SITE PLAN

SCALE: 1/32"=1'-0"

BOA Architecture Interiors Planning
1511 Cota Ave. Long Beach, CA 90813 Tel. 562-912-7900

KESSLER PARK SNACK BAR
SNACK BAR, RESTROOM REMODEL & NEW SHADE STRUCTURE
18401 JURUPA AVE, BLOOMINGTON, CA 92316

NO.	DATE	ISSUE	BY	CHK

Designer: KMF
CAD Draft: PT
Architect: LOK
Engineer: KMF
Client: BLOOMINGTON CITY
Date Issue: 01-17-2023
Job Number: 2339

SITE PLAN

P2.0

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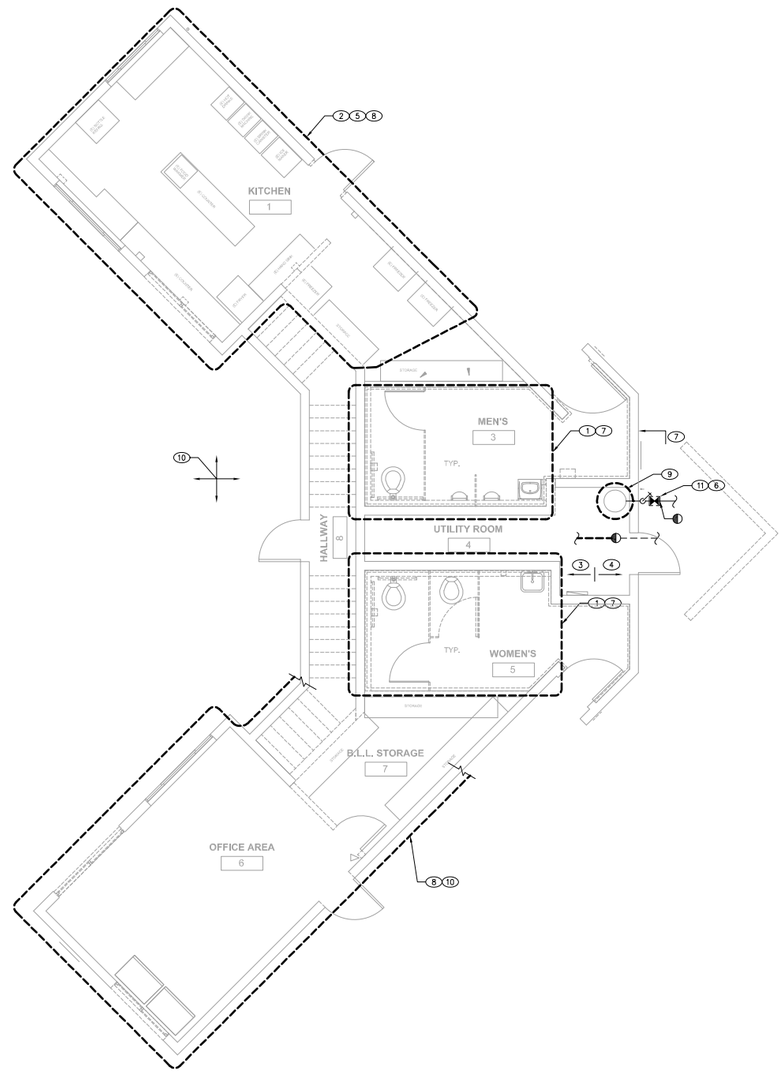
NOTES:

1. DEMO FIXTURES ASSOCIATED WITH EXISTING TOILET ROOM FACILITY (L, WC)
2. DEMO FIXTURES ASSOCIATED WITH EXISTING KITCHEN (MS, HS, IM, 3-CS)
3. MAINTAIN EXISTING 4" WASTE SERVICE INTO SPACE
4. DEMO WASTE LATERAL / RUNNOUT FROM MAIN / BUILDING DRAIN TO FIXTURES IN EXISTING RESTROOM FACILITY; MAINTAIN / MODIFY V SERVICE IN VICINITY; MAINTAIN / MODIFY VTR; EXTEND AS NECESSARY
5. DEMO WASTE LATERAL FROM WASTE MAIN TO EXISTING KITCHEN SERVICES; DEMO V SERVICE IN VICINITY; DEMO VTR
6. MAINTAIN EXISTING 2" COLD WATER SERVICE FROM WATER METER ONTO SPACE
7. DEMO (E) CW SERVICE FROM AND INCLUDING BUILDING ISOLATION VALVE TO POINTS OF USE IN RESTROOM FACILITIES
8. DEMO (E) CW SERVICE FROM AND INCLUDING BUILDING ISOLATION VALVE TO POINTS OF USE IN KITCHEN FACILITIES
9. DEMO WATER HEATER WH-A
10. CAP (E) W SERVICES ABANDONED BELOW SLAB
11. REDEVELOP ISOLATION VALVE IN YARD BOX; RESTORE YARD BOX COMPLETE IN INSTALLATION TO (N) CONDITION



NORTH

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

FLOOR PLAN - DEMO

BOA Architecture Interiors Planning
1511 Cota Ave. Long Beach, CA 90813 Tel. 562-912-7900

KESSLER PARK SNACK BAR

SNACK BAR, RESTROOM REMODEL & NEW SHADE STRUCTURE

18401 JURUPA AVE, BLOOMINGTON, CA 92316

NO.	DATE	REVISIONS	BY	CHK

Designer: AMF
CAD Drafter: RT
Architect: OK
Engineer: AMF
Client: BLOOMINGTON CITY
Date Issued: DEC-2023
Job Number: 2939

• FLOOR PLAN - DEMO

P3.0

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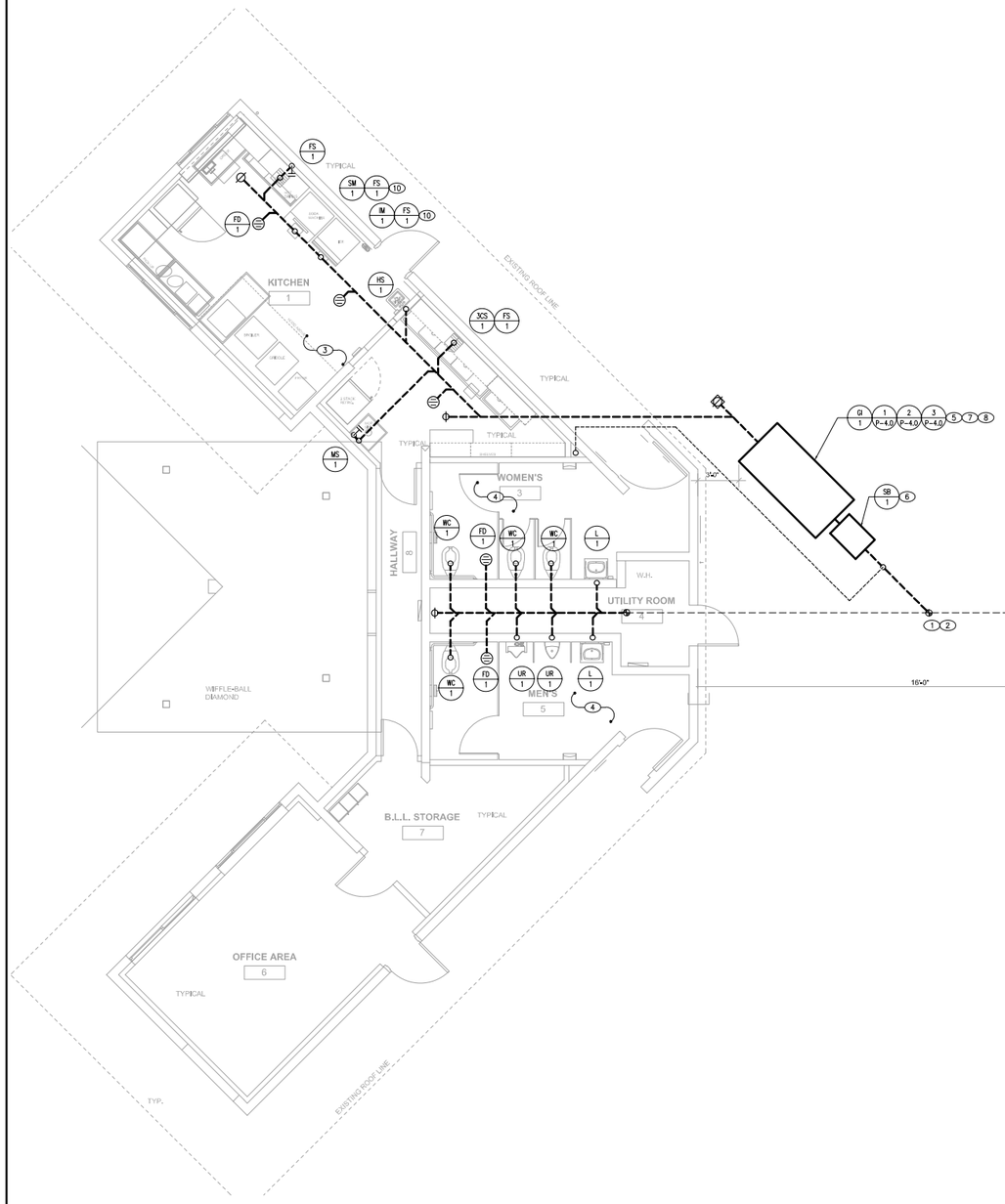
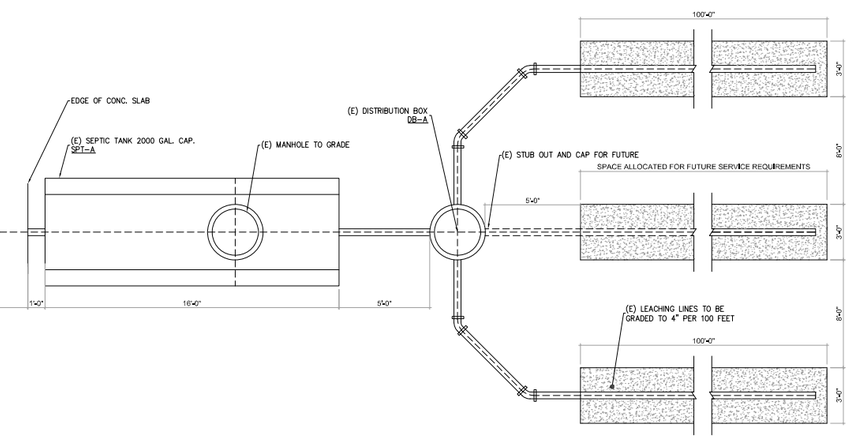
NOTES:

1. MAINTAIN EXISTING 4" WASTE SERVICE INTO SPACE
2. MODIFY / PROVIDE WASTE LATERAL / RUNNOUT FROM MAIN / BUILDING DRAIN TO FIXTURES IN EXISTING RESTROOM FACILITY; MODIFY / PROVIDE V SERVICE IN VICINITY; MODIFY / PROVIDE VTR, EXTEND AS NECESSARY
3. PROVIDE WASTE LATERAL FOR FLOOR SINK FS-1, MOP SINK MS-1, HAND SINK HS-1, 3-COMPARTMENT SINK 3CS-1 IN KITCHEN; EXTEND WASTE SERVICES FROM POINT OF CONNECTION AT (E) WASTE LATERAL TO POINT OF USE
4. MODIFY / PROVIDE WASTE & VENT SERVICES TO NEW RESTROOM FIXTURES WATER CLOSET WC-1, URINAL UR-1, LAVATORY L-1, FLOOR DRAIN FD-1
5. PROVIDE GREASE INTERCEPTOR GI-1
6. PROVIDE SAMPLING BOX SB-1
7. PROVIDE CONCRETE APRON
8. PROVIDE 2" V SERVICE FROM DISCHARGE OF GI TO TERMINATION ABOVE ROOF; COORDINATE ROUTING, TERMINATION, CONCEALMENT WITH GENERAL CONTRACTOR
9. COORDINATE REPAIR OF HARDSCAPE, LANDSCAPE WITH GENERAL CONTRACTOR
10. LOCATE FLOOR SINKS ASSOCIATED WITH ICE MAKER, SODA MACHINE HALF-EXPOSED UNDERNEATH EQUIPMENT





NORTH

FLOOR PLAN – WASTE

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

BOA Architecture Interiors Planning
1511 Cota Ave. Long Beach, CA 90813 Tel. 562-912-7900

KESSLER PARK SNACK BAR

SNACK BAR, RESTROOM REMODEL & NEW SHADE STRUCTURE

18401 JURUPA AVE, BLOOMINGTON, CA 92316

Designer:	AMF
CAD Drafter:	RT
Architect:	DK
Engineer:	AMF
Client:	BLOOMINGTON CITY
Date Issued:	01-11-2023
Job Number:	2939

• RENO FLOOR PLAN – WASTE & VENT

P3.1

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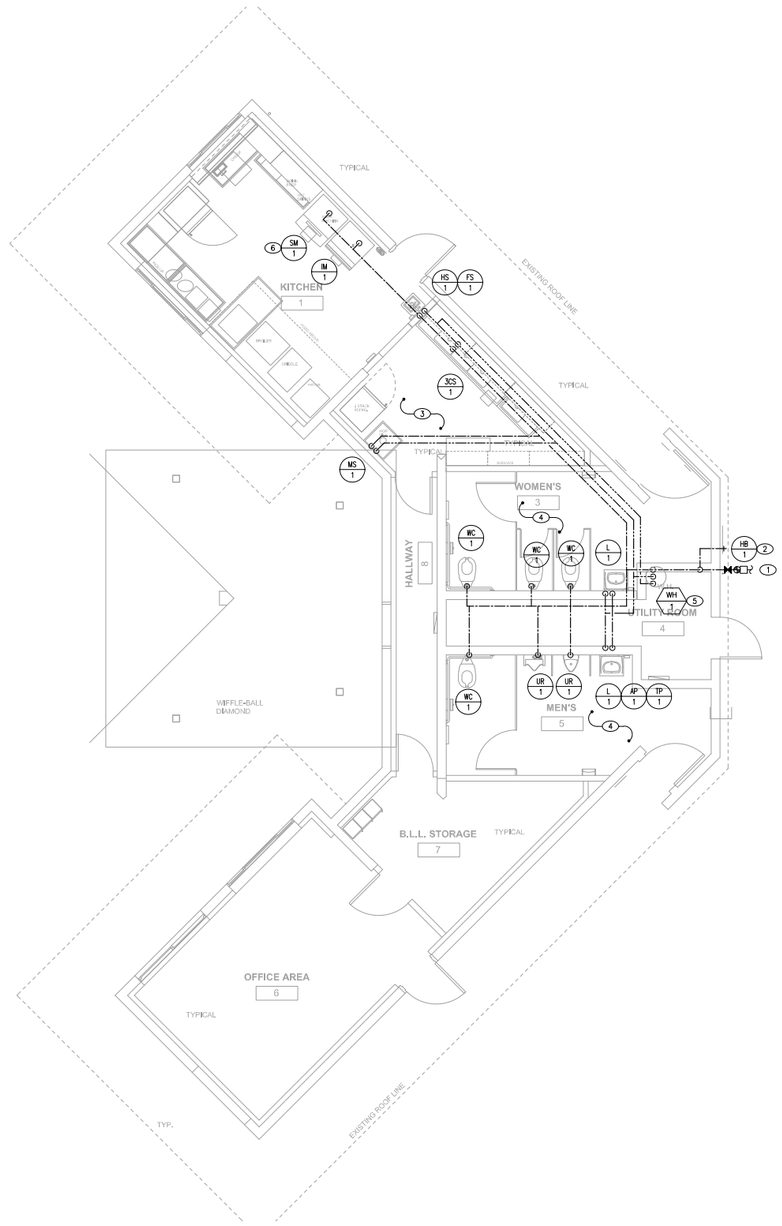
NOTES:

1. MAINTAIN EXISTING 1-1/2" COLD WATER SERVICE FROM WATER METER ONTO SITE TO POC AT BUILDING ISOLATION VALVE; PROVIDE (N) ISOLATION VALVE, (N) YARD BOX
2. EXISTING COLD WATER TO HB-A; PROVIDE HOUSE BIB UNDER LOCKABLE COVER WITH REMOVABLE KEY
3. PROVIDE MOP SINK MS-1, ICE MAKER IM-1, HAND SINK HS-1, SODA MACHINE SM-1, 3-COMPARTMENT SINK 3CS-1 IN KITCHEN SPACE; EXTEND COLD & HOT WATER SERVICES FROM MAINS IN UTILITY ROOM TO POINTS OF USE
4. MODIFY / PROVIDE COLD WATER, DOMESTIC HOT WATER LATERAL / RUNOUT FROM MAINS IN UTILITY ROOM TO POINTS OF USE
5. PROVIDE WATER HEATER WH-1; PROVIDE ASSOCIATED CW, DHW DHWR SERVICES TO / FROM WATER HEATER TO / FROM POINTS OF USE
6. PROVIDE AIR GAP BETWEEN CARBONATORS AND POTABLE WATER SUPPLY FOR SODA MACHINE SM-1



NORTH

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

FLOOR PLAN – WATER

BOA Architecture Interiors Planning
1511 Cota Ave. Long Beach, CA 90813 Tel. 562-912-7900

KESSLER PARK SNACK BAR
SNACK BAR, RESTROOM REMODEL & NEW SHADE STRUCTURE
18401 JURUPA AVE, BLOOMINGTON, CA 92316

NO.	DATE	REV.	BY	CHK

Designer: KMF
CAD Draft: BT
Architect: LGK
Engineer: KMF
Client: BLOOMINGTON DIST.
Date Issue: 02-23-2023
Job Number: 2939

• RENO FLOR PLAN – WATER
• • •

P3.2

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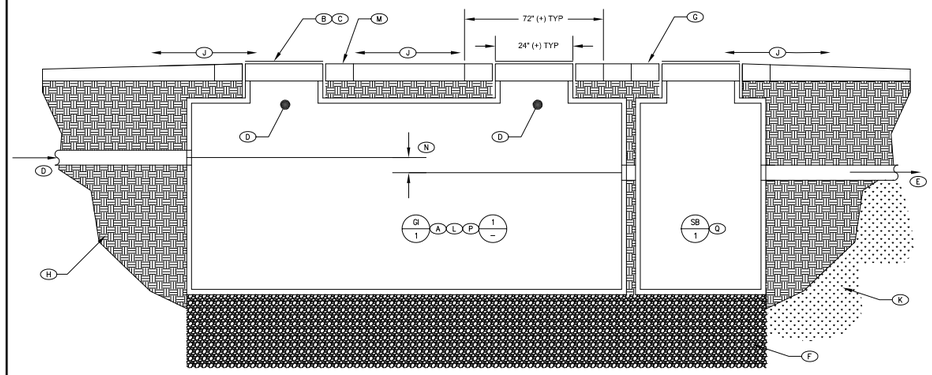
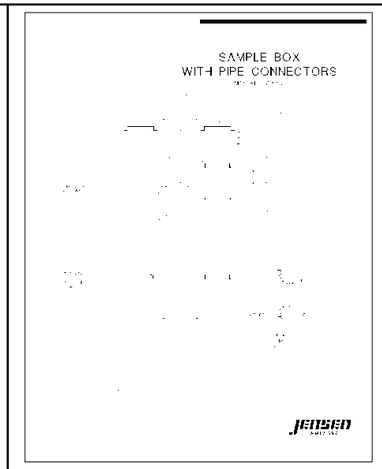


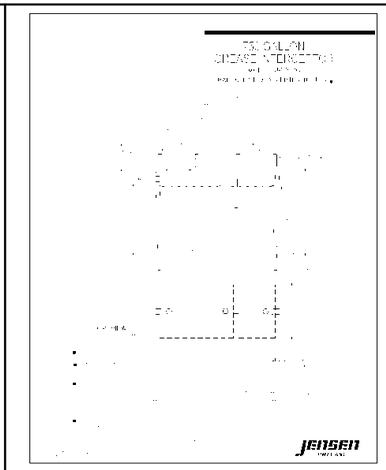
NOTES:

- (A) PROVIDE GREASE INTERCEPTOR; SET INTO EARTHEN GRADE
- (B) PROVIDE EXTENSIONS TO ELEVATE COVER ABOVE GRADE
- (C) PEDESTRIAN RATED TRAFFIC COVER TO MANWAY, FOR ACCESS INTO INTERCEPTOR; SET COVER 2" ABOVE GRADE
- (D) INLET TO INTERCEPTOR
- (E) DISCHARGE FROM INTERCEPTOR
- (F) SUB-BASE BEDDED WITH GRANULAR MATERIAL (PEA GRAVEL) WITH 90% COMPACTION
- (G) SLOPE APRON GRADE DOWN AWAY FROM COVER; TYP
- (H) NATIVE SOIL
- (J) HARDSCAPE (CONCRETE)
- (K) VERIFY DRY INSTALLATION (ABOVE WATER TABLE)
- (L) SAMPLE BOX INSTALL SIMILAR (LESS PEA GRAVEL)
- (M) PROVIDE CONCRETE APRON 24" BEYOND PERIMETER OF MANWAYS; PROVIDE #2 REBAR 18" O.C. WITH MINIMUM 2" COVER; NOT TO SCALE
- (N) MINIMUM 3", MAXIMUM 8" DIFFERENTIAL
- (P) SEE DETAIL FOR INTERNAL HARDWARE
- (Q) PROVIDE SAMPLE BOX; INSTALLATION SIMILAR

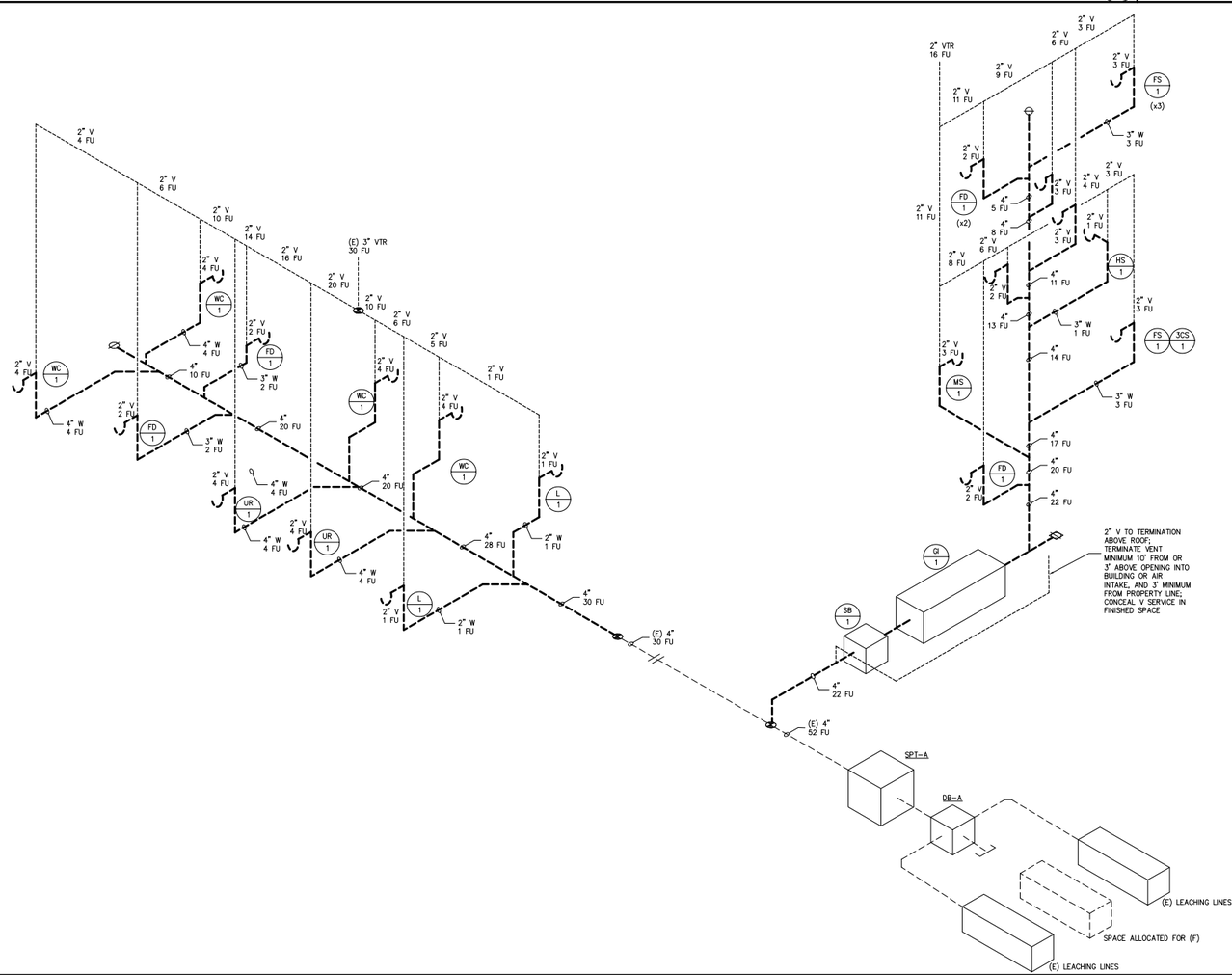
GREASE INTERCEPTOR INSTALLATION — NO SCALE — 3



SAMPLING BOX — NO SCALE — 2



GREASE INTERCEPTOR — NO SCALE — 1



WASTE & VENT ISOMETRICS

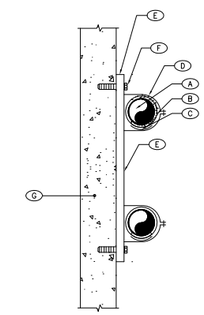
WASTE & VENT ISOMETRIC

NOTES:

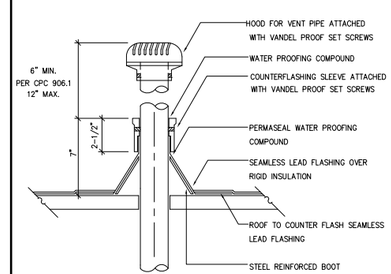
1. WASTE SERVICE SHALL BE INSTALLED WITH A MINIMUM 2% SLOPE
2. PIPING MATERIALS SHALL BE SERVICE WEIGHT HUBLESS CAST IRON PIPE AND FITTINGS WITH NEOPRENE GASKETS AND CAST IRON CLAMPS AND STAINLESS STEEL NUTS, BOLTS, AND WASHERS; ALTERNATIVE: SCHEDULE 40 ABS WITH ABS FITTINGS AND SOLVENT WELD
3. VENT SERVICE SHALL BE DEVELOPED PER REQUIREMENTS FOR COMBINATION WASTE AND VENT SERVICE

NOTES:

- (A) PROVIDE HHW SERVICE
- (B) PROVIDE PIPE INSULATION
- (C) PROVIDE PIPE SADDLE OR INSULATION INSERT
- (D) PROVIDE PIPE STRAP
- (E) PROVIDE MANUFACTURED C-CHANNEL HARDWARE, CUT AND FIELD-ASSEMBLED VIA MANUFACTURER'S FASTENERS; FIELD WELDING IS NOT ALLOWED
- (F) PROVIDE ANCHOR BOLTS FOR ATTACHMENT OF C-CHANNEL HARDWARE TO BLOCK WALL
- (G) CMU BLOCK WALL



PIPE SUPPORT — NO SCALE — 4



VENT THRU ROOF — NO SCALE — 5

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KESSLER PARK SNACK BAR
SNACK BAR, RESTROOM REMODEL & NEW SHADE STRUCTURE
18401 JURUPA AVE, BLOOMINGTON, CA 92316

NO.	DATE	BY	CHK

Designer: KWF
CAD Drafter: BT
Architect: LOA
Engineer: KWF
Client: BLOOMINGTON CITY
Date Issue: 01-13-2023
Job Number: 2939

- WASTE & VENT ISOMETRIC, DETAILS

P4.0

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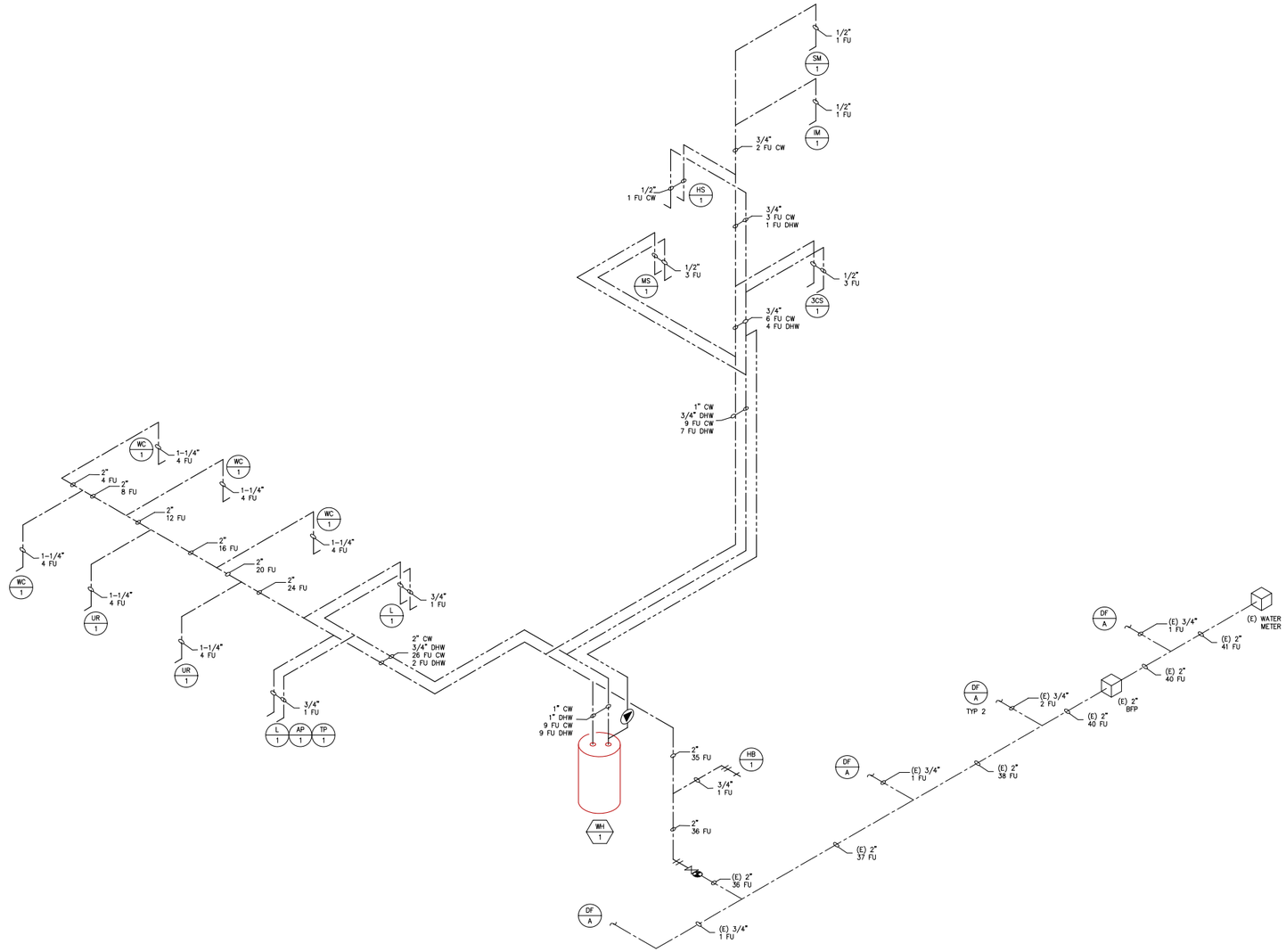
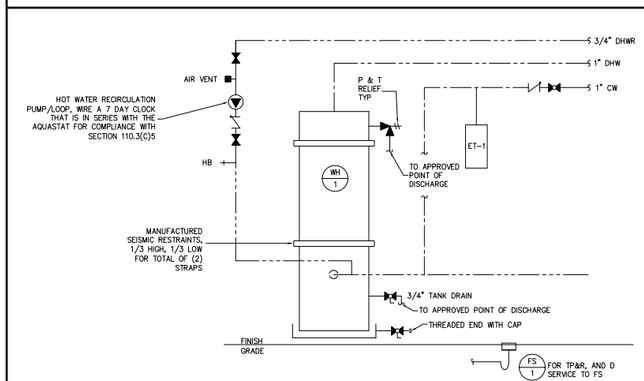
HOT & COLD WATER ISOMETRIC

NOTES:

1. COLD WATER, DOMESTIC HOT WATER INSIDE BUILDING: COPPER TYPE "L", WITH SILVER SOLDER UNLESS OTHERWISE NOTED (95/5 TIN/ANTIMONY SOLDER AT VALVES); WROT COPPER FITTINGS WITHIN BUILDING ABOVE GROUND
2. PROVIDE DI-ELECTRIC UNIONS AT CONNECTIONS OF DIS-SIMILAR METALS IN LOCATIONS ACCESSIBLE FOR INSPECTION; PROVIDE ACCESS PANELS AS NECESSARY





HOT WATER HEATER PIPING DETAIL (1)

NO SCALE

COLD WATER PIPE SIZING (FLUSH VALVE)		
*COLD WATER PIPE SIZING BASES ON 3.8 PSI/100 FT AND MAX. VELOCITY OF 8 FPS FOR COLD WATER PIPING		
PIPE SIZE INCHES	FIXTURE UNITS	
	COLD WATER SERVICE FU 8 MAX FT/S MAXIMUM	GPM
1/2	0	–
3/4	0	–
1	0	–
1 1/4	0	–
1 1/2	14	31
2	88	64
2 1/2	295	110
3	666	165
3 1/2	1091	220
4	1668	290
*INFORMATION ADAPTED FROM 2019 CALIFORNIA PLUMBING CODE		

COLD WATER PIPE SIZING (FLUSH TANK)		
*COLD WATER PIPE SIZING BASES ON 5.6 PSI/100 FT AND MAX. VELOCITY OF 8 FPS FOR COLD WATER PIPING		
PIPE SIZE INCHES	FIXTURE UNITS	
	COLD WATER SERVICE FU 8 MAX FT/S MAXIMUM	GPM
1/2	2	2
3/4	7	6
1	18	13
1 1/4	39	24
1 1/2	78	38
2	254	76
2 1/2	455	115
3	719	165
3 1/2	1091	220
4	1668	290
*INFORMATION ADAPTED FROM 2019 CALIFORNIA PLUMBING CODE		

DOMESTIC HOT WATER PIPE SIZING		
*HOT WATER PIPE SIZING BASES ON 5.6 PSI/100 FT AND MAX. VELOCITY OF 5 FPS FOR HOT WATER PIPING		
PIPE SIZE INCHES	FIXTURE UNITS	
	HOT WATER SERVICE FU 5 MAX FT/S MAXIMUM	GPM
1/2	(2 / 0.75) = 3	3
3/4	(7 / 0.75) = 9	8
1	(16 / 0.75) = 21	15
1 1/4	(28 / 0.75) = 37	24
1 1/2	(46 / 0.75) = 61	34
2	(119 / 0.75) = 159	57
2 1/2	(245 / 0.75) = 327	91
3	(406 / 0.75) = 541	133
3 1/2	(585 / 0.75) = 780	180
4	(840 / 0.75) = 1120	230
*INFORMATION ADAPTED FROM 2019 CALIFORNIA PLUMBING CODE		

HOT & COLD WATER ISOMETRIC

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1511 Cota Ave. Long Beach, CA 90813 Tel. 562-912-7900

KESSLER PARK SNACK BAR
SNACK BAR, RESTROOM REMODEL & NEW SHADE STRUCTURE
18401 JURUPA AVE, BLOOMINGTON, CA 92316

NO.	DATE	REV.	BY	CHK

Designer: KMF
CAD Drafter: RT
Architect: LOA
Engineer: KMF
Client: BLOOMINGTON CITY
Date Issue: 02-24-2023
Job Number: 2939

• HOT & COLD WATER ISOMETRICS •

P4.1

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PLUMBING FIXTURE UNITS
FIRE STATION

T.I. – KESSLER PARK
PROJECT NAME:
PROJECT NUMBER: 2082
DATE: 05/16/2022
BY: RT

PROJECT LOCATION: BLOOMINGTON, CA

CODE: 2019 CPC

FIXTURES	QTY.	WASTE FU (EACH)	WASTE FU (TOTAL)	COLD WTR (@100%) FU (EACH)	COLD WTR (@100%) FU (TOTAL)	HOT WATER (@ 100%) FU (EACH)	HOT WATER (@ 100%) FU (TOTAL)
WATER CLOSET (WC-1)	4	4	16	4	16		
LAVATORY (L-1)	2	1	2	1	2	1	2
URINAL (UR-1)	2	4	8	4	8		
MOP SINK (MS-1)	1	3	3	3	3	3	3
HAND SINK (HS-1)	1	1	1	1	1	1	1
ICE MAKER (IM-1)	1			1	1		
3-COMPARTMENT SINK (CS-1)	1			3	3	3	3
	0		0		0		0
FLOOR DRAIN (FD-1)	5	2	10		0		0
	0		0		0		0
FLOOR SINK (FS-1)	2	3	6				
HOSE BIB (HB-1)	1			1	1		
DRINKING FOUNTAIN (DF-A)	5			1	5		
SUB-TOTALS:			46		40		9

BUILDING SEWER SIZE:	4	INCHES
COLD WATER:	40	FU
COLD WATER: (CONTINUOUS FLOW DEMAND):	40	FU
COLD WATER DEMAND:	40	FU

PRESSURE DROP CALCULATION
(FLUSH VALVE – COLD WATER)

T.I. – KESSLER PARK
PROJECT NAME:
PROJECT NUMBER: 2082
DATE: 05/16/2022
BY: RT

PROJECT LOCATION: BLOOMINGTON, CA

CODE: 2019 CPC

SYSTEM PRESSURE

AVAILABLE PRESSURE	MINIMUM	62	PSI
	MAXIMUM	72	PSI
PRESSURE REQUIRED AT FARTHEST FIXTURE:		25	PSI
PRESSURE LOSS DUE TO HEIGHT:		2.3	PSI
PRESSURE LOSS THRU METER: 2" METER		7.0	PSI
PRESSURE LOSS THRU BACKFLOW PREVENTER:		6	PSI
OTHER LOSSES:		0	PSI
SUBTOTAL		40.3	PSI
LOSS AVAILABLE FOR FRICTION: 62 – 40.3		21.7	PSI

LENGTH OF RUNS

METER TO FARTHEST FIXTURE			
	OUTSIDE BUILDING:	400	FT
	INSIDE BUILDING:	45	FT
	TOTAL:	445	FT
			FT
EQUIVALENT LENGTH (FT): 445 X 1.25 FT		556	FT

1.25 FACTOR FOR FITTINGS

ALLOWABLE FRICTION LOSS

PRESSURE AVAILABLE (PSI) = 21.7
EQUIVALENT (FT) /100 (FT) = 556.3 x 100 = 3.9

* WATER CALCULATION FOR ENGINEERED PLUMBING SYSTEM BASED ON APPENDIX A OF THE CPC

PRESSURE DROP CALCULATION
(FLUSH VALVE – CW, DHW SERVICES)

T.I. – KESSLER PARK
PROJECT NAME:
PROJECT NUMBER: 2082
DATE: 05/16/2022
BY: RT

PROJECT LOCATION: BLOOMINGTON, CA

CODE: 2019 CPC

SYSTEM PRESSURE

AVAILABLE PRESSURE	MINIMUM	62	PSI
	MAXIMUM	72	PSI
PRESSURE REQUIRED AT FARTHEST FIXTURE:		15	PSI
PRESSURE LOSS DUE TO HEIGHT:		2.3	PSI
PRESSURE LOSS THRU METER: 2" METER		7.0	PSI
PRESSURE LOSS THRU BACKFLOW PREVENTER:		6	PSI
OTHER LOSSES:		0	PSI
SUBTOTAL		30.3	PSI
LOSS AVAILABLE FOR FRICTION: 62 – 30.3		31.7	PSI

LENGTH OF RUNS

METER TO FARTHEST FIXTURE			
	OUTSIDE BUILDING:	400	FT
	INSIDE BUILDING:	45	FT
	TOTAL:	445	FT
			FT
EQUIVALENT LENGTH (FT): 445 X 1.25 FT		556	FT

1.25 FACTOR FOR FITTINGS

ALLOWABLE FRICTION LOSS

PRESSURE AVAILABLE (PSI) = 31.7
EQUIVALENT (FT) /100 (FT) = 556.3 x 100 = 5.7

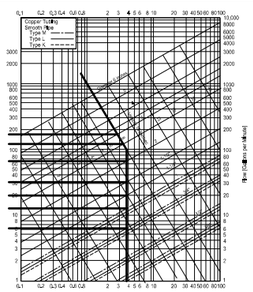
* WATER CALCULATION FOR ENGINEERED PLUMBING SYSTEM BASED ON APPENDIX A OF THE CPC

PIPE SIZING – CW (FLUSH VALVE)

T.I. – KESSLER PARK
PROJECT NAME:
PROJECT NUMBER: 2082
DATE: 05/16/2022
BY: RT

PROJECT LOCATION: BLOOMINGTON, CA

Code: 2019 CPC



PIPE MATERIAL M

SIZE	FIXTURE UNITS COLD WATER SERVICE FU 8 MAX FT/S MAXIMUM	GPM
0.75	–	–
1	–	–
1.25	–	–
1.5	14	31
2	88	64
2.5	295	110
3	666	165

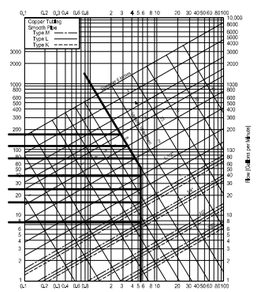
* COLD WATER PIPE SIZING BASED ON 3.8 PSI/100FT AND MAX. VELOCITY OF 8 FPS FOR COLD WATER PIPING.

PIPE SIZING – CW (FLUSH TANK)

T.I. – KESSLER PARK
PROJECT NAME:
PROJECT NUMBER: 2082
DATE: 05/16/2022
BY: RT

PROJECT LOCATION: BLOOMINGTON, CA

Code: 2019 CPC



PIPE MATERIAL M

SIZE	FIXTURE UNITS COLD WATER SERVICE FU 8 MAX FT/S MAXIMUM	GPM
0.75	7	6
1	18	13
1.25	39	24
1.5	78	38
2	254	76
2.5	455	115
3	719	165

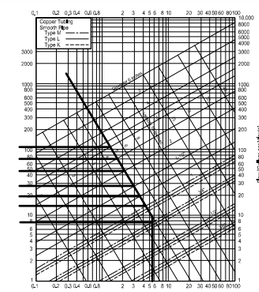
* COLD WATER PIPE SIZING BASED ON 5.6 PSI/100FT AND MAX. VELOCITY OF 8 FPS FOR COLD WATER PIPING.

PIPE SIZING – DHW

T.I. – KESSLER PARK
PROJECT NAME:
PROJECT NUMBER: 2082
DATE: 05/16/2022
BY: RT

PROJECT LOCATION: BLOOMINGTON, CA

Code: 2019 CPC



PIPE MATERIAL M

SIZE	FIXTURE UNITS HOT WATER SERVICE FU 5 MAX FT/S MAXIMUM	GPM
0.75	(7 FU / 0.75) = 9	8
1	(16 FU / 0.75) = 21	15
1.25	(28 FU / 0.75) = 37	24
1.5	(46 FU / 0.75) = 61	34
2	(119 FU / 0.75) = 159	57
2.5	(245 FU / 0.75) = 327	91
3	(406 FU / 0.75) = 541	133

* HOT WATER PIPE SIZING BASED ON 5.6 PSI/100FT AND MAX. VELOCITY OF 5 FPS FOR HOT WATER PIPING. FACTOR OF 75% ACCOUNTED FOR IN TABLE FOR DE-RATED DHW LOADS.

BOA Architecture Interiors Planning
1511 Cota Ave. Long Beach, CA 90813 Tel. 562-912-7900

KESSLER PARK SNACK BAR
SNACK BAR, RESTROOM REMODEL & NEW SHADE STRUCTURE
18401 JURUPA AVE, BLOOMINGTON, CA 92316

NO.	DATE	BY	REV

Designer: KMF
CAD Draft: RT
Architect: LDL
Engineer: KMF
Client: BLOOMINGTON CITY
Date Issue: 01-17-2023
Job Number: 2939

• WATER CALCULATION

P5.0