



**BOARD OF SUPERVISORS AGENDA ITEM REPORT
CONTRACTS / AWARDS / GRANTS**

Award Contract Grant

Requested Board Meeting Date: 6/12/2018

* = Mandatory, information must be provided

or Procurement Director Award

***Contractor/Vendor Name/Grantor (DBA):**
Arizona Department of Transportation (ADOT)

***Project Title/Description:**
ADOT Ina Road and I-10 T.I. Project (3I1105)

***Purpose:**
This retroactive amendment will provide the additional funding necessary for ADOT to complete the construction of the RWRD Sewer relocations required for the ADOT Ina Road and I-10 T.I. Project. Because ADOT has no stipulated end date in the agreement, the contract under Amendment 2 would extend the contract to June 30, 2019 based on the Project Manager's estimation of the completion date. This amendment is retroactive to reopen the contract that lapsed as there was an extended delay in receiving the final cost agreement between the contractor and ADOT.

***Procurement Method:**
This Agreement Addendum is a non-Procurement contract and not subject to Procurement rules.

***Program Goals/Predicted Outcomes:**
RWRD will monitor and the inspect the public sanitary sewer work that will be constructed by ADOT roadway contractor, Sundt-Kiewitt, to assure compliance with RWRD standard specification and provide quality control.

***Public Benefit:**
The RWRD public sanitary sewer relocations are required to accommodate the roadway and intersection improvements in the Ina Road and I-10 T.I. Project. When completed, there will be a significant improvement in traffic flows with reduced congestion and a bridge over the Union Pacific Rail Road to prevent large traffic backups.

***Metrics Available to Measure Performance:**
Final audit of total costs for the sewer work and compliance with the scheduled completion dates.

***Retroactive:**
Yes, the initial ADOT/RWRD Utility Agreement (CT 16-0273) had no costs to RWRD because of Prior Rights status associated with GMP 1 work. ADOT requested payment for the GMP 2 construction based on the ADOT Design Consultant's estimate of probable costs and this amount is what was used for Amendment 1 (\$1,272,584.00) to the ADOT/RWRD Utility Agreement (CT 16-0273). Subsequently, because this is a Construction Manager at Risk (CMAR) contract, GMP 2 was submitted to ADOT by the Contractor, Sundt-Kiewitt Joint Venture (SKJV), with a total cost of \$2,926,277 for the Sewer relocations after the construction had begun. The amount for Amendment 2 is \$1,653,693. If this amendment is not approved, ADOT will not incorporate the modifications to the Pima County Public sanitary sewer system into the construction of the 3I1105 Highway Project, and will not be able to complete the project as planned.

*To: COB. 5-16-18
pgs. 31
(2)*

Contract / Award Information

Document Type: _____ Department Code: _____ Contract Number (i.e., 15-123): _____

Effective Date: _____ Termination Date: _____ Prior Contract Number (Synergen/CMS): _____

Expense Amount: \$* _____ Revenue Amount: \$ _____

***Funding Source(s) required:**

Funding from General Fund? Yes No If Yes \$ _____ % _____

Contract is fully or partially funded with Federal Funds? Yes No

***Is the Contract to a vendor or subrecipient?**

Were insurance or indemnity clauses modified? Yes No

If Yes, attach Risk's approval

Vendor is using a Social Security Number? Yes No

If Yes, attach the required form per Administrative Procedure 22-73.

Amendment / Revised Award Information

Document Type: CT Department Code: WW Contract Number (i.e., 15-123): 16-0273

Amendment No.: 2 AMS Version No.: 7

Effective Date: 7/1/2017 New Termination Date: 6/30/2019

Prior Contract No. (Synergen/CMS): _____

Expense or Revenue Increase Decrease Amount This Amendment: \$ 1,653,693.00

Is there revenue included? Yes No If Yes \$ _____

***Funding Source(s) required:** RWRD Obligations

Funding from General Fund? Yes No If Yes \$ _____ % _____

Grant/Amendment Information (for grants acceptance and awards) Award Amendment

Document Type: _____ Department Code: _____ Grant Number (i.e., 15-123): _____

Effective Date: _____ Termination Date: _____ Amendment Number: _____

Match Amount: \$ _____ Revenue Amount: \$ _____

***All Funding Source(s) required:**

***Match funding from General Fund?** Yes No If Yes \$ _____ % _____

***Match funding from other sources?** Yes No If Yes \$ _____ % _____

***Funding Source:** _____

***If Federal funds are received, is funding coming directly from the Federal government or passed through other organization(s)?**

Contact: Glen Peterson (Stephanie Olmedo, 724-4671)

Department: Regional Wastewater Reclamation Department Telephone: 724-6349

Department Director Signature/Date: [Signature] 5/14/18

Deputy County Administrator Signature/Date: [Signature] 5/15/18

County Administrator Signature/Date: [Signature] 5/15/18

(Required for Board Agenda/Addendum Items)

Contract No: CT-WW-14-273 Amendment No: 02

This number must appear on all correspondence and documents pertaining to this contract

**STATE OF ARIZONA
DEPARTMENT OF TRANSPORTATION**

TRACS No.	010 PM 248 H8479 01C	Location:	I-10, Ina Road TI
Project No.	NH-STP-010-D(216)S	Agreement No.	3597-15-PCRWRD
UTILITY:	Pima County Regional Wastewater Reclamation Department Public Works Building 201 N. Stone Avenue, 3 rd Floor Tucson, AZ 85701-1207	Agreement Addendum No.	2
		Original Agreement AG Contract:	P001-2016-000903

Pima County Regional Wastewater Reclamation Department (PIMA COUNTY) and the Arizona Department of Transportation (ADOT) hereby agree to modify the existing referenced Agreement as provided in this Addendum, including Attachments. All other provisions of the Agreement, as modified by any previous addenda, remain in effect.

WHEREAS: The ADOT contractor will RELOCATE and REMOVE Pima County Regional Wastewater Reclamation Department facilities which are in conflict with the PROJECT construction. The project is a Construction Manager at Risk (CMAR) contract and work will be completed in two parts. This addendum is for an addition and cost for GMP 2. The work for GMP 1 is in the original agreement.

Payment responsibility for these items is identified in Revised Exhibit A. The work included for this addendum is shown in Revised Exhibit B. See Exhibit D for Change Order 13.

THEREFORE: Exhibit A-1 items covered in this addendum consists of the CMAR allowance at the Circle K. Agreement No. 3597-15-PCRWRD is hereby amended to represent a cost increase of \$34,868 as shown on the attached Exhibit A-1.

Exhibit A-2 includes the CMAR sewer construction costs for GMP 2 and Change Order 13. For the CMAR type of delivery method these costs are considered the actual construction costs. Therefore, Agreement 3597-15-PCRWRD should be amended to represent a cost increase of \$ 1,618,825.

Following completion of the PROJECT, ADOT will determine the final total cost. If ADOT's final total cost differs from the estimated amount previously paid by PCRWRD, ADOT will refund the amount of overpayment, or will invoice the PCRWRD for the additional amount due.

The parties hereto agree that Agreement No. 3597-15-PCRWRD is hereby amended to represent a cost increase of \$ 1,653,693 as shown on the attached Revised Exhibit A.

All other provisions of Agreement No. 3597-15-PCRWRD shall remain unabrogated.

Addendum No. 1 Attachments: REVISED Exhibit A
Exhibit A-1
Exhibit A-2
REVISED Exhibit B
Exhibit D

Addendum No. 2
3597-15-PCRWRD

IN WITNESS WHEREOF, the parties hereto have executed this AGREEMENT.

All other provisions of the Contract not specifically changed by this Amendment remain in effect and are binding upon the parties.

PIMA COUNTY

ARIZONA DEPARTMENT OF TRANSPORTATION

Chairman, Board of Supervisors

Victoria D. Bever, Utility and Railroad Engineering Manager

Date

Printed Name and Title

Date

ATTEST

APPROVED

Clerk of the Board

Michelle Buntin

Assistant Attorney General
Attorney for Department
of Transportation

Date

Date 4/9/18

APPROVED AS TO FORM

Charles Wesselhoft

Deputy County Attorney

CHARLES WESSELHOFT

Print DCA Name

APR 25 2018

Date

APPROVED AS TO CONTENT

Jason Jenkins

Department Head

5/2/18

Date

REVISED EXHIBIT A

**ADDENDUM NO. 2 TO AGREEMENT NO. 3597-15-PCRWRD
I-10, INA ROAD TI
010 PM 248 H8479 01C
PCRWRD**

SUMMARY OF COSTS

PCRWRD PAID ADOT GMP1 Per Original Agreement	\$ 0
PCRWRD PAID ADOT GMP2 Per Addendum 1	\$ 1,272,584
PCRWRD TOTAL PAID ADOT	\$ 1,272,584

PCRWRD COST RESPONSIBILITY – Addendum 2

PCRWRD Costs for No Prior Right Per Exhibit A-1	\$ 34,868
PCRWRD CMAR Costs for GMP1 and GMP2 Per Exhibit A-2	\$ 1,618,825
PCRWRD TOTAL DUE ADOT Addendum 2	\$ 1,653,693

EXHIBIT A-1

**ADDENDUM NO. 2 TO AGREEMENT NO. 3597-15-PCRWRD
I-10, INA ROAD TI**

ADDITIONAL GMP 2 ITEMS

PCRWRD COST RESPONSIBILITY GMP2 – Addendum 2 – Exhibit A-1

PCRWRD Costs for No Prior Right GMP2 Addendum 2 Exhibit A-1	\$ 30,320
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Total Estimated Construction Costs	\$ 30,320
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15% Construction Engineering	\$ 4,548
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PCRWRD Total Due ADOT GMP2 Addendum 2	\$ 34,868
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DATE: FEBRUARY 15, 2017

PROJECT NO. 010 PM 248 H8479 01C					
FEDERAL AID 010-D(216)S					
I-10 INA ROAD TI					
PCRWRD COSTS FOR NO PRIOR RIGHTS					
ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
9400015	CMAR ALLOWANCE (CIRCLE K) (FIXED)	L.SUM	0.5	\$ 60,640.00	\$ 30,320.00
				SUBTOTAL	\$ 30,320.00

EXHIBIT A-1 Addendum 2 3597-15-PCRWRD
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EXHIBIT A-2

**ADDENDUM NO. 2 TO AGREEMENT NO. 3597-15-PCRWRD
I-10, INA ROAD TI**

**GMP 1 AND GMP 2
CMAR COSTS**

PCRWRD PAID ADOT GMP1 Per Original Agreement 3597-15-PCRWRD	\$ 0
PCRWRD PAID ADOT GMP2 Per Addendum 1 3597-15-PCRWRD	\$ 1,272,584
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PCRWRD PAID ADOT GMP1 AND GMP2 TOTAL	\$ 1,272,584
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PCRWRD COST RESPONSIBILITY GMP1 AND GMP2 CMAR COSTS – ADDENDUM 2	
PCRWRD CMAR COSTS FOR GMP1	\$ 0
PCRWRD CMAR COSTS FOR GMP2 Exhibit A-2	\$ 2,891,409
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PCRWRD CMAR COST GMP1 AND GMP2 TOTAL	\$ 2,891,409
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PCRWRD PAID ADOT GMP1 AND GMP2 TOTAL	\$ - 1,272,584
PCRWRD CMAR COST DUE ADOT GMP1 AND GMP2 TOTAL	\$ 2,891,409
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PCRWRD TOTAL DUE ADOT	\$ 1,618,825
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				9/19/2016							
ITEM	DESCRIPTION	QTY	3597-15-PCRWRD ADDENDUM 1 EXHIBIT A	3597-15-PCRWRD ADDENDUM 1 EXHIBIT A	QTY - SKJV GMP 2	SKJV UNIT COSTS ** GMP 2	GMP SKJV 2	GMP SKJV 2	QTY - CHANGE ORDER 13	UNIT COSTS ** CHANGE ORDER 13	CHANGE ORDER 13
H847901C - ADOT GMP #2 PIMA COUNTY											
2020042	REMOVAL OF PIPE (GRAVITY SEWER)	2334	\$ 30.00	70,020.00	2,334	\$ 70.00	\$ 163,980.00				
2020116	REMOVE (SEWER MANHOLE)	7	\$ 1,000.00	7,000.00	7	\$ 2,200.00	\$ 15,400.00				
8082846	MANHOLE (SANITARY SEWER (7" DIA))								3	\$ 42,759.00	\$ 128,277.00
8082847	MANHOLE (SANITARY SEWER (8" DIA))								3	\$ 45,238.00	\$ 135,714.00
8082848	MANHOLE (SANITARY SEWER (10" DIA))								1	\$ 70,913.00	\$ 70,913.00
8090186	SEWER PIPE (8" PVC) (SDR-35)	465	\$ 85.00	39,525.00	465	\$ 109.00	\$ 50,685.00				
8090188	SEWER PIPE (24" PVC) (PS46)	345	\$ 218.00	75,210.00	345	\$ 438.00	\$ 151,110.00				
8090189	SEWER PIPE (36" PVC) (PS46)	234	\$ 240.00	56,160.00	259	\$ 513.00	\$ 132,867.00				
8090190	SEWER PIPE (8" (DUCTILE IRON) (CLASS 350)	16	\$ 110.00	1,760.00	16	\$ 331.00	\$ 5,296.00				
8090192	SEWER PIPE (36" (DUCTILE IRON) (CLASS 350)	18	\$ 270.00	4,860.00	18	\$ 1,797.00	\$ 32,346.00				
8091111	MANHOLE, SANITARY SEWER, 4" DIA	1	\$ 4,500.00	4,500.00	1	\$ 18,300.00	\$ 18,300.00				
8091114	MANHOLE, SANITARY SEWER (8" DIA)	3	\$ 14,000.00	42,000.00	3	\$ 36,085.00	\$ 114,255.00		-3	\$ 36,085.00	\$ (114,255.00)
8091115	MANHOLE, SANITARY SEWER (10" DIA)	1	\$ 15,000.00	15,000.00	1	\$ 56,500.00	\$ 56,500.00		-1	\$ 56,500.00	\$ (56,500.00)
8091116	MANHOLE, SANITARY SEWER (8" DIA)	3	\$ 12,000.00	36,000.00	3	\$ 32,500.00	\$ 97,500.00		-3	\$ 32,500.00	\$ (97,500.00)
8092000	SEWER MANHOLE, ADJUST FRAME AND COVER	3	\$ 600.00	1,800.00	3	\$ 4,280.00	\$ 12,840.00				
8092001	SEWER (CLEANOUT, ADJUST FRAME AND COVER)	1	\$ 450.00	450.00	1	\$ 712.00	\$ 712.00				
8092010	HOUSE CONNECTION, SEWER	4	\$ 1,200.00	4,800.00	4	\$ 3,780.00	\$ 15,120.00				
9090004	SURVEY MONUMENT (FORCE MAIN MONUMENT)(RWRD 503)	1	\$ 850.00	850.00	4	\$ 920.00	\$ 3,680.00				
9240055	MISCELLANEOUS WORK (SANITARY SEWER FLOW MANAGEMENT #3)	1	\$ 800,000.00	800,000.00	1	\$ 1,358,118.50	\$ 1,358,118.50				
9240113	MISCELLANEOUS WORK (REMOVE SEWER FORCE MAIN)	3870	\$ 30.00	116,100.00	3,870	\$ 45.00	\$ 174,150.00				
9240148	MISCELLANEOUS WORK (ABANDON SANITARY SEWER) (IN PL)	212	\$ 5.00	1,060.00	212	\$ 63.00	\$ 13,356.00				
				\$ 1,077,095.00			\$ 2,415,813.50				

ITEM	DESCRIPTION	ADOT UNIT COSTS	ADOT EXTENDED	QTY	SKJV UNIT COSTS	SKJV EXTENDED	
SB41301C - MARANA GMP #2 PIMA COUNTY							
9090004	SURVEY MONUMENT (FORCE MAIN MONUMENT)(RWRD 503)	10	\$ 850.00	\$ 8,500.00	10	\$ 920.00	\$ 9,200.00
9240113	MISCELLANEOUS WORK (REMOVE SEWER FORCE MAIN)	700	\$ 30.00	\$ 21,000.00	700	\$ 45.00	\$ 31,500.00
			\$ 29,500.00			\$ 40,700.00	
		GRAND TOTAL	\$ 1,106,595.00		GRAND TOTAL	\$ 2,466,313.50	
		15% Construction Engineering	\$ 165,989.25	15% Construction Engineering		\$ 368,447.03	
		TOTAL	\$ 1,272,584.25		TOTAL	\$ 2,824,760.53	

** COST - LABOR, EQUIPMENT, MATERIALS, DIRECT CHARGES, CONSTRUCTION FEE, OFF-SITE OVERHEAD, BOND, INSURANCE AND GROSS RECEIPTS TAX RATE

SKJV GMP 2 TOTAL	\$ 2,824,760.53
CHANGE ORDER 13 TOTAL	\$ 66,649.00
GMP 2 TOTAL	\$2,891,409.53

EXHIBIT A-2
ADDENDUM 2
3597-15-PCRWRD

REVISED EXHIBIT B

**ADDENDUM NO. 2 TO AGREEMENT NO. 3597-15-PCRWRD
I-10, INA ROAD TI
GMP2**

CONSTRUCTION PLANS GMP2- H8479 & SB413



PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT

INA ROAD GRAVITY SEWER MODIFICATION INA ROAD AND CAMINO DE OESTE, EAST OF 1-10 UPC-2014-013

FEDERAL REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-DI2161S	837	850	
010 PM 248					



THIS PROJECT
LOCATION MAP
SCALE: 3" = 1 mile

BEING A PORTION OF THE
NE 1/4 OF SECTION 1, T-13-S, R-12-E,
SE 1/4 OF SECTION 36, T-12-S, R-12-E,
SW 1/4 OF SECTION 31, T-12-S, R-13-E, AND
NW 1/4 OF SECTION 06, T-13-S, R-13-E
TOWN OF MARANA, PIMA COUNTY, ARIZONA
GSRM

GRAVITY SEWER DISCHARGE POINT
LATITUDE: 32° 20' 14.37" N
LONGITUDE: 111° 03' 47.05" W

INDEX OF SHEETS

PAGE NO.	SHEET NO.	SHEET DESCRIPTION
837	U-4.01	Cover Sheet
838-839	U-4.02 - U-4.03	General Notes
840-843	U-4.04 - U-4.07	Plan and Profile Sheets
		Pipe Removal Sheet
844	U-4.08	Reset MH Frame & Cover
845	U-4.09	Survey Control Sheet
846-850	U-4.10-4.14	Detail Sheets

BOARD OF SUPERVISORS

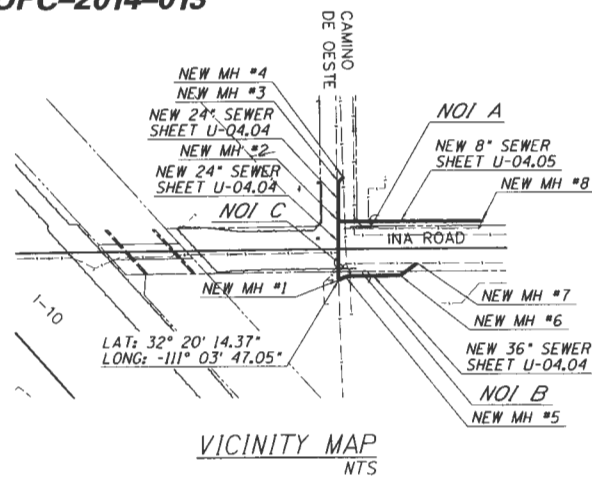
DISTRICT 2	RAMON VALADEZ	MEMBER
DISTRICT 1	ALLY MILLER	MEMBER
DISTRICT 3	SHARON BROXSON	CHAIRMAN
DISTRICT 4	STEVE CHRISTY	MEMBER
DISTRICT 5	RICHARD ELIAS	MEMBER

LEGEND

NEW	EXISTING	FEATURE
		MANHOLE, SANITARY SEWER
		SANITARY SEWER LINE (GRAVITY)
		SANITARY SEWER LINE (FORCE MAIN)
		FORCE MAIN TEST STATION
		GAS LINE
		GAS MARKER
		UNDERGROUND TELEPHONE LINE
		UNDERGROUND ELECTRIC LINE
		UNDERGROUND FIBER OPTIC LINE
		OVERHEAD ELECTRIC
		WATER MAIN
		WATER METER BOX
		GAS METER BOX
		WATER VALVE
		GAS VALVE
		IRRIGATION BOX
		TELEPHONE PEDESTAL
		ELECTRIC POLE W/ GUY WIRE
		ELECTRICAL TRANSFORMER
		ELECTRICAL PEDESTAL
		RIGHT OF WAY LINE
		PROPERTY LINE
		EASEMENT LINE
		GRADE PROFILE
		SECTION LINE
		QUARTER SECTION LINE
		FORCE MAIN MONUMENT
		ABANDON/REMOVE EXISTING SEWER

ABBREVIATIONS

PCWRD	PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
PCDOT	PIMA COUNTY DEPARTMENT OF TRANSPORTATION
PCFCD	PIMA COUNTY FLOOD CONTROL DISTRICT
COT	CITY OF TUCSON
AEO	ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
ADWR	ARIZONA DEPARTMENT OF WATER RESOURCES
CCTV	CLOSED CIRCUIT TELEVISION
MH	MANHOLE
EDS 2016	PCWRD ENGINEERING DESIGN STANDARDS 2016
SSDC 2016	PCWRD STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016
EL., ELEV.	ELEVATION
EX., EXST.	EXISTING
INV.	INVERT
VT.	VERTICAL
PT.	POINT
GB	GRADE BREAK
HDPE	HIGH DENSITY POLYETHYLENE PIPE
PVC	POLYVINYL CHLORIDE PIPE
DIP	DUCTILE IRON PIPE



LAT: 32° 20' 14.37"
LONG: -111° 03' 47.05"

VICINITY MAP
NTS

SUMMARY OF MATERIALS TABLE

Description	Est. Qty.	Unit
HOUSE CONNECTION SEWER (BUSINESS)	4	EACH
SURVEY MONUMENT (FORCE MAIN)	1	EACH
8" PVC PIPE, SDR-35	465	L.F.
24" PVC, PS46	345	L.F.
36" PVC PIPE, PS46	259	L.F.
8" DI PIPE, CL 350	16	L.F.
24" DI PIPE, CL 350	24	L.F.
36" DI PIPE, CL 350	18	L.F.
SEWER MANHOLE, 4' DIAMETER	1	EACH
SEWER MANHOLE, 72" DIAMETER	3	EACH
SEWER MANHOLE, 96" DIAMETER	3	EACH
SEWER MANHOLE, 120" DIAMETER	1	EACH
RESET FRAME AND COVER FOR CLEANOUT	1	EACH
RESET FRAME AND COVER FOR MANHOLE	3	EACH

SUMMARY OF REMOVAL TABLE

Description	Est. Qty.	Unit
12" PVC FORCE MAIN, REMOVE	418	L.F.
MANHOLE, REMOVE	5	EACH
8" VCP GRAVITY SEWER, REMOVE	448	L.F.
24" VCP GRAVITY SEWER, REMOVE	192	L.F.
30" VCP GRAVITY SEWER, REMOVE	117	L.F.
36" RCP GRAVITY SEWER, REMOVE	238	L.F.
48" RCP GRAVITY SEWER, REMOVE	68	L.F.

NOTE:
GRAVITY SEWER REMOVAL WILL BE BID AS LINEAR FEET FOR ALL SIZES AND LENGTHS LISTED ABOVE UNDER BID ITEM 2020042.

UTILITIES AND OTHER LISTINGS

Organization	Phone Number
Tucson Electric Power	(520) 918-8246
Cox Cable	(520) 629-8511
Century Link Comm.	(520) 292-7555
Comcast Cable	(520) 744-1900
Tucson Water	(520) 791-2648
Pima County DOT	(520) 724-6367
Southwest Gas	(520) 794-6021

As-Built Certification
AS-BUILT:
I hereby certify that the As-Built annotations provided on these drawings were based on an As-Built survey conducted under my supervision and accurately depicts existing field conditions to the best of my knowledge and belief.

REGISTERED LAND SURVEYOR DATE
(OR REGISTERED P.E.)

HORIZONTAL & VERTICAL CONTROL TABLE
SEE SURVEY CONTROL SHEET

(Signature) 2-2-17
TOWN OF MARANA (for Sewer location in R.O.W. only)
KEITH BRIANN, TOWN ENGINEER DATE

(Signature) 2/1/17
JACKSON JENKINS, DIRECTOR DATE

(Signature) 1/26/17
ERIC WEIDENMILT, P.E., DEPUTY DIRECTOR DATE

(Signature) 1-31-2017
JOHN WARNER, DEPUTY DIRECTOR DATE

DESIGN	NAME	DATE
DESIGN	K. LETENDRE	10/16
DRAWN	D. ZAVALA	10/16
CHECKED	M. DALY	10/16

PSOMAS
PIMA COUNTY SEWER RECLAMATION

ROUTE: I-10 LOCATION: INA ROAD T.J.

TRACS NO. H8479 01C 010-DI2161S OF

REVISED EXHIBIT B
3087-16-PCRWRD
ADDENDUM 2

G-2015-097

GENERAL NOTES




F.A.R.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD CHARGES
9	ARIZ.	010-D12161S	838	850	
010 PM 248					

1. ALL DESIGN STANDARDS, MATERIALS AND WORKMANSHIP FOR PUBLIC SANITARY SEWERS SHALL BE IN ACCORDANCE WITH THE PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT (PCRWRD) ENGINEERING DESIGN STANDARDS 2016 (EDS 2016) AND THE STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016 (SSDC 2016). SAID DOCUMENTS ARE AVAILABLE THROUGH THE PCRWRD WEBSITE (www.pima.gov/wastewaterreclamation/).
2. COORDINATE SYSTEM: ARIZONA STATE PLANE, NAD 83 (92 EPOCH), CENTRAL ZONE, GAF=1.00016

BASIS OF HORIZONTAL/VERTICAL CONTROL: MAPPING ESTABLISHED IN 2002 BY ENTRANCO ENGINEERS WAS RECOVERED AND FOUND TO AGREE WELL WITH THE ABOVE PARAMETERS.

DESIGN INFORMATION BASED UPON AERIAL PHOTOGRAMMETRIC MAPPING SUPPLIED BY ADOT. PHOTOGRAMMETRY JOB NO. 3803 - AERIAL PHOTOGRAPHY DATED OCTOBER 29, 2008. SEE GEOMETRIC CONTROL, SHEET U-04.09.
3. NOT USED
4. ANY CONSTRUCTION ACTIVITY HAVING THE POTENTIAL TO DAMAGE EXISTING PUBLIC SANITARY SEWERS OR ANY ACTIVITY THAT REQUIRES MATERIALS OR EQUIPMENT TO ENTER EXISTING PUBLIC SANITARY SEWERS SHALL REQUIRE A PIMA COUNTY RWRD SEWER CONSTRUCTION PERMIT PRIOR TO COMMENCING THAT ACTIVITY.
5. SEWER CONSTRUCTION SHALL NOT COMMENCE UNTIL: (A) THE ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (ADEQ) OR ITS DELEGATED AUTHORITY HAS ISSUED A CONSTRUCTION AUTHORIZATION FOR THIS PROJECT; (B) THE CONTRACTOR HAS OBTAINED A PCRWRD PUBLIC SEWER CONSTRUCTION PERMIT (CONTACT THE PCRWRD PERMITS SECTION AT (520) 724-6649 FOR PERMIT APPLICATION REQUIREMENTS); (C) THE CONTRACTOR'S FLOW MANAGEMENT PLAN HAS BEEN SUBMITTED THIRTY (30) CALENDAR DAYS PRIOR TO THE PRE-CONSTRUCTION MEETING AND APPROVED BY PCRWRD FIELD ENGINEERING; AND (D) A PRE-CONSTRUCTION MEETING WITH THE ASSIGNED PIMA COUNTY PROJECT FIELD INSPECTOR IS SCHEDULED AT LEAST THREE (3) FULL BUSINESS DAYS PRIOR TO COMMENCING WITH SEWER CONSTRUCTION.
6. THE CONTRACTOR SHALL SUBMIT A FLOW MANAGEMENT PLAN (FMP) TO PCRWRD FIELD ENGINEERING FOR APPROVAL BEFORE PROCEEDING WITH ANY WORK THAT MAY AFFECT LIVE SEWERS. THE FMP SHALL IDENTIFY AND INCLUDE ALL FLOW MANAGEMENT COSTS IN THE CONSTRUCTION BID. THE FMP SHALL BE SUBMITTED THIRTY (30) CALENDAR DAYS PRIOR TO THE SEWER PRE-CONSTRUCTION MEETING. FIELD ENGINEERING WILL REVIEW THE FMP WITHIN TEN (10) BUSINESS DAYS TO ACCOMMODATE REVIEW AND REVISION CYCLES. REFER TO PCRWRD SSDC 2016, SECTION 2 FOR FMP REQUIREMENTS. PLEASE CONTACT PCRWRD FIELD ENGINEERING AT (520) 724-2651 FOR ANY QUESTIONS REGARDING FLOW MANAGEMENT.
7. THE CONTRACTOR SHALL FURNISH, OPERATE AND MAINTAIN ALL EQUIPMENT AND LABOR NECESSARY TO PROVIDE CONTINUOUS 24 HOURS PER DAY SANITARY SEWER SERVICE TO ALL PARTIES TRIBUTARY TO A LIVE SEWER TO WHICH A CONNECTION IS TO BE MADE. THE PCRWRD CONVEYANCE DIVISION SHALL BE NOTIFIED AT (520) 724-3400 A MINIMUM OF TWO (2) BUSINESS DAYS PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES THAT IMPACTS THE FLOW WITHIN A LIVE SANITARY SEWER SYSTEM OR INVOLVES CONNECTING TO A LIVE SANITARY SEWER. SEE PCRWRD SSDC 2016, SECTION 2 FOR MORE INFORMATION.
8. THE INSPECTION OF THE CONTRACTOR'S WORK BY AN AGENCY AND/OR PCRWRD STAFF SHALL IN NO WAY RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR COMPLIANCE WITH THE REQUIREMENTS OF THE APPROVED CONTRACT DOCUMENTS. IF THE DESIGN ENGINEER OR PCRWRD STAFF FAIL TO POINT OUT A DEFECT, DEFICIENCY OR ERROR IN THE WORK FROM LACK OF DISCOVERY OR ANY OTHER REASON, IT SHALL IN NO WAY PREVENT LATER REJECTION OR RELIEVE THE CONTRACTOR OF PERFORMING CORRECTIONS TO THE UNSATISFACTORY WORK WHEN DISCOVERED. THE CONTRACTOR SHALL NOT FILE A CLAIM FOR LOSSES SUFFERED DUE TO ANY NECESSARY REMOVALS OR REPAIRS RESULTING FROM THE UNSATISFACTORY WORK.
9. SEWER PLANS THAT BEAR THE PIMA COUNTY DEVELOPMENT SERVICES DEPARTMENT (DSD) APPROVAL STAMP OR THE PIMA COUNTY RWRD ACCEPTANCE SIGNATURE SHALL ONLY BE USED FOR THE CONSTRUCTION OF PUBLIC SANITARY SEWER FACILITIES. APPROVED PLANS REQUIRING DESIGN REVISIONS SHALL BE RESUBMITTED TO PIMA COUNTY DSD OR RWRD (AS APPROPRIATE) FOR REVIEW AND RE-APPROVAL PRIOR TO START OF THE REVISED SEWER WORK.
10. ANY SEWER CONSTRUCTION WORK THAT IS NOT INCLUDED IN THE APPROVED SEWER PLANS WILL NOT BE ACCEPTED BY PCRWRD. SEE PCRWRD SSDC 2016, SECTION 1.4.5 REGARDING THE APPROVAL OF FIELD CHANGES.
11. IMMEDIATELY REPORT ANY OF THE FOLLOWING TO THE PCRWRD OPERATIONS CONTROL CENTER (OCC) AT (520) 724-3400: ANY RELEASE OF SEWAGE, ANY DAMAGE TO THE PUBLIC SANITARY SEWER SYSTEM, OR THE DROPPING OF DEBRIS INTO A PUBLIC SANITARY SEWER MANHOLE. A PCRWRD REPRESENTATIVE WILL BE DISPATCHED TO THE SITE. THE CONTRACTOR SHALL TAKE IMMEDIATE ACTION TO CONTAIN A SANITARY SEWAGE OVERFLOW (SSO). THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS TO REPAIR THE SYSTEM, MITIGATE THE RELEASE OF SEWAGE, DISINFECT THE RELEASE AREAS, AND ANY REGULATORY PENALTIES LEVIED ON PCRWRD FOR SEWAGE ENTERING A NATURAL DRAINAGE WAY OR STORM WATER DRAINAGE SYSTEM. THE CONTRACTOR SHALL REPAIR ALL DAMAGE AS DIRECTED AND APPROVED BY THE PCRWRD FIELD REPRESENTATIVE.
12. THE CONTRACTOR SHALL CONTACT "ARIZONA 811" (DIAL 811 OR 1-800-782-5348) A MINIMUM OF TWO (2) BUSINESS DAYS PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL KEEP ALL UNDERGROUND FACILITY LOCATION REQUESTS UP-TO-DATE AND COMPLY WITH ARIZONA REVISED STATUTES (A.R.S.), TITLE 40, CHAPTER 1, ARTICLE 6.3, SECTION 40-360.22. CONCERNS REGARDING THE ACCURACY BETWEEN THE UNDERGROUND FACILITY MARKINGS AND THE PROJECT PLANS SHALL BE IMMEDIATELY REPORTED TO THE DESIGN ENGINEER.
13. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL SANITARY SEWER MANHOLES AT ALL TIMES.
14. THE CONTRACTOR SHALL FIELD-VERIFY EXISTING SEWER LINE ELEVATIONS AND ALIGNMENTS PRIOR TO CONSTRUCTION. VERIFICATION MAY REQUIRE POT-HOLING.
15. ANY HOUSE CONNECTION SEWER (HCS) OR BUSINESS CONNECTION SEWER (BCS) LINES ENCOUNTERED DURING CONSTRUCTION SHALL BE PROTECTED, REPAIRED, OR REROUTED, AS THE SITUATION DICTATES, PER PCRWRD SSDC 2016 DETAIL NO. RWRD 400 AND AT NO EXPENSE TO THE PROPERTY OWNER OR PCRWRD. HCS AND BCS LINES ARE NOT OWNED OR MAINTAINED BY PCRWRD. PRIVATE CONNECTION SEWERS CONSTRUCTED PRIOR TO JANUARY 2006 ARE NOT REQUIRED TO BE LOCATED AND MARKED.
16. SURVEY LAYOUT AND SURVEY CONTROL SHALL BE PERFORMED BY, OR UNDER, THE DIRECT SUPERVISION OF AN ARIZONA RLS.
17. SURVEY CUT SHEETS SHALL BE PREPARED IN ACCORDANCE WITH PCRWRD SSDC 2016, SECTION 3.2.31(A)(1). CERTIFIED CUT SHEETS SHALL BE SUBMITTED TO THE PCRWRD FIELD ENGINEER PRIOR TO COMMENCEMENT OF SEWER CONSTRUCTION. CUT SHEETS ARE FOR PCRWRD REFERENCE ONLY AND SHALL NOT DELAY SEWER CONSTRUCTION DUE TO REVIEW OF THE DELIVERABLE. ANY ERRORS OR OMISSIONS RESULTING IN IMPROPER SEWER CONSTRUCTION SHALL NOT BE THE RESPONSIBILITY OF PCRWRD. REFER TO PCRWRD SSDC 2016, SECTION 3.2.31(A)(1) FOR CONSTRUCTION SURVEY STAKING REQUIREMENTS.
18. THE DEVELOPER OR CONTRACTOR SHALL RETAIN AN ARIZONA-REGISTERED LAND SURVEYOR (RLS) FOR PREPARATION OF THE SEWER AS-BUILT PLANS. SEWER AS-BUILT PLANS SHALL CONFORM TO SSDC 2016, SECTION 1.4.7 AND ARE REQUIRED FOR FINAL ACCEPTANCE OF SEWER CONSTRUCTION BY PCRWRD. THE DEVELOPER OR CONTRACTOR SHALL SUBMIT TWO FULL-SIZE COPIES, AND AN ELECTRONIC VERSION, OF THE AS-BUILT SEWER PLANS TO THE PCRWRD FIELD ENGINEER.
19. NEW PUBLIC SANITARY SEWER FACILITIES MUST BE TESTED, INSPECTED AND AUTHORIZED FOR DISCHARGE BY PCRWRD AND ADEQ, OR IT'S DELEGATE, PRIOR TO DISCHARGING INTO THE EXISTING PUBLIC SANITARY SEWER SYSTEM.
20. THE CONTRACTOR SHALL COMPLY WITH APPLICABLE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS AT ALL TIMES.
21. PRIOR TO THE INSTALLATION OF SANITARY SEWERS, ALL ROUGH GRADING, INCLUDING FILL, SHALL BE COMPLETED TO A MINIMUM OF 4 FEET OVER THE TOP OF THE SEWER PIPE. BEDDING, SHADING, AND TRENCH BACKFILL COMPACTION SHALL BE PERFORMED IN ACCORDANCE WITH PCRWRD SSDC 2016, DETAIL NO. RWRD 104, OR AS SHOWN ON THE PLANS. SHOULD GROUND WATER OR UNANTICIPATED SOIL CONDITIONS BE ENCOUNTERED, THE BEDDING SHALL BE MODIFIED BY THE DESIGN ENGINEER AND APPROVED BY THE PCRWRD FIELD ENGINEER. WHEN THE NEW SEWER IS LOCATED WITHIN A PUBLIC SEWER EASEMENT, COMPACTION OF BACKFILL SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS OR AS OTHERWISE DIRECTED BY PCRWRD. WHEN THE NEW SEWER IS LOCATED WITHIN RIGHT-OF-WAY, COMPACTION OF BACKFILL SHALL BE IN ACCORDANCE WITH THE RIGHT-OF-WAY AGENCY HAVING JURISDICTION.
22. SANITARY SEWER CONSTRUCTION SHALL START AT THE LOWEST DOWNSTREAM POINT AND PROCEED UPSTREAM, REGARDLESS OF THE STATIONING SHOWN ON THE PLANS. IF CONSTRUCTION CANNOT BE PERFORMED IN THIS MANNER, THE CONTRACTOR SHALL PROVIDE AN OUT-OF-SEQUENCE LETTER FOR APPROVAL BY THE PCRWRD FIELD ENGINEER PRIOR TO THE START OF SEWER CONSTRUCTION.
23. THE HORIZONTAL AND VERTICAL SEPARATION BETWEEN PUBLIC WATER MAINS AND PUBLIC SEWER LINES SHALL COMPLY WITH ARIZONA ADMINISTRATIVE CODE (A.A.C.) R18-5-502 AND PCRWRD SSDC 2016, DETAIL NO. RWRD 108.
24. PLANTING WITHIN PUBLIC SEWER EASEMENTS SHALL ONLY BE ALLOWED WITH SPECIAL APPROVAL. TREES WITH BRANCHES OR ROOTS HAVING THE POTENTIAL TO EXTEND INTO PUBLIC SEWER EASEMENTS SHALL BE AVOIDED. IN SPECIAL CASES, WHERE THE PUBLIC SEWERS MUST BE LOCATED OUTSIDE PAVED OR STABILIZED AREAS, LANDSCAPING AND PLANTING SHALL ADHERE TO GUIDELINES IN PCRWRD EDS 2016, SECTION 7.7 AND PCRWRD SSDC 2016, DETAIL NO. RWRD 111.
25. ALL STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MEASURES SHALL BE INSTALLED TO PREVENT ALL STORM WATER, CONSTRUCTION WATER, FUELS, CHEMICALS, LIQUIDS, OR OTHER CONTAMINANTS, FROM BEING DIRECTED INTO OR ONTO ANY SANITARY SEWER FACILITIES. PROTECTION OF SANITARY SEWER FACILITIES SHALL BE A PART OF THE APPROVED CONSTRUCTION SWPPP AND BEST MANAGEMENT PRACTICES. PROTECTION DEVICES SHALL BE INSTALLED AND MAINTAINED AROUND ALL POTENTIALLY AFFECTED SANITARY SEWER FACILITIES WITHIN THE PROJECT LIMITS. ADDITIONAL MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE USE OF RAIN STOPPERS AND MANHOLE COVERS AS DEEMED NECESSARY BY PCRWRD.
26. ALL PROJECT ACTIVITIES MUST BE KEPT WITHIN THE PROJECT AREAS. CONCERNING HUMAN BURIAL REMAINS, ARCHAEOLOGICAL CLEARANCE RECOMMENDATIONS DO NOT EXEMPT THE DEVELOPMENT FROM COMPLYING WITH STATE BURIAL PROTECTION LAWS. IN THE EVENT THAT HUMAN REMAINS, INCLUDING HUMAN SKELETAL REMAINS, CREMATIONS, CEREMONIAL OBJECTS OR FUNERARY OBJECTS, ARE FOUND DURING EXCAVATION OR CONSTRUCTION, GROUND DISTURBING ACTIVITIES MUST CEASE IN THE IMMEDIATE VICINITY OF THE DISCOVERY. ARIZONA STATE LAWS ARS 41-844 AND 41-865 REQUIRE THAT THE ARIZONA STATE MUSEUM BE NOTIFIED OF THE DISCOVERY AT (520) 621-4795 SO THAT CULTURAL GROUPS WHO CLAIM CULTURAL OR RELIGIOUS AFFINITY TO THE REMAINS CAN MAKE APPROPRIATE ARRANGEMENTS FOR THE REPATRIATION AND REBURIAL OF THE REMAINS. THE HUMAN REMAINS WILL BE REMOVED FROM THE SITE BY A PROFESSIONAL ARCHAEOLOGIST PENDING CONSULTATION AND REVIEW BY THE ARIZONA STATE MUSEUM AND THE CONCERNED CULTURAL GROUPS.
27. SPECIAL CARE SHALL BE TAKEN TO ENSURE DESIGN SLOPES ARE MAINTAINED. SEWERS CONSTRUCTED AT INSUFFICIENT SLOPES WILL NOT BE ACCEPTED BY PCRWRD FIELD ENGINEERING AND/OR ADEQ. CORRECTIVE ACTION, INCLUDING RE-CONSTRUCTION OF THE SEWERS, WILL BE AT THE SOLE EXPENSE OF THE PROJECT OWNER/CONTRACTOR.

**REVISED EXHIBIT B
3597-15-PCRWRD
ADDENDUM 2**

					
ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SERVICES		P S O M A S PIMA COUNTY WATERWAY REGULATION		ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SERVICES	
REGION: K. LETENDRE 10/16 DRAIN: O. ZAVALA 10/16 DESIGNED: M. DALY 10/16		G-2015-097 ROUTE: I-10 LOCATION: INA ROAD T.J.		ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SERVICES	
TRACS NO. H8479 OIC		010-D12161S		DWG NO. U-04.02 OF	

GENERAL NOTES (cont.)

FED. A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-DK2161S	839	850	
010 PM 248					

28. THE CONTRACTOR SHALL ADJUST OR RECONSTRUCT ALL SANITARY SEWER MANHOLES TO FINISHED GRADE. ALL FRAMES AND COVER ADJUSTMENTS SHALL BE IN ACCORDANCE WITH PCRWRD SSDC 2016, DETAIL NUMBERS RWRD 211, 212, 304 OR 305 (AS APPLICABLE). THE CONTRACTOR SHALL PROTECT THE BENCH AND FLOW CHANNELS WITH A COVER PER PCRWRD SSDC 2016, DETAIL NO. RWRD 306. PRIOR TO COMMENCING ANY WORK TO THE MANHOLE AND REMOVE THE COVER AFTER ALL WORK IS COMPLETED. THE CONTRACTOR SHALL ENSURE THAT FRAMES AND COVERS ARE CLEAN AND FREE FROM ANY AND ALL ATTACHED MATERIALS (ASPHALT, CONCRETE, ETC.) AND THAT ALL VENT HOLES ARE OPEN AND CLEAR OF OBSTRUCTIONS, AS APPROVED BY THE PCRWRD FIELD ENGINEER. EXISTING FRAMES AND/OR COVERS THAT ARE DAMAGED OR CANNOT BE COMPLETELY CLEANED SHALL BE REPLACED WITH A NEW FRAME AND COVER IN ACCORDANCE WITH PCRWRD SSDC 2016, DETAIL NO. RWRD 213-218. COSTS ASSOCIATED WITH EXISTING FRAMES AND COVERS THAT ARE LOST OR DAMAGED DUE TO THE CONTRACTOR'S OPERATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

29. WHERE CONNECTIONS TO EXISTING MANHOLES ARE TO BE MADE, THE CONTRACTOR SHALL CONSTRUCT NEW INVERTS IN THE EXISTING BASE TO SMOOTHLY DIRECT THE FLOW IN THE PROPER DIRECTION.

30. THE WORDS "PIMA COUNTY SANITARY SEWER" SHALL BE IMPRINTED ONLY ON COVERS OF MANHOLES WHICH ARE TO BE PART OF THE PIMA COUNTY REGIONAL WASTEWATER RECLAMATION (PUBLIC) SANITARY SEWER CONVEYANCE SYSTEM.

31. ALL DISTURBED AREAS SHALL BE REGRADED TO PROVIDE POSITIVE DRAINAGE AND TO MATCH THE EXISTING DRAINAGE PATTERNS. WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT WITH NO SEPARATE COMPENSATION PROVIDED.

32. NO REGULATORY FEMA FLOODPLAINS EXIST WITHIN THE PROJECT LIMITS. THE PROJECT IS LOCATED ENTIRELY WITHIN ZONE X.

MANHOLE AS-BUILT INFO		
MH NO.	STATE PLANE COORDINATES (AZ CENTRAL) NAD 83 INTERNATIONAL FEET	
	NORTHING	EASTING
MH# 1		
MH# 2		
MH# 3		
MH# 4		
MH# 5		
MH# 6		
MH# 7		
MH# 8		

HCS AS-BUILT INFO				
LOT #	STATE PLANE COORDINATES (AZ CENTRAL) NAD 83 INTERNATIONAL FEET		DISTANCE FROM TAP TO DOWNSTREAM MANHOLE	SEWER LINE STATIONING AT HCS/BCS CONNECTION
	NORTHING	EASTING		
225-36-014F				
225-36-014D				
225-36-014C				
101-05-010C				

ADEO NOTES

- ALL SEWER LINES SHALL BE COVERED WITH AT LEAST 4 FEET OF BACKFILL PER PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT (PCRWRD).
- THE FULL LENGTH OF SEWER MAIN SHALL BE DEFLECTION TESTED PER A.A.C. R18-9-E301 (D) (2) (i).
- EACH SEGMENT OF THE SEWER MAIN SHALL BE LEAK TESTED PER A.A.C. R18-9-E301 (D) (2) (j).
- THE FULL LENGTH OF SEWER MAIN SHALL BE TESTED FOR UNIFORM SLOPE PER A.A.C. R18-9-E301 (D) (2) (k).
- ALL MANHOLES SHALL BE DESIGNED PER A.A.C. R18-9-E301 (D) (3) (c) AND THE PCRWRD.
- ALL MANHOLES SHALL BE LEAK TESTED PER A.A.C. R18-9-E301 (D) (3) (e).

FORCE MAIN/ABANDONMENT MONUMENT						
MONUMENT NUMBER	NORTHING	EASTING	ROAD	APPROX. STATION	OFFSET	COMMENT
1	487573.40	960825.15	INA	80+75.37	75' RI	END OF 10" ABDN ARTHUR PACK EFFLUENT LINE
2	487642.77	963035.71	INA	102+86.29	28' RI	BEGIN ABDN (SLURRY) FOR 10" ARTHUR PACK EFFLUENT LINE
3	487660.77	963291.41	INA	105+42.16	12' RI	END ABDN (SLURRY) FOR 10" ARTHUR PACK EFFLUENT LINE
4	488642.45	963775.67	CDO	110+34 (INA E)	665' LI	END OF 10" ABDN ARTHUR PACK EFFLUENT LINE

NOTE:

- ALL FORCE MAIN MONUMENTS SHALL BE PER STANDARD DETAIL RWRD 503.

SURVEY NO. FINISHED PLANS REVISIONS LOCATION DATE SHEET NO. ENCASE P LMS

**REVISED EXHIBIT B
3597-15-PCRWRD
ADDENDUM 2**

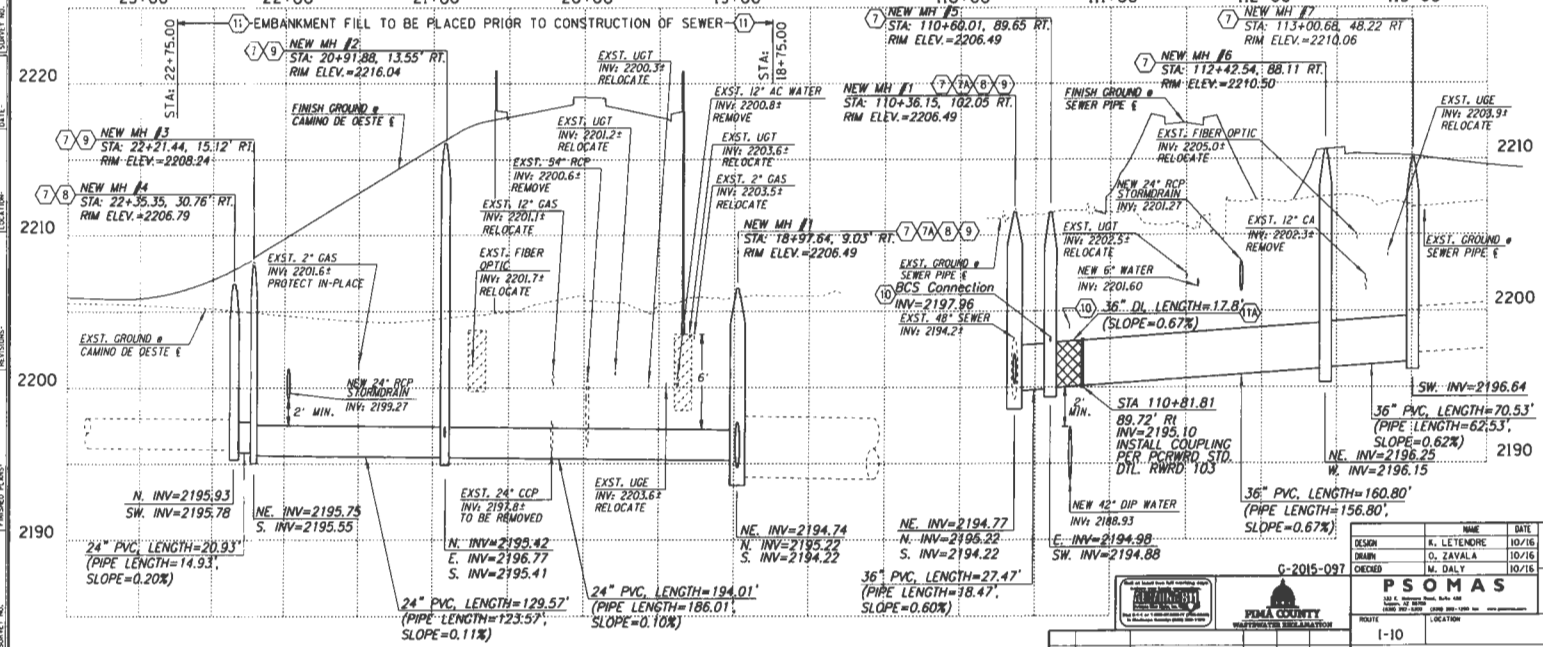
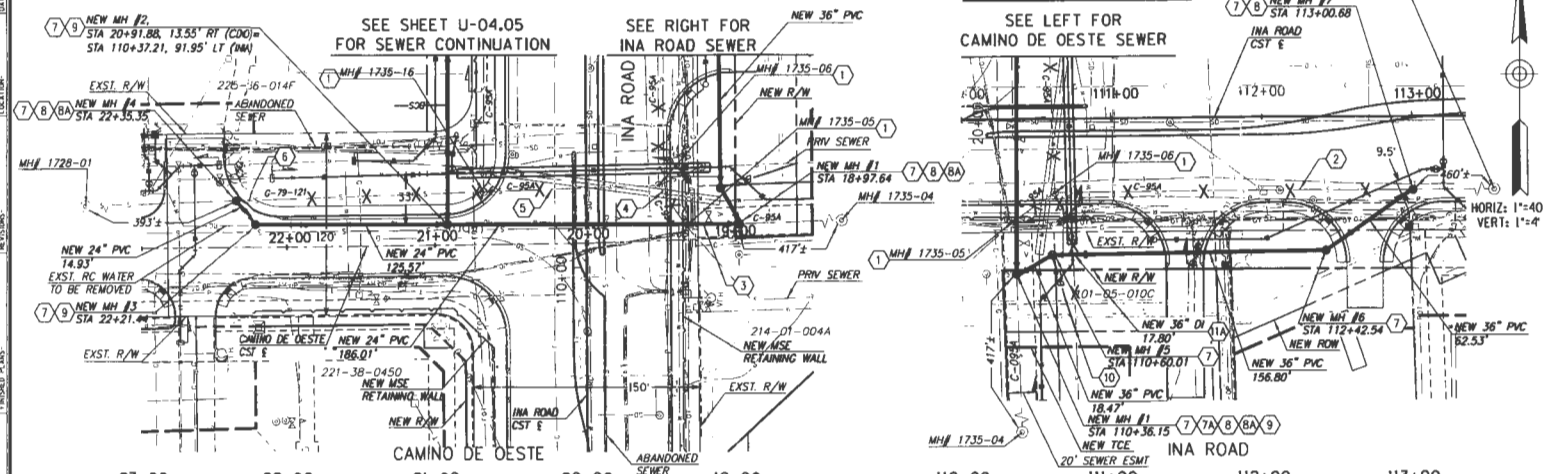
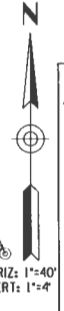


DESIGN	K. LETENDRE	10/16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SERVICES		
DRAWN	O. ZAVALA	10/16			
CHECKED	M. DALY	10/16			
PSOMAS			INA ROAD SEWER MODIFICATION PLANS GENERAL NOTES	DWG NO U-04.03	
ROUTE	1-10		LOCATION	INA ROAD T.I.	
NO.	DATE	REVISION	BY	CHKD	APPR.
TRACS NO. H8479 01C			010-DK2161S		OF

**REVISED EXHIBIT B
3597-15-PCRWRD
ADDENDUM 2**

F.A.B.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-D121615	840	850	
010 PM 248					

HORIZ: 1"=40'
VERT: 1"=4'



- KEYNOTES:**
- EXISTING MANHOLES #1735-05, #1735-06, AND #1735-16 OF C-95A TO BE REMOVED. CONTRACTOR SHALL REMOVE THE FRAME AND COVER. THE SALVAGED FRAME AND COVER SHALL BE DELIVERED TO PCRWRD AT THE LOCATION SPECIFIED BY THE INSPECTOR. THE MANHOLES WILL BE COMPLETELY DEMOLISHED. THE EXCAVATION FILLED WITH SELECT MATERIAL AND COMPACTED IN ACCORDANCE WITH THE STANDARDS SET BY THE AGENCY CONTROLLING THE RIGHT-OF-WAY. IN ALL CASES A MINIMUM OF 95% OF THE STANDARD PROCTOR DENSITY, IN ACCORDANCE WITH THE PROVISIONS OF THE ARIZONA TEST METHOD 225, SHALL BE ACHIEVED. THE CONTRACTOR SHALL DISPOSE OF ALL MANHOLE DEMOLITION MATERIAL OFF-SITE AT A LANDFILL OR OTHER APPROVED LOCATION.
 - 238 LF OF EXISTING 36" PUBLIC SEWER FROM NEW MANHOLE #7 TO MANHOLE #1735-06 OF C-95A IS TO BE REMOVED.
 - 35 LF OF EXISTING 48" PUBLIC SEWER FROM NEW MANHOLE #1 TO MANHOLE #1735-05 OF C-95A IS TO BE REMOVED.
 - 33 LF OF EXISTING 48" PUBLIC SEWER FROM MANHOLE #1735-05 TO MANHOLE #1735-06 OF C-95A IS TO BE REMOVED.
 - 117 LF OF EXISTING 30" PUBLIC SEWER FROM MANHOLE #1735-05 TO MANHOLE #1735-16 OF C-95A IS TO BE REMOVED.
 - 168 LF OF EXISTING 24" PUBLIC SEWER FROM MANHOLE #1735-16 TO NEW MANHOLE #4 OF 6-79-121 IS TO BE REMOVED.
 - NEW SEWER MANHOLE PER DETAIL 'A', SHEET U-04.14. PREPARE AND COAT MANHOLE WITH INTERIOR CORROSION PROTECTION, PER SPECIAL PROVISIONS.
 - NEW SEWER MANHOLE PER DETAIL 'B', SHEET U-04.14. PREPARE AND COAT MANHOLE WITH INTERIOR CORROSION PROTECTION, PER SPECIAL PROVISIONS.
 - NEW SEWER MANHOLE OVER EXISTING SEWER LINE PER PCRWRD STD. DTL. RWRD 303.
 - NEW SEWER MANHOLE SHALL HAVE WATER TIGHT FRAME AND COVER PER PCRWRD STD. DTL. RWRD 214
 - SEWER MANHOLE JOINTS SHALL BE REINFORCED PER PCRWRD STD. DTL. RWRD 209.
 - PRIVATE CLEANOUT TO BE INSTALLED FOR EXISTING HCS OR BCS PER PCRWRD STD. DTL. RWRD 401 AND SHALL BE REROUTED TO NEW SEWER MANHOLE PER PCRWRD STD. DTL. RWRD 402. CONTRACTOR TO VERIFY CONNECTION AT TAP.
 - BYPASS PUMPING FOR EXISTING SEWER TO BE IN PLACE AND WATER MODIFICATIONS TO BE COMPLETED PRIOR TO PLACEMENT OF EMBANKMENT FILL.
 - INSTALL DI PIPE SECTION PER PCRWRD STD. DTL. RWRD 103 & 108 PER SPECIAL PROVISIONS.

DESIGN	R. LETENDRE	DATE	10/16
DRAWN	D. ZAVALA	DATE	10/16
CHECKED	W. DALY	DATE	10/16

PSOMAS
SPECIALTY SERVICES

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

PROJECT: INA ROAD
LOCATION: INA ROAD T.I.

TRACS NO. H8479 OIC

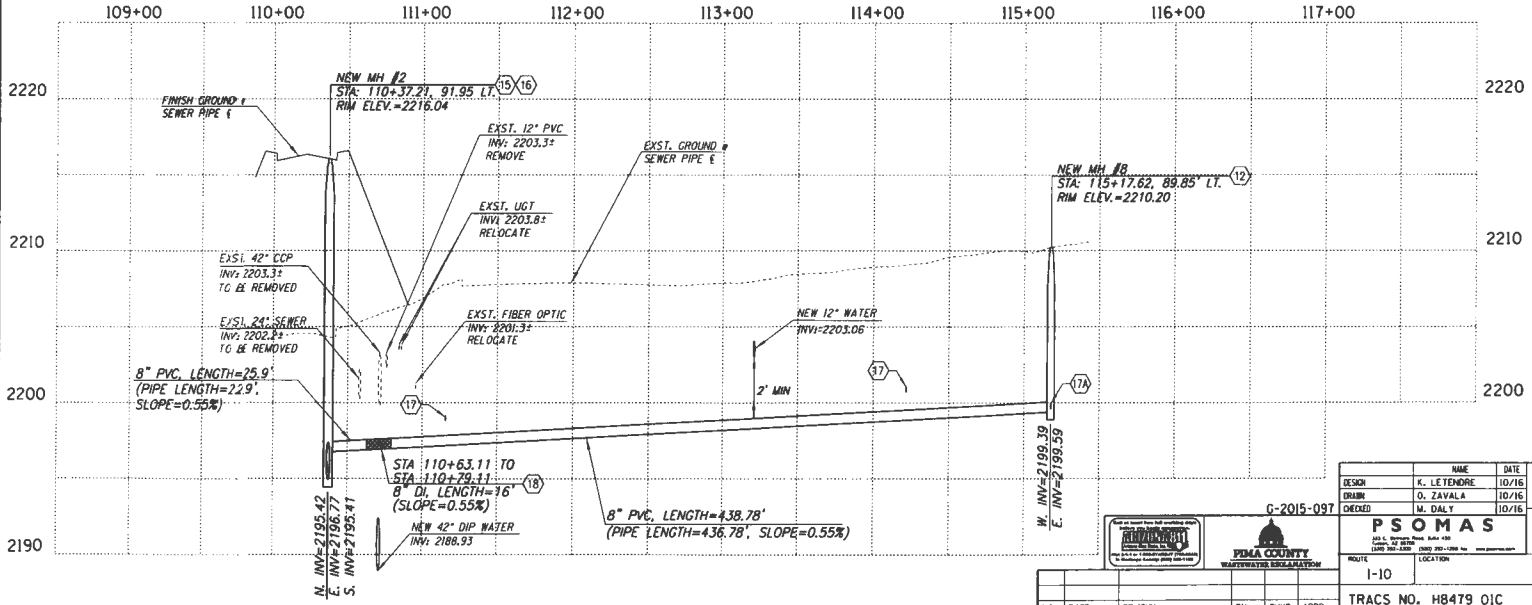
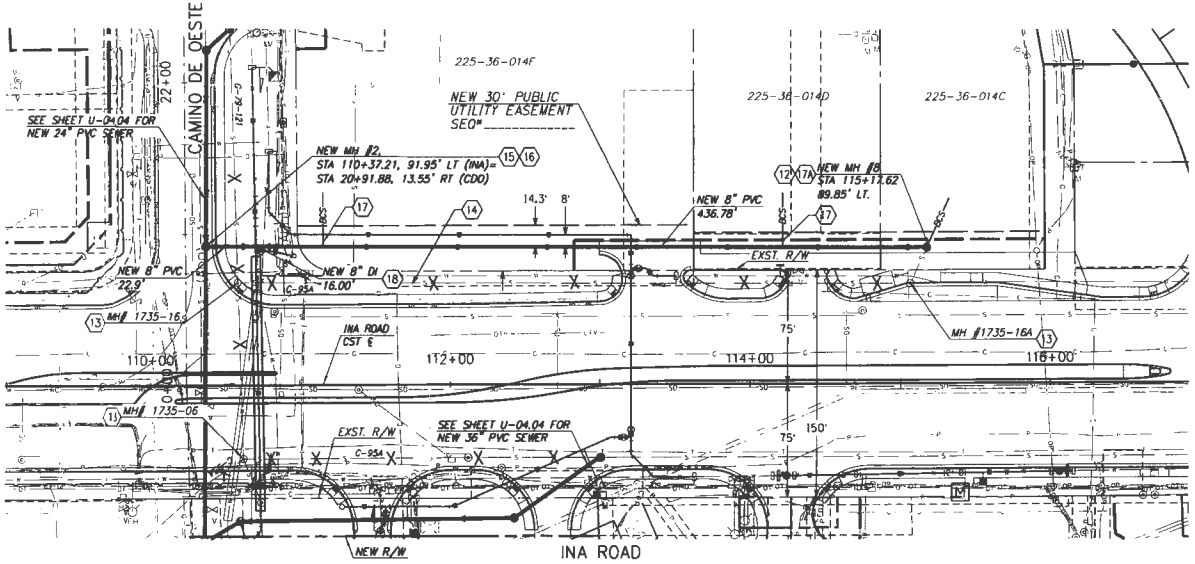
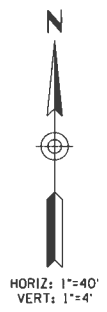
010-D121615

DWG NO. U-04.04

OF

F.A.R.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD NUMBER
9	ARIZ.	010-D121615	841	850	
010 PM 248					

- KEYNOTES:**
- NEW 4' DIA. SEWER MANHOLE PER PCRWRD STD. DTL. RWRD 205. INSTALL CONCRETE COLLAR PER PCRWRD STD. DTL. RWRD 211.
 - EXISTING MANHOLES #1735-06, #1735-16 AND #1735-16A OF C-95A TO BE REMOVED. CONTRACTOR SHALL REMOVE THE FRAME AND COVER. THE SALVAGED FRAME AND COVER SHALL BE DELIVERED TO PCRWRD AT THE LOCATION SPECIFIED BY THE INSPECTOR. THE MANHOLES WILL BE COMPLETELY DEMOLISHED. THE EXCAVATION FILLED WITH SELECT MATERIAL AND COMPACTED IN ACCORDANCE WITH THE STANDARDS SET BY THE AGENCY CONTROLLING THE RIGHT-OF-WAY. IN ALL CASES A MINIMUM OF 95% OF THE STANDARD PROCTOR DENSITY, IN ACCORDANCE WITH THE PROVISIONS OF THE ARIZONA TEST METHOD 225, SHALL BE ACHIEVED. THE CONTRACTOR SHALL DISPOSE OF ALL MANHOLE DEMOLITION MATERIAL OFF-SITE AT A LANDFILL OR OTHER APPROVED LOCATION.
 - 448 LF OF EXISTING 8" PUBLIC SEWER FROM MANHOLE #1735-16 TO MANHOLE #1735-16A OF C-95A IS TO BE REMOVED.
 - NEW SEWER MANHOLE PER DETAIL 'A', SHEET U-04.14, PREPARE AND COAT MANHOLE WITH APPROVED INTERIOR CORROSION PROTECTION PER SPECIAL PROVISIONS.
 - SEWER MANHOLE JOINTS SHALL BE REINFORCED. SEE DETAIL A ON SHEET U-04.14.
 - PRIVATE CLEANOUT TO BE INSTALLED FOR EXISTING HCS OR BCS AND SHALL BE REROUTED TO NEW SEWER MAIN PER PCRWRD STD. DTL. RWRD 401 AND 404. CONTRACTOR TO VERIFY DEPTH OF EXISTING BCS AND CONNECTION AT TAP.
 - PRIVATE CLEANOUT TO BE INSTALLED FOR EXISTING HCS OR BCS PER PCRWRD STD. DTL. RWRD 401 AND SHALL BE REROUTED TO NEW SEWER MAIN PER PCRWRD STD. DTL. RWRD 402. CONTRACTOR TO VERIFY DEPTH OF EXISTING BCS AND CONNECTION AT TAP.
 - INSTALL DI PIPE SECTION PER PCRWRD STD. DTL. RWRD 103 & 108 AND PER SPECIAL PROVISIONS.



**REVISED EXHIBIT B
3597-15-PCRWRD
ADDENDUM 2**

DESIGN	NAME	DATE
DESIGN	K. LE TENDRE	10/16
DRAWN	O. ZAVALA	10/16
CHECKED	M. DALY	10/16

PSOMAS
PUBLIC SERVICE ORGANIZATION OF MARICOPA COUNTY

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

**INA ROAD
SEWER MODIFICATION PLANS
STA 109+00 TO 117+00**

ROUTE: I-10 LOCATION: INA ROAD T.I.

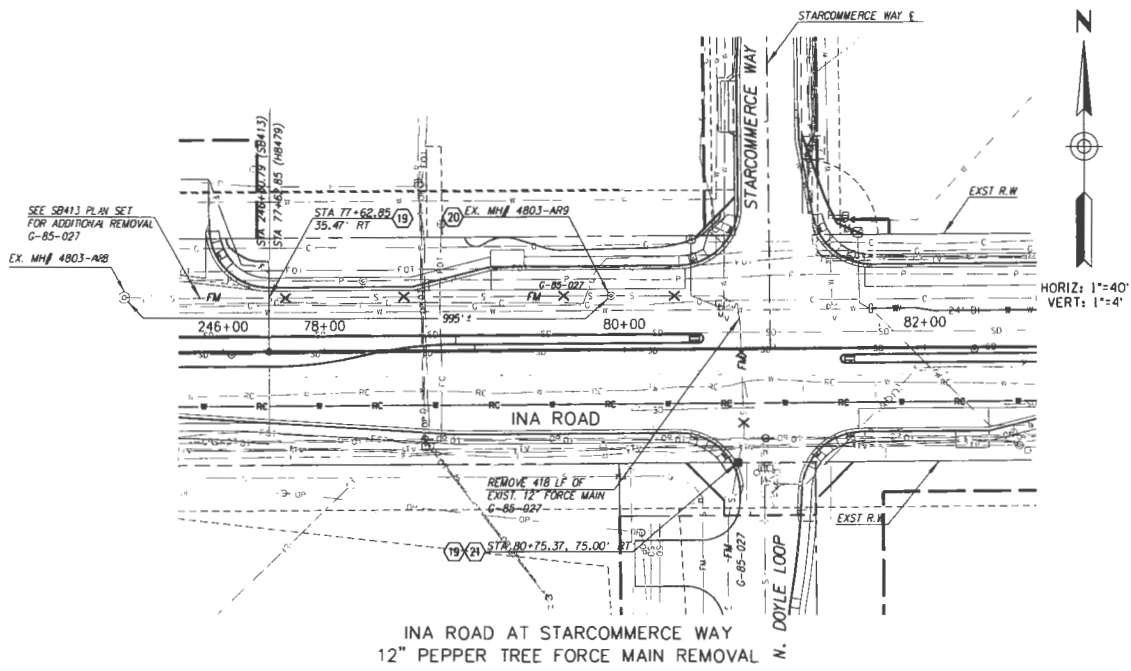
DRAWING NO. U-04.05

NO.	DATE	REVISION	BY	CHKD.	APPR.

TRACS NO. H8479 01C 010-D121615 OF

FEDERAL REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-D121615		850	
010 PM 248					

- KEYNOTES:**
19. 418 LF OF EXISTING 12" PEPPER TREE FORCE MAIN TO BE REMOVED.
 20. EXISTING MANHOLE #4803-AR9 OF G-85-072 TO BE REMOVED. CONTRACTOR SHALL REMOVE THE FRAME AND COVER. THE SALVAGED FRAME AND COVER SHALL BE DELIVERED TO PCRWRD AT THE LOCATION SPECIFIED BY THE INSPECTOR. THE MANHOLES WILL BE COMPLETELY DEMOLISHED. THE EXCAVATION FILLED WITH SELECT MATERIAL AND COMPACTED IN ACCORDANCE WITH THE STANDARDS SET BY THE AGENCY CONTROLLING THE RIGHT-OF-WAY. IN ALL CASES A MINIMUM OF 95% OF THE STANDARD PROCTOR DENSITY, IN ACCORDANCE WITH THE PROVISIONS OF THE ARIZONA TEST METHOD 225, SHALL BE ACHIEVED. THE CONTRACTOR SHALL DISPOSE OF ALL MANHOLE DEMOLITION MATERIAL OFF-SITE AT A LANDFILL OR OTHER APPROVED LOCATION.
 21. CAP EXISTING FORCEMAIN AT R/W AND INSTALL MONUMENT PER PCRWRD STD. DTL. RWRD 503.



INA ROAD AT STARCOMMERCE WAY
12" PEPPER TREE MAIN REMOVAL

**REVISED EXHIBIT B
3597-15-PCRWRD
ADDENDUM 2**

G-2015-097		ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SERVICES							
DESIGN	C. REUNE	10/16							
DRAWN	D. ZAVALA	10/16							
CHECKED	M. DALEY	10/16							
PSOMAS		INA ROAD SEWER MODIFICATION PLANS							
ROUTE	1-10	LOCATION	INA ROAD T.I.						
NO.	DATE	REVISION	BY	CHKD	APPR.	TRACS NO. H8479 OIC	010-D121615	DWG NO. U-04.06	OF

DATE: LOCATION: REVISIONS: SURVEY NO.: FINISHED PLANS: DATE: LOCATION: REVISIONS: SURVEY NO.: FINISHED PLANS: DATE: LOCATION: REVISIONS: SURVEY NO.: FINISHED PLANS:

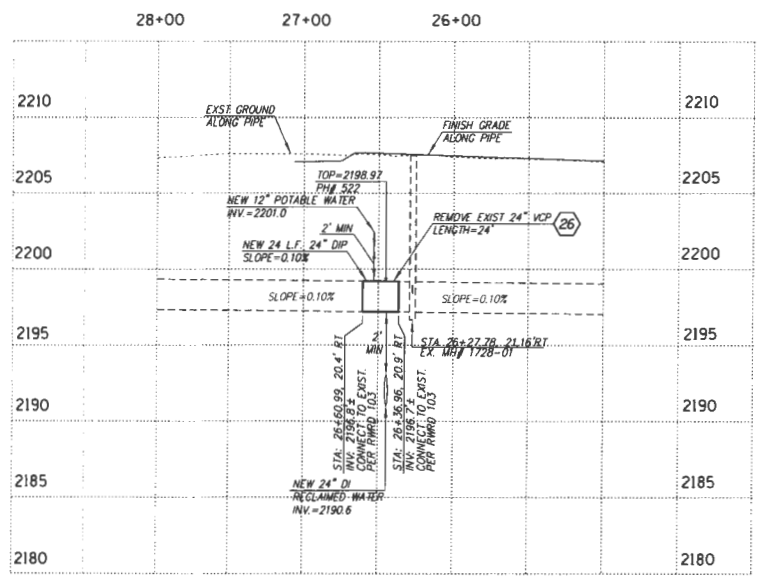
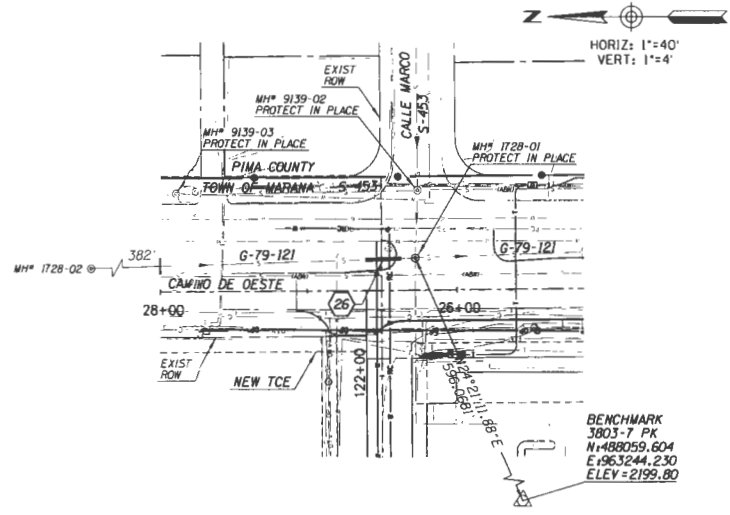
FEDERAL REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-D121615	843	850	
010 PM 248					

KEYNOTES

26. 24 LF OF EXISTING 24" YCP PUBLIC SEWER TO BE REMOVED COMPLETELY. SEWER SHALL NOT BE ABANDONED IN PLACE.

FLOW MANAGEMENT GENERAL GUIDELINES, DESCRIPTION, AND NOTES:

- THE CONTRACTOR SHALL PROVIDE THE FINAL FLOW MANAGEMENT PLAN FOR THE PROJECT FOR REVIEW AND APPROVAL BY THE RWRD FIELD ENGINEERING MANAGER. THE WASTEWATER FLOW MANAGEMENT GUIDELINES PROVIDED HEREIN SHALL NOT SERVE AS THE APPROVED FLOW MANAGEMENT PLAN.
- FLOW MANAGEMENT GUIDELINES: TO ACCOMMODATE THE REPLACEMENT OF THE 24" VCP (G-79-121) BETWEEN EXISTING MANHOLES #1728-02 AND #1728-01.
 - PUMP FROM 24" MAIN AT MANHOLE 1728-02. DISCHARGE INTO MANHOLE 1728-01.
 - PUMP SUCTION SHALL BE TAKEN FROM FLOW THROUGH PLUGS PLACED INTO THE EXISTING 24-INCH GRAVITY SEWER MAINS. FLOW THROUGH PLUGS WITH A MINIMUM THROUGH LET SIZE OF 24 INCHES SHALL BE PLACED INTO THE 24-INCH. FLOW THROUGH PLUGS WILL BE RESTRAINED IN PLACE USING 4X4 KICKERS. SAFETY CABLES SHALL BE ATTACHED TO EACH PLUG AND EACH KICKER AND HELD IN PLACE WITH "T" POSTS. ALL PLUGS WILL CLEARLY AND LEGIBLY INDICATE THE NAME OF THE RESPONSIBLE CONTRACTOR, INCLUDING ADDRESS AND PHONE NUMBER USING DEPRESSED LETTERING ON METALLIC PLACARD. TWO PLUGS SHALL BE INSTALLED AT MANHOLE 1728-02, REQUIRING THAT THE FLOW THROUGH LINES BE COUPLED TOGETHER AT A HEIGHT OF NO MORE THAN 2 FT. ABOVE THE MANHOLE FLOOR.
- FOR THE DURATION OF ALL PUMPING, THE CONTRACTOR WILL PROVIDE CONTINUOUS PUMP WATCH BY TRAINED AND QUALIFIED PUMP PERSONNEL, WHO SHALL MONITOR PUMPS, FUEL SOURCE, HEADLINES, FLOW THROUGH PLUGS, FITTINGS AND APPURTENANCES, SURCHARGING AT IMMEDIATE UPSTREAM MANHOLES, AND ALL EQUIPMENT ASSOCIATED WITH THE BYPASS PUMPING OPERATION.
- A 1/2 INCH PLYWOOD COVER, PER RWRD 306, SHALL BE USED INSIDE THE MANHOLES TO COVER THE OPEN PIPE WHILE BEING STACKED.
- THE PUMPS AND BACK UP PUMPS SHALL BE CAPABLE OF PUMPING THE PEAK DRY WEATHER FLOW (611 GPM) AT A TOTAL DYNAMIC HEAD OF 114 FEET. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ASSURE THAT THE MINIMUM SUCTION HEAD (NPSHR) IS SATISFIED.
- SUFFICIENT FUEL SHALL BE STORED ON-SITE TO ACCOMMODATE 24 HOURS CONTINUOUS PUMPING AT FULL DUTY CYCLE. FUEL SHALL BE STORED USING DOUBLE WALL UL208B CONTAINERS, INCLUDING SPILL CONTAINMENT. FUEL STORAGE SHALL BE OSHA SAFE. FUEL CONTAINMENT SHALL BE PROTECTED FROM RUNOFF RESULTING FROM STORM EVENTS.
- SUCTION LINES MAY BE INSTALLED PER CONTRACTORS DISCRETION FOR CONNECTION TO THE FLOW THROUGH PLUGS DESCRIBED ABOVE. PUMPS DISCHARGE TO BYPASS IN GENERAL CONFORMANCE WITH APPROVED FLOW MANAGEMENT PLAN. PUMPS AND SUCTION PIPING SHALL BE PROTECTED USING CONCRETE BARRIERS OR OTHER APPROVED CONTROL SECURED BY THE CONTRACTOR.
- CONTRACTOR SHALL VERIFY FLOWS INTO THE EXISTING 24" SEWER (G-79-121) OF CAMINO DE OESTE PRIOR TO SUBMITTING THE FINAL FLOW MANAGEMENT PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL.
- ALL PIPING AND PUMP CONNECTIONS SHALL BE PRESSURE TESTED USING FRESH WATER TO 80 POUNDS PER SQUARE INCH PRIOR TO CONNECTION TO THE FLOW THROUGH PLUGS AND TO OPERATION OF THE PUMP(S).
- ALL WORK PERFORMED IN THIS SCOPE SHALL BE IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. ALL EXCAVATION WITHIN 2 FT. OF A LIVE SEWER SHALL BE COMPLETED BY HAND.
- AT LEAST 5 GALLONS OF 12.5% LIQUID SODIUM HYDROCHLORIDE WILL BE ON-SITE.
- PCRWRD SHALL NOT BE HELD LIABLE OR RESPONSIBLE FOR ANY ERRORS AND OR OMISSIONS ON THE FMP. ITEMS NOT MEETING PIMA COUNTY STANDARDS SHALL BE REPAIRED OR REPLACED AT NO COST TO THE DEPARTMENT.



**REVISED EXHIBIT B
3597-15-PCRWRD
ADDENDUM 2**

DESIGN		K. LETENDRE	10/16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SERVICES	
DRAWN		D. ZAVALA	10/16		
CHECKED		M. DALEY	10/16		
PSOMAS				INA ROAD SEWER MODIFICATION PLANS	
ROUTE		1-10		LOCATION INA ROAD T.I.I.	
TRACS NO.		H8479 OIC		010-D121615	
DWG NO		U-04.01		OF	

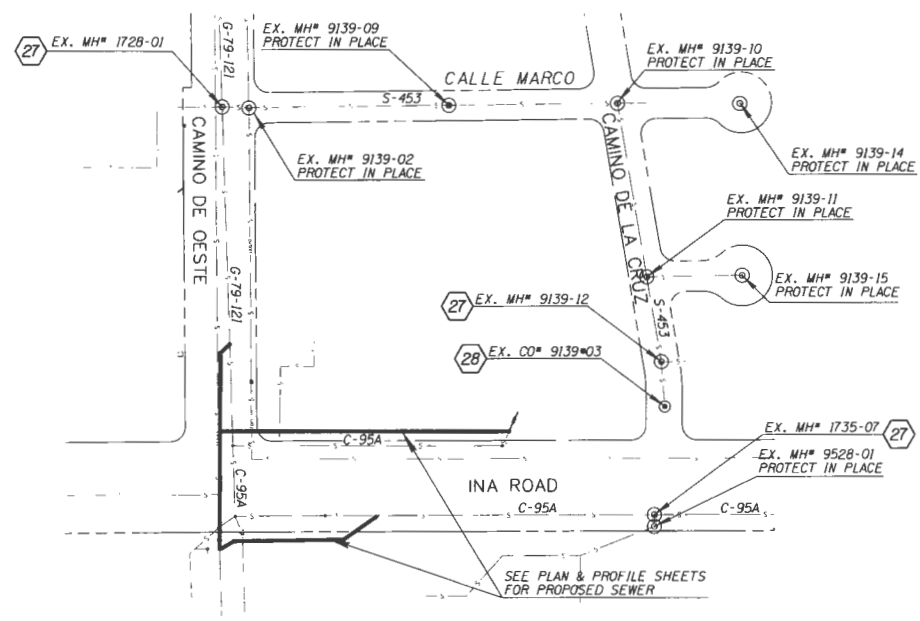
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FEDERAL REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-D(216)S	844	850	
010 PM 248					

KEYNOTES:

27. ADJUST RIM AND COVER ELEVATION PER PCRWRD STD. DTL. RWRD 304 OR 305 (WHICHEVER IS APPLICABLE).

28. ADJUST RIM AND COVER ELEVATION PER PCRWRD STD. DTL. 307.



INA ROAD					
SEWER MANHOLE FRAME AND COVER SCHEDULE					
EXISTING MANHOLE #	MANHOLE STATUS	STATION, OFFSET (INA RD. CST LINE)	EXISTING RIM ELEV.	PROPOSED RIM ELEV.	RIM ADJUSTMENT
MH #1735-07	ADJUST FRAME & COVER	117+60.43, 48.14' RT	2212.63	2212.47	-0.16
MH #9139-12	ADJUST FRAME & COVER	117+71.49, 204.19' LT	2212.62	2212.58	-0.02
CO #9139-03	ADJUST FRAME & COVER	117+77.65, 130.16' LT	2212.32	2212.38	0.08

CAMINO DE OESTE					
SEWER MANHOLE FRAME AND COVER SCHEDULE					
EXISTING MANHOLE #	MANHOLE STATUS	STATION, OFFSET (C.D.D. CST LINE)	EXISTING RIM ELEV.	PROPOSED RIM ELEV.	RIM ADJUSTMENT
MH #1728-01	ADJUST FRAME & COVER	26+27.78, 21.16' RT	2207.10	2207.17	0.07

REVISED EXHIBIT B
3597-15-PCRWRD
ADDENDUM 2

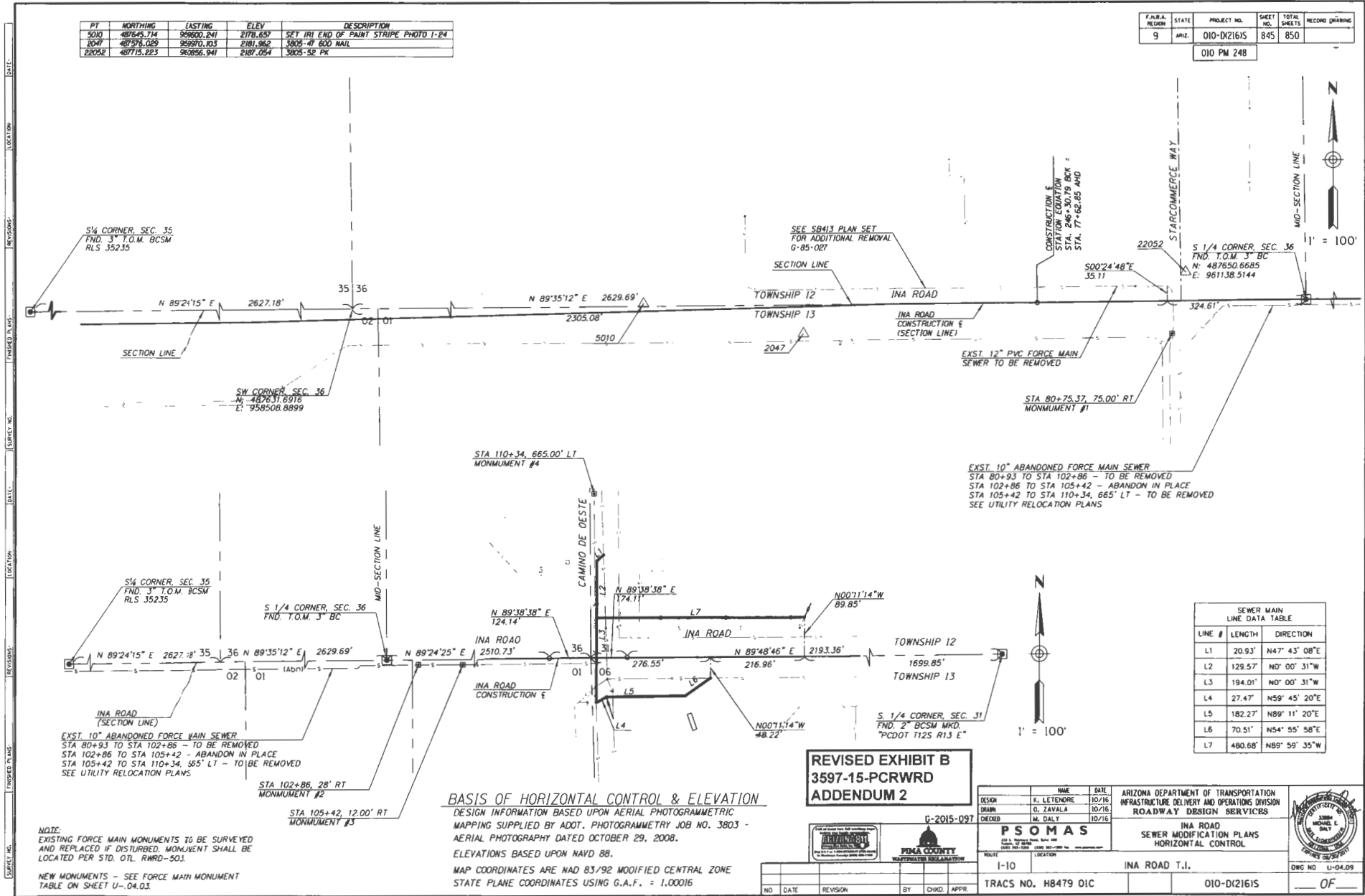
DESIGN	R. LETENDRE	10/16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SERVICES
DRAWN	D. ZAVALA	10/16	
CHECKED	M. DALY	10/16	
PSOMAS 401 S. PIMA ROAD, SUITE 100 TULSA, AZ 85080 (907) 747-1200 (907) 747-1200 fax			INA ROAD SEWER MODIFICATION PLANS RESET FRAME AND COVER
ROUTE	I-10	LOCATION	INA ROAD T.I.
TRACS NO.	H8479 OIC		010-D(216)S
DWG NO.	U-04.08		OF

SURVEY NO. LOCATION DATE REVISIONS PRINTED PLANS SURVEY NO. LOCATION DATE REVISIONS

PT	NORTHING	EASTING	ELEV	DESCRIPTION
5010	487645.714	969600.241	2178.657	SET IRI END OF PAINT STRIPE PHOTO I-24
2047	487578.089	969970.103	2181.962	500'-4" BCD RAIL
22052	487715.223	969856.941	2187.054	500'-5" PK

F.A.R.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-D121615	845	850	

010 PM 248



LINE #	LENGTH	DIRECTION
L1	20.93'	N47° 43' 08"E
L2	129.57'	N0° 00' 31"W
L3	194.01'	N0° 00' 31"W
L4	27.47'	N59° 45' 20"E
L5	182.27'	N89° 11' 20"E
L6	70.51'	N54° 55' 58"E
L7	480.68'	N85° 59' 35"W

**REVISED EXHIBIT B
3597-15-PCRWRD
ADDENDUM 2**

BASIS OF HORIZONTAL CONTROL & ELEVATION
 DESIGN INFORMATION BASED UPON AERIAL PHOTOGRAMMETRIC MAPPING SUPPLIED BY ADOT. PHOTOGRAMMETRY JOB NO. 3803 - AERIAL PHOTOGRAPHY DATED OCTOBER 29, 2008.
 ELEVATIONS BASED UPON NAVD 88.
 MAP COORDINATES ARE NAD 83/92 MODIFIED CENTRAL ZONE STATE PLANE COORDINATES USING G.A.F. = 1.00016

DESIGN	E. LETICHOE	10/16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SERVICES					
DRAWN	G. ZAVALA	10/16						
CHECKED	M. DALT	10/16						
			INA ROAD SEWER MODIFICATION PLANS HORIZONTAL CONTROL					
ROUTE	I-10	LOCATION	INA ROAD T.I.					
NO.	DATE	REVISION	BY	CHKD.	APPR.	TRACS NO. H8479 01C	010-D121615	OF

NOTE:
 EXISTING FORCE MAIN MONUMENTS TO BE SURVEYED AND REPLACED IF DISTURBED. MONUMENT SHALL BE LOCATED PER STD. DTL. RWRD-503.
 NEW MONUMENTS - SEE FORCE MAIN MONUMENT TABLE ON SHEET U--04.03

FEDERAL REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-D121615	846	850	
010 PM 24B					

VERTICAL SEPARATION

GRAVITY SEWER CROSSING
(WATER MAIN ABOVE SEWER; N.T.S.)

FORCE MAIN CROSSING
(WATER MAIN ABOVE SEWER) N.T.S.

GRAVITY OR FORCE MAIN CROSSING
(WATER MAIN BELOW SEWER) N.T.S.

NOTES:

- WHERE A WATER MAIN CROSSES ABOVE A GRAVITY SEWER WITH 2' OR GREATER VERTICAL CLEARANCE (OUTSIDE SURFACE TO OUTSIDE SURFACE), NO EXTRA PROTECTION IS REQUIRED. WHERE A WATER MAIN CROSSES ABOVE A FORCE MAIN WITH 6' OR GREATER VERTICAL CLEARANCE, NO EXTRA PROTECTION IS REQUIRED.
- WHERE A WATER MAIN MUST CROSS ABOVE A GRAVITY SEWER WITH LESS THAN 2' OF CLEARANCE OR ABOVE A FORCE MAIN WITH LESS THAN 6' OF CLEARANCE, CONSTRUCT OR REPLACE THE SEWER LINE WITH DUCTILE IRON PIPE (D.I.P.) OR APPROVED EQUAL. IN NO CASE SHALL THE WATER MAIN HAVE LESS THAN 1' OF CLEARANCE ABOVE A GRAVITY SEWER OR 2' OF CLEARANCE ABOVE A FORCE MAIN. IF THE JOINT IS LOCATED LESS THAN 6' FROM THE OUTSIDE SURFACE OF THE WATER MAIN, THEN A RESTRAINED JOINT OR APPROVED EQUAL SHALL BE USED. REFER TO SHEET 3 OF 3.
- WHERE A WATER MAIN CROSSES BELOW EITHER A GRAVITY SEWER OR A FORCE MAIN, CONSTRUCT OR REPLACE THE SEWER LINE WITH D.I.P. OR APPROVED EQUAL FOLLOWING THE GUIDELINES GIVEN IN NOTE NO. 2. IN NO CASE SHALL THE WATER MAIN BE LESS THAN 2' BELOW EITHER A GRAVITY SEWER OR FORCE MAIN.

ISSUED:	STANDARD DETAIL	DETAIL NO.
8/92	SEWER/WATER CROSSING DETAILS	RWRD 108
REVISED:		
10/15		SHEET 1 OF 3

HORIZONTAL SEPARATION

WATER MAIN SEPARATION WITH SEWER LINES
(PARALLEL ALIGNMENTS) N.T.S.

WATER MAIN SEPARATION WITH SEWER MANHOLE
N.T.S.

NOTES (CONTINUED):

- THE MINIMUM HORIZONTAL CLEARANCE WITHOUT EXTRA PROTECTION BETWEEN A WATER MAIN AND A FORCE MAIN OR GRAVITY SEWER LINE SHALL BE 6' OUTSIDE SURFACE TO OUTSIDE SURFACE.
- THE MINIMUM HORIZONTAL CLEARANCE BETWEEN A WATER MAIN AND A SEWER MANHOLE SHALL BE 6' FROM THE OUTSIDE SURFACE OF THE WATER MAIN TO THE CENTER OF MANHOLE.
- WHERE A 6' HORIZONTAL CLEARANCE CANNOT BE MAINTAINED WITH A GRAVITY SEWER, CONSTRUCT OR REPLACE THE SEWER LINE WITH D.I.P. OR APPROVED EQUAL FOLLOWING THE GUIDELINES GIVEN IN NOTE NO. 2. IN NO CASE SHALL A GRAVITY SEWER LINE BE LOCATED LESS THAN 2' HORIZONTALLY FROM A WATER MAIN.
- IN NO CASE SHALL A FORCE MAIN BE LOCATED LESS THAN 6' HORIZONTALLY FROM A WATER MAIN.
- THE AMERICAN NATIONAL STANDARD FOR THE THICKNESS DESIGN OF D.I.P. (ANSI/AWWA C150/A21.50) SHALL BE USED TO DETERMINE THE REQUIRED PRESSURE CLASS EXCEPT FOR D.I.P. WITH A DIAMETER OF 3" THRU 24", A MINIMUM PRESSURE CLASS OF 350 IS REQUIRED. FOR D.I.P. WITH A DIAMETER GREATER THAN 24", A MINIMUM PRESSURE CLASS OF 200 IS REQUIRED.

ISSUED:	STANDARD DETAIL	DETAIL NO.
8/92	SEWER/WATER CROSSING DETAILS	RWRD 108
REVISED:		
12/12		SHEET 2 OF 3

PLAN VIEWS

NOTES (CONTINUED):

- WHERE THE SEWER LINE IS A GRAVITY SEWER, THE D.I.P. INSTALLATION OR REPLACEMENT SHALL EXTEND A MINIMUM OF 6' BEYOND EACH SIDE OF THE WATER MAIN, MEASURED HORIZONTALLY FROM AND PERPENDICULAR TO THE WATER MAIN.
- WHERE THE SEWER LINE IS A FORCE MAIN, THE D.I.P. INSTALLATION OR REPLACEMENT SHALL EXTEND A MINIMUM OF 10' BEYOND EACH SIDE OF THE WATER MAIN, MEASURED HORIZONTALLY FROM AND PERPENDICULAR TO THE WATER MAIN.
- WHEN UNUSUAL CONDITIONS SUCH AS, BUT NOT LIMITED TO, HIGHWAY OR BRIDGE CROSSINGS PREVENT THE WATER AND SEWER LINE SEPARATIONS REQUIRED BY THIS DETAIL FROM BEING MET, PCRWRD WILL REVIEW AND MAY APPROVE (SUBJECT TO APPROVAL BY THE ENVIRONMENTAL REGULATORY AGENCY HAVING JURISDICTION), REQUESTS FOR AUTHORIZATION TO USE ALTERNATE CONSTRUCTION TECHNIQUES, MATERIALS AND JOINTS ON A CASE-BY-CASE BASIS.
- ALL DUCTILE IRON PIPE SHALL BE INTERNALLY LINED AND EXTERNALLY WRAPPED PER SUBSECTION 3.2.2(D).

ISSUED:	STANDARD DETAIL	DETAIL NO.
8/92	SEWER/WATER CROSSING DETAILS	RWRD 108
REVISED:		
12/12		SHEET 3 OF 3

REVISED EXHIBIT B
3597-15-PCRWRD
ADDENDUM 2

G-2015-097

DESIGN	K. LETENOR	10/15
DRAWN	D. ZAVALA	10/15
CHECKED	M. DALY	10/16

PSOMAS
333 E. UNIVERSITY AVENUE, SUITE 400
TUCSON, ARIZONA 85724
TEL: 520.744.2400 FAX: 520.744.2401

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

INA ROAD
SEWER MODIFICATION PLANS
PCRWRD STANDARD DETAILS

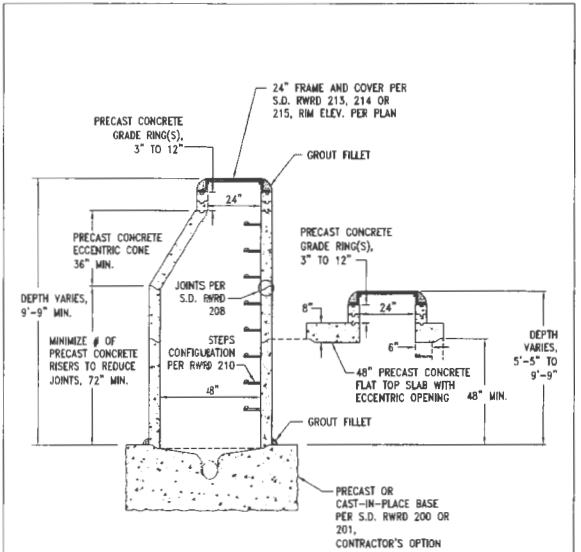
ROUTE: I-10 LOCATION: INA ROAO T.I.

TRACS NO. H8479 OIC

010-D121615

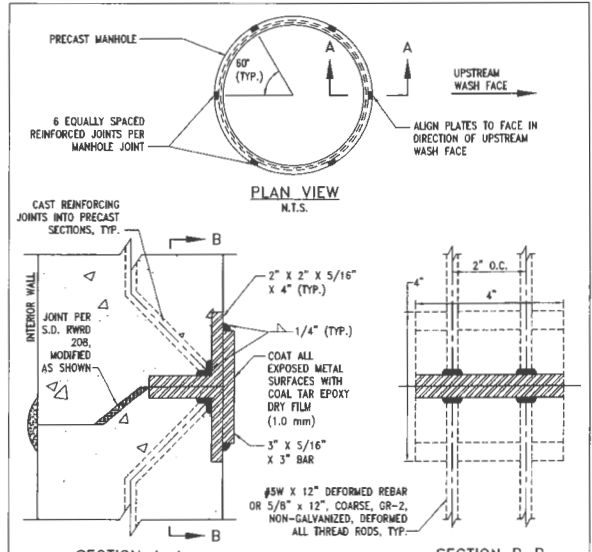
DWG NO U-04.10
OF

FEDERAL REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-D1216/S	847	850	
010 PM 248					



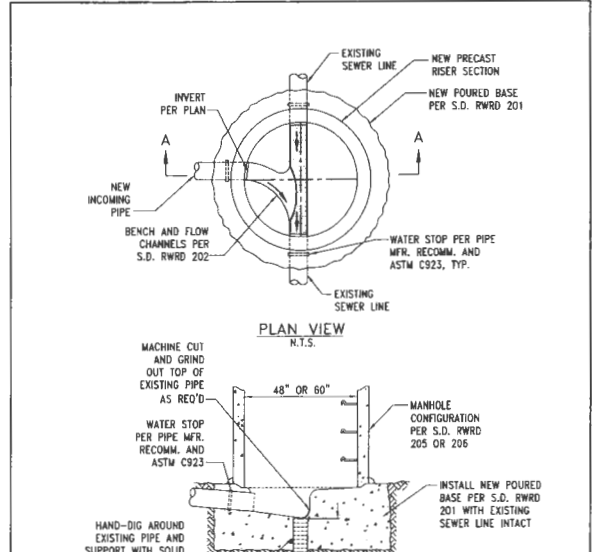
- NOTES:
1. PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO ASTM C478 AND AASHTO M199.
 2. FOR 4' DIAMETER MANHOLE DEPTHS LESS THAN 5'-5" (SHALLOW MANHOLES), SEE S.D. RWRD 207; TYPE 1.
 3. SEE SUBSECTIONS 3.3.2(E) AND 3.3.3 FOR MORE INFORMATION.

ISSUED:	STANDARD DETAIL	DETAIL NO.
8/92	4' DIAMETER MANHOLE CONFIGURATIONS	RWRD 205
REVISED:		
10/15		SHEET 1 OF 1



- NOTES:
1. THIS SPECIAL STANDARD DETAIL MAY BE USED BY THE CONTRACTOR IF APPROVED IN THE PLANS OR IN WRITING BY THE FIELD ENGINEER, AND IS TYPICALLY FOR USE WITH MANHOLES LOCATED IN WASH CROSSINGS.
 2. THIS DETAIL APPLIES TO 4' AND 5' DIAMETER MANHOLES WITH DEPTHS OF 12' OR GREATER (RIM TO INVERT) AND 3 OR LESS PRECAST SECTIONS. ALL OTHER CASES, SEE PLANS FOR MODIFIED REINFORCED MANHOLE JOINTS.
 3. FIELD WELD THE REINFORCED JOINTS AS SHOWN AND IMMEDIATELY QUENCH WITH AN APPROVED OIL QUENCHING MEDIUM AFTER EACH WELD IS COMPLETED.
 4. SEE SUBSECTION 3.3.3(B)(h) FOR MORE INFORMATION.

ISSUED:	SPECIAL STANDARD DETAIL	DETAIL NO.
8/92 (MWM-223)	REINFORCED MANHOLE JOINTS	RWRD 209
REVISED:		
10/15		SHEET 1 OF 1



- NOTES:
1. FOUNDATION PER S.D. RWRD 104 TO THE FIRST JOINT BEYOND OPEN TRENCH CONDITIONS MAY BE REQUIRED DEPENDING ON DEPTH OF EXCAVATION AND TYPE OF SOIL.
 2. SEE SUBSECTION 3.3.3(D)(v) FOR MORE INFORMATION.

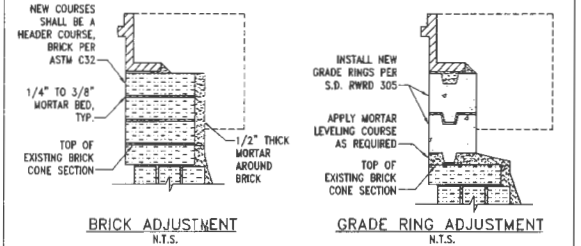
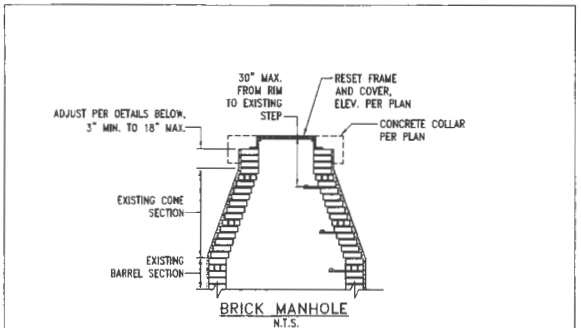
ISSUED:	STANDARD DETAIL	DETAIL NO.
8/92	NEW MANHOLE OVER EXISTING SEWER LINE	RWRD 303
REVISED:		
12/12		SHEET 1 OF 1

**REVISED EXHIBIT B
3597-15-PCRWRD
ADDENDUM 2**

DESIGN	K. LE TENDRE	10/16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SERVICES	
DRAWN	D. ZAVALA	10/16		
CHECKED	M. DALY	10/16		
PSOMAS			INA ROAD SEWER MODIFICATION PLANS PCRWRD STANDARD DETAILS	
ROUTE	I-10	LOCATION	INA ROAD T.I.	
TRACS NO. HB479 OIC			010-D1216/S	DWG NO. U-04-J1

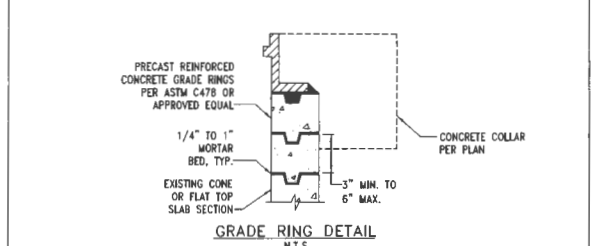
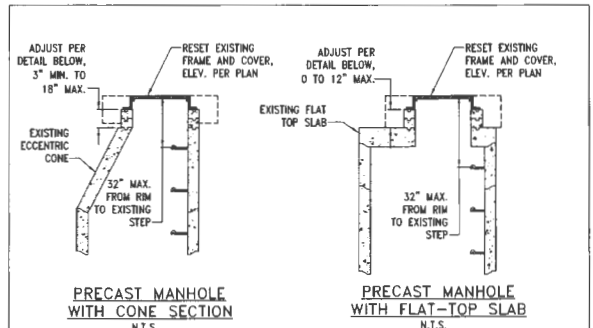
DATE: _____ LOCATION: _____ REVISIONS: _____ SURVEY NO.: _____ FINISHED PLANS: _____

F.A.R.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-D121615	848	850	
010 PM 248					



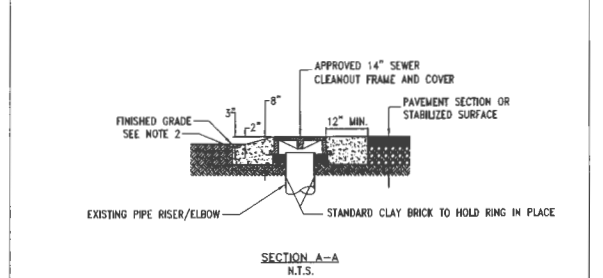
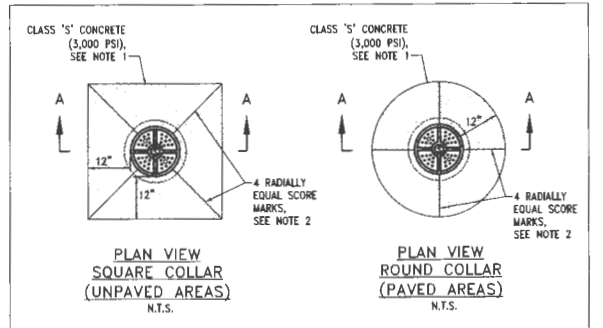
- NOTES:**
1. A SEWER CONSTRUCTION PERMIT FROM PCRWRD IS REQUIRED PRIOR TO REMOVAL OF THE FRAME AND COVER ON EXISTING PUBLIC MANHOLES. GRADE ADJUSTMENT WORK SHALL BE INSPECTED AND APPROVED BY THE FIELD ENGINEER.
 2. RECONSTRUCTION OF THE EXISTING BRICK MANHOLE SHALL BE REQUIRED FOR VIOLATION OF THE DIMENSIONAL RANGES NOTED ABOVE OR THE AGE, CONDITION OR TYPE OF MATERIAL WARRANTS SUCH REPLACEMENT, AS DIRECTED BY THE FIELD ENGINEER.
 3. SEE SUBSECTION 3.3.3.(D)(1) FOR MORE INFORMATION.

ISSUED	STANDARD DETAIL	DETAIL NO.
8/92	GRADE ADJUSTMENT FOR EXISTING BRICK MANHOLE	RWRD 304
REVISION		
12/12		SHEET 1 OF 1



- NOTES:**
1. A SEWER CONSTRUCTION PERMIT FROM PCRWRD IS REQUIRED PRIOR TO REMOVAL OF THE FRAME AND COVER ON EXISTING PUBLIC MANHOLES. GRADE ADJUSTMENT WORK SHALL BE INSPECTED AND APPROVED BY THE FIELD ENGINEER.
 2. RECONSTRUCTION OF THE EXISTING PRECAST MANHOLE SHALL BE REQUIRED FOR VIOLATION OF THE DIMENSIONAL RANGES NOTED ABOVE, AGE OF THE EXISTING MANHOLE, CONDITION OR TYPE OF MATERIAL WARRANTING SUCH REPLACEMENT, AS DIRECTED BY THE FIELD ENGINEER.
 3. SEE SUBSECTION 3.3.3.(D)(1) FOR MORE INFORMATION.

ISSUED	STANDARD DETAIL	DETAIL NO.
8/92	GRADE ADJUSTMENT FOR EXISTING PRECAST MANHOLE	RWRD 305
REVISION		
10/15		SHEET 1 OF 1



- NOTES:**
1. ALL COLLARS SHALL BE FORMED.
 2. FINISH ALL CONCRETE EDGES AND SCORE MARKS WITH A HAND TROWEL HAVING A 1/4" RADIUS. EXPOSED CONCRETE SURFACES SHALL HAVE A MEDIUM BROOM FINISH.

ISSUED	STANDARD DETAIL	DETAIL NO.
10/15	GRADE ADJUSTMENT FOR EXISTING CLEANOUTS	RWRD 307
REVISION		
		SHEET 1 OF 1

**REVISED EXHIBIT B
3597-15-PCRWRD
ADDENDUM 2**

G-2015-097

DESIGNER	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SERVICES
	R. LETENDRE	10/16	
	D. ZAVALA	10/16	
	M. DALY	10/16	

PSOMAS
221 E. WASHINGTON, Suite 400
TULSA, OK 74106
(918) 587-7700 (918) 587-1000 fax

ROUTE: I-10 LOCATION: INA ROAD T.I.

TRACS NO. H8479 OIC

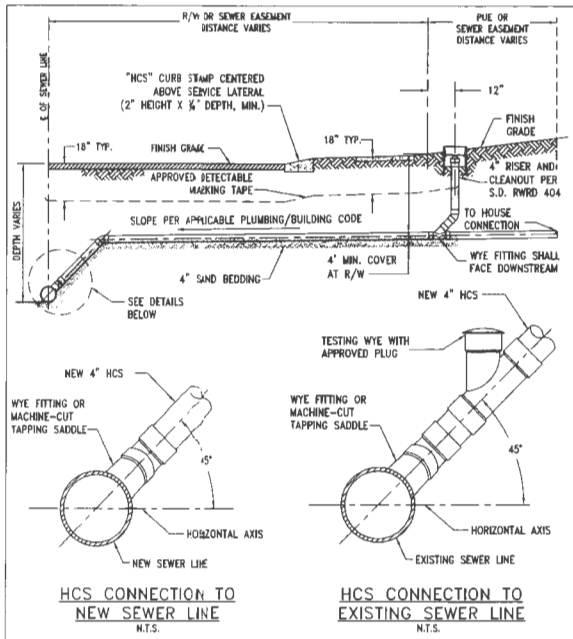
010-D121615

DWG NO. U-04.12

DATE: 08/20/12

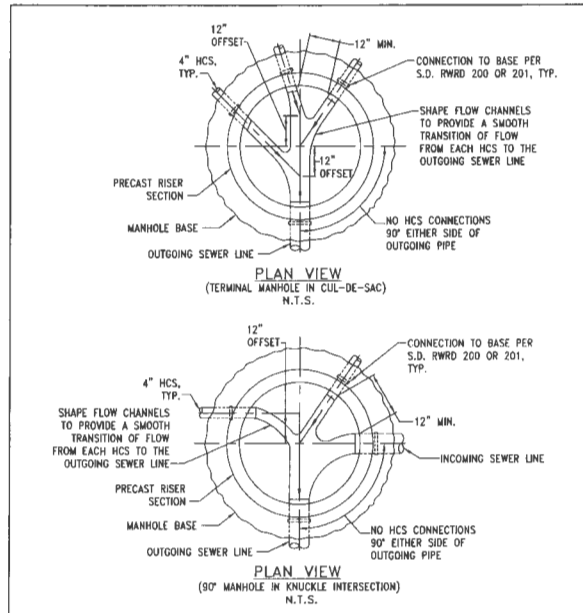
OF

F.A.R.B. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-DI21615	849	850	
010 PM 248					



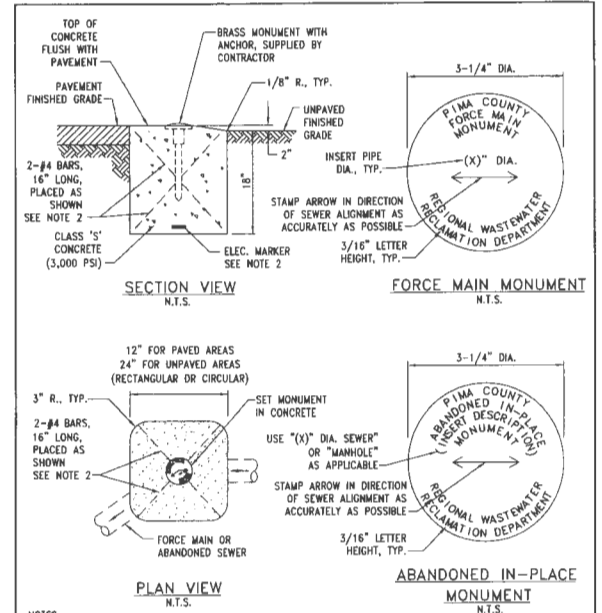
NOTE:
INSTALLATION OF FITTINGS AND TAPPING SADDLES SHALL CONFORM TO THE PIPE MANUFACTURER'S RECOMMENDATIONS AND SUBSECTION 3.2.3(c).

ISSUED:	8/92	STANDARD DETAIL	DETAIL NO.
REVISED:	10/15	HCS CONNECTION TO SEWER LINE	RWRD 401
			SHEET 1 OF 1



- NOTES:**
- THIS SPECIAL STANDARD DETAIL MAY BE USED BY THE CONTRACTOR IF APPROVED IN THE PLANS OR IN WRITING BY THE FIELD ENGINEER.
 - THE CONNECTION OF 4" DIAMETER HOUSE CONNECTION SEWERS (HCS) INTO MANHOLES SHALL BE AVOIDED EXCEPT WHERE INDICATED ON THE PLANS OR AS APPROVED BY THE FIELD ENGINEER.
 - THE CROWN ELEVATION OF EACH HCS SHALL MATCH THE CROWN ELEVATION OF THE OUTGOING SEWER LINE.

ISSUED:	8/92	SPECIAL STANDARD DETAIL	DETAIL NO.
REVISED:	12/12	HCS CONNECTIONS TO MANHOLES	RWRD 402
			SHEET 1 OF 1



- NOTES:**
- MONUMENT DATA SHALL BE AS SHOWN, WITH THE EXCEPTION OF THE NOTATION IN PARENTHESIS TO BE MODIFIED AS NOTED.
 - REINFORCING BARS MAY BE DELETED WITH THE INSTALLATION OF AN APPROVED ELECTRONIC MARKER SYSTEM PLACED AT THE BASE OF THE MONUMENT AS SHOWN.
 - ABANDONMENT MONUMENTS SHALL BE PLACED AT THE TERMINAL ENDS OF ABANDONED SEWER LINES/FORCE MAINS WITH A MAXIMUM SPACING OF 250' AND CENTERED ABOVE ABANDONED MANHOLES.

ISSUED:	8/92 (WMM-507/508)	STANDARD DETAIL	DETAIL NO.
REVISED:	12/12	FORCE MAIN AND ABANDONMENT MONUMENTS	RWRD 503
			SHEET 1 OF 1

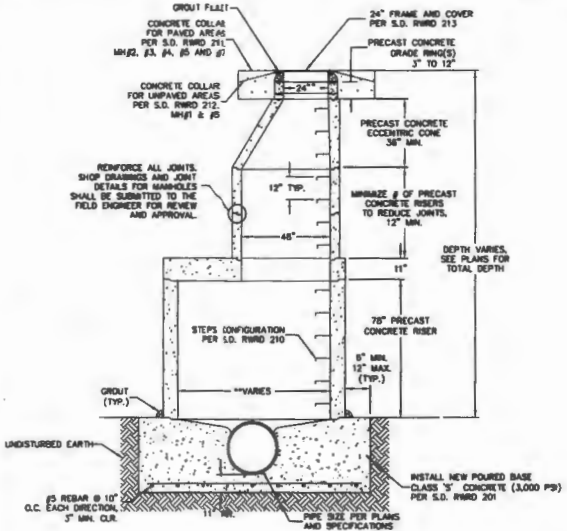


**REVISED EXHIBIT B
3597-15-PCRWRD
ADDENDUM 2**



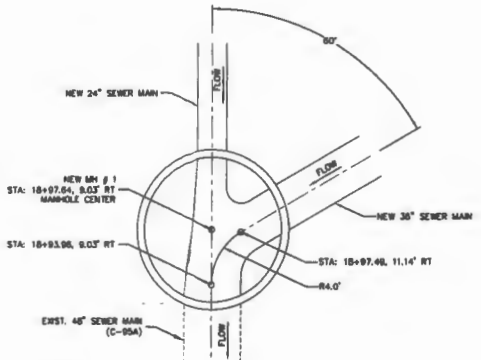
DESIGN	R. LETENDRE	DATE	10/16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SERVICES	 LIBRA MICHAEL E. SMITH COUNTY OFFICE
DRAWN	C. ZAVALLA	DATE	10/16		
CHECKED	M. DALY	DATE	10/16		
PSOMAS				INA ROAD SEWER MODIFICATION PLANS PCRWRD STANDARD DETAILS	
ROUTE	I-10			INA ROAD T.I.	DWG NO. U-04J13
TRACS NO.	H8479 01C			010-DI21615	OF

FEDERAL REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD SHEETS
9	ARIZ.	010-DX2161S	850	850	
010 PM 248					



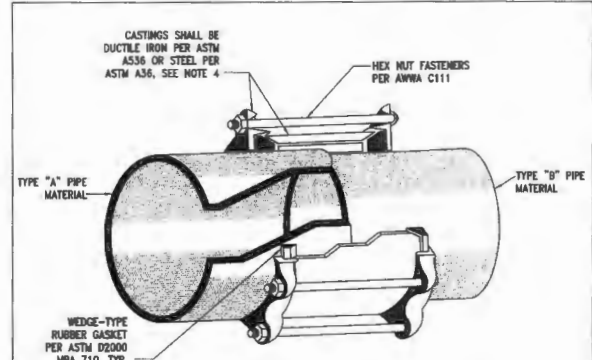
NOTES:
 1. DESIGN LOADS; MANHOLE COMPONENTS SHALL CONFORM TO ASTM C-478 AND AASHTO M-199. FLAT TOPS AND BASE SLABS SHALL BE DESIGNED FOR A MINIMUM OF H-20 TRAFFIC TO 30' STACK HEIGHT.

A SEWER MANHOLE DETAIL
 78" FOR MANHOLES #2, #3, #4, #5, #6, #7, #8
 96" FOR MANHOLES #9, #10, #11, #12
 120" FOR MANHOLES #13, #14, #15



NOTES:
 1. FLOW CHANNEL CONFIGURATION PER EDS 5.2.7.
 2. BENCH ACCESS PER STD. DTL. BRWD 202.

B SEWER MANHOLE DETAIL FOR NEW MH # 1



- NOTES:
- COUPLINGS SHALL BE RIGID, COMPRESSION TYPE COUPLINGS AS SHOWN, APPROPRIATELY SIZED AND SUITABLE FOR SANITARY SEWER APPLICATIONS. APPROVED COUPLINGS SHALL BE IN THE DEPARTMENT'S LIST OF APPROVED PRODUCTS.
 - ADJUSTABLE REPAIR COUPLINGS (I.E. MISSION) FOR SANITARY SEWER APPLICATIONS MAY BE PERMITTED ON A CASE-BY-CASE BASIS FOR EXISTING 12" DIAMETER VCP OR CONCRETE SEWER PIPE AND SMALLER, ONLY WITH PRIOR APPROVAL BY THE FIELD ENGINEER.
 - WHERE THERE IS A 1" DIFFERENTIAL IN INTERNAL DIAMETERS OF THE 2 DIFFERENT PIPE TYPES, A SPECIAL CONNECTION, APPROVED BY THE FIELD ENGINEER, SHALL BE USED TO ELIMINATE THE DIFFERENTIAL AT THE INVERT.
 - CASTINGS SHALL HAVE AN APPROVED FACTORY-APPLIED INTERIOR AND EXTERIOR CORROSION-RESISTANT COATINGS FOR SANITARY SEWER APPLICATIONS.
 - SEE SUBSECTION 3.4.3 - FOR A CURRENT LIST OF APPROVED PRODUCTS FOR PUBLIC SEWERS, CHECK THE DEPARTMENT'S WEBSITE OR CONTACT THE FIELD ENGINEERING SECTION.

ISSUED	STANDARD DETAIL	DETAIL NO.
8/92	COUPLING FOR UNLIKE PIPE MATERIALS	RWRD 103
REVISED		
10/15		SHEET 1 OF 1

REVISED EXHIBIT B
3597-15-PCRWRD
ADDENDUM 2

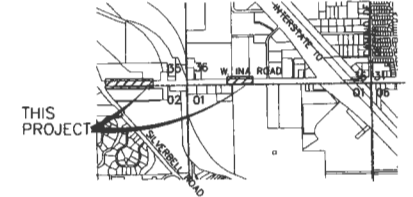
DESIGN	K. LETENDRE	10/15	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SERVICES INA ROAD SEWER MODIFICATION PLANS PCRWRD STANDARD DETAILS	
DRAWN	O. ZAVALA	10/15		
CHECKED	M. DALY	10/15		
DATE				
PSOMAS PIMA COUNTY INFRASTRUCTURE DELIVERY			INA ROAD T.I. TRACS NO. H8479 OIC 010-DX2161S OF	



PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT

INA ROAD FORCE MAIN SEWER MODIFICATION SILVERBELL ROAD TO STARCOMMERCE WAY UPC-2014-013

FED. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	MRN-0101415	251	256	
0000 PM MRN					



LOCATION MAP
SCALE: 3" = 1 mile
BEING A PORTION OF THE
SE 1/4 OF SECTION 35 AND
SW 1/4 OF SECTION 36,
T-12-S, R-12-E,
GSM, ARIZONA
TOWN OF MARANA, PIMA COUNTY, ARIZONA

12" FORCE MAIN DISCHARGE POINT
LATITUDE: 32° 20' 15.52" N
LONGITUDE: 111° 04' 26.55" W

INDEX OF SHEETS

PAGE NO.	SHEET NO.	SHEET DESCRIPTION
240	U-04.01	Cover Sheet
241-242	U-04.02 - U-04.03	General Notes
243	U-04.04	Survey Control
244	U-04.05	Removal Sheet
245	U-04.06	Detail Sheet

BOARD OF SUPERVISORS

DISTRICT	MEMBER NAME	MEMBER TITLE
DISTRICT 2	RAMON VALADEZ	MEMBER
DISTRICT 1	ALLY MILLER	MEMBER
DISTRICT 3	SHARON BROWSON	CHAIRMAN
DISTRICT 4	STEVE CHRISTY	MEMBER
DISTRICT 5	RICHARD ELIAS	MEMBER

Keith Brann 2-2-17
TOWN OF MARANA (for Sewer location in R.O.W. only) DATE
KEITH BRANN, TOWN ENGINEER

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPT.

John Jenkins 3/1/17
JACKSON JENKINS, DIRECTOR DATE

Eric McDunn 1/25/17
ERIC McDUNN, P.E., DEPUTY DIRECTOR DATE

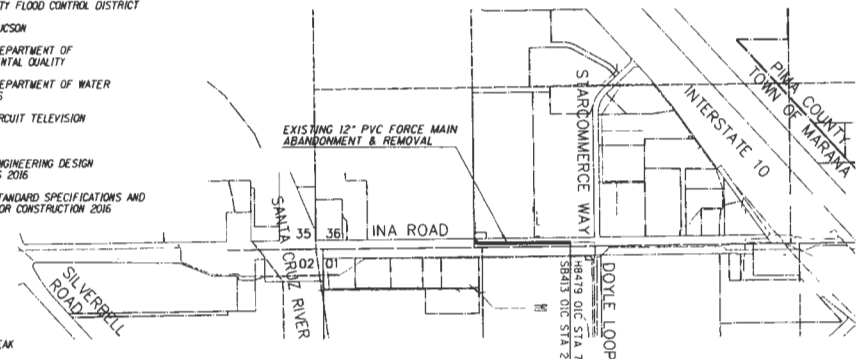
John Warner 1-31-2017
JOHN WARNER, DEPUTY DIRECTOR DATE

LEGEND

NEW	EXISTING	FEATURE
○	⊙	MANHOLE, SANITARY SEWER
—S—	—S—	SANITARY SEWER LINE (GRAVITY)
—FM—	—FM—	SANITARY SEWER LINE (FORCE MAIN)
□		FORCE MAIN TEST STATION
—G—		GAS LINE
⊙		GAS MARKER
—UCT—		UNDERGROUND TELEPHONE LINE
—UGL—		UNDERGROUND ELECTRIC LINE
—FO—		UNDERGROUND FIBER OPTIC LINE
—OHE—		OVERHEAD ELECTRIC
—W—		WATER MAIN
□		WATER METER BOX
□		GAS METER BOX
⊙		WATER VALVE
⊙		GAS VALVE
□		IRRIGATION BOX
□		TELEPHONE PEDESTAL
□		ELECTRIC POWER POLE W/ GUY WIRE
□		ELECTRICAL TRANSFORMER
□		ELECTRICAL PEDESTAL
---		RIGHT OF WAY LINE
---		PROPERTY LINE
---		EASEMENT LINE
---		GRADE PROFILE
---		SECTION LINE
---		QUARTER SECTION LINE
⊙		FORCE MAIN MONUMENT
✕✕✕✕		ABANDON/REMOVE EXISTING SEWER
---		TEMP. CONSTRUCTION ESMT. (TCE)
⊙		FIRE HYDRANT
⊙		SECTION CORNERS
⊙		QUARTER CORNERS
★		BENCHMARKS
⊙		SAGUARD
⊙		POTHOLE TEST PIT

ABBREVIATIONS

PCRWRD	PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
PCDOT	PIMA COUNTY DEPARTMENT OF TRANSPORTATION
PCFCD	PIMA COUNTY FLOOD CONTROL DISTRICT
COT	CITY OF TUCSON
ADEQ	ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
ADWR	ARIZONA DEPARTMENT OF WATER RESOURCES
CCTV	CLOSED CIRCUIT TELEVISION
MH	MANHOLE
EDS 2016	PCRWRD ENGINEERING DESIGN STANDARDS 2016
SSDC 2016	PCRWRD STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016
EL./ELEV.	ELEVATION
EX./EXST.	EXISTING
INV.	INVERT
VT.	VERTICAL
PT.	POINT
GB	GRADE BREAK
HDPE	HIGH DENSITY POLYETHYLENE PIPE
PVC	POLYVINYL CHLORIDE PIPE
DIP	DUCTILE IRON PIPE
NPI	NON-PAY ITEM
PIP	PROTECT IN PLACE



UTILITIES AND OTHER LISTINGS

Organization	Phone Number
Tucson Electric Power	(520) 918-8246
Cox Cable	(520) 629-8511
Century Link Comm.	(520) 292-7555
Comcast Cable	(520) 744-1900
Tucson Water	(520) 791-2648
Pima County DOT	(520) 724-6367
Southwest Gas	(520) 794-6021

SUMMARY OF MATERIALS TABLE

Description	Est. Qty.	Unit
SURVEY MONUMENT (FORCE MAIN)	9	EACH

SUMMARY OF REMOVAL TABLE

Description	Est. Qty.	Unit
12" PVC FORCE MAIN SEWER, REMOVE	700	L.F.

As-Built Certification
AS-BUILT:
I hereby certify that the As-Built annotations provided on these drawings were based on an As-Built survey conducted under my supervision and accurately depicts existing field conditions to the best of my knowledge and belief.

REGISTERED LAND SURVEYOR DATE
(OR REGISTERED P.E.)

REVISED EXHIBIT B
3697-16-PCRWRD
ADDENDUM 2

G-2016-049



DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SERVICES
DESIGN	C. REMME	10/16	INA ROAD SEWER MODIFICATION PLANS COVER SHEET
DRAWN	D. ZAVALA	10/16	
CHECKED	IM. DALY	10/16	
PSOMAS <small>1000 W. WASHINGTON STREET, SUITE 100 TUCSON, ARIZONA 85710</small>			
ROUTE 000		LOCATION INA ROAD SILVERBELL TO STARCOMMERCE	
TRACS NO. SB413 OIC		MRN-0101415	
DWG NO. U-04.01			OF

G-2016-049

FEDERAL REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	MRN-001415	252	256	
0000 PM MRN					





GENERAL NOTES

- ALL DESIGN STANDARDS, MATERIALS AND WORKMANSHIP FOR PUBLIC SANITARY SEWERS SHALL BE IN ACCORDANCE WITH THE PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT (PCRWRD) ENGINEERING DESIGN STANDARDS 2016 (EDS 2016) AND THE STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 2016 (SSDC 2016). SAID DOCUMENTS ARE AVAILABLE THROUGH THE PCRWRD WEBSITE (www.pima.gov/wastewaterreclamation/).
- COORDINATE SYSTEM: ARIZONA STATE PLANE, NAD 83 (92 EPOCH), CENTRAL ZONE, GAF = 1.00016

BASIS OF HORIZONTAL/VERTICAL CONTROL: MAPPING ESTABLISHED IN 2002 BY ENTRANCO ENGINEERS WAS RECOVERED AND FOUND TO AGREE WELL WITH THE ABOVE PARAMETERS.

DESIGN INFORMATION BASED UPON AERIAL PHOTOGRAMMETRIC MAPPING SUPPLIED BY ADOT. PHOTOGRAMMETRY JOB NO. 3803 - AERIAL PHOTOGRAPHY DATED OCTOBER 29, 2008.
- NOT USED
- ANY CONSTRUCTION ACTIVITY HAVING THE POTENTIAL TO DAMAGE EXISTING PUBLIC SANITARY SEWERS OR ANY ACTIVITY THAT REQUIRES MATERIALS OR EQUIPMENT TO ENTER EXISTING PUBLIC SANITARY SEWERS SHALL REQUIRE A PIMA COUNTY RWRD SEWER CONSTRUCTION PERMIT PRIOR TO COMMENCING THAT ACTIVITY.
- SEWER CONSTRUCTION SHALL NOT COMMENCE UNTIL: (A) THE ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (ADEQ) OR ITS DELEGATED AUTHORITY HAS ISSUED A CONSTRUCTION AUTHORIZATION FOR THIS PROJECT; (B) THE CONTRACTOR HAS OBTAINED A PCRWRD PUBLIC SEWER CONSTRUCTION PERMIT (CONTACT THE PCRWRD PERMITS SECTION AT (520) 724-6649 FOR PERMIT APPLICATION REQUIREMENTS); (C) THE CONTRACTOR'S FLOW MANAGEMENT PLAN HAS BEEN SUBMITTED THIRTY (30) CALENDAR DAYS PRIOR TO THE PRE-CONSTRUCTION MEETING AND APPROVED BY PCRWRD FIELD ENGINEERING; AND (D) A PRE-CONSTRUCTION MEETING WITH THE ASSIGNED PIMA COUNTY PROJECT FIELD INSPECTOR IS SCHEDULED AT LEAST THREE (3) FULL BUSINESS DAYS PRIOR TO COMMENCING WITH SEWER CONSTRUCTION.
- NOT USED
- THE CONTRACTOR SHALL FURNISH, OPERATE AND MAINTAIN ALL EQUIPMENT AND LABOR NECESSARY TO PROVIDE CONTINUOUS 24 HOURS PER DAY SANITARY SEWER SERVICE TO ALL PARTIES TRIBUTARY TO A LIVE SEWER TO WHICH A CONNECTION IS TO BE MADE. THE PCRWRD CONVEYANCE DIVISION SHALL BE NOTIFIED AT (520) 724-3400 A MINIMUM OF TWO (2) BUSINESS DAYS PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES THAT IMPACTS THE FLOW WITHIN A LIVE SANITARY SEWER SYSTEM OR INVOLVES CONNECTING TO A LIVE SANITARY SEWER. SEE PCRWRD SSDC 2016, SECTION 2 FOR MORE INFORMATION.
- THE INSPECTION OF THE CONTRACTOR'S WORK BY AN AGENCY AND/OR PCRWRD STAFF SHALL IN NO WAY RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR COMPLIANCE WITH THE REQUIREMENTS OF THE APPROVED CONTRACT DOCUMENTS. IF THE DESIGN ENGINEER OR PCRWRD STAFF FAIL TO POINT OUT A DEFECT, DEFICIENCY OR ERROR IN THE WORK FROM LACK OF DISCOVERY OR ANY OTHER REASON, IT SHALL IN NO WAY PREVENT LATER REJECTION OR RELIEVE THE CONTRACTOR OF PERFORMING CORRECTIONS TO THE UNSATISFACTORY WORK WHEN DISCOVERED. THE CONTRACTOR SHALL NOT FILE A CLAIM FOR LOSSES SUFFERED DUE TO ANY NECESSARY REMOVALS OR REPAIRS RESULTING FROM THE UNSATISFACTORY WORK.
- SEWER PLANS THAT BEAR THE PIMA COUNTY DEVELOPMENT SERVICES DEPARTMENT (DSD) APPROVAL STAMP OR THE PIMA COUNTY RWRD ACCEPTANCE SIGNATURE SHALL ONLY BE USED FOR THE CONSTRUCTION OF PUBLIC SANITARY SEWER FACILITIES. APPROVED PLANS REQUIRING DESIGN REVISIONS SHALL BE RESUBMITTED TO PIMA COUNTY DSD OR RWRD (AS APPROPRIATE) FOR REVIEW AND RE-APPROVAL PRIOR TO START OF THE REVISED SEWER WORK.
- ANY SEWER CONSTRUCTION WORK THAT IS NOT INCLUDED IN THE APPROVED SEWER PLANS WILL NOT BE ACCEPTED BY PCRWRD. SEE PCRWRD SSDC 2016, SECTION 1.4.5 REGARDING THE APPROVAL OF FIELD CHANGES.
- IMMEDIATELY REPORT ANY OF THE FOLLOWING TO THE PCRWRD OPERATIONS CONTROL CENTER (OCC) AT (520) 724-3400: ANY RELEASE OF SEWAGE, ANY DAMAGE TO THE PUBLIC SANITARY SEWER SYSTEM, OR THE DROPPING OF DEBRIS INTO A PUBLIC SANITARY SEWER MANHOLE. A PCRWRD REPRESENTATIVE WILL BE DISPATCHED TO THE SITE. THE CONTRACTOR SHALL TAKE IMMEDIATE ACTION TO CONTAIN A SANITARY SEWAGE OVERFLOW (SSO). THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS TO REPAIR THE SYSTEM, MITIGATE THE RELEASE OF SEWAGE, DISINFECT THE RELEASE AREAS, AND ANY REGULATORY PENALTIES LEVIED ON PCRWRD FOR SEWAGE ENTERING A NATURAL DRAINAGE WAY OR STORM WATER DRAINAGE SYSTEM. THE CONTRACTOR SHALL REPAIR ALL DAMAGE AS DIRECTED AND APPROVED BY THE PCRWRD FIELD REPRESENTATIVE.
- THE CONTRACTOR SHALL CONTACT "ARIZONA 811" (DIAL 811 OR 1-800-782-5348) A MINIMUM OF TWO (2) BUSINESS DAYS PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL KEEP ALL UNDERGROUND FACILITY LOCATION REQUESTS UP-TO-DATE AND COMPLY WITH ARIZONA REVISED STATUTES (A.R.S.), TITLE 40, CHAPTER 1, ARTICLE 6.3, SECTION 40-360.22. CONCERNS REGARDING THE ACCURACY BETWEEN THE UNDERGROUND FACILITY MARKINGS AND THE PROJECT PLANS SHALL BE IMMEDIATELY REPORTED TO THE DESIGN ENGINEER.
- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL SANITARY SEWER MANHOLES AT ALL TIMES.
- THE CONTRACTOR SHALL FIELD-VERIFY EXISTING SEWER LINE ELEVATIONS AND ALIGNMENTS PRIOR TO CONSTRUCTION. VERIFICATION MAY REQUIRE POT-HOLING.
- ANY HOUSE CONNECTION SEWER (HCS) OR BUSINESS CONNECTION SEWER (BCS) LINES ENCOUNTERED DURING CONSTRUCTION SHALL BE PROTECTED, REPAIRED, OR REROUTED, AS THE SITUATION DICTATES, PER PCRWRD SSDC 2016 DETAIL NO. RWRD 400 AND AT NO EXPENSE TO THE PROPERTY OWNER OR PCRWRD. HCS AND BCS LINES ARE NOT OWNED OR MAINTAINED BY PCRWRD. PRIVATE CONNECTION SEWERS CONSTRUCTED PRIOR TO JANUARY 2006 ARE NOT REQUIRED TO BE LOCATED AND MARKED.
- SURVEY LAYOUT AND SURVEY CONTROL SHALL BE PERFORMED BY, OR UNDER, THE DIRECT SUPERVISION OF AN ARIZONA RLS.
- SEWER CUT SHEETS SHALL BE PREPARED IN ACCORDANCE WITH PCRWRD SSDC 2016, SECTION 3.2.3(A)(X). CERTIFIED CUT SHEETS SHALL BE SUBMITTED TO THE PCRWRD FIELD ENGINEER PRIOR TO COMMENCEMENT OF SEWER CONSTRUCTION. CUT SHEETS ARE FOR PCRWRD REFERENCE ONLY AND SHALL NOT DELAY SEWER CONSTRUCTION DUE TO REVIEW OF THE DELIVERABLE. ANY ERRORS OR OMISSIONS RESULTING IN IMPROPER SEWER CONSTRUCTION SHALL NOT BE THE RESPONSIBILITY OF PCRWRD. REFER TO PCRWRD SSDC 2016, SECTION 3.2.3(A)(XII) FOR CONSTRUCTION SURVEY STAKING REQUIREMENTS.
- THE DEVELOPER OR CONTRACTOR SHALL RETAIN AN ARIZONA-REGISTERED LAND SURVEYOR (RLS) FOR PREPARATION OF THE SEWER AS-BUILT PLANS. SEWER AS-BUILT PLANS SHALL CONFORM TO SSDC 2016, SECTION 1.4.7 AND ARE REQUIRED FOR FINAL ACCEPTANCE OF SEWER CONSTRUCTION BY PCRWRD. THE DEVELOPER OR CONTRACTOR SHALL SUBMIT TWO FULL-SIZE COPIES, AND AN ELECTRONIC VERSION, OF THE AS-BUILT SEWER PLANS TO THE PCRWRD FIELD ENGINEER.
- NEW PUBLIC SANITARY SEWER FACILITIES MUST BE TESTED, INSPECTED AND AUTHORIZED FOR DISCHARGE BY PCRWRD AND ADEQ, OR ITS DELEGATE, PRIOR TO DISCHARGING INTO THE EXISTING PUBLIC SANITARY SEWER SYSTEM.
- THE CONTRACTOR SHALL COMPLY WITH APPLICABLE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS AT ALL TIMES.
- PRIOR TO THE INSTALLATION OF SANITARY SEWERS, ALL ROUGH GRADING, INCLUDING FILL, SHALL BE COMPLETED TO A MINIMUM OF 4 FEET OVER THE TOP OF THE SEWER PIPE. BEDDING, SHADING, AND TRENCH BACKFILL COMPACTION SHALL BE PERFORMED IN ACCORDANCE WITH PCRWRD SSDC 2016, DETAIL NO. RWRD 104, OR AS SHOWN ON THE PLANS. SHOULD GROUND WATER OR UNANTICIPATED SOIL CONDITIONS BE ENCOUNTERED, THE BEDDING SHALL BE MODIFIED BY THE DESIGN ENGINEER AND APPROVED BY THE PCRWRD FIELD ENGINEER. WHEN THE NEW SEWER IS LOCATED WITHIN A PUBLIC SEWER EASEMENT, COMPACTION OF BACKFILL SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS OR AS OTHERWISE DIRECTED BY PCRWRD. WHEN THE NEW SEWER IS LOCATED WITHIN RIGHT-OF-WAY, COMPACTION OF BACKFILL SHALL BE IN ACCORDANCE WITH THE RIGHT-OF-WAY AGENCY HAVING JURISDICTION.
- SANITARY SEWER CONSTRUCTION SHALL START AT THE LOWEST DOWNSTREAM POINT AND PROCEED UPSTREAM, REGARDLESS OF THE STATIONING SHOWN ON THE PLANS. IF CONSTRUCTION CANNOT BE PERFORMED IN THIS MANNER, THE CONTRACTOR SHALL PROVIDE AN OUT-OF-SEQUENCE LETTER FOR APPROVAL BY THE PCRWRD FIELD ENGINEER PRIOR TO THE START OF SEWER CONSTRUCTION.
- THE HORIZONTAL AND VERTICAL SEPARATION BETWEEN PUBLIC WATER MAINS AND PUBLIC SEWER LINES SHALL COMPLY WITH ARIZONA ADMINISTRATIVE CODE (A.A.C.) R18-5-502 AND PCRWRD SSDC 2016, DETAIL NO. RWRD 108.
- PLANTING WITHIN PUBLIC SEWER EASEMENTS SHALL ONLY BE ALLOWED WITH SPECIAL APPROVAL. TREES WITH BRANCHES OR ROOTS HAVING THE POTENTIAL TO EXTEND INTO PUBLIC SEWER EASEMENTS SHALL BE AVOIDED. IN SPECIAL CASES, WHERE THE PUBLIC SEWERS MUST BE LOCATED OUTSIDE PAVED OR STABILIZED AREAS, LANDSCAPING AND PLANTING SHALL ADHERE TO GUIDELINES IN PCRWRD EDS 2016, SECTION 7.7 AND PCRWRD SSDC 2016, DETAIL NO. RWRD 111.
- ALL STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MEASURES SHALL BE INSTALLED TO PREVENT ALL STORM WATER, CONSTRUCTION WATER, FUELS, CHEMICALS, LIQUIDS, OR OTHER CONTAMINANTS, FROM BEING DIRECTED INTO OR ONTO ANY SANITARY SEWER FACILITIES. PROTECTION OF SANITARY SEWER FACILITIES SHALL BE A PART OF THE APPROVED CONSTRUCTION SWPPP AND BEST MANAGEMENT PRACTICES. PROTECTION DEVICES SHALL BE INSTALLED AND MAINTAINED AROUND ALL POTENTIALLY AFFECTED SANITARY SEWER FACILITIES WITHIN THE PROJECT LIMITS. ADDITIONAL MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE USE OF RAIN STOPPERS AND MANHOLE COVERS AS DEEMED NECESSARY BY PCRWRD.
- ALL PROJECT ACTIVITIES MUST BE KEPT WITHIN THE PROJECT AREAS. CONCERNING HUMAN BURIAL REMAINS, ARCHAEOLOGICAL CLEARANCE RECOMMENDATIONS DO NOT EXEMPT THE DEVELOPMENT FROM COMPLYING WITH STATE BURIAL PROTECTION LAWS. IN THE EVENT THAT HUMAN REMAINS, INCLUDING HUMAN SKELETAL REMAINS, CREMATIONS, CEREMONIAL OBJECTS OR FUNERARY OBJECTS, ARE FOUND DURING EXCAVATION OR CONSTRUCTION, GROUND DISTURBING ACTIVITIES MUST CEASE IN THE IMMEDIATE VICINITY OF THE DISCOVERY. ARIZONA STATE LAWS ARS 41-844 AND 41-865 REQUIRE THAT THE ARIZONA STATE MUSEUM BE NOTIFIED OF THE DISCOVERY AT (520) 621-4795 SO THAT CULTURAL GROUPS WHO CLAIM CULTURAL OR RELIGIOUS AFFINITY TO THE REMAINS CAN MAKE APPROPRIATE ARRANGEMENTS FOR THE REPATRIATION AND REBURIAL OF THE REMAINS. THE HUMAN REMAINS WILL BE REMOVED FROM THE SITE BY A PROFESSIONAL ARCHAEOLOGIST PENDING CONSULTATION AND REVIEW BY THE ARIZONA STATE MUSEUM AND THE CONCERNED CULTURAL GROUPS.
- SPECIAL CARE SHALL BE TAKEN TO ENSURE DESIGN SLOPES ARE MAINTAINED. SEWERS CONSTRUCTED AT INSUFFICIENT SLOPES WILL NOT BE ACCEPTED BY PCRWRD FIELD ENGINEERING AND/OR ADEQ. CORRECTIVE ACTION, INCLUDING RE-CONSTRUCTION OF THE SEWER(S), WILL BE AT THE SOLE EXPENSE OF THE PROJECT OWNER/CONTRACTOR.

**REVISED EXHIBIT B
3597-15-PCRWRD
ADDENDUM 2**

							
G-2016-049 DESIGNER: C. DEANE CHECKER: D. ZAVALA DATE: 10/16		DATE: 10/16 DATE: 10/16 DATE: 10/16		ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SERVICES		PIMA COUNTY WASTEWATER RECLAMATION	
PROJECT: 000 LOCATION: INA ROAD SILVERBELL TO STARCOMMERCE		TRACS NO. SB413 OIC		MRN-001415		DWG NO. U-04-02 OF	

DATE: _____
 LOCATION: _____
 REVISIONS: _____
 FINISHED PLANS: _____
 SURVEY NO.: _____

GENERAL NOTES

- 28. WHERE CONNECTIONS TO EXISTING MANHOLES ARE TO BE MADE, THE CONTRACTOR SHALL CONSTRUCT NEW INVERTS IN THE EXISTING BASE TO SMOOTHLY DIRECT THE FLOW IN THE PROPER DIRECTION.
- 29. THE WORDS "PIMA COUNTY SANITARY SEWER" SHALL BE IMPRINTED ONLY ON COVERS OF MANHOLES WHICH ARE TO BE PART OF THE PIMA COUNTY REGIONAL WASTEWATER RECLAMATION (PUBLIC) SANITARY SEWER CONVEYANCE SYSTEM.
- 30. ALL DISTURBED AREAS SHALL BE REGRADED TO PROVIDE POSITIVE DRAINAGE AND TO MATCH THE EXISTING DRAINAGE PATTERNS. WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT WITH NO SEPARATE COMPENSATION PROVIDED.
- 31. NO REGULATORY FEMA FLOODPLAINS EXIST WITHIN THE PROJECT LIMITS. THE PROJECT IS LOCATED ENTIRELY WITHIN ZONE X.

ADEO NOTES

- 1. ALL SEWER LINES SHALL BE COVERED WITH AT LEAST 4 FEET OF BACKFILL PER PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT (PCRWRD).
- 2. THE FULL LENGTH OF SEWER MAIN SHALL BE DEFLECTION TESTED PER A.A.C. R18-9-E301 (D) (2) (1).
- 3. EACH SEGMENT OF THE SEWER MAIN SHALL BE LEAK TESTED PER A.A.C. R18-9-E301 (D) (2) (1).
- 4. THE FULL LENGTH OF SEWER MAIN SHALL BE TESTED FOR UNIFORM SLOPE PER A.A.C. R18-9-E301 (D) (2) (4).

F.A.R.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD OR B/C
9	ARIZ.	MRN-0101415	253	256	
0000 PM MRN					

FORCE MAIN MONUMENT						
MONUMENT NUMBER	NORTHING	EASTING	ROAD	APPROX. STATION	OFFSET	COMMENT
1	487637.74	956379.24	INA	204+96.98	29' Lt	END
2	487640.52	956628.75	INA	207+46.46	34' Lt	
3	487643.41	956878.21	INA	209+95.88	39' Lt	
4	487646.66	957128.21	INA	212+45.84	45' Lt	
5	487650.01	957378.21	INA	214+95.80	51' Lt	ANGLE POINT
6	487643.09	957385.50	INA	215+02.95	44' Lt	ANGLE POINT
7	487545.39	957386.48	INA	215+05.04	53' Rt	ANGLE POINT
8	487527.06	957399.07	INA	215+17.80	72' Rt	END
9	487711.27	959835.87	INA	239+56.48	77' Lt	END

NOTE:

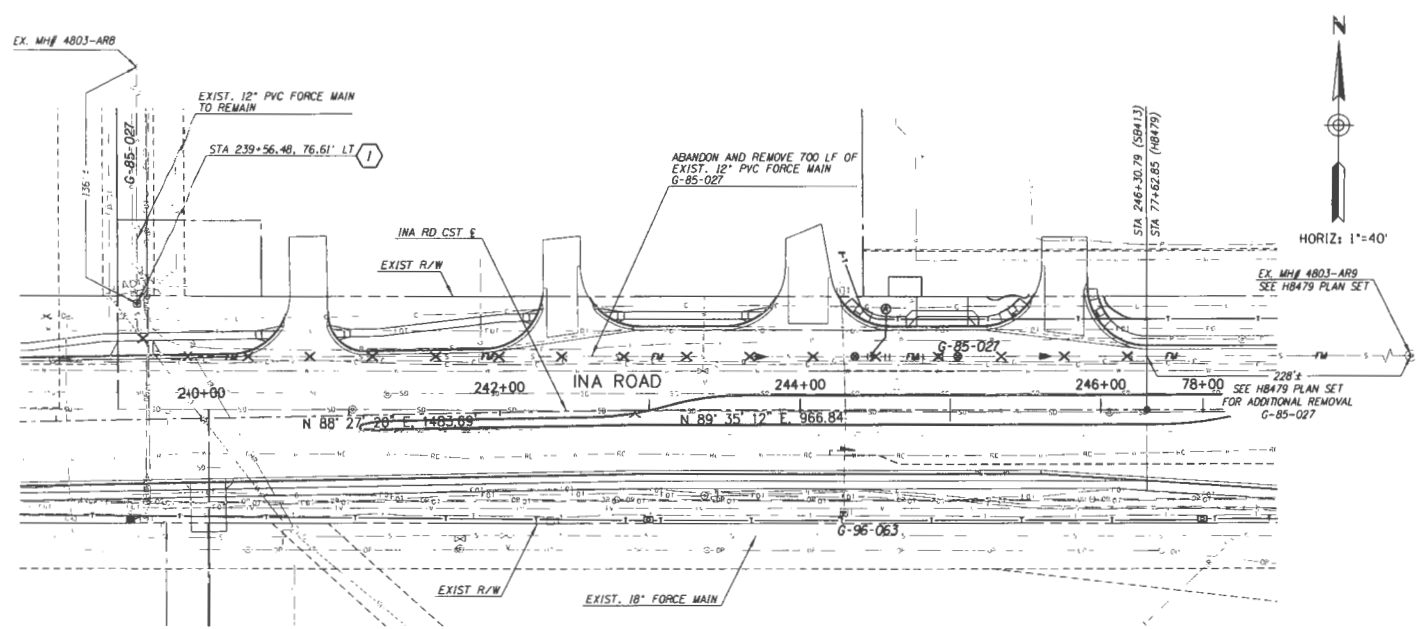
- 1. ALL FORCE MAIN MONUMENTS SHALL BE PER STANDARD DETAIL RWRD 503.

**REVISED EXHIBIT B
3597-15-PCRWRD
ADDENDUM 2**



G-2016-049		 PSOMAS 545 E. Broadway Blvd., Suite 400 Tucson, AZ 85710 (520) 792-1200 (520) 792-1200 fax		ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SERVICES		
DESIGN	C. RESNAYE	DATE	10/16	INA ROAD SEWER MODIFICATION PLANS GENERAL NOTES		
DRAWN	D. ZAVALA	DATE	10/16	ROUTE 000 LOCATION INA ROAD SILVERBELL TO STARCOMMERCE		DWG NO U-04.03 OF
CHECKED	M. DALY	DATE	10/16	TRACS NO. SB413 OIC		
NO. DATE		REVISION	BY	CHKD.	APPR.	MRN-0101415

SURVEY NO. FINISHED PLANS REVISIONS LOCATION DATE FINISHED PLANS SURVEY NO. REVISIONS LOCATION DATE



INA ROAD
12" PEPPER TREE FORCE MAIN REMOVAL

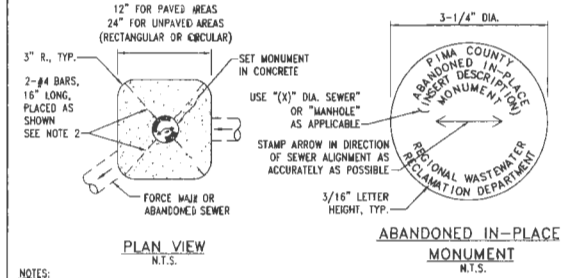
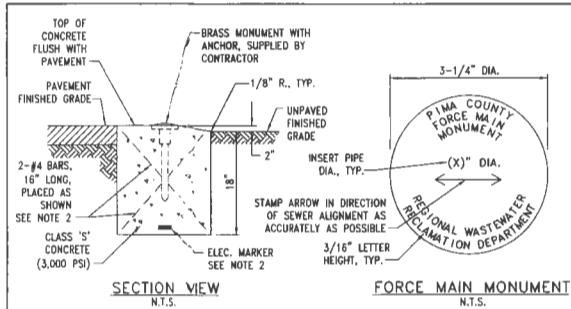
FEDERAL REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	MRN-010141S	255	256	
0000 PM MRN					

- KEYNOTES**
- CAP EXISTING FORCEMAIN AT R/W AND INSTALL MONUMENT PER PCRWRD STD. DTL. RWRD 503.

**REVISED EXHIBIT B
3597-15-PCRWRD
ADDENDUM 2**

		ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SERVICES		
G-2016-049 		PSOMAS INA ROAD SEWER MODIFICATION PLANS EASTBOUND FRONTAGE ROAD		
DESIGN: C. REMAE 10/16 DRAWN: D. ZAVALA 10/16 CHECKED: M. DALEY 10/16		ROUTE: 000 LOCATION: INA ROAD SILVERBELL TO STARCOMMERCE		DWG NO U-04-05
TRACS NO. SB413 OIC		MRN-010141S		OF

F.A.R.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	MRN-010141S	256	256	
0000 PM MRN					



- NOTES:
1. MONUMENT DATA SHALL BE AS SHOWN, WITH THE EXCEPTION OF THE NOTATION IN PARENTHESIS TO BE MODIFIED AS NOTED.
 2. REINFORCING BARS MAY BE DELETED WITH THE INSTALLATION OF AN APPROVED ELECTRONIC MARKER SYSTEM PLACED AT THE BASE OF THE MONUMENT AS SHOWN.
 3. ABANDONMENT MONUMENTS SHALL BE PLACED AT THE TERMINAL ENDS OF ABANDONED SEWER LINES/FORCE MAINS WITH A MAXIMUM SPACING OF 250' AND CENTERED ABOVE ABANDONED MANHOLES.

ISSUED:	STANDARD DETAIL	DETAIL NO.
8/02 (WMM-507/508)	FORCE MAIN AND	RWRD 503
REVISED:	ABANDONMENT MONUMENTS	SHEET OF 1
12/12		

REVISED EXHIBIT B
3597-15-PCRWRD
ADDENDUM 2

DESIGN	C. REMUE	10/16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SERVICES		
DRAWN	D. ZAVALA	10/16			
CHECKED	M. DALY	10/16			
			INA ROAD SEWER MODIFICATION PLANS STEEL CASING DETAIL		
ROUTE	000		LOCATION	INA ROAD SILVERBELL TO STARCOMMERCE	
NO.	DATE	REVISION	BY	CHKD	APPR.

NO.	DATE	REVISION	BY	CHKD	APPR.	TRACS NO. SB413 OIC	MRN-010141S	DWG NO. U-04.06	OF
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DATE: _____ LOCATION: _____ REVISIONS: _____ SHEET NO.: _____ FINISHED PLANS: _____

EXHIBIT D
ADDENDUM NO. 2 TO AGREEMENT NO. 3597-15-PCRWRD
I-10, INA ROAD TI
GMP2

CHANGE ORDER 13



Arizona Department of Transportation
 Infrastructure Delivery and Operations Division
Supplemental Agreement
 11/13/2017

Change Order No. 13

Approval Date: 11/13/2017 (em)

Tracs No: H847901C

Project No: 010-D-(216)S

Org: 4591

SouthCent

Project Name: INA RD TI

Contractor: SUNDT/KIEWIT, A JOINT VENTURE

Federal Aid
 Non-Federal Aid

Request:

Reduce the following items:

- Item 8091114 MANHOLE, SANITARY SEWER (8' DIA)
- Item 8091115 MANHOLE, SANITARY SEWER (10' DIA)
- Item 8091116 MANHOLE, SANITARY SEWER (6' DIA)

Add the following items:

- Item 8052846 MANHOLE, SANITARY SEWER (7' DIA)
- Item 8052847 MANHOLE, SANITARY SEWER (8' DIA)
- Item 8052848 MANHOLE, SANITARY SEWER (10' DIA)

Reason:

Pima County RWRD requested that 7 manholes be redesigned after ADOT and SKJV had negotiated the GMP for this project. Psomas issued revised plans sheets on October 10, 2017, which included the redesigned manholes. The manholes were increased in size and strength, resulting in additional concrete and reinforcing steel necessary to construct the manholes. SKJV subcontractor, Jenco LLC, provided a quote which reflected the additional work. Pima County has agreed to pay for all additional costs associated with this change order. This change order will only affect items in NFA Section 6 of the project.

Specifications/Stipulations:

This change order constitutes full and final compensation. By executing this change order, Sundt/Kiewit, A Joint Venture waives the right to pursue any further claims or requests for compensation related to this contract modification, including but not limited to contract time, materials, labor, services, overhead, profit and damages. Sundt/Kiewit, A Joint Venture shall indemnify and hold the Department harmless from all claims made by subcontractors or suppliers of any tier associated with this contract modification.

Date: _____ Date: _____ Date: _____ Date: 11/22/2017

 Resident Engineer City/County Engineer DocuSigned by: Ladd Bouts
 Field Reports

For valuable considerations, it is mutually agreed that the matter detailed above shall be done and payment made as shown herein for a Supplemental Agreement Change Order, all in accordance with the terms of the contract. For work being performed as a Supplemental Agreement Force Account Work Order, final payment shall be made as stipulated in the Standard Specifications and its supplements upon completion of said work.

Date: 11/15/2017 Date: 11/14/2017 Date: 11/17/2017

Approved for:
 SUNDT/KIEWIT, A JOINT VENTURE

Approved for State of Arizona

Approved without Federal participation
 Approved with Federal participation

Contract DocuSigned by:
 By: Ryan P. Cannon
 3D1D616DC249490..

DocuSigned by:
 By: [Signature]
 Resident Engineer 714BF460

DocuSigned by:
 By: Ammon Heier
 FEF6E4414BAF4AE..

**EXHIBIT D
 Addendum 2
 3597-15-PCRWRD**



**Arizona Department of Transportation
Infrastructure Delivery and Operations Division
Supplemental Agreement
11/13/2017**

Change Order No. 13

Approval Date: 11/13/2017 (em)

Tracs No: H847901C

Project No: 010-D-(216)S

Org: 4591

SouthCent

Project Name: INA RD TI

Contractor: SUNDT/KIEWIT, A JOINT VENTURE

**Pay Item
Adjustments**

Sec	Item Nbr	Description	Unit	Unit Price	Quantity	Amount
6	8082846	MANHOLE (SANITARY SEWER (7'DIA))	EACH	42,759.00	3.000	\$128,277.00
6	8082847	MANHOLE (SANITARY SEWER (8' DIA))	EACH	45,238.00	3.000	\$135,714.00
6	8082848	MANHOLE (SANITARY SEWER (10' DIA))	EACH	70,913.00	1.000	\$70,913.00
6	8091114	MANHOLE, SANITARY SEWER (8' DIA.))	EACH	38,085.00	-3.000	\$-114,255.00
6	8091115	MANHOLE, SANITARY SEWER (10' DIA.))	EACH	56,500.00	-1.000	\$-56,500.00
6	8091116	MANHOLE, SANITARY SEWER (6' DIA.))	EACH	32,500.00	-3.000	\$-97,500.00
Total						\$66,649.00

	Plus	Minus
Total Difference:	\$66,649.00	

No Extension of Contract Time is Authorized for this Supplemental Agreement.

Date: _____	Date: _____	Date: _____	Date: <u>11/22/2017</u>
_____	_____	_____	DocuSigned by: <u>Ladd Bouts</u>
Resident Engineer	City/County Engineer		Field Reports 9894A942B...

For valuable considerations, it is mutually agreed that the matter detailed above shall be done and payment made as shown herein for a Supplemental Agreement Change Order, all in accordance with the terms of the contract. For work being performed as a Supplemental Agreement Force Account Work Order, final payment shall be made as stipulated in the Standard Specifications and its supplements upon completion of said work.

Date: <u>11/15/2017</u>	Date: <u>11/14/2017</u>	Date: <u>11/17/2017</u>
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Approved for:
SUNDT/KIEWIT, A JOINT VENTURE
Contractor DocuSigned by:

By: Ryan P. Cannon
3D1D616DC249490...

Approved for State of Arizona

DocuSigned by:
[Signature]
By: _____
Resident Engineer 3714BF460

Approved without Federal participation
 Approved with Federal participation

DocuSigned by:
Ammon Heier
By: _____
FEF6E4414BAF4AE ..

**EXHIBIT D
Addendum 2
3597-15-PCRWRD**