS WHERE WIRING IS SHOWN (EDIT AS NEEDED).
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- **FOR TYPICAL PROJECTS WHERE WIRING IS NOT SHOWN (EDIT AS NEEDED).
- CIRCUIT WIRING IS NOT SHOWN EXCEPT FOR SWITCHING INTENT OF FIXTURES AND CONTROL OF DEVICES.
- PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUITING AND SWITCHING SHOWN.
- CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANELBOARD BREAKERS (SEE PANELBOARD SCHEDULE). BRANCH CIRCUITS SHALL BE SIZED ACCORDING TO THE CIRCUIT BREAKER RATING. UNLESS INDICATED OTHERWISE ON THE ELECTRICAL EQUIPMENT SCHEDULE.

GENERAL SYSTEMS NOTES

- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING ALL ELECTRICAL ITEMS SHOWN ON THE DRAWINGS, EXCEPT ITEMS LISTED ON SHEET E0 01 GENERAL ELECTRICAL NOTES.
- SEE FIRE ALARM ZONE SCHEDULE FOR INITIATING ZONES AND SIGNAL CIRCUITS.
- MAXIMUM NUMBER OF 4 INFORMATION OUTLET LOCATIONS PER CONDUIT HOME RUN TO MDF OR IDF IS PERMITTED. CONDUIT SHALL BE SIZED AS FOLLOWS:
1 INFORMATION OUTLET LOCATION: 1"
2 INFORMATION OUTLET LOCATIONS: 1 1/4"
3 INFORMATION OUTLET LOCATIONS: 1 1/2"
- **SELECT NEXT NOTE FOR PROJECT REQUIREMENT**
- ALL COMMUNICATIONS CABLES SHALL BE INSTALLED IN CONDUIT. CABLE TRAY, OR SUPPORTED BY CABLE HOOKS. PROVIDE BUSHINGS AT THE ENDS OF ALL CONDUIT WHERE STUBBED ABOVE ACCESSIBLE CEILINGS OR WHERE DROPPED INTO CABLE TRAY. PROVIDE CABLE HOOKS ABOVE ACCESSIBLE CEILINGS FOR CABLE INSTALLATION WHERE NOT INSTALLED IN CONDUIT OR CABLE TRAY.
- ALL COMMUNICATIONS CABLES SHALL BE INSTALLED IN CONDUIT OR CABLE TRAY.

* NOTE *

ALL OF NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET.
THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

LIGHTING

	LIGHTING FIXTURE, SEE FIXTURE SCHEDULE		SWITCHES: MOUNT 42" AFF UNO
	LIGHTING FIXTURE ON EMERGENCY SYSTEM		SUPERSCRIPIT, SWITCH SHALL CONTROL FIXTURE DENOTED WITH SAME LOWER CASE LETTER
	TRACK LIGHTING FIXTURE, SIZE PER FIXTURE SCHEDULE		SWITCH SYMBOL
	FLUORESCENT STRIP LIGHTING FIXTURE, SIZE PER FIXTURE SCHEDULE		SUBSCRIPT, SWITCH TYPE - SEE BELOW
	WALL MOUNTED FLUORESCENT STRIP LIGHTING FIXTURE		LINE THRU SWITCH INDICATES A KEY OPERATED SWITCH
	CEILING FIXTURE, SURFACE, RECESSED OR PENDANT, SEE FIXTURE SCHEDULE		S SWITCH, SINGLE POLE
	LIGHTING FIXTURE ON EMERGENCY SYSTEM		S ₂ SWITCH, DOUBLE POLE
	HIGH BAY LIGHTING FIXTURE		S ₃ SWITCH, THREE WAY
	WALL FIXTURE, BRACKET MOUNTED, SEE FIXTURE SCHEDULE		S ₄ SWITCH, FOUR WAY
	SELF CONTAINED EMERGENCY LIGHTING FIXTURE		S _D SWITCH, DIMMER
	EXIT SIGN, CEILING MOUNTED, DIRECTIONAL ARROW AS INDICATED		S _E SWITCH, EMERGENCY
	EXIT SIGN, WALL MOUNTED, DIRECTIONAL ARROW AS INDICATED		S _L SWITCH, LOW VOLTAGE
	SITE LIGHTING - POLE		S _M SWITCH, MASTER
	POLE MOUNTED YOKE		S _O SWITCH, WALL-BOX OCCUPANCY SENSOR
	POLE MOUNTED AREA LIGHT		S _{O2} SWITCH, WALL-BOX OCCUPANCY SENSOR, 2-POLE
	WALL MOUNTED AREA LIGHT		S _P SWITCH, WITH PILOT LIGHT
	IN GRADE LIGHT FIXTURE, SEE FIXTURE SCHEDULE		S _R SWITCH, LOW VOLTAGE, ASSOCIATED WITH RELAY PANEL
	BOLLARD LIGHT FIXTURE		S _T SWITCH, TIMER
	TELEPHONE OUTLET, WALL		S _V SWITCH, WALL-BOX VACANCY SENSOR
	TELEPHONE OUTLET FOR WALL-MOUNTED PHONE		S _X SWITCH, EXPLOSION-PROOF
	PAY TELEPHONE OUTLET		
	TELEPHONE CABINET (PBX)		
	TELEPHONE BACKBOARD, SIZE AS SHOWN		
	TECHNOLOGY OUTLET, WALL (x - DATA)		
	TECHNOLOGY OUTLET, WALL - ABOVE COUNTER (x - DATA)		
	MULTI-MEDIA TECHNOLOGY OUTLET, WALL		
	SMART-BOARD TECHNOLOGY OUTLET, WALL		
	TECHNOLOGY OUTLET, CEILING (MULTI-MEDIA)		
	FLUSH FLOOR BOX WITH TECHNOLOGY OUTLET		
	FLUSH FLOOR BOX WITH TWO (2) TECHNOLOGY OUTLETS (MULTI-MEDIA)		
	WIRELESS ACCESS POINT, CEILING		
	WALL MOUNT TV SCREEN OUTLET (PROVIDE RCA STERIO AUDIO TO THE CLASSROOM AUDIO AMPLIFIER)		
	PRESENTER'S STATION, WALL @ +36" AFF		
	AV SYSTEM SPEAKER, CEILING		
	PAGING SPEAKER, CEILING		

COMMUNICATIONS

	TELEPHONE OUTLET, WALL		CLOCK
	TELEPHONE OUTLET FOR WALL-MOUNTED PHONE		CLOCK - MASTER
	PAY TELEPHONE OUTLET		CLOCK - DOUBLE FACE
	TELEPHONE CABINET (PBX)		CLOCK - OUTLET
	TELEPHONE BACKBOARD, SIZE AS SHOWN		TIME CLOCK
	TECHNOLOGY OUTLET, WALL (x - DATA)		TELEVISION OUTLET, WALL
	TECHNOLOGY OUTLET, WALL - ABOVE COUNTER (x - DATA)		TELEVISION OUTLET, CEILING
	MULTI-MEDIA TECHNOLOGY OUTLET, WALL		TELEVISION TERMINAL CABINET
	SMART-BOARD TECHNOLOGY OUTLET, WALL		BUZZER
	TECHNOLOGY OUTLET, CEILING (MULTI-MEDIA)		CHIME
	FLUSH FLOOR BOX WITH TECHNOLOGY OUTLET		SPEAKER, WALL
	FLUSH FLOOR BOX WITH TWO (2) TECHNOLOGY OUTLETS (MULTI-MEDIA)		INTERCOM CALLBACK STATION, WALL
	WIRELESS ACCESS POINT, CEILING		VOLUME CONTROL, WALL
	WALL MOUNT TV SCREEN OUTLET (PROVIDE RCA STERIO AUDIO TO THE CLASSROOM AUDIO AMPLIFIER)		MICROPHONE CONTROL, WALL
	PRESENTER'S STATION, WALL @ +36" AFF		MONITOR SPEAKER RECEPTACLE, WALL
	AV SYSTEM SPEAKER, CEILING		FLUSH FLOOR BOX WITH MICROPHONE OUTLET
	PAGING SPEAKER, CEILING		DIRECTOR'S HEADSET, WALL

SECURITY

	CARD READER		PAGING HORN
	SECURITY SYSTEM CALL BUTTON		SOUND DETECTOR ALARM
	FACILITY INTERCOM		GLASS BREAK DETECTOR
	HANDS FREE INTERCOM		VEHICLE DETECTION LOOP
	INTRUSION DETECTOR, CEILING		VIDEO CAMERA - CEILING
	INTRUSION DETECTOR, WALL		VIDEO CAMERA - WALL
	INTRUSION DETECTOR RECEIVER		VIDEO MONITOR
	INTRUSION DETECTOR TRANSMITTER		VISITOR INTERCOM
	MOTION DETECTOR		DOOR CONTROL PANEL
	DOOR CONTACT		ACCESS CONTROL COMPUTER
	ELECTRIC DOOR LATCH		SECURITY SYSTEM PANEL
	SECURITY CAMERA		EMERGENCY PHONE - WALL
	SECURITY KEYPAD		EMERGENCY PHONE - BOLLARD
	MAGNETIC CONTACT (DOOR POSITION SENSOR)		LASER BEAM RECEIVER
	REQUEST-TO-EXIT MOTION SENSOR		LASER BEAM TRANSMITTER
	REQUEST-TO-EXIT BUTTON		SECURITY SYSTEM ALARM BUTTON

POWER

	CIRCUIT HOME RUN		RECEPTABLES
	CONDUIT TURNING UP		DIAGONAL LINE THROUGH SYMBOL OR DENOTED 'AC' INDICATES MOUNT DEVICE ABOUT COUNTER. WHERE INDICATED AS 'MOUNT ABOVE COUNTER' MOUNT BOTTOM OF BOX 2" ABOVE TOP OF BACKSPLASH OR 6" ABOVE COUNTERTOP IF NO BACKSPLASH EXISTS.
	CONDUIT TURNING DOWN		SIMPLEX RECEPTACLE
	CONDUIT STUB-UP		DUPLEX RECEPTACLE
	CONDUIT SLEEVE		DUPLEX RECEPTACLE, GFI TYPE
	CONDUIT SEAL		DUPLEX RECEPTACLE, MOUNT ABOVE COUNTER
	CONDUIT CONCEALED IN CEILING OR WALLS, POWER		DUPLEX RECEPTACLE, MOUNT ABOVE COUNTER
	CONDUIT CONCEALED IN CEILING OR WALLS, OTHER (* = SEE ABBREVIATIONS)		FOURPLEX RECEPTACLE
	CONDUIT CONCEALED IN FLOOR OR UNDERGROUND, POWER		FOURPLEX RECEPTACLE, GFI TYPE
	CONDUIT CONCEALED IN FLOOR OR UNDERGROUND, OTHER (* = SEE ABBREVIATIONS)		FOURPLEX RECEPTACLE, MOUNT ABOVE COUNTER
	EXPOSED CONDUIT, POWER		FOURPLEX RECEPTACLE, GFI TYPE, MOUNT ABOVE COUNTER
	EXPOSED CONDUIT, OTHER (* = SEE ABBREVIATIONS)		DUPLEX RECEPTACLE, FLUSH IN CEILING
	TRANSFORMER		DUPLEX RECEPTACLE, HORIZONTALLY MOUNTED
	BRANCH CIRCUIT PANEL BOARD		DUPLEX RECEPTACLE, HORIZ. MTD, GFI TYPE
	DISTRIBUTION PANEL BOARD		DUPLEX RECEPTACLE, HORIZ. MTD, MOUNT ABOVE COUNTER
	EQUIPMENT CABINET, AS NOTED		DUPLEX RECEPTACLE, HORIZ. MTD, GFI TYPE, MOUNT ABOVE COUNTER
	SWITCHBOARD		WEATHER RESISTANT GFI DUPLEX RECEPTACLE, ROOF MOUNT 18" ABOVE ADJACENT STRUCTURE WITH A WEATHERPROOF, IN-USE COVER
	CURRENT TRANSFORMER ENCLOSURE		WEATHER RESISTANT GFI DUPLEX RECEPTACLE, MOUNT 18" AFF WITH A WEATHERPROOF, IN-USE COVER
	METER		DUPLEX RECEPTACLE TO SERVE ELECTRIC WATER COOLER, MOUNT AT HEIGHT PER EQUIPMENT MANUFACTURER'S INSTALLATION GUIDELINES
	GENERATOR		DUPLEX RECEPTACLE TO SERVE TELEVISION, MOUNT AT SAME HEIGHT AND WITHIN 8" OF ADJACENT TV OUTLET
	AUTOMATIC TRANSFER SWITCH		DUPLEX RECEPTACLE, EMERGENCY
	SYSTEM GROUND ELECTRODE		FOURPLEX RECEPTACLE, EMERGENCY
	THERMOSTAT		FOURPLEX RECEPTACLE, SWITCHED
	MUSHROOM		DUPLEX RECEPTACLE, LOWER SWITCHED
	ELECTRICAL MANHOLE		DUPLEX RECEPTACLE, SWITCHED
	ELECTRICAL HANDHOLE		RANGE RECEPTACLE
	MOTOR CONNECTION, HORSEPOWER AS INDICATED		SPECIAL RECEPTACLE (MARK INDICATES OUTLET IN SCHEDULE)
	MANUAL SWITCH, WITH FUSE		FLUSH FLOOR OUTLET BOX
	MANUAL SWITCH, WITH THERMAL OVERLOAD		FLUSH FLOOR BOX WITH DUPLEX RECEPTACLE
	MAGNETIC MOTOR STARTER		FLUSH FLOOR BOX WITH FOURPLEX RECEPTACLE
	DISCONNECT SWITCH, WITH FUSE		MULTIDEVICE FLOOR BOX WITH DUPLEX AND DATA OUTLETS, DIVIDED 2 GANG BOX WITH SINGLE GANG PLASTER RING
	DISCONNECT SWITCH, WITHOUT FUSE		
	COMBINATION MOTOR STARTER		
	RELAY		
	PHOTOELECTRIC CELL		
	SWITCH, PUSH BUTTON, SINGLE		
	SWITCH, PUSH BUTTON, DOUBLE		
	SWITCH, PUSH BUTTON, TRIPLE		
	JUNCTION BOX, CEILING		
	JUNCTION BOX ABOVE SUSPENDED CEILING WITH FLEX CONNECTION		
	FLUSH JUNCTION BOX, WALL MOUNTED		
	SURFACE JUNCTION BOX, CEILING MOUNTED		
	SURFACE JUNCTION BOX, WALL MOUNTED		
	PULL BOX		
	EQUIPMENT CONNECTION		
	EQUIPMENT CONNECTION		
	MULTI-RECEPTACLE STRIP, SPACING AS INDICATED		
	DIVIDED RACEWAY		
	USB ONLY RECEPTACLE		
	RECEPTACLE WITH USB PORTS		

SAFETY

	FIRE ALARM CONTROL PANEL		SMOKE DETECTOR - IONIZATION TYPE (D=DUCT)
	FIRE ALARM ANNUNCIATOR PANEL		SMOKE DETECTOR - PHOTOELECTRIC TYPE (D=DUCT)
	N.A.C. EXTENDER PANEL		SMOKE DETECTOR - IONIZATION TYPE
	MANUAL FIRE ALARM PULL STATION		SMOKE DETECTOR - PHOTOELECTRIC TYPE
	FIRE ALARM BELL		HEAT DETECTOR RATE-OF-RISE AND FIXED TEMPERATURE, 135°F
	FIRE ALARM HORN		HEAT DETECTOR RATE-OF-RISE AND FIXED TEMPERATURE, 200°F
	FIRE ALARM VISUAL WARNING SIGNAL		HEAT DETECTOR FIXED TEMPERATURE ONLY, 135°F
	FIRE ALARM BELL, WITH VISUAL WARNING SIGNAL		HEAT DETECTOR FIXED TEMPERATURE ONLY, 200°F
	FIRE ALARM HORN, WITH VISUAL WARNING SIGNAL		SPRINKLER SYSTEM ELECTRONIC BELL ALARM
	MINI FIRE ALARM HORN, WITH VISUAL WARNING SIGNAL		FIRE ALARM MAGNETIC DOOR HOLDER
	FIRE ALARM SPEAKER, WITH VISUAL WARNING SIGNAL		REMOTE INDICATOR LAMP
	FIRE ALARM SPEAKER, FLUSH IN CEILING		OS&Y VALVE
	FIRE ALARM SPEAKER, WITH VISUAL WARNING SIGNAL, CEILING		WATER FLOW ALARM SWITCH
	FIRE ALARM VISUAL WARNING SIGNAL, CEILING		TAMPER SWITCH
	ECS SPEAKER, FLUSH IN CEILING		POST INDICATOR VALVE SWITCH
	ECS SPEAKER, WITH VISUAL WARNING SIGNAL, CEILING		BEAM TRANSMITTER
	ECS VISUAL WARNING SIGNAL, CEILING		BEAM RECEIVER
			FIRE FIGHTER'S TELEPHONE
			DISTRIBUTED ANTENNA (CEILING)

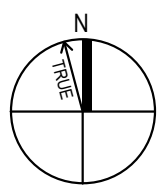
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LIGHTING CONTROL INTENT PLAN

SCALE: 1" = 10'-0"

Space Type	Specific Rm#	Turn-on	Operating hours	Turn-off
All Spaces		If a fire alarm or intrusion alarm occurs all lights come to normal function.		
Corridors & Circulation Spaces		Once the building is disarmed lights operate on occupancy sensors	Lighting is control by Occupancy Sensors. Lights are 25% when spaces is unoccupied, 100% when spaces is occupied. Lights can be over ridden with key switch, key switch is 100% or OFF. Key switch must control both normal and emergency circuits, Em fixture must come on in the event of power loss even if key switch is off.	Once the building is armed lights cycle off after 10mins
Classrooms	G102, G104, G106, G108, G114	Once the building is disarmed lights operate on occupancy sensors and photo cells. Lights are set-up to be manual on, lights to be switched on. Auto-dimming for photocells.	There is rocker at the door and 4 button scene switch with rocker at the presentation location(teacher's desk). Rocker turns all light on/off and can dim all lights. At the presentation location scenes are 1. All on 2. All off 3. Presentation Mode; C off others to 25% 4. undecided Rocker dims all lights	When the rooms is un-occupied for 10 mins lights cycle off When the building arms, lights cycle off
Library	G110	Once the building is disarmed lights operate on occupancy sensors. Lights are manual-on.	There are (2) 4- button and rocker stations to over ride the lights	When the room is unoccupied for 20 mins lights cycle off...
Restroom	G101, G103	Lights operate on occupancy sensors.	In single occupancy restrooms there is a single button station. There is no diming in this space.	When the rooms is un-occupied 10 mins for single occupancy the lights cycle off. After 15 mins for gang...
Workroom	G112	Once the building is disarmed lights operate on occupancy sensors and photo cells. Manual-on Lights and autodimming for photo cells.	Lights can be over ridden by the user. The user has the ability to turn lights on/off and dimming at button station near the door.	When the rooms is un-occupied for 20 mins lights cycle off When the building arms, lights cycle off
Exterior Lights		Lights are controlled based on the astronomical clock and intrusion system. Lights come on 30 mins before Sunset and when the building is disarmed in the morning. The light fixture directly above door F100 and the light fixture under front entry canopy to be controlled with parking lot lights, on astronomical clock only.	Over-ride located in Main Elec. Room	When the building arms, lights cycle off after 15mins and the lights cycle off 30 mins after sunrise.

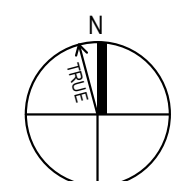
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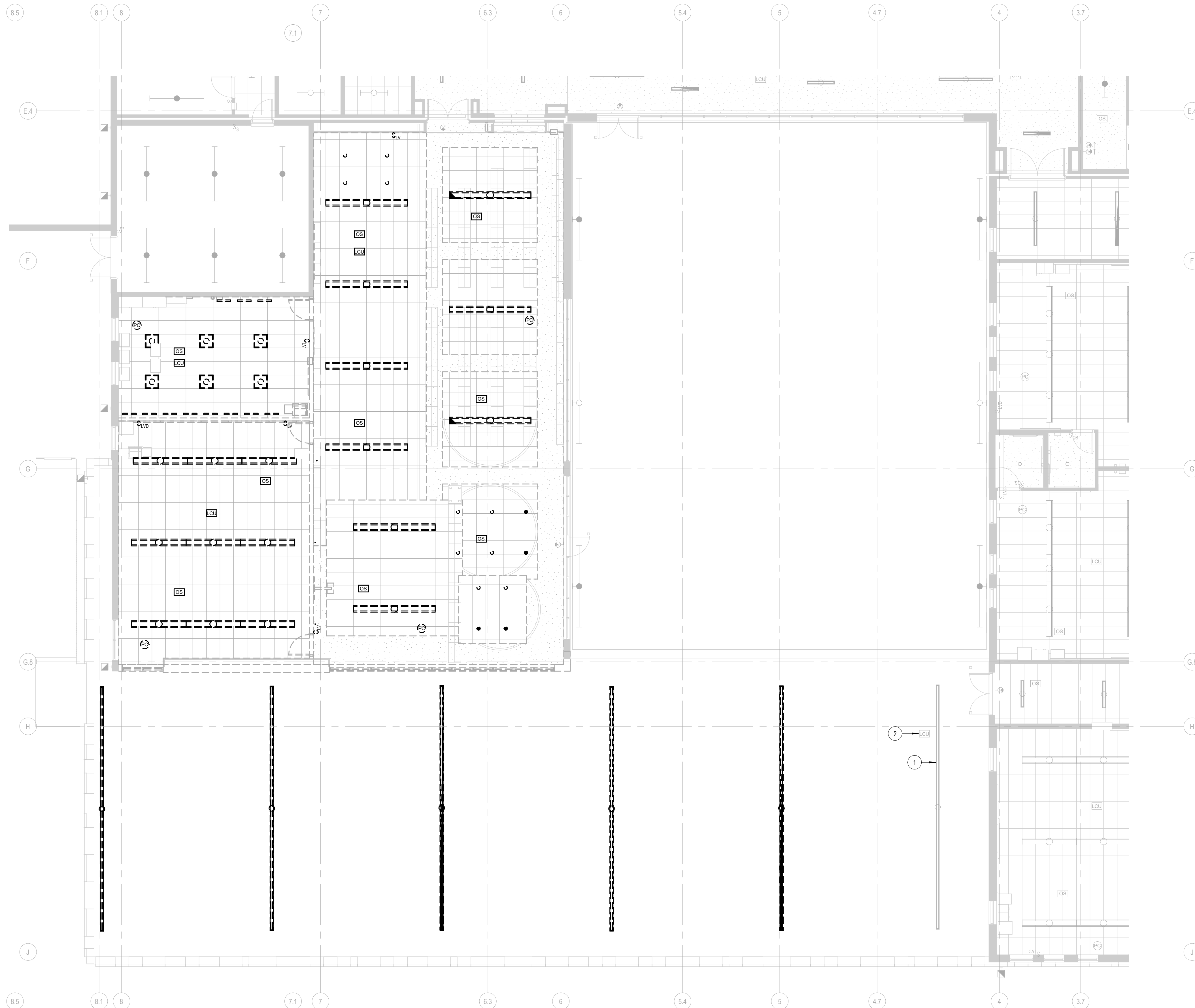
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LIGHTING DEMOLITION PLAN, LEVEL 1

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



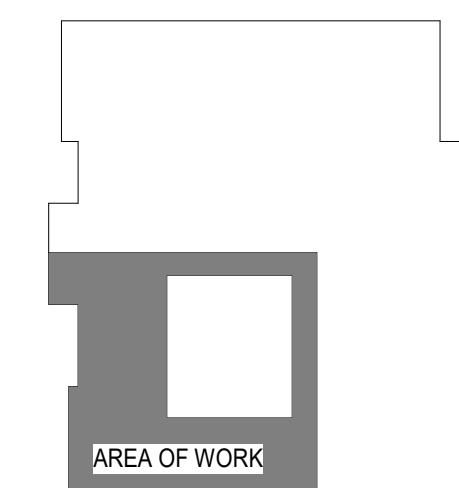
GENERAL NOTES

1. ALL LIGHTING, LIGHTING CONTROLS, POWER, DATA, AV, SECURITY, CAMERAS AND FIRE ALARM DEVICES IN AREA OF WORK TO BE DEMOLISHED BACK TO LAST JUNCTION BOX WITHIN THE CEILING. ALL DEVICES SHALL BE SAVED FOR RE-USE.
2. EXISTING LIGHTING AND LIGHTING CONTROL, POWER/DATA, SPEAKERS, AV AND FIRE ALARM DEVICES IN LIBRARY, WORK ROOM AND COMPUTER LAB TO BE REUSED IN THE NEW LOCATIONS.
3. ALL NEW DEVICES IN THE CLASSROOMS TO MATCH EXISTING SCHOOL.

SHEET NOTES

- | | |
|---|--|
| 1 | EXISTING LIGHT FIXTURE TO BE REMOVED AND REINSTALLED UNDER THE CENTER OF CANOPY. |
| 2 | EXISTING LIGHTING CONTROL UNIT (LCU) TO BE RELOCATED NEXT TO EXISTING FIXTURE. |

KEY PLAN



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BEAVERTON SCHOOL DISTRICT
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BEAVERTON, OR 97008

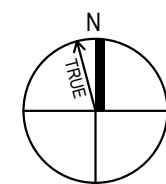
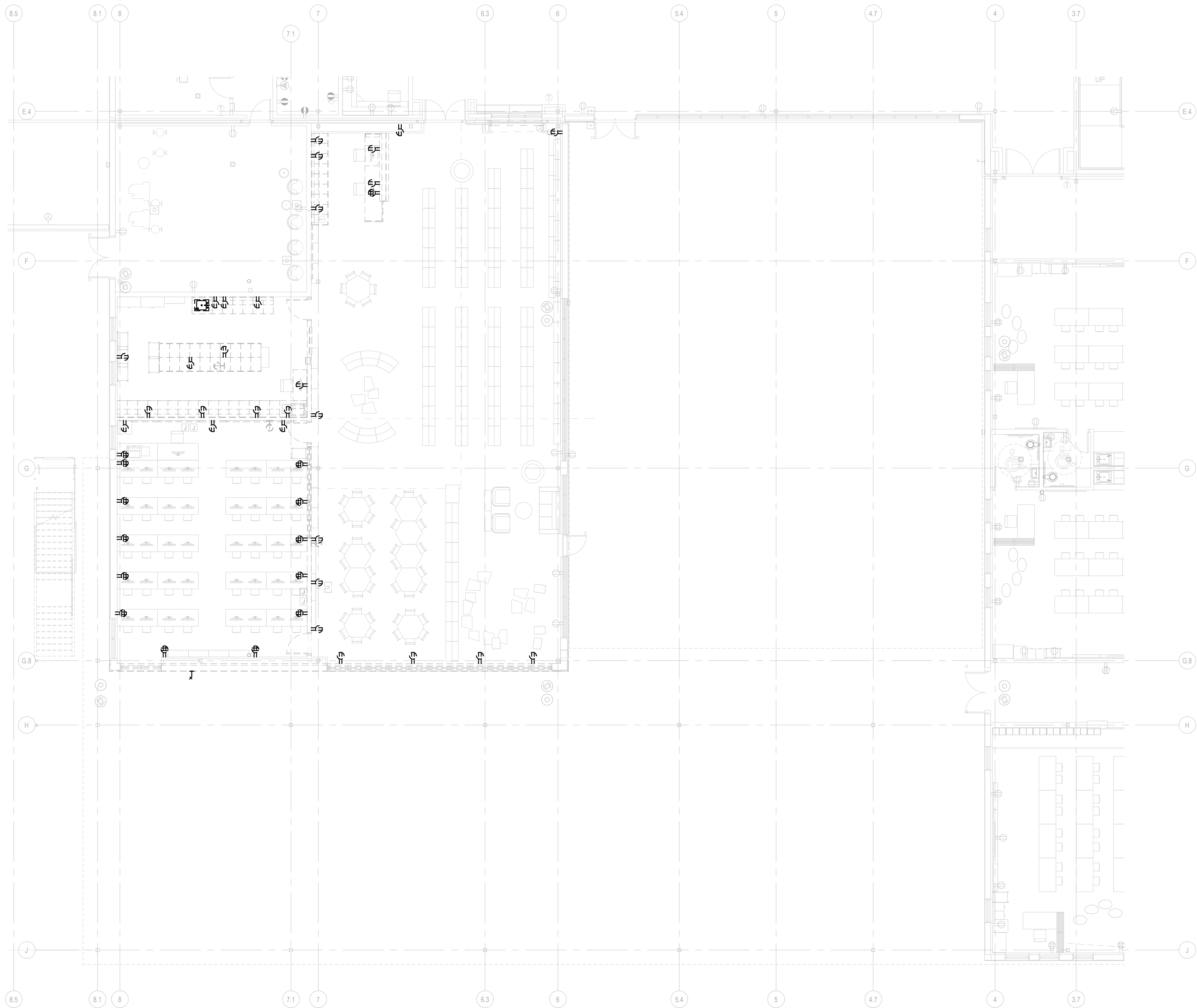
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REVISIONS

74-21102-00

LIGHTING
DEMOLITION
PLAN, LEVEL 1

ED1.1



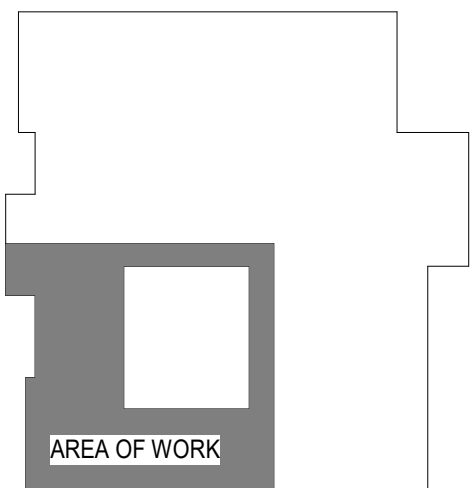


POWER DEMOLITION PLAN, LEVEL 1
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. ALL LIGHTING, LIGHTING CONTROLS, POWER, DATA, AV, SECURITY, CAMERAS AND FIRE ALARM DEVICES IN AREA OF WORK TO BE DEMOLISHED BACK TO LAST JUNCTION BOX WITHIN THE CEILING. ALL DEVICES SHALL BE SAVED FOR RE-USE.
2. EXISTING LIGHTING AND LIGHTING CONTROL, POWER/DATA, SPEAKERS, AV AND FIRE ALARM DEVICES IN LIBRARY, WORK ROOM AND COMPUTER LAB TO BE REUSED IN THE NEW LOCATIONS.
3. ALL NEW DEVICES IN THE CLASSROOMS TO MATCH EXISTING SCHOOL.

KEY PLAN



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REVISIONS

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**POWER
DEMOLITION
PLAN, LEVEL 1**

ED2.1

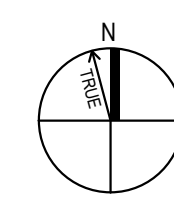
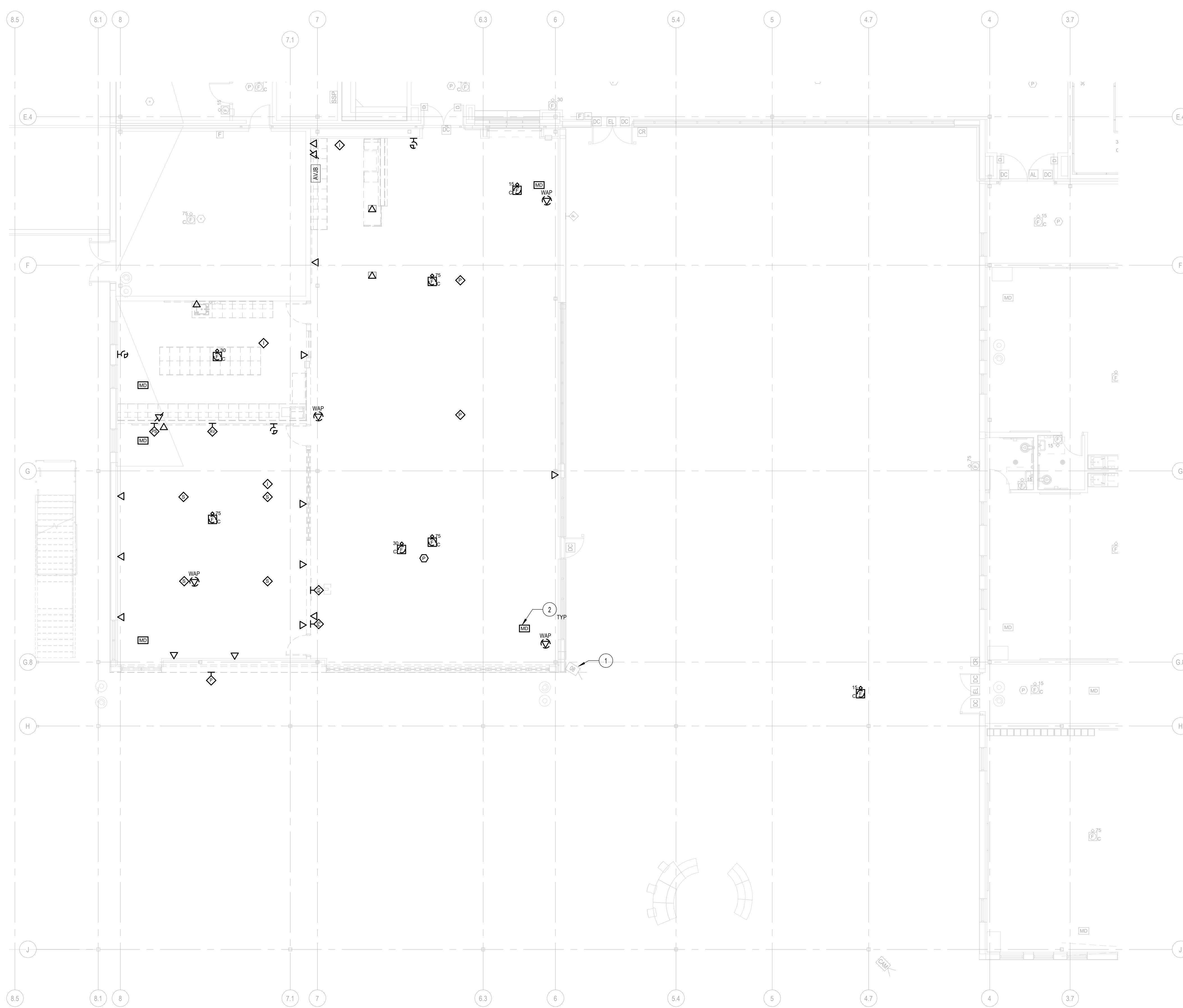
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SPECIAL SYSTEMS DEMOLITION PLAN, LEVEL 1

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

GENERAL NOTES

1. ALL LIGHTING, LIGHTING CONTROLS, POWER, DATA, AV, SECURITY, CAMERAS AND FIRE ALARM DEVICES IN AREA OF WORK TO BE DEMOLISHED BACK TO LAST JUNCTION BOX WITHIN THE CEILING. ALL DEVICES SHALL BE SAVED FOR RE-USE.
2. EXISTING LIGHTING AND LIGHTING CONTROL, POWER/DATA, SPEAKERS, AV AND FIRE ALARM DEVICES IN LIBRARY, WORK ROOM AND COMPUTER LAB TO BE REUSED IN THE NEW LOCATIONS.
3. ALL NEW DEVICES IN THE CLASSROOMS TO MATCH EXISTING SCHOOL.

SHEET NOTES

- | | |
|---|--|
| 1 | EXISTING EXTERIOR CAMERA TO BE SALVAGED REUSED. SEE NEW LOCATION ON SHEET E3.1 |
| 2 | EXISTING MOTION SENSORS TO BE SALVAGED AND REUSED WHERE POSSIBLE. |



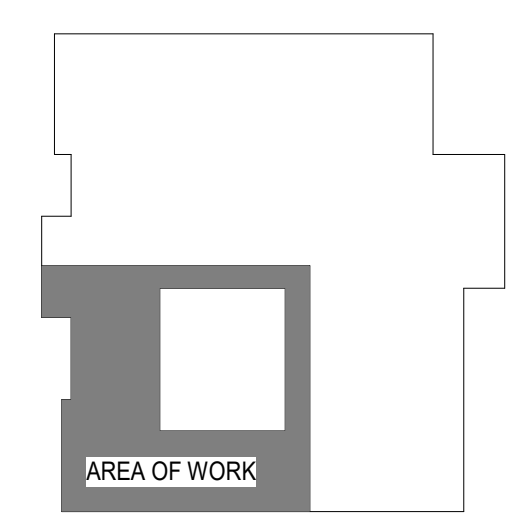
VOSE ES ADDITION
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74-21102-00
SPECIAL
SYSTEMS
DEMOLITION
PLAN, LEVEL 1

ED3.1

KEY PLAN



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E

GENERAL NOTES

1. ALL LIGHTING, LIGHTING CONTROLS, POWER, DATA, AV, SECURITY, CAMERAS AND FIRE ALARM DEVICES IN AREA OF WORK TO BE DEMOLISHED BACK TO LAST JUNCTION BOX WITHIN THE CEILING. ALL DEVICES SHALL BE SAVED FOR RE-USE.
2. EXISTING LIGHTING AND LIGHTING CONTROL, POWER/DATA, SPEAKERS, AV AND FIRE ALARM DEVICES IN LIBRARY, WORK ROOM AND COMPUTER LAB TO BE REUSED IN THE NEW LOCATIONS.
3. ALL NEW DEVICES IN THE CLASSROOMS TO MATCH EXISTING SCHOOL.

SHEET NOTES

1. EXISTING EXTERIOR CANOPY FIXTURE TO BE RELOCATED TO THE CENTER OF CANOPY.
2. EXHAUST FAN IN RESTROOM TO BE CONTROLLED VIA LIGHTING SWITCH. TIME OUT FOR EXHAUST FAN TO BE SAME AS LIGHTING FIXTURES TIME OUT. SEE LIGHTING CONTROL INTENT FOR RESTROOMS ON SHEET E0.2 FOR MORE INFORMATION
3. FIXTURE TYPE CL1 TO BE MOUNTED ON TOP OF THE CLOUD. FIELD VERIFY EXACT LENGTH OF FIXTURE PRIOR TO INSTALLATION.
4. FIXTURE TO BE TYPE RL3-8 FOR BASE BID, PROVIDE RL3-4 INSTEAD OF RL3-8 IF ALTERNATE 1 IS APPROVED.
5. FIXTURE TO BE REMOVED FROM SCOPE IF ALTERNATE 1 IS APPROVED.



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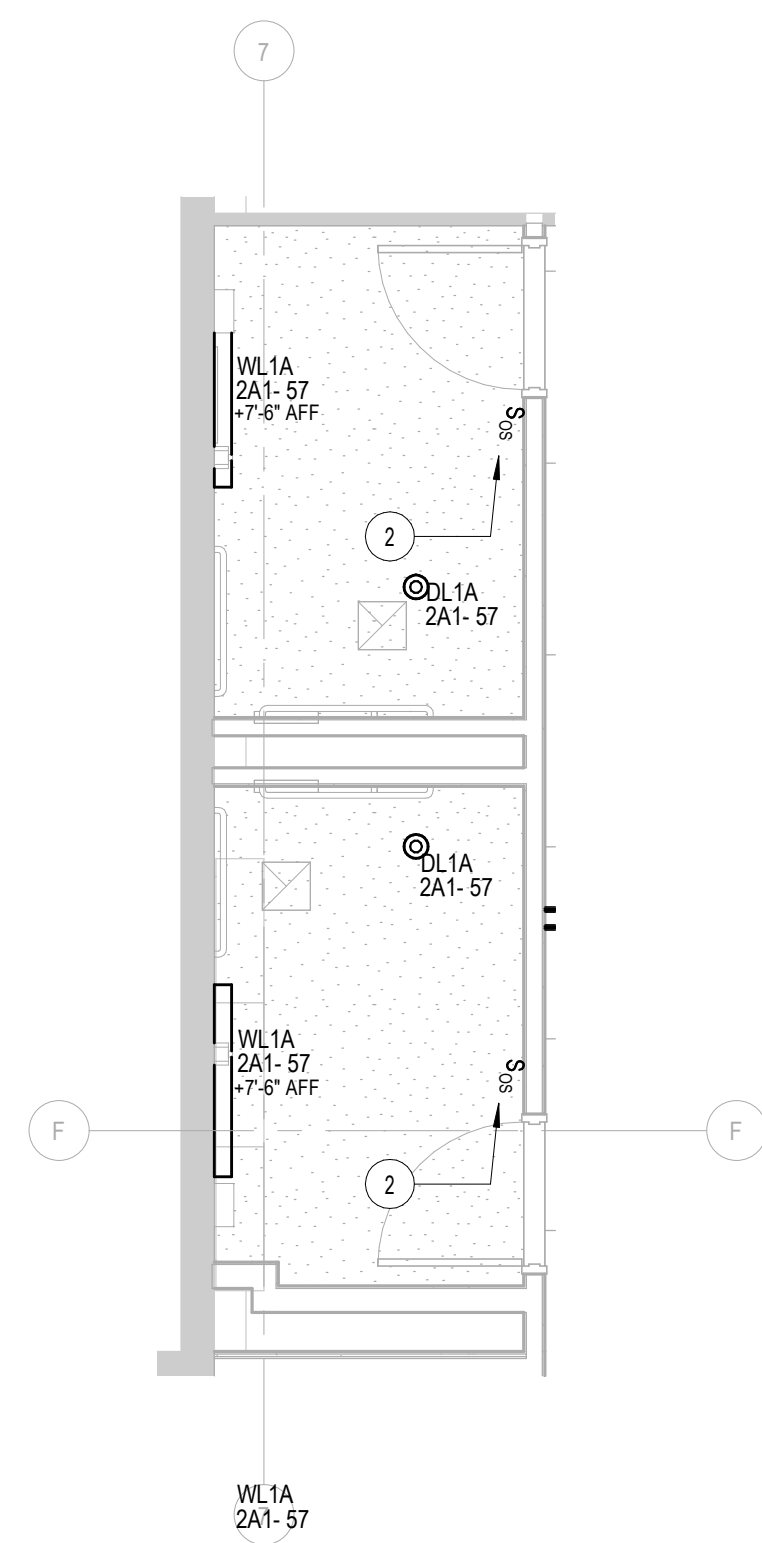
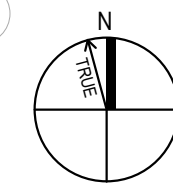
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LIGHTING PLAN,
LEVEL 1

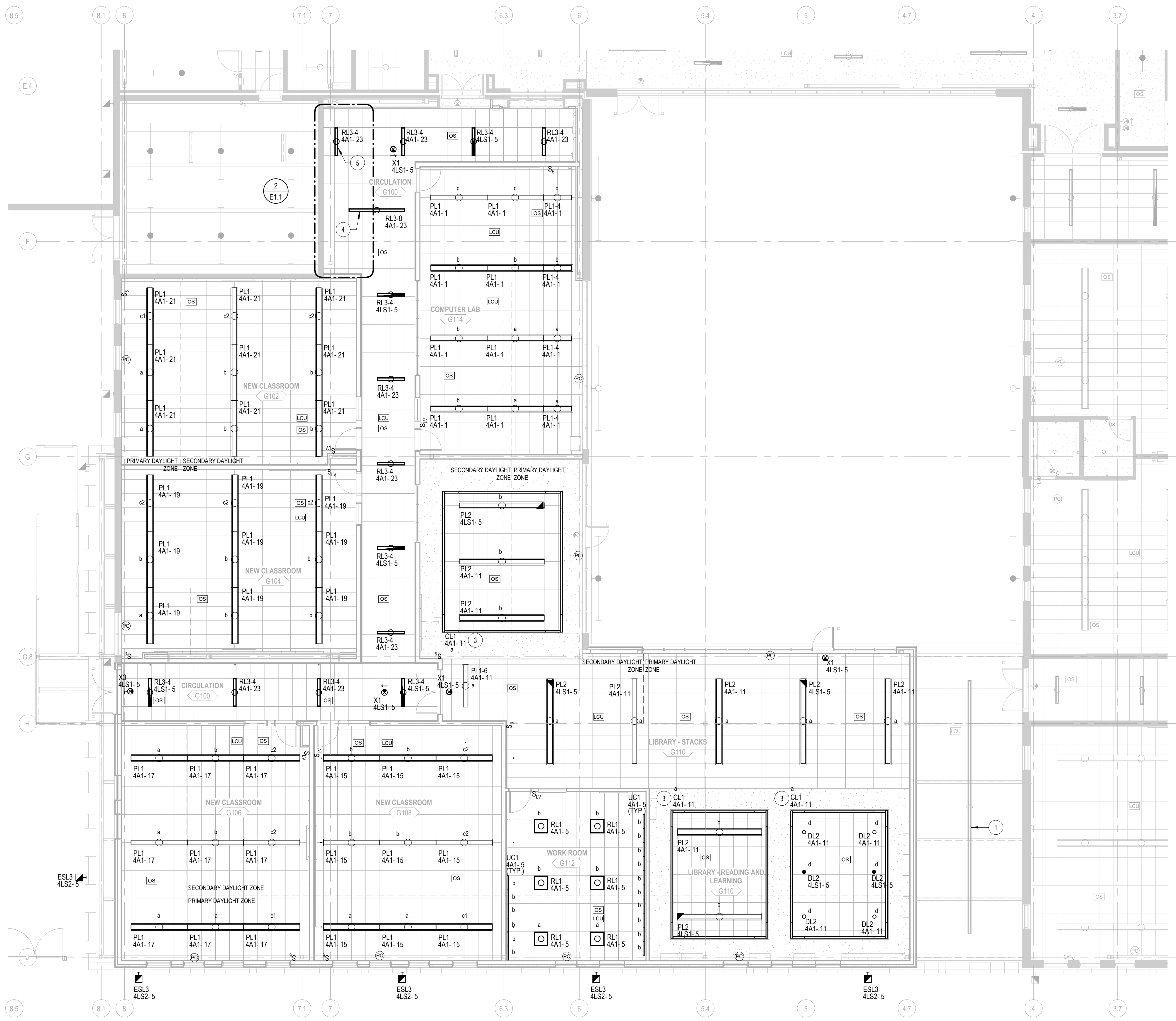
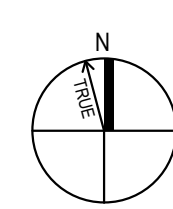
E1.1



RESTROOM LIGHTING PLAN-ALT 1
SCALE: 1/4" = 1'-0"



LIGHTING PLAN, LEVEL 1
SCALE: 1/8" = 1'-0"



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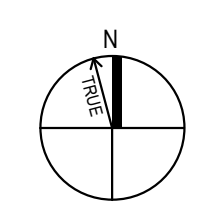
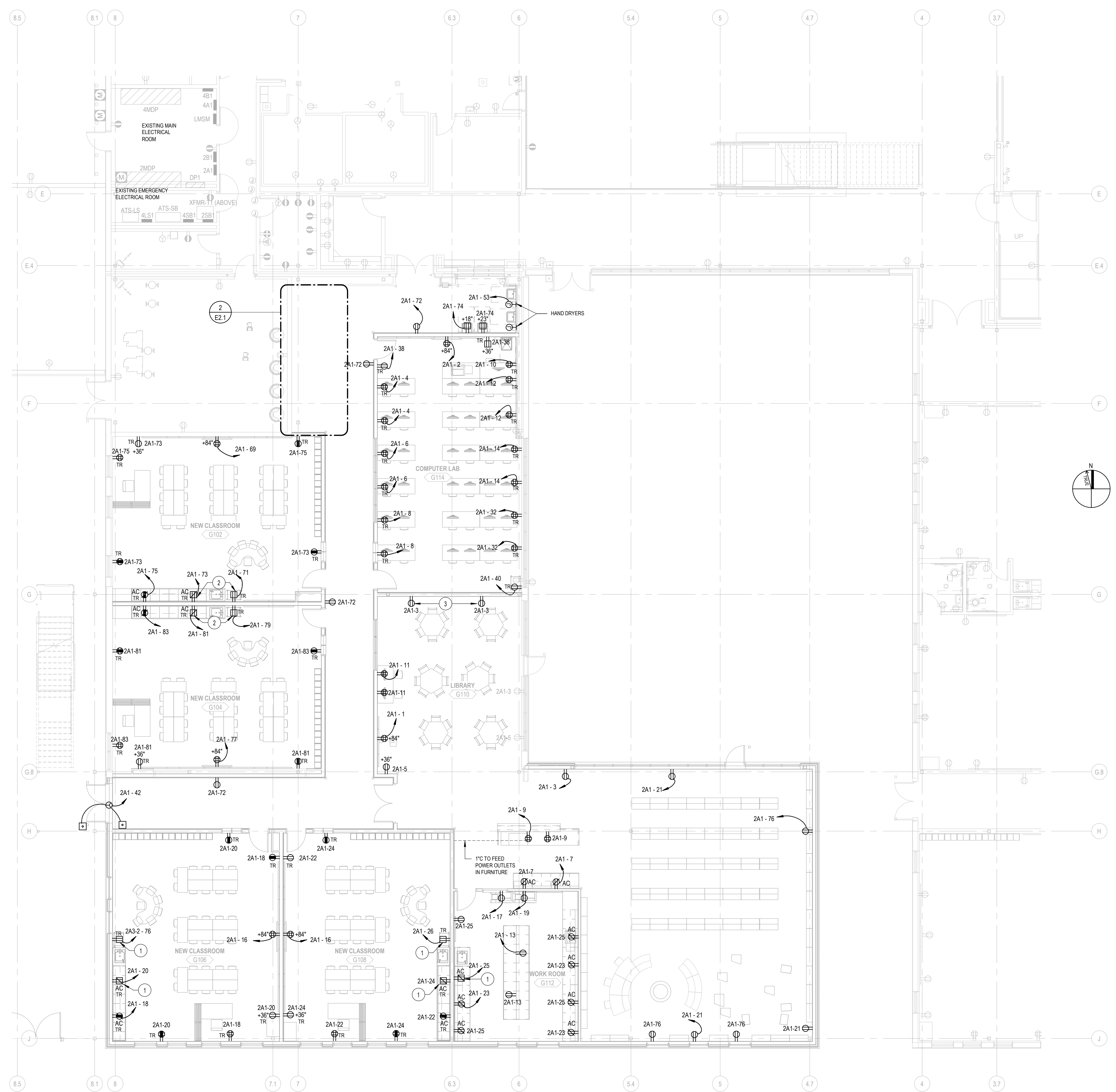
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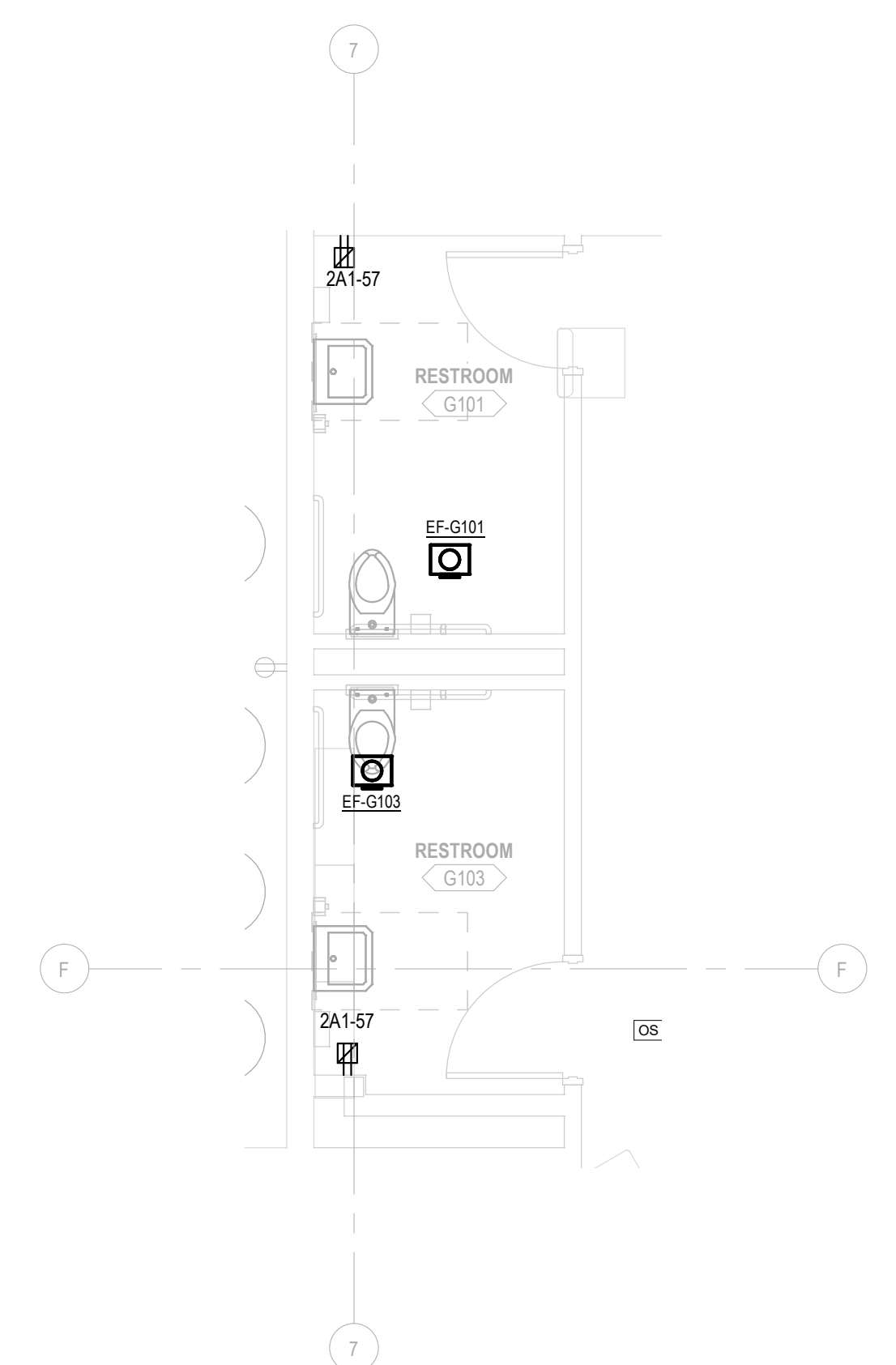
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RESTROOM POWER PLAN - ALT 1
SCALE: 1/4" = 1'-0"



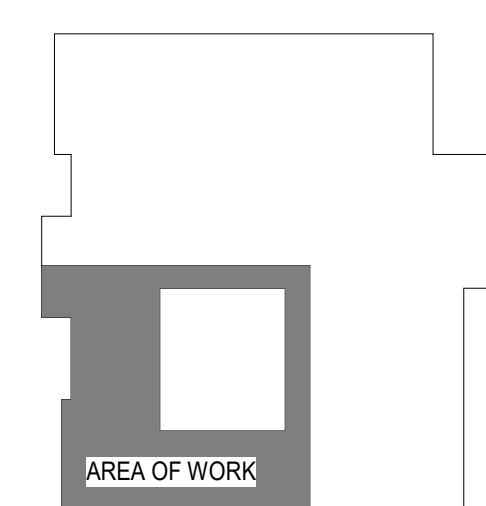
GENERAL NOTES

1. ALL LIGHTING, LIGHTING CONTROLS, POWER, DATA, AV, SECURITY, CAMERAS AND FIRE ALARM DEVICES IN AREA OF WORK TO BE DEMOLISHED BACK TO LAST JUNCTION BOX WITHIN THE CEILING. ALL DEVICES SHALL BE SAVED FOR RE-USE.
2. EXISTING LIGHTING AND LIGHTING CONTROL, POWER/DATA, SPEAKERS, AV AND FIRE ALARM DEVICES IN LIBRARY, WORK ROOM AND COMPUTER LAB TO BE REUSED IN THE NEW LOCATIONS.
3. ALL NEW DEVICES IN THE CLASSROOMS TO MATCH EXISTING SCHOOL.
4. ALL CLASSROOM PRESENTER STATION OUTLETS AT +36" AFF TO BE INSTALLED OUTSIDE OF DISPLAY BOARDS.

SHEET NOTES

1. OUTLET TO BE STANDARD DUPLEX FOR BASE BID. PROVIDE GFCI OUTLET ONLY IF ALTERNATE 2 IS APPROVED.
2. OUTLET TO BE STANDARD DUPLEX FOR BASE BID. PROVIDE GFCI OUTLET ONLY IF ALTERNATE 1 IS APPROVED.
3. OUTLETS TO BE PROVIDED ONLY FOR BASE BID.

KEY PLAN



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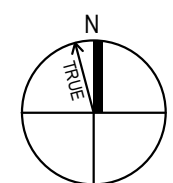
100% CD
2/26/2021
REVISIONS

74-21102-00
POWER PLAN, LEVEL 1

E2.1

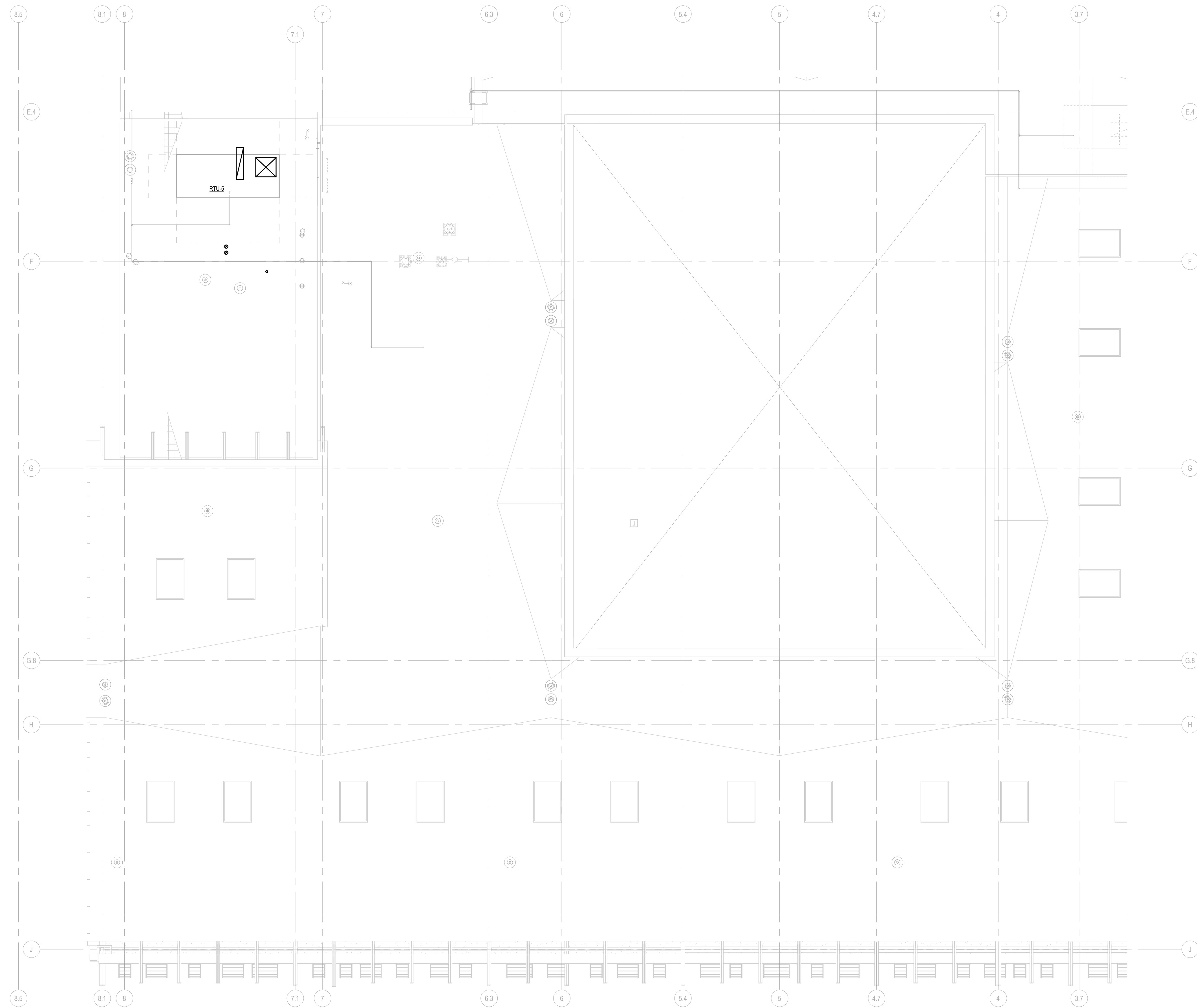


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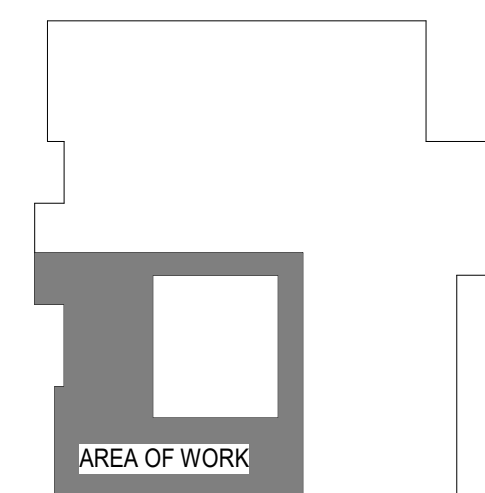


ROOF POWER PLAN

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



KEY PLAN



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BEAVERTON SCHOOL DISTRICT
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REVISIONS

74-21102-00
ROOF POWER
PLAN, LEVEL 1

E2.3

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SPECIAL SYSTEMS PLAN, LEVEL 1
SCALE: 1/8" = 1'-0"

RESTROOM SYSTEMS PLAN-ALT 1
SCALE: 1/4" = 1'-0"

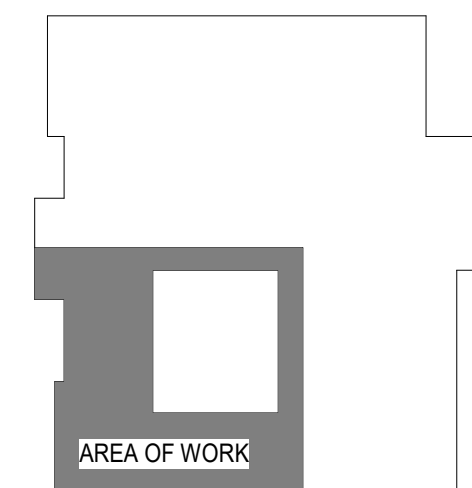
GENERAL NOTES

1. ALL LIGHTING, LIGHTING CONTROLS, POWER, DATA, AV, SECURITY, CAMERAS AND FIRE ALARM DEVICES IN AREA OF WORK TO BE DEMOLISHED BACK TO LAST JUNCTION BOX WITHIN THE CEILING. ALL DEVICES SHALL BE SAVED FOR RE-USE.
2. EXISTING LIGHTING AND LIGHTING CONTROL, POWER/DATA, SPEAKERS, AV AND FIRE ALARM DEVICES IN LIBRARY, WORK ROOM AND COMPUTER LAB TO BE REUSED IN THE NEW LOCATIONS.
3. ALL NEW DEVICES IN THE CLASSROOMS TO MATCH EXISTING SCHOOL.
4. ALL CLASSROOM PRESENTER STATION OUTLETS AT +36" AFF TO BE INSTALLED OUTSIDE OF DISPLAY BOARDS.

SHEET NOTES

- | | |
|---|---|
| 1 | PROVIDE NEW OUTDOOR RATED OMNI CAMERA WITH 360 DEGREE VIEW. |
| 2 | REINSTALL EXISTING CAMERA AT THIS LOCATION. |

KEY PLAN



VOSE ES ADDITION
BEAVERTON SCHOOL DISTRICT
11350 SW DENNEY RD
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SPECIAL
SYSTEMS PLAN,
LEVEL 1

E3.1

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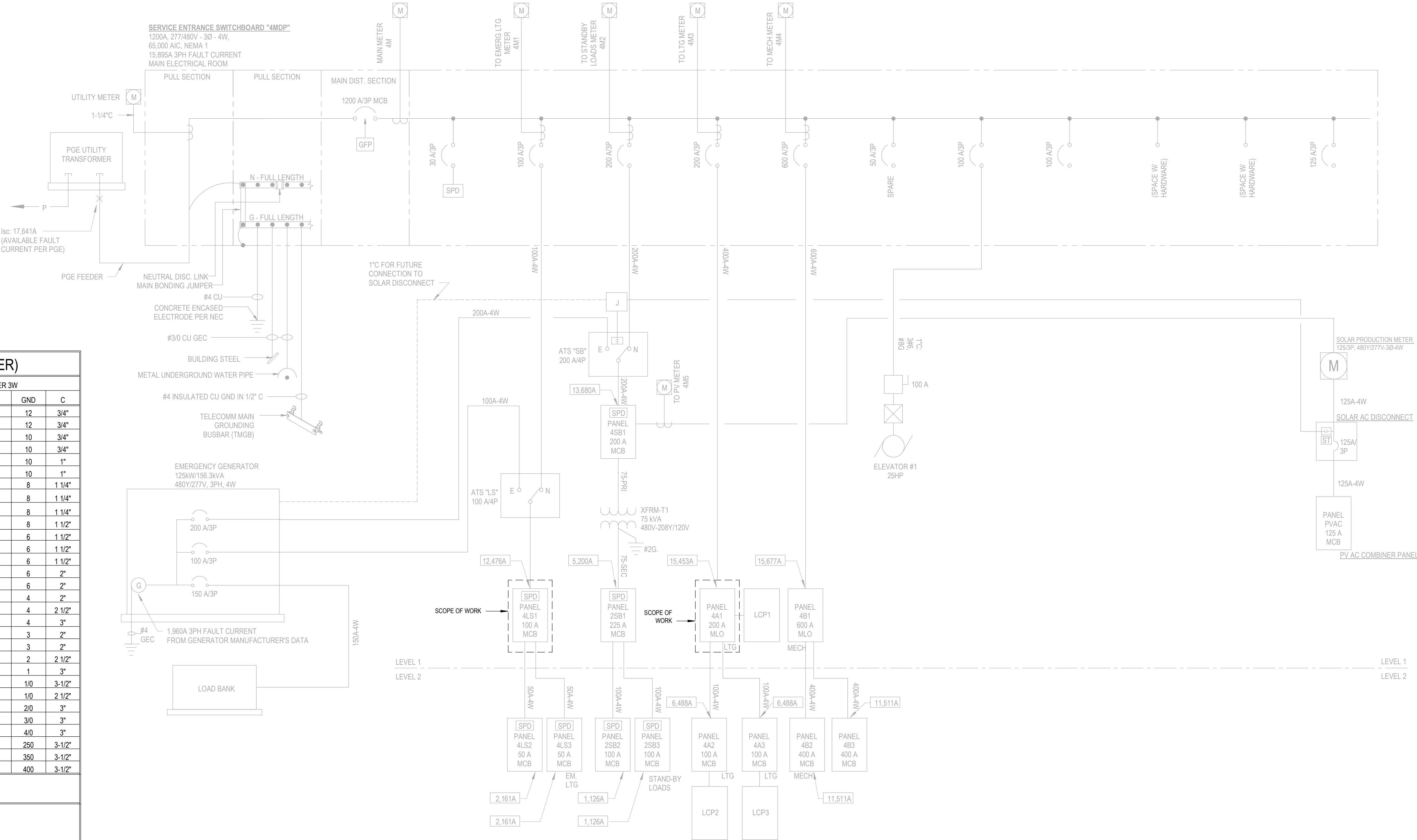
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E

TRANSFORMER FEEDER TABLE				
GENERAL PURPOSE TRANSFORMERS				
KVA	PRI (PRIMARY)	SEC (SECONDARY)	GEC	
15	3#10-1/10G-3/4"	4#6-#6G-1"	#8	
30	3#6-1/10G-1"	4#1-#6G-1 1/2"	#6	
45	3#4-#6G-1 1/4"	4#1/0-#6G-2"	#6	
75	3#1-#6G-1 1/2"	4#4/0-#2G-2 1/2"	#2	
112.5	3#1/0-#6G-2"	(2)2" EACH WITH 4#3/0, #1/0G PARALLEL FEEDER	#1/0	
150	3#4/0-#2G-2 1/2"	(2)3" EACH WITH 4-250KCMIL, #1/0G-PARALLEL FEEDER	#1/0	
225	3-350KCMIL-#2G-3"	(2)3" EACH WITH 4-350KCMIL, #2/0G-PARALLEL FEEDER	#2/0	
K4-RATED TRANSFORMERS				
15K	3#10-1/10G-3/4"	3#4-#2(N)-#6G-1 1/2"	#8	
30K	3#6-1/10G-1"	3#1/0-#3/0(N)-#6G-2 1/2"	#6	
45K	3#4-#6G-1 1/4"	3#3/0-#250KCMIL(N)-#4G-2 1/2"	#4	
75K	3#1-#8G-1 1/2"	3-300KCMIL-2#4/0(N)-#1/0G-3"	#1/0	
* GEC (GROUNDING ELECTRODE CONDUCTOR PER NEC 250-66)				

3Ø FEEDER SCHEDULE (COPPER)									
MARK (AMPACITY)	FEEDER 4W				FEEDER 3W				
	# SETS	ø & N	GND	C	# SETS	ø	GND	C	
15	1	12	12	3/4"	1	12	12	3/4"	
20	1	12	12	3/4"	1	12	12	3/4"	
30	1	10	10	3/4"	1	10	10	3/4"	
40	1	8	10	1"	1	8	10	3/4"	
50	1	6	10	1"	1	6	10	1"	
60	1	4	10	1 1/4"	1	4	10	1"	
70	1	4	8	1 1/4"	1	4	8	1 1/4"	
80	1	3	8	1 1/4"	1	3	8	1 1/4"	
90	1	2	8	1 1/2"	1	2	8	1 1/4"	
100	1	1	8	1 1/2"	1	1	8	1 1/2"	
110	1	1	6	1 1/2"	1	1	6	1 1/2"	
125	1	1/0	6	2"	1	1/0	6	1 1/2"	
150	1	1/0	6	2"	1	1/0	6	1 1/2"	
175	1	2/0	6	2"	1	2/0	6	2"	
200	1	3/0	6	2"	1	3/0	6	2"	
225	1	4/0	4	2 1/2"	1	4/0	4	2"	
250	1	250	4	3"	1	250	4	2 1/2"	
300	1	350	4	3"	1	350	4	3"	
400	2	3/0	3	2 1/2"	2	3/0	3	2"	
450	2	4/0	3	2 1/2"	2	4/0	3	2"	
500	2	250	2	3"	2	250	2	2 1/2"	
600	2	350	1	3"	2	350	1	3"	
700	2	500	1/0	4"	2	500	1/0	3-1/2"	
800	3	300	1/0	3"	3	300	1/0	2 1/2"	
1000	3	400	2/0	3"	3	400	2/0	3"	
1200	4	350	3/0	3-1/2"	4	350	3/0	3"	
1600	5	400	4/0	3-1/2"	5	400	4/0	3"	
2000	6	500	250	4"	6	500	250	3-1/2"	
2500	7	500	350	4"	7	500	350	3-1/2"	
3000	8	500	400	4"	8	500	400	3-1/2"	
NOTES									
FEEDER SHALL BE 4-WIRE (4W) UNLESS DENOTED OTHERWISE.									
ALL FEEDERS SHALL HAVE AN EQUIPMENT GROUND CONDUCTOR.									
NOT ALL SIZES USED									

3Ø FEEDER SCHEDULE (ALUMINUM)									
MARK (AMPACITY)	FEEDER 4W				FEEDER 3W				
	# SETS	ø & N	GND	C	# SETS	ø	GND	C	
125	1	2/0	4	2"	1	2/0	4	2"	
150	1	3/0	4	2"	1	3/0	4	2"	
175	1	4/0	4	2 1/2"	1	4/0	4	2"	
200	1	250	4	2 1/2"	1	250	4	2 1/2"	
225	1	300	2	3"	1	300	2	2 1/2"	
250	1	350	2	3"	1	350	2	2 1/2"	
300	1	500	2	3-1/2"	1	500	2	3"	
400	2	250	1	2-1/2"	2	250	1	2 1/2"	
450	2	300	1	3"	2	300	1	2 1/2"	
500	2	350	1/0	3"	2	350	1/0	2 1/2"	
600	2	500	2/0	3-1/2"	2	500	2/0	3"	
700	3	350	3/0	3"	3	350	3/0	3"	
800	3	400	3/0	3"	3	400	3/0	3"	
1000	4	350	4/0	3"	4	350	4/0	2 5"	
1200	5	500	250	3-1/2"	5	500	250	3"	
1600	6	400	4/0"	3"	6	350	4/0"	3"	
2000	7	500	250"	3-1/2"	7	500	250"	3"	
2500	9	500	350"	3-1/2"	9	500	350"	3"	
3000	10	500	400"	3-1/2"	10	500	400"	3"	
NOTES									
ALUMINUM CONDUCTORS ARE PERMITTED FOR FEEDERS BETWEEN SWITCHBOARDS, DISTRIBUTION PANELS, PANELBOARDS, MOTOR CONTROL CENTERS, DRY TYPE TRANSFORMERS AND BUSWAY PLUG-IN UNITS ONLY.									
ALUMINUM CONDUCTORS ARE NOT PERMITTED FOR CIRCUIT RATING OF 100A OR LOWER.									
ALUMINUM CONDUCTORS ARE NOT PERMITTED FOR BRANCH CIRCUITS OR EQUIPMENT CONNECTIONS.									
*GROUNDING CONDUCTOR FOR CIRCUIT RATING OF 1600A AND HIGER SHALL BE COPPER CONDUCTORS.									



FOR REFERENCE ONLY

ABBREVIATIONS

SES	SERVICE ENTRANCE RATED
S.U.S.E.	SUITABLE FOR USE AS SERVICE EQUIPMENT
SCCR	SHORT CIRCUIT CURRENT RATING
Isc:	AVAILABLE SHORT CIRCUIT CURRENT IN AMPERES

SYMBOLS

	EQUIPMENT GROUND FAULT PROTECTION
	SHUNT-TRIP CIRCUIT INTERRUPTER



VOSE ES ADDITION

BEAVERTON SCHOOL DISTRICT

11350 SW DENNEY RD
BEAVERTON, OR 97008

100% CD
2/26/2021
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74-21102-00

EXISTING
ONE-LINE
DIAGRAM

E5.1

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TRANSFORMER FEEDER TABLE				
GENERAL PURPOSE TRANSFORMERS				
KVA	PRI (PRIMARY)	SEC (SECONDARY)		GEC
15	3#10,#10G-3/4"C	4#6,#8G-1"C		#8
30	3#6,#10G-1"C	4#1,#6G-1 1/2"C		#6
45	3#4,#8G-1 1/4"C	4#1/0,#6G-2"C		#6
75	3#1,#8G-1 1/2"C	4#4/0,#2G-2 1/2"C		#2
112.5	3#1/0,#6G-2"C	(2)2"C EACH WITH 4#3/0, #1/0G PARALLEL FEEDER		#1/0
150	3#4/0,#2G-2 1/2"C	(2)3"C EACH WITH 4-250Kcmil, #1/0G PARALLEL FEEDER		#1/0
225	3-350Kcmil,#2G-3"C	(2)3"C EACH WITH 4-350Kcmil, #2/0G-PARALLEL FEEDER		#2/0
K4-RATED TRANSFORMERS				
15K	3#10,#10G-3/4"C	3#4,#2(N),#8G-1 1/2"C		#8
30K	3#6,#10G-1"C	3#1/0,#3/0(N),#6G-2 1/2"C		#6
45K	3#4,#8G-1 1/4"C	3#3/0,#250Kcmil(N),#4G-2 1/2"C		#4
75K	3#1,#8G-1 1/2"C	3-300Kcmil,2#4/0(N),#1/0G-3"C		#1/0
* GEC (GROUNDING ELECTRODE CONDUCTOR PER NEC 250-66)				

3Ø FEEDER SCHEDULE (COPPER)								
MARK (AMPACITY)	FEEDER 4W				FEEDER 3W			
	# SETS	ø & N	GND	C	# SETS	ø	GND	C
15	1	12	12	3/4"	1	12	12	3/4"
20	1	12	12	3/4"	1	12	12	3/4"
30	1	10	10	3/4"	1	10	10	3/4"
40	1	8	10	1"	1	8	10	3/4"
50	1	6	10	1"	1	6	10	1"
60	1	4	10	1 1/4"	1	4	10	1"
70	1	4	8	1 1/4"	1	4	8	1 1/4"
80	1	3	8	1 1/4"	1	3	8	1 1/4"
90	1	2	8	1 1/2"	1	2	8	1 1/4"
100	1	1	8	1 1/2"	1	1	8	1 1/2"
110	1	1	6	1 1/2"	1	1	6	1 1/2"
125	1	1/0	6	2"	1	1/0	6	1 1/2"
150	1	1/0	6	2"	1	1/0	6	1 1/2"
175	1	2/0	6	2"	1	2/0	6	2"
200	1	3/0	6	2"	1	3/0	6	2"
225	1	4/0	4	2 1/2"	1	4/0	4	2"
250	1	250	4	3"	1	250	4	2 1/2"
300	1	350	4	3"	1	350	4	3"
400	2	3/0	3	2 1/2"	2	3/0	3	2"
450	2	4/0	3	2 1/2"	2	4/0	3	2"
500	2	250	2	3"	2	250	2	2 1/2"
600	2	350	1	3"	2	350	1	3"
700	2	500	1/0	4"	2	500	1/0	3-1/2"
800	3	300	1/0	3"	3	300	1/0	2 1/2"
1000	3	400	2/0	3"	3	400	2/0	3"
1200	4	350	3/0	3-1/2"	4	350	3/0	3"
1600	5	400	4/0	3-1/2"	5	400	4/0	3"
2000	6	500	250	4"	6	500	250	3-1/2"
2500	7	500	350	4"	7	500	350	3-1/2"
3000	8	500	400	4"	8	500	400	3-1/2"

NOTES

FEEDER SHALL BE 4-WIRE (4W) UNLESS DENOTED OTHERWISE.

ALL FEEDERS SHALL HAVE AN EQUIPMENT GROUND CONDUCTOR.

NOT ALL SIZES USED

3Ø FEEDER SCHEDULE (ALUMINUM)								
MARK (AMPACITY)	FEEDER 4W				FEEDER 3W			
	# SETS	ø & N	GND	C	# SETS	ø	GND	C
125	1	2/0	4	2"	1	2/0	4	2"
150	1	3/0	4	2"	1	3/0	4	2"
175	1	4/0	4	2 1/2"	1	4/0	4	2"
200	1	250	4	2 1/2"	1	250	4	2 1/2"
225	1	300	2	3"	1	300	2	2 1/2"
250	1	350	2	3"	1	350	2	2 1/2"
300	1	500	2	3-1/2"	1	500	2	3"
400	2	250	1	2-1/2"	2	250	1	2 1/2"
450	2	300	1	3"	2	300	1	2 1/2"
500	2	350	1/0	3"	2	350	1/0	2 1/2"
600	2	500	2/0	3-1/2"	2	500	2/0	3"
700	3	350	3/0	3"	3	350	3/0	3"
800	3	400	3/0	3"	3	400	3/0	3"
1000	4	350	4/0	3"	4	350	4/0	2.5"
1200	5	500	250	3-1/2"	5	500	250	3"
1600	6	400	4/0"	3"	6	350	4/0"	3"
2000	7	500	250"	3-1/2"	7	500	250"	3"
2500	9	500	350"	3-1/2"	9	500	350"	3"
3000	10	500	400"	3-1/2"	10	500	400"	3"

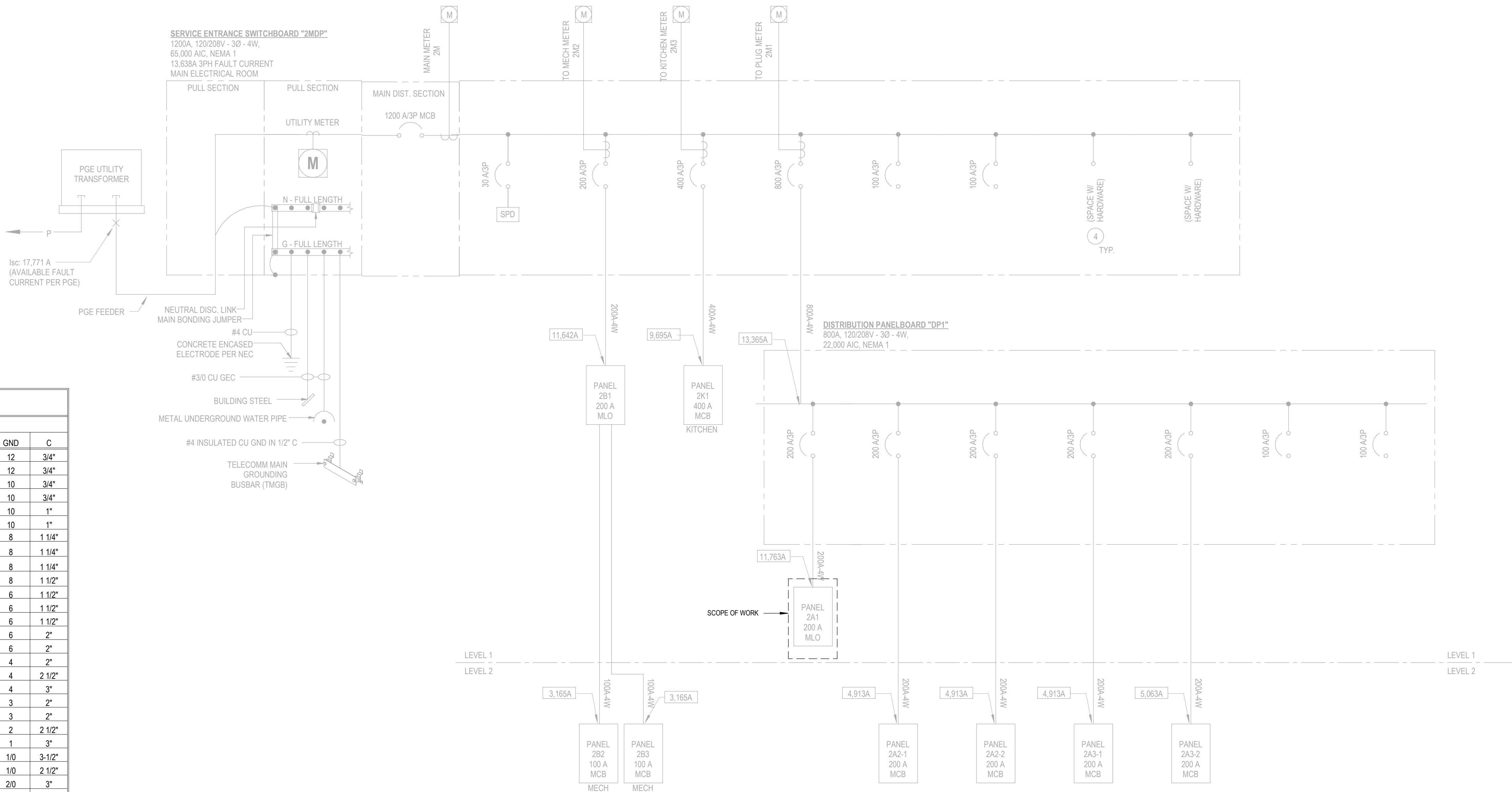
NOTES

ALUMINUM CONDUCTORS ARE PERMITTED FOR FEEDERS BETWEEN SWITCHBOARDS, DISTRIBUTION PANELS, PANELBOARDS, MOTOR CONTROL CENTERS, DRY TYPE TRANSFORMERS AND BUSWAY PLUG-IN UNITS ONLY.

ALUMINUM CONDUCTORS ARE NOT PERMITTED FOR CIRCUIT RATING OF 100A OR LOWER.

ALUMINUM CONDUCTORS ARE NOT PERMITTED FOR BRANCH CIRCUITS OR EQUIPMENT CONNECTIONS.

*GROUNDING CONDUCTOR FOR CIRCUIT RATING OF 1600A AND HIGER SHALL BE COPPER CONDUCTORS.



FOR REFERENCE ONLY

ABBREVIATIONS

SES	SERVICE ENTRANCE RATED
S.U.S.E.	SUITABLE FOR USE AS SERVICE EQUIPMENT
SCCR	SHORT CIRCUIT CURRENT RATING
Isc:	AVAILABLE SHORT CIRCUIT CURRENT IN AMPERES

SYMBOLS

	EQUIPMENT GROUND FAULT PROTECTION
	SHUNT-TRIP CIRCUIT INTERRUPTER

A

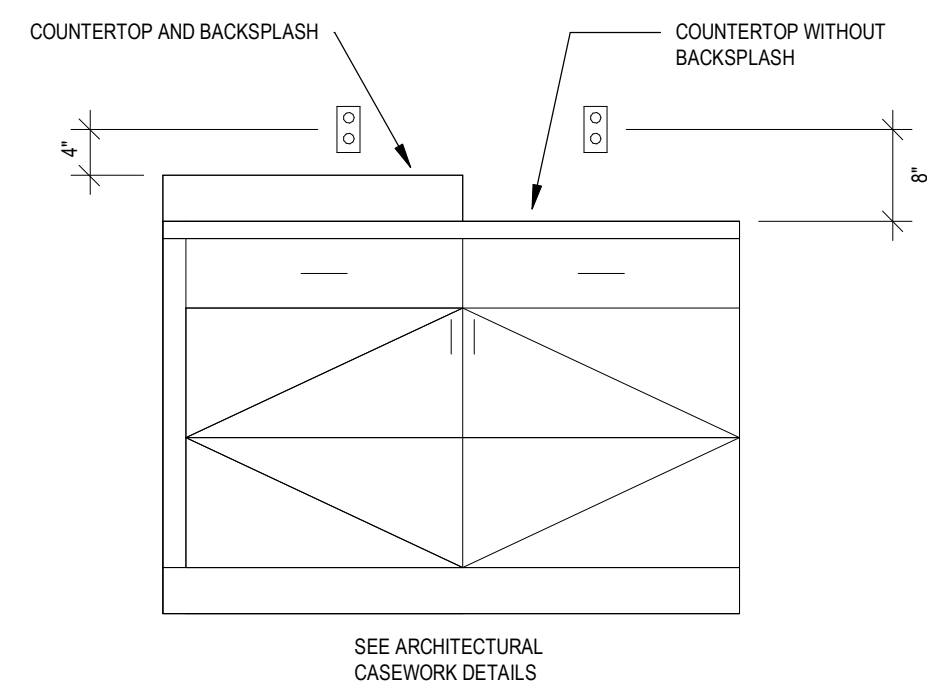
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C

D

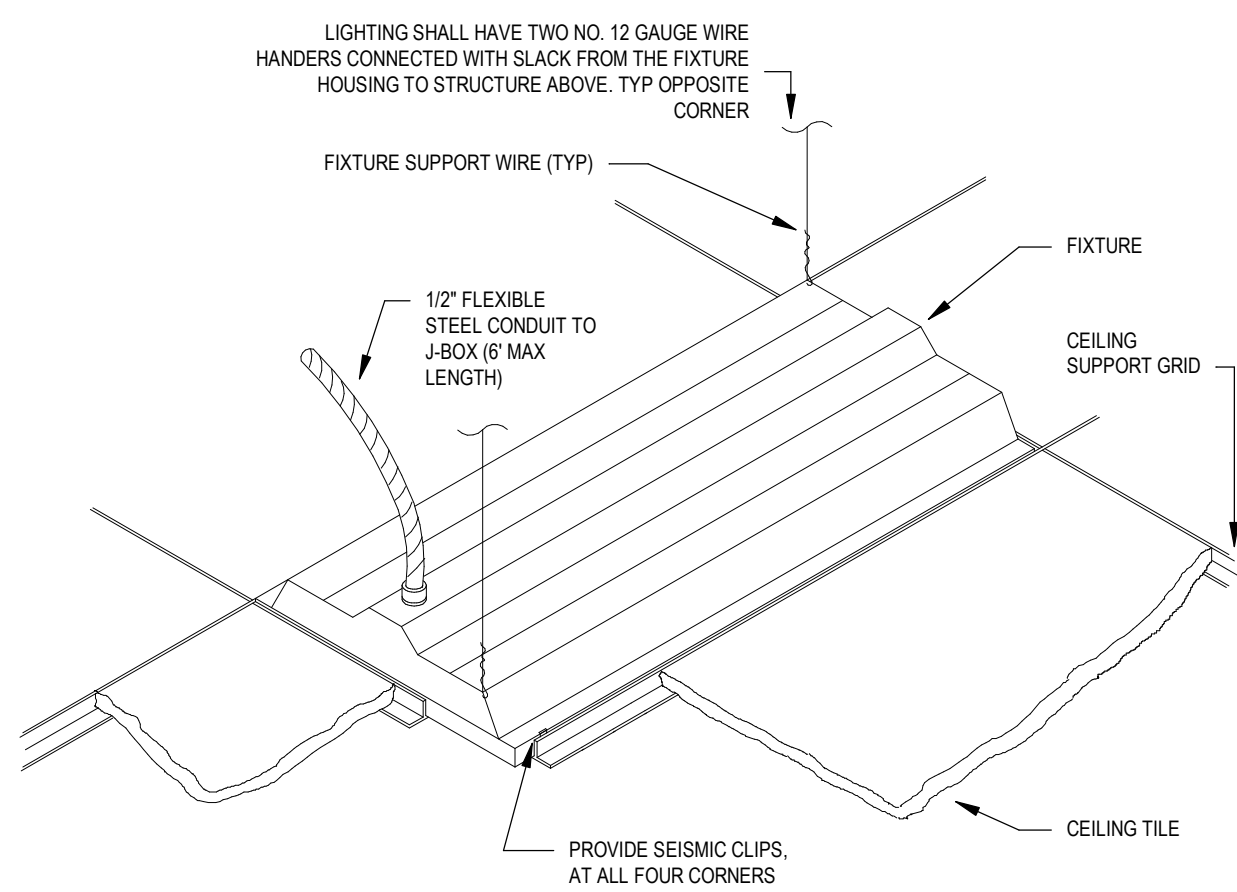
E

1

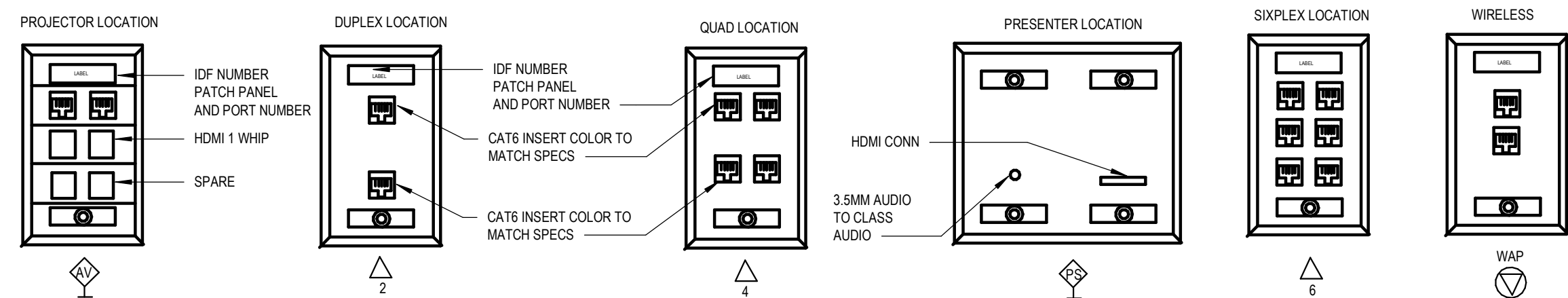


1 ABOVE COUNTER RECEPTACLES
E6.1 SCALE: 12" = 1'-0"

2

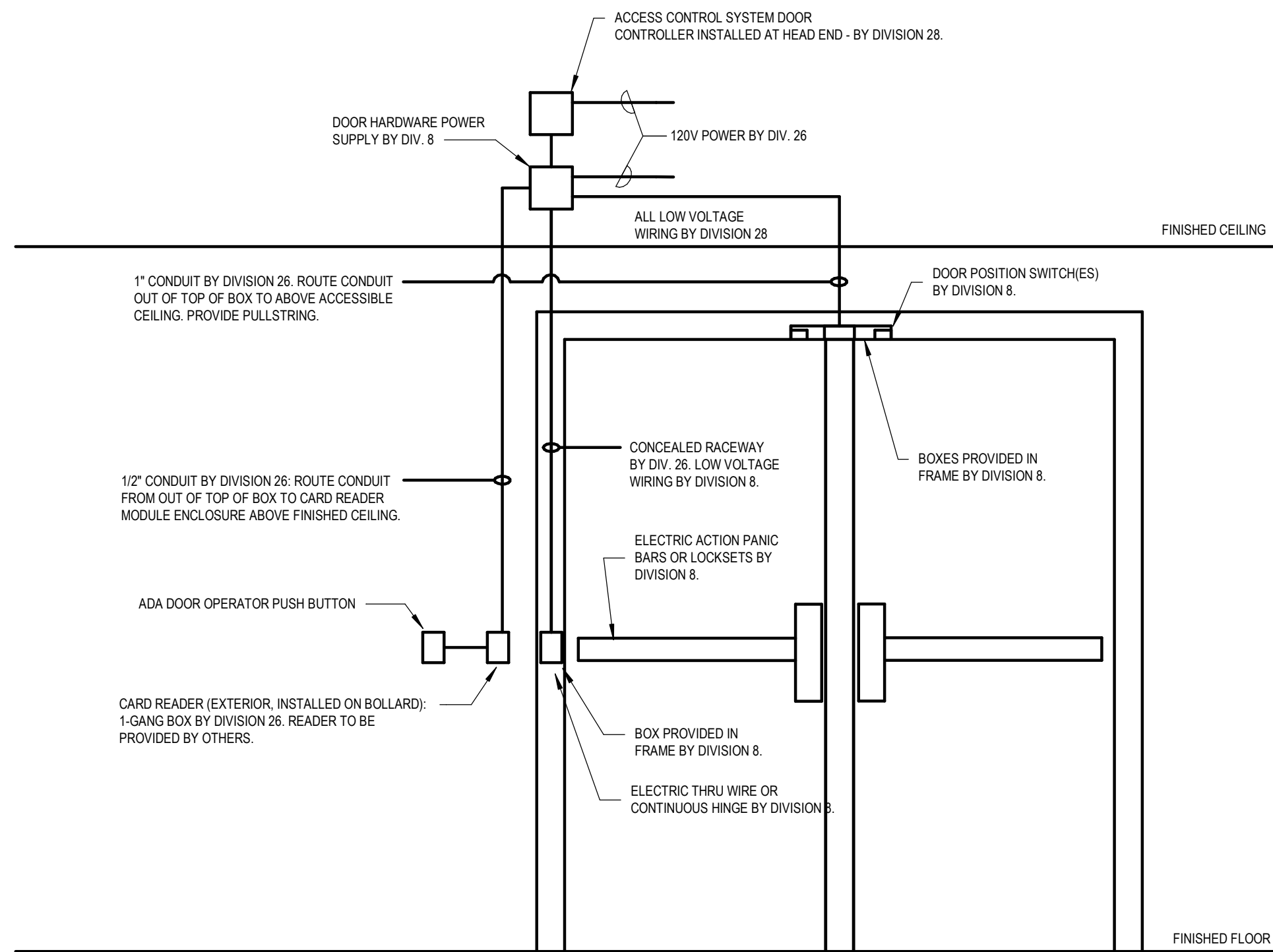


2 RECESSED FIXTURE SEISMIC SUPPORT
E6.1 SCALE: 1/8\"/>



4 TELECOM FACEPLATE
E6.1 SCALE: 12" = 1'-0"

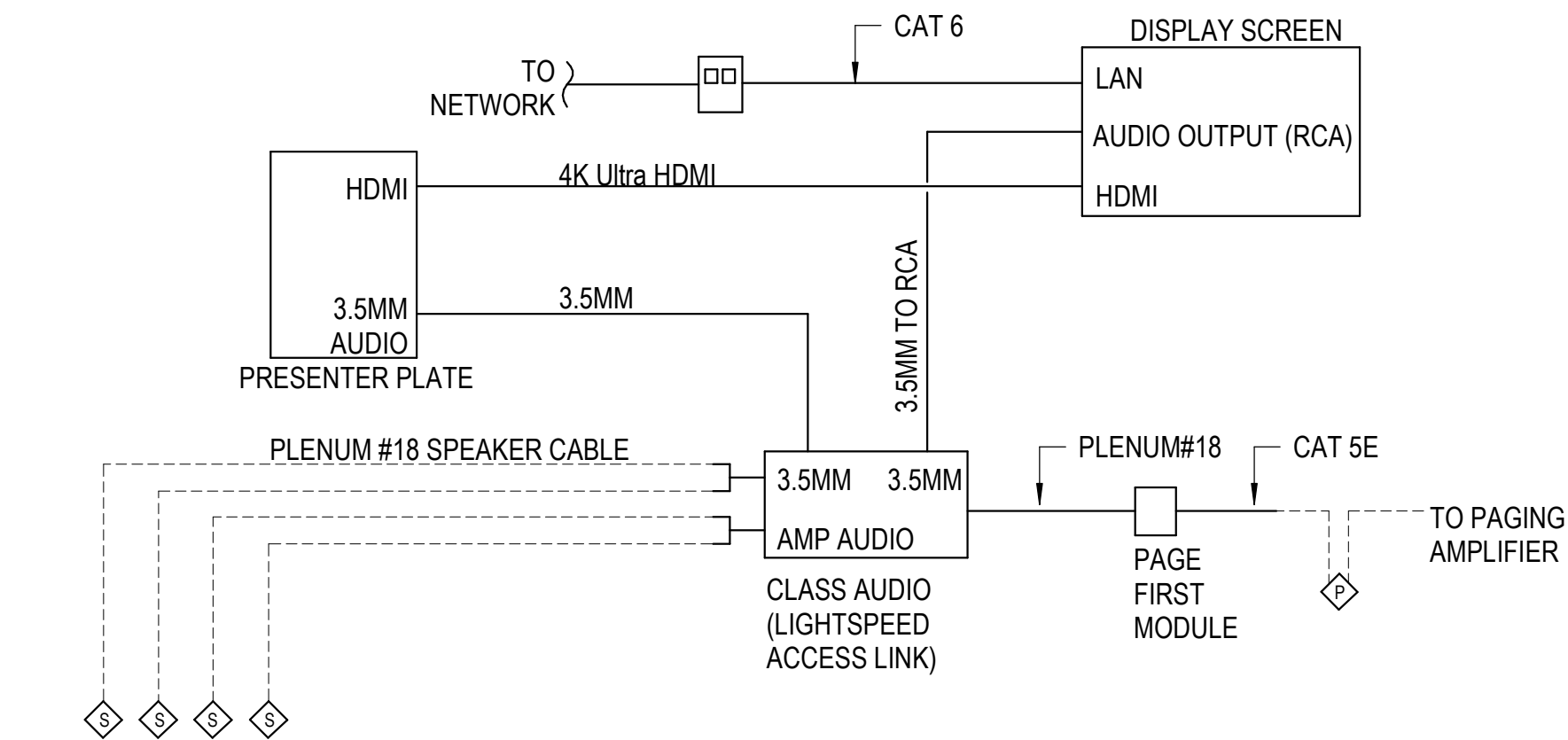
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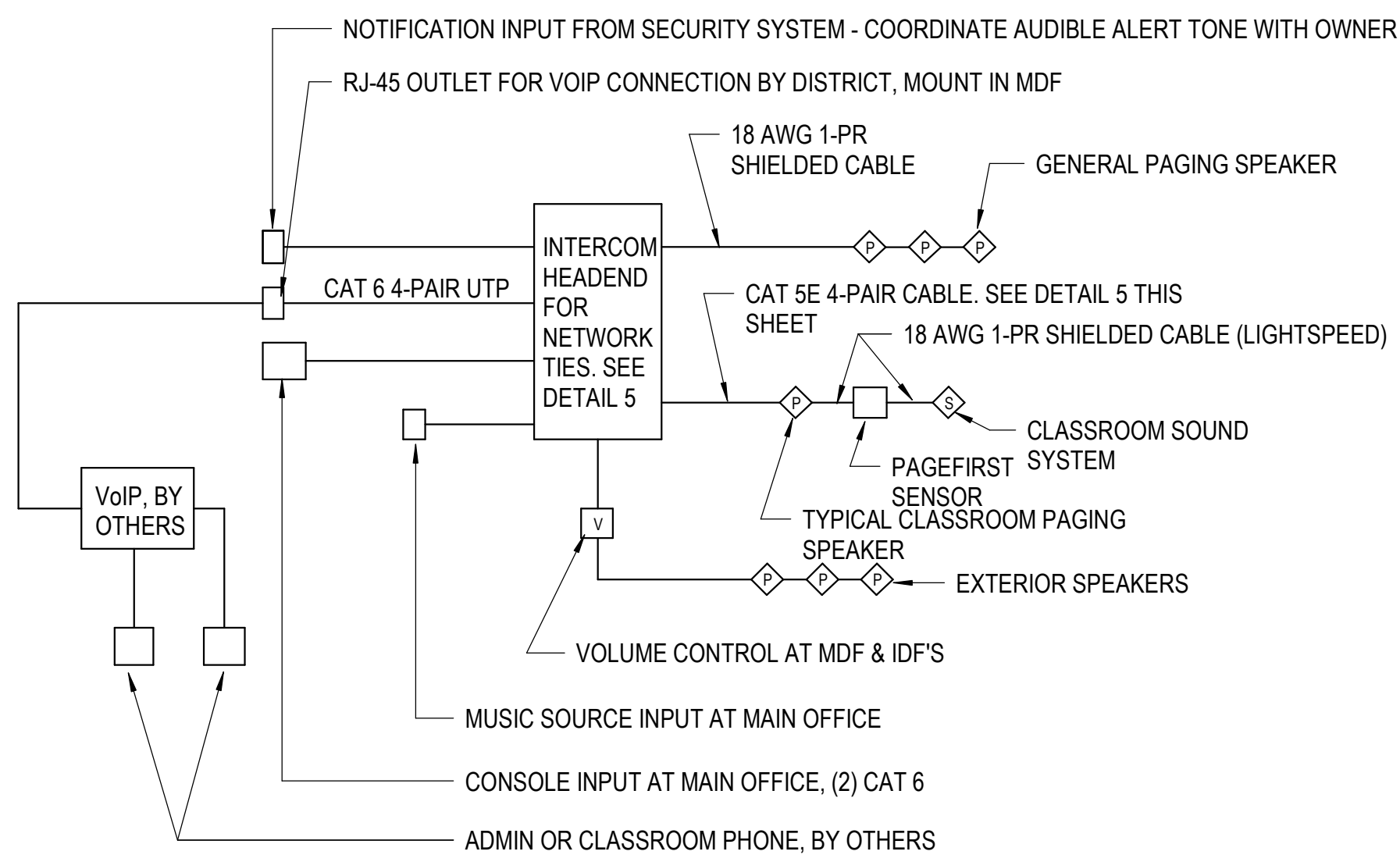
3 ACCESS CONTROL DETAIL
E6.1 SCALE: 12" = 1'-0"

GENERAL NOTES

- CONDUITS AND BOXES INDICATED WITHIN FRAMES APPLY TO HOLLOW METAL DOORS ONLY. ALUMINUM STOREFRONTS WILL ONLY REQUIRE 1\"/>



5 CLASSROOM AV DIAGRAM
E6.1 SCALE: 12" = 1'-0"



6 INTERCOM/PAGING LINE DIAGRAM
E6.1 SCALE: 12" = 1'-0"

1

2

3

4

A

B

C

D

E

LIGHT FIXTURE SCHEDULE						
TYPE	MANUFACTURER	MODEL	LAMP	VOLTAGE	APPARENT LOAD	DESCRIPTION
CL1	LUMINI EQUAL BY: OPTIC ARTS, VOLT LIGHTING	LLFLEX18-H-30K-SL-SL-XX	3500K LED	277 V	6 VA	TAPELIGHT MOUNTED ON SURFACE OF CLOUD CEILING. PROVIDE WITH TRANSFORMER. COORDINATE EXACT LENGTH WITH CEILING INSTALLATION.UL LISTED.
DL1A	EATON PORTFOLIO	LD4A-18-D010TE-ERW4A-18-835 / 4LW1-LI-WF HB26	LED 3500K	120 V	17 VA	RECESSED 4" ROUND DOWNLIGHT. 1500 NOMINAL LUMENS. 60 DEGREE CUTOFF AND COMFORT CLEAR REFLECTOR WITH WHITE FLANGE. UL DAMP RATED.
DL2	EATON PORTFOLIO	LD6A15D010TE-ERW6A15835-6LW0LI-DT6LFO	LED 3500K	277 V	18 VA	RECESSED 6" ROUND DOWNLIGHT. 1500 NOMINAL LUMENS. ROUND ACRYLIC ACCESSORY RING WITH ALUMINUM INSERT. UL DAMP RATED.
ESL3	LIGMAN	UGI-31601-W30-277-F	LED 3500K	277 V	16 VA	EXTERIOR 8.5" X 4.5"X 3.25 LED SCONCE, 1000 NOMINAL LUMENS. UL LISTED FOR WET LOCATIONS. MATT SILVER FINISH.
PL1	CORELITE	J3-F-L-40L-835-1-D-UNV-STD-W-AC48-8	LED 3500K	277 V	52 VA	8' DIRECT/INDIRECT SUSPENDED LINEAR LED FIXTURE. 4000 NOMINAL LUMENS/4FT SECTION. NO SUBSTITUTIONS
PL1-4	CORELITE	J3-F-L-40L-835-1-D-UNV-STD-W-AC48-4	LED 3500K	277 V	26 VA	SAME AS PL1 BUT 4' IN LENGHT
PL1-6	CORELITE	J3-F-L-40L-835-1-D-UNV-STD-W-AC48-6	LED 3500K	277 V	40 VA	SAME AS PL1 EXCEPT 6' LENGTH
PL2	CORELITE	J3-F-L-40L-835-1-D-UNV-STD-W-AC48-12	LED 3500K	277 V	78 VA	SAME AS PL1 EXCEPT 12' LENGTH
RL1	METALUX	22ALNG-LD4-40-UNV-L835-CD1-U	LED 3500K	277 V	45 VA	2X2 RECESSED INDIRECT TROFFER, 3800 NOMINAL LUMEN LED, 3500K, 0-10V DIMMING DRIVER. STEEL HOUSING WITH WHITE PAINTED REFLECTOR. SINGLE PIECE EXTRUDED DIFFUSE LENS WITH FULLY LUMINOUS HOUSING. WHITE PAINTED TRIM.
RL3-4	FOCAL POINT	FSM2L-FL-625LF-35K-1C-UNV-LD1-WH-4	LED 3500K	277 V	17 VA	RECESSED FLANGED 2" SLOT FIXTURE, 4' LENGTH,2500 NOMINAL LUMENS PER 4' LENGTH. CONFIRM MOUNTING CONDITIONS.
UC1	HALO	HU1036D930P	LED 3000K	277 V	18 VA	36" UNDERCABINET 1140 LUMEN LED LIGHT WITH EXTRUDED ALUMINUM HOUSING, UV STABILIZED ACRYLIC LENS, AND POLYCARBONATE ENDCAPS.
WL1A	PRUDENTIAL	S1-LED35-LO-4-SAL-TMW-UNV-SUR-ND	LED 3500K	277 V	17 VA	WALL MOUNTED WRAPAROUND STRIP, 1920 LUMEN. SATIN ACRYLIC LENS AND TEXTURES WHITE FINISH.
X1	SURELITES	EUX7R	-		5 VA	LED CLEAR ACRYLIC EDGEKIT EXIT SIGN. PROVIDE MOUNTING, NUMBER OF FACES AND DIRECTIONAL ARROWS AS INDICATED ON PLANS; SINGLE-SIDED SIGNS SHALL HAVE CLEAR BACKGROUND. DOUBLE-SIDED FACES SHALL HAVE MIRRORRED BACKGROUND.
X3	SURELITES	EUX7R	-		5 VA	LED CLEAR ACRYLIC EDGEKIT EXIT SIGN. PROVIDE MOUNTING, NUMBER OF FACES AND DIRECTIONAL ARROWS AS INDICATED ON PLANS; SINGLE-SIDED SIGNS SHALL HAVE CLEAR BACKGROUND.

MECHANICAL EQUIPMENT CONNECTION SCHEDULE											
EQUIPMENT SERVED	EQUIPMENT DESCRIPTION	HPI/ W	DISCONNECT	ELECTRICAL DATA	FLA	MCA	MOCP	PANEL	CIRCUIT NUMBER	FEEDER SIZE	NOTES
EF-G101	EXHAUST FAN	20.7 W	MOTOR RATED SWITCH	120 V/1-21 VA	0.0 A	0.0 A	15.0 A	2A1	57	2#12, #12G, 3/4"C	1
EF-G103	EXHAUST FAN	20.7 W	MOTOR RATED SWITCH	120 V/1-21 VA	0.0 A	0.0 A	15.0 A	2A1	57	2#12, #12G, 3/4"C	1
RTU-5	ROOF TOP UNIT		100 A	480 V/3-49302 VA	59.3 A	66.8 A	90.0 A	4B1	2,4,6	3#4, #8G, 1"C	2,3,4

GENERAL MECHANICAL EQUIPMENT CONNECTION NOTES:

- A. THE ABOVE INFORMATION IS FOR A SPECIFIC MANUFACTURER. THE ACTUAL MANUFACTURER FOR THE EQUIPMENT MAY DIFFER. COORDINATE WITH MECHANICAL
SUBMITTALS FOR ACTUAL LOADS, CIRCUIT AMPACITY, AND OVERCURRENT PROTECTION REQUIREMENTS PRIOR TO MAKING ELECTRICAL CONNECTIONS.
- B. LOCATE ALL DISCONNECTING MEANS PER NEC AND AHJ REQUIREMENTS. STARTERS ARE SEPARATELY MOUNTED UNLESS OTHERWISE NOTED.
- C. ALL DISCONNECTS ARE 3 POLE UNLESS OTHERWISE NOTED.

MECHANICAL EQUIPMENT SCHEDULE NOTES:

1. POWER TO MOTORIZED DAMPER THROUGH UNIT.
2. VFD PROVIDED BY DIVISION 23 AND CONNECTED BY DIVISION 26.
3. FURNISH DUCT SMOKE DETECTOR FOR INSTALLATION BY DIVISION 23 CONTRACTOR. HVAC UNITS OVER 2000CFM TO HAVE DUCT
DETECTOR IN THE RETURN AIR DUCT. COORDINATE WITH DIVISION 23 FOR QUANTITY REQUIRED. PROVIDE CONNECTION AT HVAC
UNIT FOR SHUTDOWN ON ALARM AND CONNECTION TO THE FIRE ALARM CONTROL PANEL FOR DETECTOR CONNECTION AS
REQUIRED. ALL WIRING TO BE IN EMT CONDUIT.
4. DISCONNECTING MEANS TO BE NEMA 3R RATED, FURNISHED BY RTU MANUFACTURER AND INSTALLED BY DIVISION 26.



VOSE ES ADDITION
BEAVERTON SCHOOL DISTRICT
11350 SW DENNEY RD
BEAVERTON, OR 97008

100% CD
2/26/2021
REVISIONS

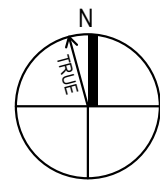
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ELECTRICAL
SCHEDULES

E7.1

4

E8.1



LIGHTING PHOTOMETRIC PLAN
SCALE: 1/8" = 1'-0"

