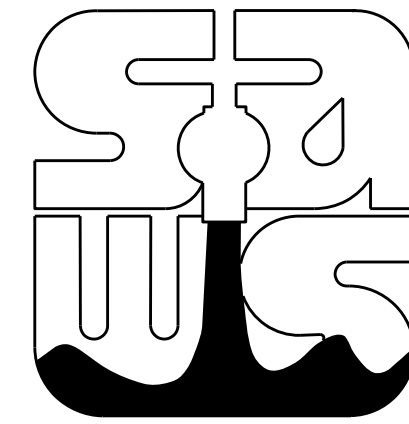


PLANS FOR WATER WORKS CONSTRUCTION

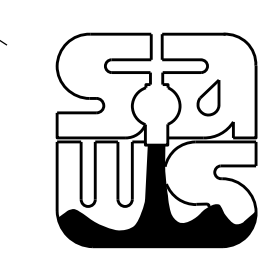
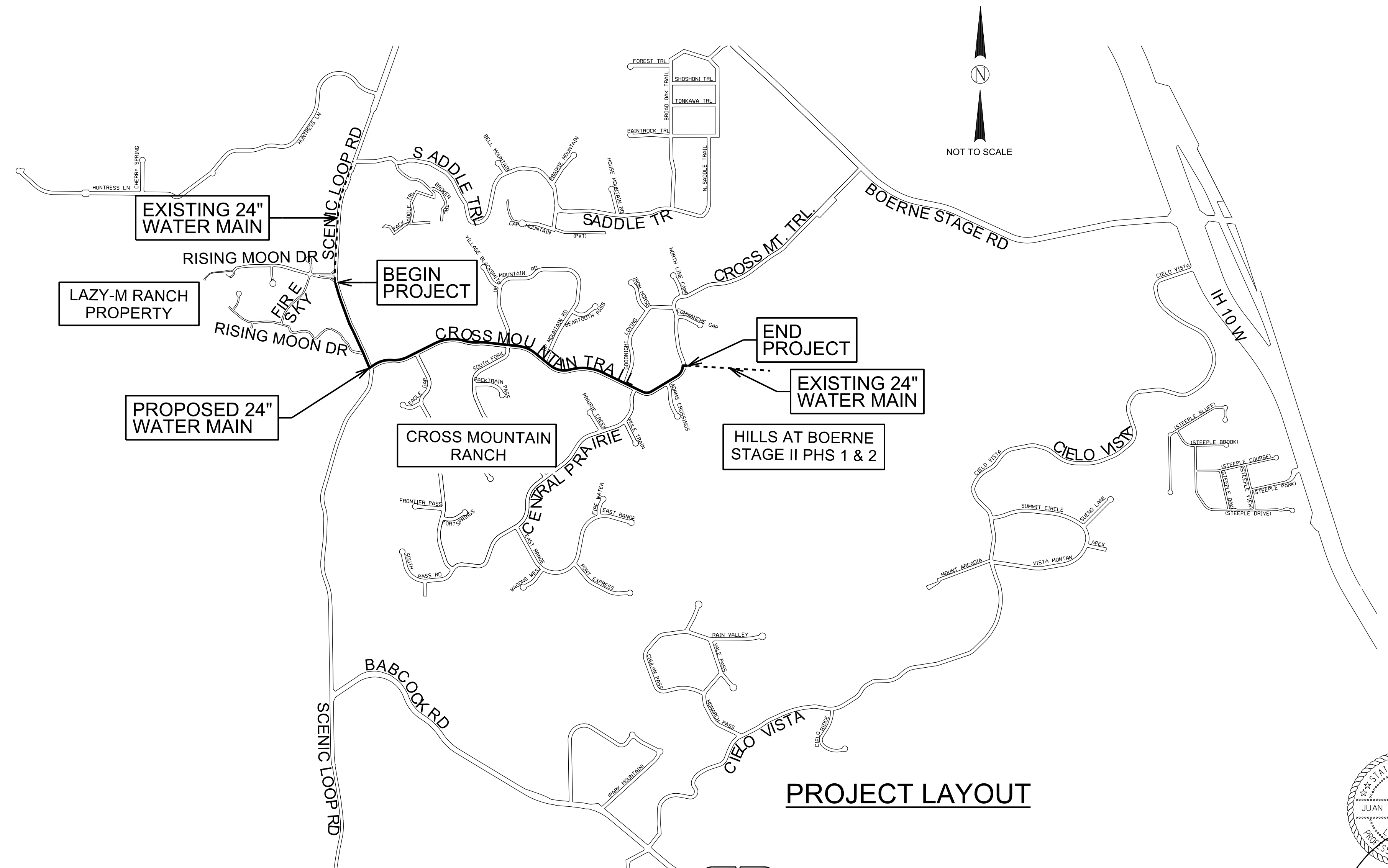
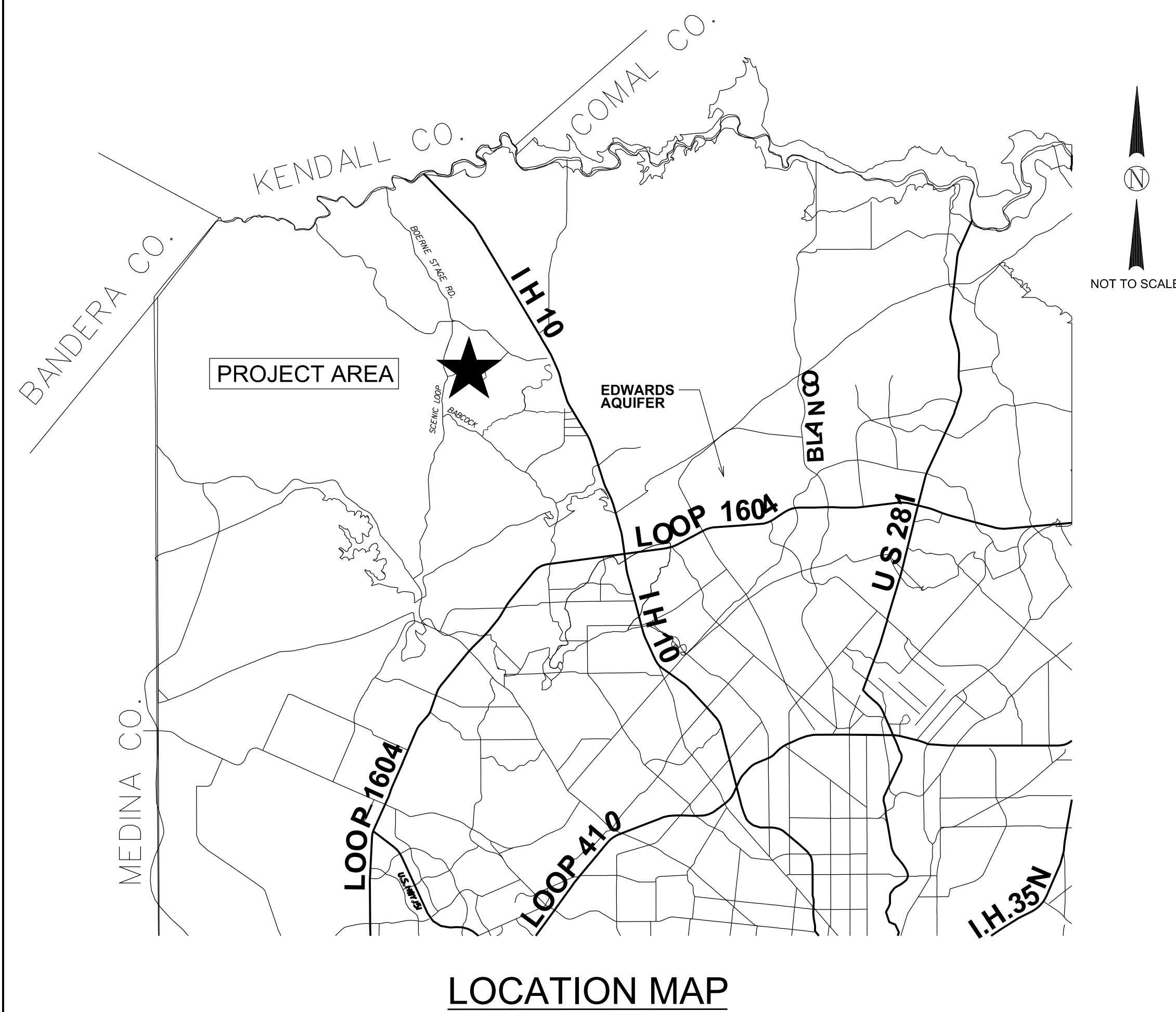


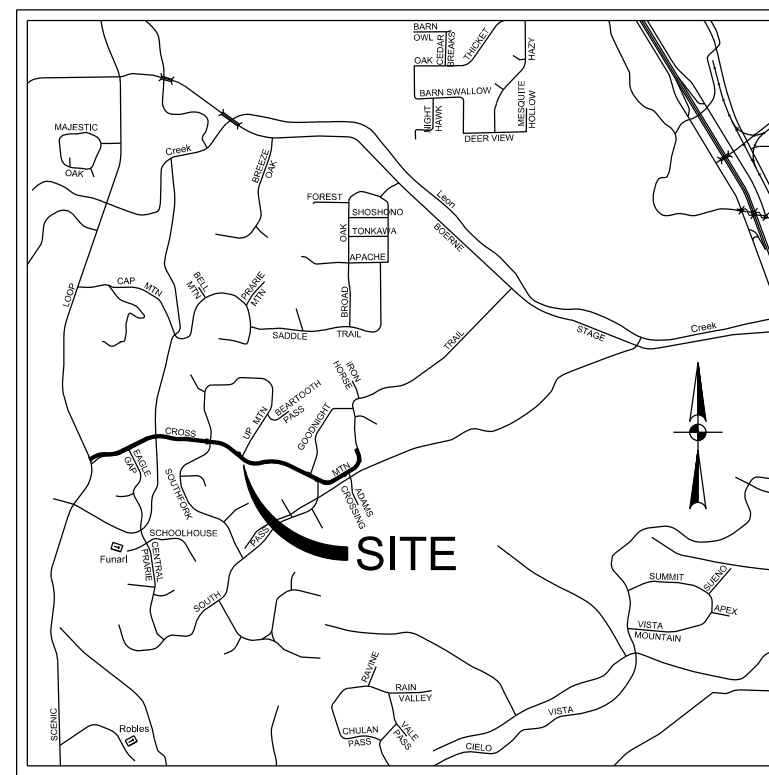
JOB NO. 10-7003

INDEX

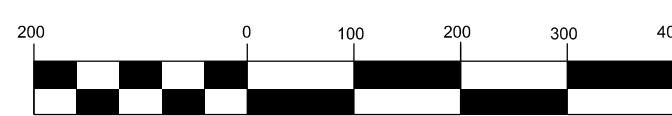
COVER SHEET	C1
GENERAL NOTES	GN1
SITE LAYOUT	SL1
PLAN & PROFILE DRAWINGS	A01 - A15
WATER DETAILS	WD1 - WD3
MISCELLANEOUS DETAILS	MD1 - MD2
TREE PERMIT PLAN	TP1-TP4
EROSION CONTROL AND SEDIMENTATION PLAN	EC1-EC5
TRAFFIC CONTROL PLAN	TC1-TC3

CROSS MOUNTAIN TRAIL 24" WATER TRANSMISSION MAIN PROJECT

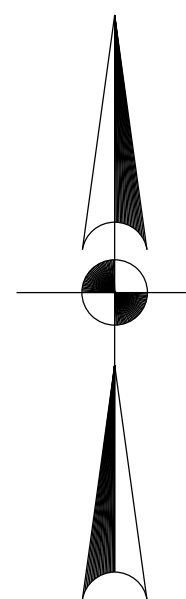




LOCATION MAP
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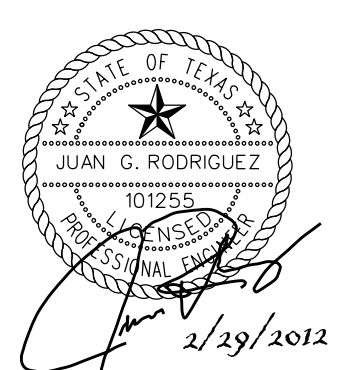


(IN FEET)
1 inch = 200 ft.



BENCHMARK TABLE				
CONTROL POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
40	13790817.65	2071135.24	1354.43	IRON ROD W/RED CAP
59	-	-	1357.55	RAILROAD SPIKE IN UTILITY POLE
20	13790418.09	2071368.33	1369.96	IRON ROD W/RED CAP
21	13789989.48	2071564.29	1393.78	IRON ROD W/RED CAP
30	13789915.24	2071776.57	1386.44	IRON ROD W/RED CAP
31	13790040.72	2072362.35	1334.30	IRON ROD W/RED CAP
32	13790301.09	2073001.99	1287.56	IRON ROD W/RED CAP
33	13790177.28	2074161.51	1345.58	IRON ROD W/RED CAP
34	13789785.13	2074783.69	1340.21	IRON ROD W/RED CAP
35	13789789.46	2075335.32	1310.24	IRON ROD W/RED CAP
36	13789353.98	2076376.97	1264.34	IRON ROD W/RED CAP
37	13789774.61	2077037.41	1257.79	IRON ROD W/RED CAP

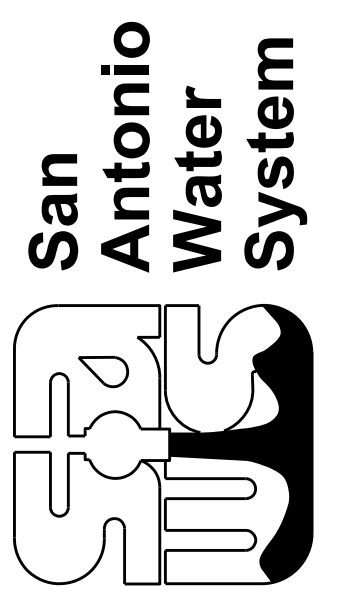
JOB NO.
10-7003



REVISIONS	No.	Description	Drn.	Approved	Date

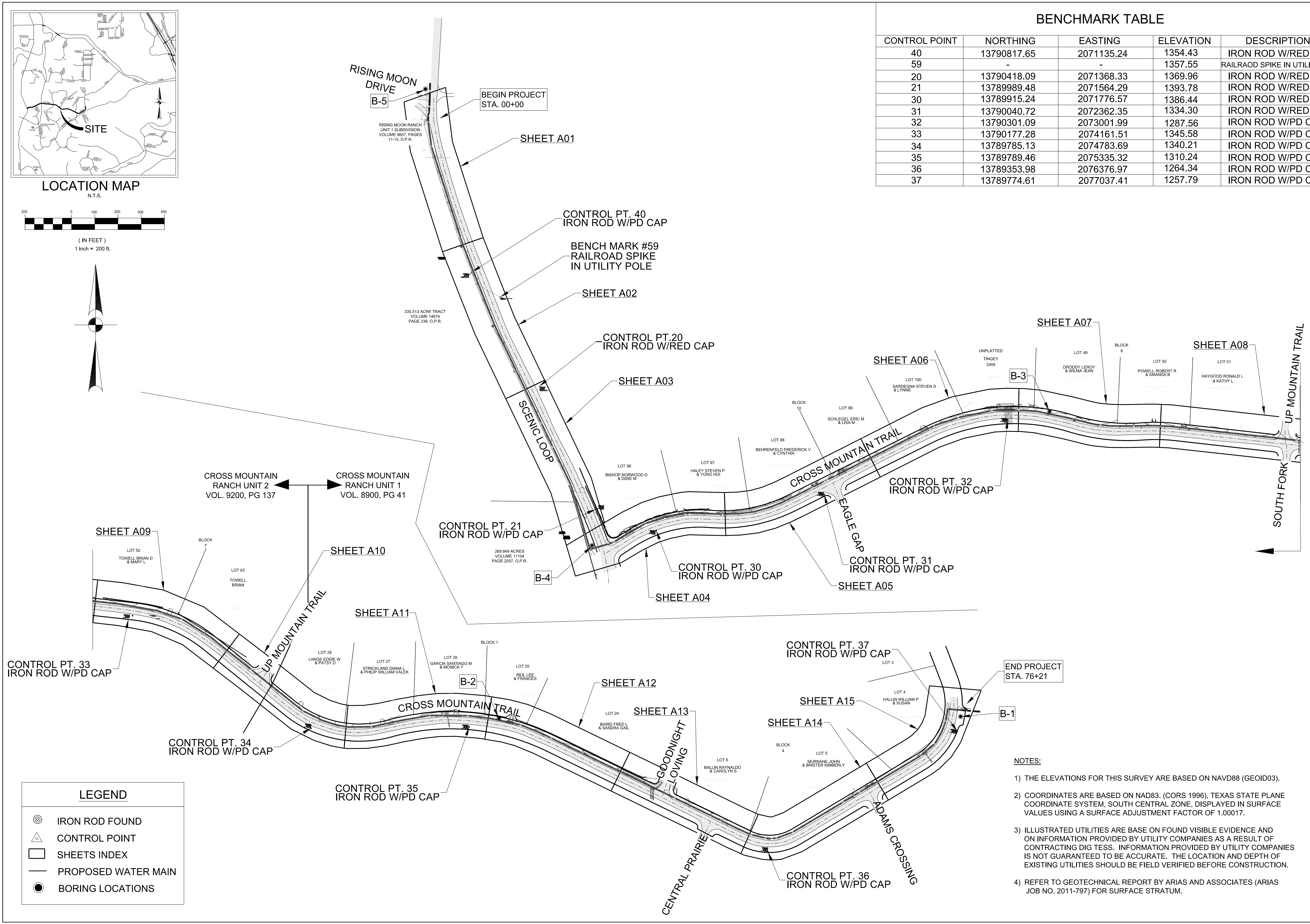
INFORMATION
SEE LEGEND THIS SHEET

Date: 12/16/2011
 Drawn by: TMJ
 Designed by: TMJ
 Checked by: JGR
 Scale:
 Approved by: JGR
 Map No:



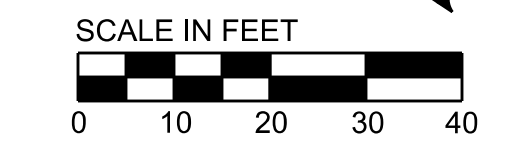
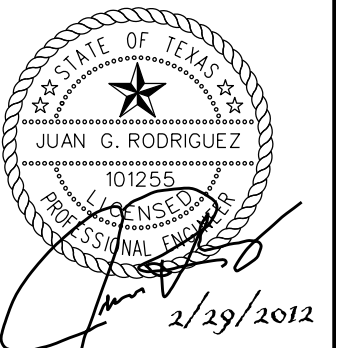
SAWS JOB NO. 10-7003
 CROSS MOUNTAIN TRAIL
 24" WATER TRANSMISSION MAIN
 PROJECT
 SITE LAYOUT

DRAWING NO.
SL1
3 OF 35



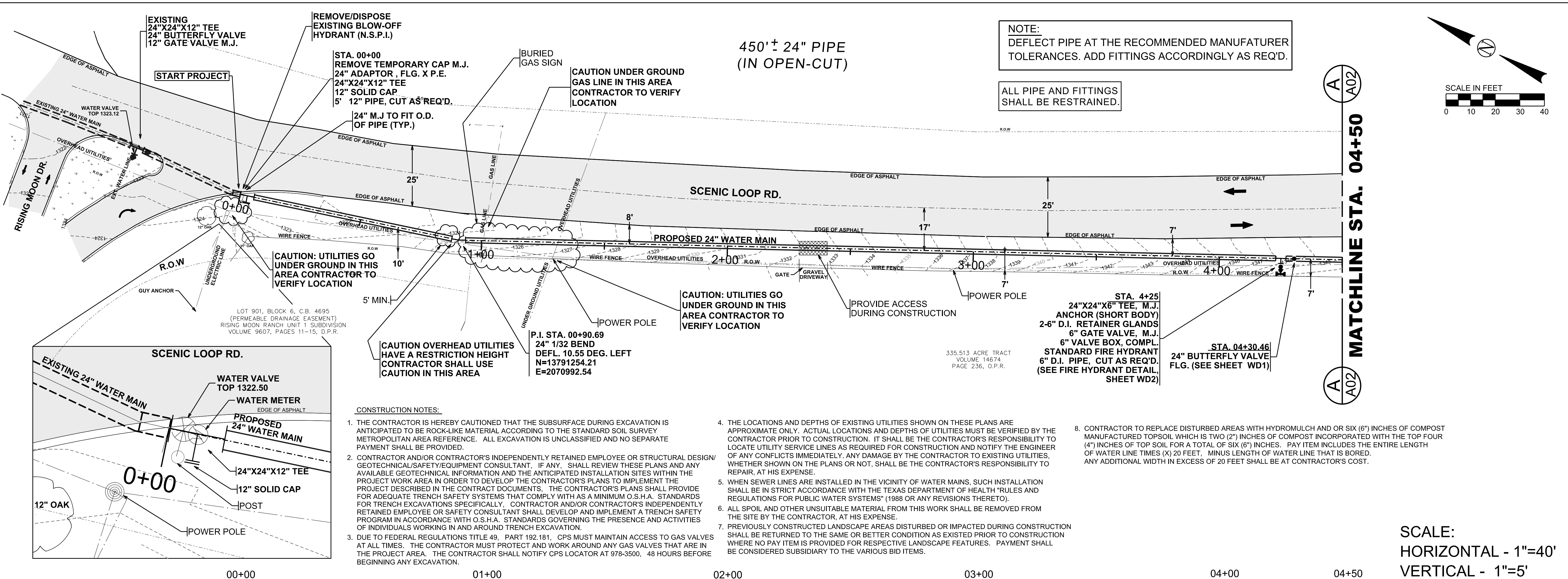
LEGEND	
⊙	IRON ROD FOUND
△	CONTROL POINT
□	SHEETS INDEX
—	PROPOSED WATER MAIN
●	BORING LOCATIONS

- NOTES:
- 1) THE ELEVATIONS FOR THIS SURVEY ARE BASED ON NAVD88 (GEOID03).
 - 2) COORDINATES ARE BASED ON NAD83. (CORS 1996), TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE, DISPLAYED IN SURFACE VALUES USING A SURFACE ADJUSTMENT FACTOR OF 1.00017.
 - 3) ILLUSTRATED UTILITIES ARE BASED ON FOUND VISIBLE EVIDENCE AND ON INFORMATION PROVIDED BY UTILITY COMPANIES AS A RESULT OF CONTRACTING DIG TESS. INFORMATION PROVIDED BY UTILITY COMPANIES IS NOT GUARANTEED TO BE ACCURATE. THE LOCATION AND DEPTH OF EXISTING UTILITIES SHOULD BE FIELD VERIFIED BEFORE CONSTRUCTION.
 - 4) REFER TO GEOTECHNICAL REPORT BY ARIAS AND ASSOCIATES (ARIAS JOB NO. 2011-797) FOR SURFACE STRATUM.



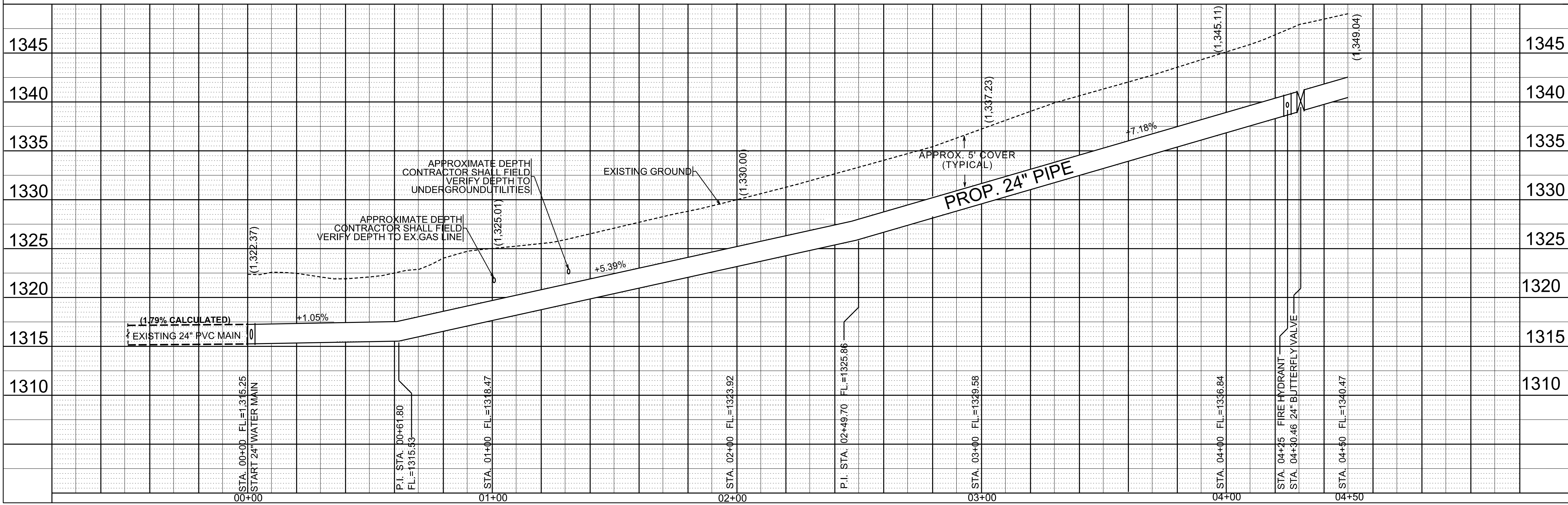
NOTE:
DEFLECT PIPE AT THE RECOMMENDED MANUFACTURER TOLERANCES. ADD FITTINGS ACCORDINGLY AS REQ'D.

ALL PIPE AND FITTINGS SHALL BE RESTRAINED.



- CONSTRUCTION NOTES:**
1. THE CONTRACTOR IS HEREBY CAUTIONED THAT THE SUBSURFACE DURING EXCAVATION IS ANTICIPATED TO BE ROCK-LIKE MATERIAL ACCORDING TO THE STANDARD SOIL SURVEY METROPOLITAN AREA REFERENCE. ALL EXCAVATION IS UNCLASSIFIED AND NO SEPARATE PAYMENT SHALL BE PROVIDED.
 2. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO DEVELOP THE CONTRACTOR'S PLANS TO IMPLEMENT THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S PLANS SHALL PROVIDE FOR ADEQUATE TRENCH SAFETY SYSTEMS THAT COMPLY WITH AS A MINIMUM O.S.H.A. STANDARDS FOR TRENCH EXCAVATIONS SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL DEVELOP AND IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH O.S.H.A. STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
 3. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA. THE CONTRACTOR SHALL NOTIFY CPS LOCATOR AT 978-3500, 48 HOURS BEFORE BEGINNING ANY EXCAVATION.
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 5. WHEN SEWER LINES ARE INSTALLED IN THE VICINITY OF WATER MAINS, SUCH INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE TEXAS DEPARTMENT OF HEALTH "RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS" (1988 OR ANY REVISIONS THERETO).
 6. ALL SPOIL AND OTHER UNSUITABLE MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, AT HIS EXPENSE.
 7. PREVIOUSLY CONSTRUCTED LANDSCAPE AREAS DISTURBED OR IMPACTED DURING CONSTRUCTION SHALL BE RETURNED TO THE SAME OR BETTER CONDITION AS EXISTED PRIOR TO CONSTRUCTION WHERE NO PAY ITEM IS PROVIDED FOR RESPECTIVE LANDSCAPE FEATURES. PAYMENT SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS.
 8. CONTRACTOR TO REPLACE DISTURBED AREAS WITH HYDROMULCH AND OR SIX (6") INCHES OF COMPOST MANUFACTURED TOPSOIL WHICH IS TWO (2") INCHES OF COMPOST INCORPORATED WITH THE TOP FOUR (4") INCHES OF TOP SOIL FOR A TOTAL OF SIX (6") INCHES. PAY ITEM INCLUDES THE ENTIRE LENGTH OF WATER LINE TIMES (X) 20 FEET, MINUS LENGTH OF WATER LINE THAT IS BORED. ANY ADDITIONAL WIDTH IN EXCESS OF 20 FEET SHALL BE AT CONTRACTOR'S COST.

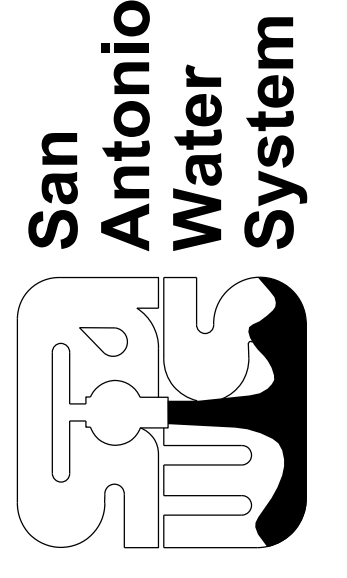
SCALE:
HORIZONTAL - 1"=40'
VERTICAL - 1"=5'



REVISIONS	No.	Description	Drn.	Approved	Date

LEGEND	Symbol	Description
—	Prop. Water Main	Prop. Water Main
- - -	Exist. Water Main	Exist. Water Main
- - -	Gas Main	Gas Main
- - -	Utility Pole Line	Utility Pole Line
- - -	Electric Cable	Electric Cable
- - -	Right-of-Way	Right-of-Way

Date: 12/22/2011
 Drawn by: TMJ
 Designed by: TMJ
 Checked by: JGR
 Scale: AS NOTED ABOVE
 Approved by: JGR
 Map No:

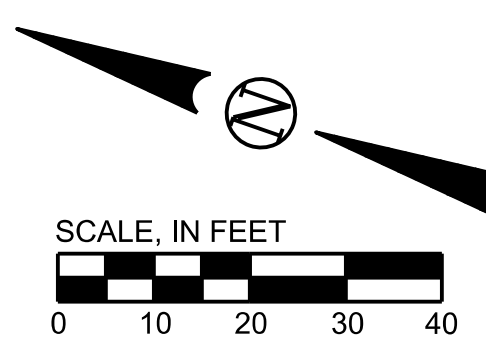


SAWS JOB NO. 10-7003
 CROSS MOUNTAIN TRAIL
 24" WATER TRANSMISSION MAIN
 PROJECT
 PLAN AND PROFILE DRAWING
 STA. 00+00 TO STA. 04+50

CONSTRUCTION NOTES:

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ALL PIPE AND FITTINGS SHALL BE RESTRAINED.



JOB NO.
10-7003

REVISIONS	
No.	Description

Date	Approved	Drn.

LEGEND

- PROP. WATER MAIN
- EXIST. WATER MAIN
- GAS MAIN
- UTILITY POLE LINE
- ELECTRIC CABLE
- RIGHT-OF-WAY

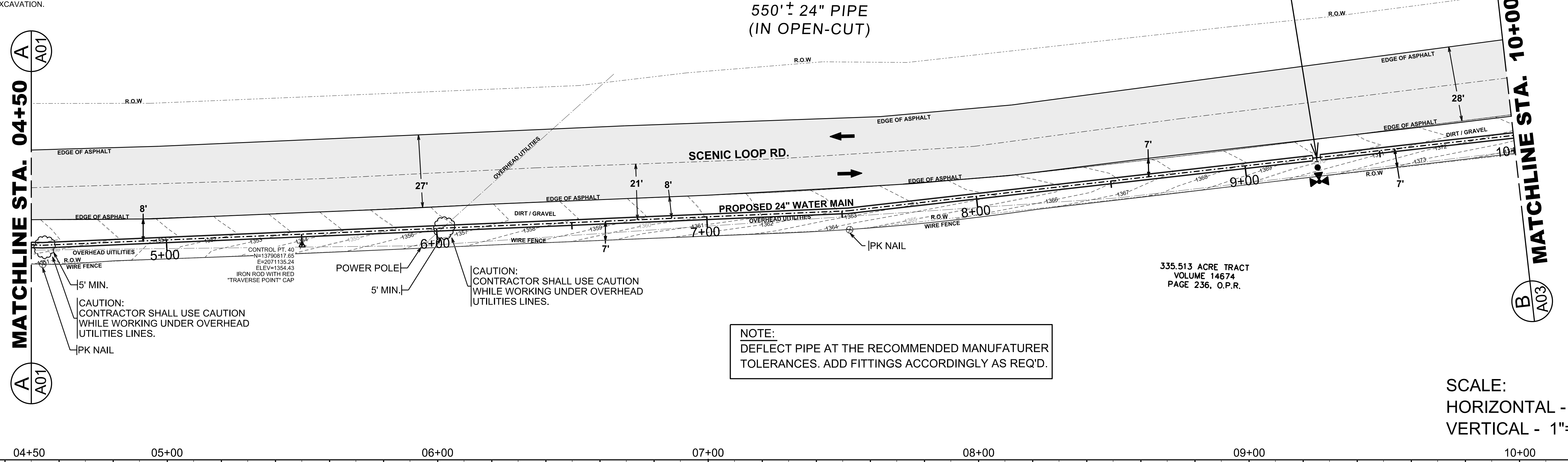
Date: 12/22/2011
 Drawn by: TMJ
 Designed by: TMJ
 Checked by: JGR
 Scale: AS NOTED ABOVE
 Approved by: JGR
 Map No:



SAWS JOB NO. 10-7003
 CROSS MOUNTAIN TRAIL
 24" WATER TRANSMISSION MAIN
 PROJECT

PLAN AND PROFILE DRAWING
 STA. 04+50 TO STA. 10+00

DRAWING NO.
A02
5 OF 35



NOTE:
DEFLECT PIPE AT THE RECOMMENDED MANUFACTURER TOLERANCES. ADD FITTINGS ACCORDINGLY AS REQ'D.

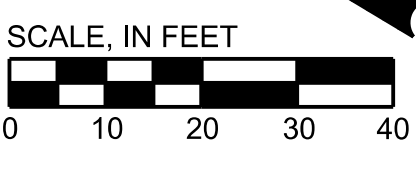
SCALE:
HORIZONTAL - 1"=20'
VERTICAL - 1"=5'



NOTE:
DEFLECT PIPE AT THE RECOMMENDED MANUFACTURER TOLERANCES. ADD FITTINGS ACCORDINGLY AS REQ'D.

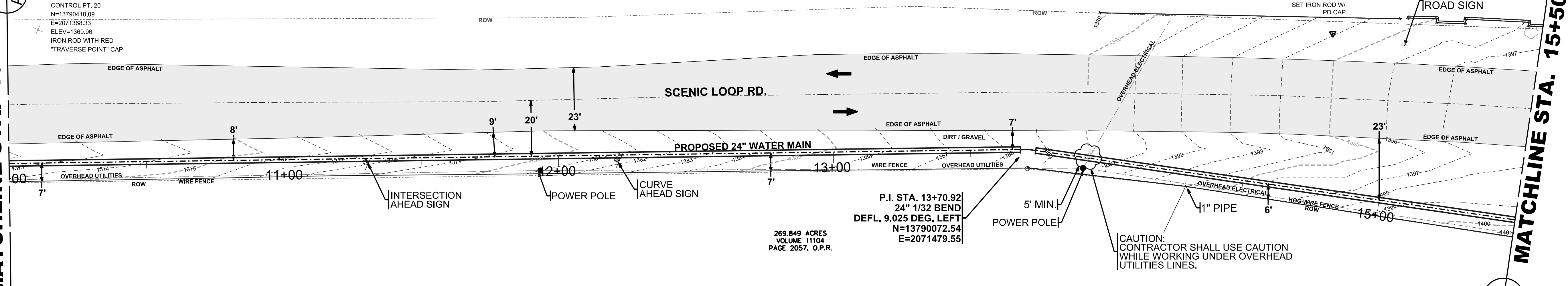
ALL PIPE AND FITTINGS SHALL BE RESTRAINED.

OWNER: BISHOP NORWOOD D & DIXIE M
LOT 96
CONTROL PT. 21
N=1378989.48
E=2071564.29
ELEV=1393.78
SET IRON ROD W/ PD CAP



MATCHLINE STA. 10+00

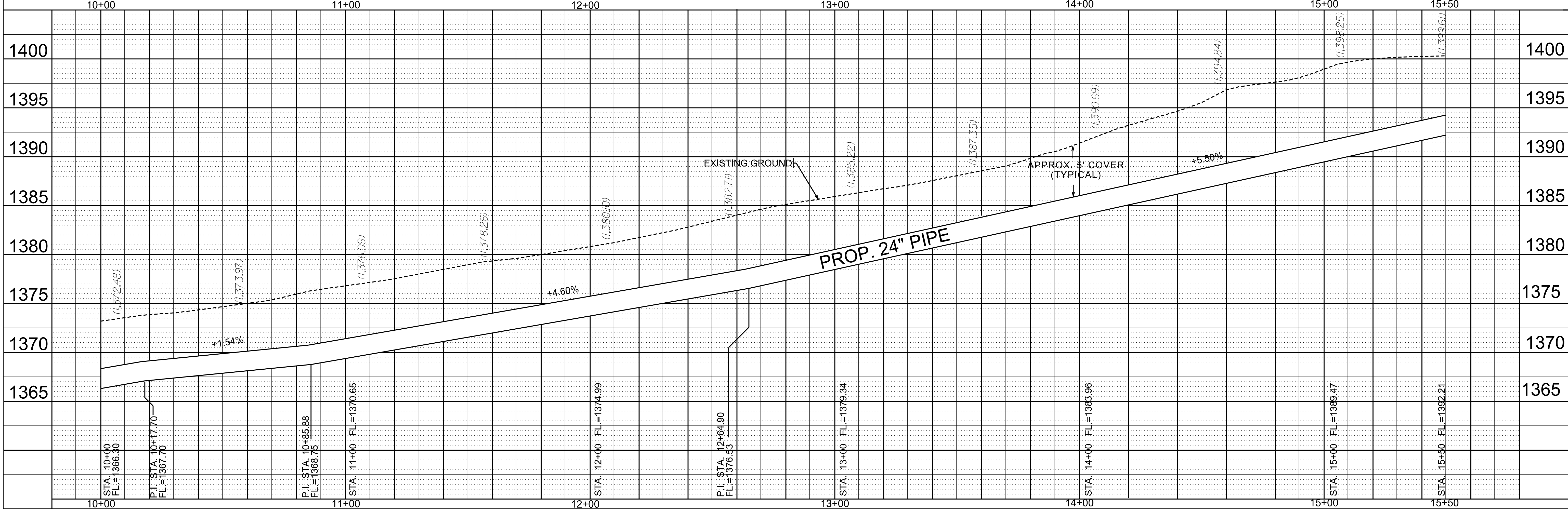
MATCHLINE STA. 15+50



CONSTRUCTION NOTES:

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SCALE:
HORIZONTAL - 1"=20'
VERTICAL - 1"=5'



JOB NO.
10-7003

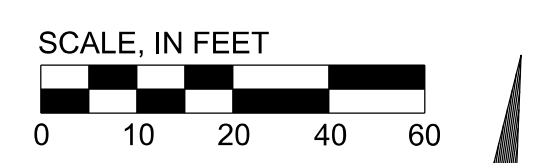
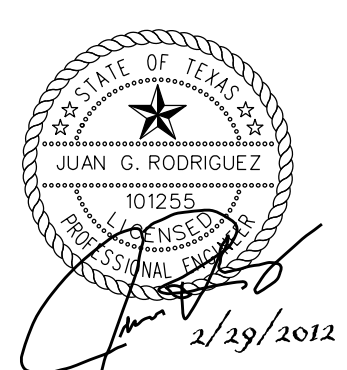
DATE: 05/02/2011
DRAWN BY: TMJ
DESIGNED BY: TMJ
CHECKED BY: JGR
SCALE: AS NOTED ABOVE
APPROVED BY: JGR
MAP NO.:

San Antonio Water System

SAWS JOB NO. 10-7003
CROSS MOUNTAIN TRAIL
24" WATER TRANSMISSION MAIN
PROJECT

PLAN AND PROFILE DRAWING
STA. 10+00 TO STA. 15+50

DRAWING NO.
A03
6 OF 35



NOTE:
DEFLECT PIPE AT THE RECOMMENDED MANUFACTURER TOLERANCES. ADD FITTINGS ACCORDINGLY AS REQ'D.

ALL PIPE AND FITTINGS SHALL BE RESTRAINED

STA.17+36 TO STA.17+79
BORE UNDER CROSS MT. TRAIL. INSTALL 32' OF 24" PIPE IN 42" I.D. MAX. STEEL CASING (SEE DETAIL, SHEET MD2).

436' ± 24" PIPE (IN OPEN-CUT)

P.I. STA. 18+87.52
24" VERTICAL BEND
DEFL. 1.37 DEG. RIGHT
N=13789960.26
E=2071805.82

STA.19+28 TO STA.19+60
BORE UNDER CROSS MT. TRAIL. INSTALL 32' OF 24" PIPE IN 42" I.D. MAX. STEEL CASING (SEE DETAIL, SHEET MD2).

P.I. STA. 13+70.92
24" VERTICAL BEND
DEFL. 6.58 DEG. RIGHT
N=1378989974.65
E=2071876.91

P.I. STA. 13+70.92
24" VERTICAL BEND
DEFL. 4.26 DEG. RIGHT
N=1378989993.06
E=20718975.77

OWNER: HALEY STEVEN P & YONG HUI
LOT 97

REMOVE / REPLACE EX. CONCRETE DITCH (1350 SQ FT)

STA. 20+91.30
24"X24"X6" TEE, M.J. ANCHOR (SHORT BODY)
2-6" D.I. RETAINER GLANDS
6" VALVE BOX, COMPL. STANDARD FIRE HYDRANT
6" D.I. PIPE, CUT AS REQ'D. (SEE FIRE HYDRANT DETAIL, SHEET WD2)

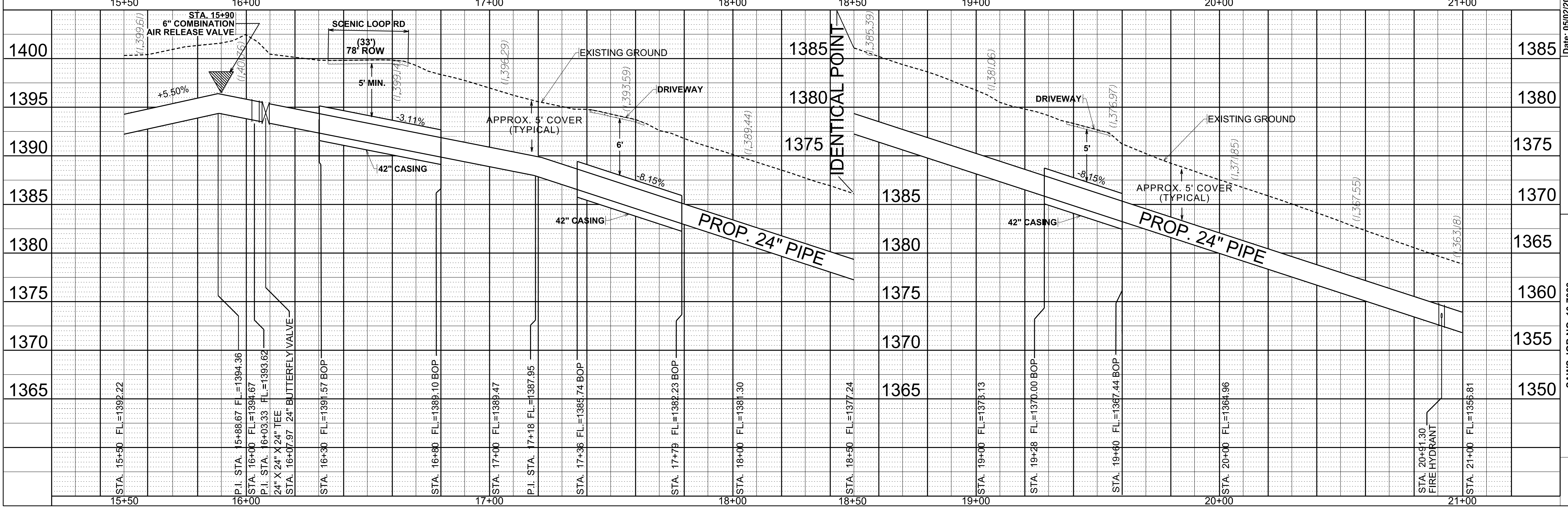
P.I. STA. 18+86.27
24" 1/32 BEND
DEFL. 14.24 DEG. LEFT
N=13789873.42
E=2071626.16

CONSTRUCTION NOTES:

1. THE CONTRACTOR IS HEREBY CAUTIONED THAT THE SUBSURFACE DURING EXCAVATION IS ANTICIPATED TO BE ROCK-LIKE MATERIAL ACCORDING TO THE STANDARD SOIL SURVEY METROPOLITAN AREA REFERENCE. ALL EXCAVATION IS UNCLASSIFIED AND NO SEPARATE PAYMENT SHALL BE PROVIDED.
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6. ALL SPOIL AND OTHER UNSUITABLE MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, AT HIS EXPENSE.
7. PREVIOUSLY CONSTRUCTED LANDSCAPE AREAS DISTURBED OR IMPACTED DURING CONSTRUCTION SHALL BE RETURNED TO THE SAME OR BETTER CONDITION AS EXISTED PRIOR TO CONSTRUCTION WHERE NO PAY ITEM IS PROVIDED FOR RESPECTIVE LANDSCAPE FEATURES. PAYMENT SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS.
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9. BORE PIT DIMENSIONS MAY VARY DUE TO EXISTING SITE CONDITIONS.

SCALE:
HORIZONTAL - 1"=20'
VERTICAL - 1"=5'



Revisions	No.	Description	Date	Approved

Legend	Symbol	Description
—	—	PROP. WATER MAIN
—	—	EXIST. WATER MAIN
—	—	GAS MAIN
—	—	UTILITY POLE LINE
—	—	ELECTRIC CABLE
—	—	RIGHT-OF-WAY

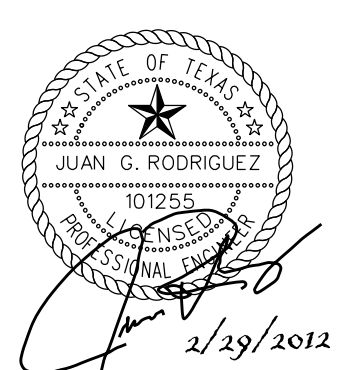
Date: 05/02/2011
 Drawn by: TMJ
 Designed by: JR
 Checked by: JR
 Scale: AS NOTED ABOVE
 Approved by: JR
 Map No:

San Antonio Water System

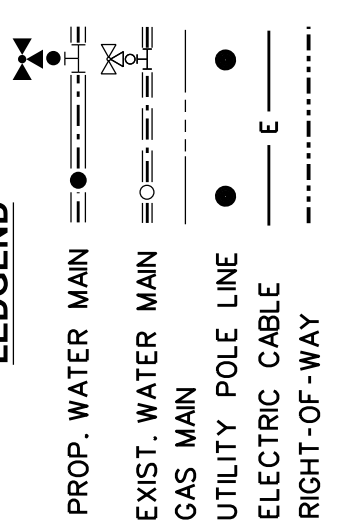
SAWS JOB NO. 10-7003
 CROSS MOUNTAIN TRAIL
 24" WATER TRANSMISSION MAIN
 PROJECT

PLAN AND PROFILE DRAWING
 STA. 15+50 TO STA. 21+00

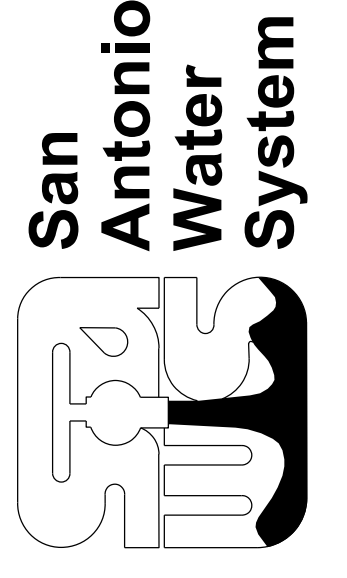
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A04
7 OF 35



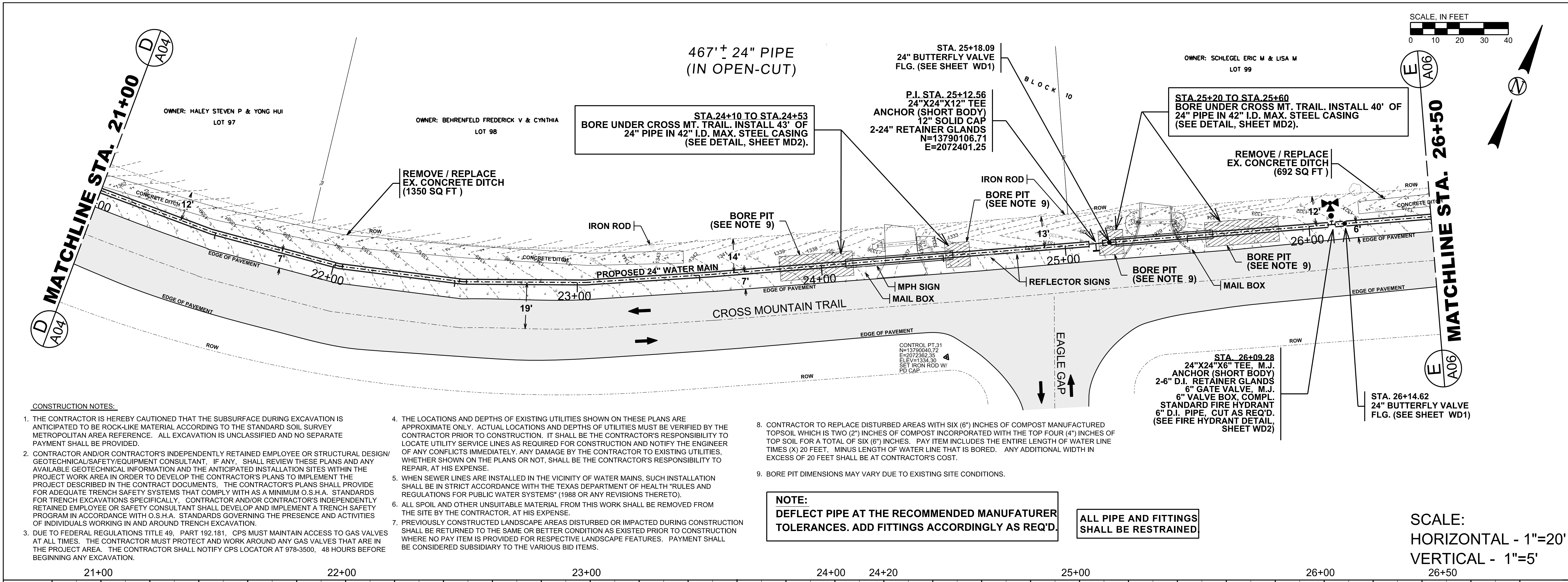
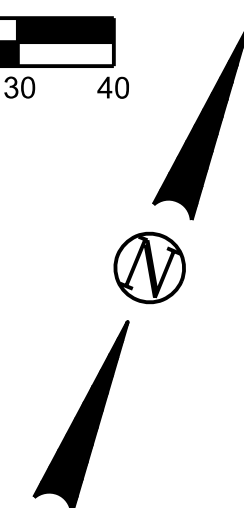
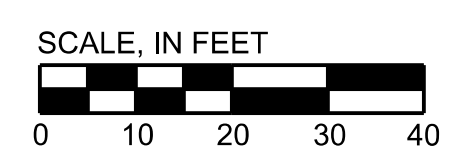
No.	Description	Dr.	Appr.	Date



Date: 12/13/2011
 Drawn by: TMJ
 Designed by: TMJ
 Checked by: JGR
 Scale: AS NOTED ABOVE
 Approved by: JGR
 Map No:



SAWS JOB NO. 10-7003
 CROSS MOUNTAIN TRAIL
 24" WATER TRANSMISSION MAIN
 PROJECT

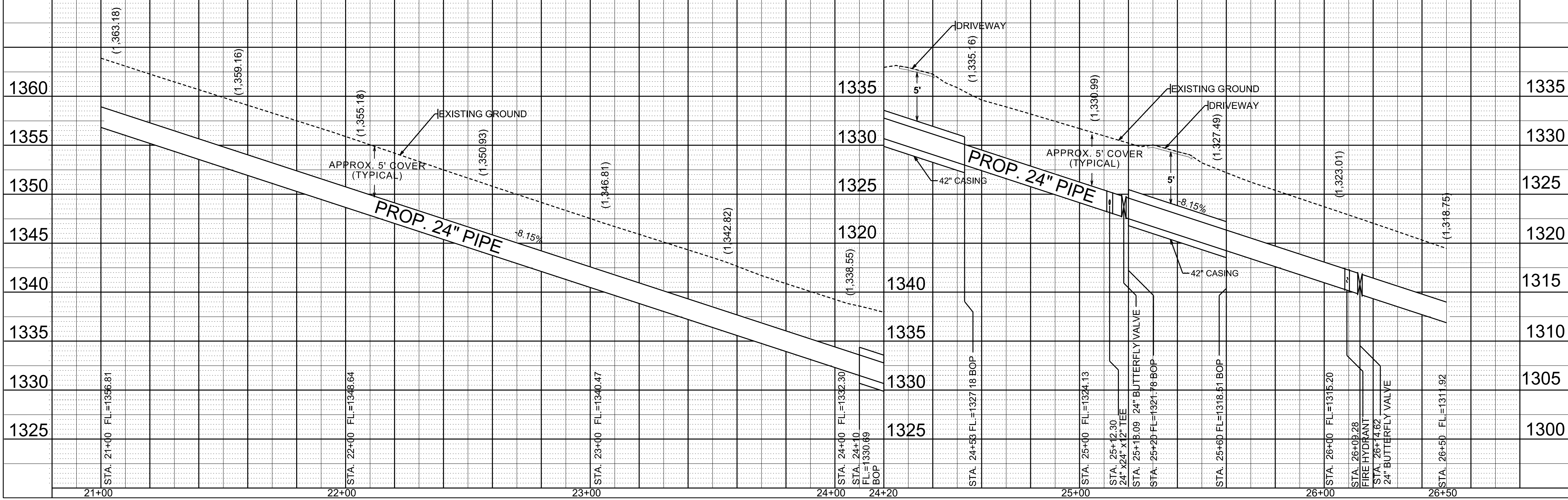


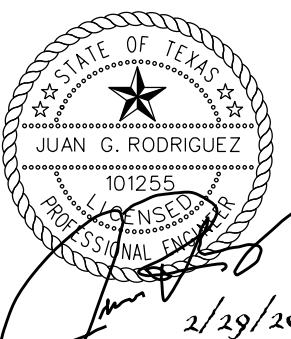
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ALL PIPE AND FITTINGS SHALL BE RESTRAINED

SCALE:
 HORIZONTAL - 1"=20'
 VERTICAL - 1"=5'

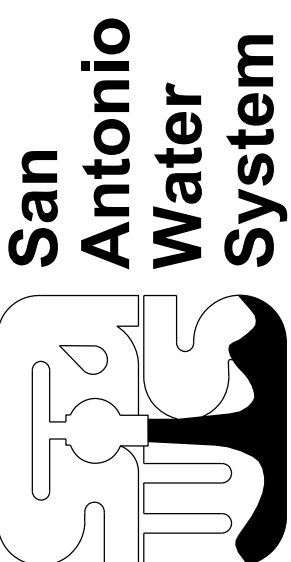




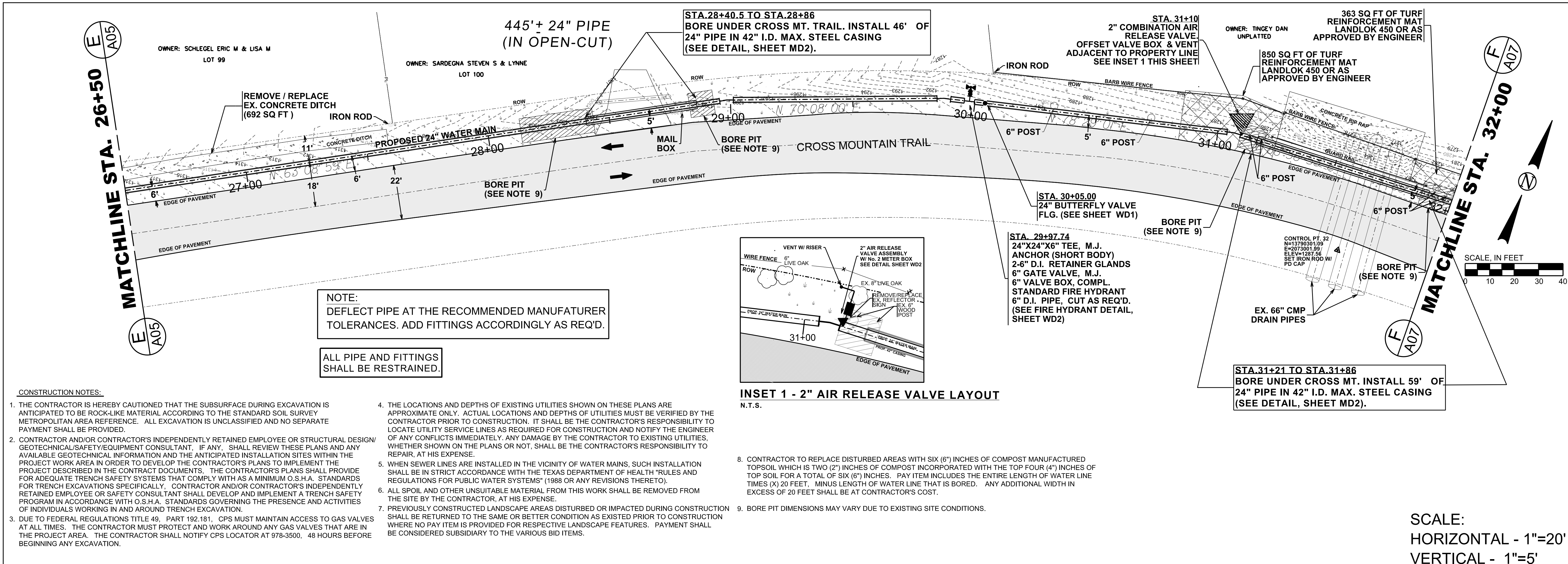
No.	Description	Drn.	Approved	Date

LEGEND	
	PROP. WATER MAIN
	EXIST. WATER MAIN
	GAS MAIN
	UTILITY POLE LINE
	ELECTRIC CABLE
	RIGHT-OF-WAY

Date: 12/22/2011
 Drawn by: TMJ
 Designed by: JGR
 Checked by: JGR
 Scale: AS NOTED ABOVE
 Approved by: JGR
 Map No:

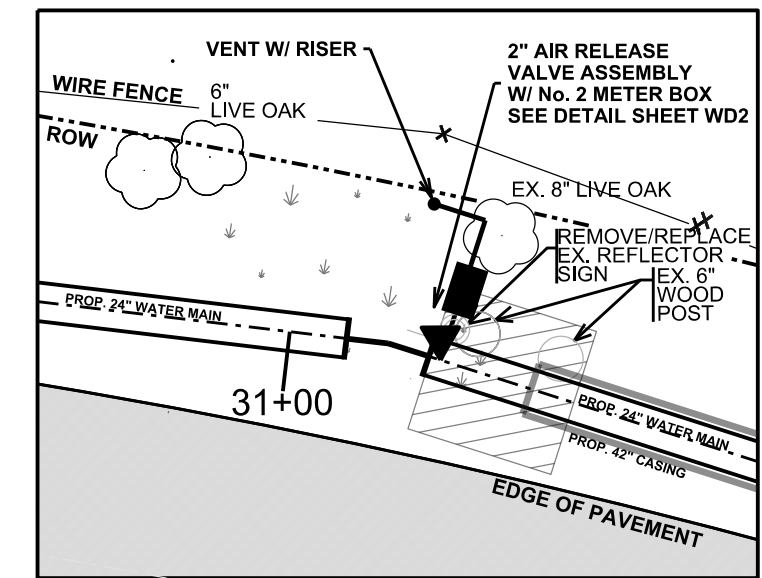


SAWS JOB NO. 10-7003
 CROSS MOUNTAIN TRAIL
 24" WATER TRANSMISSION MAIN
 PROJECT
 PLAN AND PROFILE DRAWING
 STA. 26+50 TO STA. 32+00



NOTE:
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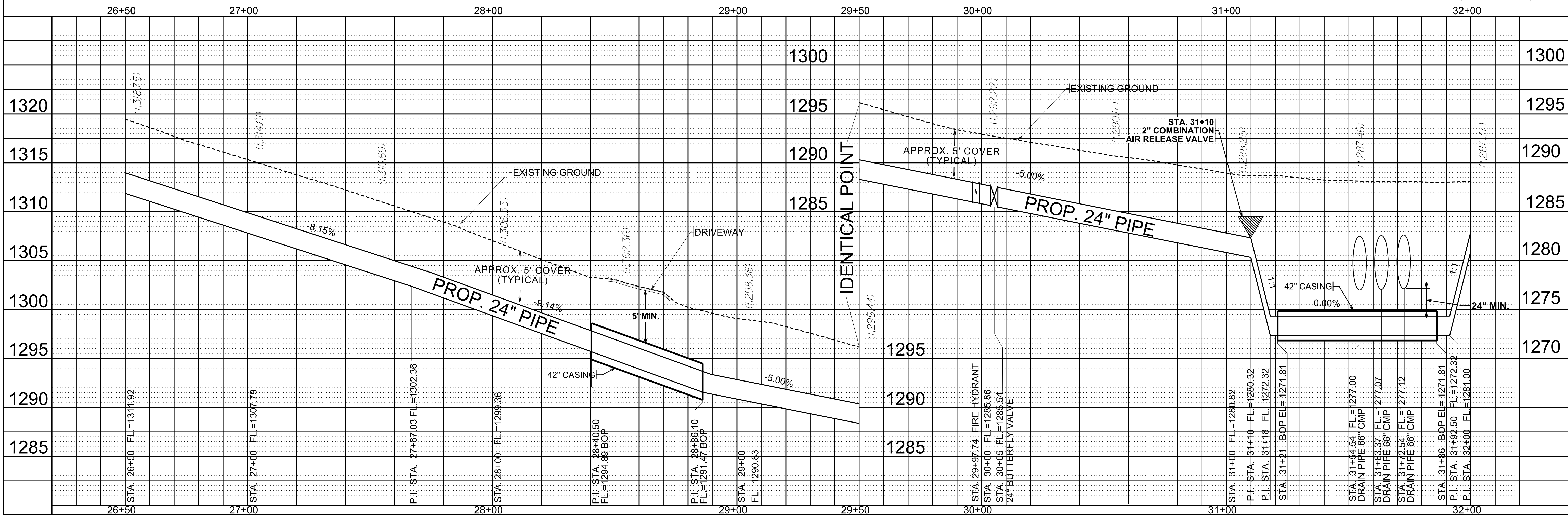
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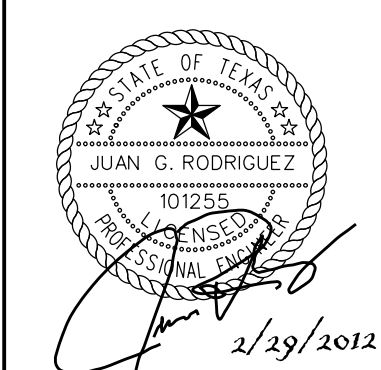
INSET 1 - 2" AIR RELEASE VALVE LAYOUT
N.T.S.

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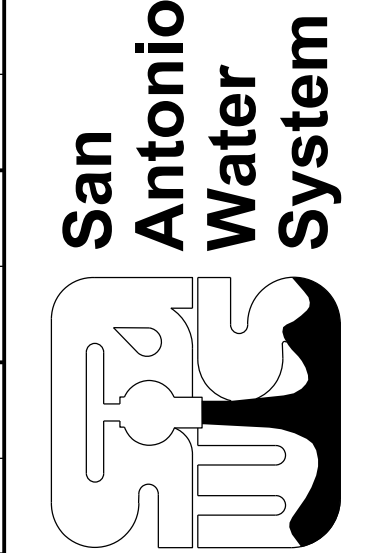


No.	Description	Drn.	Approved	Date

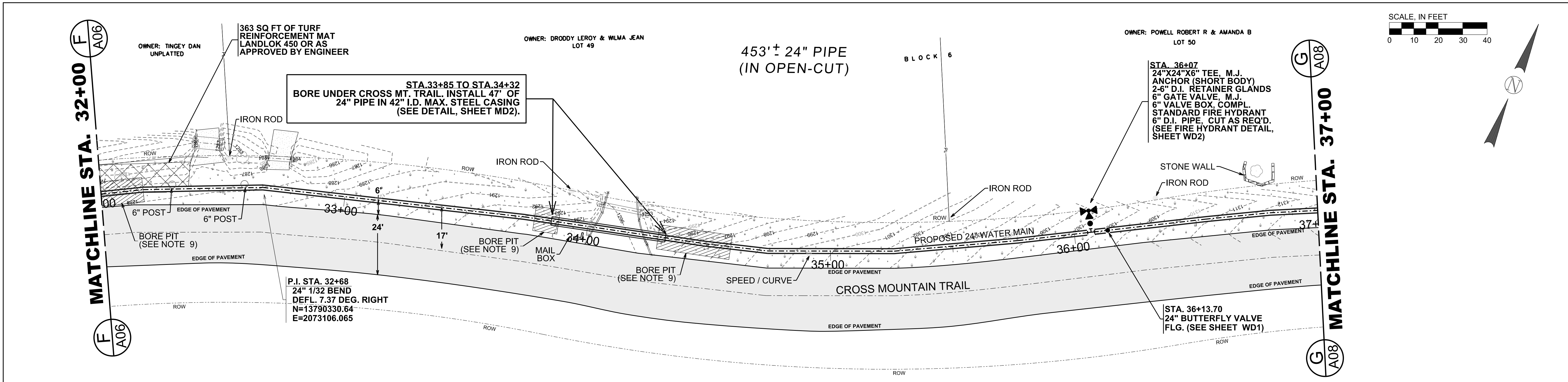
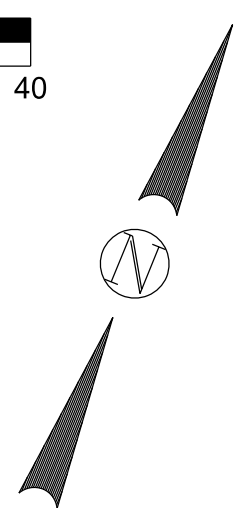
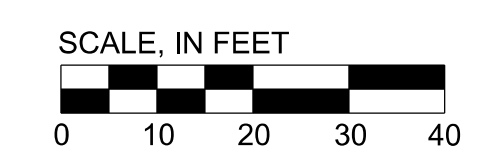
LEGEND

	PROP. WATER MAIN
	EXIST. WATER MAIN
	GAS MAIN
	UTILITY POLE LINE
	ELECTRIC CABLE
	RIGHT-OF-WAY

Date: 12/22/2011
 Drawn by: TMJ
 Designed by: TMJ
 Checked by: JGR
 Scale: AS NOTED ABOVE
 Approved by: JGR
 Map No:



SAWS JOB NO. 10-7003
 CROSS MOUNTAIN TRAIL
 24" WATER TRANSMISSION MAIN
 PROJECT
 PLAN AND PROFILE DRAWING
 STA. 32+00 TO STA. 37+00



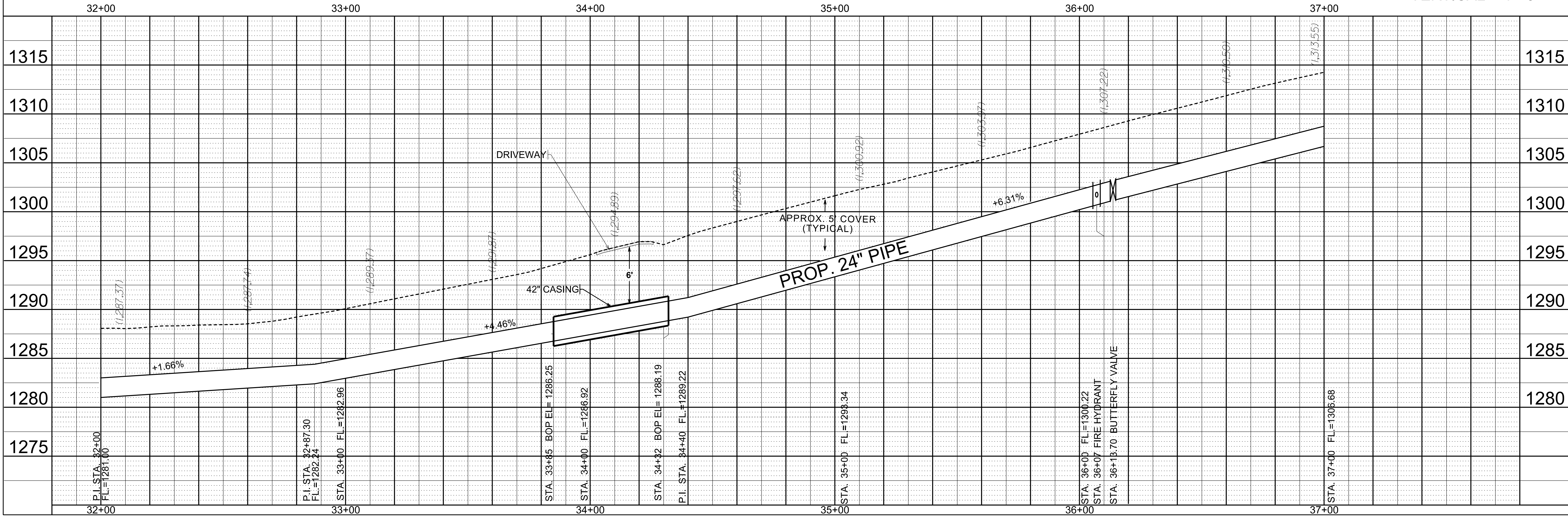
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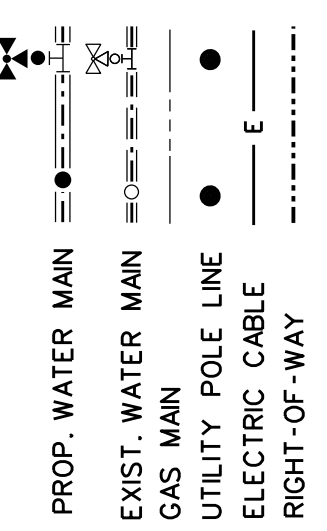
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SCALE:
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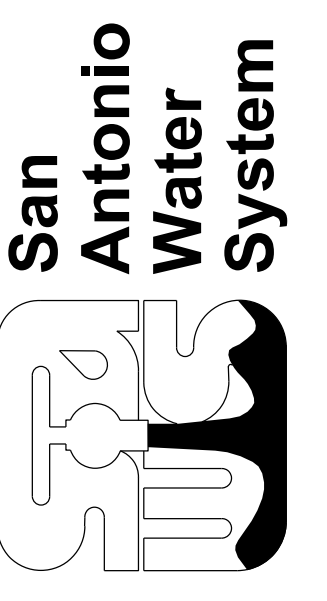




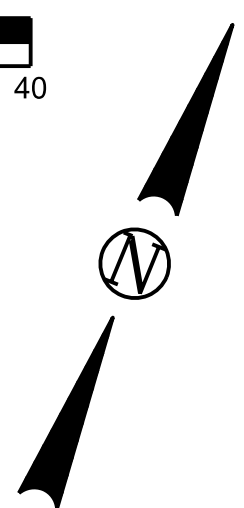
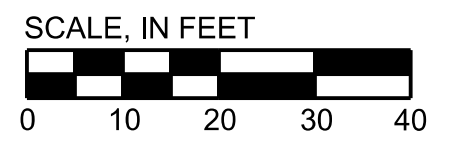
No.	Description	Drn.	Approved	Date



Date: 12/22/2011
 Drawn by: TMJ
 Designed by: TMJ
 Checked by: JGR
 Scale: AS NOTED ABOVE
 Approved by: JGR
 Map No:



SAWS JOB NO. 10-7003
 CROSS MOUNTAIN TRAIL
 24" WATER TRANSMISSION MAIN
 PROJECT
 PLAN AND PROFILE DRAWING
 STA. 37+00 TO STA. 42+00



371'± 24" PIPE
(IN OPEN-CUT)

OWNER: POWELL ROBERT R & AMANDA B
LOT 50

OWNER: HAYGOOD RONALD L & KATHY L
LOT 51

792 SQ FT OF TURF
REINFORCEMENT MAT
LANDLOK 450 OR AS
APPROVED BY ENGINEER

STA. 41+75
24" X 12" CROSS
2-12" SOLID CAP
24" BUTTERFLY
VALVE
SEE ASSEMBLY
DETAILS
SHEET WD1
10' OF 24" PIPE

STA. 37+49 TO STA. 38+06
BORE UNDER CROSS MT. TRAIL. INSTALL 57' OF
24" PIPE IN 42" I.D. MAX. STEEL CASING
(SEE DETAIL, SHEET MD2).

STA. 41+00 TO STA. 41+72
BORE UNDER CROSS MT. TRAIL. INSTALL 72' OF
24" PIPE IN 42" I.D. MAX. STEEL CASING
(SEE DETAIL, SHEET MD2).

STA. 40+90
24" BUTTERFLY VALVE
FLG. (SEE SHEET WD1)

STA. 40+95
24" X 24" X 6" TEE, M.J.
ANCHOR (SHORT BODY)
2-6" D.I. RETAINER GLANDS
6" GATE VALVE, M.J.
6" VALVE BOX, COMPL.
STANDARD FIRE HYDRANT
6" D.I. PIPE, CUT AS REQ'D.
(SEE FIRE HYDRANT DETAIL,
SHEET WD2)

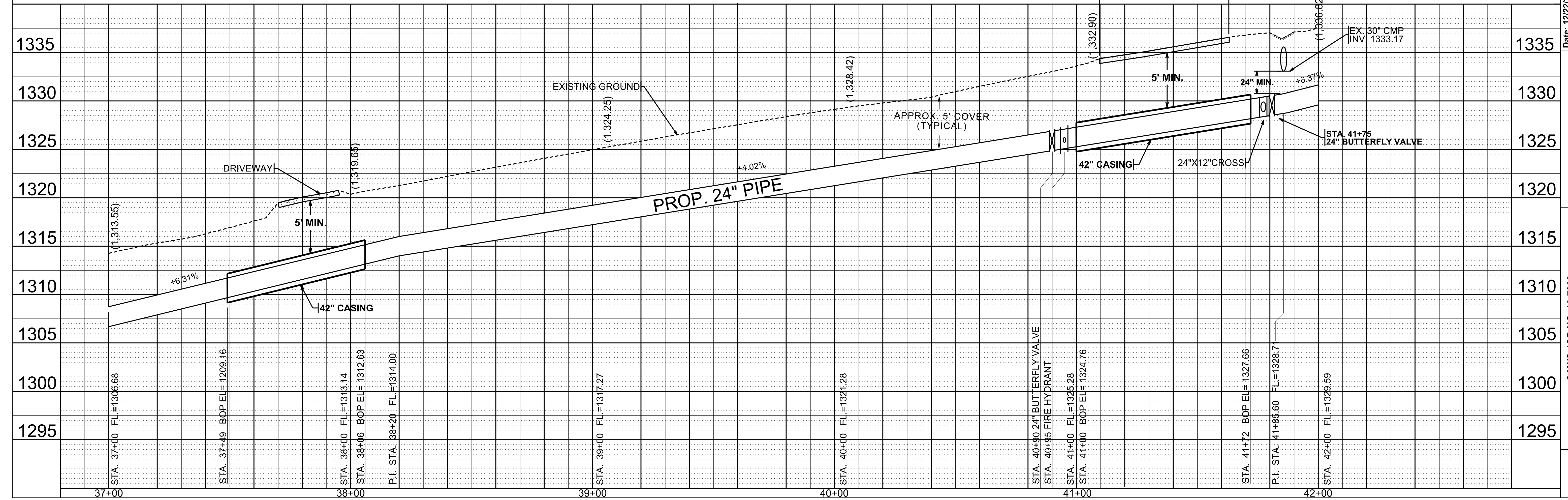
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TOLERANCES. ADD FITTINGS ACCORDINGLY AS REQ'D.

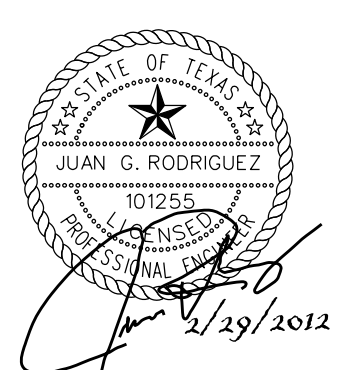
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CONSTRUCTION NOTES:

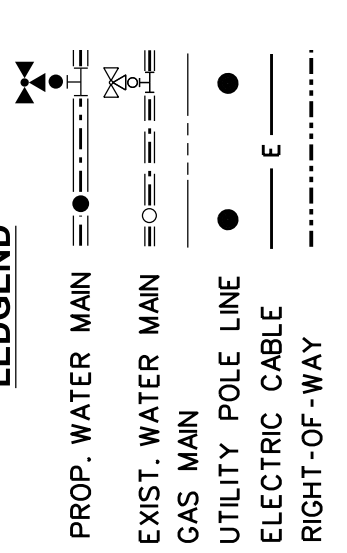
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- WHEN SEWER LINES ARE INSTALLED IN THE VICINITY OF WATER MAINS, SUCH INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE TEXAS DEPARTMENT OF HEALTH "RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS" (1988 OR ANY REVISIONS THERETO).
- ALL SPOIL AND OTHER UNSUITABLE MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, AT HIS EXPENSE.
- PREVIOUSLY CONSTRUCTED LANDSCAPE AREAS DISTURBED OR IMPACTED DURING CONSTRUCTION SHALL BE RETURNED TO THE SAME OR BETTER CONDITION AS EXISTED PRIOR TO CONSTRUCTION WHERE NO PAY ITEM IS PROVIDED FOR RESPECTIVE LANDSCAPE FEATURES. PAYMENT SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS.
- CONTRACTOR TO REPLACE DISTURBED AREAS WITH SIX (6") INCHES OF COMPOST MANUFACTURED TOPSOIL WHICH IS TWO (2") INCHES OF COMPOST INCORPORATED WITH THE TOP FOUR (4") INCHES OF TOP SOIL FOR A TOTAL OF SIX (6") INCHES. PAY ITEM INCLUDES THE ENTIRE LENGTH OF WATER LINE TIMES (X) 20 FEET, MINUS LENGTH OF WATER LINE THAT IS BORED. ANY ADDITIONAL WIDTH IN EXCESS OF 20 FEET SHALL BE AT CONTRACTOR'S COST.
- BORE PIT DIMENSIONS MAY VARY DUE TO EXISTING SITE CONDITIONS.

SCALE:
HORIZONTAL - 1"=20'
VERTICAL - 1"=5'





No.	Description	Drn.	Approved	Date



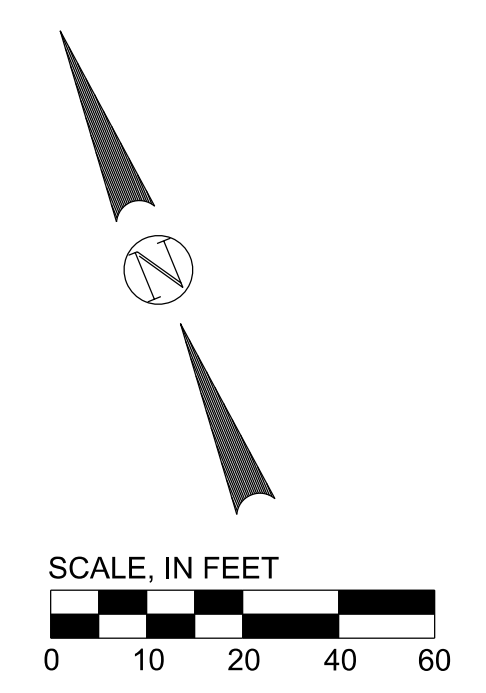
Date: 12/22/2011
 Drawn by: TMJ
 Designed by: TMJ
 Checked by: JGR
 Scale: AS NOTED ABOVE
 Approved by: JGR
 Map No:



SAWS JOB NO. 10-7003
 CROSS MOUNTAIN TRAIL
 24" WATER TRANSMISSION MAIN
 PROJECT
 PLAN AND PROFILE DRAWING
 STA. 42+00 TO STA. 47+00

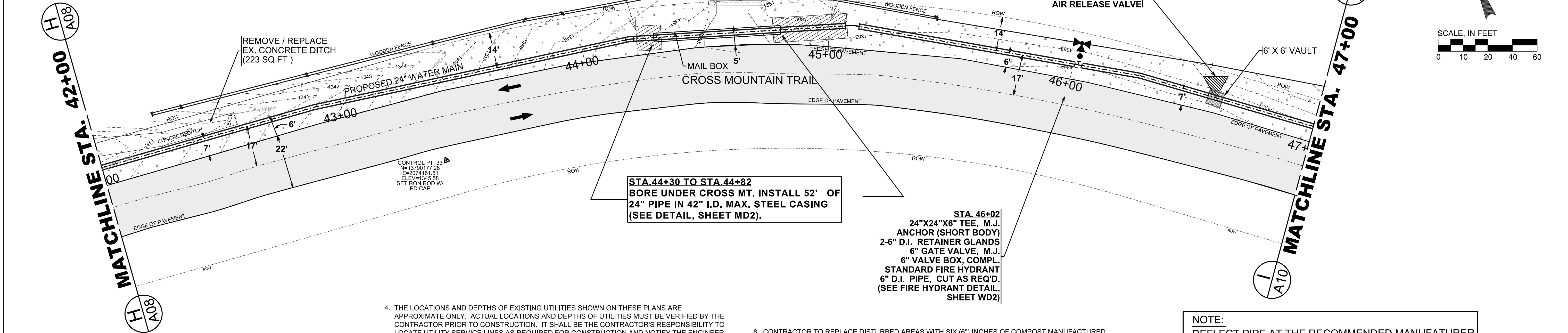
**448" ± 24" PIPE
(IN OPEN-CUT)**

OWNER: TOWELL BRIAN
LOT 63



CONSTRUCTION NOTES:
 1. THE CONTRACTOR IS HEREBY CAUTIONED THAT THE SUBSURFACE DURING EXCAVATION IS ANTICIPATED TO BE ROCK-LIKE MATERIAL ACCORDING TO THE STANDARD SOIL SURVEY METROPOLITAN AREA REFERENCE. ALL EXCAVATION IS UNCLASSIFIED AND NO SEPARATE PAYMENT SHALL BE PROVIDED.

OWNER: TOWELL BRIAN D & MARY L
LOT 52



**STA. 44+30 TO STA. 44+82
BORE UNDER CROSS MT. INSTALL 52' OF
24" PIPE IN 42" I.D. MAX. STEEL CASING
(SEE DETAIL, SHEET MD2).**

**STA. 46+02
24"X24"X6" TEE, M.J.
ANCHOR (SHORT BODY)
2-6" D.I. RETAINER GLANDS
6" GATE VALVE, M.J.
6" VALVE BOX, COMPL.
STANDARD FIRE HYDRANT
6" D.I. PIPE, CUT AS REQ'D.
(SEE FIRE HYDRANT DETAIL,
SHEET WD2)**

**NOTE:
DEFLECT PIPE AT THE RECOMMENDED MANUFACTURER
TOLERANCES. ADD FITTINGS ACCORDINGLY AS REQ'D.**

**ALL PIPE AND FITTINGS
SHALL BE RESTRAINED.**

2. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO DEVELOP THE CONTRACTOR'S PLANS TO IMPLEMENT THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S PLANS SHALL PROVIDE FOR ADEQUATE TRENCH SAFETY SYSTEMS THAT COMPLY WITH AS A MINIMUM O.S.H.A. STANDARDS FOR TRENCH EXCAVATIONS SPECIFICALLY. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL DEVELOP AND IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH O.S.H.A. STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

3. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA. THE CONTRACTOR SHALL NOTIFY CPS LOCATOR AT 978-3500, 48 HOURS BEFORE BEGINNING ANY EXCAVATION.

4. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS OF UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY CONFLICTS IMMEDIATELY. ANY DAMAGE BY THE CONTRACTOR TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.

5. WHEN SEWER LINES ARE INSTALLED IN THE VICINITY OF WATER MAINS, SUCH INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE TEXAS DEPARTMENT OF HEALTH "RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS" (1988 OR ANY REVISIONS THERETO).

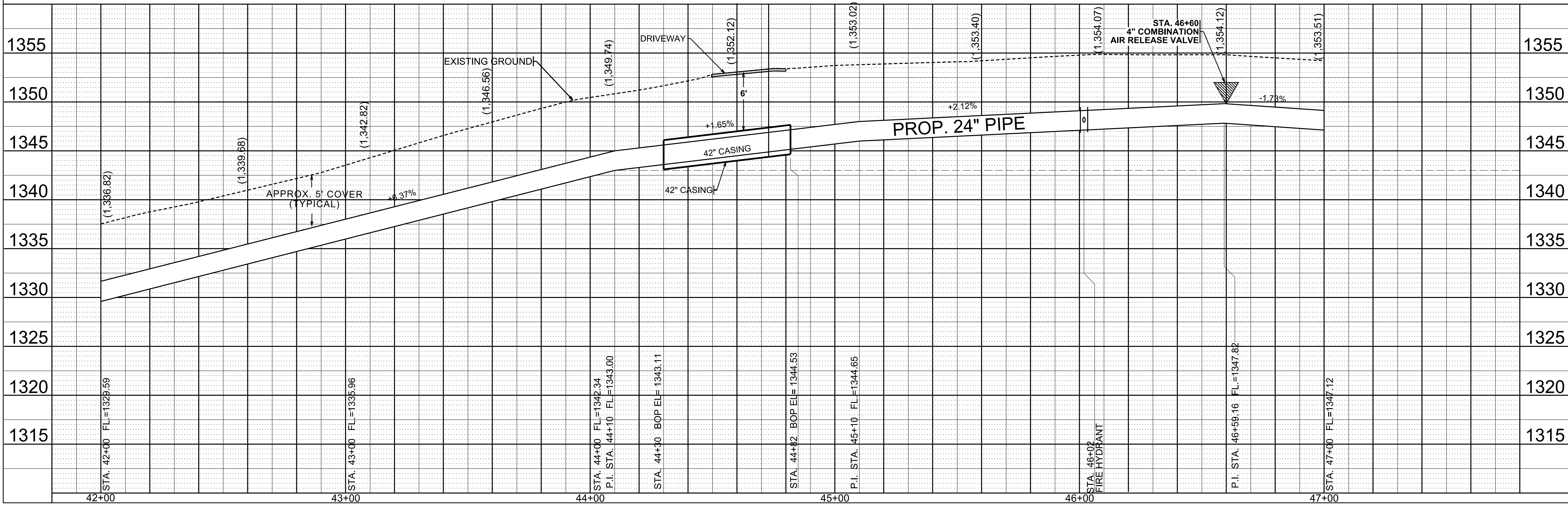
6. ALL SPOIL AND OTHER UNSUITABLE MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, AT HIS EXPENSE.

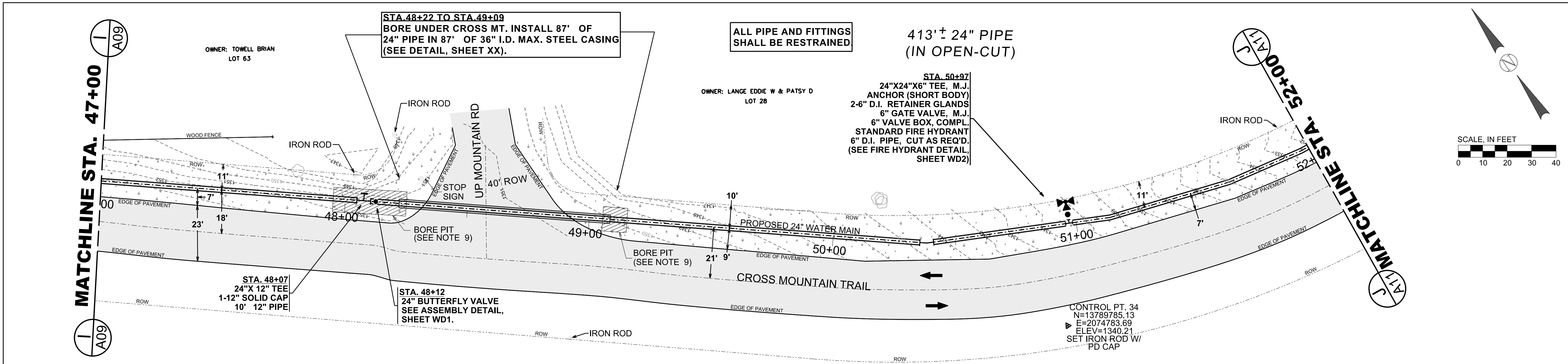
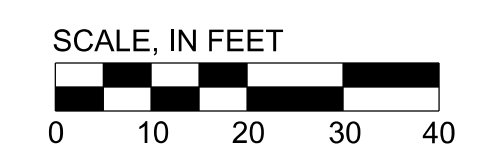
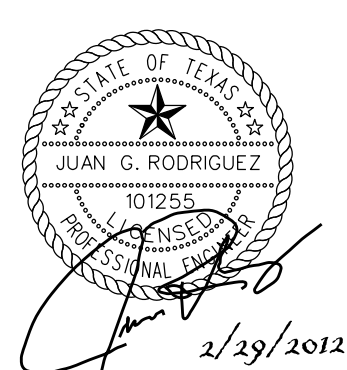
7. PREVIOUSLY CONSTRUCTED LANDSCAPE AREAS DISTURBED OR IMPACTED DURING CONSTRUCTION SHALL BE RETURNED TO THE SAME OR BETTER CONDITION AS EXISTED PRIOR TO CONSTRUCTION WHERE NO PAY ITEM IS PROVIDED FOR RESPECTIVE LANDSCAPE FEATURES. PAYMENT SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS.

8. CONTRACTOR TO REPLACE DISTURBED AREAS WITH SIX (6") INCHES OF COMPOST MANUFACTURED TOPSOIL WHICH IS TWO (2") INCHES OF COMPOST INCORPORATED WITH THE TOP FOUR (4") INCHES OF TOP SOIL FOR A TOTAL OF SIX (6") INCHES. PAY ITEM INCLUDES THE ENTIRE LENGTH OF WATER LINE TIMES (X) 20 FEET, MINUS LENGTH OF WATER LINE THAT IS BORED. ANY ADDITIONAL WIDTH IN EXCESS OF 20 FEET SHALL BE AT CONTRACTOR'S COST.

9. BORE PIT DIMENSIONS MAY VARY DUE TO EXISTING SITE CONDITIONS.

**SCALE:
HORIZONTAL - 1"=20'
VERTICAL - 1"=5'**





ALL PIPE AND FITTINGS SHALL BE RESTRAINED

413' ± 24" PIPE (IN OPEN-CUT)

STA. 50+97
24"X24"X6" TEE, M.J. ANCHOR (SHORT BODY)
2-6" D.I. RETAINER GLANDS
6" GATE VALVE, M.J.
6" VALVE BOX, COMPL.
STANDARD FIRE HYDRANT
6" D.I. PIPE, CUT AS REQ'D.
(SEE FIRE HYDRANT DETAIL, SHEET WD2)

STA. 48+22 TO STA. 49+09
BORE UNDER CROSS MT. INSTALL 87' OF
24" PIPE IN 87' OF 36" I.D. MAX. STEEL CASING
(SEE DETAIL, SHEET XX).

OWNER: TOWELL BRIAN
LOT 63

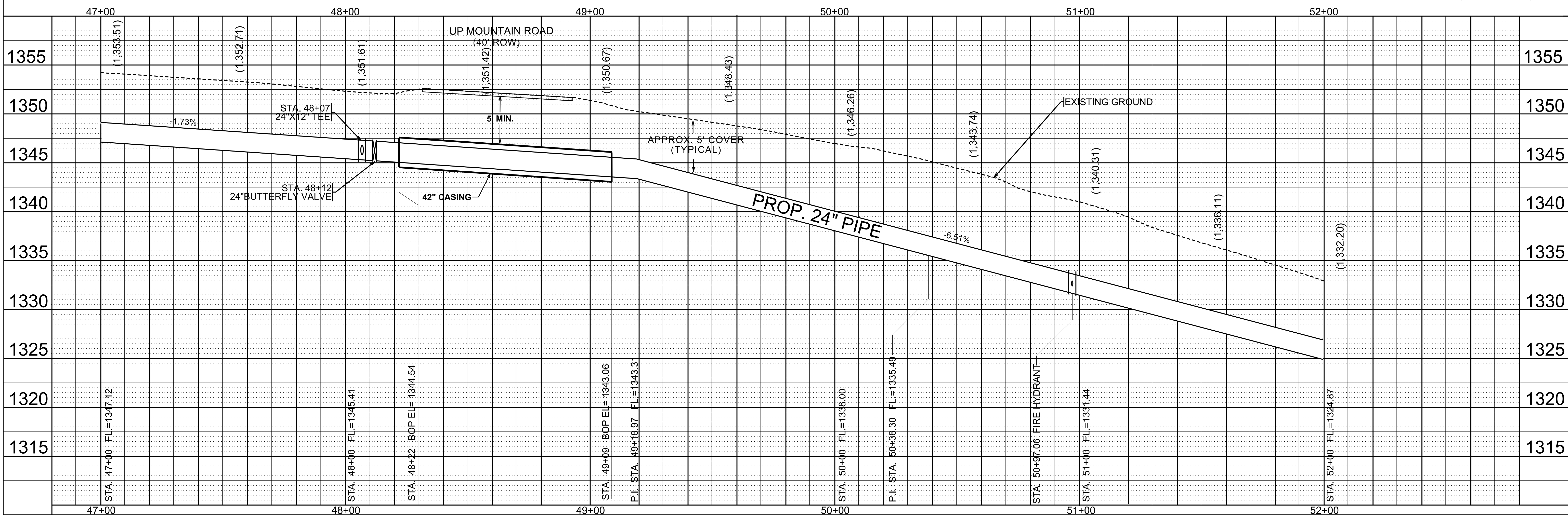
OWNER: LANGE EDDIE W & PATSY D
LOT 28

CONSTRUCTION NOTES:

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- BORE PIT DIMENSIONS MAY VARY DUE TO EXISTING SITE CONDITIONS.

NOTE:
DEFLECT PIPE AT THE RECOMMENDED MANUFACTURER TOLERANCES. ADD FITTINGS ACCORDINGLY AS REQ'D.

SCALE:
HORIZONTAL - 1"=20'
VERTICAL - 1"=5'

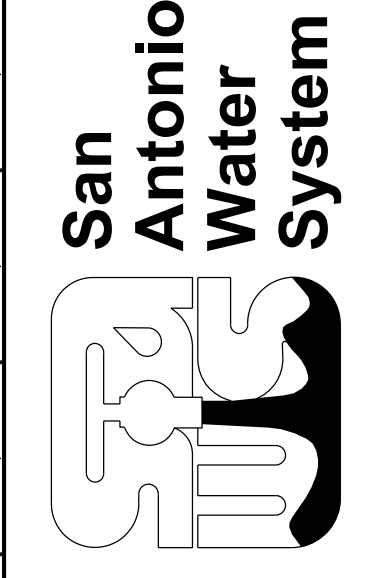


No.	Description	Drn.	Approved	Date

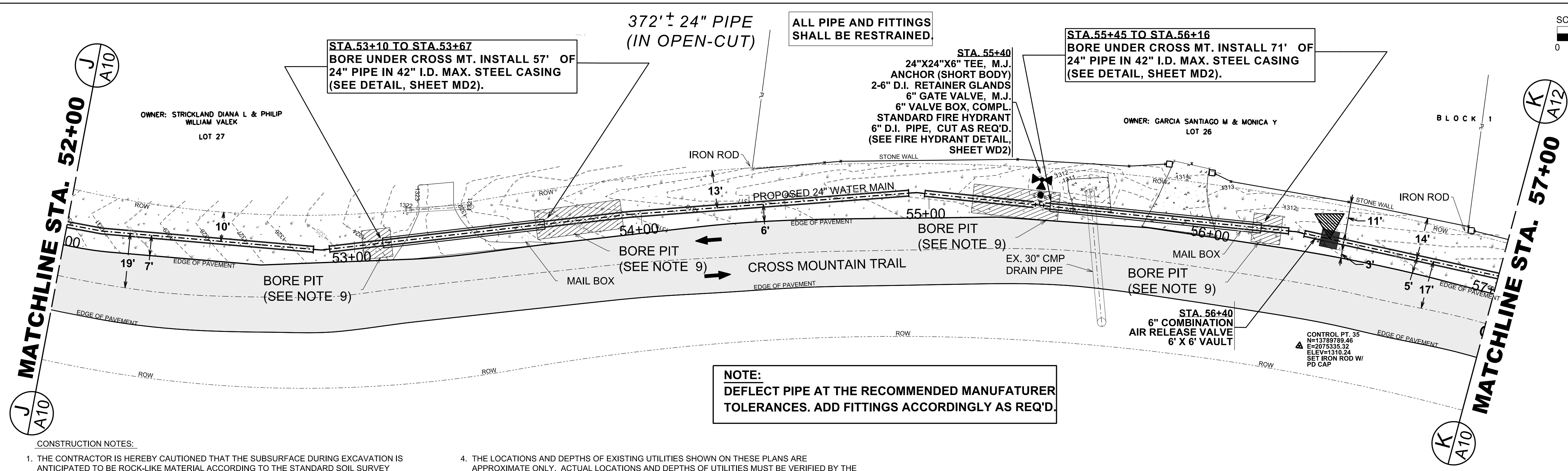
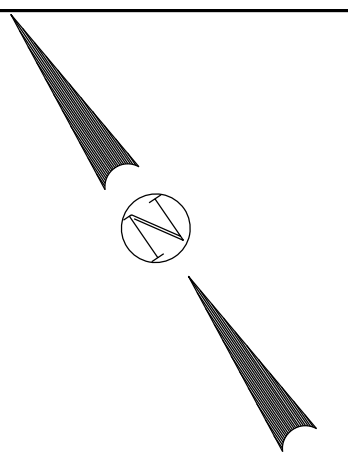
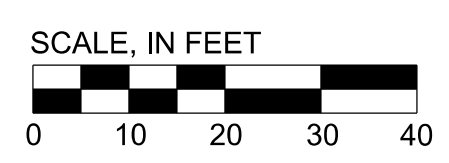
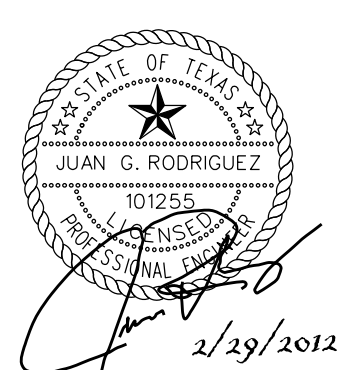
LEGEND

- PROP. WATER MAIN
- EXIST. WATER MAIN
- GAS MAIN
- UTILITY POLE LINE
- ELECTRIC CABLE
- RIGHT-OF-WAY

Date: 05/02/2011
Drawn by: TMJ
Designed by: TMJ
Checked by: JGR
Scale: AS NOTED ABOVE
Approved by: JGR
Map No:



SAWS JOB NO. 10-7003
CROSS MOUNTAIN TRAIL
24" WATER TRANSMISSION MAIN
PROJECT
PLAN AND PROFILE DRAWING
STA. 47+00 TO STA. 52+00

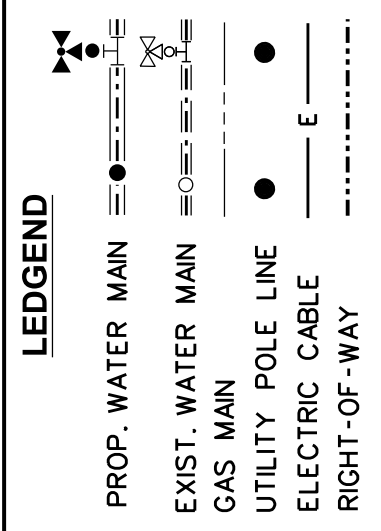


NOTE:
DEFLECT PIPE AT THE RECOMMENDED MANUFACTURER TOLERANCES. ADD FITTINGS ACCORDINGLY AS REQ'D.

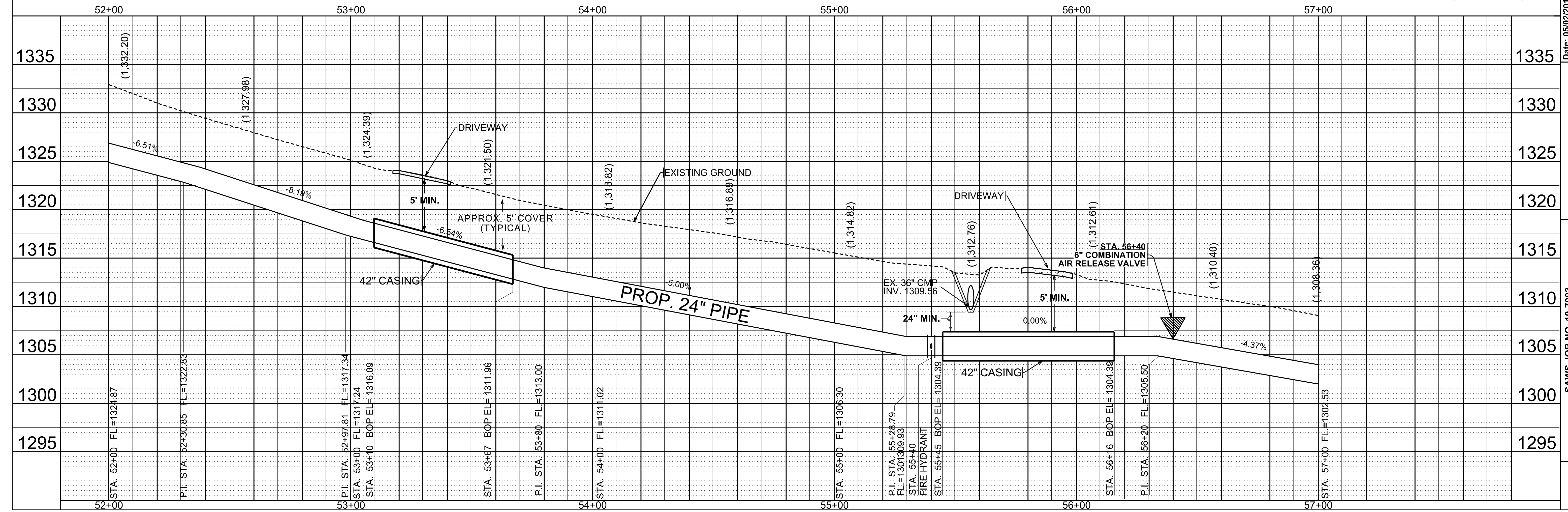
CONSTRUCTION NOTES:

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- BORE PIT DIMENSIONS MAY VARY DUE TO EXISTING SITE CONDITIONS.

REVISIONS	No.	Description	Drm.	Approved	Date



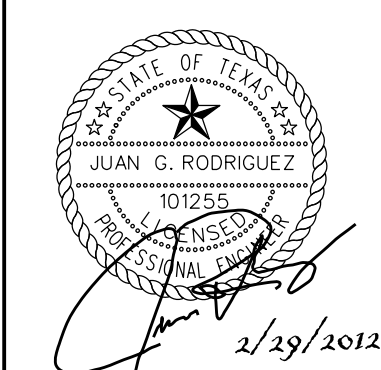
SCALE:
HORIZONTAL - 1"=20'
VERTICAL - 1"=5'



Date: 05/02/2011
Drawn by: TMJ
Designed by: TMJ
Checked by: JGR
Scale: AS NOTED ABOVE
Approved by: JGR
Map No:



SAWS JOB NO. 10-7003
CROSS MOUNTAIN TRAIL
24" WATER TRANSMISSION MAIN
PROJECT
PLAN AND PROFILE DRAWING
STA. 52+00 TO STA. 57+00

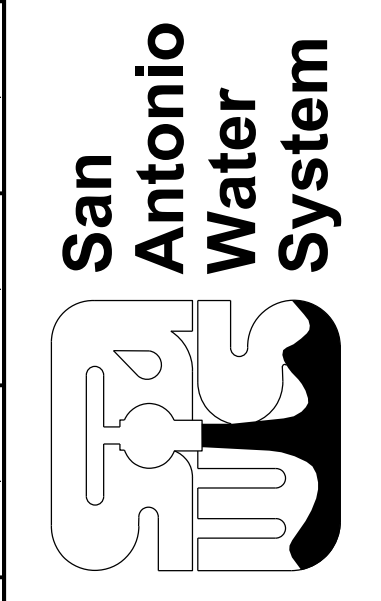


No.	Description	Drn.	Approved	Date

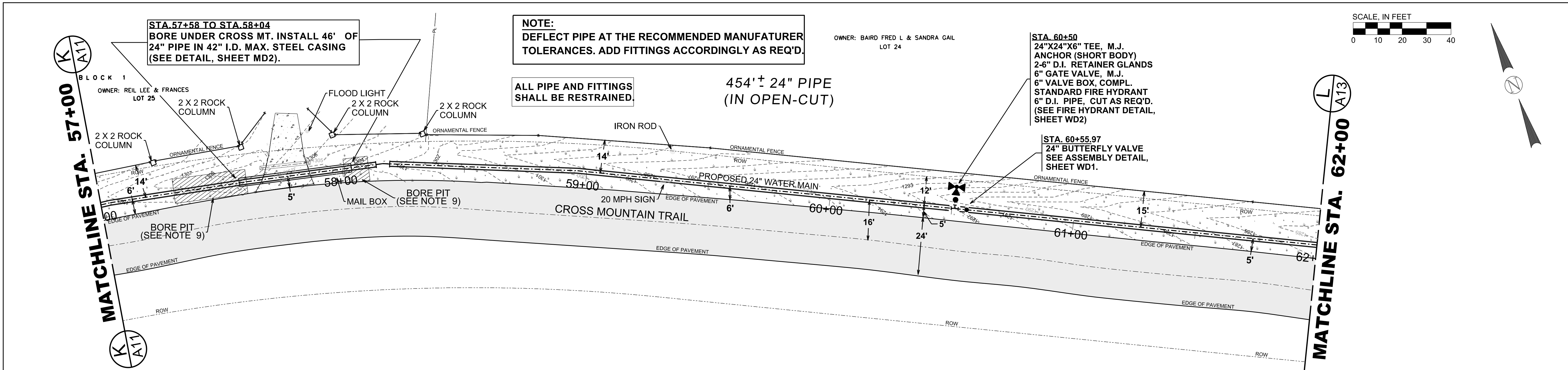
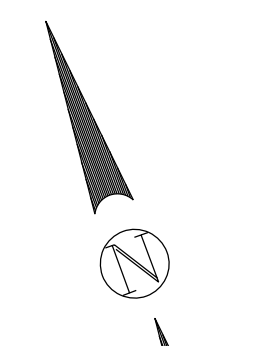
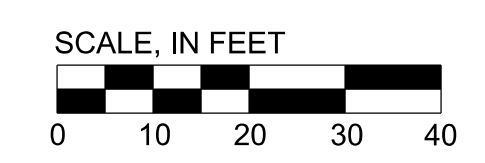
LEGEND

- PROP. WATER MAIN
- EXIST. WATER MAIN
- GAS MAIN
- UTILITY POLE LINE
- ELECTRIC CABLE
- RIGHT-OF-WAY

Date: 12/22/2011
 Drawn by: TMJ
 Designed by: TMJ
 Checked by: JGR
 Scale: AS NOTED ABOVE
 Approved by: JGR
 Map No:



SAWS JOB NO. 10-7003
 CROSS MOUNTAIN TRAIL
 24" WATER TRANSMISSION MAIN
 PROJECT
 PLAN AND PROFILE DRAWING
 STA. 57+00 TO STA. 62+00



NOTE:
 DEFLECT PIPE AT THE RECOMMENDED MANUFACTURER TOLERANCES. ADD FITTINGS ACCORDINGLY AS REQ'D.

OWNER: BAIRD FRED L & SANDRA GAIL
 LOT 24

STA. 60+50
 24"X24"X6" TEE, M.J. ANCHOR (SHORT BODY)
 2-6" D.I. RETAINER GLANDS
 6" GATE VALVE, M.J.
 6" VALVE BOX, COMPL. STANDARD FIRE HYDRANT
 6" D.I. PIPE, CUT AS REQ'D.
 (SEE FIRE HYDRANT DETAIL, SHEET WD2)

STA. 60+55.97
 24" BUTTERFLY VALVE
 SEE ASSEMBLY DETAIL, SHEET WD1.

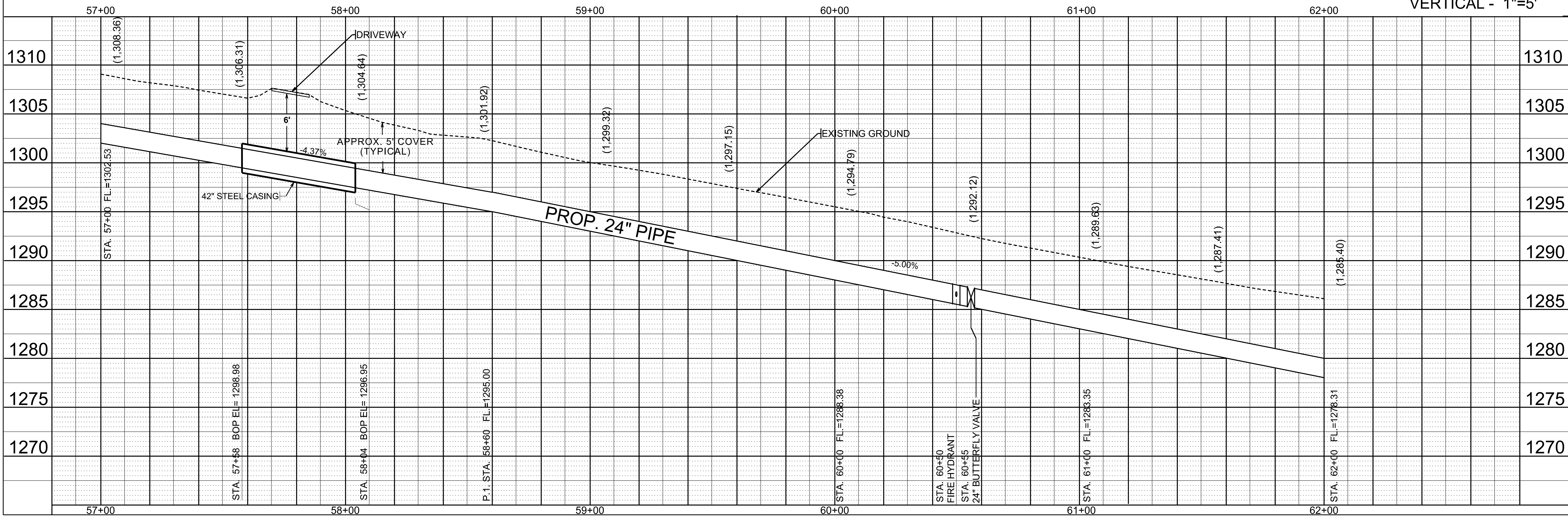
ALL PIPE AND FITTINGS SHALL BE RESTRAINED.

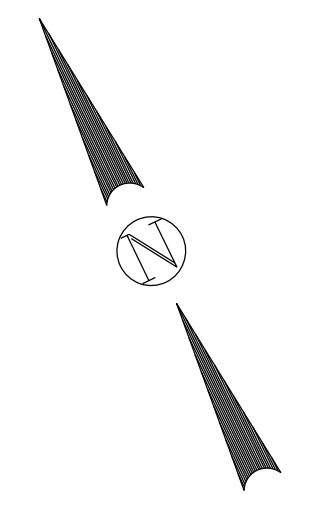
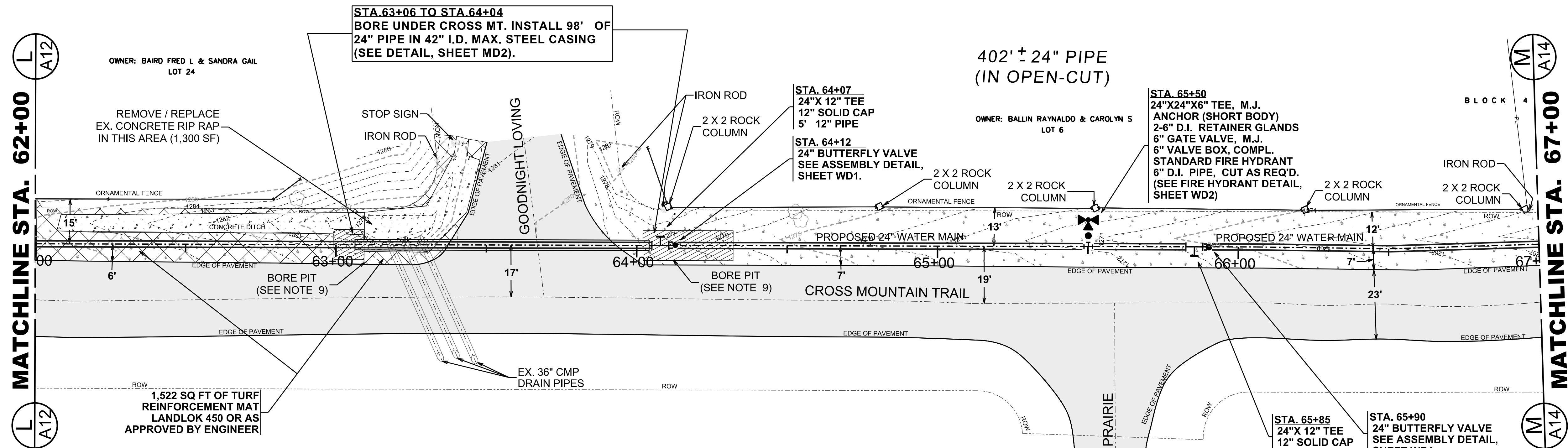
454' ± 24" PIPE (IN OPEN-CUT)

CONSTRUCTION NOTES:

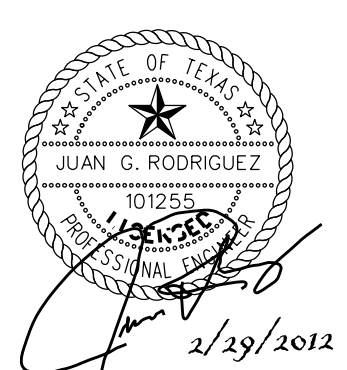
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- BORE PIT DIMENSIONS MAY VARY DUE TO EXISTING SITE CONDITIONS.

SCALE:
 HORIZONTAL - 1"=20'
 VERTICAL - 1"=5'





JOB NO.
10-7003



Revisions	No.	Description	Date

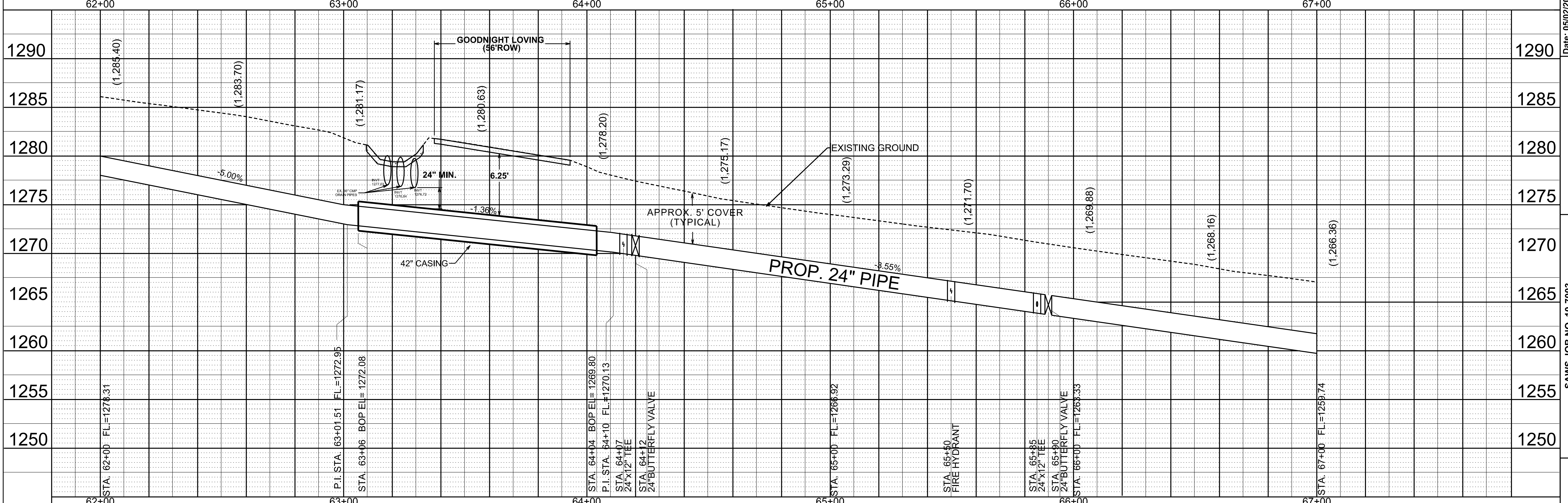
CONSTRUCTION NOTES:

- THE CONTRACTOR IS HEREBY CAUTIONED THAT THE SUBSURFACE DURING EXCAVATION IS ANTICIPATED TO BE ROCK-LIKE MATERIAL ACCORDING TO THE STANDARD SOIL SURVEY METROPOLITAN AREA REFERENCE. ALL EXCAVATION IS UNCLASSIFIED AND NO SEPARATE PAYMENT SHALL BE PROVIDED.
- CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO DEVELOP THE CONTRACTOR'S PLANS TO IMPLEMENT THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S PLANS SHALL PROVIDE FOR ADEQUATE TRENCH SAFETY SYSTEMS THAT COMPLY WITH AS A MINIMUM O.S.H.A. STANDARDS FOR TRENCH EXCAVATIONS SPECIFICALLY. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL DEVELOP AND IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH O.S.H.A. STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
- DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA. THE CONTRACTOR SHALL NOTIFY CPS LOCATOR AT 978-3500, 48 HOURS BEFORE BEGINNING ANY EXCAVATION.
- THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS OF UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY CONFLICTS IMMEDIATELY. ANY DAMAGE BY THE CONTRACTOR TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
- WHEN SEWER LINES ARE INSTALLED IN THE VICINITY OF WATER MAINS, SUCH INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE TEXAS DEPARTMENT OF HEALTH RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS (1988 OR ANY REVISIONS THERETO).
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- BORE PIT DIMENSIONS MAY VARY DUE TO EXISTING SITE CONDITIONS.

NOTE:
DEFLECT PIPE AT THE RECOMMENDED MANUFACTURER TOLERANCES. ADD FITTINGS ACCORDINGLY AS REQ'D.

ALL PIPE AND FITTINGS SHALL BE RESTRAINED.

SCALE:
HORIZONTAL - 1"=20'
VERTICAL - 1"=5'

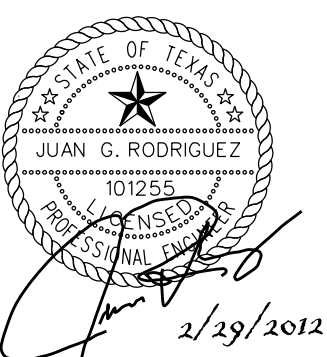


Date: 05/02/2011
 Drawn by: TMJ
 Designed by: TMJ
 Checked by: JGR
 Scale: AS NOTED ABOVE
 Approved by: JGR
 Map No:



SAWS JOB NO. 10-7003
 CROSS MOUNTAIN TRAIL
 24" WATER TRANSMISSION MAIN
 PROJECT
 PLAN AND PROFILE DRAWING
 STA. 62+00 TO STA. 67+00

DRAWING NO.
A13
16 OF 35

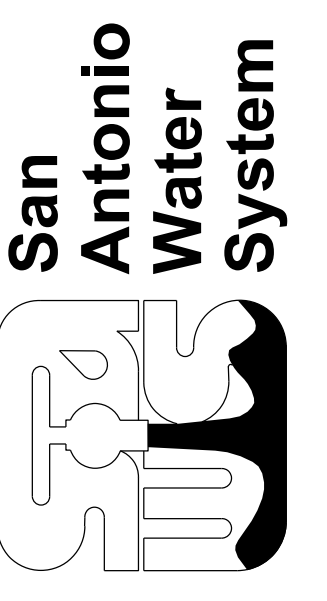


REVISIONS	No.	Description	Drn.	Approved	Date

LEGEND

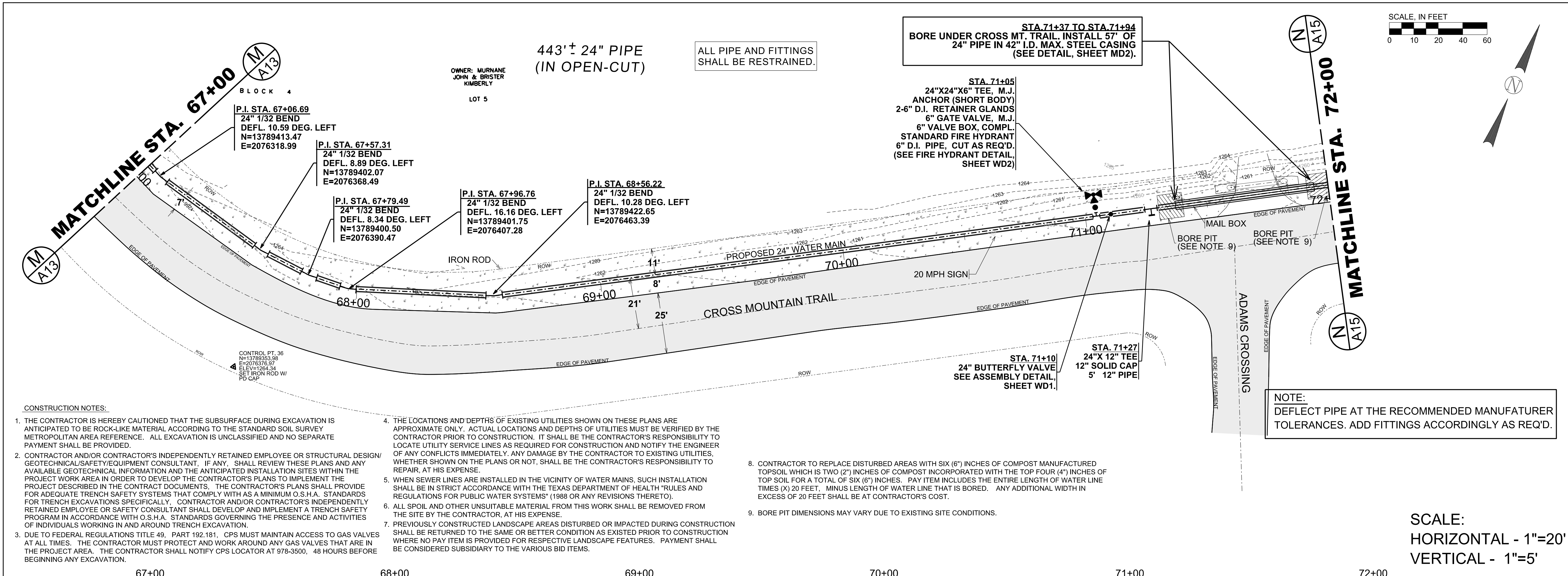
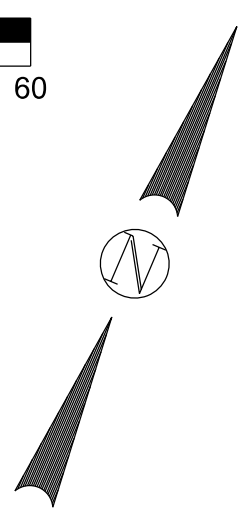
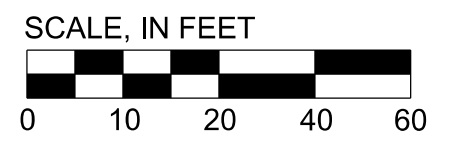
	PROP. WATER MAIN
	EXIST. WATER MAIN
	GAS MAIN
	UTILITY POLE LINE
	ELECTRIC CABLE
	RIGHT-OF-WAY

Date: 12/22/2011
Drawn by: TMJ
Designed by: TMJ
Checked by: JGR
Scale: AS NOTED ABOVE
Approved by: JGR
Map No:



SAWS JOB NO. 10-7003
CROSS MOUNTAIN TRAIL
24" WATER TRANSMISSION MAIN
PROJECT

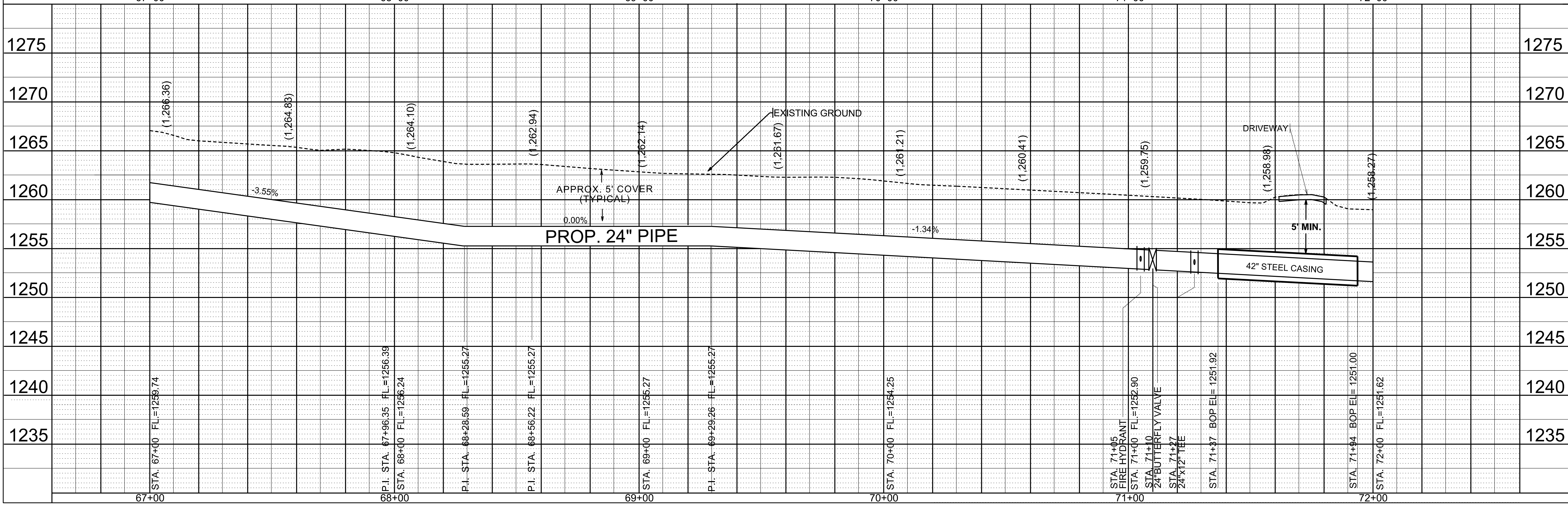
PLAN AND PROFILE DRAWING
STA. 67+00 TO STA. 72+00



- CONSTRUCTION NOTES:**
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NOTE:
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SCALE:
HORIZONTAL - 1"=20'
VERTICAL - 1"=5'



443'± 24" PIPE (IN OPEN-CUT)

OWNER: MURNANE JOHN & BRISTER KIMBERLY
LOT 5

Block 4

P.I. STA. 67+06.69 24" 1/32 BEND DEFL. 10.59 DEG. LEFT N=13789413.47 E=2076318.99	P.I. STA. 67+57.31 24" 1/32 BEND DEFL. 8.89 DEG. LEFT N=13789402.07 E=2076368.49	P.I. STA. 67+79.49 24" 1/32 BEND DEFL. 8.34 DEG. LEFT N=13789400.50 E=2076390.47	P.I. STA. 68+28.59 24" 1/32 BEND DEFL. 16.16 DEG. LEFT N=13789401.75 E=2076407.28	P.I. STA. 68+56.22 24" 1/32 BEND DEFL. 10.28 DEG. LEFT N=13789422.85 E=2076463.39
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CONTROL PT. 36
N=13789353.98
E=2076377.94
ELEV.=1264.34
SET FROM ROD W/ PD CAP

STA 71+37 TO STA 71+94
BORE UNDER CROSS MT. TRAIL. INSTALL 57' OF 24" PIPE IN 42" I.D. MAX. STEEL CASING (SEE DETAIL, SHEET MD2).

STA. 71+05
24"X24"X6" TEE, M.J. ANCHOR (SHORT BODY)
2-6" D.I. RETAINER GLANDS
6" GATE VALVE, M.J.
6" VALVE BOX, COMPL. STANDARD FIRE HYDRANT
6" D.I. PIPE, CUT AS REQ'D. (SEE FIRE HYDRANT DETAIL, SHEET WD2)

STA. 71+10
24" BUTTERFLY VALVE
SEE ASSEMBLY DETAIL, SHEET WD1.

STA. 71+27
24"X 12" TEE
12" SOLID CAP
5' 12" PIPE

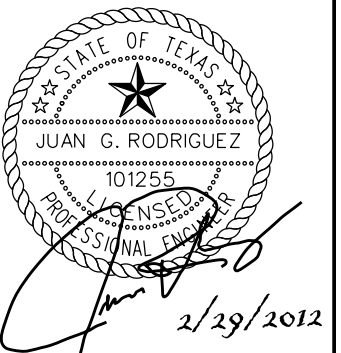
MAIL BOX

BORE PIT (SEE NOTE 9)

BORE PIT (SEE NOTE 9)

ADAMS CROSSING

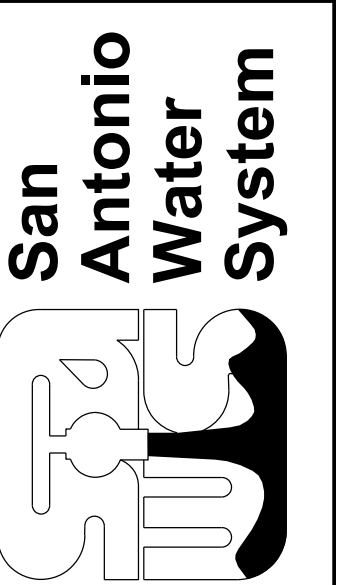
ALL PIPE AND FITTINGS SHALL BE RESTRAINED.



REVISIONS	No.	Description	Drn.	Approved	Date

LEGEND	Symbol	Description
—	—	PROP. WATER MAIN
—	—	EXIST. WATER MAIN
—	—	GAS MAIN
—	—	UTILITY POLE LINE
—	—	ELECTRIC CABLE
—	—	RIGHT-OF-WAY

Date: 12/22/2011
Drawn by: TMJ
Designed by: TMJ
Checked by: JGR
Scale: AS NOTED ABOVE
Approved by: JGR
Map No:



SAWS JOB NO. 10-7003
CROSS MOUNTAIN TRAIL
24" WATER TRANSMISSION MAIN
PROJECT

PLAN AND PROFILE DRAWING
STA. 72+00 TO STA. 76+21

