WEBB COUNTY, TEXAS

HONORABLE DANNY VALDEZ
COUNTY JUDGE

PRECINCT 1
COMMISSIONER FRANK SCIARAFFA

PRECINCT 2
COMMISSIONER ROSAURA "WAWI" TIJERINA

PRECINCT 3
COMMISSIONER JERRY GARZA

PRECINCT 4
COMMISSIONER JAIME A. CANALES

PROJECT NO: 5BCF5029-2c2400054

PROPOSED ROADWAY CONSTRUCTION FOR THE COLONIA TANQUECITOS I AND II
LIMITS: ROADWAYS WITHIN COLONIA TANQUECITOS I AND II

PROJECT NAME: BORDER ACCESS COLONIAS PROGRAM TANQUECITOS I AND II
COLONIA ROADWAY AND DRAINAGE IMPROVEMENTS

BID

BIDDER IS REQUIRED TO FILL IN INFORMATION BELOW:

BIDDER: _____
(COMPANY NAME)

TOTAL AMOUNT OF BASE BID: $_____

TOTAL AMOUNT OF BID IN WORDS: _____

_____

TOTAL AMOUNT OF BASE BID + ADDITIVE ALTERNATE 1: $_____

TOTAL AMOUNT OF BASE BID + ADDITIVE ALTERNATE 1 IN WORDS:

_____

WEBB COUNTY
November 2011

PROJECT MANUAL TABLE OF CONTENTS

NOTE: Bold capitalized Specification Sections are included in the **Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges dated June 1, 2004** and are incorporated in this Project Manual by reference as if copied verbatim. Documents listed "for filing" are to be provided by Bidder and are not included in this Project Manual unless indicated for example only. The Document numbers and titles hold places for actual documents to be submitted by Contractor during Bid, post-bid, or construction phase of the Project.

Document Title	Page No.
Bid Package Checklist	3
Project Schedule	5
Webb County Bid Specification	6
Invitation for Bid	8
Example for Bid	10
Bid Form	12
Construction Contract	17
Acknowledgement	19
Partnership	20
Contractor's Assurance	21
Notice to the Bidders	22
Notice to the Bidder	23
Disadvantaged Business Enterprises Requirements	24
Addendum Acknowledgement	25
Lobbying Certification	27
Affidavit Non- Collusion	32
Contract/ Bid Documents Federal and State Requirements	33
Child Support Statement	37
Sales Tax Information	38
Payroll Verification Information	39
Bid Bond	40
Bidder's Check Return	41
Payment Bond	42
Performance Bond	44
Certification of Interest in other Bid Proposals for this work	46
TxDOT Form 1560	47
Change Order Form	49
Final Release for Subcontractors and/or Material Supplier	50
Engineer's Seal	51
General Construction Notes & Governing Specifications and Special Provision List	52
FHWA	56
Special Provision – Prevailing Wage Rate to be Maintained	70
Webb County Special Provisions	74
Special Provisions	87

NOTE: For the purpose of construing this Bid and the attached form of Contract, the Texas Department of Transportation Standard Specifications for Construction of Highways, Streets and Bridges, as adopted by the Texas Department of Transportation on June 1, 2004, hereinafter referred to are approved and incorporated herein by reference for all purposes by Webb County as official specifications, together with and to be modified by the Special Provisions and Special Specifications as are listed herein.

BID PACKAGE CHECKLIST

Items checked below represent components which comprise this Bid Package. Bidders are asked to review the package to ensure that all applicable parts have been included. If any portion of the package is missing, notify the Webb County Purchasing Department at (936) 523-4125.

It is the bidder's responsibility to be thoroughly familiar with all bid requirements and specifications.

Bidder must initial/check the right-hand column when task is completed. Submit this form and the appropriate bid documents with bid package.

1. **BID FORM** _____ _____

   Must be completed and signed in ink. Failure to do so will cause bid to be rejected.

2. **Webb COUNTY CONTRACT** _____ _____

   This Contract MUST be signed by an officer or authorized representative prior to the award of Bid. Contract is not binding until countersigned by Webb County Commissioners' Court.

3. **BID BOND REQUIREMENTS** _____ _____

   This Bond applies to certain bids as stated in Webb County Bid Specification, Special Provisions or as included in the Contract General Requirements and Covenants (Items 1-9 of the Standard Specifications)

4 **BIDDER'S CHECK RETURN** _____ _____

   Bidders must submit with bid package.

5. **PRE-QUALIFICATIONS** _____ _____

   Potential bidders must be pre-qualified by TxDOT/Webb County

6. **GENERAL REQUIREMENTS AND COVENANTS** _____ _____

   Bidder should be familiar with all General Requirements and Covenants of the Standard Specifications.

7. **SUBMITTING PROCEDURE** _____ _____

   Sealed envelope containing bid documents must be marked with the following: contractor/company name, opening date, project number and project title

THE FOLLOWING ITEMS APPLY ONLY TO THE BIDDER WHO HAS BEEN AWARDED THE PROJECT:

8. **PERFORMANCE BOND REQUIREMENTS** _____

This Bond applies to bids that will exceed the sum of $100,000.00 as stated in the Webb County Terms and Conditions.

9. **PAYMENT BOND REQUIREMENTS** _____

This bond applies to bids that will exceed the sum of $25,000.00 as stated in the Webb County Terms and Conditions.

INSURANCE INFORMATION:

10. **WORKERS' COMPENSATION INSURANCE** _____

Please check the right-hand column if you can furnish Webb County with Workers' Compensation Insurance. This is required on all public works projects.

11. **GENERAL LIABILITY AND AUTO INSURANCE** _____

Please check the right-hand column if you can furnish Webb County with general liability and auto insurance for this project. Webb County is to be covered as additional insured.

12. **IF THE COUNTY HAS DONE BUSINESS WITH YOUR COMPANY WITHIN THE PAST YEAR AND ALL APPROPRIATE INSURANCE IS ON FILE AT THIS TIME, PLEASE CHECK THE RIGHT-HAND COLUMN** _____

13. **TxDOT FORM 1560 CERTIFICATE OF INSURANCE** _____

Submit this form after the contract has been awarded.

PROJECT SCHEDULE

5BCF5029-2c2400054

PROPOSED ROADWAY CONSTRUCTION FOR THE COLONIA TANQUECITOS I AND II,
PROJECT:
5BCF5029-2c2400054

LIMITS: ROADWAYS WITHIN COLONIA TANQUECITOS I AND II

NOTE:
The roadway constriction work for this contract will included only the streets identified below.
The bid items will include work estimated for these identified roadway project limits.
(See General Section for additional information)

BASE BID ITEMS

ROAD	LIMITS FROM		TO
DESPERADO	STA0+40	to	STA 3+56.34
CANYON	STA0+00	to	STA 7+83.10
ENLACE	STA 2+91.06	to	STA54+23.40
ARCO IRIS	STA0+15.00	to	STA20+46.85
TANQUECITOS	STA0+15.00	to	STA35+84.73
RIATA	STA0+00	to	STA15+36.51

ADDITIVE BID ITEMS

ROAD	LIMITS FROM		TO
ESTRELLA	STA36+62.51	to	STA0+40)

The quantities in the bid are approximate. The quantities of work and materials may be increased or decreased as considered necessary to complete the work as planned and contemplated.

This project is to be completed in 120 working days (i.e. Monday to Friday) in accordance with Item 8.3.A.4. (Computation of Contract Time for Completion, Working Day Charges, Standard Workweek) and will be accepted when fully completed and finished to the satisfaction of the Construction Manager.

WEBB COUNTY BID SPECIFICATION

BIDDING REQUIREMENTS:

(1) BIDDERS MUST RESPOND TO THIS BID WITH (1) ONE ORIGINAL AND (5) FIVES COPIES.

(2) BIDDERS MUST FILL IN AND SIGN THE ATTACHED CONTRACT.

(3) NO BID WILL BE ACCEPTED AFTER THE SPECIFIED DUE DATE AND TIME.

(4) PRICES WILL REMAIN FIRM FOR THE DURATION OF THIS CONTRACT. PRICES SHALL BE ALL INCLUSIVE. ANY PRICE NOT SHOWN ON THIS CONTRACT WILL NOT BE HONORED FOR PAYMENT WHEN SUBMITTED BY CONTRACTOR.

(5) WEBB COUNTY RETAINS THE RIGHT TO IMMEDIATELY CANCEL ANY AGREEMENT BETWEEN THE PARTIES HERETO, SHOULD GOODS, MATERIALS, OR SERVICES SUPPLIED BY THE BIDDER NOT MEET SPECIFICATIONS.

(6) WEBB COUNTY MAY REQUEST BIDDER TO PROVIDE, BEFORE AWARD, CERTIFICATES OF INSURANCE RELATING TO THE FOLLOWING CATEGORIES OF INSURANCE, IF REQUIRED BY LAW.
   A) WORKERS' COMPENSATION
   B) COMPREHENSIVE GENERAL LIABILITY INSURANCE
   C) AUTOMOBILE LIABILITY INSURANCE

(7) IN ADDITION TO THESE REQUIREMENTS, ALL BIDDERS SHALL COMPLY WITH "ITEM 2 - INSTRUCTIONS TO BIDDERS" OF THE GENERAL REQUIREMENTS AND COVENANTS OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES 2004 (TxDOT "MAROON" BOOK).

(8) WEBB COUNTY WILL REQUIRE THAT:

- ONLY THOSE CONTRACTORS LISTED ON THE TXDOT PRE-QUALIFIED CONTRACTORS LIST WILL BE ALLOWED TO BID ON PROJECT.
- IF THE CONTRACTOR IS NOT ON THE LIST, THE CONTRACTOR SHALL SECURE PRE-QUALIFICATION THRU TXDOT TO BE ELIGIBLE TO BID THE WEBB COUNTY PROJECT.
- FOR THE WEBB COUNTY PROJECT, BONDING WILL BE REQUIRED IN ACCORDANCE WITH ITEMS 2 AND 3 OF THE GENERAL REQUIREMENTS AND COVENANTS OF THE TXDOT 2004 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS AND BRIDGES.

THE COMMISSIONERS' COURT OF WEBB COUNTY RESERVES THE RIGHT TO AWARD THIS CONTRACT TO THE BIDDER THAT PROVIDES THE LOWEST, BEST AND MOST RESPONSIBLE BID IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS. ALTERNATE BIDS WILL NOT BE ACCEPTED. THE COMMISSIONERS' COURT FURTHER

RESERVES THE RIGHT TO WAIVE ANY FORMALITY OR IRREGULARITY, TO REJECT ALL BIDS, OR TO REQUIRE NEW BIDS IF IN THE BEST INTEREST OF THE COUNTY. BY LAW, WEBB COUNTY IS NOT OBLIGATED TO ACCEPT A NON-COMPLIANT LOW BID.

FAILURE OR INABILITY TO ADHERE TO ANY OF THE PRECEDING REQUIREMENTS MAY SERVE AS THE BASIS FOR BID DISQUALIFICATION.

SPECIAL NOTE:

A LIST OF SUBCONTRACTORS WITH THE NAME AND PHONE NUMBER SHALL BE PROVIDED BY THE GENERAL CONTRACTOR AFTER THE AWARD OF THE CONTRACT AND PRIOR TO THE COMMENCEMENT OF WORK. THIS LIST SHALL BE DELIVERED TO THE FOLLOWING:

WEBB COUNTY PURCHASING DEPARTMENT
DR. CECILIA MAY MORENO
1110 WASHINGTON ST., SUITE 101
LAREDO, TEXAS 78040
(956) 523-4125

Webb County Purchasing Department
1110 Washington St., Suite 101
Laredo, Texas 78040

Phone (956) 523-4125
Fax: (956)523-5010

INVITATION FOR BIDS

The Webb County Clerk will receive sealed bids for the proposed roadway construction consisting of grading, base, structures, surfacing, roadside drainage and signage for the Colonia Tanquecitos I and II in Webb County, Texas, until **2:00 PM, January 04, 2012** at the Webb County Clerk's Office located at 1110 Victoria, Suite 201, Laredo, Texas 78040 and addressed to H. Margie Ibarra Ramirez, Webb County Clerk. The bids will be publicly opened and read aloud at that time.

Bids are invited for the following:
PROPOSED ROADWAY CONSTRUCTION COSISTING OF GRADING, BASE, STRUCTURES, SURFACING, ROADSIDE DRAINAGE AND SIGNAGE FOR THE **COLONIA TANQUECITOS I AN II, PROJECT:**
5BCF5029-2c2400054 (2nd Call)

Interested bidders may obtain copies of Bidding Documents at the place identified below upon payment of a non-refundable $100.00 per set, with check made payable to Webb County or access at http://www.webbcountytx.gov/PurchasingAgent/PublicNoticeRFP/
Bidding documents will also be made available for review at no charge at the following locations.

Dr. Cecilia May Moreno
Purchasing Agent
Webb County Purchasing Department
1110 Washington Street, Ste. 101
Laredo, Texas 78040
(956) 523-4125
(956) 523-5010 Fax

Mike Cabello
Interim County Engineer
Webb County Engineering Department
1620 Santa Ursula 2nd Floor
Laredo, Texas 78040
(956) 523-523-4171
(956) 523-5158Fax

For any technical questions concerning the plans and specifications you may contact Mr. Mike Cabello, Interim County Engineer. Any questions concerning the submittal of bids can be made by contacting the Purchasing Agent, Dr. Cecilia May Moreno, at the above noted Purchasing Department.

Attention is called to the fact that not less than the federally determined prevailing (Davis-Bacon) wage rates, as issued by the Texas Department of Housing and Community Affairs and contained in the contract documents, must be paid on this project. Additionally, the successful bidder must ensure that employees and applicants for employment are not discriminated against because of their race, color, sex, religion, or national origin.

The County of Webb County reserves the right to reject any or all bids or to waive any informality in the bidding.

Bids may be kept by Webb County Purchasing Department for a period not to exceed 45 days from the date of the bid opening for the purpose of reviewing the bids and investigating the bidder's qualifications prior to awarding the contract.

Bidders are expected to inspect the site of the work and to inform themselves regarding all local conditions.

All contractors and subcontractors which are debarred, suspended or otherwise excluded from or ineligible for participation on federal assistance programs may not undertake any activity in part or in full under this project.

All bids shall either be mailed or hand-delivered to provide one (1) original and five (5) copies no later than **2:00PM, January 04, 2012** to the following location:

Webb County Clerk's Office
Webb County Justice Center
1110 Victoria, Suite 201
Laredo, Texas 78040

Late bids will not be considered. Bids must to be submitted in a sealed envelope with bid number on the lower left-hand corner of the envelope.

Please refer to the attached Public Notice to Bidders for additional specifications.

Sincerely,
Dr. Cecilia May Moreno
County Purchasing Agent

PROJECT :Tanquecitos
COUNTY: WEBB
HIGHWAY: County Road
LENGTH: 2.6 MI

CONTROL: 5BCF5029
LIMITS: Tanquecitos I and II Colonia

ALT	ITEM	DESC SP	Bid Item Description	Unit	Quantity	Bid Price	Amount	Seq
	104	509	REMOV CONC (SD WLK)	SY	266.400	$10.000	$2,664.00	1

EXAMPLE

EXAMPLE OF BID PRICES SUBMITTED BY COMPUTER PRINTOUT

EXAMPLE

BID PRICES SUBMITTED BY HAND WRITTEN FORMAT

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS.	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO.	DESC CODE	S.P. NO.				
	190	026		RED OAK 1.5" – 1.75" GAL BB One hundred fifty DOLLARS and no CENTS	EA	9.000	1

Unit price for each plant in place

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS.	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO.	DESC CODE	S.P. NO.				
	249	014		FLEX BAE (DEL)(DENSCOT)(TY A GR4 CL2) Seven DOLLARS and no CENTS	TON	56,787.000	14

Unit price for each ton of Flexible Base

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS.	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO.	DESC CODE	S.P. NO.				
	430	001	001	CL A CPMC FPR EXT STR (CULV) Three hundred DOLLARS and no . CENTS	CY	45.000	27

Unit price for each cubic yard of concrete

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS.	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO.	DESC CODE	S.P. NO.				
	610	007	001	ROADWAY ILL ASSEM(TY ST 50T-8-8)(.4 KW)S Fourteen thousand sixteen DOLLARS and thirty CENTS	EA	13.000	7

Unit price for each Roadway illumination Assembly

BID FORM

PROJECT: Tanquecitos I and II
COUNTY: WEBB
HIGHWAY: County Road
COUNTY: WEBB

CONTROL: 5BCF5029-2c2400054
LIMITS:
TO LENGTH:
DISTRICT: 22

BASE BID

Item No.	Estimated Quantity	Unit	Name of Pay Item with Unit Bid Price Written in Words	Amount Bid (Figures)
1	16.50	AC	PREPARING ROW, TxDOT Item 0100-2001, at_____per unit	$
2	20,714	CY	EXCAVATION, ROADWAY TxDOT Item 0110-2001, at_____per unit	$
3	4,321	CY	EMBANKMENT (FINAL) (ORD COMP) (TY B), TxDOT Item 0132-2003, at_____per unit	$
4	136	HR	PROOF ROLLING, TxDOT Item 0216-2001, at_____per unit	$
5	11,212	CY	FLEXIBLE BASE (CMP IN PLC) (TY B GR 2) (FNAL POS) TxDOT Item 0247-2046 at_____per unit	$
6	1,334	SY	LIME TRT (EX MATL) (6") TxDOT Item 0260-2006, at_____per unit	$
7	13,348	GAL	ASPH (RC-250) TxDOT Item 0316-2015at_____per unit	$
8	405	CY	AGGR (TY-PE GR-5) TxDOT Item 0316-2387, at_____per unit	$
9	3,671	TON	D-GR HMA (METH) (TYD) PG 70-22 TXDOT ITEM 0340-2122 (at_____per unit	$
10	1	LS	MOBILIZATION TxDOT Item 0500-2001, at_____per unit	$
11	8	MO	BARRICADES,SIGNS AND TRAFFIC HANDLING TxDOT Item 0502-2001 at_____per unit	$
12	257	SY	CL C CONC (VALLEY GUTTER) TxDOT Item 0420-2037 at_____per unit	$
13	445	SY	DRIVEWAYS AND TURNOUTS (CONC) TxDOT Item 0530-2022at_____per uni	$

14	1424	SY	DRIVEWAYS AND TURNOUTS (ACP) 0530-2023, at_____per unit	$
15	41	EA	INS SM RD SN SUP & AM TWT (1) UA (T) TxDOT Item 0644-2049, at_____per unit	$
16	545.30	CY	CLASS S CONC (APP SLAB) TxDOT Item 0420-2033, at_____per unit	$
17	180.00	LF	CONC BOX CULV (5 FT X 3FT) TxDOT Item 0462-2007, at_____per unit	$
18	1,360	LF	CONC BOX CULV (6 FT X 4FT) TxDOT Item 0462-2011, at_____per unit	$
19	700	LF	CONC BOX CULV (7 FT X 3FT) TxDOT Item 0462-2014, at_____per unit	$
20	300	LF	CONC BOX CULV (7 FT X 4FT) TxDOT Item 0462-2001, at_____per unit	$
21	660	LF	RCP (CL III) (24IN) TxDOT Item 0464-2005, at_____per unit	$
22	8	EA	SET (TY I) (S=5FT) (HW=3FT) (3:1) (C) TxDOT Item 0467-2038, at_____per unit	$
23	4	EA	SET (TY I) (S=6FT) (HW=4FT) (3:1) (C) TxDOT Item 0467-2048, at_____per unit	$
24	28	EA	SET (TY I) (S=7FT) (HW=3FT) (3:1) (C) TxDOT Item 0467-2056, at_____per unit	$
25	36	EA	SET (TY I) (S=7FT) (HW=4FT) (3:1) (C) TxDOT Item 0467-2057, at_____per unit	$
26	40	EA	SET (TYII) (24IN) (3:1) (C) TxDOT Item 0467-2211, at_____per unit	$
27	38	CY	CL A CONC (MISC) TxDOT Item 0420-2001, at_____per unit	$
28	565	LF	RC PIPE (CL III) (18 IN) TxDOT Item 0464-2003, at_____per unit	$
29	390	LF	RC PIPE (CL III) (24 IN) TxDOT Item 0464-2005, at_____per unit	$
30	10	EA	SET (TYII) (18IN) (RCP) (3:1) (C) TxDOT Item 0467-2209, at_____per unit	$
31	13	EA	SET (TYII) (24IN) (RCP) (3:1) (C) TxDOT Item 0467-2211, at_____per unit	$
32	236	LF	RC PIPE (CL III) (30IN) TxDOT Item 0464-2007, at_____per unit	$

33	287	LF	RC PIPE (CL III) (36IN) TxDOT Item 0464-2009, at_____per unit	$
34	10	EA	INLET (COMPL) (TY C) TxDOT Item 0465-2001, at_____per unit	$
35	10	EA	INLET EXT (TY E) TxDOT Item 0465-2008, at_____per unit	$
36	1	EA	SET (TY II) (36 IN) RCP) (3:1) (C) TxDOT Item 0467-2215, at_____per unit	$
37	1,100.4	LF	CONC CURB & GUTTER (TY II) TxDOT Item 0529-2004, at_____per unit	$
38	80	LF	ROCK FILTER DAM (INSTALL) (TY2) TxDOT Item 0506-2002, at_____per unit	$
39	80	LF	ROCK FILTER DAMS (REMOVE) TxDOT Item 0506-2009, at_____per unit	$
40	156	SY	CONSTRUCTION EXITS (INSTALL) (TY1) TxDOT Item 0506-2016, at_____per unit	$
41	156	SY	CONSTRUCTION EXITS (REMOVE) TxDOT Item 0506-2019, at_____per unit	$
42	160	LF	TEMPORARY SEDIMENTS CONTROL FENCE TxDOT Item 0506-2034, at_____per unit	$

TOTAL AMOUNT OF BASE BID: $_____

TOTAL AMOUNT OF BID IN WORDS: _____

_____

COMPANY NAME: _____

Signed: _____

Title: _____

Date: _____

Additional Signature for Joint Venture:

Signed : _____

Title: _____

Date: _____

"ADDITIVE ALTERNATE 1"

Additive Alternate 2 ESTRELLA STA 36+62.51 to STA0+40

Item No.	Estimated Quantity	Unit	Name of Pay Item with Unit Bid Price Written in Words	Amount Bid (Figures)
1	4.19	AC	PREPARING ROW TxDOT Item 100-2001, at_____per unit	$
2	6,932	CY	EXCAVATION (ROADWAY) TxDOT Item 110-2001, at_____per unit	$
3	1,151	CY	EMBANKMENT (FINAL) (ORD COMP) (TY B) TxDOT Item 0132-2003, at_____per unit	$
4	24	HR	PROOF ROLLING TxDOT Item 0216-2001, at_____per unit	$
5	3,063	CY	FL BS (CMP IN PLC) (TY B GR2) (FNAL POS) TxDOT Item 0247-2046, at_____per unit	$
6	666	SY	LIME TRT (EX MATL) (6") TxDOT Item 0260-2006, at_____per unit	$
7	3,648	GAL	ASPH (RC-250) TxDOT Item 0316-2015, at_____per unit	$
8	111	CY	AGG (TY- PE GR-5) TxDOT Item 0316-2387, at_____per unit	$
9	1,003	TON	D-GR HMA (METH) (TY D) PG 70-22 TxDOT Item 0340-2122, at_____per unit	$
10	1	LS	MOBILIZATION TxDOT Item 500-2001, at_____per unit	$
11	1	MO	BARRICADES, SIGNS AND TRAFFIC HANDLING TxDOT Item 0502-2001, at_____per unit	$
12	0	SY	CL C CONC (VALLEY GUTTER) TxDOT Item 0420-2037, at_____per unit	$0
13	0	SY	DRIVEWAYS AND TURNOUTS (CONC) TxDOT Item 0530-2022, at_____per unit	$0
14	0	SY	DRIVEWAYS AND TURNOUTS (ACP) TxDOT Item 0530-2023, at_____per unit	$0

15	0	EA	INS SM RD SN SUP & AM TY TWT (1) UA (T) TxDOT Item 0644-2049, at_____per unit	$0
16	19	CY	CL A CONC (MISC) TxDOT Item 0420-2001, at_____per unit	$
17	264	LF	RC PIPE (CL III) (18 IN) TxDOT Item 0464-2003, at_____per unit	$
18	66	LF	RC PIPE (CL III) (24 IN) TxDOT Item 0464-2005, at_____per unit	$
19	4	EA	SET (TY II) (18 IN) (RCP) 3:1) (C) TxDOT Item 0467-2209, at_____per unit	$
20	4	EA	SET (TY II) (24 IN) (RCP) 3:1) (C) TxDOT Item 0467-2211, at_____per unit	$
21	40	LF	ROCK FILTER DAMS (INSTALL) (TY2) TxDOT Item 0506-2002, at_____per unit	$
22	40	LF	ROCK FILTER DAMS (REMOVE) TxDOT Item 0506-2009, at_____per unit	$
23	78	SY	CONSTRUCTION EXITS (INSTALL) (TY1) TxDOT Item 0506-2016, at_____per unit	$
24	78	SY	CONSTRUCTION EXITS (REMOVE) TxDOT Item 0506-2019, at_____per unit	$
25	80	LF	TEMPORARY SEDIMENT CONTROL FENCE TxDOT Item 0506-2034, at_____per unit	$

TOTAL AMOUNT OF BASE BID PLUS ADDITIVE ALTERNATE 1 PLUS:
$_____

TOTAL AMOUNT OF BASE BID + ADDITIVE ALTERNATE 1 IN WORDS:_____
_____
_____

COMPANY NAME: _____
Signed: _____
Title: _____
Date: _____

Additional Signature for Joint Venture:
Signed : _____
Title: _____
Date: _____

CONSTRUCTION CONTRACT

THE STATE OF TEXAS §

COUNTY OF WEBB §

THIS AGREEMENT, made and entered into this day of _____, 2012 by and between Webb County, State of Texas, acting through Honorable Danny Valdez, County Judge, thereunto duly authorized so to do, Party of the First-Part, hereinafter termed the OWNER, and _____ of the City of _____ County of _____and State of Texas, Party of the Second Part, hereinafter termed CONTRACTOR.

WITNESSETH; That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the Party of the First Part (OWNER), and under the conditions expressed in the bond having even date wherewith, the said Party of the Second Part (CONTRACTOR), hereby agrees with the said Party of the First Part (OWNER) to commence and complete the construction described as follows:

REHABILITATION OF PROPOSED ROADWAY CONSTRUCTION COSISTING OF GRADING, BASE, STRUCTURES, SURFACING, ROADSIDE DRAINAGE AND SIGNAGE FOR THE COLONIA TANQUECITOS I AND II,
PROJECT NO: 5BCF5029-2c2400054 (2nd Call)

And all work in connection therewith, under the terms as stated in the General Conditions of the Agreement and at his (or their) own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said construction, in accordance with the Notice to Bidder, General and Special Conditions of Agreement, Plans and other drawings and printed or written explanatory matter thereof, and the Specifications and addenda therefore, as prepared by The Texas Department of Transportation, Laredo District, together with the CONTRACTOR'S written Proposal, the General Conditions of the Agreement, and the Performance and Payment Bonds hereto attached; all of which are made a part hereof and collectively evidence and constitute the entire contract.

The CONTRACTOR hereby agrees to commence work within ten (10) days after the date written notice to do so shall have been given to him, and to substantially complete the same within 120 work days after the date of the written notice to commence work.

The OWNER in consideration of the full and true performance of the said work by said CONTRACTOR hereby agrees to pay said CONTRACTOR the unit price set forth in the attached bid, and in the manner provided in the Specifications.

IN WITNESS WHEREOF, the parties of these presents have executed this Contract in the year and day first written above.

Honorable Danny Valdez, Webb County Judge
OWNER, Party of the First

_____
CONTRACTOR, Party of the Second Part

By: _____

by: _____

ATTEST:

_____
Margie Ramirez Ibarra
Webb County Clerk

APPROVED AS TO FORM:

_____
Anna L. Cavazos Ramirez
Webb County Attorney*
By law, the County Attorney's Office may only advise or approve contracts or legal documents on behalf of its clients. It may not advise or approve a contract or legal document on behalf of other parties. Our review of this document was conducted solely from the legal perspective of our client. Our approval of this document was offered for the benefit of our client. Other parties should not rely on this approval, and should seek review and approval of their own respective attorney(s).

THE STATE OF TEXAS §

COUNTY OF WEBB §

Before me, the undersigned, a Notary Public in and for said County and State, on this day personally appeared _____, CONTRACTOR, known to me to be the person and office whose name is subscribed to the foregoing instrument and acknowledged to me that the same was the act of said _____ and that executed the same as the act of such _____for the purposes and considerations therein expressed, and in the capacity' herein stated.

GIVEN UNDER, my hand and seal of office this ____day of_____, 20__.

_____
Notary Public in and for

_____County, Texas

My commission expires: _____

ACKNOWLEDGEMENT

CORPORATE

THE STATE OF _____

COUNTY OF _____§

BEFORE ME, the undersigned authority, this day personally appeared known to me to be the

_____ of the _____

_____Corporation, who being by me first duly sworn, deposed and said that he/she had executed the above and foregoing Document in the capacity stated as the authorized act and deed of said Corporation.

_____
NOTARY PUBLIC

Printed Name:_____

Commission Expires: _____

PARTNERSHIP

THE STATE OF _____§

COUNTY OF _____§

BEFORE ME, the undersigned authority, this day personally appeared _____

_____, a General Partner of the _____

_____ Partnership, who being by me first duly sworn, deposed and said that he/she had executed the above and foregoing Document in the capacity stated as the authorized act and deed of said Partnership.

_____
NOTARY PUBLIC

Printed Name:_____

Commission Expires:_____

INDIVIDUAL OR SOLE PROPRIETORSHIP

THE STATE OF _____§

COUNTY OF _____§

BEFORE ME, the undersigned authority, this day personally appeared _____

_____,an individual doing business as _____

_____ , who being by me first duly sworn, deposed and said that he/she had executed the above and foregoing Document in the capacity stated and for the purposes and consideration set forth therein.

_____
NOTARY PUBLIC

Printed Name: _____

Commission Expires:_____

*(EXECUTE APPROPRIATE ACKNOWLEDGMENT FOR CORPORATION, PARTNERSHIP OR INDIVIDUAL CONTRACTOR.)

CONTRACTOR'S ASSURANCE
(Subcontracts)

By signing this proposal, the contractor is giving assurances that all subcontract agreements will incorporate the Standard Specification and Special Provisions to Section 9.6.B. "Payment Provisions for Subcontractors", all subcontract agreements exceeding $2,000 will incorporate the applicable "Wage Determination Decision", and, all subcontract agreements of $10,000 or more will incorporate the following:

Special Provision "Certification of Nondiscrimination in Employment"

Special Provision "Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity" (Executive Order 11246)

Special Provision "Standard Federal Equal Employment Opportunity Con-struction Contract Specifications" (Executive Order 11246)

SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.
2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).
3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

1110 Washington St., Suite 101
Laredo, Texas 78040

Phone (956) 523-4125
Fax: (956)523-5010

NOTICE TO BIDDERS

OWNER:	Webb County 1110 Washington St, Suite 101 Laredo, Texas 78040
PROJECT:	Border Access Colonias Program Tanquecitos I and II Colonia Roadway and Drainage Improvements
JOB LOCATION:	Colonia Tanquecitos I an II
BID AND TIME:	_____ and _____
BONDS:	Bid Bond 5% Performance Bond 100% Payment Bond 100%
DESCRIPTION:	Proposed roadways consisting of grading, base, structures, surfacing, roadside drainage, signing and striping for the Colonia Tanquecitos I and II Roadways.
PLANS AVAILABLE:	Interested bidders may obtain copies of Bidding Documents at the place identified below upon payment of a non-refundable $100.00 per set, with check made payable to Webb County or access at http://www.webbcountytx.gov/PurchasingAgent/PublicNoticeRFP/ Bidding documents will also be made available for review at no charge at the Webb County Purchasing Department, 1110 Washington Street, Ste. 101 Laredo, Texas 78040, Telephone (956) 523-4125

1110 Washington St., Suite 101
Laredo, Texas 78040

Phone (956) 523-4125
Fax: (956)523-5010

NOTICE TO BIDDER

In the space provided below, please enter your total bid amount for this project. Only this figure will be read publicly by the Webb County at the public bid opening.

It is understood and agreed by the bidder in signing this bid that the total amount is not binding on either the Bidder or the County. It is further agreed that the official total amount for this bid will be determined by multiplying the unit prices for each pay item by the respective estimated quantities shown in this bid and then totaling all of the extended amounts

$_____	$_____
Total <u>Bid Amount</u>	**Total <u>Bid Amount</u> plus <u>Additive Alternative # 1</u>**

Control:	5BCF5029-2C2400054 (2nd Call)
Project:	Border Access Colonias, Program Tanquecitos I and II
Highway:	County Road
County:	Webb County
District:	22 Laredo
Limits:	Roadways within Colonia Tanquecitos I and II

DISADVANTAGED BUSINESS ENTERPRISES REQUIREMENTS

Project: Border Access Colonias Program, Tanquecitos I and II
Highway: County Road
County: Webb County
CSJ No: 5BCF5029-2c2400054 (2nd Call)

The following goal for disadvantaged business enterprises is established:

DBE 0 %

ADDENDUM ACKNOWLEDGEMENT

The undersigned proposes and agrees to perform all work of whatever nature required, in strict accordance with the Drawings and Specifications, for the following sum of prices, to wit:

It is understood that the work proposed to be done will be accepted when fully completed in accordance with the Contract Drawings and Specifications.

Accompanying this bid is a certified check, cashier's check or Bid Bond in the amount of five percent (5%) of the total amount bid. Also accompanying this bid is all information required in the Bidding Requirements.

It is understood that Webb County reserves the right to reject any and all bids and to waive any informality received in the bids.

In the event of the award of a Contract to the undersigned, the undersigned will furnish a Performance Bond and a Payment Bond for one hundred percent (100%) of the amount of the Contract, and a Certificate of Insurance, secure proper compliance with the terms and provisions of the Contract, to insure and guarantee the work until final completion and acceptance to guarantee payment of all lawful claim for labor performed and materials furnished in the fulfillment of the Contract, to guarantee the work for a period of one year after final acceptance by the Owner, and to guarantee the Bidder is covered by insurance as required by the Contract Documents.

The undersigned certifies that the prices contained in the bid have been carefully checked and are submitted as correct and final. The unit prices have been shown in words for each item listed in the bid and it is understood that in the event of a discrepancy, **the words shall govern**.

Each Bidder is required to acknowledge receipt of an addendum issued for this specific project. This page is provided for the purpose of acknowledging an addendum.

In order to properly acknowledge an addendum, the date which appears on the top of the addendum notification letter must be entered below.

In addition, the bidder by affixing their signature to the signature page of this bid is acknowledging that they have taken the addendum(s) into consideration when preparing their bid and that the information contained in the addendum will be included in the contract, if awarded by the Commissioners Court.

Receipt is hereby acknowledged of the following Addendum to the Contract Documents.

Addendum No. 1 dated_____Received_____
Addendum No. 2 dated_____Received_____
Addendum No. 3 dated_____Received_____
Addendum No. 4 dated_____Received_____

_____

Contractor

By_____

(Title)

_____

(Address)

_____

(City, State, and Zip Code)

_____

(Area Code) (Telephone)

LOBBYING CERTIFICATION

For Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies to the best of his or her knowledge and belief that:

1. No federal appropriated funds have been paid or will be paid by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

2. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all sub awards at all tiers (including subcontracts, sub grants, and contracts under grants, loans and cooperative agreements) and that all sub recipients shall certify and disclosure accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure,

Signature:_____

Name: _____

Title: _____

Date: _____

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352 (See reverse for public burden disclosure.)

1. type of Federal Action:	2. Status of Federal Action:	3. Report Type:
a. contract b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	a. bid/offer/application b. initial award c. post-award	a. initial filing b. grant For material change only: Year____ quarter_____ date of last report _

4. Name and Address of Reporting Entity: ☐ Prime ☐ Subawardee Tier_____, if known Congressional District, if known:	5. If Reporting Entity in No.4 is Subawardee, Enter Name and Address of Firm Congressional District, if known:
6. Federal Department/Agency:	7. Federal Program Name/Description: CFDA Number, if applicable: _____
8. Federal Action Number, if known:	9. Award Amount, if known: $_____
10. a. Name and Address of Lobbying Entity (if individual, last name, first name, MI):	b. Individuals Performing Services (including address if different from. No. 10a) (last name, :first name, MI):

(attach Continuation Sheet(s) SF-LLL-A, if necessary)

11. Amount of Payment (check all that apply): $_____ actual Planned	13. Type of Payment (check all that apply): a. retainer b. one-time fee c. commission d. contingent fee e. deferred f. other; specify:_____
12. Form of Payment (check all that apply) a. cash b. in kind; specify: nature_____ value_____	

14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s), or Member(s) contacted, for Payment Indicated in Item 11:

(attach Continuation Sheet(s) SF-LLL-A, if necessary)

15. Continuation Sheet(s) SF-LLL-A attached: Yes_____ No_____

16. Information requested through this form. is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less. than $10,000 and not more than $100,000 for each such failure.	Signature: _____ Print Name:_____ Title:_____ Telephone No:_____ Date:_____ Authorized for Local Reproduction. Standard Form - LLL

Approved by O:MB
034R-0046

DISCLOSURE OF LOBBYING ACTIVITIES
CONTINUATION SHEET

Reporting Entity:_____ Page ____of _____

Authorized for Local Reproduction
Standard Form ·ILL-A

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES.

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient of a covered Federal action, or a material change to a previous filing pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payments to any lobbying entity for Influencing or attempting to Influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Use the SF-LLLA Continuation Sheet for additional Information If the space on the form is inadequate. Complete all Items that apply for both the initial filing and material change report. Refer to the Implementing guidance published by the office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this Is a follow up report caused by a material change to the Information .previously reported, enter .the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity or this covered Federal action.
4. Enter the full name, address, city State end zip code of the reporting entity. Include Congressional District, If known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be a prime or subaward recipient. Identify the tier of the subawardee ,e.g., the first subawardee of the prime is the 1st tier. Subawards Include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee", then enter the full name , address, city, state and zip code of prime Federal Recipient, include Congressional District, if known
6. Enter the name of the Federal Agency making the award or loan commitment. Include the last one organizational level below agency name, if known. For Example, Department of Transportation, United States Coast Guard
7. Enter the Federal program name or description for the covered Federal action (item 1), if known enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number, invitation for Bid (IFB) number, grant announcement number, the contract, grant, or loan award number, the application/proposal control number assigned by the federal agency) include prefixes, e.g., "RFP-DE-90-001".
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) enter the full name, address, city, state and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.
    (b) Enter the full name of the individual(s) performing services, and include full address if different from 10(a).
    Enter Last Name, First Name, and Middle Initial (MI).
11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.
12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.
13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.
14. Provide specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered, include all preparatory and related activity, not just time spent in actual contact with Federal Officials. Identify the Federal official(s) or employee(s) contacted or the officer(s) or Member(s) of Congress that were contacted.
15. Check whether or not a SFG-LLL-A Continuation sheet(s) is attached.
16. The certifying official, shall sign and date the form, print his/her name, title, and telephone number.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments reguarding the burden estimate or any other aspect of this collection of information. Inluding suggestions for reducing this burden, to the office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, D. C. 20503.

AFFIDAVIT

FORM OF NON- COLLUSIVE AFFIDAVIT

THE STATE OF TEXAS §

COUNTY OF _____ §

_____

being first duly sworn, deposes and says

That he is _____

(a Partner of Officer of the firm of, etc.)

The party making the foregoing proposal or bid, that such proposal or bid is genuine and not collusive or sham; that said Bidder has not colluded, conspired, connived, or .agreed, directly or indirectly, with any Bidder or Person, to put in a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference, with any person, to fix the price or affiant or of any other Bidder or to fix any overhead, profit or cost element of said bid price, or of that of any other Bidder, or to secure any advantage against the County of Webb or any person interested in proposed Contract; and that all statements in said proposal or bid are true.

_____

Signature of

Bidder, if the Bidder is an individual
Partner, if Bidder is a Partner
Officer, if the Bidder is a Corporation

Subscribed and sworn before me this ___day of _____, 20_____.

_____

Notary Public

My Commission expires

CONTRACT/BID DOCUMENTS

Federal and State Requirements
Webb County
BORDER ACCESS COLONIAS PROGRAM TANQUEFITOS I AND II COLONIA
ROADWAY AND DRAINAGE IMPROVEMENTS
C5BCF5029-2c2400054 (2nd Call)

(1) **BUY AMERICA** - The County of Webb or its construction contractor will comply with the latest provisions of Buy America as listed at 23 CFR 635.410. Use Steel or Iron materials manufactured in the United States except when:

- The cost of materials, including delivery, does not exceed 0.1% of the total contract cost or $2,500, whichever is less;
- The contract contains an alternate item for a foreign source steel or iron product and the contract is awarded based on the alternate item;
- The material is temporarily installed.
- An alternative bidding procedure may be used to justify the use of foreign steel or iron. Under this procedure, the total project is bid using two alternatives: one which is based on foreign source products, and the second, using domestic products. The use of foreign products may be justified if the lowest total bid based on domestic steel or iron products is 25 percent more than the lowest bid using corresponding foreign steel or iron products. The 25 percent differential applies to the total bid for the entire project, not just the bids for the steel or iron products."

(2) **Change Orders** – Webb County reserves the right to make changes in the work including addition, reduction, or elimination of quantities and alterations needed to complete the contract. Perform the work as altered. These changes will not invalidate the contract nor release the Surety.

If the changes in quantities or the alterations do not significantly change the character of the work under the contract, the altered work will be paid for at the contract unit price. If the changes in quantities or the alterations significantly change the character of the work, the contract will be amended by a change order. If no unit prices exist, this will be considered extra work and the contract will be amended by a change order. Cost justifications should be provided as requested, in an acceptable format. Payment will not be made for anticipated profits on work that is eliminated.

Agree upon the scope of work and the basis of payment for the change order before beginning the work. If no agreement can be reached, Webb County may order the work to proceed under Article 9.5, "Force Account", or by making an interim adjustment to the contract. In the case of an adjustment, the Engineer will consider modifying the compensation after the work is performed.

A significant change in the character of the work occurs is defined as follows:

- The character of the work for any item as altered differs materially in kind or nature from that in the contact or;
- A major item of work varies by more than 25% from the original contract quantity.

When the quantity of work to be done under any major item of the contract is more than 125% of the original quantity stated in the contract, then either party to the contract may request an adjustment to the unit price on the portion of the work that is above 125%. When the quantity of work to be done under any major item on the contract is less than 75% of the original quantity stated in the contract, then either party to the contract may request an adjustment to the unit price. If the changes require additional working days to complete the contract, contract working days will be adjusted in accordance with Item 8, "Prosecution and Progress", under the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highway, Streets, and Bridges (2004).

(3) **Claims** – The County of Webb and its construction contract will comply with 23 CFR 635.124, Texas Government Code Chapter 2001, Subchapter C – Procedures for Contested Cases and Texas Government Code Chapter 201.

(4) **Standardized Contract Clause Concerning Site Conditions** – (I) General Rule: the Secretary shall issue regulations establishing and requiring, for inclusion in each contract entered into with respect to any project approved under section 106 of this title (Title 23 United States Code) a contract clause , developed in accordance with guidelines established by the Secretary, which equitably addresses each of the following:

- Site Conditions;
- Suspensions of work ordered by the State (other than a suspension of work caused by the fault of the contractor or by weather;
- Materials changes in the scope of work specified in the contract.

(II) Limitations on applicability – (a) State law – Paragraph (I) shall apply in a State except to the extent that such State adopts or has adopted by statute a formal procedure for the development of a contract clause described in paragraph (I) or adopts or has adopted a statute which does not permit inclusion of such a contract clause. (b) Design-Build Contracts – Paragraph (I) shall apply to any design-build contract approved under subsection (b) (3) of Title 23 United States Code Section 112.

(5) **Disadvantaged Business Enterprises (DBE)** – The County of Webb and/or its construction contractor will comply with 49 CFR 26 and has adopted TxDOT's DBE program.

(6) **Debarment Certification** – The County of Webb and/or its construction contractor certifies that it is not in suspension or debarment status for State and Federal funds.

(7) **Equal Employment Opportunity (EEO)** – The County of Webb has developed and implemented an EEO program. The County of Webb and/or its construction contractor will comply with the provisions of Title 23 CFR 200.

(8) **Equipment Rental Rates** – The County of Webb and/or its construction contractor will comply with FAPG NS Title 23 CFR 635.120. If equipment is rented exclusively for force account work from a third party not owned by the construction contractor, payment will be made at the invoice daily rental rate for each day the equipment is needed for the work. The State reserves the right to limit the daily rate to comparable Rental Rate Blue Book rates. When the invoice specifies that the rental rate does not include fuel, lubricants, repairs, servicing, the Rental Rate Blue Book hourly operating cost for each hour the equipment is operated will be added.

(9) **Schedule of Liquidated Damages** – The amount of Daily Contract Administrative Liquidated Damages per working day on this project will be $200 per working day.

(10) **Local Hiring Preferences** – The County of Webb and/or its construction contractor will comply with Title 23 CFR 635.117.

(11) **Method of Construction (Method of Bidding)** – The County of Webb will comply with Title 23 CFR 635.104 and use the competitive bidding process during the construction bid.

(12) **Non-Collusion** – The County of Webb certifies that it will comply with Title 23 CFR 635.112.

(13) **Non-responsive Bid** – A proposal that has one or more of the deficiencies listed below is non-responsive and will not be considered:

- The Person or, in the case of a joint venture, persons do not sign the proposal;
- The proposal guaranty does not comply with the requirements contained in Article 2.8, "Proposal Guaranty" of the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highway, Streets, and Bridges (2004);
- The proposal is in a form other than the official proposal form issued to the Bidder or bidders;
- The proposal was not in the hands of the letting official at the time and location specified in the advertisement;
- The proposal submitted has the incorrect number of items;
- A computer printout, when used, is not signed in the name of the Bidder (or Joint Bidders, in the case of a joint venture), is not in the proper format, or omits required items or includes an item or items no shown in the proposal;
- The bidder was not authorized to receive a proposal under Article 2.3, "Issuing Proposal Forms" of the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highway, Streets, and Bridges (2004);
- The Bidder submits more than one proposal, under the same or different name, for a specific proposed Contract. (A Bidder may submit a bid proposal and participate as a material supplier, subcontractor, or both to any or all Bidders contemplating submitting a proposal for this work.);
- The Bidder fails to acknowledge or improperly acknowledges receipt of all addenda issued;
- The Bidder bids more than the maximum or less than the minimum number of allowable working days shown on the plans when working days is an item;
- The Bidder modifies the proposal in a manner that alters the conditions or requirements for work as stated in the proposal form;
- The Bidder did not attend a specified mandatory pre-bid conference.

(14) **Non-segregated Facilities** – The County of Webb and/or its construction contractor will comply with Title 23 CFR 633 Subchapter A.

(15) **Prevailing Minimum Wage** – The County of Webb and or its construction contractor will comply with Tile 23 USC 113 and Title 23 CFR 633A. (Latest Bacon-Davis wage rates for Webb County are attached.)

(16) **Prison Produced Materials** – The County of Webb and/or its construction contractor certify that they will comply with Title 23 CFR 635.417 and that the use of Prison Produced Materials on this project is prohibited.

(17) **Publicly-owned equipment** – The County of Webb and/or its construction contractor will comply with Title 23 CFR 635.106. The use of publicly owned equipment on this project is prohibited.

(18) Termination – The County of Webb may terminate the construction contract in whole or in part whenever:

- The contractor is prevented from proceeding with the work as a direct result of an executive order of the President of the United States or the Governor of the State;
- The contractor is prevented from proceeding with the work due to a national emergency, or when the work to be performed under the contract is stopped, directly or indirectly, because of the freezing or diversion of materials, equipment or labor as the result of an order or a proclamation of the President of the United States;
- The contractor is prevented from proceeding with the work due to an order of any Federal authority;
- The contractor is prevented from proceeding with the work by reason of a preliminary, special, or permanent court order where the issuance of the restraining order is preliminary caused by acts or omissions of persons or agencies other than the contractor;
- The State determines that termination of the contract is in the best interest of the State or the Public. This includes but is not limited to the discovery of significant hazardous material problems, right of way acquisition problems, or utility conflicts that would cause substantial delays or expense to the contract.

(19) **Time Extensions** - Any request for a time extension on the construction contract shall require the completion of a change order request and the concurrence of the State. Contract time extensions submitted for approval shall be fully justified and adequately documented.

(20) All potential bidders shall be pre-qualified by TxDOT in accordance with Item 2 of the General Requirements and Covenants of the Standard Specifications for this project.

CHILD SUPPORT STATEMENT

WEBB COUNTY
BORDER ACCESS COLONIAS PROGRAM TANQUECITOS I AND II ROADWAY AND DRAINAGE IMPROVEMENTS
PROJECT NO: 5BCF5029-2c2400054 (2nd Call)

Under Family Code, Section 231.006, _____(name of individual) certifies that_____(name of business) _____(vendor #) as of_____, 20_____ (date) is eligible to receive a grant, loan, or payment and acknowledges that any contract may be terminated and payment may be withheld if this certification is inaccurate.

List below the name and social security number of the individual or sole proprietor and each partner, shareholder, or owner with an ownership interest of at least 25% of the business entity submitting the bid or application. This form must be updated whenever any party obtains a 25% ownership interest in the business entity.

Name (Please Print Legibly)	Social Security Number

Family Code, Section 231.006, specifies that a child support obligor who is more than thirty (30) days delinquent in paying child support and a business entity in which the obligor is a sole proprietor, partner, shareholder, or owner with an ownership interest of at least 25% percent is not eligible to receive payments from state funds under a contract to provide property, materials, or services; or receive a state-funded grant or loan.

A child support obligor or business entity ineligible to receive payments described above remains ineligible until all arrearage have been paid or the obligor is in compliance with a written repayment agreement or court order as to any existing delinquency.

Except as provided by Family Code, Section 231.302(d), a social security number is confidential and may be disclosed only for the purposes of responding to a request for information from an agency operating under the provisions of Subchapters A and D of Title IV of the federal Social Security Act (42 U.S.C. Sections 601 et seq. and 651 et seq.)

The Webb County Project File maintains the information collected through this article. With few exceptions, you are entitled on request to be informed about the information that we collect about you. Under Sections 552.022 and 552.023 of the Texas Government Code, you also are entitled to receive and review the information. Under Section 559.004 of the Government Code, you are also entitled to have us correct information about you that is incorrect.

SALES TAX INFORMATION

NOTICE TO CONTRACTORS

The Contractor's attention is directed to TEX. TAX CODE ANN. 151.311, which was amended by the Texas Legislature, effective October 1, 1993.

Under Section 151.311, as amended, tangible personal property purchased by a contractor for use in the performance of a contract for the improvement of real property for an organization such as Webb County is exempt from the payment of sales and use tax thereon when the property is incorporated into the realty in the performance of the contract. Building materials, etc., are exempt from tax if the are:

(1) Necessary and essential for the performance of the contract: and
(2) Completely consumed at the job site (i.e.: being used once for their intended purpose they are used up or destroyed). Items that can be re-used on other jobs are not tax exempt.

Services purchased by a contractor are also tax exempt, where:

(1) The contract is for an improvement to real estate for an exempt organization: and
(2) The contract expressly require specific service to be provided or purchased by the person performing the contract: or
(3) The service is integral to the performance of the contract.

Machinery and equipment, including repair and replacement parts for the same, are not tax exempt when used in the performance of a contract for the improvement of real estate for Webb County.

The contractor should be aware that the Texas Comptroller of Public Accounts issues rules interpreting applicable provisions of the tax code from time to time. The rules should be consulted when answering specific questions. The contractor can obtain additional information concerning the applicable sales and use tax, as well as sales tax permits and information regarding resale certificates, from the State Comptroller's Office, at (800) 252-5555.

JOB _____ *CONTRACT* _____

PAYROLL VERIFICATION INFORMATION

1. Payroll will be verified by a Webb County Representative. Certification of payment will be compared with payroll figures during the performance of the work and upon completion of project. To minimize time in payment of job, the General Contractor can send a certified letter to the effect upon receipt of certification of payment, they will be made available for comparison, and if any discrepancies are found, the necessary adjustments will he made.

2. Submit certified payrolls weekly to Webb County.

3. Number payrolls consecutively starting with #1 for first month worked.

4. Only one copy of each payroll is required.

5. Include Webb County Contract number and job description on each payroll.

6. Show each employee working on project and his work classification (carpenter, pipe fitter, roofer, etc.). Consult classification and minimum wage schedule in the Prevailing Wage Rate for Engineering Construction in Webb County in contract specifications.

7. Indicate on payroll if fringe benefits (as shown on Webb County Wage Scale) are paid to approved plans, funds, or programs; or if they are paid in cash to the employee. (In case of cash payment of fringe benefits, show the base rate + fringe benefits, i.e., 5.00/6.75.)

8. Show the number of hours worked in each week.

9. Indicate gross salary, deductions, net salary, and check number issued.

10. Contractor is to submit payroll sheets for each contract he has with Webb County.

11. Show "Final" on last payroll submitted.

12. General Contractor is responsible for sub-contractors' submittal of correct payrolls each week. He can only be assured of this by insisting that subcontractor payrolls be submitted to him, not to Webb County.

13. Sub-contractors' payroll to be monitored by prime contractor in complying to prevailing wage rates.

JOB _____ *CONTRACT* _____

BID BOND

KNOW ALL PERSONS BY THESE PRESENTS,

That we, (Contractor Name) _____

_____

Hereinafter called the Principal, and (Surety Name)_____

_____

a corporation or firm duly authorized to transact surety business in the State of Texas, hereinafter called the Surety, are held and f d y bound unto to Webb County, hereinafter called the Obligee, in the sum of not less than five percent (5%) not to exceed $100,00.00 to the Bid, rounded to the nearest one ~1 thousand dollars, not to exceed one hundred thousand dollars ($100,000) as a bid guaranty (amount displayed on the cover of the bid), the payment of which sum will and truly be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the principal has submitted a bid for the following project identified as:

Project: Border Access Colonias Program, Tanquecitos I and II
Highway: CR
County: Webb County
CSJ No: 5BCF5029-2c2400054 (2nd Call)

NOW, THEREFORE, if the Obligee shall award the Contract to the Principal and the Principal shall enter into the Contract in writing with the Obligee in accordance with the terms of such hid, then this bond shall be null and null void. If in the event of failure of the Principal to execute such Contract in accordance with the terms of such bid, this bond shall become the property of the Obligee, without recourse of the Principal and/or Surety, not as a penalty but as liquidated damages.

Signed this _____Day of _____20_____

By:_____
(Principal Name)

_____
(Signature and Title of Principal)

By:_____
(Surety Name)

_____
(Signature of Attorney-in-Fact)

*Attach Power of Attorney (surety) for Attorney-in-Fact.

Impressed
Surety
Seal Only

BIDDER'S CHECK RETURN

IMPORTANT

The space provided for the return address must be completed to facilitate the return of your bidder's check. Care must be taken to provide a legible, accurate, and complete return address, including zip code. A copy of this sheet should be used for each different return address.

NOTE

Successful bidders will receive their guaranty checks with the executed contract.

RETURN BIDDERS CHECK TO (PLEASE PRINT):

Project: Border Access Colonias Program, Tanquecitos I and II
Control: 5BCF5029-2c2400054 (2nd Call)
Highway: CR
County: Webb
Limits: Roadways within Colonia Tanquecitos I and II

IMPORTANT

PLEASE RETURN THIS SHEET IN ITS ENTIRETY

Please acknowledge receipt of this check(s) at your earliest convenience by signing below in longhand, in ink, and returning this acknowledgment in the enclosed self addressed envelope.

Check Received By: _____ Date: _____

Title: _____

For (Contractor's Name): _____

Project _____

County _____

PAYMENT BOND

THE COUNTY OF WEBB §

COUNTY OF WEBB §

KNOW ALL MEN BY THESE PRESENTS:

THAT_____ of the City of_____, County of_____, and State of _____,as Principal, and _____, authorized under the Laws of the County of Webb to act as Surety on Bonds for Principals, are held and firmly bound unto the County Judge of Webb County, Texas, and his duly qualified successors in office, (County), in the penal sum of Dollars ($_____) for the payment whereof, the said Principal and Surety bind themselves and their heirs, administrators, executors, successors and assigns, jointly and severally, by these presents:

WHEREAS, the Principal has entered into a certain written Contract with the County dated the day of _____, 20___, for construction of a Public Works Project, generally described as _____ which Contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION TO THIS OBLIGATION IS SUCH, that if the said Principal shall pay all claimants supplying labor and material to him or a subcontractor in the prosecution of the work provided for in said Contract, then, this obligation shall be void; otherwise, to remain in full force and effect;

PROVIDED, HOWEVER, that this Bond is executed pursuant to the provisions of Texas Government Code, Title 10, Chapter 2253 of the Revised Civil Statutes of Texas, as amended, and all liabilities on this Bond shall be determined in accordance with the provisions of said Article to the same extent as if it were copied at length herein.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract, or to the work performed there under, or the Plans, Specifications or Drawings accompanying the same, shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract, or to the work to be performed there under.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this _____ day of _____, 20_____.

_____	_____
PRINCIPAL	SURETY
BY:_____	BY:_____
TITLE: _____	TITLE: _____
ADDRESS:_____	ADDRESS:_____
_____	_____
_____	_____

The Name and Address of the Resident Agent of Surety is:

_____

_____

(Attach Power of Attorney evidencing Surety Signatory's authority to execute on behalf of Surety.)

PERFORMANCE BOND

THE WEBB COUNTY §

WEBB COUNTY §

KNOW ALL MEN BY THESE PRESENTS:

THAT_____of the City of _____, County of_____and State of ___ _____, as Principal, and _____, authorized under the Laws of the County of Webb to act as Surety on Bonds for Principals, are held and firmly bound unto the County Judge of Webb County, Texas, and his duly qualified successors in office, (County), in the penal sum of_____ Dollars ($_____ _____) for the payment whereof, the said Principal and Surety bind themselves and their heirs, administrators, executors, successors and assigns, jointly and severally, by these presents:

WHEREAS, the Principal has entered into a certain written Contract with the County, dated _____ day of _____ 20_____, for construction of a Public Works Project, generally described as _____ which Contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall in all respects duly and faithfully observe and perform all and singular the covenants, conditions, and agreements in and by said Contract agreed and covenanted by the Principal to be observed and performed, and according to the true intent and meaning of said Contract and the Plans and Specifications hereto annexed, then this obligation shall be void; otherwise, to remain in full force and effect;

PROVIDED, HOWEVER, that this Bond is executed pursuant to the provisions of Texas Government Code, Title 10, Chapter 2253 of the Revised Civil Statutes of Texas, as amended, and all liabilities on this Bond shall be determined in accordance with the provisions of said Article to the same extent as if it were copied at length herein.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract, or to the work performed thereunder, or the Plans, Specifications or Drawings accompanying the same, shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract, or to the work to be performed thereunder.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this ____ day of _____,20____.

_____	_____
PRINCIPAL	SURETY
BY:_____	BY:_____
TITLE:_____	TITLE:_____
ADDRESS: _____	ADDRESS: _____
_____	_____
_____	_____

The Name and Address of the Resident Agent of Surety is:

_____

_____

(Attach Power of Attorney evidencing Surety Signatory's authority to execute on behalf of Surety.)

CERTIFICATION OF INTEREST IN OTHER BID PROPOSALS FOR THIS WORK

By signing this proposal, the bidding firm and the signer certify that the following information, as indicated by checking "Yes" or "No" below, is true, accurate, and complete.

A. Quotation(s) have been issued in this firm's name to other firm(s) interested in this work for consideration for performing a portion of this work.

_____YES

_____ NO

B. If this proposal is the low bid, the bidder agrees to provide .the following information prior to award of the contract.

1. Identify firms which bid as a prime contractor and from which the bidder received quotations for work on this project.
2. Identify all the firms which bid as a prime contractor to which the bidder gave quotations for work on this project.

TxDOT Form 1560

Texas Department of Transportation (TxDOT)
CERTIFICATE OF INSURANCE

Prior to the beginning of work, the Contractor shall obtain the minimum insurance and endorsements specified. Only the TxDOT certificate of insurance form is acceptable as proof of insurance for department contracts. Agents should complete the form providing all requested information then either fax or mail this form directly to the address listed on page two of this form. Copies of endorsements listed below are not required as attachments to this certificate.

Insured: _____

Street/Mailing Address: _____

City/State/Zip: _____

Phone Number: Area Code ( ) Vendor Identification Number (11 digits): _____

Workers' Compensation Insurance Coverage:
Endorsed with a Waiver of Subrogation in favor of TxDOT.

Carrier Name:			Carrier Phone #:	
Address:			City, State, Zip:	
Type of Insurance	Policy Number	Effective Date	Expiration Date	Limits of Liability:
Workers' Compensation				Not Less Than: Statutory – Texas

Comprehensive General Liability Insurance:
Endorsed with TxDOT as Additional Insured and with a Waiver of Subrogation in favor of TxDOT.

Carrier Name:			Carrier Phone #:	
Address:			City, State, Zip:	
Type of Insurance:	Policy Number:	Effective Date:	Expiration Date:	Limits of Liability:
Comprehensive General Liability Insurance Bodily Injury Property Damage *OR* Commercial General Liability Insurance				Not Less Than: $ 500,000 each occurrence $ 100,000 each occurrence $ 100,000 for aggregate *OR* $ 600,000 combined single limit

Comprehensive Automobile Liability Insurance:
Endorsed with TxDOT as Additional Insured and with a Waiver of Subrogation in favor of TxDOT.

Carrier Name:			Carrier Phone #:	
Address:			City, State, Zip:	
Type of Insurance:	Policy Number:	Effective Date:	Expiration Date:	Limits of Liability:
Comprehensive Automobile Liability Insurance *OR* Texas Business Automobile Policy Bodily Injury Property Damage				Not Less Than: $ 250,000 each person $ 500,000 each occurrence $ 100,000 each occurrence

Umbrella Policy (if applicable):

Carrier Name:			Carrier Phone #:	
Address:			City, State, Zip:	
Type of Insurance:	Policy Number:	Effective Date:	Expiration Date:	Limits of Liability:
Umbrella Policy				

Authorized Agent name, address and zip code:

_____

This Certificate of Insurance neither affirmatively nor negatively amends, extends, or alters the coverage afforded by the above insurance policies issued by the named insurance company. Cancellation of the insurance policies shall not be made until THIRTY DAYS AFTER the agent or the insurance company has sent written notice by certified mail to the contractor and the Texas Department of Transportation.

THIS IS TO CERTIFY to the Texas Department of Transportation acting on behalf of the State of Texas that the insurance policies named meet all the requirements stipulated and such policies are in full force and effect. *If this form is sent by facsimile machine (fax), the sender adopts the document received by TxDOT as a duplicate original and adopts the signature produced by the receiving fax machine as the sender's original signature.*

The Texas Department of Transportation maintains the information collected through this form. With few exceptions, you are entitled on request to be informed about the information that we collect about you. Under sections 555.021 and 553.023 of the Texas Government Code, you also are entitled to receive and review the information. Under section 559.004 of the Government Code, you are also entitled to have us correct information about you that is incorrect.

Area Code ( ) _____ _____ _____
Authorized Agent's Phone Number **Authorized Agent Original Signature** **Date**

Texas Department of Transportation

NOTES TO AGENTS:

Agents must provide all requested information then either fax or mail this form directly to the address listed below.

Pre-printed limits are the minimum required, if higher limits are provided by the policy, enter the higher limit amount and strike-through or cross out the pre-printed limit.

To avoid work suspension, an updated insurance form must reach the address listed below **one business day prior** to the expiration date. **Insurance must be in force in order to perform any work.**

Binder numbers are not acceptable for policy numbers.

The certificate of insurance, once on file with the department, is adequate for subsequent department contracts provided adequate coverage is still in effect. Do not refer to specific projects/contracts on this form.

The TxDOT certificate of insurance form is the only acceptable proof of insurance for department contracts.

List the contractor's legal company name, including the DBA (doing business as) name as the insured. If a **staff leasing service company** is providing insurance, the contractor's legal company name must be listed first, then in parenthesis, identify the staff leasing service company name **(i.e. ABC Engineering, Inc (XYZ Staff 4 U, Inc – staff leasing service company))**. Denote **contact information** (i.e. address, phone number, and etc.) for the insured contractor only; do not list the contact information for either the staff leasing company or the insurance company in these fields. **Vendor Identification Number** is 11 digits which includes your nine digits FEIN (Federal Identification Number).

Over-stamping and/or over-typing entries on the certificate of insurance are not acceptable if such entries change the provisions of the certificate in any manner.

This form may be reproduced. **The SIGNATURE** of the agent is required. Stamped/typed/printed signatures are not acceptable.

CERTIFICATE OF INSURANCE REQUIREMENTS:

WORKERS' COMPENSATION INSURANCE:

The contractor is required to have Workers' Compensation Insurance if the contractor has any employees including relatives.

The word STATUTORY, under limits of liability, means that the insurer would pay benefits allowed under the Texas Workers' Compensation Law.

GROUP HEALTH or ACCIDENT INSURANCE is not an acceptable substitute for Workers' Compensation.

COMPREHENSIVE GENERAL LIABILITY INSURANCE or **COMMERCIAL GENERAL LIABILITY INSURANCE:**

If coverages are specified separately, they must be at least these amounts:

Bodily Injury	$500,000 each occurrence
Property Damage	$100,000 each occurrence
	$100,000 for aggregates

MANUFACTURERS' or CONTRACTOR LIABILITY INSURANCE is not an acceptable substitute for Comprehensive General Liability Insurance or Commercial General Liability Insurance.

COMPREHENSIVE AUTOMOBILE LIABILITY INSURANCE or **TEXAS BUSINESS AUTOMOBILE POLICY:**

The coverage amount for a Texas Business Automobile Policy or Comprehensive Automobile Liability may be shown as a minimum of $600,000 Combined Single Limit by a typed or printed entry and deletion of the specific amounts listed for Bodily Injury and Property Damage.

BASIC AUTOMOBILE LIABILITY INSURANCE is not an acceptable substitute for Comprehensive Automobile Liability Insurance or Texas Business Automobile Policy.

MAIL ALL CERTIFICATES TO:

Texas Department of Transportation
Office of General Counsel - Contract Services Section (CSS)
125 E. 11th St.
Austin, TX 78701-2483
512-374-5120 (V) 512-374-5121 (F)

CHANGE ORDER FORM

CHANGE ORDER NO. _____

PROJECT: _____

_____

CONTRACTOR:_____

Contractor is directed by County to make the following changes to the Contract Documents.

DESCRIPTION OF CHANGES:_____

_____

_____

ATTACHMENTS: (List Supporting Documents) _____

_____

CHANGE IN CONTRACT PRICE		**CHANGE IN CONTRACT TIME**	
1. Original price:	$_____	Original Time:	___Days
2. Total of prior change orders:	$_____	Total of prior change orders:	___Days
3. Total price prior to current change order:	$_____	Total time prior to current change order:	___Days
4. Total of current change order:	$_____	Total of current change order:	___Days
5. New price resulting from current change order:	$_____	New time resulting from current change order:	___Days

---

AGREED BY:

CONTRACTOR_____

COMPANY NAME

SIGNATURE: _____ **DATE:** _____

TITLE: _____

APPROVED:_____

WEBB COUNTY CONTRACT REPRESENTATIVE (DATE)

CONCURRANCE:_____

TxDOT CONTRACT REPRESENTATIVE (DATE)

FINAL RELEASE FOR SUBCONTRACTORS AND/OR MATERIAL SUPPLIER

STATE OF _____ §

COUNTY OF _____ §

BEFORE ME, the undersigned authority on this day personally appeared _____ _____ who being duly sworn, deposes and says that he is the _____ _____, which company was a Subcontractor and/or Material Supplier performing work and/or supplying material or equipment known as the _____ for the _____ _____ for Webb County, a Political Subdivision of the County of Webb .

THE UNDERSIGNED, in consideration of the sum of $_____ representing the final payment under subcontract said work and/or materials, or equipment including any and all change orders or amendments thereto, hereby remises, releases and forever discharges Webb County, a Political Subdivision of Texas *(Owner)* from all claims and demands arising out of labor performed and/or materials or equipment supplied by the undersigned in connection with said subcontract, and does hereby release and discharge unto the said Owner, his heirs, and assigns, any and all liens arising out of same.

THE UNDERSIGNED further deposes that all bills and claims of every nature and kind whatsoever in any manner arising from or growing out of labor performed and/or material or equipment furnished in connection with the construction of said project have been fully paid and satisfied and that there are no unsatisfied claims in connection with the performance of said contract; and that he makes this affidavit for the purpose of inducing said General Contractor to make the final payment under the subcontractor described above.

WE HEREBY guarantee, in accordance with the specifications, all labor and material furnished on said job, and work performed under our agreement for construction of the project, to be free from defects resulting from faulty workmanship and/or material for a period of ONE (1) YEAR from date of acceptance of said job by the Owner.

IN WITNESS WHEREOF, the undersigned has caused this Release to be signed and sealed this _____ day of _____ 20___.

_____
Subcontractor and/or Material Supplier

By _____
Authorized Signature

Title _____

SUBSCRIBED and sworn to before me this _____ day of _____, 20____.

_____

Notary Public in and for _____
Webb County, Texas.

ENGINEER'S SEAL

Project:	Border Access Colonias Program, Tanquecitos I and II
Control:	5BCF5029-2C2400054 (2nd Call)
Highway:	County Road
County:	Webb
Limits:	Roadways within Colonia Tanquecitos I and II

The enclosed specifications, special provisions, general notes and specification data in this documents have been by me or under my responsible supervision.

_____ _____

DATE

GENERAL CONSTRUCTION NOTES

GENERAL

Project: Border Access Colonias Program, Tanquecitos I and II
Control: 5BCF5029-2c2400054 (2nd Call)
Highway: County Road
County: Webb
Limits: Roadways within Colonia Tanquecitos I and II

GENERAL REQUIREMENTS AND COVENENTS:

The following areas of work have been removed and/or modified from the construction plans for this contract as described below:

1) **Enlace Road** - No improvements shall be made to Enlace Road from STA 0+00.00 to STA 2+91.06 at this time. Enlace Road shall begin at STA 2+91.06 and end at the intersection with Tanquecitos Dr. (STA 54+23.40).

2) **Serrano Drive** - No improvements shall be made to Serrano Drive at this time.

3) **Canyon Road** - Canyon Road will be constructed as shown in the plans, from STA 0+00.00 to STA 7+83.10.

4) **Desperado Road** - No improvements shall be made to Desperado Road from STA 0+00.00 to STA 0+40.00 at this time. Desperado Road shall begin at STA 0+40.00 and end at the intersection with Canyon Road (STA 3+56.34).

5) **Riata Road** - Riata Road will be constructed as shown in the plans, from STA 0+00.00 to STA 151+36.51.

6) **Estrella Road** - No improvements shall be made to Estrella Road at this time.

7) **Arco Iris Road** - No improvements shall be made to Arco Iris Road from STA 0+00.00 to STA 0+15.00. Arco Iris Road shall begin at STA 0+15.00 and end at the intersefction with Enlace Road (STA 20+46.85).

8) **El Lucero Road** - No improvements shall be made to El Lucero Road at this time.

9) El Rocio Road - No improvements shall be made to El Rocio Road at this time.

10) Los Tanquecitos Drive - No improvements shall be made to Los Tanquecitos Drive from STA 0+00.00 to STA 0+15.00 at this time. Los Tanquecitos Drive shall begin at STA 0+15.00 and end at the intersection with SH 359 (STA 35+84.73).

11) **Bridge Plan & Profile - Structures "A" to "H"** - Structures "A" to "H" shall not be constructed as shown in the plans at this time. The structures shall be replaced with an alternative pipe crossing structure and/or the Low-Water Crossing Option found on Sheet 69. Below is a description of the improvements to be made at each structure location:

Structure "A" - Install 4 - 18" RCP pipes at 34 LF with Cross Drainage Safety End Treatments. Pipe slope, upstream and downstream inverts shall be as shown in the plans for Structure "A". Also construct a Low-Water Crossing centered at Los Tanquecitos Drive STA 6+46.50. The Low-Water Crossing Option details may be found on Sheet 69.

Structure "B" - REMOVED

Structure "C" - REMOVED

Structure "D" - Install 4 - 18" RCP pipes at 39.26 LF with Cross Drainage Safety End Treatments. Pipe slope, structure skew, upstream and downstream inverts shall be as shown in the plans for Structure "D". Also construct a Low-Water Crossing centered at Enlace Road STA 41+70.24. The Low-Water Crossing Option details may be found on Sheet 69.

Structure "E" - Structure "E" currently has pipe culverts in place. Pipe culverts and other existing storm sewer improvements shall not be removed. Construct a Low-Water Crossing centered at Enlace Road STA 36+00.00. The Low-Water Crossing Option details may be found on Sheet 69.

Structure "F" - REMOVED

Structure "G" - Install 4 - 18" RCP pipes at 34 LF with Cross Drainage Safety End Treatments. Pipe slope, upstream and downstream inverts shall be as shown in the plans for Structure "G". Also construct a Low-Water Crossing centered at Enlace Road STA 4+98.31. The Low-Water Crossing Option details may be found on Sheet 69.

Structure "H" - Install storm sewer system and other improvements as per the Structure "H" Alternative Plan & Profile. The Contractor's attention is called to the fact that coordination will need to be made for the location and possible tie-in of the outfall to a storm sewer system for the adjacent development to the North. The Contractor shall coordinate with the developer and/or

his Engineer for any potential tie-in to their system. Adjustments may need to be made to the exact location of the outfall for this storm sewer system at the expense of the contractor.

The Contractor's attention is directed to the presence of underground utilities within the right of way on this project. It is the responsibility of the Contractor to call for locates at least 48 hours in advance of any excavation or drilling.

The locations of utilities, either underground or overhead, shown with the right-of-way are approximate and shall be verified by the Contractor before beginning construction operations.

ITEM 100 – PREPARING RIGHT OF WAY

This item shall be used to remove and dispose of all obstructions within the right-of-way necessary for construction operations. This includes, but is not limited to; drain pipes, asphalt pavement, concrete pavement and concrete structures.

ITEM 260 – LIME TREATMENT (ROAD MIXED)

The Contractor shall lime treat the subgrade under each low-water crossing at Structures "A", "D", "E" and "G". The lime treatment shall be a total of 100 feet long and 30 feet wide, centered about the structure centerline for each location. The lime treated subgrade shall be compacted to a 95% of the maximum density in accordance with Tex 121-E.

ITEM 316 – SURFACE TREATMENTS

The Contractor shall apply the asphalt and aggregate on top of the flexible base layer. This will act as a seal for the base and will also create a drivable surface for traffic. The streets shall be open and drivable at the end of each work day. The application rate for the asphalt is recommended at 0.30 Gal / SY. The application rate of the aggregate is recommended at 1 CY / 110 SY.

ITEM 502 – BARRICADES, SIGNS AND TRAFFIC HANDLING

The traffic control for the project shall follow the Traffic Control Plan Standards and Barricade & Construction Standards provided in the plans.

The Contractor is fully responsible for the traffic control and will be responsible for furnishing all traffic control devices and flaggers. The construction methods shall be conducted to provide the least possible interference to traffic so as to permit the continuous movement of traffic in all allowable directions at all times. If the Contractor proposed to close a section of street, he/she must obtain approval from the Engineer prior to doing so.

ITEM 506 – TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS

The SW3P for this project shall consist of the following items as directed by the Engineer:

Temporary Sediment Control Fence
Rock Filter Dam (Type 2)
Construction Exit

The Temporary Sediment Control Fence shall be 10 LF in length be placed perpendicular to the ROW between the ROW and the edge of pavement. It shall be placed no more than 5 feet from the edge of the SET, on both sides of the SET, and on both the upstream and downstream side of the structures for a total of 4 locations per structure.

The Rock Filter Dam shall be 20 LF in length and shall be placed on the downstream end of the 4 – 18" RCP pipes. It shall be centered on the 4 – 18" RCP pipes and shall be placed just along side the SET.

The Construction Exits shall be located at the Contractor's staging areas. Locations of the construction exits shall be at the discretion of the Contractor and as approved by the Engineer. The quantity provided is for 2 staging areas, if necessary.

ITEM 520 – INTERSECTIONS, DRIVEWAYS, AND TURNOUTS

The locations of the asphalt and concrete driveways shall be determined by the Webb County Engineering Department, as needed.

ITEM 644 – SMALL ROADSIDE SIGN SUPPORTS AND ASSEMBLIES

The Contractor shall remove any roadside signs in the right-of-way that are an obstruction to the construction operations. The signs shall be replaced as per this item and as per the latest version of the Texas MUTCD.

Special Provision Form FHWA-1273
Required Contract Provisions Federal-Aid Construction Contracts

I. General
II. Nondiscrimination
III. Nonsegregated Facilities
IV. Payment of Predetermined Minimum Wage
V. Statements and Payrolls
VI. Record of Materials, Supplies and Labor
VII. Subletting or Assigning the Contract
VIII. Safety: Accident Prevention
IX. False Statements Concerning Highway Projects
X. Implementation of Clean Air Act and Federal Water Pollution Control Act
XI. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
XII. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment Preference for Appalachian Contracts (included in Appalachian contracts only)

I. General.

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CRF 5.12:

Section I, paragraph 2;
Section IV, paragraphs 1, 2, 3, 4, and 7;
Section V, paragraphs 1 and 2a through 2g

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. Selection of Labor: During the performance of this contract, the contractor shall not:
   a. discriminate against labor from any other State, possession, or territory of the United States, (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

   b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. Nondiscrimination.
(Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)
1. Equal Employment Opportunity. Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal employment opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12201 et seq.) Set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:
   a. The Contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

b. The Contractor will accept as his operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color or national origin, age or disability. Such action shall include: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training."

2. EEO Officer. The Contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy. All members of the Contractor's staff who are authorized to hire, supervise, promote and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the Contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To insure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the Contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the Contractor's EEO obligations within thirty days following their reporting for duty with the Contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedure for locating and hiring minority group employees.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks or other appropriate means.

4. Recruitment. When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal-Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee-referral sources likely to yield qualified minority-group applicants. To meet this requirement, the Contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The Contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. Personnel Actions. Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, or national origin, age or disability. The following procedures shall be followed:

a. The Contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The Contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The Contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The Contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of the avenues of appeal.

6. Training and Promotion.

a. The Contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The Contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The Contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. Unions. If the Contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the Contractor, either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The Contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The Contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such unions will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The Contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information. d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the Contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment. The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The Contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. Records and Reports. The Contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the Contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;
(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;
(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and (4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority,

women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the Contractor will be required to collect and report training data.

III. Nonsegregated Facilities

(Applicable to all Federal-aid construction contracts and related subcontracts of $10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, or national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of $10,000 or more and that it will retain such certifications in its files.

IV. Payment of Predetermined Minimum Wage.

(Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General.

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account {except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)} the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1322) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification.

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;
(2) the additional classification is utilized in the area by the construction industry;
(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and
(4) with respect to helpers as defined in Section IV.4c, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20220. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

1. **Payment of Fringe Benefits.**

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers).

a. Apprentices.

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

 Trainees.

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers.

(1) Helpers will be permitted to work on a project if the helper classification is specified on an applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper as defined above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. Apprentices and Trainees (Programs of the U.S. DOT).
Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. Withholding.
The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor, or any other Federally assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. Overtime Requirements.
No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices and trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation.
Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory). Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages.

The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor

or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. Statements and Payrolls.

(Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

(1) **Compliance with Copeland Regulations (29 CFR Part 3).** The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

(2) **2. Payrolls and Payroll Records.**

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1 (b)(2)(B) of the Davis-Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5 and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014- 1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;
(2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;
(3) that each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract. e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

e. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

f. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such

records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. Record of Materials, Supplies and Labor.

- On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than $1,000,000 (23 CFR Part 635) the contractor shall:

  a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

  b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA- 47, and in the units shown on Form FHWA-47.

  c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph lb relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

- At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. Subletting or Assigning the Contract.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR Part 635).

   a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

   b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of this Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. Safety: Accident Prevention.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. False Statements Concerning Highway Projects.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

* * * * *

Notice to All Personnel Engaged on Federal-Aid Highway Projects

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the costs thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more than $10,000 or imprisoned not more than 5 years, or both."

* * * * *

X. Implementation of Clean Air Act and Federal Water Pollution Control Act.

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $100,000 or more.)

By submission of this bid, or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub. L. 92-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251, et seq., as amended by Pub. L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraphs 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

Form FHWA-1273 (Rev.03.94)

XI. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion.

1. Instructions for Certification - Primary Covered Transactions: (Applicable to all Federal-aid contracts - 49 CFR 29)
   a. By signing and submitting this bid, the prospective primary participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this bid is submitted if at any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "bid," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this bid is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this bid that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this bid that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the non-procurement portion of the "Lists of Parties Excluded From Federal Procurement of Non-procurement Programs" (Non-procurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
   a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

   b. Have not within a 3-year period preceding this bid been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

   c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph lb of this certification; and d. Have not within a 3-year period preceding this application/bid had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective

participant shall attach an explanation to this bid.

* * * * *

2. Instructions for Certification-Lower Tier Covered Transactions. (Applicable to all subcontracts, purchase orders and other lower tier transactions of $25,000 or more-49 CFR 29)

a. By signing and submitting this bid, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this bid is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "bid," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this bid is submitted for assistance in obtaining a copy of those regulations.

The prospective lower tier participant agrees by submitting this bid that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

e. f. The prospective lower tier participant further agrees by submitting this bid that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

f. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Non-procurement List.

g. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

h. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions

1. The prospective lower tier participant certifies, by submission of this bid, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this bid.

* * * * *

Form FHWA-1273 (Rev.03.94)

XII. Certification Regarding Use of Contract Funds for Lobbying.

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $100,000 or more-49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid, to the best of his or her knowledge and belief, that:

   a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

   b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

****

ATTACHMENT A - EMPLOYMENT PREFERENCE FOR APPALACHIAN CONTRACTS
(Applicable to Appalachian contracts only.)

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

   a. To the extent that qualified persons regularly residing in the area are not available.
   b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.
   c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph 1c shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph 4 below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which he estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, he shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within 1 week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph 1c above.

5. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

Project: Border Access Colonias Program, Tanquecitos I and II
Control: 5BCF5029-2c2400054 (2nd Call)
Highway: CR
County: Webb
Limits: Roadways within Colonia Tanquecitos I and II

Texas Department of Transportation
Governing Specifications and Special Provisions

All Specifications and special Provisions applicable to this Project are identified as follows:
Standard Specifications: Adopted by the Texas Department of Transportation June 1, 2004 Standard specifications are incorporated into the contract by Reference.

Items 1 to 9 Incl., General Requirements and Covenants

Item 100 Preparing Right of Way (103)
Item 260 Lime Treatment (Road Mixed)
Item 316 Surface Treatment
Item 340 Dense- Grade Hot –Mix Asphalt (Method)
Item 360 Conc Pvmt (Conc Reinf)Low Water Crossing(210)(300)(301)(320)(520)(585)
Item 420 Concrete Structures (Type B Headwall R.C.P)
Item 464 Reinforced Concrete Pipe
Item 500 Mobilization
Item 502 Barricade, Signs, and Traffic Handling
Item 506 Temporary Erosion, Sedimentation, and Environmental Controls (Rock Berm) (247)(420)(421)(427)(431)(440)

SPECIAL PROVISIONS: Special provisions will govern and take precedence over the specifications enumerated hereon wherever in conflict therewith.

REQUIRED CONTRACT PROVISION, FEDERAL-AID CONSTRUCTION CONTRACT (FORM FHWA 1273) MARCH, 1994)

PREVAILING WAGE RATE TO BE MAINTAINED
WEBB COUNTY SPECIAL PROVISION TO ITEM 1 (001---100)
WEBB COUNTY SPECIAL PROVISION TO ITEM 2 (002---200)
WEBB COUNTY SPECIAL PROVISION TO ITEM 3 (003---300)
WEBB COUNTY SPECIAL PROVISION TO ITEM 4 (004---400)
WEBB COUNTY SPECIAL PROVISION TO ITEM 5 (005---500)
WEBB COUNTY SPECIAL PROVISION TO ITEM 6 (006---600)
WEBB COUNTY SPECIAL PROVISION TO ITEM 7 (007---700)
WEBB COUNTY SPECIAL PROVISION TO ITEM 8 (008---800)
WEBB COUNTY SPECIAL PROVISION TO ITEM 9 (009---900)

SPECIAL PROVISION **"PARTNERING" (000---2329)**
SPECIAL PROVISION" **NOTICE TO ALL BIDDERS" (000---003)**
SPECIAL PROVISION **"NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY" (000-004)**
SPECIAL PROVISION **"STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS" (000---006)**
SPECIAL PROVISION **"CERTIFICATION OF NONDISCRIMINATION IN EMPLOYMENT" (000-009)**
SPECIAL PROVISION **"DISADVANTAGE BUSINESS ENTERPRISE IN FEDERAL-AID CONSTRUCTION" (000-1966)**
SPECIAL PROVSION **"ON THE JOB TRAINING PROGRAM" (000-1676)**
SPECIAL PROVSION **"SCOPE OF WORK" (004-017)**
SPECIAL PROVSION **"CONTROL OF MATERIAL" (006-030)**
SPECIAL PROVSION **"LEGAL RELATIONS AND RESPONSIBILITOES" (007-806)**
SPECIAL PROVSION **"PROSECUTION AND PROGRESS" (008-119)**
SPECIAL PROVSION **"MEASUREMENT AND PAYMENT" (009-015)**
SPECIAL PROVSION **"PREPARING RIGHT OF WAY" (100-002)**
SPECIAL PROVSION **"LIME TREATMENT (ROAD MIXED)" (260-003)**
SPECIAL PROVSION **"SURFACE TREATMENT)" (316-016)**
SPECIAL PROVSION **" DENSE –GRADED HOT-ASPHALT (METHOD)(340-003)**
SPECIAL PROVSION **"CONCRETE STRUCTURES" (420-002)**
SPECIAL PROVSION **"HYDRAULIC CEMENT CONCRETE" (421-035)**
SPECIAL PROVSION **"REINFORCED CONCRETE PIPE" (464-003)**
SPECIAL PROVSION **"MOBILIZATION" (500-005)**
SPECIAL PROVSION **"BARRICADES, SIGNS AND TRAFFIC HANDLING" (502-033)**
SPECIAL PROVSION **"TEMPORARY EROISION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS" (506-012)**

SPECIAL SPECIFICATIONS:
GENERAL: The above –Listed specifications items are those under which payment is to be made. These, together with such other pertinent items, if any, as may be referred to in the above- listed specification items, and including the special provision listed above constitute the complete specifications for this project.

SPECIAL PROVISION – PREVAILING WAGE RATE TO BE MAINTAINED

This is a "Public Works Project" within the meaning of Article No. 5159a, Revised Civil Statutes of Texas. The Commissioners' Court of Webb County has ascertained that the rates set out in the following schedule hereby constitute the general prevailing rate of "per diem" wages for the work classifications set out in such Schedule for the general locality of Webb County, Texas. Such Schedule sets forth the prevailing wage rate for each craft or type of "laborer", "workman", or "mechanic" considered necessary to the performance of the work.

The Contractor, and all Subcontractors, shall pay each "laborer", "workman", or "mechanic" employed, or providing services in connection with the work, an amount not less than the prevailing wage rate hereby established for such class of "laborer", "workman", or "mechanic". A contractor or subcontractor who violates this section shall pay to the state or a political subdivision of the state on whose behalf the contract is made, $60 for each worker employed for each calendar day or part of the day that the worker is paid less than the wage rates stipulated in the contract. A public body awarding a contract shall specify this penalty in the contract. Such forfeiture shall be made in accordance with the provisions of Article No. 5159a, R.C.S. Any laborer "," workman or "mechanic" employed, and whose position is not listed, shall be paid not less than the "per diem" wage rate established on the Project for the "laborer", "workman", or "mechanic" whose duties are most nearly comparable to those of such employees.

The Contractor and all Subcontractors shall keep, or cause to be kept, Weekly Certified Payrolls showing the name, occupation, number of hours worked each day, and "per diem" wage paid each "laborer", "workman" or "mechanic", together with a complete record of all deductions made from such wages. During the construction period, the Contractor shall keep a copy of each Weekly Payroll available in the immediate vicinity of the Project site and shall allow inspection of such Payrolls at all reasonable hours by any authorized representative of Webb County, Texas.

GENERAL DECISION:

Date: 11/18/2011
State: Texas
Construction Type: For the Rehabilitation Of Proposed Road Consisting Of Grading, Base, Structures, Surfacing, Roadside Drainage, and Signage for the Colonia Tanquecitos I and II
County: Webb
District: 22 Laredo
Classification: Zone 9,
Project: Border Access Colonias Program, Tanquecitos I and II
Highway: County Road (CR)
Limits: ROADWAYS WITHIN COLONIA TANQUECITOS I AND II

TEXAS COUNTIES IDENTIFIED BY
WAGE RATE ZONES: 8, 9, 12, 13, 15, 17, 19, 40, 42, 47, 48, 50, 51, 64, 66, 73

County Name	Zone	County Name	Zone	County Name	Zone	County Name	Zone
Anderson	48	Donley	64	Karnes	47	Reagan	64
Andrews	64	Duval	51	Kaufman	42	Real	64
Angelina	48	Eastland	64	Kendall	17	Red River	48
Aransas	50	Ector	8	Kenedy	51	Reeves	19
Archer	42	Edwards	19	Kent	64	Refugio	47
Armstrong	8	El Paso	40	Kerr	47	Roberts	64
Atascosa	17	Ellis	42	Kimble	64	Robertson	17
Austin	66	Erath	48	King	64	Rockwall	42
Bailey	64	Falls	48	Kinney	19	Runnels	64
Bandera	17	Fannin	48	Kleberg	47	Rusk	12
Bastrop	17	Fayette	47	Knox	64	Sabine	48
Baylor	64	Fisher	64	Lamar	48	San Augustine	48
Bee	47	Floyd	64	Lamb	64	San Jacinto	66
Bell	17	Foard	64	Lampasas	17	San Patricio	50
Bexar	17	Fort Bend	66	LaSalle	51	San Saba	64
Blanco	47	Franklin	48	Lavaca	47	Schleicher	64
Borden	64	Freestone	48	Lee	47	Scurry	64
Bosque	48	Frio	47	Leon	48	Shackelford	64
Bowie	12	Gaines	64	Liberty	66	Shelby	48
Brazoria	66	Galveston	66	Limestone	48	Sherman	64
Brazos	17	Garza	64	Lipscomb	64	Smith	12
Brewster	19	Gillespie	47	Live Oak	47	Somervell	48
Briscoe	64	Glasscock	64	Llano	47	Starr	51
Brooks	51	Goliad	50	Loving	64	Stephens	64
Brown	64	Gonzales	47	Lubbock	8	Sterling	64
Burleson	17	Gray	64	Lynn	64	Stonewall	64
Burnet	47	Grayson	42	Madison	48	Sutton	19
Caldwell	17	Gregg	12	Marion	48	Swisher	64
Calhoun	50	Grimes	48	Martin	64	Tarrant	42
Callahan	42	Guadalupe	17	Mason	47	Taylor	8
Cameron	9	Hale	64	Matagorda	47	Terrell	19
Camp	48	Hall	64	Maverick	51	Terry	64
Carson	8	Hamilton	48	McCulloch	64	Throckmorton	64
Cass	48	Hansford	64	McLennan	17	Titus	48
Castro	64	Hardeman	64	McMullen	51	Tom Green	8
Chambers	66	Hardin	66	Medina	17	Travis	17
Cherokee	48	Harris	66	Menard	64	Trinity	48
Childress	64	Harrison	73	Midland	8	Tyler	48
Clay	42	Hartley	64	Milam	48	Upshur	12
Cochran	64	Haskell	64	Mills	64	Upton	64
Coke	64	Hays	17	Mitchell	64	Uvalde	51
Coleman	64	Hemphill	64	Montague	64	Val Verde	19
Collin	42	Henderson	48	Montgomery	66	Van Zandt	48
Collingsworth	64	Hidalgo	9	Moore	64	Victoria	15
Colorado	47	Hill	48	Morris	48	Walker	48
Comal	17	Hockley	64	Motley	64	Waller	66
Comanche	64	Hood	48	Nacogdoches	48	Ward	64
Concho	64	Hopkins	48	Navarro	48	Washington	48
Cooke	64	Houston	48	Newton	48	Webb	9
Coryell	17	Howard	64	Nolan	64	Wharton	47
Cottle	64	Hudspeth	19	Nueces	50	Wheeler	64
Crane	64	Hunt	42	Ochiltree	64	Wichita	13
Crockett	19	Hutchinson	64	Oldham	64	Wilbarger	64
Crosby	8	Irion	8	Orange	66	Willacy	51
Culberson	19	Jack	48	Palo Pinto	48	Williamson	17
Dallam	64	Jackson	47	Panola	48	Wilson	17
Dallas	42	Jasper	48	Parker	42	Winkler	64
Dawson	64	Jeff Davis	19	Parmer	64	Wise	42
Deaf Smith	64	Jefferson	66	Pecos	19	Wood	48
Delta	42	Jim Hogg	51	Polk	48	Yoakum	64
Denton	42	Jim Wells	47	Potter	8	Young	64
DeWitt	47	Johnson	42	Presidio	19	Zapata	51
Dickens	64	Jones	42	Rains	48	Zavala	51
Dimmit	51			Randall	8		

Revised 11-18-11

The wage rates listed are those predetermined by the Secretary of Labor and State Statue to be the minimum wages paid. To determine the applicable wage rate zone, a list entitled "TEXAS COUNTIES IDENTIFIED BY WAGE RATE ZONES" is provided in the contract. Any wage rate that is not listed must be submitted to the Engineer for approval. IMPORTANT NOTICE FOR STATE PROJECTS; only the controlling wage rate zone applies to the contract. Effective 11-18-2011

CLASS. #	CLASSIFICATION DESCRIPTION	ZONE TX08 11/18/11	ZONE TX09 11/18/11	ZONE TX12 11/18/11	ZONE TX13 11/18/11	ZONE TX15 11/18/11	ZONE TX17 11/18/11	ZONE TX19 11/18/11	ZONE TX40 11/18/11	ZONE TX42 11/18/11	ZONE TX47 11/18/11	ZONE TX48 11/18/11	ZONE TX50 11/18/11	ZONE TX51 11/18/11	ZONE TX64 11/18/11	ZONE TX66 11/18/11	ZONE TX73 11/18/11
1428	Agricultural Tractor Operator						$12.69					$12.35			$11.75		
1300	Asphalt Distributor Operator	$14.87	$13.48	$13.88			$15.55	$15.72	$13.28	$15.32	$15.62	$14.36	$14.25	$14.03	$13.75	$14.06	$14.40
1303	Asphalt Paving Machine Operator	$13.40	$12.25	$12.35	$13.87		$14.36	$14.20	$13.26	$13.99	$14.68	$12.92	$13.44	$12.53	$14.00	$14.32	$12.99
1106	Asphalt Raker	$12.28	$10.61	$12.02	$14.21		$12.12	$11.64	$11.44	$12.69	$12.05	$11.34	$11.67	$11.40	$12.59	$12.36	
1112	Batching Plant Operator, Asphalt																
1115	Batching Plant Operator, Concrete																
1214	Blaster																
1615	Boom Truck Operator						$18.36										
1444	Boring Machine Operator																
1305	Broom or Sweeper Operator	$11.21	$10.33	$10.08			$11.04	$11.62		$11.74	$11.41	$10.30		$10.23	$10.60	$12.68	$11.05
1144	Communications Cable Installer																
1124	Concrete Finisher, Paving and Structures	$13.55	$12.46	$13.16	$12.85		$12.56	$12.77	$12.44	$14.12	$13.04	$13.38		$12.80	$12.79	$12.98	$13.32
1318	Concrete Pavement Finishing Machine Operator						$15.48			$16.05		$19.31				$13.07	
1315	Concrete Paving, Curing, Float, Texturing Machine Operator											$16.34				$11.71	
1333	Concrete Saw Operator									$14.48	$17.33					$13.99	
1399	Concrete/Gunite Pump Operator																
1344	Crane Operator, Hydraulic 80 tons or less						$18.36			$18.12	$18.04	$20.21			$18.63	$13.86	
1345	Crane Operator, Hydraulic Over 80 Tons																
1342	Crane Operator, Lattice Boom 80 Tons or Less	$16.82	$14.39	$13.85			$15.87			$17.27		$14.67			$16.42	$14.97	
1343	Crane Operator, Lattice Boom Over 80 Tons						$19.38			$20.52		$17.49			$25.13	$15.80	
1306	Crawler Tractor Operator	$13.96	$16.63	$13.62			$15.67			$14.07	$13.15	$13.38			$14.60	$13.68	$13.50
1351	Crusher or Screen Plant Operator																
1446	Directional Drilling Locator						$11.67										
1445	Directional Drilling Operator						$17.24										
1139	Electrician	$20.96		$19.87			$26.35		$20.27	$19.80		$21.11				$27.11	
1347	Excavator Operator, 50,000 pounds or less	$13.46	$12.56	$13.67			$12.88	$14.38	$13.49	$17.19		$13.88			$14.09	$12.71	$14.42
1348	Excavator Operator, Over 50,000 pounds		$15.23	$13.52			$17.71			$16.99	$18.80	$16.22				$14.53	
1150	Flagger	$9.30	$9.10	$8.50		$8.81	$9.45	$8.70		$10.06	$9.71	$9.03		$9.08	$9.90	$10.33	$8.10
1151	Form Builder/Setter, Structures	$13.52	$12.30	$13.38	$12.91	$12.71	$12.87	$12.38	$12.26	$13.84	$12.98	$13.07	$13.61	$12.62	$14.73	$12.23	$12.25
1160	Form Setter, Paving & Curb	$12.36	$12.16	$13.93	$11.83	$10.71	$12.94			$13.16	$12.54	$11.33	$10.69		$13.33	$12.34	
1360	Foundation Drill Operator, Crawler Mounted									$17.99						$17.43	
1363	Foundation Drill Operator, Truck Mounted		$16.86	$22.05			$16.93			$21.07	$20.20	$20.76		$17.54	$21.39	$15.89	
1369	Front End Loader Operator, 3 CY or Less	$12.28	$13.49	$13.40			$13.04	$13.15	$13.29	$13.69	$12.64	$12.89			$13.51	$13.32	$12.17
1372	Front End Loader Operator, Over 3 CY	$12.77	$13.69	$12.33			$13.21	$12.86	$13.57	$14.72	$13.75	$21.32			$13.19	$13.17	
1329	Joint-Sealer																
1172	Laborer, Common	$10.30	$9.86	$10.08	$10.51	$10.71	$10.50	$10.24	$10.58	$10.72	$10.45	$10.30	$10.25	$10.03	$10.54	$11.02	$10.15
1175	Laborer, Utility	$11.80	$11.53	$12.70	$12.17	$11.81	$12.27	$12.11	$11.33	$12.32	$11.80	$11.53	$11.23	$11.50	$11.95	$11.73	$12.37
1346	Loader/Backhoe Operator	$14.18	$12.77	$12.97	$15.68		$14.12			$15.18	$13.58	$12.87		$13.21	$14.13	$14.29	

CLASS. #	CLASSIFICATION DESCRIPTION	ZONE TX08 11/18/11	ZONE TX09 11/18/11	ZONE TX12 11/18/11	ZONE TX13 11/18/11	ZONE TX15 11/18/11	ZONE TX17 11/18/11	ZONE TX19 11/18/11	ZONE TX40 11/18/11	ZONE TX42 11/18/11	ZONE TX47 11/18/11	ZONE TX48 11/18/11	ZONE TX50 11/18/11	ZONE TX51 11/18/11	ZONE TX64 11/18/11	ZONE TX66 11/18/11	ZONE TX73 11/18/11
1187	Mechanic	$20.14	$15.47	$17.47			$17.10			$17.68	$18.94	$18.58		$16.61	$18.46	$16.96	
1380	Milling Machine Operator	$15.54	$14.64	$12.22			$14.18			$14.32	$14.35	$12.86			$14.75	$13.53	
1390	Motor Grader Operator, Fine Grade	$17.49	$16.52	$16.86			$18.51	$16.69	$16.13	$17.19	$18.35	$17.07	$17.74	$17.47	$17.08	$15.69	$20.01
1393	Motor Grader Operator, Rough	$16.15	$14.62	$15.83		$17.07	$14.63	$18.50		$16.02	$16.44	$15.12		$14.47	$17.39	$14.23	$15.53
1413	Off Road Hauler		$10.08	$10.08			$11.88			$12.25		$12.23			$13.00	$14.60	
1196	Painter, Structures						$18.34						$21.29			$18.62	
1396	Pavement Marking Machine Operator	$16.42		$13.10			$19.17	$12.01		$13.63	$14.60	$13.17		$16.65	$10.54	$11.18	
1443	Percussion or Rotary Drill Operator																
1202	Piledriver															$14.95	
1205	Pipelayer		$11.87	$14.64			$12.79		$11.37	$13.24	$12.66	$13.24	$11.17	$11.67		$12.12	
1384	Reclaimer/Pulverizer Operator	$12.85					$12.88			$11.01		$10.46					
1500	Reinforcing Steel Worker	$13.50	$14.07	$17.53			$14.00			$16.18	$12.74	$15.83		$17.10		$15.15	
1402	Roller Operator, Asphalt	$10.95		$11.96			$12.78	$11.61		$13.08	$12.36	$11.68			$11.71	$11.95	$11.50
1405	Roller Operator, Other	$10.36		$10.44			$10.50	$11.64		$11.51	$10.59	$10.30		$12.04	$12.85	$11.57	
1411	Scraper Operator	$10.61	$11.07	$10.85			$12.27		$11.12	$12.96	$11.68	$12.43		$11.22	$13.95	$13.47	
1417	Self-Propelled Hammer Operator																
1194	Servicer	$13.98	$12.34	$14.11			$14.51	$15.56	$13.44	$14.58	$14.31	$13.83		$12.43	$13.72	$13.97	
1513	Sign Erector																
1708	Slurry Seal or Micro-Surfacing Machine Operator																
1341	Small Slipform Machine Operator									$15.96							
1515	Spreader Box Operator	$12.60		$13.12			$14.04			$14.73	$13.84	$13.68		$13.45	$11.83	$13.58	
1705	Structural Steel Welder															$12.85	
1509	Structural Steel Worker						$19.29									$14.39	
1339	Subgrade Trimmer																
1143	Telecommunication Technician																
1145	Traffic Signal/Light Pole Worker						$16.00										
1440	Trenching Machine Operator, Heavy						$18.48										
1437	Trenching Machine Operator, Light																
1609	Truck Driver Lowboy-Float	$14.46	$13.63	$13.41	$15.00	$15.93	$15.66			$16.24	$16.39	$14.30	$16.62	$15.63	$14.28	$16.03	
1612	Truck Driver Transit-Mix									$14.14							
1600	Truck Driver, Single Axle	$12.74	$10.82	$10.75			$11.79	$13.53	$13.16	$12.31	$13.40	$10.30	$11.61		$11.97	$11.46	
1606	Truck Driver, Single or Tandem Axle Dump Truck	$11.33	$14.53	$11.95			$11.68		$14.06	$12.62	$11.45	$12.28		$13.08	$11.68	$11.48	$11.10
1607	Truck Driver, Tandem Axle Tractor with Semi Trailer	$12.49	$12.12	$12.50			$12.61	$13.16		$12.86	$16.22	$12.50			$13.80	$12.27	
1441	Tunneling Machine Operator, Heavy																
1442	Tunneling Machine Operator, Light																
1706	Welder		$14.02				$15.97		$13.74	$14.84					$13.78		
1520	Work Zone Barricade Servicer	$10.30	$12.88	$11.46	$11.70		$11.85	$10.77		$11.68	$12.20	$11.22	$11.51	$12.96	$10.54	$11.67	

Notes:

Any worker employed on this project shall be paid at the rate of one and one half (1-1/2) times the regular rate for every hour worked in excess of forty (40) hours per week.

The titles and descriptions for the classifications listed here are further detailed in the AGC of Texas' *Standard Job Classifications and Descriptions for Highway, Heavy, Utilities, and Industrial Construction in Texas*. AGC will make it available on its Web site for any contractor.

WEBB COUNTY SPECIAL PROVISION

Webb County Special Provision to Item 1

(001---100)

DEFINITION OF TERMS

For this project, Item 1 "**Definition of Terms**", of the Texas Standard Specifications is hereby amended with respect to the causes cited below and no other clauses or requirements of this Item are waived or changed hereby.

THE TERM "DEPARTMENT", "STATE", "STATE HIGHWAY DEPARTMENT OF TEXAS", "STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION", "STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION COMMISSION", 'COMMISSION', OR "STATE HIGHWAY COMMISSION" SHALL, IN THE USE OF THE STANDARD SPECIFICATIONS FOR ALL WORK IN CONNECTION WITH THIS PROJECT, BE DEEMED TO MEAN THE WEBB COUNTY, IN ACCOMPANYING CONTRACT OR CONTRACTS. ANY REFERENCE IN THE TEXAS STANDARD SPECIFICATIONS TO THE COUNTY OF WEBB, ITS OFFICIALS, EMPLOYEES, OR AGENTS SHALL BE DEEMED TO MEAN THE WEBB COUNTY, ITS OFFICIALS, EMPLOYEES, OR AGENTS.

Article 1.53, **Engineer**, is revised to read in its entirety as follows:

> Webb County Engineer.

Article 1.64, **Inspector**, is revised to read in its entirety as follows:

> The representative of the Construction Manager assigned and authorized to observe or inspect any or all parts of the work and the materials to be used therein.

THE FOLLOWING ARTICLES ARE ADDED:

Article 1.148. **Commissioners Court**, the Commissioners Court for Webb County, Texas.

Article 1.149. **County Auditor**, the County Auditor for County of Webb.

Article 1.150. **County Judge**, the County Judge for County of Webb.

Article 1.151. **Environmental Manager**, County of Webb representative that will oversee the environmental issues of all BCAP Project.

Webb County Special Provision to Item 2

(002---200)

INSTRUCTIONS TO BIDDERS

For this project, Item 2 "**Instructions to Bidders**", of the Texas Standard Specifications is hereby modified with respect to the clauses cited below and no other clauses or requirements of this Item are waived or changed hereby.

Article 2.2, **Eligibility of Bidders** is supplemented by the addition of the following:

To be eligible for bidding this project a Contractor must be currently pre-qualified by TxDOT/Webb County. Bids from Contractors not certified by TxDOT/Webb County at the time of bid submittal will not be accepted.

Article 2.6, **Preparing of Bid** is supplemented by the following

Each bid shall be prepared as herein directed and submitted in triplicate.

Article 2.10, **Revising Bid** is supplemented by the addition of the following:

Addenda to the Contract Documents may be issued prior to the date of opening of the bids to clarify the Documents or to reflect modifications in design or Contract terms. Each addendum issued will be distributed to each person to whom Contract Documents have been issued. The recipient shall acknowledge receipt of each addendum in the space provided in the bid. All addenda issued shall become a part of the Contract Documents.

If any Bidder is in doubt as to the true meaning of any part of the drawings, specifications, or other proposed Contract Documents, he may submit to the County Engineer a written request for an interpretation thereof. The persons submitting the request will be responsible for its prompt delivery. Any interpretation of the bid documents will be made only by addendum. Webb County will not be responsible for any other explanation or interpretations of the bid documents.

Any questions related to the scope of work would be directed to the attention of: Mike Cabello, Interim County Engineer, Webb County, 1620 Santa Ursula 2nd Floor, Laredo, Texas 78040, Telephone number: (956) 523-4171.

Any questions related to the submission of this bid, please contact: Dr. Cecilia May Moreno Purchasing Agent, 1110 Washington Street, Suite 101, Laredo, Texas 78040, Telephone number: (956) 523-4125.

Article 2.15, **Consideration of Bid Errors** is revised by deletion of the third paragraph and replaced by the following:

Acceptance of the bid error by Webb County will result in the rejection of that bid. The bidder with error cannot bid on this particular project again and the project will be re-let.

Webb County Special Provision to Item 3

(003---300)

AWARD AND EXECUTION OF CONTRACT

For this project, Item 3 "**Award and Execution of Contract**" of the Texas Standard Specifications is hereby modified with respect to the clauses cited below and no other clauses or requirements of this Item are waived or changed hereby.

Article 3.1, **Award of Contract** is revised to read in its entirety as follows:

The contract must be awarded to the lowest bidder.

Article 3.1.A, **Award** is revised to read in its entirety as follows:

The project will be awarded to the lowest responsive bidder as determined by Article 2.14 "Tabulation of Bids." The County may award the project to the next lowest bidder in the event of an error in the bid of the Contractor being considered for award.

Article 3.4, **Execution of Contract** is revised to read in its entirety as follows:

Within thirty (30) days after written notification of award of the Contract, the bidder to whom the Contract is awarded shall execute and furnish to Webb County the Contract, together with a Performance Bond and a Payment Bond, with powers of attorneys attached, each in the full amount of the contract price, executed by a surety company or surety companies duly authorized to do business in the County of Webb and the Certificate of Insurance showing coverage in accordance with contract requirements.

The Performance Bond and Payment Bond are to be furnished as a guarantee of the faithful performance of the work and for the protection of the claimants for labor and materials.

When the amount of the contract is $25,000 or less, a Performance Bond and a Payment Bond will not be required, over $25,000.00 a Payment Bond is required and over $100,000.00 a Performance Bond and Payment Bond is required.

The Contract and Bonds shall be executed as follows:

A. A One-Owner Company, if doing business in the owner's name, shall be signed only by the owner. A notarized statement to the effect that the person signing is the sole owner must be submitted with the bid.

B. A One-Owner Company and General Partnership, if not using the name of the owner or owners, must furnish a certified copy of an Assumed Name Certificate and a notarized statement listing the full name and address of the principal who is authorized to sign all documents pertaining to this contract.

C. A Limited Partnership must furnish a certified copy of Certificates of Limited Partnership from the Secretary of State and must furnish a notarized statement indicating the principal who is authorized to sign all documents pertaining to this contract.

D. In the case of a Corporation, it shall be signed by an Officer in the corporate name, attested by the Secretary and have affixed the corporate seal, and the names and addressed of the

President and Secretary of the corporation shall be given. Evidence of the authority of the Officers to execute the contract, if successful, shall be submitted with the bid and corporate seal affixed.

The Performance Bond is to be furnished in the amount of the Contract, conditioned upon the faithful performance of the Work in accordance with the Contract Documents, and solely for the protection of the Webb County. The Payment Bond is to be furnished in the amount of the Contract, solely for the protection of claimants supplying labor or material, as outlined in the Contract Documents, in the prosecution of the Work provided for in the Contract, for the use of each claimant.

In addition, prior to the Webb County's notice to begin work under Article 3.8 "Beginning of Work" the bidder to whom the Contract is awarded shall deliver a certificate or other evidence acceptable to the County showing insurance coverage in accordance with the requirements of the Contract Documents.

Article 3.5 **Failure to Enter Contract**, is revised to read in its entirety as follows:

Should the bidder to whom the Contract is awarded refuse or neglect to execute and file the Contract and the Performance Bond and the Payment Bond as specified in Special Provision to Article 3.4, "Execution of Contract" within thirty (30) days after written notification of the award of the Contract, or fail to immediately furnish certificates or other evidence acceptable to Webb County of said bidder's carriage of insurance complying with the provisions, then the Bid Guaranty filed with the Bid shall become the property of Webb County, not as a penalty, but as liquidated damages. A bidder who forfeits his Bid Guaranty in accordance with Article 3.5 "Failure to Enter Contract" will not be considered in future bids for the same work unless there has been a substantial change in the design of the Project subsequent to the forfeiture of the Bid Guaranty.

Article 3.6 **Approval and Execution Contract**, is revised to read in its entirety as follows:

The proposed Contract and the surety bond (s) (original copy) shall be submitted to the Commissioners Court for its examination. Should the Commissioners Court be of the opinion that the Contract should be entered into and approved; it shall authorize the County Judge to execute the Contract for the County and shall thereupon enter its order approving the Contract.

Article 3.7 **Return of Bid Guaranty** is revised to read in its entirety as follows:

The Bid Guaranty of the three (3) lowest bidders will be retained until after the Contract has been awarded and executed and after bonds have been made. The Bid Guaranty of each bidder, except the three lowest bids, will be returned within seventy-two (72) hours after the bids are opened.

Article 3.8, **Beginning of Work**, is hereby supplemented by the following:

Subsequent to the aforementioned date, the Contractor shall make himself, with his key personnel, available for a "Pre-Construction Conference" to plan the upcoming project.

One week prior to the time of this conference, the Contractor shall provide the County Engineer with a copy of the following:

Organization Chart

An organization chart listing the superintendents and all supervising personnel who will be employed in the work, describing by date and job their experience in the field of highway construction.

Subcontracts

A list of the work to be subcontracted describing the scope of work of each Subcontractor, this list will include the name, address and telephone number of each Subcontractor.

Vendors

A list of the vendors will include the name, address and telephone number of the proposed vendor (s).

Proposed Schedule

A Critical Path Method (CPM) construction schedule to show the proposed sequence of operations and completion dates for various major portions and components of the work is required.

Construction Equipment

A list of all major construction equipment indicating age, ownership, and leasing price for this contract is required. For each piece of equipment furnish an equipment use schedule based on the contractor proposed construction schedule.

Job Safety

Provide a narrative or outline describing the accident prevention program or safety program to be employed on the project as well as the individual responsible for the program implementation.

Webb County Special Provision to Item 4

(004---400)

SCOPE OF WORK

For this project, Item 4 "**Scope of Work**" of the Texas Standard Specifications is hereby amended with respect to the clauses cited below and no other clauses or requirements of this Item are waived or changed hereby.

Article 4.6 **Final Cleanup** is hereby supplemental by the following:

The first paragraph is amended by the addition of the following:

If the Contractor's operations have resulted in damage to sodded areas within the Right of Way, outside or beyond the construction area, such areas shall be re-sodded, at no additional cost to Webb County, in accordance with the applicable requirements of Item 162, "Sodding for Erosion Control".

Item 4 is supplemented by the addition of the following articles.

4.7 **Sampling and Testing,** the cost of design, sampling, and testing including professional quality control efforts in general will be performed by engineering testing laboratories performing such services at the direction of the Construction Manager. Payment for such professional engineering testing services will be at the sole expense of the Webb County, except as otherwise noted for item specifically requesting Contractor testing.

4.8 **Work and Storage Areas,** the Contractor may be permitted to use existing Webb County right-of-way as a work and storage area within project limits. Pre-approval by Webb County is required for any area the Contractor wishes to designate for storage within City, State or County right-of-way. The Contractor will be required to restore any site utilized for his operations to its existing condition at his sole expense prior to termination of this Contract. Work, parking and storage areas used by the Contractor shall not allow any obstructions which would pose a hazard to the traveling public. Because of limited project right-of-way, supplemental off-site work and storage areas will be required.

4.9 **Work Under Separate Contracts,** during construction of the Work, various work may be under construction within the limits of this Contract and/or adjacent thereto. The Contractor for this Project, in submitting his bid, recognizes that other Contractors and public utility companies will be utilizing rights of way, easements, streets, and/or service roads through, in, and across the limits of this Contract. He shall conduct his operations so as not to infringe upon usage by the aforementioned parties. Coordination of efforts and cooperation between the various Contractors performing work on the entire project is a requirement of this Contract.

Webb County Special Provision to Item 5

(005---500)

CONTROL OF THE WORK

For this project, Item 5, **Control of the Work**, of the Standard Specifications, is hereby amended with respect to the clauses cited below and no other clauses or requirements of this Item are waived or changed hereby.

Article 5.5, **Cooperation of Contractor** is hereby supplemented by the following.

The Contractor shall give the Construction Manager full opportunity to safely inspect all stages of work and where there has been any work stoppages he shall give the Construction Manager at least twenty-four (24) hours notice before resuming operations. Where any gas, water, or other utility installations will be affected by the work to be carried on by the Contractor, he shall see that ample notice is given to the owners, operators, or persons in charge to the end that the prosecution of the work under his Contract shall not be delayed.

Webb County Special Provision to Item 6

(006---600)

CONTROL OF MATERIALS

For this project, Item 6, **Control of Materials**, of the Texas Standard Specification is hereby amended with respect to the clauses cited below and no other clauses or requirements of this Item are waived or changed hereby.

Article 6.4, **Sampling Testing, and Inspection** The last sentence is deleted and replaced with the following:

> Materials or products requiring inspection and approval at the point of manufacture or source, as determined by the Engineer, and when such source is more than 50 miles from construction contract site; the additional expenses of such inspections over the normal cost of such services will be deducted from any money due to or to become due to the Contractor.

Article 6.4, **Sampling, Testing, and Inspection** is hereby supplemented by the following:

> When samples or notifications are required to be submitted by the Contractor by any item of these specifications, these submissions or notifications shall be made to the testing agency or company designated by the Engineer as directed at the pre-construction conference.
>
> Additionally, the cost of testing and inspection above normal cost for the following items will be deducted from any money or become due to the Contractor:
>
> 1. Costs of inspection and test due to the fabricators not keeping with the project CPM Schedule.
> 2. Costs of inspection and test due to the fabricators going to more than one shift to meet the CPM Schedule.
> 3. Costs of inspection and tests due to the original fabricator subcontracting portions of the work to another fabricator thereby causing the inspection and testing agency to supply additional technicians.
> 4. Cost of inspections and tests due to excessive repair work that causes delays in the fabrication schedule. Normal repair work is considered to be ten percent.
> 5. Costs of inspections and tests for certification of welders, welding procedures, and repairs.
> 6. Costs of inspections and tests due to the fabricator working at more than one shop where the other shops are too far apart for one technician to cover.

Webb County Special Provision to Item 7

(007---700)

LEGAL RELATIONS AND RESPONSIBILITIES

For the Work, Item 7, **Legal Relations and Responsibilities**, of the Texas Standard Specifications is hereby modified with respect to the clauses cited below and no other clauses or requirements of this item are waived or changed hereby.

Article 7.1, **Laws to be Observed** is supplemented by the addition of the following:

> The operation of heavy construction equipment over adjacent streets shall be avoided to the greatest extent practicable. If such operation is unavoidable, care shall be taken to prevent the creation of any nuisance, including, but not limited to, the tracking of dirt or the blowing of dust from uncovered loads.
>
> Any damage to existing facilities due to contracting operator should be promptly repaired by the Contractor at the Contractor's expense.
>
> If sites, buildings, and locations of historical, archaeological, educational, or scientific interest are discovered after construction operations are begun, operation in that particular area shall cease immediately and the sites, buildings, or locations shall be investigated and evaluated by Environmental Manager. An extension of time will be granted, if necessary, for delays caused by these investigations and evaluations.

Article 7.12, **Responsibility for Damage Claims,** is supplemented by the addition of the following:

> The Contractor is directed to the fact that pipelines and other underground installations as may be shown on the plans have been taken from the best available information. There may be other pipelines or installations. The Contractor shall save harmless the County of Webb, Webb County employees, the Construction Manager, any Construction Engineering Consultant, and their Contractors and Subcontractors from any and all suits or claims resulting from damage by his operations to any pipeline or underground installation.
>
> Where any gas, water, or other utility installations will be affected by the work to be carried on by the Contract, he shall see that ample notice is given to the owners, operators, or persons in charge to the end that the prosecution of the work under his contract shall not be delayed.
>
> The Contractor is reminded that the "One Call" law (Utilities Code Chapter 251) fully applies on this Contract.

Article 7.14, **Contractor's Responsibility for Work** is supplemented by the addition of the following paragraph:

> Contractor shall be responsible for any delay to work performed by any other independent Contractor of Webb County, which is proximately caused by the negligence or willful act of the Contractor, his agents, employees, Subcontractors and invitees.

Article 7.17, **Personal Liability of Public Office** is revised to read in its entirety as follows:

In carrying out the provisions of the Contract Documents or in exercising any power or authority granted there under the contract, there shall be no liability for the Construction Manager, the Consultant, their respective officers, employees, Subcontractors or authorized assistants, either personally or otherwise, as they are agents and representatives of Webb County, and there shall be no liability, either personal or otherwise, for any member of the Commissioners Court, of Webb County or any of Webb County's officers, employees, or consultants. Neither the Contract Documents nor County or Contractor course of conduct shall be deemed to create the relationship of principal and agent by and between the County and the Contractor.

Item 7 is supplemented by the addition of the following Article:

7.20 **Contractor's Responsibility for Safety** In accordance with generally accepted construction practices, the Contractor will be solely and completely responsible for conditions at the job site, including the safety of all persons and property during performance of the Work. This requirement will apply continuously and shall not be limited to normal working hours.

Webb County Special Provision to Item 8

(008---800)

PROSECUTION AND PROGRESS

"NO CHANGE"

Webb County Special Provision to Item 9

(009---900)

MEASUREMENTS AND PAYMENTS

For this project, Item 9 "**Measurements and Payments**" of the Texas Standard Specifications is hereby modified with respect to the clauses cited below and no other clauses or requirements of this Item are waived or changed hereby.

Item 9.6, **Progress Payment**, is replaced in its entirety by the following:

A. **Progress payments.** Progress payments will be made monthly. Payment for that portion of the work, if any, for which lump sum pricing has been utilized shall be based upon actual percentage of completion of the work. Where unit pricing is applicable, payment shall be based upon the value of the work performed and materials complete and in place, in accordance with the Contract Document. Where Construction Manager shall deem such to be reasonably necessary to the prosecution of the work, such progress payments may also include payment for seventy-five (75%) percent of invoice cost for all acceptable materials delivered and stored on the work site, but not complete and in place.

B. **Application for Payment:** Contractor shall submit an application for payment to Construction Manager for work performed in the preceding calendar month. Such application shall be sworn and shall be supported by such data as Construction Manager may require substantiating Contractor's right to payment for work performed or materials provided. Construction Manager's determination as to the percentage of completion, amount of work performed, or materials complete and in place shall be deemed final.

Item 9.7 **Payment for Material on Hand (MOH)** is replaced in its entirety by the following:

If Payment for MOH is desired, request compensation for 75% of the invoice cost of acceptable nonperishable materials that have not been used in the work before the request, and that have delivered to the work location or are in acceptable storage places. Nonperishable materials are those that do not have a shelf life or whose characteristics do not materially change when exposed to the elements. Include only materials that have been sampled, tested, approved, or certified, and are ready for incorporation into the work. Only materials which are completely constructed or fabricated on the Contractor's order for a specific Contract and are so marked and on which an approved test report has been issued are eligible. Payment for MOH may include the following types of Items: concrete traffic barrier, pre-cast concrete box culverts, concrete pilling, and reinforced concrete pipe and illumination poles. Any repairs required after fabricated material has been approved for storage shall require approval of the Construction Manager before being made and shall be made at the Contractor's expense. Include only those materials that have an invoice cost of at least $1,000 in the request for MOH payment.

If the request is acceptable, the Construction Manager will include payment for MOH in a progress payment. Payment for MOH does not constitute acceptance of the materials. Payment will not exceed 75% of the actual cost of the material as established by invoice, or the total cost for the associated Item less reasonable placement costs, whichever is less. Materials for which the Contractor does not have a paid invoice within 60 days will not be eligible for payment and will be removed from the estimate. Payment may be limited to a portion of the invoice cost or unit price if shown elsewhere in the contract. Payment for precast products fabricated or

constructed by the Contractor for which invoices or freight bills are not available may be made based on statements of actual costs.

Submit the request on forms provided by the Department. These forms may be electronically reproduced, provided they are in the same format and contain all the required information and certifications. Continue to submit monthly MOH forms until the total value of MOH is $0.

By submitting a request for MOH payment, the Contractor expressly authorizes Webb County to audit MOH records, and to perform process reviews of the record-keeping system. If the Department determines noncompliance with any of the requirements of this provision, the Department may exclude payment for any or all MOH for the duration of the Contract.

Maintain all records relating to MOH payment until final acceptance. Provide these records to the Construction Manager upon request.

Item 9.8, **Final Payment**, is supplemented by the following:

Waiver of Claims: The acceptance of final payment by Contractor will constitute a waiver of all claims against Webb County other than those previously advanced in writing and remaining unsettled.

SPECIAL PROVISION

000--2329
Partnering

1. General. It is the intent of this provision to promote an environment of trust, mutual respect, integrity, and fair-dealing between the Department and the Contractor.

2. Definitions.

A. Informal Partnering. Partnering that does not make use of a facilitator.

B. Formal Partnering. Partnering where the services of a facilitator (internal or external) are utilized.

3. Procedures for Partnering Meetings and Format. Informal Partnering is required for this project, unless Formal Partnering is mutually agreed to in lieu of the Informal Partnering.

Facilitators. The facilitator is to act as a neutral party seeking to initiate cooperative working relationships. This individual must have the technical knowledge and ability to lead and guide discussions. Choose either an internal or external facilitator. The facilitator must be acceptable to the Engineer.

(1) Internal Facilitators. A Department or Contractor internal (staff) facilitator may be selected as the facilitator at no additional cost to either party.

(2) External Facilitators. A private firm or individual that is independent of the Contractor and the Department may be selected as the facilitator. Submit the facilitator's name and estimated fees for approval prior to contracting with the facilitator.

Meetings and Arrangements. Coordinate with the Engineer for meeting dates and times, locations including third party facilities, and other needs and appurtenances including but not limited to audio/visual equipment. Make all meeting arrangements for Formal Partnering. Use Department

facilities or facilities in the vicinity of the project if available. Submit the estimated meeting costs for approval prior to finalizing arrangements.

Coordinate facilitator discussions prior to the partnering meeting to allow the facilitator time to prepare an appropriate agenda. Prepare a list of attendees with job titles and include critical contractor, subcontractor, and supplier staff in the list. Provide the facilitator the list of attendees and invite the attendees listed.

The Department will invite and provide a list of attendees that includes but is not limited to Department, City, County, law enforcement, railroad, and utility representatives.

Participate in additional partnering meetings as mutually agreed.

4. Payment. Expenses for employee time, contractor equipment, or overhead will not be allowed. Markups will not be allowed.

Informal Partnering will be conducted with each party responsible for their own costs.

For Formal Partnering using internal facilitators, the Contractor will be responsible for arrangements and for expenses incurred by its internal facilitator, including but not limited to meals, travel, and lodging. Department facilitators may be used at no additional cost.

For Formal Partnering using external facilitators, submit an invoice to the Engineer for reimbursement. The Department will reimburse the Contractor for half of the eligible expenses as approved. For external facilitators not approved by the Department but used at the Contractor's option, the Contractor will be responsible for all costs of the external facilitator.

For meeting facilities and appurtenances, submit an invoice to the Engineer for reimbursement. The Department will reimburse the Contractor for half of the eligible expenses as approved.

SPECIAL PROVISION

000---003

Notice to All Bidders

To report bid rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

SPECIAL PROVISION

000---004

Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)

1. **General.** In addition to the affirmative action requirements of the Special Provision titled "Standard Federal Equal Employment Opportunity Construction Contract Specifications" as set forth elsewhere in this proposal, the Bidder's attention is directed to the specific requirements for utilization of minorities and females as set forth below.

2. **Goals.**

   a. Goals for minority and female participation are hereby established in accordance with 41 CFR 60-4.

   b. The goals for minority and female participation expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area are as follows:

Goals for minority participation in each trade (percent)	Goals for female participation in each trade (percent)
See Table 1	6.9

   c. These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and non-federally involved construction. The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Standard Federal Equal Employment Opportunity Construction Contract Specifications Special Provision and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority and female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

   d. A contractor or subcontractor will be considered in compliance with these provisions by participation in the Texas Highway-Heavy Branch, AGC, Statewide Training and Affirmative

Action Plan. Provided that each contractor or subcontractor participating in this plan must individually comply with the equal opportunity clause set forth in 41 CFR 60-1.4 and must make a good faith effort to achieve the goals set forth for each participating trade in the plan in which it has employees. The overall good performance of other contractors and subcontractors toward a goal in an approved plan does not excuse any covered contractor's or subcontractor's failure to make good faith efforts to achieve the goals contained in these provisions. Contractors or subcontractors participating in the plan must be able to demonstrate their participation and document their compliance with the provisions of this Plan.

3. **Subcontracting.** The Contractor shall provide written notification to the Department within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation pending concurrence of the Department in the award. The notification shall list the names, address and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.

4. **Covered Area.** As used in this special provision, and in the contract resulting from this solicitation, the geographical area covered by these goals for female participation is the State of Texas. The geographical area covered by these goals for other minorities are the counties in the State of Texas as indicated in Table 1.

5. **Reports.** The Contractor is hereby notified that he may be subject to the Office of Federal Contract Compliance Programs (OFCCP) reporting and record keeping requirements as provided for under Executive Order 11246 as amended. OFCCP will provide direct notice to the Contractor as to the specific reporting requirements that he will be expected to fulfill.

Table 1

County	Goals for Minority Participation	County	Goals for Minority Participation
Anderson	22.5	Concho	20.0
Andrews	18.9	Cooke	17.2
Angelina	22.5	Coryell	16.4
Aransas	44.2	Cottle	11.0
Archer	11.0	Crane	18.9
Armstrong	11.0	Crockett	20.0
Atascosa	49.4	Crosby	19.5
Austin	27.4	Culberson	49.0
Bailey	19.5	Dallam	11.0
Bandera	49.4	Dallas	18.2
Bastrop	24.2	Dawson	19.5
Baylor	11.0	Deaf Smith	11.0
Bee	44.2	Delta	17.2
Bell	16.4	Denton	18.2
Bexar	47.8	DeWitt	27.4
Blanco	24.2	Dickens	19.5
Borden	19.5	Dimmit	49.4
Bosque	18.6	Donley	11.0
Bowie	19.7	Duval	44.2
Brazoria	27.3	Eastland	10.9
Brazos	23.7	Ector	15.1
Brewster	49.0	Edwards	49.4
Briscoe	11.0	Ellis	18.2
Brooks	44.2	El Paso	57.8
Brown	10.9	Erath	17.2
Burleson	27.4	Falls	18.6
Burnet	24.2	Fannin	17.2
Caldwell	24.2	Fayette	27.4
Calhoun	27.4	Fisher	10.9
Callahan	11.6	Floyd	19.5
Cameron	71.0	Foard	11.0
Camp	20.2	Fort Bend	27.3
Carson	11.0	Franklin	17.2
Cass	20.2	Freestone	18.6
Castro	11.0	Frio	49.4
Chambers	27.4	Gaines	19.5
Cherokee	22.5	Galveston	28.9
Childress	11.0	Garza	19.5
Clay	12.4	Gillespie	49.4
Cochran	19.5	Glasscock	18.9
Coke	20.0	Goliad	27.4
Coleman	10.9	Gonzales	49.4
Collin	18.2	Gray	11.0
Collingsworth	11.0	Grayson	9.4
Colorado	27.4	Gregg	22.8

	Goals for Minority		Goals for Minority
Comal	47.8	Grimes	27.4
Comanche	10.9	Guadalupe	47.8

County	Goals for Minority Participation	County	Goals for Minority Participation
Hale	19.5	Lavaca	27.4
Hall	11.0	Lee	24.2
Hamilton	18.6	Leon	27.4
Hansford	11.0	Liberty	27.3
Hardeman	11.0	Limestone	18.6
Hardin	22.6	Lipscomb	11.0
Harris	27.3	Live Oak	44.2
Harrison	22.8	Llano	24.2
Hartley	11.0	Loving	18.9
Haskell	10.9	Lubbock	19.6
Hays	24.1	Lynn	19.5
Hemphill	11.0	Madison	27.4
Henderson	22.5	Marion	22.5
Hidalgo	72.8	Martin	18.9
Hill	18.6	Mason	20.0
Hockley	19.5	Matagorda	27.4
Hood	18.2	Maverick	49.4
Hopkins	17.2	McCulloch	20.0
Houston	22.5	McLennan	20.7
Howard	18.9	McMullen	49.4
Hudspeth	49.0	Medina	49.4
Hunt	17.2	Menard	20.0
Hutchinson	11.0	Midland	19.1
Irion	20.0	Milam	18.6
Jack	17.2	Mills	18.6
Jackson	27.4	Mitchell	10.9
Jasper	22.6	Montague	17.2
Jeff Davis	49.0	Montgomery	27.3
Jefferson	22.6	Moore	11.0
Jim Hogg	49.4	Morris	20.2
Jim Wells	44.2	Motley	19.5
Johnson	18.2	Nacogdoches	22.5
Jones	11.6	Navarro	17.2
Karnes	49.4	Newton	22.6
Kaufman	18.2	Nolan	10.9
Kendall	49.4	Nueces	41.7
Kenedy	44.2	Ochiltree	11.0
Kent	10.9	Oldham	11.0
Kerr	49.4	Orange	22.6
Kimble	20.0	Palo Pinto	17.2
King	19.5	Panola	22.5
Kinney	49.4	Parker	18.2
Kleberg	44.2	Parmer	11.0

	Goals for Minority		Goals for Minority
Knox	10.9	Pecos	18.9
Lamar	20.2	Polk	27.4
Lamb	19.5	Potter	9.3
Lampasas	18.6	Presidio	49.0
LaSalle	49.4	Rains	17.2

County	Goals for Minority Participation	County	Goals for Minority Participation
Randall	9.3	Webb	87.3
Reagan	20.0	Wharton	27.4
Real	49.4	Wheeler	11.0
Red River	20.2	Wichita	12.4
Reeves	18.9	Wilbarger	11.0
Refugio	44.2	Willacy	72.9
Roberts	11.0	Williamson	24.1
Robertson	27.4	Wilson	49.4
Rockwall	18.2	Winkler	18.9
Runnels	20.0	Wise	18.2
Rusk	22.5	Wood	22.5
Sabine	22.6	Yoakum	19.5
San Augustine	22.5	Young	11.0
San Jacinto	27.4	Zapata	49.4
San Patricio	41.7	Zavala	49.4
San Saba	20.0		
Schleicher	20.0		
Scurry	10.9		
Shackelford	10.9		
Shelby	22.5		
Sherman	11.0		
Smith	23.5		
Somervell	17.2		
Starr	72.9		
Stephens	10.9		
Sterling	20.0		
Stonewall	10.9		
Sutton	20.0		
Swisher	11.0		
Tarrant	18.2		
Taylor	11.6		
Terrell	20.0		
Terry	19.5		
Throckmorton	10.9		
Titus	20.2		
Tom Green	19.2		
Travis	24.1		
Trinity	27.4		
Tyler	22.6		
Upshur	22.5		

	Goals for Minority	Goals for Minority
Upton	18.9	
Uvalde	49.4	
Val Verde	49.4	
Van Zandt	17.2	
Victoria	27.4	
Walker	27.4	
Waller	27.3	
Ward	18.9	
Washington	27.4	

SPECIAL PROVISION

000---006

Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246)

1. As used in these specifications:

a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;

b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

d. "Minority" includes:

(i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

(ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);

(iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

(iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North American and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U. S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not

excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing contracts in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the contract is being performed. Goals are published periodically in the Federal Register in notice form and such notices may be obtained from any Office of Federal Contract Compliance Programs office or any Federal procurement contracting officer. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U. S. Department of Labor.

7. The Contractor shall take specific affirmative action's to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

   a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

   b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

   c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be

documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral Process has impeded the Contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and Collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. Nondiscrimination programs require that Federal-aid recipients, subrecipients, and contractors prevent discrimination and ensure nondiscrimination in all of their programs and activities, whether those programs and activities are federally funded or not. The factors prohibited from serving as a basis for action or inaction which discriminates include race, color, national origin, sex, age, and handicap/disability. The efforts to prevent discrimination must address, but not be limited to a program's impacts, access, benefits, participation, treatment, services, contracting opportunities, training opportunities, and investigations of complaints, allocations of funds, prioritization of projects, and the functions of right-of-way, research, planning, and design.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall precede in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

16. In addition to the reporting requirements set forth elsewhere in this contract, the Contractor and the subcontractors holding subcontracts, not including material suppliers, of $10,000 or more, shall submit for every month of July during which work is per-formed, employment data as contained under Form PR 1391 (Appendix C to 23 CFR, Part 230), and in accordance with the instructions included thereon.

SPECIAL PROVISION
000---009

Certification of Nondiscrimination in Employment

By signing this proposal, the bidder certifies that he has participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Orders 10925, 11114, or 11246, or if he has not participated in a previous contract of this type, or if he has had previous contract or subcontracts and has not filed, he will file with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

Note: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b)(1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of $10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b)(1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U. S. Department of Labor.

SPECIAL PROVISION
000--1966

Disadvantaged Business Enterprise in Federal Aid Contracts

1. **Description.** The purpose of this Special Provision is to carry out the U. S. Department of Transportation's (DOT) policy of ensuring nondiscrimination in the award and administration of DOT assisted contracts and creating a level playing field on which firms owned and controlled by individuals who are determined to be socially and economically disadvantaged can compete fairly for DOT assisted contracts. If the Disadvantaged Business Enterprise (DBE) goal is greater than zero, Article A, "Disadvantaged Business Enterprise in Federal Aid Contracts", of this Special Provision shall apply to this contract. If there is no DBE goal, Article B, "Race-Neutral DBE Participation", of this Special Provision shall apply to this contract. The percentage goal for DBE participation in the work to be performed under this contract will be shown on the proposal.

A. ***Article A. Disadvantaged Business Enterprise in Federal Aid Contracts.***

1. **Policy.** It is the policy of the DOT and the Texas Department of Transportation (henceforth the "Department") that DBEs, as defined in 49 CFR Part 26, Subpart A and the Department's DBE Program, shall have the opportunity to participate in the performance of contracts financed in whole or in part with Federal funds. The DBE requirements of 49 CFR Part 26, and the Department's DBE Program, apply to this contract as follows:

   a. The Contractor will solicit DBEs through reasonable and available means, as defined in 49 CFR Part 26, Appendix A and the Department's DBE Program, or show a good faith effort to meet the DBE goal for this contract.

   b. The Contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

   c. The requirements of this Special Provision shall be physically included in any subcontract.

   d. By signing the contract proposal, the Bidder is certifying that the DBE goal as stated in the proposal will be met by obtaining commitments from eligible DBEs or that the Bidder will provide acceptable evidence of good faith effort to meet the commitment. The Department will determine the adequacy of a Contractor's efforts to meet the contract goal, within 10 business days,

   excluding national holidays, from receipt of the information outlined in this Special Provision under Section 1.A.3, "Contractor's Responsibilities." If the requirements of Section 1.A.3 are met, the conditional situation will be removed and the contract will be forwarded to the Contractor for execution.

2. ***Definitions.***

   a. "Broker" is an intermediary or middleman that does not take possession of a commodity or act as a regular dealer selling to the public.

   b. "Disadvantaged Business Enterprise" or "DBE" is defined in the standard specifications, Article 1, Definition of Terms.

   c. "DBE Joint Venture" means an association of a DBE firm and 1 or more other firm(s) to carry out a single business enterprise for profit for which purpose they combine their property, capital, efforts, skills and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work of the contract and whose share in the capital contribution, control, management, risks, and profits of the joint venture are commensurate with its ownership interest.

   d. "DOT" means the U.S. Department of Transportation, including the Office of the Secretary, the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), and the Federal Aviation Administration (FAA).

   e. "Federal Aid Contract" is any contract between the Texas Department of Transportation and a Contractor which is paid for in whole or in part with DOT financial assistance.

   f. "Good Faith Effort" means efforts to achieve a DBE goal or other requirement of this Special Provision which, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement.

   g. "Manufacturer" is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications."

h. "Race-conscious" means a measure or program that is focused specifically on assisting only DBEs, including women-owned businesses.

i. "Race-neutral DBE Participation" means any participation by a DBE through customary competitive procurement procedures.

j. "Regular Dealer" is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. To be a regular dealer, the firm must be an established, regular business that engages in, as its principal business and under its own name, the purchase and sale or lease of the products in question.

A regular dealer in such bulk items as steel, cement, gravel, stone, and petroleum products need not keep such products in stock if it owns and operates distribution equipment for the products. Any supplementing of regular dealers own distribution equipment shall be by a long-term lease agreement and not on an ad hoc or contract-by-contract basis. Brokers, packagers, manufacturers' representatives, or other persons who arrange or expedite transactions shall not be regarded as a regular dealer.

k. "Texas Unified Certification Program" or "TUCP" provides one-stop shopping to applicants for certification, such that applicants are required to apply only once for a DBE certification that will be honored by all recipients of federal funds in the state. The TUCP by Memorandum of Agreement established six member entities to serve as certifying agents for Texas in specified regions.

3. **Contractor's Responsibilities.** These requirements must be satisfied by the Contractor.

a. After conditional award of the contract, the Contractor shall submit a completed Form SMS.4901 "DBE Commitment Agreement", From SMS 4901-T "DBE Trucking Commitment Agreement", or Form SMS.4901-MS "DBE Material & Supplier Commitment Agreement" for each DBE he/she intends to use to satisfy the DBE goal or a good faith effort to explain why the goal could not be reached, so as to arrive in the Department's Office of Civil Rights (OCR) in Austin, Texas not later than 5:00 p.m. on the 10th business day, excluding national holidays, after the conditional award of the contract. When requested, additional time, not to exceed 7 business days, excluding national holidays, may be granted based on documentation submitted by the Contractor.

b. DBE prime Contractors may receive credit toward the DBE goal for work performed by his/her own forces and work subcontracted to DBEs. A DBE prime must make a good faith effort to meet the goals. In the event a DBE prime subcontracts to a non-DBE, that information must be reported on Form SMS.4902.

c. A Contractor who cannot meet the contract goal, in whole or in part, shall make adequate good faith efforts to obtain DBE participation as so stated and defined in 49 CFR Part 26, Appendix A. The following is a list of the types of action that may be considered as good faith efforts. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

- Soliciting through all reasonable and available means (e.g. attendance at prebid meetings, advertising, and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The solicitation must be done within sufficient time to allow the DBEs to respond to it. Appropriate steps must be taken to follow up initial solicitations to determine, with certainty, if the DBEs are interested.
- Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the Contractor might otherwise prefer to perform the work items with its own forces.
- Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- Negotiating in good faith with interested DBEs to make a portion of the work available to DBE subcontractors and suppliers and select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiations includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.
- A Bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional cost involved in finding and using DBEs is not in itself sufficient reason for a bidders failure to meet the Contract DBE goal as long as such cost are reasonable. Also, the ability or desire of the Contractor to perform the work of the Contract with its own organization does not relieve the Bidder of the responsibility to make good faith effort. Contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.
- Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The Contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate cause for the rejection or non-solicitation of bids and the Contractors efforts to meet the project goal.

- Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
- Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
- Effectively using the services of available minority/women community organizations; minority/women Contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.
- If the Program Manager of the OCR determines that the Contractor has failed to meet the good faith effort requirements, the Contractor will be given an opportunity for reconsideration by the Director of the OCR.

d. Should the bidder to whom the contract is conditionally awarded refuse, neglect or fail to meet the DBE goal or comply with good faith effort requirements, the proposal guaranty filed with the bid shall become the property of the state, not as a penalty, but as liquidated damages to the Department.

e. The preceding information shall be submitted directly to the Office of Civil Rights, Texas Department of Transportation, 125 E. 11th Street, Austin, Texas 78701-2483.

f. The Contractor shall not terminate for convenience a DBE subcontractor named in the commitment submitted under Section 1.A.3.a, of this Special Provision. Prior to terminating or removing a DBE subcontractor named in the commitment, the Contractor must have a written consent of the Department.

g. The Contractor shall also make a good faith effort to replace a DBE subcontractor that is unable to perform successfully with another DBE, to the extent needed to meet the contract goal. The Contractor shall submit a completed Form 4901 "DBE Commitment Agreement", From SMS 4901-T "DBE Trucking Commitment Agreement", or Form SMS.4901-MS "DBE Material & Supplier Commitment Agreement" for the substitute DBE firm(s). Any substitution of DBEs shall be subject to approval by the Department. Prior to approving the substitution, the Department will request a statement from the DBE concerning it being replaced.

h. The Contractor shall designate a DBE liaison officer who will administer the Contractor's DBE program and who will be responsible for maintenance of records of efforts and contacts made to subcontract with DBEs.

i. Contractors are encouraged to investigate the services offered by banks owned and controlled by disadvantaged individuals and to make use of these banks where feasible.

4. **Eligibility of DBEs.**

a. The member entities of the TUCP certify the eligibility of DBEs and DBE joint ventures to perform DBE subcontract work on DOT financially assisted contracts.

b. The Department maintains the Texas Unified Certification Program DBE Directory containing the names of firms that have been certified to be eligible to participate as DBE's on DOT financially assisted contracts. This Directory is available from the Department's OCR. An update of the Directory can be found on the Internet at http://www.dot.state.tx.us/business/tucp/default.htm.

c. Only DBE firms certified at the time commitments are submitted are eligible to be used in the information furnished by the Contractor as required under Section 1.A.3.a. and 3.g. above. For purposes of the DBE goal on this project, DBEs will only be allowed to perform work in the categories of work for which they are certified.

d. Only DBE firms certified at the time of execution of a contract/subcontract/purchase order, are eligible for DBE goal participation.

5. **Determination of DBE Participation**. When a DBE participates in a contract, only the values of the work actually performed by the DBE, as referenced below, shall be counted by the prime contractor toward DBE goals:

a. The total amount paid to the DBE for work performed with his/her own forces is counted toward the DBE goal. When a DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work may be counted toward DBE goals only if the subcontractor is itself a DBE. Work that a DBE subcontracts to a non-DBE firm does not count toward DBE goals.

b. A Contractor may count toward its DBE goal a portion of the total value of the contract amount paid to a DBE joint venture equal to the distinct, clearly defined portion of the work of the contract performed by the DBE.

(1) A Contractor may count toward its DBE goal only expenditures to DBEs that perform a commercially useful function (CUF) in the work of a contract or purchase order. A DBE is considered to perform a CUF when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a CUF, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself.

In accordance with 49 CFR Part 26, Appendix A, guidance concerning Good Faith Efforts, contractors may make efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services. Contractors may not however, negotiate the price of materials or supplies used on the contract by the DBE, nor may they determine quality and quantity, order the materials themselves, nor install the materials (where applicable), or pay for the material themselves. Contractors however, may share the quotations they receive from the material supplier with the DBE firm, so that the DBE firm may negotiate a reasonable price with the material supplier.

In all cases, prime or other non-DBE subcontractor assistance will not be credited toward the DBE goal.

(2) A DBE does not perform a CUF if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation.

Consistent with industry practices and the DOT/Department's DBE program, a DBE subcontractor may enter into second-tier subcontracts, amounting up to 70% of their contract. Work subcontracted to a non-DBE does not count towards DBE goals. If a DBE does not perform or exercise responsibility for at least 30% of the total cost of its contract with its own work force, or the DBE subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involved, it will be presumed that the DBE is not performing a CUF

(3) A DBE trucking firm (including an owner operator who is certified as a DBE is considered to be performing a CUF when the DBE is responsible for the management and supervision of the entire trucking operation on a particular contract and the DBE itself owns and operates at least 1 fully licensed, insured, and operational truck used on the contract.

(a) The Contractor receives credit for the total value of the transportation services the DBE provides on a contract using trucks it owns, insures, and operates using drivers it employs.

(b) The DBE may lease trucks from another DBE firm, including an owner operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the Contract.

(c) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit for the total value of transportation services provided by non-DBE lessees not to exceed the value of transportation services provided by the DBE-owned trucks on the contract. Additional participation by non-DBE lessees receive credit only for the fee or commission it receives as result of the lease arrangement

(d) A lease must indicate that the DBE has exclusive use of and control over the trucks giving the DBE absolute priority for use of the leased trucks. Leased trucks must display the name and identification number of the DBE.

(4) When a DBE is presumed not to be performing a CUF the DBE may present evidence to rebut this presumption.

(5) Project materials or supplies acquired from an affiliate of the prime contractor can not directly or indirectly (2nd or lower tier subcontractor) be used for DBE goal credit.

c. A Contractor may count toward its DBE goals expenditures for materials and supplies obtained from a DBE manufacturer, provided that the DBE assumes the actual and contractual responsibility for the materials and supplies. Count expenditures with DBEs for materials or supplies toward DBE goals as provided in the following:

(1) If the materials or supplies are obtained from a DBE manufacturer, count 100% of the cost of the materials or supplies toward DBE goals. (Definition of a DBE manufacturer found at 1A.c.(1) of this provision.)

For purposes of this Section (1.A.c.(1)), a manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications.

(2) If the materials or supplies are purchased from a DBE regular dealer, count 60% of the cost of the materials or supplies toward DBE goals.

For purposes of this Section (1.A.5.c.(2)), a regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business:

(A) To be a regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question.

(B) A person may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone or asphalt without owning, operating, or maintaining a place of business as provided in the first paragraph under Section 1.A.5.c.(2), if the person both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by a long-term lease agreement and not on an ad hoc or contract-by-contract basis.

(C) Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not regular dealers within the meaning of Section 1.A.5.c.(2).

(3) With respect to materials or supplies purchased from DBE which is neither a manufacturer nor a regular dealer, count the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site, toward DBE goals, provided you determine the fees to be reasonable and not excessive as compared with fees customarily allowed for similar services.
Do not count any portion of the cost of the materials and supplies themselves toward DBE goals.

(4) Count the entire amount of fees or commissions charged by a DBE firm for providing a bona fide service, such as professional, technical, consultant or managerial services, or for providing bonds or insurance specifically required for the performance of a DOT-assisted contract, toward DBE goals, provided you determine the fee to be reasonable and not excessive as compared with fees customarily allowed for similar services.

d. If the Contractor chooses to assist a DBE firm, other than a manufacturing material supplier or regular dealer, and the DBE firm accepts the assistance, the Contractor may act solely as a guarantor by use of a two-party check for payment of materials to be used on the project by the DBE. The material supplier must invoice the DBE who will present the invoice to the Contractor. The Contractor may issue a joint check to the DBE and the material supplier and the DBE firm must issue the remittance to the material supplier. No funds shall go directly from the Contractor to the material supplier. The DBE firm may accept or reject this joint checking arrangement.

The Contractor must obtain approval from the Department prior to implementing the use of joint check arrangements with the DBE. Submit to the Department, Joint Check Approval Form 2178 for requesting approval. Provide copies of cancelled joint checks upon request. No DBE goal credit will be allowed for the cost of DBE materials that are paid by the Contractor directly to the material supplier.

e. No DBE goal credit will be allowed for supplies and equipment the DBE subcontractor leases from the contractor or its affiliates.

f. No DBE goal credit will be allowed for the period of time determined by the Department that the DBE was not performing a CUF. The denial period of time may occur before or after a determination has been made by the department. In case of the denial of credit for non-performance of a CUF of a DBE, the Contractor will be required to provide a substitute DBE to meet the contract goal or provide an adequate good faith effort when applicable.

6. Records and Reports.

a. *The Contractor shall submit monthly reports, after work begins, on DBE payments to meet the DBE goal and for DBE or HUB race-neutral participation. Report payments made to non-DBE HUBs. The monthly report is to be sent to the Area Engineer. These reports will be due within 15 days after the end of a calendar month. These reports will be required until all DBE subcontracting or material supply activity is completed. Form SMS.4903, "DBE Progress Report," is to be used for monthly reporting. Form. SMS.4904, "DBE Final Report," is to be used as a final summary of DBE payments submitted upon completion of the project.*

The original final report must be submitted to the OCR and a copy must be submitted to the Area Engineer. These forms may be obtained from the Department or may be reproduced by the Contractor. The Department may verify the amounts being reported as paid to DBEs by requesting copies of cancelled checks paid to DBEs on a random basis. Cancelled checks and invoices should reference the Department's project number.

b. *DBE subcontractors and/or material suppliers should be identified on the monthly report by Vendor Number, name, and the amount of actual payment made to each during the monthly period. Negative reports are required when no activity has occurred in a monthly period.*

c. *All such records must be retained for a period of 3 years following completion of the contract work, and shall be available at reasonable times and places for inspection by authorized representatives of the Department or the DOT. Provide copies of subcontracts or agreements and other documentation upon request.*

d. *Prior to receiving final payment, the Contractor shall submit Form SMS.4904, "DBE Final Report". If the DBE goal requirement is not met, documentation supporting Good Faith Efforts, as outlined in Section 1.A.3.c of this Special Provision, must be submitted with the "DBE Final Report."*

e. *Provide a certification of prompt payment in accordance with the Department's prompt payment procedure to certify that all subcontractors and suppliers were paid from the previous months payments and retainage was released for those whose work is complete. Submit the completed form each month and the month following the month when final acceptance occurred at the end of the project.*

7. **Compliance of Contractor.** To ensure that DBE requirements of this DOT assisted contract are complied with, the Department will monitor the Contractor's efforts to involve DBEs during the performance of this contract. This will be accomplished by a review of monthly reports submitted to the Area Engineer by the Contractor indicating his progress in achieving the DBE contract goal, and by compliance reviews conducted on the project site by the Department.

The Contractor shall receive credit toward the DBE goal based on actual payments to the DBE subcontractor. The Contractor shall notify the Area Engineer if he/she withholds or reduces payment to any DBE subcontractor. The Contractor shall submit an affidavit detailing the DBE subcontract payments prior to receiving final payment for the contract.
Contractors' requests for substitutions of DBE subcontractors shall be accompanied by a detailed explanation which should substantiate the need for a substitution. The Contractor may not be allowed to count work on those items being substituted toward the DBE goal prior to approval of the substitution from the Department.

The prime Contractor is prohibited from providing work crews and equipment to DBEs. DBE Goal credit for the DBE subcontractors leasing of equipment or purchasing of supplies from the prime contractor or its affiliates is not allowed.

When a DBE subcontractor named in the commitment under Section 1.A.3.a. of this Special Provision, is terminated or fails to complete its work on the contract for any reason, the prime contractor is required to make good faith efforts to find another DBE subcontractor to substitute for the original DBE. These good faith efforts shall be directed at finding another DBE to perform at least the same amount of work under the contract as the DBE that was terminated, to the extent needed to meet the contract goal.

A Contractor's failure to comply with the requirements of this Special Provision shall constitute a material breach of this contract. In such a case, the Department reserves the right to terminate the contract; to deduct the amount of DBE goal not accomplished by DBEs from the money due or to become due the Contractor, or to secure a refund, not as a penalty but as liquidated damages to the Department or such other remedy or remedies as the Department deems appropriate.

Forward Form 2371, "DBE Trucking Credit Worksheet," completed by the DBE trucker every month DBE credit is used.

B. *Article B. Race-Neutral Disadvantaged Business Enterprise Participation.* ***It is the policy of the DOT that Disadvantaged Business Enterprises (DBE) as defined in 49 CFR Part 26 Subpart A, be given the opportunity to compete fairly for contracts and subcontracts financed in whole or in part with Federal funds and that a maximum feasible portion of the Department's overall DBE goal be met using race-neutral means. Consequently, if there is no DBE goal, the DBE requirements of 49 CFR Part 26, apply to this contract as follows:***

The Contractor will offer DBEs as defined in 49 CFR Part 26, Subpart A, the opportunity to compete fairly for contracts and subcontractors financed in whole or in part with Federal funds. Race-Neutral DBE and non-DBE HUB participation on projects with no DBE goal shall be reported on Form SMS.4903, "DBE or HUB Progress Report" and submitted to the Area Engineer each month and at project completion. Payments to DBEs reported on Form SMS.4903 are subject to the requirements of Section 1.A.5, "Determination of DBE Participation."

The Contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

SPECIAL PROVISION

000--1676

On-the-Job Training Program

1. **Description.** The primary objective of this Special Provision is the training and advancement of minorities, women and economically disadvantaged persons toward journeyworker status. Accordingly, make every effort to enroll minority, women and economically disadvantaged persons to the extent that such persons are available within a reasonable area of recruitment. This training commitment is not intended, and shall not be used to discriminate against any applicant for training, whether or not he/she is a member of a minority group.

2. **Trainee Assignment.** Training assignments are determined based on the past contract volume of federal-aid work performed with the Department. Contractors meeting the selection criteria will be notified of their training assignment at the beginning of the reporting year by the Department's Office of Civil Rights.

3. **Program Requirements.** Fulfill all of the requirements of the On-the-Job Training Program including the maintenance of records and submittal of periodic reports documenting program performance. Trainees shall be paid at least 60% of the appropriate minimum journeyworker's rate specified in the contract for the first half of the training period, 75% for the third quarter and 90% for the last quarter, respectively. Contractors may be reimbursed $0.80 per training hour at no additional cost to the Department.

4. **Compliance.** The Contractor will have fulfilled the contractual responsibilities by having provided acceptable training to the number of trainees specified in their goal assignment. Noncompliance may be cause for corrective and appropriate measures pursuant to Article 8.6., "Abandonment of Work or Default of Contract," which may be used to comply with the sanctions for noncompliance pursuant to 23 CFR Part 230.

SPECIAL PROVISION

004---017

Scope of Work

For this project, Item 4, "Scope of Work," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 4.2. Changes in the Work. **The first paragraph is supplemented by the following:**

The Contractor is responsible for notifying the sureties of any changes to the contract.

Article 4.2. Changes in the Work. **The sixth paragraph is voided and replaced by the following:**

When the quantity of work to be done under any major item of the Contract is less than 75% of the original quantity stated in the Contract, then either party to the Contract may request an adjustment to the unit price. When mutually agreed, the unit price may be adjusted by multiplying the Contract unit price by the factor in Table 1. If an adjusted unit price cannot be agreed upon, the Engineer may determine the unit price by multiplying the Contract unit price by the factor in Table 1.

Table 1
Quantity-Based Price Adjustment Factors

% of Original Quantity	Factor
≥ 50 and < 75	**1.05**
≥ 25 and < 50	**1.15**
< 25	**1.25**

Article 4.4. Requests and Claims for Additional Compensation, Section A., Delay Claims **is voided and replaced by the following:**

A. **Damages.** Damages occur when impacts that are the responsibility of the Department result in additional costs to the contractor that could not have been reasonably anticipated at the time of letting. Costs of performing additional work are not considered damages. For contractor damages, the intent is to reimburse the Contractor for actual expenses arising out of a compensable impact. No profit or markups, other than labor burden, will be allowed. For damages, labor burden will be reimbursed at 35% unless the Contractor can justify higher actual cost. Justification for a higher percentage must be in accordance with the methodology provided by the Department, submitted separately for project overhead labor and direct labor, and determined and submitted by a Certified Public Accountant (CPA). Submit CPA-prepared labor burden rates directly to the Contract Letting and Contractor Prequalification Branch of the Construction Division.

1. **Delay Damages.** If the Contractor requests compensation for delay damages and the delay is determined to be compensable, then standby equipment costs and project overhead compensation will be based on the duration of the compensable delay and will be limited as follows:

   a. **Standby Equipment Costs.**

      - Standby costs will not be allowed during periods when the equipment would have otherwise been idle.
      - No more than 8 hr. of standby will be paid during a 24-hr. day, nor more than 40 hr. per week, nor more than 176 hr. per month.
      - For Contractor-owned equipment, standby will be paid at 50% of the rental rates found in the Rental Rate Blue Book for Construction Equipment and calculated by dividing the monthly rate by 176 and multiplying by the regional adjustment factor and the rate adjustment factor. For leased equipment on standby, 100% of the invoice cost of the leased equipment will be paid. Operating costs will not be allowed.

   b. ***Project Overhead.*** *Project overhead is defined as the administrative and supervisory expenses incurred at the work locations. When delay to project completion occurs, reimbursement for project overhead for the prime contractor will be made using the following options:*

      - reimbursed at 6% (computed as daily cost by dividing 6% of the original contract amount by the as-let number of working days) or
      - actual documented costs for the impacted period.

      Project overhead for delays impacting sub-contractors will be determined from actual documented costs submitted by the Contractor.

      The granting of time extensions and suspensions alone will not be justification for reimbursement for project overhead.

   c. ***Home Office Overhead.*** *The Department will not compensate the Contractor for home office overhead.*

Article 4.4. Requests and Claims for Additional Compensation, Section B., Dispute or Claims Procedure is voided and replaced by the following:

B. Dispute or Claims Procedure. Work with the Engineer to resolve or escalate all issues in accordance with the procedures outlined at the pre-construction conference. Establish with the Engineer an issue escalation ladder and adhere to the following:

1. **Project Pledge.** At a minimum, Contractor representatives at the level of foreman and above will certify in writing they will approach the construction of this project in a manner consistent with delivering a high quality project in a safe, cost-effective, and timely manner, and they will be committed to not allowing personality conflicts or personal interests to interfere with providing the public with a quality project. Failure to uphold this commitment may result in grounds for removal from the project by the District Engineer.

2. **Issue Resolution Process.** An issue is any aspect of the contract where representatives of the participants in the contract do not agree. The individuals identified at the lowest level of the issue

escalation ladder will initiate the issue resolution process by escalating any issue that remains unresolved within the time frame outlined in the issue escalation ladder.

Use the Department's automated issue tracking system to submit and track issues escalated to the area engineer or above. Do not use the automated issue tracking system for routine issues resolved on the project.

Once the issue is recorded in the automated issue tracking system, the issue will be escalated to the district engineer within 15 calendar days.

The district engineer will issue written direction within 7 calendar days.

Work with the district to resolve all issues during the course of the contract. In the event the district and the Contractor cannot resolve an issue, the Contractor may file a contract claim after the completion of the contract to be handled in accordance with the Department's contract claim procedure. Contract claims will not be presented to the Contract Claims Committee for consideration prior to the final payment to the Contractor. It is the Contractor's responsibility to prove or justify all claims and requests in a timely manner.

The deadline for filing a claim in accordance with 43 TAC Section 9.2, is the earlier of 1 year after the date of final acceptance, date of default, or date of termination except that claims for warranty enforcement can be made up to 1 year after expiration of the warranty period.

SPECIAL PROVISION

006---030

Control of Materials

For this project, Item, Item 006, "Control of Materials," of the Standard Specifications is amended hereby with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 6.9. Recycled Materials is voided and replaced by the following:

The Department will not allow hazardous wastes, as defined in 30 TAC 335, proposed for recycling. Use nonhazardous recyclable materials (NRMs) only if the Specification for the Item does not disallow or restrict use. Determine if NRMs are regulated under 30 TAC 312, 330, 332, 334, or 335, and comply with all general prohibitions and requirements. Use NRMs in accordance with DMS-11000, "Evaluating and Using Nonhazardous Recyclable Materials Guidelines," and furnish all documentation required by that Specification.

Article 6.10. Hazardous Materials is voided and replaced by the following:

Use materials that are free of hazardous materials as defined in Item 1, "Definition of Terms."

Notify the Engineer immediately when a visual observation or odor indicates that materials in required material sources or on sites owned or controlled by the Department may contain hazardous materials. Except in the case of Section 6.10.A.1.a, "Cleaning and Painting Steel" below, the Department is responsible for testing and removing or disposing of hazardous materials not introduced by the Contractor on sites owned or controlled by the Department as indicated below. The plans will indicate locations where paint on steel is suspected to contain hazardous materials and where regulated asbestos containing materials have been found. The Engineer may suspend work wholly or in part during the testing, removal, or disposition of hazardous materials on sites owned or controlled by the Department, except in the case of Section 6.10.A.1.a.

When a visual observation or odor indicates that materials delivered to the work locations by the Contractor may contain hazardous materials, have an approved commercial laboratory test the materials for contamination. Remove, remediate, and dispose of any of these materials found to be contaminated. Testing, removal, and disposition of hazardous materials introduced onto the work locations by the Contractor will be at the Contractor's expense. Working day charges will not be suspended and extensions of working days will not be granted for activities related to handling hazardous material delivered by the Contractor.

A. **Painted Steel Requirements.** As shown on the plans, existing paint on steel may contain hazardous materials. Perform work in accordance with the following:

1. **Removing Paint from Steel.**

   a. **Cleaning and Painting Steel.** For contracts that are primarily for painting existing steel, perform the work in accordance with Item 446, "Cleaning and Painting Steel."

   b. **Other Contracts.** For all other projects when an existing paint must be removed to perform other work, perform paint removal work in accordance with Item 446, "Cleaning and Painting Steel" unless the paint is shown or determined to contain hazardous materials. If the paint is shown or determined to contain hazardous materials, the Department will provide for a separate contractor to remove paint prior to or during the Contract to allow dismantling of the steel for the Contractor's salvaging, reuse, or recycling or where paint must be removed to perform other work. For steel that is dismantled by unbolting, no paint stripping will be required. Use care to not damage existing paint. When dismantling is performed using flame or saw-cutting methods to remove steel elements coated with paint containing hazardous materials, the plans will show stripping locations. Coordinate with the separate contractor for stripping work to be performed during the Contract.

2. **Removal and Disposal of Painted Steel.** For Contracts where painted steel is to be removed and disposed of by the Contractor, painted steel may be reused or disposed of at a steel recycling or smelting facility. If the paint is shown or determined to contain hazardous materials, maintain and make available to the Engineer invoices and

other records showing the reuse owner or for recycling, records obtained from the recycling or smelting facility showing the received weight of the steel and the facility name. Painted steel to be retained by the Department will be shown on the plans.

- **Asbestos Requirements.** The plans will indicate locations or elements where asbestos containing materials (ACM) have been found. At these locations or at locations where previously unknown ACM has been found, the Department will arrange for abatement by a separate contractor during the Contract. For work at these locations, notify the Engineer of proposed dates of demolition or removal of structural elements with ACM at least 60 days before work is to begin to allow the Department sufficient time to abate the asbestos.

When the work by a separate contractor for removal of paint or asbestos abatement is to be performed during the Contract, provide traffic control as shown on the plans and coordinate and cooperate with the separate contractor. Continue other work detailed in the plans not directly involved in the paint removal or asbestos abatement work. Coordinate with the Department the timing of the separate contractor's work in advance in order to allow the Department to schedule work with the separate contractor. Work for the traffic control and other work will not be paid for directly but will be subsidiary to pertinent Items.

SPECIAL PROVISION

007---806
Legal Relations and Responsibilities

For this project, Item 7, "Legal Relations and Responsibilities" of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 7.4. Insurance and Bonds is voided and replaced by the following:

As specified in Article 3.4, "Execution of Contract," provide the Department with the Department's Certificate of Insurance verifying the types and amounts of coverage shown in Table 1.

Table 2
Insurance Requirements

Type of Insurance	Amount of Coverage
Commercial General Liability Insurance	$600,000 combined single limit
Business Automobile Policy:	
Bodily Injury	$250,000 each person $500,000 each occurrence
Property Damage	$100,000 each occurrence
Workers' Compensation	Statutory
Builder's Risk Insurance [1]	100% of Contract Price

1 . For building-facilities contracts only

By signing the Contract, the Contractor certifies compliance with all applicable laws, rules, and regulations pertaining to workers' compensation insurance or legitimate alternates. This certification includes all subcontractors. Pay all deductibles stated in the policy. Subcontractors must meet the requirements of Table 1 either through their own coverage or through the Contractor's coverage.

Insurances must cover the contracted work for the duration of the Contract and must remain in effect until final acceptance. Failure to obtain and maintain insurance for the contracted work may result in suspension of work or default of the Contract. If the insurance expires and coverage lapses for any reason, stop all work until the Department receives an acceptable Certificate of Insurance.

Commercial general liability and business automobile policies must include an endorsement naming the State as an additional named insured. Policies issued for coverage listed in Table 1 must include a waiver of subrogation endorsement in favor of the State.

For building-facilities contracts, provide Builder's Risk Insurance to protect the Department against loss by storm, fire or extended coverage perils on work and materials intended for use on the project including the adjacent structure. Name the Department under the Lost Payable Clause.

Provide a substitute Surety on the Contract bonds in the original full Contract amount within 15 days of notification if the Surety is declared bankrupt or insolvent, the Surety's underwriting limitation drops below the Contract amount or the Surety's right to do business is terminated by the State. The substitute Surety must be authorized by the laws of the State and acceptable to the Department. Work will be suspended until a substitute Surety is provided. Working day charges will be suspended for 15 days or until an acceptable Surety is provided, whichever is sooner.

Article 7.8. Hauling and Loads on Roadways and Structures **is supplemented by the following:**

D. Stockpiling of Materials. Do not store or stockpile material on bridge structures without written permission. If required, submit a structural analysis and supporting documentation by a licensed professional engineer for review by the Engineer. Permission may be granted if the Engineer finds that no damage or overstresses in excess of those normally allowed for occasional overweight loads will result to structures that will remain in use after Contract completion. Provide temporary matting or other protective measures as directed.

Article 7.14. Contractor's Responsibility for Work, Section B. Appurtenances **is voided and replaced by the following:**

B. Appurtenances.

1. **Unreimbursed Repair.** Except for destruction (not reusable) due to hurricanes, reimbursement will not be made for repair of damage to the following temporary appurtenances, regardless of cause:
   - signs,
   - barricades,
   - changeable message signs, and
   - other work zone traffic control devices.

   Crash cushion attenuators and guardrail end treatments are the exception to the above listing and are to be reimbursed in accordance with Section 7.14.B.2, "Reimbursed Repair."

   For the devices listed in this section, reimbursement may be made for damage due to hurricanes. Where the contractor retains replaced appurtenances after completion of the project, the Department will limit the reimbursement to the cost that is above the salvage value at the end of the project.

2. **Reimbursed Repair.** Reimbursement will be made for repair of damage due to the causes listed in Section 7.14.A, "Reimbursable Repair," to appurtenances (including temporary and permanent crash cushion attenuators and guardrail end treatments).

Article 7.15. Electrical Requirements, Section A. Definitions, Section 3. Certified Person is voided and replaced by the following:

3. Certified Person. **A certified person is a person who has passed the test from the TxDOT course TRF450, "TxDOT Roadway Illumination and Electrical Installations" or other courses as approved by the Traffic Operations Division. Submit a current and valid TRF certification upon request. On June 1, 2011, Texas Engineering Extension Service (TEEX) certifications for "TxDOT Electrical Systems" course will no longer be accepted. All TRF 450 certifications that have been issued for "TxDOT Roadway Illumination and Electrical Installations" course that expire before June 1, 2011 will be accepted until June 1, 2011.**

Article 7.15. Electrical Requirements, Section A. Definitions, Section 4. Licensed Electrician **is voided and replaced by the following:**

4. Licensed Electrician. **A licensed electrician is a person with a current and valid unrestricted master electrical license, or unrestricted journeyman electrical license that is supervised or directed by an unrestricted master electrician. An unrestricted master electrician need not be on the work locations at all times electrical work is being done, but the unrestricted master electrician must approve work performed by the unrestricted journeyman. Licensed electrician requirements by city ordinances do not apply to on state system work.**

The unrestricted journeyman and unrestricted master electrical licenses must be issued by the Texas Department of Licensing and Regulation or by a city in Texas with a population of 50,000 or greater that issues licenses based on passing a written test and demonstrating experience.

The Engineer may accept other states' electrical licenses. Submit documentation of the requirements for obtaining that license. Acceptance of the license will be based on sufficient evidence that the license was issued based on:

- **passing a test based on the NEC similar to that used by Texas licensing officials, and**
- **sufficient electrical experience commensurate with general standards for an unrestricted master and unrestricted journeyman electrician in the State of Texas.**

Article 7.19. Preservation of Cultural and Natural Resources and the Environment is supplemented by the following:

G. Asbestos Containing Material. In Texas, the Department of State Health Services (DSHS), Asbestos Programs Branch, is responsible for administering the requirements of the National Emissions Standards for Hazardous Air Pollutants, 40 CFR, Subpart M (NESHAP) and the Texas Asbestos Health Protection Rules (TAHPR). Based on EPA guidance and regulatory background information, bridges are considered to be a regulated "facility" under NESHAP. Therefore, federal standards for demolition and renovation apply.

Provide notice to the Department of demolition or renovation to the structures listed in the plans at least 30 calendar days prior to initiating demolition or renovation of each structure or load bearing member. Provide the scheduled start and completion date of structure demolition, renovation, or removal.

When demolition, renovation, or removal of load bearing members is planned for several phases, provide the start and completion dates identified by separate phases.

DSHS requires that notifications be postmarked at least 10 working days prior to initiating demolition or renovation. If the date of actual demolition, renovation, or removal is changed, the Department will be required to notify DSHS at least 10 days in advance of the work. This notification is also required when a previously scheduled (notification sent to DSHS) demolition, renovation or removal is delayed. Therefore, if the date of actual demolition, renovation,

or removal is changed, provide the Engineer, in writing, the revised dates in sufficient time to allow for the Department's notification to DSHS to be postmarked at least 10 days in advance of the actual work.

Failure to provide the above information may require the temporary suspension of work under Article 8.4, "Temporary Suspension of Work or Working Day Charges," due to reasons under the control of the Contractor. The Department retains the right to determine the actual advance notice needed for the change in date to address post office business days and staff availability.

Article 7.20, Agricultural Irrigation. This Item is supplemented by the following:

Regulate the sequence of work and make provisions as necessary to provide for agricultural irrigation or drainage during the work. Meet with the Irrigation District or land owner to determine the proper time and sequence when irrigation demands will permit shutting-off water flows to perform work.

Unless otherwise provided on the plans, the work required by these provisions will not be paid for directly but shall be considered as subsidiary work pertaining to the various bid items of this contract.

SPECIAL PROVISION

009---015

Measurement and Payment

For this project, Item 9, "Measurement and Payment," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 9.5. Force Account, B. Insurance and Taxes is replaced by the following:

B. **Labor Burden.** An additional 55% of the labor cost, excluding the 25% compensation provided in Section 9.5.A, "Labor," will be paid as compensation for labor insurance and labor taxes including the cost of premiums on non-project specific liability (excluding vehicular) insurance, workers compensation insurance, Social Security, unemployment insurance taxes, and fringe benefits.

SPECIAL PROVISION

008---119

Prosecution and Progress

For this project, Item 8, "Prosecution and Progress," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 8.8. Subcontracting, is supplemented with the following:

For all DBE subcontracts including all tiered DBE subcontracts, submit a copy of the executed subcontract agreement.

SPECIAL PROVISION

100---002

Preparing Right of Way

For this project, Item 100, "Preparing Right of Way," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 100.4. Payment. **The second paragraph is voided and replaced by the following:**

Total payment of this Item will not exceed 10% of the original contract amount until final acceptance. The remainder will be paid on the estimate after the final acceptance under Article 5.8, "Final Acceptance."

SPECIAL PROVISION

260---003

Lime Treatment (Road-Mixed)

For this project, Item 340, "Lime Treatment (Road-Mixed)," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 260.2. Materials, Section A. Lime. The first two sentences are voided and replaced by the following:

Furnish lime that meets the requirements of DMS-6350 "Lime and Lime Slurry," and DMS-6330, "Prequalification of Lime Sources." Use hydrated lime, commercial lime slurry, quicklime, or carbide lime slurry as shown on the plans.

Article 260.3. Equipment, Section B. Slurry Equipment. The last sentence of the second paragraph is voided and replaced by the following:

Equip the distributor truck with a sampling device in accordance with Tex-600-J, Part I, when using commercial lime slurry or carbide lime slurry.

Article 260.4. Construction, Section C. Application of Lime, Section 2. Slurry Placement. The first paragraph is voided and replaced with the following:

Provide slurry free of objectionable materials, at or above the minimum dry solids content, and with a uniform consistency that will allow ease of handling and uniform application. Deliver commercial lime slurry or carbide lime slurry to the jobsite, or use hydrated lime or quicklime to prepare lime slurry at the jobsite or other approved location, as specified. When dry quicklime is applied as a slurry, use 80 percent of the amount shown on the plans.

Article 260.4. Construction, Section D. Mixing. The third paragraph is voided and replaced with the following:

After mixing, the Engineer may sample the mixture at roadway moisture and test in accordance with Tex-101-E, Part III, to determine compliance with the gradation requirements in Table 1.

Article 260.5. Measurement, Section A. Lime is supplemented by the following:

4. Carbide Lime Slurry. Lime slurry will be measured by the ton (dry weight) as calculated from the minimum percent dry solids content of the slurry, multiplied by the weight of the slurry in tons delivered.

Article 260.6. Payment. The first paragraph is voided and replaced by the following:

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid in accordance with Section 260.6.A, "Lime," and Section 260.6.B, "Lime Treatment."

Article 260.6. Payment, Section A. Lime. The first sentence is voided and replaced by the following:

A. Lime. Lime will be paid for at the unit price bid for "Lime" of one of the following types:

- Hydrated Lime (Dry),
- Hydrated Lime (Slurry),
- Commercial Lime Slurry,
- Quicklime (Dry),
- Quicklime (Slurry), or
- Carbide Lime Slurry.

Article 260.6. Payment, Section B. Lime Treatment is voided and replaced by the following:

B. Lime Treatment. Lime treatment will be paid for at the unit price bid for "Lime Treatment (Existing Material)," "Lime Treatment (New Base)," or "Lime Treatment (Mixing Existing Material and New Base)," for the depth specified. No payment will be made for thickness or width exceeding that shown on the plans. This price is full compensation for shaping existing material, loosening, mixing, pulverizing, spreading, applying lime, compacting, finishing, curing, curing materials, blading, shaping and maintaining shape, replacing mixture, disposing of loosened materials, processing, hauling, preparing secondary subgrade, water, equipment, labor, tools, and incidentals.

SPECIAL PROVISION

316---016

Surface Treatments

For this project, Item 34016, "Surface Treatments", of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 316.3.A.3. Computerized Distributor. This section is voided and not replaced.

Article 316.4.D.3. Asphalt Material Designed for Winter Use. This section is voided and replaced by the following:

A. **Cold Weather Surface Treatments.** When asphalt application is allowed outside of the above temperature restrictions, the Engineer will approve the binder grade and the air and surface temperatures for asphalt material application. Apply surface treatment at air and surface temperatures as directed.

Article 316.5.A. Asphalt Material. This section is voided and replaced by the following:

B. **Asphalt Material.** Asphalt material will be measured at the applied temperature by strapping the tank just before and just after road application and determining the net volume in gallons from the distributor's calibrated strap stick. The quantity to be measured for payment will be the number of gallons used, as directed, in the accepted surface treatment.

SPECIAL PROVISION

340---003
Dense-Graded Hot-Mix Asphalt (Method)

For this project, Item 340, "Surface Treatments," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 340.2. Materials, Section A. Aggregate, Section 2. RAP is voided and replaced by the following:

2. RAP. RAP is salvaged, milled, pulverized, broken, or crushed asphalt pavement. Crush or break RAP so that 100% of the particles pass the 2-in. sieve.

Use of Contractor-owned RAP including HMA plant waste is permitted, unless otherwise noted in the plans. Department-owned RAP stockpiles are available for the Contractor's use when the stockpile locations are shown on the plans. Department-owned RAP generated through required work on the Contract is available for the Contractor's use when shown on the plans. Perform any necessary tests to ensure Contractor or Department-owned RAP is appropriate for use. Unless otherwise shown on the plans, the Department will not perform any tests or assume any liability for the quality of the Department-owned RAP.

Fractionated RAP is defined as having 2 or more RAP stockpiles whereas the RAP is divided into coarse and fine fractions. The coarse RAP stockpile will contain only material retained by processing over a 3/8 in. screen or 1/2 in. screen unless otherwise approved. The fine RAP stockpile will contain only material passing the 3/8 in. screen or 1/2 in. screen unless otherwise approved. The Engineer may allow the Contractor to use an alternate to the 3/8 in. screen or 1/2 in. screen to fractionate the RAP. The maximum percentages of fractionated RAP may be comprised of coarse or fine fractionated RAP or the combination of both coarse and fine fractionated RAP. Utilize a separate cold feed bin for each stockpile of fractionated RAP used.

Determine asphalt content and gradation of RAP stockpiles for mixture design purposes. Perform other tests on RAP when shown on the plans. Unless otherwise shown on the plans, use no more than 10% unfractionated RAP in surface mixtures and no more than 20% unfractionated RAP in non-surface mixtures that are placed within 8 in. of the final riding surface. Use no more

than 30% unfractionated RAP in non-surface mixtures that are placed 8 in. or more from the final riding surface. Unless otherwise shown on the plans, use no more than 20% fractionated RAP in surface mixtures and no more than 30% fractionated RAP in non-surface mixtures that are placed within 8 in. of the final riding surface. Use no more than 40% fractionated RAP in non-surface mixtures that are placed 8 in. or more from the final riding surface. "Surface" mixtures are defined as mixtures that will be the final lift or riding surface of the pavement structure."Non-Surface" mixtures are defined as mixtures that will be an intermediate or base layer in the pavement structure. Do not use Department or Contractor owned RAP contaminated with dirt or other objectionable materials. Do not use Department or Contractor owned RAP if the decantation value exceeds 5% and the plasticity index is greater than 8. Test the stockpiled RAP for decantation in accordance with the laboratory method given in Tex-406-A, Part I. Determine the plasticity index using Tex-106-E if the decantation value exceeds 5%. The decantation and plasticity index requirements do not apply to RAP samples with asphalt removed by extraction.

Do not intermingle Contractor-owned RAP stockpiles with Department-owned RAP stockpiles. Remove unused Contractor-owned RAP material from the project site upon completion of the project. Return unused Department-owned RAP to the designated stockpile location.

Article 340.2. Materials, Section A. Aggregate. is supplemented by the following:

4. **Recycled Asphalt Shingles (RAS).** The contractor may use post-manufactured RAS or post-consumer RAS; however, the use of post-consumer RAS may be restricted when shown on the plans. RAS are defined as processed asphalt shingle material from manufacturing of asphalt roofing shingles or from re-roofing residential structures. "Post-manufactured RAS" are processed manufacturer's shingle scrap by-product. "Post-consumer RAS," or "tear-offs," are processed shingle scrap removed from residential structures.

   Process the RAS by ambient grinding or granulating such that 100% of the particles pass the 1/2 in. sieve when tested in accordance with Tex-200-F, Part I. Add sand meeting the requirements of Table 1 and Table 2 to RAS stockpiles, if needed, to keep the processed material workable. Use a maximum of 4% sand by weight of RAS. Perform a sieve analysis on processed RAS material prior to extraction of the asphalt.

   Determine asphalt content and gradation of the RAS material for mixture design purposes in accordance with Tex-236-F. Unless otherwise shown on the plans, use no more than 5% processed RAS of the total mixture weight. When RAS is used, whether in conjunction with RAP or not, calculate and ensure the ratio of the virgin binder to total binder is greater than 65% in surface mixtures and 60% in non-surface mixtures. "Surface" mixtures are defined as

mixtures that will be final lifts or riding surfaces of a pavement structure. "Non-Surface" mixtures are defined as mixtures that will be intermediate or base layers in a pavement structure. When RAS is used in conjunction with fractionated RAP, use no more than 20% combined RAS and RAP for surface mixtures, and no more than 30% combined RAS and RAP in non-surface mixtures, unless otherwise shown on the plans. When RAS is used in conjunction with un-fractionated RAP, use no more than 10% combined RAS and RAP for surface mixtures, and no more than 20% combined RAS and RAP in non-surface mixtures, unless otherwise shown on the plans.

Certify compliance of the RAS with specification DMS-11000, "Evaluating and Using Nonhazardous Recyclable Materials Guidelines". If the RAS has not come into contact with any hazardous materials, treat it as an established NRM. Do not use RAS if deleterious materials as measured by Tex-217-F, Part I, are more than 1.5% of the stockpiled RAS.

SPECIAL PROVISION

420---002

Concrete Structures

For this project, Item 420, "Concrete Structures," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 420.4. Construction, Section I, "Finish of Bridge Slabs". The tenth paragraph is supplemented with the following:

For bridge approach slabs the carpet drag, burlap drag, or broom finish may be applied either longitudinally or transversely.

Article 420.4. Construction, Section I, "Finish of Bridge Slabs". The first sentence of the fourteenth paragraph is voided and replaced by the following:

Unless noted otherwise, saw-cut grooves in the hardened concrete of bridge slabs, bridge approach slabs, and direct-traffic culverts to produce the final texturing after completion of the required curing period.

Article 420.4. Construction, Section I, "Finish of Bridge Slabs". The fourteenth paragraph is amended by the following:

When saw-cut grooves are not required in the plans, provide either a carpet drag or broom finish for micro-texture. In this case insure that an adequate and consistent micro-texture is achieved by applying sufficient weight to the carpet and keeping the carpet or broom from getting plugged with grout. For surfaces that do not have adequate texture, the Engineer may require corrective action including diamond grinding or shot blasting.

Article 420.4. Construction, Section J. Curing Concrete. The first sentence of the fourth paragraph is voided and replaced by the following:

For upper surfaces of bridge slabs, bridge approach slabs, median and sidewalk slabs, and culvert top slabs constructed using Class S concrete, apply interim curing using a Type 1-D curing compound before the water sheen disappears but no more than 45 minutes after application of the evaporation retardant. Do not allow the concrete surface to dry before applying the interim cure, and do not place the interim cure over standing water.

Article 420.6 Payment. The pay adjustment formula given in the sixth bullet of the fourth paragraph is voided and replaced by the following:

$A = Bp[-5.37(Sa/Ss)^2 + 11.69(Sa/Ss) - 5.32]$

Where:
A = Amount to be paid
Sa = Actual strength from cylinders or cores
Ss = Specified design strength
Bp = Unit bid price

SPECIAL PROVISION

421---035

Hydraulic Cement Concrete

For this project, Item 421, "Hydraulic Cement Concrete," of the Standard Specifications is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 421.2.D. Water, Table 1. Chemical Limits for Mix Water is voided and replaced by the following:

Table 3
Chemical Limits for Mix Water

Contaminant	Test Method	Maximum Concentration (ppm)
Chloride (Cl)	ASTM C 114	
Prestressed concrete		500
Bridge decks and superstructure		500
All other concrete		1,000
Sulfate (SO_4)	ASTM C 114	2,000
Alkalies ($Na_2O + 0.658K_2O$)	ASTM C 114	600
Total Solids	ASTM C 1603	50,000

Article 421.2.B. Supplementary Cementing Materials (SCM) is supplemented with the following:

6. **Modified Class F Fly Ash (MFFA).** Furnish MFFA conforming to DMS-4610, "Fly Ash."

Article 421.2.D. Water, Table 2. Acceptance Criteria for Questionable Water Supplies is voided and replaced by the following:

Table 4
Acceptance Criteria for Questionable Water Supplies

Property	Test Method	Limits
Compressive strength, min. % control at 7 days	ASTM C 31, ASTM C 39[1,2]	90
Time of set, deviation from control, h:min.	ASTM C 403[1]	From 1:00 early to 1:30 later

1. Base comparisons on fixed proportions and the same volume of test water compared to the control mix using 100% potable water or distilled water.
2. Base comparisons on sets consisting of at least two standard specimens made from a composite sample.

Article 421.2.E.1 Coarse Aggregate. The fourth paragraph is voided and replaced by the following:

Unless otherwise shown on the plans, provide coarse aggregate with a 5-cycle magnesium sulfate soundness when tested in accordance with Tex-411-A of not more than 25% when air

entrainment is waived and 18% when air entrainment is not waived. Crushed recycled hydraulic cement concrete is not subject to the 5-cycle soundness test.

Article 421.2.E.2 Fine Aggregate. The fifth paragraph is voided and replaced by the following:

Acid insoluble (%) = {(A1)(P1)+(A2)(P2)}/100

where:

$A1$ = acid insoluble (%) of aggregate 1

$A2$ = acid insoluble (%) of aggregate 2

$P1$ = percent by weight of aggregate 1 of the fine aggregate blend

$P2$ = percent by weight of aggregate 2 of the fine aggregate blend

Article 421.2.E.2. Fine Aggregate. The final paragraph is voided and replaced by the following:

For all classes of concrete, provide fine aggregate with a fineness modulus between 2.3 and 3.1 as determined by Tex-402-A.

Article 421.2.E. Aggregate is supplemented by the following:

4. **Intermediate Aggregate.** When necessary to complete the concrete mix design, provide intermediate aggregate consisting of clean, hard, durable particles of natural or lightweight aggregate or a combination thereof. Provide intermediate aggregate free from frozen material and from injurious amounts of salt, alkali, vegetable matter, or other objectionable material, and containing no more than 0.5% clay lumps by weight in accordance with Tex-413-A.
   If more than 30% of the intermediate aggregate is retained on the No. 4 sieve, the retained portion must meet the following requirements:

   - must not exceed a wear of 40% when tested in accordance with Tex-410-A.
   - must have a 5-cycle magnesium sulfate soundness when tested in accordance with Tex-411-A of not more than 25% when air entrainment is waived and 18% when air entrainment is not waived.

   If more than 30% of the intermediate aggregate passes the 3/8" sieve, the portion passing the 3/8" sieve must not show a color darker than standard when subjected to the color test for organic impurities in accordance with Tex-408-A and must have an acid insoluble residue, unless otherwise shown on the plans, for concrete subject to direct traffic equal to or greater than the value calculated with the following equation:

$$\mathrm{AI}ia \geq \frac{60 - (\mathrm{AI}fa)(\mathrm{P}fa)}{(\mathrm{P}ia)}$$

where:

AIfa = acid insoluble (%) of fine aggregate or fine aggregate blend

Pfa = percent by weight of the fine aggregate or fine aggregate blend as a percentage of the total weight of the aggregate passing the 3/8" sieve in the concrete mix design

Pia = percent by weight of the intermediate aggregate as a percentage of the total weight of the aggregate passing the 3/8" sieve in the concrete mix design

Article 421.2.F. Mortar and Grout is supplemented by the following:

Section 421.4.A.6, "Mix Design Options," does not apply for mortar and grout.

Article 421.3.A. Concrete Plants and Mixing Equipment is supplemented by the following:

When allowed by the plans or the Engineer, for concrete classes not identified as structural concrete in Table 5 or for Class C concrete not used for bridge-class structures, the Engineer may inspect and approve all plants and trucks in lieu of the NRMCA or non-Department engineer sealed certifications. The criteria and frequency of Engineer approval of plants and trucks is the same used for NRMCA certification.

Article 421.3.A.2. Volumetric Mixers is supplemented by the following:

Unless allowed by the plans or the Engineer, volumetric mixers may not supply classes of concrete identified as structural concrete in Table 5.

Article 421.4.A Classification and Mix Design. The first paragraph is voided and replaced by the following:

Unless a design method is indicated on the plans, furnish mix designs using ACI 211, "Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete," Tex-470-A, or other approved procedures for the classes of concrete required in accordance with Table 5. Perform mix design and cement replacement using the design by weight method unless otherwise approved. Do not exceed the maximum water-to-cementitious-material ratio.

Article 421.4.A. Classification and Mix Design, Table 5 Concrete Classes is voided and replaced by the following:

Table 5
Concrete Classes

Class of Concrete	Design Strength, Min. 28-day f'_c (psi)	Maximum W/C Ratio[1]	Coarse Aggregate Grades[2,3]	General Usage[4]
A	3,000	0.60	1–4, 8	Inlets, manholes, curb, gutter, curb & gutter, conc. retards, sidewalks, driveways, backup walls, anchors
B	2,000	0.60	2–7	Riprap, small roadside signs, and anchors
C[5]	3,600	0.45	1–6	Drilled shafts, bridge substructure, bridge railing, culverts except top slab of direct traffic culverts, headwalls, wing walls, approach slabs, concrete traffic barrier (cast-in-place)
C(HPC)[5]	3,600	0.45	1-6	As shown on the plans
D	1,500	0.60	2–7	Riprap
E	3,000	0.50	2–5	Seal concrete
F[5]	Note 6	0.45	2–5	Railroad structures; occasionally for bridge piers, columns, or bents
F(HPC)[5]	Note 6	0.45	2–5	As shown on the plans
H[5]	Note 6	0.45	3–6	Prestressed concrete beams, boxes, piling, and concrete traffic barrier (precast)
H(HPC)[5]	Note 6	0.45	3–6	As shown on the plans
S[5]	4,000	0.45	2–5	Bridge slabs, top slabs of direct traffic culverts
S(HPC)[5]	4,000	0.45	2–5	As shown on the plans
P	See Item 360	0.45	2–3	Concrete pavement
DC[5]	5,500	0.40	6	Dense conc. overlay
CO[5]	4,600	0.40	6	Conc. overlay
LMC[5]	4,000	0.40	6–8	Latex-modified concrete overlay
SS[5]	3,600[7]	0.45	4–6	Slurry displacement shafts, underwater drilled shafts
K[5]	Note 6	0.45	Note 6	Note 6
HES	Note 6	0.45	Note 6	Note 6

1. Maximum water-cement or water-cementitious ratio by weight.
2. Unless otherwise permitted, do not use Grade 1 coarse aggregate except in massive foundations with 4-in. minimum clear spacing between reinforcing steel bars. Do not use Grade 1 aggregate in drilled shafts.
3. Unless otherwise approved, use Grade 8 aggregate in extruded curbs.
4. For information only.
5. Structural concrete classes.

Class of Concrete	Design Strength, Min. 28-day f'_c (psi)	Maximum W/C Ratio[1]	Coarse Aggregate Grades[2,3]	General Usage[4]

6. As shown on the plans or specified.
7. Use a minimum cementitious material content of 650 lb/cy of concrete. Do not apply Table 6 over design requirements to Class SS concrete.

Article 421.4.A. Classification and Mix Design, Table 6 Over Design to Meet Compressive Strength Requirements. Footnote 3 is supplemented by the following:

For Class K and concrete classes not identified as structural concrete in Table 5 or for Class C concrete not used for bridge-class structures, the Engineer may designate on the plans an alternative over-design requirement up to and including 1,000 psi for specified strengths less than 3,000 psi and up to and including 1,200 psi for specified strengths from 3,000 to 5,000 psi.

Article 421.4.A.1. Cementitious Materials is supplemented by the following:

The upper limit of 35% replacement of cement with Class F fly ash specified by mix design Options 1 and 3 may be increased to a maximum of 45% for mass placements, high performance concrete, and precast members when approved.

Article 421.4.A.3. Chemical Admixtures is supplemented by the following:

When a corrosion-inhibiting admixture is required, use a 30% calcium nitrite solution. The corrosion-inhibiting admixture must be set neutral unless otherwise approved. Dose the admixture at the rate of gallons of admixture per cubic yard of concrete shown on the plans.

Article 421.4.A.4 Air Entrainment is voided and replaced by the following:

Air entrain all concrete except for Class B and concrete used in drilled shafts unless otherwise shown on the plans. Unless otherwise shown on the plans, target an entrained air content of 4.0% for concrete pavement and 5.5% for all other concrete requiring air entrainment. To meet the air-entraining requirements, use an approved air-entraining admixture. Unless otherwise shown on the plans, acceptance of concrete loads will be based on a tolerance of ± 1.5% from the target air content. If the air content is more than 1.5 but less than 3.0% above the target air, the concrete

may be accepted based on strength tests. For specified concrete strengths above 5,000 psi, a reduction of 1% is permitted.

Article 421.4.A Table 7 Air Entrainment is voided.

Article 421.4.A.6. Mix Design Options. The first and second paragraphs are voided and replaced by the following:

For structural concrete identified in Table 5 and any other class of concrete designed using more than 520 lb. of cementitious material per cu. yd., use one of the mix design Options 1–8 shown below, unless otherwise shown on the plans.

For concrete classes not identified as structural concrete in Table 5 and designed using less than 520 lb. of cementitious material per cu. yd., use one of the mix design Options 1–8 shown below, except that Class C fly ash may be used instead of Class F fly ash for Options 1, 3, and 4 unless sulfate-resistant concrete is shown on the plans.

Do not use mix design Options 6 or 7 when High Performance Concrete (HPC) is required. Option 8 may be used when HPC is required provided: a minimum of 20% of the cement is replaced with a Class C fly ash; Tex-440-A, "Initial Time of Set of Fresh Concrete" is performed during mix design verification; the additional requirements for permeability are met; and the concrete is not required to be sulfate-resistant.

Article 421.4.A.6.b. Option 2 is voided and replaced by the following:

b. Option 2. Replace 35 to 50% of the cement with GGBFS or MFFA.

Article 421.4.A.6.c. Option 3 is voided and replaced by the following:

c. Option 3. Replace 35 to 50% of the cement with a combination of Class F fly ash, GGBFS, MFFA, UFFA, metakaolin, or silica fume; however, no more than 35% may be fly ash, and no more than 10% may be silica fume.

Article 421.4.A.6.f. Option 6 is voided and replaced by the following:

f. Option 6. Use lithium nitrate admixture at a minimum dosage determined by testing conducted in accordance with Tex-471-A, "Lithium Dosage Determination Using Accelerated Mortar Bar Testing." Before use of the mix, provide an annual certified test report signed and sealed by a licensed professional engineer, from a laboratory on the Department's List of Approved Lithium Testing Laboratories, certified by the Construction Division as being capable of testing according to Tex-471-A, "Lithium Dosage Determination Using Accelerated Mortar Bar Testing."

Article 421.4.A.6.g. Option 7 is voided and replaced by the following:

g. Option 7. When using hydraulic cement only, ensure that the total alkali contribution from the cement in the concrete does not exceed 3.5 lb. per cubic yard of concrete when calculated as follows:

$$\text{lb. alkali per cu. yd.} = \frac{(\text{lb. cement per cu. yd.}) \times (\%\ Na_2O \text{ equivalent in cement})}{100}$$

In the above calculation, use the maximum cement alkali content reported on the cement mill certificate.
Do not use Option 7 when any of the aggregates in the concrete are listed on the Department's List of Aggregate Sources Excluded from Option 7 ASR Mitigation.

Article 421.4.A.6.h. Option 8 is voided and replaced by the following:

h. Option 8. For any deviations from Options 1–5, perform annual testing on coarse, intermediate, and fine aggregate separately in accordance with ASTM C 1567. Before use of the mix, provide a certified test report signed and sealed by a licensed professional engineer, from a laboratory on the Department's List of Approved ASTM C 1260 Laboratories, demonstrating that the ASTM C 1567 test result for each aggregate does not exceed 0.08% expansion at 14 days.

Do not use Option 8 when any of the aggregates in the concrete are listed on the Department's List of Aggregate Sources Excluded from Option 8 ASR Mitigation. When HPC is required, provide a certified test report signed and sealed by a licensed professional engineer demonstrating that AASHTO T 277 test results indicate the permeability of the concrete is less than 1,500 coulombs tested immediately after either of the following curing schedules:

- Moist cure specimens 56 days at 73°F.
- Moist cure specimens 7 days at 73°F followed by 21 days at 100°F.

Article 421.4.B. Trial Batches is supplemented by the following:

Once a trial batch substantiates the mix design, the proportions and mixing methods used in the trial batch become the mix design of record.

Article 421.4.B. Trial Batches. The fourth sentence of the second paragraph is voided and replaced by the following:

Test at least one set of design strength specimens, consisting of two specimens per set, at 7-day, 28-day, and at least one additional age.

Article 421.4.D. Measurement of Materials, Table 9 is voided and replaced by the following:

Table 9
Measurement Tolerances – Non-Volumetric Mixers

Material	Tolerance (%)
Cement, wt.	-1 to +3
SCM wt.	-1 to +3
Cement + SCM (cumulative weighing), wt.	-1 to +3
Water, wt. or volume	±3
Fine aggregate, wt.	±2
Coarse aggregate, wt.	±2
Fine + coarse aggregate (cumulative weighing), wt.	±1
Chemical admixtures, wt. or volume	±3

Article 421.4.E. Mixing and Delivering Concrete. The first paragraph is supplemented with the following:

Do not top-load new concrete onto returned concrete.

Article 421.4.E.3. Truck-Mixed Concrete. The first paragraph is voided and replaced by the following:

Mix the concrete in a truck mixer from 70 to 100 revolutions at the mixing speed designated by the manufacturer to produce a uniform concrete mix. Deliver the concrete to the project in a thoroughly mixed and uniform mass and discharge the concrete with a satisfactory degree of uniformity. Additional mixing at the job site at the mixing speed designated by the manufacturer is allowed as long as the requirements of Section 421.4.A.5, "Slump" and Section 421.4.E, "Mixing and Delivering Concrete" are met.

SPECIAL PROVISION

464---003

Reinforced Concrete Pipe

For this project, Item 340, "Reinforced Concrete Pipe," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 464.2. Materials, Section A. Fabrication is voided and replaced by the following:

Fabrication plants must be approved by the Construction Division in accordance with DMS-7310, "Reinforced Concrete Pipe Fabrication and Plant Qualification" before furnishing precast reinforced concrete pipe for Department projects. The Construction Division maintains a list of approved reinforced concrete pipe plants.

Furnish material and fabricate reinforced concrete pipe in accordance with DMS-7310, "Reinforced Concrete Pipe Fabrication and Plant Qualification."

Article 464.2. Materials, Section B. Design. 1. General. Table 2 is voided and replaced with the following:

Table 2
Arch Pipe

Design Size	Equivalent Diameter (in.)	Rise (in.)	Span (in.)
1	18	13-1/2	22
2	21	15-1/2	26
3	24	18	28-1/2
4	30	22-1/2	36-1/4
5	36	26-5/8	43-3/4
6	42	31-5/16	51-1/8
7	48	36	58-1/2
8	54	40	65
9	60	45	73
10	72	54	88

Article 464.2. Materials, Section C. Physical Test Requirements is voided and not replaced.

Article 464.2. Materials, Section D. Markings. The first paragraph is voided and replaced with the following:

Furnish each section of reinforced concrete pipe marked with the following information specified in DMS-7310, "Reinforced Concrete Pipe Fabrication and Plant Qualification":

- class or D-Load of pipe,
- ASTM designation,
- date of manufacturer,
- name or trademark of manufacturer and plant location,
- designated manufacturer's approval marking,
- pipe to be used for jacking and boring (when applicable), and
- pipe meeting sulfate-resistant concrete plan requirements (when applicable).

Article 464.2. Materials, Section E. Inspection is voided and replaced with the following:

Provide access for inspection of the finished pipe at the project site before and during installation.

Article 464.2. Materials, Section F. Causes for Rejection is voided and replaced by the following:

Individual sections of pipe may be rejected for any of the conditions stated in the annex of DMS-7310, "Reinforced Concrete Pipe Fabrication and Plant Qualification."

Article 464.2. Materials, Section G. Repairs is voided and replaced by the following:

Make repairs if necessary as stated in the annex of DMS-7310, "Reinforced Concrete Pipe Fabrication and Plant Qualification."

Article 464.2. Materials, Section H. Rejections is voided and not replaced.

SPECIAL PROVISION

500---005

Mobilization

For this project, Item 500, "Mobilization," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 500.1. Description **is supplemented by the following:**
Work for this Item includes submissions required by the Contract.

Article 500.3. Payment, Section A is voided and replaced by the following:

A. Payment will be made upon presentation of a paid invoice for the payment, performance, or retainage bonds, and required insurance. The combined payment for bonds and insurance will be no more than 10% of the mobilization lump sum or 1% of the total Contract amount, whichever is less.

Article 500.3. Payment, Section F is voided and replaced by the following:

F. Upon final acceptance, 97% of the mobilization lump sum bid will be paid. Previous payments under this Item will be deducted from this amount.

Article 500.3. Payment **is supplemented by the following:**
G. Payment for the remainder of the lump sum bid for "Mobilization" will be made after all submittals are received, final quantities have been determined and when any separate vegetative establishment and maintenance, test and performance periods provided for in the Contract have been successfully completed.

SPECIAL PROVISION

502---033

Barricades, Signs, and Traffic Handling

For this project, Item 502, "Barricades, Signs, and Traffic Handling," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 502.4. Payment, Section C. Maximum Total Payment Prior to Acceptance **is voided and replaced by the following:**

C. Maximum Total Payment Prior to Acceptance. The total payment for this Item will not exceed 10% of the total Contract amount before final acceptance in accordance with Article 5.8, "Final Acceptance." The remaining balance will be paid in accordance with Section 502.4.E, "Balance Due."

SPECIAL PROVISION

506---012

Temporary Erosion, Sedimentation, and Environmental Controls

For this project, Item 506, "Temporary Erosion, Sedimentation, and Environmental Controls," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 506.2. Materials. Section I. Sandbags. Table 1 is replaced with the following:

Table 1
Sand Gradation

Sieve #	Retained (% by Weight)
4	MAXIMUM 3%
100	MINIMUM 80%
200	MINIMUM 95%

Article 506.4 Construction, B. General, 2. Maintenance, is voided and replaced by the following:

B. General.

2. **Maintenance.** Perform maintenance in accordance with the plans and the TPDES General Permit. Correct ineffective control measures. Implement additional controls as directed.

   An Inspector will perform a regularly scheduled SWP3 inspection every 14 calendar days and within 24 hours after a storm event of 0.5 in. or greater. Make corrections as soon as possible before the next anticipated rain event or within 7 calendar days after being able to enter the site to work on each control device. A control device site being "too wet to work" during the entire 7 calendar day time period is the only acceptable reason for not accomplishing the corrections within the 7 calendar day time limit. Provide documentation on the Department's inspection form developed from the Department's inspections or through other approved methods.

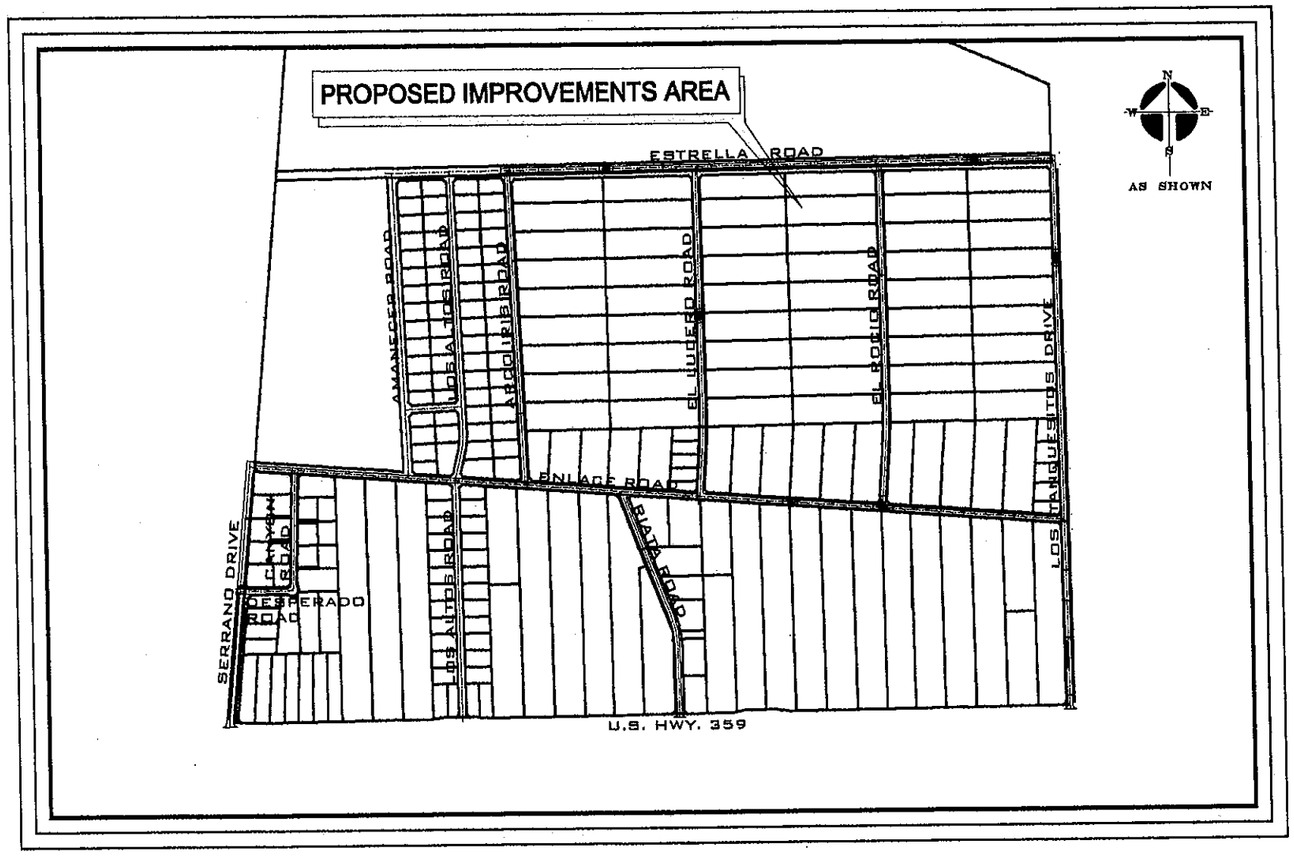
   If maintenance corrections are not made within this timeframe, work on the project may be suspended by the Engineer. Time charges will continue until SWP3 is brought into compliance and documentation of corrective action is provided. This in no way releases the contractor of liability for noncompliance.

CONSTRUCTION PLANS

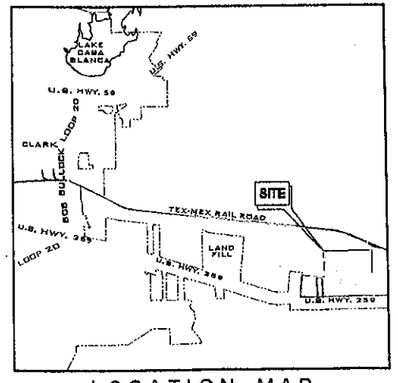
FOR

TANQUECITOS PHASE I AND II
STREET PAVING AND STORM DRAINAGE IMPROVEMENTS

WEBB COUNTY, TEXAS



HONORABLE WEBB COUNTY JUDGE
DANNY VALDEZ



LOCATION MAP
SCALE: 1"=8000'

HONORABLE WEBB COUNTY
JUDGE DANNY VALDEZ

DANNY VALDEZ
12/01/2011
DATE

THE STATE OF TEXAS
COUNTY OF WEBB

WEBB COUNTY APPROVAL
MIKE CABELLO
INTERIM COUNTY ENGINEER

MIKE CABELLO
12/01/2011
DATE

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

REVIEWED AND
REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-9266
11/28/2011

PCT. No. 1 - FRANK SCIARAFFA
COMMISSIONER

PCT. No. 2 - ROSAURA "WAWI" TIJERINA
COMMISSIONER

PCT. No. 3 - JERRY GARZA
COMMISSIONER

PCT. No. 4 - JAIME A. CANALES
COMMISSIONER

INDEX OF SHEETS

NO.	DESCRIPTION
1.	TITLE SHEET
2.1 - 2.2.	GENERAL NOTES & INFORMATION
2.3.	PAGE INDEX
3.	PLAN VIEW- ENLACE RD. - EXIST. TOPO AND CUT & FILLS
4.	PLAN & PROFILE - ENLACE RD. - STA: 0+00.00 TO 8+80.00
5.	PLAN VIEW- ENLACE RD. - EXIST. TOPO AND CUT & FILLS
6.	PLAN & PROFILE - ENLACE RD. - STA 8+80 TO 18+80.00
7.	PLAN VIEW- ENLACE RD. - EXIST. TOPO AND CUT & FILLS
8.	PLAN & PROFILE - ENLACE RD. - STA: 18+80.00 TO 27+20.00
9.	PLAN VIEW- ENLACE RD. - EXIST. TOPO AND CUT & FILLS
10.	PLAN & PROFILE - ENLACE RD. - STA: 27+20.00 TO 36+40.00
11.	PLAN VIEW- ENLACE RD. - EXIST. TOPO AND CUT & FILLS
12.	PLAN & PROFILE - ENLACE RD. - STA: 36+40.00 TO 46+00.00
13.	PLAN VIEW- ENLACE RD. - EXIST. TOPO AND CUT & FILLS
14.	PLAN & PROFILE - ENLACE RD. - STA: 46+00.00 TO 54+23.40
15.	PLAN VIEW- SERRANO RD.-EXIST. TOPO AND CUT & FILLS
16.	PLAN & PROFILE - SERRANO RD. - STA: 0+00.00 TO 8+80.00
17.	PLAN VIEW- SERRANO RD. - EXIST. TOPO AND CUT & FILLS
18.	PLAN & PROFILE - SERRANO RD. - STA: 8+80.00 TO 17+60.14
19.	PLAN VIEW- CANYON RD. - EXIST. TOPO AND CUT & FILLS
20.	PLAN & PROFILE - CANYON RD. - STA: 0+00.00 TO 7+83.10
21.	PLAN VIEW- DESPERADO RD. - EXIST. TOPO AND CUT & FILLS
22.	PLAN & PROFILE - DESPERADO RD. - STA: 0+00.00 TO 3+55.34
23.	PLAN VIEW- RIATA RD. - EXIST. TOPO AND CUT & FILLS
24.	PLAN & PROFILE - RIATA RD. - STA: 0+00.00 TO 8+00.00
25.	PLAN VIEW- RIATA RD. - EXIST. TOPO AND CUT & FILLS
26.	PLAN & PROFILE - RIATA RD. - STA: 8+00.00 TO 15+36.12
27.	PLAN VIEW- ESTRELLA RD. - EXIST. TOPO AND CUT & FILLS
28.	PLAN & PROFILE - ESTRELLA RD. - STA: 0+00.00 TO 9+20.00
29.	PLAN VIEW- ESTRELLA RD. - EXIST. TOPO AND CUT & FILLS
30.	PLAN & PROFILE - ESTRELLA RD. - STA: 9+20.00 TO 18+40.00
31.	PLAN VIEW- ESTRELLA RD. - EXIST. TOPO AND CUT & FILLS
32.	PLAN & PROFILE - ESTRELLA RD. - STA: 18+40.00 TO 27+60.00
33.	PLAN VIEW- ESTRELLA RD. - EXIST. TOPO AND CUT & FILLS
34.	PLAN & PROFILE - ESTRELLA RD. - STA: 27+60.00 TO 36+23.47
35.	PLAN VIEW- ARCO IRIS RD. - EXIST. TOPO AND CUT & FILLS
36.	PLAN & PROFILE - ARCO IRIS RD. - STA: 0+00.00 TO 7+20.00
37.	PLAN VIEW- ARCO IRIS RD. - EXIST. TOPO AND CUT & FILLS
38.	PLAN & PROFILE - ARCO IRIS RD. - STA: 7+20.00 TO 13+60.00
39.	PLAN VIEW- ARCO IRIS RD. - EXIST. TOPO AND CUT & FILLS
40.	PLAN & PROFILE - ARCO IRIS RD. - STA: 13+60.00 TO 20+46.85
41.	PLAN VIEW- EL LUCERO RD. - EXIST. TOPO AND CUT & FILLS
42.	PLAN & PROFILE - EL LUCERO RD. - STA: 0+00.00 TO 7+20.00
43.	PLAN VIEW- EL LUCERO RD. - EXIST. TOPO AND CUT & FILLS
44.	PLAN & PROFILE - EL LUCERO RD. - STA: 7+20.00 TO 14+00.00
45.	PLAN VIEW- EL LUCERO RD. - EXIST. TOPO AND CUT & FILLS
46.	PLAN & PROFILE - EL LUCERO RD. - STA: 14+00.00 TO 21+45.97
47.	PLAN VIEW- EL ROCIO RD. - EXIST. TOPO AND CUT & FILLS
48.	PLAN & PROFILE - EL ROCIO RD. - STA: 0+00.00 TO 7+20.00
49.	PLAN VIEW- EL ROCIO RD. - EXIST. TOPO AND CUT & FILLS
50.	PLAN & PROFILE - EL ROCIO RD. - STA: 7+20.00 TO 15+60.00
51.	PLAN VIEW- EL ROCIO RD. - EXIST. TOPO AND CUT & FILLS
52.	PLAN & PROFILE - EL ROCIO RD. - STA: 15+60.00 TO 22+49.29
53.	PLAN VIEW- LOS TANQUECITOS DR. - EXIST. TOPO AND CUT & FILLS
54.	PLAN & PROFILE - LOS TANQUECITOS DR. - STA: 0+00.00 TO 8+80.00
55.	PLAN VIEW- LOS TANQUECITOS DR. - EXIST. TOPO AND CUT & FILLS
56.	PLAN & PROFILE - LOS TANQUECITOS DR. - STA: 8+80.00 TO 18+00.00
57.	PLAN VIEW- LOS TANQUECITOS DR. - EXIST. TOPO AND CUT & FILLS
58.	PLAN & PROFILE - LOS TANQUECITOS DR. - STA: 18+00.00 TO 27+20.00
59.	PLAN VIEW- LOS TANQUECITOS DR. - EXIST. TOPO AND CUT & FILLS
60.	PLAN & PROFILE - LOS TANQUECITOS DR. - STA: 27+20.00 TO 35+84.73
61.	PLAN VIEW - STREET INTERSECTIONS - No. 1, 2, 3, 4, 5 AND 6
62.	PLAN VIEW - STREET INTERSECTIONS - No. 7, 8, 9, 10, 11 AND 12
63.	PLAN VIEW - STREET INTERSECTIONS - No. 13, 14, 15, 16, 17 AND 18
64.	BRIDGE PLAN & PROFILE - STRUCTURE "A" AND STRUCTURE "B"
65.	BRIDGE PLAN & PROFILE - STRUCTURE "C" AND STRUCTURE "D"
66.	BRIDGE PLAN & PROFILE - STRUCTURE "E" AND STRUCTURE "F"
67.	BRIDGE PLAN & PROFILE - STRUCTURE "G"
68.	BRIDGE PLAN & PROFILE - STRUCTURE "H"
69.	MISCELLANEOUS DETAILS
70.1.	TxDOT STD - BCS - BOX CULVERT SUPPLEMENT
70.2.	TxDOT STD - SCC-SBB - SINGLE BOX CULVERT - 5' & 6' SPANS
70.3.	TxDOT STD - SCC-MD - BOX CULVERT - MISCELLANEOUS DETAILS
71.	TxDOT STD - MC-5-20 - MULTIPLE BOX CULVERT - 5' SPAN
72.1.	TxDOT STD - MC-7-10 - MULTIPLE BOX CULVERT - 7' SPAN
72.2.	TxDOT STD - MC-MD - BOX CULVERT - MISCELLANEOUS DETAILS
73.	TxDOT STD - BAS-A - BRIDGE APPROACH SLAB - ASPHALT PAVEMENT
74.1 - 74.2.	TxDOT STD - SETB-CD - S.E.T. - BOX CULVERT - CROSS DRAINAGE
75.1 - 75.3.	TxDOT STD - SETB-FW-S - S.E.T. - BOX CULVERT - FLARED WINGS - SKEW
76.1 - 76.2.	TxDOT STD - SETP-CD - S.E.T. - PIPE - TY II - CROSS DRAINAGE
77.	CROSS DRAINAGE PIPE SECTION TYPICAL
78.1.	STRUCTURE "H" ALTERNATIVE - STORM DRAINAGE PLAN & PROFILE
78.2.	TxDOT STD - IL-C - CURB INLET TYPE C AND EXTENSION TYPE E
78.3.	TxDOT STD - CCCG-10A - CONCRETE CURB AND CURB AND GUTTER
79.1.	STREET SIGNS DETAILS
79.2.	TxDOT STD - SMD(GEN)-08 - SIGN MOUNTING DETAILS - GENERAL NOTES
79.3.	TxDOT STD - SMD(TWT)-08 - SIGN MOUNTING DETAILS - TWT POST
80.	UTILITIES RELOCATION
81.	60' AND 50' RIGHT OF WAY SECTIONS
82.	25' ACCESS ASPHALT (DRIVEWAYS)
83.	CROSS SECTION OF ACCESS DRIVEWAY TYPICAL
84.	INTENTIONALLY LEFT BLANK
85.	INTENTIONALLY LEFT BLANK
86.	CONCRETE DRIVEWAY DETAILS
87.	STREET PLAN
88.1 - 88.12.	TxDOT STD - BC-07 - BARRICADE & CONSTRUCTION STANDARDS
89.1.	TxDOT STD - TCP(2-1)-03 - TRAFFIC CONTROL PLAN STANDARDS
89.2.	TxDOT STD - TCP(2-2)-03 - TRAFFIC CONTROL PLAN STANDARDS
89.3.	TxDOT STD - TCP(TD)-03 - TCP TYPICAL DETAILS
90.	INTENTIONALLY LEFT BLANK

FOSTER
ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6002
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

TITLE SHEET
&
LOCATION MAP
WEBB COUNTY, TEXAS

TxDOT BORDER COLONIA ACCESS PROGRAM
&
TCDP CONTRACT No. _____

DRAWN BY: M.R.G.	
CHECKED BY: K.J.O.	
DRAWN DATE:	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 11-28-11	
SCALE: (24"x36") SHEET	
HOR: 1"=500'	VER: N/A
SCALE: (11"x17") SHEET	
HOR: 1"=1000'	VER: N/A
SHEET 1	OF TOTAL: 90

1. FULL DEPTH COLORED CONCRETE SHALL BE USED AT ALL RAMPS. THE CONCRETE SHALL BE MIXED INTO THE PAINT PRIOR TO POURING.
THE COLOR SHALL BE AS DIRECTED BY THE CITY OF LAREDO ENGINEERING DEPARTMENT. A FINISHED TEXTURE IN COMPLIANCE WITH TDRL
REQUIREMENTS SHALL BE USED AT ALL RAMPS.

2. THE FINISH SURFACE OF THE CONCRETE ACCESS RAMP IS TO BE GROOVED AS SHOWN ON THE DETAIL WITH A 3/4" WIDE BY 1/4" DEEP
GROOVE SPACED AT 2" ON CENTER. THE SURFACE SHALL BE ROUGHENED WITH NO LESS THAN A BROOM FINISH TO PREVENT SLIPPING
AND TO DIFFERENTIATE ITS TEXTURE FROM THAT OF THE STANDARD SIDEWALK.

3. DURING CONSTRUCTION, THE LOCATION OF THE CONCRETE ACCESS RAMP MAY BE SHIFTED FROM THE PROPOSED LOCATION DUE TO UNFORESEEN
EXISTING CONDITIONS WITH ENGINEER APPROVAL.

4. THE LEAST POSSIBLE SLOPE SHALL BE USED FOR ANY RAMP. THE MAXIMUM SLOPE CROSS SLOPE ON ANY SIDEWALK IS 1:50 (2 %). THE MAXIMUM SLOPE
FOR ANY RAMP SHALL BE 1:12.

CONCRETE CURB & VALLEY GUTTER

1. DUMMY JOINTS SHALL BE PROVIDED BY THE USE OF 1/8" THICK STEEL TEMPLATES ON 10' CENTERS AND EXTENDING 2" INTO THE CONCRETE.

2. EXPANSION JOINTS SHALL BE PROVIDED AT NO MORE THAN 40' INTERVALS BY USE OF 1/2" PREFORMED BITUMINOUS JOINT MATERIAL SET 1/2"
BELOW FINISHED SURFACE.

3. TWO(2) 1/2" X 3'-0" DOWELS SHALL BE PROVIDED AT EACH JOINT AND EXTENDING 18" EITHER SIDE OF JOINT, DOWELS SHALL BE PLAIN BARS
AND SHALL HAVE ONE HALF BAR DIPPED IN ASPHALT AND WRAPPED WITH 2 LAYERS OF ROOFING FELT.

4. TWO(2) 1/2" CONTINOUS STEEL BARS SHALL BE USED FOR REINFORCEMENT, AS SHOWN IN THE THE DETAILS.

5. CONTRACTOR TO PLACE MONOLITHICALLY POURED HIGH BACK CURB WITHIN THE CONFINES OF THE CONCRETE DRIVEWAY IN ACCORDANCE
WITH THE DETAILS AND SPECIFICATIONS AS SHOWN ON THE PLANS. CONTRACTOR TO PLACE HIGH BACK CURB TYPE "A" WITHIN CITY R.O.W.
ALONG DECELERATION LANE WHERE CURB ABUTS ASPHALT PAVEMENT. ALL WORK WITHIN THE CITY R.O.W. SHALL BE COORDINATED WITH THE
CITY OF LAREDO ENGINEERING AND TRAFFIC DEPARTMENTS. REVERSE CURBS (MONOLITHIC POUR OR STANDARD) SHALL BE USED AT ALL
LOCATIONS WHERE THE PAVEMENT SLOPES AWAY FROM THE FACE OF THE CURB SECTION.

SIDEWALK NOTES

1. ALL SIDEWALKS (FORWARD SLOPE) GRADES SHALL NOT EXCEED 6 % (1:20), UNLESS OTHERWISE NOTED ON THE PLANS.

2. THE TOP OF THE SIDEWALK ELEVATION SHALL BE DESIGN TO MATCH THE EXISTING TOP OF CURB, WHETHER THE CURB IS HIGH-BACK OR
LOW-BACK, UNLESS THE EXISTING HIGH-BACK TOP OF CURB NEEDS TO BE BROKEN OUT, TRANSITIONED FOR RAMPS, AND DRESSED WITH
GROUT.

3. SIDEWALKS ARE TO BE CONSTRUCTED SIX (6)-FEET WIDE AGAINST THE BACK CURB, EXCEPT WHERE A DETOUR AROUND A NON RE-LOCATABLE
OBJECT IS REQUIRED. SIDEWALKS ARE TO BE CONSTRUCTED 4-INCHES THICK WITH 6"X6" NO. 6 W.W.M. REINFORCEMENT,

4. SIDEWALKS ARE TO BE CONSTRUCTED WITH A LONGITUDINAL CROSS-SLOPE NOT TO EXCEED 2 % WITH A MINIMUM CROSS-SLOPE OF 0.5 % SLOPING
TOWARD THE BACK OF CURB. THE CONTRACTOR SHALL PROVIDE GRADING BEYOND THE EDGE OF SIDEWALK AT A MAXIMUM 1:3 SLOPE TO MATCH
EXISTING NATURAL GROUND. AREAS WHERE SLOPE BEHIND SIDEWALK EXCEEDS 1:4 SLOPE, THE CONTRACTOR SHALL SOD SLOPED AREAS TO EDGE
OF SIDEWALK FOR PROTECTION OF EMBANKMENT.

CONCRETE NOTES

1. CLASS "A" 3000-PSI CONCRETE SHALL BE USED UNLESS OTHERWISE NOTED IN THE PLANS.

2. 1/2" THICK MINIMUM PRE-FORMED BITUMINOUS EXPANSION JOINT MATERIAL SET 1/2" BELOW FINISHED SURFACE SHALL BE INSTALLED AT EXPANSION JOINTS. EXPANSION JOINT AT MAXIMUM 40' WITH TWO(2) 18" SMOOTH DOWELS AND 1/2" MINIMUM PRE-FORMED BITUMINOUS EXPANSION JOINT MATERIAL SIDEWALK JOINTS TO ALIGN WITH THE CURB AND GUTTER JOINTS.

3. DOWELS SHOULD BE PLAIN BARS AND SHALL HAVE 1/2 THE BAR WRAPPED WITH 2 LAYERS OF ROOFING FELT.

4. 6" X 6" - No. 6 WIRE MESH SHALL BE USED AS CONCRETE REINFORCEMENT UNLESS OTHERWISE NOTED ON THE PLANS.

5. THE FINISH SHALL BE SEMI-SMOOTH WITH A STIFF BROOM OR BRUSH FINISH.

6. CONTROL JOINTS SHALL BE SPACED IN-BETWEEN AND IN-LINE WITH THE CURB AND GUTTER CONTROL JOINT.

7. FORMS FOR SIDEWALKS SHALL BE FULL DEPTH FOR DIMENSIONS SPECIFIED.

8. THE CONTRACTOR SHALL SCHEDULE WORK SO THAT ASPHALT AND CONCRETE PLACEMENT OPERATIONS WILL FOLLOW THE SUBGRADE WORK AS
CLOSELY AS POSSIBLE IN ORDER TO REDUCE THE HAZARD TO THE TRAVELING PUBLIC AND PREVENT UNDUE DAMAGE FROM WET WEATHER.

UTILITIES

1. THESE PLANS ARE ONLY TO BE USED FOR THE CONSTRUCTION OF THE PROPOSED DECELARATION LANE & SIDEWALKS, ARE NOT INTENDED TO BE USED AS A RIGHT-OF-WAY MAP. RIGHT-OF-WAYS SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY. FIELD SURVEYING MEASURES WERE CONDUCTED TO ESTABLISH THE LOCATIONS OF EXISTING SIDEWALKS, UTILITIES, AND OTHER APPURTENANCES NECESSARY FOR THE DESIGN OF THE DECELERATION AND SIDEWALKS AS SHOWN ON THESE PLANS.

2. AS REQUIRED BY "THE TEXAS UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT," TEXAS ONE CALL SYSTEM MUST BE CONTACTED (800-245-4545) AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION OPERATIONS BEING PERFORMED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT TEXAS ONE CALL SYSTEM.

3. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION OF EXISTING UTILITY LINES, POLES, AND SYMBOLS SHOWN ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE RELOCATION OF ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL PROVIDE TRENCHING FOR ANY UTILITY ADJUSTMENT AS MAY BE REQUIRED.

4. WHERE FIRE HYDRANTS ARE ENCOUNTERED AND/OR IMPACTED BY THE PROPOSED CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL ADJUST WITH THE PROPOSED FINISHED GRADE.

DEMOLITION NOTES: (IF APPLICABLE)

1. EXIST BUILDINGS NOTED ON THIS PLAN ARE TO REMAIN IN SERVICE THROUGHOUT DEMOLITION AND CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL MAKE PROVISIONS TO MAINTAIN ACCESS TO THESE EXISTING BUILDING AT ALL TIMES OR OTHERWISE COORDINATE LIMITED ACCESS WITH PROPERTY OWNERS AND BUILDING OCCUPANTS.

2. EXISTING CONCRETE FLATWORK AND ASPHALT DESIGNATED TO BE REMOVED SHALL BE HAULED OFF SITE; INCLUDING SLABS, SIDEWALKS, HEADER CURBS, DRIVES, AND PADS DESIGNATED TO BE REMOVED.

3. EXISTING CONCRETE CURB AND GUTTERS DESIGNATED TO BE REMOVED SHALL BE HAULED OFF SITE. WHERE EXISTING CURB AND GUTTERS ARE TO REMAIN, THE CONTRACTOR SHALL REMOVE TO NEAREST JOINT. WHERE NEW CURB AND GUTTERS ARE PROPOSED WITHIN EXISTING STREETS, CONTRACTOR TO SAWCUT AND REMOVE ASPHALT AT THE PROPOSED DESIGN LOCATION AND PROVIDE FOR PROTECTION OF SAWCUT EDGE DURING INTERIM CONSTRUCTION.

4. EXISTING ASPHALT PAVEMENT DESIGNATED TO BE REMOVED SHALL BE HAULED OFF SITE. WHERE NEW CONCRETE PAVEMENT IS PROPOSED, CONTRACTOR TO FOLLOW GRADING PLAN AND APPROPRIATE NOTES FOR LOT PAVEMENT GRADING.

5. EXISTING FENCE DESIGNATED TO BE REMOVED SHALL INCLUDING GATES, POST AND FOUNDATIONS.

6. EXISTING LIGHT POLES & SERVICE LINES DESIGNATED TO BE REMOVED SHALL BE FIRST COORDINATED WITH APPROPRIATE UTILITY COMPANY FOR TERMINATION AND RELOCATION OF SERVICE. WHERE IN THE EXISTING RIGHT-OF-WAY OR EASEMENT, CONTRACTOR TO COORDINATE WITH APPROPRIATE UTILITY COMPANY, AS MAY BE REQUIRED.

7. EXISTING TREES WITHIN PLANTER AREA ARE TO REMAIN ALONG WITH GRASS AREA. CONTRACTOR SHALL MAKE PROVISIONS TO PROTECT THESE LANDSCAPED AREAS. CONTRACTOR SHALL COORDINATE ANY TREE REMOVAL WITH APPROVAL OF THE OWNER.

8. EXISTING WATER METERS AND SERVICE CONNECTION TO BE RELOCATED AS PER UTILITY PLAN. EXISTING WATER LINES AND VALVES SHALL BE REMOVED AND WHERE POSSIBLE SALVAGED FOR REUSE. ANY LINE REUSE SHALL BE COORDINATED WITH THE CITY OF LARED AND UNITED WATER. WATER LINES TO BE CAPPED OR ABANDONED ARE AS PER THE UTILTY PLAN AND THIS PLAN. CONTRACTOR TO COORDINATE WITH UNITED WATER AND LAREDO WATER WORKS DEPARTMENT FOR METER DISCONNECTS AND RECONNECTS. FIRE HYDRANTS SHALL BE SALVAGED AND REUSED WITHIN THE PROPOSED PLAN.

9. EXISTING SEWER MANHOLES DESIGNATED TO BE REMOVED SHALL BE REMOVED UPON COMPLETION AND APPROVAL OF THE PROPOSED SEWER SYSTEM BY THE CITY OF LAREDO. SEWER SERVICE FOR EXISTING BUILDING TO REMAIN SHALL BE PROTECTED TO INSURE CONTINUOUS SERVICE. WHEN NOT POSSIBLE, THE CONTRACTOR SHALL MAKE PROVISIONS TO ALLOW FOR THE CONTINUANCE OF SEWER SERVICE.

10. EXISTING ELECTRICAL POWER POLE AND GUY WIRES DESIGNATED TO BE RELOCATED BY OTHERS SHALL BE COORDINATED BY THE CONTRACTOR WITH A.E.P. CENTRAL POWER & LIGHT COMPANY.

11. EXISTING SIGN, INCLUDING CONCRETE BASE SHALL BE REMOVED WHERE IMPACTED BY PROPOSED IMPROVEMENT.

SEWER LINES (IF APPLICABLE)

1. 8" GRAVITY SANITARY SEWER LINES AND 4" SEWER SERVICE LINES SHALL BE SDR 26, MEETING THE REQUIREMENTS OF ASTM D3034 AND THE CITY OF LAREDO UTILITIES REQUIREMENTS. SEWER SERVICE LINES SHALL BE CONSTRUCTED AT THE LOCATIONS SHOWN ON THESE PLANS AND SHALL BE COORDINATED WITH THE CITY OF LAREDO AND ENGINEER. SEWER SERVICE CONNECTIONS TO THE BUILDING SHALL BE CONSTRUCTED WITH THE SAME SIZE AS THE ORIGINAL. CLEANOUTS FOR THE SERVICE CONNECTIONS SHALL BE PLACED AS INDICATED ON THESE PLANS AND SHALL BE COORDINATED WITH THE OWNER AND PLACED AT GRADE WITH AN EXPOSED PVC CAP. THE CONTRACTOR SHALL ADHERE TO TCEQS DESIGN REQUIREMENTS FOR SEPARATION & CROSSING OF POTABLE WATER AND SANITARY SEWER LINES.

WATER LINES (IF APPLICABLE)

2. 8" WATER LINES SHALL BE DR 14, CLASS 200, MEETING THE REQUIREMENTS OF AWWA C-900. THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 4'-0" OF COVER FROM TOP OF PIPE TO FINISHED GRADE, INCLUDING LANDSCAPED AND PAVED AREAS. FITTING FOR WATER LINES SHALL CONFORM TO THE CITY OF LAREDO BUILDING AND PLUMBING CODES. WATER VALVES SHALL BE PLACED AS SHOWN ON THE PLANS AND CONFORM TO THE LOCAL DESIGN STANDARDS. FIRE HYDRANTS SHALL BE INSTALLED WITH 6" DIAMETER PRESSURE RATED PVC AND SHALL BE DR-14, CLASS 200, MEETING THE REQUIREMENTS OF AWWA C-900. FIRE HYDRANT 6" TAPPING SLEEVE/SERVICE SADDLE SHALL BE IN CONFORMANCE WITH THE CITY OF LAREDO WATER UTILITIES STANDARDS. WATER SERVICE CONNECTIONS SHALL BE CONSTRUCTED AS PER DETAIL SHOWN ON THE PLANS. WATER SERVICE CONNECTIONS TO THE BUILDING SHALL BE CONSTRUCTED WITH THE SAME SIZE AS THE ORIGINAL. THE CONTRACTOR SHALL COORDINATED WITH THE CITY OF LAREDO TO DETERMINE THE WATER METER LOCATIONS, WHICH ARE TO BE INSTALLED BY THE CITY OF LAREDO AND PAID FOR BY THE OWNER.

UTILITIES

1. AS REQUIRED BY "THE TEXAS UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT," TEXAS ONE CALL SYSTEM MUST BE CONTACTED (800-245-4545) AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION OPERATIONS BEING PERFORMED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT TEXAS ONE CALL SYSTEM.

2. UNDERGROUND UTILITY LINES SHOWN ON THE PLANS CONSTITUE AN ATTEMPT BY THE ENGINEER TO LOCATE THESE UTILITIES FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL FIELD LOCATE ALL UNDERGROUND UTILITY LINES AND MAKE PROVISIONS FOR THEIR PROTECTION. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL ANY FIELD CHANGES IN THE WATER & SEWER LINE GRADES TO ACHIEVE THE DESIGN REQUIRED. ANY OTHER WORK REQUIRED TO ACCOMPLISH THESE CHANGES IN GRADE WILL BE INCLUDED IN THE PRICE OF THE LINE IN PLACE. ANY DAMAGE TO CITY OR PRIVATE UTILITY LINES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER, THE CITY AND/OR APPROPRIATE UTILITY COMPANY. REPAIRS TO THESE UTILITY LINES WILL BE AT THE DIRECTION OF THE CITY AND/OR THE UTILITY COMPANY AFFECTED AND WILL BE AT THE CONTRACTORS EXPENSE.

3. ALL UNDERGROUND ELECTRICAL, TELEPHONE, AND CABLE LINES MAY NOT BE SHOWN ON THESE PLANS. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO DETERMINE LOCATIONS, DEPTHS, AND LINE SIZES AND TO REQUEST EXACT FIELD LOCATION OF UTILITIES. THE CONTRACTOR SHALL PROVIDE AT LEAST 72 HOUR ADVANCE NOTIFICATION TO THE UTILITY COMPANIES PRIOR TO ANY EXCAVATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE RELOCATION ANY EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS.

TRENCHING

1. THE CONTRACTOR SHALL PROVIDE TRENCHING AND BACKFILL FOR THE UTILITY COMPANIES, AS REQUIRED AND SHALL COMPLY WITH ALL APPLICABLE SAFETY REGULATIONS FOR UTILITY WORK.

GENERAL NOTES:

1. NO CONTRUCTION ACTIVITIES SHALL COMMENCE UNTIL PROPER CLEARANCE IS PROVIDED BY THE APPROPRIATE CITY OF LAREDO DEPARTMENTS.

2. WORK SHALL BE CONDUCTED SO THAT ALL MACHINERY IS OFF THE ROAD BY SUNSET, UNLESS OTHERWISE DIRECTED BY THE ENGINEER IN WRITING.

3. ALL CONSTRUCTION EQUIPMENT INVOLVED IN ROADWAY WORK ON OR WITHIN 30 FEET OF THE EXISTING ROADWAYS SHALL BE EQUIPED WITH PERMANENTLY MOUNTED APPROVED 360 DEGREE REVOLVING OR STROBE WARNING LIGHT WITH AMBER LENS. THIS LIGHT SHALL HAVE A MINIMUM LENS OF 5 INCHES AND A DIAMETER OF 6 INCHES. THIS LIGHT SHALL HAVE A MOUNTING HEIGHT OF NOT LESS THAN 8 FEET ABOVE THE ROADWAY SURFACE AND SHALL BE VISIBLE FROM ALL SIDES. THIS EQUIPMENT SHALL ALSO HAVE ATTACHED AT EACH SIDE OF THE REAR END OF THE VEHICLE AN APPROVED ORANGE WARNING FLAG MOUNTED NOT LESS THAN 8 FEET ABOVE THE ROADWAY SURFACE.

4. REFERENCES TO MANUFACTURER'S TRADE OR CATALOG NUMBERS ARE FOR THE PURPOSE OF IDENTIFICATION ONLY. THE CONTRACTOR WILL BE PERMITTED TO FURNISH LIKE MATERIALS OF OTHER MANUFACTURERS PROVIDED THEY ARE OF EQUAL QUALITY AND COMPLY WITH SPECIFICATIONS FOR THIS PROJECT AND ARE APPROVED BY THE ENGINEER.

5. THE CONTRACTOR SHALL FURNISH AND INSTALL STOP SIGNS, STREET SIGNS AND SPEED LIMIT SIGNS AND PAVEMENT MARKINGS. THE LOCATIONS OF THE SIGNS AND MARKINGS SHALL BE APPROVED BY THE ENGINEER.

6. ALL REPAIRS AND/OR REPLACEMENT OF EXISTING IMPROVEMENTS SHALL BE MADE WITH MATERIALS LIKE THOSE DAMAGED OR REPLACED. ALL CONSTRUCTION OUTSIDE THE CITY R.O.W. SHALL BE COORDINATED WITH PROPERTY OWNER REPRESENTATIVES AND THE CITY OF LAREDO (WHEN IN THE CITY R.O.W).
AND FEDERAL REGULATIONS RELATING TO THE TYPE OF WORK INVOLVED.

7. TEXAS DEPARTMENT OF HIGHWAY STANDARDS WILL BE USED TO CONSTRUCT THE OUTFALL STRUCTURE. THE CONTRACTOR'S ATTENTION IS CALLED TO THE MODIFICATIONS TO THOSE STANDARDS WHICH ARE SHOWN ON THE SHEET TITLED "STORM COLLECTION SYSTEM & POLLUTION PREVENTION DETAILS".

GRADING NOTES:

1. ALL GRADING ACTIVITIES SHALL CONFORM TO THE SPECIFICATIONS AND APPROPRIATE REQUIREMENTS BY THE CITY OF LAREDO AND/OR ANY GEOTECHNICAL SUBSURFACE EXPLORATION REPORTS FOR SITE GRADING AND PAVEMENT DESIGN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW THESE SPECIFICATIONS AND REQUIREMENTS. ANY DIFFERENCE BETWEEN SPECIFICATIONS, REQUIREMENTS, REPORTS AND THESE PLANS SHALL BE ADDRESSED WITH THE ENGINEER, PRIOR TO CONSTRUCTION ACTIVITIES. MATERIAL PLACED BY THE CONTRACTOR WHICH DOES NOT CONFORM TO THE SPECIFIED DESIGN REQUIREMENTS OR LAB REPORT SHALL BE REMOVED AND/OR REWORKED UNTIL ACCEPTABLE RESULTS ARE ACHIEVED. THE COST FOR ANY ADDITIONAL TESTING REQUIRED BECAUSE OF A CONSTRUCTION FAILURE SHALL BE PAID FOR BY THE CONTRACTOR.

2. THE CONTRACTOR SHALL SCHEDULE WORK SO THAT ASPHALT AND CONCRETE PLACEMENT OPERATIONS WILL FOLLOW THE SUBGRADE WORK AS CLOSELY AS PRACTICAL IN ORDER TO REDUCE THE HAZARD TO THE TRAVELING PUBLIC AND PREVENT UNDUE DAMAGE FROM WET WEATHER.

3. CONTRACTOR SHALL REQUEST A PRE-POUR INSPECTION FOR ALL CAST-IN-PLACE CONCRETE AT LEAST 48 HOURS PRIOR TO POUR. REQUEST SHALL BE MADE TO THE CITY OF LAREDO ENGINEERING DEPARTMENT WITH A COPY PROVIDED TO THE ENGINEER.

4. CONTRACTOR TO GRADE AREA OUTSIDE OF CURB AT OR NEAR PERIMETERS TO MATCH EXISTING NATURAL GROUND.

UTILITIES NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING, LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES OR STRUCTURES. AN ATTEMPT BY THE ENGINEER TO SHOW THESE LINES WAS EXERCISED ON THE CONSTRUCTION PLANS, BUT IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE FINAL LOCATIONS OF THESE LINES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ANY ADJUSTMENTS OR FIELD LOCATES WITH THE APPROPRIATE UTILITY COMPANIES. IF, IN THE COURSE OF THE WORK, UNDERGROUND UTILITIES OR STRUCTURES ARE ENCOUNTERED AND ARE IN CONFLICT WITH THE WORK, THE CONTRACTOR SHALL CONTACT THE ENGINEER WHO WILL DIRECT THE NECESSARY ADJUSTMENTS.

2. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING UNDER AND AROUND UTILITY LINES.

3. DURING THE EXECUTION OF THE WORK, UTMOST CARE SHALL BE EXERCISED TO PREVENT DAMAGE TO ANY UTILITIES, STRUCTURES OR RIGHT-OF-WAY. ANY DAMAGE TO EXISTING UTILITIES OR STRUCTURES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

4. IF ANY OVERHEAD OR UNDERGROUND ELECTRICAL LINES NEED TO BE DE-ENERGIZED, THE CONTRACTOR SHALL CALL THE POWER COMPANY TO DO THIS WORK. ANY COST ASSOCIATED WITH DE-ENERGIZEING THE ELECTRICAL LINES AND/OR ANY OTHER PROTECTIVE MEASURES REQUIRED SHALL BE AT THE CONTRACTOR'S EXPENSE.

5. WHEN THE CONTRACTOR IS WORKING NEAR ANY POWER LINES, IT IS HIS/HER RESPONSIBILITY TO COMPLY WITH THE APPROPRIATE SECTIONS OF THE TEXAS STATE LAW AND FEDERAL REGULATIONS RELATING TO THE TYPE OF WORK INVOLVED.

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED PROFESSIONAL ENGINEER

REVIEWED AND REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED ENG. F-2085

03/07/11

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
PH: (956) 723-3451
FAX (956) 723-5302
1004 HILLSIDE RD.
LAREDO, TX 78041
ENGINEERING COMPANY

TANQUECITOS PHASE I AND II
GENERAL NOTES & INFORMATION
WEBB COUNTY, TEXAS

DRAWN BY: M.R.G.	
CHECKED BY: K.J.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: N/A	VER. N/A
SCALE: (11"x17") SHEET	
HOR: N/A	VER. N/A
SHEET 2.1 OF TOTAL 90	

GENERAL REQUIREMENTS AND COVENENTS:

The following areas of work have been removed and/or modified from the construction plans for this contract as described below:

1) Enlace Road - No improvements shall be made to Enlace Road from STA 0+00.00 to STA 2+91.06 at this time. Enlace Road shall begin at STA 2+91.06 and end at the intersection with Tanquecitos Dr. (STA 54+23.40).

2) Serrano Drive - No improvements shall be made to Serrano Drive at this time.

3) Canyon Road - Canyon Road will be constructed as shown in the plans, from STA 0+00.00 to STA 7+83.10.

4) Desperado Road - No improvements shall be made to Desperado Road from STA 0+00.00 to STA 0+40.00 at this time. Desperado Road shall begin at STA 0+40.00 and end at the intersection with Canyon Road (STA 3+56.34).

5) Riata Road - Riata Road will be constructed as shown in the plans, from STA 0+00.00 to STA 151+36.51.

6) Estrella Road - No improvements shall be made to Estrella Road at this time.

7) Arco Iris Road - No improvements shall be made to Arco Iris Road from STA 0+00.00 to STA 0+15.00. Arco Iris Road shall begin at STA 0+15.00 and end at the intersection with Enlace Road (STA 20+46.85).

8) El Lucero Road - No improvements shall be made to El Lucero Road at this time.

9) El Rocio Road - No improvements shall be made to El Rocio Road at this time.

10) Los Tanquecitos Drive - No improvements shall be made to Los Tanquecitos Drive from STA 0+00.00 to STA 0+15.00 at this time. Los Tanquecitos Drive shall begin at STA 0+15.00 and end at the intersection with SH 359 (STA 35+84.73).

11) Bridge Plan & Profile - Structures "A" to "H" - Structures "A" to "H" shall not be constructed as shown in the plans at this time. The structures shall be replaced with an alternative pipe crossing structure and/or the Low-Water Crossing Option found on Sheet 69. Below is a description of the improvements to be made at each structure location:

Structure "A" - Install 4 - 18" RCP pipes at 34 LF with Cross Drainage Safety End Treatments. Pipe slope, upstream and downstream inverts shall be as shown in the plans for Structure "A". Also construct a Low-Water Crossing centered at Los Tanquecitos Drive STA 6+46.50. The Low-Water Crossing Option details may be found on Sheet 69.

Structure "B" - REMOVED

Structure "C" - REMOVED

Structure "D" - Install 4 - 18" RCP pipes at 39.26 LF with Cross Drainage Safety End Treatments. Pipe slope, structure skew, upstream and downstream inverts shall be as shown in the plans for Structure "D". Also construct a Low-Water Crossing centered at Enlace Road STA 41+70.24. The Low-Water Crossing Option details may be found on Sheet 69.

Structure "E" - Structure "E" currently has pipe culverts in place. Pipe culverts and other existing storm sewer improvements shall not be removed. Construct a Low-Water Crossing centered at Enlace Road STA 36+00.00. The Low-Water Crossing Option details may be found on Sheet 69.

Structure "F" - REMOVED

Structure "G" - Install 4 - 18" RCP pipes at 34 LF with Cross Drainage Safety End Treatments. Pipe slope, upstream and downstream inverts shall be as shown in the plans for Structure "G". Also construct a Low-Water Crossing centered at Enlace Road STA 4+98.31. The Low-Water Crossing Option details may be found on Sheet 69.

Structure "H" - Install storm sewer system and other improvements as per the Structure "H" Alternative Plan & Profile. The Contractor's attention is called to the fact that coordination will need to be made for the location and possible tie-in of the outfall to a storm sewer system for the adjacent development to the North. The Contractor shall coordinate with the developer and/or his Engineer for any potential tie-in to their system. Adjustments may need to be made to the exact location of the outfall for this storm sewer system at the expense of the contractor.

The Contractor's attention is directed to the presence of underground utilities within the right of way on this project. It is the responsibility of the Contractor to call for locates at least 48 hours in advance of any excavation or drilling.

The locations of utilities, either underground or overhead, shown with the right-of-way are approximate and shall be verified by the Contractor before beginning construction operations.

ITEM 100 - PREPARING RIGHT OF WAY

This item shall be used to remove and dispose of all obstructions within the right-of-way necessary for construction operations. This includes, but is not limited to; drain pipes, asphalt pavement, concrete pavement and concrete structures.

ITEM 260 - LIME TREATMENT (ROAD MIXED)

The Contractor shall lime treat the subgrade under each low-water crossing at Structures "A", "D", "E" and "G". The lime treatment shall be a total of 100 feet long and 30 feet wide, centered about the structure centerline for each location. The lime treated subgrade shall be compacted to a 95 % of the maximum density in accordance with Tex 121-E.

ITEM 316 - SURFACE TREATMENTS

The Contractor shall apply the asphalt and aggregate on top of the flexible base layer. This will act as a seal for the base and will also create a driveble surface for traffic. The streets shall be open and drivable at the end of each work day. The application rate for the asphalt is recommended at 0.30 Gal / SY. The application rate of the aggregate is recommended at 1 CY / 110 SY.

ITEM 502 - BARRICADES, SIGNS AND TRAFFIC HANDLING

The traffic control for the project shall follow the Traffic Control Plan Standards and Barricade & Construction Standards provided in the plans.

The Contractor is fully responsible for the traffic control and will be responsible for furnishing all traffic control devices and flaggers. The construction methods shall be conducted to provide the least possible interference to traffic so as to permit the continuous movement of traffic in all allowable directions at all times. If the Contractor proposed to close a section of street, he/she must obtain approval from the Engineer prior to doing so.

ITEM 506 - TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS

The SW3P for this project shall consist of the following items as directed by the Engineer:

Temporary Sediment Control Fence
Rock Filter Dam (Type 2)
Construction Exit

The Temporary Sediment Control Fence shall be 10 LF in length be placed perpendicular to the ROW between the ROW and the edge of pavement. It shall be placed no more than 5 feet from the edge of the SET, on both sides of the SET, and on both the upstream and downstream side of the structures for a total of 4 locations per structure.

The Rock Filter Dam shall be 20 LF in length and shall be placed on the downstream end of the 4 - 18" RCP pipes. It shall be centered on the 4 - 18" RCP pipes and shall be placed just along side the SET.

The Construction Exits shall be located at the Contractor's staging areas. Locations of the construction exits shall be at the discretion of the Contractor and as approved by the Engineer. The quantity provided is for 2 staging areas, if necessary.

ITEM 520 - INTERSECTIONS, DRIVEWAYS, AND TURNOUTS

The locations of the asphalt and concrete driveways shall be determined by the Webb County Engineering Department, as needed.

ITEM 644 - SMALL ROADSIDE SIGN SUPPORTS AND ASSEMBLIES

The Contractor shall remove any roadside signs in the right-of-way that are an obstruction to the construction operations. The signs shall be replaced as per this item and as per the latest version of the Texas MUTCD.

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

REVIEWED AND
REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-2266

11/28/2011

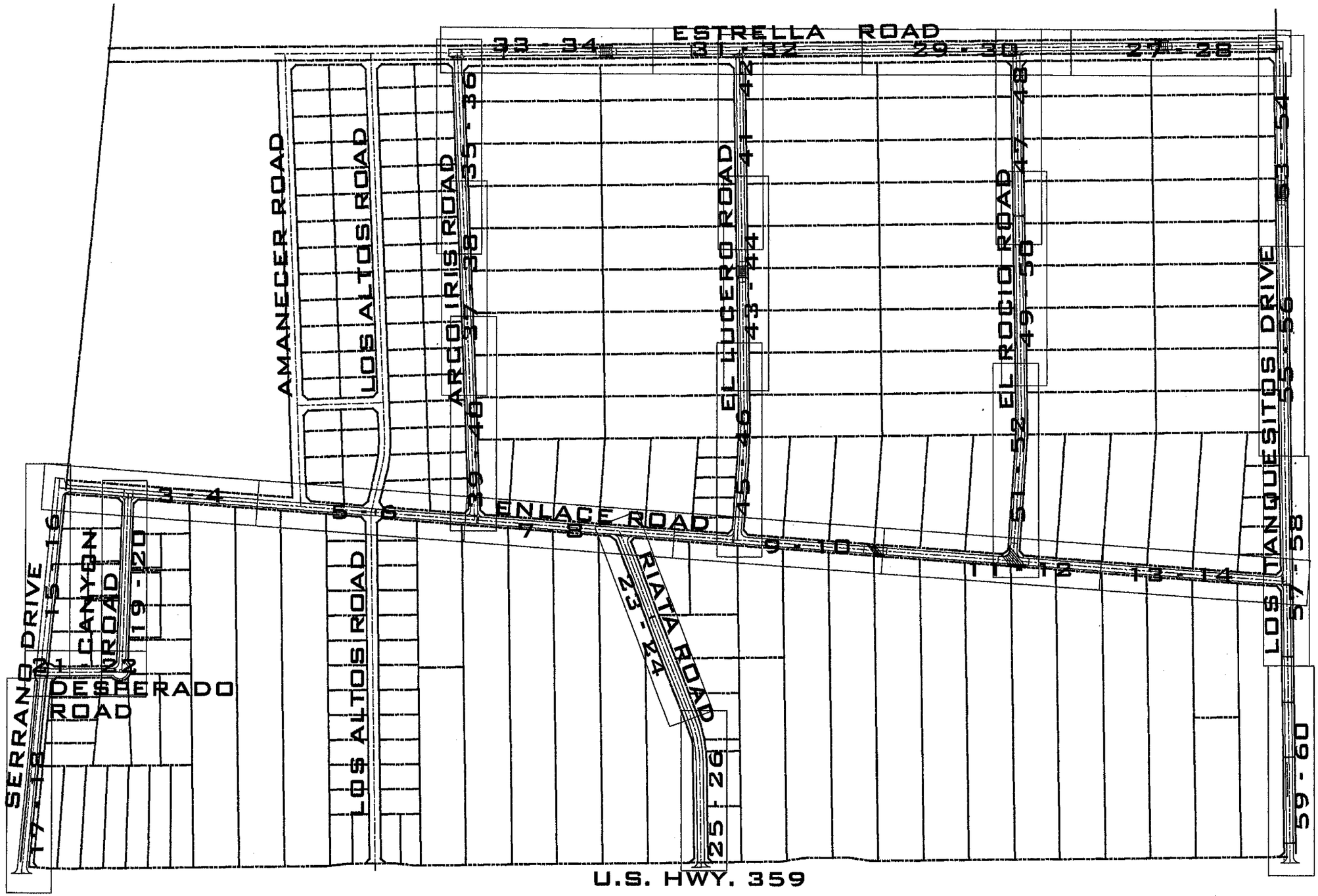
CALL BEFORE YOU DIG !
TEXAS ONE CALL PROCEDURES REQUIRE 48 HOURS NOTICE BEFORE YOU DIG, DRILL, OR BLAST - STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-2266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
GENERAL NOTES
&
INFORMATION
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 10-06-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 11-28-11

SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR: N/A VER. N/A



AS SHOWN

FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6502
1004 HILLSIDE RD.
LAREDO, TX 78041

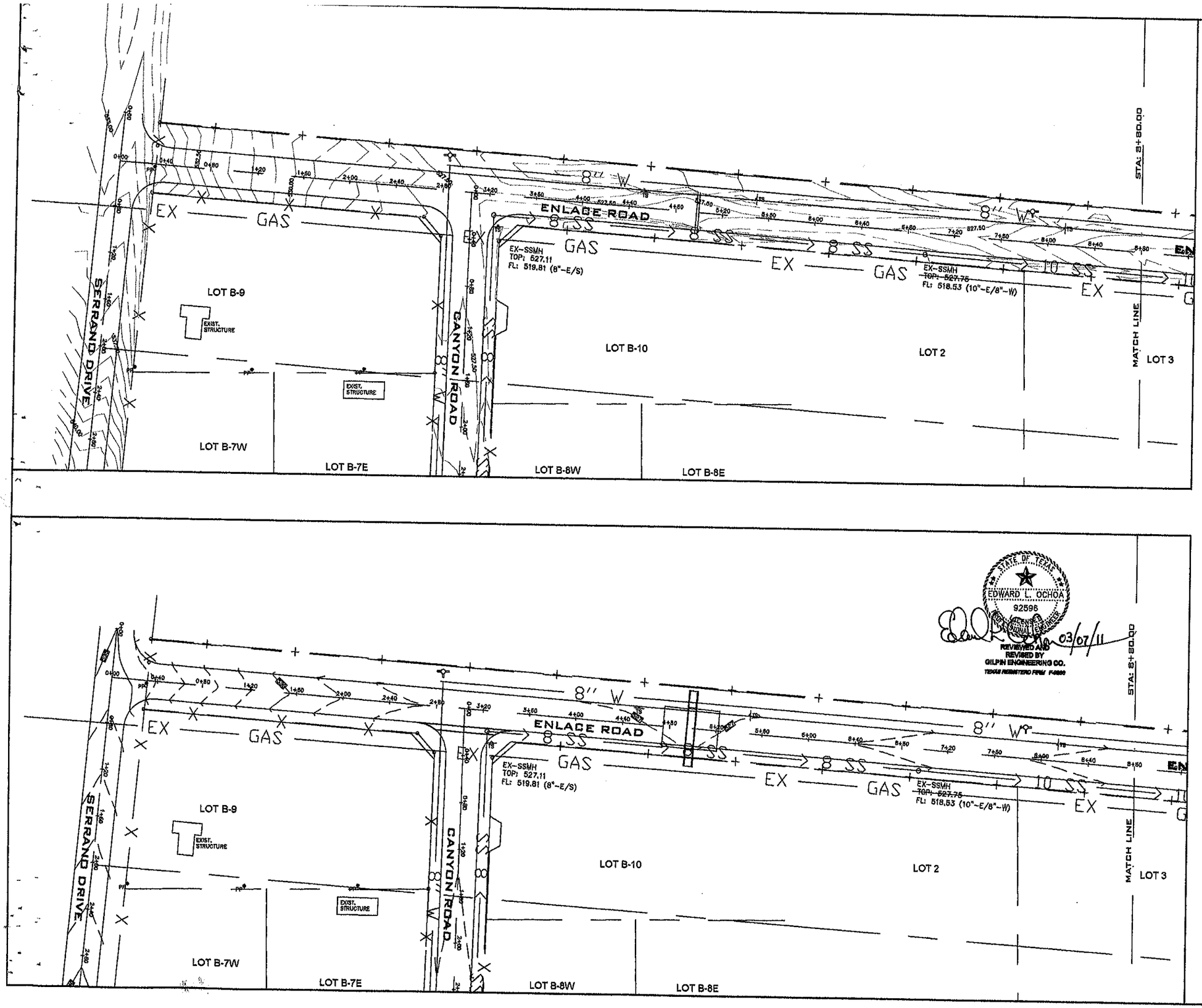
TANQUECITOS PHASE I AND II

PAGE INDEX
WEBB COUNTY, TEXAS

DRAWN BY: M.R.G.	
CHECKED BY: K.J.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: N/A	VER. N/A
SCALE: (11"x17") SHEET	
HOR: N/A	VER. N/A
SHEET 2.3	TOTAL OF 90

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

REVIEWED AND
REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-2226



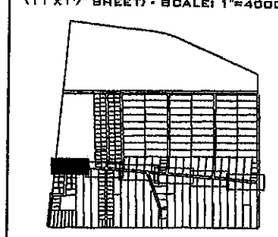
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 Inch = 40 FL.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6602
1004 HILLSIDE RD.
LAREDO, TX 78041

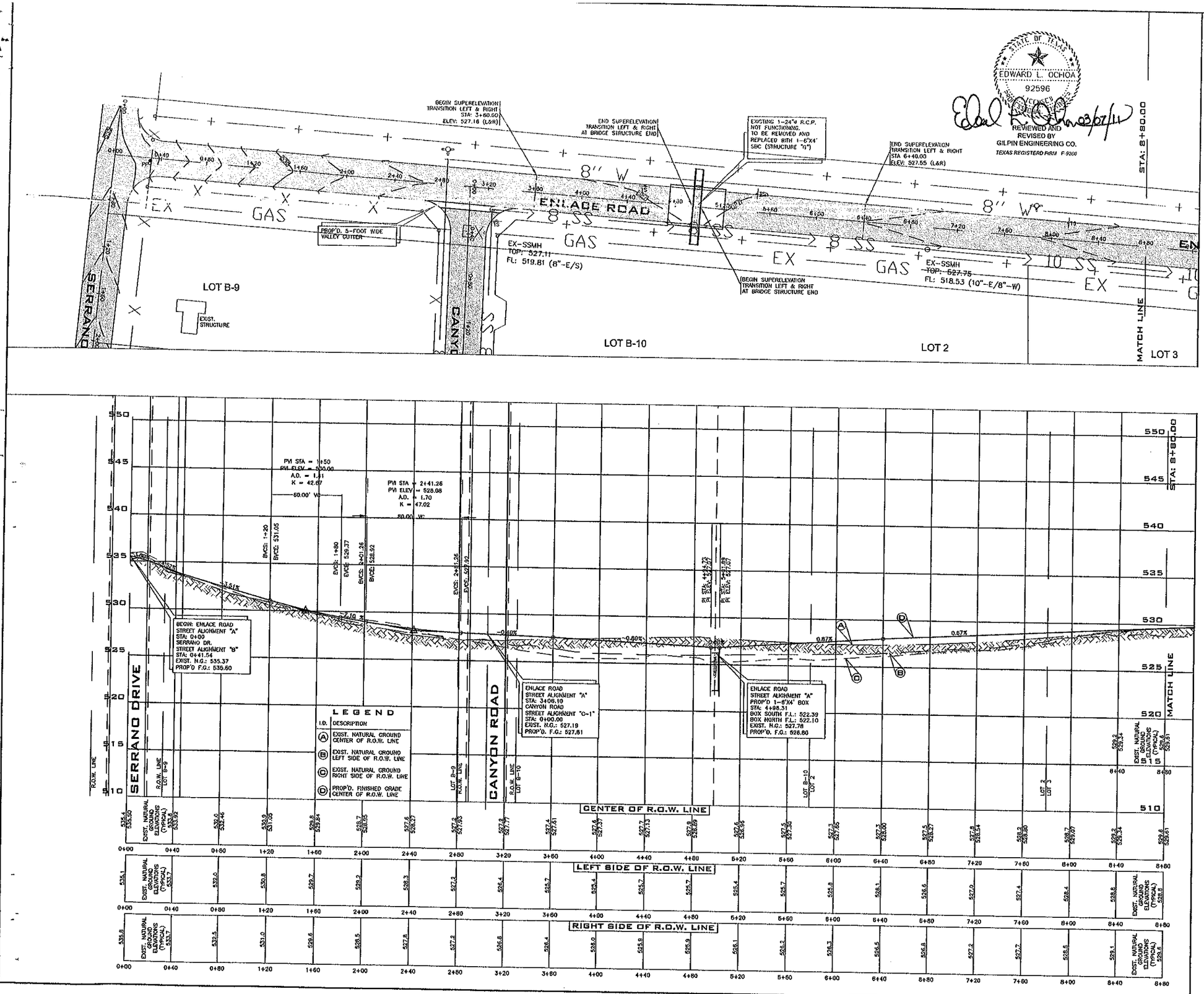
TANQUECITOS PHASE I AND II

PLAN VIEW
ENLACE ROAD
STA: 0+00.00 TO STA: 8+80.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY

BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 3 OF	TOTAL 90



STATE OF TEXAS
EDWARD L. OCHOA
92596
REVIEWED AND REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-9266
03/07/11

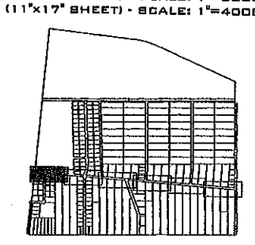
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE PP
- EXISTING GUY WIRE GW
- EXISTING TRAFFIC SIGN TS
- EXISTING TELEPHONE PEDESTAL TP
- EXISTING WATER VALVE WV
- EXISTING FIRE HYDRANT HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPANTS REQUEST 48 HOURS NOTICE BEFORE YOU DIG, DRILL OR BLAST - STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP AT 1-800-828-5127
THE LONE STAR NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
PH. (956) 723-3451
FAX (956) 723-6302
1004 HILLSIDE RD.
ENGINEERING COMPANY LAREDO, TX 78041

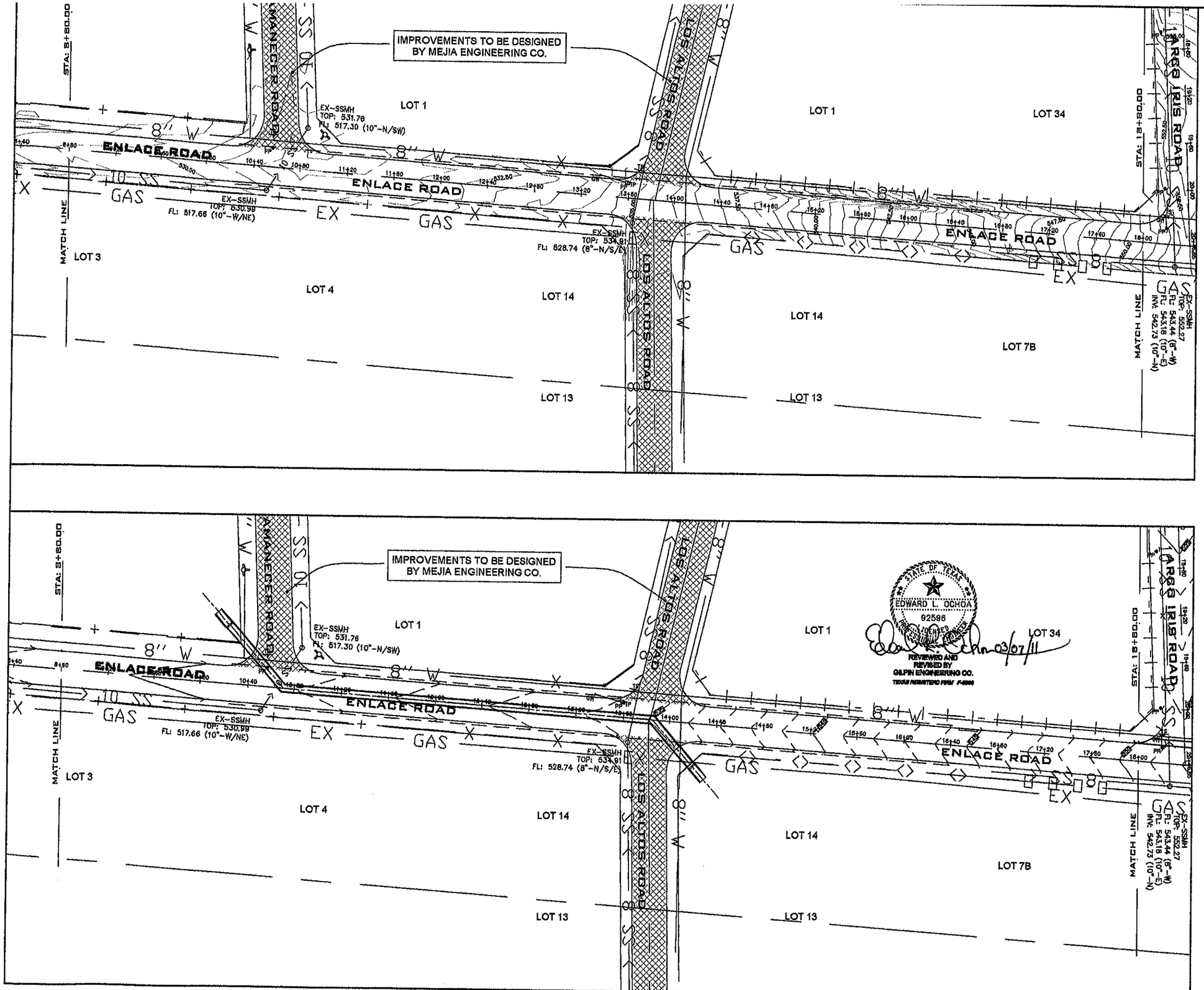
TANQUECITOS PHASE I AND II

PLAN AND PROFILE
ENLACE ROAD
STA: 0+00.00 TO STA: 8+80.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100 %	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 4	TOTAL: OF 90



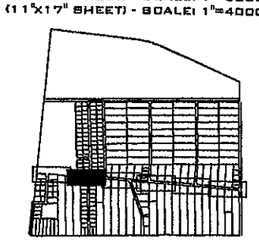
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=3000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER ENGINEERING COMPANY
PH: (956) 723-3461
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

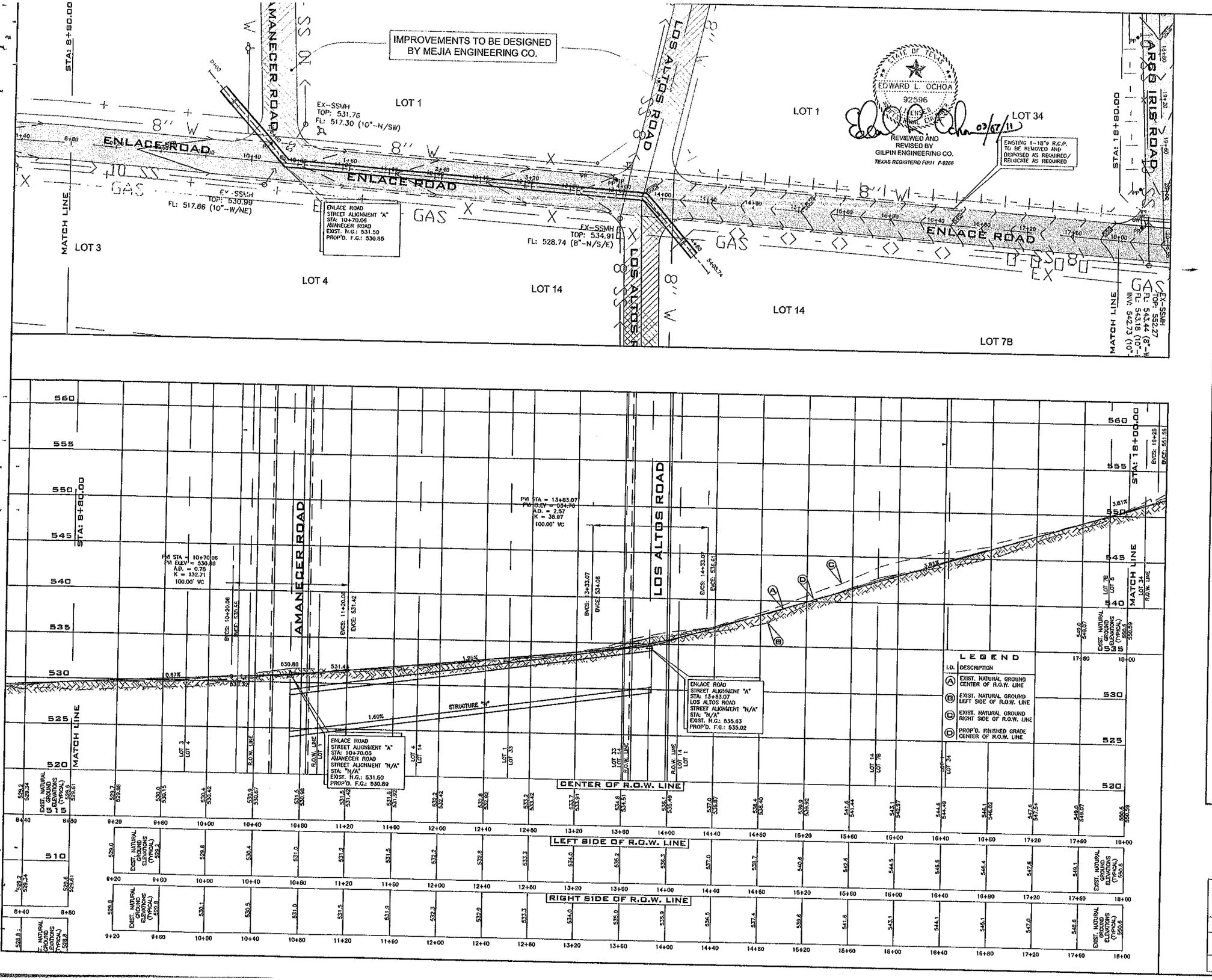
TANQUECITOS PHASE I AND II

PLAN VIEW
ENLACE ROAD
STA: 8+80.00 TO STA: 18+80.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY

BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 5	OF TOTAL 90



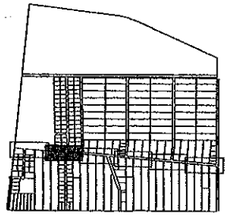
AS SHOWN

LEGEND

EXISTING FENCE BARB WIRE
EXISTING FENCE BLOCK
EXISTING FENCE CHAIN LINK
EXISTING FENCE CHICKEN
EXISTING FENCE IRON
EXISTING FENCE LAMINA
EXISTING FENCE WOOD
EXISTING OVERHEAD POWER LINE EX OHP
EXISTING NATURAL GAS PIPELINE EX GAS
EXISTING LOT LINE
EXISTING CONTOUR LINE (MINOR)
EXISTING CONTOUR LINE (MAJOR) 550.00
FINISHED CONTOUR LINE (MINOR)
FINISHED CONTOUR LINE (MAJOR) 550
EXISTING POWER POLE PP
EXISTING GUY WIRE GW
EXISTING TRAFFIC SIGN TS
EXISTING TELEPHONE PEDESTAL TP
EXISTING WATER VALVE WV
EXISTING FIRE HYDRANT HYD
EXIST. ASPHALT
EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPANTS REQUEST 48 HOURS NOTICE BEFORE YOU DIG DRILL OR BLAST - STOP, CALL 1
TEXAS ONE CALL SYSTEM 1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP AT 1-800-828-5127
THE LONE STAR NOTIFICATION COMPANY 1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM 1-800-344-8377

FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

PLAN AND PROFILE
ENLACE ROAD
STA: 8+80.00 TO STA: 18+80.00
WEBB COUNTY, TEXAS

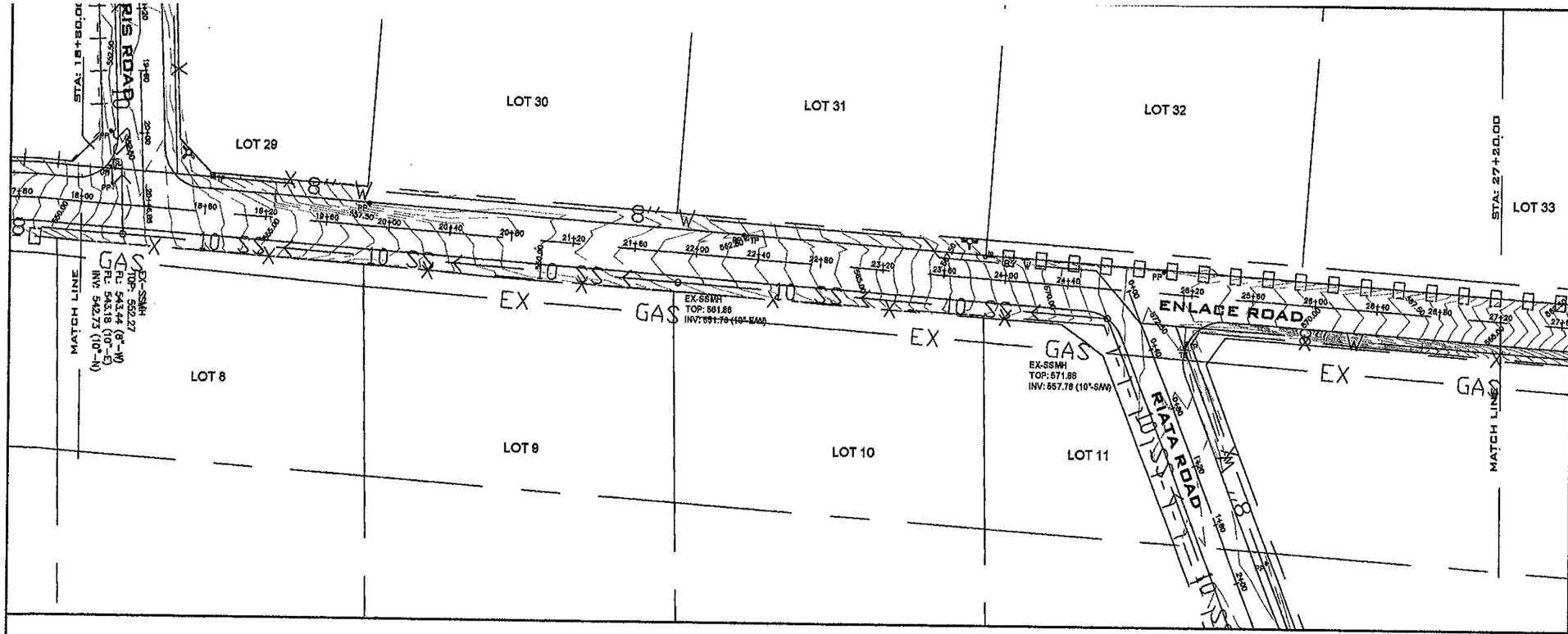
TOP VIEW SHOWING FINISHED GRADE PLAN

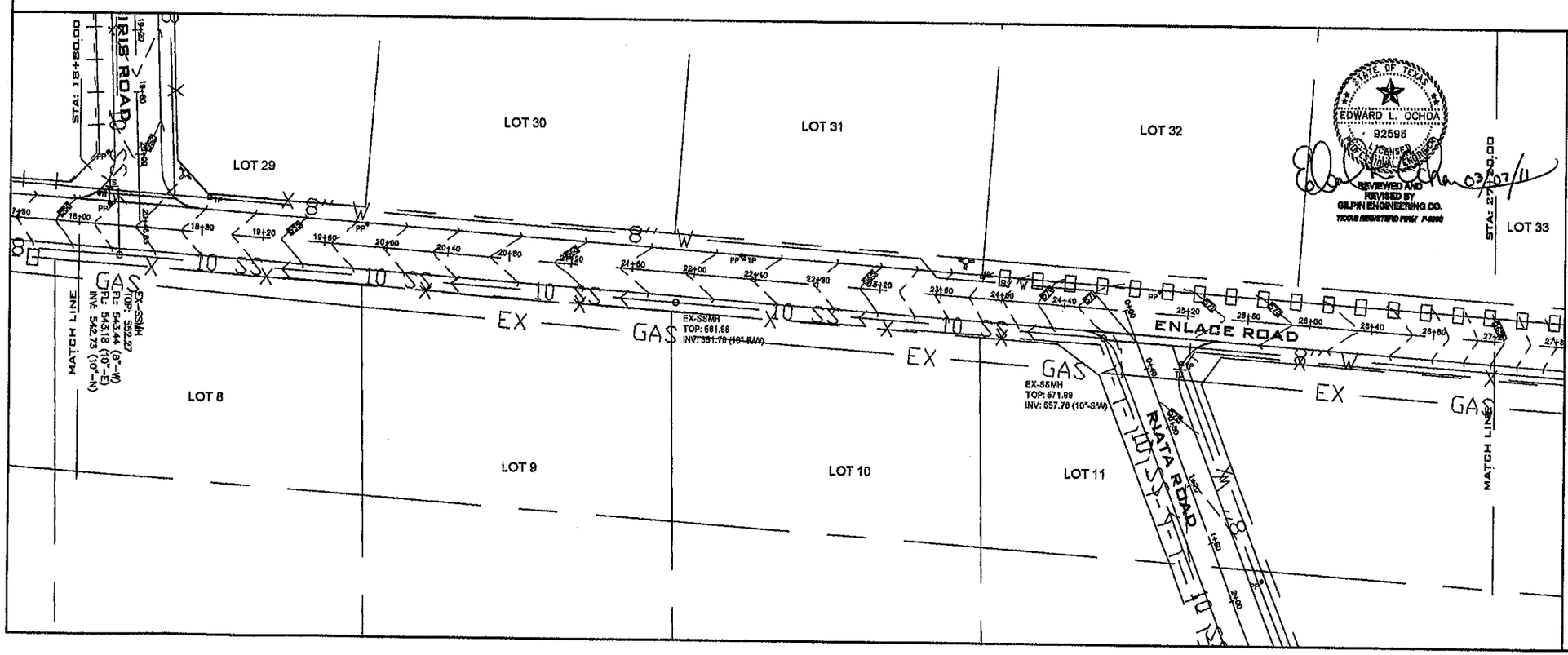
BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY:	O.R.
CHECKED BY:	E.L.O.
DRAWN DATE:	01-14-11
PLOTTED DATE:	09-03-10
JOB No.	N/A
FILE NAME:	TANQUECITOS
STATUS:	100%
AS-BUILT:	NO
REVISED DATE:	09-03-10

SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'

SHEET 6 OF TOTAL: 90





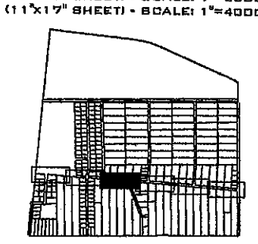
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE — EX — OHP
- EXISTING NATURAL GAS PIPELINE — EX — GAS
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) — 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) — 550
- EXISTING POWER POLE — PP
- EXISTING GUY WIRE — GW
- EXISTING TRAFFIC SIGN — TS
- EXISTING TELEPHONE PEDESTAL — TP
- EXISTING WATER VALVE — WV
- EXISTING FIRE HYDRANT — HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 Inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

PLAN VIEW
ENLACE ROAD
STA: 18+80.00 TO STA: 27+20.00
WEBB COUNTY, TEXAS

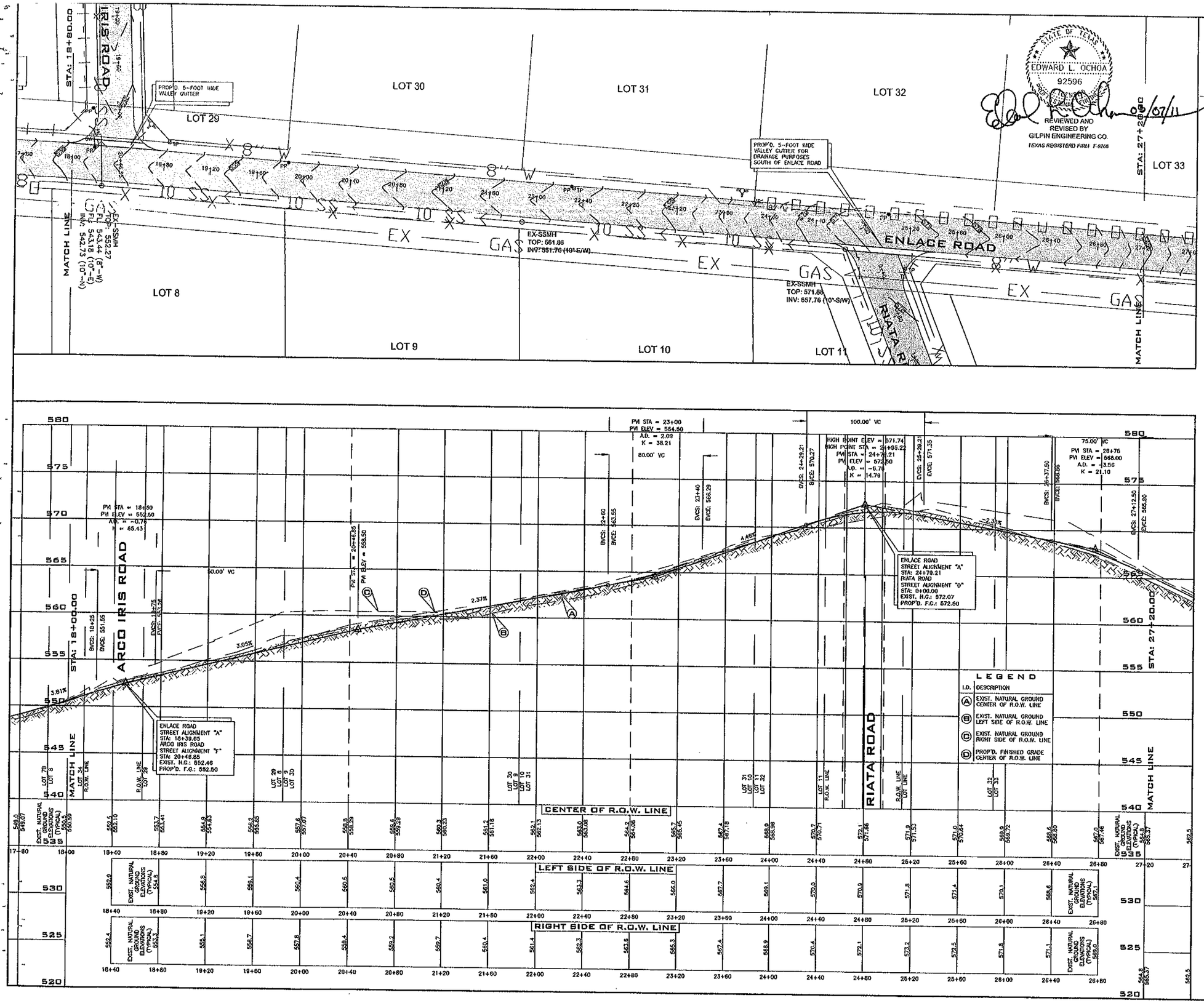
TOP VIEW
SHOWING
EXISTING TOPOGRAPHY

BOTTOM VIEW
SHOWING
PROPOSED TOPOGRAPHY

DRAWN BY:	O.R.
CHECKED BY:	E.L.O.
DRAWN DATE:	02-20-07
PLOTTED DATE:	01-14-11
JOB No.	N/A
FILE NAME:	TANQUECITOS
STATUS:	100%
AS-BUILT:	NO
REVISED DATE:	09-03-10

SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'

SHEET 7 OF TOTAL 90



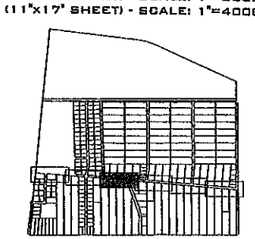
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 660
- EXISTING POWER POLE PP
- EXISTING GUY WIRE GW
- EXISTING TRAFFIC SIGN TS
- EXISTING TELEPHONE PEDESTAL TP
- EXISTING WATER VALVE WV
- EXISTING FIRE HYDRANT HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"X36" SHEET) - SCALE: 1"=2000'
(11"X17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 Inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM REQUEST 48 HOURS INSIDE BEFORE YOU DIG, CALL ON SLAST - STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

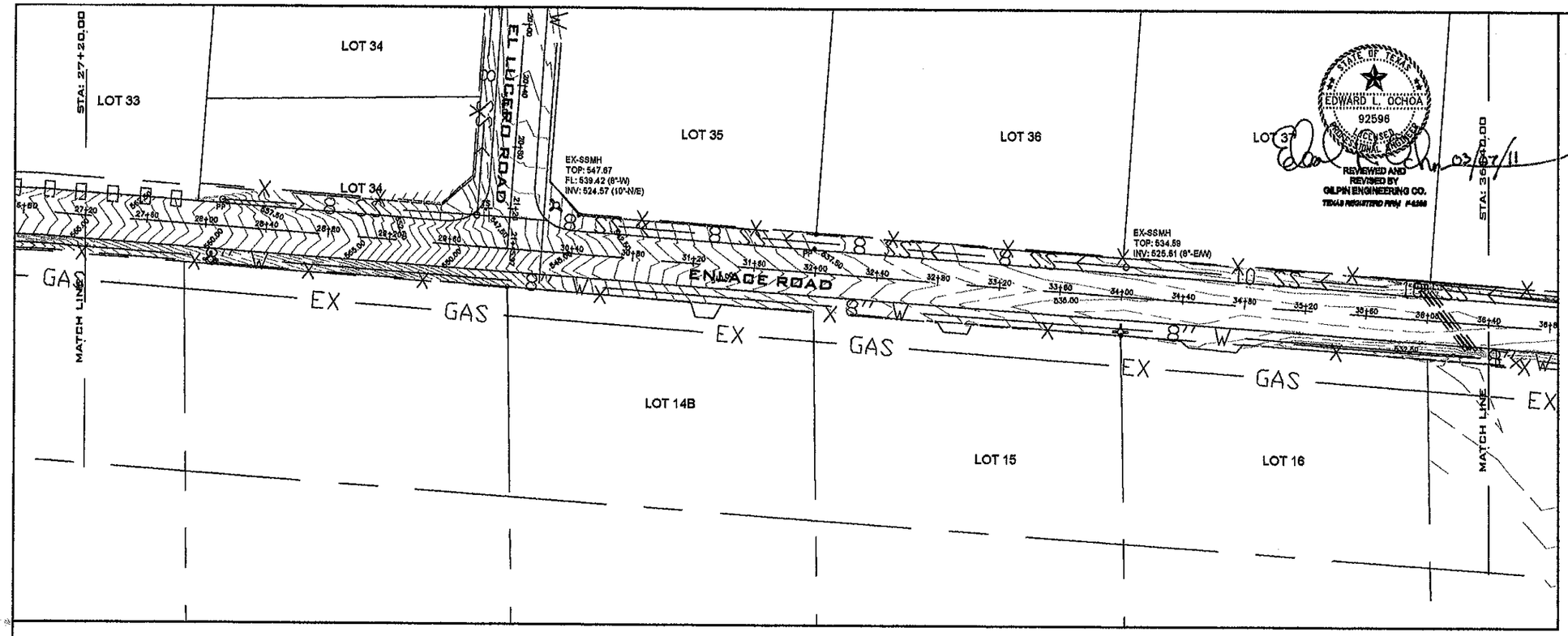
TANQUECITOS PHASE I AND II

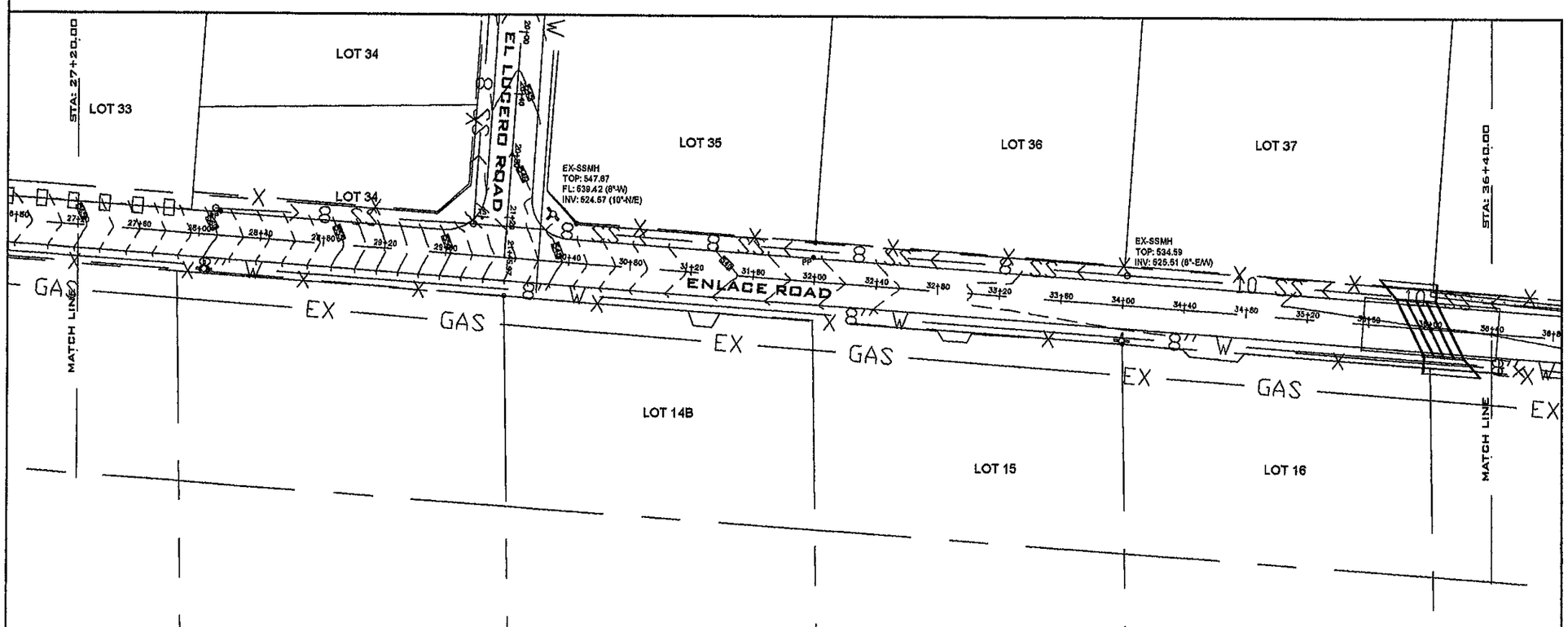
PLAN AND PROFILE
ENLACE ROAD
STA: 18+80.00 TO STA: 27+20.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 04-07-2010	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 8	OF TOTAL 90





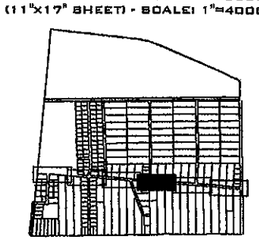
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE PP
- EXISTING GUY WIRE GW
- EXISTING TRAFFIC SIGN TS
- EXISTING TELEPHONE PEDESTAL TP
- EXISTING WATER VALVE WV
- EXISTING FIRE HYDRANT HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"X36" SHEET) - SCALE: 1"=2000'
(11"X17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

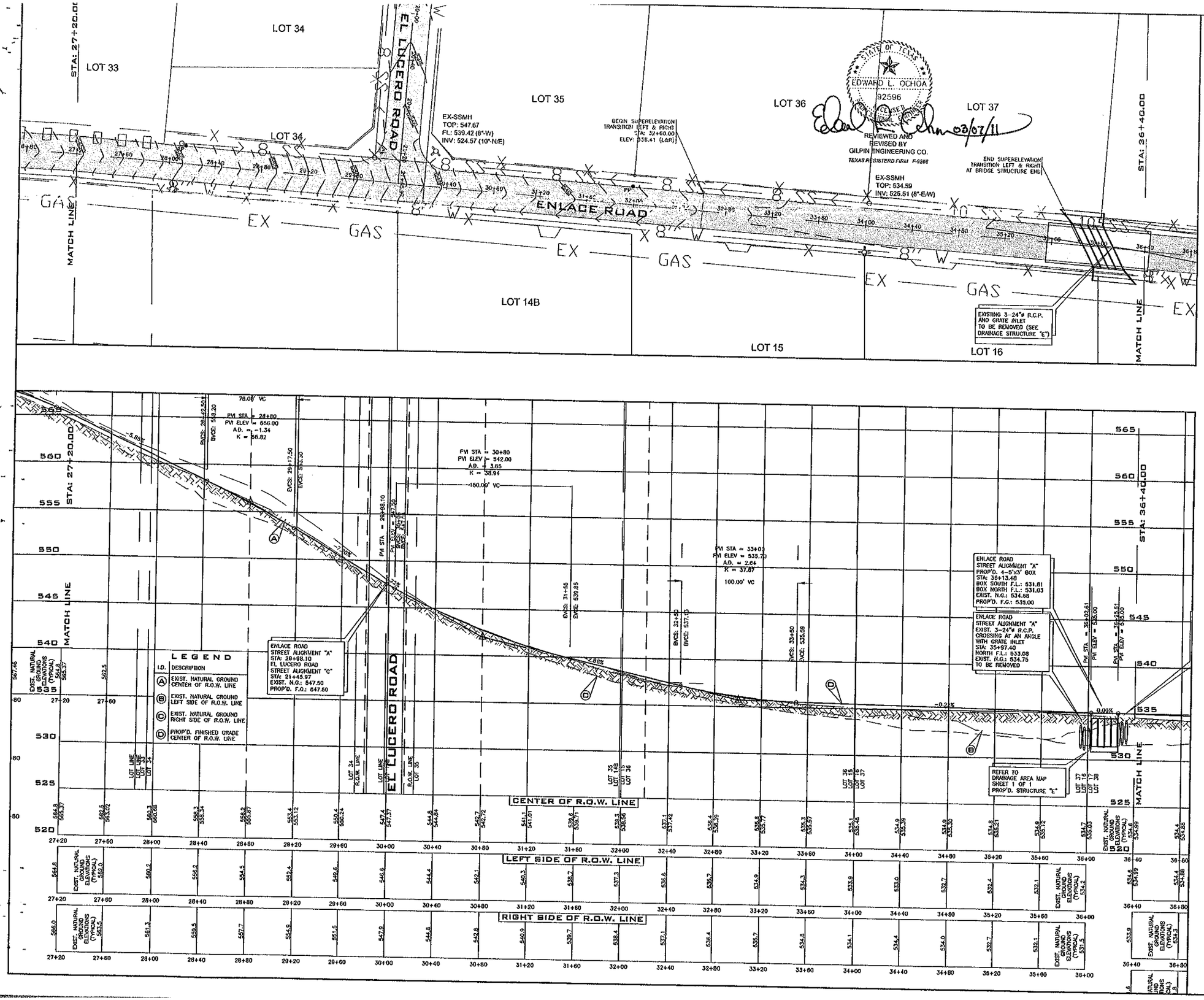
FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6302
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

PLAN VIEW
ENLACE ROAD
STA: 27+20.00 TO STA: 36+40.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY
BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 9	OF TOTAL 90



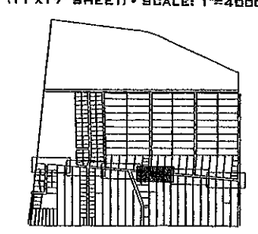
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 650
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPANTS REQUIRE 48 HOURS NOTICE BEFORE YOU DIG, DRILL, OR BLAST - STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
PH. (956) 723-3451
FAX (956) 723-5902
1004 HILLSIDE RD.
ENGINEERING COMPANY LAREDO, TX 78041

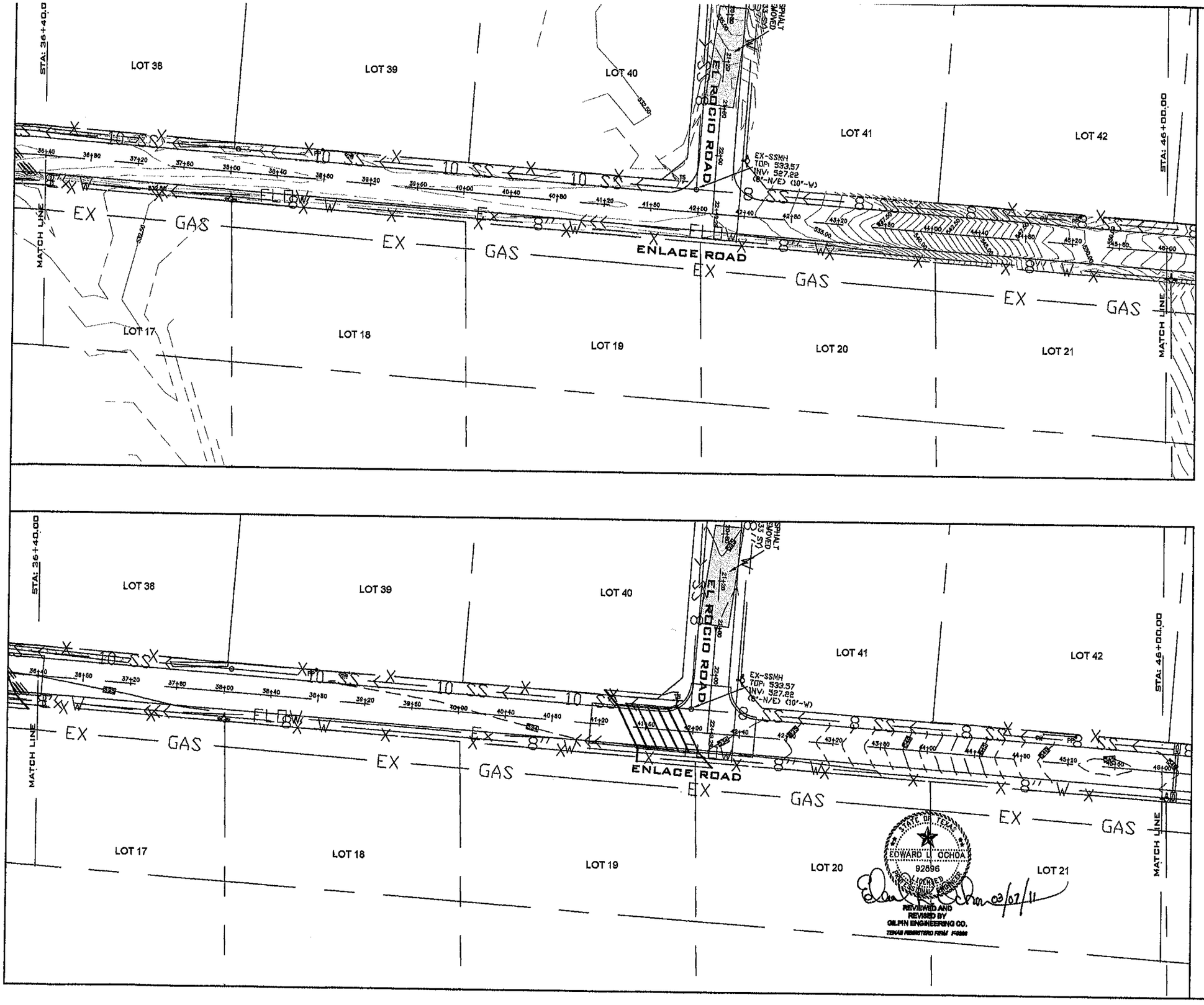
TANQUECITOS PHASE I AND II

PLAN AND PROFILE
ENLACE ROAD
STA: 27+20.00 TO STA: 36+40.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 10	TOTAL: OF 90



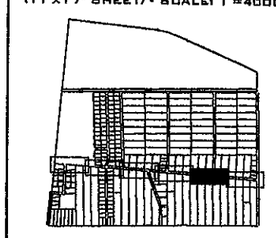
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE PP
- EXISTING GUY WIRE GW
- EXISTING TRAFFIC SIGN TS
- EXISTING TELEPHONE PEDESTAL TP
- EXISTING WATER VALVE WV
- EXISTING FIRE HYDRANT HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"X36" SHEET) - SCALE: 1"=2000'
(11"X17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPANTS REQUIRE 48 HOURS NOTICE BEFORE YOU DIG, CALL, OR ALERT - STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127

THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

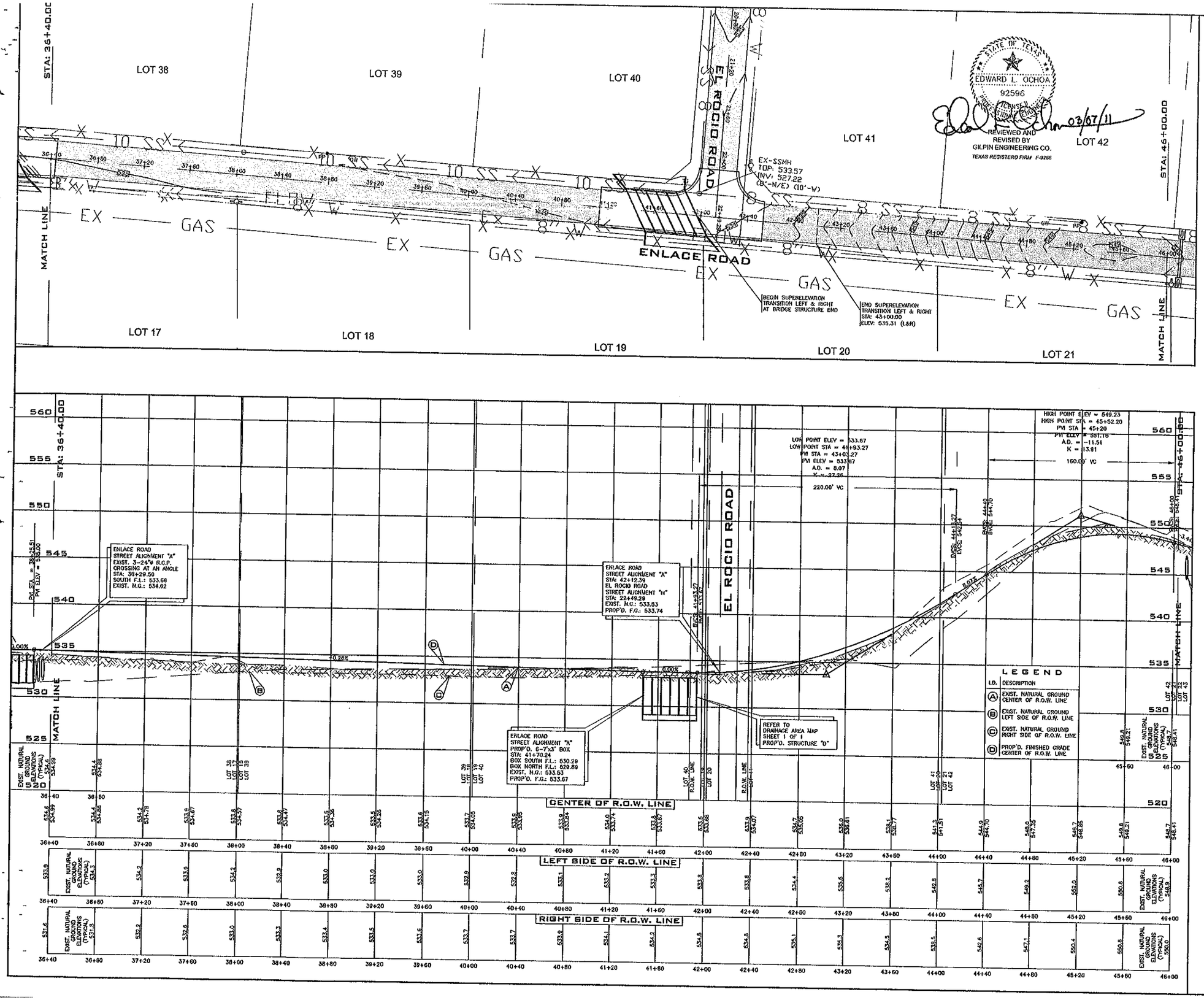
FOSTER
ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-5202
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

PLAN VIEW
ENLACE ROAD
STA: 36+40.00 TO STA: 46+00.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY
BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 11	TOTAL OF 90



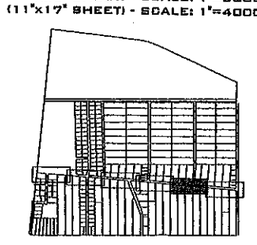
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE — EX — OHP
- EXISTING NATURAL GAS PIPELINE — EX — GAS
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 600
- EXISTING POWER POLE PP
- EXISTING GUY WIRE GW
- EXISTING TRAFFIC SIGN TS
- EXISTING TELEPHONE PEDESTAL TP
- EXISTING WATER VALVE WV
- EXISTING FIRE HYDRANT HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 Inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPANTS REQUEST 48 HOURS NOTICE BEFORE YOU DIG, DRILL, OR BLAST - STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

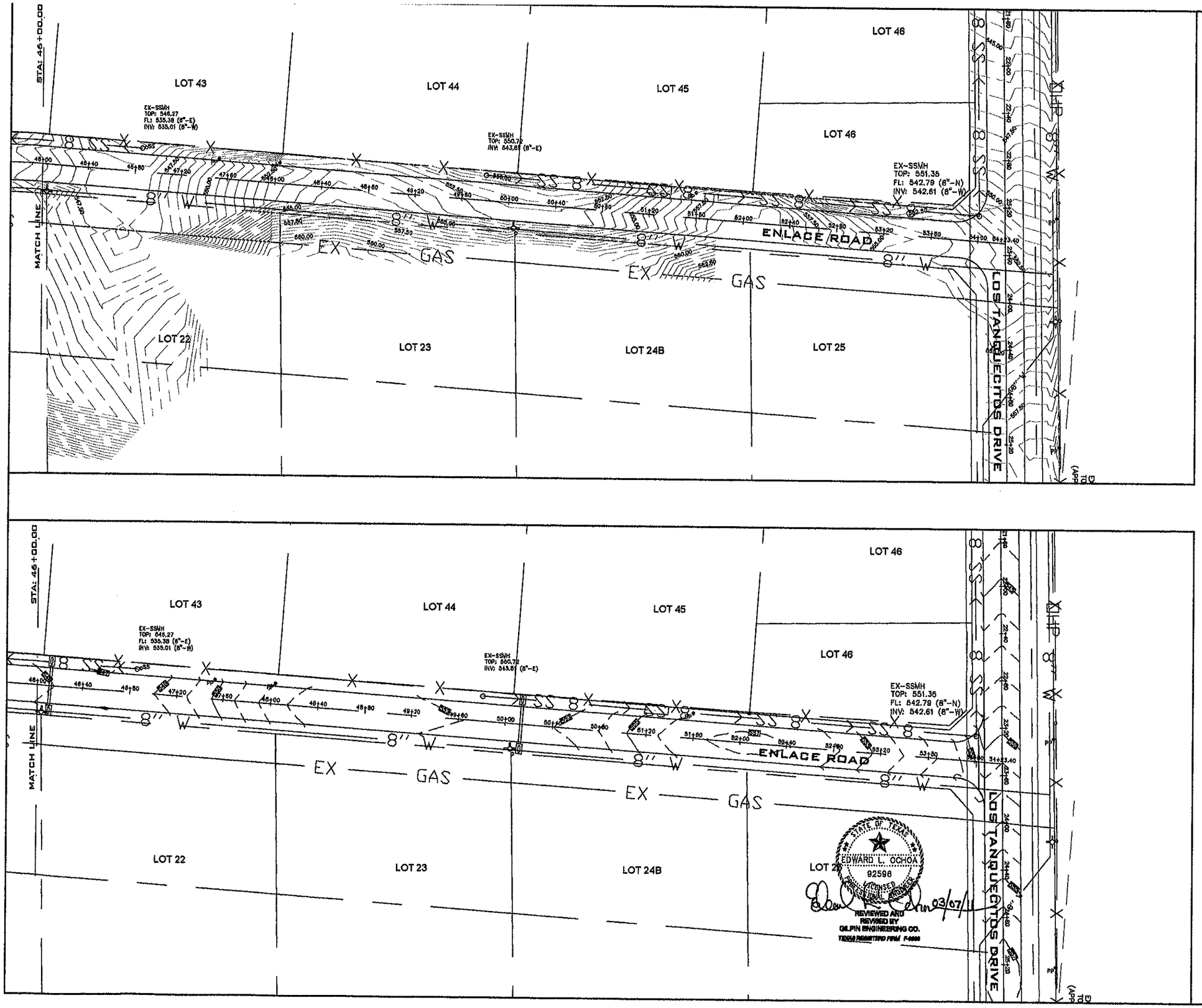
PLAN AND PROFILE
ENLACE ROAD
STA: 36+40.00 TO STA: 46+00.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY:	O.R.
CHECKED BY:	E.O.L.
DRAWN DATE:	02-20-07
PLOTTED DATE:	01-14-11
JOB No.	N/A
FILE NAME:	TANQUECITOS
STATUS:	100%
AS-BUILT:	NO
REVISED DATE:	09-03-10

SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 12 OF	TOTAL: 90



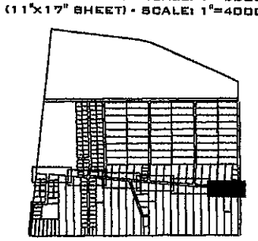
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX DHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE PP
- EXISTING GUY WIRE GW
- EXISTING TRAFFIC SIGN TS
- EXISTING TELEPHONE PEDESTAL TP
- EXISTING WATER VALVE WV
- EXISTING FIRE HYDRANT HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=3000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL NOTIFICATION REQUIRES 48 HOURS NOTICE BEFORE YOU DIG. DIAL 1 OR MORE - STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

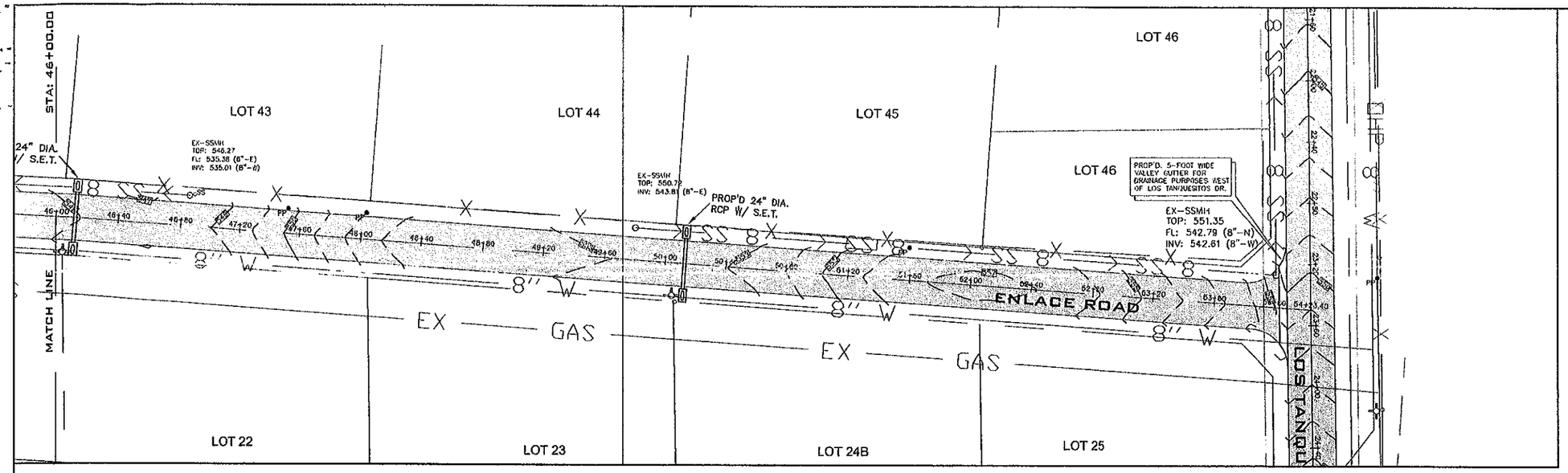
TANQUECITOS PHASE I AND II

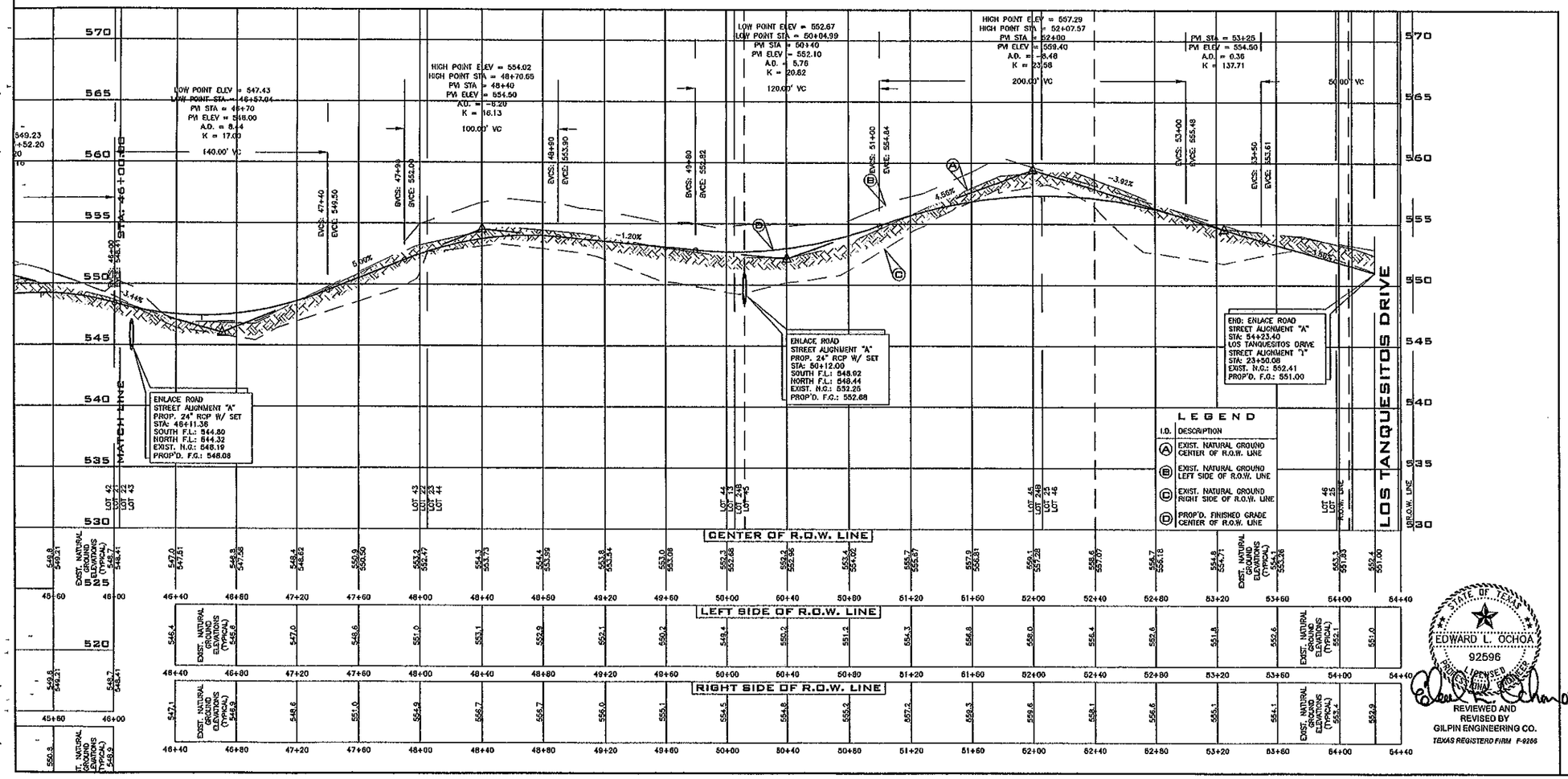
PLAN VIEW
ENLACE ROAD
STA: 46+00.00 TO STA: 54+23.40
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY

BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 13	TOTAL: OF 90





LEGEND

I.D.	DESCRIPTION
A	EXIST. NATURAL GROUND CENTER OF R.O.W. LINE
B	EXIST. NATURAL GROUND LEFT SIDE OF R.O.W. LINE
C	EXIST. NATURAL GROUND RIGHT SIDE OF R.O.W. LINE
D	PROP'D. FINISHED GRADE CENTER OF R.O.W. LINE

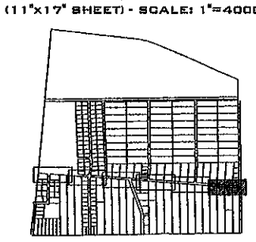
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE PP
- EXISTING GUY WIRE GW
- EXISTING TRAFFIC SIGN TS
- EXISTING TELEPHONE PEDESTAL TP
- EXISTING WATER VALVE WV
- EXISTING FIRE HYDRANT HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

03/07/11

REVIEWED AND REVISED BY GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-9266

CALL BEFORE YOU DIG !
TEXAS ONE CALL EXCAVATION REQUEST
48 HOURS NOTICE BEFORE YOU DIG, DRILL, OR BLAST - STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
PH: (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
ENGINEERING COMPANY LAREDO, TX 78041

TANQUECITOS PHASE I AND II

PLAN AND PROFILE
ENLACE ROAD
STA: 46+00.00 TO STA: 54+23.40
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY: N.R.G.	
CHECKED BY: K.J.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'

SHEET 14 OF TOTAL: 90

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED PROFESSIONAL ENGINEER

03/07/11

REVIEWED AND
REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-8295

AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

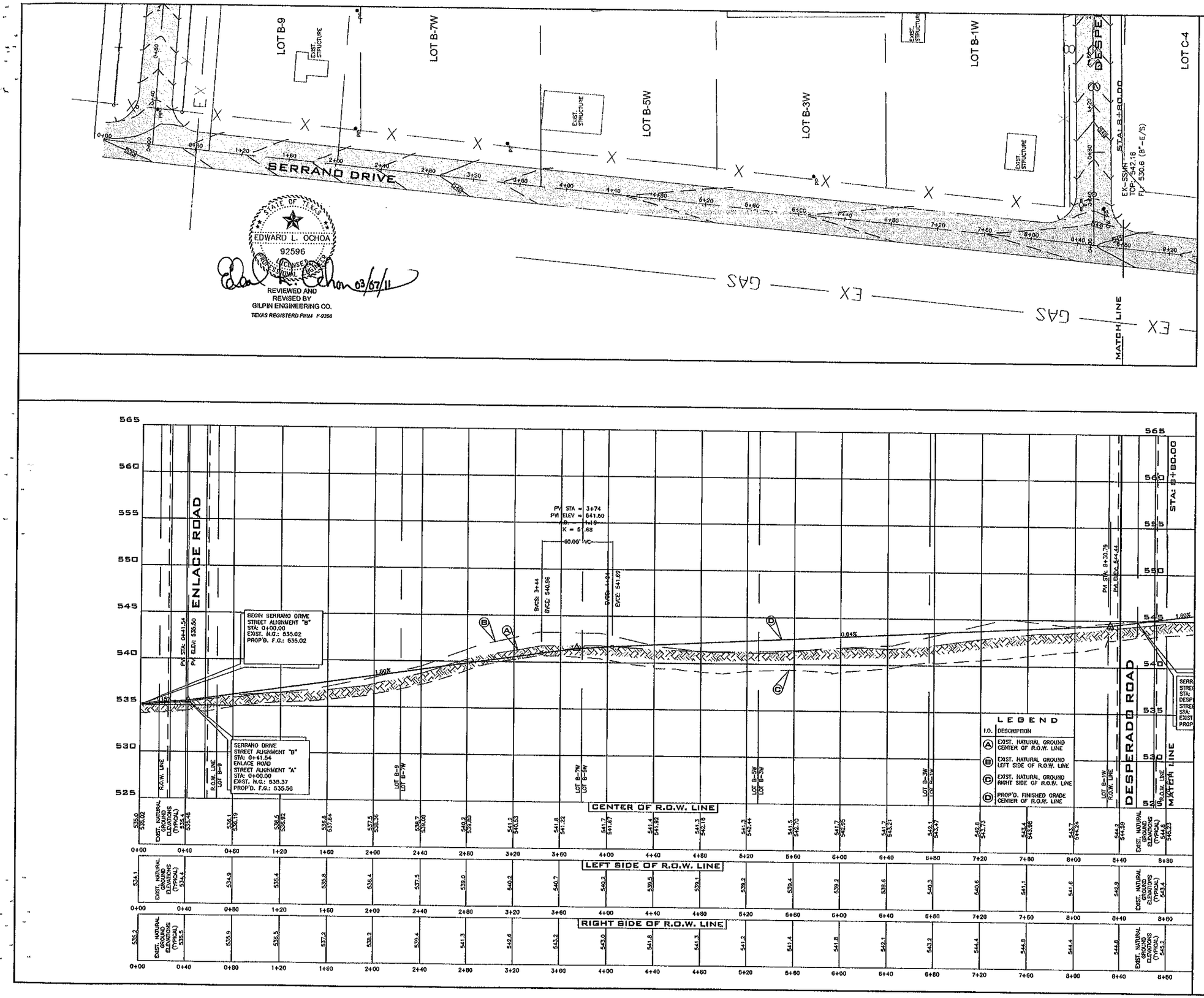
FOSTER
ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

PLAN VIEW
SERRANO DRIVE
STA: 0+00.00 TO STA: 8+80.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY
BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 15	OF TOTAL 90



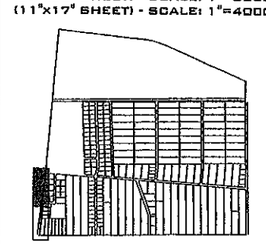
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 850.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 660
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARAGRAPHS REQUIRE 48 HOURS NOTICE BEFORE YOU DIG, DRILL, OR BLAST - STOP, CALL !

TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127

THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
PH. (956) 723-3451
FAX (956) 723-6502
1004 HILLSIDE RD.
ENGINEERING COMPANY LAREDO, TX 78041

TANQUECITOS PHASE I AND II

PLAN AND PROFILE
SERRANO ROAD
STA: 0+00.00 TO STA: 8+80.00
WEBB COUNTY, TEXAS

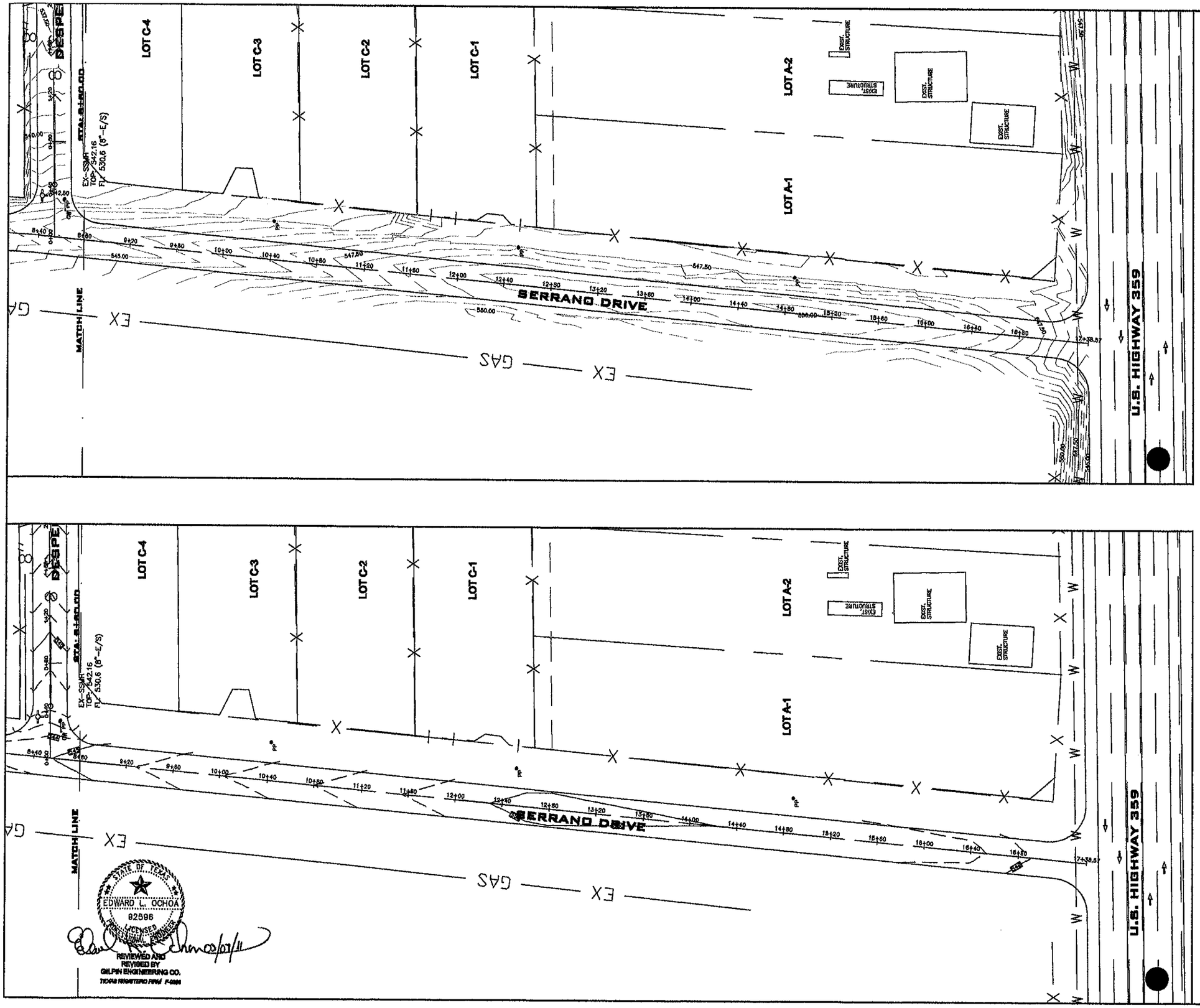
TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY:	O.R.
CHECKED BY:	E.L.O
DRAWN DATE:	02-20-07
PLOTTED DATE:	01-14-11
JOB No.	N/A
FILE NAME:	TANQUECITOS
STATUS:	100%
AS-BUILT:	NO
REVISED DATE:	09-03-10

SCALE: (24"x36") SHEET
HOR: 1"=40' VER. 1"=5'
SCALE: (11"x17") SHEET
HOR: 1"=80' VER. 1"=10'

SHEET 16 OF TOTAL: 90



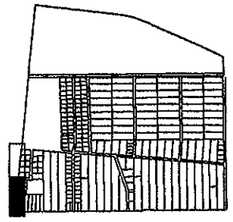
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE PP
- EXISTING GUY WIRE GW
- EXISTING TRAFFIC SIGN TS
- EXISTING TELEPHONE PEDESTAL TP
- EXISTING WATER VALVE WV
- EXISTING FIRE HYDRANT HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127

THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

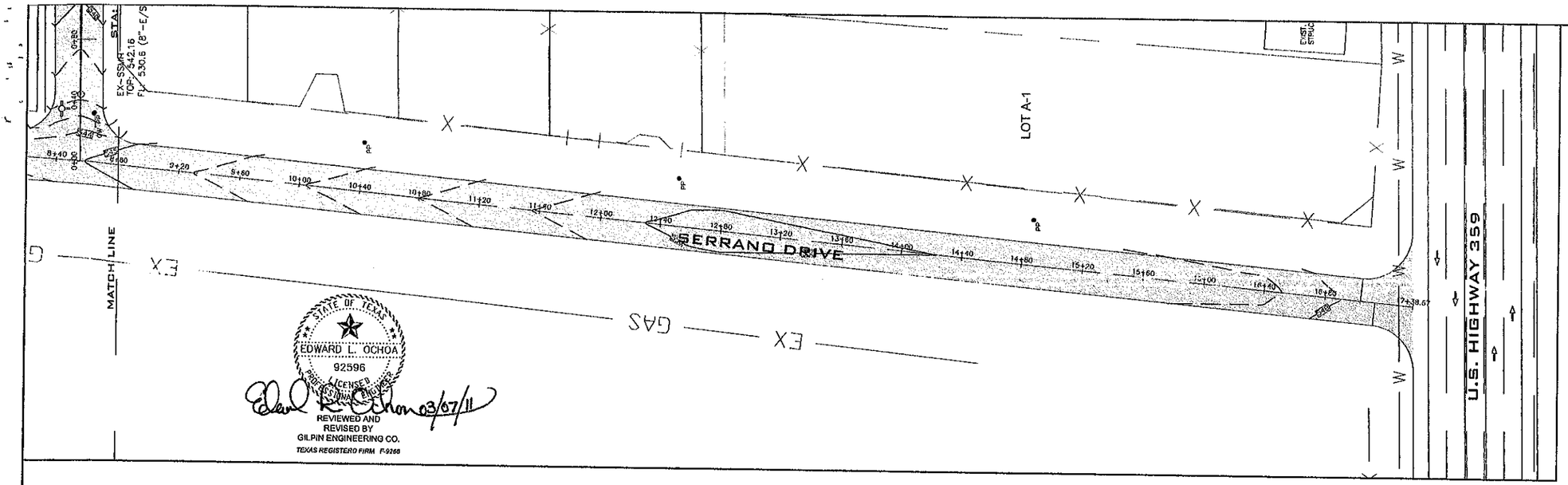
TANQUECITOS PHASE I AND II

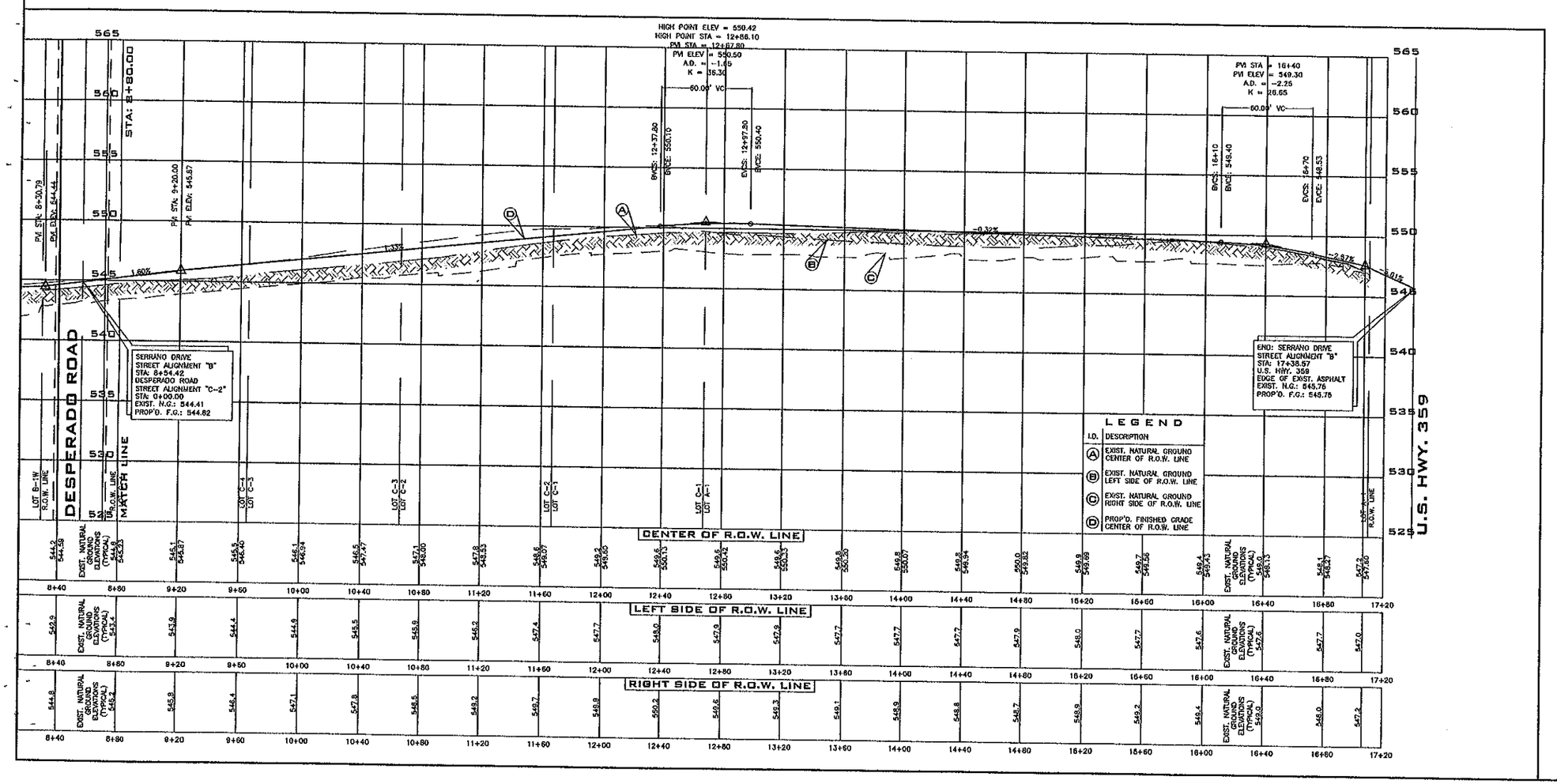
PLAN VIEW
SERRANO ROAD
STA: 8+80.00 TO STA: 17+06.14
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY

BOTTOM VIEW SHOWING PROPOSED CUT TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 03-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 17	TOTAL: OF 90





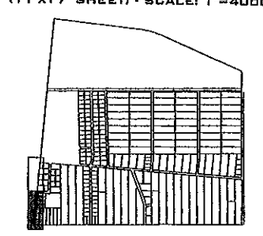
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE PP
- EXISTING GUY WIRE GW
- EXISTING TRAFFIC SIGN TS
- EXISTING TELEPHONE PEDESTAL TP
- EXISTING WATER VALVE WV
- EXISTING FIRE HYDRANT HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPANTS REQUIRE 48 HOURS NOTICE BEFORE YOU DIG, DRILL, OR BLAST – STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127

THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
PH. (956) 723-3451
FAX (956) 723-6502
1004 HILLSIDE RD.
ENGINEERING COMPANY LAREDO, TX 78041

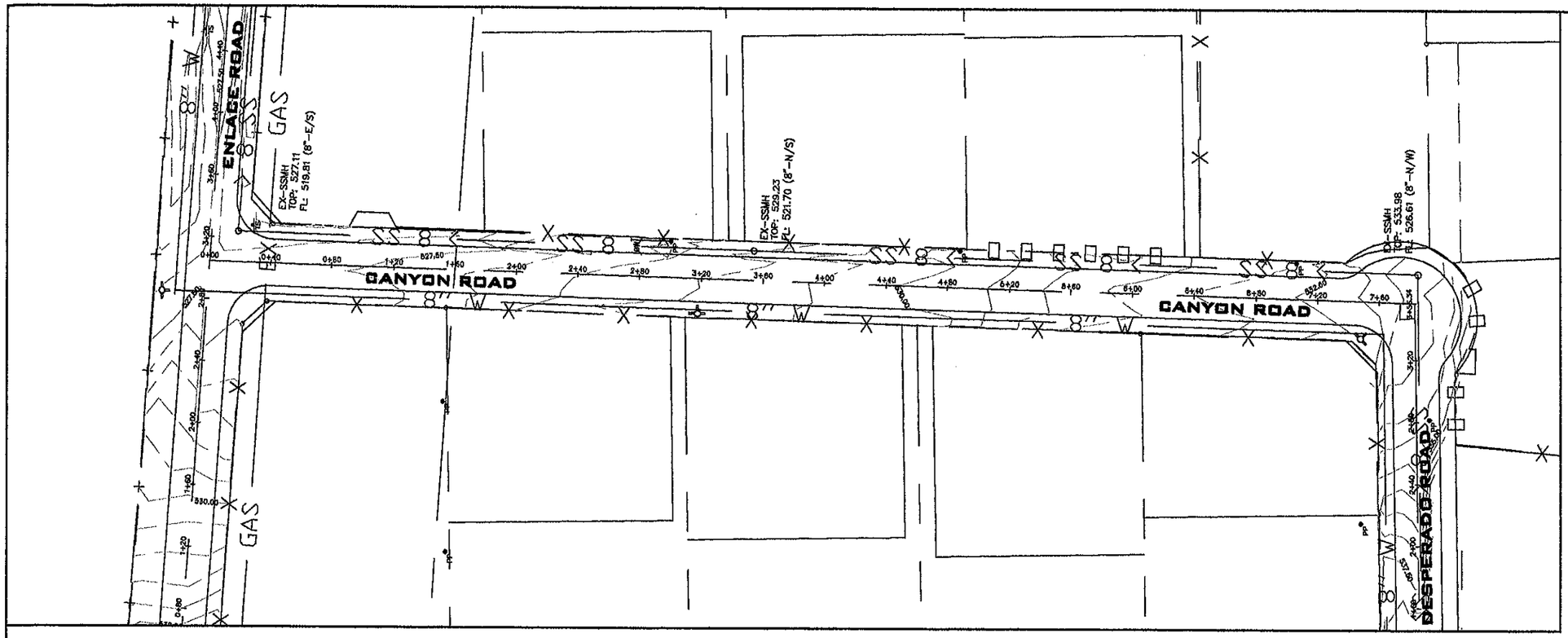
TANQUECITOS PHASE I AND II

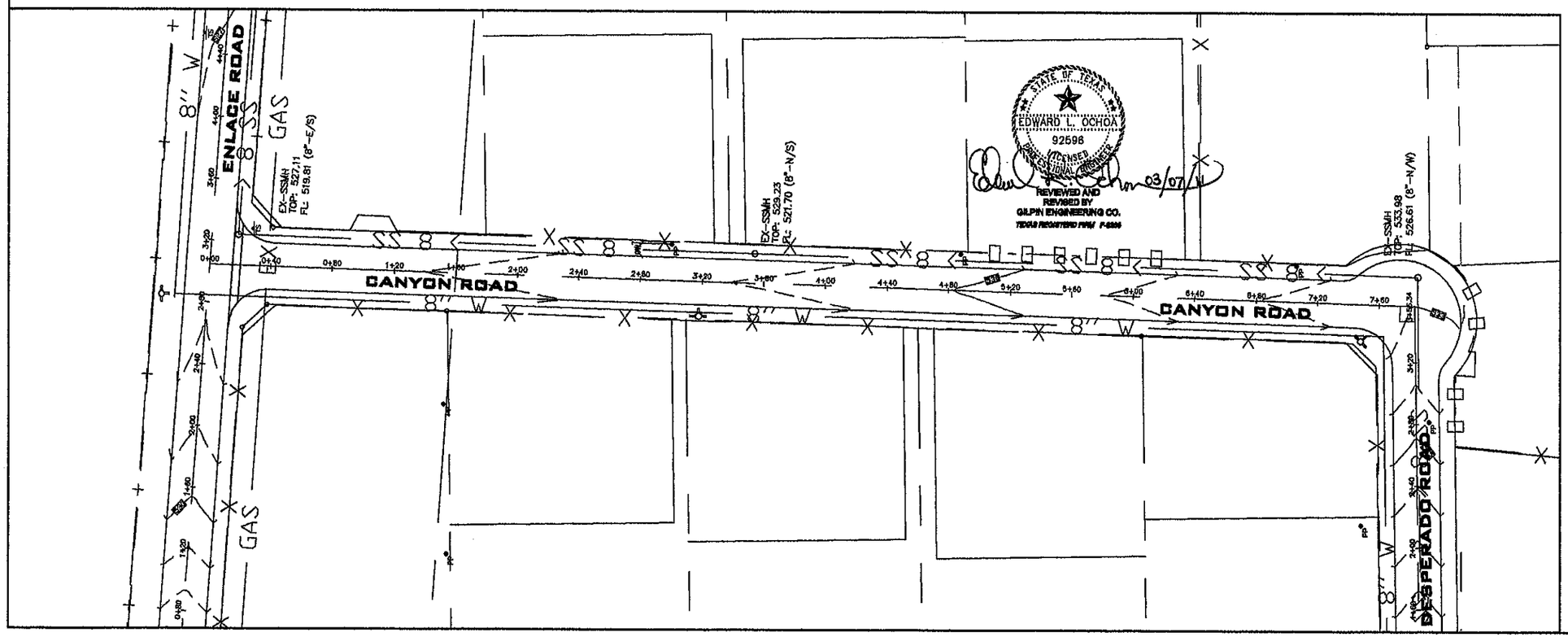
PLAN AND PROFILE
SERRANO ROAD
STA: 8+80.00 TO STA: 17+06.14
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 18	TOTAL: OF 90





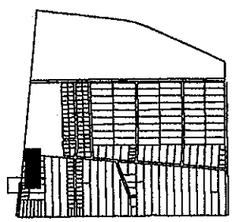
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-926-5127

THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-9202
1004 HILLSIDE RD.
LAREDO, TX 78041

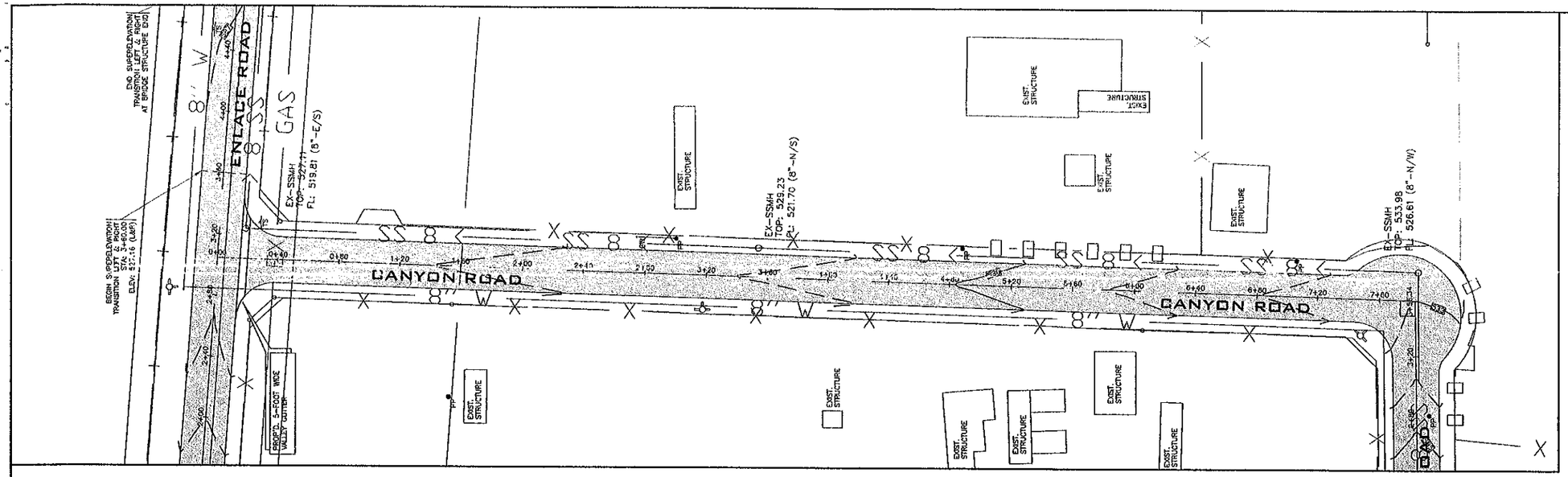
TANQUECITOS PHASE I AND II

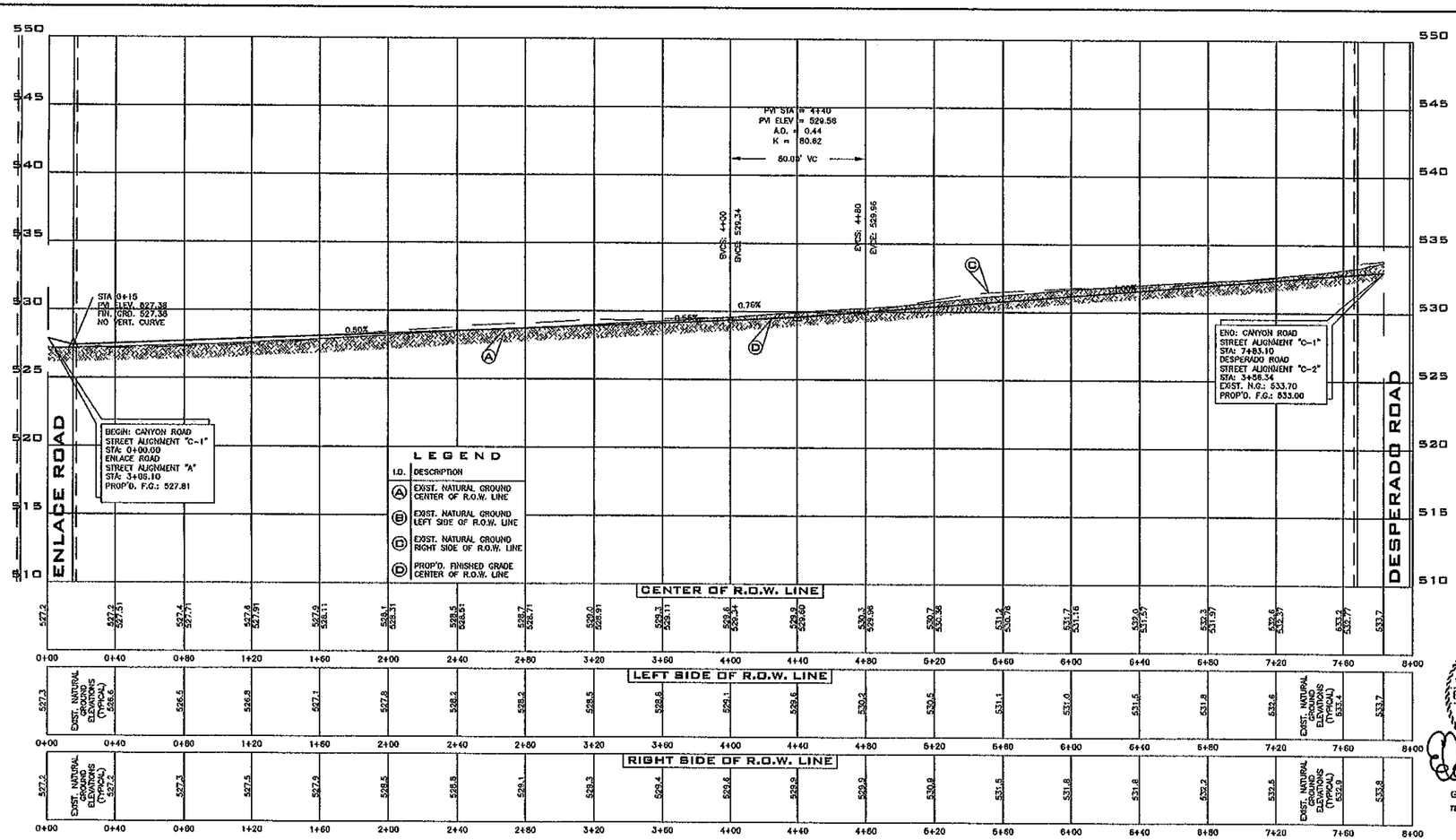
PLAN VIEW
CANYON ROAD
STA: 0+00.00 TO STA: 7+83.10
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY

BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 19 OF	TOTAL: 90





D

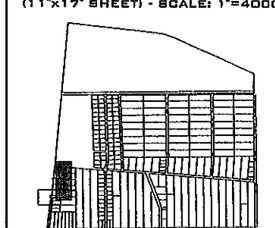
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

REVIEWED AND REVISED BY GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-9266

03/07/11

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPANTS REQUIRE 48 HOURS NOTICE BEFORE YOU DIG, DRILL, OR BLAST - STOP, CALL !
TEXAS ONE CALL SYSTEM 1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP AT 1-800-828-6127
THE LONE STAR NOTIFICATION COMPANY 1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM 1-800-344-8377

FOSTER
PH. (956) 723-3461
FAX (956) 723-6902
1004 HILLSIDE RD.
ENGINEERING COMPANY LAREDO, TX 78041

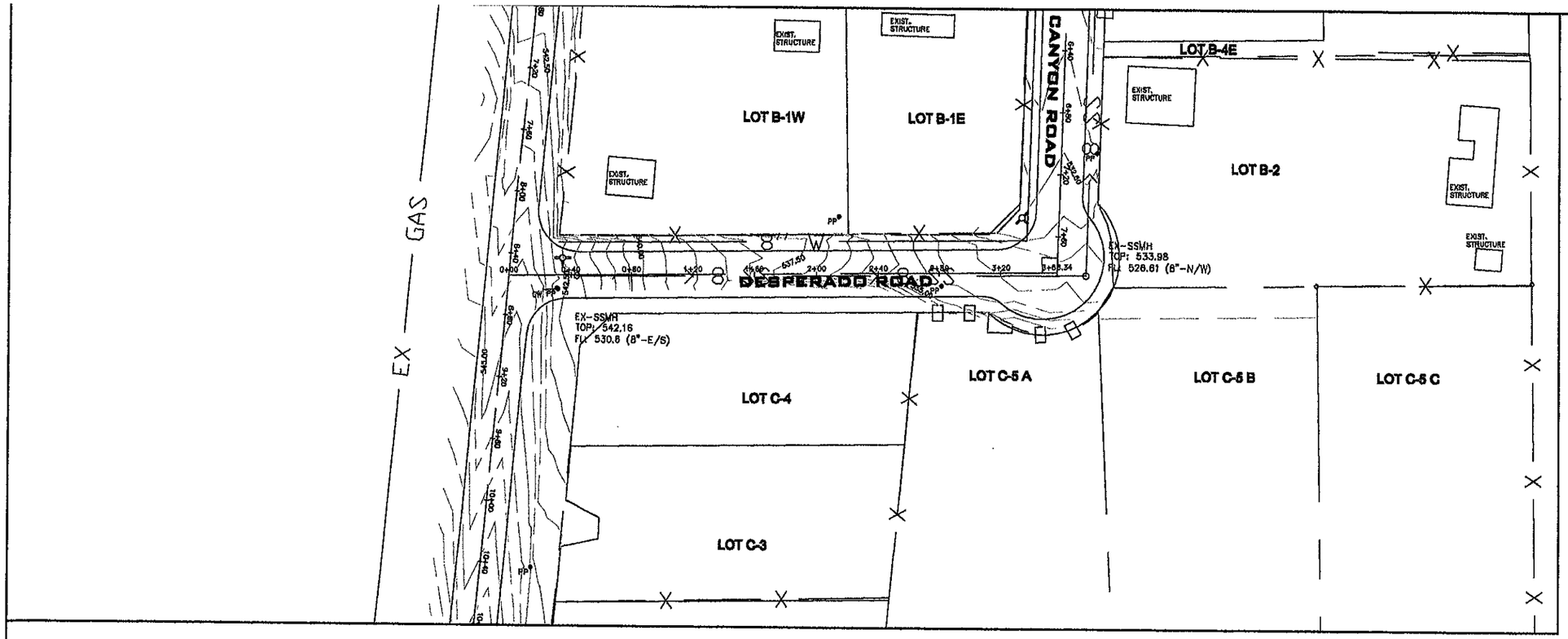
TANQUECITOS PHASE I AND II

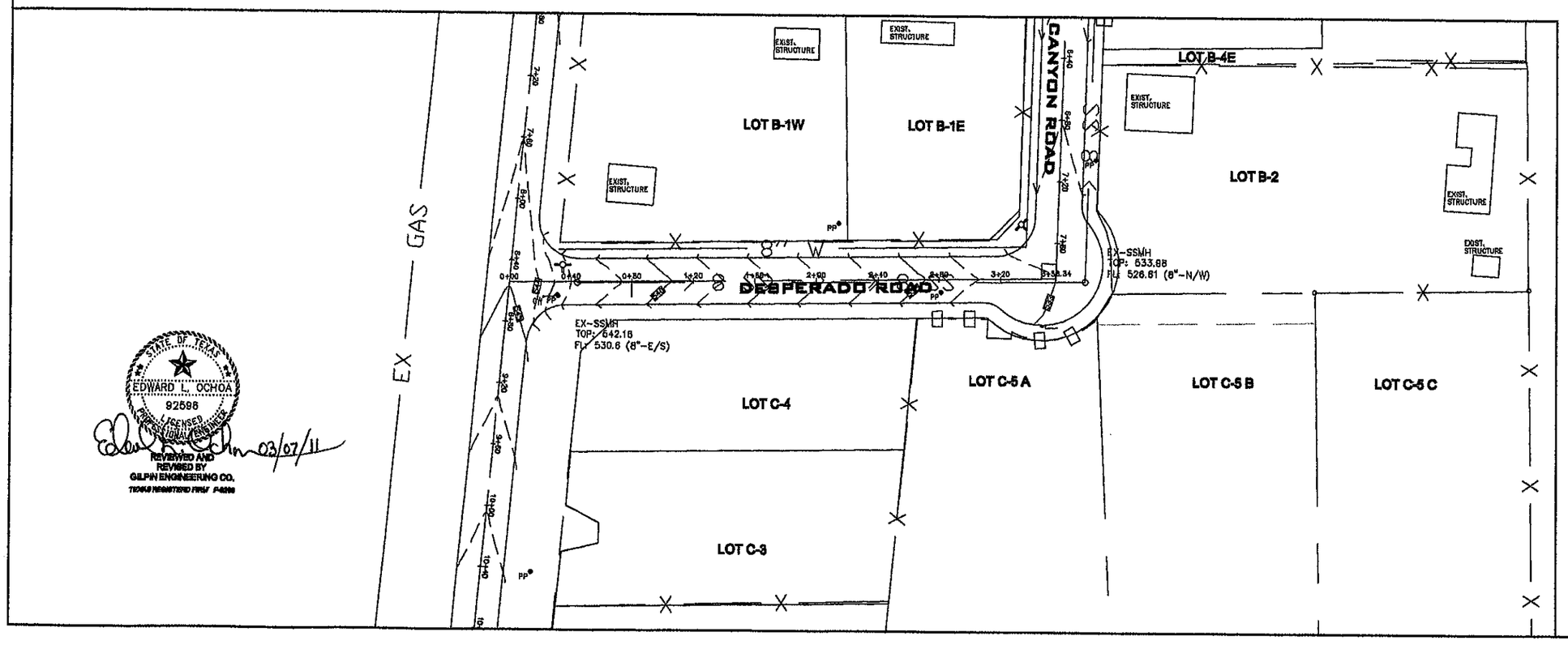
PLAN AND PROFILE
CANYON ROAD
STA: 0+00.00 TO STA: 7+83.10
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 20	TOTAL: OF 90





STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED PROFESSIONAL ENGINEER

03/07/11

REVIEWED AND REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-4298

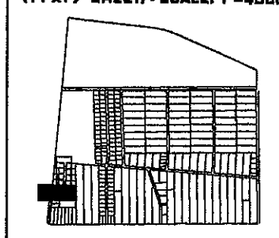
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127

THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6502
1004 HILLSIDE RD.
LAREDO, TX 78041

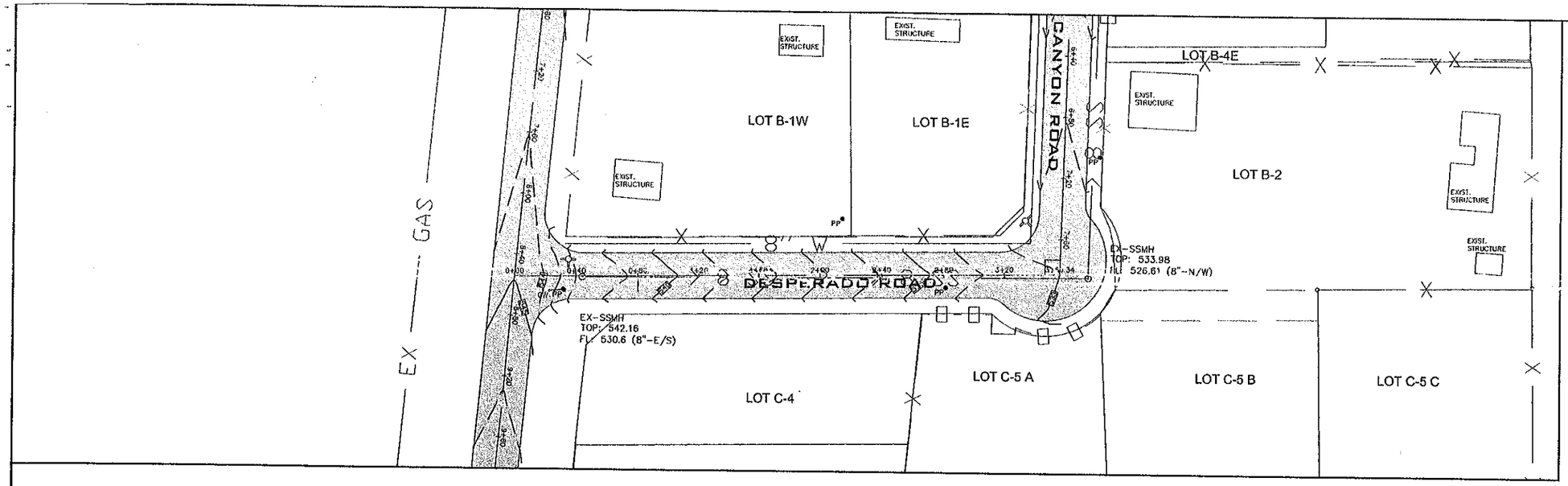
TANQUECITOS PHASE I AND II

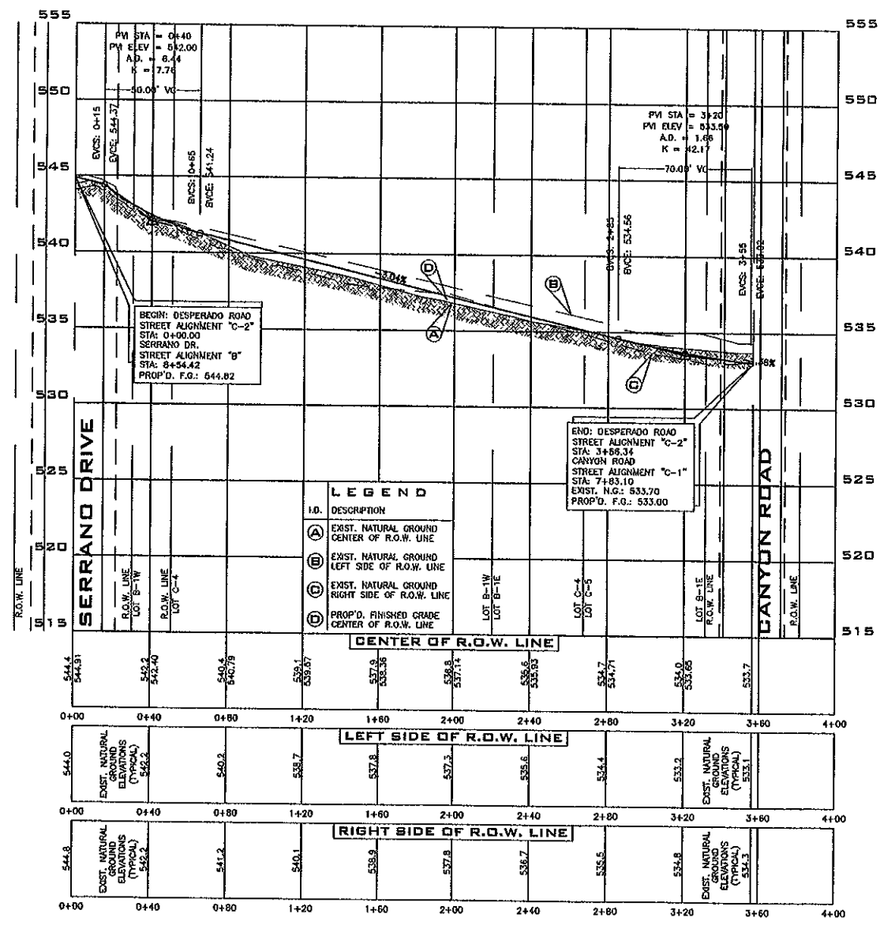
PLAN VIEW
DESPERADO ROAD
STA: 0+00.00 TO STA: 3+56.34
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY

BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 02-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 21	OF TOTAL 90





LEGEND	
I.D.	DESCRIPTION
A	EXIST. NATURAL GROUND CENTER OF R.O.W. LINE
B	EXIST. NATURAL GROUND LEFT SIDE OF R.O.W. LINE
C	EXIST. NATURAL GROUND RIGHT SIDE OF R.O.W. LINE
D	PROP'D. FINISHED GRADE CENTER OF R.O.W. LINE

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

03/07/11

REVIEWED AND
REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-9255

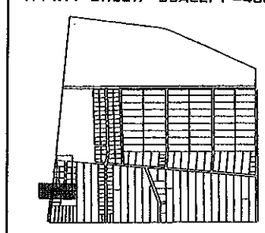
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 650
- EXISTING POWER POLE PP
- EXISTING GUY WIRE GW
- EXISTING TRAFFIC SIGN TS
- EXISTING TELEPHONE PEDESTAL TP
- EXISTING WATER VALVE WV
- EXISTING FIRE HYDRANT HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
PH. (956) 723-3451
FAX (956) 723-6802
1004 HILLSIDE RD.
ENGINEERING COMPANY LAREDO, TX 78041

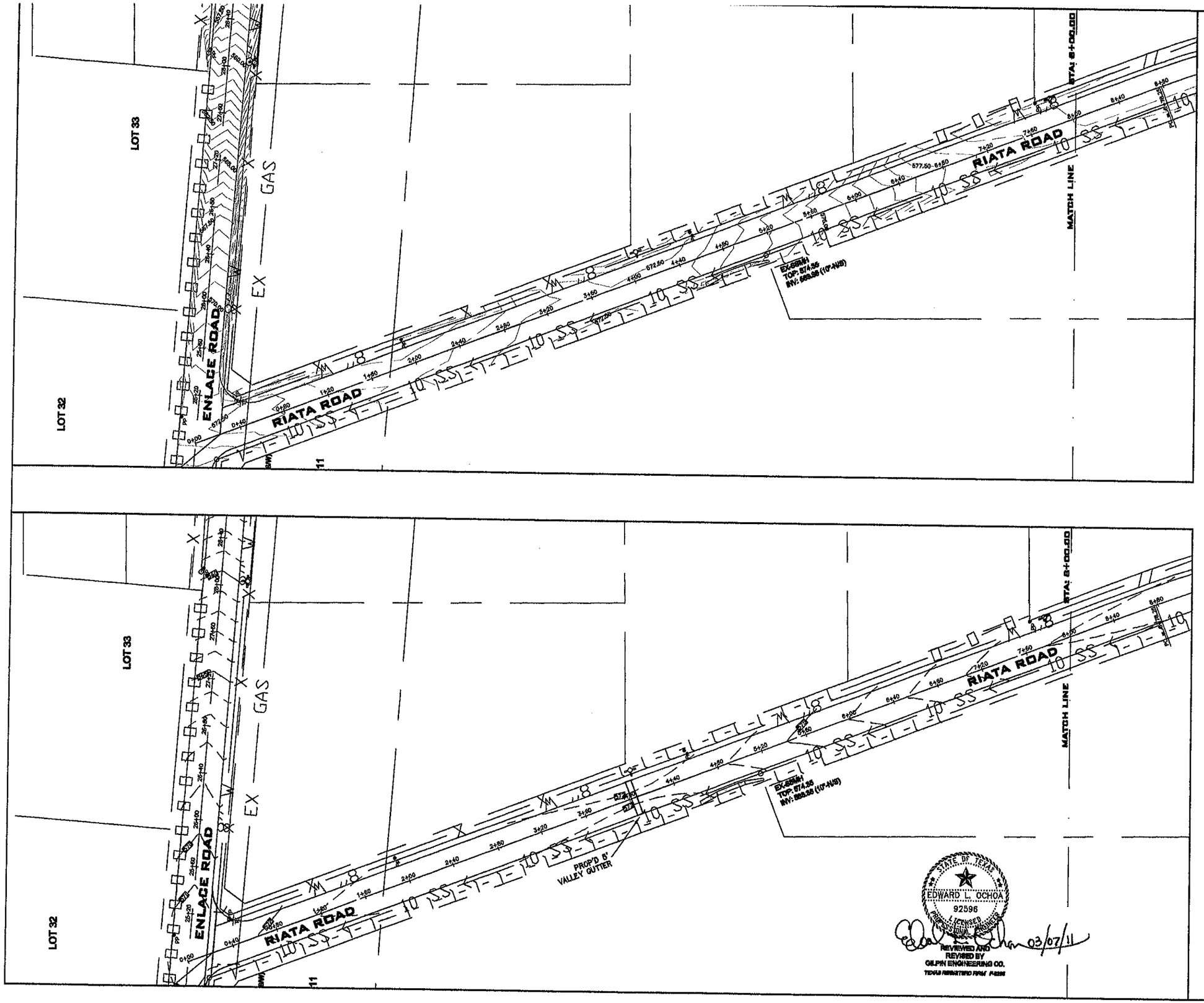
TANQUECITOS PHASE I AND II

PLAN AND PROFILE
DESPERADO ROAD
STA: 0+00.00 TO STA: 3+56.34
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 22 OF	TOTAL: 90



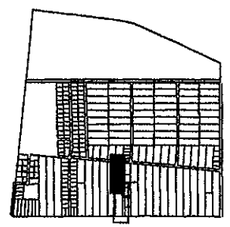
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 650.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 650
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-628-3127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

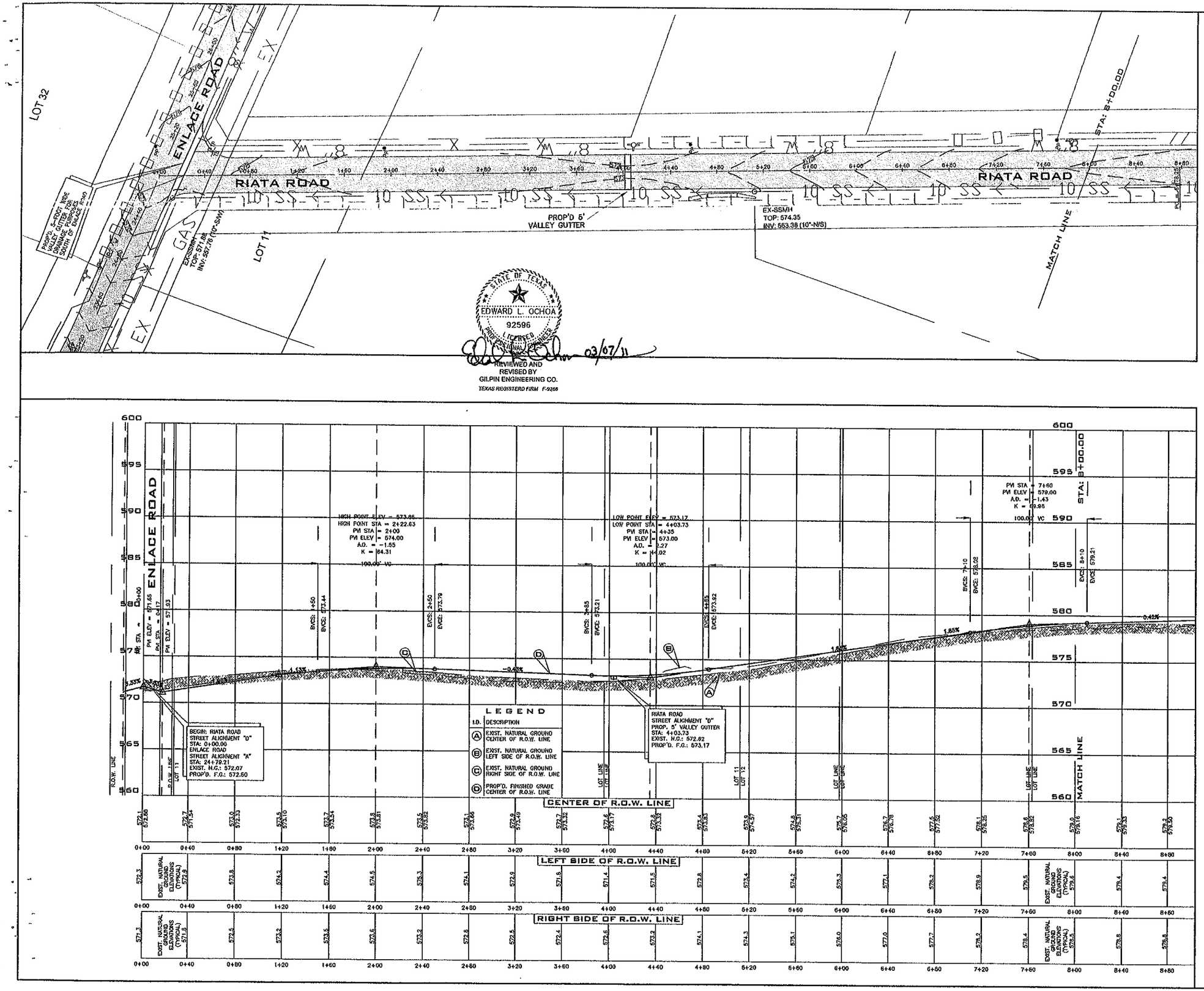
FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6302
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

PLAN VIEW
RIATA ROAD
STA: 0+00.00 TO STA: 8+00.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY
BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 23 OF	TOTAL: 90



AS SHOWN

LEGEND

EXISTING FENCE BARB WIRE

EXISTING FENCE BLOCK

EXISTING FENCE CHAIN LINK

EXISTING FENCE CHICKEN

EXISTING FENCE IRON

EXISTING FENCE LAMINA

EXISTING FENCE WOOD

EXISTING OVERHEAD POWER LINE
EX OHP

EXISTING NATURAL GAS PIPELINE
EX GAS

EXISTING LOT LINE

EXISTING CONTOUR LINE (MINOR)

EXISTING CONTOUR LINE (MAJOR)
550.00

FINISHED CONTOUR LINE (MINOR)

FINISHED CONTOUR LINE (MAJOR)
560

EXISTING POWER POLE
PP

EXISTING GUY WIRE
GW

EXISTING TRAFFIC SIGN
TS

EXISTING TELEPHONE PEDESTAL
TP

EXISTING WATER VALVE
WV

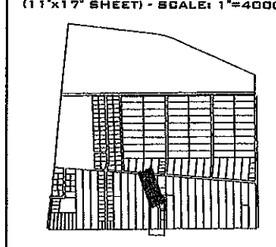
EXISTING FIRE HYDRANT
HYD

EXIST. ASPHALT

EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 Inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127

THE LONE STAR NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

PLAN AND PROFILE
RIATA ROAD
STA: 0+00.00 TO STA: 8+00.00
WEBB COUNTY, TEXAS

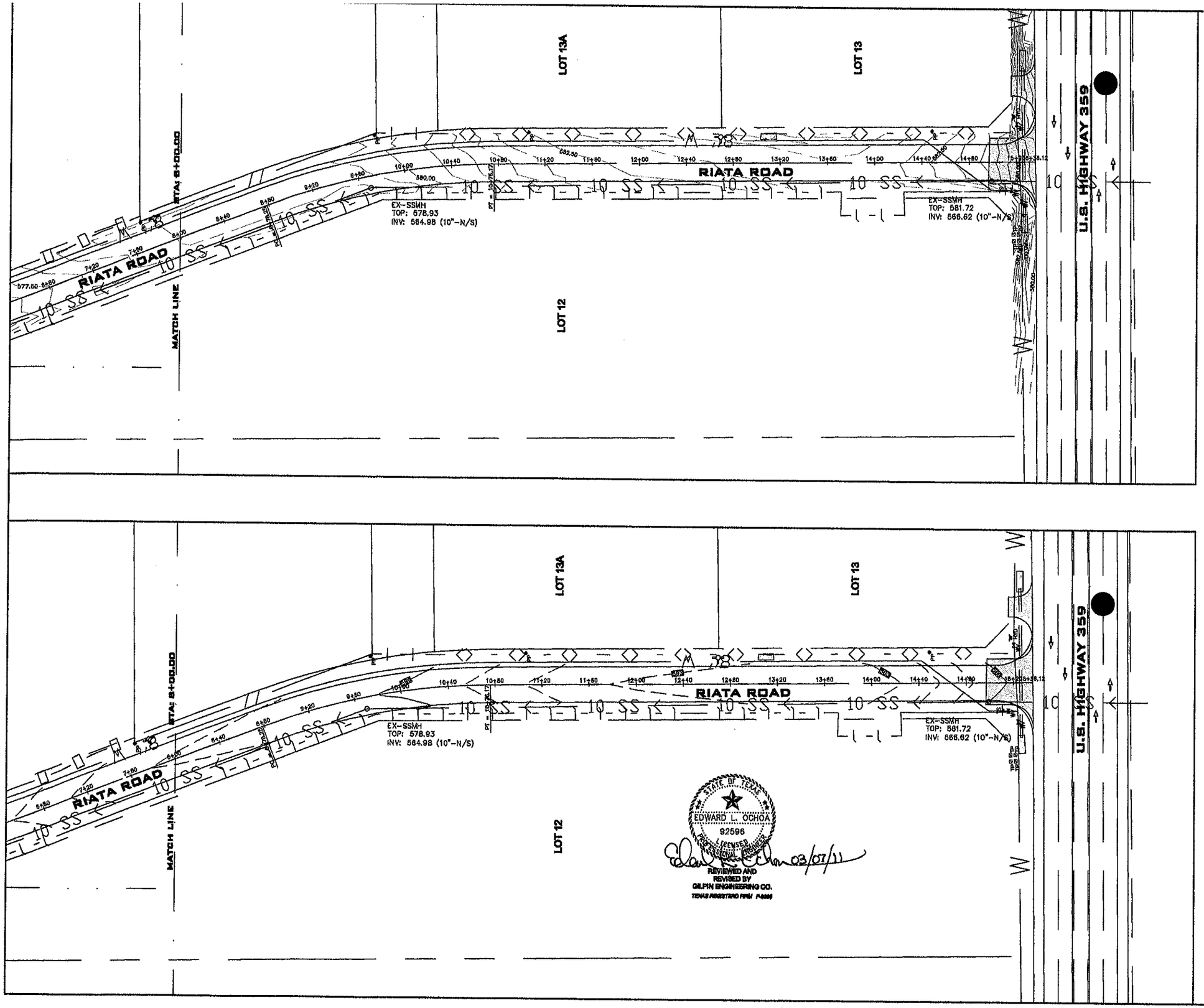
TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY:	O.R.
CHECKED BY:	E.L.O.
DRAWN DATE:	02-20-07
PLOTTED DATE:	01-14-11
JOB No.	N/A
FILE NAME:	TANQUECITOS
STATUS:	100%
AS-BUILT:	NO
REVISED DATE:	09-03-10

SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'

SHEET 24 OF TOTAL: 90



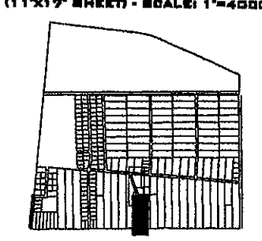
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-526-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

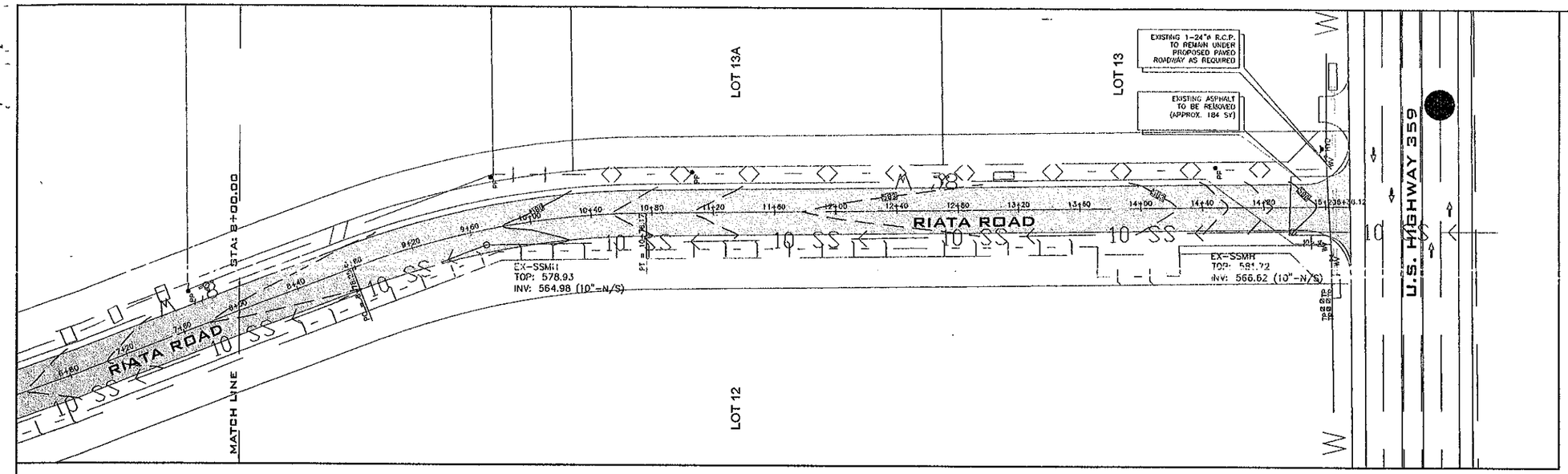
FOSTER
ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6002
1004 HILLSIDE RD.
LAREDO, TX 78041

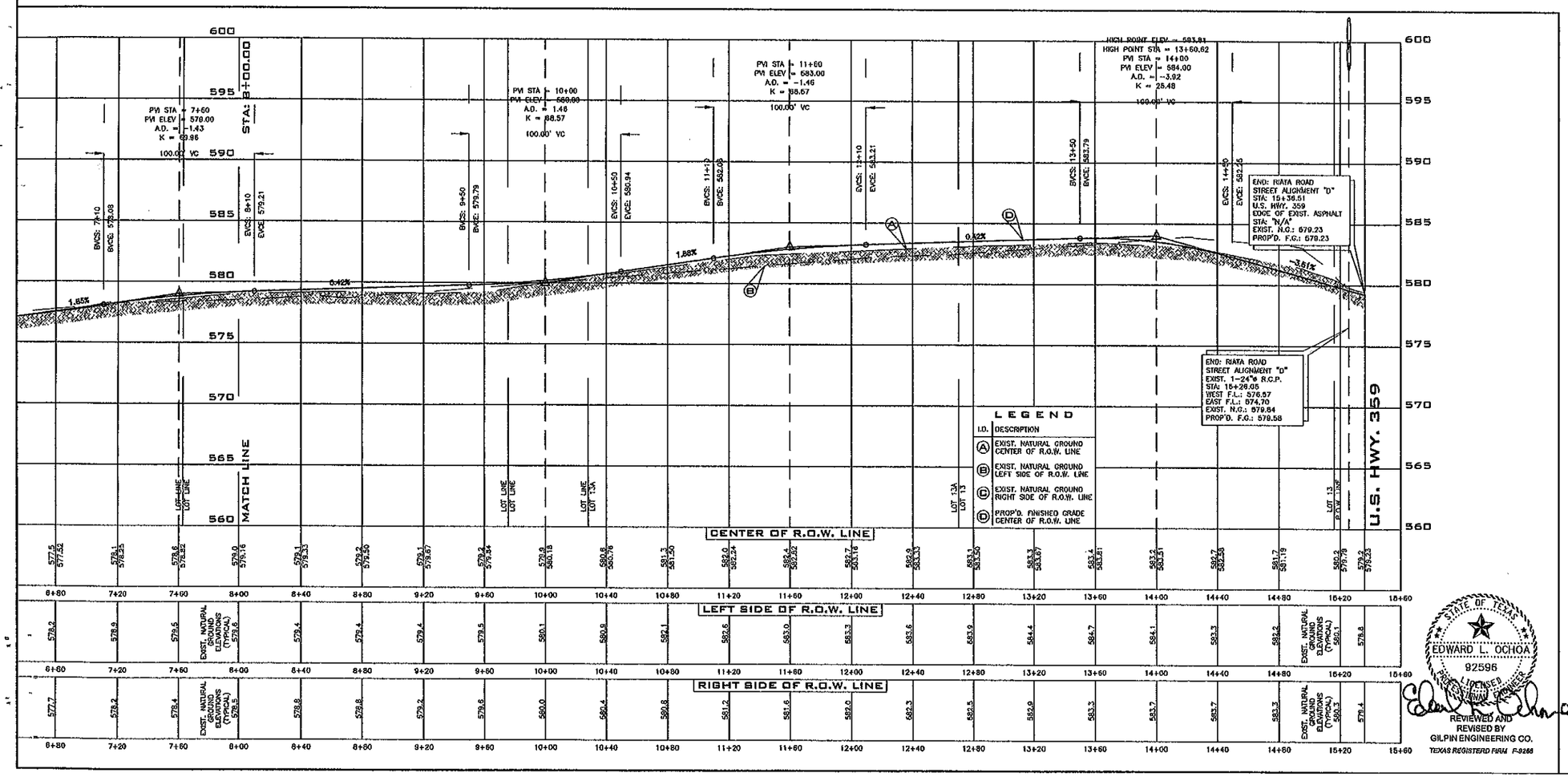
TANQUECITOS PHASE I AND II

PLAN VIEW
RIATA ROAD
STA: 8+00.00 TO STA: 15+36.12
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY
BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 25 OF	TOTAL 90





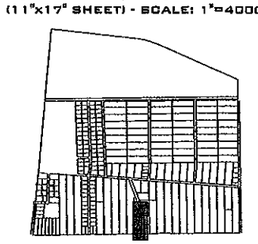
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"X36" SHEET) - SCALE: 1"=2000'
(11"X17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 ft.

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

REVIEWED AND REVISED BY GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-9266

03/07/11

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPATION REQUIRES 48 HOURS NOTICE BEFORE YOU DIG, DRILL OR BLAST - STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-6127
THE LONE STAR NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
PH. (956) 723-3451
FAX (956) 723-6502
1004 HILLSIDE RD.
ENGINEERING COMPANY LAREDO, TX 78041

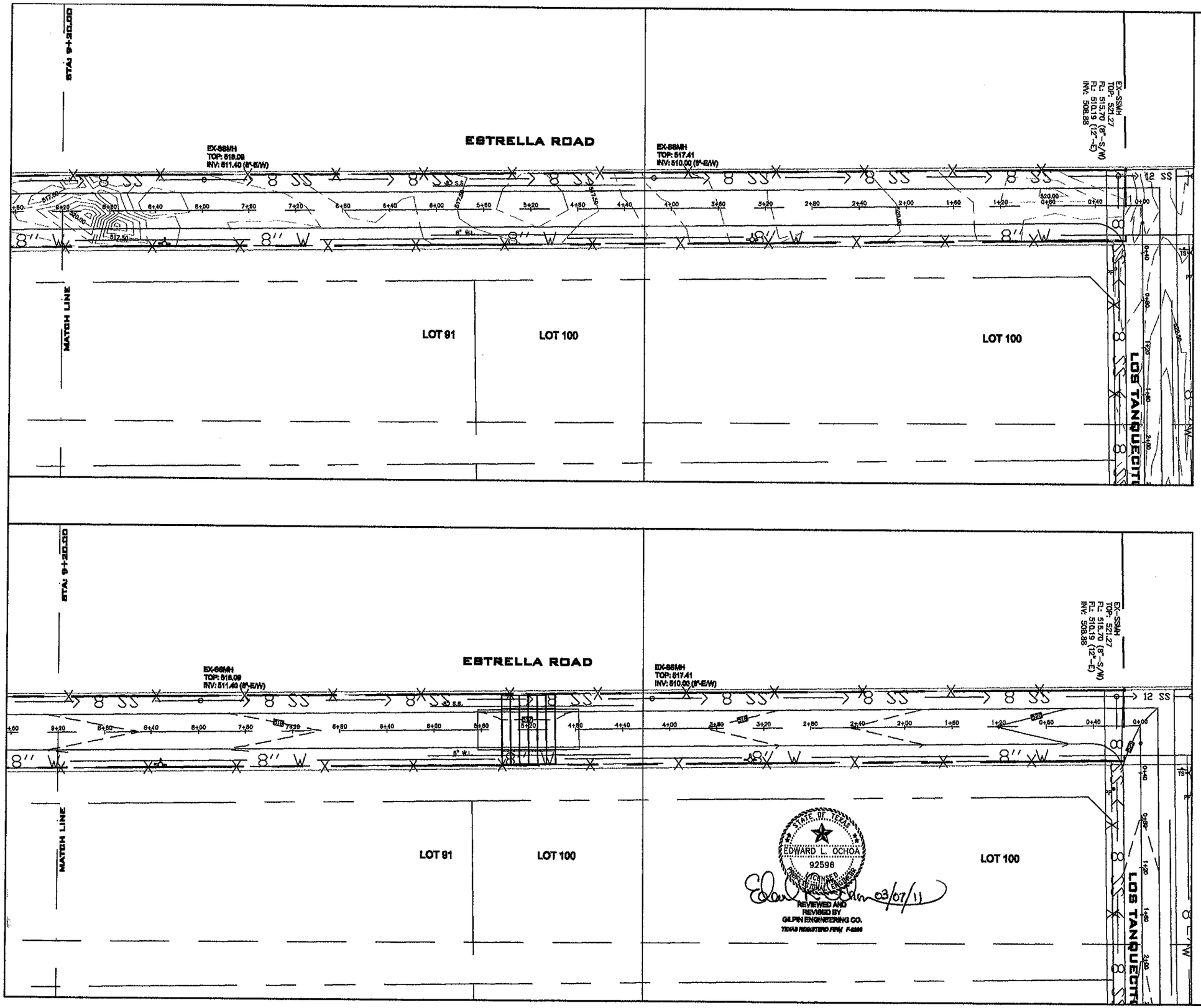
TANQUECITOS PHASE I AND II

PLAN AND PROFILE
RIATA ROAD
STA: 8+00.00 TO STA: 15+36.12
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=6'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 26	OF TOTAL: 90



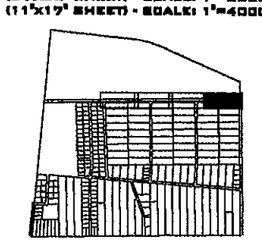
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

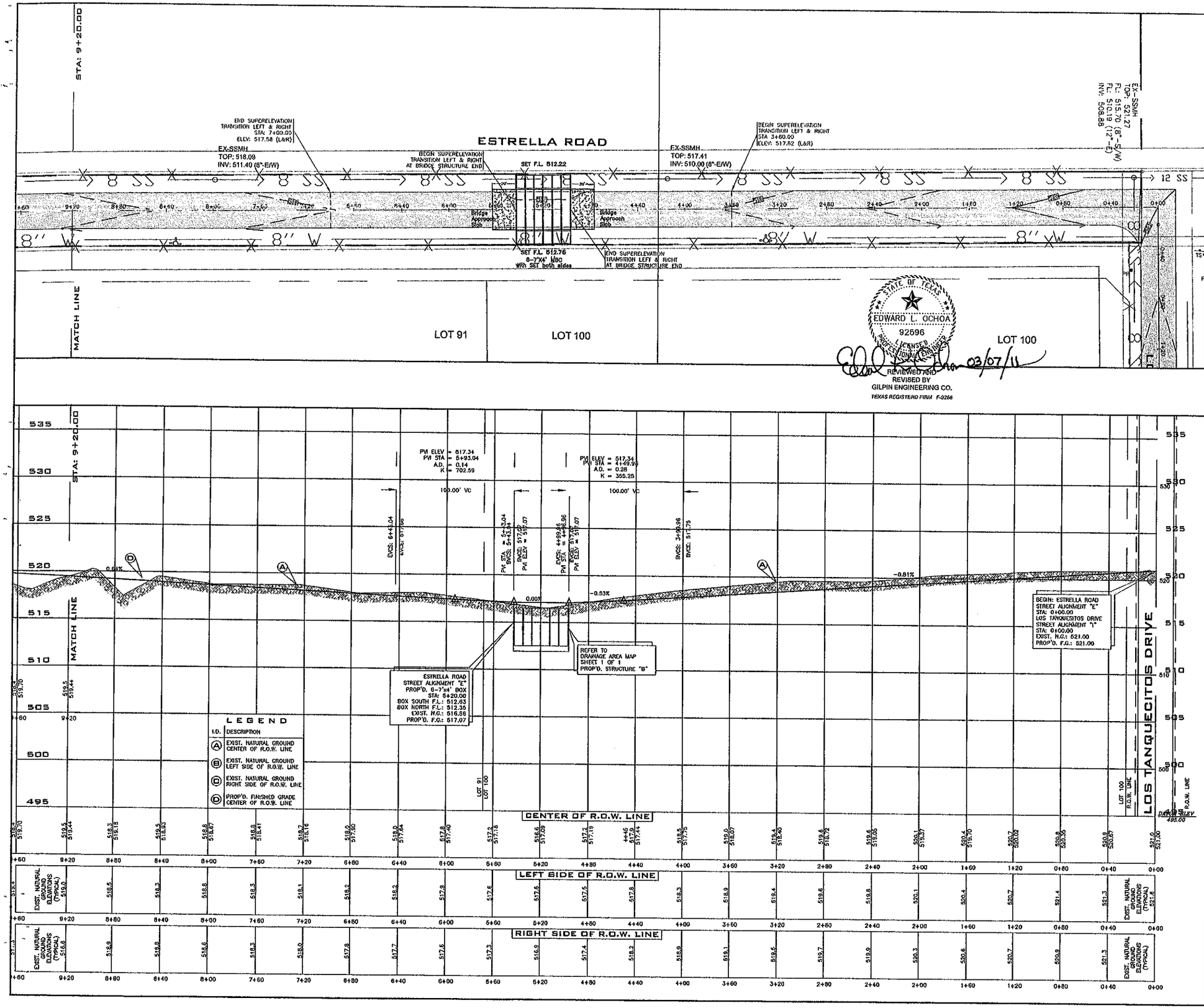
FOSTER
ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-5902
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

PLAN VIEW
ESTRELLA ROAD
STA: 0+00.00 TO STA: 9+20.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY
BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 03-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER: 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER: 1"=10'
SHEET 27	OF TOTAL: 90



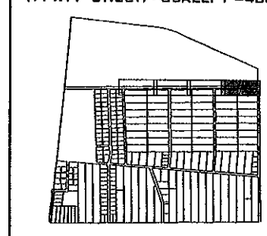
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX — OHP)
- EXISTING NATURAL GAS PIPELINE (EX — GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE PP
- EXISTING GUY WIRE GW
- EXISTING TRAFFIC SIGN TS
- EXISTING TELEPHONE PEDESTAL TP
- EXISTING WATER VALVE WV
- EXISTING FIRE HYDRANT HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPANTS REQUIRE 48 HOURS NOTICE BEFORE YOU DIG, DRILL, OR BLAST - STOP, CALL !
TEXAS ONE CALL SYSTEM 1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP AT 1-800-828-5127
THE LONE STAR NOTIFICATION COMPANY 1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM 1-800-344-8377

FOSTER
PH. (956) 723-3451
FAX (956) 722-8592
1001 HILLSIDE RD.
ENGINEERING COMPANY LAREDO, TX 78041

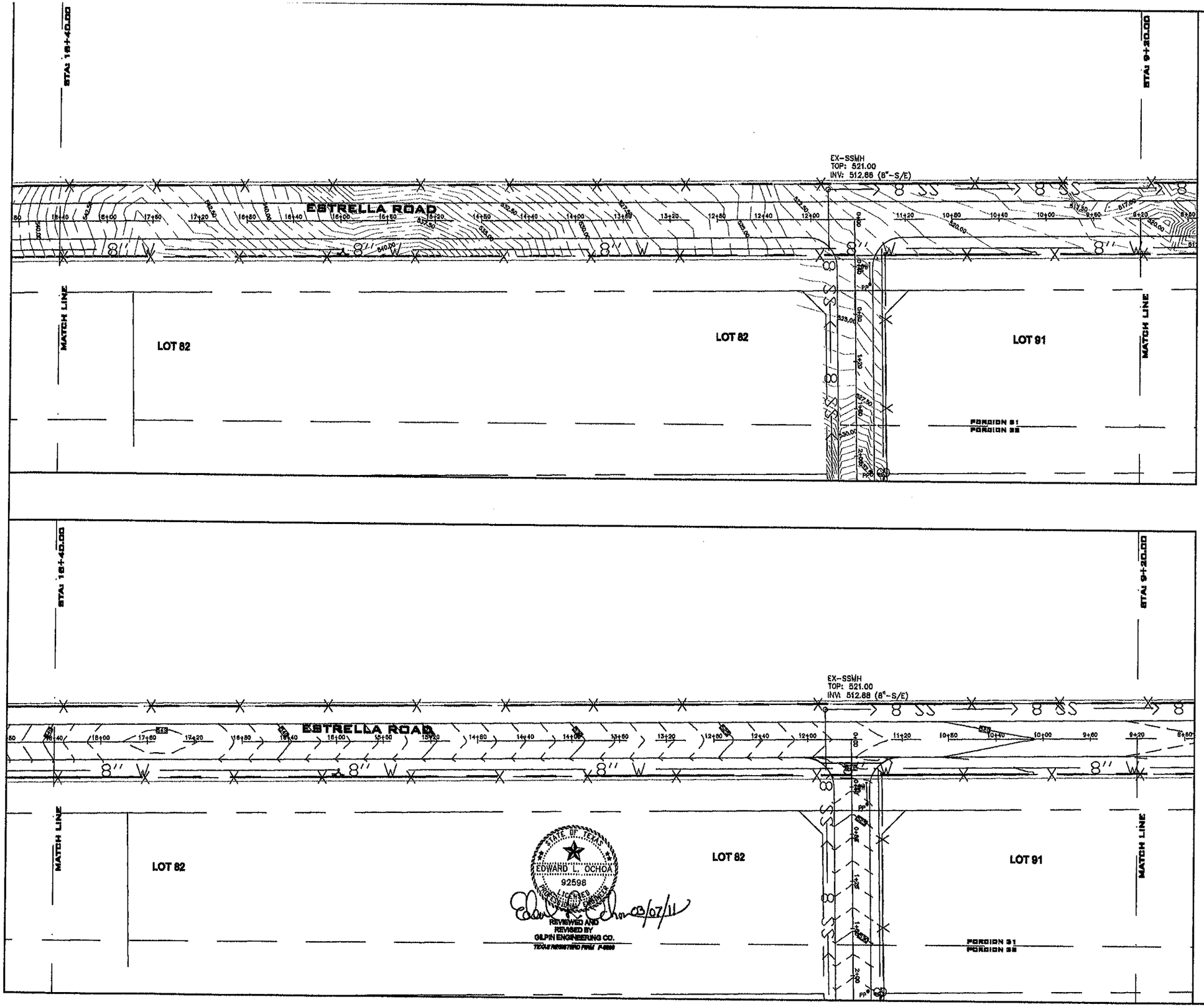
TANQUECITOS PHASE I AND II

PLAN AND PROFILE
ESTRELLA ROAD
STA: 0+00.00 TO STA: 9+20.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 04-09-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 28	OF TOTAL: 90



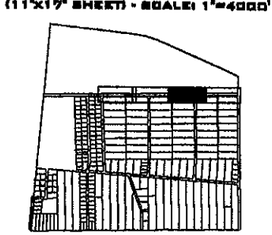
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

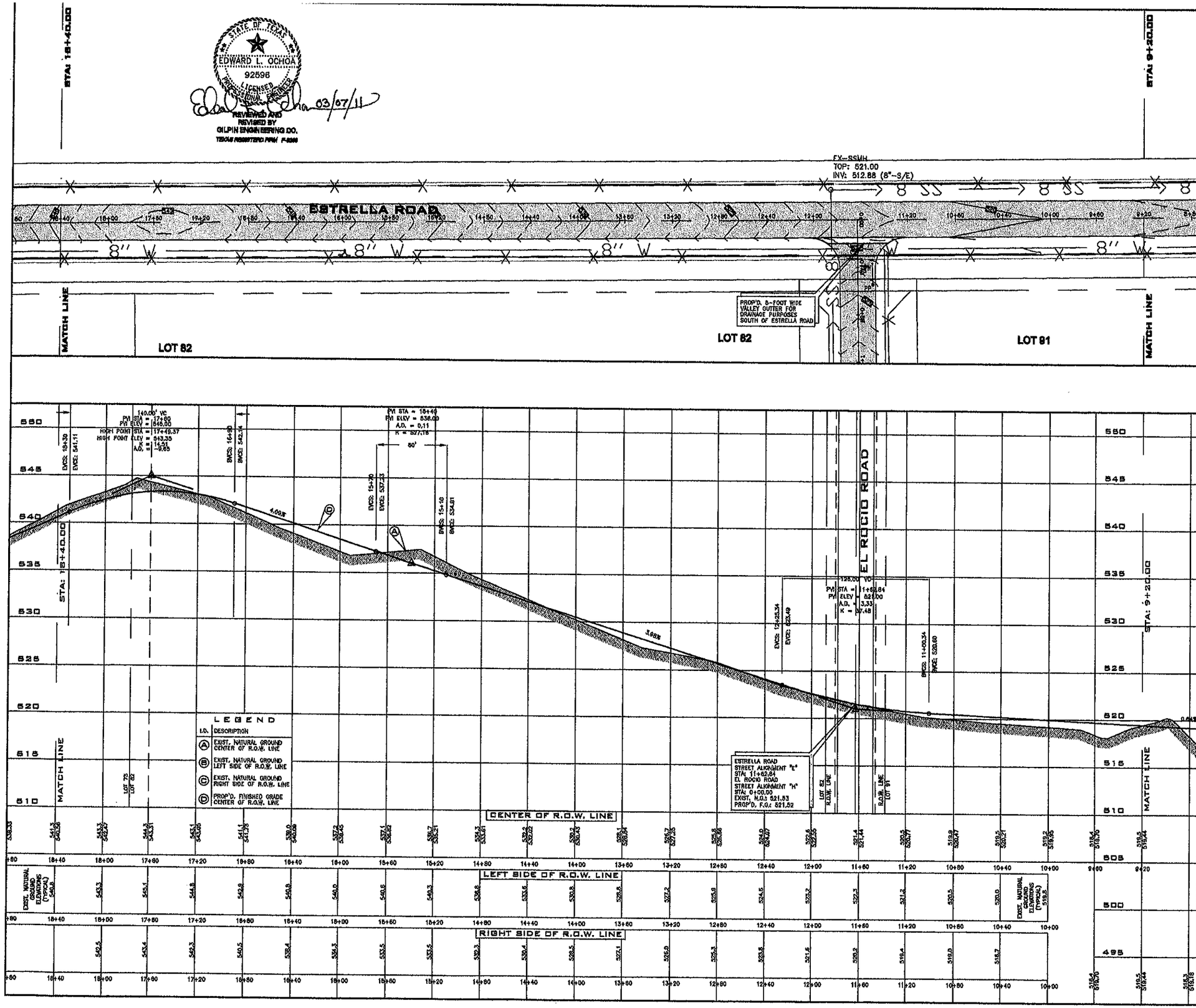
TANQUECITOS PHASE I AND II

PLAN VIEW
ESTRELLA ROAD
STA: 9+20.00 TO STA: 18+40.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY

BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-10	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER: 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER: 1"=10'
SHEET 29 OF	TOTAL 90



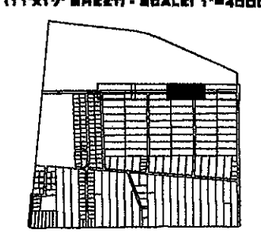
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE — EX — OHP
- EXISTING NATURAL GAS PIPELINE — EX — GAS
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) — 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) — 550
- EXISTING POWER POLE — PP
- EXISTING GUY WIRE — GW
- EXISTING TRAFFIC SIGN — TS
- EXISTING TELEPHONE PEDESTAL — TP
- EXISTING WATER VALVE — WV
- EXISTING FIRE HYDRANT — HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPANTS REQUEST 48 HOURS NOTICE BEFORE YOU DIG, CALL OR SUBMIT - STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

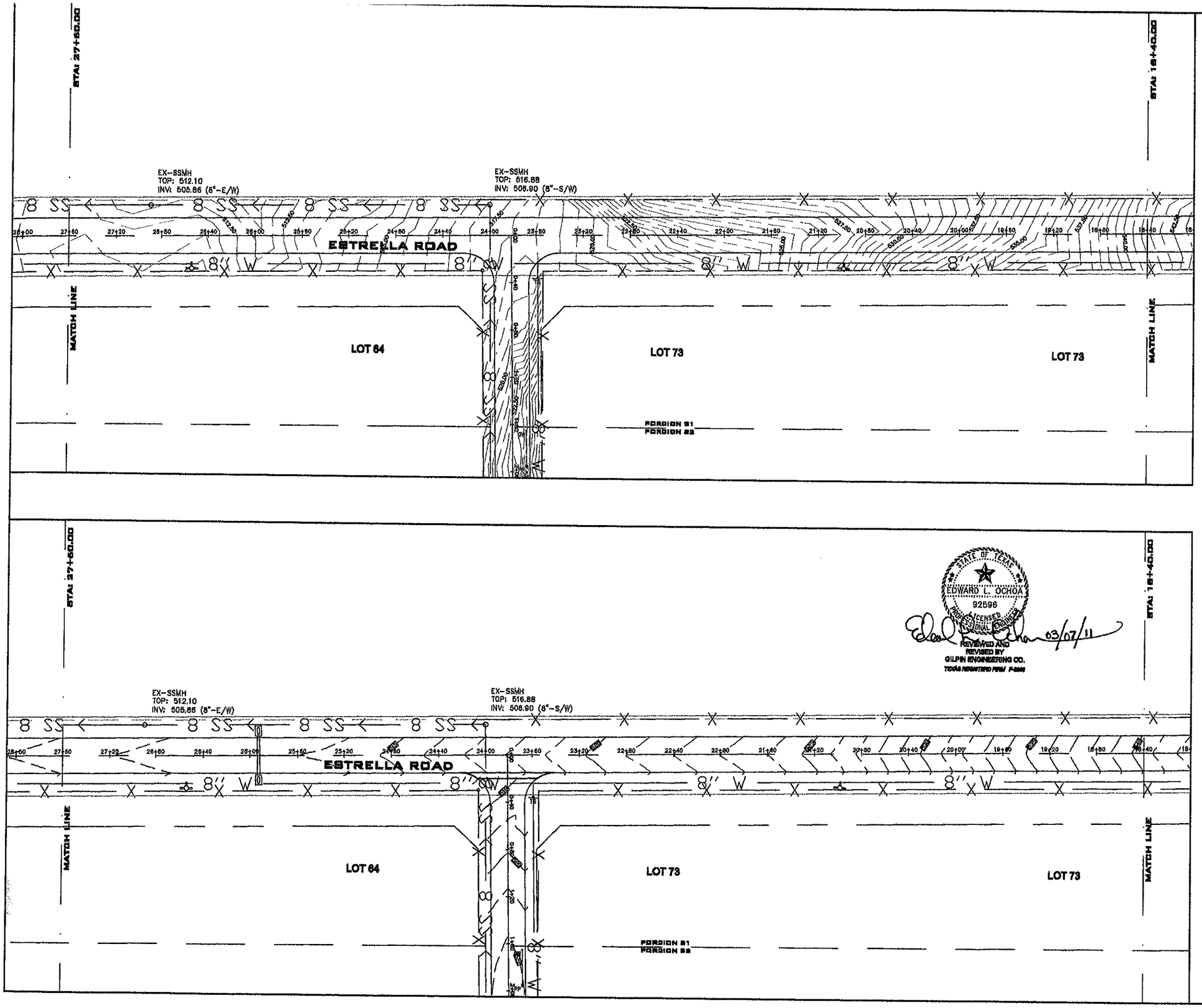
PLAN AND PROFILE
ESTRELLA ROAD
STA: 9+20.00 TO STA: 18+40.00
WEBB COUNTY, TEXAS

TOP VIEW
SHOWING
FINISHED GRADE PLAN

BOTTOM VIEW
SHOWING
FINISHED GRADE PROFILE

DRAWN BY:	O.R.
CHECKED BY:	E.L.O.
DRAWN DATE:	02-20-10
PLOTTED DATE:	01-14-11
JOB No.	N/A
FILE NAME:	TANQUECITOS
STATUS:	100%
AS-BUILT:	NO
REVISED DATE:	09-03-10

SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'



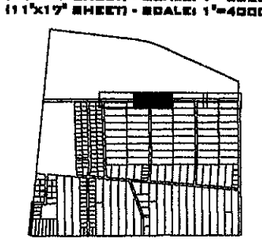
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER ENGINEERING COMPANY
PH: (956) 723-3451
FAX (956) 723-6922
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

PLAN VIEW
ESTRELLA ROAD
STA: 18+40.00 TO STA: 27+60.00
WEBB COUNTY, TEXAS

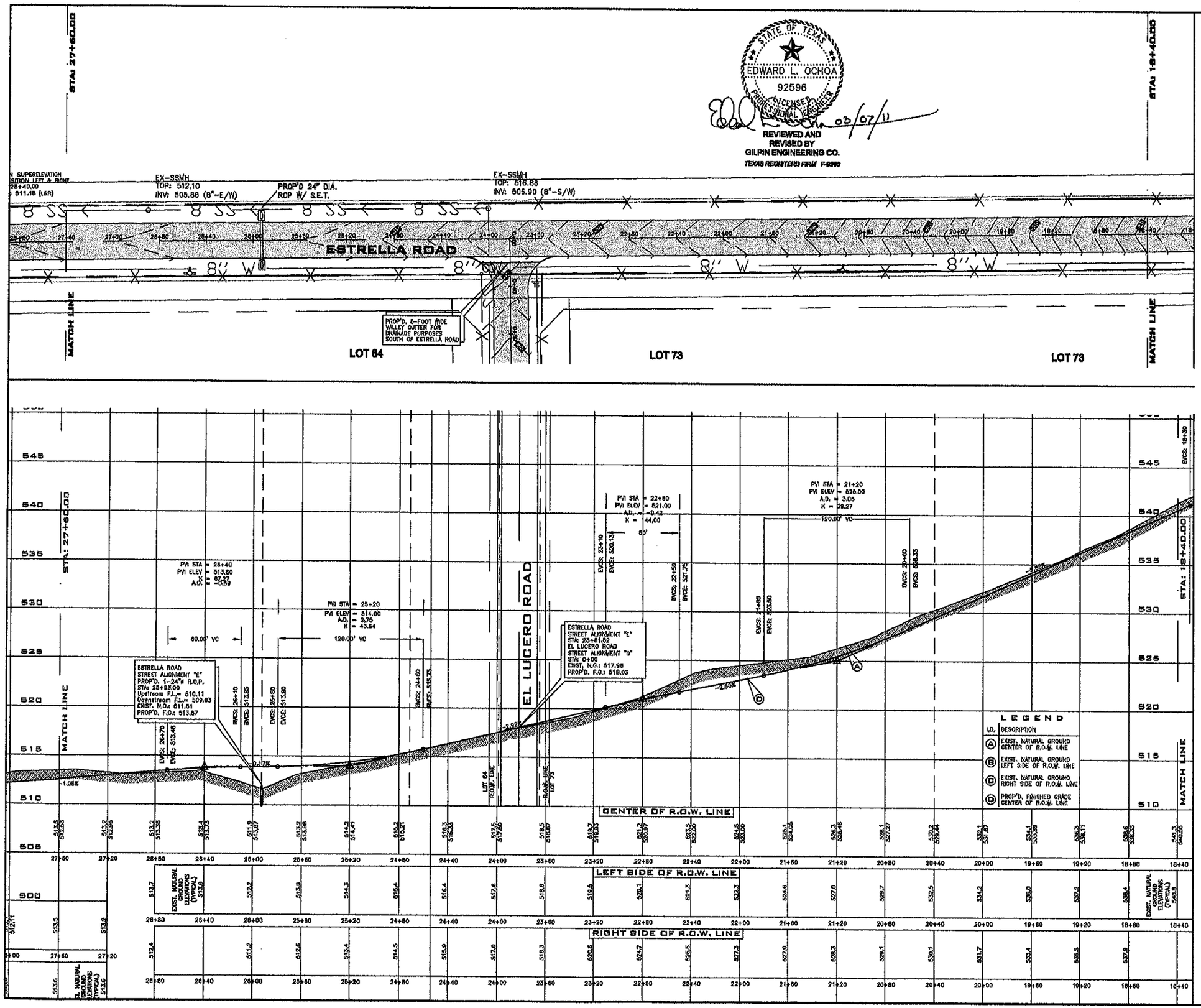
TOP VIEW SHOWING EXISTING TOPOGRAPHY
BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 31 OF	TOTAL: 90

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED PROFESSIONAL ENGINEER

03/07/11

REVIEWED AND REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-9299



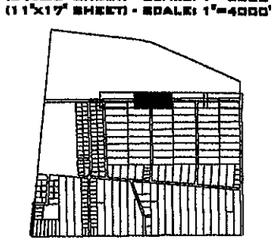
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-5522
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

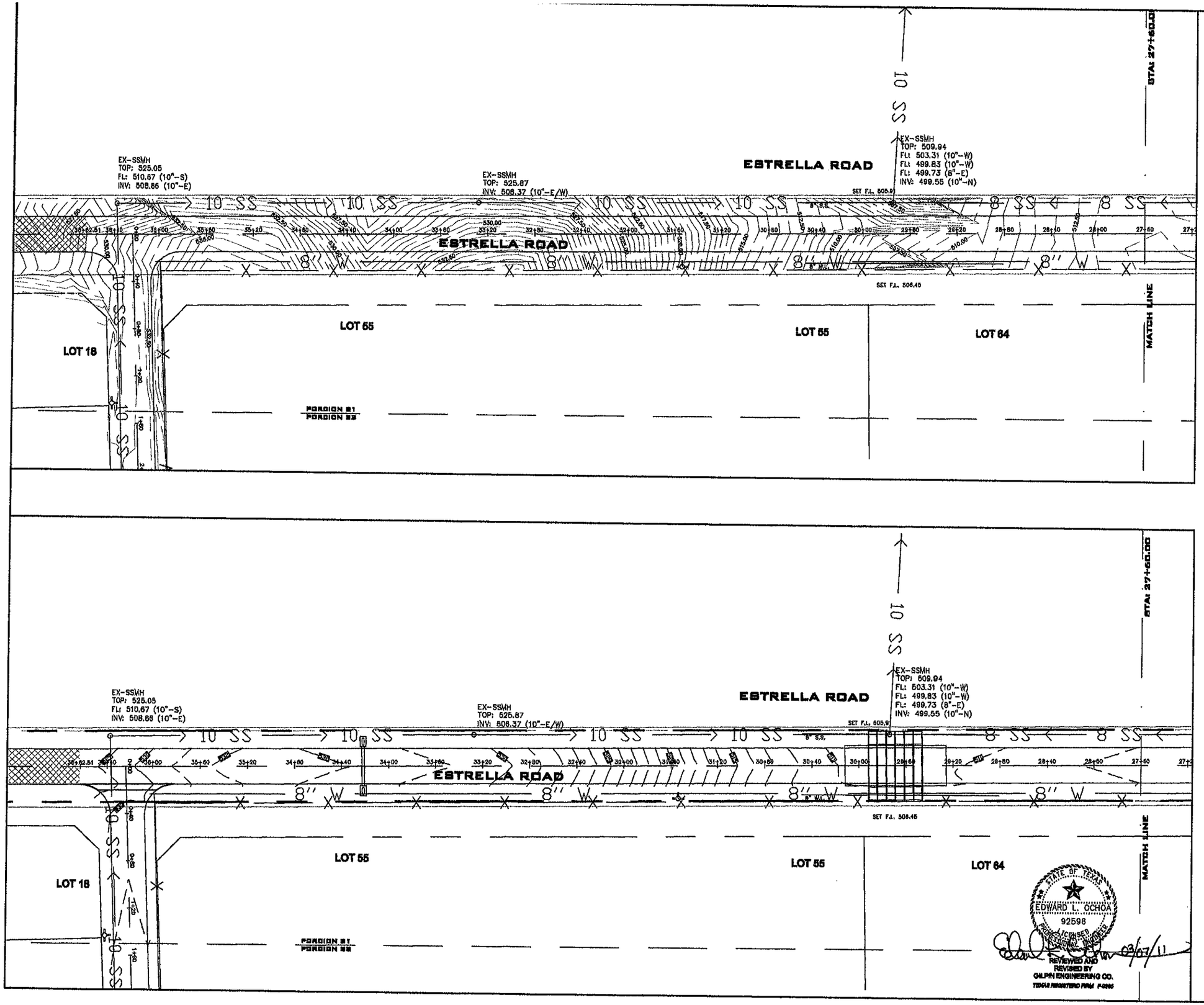
PLAN AND PROFILE
ESTRELLA ROAD
STA: 18+40.00 TO STA: 27+60.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY:	O.R.
CHECKED BY:	E.L.O.
DRAWN DATE:	02-20-07
PLOTTED DATE:	01-14-11
JOB No.	N/A
FILE NAME:	TANQUECITOS
STATUS:	100%
AS-BUILT:	NO
REVISED DATE:	09-03-10
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'

SHEET 32 OF TOTAL 90



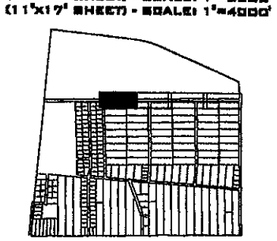
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE PP
- EXISTING GUY WIRE GW
- EXISTING TRAFFIC SIGN TS
- EXISTING TELEPHONE PEDESTAL TP
- EXISTING WATER VALVE WV
- EXISTING FIRE HYDRANT HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=3000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127

THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

STATE OF TEXAS
EDWARD L. OCHOA
92598
LICENSED
PROFESSIONAL ENGINEER

03/07/11

REVIEWED AND
REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-2595

FOSTER
ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

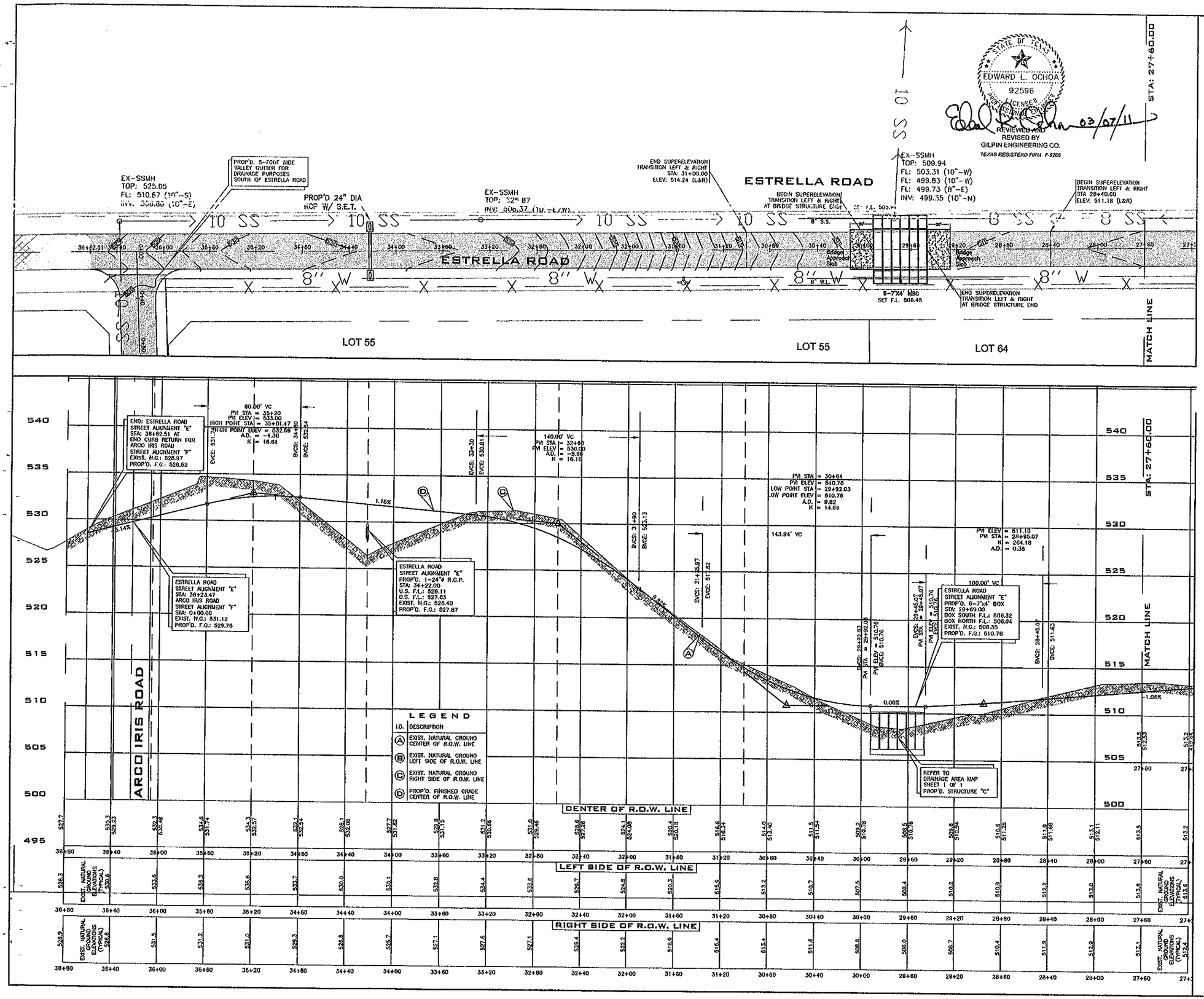
TANQUECITOS PHASE I AND II

PLAN VIEW
ESTRELLA ROAD
STA: 27+60.00 TO STA: 36+23.47
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY

BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER: 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER: 1"=10'
SHEET 33	TOTAL: OF 90



AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE PP
- EXISTING GUY WIRE GW
- EXISTING TRAFFIC SIGN TS
- EXISTING TELEPHONE PEDESTAL TP
- EXISTING WATER VALVE WV
- EXISTING FIRE HYDRANT HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPANTS REVISED! 48 HOURS BEFORE YOU DIG CALL OR FAX! - STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP AT 1-800-828-5127
THE LONE STAR NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
PH. (956) 723-3451
FAX. (956) 723-5902
1004 HILLSIDE RD.
ENGINEERING COMPANY LAREDO, TX 78041

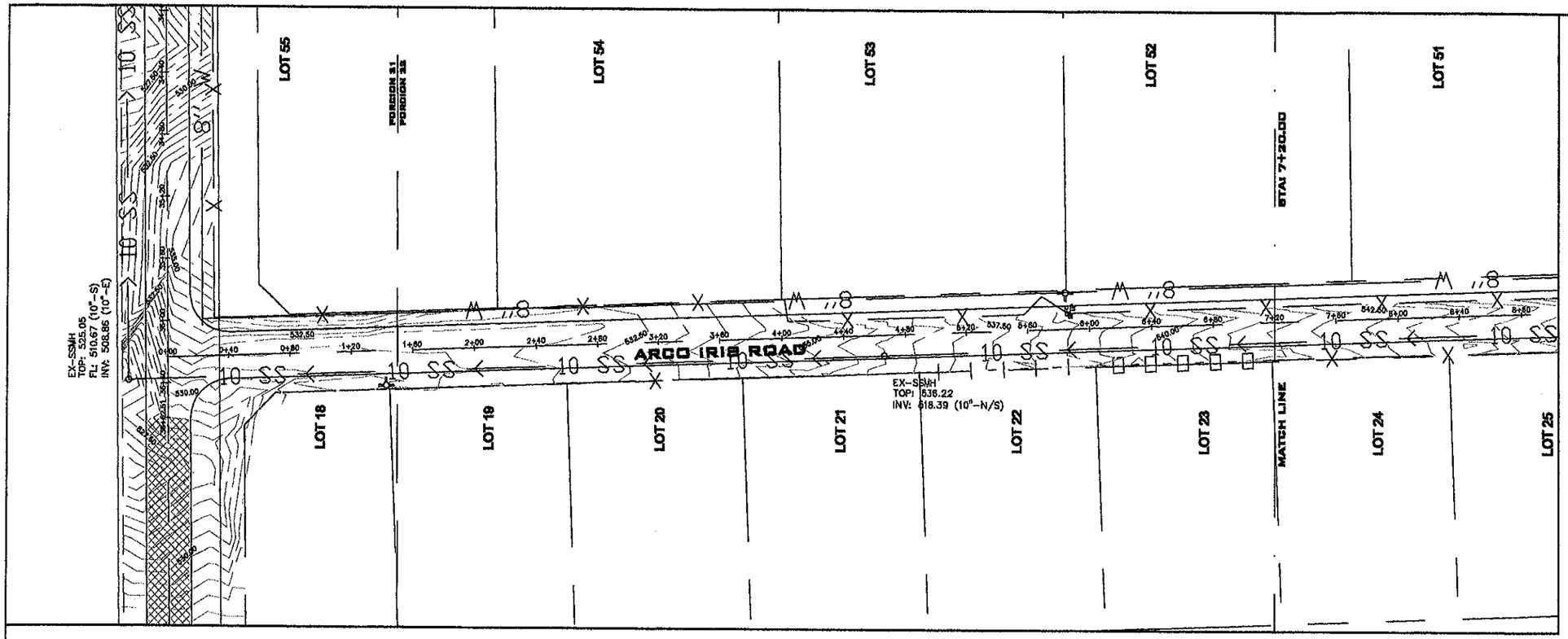
TANQUECITOS PHASE I AND II

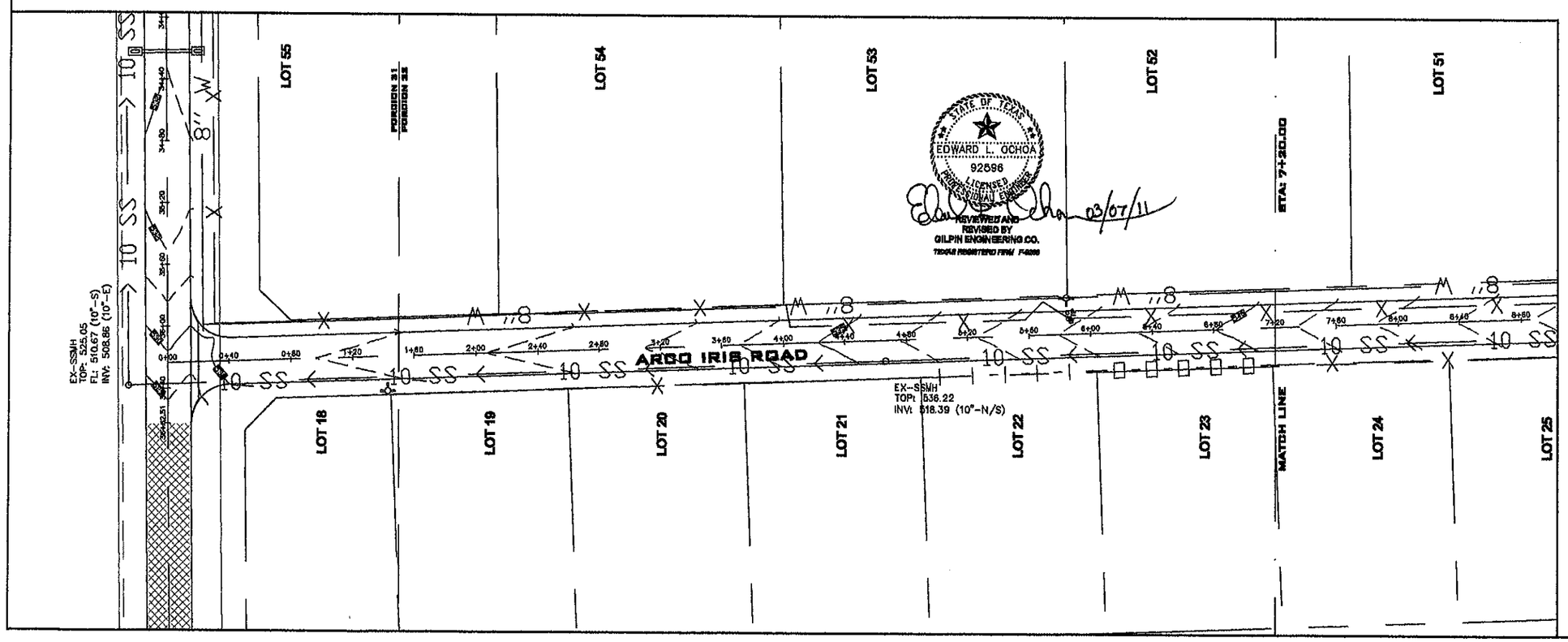
PLAN AND PROFILE
ESTRELLA ROAD
STA: 27+60.00 TO STA: 36+23.47
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY:	O.R.
CHECKED BY:	E.L.O.
DRAWN DATE:	02-20-07
PLOTTED DATE:	01-14-11
JOB No.	N/A
FILE NAME:	TANQUECITOS
STATUS:	100%
AS-BUILT:	NO
REVISED DATE:	09-03-10
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET	TOTAL:
34 OF	90





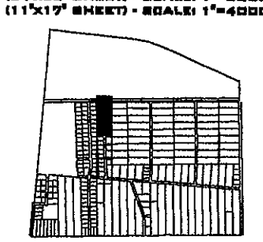
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127

THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6502
1004 HILLSIDE RD.
LAREDO, TX 78041

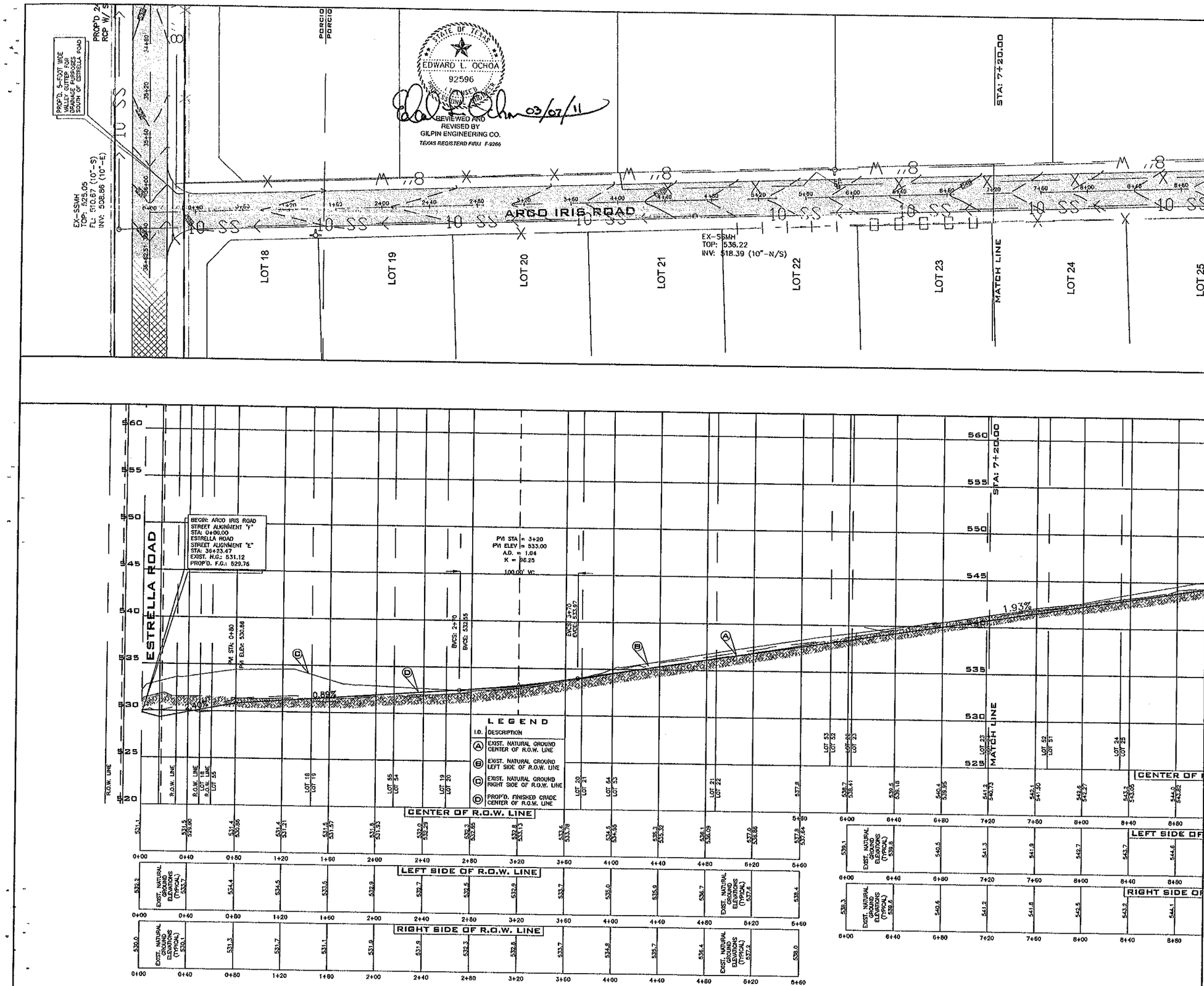
TANQUECITOS PHASE I AND II

PLAN VIEW
ARCO IRIS ROAD
STA: 0+00.00 TO STA: 7+20.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY

BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 35	OF TOTAL 90



AS SHOWN

LEGEND

EXISTING FENCE BARB WIRE

EXISTING FENCE BLOCK

EXISTING FENCE CHAIN LINK

EXISTING FENCE CHICKEN

EXISTING FENCE IRON

EXISTING FENCE LAMINA

EXISTING FENCE WOOD

EXISTING OVERHEAD POWER LINE EX — OHP

EXISTING NATURAL GAS PIPELINE EX — GAS

EXISTING LOT LINE

EXISTING CONTOUR LINE (MINOR)

EXISTING CONTOUR LINE (MAJOR) 550.00

FINISHED CONTOUR LINE (MINOR)

FINISHED CONTOUR LINE (MAJOR) 550

EXISTING POWER POLE PP

EXISTING GUY WIRE GW

EXISTING TRAFFIC SIGN TS

EXISTING TELEPHONE PEDESTAL TP

EXISTING WATER VALVE WV

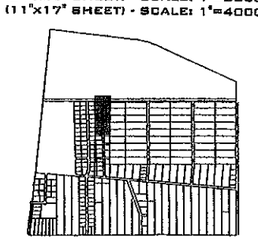
EXISTING FIRE HYDRANT HYD

EXIST. ASPHALT

EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 Inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPANTS REQUEST 48 HOURS NOTICE BEFORE YOU DIG, DRILL, OR BLAST - STOP, CALL !
TEXAS ONE CALL SYSTEM 1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP AT 1-800-828-5127
THE LONE STAR NOTIFICATION COMPANY 1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM 1-800-344-8377

FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

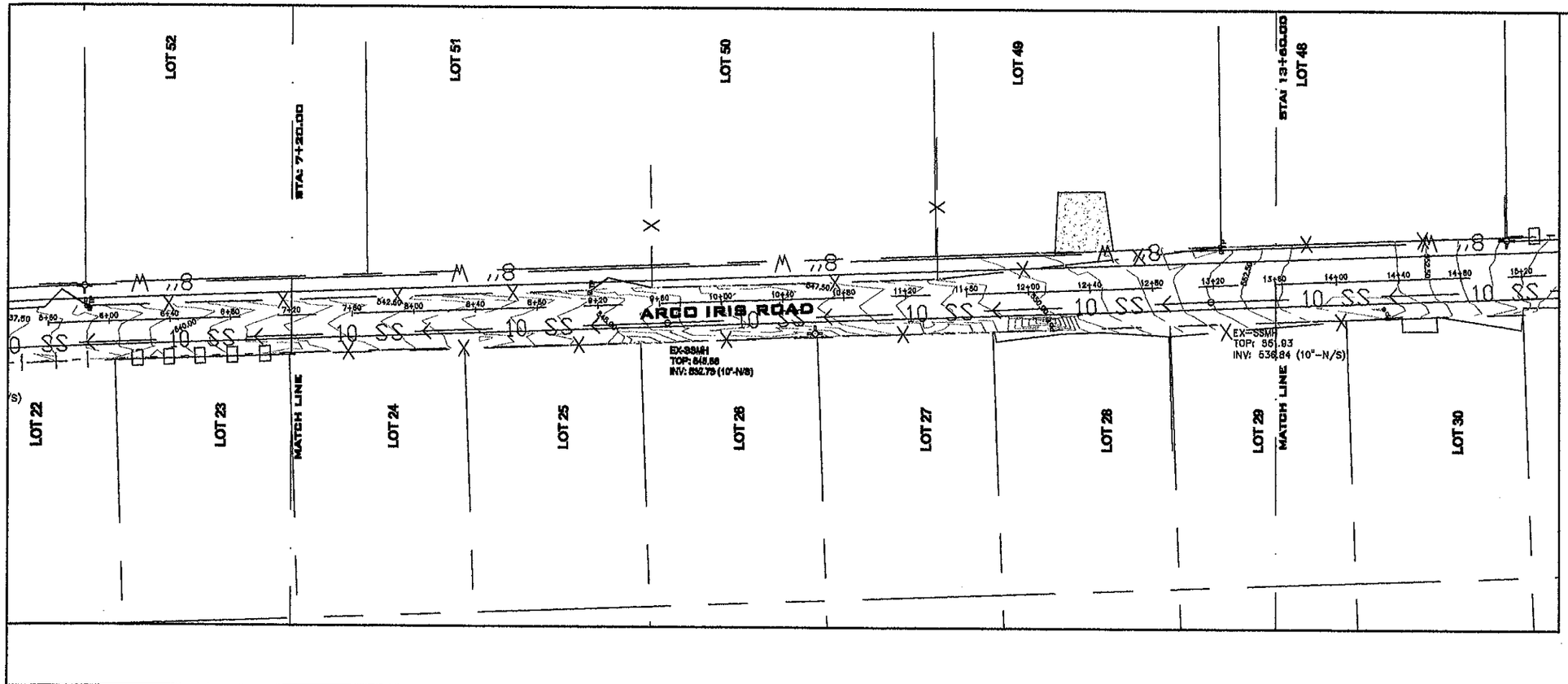
PLAN AND PROFILE
ARCO IRIS ROAD
STA: 0+00.00 TO STA: 7+20.00
WEBB COUNTY, TEXAS

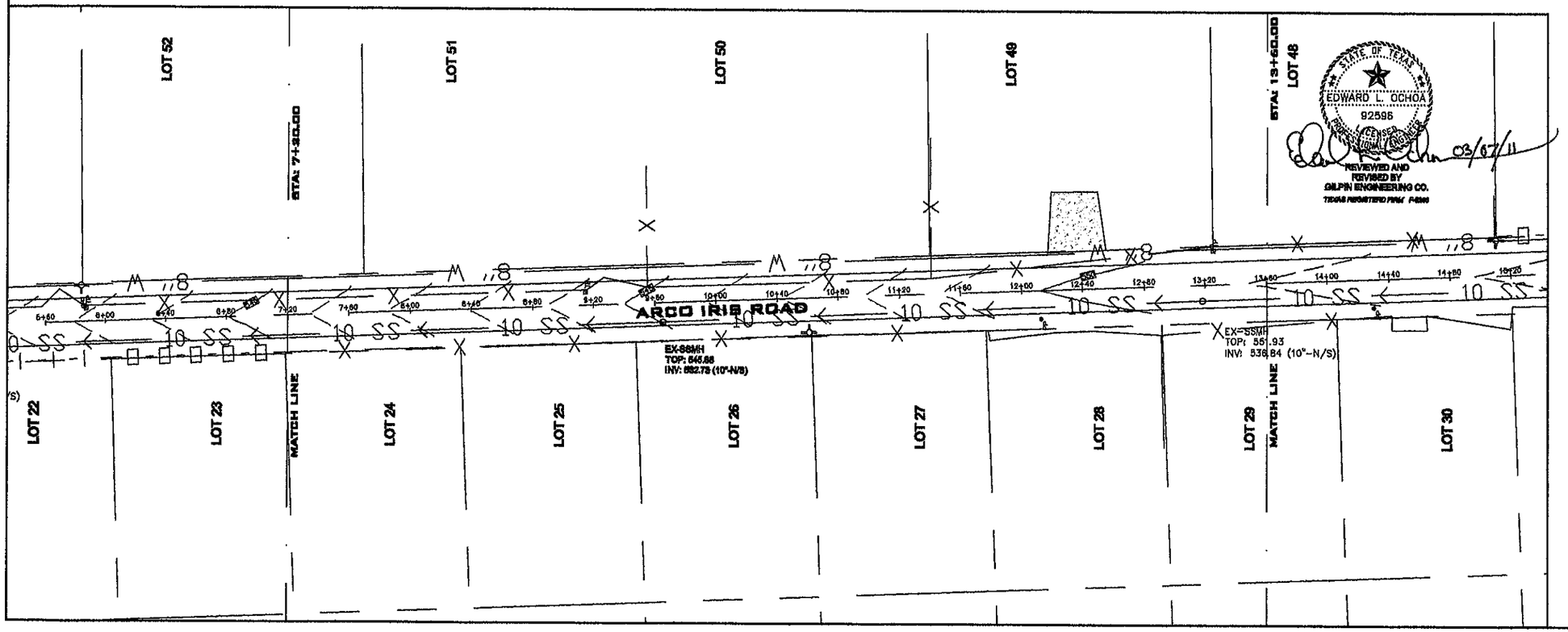
TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY:	O.R.
CHECKED BY:	E.L.O.
DRAWN DATE:	02-20-07
PLOTTED DATE:	01-14-11
JOB No.	N/A
FILE NAME:	TANQUECITOS
STATUS:	100%
AS-BUILT:	NO
REVISED DATE:	09-03-10

SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 36 OF	TOTAL: 90





STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

03/07/11

REVIEWED AND REVISED BY GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-8266

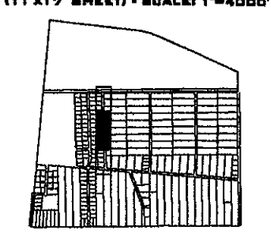
AS SHOWN

LEGEND

EXISTING FENCE BARB WIRE
EXISTING FENCE BLOCK
EXISTING FENCE CHAIN LINK
EXISTING FENCE CHICKEN
EXISTING FENCE IRON
EXISTING FENCE LAMINA
EXISTING FENCE WOOD
EXISTING OVERHEAD POWER LINE
EX OHP
EXISTING NATURAL GAS PIPELINE
EX GAS
EXISTING LOT LINE
EXISTING CONTOUR LINE (MINOR)
EXISTING CONTOUR LINE (MAJOR)
550.00
FINISHED CONTOUR LINE (MINOR)
FINISHED CONTOUR LINE (MAJOR)
550
EXISTING POWER POLE
PP
EXISTING GUY WIRE
GW
EXISTING TRAFFIC SIGN
TS
EXISTING TELEPHONE PEDESTAL
TP
EXISTING WATER VALVE
WV
EXISTING FIRE HYDRANT
HYD
EXIST. ASPHALT
EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL PURCHASING REQUEST
48 HOURS NOTICE BEFORE YOU DIG, DIG
OR BLAST - STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

PLAN VIEW
ARCO IRIS ROAD
STA: 7+20.00 TO STA: 13+60.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY

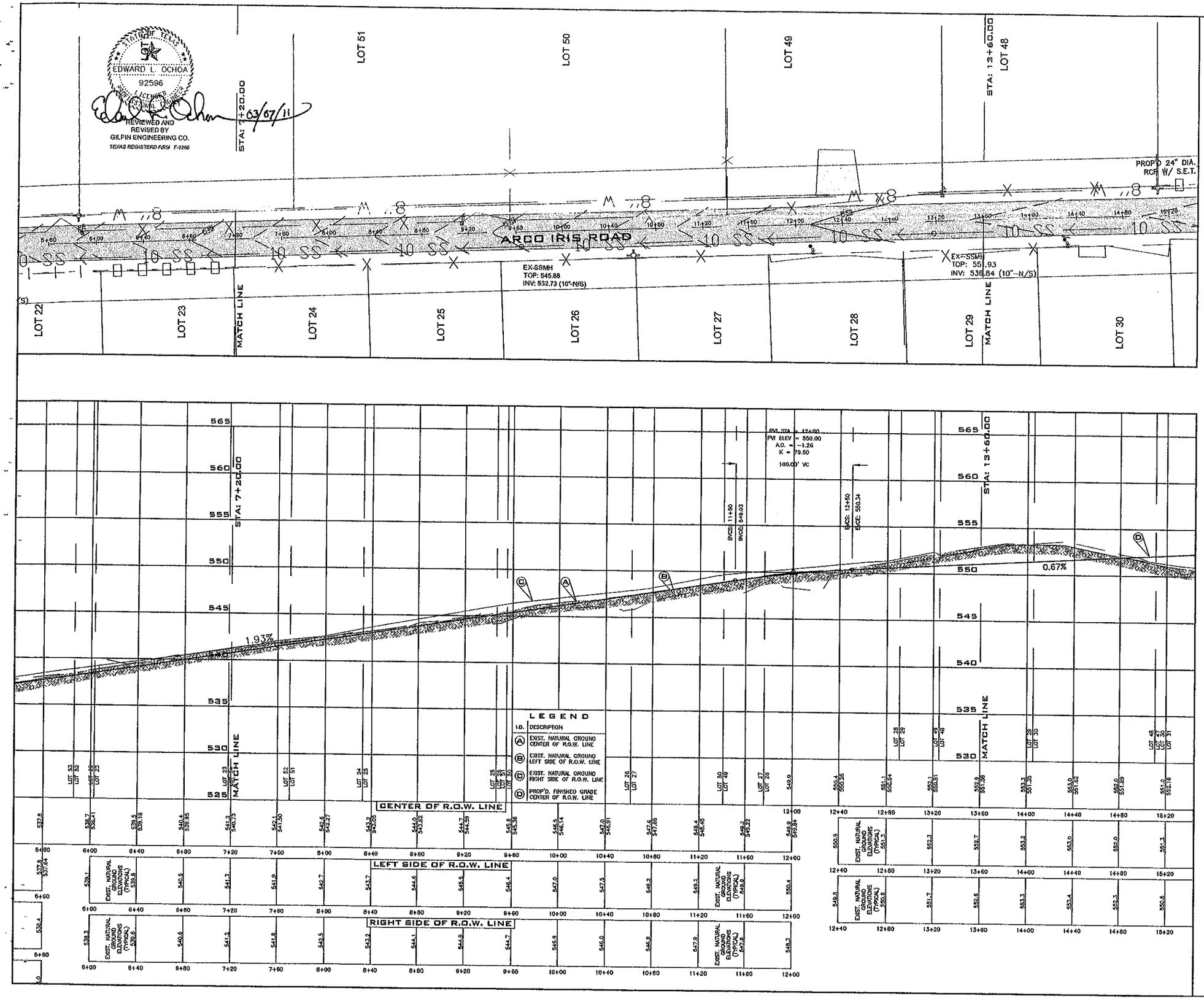
BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 020-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 37 OF	TOTAL: 90

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED PROFESSIONAL ENGINEER

REVIEWED AND REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-9266

03/07/11



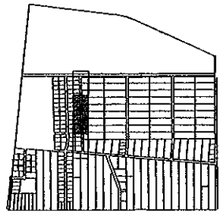
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPANTS REQUIRE 48 HOURS NOTICE BEFORE YOU DIG, DRILL OR BLAST - STOP, CALL !

TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127

THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

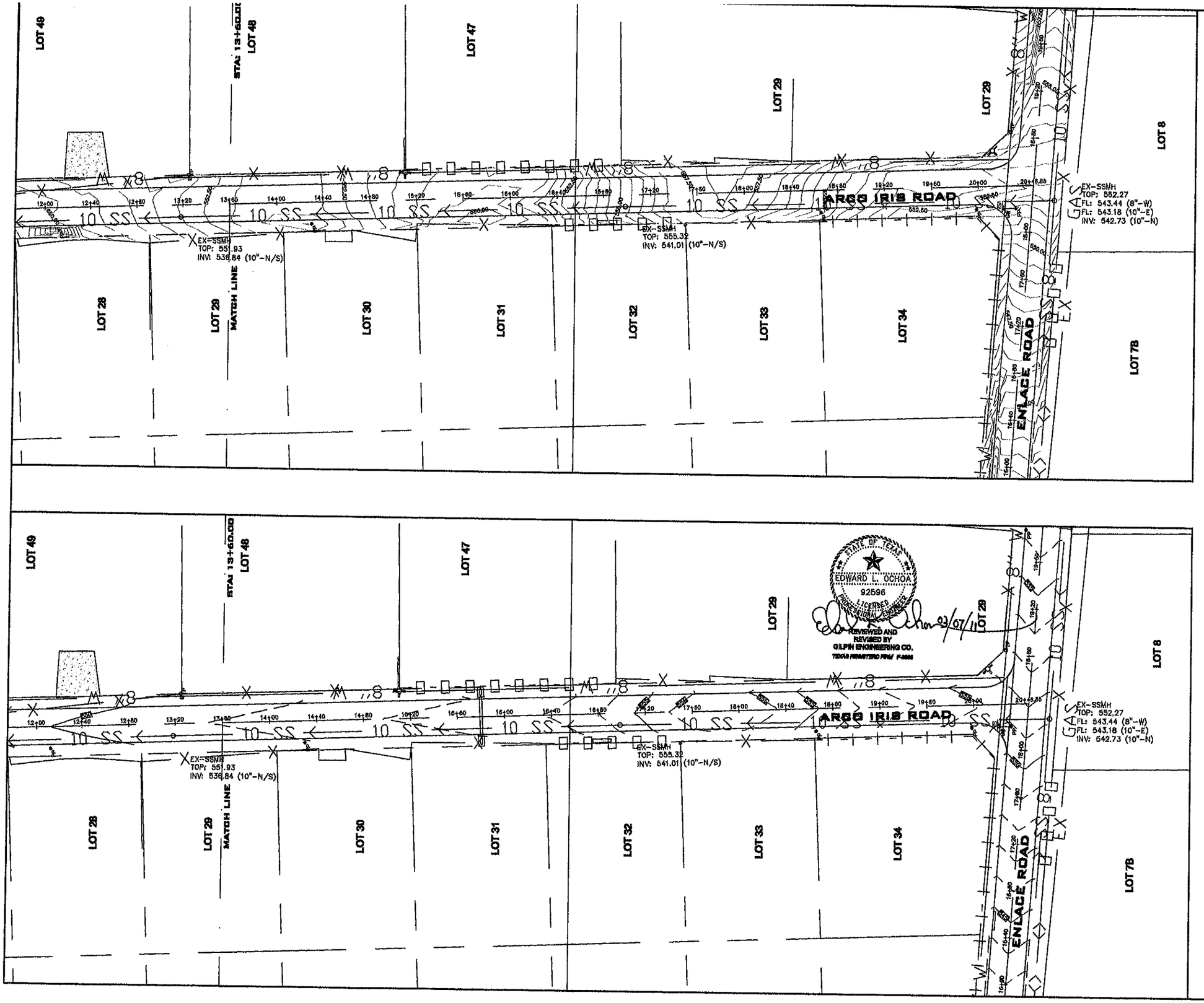
TANQUECITOS PHASE I AND II

PLAN AND PROFILE
ARCO IRIS ROAD
STA: 7+20.00 TO STA: 13+60.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 04-09-2010	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 38	TOTAL: OF 90



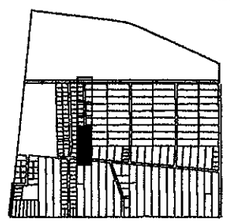
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
A1 1-800-828-5127

THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

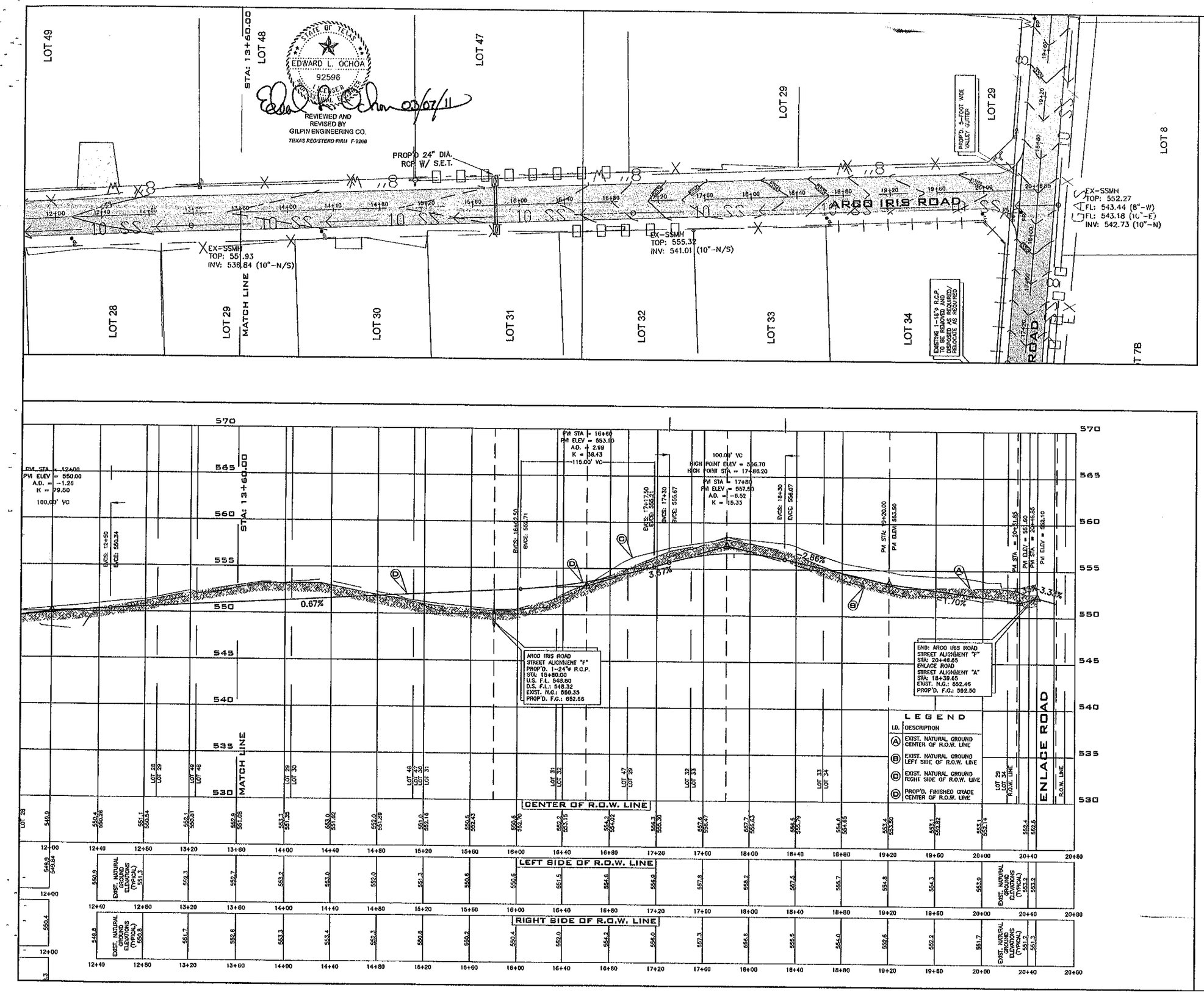
TANQUECITOS PHASE I AND II

PLAN VIEW
ARCO IRIS ROAD
STA: 13+60.00 TO STA: 20+46.85
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY

BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 39 OF	TOTAL 90



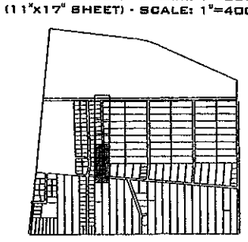
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE PP
- EXISTING GUY WIRE GW
- EXISTING TRAFFIC SIGN TS
- EXISTING TELEPHONE PEDESTAL TP
- EXISTING WATER VALVE WV
- EXISTING FIRE HYDRANT HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPANTS REQUEST 48 HOURS NOTICE BEFORE YOU DIG, DRILL, OR BLAST - STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127

THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

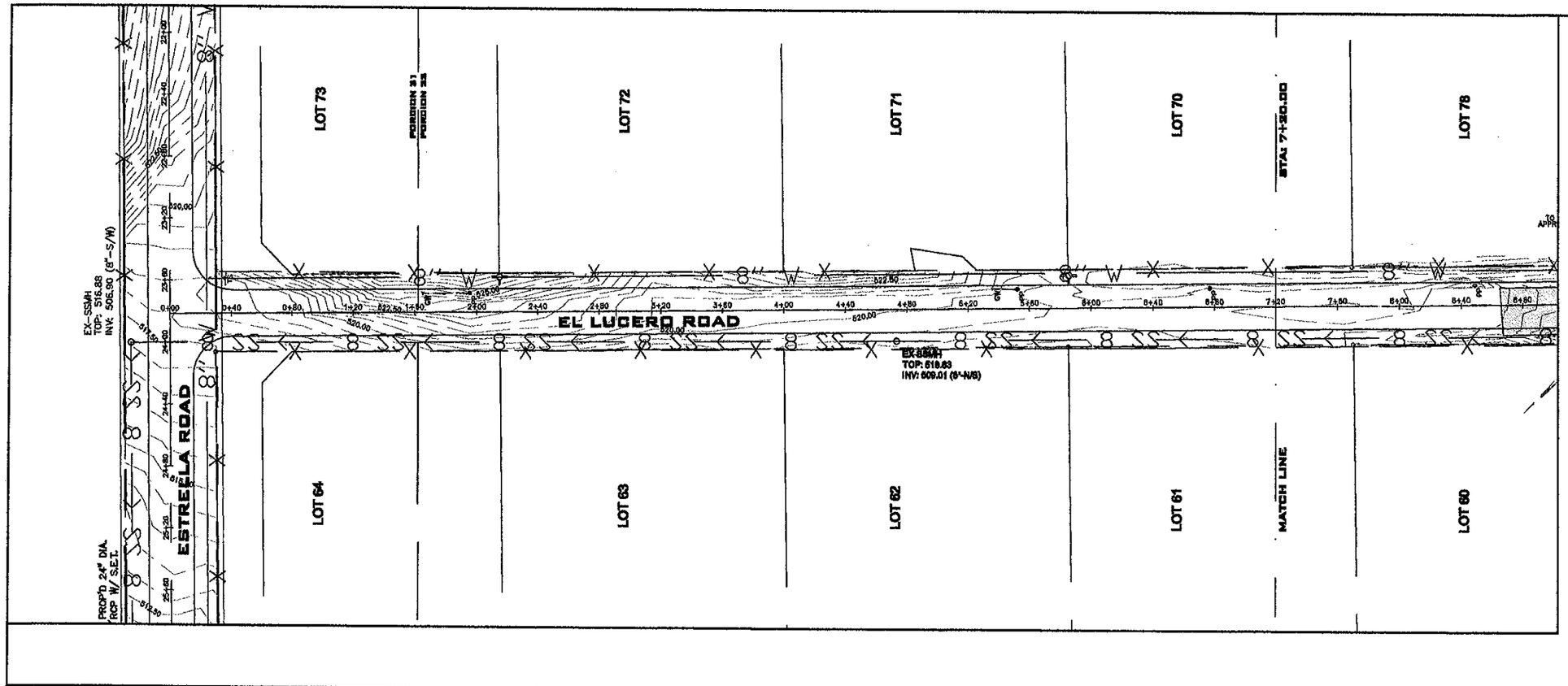
TANQUECITOS PHASE I AND II

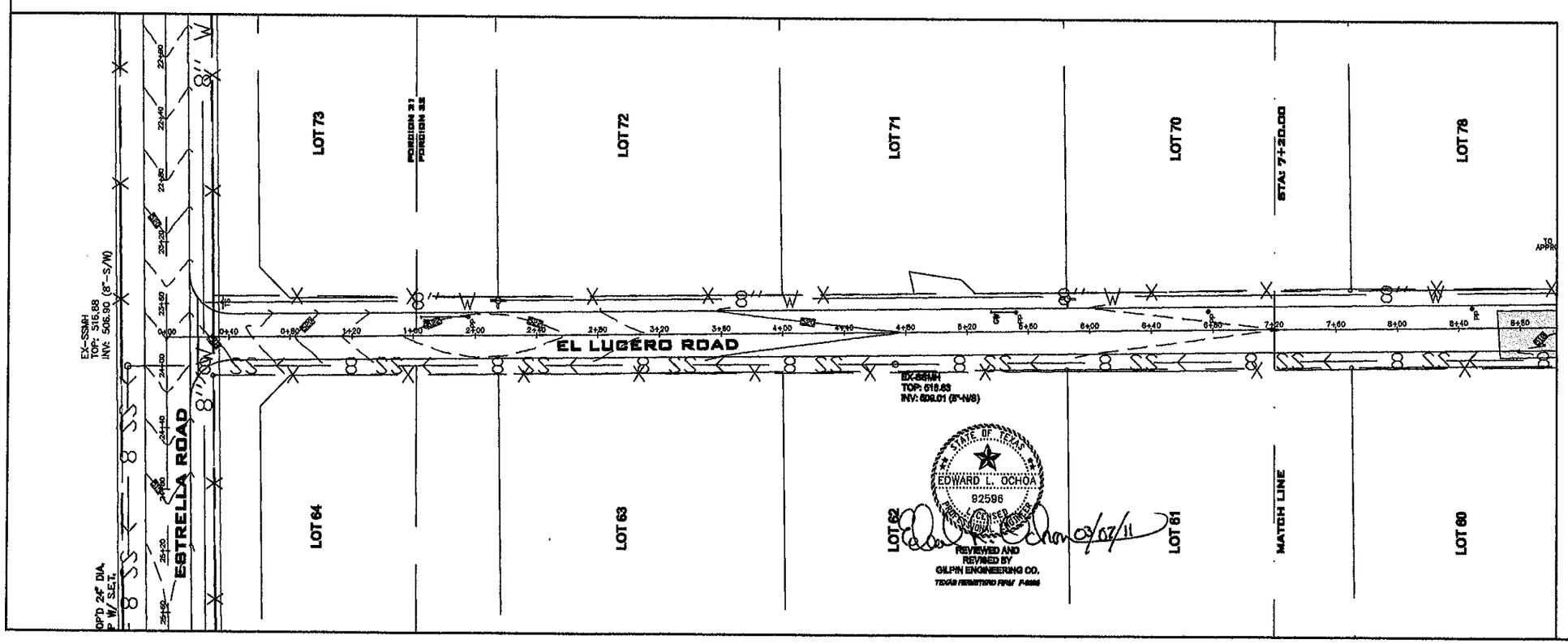
PLAN AND PROFILE
ARCO IRIS ROAD
STA: 13+60.00 TO STA: 20+46.85
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 40 OF	TOTAL: 90





STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

09/07/11

REVIEWED AND
REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-8086

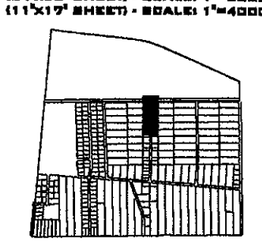
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER ENGINEERING COMPANY
PH: (956) 723-3451
FAX (956) 723-6602
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

PLAN VIEW
EL LUCERO ROAD
STA: 0+00.00 TO STA: 7+20.00
WEBB COUNTY, TEXAS

TOP VIEW
SHOWING
EXISTING TOPOGRAPHY

BOTTOM VIEW
SHOWING
PROPOSED TOPOGRAPHY

DRAWN BY:	O.R.
CHECKED BY:	E.L.O.
DRAWN DATE:	02-20-07
PLOTTED DATE:	01-14-11
JOB No.	N/A
FILE NAME:	TANQUECITOS
STATUS:	100%
AS-BUILT:	NO
REVISED DATE:	09-03-10

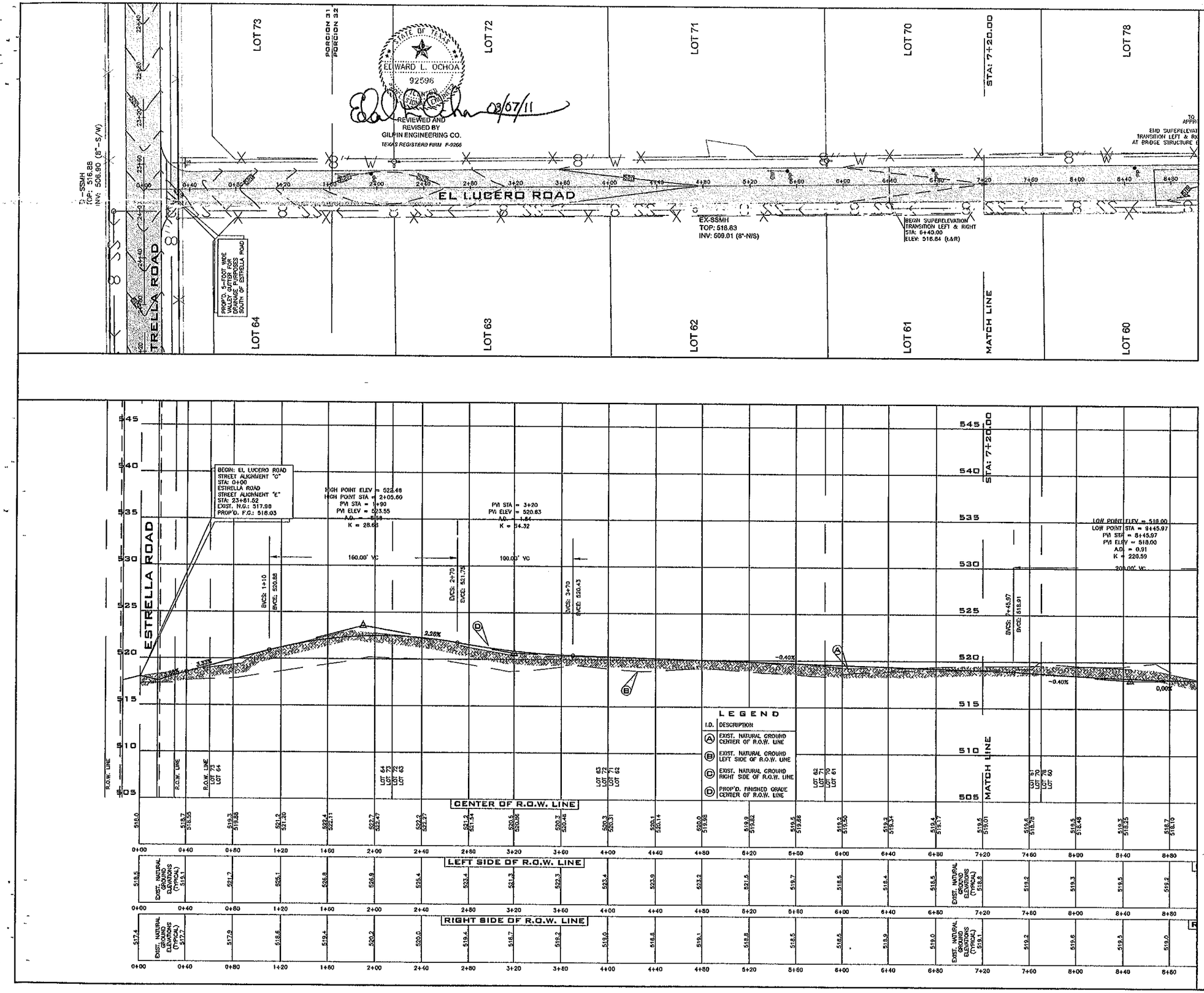
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'

SHEET 41 OF TOTAL: 90

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED PROFESSIONAL ENGINEER

03/07/11

REVIEWED AND
REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-9266



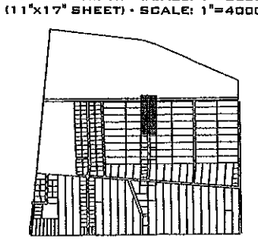
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX — OHP)
- EXISTING NATURAL GAS PIPELINE (EX — GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 650.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 650
- EXISTING POWER POLE PP
- EXISTING GUY WIRE GW
- EXISTING TRAFFIC SIGN TS
- EXISTING TELEPHONE PEDESTAL TP
- EXISTING WATER VALVE WV
- EXISTING FIRE HYDRANT HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPANTS REQUIRE 48 HOURS NOTICE BEFORE YOU DIG, DRILL OR BLAST – STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127

THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
PH. (956) 723-3451
FAX (956) 723-8902
1004 HILLSIDE RD.
ENGINEERING COMPANY LAREDO, TX 78041

TANQUECITOS PHASE I AND II

PLAN AND PROFILE
EL LUCERO ROAD
STA: 0+00.00 TO STA: 7+20.00
WEBB COUNTY, TEXAS

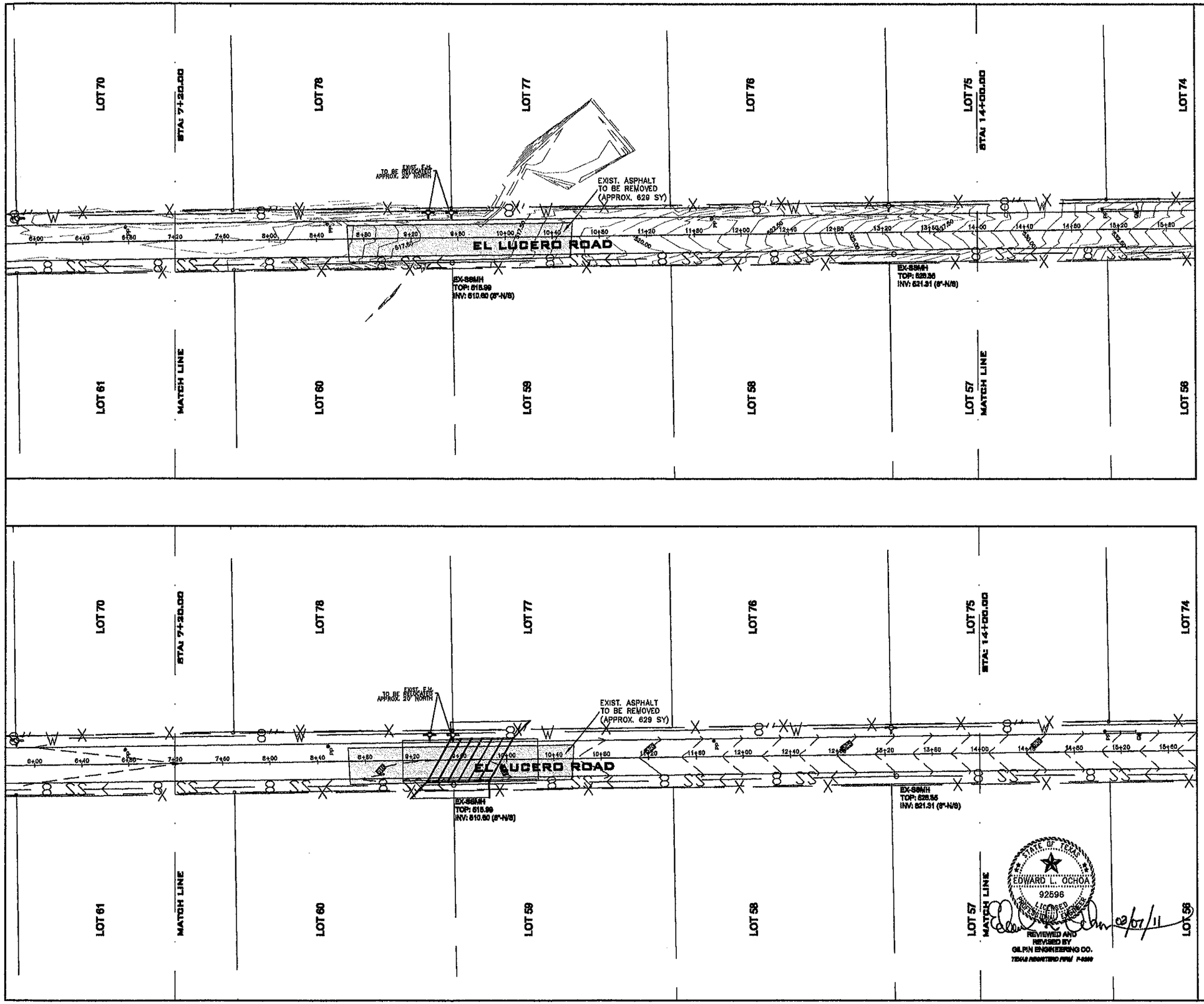
TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY:	O.R.
CHECKED BY:	E.L.O.
DRAWN DATE:	02-20-07
PLOTTED DATE:	01-14-11
JOB No.	N/A
FILE NAME:	TANQUECITOS
STATUS:	100%
AS-BUILT:	NO
REVISED DATE:	09-03-10

SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'

SHEET 42 OF TOTAL: 90



AS SHOWN

LEGEND

EXISTING FENCE BARB WIRE

EXISTING FENCE BLOCK

EXISTING FENCE CHAIN LINK

EXISTING FENCE CHICKEN

EXISTING FENCE IRON

EXISTING FENCE LAMINA

EXISTING FENCE WOOD

EXISTING OVERHEAD POWER LINE
EX OHP

EXISTING NATURAL GAS PIPELINE
EX GAS

EXISTING LOT LINE

EXISTING CONTOUR LINE (MINOR)

EXISTING CONTOUR LINE (MAJOR)
550.00

FINISHED CONTOUR LINE (MINOR)

FINISHED CONTOUR LINE (MAJOR)
550

EXISTING POWER POLE
PP

EXISTING GUY WIRE
GW

EXISTING TRAFFIC SIGN
TS

EXISTING TELEPHONE PEDESTAL
TP

EXISTING WATER VALVE
WV

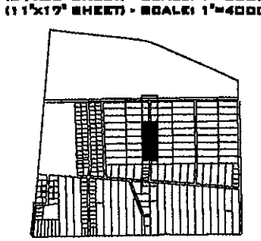
EXISTING FIRE HYDRANT
HYD

EXIST. ASPHALT

EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127

THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

02/07/11

REVIEWED AND
REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-9300

FOSTER
ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

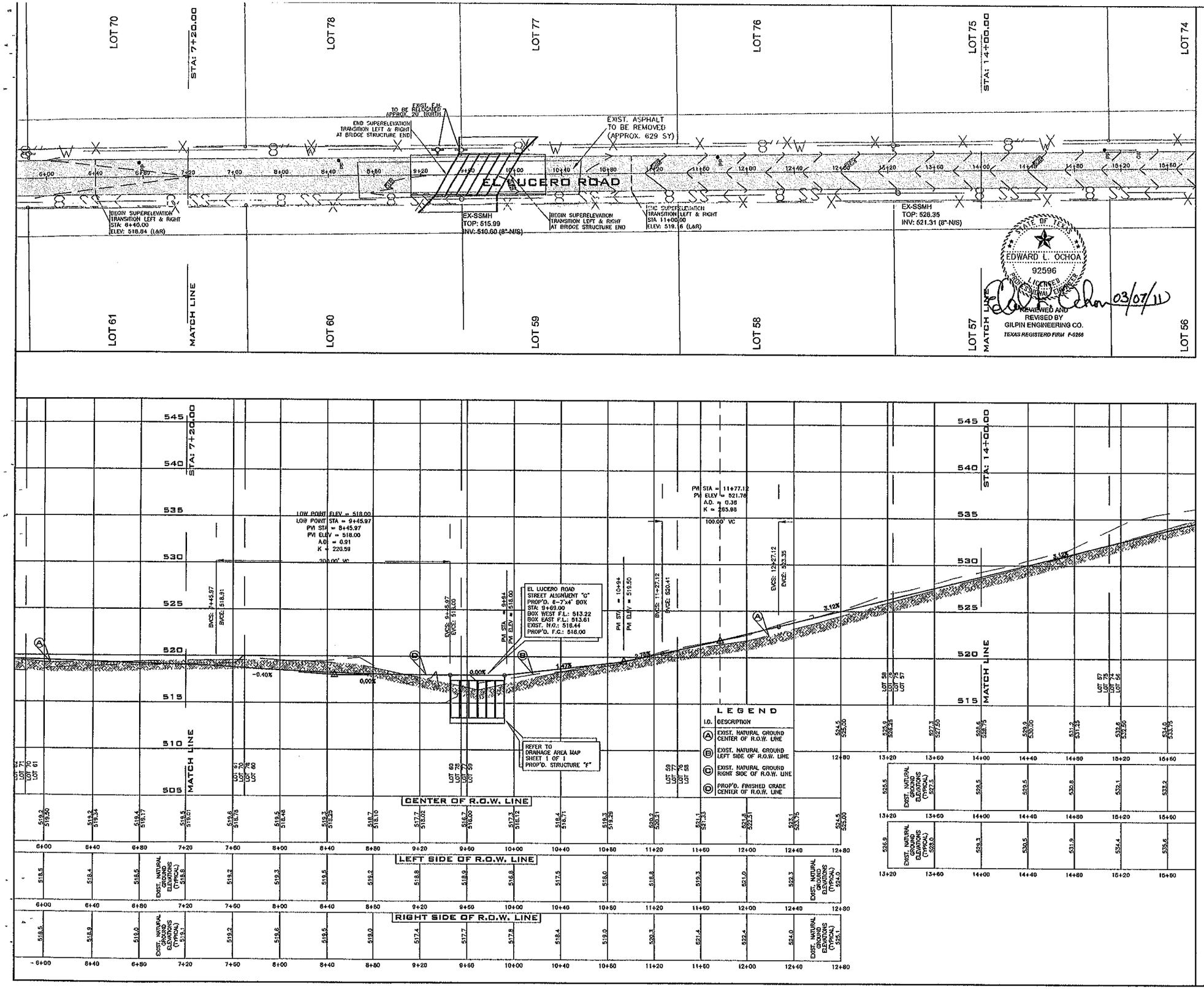
TANQUECITOS PHASE I AND II

PLAN VIEW
EL LUCERO ROAD
STA: 7+20.00 TO STA: 14+00.00
WEBB COUNTY, TEXAS

TOP VIEW
SHOWING
EXISTING TOPOGRAPHY

BOTTOM VIEW
SHOWING
PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 05-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 43 OF	TOTAL: 90



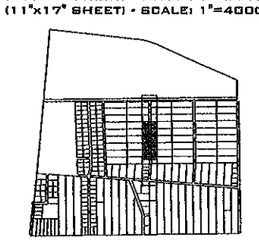
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX — OHP)
- EXISTING NATURAL GAS PIPELINE (EX — GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 650.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 650
- EXISTING POWER POLE PP
- EXISTING GUY WIRE GW
- EXISTING TRAFFIC SIGN TS
- EXISTING TELEPHONE PEDESTAL TP
- EXISTING WATER VALVE WV
- EXISTING FIRE HYDRANT HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPANTS REQUIRE 48 HOURS NOTICE BEFORE YOU DIG, CALL OR LEAVE - STOP, CALL, WAIT
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6302
1004 HILLSIDE RD.
LAREDO, TX 78041

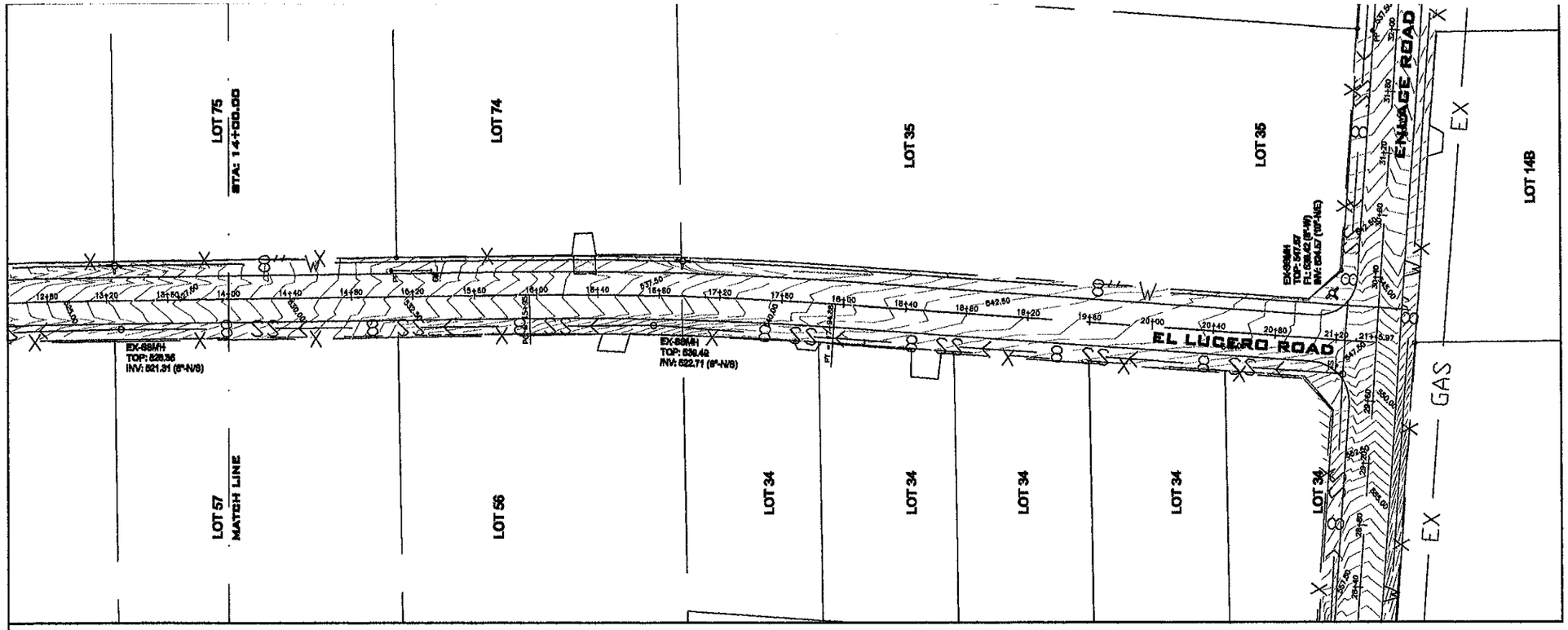
TANQUECITOS PHASE I AND II

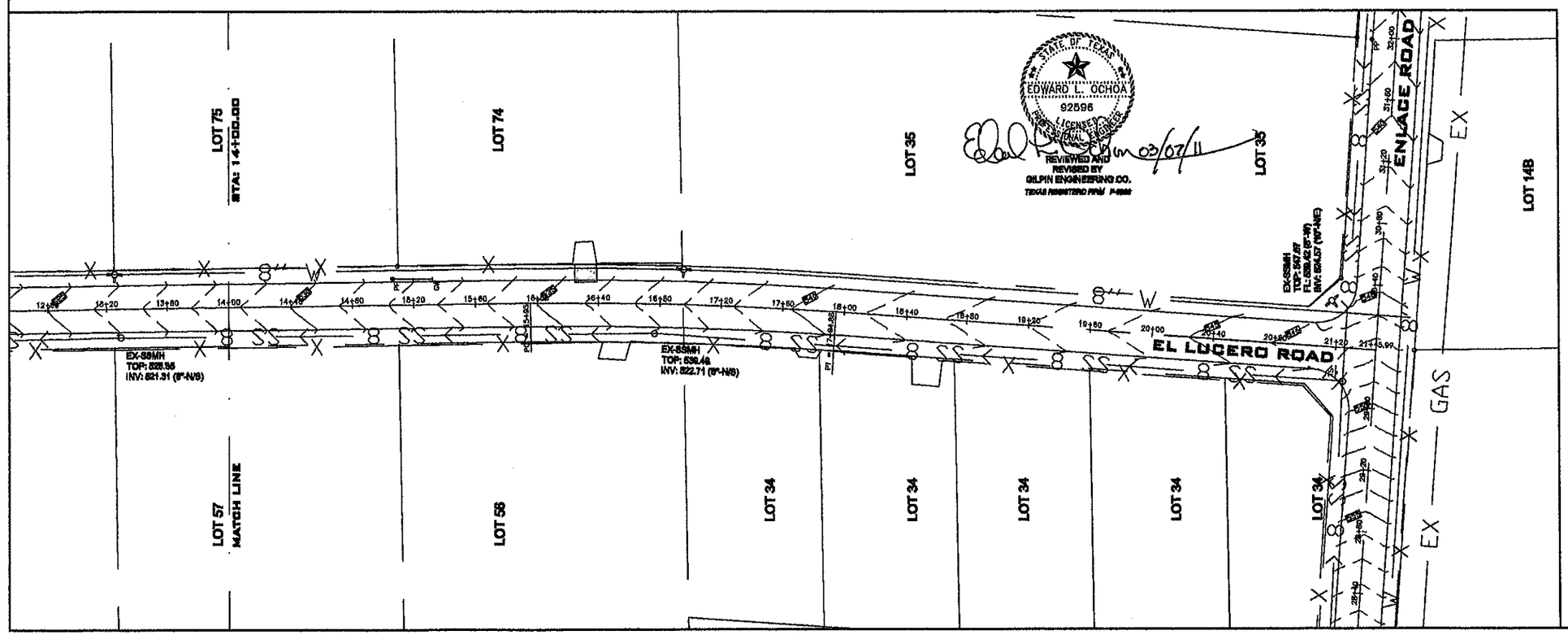
PLAN AND PROFILE
EL LUCERO ROAD
STA: 7+20.00 TO STA: 14+00.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 44	TOTAL: OF 90





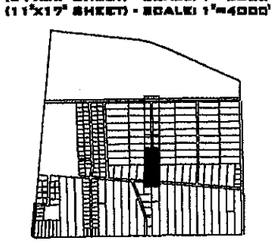
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPANTS REQUIRE 48 HOURS NOTICE BEFORE YOU DIG, DRILL OR BLAST - STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127

THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6202
1004 HILLSIDE RD.
LAREDO, TX. 78041

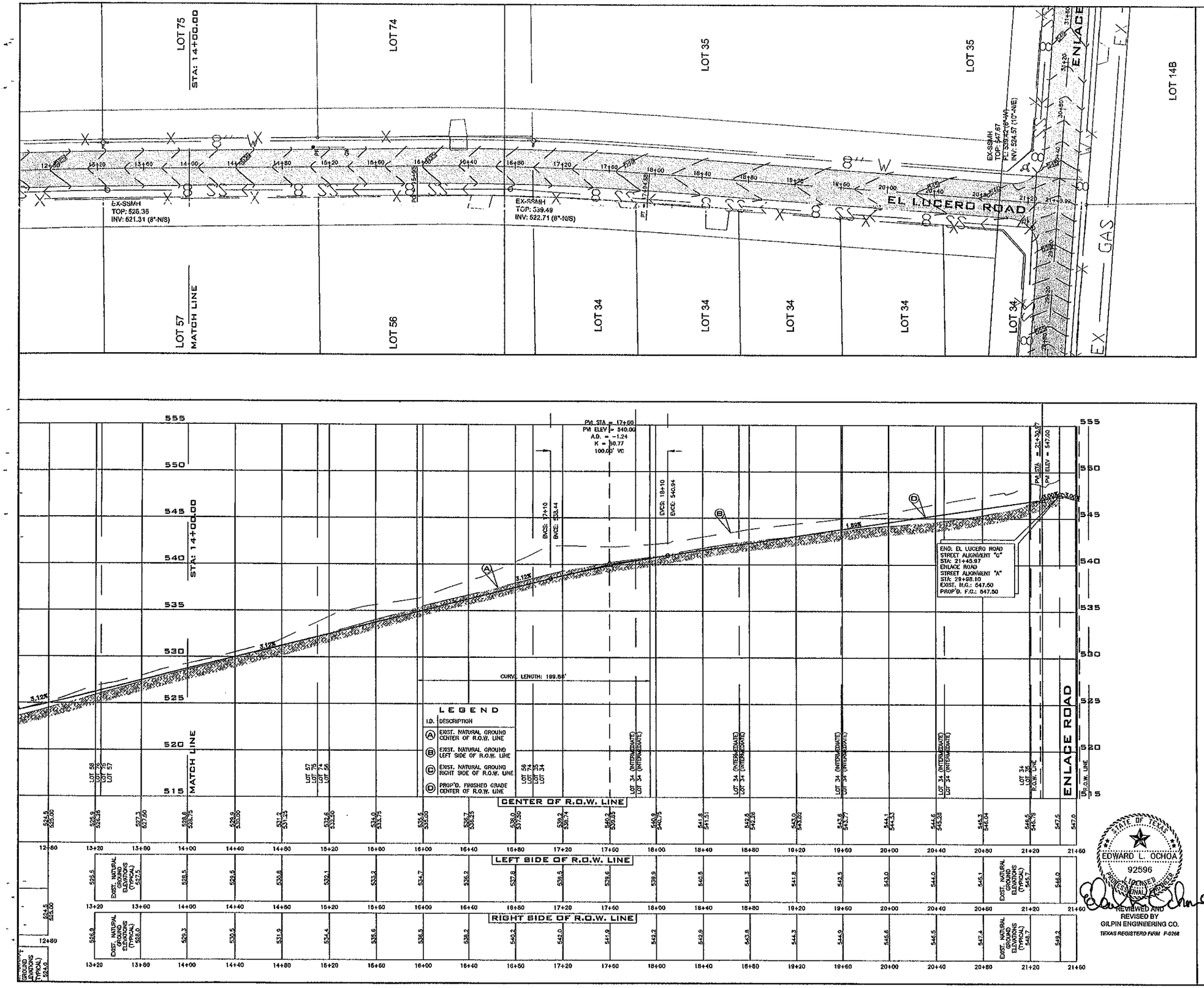
TANQUECITOS PHASE I AND II

PLAN VIEW
EL LUCERO ROAD
STA: 14+00.00 TO STA: 21+45.97
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY

BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 02-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER: 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER: 1"=10'
SHEET 45	OF TOTAL 90



AS SHOWN

LEGEND

EXISTING FENCE BARB WIRE

EXISTING FENCE BLOCK

EXISTING FENCE CHAIN LINK

EXISTING FENCE CHICKEN

EXISTING FENCE IRON

EXISTING FENCE LAMINA

EXISTING FENCE WOOD

EXISTING OVERHEAD POWER LINE
EX OHP

EXISTING NATURAL GAS PIPELINE
EX GAS

EXISTING LOT LINE

EXISTING CONTOUR LINE (MINOR)

EXISTING CONTOUR LINE (MAJOR)
550.00

FINISHED CONTOUR LINE (MINOR)

FINISHED CONTOUR LINE (MAJOR)
550

EXISTING POWER POLE
PP

EXISTING GUY WIRE
GW

EXISTING TRAFFIC SIGN
TS

EXISTING TELEPHONE PEDESTAL
TP

EXISTING WATER VALVE
WV

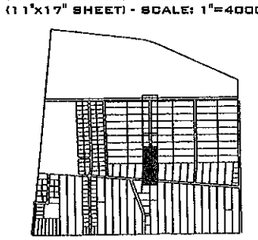
EXISTING FIRE HYDRANT
HYD

EXIST. ASPHALT

EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 Inch = 40 Ft.

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

03/07/11

REVIEWED AND REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-9268

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

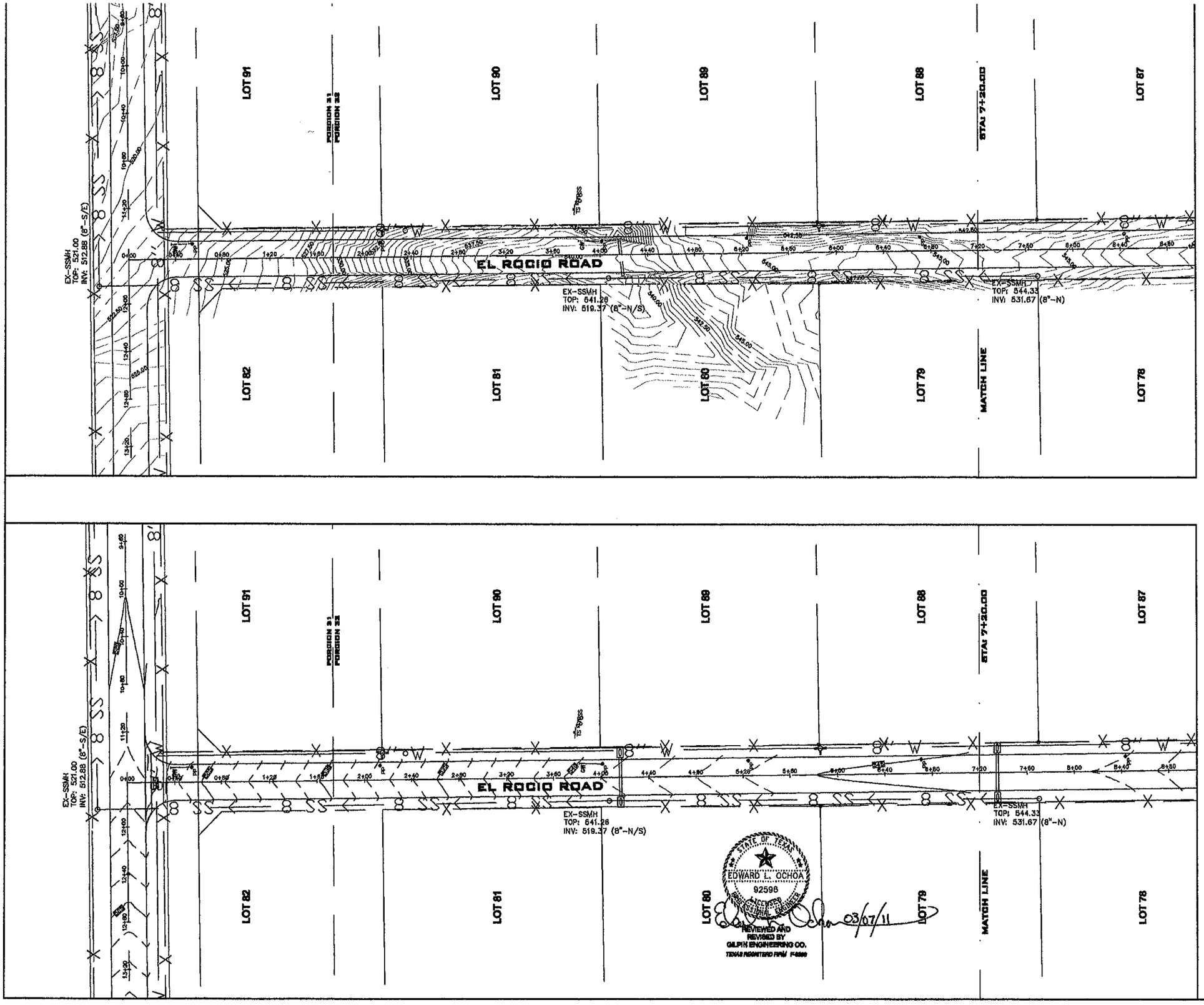
PLAN AND PROFILE
EL LUCERO ROAD
STA: 14+00.00 TO STA: 21+45.97
WEBB COUNTY, TEXAS

TOP VIEW
SHOWING
FINISHED GRADE PLAN

BOTTOM VIEW
SHOWING
FINISHED GRADE PROFILE

DRAWN BY:	O.R.
CHECKED BY:	E.L.O.
DRAWN DATE:	02-20-07
PLOTTED DATE:	01-14-11
JOB No.	N/A
FILE NAME:	TANQUECITOS
STATUS:	100%
AS-BUILT:	NO
REVISED DATE:	09-03-10

SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET	TOTAL:
46 OF	90



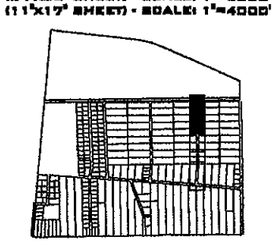
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) (550.00)
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) (550)
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=3000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPATION REQUIRED AS PER TEXAS NOTICE BEFORE YOU DIG ORDER. OR 8.000 - STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-9127

THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
PH. (956) 723-3451
FAX (956) 723-8302
1004 HILLSIDE RD.
ENGINEERING COMPANY LAREDO, TX 78041

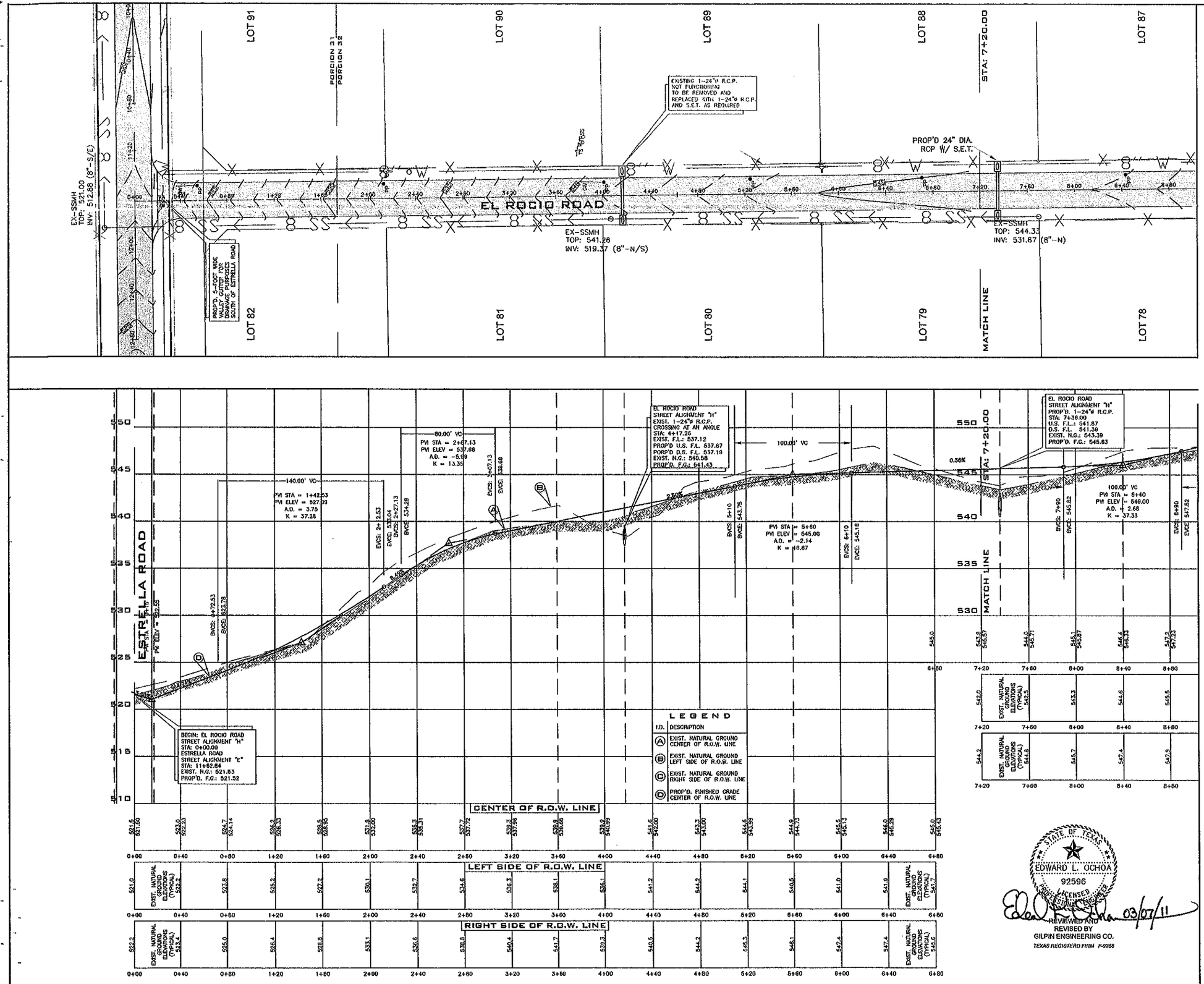
TANQUECITOS PHASE I AND II

PLAN VIEW
EL ROCIO ROAD
STA: 0+00.00 TO STA: 7+20.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY

BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 47 OF	TOTAL 91



STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED PROFESSIONAL ENGINEER

03/07/11

REVIEWED AND REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM P-9268

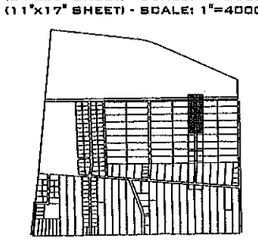
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD "W")
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL NOTIFICATION REQUIRED 48 HOURS NOTICE BEFORE YOU DIG. OR BLAST - STOP, CALL 811
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP AT 1-800-828-5127
THE LONE STAR NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER PH. (956) 723-3451 FAX (956) 723-6202
ENGINEERING COMPANY 1004 HILLSIDE RD. LAREDO, TX 78041

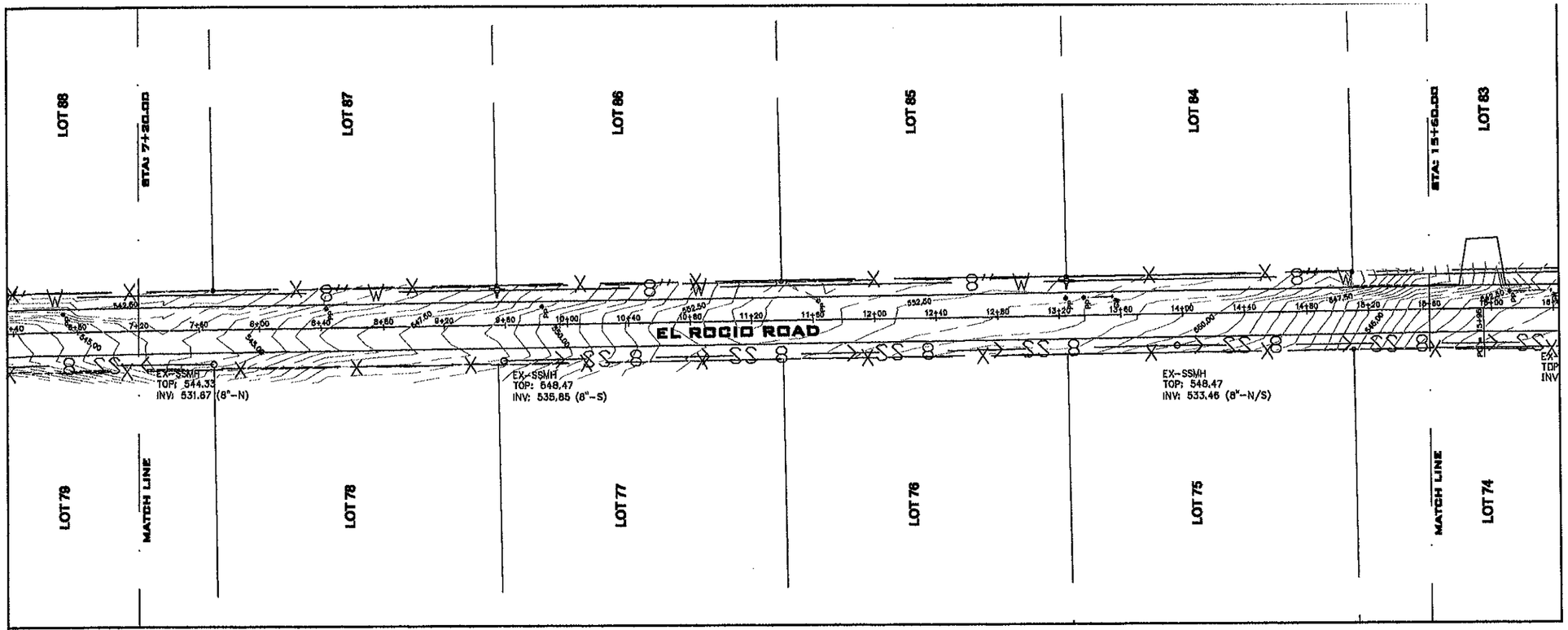
TANQUECITOS PHASE I AND II

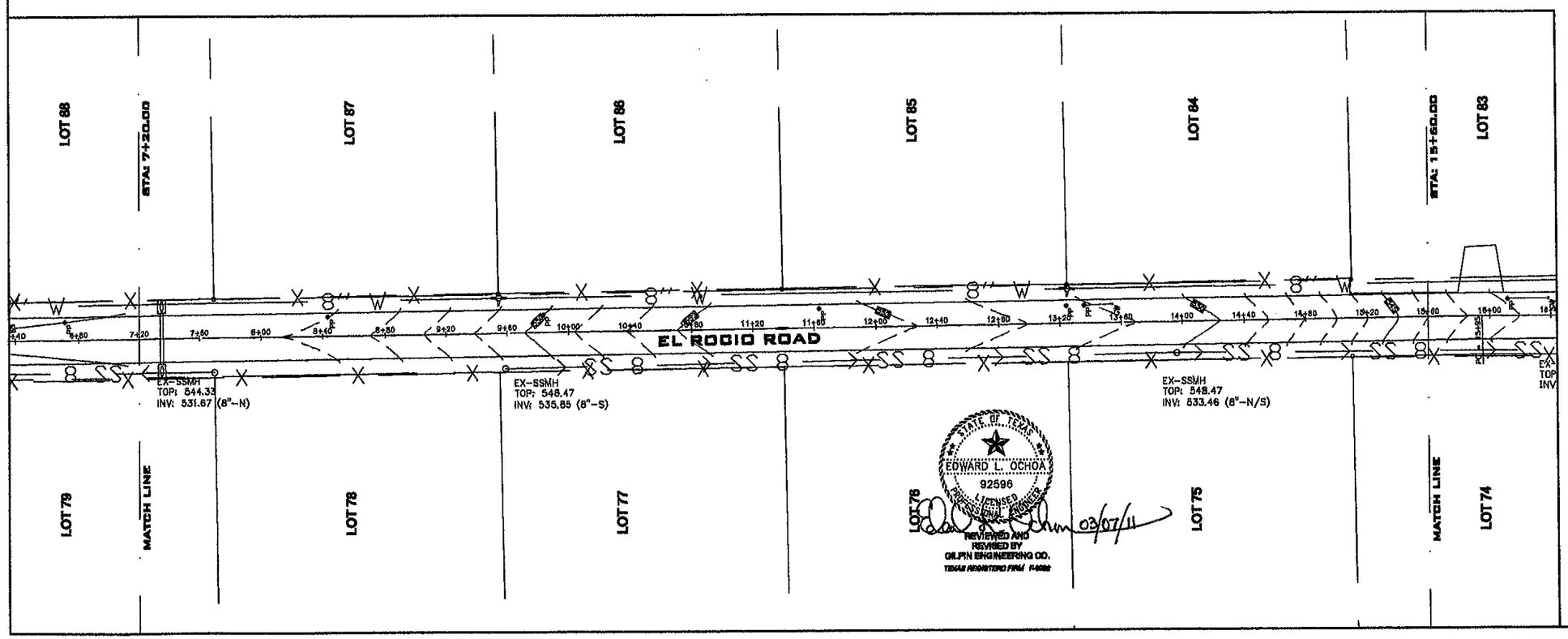
PLAN AND PROFILE
EL ROCIO ROAD
STA: 0+00.00 TO STA: 7+20.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 48 OF	TOTAL: 90





STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

03/07/11

REVIEWED AND
REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-8086

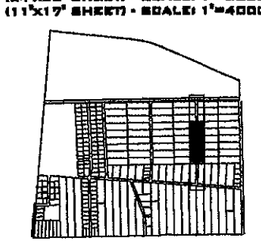
AS SHOWN

LEGEND

EXISTING FENCE BARB WIRE
EXISTING FENCE BLOCK
EXISTING FENCE CHAIN LINK
EXISTING FENCE CHICKEN
EXISTING FENCE IRON
EXISTING FENCE LAMINA
EXISTING FENCE WOOD
EXISTING OVERHEAD POWER LINE
EX OHP
EXISTING NATURAL GAS PIPELINE
EX GAS
EXISTING LOT LINE
EXISTING CONTOUR LINE (MINOR)
EXISTING CONTOUR LINE (MAJOR)
550.00
FINISHED CONTOUR LINE (MINOR)
FINISHED CONTOUR LINE (MAJOR)
550
EXISTING POWER POLE
PP
EXISTING GUY WIRE
GW
EXISTING TRAFFIC SIGN
TS
EXISTING TELEPHONE PEDESTAL
TP
EXISTING WATER VALVE
WV
EXISTING FIRE HYDRANT
HYD
EXIST. ASPHALT
EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 Inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPANTS REQUEST 48 HOURS NOTICE BEFORE YOU DIG, DRILL OR BLAST - STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

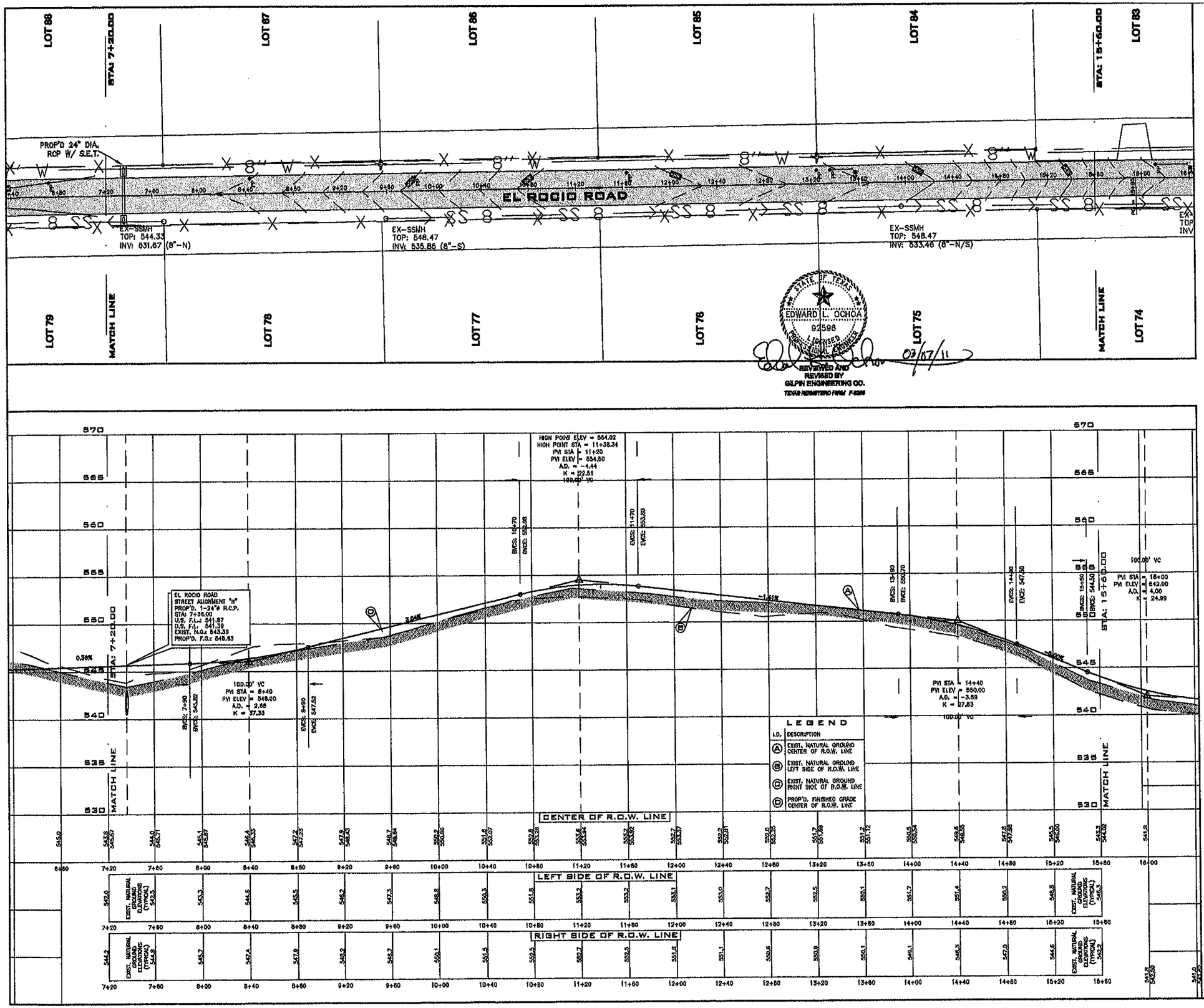
TANQUECITOS PHASE I AND II

PLAN VIEW
EL ROCIO ROAD
STA: 7+20.00 TO STA: 15+60.00
WEBB COUNTY, TEXAS

TOP VIEW
SHOWING
EXISTING TOPOGRAPHY

BOTTOM VIEW
SHOWING
PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 49 OF	TOTAL: 90



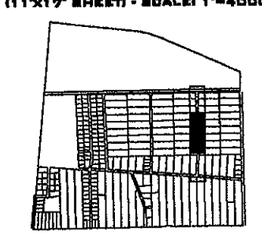
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE PP
- EXISTING GUY WIRE GW
- EXISTING TRAFFIC SIGN TS
- EXISTING TELEPHONE PEDESTAL TP
- EXISTING WATER VALVE WV
- EXISTING FIRE HYDRANT HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6522
1004 HILLSIDE RD.
LAREDO, TX 78041

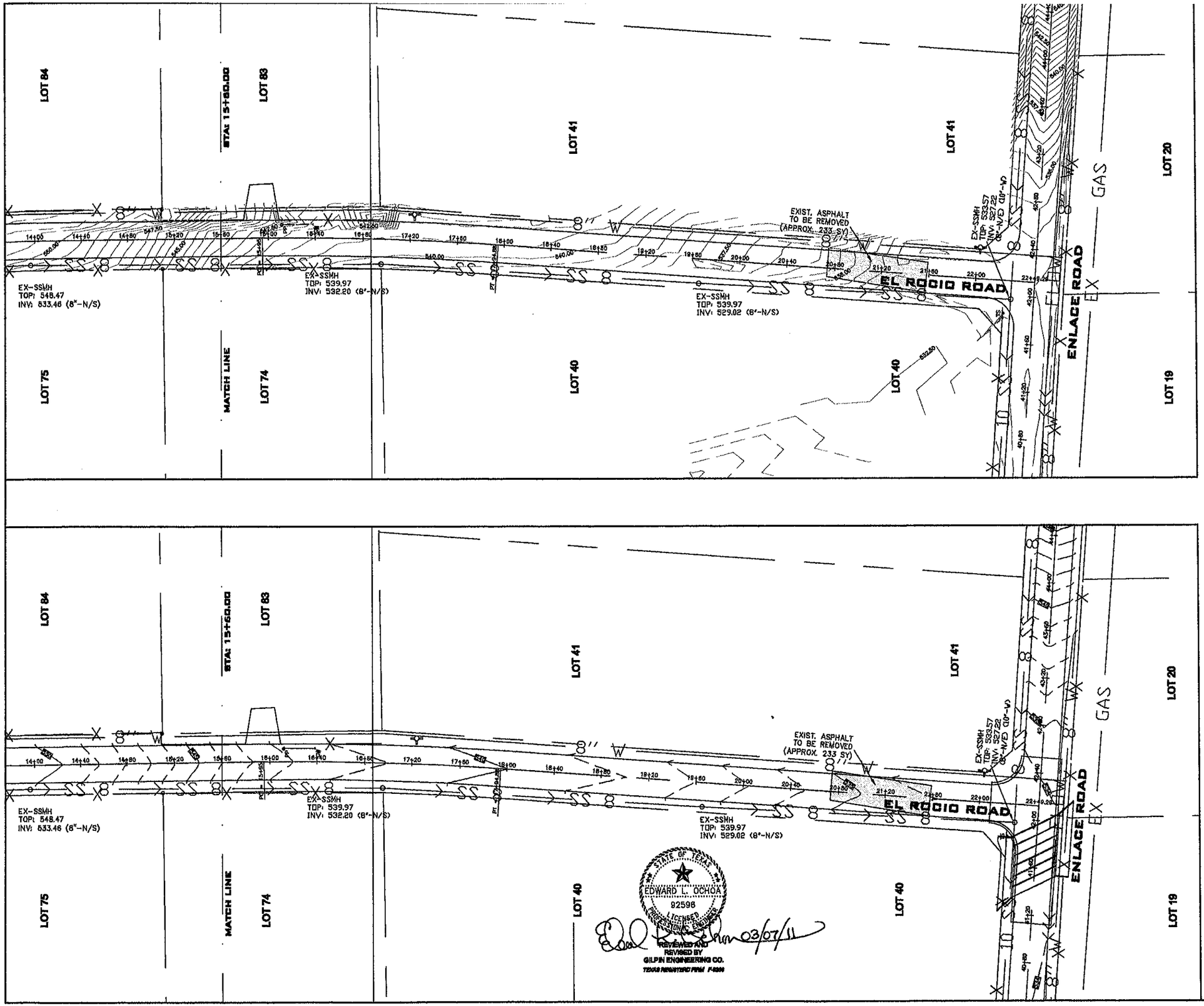
TANQUECITOS PHASE I AND II

PLAN AND PROFILE
EL ROCIO ROAD
STA: 7+20.00 TO STA: 15+60.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECIOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 02-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 50 OF	TOTAL 90



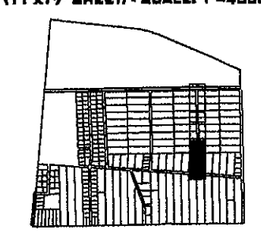
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
PH. (956) 723-3451
FAX (956) 723-6922
1004 HILLSIDE RD.
LAREDO, TX 78041
ENGINEERING COMPANY

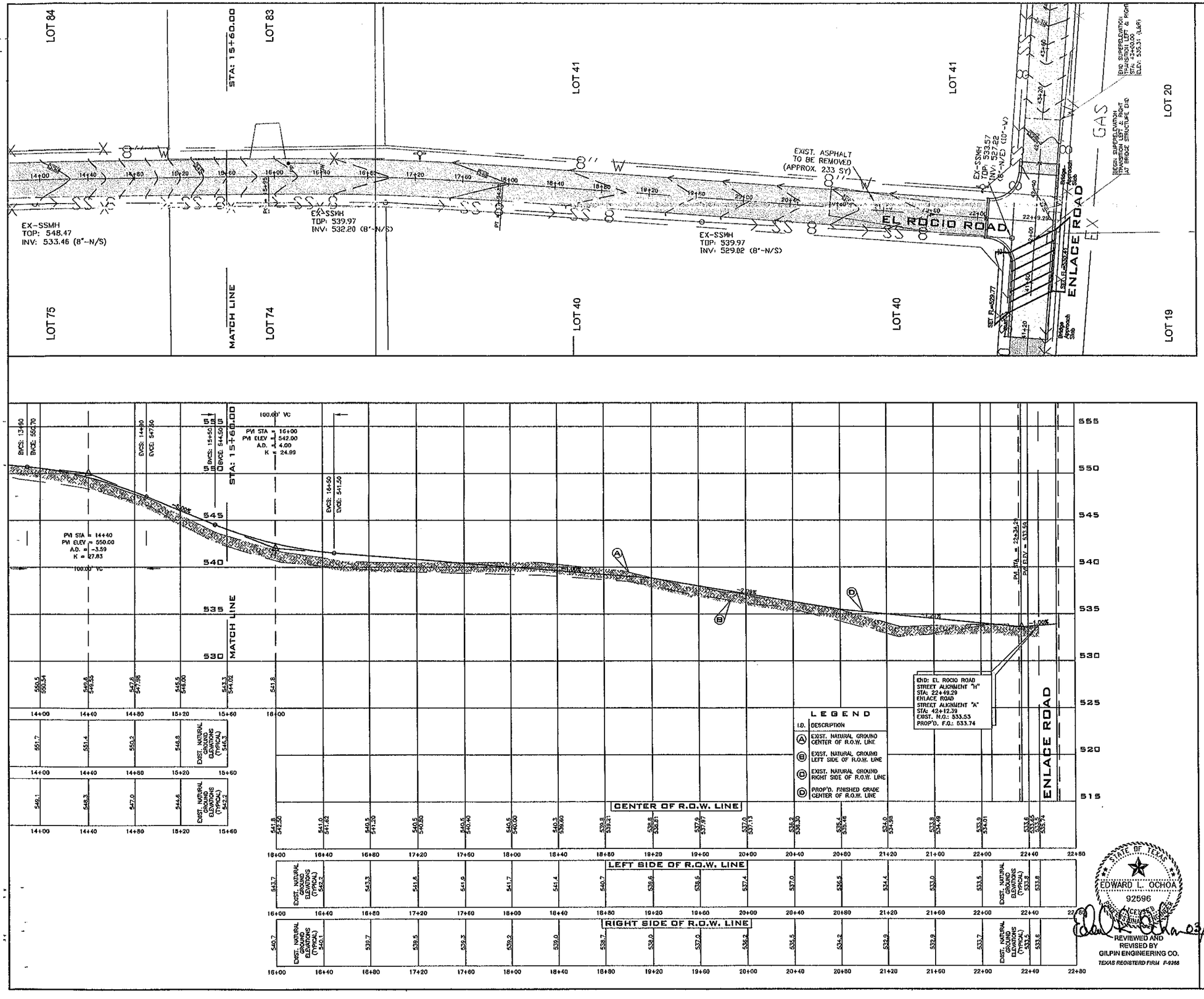
TANQUECITOS PHASE I AND II

PLAN VIEW
EL ROCIO ROAD
STA: 15+60.00 TO STA: 22+49.29
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY

BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 51	OF TOTAL 90



AS SHOWN

LEGEND

EXISTING FENCE BARB WIRE

EXISTING FENCE BLOCK

EXISTING FENCE CHAIN LINK

EXISTING FENCE CHICKEN

EXISTING FENCE IRON

EXISTING FENCE LAMINA

EXISTING FENCE WOOD

EXISTING OVERHEAD POWER LINE
EX — OHP

EXISTING NATURAL GAS PIPELINE
EX — GAS

EXISTING LOT LINE

EXISTING CONTOUR LINE (MINOR)

EXISTING CONTOUR LINE (MAJOR)
550.00

FINISHED CONTOUR LINE (MINOR)

FINISHED CONTOUR LINE (MAJOR)
550

EXISTING POWER POLE
PP

EXISTING GUY WIRE
GW

EXISTING TRAFFIC SIGN
TS

EXISTING TELEPHONE PEDESTAL
TP

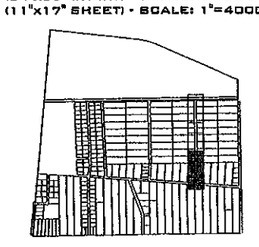
EXISTING WATER VALVE
WV

EXISTING FIRE HYDRANT
HYD

EXIST. ASPHALT | EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 Inch = 40 Ft.

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED PROFESSIONAL ENGINEER

03/07/11

REVIEWED AND REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-9266

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPANTS REQUEST 48 HOURS BEFORE YOU DIG, CALL ON BLAST - STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-6127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
ENGINEERING COMPANY
PH. (956) 723-3461
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

PLAN AND PROFILE
EL ROCIO ROAD
STA: 15+60.00 TO STA: 22+49.29
WEBB COUNTY, TEXAS

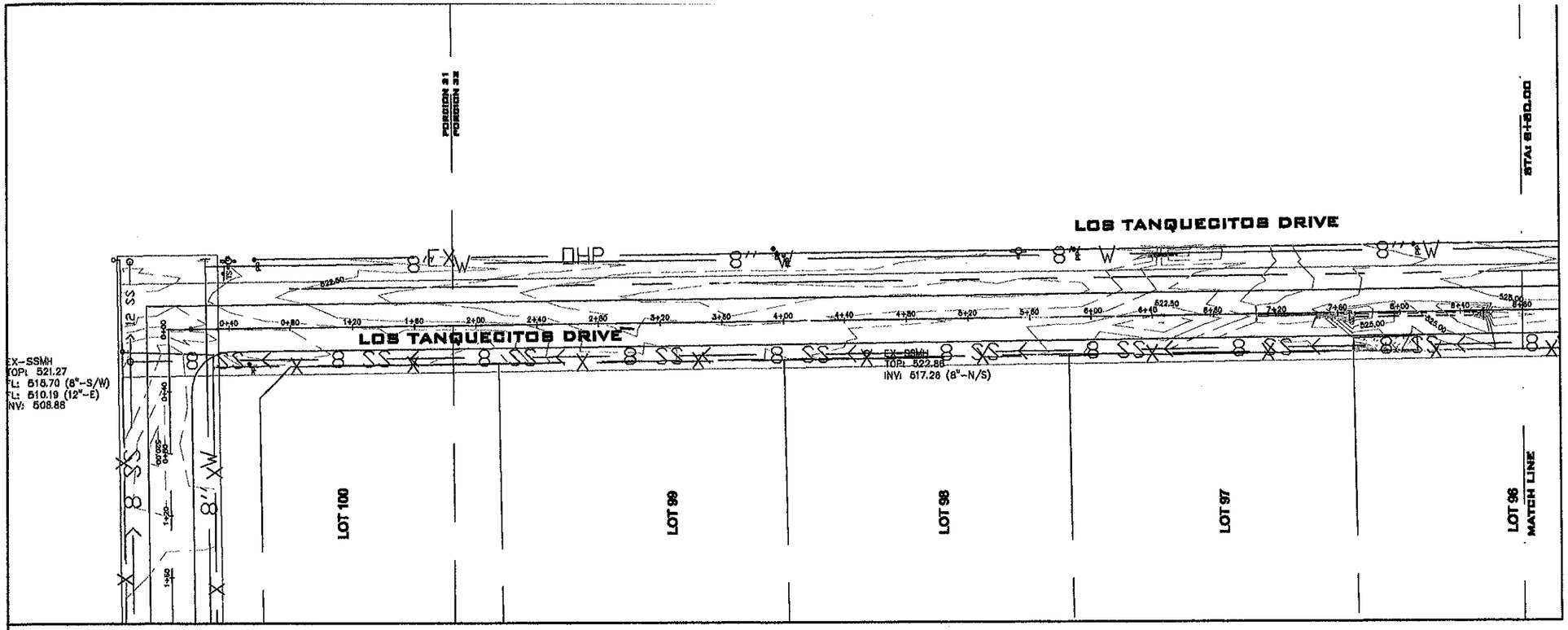
TOP VIEW
SHOWING
FINISHED GRADE PLAN

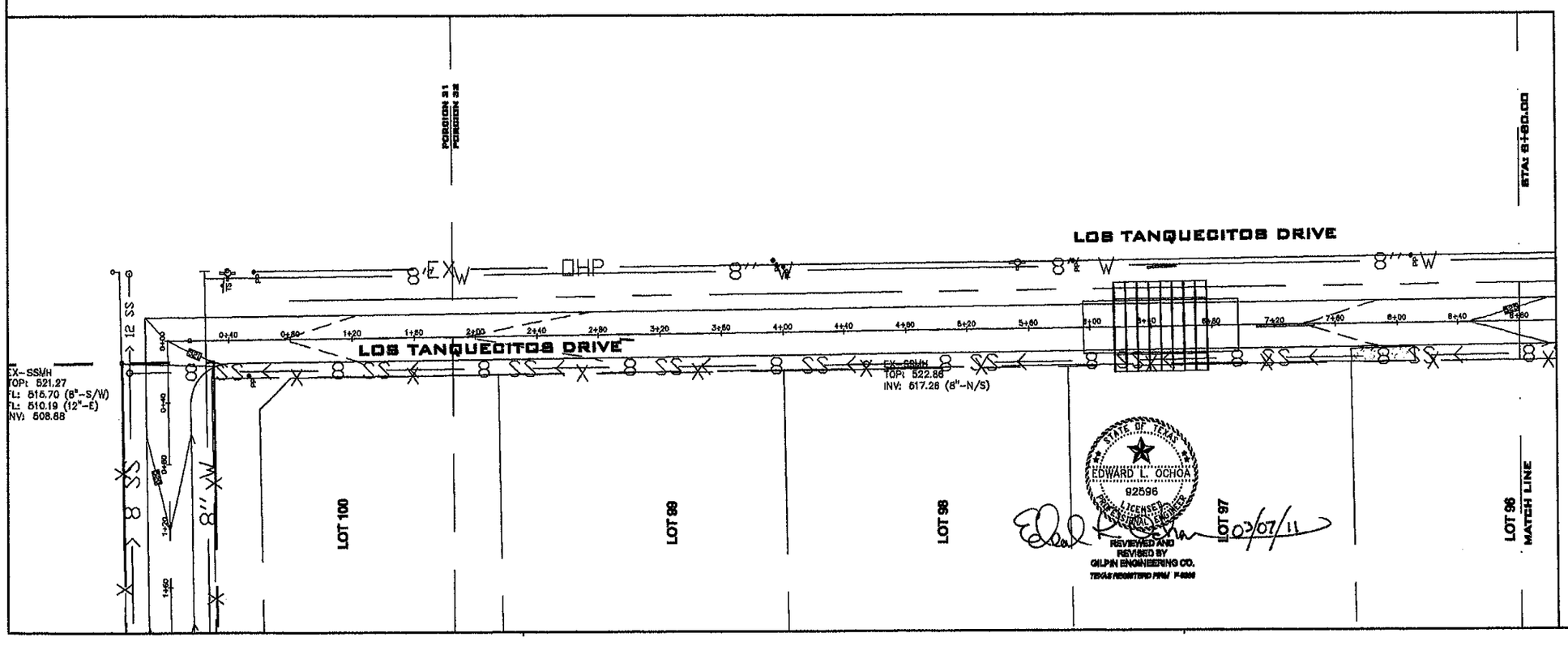
BOTTOM VIEW
SHOWING
FINISHED GRADE PROFILE

DRAWN BY:	O.R.
CHECKED BY:	E.L.O.
DRAWN DATE:	02-20-07
PLOTTED DATE:	01-14-11
JOB No.	N/A
FILE NAME:	TANQUECITOS
STATUS:	100%
AS-BUILT:	NO
REVISED DATE:	09-03-10

SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'

SHEET 52 OF TOTAL: 90





STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

03/07/11

REVIEWED AND
REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-

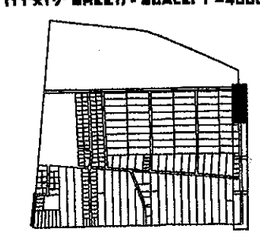
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX — OHP)
- EXISTING NATURAL GAS PIPELINE (EX — GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE PP
- EXISTING GUY WIRE GW
- EXISTING TRAFFIC SIGN TS
- EXISTING TELEPHONE PEDESTAL TP
- EXISTING WATER VALVE WV
- EXISTING FIRE HYDRANT HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 Inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127

THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-5302
1004 HILLSIDE RD.
LAREDO, TX 78041

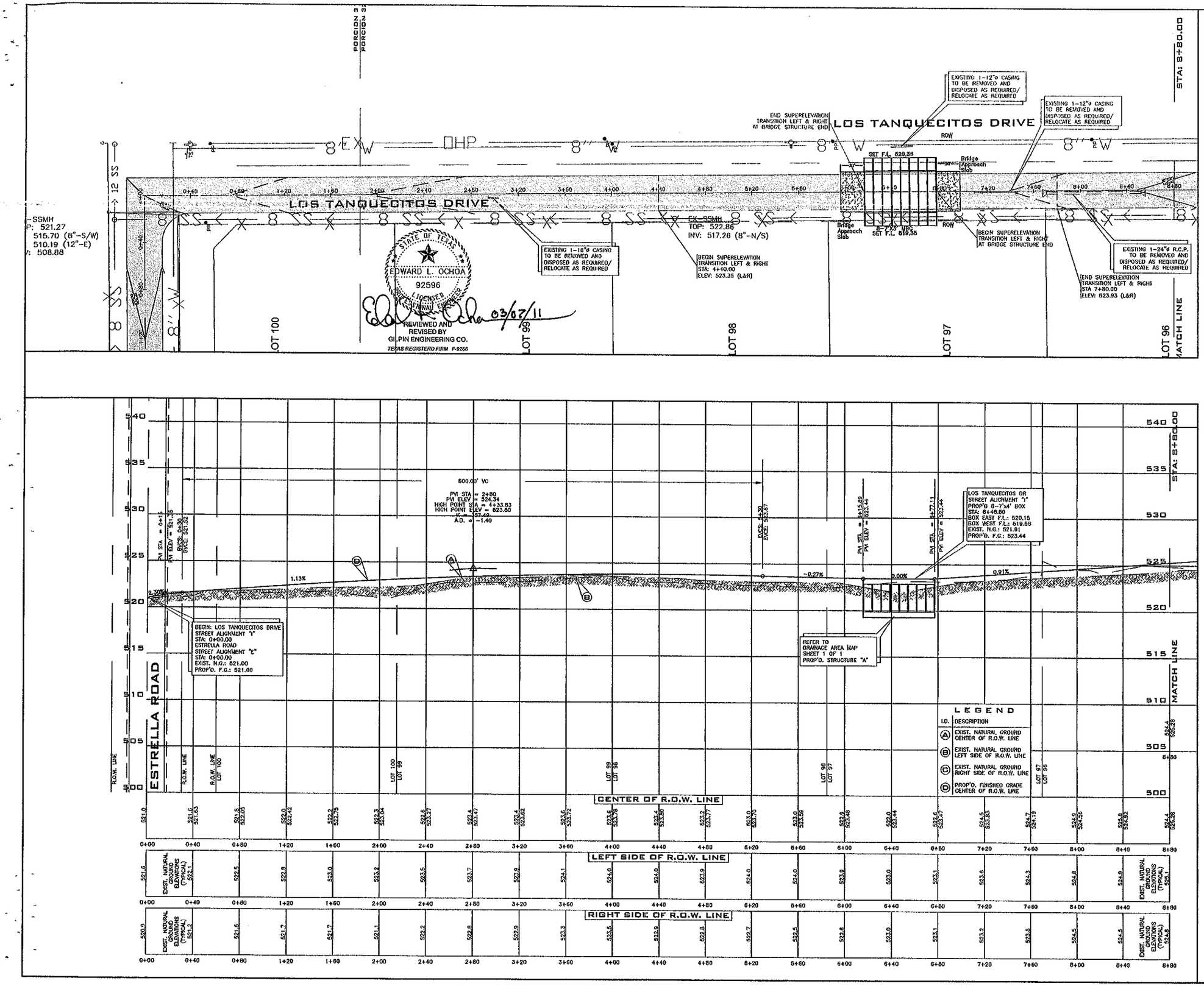
TANQUECITOS PHASE I AND II

PLAN VIEW
LOS TANQUESITIOS ROAD
STA: 0+00.00 TO STA: 8+80.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY

BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 02-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 53	TOTAL: OF 90



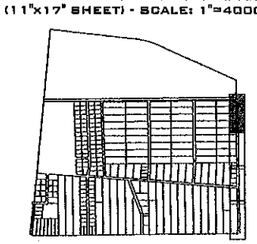
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL AFTER-HOURS REQUEST 48 HOURS NOTICE BEFORE YOU DIG, DRILL, OR BLAST - STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127

THE LONE STAR NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
PH. (956) 723-3451
FAX. (956) 723-5502
1004 HILLSIDE RD.
ENGINEERING COMPANY LAREDO, TX. 78041

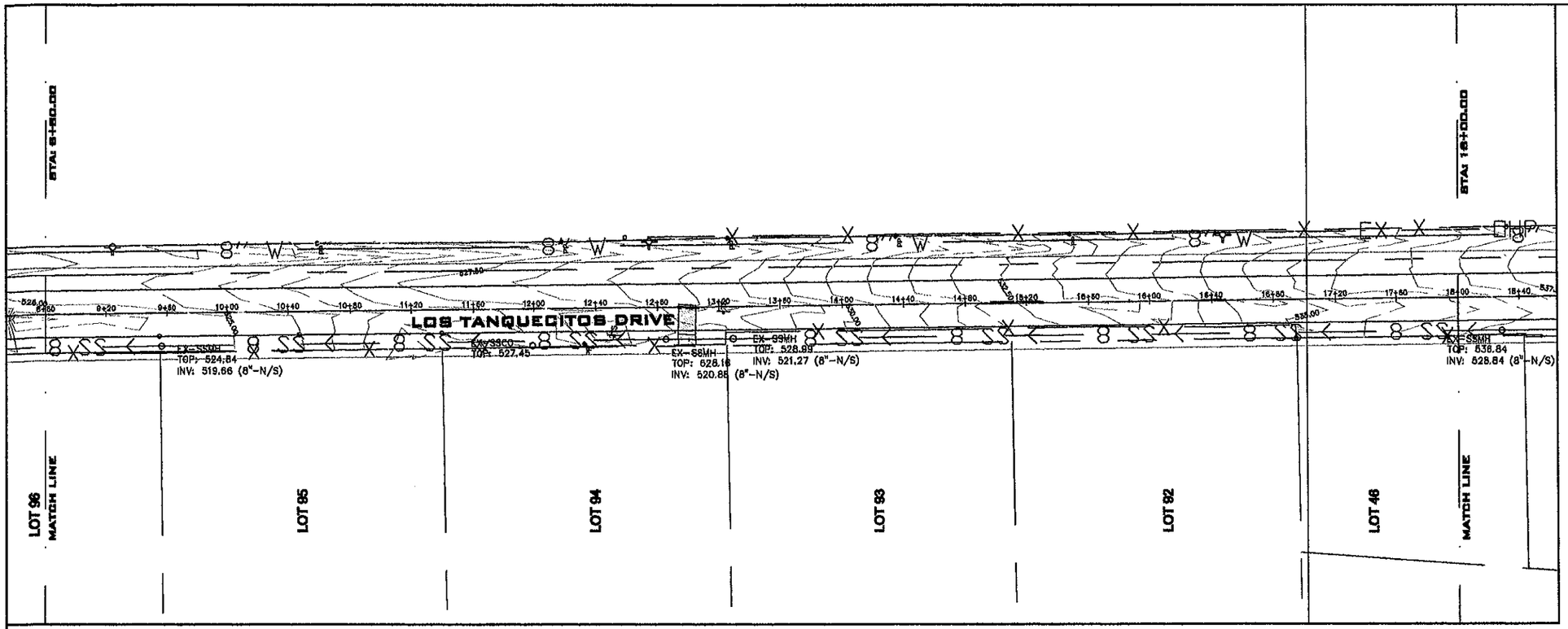
TANQUECITOS PHASE I AND II

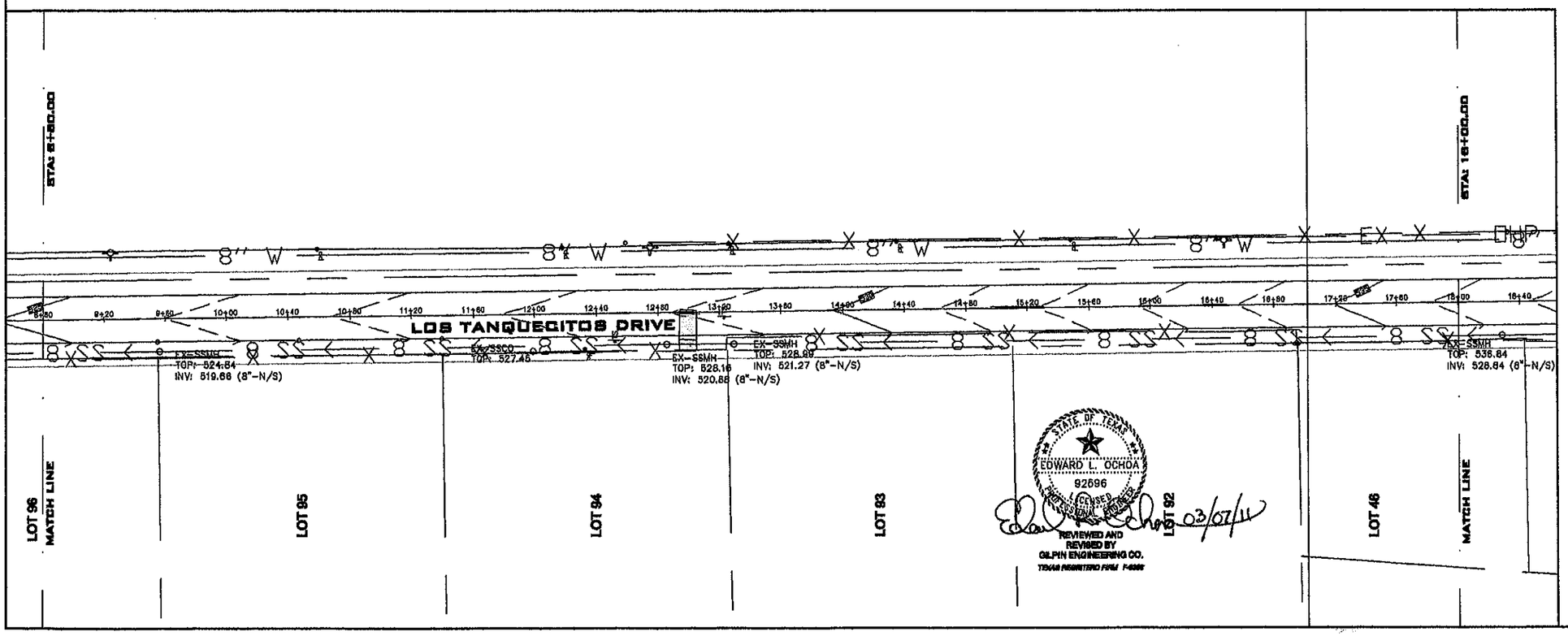
PLAN AND PROFILE
LOS TANQUESITIOS ROAD
STA: 0+00.00 TO STA: 8+80.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY:	O.R.
CHECKED BY:	E.L.O.
DRAWN DATE:	02-20-07
PLOTTED DATE:	01-14-11
JOB No.	N/A
FILE NAME:	TANQUECITOS
STATUS:	100%
AS-BUILT:	NO
REVISED DATE:	04-10-2010
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 54	OF TOTAL: 90





STATE OF TEXAS
EDWARD L. OCHOA
92696
LICENSED
PROFESSIONAL ENGINEER

03/07/11

REVIEWED AND REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-6366

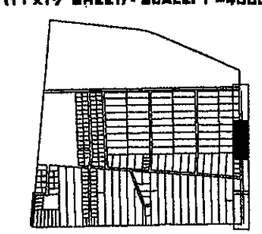
AS SHOWN

LEGEND

EXISTING FENCE BARB WIRE
EXISTING FENCE BLOCK
EXISTING FENCE CHAIN LINK
EXISTING FENCE CHICKEN
EXISTING FENCE IRON
EXISTING FENCE LAMINA
EXISTING FENCE WOOD
EXISTING OVERHEAD POWER LINE
EX OHP
EXISTING NATURAL GAS PIPELINE
EX GAS
EXISTING LOT LINE
EXISTING CONTOUR LINE (MINOR)
EXISTING CONTOUR LINE (MAJOR)
550.00
FINISHED CONTOUR LINE (MINOR)
FINISHED CONTOUR LINE (MAJOR)
550
EXISTING POWER POLE
PP
EXISTING GUY WIRE
GW
EXISTING TRAFFIC SIGN
TS
EXISTING TELEPHONE PEDESTAL
TP
EXISTING WATER VALVE
WV
EXISTING FIRE HYDRANT
HYD
EXIST. ASPHALT
EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPANTS REQUEST
48 HOURS NOTICE BEFORE YOU DIG, DIG
OR BLAST - STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-6377

FOSTER
ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

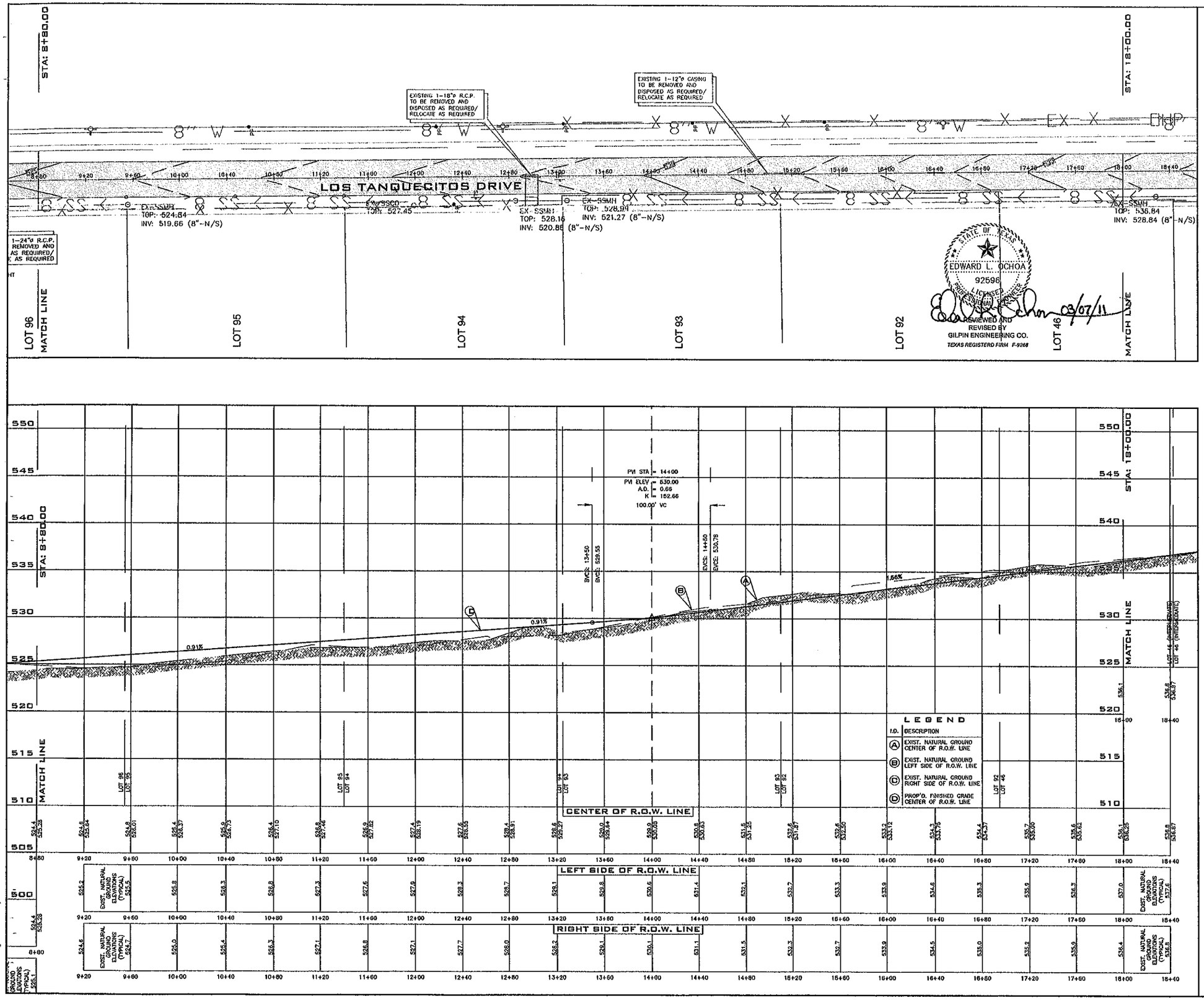
PLAN VIEW
LOS TANQUESITOS ROAD
STA: 8+80.00 TO STA: 18+00.00
WEBB COUNTY, TEXAS

TOP VIEW
SHOWING
EXISTING TOPOGRAPHY

BOTTOM VIEW
SHOWING
PROPOSED TOPOGRAPHY

DRAWN BY:	O.R.
CHECKED BY:	E.L.O.
DRAWN DATE:	02-20-07
PLOTTED DATE:	01-14-11
JOB No.	N/A
FILE NAME:	TANQUECITOS
STATUS:	100%
AS-BUILT:	NO
REVISED DATE:	09-03-10

SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'



AS SHOWN

LEGEND

EXISTING FENCE BARB WIRE

EXISTING FENCE BLOCK

EXISTING FENCE CHAIN LINK

EXISTING FENCE CHICKEN

EXISTING FENCE IRON

EXISTING FENCE LAMINA

EXISTING FENCE WOOD

EXISTING OVERHEAD POWER LINE
EX — OHP

EXISTING NATURAL GAS PIPELINE
EX — GAS

EXISTING LOT LINE

EXISTING CONTOUR LINE (MINOR)

EXISTING CONTOUR LINE (MAJOR)
650.00

FINISHED CONTOUR LINE (MINOR)

FINISHED CONTOUR LINE (MAJOR)
660

EXISTING POWER POLE
PP

EXISTING GUY WIRE
GW

EXISTING TRAFFIC SIGN
TS

EXISTING TELEPHONE PEDESTAL
TP

EXISTING WATER VALVE
WV

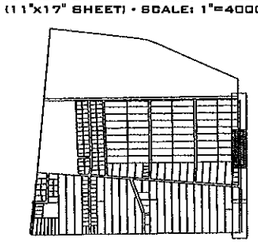
EXISTING FIRE HYDRANT
HYD

EXIST. ASPHALT

EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 Inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127

THE LONE STAR NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

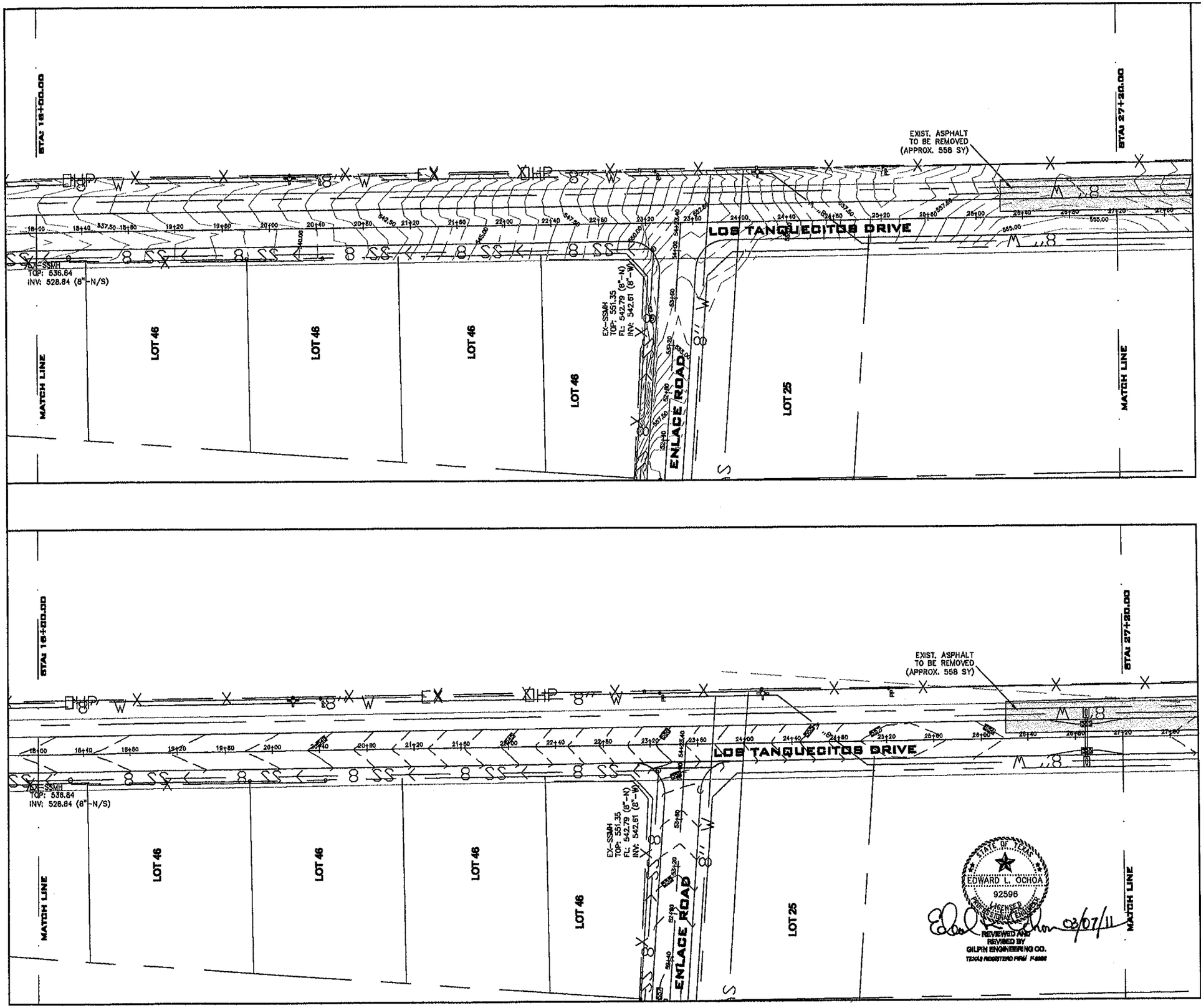
PLAN AND PROFILE
LOS TANQUESITIOS ROAD
STA: 8+80.00 TO STA: 18+00.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY:	O.R.
CHECKED BY:	E.L.O.
DRAWN DATE:	01-20-07
PLOTTED DATE:	01-14-11
JOB No.	N/A
FILE NAME:	TANQUECITOS
STATUS:	100%
AS-BUILT:	NO
REVISED DATE:	09-03-10

SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 56 OF	TOTAL: 90



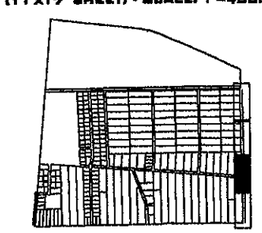
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127

THE LONE STAR NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6502
1004 HILLSIDE RD.
LAREDO, TX 78041

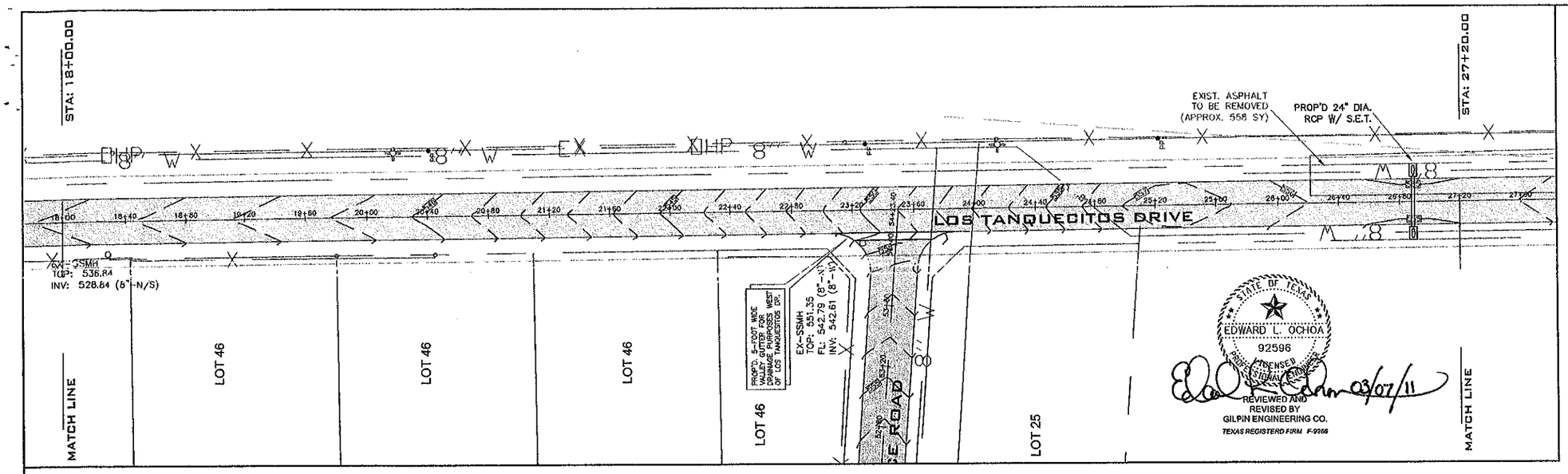
TANQUECITOS PHASE I AND II

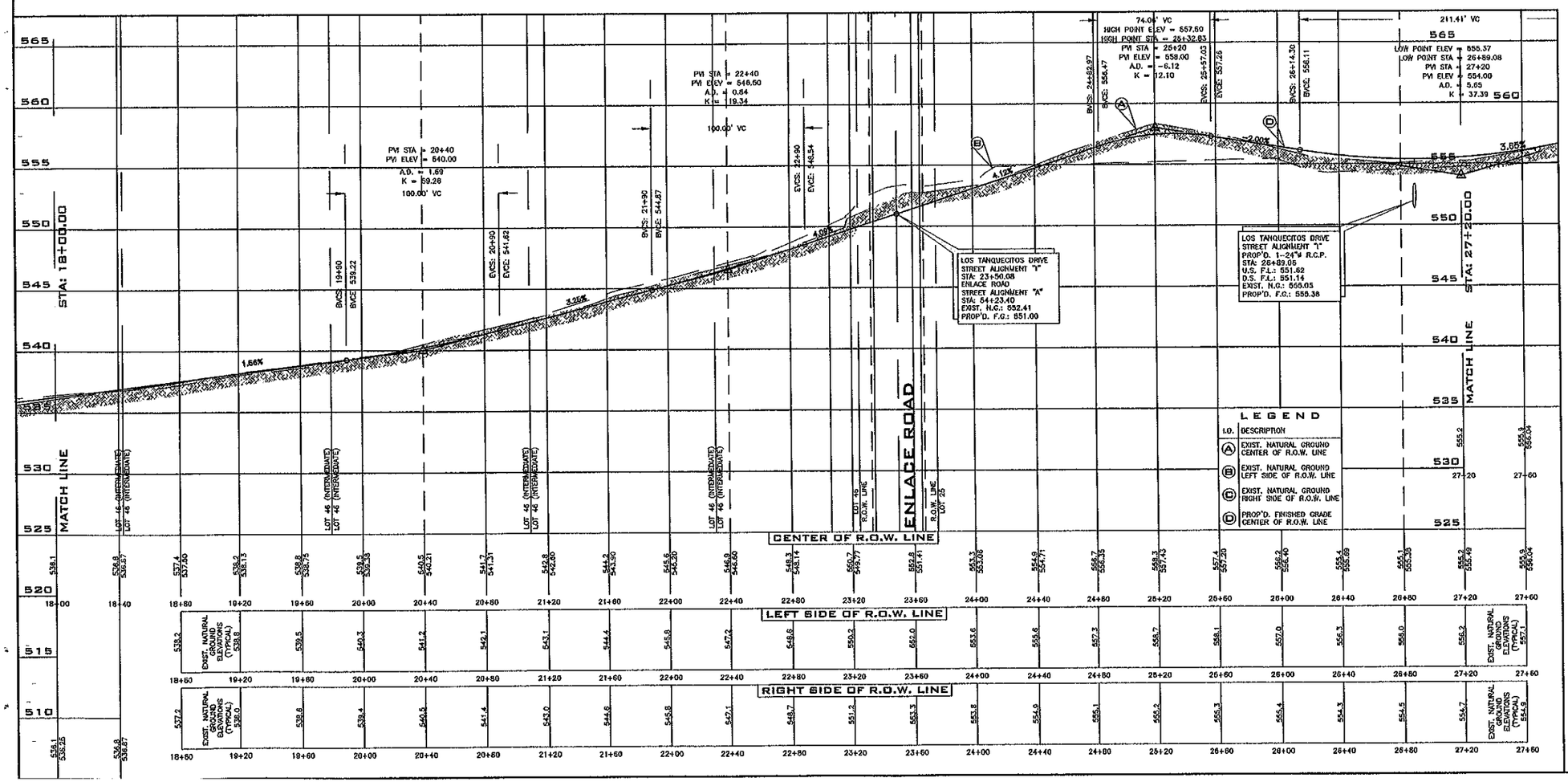
PLAN VIEW
LOS TANQUESITOS ROAD
STA: 18+00.00 TO STA: 27+20.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY

BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 57	OF TOTAL 90





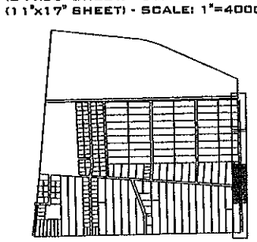
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 560
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"X36" SHEET) - SCALE: 1"=2000'
(11"X17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL FACSIMILE REQUEST
48 HRS PRIOR TO YOU DIG, DRILL, OR BLOW - STOP, CALL !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127
THE LONE STAR NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
ENGINEERING COMPANY LAREDO, TX 78041

TANQUECITOS PHASE I AND II

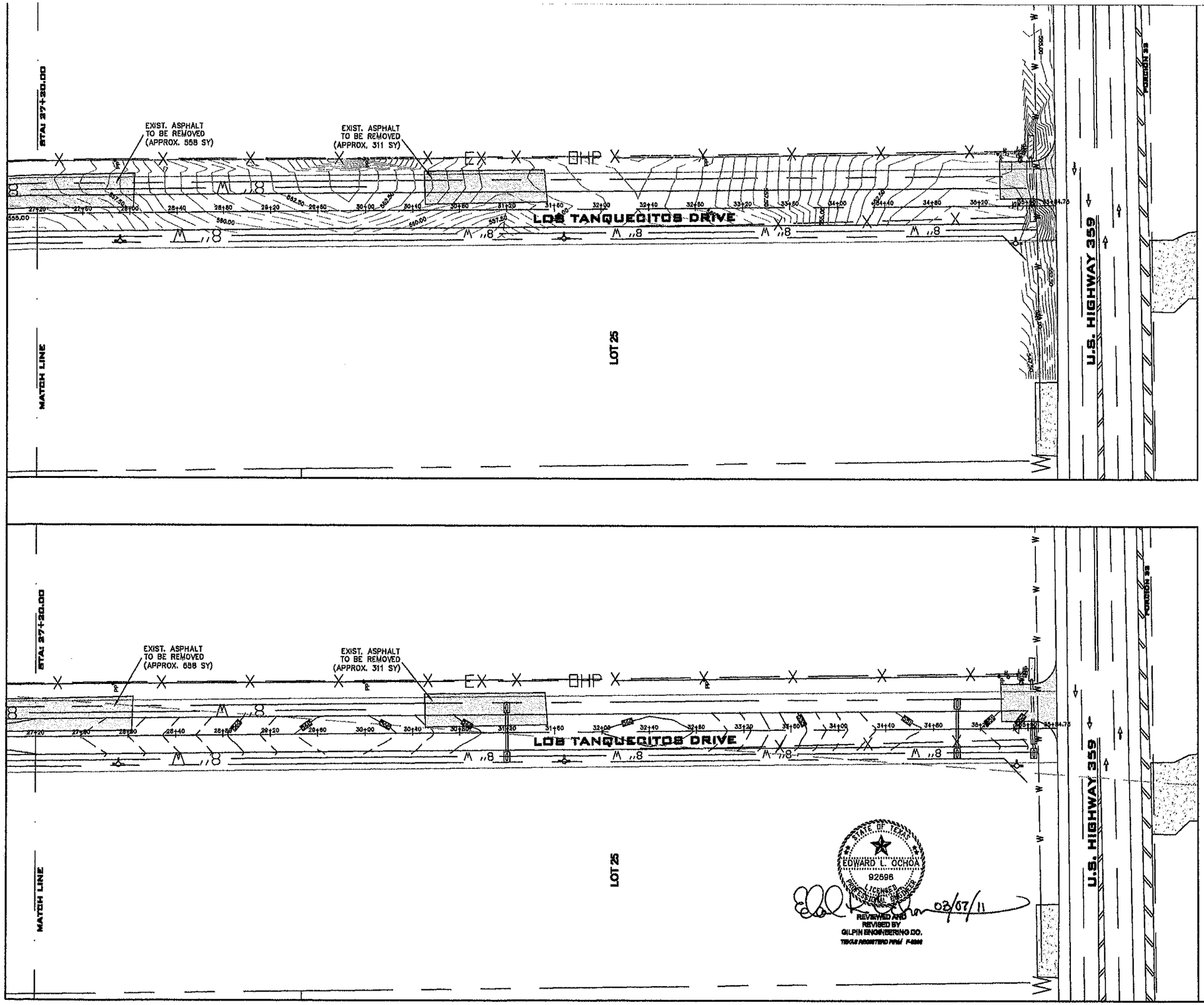
PLAN AND PROFILE
LOS TANQUESITIOS ROAD
STA: 18+00.00 TO STA: 27+20.00
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY:	O.R.
CHECKED BY:	E.L.O.
DRAWN DATE:	02-20-07
PLOTTED DATE:	01-14-11
JOB No.	N/A
FILE NAME:	TANQUECITOS
STATUS:	100%
AS-BUILT:	NO
REVISED DATE:	09-03-10

SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET	TOTAL:
58 OF	90



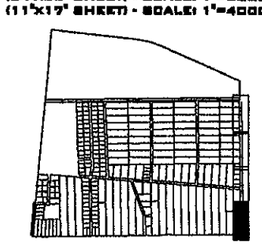
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127

THE LONE STAR
NOTIFICATION COMPANY
1-800-869-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX. 78041

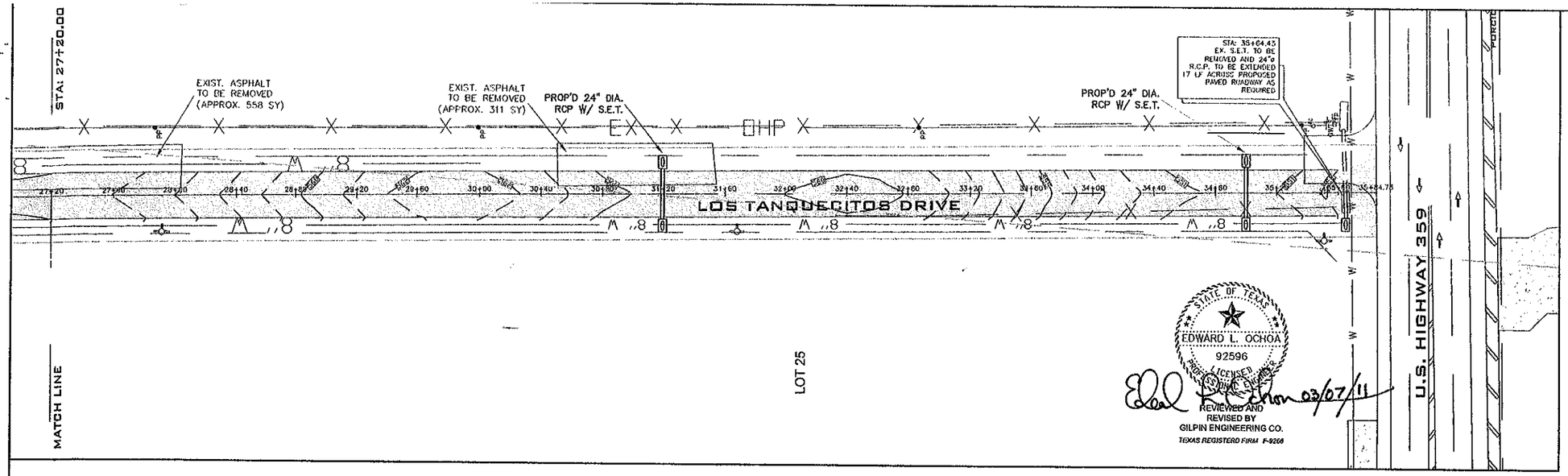
TANQUECITOS PHASE I AND II

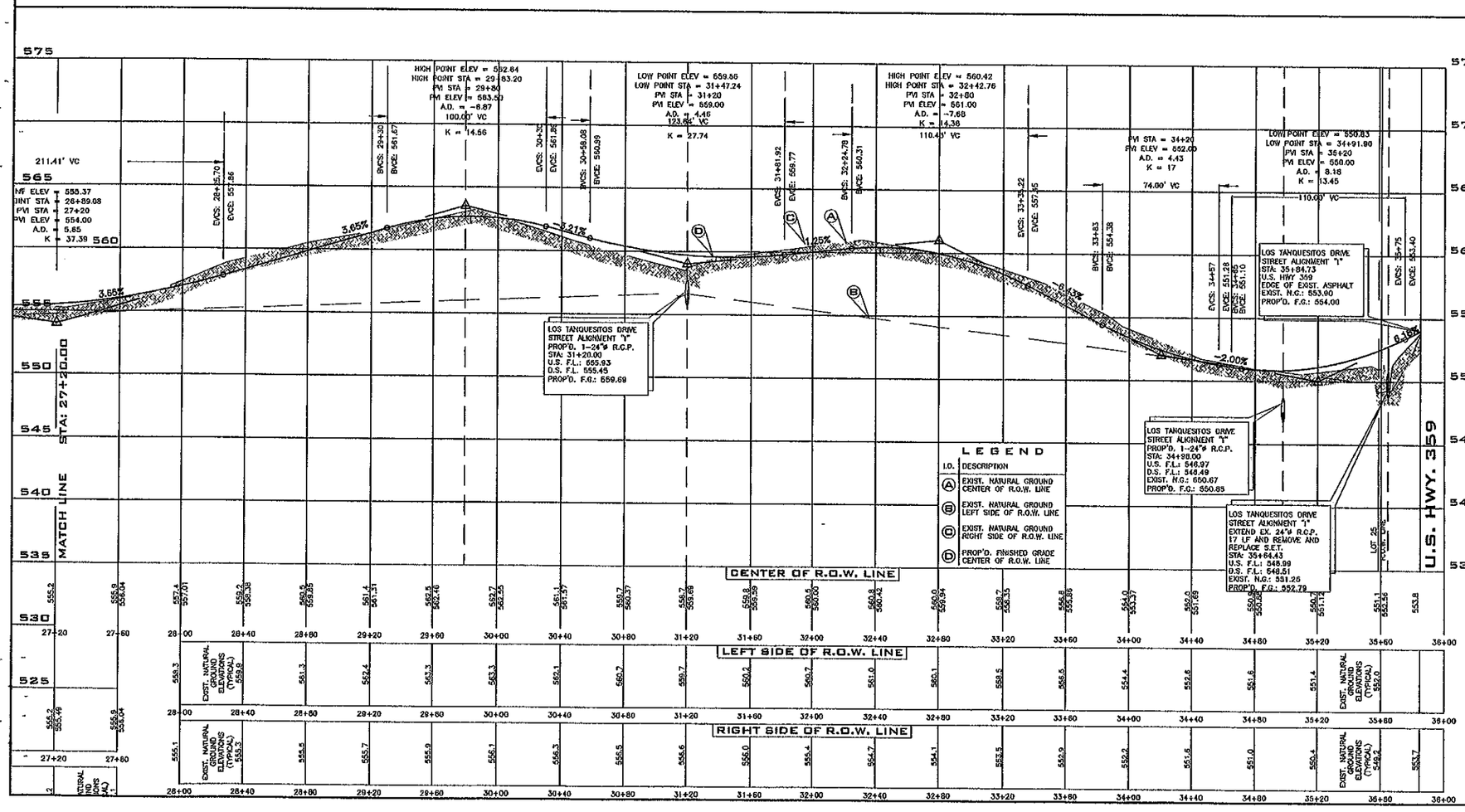
PLAN VIEW
LOS TANQUESITIOS ROAD
STA: 27+20.00 TO STA: 35+84.73
WEBB COUNTY, TEXAS

TOP VIEW SHOWING EXISTING TOPOGRAPHY

BOTTOM VIEW SHOWING PROPOSED TOPOGRAPHY

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET 59 OF	TOTAL 90





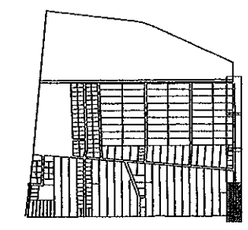
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX — OHP)
- EXISTING NATURAL GAS PIPELINE (EX — GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 560
- EXISTING POWER POLE PP
- EXISTING GUY WIRE GW
- EXISTING TRAFFIC SIGN TS
- EXISTING TELEPHONE PEDESTAL TP
- EXISTING WATER VALVE WV
- EXISTING FIRE HYDRANT HYD
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545
SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-928-5127
THE LONE STAR NOTIFICATION COMPANY
1-800-669-8344
TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

FOSTER
PH. (956) 723-3451
FAX (956) 723-6902
1004 HILLSIDE RD.
ENGINEERING COMPANY LAREDO, TX 78041

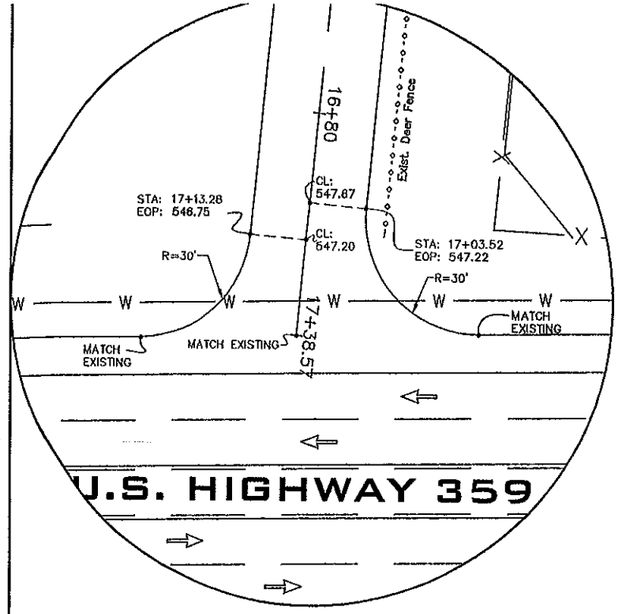
TANQUECITOS PHASE I AND II

PLAN AND PROFILE
LOS TANQUESITOS DR.
STA: 27+20.00 TO STA: 35+84.73
WEBB COUNTY, TEXAS

TOP VIEW SHOWING FINISHED GRADE PLAN

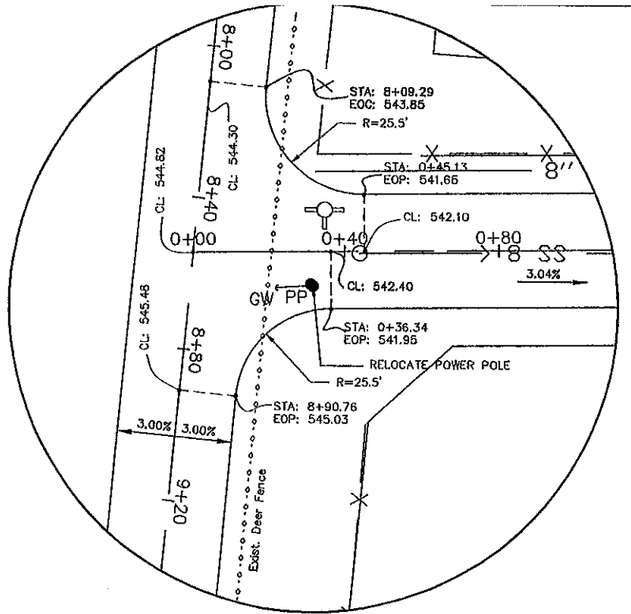
BOTTOM VIEW SHOWING FINISHED GRADE PROFILE

DRAWN BY:	O.R.
CHECKED BY:	E.L.O.
DRAWN DATE:	02-20-07
PLOTTED DATE:	01-14-11
JOB No.	N/A
FILE NAME:	TANQUECITOS
STATUS:	100%
AS-BUILT:	NO
REVISED DATE:	09-03-10
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET	TOTAL:
60 OF	90



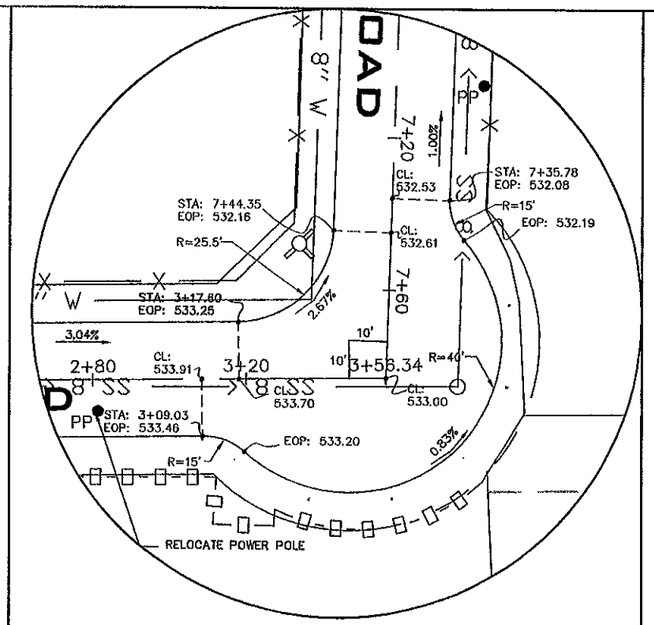
STREET INTERSECTION
AT
U.S. HIGHWAY 359
AND
SERRANO ROAD

No. 1



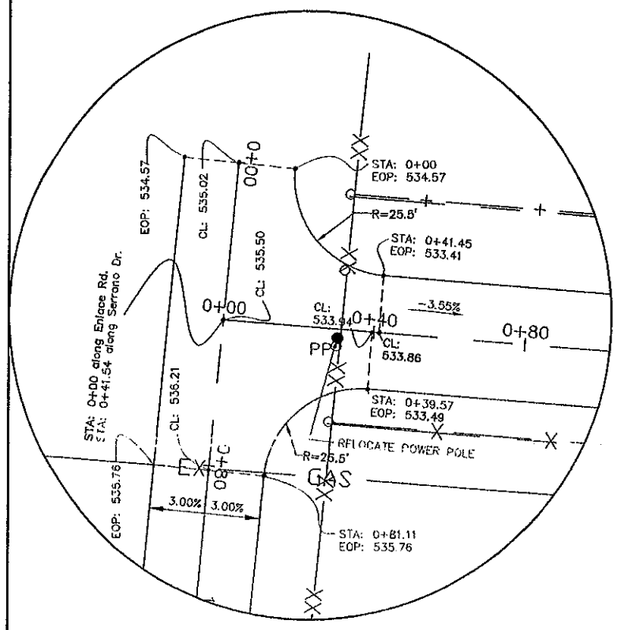
STREET INTERSECTION
AT
SERRANO ROAD
AND
DESPERADO ROAD

No. 2



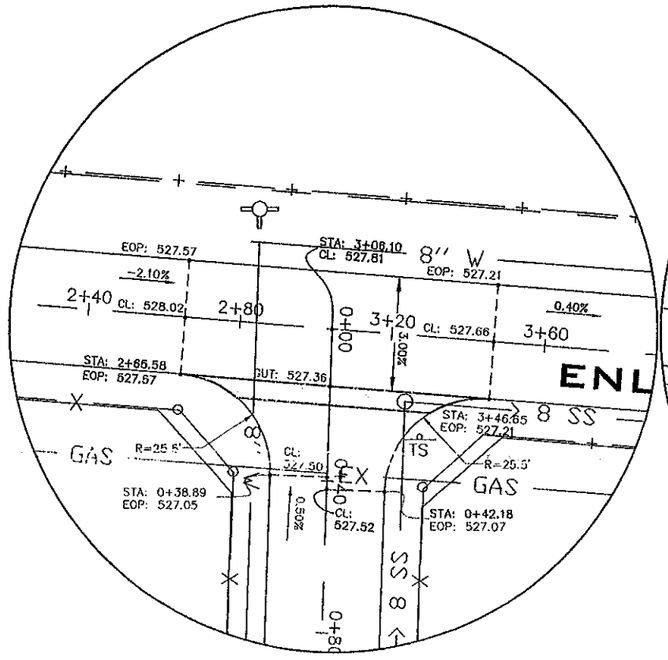
STREET INTERSECTION
AT
DESPERADO ROAD
AND
CANYON ROAD

No. 3



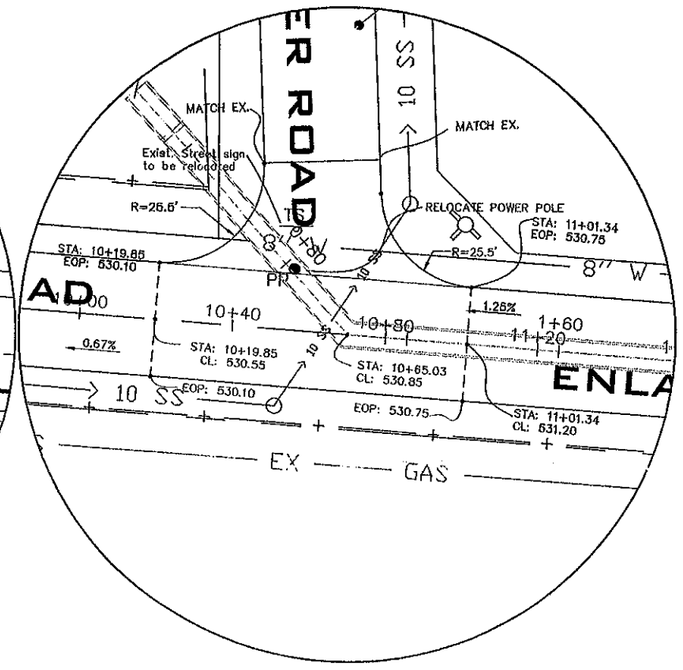
STREET INTERSECTION
AT
ENLACE Rd.
AND
SERRANO DR.

No. 4



STREET INTERSECTION
AT
ENLACE ROAD
AND
CANYON ROAD

No. 5



STREET INTERSECTION
AT
ENLACE ROAD
AND
AMANECER ROAD

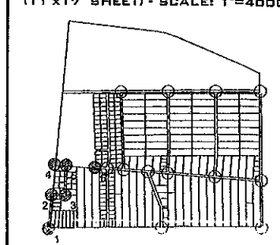
No. 6

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE
- EXISTING NATURAL GAS PIPELINE
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR)
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR)
- EXISTING POWER POLE
- EXISTING GUY WIRE
- EXISTING TRAFFIC SIGN
- EXISTING TELEPHONE PEDESTAL
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

REVIEWED AND
REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERD FIRM F-9258

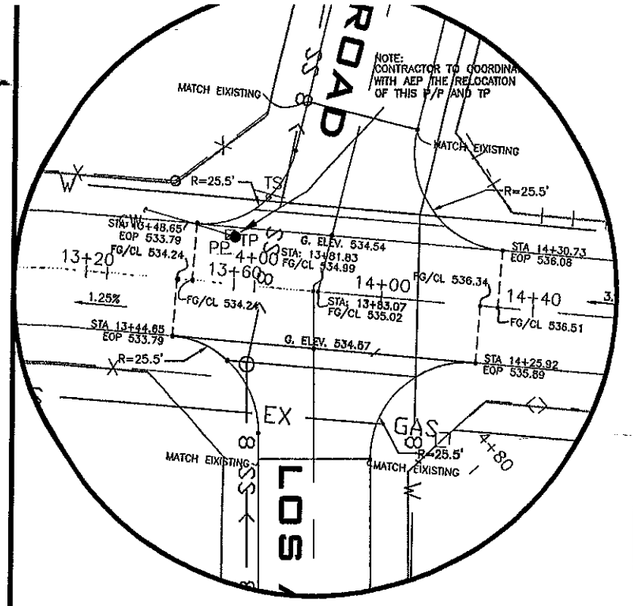
03/07/11

FOSTER
PH. (956) 723-3461
FAX (956) 723-6902
100 N. HILLSIDE RD.
ENGINEERING COMPANY LAREDO, TX 78041

TANQUECITOS PHASE I AND II

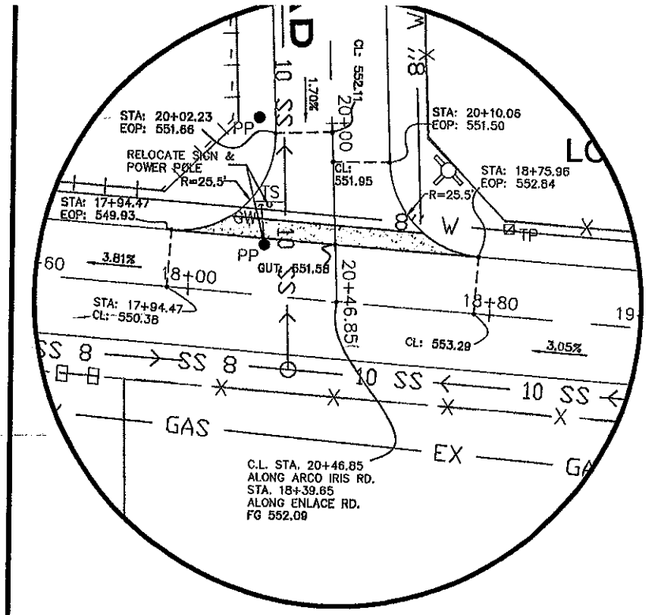
PLAN VIEW
STREET INTERSECTIONS
No. 1, 2, 3, 4, 5 AND 6
WEBB COUNTY, TEXAS

DRAWN BY: M.R.G.	
CHECKED BY: R.A.S.	
DRAWN DATE:	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=20'	VER. N/A
SCALE: (11"x17") SHEET	
HOR: 1"=40'	VER. N/A
SHEET 61	TOTAL OF 90



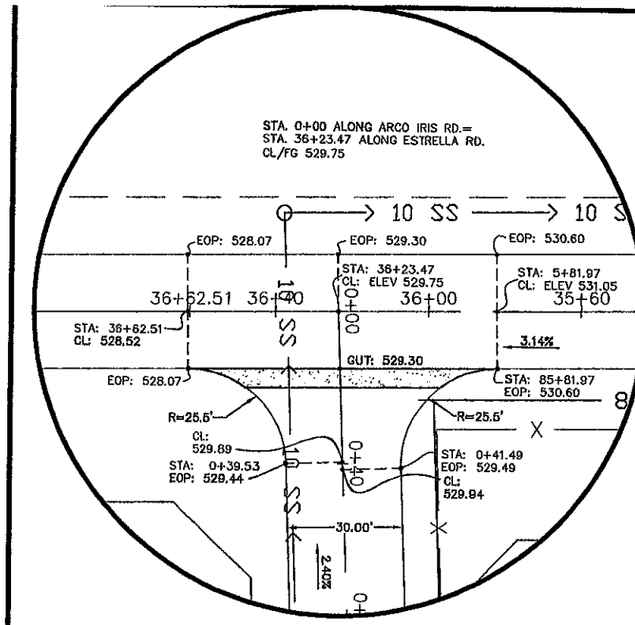
STREET INTERSECTION
AT
ENLACE ROAD
AND
LOS ALTOS ROAD

No. 7



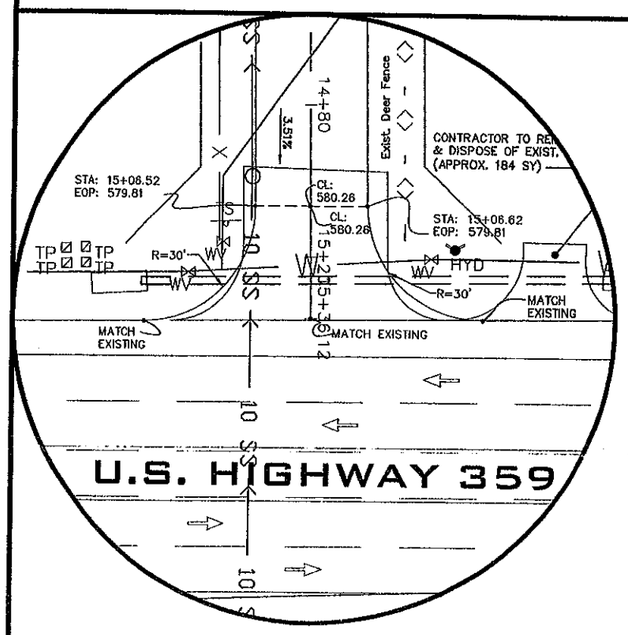
STREET INTERSECTION
AT
ENLACE ROAD
AND
ARCO IRIS ROAD

No. 8



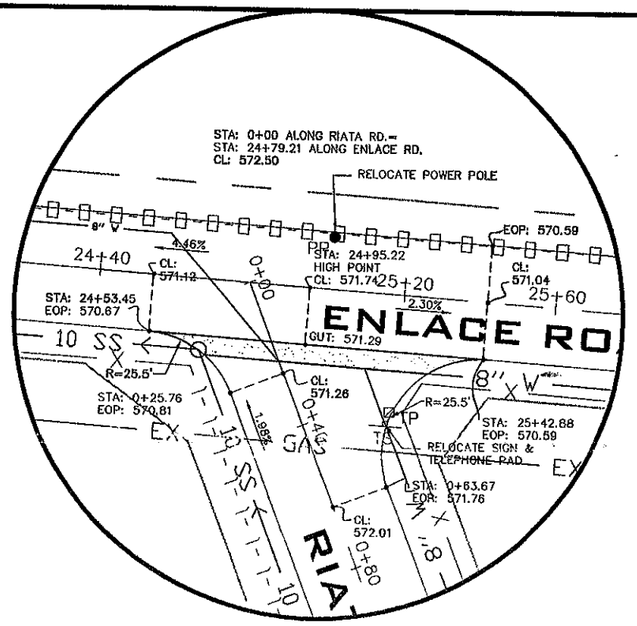
STREET INTERSECTION
AT
ESTRELLA ROAD
AND
ARCO IRIS ROAD

No. 9



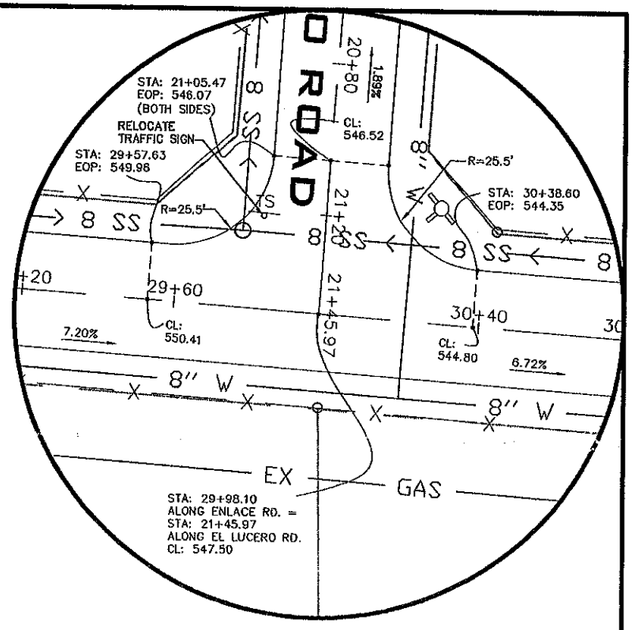
STREET INTERSECTION
AT
U.S. HIGHWAY 359
AND
RIATA ROAD

No. 10



STREET INTERSECTION
AT
ENLACE ROAD
AND
RIATA ROAD

No. 11



STREET INTERSECTION
AT
ENLACE ROAD
AND
EL LUCERO ROAD

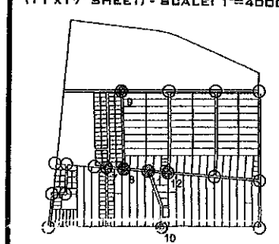
No. 12

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE
- EXISTING NATURAL GAS PIPELINE
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR)
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR)
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

03/07/11

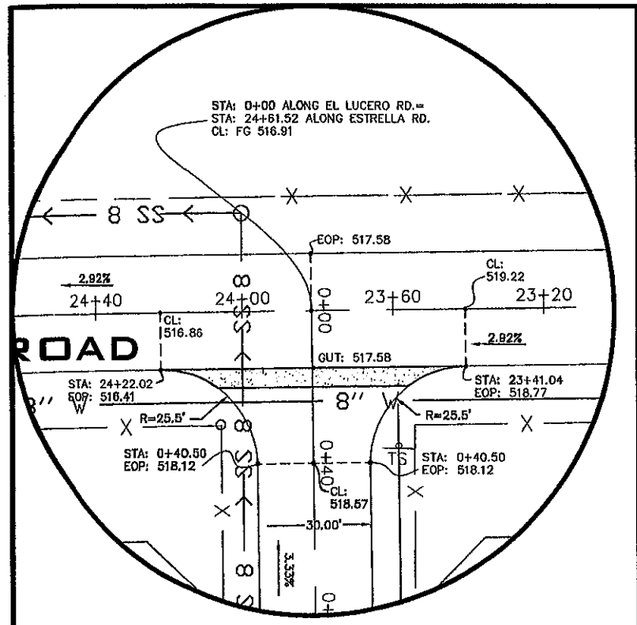
REVIEWED AND
REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERD FIRM F-9266

FOSTER
ENGINEERING COMPANY
Ph. (956) 723-3461
FAX (956) 723-6902
1004 HILLSIDE RD.
LAREDO, TX 78041

TANQUECITOS PHASE I AND II

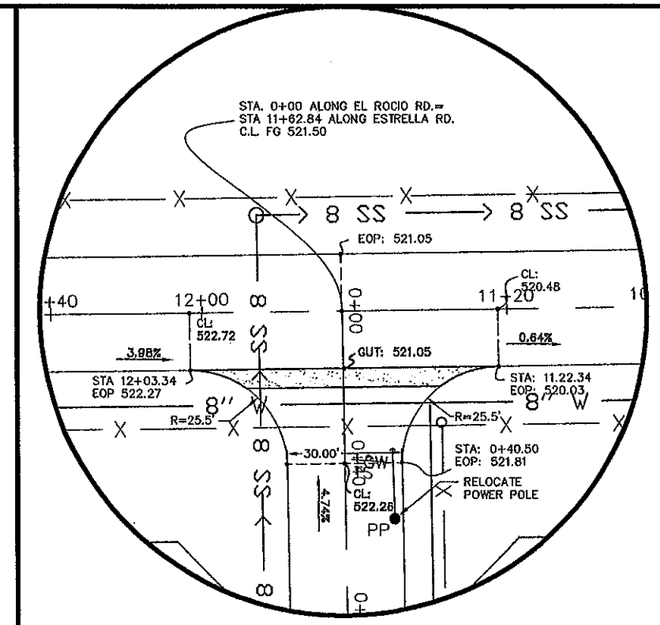
PLAN VIEW
STREET INTERSECTIONS
No. 7, 8, 9, 10, 11 AND 12
WEBB COUNTY, TEXAS

DRAWN BY: M.R.G.	
CHECKED BY: K.J.O.	
DRAWN DATE:	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=20'	VER. N/A
SCALE: (11"x17") SHEET	
HOR: 1"=40'	VER. N/A
SHEET 62	OF TOTAL: 90



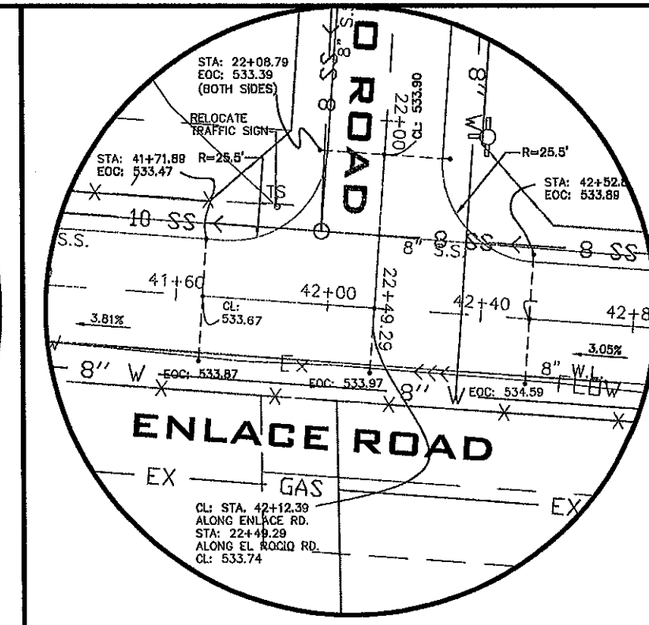
STREET INTERSECTION
AT
ESTRELLA ROAD
AND
EL LUCERO ROAD

No. 13



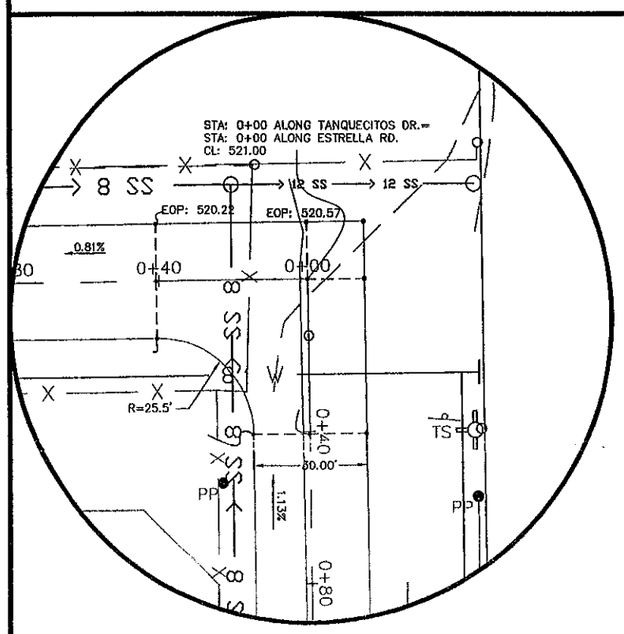
STREET INTERSECTION
AT
ESTRELLA ROAD
AND
EL ROCIO ROAD

No. 14



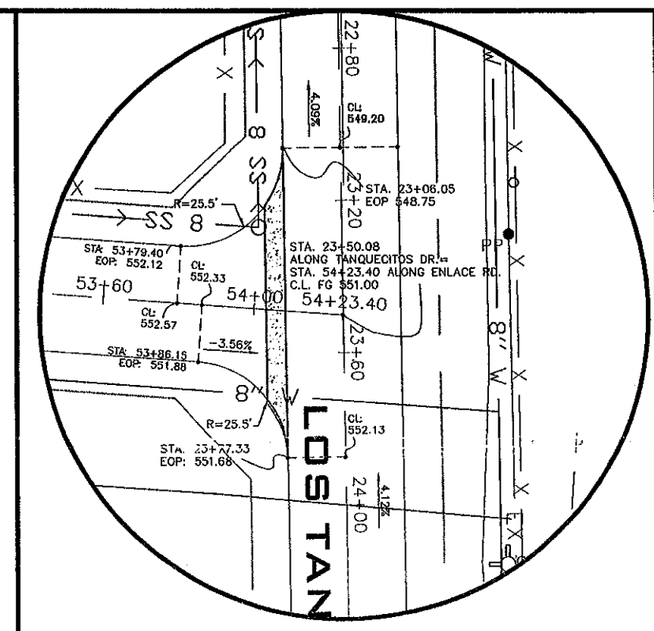
STREET INTERSECTION
AT
ENLACE ROAD
AND
EL ROCIO ROAD

No. 15



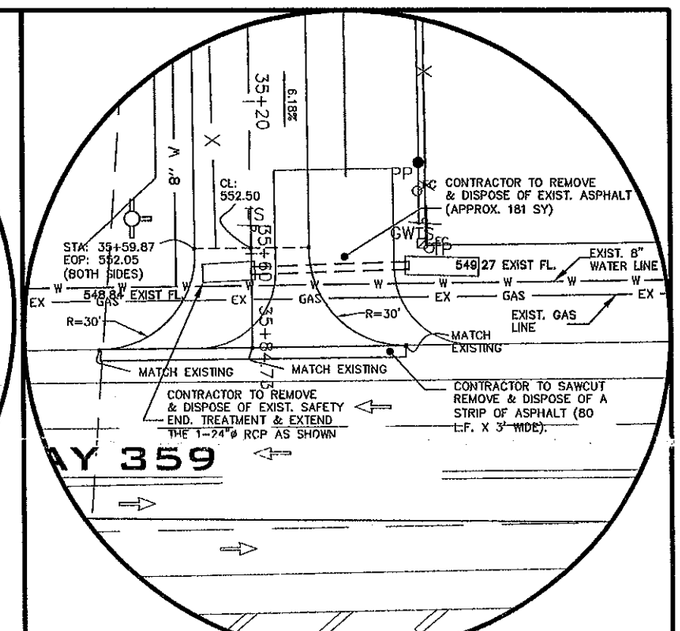
STREET INTERSECTION
AT
ESTRELLA ROAD
AND
LOS TANQUECITOS DRIVE

No. 16



STREET INTERSECTION
AT
ENLACE ROAD
AND
LOS TANQUECITOS DRIVE

No. 17

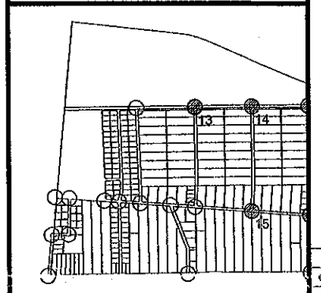


STREET INTERSECTION
AT
LOS TANQUECITOS ROAD
AND
U.S. HWY 359

No. 18

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE
- EXISTING NATURAL GAS PIPELINE
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR)
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR)
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE



STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

03/07/11

REVIEWED AND
REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERD FIRM F-9288

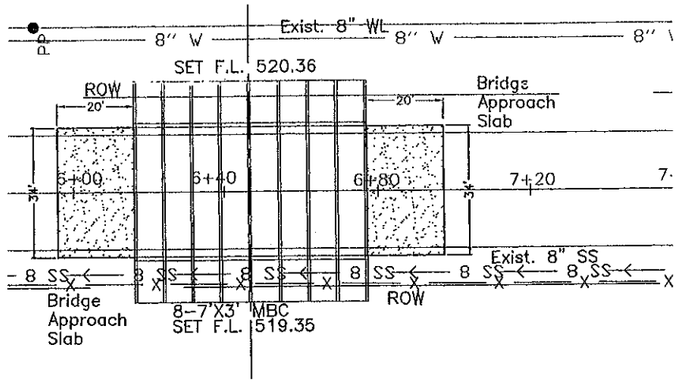
FOSTER
PH. (956) 723-3451
FAX (956) 723-8602
1004 HILLSIDE RD.
ENGINEERING COMPANY LAREDO, TX 78041

TANQUECITOS PHASE I AND II

PLAN VIEW
STREET INTERSECTIONS
No. 13, 14, 15, 16, 17 AND 18
WEBB COUNTY, TEXAS

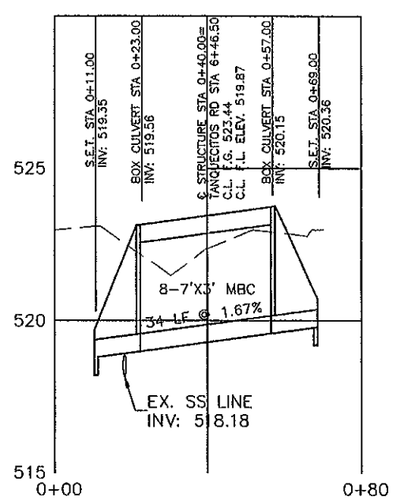
DRAWN BY: M.R.O.	
CHECKED BY: E.L.O.	
DRAWN DATE:	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=20'	VER. N/A
SCALE: (11"x17") SHEET	
HOR: 1"=40'	VER. N/A
SHEET 63 OF	TOTAL: 90

LOS TANQUECITOS DRIVE

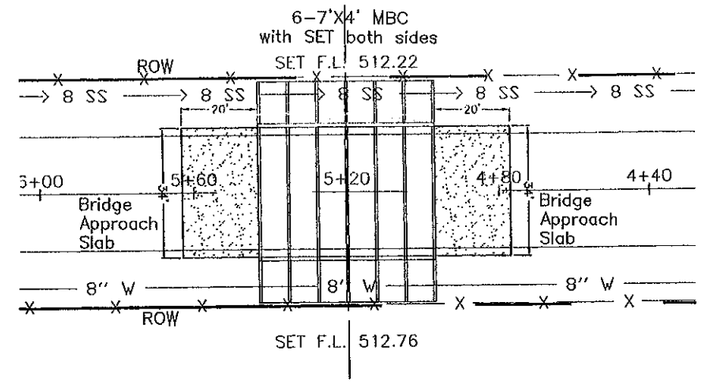


0 40
SCALE H: 1 INCH=40 FEET
SCALE V: 1 INCH=5 FEET

SEE THE FOLLOWING TxDOT STANDARDS FOR STRUCTURE "A"
MC-7-10 (Sheet 72.1)
SETB-CD(Sheets 74.1-74.2)
BAS-A (Sheet 73)

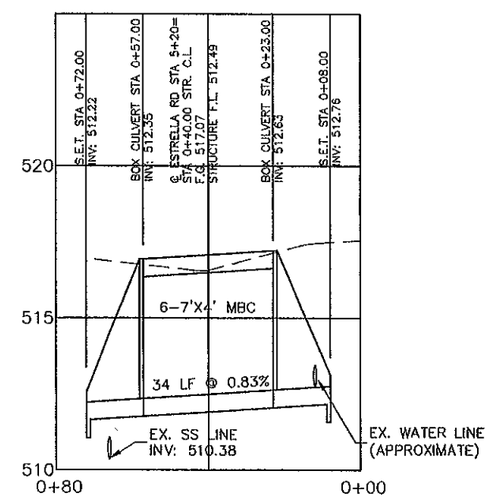


ESTRELLA ROAD



0 40
SCALE H: 1 INCH=40 FEET
SCALE V: 1 INCH=5 FEET

SEE THE FOLLOWING TxDOT STANDARDS FOR STRUCTURE "B"
MC-7-10 (Sheet 72.1)
SETB-CD(Sheets 74.1-74.2)
BAS-A (Sheet 73)



NOTES:

1) THE LOCATION OF THE EXISTING WATER LINE IS APPROXIMATE. THE CONTRACTOR WILL NEED TO CONTACT THE CITY OF LAREDO UTILITIES DEPT. AT 956-721-2000 AND REQUEST THE FIELD LOCATIONS FOR THE WATER AND SANITARY SEWER LINES.
2) THE CONTRACTOR IS REMINDED TO CALL FOR UTILITY LOCATES AT LEAST 48 HOURS BEFORE DIGGING FOR FIELD VERIFICATION OF ALL UTILITIES.

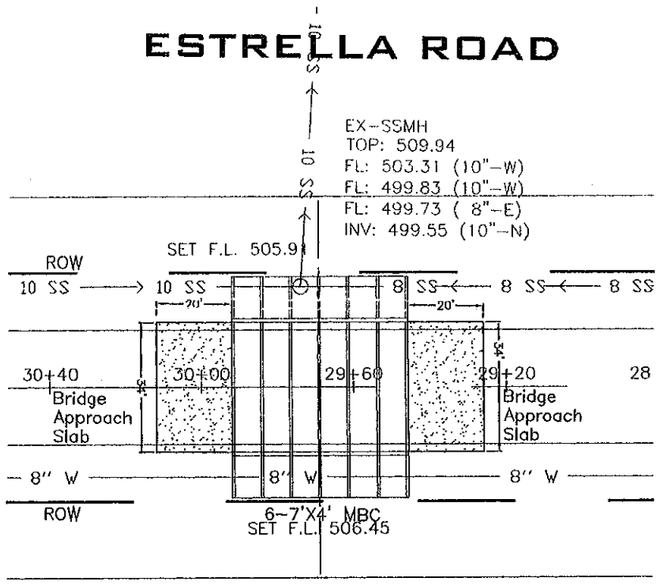
STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED PROFESSIONAL ENGINEER
03/07/11

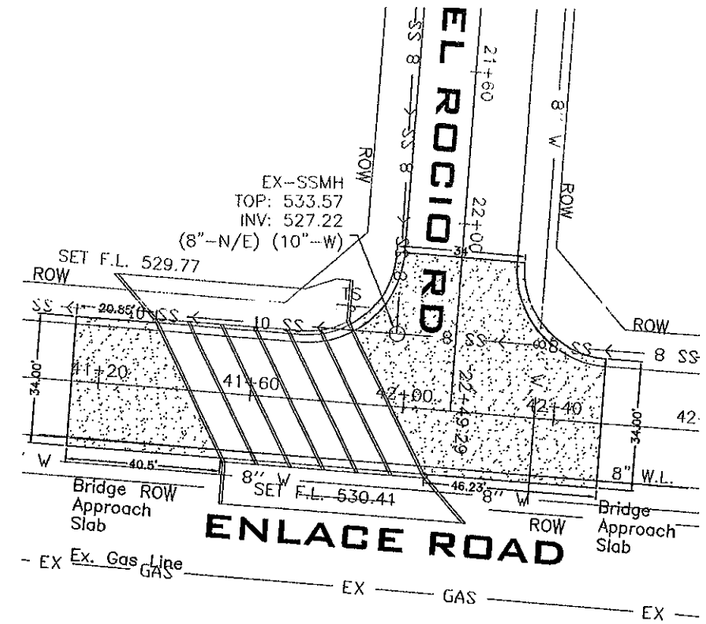
REVIEWED AND
REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-9266

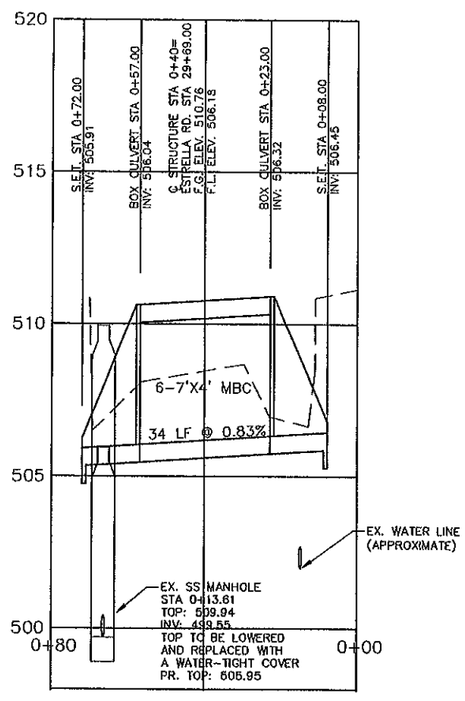
GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
BRIDGE PLAN & PROFILE
STRUCTURES "A" AND "B"
WEBB COUNTY, TEXAS

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 04-14-10	
SCALE: (24"x36") SHEET	
HOR: 1"=20'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=40'	VER. 1"=5'
SHEET 64 OF	TOTAL: 90

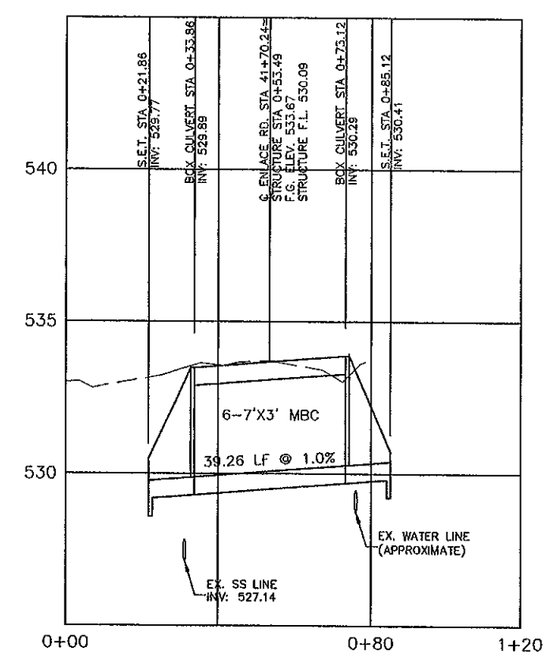






NOTES:

1) THE LOCATION OF THE EXISTING WATER LINE IS APPROXIMATE. THE CONTRACTOR WILL NEED TO CONTACT THE CITY OF LAREDO UTILITIES DEPT. AT 956-721-2000 AND REQUEST THE FIELD LOCATIONS FOR THE WATER AND SANITARY SEWER LINES.
2) THE CONTRACTOR IS REMINDED TO CALL FOR UTILITY LOCATES AT LEAST 48 HOURS BEFORE DIGGING FOR FIELD VERIFICATION OF ALL UTILITIES.



SEE THE FOLLOWING TxDOT STANDARDS FOR STRUCTURE "C"
MC-7-10 (Sheet 72.1)
SETB-CD(Sheets 74.1-74.2)
BAS-A (Sheet 73)

SEE THE FOLLOWING TxDOT STANDARDS FOR STRUCTURE "D"
MC-7-10 (Sheet 72.1)
MC-MD (Sheet 72.2)
SETB-FW-S S.E.T.-BOX CULVERT-FLARED WINGS SKEW
BAS-A (Sheet 73)

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER
03/07/11

REVIEWED AND REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-9266

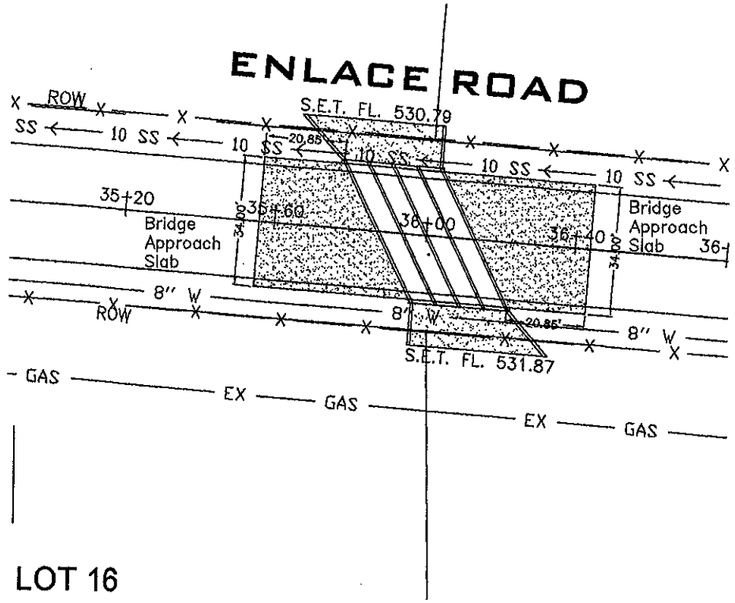
GILPIN ENGINEERING COMPANY
1101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

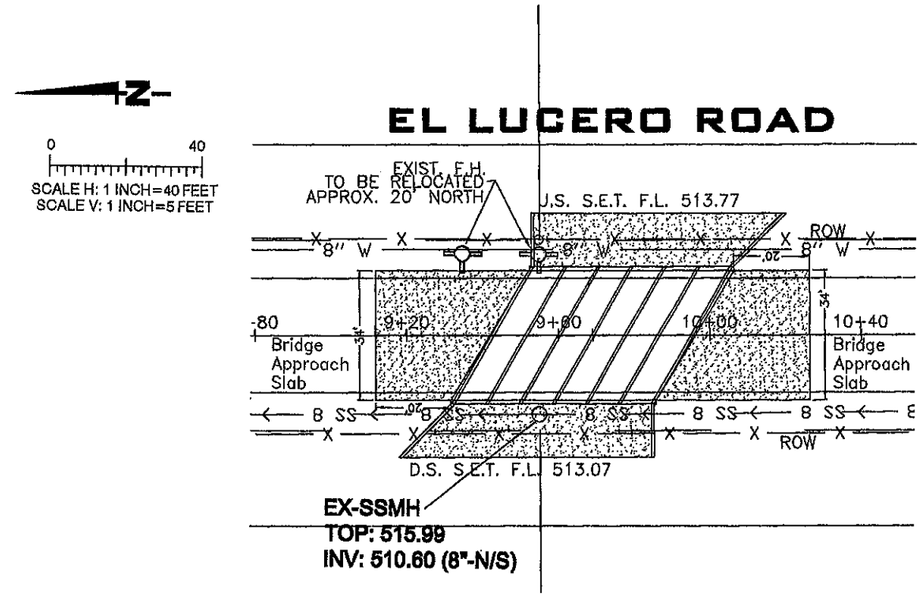
TANQUECITOS PHASE I AND II

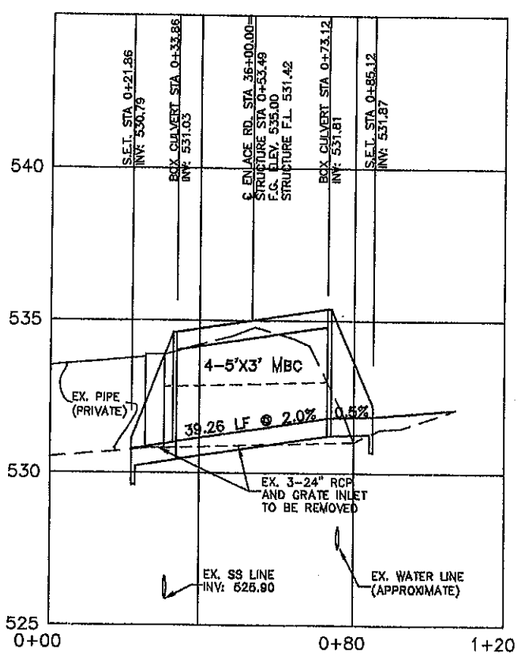
BRIDGE PLAN & PROFILE STRUCTURES "C" AND "D"

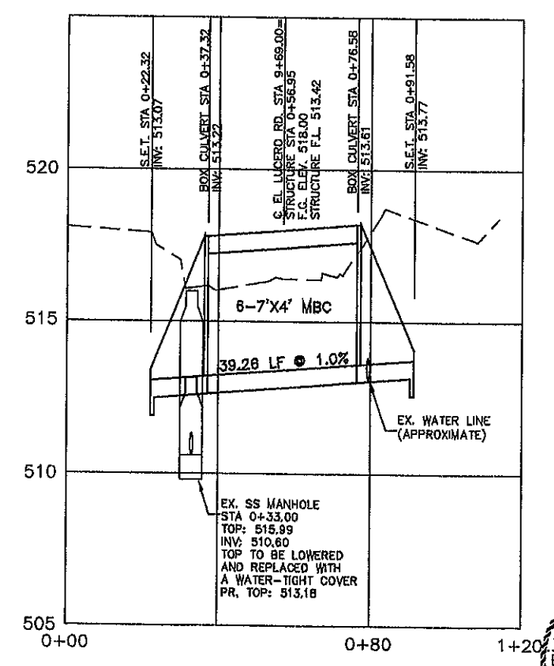
WEBB COUNTY, TEXAS

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 04-14-10	
SCALE: (24"x36") SHEET	
HOR: 1"=20'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=40'	VER. 1"=5'
SHEET 65 OF	TOTAL: 90









NOTES:

1) THE LOCATION OF THE EXISTING WATER LINE IS APPROXIMATE. THE CONTRACTOR WILL NEED TO CONTACT THE CITY OF LAREDO UTILITIES DEPT. AT 956-721-2000 AND REQUEST THE FIELD LOCATIONS FOR THE WATER AND SANITARY SEWER LINES.
2) THE CONTRACTOR IS REMINDED TO CALL FOR UTILITY LOCATES AT LEAST 48 HOURS BEFORE DIGGING FOR FIELD VERIFICATION OF ALL UTILITIES.

SEE THE FOLLOWING TxDOT STANDARDS FOR STRUCTURE "E"
MC-5-20 (Sheet 71)
MC-MD (Sheet 72.2)
SETB-FW-S S.E.T.-BOX CULVERT-FLARED WINGS SKEW
BAS-A (Sheet 73)

SEE THE FOLLOWING TxDOT STANDARDS FOR STRUCTURE "F"
MC-7-10 (Sheet 72.1)
MC-MD (Sheet 72.2)
SETB-FW-S S.E.T.-BOX CULVERT-FLARED WINGS SKEW
BAS-A (Sheet 73)

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED PROFESSIONAL ENGINEER

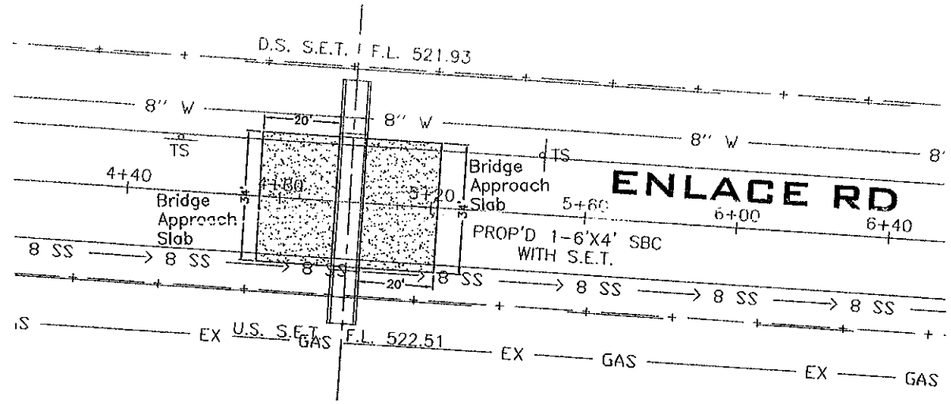
REVIEWED AND REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F0268
11/28/2011

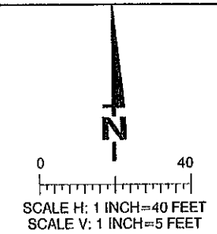
GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-0268
Ph. (956) 753-2219
Fax (956) 753-2213

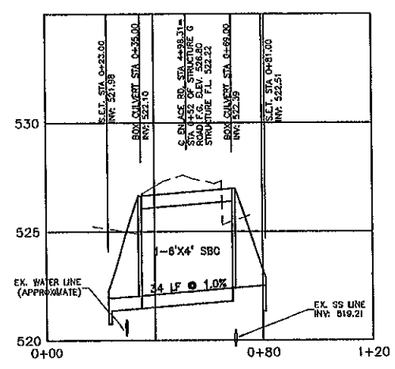
TANQUECITOS PHASE I AND II

BRIDGE PLAN & PROFILE
STRUCTURES "E" AND "F"
WEBB COUNTY, TEXAS

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 04-14-10	
SCALE: (24"x36") SHEET	
HOR: 1"=20'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=40'	VER. 1"=5'
SHEET 66 OF	TOTAL: 90







NOTES:

1) THE LOCATION OF THE EXISTING WATER LINE IS APPROXIMATE. THE CONTRACTOR WILL NEED TO CONTACT THE CITY OF LAREDO UTILITIES DEPT. AT 956-721-2000 AND REQUEST THE FIELD LOCATIONS FOR THE WATER AND SANITARY SEWER LINES.
2) THE CONTRACTOR IS REMINDED TO CALL FOR UTILITY LOCATES AT LEAST 48 HOURS BEFORE DIGGING FOR FIELD VERIFICATION OF ALL UTILITIES.

SEE THE FOLLOWING TxDOT STANDARDS FOR STRUCTURE "G"
SCC 5&6 - SINGLE BOX CULVERT 5' & 6' SPANS (Sheet 70.2)
SETB-CD-S.E.T. BOX CULVERT -CROSS DRAINAGE (Sheets 74.1.-74.2)
BAS-A (Sheet 73)

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

03/07/11

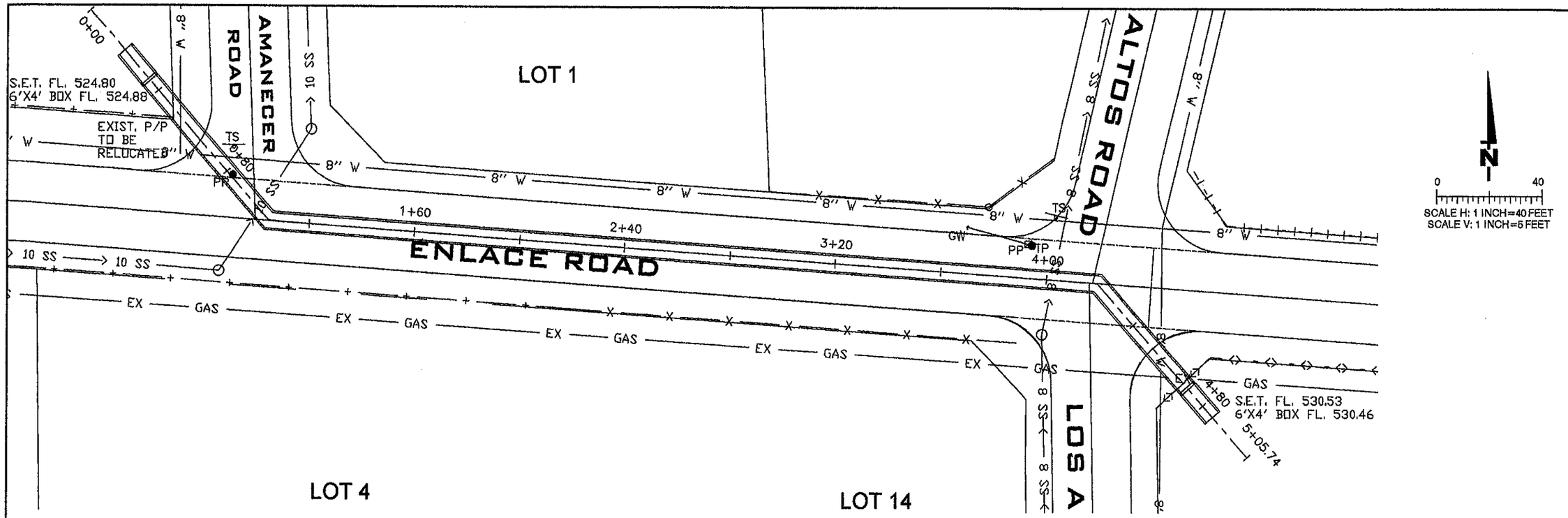
REVIEWED AND REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F9266

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

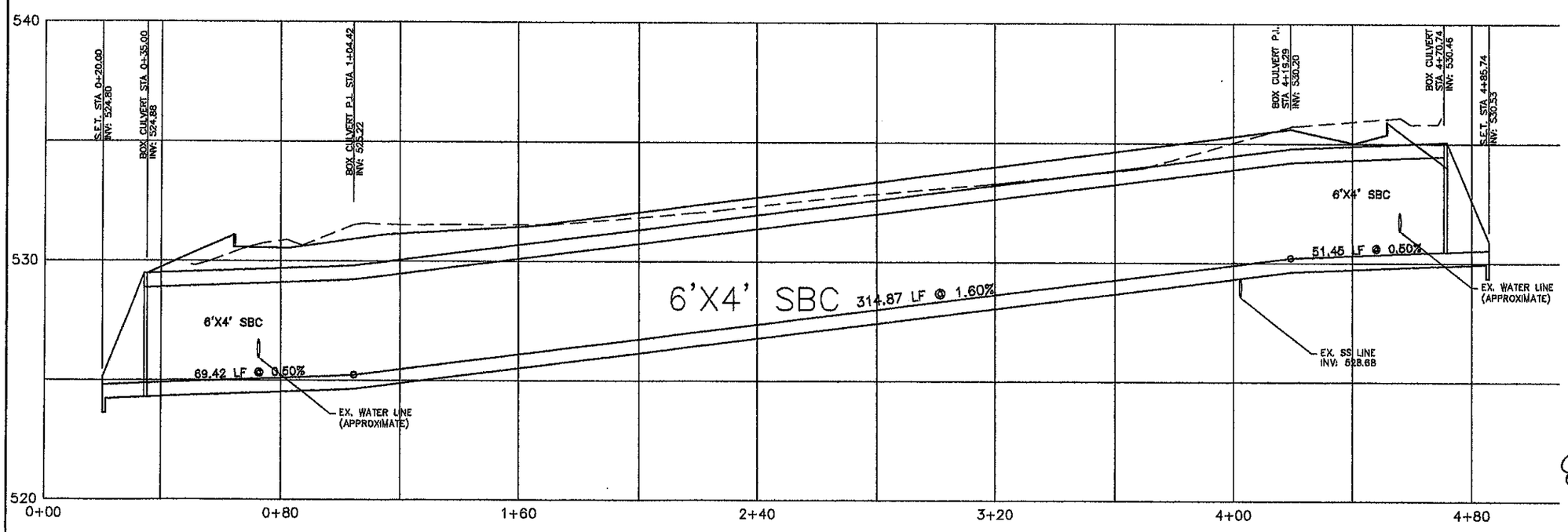
TANQUECITOS PHASE I AND II

BRIDGE PLAN & PROFILE
STRUCTURE "G"
WEBB COUNTY, TEXAS

DRAWN BY: G.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=20'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=40'	VER. 1"=5'
SHEET 67	OF TOTAL: 90



SEE THE FOLLOWING TxDOT STANDARDS FOR STRUCTURE "H"
SCC 5&6 - SINGLE BOX CULVERT 5' & 6' SPANS (Sheet 70.2)
SCC-MD (Sheet 70.3)
SETB-CD-S.E.T. BOX CULVERT -CROSS DRAINAGE (Sheets 74.1.-74.2)
BAS-A (Sheet 73)



STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED PROFESSIONAL ENGINEER

03/07/11

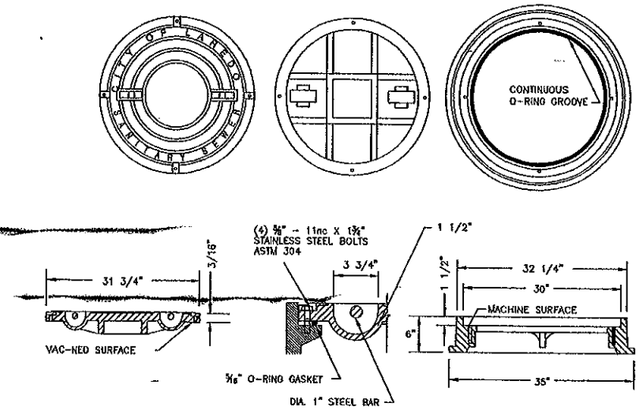
REVIEWED AND REVISED BY GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-8266

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-8266
Ph: (956) 733-2239
Fax: (956) 733-2239

TANQUECITOS PHASE I AND II

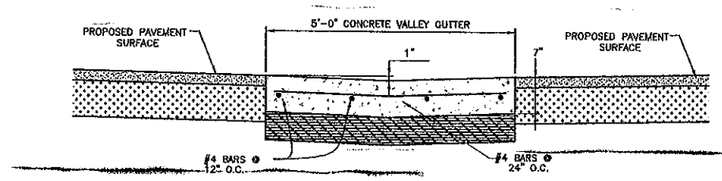
BRIDGE PLAN & PROFILE
STRUCTURE "H"
WEBB COUNTY, TEXAS

DRAWN BY: O.R.	
CHECKED BY: E.L.O.	
DRAWN DATE: 02-20-07	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100 %	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: 1"=20'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=40'	VER. 1"=5'
SHEET 68 OF	TOTAL: 90



32" WATERTIGHT MANHOLECOVER w/FRAME

N.T.S.

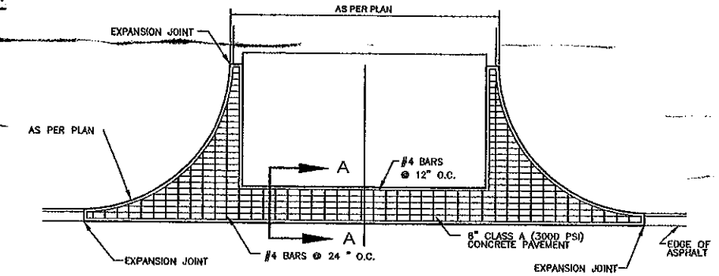


SECTION A-A

NOTE: USE SAME MATERIALS AND TESTING REQUIREMENTS AS TYPE 'A' CURB AND GUTTER. USE SAME EXPANSION AND CONTROL JOINTS AS TYPE 'A' CURB AND GUTTER.

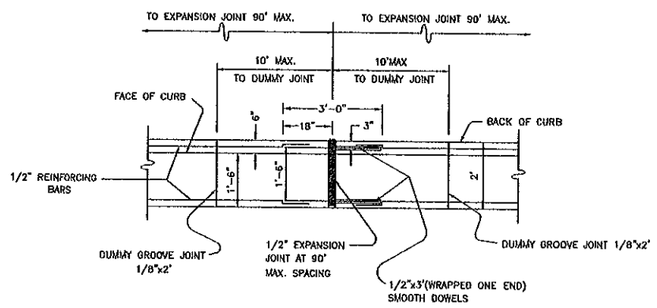
VALLEY GUTTER CROSS SECTION VIEW

N.T.S.



TYPICAL CONCRETE VALLEY GUTTER

N.T.S.

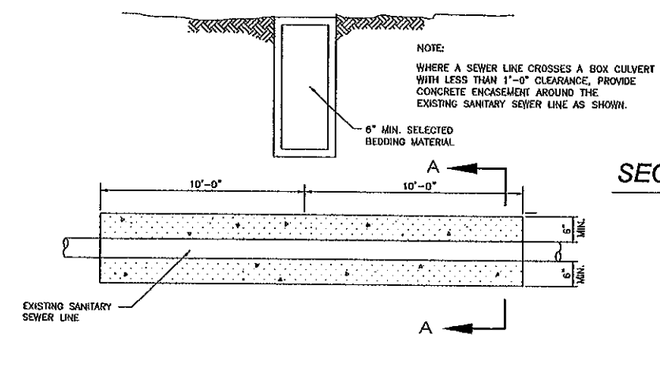


CURB & GUTTER AND VALLEY GUTTER TYPICAL TRANSVERSE JOINT PLAN VIEW

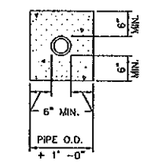
N.T.S.

CONCRETE NOTES FOR LOW WATER CROSSING:

1. CONCRETE SHALL BE CLASS "A" (3000 PSI).
2. NO. 4 REBAR SHALL BE USED AS REINFORCEMENT WITH HORIZONTAL AND VERTICAL SPACING OF 12" THROUGHOUT, UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS.
3. ALL STEEL SHALL BE GRADE 60.
4. ALL SPLICE LENGTHS SHALL BE 18" OR LONGER.
5. CLEARANCE BETWEEN REINFORCING STEEL AND CONCRETE SURFACE SHALL BE 2" OR GREATER.
6. THE FINISH SHALL BE SEMI-SMOOTH WITH A STIFF BROOM OR BRUSH FINISH.
7. USE FULL DEPTH FORMS TO THE DIMENSIONS SPECIFIED.
8. ALL COLD JOINTS BETWEEN NEWLY PLACED CONCRETE COMPONENTS SHALL BE POURED WITH STEEL REINFORCEMENT THAT IS TRANSVERSE TO COLD JOINT CONTINUED UTILIZING THE MINIMUM SPLICE LENGTH SPECIFIED HEREIN.

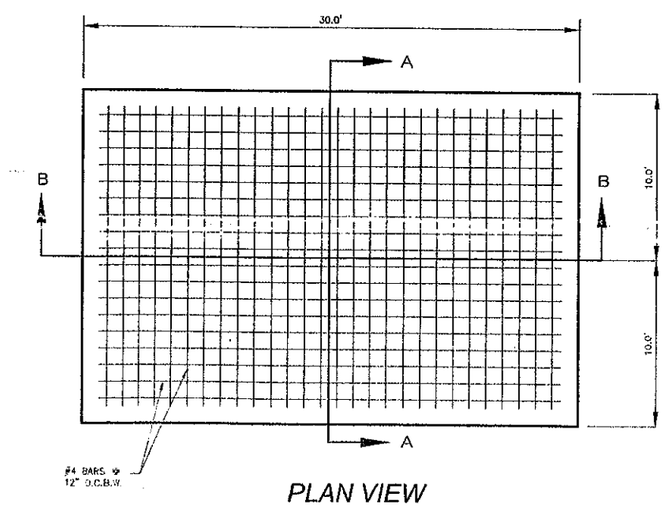


SECTION A-A



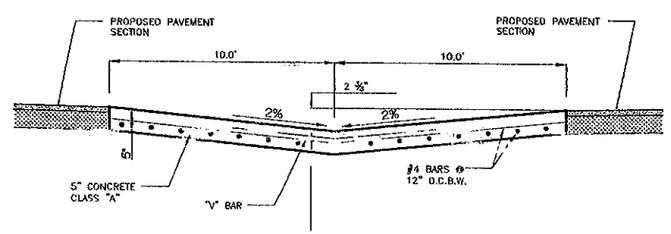
CONCRETE SEALS FOR SEWER MAIN CROSSING WATER MAIN

N.T.S.



PLAN VIEW

N.T.S.

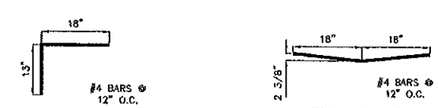


SECTION A-A

N.T.S.

LOW-WATER CROSSING OPTION

N.T.S.

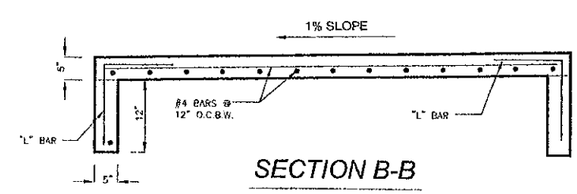


"L" BAR

N.T.S.

"V" BAR

N.T.S.



SECTION B-B

N.T.S.

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED PROFESSIONAL ENGINEER

03/07/11

REVIEWED AND REVISED BY GILPIN ENGINEERING CO.
TEXAS REGISTERED FIRM F-9205

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9205
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II

MISC. DETAILS

WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.	
CHECKED BY:	
DRAWN DATE:	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT:	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: N/A	VER. N/A
SCALE: (11"x17") SHEET	
HOR: N/A	VER. N/A
SHEET 69	TOTAL: OF 90

Culvert Station and/or Creek name followed by applicable end (Lt, Rt or Both)	Description of Box Culvert No. Spans ~ Span X Height	Max Fill Height (Ft)	Applicable Box Culvert Standard (4)	Applicable Wingwall or End Treatment Standard	Skew Angle (0^,15^, 30^ or 45^)	Side Slope or Channel Slope Ratio (SL:1)	T Culvert Top Slab Thickness (In)	U Culvert Wall Thickness (In)	C Estimated Curb Height (Ft)	Hw Height of Wingwall (1) (Ft)	A Curb to End of Wingwall (Ft)	B Offset of End of Wingwall (Ft)	Lw Length of Longest Wingwall (Ft)	Ltw Culvert Toewall Length (Ft)	Atw Anchor Toewall Length (Ft)	Riprap Apron (C.Y.)	Class "C" Conc (Curb) (2) (C.Y.)	Class "C" Conc (Wingwall) (3) (C.Y.)	Total Wingwall Area (S.F.)
STRUCTURE "A" (Both)	8 ~ 7'x 3'	10'	MC-7-10	SETB-CD	0°	3:1	7"	7"	0.000'	3.333'	N/A	N/A	9.000'	N/A	61.250'	0.0	0.0	33.4	N/A
STRUCTURE "B" (Both)	6 ~ 7'x 4'	10'	MC-7-10	SETB-CD	0°	3:1	7"	7"	0.000'	4.333'	N/A	N/A	12.000'	N/A	46.083'	0.0	0.0	34.6	N/A
STRUCTURE "C" (Both)	6 ~ 7'x 4'	10'	MC-7-10	SETB-CD	0°	3:1	7"	7"	0.000'	4.333'	N/A	N/A	12.000'	N/A	46.083'	0.0	0.0	34.6	N/A
STRUCTURE "D" (Both)	6 ~ 7'x 3'	10'	MC-7-10	SETB-FW-S	30°	3:1	7"	7"	0.250'	4.583'	12.750'	12.750'	18.031'	N/A	64.615'	20.0	1.0	19.8	N/A
STRUCTURE "E" (Both)	4 ~ 5'x 3'	20'	MC-5-20	SETB-FW-S	30°	3:1	7"	7"	0.250'	3.583'	9.750'	9.750'	13.789'	N/A	34.865'	7.4	0.4	11.6	N/A
STRUCTURE "F" (Both)	6 ~ 7'x 4'	10'	MC-7-10	SETB-FW-S	30°	3:1	7"	7"	0.250'	4.583'	12.750'	12.750'	18.031'	N/A	64.615'	20.0	1.0	19.8	N/A
STRUCTURE "G" (Both)	1 ~ 6'x 4'	16'	SCC-5&6	SETB-CD	0°	3:1	7"	7"	0.000'	4.333'	N/A	N/A	12.000'	N/A	7.167'	0.0	0.0	6.4	N/A
STRUCTURE "H" (Both)	1 ~ 6'x 4'	16'	SCC-5&6	SETB-CD	0°	3:1	7"	7"	0.000'	4.333'	N/A	N/A	12.000'	N/A	7.167'	0.0	0.0	6.4	N/A

NOTES:

Skew Angle = 0^ for SW-0, FW-0, SETB-CD, SETB-SW-0, and SETB-FW-0 standards.
30^ Maximum for Safety End Treatment

SL:1 = Horizontal:1 Vertical
Side Slope at culvert for Flared or Straight Wingwalls. Channel Slope for Parallel Wingwalls.
Slope shall be 3:1 or flatter for Safety End Treatments.

T = Box Culvert Top Slab Thickness. Dimension can be found on the applicable Box Culvert Standard.

U = Box Culvert Wall Thickness. Dimension can be found on the applicable Box Culvert Standard.

C = Curb Height.

See applicable wing or end treatment standards for calculations of Hw, A, B, Lw, Ltw, Atw, and Total Wingwall Area.
Hw = Height of Wingwall.
A = Distance from Face of Curb to End of Wingwall (Not applicable to Parallel or Straight Wingwalls).
B = Offset of End of Wingwall (Not applicable to Parallel or Straight Wingwalls).
Lw = Length of Longest Wingwall.
Ltw = Length of Culvert Toewall (Not applicable when using Riprap Apron).
Atw = Length of Anchor Toewall (Applicable to Safety End Treatment only).
Total Wingwall Area = Wingwall area in S.F. for two wingwalls (one structure end) if Lt or Rt.
Area for four wingwalls (two structure ends) if Both.

(1) The wall heights shown will be rounded to the nearest Foot for bidding purposes.

(2) Concrete volume shown is for box culvert curb only. For curbs using the RAC standard, quantities shown must be increased by a factor of 2. If Class "S" concrete is required for the top slab of the culvert, the curb concrete shall also be Class "S". Curb concrete is considered part of the Box Culvert for payment.

(3) Concrete volume shown is total of wing, footing, culvert toewall (if any), anchor toewall (if any) and wingwall toewall. Riprap apron, culvert and curb quantities are not included.

(4) Regardless of the type of culvert shown on this sheet, the Contractor shall have the option of furnishing cast-in-place or precast culverts unless otherwise shown elsewhere on the plans. If the Contractor elects to provide culverts of a different type than those shown on this sheet, it shall be the Contractor's responsibility to make the necessary adjustments to the dimensions and quantities shown.

SPECIAL NOTE:

This sheet is a supplement to the Box Culvert standards. It is to be filled out by the culvert specifier and provides dimensions for the construction of the Box Culvert Wingwalls and Safety End Treatments.

An Excel 97 spreadsheet to assist in completing this table can be downloaded from the Bridge Standards (English) web page on the TxDOT web site. The completed sheet shall be signed, sealed, and dated by a licensed Professional Engineer.

Texas Department of Transportation
Bridge Division

BOX CULVERT SUPPLEMENT
WINGS AND END TREATMENTS

BCS

FILE: bcsstdsl.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: GAF
©TxDOT February 2010	DISTRICT	FEDERAL AID PROJECT		SHEET
REVISIONS				
	COUNTY	CONTROL	SECT	JOB	HIGHWAY

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9295
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD - BCS
BOX CULVERT SUPPLEMENT
WINGS AND END TREATMENTS
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR: N/A VER. N/A

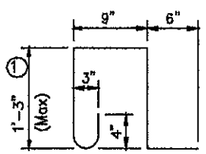
BILLS OF REINFORCING STEEL (For Box Length = 40 feet)

SECTION DIMENSIONS S	H	T	U	FILL HEIGHT ⑤	Bars B No.	Size	Spa	Length	Weight	Bars C No.	Size	Spa	Length	Weight	"X"	"Y"
5'-0"	2'-0"	7"	7"	26'	194	#5	5"	5'-11"	1,197	162	#5	6"	5'-2"	873	2'-5"	2'-9"
5'-0"	2'-0"	8"	7"	30'	194	#5	5"	5'-11"	1,197	194	#4	5"	5'-0"	648	2'-6"	2'-6"
5'-0"	3'-0"	7"	7"	26'	194	#5	5"	5'-11"	1,197	194	#4	6"	5'-11"	767	3'-5"	2'-6"
5'-0"	3'-0"	8"	7"	30'	194	#5	5"	5'-11"	1,197	194	#4	5"	6'-0"	778	3'-6"	2'-6"
5'-0"	4'-0"	7"	7"	26'	194	#5	5"	5'-11"	1,197	194	#4	5"	6'-11"	896	4'-5"	2'-6"
5'-0"	4'-0"	8"	7"	30'	194	#5	5"	5'-11"	1,197	194	#4	5"	7'-0"	907	4'-6"	2'-6"
5'-0"	5'-0"	7"	7"	26'	194	#5	5"	5'-11"	1,197	194	#4	5"	7'-11"	1,026	5'-5"	2'-6"
5'-0"	5'-0"	8"	7"	30'	194	#5	5"	5'-11"	1,197	194	#4	5"	8'-0"	1,037	5'-6"	2'-6"
6'-0"	3'-0"	7"	7"	20'	194	#5	5"	6'-11"	1,400	162	#5	6"	6'-6"	1,098	3'-5"	3'-1"
6'-0"	3'-0"	8"	7"	26'	162	#6	6"	6'-11"	1,683	162	#5	6"	6'-7"	1,112	3'-6"	3'-1"
6'-0"	3'-0"	9"	8"	30'	162	#6	6"	7'-1"	1,724	162	#5	6"	6'-8"	1,126	3'-7"	3'-1"
6'-0"	4'-0"	7"	7"	20'	194	#5	5"	6'-11"	1,400	194	#4	5"	7'-3"	940	4'-5"	2'-10"
6'-0"	4'-0"	8"	7"	26'	194	#6	5"	6'-11"	2,015	162	#5	6"	7'-7"	1,281	4'-6"	3'-1"
6'-0"	4'-0"	9"	8"	30'	162	#6	6"	7'-1"	1,724	162	#5	6"	7'-8"	1,295	4'-7"	3'-1"
6'-0"	5'-0"	7"	7"	20'	194	#5	5"	6'-11"	1,400	194	#4	5"	8'-3"	1,069	5'-5"	2'-10"
6'-0"	5'-0"	8"	7"	26'	194	#6	5"	6'-11"	2,015	162	#5	6"	8'-7"	1,450	5'-6"	3'-1"
6'-0"	5'-0"	9"	8"	30'	194	#6	5"	7'-1"	2,084	162	#5	6"	8'-8"	1,464	5'-7"	3'-1"
6'-0"	6'-0"	7"	7"	20'	194	#5	5"	6'-11"	1,400	194	#4	5"	9'-3"	1,199	6'-5"	2'-10"
6'-0"	6'-0"	8"	7"	26'	194	#6	5"	6'-11"	2,015	162	#5	6"	9'-7"	1,619	6'-6"	3'-1"
6'-0"	6'-0"	9"	8"	30'	194	#6	5"	7'-1"	2,064	162	#5	6"	9'-8"	1,633	6'-7"	3'-1"

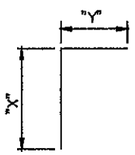
Bars D No.	Size	Spa	Length	Weight	"Y"	"Z"	Bars E~#4 at 18" Max No.	Length	Wt	Bars F1~#4 No.	Spa	Length	Wt	Bars F2~#4 at 18" Max No.	Length	Wt	Bars H 4~#4 Length	Wt	Bars K No.	Wt
162	#5	6"	5'-4"	901	2'-9"	2'-7"	56	2'-0"	75	8	7"	39'-9"	212	22	39'-9"	584	5'-11"	16	14	40
194	#4	5"	4'-9"	616	2'-6"	2'-3"	56	2'-0"	75	4	18"	39'-9"	106	22	39'-9"	584	5'-11"	16	14	40
194	#4	5"	4'-8"	605	2'-6"	2'-2"	56	3'-0"	112	8	7"	39'-9"	212	26	39'-9"	690	5'-11"	16	14	40
194	#4	5"	4'-9"	616	2'-6"	2'-3"	56	3'-0"	112	4	18"	39'-9"	106	26	39'-9"	690	5'-11"	16	14	40
194	#4	5"	4'-8"	605	2'-6"	2'-2"	56	4'-0"	150	8	7"	39'-9"	212	26	39'-9"	690	5'-11"	16	14	40
194	#4	5"	4'-9"	616	2'-6"	2'-3"	56	4'-0"	150	4	18"	39'-9"	106	26	39'-9"	690	5'-11"	16	14	40
194	#4	5"	4'-8"	605	2'-6"	2'-2"	56	5'-0"	187	8	7"	39'-9"	212	30	39'-9"	797	5'-11"	16	14	40
194	#4	5"	4'-9"	616	2'-6"	2'-3"	56	5'-0"	187	4	18"	39'-9"	106	30	39'-9"	797	5'-11"	16	14	40
162	#5	6"	5'-8"	957	3'-1"	2'-7"	56	3'-0"	112	10	7"	39'-9"	266	29	39'-9"	770	6'-11"	18	16	45
162	#5	6"	5'-9"	972	3'-1"	2'-8"	56	3'-0"	112	5	18"	39'-9"	133	29	39'-9"	770	6'-11"	18	16	45
162	#5	6"	5'-10"	986	3'-1"	2'-9"	56	3'-0"	112	5	18"	39'-9"	133	29	39'-9"	770	7'-1"	19	18	51
194	#4	5"	5'-0"	648	2'-10"	2'-2"	56	4'-0"	150	10	7"	39'-9"	266	29	39'-9"	770	6'-11"	18	16	45
162	#5	6"	5'-9"	972	3'-1"	2'-8"	56	4'-0"	150	5	18"	39'-9"	133	29	39'-9"	770	6'-11"	18	16	45
162	#5	6"	5'-10"	986	3'-1"	2'-9"	56	4'-0"	150	5	18"	39'-9"	133	29	39'-9"	770	7'-1"	19	18	51
194	#4	5"	5'-0"	648	2'-10"	2'-2"	56	5'-0"	187	10	7"	39'-9"	266	33	39'-9"	876	6'-11"	18	16	45
162	#5	6"	5'-9"	972	3'-1"	2'-8"	56	5'-0"	187	5	18"	39'-9"	133	33	39'-9"	876	6'-11"	18	16	45
162	#5	6"	5'-10"	986	3'-1"	2'-9"	56	5'-0"	187	5	18"	39'-9"	133	33	39'-9"	876	7'-1"	19	18	51
194	#4	5"	5'-0"	648	2'-10"	2'-2"	56	6'-0"	224	10	7"	39'-9"	266	37	39'-9"	982	6'-11"	18	16	45
162	#5	6"	5'-9"	972	3'-1"	2'-8"	56	6'-0"	224	5	18"	39'-9"	133	37	39'-9"	982	6'-11"	18	16	45
162	#5	6"	5'-10"	986	3'-1"	2'-9"	56	6'-0"	224	5	18"	39'-9"	133	37	39'-9"	982	7'-1"	19	18	51

QUANTITIES

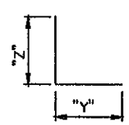
Per foot of Barrel Conc (CY)	Reinf (Lb)	Curb Conc (CY)	Reinf (Lb)	Total Conc (CY)	Reinf (Lb)
0.353	96.1	0.5	56	14.6	3,898
0.391	80.7	0.5	56	16.1	3,282
0.396	89.6	0.5	56	16.3	3,639
0.434	87.5	0.5	56	17.9	3,555
0.439	93.8	0.5	56	18.1	3,806
0.477	91.7	0.5	56	19.6	3,722
0.483	100.6	0.5	56	19.8	4,080
0.521	98.5	0.5	56	21.3	3,996
0.439	115.1	0.5	63	18.1	4,666
0.484	119.6	0.5	63	19.9	4,845
0.556	121.3	0.5	70	22.7	4,921
0.483	104.4	0.5	63	19.8	4,297
0.527	133.0	0.5	63	21.6	5,384
0.605	128.5	0.5	70	24.7	5,128
0.526	111.2	0.5	63	21.5	4,509
0.570	140.8	0.5	63	23.3	5,696
0.654	142.8	0.5	70	26.7	5,760
0.569	118.0	0.5	63	23.3	4,782
0.613	148.6	0.5	63	25.0	6,008
0.704	150.6	0.5	70	28.7	6,092



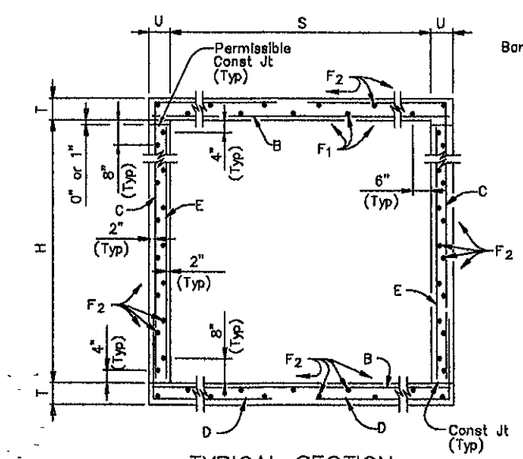
BARS K ~ #4
(Spa = 1'-0" Max)
(Length = 4'-3")



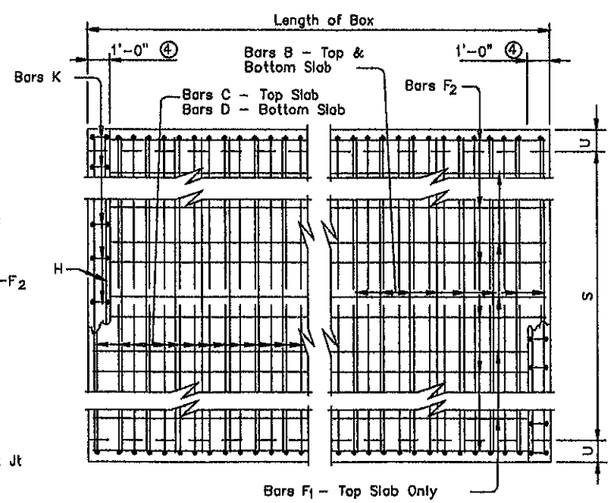
BARS C



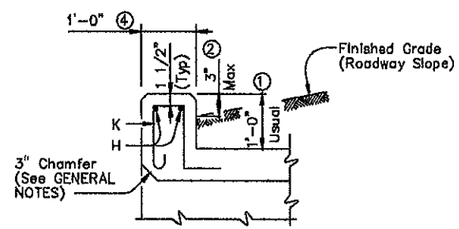
BARS D



TYPICAL SECTION



PLAN OF REINF STEEL



SECTION THRU CURB

① 0" min to 5'-0" max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail, bicycle rail or curbs taller than 1'-0", refer to ECD standard. For structures with T6 bridge rail, refer to T6-CM standard. For structures with traffic rail, other than T6, refer to RAC standard.

② For vehicle safety, the following requirements must be met:
- For structures without bridge rail, curbs shall project no more than 3" above finished grade.
- For structures with bridge rail, curbs shall be flush with finished grade.

Curb heights shall be reduced, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

③ For curbs less than 1'-0" high, tilt bars K or reduce bar height as necessary to maintain cover. For curbs less than 3" high, bars K may be omitted.

④ 1'-0" typical. 2'-0" when RAC standard is referred to elsewhere in the plans.

⑤ For each box size, minimum fill height shown shall be used for all culverts with less than 2'-0" of fill.

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.
Designed to the maximum fill heights shown.
All reinforcing steel shall be Grade 60.
All concrete shall be Class "C" with these exceptions: use Class "S" for top slabs of culverts with overlay, with 1-to-2 course surface treatment, or with the top slab as the final riding surface.
Class "C" concrete shall have a minimum compressive strength of 3,600 psi. Class "S" concrete shall have a minimum compressive strength of 4,000 psi.
The use of permanent forms is not allowed.
Reinforcing bars shall be adjusted to provide a minimum of 1 1/2 inches clear cover.
The bottom edge of the top slab shall be chamfered 3 inches at the entrance.
Construction joints shown at the flow line may be raised a maximum of 6 inches at the Contractor's option. If this option is used, Bars E may be cut off or raised, and Bars C and D may be reversed.
See Standard SCC-MD for skewed ends, angle sections and lengthening details.

HL93 LOADING

Texas Department of Transportation
Bridge Division

SINGLE BOX CULVERTS
CAST-IN-PLACE
0' TO 30' FILL

SCC-5 & 6

FILE: scc56sta.dgn	DN: GAF	CK: LMW	DW: BMH/TxDOT	CK: GAF
©TxDOT February 2010	DISTRICT	FEDERAL AID PROJECT		SHEET
REVISIONS				
	COUNTY	CONTROL	SECT	JOB	HIGHWAY

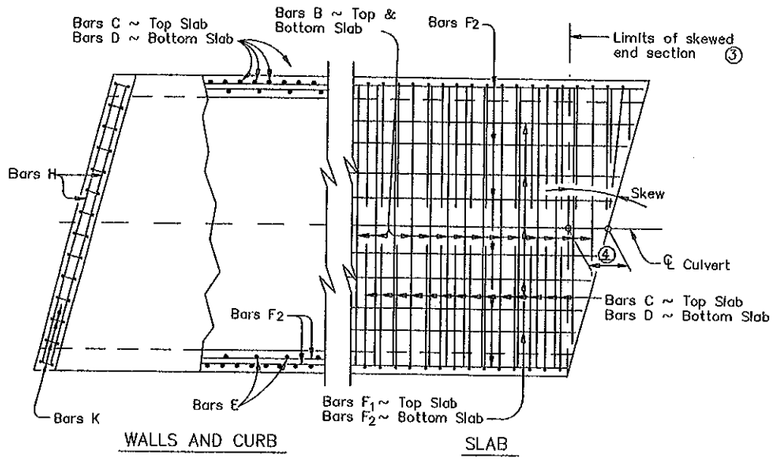
GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9295
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD - SCC-5&6
SINGLE BOX CULVERTS - 5' & 6'
CAST-IN-PLACE
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

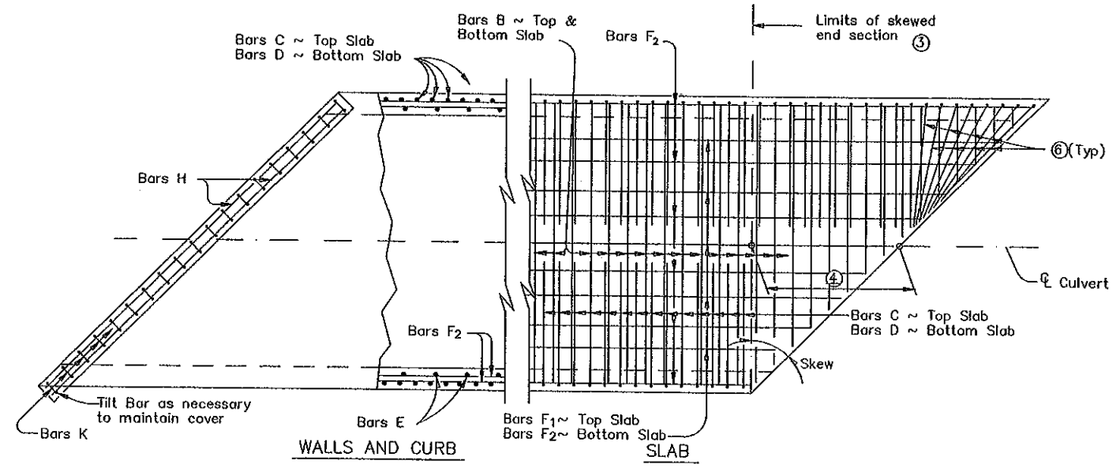
SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR: N/A VER. N/A

SHEET 70.2 OF TOTAL 90

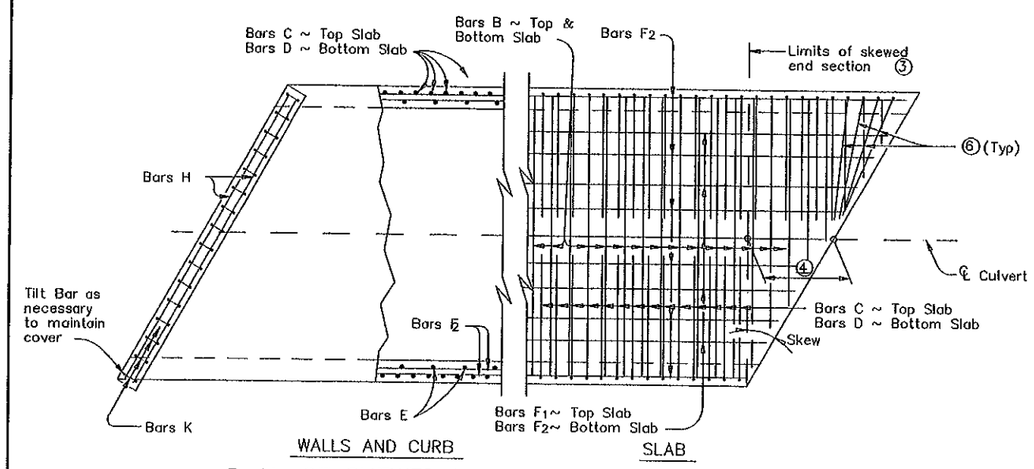


PLAN OF SKEWED ENDS ~ FROM 0° TO 15° ②

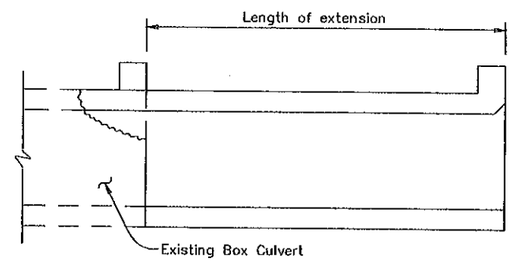
② When the spacing between Bars B becomes less than half of the normal spacing, bars shall be cut to avoid fouling
③ The length of Bars B and E will vary in the skewed end sections
④ [One half of overall width] x [Tan of the skew angle]
⑤ Bars F1 and F2 shall be continuous through the angle section. They shall be bent to remain parallel to the walls of the Box Culvert.
⑥ When necessary to avoid fouling in acute corners, the slab extension leg of Bars C and Bars D may be shortened to a minimum of 1'-6" for skews of 30° and 45°.
⑦ For skews of 15° or less, the contractor has the option of placing Bars B, C and D parallel to the skewed end while maintaining spacing along centerline box. Lengths of Bars B shown on the standards shall be increased to accommodate the skew.



PLAN OF SKEWED ENDS ~ OVER 30° TO 45°



PLAN OF SKEWED ENDS ~ OVER 15° TO 30°

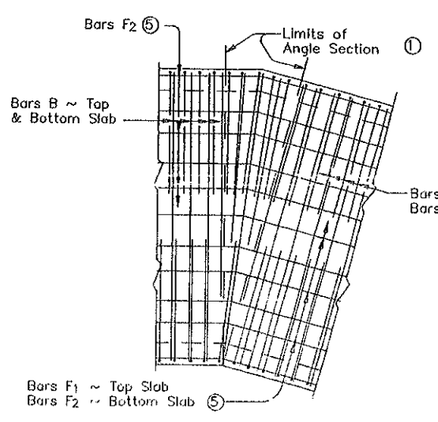


LENGTHENING DETAIL ①

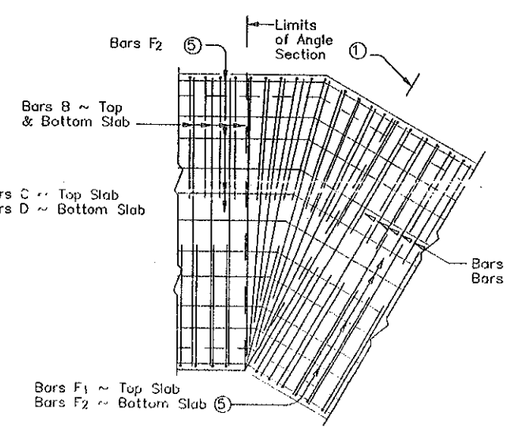
① For box culverts with less than 2'-0" of fill, the top slab shall be broken back to provide a minimum 1'-10" lap of the existing longitudinal bars with the longitudinal bars in the extension. If the depth of fill is 2'-0" or greater, the top slab shall be broken back to provide a 1'-0" minimum embedment of existing longitudinal reinforcing into the extension. Alternatively, if the fill height is greater than 2'-0", the existing curb may be left in place and 2'-0" long #6 bars shall be drilled and grouted 1'-0" into the existing top slab at 1'-6" center to center spacing. Wings and apron shall be broken back as necessary to install the extension. Exposed wingwall and apron reinforcing may be removed or cleaned and included in the extension. When lengthening existing box culverts with dimensions different than current standard dimensions, horizontal and vertical transitions shall be formed as directed by the Engineer. Bottom slabs shall match to maintain an uninterrupted flow line. Existing and new reinforcing shall be field bent into transition maintaining specified cover requirements.

GENERAL NOTES:
Designed according to AASHTO LRFD Specifications.
All reinforcing steel shall be Grade 60.
All concrete shall be Class "C" with these exceptions: use Class "S" for top slabs of culverts with overlay, with 1-to-2 course surface treatment, or with the top slab as the final riding surface.
Class "C" concrete shall have a minimum compressive strength of 3,600 psi. Class "S" concrete shall have a minimum compressive strength of 4,000 psi.
The use of permanent forms is not allowed.
Refer to Single Box Culverts Cast-in-Place standard for details of straight sections of culvert. For skewed sections and angle sections refer to Single Box Culverts Cast-in-Place standard for slab and wall dimensions, bar sizes, maximum bar spacing, and any other details not shown. For Skewed ends with curbs, adjust length of Bars H, number of Bars K, curb concrete volume and reinforcing steel weight by dividing the values shown on the culvert standards by the cosine of the skew angle.
Laps for Bars H, when required, shall be 1'-9" for uncoated bars and 2'-7" for epoxy coated.

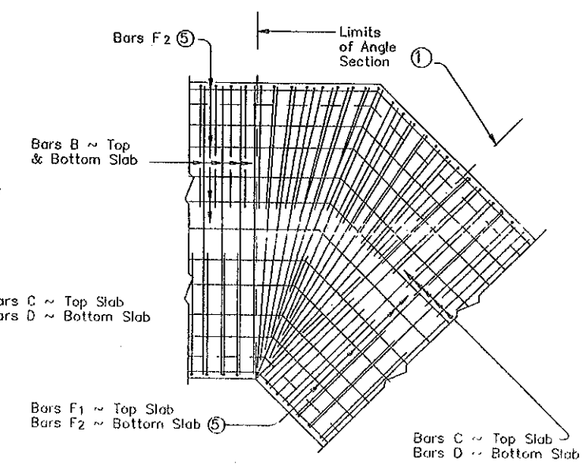
HL93 LOADING



PLAN OF ANGLE SECTION ~ FROM 0° TO 15°



PLAN OF ANGLE SECTION ~ OVER 15° TO 30°



PLAN OF ANGLE SECTION ~ OVER 30° TO 45°

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD - SCC-MD
SINGLE BOX CULVERTS
MISCELLANEOUS DETAILS
WEBB COUNTY, TEXAS

Texas Department of Transportation
Bridge Division

SINGLE BOX CULVERTS
CAST-IN-PLACE
MISCELLANEOUS DETAILS

SCC-MD

FILE: sccmdsfe.dgn	DN: GAF	CK: LJW	DW: BWH/TxDOT	CK: GAF	
©TxDOT February 2010	DISTRICT	FEDERAL AID PROJECT			SHEET
REVISIONS	COUNTY		CONTROL	SECT	JOB	HIGHWAY

DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

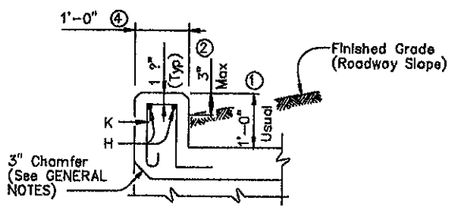
SCALE: (24"x36") SHEET
HOR: N/A VER: N/A
SCALE: (11"x17") SHEET
HOR: N/A VER: N/A

SHEET 70.3 OF TOTAL 90

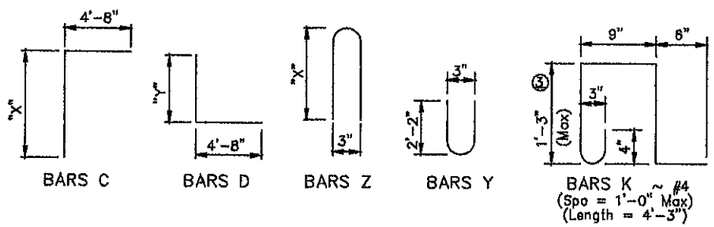
BILLS OF REINFORCING STEEL (For Box Length = 40 feet)

NUMBER OF SPANS	SECTION DIMENSIONS S	H	T	U	Bars B No.	Size	Spa	Length	Wt	Bars C & D No.	Size	Spa	Bar C Length	Bar C Wt	Bar D Length	Bar D Wt	Bars E No.	Size	Spa	Length	Wt	Bars F ~#4 No.	Spa	Length	Wt	Bars F 2~#4 at 1'-6" Max No.	Length	Wt	Bars M~#4 at 1'-6" Max No.	Length	Wt	Bars Y & Z~#4 at 1'-0" Max No.	Bar Y Length	Bar Y Wt	Bar Z Length	Bar Z Wt	Bars H 4~#4 Length	Weight	Bars K No.	Weight	QUANTITIES Per foot of Barrel Conc (CY)	Reinf (Lb)	Curb Conc (CY)	Curb Reinf (Lb)	Total Conc (CY)	Total Reinf (Lb)
2	5'-0"	2'-0"	7"	7"	194	#4	5"	11'- 6"	1,490	162	#4	6"	7'- 1"	767	6'-10"	739	162	#5	6"	5'- 8"	957	14	8"	39'-9"	372	38	39'-9"	1,009	56	2'- 0"	75	41	4'- 6"	123	5'- 0"	137	11'- 6"	31	26	74	0.637	141.7	0.9	105	26.4	5,774
3	5'-0"	2'-0"	7"	7"	194	#4	5"	17'- 1"	2,214	162	#4	6"	7'- 1"	767	6'-10"	739	162	#5	6"	11'- 3"	1,901	21	8"	39'-9"	558	54	39'-9"	1,434	56	2'- 0"	75	82	4'- 6"	246	5'- 0"	274	17'- 1"	46	36	102	0.922	205.2	1.3	148	38.2	8,356
4	5'-0"	2'-0"	7"	7"	194	#4	5"	22'- 8"	2,937	162	#4	6"	7'- 1"	767	6'-10"	739	162	#5	6"	16'-10"	2,844	28	8"	39'-9"	743	70	39'-9"	1,859	56	2'- 0"	75	123	4'- 6"	370	5'- 0"	411	22'- 8"	61	48	136	1.206	268.6	1.7	197	49.9	10,942
5	5'-0"	2'-0"	7"	7"	194	#4	5"	28'- 3"	3,661	162	#4	6"	7'- 1"	767	6'-10"	739	162	#5	6"	22'- 5"	3,788	35	8"	39'-9"	929	86	39'-9"	2,284	56	2'- 0"	75	164	4'- 6"	493	5'- 0"	548	28'- 3"	75	60	170	1.491	332.1	2.1	245	61.7	13,529
6	5'-0"	2'-0"	7"	7"	194	#4	5"	33'-10"	4,385	162	#4	6"	7'- 1"	767	6'-10"	739	162	#5	6"	28'- 0"	4,731	42	8"	39'-9"	1,115	102	39'-9"	2,708	56	2'- 0"	75	205	4'- 6"	616	5'- 0"	685	33'-10"	90	70	199	1.775	395.5	2.5	289	73.5	16,110
2	5'-0"	3'-0"	7"	7"	194	#4	5"	11'- 6"	1,490	138	#4	7"	8'- 1"	745	6'-10"	630	162	#5	6"	5'- 8"	957	14	8"	39'-9"	372	44	39'-9"	1,188	56	3'- 0"	112	41	4'- 6"	123	7'- 0"	192	11'- 6"	31	26	74	0.702	144.7	0.9	105	29.0	5,894
3	5'-0"	3'-0"	7"	7"	194	#4	6"	17'- 1"	2,214	138	#4	7"	8'- 1"	745	6'-10"	630	162	#5	6"	11'- 3"	1,901	21	8"	39'-9"	558	62	39'-9"	1,646	56	3'- 0"	112	82	4'- 6"	246	7'- 0"	383	17'- 1"	46	36	102	1.008	210.9	1.3	148	41.6	8,583
4	5'-0"	3'-0"	7"	7"	194	#4	5"	22'- 8"	2,937	138	#4	7"	8'- 1"	745	6'-10"	630	162	#5	6"	16'-10"	2,844	28	8"	39'-9"	743	80	39'-9"	2,124	56	3'- 0"	112	123	4'- 6"	370	7'- 0"	575	22'- 8"	61	48	136	1.314	277.0	1.7	197	54.3	11,277
5	5'-0"	3'-0"	7"	7"	194	#4	5"	28'- 3"	3,661	138	#4	7"	8'- 1"	745	6'-10"	630	162	#5	6"	22'- 5"	3,788	35	8"	39'-9"	929	98	39'-9"	2,602	56	3'- 0"	112	164	4'- 6"	493	7'- 0"	767	28'- 3"	75	60	170	1.620	343.2	2.1	245	66.9	13,972
6	5'-0"	3'-0"	7"	7"	194	#4	5"	33'-10"	4,385	138	#4	7"	8'- 1"	745	6'-10"	630	162	#5	6"	28'- 0"	4,731	42	8"	39'-9"	1,115	116	39'-9"	3,080	56	3'- 0"	112	205	4'- 6"	616	7'- 0"	959	33'-10"	90	70	199	1.926	409.3	2.5	289	79.5	16,662
2	5'-0"	4'-0"	7"	7"	194	#4	5"	11'- 6"	1,490	138	#4	7"	9'- 1"	837	6'-10"	630	162	#5	6"	5'- 8"	957	14	8"	39'-9"	372	44	39'-9"	1,168	56	4'- 0"	150	41	4'- 6"	123	9'- 0"	246	11'- 6"	31	26	74	0.767	149.3	0.9	105	31.6	6,078
3	5'-0"	4'-0"	7"	7"	194	#4	5"	17'- 1"	2,214	138	#4	7"	9'- 1"	837	6'-10"	630	162	#5	6"	11'- 3"	1,901	21	8"	39'-9"	558	62	39'-9"	1,646	56	4'- 0"	150	82	4'- 6"	246	9'- 0"	493	17'- 1"	46	36	102	1.095	216.9	1.3	148	45.1	8,823
4	5'-0"	4'-0"	7"	7"	194	#4	5"	22'- 8"	2,937	138	#4	7"	9'- 1"	837	6'-10"	630	162	#5	6"	16'-10"	2,844	28	8"	39'-9"	743	80	39'-9"	2,124	56	4'- 0"	150	123	4'- 6"	370	9'- 0"	739	22'- 8"	61	48	136	1.422	284.4	1.7	197	58.6	11,571
5	5'-0"	4'-0"	7"	7"	194	#4	5"	28'- 3"	3,661	138	#4	7"	9'- 1"	837	6'-10"	630	162	#5	6"	22'- 5"	3,788	35	8"	39'-9"	929	98	39'-9"	2,602	56	4'- 0"	150	164	4'- 6"	493	9'- 0"	986	28'- 3"	75	60	170	1.750	351.9	2.1	245	72.1	14,321
6	5'-0"	4'-0"	7"	7"	194	#4	5"	33'-10"	4,385	138	#4	7"	9'- 1"	837	6'-10"	630	162	#5	6"	28'- 0"	4,731	42	8"	39'-9"	1,115	116	39'-9"	3,080	56	4'- 0"	150	205	4'- 6"	616	9'- 0"	1,232	33'-10"	90	70	199	2.078	419.4	2.5	289	85.6	17,065
2	5'-0"	5'-0"	7"	7"	194	#4	5"	11'- 6"	1,490	138	#4	7"	10'- 1"	930	6'-10"	630	162	#5	6"	5'- 8"	957	14	8"	39'-9"	372	50	39'-9"	1,328	56	5'- 0"	187	41	4'- 6"	123	11'- 0"	301	11'- 6"	31	26	74	0.832	158.0	0.9	105	34.2	6,423
3	5'-0"	5'-0"	7"	7"	194	#4	5"	17'- 1"	2,214	138	#4	7"	10'- 1"	930	6'-10"	630	162	#5	6"	11'- 3"	1,901	21	8"	39'-9"	558	70	39'-9"	1,859	56	5'- 0"	187	82	4'- 6"	246	11'- 0"	603	17'- 1"	46	36	102	1.181	228.2	1.3	148	48.5	9,276
4	5'-0"	5'-0"	7"	7"	194	#4	5"	22'- 8"	2,937	138	#4	7"	10'- 1"	930	6'-10"	630	162	#5	6"	16'-10"	2,844	28	8"	39'-9"	743	90	39'-9"	2,390	56	5'- 0"	187	123	4'- 6"	370	11'- 0"	904	22'- 8"	61	48	136	1.530	298.4	1.7	197	62.9	12,132
5	5'-0"	5'-0"	7"	7"	194	#4	6"	28'- 3"	3,661	138	#4	7"	10'- 1"	930	6'-10"	630	162	#5	6"	22'- 5"	3,788	35	8"	39'-9"	929	110	39'-9"	2,921	56	5'- 0"	187	164	4'- 6"	493	11'- 0"	1,205	28'- 3"	75	60	170	1.880	368.6	2.1	245	77.3	14,989
6	5'-0"	5'-0"	7"	7"	194	#4	5"	33'-10"	4,385	138	#4	7"	10'- 1"	930	6'-10"	630	162	#5	6"	28'- 0"	4,731	42	8"	39'-9"	1,115	130	39'-9"	3,452	56	5'- 0"	187	205	4'- 6"	616	11'- 0"	1,506	33'-10"	90	70	199	2.229	438.8	2.5	289	91.7	17,841

H	Bar Dimensions "X"	"Y"
2'-0"	2'-5"	2'-2"
3'-0"	3'-5"	2'-2"
4'-0"	4'-5"	2'-2"
5'-0"	5'-5"	2'-2"



SECTION THRU CURB



BARS C BARS D BARS Z BARS Y BARS K ~ #4 (Spa = 1'-0" Max) (Length = 4'-3")

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.
Designed to the maximum fill height shown.
All reinforcing steel shall be Grade 60.
All concrete shall be Class "C" with these exceptions: use Class "S" for top slabs of culverts with overlay, with 1-to-2 course surface treatment, or with the top slab as the final riding surface.
Class "C" concrete shall have a minimum compressive strength of 3,600 psi.
Class "S" concrete shall have a minimum compressive strength of 4,000 psi.
The use of permanent forms is not allowed.
The bottom edge of the top slab shall be chamfered 3" at the entrance.
Reinforcing bars shall be adjusted to provide a minimum of 1 ?" clear cover.
Construction joints shown at the flow line may be raised a maximum of 6" at the Contractor's option. If this option is used, Bars M may be cut off or raised, Bars C and D may be reversed, and Bars Y and Z may be reversed.
See standard MC-MD for skewed ends, angle sections and lengthening details.

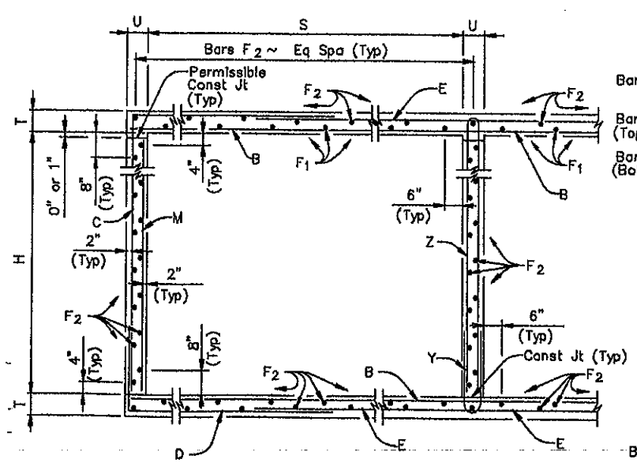
① 0" min to 5'-0" max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail, bicycle rail or curbs taller than 1'-0", refer to ECD standard. For structures with T6 bridge rail, refer to T6-CM standard. For structures with traffic rail, other than T6, refer to RAC standard.

② For vehicle safety, the following requirements must be met:
- For structures without bridge rail, curbs shall project no more than 3" above finished grade.
- For structures with bridge rail, curbs shall be flush with finished grade.

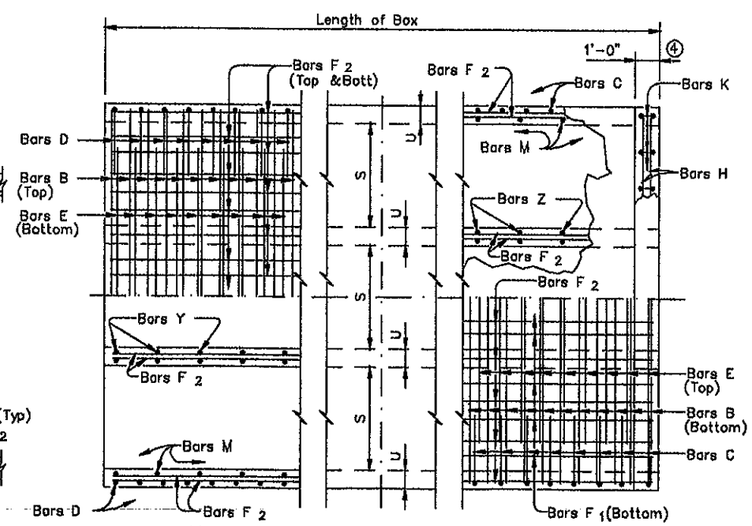
Curb heights shall be reduced, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

③ For curbs less than 1'-0" high, tilt bars K or reduce bar height as necessary to maintain cover. For curbs less than 3" high, bars K may be omitted.

④ 1'-0" typical. 2'-0" when RAC standard is referred to elsewhere in the plans.



TYPICAL SECTION



BOTTOM SLAB PART PLANS TOP SLAB

HL93 LOADING

Texas Department of Transportation
Bridge Division

MULTIPLE BOX CULVERTS CAST-IN-PLACE 5'-0" SPAN 0' TO 20' FILL

MC-5-20

FILE: mc520sta.dgn	DN: GAF	CK: LMW	DW: BWH/TxDOT	CK: GAF
©TxDOT February 2010	DISTRICT	FEDERAL AID PROJECT		SHEET
REVISIONS	COUNTY	CONTROL	SECT	JOB	HIGHWAY

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-4226
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD - MC-5-20
MULTIPLE BOX CULVERT - 5' SPAN
CAST-IN-PLACE
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.
CHECKED BY: E.L.D.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

SCALE: (24"x36") SHEET HOR: N/A VER: N/A
SCALE: (11"x17") SHEET HOR: N/A VER: N/A

BILLS OF REINFORCING STEEL (For Box Length = 40 feet)

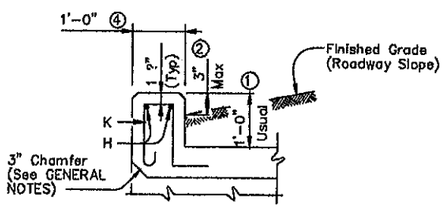
NUMBER OF SPANS	SECTION DIMENSIONS S	H	T	U	Bars B No.	Size	Spa	Length	Wt	Bars C & D No.	Size	Spa	Bar C Length	Bar C Wt	Bar D Length	Bar D Wt	Bars E No.	Size	Spa	Length	Wt
2	7'-0"	3'-0"	7"	7"	194	#5	5"	15'- 6"	3,136	162	#4	6"	8'- 11"	965	7'-8"	830	194	#5	5"	8'-0"	1,619
3	7'-0"	3'-0"	7"	7"	194	#5	5"	23'- 1"	4,671	162	#4	6"	8'- 11"	965	7'-8"	830	194	#5	6"	16'-7"	3,153
4	7'-0"	3'-0"	7"	7"	194	#5	5"	30'- 8"	6,205	162	#4	6"	8'- 11"	965	7'-8"	830	194	#5	5"	23'-2"	4,688
5	7'-0"	3'-0"	7"	7"	194	#5	5"	38'- 3"	7,740	162	#4	6"	8'- 11"	965	7'-8"	830	194	#5	5"	30'-9"	6,222
6	7'-0"	3'-0"	7"	7"	194	#5	5"	45'-10"	9,274	162	#4	6"	8'- 11"	965	7'-8"	830	194	#5	5"	38'-4"	7,756
2	7'-0"	4'-0"	7"	7"	194	#5	5"	15'- 6"	3,136	162	#4	6"	9'- 11"	1,073	7'-8"	830	194	#5	5"	8'-0"	1,619
3	7'-0"	4'-0"	7"	7"	194	#5	5"	23'- 1"	4,671	162	#4	6"	9'- 11"	1,073	7'-8"	830	194	#5	5"	16'-7"	3,153
4	7'-0"	4'-0"	7"	7"	194	#5	5"	30'- 8"	6,205	162	#4	6"	9'- 11"	1,073	7'-8"	830	194	#5	5"	23'-2"	4,688
5	7'-0"	4'-0"	7"	7"	194	#5	5"	38'- 3"	7,740	162	#4	6"	9'- 11"	1,073	7'-8"	830	194	#5	5"	30'-9"	6,222
6	7'-0"	4'-0"	7"	7"	194	#5	5"	45'-10"	9,274	162	#4	6"	9'- 11"	1,073	7'-8"	830	194	#5	5"	38'-4"	7,756
2	7'-0"	5'-0"	7"	7"	194	#5	5"	15'- 6"	3,136	162	#4	6"	10'- 11"	1,181	7'-8"	830	194	#5	5"	8'-0"	1,619
3	7'-0"	5'-0"	7"	7"	194	#5	5"	23'- 1"	4,671	162	#4	6"	10'- 11"	1,181	7'-8"	830	194	#5	6"	16'-7"	3,153
4	7'-0"	5'-0"	7"	7"	194	#5	5"	30'- 8"	6,205	162	#4	6"	10'- 11"	1,181	7'-8"	830	194	#5	5"	23'-2"	4,688
5	7'-0"	5'-0"	7"	7"	194	#5	5"	38'- 3"	7,740	162	#4	6"	10'- 11"	1,181	7'-8"	830	194	#5	5"	30'-9"	6,222
6	7'-0"	5'-0"	7"	7"	194	#5	5"	45'-10"	9,274	162	#4	6"	10'- 11"	1,181	7'-8"	830	194	#5	5"	38'-4"	7,756
2	7'-0"	6'-0"	7"	7"	194	#5	5"	15'- 6"	3,136	162	#4	6"	11'- 11"	1,290	7'-8"	830	194	#5	5"	8'-0"	1,619
3	7'-0"	6'-0"	7"	7"	194	#5	5"	23'- 1"	4,671	162	#4	6"	11'- 11"	1,290	7'-8"	830	194	#5	5"	23'-2"	4,688
5	7'-0"	6'-0"	7"	7"	194	#5	5"	38'- 3"	7,740	162	#4	6"	11'- 11"	1,290	7'-8"	830	194	#5	5"	30'-9"	6,222
6	7'-0"	6'-0"	7"	7"	194	#5	5"	45'-10"	9,274	162	#4	6"	11'- 11"	1,290	7'-8"	830	194	#5	5"	38'-4"	7,756
2	7'-0"	7'-0"	7"	7"	194	#5	5"	15'- 6"	3,136	162	#4	6"	12'- 11"	1,398	7'-8"	830	194	#5	5"	8'-0"	1,619
3	7'-0"	7'-0"	7"	7"	194	#5	5"	23'- 1"	4,671	162	#4	6"	12'- 11"	1,398	7'-8"	830	194	#5	6"	16'-7"	3,153
4	7'-0"	7'-0"	7"	7"	194	#5	5"	30'- 8"	6,205	162	#4	6"	12'- 11"	1,398	7'-8"	830	194	#5	5"	23'-2"	4,688
5	7'-0"	7'-0"	7"	7"	194	#5	5"	38'- 3"	7,740	162	#4	6"	12'- 11"	1,398	7'-8"	830	194	#5	5"	30'-9"	6,222
6	7'-0"	7'-0"	7"	7"	194	#5	5"	45'-10"	9,274	162	#4	6"	12'- 11"	1,398	7'-8"	830	194	#5		38'-4"	7,756

NUMBER OF SPANS	Bars F 1~#4 No.	Spa	Length	Wt	Bars F 2~#4 at 1'-6" Max No.	Length	Wt	Bars M~#4 at 1'-6" Max No.	Length	Wt	Bars Y & Z~#4 at 10" Max No.	Bar Y Length	Bar Y Wt	Bar Z Length	Bar Z Wt	Bars H 4~#4 Length	Weight	Bars K No.	Weight
2	20	8"	39'-9"	531	54	39'-9"	1,434	56	3'-0"	112	49	4'-6"	147	7'-0"	229	15'-6"	41	34	97
3	30	8"	39'-9"	797	77	39'-9"	2,045	56	3'-0"	112	98	4'-6"	295	7'-0"	458	23'-1"	62	48	136
4	40	8"	39'-9"	1,062	100	39'-9"	2,655	56	3'-0"	112	147	4'-6"	442	7'-0"	687	30'-8"	82	64	182
5	50	8"	39'-9"	1,328	123	39'-9"	3,266	56	3'-0"	112	196	4'-6"	589	7'-0"	916	38'-3"	102	80	227
6	60	8"	39'-9"	1,593	146	39'-9"	3,877	56	3'-0"	112	245	4'-6"	736	7'-0"	146	45'-10"	122	94	267
2	20	8"	39'-9"	531	54	39'-9"	1,434	56	4'-0"	150	49	4'-6"	147	9'-0"	295	15'-6"	41	34	97
3	30	8"	39'-9"	797	77	39'-9"	2,045	56	4'-0"	150	98	4'-6"	295	9'-0"	589	23'-1"	62	48	136
4	40	8"	39'-9"	1,062	100	39'-9"	2,655	56	4'-0"	150	147	4'-6"	442	9'-0"	884	30'-8"	82	64	182
5	50	8"	39'-9"	1,328	123	39'-9"	3,266	56	4'-0"	150	196	4'-6"	589	9'-0"	1,178	38'-3"	102	80	227
6	60	8"	39'-9"	1,593	146	39'-9"	3,877	56	4'-0"	150	245	4'-6"	736	9'-0"	1,473	45'-10"	122	94	267
2	20	8"	39'-9"	531	60	39'-9"	1,593	56	5'-0"	187	49	4'-6"	147	11'-0"	360	15'-6"	41	34	97
3	30	8"	39'-9"	797	85	39'-9"	2,257	56	5'-0"	187	98	4'-6"	295	11'-0"	720	23'-1"	62	48	136
4	40	8"	39'-9"	1,062	110	39'-9"	2,921	56	5'-0"	187	147	4'-6"	442	11'-0"	1,080	30'-8"	82	64	182
5	50	8"	39'-9"	1,328	135	39'-9"	3,585	56	5'-0"	187	196	4'-6"	589	11'-0"	1,440	38'-3"	102	80	227
6	60	8"	39'-9"	1,593	160	39'-9"	4,248	56	5'-0"	187	245	4'-6"	736	11'-0"	1,800	45'-10"	122	94	267
2	20	8"	39'-9"	531	66	39'-9"	1,752	56	6'-0"	224	49	4'-6"	147	13'-0"	426	15'-6"	41	34	97
3	30	8"	39'-9"	797	93	39'-9"	2,469	56	7'-0"	262	98	4'-6"	295	15'-0"	982	23'-1"	62	48	136
4	40	8"	39'-9"	1,062	120	39'-9"	3,186	56	7'-0"	262	147	4'-6"	442	15'-0"	1,473	30'-8"	82	64	182
5	50	8"	39'-9"	1,328	147	39'-9"	3,903	56	7'-0"	262	196	4'-6"	589	15'-0"	1,964	38'-3"	102	80	227
6	60	8"	39'-9"	1,593	174	39'-9"	4,620	56	7'-0"	262	245	4'-6"	736	15'-0"	2,455	45'-10"	122	94	267

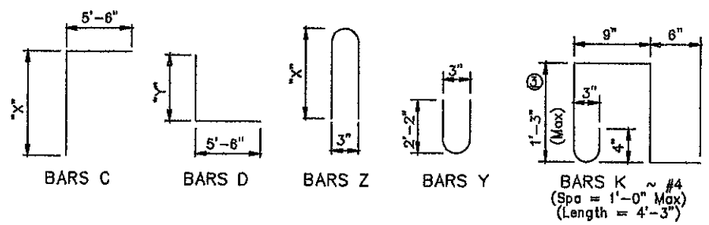
QUANTITIES

NUMBER OF SPANS	Per foot of Barrel Conc (CY)	Reinf (Lb)	Curb Conc (CY)	Reinf (Lb)	Total Conc (CY)	Reinf (Lb)
2	0.875	225.1	1.2	138	36.2	9,141
3	1.267	333.2	1.7	198	52.4	13,524
4	1.660	441.2	2.3	264	68.7	17,910
5	2.052	549.2	2.9	329	85.0	22,297
6	2.445	657.2	3.4	389	101.2	26,678
2	0.940	230.4	1.2	138	38.8	9,353
3	1.354	340.1	1.7	198	55.9	13,801
4	1.768	449.7	2.3	264	73.0	18,253
5	2.182	559.4	2.9	329	90.2	22,705
6	2.596	669.1	3.4	389	107.2	27,151
2	1.005	239.6	1.2	138	41.4	9,722
3	1.440	352.3	1.7	198	59.3	14,289
4	1.876	464.9	2.3	264	77.3	18,860
5	2.312	577.6	2.9	329	95.4	23,431
6	2.747	690.1	3.4	389	113.3	27,994
2	1.069	248.9	1.2	138	44.0	10,093
3	1.984	480.1	2.3	264	62.8	14,778
4	2.441	595.7	2.9	329	81.7	19,468
5	2.899	711.3	3.4	389	100.5	24,157
6	1.134	254.2	1.2	138	119.4	28,840
2	1.613	371.4	1.7	198	46.6	10,304
3	2.092	488.7	2.3	264	66.2	15,055
4	2.571	605.9	2.9	329	86.0	19,810
5	3.050	723.1	3.4	389	105.7	24,565
6					125.4	29,313

H	Bar Dimensions "X"	"Y"
3'-0"	3'-5"	2'-2"
4'-0"	4'-5"	2'-2"
5'-0"	5'-5"	2'-2"
6'-0"	6'-5"	2'-2"
7'-0"	7'-5"	2'-2"



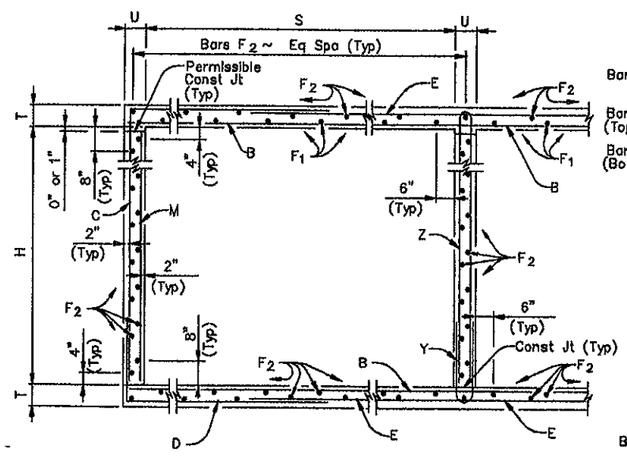
SECTION THRU CURB



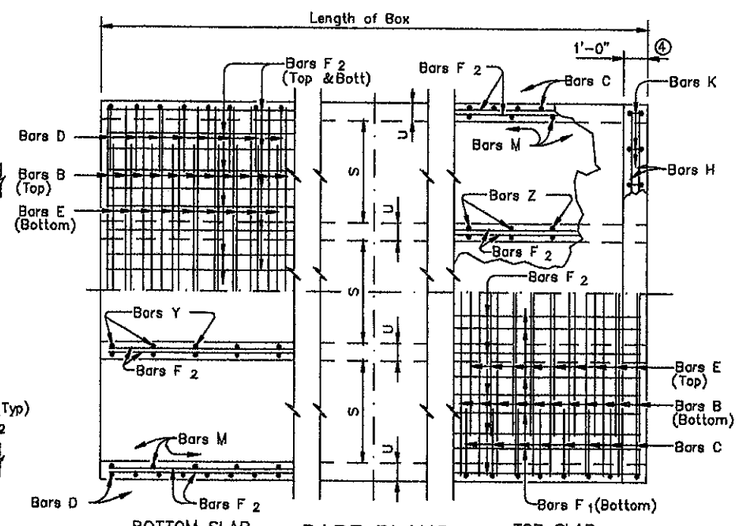
BARS C BARS D BARS Z BARS Y BARS K ~ #4 (Spa = 1'-0" Max) (Length = 4'-3")

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.
Designed to the maximum fill height shown.
All reinforcing steel shall be Grade 60.
All concrete shall be Class "C" with these exceptions: use Class "S" for top slabs of culverts with overlay, with 1-to-2 course surface treatment, or with the top slab as the final riding surface.
Class "C" concrete shall have a minimum compressive strength of 3,600 psi.
Class "S" concrete shall have a minimum compressive strength of 4,000 psi.
The use of permanent forms is not allowed.
The bottom edge of the top slab shall be chamfered 3" at the entrance.
Reinforcing bars shall be adjusted to provide a minimum of 1 2" clear cover.
Construction joints shown at the flow line may be raised a maximum of 6" at the Contractor's option. If this option is used, Bars M may be cut off or raised, Bars C and D may be reversed, and Bars Y and Z may be reversed.
See standard MC-MD for skewed ends, angle sections and lengthening details.



TYPICAL SECTION



BOTTOM SLAB PART PLANS TOP SLAB

① 0" min to 5'-0" max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail, bicycle rail or curbs taller than 1'-0", refer to ECD standard. For structures with T6 bridge rail, refer to T6-CM standard. For structures with traffic rail, other than T6, refer to RAC standard.

② For vehicle safety, the following requirements must be met:
- For structures without bridge rail, curbs shall project no more than 3" above finished grade.
- For structures with bridge rail, curbs shall be flush with finished grade.

Curb heights shall be reduced, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

③ For curbs less than 1'-0" high, tilt bars K or reduce bar height as necessary to maintain cover. For curbs less than 3" high, bars K may be omitted.

④ 1'-0" typical. 2'-0" when RAC standard is referred to elsewhere in the plans.

HL93 LOADING

Texas Department of Transportation
Bridge Division

MULTIPLE BOX CULVERTS
CAST-IN-PLACE
7'-0" SPAN
0' TO 10' FILL

MC-7-10

FILE: mc710sta.dgn	DN: OAF	CK: LMW	DW: BWH/TxDOT	CK: OAF
©TxDOT February 2010	DISTRICT	FEDERAL AID PROJECT		SHEET
REVISIONS	COUNTY	CONTROL	SECT	JOB	HIGHWAY

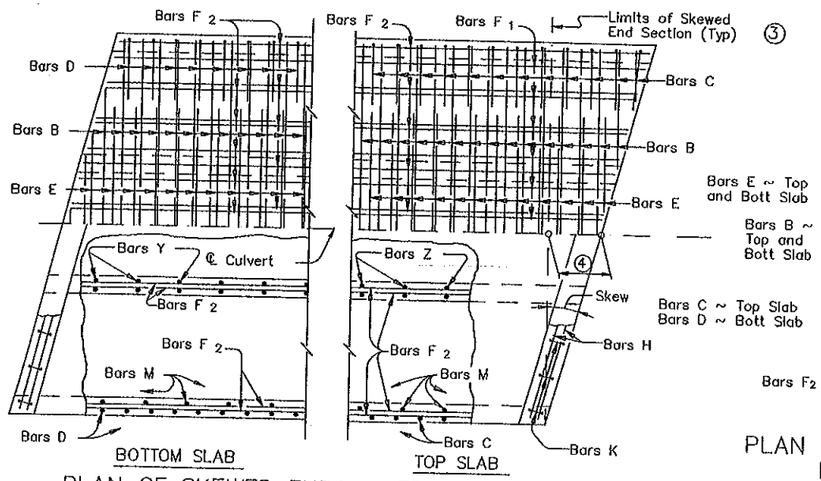
GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2273

TANQUECITOS PHASE I AND II

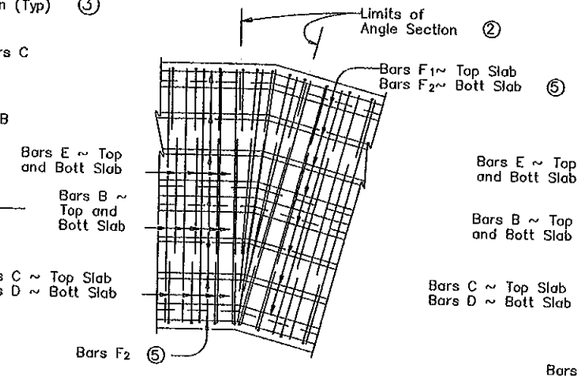
TX-DOT STANDARD - MC-7-10
MULTIPLE BOX CULVERT - 7' SPAN
CAST-IN-PLACE
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

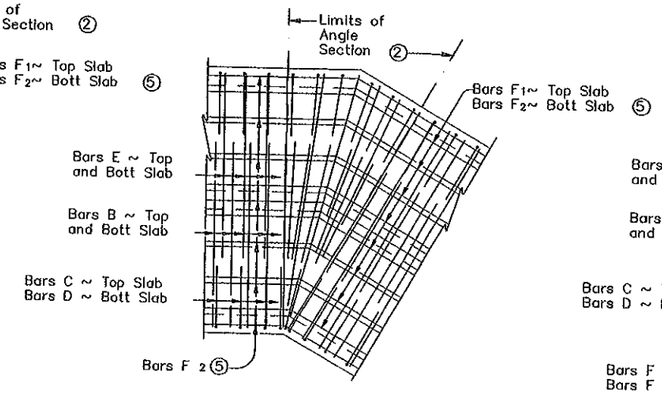
SCALE: (24"x36") SHEET HOR: N/A VER: N/A
SCALE: (11"x17") SHEET HOR: N/A VER: N/A



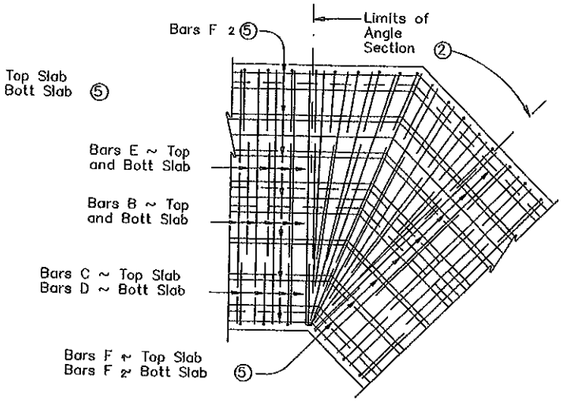
PLAN OF SKEWED ENDS ~ FROM 0° TO 15° ⑦



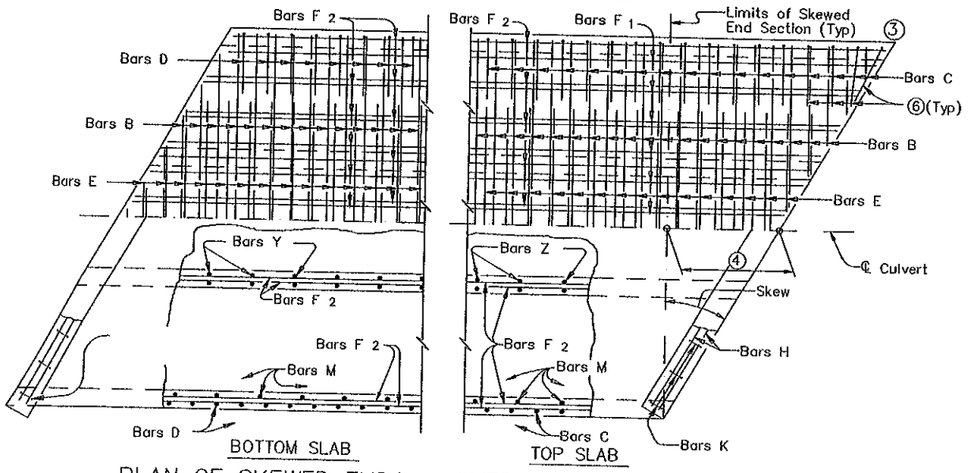
PLAN OF ANGLE SECTION ~ FROM 0° TO 15°



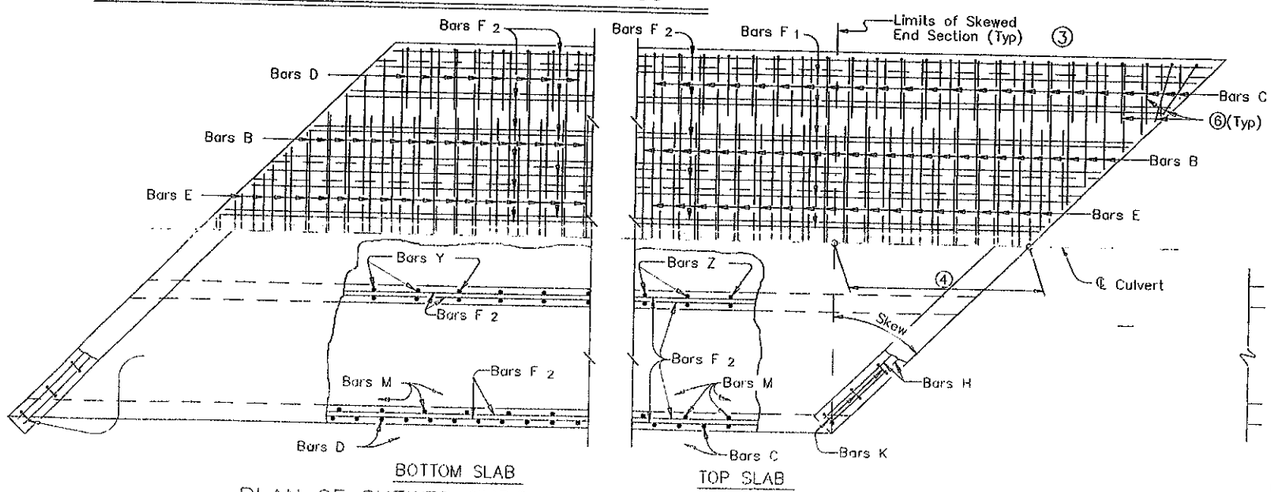
PLAN OF ANGLE SECTION ~ OVER 15° TO 30°



PLAN OF ANGLE SECTION ~ OVER 30° TO 45°



PLAN OF SKEWED ENDS ~ OVER 15° TO 30°



PLAN OF SKEWED ENDS ~ OVER 30° TO 45°

GENERAL NOTES:

Designed according to current AASHTO Standard and Interim Specifications.

All reinforcing steel shall be Grade 60.

All concrete shall be Class "C" with these exceptions: use Class "S" for top slabs of culverts with overlay, with 1-to-2 course surface treatment, or with the top slab as the final riding surface.

Class "C" concrete shall have a minimum compressive strength of 3,600 psi. Class "S" concrete shall have a minimum compressive strength of 4,000 psi.

Refer to Multiple Box Culverts Cast-in-Place standard for details of straight sections of culvert. For skewed sections and angle sections refer to Multiple Box Culverts Cast-in-Place standard for slab and wall dimensions, bar sizes, maximum bar spacing, and any other details not shown. For Skewed ends with curbs, adjust length of Bars H, number of Bars K, curb concrete volume and reinforcing steel weight by dividing the values shown on the culvert standards by the cosine of the skew angle.

The use of permanent forms is not allowed.

Laps for Bars H, when required, shall be 1'-9" for uncoated bars and 2'-7" for epoxy coated.

① For box culverts with less than 2'-0" of fill, the top slab shall be broken back to provide a minimum 1'-10" lap of the existing longitudinal bars with the longitudinal bars in the extension. If the depth of fill is 2'-0" or greater, the top slab shall be broken back to provide a 1'-0" minimum embedment of existing longitudinal reinforcing into the extension. Alternatively, if the fill height is greater than 2'-0", the existing curb may be left in place and 2'-0" long #6 bars shall be drilled and grouted 1'-0" into the existing top slab at 1'-6" center to center spacing. Wings and apron shall be broken back as necessary to install the extension. Exposed wingwall and apron reinforcing may be removed or cleaned and included in the extension. When lengthening existing box culverts with dimensions different than current standard dimensions, horizontal and vertical transitions shall be formed as directed by the Engineer. Bottom slabs shall match to maintain an uninterrupted flow line. Existing and new reinforcing shall be field bent into transition maintaining specified cover requirements. For top slabs of culverts with overlay, with 1-to-2 course surface treatment, or with the top slab as the final riding surface, the "H" dimension may be adjusted to provide a smooth riding surface.

② When the spacing between Bars B or Bars E becomes less than half of the normal spacing, bars shall be cut to avoid fouling

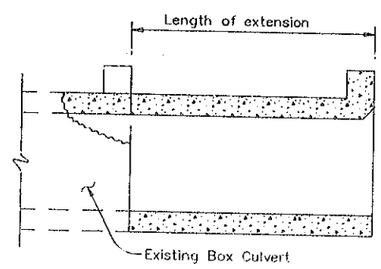
③ The length of Bars B and E will vary in the skewed end sections

④ [One half of overall width] x [Tan of the skew angle]

⑤ Bars F 1and F 2shall be continuous through the angle section. They shall be bent to remain parallel to the walls of the Box Culvert.

⑥ When necessary to avoid fouling in acute corners, the slab extension leg of Bars C and Bars D may be shortened to a minimum of 1'-6" for skews of 30^ and 45^.

⑦ For skews of 15^ or less, the contractor has the option of placing Bars B, C, D and E parallel to the skewed end while maintaining spacing along centerline box. Lengths of Bars B and E shown on the standards shall be increased to accommodate the skew.



LENGTHENING DETAIL ①

HS20 LOADING

Texas Department of Transportation
Bridge Division

MULTIPLE BOX CULVERTS
CAST-IN-PLACE
MISCELLANEOUS DETAILS

MC-MD

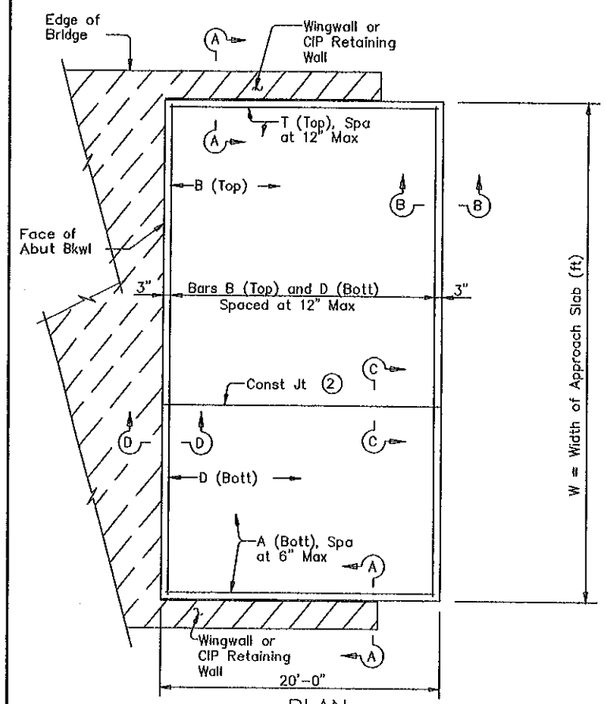
FILE: mc-mdsta.dgn	DN: GAF	CK: LMW	DW: BWH/TxDOT	CK: GAF	
©TxDOT May 2005	DISTRICT	FEDERAL AID PROJECT			SHEET
REVISIONS	COUNTY		CONTROL	SECT	JOB	HIGHWAY

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD - MC-MD
BOX CULVERT - MISCELLANEOUS DETAILS
WEBB COUNTY, TEXAS

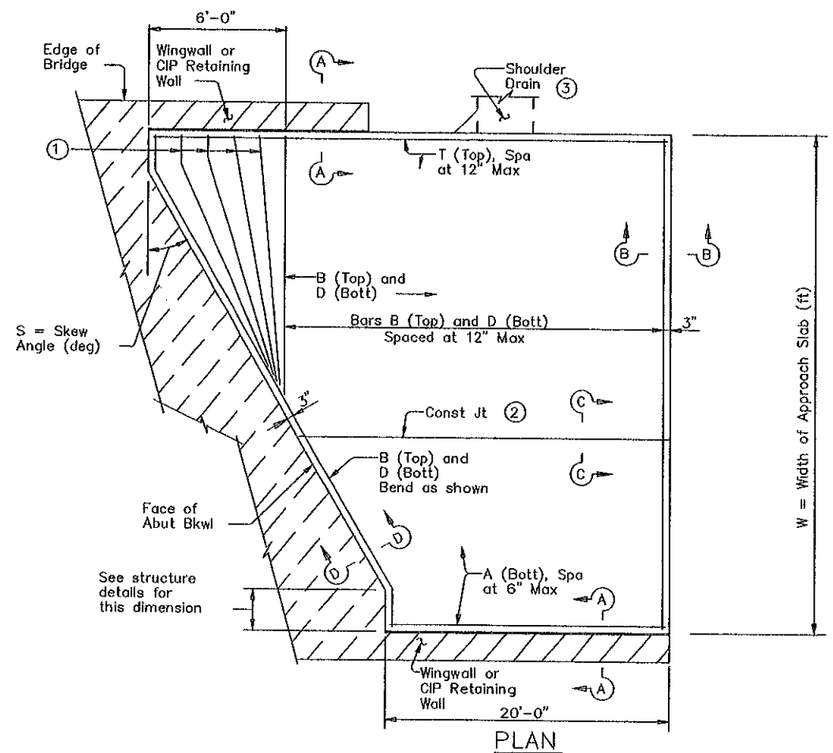
DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR: N/A VER. N/A



PLAN

(Showing Non-Skewed Approach Slab)



PLAN

(Showing Skewed Approach Slab)

BAR TABLE	
BAR	SIZE
A	#8
B	#5
D	#5
T	#5

APPROXIMATE QUANTITIES (4)

Reinf steel weight = 8.5 Lbs/SF of Approach Slab

Area of Appr Slab = 20W + 0.5W taA S (SF)

W = Width of Approach Slab (ft)

S = Skew Angle (deg)

(1) Flare Bars B and D in this region (1'-6" Max Spa, 3" Min Spa). Minimum flared bar length = 2'-6". Bend bars as necessary.

(2) Provide longitudinal construction joints that align with longitudinal construction joints in the bridge slab with bridges built in stages. Other longitudinal construction joints must receive approval of the Engineer.

(3) See details elsewhere in plans for shoulder drain location and details.

(4) For Contractor's Information only.

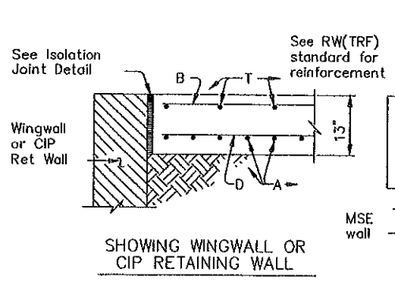
(5) Multiple piece tie bars are acceptable at longitudinal construction joints provided minimum laps shown are achieved.

(6) See details elsewhere in plans for required cross-slope.

(7) Place in accordance with Item 438.

(8) Backer rod shall be 25% larger than joint opening and shall be compatible with the sealant.

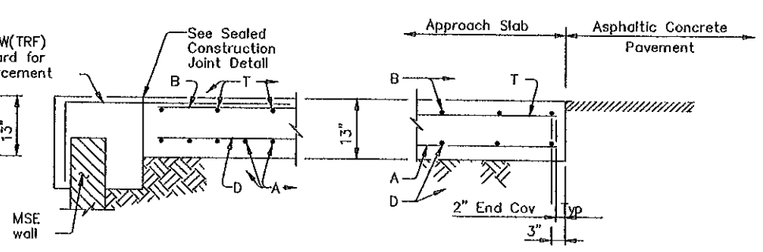
(9) Place ?" Preformed Bituminous Fiber Material between concrete railing and top of approach slab as shown when concrete railing projects over the approach slab.



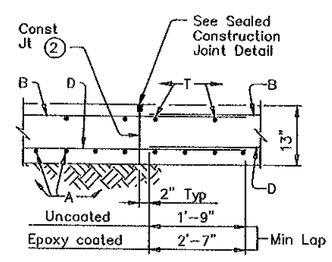
SHOWING WINGWALL OR CIP RETAINING WALL

SHOWING MSE WALL

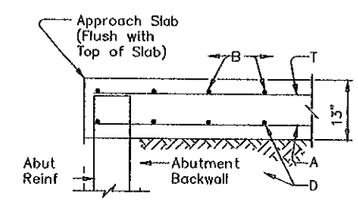
SECTION A-A



SECTION B-B



SECTION C-C (5)



SECTION D-D

GENERAL NOTES:

Construct approach slab in accordance with Item 420.

Concrete shall be Class "S" with a minimum compressive strength of 4,000 psi.

All reinforcing steel shall be Grade 60.

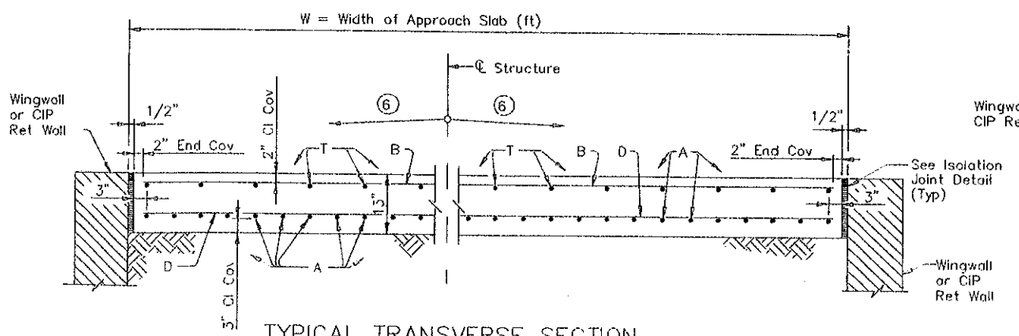
Construct the subgrade or subbase from the bridge for a minimum distance of 100 feet prior to the approach slab, unless otherwise indicated on the plans.

Compact and finish the subgrade or foundation for the approach slab to the typical cross-section and to the lines and grades shown on the plans.

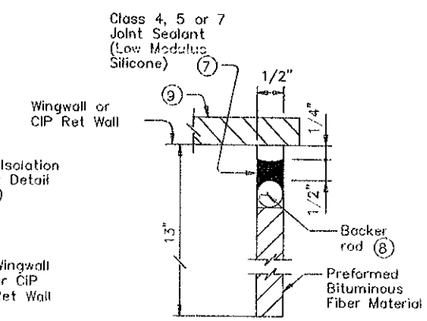
Cure for 4 days using water or membrane curing per Item 420.

Sealant, backer rod and preformed bituminous fiber material is subsidiary to approach slab concrete.

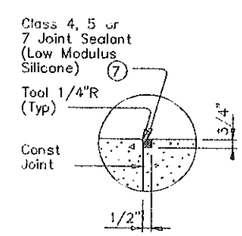
Provide a 1" bondbreaker (asphaltic concrete pavement or asphalt stabilized base) between the approach slab and cement stabilized backfill or cement treated base. Other bondbreakers may be used if approved by the Engineer.



TYPICAL TRANSVERSE SECTION



ISOLATION JOINT DETAIL



SEALED CONSTRUCTION JOINT DETAIL

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-5256
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II

TX-DOT STANDARD - BSA-A
BRIDGE APPROACH SLAB
ASPHALTIC CONCRETE PAVEMENT
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.
CHECKED BY: E.A.M.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 02-03-10

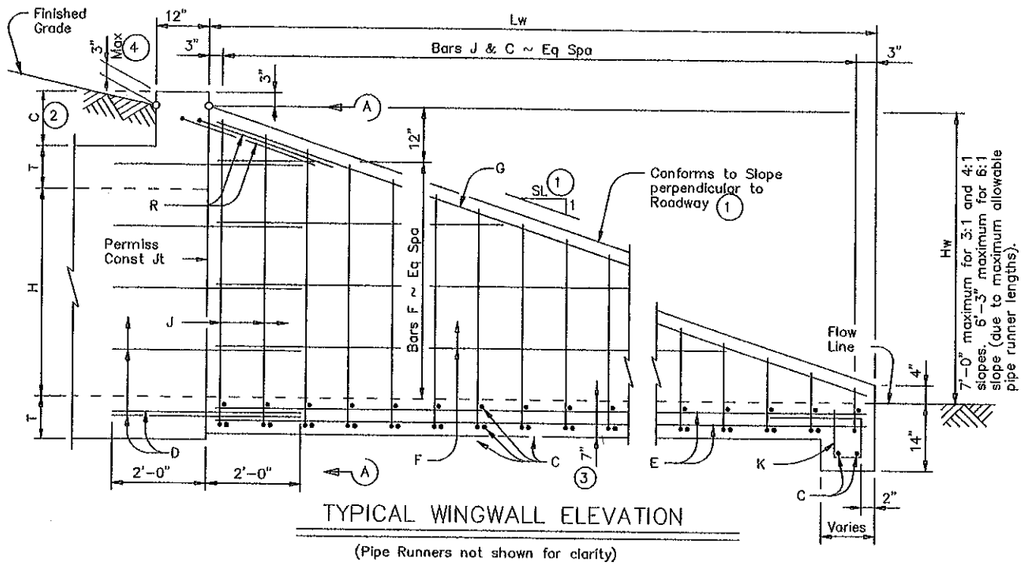
Texas Department of Transportation
Bridge Division

BRIDGE APPROACH SLAB
ASPHALTIC CONCRETE PAVEMENT

BAS-A

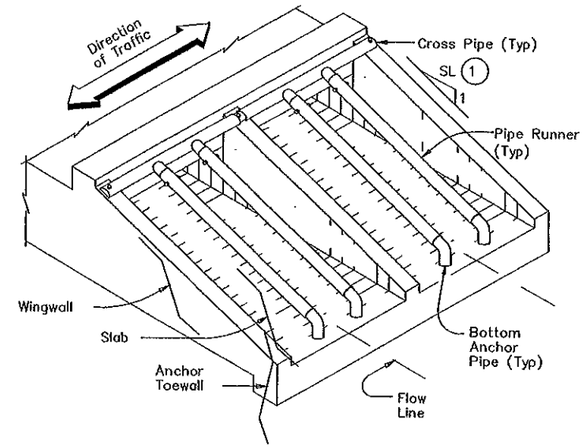
FILE: basaslet.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT April 2006	DISTRICT	FEDERAL AID PROJECT		SHEET
REVISIONS	COUNTY	CONTROL	SECT	JOB	HIGHWAY

SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR: N/A VER. N/A



TYPICAL WINGWALL ELEVATION

(Pipe Runners not shown for clarity)



ISOMETRIC VIEW OF TYPICAL INSTALLATION

Formulas: (All values are in Feet)

$Hw = H + T + C - 0.250'$

$Lw = (Hw - 0.333')\ (SL)$

For Cast-in-place culverts:

$Atw = (N)\ (S) + (N + 1)\ (U)$

For Precast culverts:

$Atw = (N)\ (2U + S) + (N - 1)\ (0.500')$

Total Wingwall Area (S.F.)

$= (0.5)\ (Hw + 0.333')\ (Lw)\ (N + 1)$

Total Concrete Volume (C.Y.)

$= [(\text{Wingwall Area})\ (0.583') + (Lw)\ (Atw)\ (0.583') + (Atw)\ (1.167')\ (1.167' - 0.583')] \div (27)$

Pipe Runner Length

$= (Lw)\ (K1) - (1.917')$

Total Reinforcing (Lbs)

$= (1.55)\ (Lw)\ (Atw) + (4.43)\ (Atw) + (K2)\ (Hw)\ (N + 1)\ (\sqrt{Lw})$

C = Height of Curb above top of Top Slab
Hw = Height of Wingwall
K = Constant Value for use in formulas

Slope SL:1		K1		K2
3:1	~	1.054	~	7.45
4:1	~	1.031	~	8.49
6:1	~	1.014	~	10.30

Atw = Anchor Toewall Length
Lw = Length of Wingwall
N = Number of Culvert Barrels
SL:1 = Side Slope Ratio (Horizontal : 1 Vertical)

See applicable box culvert standard for H, S, T, and U values.

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.

The Safety End Treatments shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the Pipe Runners.

Pipe Runners are designed for a traversing load of 1,800 pounds at yield as recommended by Research Report 280-1, "Safety Treatment of Roadside Cross-Drainage Structures", Texas Transportation Institute, March 1981.

All reinforcing steel shall be Grade 60. All reinforcing shall be adjusted as necessary to provide a minimum clear cover of 1 1/4".

All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.

The quantities for Pipe Runners, reinforcing steel, and concrete, resulting from the formulas given herein are for Contractor's information only.

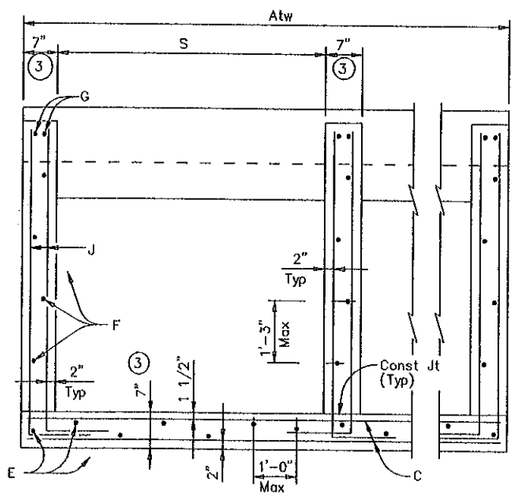
Pipe Runners, Cross Pipes, and Anchor Pipes shall conform to the requirements of ASTM A53 (Type E or S, Grade B), ASTM A500 (Grade B), or API 5LX52.

Bolts and nuts shall conform to ASTM A307.

All steel components, except the concrete reinforcing, shall be galvanized after fabrication. Galvanizing damaged during transport or construction shall be repaired in accordance with the specifications.

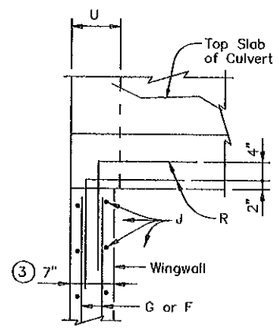
See BCS standard sheet for additional dimensions and information.

Alternate design drawings bearing the seal of a professional engineer will be acceptable for precast construction of the Safety End Treatments.



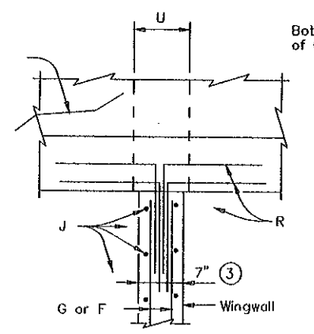
SECTION A-A

(Showing typical Wingwall and Wing Slab reinforcing)
(Pipe Runners not shown for clarity)



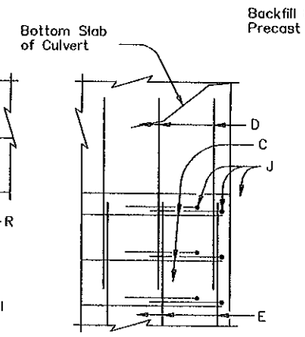
AT TOP OF EXTERIOR WINGWALL

(Cast-in-Place Culvert)



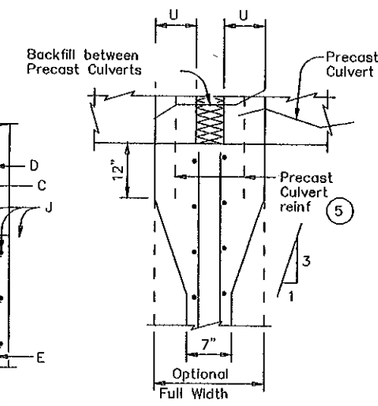
AT TOP OF INTERIOR WINGWALL

(Cast-in-Place Culvert)



AT OUTSIDE OF BOTTOM SLAB

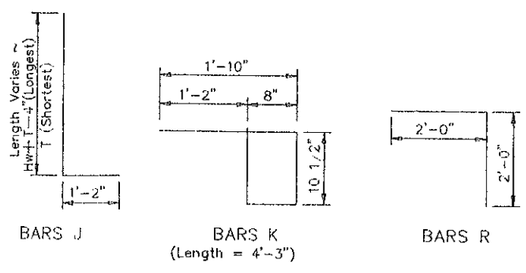
(Cast-in-Place Culvert)



AT INTERIOR WINGWALL

(Precast Culvert)

PLAN VIEWS OF CORNER DETAILS



BARS J

BARS K
(Length = 4'-3")

BARS R

TABLE OF REINFORCING BAR SIZES & SPACING

Bar	Size	Spacing
C	#4	10" Max
D	#4	match F & E
E	#4	1'- 0" Max
F	#4	1'- 3" Max
G	#6	Shown
J	#4	10" Max
K	#4	1'- 0" Max
R	#4	Shown

(1) Recommended values of slope are: 3:1, 4:1, & 6:1. Slope shall be 3:1 or flatter.

(2) 0" min to 5'-0" max. Estimated curb heights are shown elsewhere in the plans. For structures without railing and curbs taller than 1'-0", refer to ECD standard.

(3) Wingwall and slab thicknesses may be the same as the adjacent culvert wall and slab thicknesses (7" Minimum). If thicknesses greater than the minimum (7") are used, no changes will be made in quantities and no additional compensation will be allowed.

(4) For vehicle safety, curbs shall project no more than 3" above finished grade. Curb heights shall be reduced, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

(5) For Culverts with C = 0", the precast culvert reinforcing may extend 1'-0" minimum into Wingwall. Wingwall Bars D and R may be omitted. Otherwise, refer to the "Wingwall Connection Detail" on the SCP-MD standard.

SHEET 1 OF 2

Texas Department of Transportation
Bridge Division

SAFETY END TREATMENT
FOR 0^ SKEW BOX CULVERTS (MAXIMUM Hw = 7'-0") TYPE I ~ CROSS DRAINAGE

SETB-CD

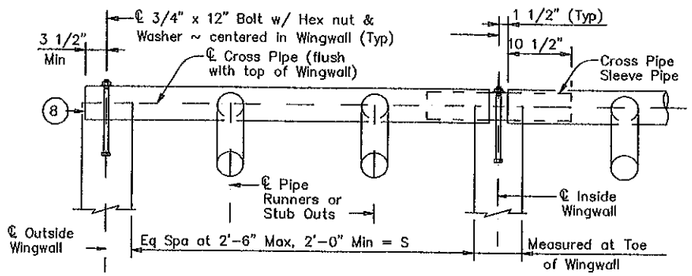
FILE: setbcd0e.dgn	DN: CAF	CK: CAT	DW: JRP	CK: CAF
©TxDOT February 2010	DISTRICT	FEDERAL AID PROJECT		SHEET
REVISIONS				
	COUNTY	CONTROL	SECT	JOB	HIGHWAY

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9265
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD - SETB-CD
SAFETY END TREATMENT
BOX CULVERT - CROSS DRAINAGE
WEBB COUNTY, TEXAS

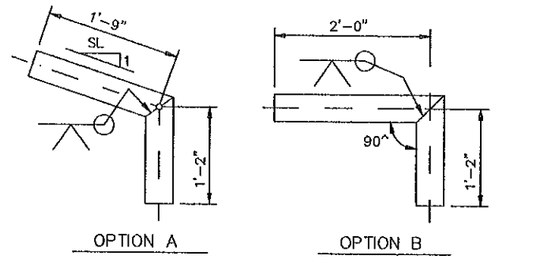
DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

SCALE: (24"x36") SHEET
HOR: N/A VER: N/A
SCALE: (11"x17") SHEET
HOR: N/A VER: N/A



NOTE: At Contractor's option, the Cross Pipe may be made continuous across the Inside Wingwalls. If such option is selected, the Sleeve Pipe shall be omitted and a 15/16" diameter through hole be made in the Cross Pipe to accept the anchor bolt at the centerline of each Inside Wingwall.

CROSS PIPE INSTALLATION DETAILS



BOTTOM ANCHOR PIPE DETAILS (10)

(6) Cross Pipe shall be the same size as the Pipe Runner. Cross Pipe Stub Out shall be the same size as the Anchor Pipe.

(7) Note that actual slope of Safety Pipe Runner may vary slightly from Side Slope.

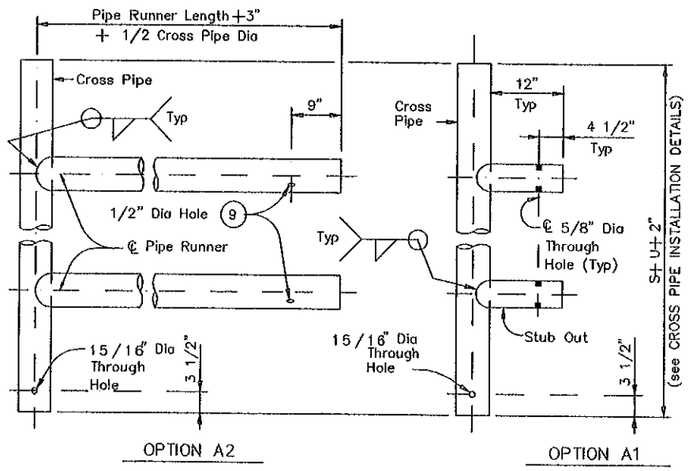
(8) Care shall be taken to ensure that Riprap concrete does not flow into the Cross Pipe so as to permit disassembly of the bolted connection to allow cleanout access.

(9) After installation, the 1/2" hole shall be inspected to ensure that the lap of the Safety Pipe Runner with the Bottom Anchor Pipe is adequate.

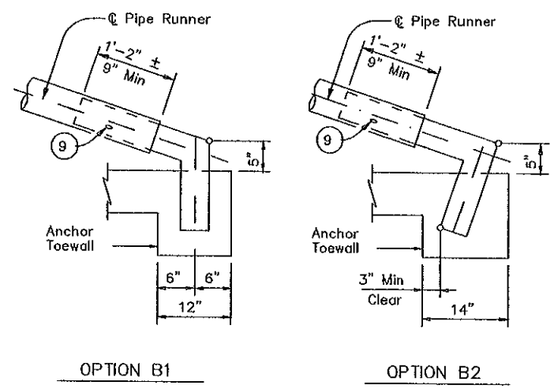
(10) At fabricator's option, a heat bend to a smooth 5" radius or a manufactured elbow (of the same material as the Runner) may be substituted for the mitered and welded joint in the Bottom Anchor Pipe.

MAXIMUM PIPE RUNNER LENGTHS & REQUIRED PIPE RUNNER AND ANCHOR PIPE SIZES (6)

Maximum Pipe Runner Length	Required Pipe Runner Size			Required Anchor Pipe Size		
	Pipe Size	Pipe O.D.	Pipe I.D.	Pipe Size	Pipe O.D.	Pipe I.D.
10'- 0"	3" STD	3.500"	3.068"	2" STD	2.375"	2.067"
19'- 8"	4" STD	4.500"	4.026"	3" STD	3.500"	3.068"
34'- 2"	5" STD	5.563"	5.047"	4" STD	4.500"	4.026"

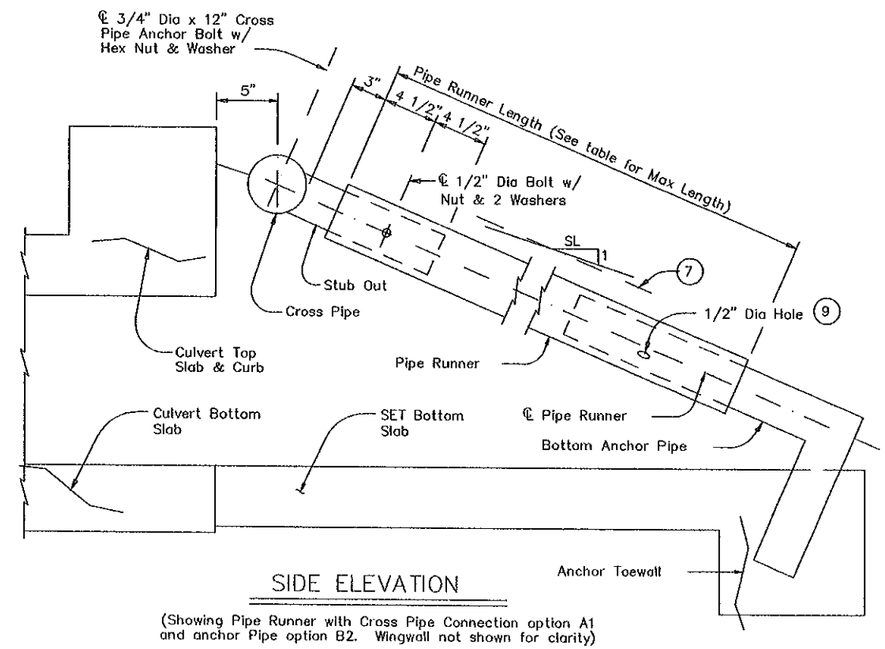


FOR USE IN OUTSIDE CULVERT BAY



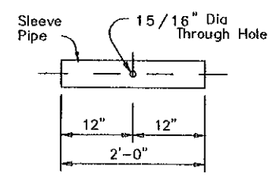
BOTTOM ANCHOR TOEWALL DETAILS

(Wingwall not shown for clarity)

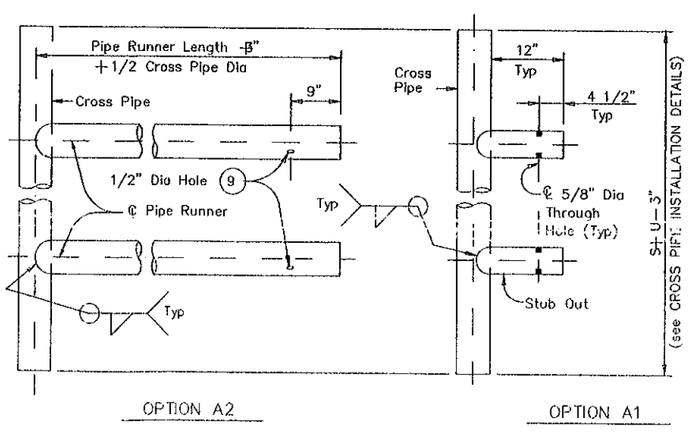


SIDE ELEVATION

(Showing Pipe Runner with Cross Pipe Connection option A1 and anchor Pipe option B2. Wingwall not shown for clarity)

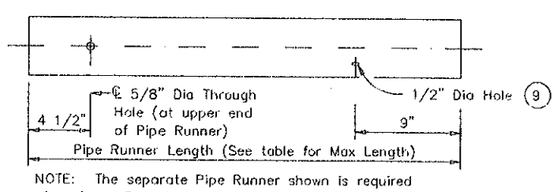


CROSS PIPE SLEEVE PIPE DETAILS



FOR USE IN INSIDE CULVERT BAY

CROSS PIPE AND CONNECTIONS DETAILS



NOTE: The separate Pipe Runner shown is required when Cross Pipe Connection Option A1 is used.

PIPE RUNNER DETAILS

SHEET 2 OF 2

Texas Department of Transportation
Bridge Division

SAFETY END TREATMENT

FOR 0° SKEW BOX CULVERTS
(MAXIMUM Hw = 7'-0")
TYPE I ~ CROSS DRAINAGE

SETB-CD

FILE: setbcdse.dgn	DN: GAF	CK: CAT	DW: JRP	CK: GAF	
©TxDOT February 2010	DISTRICT	FEDERAL AID PROJECT			SHEET
REVISIONS	COUNTY		CONTROL	SECT	JOB	HIGHWAY

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph: (956) 753-2210
Fax: (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD - SETB-CD
SAFETY END TREATMENT
BOX CULVERT - CROSS DRAINAGE
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR: N/A VER. N/A

SHEET 74.2 OF TOTAL: 90

TABLE OF DIMENSIONS & REINFORCING STEEL
(Wings for One Structure End)

Dimensions					Variable Reinforcing				Estimated Quantities per ft of wing length (2~Wings) (3)	
Maximum Wingwall Height Hw (10)	W	X	Y	Z	Bars J 1		Bars J 2			
					Size	Spa	Size	Spa	Reinf (Lb/Ft)	Conc (CY/Ft)
2'-6"	2'-5"	1'-0"	9"	7"	#4	1'-0"	#4	1'-0"	33.73	0.248
3'-0"	2'-5"	1'-0"	9"	7"	#4	1'-0"	#4	1'-0"	37.07	0.261
3'-6"	2'-5"	1'-0"	9"	7"	#4	1'-0"	#4	1'-0"	37.74	0.273
4'-0"	2'-5"	1'-0"	9"	7"	#4	1'-0"	#4	1'-0"	38.41	0.285
4'-6"	3'-2"	1'-6"	1'-0"	7"	#4	1'-0"	#4	1'-0"	41.75	0.330
5'-0"	3'-2"	1'-6"	1'-0"	7"	#4	1'-0"	#4	1'-0"	45.09	0.343
5'-6"	3'-2"	1'-6"	1'-0"	7"	#4	1'-0"	#4	1'-0"	45.75	0.355
6'-0"	3'-2"	1'-6"	1'-0"	7"	#4	1'-0"	#4	1'-0"	46.42	0.367
7'-0"	3'-8"	1'-9"	1'-3"	7"	#4	1'-0"	#4	1'-0"	52.77	0.414
8'-0"	4'-2"	2'-0"	1'-6"	8"	#5	1'-0"	#4	1'-0"	60.19	0.486
9'-0"	4'-8"	2'-3"	1'-9"	8"	#4	6"	#4	6"	81.49	0.535
10'-0"	5'-2"	2'-6"	2'-0"	8"	#5	6"	#4	6"	97.25	0.584
11'-0"	5'-8"	2'-9"	2'-3"	8"	#6	6"	#5	6"	133.65	0.634
12'-0"	6'-2"	3'-0"	2'-6"	9"	#7	6"	#5	6"	162.29	0.721

TABLE OF WINGWALL REINFORCING (2~Wings)

Bar	Size	No.	Spa
DL & DS	#5	~	1'-0"
E	#4	~	1'-0"
F	#4	~	1'-0"
G	#6	4	~
M	#4	4	~
P	#4	~	1'-0"
RL	#5	3	~
RS	#5	3	~
V	#4	~	1'-0"

TABLE OF ESTIMATED CULVERT TOEWALL QUANTITIES

Bar	Size	No.	Spa
L	#4	~	1'-6"
Q	#4	1	~
Reinf (Lb/Ft)			2.45
Conc (CY/Ft)			0.037

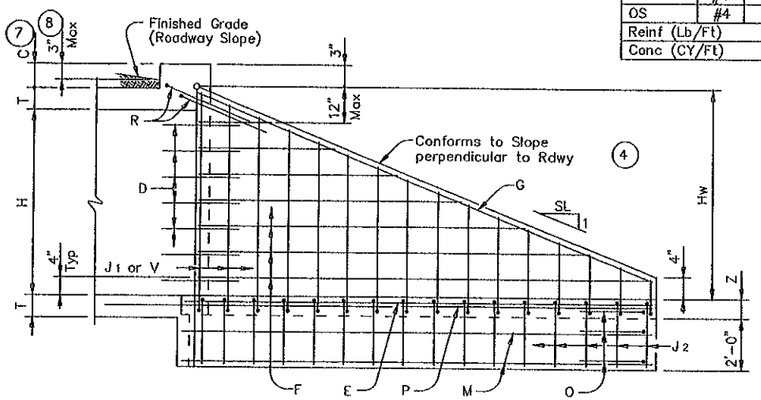
TABLE OF ESTIMATED ANCHOR TOEWALL QUANTITIES

Bar	Size	No.	Spa
K	#4	~	1'-0"
N	#5	6	~
OL	#4	3	~
OS	#4	3	~
Reinf (Lb/Ft)			9.82
Conc (CY/Ft)			0.074

1. Extend Bars P 3'-0" minimum into bottom slab of Box Culvert.
2. Adjust to fit as necessary to maintain 1 1/4" clear cover and 4" minimum between bars.
3. Quantities shown are based on an average wing height for two wings (one structure end). To determine total quantities for two wings multiply the tabulated values by 0.5(A+Lw).
4. Recommended values of Slope are: 3:1, 4:1, & 6:1. Slope shall be 3:1 or flatter.
5. When shown elsewhere on the plans, a 5" deep concrete riprap shall be constructed. Payment for riprap shall be as required by Item 432, "Riprap". Unless otherwise shown on the plans or directed by the Engineer, construction joints or grooved joints, oriented in the direction of flow, and shall extend across the full distance of the riprap, at intervals of approximately 20'. When such riprap is provided, the culvert toewall shown in SECTION B-B will not be required.
6. At Contractor's option, Culvert Toewall may be ended flush with Wingwall Toewall. Adjust reinforcing from that shown as necessary.
7. 3" min to 5'-0" max. Estimated curb heights are shown elsewhere in the plans. For structures without railing and curbs taller than 1'-0", refer to ECD standard.
8. For vehicle safety, curbs shall project no more than 3" above finished grade. Curb heights shall be reduced, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
9. Culvert Skew (limited to 15°or 30°)
10. See "Table Of Maximum Wing Heights" for various slopes. Height is limited based on a 33'-6" maximum safety pipe runner length.
11. Typical Wingwall angle for all skews.

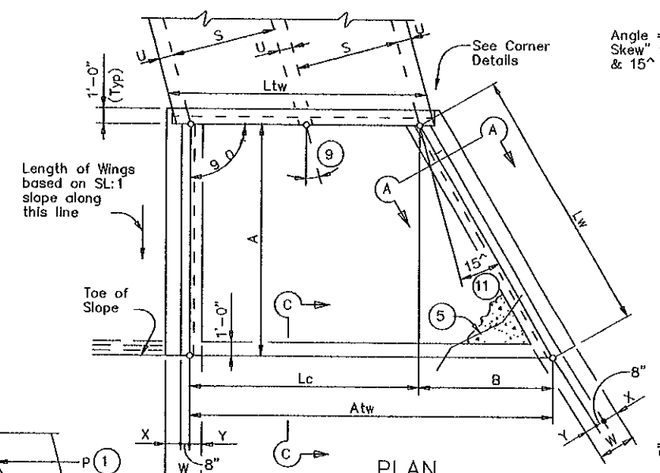
TABLE OF MAXIMUM WING HEIGHTS (Hw max) (10)

Side Slope	Hw max
3:1	11'- 5"
4:1	8'-10"
6:1	6'- 1"



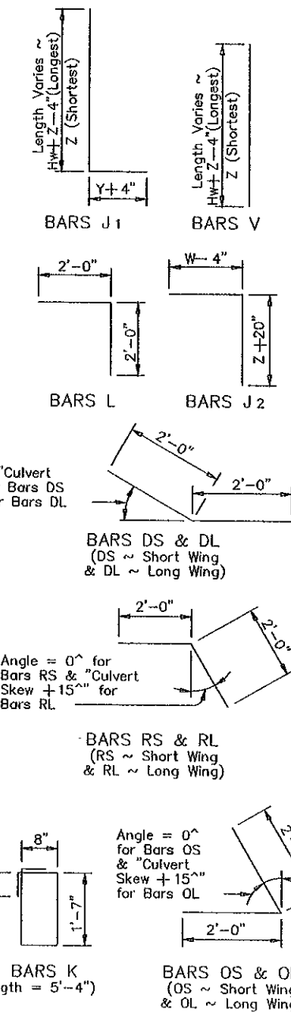
INSIDE ELEVATION OF WINGWALL

(Showing reinforcing. Culvert and Culvert Toewall reinforcing not shown for clarity.)



PLAN

(Showing dimensions and 15^ Skew.)



WING DIMENSION CALCULATIONS:

Formulas: (All values are in Feet)

Hw = H + T + C − 0.250' (10)

A = (Hw − 0.333') (SL)

B = (A) [Tangent (θ + 15')]

Lw = (A) ÷ [Cosine (θ + 15')]

For Cast-in-place culverts:

Ltw = [(N) (S) + (N+1) (U)] ÷ (Cosine θ)

For Precast culverts:

Ltw = [(N) (2U+S) + (N−1) (0.500')] ÷ (Cosine θ)

Lc = (Ltw) − (2U) ÷ (Cosine θ)

Atw = (Lc) + (B)

Total Wingwall Area (Two Wings ~ S.F.) = (0.5) (Hw + 0.333') (Lw + A)

Hw = Height of Wingwall
SL:1 = Side Slope Ratio (Horizontal : 1 Vertical)
Lw = Length of Wingwall
Ltw = Culvert Toewall Length
Lc = Culvert Curb between Wings
Atw = Anchor Toewall Length
N = Number of Culvert Spans
θ = Culvert Skew

See applicable box culvert standard for H, S, T, and U values. See Table of Maximum Wall Heights for limits on Hw.

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.

The Safety End Treatments shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the Pipe Runners.

Pipe Runners are designed for a traversing load of 1,800 pounds at yield as recommended by Research Report 280-1, "Safety Treatment of Roadside Cross-Drainage Structures", Texas Transportation Institute, March 1981.

All reinforcing steel shall be Grade 60.

All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.

All reinforcing bars shall be adjusted to provide a minimum of 1 1/4" clear cover.

When structure is founded on solid rock, depth of toewalls for culverts and wingwalls may be reduced or eliminated as directed by the Engineer.

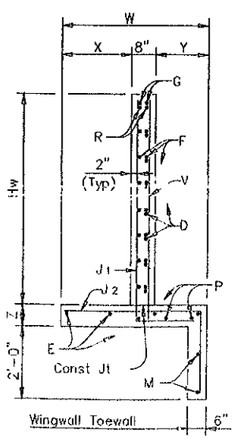
See BCS sheet for additional dimensions and information.

All bolts, nuts, washers, brackets, angles, and pipe runners are considered parts of the Safety End Treatment for payment.

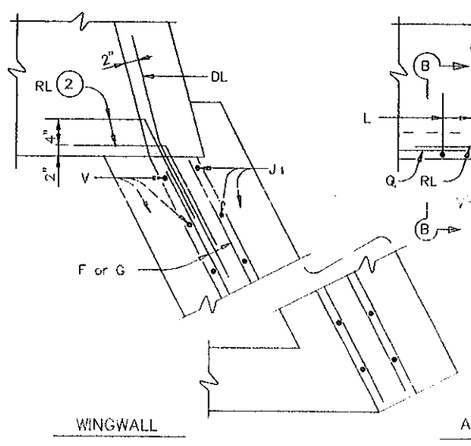
Pipe Runners shall conform to the requirements of ASTM A53 (Type E or S, Grade B), ASTM A500 (Grade B), or API 5LX52.

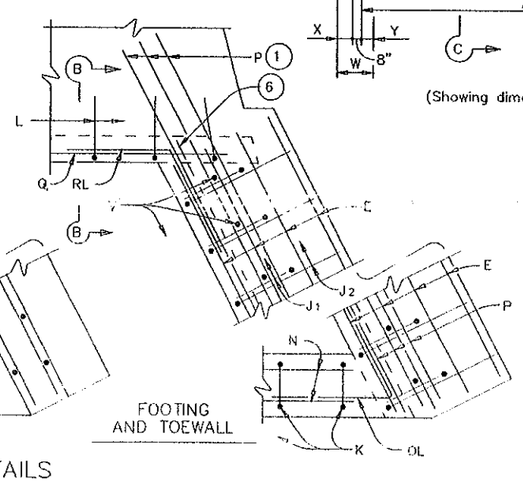
Bolts and nuts shall conform to ASTM A307. Steel plates shall conform to ASTM A36. All steel components, except reinforcing, shall be galvanized. Galvanizing damaged during transport or construction shall be repaired in accordance with the specifications.

The quantities for concrete and reinforcing steel resulting from the formulas given on this sheet are for Contractor's information only.



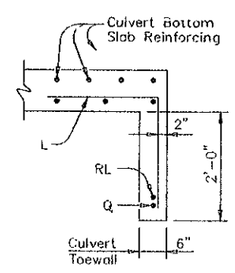
SECTION A-A



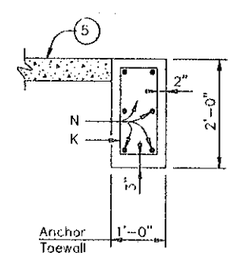


CORNER DETAILS

(Culvert and Culvert Toewall reinforcing not shown for clarity.)



SECTION B-B (5)



SECTION C-C

SHEET 1 OF 3

Texas Department of Transportation
Bridge Division

SAFETY END TREATMENT WITH FLARED WINGS

FOR 15° & 30° SKEW BOX CULVERTS
TYPE I ~ CROSS DRAINAGE

SETB-FW-S

FILE: setbfsse.dgn	DN: GAF	CK: CAT	DW: TxDOT	CK: GAF
©TxDOT February 2010	DISTRICT	FEDERAL AID PROJECT		SHEET
REVISIONS	COUNTY	CONTROL / SECT / JOB	HIGHWAY	

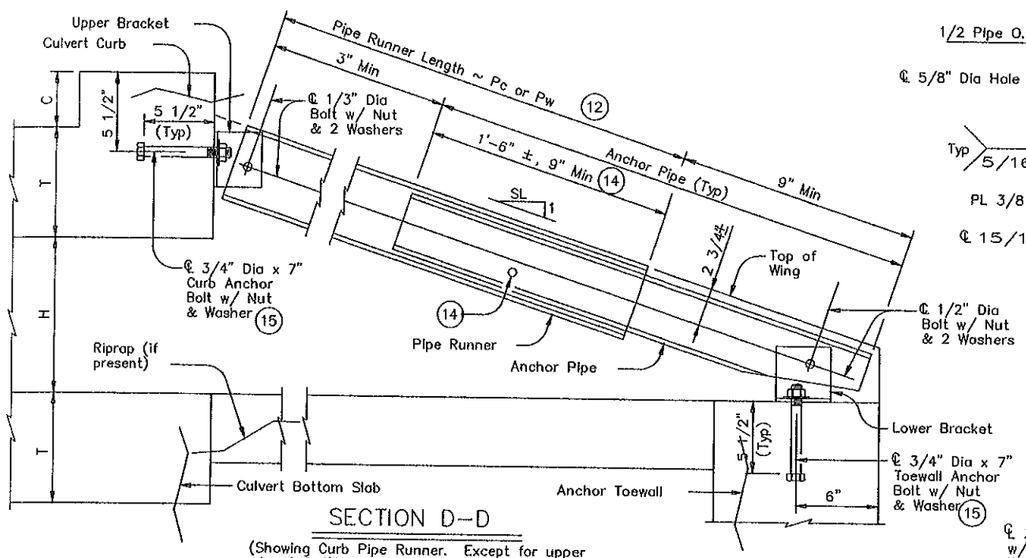
GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD SETB-FW-S
SAFETY END TREATMENT - BOX CULVERT
FLARED WINGS - SKEW - CROSS DRAINAGE
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

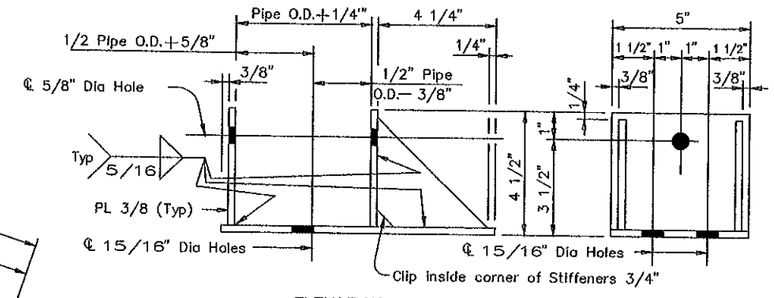
SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR:N/A VER. N/A

SHEET 75.1 OF TOTAL: 90



SECTION D-D

(Showing Curb Pipe Runner. Except for upper bracket, Wingwall Pipe Runners are similar.)



ELEVATION

SIDE VIEW

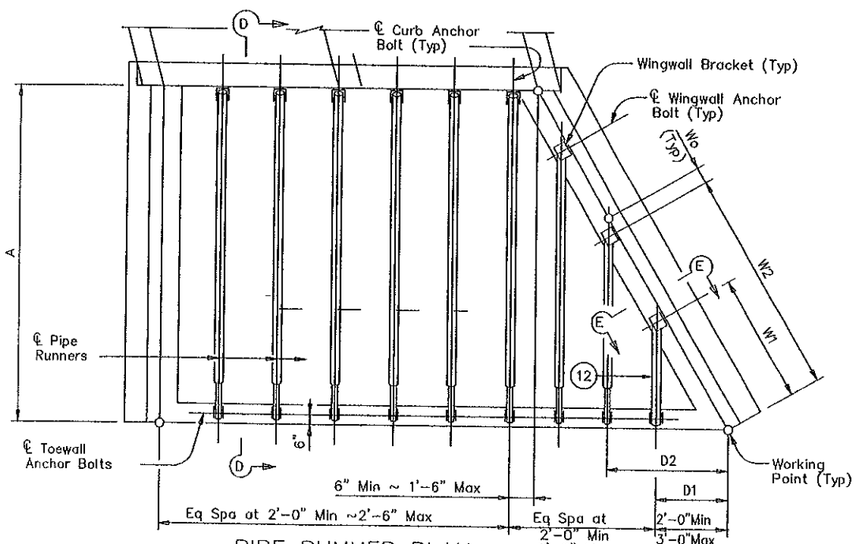
MAXIMUM PIPE RUNNER LENGTHS & REQUIRED PIPE RUNNER AND ANCHOR PIPE SIZES						
Maximum Pipe Runner Length (Pc or Pw)	Required Pipe Runner Size			Required Anchor Pipe Size		
	Pipe Size	Pipe O.D.	Pipe I.D.	Pipe Size	Pipe O.D.	Pipe I.D.
9'-4"	3" STD	3.500"	3.068"	2" STD	2.375"	2.067"
19'-0"	4" STD	4.500"	4.026"	3" STD	3.500"	3.068"
33'-6"	5" STD	5.563"	5.047"	4" STD	4.500"	4.026"

(12) If Pipe Runner Length Pw is 1'-9" or less, a single Non-Sliding Pipe Runner shall replace the normal Pipe Runner and Anchor Pipe. See NON-SLIDING PIPE RUNNER DETAILS for additional information.

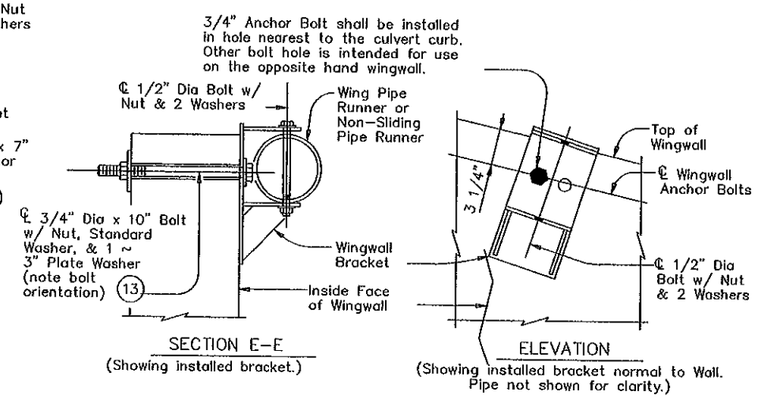
(13) At Contractor's option, 7/8" diameter hole may be formed or cored drilled. Percussion drilling is not permitted. Adjust placement of reinforcing steel as necessary to avoid bolt holes.

(14) After installation of Pipe Runner, the 1/2" inspection hole shall be utilized to ensure that the lap of the Anchor Pipe with the Pipe Runner is adequate.

(15) At Contractor's option, an epoxy anchorage system may be used. Anchorage system chosen must be able to achieve an ultimate tensile resistance of 20 kips. Anchor diameter shall be 3/4". The Contractor must provide evidence to the Engineer that this can be achieved. Evidence of adequate tensile resistance can be based on the manufacturer's published values of ultimate tensile strength (anchor spacing and edge distance must be accounted for). Anchor installation, including hole size, drilling, and clean-out, must be in accordance with the manufacturer's recommendations.



PIPE RUNNER PLAN



SECTION E-E

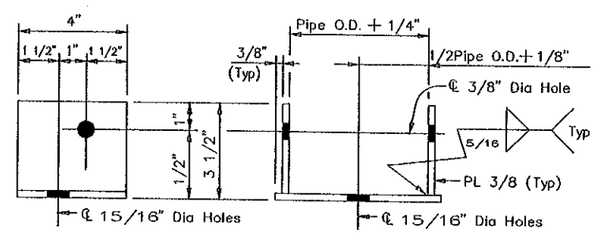
(Showing installed bracket.)

ELEVATION

(Showing installed bracket normal to Wall. Pipe not shown for clarity.)

Note: Wingwall Bracket shall match the Upper Curb Bracket size.

WINGWALL BRACKET DETAILS



SIDE VIEW

ELEVATION

Note: Upper and Lower Brackets shall, except for the brackets used with Non-Sliding Pipe Runners, match the required pipe diameters as shown in the table.

UPPER & LOWER BRACKET DETAILS

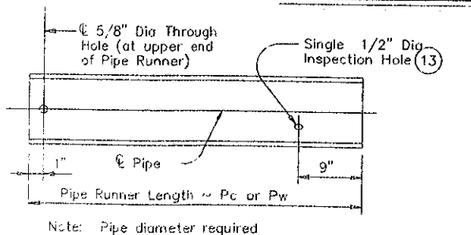
PIPE RUNNER DIMENSION CALCULATIONS:

Formulas:
W"n" = (K3) (D"n") — (Wo)
Pw"n" = (D"n") (K2) — (2.063)
Pw1 Non-Sliding Pipe Runner (If required)
= (D1) (K2) — (0.563)
Pc = (A) (K1) — (1.688)

W"n" = Distance from Working Point to centerline Anchor Bolt measured along bottom inside face of Wing
D"n" = Distance from Working Point to centerline Pipe Runner measured along outside face of Anchor Toewall
Pw = Wingwall Pipe Runner Length
Pc = Curb Pipe Runner Length
K = Constant Values for use in formulas

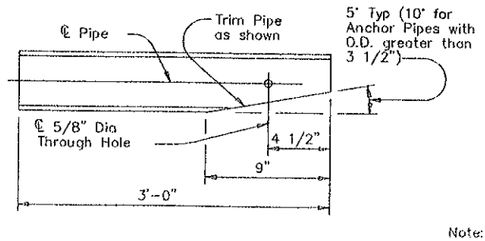
Slope SL:1	K1	K2~15°Skew	K2~30°Skew
3:1	~ 1.054	~ 1.826	~ 1.054
4:1	~ 1.031	~ 1.785	~ 1.031
6:1	~ 1.014	~ 1.756	~ 1.014

K3 = 15°Skew ~ 2.000
30°Skew ~ 1.414
"n" = Wing Pipe Runner Number
Wo = 15°Skew ~ 5"
30°Skew ~ 21/2"

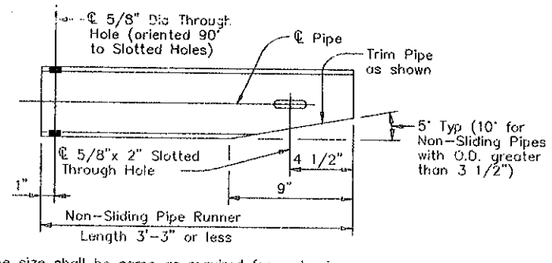


Note: Pipe diameter required for curb pipe runner shall also be used for wingwall pipe runner.

PIPE RUNNER DETAILS



ANCHOR PIPE DETAILS



Note: Pipe size shall be same as required for curb pipe runner. Adjust the corresponding Lower Bracket accordingly.

NON-SLIDING PIPE RUNNER DETAILS

SHEET 2 OF 3

Texas Department of Transportation
Bridge Division

SAFETY END TREATMENT WITH FLARED WINGS

FOR 15° & 30° SKEW BOX CULVERTS
TYPE I ~ CROSS DRAINAGE

SETB-FW-S

FILE: setbfsse.dgn	DN: GAF	CK: CAT	DW: TxDOT	CK: GAF
©TxDOT February 2010	DISTRICT	FEDERAL AID PROJECT		SHEET
REVISIONS	COUNTY	CONTROL	SECT	JOB	HIGHWAY

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II

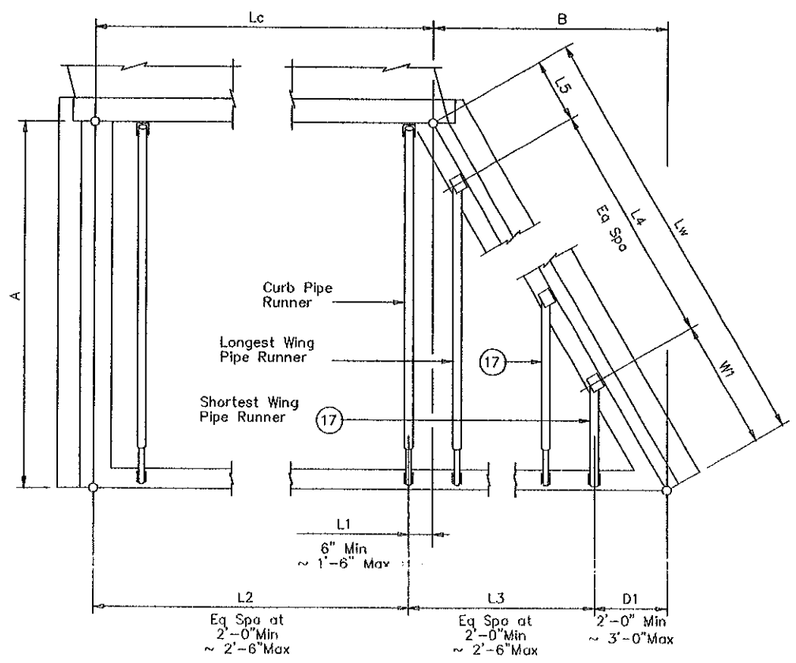
TX-DOT STANDARD SETB-FW-S
SAFETY END TREATMENT - BOX CULVERT
FLARED WINGS - SKEW - CROSS DRAINAGE
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR: N/A VER. N/A

SHEET 75.2 OF TOTAL 90

Culvert Station and/or Creek name followed by applicable end (Lt, Rt or Bothe) (16)	Lc (Ft)	L1 (Ft)	L2 No. Spa	L2 Spa at (Ft)	L2 Overall Length (Ft)	D1 (Ft)	L3 No. Spa	L3 Spa at (Ft)	L3 Overall Length (Ft)	W1 (Ft)	L4 No. Spa	L4 Spa at (Ft)	L4 Overall Length (Ft)	L5 (Ft)	Curb Pipe Runner (Pc) No.	Curb Pipe Runner (Pc) Length (Ft)	Longest Wing Pipe Runner (Pw) (Ft)	Shortest Wing Pipe Runner (Pw) (Ft)	Non-Sliding Wing Pipe Runner (if applicable) (Ft)	Curb, Wing, and/or Non-Sliding Pipe Runners Size (3",4" or 5")	Curb, Wing, and/or Non-Sliding Pipe Runners Total Length (16) (Ft)	3'-0" Anchor Pipe Size (2",3" or 4")	3'-0" Anchor Pipe Total (16) (Ft)
STRUCTURE "D" (Both)	51.865'	0.500'	21	2.446'	51.365'	2.000'	5	2.250'	11.250'	2.620'	4	3.182'	12.726'	2.686'	21	11.750'	9.521'	2.417'	1.542'	4"	544.333'	3"	150.000'
STRUCTURE "E" (Both)	25.115'	0.500'	10	2.461'	24.615'	2.750'	3	2.500'	7.500'	3.680'	2	3.535'	7.070'	3.038'	10	8.583'	6.104'	3.479'	2.333'	3"	195.500'	2"	72.000'
STRUCTURE "F" (Both)	51.865'	0.500'	21	2.446'	51.365'	2.000'	5	2.250'	11.250'	2.620'	4	3.182'	12.726'	2.686'	21	11.750'	9.521'	2.417'	1.542'	4"	544.333'	3"	150.000'



PIPE RUNNER LAYOUT

Note: Right forward culvert skew shown, actual culvert skew may be opposite hand.

(16) Quantities shown are for one structure end if Lt or Rt. Quantities shown are for two structure ends if Both.

(17) If the outermost Wing Pipe Runner is a Non-Sliding Pipe Runner, the next outermost Wing Pipe Runner shall be considered the Shortest.

SPECIAL NOTE:

This tabular sheet is to be filled out by the culvert specifier and provides information for the construction details and quantities of Pipe Runners.

An Excel 97 spreadsheet to assist in completing this table can be downloaded from the Bridge Standards (English) web page on the TxDOT web site. The completed sheet shall be signed, sealed, and dated by a licensed Professional Engineer.

Note that the tabular quantities are given for estimating purposes only. It is likely that these quantities will change due to field conditions. Therefore, all dimensions shall be verified by the Contractor in the field prior to fabrication of the Safety End Treatment components.

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax: (956) 753-2213

TANQUECITOS PHASE I AND II

TX-DOT STANDARD SETB-FW-S
SAFETY END TREATMENT - BOX CULVERT
FLARED WINGS - SKEW - CROSS DRAINAGE
WEBB COUNTY, TEXAS

SHEET 3 OF 3

Texas Department of Transportation
Bridge Division

SAFETY END TREATMENT
WITH FLARED WINGS

FOR 15° & 30° SKEW BOX CULVERTS
TYPE I ~ CROSS DRAINAGE

FILE: O

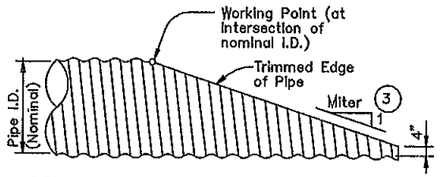
SETB-FW-S

setbfsse.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: GAF
© TxDOT February 2010	DISTRICT	FEDERAL AID PROJECT		SHEET
REVISIONS				
	COUNTY	CONTROL	SECT	JOB	HIGHWAY

DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 00-03-10

SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR: N/A VER. N/A

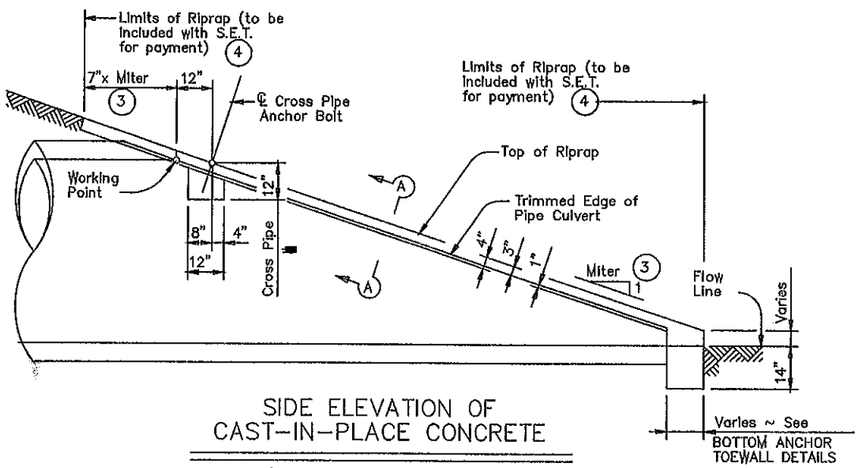
SHEET 75.3 OF TOTAL 90



NOTE: All Pipe Runners, calculations, and dimensions are based on the pipe culverts mitered as shown in this detail. Alternate styles of mitered ends will require that appropriate adjustments be made to the values presented on this standard.

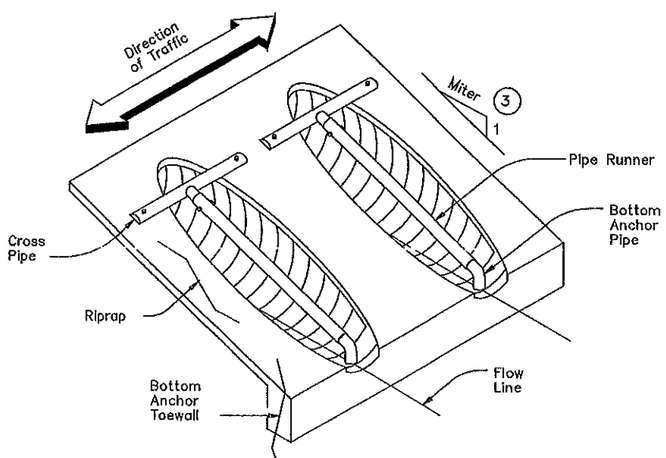
SIDE ELEVATION OF TYPICAL PIPE CULVERT MITER

(Showing Corrugated Metal Pipe Culvert. Details of Concrete Pipe Culvert are similar.)



SIDE ELEVATION OF CAST-IN-PLACE CONCRETE

(Showing Concrete Pipe Culvert. Details of Corrugated Metal Pipe Culvert are similar. Pipe Runners not shown for clarity)



ISOMETRIC VIEW OF TYPICAL INSTALLATION

(Showing Installation with no skew.)

CROSS PIPE LENGTHS & PIPE RUNNER LENGTHS (1)(2)

Nominal Culvert I.D.	Pipe Culvert Spa ~ G	Cross Pipe Length	Pipe Runner Length											
			3:1 Side Slope				4:1 Side Slope				6:1 Side Slope			
			0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	1° Skew	30° Skew	45° Skew
24"	1'– 7"	3'– 5"	N/A	N/A	N/A	5'–10"	N/A	N/A	N/A	8'– 1"	N/A	N/A	N/A	12'– 9"
27"	1'– 8"	3'– 8"	N/A	N/A	5'– 5"	6'–11"	N/A	N/A	7'– 7"	9'– 7"	N/A	N/A	11'–11"	14'–11"
30"	1'–10"	3'–11"	N/A	N/A	6'– 4"	8'– 0"	N/A	N/A	8'– 9"	11'– 0"	N/A	N/A	13'– 8"	17'– 0"
33"	1'–11"	4'– 2"	6'– 2"	6'– 5"	7'– 3"	9'– 1"	8'– 6"	8'–10"	10'– 0"	12'– 5"	13'– 3"	13'– 9"	15'– 5"	19'– 2"
36"	2'– 1"	4'– 5"	6'–11"	7'– 3"	8'– 2"	10'– 2"	9'– 6"	9'–11"	11'– 2"	13'–10"	14'– 9"	15'– 3"	17'– 2"	21'– 3"
42"	2'– 4"	4'–11"	8'– 6"	8'–10"	9'–11"	12'– 4"	11'– 7"	12'– 0"	13'– 6"	16'– 8"	17'– 9"	18'– 5"	20'– 8"	25'– 7"
48"	2'– 7"	5'– 5"	10'– 1"	10'– 5"	11'– 9"	N/A	13'– 7"	14'– 2"	15'–10"	N/A	20'– 9"	21'– 6"	24'– 2"	N/A
54"	3'– 0"	5'–11"	11'– 8"	12'– 1"	N/A	N/A	15'– 8"	16'– 3"	N/A	N/A	23'–10"	24'– 8"	N/A	N/A
60"	3'– 3"	6'– 5"	13'– 3"	N/A	N/A	N/A	17'– 9"	N/A	N/A	N/A	26'–10"	N/A	N/A	N/A

TYPICAL PIPE CULVERT MITERS (3)

Side Slope	0° Skew	15° Skew	30° Skew	45° Skew
3:1	3:1	3.106:1	3.464:1	4.243:1
4:1	4:1	4.141:1	4.619:1	5.657:1
6:1	6:1	6.212:1	6.928:1	8.485:1

CONDITIONS WHERE PIPE RUNNERS ARE NOT REQUIRED (2)

Nominal Culvert I.D.	Single Pipe Culvert	Multiple Pipe Culverts
12" thru 21"	Skews thru 45°	Skews thru 45°
24"	Skews thru 45°	Skews thru 30°
27"	Skews thru 30°	Skews thru 15°
30"	Skews thru 15°	Skews thru 15°
33"	Skews thru 15°	Always required
36"	Normal(No Skew)	Always required
42" to 60"	Always required	Always required

STANDARD PIPE SIZES & MAX PIPE RUNNER LENGTHS (1)

Pipe Size	Pipe O.D.	Pipe I.D.	Max Pipe Runner Length
2" STD	2.375"	2.067"	N/A
3" STD	3.500"	3.068"	10'– 0"
4" STD	4.500"	4.026"	19'– 8"
5" STD	5.563"	5.047"	34'– 2"

ESTIMATED CONCRETE RIPRAP QUANTITIES (CY) (5)

Nominal Culvert I.D.	3:1 Side Slope				4:1 Side Slope				6:1 Side Slope			
	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew
12"	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.7	0.8
15"	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.9
18"	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.9	1.0
21"	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.9	0.9	0.9	1.0	1.2
24"	0.6	0.7	0.7	0.8	0.8	0.8	0.8	1.0	1.0	1.0	1.1	1.3
27"	0.7	0.7	0.8	0.9	0.8	0.9	0.9	1.1	1.1	1.1	1.2	1.4
30"	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.2	1.2	1.2	1.3	1.6
33"	0.8	0.8	0.9	1.0	1.0	1.0	1.1	1.3	1.3	1.4	1.5	1.7
36"	0.9	0.9	0.9	1.1	1.1	1.1	1.2	1.4	1.4	1.5	1.6	1.8
42"	1.0	1.0	1.1	1.3	1.2	1.3	1.3	1.6	1.6	1.7	1.8	2.1
48"	1.1	1.1	1.2	N/A	1.4	1.4	1.5	N/A	1.9	1.9	2.1	N/A
54"	1.3	1.3	N/A	N/A	1.6	1.6	N/A	N/A	2.1	2.1	N/A	N/A
60"	1.4	N/A	N/A	N/A	1.7	N/A	N/A	N/A	2.3	N/A	N/A	N/A

(1) Size of Pipe Runner shall be as shown in the tables. Cross Pipe shall be the same size as the Pipe Runner. Cross Pipe Stub Out and Bottom Anchor Pipe shall be the next smaller size pipe as shown in the STANDARD PIPE SIZES table.

(2) This standard allows for the placement of only one pipe runner across each culvert pipe opening. In order to limit the clear opening to be traversed by an errant vehicle, the following conditions must be met:

For 60" culvert pipes, the skew must not exceed 0°.
For 54" culvert pipes, the skew must not exceed 15°.
For 48" culvert pipes, the skew must not exceed 30°.
For all culvert pipe sizes 42" and less, the skew must not exceed 45°.

If the above conditions cannot be met, the designer should consider using a safety end treatment with flared wings. For further information, refer to the TxDOT "Roadway Design Manual".

(3) Miter = Slope of Mitered Pipe Culvert End

(4) Riprap placed beyond the limits shown will be paid as Concrete Riprap in accordance with Item 432, "Riprap".

(5) Quantities shown are for one end of one reinforced Concrete Pipe Culvert. For multiple Pipe Culverts or for Corrugated Metal Pipe Culverts, quantities will need to be adjusted. Riprap quantities are for Contractor's information only.

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-6266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD SETP-CD
SAFETY END TREATMENT
PIPE CULVERT - CROSS DRAINAGE
WEBB COUNTY, TEXAS

SHEET 1 OF 2

Texas Department of Transportation
Bridge Division

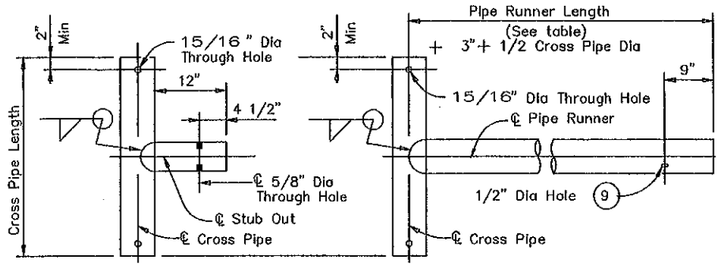
SAFETY END TREATMENT
FOR 12" DIA TO 60" DIA
PIPE CULVERTS
TYPE II ~ CROSS DRAINAGE

SETP-CD

FILE: setpcdse.dgn	DN: GAF	CK: CAT	DW: JRP	CK: GAF	
©TxDOT February 2010	DISTRICT	FEDERAL AID PROJECT			SHEET
REVISIONS	COUNTY		CONTROL	SECT	JOB	HIGHWAY

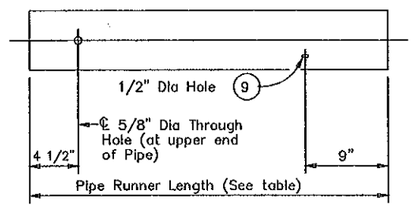
DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR:N/A VER. N/A



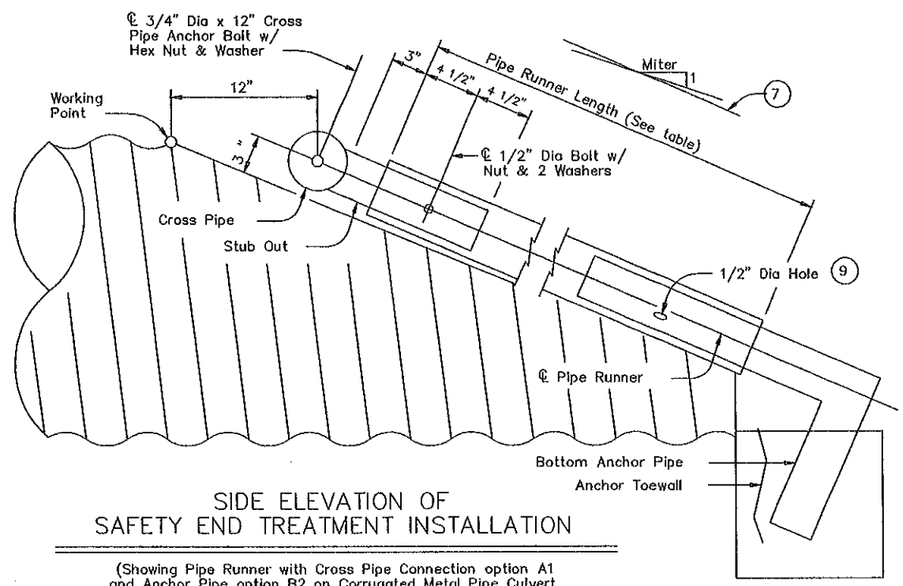
OPTION A1 OPTION A2

CROSS PIPE AND CONNECTIONS DETAILS



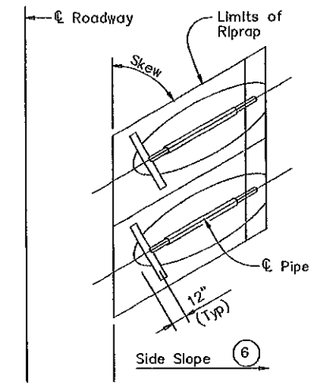
NOTE: The separate Pipe Runner shown is required when Cross Pipe Connection Option A1 is used.

PIPE RUNNER DETAILS

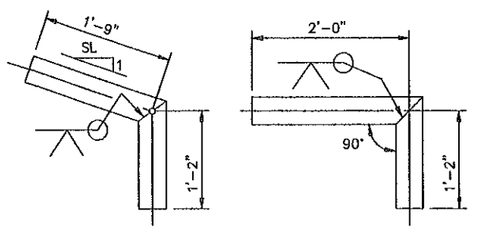


SIDE ELEVATION OF SAFETY END TREATMENT INSTALLATION

(Showing Pipe Runner with Cross Pipe Connection option A1 and Anchor Pipe option B2 on Corrugated Metal Pipe Culvert. Concrete Pipe Culvert details are similar. Riprap not shown for clarity)

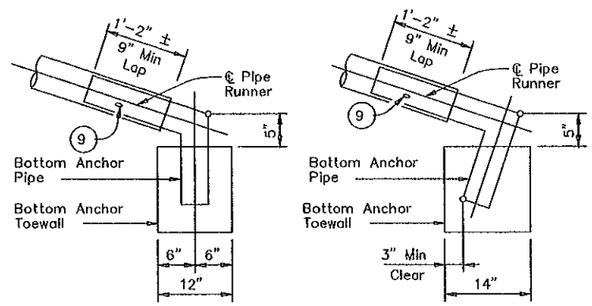


PLAN OF SKEWED INSTALLATION



OPTION B1 OPTION B2

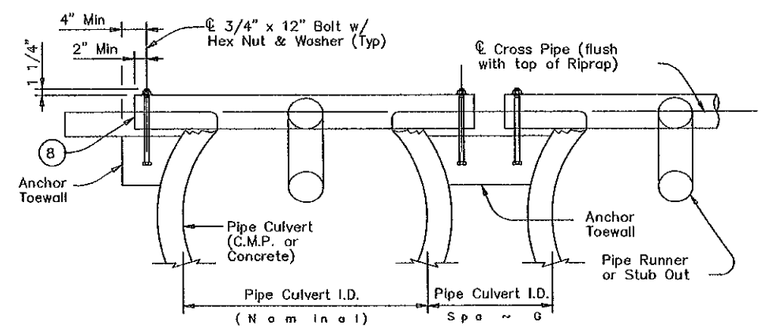
BOTTOM ANCHOR PIPE DETAILS 10



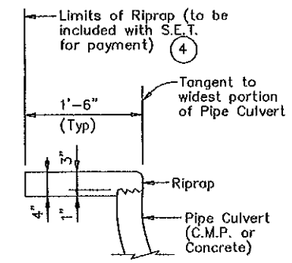
OPTION B1 OPTION B2

BOTTOM ANCHOR TOEWALL DETAILS

(Culvert & Riprap not shown for clarity)



SHOWING CROSS PIPE & ANCHOR TOEWALL



SHOWING TYPICAL PIPE CULVERT & RIPRAP

SECTION A-A

6 Recommended values of side slope are 3:1, 4:1, & 6:1. All quantities, calculations, and dimensions shown herein are based on these recommended values. Slope of 3:1 or flatter is required for vehicle safety.

7 Note that actual slope of Pipe Runner may vary slightly from Side Slope of Riprap and trimmed Culvert Pipe edge.

8 Care shall be taken to ensure that Riprap concrete does not flow into the Cross Pipe so as to permit disassembly of the bolted connection to allow cleanout access.

9 After installation, the 1/2" hole shall be inspected to ensure that the lap of the Pipe Runner with the Bottom Anchor Pipe is adequate.

10 At fabricator's option, a heat bend to a smooth 5" radius or a manufactured elbow (of the same material as the Runner) may be substituted for the mitered and welded joint in the Bottom Anchor Pipe.

GENERAL NOTES:

Pipe Runners are designed for a traversing load of 1,800 pounds at yield as recommended by Research Report 280-1, "Safety Treatment of Roadside Cross-Drainage Structures", Texas Transportation Institute, March 1981.

The Safety End Treatments shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the Pipe Runners.

Riprap and all necessary inverts shall be Concrete Riprap conforming to the requirements of Item 432, "Riprap".

Payment for riprap and toewall is included in the Price Bid for each Safety End Treatment.

Pipe Runners, Cross Pipes, and Anchor Pipes shall conform to the requirements of ASTM A53 (Type E or S, Grade B), ASTM A500 (Grade B), or API 5LX52.

Bolts and nuts shall conform to ASTM A307.

All steel components, except concrete reinforcing, shall be galvanized after fabrication. Galvanizing damaged during transport or construction shall be repaired in accordance with the specifications.

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD SETP-CD
SAFTY END TREATMENT
PIPE CULVERTS - CROSS DRAINAGE
WEBB COUNTY, TEXAS

SHEET 2 OF 2

Texas Department of Transportation
Bridge Division

SAFETY END TREATMENT
FOR 12" DIA TO 60" DIA
PIPE CULVERTS
TYPE II ~ CROSS DRAINAGE

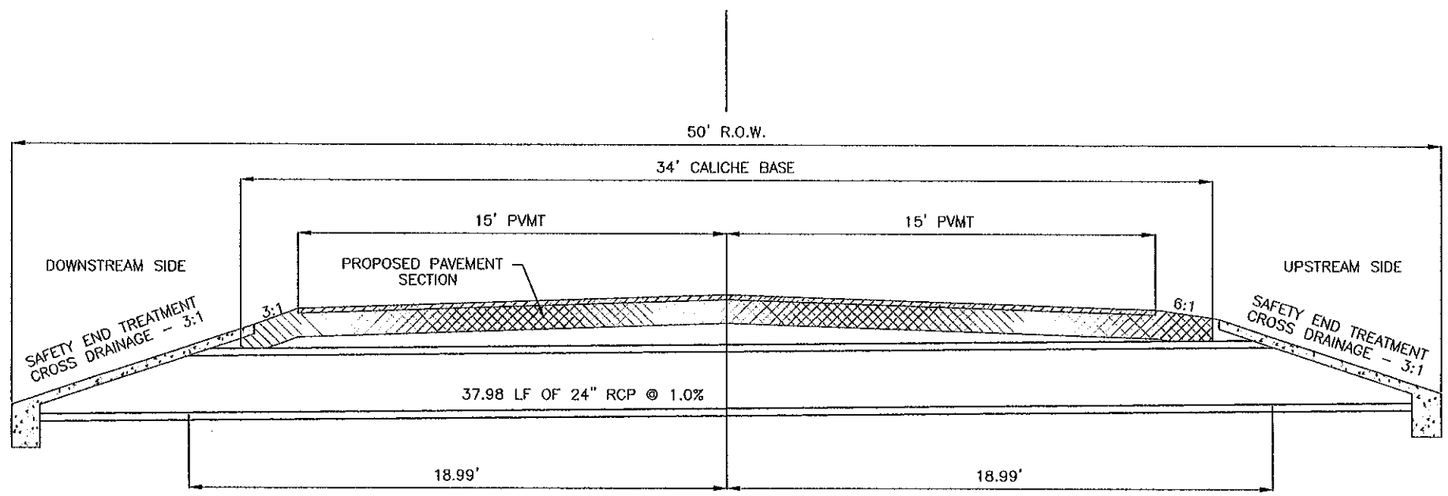
SETP-CD

FILE: setpcdae.dgn	DN: GAF	CK: CAT	DW: JRP	CK: GAF
©TxDOT February 2010	DISTRICT	FEDERAL AID PROJECT		SHEET
REVISIONS	COUNTY	CONTROL	SECT	JOB	HIGHWAY

DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR: N/A VER. N/A

SHEET 76.2 OF TOTAL: 90



24" RCP PIPE CULVERT CROSS DRAINAGE

TYPICAL SECTION N.T.S.

NOTES:

1. SEE TxDOT STANDARD SETP-CD FOR SAFETY END TREATMENT DETAILS.

2. THIS DETAIL IS TO BE USED FOR ALL PIPE CULVERT CROSS DRAINAGE APPLICATIONS UNLESS OTHERWISRE NOTED.

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

03/07/11

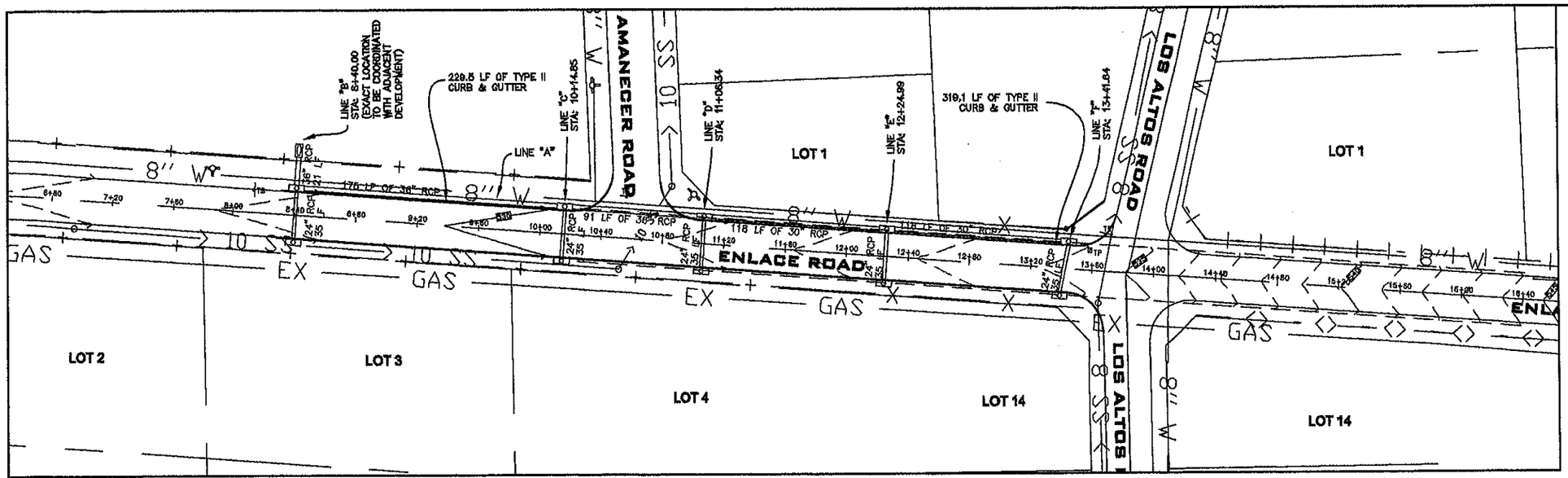
REVIEWED AND
REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERD FIRM F-9266

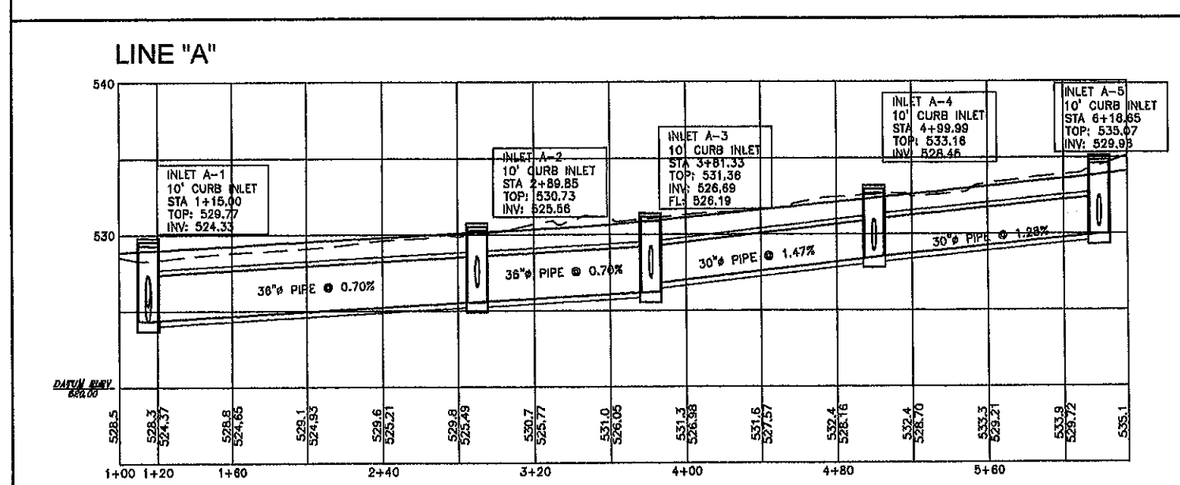
GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

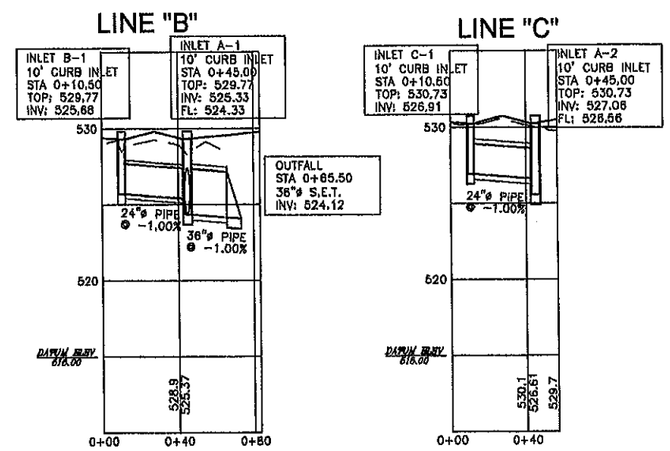
TANQUECITOS PHASE I AND II

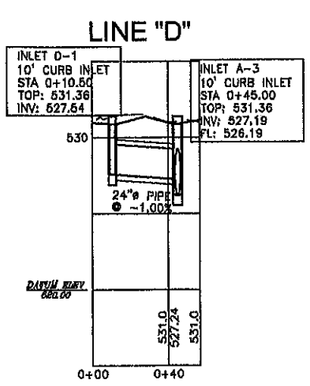
CROSS DRAINAGE PIPE
TYPICAL SECTION
WEBB COUNTY, TEXAS

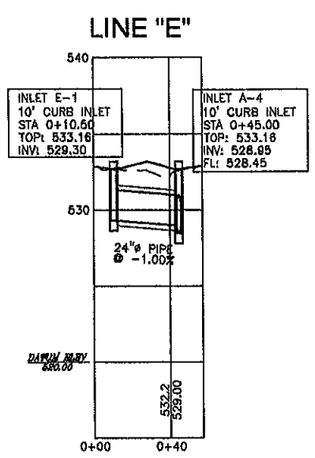
DRAWN BY: T.P.O.	
CHECKED BY: E.L.O.	
DRAWN DATE:	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: N/A	VER. N/A
SCALE: (11"x17") SHEET	
HOR: N/A	VER. N/A

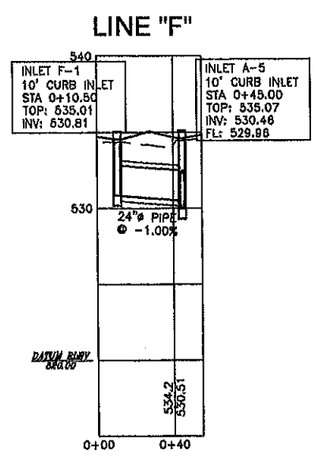












STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

11/28/2011

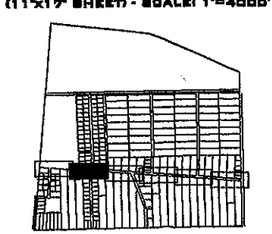
AS SHOWN

LEGEND

- EXISTING FENCE BARB WIRE
- EXISTING FENCE BLOCK
- EXISTING FENCE CHAIN LINK
- EXISTING FENCE CHICKEN
- EXISTING FENCE IRON
- EXISTING FENCE LAMINA
- EXISTING FENCE WOOD
- EXISTING OVERHEAD POWER LINE (EX OHP)
- EXISTING NATURAL GAS PIPELINE (EX GAS)
- EXISTING LOT LINE
- EXISTING CONTOUR LINE (MINOR)
- EXISTING CONTOUR LINE (MAJOR) 550.00
- FINISHED CONTOUR LINE (MINOR)
- FINISHED CONTOUR LINE (MAJOR) 550
- EXISTING POWER POLE (PP)
- EXISTING GUY WIRE (GW)
- EXISTING TRAFFIC SIGN (TS)
- EXISTING TELEPHONE PEDESTAL (TP)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (HYD)
- EXIST. ASPHALT
- EXIST. CONCRETE

LOCATION MAP

(24"x36" SHEET) - SCALE: 1"=2000'
(11"x17" SHEET) - SCALE: 1"=4000'



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 Ft.

CALL BEFORE YOU DIG !
TEXAS ONE CALL SYSTEM
1-800-245-4545

SOUTHWESTERN BELL LOCATION GROUP
AT 1-800-828-5127

THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344

TEXAS EXCAVATION SAFETY SYSTEM
1-800-344-8377

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2219
Fax (956) 753-2213

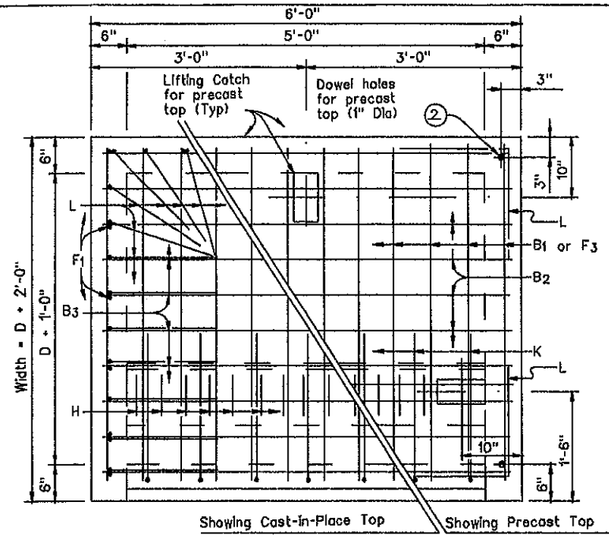
TANQUECITOS PHASE I AND II

STRUCTURE "H" ALTERNATIVE
ENLACE ROAD
STA: 8+40.00 TO STA: 13+41.64
WEBB COUNTY, TEXAS

TOP VIEW SHOWING STORM DRAINAGE PLAN

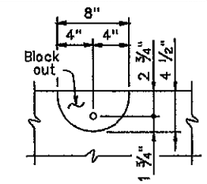
BOTTOM VIEW SHOWING STORM DRAINAGE PROFILE

DRAWN BY: E.L.O.	
CHECKED BY: E.L.O	
DRAWN DATE: 09-22-11	
PLOTTED DATE: 09-28-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 11-28-11	
SCALE: (24"x36") SHEET	
HOR: 1"=40'	VER. 1"=5'
SCALE: (11"x17") SHEET	
HOR: 1"=80'	VER. 1"=10'
SHEET	TOTAL
78. 1	OF 90

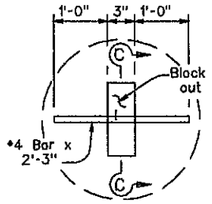


PLAN

2 If precast top is used, provide 4 ~ 5/8" dia x 1'-6" smooth bars in inlet walls for 1" dia holes

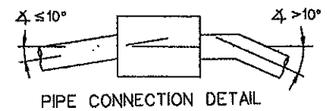


SECTION C-C



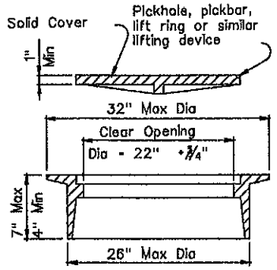
PLAN

LIFTING CATCH



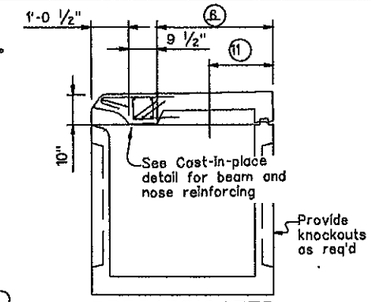
PIPE CONNECTION DETAIL

Connecting pipes should enter within 10° of normal to inlet wall. If necessary, pipe elbow or curved approach alignment should be used to stay within this limit.



RING AND COVER DETAILS

Approximate Weight = 245 lb



PREFABRICATED INLET

8 For reinforcing steel and dimensions not shown, see fabricators design drawing. Structure shall be of the size required to accommodate size of pipe shown elsewhere in the plans. Length of inlet = 5'-0"

ESTIMATED QUANTITIES 8

Pipe Size = D	Height	For 4 Foot Width		Per 6 Inch Add'l Width		Per 1 Foot Add'l Height 7	
		Cl "A" Conc	Reinf Steel	Cl "A" Conc	Reinf Steel	Cl "A" Conc	Reinf Steel
In	Ft	CY	Lb	CY	Lb	CY	Lb
18"	3'-7"	1.6	315	--	--	.33	32
24"	4'-1"	2.0	329	--	--	.33	32
30"	4'-7"	2.4	347	.18	19	.35	33
36"	5'-1"	2.7	361	.19	20	.37	35
42"	5'-7"	3.1	379	.20	21	.39	36
48"	6'-1"	3.5	393	.21	21	.41	38

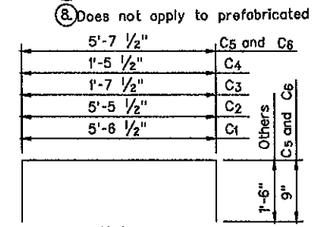
7 For Width (4'-0" Min) = D + 2'-0"

8 Does not apply to prefabricated inlets

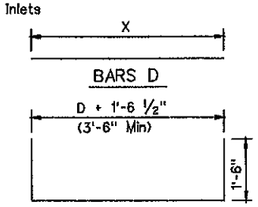
REINF STEEL

Bar	Size	Spacing
B1	#4	6"
B2	#5	6"
B3	#4	6"
C1-2	#4	12"
C3-4	#4	9
C5	#6	9
C6	#4	9
D	#4	9
E	#4	12"
F1-3	#4	12"
G	#4	6"
H	#3	4"
K	#4	9"
L	#4	6"

9 As shown

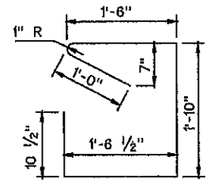


BARS C

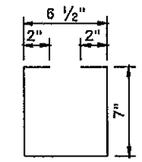


BARS D

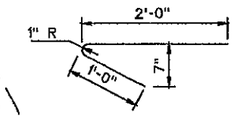
BARS E



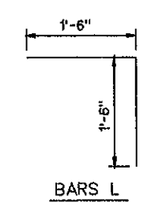
BARS G



BARS H



BARS K



BARS L

GENERAL NOTES:

Quantities shown herein are for Contractor's information only. Unless otherwise shown in the plans, payment will be made for each inlet of the type specified and for each extension. Each five foot curb opening of extension is considered "one extension" regardless of whether placed monolithically or precast. Extension length shall be in multiples of 5 feet.

Engineer has the option of specifying cast-in-place top with ring and cover or removable precast top as specified elsewhere in plans.

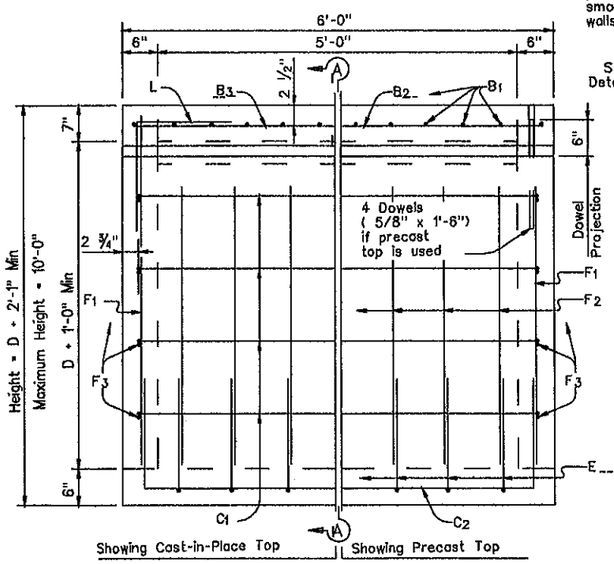
When approved, precast inlets with equivalent structural capacity may be furnished. Sealed engineering calculations and drawings shall be submitted for approval prior to construction.

When approved by the Engineer, opening configurations of equivalent hydraulic design may be furnished.

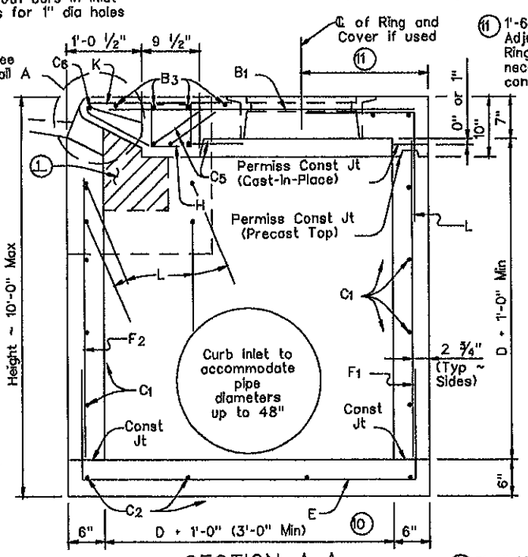
Shop drawings will not be required.

In areas of conflict between reinforcing steel, blockouts, pipes, anchor bolts or other reinforcing steel, the reinforcement shall be bent or adjusted to clear as directed by the Engineer.

Ring and cover shall conform to the requirements of AASHTO M306, "Standard Specification for Drainage Structure Castings". Materials shall conform to ASTM A48, Class 35B for gray iron castings or ASTM A536, Grade 65-45-12 for ductile iron castings. Aluminum alloy castings shall not be permitted.



ELEVATION

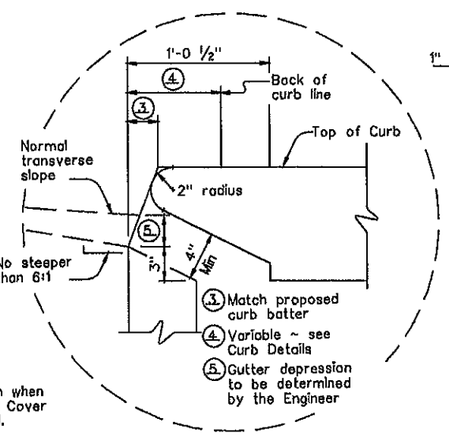


SECTION A-A

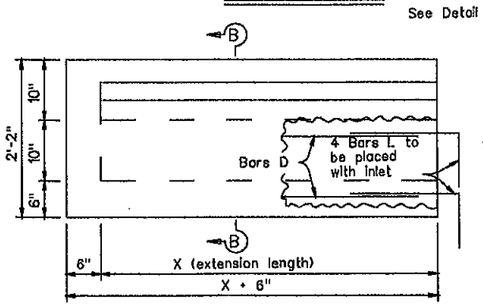
11 1'-6" Min, 1'-9" Max. Adjust placement of Ring and Cover as necessary to avoid conflict with Bars H.

10 3'-6" Min when Ring and Cover are used.

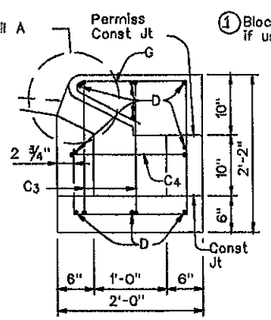
1 Block out to accommodate extension if used and to place 4 Bars L



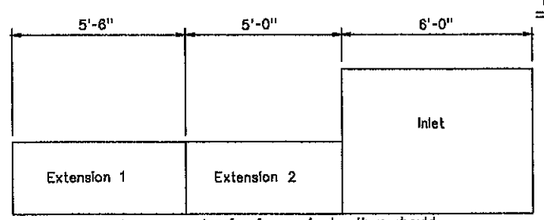
DETAIL A



EXTENSION ELEVATION



SECTION B-B



Note: If more than one extension is required, they should all be located on one side as indicated above. No slope is required in flowline of extension.

EXTENSION PLACEMENT

EXTENSION QUANTITIES

Ext	"X"	Cl "A" Conc	Reinf Steel
No.	Ft	CY	Lb
1	5	0.7	104
2	10	1.2	190
3	15	1.8	277
4	20	2.4	366

FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6302
1004 HILLSIDE RD.
LARDEO, TX. 78041

TANQUECITOS PHASE I AND II

TX-DOT STANDARD - IL-C
CURB INLET TYPE C
WITH EXTENSION TYPE E
WEBB COUNTY, TEXAS

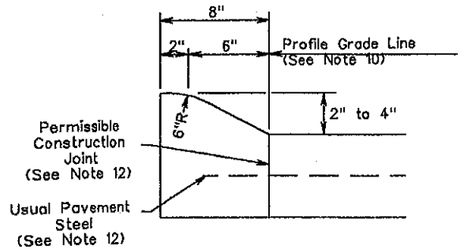
Texas Department of Transportation
Bridge Division

CURB INLET TYPE C AND EXTENSION TYPE E (5'-0" INLET)

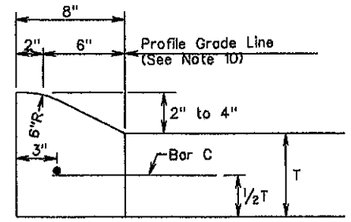
IL-C

DRAWN BY: T.P.O.	
CHECKED BY: W.L.O.	
DRAWN DATE: 09-22-11	
PLOTTED DATE: 09-28-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: PRELIMINARY	
AS-BUILT: NO	
REVISED DATE:	
SCALE: (24"x36") SHEET	HOR: 1"=40' VER. 1"=5'
SCALE: (11"x17") SHEET	HOR: 1"=80' VER. 1"=10'
SHEET 78.2 OF TOTAL 90	

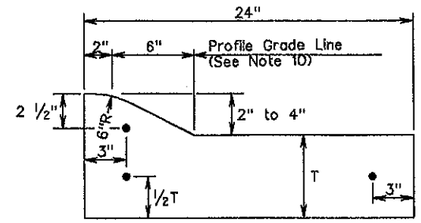
FILE: 8-cstde.dgn	DN: TxDOT	CK: TER	DW: MCB	CK: TER/OAF
©TxDOT May 2005	DISTRICT	FEDERAL AID PROJECT		SHEET
REVISIONS				
COUNTY	CONTROL	SECT	JOB	HIGHWAY



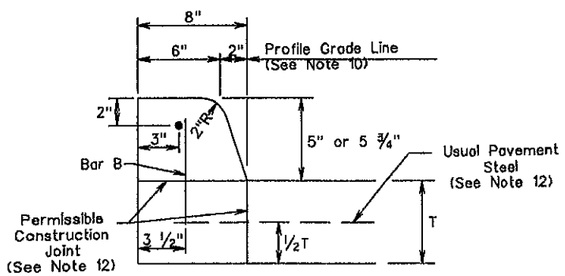
TYPE I CURB (MONOLITHIC)
2" - 4" HEIGHT



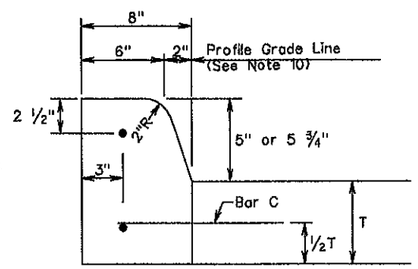
TYPE I CURB
2" - 4" HEIGHT



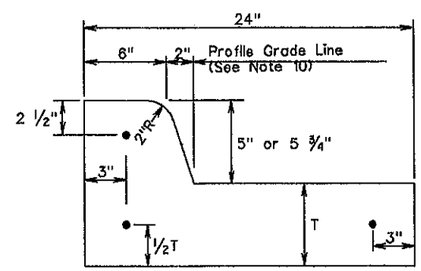
TYPE I CURB AND GUTTER
2" - 4" HEIGHT



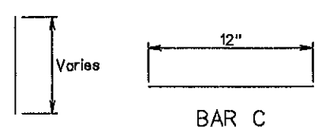
TYPE II CURB (MONOLITHIC)
5" - 5 3/4" HEIGHT



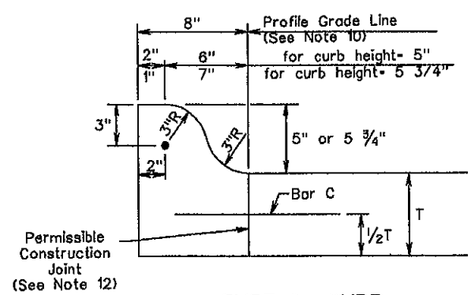
TYPE II CURB
5" - 5 3/4" HEIGHT



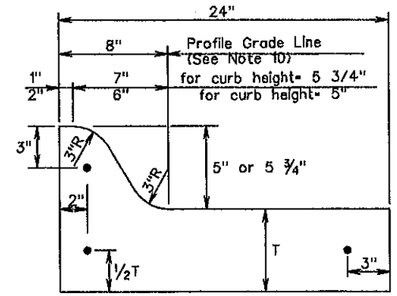
TYPE II CURB AND GUTTER
5" - 5 3/4" HEIGHT



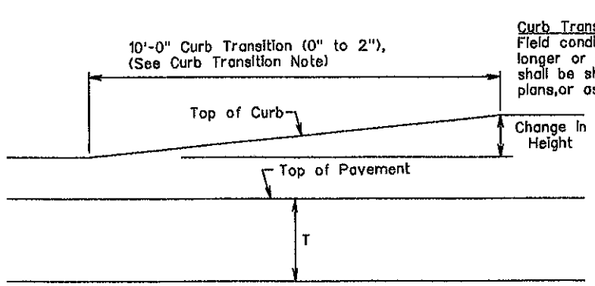
BAR B BAR C



TYPE IIa CURB
5" - 5 3/4" HEIGHT

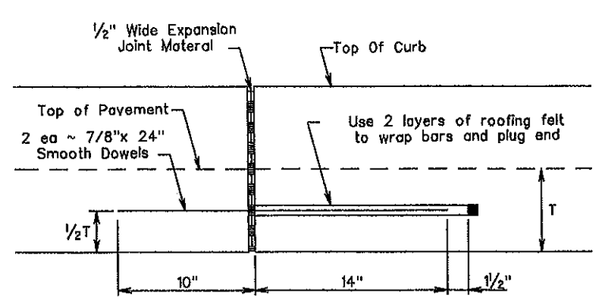


TYPE IIa CURB AND GUTTER
5" - 5 3/4" HEIGHT



Curb Transition Note:
Field conditions may require a longer or shorter transition, and shall be shown elsewhere in the plans,or as directed by the Engineer.

CURB TRANSITION
Note: To be paid for as Highest Curb



EXPANSION JOINT DETAIL

General Notes

1. All materials and construction shall be in accordance with Item 529, "Concrete Curb, Gutter, and Combined Curb and Gutter."
2. Concrete shall be Class A.
3. When reinforcing bars are used, they shall be No.4 unless otherwise shown. The use of synthetic fiber in lieu of steel reinforcing is acceptable, provided the fiber producer is on the Department Producer List (MPL), maintained by TxDOT, Construction Division.
4. Round exposed sharp edges with a rounding tool, to a minimum radius of 1/4 inch.
5. All existing curbs and driveways to be removed shall be sawed or removed at existing joints.
6. Where concrete curb is placed on existing concrete pavement, the pavement shall be drilled and the reinforcing bars grouted in place.
7. Expansion and contraction joints shall be constructed to match pavement joints in all curbs and curb and gutter adjacent to jointed concrete pavement. Where placement of curb or curb and gutter is not adjacent to concrete pavement, expansion joints shall be provided at structures, curb returns at streets, and at locations directed by The Engineer.
8. Vertical and horizontal dowel bars and transverse reinforcing bars shall be placed at four feet C~C.

FOSTER ENGINEERING COMPANY
PH. (956) 723-3451
FAX (956) 723-6302
1004 HILLSIDE RD.
LAREDO, TX. 78041

TANQUECITOS PHASE I AND II

TX-DOT STANDARD - IL-C
CURB INLET TYPE C AND
EXTENSION TYPE E
WEBB COUNTY, TEXAS

Texas Department of Transportation
Design Division Standard

CONCRETE CURB AND
CURB AND GUTTER

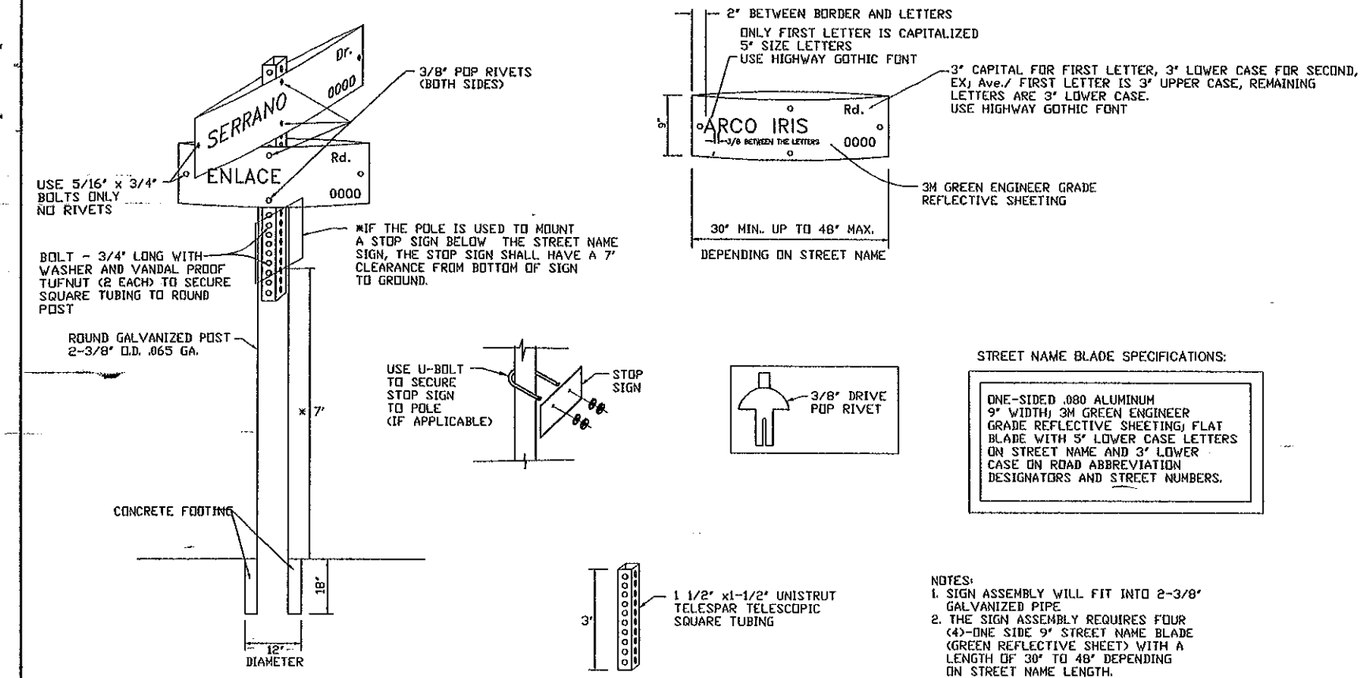
CCCG-10A

FILE: cccg10a.dgn	DN: TxDOT	CK: AM	DW: BD	CK:
©TxDOT 1995	CONT	SECT	JOB	HIGHWAY
REVISIONS	DIST		COUNTY	SHEET NO.

DRAWN BY: T.P.O.
CHECKED BY: W.L.O.
DRAWN DATE: 09-22-11
PLOTTED DATE: 09-28-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: PRELIMINARY
AS-BUILT: NO
REVISED DATE:

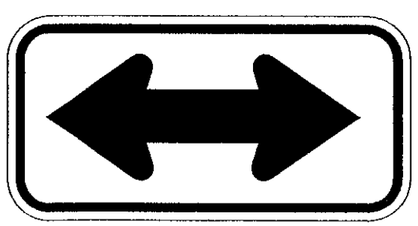
SCALE: (24"x36") SHEET
HOR: 1"=40' VER. 1"=5'
SCALE: (11"x17") SHEET
HOR: 1"=80' VER. 1"=10'

SHEET 78.3 OF TOTAL 90



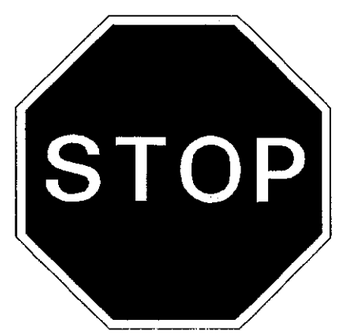
TYPICAL INSTALLATION OF STREET NAME SIGNS

N.T.S.



W1-2R
24"x12"

W1-2R
30"x30"



R1 - 1
24"x24"

W 14-2
24"x24"

NOTE:

ALL SIGNS TO MEET THE STANDARDS AS PER THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. (TEXAS MUTCD)

PROJECT STREET SIGNS

N.T.S.

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER
03/07/11
REVIEWED AND REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERD FIRM F-9266

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Sta. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TYPICAL STREET SIGN DETAILS
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.
CHECKED BY: F.L.O.
DRAWN DATE:
PLOTTED DATE: 03-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 00-03-10
SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR: N/A VER. N/A

SIGN SUPPORT DESCRIPTIVE CODES

(Descriptive Codes correspond to project estimate and quantities sheets)

SM RD SGN ASSM TY XXXXX(X)XX(X-XXXX)

Post Type

FRP = Fiberglass Reinforced Plastic Pipe (see SMD(FRP))
TWT = Thin-Walled Tubing (see SMD(TWT))
10BWG = 10 BWG Tubing (see SMD(SLIP-1) to (SLIP-3))
S80 = Schedule 80 Pipe (see SMD(SLIP-1) to (SLIP-3))

Number of Posts (1 or 2)

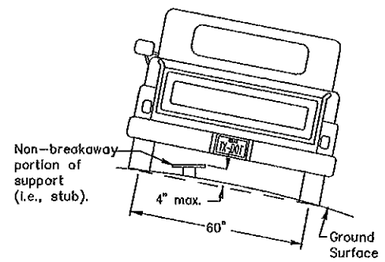
Anchor Type

UA = Universal Anchor -- Concreted (see SMD(FRP) and (TWT))
UB = Universal Anchor – Bolted down (see SMD(FRP) and (TWT))
WS = Wedge Anchor Steel – (see SMD(TWT))
WP = Wedge Anchor Plastic (see SMD(TWT))
SA = Slipbase – Concreted (see SMD(SLIP-1) to (SLIP-3))
SB = Slipbase – Bolted Down (see SMD(SLIP-1) to (SLIP-3))

Sign Mounting Designation

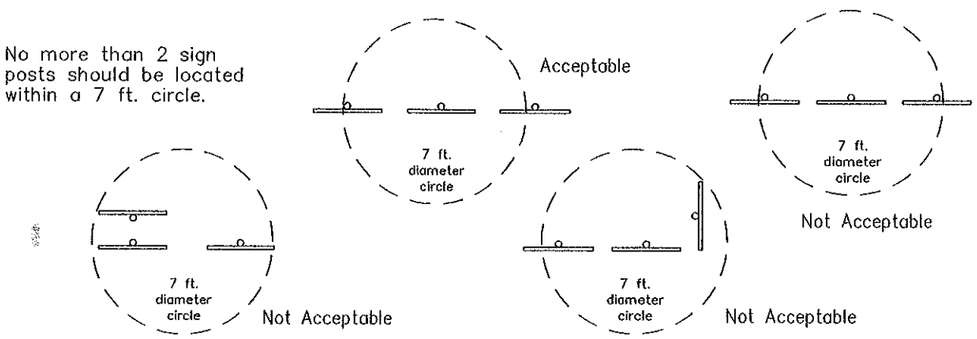
P = Prefab. "Plain" (see SMD(SLIP-1) to (SLIP-3), (TWT), (FRP))
T = Prefab. "T" (see SMD(SLIP-1) to (SLIP-3), (TWT))
U = Prefab. "U" (see SMD(SLIP-1) to (SLIP-3))
IF REQUIRED
1EXT or 2EXT = Number of Extensions (see SMD(SLIP-1) to (SLIP-3), (TWT))
BM = Extruded Wind Beam (see SMD(SLIP-1) to (SLIP-3))
WC = 1.12 #/ft Wing Channel (see SMD(SLIP-1) to (SLIP-3))
EXAL = Extruded Aluminum Sign Panels (see SMD(SLIP-3))

REQUIRED CLEARANCE FOR BREAKAWAY SUPPORT



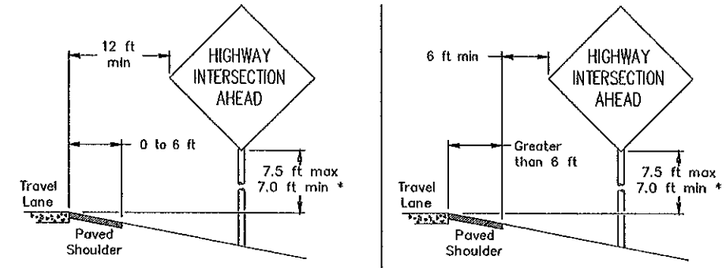
To avoid vehicle undercarriage snagging, any substantial remains of a breakaway support, when it is broken away, should not project more than 4 inches above a 60-inch chord (i.e., typical space between wheel paths).

No more than 2 sign posts should be located within a 7 ft. circle.



SIGN LOCATION

PAVED SHOULDERS



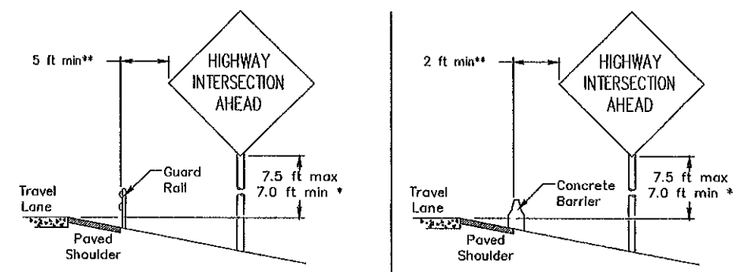
LESS THAN 6 FT. WIDE

When the shoulder is 6 ft. or less in width, the sign must be placed at least 12 ft. from the edge of the travel lane.

GREATER THAN 6 FT. WIDE

When the shoulder is greater than 6 ft in width, the sign must be placed at least 6 ft. from the edge of the shoulder.

BEHIND BARRIER

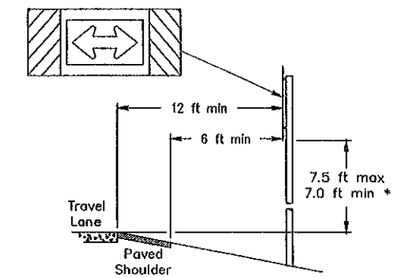


BEHIND GUARDRAIL

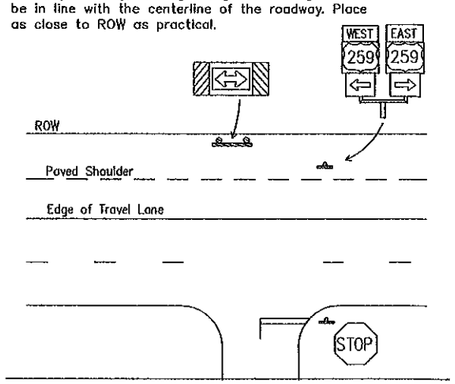
BEHIND CONCRETE BARRIER

**Sign clearance based on distance required for proper guard rail or concrete barrier performance.

T-INTERSECTION



When this sign is needed at the end of a two-lane, two way roadway, the right edge of the sign should be in line with the centerline of the roadway. Place as close to ROW as practical.



* Signs shall be mounted using the following condition that results in the greatest sign elevation:

(1) a minimum of 7 to a maximum of 7.5 feet above the edge of the travel lane or

(2) a minimum of 7 to a maximum of 7.5 feet above the grade at the base of the support when sign is installed on the backslope.

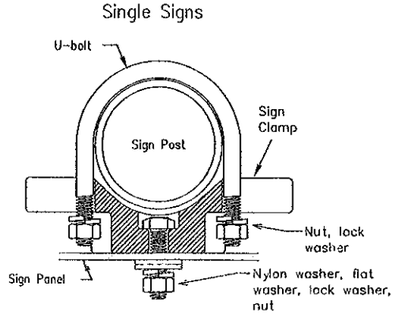
The maximum values may be increased when directed by the Engineer.

See the Traffic Operations Division website for detailed drawings of sign clamps, Triangular Slipbase System components and Wedge Anchor System components.

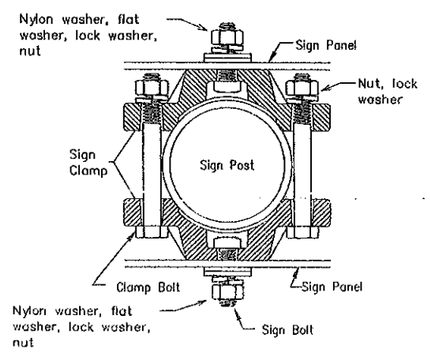
The website address is:
http://www.txdot.gov/publications/traffic.htm

TYPICAL SIGN ATTACHMENT DETAIL

Single Signs



Back-to-Back Signs



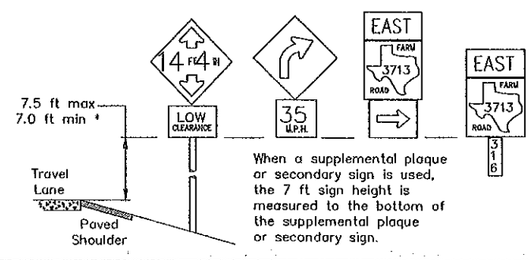
Bolts used to mount sign panels to the clamp are 5/16-18 UNC galvanized square head with nut, nylon washer, flat washer and lock washer. The bolt length is 1 inch for aluminum.

When two sign clamps are used to mount signs back-to-back, use a 5/16-18 UNC galvanized hex head per ASTM A307 with nut and helical-spring lock washer. The approximate bolt lengths for various post sizes and sign clamp types are given in the table at right. The bolt length may need to be adjusted depending upon field conditions.

Sign clamps may be either the specific size clamp or the universal clamp.

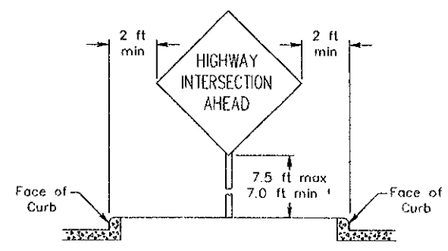
Pipe Diameter	Approximate Bolt Length	
	Specific Clamp	Universal Clamp
2" nominal	3"	3 or 3 1/2"
2 1/2" nominal	3 or 3 1/2"	3 1/2 or 4"
3" nominal	3 1/2 or 4"	4 1/2"

SIGNS WITH PLAQUES



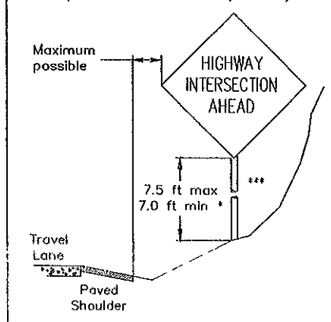
When a supplemental plaque or secondary sign is used, the 7 ft sign height is measured to the bottom of the supplemental plaque or secondary sign.

CURB & GUTTER OR RAISED ISLAND



RESTRICTED RIGHT-OF-WAY

(When 6 ft min. is not possible.)



Right-of-way restrictions may be created by rocks, water, vegetation, forest, buildings, a narrow island, or other factors.

In situations where a lateral restriction prevents the minimum horizontal clearance from the edge of the travel lane, signs should be placed as far from the travel lane as practical.

*** Post may be shorter if protected by guardrail or if Engineer determines the post could not be hit due to extreme slope.

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-5056
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II

TX-DOT STANDARD SMD(GEN) - 08
SIGN MOUNTING DETAILS,
GEN. NOTES, SM. RD. SIGNS & DETAILS
WEBB COUNTY, TEXAS

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
GENERAL NOTES & DETAILS

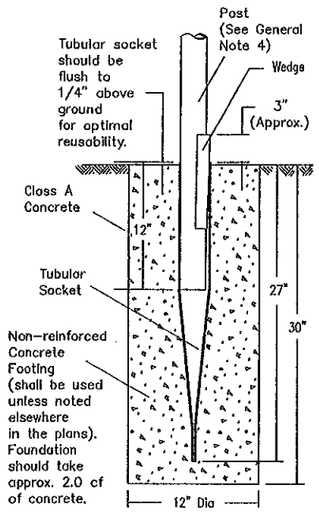
SMD(GEN)-08

DRAWN BY: T.P.O.	
CHECKED BY: E.L.O.	
DRAWN DATE:	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: N/A	VER. N/A
SCALE: (11"x17") SHEET	
HOR: N/A	VER. N/A
SHEET 79.2	TOTAL: 90

©TxDOT July 2002

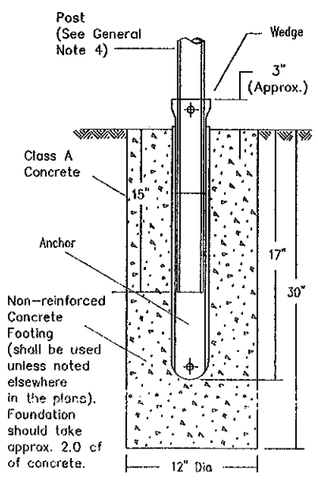
9-08 REVISIONS	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT	
	CONT	SECT	JOB	HIGHWAY	
26A	DIST		COUNTY	SHEET NO.	

Wedge Anchor Steel System



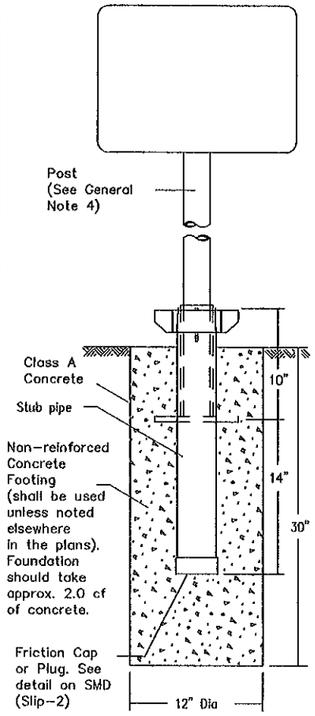
SM RD SGN ASSM TY TWT(X)WS(X)

Wedge Anchor High Density Polyethylene (HDPE) System

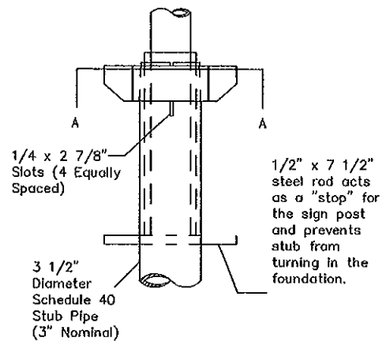


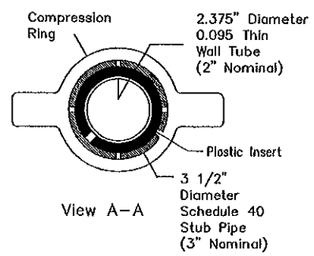
SMD RD SGN ASSM TY TWT(X)WP(X)

Universal Anchor System with Thin-Walled Tubing Post

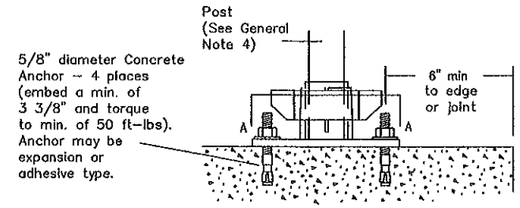


SM RD SGN ASSM TY TWT(X)UA(P)

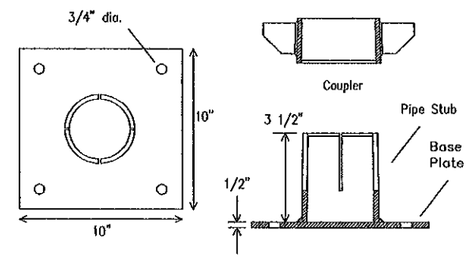




Plastic insert must be used when using the TWT with either the Universal Anchor System or the Bolt Down Universal Anchor System. The insert should be approx. 10" long and cover the tubing from just above the top of the stub pipe to the bottom of the sign post when using the Universal Anchor System. The insert should be cut to approx. 4 1/2" when used with the Bolt Down Universal Anchor System.

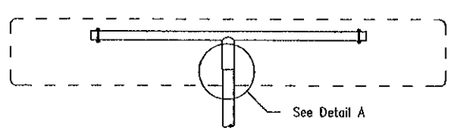


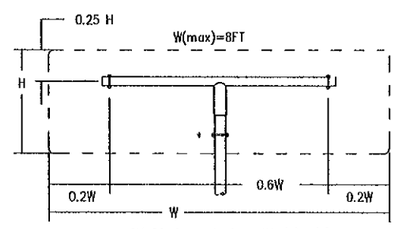
Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. A heavy hex nut per ASTM A563 and hardened washer per ASTM F436. The stud bolt shall have minimum yield and ultimate tensile strengths of 50 and 75 ksi, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Top of bolt shall extend at least flush with top of nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 3 3/8" minimum embedment, shall have a minimum allowable tension and shear of 2450 and 1525 psi, respectively. Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "Epoxies and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time per the manufacturer's recommendations.



SM RD SGN ASSM TY TWT(X)UB(P)

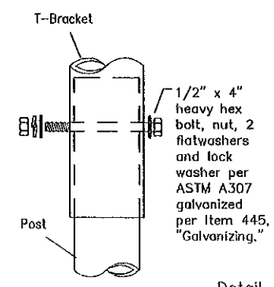
Sign Installation Using a Prefabricated T-Bracket for Thin-Wall Tubing Post





SM RD SGN ASSM TY TWT(X)XX(T)

(* - See General Note 6)



9/16" hole may need to be drilled through post to accommodate bolt.

Detail A

NOTE

The devices shall be installed per manufacturer's recommendations. Installation procedures shall be provided to the Engineer by Contractor.

GENERAL NOTES:

1. The Wedge Anchor System and the Universal Anchor System with thin wall tubing post may be used to support up to 10 square feet of sign area.
2. The tubular socket, wedge and prefabricated T-bracket shall be permanently marked to indicate manufacturer. Method, design, and location of marking are subject to the approval of the TxDOT Traffic Standards Engineer.
3. Except for posts (13 BWG Tubing), clamps, nuts and bolts, all components shall be prequalified. A list of prequalified vendors may be obtained from the Material Producer List web page. The website address is: http://www.txdot.gov/business/producer list.htm
4. Material used as post with this system shall conform to the following specifications:
   13 BWG Tubing (2.375" outside diameter) (TWT)
   - 0.095" nominal wall thickness
   - Seamless or electric-resistance welded steel tubing
   - Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
   - Other steels may be used if they meet the following:
     - 55,000 PSI minimum yield strength
     - 70,000 PSI minimum tensile strength
     - 18% minimum elongation in 2"
   - Wall thickness (uncoated) shall be within the range of .083" to .099"
   - Outside diameter (uncoated) shall be within the range of 2.369" to 2.381"
   - Galvanization per ASTM 123 or ASTM A653 G210. For precoated steel tubing (ASTM A653), recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.
5. Sign blanks shall be the sizes and shapes shown on the plans.
6. Additional sign clamp required on the "T-bracket" post for 24" high signs. Place clamp at least 3" above bottom of sign when possible.
7. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
8. See the Traffic Operations Division website for detailed drawings of sign clamps and Wedge Anchor System components. The website address is: http://www.txdot.gov/publications/traffic.htm

WEDGE ANCHOR SYSTEM INSTALLATION PROCEDURE

1. Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
2. The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Place concrete into hole until it is approximately flush with the ground. Concrete shall be Class A.
3. Insert tubular socket into concrete until top of socket is approximately 1/4 " above the concrete footing.
4. Plumb the socket. Allow a minimum 4 days for concrete to set, unless otherwise directed by Engineer..
5. Attach the sign to the sign post.
6. Insert the sign post into socket and align sign face with roadway.
7. Drive the wedge into the socket to secure post. This will leave approximately 3 inches of the wedge exposed.

UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURE

1. Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
2. Insert base post in hole to depths shown and backfill hole with concrete.
3. Level and plumb the base post using a torpedo level and allow concrete adequate time to set. The bottom of the slots provided in the stub pipe shall remain above the top of the concrete foundation.
4. Attach the sign to the sign post.
5. Install plastic insert around bottom of post.
6. Insert sign post into base post. Lower until the post comes to rest on steel rod.
7. Seat compression ring using a hammer. Typically, the top of compression ring will be approximately level with top of stub post when optimally installed.
8. Check sign post by hand to ensure it is unable to turn. If loose, increase the tightening of the compression ring.

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II

TX-DOT STANDARD SMD(TWT) - 08

SIGN MOUNTING DETAILS

WEBB COUNTY, TEXAS

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
WEDGE & UNIVERSAL ANCHOR
WITH THIN WALL TUBING POST

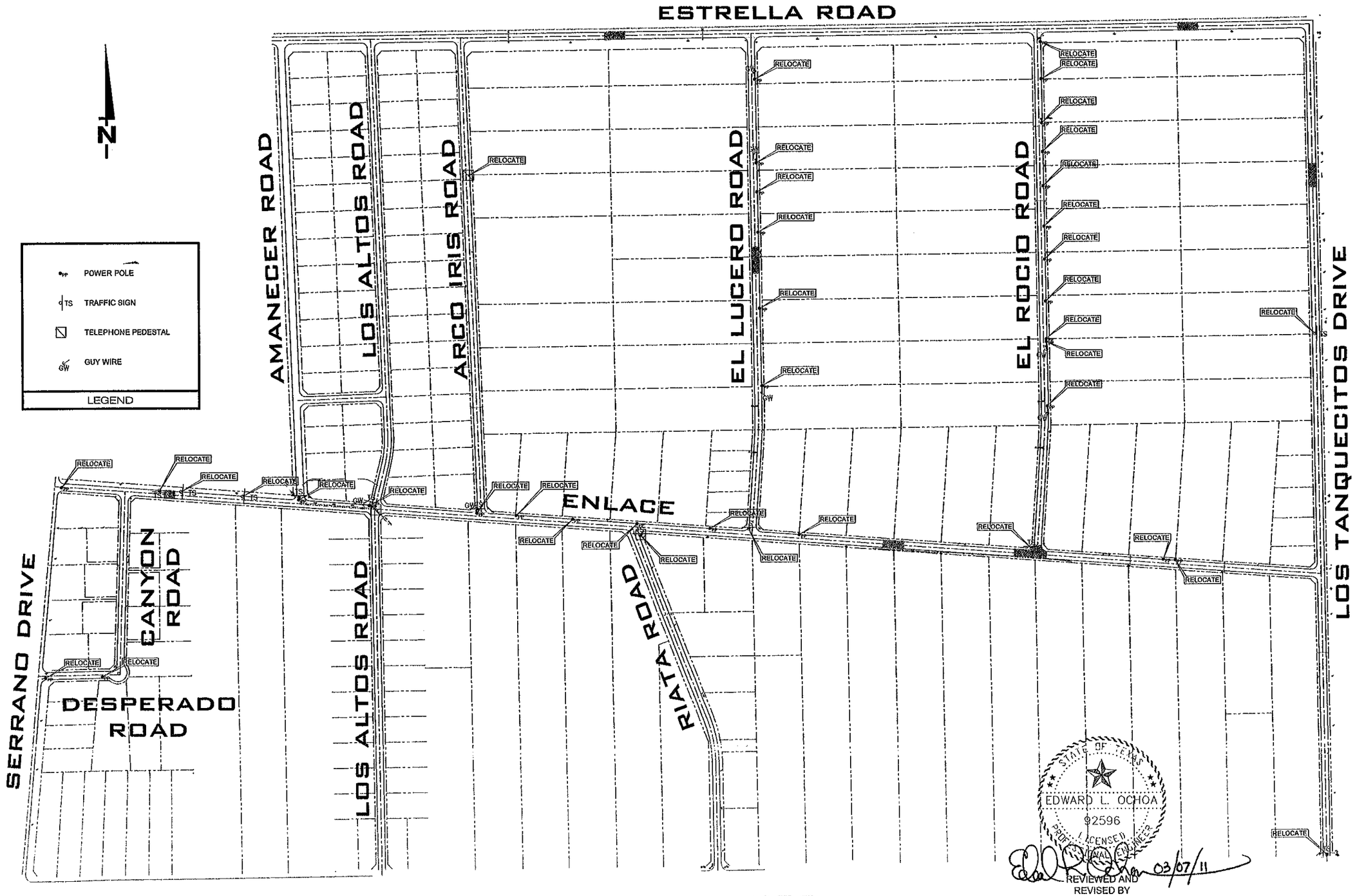
SMD(TWT)-08

July 2002	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
REVISIONS	CONT	SECT	JOB	HIGHWAY
9-08	DIST		COUNTY	SHEET NO.
26E				

DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR:N/A VER. N/A

SHEET 79.3 OF TOTAL 90



STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

03/07/11

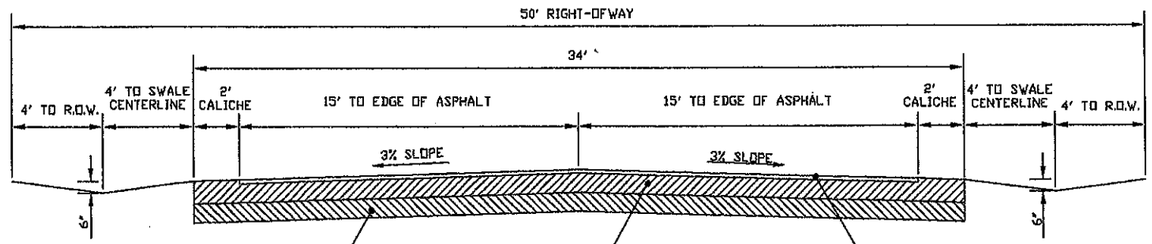
REVIEWED AND
REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERD FIRM F-9266

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II

UTILITIES RELOCATION
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.	
CHECKED BY: E.L.O.	
DRAWN DATE:	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: N/A	VER. N/A
SCALE: (11"x17") SHEET	
HOR: N/A	VER. N/A
SHEET 80	OF TOTAL: 90



ALL SUB GRADE SHALL BE SCARIFIED 8" AND COMPACTED TO A 95% PROCTOR DENSITY TEX. 113-E WHERE FILL IS REQUIRED. (SEE NOTE @ RIGHT)

8" CALICHE BASE COMPACTED TO 98% PROCTOR DENSITY IN ACCORDANCE WITH TEX. 113-E

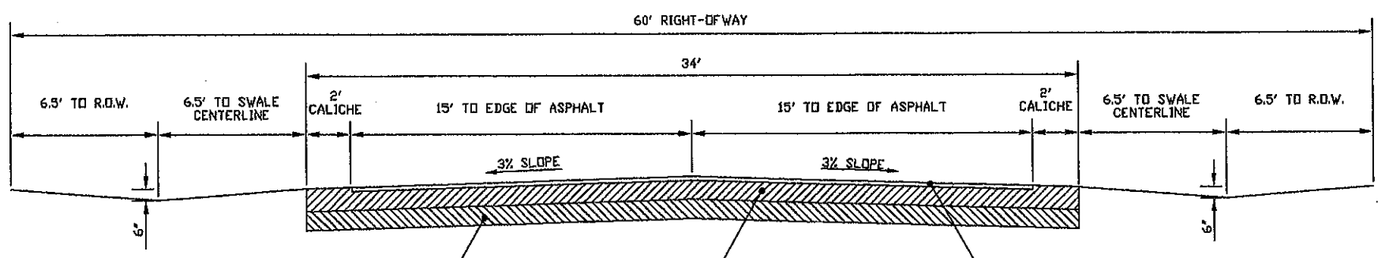
1 ½" HOT MIX ASPHALT PAVEMENT-TYPE D PER TxDOT ITEM 340

NOTE: OPTIMUM MOISTURE REQUIREMENT RELATED TO THE PROCTOR DENSITY, TESTING SHALL BE ALLOWED PLUS OR MINUS 2% POINTS FROM THE OPTIMUM MOISTURE SPECIFIED FOR THE MATERIAL

NOTE FOR FILL AREA: FILL FOR PAVEMENT SECTION SHALL BE DONE IN 6" LIFTS AND COMPACTED TO A 95% PROCTOR DENSITY TEX. 113-E WITH MATERIAL FROM THE PROJECT AREAS. IF MATERIAL FROM OUTSIDE THE PROJECT IS REQUIRED, IT SHALL BE SPECIFIED TO HAVE MIN. 4 AND MAX. P.I. OF 18.

TYPICAL 50' WIDE RIGHT-OF-WAY SECTION

N.T.S.



ALL SUB GRADE SHALL BE SCARIFIED 8" AND COMPACTED TO A 95% PROCTOR DENSITY TEX. 113-E WHERE FILL IS REQUIRED. (SEE NOTE @ RIGHT)

8" CALICHE BASE COMPACTED TO 98% PROCTOR DENSITY IN ACCORDANCE WITH TEX. 113-E

1 ½" HOT MIX ASPHALT PAVEMENT-TYPE D PER TxDOT ITEM 340

NOTE: OPTIMUM MOISTURE REQUIREMENT RELATED TO THE PROCTOR DENSITY, TESTING SHALL BE ALLOWED PLUS OR MINUS 2% POINTS FROM THE OPTIMUM MOISTURE SPECIFIED FOR THE MATERIAL

NOTE FOR FILL AREA: FILL FOR PAVEMENT SECTION SHALL BE DONE IN 6" LIFTS AND COMPACTED TO A 95% PROCTOR DENSITY TEX. 113-E WITH MATERIAL FROM THE PROJECT AREA. IF MATERIAL FROM OUTSIDE THE PROJECT IS REQUIRED, IT SHALL BE SPECIFIED TO HAVE MIN. 4 AND MAX. P.I. OF 18.

TYPICAL 60' WIDE RIGHT-OF-WAY SECTION

N.T.S.

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

REVIEWED AND REVISED BY GILPIN ENGINEERING CO.

TEXAS REGISTERD FIRM F-9266

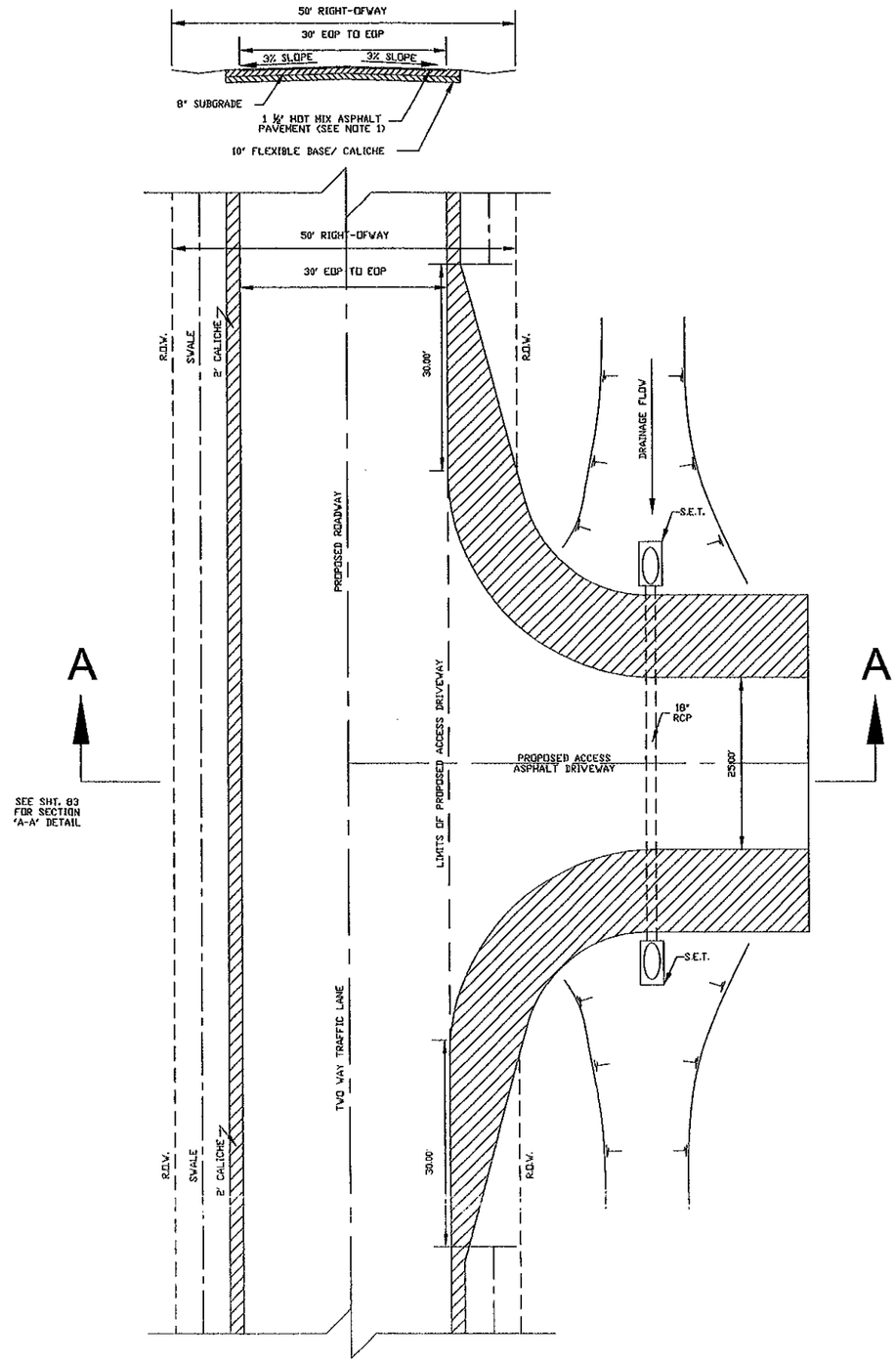
10/05/2011

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2240
Fax (956) 753-2243

TANQUECITOS PHASE I AND II

50' AND 60' RIGHT-OF-WAY SECTIONS
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.	
CHECKED BY: E.L.O.	
DRAWN DATE:	
PLOTTED DATE: 10-05-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-22-11	
SCALE: (24"x36") SHEET	
HOR: N/A	VER. N/A
SCALE: (11"x17") SHEET	
HOR: N/A	VER. N/A
SHEET 81	OF TOTAL: 90



TYPICAL 30' ASPHALT PAVEMENT ROAD
w/ ACCESS ROAD DRIVEWAY w/ DRAINAGE
N.T.S.

NOTES- ASPHALT PAVEMENT SECTION

1. 1 ½" HOT MIX ASPHALT PAVEMENT- TYPE D PER TxDOT ITEM 340

2. OPTIMUM MOISTURE: (REQUIREMENT RELATED TO THE PROCTOR DENSITY) TESTING SHALL BE ALLOWED PLUS OR MINUS 2% POINTS FROM THE OPTIMUM MOISTURE SPECIFIED FOR THE MATERIAL

3. FILL AREA: FILL FOR PAVEMENT SECTION SHALL BE DONE IN 6" LIFTS AND COMPACTED TO A 95% PROCTOR DENSITY TEX. 113-E WITH, MATERIAL FROM THE PROJECT AERA. IF MATERIAL FROM OUTSIDE THE PROJECT IS REQUIRED, IT SHALL BE SPECIFIED TO HAVE MIN. 4 AND MAX. P.I. OF 18.

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER
03/07/11

REVIEWED AND
REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERD FIRM F-9266

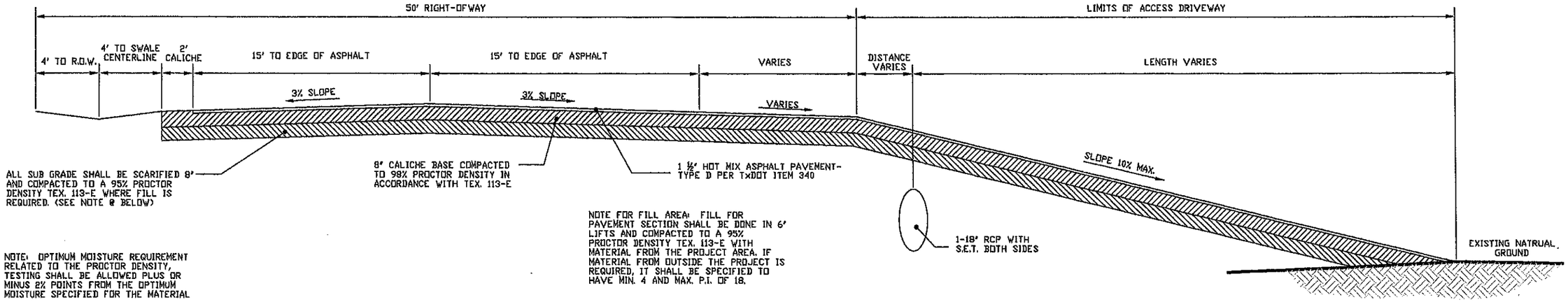
GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II

PLAN VIEW OF ACCESS DRWY.
WEBB COUNTY, TEXAS

25' ACCESS ASPHALT DRIVEWAY DETAIL

DRAWN BY: T.P.O.	
CHECKED BY: F.I.O	
DRAWN DATE:	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: N/A	VER. N/A
SCALE: (11"x17") SHEET	
HOR: N/A	VER. N/A
SHEET 82 OF	TOTAL: 90



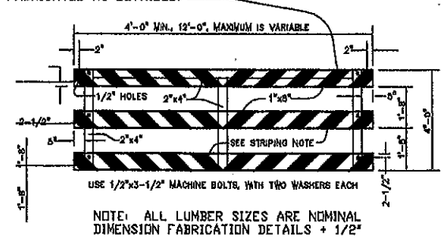
NOTE: OPTIMUM MOISTURE REQUIREMENT RELATED TO THE PROCTOR DENSITY, TESTING SHALL BE ALLOWED PLUS OR MINUS 2% POINTS FROM THE OPTIMUM MOISTURE SPECIFIED FOR THE MATERIAL

TYPICAL ASPHALT ROAD PAVEMENT SECTION "A-A"

N.T.S.

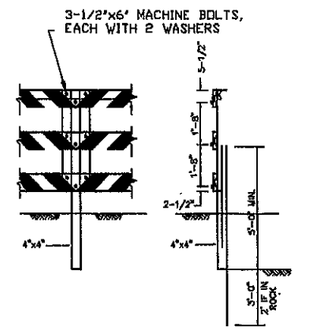
PANEL FOR TYPE III BARRICADE

WHEN WOOD BARRICADES ARE USED AND WHEN RED AND WHITE STRIPES ARE REQUIRED ON THE BACKSIDE, A 2"x 8" RAIL MAY BE USED IN LIEU OF THE 1"x 8" RAIL AND 2"x 4" STIFFENER. OTHERWISE THE RAIL SHOULD BE FABRICATED AS DETAILED.



NOTE: ALL LUMBER SIZES ARE NOMINAL DIMENSION FABRICATION DETAILS + 1/2"

POST FOR TYPE III BARRICADE



STRIPING FOR BARRICADE

BARRICADE NOTES

CHANNELIZING DEVICES OTHER THAN BARRICADES SHOULD NORMALLY BE USED FOR CHANNELIZATION PURPOSES.

BARRICADES SHOULD NORMALLY BE PLACED PERPENDICULAR TO THE TRAFFIC FLOW. OTHER CHANNELIZING DEVICES, SUCH AS DRUMS, VERTICAL PANELS OR PORTABLE BARRIERS, SHOULD BE USED WHERE NEEDED TO SEPARATE TRAFFIC FROM THE WORK AREA. IN ALL CASES, THE BARRICADES SHOULD BE SO LOCATED AS TO MOST ADVANTAGEOUSLY WARN AND DIRECT TRAFFIC.

BARRICADES MAY BE DESIGNED AND CONSTRUCTED FROM WOOD, PVC PIPE OR ANY OTHER SUITABLE MATERIAL IN A MANNER APPROVED BY THE ENGINEER. THE CONSTRUCTION DETAILS DETAILS SHOWN HEREON ARE TYPICAL AND ARE SUGGESTED DETAILS FOR WOOD AND PVC PIPE SUPPORT SYSTEMS FOR BARRICADES. THE DETAILS OF RAIL WIDTH AND STRIPING, NUMBER AND SPACING OF RAILS, MINIMUM LENGTH AND HEIGHT (ABOVE PAVEMENT) OF RAILS MUST BE ADHERED TO WHEN ALTERNATE DESIGNS ARE USED.

BARRICADES ARE TO BE CONSTRUCTED IN A FIRST-CLASS WORKMANSHIP MANNER OF CLEAN SOUND MATERIAL. ALL SURFACES ABOVE GROUND, WHICH ARE NOT STRIPED, SHALL BE WHITE EXCEPT THE UNPAVED GALVANIZED METAL OR ALUMINUM COMPONENTS MAY BE USED. COMPONENTS MADE OF LUMBER SHALL BE PAINTED WITH A MINIMUM OF TWO COATS OF AN APPROVED BRAND OF WHITE PAINT TO SECURE THOROUGH AND A UNIFORM WHITE COLOR.

THE CONTRACTOR SHALL MAINTAIN EACH BARRICADE IN A CLEAN AND GOOD CONDITION.

BARRICADES SHALL BE REMOVED UPON COMPLETION OF THE WORK AND/OR THE ELIMINATION OF THE HAZARD ON ANY SECTION.

WHERE A BARRICADE EXTENDS ENTIRELY ACROSS A ROADWAY, IT IS DESIRABLE THAT THE STRIPES SLOPE UPWARD TOWARDS THE DIRECTION WHICH TRAFFIC MUST TURN IN DETOURING. WHEN BOTH RIGHT AND LEFT TURNS ARE PROVIDED FOR, THE CHEVRON STRIPING MAY SLOPE DOWNWARD IN BOTH DIRECTIONS FROM THE CENTER OF THE BARRICADE.

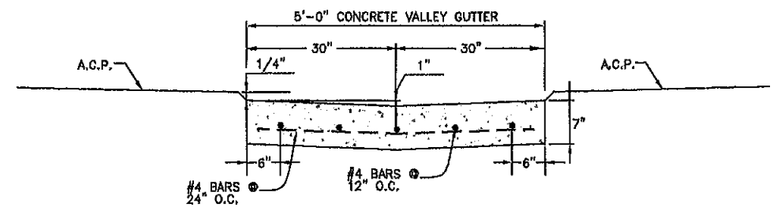
STRIPING SHOULD COVER THE FULL WIDTH OF THE RAIL. STRIPING OF RAILS, PANELS AND GATES FOR THE RIGHT SIDE OF THE ROADWAY IS SHOWN ABOVE. FOR THE SIDE OF THE ROADWAY, STRIPING SHOULD SLOPE UPWARD TO THE LEFT.

FOR ALL TYPES OF BARRICADES WITH RAILS LESS THAN 3'-0" LONG STRIPES 4" WIDE SHALL BE USED.
THE 8" RAIL WIDTH IS A NORMAL DIMENSION FOR RAILS MADE OF LUMBER.

IDENTIFICATION MARKINGS MAY BE SHOWN ONLY ON BACK SIDE OF BARRICADE RAILS.

BARRICADE DETAILS AND NOTES

N.T.S.



DETAIL OF 5' CONCRETE VALLEY GUTTER

N.T.S.

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

REVIEWED AND REVISED BY GILPIN ENGINEERING CO.

TEXAS REGISTERD FIRM F-9266

09/28/2011

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II

PAVING DETAILS
WEBB COUNTY, TEXAS

ACCESS DRIVEWAY SECTION AND PAVING DETAILS

DRAWN BY: T.P.O.	
CHECKED BY: E.L.O.	
DRAWN DATE:	
PLOTTED DATE: 10-06-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-28-10	
SCALE: (24"x36") SHEET	
HOR: N/A	VER. N/A
SCALE: (11"x17") SHEET	
HOR: N/A	VER. N/A
SHEET 83	OF TOTAL 90

INTENTIONNALLY LEFT BLANK

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-6266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II

WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.
CHECKED BY: E.I.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

SCALE: (24"x36") SHEET
HOR: N/A | VER. N/A
SCALE: (11"x17") SHEET
HOR: N/A | VER. N/A

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

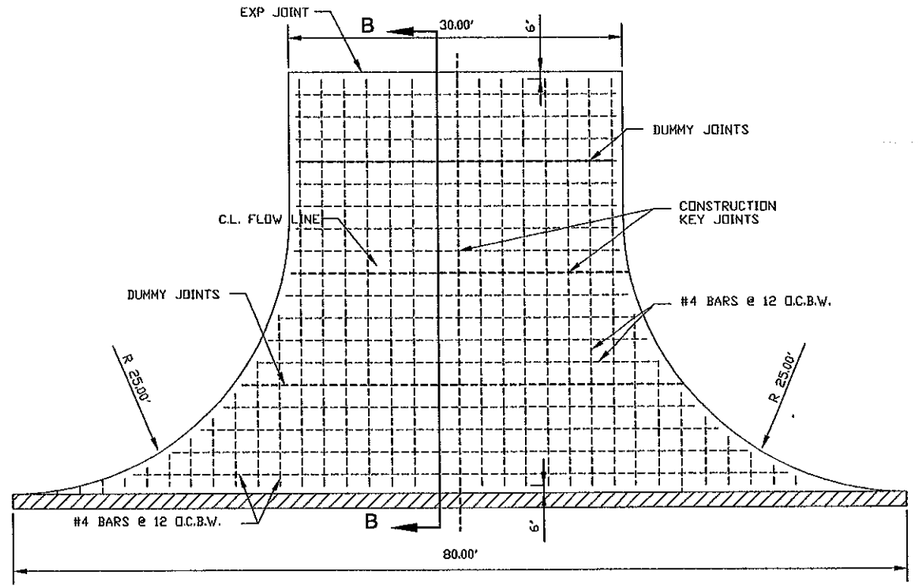
TANQUECITOS PHASE I AND II

WEBB COUNTY, TEXAS

INTENTIONNALLY LEFT BLANK

DRAWN BY: T.P.O.
CHECKED BY: E.J.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

SCALE: (24"x36") SHEET
HOR: N/A | VER. N/A
SCALE: (11"x17") SHEET
HOR: N/A | VER. N/A

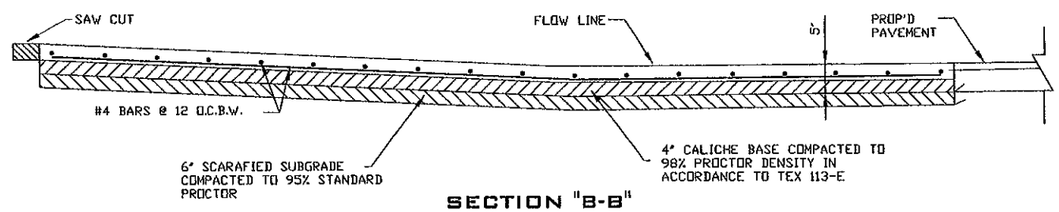


TANQUECITOS CONCRETE DRIVEWAY

(TO BE CONSTRUCTED MONOLITHYCALLY
AFTER FLEXIBLE BASE IS IN PLACE)
N.T.S.

NOTE:

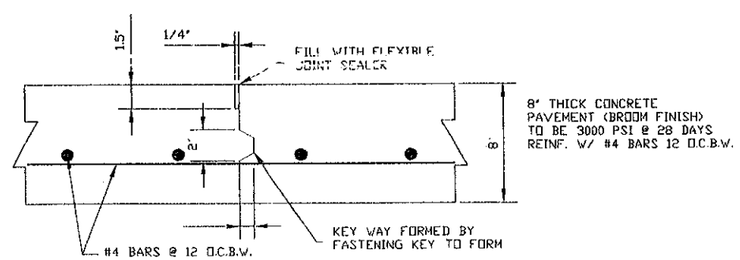
CONTRACTOR TO SAW CUT REMOVE AND DISPOSE OF 80.00 L.F. OF 1 FT. SIDE STRIP OF ASPHALT PVM'T. (REFER TO PLAN VIEW FOR ACTUAL CONFIGUARATION)



SECTION "B-B"

DETAIL OF CONCRETE DRIVEWAY

N.T.S.



CONSTRUCTION/ KEY JOINT

N.T.S.

STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

03/07/11

REVIEWED AND
REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERD FIRM F-9266

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II

WEBB COUNTY, TEXAS

CONCRETE DRIVEWAY DETAILS

DRAWN BY: T.P.O.	
CHECKED BY: E.L.O.	
DRAWN DATE:	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: N/A	VER. N/A
SCALE: (11"x17") SHEET	
HOR:N/A	VER. N/A
SHEET 86	OF TOTAL: 90

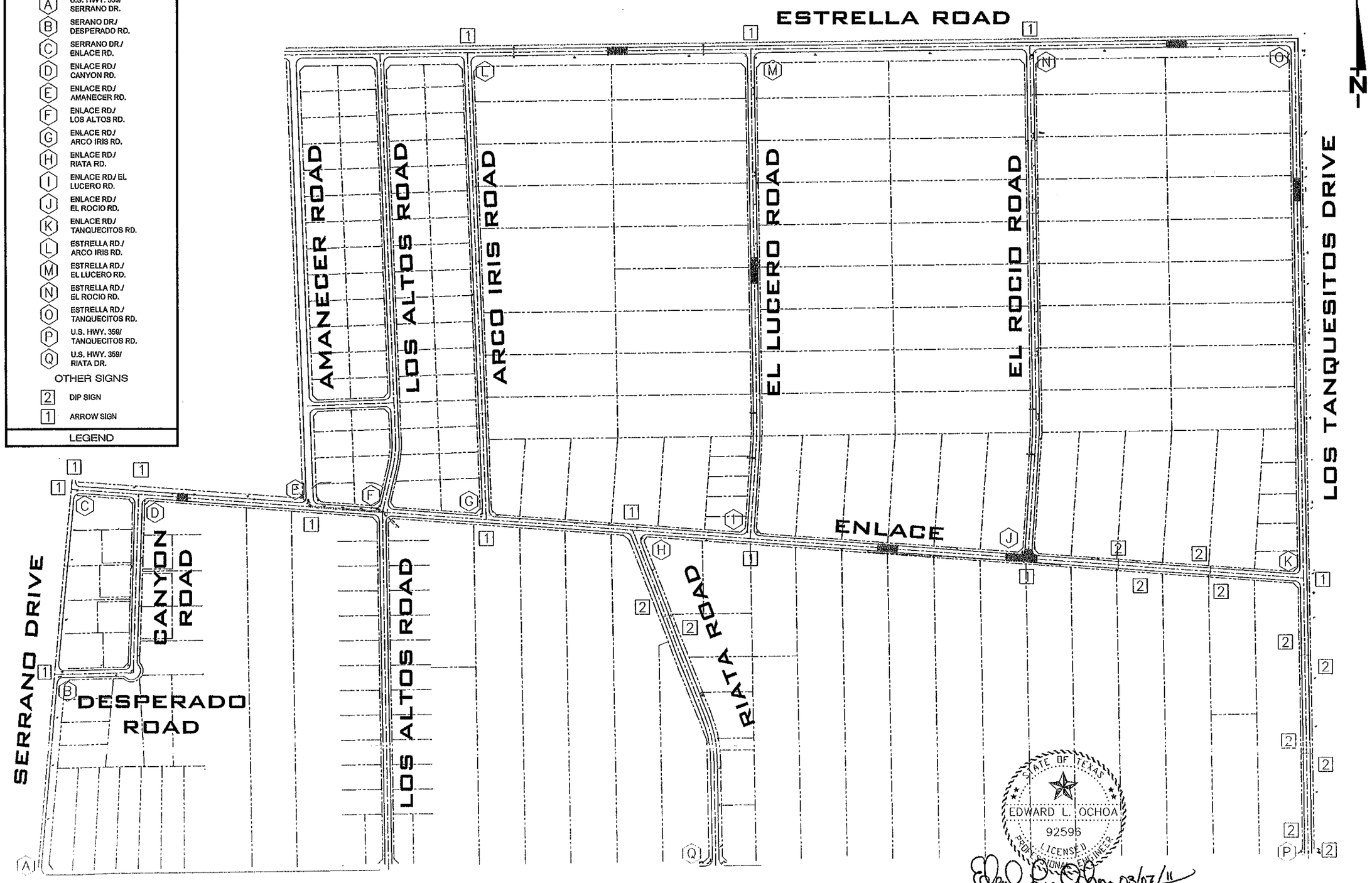
STOP SIGN w/ ST. NAMES

- (A) U.S. HWY. 359/ SERRANO DR.
- (B) SERANO DR./ DESPERADO RD.
- (C) SERRANO DR./ ENLACE RD.
- (D) ENLACE RD./ CANYON RD.
- (E) ENLACE RD./ AMANECER RD.
- (F) ENLACE RD./ LOS ALTOS RD.
- (G) ENLACE RD./ ARCO IRIS RD.
- (H) ENLACE RD./ RIATA RD.
- (I) ENLACE RD./ EL LUCERO RD.
- (J) ENLACE RD./ EL ROCIO RD.
- (K) ENLACE RD./ TANQUECITOS RD.
- (L) ESTRELLA RD./ ARCO IRIS RD.
- (M) ESTRELLA RD./ EL LUCERO RD.
- (N) ESTRELLA RD./ EL ROCIO RD.
- (O) ESTRELLA RD./ TANQUECITOS RD.
- (P) U.S. HWY. 359/ TANQUECITOS RD.
- (Q) U.S. HWY. 359/ RIATA DR.

OTHER SIGNS

- [2] DIP SIGN
- [1] ARROW SIGN

LEGEND



STATE OF TEXAS
EDWARD L. OCHOA
92596
LICENSED
PROFESSIONAL ENGINEER

03/07/11

REVIEWED AND
REVISED BY
GILPIN ENGINEERING CO.
TEXAS REGISTERD FIRM F-9266

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II

STREET SIGNAGE PLAN
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.	
CHECKED BY: E.L.O.	
DRAWN DATE:	
PLOTTED DATE: 09-03-10	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 95%	
AS-BUILT: NO	
REVISED DATE: 09-03-10	
SCALE: (24"x36") SHEET	
HOR: N/A	VER. N/A
SCALE: (11"x17") SHEET	
HOR: N/A	VER. N/A
SHEET 87	TOTAL: OF 90

Barricade and Construction (BC) Standard Sheets General Notes:

1. The Barricade and Construction Standard Sheets (BC sheets) are intended to show typical examples for placement of temporary traffic control devices, construction pavement markings, and typical work zone signs. The information contained in these sheets meet or exceed the requirements shown in the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
2. The development and design of the Traffic Control Plan (TCP) is the responsibility of the Engineer.
3. The Contractor may propose changes to the TCP that are signed and sealed by a licensed professional engineer for approval. The Engineer may develop, sign and seal Contractor proposed changes.
4. The Contractor is responsible for installing and maintaining the traffic control devices as shown in the plans. The Contractor may not move or change the approximate location of any device without the approval of the Engineer.
5. Geometric design of lane shifts and detours should, when possible, meet the applicable design criteria contained in manuals such as the American Association of State Highway and Transportation Officials (AASHTO), "A Policy on Geometric Design of Highways and Streets", the TxDOT "Roadway Design Manual" or engineering judgment.
6. When projects abut, the Engineer(s) may omit the END ROAD WORK, TRAFFIC FINES DOUBLE, and other advance warning signs if the signing would be redundant and the work areas appear continuous to the motorists. If the adjacent project is completed first, the Contractor shall erect the necessary warning signs as shown on these sheets, the TCP sheets or as directed by the Engineer. The BEGIN ROAD WORK NEXT X MILES sign shall be revised to show appropriate work zone distance.
7. The Engineer may require duplicate warning signs on the median side of divided highways where median width will permit and traffic volumes justify the signing.
8. All signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition. Sign details not shown in this manual shall be shown in the plans or the Engineer shall provide a detail to the Contractor before the sign is manufactured.
9. The temporary traffic control devices shown in the illustrations of the BC sheets are examples. As necessary, the Engineer will determine the most appropriate traffic control devices to be used.
10. As shown on BC(2), the OBEY WARNING SIGNS STATE LAW sign and the WORK ZONE TRAFFIC FINES DOUBLE sign with plaque shall be erected in advance of the CSJ limits. The BEGIN ROAD WORK NEXT X MILES, CONTRACTOR and END ROAD WORK signs shall be erected at or near the CSJ limits.
11. Except for devices required by Note 10, traffic control devices should be in place only while work is actually in progress or a definite need exists.
12. The Engineer has the final decision on the location of all traffic control devices.
13. Inactive equipment and work vehicles, including workers' private vehicles must be parked away from travel lanes. They should be as close to the right-of-way line as possible, or located behind a barrier or guardrail, or as approved by the Engineer.

Worker Safety Apparel Notes:

1. Workers on foot who are exposed to traffic or to construction equipment within the right-of-way shall wear high-visibility safety apparel meeting the requirements of ISEA "American National Standard for High-Visibility Apparel" labeled as ANSI 107-2004 standard performance for Class 2 or 3 risk exposure. Class 3 garments should be considered for high traffic volume work areas or night time work.

Only pre-qualified products shall be used. The "Compliant Work Zone Traffic Control Devices List" (CWZTCD) describes prequalified products and their sources and may be found on-line at the web address given below or by contacting:

Texas Department of Transportation
Traffic Operations Division - TE
Phone (512) 416-3134

WEB ADDRESSES FOR REFERENCED DOCUMENTS

Compliant Work Zone Traffic Control Devices List (CWZTCD)
http://www.txdot.gov/publications/traffic.htm

Texas Manual on Uniform Traffic Control Devices (TMUTCD)
http://www.txdot.gov/publications/traffic.htm

Standard Highway Sign Designs for Texas (SHSD)
http://www.txdot.gov/publications/traffic.htm

Traffic Engineering Standard Sheets
http://www.txdot.gov/business/disclaim.htm

Material Producer List
http://www.txdot.gov/business/producer*list.htm

Departmental Material Specifications (DMS)
http://www.txdot.gov/services/construction/material*specifications/

Roadway Design Manual
http://www.txdot.gov/services/general*services/manuals.htm

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-5266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD - BC (1)-07
BARRICADE AND CONSTRUCTION
WEBB COUNTY, TEXAS

Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION
GENERAL NOTES
AND REQUIREMENTS

1 of 12 BC(1)-07

©TxDOT 11-4-02

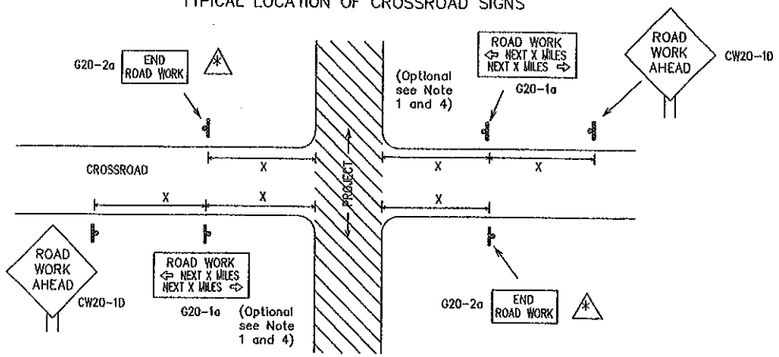
REVISIONS	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
4-03	CONT	SECT	JOB	HIGHWAY
9-07	DIST		COUNTY	SHEET NO.

DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

SCALE: (24"x36") SHEET
HOR: N/A VER: N/A
SCALE: (11"x17") SHEET
HOR:N/A VER: N/A

SHEET 88.1 OF TOTAL 90

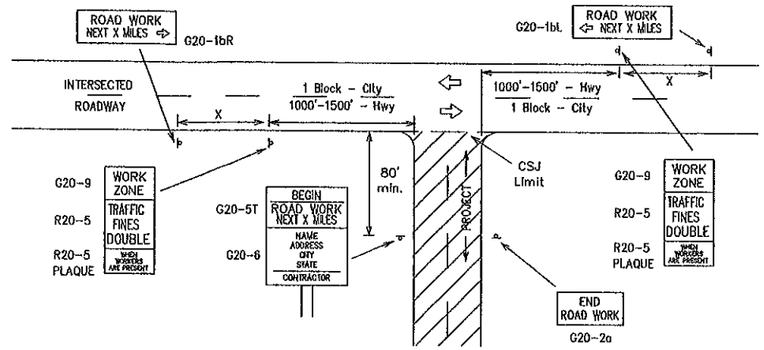
TYPICAL LOCATION OF CROSSROAD SIGNS



✱ May be mounted on back of CW20-1D sign with approval of engineer. (See note 2 below)

1. The typical minimum signing on a crossroad approach should be a CW20-1D ROAD WORK AHEAD sign and a G20-2a END ROAD WORK sign,unless noted otherwise in plans.
2. The Engineer may use the reduced size 36" x 36" ROAD WORK AHEAD (CW20-1D) sign mounted back to back with the reduced size 36" x 18" END ROAD WORK (G20-2a) sign on low volume crossroads (see Note 4 under "Typical Construction Warning Sign Size and Spacing"). See the "Standard Highway Sign Designs for Texas" manual for sign details. The Engineer may omit the advance warning signs on low volume crossroads. The Engineer will determine whether a road is low volume. This information shall be shown in the plans.
3. Based on existing field conditions, the Engineer/Inspector may require additional signs such as FLAGGER AHEAD, LOOSE GRAVEL, or other appropriate signs. When additional signs are required, these signs will be considered part of the minimum requirements. The Engineer/Inspector will determine the proper location and spacing of any sign not shown on the BC sheets, Traffic Control Plan sheets or the Work Zone Standard Sheets.
4. The G20-1a sign shall be required at high volume crossroads to advise motorists of the length of construction in either direction from the intersection. The Engineer will determine whether a roadway is considered high volume.
5. Additional traffic control devices may be shown elsewhere in the plans for higher volume crossroads.
6. When work occurs in the intersection area, appropriate traffic control devices, as shown elsewhere in the plans or as determined by the Engineer/Inspector, shall be in place.

T-INTERSECTION



CSJ LIMITS AT T-INTERSECTION

1. The Engineer will determine the types and location of any additional traffic control devices, such as a flagger and accompanying signs, or other signs, that should be used when work is being performed at or near an intersection.
2. If construction closes the road at a T-intersection the Contractor shall place the G20-6 "Contractor Name" sign behind the Type III Barricades for the road closure (see BC(10) also). The G20-1bL and G20-1bR signs shall be replaced by the detour signing called for in the plans.

TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING 1,5,6

SIZE

Sign Number or Series	Conventional Road	Expressway/ Freeway
CW20 4, CW21, CW22, CW23, CW25	48" x 48"	48" x 48"
CW1, CW2, CW7, CW8, CW9, CW11, CW14	36" x 36"	48" x 48"
CW3, CW4, CW5, CW6, CW8-3, CW10, CW12	48" x 48"	48" x 48"

SPACING

Posted Speed	Sign Spacing "X" Δ
MPH	Feet (Apprx.)
30	120
35	160
40	240
45	320
50	400
55	500 2
60	600 2
65	700 2
70	800 2
75	900 2
80	1000 2
*	* 3

* For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.

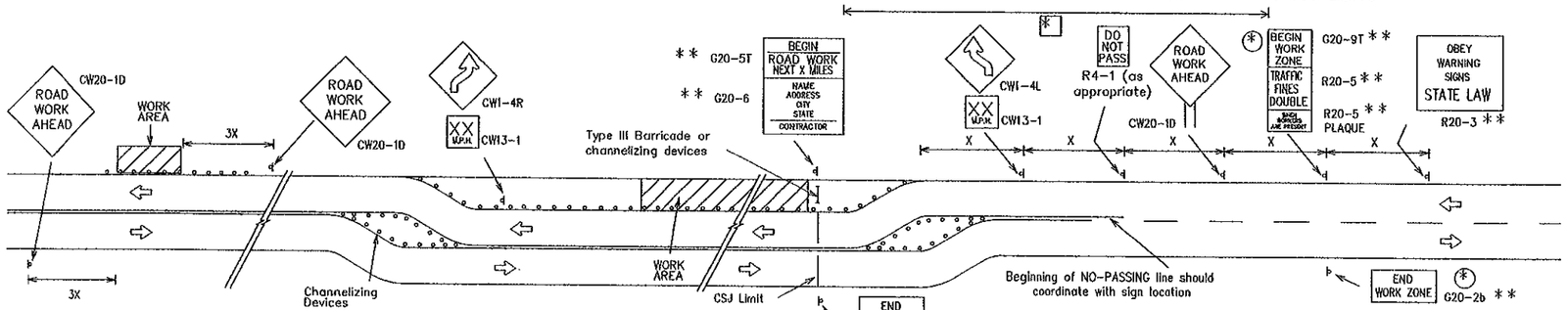
Δ Minimum distance from work area to first Advance Warning sign nearest the work area and/or distance between each additional sign.

General Notes:

1. Special or larger size signs may be used as necessary.
2. Distance between signs should be increased as required to have 1500 feet advance warning.
3. Distance between signs should be increased as required to have 2 mile or more advance warning.
4. 36" x 36" ROAD WORK AHEAD (CW20-1D) signs may be used on low volume crossroads at the discretion of the Engineer. See Note 2 under "Typical Location of Crossroad Signs".
5. Only diamond shaped warning sign sizes are indicated.
6. See sign size listing in "TMUTCD", Sign Appendix or the "Standard Highway Sign Designs for Texas" manual for complete list of available sign design sizes.

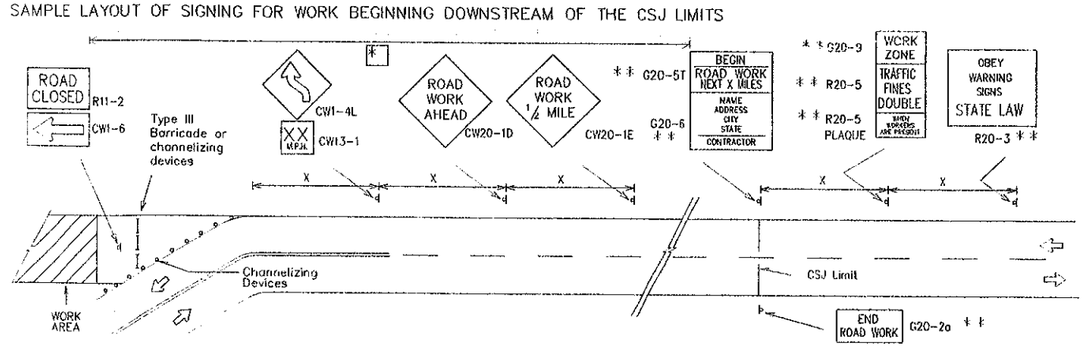
WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING AT THE CSJ LIMITS



When extended distances occur between minimal work areas, the Engineer/Inspector should ensure additional Road Work Ahead (CW20-1D) signs are placed in advance of these work areas to remind drivers they are still within the project limits. See the applicable TCP sheets for exact location and spacing of signs and channelizing devices.

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING DOWNSTREAM OF THE CSJ LIMITS



NOTES

The Contractor shall determine the appropriate distance to be placed on the G20-1 series signs and G20-5T sign for each specific project. This distance shall replace the "X" and shall be rounded to the nearest whole mile with the approval of the Engineer. No decimals shall be used.

✱ The G20-9T and G20-2b shall be used when advance signs are required outside the CSJ Limits. They inform the motorist of entering or leaving a work zone where traffic fines may double if workers are present.

** Required CSJ Limit signing. See Note 10 on BC(1).

Area for placement of "ROAD WORK AHEAD" sign and other signs or devices as called for on the Traffic Control Plan.

LEGEND

- Sign
- Channelizing Devices
- Type III Barricade
- X See Typical Construction Warning Sign Size and Spacing chart or the TMUTCD for sign spacing requirements.

R20-3
Legend/Border -- Black
Background -- White

Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION PROJECT LIMIT STANDARD

2 of 12 BC(2)-07

©TxDOT 11-4-02 REVISIONS 9-07

DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
CONT	SECT	JOB	HIGHWAY
DIST	COUNTY		SHEET NO.

SHEET 88.2 OF TOTAL 90

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-5266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD - BC (2)-07
BARRICADE AND CONSTRUCTION
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

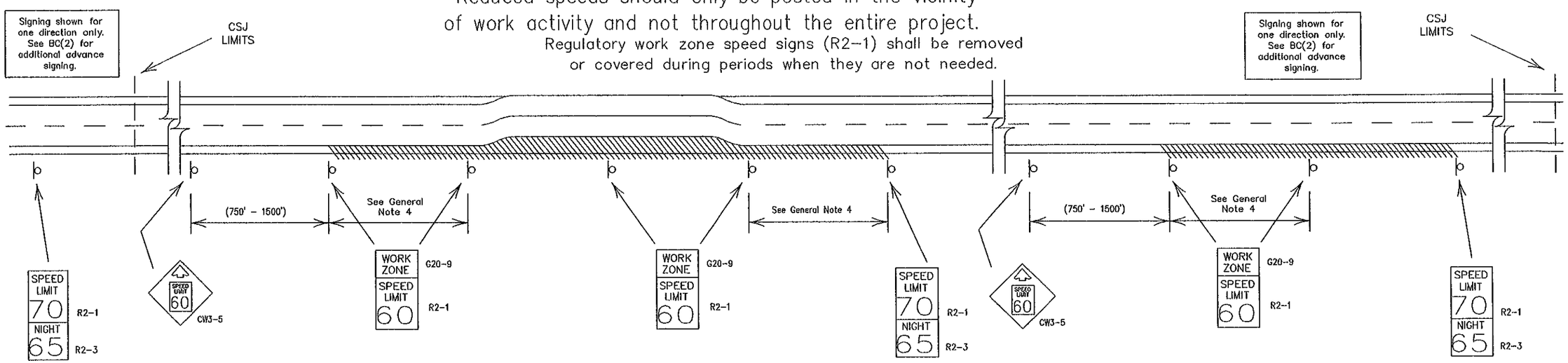
SCALE: (24"x36") SHEET HOR: N/A VER. N/A
SCALE: (11"x17") SHEET HOR: N/A VER. N/A

TYPICAL APPLICATION OF WORK ZONE SPEED LIMIT SIGNS

Work zone speed limits shall be regulatory, established in accordance with the "Procedures for Establishing Speed Zones," and approved by the Texas Transportation Commission, or by City Ordinance when within Incorporated City Limits.

Reduced speeds should only be posted in the vicinity of work activity and not throughout the entire project.

Regulatory work zone speed signs (R2-1) shall be removed or covered during periods when they are not needed.



GUIDANCE FOR USE:

LONG/INTERMEDIATE TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit should be included on the design of the traffic control plans when restricted geometrics with a lower design speed are present in the work zone and modification of the geometrics to a higher design speed is not feasible.

Long/Intermediate Term Work Zone Speed Limit signs, when approved as described above, should be posted and visible to the motorist when work activity is present. Work activity may also be defined as a change in the roadway that requires a reduced speed for motorists to safely negotiate the work area, including:

a) rough road or damaged pavement surface
b) substantial alteration of roadway geometrics (diversions)
c) construction detours
d) grade
e) width
f) other conditions readily apparent to the driver

As long as any of these conditions exist, the work zone speed limit signs should remain in place.

SHORT TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit should be included on the design of the traffic control plans when workers or equipment are not behind concrete barrier, when work activity is within 15 feet of pavement edge or actually on the pavement.

Short Term Work Zone Speed Limit signs should be posted and visible to the motorists only when work activity is present. When work activity is not present, signs shall be removed or covered.
(See Removing or Covering on BC(4)).

GENERAL NOTES:

1. Regulatory work zone speed limits should be used only for sections of construction projects where speed control is of major importance.
2. Regulatory work zone speed limit signs shall be placed on supports at a 7 foot minimum mounting height.
3. Speed zone signs are illustrated for one direction of travel and are normally posted for each direction of travel.
4. Frequency of work zone speed limit signs should be:
   40 mph and greater 0.2 to 2 miles
   35 mph and less 0.2 to 1 mile
5. Regulatory speed limit signs shall have black legend and border on a white reflective background (See "Reflective Sheeting" on BC(4)).
6. Fabrication, errection and maintenance of the CW3-5 sign, G20-9 plaque and the R2-1 and R2-3 signs shall not be paid for directly, but shall be considered subsidiary to Item 502.
7. Turning signs from view, laying signs over or down will not be allowed, unless otherwise noted.
8. Techniques that may help reduce traffic speeds include but are not limited to:
   A. Law enforcement.
   B. Flagger stationed next to sign.
   C. Portable changeable message sign (PCMS).
   D. Low-power (drone) radar transmitter.
   E. Speed monitor trailers or signs.
9. Speeds shown on details above are for illustration only.
   Work Zone Speed Limits should only be posted as approved for each project.

Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION WORK ZONE SPEED LIMIT STANDARD

3 of 12 BC(3)-07

©TxDOT 11-4-02

9-07 REVISIONS	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
	CONT	SECT	JOB	HIGHWAY
	DIST		COUNTY	SHEET NO.

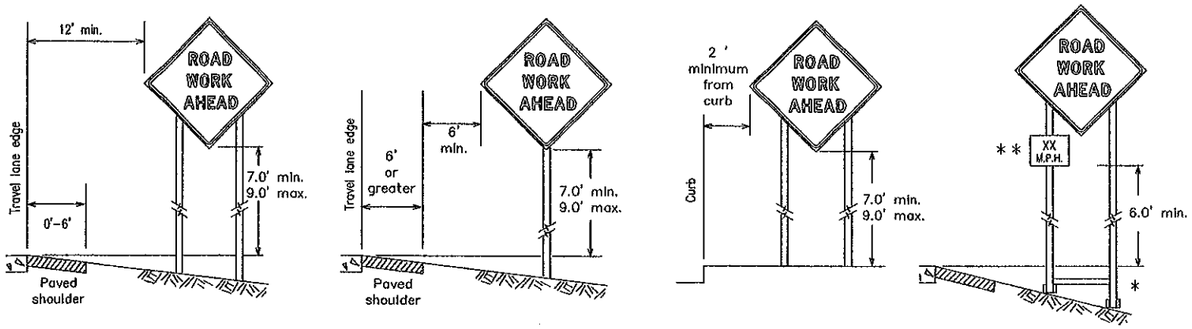
GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD - BC (3)-07
BARRICADE AND CONSTRUCTION
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR: N/A VER. N/A

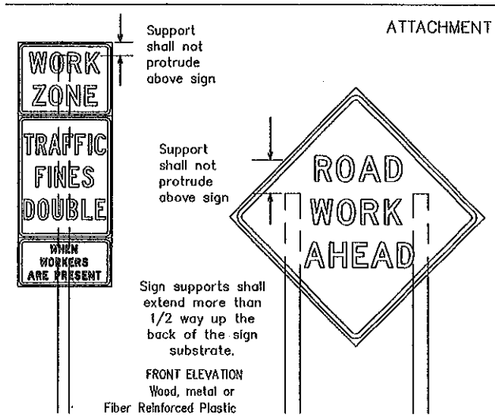
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS



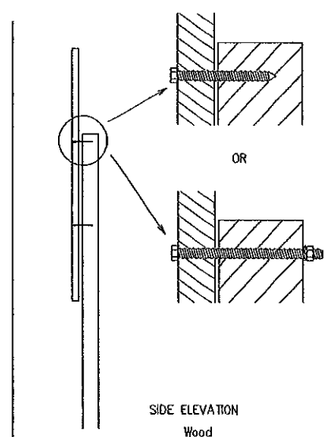
* When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

** When plaques are placed on dual-leg supports, they should be attached to the upright nearest the travel lane. Supplemental plaques (advisory or distance) should not cover the surface of the parent sign.

ATTACHMENT FOR SIGN SUPPORTS



Splicing embedded perforated square metal tubing in order to extend post height will only be allowed when the splice is made using four bolts, two above and two below the splice point. Splice must be located entirely behind the sign substrate, not near the base of the support. Splice insert lengths should be at least 5 times nominal post size, centered on the splice and of at least the same guage material.



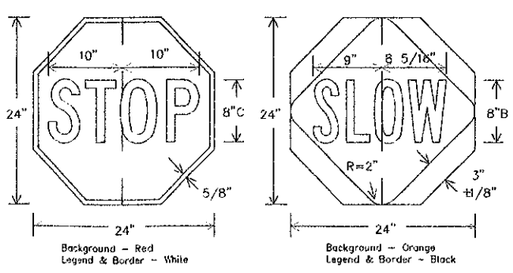
Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports

Nails will NOT be allowed.

Each sign shall be attached directly to the sign support. Multiple signs shall not be joined or spliced by any means. Wood supports shall not be extended or repaired by splicing or other means.

STOP/SLOW PADDLES

1. STOP/SLOW paddles are the primary method to control traffic by flaggers. The STOP/SLOW paddle size should be 24" x 24" as detailed below.
2. When used at night, the STOP/SLOW paddle shall be retroreflectorized.
3. STOP/SLOW paddles may be attached to a staff with a minimum length of 6' to the bottom of the sign.
4. Any lights incorporated into the STOP or SLOW paddle faces shall only be as specifically described in Section 6E.03 Hand Signaling Devices in the TMUTCD.



CONTRACTOR REQUIREMENTS FOR MAINTAINING PERMANENT SIGNS WITHIN THE PROJECT LIMITS

1. Permanent signs are used to give notice of traffic laws or regulations, call attention to conditions that are potentially hazardous to traffic operations, show route designations, destinations, directions, distances, services, points of interest, and other geographical, recreational, or cultural information. Drivers proceeding through a work zone need the same, if not better route guidance as normally installed on a roadway without construction.
2. When permanent regulatory or warning signs conflict with work zone conditions, remove or cover the permanent signs until the permanent sign message matches the roadway condition.
3. When existing permanent signs are moved and relocated due to construction purposes, they shall be visible to motorists at all times.
4. If existing signs are to be relocated on their original supports, they shall be installed on crashworthy bases as shown on the SMD Standard sheets. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards. This work should be paid for under the appropriate pay item for relocating existing signs.
5. If permanent signs are to be removed and relocated using temporary supports, the Contractor shall use crashworthy supports as shown on the BC sheets or the CWZTCD. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards during construction. This work should be paid for under the appropriate pay item for relocating existing signs.
6. Any sign or traffic control device that is struck or damaged by the Contractor or his/her construction equipment shall be replaced as soon as possible by the Contractor to ensure proper guidance for the motorists. This will be subsidiary to Item 502.

GENERAL NOTES FOR WORK ZONE SIGNS

1. Contractor shall install and maintain signs in a straight and plumb condition and/or as directed by the Engineer.
2. Wooden sign posts shall be painted white.
3. Barricades shall NOT be used as sign supports.
4. Nails shall NOT be used to attach signs to any support.
5. All signs shall be installed in accordance with the plans or as directed by the Engineer. Signs shall be used to regulate, warn, and guide the traveling public safely through the work zone.
6. The Contractor may furnish either the sign design shown in the plans or in the "Standard Highway Sign Designs for Texas" (SHSD). The Engineer/Inspector may require the Contractor to furnish other work zone signs that are shown in the TMUTCD but may have been omitted from the plans. Any variation in the plans shall be documented by written agreement between the Engineer and the Contractor's Responsible Person. All changes must be documented in writing before being implemented. This can include documenting the changes in the Inspector's TxDOT diary and having both the Inspector and Contractor initial and date the agreed upon changes.
7. The Contractor shall furnish sign supports listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCD). The Contractor shall install the sign support in accordance with the manufacturer's recommendations. If there is a question regarding installation procedures, the Contractor shall furnish the Engineer a copy of the manufacturer's installation recommendations so the Engineer can verify the correct procedures are being followed.
8. The Contractor is responsible for installing signs on approved supports and replacing signs with damaged or cracked substrates and/or damaged or marred reflective sheeting as directed by the Engineer/Inspector.
9. Identification markings may be shown only on the back of the sign substrate. The maximum height of letters and/or company logos used for identification shall be 1 inch.
10. The Contractor shall replace damaged wood posts. New or damaged wood sign posts shall not be spliced.

DURATION OF WORK (as defined by the "Texas Manual on Uniform Traffic Control Devices" Part 6)

1. The types of sign supports, sign mounting height,the size of signs, and the type of sign substrates can vary based on the type of work being performed. The Engineer is responsible for selecting the appropriate size sign for the type of work being performed. The Contractor is responsible for ensuring the sign support, sign mounting height and substrate meets manufacturer's recommendations in regard to crashworthiness and duration of work requirements.
   a. Long-term stationary – work that occupies a location more than 3 days.
   b. Intermediate-term stationary – work that occupies a location more than one daylight period up to 3 days, or nighttime work lasting more than one hour.
   c. Short-term stationary – daytime work that occupies a location for more than 1 hour in a single daylight period.
   d. Short, duration – work that occupies a location up to 1 hour.
   e. Mobile – work that moves continuously or intermittently (stopping for up to approximately 15 minutes.)

SIGN MOUNTING HEIGHT

1. The bottom of Long-term/Intermediate-term signs shall be at least 7 feet, but not more than 9 feet, above the paved surface, except as shown for supplemental plaques mounted below other signs.
2. The bottom of Short-term/Short Duration signs shall be a minimum of 1 foot above the pavement surface but no more than 2 feet above the ground.
3. Long-term/Intermediate-term Signs may be used in lieu of Short-term/Short Duration signing.
4. Short-term/Short Duration signs shall be used only during daylight and shall be removed at the end of the workday. or raised to appropriate Long-term/Intermediate sign height.
5. Regulatory signs shall be mounted at least 7 feet, but not more than 9 feet, above the paved surface regardless of work duration.

SIZE OF SIGNS

1. The Engineer may allow the use of smaller size construction warning signs on secondary roads or city streets where speeds are low if the sign size is listed as an option on the "Typical Construction Warning Sign Size and Spacing" chart shown on BC(2).
2. The Contractor shall furnish the sign sizes shown in plans, the BC Sheets, the TCP sheets or as directed by the Engineer.

SIGN SUBSTRATES

1. The Contractor shall ensure the sign substrate is installed in accordance with the manufacturer's recommendations for the type of sign support that is being used. The CWZTCD lists each substrate that can be used on the different types and models of sign supports.
2. "Mesh" type materials are NOT an approved sign substrate, regardless of the tightness of the weave.
3. All wooden individual sign panels fabricated from 2 or more pieces shall have one or more plywood cleat, 1/2" thick by 6" wide, fastened to the back of the sign and extending fully across the sign. The cleat shall be attached to the back of the sign using wood screws that do not penetrate the face of the sign panel. The screws shall be placed on both sides of the splice and spaced at 6" centers. The Engineer may approve other methods of splicing the sign face.

REFLECTIVE SHEETING

1. All signs shall be retroreflective and constructed of sheeting meeting the color and retro-reflectivity requirements of DMS-8300 for rigid signs or DMS-8310 for roll-up signs. The web address for DMS specifications is shown on BC(1).
2. White sheeting, meeting the requirements of DMS-8300 Type C (High Specific Intensity), shall be used for signs with a white background.
3. Orange sheeting, meeting the requirements of DMS-8300 Type E (Fluorescent Prismatic), shall be used for rigid signs with orange backgrounds.

SIGN LETTERS

1. All sign letters and numbers shall be clear, and open rounded type uppercase alphabet letters as approved by the Federal Highway Administration (FHWA) and as published in the "Standard Highway Sign Design for Texas" manual. Signs, letters and numbers shall be of first class workmanship in accordance with Department Standards and Specifications.

REMOVING OR COVERING

1. When sign messages may be confusing or do not apply, the signs shall be removed or completely covered.
2. Long-term stationary or intermediate stationary signs installed on square metal tubing may be turned away from traffic 90 degrees when the sign message is not applicable. This type of sign support meets the crashworthiness standards regardless of the direction of impact. This technique may not be used for signs installed in the median of divided highways or near any intersections where the sign may be seen from approaching traffic.
3. Signs installed on wooden skids shall not be turned at 90 degree angles to the roadway. These signs should be removed or completely covered when not required.
4. When signs are covered, the material used shall be opaque, such as heavy mil black plastic, or other materials which will cover the entire sign face and maintain their opaque properties under automobile headlights at night, without damaging the sign sheeting.
5. Burlap shall NOT be used to cover signs.
6. Duct tape or other adhesive material shall NOT be affixed to a sign face. These materials can damage the retroreflectivity of sheeting.
7. Signs and anchor stubs shall be removed and holes backfilled upon completion of work.

SIGN SUPPORT WEIGHTS

1. Where sign supports require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand is recommended.
2. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight.
3. Rock, concrete, iron, steel or other solid objects shall not be permitted for use as sign support weights.
4. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs.
5. Sandbags shall be made of a durable material that tears upon vehicular impact.
6. Rubber (such as tire inner tubes) shall NOT be used for sandbags.
7. Rubber ballasts designed for channelizing devices should not be used for ballast on portable sign supports. Sign supports designed and manufactured with rubber bases may be used when shown on the CWZTCD list.
8. Sandbags shall only be placed along or laid over the base supports of the traffic control device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners. Sandbags shall be placed along the length of the skids to weigh down the sign support.
9. Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES STANDARD

4 of 12

BC(4)--07

©TxDOT 11-4-02

9-07 REVISIONS

DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
CONT	SECT	JOB	HIGHWAY
DIST	COUNTY		SHEET NO.

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-2266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD - BC (4)-07
BARRICADE AND CONSTRUCTION
WEBB COUNTY, TEXAS

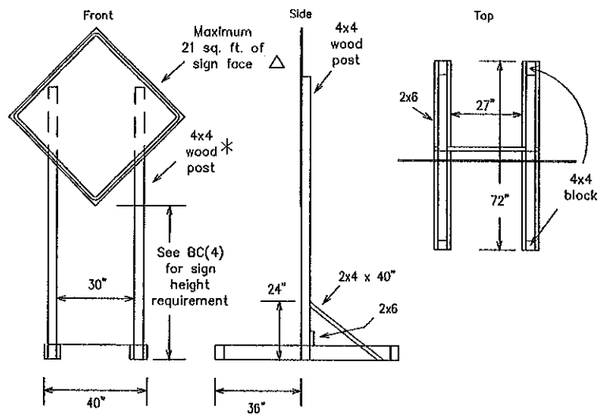
DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

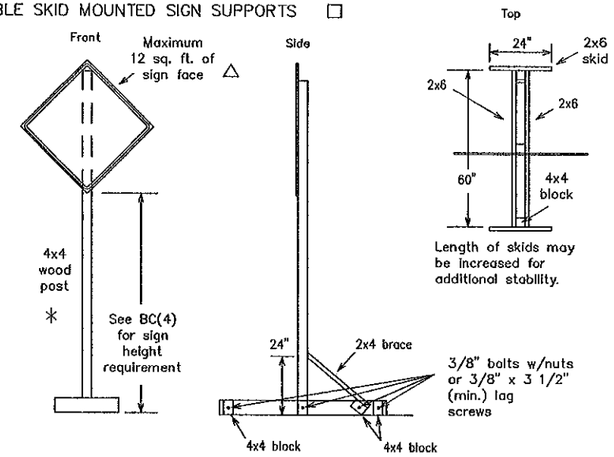
SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR:N/A VER. N/A

SHEET 88.4 OF TOTAL: 90

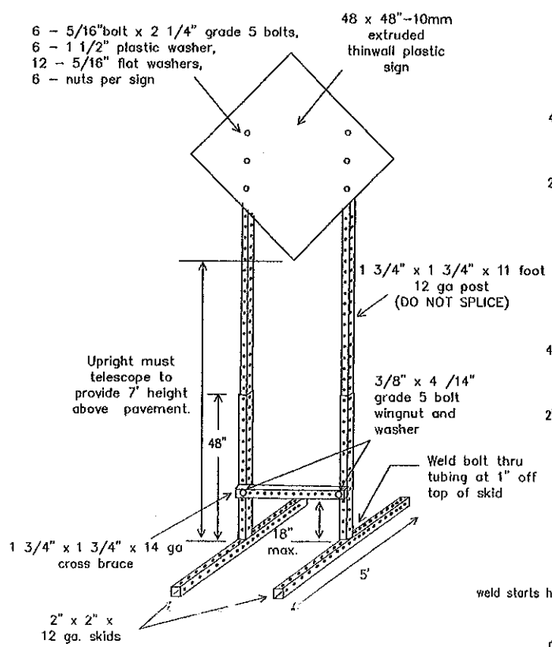
SKID MOUNTED WOOD SIGN SUPPORTS

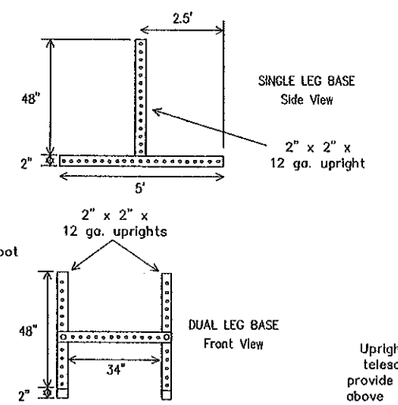
LONG/INTERMEDIATE TERM STATIONARY -- PORTABLE SKID MOUNTED SIGN SUPPORTS □

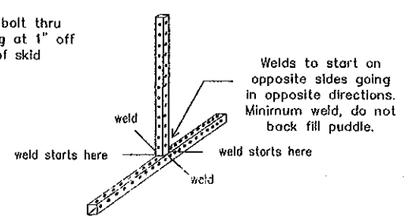


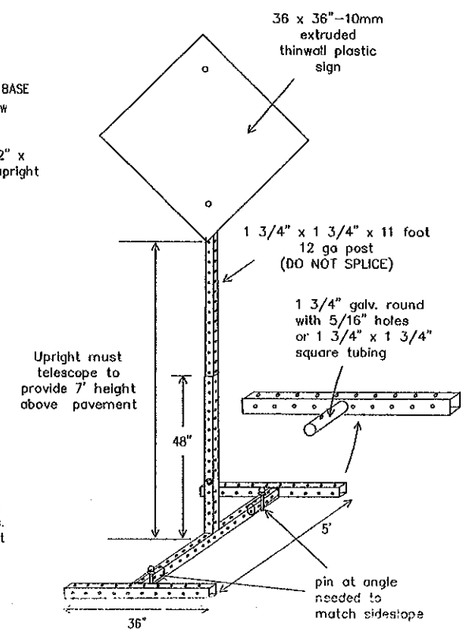


SKID MOUNTED PERFORATED SQUARE STEEL TUBING SIGN SUPPORTS



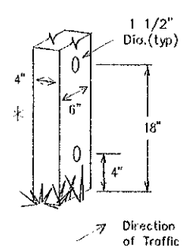






WEDGE ANCHORS

Both steel and plastic Wedge Anchor Systems as shown on the SMD Standard Sheets may be used as temporary sign supports for signs up to 10 square feet of sign face. They may be set in concrete or in sturdy soils if approved by the Engineer. (See web address for "Traffic Engineering Standard Sheets" on BC(1)).



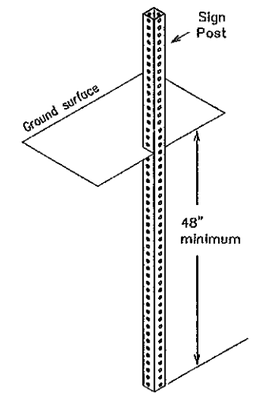
WOOD POST SYSTEM FOR GROUND MOUNTED SIGN SUPPORTS

Nominal Post Size	No. of Posts	Maximum Sq. feet of Sign Face	Minimum Soil Embedment	Drilled Hole(s) Required
4 x 4	1	12	36"	NO
4 x 4	2	21	36"	NO
4 x 6	1	21	36"	YES
4 x 6	2	36	36"	YES

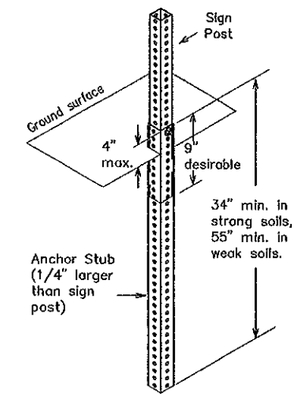
GROUND MOUNTED SIGN SUPPORTS

Refer to the CWZTCD and the manufacturer's installation procedure for each type sign support.
The maximum sign square footage shall adhere to the manufacturer's recommendation.
Two post installations can be used for larger signs.

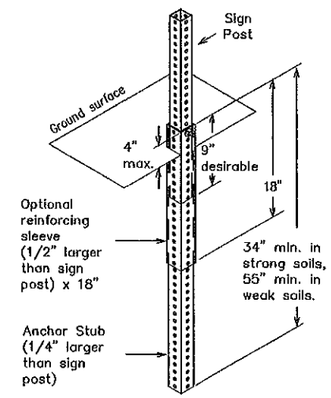
PERFORATED SQUARE METAL TUBING



OPTION 1
(Direct Embedment)



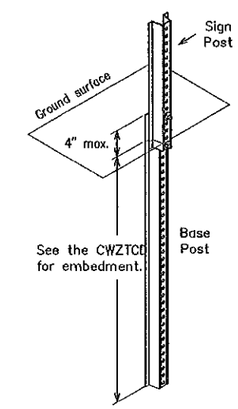
OPTION 2
(Anchor Stub)



OPTION 3
(Anchor Stub and Reinforcing Sleeve))

WING CHANNEL

Lap-splice/base bolted anchor



GENERAL NOTES

1. Nails may be used in the assembly of wooden sign supports, but 3/8" bolts with nuts or 3/8" x 3 1/2" lag screws must be used on every joint for final connection.
2. More details of approved Long/Intermediate and Short Term supports can be found on the CWZTCD list. See BC(1) for website location.
3. No more than 2 sign posts shall be placed within a 7 ft. circle, except for specific materials noted on the CWZTCD List.
4. When project is completed, all sign supports and foundations shall be removed from the project site. This will be considered subsidiary to Item 502.

□ See BC(4) for definition of "Work Duration."

* Wood sign posts MUST be one piece. Splicing will NOT be allowed. Posts shall be painted white.

△ See the CWZTCD for the type of sign substrate that can be used for each approved sign support.

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-5266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II

TX-DOT STANDARD - BC (5)-07
BARRICADE AND CONSTRUCTION

WEBB COUNTY, TEXAS

Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION
TYPICAL SIGN SUPPORT
STANDARD

5 of 12

BC(5)-07

DRAWN BY:	T.P.O.
CHECKED BY:	E.L.O.
DRAWN DATE:	
PLOTTED DATE:	01-14-11
JOB No.	N/A
FILE NAME:	TANQUECITOS
STATUS:	100%
AS-BUILT:	NO
REVISED DATE:	09-03-10

©TxDOT 11-4-02

9-07 REVISIONS

DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
CONT	SECT	JOB	HIGHWAY
DIST	COUNTY		SHEET NO.

SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR: N/A VER. N/A

SHEET 88.5 OF TOTAL 90

PORTABLE CHANGEABLE MESSAGE SIGNS

1. The Engineer/Inspector shall approve all messages used on portable changeable message signs (PCMS).
2. Messages on PCMS should contain no more than 8 words (about four to eight characters per word), not including simple words such as "TO," "FOR," "AT," etc.
3. Messages should consist of a single phase, or two phases that alternate. Three-phase messages are not allowed. Each phase of the message should convey a single thought, and must be understood by itself.
4. Use the word "EXIT" to refer to an exit ramp on a freeway, i.e., "EXIT CLOSED." Do not use the term "RAMP."
5. Always use the route or interstate designation (IH, US, SH, FM) along with the number when referring to a roadway.
6. When in use the bottom of a stationary PCMS message panel should be a minimum 7 feet above the roadway, where possible.
7. The message term "WEEKEND" should be used only if the work is to start on Saturday morning and end by Sunday evening at midnight. Actual days and hours of work should be displayed on the PCMS if work is to begin on Friday evening and/or continue into Monday morning.
8. The Engineer/Inspector may select one of two options which are available for displaying a two-phase message on a PCMS. Each phase may be displayed for either four seconds each or for three seconds each.
9. Do not "flash" messages or words included in a message. The message should be steady burn or continuous while displayed.
10. Do not present redundant information on a two-phase message; i.e., keeping two lines of the message the same and changing the third line.
11. Do not use the word "Danger" in message.
12. Do not display the message "LANES SHIFT LEFT" or "LANES SHIFT RIGHT" on a PCMS. Drivers do not understand the message.
13. Do not display messages that scroll horizontally or vertically across the face of the sign.
14. The following table lists abbreviated words and two-word phrases that are acceptable for use on a PCMS. Both words in a phrase must be displayed together. Words or phrases not on this list should not be abbreviated.
15. PCMS character height should be at least 18 inches for trailer mounted units. They should be visible from at least 1/2 (.5) mile and the text should be legible from at least 720 feet. Truck mounted units must have a character height of 10 inches and must be legible from at least 400 feet.
16. Each line of text should be centered on the message board rather than left or right justified.
17. If disabled, the PCMS should default to an illegible display that will not alarm motorists and will only be used to alert workers that the PCMS has malfunctioned. A pattern such as a series of horizontal solid bars is appropriate.

Word or Phrase	Abb.	Word or Phrase	Abb.
Access Road	ACCS RD	Major	MAJ
Air Quality	AIR QLTY	Miles	MI
Alternate	ALT	Miles Per Hour	MPH
Avenue	AVE	Minor	MNR
Best Route	BEST RTE	Monday	MON
Boulevard	BLVD	Normal	NORM
Bridge	BRDG	North	N
Cannot	CANT	Northbound	(route) N
Center	CNTR	Parking	PKING
Construction Ahead	CONST AHEAD	Parking Lot	PRK LOT
Detour Route	DETOUR RTE	Road	RD
Do Not	DONT	Right Lane	RGT LN
East	E	Saturday	SAT
Eastbound	(route) E	Service Road	SERV RD
Emergency	EMER	Shoulder	SHLDR
Emergency Vehicle	EMER VEH	Slippery	SLIP
Entrance, Enter	ENT	South	S
Express Lanes	EXP LANE	Southbound	(route) S
Expressway	EXPWY	Speed	SPD
XXXX Feet	XXXX FT	Street	ST
Fog Ahead	FOG AHD	Sunday	SUN
Freeway	FRWY, FWY	Telephone	PHONE
Freeway Blocked	FWY BLKD	Temporary	TEMP
Friday	FRI	Thursday	THURS
Hazardous Driving	HAZ DRIVING	To Downtown	TO DWNTN
Hazardous Material	HAZMAT	Traffic	TRAF
High-Occupancy Vehicle	HOV	Travelers	TRVLRS
Highway	HWY	Tuesday	TUES
Hours	HR	Time Minutes	TIME MIN
Information	INFO	Upper Level	UPPR LVL
It Is	ITS	Vehicle	VEH
Junction	JCT	Warning	WARN
Left	LFT	Wednesday	WED
Left Lane	LFT LN	Weight Limit	WT LIMIT
Lane Closed	LN CLSD	West	W
Lower Level	LOWR LVL	Westbound	(route) W
Maintenance	MAINT	Wet Pavement	WET PVMT
		Will Not	WONT

Roadway designation # IH-number, US-number, SH-number, FM-number

WHEN NOT IN USE, REMOVE THE PCMS FROM THE RIGHT-OF-WAY OR PLACE THE PCMS BEHIND BARRIER OR GUARDRAIL WITH SIGN PANEL TURNED PARALLEL TO TRAFFIC

RECOMMENDED PHASES AND FORMATS FOR PCMS MESSAGES DURING ROADWORK ACTIVITIES

(The Engineer may approve other messages not specifically covered here.)

Phase 1: Condition Lists

Road/Lane/Ramp Closure List

FREEWAY CLOSED X MILE	FRONTAGE ROAD CLOSED
ROAD CLOSED AT SH XXX	SHOULDER CLOSED XXX FT
ROAD CLSD AT FM XXXX	RIGHT LN CLOSED XXX FT
RIGHT X LANES CLOSED	RIGHT X LANES OPEN
CENTER LANE CLOSED	DAYTIME LANE CLOSURES
NIGHT LANE CLOSURES	I-XX SOUTH EXIT CLOSED
VARIOUS LANES CLOSED	EXIT XXX CLOSED X MILE
EXIT CLOSED	RIGHT LN TO BE CLOSED
MALL DRIVEWAY CLOSED	X LANES CLOSED TUE - FRI
XXXXXXXX BLVD CLOSED	

Other Condition List

ROADWORK XXX FT	ROAD REPAIRS XXXX FT
FLAGGER XXXX FT	LANE NARROWS XXXX FT
RIGHT LN NARROWS XXXX FT	TWO-WAY TRAFFIC XX MILE
MERGING TRAFFIC XXXX FT	CONST TRAFFIC XXX FT
LOOSE GRAVEL XXXX FT	UNEVEN LANES XXXX FT
DETOUR X MILE	ROUGH ROAD XXXX FT
ROADWORK PAST SH XXXX	ROADWORK NEXT FRI-SUN
BUMP XXXX FT	US XXX EXIT X MILES
TRAFFIC SIGNAL XXXX FT	LANES SHIFT *

* LANES SHIFT in Phase 1 must be used with STAY IN LANE in Phase 2.

Phase 2: Possible Component Lists

Action to Take/Effect on Travel List

MERGE RIGHT	FORM X LINES RIGHT
DETOUR NEXT X EXITS	USE XXXXX RD EXIT
USE EXIT XXX	USE EXIT I-XX NORTH
STAY ON US XXX SOUTH	USE I-XX E TO I-XX N
TRUCKS USE US XXX N	WATCH FOR TRUCKS
WATCH FOR TRUCKS	EXPECT DELAYS
EXPECT DELAYS	PREPARE TO STOP
REDUCE SPEED XXX FT	END SHOULDER USE
USE OTHER ROUTES	WATCH FOR WORKERS
STAY IN LANE *	

Location List

AT FM XXXX

BEFORE RAILROAD CROSSING

NEXT X MILES

PAST US XXX EXIT

XXXXXXX TO XXXXXXX

US XXX TO FM XXXX

Warning List

SPEED LIMIT XX MPH

MAXIMUM SPEED XX MPH

MINIMUM SPEED XX MPH

ADVISORY SPEED XX MPH

RIGHT LANE EXIT

USE CAUTION

DRIVE SAFELY

DRIVE WITH CARE

** Advance Notice List

TUE-FRI XX AM-X PM

APR XX-XX X PM-X AM

BEGINS MONDAY

BEGINS MAY XX

MAY X-X XX PM - XX AM

NEXT FRI-SUN

XX AM TO XX PM

NEXT TUE AUG XX

TONIGHT XX PM-XX AM

** See Application Guidelines Note 6.

Application Guidelines

1. Only 1 or 2 phases are to be used on a PCMS.
2. The 1st phase (or both) should be selected from the "Road/Lane/Ramp Closure List" and the "Other Condition List".
3. A 2nd phase can be selected from the "Action to Take/Effect on Travel, Location, General Warning, or Advance Notice Phase Lists".
4. A Location Phase is necessary only if a distance or location is not included in the first phase selected.
5. If two PCMS are used in sequence, they must be separated by a minimum of 1000 ft. Each PCMS shall be limted to two phases, and should be understandable by themselves.
6. For advance notice, when the current date is within seven days of the actual work date, calendar days should be replaced with days of the week. Advance notification should typically be for no more than one week prior to the work

Wording Alternatives

1. The words RIGHT, LEFT and ALL can be interchanged as appropriate.
2. Roadway designations IH, US, SH, FM and LP can be interchanged as appropriate.
3. EAST, WEST, NORTH and SOUTH (or abbreviations E, W, N and S) can be interchanged as appropriate.
4. Highway names and numbers replaced as appropriate.
5. ROAD, HIGHWAY and FREEWAY can be interchanged as needed.
6. AHEAD may be used instead of distances if necessary.
7. FT and MI, MILE and MILES interchanged as appropriate.
8. AT, BEFORE and PAST interchanged as needed.
9. Distances or AHEAD can be eliminated from the message if a location phase is used.

PCMS SIGNS WITHIN THE R.O.W. SHALL BE BEHIND GUARDRAIL OR CONCRETE BARRIER OR SHALL HAVE A MINIMUM OF FOUR (4) PLASTIC DRUMS PLACED PERPENDICULAR TO TRAFFIC ON THE UPSTREAM SIDE OF THE PCMS.

FULL MATRIX PCMS SIGNS

1. When Full Matrix PCMS signs are used, the character height and legibility/visibility requirements shall be maintained as listed in Note 15 under "PORTABLE CHANGEABLE MESSAGE SIGNS" above.
2. When symbol signs, such as the CW20-7a Flagger Symbol, are represented graphically on the Full Matrix PCMS sign and, with the approval of the Engineer, it shall maintain the legibility/visibility requirement listed above.
3. When symbol signs are represented graphically on the Full Matrix PCMS, they shall only supplement the use of the static sign represented, and shall not substitute for, or replace that sign.
4. A full matrix PCMS may be used to simulate a flashing arrow panel provided it meets the visibility, flash rate and dimming requirements on BC(7), for the same size arrow.

Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) STANDARD

6 of 12 BC(6)-07

©TxDOT 11-4-02

9-07 REVISIONS

DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
CONT	SECT	JOB	HIGHWAY
DIST	COUNTY		SHEET NO.

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD - BC (6)-07
BARRICADE AND CONSTRUCTION
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.
CHECKED BY: E.L.G.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

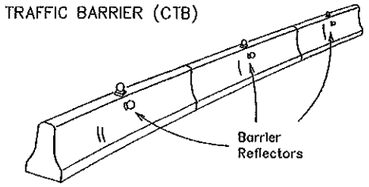
SCALE: (24"x36") SHEET
HOR: N/A VER: N/A
SCALE: (11"x17") SHEET
HOR:N/A VER: N/A

SHEET 88.6 OF TOTAL 90

BARRIER REFLECTORS FOR CONCRETE TRAFFIC BARRIER AND ATTENUATORS

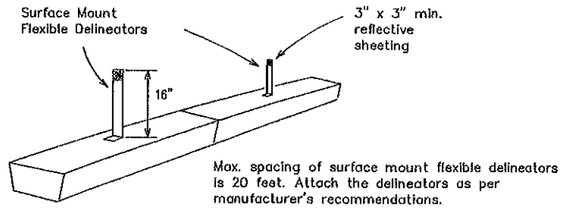
1. Barrier Reflectors shall be prequalified, and conform to the color and reflectivity requirements of DMS-8600. A list of prequalified Barrier Reflectors (Type C Delineators) can be found at the Material Producer List web address shown on BC(1).
2. Color of Barrier Reflectors shall be as specified in the TMUTCD. The cost of the reflectors shall be considered subsidiary to Item 502.

CONCRETE TRAFFIC BARRIER (CTB)

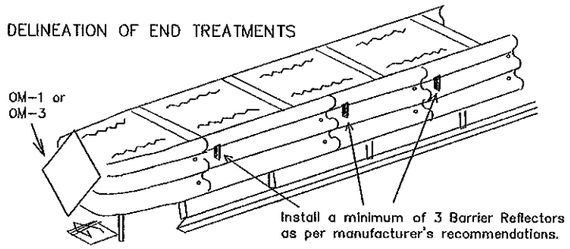


3. Where traffic is on one side of the CTB, two (2) Barrier Reflectors shall be mounted in approximately the midsection of each section of CTB. An alternate mounting location is uniformly spaced at one end of each CTB. This will allow for attachment of a barrier grapple without damaging the reflector. The Barrier Reflector mounted on the side of the CTB shall be located directly below the reflector mounted on top of the barrier, as shown in the detail above.
4. Where CTB separates two-way traffic, three barrier reflectors shall be mounted on each section of CTB. The reflector unit on top shall have two yellow reflective faces (Bi-Directional)while the reflectors on each side of the barrier shall have one yellow reflective face, as shown in the detail above.
5. When CTB separates traffic traveling in the same direction, no barrier reflectors will be required on top of the CTB.
6. Barrier Reflector units shall be yellow or white in color to match the edgeline being supplemented. Yellow Barrier Reflectors shall be made with Type E Fluorescent Prismatic Yellow Retroreflective Sheeting. White reflectors shall be made with Type D White Prismatic sheeting.
7. Maximum spacing of Barrier Reflectors is forty (40) feet.
8. Pavement markers or temporary flexible-reflective roadway marker tabs shall NOT be used as CTB delineation.
9. Attachment of Barrier Reflectors to CTB shall be per manufacturer's recommendations.
10. Missing or damaged Barrier Reflectors shall be replaced as directed by the Engineer.
11. Single slope barriers shall be delineated as shown on the above detail.

LOW PROFILE CONCRETE BARRIER (LPCB)



DELINEATION OF END TREATMENTS



	APPROACHING TRAFFIC	
	BOTH SIDES	ONE SIDE
DELINEATION	OM-1	OM-3 or Vertical Panel

END TREATMENTS FOR CTB'S USED IN WORK ZONES

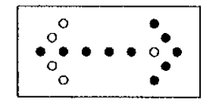
End treatments used on CTB's in work zones shall meet crashworthy standards as defined in the National Cooperative Highway Research Report 350. Refer to the CWZTCD List for approved end treatments and manufacturers.

TYPICAL FLASHING ARROW PANEL

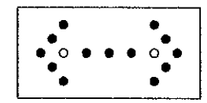
Arrow Panels may be located behind channelizing devices in place for a shoulder taper or merging taper, otherwise they shall be delineated with four (4) channelizing devices placed perpendicular to traffic on the upstream side of traffic.

1. The Flashing Arrow Panel should be used for all lane closures on multi-lane roadways, or slow moving maintenance or construction activities on the travel lanes.
2. Flashing Arrow Panels should not be used on two-lane, two-way roadways, detours, diversions or work on shoulders unless the "CAUTION" display (see detail below) is used.
3. The Engineer/Inspector shall choose all appropriate signs, barricades and/or other traffic control devices that should be used in conjunction with the Flashing Arrow Panel.
4. The Flashing Arrow Panel should be able to display the following symbols:

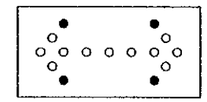
Flashing RIGHT (LEFT) ARROW



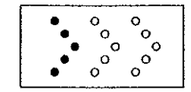
Flashing DOUBLE ARROW



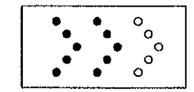
Flashing CAUTION

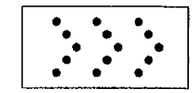


5. The "CAUTION" display consists of four corner lamps flashing simultaneously.
6. The straight line caution display is NOT ALLOWED.
7. The Flashing Arrow Panel shall be capable of minimum 50 percent dimming from rated lamp voltage. The flashing rate of the lamps shall not be less than 25 nor more than 40 flashes per minute.
8. Minimum lamp "on time" shall be approximately 50 percent for the flashing arrow and equal intervals of 25 percent for each sequential phase of the flashing chevron.
9. The sequential arrow display is NOT ALLOWED.
10. The flashing arrow display is the TxDOT standard; however, the sequential Chevron display may be used during daylight operations.



Sequential Chevron





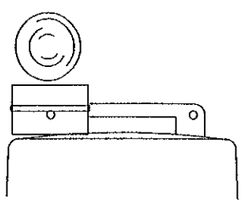
REQUIREMENTS

TYPE	MINIMUM SIZE	MINIMUM NUMBER OF PANEL LAMPS	MINIMUM VISIBILITY DISTANCE
B	30 x 60	13	3/4 mile
C	48 x 96	15	1 mile

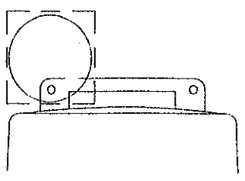
ATTENTION: Flashing Arrow Panels shall be equipped with automatic dimming devices.

WHEN NOT IN USE, REMOVE THE ARROW PANEL FROM THE RIGHT-OF-WAY OR PLACE THE ARROW PANEL BEHIND CONCRETE TRAFFIC BARRIER OR GUARDRAIL.

11. The Flashing Arrow Panel shall be mounted on a vehicle, trailer or other suitable support.
12. A Flashing Arrow Panel SHALL NOT BE USED to laterally shift traffic.
13. A full matrix PCMS may be used to simulate a Flashing Arrow Panel provided it meets visibility, flash rate and dimming requirements on this sheet for the same size arrow.
14. Minimum mounting height of trailer mounted arrow panels should be 7 feet from roadway to bottom of panel.



Type C Warning Light or approved substitute mounted adjacent to the travel way.



Warning reflector may be round or square.Must have a reflective surface area of at least 30 square inches

WARNING LIGHTS

1. Warning lights shall meet the requirements of the TMUTCD.
2. Warning lights shall NOT be installed on barricades.
3. Type A-Low Intensity Flashing Warning Lights are commonly used with drums. They are intended to warn of or mark a potentially hazardous area. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "FL". The Type A Warning Lights shall not be used with signs manufactured with Type E Sheeting (Fluorescent Prismatic) meeting the requirements of Departmental Material Specification DMS-8300.
4. Type-C and Type D 360 degree Steady Burn Lights are intended to be used in a series for delineation to supplement other traffic control devices. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "SB".
5. The Engineer/Inspector or the plans shall specify the location and type of warning lights to be installed on the traffic control devices.
6. When required by the Engineer, the Contractor shall furnish a copy of the warning lights certification. The warning light manufacturer will certify the warning lights meet the requirements of the latest ITE Purchase Specifications for Flashing and Steady-Burn Warning Lights.
7. When used to delineate curves, Type-C and Type D Steady Burn Lights should only be placed on the outside of the curve, not the inside.

WARNING LIGHTS MOUNTED ON PLASTIC DRUMS

1. Type A flashing warning lights are intended to warn drivers that they are approaching or are in a potentially hazardous area.
2. Type A random flashing warning lights are not intended for delineation and shall not be used in a series.
3. A series of sequential flashing warning lights placed on channelizing devices to form a merging taper may be used for delineation. If used, the successive flashing of the sequential warning lights should occur from the beginning of the taper to the end of the merging taper in order to identify the desired vehicle path. The rate of flashing for each light shall be 65 flashes per minute, plus or minus 10 flashes.
4. Type C and D steady-burn warning lights are intended to be used in a series to delineate the edge of the travel lane on detours, on lane changes, on lane closures, and on other similar conditions.
5. Type A, Type C and Type D warning lights shall be installed at locations as detailed on other sheets in the plans.
6. Warning lights shall not be installed on a drum that has a sign, chevron or vertical panel.
7. The maximum spacing for warning lights on drums should be identical to the channelizing device spacing.

WARNING REFLECTORS MOUNTED ON PLASTIC DRUMS AS A SUBSTITUTE FOR TYPE C (STEADY BURN) WARNING LIGHTS

1. A warning reflector or approved substitute may be mounted on a plastic drum as a substitute for a Type C, steady burn warning light at the discretion of the Contractor unless otherwise noted in the plans.
2. The warning reflector shall be yellow in color and shall be manufactured using a sign substrate approved for use with plastic drums listed on the CWZTCD.
3. The warning reflector shall have a minimum retroreflective surface area (one-side) of 30 square inches.
4. Round reflectors shall be fully reflectorized, including the area where attached to the drum.
5. Square substrates must have a minimum of 30 square inches of reflectorized sheeting. They do not have to be reflectorized where it attaches to the drum.
6. The side of the warning reflector facing approaching traffic shall have sheeting meeting the color and retroreflectivity requirements for DMS 8300-Type D (Non-fluorescent Prismatic).
7. When used near two-way traffic, both sides of the warning reflector shall be reflectorized.
8. The warning reflector should be mounted on the side of the handle nearest approaching traffic.
9. The maximum spacing for warning reflectors should be identical to the channelizing device spacing requirements.

TRUCK-MOUNTED ATTENUATORS

1. Truck-mounted attenuators (TMA) used on TxDOT facilities must meet the requirements outlined in the National Cooperative Highway Research Report No. 350 (NCHRP 350).
2. Refer to the CWZTCD for the requirements of Level 2 or Level 3 TMAs.
3. Refer to the dates shown in the CWZTCD to ensure that the TMA meets the age requirements and the crashworthiness criteria established by the Federal Highway Administration (FHWA) for TMAs.
4. Refer to the CWZTCD for a list of approved TMAs.
5. TMAs are required on freeways unless otherwise noted in the plans.
6. A TMA should be used anytime that it can be positioned approximately 30 to 100 feet in advance of the area of crew exposure without adversely affecting the work performance.
7. The only reason a TMA should not be required is when a work area is spread down the roadway and the work crew is an extended distance from the TMA.

Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION ARROW PANEL, REFLECTORS, WARNING LIGHTS & ATTENUATOR STANDARD

7 of 12 BC(7)-07

©TxDOT 11-4-02

9-07 REVISIONS	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
	CONT	SECT	JOB	HIGHWAY
	DIST		COUNTY	SHEET NO.

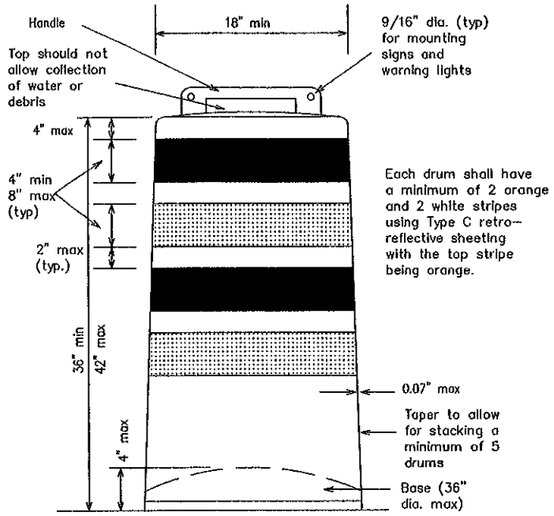
GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax: (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD - BC (7)-07
BARRICADE AND CONSTRUCTION
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.
CHECKED BY: E.L.G.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR:N/A VER. N/A

SHEET 88.7 OF TOTAL 90



GENERAL NOTES

1. For long term stationary work zones on freeways, drums shall be used as the primary channelizing device.
2. For intermediate term stationary work zones on freeways, drums should be used as the primary channelizing device but may be replaced in tangent sections by vertical panels, or 42" two-piece cones. In tangent sections one-piece cones may be used with the approval of the Engineer but only if personnel are present on the project at all times to maintain the cones in proper position and location.
3. For short term stationary work zones on freeways, drums are the preferred channelizing device but may be replaced in tapers, transitions and tangent sections by vertical panels, two-piece cones or one-piece cones as approved by the Engineer.
4. Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
5. Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
6. The Contractor shall have a maximum of 24 hours to replace any plastic drums identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.

GENERAL DESIGN REQUIREMENTS

Prequalified plastic drums shall meet the following requirements:

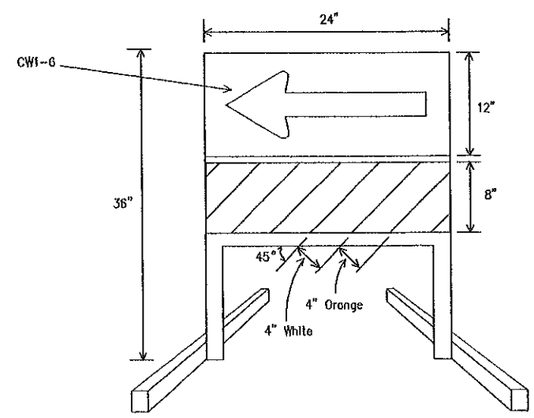
1. Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents accidental separation due to normal handling and/or air turbulence created by passing vehicles.
3. Plastic drums shall be constructed of lightweight flexible, and deformable materials. The Contractor shall NOT use metal drums or single piece plastic drums as channelization devices or sign supports.
4. Drums shall present a profile that is a minimum of 18 inches in width at the 36 inch height when viewed from any direction. The height of drum unit (body installed on base) shall be a minimum of 36 inches and a maximum of 42 inches.
5. The top of the drum shall have a built-in handle for easy pickup and shall be designed to drain water and not collect debris. The handle shall have a minimum of two widely spaced 9/16 inch diameter holes to allow attachment of a warning light, warning reflector unit or approved compliant sign.
6. The exterior of the drum body shall have a minimum of four alternating orange and white retroreflective circumferential stripes not less than 4 inches nor greater than 8 inches in width. Any non-reflectorized space between any two adjacent stripes shall not exceed 2 inches in width.
7. Bases shall have a maximum width of 36 inches, a maximum height of 4 inches, and a minimum of two footholds of sufficient size to allow base to be held down while separating the drum body from the base.
8. Plastic drums shall be constructed of ultra-violet stabilized, orange, high-density polyethylene (HDPE) or other approved material.
9. Drum body shall have a minimum unballasted weight of 7.7 lbs. and maximum unballasted weight of 11 lbs. The wall of the drum body shall be a minimum of 0.07 inch in thickness. Weight of any drum supplied shall not vary more than 0.5 lb. from that of the prequalified sample.
10. Drum and base shall be marked with manufacturer's name and model number.

RETROREFLECTIVE SHEETING

1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Flat Surface Reflective Sheeting." High Specific Intensity (Type C) retroreflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall be suitable for use on and shall adhere to the drum surface such that, upon vehicular impact, the sheeting shall remain adhered in-place and exhibit no delaminating, cracking, or loss of retroreflectivity other than that loss due to abrasion of the sheeting surface.

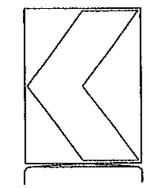
BALLAST

1. Unballasted bases shall be large enough to hold up to 50 lbs. of sand. This base, when filled with the ballast material, should weigh between 35 lbs (minimum) and 50 lbs (maximum). The ballast may be sand in one to three sandbags separate from the base, sand in a sand-filled plastic base, or other ballasting devices as approved by the Engineer. Stacking of sandbags will be allowed, however height of sandbags above pavement surface may not exceed 12 inches.
2. Bases with built-in ballast shall weigh between 40 lbs. and 50 lbs. Built-in ballast can be constructed of an integral crumb rubber base or a solid rubber base.
3. The ballast shall not be heavy objects, water, or any material that would become hazardous to motorists, pedestrians, or workers when the drum is struck by a vehicle.
4. When used in regions susceptible to freezing, drums shall have drainage holes in the bottoms so that water will not collect and freeze becoming a hazard when struck by a vehicle.
5. Ballast shall not be placed on top of drums.
6. Adhesives may be used to secure base of drums to pavement.

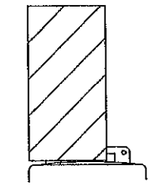


DIRECTION INDICATOR BARRICADE

1. The Direction Indicator Barricade may be used in tapers, transitions, and other areas where specific directional guidance to drivers is necessary.
2. If used, the Direction Indicator Barricade should be used in series to direct the driver through the transition and into the intended travel lane.
3. The Direction Indicator Barricade shall consist of One-Direction Large Arrow (CW1-6) sign in the size shown with a black arrow on a background of Type E Fluorescent Prismatic Orange above a rail with Type C High Specific Intensity retroreflective sheeting in alternation 4" white and orange stripes sloping downward at an angle of 45 degrees in the direction road users are to pass.
4. Double arrows on the Direction Indicator Barricade will not be allowed.
5. Approved manufacturers are shown on the CWZTCD List. Ballast shall be as approved by the manufacturers instructions.



18" x 24" Sign
(Maximum Sign Dimension)
Chevron CW1-8, Opposing Traffic Lane Divider, Driveway sign D70a, Keep Right R4 series or other signs as approved by Engineer



12" x 24"
Vertical Panel
mount with diagonals sloping down towards travel way

Plywood, Aluminum or Metal sign substrates shall NOT be used on plastic drums

SIGNS, CHEVRONS, AND VERTICAL PANELS MOUNTED ON PLASTIC DRUMS

1. Signs used on plastic drums shall be manufactured using substrates listed on the CWZTCD.
2. Chevrons and other work zone signs with an orange background shall be manufactured with Type E (Fluorescent Prismatic) sheeting meeting the color and retroreflectivity requirements of DMS-8300, "Sign Face Material," unless otherwise specified in the plans.
3. Vertical Panels shall be manufactured with orange and white sheeting meeting the requirements of DMS-8300 Type C (High Specific Intensity). Diagonal stripes on Vertical Panels shall slope down toward the intended traveled lane.
4. Other sign messages (text or symbolic) may be used as approved by the Engineer. Sign dimensions shall not exceed 18 inches in width or 24 inches in height.
5. Signs shall be installed using a 1/2 inch bolt (nominal) and nut, two washers, and one locking washer for each connection.
6. Mounting bolts and nuts shall be fully engaged and adequately torqued. Bolts should not extend more than 1/2 inch beyond nuts.
7. Chevrons may be placed on drums on the outside of curves, on merging tapers or on shifting tapers. When used in these locations they may be placed on every drum or spaced not more than on every third drum. A minimum of three (3) should be used at each location called for in the plans.
8. R9-9, R9-10, R9-11 and R9-11a Sidewalk Closed signs which are 24 inches wide may be mounted on plastic drums, with approval of the Engineer.

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD - BC (8)-07
BARRICADE AND CONSTRUCTION
WEBB COUNTY, TEXAS

Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES STANDARD

8 of 12 BC(8)--07

DRAWN BY: T.P.O.	
CHECKED BY: E.L.O.	
DRAWN DATE:	
PLOTTED DATE: 01-14-11	
JOB No. N/A	
FILE NAME: TANQUECITOS	
STATUS: 100%	
AS-BUILT: NO	
REVISED DATE: 08-03-10	
SCALE: (24"x36") SHEET	
HOR: N/A	VER: N/A
SCALE: (11"x17") SHEET	
HOR:N/A	VER. N/A
SHEET 88.8	TOTAL: OF 90

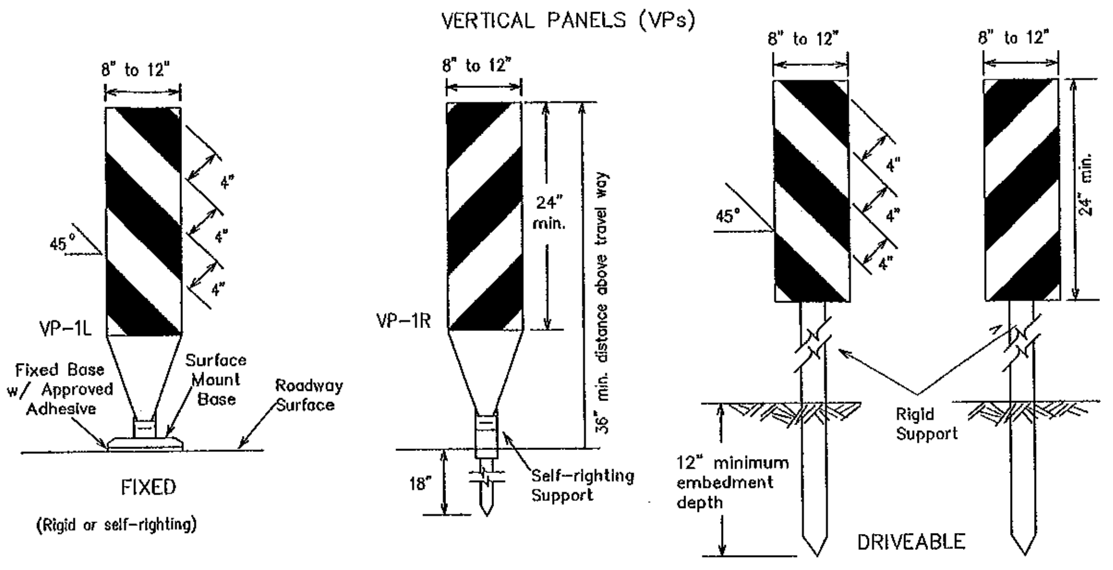
©TxDOT 11-4-02

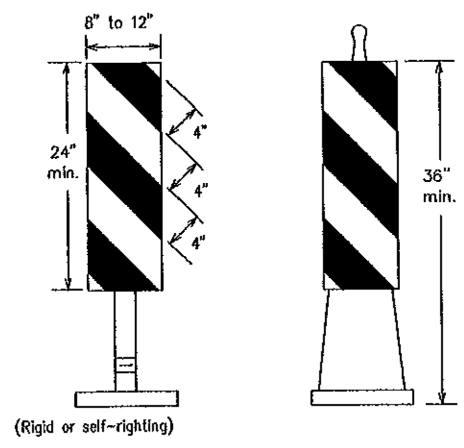
REVISIONS
4-03
9-07

DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
CONT	SECT	JOB	HIGHWAY
DIST	COUNTY		SHEET NO.

CHANNELIZING DEVICES

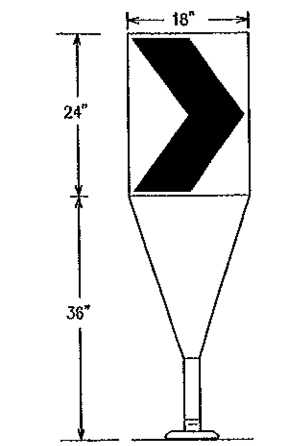
VERTICAL PANELS (VPs)





1. Vertical Panels (VP's) are normally used to channelize traffic or divide opposing lanes of traffic.
2. VP's may be used in daytime or nighttime situations. They may be used at the edge of shoulder drop-offs and other areas such as lane transitions where positive daytime and nighttime delineation is required. The Engineer/Inspector shall refer to the Roadway Design Manual Appendix B "Treatment of Pavement Drop-offs in Work Zones" for additional guidelines on the use of VP's for drop-offs.
3. VP's should be mounted back to back if used at the edge of cuts adjacent to two-way two lane roadways. Stripes are to be reflective orange and reflective white and should always slope downward toward the travel lane.
4. VP's used on expressways and freeways or other high speed roadways,shall have a minimum of 270 square inches of retroreflective area facing traffic.
5. Self-righting supports are available with portable base. See "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
6. Sheeting for the VP's shall be retroreflective Type C (High Specific Intensity) conforming to Departmental Material Specification DMS-8300, unless noted otherwise.
7. Where the height of reflective material on the vertical panel is greater than 36 inches, a panel stripe of 6 inches shall be used.

CHEVRONS



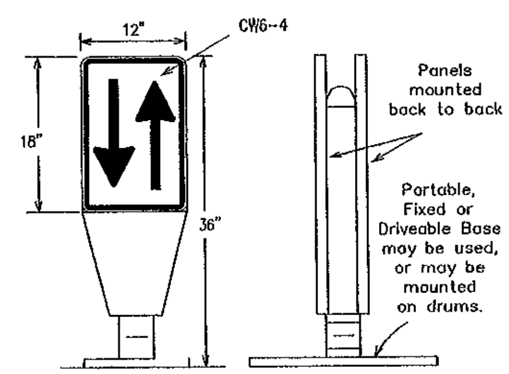
Fixed Base w/ Approved Adhesive (Driveable Base, or Flexible Support can be used)

1. The chevron shall be a vertical rectangle with a minimum size of 12 by 18 inches.
2. Chevrons are intended to give notice of a sharp change of alignment with the direction of travel and provide additional emphasis and guidance for vehicle operators with regard to changes in horizontal alignment of the roadway.
3. Chevrons, when used, shall be erected on the outside of a sharp curve or turn, or on the far side of an intersection. They shall be in line with and at right angles to approaching traffic. Spacing should be such that the motorist always has three in view, until the change in alignment eliminates its need.
4. To be effective, the chevron should be visible for at least 500 feet.
5. Chevrons shall be orange with a black nonreflective legend. Sheeting for the chevron shall be retroreflective Type E (Fluorescent Prismatic) conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall be black vinyl non-reflective decal sheeting meeting the requirements of DMS-8300.
6. For Long Term Stationary use on tapers or transitions on freeways and divided highways self-righting chevrons may be used to supplement plastic drums but not to replace plastic drums.

GENERAL NOTES:

1. Work Zone channelizing devices illustrated on this sheet may be installed in close proximity to traffic and are suitable for use on high or low speed roadways. The Engineer/Inspector shall ensure that spacing and placement is uniform and in accordance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
2. Channelizing devices shown on this sheet may have a driveable, fixed or portable base. The requirement for self-righting channelizing devices must be specified in the General Notes or other plan sheets.
3. Channelizing devices on self-righting supports should be used in work zone areas where channelizing devices are frequently impacted by errant vehicles or vehicle related wind gusts making alignment of the channelizing devices difficult to maintain. Locations of these devices shall be detailed elsewhere in the plans. These devices shall conform to the TMUTCD and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
4. The Contractor shall maintain devices in a clean condition and replace damaged, nonreflective, faded, or broken devices and bases as required by the Engineer/Inspector. The Contractor shall be required to maintain proper device spacing and alignment.
5. Portable bases shall be fabricated from virgin and/or recycled rubber. The portable bases shall weigh approximately 35 lbs.
6. Pavement surfaces shall be prepared in a manner that ensures proper bonding between the adhesives, the fixed mount bases and the pavement surface. Adhesives shall be prepared and applied according to the manufacturer's recommendations.
7. The installation and removal of channelizing devices shall not cause detrimental effects to the final pavement surfaces, including pavement surface discoloration or surface integrity. Driveable bases shall not be permitted on final pavement surfaces. The Engineer/Inspector shall approve all application and removal procedures of fixed bases.
8. Examples on this sheet are commonly used channelizing devices in work zones. For other devices, refer to the CWZTCD.

OPPOSING TRAFFIC LANE DIVIDERS (OTLD)

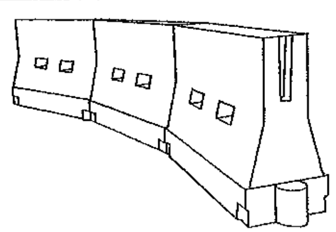


1. Opposing Traffic Lane Dividers (OTLD) are delineation devices designed to convert a normal one-way roadway section to two-way operation. OTLD's are used on temporary centerlines. The upward and downward arrows on the sign's face indicate the direction of traffic on either side of the divider. The base is secured to the pavement with an adhesive or rubber weight to minimize movement caused by a vehicle impact or wind gust.
2. The OTLD may be used in combination with simple tubular markers or VPs.
3. Spacing between the OTLD shall not exceed 500 feet. Tubular markers or VPs placed between the OTLD's should not exceed 100 foot spacing.
4. The OTLD shall be orange with a black non-reflective legend. Sheeting for the OTLD shall be retroreflective Type E (Fluorescent Prismatic) conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall be black vinyl non-reflective decal sheeting meeting the requirements of DMS-8300.

Posted Speed	Formula	Minimum Desirable Taper Lengths **			Suggested Maximum Spacing of Channelizing Devices	
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent
30		150'	165'	180'	30'	60'–75'
35	$L = \frac{WS^2}{60}$	205'	225'	245'	35'	70'–90'
40		265'	295'	320'	40'	80'–100'
45		450'	495'	540'	45'	90'–110'
50		500'	550'	600'	50'	100'–125'
55	L=WS	550'	605'	660'	55'	110'–140'
60		600'	660'	720'	60'	120'–150'
65		650'	715'	780'	65'	130'–165'
70		700'	770'	840'	70'	140'–175'
75		750'	825'	900'	75'	150'–185'
80		800'	880'	960'	80'	160'–195'

** Taper lengths have been rounded off.
L=Length of Taper (FT.) W=Width of Offset (FT.)
S=Posted Speed (MPH)

HOLLOW OR WATER BALLASTED SYSTEMS USED AS LONGITUDINAL CHANNELIZING DEVICES OR BARRIERS



LONGITUDINAL CHANNELIZING DEVICES

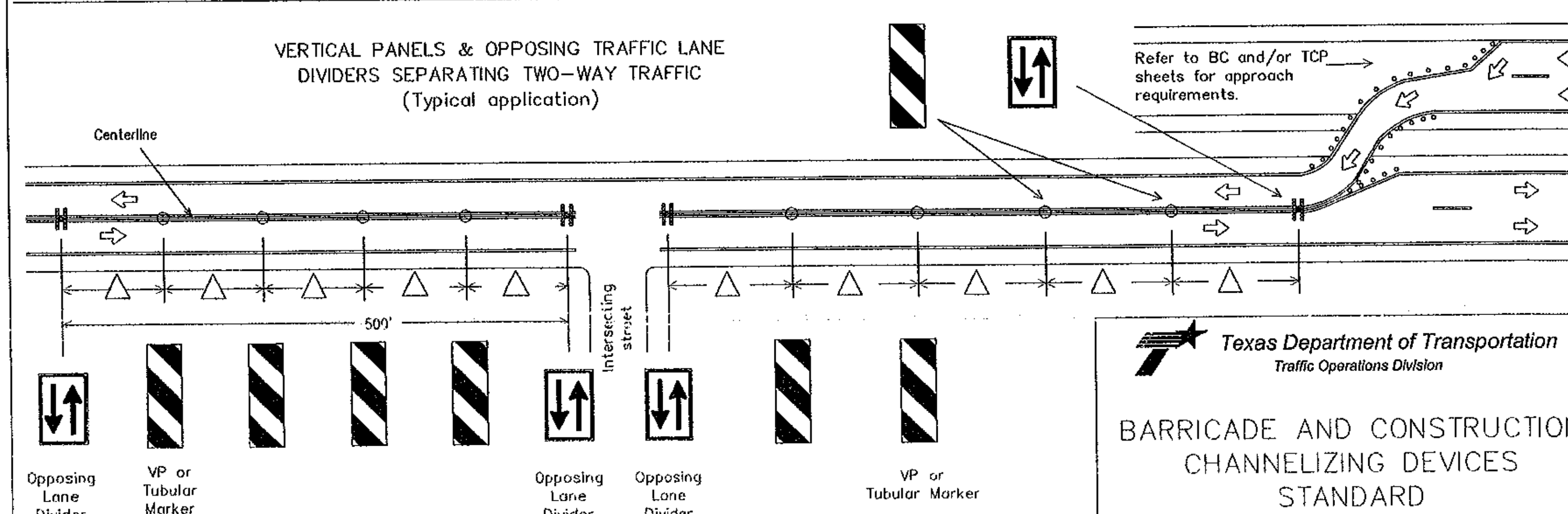
1. Longitudinal channelizing devices are crashworthy, lightweight, deformable devices that are highly visible, have good target value and can be connected together. They are not designed to contain or redirect a vehicle on impact.
2. Longitudinal channelizing devices may be used instead of a line of cones or drums.
3. Longitudinal channelizing devices shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. Longitudinal channelizing devices should not be used to provide positive protection for obstacles, pedestrians or workers.
5. Longitudinal channelizing devices shall be retroreflective, or supplemented with retroreflective delineation as required for temporary barriers on BC(7)-07.

WATER BALLASTED SYSTEMS USED AS BARRIERS

1. Water ballasted systems used as barriers shall not be used solely to channelize road users, but also to protect the work space per the appropriate NCHRP 350 crashworthiness requirements based on roadway speed and barrier application.
2. Water ballasted systems used to channelize vehicular traffic shall be supplemented with retroreflective delineation or channelizing devices to improve daytime/nighttime visibility. They may also be supplemented with pavement markings.
3. Water ballasted systems used as barriers shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. Water ballasted systems used as barriers should not be used for a merging taper except in low speed (less than 45 MPH) urban areas. When used on a taper in a low speed urban area, the taper shall be delineated and the taper length should be designed to optimize road user operations considering the available geometric conditions.
5. When water ballasted systems used as barriers have blunt ends exposed to traffic, they should be attenuated as per manufacturer recommendations or flared to point outside the clear zone.

If used to channelize pedestrians, longitudinal channelizing devices or water ballasted systems must have a continuous detectable bottom for users of long canes and the top of the unit shall be not less than 32 inches in height.

VERTICAL PANELS & OPPOSING TRAFFIC LANE DIVIDERS SEPARATING TWO-WAY TRAFFIC
(Typical application)



△ Spacing between the VP's or tubular markers shall not exceed 100 feet. On roadways with speeds less than 45 MPH, spacing between the tubular markers or VP's shall be as shown on the channelizing spacing table shown on this page. If the table shows spacing greater than 100 feet based on the roadway speed, then use a maximum of 100 feet spacing between the tubular markers or VP's. Every fifth channelizing device shall be an OTLD, except when the OLTD must be spaced closer to accomodate an intersection. Spacing between the OTLD shall not exceed 500 feet.

Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES STANDARD

9 of 12 BC(9)-07

©TxDOT 11-4-02

DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
REVISIONS 9-07	CONT	SECT	JOB	HIGHWAY
	DIST	COUNTY	SHEET NO.

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD - BC (9)-07
BARRICADE AND CONSTRUCTION
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

SCALE: (24"x36") SHEET — HOR: N/A VER. N/A
SCALE: (11"x17") SHEET — HOR: N/A VER. N/A

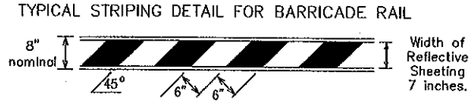
SHEET 88.9 OF TOTAL 90

TYPE III BARRICADES

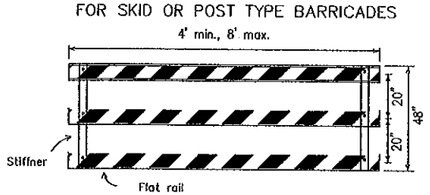
1. Refer to the Compliant Work Zone Traffic Control Devices List (CWZTCD) for details of the Type III Barricades and a list of all materials used in the construction of Type III Barricades.
2. Type III Barricades shall be used at each end of construction projects closed to all traffic.
3. Barricades extending across a roadway should have stripes that slope downward in the direction toward which traffic must turn in detouring. When both right and left turns are provided, the chevron striping may slope downward in both directions from the center of the barricade. Where no turns are provided at a closed road striping should slope downward in both directions toward the center of roadway.
4. Striping of rails, for the right side of the roadway, should slope downward to the left. For the left side of the roadway, striping should slope downward to the right.
5. Identification markings may be shown only on the back of the barricade rails. The maximum height of letters and/or company logos used for identification shall be 1".
6. Barricades shall not be placed parallel to traffic unless an adequate clear zone is provided.
7. Warning lights shall NOT be installed on barricades.
8. Where barricades require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand is recommended. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight. Sand bags shall not be stacked in a manner that covers any portion of a barricade rails reflective sheeting. Rock, concrete, iron, steel or other solid objects will NOT be permitted. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall not be used for sandbags. Sandbags shall only be placed along or upon the base supports of the device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners.
9. Sheeting for barricades shall be retroreflective Type C (High Specific Intensity) conforming to Departmental Material Specification DMS-8300 unless otherwise noted.

Barricades shall NOT be used as a sign support.

TYPICAL STRIPING DETAIL FOR BARRICADE RAIL



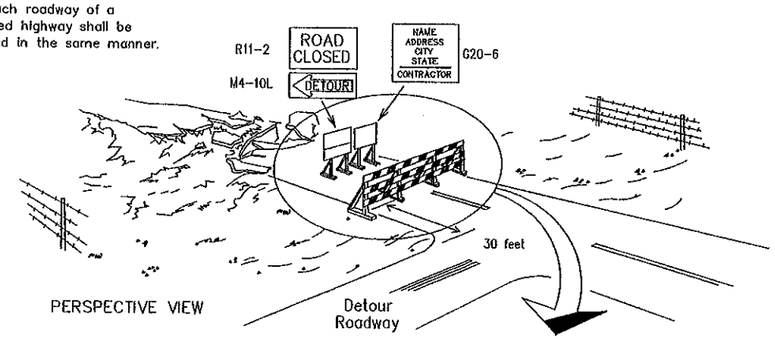
TYPICAL PANEL DETAIL FOR SKID OR POST TYPE BARRICADES



Stiffner may be inside or outside of support, but no more than 2 stiffeners shall be allowed on one barricade.

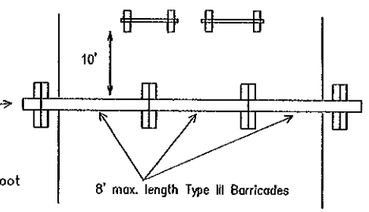
TYPE III BARRICADE (POST AND SKID) TYPICAL APPLICATION

Each roadway of a divided highway shall be barricaded in the same manner.



The three rails on Type III barricades shall be reflectorized orange and reflective white stripes on one side facing one-way traffic and both sides for two-way traffic.

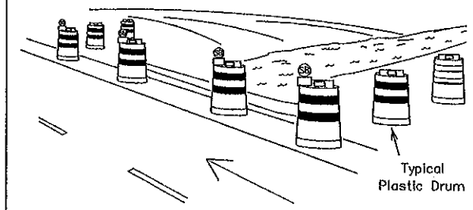
Barricade striping should slant downward in the direction of detour.



PLAN VIEW

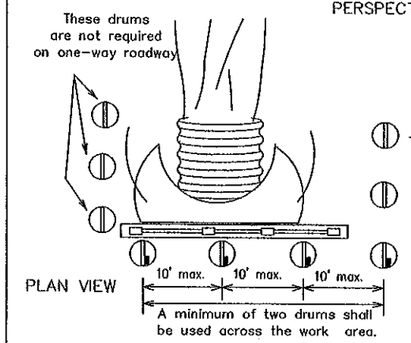
1. Signs should be mounted on independent supports at a 7 foot mounting height in center of roadway. The signs should be a minimum of 10 feet behind Type III Barricades.
2. Advance signing shall be as specified elsewhere in the plans.

CULVERT WIDENING OR OTHER ISOLATED WORK WITHIN THE PROJECT LIMITS



PERSPECTIVE VIEW

1. Where positive redirectional capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder width is greater than 12 feet, steady-burn lights may be omitted if drums are used.
5. Drums must extend the length of the culvert widening.



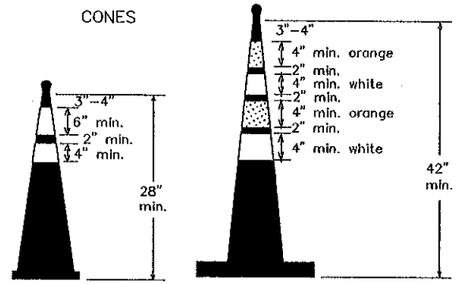
PLAN VIEW

Increase number of plastic drums on the side of approaching traffic if the crown width makes it necessary. (minimum of 2 and maximum of 4 drums)

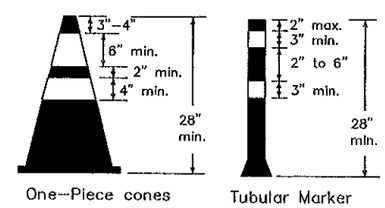
Legend

- Plastic drum
- Plastic drum with steady burn light or yellow warning reflector
- (SB) Steady burn warning light or yellow warning reflector

CONES



Two-Piece cones

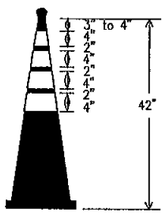


One-Piece cones Tubular Marker

28" Cones shall have a minimum weight of 9 1/2 lbs.

42" 2-piece cones shall have a minimum weight of 30 lbs. including base.

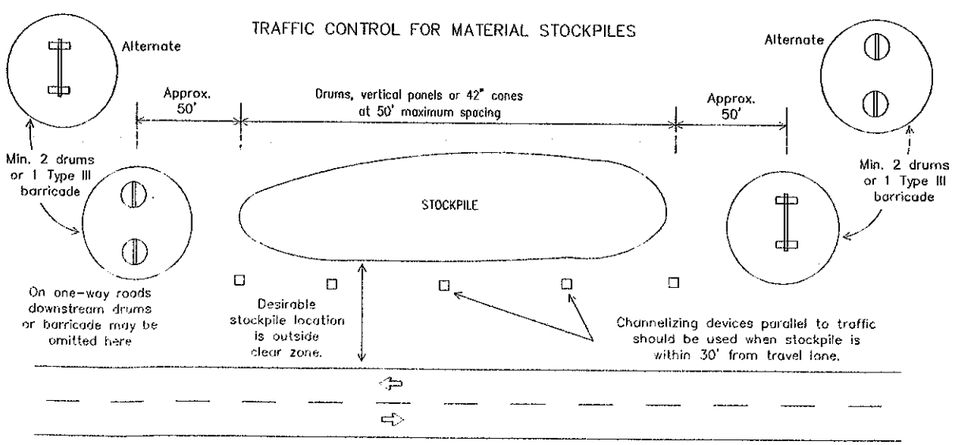
1. Traffic cones and tubular markers shall be a minimum of 28 inches in height when used either on freeways or at nighttime.
2. Cones or tubular markers shall be predominantly orange, fluorescent red-orange, or fluorescent yellow-orange. They should be kept clean and bright for maximum visibility.
3. Cones used only for daytime operations do not require the reflectorized bands.
4. Cones and tubular markers used for nighttime operations shall be reflectorized. Reflectorized material shall have a smooth, sealed outer surface that displays the same approximate color during the day and night. The reflectorized bands shall be retroreflective Type C (High Specific Intensity) conforming to Departmental Material Specification DMS-8300, unless otherwise noted.
5. When used at night, appropriate personnel shall ensure that cones and tubular markers remain in their proper location and in an upright position.
6. Reflectorization of 28"cones shall consist of a minimum 6 inch band placed at least 3 inches but not more than 4 inches from the top, supplemented by a minimum 4 inch band spaced a minimum of 2 inches below the 6 inch band.
7. Reflectorization of 42" cones shall be provided by alternating 4 to 6" orange and white stripes with orange on top.
8. Reflectorization of tubular markers shall be a minimum of two 3 inch bands placed a maximum of 2 inches from the top with a maximum of 6 inches between bands.
9. One-piece cones or tubular markers are generally suitable for temporary usage (up to 8 hours) with other channelization devices such as vertical panels, drums or two-piece cones for long term usage. Care should be taken to ensure they remain in their proper location and in an upright position.
10. Cones or tubular markers used on each project shall be of the same size and shape.
11. The handle may be designed as a hook or other shape, fabricated from non-rigid materials similar to the cone material, and may extend up to a maximum of 8 inches above the top of cone. Length of the handle shall not be considered with regard to the overall height of the cone.



EDGELINE CHANNELIZER

1. This device is intended only for use in place of a vertical panel to channelize traffic by indicating the edge of the travel lane. It is not intended to be used in transitions or tapers.
2. This device shall not be used to separate lanes of traffic (opposing or otherwise) or warn of objects.
3. This device is based on a 42 inch, two-piece cone with an alternate striping pattern: four 4 inch retroreflective bands, with an approximate 2 inch gap between bands. The color of the band should correspond to the color of the edgeline (yellow for left edgeline, white for right edgeline) for which the device is substituted or for which it supplements. The reflectorized bands shall be retroreflective Type C encapsulated bead (High Specific Intensity) conforming to Departmental Material Specification DMS-8300, unless otherwise noted.
4. The base must weigh a minimum of 30 lbs.

TRAFFIC CONTROL FOR MATERIAL STOCKPILES



Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES STANDARD

10 of 12 BC(10)-07

©TxDOT 11-4-02

REVISIONS	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
9-07	CONT	SECT	JOB	HIGHWAY
	DIST		COUNTY	SHEET NO.

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-5268
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD - BC (10)-07
BARRICADE AND CONSTRUCTION
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR:N/A VER. N/A

WORK ZONE PAVEMENT MARKINGS

GENERAL

1. The Contractor shall be responsible for maintaining work zone and existing pavement markings, in accordance with the standard specifications and special provisions, on all roadways open to traffic within the CSJ limits unless otherwise stated in the plans.
2. Color, patterns and dimensions shall be in conformance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
3. Additional supplemental pavement marking details may be found in the plans or specifications.
4. Pavement markings shall be installed in accordance with the TMUTCD and as shown on the plans.
5. When short term markings are required on the plans, short term markings shall conform with the TMUTCD, the plans and details as shown on the Standard Plan Sheet WZ(STPM).
6. When standard pavement markings are not in place and the roadway is opened to traffic, DO NOT PASS signs shall be erected to mark the beginning of the sections where passing is prohibited and PASS WITH CARE signs at the beginning of sections where passing is permitted.
7. All work zone pavement markings shall be installed in accordance with Item 662, "Work Zone Pavement Markings."

RAISED PAVEMENT MARKERS

1. Raised pavement markers are to be placed according to the patterns on BC(12).
2. All raised pavement markers used for work zone markings shall meet the requirements of Item 672, "RAISED PAVEMENT MARKERS" and Departmental Material Specification DMS-4200 or DMS-4300.

PREFABRICATED PAVEMENT MARKINGS

1. Removable prefabricated pavement markings shall meet the requirements of DMS-8241.
2. Non-removable prefabricated pavement markings (foil back) shall meet the requirements of DMS-8240.

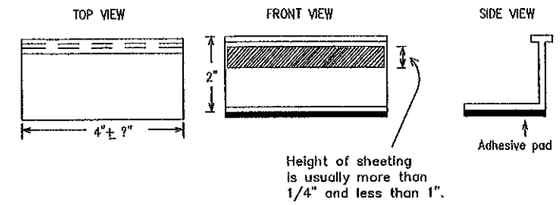
MAINTAINING WORK ZONE PAVEMENT MARKINGS

1. The Contractor will be responsible for maintaining work zone pavement markings within the work limits.
2. Work zone pavement markings shall be inspected in accordance with the frequency and reporting requirements of work zone traffic control device inspections as required by Form 599.
3. The markings should provide a visible reference for a minimum distance of 300 feet during normal daylight hours and 160 feet when illuminated by automobile low-beam headlights at night, unless sight distance is restricted by roadway geometrics.
4. Markings failing to meet this criteria within the first 30 days after placement shall be replaced at the expense of the Contractor as per Specification Item 662.

REMOVAL OF PAVEMENT MARKINGS

1. Pavement markings that are no longer applicable, could create confusion or direct a motorist toward or into the closed portion of the roadway, shall be removed or obliterated before the roadway is opened to traffic.
2. The above shall not apply to detours in place for less than two weeks, where flaggers and/or sufficient channelizing devices are used in lieu of markings to outline the detour route.
3. Pavement markings shall be removed to the fullest extent possible, so as not to leave a discernable marking. This shall be by any method approved by TxDOT Specification Item 677 for "Eliminating Existing Pavement Markings and Markers".
4. The removal of pavement markings may require resurfacing or seal coating portions of the roadway.
5. Subject to the approval of the Engineer, any method that proves to be successful on a particular type pavement may be used.
6. Blast cleaning may be used but will not be required unless specifically shown in the plans.
7. Over-painting of the markings SHALL NOT BE permitted.
8. Removal of raised pavement markers shall be as directed by the Engineer.
9. Removal of existing pavement markings and markers will be paid for directly in accordance with Item 677, "ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS," unless otherwise stated in the plans.
10. Black-out marking tape may be used to cover conflicting existing markings for periods less than two weeks when approved by the Engineer.

Temporary Flexible-Reflective Roadway Marker Tabs



STAPLES OR NAILS SHALL NOT BE USED TO SECURE TEMPORARY FLEXIBLE-REFLECTIVE ROADWAY MARKER TABS TO THE PAVEMENT SURFACE

1. Temporary flexible-reflective roadway marker tabs used as guidemarks shall meet the requirements of DMS-8242.
2. Tabs detailed on this sheet are to be inspected and accepted by the Engineer or designated representative. Sampling and testing is not normally required, however at the option of the Engineer, either "A" or "B" below may be imposed to assure quality before placement on the roadway.
   A. Select five (5) or more tabs at random from each lot or shipment and submit to the Construction Division, Materials and Pavement Section to determine specification compliance.
   B. Select five (5) tabs and perform the following test. Affix five (5) tabs at 24 inch intervals on an asphaltic pavement in a straight line. Using a medium size passenger vehicle or pickup, run over the markers with the front and rear tires at a speed of 35 to 40 miles per hour, four (4) times in each direction. No more than one (1) out of the five (5) reflective surfaces shall be lost or displaced as a result of this test.
3. Small design variances may be noted between tab manufacturers.
4. See Standard Sheet WZ(STPM) for tab placement on new pavements. See Standard Sheet TCP(7-1) for tab placement on seal coat work.

Raised Pavement Markers used as Guidemarks

1. Raised pavement markers used as guidemarks shall be from the approved product list, and meet the requirements of DMS-4200.
2. All temporary construction raised pavement markers provided on a project shall be of the same manufacturer.
3. Adhesive for guidemarks shall be bituminous material hot applied or butyl rubber pad for all surfaces, or thermoplastic for concrete surfaces.

Guidemarks shall be designated as:
YELLOW - (two amber reflective surfaces with yellow body).
WHITE - (one silver reflective surface with white body).

DEPARTMENTAL MATERIAL SPECIFICATIONS

PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
TRAFFIC BUTTONS	DMS-4300
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
PREFABRICATED PAVEMENT MARKINGS-PERMANENT	DMS-8240
PREFABRICATED PAVEMENT MARKINGS-REMOVABLE	DMS-8241
TEMPORARY FLEXIBLE-REFLECTIVE ROADWAY MARKER TABS	DMS-8242

A list of prequalified reflective raised pavement markers, non-reflective traffic buttons, roadway marker tabs and other pavement markings can be found at the Material Producer List web address shown on BC(1).

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-5266
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD - BC (11)-07
BARRICADE AND CONSTRUCTION
WEBB COUNTY, TEXAS

Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION PAVEMENT MARKINGS STANDARD

11 of 12 BC(11)-07

© TxDOT February 1998

REVISIONS	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
2-98	CONT	SECT	JOB	HIGHWAY
1-02				
11-02	DIST		COUNTY	SHEET NO.
9-07				

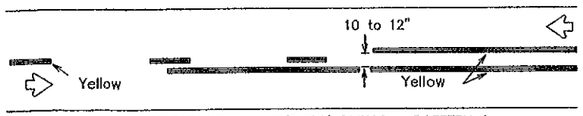
DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR: N/A VER. N/A

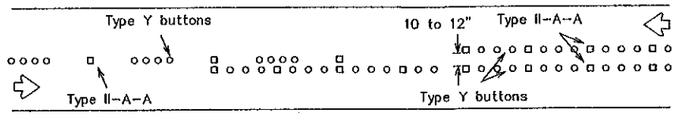
SHEET 88.11 OF TOTAL 90

PAVEMENT MARKING PATTERNS

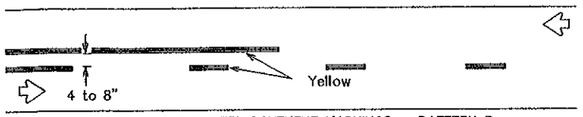
CENTER LINE & NO-PASSING ZONE BARRIER LINES FOR TWO-LANE, TWO-WAY HIGHWAYS



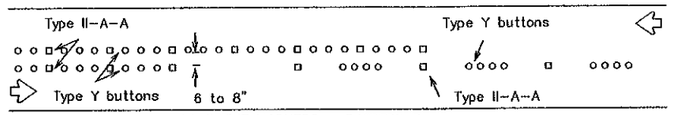
REFLECTORIZED PAVEMENT MARKINGS – PATTERN A



RAISED PAVEMENT MARKERS – PATTERN A



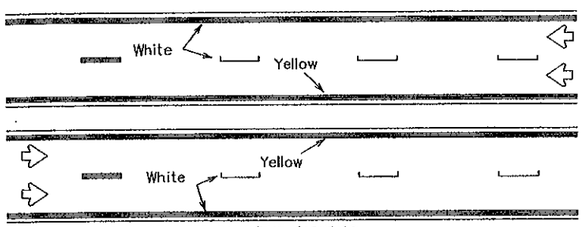
REFLECTORIZED PAVEMENT MARKINGS – PATTERN B



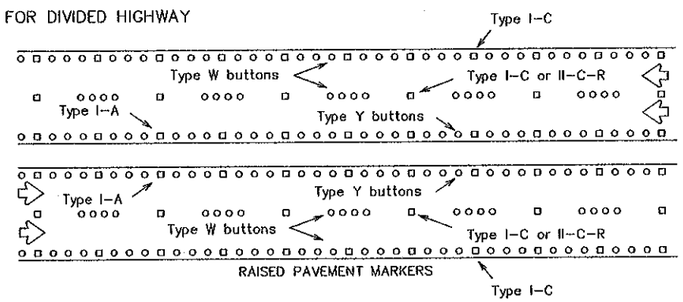
RAISED PAVEMENT MARKERS – PATTERN B

Pattern A is the TXDOT Standard, however Pattern B may be used if approved by the Engineer. Prefabricated markings may be substituted for reflectorized pavement markings.

EDGE & LANE LINES FOR DIVIDED HIGHWAY



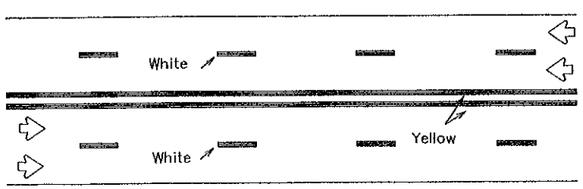
REFLECTORIZED PAVEMENT MARKINGS



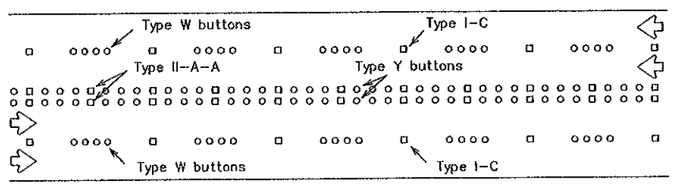
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



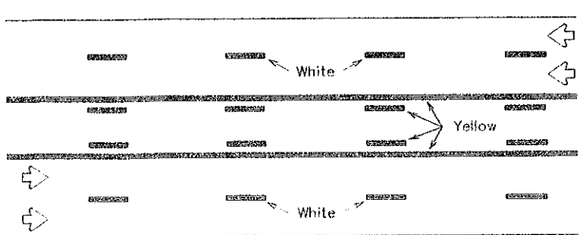
REFLECTORIZED PAVEMENT MARKINGS



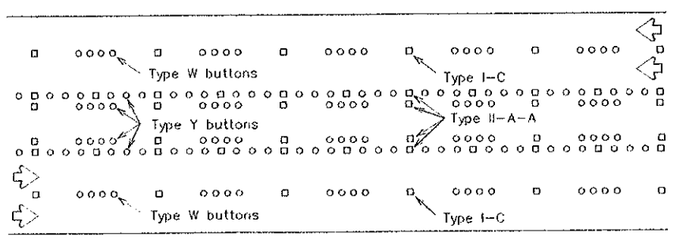
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

TWO-WAY LEFT TURN LANE



REFLECTORIZED PAVEMENT MARKINGS



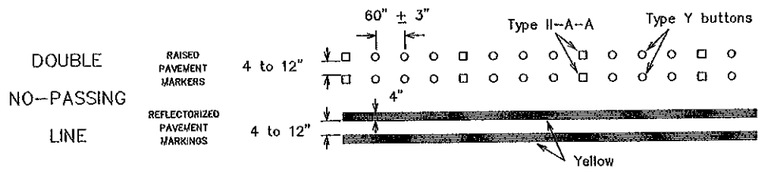
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

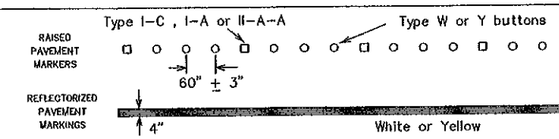
STANDARD WORK ZONE PAVEMENT MARKINGS DETAILS

SOLID LINES

DOUBLE NO-PASSING LINE

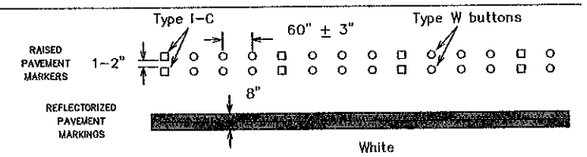


EDGE LINE OR SINGLE NO-PASSING LINE



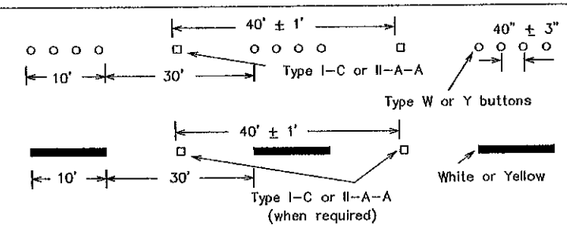
WIDE LINE

(FOR LEFT TURN CHANNELIZING LINE OR CHANNELIZING LINE USED TO DISCOURAGE LANE CHANGING.)



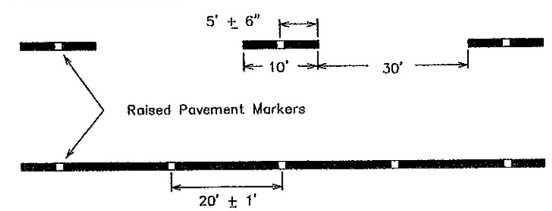
BROKEN LINE

(FOR CENTER LINE OR LANE LINE.)



REMOVABLE MARKINGS WITH RAISED PAVEMENT MARKERS

If raised pavement markers are used to supplement REMOVABLE markings, the markers shall be applied to the top of the tape at the approximate mid length of tape used for broken lines or at 20 foot spacing for solid lines. This allows an easier removal of raised pavement markers and tape.



Centerline only – not to be used on edge lines

Raised pavement markers used as standard pavement markings shall be from the approved products list and meet the requirements of Item 672 "RAISED PAVEMENT MARKERS."

Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION PAVEMENT MARKING PATTERNS STANDARD

12 of 12 BC(12)-07

©TxDOT February 1998

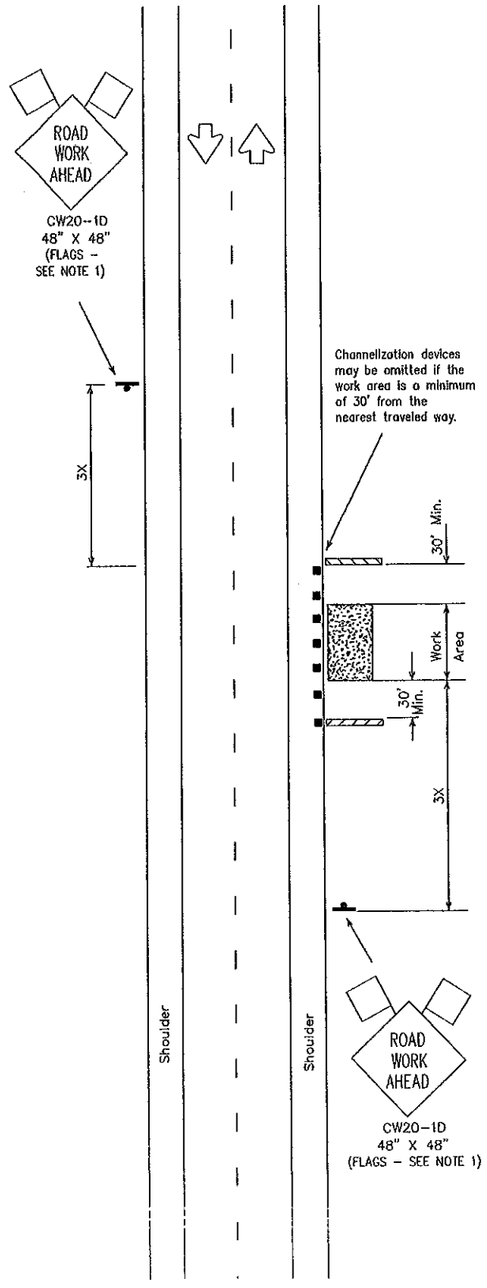
REVISIONS	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
1-97	CONT	SECT	JOB	HIGHWAY
2-98				
11-02	DIST		COUNTY	SHEET NO.
9-07				

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2219
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD - BC (12)-07
BARRICADE AND CONSTRUCTION
WEBB COUNTY, TEXAS

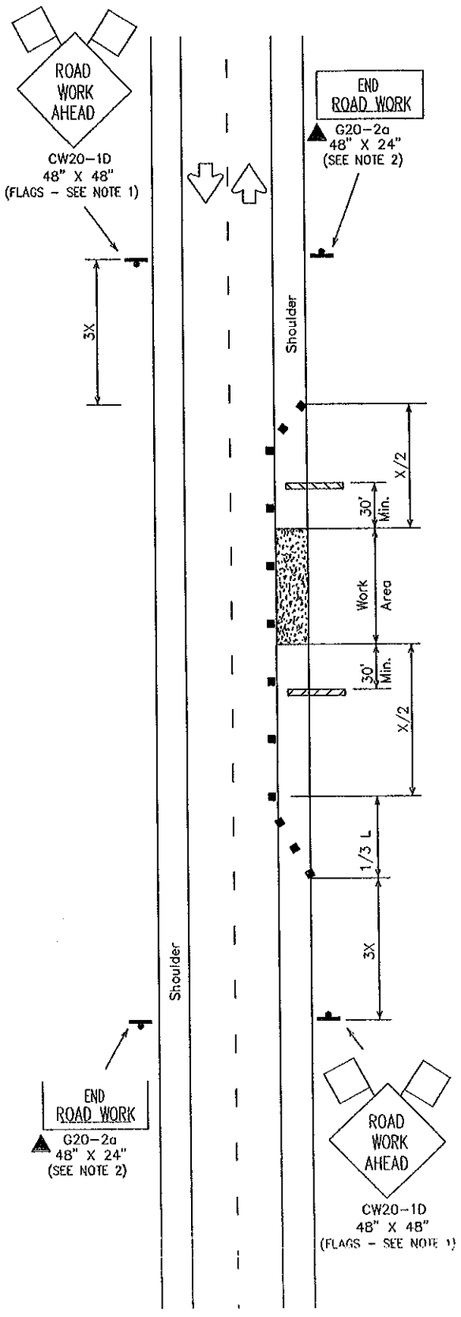
DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR: N/A VER. N/A



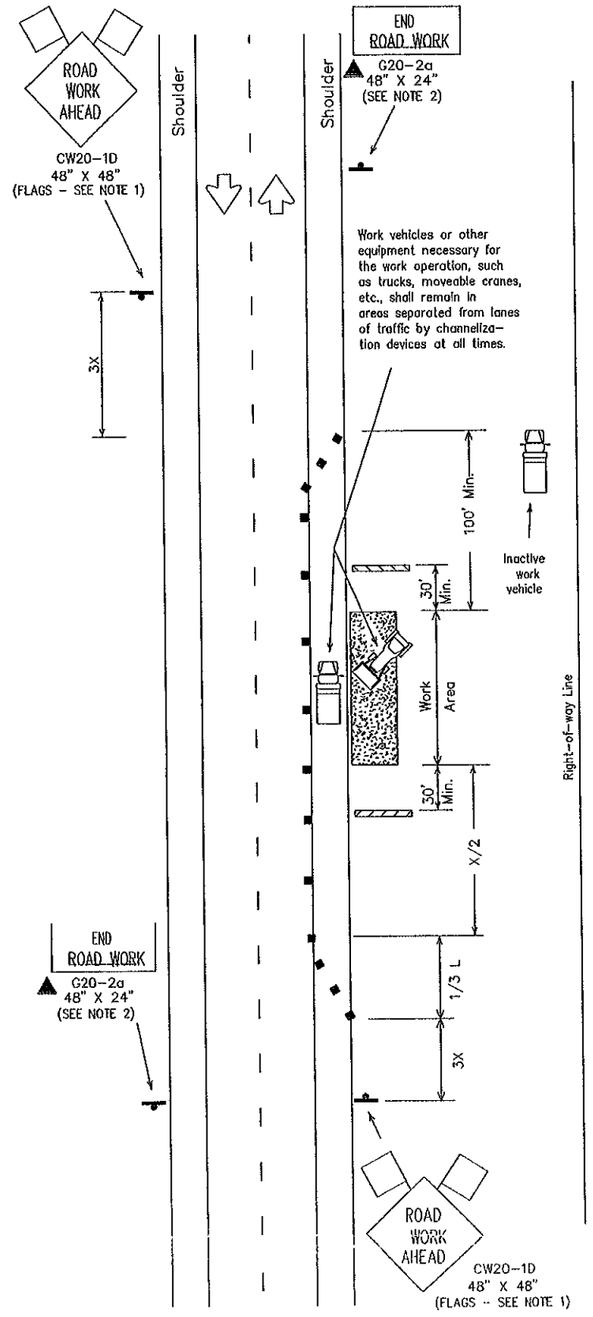
TCP (2-1a)

Work Area Near Shoulder



TCP (2-1b)

Work Area on Shoulder



TCP (2-1c)

Work Vehicles on Shoulder

LEGEND

Type III Barricade · Channelizing Devices · Flag
Heavy Work Vehicle · Truck Mounted Attenuator
Trailer Mounted Flashing Arrow Panel · Portable Changeable Message Sign
Flagger · Sign Post

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Device On a Taper	On a Tangent	Minimum Sign Spacing X Distance
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'-75'	120'
35		205'	225'	245'	35'	70'-90'	160'
40		265'	295'	320'	40'	80'-100'	240'
45	L=WS	450'	495'	540'	45'	90'-110'	320'
50		500'	550'	600'	50'	100'-125'	400'
55		550'	605'	660'	55'	110'-140'	500'
60		600'	660'	720'	60'	120'-150'	* 600'
65		650'	715'	780'	65'	130'-165'	* 700'
70		700'	770'	840'	70'	140'-175'	* 800'

* Conventional Roads Only

** Taper lengths have been rounded off.
L=Length of Taper (FT.) W=Width of Offset (FT.) S=Posted Speed (MPH)

TYPICAL USAGE:				
SHORT MOBILE	SHORT TERM DURATION	INTERMEDIATE STATIONARY TERM	LONG TERM STATIONARY	STATIONARY
	✓	✓	✓	✓

GENERAL NOTES:

1. Unless otherwise stated in the plans, flags attached to signs are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans.
3. Type III barricades are required on both sides of work area at all times. (See BC Standards for barricade details.)
4. Stockpiled material should be placed a minimum 30' from nearest traveled way.
5. On high speed facilities advance warning signs should be installed approximately 3X from the work area or from the beginning of a lane or shoulder taper. On low speed facilities the advance warning sign should be placed on the "X" minimum distance.

Only pre-qualified products shall be used. A list of compliant products and their sources may be obtained by writing or faxing:

Standards Engineer
Traffic Operations Division - TE
Texas Department of Transportation
125 East 11th Street
Austin, Texas 78701-2483
Phone (512) 416-3335
Fax (512) 416-3161
E-mail TRF-STANDARD@mailgw.dot.state.tx.us

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9286
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD
TRAFFIC CONTROL PLAN
TCP (2-1) - 98
WEBB COUNTY, TEXAS

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

TRAFFIC CONTROL PLAN

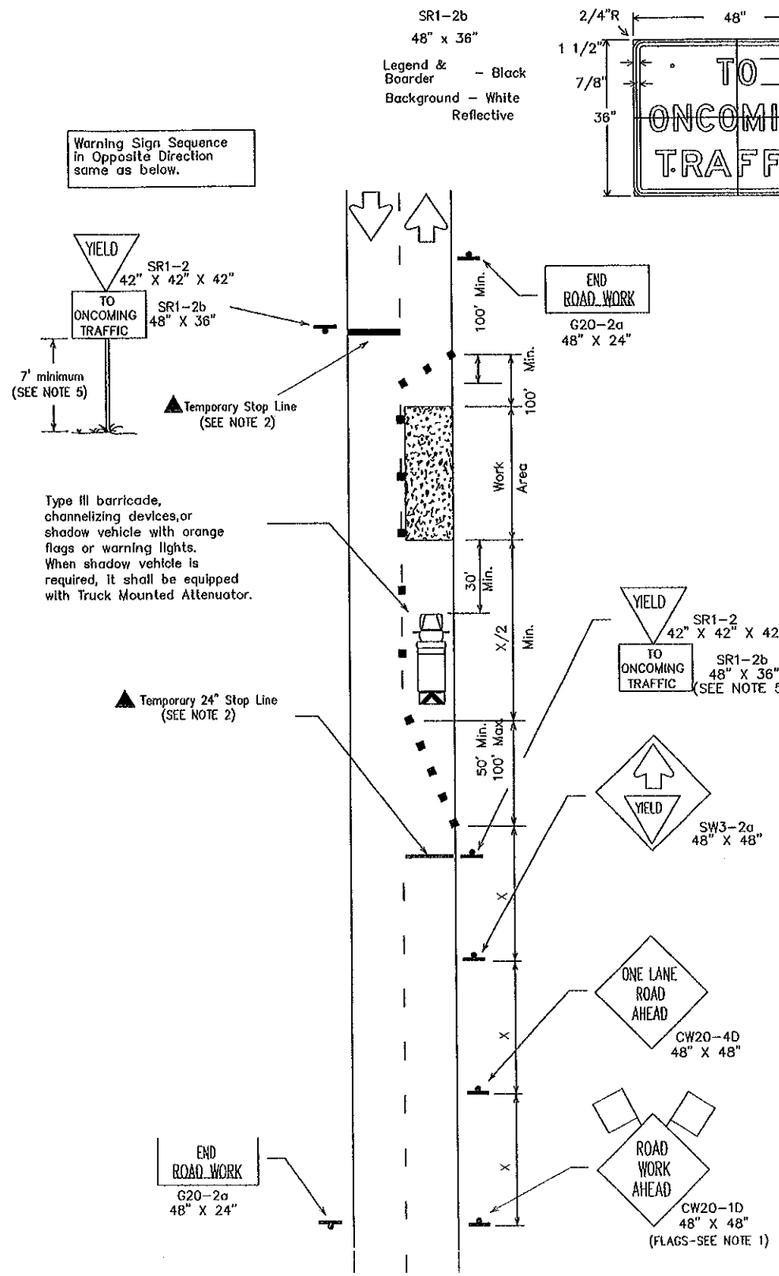
TCP(2-1)-98

©TxDOT December 1985 DN-LR CK-MT DR-DN CK-MT

REVISIONS	STATE DISTRICT	FEDERAL ROADWAY	FEDERAL AID PROJECT	SHEET
2-94 8-95 1-97 4-98		6		
	COUNTY		CONTROL SECTION JOB	HIGHWAY

DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

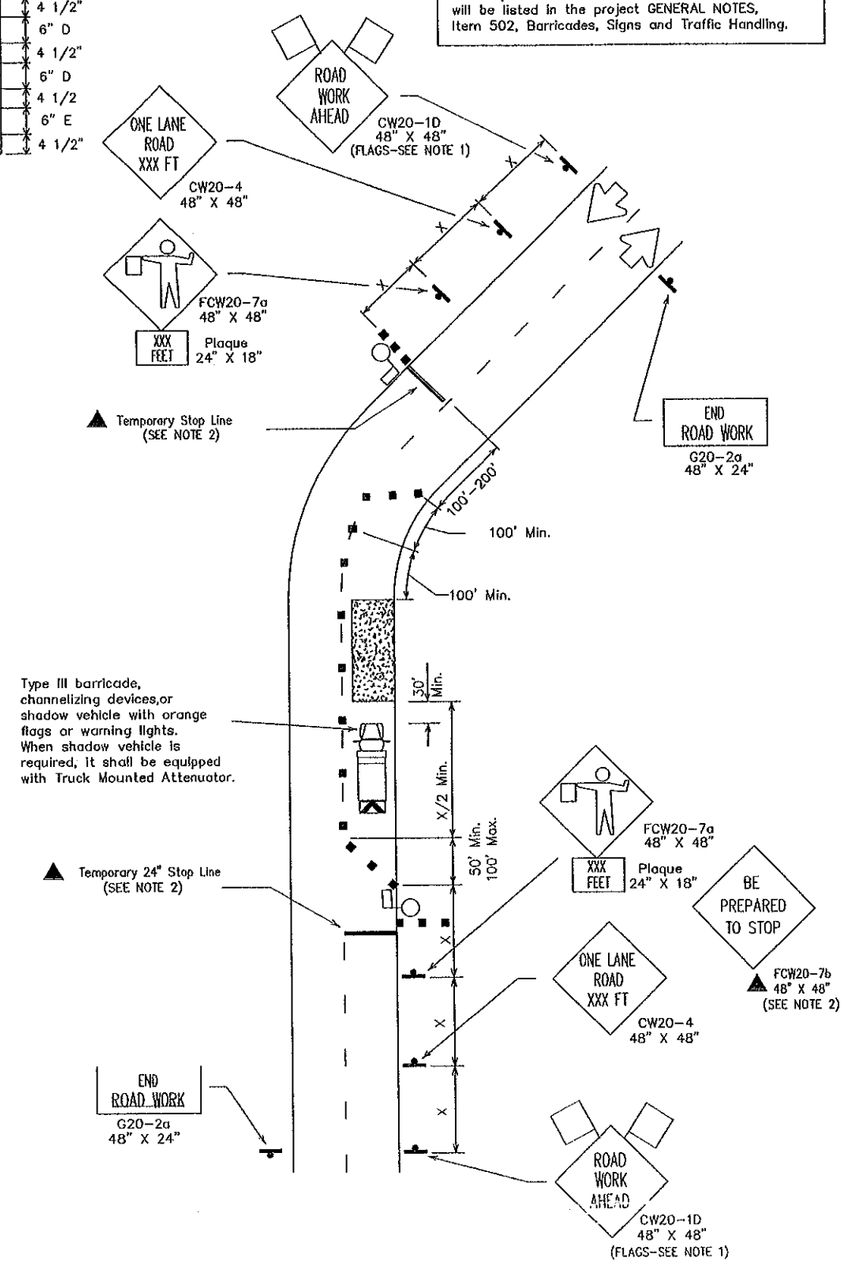
SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR: N/A VER. N/A



TCP (2-2a)

2-Lane Roadway Without Paved Shoulders
One Lane Closed
Adequate Field of View

The requirement for shadow vehicles will be listed in the project GENERAL NOTES, Item 502, Barricades, Signs and Traffic Handling.



TCP (2-2b)

2-Lane Roadway Without Paved Shoulders
One Lane Closed
Inadequate Field of View

LEGEND

Type III Barricade · Channelizing Devices · Flag
Heavy Work Vehicle · Truck Mounted Attenuator
Trailer Mounted Flashing Arrow Panel · Portable Changeable Message Sign
Flagger · Sign Post

Posted Speed*	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Device On a Taper	On a Tangent	Minimum Sign Spacing X Distance
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'-75'	120'
35		205'	225'	245'	35'	70'-90'	160'
40		265'	295'	320'	40'	80'-100'	240'
45	L=WS	450'	495'	540'	45'	90'-110'	320'
50		500'	550'	600'	50'	100'-125'	400'
55		550'	605'	660'	55'	110'-140'	500'
60		600'	660'	720'	60'	120'-150'	* 600'
65		650'	715'	780'	65'	130'-165'	* 700'
70		700'	770'	840'	70'	140'-175'	* 800'

* Conventional Roads Only

** Taper lengths have been rounded off.
L=Length of Taper (FT.) W=Width of Offset (FT.) S=Posted Speed (MPH)

TYPICAL USAGE:				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓	✓	

GENERAL NOTES:

1. Flags attached to signs are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans.
3. The BE PREPARED TO STOP sign may be installed after the ONE LANE ROAD XXX FT sign, but proper sign spacing shall be maintained.
4. YIELD sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work zones should be no longer than one half city block. In rural areas on roadways with less than 4000 ADT and work areas should be no longer than 400'.
5. YIELD TO ONCOMING TRAFFIC sign shall be placed on a support at a 7' minimum mounting height.
6. Flaggers should use two-way radios or other methods of communication to control traffic.
7. Length of work area should be based on the ability of flaggers to communicate.
8. For intermediate term situations, when it is not feasible to remove and restore pavement markings, the channelization must be made dominant by using a very close spacing. This is especially important in locations of conflicting information, such as where traffic is directed over a double yellow centerline. In such locations a maximum channelizing device spacing of 10 feet is recommended. The 10 foot channelizing device spacing recommendation is intended for the area of conflicting information and not the entire work zone.

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

TRAFFIC CONTROL PLAN

TCP(2-2)-03

©TxDOT December 1985 | DN-LR | CK:-MT | DW-DN | CK:-MT | MPG NO.

REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
8-95		6		
1-97				
4-98	COUNTY		CONTROL / SECTION / JOB	HIGHWAY
3-03				

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9265
Ph. (956) 753-2210
Fax: (956) 753-2213

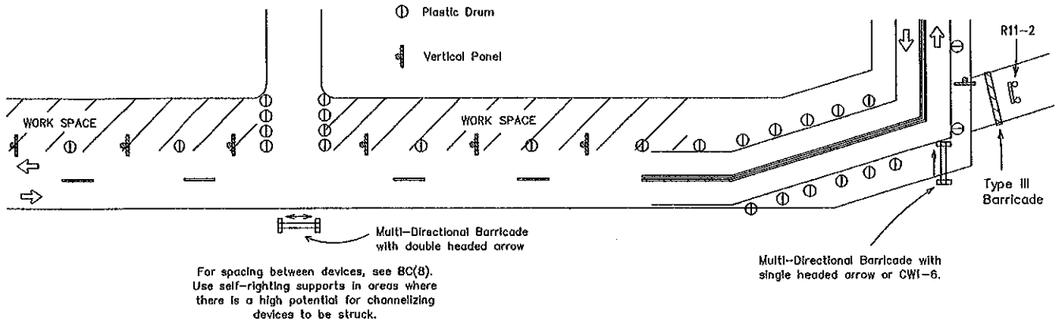
TANQUECITOS PHASE I AND II
TX-DOT STANDARD TCP(2-2)-03
TRAFFIC CONTROL PLAN
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.
CHECKED BY: F.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

SCALE: (24"x36") SHEET
HOR: N/A VER. N/A
SCALE: (11"x17") SHEET
HOR:N/A VER. N/A

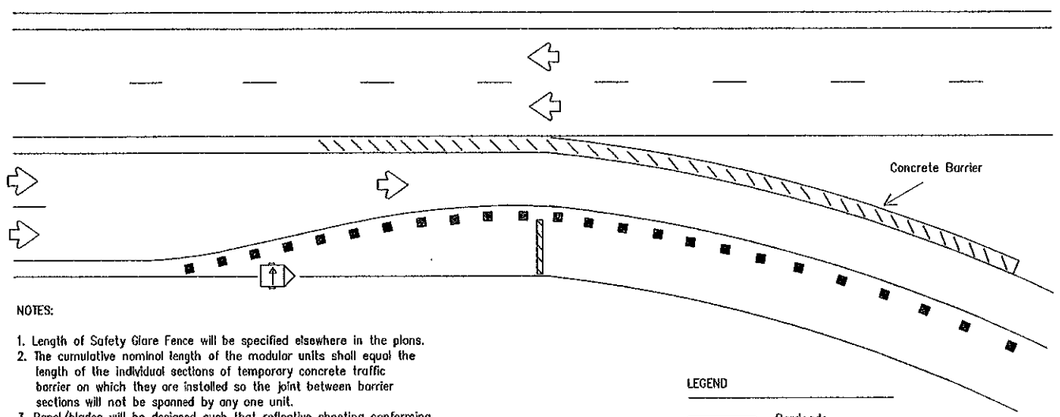
SHEET 89.2 OF TOTAL: 90

CHANNELIZING DEVICES FOR URBAN ROADWAY TYPE PROJECT



For spacing between devices, see BC(8). Use self-righting supports in areas where there is a high potential for channelizing devices to be struck.

BARRIER DELINEATION WITH SAFETY GLARE FENCE



NOTES:

1. Length of Safety Glare Fence will be specified elsewhere in the plans.
2. The cumulative nominal length of the modular units shall equal the length of the individual sections of temporary concrete traffic barrier on which they are installed so the joint between barrier sections will not be spanned by any one unit.
3. Panel/blades will be designed such that reflective sheeting conforming with Departmental Material Specification DMS-8300, Flat Surface Reflective Sheeting, Type C (High Specific Intensity), minimum size of 2 inches by 12 inches can be attached to the edge of the panel/blade. The sheeting shall be attached to one panel/blade per section of concrete barrier not to exceed a spacing of 30 feet. Barrier reflectors are not necessary when panel/blades are installed.
4. Modular Glare Screens for head light barrier shall meet the requirements of DMS-8610.

LEGEND

- Barricade
- Channelizing devices
- Trailer mounted flashing arrow panel
- Safety glare fence

Only pre-qualified products shall be used. A copy of the "Compliant Work Zone Traffic Control Devices List" (CWZTCD) describes pre-qualified products and their sources and may be obtained by contacting:

Standards Engineer
Traffic Operations Division - TE
Texas Department of Transportation
125 East 11th Street
Austin, Texas 78701-2483
Phone (512) 416-3120
Fax (512) 416-3299

Instructions to locate the "CWZTCD" on TxDOT website are:

Start at website - www.dot.state.tx.us
Click on "About TxDOT",
Click on "Organizational Chart",
Click on Traffic Operations Box,
Click on "Compliant Work Zone Traffic Control Devices",
Click on "View PDF".
This site is printable.

PREQUALIFICATION PROCEDURES ARE OBTAINED FROM:

CONSTRUCTION DIVISION-MATERIALS AND TESTS SECTION
TEXAS DEPARTMENT OF TRANSPORTATION (TxDOT)
125 EAST 11th STREET
AUSTIN, TX 78701-2483

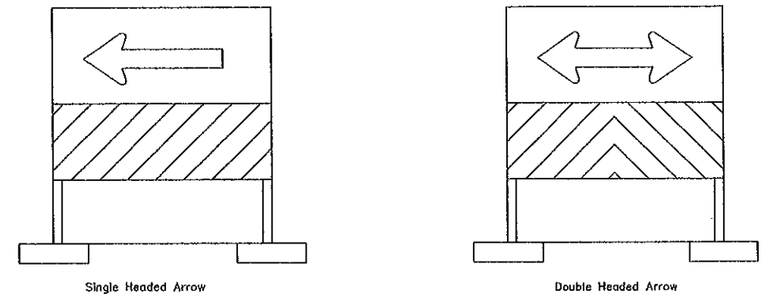
DEPARTMENTAL MATERIAL SPECIFICATIONS

FLAT SURFACE REFLECTIVE SHEETING	DMS-8300
DELINEATORS AND OBJECT MARKERS	DMS-8600
MODULER GLARE SCREENS	DMS-8610

COLOR	USAGE	SIGN SHEETING
ORANGE	BACKGROUND	TYPE E (FLUORESCENT PRISMATIC)
WHITE	BACKGROUND	TYPE C (HIGH SPECIFIC INTENSITY)
BLACK	LEGEND & BORDERS	VINYL NON-REFLECTIVE SHEETING

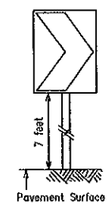
REFER TO THE BC SHEETS FOR SHEETING REQUIREMENT ON CHANNELIZING DEVICES.

MULTI-DIRECTIONAL BARRICADE



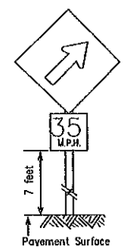
1. Multi-directional barricade shall not be used for lane closures.
2. May be used for sharp changes in alignment, or across roadway from stem of "T" intersection.
3. Typically used for Intermediate Term Stationary, Short Term Stationary or Short Duration work zone operations.
4. See the CWZTCD List for approved designs.

USAGE OF CW1-6, ECW1-6a AND CW1-8 SIGNS



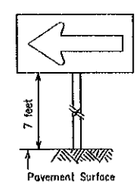
CW1-8

The CHEVRON sign (CW1-8) may be used to replace roadside delineation on curves or used in transitions or tapers.



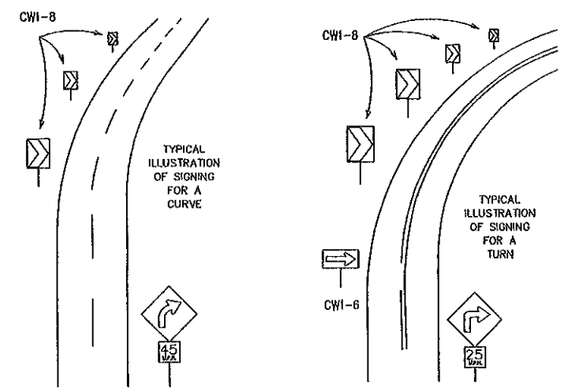
ECW1-6a

An UPWARD SLOPING ARROW sign (ECW1-6a) is intended to be used to indicate the beginning of a curve or transition. It should be preceded with an appropriate curve sign when needed, and should not be used throughout the curve or transition. Advisory speed plaque is optional.



CW1-6

A LARGE ARROW sign (CW1-6) is intended to be used to give notice of a sharp change in alignment (turn) in the direction of travel. It should be preceded with an appropriate advance construction warning turn sign.



NOTES:

1. CW1-8, ECW1-6a & CW1-8 signs shall be mounted on fixed supports.
2. Chevrons, when used, shall be erected on the outside of a sharp curve or turn, or on the far side of an intersection. They shall be in line with and at right angles to approaching traffic. Spacing should be such that the motorist always has three in view, until the change in alignment eliminates its need.
3. For two-way traffic, use same arrangement of signs on outside of curve for each direction of travel.
4. Appropriate advance warning CURVE or TURN sign with Advisory Speed plaque should be used when needed.

The five categories of work duration and their time at a location shall be:

A. Long-term stationary is work that occupies a location more than 3 days.

B. Intermediate-term stationary is work that occupies a location more than one daylight period up to 3 days, or nighttime work lasting more than 1 hour.

C. Short-term stationary is daytime work that occupies a location for more than 1 hour, but less than 12 hours.

D. Short duration is work that occupies a location up to 1 hour.

E. Mobile is work that moves intermittently or continuously.

Texas Department of Transportation
Traffic Operations Division

TRAFFIC CONTROL PLAN
TYPICAL DETAILS

WZ(TD)-03

©TxDOT February 1998

REVISIONS
4-98
3-03

DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
CONT	SECT	JOB	HIGHWAY
DIST		COUNTY	SHEET NO.

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9285
Ph. (956) 753-2210
Fax (956) 753-2213

TANQUECITOS PHASE I AND II
TX-DOT STANDARD WZ(TD)-03
TRAFIC CONTROL PLAN
TYPICAL DETAILS
WEBB COUNTY, TEXAS

DRAWN BY: T.P.O.
CHECKED BY: E.L.D.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 02-03-10

SCALE: (24"x36") SHEET
HOR: N/A VER: N/A
SCALE: (11"x17") SHEET
HOR: N/A VER: N/A

INTENTIONALLY LEFT BLANK

TANQUECITOS PHASE I AND II

WEBB COUNTY, TEXAS

GILPIN ENGINEERING COMPANY
101 W. Hillside Road, Ste. 8
Laredo, Texas 78041
Texas Registered Firm F-9266
Ph. (956) 753-2210
Fax (956) 753-2213

DRAWN BY: T.P.O.
CHECKED BY: E.L.O.
DRAWN DATE:
PLOTTED DATE: 01-14-11
JOB No. N/A
FILE NAME: TANQUECITOS
STATUS: 100%
AS-BUILT: NO
REVISED DATE: 09-03-10

A 24"x36" SHEET
HOR N/A | ER N/A
SCALE 1"=17' SHEET
HOR N/A | VER N/A