ADDENDUM NO. 2

Addendum No. 2 to the Construction Documents for:

MCALLISTER PARK RECONNECTION
TO SALADO CENTRAL GREENWAY

PROJECT ID NO.: 26-00526

Briones Consulting & Engineering, Ltd.
8118 Broadway
San Antonio, TX 78209

This addendum is hereby made a part of the construction documents to the same extent as though it were originally included therein. This addendum shall take precedence over the original construction documents where its provisions apply.

REVISIONS TO DOCUMENTS

Table of Contents – Governing Specifications – Add 517 Bridge Railing to City of San Antonio Specs.

025 Unit Pricing Form - This document has been revised to reflect the following:

- Add item 517.1 – Bridge Railing 278 LF
- Revise Quantity of Item 522.1 from 300 LF to 22 LF.

REVISIONS TO PLANS

G-2	Index of sheets:	Add sheet C-27 Corrected the Description of C-21 Adjusted the Sequence Numbers 30-41 to account for adding Sheet C-27.
	Quantities:	Add Item 517.1 Bridge Railing 278 lf. Revise Item 522.1 Handrail from 300 lf to 22 lf

C-10 Revised handrail detail callout in profile referencing Type F rail on Sheet C-27

C-11 Corrected Handrail detail callout in plan view.

C-27 Added a Pedestrian Handrail Detail sheet. Use Type F where noted on plans.

END OF ADDENDUM NO. 2

RESPONSES TO BIDDERS' QUESTIONS

Question 1. How many of these existing "Heritage Oak" trees will we be allowed to remove?

Response. The trees slated for removal are shown on sheet L-1. This question refers specifically to the heritage trees in the vicinity of the bridge construction. The plan is to save all heritage trees in the immediate vicinity of the bridge with the exception of those shown on L-1. Another pre-bid meeting is not planned. A meeting will be organized with the successful bidder, his arborist and appropriate City and Consulting Engineering staff to discuss bridge construction as it relates to the heritage trees.

No other questions have been received to date.

ADDENDUM REVIEWED AND APPROVED

CITY OF SAN ANTONIO:

AGDEL RIVERA

Agdel Rivera, Project Coordinator

9.17.12

Date

END OF ADDENDUM NO. 2

CITY OF SAN ANTONIO
DEPARTMENT OF CAPITAL IMPROVEMENTS MANAGEMENT SERVICES
CONTRACT SERVICES DIVISION

RECEIPT OF ADDENDUM NUMBER(S) **2** IS HEREBY ACKNOWLEDGED FOR PLANS AND SPECIFICATIONS FOR CONSTRUCTION OF **MCALLISTER PARK RECONNECTION TO SALADO CENTRAL GREENWAY - (26-00526)**

FOR WHICH BIDS WILL BE OPENED ON **September 25, 2012**

THIS ACKNOWLEDGEMENT MUST BE SIGNED AND RETURNED WITH THE BID PACKAGE.

Company Name: _____

Address: _____

City/State/Zip Code: _____

Date: _____

_____
Signature

_____
Print Name/Title

CITY OF SAN ANTONIO PROJECT MANUAL
MCALLISTER RECONNECTION TO SALADO CENTRAL GREENWAY

TABLE OF CONTENTS
ADDENDUM #2

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I.	**BIDDING REQUIREMENTS, CONTRACT FORMS & CONTRACT CONDITIONS:**	
010	Invitation for Bids and Contract Signature Page	1
020	Bid Form	1
025	Unit Pricing Form	2
030	Experience & Qualifications	1
040	Standard Instructions to Respondent	8
050.01	Small Business Economic Development (SBEDA) Guidelines	11
	Stacked API Subcontractor/Supplier Utilization Plan	2
060	Supplemental Conditions	1
075	Performance Bond	1
076	Payment Bond	1
081	General Conditions for COSA Construction Contracts	105
	Heavy/Hwy Wage Decision	4
II.	**GOVERNING SPECIFICATIONS:**	

City of San Antonio Standard Specifications for Construction - June 2008

http://www.sanantonio.gov/cims/standardspecificationsV2.asp

100	MOBILIZATION
101	PREPARING RIGHT OF WAY
102	OBLITERATING ABANDONED STREET (TRAIL)
104	EXCAVATION
107	EMBANKMENT
200	FLEXIBLE BASE (2" COMPACTED DEPTH)
209	CONCRETE PAVEMENT
300	CONCRETE
301	REINFORCING STEEL
302	METAL FOR STRUCTURES
303	WELDED WIRE FLAT SHEETS
307	CONCRETE STRUCTURES
308	DRILLED SHAFTS AND UNDER-REAMED FOUNDATIONS
309	PRECAST REINFORCED CONCRETE BOX CULVERTS
410	SUBGRADE FILLER
502	CONCRETE SIDEWALKS
505	6" CONCRETE RIPRAP

CITY OF SAN ANTONIO PROJECT MANUAL
MCALLISTER RECONNECTION TO SALADO CENTRAL GREENWAY

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ADDENDUM #2

ITEM NO.		NO. OF PAGES
507	CHAIN LINK WIRE FENCE	

City of San Antonio Standard Specifications for Construction - June 2008 (con't)

514	PAINT AND PAINTING	
517	BRIDGE RAILING	
520	HYDROMULCHING	
522	SIDEWALK PIPE RAILING	
530	BARRICADES, SIGNS AND TRAFFIC HANDLING	
531	SIGNS	
535	HOT APPLIED THERMOPLASTIC PAVEMENT MARKINGS	
540	TEMPORARY EROSION, SEDIMENTATION & WATER POLLUTION PREVENTION CONTROL	

City of San Antonio Parks Department Specifications for Construction

2871	SITE FURNISHINGS	3
2940	TREATMENT OF EXISTING TREES	7

Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges – June 2004

http://www.dot.state.tx.us/BUSINESS/specifications.htm

TxDOT 432	ROCK RIPRAP	

III. SPECIAL SPECIFICATIONS:

SP 1000.1	PROJECT SIGNS	1
SS 1000	PREFABRICATED PEDESTRIAN STEEL TRUSS BRIDGE SPAN	6

CITY OF SAN ANTONIO

025 UNIT PRICING FORM - ADDENDUM #2

PROJECT NAME: McAllister Park Reconnection to Salado Central Greenway

PROJECT NO. 26-00526

ITEM NO.	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
100.1	MOBILIZATION	L.S.	1			
100.2	INSURANCE & BOND	L.S.	1			
101.1	PREPARING RIGHT OF WAY	L.S.	1			
102.1	DEMOLISH EXISTING TRAIL	S.Y.	312			
104.1	EXCAVATION	C.Y.	1656			
107.2	EMBANKMENT	C.Y.	235			
107.2	EMBANKMENT (RETAINING WALL BACKFILL)	C.Y.	308			
200.1	FLEXIBLE BASE (2" COMPACTED DEPTH)	S.Y.	5226			
307.1	CONCRETE SIDEWALK DRAIN (INCLUDES PLATE)	LF	78			
307.1	CONCRETE CLASS C (ABUTMENT)	C.Y.	19.5			
307.1	CONCRETE CLASS C (APPROACH SLAB)	C.Y.	4.4			
307.1	1~10'x6'x12' BOX CULVERT	C.Y.	12			
307.1	CONCRETE RETAINING WALLS	S.F.	1175			
308.1	DRILL SHAFT (30")	LF	80			
502.1	5" CONCRETE TRAIL (INCLUDES REST AREAS & MILE MARKER CONCRE	S.Y.	6326			
502.1	8" CONCRETE TOE DOWNS (9" OVERALL DEPTH - 4" TOEDOWN)	C.Y.	72			
502.1	8" CONCRETE TOE DOWNS (36" OVERALL DEPTH - 31" TOEDOWN)	C.Y.	20			
502.1	8" CONCRETE TOE DOWNS (24" OVERALL DEPTH - 19" TOEDOWN)	C.Y.	85			
505.1	6" CONCRETE RIPRAP	S.Y.	166			
517.1	BRIDGE RAILING	L.F.	278			
520.1	HYDROMULCH SEEDING	S.Y.	17517			
522.1	HANDRAIL (CITY STANDARD WITH TOE PLATE)	L.F.	22			
530.1	BARRICADES, SIGNS AND TRAFFIC HANDLING	L.S.	1			
531.3	STOP SIGN (R1-1)	EACH	2			
535.5	12" WIDE WHITE STRIPE	L.F.	48			
535.5	24" WIDE WHITE STRIPE	L.F.	40			
531.59	WURZBACH PARKWAY - UNDER BRIDGE SIGN	EACH	2			
531.59	CAUTION - VEHICULAR TRAFFIC AHEAD SIGN	EACH	2			
531.59	BIKE PEDESTRIAN SIGN	EACH	2			
540.1	ROCK FILTER DAMS	L.F.	125			
540.6	CONSTRUCTION EXIT	S.Y.	445			
540.9	TEMPORARY SEDIMENT CONTROL SILT FENCE	L.F.	5666			
TxDOT 432	ROCK RIPRAP	CY	175			

CITY OF SAN ANTONIO

025 UNIT PRICING FORM - ADDENDUM #2

PROJECT NAME: McAllister Park Reconnection to Salado Central Greenway

PROJECT NO. 26-00526

ITEM NO.	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
SS 1000	PEDESTRIAN TRUSS BRIDGE SPAN	EACH	1			
2871A	METAL BENCH	EACH	1			
2871B	CREEK CROSSING AHEAD SIGN	EACH	2			
2871B	WAYFINDING SIGNS	EACH	2			
2871B	MILE MARKERS	EACH	1			
2871B	QUARTER MILE MARKERS	EACH	2			
2871C	REMOVABLE BOLLARDS	EACH	2			
2871D	2' BOULDERS	EACH	12			
2940.0	TREE PROTECTION FENCING	L.F.	5274			
2940.0	TREE ARMOR	EACH	50			
2940.0	CHAIN LINK FENCING FOR TREES	LF	671			
2940.0	TREATMENT OF EXISTING TREES - ARBORIST, EXTRA PROTECTION	LS	1			
SP 1000.1	PROJECT SIGNS	EACH	2			

Total Bid Amount:	

_____certifies that the unit prices shown on this complete computer print-out for all of the bid items and the alternates contained in this proposal are the unit prices intended and that its bid will be tabulated using these unit prices and no other information from this print-out.

_____Acknowleged and agrees that the total bid amount shown will be read as its total bid and further agrees that the official total bid amount will be determined by multiplying the unit bid prices shown in this print-out by the respective estimated quantities shown in the proposal and then totaling all of the extended amounts. _____ agrees to the terms, conditions, and requirements of the bidder's bid proposal.

Signed: _____ Date: _____

INDEX OF SHEETS

SEQUENCE NUMBER	SHEET NUMBER	DESCRIPTION
1	G-1	COVER SHEET
2	G-2	INDEX, LEGEND & QUANTITY SHEET
3	G-3	GENERAL NOTES & TRAIL SECTION
4	C-1	SURVEY CONTROL PLAN
5	C-2	SWPPP / CONTRACTOR STAGING AREA PLAN
6	C-3	SWPPP NARRATIVE
7	C-4	SWPPP DETAILS
8	C-5	PLAN AND PROFILE SHEET INDEX
9	C-6	TRAIL PLAN AND PROFILE. SHEET 1 OF 12
10	C-7	TRAIL PLAN AND PROFILE. SHEET 2 OF 12
11	C-8	TRAIL PLAN AND PROFILE. SHEET 3 OF 12
12	C-9	TRAIL PLAN AND PROFILE. SHEET 4 OF 12
13	C-10	TRAIL PLAN AND PROFILE. SHEET 5 OF 12
14	C-11	TRAIL PLAN AND PROFILE. SHEET 6 OF 12
15	C-12	TRAIL PLAN AND PROFILE. SHEET 7 OF 12
16	C-13	TRAIL PLAN AND PROFILE. SHEET 8 OF 12
17	C-14	TRAIL PLAN AND PROFILE. SHEET 9 OF 12
18	C-15	TRAIL PLAN AND PROFILE. SHEET 10 OF 12
19	C-16	TRAIL PLAN AND PROFILE. SHEET 11 OF 12
20	C-17	TRAIL PLAN AND PROFILE. SHEET 12 OF 12
21	C-18	TRAIL DETAILS
22	C-19	CIVIL STANDARD DETAILS
23	C-20	TxDOT SINGLE BOX CULVERT DETAILS
24	C-21	CULVERT CROSSING DETAILS 2
25	C-22	STANDARD SIGN DETAILS
26	C-23	STANDARD SIGN DETAILS
27	C-24	STANDARD TRAFFIC CONTROL DETAILS
28	C-25	STANDARD TRAFFIC CONTROL DETAILS
29	C-26	STANDARD TRAFFIC CONTROL DETAILS
2 30	C-27	PEDESTRIAN HANDRAIL DETAILS
31	L-1	TREE CANOPY/PERSERVATION PLAN
32	L-2	TREE PRESERVATION DETAILS
33	S-1	STRUCTURAL GENERAL NOTES
34	S-2	MUD CREEK BRIDGE LAYOUT
35	S-3	ESTIMATED BRIDGE QUANTITIES
36	S-4	ABUTMENT 1 DETAILS (1 OF 2)
37	S-5	ABUTMENT 1 DETAILS (2 OF 2)
38	S-6	ABUTMENT 2 DETAILS (1 OF 2)
39	S-7	ABUTMENT 2 DETAILS (2 OF 2)
40	S-8	MUD CREEK BRIDGE LAYOUT
41	S-9	MUD CREEK BRIDGE LAYOUT

QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITY
100.1	MOBILIZATION	L.S.	1
100.2	INSURANCE & BOND	L.S.	1
101.1	PREPARING RIGHT OF WAY	L.S.	1
102.1	DEMOLISH EXISTING TRAIL	S.Y.	312
104.1	EXCAVATION	C.Y.	1656
107.2	EMBANKMENT	C.Y.	235
107.2	EMBANKMENT (RETAINING WALL BACKFILL)	C.Y.	308
200.1	FLEXIBLE BASE (2" COMPACTED DEPTH)	S.Y.	5226
307.1	CONCRETE SIDEWALK DRAIN (INCLUDES PLATE)	LF	78
307.1	CONCRETE CLASS C (ABUTMENT)	C.Y.	19.5
307.1	CONCRETE CLASS C (APPROACH SLAB)	C.Y.	4.4
307.1	1~10'x6'x12' BOX CULVERT	C.Y.	12
307.1	CONCRETE RETAINING WALLS	S.F.	1175
308.1	DRILL SHAFT (30")	LF	80
502.1	5" CONCRETE TRAIL (INCLUDES REST AREAS & MILE MARKER CONCRETE)	S.Y.	6326
502.1	8" CONCRETE TOE DOWNS (9" OVERALL DEPTH - 4" TOEDOWN)	C.Y.	72
502.1	8" CONCRETE TOE DOWNS (36" OVERALL DEPTH - 31" TOEDOWN)	C.Y.	20
502.1	8" CONCRETE TOE DOWNS (24" OVERALL DEPTH - 19" TOEDOWN)	C.Y.	85
505.1	6" CONCRETE RIPRAP	S.Y.	165.9
2 517.1	BRIDGE RAILING	L.F.	278
520.1	HYDROMULCH SEEDING	S.Y.	17517
522.1	HANDRAIL (CITY STANDARD WITH TOE PLATE)	L.F.	22 2
530.1	BARRICADES, SIGNS AND TRAFFIC HANDLING	L.S.	1
531.3	STOP SIGN (R1-1)	EACH	2
535.5	12" WIDE WHITE STRIPE	L.F.	48
535.5	24" WIDE WHITE STRIPE	L.F.	40
531.59	WURZBACH PARKWAY - UNDER BRIDGE SIGN	EACH	2
531.59	CAUTION - VEHICULAR TRAFFIC AHEAD SIGN	EACH	2
531.59	BIKE PEDESTRIAN SIGN	EACH	2
540.1	ROCK FILTER DAMS	L.F.	125
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SS 1000	PEDESTRIAN TRUSS BRIDGE SPAN	EACH	1
2871A	METAL BENCH	EACH	1
2871B	CREEK CROSSING AHEAD SIGN	EACH	2
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2871B	MILE MARKERS	EACH	1
2871B	QUARTER MILE MARKERS	EACH	2
2871C	REMOVABLE BOLLARDS	EACH	2
2871D	2' BOULDERS	EACH	12
2940.0	TREE PROTECTION FENCING	L.F.	5274
2940.0	TREE ARMOR	EACH	50
2940.0	CHAIN LINK FENCING FOR TREES	LF	671
2940.0	TREATMENT OF EXISTING TREES - ARBORIST, EXTRA PROTECTION	LS	1
SP 1000.1	PROJECT SIGNS	EACH	2

NOTES:
1. PAYMENT FOR CONCRETE RETAINING WALLS IS BASED ON SQUARE FOOTAGE OF THE EXPOSED FACE OF THE RETAINING WALL ABOVE FINISHED GROUND (MINIMUM 1' ABOVE TOP OF FOOTING). THIS ITEM INCLUDES FULL PAYMENT FOR THE CONSTRUCTION OF THE WALL AND THE STONE VENEER ON THE WALL AND CULVERT FACING.
2. PAYMENT FOR THE CONCRETE SIDEWALK DRAIN INCLUDES ALL CONCRETE AND METAL PLATES.
3. REINFORCING STEEL IS SUBSIDARY TO THE CONCRETE STRUCTURE IT REINFORCES.
4. PAYMENT FOR MULCH REQUIRED FOR TREE PROTECTION IS SUBSIDIARY TO ITEM 2940 - TREATMENT OF EXISTING TREES.
5. REMOVAL OF EXISTING TREES IS NOT MEASURED FOR PAYMENT.
6. CONTRACTOR TO DISPOSE OF EXCESS EXCAVATION IN A SUITABLE OFFSITE LOCATION. SEE GENERAL NOTE #38, SHEET G-3.
7. PAYMENT FOR HYDROMULCH SEEDING WILL BE TEN FEET EACH SIDE OF THE TRAIL AND THE SEEDING THE CONSTRUCTION STAGING AREAS SHOWN ON THE PLANS.

LEGEND

	CONCRETE RIP RAP
	ROCK RIP RAP
	DEMOLISH TRAIL
PP	POWER POLE
	GUY WIRE FOR POWER POLE
NSPI	NO SEPARATE PAY ITEM

REVISIONS	
date	description
2 9/14/12	ADDENDUM #2

BRIONES CONSULTING & ENGINEERING LTD.
8118 BROADWAY
SAN ANTONIO, TX 78209
TBPE FIRM REG. NO. F-5028
(210) 828-1431
(210) 828 1432 fax

STATE OF TEXAS
DAVID P. BEALES
58552
REGISTERED PROFESSIONAL ENGINEER
09/14/2012

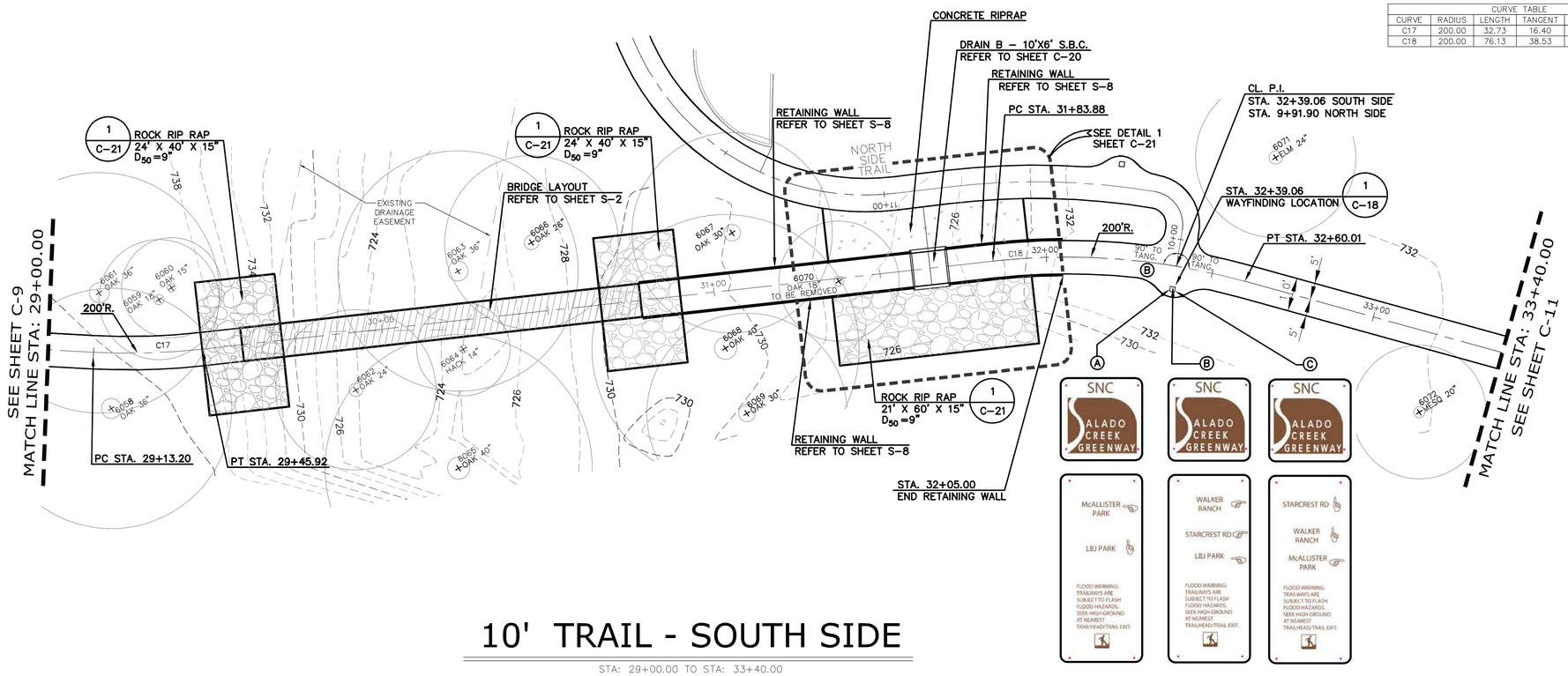
INDEX, LEGEND, & QUANTITY SHEET
FOR
SALADO CREEK GREENWAY
McALLISTER RECONNECTION TO
SALADO CENTRAL GREENWAY - 1.03 MILES

DATE: 08/14/12
SHEET NO.

G-2

PLOT DATE: Sep 14, 2012, 11:44AM LOGIN: bp-Administrator File: P:\Briones Engineering\City of San Antonio\On-Call Civil Engineering Services\Wurzbach Parkway Trail\DWG\Wurzbach Trails BIKE TRAIL Index-Legend-Quantities.dwg

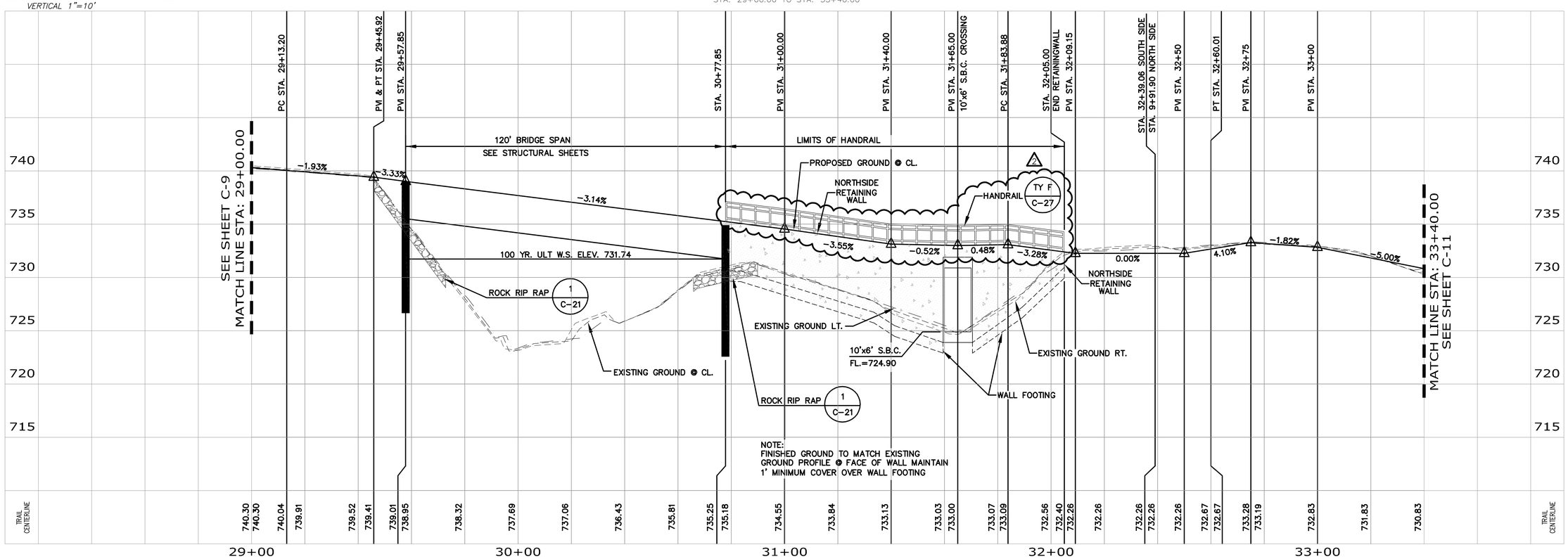
CURVE TABLE					
CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD
C17	200.00	32.73	16.40	09°22'31"	36.41
C18	200.00	76.13	38.53	21°48'36"	75.67



SCALE: HORZ. 1"= 20' ~ 22"x34" SHEET
VERTICAL 1"=5'
SCALE: HORZ. 1"= 40' ~ 11"x17" SHEET
VERTICAL 1"=10'

10' TRAIL - SOUTH SIDE

STA: 29+00.00 TO STA: 33+40.00



NOTE:
FINISHED GROUND TO MATCH EXISTING GROUND PROFILE @ FACE OF WALL MAINTAIN 1' MINIMUM COVER OVER WALL FOOTING

REVISIONS	
date	description
9/14/12	ADDENDUM #2

BRIONES
CONSULTING & ENGINEERING LTD.
8118 BROADWAY
SAN ANTONIO, TX 78209
TBPE FIRM REG. NO. F-5028
(210) 828-1431
(210) 828 1432 fax

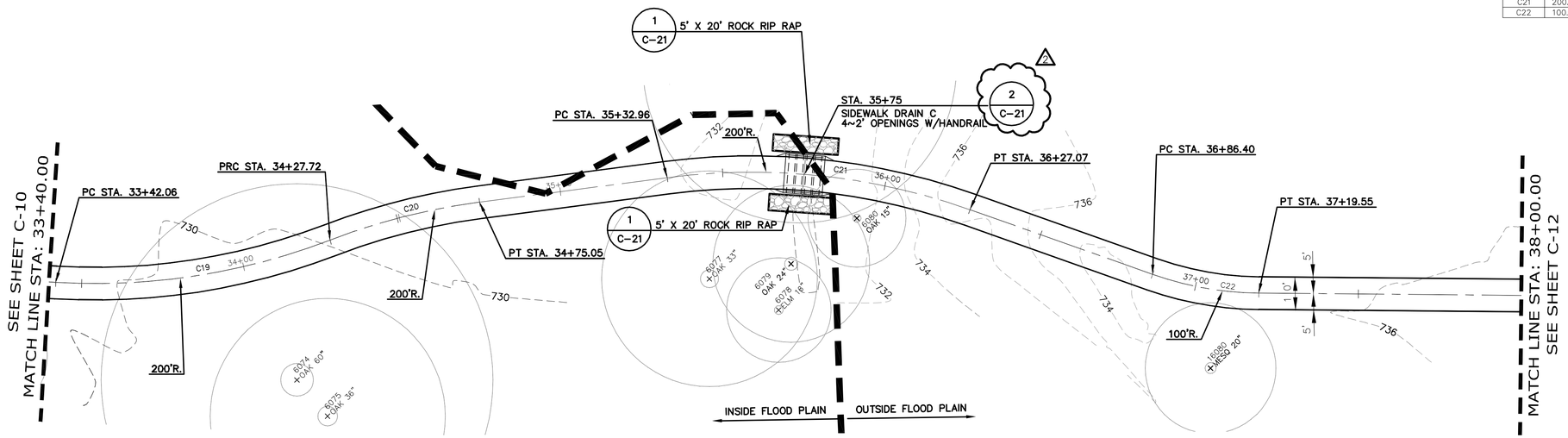
STATE OF TEXAS
DAVID P. BEALES
58552
REGISTERED PROFESSIONAL ENGINEER
09/14/2012

TRAIL PLAN AND PROFILE. SHEET 5 OF 12
FOR
SALADO CREEK GREENWAY
McALLISTER RECONNECTION TO
SALADO CENTRAL GREENWAY - 1.03 MILES

DATE: 08/14/12
SHEET NO.
C-10

CURVE TABLE					
CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD
C19	200.00	85.65	43.49	24°32'17"	85.00
C20	200.00	47.33	23.78	13°33'33"	47.22
C21	200.00	94.11	47.94	26°57'36"	93.24
C22	100.00	33.15	16.73	18°59'42"	33.00

REVISIONS	
date	description
9/14/12	ADDENDUM #2



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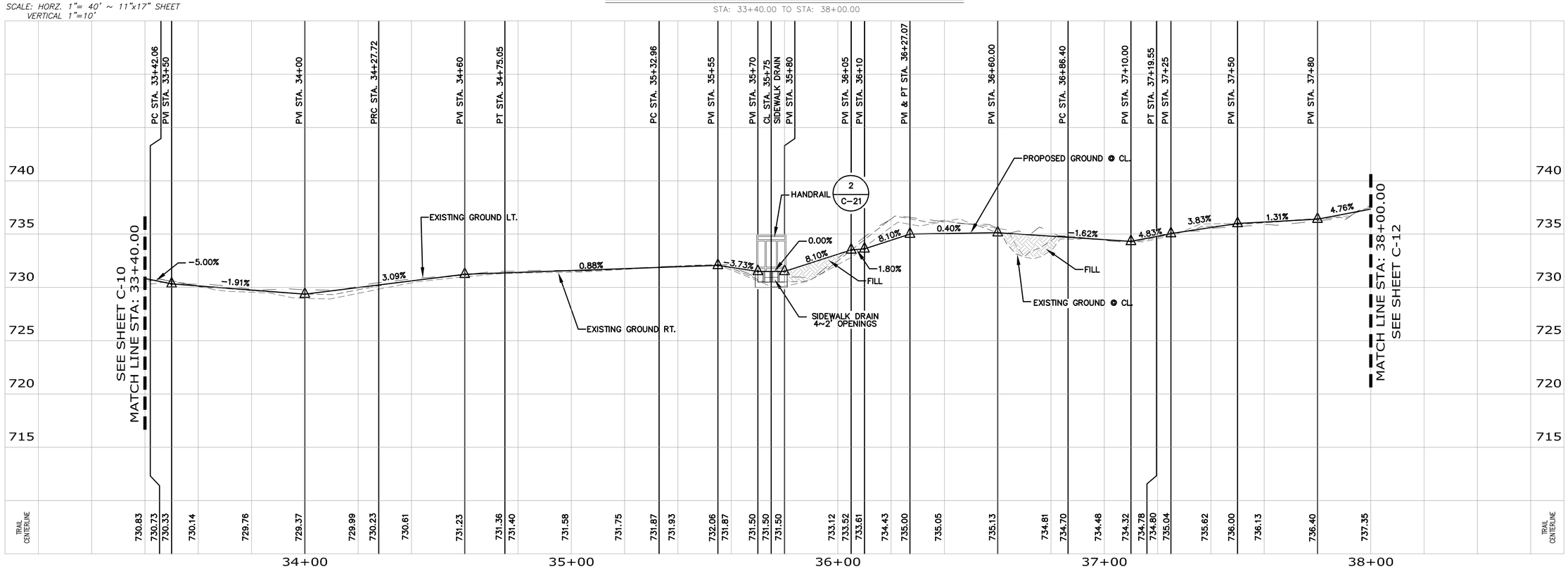
SCALE: HORZ. 1"= 20' ~ 22"x34" SHEET
VERTICAL 1"=5'
SCALE: HORZ. 1"= 40' ~ 11"x17" SHEET
VERTICAL 1"=10'

10' TRAIL - SOUTH SIDE

STA: 33+40.00 TO STA: 38+00.00



BRIONES
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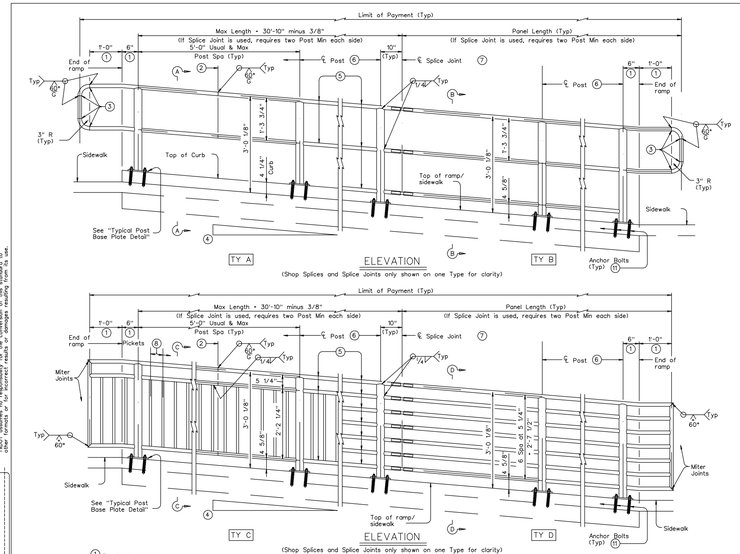
8118 BROADWAY (210) 828-1431
SAN ANTONIO, TX 78209 (210) 828 1432 fax
TBPE FIRM REG. NO. F-5028

STATE OF TEXAS
DAVID P. BEALES
58552
REGISTERED PROFESSIONAL ENGINEER
09/14/2012

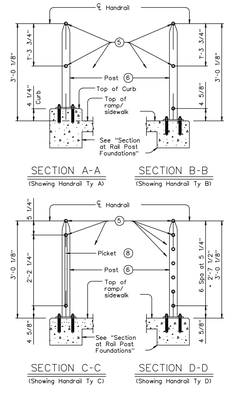
TRAIL PLAN AND PROFILE, SHEET 6 OF 12
FOR
SALADO CREEK GREENWAY
McALLISTER RECONNECTION TO
SALADO CENTRAL GREENWAY - 1.03 MILES

DATE: 08/14/12
SHEET NO.
C-11

PLOT DATE: Sep 14, 2012, 8:18AM LOGIN: HP-Administrator File: P:\Briones Engineering\City of San Antonio\Von-Hall Civil Engineering Services\Wurzbach Parkway Trail\DWG\Wurzbach Trails Profiles.dwg



RECOMMENDED USAGE (9)(10)	
Dropoff Height/ Condition	Recommended Rail Options
< 30" dropoff	TY A, TY B, TY C, or TY D
≥ 30" dropoff, or along Bike Path	TY E or TY F



DISCLAIMER:
Use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT shall not be responsible for the suitability of this standard for other details or for incorrect results or damages resulting from its use.

1. Parallel to ground.
2. One shop splice per panel is permitted with minimum 85 percent penetration. The weld may be square groove or single vee groove. Grind smooth.
3. Shop splice is permitted with minimum 85 percent penetration. The weld may be square groove or single vee groove. Grind smooth.
4. See Ramp Details located elsewhere in plans for ramp slope and dimensions. Maximum ramp slope will not exceed 8.3 percent. Level landing required for each 30" rise if grade exceeds 5 percent.
5. 1" Dia Extra Heavy Pipe (1.315" O.D., 0.179" wall thickness). Parallel to ramp/sidewalk. Provide holes as needed in 1" Dia pipe for galvanizing drainage and venting.
6. 2 1/2" Dia Standard Pipe (2.875" O.D., 0.203" wall thickness). Plumb all posts. See "Post Mount Detail" for crimping and trimming post to fit Dia of top rail. Provide holes as needed in post for galvanizing drainage and venting.
7. See "Handrail Fabrication Details" for Splice Joints.
8. 5/8" Dia Round Bar Eq Spa at 4 1/2" Max. Plumb all pickets.
9. When needed for accessibility (grade 5 percent) or as needed for pedestrian safety.
10. Not to be used on bridges.
11. See "General Notes" for anchor bolt information.

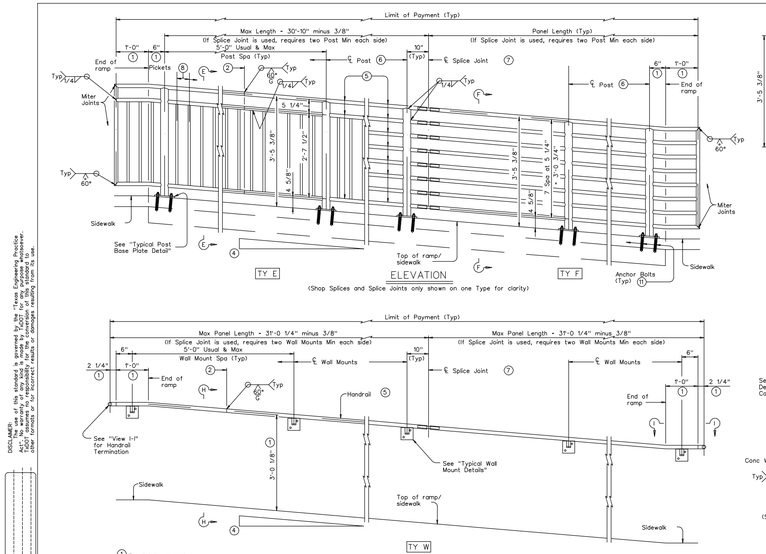
Texas Department of Transportation
Design Division (Roadway)

PEDESTRIAN HANDRAIL DETAILS

PRD-06

SHEET 1 OF 3

FILE:	prd06.dgn	DN: JMH	CK: TxDOT	DW: JTR	CK: TxDOT
©TxDOT December 2006		DISTRICT	FEDERAL AID PROJECT		SHEET
REVISIONS					
		COUNTY	CONTROL	SECT	JOB	HIGHWAY



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1. Parallel to ground.
2. One shop splice per panel is permitted with minimum 85 percent penetration. The weld may be square groove or single vee groove. Grind smooth.
3. Shop splice is permitted with minimum 85 percent penetration. The weld may be square groove or single vee groove. Grind smooth.
4. See Ramp Details located elsewhere in plans for ramp slope and dimensions. Maximum ramp slope will not exceed 8.3 percent. Level landing required for each 30" rise if grade exceeds 5 percent.
5. 1" Dia Extra Heavy Pipe (1.315" O.D., 0.179" wall thickness). Parallel to ramp/sidewalk. Provide holes as needed in 1" Dia pipe for galvanizing drainage and venting.
6. 2 1/2" Dia Standard Pipe (2.875" O.D., 0.203" wall thickness). Plumb all posts. See "Post Mount Detail" for crimping and trimming post to fit Dia of top rail. Provide holes as needed in post for galvanizing drainage and venting.
7. See "Handrail Fabrication Details" for Splice Joints.
8. 5/8" Dia Round Bar Eq Spa at 4 1/2" Max. Plumb all pickets.
11. See "General Notes" for anchor bolt information.

Texas Department of Transportation
Design Division (Roadway)

PEDESTRIAN HANDRAIL DETAILS

PRD-06

SHEET 2 OF 3

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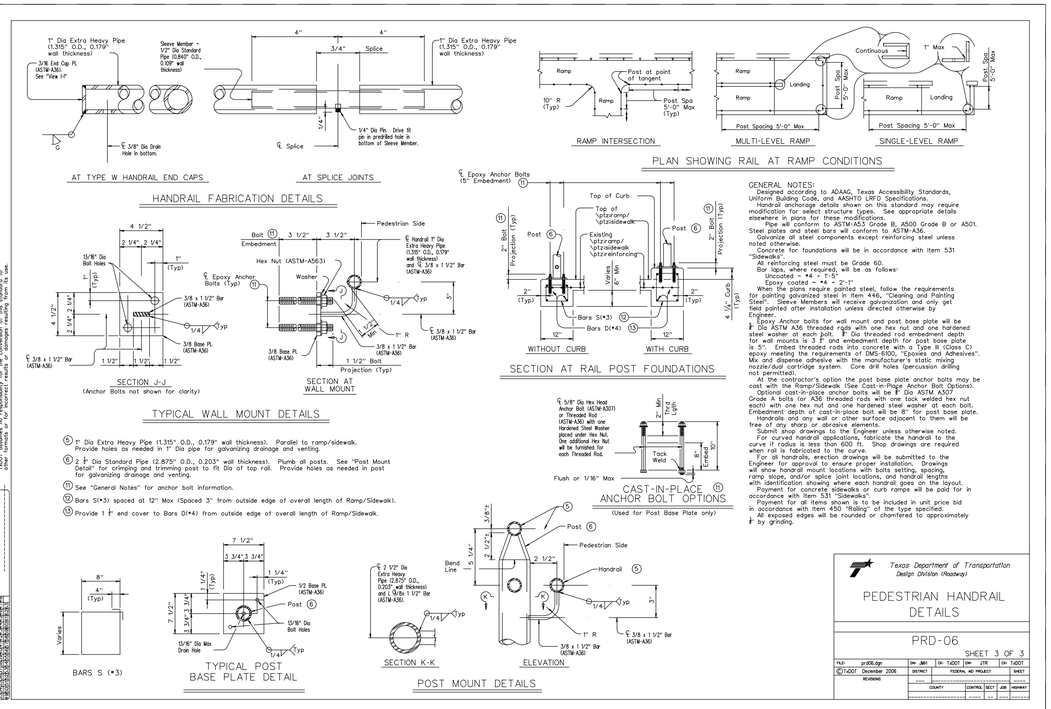

GENERAL NOTES:
Designed according to ADAAG, Texas Accessibility Standards, Uniform Building Code, and AASHTO LRFD Specifications.
Handrail anchorage details shown on this standard may require modification for select structure types. See appropriate details elsewhere in plans for these modifications.
Pipe will conform to ASTM-A53 Grade B, A500 Grade B or A501. Steel plates and steel bars will conform to ASTM-A36.
Galvanize all steel components except reinforcing steel unless noted otherwise.
Concrete for foundations will be in accordance with Item 531 "Sidewalks".
All reinforcing steel must be Grade 60.
Bar laps, where required, will be as follows:
Uncoated - *4 - 1'-5"
Epoxy coated - *4 - 2'-1"
When the plans require painted steel, follow the requirements for painting galvanized steel in Item 446, "Cleaning and Painting Steel". Sleeve Members will receive galvanization and only get field painted after installation unless directed otherwise by Engineer.
Epoxy Anchor bolts for wall mount and post base plate will be 1" Dia ASTM A36 threaded rods with one hex nut and one hardened steel washer at each end. Bend one end of the anchor bolt for post base plate or wall mounts to 2 1/2" and embedment depth for post base plate is 5". Embed threaded rods into concrete with a Type B (Class C) epoxy meeting the requirements of DMS-6100, "Epoxies and Adhesives". Mix and dispense adhesive with the manufacturer's static mixing nozzle/dual cartridge system. Core drill holes (percussion drilling not permitted).
At the contractor's option the post base plate anchor bolts may be cast with the Ramp/Sidewalk (See Cast-in-Place Anchor Bolt Options).
Optional cast-in-place anchor bolts will be 1" Dia ASTM A307 Grade A bolts (or A36 threaded rods with one tack welded hex nut each) with one hex nut and one hardened steel washer at each bolt.
Embedment depth of cast-in-place bolt will be 8" for post base plate.
Handrails and any wall or other surface adjacent to them will be free of any sharp or abrasive surfaces.
Finish welds as drawn unless the Engineer unless otherwise noted.
For curved handrail applications, fabricate the handrail to the curve if radius is less than 600 ft. Shop drawings are required when rail is fabricated to the curve.
For all handrails, erection drawings will be submitted to the Engineer for approval to ensure proper installation. Drawings will show handrail mount locations with bolts setting, spacing, ramp slope, and/or splice joint locations, and handrail lengths with identification showing where each handrail goes on the layout.
Payment for concrete sidewalks or curb ramps will be paid for in accordance with Item 531 "Sidewalks".
Payment for all items shown is to be included in unit price bid in accordance with Item 450 "Railing" of the type specified.
All exposed edges will be rounded or chamfered to approximately 1/4" by grinding.

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6. 2 1/2" Dia Standard Pipe (2.875" O.D., 0.203" wall thickness). Plumb all posts. See "Post Mount Detail" for crimping and trimming post to fit Dia of top rail. Provide holes as needed in post for galvanizing drainage and venting.
11. See "General Notes" for anchor bolt information.
12. Bars S(*3) spaced at 12" Max (Spaced 3" from outside edge of overall length of Ramp/Sidewalk).
13. Provide 1 1/2" end cover to Bars D(*4) from outside edge of overall length of Ramp/Sidewalk.

Texas Department of Transportation
Design Division (Roadway)

PEDESTRIAN HANDRAIL DETAILS

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SHEET 3 OF 3

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date	description
9/14/12	ADDENDUM #2

BRIONES CONSULTING & ENGINEERING LTD.
8118 BROADWAY
SAN ANTONIO, TX 78209
TBPE FIRM REG. NO. F-5028
(210) 828-1431
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STATE OF TEXAS
DAVID P. BEALES
58552
REGISTERED PROFESSIONAL ENGINEER
09/14/2012

PEDESTRIAN HANDRAIL DETAILS FOR SALADO CREEK GREENWAY

McALLISTER RECONNECTION TO SALADO CENTRAL GREENWAY - 1.03 MILES

DATE: 09/11/12
SHEET NO.
C-27

C-27 NEW SHEET WITH ADDENDUM #2

PLOT DATE: Sep 14, 2012, 10:06AM LOGIN: tp:Administrator File: P:\Briones Engineering\City of San Antonio\On-Call Civil Engineering Services\Wurzbach Parkway Trail\WS\Wurzbach Trails Details.dwg