

GARFIELD PARK

Pre-Fab Restroom Installation
 810 Tombstone Canyon, Bisbee, AZ 85603
 APN 10360124



PROJECT LOCATION



P.O. BOX 274
 BISBEE, AZ 85603
 TEL: 520.678.4000
 EMAIL: zacatecas.engineering.com
 URL: zacatecasengineering.com

PROJECT NAME:

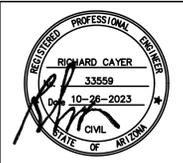
NEW RESTROOM
 810 Tombstone Canyon
 Bisbee, AZ 85603

DRAWING NAME

COVER SHEET

REVISIONS

#	DATE	BY	DESCRIPTION



SHEET NO.	SHEET NAME
1	COVER/LOCATION SHEET
2	NOTE/LEGEND SHEET
3	EXISTING CONDITIONS/DEMO SHEET
4	GRADING/LOCATION PLAN SHEET
5	ELECTRIC PLAN SHEET
6	WATER PLAN SHEET
7	SEWER PLAN SHEET
8	DETAIL SHEET
9	DETAIL SHEET

ENGINEER: RC
 DWN BY: BM
 CHK BY:

DWG NO.
 23-003

SCALE
 NTS

SHEET
 1 OF 9

NOTES

1. ALL IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST REVISION OF THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" AND THE "UNIFORM STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION" AS SPONSORED AND DISTRIBUTED BY THE MARICOPA ASSOCIATION OF GOVERNMENTS (M.A.G.), AND OR AS SHOWN ON PLANS.
2. ALL PERMITS FROM APPLICABLE GOVERNMENT AGENCIES NECESSARY FOR CONSTRUCTION SHALL BE ACQUIRED PRIOR TO START OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS NECESSARY FOR THE COMPLETION OF THIS PROJECT.
3. ALL REQUIRED AND APPLICABLE TRAFFIC CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR AND SUBJECT TO REVIEW OF THE CITY AND SHALL CONFORM TO THE LATEST EDITION OF THE ARIZONA DEPARTMENT OF TRANSPORTATION'S "TRAFFIC CONTROL MANUAL FOR HIGHWAY CONSTRUCTION AND MAINTENANCE."
4. TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
5. CALL BLUESTAKE AT 1-800-782-5348 AND ANY NON-PARTICIPATING UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO BEGINNING ANY WORK FOR FIELD LOCATION OF ALL EXISTING UTILITIES WITHIN PROPOSED CONSTRUCTION AREA.
6. ALL TRENCHING SHALL BE IN ACCORDANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATION 29, CFR PART 1926, SUB-PART P, "EXCAVATIONS AND TRENCHES."
7. ALL MATERIALS AND PRODUCTS THAT COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NATIONAL SANITATION FOUNDATION STANDARDS.
8. THE DEPARTMENT OF PUBLIC WORKS SHALL BE NOTIFIED THREE (3) DAYS PRIOR TO BEGINNING ANY WORK.
9. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND COORDINATE SITE CONDITIONS WITH THE DRAWINGS PRIOR TO CONSTRUCTION, ANY DISCREPANCIES AND OMISSIONS SHALL BE RESOLVED WITH THE PROJECT ENGINEER. DO NOT USE SCALED DIMENSIONS.
10. ALL DETAILS SHOWN SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS, WHETHER SPECIFICALLY INDICATED OR NOT. TYPICAL DETAILS MAY OR MAY NOT BE SHOWN ON THE DRAWINGS, BUT SHALL APPLY UNLESS NOTED OTHERWISE.
11. THE PAVEMENT AND CONCRETE MIX DESIGN MUST BE APPROVED BY THE DEPT. OF PUBLIC WORKS OR BE ON FILE WITH SAID DEPARTMENT.
12. ALL UTILITY FRAMES AND COVERS TO BE ADJUSTED TO THE NEW FINISHED GRADE IN ACCORDANCE TO MAG STANDARDS.
13. ALL CONCRETE SHALL BE AS A MINIMUM, CLASS 'A' (3000 PSI) PER M.A.G. SECTION 725.
14. ALL EXISTING PROPERTY IMPROVEMENTS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED TO THEIR ORIGINAL CONDITION.
15. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS FOR CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING PUBLIC STREETS, AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS AND TAKE WHATEVER MEASURES THAT ARE NECESSARY TO INSURE THAT ALL ROADS ARE MAINTAINED IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES.
16. AN APPROVED SET OF PLANS SHALL BE MAINTAINED ON THE JOB SITE AT ALL TIMES WORK IS IN PROGRESS. DEVIATION FROM THE PLANS WILL NOT BE ALLOWED WITHOUT AN APPROVED PLAN REVISION.
17. THE CONTRACTOR SHALL GUARANTEE ALL WORK TO THE CITY OF BISBEE AGAINST DEFECTIVE WORKMANSHIP OR MATERIALS FOR A PERIOD OF TWO (2) YEARS FROM THE DATE OF ITS FINAL ACCEPTANCE.
18. UTILITY LOCATIONS AS SHOWN ON THE PLANS, WERE COMPLIED BASED ON THE BEST INFORMATION AVAILABLE. PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES WITH THE APPROPRIATE OWNER.
19. SAWCUT, TACK AND JOIN FOR ALL PAVEMENT AND CONCRETE CUTS. SPADE CUTS NOT ACCEPTABLE.
20. ALL SPOILS FROM DEMOLITION OF THE EXISTING SITE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS OTHER AGGRANGMENTS HAVE BEEN MADE WITH CITY ENGINEER.

LEGEND

AC - ASPHALT CONCRETE
 AB - AGGREGATE BASE
 ID - IDENTIFIER
 HCS - HOUSE CONNECTION
 EX - EXISTING
 WS - WATER SERVICES
 GS - GAS SERVICE

NEW		EXISTING	
	NEW BRASS CAP SURVEY MONUMENT		FOUND BRASS CAP SURVEY MONUMENT
	WATER VALVE		WATER VALVE
	WATER LINE		WATER LINE
	WATER METER		WATER METER
	IRRIGATION VALVE		BACK FLOW
	IRRIGATION UNDERGROUND		IRRIGATION VALVE
	IRRIGATION UNDERGROUND		IRRIGATION UNDERGROUND
	NEW SEWER MANHOLE		FIRE HYDRANT
	NEW SEWER LINE		SEWER MANHOLE
	NEW ROAD SIGN		SEWER CLEANOUT
	NEW SEWER CLEANOUT		SEWER LINE
	NEW STORM DRAIN		STORM DRAIN
	NEW AC		UTILITY POLE
	NEW AB		OVERHEAD ELECTRIC
	NEW CONCRETE		ELECTRIC BOX
			UNDERGROUND GAS
			GAS METER
			FIBER OPTIC
			TELEPHONE PEDESTAL
			TELEPHONE UNDERGROUND
			CABLE TV PEDESTAL
			CABLE UNDERGROUND
			ROAD SIGN
			STREET LIGHT
	EXISTING AC		
	EXISTING AB		
	EXISTING CONCRETE		



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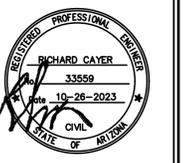
GARFIELD PARK
 PRE-FAB RESTROOM
 INSTALLATION

DRAWING NAME

NOTE/LEGEND
 SHEET

REVISIONS

#	DATE	BY	DESCRIPTION



ENGINEER: RC
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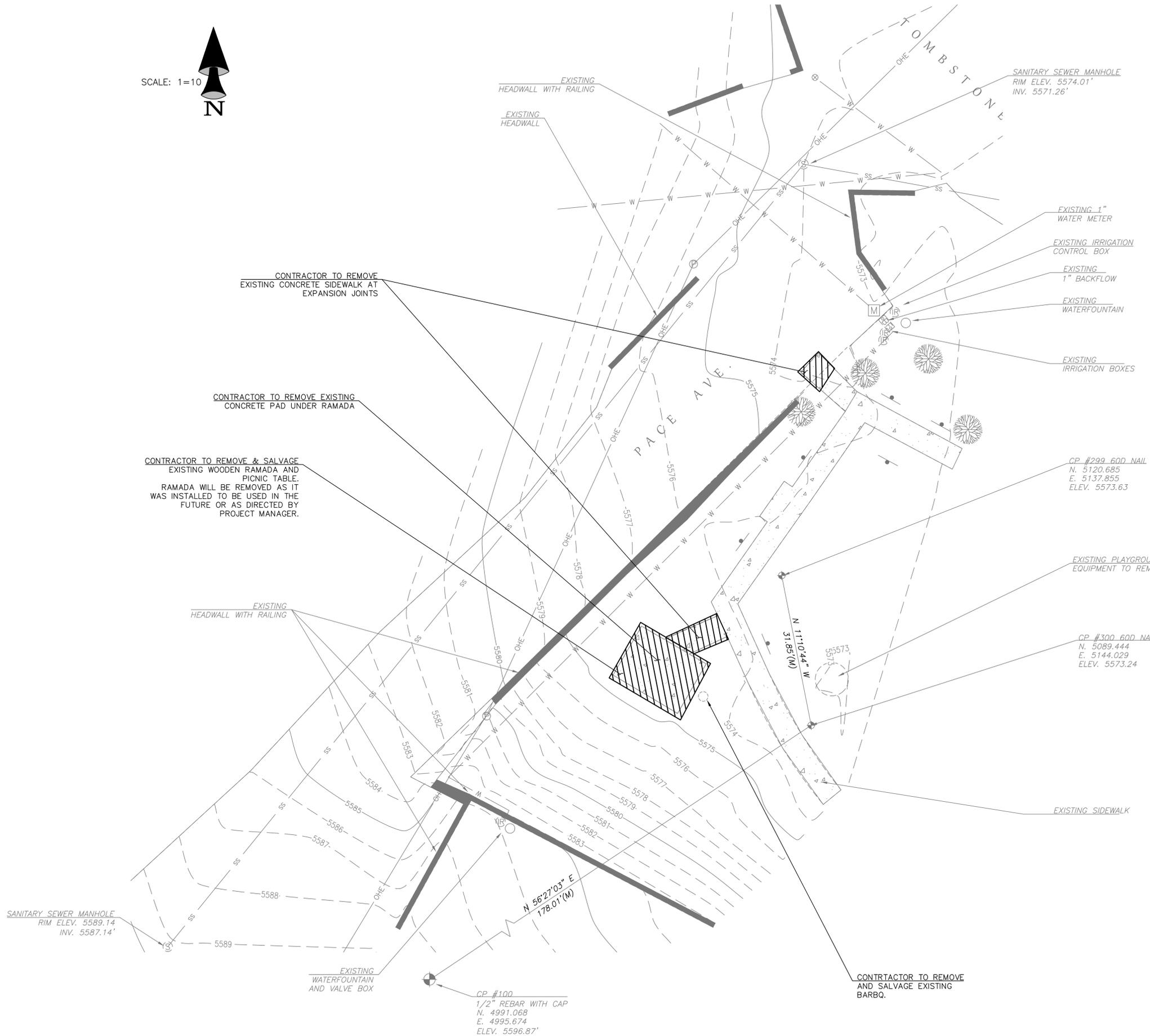
DWG NO.
 23-002

SCALE
 NTS

SHEET
 2 OF 9



SCALE: 1=10



NOTES

1. EXISTING IRRIGATION/WATER LINES ON PROPERTY ARE NOT SHOWN ON PLANS. CONTRACTOR RESPONSIBLE FOR COMMUNICATION WITH CITY OF BISBEE FOR BLUESTAKE.
2. ALL UTILITY LOCATIONS MUST BE FIELD VERIFIED BEFORE START OF PROJECT.



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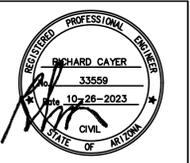
GARFIELD PARK
 PRE-FAB RESTROOM
 INSTALLATION

DRAWING NAME

EXISTING
 CONDITIONS/
 DEMOLITION SHEET

REVISIONS

#	DATE	BY	DESCRIPTION



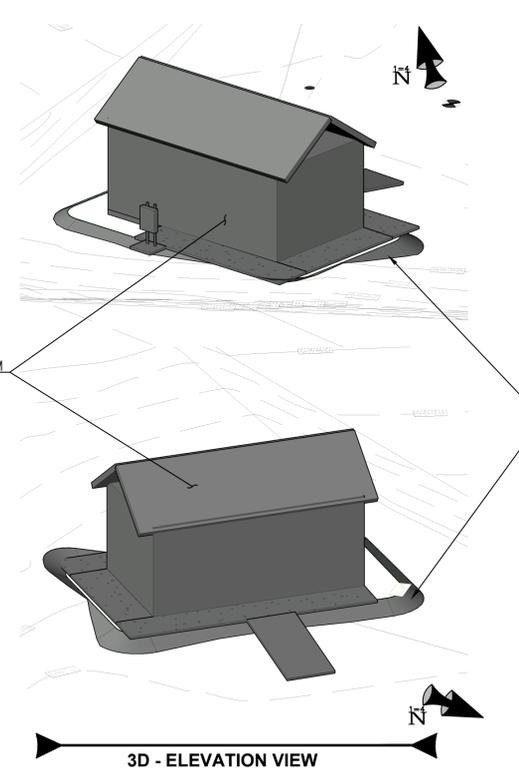
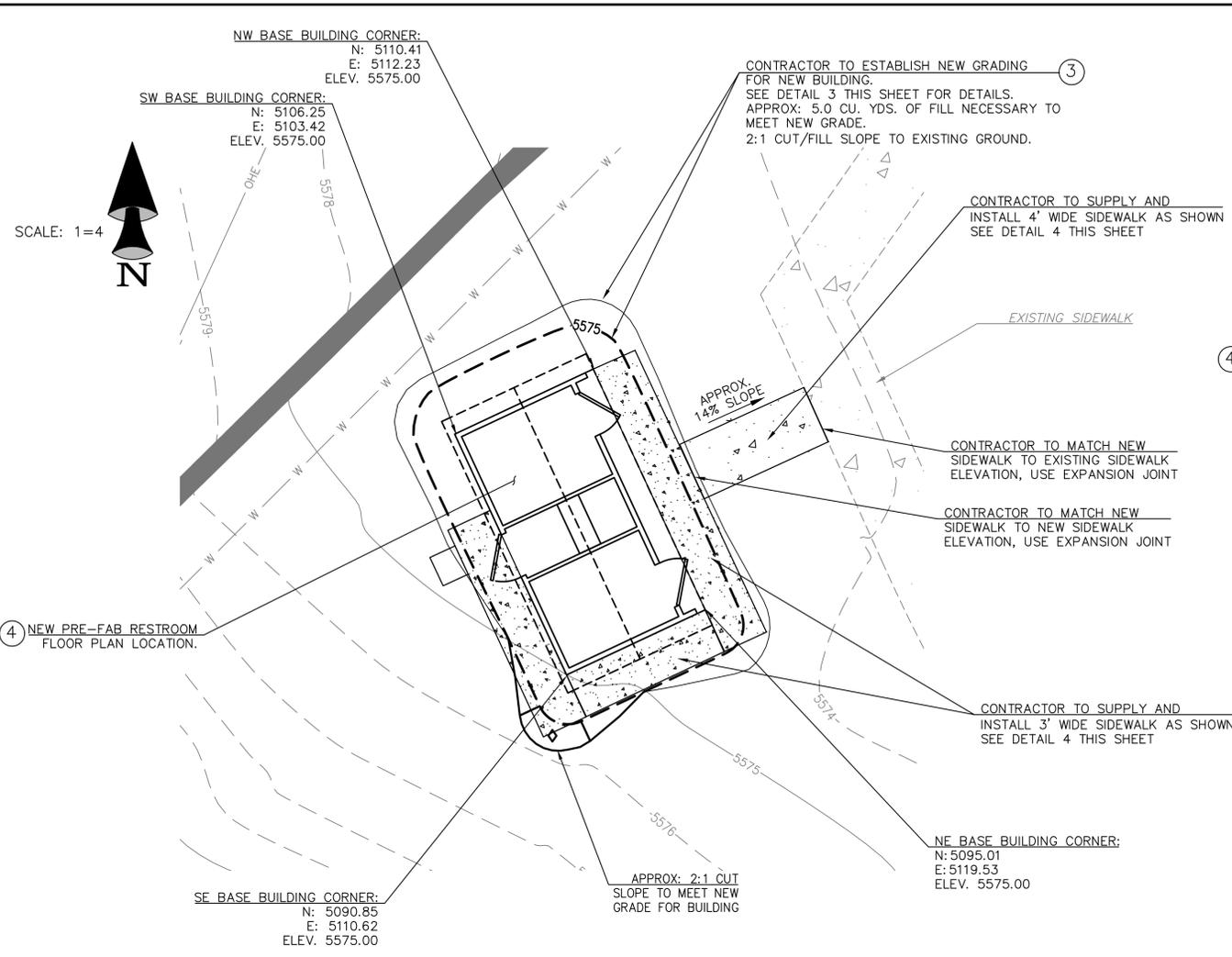
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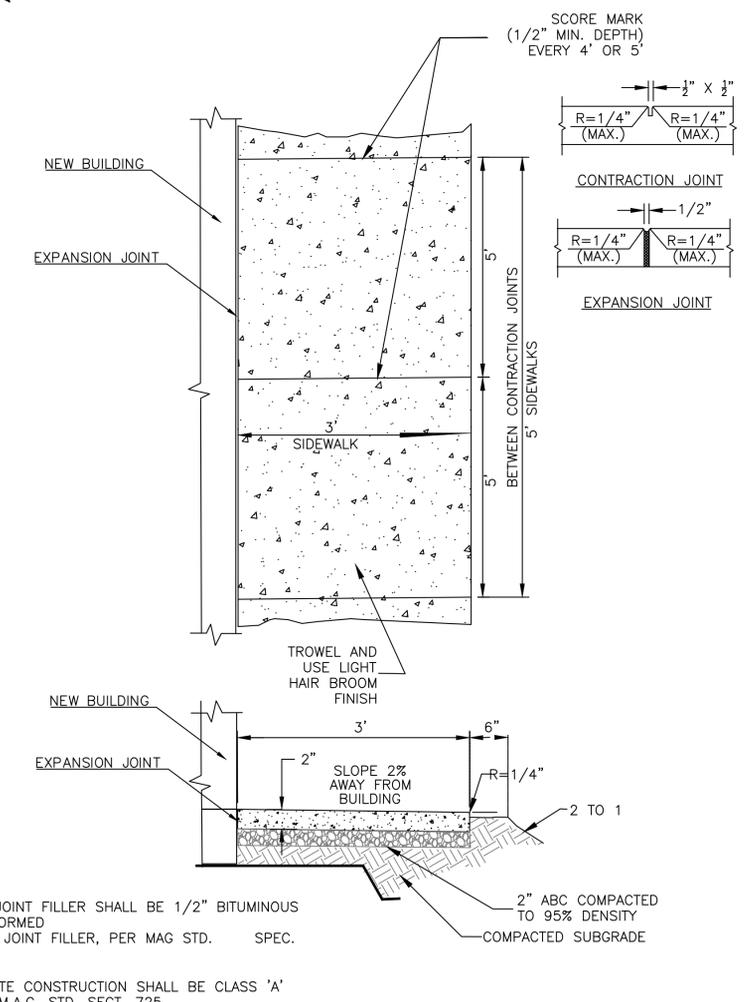
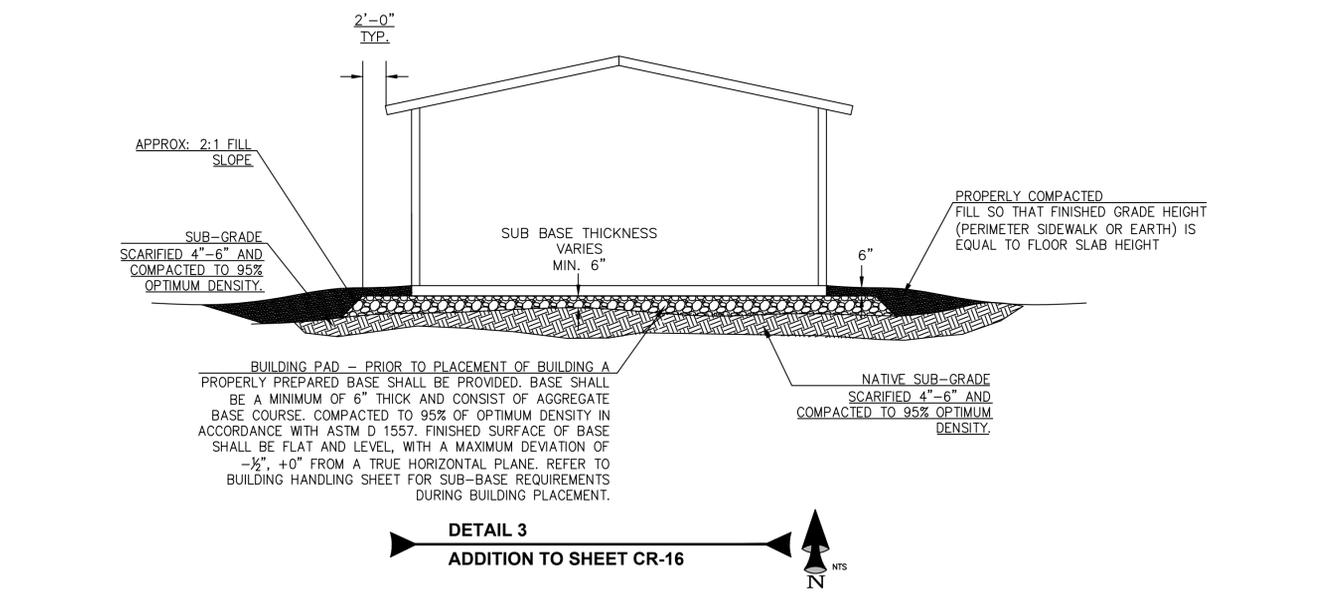
SCALE
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SHEET
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- NOTES**
- EXISTING IRRIGATION/WATER LINES ON PROPERTY ARE NOT SHOWN ON PLANS. CONTRACTOR RESPONSIBLE FOR COMMUNICATION WITH CITY OF BISBEE FOR BLUESTAKE.
 - 100 AMP SERVICE REQUIRED FOR NEW RESTROOM.
 - SEE PLANS/SPECIFICATION FROM LBFoster CXT Products -CORTEZ FOR ALL FINISHED UTILITY CONNECTIONS TO NEW BUILDING. PLANS PROVIDED TO CONTRACTOR FROM CITY.
 - PRE-FAB BUILDING TO BE SUPPLIED & INSTALLED BY OTHERS



- NOTES:**
- EXPANSION JOINT FILLER SHALL BE 1/2" BITUMINOUS TYPE PREFORMED EXPANSION JOINT FILLER, PER MAG STD. SPEC. 729.
 - ALL CONCRETE CONSTRUCTION SHALL BE CLASS 'A' CONC. PER M.A.G. STD. SECT. 725.

ZACATECAS ENGINEERING

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PROJECT NAME:

GARFIELD PARK
PRE-FAB RESTROOM
INSTALLATION

DRAWING NAME

GRADING PLAN/
BUILDING LOCATION
SHEET

REVISIONS

#	DATE	BY	DESCRIPTION

REGISTERED PROFESSIONAL ENGINEER
RICHARD GAYER
No. 33559
Exp. 10-28-2023
CIVIL
STATE OF ARIZONA

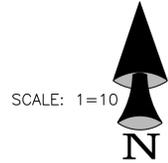
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23-002

SCALE
NTS

SHEET
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811 or 1-800-782-5348
www.azbluestake.com



SCALE: 1=10

③ CONTRACTOR TO PROVIDE AND INSTALL ALL EQUIPMENT NECESSARY TO ESTABLISH NEW ELECTRIC PREFAB RESTROOM

CONTRACTOR TO PROVIDE AND INSTALL NEW FREE STANDING ELECTRICAL METERED SERVICE PANEL USING UNI-STRUT WITH 2'X2'X2" CONCRETE BASE FOLLOWING APS ELECTRIC COMPANY SPECIFICATIONS AND STANDARDS.

CONTRACTOR TO TRENCH APPROX. 30' PROVIDE AND INSTALL NEW 6" ELECTRICAL CONDUIT FOR SERVICE CONNECTION FROM EXISTING POLE TO NEW METERED SERVICE PANEL. ALL TRENCHING, CONDUIT TYPE, BACKFILL, PANEL/METER WILL FOLLOW APS ELECTRIC COMPANY STANDARDS SPECIFICATIONS.

② EXISTING POWER POLE ELECTRIC CONNECTION TO BE DETERMINED BY APS ELECTRIC COMPANY.

NEW PRE-FAB BUILDING LOCATION SEE SHEET 4 FOR LOCATION DETAILS. ④

NOTES

- ①. EXISTING IRRIGATION/WATER LINES ON PROPERTY ARE NOT SHOWN ON PLANS. CONTRACTOR RESPONSIBLE FOR COMMUNICATION WITH CITY OF BISBEE FOR BLUESTAKE.
- ②. 100 AMP SERVICE REQUIRED FOR NEW RESTROOM.
- ③. SEE PLANS/SPECIFICATION FROM LBFoster CXT Products -CORTEZ FOR ALL FINISHED UTILITY CONNECTIONS TO NEW BUILDING. PLANS PROVIDED TO CONTRACTOR FROM CITY.
- ④. PRE-FAB BUILDING TO BE SUPPLIED & INSTALLED BY OTHERS

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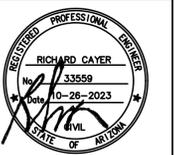
GARFIELD PARK
PRE-FAB RESTROOM
INSTALLATION

DRAWING NAME

PLAN SHEET
ELECTRIC

REVISIONS

#	DATE	BY	DESCRIPTION



ENGINEER: RC
DWN BY: BM
CHK BY:

DWG NO.

23-002

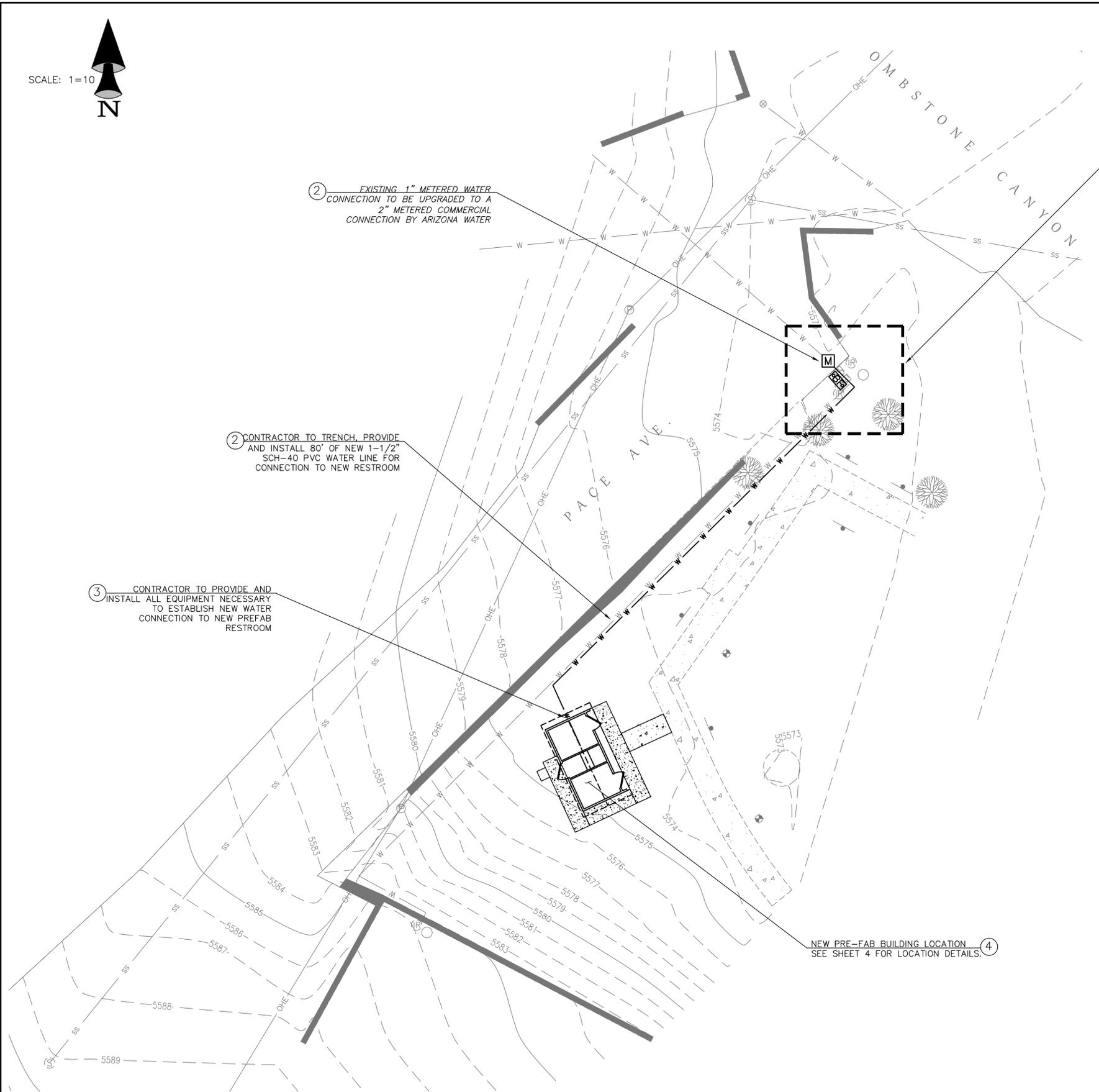
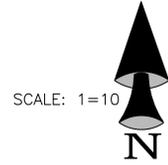
SCALE

NTS

SHEET

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② EXISTING 1" METERED WATER CONNECTION TO BE UPGRADED TO A 2" METERED COMMERCIAL CONNECTION BY ARIZONA WATER

② CONTRACTOR TO TRENCH, PROVIDE AND INSTALL 80' OF NEW 1-1/2" SCH-40 PVC WATER LINE FOR CONNECTION TO NEW RESTROOM

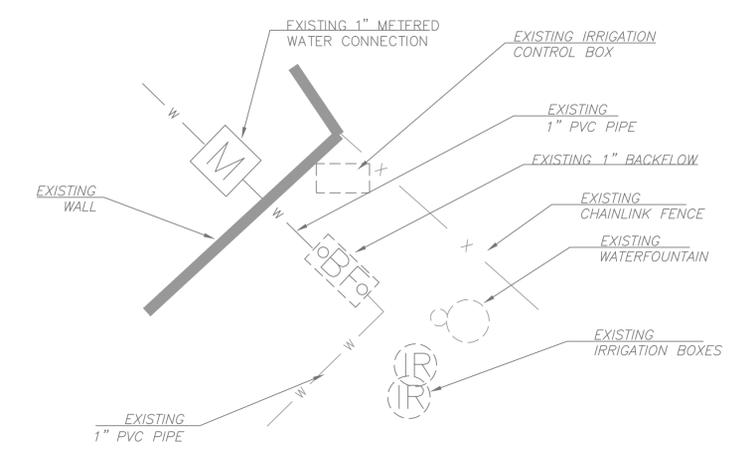
③ CONTRACTOR TO PROVIDE AND INSTALL ALL EQUIPMENT NECESSARY TO ESTABLISH NEW WATER CONNECTION TO NEW PREFAB RESTROOM

④ NEW PRE-FAB BUILDING LOCATION SEE SHEET 4 FOR LOCATION DETAILS.

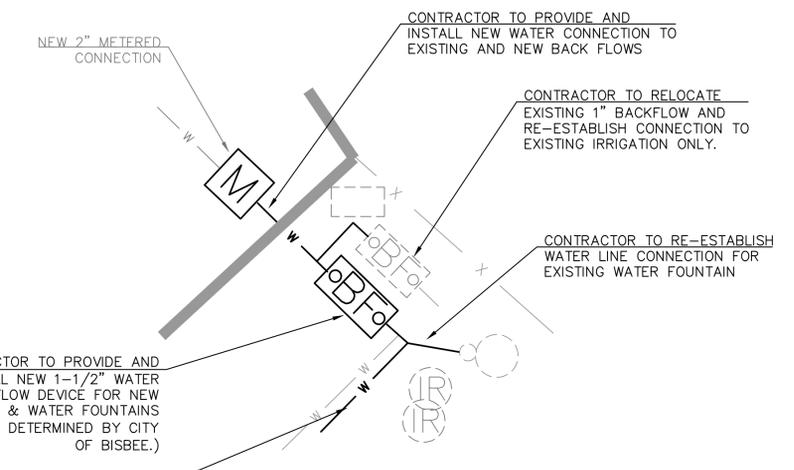
NEW IRRIGATION AND WATER CONNECTION. SEE DETAILS 1 & 2 THIS SHEET.

NOTES

- ① EXISTING IRRIGATION/WATER LINES ON PROPERTY ARE NOT SHOWN ON PLANS. CONTRACTOR RESPONSIBLE FOR COMMUNICATION WITH CITY OF BISBEE FOR BLUESTAKE.
- ② BUILDING PLANS REQUIRE 1-1/2" WATER LINE @ 40 PSI MIN FOR CONNECTION TO NEW PRE-FAB RESTROOM
- ③ SEE PLANS/SPECIFICATION FROM LBFoster CXT Products -CORTEZ FOR ALL FINISHED UTILITY CONNECTIONS TO NEW BUILDING. PLANS PROVIDED TO CONTRACTOR FROM CITY.
- ④ PRE-FAB BUILDING TO BE SUPPLIED & INSTALLED BY OTHERS



DETAIL 1
EXISTING WATER & IRRIGATION



DETAIL 2
NEW WATER & IRRIGATION

② CONTRACTOR TO PROVIDE AND INSTALL NEW 1-1/2" WATER BACKFLOW DEVICE FOR NEW RESTROOM & WATER FOUNTAINS (MAKE N MODEL DETERMINED BY CITY OF BISBEE.)

CONTRACTOR TO PROVIDE & INSTALL NEW 1-1/2" SCH-40 PVC FOR NEW RESTROOM CONNECTION

CONTRACTOR TO PROVIDE AND INSTALL NEW WATER CONNECTION TO EXISTING AND NEW BACK FLOWS

CONTRACTOR TO RELOCATE EXISTING 1" BACKFLOW AND RE-ESTABLISH CONNECTION TO EXISTING IRRIGATION ONLY.

CONTRACTOR TO RE-ESTABLISH WATER LINE CONNECTION FOR EXISTING WATER FOUNTAIN



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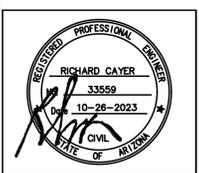
GARFIELD PARK
PRE-FAB RESTROOM
INSTALLATION

DRAWING NAME

PLAN SHEET
WATER

REVISIONS

#	DATE	BY	DESCRIPTION



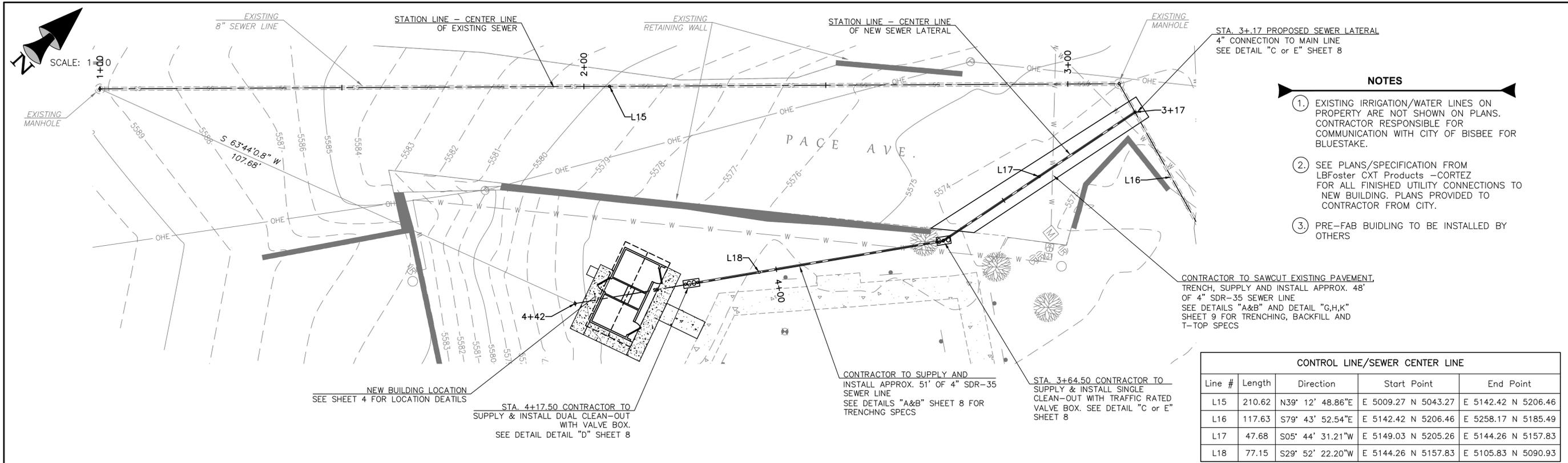
ENGINEER: RC
DWN BY: BM
CHK BY:

DWG NO.
23-002

SCALE
NTS

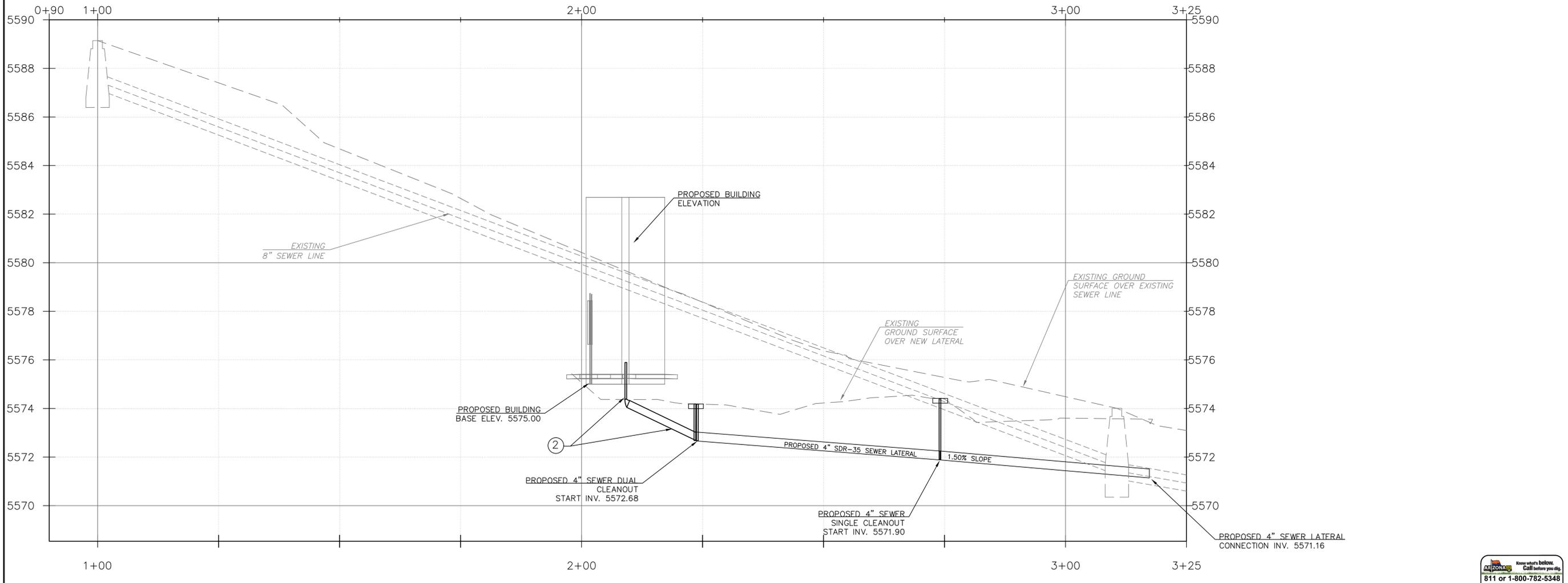
SHEET
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- NOTES**
- EXISTING IRRIGATION/WATER LINES ON PROPERTY ARE NOT SHOWN ON PLANS. CONTRACTOR RESPONSIBLE FOR COMMUNICATION WITH CITY OF BISBEE FOR BLUESTAKE.
 - SEE PLANS/SPECIFICATION FROM LBFoster CXT Products -CORTEZ FOR ALL FINISHED UTILITY CONNECTIONS TO NEW BUILDING. PLANS PROVIDED TO CONTRACTOR FROM CITY.
 - PRE-FAB BUILDING TO BE INSTALLED BY OTHERS

CONTROL LINE/SEWER CENTER LINE				
Line #	Length	Direction	Start Point	End Point
L15	210.62	N39° 12' 48.86"E	E 5009.27 N 5043.27	E 5142.42 N 5206.46
L16	117.63	S79° 43' 52.54"E	E 5142.42 N 5206.46	E 5258.17 N 5185.49
L17	47.68	S05° 44' 31.21"W	E 5149.03 N 5205.26	E 5144.26 N 5157.83
L18	77.15	S29° 52' 22.20"W	E 5144.26 N 5157.83	E 5105.83 N 5090.93



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GARFIELD PARK
PRE-FAB RESTROOM
INSTALLATION

DRAWING NAME:

PLAN SHEET
SEWER CONNECTION

REVISIONS

#	DATE	BY	DESCRIPTION

ENGINEER:	RC
DWN BY:	BM
CHK BY:	

DWG NO.

23-002

SCALE

NTS

SHEET

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TRENCH REQUIREMENTS:

- A WIDER TRENCH SHALL BE ALLOWED IF A PULLBOX IS USED AS MEANS FOR TRENCH SHORING.
- FOR ALL EXCAVATION AND TRENCHES, THE CONTRACTOR SHALL ADHERE STRICTLY WITH OSHA CFR PART 1926 SUBPART P.
- TRENCH EXCAVATIONS OVER 20- FEET IN DEPTH SHALL HAVE AN APPROVED SHORING PLAN, STAMPED BY A REGISTERED PROFESSIONAL ENGINEER TO BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE CITY OF SIERRA VISTA.

AGGREGATE BASE

- AGGREGATE BASE PER SIERRA VISTA DETAIL SV200-4.
- RECLAIMED CONCRETE MATERIAL (RCM) IN ACCORDANCE WITH MAG STD. SECT. 701.4 MAY BE SUBSTITUTED FOR AGGREGATE BASE.

NON SHRINK SLURRY

- ONE SACK TYPE II PORTLAND CONCRETE CEMENT PER CUBIC YARD.
- TYPE "B" SELECT AGGREGATE PER MAG STD. SECT. 702, OR AGGREGATE BASE COURSE, OR RECLAIMED CONCRETE MATERIAL PER MAG STD. SECT. 701.4 AND 702.

ALLOWABLE BEDDING & SHADING SAND OR CHAT

- 100% PASSING 1/2" SIEVE.
- SUM OF PI PLUS 200 SIEVE SHALL BE LESS THAN 23.

ALLOWABLE TRENCH BACKFILL MATERIALS

1. NATIVE MATERIAL SHALL BE USED WHERE FOUND SUITABLE BY A GEOTECHNICAL REPORT. A GEOTECHNICAL REPORT SHALL BE SUBMITTED TO THE CITY BY THE OWNER FOR APPROVAL PRIOR TO CONSTRUCTION.

2. MATERIAL SPECIFICATIONS AND TESTING SHALL CONFORM TO SECTION 151.08.011 OF THE SIERRA VISTA DEVELOPMENT CODE.

3. AT A MINIMUM, THE MATERIAL SHALL MEET THE FOLLOWING REQUIREMENTS:

- MATERIAL IS FREE OF BROKEN CONCRETE, BROKEN PAVEMENT, RUBBISH, CHUNKS OF CLAY, WOOD, ORGANIC MATERIAL OR OTHER DELETERIOUS MATERIAL.
- MATERIAL DOES NOT CONTAIN ROCK OR STONES LARGER THAN THREE INCHES.
- FINES REQUIREMENT-MATERIAL SHALL NOT HAVE A PI GREATER THAN 15, AND THE TOTAL SUM OF THE PERCENT PASSING THE NO. 200 SIEVE AND THE PI SHALL NOT EXCEED 45.

4. ALL MANHOLE EXCAVATIONS SHALL BE BACKFILLED FROM TRENCH TO TRENCH WITH 100% ABC COMPACTED TO 95% MAX. DRY DENSITY.

* 200 SIEVE TO BE DETERMINED BY ASTM. D4318, DRY PREP. OR AASHTO T-90.

BACKFILL REQUIREMENTS

TRENCHING IN RIGHT OF WAY OUTSIDE ROADWAY PRISM OR UNPAVED ALLEY	TRENCHING IN EXISTING ROADWAY PRISM		TRENCHING IN PROPOSED ROADWAY PRISM	
	ALLOWABLE BACKFILL MATERIALS	COMPACTION REQUIREMENT	ALLOWABLE BACKFILL MATERIALS	COMPACTION REQUIREMENT
NATIVE MATERIAL WITHOUT FINES REQUIREMENT	X	95%		
NATIVE MATERIAL WITH FINES REQUIREMENT	X	95%		
AGGREGATE BASE	X	95%	X	*1 + *2
NON SHRINK SLURRY	X	NA	X	NA

TRENCH WIDTH CHART 1

SIZE OF PIPE (D.)	MAXIMUM WIDTH AT TOP OF PIPE GREATER THAN 0.1% OF BARREL	MINIMUM WIDTH AT SPONGELINE EA. SIDE OF PIPE
LESS THAN 18"	20"	8"
18" TO 24"	23"	9.5"
24" TO 30"	26"	12"
30" TO 36"	29"	14.5"
36" TO 42"	32"	17"
42" TO 60"	34"	19"
OVER 60"	PER MAG STD. SECT. TABLE 601-1, FLEX PIPES	

DETAIL A N.T.S.

Sierra Vista CITY OF SIERRA VISTA 1011 North Coronado Drive Sierra Vista, AZ 85635 520-458-5775

CITY OF SIERRA VISTA STORM DRAIN/SEWER/UTILITY BACKFILL AND BEDDING DETAIL

REVISED: 06/2021 SCALE: NTS
DETAIL NO: SV200-3

AGGREGATE BASE COURSE

702.2.1 REPLACE TABLE 702-1 OF THE MAG STANDARD CONSTRUCTION SPECIFICATIONS WITH THE FOLLOWING:

REVISED TABLE 702-1

Sieve Analysis Test Methods AASHTO T-27, T-11

Sieve Size	Accumulative Percentage Passing Sieve, by Weight		Aggregate Base Course
	Type A	Type B	
3 IN.	100	-	-
1-1/2 IN.	-	100	100
1 IN.	-	-	90-100
NO. 4	30-75	30-70	32-65
NO. 8	20-60	20-60	20-60
NO. 30	10-40	10-40	10-40
NO. 200	0-12	0-12	3-12

Plasticity Index
Test Methods AASHTO T-89 Method A, T-90, T146 Method A

MAXIMUM ALLOWABLE VALUE	5	5	5
Fractured Face, One Face			
Test Method ARIZ 212, Percent by Weight of the Material Retained on a #4 Sieve	50	50	50
Resistance to Degradation and Abrasion by the Los Angeles Abrasion Machine			
Test Method AASHTO T-96, Percent Loss by Weight	10	10	10
MAXIMUM ALLOWABLE VALUE AT 500 REVOLUTIONS	45	45	45

DETAIL B N.T.S.

Sierra Vista CITY OF SIERRA VISTA 1011 North Coronado Drive Sierra Vista, AZ 85635 520-458-5775

CITY OF SIERRA VISTA BACKFILL AND BEDDING TABLE

REVISED: 06/2021 SCALE: NTS
DETAIL NO: SV200-4

DETAIL C N.T.S.

TYPE 'C' - SEWER BUILDING CONNECTION ONE-WAY CLEANOUT AND METER BOX (WHEN SPECIFIED BY LOCAL AGENCY)

NOTES:

- CONSTRUCTION DETAIL APPLIES WHERE CONTRACTOR BUILDS HOUSE CONNECTION. TAP EXTENDS TO PROPERTY LINE IN ALLEYS OR STREETS OR TO EASEMENT LINE.
- SIZE OF TAP SHALL BE DESIGNATED ON PLANS.
- CONSTRUCT TAP AT MIN. SLOPE IF COVER WILL BE LESS THAN 5' AT PROPERTY LINE.
- IF DEPTH REQUIRES, MINIMUM SLOPE CAN BE REDUCED TO 1/8" PER FOOT PROVIDED STUB IS STAKED TO GRADE.
- ALL FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D-2321. THE CONTRACTOR MAY VARY FROM THE DRAWING TO USE THE APPROPRIATE WYES, TEE-WYES AND BENDS TO ENSURE NO MISALIGNMENT OF THE PIPE AND FITTINGS. BLOCK OR BRACE FITTING JOINTS TO ENSURE ZERO DEGREES ANGULAR JOINT DEFLECTION.
- END OF TAP TO BE SEALED AND MARKED.
- ELECTRONIC MARKER SHALL BE A 3M MODEL 1424-XR/D [4" DIAMETER SELF LEVELING MARKER BALL GREEN IN COLOR] OR APPROVED EQUAL OR AS REQUIRED BY THE LOCAL AGENCY.
- INSTALL RAISED 4" THREADED PLUG IN CLEANOUT INCORPORATING 3M MODEL 1414 ELECTRONIC DISC MARKER GREEN IN COLOR. LOCATOR PLUG TO BE GPK PRODUCTS MODEL #228-000A DM OR APPROVED EQUAL.
- STAMP OR WELD THE LETTER "S" ON LID OF METER BOX.

DETAIL C N.T.S.

Sierra Vista CITY OF SIERRA VISTA 1011 North Coronado Drive Sierra Vista, AZ 85635 520-458-5775

CITY OF SIERRA VISTA BACKFILL AND BEDDING TABLE

REVISED: 06/2021 SCALE: NTS
DETAIL NO: SV200-4

DETAIL D N.T.S.

BACKFLOW ASSEMBLY SEWER CONNECTION

NOTES:

- ALL PIPE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. D-3034, SDR-35 PER MAG STD. SECT. 745.
- SIZE OF PIPE SHALL BE 4" UNLESS OTHERWISE SHOWN ON PLANS.
- ALL WORK SHALL CONFORM TO THE CITY OF SIERRA VISTA DEPARTMENT CODE SECTION 151.08.007.E.4.
- BACKFLOW ASSEMBLIES SHALL BE INSTALLED ON ALL HCS.
- USE TEFLON TAPE ON ALL THREADED CONNECTIONS.

DETAIL D N.T.S.

Sierra Vista CITY OF SIERRA VISTA 1011 North Coronado Drive Sierra Vista, AZ 85635 520-458-5775

CITY OF SIERRA VISTA BACKFLOW ASSEMBLY SEWER CONNECTION

REVISED: 06/2021 SCALE: NTS
DETAIL NO: SV442

DETAIL E N.T.S.

NEW SEWER BUILDING CONNECTIONS

NOTES:

- SADDLE TYPE CONNECTION IS ONLY ALLOWED ON NEW SEWER TAPS INTO EXISTING SEWER LINES. ALL NEW CONSTRUCTION SHALL BE Y-CONNECTIONS.
- SIZE OF TAP SHALL BE DESIGNATED ON PLANS.
- CONSTRUCTION TAP AT MINIMUM SLOPE IF COVER WILL BE LESS THAN 5' AT PROPERTY LINE.
- IF DEPTH REQUIRES, MINIMUM SLOPE CAN BE REDUCED TO 1/8" PER FOOT PROVIDED STUB IS STAKED TO GRADE.
- ALL FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D-2321. THE CONTRACTOR MAY VARY FROM THE DRAWING TO USE THE APPROPRIATE WYES.
- TEE WYES AND BENDS TO ENSURE NO MISALIGNMENT OF THE PIPE AND FITTINGS. BLOCK OR BRACE FITTING JOINTS TO ENSURE ZERO DEGREES ANGULAR JOINT DEFLECTION.
- END OF TAP TO BE SEALED AND MARKED AS NOTED.
- A TRACER WIRE SHALL BE INSTALLED IN ORDER FOR THE CITY TO LOCATE ALL HCS LATERAL SEWER LINES. THE TRACER WIRE SHALL BE CONTINUOUS (NO SPLICES) SOLID 14 AWG COPPER WIRE WITH GREEN TYPE UF (UNDERGROUND FEEDER) INSULATION. THE WIRE SHALL BE SECURELY TAPPED AT A MAXIMUM OF 10-FOOT INTERVALS AND EXTEND FROM THE SEWER MAIN TO A CLEANOUT AT ALL HCS LATERAL LINES. 12-INCHES OF TRACER WIRE SHALL BE ACCESSIBLE ABOVE GRADE AT THE CLEANOUT. THE CLEANOUT SHALL BE LOCATED ON THE PRIVATE SIDE OF THE PUBLIC RIGHT OF WAY.
- STAMP OR WELD THE LETTER "S" ON LID OF METER BOX.
- ABC SHALL BE PER SIERRA VISTA DETAIL SV200-4.

DETAIL E N.T.S.

Sierra Vista CITY OF SIERRA VISTA 1011 North Coronado Drive Sierra Vista, AZ 85635 520-458-5775

CITY OF SIERRA VISTA NEW SEWER BUILDING CONNECTIONS

REVISED: 12/2022 SCALE: NTS
DETAIL NO: SV440

DETAIL F N.T.S.

NEW SEWER BUILDING CONNECTIONS

NOTES:

- SADDLE TYPE CONNECTION IS ONLY ALLOWED ON NEW SEWER TAPS INTO EXISTING SEWER LINES. ALL NEW CONSTRUCTION SHALL BE Y-CONNECTIONS.
- SIZE OF TAP SHALL BE DESIGNATED ON PLANS.
- CONSTRUCTION TAP AT MINIMUM SLOPE IF COVER WILL BE LESS THAN 5' AT PROPERTY LINE.
- IF DEPTH REQUIRES, MINIMUM SLOPE CAN BE REDUCED TO 1/8" PER FOOT PROVIDED STUB IS STAKED TO GRADE.
- ALL FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D-2321. THE CONTRACTOR MAY VARY FROM THE DRAWING TO USE THE APPROPRIATE WYES.
- TEE WYES AND BENDS TO ENSURE NO MISALIGNMENT OF THE PIPE AND FITTINGS. BLOCK OR BRACE FITTING JOINTS TO ENSURE ZERO DEGREES ANGULAR JOINT DEFLECTION.
- END OF TAP TO BE SEALED AND MARKED AS NOTED.
- A TRACER WIRE SHALL BE INSTALLED IN ORDER FOR THE CITY TO LOCATE ALL HCS LATERAL SEWER LINES. THE TRACER WIRE SHALL BE CONTINUOUS (NO SPLICES) SOLID 14 AWG COPPER WIRE WITH GREEN TYPE UF (UNDERGROUND FEEDER) INSULATION. THE WIRE SHALL BE SECURELY TAPPED AT A MAXIMUM OF 10-FOOT INTERVALS AND EXTEND FROM THE SEWER MAIN TO A CLEANOUT AT ALL HCS LATERAL LINES. 12-INCHES OF TRACER WIRE SHALL BE ACCESSIBLE ABOVE GRADE AT THE CLEANOUT. THE CLEANOUT SHALL BE LOCATED ON THE PRIVATE SIDE OF THE PUBLIC RIGHT OF WAY.
- STAMP OR WELD THE LETTER "S" ON LID OF METER BOX.
- ABC SHALL BE PER SIERRA VISTA DETAIL SV200-4.

DETAIL F N.T.S.

Sierra Vista CITY OF SIERRA VISTA 1011 North Coronado Drive Sierra Vista, AZ 85635 520-458-5775

CITY OF SIERRA VISTA NEW SEWER BUILDING CONNECTIONS

REVISED: 12/2022 SCALE: NTS
DETAIL NO: SV440

ZACATECAS ENGINEERING

P.O. BOX 274
BISBEE, AZ 85603
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EMAIL: zacatecas.engineering.com
URL: zacatecasengineering.com

PROJECT NAME:

DETAIL SHEET

REVISIONS

#	DATE	BY	DESCRIPTION

PROFESSIONAL ENGINEER
RICHARD CAYLER
33559
10-26-2023
CIVIL
STATE OF ARIZONA

ENGINEER: RC
DWN BY: BM
CHK BY:

DWG NO.
23-002

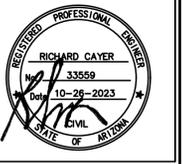
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#	DATE	BY	DESCRIPTION



ENGINEER: RC
 DWN BY: BM
 CHK BY:

DWG NO.
 23-002
 SCALE
 NTS
 SHEET
 9 OF 9

LONGITUDINAL				TRANSVERSE			
(A)	(B)	THICKNESS (W)	(L)	(A)	(B)	THICKNESS (W)	(L)
12"	18"	1"	4'	8'	58"	19"	12"
12"	18"	1"	4'	10'	58"	31"	12"
24"	18"	1"	5'	10'	70"	25"	12"
36"	18"	1"	6'	10'	44"	38"	12"
48"	18"	1"	7'	10'	52"	34"	12"
60"	18"	1"	8'	10'	58"	31"	12"
12"	18"	1-1/4"	4'	15'	88"	43"	12"
24"	18"	1-1/4"	5'	12'	104"	20"	12"
36"	18"	1-1/4"	6'	12'	66"	39"	12"
36"	18"	1-1/4"	6'	16'	66"	63"	12"
48"	18"	1-1/4"	7'	12'	76"	33"	12"
48"	18"	1-1/4"	7'	16'	76"	58"	12"
60"	18"	1-1/4"	8'	12'	86"	29"	12"
60"	18"	1-1/4"	8'	15'	86"	49"	12"
60"	18"	1-1/4"	8'	16'	86"	63"	12"
60"	18"	1-1/4"	8'	20'	86"	77"	12"
60"	18"	1-3/8"	8'	20'	102"	69"	12"

NOTES:
 1. USE TYPE 1 PLATE INSTALLATION WHERE POSTED SPEED LIMIT IS LESS THAN 30 MPH. USE TYPE 2 PLATE INSTALLATION WHERE POSTED SPEED LIMIT IS 30 MPH OR GREATER.
 2. FOR TYPE 2 PLATE INSTALLATION, THE STEEL PLATE SHALL BE RECESSED BY MILLING INTO THE EXISTING ASPHALT TO SET FLUSH WITH THE SURFACE OF THE EXISTING ASPHALT. FULL DEPTH CUTTING OF PAVEMENT SECTION OUTSIDE OF TRENCH IS NOT PERMITTED. MILLING DEPTH SHALL MATCH THICKNESS OF PLATE. THE GAP BETWEEN THE EDGE OF THE PLATE AND THE ADJACENT EXISTING ASPHALT PAVEMENT MUST BE FILLED WITH TEMPORARY ASPHALT.
 3. TRENCH WIDTHS ARE BASED ON AN ANALYSIS PER THE 14TH EDITION OF STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES BY AASHTO. AN ASSUMED AXLE LOADING OF 12 TONS WITH A 30% IMPACT FACTOR WAS USED. THE AXLE LENGTH IS 6 FEET. THEREFORE, THE NUMBER OF WHEELS CARRIED BY A PLATE DEPENDS ON THE ROADWAY WIDTH.
 4. STEEL PLATE MUST BE ABLE TO WITHSTAND H=20 TRAFFIC LOADINGS WITHOUT ANY MOVEMENT.
 5. PLATES SHALL BE FABRICATED FROM ASTM A36 STEEL (MIN).
 6. PLATES SHALL BE SECURED FROM LATERAL MOVEMENT AND VERTICAL VIBRATION (ASSOCIATED NOISE) WHILE IN USE BY TEMPORARY ASPHALT (COLD MIX).

MODIFIED MAG DETAIL 200-1
 SCALE: 1" = 1'-0"
 NTS
 DETAIL NO: SV211

DETAIL H N.T.S.

NOTES:
 1. PAVEMENT MATCHING, BASE COURSES AND SURFACE REPLACEMENT SHALL BE IN ACCORDANCE WITH MAG STD. SECT. 336 UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS.
 2. TRENCH EXCAVATION, BACKFILLING AND COMPACTION SHALL BE IN ACCORDANCE WITH MAG STD. SECT. 601. NATIVE BACKFILL SHALL ONLY BE USED WITH AGENCY APPROVAL.
 3. CLSM SHALL BE 1/2-SACK OR 1-SACK PER MAG STD. SECTIONS 604 AND 728.
 4. MATERIAL FOR FINAL BACKFILL AND BASE (IF APPLICABLE) SHALL BE AS NOTED HEREIN UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS.
 5. FINAL BACKFILL SHALL BE CLSM FOR TRENCH DEPTHS GREATER THAN 4 FEET UNLESS A SAFE (OSHA COMPLIANT) WORKING SPACE AT LEAST 30" WIDE IS PROVIDED TO CONDUCT COMPACTION TESTING.
 6. PROVIDE MINIMUM 12" WIDE SHELF AS SHOWN IN "T-TOP" TRENCH REPAIR AT ENDS OF TYPE "A" TRENCH REPAIR EXCEPT WHERE EDGE ABUTS EXISTING CONCRETE.
 7. USE "T-TOP" PAVEMENT REPLACEMENT WHERE A TRENCH IS NOT PARALLEL TO A STREET OR GOES THROUGH AN INTERSECTION.
 8. THE JOINT LOCATION OR JOINT CONFIGURATION MAY VARY FROM THAT SHOWN TO ELIMINATE REMNANTS, TO ELIMINATE FULL DEPTH SAWCUT JOINTS FROM BEING LOCATED WITHIN A WHEEL PATH AS REQUIRED BY MAG STD. SECT. 336, OR WHEN AN OFFSET JOINT IS CONSTRUCTED. SEE SIERRA VISTA DETAIL SV200-2 FOR REMNANT PAVEMENT REMOVAL REQUIREMENTS.
 9. SAWCUT OR MILL EDGE AND APPLY TACK COAT. FOR PERMANENT PAVEMENT, APPLY 2-1/2" WIDE MAG STD. SECT. 337.2.1 COMPLIANT JOINT SEALANT AS REQUIRED BY AGENCY - SEE SIERRA VISTA DETAIL SV200-2.
 10. EXPOSED COPPER OR POLYETHYLENE WATER PIPE UP TO 2" IN DIAMETER IN TRENCHES TO BE BACKFILLED WITH CLSM SHALL BE WRAPPED WITH MINIMUM 3/4" THICK PREFORMED PIPE-COVERING FOAM INSULATION BEFORE PLACING CLSM.
 11. ABC WITHIN 24" BELOW PAVEMENT SHALL BE COMPACTED TO 100% STANDARD DRY DENSITY.

MODIFIED MAG DETAIL 200-1
 SCALE: 1" = 1'-0"
 NTS
 DETAIL NO: SV200-1-A

DETAIL G N.T.S.

NOTES:
 1. CASTING TO CONFORM TO SECT. 787.
 2. LETTERS ON COVER TO BE AS FOLLOWS: "SEWER", "WATER", OR "SURVEY" AS DIRECTED. TOTAL WIDTH OF WORD "SEWER" OR "WATER" 3-3/4", TOTAL WIDTH OF THE WORD "SURVEY" 4-1/2". LETTER SIZE 5/8" X 3/4", RAISED 1/16" ABOVE THE LEVEL OF THE COVER.
 3. #4 REINFORCING STEEL HOOP EQUALLY CENTERED HORIZONTALLY & VERTICALLY.
 4. / INDICATES MACHINE FINISHED SURFACE.

DETAIL NO. 270
 STANDARD DETAIL ENGLISH
 ROUND FRAME AND COVER AND GRADE ADJUSTMENT
 REVISED 01-01-2017
 DETAIL NO. 270

DETAIL J N.T.S.

NOTES:
 1. PAVEMENT MATCHING AND SURFACE REPLACEMENT SHALL BE IN ACCORDANCE WITH SECTION 336.
 2. TYPE OF BACKFILL AND BASE (IF APPLICABLE) SHALL BE AS NOTED HEREIN UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS. IF NOT SPECIFIED, CLSM SHALL BE 1/2-SACK PER SECTIONS 604 AND 728.
 3. TRENCHES LESS THAN 24" WIDE SHALL BE BACKFILLED FROM TOP OF INITIAL BACKFILL TO BOTTOM OF SURFACING MATERIALS WITH 1/2-SACK CLSM PER SECTIONS 604 AND 728.
 4. BASE, FINAL BACKFILL, AND PIPE EMBEDMENT ZONE COMPACTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH SECTION 601.
 5. ASPHALT CONCRETE SURFACE AND BASE COURSES SHALL COMPLY WITH SECTION 336.2.4.1 UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS.
 6. USE TYPE "A" FOR LONGITUDINAL TRENCH REPAIR AND USE "T-TOP" FOR TRANSVERSE TRENCH REPAIR (SEE DETAIL 200-2) UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS. TYPE "B" TRENCH REPAIR MAY BE USED FOR TRANSVERSE TRENCH REPAIR IF SPECIFIED BY THE AGENCY.
 7. PROVIDE MINIMUM 12" WIDE SHELF AS SHOWN IN "T-TOP" TRENCH REPAIR AT ENDS OF TYPE "A" TRENCH REPAIR EXCEPT WHERE EDGE ABUTS EXISTING CONCRETE.
 8. USE "T-TOP" PAVEMENT REPLACEMENT WHERE A TRENCH IS NOT PARALLEL TO A STREET OR GOES THROUGH AN INTERSECTION.
 9. SEE DETAIL 200-2 FOR REMNANT PAVEMENT REMOVAL REQUIREMENTS.
 10. EXPOSED COPPER OR POLYETHYLENE WATER PIPE UP TO 2" IN DIAMETER IN TRENCHES TO BE BACKFILLED WITH CLSM SHALL BE WRAPPED WITH MINIMUM 3/4" THICK PREFORMED PIPE-COVERING FOAM INSULATION BEFORE PLACING CLSM.

DETAIL NO. 200-1
 STANDARD DETAIL ENGLISH
 BACKFILL, PAVEMENT AND SURFACE REPLACEMENT
 PROPOSED 01-01-2015
 DETAIL NO. 200-1

DETAIL K N.T.S.