

**CAMINO REAL REGIONAL MOBILITY AUTHORITY
BOARD RESOLUTION**

WHEREAS, the Camino Real Regional Mobility Authority (CRRMA) entered into a construction contract dated October 24, 2016 (Contract) with International Eagle Enterprises, Inc. (Contractor) for the construction of the Old Hueco Tanks Road Project (Project);

WHEREAS, the irrigation meter was relocated as required for the landscaping included in the Project plans; and

WHEREAS, the CRRMA and Contractor therefore desire to execute this change order to the Contract, for the inclusion of such additional work.

NOW, THEREFORE, BE IT RESOLVED BY THE CAMINO REAL REGIONAL MOBILITY AUTHORITY:

THAT the Executive Director be authorized to execute Change Order No. 3 with International Eagle Enterprises, Inc., for modifications to the landscape irrigation system for the Old Hueco Tanks Road Project.

PASSED AND APPROVED THIS 13TH DAY OF DECEMBER 2017.

**CAMINO REAL REGIONAL
MOBILITY AUTHORITY**

Susan A. Melendez, Chair

ATTEST:

Joe R. Fernandez, Board Secretary

APPROVED AS TO CONTENT:

Raymond L. Telles
Executive Director

CONSTRUCTION CONTRACT CHANGE ORDER NUMBER #3

1. CONTRACTOR: International Eagle Enterprises, Inc

2. Change Order Work Limits: Sta. 1+00 OHT CL to Sta. 28+65 OHT CL

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.

This change order # 3 is to reimburse the contractor for minor work to place the irrigation meter at a new supply source location. 2 additional days will be added to the contract for completing the work.

Original plans had the water supply located at station 28+65. See attached original plans for the irrigation layout on sheets 205 to 212, and original proposed location on sheet 207. There is a new proposed meter location, refer to revised plan sheet for 205-C3 thru 210-C3.

5. New and revised plans sheet(s) are attached and numbered.

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

CCSJ:	<u>0924-06-111</u>
Project:	<u>CS 0924 06 111</u>
Highway:	<u>Old Hueco Tanks Rd</u>
County:	<u>El Paso</u>
District:	<u>ELP</u>
Contract Number:	<u>N/A</u>

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.

The following information must be provided

Time Ext. #3 : 2 Days added on this C.O.#3: _____

Amt. added by this change order: \$ 5,671.10

THE CONTRACTOR _____ Date 12-4-12

By [Signature]

Typed/Printed Name Alfredo Corral

Typed/Printed Title President

CAMINO REAL REGIONAL MOBILITY AUTHORITY

Executed for and approved by the Camino Real Regional Mobility Authority for the purpose and effect of activating and/or carrying out the orders, established policies or work programs heretofore approved and authorized by the Texas Transportation Commission.

Signature Date

Typed/Printed Name and Title

LIST OF ATTACHMENTS

- Attachment A Old Hueco Tanks Rd irrigation plan layout Plans Sheet 207.
- Attachment B Proposed Old Hueco Tanks Rd irrigation plan layout Plans Sheet 205-C3 Thru 210-C3

CONSTRUCTION CONTRACT CHANGE ORDER NUMBER: 3

Estimated Cost:

CCSJ 0924-06-111

Paid by Invoice? (Yes No)

TABLE A: Force Account Workand Materials Placed into Stock

LABOR	HOURLY RATE	EQUIPMENT	HOURLY RATE
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

TABLE B: Contract Items

ITEM	DESCRIPTION	UNIT	UNIT PRICE	ORIGINAL + PREVIOUSLY REVISED		NEW		OVERRUN/ UNDERRUN
				QUANTITY	ITEM COST	QUANTITY	ITEM COST	
618-6016	CONDT (PVC) (SCH 40) (1")	960	5.00	0	0	960	4,800	4,800.00
7058-6101	WATERLINE SADDLE	1	871.10	0	0	1	871.10	871.10
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
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0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
TOTALS : 000.000								5,671.10

CAMINO REAL REGIONAL MOBILITY AUTHORITY

CONSTRUCTION CONTRACT CHANGE ORDER NUMBER 3

Third Party Funding Notification Sheet

This form is used when the subject change order involves funding by a source other than CRRMA, and involves third parties who are providing funding under an Advance Funding Agreement or Donation Agreement.

1. Outside funding provided by:

County of El Paso

(Outside Entity's Legal Name)

2. Type of outside funding agreement for this change:

Existing Amended New

[Check one]

3. Indicate the type and amount of funding:

Fixed Price (Lump Sum) (Estimated Amount) \$5,671.10

Actual Cost _____

CCSJ:	<u>0924-06-111</u>
Highway:	<u>Old Hueco Tanks</u>
County:	<u>El Paso</u>
District:	<u>N/A</u>
Contract Number:	_____

(a) Contract Items (Bid Items): _____

TOTAL \$5,671.10

* The percentage (%) for E&C (Engineering and Contingencies) charges varies from project to project depending on the contract amount of the project. Projects with a higher contract amount will have a lower rate of E&C charge. For a specific project, E&C rate (%) can be derived from the cost of "Engineering and Contingencies" in the "Estimated Cost" of the project.

** Use the statewide district rate as established by Finance Division each year. This line 3 (c) is for Service Project only, unless otherwise specified in the Advance Funding Agreement. See Stand Alone Manual Notice 98-2 for instructions.

I hereby acknowledge notification of the modifications covered by this Change Order.	
Funding for this Change Order has been arranged:	
<u>Norma Rivera</u> Representative	<u>12/7/2017</u> Date
Typed/Printed Name: <u>NORMA RIVERA PALACIOS</u>	

Contact/Help



Resubmitted November 10, 2017
September 14, 2017

Atkins Global
404 Executive Center Blvd.
El Paso, TX 799XX

TXDOT CSJ:0924-06-111
PROJECT:STP95 (322)MM
HIGHWAY:OLD HUECO TANKS ROAD
COUNTY:EL PASOATTN: JOSEPH HUDY
RE: CHANGE ORDER #06 REMOVE INLETS

Dear Joe,
See our proposal for Change order #03

First item is reflecting a quantity on PVC that increased due to the original plans not indicating where to connect to a source. Quantity is based of the revised plans provided by Atkins.

Second item is a saddle required to connect to a water source that was not included on the original plans.

Both prices are including Material, labor and equipment in order to complete this work. We would like to request 2 additional days to be added for this work.

ITEM DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL
PVC 1 INCH SCH 40	960	LF	\$5.00	\$4,800.00
SADDLE TO CONNECT TO WATER SOURCE	1	EA	\$871.10	\$871.10
				\$5,671.10

TOTAL: \$5,671.00

Sincerely,

Marcos Molina

Marcos Molina
Project Manager

Run Date: 9/13/17

Quote



Customer #	151738
Order #	H803561
Date Ordered	09/13/17
Job #	
Job Name	
Purchase Order #	
Method of Shipment	PICKUP
Contract Order #	E619197
Ordered By	RENE ESTRADA
Ship Via	

Sold To:
 CASH SALE
 NWW 537-EL PASO
 930 PENDALE RD
 EL PASO, TX 79907 1720

Ship To:
 CASH SALE
 Branch - 537
 Eagle Construction
 El Paso, TX 79907 1720

Branch:
 EL PASO TX
 Branch - 537
 930 Pendale Rd
 El Paso, TX 79907 1720

 Phone: 915-590-6922

Bid Seq#	Product Code	Description	Qty Ordered	Qty Shipped	Qty B/O	Net Price	UOM	Ext Price
	0810S060K	1X60' (K) SOFT COPPER TUBING	60			8.48000	FT	508.80
	3610H15000N	H15000N 1 CORP STOP CCXCF NO LEAD	1			48.76000	EA	48.76
	3710B24275N	B24275N 1 ANG MBV CFXFIP W/LW NO LEAD BRASS	1			98.73000	EA	98.73
	4410C384415NL	C38-44-1.5-NL 1 MTR CPLG NO LEAD	1			21.27000	EA	21.27
	71BR2B1314CC100	BR2B1314CC100 SAD 12X1CC 13.14-14.58 DBL STRAP BRNZ SAD	1			193.54000	EA	193.54

Terms in accordance with shipping manifest.

Special Instructions/Comments:
BID # 4351785 C/O # E619197

Total Ordered:	871.10
Tax Amount:	71.87
Other Charges:	.00
Total:	942.97

Hudy, Joseph W

From: Joe Perez <Joe.F.Perez@txdot.gov>
Sent: Thursday, May 25, 2017 8:11 AM
To: Hudy, Joseph W
Subject: RE: RFI # 09 Irrigation Supply location

Good morning Joe,

I am trying to get you an answer to your inquiry. In the meantime, my suggestion would be to contact either the County Road & Bridge Department, City of Socorro and/or Lower Valley Water District.

Please let me know if you get a response from them. I'll let you know what I came up with.

Joe

From: Hudy, Joseph W [mailto:Joseph.Hudy@atkinsglobal.com]
Sent: Thursday, May 25, 2017 7:45 AM
To: Joe Perez
Cc: Eduardo Rodriguez
Subject: RFI # 09 Irrigation Supply location

Jose,

Attached is the International Eagles RFI # 09 which pertaining to the water source location. The only irrigation water source for this project right now is down at North loop. The issue is that the distance to the Interstate 10 is 7000 feet from this supply location. Will that water supply location be able to supply the whole project? The project plans for the irrigation plan is on sheet 205 to 212, on sheet 207 there is a meter noted at station 28 +_ 65 with a line going out into the farmers field.

Please give us your design comments as soon at possible.

Thanks,

Joseph W. Hudy
Sr Contract Administrator

ATKINS

Thought leadership in a complex world - www.atkinsglobal.com/angles

404 Executive Center Boulevard ,El Paso, TX 79902 | Direct: +1 915.255-4486 | Fax: +1 915.533.6089
Email:Joseph.Hudy@atkinsglobal.com | Web: www.atkinsglobal.com | Careers: www.atkinsglobal.com/careers

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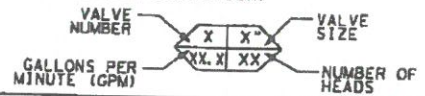
Consider the environment. Please don't print this e-mail unless you really need to.

ESTIMATED QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
1" SCH 40 PVC MAIN LINE	LF	410'
2" SCH 40 PVC SLEEVES	LF	95'
1" C-200 PVC LATERALS	LF	434'
1" CAP	EA	1

ESTIMATED QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
1" ISOLATION BALL VALVES	EA	1
1" CONTROL VALVE	EA	1
1" FILTER	EA	1
1" PRESSURE REGULATOR	EA	1
EMITTERS	EA	11

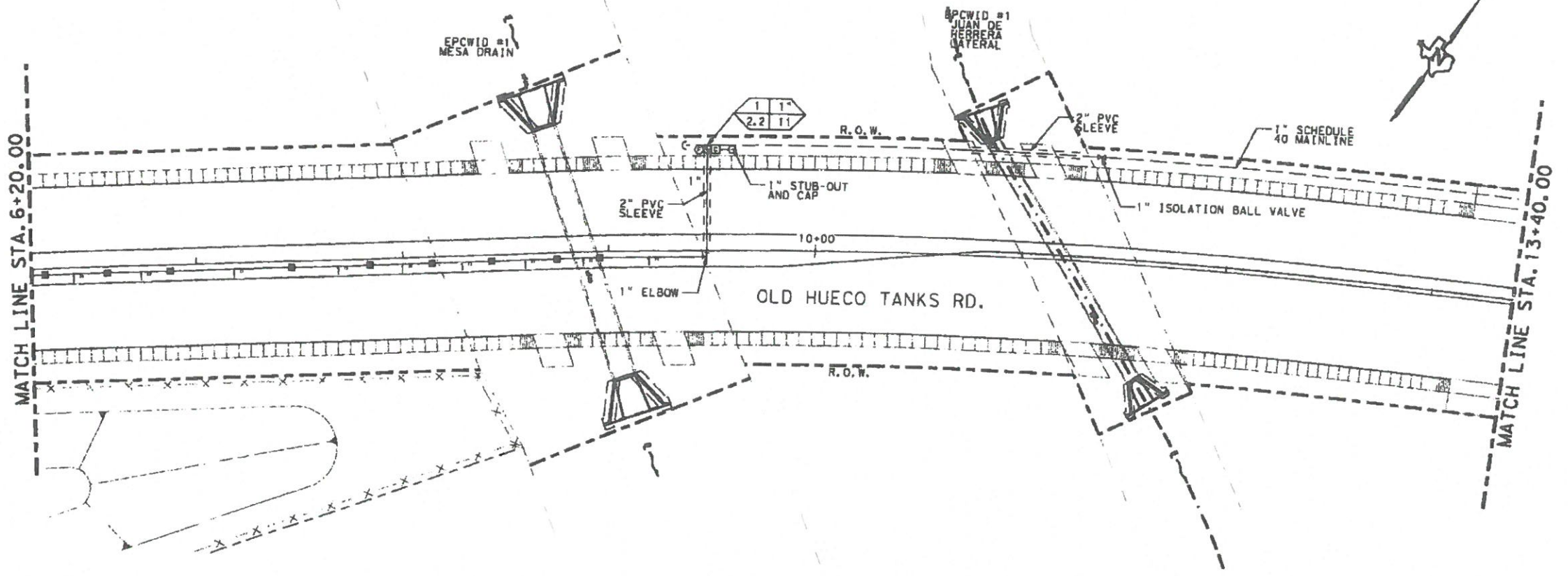
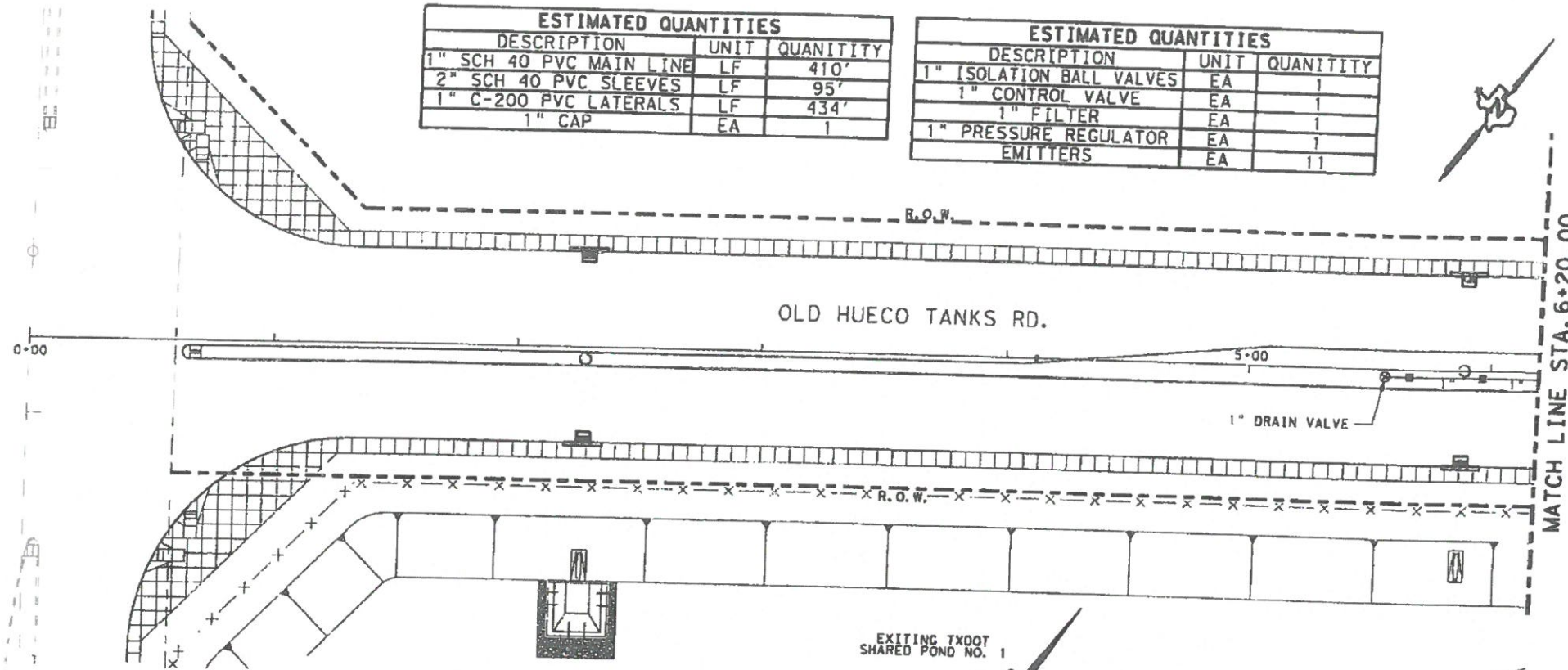
NOTES:

- CONTRACTOR SHALL NOTIFY THE IRRIGATOR IF EXISTING CONDITIONS DO NOT REFLECT PLANS.
- CONTRACTOR SHALL TEST THE WATER PRESSURE. IF WATER PRESSURE EXCEEDS 50 PSI, A PRESSURE REGULATOR SHALL BE REQUIRED AFTER THE CONTROL VALVE. REFER TO IRRIGATION DETAILS.
- WATER METER, BACKFLOW, VALVE BOXES AND EMITTER LOCATION ARE APPROXIMATE AND MAY BE ADJUSTED. CONTRACTOR SHALL RECORD FINAL LOCATIONS ON THE AS-BUILT DRAWINGS.
- CONTRACTOR SHALL ADJUST WATERING SCHEDULE ON BATTERY OPERATED CONTROL VALVE TO PROVIDE SUFFICIENT WATER AS REQUIRED BY PLANT MATERIAL.
- VERIFY LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES BEFORE EXCAVATION.



IRRIGATION LEGEND	
○	1" WATER METER
⊖	1" BACKFLOW PREVENTOR
⊙	1" PRESSURE REGULATOR & FILTER
⊞	1" ISOLATION BALL VALVE
---	1" PVC CLASS 200 LATERAL
- - -	1" PVC SCHEDULE 40 MAIN LINE
==	2" PVC SCHEDULE 40 SLEEVE
⊞	1" CONTROL VALVE WITH CONTROLLER
○	3/4" QUICK COUPLER VALVE
⊞	1" BENDS, FITTINGS AND CAPS
■	EMITTER
⊞	1" DRAIN VALVE

FM-76 (NORTHLLOOP DR.)



Jesus Avila, P.E.
6-3-16
OLD HUECO TANKS RD.

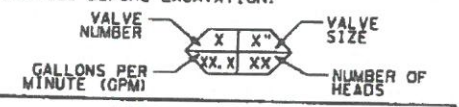
AESTHETICS IRRIGATION LAYOUT
STA. 0+00.00 TO STA. 13+40.00

SHEET 1 OF 6 SCALE: 1" = 60' (HORIZ)

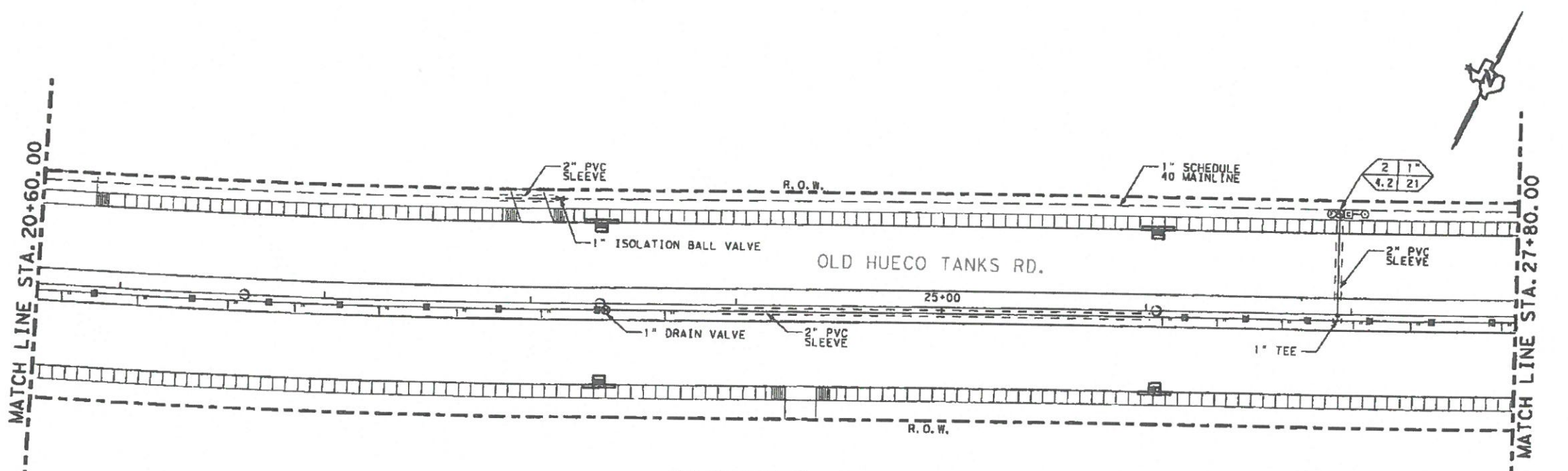
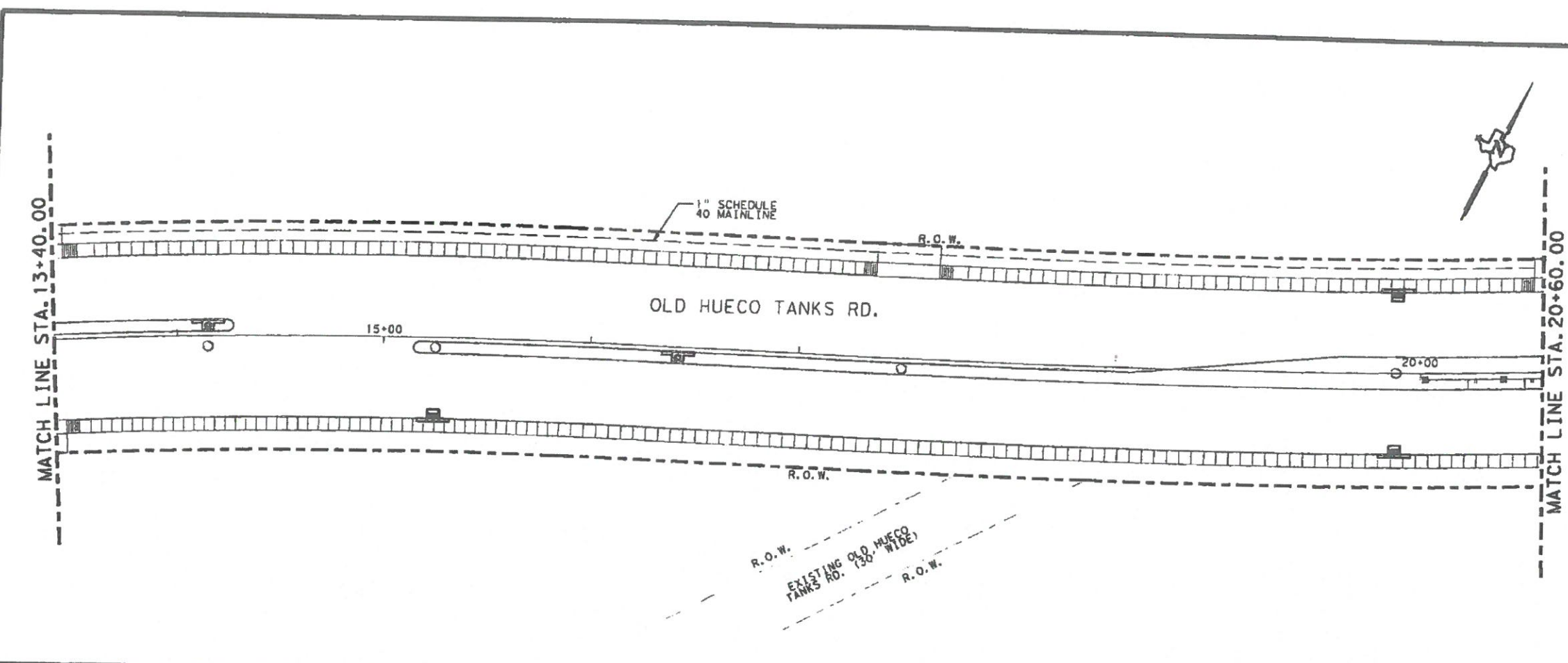
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STATE	DIST.	COUNTY	
TEXAS	ELP	EL PASO	
CONTROL	SECTION	JOB	HIGHWAY NO.
0924	06	111	CS

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- NOTES:
- 1 CONTRACTOR SHALL NOTIFY THE IRRIGATOR IF EXISTING CONDITIONS DO NOT REFLECT PLANS.
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IRRIGATION LEGEND	
⊙	1" WATER METER
⊞	1" BACKFLOW PREVENTOR
⊕	1" PRESSURE REGULATOR & FILTER
⊞	1" ISOLATION BALL VALVE
---	1" PVC CLASS 200 LATERAL
---	1" PVC SCHEDULE 40 MAIN LINE
---	2" PVC SCHEDULE 40 SLEEVE
⊞	1" CONTROL VALVE WITH CONTROLLER
⊕	3/4" QUICK COUPLER VALVE
⊕	1" BENDS, FITTINGS AND CAPS
⊞	EMITTER
⊕	1" DRAIN VALVE



ESTIMATED QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
1" SCH 40 PVC MAIN LINE	LF	1,438'
2" SCH 40 PVC SLEEVES	LF	275'
1" C-200 PVC LATERALS	LF	844'

ESTIMATED QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
1" ISOLATION BALL VALVES	EA	1
1" CONTROL VALVE	EA	1
1" FILTER	EA	1
1" PRESSURE REGULATOR	EA	1
EMITTERS	EA	15

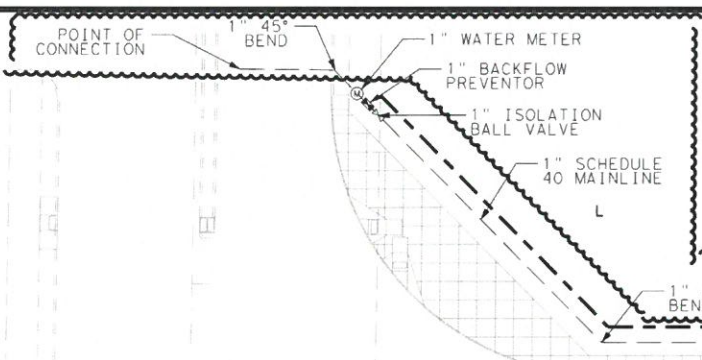
STATE OF TEXAS
JESUS AVILA
122356
LICENSED PROFESSIONAL ENGINEER
Jesus Avila, P.E.
6-3-16
OLD HUECO TANKS RD.

AESTHETICS IRRIGATION LAYOUT
STA. 13+40.00 TO STA. 27+80.00

SHEET 2 OF 6 SCALE: 1" = 60' (HORIZ)

Texas Department of Transportation		PROJECT NO. 0924-06-111	
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	ELP	EL PASO	206
CONTROL	SECTION	JOB	HIGHWAY NO.
0924	06	111	CS

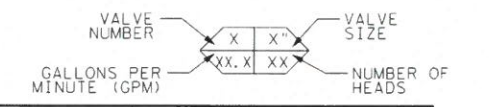
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ESTIMATED QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
1" WATER METER	EA	1
1" BACKFLOW PREVENTOR	EA	1
1" SCH 40 PVC MAIN LINE	LF	1,370
2" SCH 40 PVC SLEEVES	LF	191'
1" C-200 PVC LATERALS	LF	434

ESTIMATED QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
1" ISOLATION BALL VALVES	EA	2
1" CONTROL VALVE	EA	1
1" FILTER	EA	1
1" PRESSURE REGULATOR	EA	1
EMITTERS	EA	11

- NOTES:
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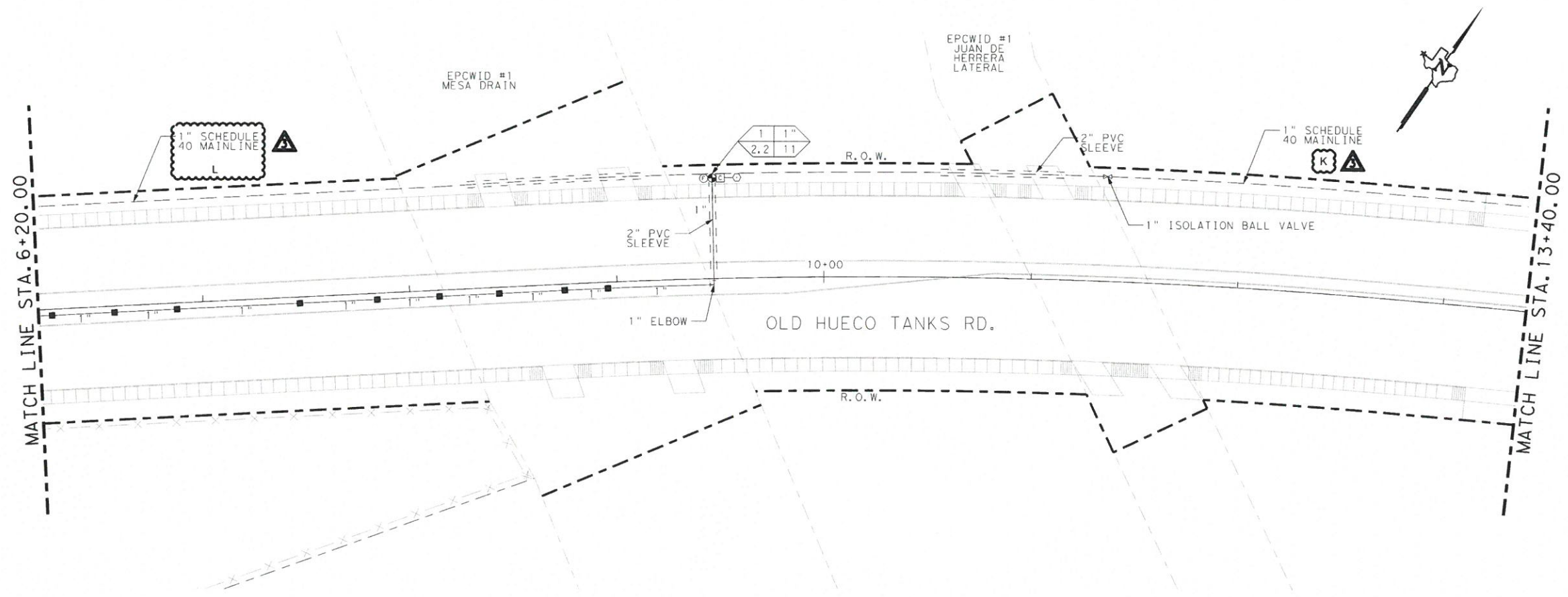


IRRIGATION LEGEND	
⊙	1" WATER METER
■	1" BACKFLOW PREVENTOR
⊕	1" PRESSURE REGULATOR & FILTER
⊗	1" ISOLATION BALL VALVE
—	1" PVC CLASS 200 LATERAL
—	1" PVC SCHEDULE 40 MAIN LINE
—	2" PVC SCHEDULE 40 SLEEVE
⊞	1" CONTROL VALVE WITH CONTROLLER
⊙	3/4" QUICK COUPLER VALVE
⊙	1" BENDS, FITTINGS AND CAPS
■	EMITTER
⊙	1" DRAIN VALVE
X	PIPE SECTION LABEL

FM-76 (NORTHLOOP DR.)

OLD HUECO TANKS RD.

EXITING TXDOT SHARED POND NO. 1



Jose F. Perez P.E.

06/27/2017
OLD HUECO TANKS RD.

AESTHETICS IRRIGATION LAYOUT

STA. 0+00.00 TO STA. 13+40.00

SHEET 1 OF 6 SCALE: 1" = 60' (HORIZ)

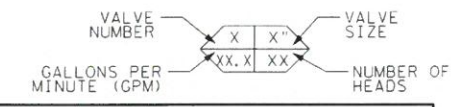
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DIST.	SECTION	COUNTY	
ELP	06	EL PASO	
CONTROL	JOB	HIGHWAY NO.	
0924	111	CS	

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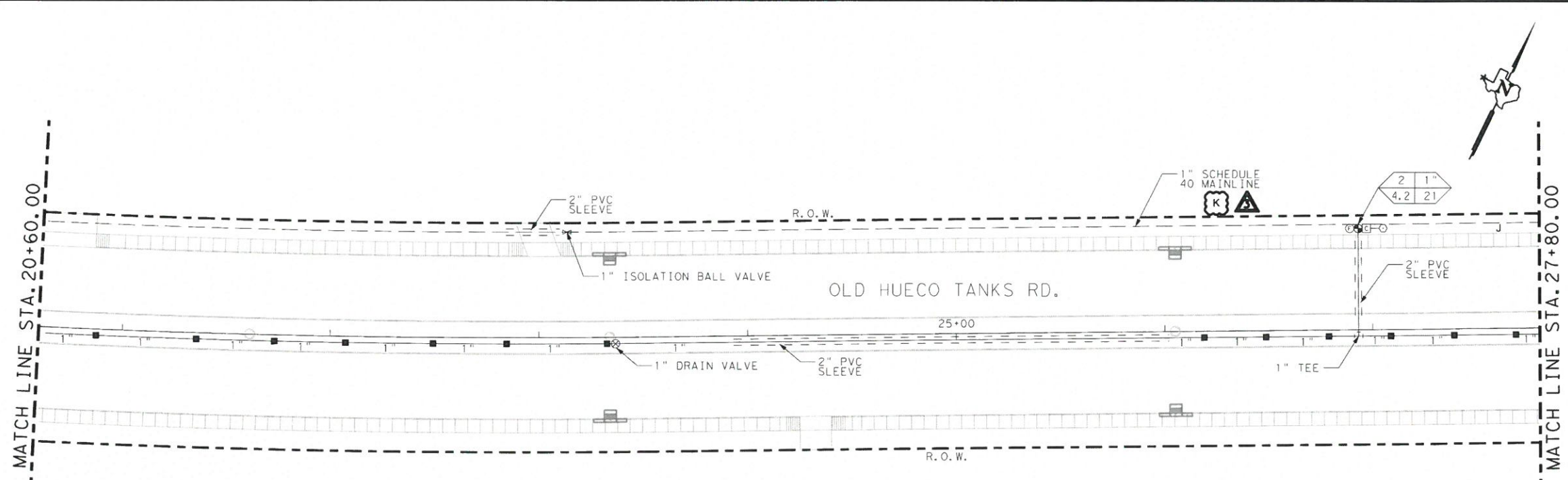
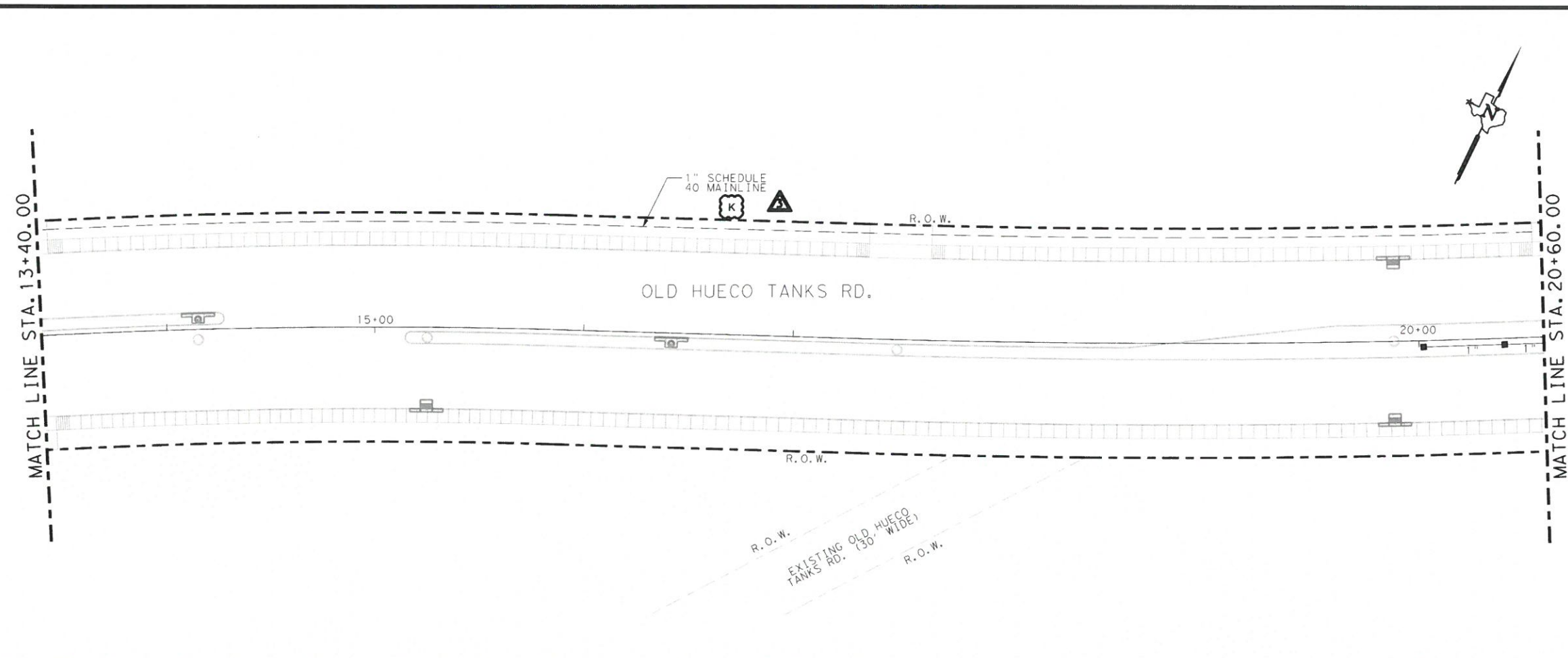
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NOTES:

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IRRIGATION LEGEND	
⊙	1" WATER METER
■	1" BACKFLOW PREVENTOR
⊕	1" PRESSURE REGULATOR & FILTER
×	1" ISOLATION BALL VALVE
—	1" PVC CLASS 200 LATERAL
—	1" PVC SCHEDULE 40 MAIN LINE
—	2" PVC SCHEDULE 40 SLEEVE
⊕	1" CONTROL VALVE WITH CONTROLLER
⊙	3/4" QUICK COUPLER VALVE
⊕	1" BENDS, FITTINGS AND CAPS
■	EMITTER
⊕	1" DRAIN VALVE
X	PIPE SECTION LABEL



06/27/2017

OLD HUECO TANKS RD.

AESTHETICS IRRIGATION LAYOUT

STA. 13+40.00 TO STA. 27+80.00

SHEET 2 OF 6 SCALE: 1" = 60' (HORIZ)



FED. RD. DIV. NO. 6		COUNTY EL PASO	
STATE TEXAS		DIST. ELP	
CONTROL 0924		JOB 111	
SECTION 06		HIGHWAY NO. CS	

ESTIMATED QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
1" SCH 40 PVC MAIN LINE	LF	1,438'
2" SCH 40 PVC SLEEVES	LF	275'
1" C-200 PVC LATERALS	LF	844'

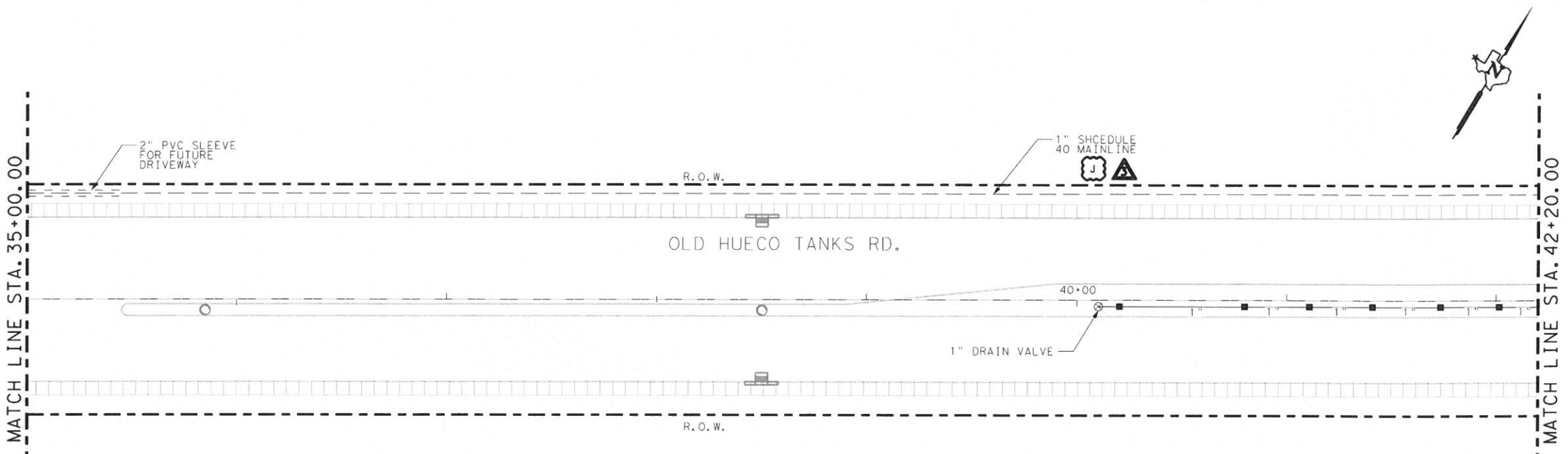
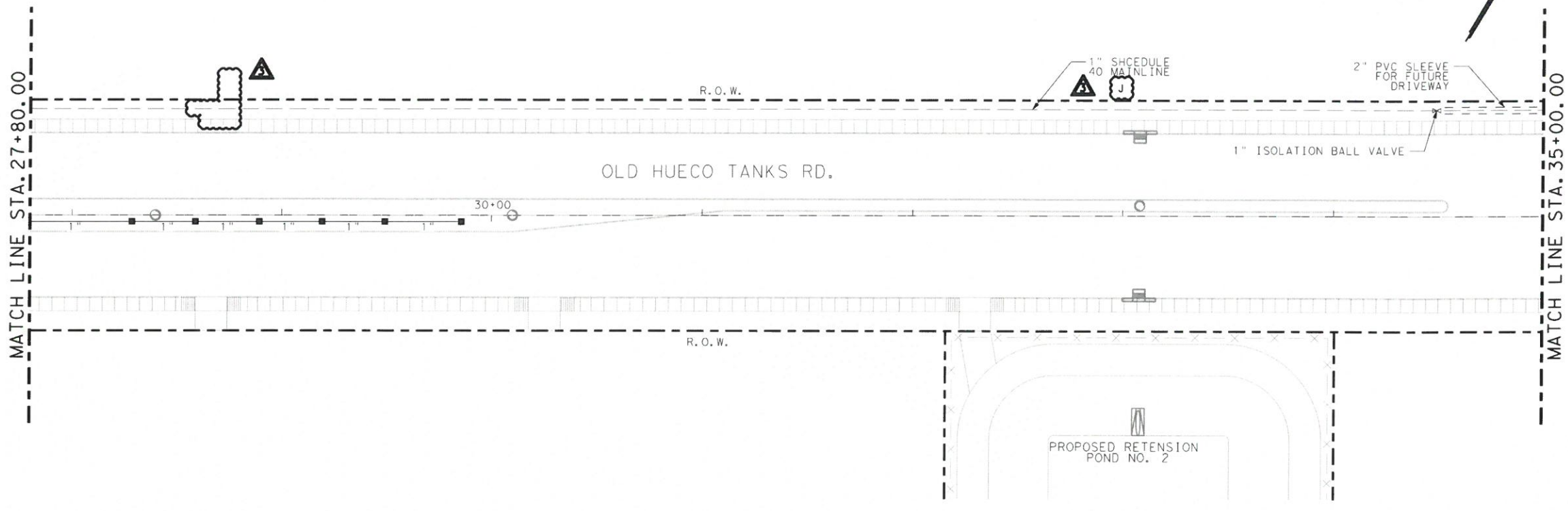
ESTIMATED QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
1" ISOLATION BALL VALVES	EA	1
1" CONTROL VALVE	EA	1
1" FILTER	EA	1
1" PRESSURE REGULATOR	EA	1
EMITTERS	EA	15

6/27/2017 6:17:06 PM M:\0924-06-111\3-Plan_Sheets\10-Aesthetics\IRR*1 Rev.dgn

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 - 5 VERIFY LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES BEFORE EXCAVATION.

VALVE NUMBER: X X X
VALVE SIZE: XX.X
GALLONS PER MINUTE (GPM): XX.X
NUMBER OF HEADS: XX

IRRIGATION LEGEND	
⊙	1" WATER METER
■	1" BACKFLOW PREVENTOR
⊕	1" PRESSURE REGULATOR & FILTER
X	1" ISOLATION BALL VALVE
—	1" PVC CLASS 200 LATERAL
—	1" PVC SCHEDULE 40 MAIN LINE
—	2" PVC SCHEDULE 40 SLEEVE
⊕	1" CONTROL VALVE WITH CONTROLLER
⊙	3/4" QUICK COUPLER VALVE
⊕	1" BENDS, FITTINGS AND CAPS
■	EMITTER
⊕	1" DRAIN VALVE
X	PIPE SECTION LABEL



ESTIMATED QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
1" WATER METER	EA	0
1" BACKFLOW PREVENTOR	EA	0
1" SCH 40 PVC MAIN LINE	LF	1470'
2" SCH 40 PVC SLEEVES	LF	94'

ESTIMATED QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
1" C-200 PVC LATERALS	LF	405'
1" ISOLATION BALL VALVES	EA	1
EMITTERS	EA	12



06/27/2017
 OLD HUECO TANKS RD.
AESTHETICS IRRIGATION LAYOUT
 STA. 27+80.00 TO STA. 42+20.00

SHEET 3 OF 6 SCALE: 1" = 60' (HORIZ)

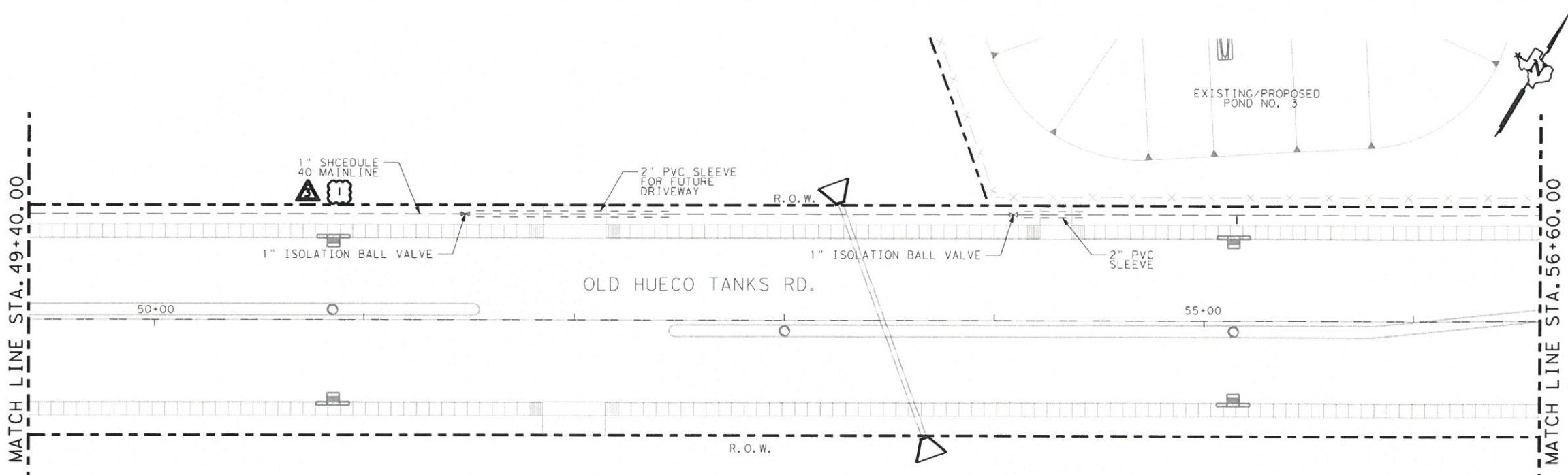
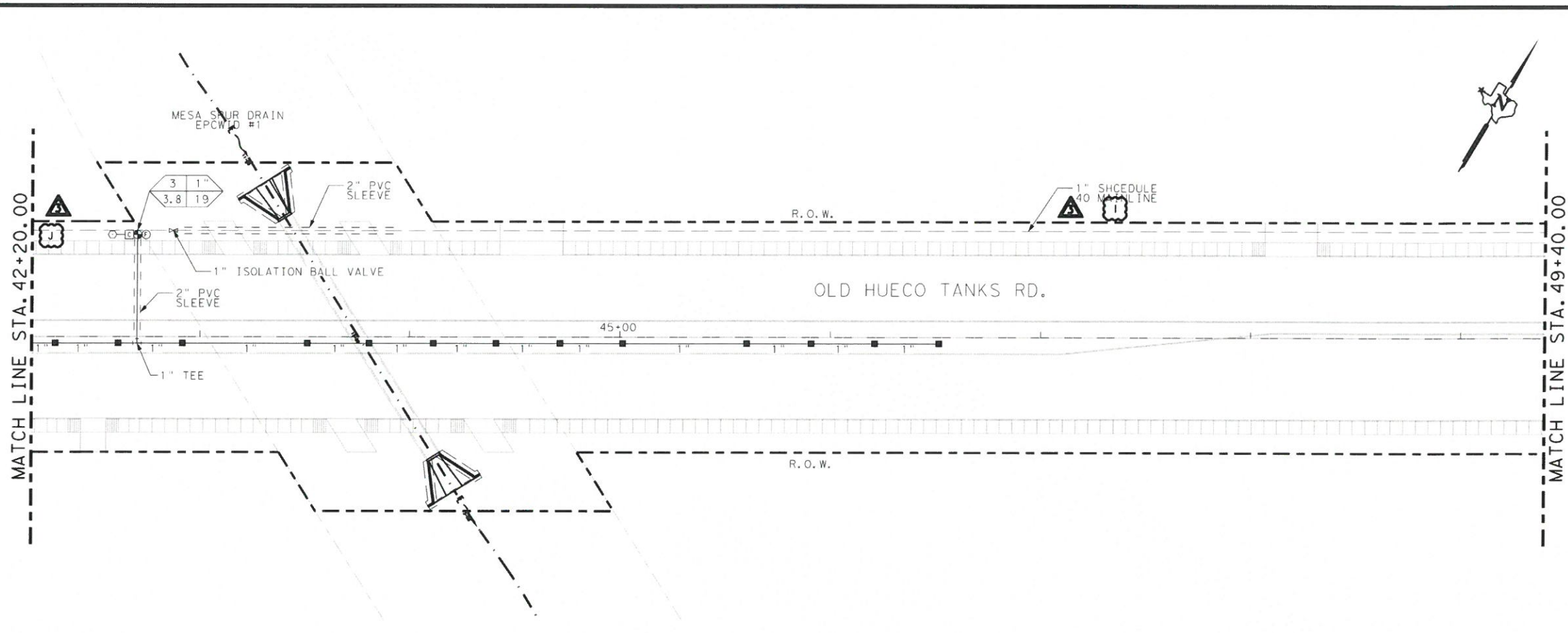
Texas Department of Transportation		# FILE ABBREVS	
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FED. RD. DIV. NO. 6	STATE TEXAS	DIST. ELP	COUNTY EL PASO
CONTROL 0924	SECTION 06	JOB 111	HIGHWAY NO. CS

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- NOTES:
- 1 CONTRACTOR SHALL NOTIFY THE IRRIGATOR IF EXISTING CONDITIONS DO NOT REFLECT PLANS.
 - 2 CONTRACTOR SHALL TEST THE WATER PRESSURE. IF WATER PRESSURE EXCEEDS 50 PSI, A PRESSURE REGULATOR SHALL BE REQUIRED AFTER THE CONTROL VALVE. REFER TO IRRIGATION DETAILS.
 - 3 WATER METER, BACKFLOW, VALVE BOXES AND EMITTER LOCATION ARE APPROXIMATE AND MAY BE ADJUSTED. CONTRACTOR SHALL RECORD FINAL LOCATIONS ON THE AS-BUILT DRAWINGS.
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 - 5 VERIFY LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES BEFORE EXCAVATION.

VALVE NUMBER: X X
VALVE SIZE: XX.X XX
GALLONS PER MINUTE (GPM):
NUMBER OF HEADS:

IRRIGATION LEGEND	
⊙	1" WATER METER
■	1" BACKFLOW PREVENTOR
⊙	1" PRESSURE REGULATOR & FILTER
X	1" ISOLATION BALL VALVE
—	1" PVC CLASS 200 LATERAL
—	1" PVC SCHEDULE 40 MAIN LINE
—	2" PVC SCHEDULE 40 SLEEVE
⊙	1" CONTROL VALVE WITH CONTROLLER
⊙	3/4" QUICK COUPLER VALVE
⊙	1" BENDS, FITTINGS AND CAPS
■	EMITTER
⊙	1" DRAIN VALVE
X	PIPE SECTION LABEL



ESTIMATED QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
1" SCH 40 PVC MAIN LINE	LF	1,440'
2" SCH 40 PVC SLEEVES	LF	269'
1" C-200 PVC LATERALS	LF	497'
1" ISOLATION BALL VALVES	EA	3

ESTIMATED QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
1" CONTROL VALVE	EA	1
1" FILTER	EA	1
1" PRESSURE REGULATOR	EA	1
EMITTERS	EA	13

STATE OF TEXAS
JOSE F. PEREZ
106237
LICENSED PROFESSIONAL ENGINEER
06/27/2017
OLD HUECO TANKS RD.
AESTHETICS IRRIGATION LAYOUT
STA. 42+20.00 TO STA. 56+60.00

SHEET 4 OF 6 SCALE: 1" = 60' (HORIZ)

TEXAS DEPARTMENT OF TRANSPORTATION
© 2014 #FILEABREV#
FED. RD. DIV. NO. 6 SHEET NO. 208-C3
STATE TEXAS DIST. ELP COUNTY EL PASO
CONTROL 0924 SECTION 06 JOB 111 HIGHWAY NO. CS

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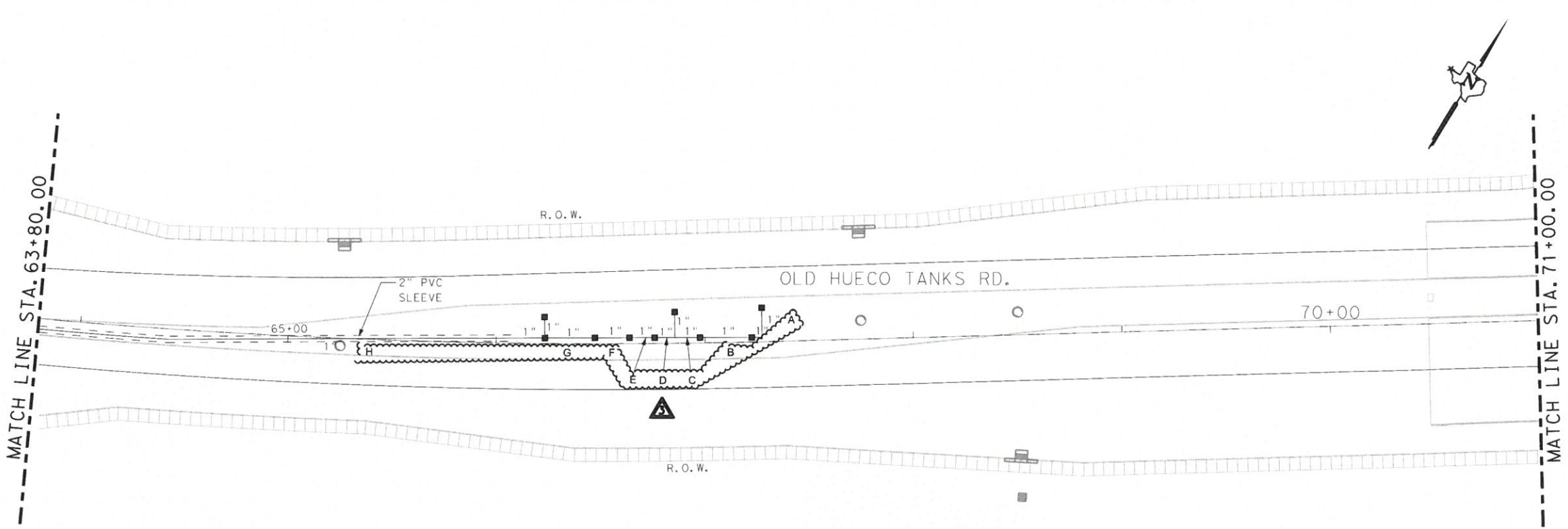
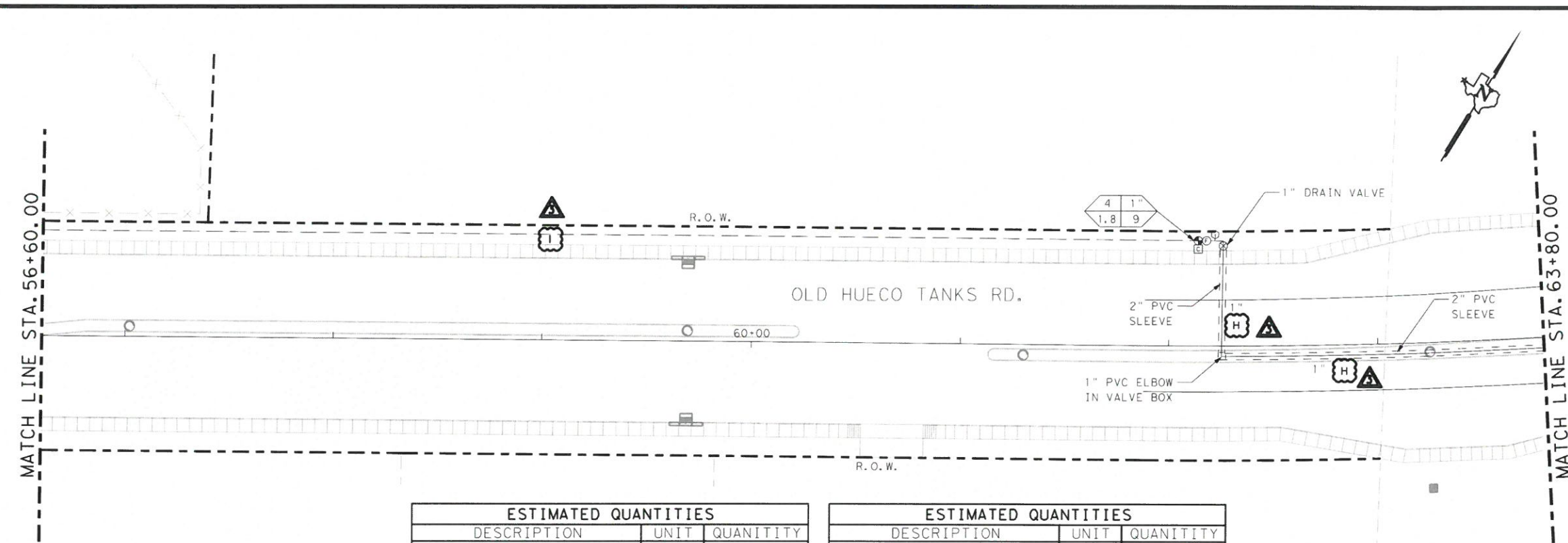
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VALVE NUMBER: XX.X
VALVE SIZE: X"
GALLONS PER MINUTE (GPM): XX.X
NUMBER OF HEADS: XX

IRRIGATION LEGEND	
⊙	1" WATER METER
■	1" BACKFLOW PREVENTOR
⊙	1" PRESSURE REGULATOR & FILTER
X	1" ISOLATION BALL VALVE
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■	EMITTER
⊙	1" DRAIN VALVE
X	PIPE SECTION LABEL

ESTIMATED QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
1" CONTROL VALVE	EA	1
1" FILTER	EA	1
1" PRESSURE REGULATOR	EA	1
1" SCH 40 PVC MAIN LINE	LF	551'

ESTIMATED QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
2" SCH 40 PVC SLEEVES	LF	476'
1" C-200 PVC LATERALS	LF	632'
EMITTERS	EA	9
1" CAP	EA	1



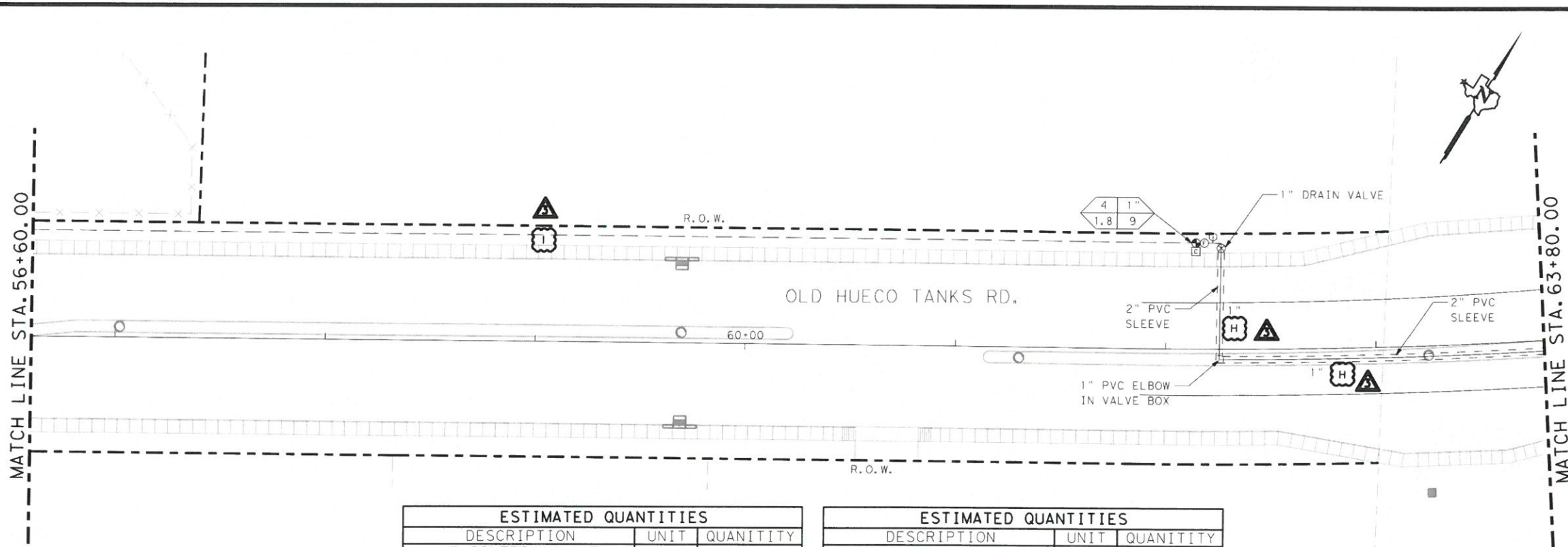
06/27/2017
OLD HUECO TANKS RD.
AESTHETICS IRRIGATION LAYOUT
 STA. 56+60.00 TO STA. 71+00.00

SHEET 5 OF 6 SCALE: 1" = 60' (HORIZ)

FED. RD. DIV. NO.	SHEET NO.		
6	209-C3		
STATE	DIST.	COUNTY	
TEXAS	ELP	EL PASO	
CONTROL	SECTION	JOB	HIGHWAY NO.
0924	06	111	CS

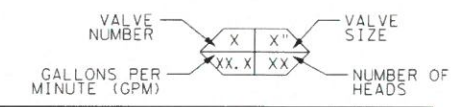
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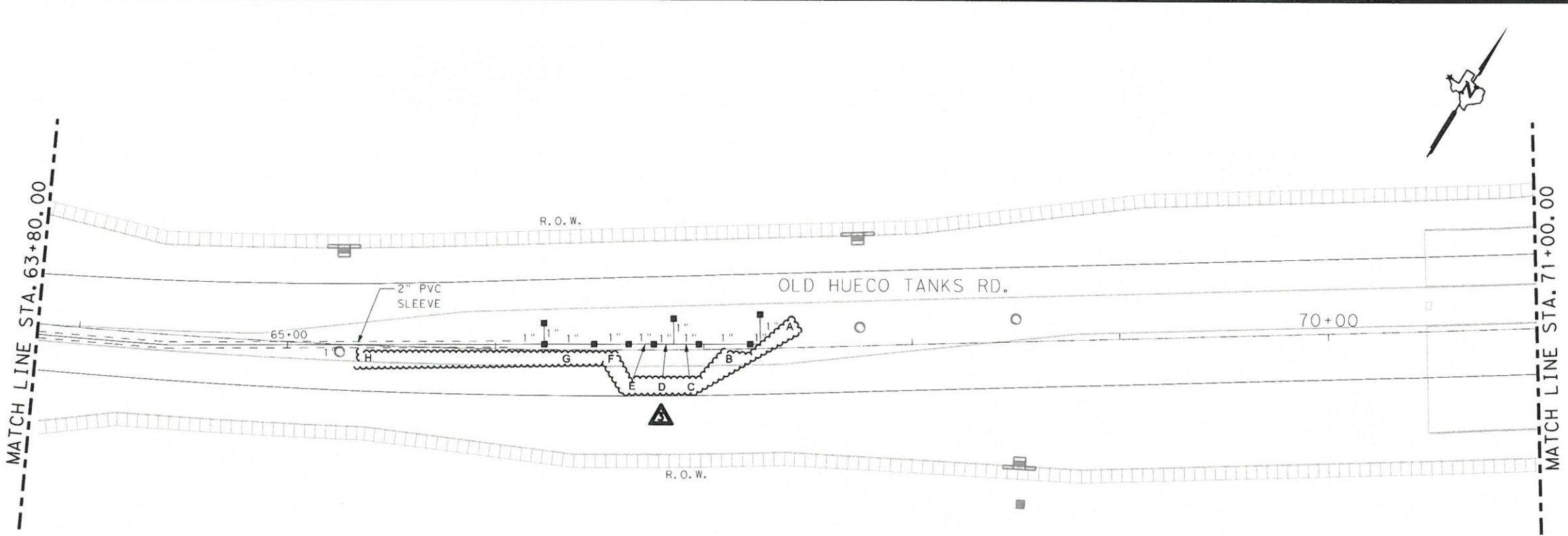


ESTIMATED QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
1" CONTROL VALVE	EA	1
1" FILTER	EA	1
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1" SCH 40 PVC MAIN LINE	LF	551'

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DESCRIPTION	UNIT	QUANTITY
2" SCH 40 PVC SLEEVES	LF	476'
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IRRIGATION LEGEND	
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06/27/2017
OLD HUECO TANKS RD.

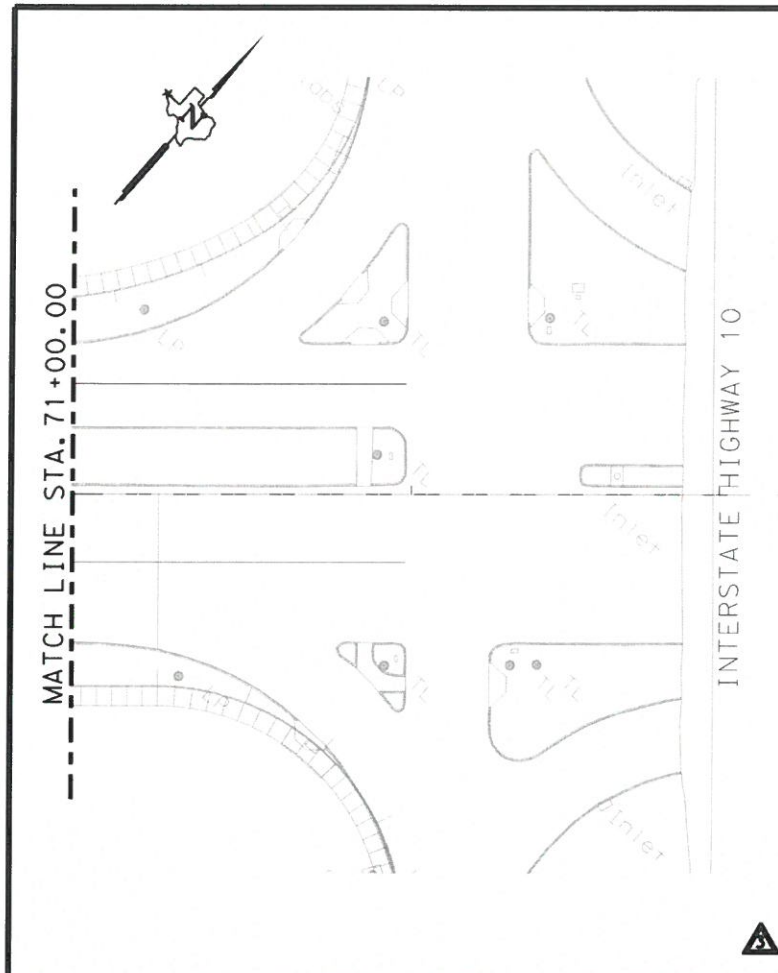
AESTHETICS IRRIGATION LAYOUT
 STA. 56+00.00 TO STA. 71+00.00

SHEET 5 OF 6 SCALE: 1" = 60' (HORIZ)

FED. RD. DIV. NO.	SHEET NO.		
6	209-C3		
STATE	DIST.	COUNTY	
TEXAS	ELP	EL PASO	
CONTROL	SECTION	JOB	HIGHWAY NO.
0924	06	111	CS

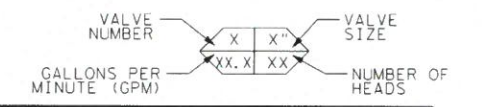
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HYDRAULIC CALCULATION TABLE							
VALVE: #4		STATIC PRESSURE: 110			SECTION GPM: 1.80		
PIPE SECTION	PIPE LENGTH (FEET)	FLOW (GPM)	SIZE (IN.)	PRESSURE LOSS PER 100 FEET	PRESSURE LOSS THIS SECTION	PRESSURE LOSS OR GAINED BY ELEVATION	ACCUMULATED PRESSURE LOSS
A-1" PVC CLASS 200	20	0.20	1"	0.020	0.004	0.098	0.102
B-1" PVC CLASS 200	25	0.40	1"	0.020	0.005	0.122	0.229
C-1" PVC CLASS 200	12	0.60	1"	0.020	0.002	0.136	0.367
D-1" PVC CLASS 200	10	0.80	1"	0.020	0.002	0.113	0.482
E-1" PVC CLASS 200	12	1.00	1"	0.020	0.002	0.136	0.620
F-1" PVC CLASS 200	16	1.20	1"	0.070	0.011	0.181	0.812
G-1" PVC CLASS 200	24	1.40	1"	0.070	0.017	0.271	1.100
H-1" PVC CLASS 200	455	1.80	1"	0.070	0.319	1.960	3.379
LATERAL PIPING PRESSURE LOSS IN PSI							3.379
ZONE VALVE		1.80	1"		1.500		4.879
I-1" MAINLINE SCH 40	1,943	1.80	1"	0.120	2.332	16.680	23.891
J-1" MAINLINE SCH 40	1,577	1.80	1"	0.120	1.892	-0.563	25.220
K-1" MAINLINE SCH 40	1,751	1.80	1"	0.120	2.101	-0.787	26.534
L-1" MAINLINE SCH 40	969	1.80	1"	0.120	1.163	1.612	29.309
1" BACKFLOW PREVENTOR		1.80	1"		4.000		33.309
1" WATER METER		1.80	1"		0.100		33.409
MINIMUM HEAD PRESSURE							15.000
DESIGN PRESSURE							48.409
ACTUAL PRESSURE AT CRITICAL HEAD							76.591

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IRRIGATION LEGEND	
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⊙	1" BENDS, FITTINGS AND CAPS
■	EMITTER
⊙	1" DRAIN VALVE
X	PIPE SECTION LABEL

IRRIGATION SPECIFICATIONS				
DESCRIPTION	MANUFACTURER OR EQUAL	SIZE	QUANTITY	REMARKS
WATER METER - BASED ON LVWD REQUIREMENTS		1"	1	COORDINATE WITH LVWD FOR WATER SERVICE CONNECTION
BACKFLOW PREVENTOR-DOUBLE CHECK ASSEMBLY	FEBCO OR EQUAL	1"	1	SEE DETAILS FOR ENCLOSURE AND CLEARANCES
CONCRETE UTILITY BOX	CHRISTY OR EQUAL	43" X 31" X 12"	1	SEE DETAILS FOR ENCLOSURE AND CLEARANCES
ISOLATION BRASS BALL VALVES	NIBCO/MUELLER OR EQUAL	1"	6	BLOW-OUT PROOF STEM WITH LEVER HANDLE
SCHEDULE 40 PVC PIPE-MAIN LINE	CHARLOTTE OR EQUAL	1"	6,239	
SCHEDULE 40 PVC PIPE-SLEEVES	CHARLOTTE OR EQUAL	2"	1,211 LF	
CLASS 200 PVC PIPE-LATERALS	CHARLOTTE OR EQUAL	1"	2,801 LF	
FITTINGS-PVC SCHEDULE 40	LASCO/CHARLOTTE OR EQUAL	1"		GENERALLY THE SAME AS PIPING
VALVE BOXES-SQUARE	CARSON 1419 OR EQUAL	17" X 12" X 12" OR 24"	21 EA	STANDARD-GREEN LID, QUICK COUPLERS-PURPLE LID
VALVE BOXES-ROUND	CARSON 1419 OR EQUAL	10" DIAMETER X 12" DEEP	60 EA	STANDARD-GREEN LID
BATTERY OPERATED CONTROL VALVES	RAINBIRD/HUNTER OR EQUAL	1"	4 EA	3 YEAR WARRANTY WITH TRANSMITTER
FILTER	RAINBIRD/HUNTER OR EQUAL	1"	4 EA	WYE FILTER
PRESSURE REGULATOR	WILKINS/HUNTER OR EQUAL	1"	4 EA	IN LINE REGULATOR
QUICK COUPLER VALVE	HUNTER/RAINBIRD OR EQUAL	3/4"	4 EA	PURPLE TOP WITH LOCK
EMITTERS	RAINBIRD/HUNTER OR EQUAL		85 EA	2 GPH EACH OUTLET
CMU BLOCKS		8"X8"X16"	88 EA	REFER TO IRRIGATION DETAILS ON NEXT SHEET
WASHED ROCK		1"	113 CF	REFER TO IRRIGATION DETAILS ON NEXT SHEET
WEED BARRIER	DeWITT OR EQUAL	1"	685 SF	REFER TO IRRIGATION DETAILS ON NEXT SHEET
6 MM BLACK POLYETHYLENE TAPE				SEE DETAILS FOR ENCLOSURE AND CLEARANCES
SOLVENT CEMENT & PRIMER				REFER TO MANUFACTURES RECOMMENDIONS



06/27/2017
 OLD HUECO TANKS RD.

**AESTHETICS
 IRRIGATION
 LAYOUT**
 STA. 71+00.00
 STA. 73+66.37

SHEET 6 OF 6 SCALE: 1" = 60' (HORIZ)

Texas Department of Transportation	
FED. RD. DIV. NO. 6	SHEET NO. 210-C3
STATE TEXAS	DIST. ELP COUNTY EL PASO
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