

Thank You,  
Greg Vega PE (AZ)  
Vice President  
p 520.495.4065 | m 520.429.5570  
DIBBLE

- Easement dedication
- Fire Marshall permit
- Flow rates for new fire line?

## DOMESTIC WATER PIPE REPLACEMENT

## SITE PIPING GENERAL NOTES

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1. PROVIDE THRUST BLOCKS AT CHANGES IN DIRECTION, AT BRANCH FITTINGS, AT BUILDING ENTRANCE LOCATIONS, AND AS REQUIRED BY THE PIPING MANUFACTURER'S INSTALLATION GUIDELINES. PROVIDE MORE STRINGENT OF TUCSON WATER STANDARD DETAILS OR MANUFACTURER REQUIREMENTS.
2. INSTALL EXPANSION LOOPS WHERE REQUIRED BY MANUFACTURER.
3. ABOVE GROUND VALVES ARE PREFERRED TO DIRECT BURRY VALVES. ABOVE GROUND VALVES EXPOSED IN PUBLIC AREAS SHALL BE PROTECTED FROM VANDALISM & HAVE PROVISIONS FOR LOCKING. COORDINATE WITH TUSD.
4. IN ADDITION TO AS-BUILT LOCATION FOR THE NEW WORK, FIELD VERIFY LOCATION OF EXISTING WATER MAIN AND DOCUMENT OFF CORNERS OF BUILDINGS IN AS-BUILTS.

## SITE DEMOLITION NOTES

1. THE PARTIAL DEPICTION OF EXISTING UTILITIES ON THIS DRAWING IS BASED SOLELY UPON SITE OBSERVATIONS AND EXISTING DRAWING INFORMATION BY TUSD. THE DEPICTION IS NOT INTENDED TO REPRESENT AN ACCURATE AND COMPLETE MAPPING OF ALL UNDERGROUND UTILITIES. THIS DRAWING IS ONLY INTENDED TO ASSIST THE CONTRACTOR IN UNDERSTANDING THE SCOPE OF THE WATERLINE REPLACEMENT PROJECT AND IS NOT INTENDED TO BE A COMPLETE AND/OR ACCURATE SURVEY OF THE UNDERGROUND SITE UTILITIES.
2. TO THE EXTENT POSSIBLE AND AS REQUIRED BY THE STATE OF ARIZONA, THE CONTRACTOR SHALL VERIFY UNDERGROUND UTILITY LOCATIONS BY USING ARIZONA BLUE SLAKE AND ANY OTHER UTILITY LOCATING MEANS AVAILABLE PRIOR TO DIGGING.
3. UNDERGROUND UTILITIES, WHETHER DEPICTED OR NOT, WILL MOST LIKELY BE ENCOUNTERED DURING THIS WORK. IF "ACTIVE" WATER, IRRIGATION, SANITARY SEWER, ELECTRIC, GAS, OR TELECOM ARE DAMAGED DURING THE EXCAVATION PORTION OF THE PROJECT, THE CONTRACTOR SHALL IMMEDIATELY CONTACT TUSD AND THE UTILITY PROVIDER AND MAKE NECESSARY EMERGENCY REPAIRS TO THE UTILITY, EXCEPT FOR GAS WHICH SHALL BE REPORTED TO THE AFD.
4. ALL REPAIRS TO UNDERGROUND UTILITIES THAT WERE PROPERLY LOCATED & IDENTIFIED BY THE UTILITY LOCATOR SHALL BE PERFORMED BY THIS CONTRACTOR AT NO COST TO THE OWNER.
5. DEMOLITION OF EXISTING UNDERGROUND WATER DISTRIBUTION PIPING SHALL INVOLVE REMOVAL OF PIPING WHERE NECESSARY TO PROVIDE SPACE FOR NEW PIPING AND/OR CONNECTIONS. OTHERWISE, IT IS ASSUMED THAT THE EXISTING UNDERGROUND WATER DISTRIBUTION PIPING WILL BE ABANDONED IN PLACE.
6. SAWCUT AND REPAIR ASPHALT, CONCRETE, BRICKS, ETC. AS NECESSARY TO PROVIDE SUFFICIENT WORK SPACE FOR EXCAVATION AND INSTALLATION OF NEW WORK. ALSO SEE SPECIFICATIONS.



GPM (BASED ON STEEL PIPE AT 5 FPS)	(E) GALVANIZED ASTM A53 (c=120)				PP-R (c=140)				TYPE L COPPER (c=130)		STAINLESS STEEL (c=130)	
	NOM. SIZE (INCHES)	I.D. <sup>1</sup>	FPS	HEAD (FT/100)	NOM. SIZE (INCHES)	I.D. <sup>2</sup>	FPS	HEAD (FT/100)	NOM. SIZE (INCHES)	I.D. <sup>3</sup>	NOM. SIZE (INCHES)	I.D. <sup>1</sup>
—	1/2	0.62	—	—	3/4	0.72			3/4	0.785	N/A	
8.3	3/4	0.82	0.82	0.82	1	1.05			1	1.025	N/A	
13.4	1	1.05	1.05	1.05	1	1.05			1	1.025	N/A	
23.3	1-1/4	1.38	1.38	1.38	1-1/2	1.61			1-1/2	1.505	N/A	
31.7	1-1/2	1.61	1.61	1.61	1-1/2	1.61			2	1.985	N/A	
52.3	2	2.07	2.07	2.07	2	2.07			2	1.985	N/A	
74.5	2-1/2	2.47	2.47	2.47	2-1/2	2.47			2-1/2	2.465	N/A	
115	3	3.07	3.07	3.07	3	3.07			3	2.945	N/A	
198	4	4.03	4.03	4.03	4	4.03			4	3.905	4	4.260
450	6	6.07	6.07	6.07	8	7.98			6	5.845	6	6.357
—	8	7.98	7.98	7.98	8	7.98			8	7.725	N/A	

**Notes from interior walk**

- Any copper lines will stay existing, RG will connect lines.
- Any valves will be replaced/ adding more valves as needed
- How many sprinkler do each FDC run? What is the density?
- What is the proposed size of pipe for the Fire Line?

**OCS - fire water distribution scope**

- We are installing a new fire service line in the tunnels to supply the existing fire risers.
- We are installing 4" approved steel pipe per NFPA13. Attaching pipe to existing concrete walls in tunnel.
- New control valves, and accessories
- All this work to be done regular hours Monday-Saturday
- Hydrostatic pressure test to AHJ.
- Final to AHJ
- Submit all plans to AHJ in the area.
- Labeling pipe for future references.
- Fire sprinkler shop drawings and permits.

PIPE SIZING / EQUIVALENCY CHART											
D.1 ASTM A53 (c=120)			PP-R (c=140)			TYPE L COPPER (c=130)			STAINLESS STEEL (c=130)		
NOM. SIZE (INCHES)	I.D.2	FPS	NOM. SIZE (INCHES)	I.D.2	FPS	NOM. SIZE (INCHES)	I.D.3	FPS	NOM. SIZE (INCHES)	I.D.1	FPS
3/4	0.72		3/4	0.785		3/4	0.785		3/4	0.785	
1	1.05		1	1.025		1	1.025		1	1.025	
1-1/2	1.61		1-1/2	1.505		1-1/2	1.505		1-1/2	1.505	
2	2.07		2	1.985		2	1.985		2	1.985	
2-1/2	2.47		2-1/2	2.465		2-1/2	2.465		2-1/2	2.465	
3	3.07		3	2.945		3	2.945		3	2.945	
4	4.03		4	3.905		4	3.905		4	4.260	
6	6.07		6	5.845		6	5.845		6	6.357	
8	7.98		8	7.725		8	7.725		8	7.725	

REPLACEMENT PIPE SIZES & PERFORMANCE

REPLACEMENT PIPE SIZES & PERFORMANCE

- We are installing a new fire service line in the tunnels to supply the existing fire risers.
- We are installing 4" approved steel pipe per NFPA13. Attaching pipe to existing concrete walls in tunnel.
- New control valves, and accessories
- All this work to be done regular hours Monday-Saturday
- Hydrostatic pressure test to AHJ.
- Final to AHJ.
- Submit all plans to AHJ in the area.
- Labeling pipe for future references.
- Fire sprinkler shop drawings and permits.

4 OF 12  
SABINO H.S.  
DOMESTIC WATER PIPE  
REPLACEMENT

**DOMESTIC WATER  
PIPE REPLACEMENT**

**SABINO HIGH SCHOOL**  
5000 N. Bowes Road, Tucson, AZ 85749

**GENERAL PLAN NOTES:**

- PROVIDE MECHANICAL LINK SEAL FOR ALL FLOOR PENETRATIONS THRU FLOOR ABOVE (ALL ARE WITHIN WET AREAS).
- ALL PIPING SHOWN, THAT CONTINUES TO FLOOR ABOVE IS COPPER U.N.O.
- INSTALL PARALLEL REPLACEMENT PIPE IN TUNNELS WHERE POSSIBLE TO COMPLY WITH PHASING REQUIREMENTS – REFER TO SHEET G.1.1.

**GENERAL CEILING NOTES:**

- MATCH EXISTING HEIGHTS – FIELD VERIFY.
- CEILING TYPES INDICATED ARE PROVIDED FOR REFERENCE AND MUST BE VERIFIED. VERIFY ASSEMBLY CONSTRUCTION.
- REPAIR / REPLACE ALL CEILINGS WITHIN AREAS OF WORK AS REQUIRED.
- PROVIDE FRAMING AS REQUIRED TO INSTALL ACCESS PANELS.
- REFER TO SPEC #16 ON P0.1 FOR ADDITIONAL REQUIREMENTS.
- NEW WORK MAY BE INSTALLED BELOW THE (E)CLG AND CONCEALED WITHIN A NEWLY CONSTRUCTED SOFFIT. VANDAL RESISTANT CONSTRUCTION; PAINTED TO MATCH EXISTING; COMPLETE WITH ACCESS TO VALVES. ALL PIPING SHALL BE CONCEALED. PROVIDE SOFFIT LOCATION PLAN FOR TUSD APPROVAL PRIOR TO WORK.

**PIPE SIZING NOTES:**

PIPE SIZES SHOWN ON PLAN REPRESENT THE EXISTING SIZES. REFER TO SHEET P1.1 FOR NEW WORK PIPE SIZES TO REPLACE THOSE NOTED ON THIS SHEET.

**PIPE REPLACEMENT PLAN KEYNOTES:**

1. REPLACE BASEMENT / TUNNEL CW PIPE TO POINT OF CONNECTION WITH (E) COPPER BRANCH SEGMENT.
  - 1.1. PROVIDE FULL LINE SIZE SOV AT TAP TO MAIN.
  - 1.2. DEMO (E) SOV IF ONE EXISTS.
  - 1.3. FIELD VERIFY MATERIAL, EXACT SIZE AND LOCATION. SEE EQUIVALENT PIPE SIZING NOTES FOR CONVERSIONS.
  - 1.4. PROVIDE UNION OR MATING FLANGE DOWNSTREAM OF VALVE AT CONNECTION TO (E) COPPER BRANCH MATERIAL. PROVIDE DIELECTRIC TYPE WHERE APPLICABLE FOR ELECTROLYSES PROTECTION.
2. REPLACE BASEMENT / TUNNEL CW PIPE TO A POINT OF CONNECTION WITH (E) CW BLACK STEEL PIPE.
  - 2.1. PROVIDE FULL LINE SIZE SOV AT TAP TO MAIN.
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**DOMESTIC WATER  
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5000 N. Bowes Road, Tucson, AZ 85749

SEAL:

**KW**  
**KELLY & WRIGHT**  
**ASSOCIATES • PC**  
HVAC PLUMBING • FIRE PROTECTION  
7337 E. TANQUE VERDE RD.  
TUCSON, ARIZONA 85715  
(520) 887.1919 FAX (520) 696.0280  
WWW.KWMECH.COM  
THIS DOCUMENT IS THE PROPERTY OF KELLY & WRIGHT ASSOCIATES, PC. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF KELLY & WRIGHT ASSOCIATES, PC.

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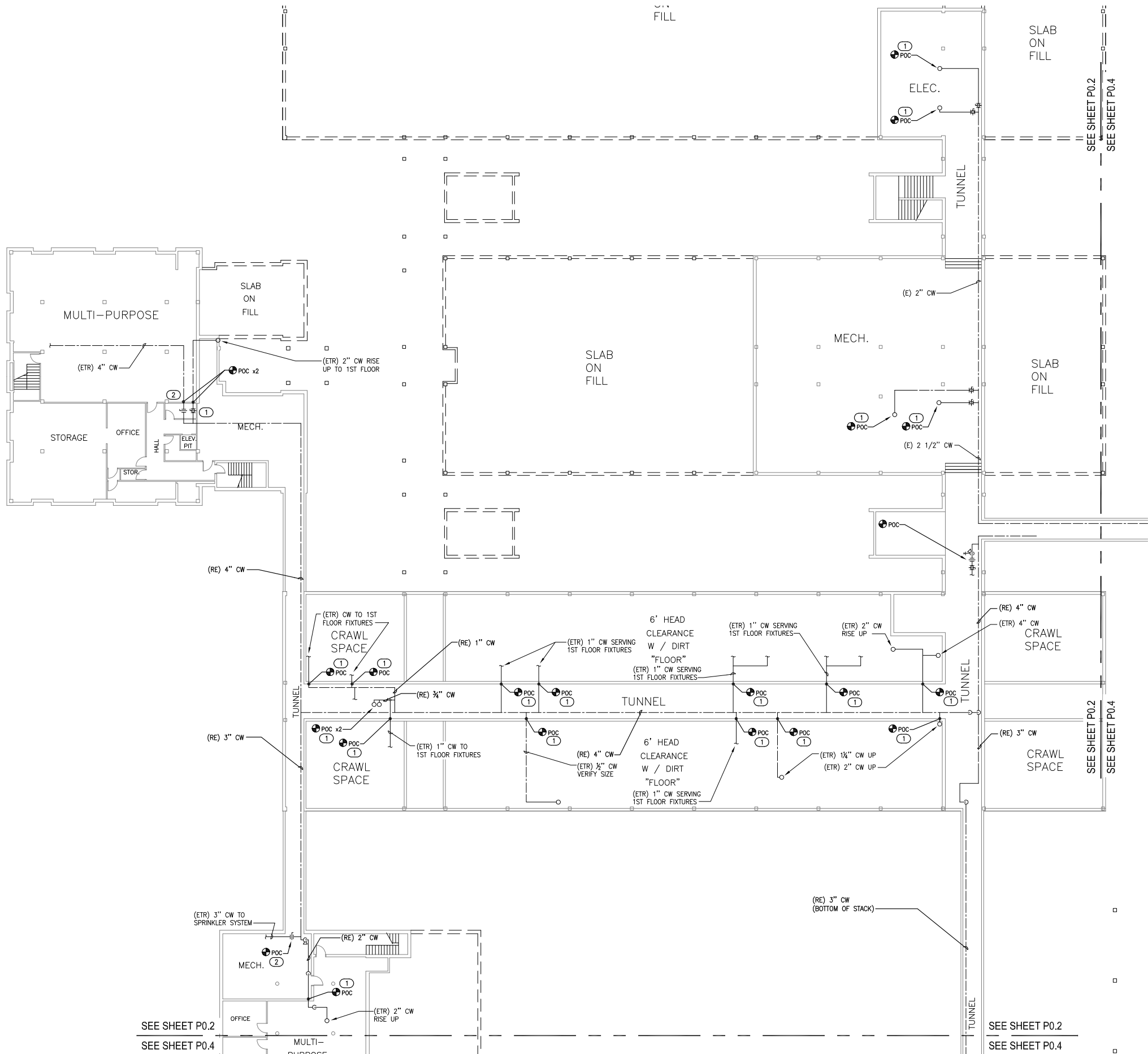
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DRAWN BY: JBR  
DESIGNED BY: JBR  
CHECKED BY: DFK

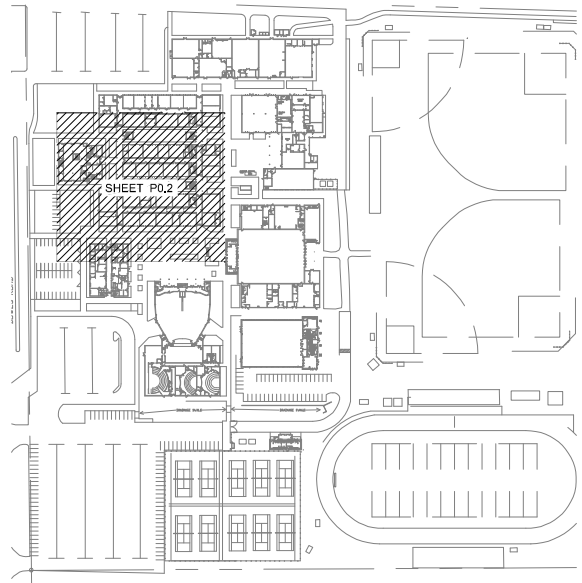
**SHEET CONTENTS:**  
BLDG. G BASEMENT  
PIPING FLOOR PLAN

SHEET

**P0.2**

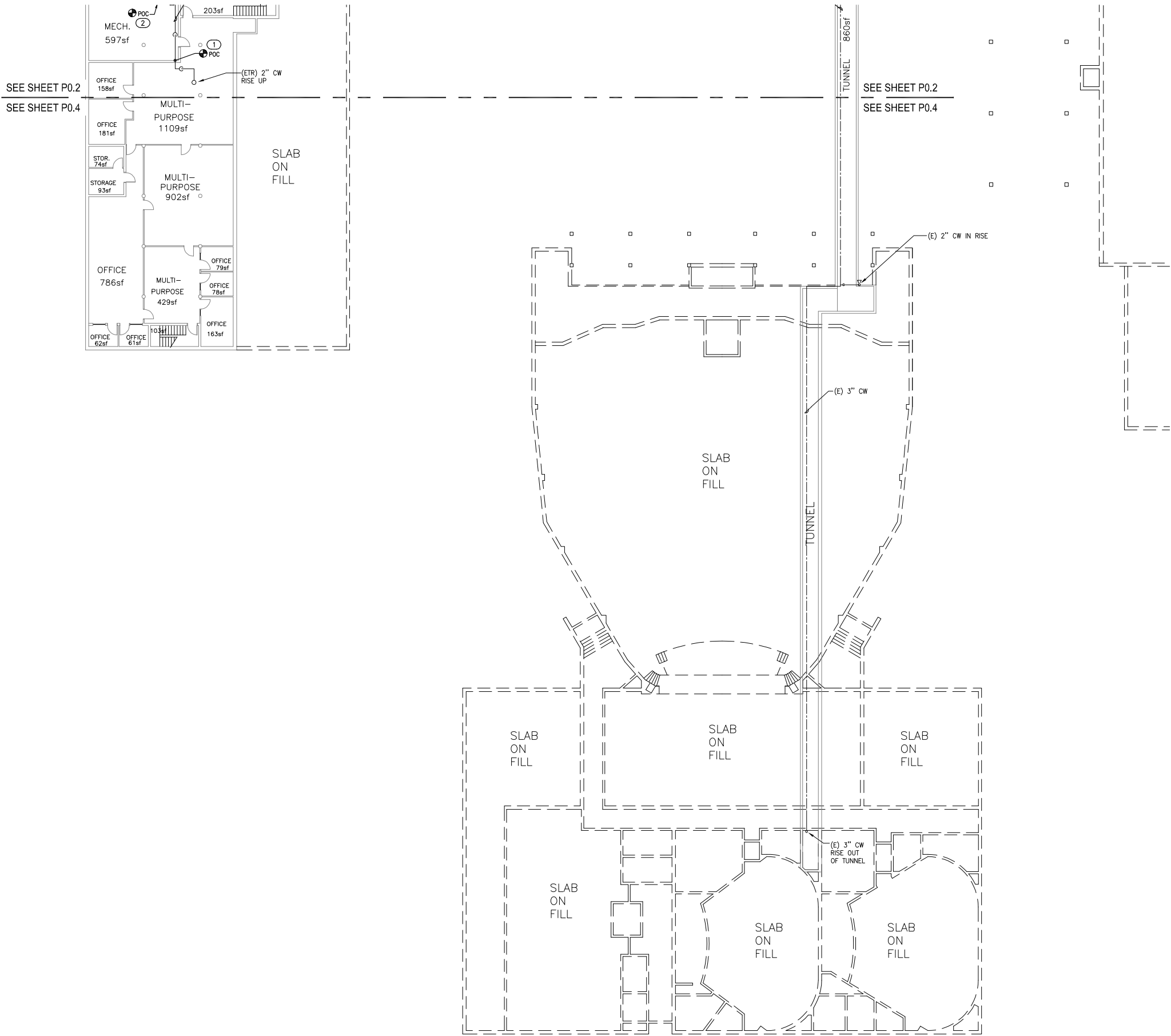


**2 BASEMENT PIPING PLAN - AREA NORTHWEST**  
SCALE: APPROXIMATELY 1/16"=1'-0"  
SABINO H.S. NORTH

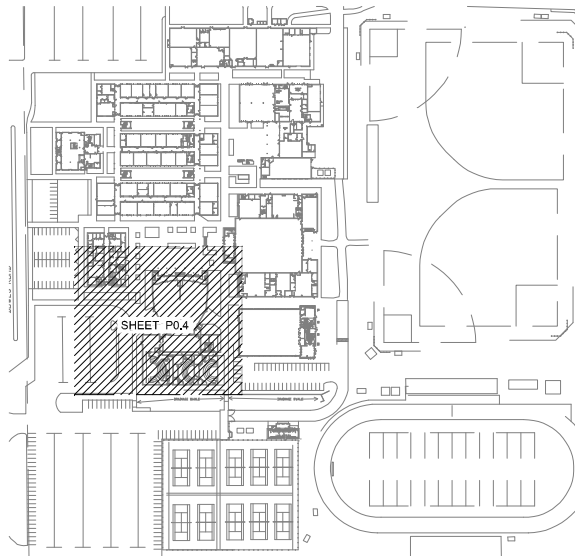
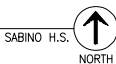


**1 KEYPLAN**  
SCALE: NONE  
SABINO H.S. NORTH

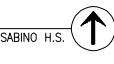




2 BASEMENT PIPING FLOOR PLAN - AREA SOUTH  
SCALE: APPROXIMATELY 1/16"=1'-0"



1 KEYPLAN  
SCALE: NONE



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SEAL:



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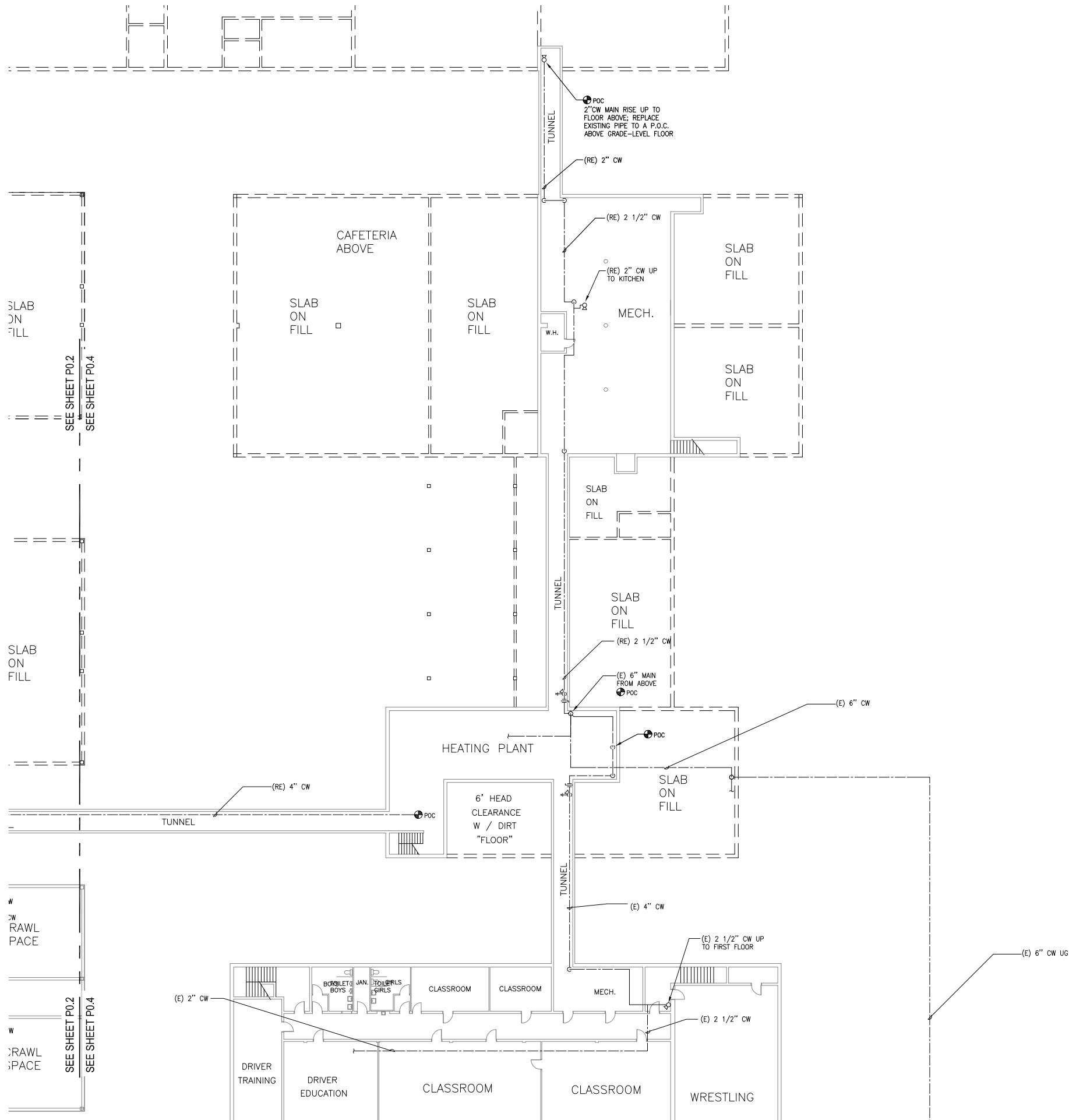
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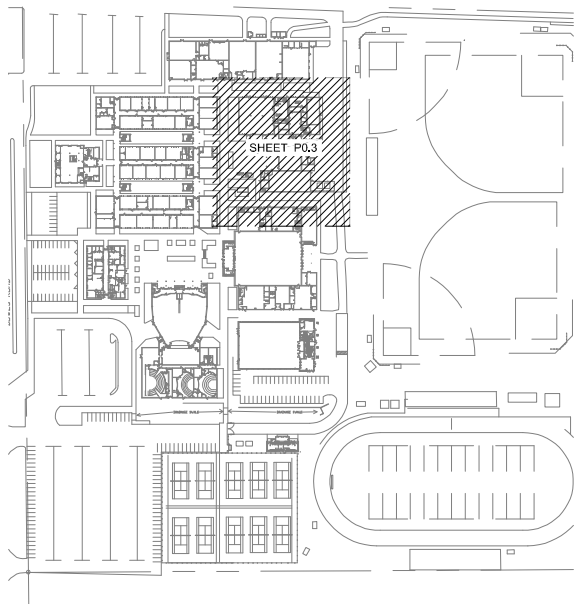
SHEET CONTENTS:  
BLDG. B3, 300 WING BASEMENT  
PIPING FLOOR PLAN

SHEET

P0.4



**2 BASEMENT PIPING FLOOR PLAN - AREA NORTHEAST**  
SCALE: APPROXIMATELY 1/8"=1'-0"  
SABINO H.S. NORTH



**1 KEYPLAN**  
SCALE: NONE  
SABINO H.S. NORTH



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**P0.3**