

CITY OF PHOENIX WATER SERVICE DEPARTMENT LARGE DIAMETER SANITARY SEWER **REHABILITATION - GRADE 5 & 4** MANHOLES - NORTH - ZONE 3 WS90500273



JANUARY 2022

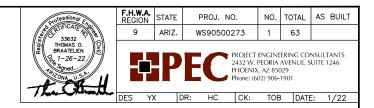
INSPECTION BLOCK

CITY PROJECT MANGER
CITY INSPECTOR
CONTRACTOR
DATE OF SUBSTANTIAL COMPLETION
DATE OF FINAL COMPLETION
1 YEAR WARRANTY END DATE
5 YEAR WARRANTY (COATINGS) END DATE

25 YEAR WARRANTY (INSERTS) END DATE _

REHABILITATION QUANTITIES					
DESCRIPTION	QUANTITY 60IN MH DIA	QUANTITY IRREGULAR SHAPE MH			
MANHOLES REHABILITATED WITH INSERT LINING 31	EA 32 EA	1 EA			
MANHOLES REHABILITATED WITH ONLY COATING	10 EA				
MANHOLES REHABILITATED WITH ONLY SPOT REPAIRS	7 EA				
TOTAL MANHOLES 48	EA 49 EA	1 EA			
TOTAL MANHOLES REHABBED IN ZONE 3	49 EA _50	EA			







CITY MANAGER

JEFFREY BARTON

CITY COUNCIL

DISTRICT N	NO 1.	ANN O'BRIEN
DISTRICT N	10 2.	JIM WARING
DISTRICT N	10 3.	DEBRA STARK
DISTRICT N	NO 4.	LAURA PASTOR
DISTRICT N	10 5.	BETTY GUARDADO
DISTRICT N	10 6.	SAL DICICCIO
DISTRICT N	10 7.	YASSAMIN ANSARI
DISTRICT N	10 8.	CARLOS GARCIA

CITY ENGINEER

ERIC J. FROBERG, P.E.

WATER SERVICES DIRECTOR

TROY HAYES, P.E.

INDEX OF SHEETS

SHEET NO.	DRAWING NO.	SHEET TITLE
1 2 3 4 5 - 7 8 - 57	G-1 G-2 G-3 G-4 G-5 TO G-7 -	COVER SHEET NOTES NOTES AND ABBREVIATIONS KEY MAP MANHOLE LOCATION MAP MANHOLE MAP BOOK
58 - 63	D-1 TO D-6	DETAILS

AS BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF

REGISTERED ENGINEER

DATE

REGISTRATION NUMBER



"PER PHOENIX CITY CODE CHAPTER 2. SECTION 2-28 THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY LAW THIS DOCUMENT MUST BE KEPT SECURE AT ALL TIMES

CITY OF PHOENIX PAVING NOTES

- COMPACTION SHALL COMPLY WITH M.A.G SECTION 601.
- 2. CONSTRUCTION WITHIN THE RIGHT-OF-WAY SHALL CONFORM TO THE LATEST APPLICABLE MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) UNIFORM STANDARD SPECIFICATIONS AND DETAILS AND THE LATEST CITY OF PHOENIX SUPPLEMENT TO THE MAG UNIFORM STANDARD SPECIFICATIONS AND DETAILS.
- 3. THE ENGINEERING DESIGN ON THESE PLANS IS ONLY APPROVED BY THE CITY IN SCOPE AND NOT IN DETAIL. CONSTRUCTION QUANTITIES ON THESE PLANS ARE NOT VERIFIED BY THE CITY. APPROVAL OF THESE PLANS ARE FOR PERMIT PURPOSES ONLY AND SHALL NOT PREVENT THE CITY FROM REQUIRING CORRECTION OF ERRORS IN THE PLANS WHERE SUCH ERRORS ARE SUBSEQUENTLY FOUND TO BE IN VIOLATION OF ANY LAW. ORDINANCE, HEALTH, SAFETY, OR OTHER DESIGN ISSUES. IN ADDITION, THE PROPERTY OWNER MUST DEDICATE STREETS IN ACCORDANCE WITH MINIMUM RIGHT-OF-WAY STANDARDS MAP (ORDINANCE NO 437, LATEST AMENDMENT).
- 4. PLAN APPROVAL IS VALID FOR 180 DAYS. PRIOR TO PLAN APPROVAL EXPIRATION, ALL ASSOCIATED PERMITS SHALL BE PURCHASED OR THE PLANS SHALL BE RESUBMITTED FOR EXTENSION OF PLAN APPROVAL. THE EXPIRATION, EXTENSION, AND REINSTATEMENT OF CIVIL ENGINEERING PLANS AND PERMITS SHALL FOLLOW THE SAME GUIDELINES AS THOSE INDICATED IN THE PHOENIX BUILDING CONSTRUCTION CODE ADMINISTRATIVE PROVISIONS SECTION 105.3 FOR BUILDING PERMITS.
- 5. EXISTING OR NEWLY DAMAGED AND/OR DISPLACED CONCRETE CURB, GUTTER, SIDEWALK, OR DRIVEWAY SLAB THAT IS WITHIN THE RIGHT-OF-WAY SHALL BE REPAIRED OR REPLACED, AS NOTED BY CITY INSPECTORS, BEFORE FINAL ACCEPTANCE OF THE WORK.
- 6. ALL NEW OR RELOCATED UTILITIES SHALL BE PLACED UNDERGROUND.
- 7. THE ACTUAL POINT OF PAVEMENT MATCHING, AND/OR TERMINATION, SHALL BE DETERMINED IN THE FIELD BY THE INSPECTOR FOR THE CITY.
- 8. AN APPROVED PAVING PLAN SHALL BE ON THE JOB SITE AT ALL TIMES. DEVIATIONS FROM THE PLAN MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
- 9. OBSTRUCTIONS TO PROPOSED IMPROVEMENTS IN THE RIGHT-OF-WAY SHALL BE REMOVED OR RELOCATED BEFORE BEGINNING CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
- 10. ALL EXISTING CATCH BASINS MUST BE RE-LOCATED WHEN THEY ARE SHOWN IN A NEWLY PROPOSED DRIVEWAY.
- 11. CONSTRUCTION OF SURFACE IMPROVEMENTS SHALL NOT BEGIN UNTIL CONFLICTING UNDERGROUND UTILITY CONSTRUCTION IS COMPLETED AND SERVICE CONNECTIONS TO ALL PLATTED LOTS HAVE BEEN ADEQUATELY EXTENDED PAST THE RIGHT-OF-WAY.
- 12. THE PERMIT HOLDER SHALL ARRANGE FOR THE RELOCATION AND RELOCATION COSTS OF ALL UTILITIES, INCLUDING ANY STREET LIGHTS, AND SUBMIT A UTILITY RELOCATION SCHEDULE PRIOR TO THE ISSUANCE OF A CONSTRUCTION PERMIT. RELOCATION OF WATER METERS SHALL BE DONE BY THE WATER SERVICES DEPARTMENT AFTER PAYMENT OF PREVAILING FEES. RELOCATION OF CITY FIRE HYDRANTS REQUIRE A SEPARATE PLAN REVIEW AND PERMIT AT THE CONTRACTOR'S EXPENSE.
- 13. ALL FRAMES, COVERS, VALVE BOXES, AND MANHOLE COVERS SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO COMPLETION OF PAVING OR RELATED CONSTRUCTION. ADJUSTMENT OF EXISTING "TYPE A" OR "TYPE B" WATERLINE VALVE BOXES IN THE PARKWAY SHALL BE CONSIDERED INCIDENTAL TO PARKWAY GRADING. EXISTING "TYPE B" WATERLINE VALVE BOXES SHALL BE REPLACED WITH "TYPE A" BOXES PER COP STANDARD DETAIL P1391
- 14. GRADING BETWEEN BACK OF CURB AND PROPERTY LINE SHALL BE LIMITED TO 4:1 SLOPE.
- 15. TREES AND SHRUBBERY IN THE RIGHT-OF-WAY THAT CONFLICT WITH PROPOSED IMPROVEMENTS SHALL NOT BE REMOVED WITHOUT APPROVAL OF THE CITY LANDSCAPE ARCHITECT. THE PERMIT HOLDER SHALL BE RESPONSIBLE FOR OBTAINING AUTHORIZATION TO REMOVE AND/OR RELOCATE AND RECREATION DEPARTMENT PRIOR TO ANY RIGHT-OF-WAY SHRUBBERY BY CALLING THE PARKS PLANT RELOCATIONS AT 602-262-6862.
- 16. THE INSPECTOR MUST CONTACT STREET TRANSPORTATION DEPARTMENT, TRAFFIC SERVICES DIVISION AT 602-495-0205 VOICE OR 602-534-5500 TTY TWO (2) WEEKS PRIOR TO COMPLETION OF PAVING WORK FOR SIGNING & STRIPING
- 17. STREET PAVEMENT CUTS IN THE CITY RIGHT OF WAY WILL REQUIRE ASPHALT RESURFACING TREATMENT PER SECTION 31-49.1 OF THE PHOENIX CITY CODE.

CITY OF PHOENIX SEWER NOTES

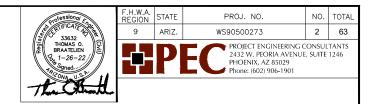
- 1. THE INSPECTOR FOR THE CITY SHALL BE NOTIFIED 48 HOURS BEFORE CONSTRUCTION BEGINS.
- 2. ANY SEWER MAIN 15 INCH IN SIZE OR 12 FEET IN DEPTH, OR GREATER, REQUIRES 5' MANHOLES
- 3. ALL MANHOLES NEWLY CONSTRUCTED OR EXISTING THAT ARE WORKED IN FOR CONNECTIONS SHALL BE PAINTED WITH INSECTICIDE PAINT PER CITY OF PHOENIX SUPPLEMENT TO MAG SECTION 627.
- 4. MANHOLES WITH 60" DIAMETER AND PIPE GREATER THAN 12" REQUIRE COATING PER COP SUPPLEMENT 626. ANY EXISTING MANHOLES WITH CORROSION COATING THAT ARE DISTURBED OR ADJUSTED TO NEW FINISH GRADES SHALL HAVE ANY DAMAGED COATING REPAIRED, INCLUDING ALL ADJUSTING RINGS.
- 5. THIS SET OF PLANS HAS BEEN INITIALLY REVIEWED BY THE CITY OF PHOENIX, SUCH REVIEW IS PART OF THE PROCESS THAT DEVELOPER(S)/CONTRACTOR(S) MUST GO THROUGH IN ORDER TO OBTAIN A CONSTRUCTION PERMIT. THE RESULTS OF SUCH INITIAL REVIEW SHALL NOT DICTATE THE CITY OF PHOENIX'S FINAL DETERMINATION AS TO THE ACCEPTABILITY OF THE PLANS, NOR SHALL IT PREVENT THE CITY OF PHOENIX FROM REQUIRING ERRORS AND OMISSIONS, AS FOUND ON PLANS, BE ADDRESSED BE DEVELOPER(S) / CONTRACTOR(S), WHERE SUCH ERRORS AND OMISSIONS CAUSE THE PLANS TO BE IN VIOLATION OF OR INADEQUATE UNDER APPLICABLE FEDERAL/STATE/COUNTY/LOCAL CODES, ORDINANCES, REGULATIONS OR OTHER LAWS. THIS REVIEWED AND STAMPED SET OF PLANS MUST BE KEPT AT THE CONSTRUCTION SITE AT ALL TIMES.
- 6. ALL CONSTRUCTION IN CITY OF PHOENIX RIGHT-OF-WAY, OR EASEMENT, IS TO CONFORM TO MAG SPECIFICATIONS AND DETAILS AND CITY OF PHOENIX SUPPLEMENT TO MAG SPECIFICATIONS AND DETAILS, UNLESS MODIFIED ON THE PLANS.
- 7. ALL SEWER MAINS MUST HAVE A CCTV INSPECTION BEFORE ACCEPTED AS COMPLETE (SEE CITY OF PHOENIX SUPPLEMENT TO MAG SPECIFICATION SECTION 611.3(C)
- 8. TRAFFIC REGULATIONS: ALL WORK MUST COMPLY WITH REQUIREMENTS OF THE CURRENT CITY OF PHOENIX "TRAFFIC BARRICADE MANUAL"
- 9. THE FOLLOWING MAG DETAILS ARE SPECIFICALLY NOT APPROVED. 425 24" ALUMINUM FRAME AND COVER
- 10. NEW MANHOLES ARE TO BE BUILT WITHOUT STEPS.
- 11. COMPACTION SHALL COMPLY WITH MAG SECTION 601 AND CITY OF PHOENIX SUPPLEMENTS.
- 12. NEW SEWER LINES ARE TO BE BUILT IN ACCORDANCE WITH CITY OF PHOENIX "STANDARD UTILITY LOCATIONS" OR AS SHOWN ON THE PLANS.
- 13. A SIX (6) FOOT MINIMUM HORIZONTAL SEPARATION FROM ANY UNDERGROUND UTILITY SHALL BE PROVIDE FOR SEWER MAINS, SEWER SERVICES, WATER MAINS, AND WATER SERVICES. THE MINIMUM HORIZONTAL SEPARATION IS MEASURED FROM OUTSIDE OF SEWER MAIN. SEWER SERVICE, WATER MAIN, OR WATER SERVICE TO OUTSIDE OF UNDERGROUND UTILITY.
- 14. A ONE (1) FOOT MINIMUM VERTICAL SEPARATION FROM ANY DRY UNDERGROUND UTILITY CROSSING SHALL BE PROVIDED FOR SEWER MAINS, SEWER SERVICES, WATER MAINS AND WATER SERVICES. THE MINIMUM VERTICAL SEPARATION IS MEASURED FROM OUTSIDE OF SEWER MAIN, SEWER SERVICE, WATER MAIN, OR WATER SERVICE TO OUTSIDE OF DRY UNDERGROUND UTILITY
- 15. A TWO (2) FOOT MINIMUM VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN ANY SEWER MAIN AND STORM DRAIN CROSSING A WATER MAIN. THE MINIMUM VERTICAL SEPARATION IS MEASURED FROM OUTSIDE OF WATER MAIN TO OUTSIDE OF SEWER MAIN OR STORM DRAIN MAIN. SEE MAG STANDARD DETAIL 404 FOR ADDITIONAL INFORMATION AND OR PROVISIONS FOR CLEARANCE.
- 16. EXCEPTIONS OR DEVIATIONS FROM THE ABOVE MINIMUM CLEARANCES MUST BE APPROVED AND SHOWN ON THE APPROVED WATER AND SEWER PLANS. WHEN UTILITY CONFLICTS ARE FOUND DURING CONSTRUCTION, ALL CHANGES AND REVISIONS MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
- 17. ANY AND ALL MORE STRINGENT REQUIREMENTS REQUIRED BY FEDERAL, STATE, COUNTY, OR LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
- 18. ANY SEWER LINES THAT ARE INSTALLED WITH LESS THAN 0.004 FT/FT SLOPE MUST BE INSTALLED USING A LASER.
- 19. WHEN DIP SEWER PIPE IS USED, LINING IS REQUIRED PER CITY OF PHOENIX SUPPLEMENT TO MAG 751.
- 20. CONCRETE OR ASPHALT DAMAGED DURING THE COURSE OF CONSTRUCTION SHALL BE REMOVED AND REPLACED IN KIND PRIOR TO FINAL INSPECTION.
- 21. RECORD DRAWING SUBMITTALS MUST COMPLY WITH WATER SERVICES DEPARTMENT ENGINEERING POLICY P-85. A COPY OF THE POLICY CAN BE OBTAINED IN THE DEPARTMENT'S WEBSITE HTTP: PHOENIX.GOV/WATERSERVICES/DESIGN/ENGPOLICIES/INDEX.HTML

- CONSTRUCTION BID.

- EXPENSE

CITY OF PHOENIX ENVIRONMENTAL NOTES

- 1
- TO EVALUATE POTENTIAL IMPACTS



CITY OF PHOENIX GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH CONTRACT SPECIFICATIONS; PLANS; CITY OF PHOENIX SUPPLEMENTS TO MAG STANDARD SPECIFICATIONS AND DETAILS; AND MAG STANDARD SPECIFICATIONS AND DETAILS, IN THAT ORDER OF PRECEDENCE, AT THE TIME OF

2. FACILITIES WHICH ARE NOT SPECIFICALLY LOCATED WITH ACTUAL VERTICAL AND HORIZONTAL CONTROLS, ARE LOCATED ONLY APPROXIMATELY AND TO THE BEST AVAILABLE INFORMATION PROVIDED BY VARIOUS OWNERS OF THE FACILITIES. AND SUPPLEMENTED BY VISUAL SURFACE INFORMATION WHERE APPROPRIATE. ACCURACY, LOCATION AND COMPLETENESS OF THIS INFORMATION SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO INITIATION OF CONSTRUCTION.

3. AT LEAST TWO WORKING DAYS BEFORE CONSTRUCTION, THE CONTRACTOR SHALL CONTACT BLUESTAKE TO LOCATE AND FLAG UNDERGROUND UTILITIES. THE CONTRACTOR SHALL CONTACT OTHER APPROPRIATE UTILITIES DIRECTLY IF THEY ARE NOT ON BLUESTAKE SYSTEM.

4. VERTICAL CONTROL IS BASED ON NATIONAL GEODETIC SURVEY, NGVD 1929.

5. ALL CONSTRUCTION ACTIVITIES SHALL BE CONTAINED WITHIN THE PUBLIC RIGHT OF WAY OR IN EASEMENTS GRANTED FOR THE WATER AND/OR SEWER MAIN INSTALLATION. ANY EXISTING FEATURES DISTURBED OUTSIDE THESE LIMITS SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S

6. TRAFFIC CONTROL SHALL CONFORM TO THE CITY OF PHOENIX "TRAFFIC BARRICADE MANUAL" AND SHALL BE SUBJECT TO CITY REVIEW AND APPROVAL.

7. ANY WORK BETWEEN 7:00 PM - 7:00 AM (BETWEEN OCTOBER 1ST - APRIL 30TH) OR 7:00 PM TO 6:00 AM (BETWEEN MAY 1ST - SEPTEMBER 30TH) IN THE RIGHT OF WAY (ARTERIAL AND COLLECTOR STREETS) REQUIRES AN AFTER HOURS WORK PERMIT.

CONTRACTOR SUBCONTRACTORS AND ALL FIELD PERSONNEL SHALL BE PROVIDED THE ATTACHED MIGRATORY BIRD TREATY ACT FLYER. IF TREES OR SHRUBS WILL BE TRIMMED OR REMOVED BETWEEN FEBRUARY 1 AND AUGUST 31, OR IF AN ACTIVE BIRD NEST IS PRESENT IN THE WORK AREA, WORK SHALL CEASE WITHIN 100 FEET AND THE CITY OF PHOENIX ENVIRONMENTAL QUALITY SPECIALIST (ANDREA LOVE [602-495-6718] OR JAMES MARSHALL [602-534-3747]) SHALL BE NOTIFIED IMMEDIATELY.

2. CONTRACTOR, SUBCONTRACTORS, AND ALL FIELD PERSONNEL SHALL BE PROVIDED THE WESTERN BURROWING OWL FLYER. IF BURROWING OWLS OR POTENTIALLY ACTIVE BURROWS (NATURAL OR MAN-MADE HOLES 3 INCH DIAMETER OR GREATER) ARE OBSERVED DURING CONSTRUCTION. WORK SHALL CEASE WITHIN 100 FEET AND THE CITY OF PHOENIX ENVIRONMENTAL QUALITY SPECIALIST (ANDREA LOVE [602-495-6718] OR JAMES MARSHALL [602-534-3747]) SHALL BE NOTIFIED IMMEDIATELY.

3. IF THERE IS A CHANGE IN SCOPE OR THE PROJECT LIMITS, THE CITY OF PHOENIX ENVIRONMENTAL QUALITY SPECIALIST (ANDREA LOVE [602-495-6718] OR JAMES MARSHALL [602-534-3747]) SHALL BE CONTACTED

4. IF ANY ARCHAEOLOGICAL MATERIALS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL CEASE ALL GROUND-DISTURBING ACTIVITIES WITHIN 10 METERS OF THE DISCOVERY AND THE CITY OF PHOENIX ARCHAEOLOGY OFFICE (602-534-1573) AND CITY OF PHOENIX ENVIRONMENTAL QUALITY SPECIALIST (ANDREA LOVE [602-495-6718] OR JAMES MARSHALL [602-534-3747]) SHALL BE NOTIFIED IMMEDIATELY AND ALLOWED TIME TO PROPERLY ASSESS THE MATERIALS.

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	LARGE DIAMETER SANITARY SEWER REHABILITATION GRADE 5 & 4 MANHOLES - NORTH - ZONE 3
	CITY OF PHOENIX, ARIZONA WATER SERVICES DEPARTMENT
Contact Anzona 8 i at least two full working days before you begin excavation	NOTES
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Call 811 or click Arizona811.com	SCALE: NONE DRAWING G-2 2 63

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ENGINEERING NOTES

ABBREVIATIONS

		ADOT	ARIZONA DEPARTMENT OF TRANSPORTATION
1.	THE CONTRACTOR SHALL SUPPORT AND PROTECT IN PLACE ALL EXISTING UTILITIES WITHIN THE EXCAVATION AS REQUIRED BY THE MAG SPECIFICATIONS AND THE CITY SUPPLEMENTS.	В	BROKEN
		BOU	BOTTOM OF UTILITY
	COMPACTION SHALL COMPLY WITH MAG SECTION 601 AND CITY OF PHOENIX SUPPLEMENTS AND AS INDICATED IN THE PROJECT PLANS AND DETAILS. ALL REMOVAL AND REPLACEMENTS SHALL MATCH EXISTING UNLESS OTHERWISE NOTED ON	C CCTV CIPP CM	COLLAR SHAPE CIRCULAR CLOSED CIRCUIT TELEVISION CAST IN PLACE PIPE CRACK MULTIPLE
	CONTRACTOR TO VERIFY ALL ACCESS POINTS TO WORK ZONE PRIOR TO CONSTRUCTION.	CONC COP CST	CONCRETE CITY OF PHOENIX CONSTRUCTION
	THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS WHICH ARE REQUIRED PRIOR TO CONSTRUCTION, EXCEPT AS DEFINED BY THE SPECIFICATIONS.	DB DTL / DET DIP DWG	DISPLACED BRICK DETAIL DUCTILE IRON PIPE DRAWING
	SEWER MANHOLE REHAB NOTES	EA ELEC ELEV EX/ EXIST	EACH ELECTRIC OR ELECTRICAL ELEVATION EXISTING
		FDMC	FLOOD CONTROL DISTRICT OF MARICOPA COUN
1.	THE CONTRACTOR SHALL FIELD VERIFY ALL MANHOLE LOCATIONS, MATERIALS, CONDITIONS, AND DIMENSIONS BEFORE STARTING WORK AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES.	FL FM FND FO (FT)	FLANGE FRACTURE MULTIPLE FOUND FIBER OPTIC FEET
2.	ANY CHANGES IN REHABILITATION METHODS SHALL BE APPROVED BY THE ENGINEER PRIOR TO	НН	HANDHOLE
3	CONSTRUCTION. THE CONTRACTOR SHALL WHEN REQUIRED TO, ADJUST OR REPLACE EXISTING MANHOLE, FRAME,	ID I.E. (IN)	IDENTIFICATION INVERT ELEVATION INCHES
0.	AND COVER TO MATCH EXISTING FINAL GRADE ACCORDING TO MAG STANDARD DETAILS NO. 422, 423 AND COP STD DTL P1424.	LFD LT	LINING FAILURE DETACHED LEFT
4.	CONTRACTOR SHALL SUBMIT BYPASS PUMPING PLANS FOR ALL WORK AT THE PRE-CONSTRUCTION MEETING, BYPASS PUMPING PLANS MUST BE APPROVED BY THE ENGINEER	MC MH MMM	MARICOPA COUNTY MANHOLE MORTAR MISSING MEDIUM
	PRIOR TO PERFORMING WORK.	PHX PHXSE	PHOENIX PHOENIX OWNED PARCEL WITH COP SEWER EA
5.	SANITARY SEWER FLOW SHALL NOT BE DISRUPTED DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE BYPASS AND/OR DIVERSION AROUND THE LIMITS OF WORK.	PNDNG PTPUE PTSE PVC	OWNERSHIP OF PARCEL IS CURRENTLY CHANGI PRIVATE PROPERTY WITH COP PUBLIC UTILITY & PRIVATE PROPERTY WITH COP SEWER EASEME POLYVINYL CHLORIDE
6.	SPILLS SHALL NOT BE PERMITTED AT ANY TIME DURING CONSTRUCTION. A SPILL IS DEFINED AS ANY RELEASE OF RAW SEWAGE, CONSTRUCTION WATER, OR OTHER LIQUIDS.	RT	RIGHT
7.	IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY FOR REMOVAL OF CONTAMINATED SOIL AND A HAUL PLAN TO THE DISPOSAL SITE.	SAM SAMM SAMZ SAP SAPZ SHT SHT SRC SRP	SURFACE AGGREGATE MISSING SURFACE AGGREGATE MISSING MECHANICAL SURFACE AGGREGATE MISSING UNKNOWN SURFACE AGGREGATE PROJECTING SURFACE AGGREGATE PROJECTING UNKNOWN STEP HOLE SHEET SURFACE REINFORCEMENT CORRODED SALT RIVER PROJECT
		SRPZ SRV SRVZ SSMH STA SW	SURFACE REINFORCEMENT PROJECTING UNKNOV SURFACE REINFORCEMENT VISIBLE SURFACE REINFORCEMENT VISIBLE UNKNOWN SANITARY SEWER MANHOLE STATION SOUTHWEST
		VCP	VITRIFIED CLAY PIPE
		W/	WITH
		XXX	UNKNOWN



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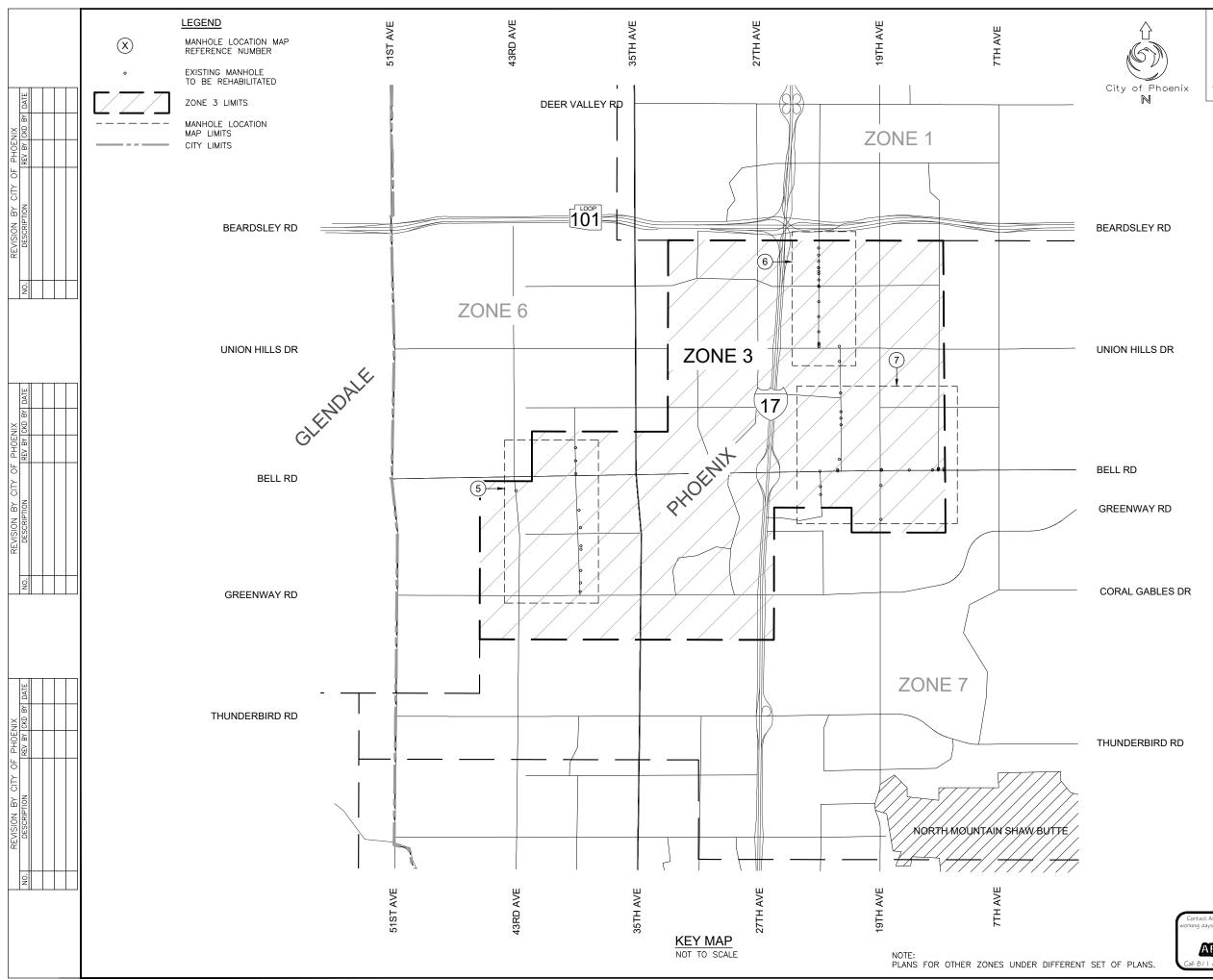
LARGE DIAMETER SANITARY SEWER REHABILITATION GRADE 5 & 4 MANHOLES - NORTH - ZONE 3

CITY OF PHOENIX, ARIZONA WATER SERVICES DEPARTMENT

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NOTES AND ABBREVIATIONS

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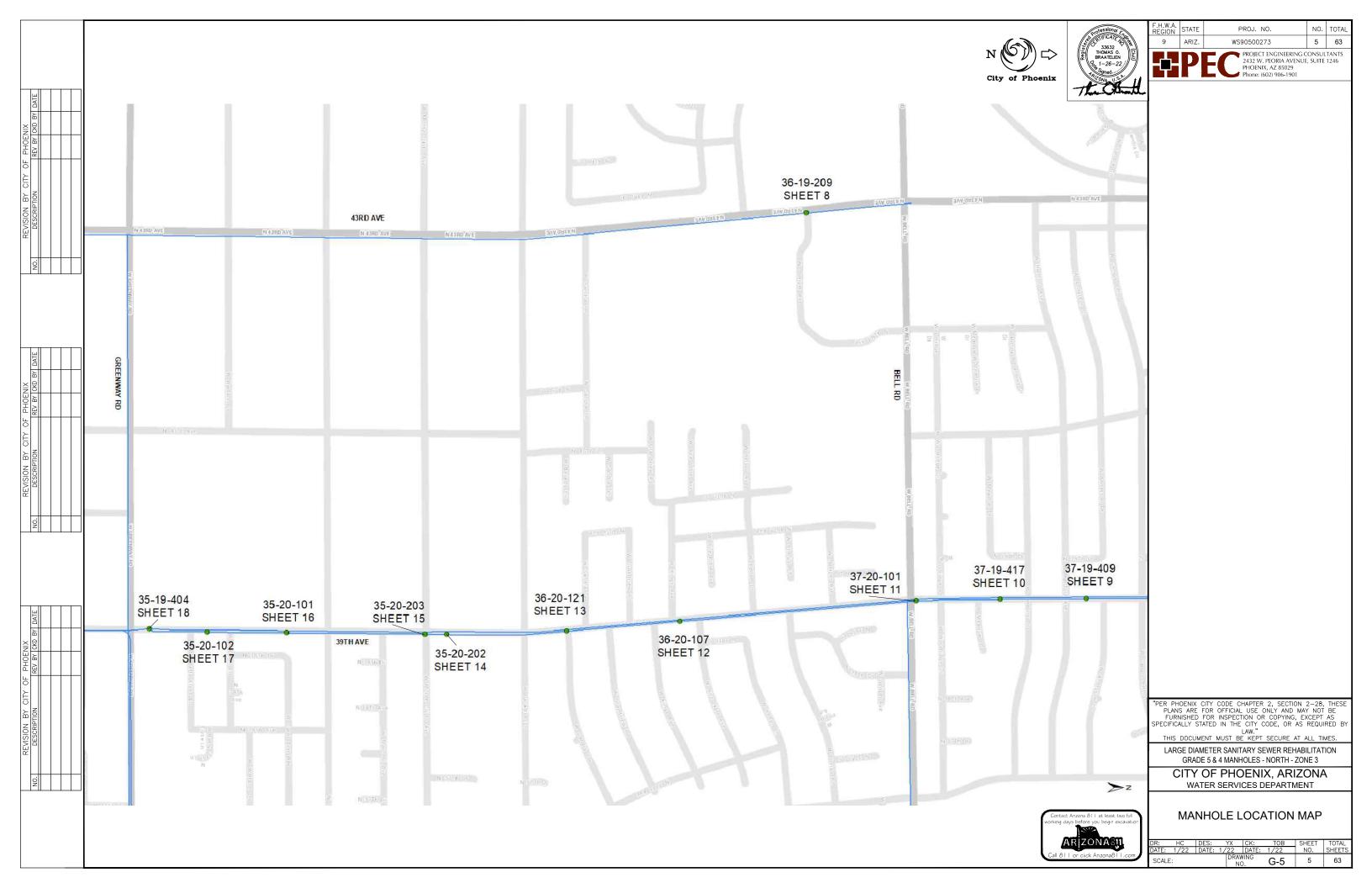


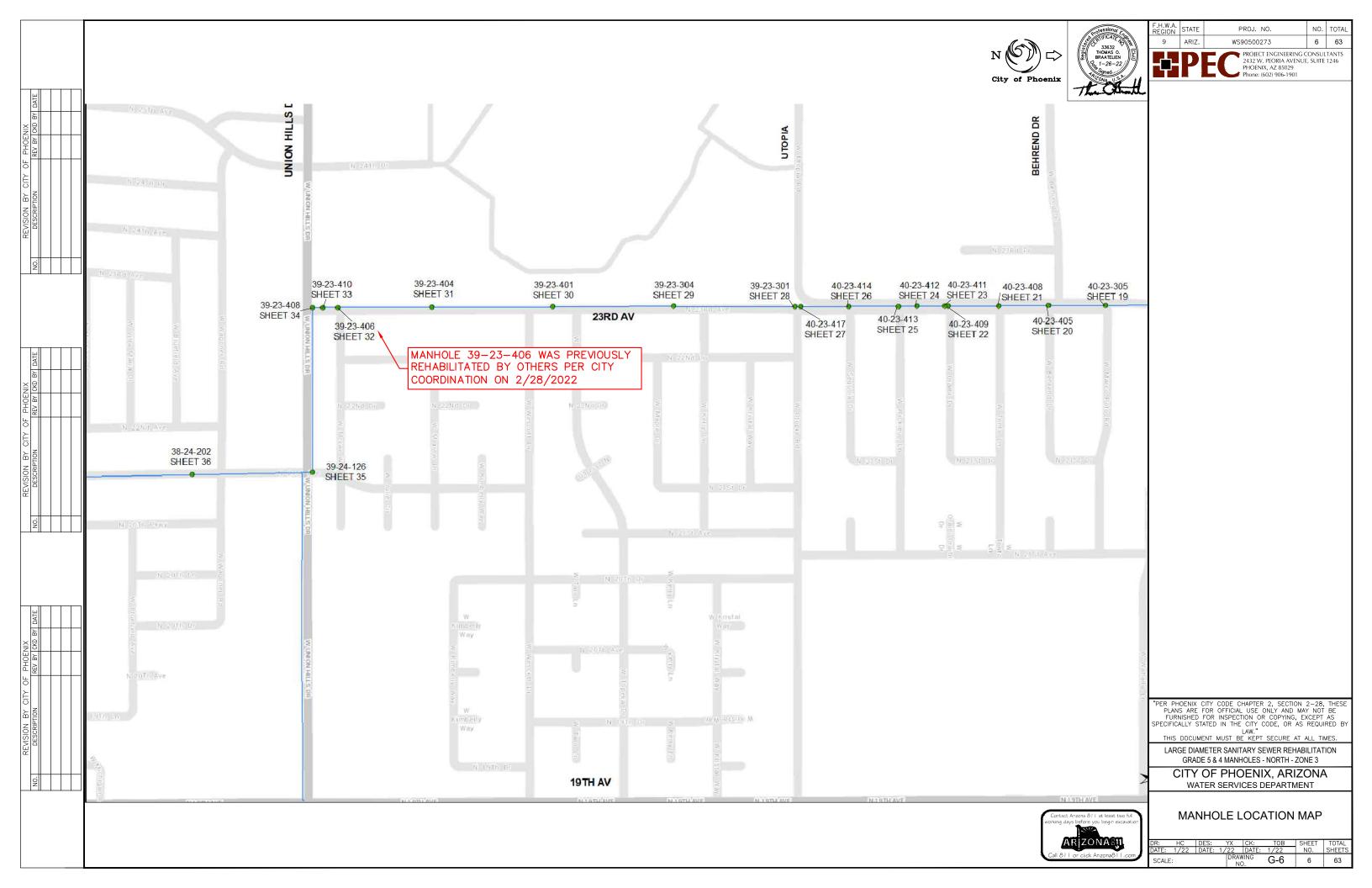


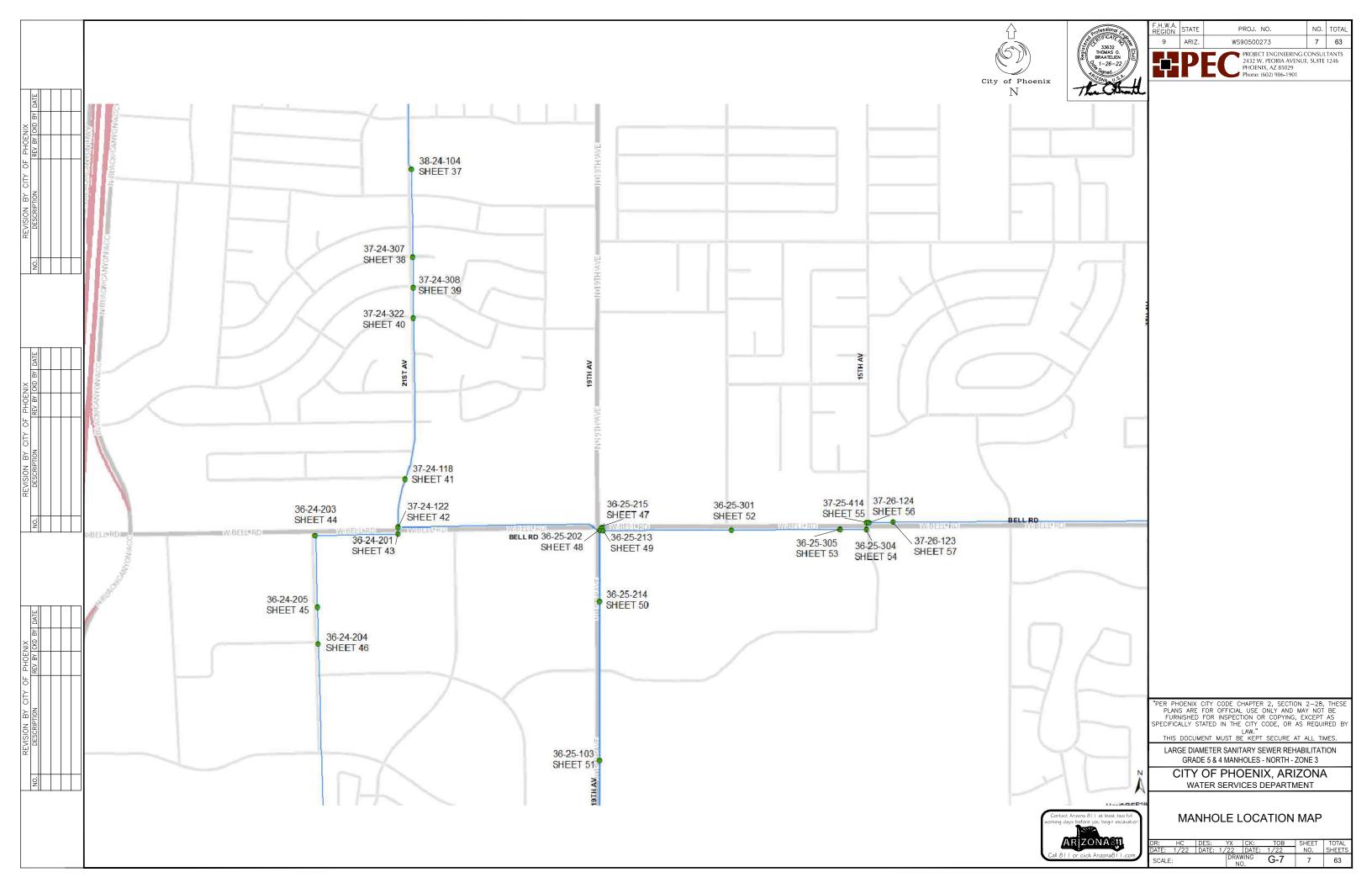
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2 0. JEN -22 -22 -25 -25 -25 -25 -25 -25	ф -	P	PROJECT ENGINEERING C 2432 W. PEORIA AVENUE PHOENIX, AZ 85029 Phone: (602) 906-1901		

	QUARTER SECTIONS LIST				
	QUARTER SECTIONS	MANHOLES			
EY RD	35-19	1			
	35-20	4			
	36-19	1			
	36-20	2			
	36-24	4			
LS DR	36-25	8			
	37-19	2			
	37-20	1			
	37-24	5			
	37-25	1			
	37-26	2			
AY RD	38-24	2			
	39-23	6 7			
	39-24	1			
ABLES DR	40-23	9			
	GRAND TOTAL	49 50			

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	CITY OF PHOENIX, ARIZONA WATER SERVICES DEPARTMENT												
intact Anzona 81 i at least two fulling days before you begin excavation	KEY MAP												
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	PROJECT IN	FORMATION					REHABILITATION DI	ESIGN	AND C	UANTI	TIES
CITY OF PHOENIX - WA	ATER SERVICES DEPT - L	ARGE DIAMETER	PROJE	ECT NUMBER: WS90500273							
SANITARY SEWER REHA	ABILITATION - GRADE 5 NORTH - ZONE 3	& 4 MANHOLES -	CITY F	PROJECT MANAGER: SAUL DURAN	CONSTRUCTION	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.	BID QUANTITY	AS BL Y QUAN
		NFORMATION	I		MAG 422						
WAM ID : I-1224982	LOCATION ID: 36-19-209	CROSS STREET: JUNIPER AVE & 43RD AVE			MAG 423 COP P1424	& COVER	REPLACE COLLAR, FRAME & COVER	EA	1		
JURISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL: CAST IRON	COVER DIAMETER: 32 (IN)		ENVIRONMENT: MAJOR ARTERIAL ROAD		CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2	146	
DEPTH RIM TO INVERT: 11.2 (FT)	BARREL DIAMETER: 60 (IN)	CORROSION PROTECTION: NOT COATED		QUARTER SECTION: 36-19	DETAIL: 1 & 2	& BARREL				-	
COLLAR PRESENT: YES GROUND TYPE: ASPHALT	NASSCO MACP STRUCTURAL GRADE: 4	EXISTING WALL MATERIAL: CONCRETE		NOTES:			REPAIR & COAT	EA	3		
		LOCATION		SHEET: D-4	DENCU	48 IN DIAMETER					
				U.S.	DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	4	1	
878	AVEN		-		SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5		
33.62	TH 43RD				SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	6		
	NORTH	36-19-209 VCP-10 (in) WEST	JUNI	PER AVENUE	SHEET: D-4 DETAIL: 1 & 3		JOINT REPAIR	EA	7		
35				30 36-19-222	SHEET: D-2 DETAIL: 1	INCEPT	INSTALL 42-IN DIAMETER INSERT	VF	8		
		35			SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	9		
					MAG 420	MANHOLE	REPLACE MANHOLE	VF	10		
-112.1523	-112.1519	-112.1514		.112.1510 -112.1505	NOTES: SPARK TEST PULL TEST:	RESULTS:			DVED BY: ED NAME: PANY:		
100 200	300 ft	LEGE									
ASSESSMENT NOTES:				MANHOLE TO REPAIR Pipe Connection on Wall			n in the second s	IOTES)		
AS BUILT CERTIFICATION			Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections Existing Abandoned Sewer Main	B. REMOVE AI C. BLAST CLEA	L STEPS BEFORE R	BEFORE PURCHASING MAT EHABILITATION WORK. DRE REHABILITATION. ONCRETE.	ERIAL.		Register Co	Professional E RIVFICATE 33632 THOMAS 0. BRAATELIEN 8, 1-26-22	
MEASUREMENTS AS SHOWN HEREO UNDER MY SUPERVISION OR AS NOT CORRECT TO THE BEST OF MY KNOW BELIEF.	N WERE MADE REGISTRATIO	C	— (> '	Not in GIS Pipe Connections City Sewer Main Flow Direction City Manholes / Not For Repair	E. REINSTATE I F. RESTORE LA G. USE FLOW	PIPE CONNECTION: NDSCAPE/PAVEME THROUGH PLUG IF	S AFTER COATING OR LINING ENT/SIDEWALK AFTER REHAI	BILITATIO	ON.	The	5, 1-26-22 Sgned
"PER PHOENIX CITY CODE CHAPTER 2, SEC	TION 2-28, THESE PLANS ARE FOR OFFIC SPECIFICALLY STATED IN THE CIT THIS DOCUMENT MUST E	OR INSPECTION OR COPYING, EXCEPT AS		2432 W. P PHOENIX, Phone:(60	ENGINEERING CONSULTANTS teoRIA AVENUE, SUITE 1246 AZ 85029 12) 906-1901 Know what's Call be	below. fore you dig.	SCALE (0F MAP: .00	MAN 1		

ABILITATION DESIGN AND QUANTITIES								
REHABILITATION	UNITS	BID ITEM NO.		AS BUILT QUANTITY	APPROVED MATERIAL	MANUFACTURER	MANHOLE 36-19-209 WS90500273	
ACE COLLAR, FRAME VER	EA	1					NHOLE 3 WS9	
CT REPAIR COATING	SF	2	146				MAN	
IR & COAT I DIAMETER	EA	3						
IR & COAT I DIAMETER	EA	4	1					
IR NOTE D)	EA	5					/ER	
CT REPAIR PATCHING	SF	6					E DIAMETER SANITARY SEWER 8TH - ZONE 3	
T REPAIR	EA	7					R SANITA	
ALL 42-IN 1eter insert	VF	8					AMETER - ZONE 3	
ALL 54-IN 1ETER INSERT	VF	9					ARGE DI NORTH	
ACE MANHOLE	VF	10					DEPT - L/	
		OVED BY: ED NAME ANY:	:		DATE: /_	_/	RVICES E	
N	OTES				·		s SEF 5 &	
RE PURCHASING MATE LITATION WORK. HABILITATION. TE. R COATING OR LINING DEWALK AFTER REHAE SSARY. FTER REHABILITATION	i. ILITATIC	DN.	And	olessiong/ RIFICAI2 BRATELIEN BRATELIEN Sond Sond Vonn US- Vonn US- Vonn US- Vonn	,	6)	CITY OF PHOENIX - WATER SERVICES DEPT - LARGE DIAMETE REHABILITATION - GRADE 5 & 4 MANHOLES - NORTH - ZONE	
NG CONSULTANTS NUE, SUITE 1246 D1 Know whats				E OF MAP: MANHOLE: SHEET NUMBE 1:100 1 / 50 8 OF 63				

	PI	ROJECT INF	ORMATION					REHABILITATION DE	SIGN	AND C	Į
CITY OF PHOENIX - W	ATER SERVICES	S DEPT - LAI	RGE DIAMETER	PROJ	ECT NUMBER: WS90500273						
SANITARY SEWER REH	ABILITATION -	GRADE 5 &	4 MANHOLES -	CITY	PROJECT MANAGER: SAUL DURAN	CONSTRUCTION	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.	1
	NORTH - ZON	NE 3									
	M	ANHOLE IN	FORMATION	•		MAG 422					Ī
WAM ID :	LOCATION ID:		CROSS STREET:			MAG 423	& COVER	REPLACE COLLAR, FRAME & COVER	EA	1	
	37-19-409		39TH AVE & ANDERSO	ON DR		COP P1424					ļ
JURISDICTION: CITY OF PHOENIX	FRAME/COVER N CAST IRON		COVER DIAMETER: 32 (IN)		ENVIRONMENT: SECONDARY ROAD	SHEET: D-3	CHIMNEY, CONE			_	
DEPTH RIM TO INVERT:	BARREL DIAMETE		CORROSION PROTECT	ION:	QUARTER SECTION:	DETAIL: 1 & 2		DEFECT REPAIR COATING	SF	2	
14.5 (FT)	60 (IN)		EPOXY		37-19						╞
COLLAR PRESENT: YES GROUND TYPE: ASPHALT	NASSCO MACP		EXISTING WALL MATEI CONCRETE	RIAL:	NOTES:			REPAIR & COAT	EA	3	
GROUND TTPE. ASPHALI		MANHOLE						48 IN DIAMETER	EA	5	
				6		SHEET: D-4 DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	4	
33.5430 97.19.490		A	WEST AND	DERSON	DRIVE	SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5	
			-24 (in)	- CO		SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	6	
		1.00	7 37-19-409			SHEET: D-4 DETAIL: 1 & 3		JOINT REPAIR	EA	7	
33.6425						SHEET: D-2 DETAIL: 1	INSERT	INSTALL 42-IN DIAMETER INSERT	VF	8	
			VCP-24 (in)	6	E BERNER	SHEET: D-2 DETAIL: 1		INSTALL 54-IN DIAMETER INSERT	VF	9	
	37-19-413		Ö WEST HAF	RTFORD	AVENUE	MAG 420	MANHOLE	REPLACE MANHOLE	VF	10	
-112.1438 100 200	-112.14		-112,1429	LEGEND:	-112.1425	NOTES: SPARK TEST PULL TEST:	RESULTS:			DVED BY: ED NAME ANY:	:
ASSESSMENT NOTES:	500			\bigcirc	MANHOLE TO REPAIR			N	OTES		
					Pipe Connection on Wall Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections	B. REMOVE AL	L STEPS BEFORE R	BEFORE PURCHASING MATE			
AS BUILT CERTIFICATION		REGISTERED CIV	IL ENGINEER:	XXX	Existing Abandoned Sewer Main		N MANHOLE BEFC	DRE REHABILITATION. ONCRETE.			1
I HEREBY CERTIFY THAT THE "RECOR MEASUREMENTS AS SHOWN HEREC		REGISTRATION I	NUMBER:		Not in GIS Pipe Connections	E. REINSTATE F	PIPE CONNECTION	S AFTER COATING OR LINING			1
UNDER MY SUPERVISION OR AS NO	TED ARE			\triangleright	City Sewer Main Flow Direction			ENT/SIDEWALK AFTER REHAE	BILITATIO	ON.	1
CORRECT TO THE BEST OF MY KNOV BELIEF.	WLEDGE AND	DATE:		•	City Manholes / Not For Repair		THROUGH PLUG IF	ESTS AFTER REHABILITATION			ı
	SPECIFICALLY S	STATED IN THE CITY O	USE ONLY AND MAY NOT BE CODE, OR AS REQUIRED BY L EPT SECURE AT ALL TIMES		FOR INSPECTION OR COPYING, EXCEPT AS		EC PROJECT 2432 W. F PHOENIX, Phone:(60	ENGINEERING CONSULTANTS PEORIA AVENUE, SUITE 1246 , AZ 85029 02) 906-1901	VA <mark>811</mark>	SCALE (

IGN	AND O	UANTI	FIES			
INITS	BID ITEM NO.	BID QUANTITY	AS BUILT QUANTITY	APPROVED MATERIAL	MANUFACTURER	MANHOLE 37-19-409 WS90500273
EA	1					NS9 WS9
SF	2	189				MAN
EA	3					
EA	4	1				
EA	5					/ER
SF	6					E DIAMETER SANITARY SEWER RTH - ZONE 3
EA	7					R SANITA
VF	8					E DIAMETER (TH - ZONE 3
VF	9					ARGE DI NORTH
VF	10					HOLES -
	OVED BY: ED NAME: ANY:			DATE: /_	_/	RVICES D 4 MANI
TES						SEI 5 &
AL.		Register	olessiona/ ATIFICA/7 33632 THOMAS 0. BRAATELIEN			CITY OF PHOENIX - WATER SERVICES DEPT - LARGE REHABILITATION - GRADE 5 & 4 MANHOLES - NOR
ITATIC	DN.	The	1-26-22 Soned ZONA, U.S.Y W			F PHOENI
w. ou dig.	SCALE C	DF MAP: 100	MANHO 2 / 50		HEET NUMBER: 9 OF 63	CITY OI REHAB

	PROJECT IN	IFORMATION		REHABILITATION DESIGN AND QUANTITIES								
CITY OF PHOENIX - WA	ATER SERVICES DEPT - L	ARGE DIAMETER	PROJECT NUMBER: WS90500273									
SANITARY SEWER REH	ABILITATION - GRADE 5	& 4 MANHOLES -	CITY PROJECT MANAGER: SAUL DURAN	CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.			APPROVED MATERIAL	MANUFACTURER
	NORTH - ZONE 3											
	MANHOLE I	NFORMATION		MAG 422								
VAM ID :	LOCATION ID:	CROSS STREET:		MAG 423	& COVER	REPLACE COLLAR, FRAME & COVER	EA	1	1			
	37-19-417	39TH AVE & MEADOW DR	ENVIRONMENT: SECONDARY	COP P1424								
JRISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL: CAST IRON	COVER DIAMETER: 32 (IN)	ROAD	SHEET: D-3	CHIMNEY, CONE			_				
EPTH RIM TO INVERT:	BARREL DIAMETER:	CORROSION PROTECTION:	QUARTER SECTION:	DETAIL: 1 & 2		DEFECT REPAIR COATING	SF	2				
4.8 (FT)	60 (IN)	EPOXY	37-19									
OLLAR PRESENT: YES		EXISTING WALL MATERIAL: CONCRETE	NOTES:			REPAIR & COAT	_	2				
OUND TYPE: ASPHALT	STRUCTURAL GRADE: 4					48 IN DIAMETER	EA	3				
	IVIANHUL	E LOCATION		SHEET: D-4 DETAIL: 1	BENCH							
		WEST D	ANBURY DRIVE			REPAIR & COAT 60 IN DIAMETER	EA	4	1			
		VCP-24		SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5	1			
		37-19-417		SHEET: D-4-6 DETAIL: ALL		DEFECT REPAIR PATCHING	SF	6				
		SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA	7						
0,19				SHEET: D-2 DETAIL: 1		INSTALL 42-IN DIAMETER INSERT	VF	8				
		NORTH		SHEET: D-2 DETAIL: 1	- INSERT	INSTALL 54-IN DIAMETER INSERT	VF	9	11.9			
		37-20-114 WEST MEADO	W DRIVE	MAG 420	MANHOLE	REPLACE MANHOLE	VF	10				
-112.1441 -112. 100 200	1436 -112.143 300 ft	2 -112.1427 LEGEN		NOTES: SPARK TEST PULL TEST:	RESULTS:			OVED BY: ED NAME: ANY:			DATE:	_/
SSESSMENT NOTES:			MANHOLE TO REPAIR			N	OTES					
AS BUILT CERTIFICATION	REGISTERED	Pipe Connection on Wall Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections	B. REMOVE AL	L STEPS BEFORE R	S BEFORE PURCHASING MATE EHABILITATION WORK. DRE REHABILITATION.			1000 000 000 000 000 000 000 000 000 00	otessional Kran	1		
I HEREBY CERTIFY THAT THE "RECORD DRAWING" Existing Abandoned Sever Main MEASUREMENTS AS SHOWN HEREON WERE MADE REGISTRATION NUMBER: UNDER MY SUPERVISION OR AS NOTED ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND					CHANNEL IF IT IS C PIPE CONNECTION NDSCAPE/PAVEMI	ONCRETE. S AFTER COATING OR LINING ENT/SIDEWALK AFTER REHAE		DN.	Regis	HOMAS 0. BRAATELIEN , 1-26-22 Sogned		
ORRECT TO THE BEST OF MY KNOV ELIEF.	VLEDGE AND DATE:	City Manholes / Not For Repair		THROUGH PLUG IF SPARK AND PULL T	ESTS AFTER REHABILITATION							
	SPECIFICALLY STATED IN THE CIT	IALUSE ONLY AND MAY NOT BE FURN Y CODE, OR AS REQUIRED BY LAW" E KEPT SECURE AT ALL TIMES	ISHED FOR INSPECTION OR COPYING, EXCEPT AS		2432 W. I PHOENIX Phone:(6)	ENGINEERING CONSULTANTS PEORIA AVENUE, SUITE 1246 , AZ 85029 02) 906-1901	below. ore you dig.	SCALE C		MANHC 3 / 5		IEET NUMBER: 10 OF 63

	Р	ROJECT INF	ORMATION		·				REHABILITATION DI	<mark>ESIGN</mark>	/
CITY OF PHOENIX - WA	ATER SERVICE	S DEPT - LA	RGE DIAMETER	Р	PROJEC	CT NUMBER: WS90500273	0010751				
SANITARY SEWER REH	- ABILITATION NORTH - ZON		4 MANHOLES -	С	CITY PR	ROJECT MANAGER: SAUL DURAN	CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	E
			FORMATION				MAG 422				T
WAM ID : I-1225507	LOCATION ID: 37-20-101		CROSS STREET: 39TH AVE & BELL RD				MAG 423 COP P1424	COLLAR, FRAME & COVER	REPLACE COLLAR, FRAME & COVER	EA	
JURISDICTION: CITY OF PHOENIX	FRAME/COVER N CAST IRON BARREL DIAMET		COVER DIAMETER: 32 (IN) CORROSION PROTECTION		/	ENVIRONMENT: MAJOR ARTERIAL ROAD QUARTER SECTION:	SHEET: D-3 DETAIL: 1 & 2	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	
15.2 (FT)	60 (IN)		EPOXY	UN.		37-20					
COLLAR PRESENT: YES GROUND TYPE: ASPHALT	NASSCO MACP STRUCTURAL GR		EXISTING WALL MATER CONCRETE	RIAL:	I	NOTES:			REPAIR & COAT 48 IN DIAMETER	EA	
		MANHOLE	LOCATION				SHEET: D-4	BENCH		<u> </u>	
37.134.22			37.20 ⁻¹⁰³ W	/EST V	WOOI	DRIDGE DRIVE	DETAIL: 1		REPAIR & COAT 60 IN DIAMETER	EA	
			VCP-24				SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	
432		NTH 39			"	STOR T	SHEET: D-4-6 DETAIL: ALL		DEFECT REPAIR PATCHING	SF	
W VCP-8	3 (in)		7 3 ^{1/2102} 37-20-101			8988 880 tre . to the	SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA	
WEST	BELLROAD	-	CP-24 (in)		£		SHEET: D-2 DETAIL: 1	INCERT	INSTALL 42-IN DIAMETER INSERT	VF	
22						ET TA	SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	
area and a second				-			MAG 420	MANHOLE	REPLACE MANHOLE	VF	
-112.1438	-112.1434		-112.1429	EGEND		2.1425 -112.1421	NOTES: SPARK TEST PULL TEST:	RESULTS:		APPRO PRINT COMF	E
100 200 ASSESSMENT NOTES:	30	00 ft	L	0	MA	ANHOLE TO REPAIR			Ν		
				_	Pip	pe Connection on Wall					
					•	pe Connection Over Bench pe Connection At Channel			BEFORE PURCHASING MATI EHABILITATION WORK.	ERIAL.	
AS BUILT CERTIFICATION		REGISTERED CI	VIL ENGINEER:		Dr	rop Pipe Connections	C. BLAST CLEA	N MANHOLE BEFC	ORE REHABILITATION.		
I HEREBY CERTIFY THAT THE "RECOR						kisting Abandoned Sewer Main ot in GIS Pipe Connections		HANNEL IF IT IS CONFECTION	ONCRETE. S AFTER COATING OR LINING	9	
MEASUREMENTS AS SHOWN HEREO UNDER MY SUPERVISION OR AS NOT		REGISTRATION	NUMBER:		– Cit	ty Sewer Main			ENT/SIDEWALK AFTER REHA		0
CORRECT TO THE BEST OF MY KNOV	-	DATE:		\triangleright		ow Direction		HROUGH PLUG IF			
BELIEF.				•	Cit	ty Manholes / Not For Repair	H. PERFORM S	Park and pull t	ESTS AFTER REHABILITATION	•	т-
"PER PHOENIX CITY CODE CHAPTER 2, SEC	SPECIFICALLY S	STATED IN THE CITY	LUSE ONLY AND MAY NOT BE CODE, OR AS REQUIRED BY LA KEPT SECURE AT ALL TIMES		HED FOF	R INSPECTION OR COPYING, EXCEPT AS		2432 W. F PHOENIX, Phone:/60	ENGINEERING CONSULTANTS PEORIA AVENUE, SUITE 1246 AZ 85029 32) 906-1901	below.	9

AND O	UANTI	TIES				
BID ITEM NO.		AS BUILT QUANTITY	APPRO MATER		MANUFACTURER	MANHOLE 37-20-101 WS90500273
1						NS9 WS9
2	156					MAN
3						
4	1					
5						/ER
6						E DIAMETER SANITARY SEWER RTH - ZONE 3
7						k SANIT ² 3
8						E DIAMETER (TH - ZONE 3
9						ARGE DI. NORTH
10						HOLES - LA
DVED BY: ED NAME: ANY:	l 		DATE:	./_	/	/ICES D MANH
						SER\ 8 4
DN.	Sector Se	olessionar StiffCAIZ 33632 THOMAS O BRATELIEN 1-26-22 One JSt			6)	CITY OF PHOENIX - WATER SERVICES DEPT - LARGE REHABILITATION - GRADE 5 & 4 MANHOLES - NOR
SCALE C	DF MAP: 100	MANHO 4 / 50		SH	EET NUMBER: 11 OF 63	CITY OI REHAB

	PR	OJECT IN	FORMATION					REHABILITATION D	ESIGN	
CITY OF PHOENIX - WA	TER SERVICES	DEPT - LA	ARGE DIAMETER	PRO.	JECT NUMBER: WS90500273	CONSTRUCTION				
SANITARY SEWER REHA			& 4 MANHOLES -	СІТҮ	PROJECT MANAGER: SAUL DURAN	CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	B
	NORTH - ZON									
	· · · · · · · · · · · · · · · · · · ·	NHOLE IN	FORMATION			MAG 422	COLLAR. FRAME	REPLACE COLLAR, FRAME		
WAM ID : I-1225051	LOCATION ID: 36-20-107		CROSS STREET: 39TH AVE & KINGS AVE			MAG 423 COP P1424	& COVER	& COVER	EA	
JURISDICTION: CITY OF PHOENIX	FRAME/COVER MA		COVER DIAMETER: 32 (IN)		ENVIRONMENT: SECONDARY ROAD		CHIMNEY, CONE	DEFECT REPAIR COATING	SF	
DEPTH RIM TO INVERT: 14.7 (FT)	BARREL DIAMETER	R:	CORROSION PROTECTION:		QUARTER SECTION: 36-20	DETAIL: 1 & 2	& BARREL			
COLLAR PRESENT: NO GROUND TYPE: ASPHALT	NASSCO MACP		EXISTING WALL MATERIAL	:	NOTES:			REPAIR & COAT	EA	
GROUND TIPE. ASPHALI	1					SHEET: D-4		48 IN DIAMETER		
	- AND			NEST	AIRE LIBRE AVENUE	DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	
33-63-2		ENUE	3678	•	A BARAP	SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	
		39TH AV	VCP-24 (in)			SHEET: D-4-6 DETAIL: ALL		DEFECT REPAIR PATCHING	SF	
		NORTH	36-20-107	2		SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA	
WEST KINGS AVEN		·	3620		-	SHEET: D-2 DETAIL: 1		INSTALL 42-IN DIAMETER INSERT	VF	
					E PE	SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	
			Parts EG	WI	EST KINGS AVENUE	MAG 420	MANHOLE	REPLACE MANHOLE	VF	
- <u>112.1432</u> 100 200	300 1	-112.1428	-112.1423	t	-112.1419	NOTES: SPARK TEST PULL TEST:	RESULTS:		APPRO PRINT COMF	ΈĽ
ASSESSMENT NOTES:	3001	it		\bigcirc	MANHOLE TO REPAIR			Π	OTES	,
					Pipe Connection on Wall Pipe Connection Over Bench Pipe Connection At Channel	B. REMOVE AL	L STEPS BEFORE R	BEFORE PURCHASING MAT EHABILITATION WORK.	ERIAL.	
AS BUILT CERTIFICATION		EGISTERED C	IVIL ENGINEER:	XX	Drop Pipe Connections Existing Abandoned Sewer Main		N MANHOLE BEFC HANNEL IF IT IS CO	RE REHABILITATION. DNCRETE.		
I HEREBY CERTIFY THAT THE "RECORI MEASUREMENTS AS SHOWN HEREO UNDER MY SUPERVISION OR AS NOT	N WERE MADE R	EGISTRATION			Not in GIS Pipe Connections City Sewer Main Flow Direction	E. REINSTATE P F. RESTORE LAI	IPE CONNECTION	S AFTER COATING OR LININ NT/SIDEWALK AFTER REHA		٦١
CORRECT TO THE BEST OF MY KNOW BELIEF.	/LEDGE AND D	ATE:		>	City Manholes / Not For Repair		'HROUGH PLUG IF PARK AND PULL TI	NECESSARY. ESTS AFTER REHABILITATION	J.	
"PER PHOENIX CITY CODE CHAPTER 2, SECT	SPECIFICALLY STA	ATED IN THE CITY	ALUSE ONLY AND MAY NOT BE FUR ' CODE, OR AS REQUIRED BY LAW" KEPT SECURE AT ALL TIMES	NISHED	FOR INSPECTION OR COPYING, EXCEPT AS		2432 W. P PHOENIX, Phone:(60	NGINEERING CONSULTANTS EORIA AVENUE, SUITE 1246 AZ 85029 2) 906-1901	NASI s below. efore you dig.	5

N	AND C	UANTI	FIES				
S	BID ITEM NO.		AS BUILT QUANTITY	APPRO\ MATER		MANUFACTURER	MANHOLE 36-20-107 WS90500273
	1	1					IHOLE 3 WS9
	2	221					MAN
	3						
	4	1					
	5						/ER
	6						E DIAMETER SANITARY SEWER RTH - ZONE 3
	7						k SANIT ²
	8						E DIAMETER XTH - ZONE 3
	9						ARGE DI, NORTH
	10						HOLES - 14
ITI	VED BY: ED NAME: ANY:	!	·	DATE:	/	_/	VICES D 4 MANI
S							SER 5 &
-IC	DN.	Register	oression FIFICATE THOMAS OL BRAATELEN 1-26-22 ONA UST ONA UST ONA UST			6)	CITY OF PHOENIX - WATER SERVICES DEPT - LARGE REHABILITATION - GRADE 5 & 4 MANHOLES - NOR
	SCALE C	DF MAP: 100	MANHO 5 / 5(SH	EET NUMBER: 12 OF 63	CITY OF REHAB

	PROJECT I	NFORMATION					REHABILITATION DE	SIGN	AND C	UANTI	FIES			
CITY OF PHOENIX - WAT	FER SERVICES DEPT -	LARGE DIAMETER	PROJE	CT NUMBER: WS90500273										21
SANITARY SEWER REHAI	BILITATION - GRADE 5	5 & 4 MANHOLES -		ROJECT MANAGER: SAUL DURAN	CONSTRUCTION		REHABILITATION	UNITS	BID ITEM NO.			APPROVED MATERIAL	MANUFACTURER	-20-1
	NORTH - ZONE 3			ROJECT MANAGER: SAUL DURAN	DETAILS				NO.	QUANTIT	QUANTIT			6-2
		INFORMATION			MAG 422									m
VAM ID :	LOCATION ID:	CROSS STREET:			MAG 422 MAG 423		REPLACE COLLAR, FRAME	EA	1	1				MANHOLE
	36-20-121	39TH AVE & SANDRA TER			COP P1424	& COVER	& COVER		-	-				R
URISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL:	COVER DIAMETER:		ENVIRONMENT: SECONDARY										Z
	CAST IRON	32 (IN)		ROAD		CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2					Ž
	BARREL DIAMETER:	CORROSION PROTECTION:		QUARTER SECTION:	DETAIL: 1 & 2	& BARREL		5	2					
· · ·	60 (IN)	EPOXY		36-20										- /
	NASSCO MACP	EXISTING WALL MATERIAL	RIAL: NOTES:				REPAIR & COAT	F A	2					
OUND TYPE: ASPHALT	STRUCTURAL GRADE: 4	CONCRETE					48 IN DIAMETER	EA	3					
	MANHO	LE LOCATION	100		SHEET: D-4	BENCH								-
			DETAIL: 1		REPAIR & COAT 60 IN DIAMETER	EA	4	1						
36-19AL WEST SANDRA	TERRACE	26201			SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5					/FR
		VCP-24 (in)			SHEET: D-4-6 DETAIL: ALL		DEFECT REPAIR PATCHING	SF	6					ARY SEWFR
WEST SANDRA TERRACE VCP-8 (in)					SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA	7					S SANITA
		36-20-121			SHEET: D-2 DETAIL: 1		INSTALL 42-IN DIAMETER INSERT	VF	8					ANFTER
		VCP-24 (in)			SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	9	13.1				
					MAG 420	MANHOLE	REPLACE MANHOLE	VF	10					
-112.1432 100 200	-112.1428 300 ft	-112.1423	<u>-112.14</u> END:	.19 -112.1414	NOTES: SPARK TEST PULL TEST:	RESULTS:			OVED BY: ED NAME: ANY:			DATE:	_/	
SESSMENT NOTES:			<u>о</u> м	IANHOLE TO REPAIR			N	OTES						_ U
SOURCE THE TREASES STREET THE TREASES STREET THE TREASES STREET THE THE THE TREASES AND THE SUPERVISION OF AS NOTE ORRECT TO THE BEST OF MY KNOWL	I WERE MADE REGISTRATIO	ipe Connection on Wall ipe Connection Over Bench ipe Connection At Channel orop Pipe Connections xisting Abandoned Sewer Main lot in GIS Pipe Connections ity Sewer Main low Direction	B. REMOVE AI C. BLAST CLEA D. COAT THE C E. REINSTATE I F. RESTORE LA	L STEPS BEFORE R N MANHOLE BEFC CHANNEL IF IT IS CO PIPE CONNECTION	S AFTER COATING OR LINING ENT/SIDEWALK AFTER REHAE	i.	DN.	Construction of the second sec	Utesiong / 0 (IFCA): 3632 THOMAS 0. BRAATELIEN 1-26-22 20NA US1 20NA US1		6	HOENIX - WATER		
ELIEF.	EDGE AND DATE:	'	FI C	ity Manholes / Not For Repair	H. PERFORM S	SPARK AND PULL T	ESTS AFTER REHABILITATION							DU
"PER PHOENIX CITY CODE CHAPTER 2, SECTION	L ON 2-28, THESE PLANS ARE FOR OFFI SPECIFICALLY STATED IN THE C THIS DOCUMENT MUST	DR INSPECTION OR COPYING, EXCEPT AS		2432 W. P PHOENIX, Phone:(60	ENGINEERING CONSULTANTS ECORIA AVENUE, SUITE 1246 AZ 85029 J2) 906-1901	below. ore you dig.	SCALE C		MANHC 6 / 5		EET NUMBER: 13 OF 63			

	PROJECT IN	FORMATION					REHABILITATION DE	SIGN	AND Q	UANTI	TIES
CITY OF PHOENIX - WA	ATER SERVICES DEPT - L	ARGE DIAMETER	PROJE	ECT NUMBER: WS90500273						·	
SANITARY SEWER REH	ABILITATION - GRADE 5	& 4 MANHOLES -		PROJECT MANAGER: SAUL DURAN	CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.	BID QUANTITY	AS BU
	NORTH - ZONE 3			NOJECI WANAGEN. SAGE DONAN						20/11/11	
	MANHOLE II	NFORMATION			MAG 422						
WAM ID :	LOCATION ID:	CROSS STREET:			MAG 423	& COVER	REPLACE COLLAR, FRAME & COVER	EA	1		
I-1223558 JURISDICTION: CITY OF PHOENIX	35-20-202 FRAME/COVER MATERIAL:	39TH AVE & MONTE CRISTO) AVE	ENVIRONMENT: SECONDARY	COP P1424						
	CAST IRON	32 (IN)		ROAD	SHEET: D-3	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2	207	
DEPTH RIM TO INVERT:	BARREL DIAMETER:	CORROSION PROTECTION:		QUARTER SECTION:	DETAIL: 1 & 2	& BARREL	DEFECT REPAIR COATING	55	2	207	
13.6 (FT) COLLAR PRESENT: YES	60 (IN) NASSCO MACP	EPOXY EXISTING WALL MATERIAL:		35-20 NOTES:							
GROUND TYPE: ASPHALT	STRUCTURAL GRADE: 4	CONCRETE		NOTES.			REPAIR & COAT	EA	3		
	MANHOLI	LOCATION		<u> </u>]	SHEET: D-4	DENICLI	48 IN DIAMETER				
					DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	4	1	
	Cui b2c4				SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5		
	NUE	Contra 1			SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	6		
		35-20-202		A Ann	SHEET: D-4 DETAIL: 1 & 3		JOINT REPAIR	EA	7		
	NORTH			AND AND AND AND	SHEET: D-2 DETAIL: 1	INSERT	INSTALL 42-IN DIAMETER INSERT	VF	8		
	(iii) 4C-DV		***		SHEET: D-2 DETAIL: 1		INSTALL 54-IN DIAMETER INSERT	VF	9		
					MAG 420	MANHOLE	REPLACE MANHOLE	VF	10		
-112.1429	-112.1426	-112.1422	-	E CRISTO AVENUE <u>112.1419</u> -112.1415	NOTES: SPARK TEST PULL TEST:	RESULTS:			OVED BY: ED NAME: ANY:		
80 160) 240 ft			MANHOLE TO REPAIR			N	IOTES			
ASSESSMENT NOTES:				Pipe Connection on Wall							
AS BUILT CERTIFICATION I HEREBY CERTIFY THAT THE "RECOR MEASUREMENTS AS SHOWN HEREO UNDER MY SUPERVISION OR AS NOT CORRECT TO THE BEST OF MY KNOW BELIEF.	D DRAWING" IN WERE MADE REGISTRATION FED ARE	_		Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections Existing Abandoned Sewer Main Not in GIS Pipe Connections City Sewer Main Flow Direction City Manholes / Not For Repair	B. REMOVE AL C. BLAST CLEA D. COAT THE C E. REINSTATE F F. RESTORE LA G. USE FLOW 1	L STEPS BEFORE R N MANHOLE BEFC HANNEL IF IT IS CO IPE CONNECTION NDSCAPE/PAVEME THROUGH PLUG IF	S AFTER COATING OR LINING ENT/SIDEWALK AFTER REHAE	G. BILITATIC	DN.	Radia Radia	votessionari z KUFICATC HOMAS O. BRAATELIEN 1-26-22 Sond Viciona U.S. 1-2000 Sond Viciona U.S. 1-2000 Sond Viciona U.S. 1-2000 Viciona U.S.
"PER PHOENIX CITY CODE CHAPTER 2, SEC	SPECIFICALLY STATED IN THE CIT	ALUSE ONLY AND MAY NOT BE FURN Y CODE, OR AS REQUIRED BY LAW" E KEPT SECURE AT ALL TIMES	NISHED F	OR INSPECTION OR COPYING, EXCEPT AS		2432 W. F PHOENIX, Phone:(60	ENGINEERING CONSULTANTS PEORIA AVENUE, SUITE 1246 AZ 85029 J2) 906-1901		SCALE C		MAI 7

ABILITATION DE	SIGN	AND C	UANTI	TIES			
REHABILITATION	UNITS	BID ITEM NO.		AS BUILT QUANTITY	APPROVED MATERIAL	MANUFACTURER	MANHOLE 35-20-202 WS90500273
ACE COLLAR, FRAME IVER	EA	1					NOLE 3 WS9
CT REPAIR COATING	SF	2	207				MAN
IR & COAT I DIAMETER	EA	3					
IR & COAT I DIAMETER	EA	4	1				
IR NOTE D)	EA	5					'ER
ECT REPAIR PATCHING	SF	6					E DIAMETER SANITARY SEWER RTH - ZONE 3
T REPAIR	EA	7					k SANIT ² 3
ALL 42-IN ⁄IETER INSERT	VF	8					E DIAMETER TH - ZONE 3
ALL 54-IN ⁄IETER INSERT	VF	9					ARGE DI
ACE MANHOLE	VF	10					HOLES -
		OVED BY: ED NAME: ANY:			DATE: /_	_/	ERVICES DEPT - LARGE & 4 MANHOLES - NOR
N	OTES				I		SER 5 &
RE PURCHASING MATE LITATION WORK. HABILITATION. TE. R COATING OR LINING DEWALK AFTER REHAE SSARY. FTER REHABILITATION.	i. Ilitatio	DN.	A CONTRACT OF CONTRACT	olessionar FIFICAI2 35832 THOMAS 0. BRAATELIEN 1-26-22 Sond 2011		6)	CITY OF PHOENIX - WATER SERVICES DEPT - LARG REHABILITATION - GRADE 5 & 4 MANHOLES - NOF
NG CONSULTANTS ENUE, SUITE 1246 01 Know what's Call ber	Delow. pre you dig.	SCALE C)F MAP: 75	Manho 7 / 50		IEET NUMBER: 14 OF 63	CITY OF REHABI

	PI	ROJECT IN	FORMATION					REHABILITATION D	ESIGN	A
CITY OF PHOENIX - WA	ATER SERVICE	S DEPT - LA	ARGE DIAMETER	PROJ	ECT NUMBER: WS90500273					
SANITARY SEWER REH	ABILITATION -	GRADE 5	& 4 MANHOLES -	CITY	PROJECT MANAGER: SAUL DURAN	CONSTRUCTION	COMPONENT	REHABILITATION	UNITS	BID
	NORTH - ZON	IE 3			PROJECT MANAGER: SAUL DURAN	DETAILS				'
			FORMATION	I		MAG 422				<u> </u>
WAM ID :	LOCATION ID:		CROSS STREET:			MAG 422 MAG 423	COLLAR, FRAME		EA	
I-1223564	35-20-203		39TH AVE & MONTE C	RISTO AVE	_	COP P1424	& COVER	& COVER		
JURISDICTION: CITY OF PHOENIX	FRAME/COVER N CAST IRON	IATERIAL:	COVER DIAMETER: 26 (IN)		ENVIRONMENT: SECONDARY ROAD	SHEET: D-3	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	
DEPTH RIM TO INVERT:	BARREL DIAMETE	ER:	CORROSION PROTECT	ION:	QUARTER SECTION:	DETAIL: 1 & 2	& BARREL			
13.6 (FT)	60 (IN)		EPOXY		35-20					
COLLAR PRESENT: YES GROUND TYPE: ASPHALT	NASSCO MACP		EXISTING WALL MATER	RIAL:	NOTES:			REPAIR & COAT	EA	
	-		LOCATION					48 IN DIAMETER		
			LUCATION		The state with	SHEET: D-4 DETAIL: 1	BENCH			
								REPAIR & COAT 60 IN DIAMETER	EA	
	Port	VCP-24 (in)		W. M.		SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	
		VCP	+.	*		SHEET: D-4-6 DETAIL: ALL		DEFECT REPAIR PATCHING	SF	
m		ENUE	✓ 35-20-203		DNTE CRISTO AVENUE P-8 (in)	SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA	
	1	9TH AVE				SHEET: D-2 DETAIL: 1	INSERT	INSTALL 42-IN DIAMETER INSERT	VF	
		NORTH 3 VCP-24 (in)				SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	
in the second se		8523				MAG 420	MANHOLE	REPLACE MANHOLE	VF	
-112.1431 -112.1427		-112.1424	-112.12	421 LEGEND:	-112.1417	NOTES: SPARK TEST PULL TEST:	RESULTS:		APPRC PRINT COMP	ED N
	J	240 ft			MANHOLE TO REPAIR			Ν		
ASSESSMENT NOTES:					Pipe Connection on Wall					
					Pipe Connection Over Bench Pipe Connection At Channel			BEFORE PURCHASING MAT EHABILITATION WORK.	ERIAL.	
AS BUILT CERTIFICATION		REGISTERED C	IVIL ENGINEER:	\times	Drop Pipe Connections Existing Abandoned Sewer Main			ORE REHABILITATION.		
I HEREBY CERTIFY THAT THE "RECOR					Not in GIS Pipe Connections		HANNEL IF IT IS CONFICTION	ONCRETE. S AFTER COATING OR LINING	3	
MEASUREMENTS AS SHOWN HEREO UNDER MY SUPERVISION OR AS NOT		REGISTRATION	I NUMBER:		City Sewer Main			ENT/SIDEWALK AFTER REHA		DN.
CORRECT TO THE BEST OF MY KNOW		DATE:		\triangleright	Flow Direction	G. USE FLOW	THROUGH PLUG IF	NECESSARY.		
BELIEF.		· · · = •		•	City Manholes / Not For Repair	H. PERFORM S	SPARK AND PULL T	ESTS AFTER REHABILITATION		
"PER PHOENIX CITY CODE CHAPTER 2, SEC	SPECIFICALLY S	TATED IN THE CITY	ALUSE ONLY AND MAY NOT BE (CODE, OR AS REQUIRED BY L KEPT SECURE AT ALL TIMES		FOR INSPECTION OR COPYING, EXCEPT AS		2432 W. F PHOENIX, Phone:(60	ENGINEERING CONSULTANTS ECORIA AVENUE, SUITE 1246 AZ 85029 12) 906-1901	below.	SC

GN	AND O	UANTI	TIES				
NITS	BID ITEM NO.		AS BUILT QUANTITY	APPROV MATERI		MANUFACTURER	MANHOLE 35-20-203 WS90500273
EA	1	1					IHOLE 3 WS9
SF	2	15					MAN
EA	3						
EA	4						
EA	5						'ER
SF	6						\RY SEW
EA	7						k SANIT ^A
VF	8						AMETER - ZONE 3
VF	9						ARGE DI, NORTH
VF	10						HOLES - 14
	OVED BY: ED NAME: ANY:			DATE:	/	_/	VICES D 4 MANI
TES				1			SEF 5 &
AL.			ofessional L.		1		WATER GRADE 5
TATIC	DN.	Healist Healist	33632 THOMAS 0 BRAATELIEN 1-26-22 Somed Cona, UST				CITY OF PHOENIX - WATER SERVICES DEPT - LARGE DIAMETER SANITARY SEWER REHABILITATION - GRADE 5 & 4 MANHOLES - NORTH - ZONE 3
V. v. vu dig.	SCALE C)F MAP: 75	MANHO 8 / 5(SH	EET NUMBER: 15 OF 63	CITY OI REHAB

	Р	ROJECT INI	FORMATION					REHABILITATION D	ESIGN	Α
CITY OF PHOENIX - WA	ATER SERVICE	S DEPT - LA	ARGE DIAMETER	PRO.	JECT NUMBER: WS90500273					
SANITARY SEWER REH	ABILITATION -	GRADE 5 8	& 4 MANHOLES -		PROJECT MANAGER: SAUL DURAN	CONSTRUCTION		REHABILITATION	UNITS	В
	NORTH - ZO	NE 3			PROJECT MIANAGEN. SAGE DOMAN	DEMAES				
	М	ANHOLE IN	IFORMATION			MAG 422				
WAM ID : I-1243457	LOCATION ID: 35-20-101		CROSS STREET: 39TH AVE & CAROL ANN W	VAY		MAG 423 COP P1424	& COVER	REPLACE COLLAR, FRAME & COVER	EA	
JURISDICTION: CITY OF PHOENIX	FRAME/COVER I CAST IRON	MATERIAL:	COVER DIAMETER: 32 (IN)		ENVIRONMENT: SECONDARY ROAD	SHEET: D-3	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	
DEPTH RIM TO INVERT: 13 (FT)	BARREL DIAMET 60 (IN)	ER:	CORROSION PROTECTION: EPOXY		QUARTER SECTION: 35-20	DETAIL: 1 & 2	& BARREL	DEFECT REPAIR COATING	55	
COLLAR PRESENT: YES GROUND TYPE: ASPHALT	NASSCO MACP STRUCTURAL GF	ADE: 4	EXISTING WALL MATERIAL: CONCRETE	:	NOTES:			REPAIR & COAT	EA	
	1	MANHOLE	LOCATION			SHEET: D-4	BENCH	48 IN DIAMETER		
1,6284						DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	
m		24 (in)				SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	
*	**	ACP.				SHEET: D-4-6 DETAIL: ALL		DEFECT REPAIR PATCHING	SF	
88		\$	35-20-101	V.	VEST CAROL ANN WAY	SHEET: D-4 DETAIL: 1 & 3	- PVC LINER	JOINT REPAIR	EA	
33.6		VENUE		an is		SHEET: D-2 DETAIL: 1		INSTALL 42-IN DIAMETER INSERT	VF	
		TH 39TH A				SHEET: D-2 DETAIL: 1	- INSERT	INSTALL 54-IN DIAMETER INSERT	VF	
		NOR				MAG 420	MANHOLE	REPLACE MANHOLE	VF	
-112.1432	-112.1427		-112.1423	-112.1	418 -112.1414	NOTES: SPARK TEST PULL TEST:	RESULTS:		APPRO PRINT COMF	ED
100 200	30	00 ft		_	MANHOLE TO REPAIR				NOTES	
ASSESSMENT NOTES:					Pipe Connection on Wall					
AS BUILT CERTIFICATION		REGISTERED C	VIL ENGINEER:	××	Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections Existing Abandoned Sewer Main	B. REMOVE A C. BLAST CLEA	LL STEPS BEFORE R	BEFORE PURCHASING MAT EHABILITATION WORK. DRE REHABILITATION.	ERIAL.	
I HEREBY CERTIFY THAT THE "RECOR MEASUREMENTS AS SHOWN HEREO UNDER MY SUPERVISION OR AS NOT CORRECT TO THE BEST OF MY KNOW BELIEF.	N WERE MADE FED ARE	REGISTRATION	[>	Not in GIS Pipe Connections City Sewer Main Flow Direction City Manholes / Not For Repair	E. REINSTATE F. RESTORE LA G. USE FLOW	PIPE CONNECTION NDSCAPE/PAVEME THROUGH PLUG IF	S AFTER COATING OR LININ ENT/SIDEWALK AFTER REHA	BILITATI	ЭN
	SPECIFICALLY	STATED IN THE CITY	ALUSE ONLY AND MAY NOT BE FURI CODE, OR AS REQUIRED BY LAW" KEPT SECURE AT ALL TIMES	NISHED	FOR INSPECTION OR COPYING, EXCEPT AS		2432 W. F PHOENIX, Phone:(60	ENGINEERING CONSULTANTS ECORIA AVENUE, SUITE 1246 AZ 85029 22) 906-1901	s below. efore you dig.	s

Ν	AND C	UANTI	FIES			
ſS	BID ITEM NO.	BID QUANTITY	AS BUILT QUANTITY	APPROVI MATERIA		MANHOLE 35-20-101 WS90500273
	1					WS9
	2	15				MAN
	3					
	4	1				
	5					ER
	6					E DIAMETER SANITARY SEWER 8TH - ZONE 3
	7					SANIT ^A
	8					E DIAMETER
	9					ARGE DI, NORTH
	10					In the second se
ITI	VED BY: ED NAME: ANY:			DATE: /	//	VICES D
S						SER
TIC	DN.	Registered	olessionor FIFICATE STATELEN 1-26-22 ONA USA NA USA	_	6)	CITY OF PHOENIX - WATER SERVICES DEPT - LARGI REHABILITATION - GRADE 5 & 4 MANHOLES - NOR
5	SCALE C	DF MAP: 100	MANHO 9 / 5		SHEET NUMBER: 16 OF 63	CITY OF REHABI

	PROJECT IN	IFORMATION						REHABILITATION DE	SIGN	AND C	UANTI	TIES
CITY OF PHOENIX - WA	ATER SERVICES DEPT - L ABILITATION - GRADE 5			CT NUMBER: WS90500273 ROJECT MANAGER: SAUL DURAN		CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.	BID	AS B
	NORTH - ZONE 3											
		NFORMATION			,	MAG 422	COLLAR. FRAME	REPLACE COLLAR, FRAME				
WAM ID : I-1223599	LOCATION ID: 35-20-102	CROSS STREET: 39TH AVE & BETTY ELYSE LN	N			MAG 423 COP P1424	& COVER	& COVER	EA	1		
JURISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL:	COVER DIAMETER:		ENVIRONMENT: SECONDARY		00111121						
	CAST IRON	32 (IN)		ROAD			CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2	2	
DEPTH RIM TO INVERT:	BARREL DIAMETER:	CORROSION PROTECTION: EPOXY		QUARTER SECTION:		DETAIL: 1 & 2	& BARREL			2		
14.2 (FT) COLLAR PRESENT: YES	60 (IN) NASSCO MACP	EXISTING WALL MATERIAL:		35-20 NOTES:								
GROUND TYPE: ASPHALT	STRUCTURAL GRADE: 4	CONCRETE						REPAIR & COAT 48 IN DIAMETER	EA	3		
	MANHOL	E LOCATION				SHEET: D-4	BENCH					
h the Shar		V 35-20-122	WES	T WALTANN LANE		DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	4	1	
						SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5		
33.6268						SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	6		
· · · · · · · · · · · · · · · · · · ·	JE RCP-36 (in	35-20-102	0.2			SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA	7		
F	HAVEN					SHEET: D-2 DETAIL: 1	INSERT	INSTALL 42-IN DIAMETER INSERT	VF	8		
33.6263	NORTH 391	V JSANI WEST BETTY EL	LYSE L	The product of the second of t		SHEET: D-2 DETAIL: 1		INSTALL 54-IN DIAMETER INSERT	VF	9		
					_	MAG 420	MANHOLE	REPLACE MANHOLE	VF	10		
	12.1428 -112.1			-112.1415		NOTES: SPARK TEST PULL TEST:	RESULTS:			OVED BY: ED NAME ANY:	:	
100 200 ASSESSMENT NOTES:	300 ft		р м	ANHOLE TO REPAIR				N	OTES			
			Pi	pe Connection on Wall								
				pe Connection Over Bench pe Connection At Channel				BEFORE PURCHASING MATE EHABILITATION WORK.	ERIAL.			ofessional
AS BUILT CERTIFICATION I HEREBY CERTIFY THAT THE "RECOR MEASUREMENTS AS SHOWN HEREO UNDER MY SUPERVISION OR AS NOT CORRECT TO THE BEST OF MY KNOW BELIEF.	D DRAWING" N WERE MADE REGISTRATIO TED ARE		Di Ex Ni Ci S	rop Pipe Connections xisting Abandoned Sewer Main ot in GIS Pipe Connections ity Sewer Main ow Direction ity Manholes / Not For Repair		C. BLAST CLEA D. COAT THE C E. REINSTATE P F. RESTORE LAI G. USE FLOW T	N MANHOLE BEFO HANNEL IF IT IS CC IPE CONNECTIONS NDSCAPE/PAVEME 'HROUGH PLUG IF	RE REHABILITATION. DNCRETE. 5 AFTER COATING OR LINING NT/SIDEWALK AFTER REHAE	BILITATIC	DN.	A 24 Medi 81	RIFICATE 33632 THOMAS 0. BRAATELIEN 1-26-22. ONA, U.S
"PER PHOENIX CITY CODE CHAPTER 2, SEC	SPECIFICALLY STATED IN THE CIT	IALUSE ONLY AND MAY NOT BE FURN Y CODE, OR AS REQUIRED BY LAW" E KEPT SECURE AT ALL TIMES	NISHED FO	R INSPECTION OR COPYING, EXCEPT AS		PROJECT ENGINEERING	2432 W. Pl PHOENIX, J Phone:(60)	NGINEERING CONSULTANTS CORIA AVENUE, SUITE 1246 Az 85029 2) 906-1901		SCALE (1:1	DF MAP: 100	MA 1

TION DE	SIGN	AND Q	UANTI	TIES			_
ATION	UNITS	BID ITEM NO.	BID QUANTITY	AS BUILT QUANTITY	APPROVE MATERIA		MANHOLE 35-20-102 WS90500273
R, FRAME	EA	1					NOLE 3 WS9
COATING	SF	2	2				MAN
3	EA	3					
3	EA	4	1				
	EA	5					/ER
PATCHING	SF	6					E DIAMETER SANITARY SEWER 8TH - ZONE 3
	EA	7					R SANITA
RT	VF	8					AMETEF - ZONE 3
RT	VF	9					ARGE DI NORTH
OLE	VF	10					DEPT - L/
		OVED BY: ED NAME: ANY:		·	DATE: /.	/	RVICES E
N	OTES						5 &
SING MATE /ORK. DN. OR LINING TER REHAB BILITATION.		DN.	And the second s	rdessiong/ TIFICA/2 33332 HUFICA/2 THOMAS 0. BRAATELIEN 1-26-22 70NA US- 1-26-22 70NA US- 1-26-26 70NA US- 1-26-26	_	6	CITY OF PHOENIX - WATER SERVICES DEPT - LARGE DIAMETER REHABILITATION - GRADE 5 & 4 MANHOLES - NORTH - ZONE 3
ARZON Know what's b Call befo	elow. re you dig.	SCALE C)F MAP: 100	MANHO 10 / 5		HEET NUMBER: 17 OF 63	CITY OI REHAB

	PROJECT I	NFORMATION					REHABILITATION DE	SIGN	AND C	UANTI	TIES		
CITY OF PHOENIX - WAT	ER SERVICES DEPT -	LARGE DIAMETER	PROJE	ECT NUMBER: WS90500273									
SANITARY SEWER REHAE	BILITATION - GRADE 5	& 4 MANHOLES -		PROJECT MANAGER: SAUL DURAN	CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.			APPROVED MATERIAL	MANUFACTURER
Ν	NORTH - ZONE 3			ROJECT MANAGER. SAUE DURAN	DETAILS				10.	QUANTIT	QUANTIT		
	MANHOLE	INFORMATION			MAG 422								
VAM ID :	LOCATION ID:	CROSS STREET:			MAG 423	COLLAR, FRAME & COVER	REPLACE COLLAR, FRAME & COVER	EA	1	1			
	35-19-404	39TH AVE & GREENWAY R	D		COP P1424	& COVER	& COVER						
	FRAME/COVER MATERIAL: CAST IRON	COVER DIAMETER: 32 (IN)		ENVIRONMENT: SECONDARY ROAD		CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2				
	BARREL DIAMETER: 60 (IN)	CORROSION PROTECTION	:	QUARTER SECTION: 35-19	DETAIL: 1 & 2	IL: 1 & 2 & BARREL							
	NASSCO MACP	EXISTING WALL MATERIAL		NOTES:									
	STRUCTURAL GRADE: 4	CONCRETE	•	NOTES.			REPAIR & COAT	EA	3				
		E LOCATION		1	SHEET: D-4		48 IN DIAMETER						
					DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	4	1			
	FL.	36 (in) 39TH AV			SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5	1			
		NORTH	T		SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	6				
520-1-404 35-19-404					SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA	7				
	35-19-404				SHEET: D-2 DETAIL: 1		INSTALL 42-IN DIAMETER INSERT	VF	8				
		RCP-36 (in)			SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	9	16.7			
WEST	GREENWAY ROAD	34.102.1			MAG 420	MANHOLE	REPLACE MANHOLE	VF	10				
		LEGI	112.1420 END:	-112.1415	NOTES: SPARK TEST PULL TEST:	RESULTS:			DVED BY: ED NAME: ANY:	· 	· 	DATE:	_/
100 200	300 ft			MANHOLE TO REPAIR			Ν	OTES				1	
SSESSMENT NOTES:			$\mathbf{\vee}$	Pipe Connection on Wall				JILJ					
			F	Pipe Connection Over Bench Pipe Connection At Channel	B. REMOVE AL	L STEPS BEFORE R	BEFORE PURCHASING MATE EHABILITATION WORK.	RIAL.		/s?	ofessional 47		
S BUILT CERTIFICATION		CIVIL ENGINEER:		Drop Pipe Connections Existing Abandoned Sewer Main			RE REHABILITATION.			glister,	33632 THOMAS O. BRAATELIEN	1	
HEREBY CERTIFY THAT THE "RECORD			[Not in GIS Pipe Connections	nections E. REINSTATE PIPE CONNECTIONS AFTER COATING OR LINING. F. RESTORE LANDSCAPE/PAVEMENT/SIDEWALK AFTER REHABILITATION. G. USE FLOW THROUGH PLUG IF NECESSARY.								
IEASUREMENTS AS SHOWN HEREON INDER MY SUPERVISION OR AS NOTEI		ON NUMBER:	(City Sewer Main									
CORRECT TO THE BEST OF MY KNOWLI				Flow Direction									
BELIEF.			• (City Manholes / Not For Repair	H. PERFORM S	PARK AND PULL TE	ESTS AFTER REHABILITATION	•					
"PER PHOENIX CITY CODE CHAPTER 2, SECTIC	SPECIFICALLY STATED IN THE C	CIALUSE ONLY AND MAY NOT BE FUR ITY CODE, OR AS REQUIRED BY LAW" BE KEPT SECURE AT ALL TIMES		OR INSPECTION OR COPYING, EXCEPT AS		2432 W. P PHOENIX, Phone:(60	ENGINEERING CONSULTANTS EORIA AVENUE, SUITE 1246 AZ 85029 2) 906-1901	below.	SCALE C	DF MAP: LOO	MANHC 11 / 5		IEET NUMBER: 18 OF 63

	PROJECT IN	FORMATION					REHABILITATION DE	SIGN	AND C	UANTI	TIES		
CITY OF PHOENIX - WATE	ER SERVICES DEPT - L	ARGE DIAMETER	PROJEC	CT NUMBER: WS90500273									
SANITARY SEWER REHAB	SILITATION - GRADE 5	& 4 MANHOLES -		ROJECT MANAGER: SAUL DURAN	CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.			APPROVED MATERIAL	MANUFACTURER
N	ORTH - ZONE 3			OJECT MANAGER: SAUL DURAN	DETAILS				NO.	QUANTIT	QUANTIT		
		NFORMATION			MAG 422								
WAM ID :	OCATION ID:	CROSS STREET:			MAG 422 MAG 423		E REPLACE COLLAR, FRAME	EA	1	1			
	0-23-305	23RD AVE & MARCO POLO	RD		COP P1424	& COVER	& COVER		_	_			
JURISDICTION: CITY OF PHOENIX FF	RAME/COVER MATERIAL:	COVER DIAMETER:		ENVIRONMENT: MAJOR									
	CAST IRON	32 (IN)		ARTERIAL ROAD		CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2				
	BARREL DIAMETER:	CORROSION PROTECTION:		QUARTER SECTION:	DETAIL: 1 & 2	& BARREL			-				
				40-23									
	IASSCO MACP TRUCTURAL GRADE: 5	EXISTING WALL MATERIAL: CONCRETE	:	NOTES:			REPAIR & COAT	EA	3				
ROOND TIPE. ASPHALI							48 IN DIAMETER		5				
	MANHUL	LOCATION			SHEET: D-4 DETAIL: 1	BENCH							
			0.00	1.00 1.11 1.00	DETAIL. 1		REPAIR & COAT 60 IN DIAMETER	EA	4	1			
		40723			SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5				
		VCP-24 (In			SHEET: D-4-6 DETAIL: ALL		DEFECT REPAIR PATCHING	SF	6				
	40-23-305 WEST MARCO POLO ROAD VCP-8 (in)			OLO ROAD VCP-8 (in)	SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA	7				
EST					SHEET: D-2 DETAIL: 1		INSTALL 42-IN DIAMETER INSERT	VF	8				
		VCP-24 (in)			SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	9	16			
R			6		MAG 420	MANHOLE	REPLACE MANHOLE	VF	10				
-112.1095 -11 100 200	12.1090 -1" 300 ft	LEGE	-112.1081 END:	-112.1077	NOTES: SPARK TEST PULL TEST:	RESULTS:			oved by: Ed name: Any:	:		DATE:	_/
	500 10		👝 м.	ANHOLE TO REPAIR	L		Ν	OTES				•	
SSESSMENT NOTES:			$\mathbf{\vee}$	pe Connection on Wall									
AS BUILT CERTIFICATION			Pij Pij	pe Connection Over Bench pe Connection At Channel rop Pipe Connections	B. REMOVE AL	L STEPS BEFORE R	BEFORE PURCHASING MATE EHABILITATION WORK. RE REHABILITATION.	RIAL.			ofessiona/ TIFICATE 10	i.	
AS BOILT CERTIFICATION HEREBY CERTIFY THAT THE "RECORD D				kisting Abandoned Sewer Main						Regisi	33632 THOMAS O. BRAATELIEN		
MEREBY CERTIFY THAT THE RECORD D MEASUREMENTS AS SHOWN HEREON W		N NUMBER:		ot in GIS Pipe Connections	nnections E. REINSTATE PIPE CONNECTIONS AFTER COATING OR LINING. F. RESTORE LANDSCAPE/PAVEMENT/SIDEWALK AFTER REHABILITATION.						1-26-22		
INDER MY SUPERVISION OR AS NOTED			•	ty Sewer Main									
ORRECT TO THE BEST OF MY KNOWLE				ow Direction	G. USE FLOW T			1 Kov	m maan				
BELIEF.			 Ci 	ty Manholes / Not For Repair	H. PERFORM S	Park and Pull Te	STS AFTER REHABILITATION	•					
"PER PHOENIX CITY CODE CHAPTER 2, SECTION	SPECIFICALLY STATED IN THE CIT	ALUSE ONLY AND MAY NOT BE FURI Y CODE, OR AS REQUIRED BY LAW" E KEPT SECURE AT ALL TIMES	NISHED FO	R INSPECTION OR COPYING, EXCEPT AS		2432 W. Pl PHOENIX, J Phone:(60)	NGINEERING CONSULTANTS EORIA AVENUE, SUITE 1246 AZ 85029 2) 906-1901	below. ore you dig.	SCALE (1:1	DF MAP: LOO	MANHC 12 / 5		IEET NUMBER: 19 OF 63

	F	ROJECT IN	FORMATION					REHABILITATION DE	SIGN	
CITY OF PHOENIX - WA	ATER SERVICE	ES DEPT - LA	ARGE DIAMETER	PROJ	ECT NUMBER: WS90500273	CONSTRUCTION				
SANITARY SEWER REH			& 4 MANHOLES -	CITY	PROJECT MANAGER: SAUL DURAN	DETAILS	COMPONENT	REHABILITATION	UNITS	
	NORTH - ZO					-				+
WAM ID :	LOCATION ID:	IANHOLE IN	FORMATION CROSS STREET:			MAG 422 MAG 423		REPLACE COLLAR, FRAME	EA	
I-1192241	40-23-405		23RD AVE & BEHREND DR			COP P1424	& COVER	& COVER		
JURISDICTION: CITY OF PHOENIX	FRAME/COVER CAST IRON		COVER DIAMETER: 32 (IN)		ENVIRONMENT: MAJOR ARTERIAL ROAD		CHIMNEY, CONE	DEFECT REPAIR COATING	SF	
DEPTH RIM TO INVERT: 17.5 (FT)	BARREL DIAME	IER:	CORROSION PROTECTION: NOT COATED		QUARTER SECTION: 40-23	DETAIL: 1 & 2	& BAKKEL			
COLLAR PRESENT: YES GROUND TYPE: ASPHALT	NASSCO MACP	RADE: 4	EXISTING WALL MATERIAL: CONCRETE		NOTES:			REPAIR & COAT 48 IN DIAMETER	EA	
		MANHOLE	LOCATION			SHEET: D-4	BENCH			
						DETAIL: 1		REPAIR & COAT 60 IN DIAMETER	EA	
659		J J	VCP-24 (in)			SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	
3.5	1	RD AVENUE				SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	
40-73-404		ORTH 23	✓ 40-23-405 WEST BEHI	REND	DRIVE _{VCP-8} (in)	SHEET: D-4 DETAIL: 1 & 3		JOINT REPAIR	EA	
			1073°			SHEET: D-2 DETAIL: 1	INSERT	INSTALL 42-IN DIAMETER INSERT	VF	
33.6654			VCP-24 (in)	<u>A</u> .		SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	
						MAG 420	MANHOLE	REPLACE MANHOLE	VF	
-112.1092		112.1088 00 ft	-112.1083 LEGE	ND:	-112.1079	NOTES: SPARK TEST PULL TEST:	RESULTS:		APPRO PRINT COMP	E
ASSESSMENT NOTES:					MANHOLE TO REPAIR			Ν	OTES	,
					Pipe Connection on WallPipe Connection Over BenchPipe Connection At ChannelDrop Pipe Connections	B. REMOVE AL	L STEPS BEFORE R	BEFORE PURCHASING MATE EHABILITATION WORK. IRE REHABILITATION.	RIAL.	_
AS BUILT CERTIFICATION I HEREBY CERTIFY THAT THE "RECOR MEASUREMENTS AS SHOWN HEREO	N WERE MADE	REGISTRATION	×		Existing Abandoned Sewer Main Not in GIS Pipe Connections City Sewer Main	D. COAT THE C E. REINSTATE P	HANNEL IF IT IS CONPECTION			n
UNDER MY SUPERVISION OR AS NOT CORRECT TO THE BEST OF MY KNOW BELIEF.		DATE:	[Flow Direction City Manholes / Not For Repair	G. USE FLOW 1	HROUGH PLUG IF			-
"PER PHOENIX CITY CODE CHAPTER 2, SEC	SPECIFICALLY	STATED IN THE CITY	ALUSE ONLY AND MAY NOT BE FURI CODE, OR AS REQUIRED BY LAW" KEPT SECURE AT ALL TIMES	NISHED F	FOR INSPECTION OR COPYING, EXCEPT AS		2432 W. P PHOENIX, Phone:(60	NGINEERING CONSULTANTS EORIA AVENUE, SUITE 1246 AZ 85029 2) 906-1901		

AND O	UANTI	FIES				
BID ITEM NO.		AS BUILT QUANTITY	APPRO\ MATER		MANUFACTURER	MANHOLE 40-23-405 WS90500273
1						NOLE 4 WS9
2	236					MAN
3						
4	1					
5						/ER
6						E DIAMETER SANITARY SEWER RTH - ZONE 3
7						R SANITA 3
8						E DIAMETER (TH - ZONE 3
9						ARGE DI NORTH
10						DEPT - L/
OVED BY: ED NAME: ANY:	·		DATE:	/	_/	VICES D
						SER'
DN.	Register	otessional			6	CITY OF PHOENIX - WATER SERVICES DEPT - LARGE REHABILITATION - GRADE 5 & 4 MANHOLES - NOR
SCALE C	DF MAP: 100	MANHO 13 / 5		SH	EET NUMBER: 20 OF 63	CITY OI REHAB

	PROJECT IN	FORMATION				REHABILITATION DE	SIGN			TIES			
CITY OF PHOENIX - WA	ATER SERVICES DEPT - L	ARGE DIAMETER	PROJECT NUMBER: WS90500273	CONSTRUCTION				BID ITEM	BID		APPROVED		40-23-408
SANITARY SEWER REHA		& 4 MANHOLES -	CITY PROJECT MANAGER: SAUL DURAN	DETAILS	COMPONENT	REHABILITATION	UNITS			QUANTITY		MANUFACTURER	23-1
	NORTH - ZONE 3												ģ
		NFORMATION		MAG 422	COLLAR, FRAME	REPLACE COLLAR, FRAME	-						-
VAM ID : -1243320	LOCATION ID: 40-23-408	CROSS STREET: 23RD AVE & TONTO LN		MAG 423 COP P1424	& COVER	& COVER	EA	1	1				P
URISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL: CAST IRON	COVER DIAMETER: 32 (IN)	ENVIRONMENT: MAJOR ARTERIAL ROAD		CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2					MANHOLE
EPTH RIM TO INVERT: 6.9 (FT)	BARREL DIAMETER: 60 (IN)	CORROSION PROTECTION: NOT COATED	QUARTER SECTION: 40-23	DETAIL: 1 & 2	& BARREL		51	2					
OLLAR PRESENT: YES	NASSCO MACP	EXISTING WALL MATERIAL:	NOTES:			REPAIR & COAT							
ROUND TYPE: ASPHALT	STRUCTURAL GRADE: 5	CONCRETE				48 IN DIAMETER	EA	3					
	MANHOLI	LOCATION		SHEET: D-4	BENCH								-
		1 200		DETAIL: 1		REPAIR & COAT 60 IN DIAMETER	EA	4	1				
		VCP-24 (in)		SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5					(CD
	N.C.			SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	6					
4873487					PVC LINER	JOINT REPAIR	EA	7					CANITA
	NCP-8 (in) WEST TONTO LANE					INSTALL 42-IN DIAMETER INSERT	VF	8					
		VCP-24 (in)		SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	9	14				
				MAG 420	MANHOLE	REPLACE MANHOLE	VF	10					H
-112.1093	-112.1089	-112.1084	-112.1080 -112. ID:	NOTES: SPARK TEST PULL TEST:	RESULTS:			OVED BY: ED NAME: ANY:			DATE:	_/	
100 200 SSESSMENT NOTES:	300 ft		MANHOLE TO REPAIR			N	OTES						
			Pipe Connection on Wall										
			Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections	B. REMOVE AL	L STEPS BEFORE R	BEFORE PURCHASING MATE EHABILITATION WORK.	ERIAL.			ofessional E30		(0)	
S BUILT CERTIFICATION			Existing Abandoned Sewer Main		N MANHOLE BEFC	DRE REHABILITATION. ONCRETE.			Registe,	33632 THOMAS O. BRAATELIEN			
HEREBY CERTIFY THAT THE "RECOR IEASUREMENTS AS SHOWN HEREO		NUMBER:	Not in GIS Pipe ConnectionsCity Sewer Main	E. REINSTATE F	PIPE CONNECTION	S AFTER COATING OR LINING			80.	1-26-22			
NDER MY SUPERVISION OR AS NOT	ED ARE		-		NDSCAPE/PAVEMI THROUGH PLUG IF	ENT/SIDEWALK AFTER REHAE	BILITATIO	DN.	That	me Breat			
ORRECT TO THE BEST OF MY KNOW ELIEF.	/LEDGE AND DATE:		City Manholes / Not For Repair			ESTS AFTER REHABILITATION							
	DATE.					ENGINEERING CONSULTANTS PEORIA AVENUE, SUITE 1246 AZ 85029 D2) 906-1901	below.	SCALE C		MANHC 14 / 5		EET NUMBER: 21 OF 63	

	PROJE	CT INFORMATION					REHABILITATION D	ESIGN	A
CITY OF PHOENIX - WAT	ER SERVICES DEF	PT - LARGE DIAMETER	PROJE	ECT NUMBER: WS90500273					
SANITARY SEWER REHAE	BILITATION - GRA	DE 5 & 4 MANHOLES -		PROJECT MANAGER: SAUL DURAN	CONSTRUCTION	COMPONENT	REHABILITATION	UNITS	B
N	IORTH - ZONE 3			ROJECT MANAGER. SAUL DURAN	DETAILS				
		DLE INFORMATION	1		MAG 422				T
WAM ID :	LOCATION ID:	CROSS STREET:			MAG 423	COLLAR, FRAME & COVER	REPLACE COLLAR, FRAME & COVER	EA	
	40-23-409	23RD AVE & ORAIBI DR			COP P1424	& COVER	& COVER		
	FRAME/COVER MATERI CAST IRON	32 (IN)		ENVIRONMENT: MAJOR ARTERIAL ROAD		CHIMNEY, CONE	DEFECT REPAIR COATING	SF	
	BARREL DIAMETER:	CORROSION PROTECTION:		QUARTER SECTION:	DETAIL: 1 & 2	& BARREL			
	50 (IN) NASSCO MACP	NOT COATED EXISTING WALL MATERIAL:		40-23 NOTES:					
	STRUCTURAL GRADE: 5	CONCRETE		NOTES:			REPAIR & COAT	EA	
		HOLE LOCATION			SHEET: D-4		48 IN DIAMETER		
33.6643			K		DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	
		VCP-24 (in)	R		SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	
	RD AVENUE	(in)			SHEET: D-4-6 DETAIL: ALL		DEFECT REPAIR PATCHING	SF	
33.q642			DRAIBI DRIVE 2-8 (in)	SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA		
VCP-8 (i	iu)	40-23-411		- The server	SHEET: D-2 DETAIL: 1	INSERT	INSTALL 42-IN DIAMETER INSERT	VF	
CON T				1 1 1	SHEET: D-2 DETAIL: 1		INSTALL 54-IN DIAMETER INSERT	VF	
33. 6641		VCP-24 (in)				MANHOLE	REPLACE MANHOLE	VF	
-112.1088	-112.1086	-112.1085		-112.1084 -112.108	NOTES: SPARK TEST PULL TEST:	RESULTS:		APPRO PRINT COMF	ED
ASSESSMENT NOTES:			ı (MANHOLE TO REPAIR			Ν	IOTES	,
				Pipe Connection on Wall Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections	B. REMOVE AL	L STEPS BEFORE R	BEFORE PURCHASING MAT EHABILITATION WORK.	ERIAL.	
AS BUILT CERTIFICATION		ERED CIVIL ENGINEER:		Existing Abandoned Sewer Main		N MANHOLE BEFC HANNEL IF IT IS CO	ORE REHABILITATION.		
I HEREBY CERTIFY THAT THE "RECORD I MEASUREMENTS AS SHOWN HEREON ' UNDER MY SUPERVISION OR AS NOTED	WERE MADE REGIST	RATION NUMBER:		Not in GIS Pipe Connections City Sewer Main	E. REINSTATE P F. RESTORE LAI	IPE CONNECTION NDSCAPE/PAVEME	S AFTER COATING OR LINING ENT/SIDEWALK AFTER REHAI		ЛС
CORRECT TO THE BEST OF MY KNOWLE	EDGE AND DATE:			Flow Direction		HROUGH PLUG IF	NECESSARY. ESTS AFTER REHABILITATION	I	
BELIEF.			• (City Manholes / Not For Repair		FARN AND PULL II		•	
"PER PHOENIX CITY CODE CHAPTER 2, SECTIO	SPECIFICALLY STATED IN	R OFFICIALUSE ONLY AND MAY NOT BE FURI THE CITY CODE, OR AS REQUIRED BY LAW" MUST BE KEPT SECURE AT ALL TIMES	NISHED F	OR INSPECTION OR COPYING, EXCEPT AS		2432 W. F PHOENIX, Phone:(60	ENGINEERING CONSULTANTS FEORIA AVENUE, SUITE 1246 AZ 85029 32) 906-1901	below.	5

AND C	UANTI	FIES				
BID ITEM NO.		AS BUILT QUANTITY	APPROV MATERI		MANUFACTURER	MANHOLE 40-23-409 WS90500273
1	1					IHOLE 4 WS9
2						MAN
3						
4	1					
5						/ER
6						E DIAMETER SANITARY SEWER RTH - ZONE 3
7						R SANIT ⁴ 3
8						E DIAMETER (TH - ZONE 3
9	13.8					ARGE DI NORTH
10						HOLES -
DVED BY: ED NAME:			DATE:			CES D AANI
ANY:				/	_/	ERVI & 4 n
DN.	tage ite	olessionor tipicar solution tipicar solution soluti	, 		5	CITY OF PHOENIX - WATER SERVICES DEPT - LARGE REHABILITATION - GRADE 5 & 4 MANHOLES - NOR
	OF MAP: MANHOLE 1:25 15 / 50			SH	EET NUMBER: 22 OF 63	CITY OF REHABI

	F	ROJECT IN	FORMATION					REHABILITATION DE	SIGN	A
CITY OF PHOENIX - WA	TER SERVICE	ES DEPT - LA	ARGE DIAMETER	PROJE	ECT NUMBER: WS90500273					Γ
SANITARY SEWER REHA	BILITATION	- GRADE 5 8	& 4 MANHOLES -		PROJECT MANAGER: SAUL DURAN	CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	E
	NORTH - ZO	NE 3			PROJECT MANAGER: SAUL DURAN	DETAILS				
			IFORMATION	1		MAG 422				T
WAM ID :	LOCATION ID:		CROSS STREET:			MAG 423	COLLAR, FRAME & COVER	REPLACE COLLAR, FRAME & COVER	EA	
I-1239978	40-23-411		23RD AVE & ORAIBI DR			COP P1424				
JURISDICTION: CITY OF PHOENIX	FRAME/COVER CAST IRON		COVER DIAMETER: 32 (IN)		ENVIRONMENT: MAJOR ARTERIAL ROAD	SHEET: D-3	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	
DEPTH RIM TO INVERT:	BARREL DIAMET	TER:	CORROSION PROTECTION:		QUARTER SECTION:	DETAIL: 1 & 2	& BARREL			
16.9 (FT) COLLAR PRESENT: YES	60 (IN) NASSCO MACP		NOT COATED EXISTING WALL MATERIAL:		40-23 NOTES:					┢
GROUND TYPE: ASPHALT	STRUCTURAL GI	RADE: 4	CONCRETE		NOTES.			REPAIR & COAT	EA	
	1	MANHOLE	LOCATION			SHEET: D-4	55101	48 IN DIAMETER		
- SPA	AVENUE		VCP-:	No.		DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	
33.6642	23RD AVE		√ ^{CP} -24 (in) √ 40-23-409 w		DRAIBI DRIVE	SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	
1	NORTH 2:		VCP.	VCP	2-8 (in)	SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	
VCP-8	VCP-8 (in)		CP-24 (ii) 40-23-411			SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA	
8.6641	0	1		h	-	SHEET: D-2 DETAIL: 1	INCERT	INSTALL 42-IN DIAMETER INSERT	VF	
			VCP-24 (in)			SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	
						MAG 420	MANHOLE	REPLACE MANHOLE	VF	
-112.1088 -112.1087	60 ft	-112.1086	-112.1085 LEGE	ND:	-112.1084	NOTES: SPARK TEST PULL TEST:	RESULTS:		APPRO PRINT COMF	ΈC
ASSESSMENT NOTES:					MANHOLE TO REPAIR			N	IOTES	,
ASSESSMENT NOTES. AS BUILT CERTIFICATION I HEREBY CERTIFY THAT THE "RECORI MEASUREMENTS AS SHOWN HEREO UNDER MY SUPERVISION OR AS NOT CORRECT TO THE BEST OF MY KNOW BELIEF.	N WERE MADE ED ARE	REGISTERED C REGISTRATION DATE:	IVIL ENGINEER:		Pipe Connection on Wall Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections Existing Abandoned Sewer Main Not in GIS Pipe Connections City Sewer Main Flow Direction City Manholes / Not For Repair	B. REMOVE AL C. BLAST CLEAI D. COAT THE C E. REINSTATE P F. RESTORE LAI G. USE FLOW T	L STEPS BEFORE RI N MANHOLE BEFO HANNEL IF IT IS CO IPE CONNECTIONS NDSCAPE/PAVEME HROUGH PLUG IF	BEFORE PURCHASING MATE EHABILITATION WORK. IRE REHABILITATION. DNCRETE. S AFTER COATING OR LINING INT/SIDEWALK AFTER REHAB	ERIAL. 6. BILITATIO	
"PER PHOENIX CITY CODE CHAPTER 2, SEC	SPECIFICALLY	STATED IN THE CITY	ALUSE ONLY AND MAY NOT BE FUR CODE, OR AS REQUIRED BY LAW" KEPT SECURE AT ALL TIMES	NISHED F	OR INSPECTION OR COPYING, EXCEPT AS		2432 W. P PHOENIX, Phone:(60	2) 006 1001 Know what's		S

AND O	UANTI	FIES				
BID ITEM NO.		AS BUILT QUANTITY	APPRO\ MATER		MANUFACTURER	MANHOLE 40-23-411 WS90500273
1						NOLE 4 WS9
2	218					MAN
3						
4	1					
5						/ER
6						E DIAMETER SANITARY SEWER RTH - ZONE 3
7						k SANIT ² 3
8						E DIAMETER (TH - ZONE 3
9						ARGE DI. NORTH
10						HOLES - LA
DVED BY: ED NAME: ANY:	·	·	DATE:	/_	/	ICES D MAN
					_,	SERV & 4
DN.	Kapisian 2000 Contractor	olessiong THECATE 33632 THOMAS 0. BRAATELIEN 1-26-22 One Cond USL Cond USL Cond USL Cond			5	CITY OF PHOENIX - WATER SERVICES DEPT - LARGE REHABILITATION - GRADE 5 & 4 MANHOLES - NOR
SCALE C	DF MAP: 25	MANHO 16 / 5		SH	EET NUMBER: 23 OF 63	CITY OI REHAB

	Р	ROJECT IN	FORMATION					REHABILITATION DE	SIGN	
CITY OF PHOENIX - WAT	ER SERVICE	S DEPT - L	ARGE DIAMETER	PRO.	JECT NUMBER: WS90500273					
SANITARY SEWER REHAB	BILITATION -	GRADE 5	& 4 MANHOLES -		PROJECT MANAGER: SAUL DURAN	CONSTRUCTION	COMPONENT	REHABILITATION	UNITS	E
N	IORTH - ZOI	NE 3			TROJECT WINNAULIN, SAUL DURAN	DEIMES				
	M	ANHOLE II	NFORMATION	1		MAG 422				
WAM ID :	LOCATION ID:		CROSS STREET:			MAG 423	& COVER	REPLACE COLLAR, FRAME & COVER	EA	
	40-23-412	44755141	23RD AVE & WICKIEUP LN			COP P1424				L
C	FRAME/COVER N CAST IRON		COVER DIAMETER: 32 (IN)		ENVIRONMENT: MAJOR ARTERIAL ROAD	SHEET: D-3	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	
	BARREL DIAMET 60 (IN)	ER:	CORROSION PROTECTION: NOT COATED		QUARTER SECTION: 40-23	DETAIL: 1 & 2	& BARREL			
	NASSCO MACP		EXISTING WALL MATERIAL:		NOTES:			_		
	STRUCTURAL GR	ADE: 5	CONCRETE					REPAIR & COAT 48 IN DIAMETER	EA	
		MANHOLI	LOCATION			SHEET: D-4	BENCH			
HONEYWELL INC				-		DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	
	10: 10:		VCP-24 (in)			SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	
		, in the second		3		SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	
	23RD AVEI	40-23-412	1		SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA		
		JORTH 2			-	SHEET: D-2 DETAIL: 1	INCERT	INSTALL 42-IN DIAMETER INSERT	VF	
336			VCP-27 (in)		FAL	SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	
		8-		W	VEST WICKIEUP LANE	MAG 420	MANHOLE	REPLACE MANHOLE	VF	
-112.1090 50 100	-112.1087	0 ft	-112.1085		12.1083 -112.1081	NOTES: SPARK TEST PULL TEST:	RESULTS:		APPRO PRINT COMF	ΈC
ASSESSMENT NOTES:	15				MANHOLE TO REPAIR			N	OTES	,
ASSESSMENT NOTES:		REGISTERED			Pipe Connection on Wall Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections	B. REMOVE AL	L STEPS BEFORE R	BEFORE PURCHASING MATE EHABILITATION WORK. RE REHABILITATION.		
I HEREBY CERTIFY THAT THE "RECORD E MEASUREMENTS AS SHOWN HEREON		REGISTRATIO		\times	Existing Abandoned Sewer Main Not in GIS Pipe Connections	D. COAT THE C	HANNEL IF IT IS CO		ì.	
UNDER MY SUPERVISION OR AS NOTED			_	_	City Sewer Main		-	NT/SIDEWALK AFTER REHAB	BILITATIO	٦N
CORRECT TO THE BEST OF MY KNOWLE BELIEF.	EDGE AND	DATE:		>	Flow Direction City Manholes / Not For Repair		HROUGH PLUG IF PARK AND PULL TE	NECESSARY. ESTS AFTER REHABILITATION		
"PER PHOENIX CITY CODE CHAPTER 2, SECTIO	SPECIFICALLY S	STATED IN THE CIT	ALUSE ONLY AND MAY NOT BE FURI Y CODE, OR AS REQUIRED BY LAW" E KEPT SECURE AT ALL TIMES	NISHED	FOR INSPECTION OR COPYING, EXCEPT AS		2432 W. P PHOENIX, Phone:(60	2) 906-1901 Know what's		S

AND O	UANTI	FIES				
BID ITEM NO.		AS BUILT QUANTITY	APPROV MATERI		MANUFACTURER	MANHOLE 40-23-412 WS90500273
1	1					NOLE 4 WS9
2						MAN
3						
4	1					
5						/ER
6						E DIAMETER SANITARY SEWER RTH - ZONE 3
7						R SANIT ⁴ 3
8						E DIAMETER (TH - ZONE 3
9	14.8					ARGE DI NORTH
10						HOLES -
DVED BY: ED NAME:	· 	·	DATE:			CES D
ANY:				/	_/	ervi 8 4 n
						ER S
DN.	A LOO	oressional StriffCA2 33632 BRAATELIEN 1-26-22 COMA USL COMA USL COMA USL COMA USL COMA USL COMA USL COMA USL COMA USL COMA	1		5	CITY OF PHOENIX - WATER SERVICES DEPT - LARGE REHABILITATION - GRADE 5 & 4 MANHOLES - NOR
SCALE C	DF MAP: 50	MANHO 17 / 5		SH	EET NUMBER: 24 OF 63	CITY OI REHAB

	PROJECT IN	FORMATION				REHABILITATION DE	SIGN	AND C	UANTI	TIES		
CITY OF PHOENIX - W	ATER SERVICES DEPT - L	ARGE DIAMETER	PROJECT NUMBER: WS90500273									
SANITARY SEWER REH	ABILITATION - GRADE 5	& 4 MANHOLES -	CITY PROJECT MANAGER: SAUL DURAN	CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.			APPROVED MATERIAL	MANUFACTURER
	NORTH - ZONE 3		CITITI I ROJECT MANAGER. SAGE DORAN									
	MANHOLE I	NFORMATION		MAG 422								
WAM ID :	LOCATION ID:	CROSS STREET:		MAG 423	& COVER	REPLACE COLLAR, FRAME & COVER	EA	1	1			
-1239979	40-23-413	23RD AVE & WICKIEUP LN		COP P1424	a coven	d coven						
URISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL:	COVER DIAMETER: 32 (IN)	ENVIRONMENT: MAJOR ARTERIAL ROAD	SHEET: D-3	CHIMNEY, CONE							
DEPTH RIM TO INVERT:	BARREL DIAMETER:	CORROSION PROTECTION:		DETAIL: 1 & 2		DEFECT REPAIR COATING	SF	2				
L7 (FT)	60 (IN)	NOT COATED	40-23									
OLLAR PRESENT: YES	NASSCO MACP	EXISTING WALL MATERIAL:	NOTES:			REPAIR & COAT						
ROUND TYPE: ASPHALT	STRUCTURAL GRADE: 4	CONCRETE				48 IN DIAMETER	EA	3				
	MANHOL	E LOCATION		SHEET: D-4	BENCH							
And a				DETAIL: 1		REPAIR & COAT 60 IN DIAMETER	EA	4	1			
		VCP-27		SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5				
	N.	Ē	WEST WICKIEUP LANE	SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	6				
	SRD AVE	✓ 40-23-413	VCP-8 (in)	SHEET: D-4 DETAIL: 1 & 3		JOINT REPAIR	EA	7				
	NORTH 231		6	SHEET: D-2 DETAIL: 1	INSERT	INSTALL 42-IN DIAMETER INSERT	VF	8				
	A Carlos and a car	VCP-27 (in)		SHEET: D-2 DETAIL: 1		INSTALL 54-IN DIAMETER INSERT	VF	9	14			
				MAG 420	MANHOLE	REPLACE MANHOLE	VF	10				
-112.1089 50 100	-112.1087 150 ft	-112.1084	-112.1082 ND:	NOTES: SPARK TEST PULL TEST:	RESULTS:			oved by: Ed name Any:			DATE:	_/
SSESSMENT NOTES:	150 ft		MANHOLE TO REPAIR			N	OTES				1	
ASSESSMENT NOTES. AS BUILT CERTIFICATION HEREBY CERTIFY THAT THE "RECOR MEASUREMENTS AS SHOWN HEREC	D DRAWING"		Pipe Connection on Wall Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections Existing Abandoned Sewer Main Not in GIS Pipe Connections	B. REMOVE AL C. BLAST CLEA D. COAT THE C	L STEPS BEFORE R N MANHOLE BEFC HANNEL IF IT IS CO	BEFORE PURCHASING MATE EHABILITATION WORK. PRE REHABILITATION.	RIAL.		Register Concernent	otessional 4-201 HUTECATE 4-201 BRAATELIEN 1-26-22		6)
JNDER MY SUPERVISION OR AS NO CORRECT TO THE BEST OF MY KNOV BELIEF.	TED ARE		 City Sewer Main Flow Direction City Manholes / Not For Repair 	F. RESTORE LA G. USE FLOW	NDSCAPE/PAVEME FHROUGH PLUG IF	NT/SIDEWALK AFTER REHAB	ILITATIO	DN.	The	and USIN		
	SPECIFICALLY STATED IN THE CI	CIALUSE ONLY AND MAY NOT BE FURI TY CODE, OR AS REQUIRED BY LAW" BE KEPT SECURE AT ALL TIMES	NISHED FOR INSPECTION OR COPYING, EXCEPT AS		2432 W. P PHOENIX, Phone:(60	ENGINEERING CONSULTANTS EORIA AVENUE, SUITE 1246 AZ 85029 2) 906-1901	Delow.	SCALE C)F MAP: 50	MANHC 18 / 5		HEET NUMBER: 25 OF 63

					REHABILITATION DESIGN AND QUANTITIES							
CITY OF PHOENIX - WA	TER SERVICES DEPT - I	ARGE DIAMETER	PROJECT NUMBER: WS90500273									
SANITARY SEWER REHA	ABILITATION - GRADE 5	& 4 MANHOLES -	CITY PROJECT MANAGER: SAUL DURAN	CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.			APPROVED MATERIAL	MANUFACTURER
	NORTH - ZONE 3											
	MANHOLE	INFORMATION		MAG 422								
AM ID :	LOCATION ID:	CROSS STREET:		MAG 423	& COVER	REPLACE COLLAR, FRAME & COVER	EA	1	1			
	40-23-414	23RD AVE & SEQUOIA E		COP P1424								
RISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL: CAST IRON	COVER DIAMETER: 32 (IN)	ENVIRONMENT: MAJOR ARTERIAL ROAD	SHEET: D-3	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2				
PTH RIM TO INVERT:	BARREL DIAMETER:	CORROSION PROTECTIO		DETAIL: 1 & 2	& BARREL		51	2				
(FT)	60 (IN)		40-23									
LLAR PRESENT: YES DUND TYPE: ASPHALT	NASSCO MACP STRUCTURAL GRADE: 4	EXISTING WALL MATER	AL: NOTES:			REPAIR & COAT	EA	3				
		E LOCATION		SHEET: D-4		48 IN DIAMETER		5				
				DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	4	1			
		VCP-27		SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5				
TET I.I.TET		E		SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	6				
	3RD AVE	✓ 40-23-414	WEST SEQUOIA DRIVE	SHEET: D-4 DETAIL: 1 & 3		JOINT REPAIR	EA	7				
	NORTH 2			SHEET: D-2 DETAIL: 1		INSTALL 42-IN DIAMETER INSERT	VF	8				
		VCP-27 (In)		SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	9	13.8			
				MAG 420	MANHOLE	REPLACE MANHOLE	VF	10				
-112.1095 -112. 100 200	-112.1 300 ft		12.1082 -112.1077 EGEND:	NOTES: SPARK TEST PULL TEST:	RESULTS:			OVED BY: ED NAME: ANY:			DATE:	_/
SESSMENT NOTES:			MANHOLE TO REPAIR			N	OTES					
BUILT CERTIFICATION	REGISTEREN	CIVIL ENGINEER:	Pipe Connection on Wall Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections	B. REMOVE AL	L STEPS BEFORE F	BEFORE PURCHASING MATE EHABILITATION WORK. DRE REHABILITATION.	ERIAL.			otessional Line RTIFICATE 101 33632	i	
EREBY CERTIFY THAT THE "RECORE EASUREMENTS AS SHOWN HEREON IDER MY SUPERVISION OR AS NOT DRRECT TO THE BEST OF MY KNOW	D DRAWING" N WERE MADE REGISTRATIC ED ARE	DN NUMBER:	 Existing Abandoned Sewer Main Not in GIS Pipe Connections City Sewer Main Flow Direction 									
ELIEF.			City Manholes / Not For Repair	H. PERFORM S	SPARK AND PULL T	ESTS AFTER REHABILITATION						
	SPECIFICALLY STATED IN THE C	CIALUSE ONLY AND MAY NOT BE ITY CODE, OR AS REQUIRED BY LA BE KEPT SECURE AT ALL TIMES	FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS W"		2432 W. PHOENIX Phone:(6	ENGINEERING CONSULTANTS PEORIA AVENUE, SUITE 1246 AZ 85029 02) 906-1901	below.	SCALE C		MANHO 19 / 5		IEET NUMBER: 26 OF 63

	PROJECT IN	FORMATION					REHABILITATION DE	SIGN	/
CITY OF PHOENIX - W	ATER SERVICES DEPT - L	ARGE DIAMETER	PROJEC	CT NUMBER: WS90500273					
SANITARY SEWER REH	ABILITATION - GRADE 5	& 4 MANHOLES -			CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	
	NORTH - ZONE 3			ROJECT MANAGER: SAUL DURAN	DETAILS				
		NFORMATION			MAG 422				T
WAM ID :	LOCATION ID:	CROSS STREET:			MAG 422 MAG 423		REPLACE COLLAR, FRAME	EA	
I-1259691	40-23-417	23RD AVE & UTOPIA RD			COP P1424	& COVER	& COVER		
JURISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL: CAST IRON	COVER DIAMETER: 32 (IN)		ENVIRONMENT: EASEMENT/ RIGHT OF WAY	SHEET: D-3	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	
DEPTH RIM TO INVERT:	BARREL DIAMETER:	CORROSION PROTECTION:		QUARTER SECTION:	DETAIL: 1 & 2	& BARREL	DEFECT REPAIR COATING	ЭГ	
17.1 (FT)	60 (IN)	NOT COATED		40-23					┢
COLLAR PRESENT: YES	NASSCO MACP	EXISTING WALL MATERIAL:		NOTES:			REPAIR & COAT	_	
GROUND TYPE: OTHER	STRUCTURAL GRADE: 4	CONCRETE					48 IN DIAMETER	EA	
	MANHOL	LOCATION	_		SHEET: D-4 DETAIL: 1	BENCH			╞
33.6621	AVENUE	11		E BEAL			REPAIR & COAT 60 IN DIAMETER	EA	
	H 23RD	VCP-27	4	the states	SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	
	NORT	-27 (in)		1000	SHEET: D-4-6 DETAIL: ALL		DEFECT REPAIR PATCHING	SF	
VCP-	8 (in)	✓ ⁴⁰⁻²³⁻⁴¹⁷	VCP-8	3 (in)	SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA	
WEST UTOPIA ROAD	Jos and	VCP-27		•	SHEET: D-2 DETAIL: 1	INSERT	INSTALL 42-IN DIAMETER INSERT	VF	
Share and	VCP-10 (in)	y 39-23-301	VCP-8	8 (in)	SHEET: D-2 DETAIL: 1		INSTALL 54-IN DIAMETER INSERT	VF	
33.6619	Construction of the second s		1×		MAG 420	MANHOLE	REPLACE MANHOLE	VF	
-112.1088 -112.1087 20 40	Strate and the state of the sta	-112.1085	ND:	-112.1084	NOTES: SPARK TEST PULL TEST:	RESULTS:		APPRO PRINT COMF	ΈC
	0010		👝 м	ANHOLE TO REPAIR			N	OTES	;
ASSESSMENT NOTES: ASSESSMENT NOTES: AS BUILT CERTIFICATION I HEREBY CERTIFY THAT THE "RECOR MEASUREMENTS AS SHOWN HEREC UNDER MY SUPERVISION OR AS NO CORRECT TO THE BEST OF MY KNOW	RD DRAWING" DN WERE MADE REGISTRATION TED ARE	CIVIL ENGINEER:	Pij Pij Dr Ex Na Cit	pe Connection on Wall pe Connection Over Bench pe Connection At Channel rop Pipe Connections kisting Abandoned Sewer Main ot in GIS Pipe Connections ty Sewer Main ow Direction	B. REMOVE ALI C. BLAST CLEAI D. COAT THE CL E. REINSTATE P F. RESTORE LAN G. USE FLOW T	L STEPS BEFORE RI N MANHOLE BEFO HANNEL IF IT IS CO IPE CONNECTIONS NDSCAPE/PAVEME HROUGH PLUG IF	BEFORE PURCHASING MATE EHABILITATION WORK. RE REHABILITATION. DNCRETE. S AFTER COATING OR LINING NT/SIDEWALK AFTER REHAB	ERIAL. 6. BILITATIO	
BELIEF.	SPECIFICALLY STATED IN THE CIT	ALUSE ONLY AND MAY NOT BE FURN Y CODE, OR AS REQUIRED BY LAW" E KEPT SECURE AT ALL TIMES	-	ty Manholes / Not For Repair R INSPECTION OR COPYING, EXCEPT AS		EC PROJECT E 2432 W. P PHOENIX, Phone:(60	NGINEERING CONSULTANTS EORIA AVENUE, SUITE 1246	TA <mark>STI</mark>	:

AND C	UANTI	FIES				
BID ITEM NO.		AS BUILT QUANTITY	APPROV MATERI		MANUFACTURER	MANHOLE 40-23-417 WS90500273
1	1					UHOLE 4 WS9
2						MAN
3						
4	1					
5						/ER
6						E DIAMETER SANITARY SEWER RTH - ZONE 3
7						k SANIT ² 3
8						E DIAMETER (TH - ZONE 3
9	14.7					ARGE DI. NORTH
10						HOLES - LA
DVED BY:			DATE:			ES D
ANY:				/	_/	RVIC 4 N
						R SE
DN.	Register	olessional control of the second seco			6	CITY OF PHOENIX - WATER SERVICES DEPT - LARGE REHABILITATION - GRADE 5 & 4 MANHOLES - NOR
SCALE C)F MAP: 25	MANHO 20 / 5		SH	EET NUMBER: 27 OF 63	CITY OI REHAB

	PROJECT IN	FORMATION					REHABILITATION DE	SIGN	A
CITY OF PHOENIX - W	ATER SERVICES DEPT - L	ARGE DIAMETER	PROJE	CT NUMBER: WS90500273					
SANITARY SEWER REH	ABILITATION - GRADE 5	& 4 MANHOLES -		ROJECT MANAGER: SAUL DURAN	CONSTRUCTION	COMPONENT	REHABILITATION	UNITS	E
	NORTH - ZONE 3			NOJECI WANAGEN. SAGE DONAN	DEMALO				ĺ
	MANHOLE II	NFORMATION			MAG 422				
WAM ID :	LOCATION ID:	CROSS STREET:			MAG 423	& COVER	REPLACE COLLAR, FRAME & COVER	EA	
I-1259702	39-23-301	23RD AVE & UTOPIA RD			COP P1424	a coven	a coven		
JURISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL: CAST IRON	COVER DIAMETER:		ENVIRONMENT: EASEMENT/ RIGHT OF WAY					
DEPTH RIM TO INVERT:	BARREL DIAMETER:	32 (IN) CORROSION PROTECTION:		QUARTER SECTION:	SHEET: D-3 DETAIL: 1 & 2	CHIMNEY, CONE & BARREI	DEFECT REPAIR COATING	SF	ĺ
18.5 (FT)	60 (IN)	NOT COATED		39-23					
COLLAR PRESENT: YES	NASSCO MACP	EXISTING WALL MATERIAL:		NOTES:					ĺ
GROUND TYPE: GRASS DIRT	STRUCTURAL GRADE: 4	CONCRETE					REPAIR & COAT 48 IN DIAMETER	EA	ĺ
0	MANHOLI	LOCATION			SHEET: D-4	BENCH			
33.62	8 (in)	v √3 40-23-417	VCD	0.(12)	DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	
VCP			VCP-	8 (in)	SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	
WEST UTOPIA ROAD		VCP-27 (in)			SHEET: D-4-6 DETAIL: ALL		DEFECT REPAIR PATCHING	SF	
33.46619	VCP-10 (in)	39-23-301 → → → → → → → → → → → → → → → → → → →	VCP-	8 (in)	SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA	
	E Star J		ENUE		SHEET: D-2 DETAIL: 1	INSERT	INSTALL 42-IN DIAMETER INSERT	VF	
ALCON AND	VCP-37 (in)		23RD AV	N S	SHEET: D-2 DETAIL: 1		INSTALL 54-IN DIAMETER INSERT	VF	
33.6618		0	NORTH	. 1	MAG 420	MANHOLE	REPLACE MANHOLE	VF	
-112.1088 -112.1087		-112.1085	ND:	-112.1084	NOTES: SPARK TEST PULL TEST:	RESULTS:		APPRO PRINT COMP	ED
20 40	60 ft			1ANHOLE TO REPAIR			N		
ASSESSMENT NOTES:				ipe Connection on Wall				IUTES	_
AS BUILT CERTIFICATION I HEREBY CERTIFY THAT THE "RECOF MEASUREMENTS AS SHOWN HEREC UNDER MY SUPERVISION OR AS NO CORRECT TO THE BEST OF MY KNOV BELIEF.	RD DRAWING" DN WERE MADE REGISTRATION TED ARE			Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections Existing Abandoned Sewer Main Not in GIS Pipe Connections City Sewer Main Now Direction City Manholes / Not For Repair	B. REMOVE AL C. BLAST CLEA D. COAT THE C E. REINSTATE P F. RESTORE LAI G. USE FLOW T	L STEPS BEFORE R N MANHOLE BEFC HANNEL IF IT IS CO IPE CONNECTION NDSCAPE/PAVEME 'HROUGH PLUG IF	S AFTER COATING OR LINING NT/SIDEWALK AFTER REHAE	G. BILITATIO	DN
"PER PHOENIX CITY CODE CHAPTER 2, SEC	SPECIFICALLY STATED IN THE CIT	ALUSE ONLY AND MAY NOT BE FURN Y CODE, OR AS REQUIRED BY LAW" E KEPT SECURE AT ALL TIMES	NISHED FC	DR INSPECTION OR COPYING, EXCEPT AS		2432 W. P PHOENIX, Phone:(60	INGINEERING CONSULTANTS EORIA AVENUE, SUITE 1246 AZ 85029 2) 906-1901	TAKE, INC.	S

AND C	UANTI	FIES				
BID ITEM NO.		AS BUILT QUANTITY	APPROV MATER		MANUFACTURER	MANHOLE 39-23-301 WS90500273
1	1					NS9 WS9
2						MAN
3						
4	1					
5						/ER
6						E DIAMETER SANITARY SEWER RTH - ZONE 3
7						R SANITA 3
8						E DIAMETER (TH - ZONE 3
9	15.4					ARGE DI NORTH
10						HOLES -
DVED BY: ED NAME:	:		DATE:			CES D MANI
ANY:				/	_/	ERVI & 4 r
DN.	and the second s	olessiona/ CIFICAT Solossi REALELEN 1-26-22 Soned COMA USA COMA USA COMA USA COMA USA COMA USA COMA USA COMA USA COMA USA COMA USA COMA USA COMA USA COMA USA COMA	1		5	CITY OF PHOENIX - WATER SERVICES DEPT - LARGE REHABILITATION - GRADE 5 & 4 MANHOLES - NOR
	OF MAP: MANHOLE: 1:25 21 / 50			SH	EET NUMBER: 28 OF 63	CITY OI REHAB

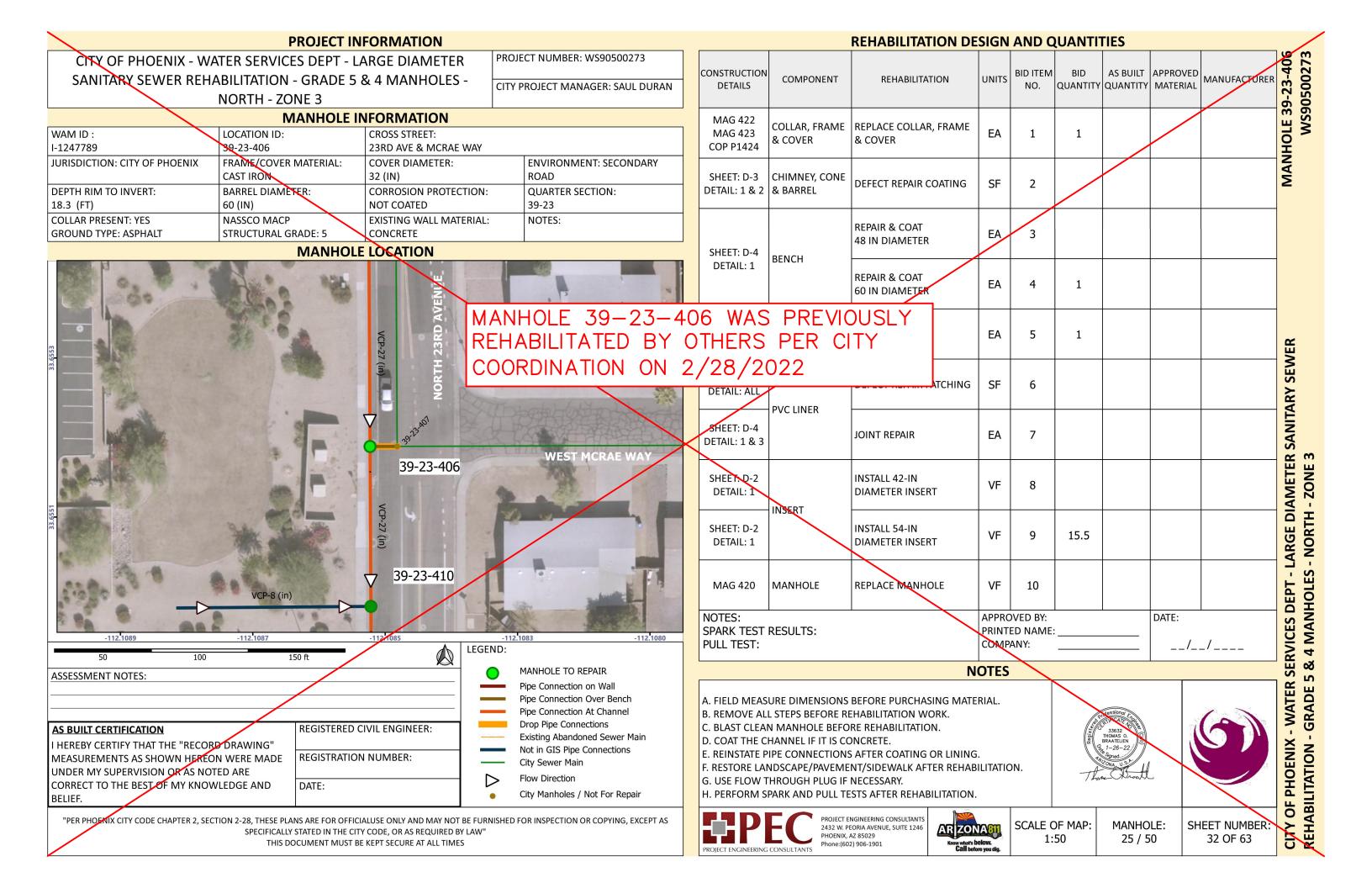
	P	ROJECT IN	ORMATION					REHABILITATION DE	SIGN	A
CITY OF PHOENIX - WAT	ER SERVICE	S DEPT - LA	RGE DIAMETER	PROJ	ECT NUMBER: WS90500273	CONSTRUCTION				
SANITARY SEWER REHAE	BILITATION -	GRADE 5 8	& 4 MANHOLES -	CITY I	PROJECT MANAGER: SAUL DURAN	CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	В
N	NORTH - ZON	IE 3								
		ANHOLE IN	FORMATION			MAG 422	COLLAR. FRAME	REPLACE COLLAR, FRAME		1
1 1	LOCATION ID: 39-23-304		CROSS STREET: 23RD AVE & KERRY LN			MAG 423 COP P1424	& COVER	& COVER	EA	
	FRAME/COVER N CAST IRON		COVER DIAMETER: 32 (IN)		ENVIRONMENT: SECONDARY ROAD	SHEET: D-3	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	
	BARREL DIAMETI 60 (IN)	ER:	CORROSION PROTECTION	l:	QUARTER SECTION: 39-23	DETAIL: 1 & 2	& BARREL			
	NASSCO MACP STRUCTURAL GR		EXISTING WALL MATERIA CONCRETE	L:	NOTES:			REPAIR & COAT	EA	
GROUND TYPE: ASPHALI			LOCATION			SHEET: D-4		48 IN DIAMETER	EA	
		1	A REPERTANT	Γ KERR	Y LANE	DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	
33.6604		ICP-27 (in)				SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	
		VCP				SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	
		1 . · ·	39-23-30439-23-304			SHEET: D-4 DETAIL: 1 & 3		JOINT REPAIR	EA	
13.5600						SHEET: D-2 DETAIL: 1		INSTALL 42-IN DIAMETER INSERT	VF	
		1	ACb-51 (III) REL HTRO		3824214	SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	
					F	MAG 420	MANHOLE	REPLACE MANHOLE	VF	
-112.1093	-112.1089	100	-112.1084	END:	-112.1080 -112.10	NOTES: SPARK TEST PULL TEST:	RESULTS:		APPRO PRINT COMP	EC
	30) ft			MANHOLE TO REPAIR			N	OTES	
ASSESSMENT NOTES:	DRAWING" WERE MADE	REGISTERED C	VIL ENGINEER:		Pipe Connection on Wall Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections Existing Abandoned Sewer Main Not in GIS Pipe Connections City Sewer Main	B. REMOVE AL C. BLAST CLEA D. COAT THE C E. REINSTATE F	L STEPS BEFORE R N MANHOLE BEFO HANNEL IF IT IS CO PIPE CONNECTION	BEFORE PURCHASING MATE EHABILITATION WORK. RE REHABILITATION.	RIAL.	
UNDER MY SUPERVISION OR AS NOTED CORRECT TO THE BEST OF MY KNOWLE BELIEF.		DATE:			Flow Direction City Manholes / Not For Repair	G. USE FLOW 1	THROUGH PLUG IF			-
"PER PHOENIX CITY CODE CHAPTER 2, SECTIC	SPECIFICALLY S	TATED IN THE CITY	LUSE ONLY AND MAY NOT BE FU CODE, OR AS REQUIRED BY LAW KEPT SECURE AT ALL TIMES		FOR INSPECTION OR COPYING, EXCEPT AS		2432 W. P PHOENIX, Phone:(60	NGINEERING CONSULTANTS EORIA AVENUE, SUITE 1246 AZ 85029 2) 906-1901		s

N	AND C	UANTI	FIES			
TS	BID ITEM NO.		AS BUILT QUANTITY	APPROVE MATERIA		MANHOLE 39-23-304 WS90500273
4	1					NS9
	2	237				MAN
4	3					
٩.	4	1				
4	5					ER
=	6					E DIAMETER SANITARY SEWER 8TH - ZONE 3
4	7					SANIT ^A
=	8					E DIAMETER
=	9					ARGE DI
=	10					HOLES -
NTI	VED BY: ED NAME: ANY:			DATE: /	//	VICES D 4 MANH
ES						SER
TIC	DN.	() B	ofessional Signal Signal Sonad So	_	\mathbf{O}	CITY OF PHOENIX - WATER SERVICES DEPT - LARGI REHABILITATION - GRADE 5 & 4 MANHOLES - NOR
	SCALE C	DF MAP: 100	MANHO 22 / 5		SHEET NUMBER 29 OF 63	CITY OF REHABI

	PROJE	ECT INFORMATION					REHABILITATION D	ESIGN	AND Q	UANTI	TIES
CITY OF PHOENIX - WA	ATER SERVICES DEI	PT - LARGE DIAMETER	PROJE	ECT NUMBER: WS90500273							
SANITARY SEWER REHA	ABILITATION - GRA	ADE 5 & 4 MANHOLES -		PROJECT MANAGER: SAUL DURAN	CONSTRUCTION	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.	BID QUANTITY	
	NORTH - ZONE 3			ROJECT MANAGER. SAOL DURAN	DETAILS				NO.	QUANTIT	QUANTI
		OLE INFORMATION			MAG 422						
WAM ID :	LOCATION ID:	CROSS STREET:			MAG 423	COLLAR, FRAME	REPLACE COLLAR, FRAME & COVER	EA	1		
I-1194878	39-23-401	23RD AVE & TOPEKA DR			COP P1424	& COVER	a cover				
JURISDICTION: CITY OF PHOENIX	FRAME/COVER MATERI CAST IRON	IAL: COVER DIAMETER: 26 (IN)		ENVIRONMENT: SECONDARY ROAD		CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2	228	
DEPTH RIM TO INVERT:	BARREL DIAMETER:	CORROSION PROTECTION	1:	QUARTER SECTION:	DETAIL: 1 & 2	& BARREL		51	2	220	
16.2 (FT)	60 (IN)	NOT COATED		39-23							
COLLAR PRESENT: NO GROUND TYPE: ASPHALT	NASSCO MACP STRUCTURAL GRADE: 4	EXISTING WALL MATERIAL CONCRETE	L:	NOTES:			REPAIR & COAT	EA	3		
GROUND TIPE. ASPHALI		NHOLE LOCATION					48 IN DIAMETER	LA	5		
			Pri-		SHEET: D-4 DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	4	1	
		Sanda Wes	TTOPE	EKA DRIVE	SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5		
8	· · · · · · · · · · · · · · · · · · ·	-27 (in)	6		SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	6		
33.65	39-23-4				SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA	7		
	N. (3				SHEET: D-2 DETAIL: 1	INSERT	INSTALL 42-IN DIAMETER INSERT	VF	8		
		VCP-27 (III)	T.	6	SHEET: D-2 DETAIL: 1		INSTALL 54-IN DIAMETER INSERT	VF	9		
33.6580		B 39.73 AD WEST	WESCO	OTT DRIVE	MAG 420	MANHOLE	REPLACE MANHOLE	VF	10		
-112.1094 100 200	-112.1090 	-112.1085	<u>-112.108</u> END:	81 -112.1076	NOTES: SPARK TEST PULL TEST:	RESULTS:			oved by: "Ed name: "Any:		
ASSESSMENT NOTES:				MANHOLE TO REPAIR			Γ	OTES	6		
			F	Pipe Connection on Wall Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections	B. REMOVE AL	L STEPS BEFORE R	BEFORE PURCHASING MAT EHABILITATION WORK.	ERIAL.			rotessional Light
AS BUILT CERTIFICATION I HEREBY CERTIFY THAT THE "RECOR MEASUREMENTS AS SHOWN HEREO UNDER MY SUPERVISION OR AS NOT CORRECT TO THE BEST OF MY KNOW BELIEF.	D DRAWING" N WERE MADE REGIST TED ARE	TRATION NUMBER:		Existing Abandoned Sewer Main Not in GIS Pipe Connections City Sewer Main Flow Direction City Manholes / Not For Repair	D. COAT THE C E. REINSTATE F F. RESTORE LA G. USE FLOW T	HANNEL IF IT IS CO PIPE CONNECTION NDSCAPE/PAVEME FHROUGH PLUG IF	S AFTER COATING OR LININ ENT/SIDEWALK AFTER REHA	BILITATIO	DN.	A Contraction of the second se	33632 THOMAS 0. BRAATELIEN 2. 1-26-22 Soned 2001 J. 5 March 19 March 19 Mar
"PER PHOENIX CITY CODE CHAPTER 2, SEC	SPECIFICALLY STATED II	OR OFFICIALUSE ONLY AND MAY NOT BE FUF N THE CITY CODE, OR AS REQUIRED BY LAW" T MUST BE KEPT SECURE AT ALL TIMES		OR INSPECTION OR COPYING, EXCEPT AS		PHOENIX, Phone:(60	ENGINEERING CONSULTANTS FEORIA AVENUE, SUITE 1246 AZ 85029 22) 906-1901	NACTI below. sfore you dig.	SCALE C		MANH 23 /

ABILITATION DE	SIGN	AND C	UANTI	TIES			
REHABILITATION	UNITS	BID ITEM NO.		AS BUILT QUANTITY	APPROVED MATERIAL	MANUFACTURER	MANHOLE 39-23-401 WS90500273
ACE COLLAR, FRAME VER	EA	1					NS9 WS9
CT REPAIR COATING	SF	2	228				MAN
IR & COAT I DIAMETER	EA	3					
IR & COAT I DIAMETER	EA	4	1				
IR NOTE D)	EA	5					/ER
CT REPAIR PATCHING	SF	6					E DIAMETER SANITARY SEWER RTH - ZONE 3
T REPAIR	EA	7					R SANIT [#] 3
ALL 42-IN 1eter insert	VF	8					AMETEF - ZONE 3
ALL 54-IN 1ETER INSERT	VF	9					ERVICES DEPT - LARGE DIAMETE & 4 MANHOLES - NORTH - ZONE
ACE MANHOLE	VF	10					DEPT - L/
		OVED BY: ED NAME ANY:	:		DATE: /_	_/	RVICES E
Ν	OTES				·		s SEF 5 &
RE PURCHASING MATE LITATION WORK. HABILITATION. TE. R COATING OR LINING DEWALK AFTER REHAB SSARY. FTER REHABILITATION.	i. ILITATIC	DN.	Level 2 4 400	rolessiona/ ATTERCATE THOMAS 0. BRAATELIEN 1-26-22. Cond. U.S. TOMA. U.S. TOMA. U.S. TOMA. U.S.		6)	CITY OF PHOENIX - WATER SERVICES DEPT - LARGI REHABILITATION - GRADE 5 & 4 MANHOLES - NOF
NG CONSULTANTS NUE, SUITE 1246 D1 Know whats I Call ber	pelow. pre you dig.		DF MAP: 100	MANHO 23 / 5		IEET NUMBER: 30 OF 63	CITY OF REHABI

	PROJECT IN	FORMATION		REHABILITATION DESIGN AND QUANTITIES									
CITY OF PHOENIX - W	ATER SERVICES DEPT - L	ARGE DIAMETER	ROJECT NUMBER: WS90500273										R
SANITARY SEWER REH	ABILITATION - GRADE 5	& 4 MANHOLES -	TTY PROJECT MANAGER: SAUL DURAN	CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.			APPROVED MATERIAL	MANUFACTURER	R
	NORTH - ZONE 3												
	MANHOLE I	NFORMATION		MAG 422									C
AM ID :	LOCATION ID:	CROSS STREET:		MAG 423	& COVER	REPLACE COLLAR, FRAME & COVER	EA	1	1				2
	39-23-404	23RD AVE & MORROW DR		COP P1424									_
RISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL:	COVER DIAMETER: 32 (IN)	ENVIRONMENT: SECONDARY	SHFFT: D-3	CHIMNEY, CONE								
PTH RIM TO INVERT:	BARREL DIAMETER:	CORROSION PROTECTION:	QUARTER SECTION:	DETAIL: 1 & 2		DEFECT REPAIR COATING	SF	2					1
.3 (FT)	60 (IN)	NOT COATED	39-23										_
LLAR PRESENT: YES	NASSCO MACP	EXISTING WALL MATERIAL:	NOTES:			REPAIR & COAT	-	2					
OUND TYPE: ASPHALT	STRUCTURAL GRADE: 5	CONCRETE				48 IN DIAMETER	EA	3					
	MANHOLI	E LOCATION		SHEET: D-4 DETAIL: 1	BENCH								-
						REPAIR & COAT 60 IN DIAMETER	EA	4	1				
		VCP-27		SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5					
and the second sec		(m)		SHEET: D-4-6 DETAIL: ALL		DEFECT REPAIR PATCHING	SF	6					
		39-23-404	WEST MORROW DRIVE	SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA	7					
				SHEET: D-2 DETAIL: 1	INSERT	INSTALL 42-IN DIAMETER INSERT	VF	8					
		ACb-52 (III)		SHEET: D-2 DETAIL: 1		INSTALL 54-IN DIAMETER INSERT	VF	9	14.7				
		NORTH		MAG 420	MANHOLE	REPLACE MANHOLE	VF	10					
-112.1095 -112 100 200	2.1091 -112.108 300 ft	6 -112.1082 LEGENI	-112.1077 D:	NOTES: SPARK TEST PULL TEST:	RESULTS:			OVED BY: ED NAME: ANY:			DATE:	_/	
SESSMENT NOTES:			MANHOLE TO REPAIR			N	OTES						
SESSMENT NOTES. BUILT CERTIFICATION IEREBY CERTIFY THAT THE "RECOR EASUREMENTS AS SHOWN HEREC NDER MY SUPERVISION OR AS NO DRRECT TO THE BEST OF MY KNOV	RD DRAWING" ON WERE MADE REGISTRATION TED ARE	CIVIL ENGINEER:	 Not in GIS Pipe Connections City Sewer Main Flow Direction 	B. REMOVE AL C. BLAST CLEA D. COAT THE C E. REINSTATE F F. RESTORE LA G. USE FLOW 1	L STEPS BEFORE R IN MANHOLE BEFO CHANNEL IF IT IS C PIPE CONNECTION NDSCAPE/PAVEMI THROUGH PLUG IF	BEFORE PURCHASING MATE EHABILITATION WORK. DRE REHABILITATION. ONCRETE. S AFTER COATING OR LINING ENT/SIDEWALK AFTER REHAE NECESSARY.	RIAL.		Hapling	issional 3632 THOMAS 0. BRAATLEN 1-26-22. Soned.		6)	
LIEF. 'PER PHOENIX CITY CODE CHAPTER 2, SEC	SPECIFICALLY STATED IN THE CIT	IALUSE ONLY AND MAY NOT BE FURNIS Y CODE, OR AS REQUIRED BY LAW" E KEPT SECURE AT ALL TIMES	City Manholes / Not For Repair		FC PROJECT 2432 W. I PHOENIX Phone:(6)	ESTS AFTER REHABILITATION	TA <mark>BIT</mark> .	SCALE C		MANHO 24 / 5		IEET NUMBER: 31 OF 63	



		NFORMATION					REHABILITATION DE	SIGN	AND Q	UANTI	TIES
	ATER SERVICES DEPT -		PROJEC	CT NUMBER: WS90500273	CONSTRUCTION				BID ITEM	BID	AS BUILT
SANITARY SEWER REH		5 & 4 MANHOLES -	CITY PF	ROJECT MANAGER: SAUL DURAN	DETAILS	COMPONENT	REHABILITATION	UNITS			
	NORTH - ZONE 3										
WAM ID :	LOCATION ID:	INFORMATION CROSS STREET:			MAG 422 MAG 423		REPLACE COLLAR, FRAME	EA	1		
VVAIVI ID :	39-23-410	23RD AVE & UNION HILLS D	DR		COP P1424	& COVER	& COVER		1		
JURISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL: CAST IRON	COVER DIAMETER: 32 (IN)		ENVIRONMENT: SECONDARY ROAD		CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2	2	
DEPTH RIM TO INVERT: 18.6 (FT)	BARREL DIAMETER: 60 (IN)	CORROSION PROTECTION: EPOXY		QUARTER SECTION: 39-23	DETAIL: 1 & 2	& BARREL			2	2	
COLLAR PRESENT: YES GROUND TYPE: ASPHALT	NASSCO MACP STRUCTURAL GRADE: 4	EXISTING WALL MATERIAL: CONCRETE	:	NOTES:			REPAIR & COAT 48 IN DIAMETER	EA	3		
	MANHO	LE LOCATION	·		SHEET: D-4	BENCH					
33.6552		39-23-406		WEST MCRAE WAY	DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	4	1	
	E	VCP	2		SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5		
	Water.	avenue			SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	6		
	39-23-410 VCP-8 (in)	H 23RD AVI			SHEET: D-4 DETAIL: 1 & 3		JOINT REPAIR	EA	7		
	e + 10.	LTAON	A STATE		SHEET: D-2 DETAIL: 1	INSERT	INSTALL 42-IN DIAMETER INSERT	VF	8		
		39-23-408	VCP-2	27 (in)	SHEET: D-2 DETAIL: 1		INSTALL 54-IN DIAMETER INSERT	VF	9		
WEST UNION HILLS DRIVE		VCP-6 (in)	۵		MAG 420	MANHOLE	REPLACE MANHOLE	VF	10		
-112.1090 -112. 50 100	1088 -112.10	•		-112.1081	NOTES: SPARK TEST PULL TEST:	RESULTS:			OVED BY: ED NAME: ANY:		
ASSESSMENT NOTES:	20011		🔵 М.	ANHOLE TO REPAIR			N	OTES			
AS BUILT CERTIFICATION I HEREBY CERTIFY THAT THE "RECOF MEASUREMENTS AS SHOWN HEREC UNDER MY SUPERVISION OR AS NO CORRECT TO THE BEST OF MY KNOV BELIEF.	RD DRAWING" DN WERE MADE REGISTRATI DTED ARE	O CIVIL ENGINEER:	Pij Pij Di Ex Na Ci	pe Connection on Wall pe Connection Over Bench pe Connection At Channel rop Pipe Connections xisting Abandoned Sewer Main ot in GIS Pipe Connections ity Sewer Main ow Direction ity Manholes / Not For Repair	B. REMOVE AL C. BLAST CLEA D. COAT THE C E. REINSTATE F F. RESTORE LA G. USE FLOW	L STEPS BEFORE R N MANHOLE BEFO HANNEL IF IT IS C PIPE CONNECTION NDSCAPE/PAVEMI THROUGH PLUG IF	S AFTER COATING OR LINING ENT/SIDEWALK AFTER REHAE). BILITATIC	DN.	The second	messiony control of the second control of th
"PER PHOENIX CITY CODE CHAPTER 2, SEC	SPECIFICALLY STATED IN THE	ICIALUSE ONLY AND MAY NOT BE FURN ITY CODE, OR AS REQUIRED BY LAW" BE KEPT SECURE AT ALL TIMES	NISHED FO	R INSPECTION OR COPYING, EXCEPT AS		2432 W. PHOENIX Phone:(6	ENGINEERING CONSULTANTS PEORIA AVENUE, SUITE 1246 , AZ 85029 02) 906-1901 Know what's Call ber		SCALE C		MANH 26 /

ABILITATION DE	SIGN	AND C	UANTI	TIES			
REHABILITATION	UNITS	BID ITEM NO.		AS BUILT QUANTITY	APPROVED MATERIAL	MANUFACTURER	MANHOLE 39-23-410 WS90500273
ACE COLLAR, FRAME IVER	EA	1					NOLE 3 WS9
CT REPAIR COATING	SF	2	2				MAN
IR & COAT I DIAMETER	EA	3					
IR & COAT I DIAMETER	EA	4	1				
IR NOTE D)	EA	5					'ER
CT REPAIR PATCHING	SF	6					E DIAMETER SANITARY SEWER RTH - ZONE 3
T REPAIR	EA	7					k SANIT ² 3
ALL 42-IN /IETER INSERT	VF	8					AMETER - ZONE 3
ALL 54-IN ⁄IETER INSERT	VF	9					ERVICES DEPT - LARGE DIAMETE & 4 MANHOLES - NORTH - ZONE
ACE MANHOLE	VF	10					HOLES -
		OVED BY: ED NAME: ANY:			DATE:	_/	VICES E 4 MANI
N	OTES						SEF 5 &
RE PURCHASING MATE LITATION WORK. HABILITATION. ETE. R COATING OR LINING DEWALK AFTER REHAB SSARY. FTER REHABILITATION.	ILITATIC	DN.	A CONTRACTOR OF	niessiona/ Siessi	_	6	CITY OF PHOENIX - WATER SERVICES DEPT - LARG REHABILITATION - GRADE 5 & 4 MANHOLES - NOF
NG CONSULTANTS ENUE, SUITE 1246 01 Know what's D Call before	elow. re you dig.	SCALE C)F MAP: 50	MANHO 26 / 5		IEET NUMBER: 33 OF 63	CITY OF REHABI

	PROJECT II	NFORMATION					REHABILITATION DE	SIGN	AND C	UANTI	FIES				
CITY OF PHOENIX - WAT	FER SERVICES DEPT - I	ARGE DIAMETER	PROJECT	T NUMBER: WS90500273											
SANITARY SEWER REHA	BILITATION - GRADE 5	& 4 MANHOLES -	CITY PRO	OJECT MANAGER: SAUL DURAN	CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.			APPROVED MATERIAL	MANUFACTURER		
N	NORTH - ZONE 3														
		INFORMATION			MAG 422	COLLAR, FRAME	REPLACE COLLAR, FRAME								
	LOCATION ID: 39-23-408	CROSS STREET: UNION HILLS DR & 23RD A	WE		MAG 423 COP P1424	& COVER	-	-	& COVER	EA	1	1			
	FRAME/COVER MATERIAL:	COVER DIAMETER:		NVIRONMENT: MAJOR											
	CAST IRON	32 (IN)		ARTERIAL ROAD		CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2						
	BARREL DIAMETER:	CORROSION PROTECTION:		QUARTER SECTION:	DETAIL: 1 & 2	& BARREL		51	2						
	60 (IN) NASSCO MACP	NOT COATED EXISTING WALL MATERIAL:		19-23 NOTES:											
	STRUCTURAL GRADE: 5	CONCRETE					REPAIR & COAT	EA	3						
	MANHOL		SHEET: D-4	BENCH	48 IN DIAMETER										
	39-23-410	AVENUE			DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	4	1					
	VCP-8 (in)	1 23RD A			SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5	1					
600 e'e'e'e		CP-27 (in) 39-23-408	C. H. S.		SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	6						
		39-23-408	VCP-27	' (in)	SHEET: D-4 DETAIL: 1 & 3		JOINT REPAIR	EA	7						
WEST UNION HILLS DRIVE			•		SHEET: D-2 DETAIL: 1	INCERT	INSTALL 42-IN DIAMETER INSERT	VF	8						
	- 1.	VCP-6 (in)	State 1		SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	9	14.9					
		4	12		MAG 420	MANHOLE	REPLACE MANHOLE	VF	10						
-112.1090 -112. 50 100	1088 -112." 150 ft	1085 -112,1 LEGE		-112.1081	NOTES: SPARK TEST PULL TEST:	RESULTS:			OVED BY: ED NAME: ANY:			DATE: /	_/		
SSESSMENT NOTES:	150 11			NHOLE TO REPAIR			N	OTES							
			Pipe Pipe	e Connection on Wall e Connection Over Bench e Connection At Channel op Pipe Connections	B. REMOVE AL	L STEPS BEFORE R	BEFORE PURCHASING MATE EHABILITATION WORK.	RIAL.		[3]	otessional English				
<u>S BUILT CERTIFICATION</u> HEREBY CERTIFY THAT THE "RECORD IEASUREMENTS AS SHOWN HEREON	DRAWING"		Exis	sting Abandoned Sewer Main t in GIS Pipe Connections	D. COAT THE C	HANNEL IF IT IS CO	RE REHABILITATION. DNCRETE. 5 AFTER COATING OR LINING	i.			33632 THOMAS 0. BRAATELIEN 1-26-22				
NDER MY SUPERVISION OR AS NOTE	D ARE			y Sewer Main w Direction			NT/SIDEWALK AFTER REHAE	ILITATIC	DN.	-tl	an Arcatt				
CORRECT TO THE BEST OF MY KNOWL	EDGE AND DATE:			y Manholes / Not For Repair		THROUGH PLUG IF PARK AND PULL TE	NECESSARY. ESTS AFTER REHABILITATION			1 20					
ELIEF.	SPECIFICALLY STATED IN THE CI	CIALUSE ONLY AND MAY NOT BE FURN TY CODE, OR AS REQUIRED BY LAW" BE KEPT SECURE AT ALL TIMES	-			FC PROJECT E 2432 W. P PHOENIX, Phone:(60	NGINEERING CONSULTANTS EORIA AVENUE, SUITE 1246	JA <mark>BII</mark>	SCALE C)F MAP: 50	MANHC 27 / 5		EET NUMBER: 34 OF 63		

	PROJECT I	NFORMATION		REHABILITATION DESIGN AND QUANTITIES									
CITY OF PHOENIX - WA	TER SERVICES DEPT -	LARGE DIAMETER	ROJECT NUMBER: WS90500273										26
SANITARY SEWER REHA	BILITATION - GRADE	5 & 4 MANHOLES -	ITY PROJECT MANAGER: SAUL DURAN	CONSTRUCTIOI DETAILS	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.		AS BUILT QUANTITY	APPROVED	MANUFACTURER	4-1
	NORTH - ZONE 3		TTT PROJECT MANAGER. SAUE DURAN	DETAILS				NO.	QUANTIT	QUANTIT			9-24-
		INFORMATION		MAG 422			1						ñ
/AM ID :	LOCATION ID:	CROSS STREET:		MAG 423	COLLAR, FRAME	REPLACE COLLAR, FRAME & COVER	EA	1	1				OLE
1229509	39-24-126	21ST AVE & UNION HILLS DR		COP P1424	& COVER	& COVER							Ĭ
	FRAME/COVER MATERIAL: CAST IRON	COVER DIAMETER: 32 (IN)	ENVIRONMENT: MAJOR ARTERIAL ROAD	SHEET: D-3	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2					MANHOLE
EPTH RIM TO INVERT:	BARREL DIAMETER:	CORROSION PROTECTION:	QUARTER SECTION: 39-24	DETAIL: 1 & 2	& BARREL			_					
5.3 (FT) DLLAR PRESENT: YES	60 (IN) NASSCO MACP	NOT COATED EXISTING WALL MATERIAL:	NOTES:										
	STRUCTURAL GRADE: 5	CONCRETE	NOTES:			REPAIR & COAT	EA	3					
		LE LOCATION		SHEET: D-4		48 IN DIAMETER							
	3974-124	39.74.71		DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	4	1				-
				SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5	1				
5		Cont		SHEET: D-4-6 DETAIL: ALL	– PVC LINER	DEFECT REPAIR PATCHING	SF	6					
VCP-27		39-24-126		SHEET: D-4 DETAIL: 1 & 3		JOINT REPAIR	EA	7					
WEST UNION HILLS D				SHEET: D-2 DETAIL: 1		INSTALL 42-IN DIAMETER INSERT	VF	8					
				SHEET: D-2 DETAIL: 1	- INSERT	INSTALL 54-IN DIAMETER INSERT	VF	9	21.7				
		CP-27 (in)		MAG 420	MANHOLE	REPLACE MANHOLE	VF	10					
-112.1064 100 200	-112.1060 300 ft	-112.1055	<u>-112.1051</u> -112.1046):	NOTES: SPARK TEST PULL TEST:	RESULTS:			oved by: Ed name Any:	:		DATE:	_/	
SESSMENT NOTES:			MANHOLE TO REPAIR			N	OTES						L
BUILT CERTIFICATION	REGISTEDER	CIVIL ENGINEER:	Pipe Connection on Wall Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections	B. REMOVE A	LL STEPS BEFORE R	BEFORE PURCHASING MATE EHABILITATION WORK. DRE REHABILITATION.				otessionar Linguages	1		
EREBY CERTIFY THAT THE "RECORD EASUREMENTS AS SHOWN HEREON IDER MY SUPERVISION OR AS NOTE	D DRAWING" N WERE MADE REGISTRATIO		 Existing Abandoned Sewer Main Not in GIS Pipe Connections City Sewer Main Flow Direction 	D. COAT THE (E. REINSTATE F. RESTORE LA	CHANNEL IF IT IS CONPECTION	ONCRETE. S AFTER COATING OR LINING ENT/SIDEWALK AFTER REHAE		DN.	Regis	1-26-22			
DRRECT TO THE BEST OF MY KNOW	LEDGE AND DATE:		City Manholes / Not For Repair			ESTS AFTER REHABILITATION							
	SPECIFICALLY STATED IN THE C	ICIALUSE ONLY AND MAY NOT BE FURNIS ITY CODE, OR AS REQUIRED BY LAW" BE KEPT SECURE AT ALL TIMES	HED FOR INSPECTION OR COPYING, EXCEPT AS		2432 W. F PHOENIX, Phone:(60	ENGINEERING CONSULTANTS PEORIA AVENUE, SUITE 1246 AZ 85029 02) 906-1901	below. fore you dig.	SCALE (1::	DF MAP: 100	MANHC 28 / 5		IEET NUMBER: 35 OF 63	

	P	ROJECT INI	FORMATION					REHABILITATION D	ESIGN	A
CITY OF PHOENIX - WA				PROJ	IECT NUMBER: WS90500273					ſ
SANITARY SEWER REHA						CONSTRUCTION	COMPONENT	REHABILITATION	UNITS	E
	NORTH - ZO		x + MANHOLLS -	CITY	PROJECT MANAGER: SAUL DURAN	DETAILS				
			IFORMATION						-	+
WAM ID :	LOCATION ID:		CROSS STREET:			MAG 422 MAG 423		REPLACE COLLAR, FRAME	EA	
I-1255988	38-24-202		21ST AVE & WAGONER RD			COP P1424	& COVER	& COVER		
JURISDICTION: CITY OF PHOENIX	FRAME/COVER	MATERIAL:	COVER DIAMETER:		ENVIRONMENT: SECONDARY					t
	CAST IRON		32 (IN)		ROAD		CHIMNEY, CONE	DEFECT REPAIR COATING	SF	
DEPTH RIM TO INVERT: 25.3 (FT)	BARREL DIAMET 60 (IN)	TER:	CORROSION PROTECTION: NOT COATED		QUARTER SECTION: 38-24	DETAIL: 1 & 2	& BARREL		_	
COLLAR PRESENT: YES	NASSCO MACP		EXISTING WALL MATERIAL		NOTES:			_		T
GROUND TYPE: ASPHALT	STRUCTURAL GF	RADE: 4	CONCRETE					REPAIR & COAT 48 IN DIAMETER	EA	
	·	MANHOLE	LOCATION			SHEET: D-4	BENCH			
		3824278 m	3824-20 ⁶	E Vest	WAGONER ROAD	DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	
33.6533		ST AVENU	VCP-27 (in)			SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	
		G DRTH 215				SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	
2822219		E SALE	38-24-202	N.C.	382422	SHEET: D-4 DETAIL: 1 & 3		JOINT REPAIR	EA	
6292						SHEET: D-2 DETAIL: 1		INSTALL 42-IN DIAMETER INSERT	VF	
			VCP-27 (in)			SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	
		F -				MAG 420	MANHOLE	REPLACE MANHOLE	VF	
-112.1065	112.1060	-112.1		2.1051 ND:	-112.1047	NOTES: SPARK TEST PULL TEST:	RESULTS:		APPRO PRINT COMF	ΈĽ
100 200	30	00 ft			MANHOLE TO REPAIR				NOTES	
ASSESSMENT NOTES:					Pipe Connection on Wall				VIES	
					Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections	B. REMOVE AL	L STEPS BEFORE R	BEFORE PURCHASING MAT EHABILITATION WORK. DRE REHABILITATION.	ERIAL.	
AS BUILT CERTIFICATION	D DRAWING"		IVIL ENGINEER:	$\times \times$	Existing Abandoned Sewer Main		HANNEL IF IT IS C			
MEASUREMENTS AS SHOWN HEREO		REGISTRATION	NUMBER:		Not in GIS Pipe Connections City Sewer Main			S AFTER COATING OR LININ		<u>.</u> .
UNDER MY SUPERVISION OR AS NOT		D. 475	ı	>	Flow Direction		NDSCAPE/PAVEMI THROUGH PLUG IF	ENT/SIDEWALK AFTER REHA NECESSARY	BILITATI	٦N
CORRECT TO THE BEST OF MY KNOW BELIEF.	LEDGE AND	DATE:	'	-	City Manholes / Not For Repair			ESTS AFTER REHABILITATION	۷.	
	SPECIFICALLY	STATED IN THE CITY	ALUSE ONLY AND MAY NOT BE FUR CODE, OR AS REQUIRED BY LAW" KEPT SECURE AT ALL TIMES	NISHED	FOR INSPECTION OR COPYING, EXCEPT AS		2432 W. F PHOENIX, Phone:(6)	ENGINEERING CONSULTANTS PEORIA AVENUE, SUITE 1246 AZ 85029 J2) 906-1901	rs below. before you dig.	0

δN	AND O	UANTI	FIES				
ITS	BID ITEM NO.	BID QUANTITY	AS BUILT QUANTITY	APPROV MATERI		NUFACTURER	MANHOLE 38-24-202 WS90500273
4	1						IHOLE 3 WS9
F	2	353					MAN
4	3						
4	4	1					
4	5						/ER
F	6						E DIAMETER SANITARY SEWER RTH - ZONE 3
4	7						R SANIT/ 3
F	8						E DIAMETER XTH - ZONE 3
F	9						ARGE DI NORTH
F	10						HOLES -
ΝΤΙ	OVED BY: ED NAME: ANY:			DATE:	//_		VICES E 4 MANI
ES							SEF 5 &
 TIC	DN.		olessionor FIFICATZ Sond BIRATELIEN Sond Sond USA Sond USA Sond USA Sond USA Sond USA Sond USA Sond USA Sond USA Sond USA Sond USA Sond				CITY OF PHOENIX - WATER SERVICES DEPT - LARGI REHABILITATION - GRADE 5 & 4 MANHOLES - NOR
9 .	SCALE C	DF MAP: 100	MANHO 29 / 5			NUMBER: OF 63	CITY OI REHAB

	PROJECT IN	NFORMATION					REHABILITATION DI	ESIGN	AND C	UANTI	TIES		
CITY OF PHOENIX - WA	ATER SERVICES DEPT - L	ARGE DIAMETER	PROJECT NUMBER: WS	590500273	CONCEPTION								
SANITARY SEWER REHA	ABILITATION - GRADE 5	& 4 MANHOLES -	CITY PROJECT MANAG	ER: SAUL DURAN	CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.	BID QUANTITY		APPROVED MATERIAL	MANUFACTURER
	NORTH - ZONE 3												
		NFORMATION			MAG 422	COLLAR, FRAME	REPLACE COLLAR, FRAME						
VAM ID : -1229710	LOCATION ID: 38-24-104	CROSS STREET: 21ST AVE & MORNINGSID	DE DR		MAG 423 COP P1424	& COVER	& COVER	EA	1				
JURISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL: CAST IRON	COVER DIAMETER: 32 (IN)	ENVIRONMENT ROAD	: SECONDARY	SHEET: D-3	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2				
DEPTH RIM TO INVERT:	BARREL DIAMETER:	CORROSION PROTECTION	-	ION:	DETAIL: 1 & 2	& BARREL	DEFECT REPAIR COATING	SF	Z				
25.2 (FT) COLLAR PRESENT: YES	60 (IN) NASSCO MACP	NOT COATED EXISTING WALL MATERIAL	38-24 L: NOTES:										
GROUND TYPE: ASPHALT	STRUCTURAL GRADE: 5	CONCRETE	L. NOTES.				REPAIR & COAT 48 IN DIAMETER	EA	3				
	MANHOL	E LOCATION			SHEET: D-4 DETAIL: 1	BENCH							
	38-24-105					blitten	REPAIR & COAT 60 IN DIAMETER	EA	4	1			
		SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5	1						
1		SHEET: D-4-6 DETAIL: ALL		DEFECT REPAIR PATCHING	SF	6							
25-radius	38-24-104					PVC LINER	JOINT REPAIR	EA	7				
	IORTH 21			SHEET: D-2 DETAIL: 1		INSTALL 42-IN DIAMETER INSERT	VF	8					
4		VCP-27 (in)			SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	9	21.3			
is-been			NGSIDE DRIVE (240	FT)	MAG 420	MANHOLE	REPLACE MANHOLE	VF	10				
WEST MORNINGSIDE DRIVE (240 FT) -112.1059 -112.1054 -112.1052 -112.1050 LEGEND: LEGEND:					NOTES: SPARK TEST PULL TEST:	RESULTS:			OVED BY: ED NAME ANY:	:		DATE:	_/
50 100	150 ft		MANHOLE TO REPA	JR			N	IOTES					
Pipe Connection on Wall Pipe Connection Over Bench Pipe Connection At Channel Dran Direc Connections							BEFORE PURCHASING MAT				ofessional L		
AS BUILT CERTIFICATION I HEREBY CERTIFY THAT THE "RECORI	D DRAWING"	X	Existing Abandoned Not in GIS Pipe Con	Sewer Main	D. COAT THE C	HANNEL IF IT IS CO	DRE REHABILITATION. ONCRETE. S AFTER COATING OR LINING	-		Registere	33632 THOMAS 0. BRAATELIEN 1-26-22		5
MEASUREMENTS AS SHOWN HEREO UNDER MY SUPERVISION OR AS NOT CORRECT TO THE BEST OF MY KNOW	TED ARE		City Sewer Main Flow Direction		F. RESTORE LAN G. USE FLOW T	NDSCAPE/PAVEME HROUGH PLUG IF	ENT/SIDEWALK AFTER REHAI NECESSARY.	BILITATIC	DN.	Thomas	ZONA U.S.N.	_	
BELIEF.			City Manholes / Not					•					
"PER PHOENIX CITY CODE CHAPTER 2, SEC		CIALUSE ONLY AND MAY NOT BE FUI TY CODE, OR AS REQUIRED BY LAW'		OPYING, EXCEPT AS			ENGINEERING CONSULTANTS PEORIA AVENUE, SUITE 1246 AZ 85029		SCALE C	ΓΕ ΜΔΡ·	MANHC		EET NUMBER:

	PR	OJECT IN	FORMATION					REHABILITATION DE	SIGN	AND O	UANTI	FIES		
CITY OF PHOENIX - WAT	TER SERVICES	DEPT - LA	ARGE DIAMETER	R PROJ	ECT NUMBER: WS90500273									
SANITARY SEWER REHA	BILITATION - G	RADE 5 8	& 4 MANHOLES	-		CONSTRUCTION	COMPONENT	REHABILITATION	UNITS	BID ITEM			APPROVED	MANUFACTURER
	NORTH - ZONE			CITY	PROJECT MANAGER: SAUL DURAN	DETAILS				NO.	QUANTITY	QUANTITY	MATERIAL	
						NAC 422								
VAM ID :	LOCATION ID:		VFORMATION CROSS STREET:			MAG 422 MAG 423		REPLACE COLLAR, FRAME	EA	1	1			
	37-24-307		GREENBRIAR DR & 2	1ST AVE		COP P1424	& COVER	& COVER		-	-			
URISDICTION: CITY OF PHOENIX	FRAME/COVER MA	TERIAL:	COVER DIAMETER:		ENVIRONMENT: SECONDARY									
	CAST IRON		32 (IN)		ROAD		CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2				
	BARREL DIAMETER	:	CORROSION PROTEC	CTION:	QUARTER SECTION:	DETAIL: 1 & 2	& BARREL			2				
	60 (IN)		NOT COATED		37-24									
	NASSCO MACP STRUCTURAL GRAD		EXISTING WALL MAT	ERIAL:	NOTES:			REPAIR & COAT	EA	3				
KOUND TTPE. ASPHALI								48 IN DIAMETER		3				
			LOCATION			SHEET: D-4 DETAIL: 1	BENCH							
	PP-	0	37.24.333					REPAIR & COAT 60 IN DIAMETER	EA	4	1			
24280	31		Lander W		AND E AND A DA									
31				1		SHEET: D-1	CHANNEL	REPAIR	EA	5				
		*	2 3			DETAIL: 1 - 5		(SEE NOTE D)		5				
	- · · · · · · · · · · · · · · · · · · ·		Ŷ .											
	7 37-24-307					SHEET: D-4-6		DEFECT REPAIR PATCHING	SF	6				
						DETAIL: ALL				U				
							PVC LINER							
	Contraction of the second					SHEET: D-4		JOINT REPAIR	EA	7				
WEST GREENBRIAR DI	RIVE		○ - < - - < - - <	VCP-8 (IN)	2433	DETAIL: 1 & 3				,				
WEST GREENDE		ш		A TAN	3									
		R	Y			SHEET: D-2		INSTALL 42-IN	VF	8				
- 6 Land		Ň				DETAIL: 1		DIAMETER INSERT	VI	U				
		H H	1 6	1 A P			INSERT							
to at the second		115	P a			SHEET: D-2		INSTALL 54-IN	VF	9	19.8			
	A A A	D I		HA. TH		DETAIL: 1		DIAMETER INSERT	VI	9	19.0			
	31.24													
	100 2 - Ar - Lan - 2-	2	and the second			MAG 420	MANHOLE		VF	10				
in the second se			The second			IVIAG 420	WANHOLE	REPLACE MANHOLE	VF	10				
				100	1 I Part	NOTES:				VED BY:			DATE:	
	1.1	El III		TR		SPARK TEST	RESULTS:			ED NAME:			DATE.	
-112.1063	-112.1058	-1	112.1054	-112.104 LEGEND:	9 -112.1045	PULL TEST:			COMP				/_	_/
100 200	300 f								OTEC					
SSESSMENT NOTES: MANHOLE TO REPAIR Pipe Connection on Wall								N	OTES					
					Pipe Connection on Wall Pipe Connection Over Bench			BEFORE PURCHASING MATE	RIAI					
					Pipe Connection At Channel			EHABILITATION WORK.				ofessional Francisco		1.
S BUILT CERTIFICATION	RI	EGISTERED C	IVIL ENGINEER:		Drop Pipe Connections	C. BLAST CLEA	N MANHOLE BEFC	RE REHABILITATION.			istered and a second	33632	1	
HEREBY CERTIFY THAT THE "RECORD					Existing Abandoned Sewer Main Not in GIS Pipe Connections		HANNEL IF IT IS CO				Reg	THOMAS 0. BRAATELIEN 1-26-22		
IEASUREMENTS AS SHOWN HEREON		EGISTRATION	NUMBER:		City Sewer Main			S AFTER COATING OR LINING			14	Sgned		
NDER MY SUPERVISION OR AS NOTE		ATE			Flow Direction		NDSCAPE/PAVEME	ENT/SIDEWALK AFTER REHAE NECESSARY.		/IN.	The	a Arall	_ `	
CORRECT TO THE BEST OF MY KNOWL BELIEF.		ATE:			City Manholes / Not For Repair			ESTS AFTER REHABILITATION						
				-				h						
"PER PHOENIX CITY CODE CHAPTER 2, SECTI			ALUSE ONLY AND MAY NOT Y CODE, OR AS REQUIRED B		FOR INSPECTION OR COPYING, EXCEPT AS		2432 W. P	ENGINEERING CONSULTANTS EORIA AVENUE, SUITE 1246 AZ 85029	JASTI	SCALE C		MANHC 31 / 5	LE: S⊢	IEET NUMBER:
							PHOENIX,				.00			

	PROJECT	INFORMATION					REHABILITATION DE	SIGN	AND O	UANTI	FIES			
CITY OF PHOENIX - WAT	ER SERVICES DEPT -	LARGE DIAMETER	PROJE	ECT NUMBER: WS90500273						212				308
SANITARY SEWER REHAB	BILITATION - GRADE	5 & 4 MANHOLES -		PROJECT MANAGER: SAUL DURAN	CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.			APPROVED MATERIAL	MANUFACTURER	4
Ν	IORTH - ZONE 3													7-2
	MANHOLE	INFORMATION	•		MAG 422		REPLACE COLLAR, FRAME							LE 37-
	LOCATION ID:	CROSS STREET:			MAG 423	& COVER	& COVER	EA	1	1				OL
	37-24-308 FRAME/COVER MATERIAL:	VILLAGE DR & 21ST AVE COVER DIAMETER:		ENVIRONMENT: SECONDARY	COP P1424									E
	CAST IRON	32 (IN)		ROAD	SHEET: D-3	CHIMNEY, CONE			-					MANHOLE
	BARREL DIAMETER:	CORROSION PROTECTION	:	QUARTER SECTION:	DETAIL: 1 & 2		DEFECT REPAIR COATING	SF	2					2
· ·	50 (IN)	NOT COATED		37-24										-
	NASSCO MACP STRUCTURAL GRADE: 5	EXISTING WALL MATERIAL CONCRETE	.:	NOTES:			REPAIR & COAT	EA	3					
					SHEET: D-4		48 IN DIAMETER		5					
	- TORNAL	C		DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	4	1					
		VCP-			SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5	1				SEWER
	R. B.	3			SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	6					RY
WEST VILLAG	GE DRIVE	VCP-8 (in) 3 ^{1/2}	312		SHEET: D-4 DETAIL: 1 & 3		JOINT REPAIR	EA	7					R SANITA
	VENUE			33/24-2	SHEET: D-2 DETAIL: 1	INSERT	INSTALL 42-IN DIAMETER INSERT	VF	8					AMETER
	H 21STA	VCP-27 (in)		- 126 2 1	SHEET: D-2 DETAIL: 1		INSTALL 54-IN DIAMETER INSERT	VF	9	19.4				ARGE DI
3122200	Nort		75	Lo Tes	MAG 420	MANHOLE	REPLACE MANHOLE	VF	10					DEPT - L
-112.1064 -112.1059 100 200	-112.105 300 ft		END:	-112.1046	NOTES: SPARK TEST PULL TEST:	RESULTS:			OVED BY: ED NAME: ANY:			DATE:	_/	RVICES
ASSESSMENT NOTES:			O 1	MANHOLE TO REPAIR			Ν	OTES						SE
AS BUILT CERTIFICATION REGISTERED CIVIL ENGINEER: Pipe Connection Over Bench I HEREBY CERTIFY THAT THE "RECORD DRAWING" REGISTERED CIVIL ENGINEER: Drop Pipe Connections MEASUREMENTS AS SHOWN HEREON WERE MADE REGISTRATION NUMBER: Drop Pipe Connections UNDER MY SUPERVISION OR AS NOTED ARE REGISTRATION NUMBER: City Sewer Main CORRECT TO THE BEST OF MY KNOWLEDGE AND DATE: Flow Direction BELIEF. City Manholes / Not For Repair						L STEPS BEFORE R N MANHOLE BEFO HANNEL IF IT IS CO PIPE CONNECTIONS NDSCAPE/PAVEME FHROUGH PLUG IF	S AFTER COATING OR LINING NT/SIDEWALK AFTER REHAB). BILITATIC	DN.	And	otessiong HICA2 33632 HOMAS 0. BRAATELIAN 1-26-22 ONA USA ONA USA		6)	CITY OF PHOENIX - WATER 5
"PER PHOENIX CITY CODE CHAPTER 2, SECTIO	SPECIFICALLY STATED IN THE	FICIALUSE ONLY AND MAY NOT BE FUR CITY CODE, OR AS REQUIRED BY LAW" T BE KEPT SECURE AT ALL TIMES	RNISHED F	OR INSPECTION OR COPYING, EXCEPT AS		2432 W. P PHOENIX, Phone:(60	NGINEERING CONSULTANTS EORIA AVENUE, SUITE 1246 AZ 85029 2) 906-1901	below. fore you dig.	SCALE C		MANHC 32 / 5		IEET NUMBER: 39 OF 63	CITY OF

	PROJECT IN	FORMATION					REHABILITATION DE	SIGN	AND C	UANTI	FIES			
CITY OF PHOENIX - WAT	ER SERVICES DEPT - L	ARGE DIAMETER	PROJE	CT NUMBER: WS90500273										22
SANITARY SEWER REHAB	BILITATION - GRADE 5	& 4 MANHOLES -		ROJECT MANAGER: SAUL DURAN	CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.	BID QUANTITY		APPROVED	MANUFACTURER	24-3
Ν	IORTH - ZONE 3			ROJECT MANAGER. SAUE DURAN	DETAILS				NO.		QUANTIT			-2
		NFORMATION			MAG 422									m
AM ID :	LOCATION ID:	CROSS STREET:			MAG 423	COLLAR, FRAME & COVER	REPLACE COLLAR, FRAME & COVER	EA	1	1				DLE
	37-24-322	MEADOW DR & 21ST AVE			COP P1424	A COVER	A COVER							H
c	FRAME/COVER MATERIAL: CAST IRON	COVER DIAMETER: 32 (IN)		ENVIRONMENT: SECONDARY ROAD		CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2					MANHOLE
	BARREL DIAMETER: 50 (IN)	CORROSION PROTECTION: NOT COATED		QUARTER SECTION: 37-24	DETAIL: 1 & 2	& BARREL								
	NASSCO MACP	EXISTING WALL MATERIAL:		NOTES:										
	STRUCTURAL GRADE: 4	CONCRETE	•	Notes.			REPAIR & COAT	EA	3					
		E LOCATION			SHEET: D-4		48 IN DIAMETER		_					
	VCP-27 (In)			- All	DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	4	1				
33242					SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5	1				
				Hor of	SHEET: D-4-6 DETAIL: ALL		DEFECT REPAIR PATCHING	SF	6					
WEST MEAD	OOW DRIVE	V27 37-24-322 (i) VCP-8 (in)	31-24-323	E	PVC LINER		JOINT REPAIR	EA	7					
	WEST MEADOW DRIVE				SHEET: D-2 DETAIL: 1	INCERT	INSTALL 42-IN DIAMETER INSERT	VF	8					AAFTED
E. T.	ST AVENU	VCP-27 (in)			SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	9	18.8				
2126-22.1	ORTH 21				MAG 420	MANHOLE	REPLACE MANHOLE	VF	10					
-112.1060	-112.1056	-112.1051	END:	-112.1047	NOTES: SPARK TEST PULL TEST:	RESULTS:			oved by: Ed name: Any:			DATE:	_/	
100 200	300 ft		○ №	IANHOLE TO REPAIR			Ν	OTES				1		
SESSMENT NOTES:			$\mathbf{}$	Pipe Connection on Wall										-
AS BUILT CERTIFICATION REGISTERED CIVIL ENGINEER: Pipe Connection Over Bench Drop Pipe Connection At Channel Drop Pipe Connections					B. REMOVE AL	L STEPS BEFORE R	BEFORE PURCHASING MATE EHABILITATION WORK.	RIAL.			ofessional L2			
BUILT CERTIFICATION				Existing Abandoned Sewer Main		N MANHOLE BEFO HANNEL IF IT IS CC	RE REHABILITATION.			egiste,	33632 THOMAS O. BRAATELIEN			
EREBY CERTIFY THAT THE "RECORD I			N	lot in GIS Pipe Connections			S AFTER COATING OR LINING	i.		A Des	1-26-22			
EASUREMENTS AS SHOWN HEREON V IDER MY SUPERVISION OR AS NOTED				City Sewer Main			NT/SIDEWALK AFTER REHAB		DN.	PA A	ZONA U.S.A.			
RRECT TO THE BEST OF MY KNOWLE		[low Direction	G. USE FLOW 1	HROUGH PLUG IF	NECESSARY.			Tho	ne Areald	-		
LIEF.			• C	City Manholes / Not For Repair	H. PERFORM S	PARK AND PULL TE	STS AFTER REHABILITATION.							
"PER PHOENIX CITY CODE CHAPTER 2, SECTIO	SPECIFICALLY STATED IN THE CI	CIALUSE ONLY AND MAY NOT BE FUR TY CODE, OR AS REQUIRED BY LAW" SE KEPT SECURE AT ALL TIMES	NISHED FO	DR INSPECTION OR COPYING, EXCEPT AS		2432 W. Pl PHOENIX, J Phone:(60)	NGINEERING CONSULTANTS EORIA AVENUE, SUITE 1246 AZ 85029 2) 906-1901	below.	SCALE C	DF MAP: LOO	MANHC 33 / 5		IEET NUMBER: 40 OF 63	

	F	PROJECT IN	FORMATION					REHABILITATION DE	<mark>ESIGN</mark>	
CITY OF PHOENIX - WAT	TER SERVICE	ES DEPT - LA	ARGE DIAMETER	PF	OJECT NUMBER: WS90500273					Ī
SANITARY SEWER REHA	BILITATION	- GRADE 5 8	& 4 MANHOLES -	C	TY PROJECT MANAGER: SAUL DUBAN		COMPONENT	REHABILITATION	UNITS	
	NORTH - ZO	NE 3								
	Ν	IANHOLE IN	IFORMATION			MAG 422				Ī
	LOCATION ID:		CROSS STREET:			MAG 423	& COVER	& COVER	EA	
	37-24-118 FRAME/COVER			RD		COP P1424				4
	CAST IRON	IVIAI ENIAL.	32 (IN)		ROAD	SHEET: D-3	CHIMNEY, CONE			
	BARREL DIAME	TER:	CORROSION PROTECTI	ON:	QUARTER SECTION:	DETAIL: 1 & 2	& BARREL	DEFECT REPAIR COATING	SF	
	60 (IN)		EPOXY						+	╞
	NASSCO MACP STRUCTURAL GI	RADE: 5	EXISTING WALL MATER	RIAL:	NOTES:			REPAIR & COAT	FΔ	
SROOND THE ASTRAL	STRUCTURAL OF		LOCATION					48 IN DIAMETER		
						DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	
			(u) OE-4		THE REAL PROPERTY OF	SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	
			D A		And a set of the set o	SHEET: D-4-6 DETAIL: ALL		DEFECT REPAIR PATCHING	SF	
310 ⁴¹⁰ WEST DANBUR	RY ROAD		37-24-118			SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA	
			3			SHEET: D-2 DETAIL: 1		INSTALL 42-IN DIAMETER INSERT	VF	
		VCP-30 (In)		ALL		SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	
		NORTH .			A A REAL AND A REAL AN	MAG 420	MANHOLE	REPLACE MANHOLE	VF	
-112.1065	-112.1060		112.1056		.1051 -112.1047		RESULTS:		PRINT	E
100 200	3	00 ft			MANHOLE TO REPAIR			N		
ASSESSMENT NOTES:					Pipe Connection on Wall					
AS BUILT CERTIFICATION			IVIL ENGINEER:	=	Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections	B. REMOVE AL	L STEPS BEFORE R	EHABILITATION WORK.	ERIAL.	
I HEREBY CERTIFY THAT THE "RECORD	DRAWING"				Existing Abandoned Sewer Main					
MEASUREMENTS AS SHOWN HEREON	I WERE MADE	REGISTRATION	NUMBER:	ES - CITY PROJECT MANAGER: SAUL DURAN CONSTRUCTION DETAILS COMPONENT REHABILITATION UNITS I MAG 422 MAG 422 COP P1424 COLLAR, FRAME & COVER REPLACE COLLAR, FRAME & COVER EA MAG 422 MAG 422 COP P1424 COLLAR, FRAME & COVER REPLACE COLLAR, FRAME & COVER EA SHEET: D-1 DETAIL: 1 & 2 CHIMNEY, CONE & BARREL DEFECT REPAIR COATING SF SF SHEET: D-1 DETAIL: 1 & 2 SHEET: D-1 DETAIL: 1 & 2 CHANNEL REFAIR & COAT GO IN DIAMETER EA SHEET: D-1 DETAIL: 1 & 3 SHEET: D-1 DETAIL: 1 & 3 CHANNEL REPAIR & COAT GO IN DIAMETER EA SHEET: D-1 DETAIL: 1 & 3 SHEET: D-4 DETAIL: 1 & 3 D-4 DETAIL: 1 & 3 PVC LINER DEFECT REPAIR PATCHING SF SHEET: D-2 DETAIL: 1 & 3 SHEET: D-4 DETAIL: 1 & 3 D-4 DETAIL: 1 & 3 DINT REPAIR EA SHEET: D-2 DETAIL: 1 SHEET: D-2 DETAIL: 1 & 3 D-4 DETAIL: 1 & 3 DINT REPAIR EA SHEET: D-2 DETAIL: 1 SHEET: D-2 DETAIL: 1 & 3 D-4 DETAIL: 1 & 3 DINT REPAIR EA SHEET: D-2 DETAIL: 1 NOTES SHEET: D-2 DETAIL: 1 & 3 D-4 DETAIL: 1 & 3 DEFECT REPAIR PATCHING SF SHEET: D-2 DETA						
UNDER MY SUPERVISION OR AS NOTE				DIAMETER AANHOLES - PROJECT NUMBER: WS90500273 (TTY PROJECT MANAGER: SAUL DURAN CONSTRUCTION DETAILS COMPONENT REHABILITATION UNITS MATION SSTRET: ARAME & DANBURY RD ROJAMETER: DISON PROTECTION: 37-24 ENVIRONMENT: SECONDARY NOAKE & DANBURY RD ROJAMETER: 37-24 ENVIRONMENT: SECONDARY NO WALL MATERIAL: RETE MAG 422 ACOVER COLLAR, FRAME & EPIACE COLLAR, FRAME & COVER REPLACE COLLAR, FRAME & EQUINE & EQUINE & SHEET: D-1 DEFAUL: 1 & 2 3 REPLACE MANHOLE & COVER REPLACE MANHOLE & COVER REPLACE MANHOLE & COVER REPLACE & COVER REP						
CORRECT TO THE BEST OF MY KNOWL BELIEF.	LEDGE AND	DATE:		•	City Manholes / Not For Repair				J .	
"PER PHOENIX CITY CODE CHAPTER 2, SECTION	SPECIFICALLY	STATED IN THE CITY	ALUSE ONLY AND MAY NOT BE CODE, OR AS REQUIRED BY LA KEPT SECURE AT ALL TIMES		ED FOR INSPECTION OR COPYING, EXCEPT AS		2432 W. P PHOENIX, Phone:(60	EORIA AVENUE, SUITE 1246 AZ 85029 (2) 906-1901		Ī

SIGN	AND O	UANTI	FIES				
UNITS	BID ITEM NO.	BID QUANTITY	AS BUILT QUANTITY	APPROV MATERI		MANUFACTURER	MANHOLE 37-24-118 WS90500273
EA	1	1					NS9 WS9
SF	2						MAN
EA	3						
EA	4	1					
EA	5						/ER
SF	6						ARY SEM
EA	7						R SANIT [/]
VF	8						AMETEF
VF	9	16.3					ARGE DI NORTH
VF	10						HOLES -
	OVED BY: ED NAME: ANY:			DATE:	/	_/	RVICES D
OTES							S E
RIAL.		Register	otessional 2.700 trifficAl 2.700 BB 336522 THOMAS 0. BRAATELIEN				CITY OF PHOENIX - WATER SERVICES DEPT - LARGE DIAMETER SANITARY SEWER REHABILITATION - GRADE 5 & 4 MANHOLES - NORTH - ZONE 3
LITATIC	DN.	The second secon	, 1-26-22 Soned 2010A U.S.Y M				F PHOENI
low. e you dig.	SCALE C	DF MAP: 100	MANHO 34 / 5		SH	EET NUMBER: 41 OF 63	CITY O REHAB

	PROJECT IN	FORMATION					REHABILITATION DE	SIGN	A
CITY OF PHOENIX - WA	ATER SERVICES DEPT - LA	ARGE DIAMETER	PROJE	ECT NUMBER: WS90500273					
SANITARY SEWER REH	ABILITATION - GRADE 5	& 4 MANHOLES -		PROJECT MANAGER: SAUL DURAN	CONSTRUCTION	COMPONENT	REHABILITATION	UNITS	E
	NORTH - ZONE 3			ROJECT MANAGER. SAOL DURAN	DETAILS				
	MANHOLE IN	FORMATION		,	MAG 422				
WAM ID :	LOCATION ID:	CROSS STREET:			MAG 423	& COVER	REPLACE COLLAR, FRAME & COVER	EA	
I-1247681	37-24-122	21ST AVE & BELL RD			COP P1424				
JURISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL: CAST IRON	COVER DIAMETER: 32 (IN)		ENVIRONMENT: MAJOR ARTERIAL ROAD		CHIMNEY, CONE	DEFECT REPAIR COATING	SF	
DEPTH RIM TO INVERT:	BARREL DIAMETER: 60 (IN)	CORROSION PROTECTION: NOT COATED		QUARTER SECTION: 37-24	DETAIL: 1 & 2	& BARREL			
19.1 (FT) COLLAR PRESENT: YES	NASSCO MACP	EXISTING WALL MATERIAL:		NOTES:				1	
GROUND TYPE: ASPHALT	STRUCTURAL GRADE: 4	CONCRETE					REPAIR & COAT	EA	
	MANHOLE	LOCATION		·	SHEET: D-4	DENCU	48 IN DIAMETER		
	198 The second s	AVENUE	the second se		DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	
		ACD-30 (IU)		1 il	SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	
		Ž			SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	
	VCP-8 (in) 31.24.121	3 ^{12¹} VCP-8 ((in)		SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA	
WEST BELL ROAD		37-24-122 XCP-30 (in)	l	-	SHEET: D-2 DETAIL: 1	NICEDT	INSTALL 42-IN DIAMETER INSERT	VF	
P9- EE) → 36-24-201	5		SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	
					MAG 420	MANHOLE	REPLACE MANHOLE	VF	
- <u>-112.1062</u> 50 100	-112.1059 150 ft	-112.1057 LEGEI	ND:	-112.1055	NOTES: SPARK TEST PULL TEST:	RESULTS:		APPRO PRINT COMF	EC
ASSESSMENT NOTES:	150 ft			MANHOLE TO REPAIR			N	OTES	
ASSESSMENT NOTES: ASSESSMENT ASSESSMENT NOTES: ASSESSMENT ASSESSMENT ASSESSM	D DRAWING" N WERE MADE REGISTRATION FED ARE	IVIL ENGINEER:		Pipe Connection on Wall Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections Existing Abandoned Sewer Main Not in GIS Pipe Connections City Sewer Main Flow Direction City Manholes / Not For Repair	B. REMOVE AL C. BLAST CLEAI D. COAT THE C E. REINSTATE P F. RESTORE LAN G. USE FLOW T	L STEPS BEFORE R N MANHOLE BEFC HANNEL IF IT IS CO IPE CONNECTION: NDSCAPE/PAVEME HROUGH PLUG IF	BEFORE PURCHASING MATE EHABILITATION WORK. RE REHABILITATION. DNCRETE. S AFTER COATING OR LINING NT/SIDEWALK AFTER REHAE	ERIAL. 6. BILITATIO	
"PER PHOENIX CITY CODE CHAPTER 2, SEC	SPECIFICALLY STATED IN THE CITY	ALUSE ONLY AND MAY NOT BE FURN 7 CODE, OR AS REQUIRED BY LAW" KEPT SECURE AT ALL TIMES	NISHED F	OR INSPECTION OR COPYING, EXCEPT AS		2432 W. P PHOENIX, Phone:(60	2) 906-1901 Know what's		0

AND C	UANTI	FIES				
BID ITEM NO.		AS BUILT QUANTITY	APPROV MATERI		MANUFACTURER	MANHOLE 37-24-122 WS90500273
1	1					NS9 WS9
2						MAN
3						
4	1					
5						/ER
6						E DIAMETER SANITARY SEWER RTH - ZONE 3
7						R SANITA
8						E DIAMETER (TH - ZONE 3
9	13.8					ARGE DI NORTH
10						HOLES -
DVED BY: ED NAME:	·		DATE:			CES D
ANY:				/	_/	ERVI & 4 n
DN.	tage ite	olessionor tipicar solution tipicar solution soluti	, _		6	CITY OF PHOENIX - WATER SERVICES DEPT - LARGE REHABILITATION - GRADE 5 & 4 MANHOLES - NOR
SCALE C	DF MAP: 50	MANHO 35 / 5		SH	EET NUMBER: 42 OF 63	CITY OF REHABI

	PROJECT IN	IFORMATION				REHABILITATION DE	SIGN		UANTI	FIES		
CITY OF PHOENIX - WAT	TER SERVICES DEPT - L	ARGE DIAMETER	PROJECT NUMBER: WS90500273	00110701107								
SANITARY SEWER REHA	BILITATION - GRADE 5	& 4 MANHOLES -	CITY PROJECT MANAGER: SAUL DURAN	CONSTRUCTION	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.		AS BUILT	APPROVED MATERIAL	MANUFACTURER
1	NORTH - ZONE 3											
	MANHOLE I	NFORMATION	·	MAG 422								
	LOCATION ID:	CROSS STREET:		MAG 423	& COVER	REPLACE COLLAR, FRAME & COVER	EA	1	1			
	36-24-201	BELL RD & 21ST AVE		COP P1424								
	FRAME/COVER MATERIAL: CAST IRON	COVER DIAMETER: 32 (IN)	ENVIRONMENT: MAJOR ARTERIAL ROAD		CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2				
	BARREL DIAMETER: 60 (IN)	CORROSION PROTECTION: NOT COATED	QUARTER SECTION: 36-24	DETAIL: 1 & 2	& BARREL							
	NASSCO MACP	EXISTING WALL MATERIAL:	NOTES:									
	STRUCTURAL GRADE: 5	CONCRETE	NOTES.			REPAIR & COAT	EA	3				
1		E LOCATION		SHEET: D-4		48 IN DIAMETER		-				
	VCP-8 (in) 3 ^{1,24,121}			DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	4	1			
		37-24-122		SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5	1			
WEST BELL ROAD		VCP-30 (in)		SHEET: D-4-6 DETAIL: ALL		DEFECT REPAIR PATCHING	SF	6				
VCP-30	(in)	36-24-201		SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA	7				
H	H H	- गण्मगर के	······································	SHEET: D-2 DETAIL: 1	INSERT	INSTALL 42-IN DIAMETER INSERT	VF	8				
				SHEET: D-2 DETAIL: 1		INSTALL 54-IN DIAMETER INSERT	VF	9	15.5			
				MAG 420	MANHOLE	REPLACE MANHOLE	VF	10				
-112.1062	-112.1059	-112.1057	-112.1055 ND:	NOTES: SPARK TEST PULL TEST:	RESULTS:			DVED BY: ED NAME: ANY:			DATE:	_/
50 100	150 ft		MANHOLE TO REPAIR			N	IOTES					
SSESSMENT NOTES:		_	Pipe Connection on Wall									
			Pipe Connection Over Bench Pipe Connection At Channel	B. REMOVE AL	L STEPS BEFORE R	BEFORE PURCHASING MATE EHABILITATION WORK.	ERIAL.		18	ofessional 27		$\left(\right)$
S BUILT CERTIFICATION	REGISTERED	LIVIL ENGINEEK:	Drop Pipe Connections Existing Abandoned Sewer Main			ORE REHABILITATION.			igiste.	33632 THOMAS O. BRAATELIEN	6	
EREBY CERTIFY THAT THE "RECORD			Not in GIS Pipe Connections		HANNEL IF IT IS C	ONCRETE. S AFTER COATING OR LINING	i.		la la	BRAATELIEN		
EASUREMENTS AS SHOWN HEREON NDER MY SUPERVISION OR AS NOTE			— City Sewer Main			ENT/SIDEWALK AFTER REHAE		DN.	A A	ZONA, U.S.A.		
ORRECT TO THE BEST OF MY KNOWL			> Flow Direction		THROUGH PLUG IF	-			The	ne Areatt	_	
ELIEF.			City Manholes / Not For Repair	H. PERFORM S	PARK AND PULL T	ESTS AFTER REHABILITATION						
"PER PHOENIX CITY CODE CHAPTER 2, SECTION	SPECIFICALLY STATED IN THE CIT	IALUSE ONLY AND MAY NOT BE FURN Y CODE, OR AS REQUIRED BY LAW" E KEPT SECURE AT ALL TIMES	IISHED FOR INSPECTION OR COPYING, EXCEPT AS		2432 W. I PHOENIX Phone:(6)	ENGINEERING CONSULTANTS PEORIA AVENUE, SUITE 1246 , AZ 85029 02) 906-1901	below.	SCALE C	DF MAP: 50	MANHC 36 / 5		IEET NUMBER: 43 OF 63

	PROJECT II	NFORMATION				REHABILITATION DE	SIGN	AND O	UANTI	FIES			
CITY OF PHOENIX - WA	ATER SERVICES DEPT - I	ARGE DIAMETER	DJECT NUMBER: WS90500273										203
SANITARY SEWER REHA	ABILITATION - GRADE 5	& 4 MANHOLES -	Y PROJECT MANAGER: SAUL DURAN	CONSTRUCTION	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.		AS BUILT QUANTITY	APPROVED MATERIAI	MANUFACTURER	-24-20
	NORTH - ZONE 3		PROJECT MANAGER. SAGE DURAN	DETAILS				NO.	QUANTIT	QUANTIT			36-2
		INFORMATION		MAG 422									
WAM ID :	LOCATION ID:	CROSS STREET:		MAG 423	COLLAR, FRAME & COVER	REPLACE COLLAR, FRAME & COVER	EA	1	1				OLE
I-1247831	36-24-203	23RD AVE & BELL RD		COP P1424									Ţ
JURISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL: CAST IRON	COVER DIAMETER: 32 (IN)	ENVIRONMENT: MAJOR ARTERIAL ROAD	SHEET: D-3	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2					MANHOLE
DEPTH RIM TO INVERT: 18.9 (FT)	BARREL DIAMETER: 60 (IN)	CORROSION PROTECTION: NOT COATED	QUARTER SECTION: 36-24	DETAIL: 1 & 2	& BARREL								
COLLAR PRESENT: YES	NASSCO MACP	EXISTING WALL MATERIAL:	NOTES:										1
GROUND TYPE: ASPHALT	STRUCTURAL GRADE: 5	CONCRETE				REPAIR & COAT 48 IN DIAMETER	EA	3					
	MANHOL	E LOCATION		SHEET: D-4	BENCH	48 IN DIAMETER							
				DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	4	1				
		A-120	to the second	SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5	1				SEWER
31,12		- 31 ⁻¹		SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	6					RY
WEST BELL ROAD	• 	vo	CP-30 (in)	SHEET: D-4 DETAIL: 1 & 3		JOINT REPAIR	EA	7					R SANITA
	NUL			SHEET: D-2 DETAIL: 1	INSERT	INSTALL 42-IN DIAMETER INSERT	VF	8					AMETER
	23RD AVE	VCP-30 (III)		SHEET: D-2 DETAIL: 1		INSTALL 54-IN DIAMETER INSERT	VF	9	15.6				ARGE DI
	B NORTH 2			MAG 420	MANHOLE	REPLACE MANHOLE	VF	10					DEPT - L
-112.1092 100 200		12.1083 -112.1079 LEGEND:	-112.1074	NOTES: SPARK TEST PULL TEST:	RESULTS:			OVED BY: ED NAME: ANY:			DATE:	_/	RVICES
ASSESSMENT NOTES:			MANHOLE TO REPAIR			N	OTES						SE
ASSESSMENT NOTES. AS BUILT CERTIFICATION HEREBY CERTIFY THAT THE "RECORI MEASUREMENTS AS SHOWN HEREO JNDER MY SUPERVISION OR AS NOT CORRECT TO THE BEST OF MY KNOW BELIEF.	N WERE MADE REGISTRATIC	Pipe Connection on Wall Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections Existing Abandoned Sewer Main Not in GIS Pipe Connections City Sewer Main Flow Direction City Manholes / Not For Repair	B. REMOVE AI C. BLAST CLEA D. COAT THE C E. REINSTATE I F. RESTORE LA G. USE FLOW	L STEPS BEFORE R IN MANHOLE BEFC CHANNEL IF IT IS CO PIPE CONNECTION: NDSCAPE/PAVEME THROUGH PLUG IF	BEFORE PURCHASING MATE EHABILITATION WORK. DRE REHABILITATION. DNCRETE. S AFTER COATING OR LINING ENT/SIDEWALK AFTER REHAE	ERIAL. 6. BILITATIC	DN.	Register	ofestional the CATE the		6)	CITY OF PHOENIX - WATER	
PER PHOENIX CITY CODE CHAPTER 2, SEC	SPECIFICALLY STATED IN THE CI	CIALUSE ONLY AND MAY NOT BE FURNISHEI TY CODE, OR AS REQUIRED BY LAW" BE KEPT SECURE AT ALL TIMES	D FOR INSPECTION OR COPYING, EXCEPT AS		2432 W. P PHOENIX, Phone:(60	ENGINEERING CONSULTANTS PEORIA AVENUE, SUITE 1246 AZ 85029 2) 906-1901	below. ore you dig.	SCALE C		MANHC 37 / 5		IEET NUMBER: 44 OF 63	CITY OI

	PROJECT	INFORMATION				REHABILITATION DE	SIGN	AND O	UANTITIES		
CITY OF PHOENIX - WA	ATER SERVICES DEPT	- LARGE DIAMETER	ROJECT NUMBER: WS90500273	001075-07-5-							
SANITARY SEWER REHA	ABILITATION - GRADE	5 & 4 MANHOLES -	TITY PROJECT MANAGER: SAUL DURAN	CONSTRUCTION	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.	BID AS BUILT	APPROVED MATERIAL	MANUFACTURER
	NORTH - ZONE 3		ATT TROJECT MANAGEN. SAGE DONAN	DEMILO							
		E INFORMATION		MAG 422							
VAM ID :	LOCATION ID:	CROSS STREET:		MAG 423	COLLAR, FRAME	REPLACE COLLAR, FRAME & COVER	EA	1	1		
-1225219	36-24-205	23RD AVE & PHELPS RD		COP P1424	a coven	a coven					
URISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL: CAST IRON	32 (IN)	ENVIRONMENT: SECONDARY ROAD	SHEET: D-3	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2			
DEPTH RIM TO INVERT: .7.2 (FT)	BARREL DIAMETER: 60 (IN)	CORROSION PROTECTION: NOT COATED	QUARTER SECTION: 36-24	DETAIL: 1 & 2	& BARREL						
COLLAR PRESENT: NO	NASSCO MACP	EXISTING WALL MATERIAL:	NOTES:								
ROUND TYPE: ASPHALT	STRUCTURAL GRADE: 5	CONCRETE	Notes.			REPAIR & COAT	EA	3			
		OLE LOCATION		SHEET: D-4		48 IN DIAMETER		-			
				DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	4	1		
		VCP-30 (in)		SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5			
	18-11-56		SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	6				
	VCP-8 (in)		SHEET: D-4 DETAIL: 1 & 3	FVC LINER	JOINT REPAIR	EA	7				
THE AND LOG	e Geore			SHEET: D-2 DETAIL: 1		INSTALL 42-IN DIAMETER INSERT	VF	8			
	0-0-00		SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	9	14.2			
		CC-30 (IU)		MAG 420	MANHOLE	REPLACE MANHOLE	VF	10			
-112.1089 100 200	-112.1085 300 ft	-112.1080 LEGEND	-112.1076 D:	NOTES: SPARK TEST PULL TEST:	RESULTS:			OVED BY: ED NAME: ANY:	·	DATE:	_/
SSESSMENT NOTES:			MANHOLE TO REPAIR			N	OTES				
AS BUILT CERTIFICATION HEREBY CERTIFY THAT THE "RECORE MEASUREMENTS AS SHOWN HEREOI JNDER MY SUPERVISION OR AS NOT CORRECT TO THE BEST OF MY KNOW BELIEF.	D DRAWING" N WERE MADE REGISTRA ED ARE	ED CIVIL ENGINEER:	 Pipe Connection on Wall Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections Existing Abandoned Sewer Main Not in GIS Pipe Connections City Sewer Main Flow Direction City Manholes / Not For Repair 	B. REMOVE AL C. BLAST CLEA D. COAT THE C E. REINSTATE F F. RESTORE LA G. USE FLOW	L STEPS BEFORE R N MANHOLE BEFO HANNEL IF IT IS C PIPE CONNECTION NDSCAPE/PAVEMI THROUGH PLUG IF	S AFTER COATING OR LINING ENT/SIDEWALK AFTER REHAE	G. BILITATIC	DN.	And a start of the		6)
	SPECIFICALLY STATED IN TH	FFICIALUSE ONLY AND MAY NOT BE FURNISI E CITY CODE, OR AS REQUIRED BY LAW" IST BE KEPT SECURE AT ALL TIMES	HED FOR INSPECTION OR COPYING, EXCEPT AS		2432 W. I PHOENIX Phone:(6)	ENGINEERING CONSULTANTS PEORIA AVENUE, SUITE 1246 AZ 85029 22) 906-1901	below.	SCALE C			IEET NUMBER: 45 OF 63

	PRO	JECT INFORMATION					REHABILITATION DE	SIGN	AND C	UANTI	FIES			
CITY OF PHOENIX - WA	TER SERVICES D	EPT - LARGE DIAMETER	PROJE	ECT NUMBER: WS90500273										204
SANITARY SEWER REHA	BILITATION - GF	ADE 5 & 4 MANHOLES	- CITY [PROJECT MANAGER: SAUL DURAN	CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.	BID QUANTITY		APPROVED	MANUFACTURER	-24-20
	NORTH - ZONE	3		ROJECT MANAGER: SAOL DURAN	DETAILS				NO.	QUANTIT	QUANTIT			5-2
		HOLE INFORMATION		1	MAG 422									-9E 30-
WAM ID :	LOCATION ID:	CROSS STREET:			MAG 423	COLLAR, FRAME & COVER	REPLACE COLLAR, FRAME & COVER	EA	1	1				OLE
I-1225221	36-24-204	23RD AVE & PHELPS I	RD		COP P1424	& COVER	& COVER							Ŧ
	FRAME/COVER MATE CAST IRON	32 (IN)		ENVIRONMENT: SECONDARY ROAD		CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2					MANHOLE
DEPTH RIM TO INVERT: 17.2 (FT)	BARREL DIAMETER: 60 (IN)	CORROSION PROTECT	TION:	QUARTER SECTION: 36-24	DETAIL: 1 & 2	& BARREL			_					
COLLAR PRESENT: NO	NASSCO MACP	EXISTING WALL MATE	FRIAL	NOTES:										
	STRUCTURAL GRADE						REPAIR & COAT	EA	3					
	MA	NHOLE LOCATION			SHEET: D-4	DENCU	48 IN DIAMETER							
		ECR		DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	4	1					
		VCP-30 (III)		BEEBER	SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5					/ER
					SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	6					ARY SEWER
WEST PHELP	WEST PHELPS ROAD VCP-8 (in) B						JOINT REPAIR	EA	7					R SANITA
							INSTALL 42-IN DIAMETER INSERT	VF	8					IAMETER
		ACb-30 (iu)	fifi		SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	9	14				ARGE DI
		VORTH 2			MAG 420	MANHOLE	REPLACE MANHOLE	VF	10					DEPT - L
12.1093 -112.1088 100 200	300 ft	112.1084 -112.1	1079 LEGEND:	-112.1075	NOTES: SPARK TEST PULL TEST:	RESULTS:			oved by: Ed name Any:			DATE:	_/	RVICES
ASSESSMENT NOTES:	500 It		1 🦲	MANHOLE TO REPAIR			N	IOTES						SEF
NUTES.			\smile	Pipe Connection on Wall										
		ISTERED CIVIL ENGINEER:	— F	Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections	B. REMOVE AL	L STEPS BEFORE R	BEFORE PURCHASING MATE EHABILITATION WORK. DRE REHABILITATION.	ERIAL.			ofessional English	ŕ		WATER
AS BUILT CERTIFICATION HEREBY CERTIFY THAT THE "RECORD		ISTERED CIVIL ENGINEER:	XXX E	Existing Abandoned Sewer Main		HANNEL IF IT IS CO				Regist	33632 THOMAS O. BRAATELIEN			×
MEASUREMENTS AS SHOWN HEREON		ISTRATION NUMBER:		Not in GIS Pipe Connections City Sewer Main			S AFTER COATING OR LINING			100 100	1-26-22			PHOENIX
JNDER MY SUPERVISION OR AS NOTI	ED ARE		•	Flow Direction		-	ENT/SIDEWALK AFTER REHAE	BILITATIO	DN.	-th	a Breatt			OE
CORRECT TO THE BEST OF MY KNOW	LEDGE AND DAT	E:		City Manholes / Not For Repair	r Repair G. USE FLOW THROUGH PLUG IF NECESSARY.									H
BELIEF.			•					-		Г				L
"PER PHOENIX CITY CODE CHAPTER 2, SECT	SPECIFICALLY STATE	E FOR OFFICIALUSE ONLY AND MAY NOT E D IN THE CITY CODE, OR AS REQUIRED BY ENT MUST BE KEPT SECURE AT ALL TIMES	(LAW"	OR INSPECTION OR COPYING, EXCEPT AS	PROJECT ENGINEERING	2432 W. F PHOENIX, Phone:/60	ENGINEERING CONSULTANTS PEORIA AVENUE, SUITE 1246 .AZ 85029 02) 906-1901	below. fore you dig.	SCALE (1:1	DF MAP: 100	MANHC 39 / 5		IEET NUMBER: 46 OF 63	CITY OF PHOENIX

	PR	OJECT INFORMATION					REHABILITATION DE	SIGN	A
CITY OF PHOENIX - WA	ATER SERVICES	DEPT - LARGE DIAMETER	PRC	DJECT NUMBER: WS90500273					
SANITARY SEWER REH	ABILITATION - G	GRADE 5 & 4 MANHOLES -		Y PROJECT MANAGER: SAUL DURAN	CONSTRUCTION	COMPONENT	REHABILITATION	UNITS	E
	NORTH - ZONE	E 3		PROJECT MANAGER: SAUL DURAN	DETAILS				
	MA	NHOLE INFORMATION			MAG 422				
WAM ID :	LOCATION ID:	CROSS STREET:			MAG 423	& COVER	REPLACE COLLAR, FRAME & COVER	EA	
I-1225242 JURISDICTION: CITY OF PHOENIX	36-25-215 FRAME/COVER MA	BELL RD & 19TH AVE ATERIAL: COVER DIAMETER:		ENVIRONMENT: MAJOR	COP P1424				╞
JONISDICTION. CITT OF PHOENIX	CAST IRON	32 (IN)		ARTERIAL ROAD	SHEET: D-3	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	
DEPTH RIM TO INVERT:	BARREL DIAMETER		N:	QUARTER SECTION:	DETAIL: 1 & 2	& BARREL	DEFECT REPAIR COATING	55	
26.7 (FT) COLLAR PRESENT: YES	53 (IN) NASSCO MACP	EPOXY EXISTING WALL MATERIA	Δι·	36-25 NOTES:					┢
GROUND TYPE: OTHER	STRUCTURAL GRAD		Π L.	NOTES.			REPAIR & COAT 48 IN DIAMETER	EA	
	N	IANHOLE LOCATION			SHEET: D-4	BENCH			
	;		-	and the second s	DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	
33.6402 AVENUE		(i) (i)	-		SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	
ГН 19ТН		VCR-15 (in)	H	WEST BELL ROAD	SHEET: D-4-6 DETAIL: ALL		DEFECT REPAIR PATCHING	SF	
NORTH	•	36-25-215	H	1	SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA	
3.6401		4 ²⁷⁻⁵ ¹⁰ ¹⁷ ¹⁷ ¹⁷ ¹⁷ ¹⁷ ¹⁷ ¹⁷ ¹⁷		-	SHEET: D-2 DETAIL: 1	INSERT	INSTALL 42-IN DIAMETER INSERT	VF	
	57-53 (U) (U) (U) (U) (U) (U) (U) (U) (U) (U)	36-25-202 3 36-25-2	213	VCP-18 (in)	SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	
			9 -		MAG 420	MANHOLE	REPLACE MANHOLE	VF	
-112.0998	-112.0997 60 ft	-112.0996	<u>-112.09</u> GEND:	995 -112.0994	NOTES: SPARK TEST PULL TEST:	RESULTS:		APPRO PRINT COMF	ED
ASSESSMENT NOTES:			\bigcirc	MANHOLE TO REPAIR	<u>.</u>		N	OTES	
53 (IN) COATED MANHOLE, REDUCE	D DIAMETER			Pipe Connection on Wall					
AS BUILT CERTIFICATION I HEREBY CERTIFY THAT THE "RECOR MEASUREMENTS AS SHOWN HEREC UNDER MY SUPERVISION OR AS NO CORRECT TO THE BEST OF MY KNOW BELIEF.	RD DRAWING"	EGISTERED CIVIL ENGINEER: EGISTRATION NUMBER: ATE:		Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections Existing Abandoned Sewer Main Not in GIS Pipe Connections City Sewer Main Flow Direction City Manholes / Not For Repair	B. REMOVE AL C. BLAST CLEAI D. COAT THE C E. REINSTATE P F. RESTORE LAI G. USE FLOW T	L STEPS BEFORE RI N MANHOLE BEFO HANNEL IF IT IS CO IPE CONNECTIONS NDSCAPE/PAVEME 'HROUGH PLUG IF	S AFTER COATING OR LINING NT/SIDEWALK AFTER REHAB	G. BILITATIO	ЛС
"PER PHOENIX CITY CODE CHAPTER 2, SEC	SPECIFICALLY STA	ARE FOR OFFICIALUSE ONLY AND MAY NOT BE F TED IN THE CITY CODE, OR AS REQUIRED BY LAV MENT MUST BE KEPT SECURE AT ALL TIMES		D FOR INSPECTION OR COPYING, EXCEPT AS		2432 W. P PHOENIX, Phone:(60	NGINEERING CONSULTANTS EORIA AVENUE, SUITE 1246 AZ 85029 2) 906-1901		S

AND O	UANTI	FIES				
BID ITEM NO.		AS BUILT QUANTITY	APPROV MATER		MANUFACTURER	MANHOLE 36-25-215 WS90500273
1	1					NS9 WS9
2						MAN
3	1					
4						
5	1					/ER
6						E DIAMETER SANITARY SEWER RTH - ZONE 3
7						R SANIT ² 3
8	24.8					E DIAMETER (TH - ZONE 3
9						ARGE DI. NORTH
10						HOLES - 14
DVED BY: ED NAME: ANY:	· 	·	DATE:	./	_/	VICES D
						SER 5 & 4
DN.	teal is the second s	oressionor FIFICATZ THOMAS 0. BIRATELIEN 1-26-22 Sond USA			6)	CITY OF PHOENIX - WATER SERVICES DEPT - LARGE REHABILITATION - GRADE 5 & 4 MANHOLES - NOR
SCALE C	DF MAP: 25	MANHO 40 / 5		SH	EET NUMBER: 47 OF 63	CITY OI REHAB

	PROJECT IN	NFORMATION					REHABILITATION DE	SIGN	AND C	UANTI	TIES			
CITY OF PHOENIX - WA	ATER SERVICES DEPT - L	ARGE DIAMETER	JECT NUMBER: WS90500273							212				202
SANITARY SEWER REH	ABILITATION - GRADE 5	& 4 MANHOLES -	PROJECT MANAGER: SAUL DURAN		CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.			APPROVED MATERIAL	MANUFACTURER	L L
	NORTH - ZONE 3										-			<mark>36-2</mark> !
	MANHOLE	INFORMATION			MAG 422									
/AM ID :	LOCATION ID:	CROSS STREET:			MAG 423	& COVER	REPLACE COLLAR, FRAME & COVER	EA	1	1				OLI
1250842	36-25-202	19TH AVE & BELL RD			COP P1424									Ţ
JRISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL: CAST IRON	COVER DIAMETER: 26 (IN)	ENVIRONMENT: MAJOR ARTERIAL ROAD			CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2					MANHOLE
EPTH RIM TO INVERT: 7.7 (FT)	BARREL DIAMETER: 60 (IN)	CORROSION PROTECTION: NOT COATED	QUARTER SECTION: 36-25		DETAIL: 1 & 2	& BARKEL								
DLLAR PRESENT: YES	NASSCO MACP	EXISTING WALL MATERIAL:	NOTES:											
OUND TYPE: ASPHALT	STRUCTURAL GRADE: 5	CONCRETE					REPAIR & COAT	EA	3					
	MANHOL	E LOCATION			SHEET: D-4		48 IN DIAMETER							
	1	(ų)			DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	4	1				
		⁵⁷ ⁵⁷ → 36-25-2	WEST BELL ROAD		SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5					/FR
		VO.15 CAL DIP-18	1		SHEET: D-4-6 DETAIL: ALL	- PVC LINER	DEFECT REPAIR PATCHING	SF	6					ARY SFWFR
and the second s	St.	36-25-202 🕄 36	-25-213 VCP-18 (in)		SHEET: D-4 DETAIL: 1 & 3		JOINT REPAIR	EA	7					D CANITA
	1. S		1.		SHEET: D-2 DETAIL: 1	INCEPT	INSTALL 42-IN DIAMETER INSERT	VF	8					ANGTER
TH 19TH		TIM	- the		SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	9	25				
	the second se	X			MAG 420	MANHOLE	REPLACE MANHOLE	VF	10					EDT I
-112.0999 -11	2.0998 -112.09		-112.0994	9	NOTES: SPARK TEST PULL TEST:	RESULTS:)VED BY: ED NAME: ANY:			DATE:	_/	BVICES D
20 40	60 ft		MANHOLE TO REPAIR	L			N	OTES						SFR
SESSMENT NOTES:			Pipe Connection on Wall	Г				UILJ						-
<u>S BUILT CERTIFICATION</u> HEREBY CERTIFY THAT THE "RECOR IEASUREMENTS AS SHOWN HEREC NDER MY SUPERVISION OR AS NO ORRECT TO THE BEST OF MY KNOV ELIEF.	RD DRAWING" DN WERE MADE REGISTRATIC TED ARE	CIVIL ENGINEER:	Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections Existing Abandoned Sewer Main Not in GIS Pipe Connections City Sewer Main Flow Direction City Manholes / Not For Repair	E C E F C	B. REMOVE AL C. BLAST CLEA D. COAT THE C E. REINSTATE F F. RESTORE LA G. USE FLOW	L STEPS BEFORE R N MANHOLE BEFO HANNEL IF IT IS CO PIPE CONNECTIONS NDSCAPE/PAVEME FHROUGH PLUG IF	S AFTER COATING OR LINING NT/SIDEWALK AFTER REHAB	i. Silitatic	DN.	8	sestional 3632 THOMAS 0. BRAATLEN 1-26-22. Soned.		6)	CITY OF PHOENIX - WATER
"PER PHOENIX CITY CODE CHAPTER 2, SEC	SPECIFICALLY STATED IN THE CI	CIALUSE ONLY AND MAY NOT BE FURNISHED TY CODE, OR AS REQUIRED BY LAW" BE KEPT SECURE AT ALL TIMES	FOR INSPECTION OR COPYING, EXCEPT AS			2432 W. P PHOENIX, Phone:(60	NGINEERING CONSULTANTS EORIA AVENUE, SUITE 1246 AZ 85029 2) 906-1901	Delow. ore you dig.	SCALE C		MANHO 41 / 5		IEET NUMBER: 48 OF 63	

	PROJECT	INFORMATION				REHABILITATION DE	SIGN	AND C	UANTI	TIES	
CITY OF PHOENIX - WA	TER SERVICES DEPT	- LARGE DIAMETER	JECT NUMBER: WS90500273								
SANITARY SEWER REHA	ABILITATION - GRADI	E 5 & 4 MANHOLES -	PROJECT MANAGER: SAUL DURAN	CONSTRUCTIC DETAILS	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.		AS BUILT APPROVED	
	NORTH - ZONE 3		TROJECT MANAGER. SACE DORAN								
	MANHOL	E INFORMATION		MAG 422	AAG 422 COLLAR, FRAME REPLACE COLLAR, FRAM						
AM ID :	LOCATION ID:	CROSS STREET:		MAG 423 & COVER &	AG 423	& COVER	EA	1	1		
	36-25-213	BELL RD & 19TH AVE		COP P1424							
RISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL	COVER DIAMETER: 32 (IN)	ENVIRONMENT: MAJOR ARTERIAL ROAD	SHEET: D-3	CHIMNEY, CONE						
EPTH RIM TO INVERT:	BARREL DIAMETER:	CORROSION PROTECTION:	QUARTER SECTION:		2 & BARREL	DEFECT REPAIR COATING	SF	2			
0.4 (FT)	60 (IN)	NOT COATED	36-25								
DLLAR PRESENT: YES ROUND TYPE: ASPHALT	NASSCO MACP STRUCTURAL GRADE: 4	EXISTING WALL MATERIAL: CONCRETE	NOTES:			REPAIR & COAT	EA	3			
				SHEET: D-4		48 IN DIAMETER		5			
1	MANI			DETAIL: 1	BENCH						
		(ij)				REPAIR & COAT 60 IN DIAMETER	EA	4	1		
	8	Y WEST B	ELL ROAD								
	2	36-25-215		SHEET: D-1		REPAIR	EA	_	1		
- 0			and the second state of the second state	DETAIL: 1 - !	5 CHANNEL	(SEE NOTE D)		5			
		1									
	18 ^{-15⁶⁷}	DIP-18		SHEET: D-4-		DEFECT REPAIR PATCHING	SF	6			
			And the owner of the owner of the owner.	DETAIL: ALI							
	36-25-20	36-25-213	North States		PVC LINER						
		VC	P-18 (in)	SHEET: D-4 DETAIL: 1 &		JOINT REPAIR	EA	7			
H			A DECEMBER OF THE OWNER.								
		N		SHEET: D-2		INSTALL 42-IN					
A A	and the second second	1 -	and the second se	DETAIL: 1		DIAMETER INSERT	VF	8			
H /		11	Street and a second second		INSERT						
119	100000	est		SHEET: D-2		INSTALL 54-IN	VF	0	17.9		
			- International Contraction	DETAIL: 1		DIAMETER INSERT		9	17.9		
Q			7								
11	- 100 C	ACA	and the second	MAG 420	MANHOLE	REPLACE MANHOLE	VF	10			
A DESCRIPTION OF THE OWNER OF THE											
	0			NOTES:		·		OVED BY:		DATE:	•
-112.0998 -1	12.0997	-112.0996 -112.0994	-112.0993	PULL TEST:	T RESULTS:		PRINT COMP	ED NAME	:	/	/
20 40	60 ft	LEGEND:			1						_/
SESSMENT NOTES:			MANHOLE TO REPAIR			N	OTES				
			Pipe Connection on Wall Pipe Connection Over Bench			S BEFORE PURCHASING MATE	DIAL				
			Pipe Connection At Channel			REHABILITATION WORK.	LNIAL.		//2	rofessiona/Ep	1.
<u>S BUILT CERTIFICATION</u>	REGISTER	ED CIVIL ENGINEER:	Drop Pipe Connections			ORE REHABILITATION.			alistered and a second		
IEREBY CERTIFY THAT THE "RECORI			Existing Abandoned Sewer Main Not in GIS Pipe Connections		CHANNEL IF IT IS C	ONCRETE. IS AFTER COATING OR LINING	-		Sol Rec	THOMAS 0. BRAATELIEN	
EASUREMENTS AS SHOWN HEREO NDER MY SUPERVISION OR AS NOT		TION NUMBER:	City Sewer Main			ENT/SIDEWALK AFTER REHAE		ON.	A A		
DRRECT TO THE BEST OF MY KNOW			Flow Direction	G. USE FLOW	/ THROUGH PLUG IF	NECESSARY.			The	me throath	
LIEF.		•	City Manholes / Not For Repair	H. PERFORM	SPARK AND PULL T	ESTS AFTER REHABILITATION					
"PER PHOENIX CITY CODE CHAPTER 2, SECT	TION 2-28, THESE PLANS ARE FOR (OFFICIALUSE ONLY AND MAY NOT BE FURNISHEE	FOR INSPECTION OR COPYING, EXCEPT AS					SCALE C)F ΜΔΡ·	MANHOLE: SH	HEET NUMBER:
		IE CITY CODE, OR AS REQUIRED BY LAW" JST BE KEPT SECURE AT ALL TIMES			PHOENIX	PEORIA AVENUE, SUITE 1246 , AZ 85029	helow		25	42 / 50	49 OF 63
		ST DE REFT SECORE AL ALL HIVES		PROJECT ENGINEERI	NG CONSULTANTS Phone:(6	02) 906-1901 Know what's Call bet	ore you dig.			,	

	PROJECT IN	FORMATION						REHABILITATION DE	SIGN		
CITY OF PHOENIX - WA	ATER SERVICES DEPT - L		PROJ	ECT NUMBER: WS90500273] [
SANITARY SEWER REHA						CONSTRUCTION	COMPONENT	REHABILITATION	UNITS	BID ITEM	BID
		& 4 MANHOLLS -	CITY F	PROJECT MANAGER: SAUL DURAN		DETAILS		REHADEITATION		NO.	QUANTITY C
	NORTH - ZONE 3										
		NFORMATION				MAG 422	COLLAR, FRAME	REPLACE COLLAR, FRAME	F A	4	
WAM ID : I-1246707	LOCATION ID: 36-25-214	CROSS STREET: 19TH AVE & TURF PARAD				MAG 423 COP P1424	& COVER	& COVER	EA	1	
JURISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL:	COVER DIAMETER:		ENVIRONMENT: MAJOR	-						
	CAST IRON	32 (IN)		ARTERIAL ROAD		SHEET: D-3	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2	382
DEPTH RIM TO INVERT:	BARREL DIAMETER:	CORROSION PROTECTION	۱:	QUARTER SECTION:		DETAIL: 1 & 2	& BARREL	DEFECT REPAIR COATING	ЭГ	Z	302
26.3 (FT)	60 (IN)	NOT COATED		36-25	-						
COLLAR PRESENT: YES GROUND TYPE: ASPHALT	NASSCO MACP STRUCTURAL GRADE: 4	EXISTING WALL MATERIA	L:	NOTES:				REPAIR & COAT	EA	3	
		E LOCATION				SHEET: D-4	DEN OL	48 IN DIAMETER		5	
			-			DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	4	1
		VCP-18 (in)				SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5	
33,6384			*			SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	6	
		36-25-214 VCP-8 (in)				SHEET: D-4 DETAIL: 1 & 3		JOINT REPAIR	EA	7	
	VENUE	VCP-18				SHEET: D-2 DETAIL: 1	INSERT	INSTALL 42-IN DIAMETER INSERT	VF	8	
13.63 13.63 13.63 13.63 14.545	1 19TH A	18 (in)				SHEET: D-2 DETAIL: 1		INSTALL 54-IN DIAMETER INSERT	VF	9	
	NORTH	35322					MANHOLE	REPLACE MANHOLE	VF	10	
34 BARRA MERCH 7 3	attin 1					NOTES: SPARK TEST				VED BY:	
-112.1006 -112.1	-112.0997			-112.0988		PULL TEST:	RESULTS:		COMP	ED NAME: ANY:	
100 200	300 ft		SEND:								
ASSESSMENT NOTES:			$\mathbf{}$	MANHOLE TO REPAIR Pipe Connection on Wall	1			N	OTES		
				Pipe Connection Or Wall Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections		B. REMOVE AL	L STEPS BEFORE RI	BEFORE PURCHASING MATE	RIAL.		ad profe
AS BUILT CERTIFICATION		CIVIL ENGINEER:		Existing Abandoned Sewer Main			N MANHOLE BEFO HANNEL IF IT IS CO	RE REHABILITATION. DNCRETE.			Register Market Register Market Register
I HEREBY CERTIFY THAT THE "RECOR MEASUREMENTS AS SHOWN HEREO		N NUMBER:		Not in GIS Pipe Connections				S AFTER COATING OR LINING	i.		Date S
UNDER MY SUPERVISION OR AS NOT			•	City Sewer Main Flow Direction			-	NT/SIDEWALK AFTER REHAB	ILITATIC	N.	Thomas
CORRECT TO THE BEST OF MY KNOW	/LEDGE AND DATE:			City Manholes / Not For Repair			HROUGH PLUG IF	NECESSARY. STS AFTER REHABILITATION.			1 2000
BELIEF.	-	IALUSE ONLY AND MAY NOT BE FU Y CODE, OR AS REQUIRED BY LAW	IRNISHED F		_		PROJECT E	NGINEERING CONSULTANTS EORIA AVENUE, SUITE 1246	TA <mark>STI</mark> .	SCALE C	
	THIS DOCUMENT MUST B	E KEPT SECURE AT ALL TIMES				PROJECT ENGINEERING	Phone:(60	2) 906-1901 Know what's Call ber		1:1	.00

<mark>DN DE</mark>	SIGN	AND O	UANTI	TIES			
N	UNITS	BID ITEM NO.	BID QUANTITY	AS BUILT QUANTITY	APPROVED MATERIAL	MANUFACTURER	MANHOLE 36-25-214 WS90500273
RAME	EA	1					NS9 WS9
ATING	SF	2	382				MAN
	EA	3					
	EA	4	1				
	EA	5					/ER
CHING	SF	6					E DIAMETER SANITARY SEWER RTH - ZONE 3
	EA	7					R SANIT/ 3
	VF	8					AMETER - ZONE
	VF	9					ARGE DI NORTH
Ē	VF	10					DEPT - L
		OVED BY: ED NAME: ANY:			DATE: /_	_/	RVICES [4 MAN
N	OTES						SEI 5 &
G MATE K. LINING REHAB TATION.		DN.	A contract of the second secon	ndessiong/ RUFC4/2 HUFC4/2 HOMAS 0. BRAATELIEN 1-26-22 HOMA USI HOMA USI HOMA USI HOMA USI		6)	CITY OF PHOENIX - WATER SERVICES DEPT - LARGE DIAMETER REHABILITATION - GRADE 5 & 4 MANHOLES - NORTH - ZONE 3
RZON Know what's bu Call befo		SCALE C	0F MAP: 100	MANHO 43 / 5		HEET NUMBER: 50 OF 63	CITY OF REHABI

	Р	ROJECT IN	FORMATION					REHABILITATION DE	SIGN	
CITY OF PHOENIX - W/	ATER SERVICE	S DEPT - LA	ARGE DIAMETER	PRO	JECT NUMBER: WS90500273	CONCERNICE				
SANITARY SEWER REH	- ABILITATION NORTH - ZOI		& 4 MANHOLES -	СІТҮ	PROJECT MANAGER: SAUL DURAN	CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	
			IFORMATION			MAG 422				T
WAM ID : I-1225254	LOCATION ID: 36-25-103		CROSS STREET: 19TH AVE & GRANDVIEW	RD		MAG 423 COP P1424	COLLAR, FRAME & COVER	REPLACE COLLAR, FRAME & COVER	EA	
JURISDICTION: CITY OF PHOENIX	FRAME/COVER I CAST IRON		COVER DIAMETER: 32 (IN)		ENVIRONMENT: MAJOR ARTERIAL ROAD		CHIMNEY, CONE	DEFECT REPAIR COATING	SF	
DEPTH RIM TO INVERT: 20.3 (FT)	BARREL DIAMET 60 (IN)	ER:	CORROSION PROTECTION: NOT COATED	:	QUARTER SECTION: 36-25	DETAIL: 1 & 2	& BARREL			
COLLAR PRESENT: YES GROUND TYPE: ASPHALT	NASSCO MACP STRUCTURAL GR	RADE: 5	EXISTING WALL MATERIAL CONCRETE	:	NOTES:			REPAIR & COAT 48 IN DIAMETER	EA	
		MANHOLE	LOCATION			SHEET: D-4	BENCH		<u> </u>	
234e		ENUE				DETAIL: 1		REPAIR & COAT 60 IN DIAMETER	EA	
33		19ТН АV	VCP-18 (in)			SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	
		NORTH			× ×	SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	
		VCP-8 (in)	36-25-103			SHEET: D-4 DETAIL: 1 & 3		JOINT REPAIR	EA	
33.634			V ACCESSION OF A CONSTRAINT OF	1		SHEET: D-2 DETAIL: 1	INCERT	INSTALL 42-IN DIAMETER INSERT	VF	
						SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	
WEST GRANDVII	EW ROAD (480	FT)	35-			MAG 420	MANHOLE	REPLACE MANHOLE	VF	
£50 £60 £70 £70 £70 £70 £70 £70 £70 £70 £70 £7	-112.1001	-112		112.0992	-112.0988	NOTES: SPARK TEST PULL TEST:	RESULTS:		APPRO PRINT COMP	Έ
100 200	30	00 ft		END:						
ASSESSMENT NOTES:				0	MANHOLE TO REPAIR Pipe Connection on Wall			N	OTES	
AS BUILT CERTIFICATION I HEREBY CERTIFY THAT THE "RECOR MEASUREMENTS AS SHOWN HEREC UNDER MY SUPERVISION OR AS NOT	DN WERE MADE TED ARE	REGISTRATION	IVIL ENGINEER:		Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections Existing Abandoned Sewer Main Not in GIS Pipe Connections City Sewer Main Flow Direction	B. REMOVE AL C. BLAST CLEAI D. COAT THE C E. REINSTATE P F. RESTORE LAI	L STEPS BEFORE RI N MANHOLE BEFO HANNEL IF IT IS CO IPE CONNECTIONS	S AFTER COATING OR LINING NT/SIDEWALK AFTER REHAB	i.	וכ
CORRECT TO THE BEST OF MY KNOV BELIEF.		DATE:	'	•	City Manholes / Not For Repair			STS AFTER REHABILITATION.		
"PER PHOENIX CITY CODE CHAPTER 2, SEC	SPECIFICALLY	STATED IN THE CITY	ALUSE ONLY AND MAY NOT BE FUR CODE, OR AS REQUIRED BY LAW" KEPT SECURE AT ALL TIMES		FOR INSPECTION OR COPYING, EXCEPT AS		2432 W. P PHOENIX, Phone:(60	2) 906-1901 Know what's b		;

AND C	UANTI	TIES				
BID ITEM NO.		AS BUILT QUANTITY	APPROV MATERI		IUFACTURER	MANHOLE 36-25-103 WS90500273
1	1					NS9 WS9
2						MAN
3						
4	1					
5						/ER
6						E DIAMETER SANITARY SEWER RTH - ZONE 3
7						R SANIT/ 3
8						E DIAMETER (TH - ZONE 3
9	17.7					ARGE DI NORTH
10						DEPT - L
OVED BY: ED NAME: ANY:	: 		DATE:	//_		VICES [4 MAN
						SER 5 & 4
DN.	teal is the second s	sessionar HIFLCATE THOMAS ON BRAATELIEN Sond Sond USA Sond USA Sond USA Sond USA Sond USA Sond USA Sond USA Sond USA Sond USA Sond USA Sond So	_	E		CITY OF PHOENIX - WATER SERVICES DEPT - LARGE REHABILITATION - GRADE 5 & 4 MANHOLES - NOR
SCALE C	DF MAP: 100	MANHO 44 / 5			NUMBER: OF 63	CITY OI REHAB

	PR	OJECT INF	ORMATION					REHABILITATION D	ESIGN	
CITY OF PHOENIX - WA	ATER SERVICES	DEPT - LA	RGE DIAMETER	PF	OJECT NUMBER: WS90500273	CONSTRUCTION				
SANITARY SEWER REH	ABILITATION - (NORTH - ZON		4 MANHOLES -	CI	TY PROJECT MANAGER: SAUL DURAN	CONSTRUCTION	COMPONENT	REHABILITATION	UNITS	
			FORMATION			MAG 422				T
WAM ID : I-1225245	LOCATION ID: 36-25-301		CROSS STREET: BELL RD & 17TH AVE			MAG 422 COP P1424	COLLAR, FRAME & COVER	REPLACE COLLAR, FRAME & COVER	EA	
JURISDICTION: CITY OF PHOENIX	FRAME/COVER M/ CAST IRON		COVER DIAMETER: 26 (IN)		ENVIRONMENT: MAJOR ARTERIAL ROAD	SHEET: D-3	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	T
DEPTH RIM TO INVERT: 16.1 (FT)	BARREL DIAMETER		CORROSION PROTECTI NOT COATED	ION:	QUARTER SECTION: 36-25	DETAIL: 1 & 2	& BARREL			
COLLAR PRESENT: YES GROUND TYPE: ASPHALT	NASSCO MACP STRUCTURAL GRA		EXISTING WALL MATER CONCRETE	RIAL:	NOTES:			REPAIR & COAT 48 IN DIAMETER	EA	
	N	//ANHOLE		SHEET: D-4	BENCH					
			DETAIL: 1		REPAIR & COAT 60 IN DIAMETER	EA				
	- Andrew		8 .8			SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	
	31751	37.2510	Ø	00000 0	31244	SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	
WEST BELL ROAD	VCP-18 (in)		36-25-301 →		/CP-18 (in)	SHEET: D-4 DETAIL: 1 & 3		JOINT REPAIR	EA	
	and the second	Ę				SHEET: D-2 DETAIL: 1	INSERT	INSTALL 42-IN DIAMETER INSERT	VF	
		7TH AVE				SHEET: D-2 DETAIL: 1		INSTALL 54-IN DIAMETER INSERT	VF	
						MAG 420	MANHOLE	REPLACE MANHOLE	VF	
-112.0965	-112.0960	-	-112.0956	LEGEND	-112.0951 -112.0947	NOTES: SPARK TEST PULL TEST:	RESULTS:		APPR PRINT COMF	EI
100 200	300 1	ft	Ľ	-	MANHOLE TO REPAIR				NOTES	
ASSESSMENT NOTES:				0	Pipe Connection on Wall				UTES	
				_	Pipe Connection Over Bench Pipe Connection At Channel			BEFORE PURCHASING MATER BEFORE BEFORE PURCHASING PURCH.	ERIAL.	
AS BUILT CERTIFICATION I HEREBY CERTIFY THAT THE "RECOR		EGISTERED CI	VIL ENGINEER:	XXX	Drop Pipe Connections Existing Abandoned Sewer Main		N MANHOLE BEFC	DRE REHABILITATION. ONCRETE.		
MEASUREMENTS AS SHOWN HEREO UNDER MY SUPERVISION OR AS NOT	N WERE MADE R	EGISTRATION	NUMBER:		Not in GIS Pipe Connections City Sewer Main	E. REINSTATE F	PIPE CONNECTION	S AFTER COATING OR LININ ENT/SIDEWALK AFTER REHA		01
CORRECT TO THE BEST OF MY KNOW BELIEF.		DATE:			Flow Direction City Manholes / Not For Repair		THROUGH PLUG IF PARK AND PULL TI	NECESSARY. ESTS AFTER REHABILITATIOI	۷.	
	SPECIFICALLY ST	ATED IN THE CITY	LUSE ONLY AND MAY NOT BE CODE, OR AS REQUIRED BY L KEPT SECURE AT ALL TIMES		ED FOR INSPECTION OR COPYING, EXCEPT AS		2432 W. F PHOENIX, Phone:(60	ENGINEERING CONSULTANTS PEORIA AVENUE, SUITE 1246 AZ 85029 02) 906-1901	s below.	!

AND O	UANTI	TIES				
BID ITEM NO.		AS BUILT QUANTITY	APPRO\ MATER		MANUFACTURER	MANHOLE 36-25-301 WS90500273
1						NS9 WS9
2	243					MAN
3						
4	1					
5						/ER
6						E DIAMETER SANITARY SEWER RTH - ZONE 3
7						R SANIT ² 3
8						E DIAMETER (TH - ZONE 3
9						ARGE DI. NORTH
10						HOLES - 14
DVED BY: ED NAME: ANY:	·	L	DATE:	/_	/	ICES D
				'	_/	SERV & 4
DN.	A A COLORADO	otessionar (FIFCA) 33632 THOMAS 0. BRAATELIEN 1-26-22 Ona UST Ona UST			6	CITY OF PHOENIX - WATER SERVICES DEPT - LARGE REHABILITATION - GRADE 5 & 4 MANHOLES - NOR
SCALE C	DF MAP: 100	MANHO 45 / 5		SH	EET NUMBER: 52 OF 63	CITY OI REHAB

	PROJECT II	FORMATION					REHABILITATION D	ESIGN	F
CITY OF PHOENIX - WA	TER SERVICES DEPT - I	ARGE DIAMETER	PROJ	ECT NUMBER: WS90500273					
SANITARY SEWER REHA	BILITATION - GRADE 5	& 4 MANHOLES -	CITY	PROJECT MANAGER: SAUL DURAN	CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	E
	NORTH - ZONE 3								
		NFORMATION			MAG 422	COLLAR FRAME	REPLACE COLLAR, FRAME		
WAM ID : I-1221441	LOCATION ID: 36-25-305	CROSS STREET: BELL RD & 15TH AVE			MAG 423 COP P1424	& COVER	& COVER	EA	
JURISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL:	COVER DIAMETER:		ENVIRONMENT: MAJOR					┝
	CAST IRON	26 (IN)		ARTERIAL ROAD	SHEET: D-3	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	
DEPTH RIM TO INVERT: 16.4 (FT)	BARREL DIAMETER: 60 (IN)	CORROSION PROTECTION: NOT COATED		QUARTER SECTION: 36-25	DETAIL: 1 & 2	& BARREL			
COLLAR PRESENT: NO	NASSCO MACP	EXISTING WALL MATERIAL:		NOTES:					
GROUND TYPE: ASPHALT	STRUCTURAL GRADE: 5	CONCRETE					REPAIR & COAT 48 IN DIAMETER	EA	
	MANHOL		SHEET: D-4	BENCH			+		
			and the	Notes the second s	DETAIL: 1		REPAIR & COAT 60 IN DIAMETER	EA	
33.440	omit just		-	37-25-414 37-25-414	SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	
WEST BELL ROAD	· · · ·		-	37-26-124 ද	SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	
	VCP-18 (in)	36-25-305 ∨CP-1-	8 (in)	36-25-304 37-25-304 37-25-304	SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA	
		VCP-8		TISH	SHEET: D-2 DETAIL: 1	INSERT	INSTALL 42-IN DIAMETER INSERT	VF	
				NORTH	SHEET: D-2 DETAIL: 1		INSTALL 54-IN DIAMETER INSERT	VF	
			an all		MAG 420	MANHOLE	REPLACE MANHOLE	VF	
-112.0933 -112. 100 200	0928 -112.0 300 ft	24 -112.09 LEGE		-112.0915	NOTES: SPARK TEST PULL TEST:	RESULTS:		APPRO PRINT COMF	ΈC
ASSESSMENT NOTES:	500 It			MANHOLE TO REPAIR			1	OTES	5
ASSESSMENT NOTES: AS BUILT CERTIFICATION I HEREBY CERTIFY THAT THE "RECORE MEASUREMENTS AS SHOWN HEREOF UNDER MY SUPERVISION OR AS NOT CORRECT TO THE BEST OF MY KNOW	D DRAWING" N WERE MADE REGISTRATIC ED ARE	CIVIL ENGINEER:	~ ``	Pipe Connection on Wall Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections Existing Abandoned Sewer Main Not in GIS Pipe Connections City Sewer Main Flow Direction	B. REMOVE AL C. BLAST CLEA D. COAT THE C E. REINSTATE P F. RESTORE LAI	L STEPS BEFORE RI N MANHOLE BEFO HANNEL IF IT IS CO IPE CONNECTIONS	BEFORE PURCHASING MAT EHABILITATION WORK. RE REHABILITATION. DNCRETE. S AFTER COATING OR LININ NT/SIDEWALK AFTER REHA	ERIAL. G.	
BELIEF.			•	City Manholes / Not For Repair	H. PERFORM S	PARK AND PULL TE	STS AFTER REHABILITATION	l	
"PER PHOENIX CITY CODE CHAPTER 2, SECT	SPECIFICALLY STATED IN THE C	CIALUSE ONLY AND MAY NOT BE FURN TY CODE, OR AS REQUIRED BY LAW" BE KEPT SECURE AT ALL TIMES	IISHED F	FOR INSPECTION OR COPYING, EXCEPT AS		2432 W. P PHOENIX, Phone:(60	NGINEERING CONSULTANTS EORIA AVENUE, SUITE 1246 AZ 85029 2) 906-1901	NASI s below. efore you dig.	\$

AND O	UANTI	FIES			
BID ITEM NO.		AS BUILT QUANTITY	APPROVI MATERIA		MANHOLE 36-25-305 WS90500273
1	1				UNC9
2					MAN
3					
4	1				
5					/ER
6					E DIAMETER SANITARY SEWER 8TH - ZONE 3
7					R SANITA
8					E DIAMETER
9	14.4				ARGE DI NORTH
10					DEPT - L/
OVED BY: ED NAME: ANY:	·		DATE:	'/	ICES I
			/	/	SERV & 4
DN.	and a second sec	otessional 200 MITECAZ 33532 BRAATELIEN 1-26-22 Oned 0004 UST		6	EITY OF PHOENIX - WATER SERVICES DEPT - LARGE REHABILITATION - GRADE 5 & 4 MANHOLES - NOR
SCALE C	DF MAP: 100	MANHO 46 / 5		SHEET NUMBE 53 OF 63	ELTY OI

	PROJECT IN	IFORMATION				REHABILITATION DI	SIGN	AND C	UANTI	TIES	
CITY OF PHOENIX - W	ATER SERVICES DEPT - L	ARGE DIAMETER	PROJECT NUMBER: WS90500273								
SANITARY SEWER REH	ABILITATION - GRADE 5	& 4 MANHOLES -	CITY PROJECT MANAGER: SAUL DURAN	CONSTRUCTION	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.		AS BUILT APPROVED	MANUFACTURE
	NORTH - ZONE 3		ATT TROJECT MANAGER. SAUL DURAN	DEIMES					20/11/11		
		NFORMATION		MAG 422							
VAM ID :	LOCATION ID:	CROSS STREET:		MAG 423	COLLAR, FRAME & COVER	REPLACE COLLAR, FRAME & COVER	EA	1	1		
-1225243	36-25-304	15TH AVE & BELL RD		COP P1424	& COVER	a COVER					
IURISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL: CAST IRON	COVER DIAMETER: 26 (IN)	ENVIRONMENT: MAJOR ARTERIAL ROAD	SHEET: D-3	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2			
DEPTH RIM TO INVERT:	BARREL DIAMETER: 60 (IN)	CORROSION PROTECTION: NOT COATED	QUARTER SECTION: 36-25	DETAIL: 1 & 2	& BARREL			_			
L6.3 (FT) COLLAR PRESENT: NO	NASSCO MACP	EXISTING WALL MATERIAL:	NOTES:								
ROUND TYPE: ASPHALT	STRUCTURAL GRADE: 5	CONCRETE	NOTES.			REPAIR & COAT	EA	3			
		E LOCATION		SHEET: D-4		48 IN DIAMETER		-			
***		25-414	VCP-18 (in)	DETAIL: 1	BENCH	REPAIR & COAT 60 IN DIAMETER	EA	4	1		
	_	WEST	Г BELL ROAD	SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5	1		
18 4		VCP-18 (in)	1	SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	6			
VCP-	18 (in)	36-25-304		SHEET: D-4 DETAIL: 1 & 3	PVCLINER	JOINT REPAIR	EA	7			
				SHEET: D-2 DETAIL: 1	INCERT	INSTALL 42-IN DIAMETER INSERT	VF	8			
	IF +	1 ISTHAN		SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	9	14.2		
ALL ALL		NORTH	The second	MAG 420	MANHOLE	REPLACE MANHOLE	VF	10			
-112.0918	-112.0916	-112.0914	-112.0911 D:	NOTES: SPARK TEST PULL TEST:	RESULTS:			OVED BY: ED NAME ANY:		DATE:	_/
50 100 SSESSMENT NOTES:	150 ft		MANHOLE TO REPAIR			Ν	OTES				
AS BUILT CERTIFICATION I HEREBY CERTIFY THAT THE "RECOF MEASUREMENTS AS SHOWN HEREC	RD DRAWING" ON WERE MADE REGISTRATIO	CIVIL ENGINEER:	 Pipe Connection on Wall Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections 	B. REMOVE AL C. BLAST CLEA D. COAT THE C E. REINSTATE F	L STEPS BEFORE R N MANHOLE BEFC CHANNEL IF IT IS CO PIPE CONNECTION	BEFORE PURCHASING MAT EHABILITATION WORK. DRE REHABILITATION. DNCRETE. S AFTER COATING OR LINING	ERIAL.		Registered	otessionar GTFCATE 35532 HOMAS 0. BRATELEN 1-26-22 Sone 1-51	67
UNDER MY SUPERVISION OR AS NO CORRECT TO THE BEST OF MY KNO BELIEF.				G. USE FLOW	THROUGH PLUG IF	ENT/SIDEWALK AFTER REHAU NECESSARY. ESTS AFTER REHABILITATION		JN.	That	a Chreath	
"PER PHOENIX CITY CODE CHAPTER 2, SE	SPECIFICALLY STATED IN THE CI	CIALUSE ONLY AND MAY NOT BE FURNIS TY CODE, OR AS REQUIRED BY LAW" BE KEPT SECURE AT ALL TIMES	HED FOR INSPECTION OR COPYING, EXCEPT AS		2432 W. F PHOENIX, Phone:(60	ENGINEERING CONSULTANTS ECORIA AVENUE, SUITE 1246 AZ 85029 D2) 906-1901	below.	SCALE ()F MAP: 50	MANHOLE: SF 47 / 50	HEET NUMBER: 54 OF 63

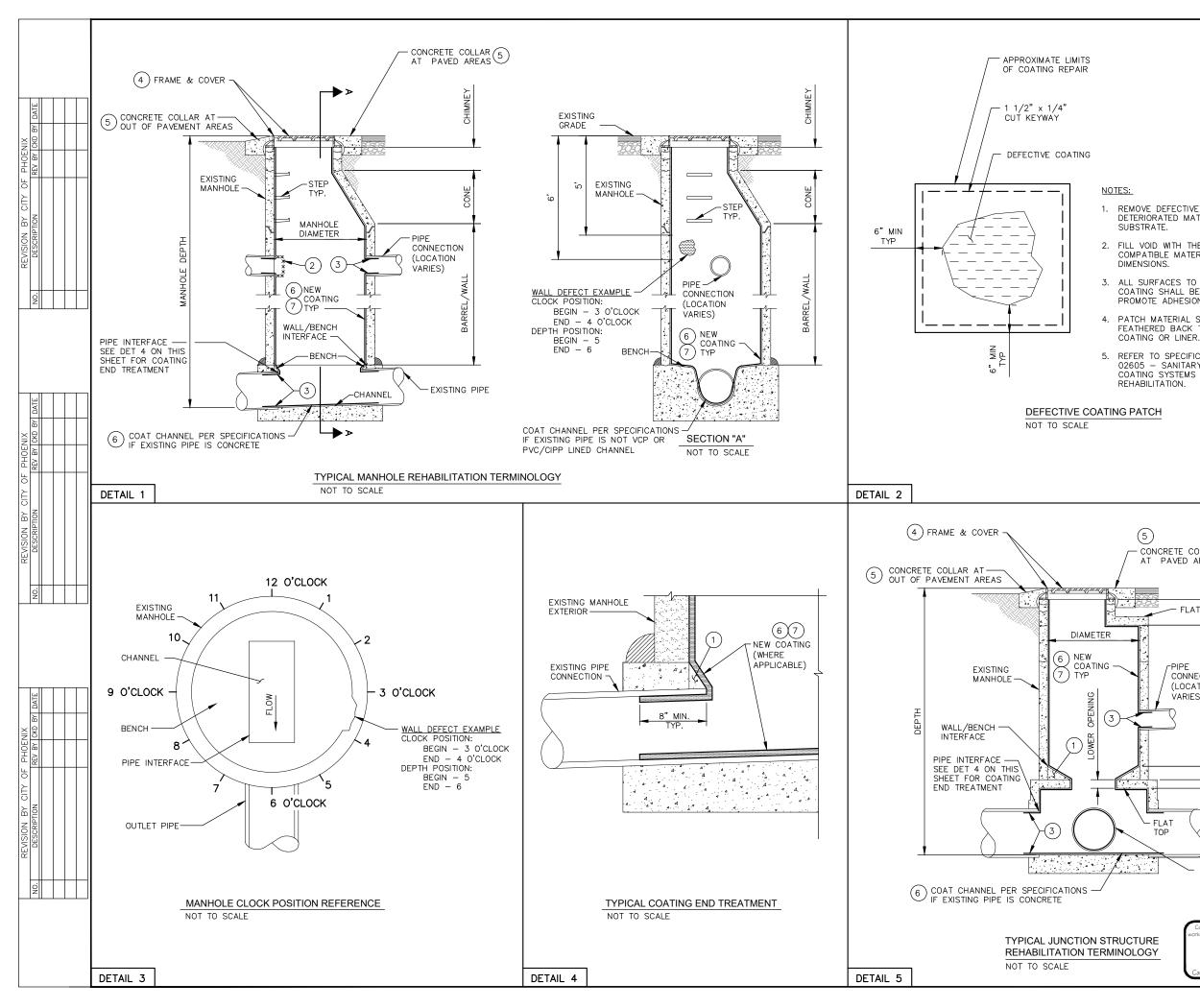
	PRO.	JECT INFORMATION					REHABILITATION DE	SIGN	AND C	UANTI	FIES			
CITY OF PHOENIX - WA	ATER SERVICES D	EPT - LARGE DIAMETER	PROJE	ECT NUMBER: WS90500273										114
SANITARY SEWER REH	ABILITATION - GR	ADE 5 & 4 MANHOLES -		PROJECT MANAGER: SAUL DURAN	CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.			APPROVED MATERIAL	MANUFACTURER	5-4
	NORTH - ZONE 3	3		PROJECT MANAGER: SAUL DURAN	DETAILS				NO.	QUANTIT	QUANTIT			-2
		HOLE INFORMATION			MAG 422									37
VAM ID :	LOCATION ID:	CROSS STREET:			MAG 422 MAG 423		REPLACE COLLAR, FRAME	EA	1	1				LE
1242634	37-25-414	15TH AVE & BELL RD			COP P1424	& COVER	& COVER							E
JRISDICTION: CITY OF PHOENIX	FRAME/COVER MATE CAST IRON	RIAL: COVER DIAMETER: 32 (IN)		ENVIRONMENT: MAJOR ARTERIAL ROAD	SHEET: D-3	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2					MANHOLE
PTH RIM TO INVERT:	BARREL DIAMETER:	CORROSION PROTECTI	ON:	QUARTER SECTION:	DETAIL: 1 & 2	& BARREL	DEFECT REPAIR COATING	SF	2					
5.4 (FT)	60 (IN)	NOT COATED		37-25										-
LLAR PRESENT: YES	NASSCO MACP	EXISTING WALL MATER	RIAL:	NOTES:			REPAIR & COAT	_	2					
OUND TYPE: ASPHALT	STRUCTURAL GRADE:						48 IN DIAMETER	EA	3					
	IMA	NHOLE LOCATION			SHEET: D-4 DETAIL: 1	BENCH								
	-0				DETAIL: 1		REPAIR & COAT 60 IN DIAMETER	EA	4	1				
. 00	A	VCP-12 (in)	L		SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5	1				/ED
	NT				SHEET: D-4-6 DETAIL: ALL		DEFECT REPAIR PATCHING	SF	6					NDV CENTED
	1	(ii) 81-dDA VCP-18 (in)	37-26-12	24 VCP-18 (in)	SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA	7					CANITA
	t	37-25-414			SHEET: D-2 DETAIL: 1		INSTALL 42-IN DIAMETER INSERT	VF	8					ANGTED
1		VCP-18 (in)	WE	ST BELL ROAD	SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	9	13.4				
					MAG 420	MANHOLE	REPLACE MANHOLE	VF	10					DEDT _ I
<u>-112.0918</u> -112 20 40	.0916 60 ft		112.0914 EGEND:	-112.0913	NOTES: SPARK TEST PULL TEST:	RESULTS:			OVED BY: ED NAME ANY:			DATE:	_/	
SESSMENT NOTES:				MANHOLE TO REPAIR	L		Ν	OTES						SFF
SSESSMENT NOTES:		ISTERED CIVIL ENGINEER:		Pipe Connection on Wall Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections	B. REMOVE AL	L STEPS BEFORE R	BEFORE PURCHASING MATE EHABILITATION WORK. RE REHABILITATION.				ofessional English	4		WATER
S BUILT CERTIFICATION IEREBY CERTIFY THAT THE "RECOR EASUREMENTS AS SHOWN HEREO NDER MY SUPERVISION OR AS NOT	D DRAWING" N WERE MADE REG	ISTRATION NUMBER:		Existing Abandoned Sewer Main Not in GIS Pipe Connections City Sewer Main	D. COAT THE C E. REINSTATE F F. RESTORE LA	HANNEL IF IT IS CO PIPE CONNECTIONS NDSCAPE/PAVEME	DNCRETE. 5 AFTER COATING OR LINING NT/SIDEWALK AFTER REHAE		DN.	Regist	33632 THOMAS 0. BRAATELIEN Sogned	,		
DRRECT TO THE BEST OF MY KNOW		E:		Flow Direction City Manholes / Not For Repair		THROUGH PLUG IF	NECESSARY. STS AFTER REHABILITATION			1 hor				
ELIEF. "PER PHOENIX CITY CODE CHAPTER 2, SEC	SPECIFICALLY STATE	E FOR OFFICIALUSE ONLY AND MAY NOT BE D IN THE CITY CODE, OR AS REQUIRED BY L ENT MUST BE KEPT SECURE AT ALL TIMES	FURNISHED F			FC PROJECT E 2432 W. P PHOENIX, Phone:(60	NGINEERING CONSULTANTS EORIA AVENUE, SUITE 1246	VA <mark>811</mark>	SCALE C)F MAP: 25	MANHC 48 / 5		IEET NUMBER: 55 OF 63	

	PROJECT IN	IFORMATION					REHABILITATION D	ESIGN	A
CITY OF PHOENIX - WA			PROJE	CT NUMBER: WS90500273					
SANITARY SEWER REHA					CONSTRUCTION	COMPONENT	REHABILITATION	UNITS	В
	NORTH - ZONE 3		CITY PI	ROJECT MANAGER: SAUL DURAN	DETAILS				
		NFORMATION CROSS STREET:			MAG 422 MAG 423	COLLAR, FRAME	REPLACE COLLAR, FRAME	EA	
WAM ID : I-1225839	LOCATION ID: 37-26-124	15TH AVE & BELL RD			COP P1424	& COVER	& COVER	EA	
JURISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIAL:	COVER DIAMETER:		ENVIRONMENT: MAJOR					
	CAST IRON	32 (IN)		ARTERIAL ROAD	SHEET: D-3	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	
DEPTH RIM TO INVERT:	BARREL DIAMETER:	CORROSION PROTECTION:		QUARTER SECTION:	DETAIL: 1 & 2	& BARREL	DEFECT REPAIR COATING	ЭГ	
15.5 (FT)	60 (IN)	NOT COATED		37-26					
COLLAR PRESENT: YES GROUND TYPE: ASPHALT		EXISTING WALL MATERIAL:		NOTES:			REPAIR & COAT		
GROUND TYPE: ASPHALI	STRUCTURAL GRADE: 5						48 IN DIAMETER	EA	
	MANHUL	E LOCATION	_		SHEET: D-4 DETAIL: 1	BENCH			
-04-04		AVENUE	5				REPAIR & COAT 60 IN DIAMETER	EA	
	'N	HT21 H	1	Ster Contraction	SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	
1	(j)	ON INCOMENTATION			SHEET: D-4-6 DETAIL: ALL	PVC LINER	DEFECT REPAIR PATCHING	SF	
	VCP-18 (in)	37-26-124 • •	VCP-1	18 (in)	SHEET: D-4 DETAIL: 1 & 3	FVC LINER	JOINT REPAIR	EA	
33.640	37-25-	414			SHEET: D-2 DETAIL: 1		INSTALL 42-IN DIAMETER INSERT	VF	
1	VCP-18 (in)	WEST	BELL	ROAD	SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	
		0 H			MAG 420	MANHOLE	REPLACE MANHOLE	VF	
-112.0916	-112.0915 60 ft	-112.0914		12.0913 -112.0912	NOTES: SPARK TEST PULL TEST:	RESULTS:		APPRO PRINT COMF	ED
ASSESSMENT NOTES:			М	1ANHOLE TO REPAIR			Ν	IOTES	
			Pi	ipe Connection on Wall					
				ipe Connection Over Bench ipe Connection At Channel			BEFORE PURCHASING MAT	ERIAL.	
AS BUILT CERTIFICATION	REGISTERED	CIVIL ENGINEER:		Prop Pipe Connections			EHABILITATION WORK. DRE REHABILITATION.		
AS BUILT CERTIFICATION		\rightarrow	Ex	xisting Abandoned Sewer Main		HANNEL IF IT IS C			
MEASUREMENTS AS SHOWN HEREOI		N NUMBER:		lot in GIS Pipe Connections City Sewer Main			S AFTER COATING OR LINING		
UNDER MY SUPERVISION OR AS NOT	ED ARE			low Direction		NDSCAPE/PAVEME HROUGH PLUG IF	ENT/SIDEWALK AFTER REHA	BILITATIO	ΟN
CORRECT TO THE BEST OF MY KNOW BELIEF.	/LEDGE AND DATE:			City Manholes / Not For Repair			ESTS AFTER REHABILITATION		
"PER PHOENIX CITY CODE CHAPTER 2, SECT	SPECIFICALLY STATED IN THE CI	IALUSE ONLY AND MAY NOT BE FURN Y CODE, OR AS REQUIRED BY LAW" E KEPT SECURE AT ALL TIMES	NISHED FO	DR INSPECTION OR COPYING, EXCEPT AS		2432 W. F PHOENIX, Phone:(60	ENGINEERING CONSULTANTS PEORIA AVENUE, SUITE 1246 AZ 85029 D2) 906-1901		s

AND C	UANTI	FIES				
BID ITEM NO.	BID QUANTITY	AS BUILT QUANTITY	APPROV MATERI		MANUFACTURER	MANHOLE 37-26-124 WS90500273
1	1					NOLE 3 WS9
2						MAN
3						
4	1					
5						/ER
6						E DIAMETER SANITARY SEWER RTH - ZONE 3
7						R SANIT/ 3
8						E DIAMETER (TH - ZONE 3
9	13.4					ARGE DI NORTH
10						HOLES -
DVED BY: ED NAME: ANY:			DATE:	/	_/	VICES D 4 MANI
						SEF 5 &
DN.	testing to the second s	dessionar GESSIONAR GEFECAR 33632 BRAATELIEN 1-26-22 Sona 200A 1-25 200A 1-25 200A 1-25 200A			5	CITY OF PHOENIX - WATER SERVICES DEPT - LARGE REHABILITATION - GRADE 5 & 4 MANHOLES - NOR
SCALE C	DF MAP: 25	MANHO 49 / 5		SH	EET NUMBER: 56 OF 63	CITY OI REHAB

	PROJEC	CT INFORMATION				REHABILITATION DE	SIGN	AND C	UANTI	TIES
CITY OF PHOENIX - WA			PROJECT NUMBER: WS90500273 CITY PROJECT MANAGER: SAUL DURAN	CONSTRUCTION DETAILS	COMPONENT	REHABILITATION	UNITS	BID ITEM NO.	BID QUANTITY	AS E QUA
		DLE INFORMATION		MAG 422						
WAM ID : I-1242656	LOCATION ID: 37-26-123	CROSS STREET: BELL RD & 15TH AVE		MAG 422 MAG 423 COP P1424	COLLAR, FRAME & COVER	REPLACE COLLAR, FRAME & COVER	EA	1	1	
JURISDICTION: CITY OF PHOENIX	FRAME/COVER MATERIA CAST IRON	32 (IN)	ENVIRONMENT: MAJOR ARTERIAL ROAD	SHEET: D-3	CHIMNEY, CONE	DEFECT REPAIR COATING	SF	2	213	
DEPTH RIM TO INVERT: 14.7 (FT)	BARREL DIAMETER: 60 (IN)	CORROSION PROTECTION: NOT COATED	37-26	DETAIL: 1 & 2	& BARREL					
COLLAR PRESENT: YES GROUND TYPE: OTHER	NASSCO MACP STRUCTURAL GRADE: 4	EXISTING WALL MATERIAL	: NOTES:			REPAIR & COAT 48 IN DIAMETER	EA	3		
	MAN	HOLE LOCATION		SHEET: D-4	BENCH					<u> </u>
33.6407		(D) 4		DETAIL: 1		REPAIR & COAT 60 IN DIAMETER	EA	4	1	
VCP-12	1			SHEET: D-1 DETAIL: 1 - 5	CHANNEL	REPAIR (SEE NOTE D)	EA	5		
		VCP-6		SHEET: D-4-6 DETAIL: ALL		DEFECT REPAIR PATCHING	SF	6		
37-26-124 37-25-41		37-26-123 VCP-18 (in)	VCP-18 (in)	SHEET: D-4 DETAIL: 1 & 3	PVC LINER	JOINT REPAIR	EA	7		
VCP-18 (in) 3 VCP-18 (in) 3 WEST BE 36-25-304 3 ₩	and the second s	F		SHEET: D-2 DETAIL: 1		INSTALL 42-IN DIAMETER INSERT	VF	8		
			MANHOLE TO REPAIR	SHEET: D-2 DETAIL: 1	INSERT	INSTALL 54-IN DIAMETER INSERT	VF	9		
ORTH 1.	1.	11		MAG 420	MANHOLE	REPLACE MANHOLE	VF	10		
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ASSESSMENT NOTES: ZONE 7 MANHOLE IN A DIFERENT SI	ET OF PLANS		Pipe Connection on Wall							
AS BUILT CERTIFICATION I HEREBY CERTIFY THAT THE "RECOR MEASUREMENTS AS SHOWN HEREC UNDER MY SUPERVISION OR AS NO CORRECT TO THE BEST OF MY KNOW BELIEF.	REGISTI RD DRAWING" DN WERE MADE REGISTI TED ARE	ERED CIVIL ENGINEER:	 Pipe Connection Over Bench Pipe Connection At Channel Drop Pipe Connections Existing Abandoned Sewer Main Not in GIS Pipe Connections City Sewer Main Flow Direction City Manholes / Not For Repair 	B. REMOVE AL C. BLAST CLEA D. COAT THE C E. REINSTATE P F. RESTORE LAI G. USE FLOW T	L STEPS BEFORE RI N MANHOLE BEFO HANNEL IF IT IS CO PIPE CONNECTIONS NDSCAPE/PAVEME THROUGH PLUG IF	S AFTER COATING OR LINING NT/SIDEWALK AFTER REHAE	G. BILITATIO	DN.	A CALL OF CALLO OF CALL OF CAL	RATELES BRAATELES Soned
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ABILITATION DE	SIGN	AND C	UANTI	TIES			
REHABILITATION	UNITS	BID ITEM NO.		AS BUILT QUANTITY	APPROVED MATERIAL	MANUFACTURER	MANHOLE 37-26-123 WS90500273
ACE COLLAR, FRAME VER	EA	1	1				NS9 WS9
CT REPAIR COATING	SF	2	213				MAN
IR & COAT I DIAMETER	EA	3					
IR & COAT I DIAMETER	EA	4	1				
IR NOTE D)	EA	5					/ER
CT REPAIR PATCHING	SF	6					E DIAMETER SANITARY SEWER RTH - ZONE 3
T REPAIR	EA	7					R SANIT [/] 3
ALL 42-IN 1ETER INSERT	VF	8					AMETEF
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RE PURCHASING MATE LITATION WORK. HABILITATION. TE. R COATING OR LINING DEWALK AFTER REHAB SSARY. FTER REHABILITATION.	ILITATIC	DN.	A statistical stat	olessionar RIFCAI2 BRAATELIEN 1-26-22 Soned. 1-26-22 Non US-1		6)	CITY OF PHOENIX - WATER SERVICES DEPT - LARGI REHABILITATION - GRADE 5 & 4 MANHOLES - NOF
NG CONSULTANTS NUE, SUITE 1246 D1 Know what's D Call before	elow. bre you dig.		DF MAP: 100	MANHO 50 / 5		IEET NUMBER: 57 OF 63	CITY OF REHABI





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H.W.A. STATE PROJ. NO. NO. TOTA EGION ARIZ. WS90500273 58 63 **SPF** PROJECT ENGINEERING CONSULTANTS 2432 W. PEORIA AVENUE, SUITE 1246 ár i PHOENIX, AZ 85029 Phone: (602) 906-1901

KEY NOTES

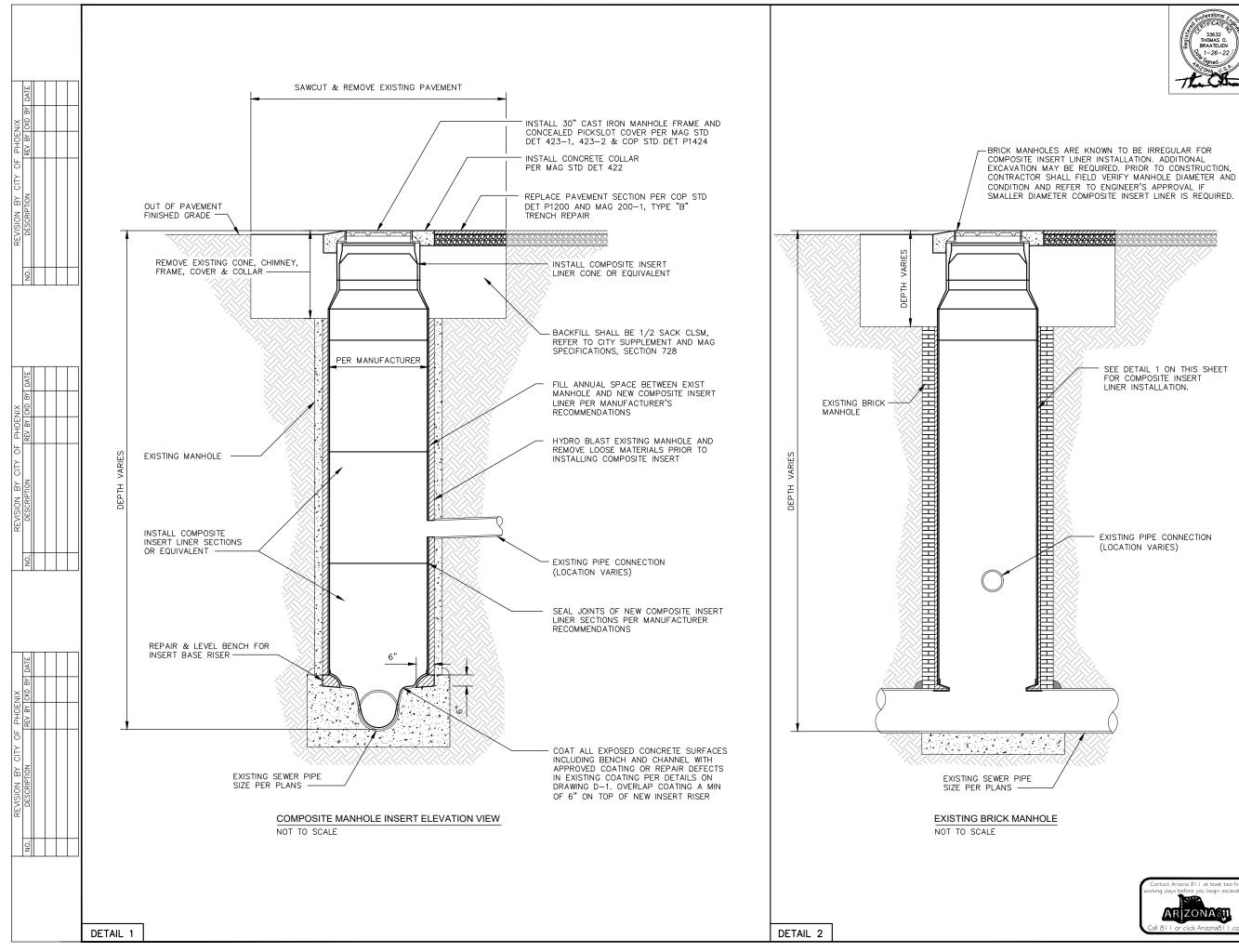
(1)IF REQUIRED AND IF LEDGE IS PRESENT ABOVE PIPE, THE CONTRACTOR SHALL GROUT UP TO 8" ABOVE PIPE PRIOR TO COATING. THEN COAT THE EXPOSED CONCRETE WITH COATING PER SPECIFICATIONS. IF REQUIRED AND PRIOR TO COATING, THE (2) CONTRACTOR SHALL TRIM INTRUDING PIPE 1. REMOVE DEFECTIVE COATING & CONNECTIONS ABOVE THE CHANNEL PER SPECIFICATIONS DETERIORATED MATERIAL TO SOUND 2. FILL VOID WITH THE SAME OR COMPATIBLE MATERIAL TO ORIGINAL 3 THE CONTRACTOR SHALL CREATE A WATER TIGHT SEAL AT THE MANHOLE TO PIPE INTERFACE DEPENDING ON MANHOLE AND PIPE MATERIAL AS FOLLOWS: 3. ALL SURFACES TO RECEIVE NEW COATING SHALL BE ROUGHENED TO • COATED MANHOLE TO CIPP-LINED/VCP/DIP PROMOTE ADHESION. PIPE: ROUGHEN PIPE SURFACE PRIOR TO COATING THEN OVERLAP THE COATING 8 4. PATCH MATERIAL SHALL BE FEATHERED BACK TO THE EXISTING INCHES ON TOP OF THE PIPE AS SHOWN IN DETAIL 4 ON THIS SHEET COATED MANHOLE TO PVC-LINED PIPE: SEAL 5. REFER TO SPECIFICATIONS SECTION INTERFACE PER DETAIL 4, DRAWING D-5 02605 - SANITARY SEWER MANHOLE COATING SYSTEMS AND • PVC-LINED MANHOLE TO CIPP-LINED/VCP/DIF PIPE: SEAL INTERFACE PER DETAIL 1 & 2, DRAWING D-6 • PVC-LINED MANHOLE TO PVC-LINED PIPE: SEAL INTERFACE PER DETAIL 2, DRAWING D-5 IF MANHOLE FRAME & COVER AND (4)COLLAR ARE TO BE BE REPLACED, THE NEW INSTALLATION SHALL BE PER MAG STD DET 423-1, 423-2 & COP STD DET P1424 IF MANHOLE CONCRETE COLLAR IS TO BE (5) BE REPLACED, THE NEW INSTALLATION SHALL BE PER MAG STD DET 422 CONCRETE COLLAR (6) THE CONTRACTOR SHALL REHABILITATE ALL AT PAVED AREAS EXPOSED CONCRETE SURFACES OR EXISTING DEFECTIVE COATING SYSTEM. THE COATING SHALL BE 1/8" (OR 125 MILS) ON THE MANHOLE OR JUNCTION STRUCTURE. REFER TO THE REHABILITATION TABLES ON THE MANHOLE REHABILITATION PLANS FOR - FLAT TOP SPECIFIC DETAILS AND TO THE SPECIFICATIONS FOR ADDITIONAL COATING REQUIREMENTS. HOLIDAY TEST PER COP SUPPLEMENT TO (7) THE MAG SPECIFICATIONS 626.3.3 -PIPF CONNECTION T (LOCATION VARIES) BEI "PER PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY N N N OWER LAW." THIS DOCUMENT MUST BE KEPT SECURE AT ALL TIMES LARGE DIAMETER SANITARY SEWER REHABILITATION GRADE 5 & 4 MANHOLES - NORTH - ZONE 3 PIPE CONNECTION CITY OF PHOENIX, ARIZONA (LOCATION VARIES) WATER SERVICES DEPARTMENT **REHABILITATION:** ona 811 at least two COATING DETAILS AR ZONA 811 SHEE NO. 1/22 SHEET 1/22 RAWINC

SCALE: NONE

D-1 58

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🔪 Ca	all 811 or click Arizona811.com 🖌



- CONTRACTOR SHALL VERIFY THE LOCATION ALL EXISTING UTILITIES IN EXCAVATION AREA PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL PROTECT IN PLACE ALL 2. EXISTING UTILITIES.
- PRIOR TO PLACING ORDER FOR 3. MANUFACTURING OF COMPOSITE INSERT LINER CONTRACTOR SHALL TAKE PRECISE MEASUREMENTS AND PROVIDE THE MANUFACTURER ALL DIMENSIONS AND CONFIGURATIONS AS REQUIRED FOR PROPER INSTALLATION.
- CONTRACTOR TO VERIFY PIPE CONNECTION LOCATIONS, SIZES AND ELEVATIONS PRIOR TO CUTTING PIPE OPENINGS IN COMPOSITE INSERT LINER.
- IN AREAS WHERE THE MANHOLE IS IN 5. CONCRETE SIDEWALK, REMOVE CONCRETE TO NEAREST JOINT.
- 6. BLAST CLEAN ENTIRE MANHOLE AND REMOVE ANY MANHOLE STEPS PRIOR TO INSTALLING COMPOSITE INSERT LINER.
- REPAIR THE MANHOLE CHANNEL & BENCH 7. COMPONENTS PRIOR TO INSTALLING THE COMPOSITE INSERT LINER.
- ANY GROUT REPAIR TO THE BASE FOR 8. SUPPORT OF THE INSERT SHALL BE CONSTRUCTED OF 5000 PSI IN 28 DAYS GROUT AND SHALL HAVE A MINIMUM REINFORCEMENT AREA OF 0.5% WITH GRADE 60 REINFORCING STEEL.
- EXTEND EXISTING PIPE CONNECTIONS PER 9. COMPOSITE INSERT LINER MANUFACTURER'S RECOMMENDATIONS AND PROVIDE A WATER TIGHT SEAL AROUND CONNECTIONS.
- 10. CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS TO INSTALL THE COMPOSITE INSERT LINER AND REFER TO SPECIFICATIONS.

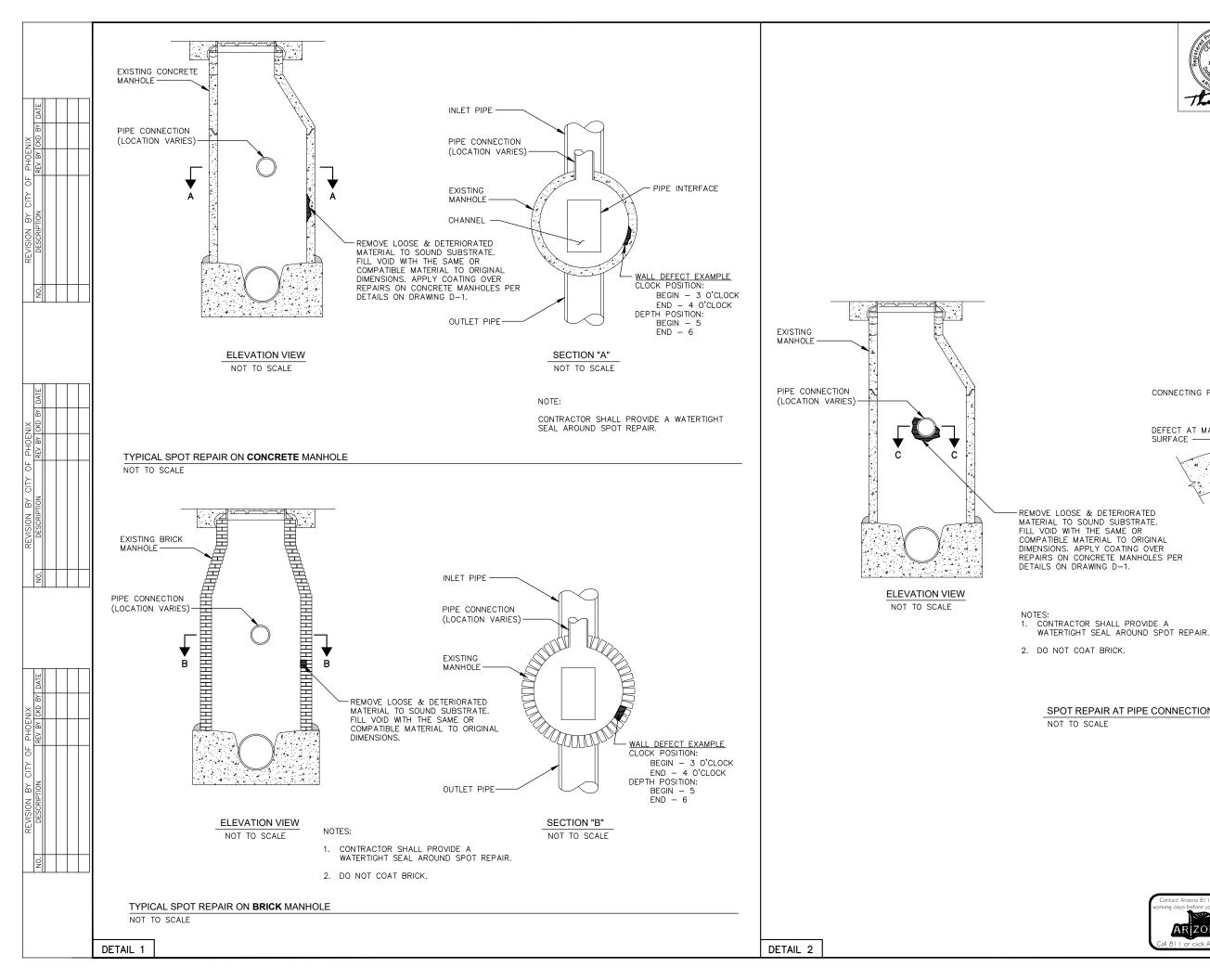
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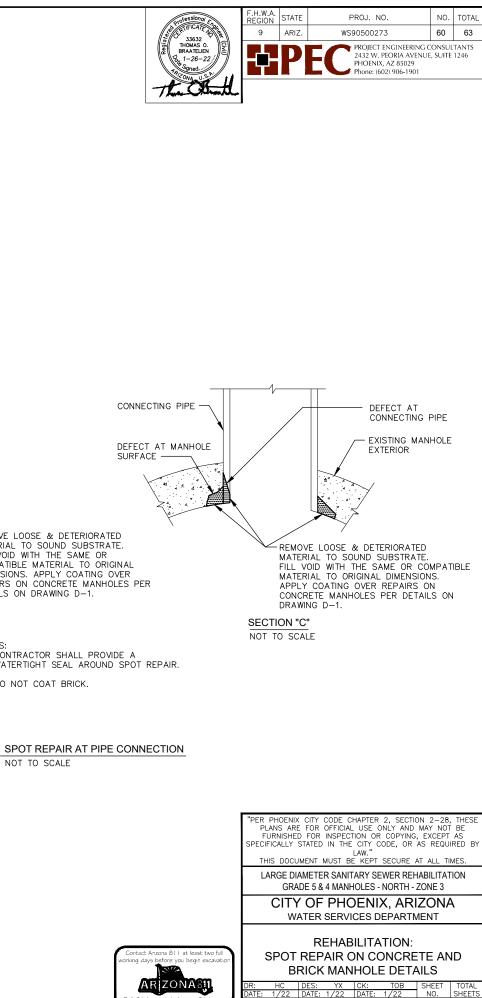
LARGE DIAMETER SANITARY SEWER REHABILITATION GRADE 5 & 4 MANHOLES - NORTH - ZONE 3

CITY OF PHOENIX, ARIZONA WATER SERVICES DEPARTMENT

REHABILITATION: MANHOLE COMPOSITE INSERT LINER DETAILS

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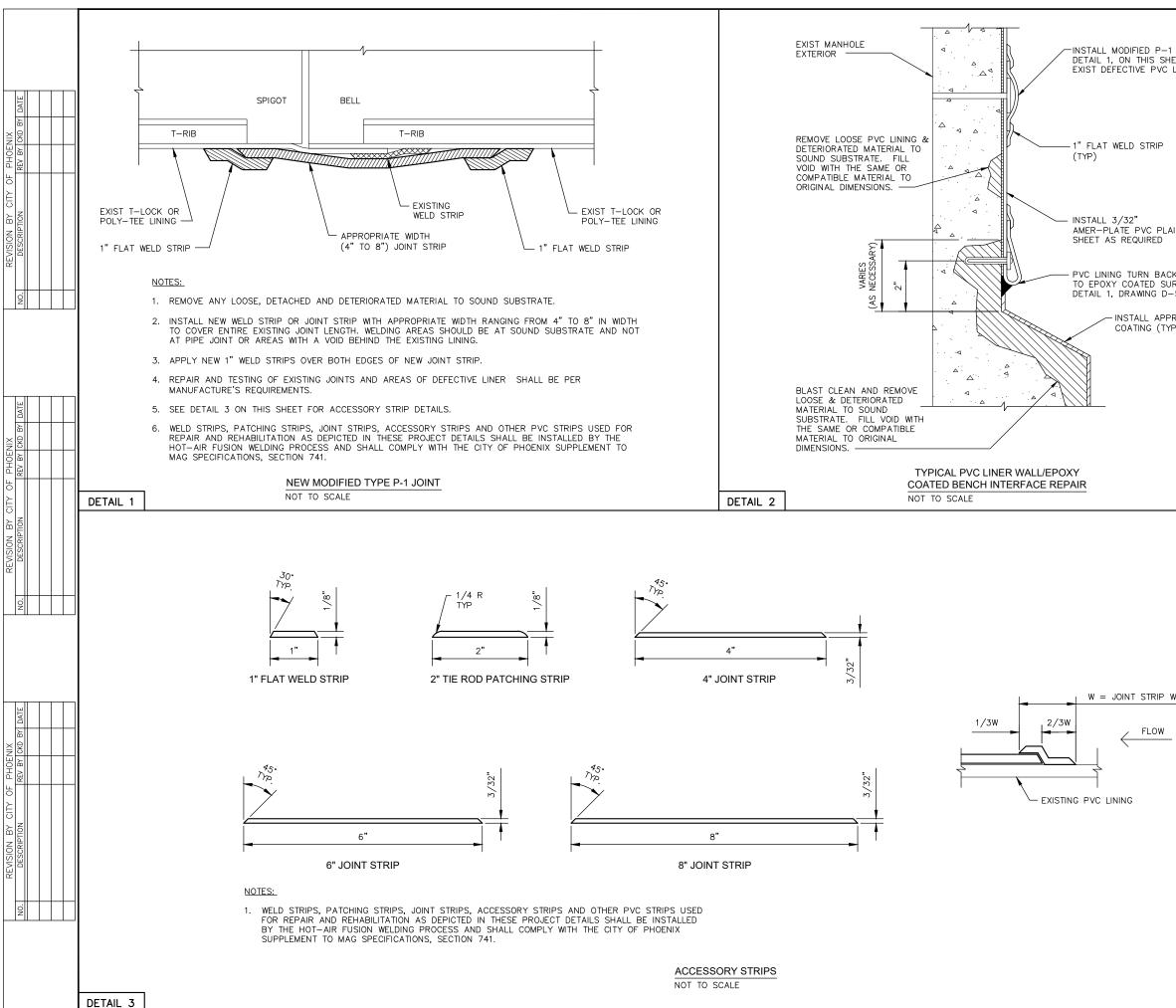


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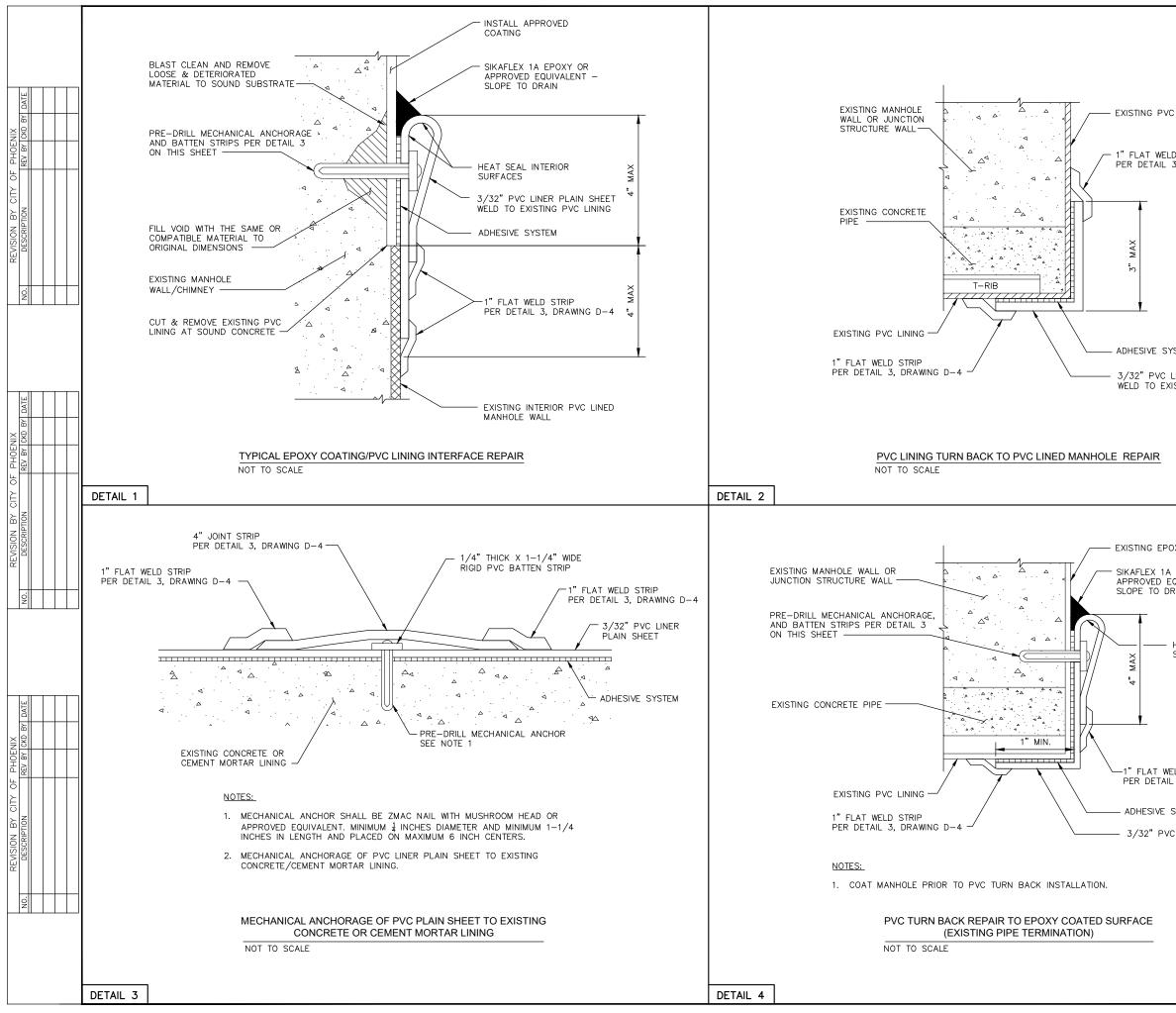
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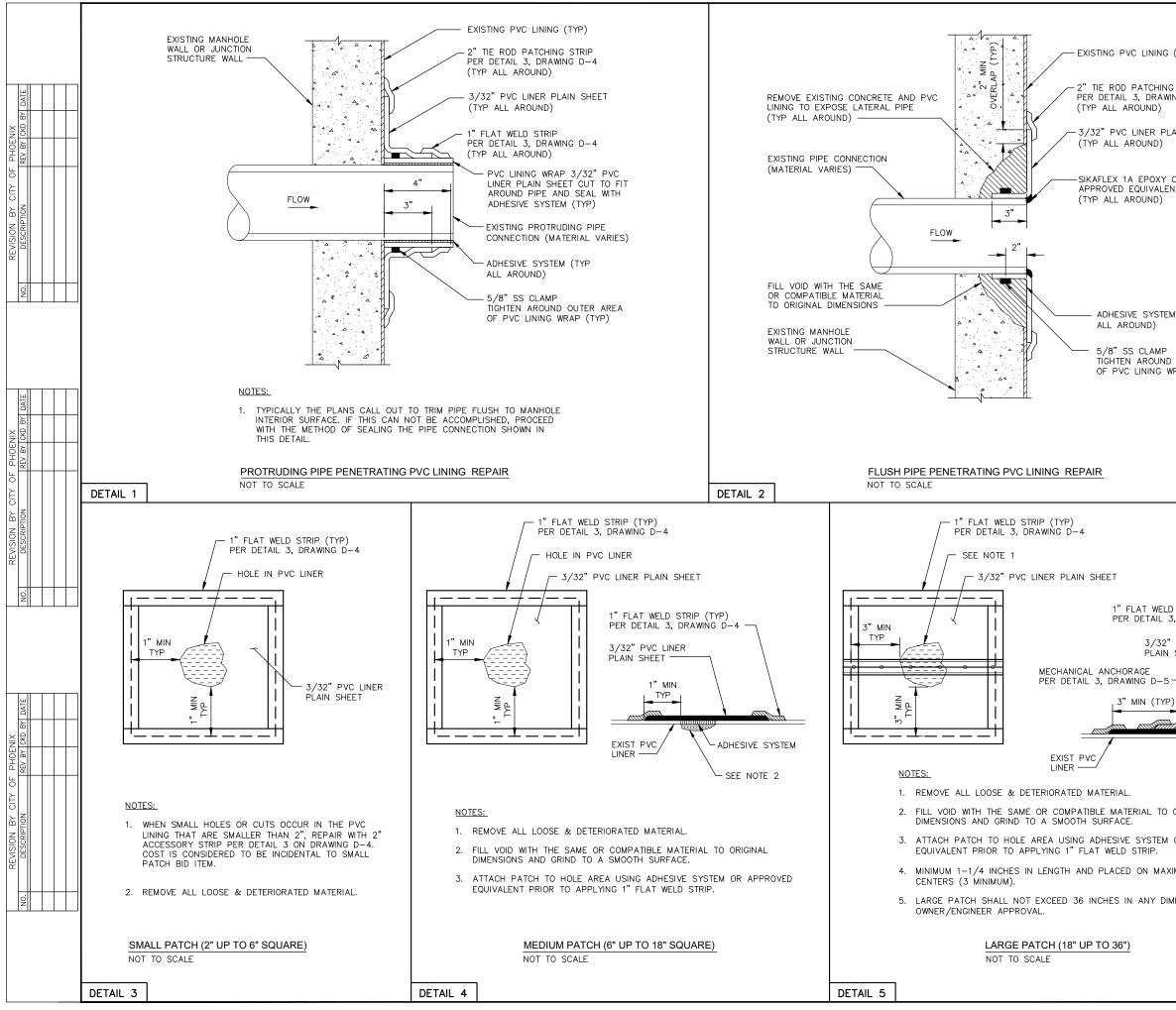
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