

## Change Order #6 Las Milpas Road

Owner: Hidalgo County Precinct #2  
From: B2Z Engineering  
To: GO Underground, LLC  
211 W. Jefferson Avenue, Ste. 7  
Harlingen Texas 78550

Project: Las Milpas Road  
Contract: C-22-0094-09-06(ARPA 22-1-122-109)  
Limits: McColl Rd (FM 3062) to 10<sup>th</sup> Street (FM 336)

### Summary of Change Order No. 6 (CO#6)

Change Order No. 6 modifies two existing irrigation crossings for HCID#2 and HCCWCID to maintain uninterrupted service for local farmers. It also adds the previously omitted traffic rail foundation for the Las Milpas Bridge.

#### Key changes include:

- Relocation of the first irrigation crossing from Sta 116+40 to Sta 127+65 due to development-related changes, using surface-level irrigation infrastructure.
- Adjustment at Sta 157+88 to remove one well and extend a 12" PVC line 40 LF into a poly riser with an alfalfa valve.
- Addition of the traffic rail foundation, with costs and components reviewed and accepted as reasonable.
- Extension of the project timeline by 57 days (17 days for past delays, 40 for new work)

The Las Milpas Road plans were developed by B2Z and RDJ, with this change order also prepared by B2Z. Construction is currently underway, and timely approval of CO#6 is essential to maintain the project schedule.

Hidalgo County Precinct 2 has reviewed and agreed to CO#6. The change order does not alter the project's original environmental assessment and has no impact on TDLR compliance, wetlands, waters of the U.S., or archaeological, historical, or environmentally sensitive areas. No site notification is required because of this modification.

B2Z has presented and discussed CO#6 with Precinct 2 officials, detailing the modifications to the contract. This change order introduces four new bid items, modifies existing quantities, and updates plan sheets 122, 122a, 122b, 122c, 123, 123a, 109a, 110a, 110b, and 110c. For formal documentation, see the attached TxDOT Change Order Form 2146-L and revised plan sheets.

Change Order No. 6 has been approved and signed by both Hidalgo County Precinct 2 and GO Underground.

CHANGE IN CONTRACT PRICE:	CHANGE IN CONTRACT TIME:
Original Contract Price <u>\$3,694,806.64</u>	Original Contract Time <u>160 working Days</u>
Previous Change Orders <u>\$314,438.58</u>	Previous Change Orders 140 Working Days

Contract Price prior to this Change Order <u>\$4,009,245.22</u>	Contract Time prior to this Change Order <u>300 Working Days</u>
Net <b>increase/decrease</b> of the Change Order <u>\$66,328.96</u>	Net <b>increase/decrease</b> of the Change Order <u>57 Working Days</u>
Contract Price with all approved Change Orders <u>\$4,077,574.18</u>	Contract Time with all approved Change Orders <u>357 Working Days</u>

# CONSTRUCTION CONTRACT CHANGE ORDER NUMBER: 6

1. CONTRACTOR: GO Underground, LLC
2. Change Order Work Limits: Sta. Sta 116+40 to Sta. 157+88
3. Type of Change (on federal-aid non-exempt projects): Minor (Major/Minor)
4. Describe the change and the reason for the change order. When necessary, include exceptions to this agreement.

1. The Las Milpas Road, relocates the first proposed irrigation crossing at Sta 116+40 to 127+65 further east because of economic development. 2. The Las Milpas Road, modifies an existing irrigation crossing at Sta 157+88 by removing 1 well, extending the 12" Irrigation line 40ft and adding a poly riser and valve. 3. Add rail foundation for traffic rail support. 4. CO#6 adds 57 Days, make up 17 LD's (October 2024) and add 40 Days for CO work.

CCSJ: NA

Project: Las Milpas Road

Highway: Las Milpas Road

County: Hidalgo

District: Pharr

Contract Number: C22-0094-09-06

5. New or revised plan sheet(s) are attached and numbered: 122, 122a, 122b, 122c, 123, 123a, 109a, 110a, 110b, 110c

Each signatory hereby warrants that each has the authority to execute this Change Order.

<p>By signing this change order, the contractor agrees to waive any and all claims for additional compensation due to any and all other expenses; additional changes for time, overhead and profit; or loss of compensation as a result of this change. Further, the contractor agrees that this agreement is made in accordance with Item 4 and the Contract. Exceptions should be noted in the response for #5 above.</p>	<p><b>The following information must be provided</b></p> <p>Time Ext. #: <u>3</u> Days added on this C.O.: <u>57</u></p> <p>Amt. added by this change order: <u>\$66,328.96</u></p>
<p>THE CONTRACTOR Date <u>05/19/25</u></p> <p>By <u>George Olivares</u></p> <p>Typed/Printed Name <u>George Olivares</u></p> <p>Typed/Printed Title <u>President</u></p>	<p><b>For TxDOT use only:</b></p> <p>Days participating: <u>0</u></p> <p>Amount participating: <u>NA</u></p> <p>Signature _____ Date _____</p> <p>Name/Title _____</p>

**RECOMMENDED FOR EXECUTION:**

<p><u>[Signature]</u> Date <u>5/20/25</u></p> <p>Name/Title _____ Date _____</p>	<p>Name/Title _____ Date _____</p> <p><input type="checkbox"/> APPROVED <input type="checkbox"/> REQUEST APPROVAL</p>
<p>Name/Title _____ Date _____</p>	<p>Name/Title _____ Date _____</p> <p><input type="checkbox"/> APPROVED <input type="checkbox"/> REQUEST APPROVAL</p>
<p>Name/Title _____ Date _____</p>	<p>Name/Title _____ Date _____</p> <p><input type="checkbox"/> APPROVED <input type="checkbox"/> REQUEST APPROVAL</p>
<p>Name/Title _____ Date _____</p> <p>Engineer's Seal:</p>	<p>Name/Title _____ Date _____</p> <p><input type="checkbox"/> APPROVED</p>



## CONSTRUCTION CONTRACT CHANGE ORDER NUMBER: 6

Estimated Cost: \_\_\_\_\_

CCSJ: C22-0094-09-06

Paid by Invoice? (  Yes  No )

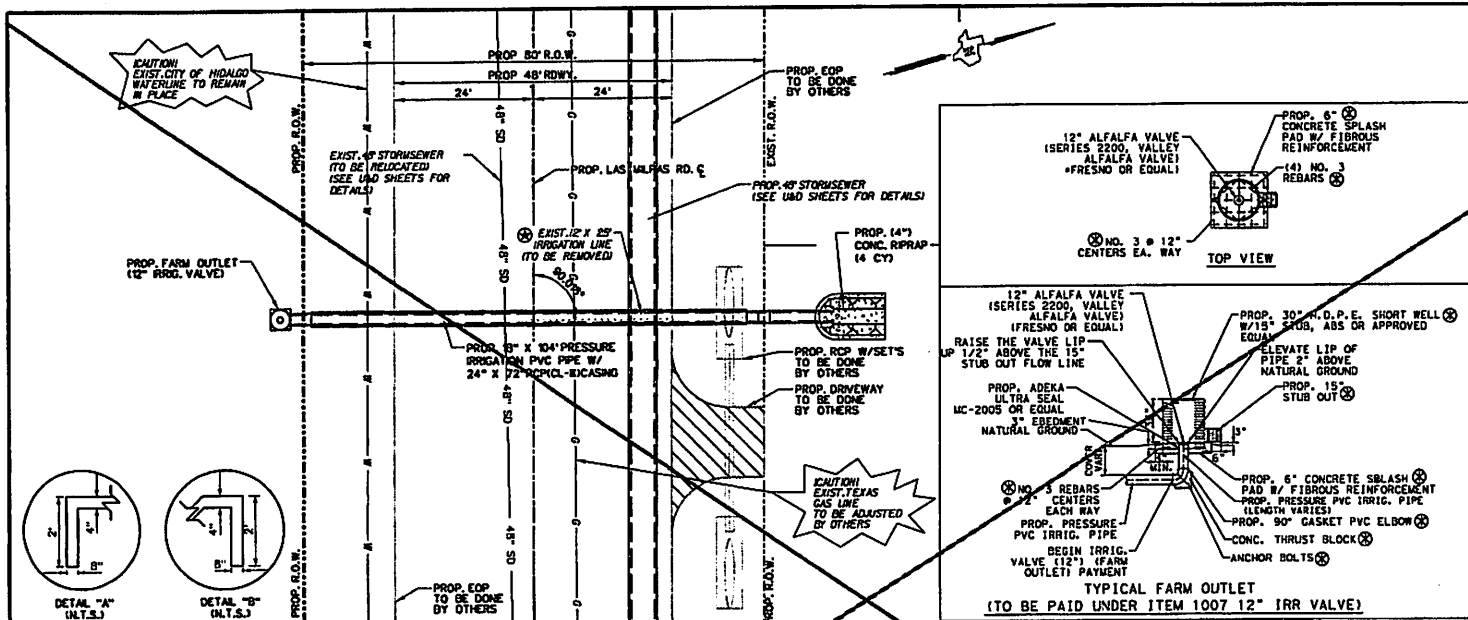
**TABLE A: Force Account Work and Materials Placed into Stock**

LABOR	HOURLY RATE	EQUIPMENT	HOURLY RATE

**TABLE B: Contract Items**

ITEM	DESCRIPTION	UNIT	UNIT PRICE	ORIGINAL + PREVIOUSLY REVISED		NEW		OVERRUN/ UNDERRUN
				QUANTITY	ITEM COST	QUANTITY	ITEM COST	
400-6010	STRUCT EXCAV(SPL)	CY	60.00	334.00	20,040.00	348.00	20,880.00	840.00
400-6011	SAND BACKFILL	cy	50.00	5,358.00	267,900.00	5,382.00	269,100.00	1,200.00
402-6001	TRENCH EXCAVATION PROTECTIO	LF	2.00	4,989.00	9,978.00	5,048.00	10,096.00	118.00
464-6005	RC PIPE CL III 24"	LF	72.92	0.00	0.00	22.00	1,604.24	1,604.24
1007-6007	IRRIGATION VALVE 12IN	EA	5,118.00	1.00	5,118.00	0.00	0.00	- 5,118.00
1008-6001	PRSSR IRRG PVC PIPE 18 IN	LF	96.12	104.00	9,996.48	165.00	15,859.80	5,863.32
1008-6003	PRSSR IRRG PVC PIPE 12 IN	LF	58.01	76.00	4,408.76	116.00	6,729.16	2,320.40
9006-0001	IRRIGATION WELL 48IN W/ 18"GATE	EA	24,385.00	0.00	0.00	1.00	24,385.00	24,385.00
9006-0002	12" POLY RISER W/ IRRIG VALVE	EA	3,980.00	0.00	0.00	1.00	3,980.00	3,980.00
9006-0003	18" POLY RISER	EA	2,800.00	0.00	0.00	3.00	8,400.00	8,400.00
420-6066	CL C CONC (RAIL FOUNDATION)	CY	580.00	0.00	0.00	39.20	22,736.00	22,736.00
<b>TOTALS</b>					317,441.24		383,770.20	66,328.96

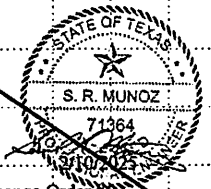
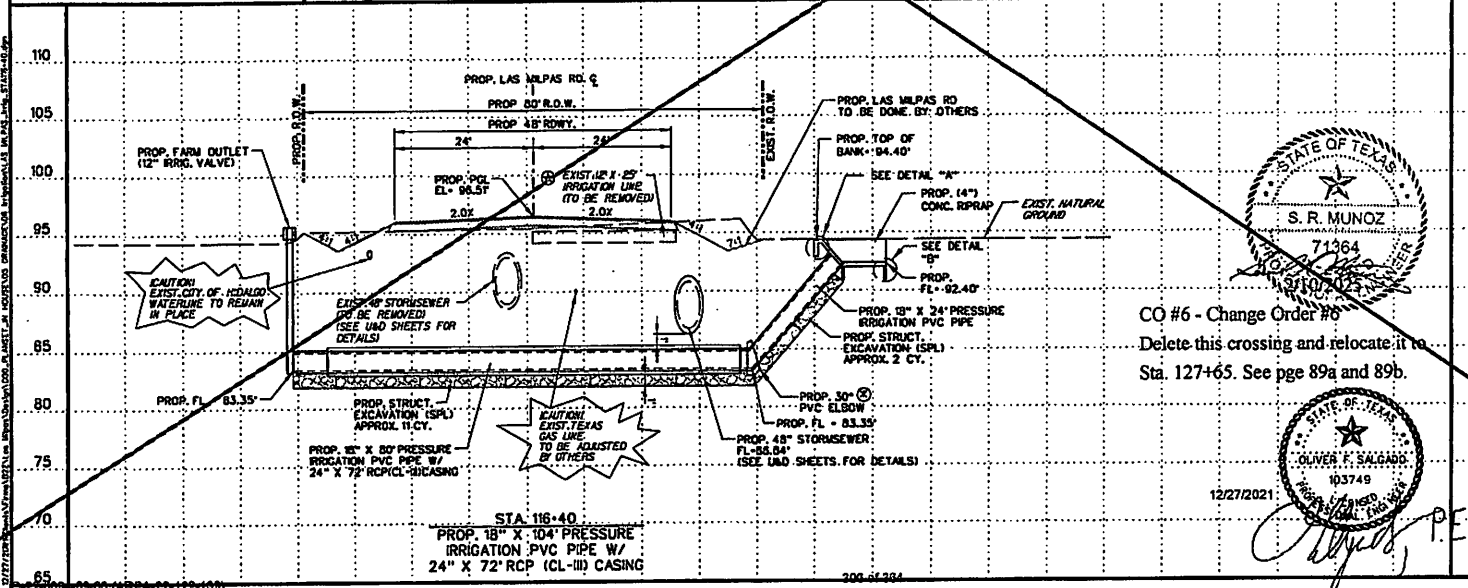
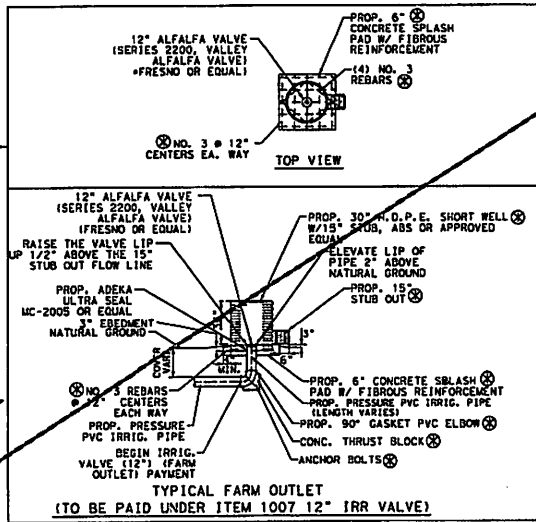




SHEET SUMMARY		
ITEM	DESCRIPTION	QUANTITY
400	STRUCTURAL EXCAVATION	CY 184
400	STRUCTURAL EXCAV. (SPL.)	CY 13
400	SAND BACKFILL	CY 38
404	STRUCT. EXCAV. PROTECTION	LF 104
432	R.P.R.P. CONC. (4")	CY 4
484	RCP CL. 18(24") P.S. 80	LF 22
485	REMOVE STRUCTURE (R.P.P.)	LF 24
5007	IRRIGATION VALVE (12")	EA 1
1008	EXCAVATION BY RCP PIPE (8")	LF 104

- LEGEND**
- ☒ SEE P&P SHEETS FOR DETAILS
  - ⊕ NON-PAY. SUBSIDIARY TO PERTINENT BO ITEMS.
  - ⊗ TO BE REMOVED UNDER ITEM 486. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
  - ⊙ TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
  - ▨ LIMITS OF PROP. CUT & RESTORE (ITEM 400)

- NOTE:**
1. THE CONTRACTOR WILL COORDINATE WITH HCD #2. 48 HOURS PRIOR TO ANY WORK DONE ON OR NEAR THE IRRIGATION STRUCTURES.
  2. PRIOR TO WORKING OUTSIDE THE ROW THE CONTRACTOR SHALL CONTACT THE AREA ENGINEER. CAUTION SHALL BE TAKEN NOT TO DAMAGE EXISTING FENCES, TREES, ETC. THE CONTRACTOR SHALL NOTIFY PROPERTY OWNERS WHEN WORKING OUTSIDE THE ROW. ANY DAMAGES DONE TO THEIR PROPERTY SHALL BE REPAIRED AT CONTRACTORS EXPENSE.
  3. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO CONSTRUCTION.
  4. ALL PVC ELBOWS AND CONNECTIONS SHALL BE SUBSIDIARY TO PERTINENT BO ITEMS.
  5. THE CONTRACTOR SHALL CONFIRM THAT THE TOP ELEVATION ON THE PROPOSED STANDPIPES IS AT THE SAME ELEVATION AS THE EXIST. STANPIPE



CO #6 - Change Order #6  
Delete this crossing and relocate it to Sta. 127+65. See pgs 89a and 89b.



12/27/2021

**B2Z ENGINEERING**  
TPE FIRM NO. F-11187



**LAS MILPAS ROAD IRRIGATION LAYOUT**  
STA. 116+40

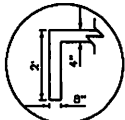
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12/27/21	OS	1
12/27/21	OS	2
12/27/21	OS	3
12/27/21	OS	4
12/27/21	OS	5
12/27/21	OS	6
12/27/21	OS	7
12/27/21	OS	8
12/27/21	OS	9
12/27/21	OS	10

**LEGEND**

- SEE P&P SHEETS FOR DETAILS
- ⊕ NON-PAY, SUBSIDIARY TO PERTINENT BD ITEMS.
- ⊙ TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- ⊗ TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- ▨ LIMITS OF PROP. CUT & RESTORE ITEM 400

**NOTE:**

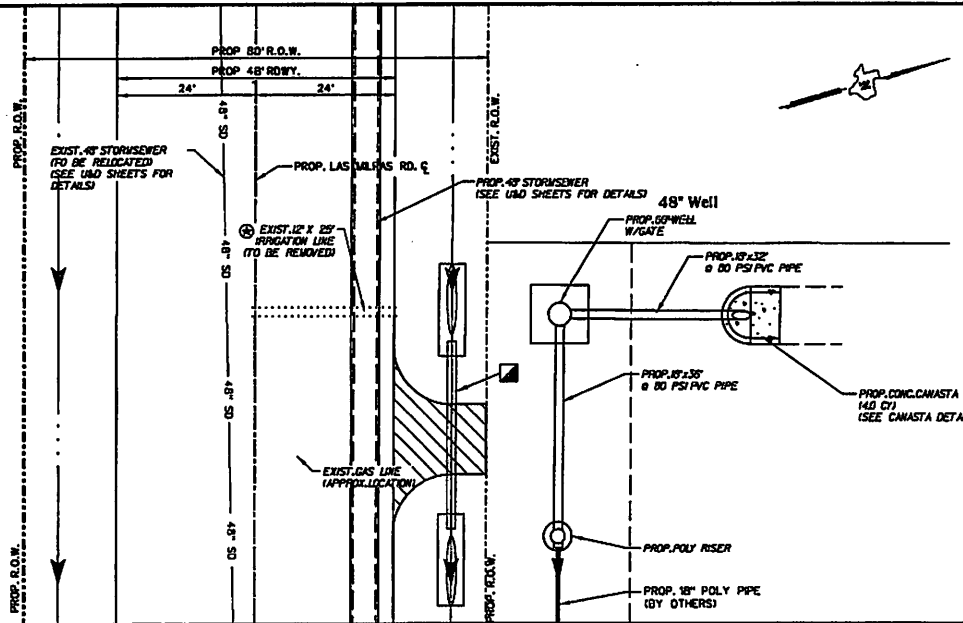
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2. PRIOR TO WORKING OUTSIDE THE ROW THE CONTRACTOR SHALL CONTACT THE AREA ENGINEER. CAUTION SHALL BE TAKEN NOT TO DAMAGE EXISTING FENCES, TREES, ETC. THE CONTRACTOR SHALL NOTIFY PROPERTY OWNERS WHEN WORKING OUTSIDE THE ROW. ANY DAMAGES DONE TO THEIR PROPERTY SHALL BE REPAIRED AT CONTRACTORS EXPENSE.
3. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO CONSTRUCTION.
4. ALL PVC ELBOWS AND CONNECTIONS SHALL BE SUBSIDIARY TO PERTINENT BD ITEMS.
5. THE CONTRACTOR SHALL CONFIRM THAT THE TOP ELEVATION ON THE PROPOSED STANDPIPES IS AT THE SAME ELEVATION AS THE EXIST. STANDPIPE



DETAIL "A"  
(N.T.S.)



DETAIL "B"  
(N.T.S.)



SHEET SUMMARY		
ITEM	DESCRIPTION	UNIT QUANTITY
⊕ 400	STRUCTURAL EXCAVATION	CY 70
⊕ 400	GRAVEL BEDDING	CY 13
⊕ 400	SAND BACKFILL	CY 24
⊕ 402	TRENCH DECAY PROTECTION	LF 24
⊕ 432	TRENCH CONC. (4")	CY 1
⊕ 496	REMOVE STRUCTURE (PIPE)	LF 24
⊕ 496	REMOVE RISER	EA 1
⊕ 496	REMOVE EXIST. PVC PRESS. (8")	LF 1
⊕ 496	REMOVE EXIST. WELL 7' 10" GATE	EA 1



**CO #6 - Change Order #6**  
**Relocate the irrigation crossing**  
**at Sta 116+40 to Sta 127+65**  
**using poly risers and canastas.**

THIS FINAL SUBMITTAL DOCUMENT IS PENDING COUNTY AND OTHER LOCAL ENTITIES' APPROVAL. THIS DOCUMENT IS NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.

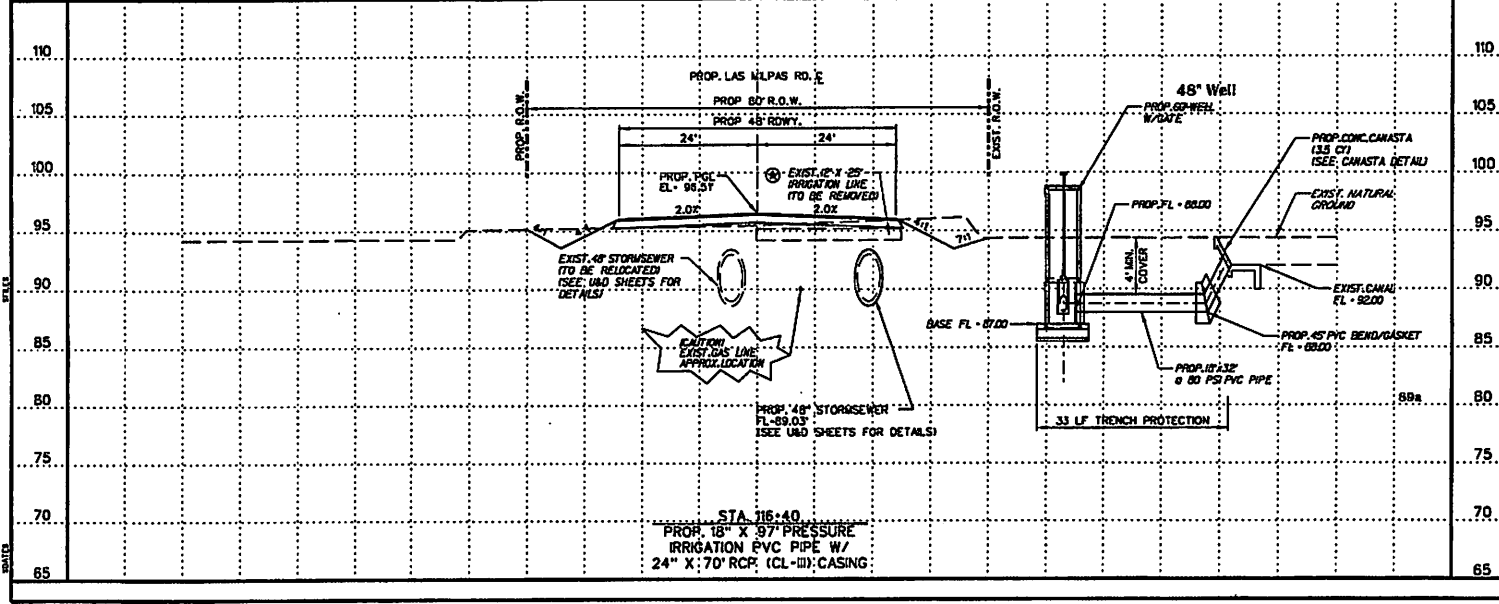
OLIVER F. SALGADO  
 P.E. 103749  
 DATE

**B<sup>2</sup>Z ENGINEERING**  
 TYPE FIRM NO. F-11187

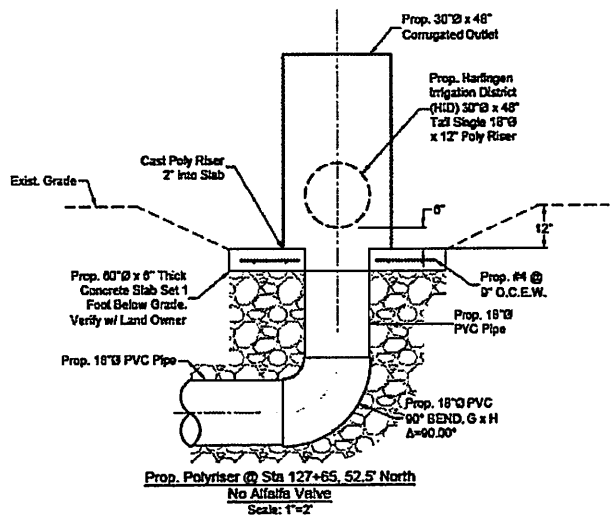
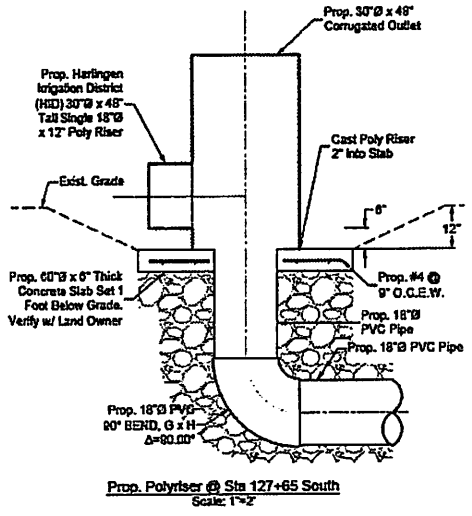
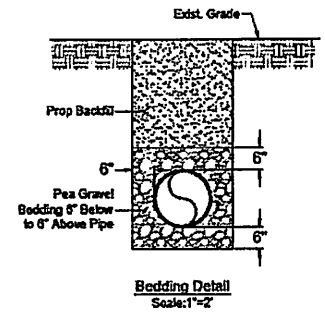
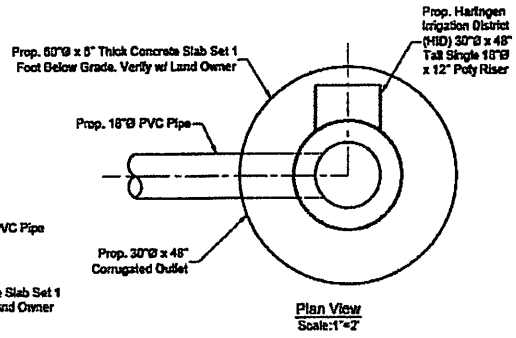
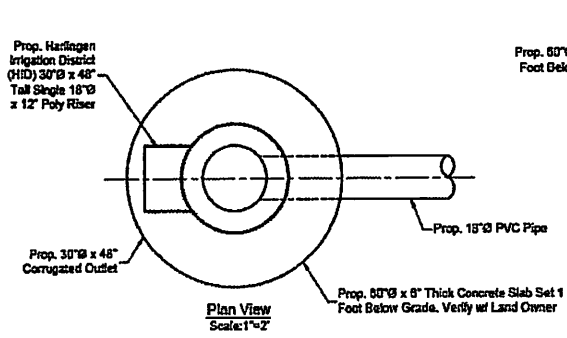


**LAS MILPAS ROAD**  
**IRRIGATION CROSSING**  
**STA. 116+40**

SCALE	PROJECT NO.	SHEET NO.
1" = 10'	1228	1 OF 2
DATE	STATE	PROJECT NO.
08/20/2024	TX	1228
OWNER	COUNTY	PRECINCT
PHR	HIDALGO	2
		MILPAS







**CO #6 - Change Order #6**  
 Eliminate 1-36" well and extend the 12" Irrigation line an additional 40Lf with a poly risers. Relocate the irrigation crossing at Sta 116+40 to Sta 127+65 using poly risers and canastas.

**B<sup>2</sup>Z ENGINEERING**  
 TYPE FIRM NO. F-111181



**LAS MILPAS ROAD IRRIGATION DETAILS**



SHEET 1 OF 1

DATE	2021	STATE	TEXAS	PROJECT NO.	1221c
DATE	2021	COUNTY	HIDALGO	DATE	12/21
DATE	2021	CITY	MILPAS		

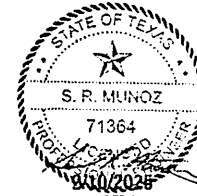
SHEET SUMMARY			
ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCTURAL EXCAVATION	CY	69
400	STRUCTURAL EXCAV. (SPL)	CY	9
400	SAND BACKFILL	CY	73
402	TRENCH EXCAV PROTECTION	LF	76
464	RCP CL (12") CASING	LF	70
496	REMOVE STRUCTURE (P&P)	LF	91
1007	IRRIGATION WELL (EX-1)	EA	2
1007	IRRIGATION GATE (12")	EA	2
1008	PRESSURE PVC IRRIG. PIPE (12")	LF	76

**LEGEND**

- ☐ SEE P&P SHEETS FOR DETAILS
- ⊗ NON-PAY. SUBSIDIARY TO PERTINENT BID ITEMS.
- ⊕ TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- ⊙ TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- ▨ PARTS OF PROP. CUT & RESTORE (ITEM 400)

**NOTE:**

1. THE CONTRACTOR WILL COORDINATE WITH HCD#2. 48 HOURS PRIOR TO ANY WORK DONE ON OR NEAR THE IRRIGATION STRUCTURES.
2. PRIOR TO WORKING OUTSIDE THE ROW THE CONTRACTOR SHALL CONTACT THE AREA ENGINEER. CAUTION SHALL BE TAKEN NOT TO DAMAGE EXISTING FENCES, TREES, ETC. THE CONTRACTOR SHALL NOTIFY PROPERTY OWNERS WHEN WORKING OUTSIDE THE ROW. ANY DAMAGES DONE TO THEIR PROPERTY SHALL BE REPAIRED AT CONTRACTORS EXPENSE.
3. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO CONSTRUCTION.
4. ALL PVC ELBOWS AND CONNECTIONS SHALL BE SUBSIDIARY TO PERTINENT BID ITEMS.
5. THE CONTRACTOR SHALL CONFIRM THAT THE TOP ELEVATION ON THE PROPOSED STANDPIPES IS AT THE SAME ELEVATION AS THE EXIST. STANDPIPE



**CO #6 - Change Order #6**  
 Eliminate 1-36" well and extend the 12" Irrig. line an additional 40LF.

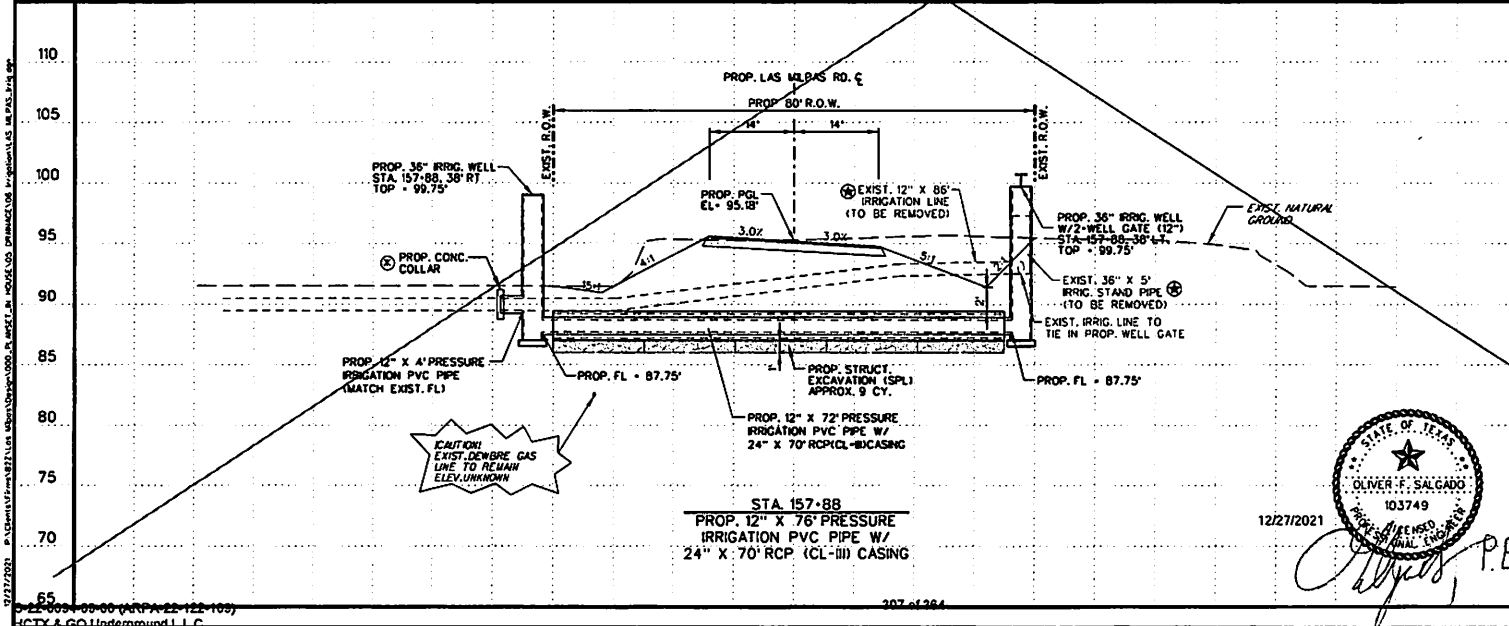
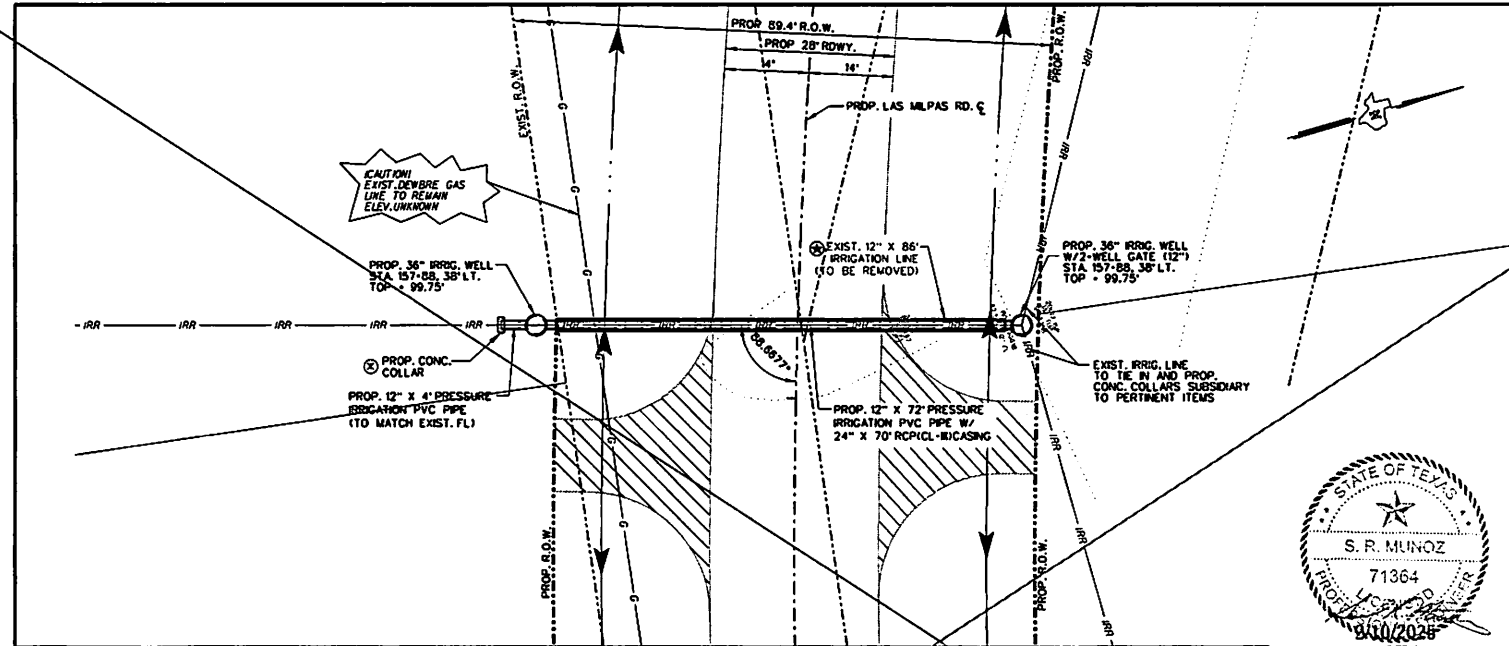


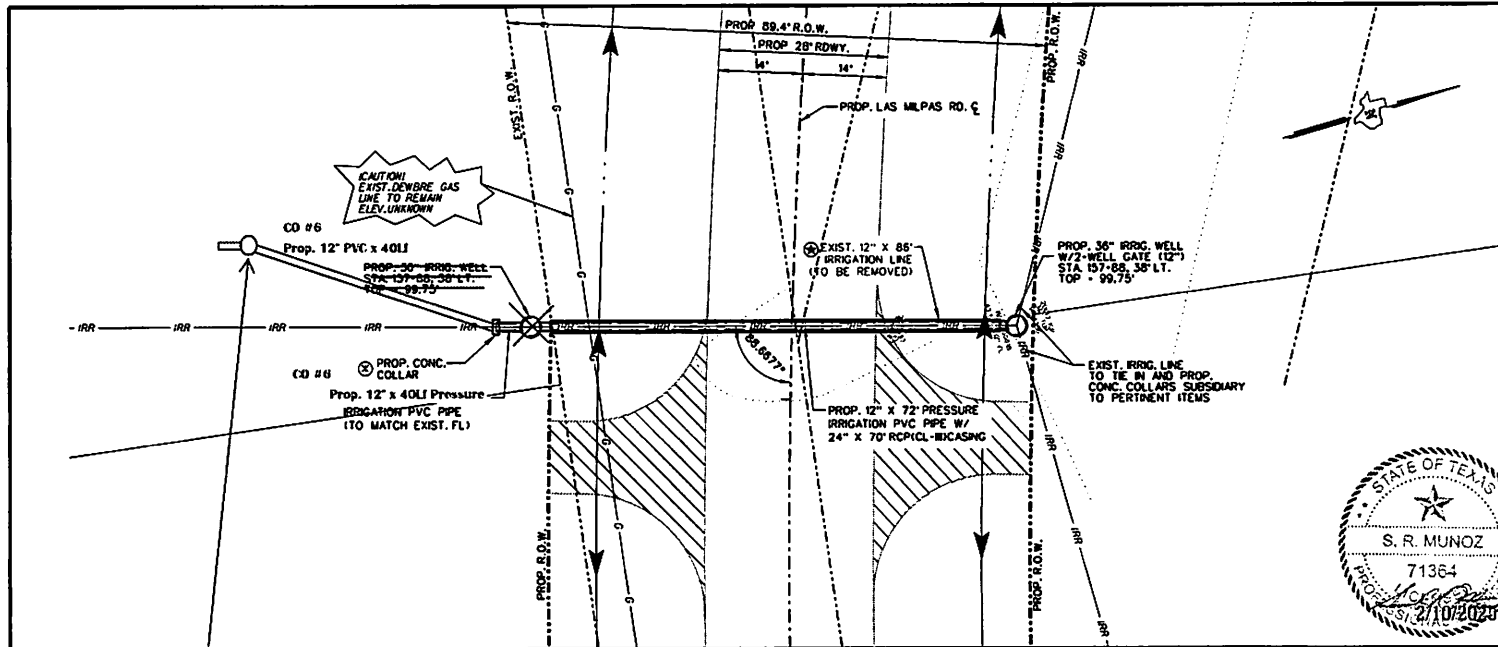
**LAS MILPAS ROAD**  
 IRRIGATION LAYOUT  
 STA. 157-88



12/27/2021

SCALE: HORIZ-20'	VERT-10'	SHEET 2 OF 2
DATE: 12/27/2021	PROJECT NO.:	DATE: 12/27/2021
BY: [Signature]	STATE: TEXAS	DATE: 12/27/2021
CHECKED: [Signature]	PROJECT: HSDA 0722-28	DATE: 12/27/2021
DATE: 12/27/2021	PROJECT: LAS MILPAS	DATE: 12/27/2021



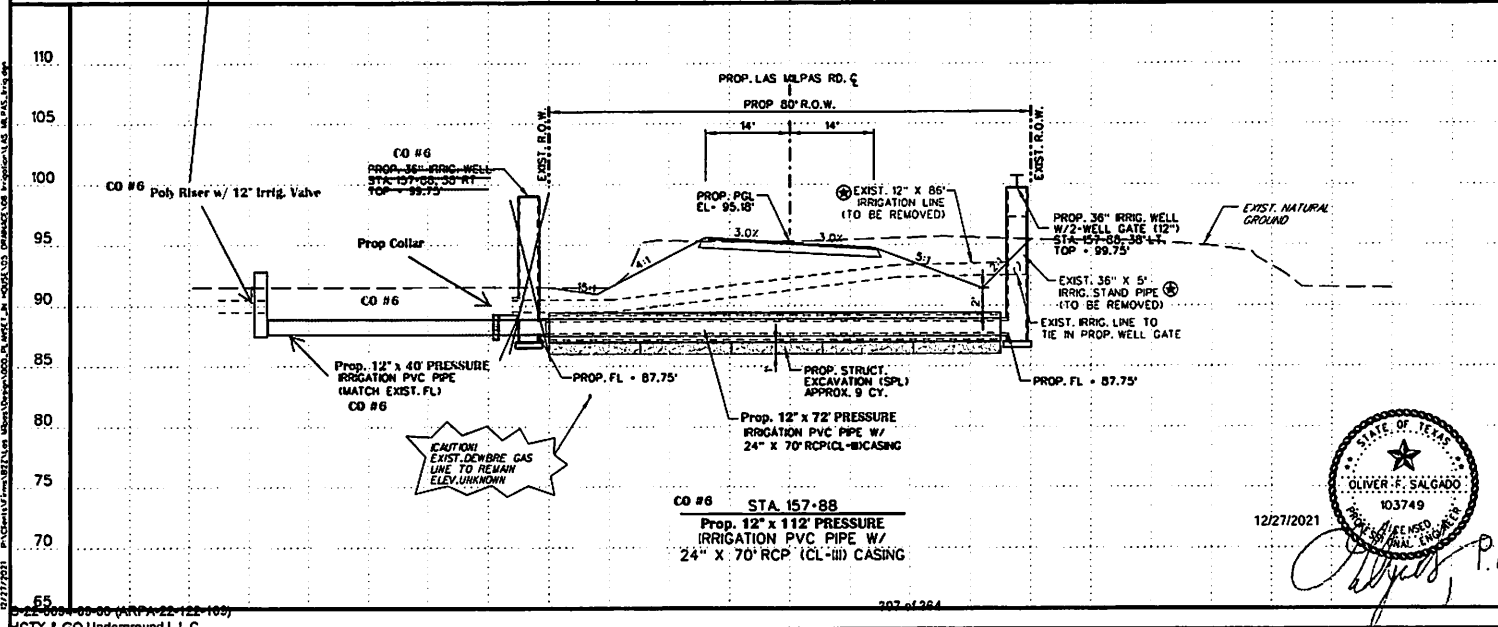
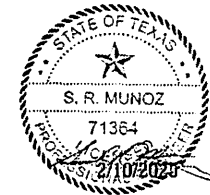


**SHEET SUMMARY**

ITEM	DESCRIPTION	UNIT	QUANTITY
④ 400	STRUCTURAL EXCAVATION	CY	69
④ 400	STRUCTURAL EXCAV. (SPL.)	CY	9
④ 400	SAND BACKFILL	CY	23
④ 402	TRENCH EXCAV. PROTECTION	LF	112
④ 464	RCP CL. # (12") CASING	LF	70
④ 496	REMOVE STRUCTURE (PIPE)	LF	91
④ 500	IRRIGATION WELL (12")	EA	1
④ 507	IRRIGATION GATE (12")	EA	2
④ 508	PRESSURE PVC IRRIG. PIPE (12")	LF	116

- LEGEND**
- ☑ SEE P&P SHEETS FOR DETAILS
  - ④ NON-PAY. SUBSIDIARY TO PERTINENT BID ITEMS.
  - ⊕ TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
  - ⊗ TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
  - ▨ LIMITS OF PROP. CUT & RESTORE (ITEM 400)

- NOTE:**
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  - ALL PVC ELBOWS, AND CONNECTIONS SHALL BE SUBSIDIARY TO PERTINENT BID ITEMS.
  - THE CONTRACTOR SHALL CONFIRM THAT THE TOP ELEVATION ON THE PROPOSED STANDPIPES IS AT THE SAME ELEVATION AS THE EXIST. STANDPIPE



**CO #6 - Change Order #6**  
 Eliminate 1-36" well and extend the 12" Irrig. line an additional 40LF. Add concrete rail foundation.

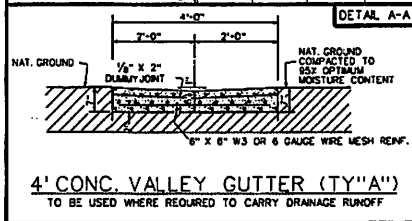
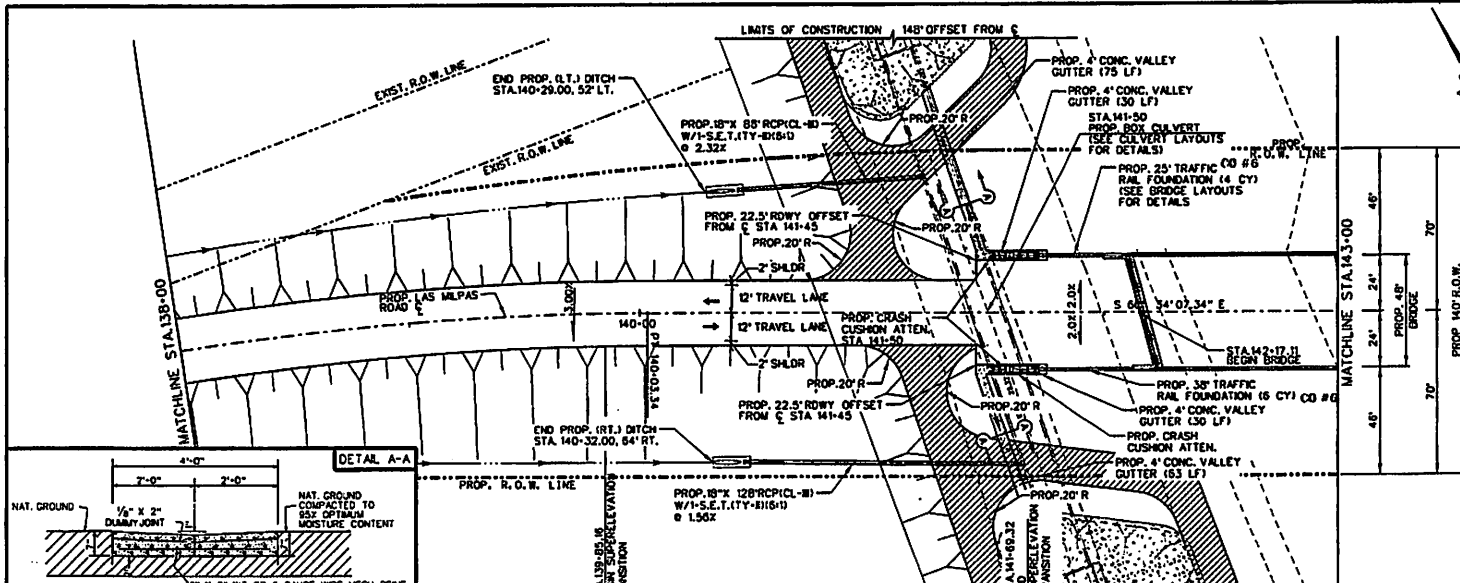


**LAS MILPAS ROAD IRRIGATION LAYOUT STA. 157-88**



SCALE: HORIZ: 20' VERT: 1" = 10'

DATE	BY	CHK	APP	STATE	PROJECT NO.	SHEET NO.
12/27/2021	OS	OS	OS	TX	122A	2 OF 2



**SHEET SUMMARY**

ITEM	DESCRIPTION	UNIT	QUANTITY
420	CL C CONC. (RAIL FOUNDATION)	CY	10
464	RRP PPF (C-#) (BRIBED)	LF	234
487	SET CITY (RUBBERED)	EA	2
529	CONC CURB & GUTTER (VALLEY GUTTER)	LV	158
545	CRASH CUSHION ATTEN.	EA	2

- LEGEND:**
- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY TABLE FOR QUANTITIES)
  - PROP. CUT AND RESTORE
  - PROPOSED PLANNING (10'-1/4\"/>

**CO #6 - Change Order #6**  
 Eliminate 1-36\"/>



03/10/2021

**B2Z ENGINEERING**  
 TYPE FIRM NO. F-11187

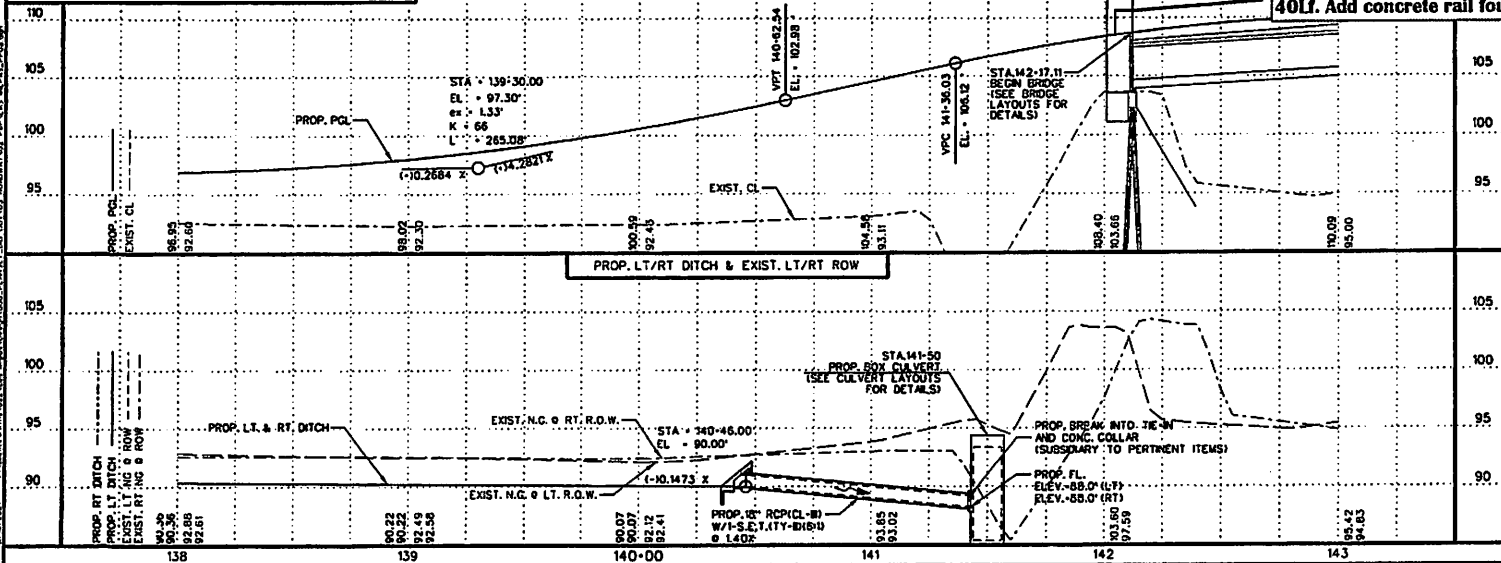


**LAS MILPAS ROAD  
 PLAN AND PROFILE  
 STA. 138+00 TO STA. 143+00**

SCALE: HOR 1\"/>

DATE	REV	BY	CHK	DATE
03/10/2021	1	OS	OS	03/10/2021

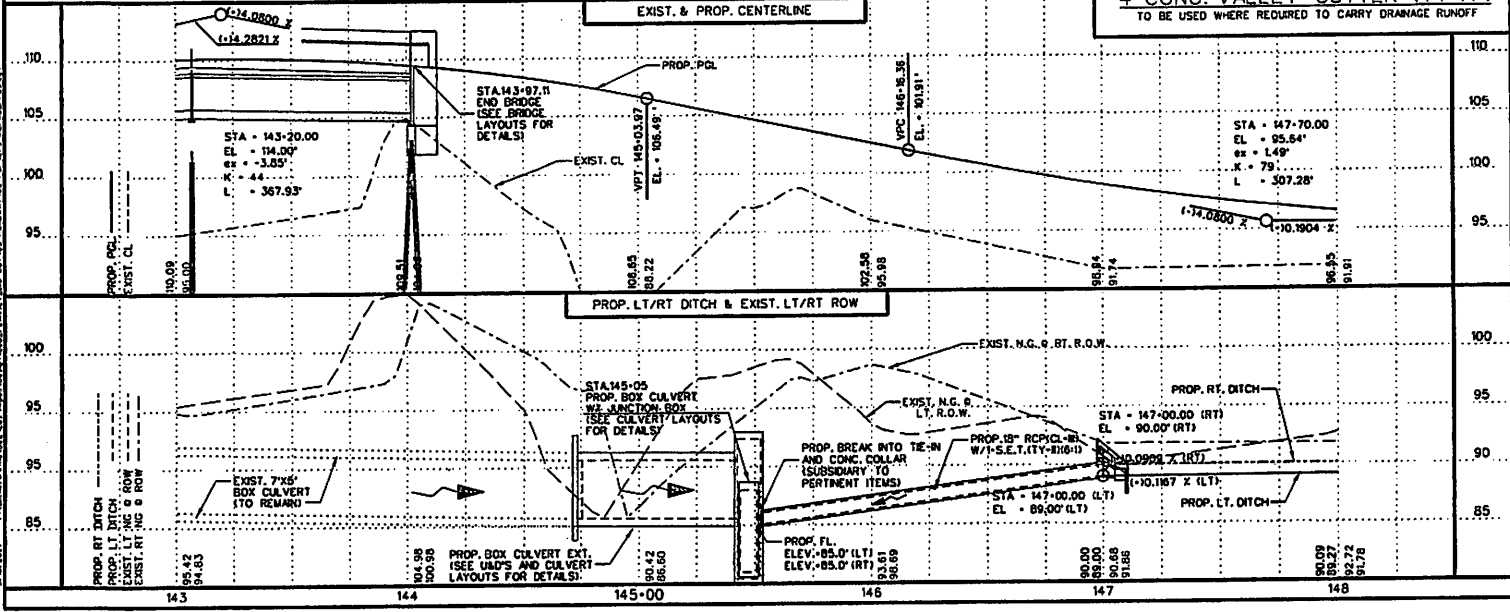
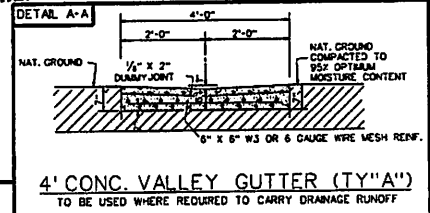
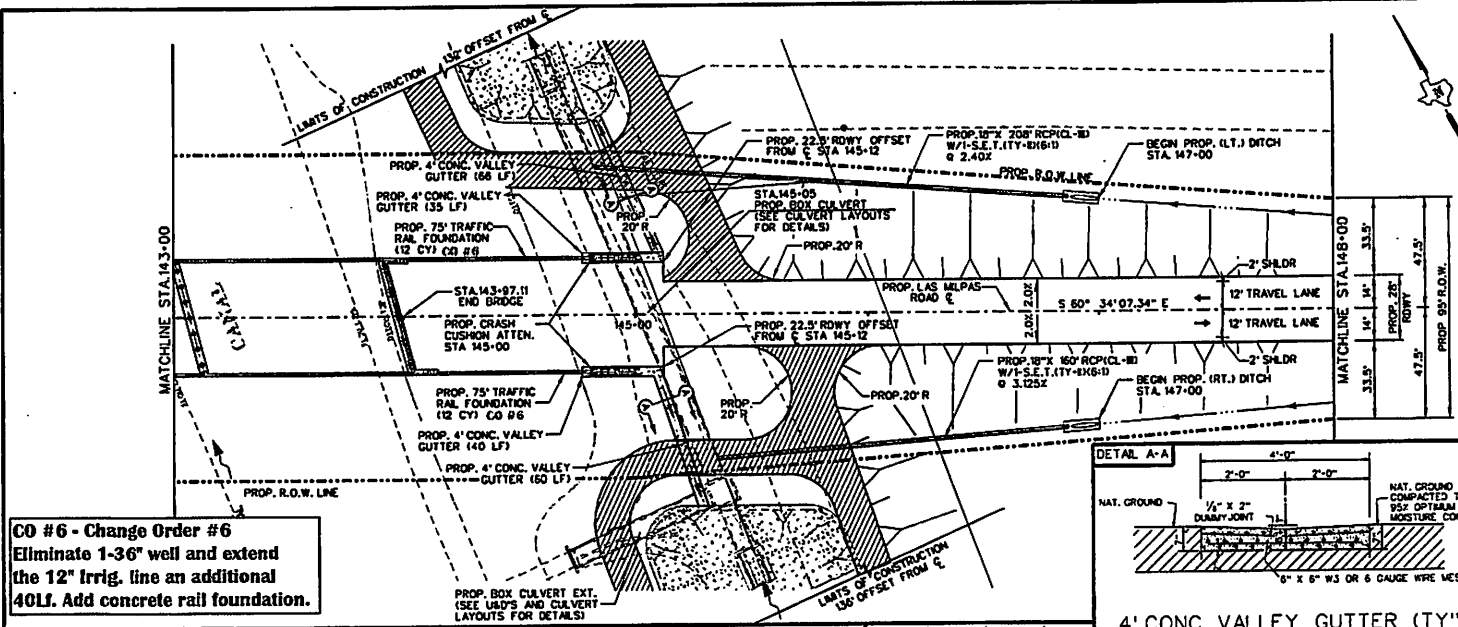
STATE	PROJECT NO.	SHEET
TEXAS	109B	109B
COUNTY	CITY	
HIDALGO	MILPAS	



SHEET SUMMARY		
ITEM	DESCRIPTION	UNIT QUANTITY
429	4' CONC. VALLEY GUTTER (135 LF)	LF 135
430	4' CONC. VALLEY GUTTER (60 LF)	LF 60
431	75' TRAFFIC RAIL FOUNDATION (12 CY) CO #6	CY 12
432	75' TRAFFIC RAIL FOUNDATION (12 CY) CO #6	CY 12
433	CRASH CUSHION ATTEN. STA 145-00	EA 1
434	CRASH CUSHION ATTEN. STA 147-00	EA 1

- LEGEND:**
- PROPOSED PRIVATE DRIVEWAY OR PUBLIC INTERSECTION (SEE DRIVEWAY TABLE FOR QUANTITIES)
  - PROP. CUT AND RESTORE
  - PROPOSED PLANNING (10-1/2")
  - EXIST. ROADWAY TO BE REMOVED (ITEM 100)
  - TO BE REMOVED UNDER ITEM 496 INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES
  - REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 500
  - TO BE REMOVED UNDER ITEM 100 "PROP. ROW"
  - PROP. DITCH FLOWLINE/DIRECTION
  - OBJECT MARKER ON-22(F)X(1)X(1)X(1)
- NOTE:**  
 SEE HORIZONTAL ALIGNMENT DATA SHEET FOR PROP. CENTERLINE DATA.  
 SEE SURVEY CONTROL SHEETS FOR BM STATIONS, OFFSETS, ELEVATIONS, ETC.

**CO #6 - Change Order #6**  
 Eliminate 1-36" well and extend the 12" Irrig. line an additional 40LF. Add concrete rail foundation.



03/10/2021  
 OLIVER F. SALGADO  
 103749  
 LICENSED PROFESSIONAL ENGINEER  
 P.E.

**B2Z ENGINEERING**  
 TPEE FIRM NO. F-11187



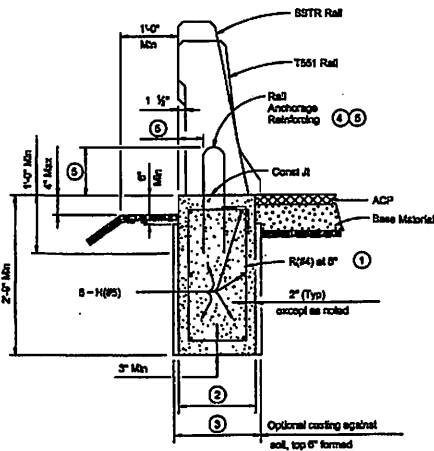
**LAS MILPAS ROAD  
 PLAN AND PROFILE  
 STA. 143-00 TO STA. 148-00**

SCALE: HORIZ. 1" = 30' VERT. 1" = 10'

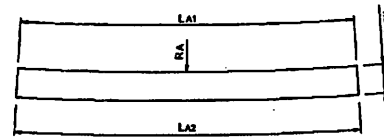
NO.	DATE	STATE	PROJECT NO.	SHEET
1		TX		1108

DATE	BY	CHK'D	APP'D	SCALE

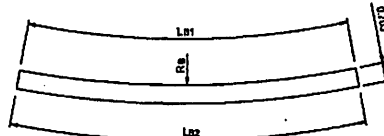
SHEET 3 OF 5



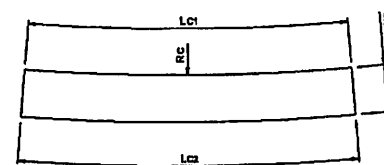
**TRAFFIC RAIL FOUNDATION**  
(Showing T551 & SSTR Rails, other Bridge Rails similar)



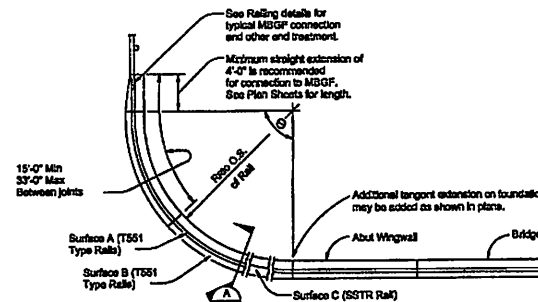
**DEVELOPED SURFACE-A**  
(T551 Type Rail)



**DEVELOPED SURFACE-B**  
(T551 Type Rail)



**DEVELOPED SURFACE-C**  
(SSTR Rail)



**CURVED T551 & SSTR TYPE RAILING AT BRIDGE ENDS**

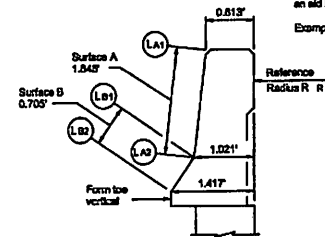
**TABLE OF DEVELOPED SURFACES**  
DIMENSIONS FOR  $\alpha = 90^\circ$

Reference Radius R (ft) to back of Rail	T551 TYPE RAILS						SSTR RAIL		
	Radius		Arc Length		Radius		Arc Length		
	RA	LA1	LA2	RB	LB1	LB2	RC	LC1	LC2
10	93.78	18.99	17.31	19.03	17.31	17.33	55.09	16.69	17.81
15	140.04	24.84	26.17	28.54	25.17	25.79	81.26	24.54	25.48
20	184.32	32.69	33.02	37.44	33.02	33.84	108.05	32.40	33.31
25	228.60	40.88	40.87	46.35	40.87	41.50	134.25	40.25	41.17
30	272.88	48.40	48.73	55.25	48.73	49.35	160.44	48.11	49.02

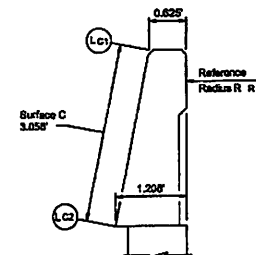
$R = 0.8500(R + 0.8137)$        $R = 1.7811(R + 0.0217)$        $R = 0.2359(R + 0.6237)$   
 $LA = 1.5708(R + 0.8137)$        $LB = 1.5708(R + 0.0217)$        $LC = 1.5708(R + 0.6237)$   
 $LA2 = 1.5708(R + 0.8137)$        $LB2 = 1.5708(R + 0.417)$        $LC2 = 1.5708(R + 0.2007)$

The linear ratio may be used to obtain the above arc length dimensions for included  $\theta$  angles other than  $90^\circ$ . The dimensions are intended as an aid in constructing forms for curved SSTR & Type T551 Railing.

Example: For  $R = 60'$  &  $90^\circ - L = 16.99'(f)$



**SECTION A-A**  
(T551 Type Rails)



**SECTION A-A**  
(SSTR Rail)

**DESIGN GUIDANCE:**  
The use of curved rail sections at bridge ends must be appropriate for the speed and site conditions.

**MATERIAL NOTES:**  
Provide Class "C" concrete. Provide Class "C" (HPC) if required elsewhere.  
Provide Grade 60 reinforcing steel.  
Epoxy coat or galvanize all reinforcing steel if required elsewhere.  
Deformed Welded Wire Reinforcement (WWR) (ASTM A1004) of equal size and spacing may be substituted for Bars H and R unless noted otherwise. Provide the same laps as required for reinforcing bars.  
Provide bar laps, where required, as follows:  
Uncoated or galvanized - #5 = 2'-4"  
Epoxy coated - #5 = 3'-8"

**GENERAL NOTES:**  
The foundations indicated are suitable for mounting typical concrete bridge barrier type railings. The design resistance is based on the current AASHTO bridge railing requirements with the assumption of fair to good soil support conditions. Poor soil conditions will require suitably deeper foundations. See Railing standards for details not shown. The primary use of the curved railing detail is to avoid the necessity of curved MBGF at the ends of bridges adjacent to grade intersections. This detail is intended for use as a guide to unusual railing anchorage situations but may be included in the plans, modified as necessary to apply to specific installations required on the project. Payment for railing foundations will be by CY of Class "C" or Class "C" (HPC) concrete. Reinforcing steel quantities shown are for contractor's information only. The associated bridge railing will be paid for by the linear foot which includes the concrete and reinforcement. Excavation will be subsidiary to other items.

Cover dimensions are clear dimensions, unless noted otherwise.

**Texas Department of Transportation** Bridge Division Standard

**TRAFFIC RAIL FOUNDATION AND MISCELLANEOUS DETAILS**

**TRF**

PLAN	TRF02-1143p	DATE	12/07	BY	MM	CHK	JTR	DATE	12/07
REV	01	DESCRIPTION	October 2019	BY		CHK		DATE	
PRR	HDALGO								1100

**CO #6 - Change Order #6**  
Eliminate 1-36" well and extend the 12" irrig. line an additional 40LF. Add concrete rail foundation.

CONTRACTOR: This detail is provided by the Texas Department of Transportation. No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT makes no representation for the construction of this detail to other details or for intended results or changes resulting from its use.

DATE: FILE:



ITEM	CODE	DESCRIPTION	UNIT	QTY	LINE TOTAL	TOTAL
1	1004-7001	IRRIGATION WELL 48" W/18" GATE	EA	1	\$ 24,385.00	\$ 24,385.00
2	9006-002	POLY RISER	EA	4	\$ 2,800.00	\$ 11,200.00
3	9006-003	POLY RISER W/12" VALVE	EA	1	\$ 3,980.00	\$ 3,980.00
4	420-6066	TRAFFIC RAIL FOUNDATION	CY	40	\$ 580.00	\$ 23,200.00
					TOTTAL	\$ 62,765.00



# Bid Item Averages

**Filters:**

Standard Specification Code

Bid Item

Actual Let Date Range

Bidder Rank

District

County

Project Classification

Vendors

(Select to Exclude)

Project Size

Project Type

Adjust filters to refine your analysis of bid item average costs.

Use Qty Filter:

BID CODE	CCSJ Count	BID_ITEM_DSCR	Unit	Min. Bid Item Qty	Max. Bid Item Qty	Weighted Avg Unit Price
1004-7001	1	IRRIGATION WELL (48")	EA	4.0	4.0	\$23,400.00



# Bid Item Averages

**Filters:**

Standard Specification Code

Bid Item

Actual Let Date Range

Bidder Rank

District

County

Project Classification

Vendors

(Select to Exclude)

Project Size

Project Type

Adjust filters to refine your analysis of bid item average costs.

Use Qty Filter:

BID CODE	CCSJ Count	BID_ITEM_DSCR	Unit	Min. Bid Item Qty	Max. Bid Item Qty	Weighted Avg Unit Price
420-6066	1	CL C CONC (RAIL FOUNDATION)	CY	16,762.0	16,762.0	\$556.49



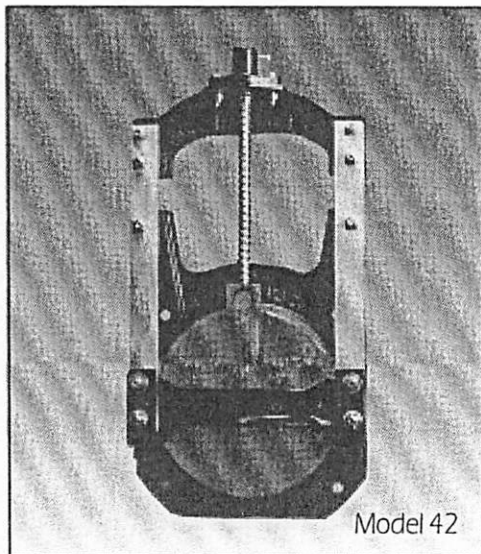
Las Milpas Road  
Change Orders

		Original Total	Original Days	Original Months						Richard Cortez
	AWARD AMOUNT:	\$ 3,694,806.64	160	8						Final Approval
	Description	CO AMOUNT	Additional Time	Additional Mo	Plan Sheets	Responsible EOR	Error	Contractor Appr(GO)	County Appr(B22)	
CO #1	Pipe Adjustment(Labor & Equipment)	\$ (328,176.60)	0		6c & 74a	Oliver Salgado	No		December 1, 2022	AP
CO #2	12" Hidalgo WL Conflict, , Add Standard Shts (SCC-7)for CIP 7x7 & 7x9 RCB	\$ 21,700.00	0		115a, 133a, 133b	Oliver Salgado	No		March 7, 2023	AP
CO #3	Add 12 x 8 CIP Box Culvert Design	NR	0		133c, 133d	Oliver Salgado	No			AP
CP #4	Extend 12x8 CIP 24' to the north(exposed gas line)	\$ 63,492.00	40	2	5a, 117a	Oliver Salgado	No			AP
CO #5	Drainage Structure	\$ 557,423.18	100	5	15 Shts	Oliver Salgado	No	January 17, 2024	January 17, 2024	AP
CO #6	Irrigation Crossings & Rail Foundation	\$ 66,328.96	45	0	11 Shts	Oliver Salgado	no			
CO #7	Crash Cushions									
CO #8										
CO #9										
CO #10										
CO #11										
	Sum of all CO's	\$ 380,767.54	185	7						
			345	15	Total					

Original Project Schedule	Start	End	Total	Delays/Extensions
	Mar-23	Dec-23	8 Months	Texas Gas, DeBrie, Lone Star and Enterprise Gas
CO #4	Jan-24	Feb-24	2 Months	DD#1 & Enterprise Gas
CO #5	Mar-24	Jul-24	5 Months	CO #5 DD#1 & P2
CO #6	May-25	Aug-24	6 Months	CO #5 ID#2, ID#3 & P2

## SERIES 4200 TYPE W PRESSURE GATE

### TECHNICAL DATA SHEET



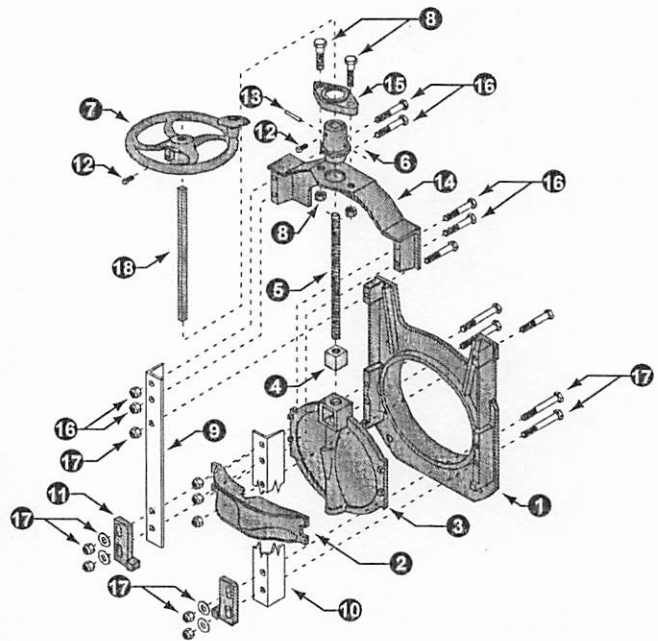
Series 4200 Type W Pressure Gate

#### Features

- Rugged Cast Iron frame for long life.
- Precision ground seats for watertight operation.
- Single center wedge design distributes uniform pressure at the seating surface.
- Convex slide for greater strength.
- Bronze stem provides smooth operation and corrosion resistance.
- Holds pressure in both flow directions.

#### Material Specifications

Item	Description	Material	Specification
1	Frame	Cast Iron	ASTM A126, Class B
2	Bar	Cast Iron	ASTM A126, Class B
3	Slide	Cast Iron	ASTM A126, Class B
4	Lift Nut	Brass	ASTM B584, C93200
5	Screw	Brass	ASTM B584, C93200
6	Screwhead	Cast Iron	ASTM A126, Class B
7	Handwheel w/Knob	Cast Iron	ASTM A126, Class B
8	Collar Bolts/Nuts	Steel, plated	ASTM A307, A164
9	Side Angle, Left	Steel, galvanized	ASTM A36
10	Side Angle, Right	Steel, galvanized	ASTM A36
11	Stop	Cast Iron	ASTM A126, Class B
12	Set Screw	Steel, plated	ASTM A307, A164
13	Roll Pin	Steel, plated	ASTM A307, A164
14	Headbar	Cast Iron	ASTM A126, Class B
15	Collar	Cast Iron	ASTM A126, Class B
16	Headbar, Bolts/Nuts	Steel, plated	ASTM A307, A164
17	Frame, Bolts/Nuts	Steel, plated	ASTM A307, A164
18	Handle Extension	Steel, Carbon	ASTM A307, A164

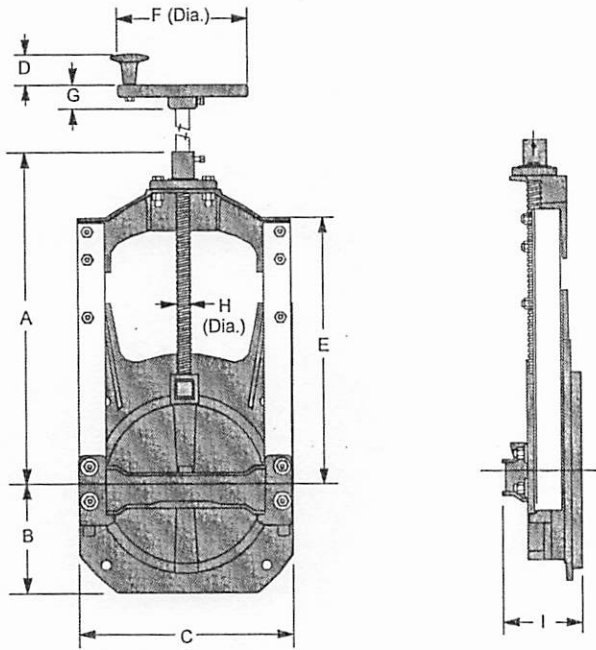


#### Applications

The Series 4200 Pressure Gates are designed for use in canals, flood control systems, pipeline distribution, waste water systems, oil refineries and various industrial water control applications.

# SPECIFICATIONS

## SERIES 4200 PRESSURE GATE



### Recommended Operating Range

Maximum seating head ..... 60 ft. (26 psi)  
 Maximum unseating head ..... 10 ft. (4.5 psi)

### Installation

Series 4200 Pressure Gates are normally mounted on head walls or in pipe stands, using steel anchor bolts and grout. Flange back models may also be installed on pipe flanges.

### Options

- Bronze seating surfaces.
- Rising Stem.
- Stem Extensions.
- Tapered setting collar for concrete installations.
- Special coatings.
- Stainless Steel frame & fasteners.

### Dimensional Information

Valve Size (Inches)	Weight (lbs.)	Dimensions (Inches)								
		A	B	C	D	E	F	G	H	I
6	30.0	15.13	4.25	9.13	2.25	11.50	7.75	1.69	0.88	4.31
8	40.0	18.00	6.13	11.38	2.25	14.00	7.75	1.69	0.88	4.40
10	56.0	21.50	6.88	13.38	2.25	16.50	7.75	1.69	0.88	4.45
12	104.0	24.19	8.00	16.00	2.25	19.75	9.88	1.69	1.00	5.75
14	107.0	26.31	9.44	18.94	2.25	20.50	9.88	1.69	1.00	6.38
16	131.0	29.75	10.38	20.75	2.25	23.31	9.88	1.69	1.00	6.62
18	158.0	33.31	10.94	23.88	2.25	26.25	9.88	1.69	1.00	6.75
20	249.0	40.00	12.00	26.25	2.25	28.25	15.88	2.25	1.25	8.75
24	380.0	45.00	14.25	29.50	2.25	34.50	15.88	2.25	1.25	9.75



**Fresno Valves & Castings, Inc.**

7736 East Springfield Avenue

P.O. Box 40, Selma, CA 93662, U.S.A.

**(800) 333-1658**

www.fresnovalves.com