

GENERAL STRUCTURAL NOTES:

GENERAL:

- A

1.

THESE DRAWINGS HAVE BEEN PREPARED SOLELY FOR USE IN THE CONSTRUCTION OF THE OBSIDIAN MIDDLE SCHOOL MODERNIZATION AT THE LOCATION OF 1335 SW OBSIDIAN AVE, REDMOND, OR 97756. POSSESSION OF THESE DRAWINGS DOES NOT GRANT A LICENSE TO CONSTRUCT OR FABRICATE THE WHOLE, OR PARTS OF THIS PROJECT IN OTHER LOCATIONS.

2.

STRUCTURAL DRAWINGS ARE A PORTION OF THE CONTRACT DOCUMENTS AND ARE INTENDED TO BE USED WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND SITE CIVIL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REQUIREMENTS FROM THESE DRAWINGS INCLUDING BUT NOT LIMITED TO DIMENSIONS, BLOCKOUTS, OPENINGS, SLEEVES, EMBEDDED ITEMS, ETC. INTO THEIR SHOP DRAWINGS AND WORK. NOTIFY THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD OF ANY DISCREPANCIES OR IF ACTUAL CONDITIONS DIFFER FROM THOSE SHOWN OR NOTED.

3.

DO NOT SCALE OR RESIZE THE DRAWINGS IN ANY MANNER. ANY ADJUSTMENTS TO THE SIZE OR SCALE OF THE DRAWINGS MAY RESULT IN MISINTERPRETATION OF CRITICAL DIMENSIONS AND DETAILS.

4.

THE STRUCTURAL DRAWINGS ARE INTENDED TO SHOW THE GENERAL CHARACTER AND EXTENT OF THE PROJECT AND ARE NOT INTENDED TO SHOW ALL DETAILS OF WORK. USE ENTIRE DETAIL SHEETS AND SPECIFIC DETAILS REFERENCED IN THE PLANS AS "TYPICAL" WHEREVER THEY APPLY. USE DETAILS ON ENTIRE SHEETS WITH "TYPICAL" IN THE NAME WHEREVER THEY APPLY.

5.

WHERE DISCREPANCIES OCCUR BETWEEN THE GENERAL STRUCTURAL NOTES, SPECIFICATIONS, PLANS/DETAILS OR REFERENCE STANDARDS, THE ARCHITECT/ENGINEER SHALL DETERMINE WHICH SHALL GOVERN. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK. SHOULD ANY DISCREPANCY BE FOUND IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL INCLUDE IN THE PRICE THE MOST EXPENSIVE WAY OF COMPLETING THE WORK, UNLESS PRIOR TO THE SUBMISSION OF THE PRICE, THE CONTRACTOR ASKS FOR A DECISION FROM THE ARCHITECT AS TO WHICH SHALL GOVERN. CONFLICTS BETWEEN THE CONTRACT DOCUMENTS SHALL NOT BE A BASIS FOR ADJUSTMENT IN CONTRACT PRICE.

6.

THE CONTRACTOR SHALL FURNISH THE PRODUCTS SPECIFIED ON THE DRAWINGS. SUBSTITUTIONS WILL BE CONSIDERED ONLY IF THE CONTRACTOR PROVIDES DOCUMENTATION TO PROVE THE ALTERNATIVE EQUALS OR EXCEEDS THE STRUCTURAL PERFORMANCE CHARACTERISTICS OF THE SPECIFIED PRODUCT.

7.

CODE REQUIREMENTS:

A. ALL WORK SHALL BE IN STRICT COMPLIANCE WITH:

a. 2021 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED BY THE STATE OF OREGON (2022 OREGON STRUCTURAL SPECIALTY CODE)

8.

TEMPORARY CONDITIONS:

A. THE STRUCTURAL DRAWINGS REPRESENT THE STRUCTURE IN THE FINAL CONSTRUCTED CONDITION. THE CONTRACTOR SHALL PROVIDE NECESSARY TEMPORARY SUPPORT PRIOR TO COMPLETION OF VERTICAL AND LATERAL LOAD SYSTEMS. MORRISON-MAIERLE HAS NOT BEEN RETAINED TO PROVIDE ANY SERVICES RELATED TO JOB SITE SAFETY PRECAUTIONS, OR TO REVIEW THE MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES FOR THE CONTRACTOR TO PERFORM WORK. UNLESS WE ARE SPECIFICALLY RETAINED AND COMPENSATED TO DO OTHERWISE, OUR WORK IS LIMITED TO THE FINAL DESIGN OF THE WORK DESCRIBED ON OUR DRAWINGS FOR THIS PROJECT.

B. CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.

9.

EXISTING CONDITIONS:

A. EXISTING BUILDING/SITE DIMENSIONS AND ASSUMED CONDITIONS ARE TO BE VERIFIED IN THE FIELD AND ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD OF ALL DISCREPANCIES WHICH REQUIRE A SIGNIFICANT CHANGE IN THE DESIGN AND/OR CONSTRUCTION FROM THAT SHOWN ON THE DRAWINGS.
- B

DESIGN CRITERIA:

1.

DESIGN IS BASED ON THE FOLLOWING LOADING FOR THE BASIS OF STRENGTH, PERFORMANCE, AND SERVICEABILITY OF THE STRUCTURE:

DESIGN CRITERIA		
LIVE LOAD CRITERIA (IBC 1603.1.1)		
FLOOR LIVE LOADS:	UNIFORM LOAD	CONCENTRATED LOAD
SCHOOLS: CLASSROOMS	40 PSF	1000 LBS
ROOF LIVE LOAD CRITERIA (IBC 1603.1.2)		
ORDINARY FLAT, PITCHED, CURVED	N/A, NO ROOF WORK IS ASSOCIATED WITH THE PROJECT	
SNOW LOAD CRITERIA (IBC 1603.1.3)		
DESIGN ROOF SNOW LOAD	N/A, NO ROOF WORK IS ASSOCIATED WITH THE PROJECT	
WIND LOAD CRITERIA (IBC 1603.1.4)		
BASIC DESIGN WIND SPEED	N/A, NO LATERAL FORCE RESISTING SYSTEM OR ENVELOPE WORK IS ASSOCIATED WITH THE PROJECT	
SEISMIC LOAD CRITERIA (IBC 1603.1.5)		
RISK CATEGORY	N/A, NO LATERAL FORCE RESISTING SYSTEM WORK IS ASSOCIATED WITH THE PROJECT	
GEOTECHNICAL CRITERIA (IBC 1603.1.6)		
DESIGN BASIS	PRESUMPTIVE VALUES OF SOILS (IBC 1806)	
DESIGN SOIL BEARING PRESSURE	1500 PSF (DL + LL)	2000 PSF (EL / WL INCLUDED)
RETAINING WALLS EQ. FLUID PRESSURE	35 PCF (ACTIVE)	55 PCF (AT REST)
PASSIVE BEARING PRESSURE	250 PSF/FT	
COEFFICIENT OF SLIDING FRICTION	0.3	

STRUCTURAL OBSERVATIONS:

1.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE ENGINEER OF RECORD A MINIMUM OF 24 HOURS IN ADVANCE OF LISTED OBSERVATION STAGES BELOW. CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE OBSERVER. APPROVAL BY THE MUNICIPAL INSPECTOR DOES NOT PRECLUDE OBSERVATIONS BY THE ENGINEER OF RECORD AND APPROVAL BY THE ENGINEER OF RECORD DOES NOT PRECLUDE THE INSPECTION PROCESS BY THE MUNICIPAL INSPECTOR AND ANY OTHER CODE REQUIREMENTS FOR INSPECTION.
2.

UPON COMPLETION OF WORK THE STRUCTURAL OBSERVER SHALL SUBMIT A REPORT TO THE OWNER AND BUILDING OFFICIAL ATTESTING TO THE VISUAL OBSERVATION MADE. THE REPORT SHALL IDENTIFY ANY REPORTED DEFICIENCIES WHICH HAVE NOT BEEN RESOLVED.

STRUCTURAL OBSERVATIONS	
STAGE	COMMENTS
PRIOR TO FIRST CONCRETE POUR	AFTER REBAR PLACEMENT
AS REQUIRED TO ADDRESS STRUCTURAL ISSUES	

D

SUBMITTALS:

1.

SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION OF ALL STRUCTURAL PRODUCTS, INCLUDING THE FOLLOWING:
- | SUBMITTALS | | |
|-------------------------------------|-----------|--------------------|
| ITEM | SUBMITTAL | DEFERRED SUBMITTAL |
| CONCRETE MIX DESIGNS | X | |
| CONCRETE REINFORCEMENT | X | |
| CONCRETE ANCHORAGES | X | |
| STAIRS, LADDERS AND RAILINGS | X | X |
| MEP EQUIPMENT ANCHORAGE AND BRACING | X | X |
2.

SHOP DRAWINGS SUBMITTALS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION FOR ALL STRUCTURAL PRODUCTS DELIVERED TO THE PROJECT. IF THE SHOP DRAWINGS DEViate FROM OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. ANY CHANGES TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ARE SUBJECT TO REVIEW AND ACCEPTANCE OF THE STRUCTURAL ENGINEER OF RECORD.
3.

DEFERRED SUBMITTAL DESIGN DRAWINGS, SHOP DRAWINGS, AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. THE DEFERRED SUBMITTAL SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION AND ARE SUBJECT TO REVIEW AND ACCEPTANCE OF THE STRUCTURAL ENGINEER FOR LOADS IMPOSED ON THE SUPPORTING STRUCTURE. CALCULATIONS SHALL BE INCLUDED FOR ALL CONNECTIONS TO THE STRUCTURE, CONSIDERING LOCALIZED EFFECTS ON STRUCTURAL ELEMENTS INDUCED BY THE CONNECTION LOADS. DESIGN SHALL BE BASED ON THE REQUIREMENTS OF THE CODES AND DESIGN CRITERIA NOTED IN THESE GENERAL STRUCTURAL NOTES.
4.

THE CONTRACTOR SHALL COORDINATE SEISMIC RESTRAINTS OF MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT, MACHINERY AND ASSOCIATED PIPING WITH THE STRUCTURE. CONNECTIONS TO STRUCTURE SHALL BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO CONSTRUCTION.
5.

FIELD ENGINEERED DETAILS DEVELOPED BY THE CONTRACTOR THAT DEViate FROM OR ADD TO THE STRUCTURAL DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO CONSTRUCTION.
6.

THE USE OF REPRODUCTIONS OR PHOTOCOPIES OF THE CONTRACT DOCUMENTS SHALL NOT BE PERMITTED. WHEN CAD OR REVIT FILES ARE PROVIDED TO THE CONTRACTOR OR SUBCONTRACTORS, IT IS THE RESPONSIBILITY OF THE DETAILERS TO REMOVE ALL INFORMATION NOT DIRECTLY RELEVANT TO THE CREATION OF THE PLACING DRAWINGS AS WELL AS ALL REFERENCES TO THE OUTSIDE SOURCE FILES.
7.

SUBMITTAL DOCUMENTS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO BEING SUBMITTED TO THE ARCHITECT FOR REVIEW.
8.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE REVIEWED SUBMITTAL TO THE BUILDING DEPARTMENT FOR DEFERRED PERMIT APPLICATION. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.
- EARTHWORK:
1.

GENERAL:

A. STABILITY OF CONSTRUCTION EXCAVATION AND WORKER SAFETY ARE THE RESPONSIBILITY OF THE CONTRACTOR. BASED UPON THE GEOTECHNICAL REPORT, TEMPORARY CONSTRUCTION EXCAVATIONS, ABOVE GROUNDWATER, TO BE PLANNED IN ACCORDANCE WITH OSHA PROVISIONS SHOULD ASSUME TYPE B MATERIAL FOR STIFF CLAY, AND TYPE C MATERIAL FOR SAND.

B. DO NOT EXCAVATE CLOSER THAN 2:1 SLOPE BELOW FOOTING EXCAVATIONS.

C. ALL SLABS-ON-GRADE SHALL BEAR ON COMPACTED STRUCTURAL FILL OR COMPETENT NATIVE SOIL. ALL MOISTURE SENSITIVE SLABS-ON-GRADE OR THOSE SUBJECT TO RECEIVE MOISTURE SENSITIVE COATINGS OR COVERINGS SHALL BE PROVIDED WITH AN APPROPRIATE CAPILLARY BREAK AND VAPOR BARRIER OR RETARDANT OVER THE SUBGRADE PREPARED AND INSTALLED AS NOTED IN THE GEOTECHNICAL REPORT. BARRIER MANUFACTURER'S WRITTEN RECOMMENDATIONS AND COORDINATED WITH THE FINISHES SPECIFIED BY THE ARCHITECT.

2.

PREScriptive EARTHWORK:

A. AT THE OWNERS DIRECTION, A GEOTECHNICAL INVESTIGATION HAS NOT BEEN PERFORMED. IF ANY OF THE FOLLOWING CONDITIONS ARE DISCOVERED DURING CONSTRUCTION AT THE BUILDING SITE, A GEOTECHNICAL INVESTIGATION SHALL BE COMMISSIONED IN ACCORDANCE WITH CHAPTER 18 OF THE INTERNATIONAL BUILDING CODE:

a. QUESTIONABLE SOIL

b. EXPANSIVE SOIL

c. GROUND-WATER TABLE IS ABOVE OR WITHIN 5 FEET BELOW THE ELEVATION OF THE LOWEST FLOOR LEVEL WHERE SUCH FLOOR IS LOCATED BELOW THE FINISHED GROUND LEVEL ADJACENT TO THE FOUNDATION

d. ROCK STRATA OF VARIABLE OR DOUBTFUL CHARACTERISTICS

e. EXCAVATIONS THAT WILL REMOVE THE LATERAL SUPPORT OF AN ADJACENT, EXISTING FOUNDATION

f. USE OF COMPACTED FILL MATERIAL BELOW SHALLOW FOUNDATIONS IN EXCESS OF 12 INCHES IN DEPTH

g. USE OF CONTROLLED LOW-STRENGTH MATERIAL (CLSM)

B. THE SITE WORK DESCRIBED BELOW IS BASED ON RECOMMENDATIONS FROM THE PRESCRIPTIVE REQUIREMENTS IN THE INTERNATIONAL BUILDING CODE CHAPTER 18.

a. REMOVE ALL ORGANIC MATERIAL AND TOPSOIL FROM AREAS UNDER THE BUILDING OR UNDER PAVED AREAS.

b. FOUNDATIONS SHALL BE BUILT ON UNDISTURBED SOIL OR COMPACTED FILL MATERIAL 12 INCHES OR LESS IN DEPTH. IF PROVIDED, COMPACTED FILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 8" AND HAVE AN IN-PLACE DRY DENSITY NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT DETERMINED IN ACCORDANCE WITH ASTM D1557. IF THE COMPACTED FILL MATERIAL EXCEEDS 12 INCHES IN DEPTH OR CLSM IS USED, PLACEMENT SHALL COMPLY WITH THE PROVISIONS OF AN APPROVED GEOTECHNICAL INVESTIGATION AND REPORT.

c. THE BOTTOM OF ALL EXTERIOR FOOTINGS AND FOOTINGS SUSCEPTIBLE TO FROST HEAVE SHALL EXTEND A MINIMUM DEPTH BELOW LOWEST ADJACENT FINISHED GRADE OF 18 INCHES.

d. THE EXCAVATION OUTSIDE THE FOUNDATION SHALL BE BACKFILLED WITH SOIL THAT IS FREE OF ORGANIC MATERIAL, CONSTRUCTION DEBRIS, COBBLES AND BOULDERS, OR WITH CLSM. THE BACKFILL SHALL BE PLACED IN LIFTS AND COMPACTED IN A MANNER THAT DOES NOT DAMAGE THE FOUNDATION OR THE WATERPROOFING OR DAMPPROOFING MATERIAL, IF PRESENT. CLSM NEED NOT BE COMPACTED.

e. DAMPPROOFING, WATERPROOFING, AND FOUNDATION DRAINS: COMPLY WITH SECTION 1805 OF THE IBC. DESIGN/SPECIFICATION OF THESE SYSTEMS IS TO BE BY OTHERS.

C. THE SUBGRADE OF SLABS-ON-GRADE SHALL BE STRIPPED, TILLED, AND RE-COMPACTED TO PRODUCE A UNIFORM SURFACE. THE SUBGRADE SHALL BE OVERLAIN WITH 6 INCHES, MINIMUM, OF CLEAN, DENSELY-GRADED, CRUSHER-RUN BASE MATERIAL WITH A BALANCED FINE CONTENT THAT SATISFIES THE REQUIREMENTS OF ASTM D1241, TYPE 1 MIXTURE, GRADATION C. THE BASE MATERIAL SHALL BE COMPACTED TO A DRY DENSITY NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT DETERMINED IN ACCORDANCE WITH ASTM D1557. THE SURFACE OF THE BASE MATERIAL SHALL BE CHOKED OFF WITH SAND OR FINE GRAVEL AND COMPACTED TO PROVIDE A SMOOTH, PLANAR SURFACE FOR THE CONCRETE SLABS-ON-GRADE.

D. PROVIDE A VAPOR RETARDER DIRECTLY AS REQUIRED BY THE ARCHITECT BELOW SLABS-ON-GRADE AND ABOVE THE GRANULAR BASE MATERIAL. THE VAPOR RETARDER SHALL COMPLY WITH ASTM E1745 AND SHALL BE 10 MILS THICK, MINIMUM.

CAST-IN-PLACE CONCRETE:

1.

CONCRETE SHALL BE IN ACCORDANCE WITH ACI 301, SPECIFICATION FOR STRUCTURAL CONCRETE, AND ACI 117, SPECIFICATION FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS, UNLESS NOTED OTHERWISE.

2.

AVERAGE CONCRETE STRENGTH DETERMINED BY JOB CAST LAB CURED CYLINDER PER ASTM C39 TO BE AS INDICATED BELOW PLUS INCREASE DEPENDING ON THE PLANT'S STANDARD DEVIATION AS SPECIFIED IN ACI 318. MINIMUM CONCRETE PROPERTIES SHALL BE AS FOLLOWS:

CONCRETE PROPERTIES						
USE	FREEZE & THAW EXPOSURE	MIN COMPRESSIVE STRENGTH	TEST AGE DAYS	AIR CONTENT	MAX WATER TO CEMENT RATIO	MAX AGGREGATE SIZE
INTERIOR SLABS ON GRADE	F0	3,500 PSI	28	—	0.50	1"

3.

CONCRETE IS EXPOSURE CLASS W0 OR W1, CLASS C0 OR C1 AND CLASS S0 UNLESS OTHERWISE NOTED.

4.

THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS ALONG WITH TEST DATA A MINIMUM OF TWO WEEKS PRIOR TO PLACING CONCRETE. ADDITIONAL WATER SHALL NOT BE ADDED TO THE CONCRETE MIX AT THE JOBSITE UNLESS SPECIFICALLY NOTED IN THE MIX DESIGN.

5.

CURING OF CONCRETE SHALL COMPLY WITH ACI 308, UNLESS NOTED OTHERWISE.

6.

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

7.

PROVIDE 3/4" CHAMFERS ON ALL EXPOSED CONCRETE CORNERS UNLESS NOTED OTHERWISE.

8.

CONSTRUCTION JOINT LOCATIONS FOR CONCRETE WORK ARE NOT SHOWN IN THE DRAWINGS. THE CONTRACTOR SHALL SUBMIT PROPOSED LOCATIONS FOR REVIEW AND APPROVAL PRIOR TO COMMENCING CONSTRUCTION OF THE JOINTS.

9.

PROVIDE TOOLED OR SAW-CUT CONTROL JOINTS OR CONSTRUCTION JOINTS IN SLABS ON GRADE COMPLYING WITH THE FOLLOWING CRITERIA. THE CONTRACTOR SHALL SUBMIT CONTROL JOINT PLAN AT LEAST (7) DAYS PRIOR TO POURING THE SLABS WHERE THE JOINTS ARE NOT EXPLICITLY SPECIFIED BY THE ARCHITECT.

A. JOINT SPACING SHALL NOT EXCEED 30 TIMES THE SLAB THICKNESS

B. ASPECT RATIO OF SLAB PANELS SHALL BE MAXIMUM OF 1.5 TO 1.0; HOWEVER A RATIO OF 1.0 TO 1.0 IS PREFERRED

C. JOINTS SHALL BE CONTINUOUS ACROSS INTERSECTING JOINTS, NOT STAGGERED OR OFFSET

D. JOINTS SHALL EXTEND FROM ISOLATION JOINT AROUND COLUMNS AND WALLS

REINFORCING STEEL:

1.

REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING PROPERTIES:

REINFORCEMENT STEEL PROPERTIES		
USE	REINFORCEMENT SIZE	SPECIFICATION
GENERAL USE	#7 & SMALLER	ASTM A615, GRADE 60

2.

REINFORCING STEEL TO BE WELDED SHALL USE ONLY LOW HYDROGEN ELECTRODES. ALL WELDING TO BE IN COMPLIANCE WITH AWS D1.4. WELD REINFORCING STEEL ONLY WHERE INDICATED ON THE DRAWINGS. WELDING OR TACK WELDING OF REINFORCEMENT BARS TO OTHER BARS OR STEEL COMPONENTS IS PROHIBITED.

3.

REINFORCING STEEL IN BEAMS AND SLABS SHALL BE SUPPORTED ON CONCRETE DOBBIES, OR APPROVED CHAIRS IN SUFFICIENT NUMBERS TO SUPPORT THE BARS WITHOUT SETTLEMENT. FABRICATE AND INSTALL REINFORCING STEEL ACCORDING TO THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES - ACI STANDARD 315.

4.

CONTACT LAP ALL REINFORCING BARS PER THE TYPICAL LAP SPLICE LENGTH SCHEDULE, EXCEPT AS NOTED ON DRAWINGS. MECHANICAL SPLICES NOTED ON THE DRAWINGS SHALL BE DAYTON SUPERIOR BAR-LOCK OR APPROVED WITH A CURRENT ICC-ES OR IAPMO-ES EVALUATION REPORT.

GRADE 60 REINFORCING STEEL LAP SPLICE LENGTH AND DEVELOPMENT LENGTH															
BAR SIZE	f'c = 3,000 PSI					f'c = 4,000 PSI					f'c = 5,000 PSI				
	MISC BARS		TOP BARS (SEE NOTE 3)		HOOK BARS	MISC BARS		TOP BARS (SEE NOTE 3)		HOOK BARS	MISC BARS		TOP BARS (SEE NOTE 3)		
	Ld	LAP	Ld	LAP	Ldh	Ld	LAP	Ld	LAP	Ldh	Ld	LAP	Ld	Ldh	
#3	17	22	22	28	9	15	19	29	25	8	13	17	17	22	7
#4	22	29	29	38	11	19	25	25	33	10	17	23	23	29	9
#5	28	36	36	47	14	24	31	31	41	12	22	28	28	36	11
#6	33	43	43	56	17	29	37	37	49	15	26	34	34	44	13
#7	48	63	63	81	20	42	54	54	71	17	38	49	49	63	15

A.

ALL TABULATED VALUES ARE IN INCHES, FOR GRADE 60, UNCOATED REINFORING, NORMAL WEIGHT CONCRETE WITH CLEAR SPACING AND CLEAR COVER GREATER THAN THE BAR DIAMETER.

B.

IT SHALL BE PERMITTED TO INTERPOLATE BETWEEN CONCRETE STRENGTHS OR USE THE NEXT LOWER CONCRETE STRENGTH.

C.

TOP BARS ARE ANY HORIZ BAR PLACED SUCH THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR. HORIZ WALL BARS ARE CONSIDERED TOP BARS.

D.

LAP SPLICES ARE FOR NON-LATERAL LOAD RESISTING ELEMENTS. FOR REBAR LAPS SPLICES AT LATERAL LOAD RESISTING ELEMENTS, REFERENCE PLANS AND ELEVATIONS.

E.

Ld = DEVELOPMENT LENGTH IN TENSION OF DEFORMED BAR
Ldh = DEVELOPMENT LENGTH IN TENSION OF DEFORMED BAR OR DEFORMED WIRE WITH A STANDARD HOOK
LAP = LAP SPLICE LENGTH OF DEFORMED BAR OR DEFORMED WIRE

5.

REINFORCING STEEL SHALL BE PROTECTED BY PLACING BARS WITH A MINIMUM COVER, UNLESS NOTED OTHERWISE.

REINFORCING STEEL CONCRETE COVER	
USE	CLEAR COVER
SLABS	3/4"

CONCRETE CONNECTORS:

1.

UNLESS A SPECIFIC ANCHOR PRODUCT IS NOTED IN THE DRAWINGS, POST-INSTALLED ANCHORS MAY USE ONE OF THE ANCHORS LISTED BELOW FOR THE REQUIRED TYPE.

POST INSTALLED CONCRETE ANCHORS		
TYPE	PRODUCT	REPORT #
ADHESIVE ANCHORS & DOWELS	SIMPSON SET-XP	ICC-ES ESR-2508
	SIMPSON AT-XP	IAPMO-JES ER-263
	HILTI HIT-HY 200	ICC-ES ESR-3187
EXPANSION ANCHOR	SIMPSON STRONG-BOLT 2	ICC-ES ESR-3037
	HILTI KWIK BOLT T22	ICC-ES ESR-4266
SCREW ANCHOR	SIMPSON TITEN HD	ICC-ES ESR-2713
	HILTI KWIK HUS-EZ	ICC-ES ESR-3027

2.

ALL ANCHORS SHALL BE INSTALLED IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND PRODUCT EVALUATION REPORTS.

3.

EMBEDMENTS SPECIFIED ON DRAWINGS ARE "EFFECTIVE" EMBEDMENTS. REFERENCE MANUFACTURER LITERATURE FOR CORRESPONDING ACTUAL EMBEDMENT DEPTHS.

4.

ANCHORS RODS EXPOSED TO EARTH OR WEATHER SHALL BE PROTECTED FROM CORROSION BY HOT-DIP GALVANIZING OR USE OF STAINLESS STEEL. POST INSTALLED EXPANSION AND SCREW ANCHORS EXPOSED TO EARTH OR WEATHER SHALL BE STAINLESS STEEL.

5.

FOR POST-INSTALLED ANCHORS, LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED.

6.

IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON AND SHIFT THE HOLE LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM OF (2) ANCHOR DIAMETERS OR 1 INCH, WHICHEVER IS LARGER, OF SOUND CONCRETE BETWEEN THE ANCHOR AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. IF THE ANCHOR OR DOWEL MANY NOT BE SHIFTED AS NOTED ABOVE, SEEK GUIDANCE FROM THE STRUCTURAL ENGINEER OF RECORD.

7.

SPECIAL INSPECTION OF ANCHOR INSTALLATION IS REQUIRED UNLESS SPECIFICALLY NOTED OTHERWISE IN DRAWINGS. SEE SPECIAL INSPECTION AND MATERIALS TESTING PROGRAM AND NOTES.

sāj

Architecture

BEND

721 SW Industrial Way Ste. 130

Bend, OR 97702

(541) 330-6506

PORTLAND

329 NE Couch St. Ste. 203

Portland, OR 97232

(503) 595-0270

REGISTERED PROFESSIONAL ENGINEER

09.42.49SE

EXPIRES: 06/30/27

Morrison

Maierle

engineers • surveyors • planners • scientists

DRAWING REVISIONS

Description

Date

#

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OBSIDIAN MIDDLE SCHOOL MODERNIZATION

REDMOND SCHOOL DISTRICT

BID SET

Drawing Title

GENERAL STRUCTURAL NOTES

Sheet No.

S0.01

Date :

2026-01-30

Project No.

25033

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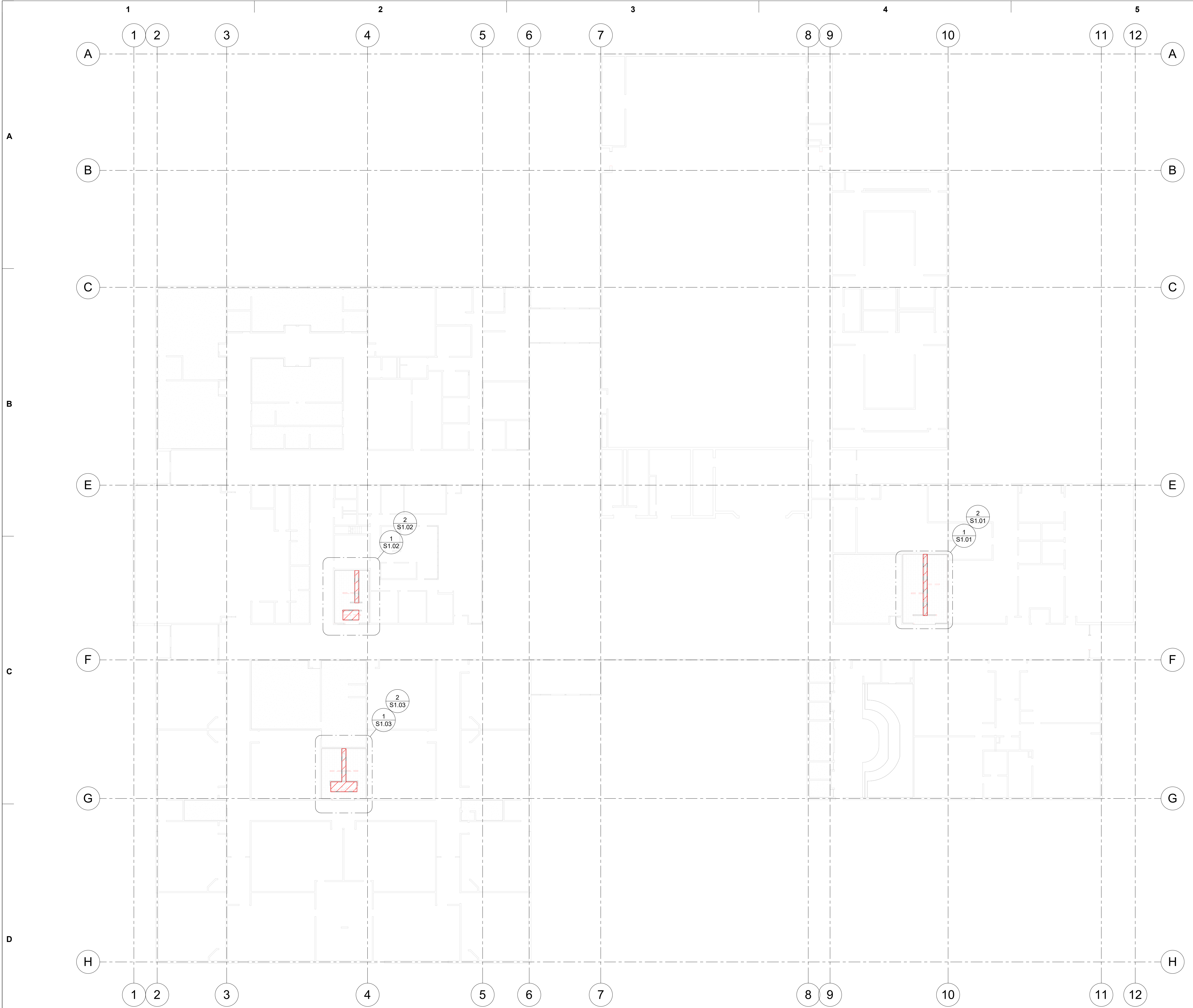
REDMOND SCHOOL DISTRICT

MODERNIZATION

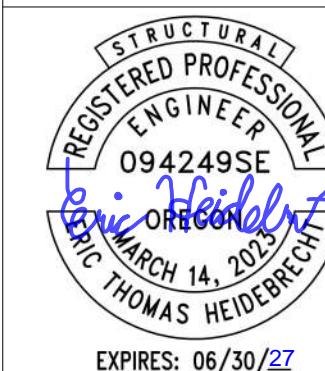
OBSEDIAN MIDDLE SCHOOL

Date :	2026-01-30
Revised :	Project No. 25033

\$1.00



1 MAIN FLOOR STRUCTURAL PLAN - OVERALL
1" = 20'-0"

[illegible]

**OBSIDIAN MIDDLE SCHOOL
MODERNIZATION**

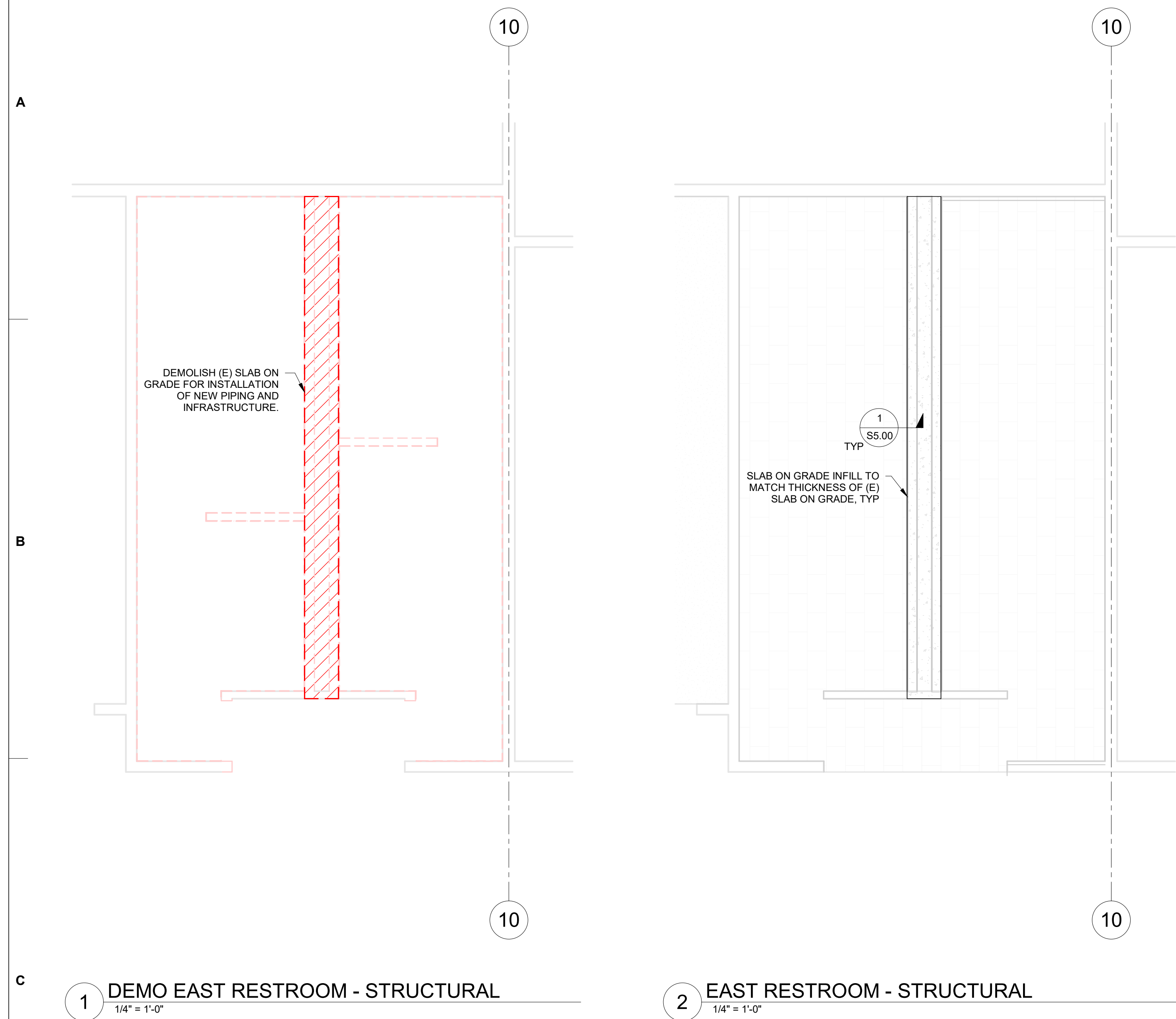
REDMOND SCHOOL DISTRICT

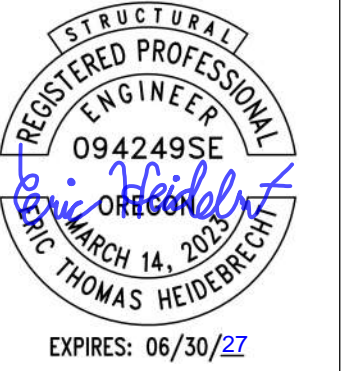
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Drawing Title: EAST RESTROOM STRUCTURAL FLOOR PLAN	
Date :	2026-01-30
Revised :	Project No. 25033

Sheet No. S1.01

1. PROJECT DATUM ELEVATION = 0' - 0" at TOP of MAIN FLOOR SLAB ON GRADE (SEE CIVIL DRAWINGS FOR ABSOLUTE ELEVATION). ALL SPOT ELEVATIONS ARE IN REFERENCE TO THE DATUM ELEVATION.
2. REFER TO THE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS.
3. REFER TO THE DRAWING ANNOTATIONS & SYMBOLS FOR EXPLANATION OF DRAWING CONVENTIONS.
4. REFER TO DRAWINGS \$5.00 FOR TYPICAL CONCRETE DETAILS. TYPICAL DETAILS ARE NOT NECESSARILY REFERENCED BY CALLOUTS ON PLAN; IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW THE REQUIREMENTS OF THE DETAILS AT THE LOCATION AT WHICH THEY OCCUR.
5. COORDINATE THE FOLLOWING ITEMS WITH DRAWINGS OF OTHER DISCIPLINES:
 - a. SIZES AND LOCATIONS OF OPENINGS AND PENETRATIONS THROUGH WALLS AND FLOORS; SEE ARCHITECTURAL, ELECTRICAL, MECHANICAL, AND PLUMBING DRAWINGS.
 - b. RECESSED AND DEPRESSED FLOOR AREAS; SEE ARCHITECTURAL DRAWINGS.
 - c. LOCATIONS AND REQUIREMENTS FOR NON-BEARING / NON-STRUCTURAL PARTITION WALLS; SEE ARCHITECTURAL DRAWINGS.
 - d. WINDOW AND DOOR LOCATIONS AND ROUGH OPENING SIZES IN WALLS; SEE ARCHITECTURAL DRAWINGS.
 - e. LOCATION, SIZE, AND ANCHORAGE OF ELECTRICAL MECHANICAL AND PLUMBING EQUIPMENT; SEE ELECTRICAL, MECHANICAL AND PLUMBING DRAWINGS.
 - f. ROUTING OF DUCTS AND UTILITIES THROUGH WEBS OF TRUSSES OR JOISTS; SEE MECHANICAL AND PLUMBING DRAWINGS.
 - g. DEMOLITION EXTENTS OF EXISTING SLABS ON GRADE; SEE PLUMBING AND ARCHITECTURAL DRAWINGS.
6. SLAB DEMO AND INFILL EXTENTS ARE SHOWN FOR PRICING ONLY. CONTRACTOR MAY INCREASE OR DECREASE EXTENT OF DEMO/INFILL AS REQUIRED TO ACHIEVE ARCHITECTURAL AND PLUMBING SCOPE.



[illegible]

BID SET

REDMOND SCHOOL DISTRICT

MODERNIZATION

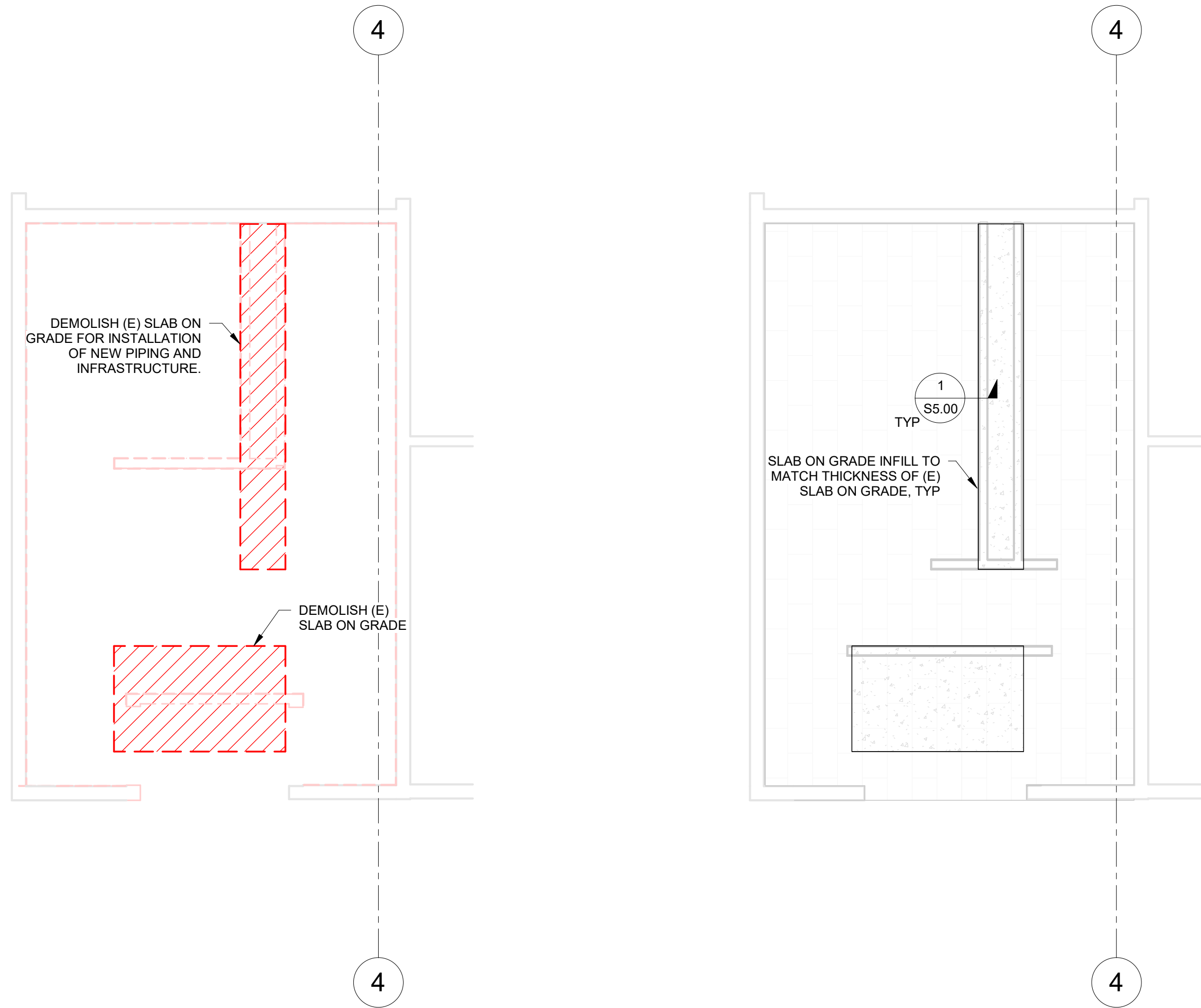
SUBSIDIAN MIDDLE SCHOOL

Date :	2026-01-30
Revised :	Project No. 25033

Sheet No.

\$1.02

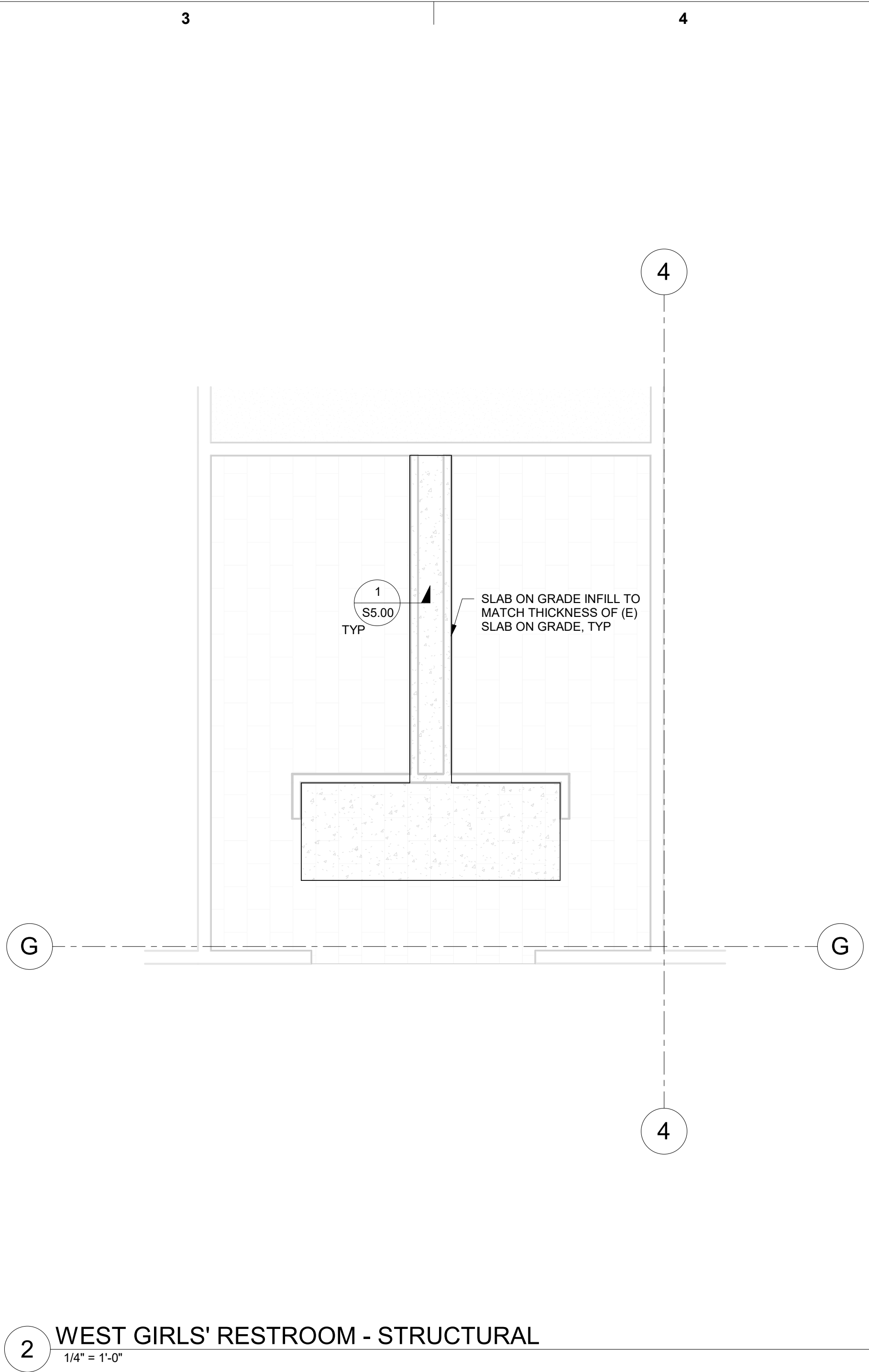
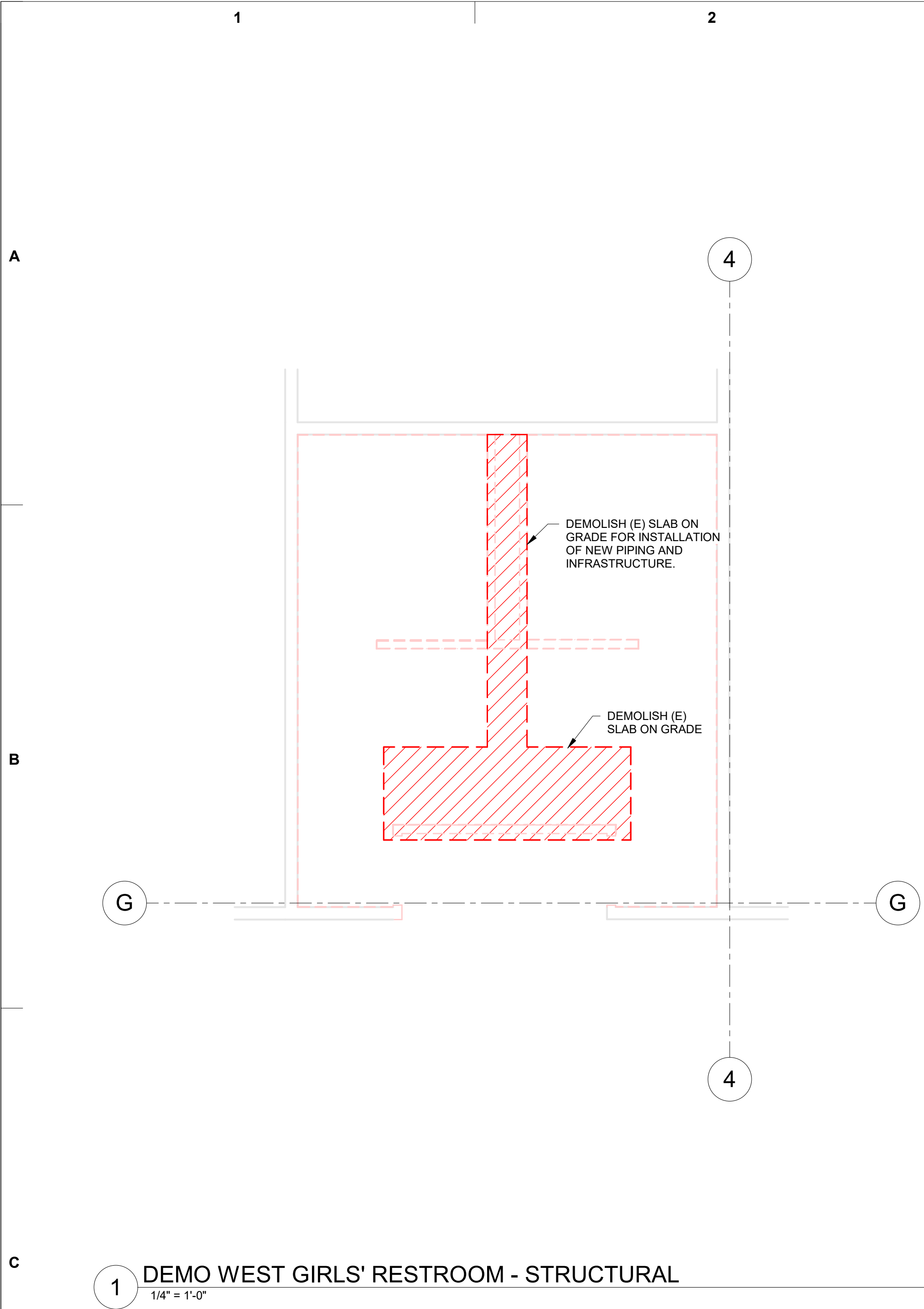
1. PROJECT DATUM ELEVATION = 0' - 0" AT TOP OF MAIN FLOOR SLAB ON GRADE (SEE CIVIL DRAWINGS FOR ABSOLUTE ELEVATION). ALL SPOT ELEVATIONS ARE IN REFERENCE TO THE DATUM.
2. REFER TO THE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS.
3. REFER TO THE DRAWING ANNOTATIONS & SYMBOLS FOR EXPLANATION OF DRAWING CONVENTIONS.
4. REFER TO DRAWING SS-00 FOR TYPICAL CONCRETE DETAILS. TYPICAL DETAILS ARE NOT NECESSARILY REFERENCED BY CALLOUTS ON PLAN; IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW THE REQUIREMENTS OF THE DETAILS AT THE LOCATION AT WHICH THEY OCCUR.
5. COORDINATE THE FOLLOWING ITEMS WITH DRAWINGS OF OTHER DISCIPLINES:
 - SIZES AND LOCATIONS OF OPENINGS AND PENETRATIONS THROUGH WALLS AND FLOORS; SEE ARCHITECTURAL, ELECTRICAL, MECHANICAL, AND PLUMBING DRAWINGS.
 - REGISTERED AND DEPRESSED FLOOR AREAS; SEE ARCHITECTURAL DRAWINGS.
 - LOCATIONS AND REQUIREMENTS FOR NON-BEARING / NON-STRUCTURAL PARTITION WALLS; SEE ARCHITECTURAL DRAWINGS.
 - WINDOW AND DOOR LOCATIONS AND ROUGH OPENING SIZES IN WALLS; SEE ARCHITECTURAL DRAWINGS.
 - LOCATION, SIZE, AND ANCHORAGE OF ELECTRICAL MECHANICAL, AND PLUMBING EQUIPMENT; SEE ELECTRICAL, MECHANICAL, AND PLUMBING DRAWINGS.
 - ROUTING OF DUCTS AND UTILITIES THROUGH WEBS OF TRUSSES OR JOISTS; SEE MECHANICAL AND PLUMBING DRAWINGS.
 - DEMOLITION EXTENTS OF EXISTING SLABS ON GRADE; SEE PLUMBING AND ARCHITECTURAL DRAWINGS.
6. SLAB AND INFILL EXTENTS ARE SHOWN FOR PRICING ONLY. CONTRACTOR MAY INCREASE/DECREASE EXTENT OF DEMO/INFILL AS REQUIRED TO ACHIEVE ARCHITECTURAL AND PLUMBING SCOPE.



1 DEMO WEST BOYS' RESTROOM - STRUCTURAL
1/4" = 1'-0"

2 WEST BOYS' RESTROOM - STRUCTURAL

1/23/2026 9:03:06 AM



FLOOR PLAN NOTES

- PROJECT DATUM ELEVATION = 0' - 0" AT TOP OF MAIN FLOOR SLAB ON GRADE (SEE CIVIL DRAWINGS FOR ABSOLUTE ELEVATION). ALL SPOT ELEVATIONS ARE IN REFERENCE TO THE DATUM ELEVATION.
- REFER TO THE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS.
- REFER TO THE DRAWING ANNOTATIONS & SYMBOLS FOR EXPLANATION OF DRAWING CONVENTIONS.
- REFER TO DRAWING S5.00 FOR TYPICAL CONCRETE DETAILS. TYPICAL DETAILS ARE NOT NECESSARILY REFERENCED BY CALLOUTS ON PLAN; IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW THE REQUIREMENTS OF THE DETAILS AT THE LOCATION AT WHICH THEY OCCUR.
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 - SIZES AND LOCATIONS OF OPENINGS AND PENETRATIONS THROUGH WALLS AND FLOORS; SEE ARCHITECTURAL, ELECTRICAL, MECHANICAL, AND PLUMBING DRAWINGS.
 - RECESSED AND DEPRESSED FLOOR AREAS; SEE ARCHITECTURAL DRAWINGS.
 - LOCATIONS AND REQUIREMENTS FOR NON-BEARING / NON-STRUCTURAL PARTITION WALLS; SEE ARCHITECTURAL DRAWINGS.
 - WINDOW AND DOOR LOCATIONS AND ROUGH OPENING SIZES IN WALLS; SEE ARCHITECTURAL DRAWINGS.
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sāj

Architecture

BEND

721 SW Industrial Way Ste.130

Bend, OR 97702

(541) 330-6506

PORTLAND

329 NE Couch St. Ste. 203

Portland, OR 97232

(503) 595-0270

STRUCTURAL
REGISTERED PROFESSIONAL
ENGINEER
094249SE
THOMAS HEIDERICH
MARCH 14, 2024
EXPIRES: 06/30/27

Morrison
Maierle

engineers • surveyors • planners • scientists

DRAWING REVISIONS

#	Date	Description

OBSIDIAN MIDDLE SCHOOL
MODERNIZATION
REDMOND SCHOOL DISTRICT

BID SET

Drawing Title:
GIRLS' WEST STRUCTURAL
FLOOR PLAN

Date :
2026-01-30

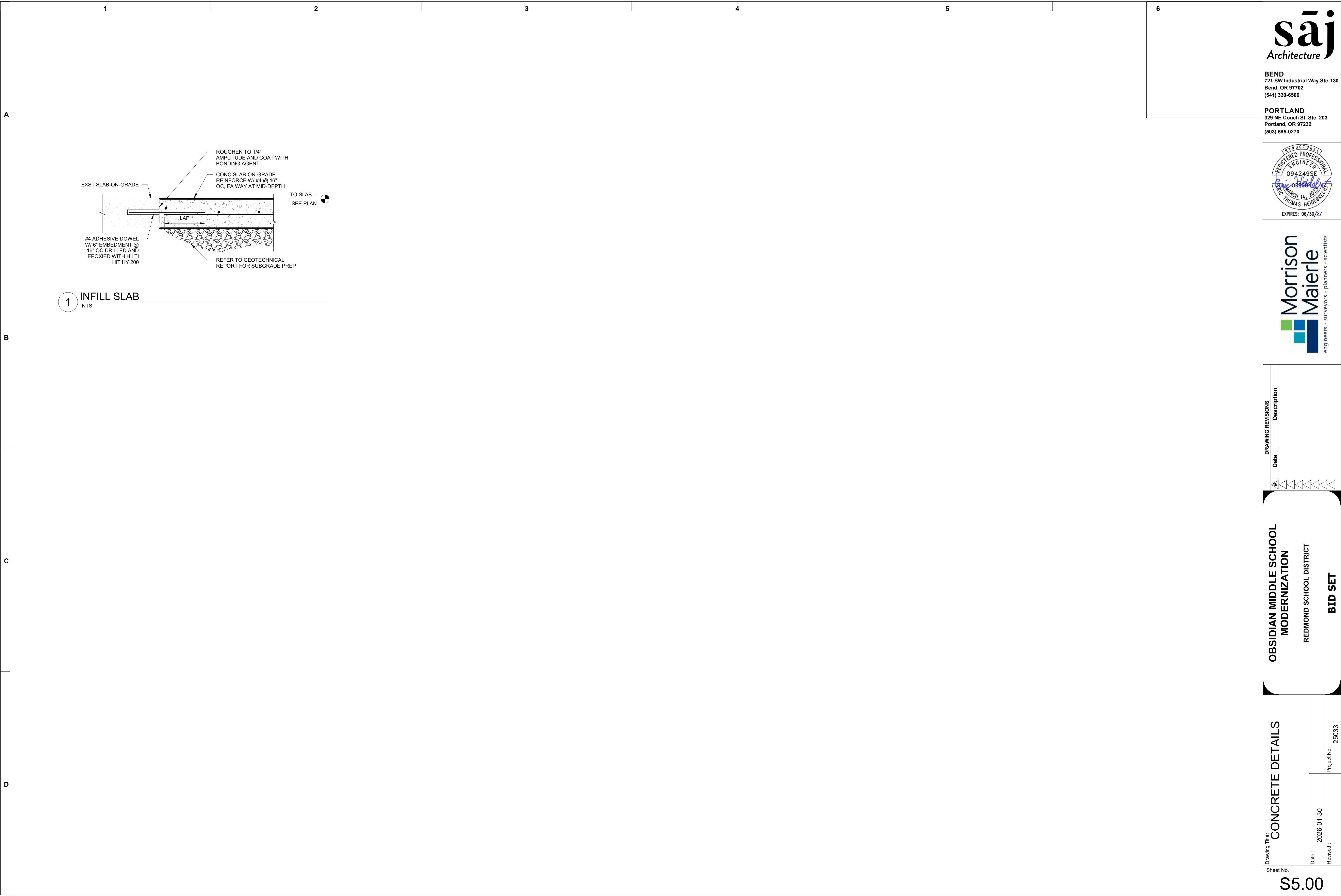
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25033

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S1.03

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BEND
721 SW Industrial Way Ste. 130
Bend, OR 97702
(541) 330-6506

PORTLAND
329 NE Couch St. Ste. 203
Portland, OR 97232
(503) 595-0270

DRAWING REVISIONS		
#	Date	Description

OBSIDIAN MIDDLE SCHOOL
MODERNIZATION

REDMOND SCHOOL DISTRICT

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Drawing Title:
CONCRETE DETAILS

Date :
2026-01-30

Revised :

Project No.
25033

Sheet No.
S5.00

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