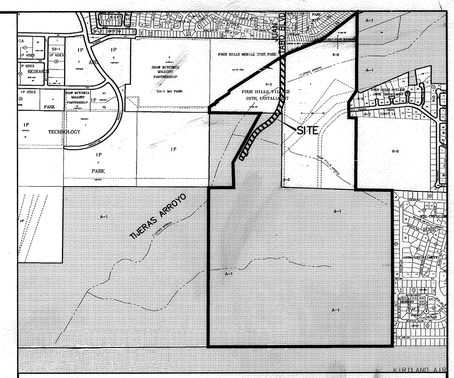
RECORD DRAWINGS

CONSTRUCTION PLANS

FOR

JUAN TABO PHASE II IMPROVEMENTS

ALBUQUERQUE, NEW MEXICO



VICINITY MAP — ZONE ATLAS M-21/N-21 — SCALE: NONE

GENERAL NOTES

NOTICE TO CONTRACTORS

1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN THE CITY RIGHT-OF-WAY.
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AS REVISED THROUGH UPDATE #7.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM (260-1990) FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
5. FIVE (5) WORKING DAYS PRIOR TO BEGINNING OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO CONSTRUCTION COORDINATION DIVISION A DETAILED CONSTRUCTION SCHEDULE. TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN A BARRICADING PERMIT FROM THE CONSTRUCTION COORDINATION DIVISION. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION COORDINATION ENGINEER (924-3400) PRIOR TO OCCUPYING AN INTERSECTION. REFER TO SECTION 19 OF THE GENERAL CONDITIONS OF THE STANDARD SPECIFICATIONS.
6. ALL WORK AFFECTING ARTERIAL ROADWAYS REQUIRES TWENTY-FOUR HOUR CONSTRUCTION.
7. ALL STREET STRIPING ALTERED OR DESTROYED SHALL BE REPLACED WITH PLASTIC REFLECTORIZED PAVEMENT MARKING BY CONTRACTOR TO THE SAME LOCATION AS WAS EXISTING, OR AS INDICATED BY THIS PLAN SET.
8. CONTRACTOR SHALL NOTIFY THE ENGINEER NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK IN ORDER THAT THE CITY SURVEYOR MAY TAKE NECESSARY MEASURES TO INSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE CITY SURVEYOR AND SHALL NOTIFY THE CITY SURVEYOR AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE CITY SURVEYOR. WHEN A CHANGE IS MADE IN THE FINISHED ELEVATIONS OF THE PAVEMENT OF ANY ROADWAY IN WHICH A PERMANENT SURVEY MONUMENT IS LOCATED, CONTRACTOR SHALL, AT HIS OWN EXPENSE, ADJUST THE MONUMENT TO COVER THE NEW GRADE UNLESS OTHERWISE SPECIFIED. REFER TO SECTION 4.4 OF THE GENERAL CONDITIONS OF THE STANDARD SPECIFICATIONS.

   CONTRACTOR SHALL RECORD DATA ON ALL UTILITY LINES AND ACCESSORIES AS REQUIRED BY THE CITY OF ALBUQUERQUE FOR THE PREPARATION OF "AS CONSTRUCTED" DRAWINGS. CONTRACTOR SHALL NOT COVER UTILITY LINES AND ACCESSORIES UNTIL ALL DATA HAVE BEEN RECORDED.
10. CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORK SITE. CONTRACTOR SHALL PROMPTLY REMOVE ANY GRAFFITI FROM ALL EQUIPMENT, WHETHER PERMANENT OR TEMPORARY.
11. CONTRACTOR SHALL COORDINATE WITH THE CITY OF ALBUQUERQUE WATER SYSTEMS DIVISION (857-8200) SEVEN (7) WORKING DAYS IN ADVANCE OF ANY WORK THAT MAY AFFECT EXISTING PUBLIC WATER OR SEWER UTILITIES. EXISTING VALVES TO BE OPERATED BY CITY PERSONNEL ONLY. CONTRACTOR SHALL CONTACT THE WATER SYSTEMS DIVISION SEVEN (7) WORKING DAYS PRIOR TO NEEDING VALVES TURNED ON OR OFF.
12. FOR STORM DRAIN CONSTRUCTION, RCP JOINTS SHALL NOT BE GROUTED PRIOR TO FINAL INSPECTION. FINAL INSPECTION WILL DETERMINE JOINTS TO BE GROUTED FOR FINAL ACCEPTANCE OF THE CONSTRUCTION.

THE FOLLOWING NOTES ALSO APPLY WHEN CHECKED

- [x] ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
- [x] BACKFILL COMPACTION SHALL BE ACCORDING TO SPECIFIED STREET USE.
- [ ] TACK COAT REQUIREMENTS SHALL BE DETERMINED BY THE ENGINEER.
- [x] SIDEWALK AND WHEELCHAIR RAMPS WITHIN THE CURB RETURNS SHALL BE CONSTRUCTED WHEREVER A NEW CURB RETURN IS CONSTRUCTED.
- [ ] IF CURB IS DEPRESSED FOR A DRIVEPAD, THE DRIVEPAD SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF CURB AND GUTTER.
- [x] ALL STORM DRAINAGE FACILITIES SHALL BE COMPLETED PRIOR TO FINAL ACCEPTANCE.

SURVEYOR'S CERTIFICATION - FOR WATERLINE

I, WILL PLOTNER JR, A DULY QUALIFIED, REGISTERED, PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT THE 'AS-BUILT' INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM FIELD CONSTRUCTION AND 'AS-BUILT' SURVEYS PERFORMED BY ME OR UNDER MY SUPERVISION, THAT THE 'AS-BUILT' INFORMATION SHOWN ON THESE DRAWNINGS WAS ADDED BY ME OR UNDER MY SUPERVISION , AND THAT THIS 'AS-BUILT' INFORMATION IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. CARTESIAN SURVEYS IS NOT RESPONSIBLE FOR ANY OF THE DESIGN CONCEPTS, CALCULATIONS, ENGINEERING, OR INTENT OF THE RECORD DRAWINGS.

Will Plotner 4/16/07

WILL PLOTNER JR, NMPS 14271

WILL W. PLOTNER, JR. NEW MEXICO 14271 REGISTERED PROFESSIONAL SURVEYOR

INDEX TO DRAWINGS

CIVIL

SHEET NO.	SHEET
1 (C-1) OF 46	TITLE SHEET
2 (C-2) OF 46	PLAT
3 (C-3) OF 46	MASTER PLAN
4 (C-4) OF 46	PAVING IMPROVEMENTS
5 (C-5) OF 46	PAVING IMPROVEMENTS
6 (C-6) OF 46	STRIPING & SIGNAGE PLAN
7 (C-7) OF 46	EXISTING 30" WATERLINE
8 (C-8) OF 46	GUIDE BANK PLAN
9 (C-9) OF 46	GUIDE BANK PROFILE & DETAILS
10 (C-10) OF 46	TIJERAS ARROYO SLOPE PAVING UNDER BRIDGE
10R	TIJERAS ARROYO BRIDGE JOINT REPLACEMENT (WARRANTY WORK)

STRUCTURAL

SHEET NO.	SHEET
11 (S-1) OF 46	BRIDGE GENERAL NOTES
12 (S-2) OF 46	STRUCTURE LOCATION PLAN
13 (S-3) OF 46	STRUCTURE LOCATION PROFILE
14 (S-4) OF 46	DECK FRAMING PLAN
15 (S-5) OF 46	TRANSVERSE SECTION AND DIAPHRAGM DETAILS
16 (S-6) OF 46	DECK SLAB REINFORCING PLAN UNIT 1
17 (S-7) OF 46	TOP OF DECK AND BEAM SEAT ELEVATIONS
18 (S-8) OF 46	BEARING DETAILS
19 (S-9) OF 46	BEAM DETAILS - BT-54, 90' SPAN
20 (S-10) OF 46	BEAM DETAILS - BT-54, 100' SPAN
21 (S-11) OF 46	PIER PLANS AND ELEVATIONS
22 (S-12) OF 46	PIER DETAILS
23 (S-13) OF 46	PIER DETAILS
24 (S-14) OF 46	ABUTMENT 1 PLAN AND ELEVATION
25 (S-15) OF 46	ABUTMENT 2 PLAN AND ELEVATION
26 (S-16) OF 46	ABUTMENT #1 DETAILS
27 (S-17) OF 46	ABUTMENT #2 DETAILS
28 (S-18) OF 46	ABUTMENT END DIAPHRAGM & APPROACH SLAB
29 (S-19) OF 46	DRILLED SHAFT DETAILS
30 (S-20) OF 46	MISCELLANEOUS SECTIONS & DETAILS
31 (S-21) OF 46	MISCELLANEOUS DETAILS

ARCHITECTURAL

SHEET NO.	SHEET
32 (A-1) OF 46	ELEVATIONS
33 (A-2) OF 46	DETAILS
34 (A-3) OF 46	ARCHITECTURAL NOTES

ELECTRICAL

SHEET NO.	SHEET
35 (E-1) OF 46	ELECTRICAL SITE PLAN
36 (E-2) OF 46	STREET LIGHTING CONTROL CABINET CIRCUIT UNMETERRED

NMSHTD STANDARD DRAWINGS

SHEET NO.	SHEET
37 (BBR-001) OF 46	BARRIER RAILING GENERAL NOTES
38 (BBR-002) OF 46	BARRIER RAILING STANDARD SECTION DETAILS
39 (BBR-003) OF 46	BARRIER RAILING TRANSITION SECTION DETAILS
40 (BBR-004) OF 46	BARRIER RAILING DETAILS AT JOINT SEALS
41 (BJS-001) OF 46	BRIDGE JOINT STRIP SEALS
42 (BJS-002) OF 46	BRIDGE JOINT STRIP SEALS
43 (BJS2) OF 46	POLYMER BRIDGE JOINT SEALS
44 OF 46	BOLTED STEEL DIAPHAGMS FOR PRESTRESSED CONCRETE GIRDERS

MORE CIVIL

45 (C-11) OF 46	VIA POSADA CT. WATER LINE
46 (C-12) OF 46	WATERLINE DETAILS

CAUTION:
NOTE THAT ALL EXISTING UTILITIES MAY NOT BE SHOWN. ALL EXISTING SERVICE CONNECTIONS ARE NOT SHOWN. ANY EXISTING UTILITIES THAT ARE SHOWN ARE APPROXIMATE LOCATION ONLY. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL THE UTILITY OWNERS AND TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATIONS TO DETERMINE THE ACTUAL LOCATION OF UTILITIES AND OTHER IMPROVEMENTS.

dmg D. MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
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ALBUQUERQUE, NEW MEXICO 87199
(505) 828-2200, FAX (505) 797-9539

RECORD DRAWING

CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, James D. Hughes, NMPE 11674, of the firm Mark Goodwin & Associates, PA, a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision, and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met, except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me or personnel under my direction, and survey information provided by Will W. Plotner, Jr., NMPS number 14271.

James D. Hughes 4-17-07
James D. Hughes NMPE 11674

JAMES D. HUGHES 11674 NEW MEXICO REGISTERED PROFESSIONAL ENGINEER

I, James D. Hughes, certify that this electronic version is identical to the original reproducible APPROVED FOR CONSTRUCTION drawings signed by me on 4-20, 20 05.

This set of drawings is accepted for RECORD purposes by _____ on _____, 2007.

APPROVED AS RECORD DRAWINGS
DESIGN REVIEW SECTION
CITY CONSTRUCTION ENGINEER
DATE: 03/02/12 11/17/09

DRB NO. 1001370

REV.	SHEETS	CITY ENGINEER	DATE	USER DEPARTMENT	DATE	USER DEPARTMENT	DATE

ENGINEERS STAMP & SIGNATURE	APPROVALS	ENGINEER	DATE
JAMES D. HUGHES 11674 NEW MEXICO REGISTERED PROFESSIONAL ENGINEER 4-20-05	DRC CHAIRMAN		7/17/07
	TRANSPORTATION		5/30/07
	WATER/WASTEWATER		6/22/07
	HYDROLOGY	Bradley J. Brightman	5/16/07
	CIP		
	CONSTR. MNGMT.		
	CONSTR. COORD.		

APPROVED FOR CONSTRUCTION

7-25-07
CITY ENGINEER DATE

CITY PROJECT NO. 756181

SHEET 1 OF 46 C-1

F:\A02\DBS\A2079 4 HILLS\Bridge Plans\Phase II\A2079-Title.dwg, 4/19/2005 4:48:11 PM, PLOTTED BY: DER

BULK LAND PLAT FOR
JUAN TABO HILLS
WITHIN
SECTIONS 27, 33 AND 34
TOWNSHIP 10 NORTH, RANGE 4 EAST, NMPM
CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO
DECEMBER, 2004

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N89°42'17"W	447.39
L2	S01°49'04"E	439.87
L3	S29°26'17"W	1004.51
L4	S89°15'53"E	911.63
L5	S00°42'12"W	98.56
L6	S57°28'58"W	163.10
L7	S32°31'02"E	20.00
L8	S57°28'58"W	260.16
L9	S12°37'53"W	50.77
L10	N00°39'44"E	8.73
L11	S54°55'30"W	52.84
L12	S68°13'20"W	46.69
L13	S00°53'31"W	13.27
L14	S68°28'17"W	594.70
L15	S01°08'50"W	18.00
L16	N86°43'49"W	64.80
L17	S52°53'46"W	852.28
L18	N00°32'11"E	550.16
L19	N34°19'37"E	254.94
L20	N01°08'04"W	270.46
L21	N87°23'00"W	132.86
L22	N87°50'40"W	664.23
L23	N00°22'48"E	274.47
L24	N28°19'24"E	198.88
L25	S29°26'17"W	70.61
L26	N59°38'23"W	201.11
L27	N89°27'44"W	188.92
L28	S18°00'20"W	125.00
L29	N71°59'40"W	176.04
L30	S88°28'58"W	184.46
L31	N21°04'31"W	125.00
L32	N00°22'48"E	99.61
L33	N89°37'12"W	120.14
L34	N55°40'12"W	102.99
L35	N89°08'27"W	121.99
L36	S88°28'58"W	184.46
L37	S89°10'39"E	261.54
L38	S88°28'58"W	184.46
L39	S82°42'26"W	145.51
L40	N00°30'17"E	19.27
L41	N89°37'12"W	143.00
L42	N89°37'12"W	144.03
L43	S82°42'26"W	145.51
L44	N35°13'05"W	187.08
L45	N55°00'00"E	161.23
L46	N35°00'00"W	325.00
L47	N55°00'00"E	320.00
L48	N59°38'23"W	188.47
L49	N89°27'44"W	188.92
L50	S17°15'06"W	105.00
L51	S78°16'12"E	191.28
L52	N89°37'12"W	137.83
L53	N89°27'44"W	188.92
L54	S17°15'06"W	72.00
L55	S29°26'17"W	282.88
L56	N59°38'23"W	166.13
L58	N22°31'35"E	141.84
L59	S17°15'06"W	133.70
L60	S72°44'54"E	78.56
L61	S72°44'54"E	72.00
L62	S43°39'32"E	48.56

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CH-BEARING	CH-DIST
C1	666.21	650.00	58°43'27"	365.69	N30°03'42"E	637.43
C2	340.18	650.00	29°59'09"	174.08	S44°25'52"W	336.31
C3	126.36	650.00	11°08'17"	63.38	S23°52'09"W	126.16
C4	338.33	650.00	29°49'21"	173.09	S74°33'04"E	334.52
C5	189.61	650.00	16°42'50"	95.48	N81°06'19"W	188.94
C6	173.45	650.00	15°17'21"	87.24	S24°53'47"W	172.94
C7	334.60	650.00	29°29'40"	171.10	N17°47'37"E	330.92
C8	161.75	650.00	14°15'28"	81.30	N51°07'16"W	161.33
C9	117.25	300.00	22°23'35"	59.38	N81°31'00"E	116.50
C10	327.46	650.00	28°51'52"	167.28	S72°31'17"E	324.01
C11	948.59	1040.16	52°15'06"	510.15	S08°52'27"E	916.05
C12	505.85	650.00	44°35'21"	266.51	S57°17'40"E	493.18
C13	137.45	650.00	12°06'56"	68.98	N16°28'07"E	137.19
C14	168.92	435.11	22°14'35"	85.53	S11°24'18"W	167.86
C15	201.05	650.00	17°43'19"	101.33	N09°08'40"E	200.25
C16	281.11	825.00	19°31'22"	141.93	N81°45'21"W	279.75
C17	98.68	425.00	13°18'10"	49.56	S84°51'57"E	98.45
C18	318.31	555.00	32°51'38"	163.66	S85°21'19"W	313.96
C19	223.30	599.00	21°21'31"	112.96	S10°23'45"E	222.01
C20	127.18	425.00	17°08'46"	64.07	S80°34'04"E	126.71
C21	238.52	700.00	19°31'22"	120.43	N81°45'21"W	237.36
C22	127.70	550.00	13°18'10"	64.14	S84°51'57"E	127.41
C23	385.48	430.00	51°21'51"	206.78	S76°06'12"W	372.70
C24	370.22	1050.00	20°12'06"	187.05	N60°31'20"E	368.30
C25	233.44	1950.00	6°51'33"	116.86	S67°11'37"W	233.30
C26	259.74	550.00	27°03'31"	132.34	N77°17'36"E	257.34
C27	212.52	450.00	27°03'31"	108.28	N77°17'36"E	210.55
C28	245.41	2050.00	6°51'33"	122.85	S67°11'37"W	245.26
C29	334.96	950.00	20°12'06"	169.24	N60°31'20"E	333.23
C30	475.13	530.00	51°21'51"	254.87	S76°06'12"W	459.38
C31	104.48	450.00	13°18'10"	52.48	S84°51'57"E	104.25
C32	272.59	800.00	19°31'22"	137.63	N81°45'21"W	271.27
C33	97.26	325.00	17°08'46"	49.00	S80°34'04"E	96.90
C34	296.06	550.00	30°50'29"	151.71	N73°09'19"E	292.49
C35	196.13	450.00	24°58'22"	99.85	S70°13'15"W	194.59
C36	489.49	950.00	29°31'18"	250.31	N82°31'55"W	484.09
C37	456.08	1050.00	24°53'13"	231.69	S80°12'52"E	452.50
C38	241.75	550.00	25°11'04"	122.86	N80°03'57"W	239.81
C39	114.62	250.00	26°16'09"	58.34	N54°20'20"W	113.62
C40	433.40	425.00	58°25'41"	237.66	S70°25'06"E	414.86
C41	43.69	250.00	10°00'45"	21.90	S85°22'26"W	43.63
C42	65.56	100.00	37°33'56"	34.01	N71°35'50"E	64.40
C43	61.16	350.00	10°00'45"	30.66	S85°22'26"W	61.08
C44	331.42	325.00	58°25'41"	181.74	S70°25'06"E	317.25
C45	160.47	350.00	26°16'09"	81.67	N54°20'20"W	159.07
C46	285.71	650.00	25°11'04"	145.20	N80°03'57"W	283.41
C47	412.64	950.00	24°53'13"	209.63	S80°12'52"E	409.40
C48	541.02	1050.00	29°31'18"	276.66	N82°31'55"W	535.05
C49	239.72	550.00	24°58'22"	121.79	S70°13'15"W	237.83
C50	242.23	450.00	30°50'29"	124.13	N73°09'19"E	239.31
C51	645.84	686.00	53°56'30"	348.09	S08°01'45"E	622.26
C52	409.11	786.00	29°49'21"	209.30	S74°33'04"E	404.51
C53	149.94	514.00	16°42'50"	75.51	N81°06'19"W	149.41
C54	112.97	275.00	23°32'17"	57.30	S84°31'02"E	112.18
C55	102.20	325.00	18°01'00"	51.52	N87°16'41"W	101.78
C56	298.80	325.00	52°40'35"	160.89	N51°55'54"W	288.38
C57	357.06	686.00	29°49'21"	182.67	S74°33'04"E	353.05
C58	179.11	614.00	16°42'50"	90.20	N81°06'19"W	178.48
C59	406.69	610.00	38°11'57"	211.23	N40°19'27"E	399.20
C60	374.54	690.00	31°06'02"	192.01	S43°52'25"W	369.96
C61	79.50	1050.00	4°20'17"	39.77	S84°52'34"W	79.48
C62	24.97	435.11	3°17'18"	12.49	S20°52'56"W	24.97
C63	143.94	435.11	18°57'16"	72.63	S09°45'39"W	143.29
C64	246.62	430.00	32°51'38"	126.80	S85°21'19"W	243.25
C65	138.87	430.00	18°30'13"	70.04	S59°40'23"W	138.26
C66	171.16	530.00	18°30'13"	86.33	S59°40'23"W	170.42
C67	303.97	530.00	32°51'38"	156.29	S85°21'19"W	299.82
C68	18.57	250.00	4°15'18"	9.29	N65°20'46"W	18.56
C69	96.05	250.00	22°00'50"	48.63	N52°12'41"W	95.46
C70	423.22	950.00	25°31'31"	215.18	N80°32'01"W	419.73
C71	66.27	950.00	3°59'48"	33.15	S84°42'20"W	66.25
C72	461.52	1050.00	25°11'02"	234.55	N80°21'47"W	457.81
C73	100.38	1040.16	5°31'46"	50.23	S12°30'13"W	100.34
C74	812.20	1040.16	44°44'20"	428.07	S12°37'50"E	791.72
C75	24.79	686.00	2°04'13"	12.39	S28°24'11"W	24.79
C76	359.26	650.00	31°40'04"	184.35	N43°35'24"E	354.70
C77	306.95	650.00	27°03'23"	156.39	N14°13'40"E	304.10

LEGAL DESCRIPTION

DESCRIPTION

A tract of land situate within Sections 33 and 34, Township 10 North, Range 4 East, New Mexico Principal Meridian, City of Albuquerque, Bernalillo County, New Mexico being the Northeast one-quarter of the Southeast one-quarter (NE1/4, SE1/4) Section 33, together with the West half of the Southwest one-quarter and the West half of the East half of the Southwest one-quarter (W1/2,SW1/4 and W1/2,E1/2,SW1/4) of Section 34, together with the Southeast one-quarter of the Southeast one- quarter (SE1/4, SE1/4) Section 33, together with a tract of land situate within Sections 27, 33 and 34, Township 10 North, Range 4 East, New Mexico Principal Meridian, City of Albuquerque, Bernalillo County, New Mexico being all of TRACT A, FOUR HILLS VILLAGE 20TH INSTALLMENT as the same is shown and designated on said plat filed for record in the office of the County Clerk of Bernalillo County, New Mexico on December 29, 1998 in Book 98C, Page 367 together with a portion of the Southeast one-quarter of the Northeast one- quarter (SE1/4, NE1/4) Section 33, Township 10 North, Range 4 East as the same is described in a DEDICATION filed for record in the office of the County Clerk of Bernalillo County, New Mexico on December 23, 1981 in Bk. Misc. 898, Pages 882–885 and being more particularly described as folllows:

BEGINNING at the southwest corner of the herein described tract, from whence the Albuquerque Control Survey Monument "7–M21" bears N 03°08'30" W, 643.92 feet;

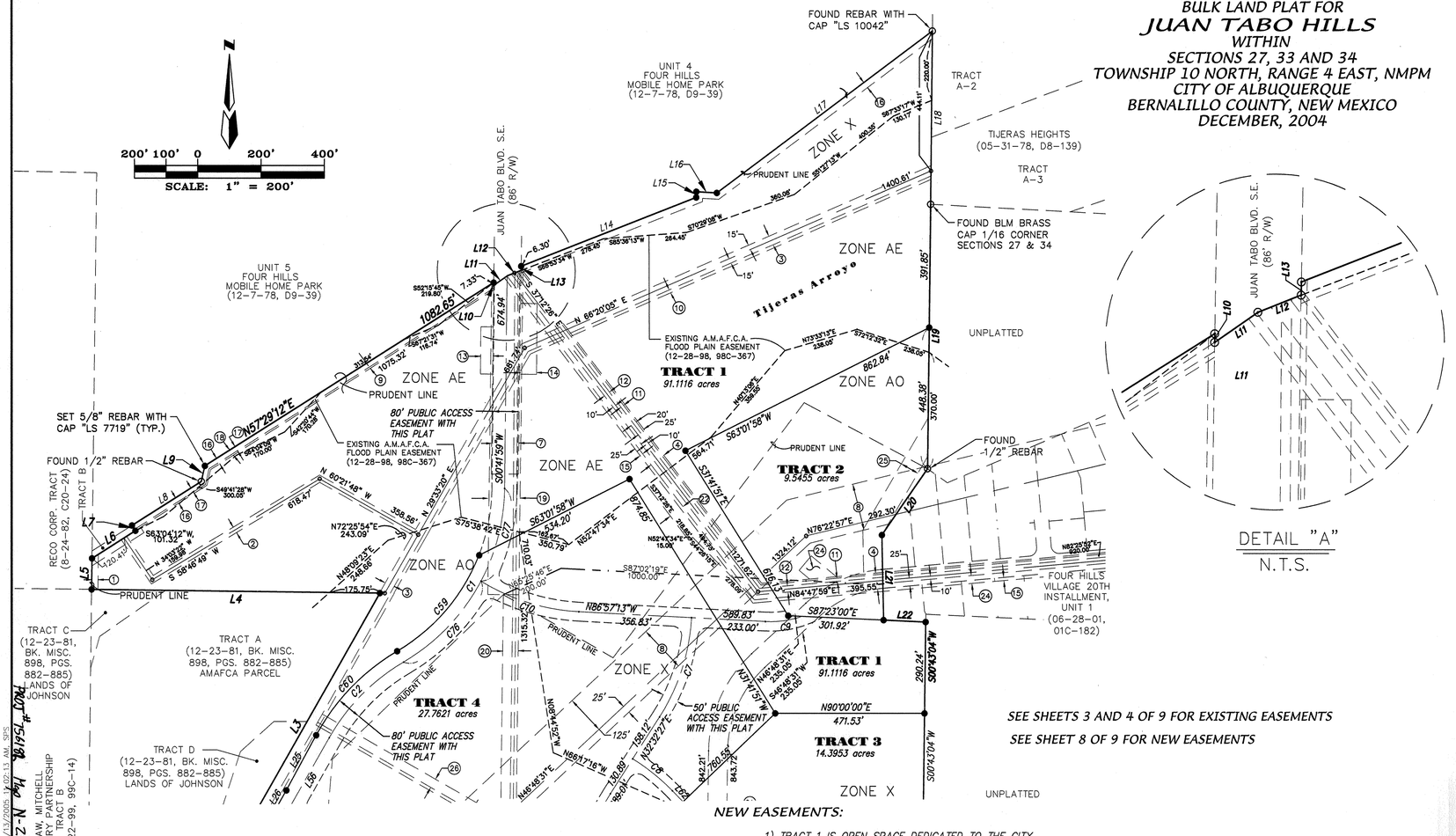
THENCE N 00°17'01" E, 2750.97 feet to a point;
THENCE S 89°42'17" E, 447.39 feet to a point;
THENCE N 01°49'04" W, 439.87 feet to a point;
THENCE N 29°26'17" E, 1004.51 feet to a point;
THENCE N 89°15'53" W, 911.63 feet to a point;
THENCE N 00°42'12" E, 98.56 feet to a point;
THENCE N 57°28'58" E, 163.10 feet to a point;
THENCE N 32°31'02" W, 20.00 feet to a point;
THENCE N 57°28'58" E, 260.16 feet to a point;
THENCE N 12°37'53" E, 50.77 feet to a point;
THENCE N 57°29'12" E, 1082.65 feet to a point;
THENCE S 00°39'44" W, 8.73 feet to a point;
THENCE N 54°55'30" E, 52.84 feet to a point;
THENCE N 68°13'20" E, 46.69 feet to a point;
THENCE N 00°53'31" E, 13.27 feet to a point;
THENCE N 68°28'17" E, 594.70 feet to a point;
THENCE N 01°08'50" E, 18.00 feet to a point;
THENCE S 86°43'49" E, 64.80 feet to a point;
THENCE N 52°53'46" E, 852.28 feet to a point;
THENCE S 00°32'11" W, 550.16 feet to a point;
THENCE S 00°40'21" W, 840.23 feet to a point;
THENCE S 34°19'37" W, 254.94 feet to a point;
THENCE S 01°08'04" E, 270.46 feet to a point;
THENCE S 87°23'00" E, 132.86 feet to a point;
THENCE S 00°43'04" W, 1276.85 feet to a point;
THENCE S 87°50'40" E, 664.23 feet to a point;
THENCE S 00°22'48" W, 1707.50 feet to a point;
THENCE S 00°30'17" W, 734.93 feet to a point;
THENCE S 00°22'48" W, 274.47 feet to a point;
THENCE N 89°06'07" W, 1313.06 feet to a point;
THENCE N 89°17'01" W, 662.84 feet to a point;
THENCE N 89°10'39" W, 1317.21 feet to the point of beginning and containing (14,270,056 s.f.) 327.5954 acres more or less.

ALDRICH LAND SURVEYING
P.O. BOX 30701, ALBQ., N.M. 87190
505–884–1990

Dwg: NEW sht 5-8.dwg	Drawn: STEPHEN	Checked: ALS	Sheet 9 of 9
Scale: NTS	Date: 01/13/05	Job: A02079	

A02JOBS\A2079 4 HILLS\Bulk Plat\NEW sht 5-8.dwg - Layout3 (12-28-04) SPS

BULK LAND PLAT FOR
JUAN TABO HILLS
WITHIN
SECTIONS 27, 33 AND 34
TOWNSHIP 10 NORTH, RANGE 4 EAST, NMPM
CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO
DECEMBER, 2004



SEE SHEET 6 OF 9
SEE SHEETS 3 AND 4 OF 9 FOR EXISTING EASEMENTS
SEE SHEET 8 OF 9 FOR NEW EASEMENTS

NEW EASEMENTS:

1) TRACT 1 IS OPEN SPACE DEDICATED TO THE CITY OF ALBUQUERQUE PER THE EXCHANGE AGREEMENT DATED 7-23-04.

2) A BLANKET DRAINAGE EASEMENT WITH THIS PLAT TO BE BETTER DEFINED OR VACATED UPON FUTURE DEVELOPMENT.

3) A 25' WIDE FLOATING ACCESS EASEMENT FROM NEW 80' WIDE PUBLIC ACCESS EASEMENT ACROSS NEW TRACT 1 TO AMAFCA TRACT "A" IS HEREBY GRANTED WITH THIS PLAT. FINAL LOCATION TO BE DETERMINED AT A LATER DATE BETWEEN CITY OPEN SPACE AND AMAFCA.

ALDRICH LAND SURVEYING
P.O. BOX 30701, ALBQ., N.M. 87190
505–884–1990

Dwg: NEW sht 5-8.dwg	Drawn: STEPHEN	Checked: ALS	Sheet 5 of 9
Scale: AS SHOWN	Date: 01/13/05	Job: A02079	

A02JOBS\A2079 4 HILLS\Bulk Plat\NEW sht 5-8.dwg - Layout1 (01-04-05) SPS

RECORD DRAWINGS

PROJECT 5618, by N-21 SHEET 2 OF 4 (Rev 1)

FOUND 1/2" REBAR

RECORD DRAWINGS

LEGEND

- 5210 — EXISTING CONTOUR (MAJOR)
- TC= / FL= x 00.0 — EXISTING SPOT ELEVATION
- • — EXISTING SANITARY SEWER MANHOLE
- 30"SD — EXISTING STORM DRAIN
- 8"SAS — EXISTING SAS LINE
- 10"WL — EXISTING WATER LINE
- EXISTING FLOOD PLAIN (100 YEAR)
- EXISTING/NEW EASEMENTS
- 5445 — NEW FLOODPLAIN CONTOUR
- 41 — NEW HEC-RAS CROSS SECTION & ID
- AR 30 — EXISTING HEC-RAS CROSS SECTION & ID

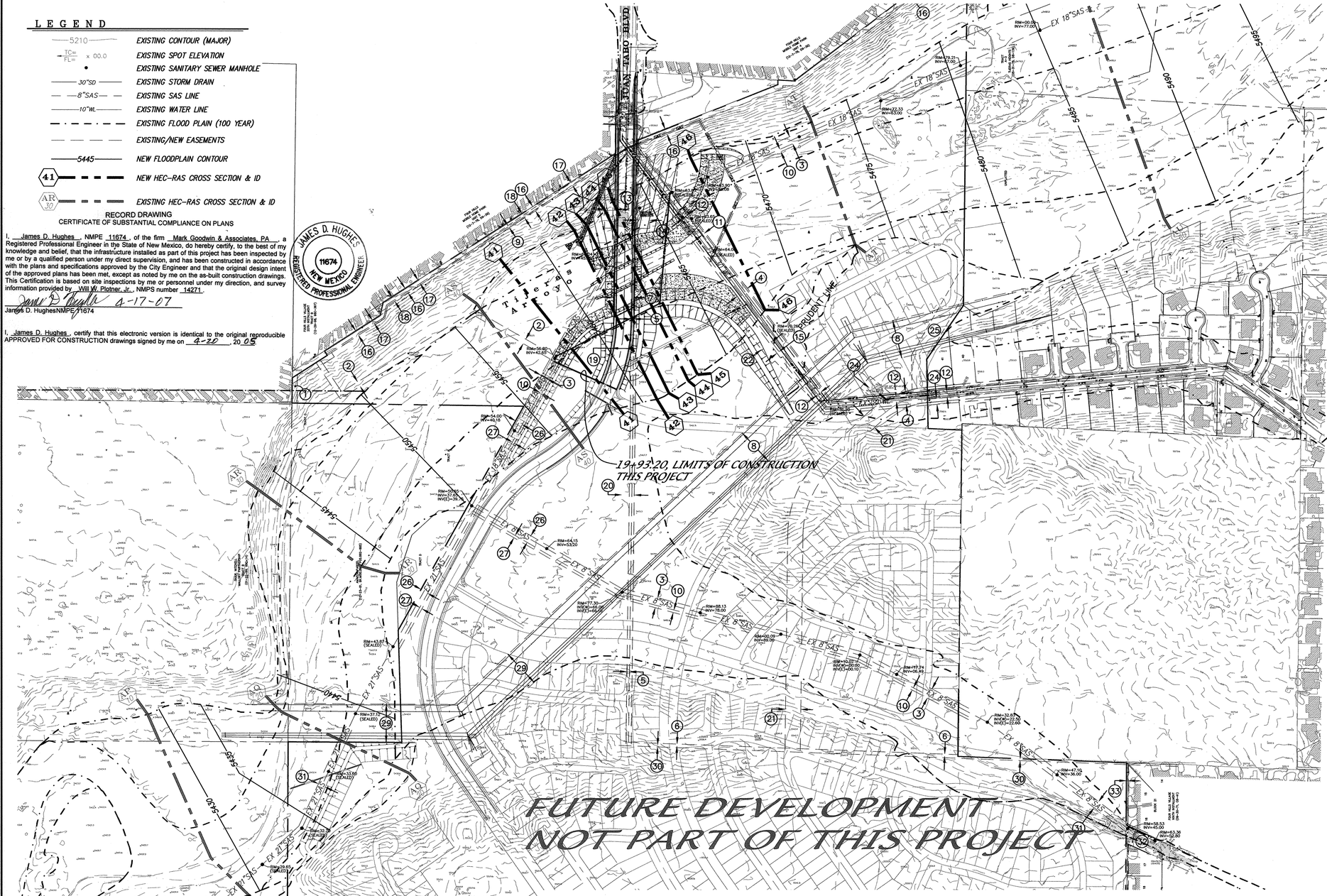
RECORD DRAWING
CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, James D. Hughes, NMPE 11674, of the firm Mark Goodwin & Associates, PA, a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision, and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met, except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me or personnel under my direction, and survey information provided by Will W. Plotner, Jr., NMPS number 14271.

James D. Hughes 4-17-07
James D. HughesNMPE 11674

JAMES D. HUGHES 11674 NEW MEXICO REGISTERED PROFESSIONAL ENGINEER

I, James D. Hughes, certify that this electronic version is identical to the original reproducible APPROVED FOR CONSTRUCTION drawings signed by me on 4-20 20 05



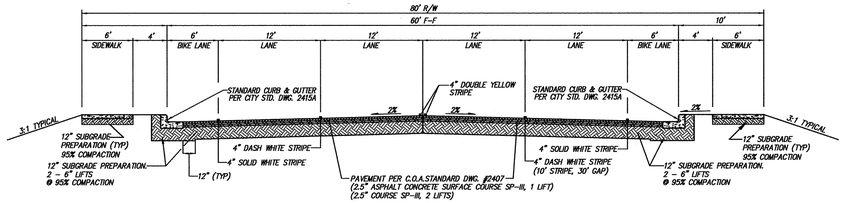
EASEMENTS

1. 20' C.O.A. DRAINAGE EASEMENT
2. 20' C.O.A. UTILITY EASEMENT
3. 30' C.O.A. PERMANENT UTILITY & DRAINAGE EASEMENT
4. 50' C.O.A. DRAINAGE & UTILITY EASEMENT
5. 10' U.G. TELEPHONE EASEMENT
6. 7' U.G. TELEPHONE EASEMENT
7. 86' C.O.A. WIDE DRAINAGE EASEMENT
8. 150' PUBLIC SERVICE COMPANY OF NEW MEXICO EASEMENT
9. 10' PNM & M.S.T.&T. EASEMENT
10. 10' C.O.A. TEMPORARY UTILITY & DRAINAGE EASEMENT
11. 10' C.O.A. U.G. SEWER LINE EASEMENT
12. 20' C.O.A. PERMANENT UTILITY EASEMENT
13. 40' X 150' C.O.A. CONSTRUCTION & MAINTENANCE EASEMENT
14. 50' X 225' C.O.A. CONSTRUCTION & MAINTENANCE EASEMENT
15. 10' GAS EASEMENT
16. 20' C.O.A. PUBLIC TRAIL ACCESS EASEMENT
17. 15' C.O.A. PUBLIC ACCESS EASEMENT
18. 20' PRIVATE ACCESS EASEMENT FOR TRACT B
19. 98' C.O.A. PUBLIC ROADWAY EASEMENT
20. 49' C.O.A. PUBLIC ROADWAY EASEMENT WITH 6' BIKE LANE
21. 60' C.O.A. PUBLIC ROADWAY EASEMENT
22. C.O.A. PUBLIC DRAINAGE EASEMENT
23. 15' C.O.A. PUBLIC PEDESTRIAN & NON-VEHICULAR ACCESS EASEMENT
24. 60' PUBLIC DRAINAGE EASEMENT VEHICULAR ACCESS EASEMENT
25. 60' ACCESS AND UTILITY EASEMENT
26. 30' C.O.A. PERMANENT UTILITY & DRAINAGE EASEMENT
27. 10' C.O.A. TEMPORARY UTILITY & DRAINAGE EASEMENT
28. 10' PNM EASEMENT
29. 150' PUBLIC SERVICE COMPANY OF NEW MEXICO EASEMENT
30. 7' M.S.T.&T. R/W EASEMENT
31. 30' SANITARY SEWER EASEMENT
32. 65' DRAINAGE & UTILITY EASEMENT
33. 7' UTILITY & DRAINAGE EASEMENT
34. 7' UTILITY & DRAINAGE EASEMENT

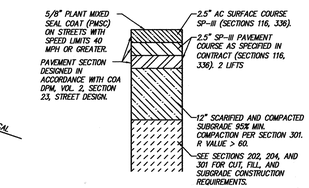
N

200' 100' 0 200' 400'

SCALE: 1" = 200'



TYPICAL STREET SECTION
N.T.S.



FLEXIBLE PAVEMENT SECTION (2407)
N.T.S. ART./COLL. ST. SECTIONS WITHOUT MEDIANS

A2079 4 HILLS/BRIDGE PLANS/PHASE II/A2079-MASTERPLAN.dwg/06-21-05/ACH DER

F:\A02JOBS\A2079 4 HILLS\Bridge Plans\Phase II\A2079-MASTERPLAN.dwg, 6/21/2005 9:17:01 AM, PLOTTED BY: DER

AS BUILT INFORMATION

CONTRACTOR AUF, Inc.

WORK STAKED BY	Cartesian Surveys Inc.	DATE 3/04
SURVEY CHECKED & ACCEPTANCE	BY MGA	DATE 4/07
FIELD VERIFICATION BY	Cartesian Surveys Inc	DATE 4/07
DRAWINGS CORRECTED BY	MGA	DATE 4/07

MICRO-FILM INFORMATION

RECORDED BY DATE

NO.

BENCH MARKS

STATION "5-M22" IS LOCATED 8.7 MI. SE OF DOWNTOWN ALBUQUERQUE ON THE EAST SIDE OF THE MUNICIPAL LIMITS LINE IN THE TOUR HILLS SUBDIVISION AREA. STATION IS 600 FT. EAST OF MUNICIPAL LIMITS LINE, 77.5' SE OF POWER POLE #SE37 & 186.0' NW OF POWER POLE #60. STATION IS A STANDARD ACS BRASS DISK SET IN A CONCRETE MONUMENT IN THE GROUND. STATION IS STAMPED "5-M22, 1975ACS". X= 424,017.61, Y= 1,475,700.07, (NAD 1927), Z= 5594.518 (SLD 1929).

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL

JAMES D. HUGHES 11674 NEW MEXICO REGISTERED PROFESSIONAL ENGINEER 5-02-07

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
		DESIGNED BY JDH	DATE 12/04
		DRAWN BY ACH	DATE 12/04
		CHECKED BY DMG	DATE 12/04

dmg MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
P.O. BOX 90606
ALBUQUERQUE, NEW MEXICO 87199
(505) 828-2200, FAX (505) 797-9539

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO BOULEWARD S.E. - PHASE II MASTER PLAN

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO.	ZONE MAP NO.	SHEET OF	
756181	M-21/N-21	3 46	C-3

RECORD DRAWINGS

50' 25' 0 50' 100'

SCALE: 1" = 50'

JUAN TABO BOULEVARD S.E.

STA. 5+00.00 TO STA. 17+30.59

SCALE: HORZ. 1" = 50'
VERT. 1" = 10'

JUAN TABO BLVD.

DETAIL "A"
N.T.S.

Section W-W (NTS)

NGVD 29

NOTES

1. ALL STATIONING IS CENTERLINE STATIONING.
2. ALL 4' VALLEY GUTTERS PER CITY OF ALBUQUERQUE STANDARD DRAWING 2421 AT KNUCKLES AND 6' VALLEY GUTTERS PER CITY OF ALBUQUERQUE STANDARD DRAWING 2420 AT ALL INTERSECTIONS, EXCEPT 16' VALLEY GUTTERS PER ALBUQUERQUE STANDARD DRAWING 2422.
3. TRANSITION FROM ROLL CURB TO STANDARD CURB SHALL BE PER CITY OF ALBUQUERQUE DRAWING 2418, UNLESS OTHERWISE SPECIFIED.
4. ALL HANDICAP RAMPS TO BE CASE II PER CITY OF ALBUQUERQUE STANDARD DRAWING 2441, TO BE MAINTAINED WITHIN THE LENGTH AS SPECIFIED. THEN THE "F" LENGTH AS SHOWN IN DRAWING 2441 SHALL MUST BE INCREASED TO MAINTAIN A SLOPE < 12:1.
5. TRANSITION SECTION FROM FULL CROWN TO NO CROWN TO BE A MINIMUM OF 50' AND TRANSITIONS SECTIONS FROM FULL TO HALF CROWN TO BE A MINIMUM OF 25', PER CITY OF ALBUQUERQUE STANDARD DRAWING 2401.
6. ALL PROPOSED SIDEWALKS ARE PER CITY OF ALBUQUERQUE STANDARD DETAIL #2430.
7. SOIL NOT HAVING A MINIMUM R-VALUE OF 60 WILL BE REMOVED TO A DEPTH OF 2 FEET AND REPLACED BY THE CONTRACTOR WITH A SUITABLE MATERIAL OR PAVEMENT SECTION SHALL BE DESIGNED BY THE CONSULTANT ACCOMADATING THE EXISTING R-VALUE PER COA STANDARD SPECIFICATIONS.

LEGEND

- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)
- EXISTING SPOT ELEVATION
- EXISTING SANITARY SEWER MANHOLE
- EXISTING FENCE
- EXISTING STORM DRAIN
- EXISTING SAS LINE
- EXISTING WATER LINE
- EXISTING STORM MANHOLE
- EXISTING ELECTRIC LINE
- EXISTING POWER POLE/GUY WIRE
- NEW STORM MANHOLE
- NEW STORM LINE
- NEW SANITARY SEWER MANHOLE
- NEW SANITARY SEWER MANHOLE
- NEW CURB & GUTTER
- NEW SIDEWALK
- NEW RIGHT-OF-WAY
- NEW CENTERLINE
- NEW EASEMENTS
- NEW RETAINING WALL
- REMOVE EXISTING CURB & GUTTER, PAVING & CONCRETE SIDEWALK
- NAITIVE SEED & GRAVEL MULCH
- PROPOSED BRIDGE DECK

CURVE DATA – DESCRIBES FACE OF NEW CURB

1. L=40.36, R=25.00, Δ=92°29'50", Tan=26.11
2. L=38.69, R=25.00, Δ=88°40'00", Tan=24.42
3. L=26.41, R=650.00, Δ=2°19'41", Tan=13.21
4. L=26.41, R=650.00, Δ=2°19'41", Tan=13.21
5. L=57.97, R=650.00, Δ=5°06'35", Tan=29.00
6. L=57.97, R=650.00, Δ=5°06'35", Tan=29.00

AMAFCA DATE

RECORD DRAWING
CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, James D. Hughes, NMPE 11674, of the firm Mark Goodwin & Associates, PA, a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision, and has been constructed in accordance with this plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met, except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me or personnel under my direction, and survey information provided by Will W. Plotner, Jr., NMPS number 14271.

James D. Hughes 4-17-07
James D. Hughes NMPE 11674

I, James D. Hughes, certify that this electronic version is identical to the original reproducible APPROVED FOR CONSTRUCTION drawings signed by me on 4-17-07, 20 07

JAMES D. HUGHES 11674 NEW MEXICO REGISTERED PROFESSIONAL ENGINEER

AS BUILT INFORMATION

CONTRACTOR Ruff, Inc.

WORK STAKED BY	Cartesian Surveys Inc.	DATE 9/05
FIELD ACCEPTANCE BY	MCA	DATE 11/07
FIELD LOCATION BY	Cartesian Surveys Inc.	DATE 4/07
DRAWINGS CORRECTED BY	MCA	DATE 4/07
RECORDED BY	MICRO-FILM INFORMATION	DATE

BENCH MARKS

STATION "5-M22" IS LOCATED 8.7 MI. SE OF DOWNTOWN ALBUQUERQUE ON THE EAST SIDE OF THE MUNICIPAL LIMITS LINE IN THE FOUR HILLS SUBDIVISION AREA. STATION IS 660 FT. EAST OF MUNICIPAL LIMITS LINE, 77.9' SE OF POWER POLE #E37 & 186.0' NW OF POWER POLE #60. STATION IS A STANDARD ACS BRASS DISK SET IN A CONCRETE MONUMENT IN THE GROUND. STATION IS STAMPED "5-M22, 1975ACS". X= 424,017.61, Y= 1,475,700.07, (NAD 1927), Z= 5594.518 (SLD 1929).

SURVEY INFORMATION

NO.	BY	DATE

ENGINEER'S SEAL

JAMES D. HUGHES 11674 NEW MEXICO REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
		DESIGNED BY JDH	DATE 12/04
		DRAWN BY DER	DATE 12/04
		CHECKED BY DMG	DATE 12/04

dmg MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
P.O. BOX 90606
ALBUQUERQUE, NEW MEXICO 87199
(505) 828-2200, FAX (505) 797-9539

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO BOULEVARD S.E. - PHASE II PAVING IMPROVEMENTS

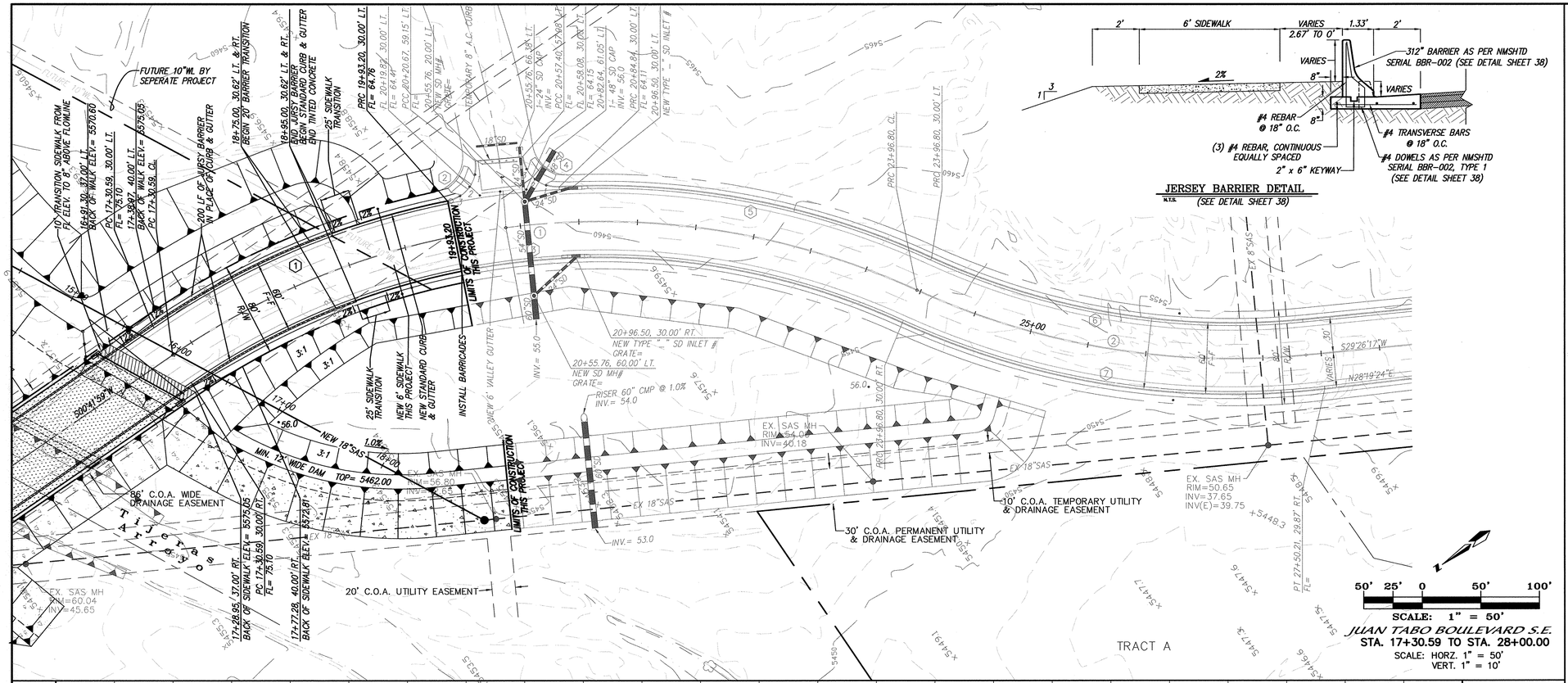
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO. 756181 | ZONE MAP NO. M-21/N-21 | SHEET 4 OF 46 | C-4

A02jobs\A2079 4 HILLS\Bridge Plans\PHASE II\A2079-Bridge-pp1.dwg\06-16-05\DER ACH

F:\A02JOBS\A2079 4 HILLS\Bridge Plans\Phase II\A2079-Bridge-sp1.dwg, 6/16/2005 3:32:30 PM, PLOTTED BY: DER

RECORD DRAWINGS



JERSEY BARRIER DETAIL
N.T.S.
(SEE DETAIL SHEET 38)

NOTES

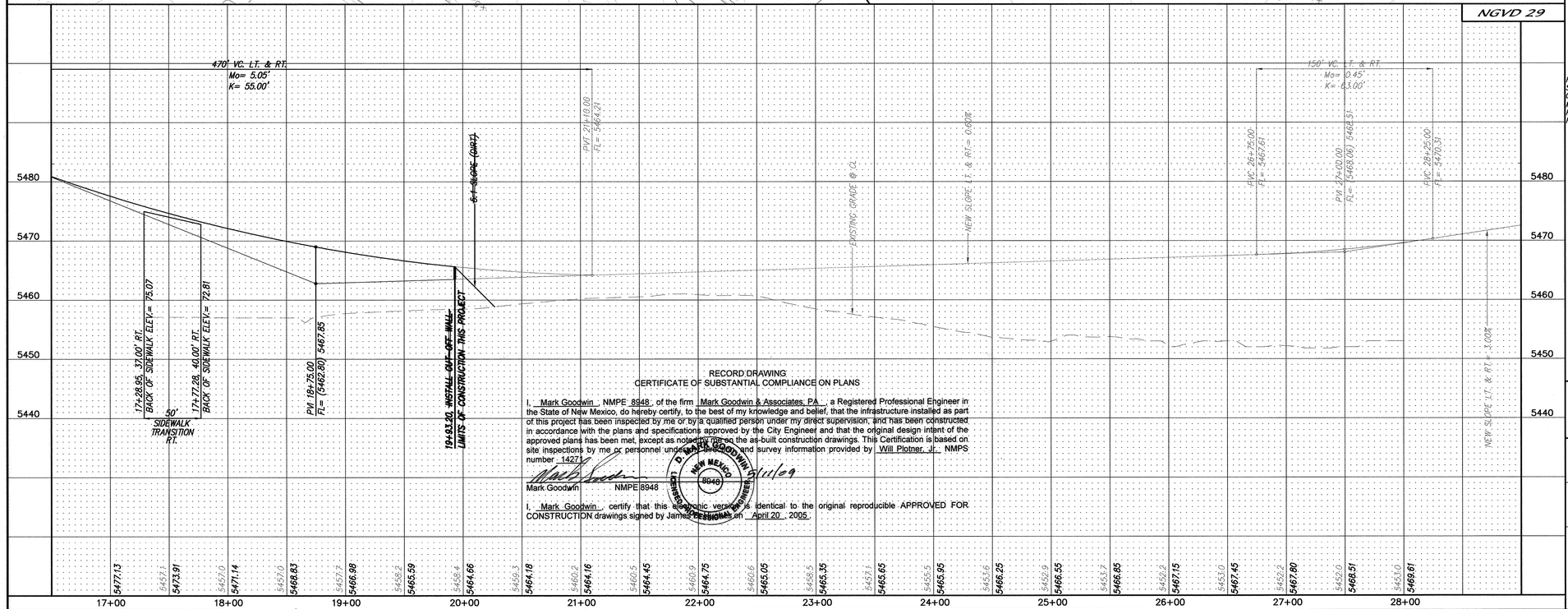
1. ALL STATIONING IS CENTERLINE STATIONING.
2. ALL 4' VALLEY GUTTERS PER CITY OF ALBUQUERQUE STANDARD DRAWING 2421 AT KNUCKLES AND 6' VALLEY GUTTERS PER CITY OF ALBUQUERQUE STANDARD DRAWING 2420 AT ALL INTERSECTIONS, EXCEPT 16' VALLEY GUTTERS PER ALBUQUERQUE STANDARD DRAWING 2422.
3. TRANSITION FROM ROLL CURB TO STANDARD CURB SHALL BE PER CITY OF ALBUQUERQUE DRAWING 2418, UNLESS OTHERWISE SPECIFIED.
4. ALL HANDICAP RAMPS TO BE CASE II PER CITY OF ALBUQUERQUE STANDARD DRAWING 2441. WHERE GRADES DO NOT PERMIT A MAXIMUM SLOPE OF 12:1 TO BE MAINTAINED WITHIN THE LENGTH AS SPECIFIED, THEN THE "F" LENGTH AS SHOWN IN DRAWING 2441 SHALL MUST BE INCREASED TO MAINTAIN A SLOPE < 12:1.
5. TRANSITION SECTION FROM FULL CROWN TO NO CROWN TO BE A MINIMUM OF 50' AND TRANSITIONS SECTIONS FROM FULL TO HALF CROWN TO BE A MINIMUM OF 25', PER CITY OF ALBUQUERQUE STANDARD DRAWING 2401.
6. ALL PROPOSED SIDEWALKS ARE PER CITY OF ALBUQUERQUE STANDARD DETAIL #2430.
7. SOIL NOT HAVING A MINIMUM R-VALUE OF 60 WILL BE REMOVED TO A DEPTH OF 2 FEET AND REPLACED BY THE CONTRACTOR WITH A SUITABLE MATERIAL OR PAVEMENT SECTION SHALL BE DESIGNED BY THE CONSULTANT ACCOMADATING THE EXISTING R-VALUE PER COA STANDARD SPECIFICATIONS.

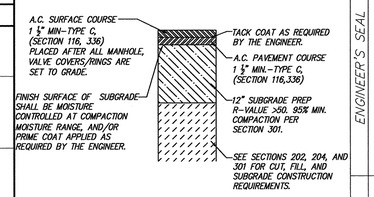
CURVE DATA – DESCRIBES CENTERLINE

① Δ = 58°43'27" R = 650.00' L = 666.21' T = 365.69'
② Δ = 29°59'09" R = 850.00' L = 340.18' T = 174.08'

CURVE DATA – DESCRIBES FACE OF NEW CURB

① Δ = 23°08'52" R = 680.00' L = 274.72' T = 139.26'
② Δ = 87°09'59" R = 30.00' L = 45.64' T = 28.55'
③ Δ = 58°43'27" R = 620.00' L = 635.46' T = 348.81'
④ Δ = 84°55'40" R = 30.00' L = 44.47' T = 27.46'
⑤ Δ = 27°29'54" R = 680.00' L = 326.36' T = 166.38'
⑥ Δ = 29°59'09" R = 620.00' L = 324.48' T = 166.05'
⑦ Δ = 31°06'02" R = 680.00' L = 369.11' T = 189.22'





FLEXIBLE PAVEMENT SECTION (2405A)
N.T.S.

RECORD DRAWING
CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, Mark Goodwin, NMPE 8948, of the firm Mark Goodwin & Associates, P.A., a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision, and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met, except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me or personnel under my supervision and survey information provided by Will Plotner, Jr. NMPS number 14271.

Mark Goodwin NMPE 8948 — 8/11/09

I, Mark Goodwin, certify that this electronic version is identical to the original reproducible APPROVED FOR CONSTRUCTION drawings signed by James D. Hughes on April 20, 2005.

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

BENCH MARKS
STATION "5-M22" IS LOCATED 8.7 MI. SE OF DOWNTOWN ALBUQUERQUE ON THE EAST SIDE OF THE MUNICIPAL LIMITS LINE IN THE FOUR HILLS SUBDIVISION AREA. STATION IS 600 FT. EAST OF MUNICIPAL LIMITS LINE. 77.0' SE OF POWER POLE #ES37 & 186.0' NW OF POWER POLE #RG. STATION IS A STANDARD ACS BRASS DISK SET IN A CONCRETE MONUMENT IN THE GROUND. STATION IS STAMPED "5-M22, 1975ACS". X= 424,017.61, Y= 1,475,700.07, (NAD 1927), Z= 5594.518 (SLD 1929).

AS BUILT INFORMATION
CONTRACTOR: AUF, INC.

WORK STAKED BY:	Cartesian Surveys Inc.	DATE 8/65
INSPECTED BY:		DATE 4/62
FIELD VERIFIED BY:	MGA	DATE 4/62
DRAWINGS PLOTTED BY:	Cartesian Surveys Inc.	DATE 4/62
CORRECTED BY:	MGA	DATE 4/61

MICRO-FILM INFORMATION
RECORDED BY: DATE
NO.

ENGINEER'S SEAL
JAMES D. HUGHES — NEW MEXICO — REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REMARKS / REVISIONS	BY
		DESIGN	
DESIGNED BY		JDH	12/04
DRAWN BY		DER	12/04
CHECKED BY		DMG	12/04

dmg MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
P.O. BOX 90606
ALBUQUERQUE, NEW MEXICO 87199
(505) 828-2200, FAX (505) 797-9539

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE:
JUAN TABO BOULEVARD S.E. - PHASE II
PAVING IMPROVEMENTS

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF	
756181	M-21/N-21	5	46	C-5

A02jobs\A2079 4 HILLS\Bridge Plans\PHASE II\A2079-Bridge-pp2.dwg\06-16-05\DER ACH

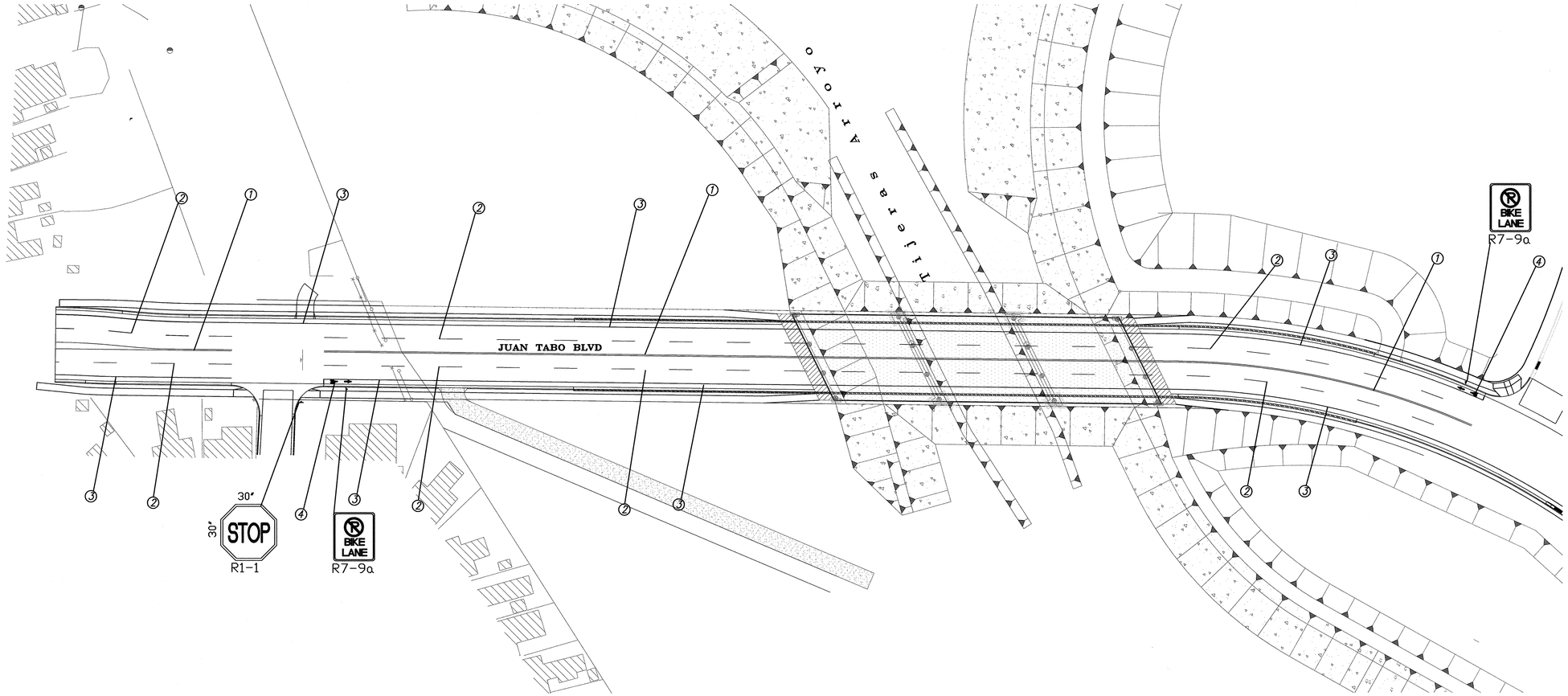
F:\A02JOBS\A2079 4 HILLS\Bridge Plans\Phase II\A2079-Bridge-pp2.dwg, 8/16/2005 3:23:05 PM, PLOTTED BY: DER

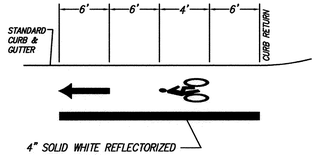
RECORD DRAWINGS

NOTES

1. 4" DOUBLE YELLOW REFLECTORIZED PLASTIC STRIPE
2. 4" DASH WHITE REFLECTORIZED PLASTIC STRIPE (10' STRIPE, 30' GAP)
3. 4" SOLID WHITE REFLECTORIZED PLASTIC STRIPE
4. NEW BIKE LANE MARKING (SEE DETAIL THIS SHEET)

NOTE: COORDINATE WITH TRAFFIC OPERATIONS PRIOR TO ANY SIGNAGE & STRIPING.





BIKE LANE MARKING
N.T.S.

RECORD DRAWING
CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, Mark Goodwin, NMPE 8948, of the firm Mark Goodwin & Associates, PA, a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision, and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met, except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me or personnel under my direction, and survey information provided by Will Plotner, Jr. NMPS number 14271.

Mark Goodwin NMPE 8948 — 4/11/09

I, Mark Goodwin, certify that this electronic version is identical to the original reproducible APPROVED FOR CONSTRUCTION drawings signed by James D. Hughes on April 20, 2005.

D. MARK GOODWIN — NEW MEXICO — 8948 — REGISTERED PROFESSIONAL ENGINEER

50' 25' 0 50' 100'
SCALE: 1" = 50'

A04jobs\A2079 4 HILLS\ Bridge Plans\PHASE II\A2079-Bridge -ssp.dwg\06-16-05\DER

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

BENCH MARKS

STATION "5-M22" IS LOCATED 8.7 MI. SE OF DOWNTOWN ALBUQUERQUE ON THE EAST SIDE OF THE MUNICIPAL LIMITS LINE IN THE FOUR HILLS SUBDIVISION AREA. STATION IS 600 FT. EAST OF MUNICIPAL LIMITS LINE, 77.9' SE OF POWER POLE #SE37 & 186.0' NW OF POWER POLE #60. STATION IS A STANDARD AGS BRASS DISK, SET IN A CONCRETE MONUMENT IN THE GROUND. STATION IS STAMPED "5-M22, 1975AGS". X= 424,017.61, Y= 1,475,700.07, (NAD 1927), Z= 5594.518 (SLD 1929)

AS BUILT INFORMATION

CONTRACTOR AUTAUC DATE 9/05
WORK STAKED BY Cartesian Surveys Inc. DATE 9/07
INSPECTED BY MGA
ACCEPTANCE BY Cartesian Surveys Inc. DATE 9/07
FIELD VERIFICATION BY MGA DATE 9/07
DRAWINGS CORRECTED BY MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

ENGINEER'S SEAL

JAMES D. HUGHES — 14271 — NEW MEXICO — REGISTERED PROFESSIONAL ENGINEER — 4-20-05

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
DESIGNED BY		JDH	DATE 02/05
DRAWN BY		DER	DATE 02/05
CHECKED BY		DMG	DATE 02/05

dmg MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
P.O. BOX 90606
ALBUQUERQUE, NEW MEXICO 87199
(505) 828-2200, FAX (505) 797-9539

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO BOULEVARD S.E. - PHASE II
STRIPING & SIGNING

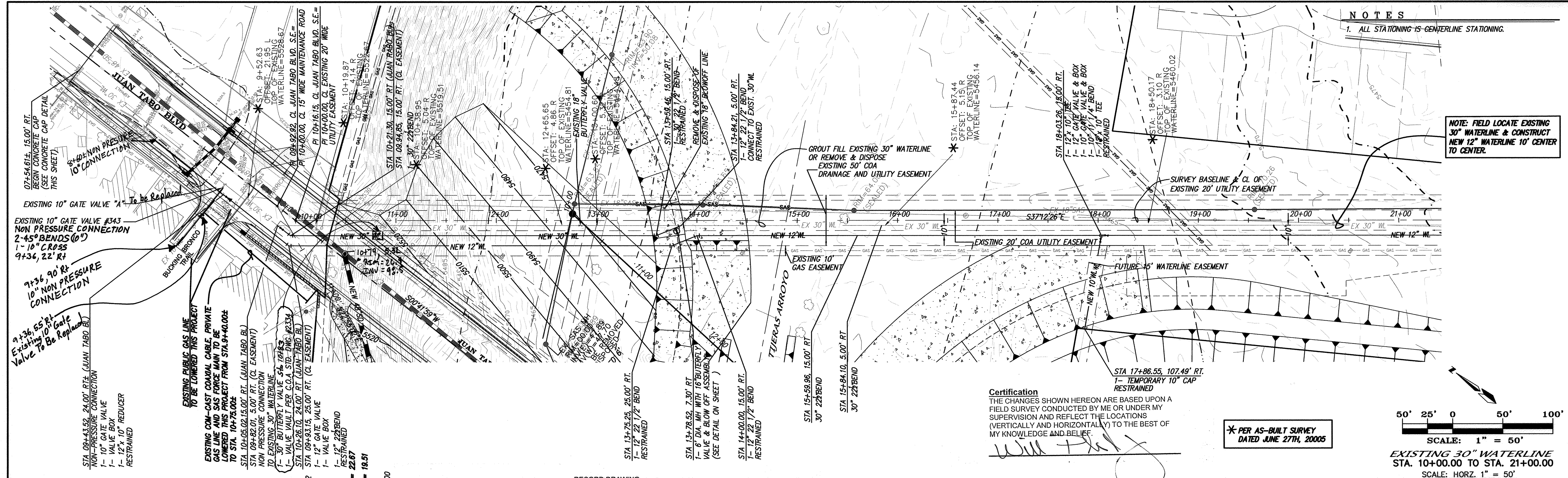
DESIGN REVIEW COMMITTEE: APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE
CITY ENGINEER APPROVAL: APPROVED JUL 28 2005 CITY ENGINEER

LAST DESIGN UPDATE: MO./DAY/YR. | MO./DAY/YR.

CITY PROJECT NO. 756181 | ZONE MAP NO. M-21/N-21 | SHEET 6 OF 46 | C-6

F:\AS2JOBS\A2079 4 HILLS\Bridge Plans\Phase II\A2079-Bridge-ssp.dwg, 6/16/2005 3:57:03 PM, PLOTTED BY: DER

RECORD DRAWINGS



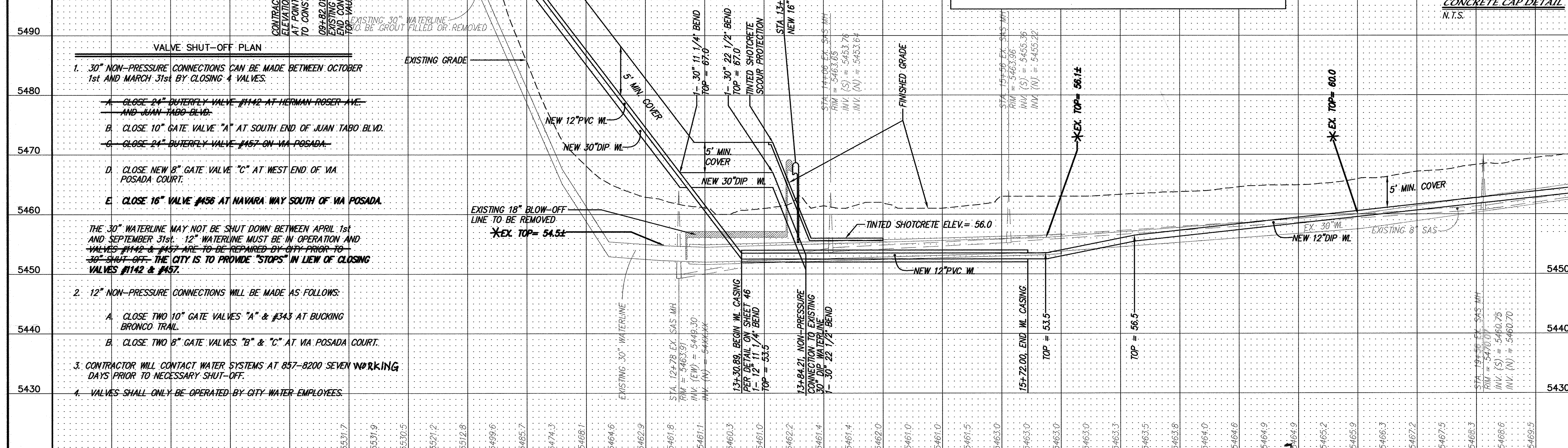
NOTES

1. ALL STATIONING IS CENTERLINE STATIONING.

Certification

THE CHANGES SHOWN HEREON ARE BASED UPON A FIELD SURVEY CONDUCTED BY ME OR UNDER MY SUPERVISION AND REFLECT THE LOCATIONS (VERTICALLY AND HORIZONTALLY) TO THE BEST OF MY KNOWLEDGE AND BELIEF.

EXISTING 30" WATERLINE
STA. 10+00.00 TO STA. 21+00.00
SCALE: HORZ. 1" = 50'

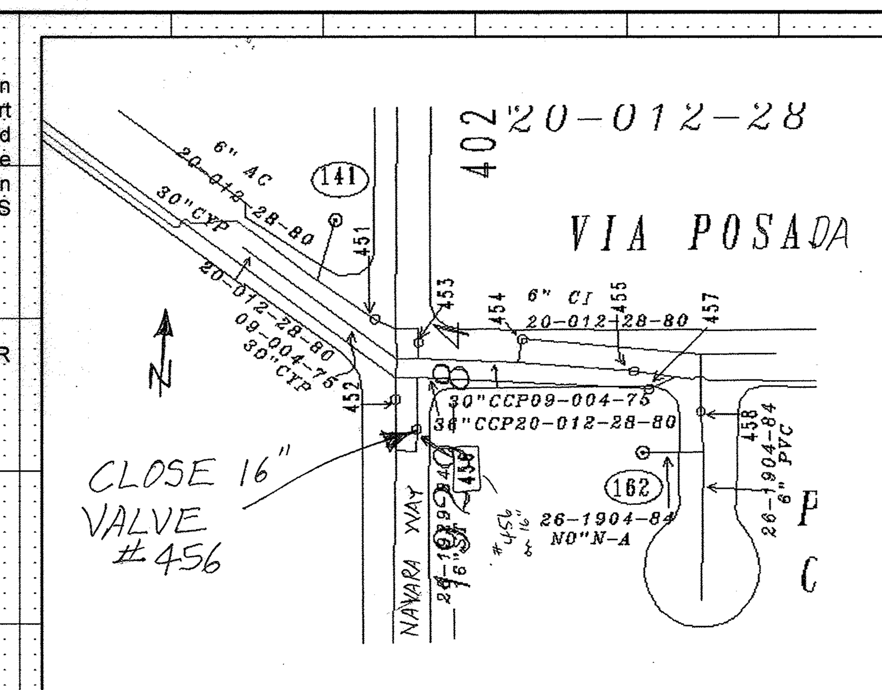


RECORD DRAWING
CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, Mark Goodwin , NMPE 8948 , of the firm Mark Goodwin & Associates, PA , a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision, and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met; except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me or personnel under my direction, and survey information provided by Will Plotner, Jr. NMPS number 14271 .

Mark Goodwin NMPE 8948 5/11/09

I, Mark Goodwin , certify that this electronic version is identical to the original reproducible APPROVED FOR CONSTRUCTION drawings signed by James D. Hughes on April 20 , 2005 .

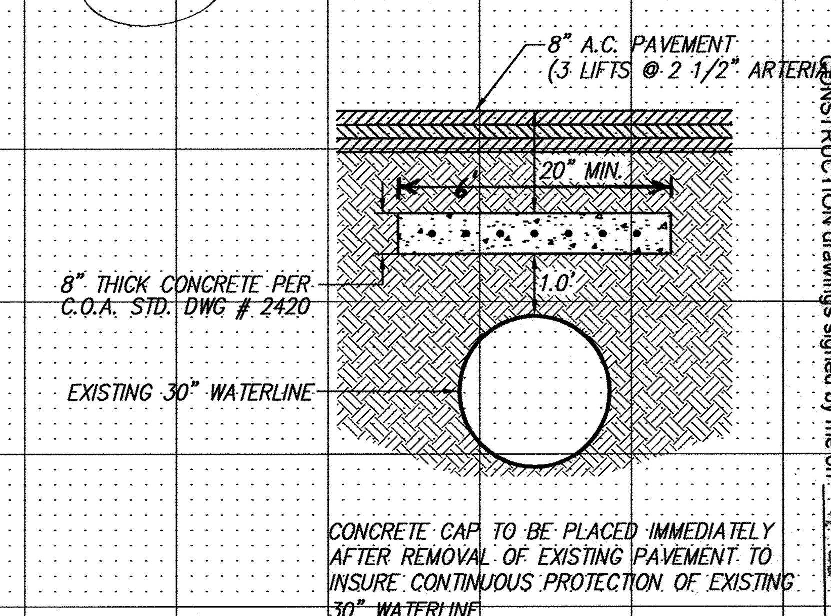


VALVE SHUT-OFF PLAN

1. 30" NON-PRESSURE CONNECTIONS CAN BE MADE BETWEEN OCTOBER 1st AND MARCH 31st BY CLOSING 4 VALVES:
   - ~~A. CLOSE 24" BUTERFLY VALVE #1142 AT HERMAN ROSER AVE. AND JUAN TABO BLVD.~~
   - B. CLOSE 10" GATE VALVE "A" AT SOUTH END OF JUAN TABO BLVD.
   - ~~C. CLOSE 24" BUTERFLY VALVE #457 ON VIA POSADA.~~
   - D. CLOSE NEW 8" GATE VALVE "C" AT WEST END OF VIA POSADA COURT.
   - **E. CLOSE 16" VALVE #456 AT NAVARA WAY SOUTH OF VIA POSADA.**

THE 30" WATERLINE MAY NOT BE SHUT DOWN BETWEEN APRIL 1st AND SEPTEMBER 31st. 12" WATERLINE MUST BE IN OPERATION AND ~~VALVES #1142 & #457 ARE TO BE REPAIRED BY CITY PRIOR TO 30" SHUT OFF.~~ **THE CITY IS TO PROVIDE "STOPS" IN LIEW OF CLOSING VALVES #1142 & #457.**

2. 12" NON-PRESSURE CONNECTIONS WILL BE MADE AS FOLLOWS:
   - A. CLOSE TWO 10" GATE VALVES "A" & #343 AT BUCKING BRONCO TRAIL.
   - B. CLOSE TWO 8" GATE VALVES "B" & "C" AT VIA POSADA COURT.
3. CONTRACTOR WILL CONTACT WATER SYSTEMS AT 857-8200 SEVEN WORKING DAYS PRIOR TO NECESSARY SHUT-OFF.
4. ~~VALVES SHALL ONLY BE OPERATED BY CITY WATER EMPLOYEES.~~



CONCRETE CAP TO BE PLACED IMMEDIATELY AFTER REMOVAL OF EXISTING PAVEMENT TO INSURE CONTINUOUS PROTECTION OF EXISTING 30" WATERLINE.

CONCRETE CAP DETAIL
N.T.S.

CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, James D. Hughes , NMPE 11674 of the firm Mark Goodwin & Associates, PA , a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision, and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met; except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me or personnel under my direction, and survey information provided by Will Plotner, Jr. NMPS number 14271 .

James D. Hughes 4-17-07
James D. Hughes NMPE 11674

I, James D. Hughes , certify that this electronic version is identical to the original reproducible APPROVED FOR CONSTRUCTION drawings signed by me on 4-20 , 20 05 .

AS BUILT INFORMATION		
CONTRACTOR	AUI, INC	DATE
WORK STAKED BY	Cartesian Surveys Inc.	DATE 8/05
INSPECTOR'S ACCEPTANCE BY	MCA	DATE 4/07
FIELD VERIFICATION BY	Cartesian Surveys Inc.	DATE 4/07
DRAWINGS CORRECTED BY	MCA	DATE 4/07

MICRO-FILM INFORMATION	
RECORDED BY	DATE
NO.	

BENCH MARKS

STATION "5-M22" IS LOCATED 8.7 MI. SE OF DOWNTOWN ALBUQUERQUE ON THE EAST SIDE OF THE MUNICIPAL LIMITS LINE IN THE FOUR HILLS SUBDIVISION AREA. STATION IS 600 FT. EAST OF MUNICIPAL LIMITS LINE, 77.9' SE OF POWER POLE #SE37 & 186.0' NW OF POWER POLE #60. STATION IS A STANDARD ACS BRASS DISK SET IN A CONCRETE MONUMENT IN THE GROUND. STATION IS STAMPED "5-M22, 1975ACS". X= 424,017.61, Y= 1,475,700.07, (NAD 1927), Z= 5594.518 (SLD 1929).

SURVEY INFORMATION		
FIELD NOTES		
NO.	BY	DATE

ENGINEER'S SEAL
JAMES D. HUGHES 11674 NEW MEXICO REGISTERED PROFESSIONAL ENGINEER 4-20-05

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	

DESIGNED BY	JDH	DATE	02/05
DRAWN BY	DER	DATE	02/05
CHECKED BY	DMG	DATE	02/05

dmg MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
P.O. BOX 90606
ALBUQUERQUE, NEW MEXICO 87199
(505) 828-2200, FAX (505) 797-9539

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE:
JUAN TABO BOULEVARD S.E. - PHASE II
EXISTING 30" WATERLINE

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO.	ZONE MAP NO.	SHEET OF	
756181	M-21/N-21	7 46	C-7

A02jobs\A2079 4 HILS\Bridge Plans\PHASE II\A2079-Bridge-up2.dwg\06-23-05\DER

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RECORD DRAWINGS

NOTES

1. ALL STATIONING IS CENTERLINE STATIONING.

LEGEND

41 — — — HEC-RAS CROSS

PI 09+92.92, CL JUAN TABO BLVD. S.E.=
PI 10+00.00, CL 15' WIDE MAINTENANCE ROAD

PI 10+00.00, CL EXISTING 20' UTILITY EASEMENT

SEE DETAIL "A" ON SHEET 4

NATIVE SEED & GRAVEL MULCH

JUAN TABO BLVD.

TOP OF 2:1 SLOPE

TOP OF SHOT-CRETE ELEV.= 64.00

TOE OF SHOT-CRETE TOE ELEV.= 41.0

TOE OF SHOT-CRETE TOE ELEV.= 56.0

PI 15+55.00, CL JUAN TABO BLVD. S.E.=
PI 10+00.00, CL TIJERAS ARROYO

MATCH EXISTING

EX. SAS MH RIM=60.04 INV=45.65 TO BE REMOVED & DISPOSED

EX. SAS MH RIM=00.00 INV(E)=47.98 INV(W)=47.70 TO BE REMOVED & DISPOSED

14+88.36, 310.62' LT. EL.= 72.0
15+26.85, 294.66' LT. EL.= 68.0
15+17.19, 277.15' LT. EL.= 68.0
15+72.94, 269.22' LT. EL.= 65.0
14+80.19, 292.35' LT. EL.= 72.0
16+28.62, 215.85' LT. EL.= 65.0± (MATCH EXISTING)
16+11.54, 205.46' LT. EL.= 65.0± (MATCH EXISTING)
15+63.28, 251.71' LT. EL.= 65.0
15+56.44, 235.06' LT. EL.= 56.0
14+98.72, 258.79' LT. EL.= 56.0
12+98.57, 94.44' LT. EL.= 56.0
12+89.73, 87.49' LT. EL.= 54.0
13+10.41, 33.15' LT. EL.= 56.0
13+00.77, 30.31' LT. EL.= 54.0
12+06.97, 73.12' LT. EL.= 54.0
12+50.48, 19.41' LT. EL.= 54.0
PC 11+86.84, 84.56' LT. EL.= 60.0
11+90.90, 47.00' LT. EL.= 54.0
11+65.94, 58.56' LT. EL.= 47.0
11+32.50, 57.49' RT. EL.= 54.0
13+54.83, 223.12' RT. EL.= 54.0
11+01.18, 108.42' RT. EL.= 54.0
10+32.99, 80.70' RT. EL.= 47.0
PC 9+91.67, 104.56' RT. EL.= 58.99
13+80.23, 354.57' RT. EL.= 54.0
13+59.40, 361.22' RT. EL.= 54.0
13+47.97, 384.87' RT. EL.= 60.0
13+32.14, 446.22' RT. EL.= 76.0
13+65.66, 481.96' RT. MATCH EXISTING GRADE
13+17.49, 374.59' RT. EL.= 76.0
13+63.03, 771.38' RT. EL.= 76.0
7+00 PT 8+35.46, 104.56' RT. EL.= 59.0
6+65.71, 157.20' RT. EL.= 59.0
6+13.58, 192.98' RT. EL.= 59.0

EXISTING 10' WIDE U.G. TELEPHONE EASEMENT
EXISTING 900 PAIR BURIED QWEST CABLE
10+77.41, 87.86' RT. EL.= 47.0

APPROXIMATE LIMITS OF EXPOSED SHOT-CRETE ELEV.= 60.0±

TOP OF SHOT-CRETE ELEV.= 76.0

GRADE HING LINE ELEV.= 54.0

20' WIDE LEVEE

15' WIDE EASEMENT

10" WATERLINE BY SERPERATE PROJECT

NEW 10" WL

NEW 12" WL

NEW 18"SAS

NEW 30" WL

NEW 12" WL

NEW 8" WL

NEW 12" WL

NEW 12" WL

108.89' TRANSITION (UN-LINED)

178.61' TRANSITION (UN-LINED)

74' BRIDGE DECK NOT SHOWN

46.80' TRANSITION FROM 2:1 TO 1:1 SLOPE

21' TRANSITION FROM 2:1 TO 1:1 SLOPE

20' WIDE LEVEE TOP ELEV.= 76.0

TOP OF SHOT-CRETE ELEV.= 47.0

TOE OF SHOT-CRETE TOE ELEV.= 54.0

AFTO

TIJERAS

LIMITS OF CONSTRUCTION 19+93.20

CURVE DATA – DESCRIBES GRADE HING LINE

① L=375.11 R=350.00 Δ=61°24'23" Tan=207.84	② L=6.66 R=35.00 Δ=10°54'03" Tan=3.34	③ L=471.96 R=374.00 Δ=72°18'06" Tan=273.24	④ L=30.72 R=25.00 Δ=70°24'22" Tan=17.64
⑤ L=180.43 R=300.00 Δ=34°27'33" Tan=93.04	⑥ L=118.92 R=374.00 Δ=18°13'05" Tan=59.97		

SCALE: 1" = 50'

RECORD DRAWING
CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, Mark Goodwin, NMPE 8948, of the firm Mark Goodwin & Associates, P.A., a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person working under my supervision and that it substantially conforms to the approved plans and specifications, and that it is acceptable to the City Engineer and that the original design intent of the approved plans has been met, except as noted, and that the as-built construction drawings. This Certification is based on site inspections by me or personnel under my supervision and survey information provided by Will Plotner Jr. NMPS number 14271.

Mark Goodwin NMPE 8948

I, Mark Goodwin, certify that this CONSTRUCTION drawings signed by James Siebert on April 20, 2005 is identical to the original reproducible APPROVED FOR CONSTRUCTION drawings signed by James Siebert on April 20, 2005.

Mark Goodwin NMPE 8948

STATE OF NEW MEXICO — MARK GOODWIN — 14271 — REGISTERED PROFESSIONAL ENGINEER — 11/19/09

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

BENCH MARKS

STATION "5-M22" IS LOCATED 8.7 MI. SE OF DOWNTOWN ALBUQUERQUE ON THE EAST SIDE OF THE MUNICIPAL LIMITS LINE IN THE FOUR HILLS SUBDIVISION AREA. STATION IS 600 FT. EAST OF MUNICIPAL LIMITS LINE. 77.0' SE OF POWER POLE #ES37 & 186.0' NW OF POWER POLE #60. STATION IS A STANDARD ACS BRASS DISK SET IN A CONCRETE MONUMENT IN THE GROUND. STATION IS STAMPED "5-M22, 1975ACS". X= 424,017.61, Y= 1,475,700.07, (NAD 1927), Z= 5594.518 (SLD 1929).

AS BUILT INFORMATION

CONTRACTOR AGT, LLC DATE 4/6/2

WORK STAKED BY: Cartesian Surveys Inc. DATE 4/6/2

INSPECTIONS BY: MGA DATE 4/6/2

FIELD DRAWINGS BY: Cartesian Surveys Inc. DATE 4/6/2

CORRECTED BY: MGA DATE 4/6/2

MICRO-FILM INFORMATION

RECORDED BY DATE

NO.

ENGINEER'S SEAL

JAMES D. HUGHES — NEW MEXICO — 14271 — REGISTERED PROFESSIONAL ENGINEER — 4-21-05

NO.	DATE	REMARKS	BY	DATE
		REVISIONS		
		DESIGN		12/04
				12/04
				12/04

DESIGNED BY JDH
DRAWN BY DER
CHECKED BY DMG

dmg MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
P.O. BOX 90606
ALBUQUERQUE, NEW MEXICO 87199
(505) 828-2200, FAX (505) 797-9539

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO BOULEVARD S.E. - PHASE II
GUIDE BANK PLAN

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF	
756181	M-21/N-21	8	46	C-8

A02\jobs\A2079 4 HILLS\Bridge Plans\PHSE II\A2079-Bridge-50.dwg 08-16-05 DER

F:\A02\JOBS\A2079 4 HILLS\Bridge Plans\Phase II\A2079-Bridge-50.dwg, 8/16/2005 4:30:01 PM, PLOTTED BY: DER

RECORD DRAWINGS

SECTION 625

SHOTCRETE

Add the following section:

625.1 GENERAL

625.11 This work shall consist of construction of the shotcrete channel lining utilizing the shotcrete process, including mixing, placing, finishing, testing and curing as shown in the contract in compliance with these specifications:

625.12 The requirements of Section 101 - Portland Cement Concrete and Section 510 - Concrete Structures shall apply where appropriate and not expressly modified by these specifications. Fly Ash shall be used in all concrete and shotcrete per section 510.

625.2 MATERIALS

625.21 All requirements of Section 101 - Portland Cement Concrete shall apply except as modified herein. Shotcrete shall have a minimum compressive strength of 4,000 PSI at 28 days, 5-8% air content at the pump and a slump of 1-1/2" to 3" at the pump. ~~Shotcrete shall be tested in accordance with Subsection 602.3.3 of these specifications.~~

625.211 Tinted concrete will be made by the addition of an approved concrete coloring agent to the concrete mix. The coloring agent will be added in addition to other concrete ingredients and no reductions to other ingredients will be made.

The concrete coloring for use on this project shall be: AS SPECIFIED ON SHEET A-1

~~Davis Color or Approved Equal~~

~~Quantity of cement Color number~~

~~San Diego Buff 1 lb.~~

The design mixes must be submitted by the Contractor for approval by the Project Manager prior to placement.

Coordination with the General contractor, shotcrete subcontractor, ~~AMAFCA~~ CITY Project Manager will be required prior to any shotcrete placement.

625.22 Coarse Aggregate. Coarse aggregate shall meet the following gradation requirements.

Sieve Size	Percent Passing
½ inch	100
3/8 inch	85-100
No. 4	10-30
No. 8	0-10
No. 16	0-5

625.23 Proportioning. Shotcrete shall be mixed and pneumatically applied by the wet-mix process. The concrete shall meet the minimum requirements set forth in Section 510 including the addition of air entrainment, fly ash, and tint.

625.24 The design mixes must be submitted by the Contractor for approval by the Project Manager.

625.25 Preconstruction Testing:

Test panels simulating actual field conditions shall be fabricated prior to start of construction. Test panels shall be colored shotcrete for color approval prior to construction.

The panels shall be at least 36" square and 6" thick with a back form of heavy plywood. The forms should be set for each shooting position to be encountered in the structure. Part of the panel should contain the same reinforcement as the structure, to show whether sound shotcrete is obtained behind the reinforcing bars. The panel is fabricated by gunning the proposed shotcrete design mix, including all materials and additives, to simulate actual field conditions. Curing will be field cured as specified. Cores shall be obtained for compression test and tested at 7, 14, and 28 days.

Prior to gunning the mixture three concrete test cylinders shall be taken from the design mix and tested at 7, 14, and 28 days. Cylinders to be field cured.

625.26 Quality Acceptance Tests: or NMSHTD 519.23 1500sy bank Protection.

A minimum of three cores shall be taken for each ~~500 linear feet of channel~~. Cores shall be obtained and tested in accordance with ASTM C-42-90. One core shall be removed and tested at 7 days, one at 14 days, and one at 28 days. Minimum compression strengths shall be as follows:

7 day	14 day	28 day
2,400 PSI	3,000 PSI	4,000 PSI

If shotcrete cores at 28 days show deficient strength, additional cores shall be taken at the contractor's expense from adjacent areas. Two cores shall be required for each deficient core. Should either additional core prove deficient, the defective shotcrete shall be removed and replaced at the Contractor's expense. No additional shotcreting shall be done until the shotcrete mixture is revised and approved by the Project Manager.

Should a strength deficiency be evident in 7-day or 14-day cores, on approval of Project Manager, the Contractor may proceed with the work on his own responsibility until the 28 day cores are tested. These cores shall also be used for determining shotcrete thickness.

625.3 CONSTRUCTION

625.31 Equipment and Workmen. Shotcreting shall be done only by experienced personnel. When requested by the Project Manager, the Contractor shall furnish evidence that each foreman, nozzle operator and delivery equipment operator has done satisfactory work in a similar capacity elsewhere and is fully qualified to perform the work.

The Contractor shall furnish the Project Manager with copies of the manufacturer's specifications and operating instructions for the equipment used. No shotcrete shall be placed until the type of equipment and method of operation have been approved by the Project Manager.

625.311 Premixed Shotcrete. The mixing equipment shall be capable of thoroughly mixing the specified materials in sufficient quantity to maintain continuous placing.

625.32 Surface Preparation. The foundation for areas to receive shotcrete shall be evenly graded to the required elevation before the shotcrete is applied. The areas shall be thoroughly compacted with sufficient mixture to provide a firm foundation and to prevent absorption of water form the shotcrete. No high subgrade will be permitted.

Surfaces shall not contain free surface water, loose material or frozen material at the time of shotcrete application.

625.33 Forms and Reinforcement. Forms, headers, and shooting strips shall be provided and rigidly braced as required for backing. Ground or gaging wires and depth gages shall be used where necessary to establish and insure thickness, surface and finish lines.

Steel reinforcement shall be rigidly supported in the position shown in the contract. Metal chairs shall be used to properly anchor and place the reinforcement. All reinforcement shall be clean and free from loose mill scale, loose rust, overspray from previous shotcrete application, soil and other undesirable materials that interfere with bonding.

625.34 Placing. Each layer of shotcrete shall be built up by making several passes of the nozzle over the working area. When enclosing steel reinforcement, the nozzle shall be held so as to direct the material around the bars. The shotcrete shall emerge from the nozzle in a steady, uninterrupted flow. The nozzle shall be directed so as to result in minimum rebound. The velocity of the material as it leaves the nozzle shall be maintained uniform and at a rate determined for the given job conditions.

Contractor shall use appropriate form work to separate areas of different tinting, and shall prevent adjacent areas from being discolored by overspray and rebound.

Rebound shall not be worked back into the construction or salvaged. Rebound that does not fall clear of the work shall be removed.

Shotcrete shall not be placed when the air temperature is below forty degrees (40°)F unless the air temperature is at least thirty-five degrees (35°)F and rising.

The mixing, transporting, and placement time for shotcrete materials, shall not exceed two hours or 250 revolutions of the mixer drum whichever comes first. Additional water may be added at job site only if requested by the Project Manager. When additional water is added, the drum shall be rotated a minimum of 30 additional revolutions. The ready-mix plant shall certify the material for weight, water, admixtures and mixing time.

625.35 Finishing. After the shotcrete has been placed as nearly as practical to the required thickness, the ground wires may be removed, the surfaces shall be checked with a straight edge, and low spots or depressions shall be corrected by placing additional shotcrete in such a manner that the finished surface is natural as left by the nozzle and will be reasonably smooth and uniform.

Loose areas of shotcrete shall be removed and replaced by the Contractor at no additional cost.

625.36 Curing. In all cases, the period of protection shall be not less than 7 days.

625.37 Tolerance in Shotcrete Thickness. Acceptance of the finished channel lining with respect to thickness shall be on the basis of random core sampling, as designated by the Project Manager. A minimum of two core samples will be taken form longitudinal lengths of channel not exceed 500 linear feet. If deficiencies are noted, the Project Manager may require additional core samples. All coring required by the Project Manager shall be at the Owner's expense.

Should the Contractor desire to have additional core samples taken these samples would be taken at the Contractor's expense.

Deduction for a deficiency in thickness shall be made according to the following: Thickness deficiency shall be based on the average thickness of the number of samples taken within each 500 or less linear feet of channel.

Thickness Deficiency	Percent of Contract Price Allowed
0-1/2"	100%
Greater than 1/2"	Reject

Any 500 linear foot span of channel lining that is noted to be deficient in thickness by more than the reject level shall be removed and replaced at the Contractor's expense.

It shall be the responsibility of the Contractor to have the core holes immediately filled with fresh shotcrete. This shotcrete shall be of the same mix and of equal compressive strength as the original.

For quality acceptance, the Project Manager may have the core samples tested for compressive strength.

All cores will be measured in accordance with ASTM C-174.

625.38 Method of Measurement. Shotcrete will be measured by the square yard parallel to the surface.

Basis for Payment. The accepted quantities of shotcrete will be paid for at the contract unit price per square yard. Such payment shall constitute full reimbursement for all materials, labor and equipment used in the placement of all shotcrete, steel reinforcement, support chairs, forms, joints, tinting, finishing, curing, and all other necessary operations to complete the shotcrete in place. No extra payment will be made for additional shotcrete placed in excess of that shown on the plans unless directed by the Project Manager.

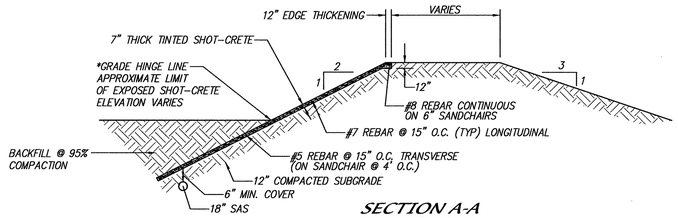
Pay Item	Pay Unit
Channel Lining 7" Thick, Tinted Reinforced Shotcrete, 4000 PSI.	SY

NOTES

LEGEND

WATER SURFACE ELEVATION WSEL.= 100YR (500YR)

VELOCITY V= 100YR (500YR)



SECTION A-A

N.T.S.

RECORD DRAWING
CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, Mark Goodwin, NMPE 8948, of the firm Mark Goodwin & Associates, PA., a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision, and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met, except as noted, on the as-built construction drawings. This Certification is based on site inspections by me or personnel under my direction and survey information provided by Will Plotner, Jr. NMPS number 14271.

Mark Goodwin NMPE 8948 — 6/11/09

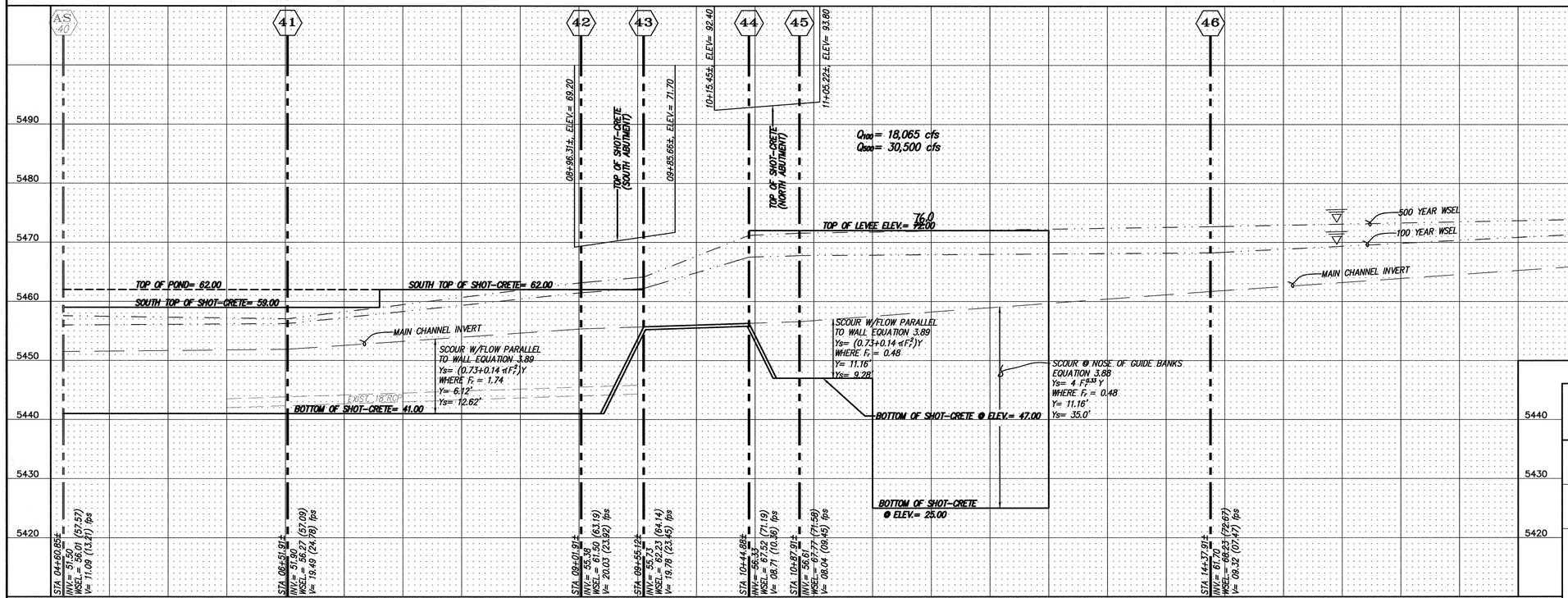
I, Mark Goodwin, certify that this electronic version is identical to the original reproducible APPROVED FOR CONSTRUCTION drawings signed by James D. Hughes on April 20, 2005.

TIJERAS ARROYO- GUIDE BANK
STA. 4+50.00 TO STA. 19+00.00
SCALE: HORZ. 1" = 50'
VERT. 1" = 10'

AS BUILT INFORMATION
CONTRACTOR AUT INC
WORK STAKED BY Cartesian Surveys Inc. DATE 3/05
FINAL CONDITIONS ACCEPTANCE BY MGA DATE 4/60
FIELD LOCATION BY Cartesian Surveys Inc. DATE 4/60
DRAWINGS CORRECTED BY MGA DATE 4/61
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS
STATION "S-422" IS LOCATED 8.7 MI. SE OF DOWNTOWN ALBUQUERQUE ON THE EAST SIDE OF THE MUNICIPAL LIMITS LINE IN THE FOUR HILLS SUBDIVISION AREA, STATION IS 600 FT. EAST OF MUNICIPAL LIMITS LINE. 77.9' SE OF POWER POLE #ES37 & 186.0' NW OF POWER POLE #RO. STATION IS A STANDARD ACS BRASS DISK SET IN A CONCRETE MONUMENT IN THE GROUND. STATION IS STAMPED "S-422, 1975ACS". X= 424,017.61, Y= 1,475,700.07, (NAD 1927), Z= 5594.518 (SLD 1929).

SURVEY INFORMATION
FIELD NOTES
NO. DATE BY



REMARKS / REVISIONS / DESIGN

NO.	DATE	BY
DESIGNED BY	JDH	03/05
DRAWN BY	DER	03/05
CHECKED BY	DMG	03/05

dmg MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
P.O. BOX 90606
ALBUQUERQUE, NEW MEXICO 87199
(505) 828-2200, FAX (505) 797-9539

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO BLVD. S.E. - PHASE II
GUIDE BANK PROFILE & DETAILS

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVE JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVE JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF	
756181	M-21/N-21	9	46	C-9

ENGINEER'S SEAL
JAMES D. HUGHES NEW MEXICO 9494 REGISTERED PROFESSIONAL ENGINEER
6-10-05

A02jobs\A2079 4 HILLS\Bridge Plans\PHASE II\A2079-Bridge-50.dwg\04-19-05\DER

F:\A02JOBS\A2079 4 HILLS\Bridge Plans\Phase II\A2079-Bridge-50.dwg, 4/19/2005 4:46:54 PM, PLOTTED BY: DER

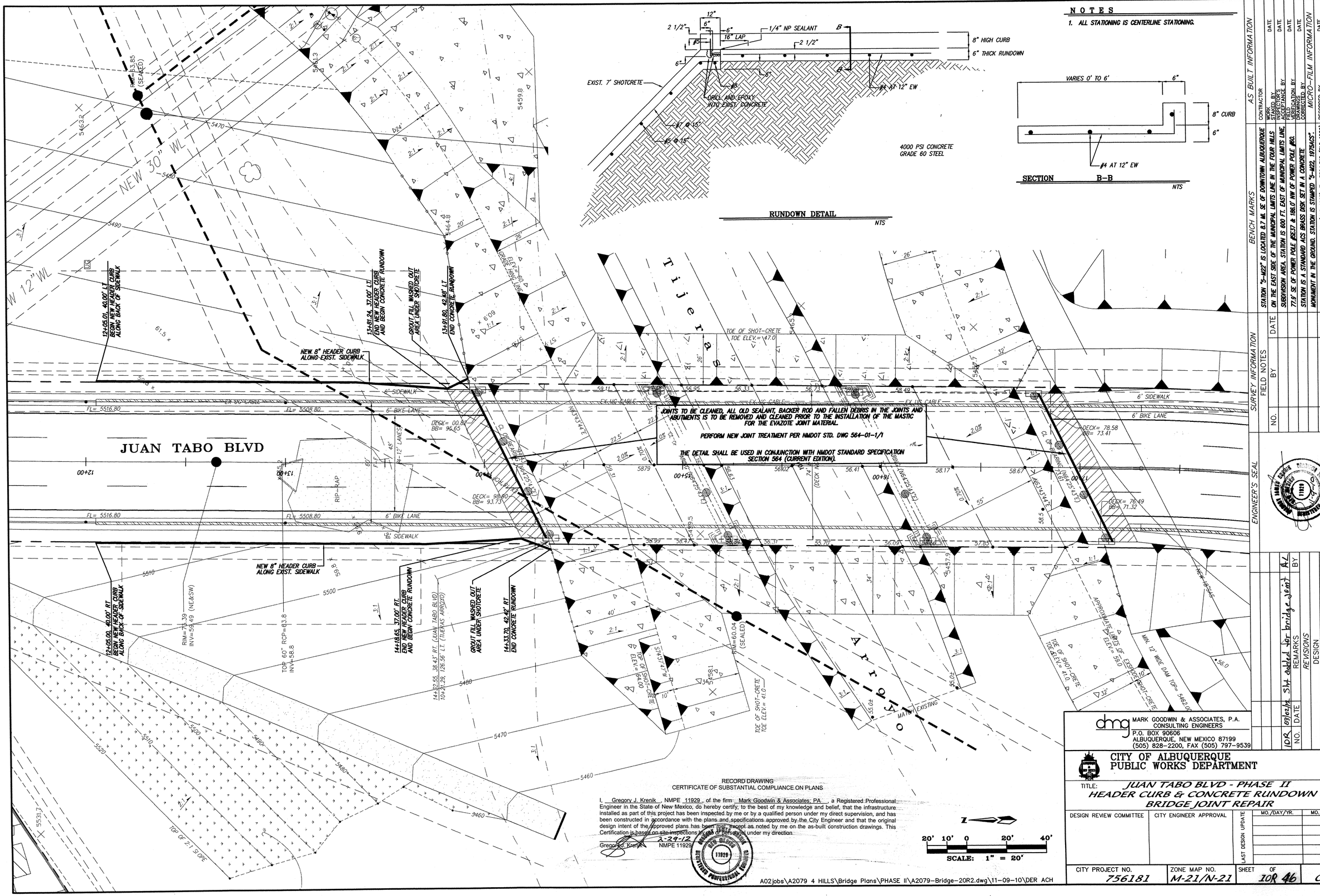
RECORD DRAWINGS

NOTES

1. ALL STATIONING IS CENTERLINE STATIONING.

RUNDOWN DETAIL
NTS

SECTION B–B
NTS



RECORD DRAWING
CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, Gregory J. Krenik, NMPE 11929, of the firm Mark Goodwin & Associates, P.A., a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision, and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met, except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me or personnel under my direction.

3-29-12
Gregory J. Krenik NMPE 11929

AS BUILT INFORMATION

CONTRACTOR	DATE
WORK STARTED BY	DATE
INSPECTOR'S ACCEPTANCE BY	DATE
FIELD VERIFICATION BY	DATE
DRAWINGS DRAWN BY	DATE
DRAWINGS CHECKED BY	DATE

BENCH MARKS

STATION "5-M22" IS LOCATED 8.7 MI. SE OF DOWNTOWN ALBUQUERQUE ON THE EAST SIDE OF THE MUNICIPAL LIMITS LINE IN THE FOUR HILLS SUBDIVISION AREA. STATION IS 800 FT. EAST OF MUNICIPAL LIMITS LINE, 71.9' SE OF POWER POLE #3517 & 186.0' NW OF POWER POLE #60. STATION IS A STANDARD ACS BRASS DISK SET IN A CONCRETE MONUMENT IN THE GROUND. STATION IS STAMPED "5-M22, 1975ACS". X= 424,017.61, Y= 1,475,700.07, (NAD 1927), Z= 5594.518 (SLD 1929).

MICRO-FILM INFORMATION

RECORDED BY DATE
NO.

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL

NEW MEXICO REGISTERED PROFESSIONAL ENGINEER GREGORY J. KRENIK 11929

NO.	DATE	REVISIONS	BY
1OR	03/26/12	Sht added for bridge joint	AL

DESIGNED BY	JDH	DATE 12/04
DRAWN BY	DER	DATE 12/04
CHECKED BY	DMG	DATE 12/04

dmg MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
P.O. BOX 90606
ALBUQUERQUE, NEW MEXICO 87199
(505) 828-2200, FAX (505) 797-9539

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO BLVD - PHASE II
HEADER CURB & CONCRETE RUNDOWN & BRIDGE JOINT REPAIR

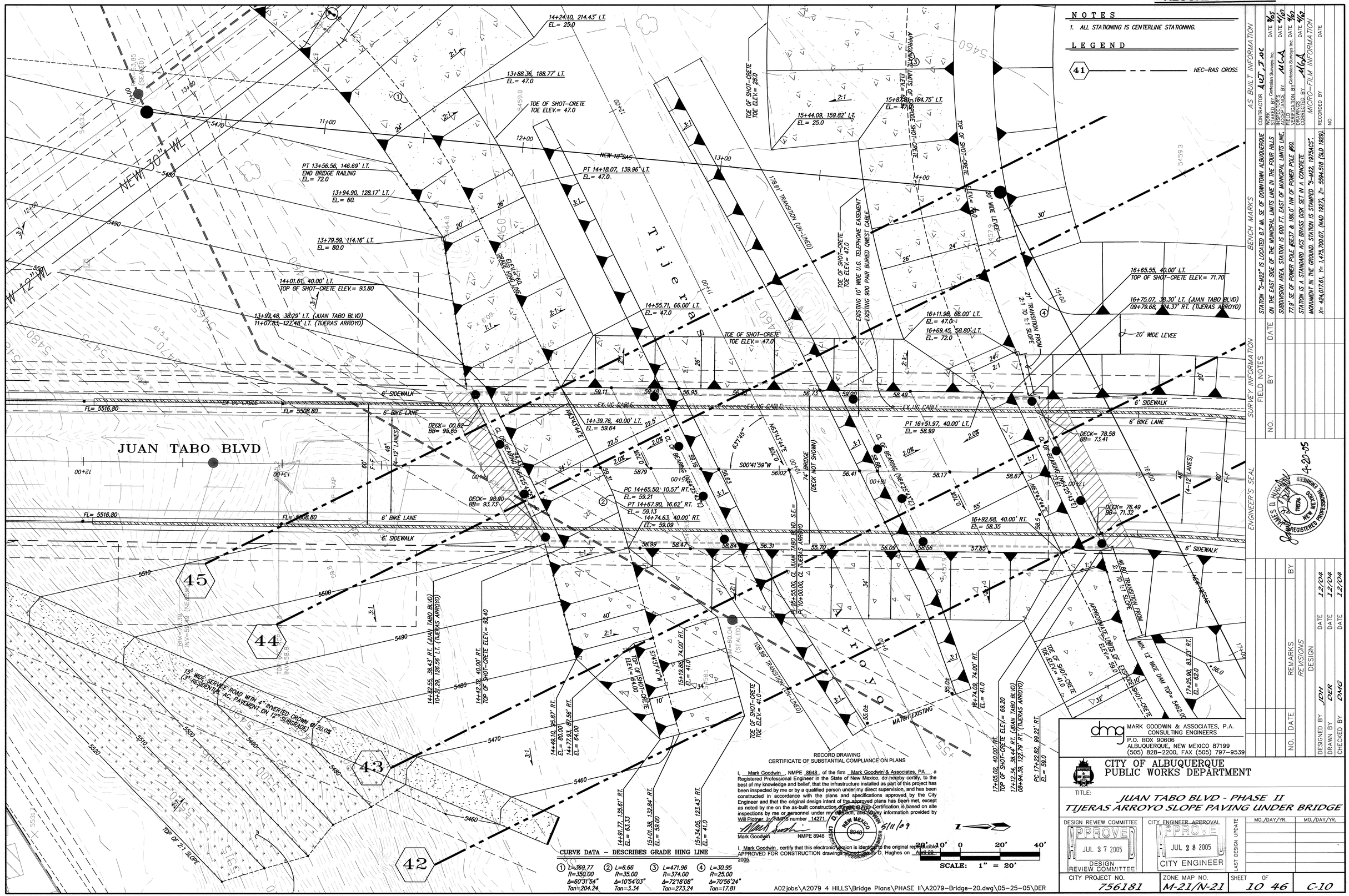
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.

CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF
756181	M-21/N-21	10R 46	C-10

A02jobs\A2079 4 HILLS\Bridge Plans\PHASE II\A2079-Bridge-20R2.dwg, 11-09-10\DER ACH

F:\A02JOBS\A2079 4 HILLS\Bridge Plans\Phase II\A2079-Bridge-20R2.dwg, 11/9/2010 9:23:54 AM, Oce_Rod2_myplr.pc3, CHRIS

RECORD DRAWINGS



AS BUILT INFORMATION

CONTRACTOR AUST, INC

WORK STAKED BY	Cartesian Surveys Inc.	DATE 9/07
WORK INSPECTIONS BY	MCA	DATE 4/08
ACCEPTANCE BY	MCA	DATE 9/07
FIELD VERIFICATION BY	Cartesian Surveys Inc.	DATE 9/07
DRAWINGS CORRECTED BY	MCA	DATE 4/08

MICRO-FILM INFORMATION

RECORDED BY DATE

NO.

BENCH MARKS

STATION "5-M22" IS LOCATED 8.7 MI. SE OF DOWNTOWN ALBUQUERQUE ON THE EAST SIDE OF THE MUNICIPAL LIMITS LINE IN THE FOUR HILLS SUBDIVISION AREA. STATION IS 600 FT. EAST OF MUNICIPAL LIMITS LINE. 77.9' SE OF POWER POLE #ES37 & 186.0' NW OF POWER POLE #RG. STATION IS A STANDARD ACS BRASS DISK SET IN A CONCRETE MONUMENT IN THE GROUND. STATION IS STAMPED "5-M22, 1975ACS". X= 424,017.61, Y= 1,475,700.07, (NAD 1927), Z= 5594.518 (SLD 1929).

SURVEY INFORMATION

FIELD NOTES

NO.	DATE	BY

ENGINEER'S SEAL

JAMES D. HUGHES 16074 NEW MEXICO REGISTERED PROFESSIONAL ENGINEER 4-20-05

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	

DESIGNED BY	JDH	DATE 12/04
DRAWN BY	DER	DATE 12/04
CHECKED BY	DMG	DATE 12/04

dmg MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
P.O. BOX 90606
ALBUQUERQUE, NEW MEXICO 87199
(505) 828-2200, FAX (505) 797-9539

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE:
JUAN TABO BLVD - PHASE II
TIJERAS ARROYO SLOPE PAVING UNDER BRIDGE

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF	
756181	M-21/N-21	10	46	C-10

GENERAL NOTES:

1. CONCRETE SUPERSTRUCTURE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS. SUBSTRUCTURE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS. CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4 INCH UNLESS NOTED OTHERWISE.

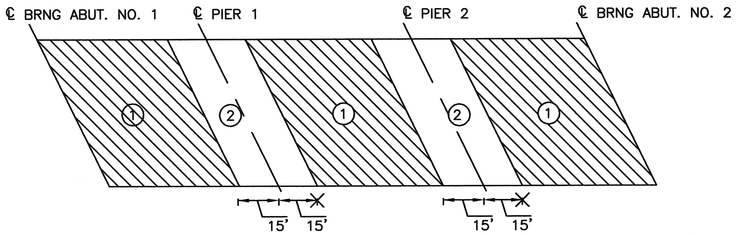
2. STRUCTURAL STEEL TO BE CARBON STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M183 UNLESS NOTED OTHERWISE ON THE PLANS.

3. REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE.

4. STAY IN PLACE DECK FORMS. PERMANENT STEEL DECK FORMS MAY BE UTILIZED FOR SLAB CONSTRUCTION PROVIDED THAT BOTH TOP AND BOTTOM MATS OF DECK SLAB REINFORCING BARS ARE EPOXY COATED, COMPLETE SHOP PLANS ,DESIGN CALCULATIONS, AND SPECIFICATIONS FOR THE PROPOSED FORMING SYSTEM MUST BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

5. VERIFICATION OF GIRDER CAMBER. AFTER GIRDERS ARE PLACED AND BEFORE SCREEDS ARE SET. A PROFILE SHALL BE TAKEN ALONG EACH COMPLETE LINE OF GIRDERS. IF THE ACTUAL CAMBERS DIFFER FROM THAT SHOWN ON THE PLANS SO THAT A DEFICIENT SLAB THICKNESS WOULD RESULT, ADJUSTMENT SHALL BE MADE BY THE CONTRACTOR.

6. DECK SLAB SURFACE OF THE DECK AND THE APPROACH SLABS SHALL BE MACHINE GROOVED IN ACCORDANCE WITH THE SPECIFICATION REQUIREMENTS FOR GROOVING HARDENED CONCRETE. DECK SLAB CONCRETE SHALL BE PLACED IN ACCORDANCE WITH THE DECK SLAB PLACEMENT SEQUENCE SHOWN BELOW.



NOTE:
CONCRETE SHALL BE PLACED THE FULL WIDTH OF THE DECK SLAB IN THE SEQUENCE SHOWN ABOVE AT A FORWARD RATE OF PROGRESS OF NOT LESS THAN 30 FEET PER HOUR. PLACEMENTS ① MAY BE MADE ON THE SAME OR ON SEPARATE DAYS AND PLACEMENT ② MAY BE MADE ON THE SAME OR ON SEPARATE DAYS. PLACEMENT ② SHALL NOT BE MADE UNTIL THE CONCRETE IN ADJACENT PLACEMENTS ① AREAS HAS BEEN IN PLACE AT LEAST 48 HOURS. SET RETARDANT SHALL NOT BE USED IF THE ATMOSPHERIC TEMPERATURE AT THE TIME OF PLACEMENT IS LESS THAN 60° F.
AFTER GROOVING AND AFTER APPLYING THE PENETRATING WATER REPELLENT TREATMENT, ALL DECK CONSTRUCTION JOINTS ARE TO BE FILLED WITH HIGH MOLECULAR WEIGHT METHACRYLATE RESIN IN ACCORDANCE WITH THE SPECIFICATION FOR CRACK SEALING USING HIGH MOLECULAR WEIGHT METHACRYLATE.

7. ANCHOR BOLTS FOR GIRDERS SHALL BE PLACED IN DRILLED HOLES AND GROUTED IN THE EXACT POSITION AS SHOWN IN THE PLANS.

8. OPEN HOLES IN GRIDERS AFTER COMPLETION OF SUPERSTRUCTURE ALL OPEN HOLES IN EXTERIOR GIRDERS ARE TO BE PACKED WITH GROUT.

DESIGN DATA:

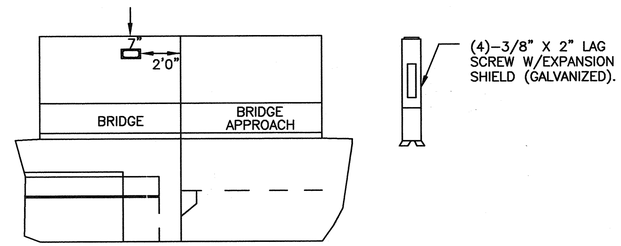
DESIGN IS IN ACCORDANCE WITH AASHTO SPECIFICATIONS 2002 EDITION AND INTERIM SPECIFICATIONS TO DATE.

DESIGN STRESSES:

STRUCTURAL STEEL:	AASHTO M–183, fs = 20,000 PSI
REINFORCED CONCRETE:	
SUPERSTRUCTURE	f'c= 4000 PSI @ 28 DAYS
SUBSTRUCTURE	f'c= 4000 PSI @ 28 DAYS
REINFORCING STEEL:	fy= 60000 PSI GRADE 60 n=8

DESIGN LOADS:

LIVE LOAD:	HS–20–44 AND INTERSTATE ALTERNATE
WEARING SURFACE:	30 PSF ALLOWANCE FOR FUTURE WEARING SURFACE AND 1/4" MONOLITHIC CONCRETE.
STAY–IN–PLACE FORMS:	5 PSF
HORIZONTAL EARTH PRESSURE:	36 PCF EQUIVALENT FLUID PRESSURE AND 2 FT. SURCHARGE
WIND VELOCITY:	80 MPH
STREAM VELOCITY:	10.4 FPS FOR 500 YR. STORM – UPSTREAM. 23.5 FPS FOR 500 YR. STORM – DOWNSTREAM
SEISMIC:	CATEGORY B (0.125g)



NOTES:
1. 2 PLATES WITH BOLTS REQUIRED FOR EACH BRIDGE. MATERIAL EQUALS CAST IRON. RAISED BLOCK LETTERS OF NEAT SQUARE CUT DESIGN. GRIND FACE, & HOT DIPPED GALV.
2. EACH PLATE IS TO BE PLACED AT EACH END OF THE BRIDGE ON THE ROADWAY FACE OF THE CONCRETE BARRIER RAILING AT THE END OF THE DECK. LOCATE ON RIGHT SIDE AS ONE APPROACHES BRIDGE.

BRIDGE NUMBER PLATE DETAILS

N.T.S

1. BRIDGE NUMBER PLATES. THE CONTRACTOR SHALL FURNISH 2 BRIDGE NUMBER PLATES CONFORMING TO THE DETAILS SHOWN. THE COST OF THE PLATES SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND WILL NOT BE PAID FOR DIRECTLY.

INDEX OF BRIDGE SHEETS

S–1 BRIDGE GENERAL NOTES
S–2 STRUCTURE LOCATION PLAN
S–3 STRUCTURE LOCATION PROFILE
S–4 DECK FRAMING PLAN
S–5 TRANSVERSE SECTION AND DIAPHRAGM DETAILS
S–6 DECK SLAB REINFORCING PLAN
S–7 TOP OF DECK AND BEAM SEAT ELEVATIONS
S–8 BEARING DETAILS
S–9 BEAM DETAILS – TYPE BT–54, 90' SPAN
S–10 BEAM DETAILS – TYPE BT–54, 100' SPAN
S–11 PIER PLAN AND ELEVATION
S–12 PIER DETAILS
S–13 PIER DETAILS
S–14 ABUTMENT 1 PLAN AND ELEVATION
S–15 ABUTMENT 2 PLAN AND ELEVATION
S–16 ABUTMENT #1 DETAILS
S–17 ABUTMENT #2 DETAILS
S–18 ABUTMENT END DIAPHRAGM & APPROACH SLAB
S–19 DRILLED SHAFT DETAILS
S–20 MISCELLANEOUS SECTIONS AND DETAILS
S–21 MISCELLANEOUS DETAILS
A–1 ELEVATIONS
A–2 DETAILS
A–3 ARCHITECTURAL NOTES
E–1 ELECTRICAL SITE PLAN
E–2 STREET LIGHTING CONTROL CABINET CIRCUIT UNMETERED

NMSHTD STANDARD DRAWINGS

BBR–001 BARRIER RAILING GENERAL NOTES
BBR–002 BARRIER RAILING STANDARD SECTION DETAILS
BBR–003 BARRIER RAILING TRANSITION SECTION DETAILS
BBR–004 BARRIER RAILING DETAILS AT JOINT SEALS
BJS–001 BRIDGE JOINT STRIP SEALS
BJS–002 BRIDGE JOINT STRIP SEALS
BJS2 POLYMER BRIDGE JOINT SEALS
BOLTED STEEL DIAPHAGMS FOR PRESTRESSED CONCRETE GIRDERS

I, ROBERT IRVING JOHNSON, NMPE 9497, OF THE FIRM OF ROBERT I. JOHNSON, P.E., LLC., A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE STRUCTURE INSTALLED AS PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR BY A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, APPROVED BY THE CITY ENGINEER AND THAT THE ORIGINAL DESIGN INTENT OF THE APPROVED PLANS HAS BEEN MET, EXCEPT AS NOTED BY ME ON THE AS-BUILT CONSTRUCTION DRAWINGS. THIS CERTIFICARION IS BASED ON SITE INSPECTIONS BY ME OR PERSONNEL UNDER MY DIRECTION.

Robert Irving Johnson
SIGNATURE & ENGINEERS SEAL

I, ROBERT IRVING JOHNSON, CERTIFY THAT THIS ELECTRONIC VERVION IS IDENTICAL TO THE ORIGINAL REPRODUCIBLE APPROVED FOR CONSTRUCTION DRAWINGS SIGNED BY ME ON 5/2, 2005

ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 7/2/07

ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

ENGINEER'S SEAL

AS BUILT INFORMATION
CONTRACTOR AUI, Inc
WORK STAKED BY AUI, Inc DATE 8/05
INSPECTIONS BY C.M DATE 7/07
AS-BUILTING BY
FIELD VERIFICATION BY AUI, Inc DATE 8/05
DRAWINGS CORRECTED BY C.M DATE 7/07
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

NO.	REMARKS	DATE	BY
	REVISIONS		
	DESIGN	5/2/05	JPG
		5/2/05	TEP
		5/2/05	RIJ

DESIGNED BY JPG
DRAWN BY TEP
CHECKED BY RIJ

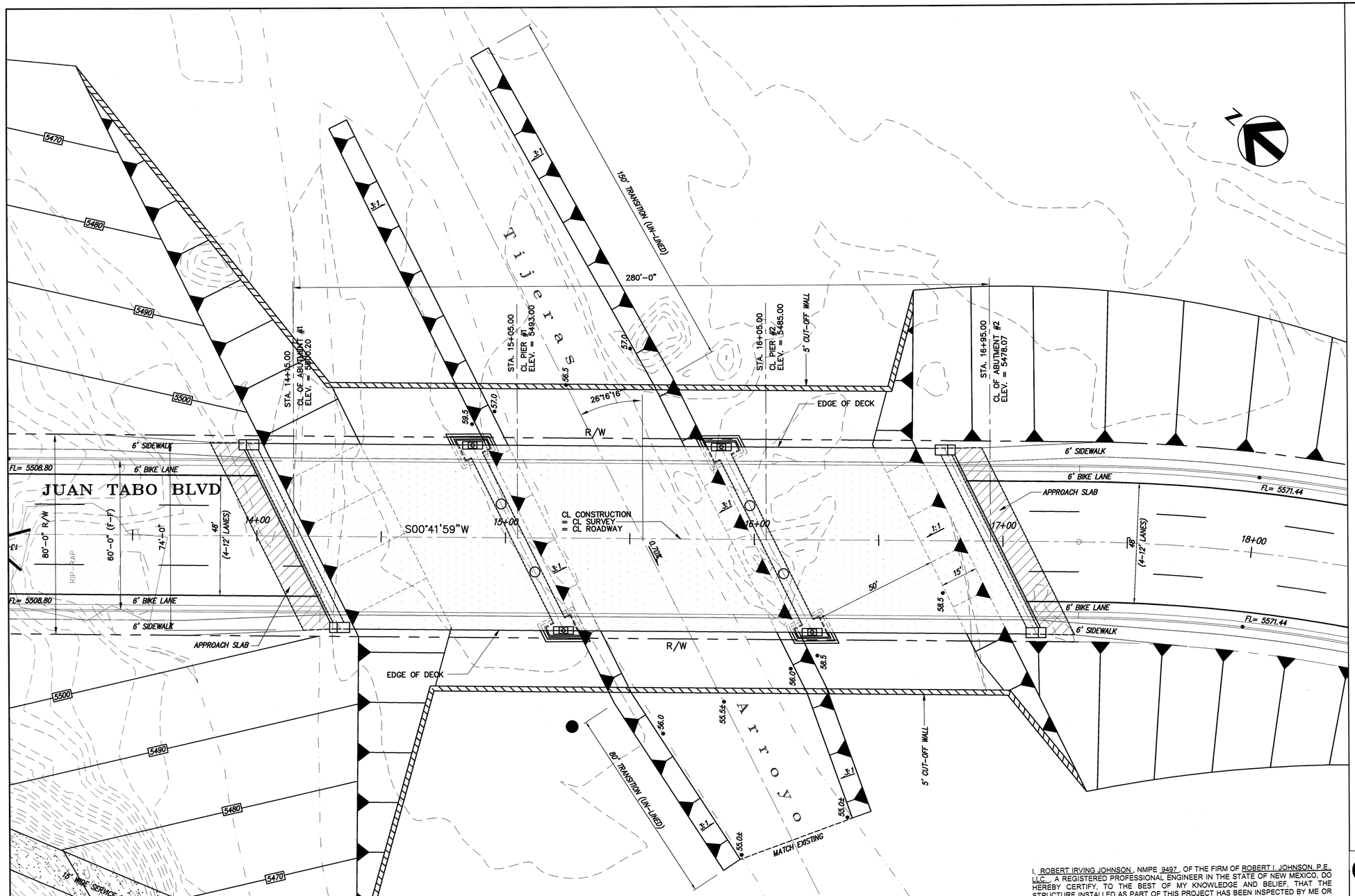
102597
CME, Inc.
Mechanical / Electrical / Structural Consulting Engineers
6001 Indian School Rd. NE, Ste 200 Albuquerque, New Mexico 87110
(505) 884–8868 FAX 884–7048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
BRIDGE GENERAL NOTES

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO. 756181 | ZONE MAP NO. M-21/N-21 | SHEET OF 11 46 | S-1



PLAN

SCALE: 1" = 20'

I, ROBERT IRVING JOHNSON, NMPE 9497 OF THE FIRM OF ROBERT I. JOHNSON, P.E. LLC., A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE STRUCTURE INSTALLED AS PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR BY A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, APPROVED BY THE CITY ENGINEER AND THAT THE ORIGINAL DESIGN INTENT OF THE APPROVED PLANS HAS BEEN MET, EXCEPT AS NOTED BY ME ON THE AS-BUILT CONSTRUCTION DRAWINGS. THIS CERTIFICARION IS BASED ON SITE INSPECTIONS BY ME OR PERSONNEL UNDER MY DIRECTION.

Robert Irving Johnson
SIGNATURE & ENGINEERS SEAL

I, ROBERT IRVING JOHNSON, CERTIFY THAT THIS ELECTRONIC VERVION IS IDENTICAL TO THE ORIGINAL REPRODUCIBLE APPROVED FOR CONSTRUCTION DRAWINGS SIGNED BY ME ON 5/2, 2005

ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

AS BUILT INFORMATION

CONTRACTOR AUF, INC

STAKED BY	AUF	DATE 5/2
INSPECTOR'S CHANGES BY	CM	DATE 5/2
FIELD VERIFICATION BY	AUF	DATE 5/2
DRAWINGS CORRECTED BY	CM	DATE 5/2

MICRO-FILM INFORMATION

RECORDED BY DATE

NO.

BENCH MARKS

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL

ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
		DESIGNED BY JPG	DATE 5/2/05
		DRAWN BY TEP	DATE 5/2/05
		CHECKED BY RIJ	DATE 5/2/05

20' 10' 0 20' 40'

SCALE: 1" = 20'

102597

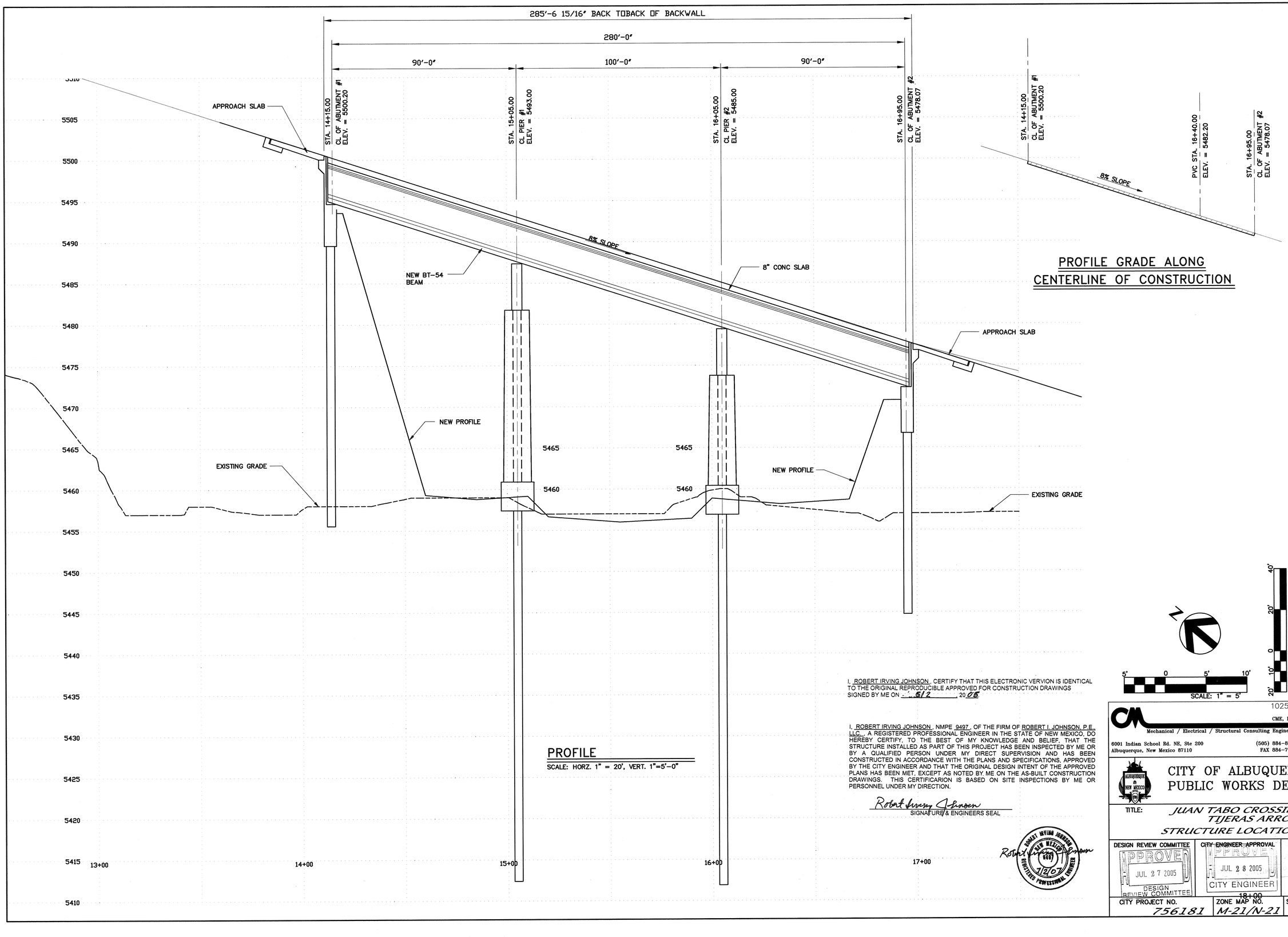
CME, Inc.
Mechanical / Electrical / Structural Consulting Engineers
6001 Indian School Rd. NE, Ste 200 (505) 884-8868
Albuquerque, New Mexico 87110 FAX 884-7048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
STRUCTURE LOCATION PLAN

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF	
756181	M-21/N-21	12	46	S-2



PROFILE GRADE ALONG CENTERLINE OF CONSTRUCTION

PROFILE

SCALE: HORZ. 1" = 20', VERT. 1"=5'-0"

SCALE: 1" = 5'

SCALE: 1" = 20'

I, ROBERT IRVING JOHNSON, CERTIFY THAT THIS ELECTRONIC VERVION IS IDENTICAL TO THE ORIGINAL REPRODUCIBLE APPROVED FOR CONSTRUCTION DRAWINGS SIGNED BY ME ON 5/2, 2005

I, ROBERT IRVING JOHNSON, NMPE 9497, OF THE FIRM OF ROBERT I. JOHNSON, P.E., LLC., A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE STRUCTURE INSTALLED AS PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR BY A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, APPROVED BY THE CITY ENGINEER AND THAT THE ORIGINAL DESIGN INTENT OF THE APPROVED PLANS HAS BEEN MET, EXCEPT AS NOTED BY ME ON THE AS-BUILT CONSTRUCTION DRAWINGS. THIS CERTIFICARION IS BASED ON SITE INSPECTIONS BY ME OR PERSONNEL UNDER MY DIRECTION.

Robert Irving Johnson
SIGNATURE & ENGINEERS SEAL

ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

AS BUILT INFORMATION

CONTRACTOR A&T, Inc.
WORK STAKED BY A&T DATE 5/05
INSPECTION BY CM DATE 5/2
FIELD VERIFICATION BY A&T DATE 5/05
DRAWINGS CORRECTED BY CM DATE 5/2

MICRO-FILM INFORMATION

RECORDED BY DATE
NO.

BENCH MARKS

SURVEY INFORMATION

NO.	FIELD NOTES	BY	DATE

ENGINEER'S SEAL

ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
		DESIGNED BY JPG	DATE 5/2/05
		DRAWN BY TEP	DATE 5/2/05
		CHECKED BY RJJ	DATE 5/2/05

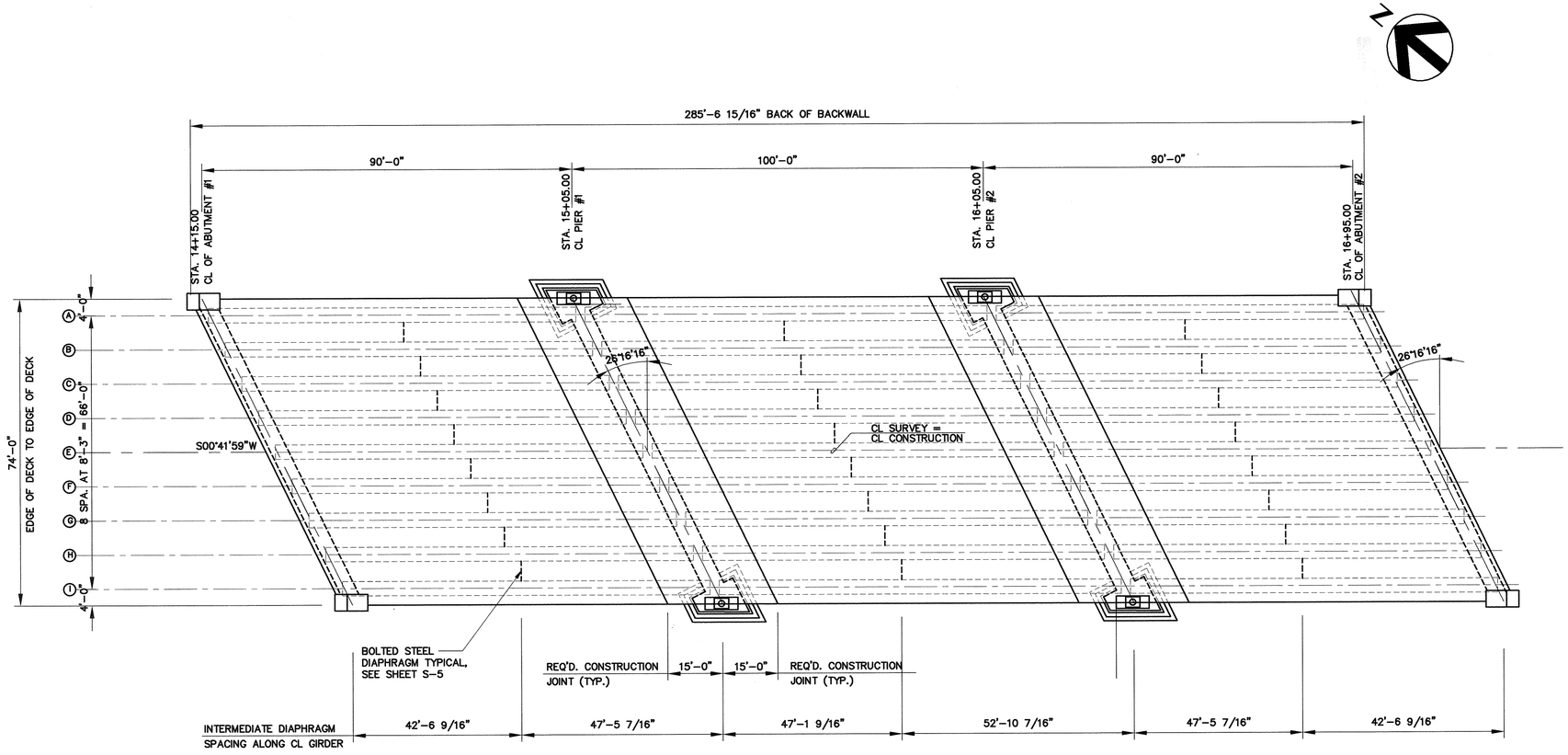
102597
CME, Inc.
Mechanical / Electrical / Structural Consulting Engineers
6001 Indian School Rd. NE, Ste 200 Albuquerque, New Mexico 87110
(505) 884-8868 FAX 884-7048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
STRUCTURE LOCATION PROFILE

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF	
756181	M-21/N-21	13	46	S-3



DECK FRAMING PLAN

SCALE: 1/16"= 1'-0"

I, ROBERT IRVING JOHNSON, NMPE 9497, OF THE FIRM OF ROBERT I. JOHNSON, P.E., LLC., A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE STRUCTURE INSTALLED AS PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR BY A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. APPROVED BY THE CITY ENGINEER AND THAT THE ORIGINAL DESIGN INTENT OF THE APPROVED PLANS HAS BEEN MET, EXCEPT AS NOTED BY ME ON THE AS-BUILT CONSTRUCTION DRAWINGS. THIS CERTIFICARION IS BASED ON SITE INSPECTIONS BY ME OR PERSONNEL UNDER MY DIRECTION.

Robert Irving Johnson
SIGNATURE & ENGINEERS SEAL

I, ROBERT IRVING JOHNSON, CERTIFY THAT THIS ELECTRONIC VERVION IS IDENTICAL TO THE ORIGINAL REPRODUCIBLE APPROVED FOR CONSTRUCTION DRAWINGS SIGNED BY ME ON 5/2, 2005.

Robert Irving Johnson

ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 7/2/07

AS BUILT INFORMATION
CONTRACTOR AUI, Inc.
WORK STAKED BY AUI DATE 9/05
INSPECTOR'S ACCEPTANCE BY CM DATE 9/20
FIELD DETAILS BY AUI DATE 11/05
DRAWINGS CORRECTED BY CM DATE 7/07

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES BY DATE

MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

ENGINEER'S SEAL
ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

NO.	DATE	REMARKS
		REVISIONS
		DESIGN BY
		DESIGNED BY JPG DATE 5/2/05
		DRAWN BY TEP DATE 5/2/05
		CHECKED BY RJ DATE 5/2/05

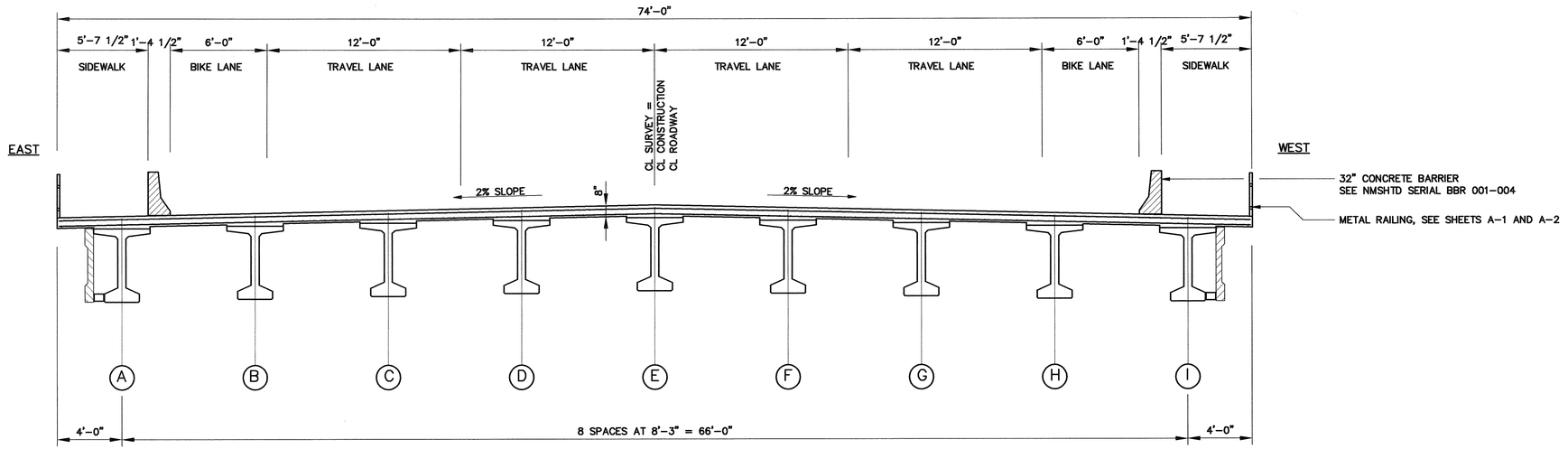
102597
CME, Inc.
Mechanical / Electrical / Structural Consulting Engineers
6001 Indian School Rd. NE, Ste 200 (505) 884-8868
Albuquerque, New Mexico 87110 FAX 884-7048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
DECK FRAMING PLAN

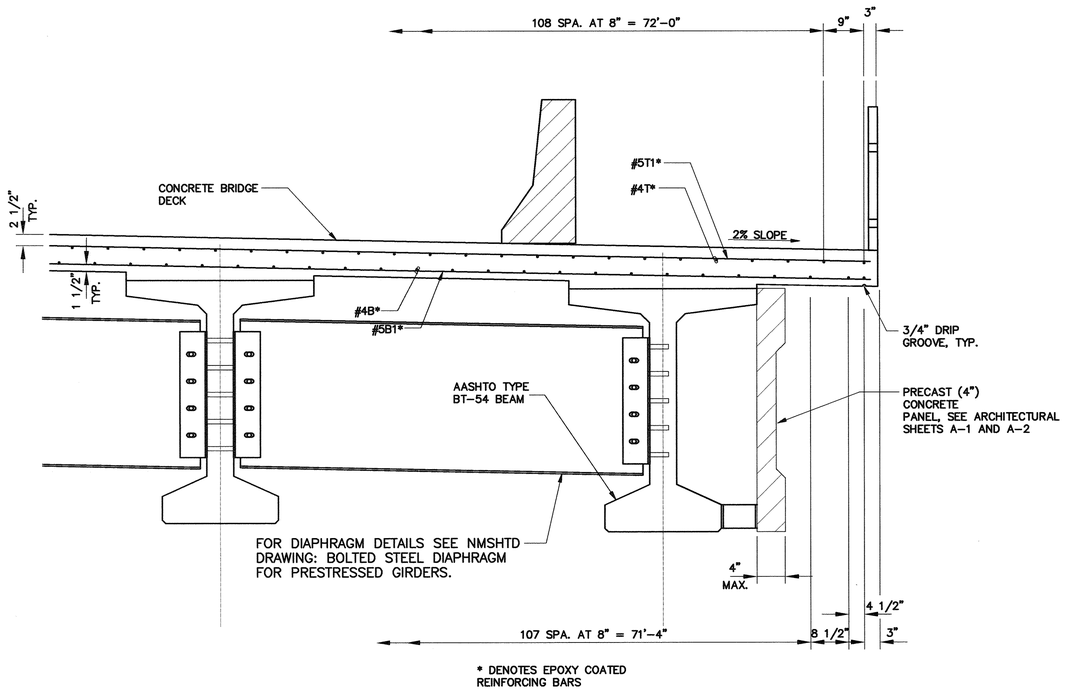
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF	
756181	M-21/N-21	14	46	S-4



TRANSVERSE SECTION (PERPENDICULAR TO CL ROADWAY)

SCALE: 1/4" = 1'-0"



* DENOTES EPOXY COATED REINFORCING BARS

TYPICAL OUTSIDE END SECTION

SCALE: 3/4" = 1'-0"

I, ROBERT IRVING JOHNSON, NMPE 9497, OF THE FIRM OF ROBERT I. JOHNSON, P.E., LLC., A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE STRUCTURE INSTALLED AS PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR BY A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, APPROVED BY THE CITY ENGINEER AND THAT THE ORIGINAL DESIGN INTENT OF THE APPROVED PLANS HAS BEEN MET, EXCEPT AS NOTED BY ME ON THE AS-BUILT CONSTRUCTION DRAWINGS. THIS CERTIFICARION IS BASED ON SITE INSPECTIONS BY ME OR PERSONNEL UNDER MY DIRECTION.

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SIGNATURE & ENGINEERS SEAL

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ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 7/26/07

AS BUILT INFORMATION

CONTRACTOR	AUI, INC	DATE 7/05
WORK STAKED BY	AUI	
INSPECTOR'S ACCEPTANCE BY	CM	DATE 7/07
FIELD MARKUP BY	AUI	DATE 8/05
VERIFICATION BY	CM	DATE 7/07
CORRECTED BY		

MICRO-FILM INFORMATION

RECORDED BY DATE

NO.

BENCH MARKS

SURVEY INFORMATION

NO.	FIELD NOTES BY	DATE

ENGINEER'S SEAL

ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 7/26/07

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
		DESIGNED BY JPG	DATE 5/2/05
		DRAWN BY TEP	DATE 5/2/05
		CHECKED BY RIJ	DATE 5/2/05

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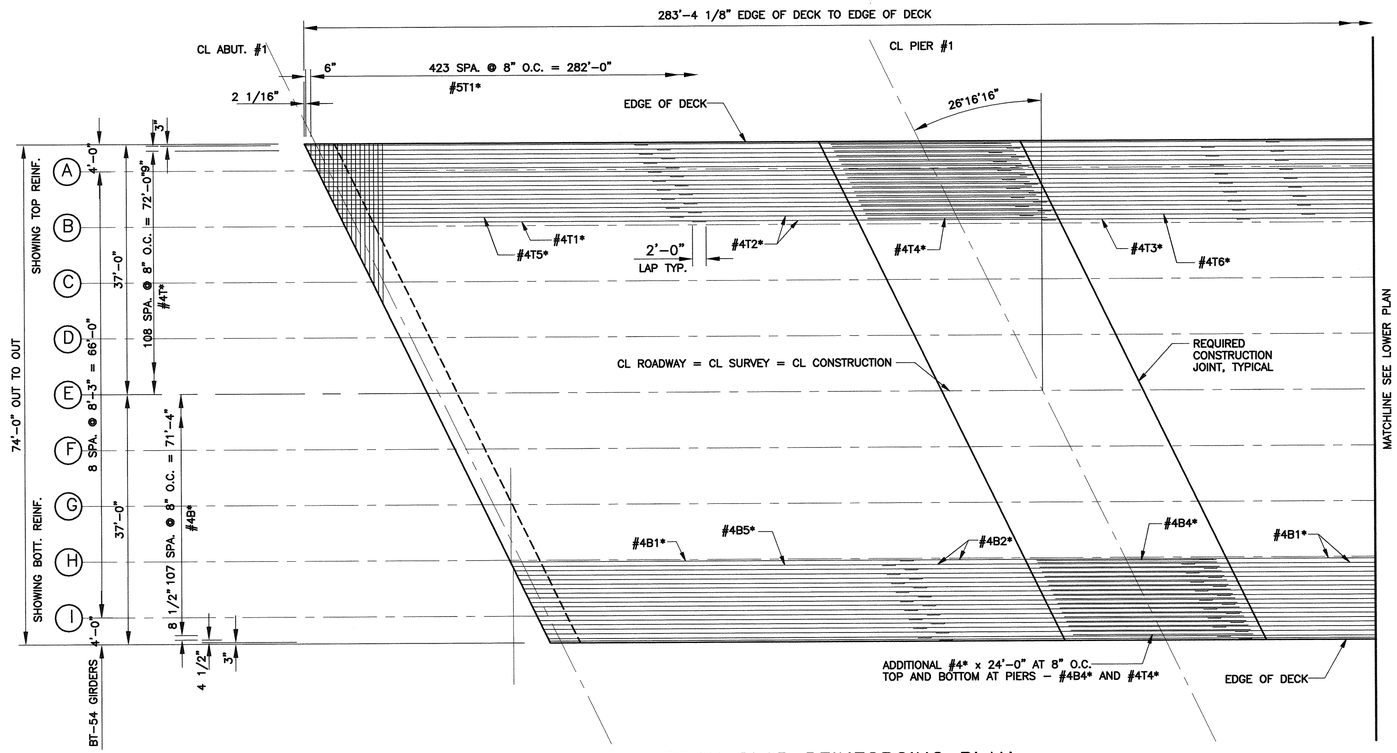
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
TRANSVERSE SECTION AND DIAPHRAGM DETAILS

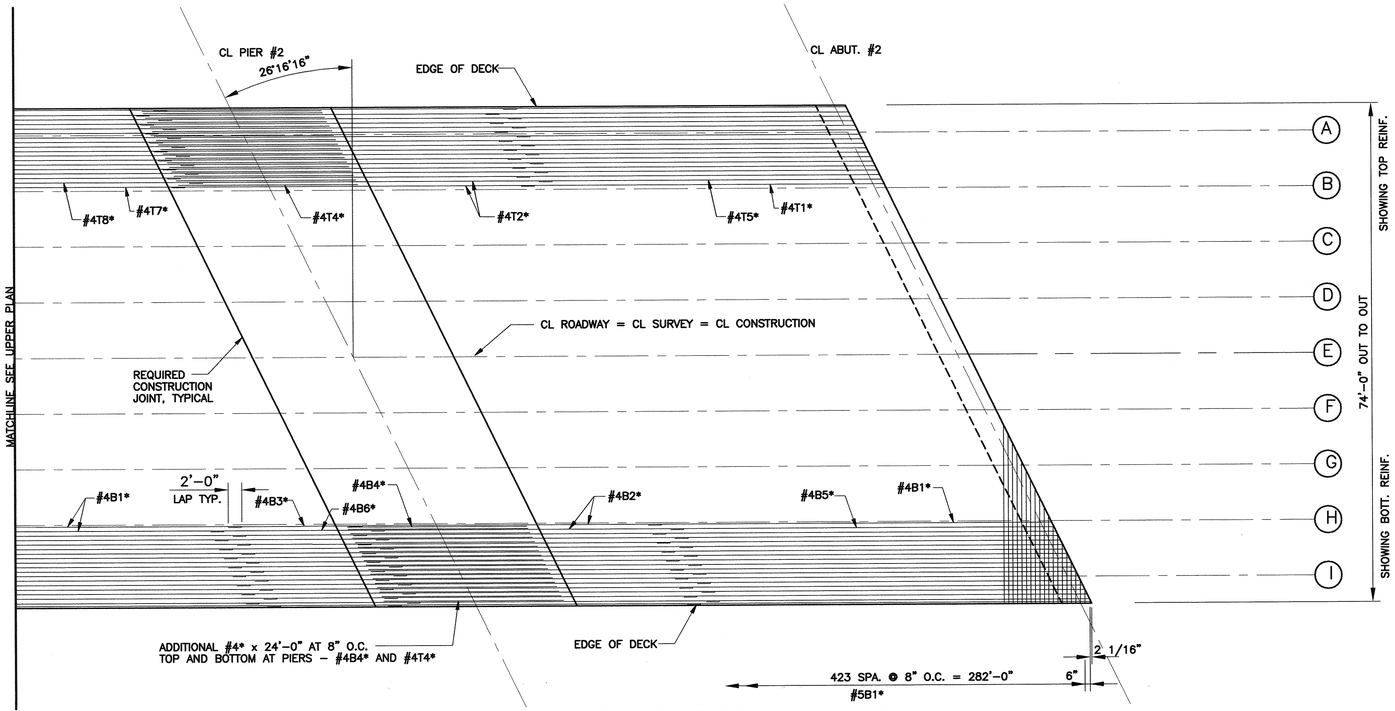
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO. 756181 | ZONE MAP NO. M-21/N-21 | SHEET 15 OF 46 | S-5



DECK SLAB REINFORCING PLAN

SCALE: 3/32" = 1'-0"



DECK SLAB REINFORCING PLAN

SCALE: 3/32" = 1'-0"

LONGITUDINAL BAR LENGTHS

DESIGNATION	LENGTH
#4B1*	60'-0"
#4B2*	46'-7"
#4B3*	21'-0"
#4B4*	24'-0"
#4B5*	57'-0"
#4B6*	27'-0"
#4T1*	54'-0"
#4T2*	54'-1"
#4T3*	32'-0"
#4T4*	24'-0"
#4T5*	51'-0"
#4T6*	45'-0"
#4T7*	46'-0"
#4T8*	39'-0"

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ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

AS BUILT INFORMATION
CONTRACTOR AUF, FAC
WORK STAKED BY AUF DATE 9/05
INSPECTIONS AUF DATE 2/07
ACCEPTANCE BY CM DATE 9/05
FIELD VERIFICATION BY AUC DATE 9/05
DRAWINGS CORRECTED BY CM DATE 9/07
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL
ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

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CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
DECK SLAB REINFORCIING PLAN

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF	
756181	M-21/N-21	16	46	S-6

TOP OF SLAB ELEVATIONS

SPAN 1

	a	b	c	d	e	f	g	h	i	j	k
LT. E.O.D.	5500.92	5500.20	5499.48	5498.76	5498.04	5497.32	5496.60	5495.88	5495.16	5494.44	5493.72
A	5500.84	5500.12	5499.40	5498.68	5497.96	5497.24	5496.52	5495.80	5495.08	5494.36	5493.64
B	5500.68	5499.96	5499.24	5498.52	5497.80	5497.08	5496.36	5495.64	5494.92	5494.20	5493.48
C	5500.52	5499.80	5499.08	5498.36	5497.64	5496.92	5496.20	5495.48	5494.76	5494.04	5493.32
D	5500.36	5499.64	5498.92	5498.20	5497.48	5496.76	5496.04	5495.32	5494.60	5493.88	5493.16
E	5500.20	5499.48	5498.76	5498.04	5497.32	5496.60	5495.88	5495.16	5494.44	5493.72	5493.00
F	5499.71	5498.99	5498.27	5497.55	5496.83	5496.11	5495.39	5494.67	5493.95	5493.23	5492.51
G	5499.22	5498.50	5497.78	5497.06	5496.34	5495.62	5494.90	5494.18	5493.46	5492.74	5492.02
H	5498.73	5498.01	5497.29	5496.57	5495.85	5495.13	5494.41	5493.69	5492.97	5492.25	5491.53
I	5498.24	5497.52	5496.80	5496.08	5495.36	5494.64	5493.92	5493.20	5492.48	5491.76	5491.04
RT. E.O.D.	5498.00	5497.28	5496.56	5495.84	5495.12	5494.40	5493.68	5492.96	5492.24	5491.52	5490.80

SPAN 2

	a	b	c	d	e	f	g	h	i	j	k
LT. E.O.D.	5493.72	5492.92	5492.12	5491.32	5490.52	5489.72	5488.92	5488.12	5487.32	5486.52	5485.72
A	5493.64	5492.84	5492.04	5491.24	5490.44	5489.64	5488.84	5488.04	5487.24	5486.44	5485.64
B	5493.48	5492.68	5491.88	5491.08	5490.28	5489.48	5488.68	5487.88	5487.08	5486.28	5485.48
C	5493.32	5492.52	5491.72	5490.92	5490.12	5489.32	5488.52	5487.72	5486.92	5486.12	5485.32
D	5493.16	5492.36	5491.56	5490.76	5489.96	5489.16	5488.36	5487.56	5486.76	5485.96	5485.16
E	5493.00	5492.20	5491.40	5490.60	5489.80	5489.00	5488.20	5487.40	5486.60	5485.80	5485.00
F	5492.51	5491.71	5490.91	5490.11	5489.31	5488.51	5487.71	5486.91	5486.11	5485.31	5484.51
G	5492.02	5491.22	5490.42	5489.62	5488.82	5488.02	5487.22	5486.42	5485.62	5484.82	5484.02
H	5491.53	5490.73	5489.93	5489.13	5488.33	5487.53	5486.73	5485.93	5485.13	5484.33	5483.53
I	5491.04	5490.24	5489.44	5488.64	5487.84	5487.04	5486.24	5485.44	5484.64	5483.84	5483.04
RT. E.O.D.	5490.80	5490.00	5489.20	5488.40	5487.60	5486.80	5486.00	5485.20	5484.40	5483.60	5482.80

SPAN 3

	a	b	c	d	e	f	g	h	i	j	k
LT. E.O.D.	5485.72	5485.00	5484.28	5483.56	5482.84	5482.12	5481.40	5480.69	5479.99	5479.31	5478.64
A	5485.64	5484.92	5484.20	5483.48	5482.76	5482.04	5481.32	5480.62	5479.92	5479.24	5478.58
B	5485.48	5484.76	5484.04	5483.32	5482.60	5481.88	5481.17	5480.46	5479.78	5479.11	5478.45
C	5485.32	5484.60	5483.88	5483.16	5482.44	5481.72	5481.01	5480.32	5479.64	5478.97	5478.32
D	5485.16	5484.44	5483.72	5483.00	5482.28	5481.56	5480.86	5480.17	5479.50	5478.84	5478.19
E	5485.00	5484.28	5483.56	5482.84	5482.12	5481.41	5480.71	5480.03	5479.36	5478.71	5478.07
F	5484.51	5483.79	5483.07	5482.35	5481.63	5480.93	5480.24	5479.56	5478.90	5478.25	5477.62
G	5484.02	5483.30	5482.58	5481.86	5481.15	5480.45	5479.76	5479.10	5478.44	5477.80	5477.18
H	5483.53	5482.81	5482.09	5481.37	5480.66	5479.97	5479.30	5478.63	5477.99	5477.35	5476.73
I	5483.04	5482.32	5481.60	5480.88	5480.18	5479.50	5478.83	5478.17	5477.53	5476.91	5476.29
RT. E.O.D.	5482.80	5482.08	5481.36	5480.65	5479.95	5479.27	5478.60	5477.95	5477.31	5476.69	5476.08

	DESCRIPTION	GIRDER								
		A	B	C	D	E	F	G	H	I
ABUT 1	DECK ELEV	5500.84	5500.68	5500.52	5500.36	5500.20	5499.71	5499.22	5498.73	5498.24
	P DIMENSION	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75
	SEAT ELEV	5495.09	5494.93	5494.77	5494.61	5494.45	5493.96	5493.47	5492.98	5492.49

	DESCRIPTION	GIRDER								
		A	B	C	D	E	F	G	H	I
PIER 1 UPHILL	DECK ELEV	5493.71	5493.55	5493.39	5493.23	5493.07	5492.58	5492.08	5491.59	5491.10
	P DIMENSION	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75
	SEAT ELEV	5487.96	5487.80	5487.64	5487.48	5487.32	5486.83	5486.33	5485.84	5485.35

	DESCRIPTION	GIRDER								
		A	B	C	D	E	F	G	H	I
PIER 1 DOWNHILL	DECK ELEV	5493.58	5493.42	5493.26	5493.09	5492.93	5492.44	5491.95	5491.46	5490.97
	P DIMENSION	5.615	5.615	5.615	5.615	5.615	5.615	5.615	5.615	5.615
	SEAT ELEV	5487.96	5487.80	5487.64	5487.48	5487.32	5486.83	5486.33	5485.84	5485.35

	DESCRIPTION	GIRDER								
		A	B	C	D	E	F	G	H	I
PIER 2 UPHILL	DECK ELEV	5485.71	5485.55	5485.39	5485.23	5485.07	5484.58	5484.08	5483.59	5483.10
	P DIMENSION	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75
	SEAT ELEV	5479.96	5479.80	5479.64	5479.48	5479.32	5478.83	5478.33	5477.84	5477.35

	DESCRIPTION	GIRDER								
		A	B	C	D	E	F	G	H	I
PIER 2 DOWNHILL	DECK ELEV	5485.58	5485.42	5485.26	5485.09	5484.93	5484.44	5483.95	5483.46	5482.97
	P DIMENSION	5.615	5.615	5.615	5.615	5.615	5.615	5.615	5.615	5.615
	SEAT ELEV	5479.96	5479.80	5479.64	5479.48	5479.32	5478.83	5478.33	5477.84	5477.35

	DESCRIPTION	GIRDER								
		A	B	C	D	E	F	G	H	I
ABUT 2	DECK ELEV	5478.58	5478.45	5478.32	5478.19	5478.07	5477.62	5477.18	5476.73	5476.29
	P DIMENSION	5.89	5.92	5.95	5.98	6.02	6.06	6.12	6.16	6.21
	SEAT ELEV	5472.69	5472.53	5472.37	5472.21	5472.05	5471.56	5471.06	5470.57	5470.08

SEAT ELEVATIONS

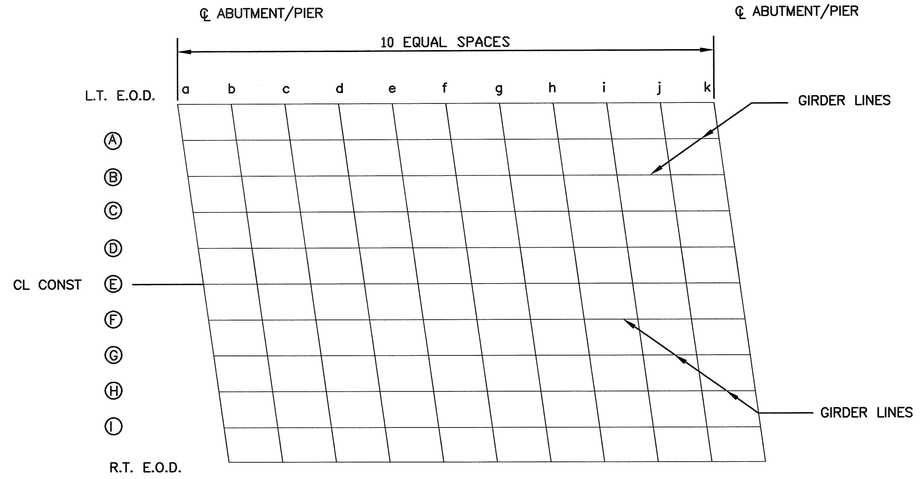
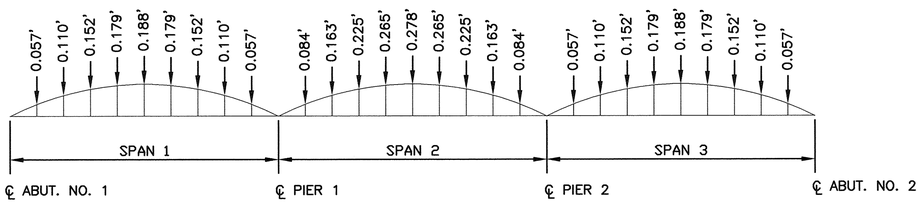


DIAGRAM FOR ELEVATIONS AT 10th POINTS

NO SCALE



LOAD DEFLECTION DIAGRAMS

NO SCALE

NOTE:

1. TO COMPENSATE FOR DEAD LOAD DEFLECTIONS DUE TO WEIGHT OF SLAB AND SUPERIMPOSED DEAD LOADS, SET SCREEDS ABOVE DECK ELEVATIONS BY DIMENSIONS SHOWN IN DEAD LOAD DIAGRAMS. ALL DIMENSIONS SHOWN IN DEAD LOAD DIAGRAMS ARE IN FEET.
2. DECK ELEVATIONS SHOWN ARE AT 10th POINTS OF SPANS.

I, ROBERT IRVING JOHNSON, NMPE 9497, OF THE FIRM OF ROBERT I. JOHNSON, P.E., LLC., A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE STRUCTURE INSTALLED AS PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR BY A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, APPROVED BY THE CITY ENGINEER AND THAT THE ORIGINAL DESIGN INTENT OF THE APPROVED PLANS HAS BEEN MET, EXCEPT AS NOTED BY ME ON THE AS-BUILT CONSTRUCTION DRAWINGS. THIS CERTIFICARION IS BASED ON SITE INSPECTIONS BY ME OR PERSONNEL UNDER MY DIRECTION.

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SIGNATURE & ENGINEERS SEAL

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ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

AS BUILT INFORMATION
CONTRACTOR AUI, Inc. DATE 7/05
STAKED BY AUI DATE 7/02
INSPECTOR'S SIGNATURE BY CM DATE 7/02
FIELD VERIFICATION BY AUI DATE 7/05
VERIFICATION BY AUI DATE 7/05
CORRECTED BY C.M DATE 7/07
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL
ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
		DESIGNED BY JPG	DATE 5/2/05
		DRAWN BY TEP	DATE 5/2/05
		CHECKED BY RJJ	DATE 5/2/05

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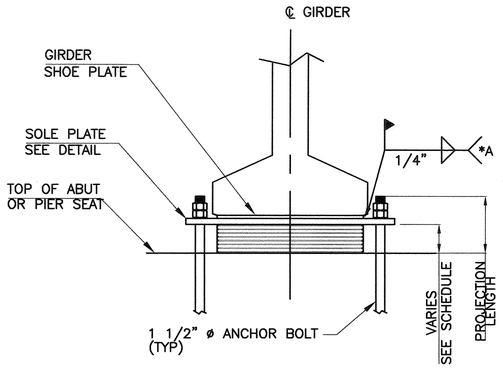
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

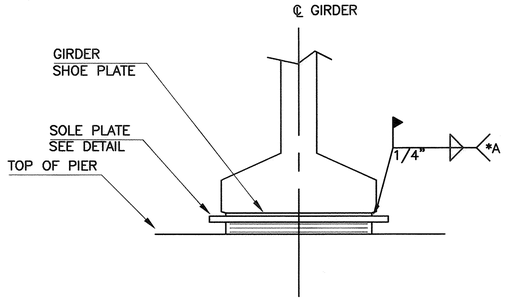
TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
TOP OF DECK AND BEAM SEAT ELEVATIONS

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005	APPROVED JUL 28 2005 CITY ENGINEER			

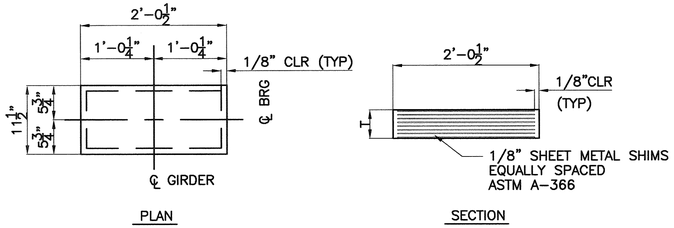
CITY DESIGN REVIEW PROJECT NO.	ZONE MAP NO.	SHEET	OF	
756181	M-21/N-21	17	46	S-7



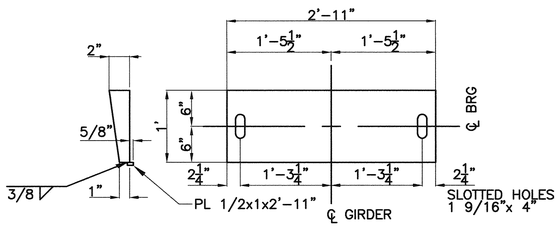
TYPICAL END VIEW AT BEARING
PIER NO. 1,2



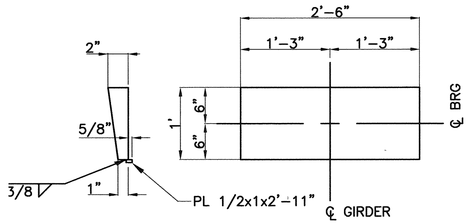
TYPICAL END VIEW AT BEARING
ABUTMENT NO. 1,2



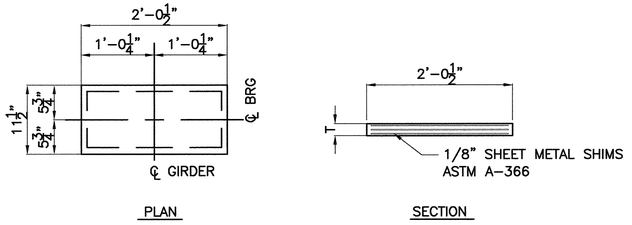
ABUTMENT NO. 1,2 AND
DOWNHILL SIDE OF PIER NO. 1,2
ELASTOMERIC PAD
DUROMETER 60



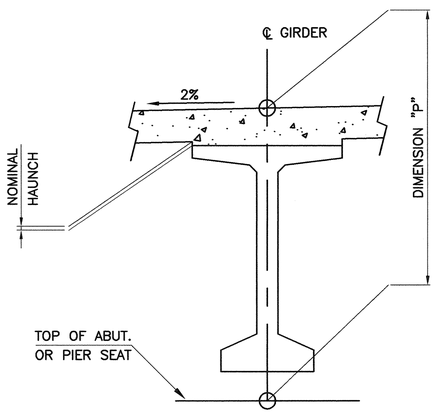
BEVELED
SOLE PLATE DETAILS
PIER NO. 1,2



BEVELED
SOLE PLATE DETAILS
ABUTMENT NO. 1,2



UPHILL SIDE OF PIER NO. 1,2
ELASTOMERIC PAD
DUROMETER 60



NOTES:

1. TOP AND BOTTOM SURFACES OF SOLE PLATES SHALL BE FLAT WITHIN 1/32" TOTAL INDICATOR READING. SURFACES FINISHES SHALL BE ANSI 1000 OR BETTER. THE PLATE THICKNESS SHOWN IS THE FINISHED THICKNESS.
2. IF MACHINING PROCESSES ARE USED TO ACHIEVE THE REQUIRED FLATNESS TOLERANCES OF THE SOLE PLATES, THE DIRECTION OF MACHINING OF THE SURFACE TO BE IN CONTACT WITH THE ELASTOMERIC PAD SHALL BE PERPENDICULAR TO THE LONGITUDINAL AXIS OF THE BEAM.
3. SOLE PLATES SHALL BE DELIVERED TO THE JOB SITE WITH ONE COAT OF PRIMER APPLIED TO ALL SURFACES EXCEPT FOR MASKED OFF STRIPES WHERE THE SOLE PLATES SHALL BE WELDED TO SHOE PLATES OF THE PRESTRESSED BEAMS AND THE SURFACE TO BE IN CONTACT WITH ELASTOMERIC BEARING PAD. BEFORE INSTALLATION, SURFACES TO BE IN CONTACT WITH THE PADS SHALL BE CLEANED TO SSPC-SP 6 REQUIREMENTS AND SAND BLASTED TO PROVIDE A SLIP RESISTANT SURFACE. AFTER INSTALLING THE PAD AND WELDING THE SOLE PLATE TO THE SHOE PLATES, THE CONTRACTOR SHALL TOUCH UP THE PRIMER AND APPLY THE TOP COAT TO ALL EXPOSED SURFACES.

*A DURING WELDING OF SOLE PLATE TO SHOE PLATE, THE ELASTOMERIC PAD SHALL NOT BE EXPOSED TO INSTANTANEOUS TEMPERATURES GREATER THAN 400°F.

ELASTOMERIC BEARING PAD SCHEDULE
(DUROMETER 60)

LOCATION	DIMENSIONS (in)			INNER LAM		OUTER LAM		NO. SHIMS	DESIGN LOAD	NO. REQ'D	MOVEMENT LENGTH (ft)
	W	L	T	NO.	TKN	NO.	TKN				
ABUT NO. 1	24.5	11.5	3.5	5	0.5	2	.125	6	DL = 84.4 K LL = 58.0 K	9	140
PIER NO. 1, UPHILL	24.5	11.5	3.5	2	0.625	2	.125	3	DL = 91.7 K LL = 60.5 K	9	
PIER NO. 1, DOWNHILL	24.5	11.5	1.875	5	0.5	2	.125	6	DL = 97.1 K LL = 61.6 K	9	
PIER NO. 2, UPHILL	24.5	11.5	3.5	2	0.625	2	.125	3	DL = 97.1 K LL = 61.6 K	9	
PIER NO. 2, DOWNHILL	24.5	11.5	1.875	5	0.5	2	.125	6	DL = 91.7 K LL = 60.5 K	9	
ABUT NO. 2	24.5	11.5	3.5	5	0.5	2	.125	6	DL = 84.4 K LL = 58.0 K	9	140

TABLE OF DIMENSION "P"

	ABUT NO. 1	PIER 1		PIER 2		ABUT NO. 2
		UPHILL	DOWNHILL	UPHILL	DOWNHILL	
SLAB	8.0 in	8.0 in	8.0 in	8.0 in	8.0 in	8.0 in
HAUNCH	2 in	2 in	2 in	2 in	2 in	VARIES, SEE SHT. S-7
BEAM	54 in	54 in	54 in	54 in	54 in	54 in
SOLE PLATE	1.5 in	1.5 in	1.5 in	1.5 in	1.5 in	1.5 in
BEARING	3.5 in	3.5 in	1.875 in	3.5 in	1.875 in	3.5 in
DIMENSION "P"	5.75 ft	5.75 ft	5.615 ft	5.75 ft	5.615 ft	VARIES, SEE SHT. S-7

I, ROBERT IRVING JOHNSON, NMPE 9497, OF THE FIRM OF ROBERT I. JOHNSON, P.E., LLC., A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE STRUCTURE INSTALLED AS PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR BY A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, APPROVED BY THE CITY ENGINEER AND THAT THE ORIGINAL DESIGN INTENT OF THE APPROVED PLANS HAS BEEN MET, EXCEPT AS NOTED BY ME ON THE AS-BUILT CONSTRUCTION DRAWINGS. THIS CERTIFICARION IS BASED ON SITE INSPECTIONS BY ME OR PERSONNEL UNDER MY DIRECTION.

Robert Irving Johnson
SIGNATURE & ENGINEERS SEAL

I, ROBERT IRVING JOHNSON, CERTIFY THAT THIS ELECTRONIC VERVION IS IDENTICAL TO THE ORIGINAL REPRODUCIBLE APPROVED FOR CONSTRUCTION DRAWINGS SIGNED BY ME ON 5/2, 2025

AS BUILT INFORMATION
CONTRACTOR AUE, Inc
WORK STAKED BY AUE DATE 9/05
INSPECTED BY CM DATE 7/07
FIELD VERIFICATION BY AUE DATE 9/05
DRAWINGS CORRECTED BY CM DATE 7/07
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL
ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
		DESIGNED BY JPG	DATE 5/2/05
		DRAWN BY TEP	DATE 5/2/05
		CHECKED BY RIJ	DATE 5/2/05

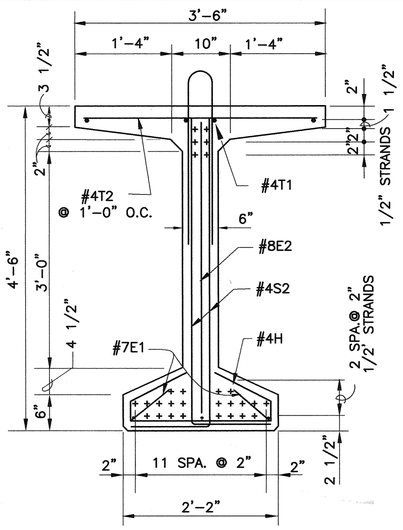
102597
CME, Inc.
Mechanical / Electrical / Structural Consulting Engineers
6001 Indian School Rd. NE, Ste 200 Albuquerque, New Mexico 87110
(505) 884-8868 FAX 884-7048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

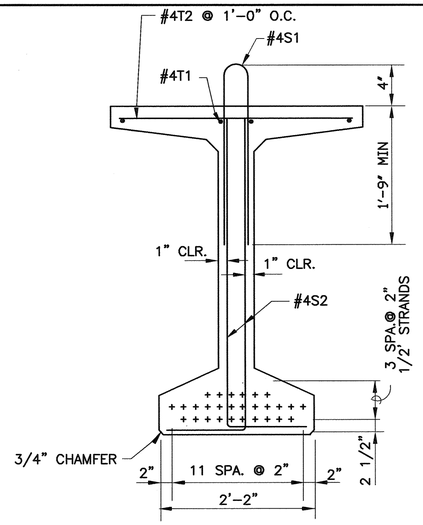
TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
BEARING DETAILS

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

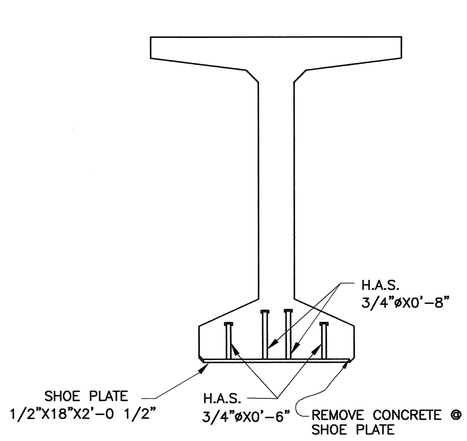
CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF	
756181	M-21/N-21	18	46	S-8



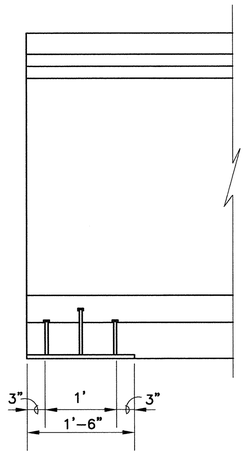
END VIEW



SECTION NEAR
℄ OF BEAM

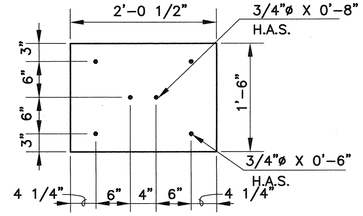


END VIEW



ELEVATION

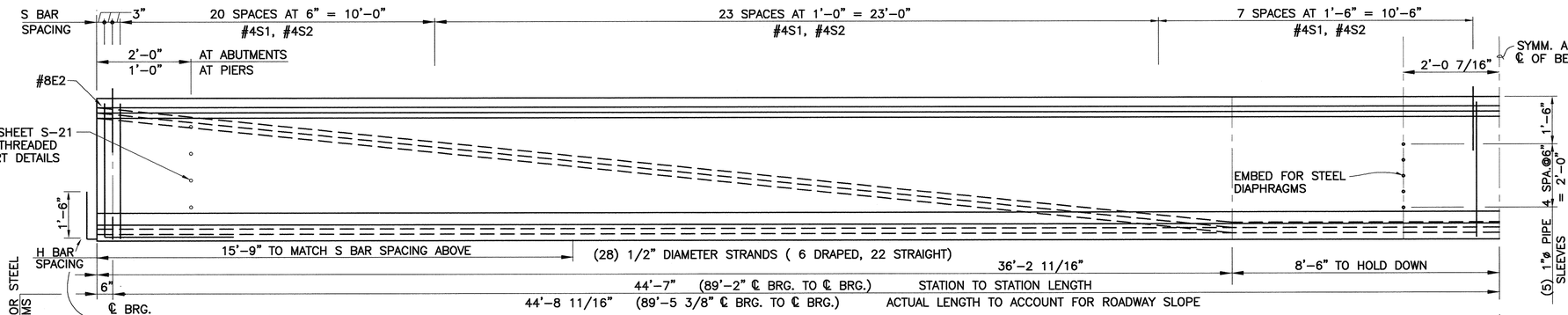
SHOE PLATE DETAILS



SHOE ℄ DETAIL

WEIGHT	CAMBER @ RELEASE	CAMBER @ ERECTION	DEAD LOAD DEFLECTION
30.8 TONS	1.318 in.	2.328 in.	2.258 in.

BEAM DATA

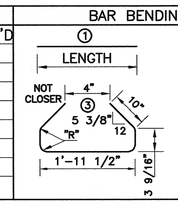


HALF ELEVATION TYPE BT 54 BEAMS, 18 REQ'D

(fse = 24,835 LBS. PER STRAND; LOSSES = 6,140 LBS. PER STRAND)

BAR	TYPE	BEAM SIZE	"R"	"X"	LENGTH	NO. REQ'D
E1	②	#7	3 1/8"	5'–0"	5'–8"	4
E2	②	#8	3 1/2"	4'–2"	8'–4"	2
S1	④	#4	1 3/4"	3'–0"	4'–6"	102
S2	②	#4	1 1/2"	4'–3"	5'–2"	102
H	③	#4	1 1/2"	---	4'–1 1/2"	36
T1	①	#4	---	---	90'–0"	4
T2	①	#4	---	---	3'–3"	90

BAR BENDING DIAGRAM



REINFORCING BARS REQ'D FOR ONE BEAM

I, ROBERT IRVING JOHNSON, NMPE 9497, OF THE FIRM OF ROBERT I. JOHNSON, P.E. LLC. A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE STRUCTURE INSTALLED AS PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR BY A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, APPROVED BY THE CITY ENGINEER AND THAT THE ORIGINAL DESIGN INTENT OF THE APPROVED PLANS HAS BEEN MET, EXCEPT AS NOTED BY ME ON THE AS-BUILT CONSTRUCTION DRAWINGS. THIS CERTIFICARION IS BASED ON SITE INSPECTIONS BY ME OR PERSONNEL UNDER MY DIRECTION.

Robert Irving Johnson
SIGNATURE & ENGINEERS SEAL

ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 12/2/07

I, ROBERT IRVING JOHNSON, CERTIFY THAT THIS ELECTRONIC VERVION IS IDENTICAL TO THE ORIGINAL REPRODUCIBLE APPROVED FOR CONSTRUCTION DRAWINGS SIGNED BY ME ON 5/2, 2005

GENERAL NOTES

1. COST OF REINFORCING BARS AND STRUCTURAL STEEL EMBEDDED IN BRIDGE BEAMS IS TO BE INCLUDED IN THE UNIT PRICE BID FOR PRESTRESSED CONCRETE BRIDGE MEMBER TYPE BT 54
2. BEAMS TO BE LIFTED BY MEANS OF DEVICES SATISFACTORY TO THE ENGINEER. LIFTING DEVICES MUST BE APPROVED BY THE ENGINEER PRIOR TO USE. BEAMS TO BE CAST, STORED, AND HAULED IN UPRIGHT POSITION
3. THE TOP SURFACES OF THE BEAMS ARE TO BE THOROUGHLY WIRE BRUSHED AND SCORED TRANSVERSELY AFTER INITIAL SET (MIN. DEPTH = 1/4" ACROSS ENTIRE FLANGE WIDTH).
4. THE CAMBER AT ERECTION DIMENSION LISTED IS THE CALCULATED VALUE DUE TO THE EFFECT OF PRESTRESSING WITH THE WEIGHT OF THE BEAM ACTING, WITH AN ALLOWANCE FOR CAMBER GROWTH TO 90 DAYS. THE CONTRACTOR SHALL LIMIT THE CAMBER GROWTH TO A VALUE NOT TO EXCEED THE PREDICTED CAMBER AT ERECTION DIMENSION BY 1 INCH AT THE TIME OF DECK SLAB PLACEMENT. CAMBER GROWTH IS TO BE LIMITED BY WEIGHTING, FABRICATION SCHEDULING OR OTHER APPROVED MEANS.
5. DEAD LOAD DEFLECTION IS THE COMPUTED DEFLECTION DUE TO WEIGHT OF SLAB, DIAPHRAGMS, AND SUPERIMPOSED DEAD LOAD.
6. THE DESIGN SHOWN IS BASED ON THE USE OF 1/2" DIAMETER LOW–RELAXATION STRANDS MEETING THE REQUIREMENTS OF AASHTO M–203 (GRADE 270). INITIAL PRESTRESSING FORCE SHALL BE 30,975 LBS. PER STRAND. SLIGHT OVERSTRESSING UP TO 33,000 LBS. PER STRAND WILL BE ALLOWED TO OFFSET SEATING LOSSES.
7. TYPE III CEMENT MAY BE USED AT THE FABRICATOR'S OPTION.
8. SHOE PLATES MUST BE STRAIGHTENED PRIOR TO CASTING INTO BEAM.
9. REINFORCING BARS PROJECTING FROM THE TOP OF THE GIRDER SHALL BE EPOXY COATED.

DESIGN DATA

DESIGN ACCORDING TO A.A.S.H.T.O. SPECIFICATIONS DATED 2002 AND CURRENT INTERIM.

BEAMS:
f'ci (MIN. COMPRESSIVE STRENGTH OF CONCRETE AT TIME OF INITIAL PRESTRESS) = 4750 LBS. PER SQ. IN.
f'c = 6000 LBS. PER SQ. IN.; n = 7

PRESTRESSING STEEL:
1/2" DIAMETER SEVEN WIRE LOW RELAXATION STRANDS.
f's = 41,300 LBS. PER STRAND;
f*y = 37,100 LBS. PER STRAND.

CONVENTIONAL REINFORCING BARS:
fy = 60,000 LBS. PER SQ. IN.

COMPOSITE SLAB:
f'c = 4,000 LBS. PER SQ. IN.
ALLOWANCE FOR FUTURE WEARING SURFACE = 30 psf
ALLOWANCE FOR PERMANENT STEEL = 5 psf
DECK FORMS
LIVE LOAD = HS 20–44.

AS BUILT INFORMATION
CONTRACTOR AUI, Inc
WORK STAKED BY AUI DATE 8/05
INSPECTIONS BY CM DATE 2/07
ACCEPTANCE BY CM DATE 9/05
FIELD REVISION BY AUI DATE 9/05
DRAWINGS CORRECTED BY CM DATE 2/07
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL
ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
		DESIGNED BY JPG	DATE 5/2/05
		DRAWN BY TEP	DATE 5/2/05
		CHECKED BY RJJ	DATE 5/2/05

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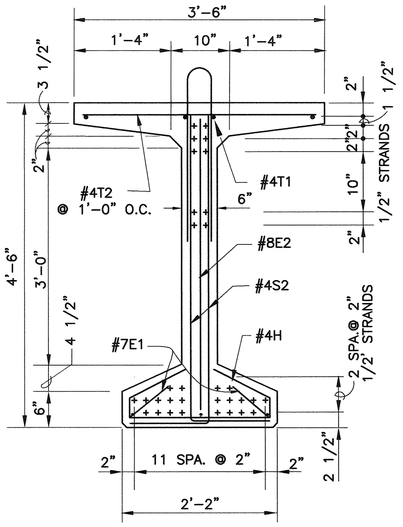
CME, Inc.
Mechanical / Electrical / Structural Consulting Engineers
6001 Indian School Rd. NE, Ste 200 (505) 884–8868
Albuquerque, New Mexico 87110 FAX 884–7048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

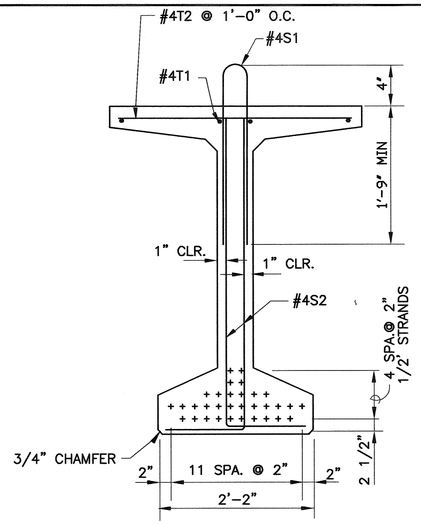
TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
BEAM DETAILS -TYPE BT-54, 90.0' SPAN

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

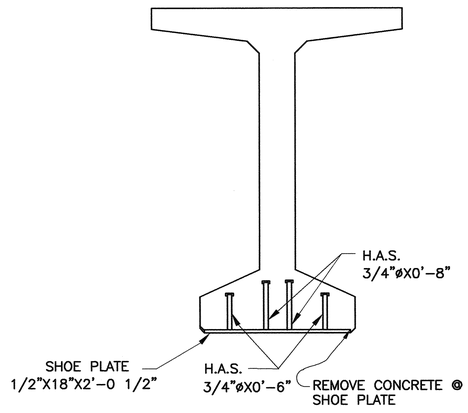
CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF	
756181	M-21/N-21	19	46	S-9



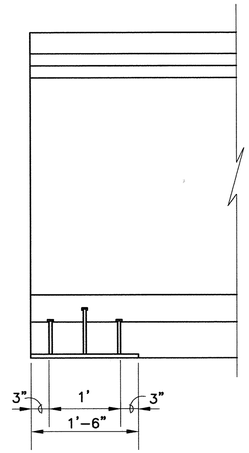
END VIEW



SECTION NEAR
℄ OF BEAM

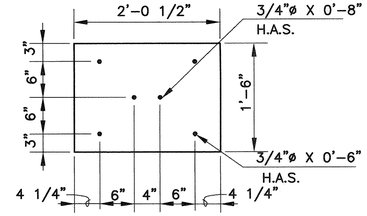


END VIEW



ELEVATION

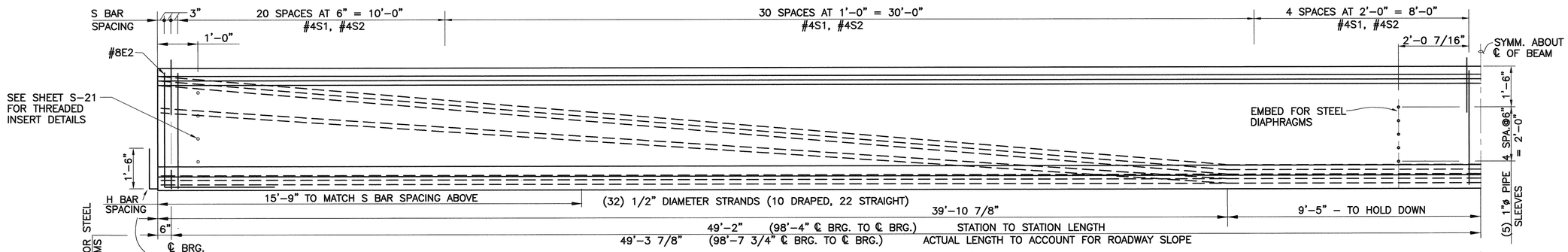
SHOE PLATE DETAILS



SHOE ℙ DETAIL

WEIGHT	CAMBER @ RELEASE	CAMBER @ ERECTION	DEAD LOAD DEFLECTION
34.3 TONS	1.575 in.	2.767 in.	3.339 in.

BEAM DATA

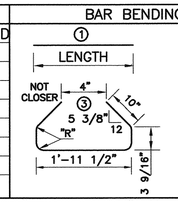


HALF ELEVATION TYPE BT 54 BEAMS, 9 REQ'D

(fse = 24,525 LBS. PER STRAND; LOSSES = 6,450 LBS. PER STRAND)

BAR	TYPE	BEAM SIZE	"R"	"X"	LENGTH	NO. REQ'D
E1	②	#7	3 1/8"	5'–0"	5'–8"	4
E2	②	#8	3 1/2"	4'–2"	8'–4"	2
S1	④	#4	1 3/4"	3'–0"	4'–6"	114
S2	②	#4	1 1/2"	4'–3"	5'–2"	114
H	③	#4	1 1/2"	---	4'–1 1/2"	36
T1	①	#4	---	---	99'–4"	4
T2	①	#4	---	---	3'–3"	99

BAR BENDING DIAGRAM



REINFORCING BARS REQ'D FOR ONE BEAM

I, ROBERT IRVING JOHNSON, NMPE 9497, OF THE FIRM OF ROBERT I. JOHNSON, P.E. LLC., A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE STRUCTURE INSTALLED AS PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR BY A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, APPROVED BY THE CITY ENGINEER AND THAT THE ORIGINAL DESIGN INTENT OF THE APPROVED PLANS HAS BEEN MET, EXCEPT AS NOTED BY ME ON THE AS-BUILT CONSTRUCTION DRAWINGS. THIS CERTIFICARION IS BASED ON SITE INSPECTIONS BY ME OR PERSONNEL UNDER MY DIRECTION.

Robert Irving Johnson
SIGNATURE & ENGINEERS SEAL

ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 7/2/07

I, ROBERT IRVING JOHNSON, CERTIFY THAT THIS ELECTRONIC VERVION IS IDENTICAL TO THE ORIGINAL REPRODUCIBLE APPROVED FOR CONSTRUCTION DRAWINGS SIGNED BY ME ON 5/2, 2005

GENERAL NOTES

1. COST OF REINFORCING BARS AND STRUCTURAL STEEL EMBEDDED IN BRIDGE BEAMS IS TO BE INCLUDED IN THE UNIT PRICE BID FOR PRESTRESSED CONCRETE BRIDGE MEMBER TYPE BT 54
2. BEAMS TO BE LIFTED BY MEANS OF DEVICES SATISFACTORY TO THE ENGINEER. LIFTING DEVICES MUST BE APPROVED BY THE ENGINEER PRIOR TO USE. BEAMS TO BE CAST, STORED, AND HAULED IN UPRIGHT POSITION
3. THE TOP SURFACES OF THE BEAMS ARE TO BE THOROUGHLY WIRE BRUSHED AND SCORED TRANSVERSELY AFTER INITIAL SET (MIN. DEPTH = 1/4" ACROSS ENTIRE FLANGE WIDTH).
4. THE CAMBER AT ERECTION DIMENSION LISTED IS THE CALCULATED VALUE DUE TO THE EFFECT OF PRESTRESSING WITH THE WEIGHT OF THE BEAM ACTING, WITH AN ALLOWANCE FOR CAMBER GROWTH TO 90 DAYS. THE CONTRACTOR SHALL LIMIT THE CAMBER GROWTH TO A VALUE NOT TO EXCEED THE PREDICTED CAMBER AT ERECTION DIMENSION BY 1 INCH AT THE TIME OF DECK SLAB PLACEMENT. CAMBER GROWTH IS TO BE LIMITED BY WEIGHTING, FABRICATION SCHEDULING OR OTHER APPROVED MEANS.
5. DEAD LOAD DEFLECTION IS THE COMPUTED DEFLECTION DUE TO WEIGHT OF SLAB, DIAPHRAGMS, AND SUPERIMPOSED DEAD LOAD.
6. THE DESIGN SHOWN IS BASED ON THE USE OF 1/2" DIAMETER LOW-RELAXATION STRANDS MEETING THE REQUIREMENTS OF AASHTO M-203 (GRADE 270). INITIAL PRESTRESSING FORCE SHALL BE 30,975 LBS. PER STRAND. SLIGHT OVERSTRESSING UP TO 33,000 LBS. PER STRAND WILL BE ALLOWED TO OFFSET SEATING LOSSES.
7. TYPE III CEMENT MAY BE USED AT THE FABRICATOR'S OPTION.
8. SHOE PLATES MUST BE STRAIGHTENED PRIOR TO CASTING INTO BEAM.
9. REINFORCING BARS PROJECTING FROM THE TOP OF THE GIRDER SHALL BE EPOXY COATED.

DESIGN DATA

DESIGN ACCORDING TO A.A.S.H.T.O. SPECIFICATIONS DATED 2002 AND CURRENT INTERIM.

BEAMS:
f'ci (MIN. COMPRESSIVE STRENGTH OF CONCRETE AT TIME OF INITIAL PRESTRESS) = 4750 LBS. PER SQ. IN.
f'c = 6000 LBS. PER SQ. IN.; n = 7

PRESTRESSING STEEL:
1/2" DIAMETER SEVEN WIRE LOW RELAXATION STRANDS.
f's = 41,300 LBS. PER STRAND;
f*y = 37,100 LBS. PER STRAND.

CONVENTIONAL REINFORCING BARS:
fy = 60,000 LBS. PER SQ. IN.

COMPOSITE SLAB:
f'c = 4,000 LBS. PER SQ. IN.
ALLOWANCE FOR FUTURE WEARING SURFACE = 30 psf
ALLOWANCE FOR PERMANENT STEEL = 5 psf
DECK FORMS
LIVE LOAD = HS 20-44.

AS BUILT INFORMATION
CONTRACTOR
WORK STAKED BY
INSPECTOR'S ACCEPTANCE BY
VERIFICATION BY
DRAWINGS CORRECTED BY
MICRO-FILM INFORMATION
RECORDED BY
NO.
DATE

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL
ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	

DESIGNED BY JPG DATE 5/2/05
DRAWN BY TEP DATE 5/2/05
CHECKED BY RIJ DATE 5/2/05

102597
CME, Inc.
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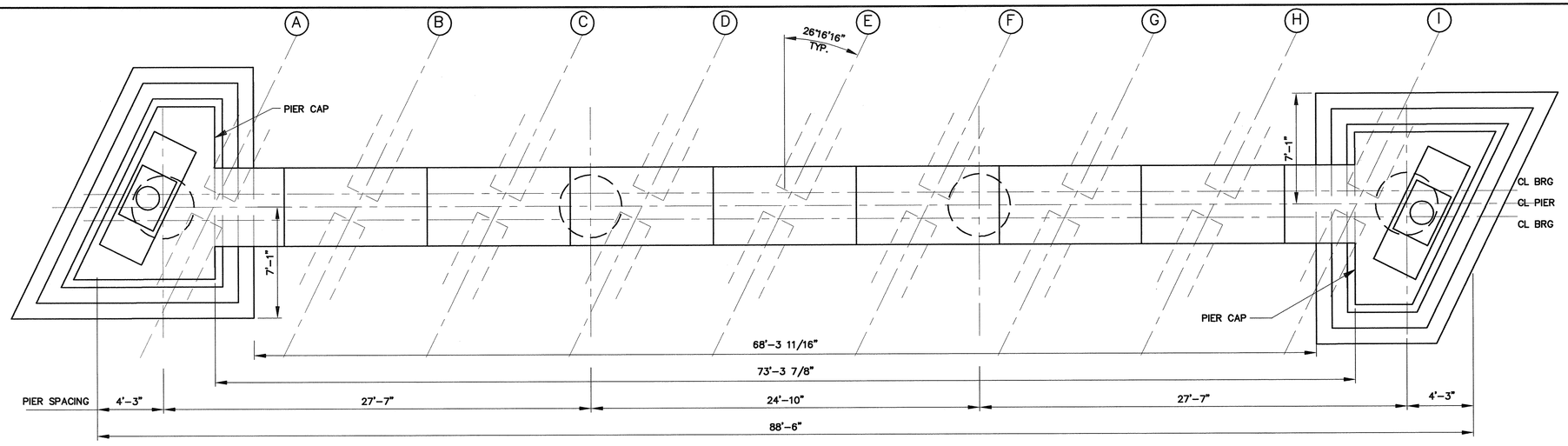
Albuquerque, New Mexico 87110 FAX 884-7048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
BEAM DETAILS -TYPE BT-54, 100' SPAN

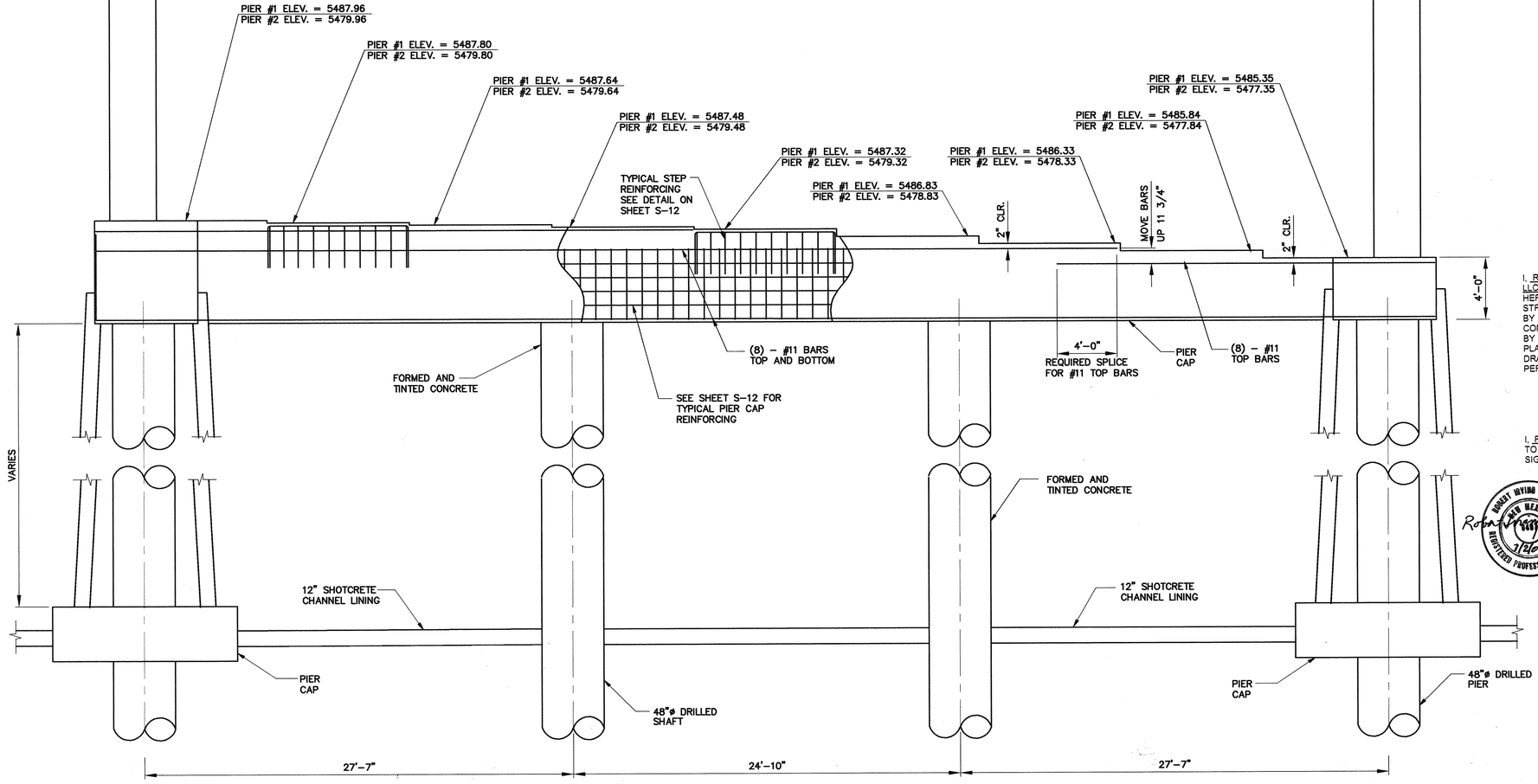
DESIGN REVIEW COMMITTEE: APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE
CITY ENGINEER APPROVAL: APPROVED JUL 28 2005 CITY ENGINEER
LAST DESIGN UPDATE: MO./DAY/YR. MO./DAY/YR.

CITY PROJECT NO. 756181 | ZONE MAP NO. M-21/N-21 | SHEET 20 OF 46 | S-10



PIER #1 & PIER #2 PLAN VIEW

SCALE: 1/4" = 1'-0"



PIER #1 & PIER #2 ELEVATION

SCALE: 1/4" = 1'-0"

I, ROBERT IRVING JOHNSON, NMPE 9497, OF THE FIRM OF ROBERT I. JOHNSON, P.E., LLC., A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE STRUCTURE INSTALLED AS PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR BY A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, APPROVED BY THE CITY ENGINEER AND THAT THE ORIGINAL DESIGN INTENT OF THE APPROVED PLANS HAS BEEN MET, EXCEPT AS NOTED BY ME ON THE AS-BUILT CONSTRUCTION DRAWINGS. THIS CERTIFICARION IS BASED ON SITE INSPECTIONS BY ME OR PERSONNEL UNDER MY DIRECTION.

Robert Irving Johnson
SIGNATURE & ENGINEERS SEAL

I, ROBERT IRVING JOHNSON, CERTIFY THAT THIS ELECTRONIC VERVION IS IDENTICAL TO THE ORIGINAL REPRODUCIBLE APPROVED FOR CONSTRUCTION DRAWINGS SIGNED BY ME ON 5/2, 20 05.

ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

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Mechanical / Electrical / Structural Consulting Engineers
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CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
PIER PLAN AND ELEVATION

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO.	ZONE MAP NO.	SHEET OF	
756181	M-21/N-21	21 46	S-11

AS BUILT INFORMATION

CONTRACTOR	AUI, Inc.	
WORK STARTED BY	AUI	DATE 9/05
WORK COMPLETED BY	CMI	DATE 1/06
ACCEPTANCE BY	CMI	DATE 9/05
FIELD VERIFICATION BY	AUI	DATE 9/05
DRAWINGS CORRECTED BY	CMI	DATE 3/06
MICRO-FILM INFORMATION		
RECORDED BY		DATE
NO.		

BENCH MARKS

SURVEY INFORMATION

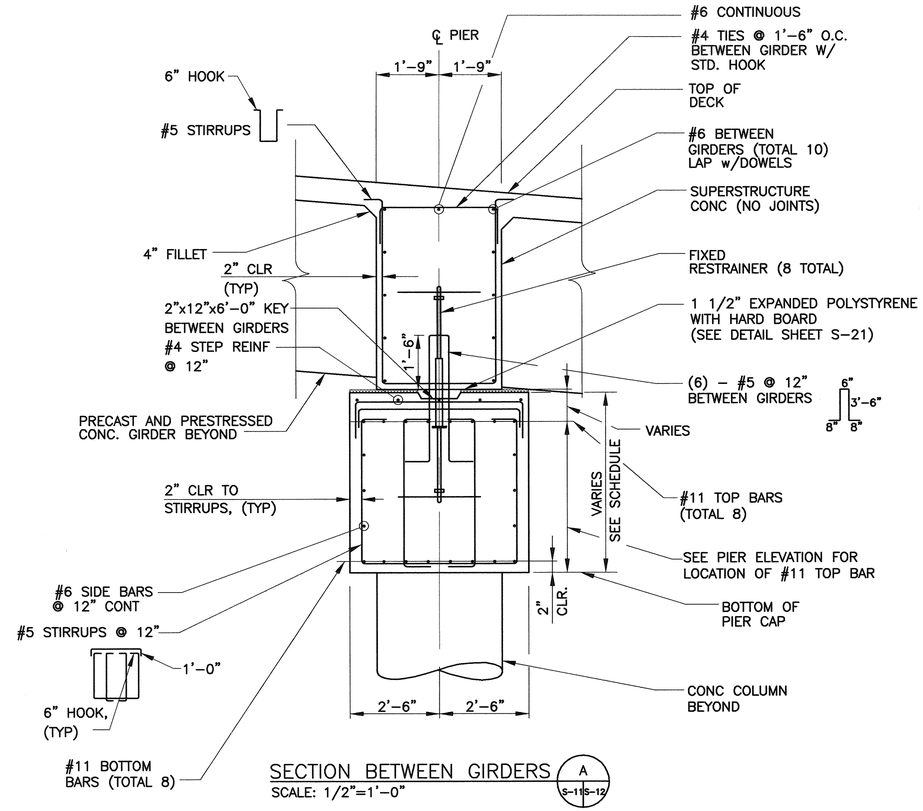
FIELD NOTES

NO.	BY	DATE

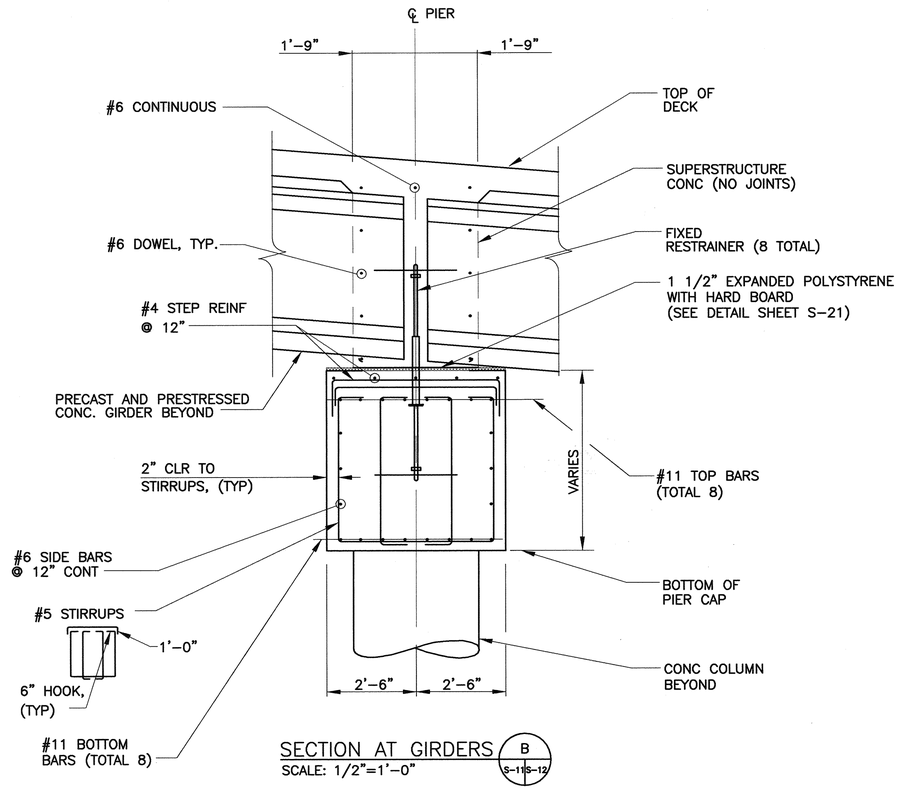
ENGINEER'S SEAL

ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER

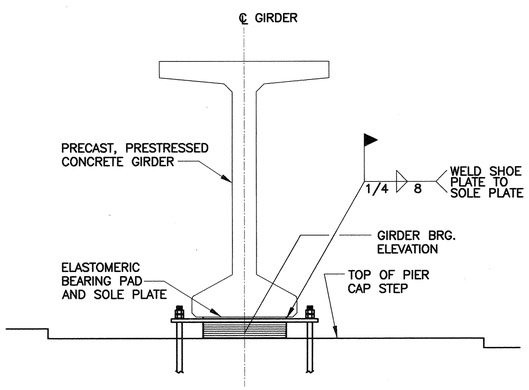
NO.	DATE	REMARKS	BY	DESIGNED BY JPG	5/2/05
		REVISIONS		DRAWN BY TEP	5/2/05
		DESIGN		CHECKED BY RJJ	5/2/05



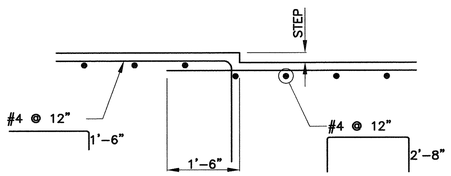
SECTION BETWEEN GIRDERS (A) S-11 S-12
SCALE: 1/2"=1'-0"



SECTION AT GIRDERS (B) S-11 S-12
SCALE: 1/2"=1'-0"



GIRDER BEARING DETAIL
NO SCALE



STEP REINFORCING DETAIL
3/4" = 1'-0"

NOTES:
1. ADJUST PIER CAP REINF. TO CLEAR COLUMN VERTICAL REINF. ALL ADJUSTMENTS SUBJECT TO APPROVAL OF THE ENGINEER.
2. PROVIDE #4 STEP REINF. @ 1'-0" EACH WAY WHERE CONC. COVERAGE ABOVE #11 TOP PIER CAP REINF. EXCEEDS 4".

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SIGNATURE & ENGINEERS SEAL

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AS BUILT INFORMATION

CONTRACTOR	AUI, Inc
WORK STAKED BY	AUI DATE 9/03
INSPECTOR'S ACCEPTANCE BY	C.M DATE 7/03
AS-BUILT VERIFICATION BY	AUI DATE 8/03
DRAWINGS CORRECTED BY	C.M DATE 7/03
MICRO-FILM INFORMATION	
RECORDED BY	DATE
NO.	

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL
ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER
Robert Irving Johnson 5/2/05

NO.	DATE	REMARKS
		REVISIONS
		DESIGN

DESIGNED BY JPG DATE 5/2/05
DRAWN BY TEP DATE 5/2/05
CHECKED BY RJJ DATE 5/2/05

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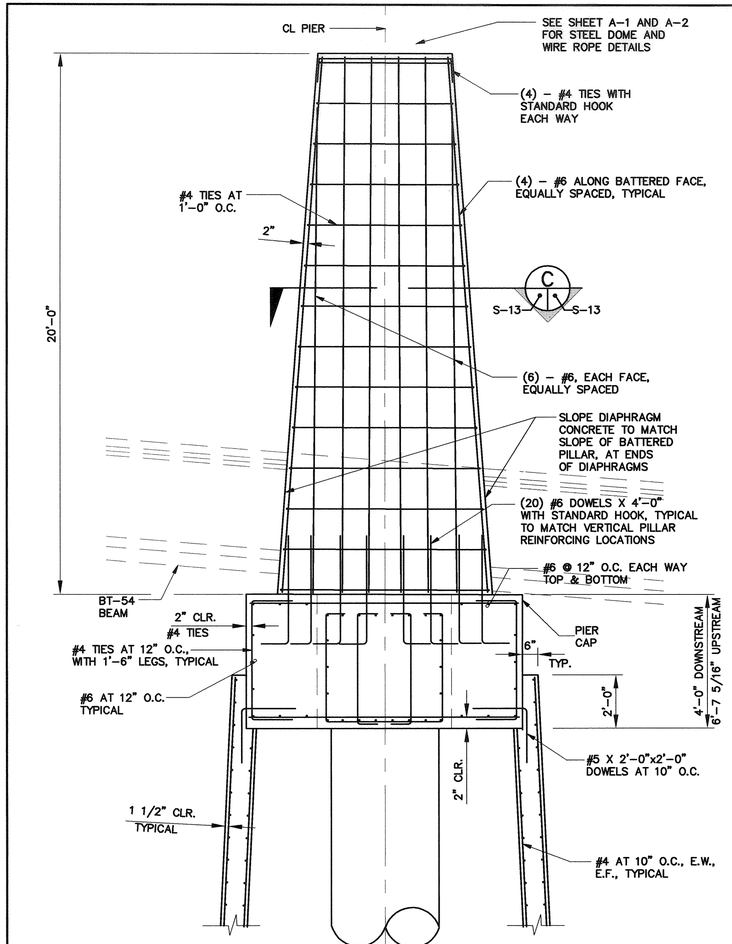
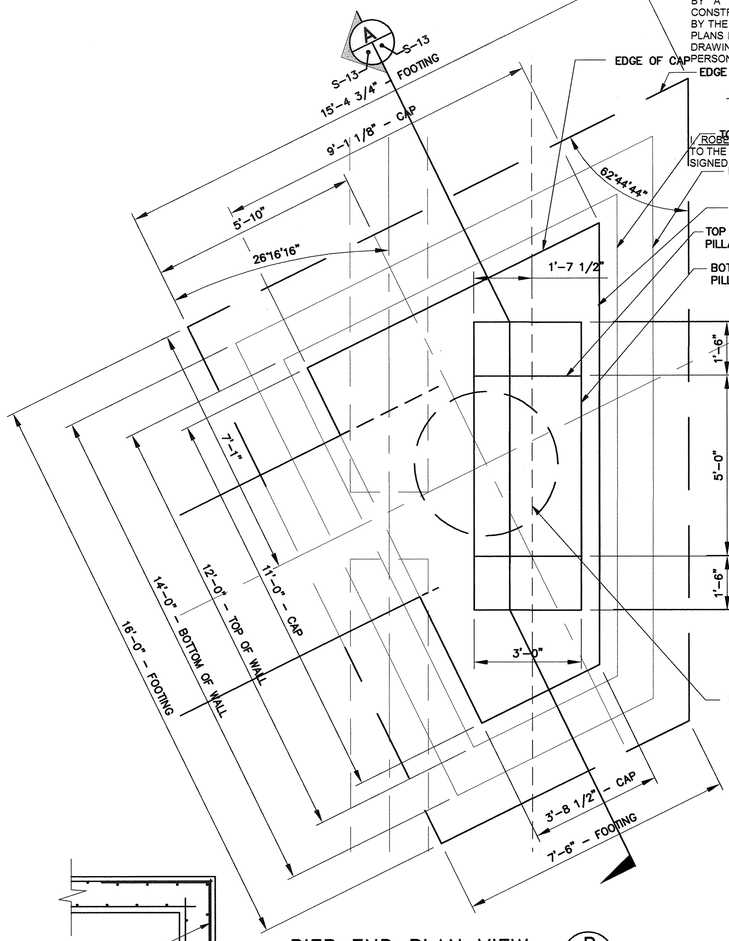
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
PIER DETAILS

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO.	ZONE MAP NO.	SHEET OF	
756181	M-21/N-21	22 46	S-12





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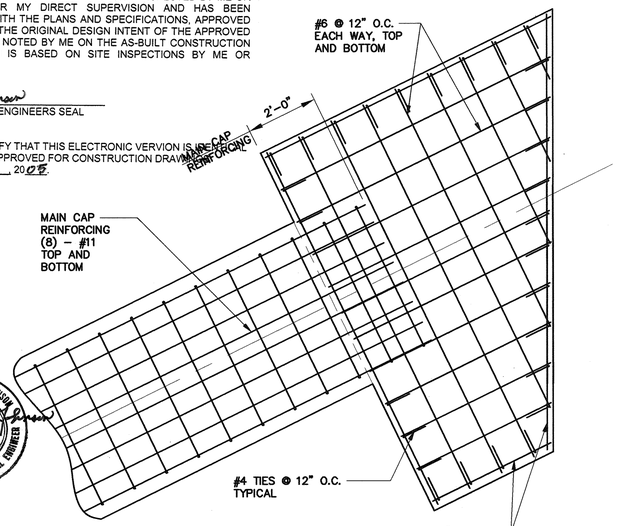
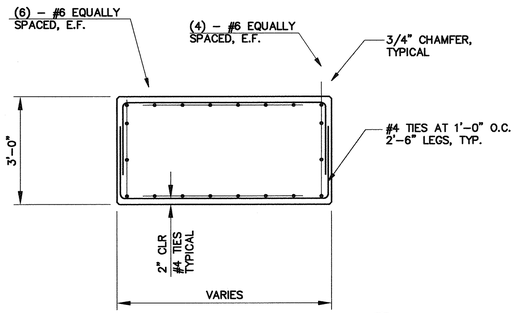
ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05



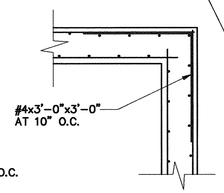
PLAN VIEW PIER CAP REINFORCING (B, S-13 S-13)

SCALE: 1/2" = 1'–0"



CONCRETE PILLAR SECTION (C, S-13 S-13)

SCALE: 1/2" = 1'–0"

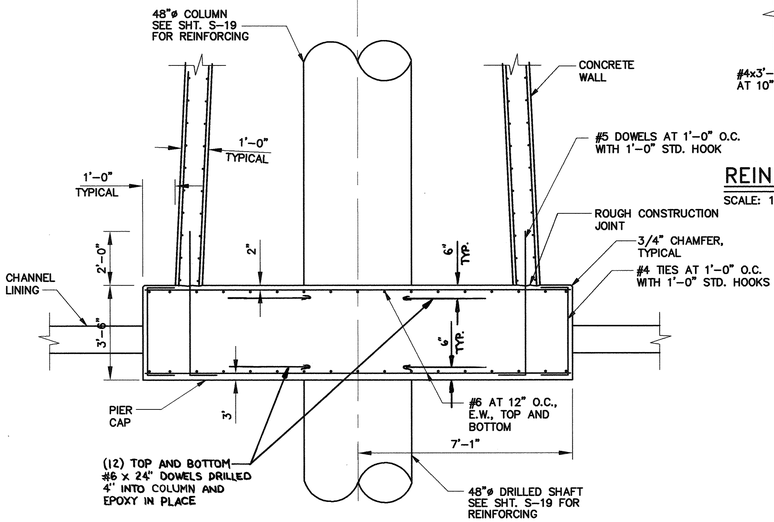


REINFORCING CORNERS

SCALE: 1/2" = 1'–0"

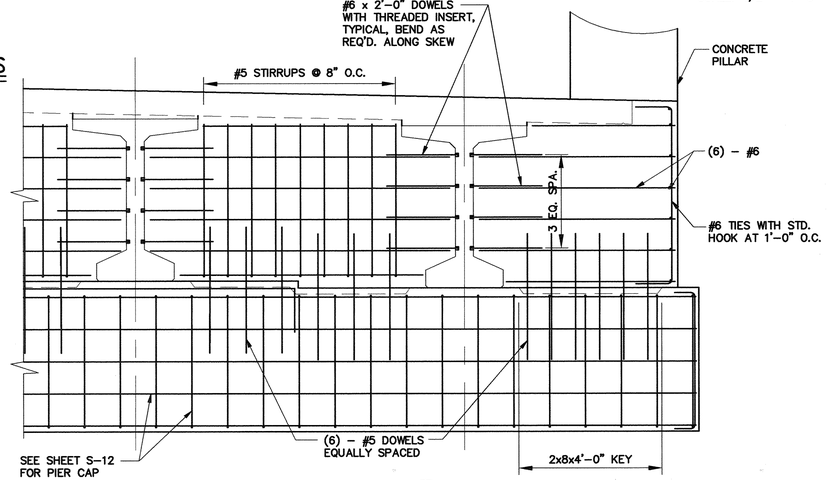
PIER END PLAN VIEW (B, S-13 S-13)

SCALE: 1/2" = 1'–0"



PIER END VIEW (A, S-13 S-13)

SCALE: 3/8" = 1'–0"



DIAPHRAGM AT PIER (D, S-13 S-13)

SCALE: 1/2" = 1'–0"

AS BUILT INFORMATION

	CONTRACTOR	DATE
WORK STAKED BY	AUI	9/05
INSPECTOR'S ACCEPTANCE BY	C.M	7/07
VERIFICATION BY	AUI	9/05
CORRECTED BY	C.M	7/07

MICRO-FILM INFORMATION

NO.	RECORDED BY	DATE

BENCH MARKS

SURVEY INFORMATION

NO.	FIELD NOTES BY	DATE

ENGINEER'S SEAL

ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

NO.	REMARKS	DATE	BY
	REVISIONS		
	DESIGN	5/2/05	JPG
	DRAWN BY	5/2/05	TEP
	CHECKED BY	5/2/05	RIJ

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Albuquerque, New Mexico 87110
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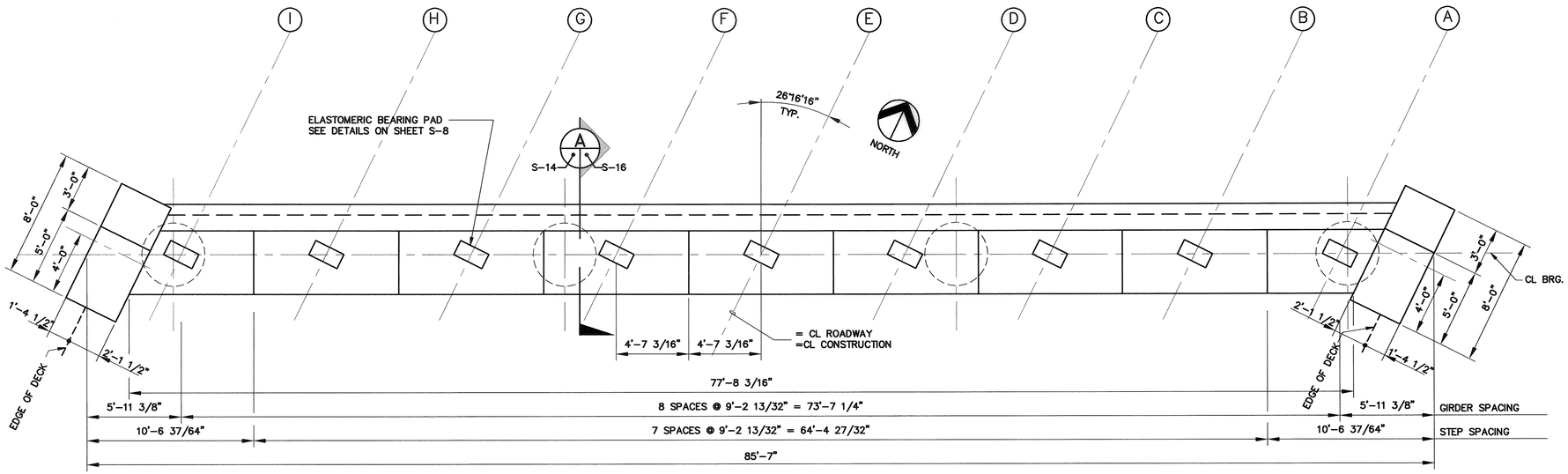
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
PIER DETAILS

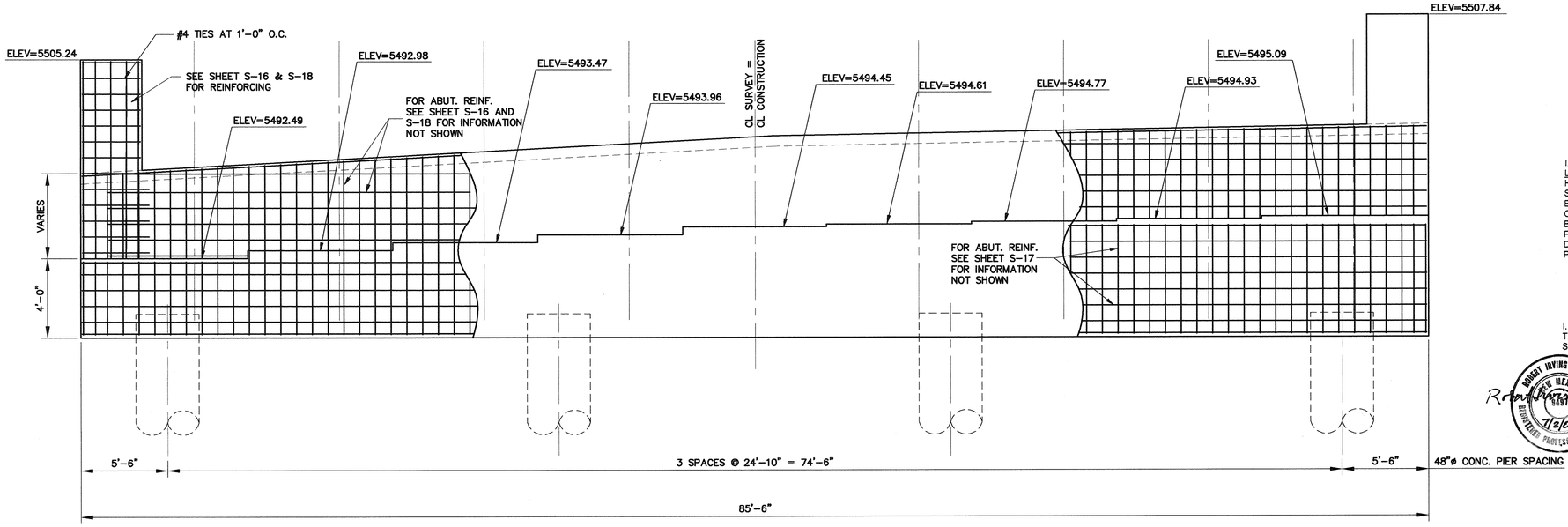
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO.	ZONE MAP NO.	SHEET OF	
756181	M-21/N-21	23 46	S-13



ABUTMENT #1 PLAN

SCALE: 1/4" = 1'-0"



ABUTMENT #1 ELEVATION – ALONG CL BRG.

SCALE: 1/4" = 1'-0"

I, ROBERT IRVING JOHNSON, NMPE 9497, OF THE FIRM OF ROBERT I. JOHNSON, P.E., LLC., A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE STRUCTURE INSTALLED AS PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR BY A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, APPROVED BY THE CITY ENGINEER AND THAT THE ORIGINAL DESIGN INTENT OF THE APPROVED PLANS HAS BEEN MET, EXCEPT AS NOTED BY ME ON THE AS-BUILT CONSTRUCTION DRAWINGS. THIS CERTIFICARION IS BASED ON SITE INSPECTIONS BY ME OR PERSONNEL UNDER MY DIRECTION.

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ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 7/2/07

Robert Irving Johnson

AS BUILT INFORMATION
CONTRACTOR AJE, Inc.
WORK STAKED BY AJE DATE 8/6
INSPECTIONS BY AJE DATE 9/27
ACCEPTANCE BY CM DATE 9/29
FIELD VERIFICATION BY AJE DATE 9/25
DRAWINGS CORRECTED BY CM DATE 7/02
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL
ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
		DESIGNED BY JPG	DATE 5/2/05
		DRAWN BY TEP	DATE 5/2/05
		CHECKED BY RJJ	DATE 5/2/05

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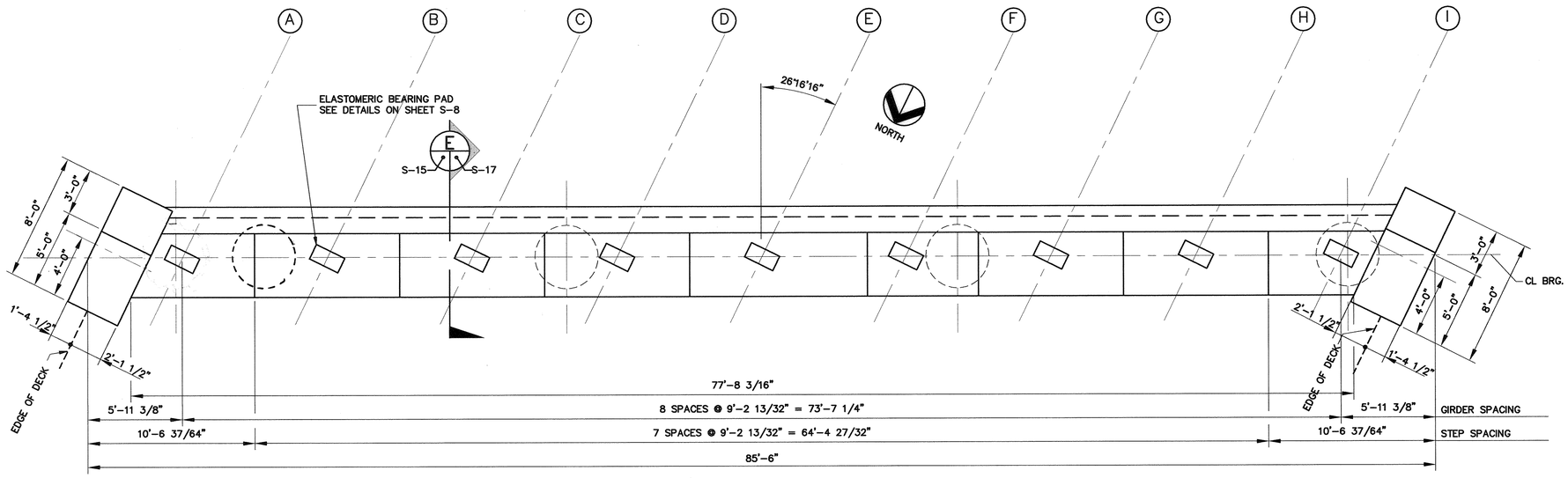
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
ABUTMENT #1 PLAN AND ELEVATION

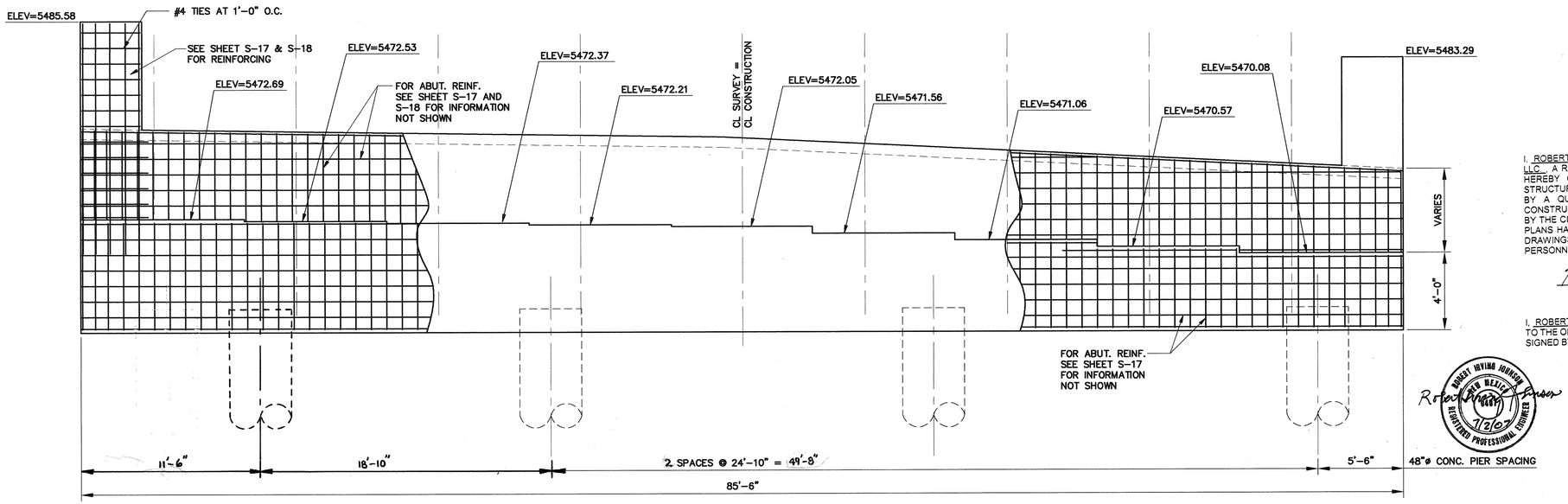
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF	
756181	M-21/N-21	24	46	S-14



ABUTMENT #2 PLAN

SCALE: 1/4" = 1'-0"



ABUTMENT #2 ELEVATION – ALONG CL BRG.

SCALE: 1/4" = 1'-0"

I, ROBERT IRVING JOHNSON, NMPE 9497, OF THE FIRM OF ROBERT I. JOHNSON, P.E. LLC., A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE STRUCTURE INSTALLED AS PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR BY A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, APPROVED BY THE CITY ENGINEER AND THAT THE ORIGINAL DESIGN INTENT OF THE APPROVED PLANS HAS BEEN MET, EXCEPT AS NOTED BY ME ON THE AS-BUILT CONSTRUCTION DRAWINGS. THIS CERTIFICARION IS BASED ON SITE INSPECTIONS BY ME OR PERSONNEL UNDER MY DIRECTION.

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Robert Irving Johnson
NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

AS BUILT INFORMATION
CONTRACTOR AUI, INC
WORK STARTED BY AUI DATE 9/04
INSPECTOR'S ACCEPTANCE BY C.M. DATE 2/05
FIELD VERIFICATION BY AUI DATE 8/05
CORRECTIONS MADE BY C.M. DATE 1/07
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL
ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

NO.	DATE	REMARKS	BY	DATE
		REVISIONS		
		DESIGN		5/2/05
		DESIGNED BY	JPG	5/2/05
		DRAWN BY	TEP	5/2/05
		CHECKED BY	RJ	

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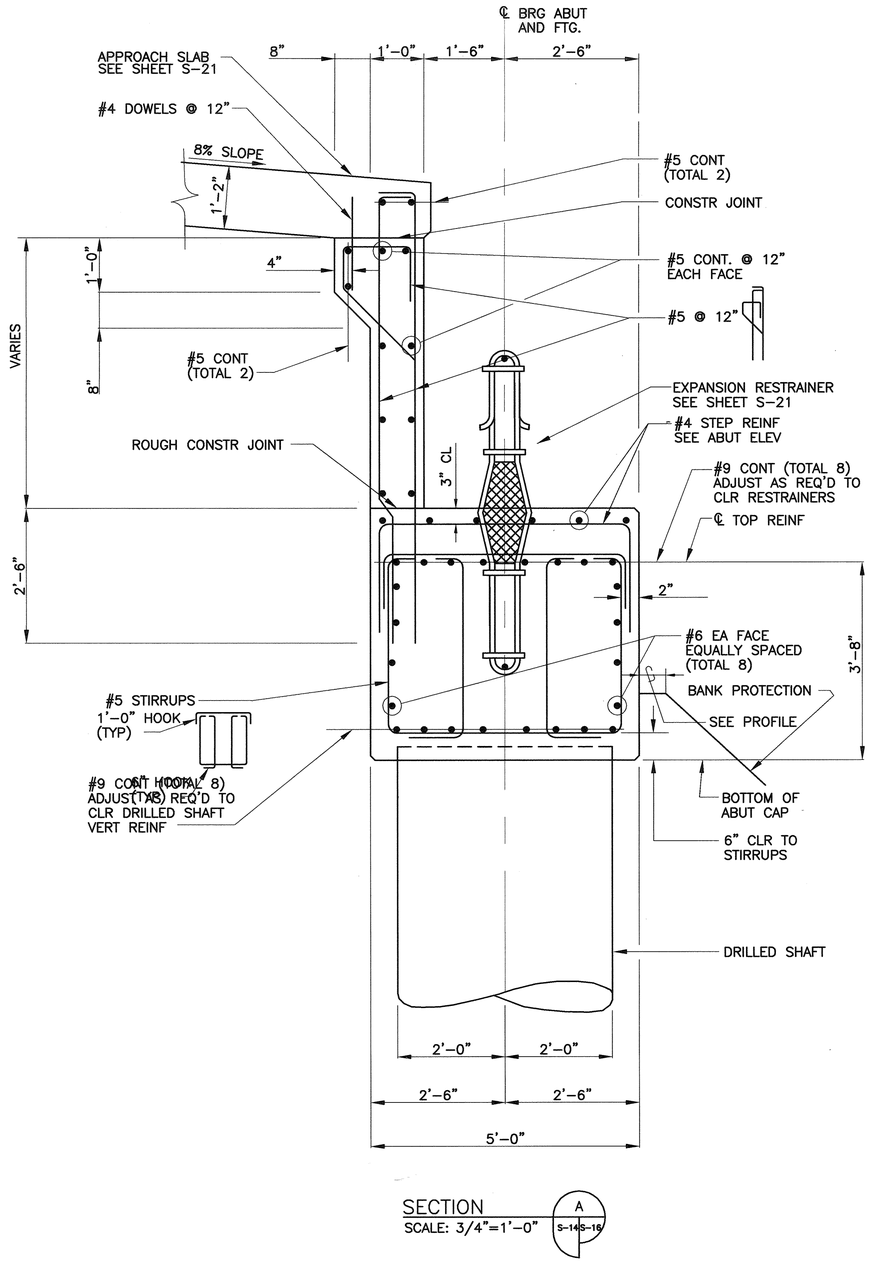
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

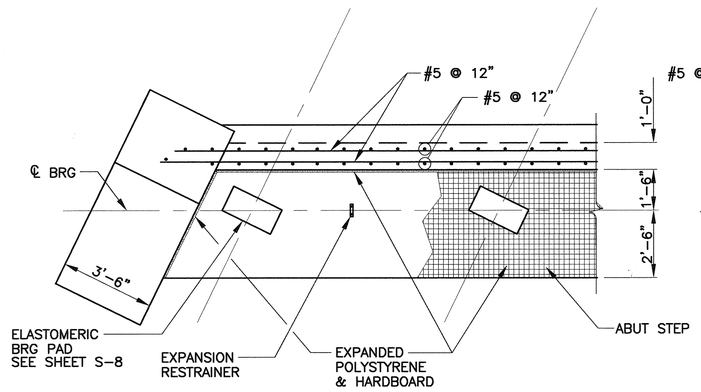
TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
ABUTMENT #2 PLAN AND ELEVATION

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

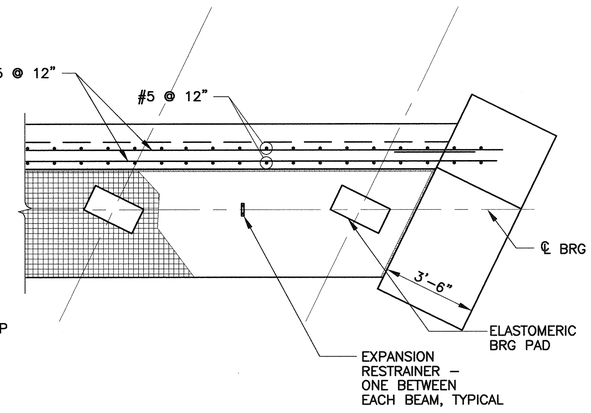
CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF	
756181	M-21/N-21	25	46	S-15



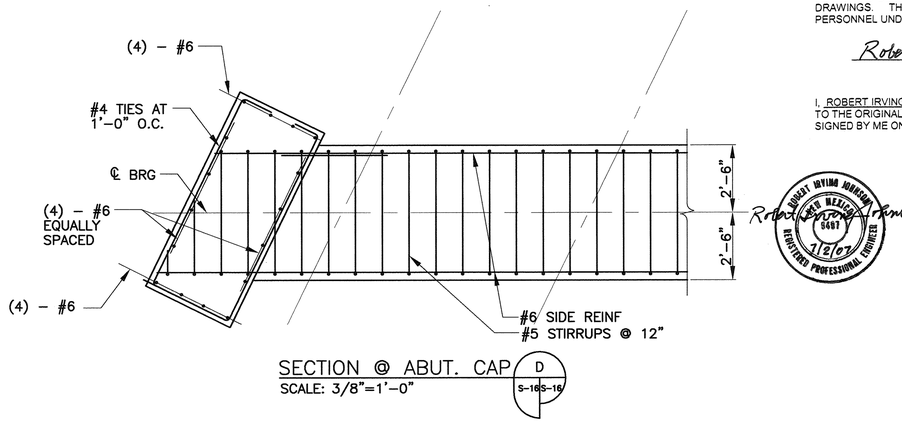
SECTION A
SCALE: 3/4"=1'-0"
S-14 S-16



SECTION B
SCALE: 3/8"=1'-0"
S-16 S-16



SECTION C
SCALE: 3/8"=1'-0"
S-16 S-16



SECTION @ ABUT. CAP D
SCALE: 3/8"=1'-0"
S-16 S-16

I, ROBERT IRVING JOHNSON, NMPE 9497, OF THE FIRM OF ROBERT I. JOHNSON, P.E., LLC. A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE STRUCTURE INSTALLED AS PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR BY A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, APPROVED BY THE CITY ENGINEER AND THAT THE ORIGINAL DESIGN INTENT OF THE APPROVED PLANS HAS BEEN MET, EXCEPT AS NOTED BY ME ON THE AS-BUILT CONSTRUCTION DRAWINGS. THIS CERTIFICARION IS BASED ON SITE INSPECTIONS BY ME OR PERSONNEL UNDER MY DIRECTION.

Robert Irving Johnson
SIGNATURE & ENGINEERS SEAL

I, ROBERT IRVING JOHNSON, CERTIFY THAT THIS ELECTRONIC VERVION IS IDENTICAL TO THE ORIGINAL REPRODUCIBLE APPROVED FOR CONSTRUCTION DRAWINGS SIGNED BY ME ON 7/2/07, 2005.

ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER
7/2/07

AS BUILT INFORMATION

CONTRACTOR	AUI, Inc	DATE 9/6
STAKED BY	AUI	DATE 7/21
INSPECTOR'S FIELD CHANGES	C.M	DATE 9/6
FIELD VERIFICATION BY	A.U.I	DATE 9/6
DRAWINGS CORRECTED BY	C.M	DATE 9/21

MICRO-FILM INFORMATION

RECORDED BY	DATE
NO.	

BENCH MARKS

SURVEY INFORMATION

NO.	BY	DATE
	FIELD NOTES	

ENGINEER'S SEAL

ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER
9/2/05

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
		DESIGNED BY JPG	DATE 5/2/05
		DRAWN BY TEP	DATE 5/2/05
		CHECKED BY RIJ	DATE 5/2/05

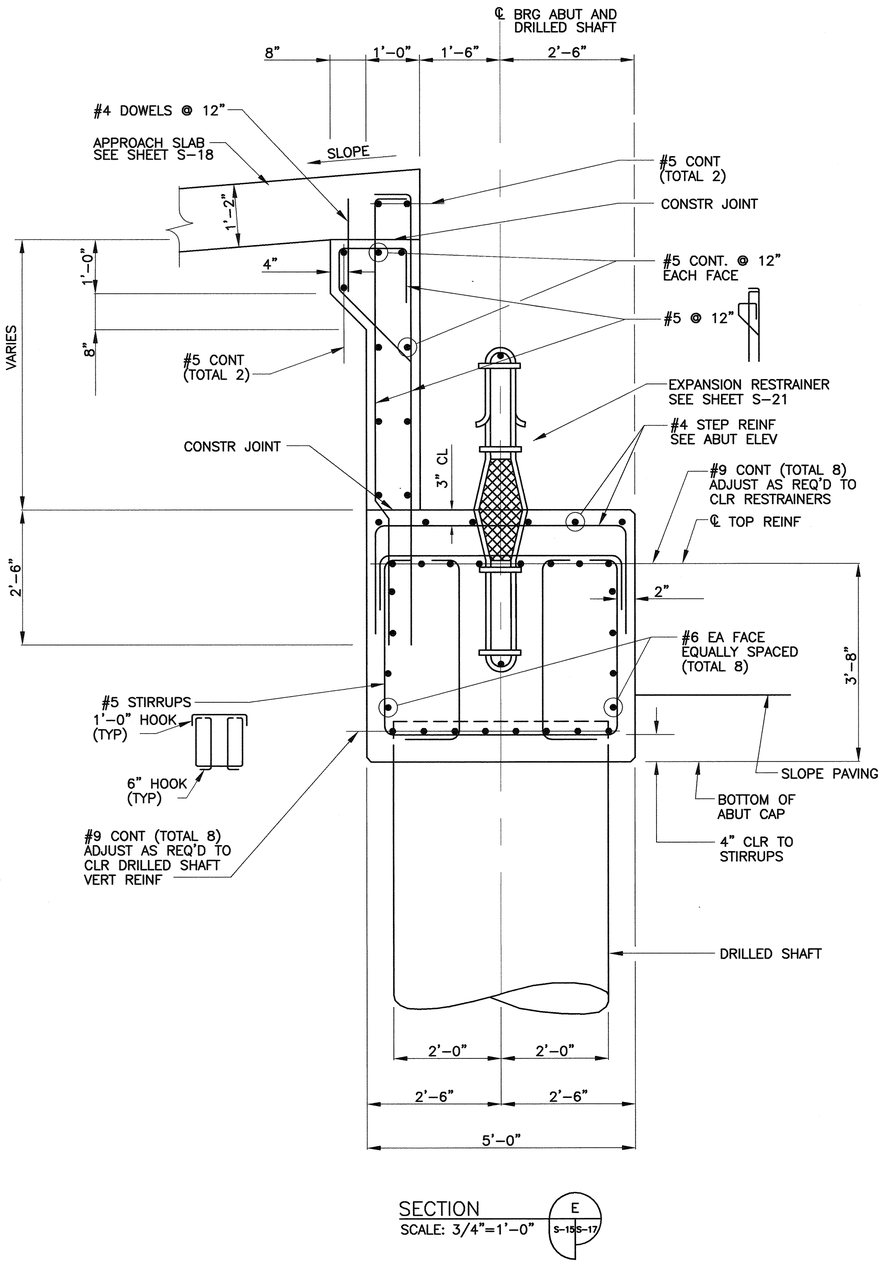
102597
CME, Inc.
Mechanical / Electrical / Structural Consulting Engineers
6001 Indian School Rd. NE, Ste 200 Albuquerque, New Mexico 87110
(505) 884-8868 FAX 884-7048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

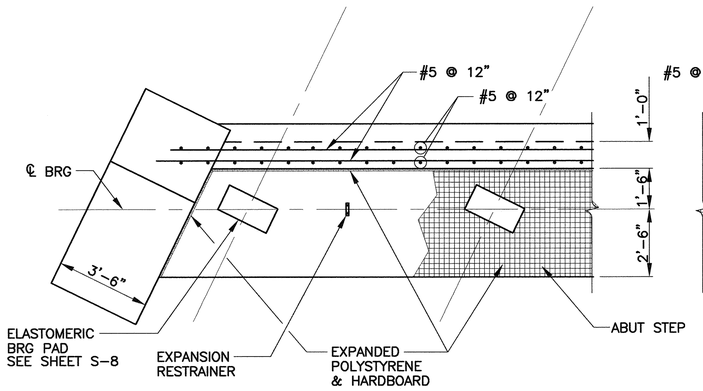
TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
ABUTMENT #1 DETAILS

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

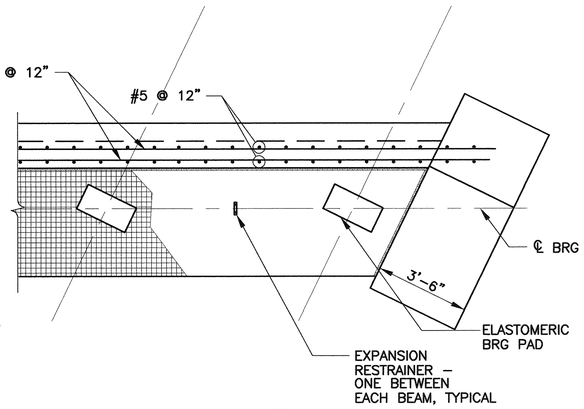
CITY PROJECT NO.	ZONE MAP NO.	SHEET OF	
756181	M-21/N-21	26 46	S-16



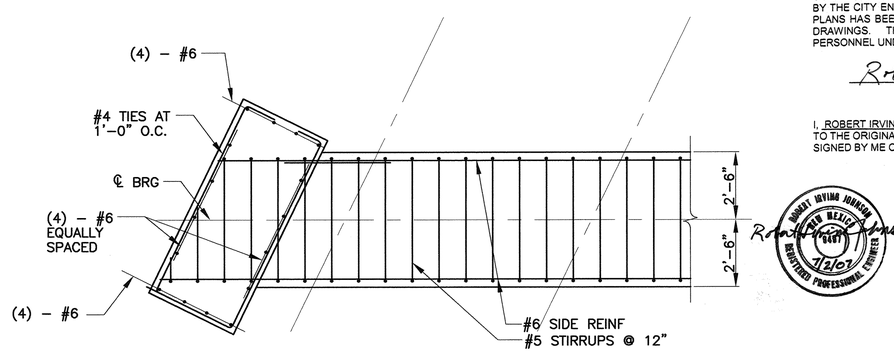
SECTION
SCALE: 3/4"=1'-0"
E S-15 S-17



SECTION
SCALE: 3/8"=1'-0"
F S-17 S-17



SECTION
SCALE: 3/8"=1'-0"
G S-17 S-17



SECTION @ ABUT. CAP
SCALE: 3/8"=1'-0"
H S-17 S-17

I, ROBERT IRVING JOHNSON, NMPE 9497 OF THE FIRM OF ROBERT I. JOHNSON, P.E., LLC., A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE STRUCTURE INSTALLED AS PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR BY A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, APPROVED BY THE CITY ENGINEER AND THAT THE ORIGINAL DESIGN INTENT OF THE APPROVED PLANS HAS BEEN MET, EXCEPT AS NOTED BY ME ON THE AS-BUILT CONSTRUCTION DRAWINGS. THIS CERTIFICARION IS BASED ON SITE INSPECTIONS BY ME OR PERSONNEL UNDER MY DIRECTION.

SIGNATURE & ENGINEERS SEAL

I, ROBERT IRVING JOHNSON, CERTIFY THAT THIS ELECTRONIC VERVION IS IDENTICAL TO THE ORIGINAL REPRODUCIBLE APPROVED FOR CONSTRUCTION DRAWINGS SIGNED BY ME ON 5/2, 2005.

ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

AS BUILT INFORMATION
CONTRACTOR AUI, INC.

	BY	DATE
WORK STAKED BY		
AS-BUILTS	AUI	9/05
ACCEPTANCE BY	CM	9/07
FIELD VERIFICATION BY	AUI	9/05
DRAWINGS CORRECTED BY	CM	7/07

MICRO-FILM INFORMATION

RECORDED BY	DATE
NO.	

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL
ROBERT IRVING JOHNSON 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

NO.	DATE	REMARKS	BY	DATE
		REVISIONS DESIGN		5/2/05
				5/2/05
				5/2/05

DESIGNED BY JPG
DRAWN BY TEP
CHECKED BY RJJ

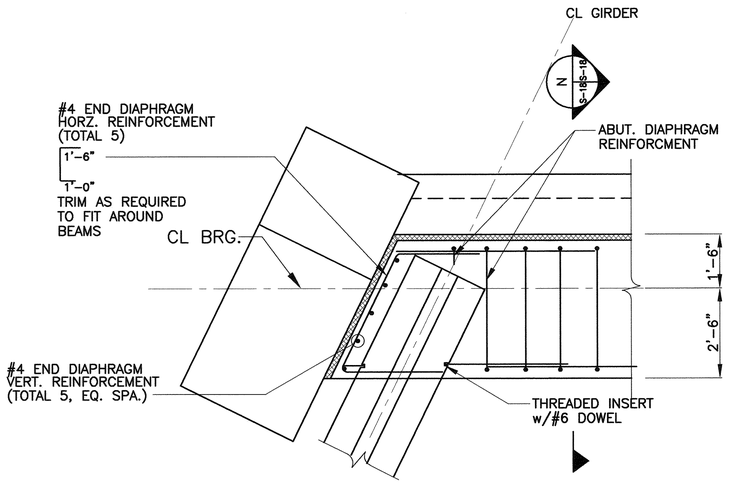
102597
CME, Inc.
Mechanical / Electrical / Structural Consulting Engineers
6001 Indian School Rd. NE, Ste 200 Albuquerque, New Mexico 87110
(505) 884-8868 FAX 884-7048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

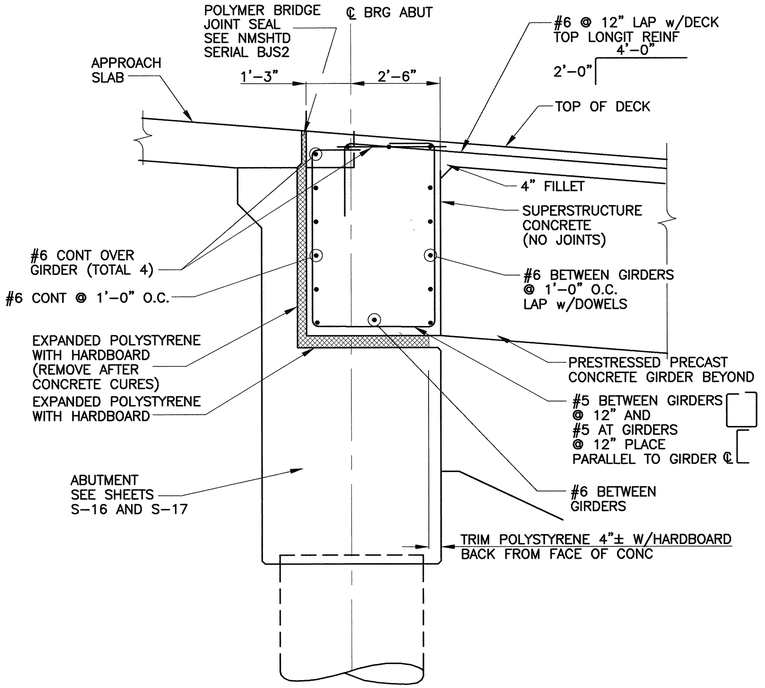
TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
ABUTMENT #2 DETAILS

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

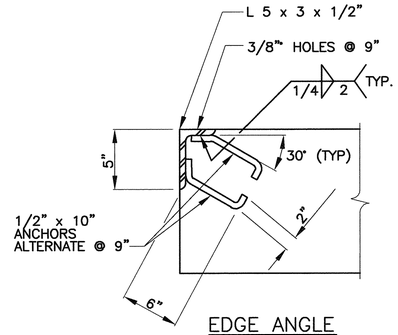
CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF	
756181	M-21/N-21	27	46	S-17



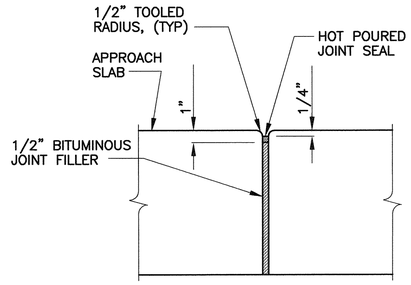
PLAN
SCALE: 1/2" = 1'-0"



ABUTMENT DIAPHRAGM
SCALE: 1/2"=1'-0"



EDGE ANGLE
NO SCALE:



JOINT DETAIL
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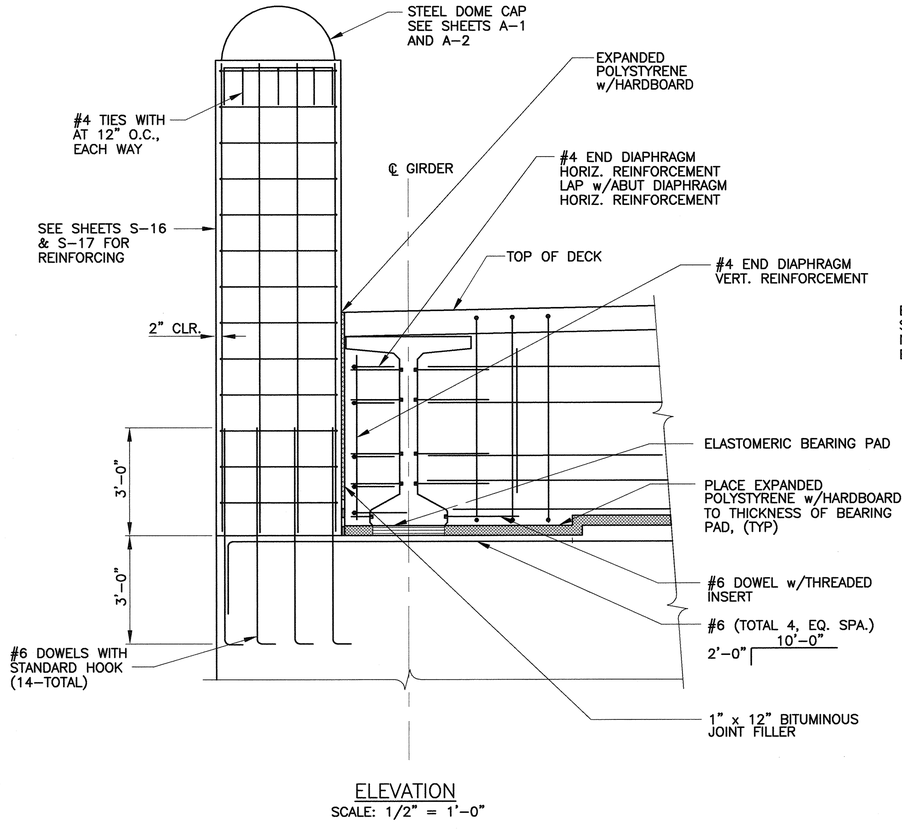
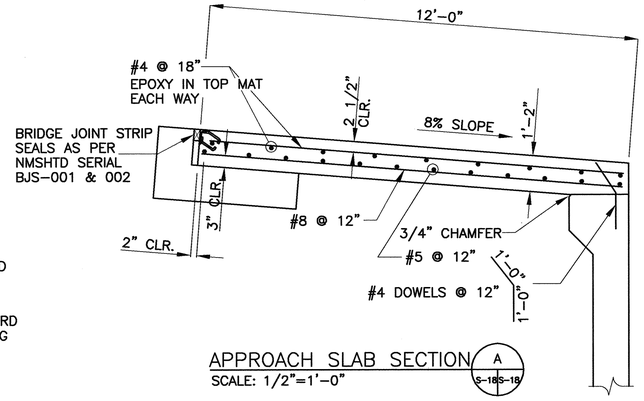
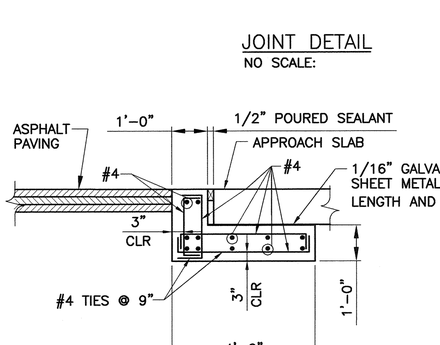


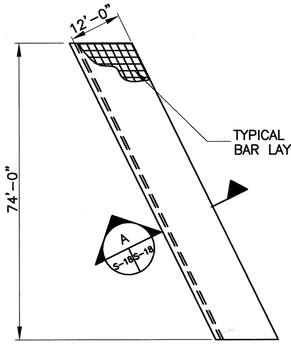
ELEVATION
SCALE: 1/2" = 1'-0"



APPROACH SLAB SECTION A
SCALE: 1/2"=1'-0"



SLEEPER FOOTING DETAIL
SCALE: 1/2"=1'-0"



APPROACH SLAB PLAN

APPROACH SLAB DETAILS

I, ROBERT IRVING JOHNSON, NMPE 9497, OF THE FIRM OF ROBERT I. JOHNSON, P.E. LLC., A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE STRUCTURE INSTALLED AS PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR BY A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, APPROVED BY THE CITY ENGINEER AND THAT THE ORIGINAL DESIGN INTENT OF THE APPROVED PLANS HAS BEEN MET, EXCEPT AS NOTED BY ME ON THE AS-BUILT CONSTRUCTION DRAWINGS. THIS CERTIFICARION IS BASED ON SITE INSPECTIONS BY ME OR PERSONNEL UNDER MY DIRECTION.

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AS BUILT INFORMATION

CONTRACTOR	AUF, Inc	DATE 9/07
WORK STAKED BY	AUF	DATE 7/07
INSPECTIONS	CM	DATE 7/07
ACCEPTANCE BY	AUF	DATE 9/07
FIELD VERIFICATION BY	CM	DATE 7/07
DRAWINGS CORRECTED BY	MICRO-FILM INFORMATION	DATE
RECORDED BY		DATE
NO.		

BENCH MARKS

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL

ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
	5/2/05	DESIGNED BY JPG	
	5/2/05	DRAWN BY TEP	
	5/2/05	CHECKED BY RJJ	

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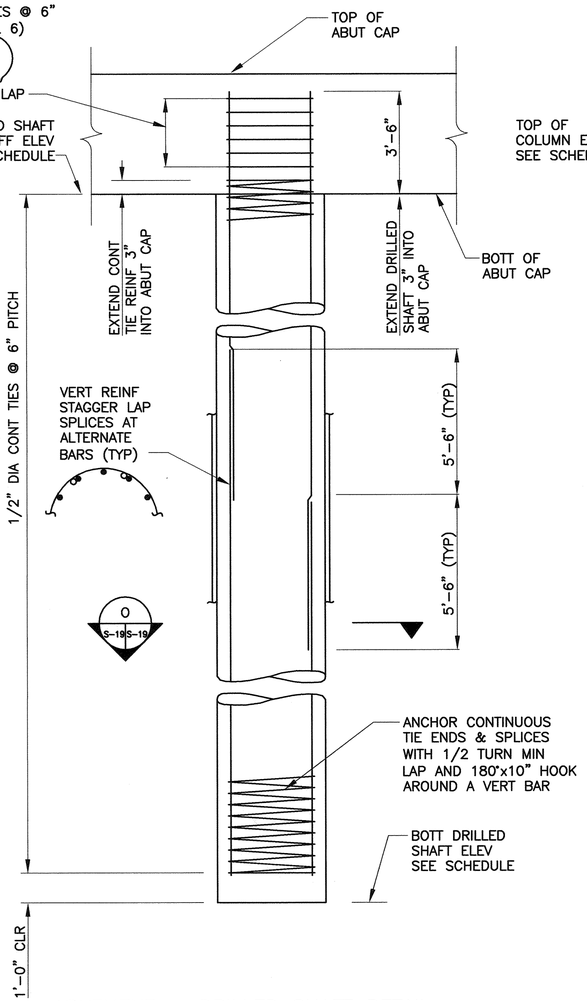
CME, Inc.
Mechanical / Electrical / Structural Consulting Engineers
6001 Indian School Rd. NE, Ste 200 Albuquerque, New Mexico 87110
(505) 884-8868 FAX 884-7048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

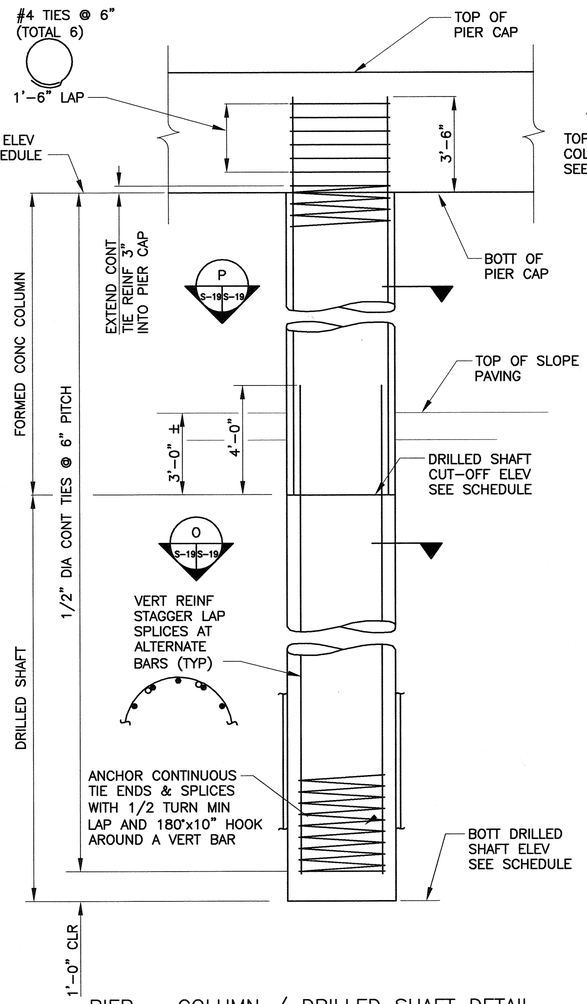
TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
ABUTMENT END DIAPHRAGM & APPROACH SLAB

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

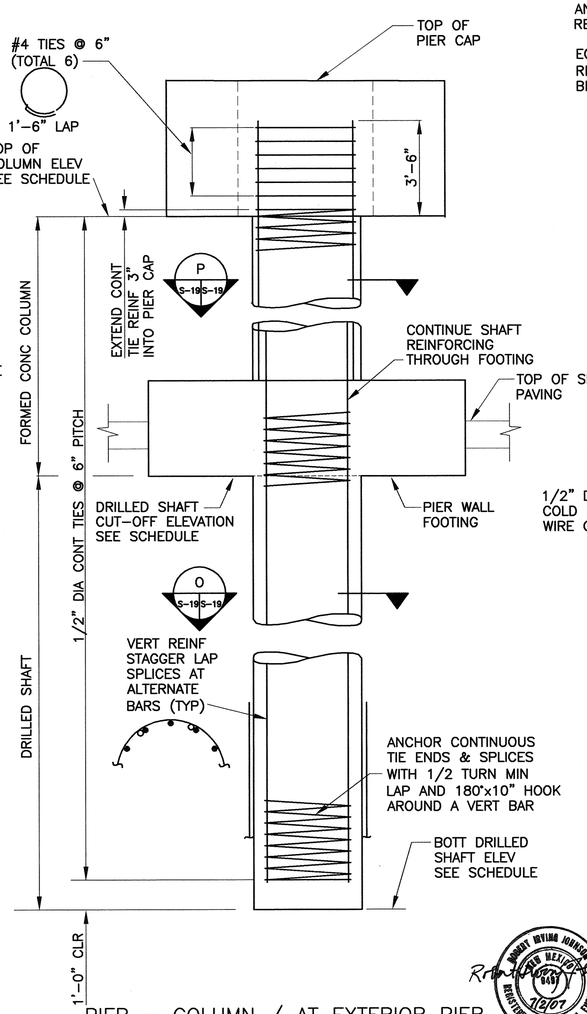
CITY PROJECT NO.	ZONE MAP NO.	SHEET OF	
756181	M-21/N-21	28 46	S-18



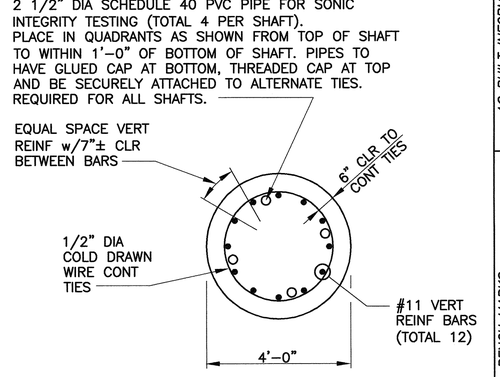
ABUTMENT – DRILLED SHAFT DETAIL
3/8" = 1'-0"



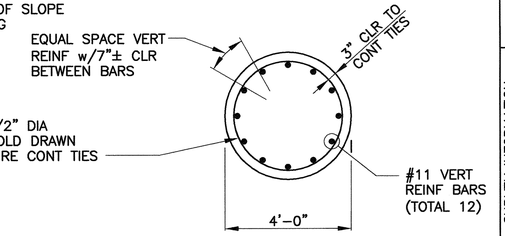
PIER – COLUMN / DRILLED SHAFT DETAIL
3/8" = 1'-0"



PIER – COLUMN / AT EXTERIOR PIER DRILLED SHAFT DETAIL
3/8" = 1'-0"



SECTION
SCALE: 1/2" = 1'-0" O S-19 S-19



SECTION
SCALE: 1/2" = 1'-0" P S-19 S-19

DRILLED SHAFT NOTES:

1. ABUTMENTS #1 AND #2 ARE TO BE SUPPORTED ON 4'–0" DIAMETER CAST–IN–PLACE CONCRETE DRILLED SHAFTS WITH A MINIMUM ALLOWABLE DOWNWARD CAPACITY OF 400 KIPS.
2. PIERS ARE TO BE SUPPORTED ON 4'–0" DIAMETER CAST–IN–PLACE CONCRETE DRILLED SHAFTS WITH A MINIMUM ALLOWABLE DOWNWARD CAPACITY OF 980 KIPS.
3. EXCAVATION OF ADJACENT DRILLED SHAFTS WITHIN 4 SHAFT DIAMETERS MEASURED CENTER TO CENTER WILL NOT BE PERMITTED UNTILL 48 HOURS AFTER THE ADJACENT DRILLED SHAFT HAS BEEN CONCRETED.
4. TOPS OF DRILLED SHAFTS SHALL BE WITHIN 2–1/2" OF PLAN DIMENSIONS AND SHALL NOT DEVIATE MORE THAN 1–1/2 PERCENT FROM PLUMB.
5. CONSTRUCTION JOINTS NOT SHOWN ON THE PROJECT PLANS WILL REQUIRE APPROVAL OF THE ENGINEER PRIOR TO CONSTRUCTION.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SUPPORT OF REINFORCING CAGES DURING FABRICATION, ERECTION AND PLACEMENT OF CONCRETE. PLANS SHOWING REINFORCING CAGE SUPPORT AND METHODS OF ERECTION SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
7. VERTICAL REINFORCEMENT SHALL CONSIST OF AS LONG A LENGTH BARS AS PRACTICAL WITH LAP SPLICES LOCATED IN LOWER PORTION OF SHAFTS.
8. DRILLED SHAFTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 502 OF THE NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT'S SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION.

DRILLED SHAFT SCHEDULE

LOCATION		TOP OF CONC COLUMN ELEV	DRILLED SHAFT CUT–OFF ELEV	BOTT OF DRILLED SHAFT ELEV
ABUT 1	———	———	5488.49	5454.49
PIER 1 INTERIOR	———	5481.35	5456.10	5413.10
PIER 1 EXTERIOR	UPSTREAM	5481.35	5457.20	5411.20
	DOWNSTREAM	5481.35	5456.50	5410.50
PIER 2 INTERIOR	———	5473.35	5455.80	5412.80
PIER 2 EXTERIOR	UPSTREAM	5473.35	5457.40	5411.40
	DOWNSTREAM	5473.35	5456.80	5410.85
ABUT 2	———	———	5466.08	5444.08
EAST MOST DRILLED SHAFT AT ABUTMENT 2			5466.08	5442.08

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SIGNATURE & ENGINEERS SEAL

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AS BUILT INFORMATION
CONTRACTOR AUI, Inc
WORK STAKED BY AUI DATE 3/05
ACCEPTANCE BY CAM DATE 7/01
VERIFICATION BY AUI DATE 3/05
DRAWINGS CORRECTED BY CAM DATE 7/01
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES BY DATE
NO.

ENGINEER'S SEAL
ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	

DESIGNED BY JPG DATE 5/2/05
DRAWN BY TEP DATE 5/2/05
CHECKED BY RJJ DATE 5/2/05

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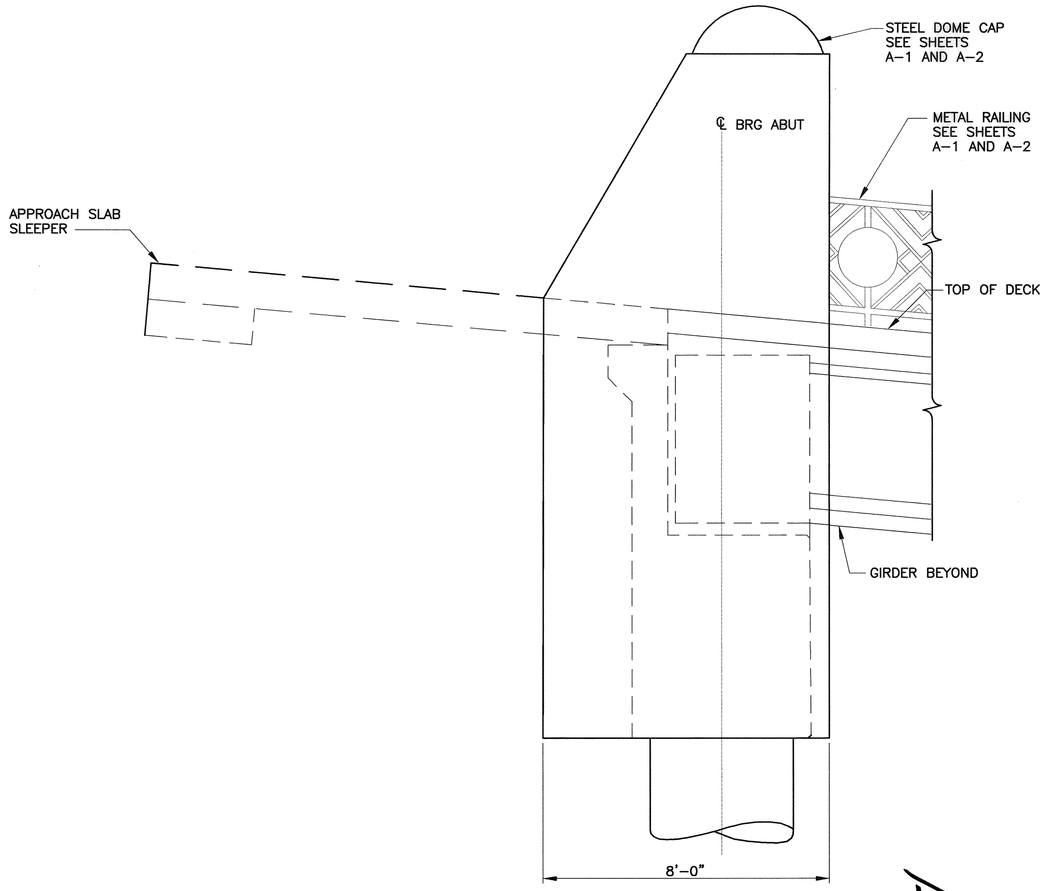
Mechanical / Electrical / Structural Consulting Engineers
6001 Indian School Rd. NE, Ste 200 Albuquerque, New Mexico 87110
(505) 884-8868 FAX 884-7048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
DRILLED SHAFT DETAILS

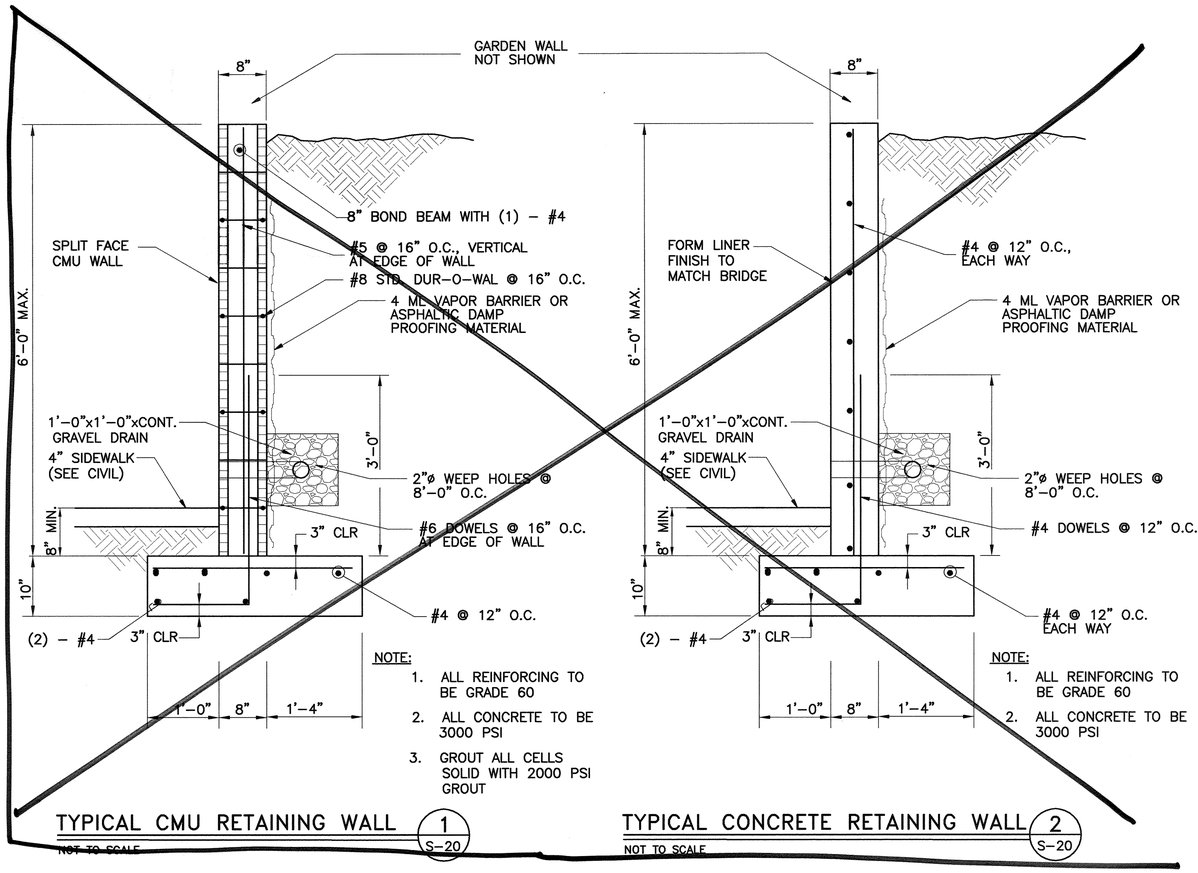
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO. 756181 | ZONE MAP NO. M-21/N-21 | SHEET OF 29 46 | S-19



WINGWALL ELEVATION

1/2" = 1'-0"

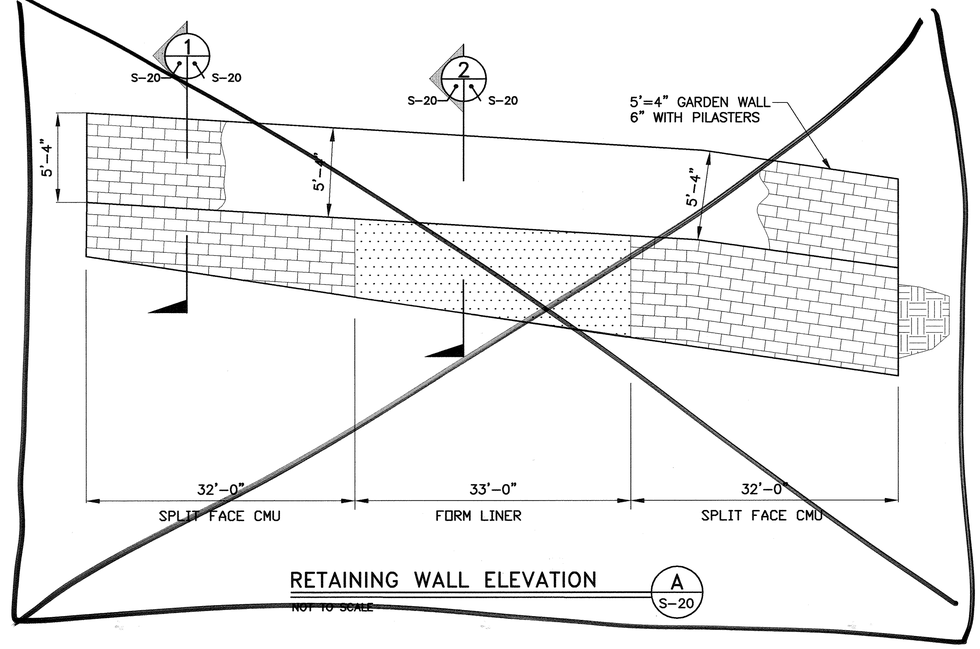


TYPICAL CMU RETAINING WALL (1 / S-20)

NOT TO SCALE

TYPICAL CONCRETE RETAINING WALL (2 / S-20)

NOT TO SCALE



RETAINING WALL ELEVATION (A / S-20)

NOT TO SCALE

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Robert Irving Johnson
SIGNATURE & ENGINEERS SEAL

ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 7/26/07

I, ROBERT IRVING JOHNSON, CERTIFY THAT THIS ELECTRONIC VERVION IS IDENTICAL TO THE ORIGINAL REPRODUCIBLE APPROVED FOR CONSTRUCTION DRAWINGS SIGNED BY ME ON 5/2, 2005.

AS BUILT INFORMATION

CONTRACTOR	AUI, Inc	DATE 9/05
WORK STAKED BY	AUI	
INSPECTOR'S ACCEPTANCE BY	C.M	DATE 7/07
AS-BUILTED BY	AUI	DATE 9/05
VERIFICATION BY	C.M	DATE 9/07
DRAWINGS CORRECTED BY		

MICRO-FILM INFORMATION

RECORDED BY DATE

NO.

BENCH MARKS

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL

ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER 5/2/05

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	

DESIGNED BY JPG DATE 5/2/05
DRAWN BY TEP DATE 5/2/05
CHECKED BY RJJ DATE 5/2/05

102597
CME, Inc.
Mechanical / Electrical / Structural Consulting Engineers
6001 Indian School Rd. NE, Ste 200 (505) 884-8868
Albuquerque, New Mexico 87110 FAX 884-7048

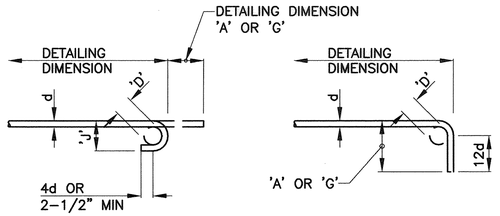
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO

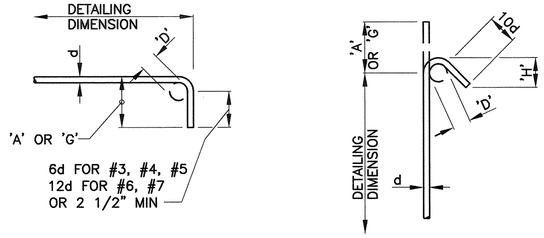
MISCELLANEOUS SECTIONS AND DETAILS

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF	
756181	M-21/N-21	30	46	S-20



180° & 90° STANDARD HOOKS



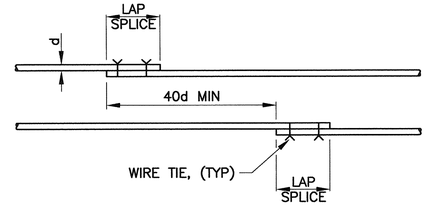
90° & 135° STANDARD HOOKS
(STIRRUPS & TIES)

	BAR SIZE								
HOOK	3	4	5	6	7	8	9	10	11
'D'	2 1/4"	3"	3 3/4"	4 1/2"	5 1/4"	6"	9 1/2"	10 3/4"	1'-0"
180° 'A' or 'G'	5"	6"	7"	8"	10"	11"	1'-3"	1'-5"	1'-7"
'J'	3"	4"	5"	6"	7"	8"	11 3/4"	1'-1 1/4"	1'-2 3/4"
90° 'A' or 'G'	6"	8"	10"	1'-0"	1'-2"	1'-4"	1'-8"	1'-10"	2'-0"

NOTES:
1. TYPICAL FOR ALL DRAWINGS U.N.O.
2. ALL BAR BENDS TO BE COLD BENT

	BAR SIZE				
HOOK	3	4	5	6	7
'D'	1 1/2"	2"	2 1/2"	4 1/2"	5 1/4"
135° 'A' or 'G'	5"	6 1/2"	8"	10 3/4"	1'-1/2"
'H' (APPROX)	3 1/2"	4 1/2"	5 1/2"	6 1/2"	7 3/4"
90° 'A' or 'G'	4"	4 1/2"	6"	1'-0"	1'-2"

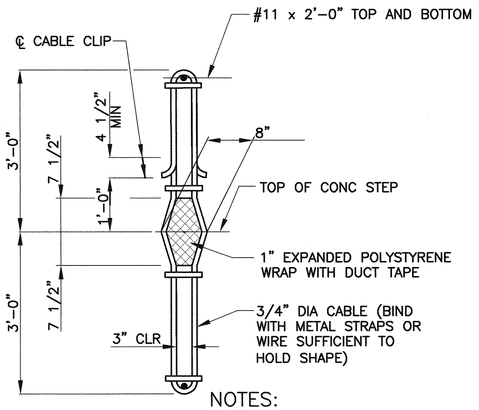
STANDARD REINF BAR HOOK DETAILS
NO SCALE



BAR SIZE	3	4	5	6	7	8	9	10	11
LAP SPLICE	12"	16"	20"	26"	35"	45"	57"	73"	89"

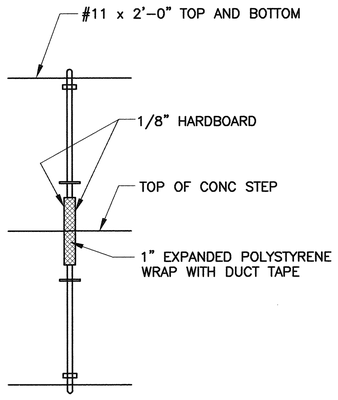
NOTES:
1. LAPS PROVIDED IN TABLE ARE TO BE USED AS MINIMUM FOR LAPPING HORIZONTAL REINFORCING, TYPICAL UNLESS NOTED OTHERWISE.
2. THE MINIMUM LAP REQUIREMENTS ARE BASED ON GRADE 60 REINFORCEMENT AND 3000 PSI CONCRETE FOR A CLASS B SPLICE. THE LAP REQUIREMENTS SHALL BE MODIFIED BY THE FOLLOWING APPROPRIATE FACTORS.
   BAR SPACING GREATER THAN 6" = 0.80
   TOP BARS = 1.40
3. TOP BARS HAVE MORE THAN 12" OF CONCRETE CAST BELOW THEM.
4. LAP SPLICES SHALL NOT BE LESS THAN 12"
5. DEVIATION REQUIRES APPROVAL OF THE ENGINEER.

HORIZ REINF LAP SPLICE DETAIL
NO SCALE



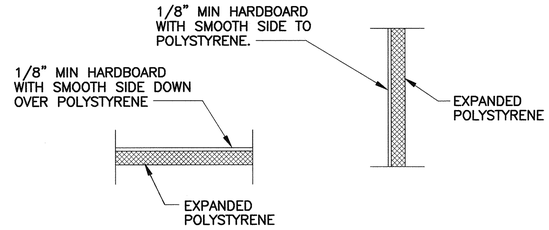
NOTES:
1. RESTRAINER CABLES SHALL BE 3/4" DIA PREFORMED 6 x 19 GALVANIZED CABLE WITH MINIMUM BREAKING STRENGTH OF 42 KIPS.
2. PLACE RESTRAINERS UNITS PARALLEL TO ℄ GIRDER.

ELEVATION



SECTION

EXPANSION RESTRAINER DETAIL
3/4" = 1'-0"

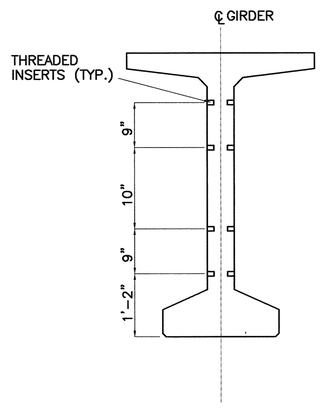


PROTECTION OF HORIZONTAL POLYSTYRENE

PROTECTION OF VERTICAL POLYSTYRENE

NOTE:
HARDBOARD TO BE USED ON ANY POLYSTYRENE FACE AGAINST WHICH CONCRETE IS TO BE PLACED.

POLYSTYRENE PROTECTION DETAIL
SCALE: NONE



NOTES:
1. THREADED INSERTS ARE FERRULE LOOP INSERTS FOR #6 REINFORCING BARS THREADED ON END. INSERTS SHALL DEVELOP AN ULTIMATE PULLOUT STRENGTH OF 3600 LBS.
2. THREADED INSERTS SHALL BE PLACED NORMAL TO GIRDER WEB. FIELD BEND INSERTED BARS IN SUCH A MANNER AS TO PREVENT BENDING STRESSES AT ROOT OF THREADS. SHOP DRAWINGS SHALL INDICATE METHOD OF BENDING.

TYPICAL GIRDER INSERT DETAIL
SCALE: N.T.S.

I, ROBERT IRVING JOHNSON, NMPE 9497, OF THE FIRM OF ROBERT I. JOHNSON, P.E., LLC., A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE STRUCTURE INSTALLED AS PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR BY A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, APPROVED BY THE CITY ENGINEER AND THAT THE ORIGINAL DESIGN INTENT OF THE APPROVED PLANS HAS BEEN MET, EXCEPT AS NOTED BY ME ON THE AS-BUILT CONSTRUCTION DRAWINGS. THIS CERTIFICARION IS BASED ON SITE INSPECTIONS BY ME OR PERSONNEL UNDER MY DIRECTION.

Robert Irving Johnson
SIGNATURE & ENGINEERS SEAL

I, ROBERT IRVING JOHNSON, CERTIFY THAT THIS ELECTRONIC VERVION IS IDENTICAL TO THE ORIGINAL REPRODUCIBLE APPROVED FOR CONSTRUCTION DRAWINGS SIGNED BY ME ON 5/2, 2005.

AS BUILT INFORMATION
CONTRACTOR AUI, Inc. DATE 9/05
STAKED BY DATE
INSPECTOR'S INITIALS BY CM DATE 7/07
FIELD CHANGE BY AUI DATE 8/01
VERIFICATION BY DATE
UTILITIES CORRECTED BY CM DATE 7/07
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS

SURVEY INFORMATION
NO. | FIELD NOTES BY | DATE

ENGINEER'S SEAL
ROBERT IRVING JOHNSON NEW MEXICO 9497 REGISTERED PROFESSIONAL ENGINEER
Robert Irving Johnson
5/2/05

NO.	REMARKS	BY	DATE
	REVISIONS		
	DESIGN		5/2/05
	DESIGNED BY JPG		DATE 5/2/05
	DRAWN BY TEP		DATE 5/2/05
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PUBLIC WORKS DEPARTMENT

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MISCELLANEOUS DETAILS

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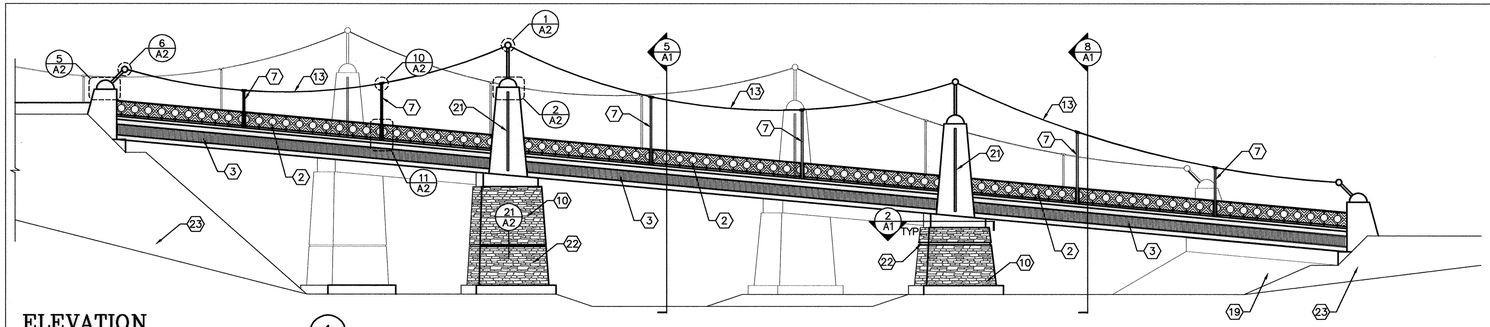
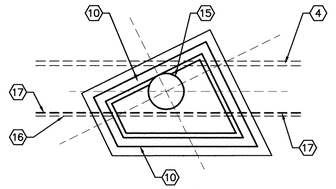
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

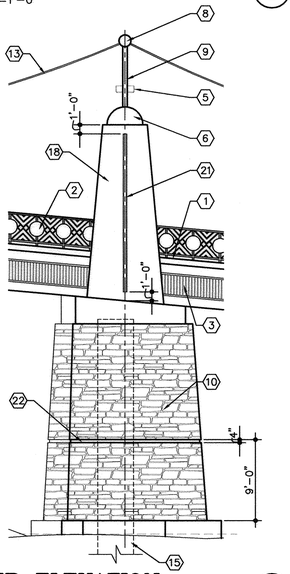
CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF	
756181	M-21/N-21	31	46	S-21



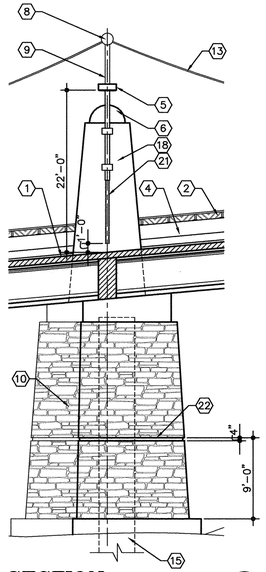
ELEVATION 1
1/16"=1'-0"



PIER SECTION 2
1/8"=1'-0"



PIER ELEVATION 3
1/8"=1'-0"



PIER SECTION 4
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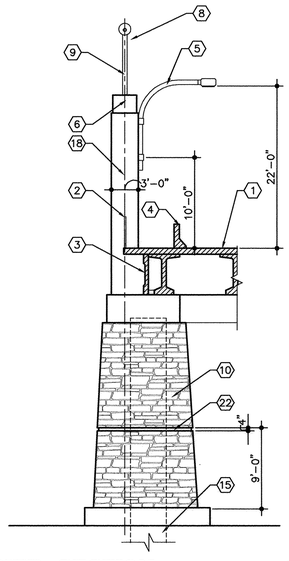
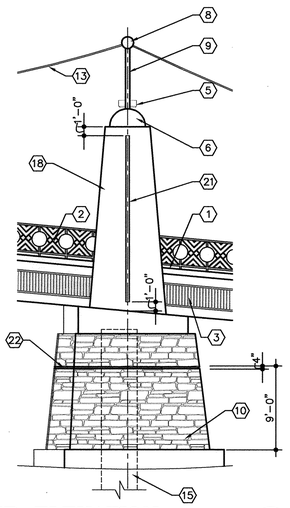
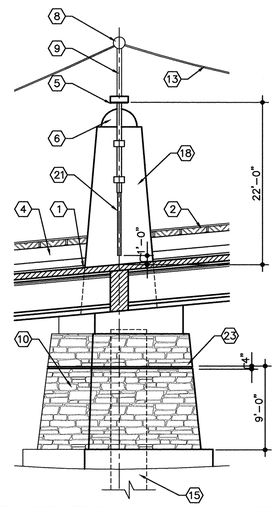


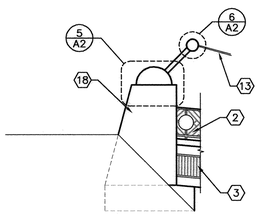
PIER SECTION 5
1/8"=1'-0"



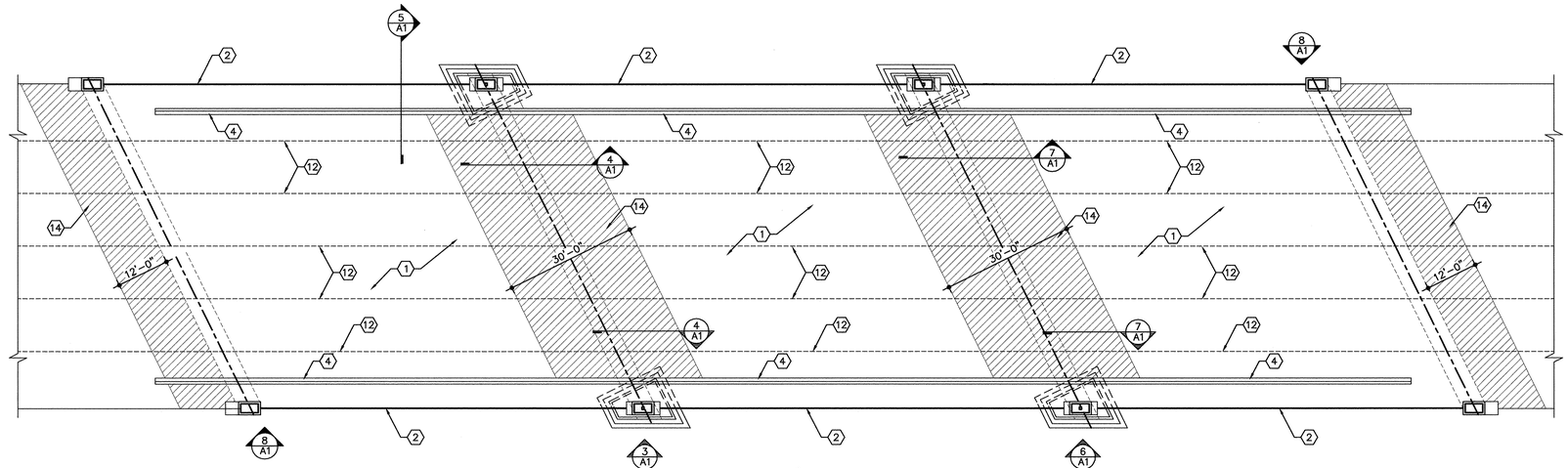
PIER ELEVATION 6
1/8"=1'-0"



PIER SECTION 7
1/8"=1'-0"



PIER ELEVATION 8
1/8"=1'-0"



PLAN VIEW
1/16"=1'-0"

KEYED NOTES:

1. CONCRETE DRIVE SURFACE, WITH SCOFIELD ADMIXTURE C-25 SOMBRERO BUFF.
2. 3'-6" HIGH GUARDRAIL, SEE SHEET A2.
3. PRECAST RIBBED CONCRETE, SEE DETAIL 17/A2.
4. CONCRETE JERSEY BARRIER, SEE DETAILS 18&19/A2.
5. STREET LAMP FASTENED TO CONCRETE PIERS. SEE ELEC.
6. 3/16" THICK STEEL DOME CAP, 2'-8"x4'-0"x2'-0", SEE DETAIL 4/A2.
7. 4" x 4" x 1/4" STEEL COLUMN, LENGTH VARIES, FIELD VERIFY REQUIRED LENGTH.
8. 3/16" CUSTOM HOLLOW STEEL SPHERE, SEE DETAIL 1/A2.
9. 6" x 6" x 1/4" STEEL COLUMN, SEE DETAIL 1/A2.
10. CONCRETE PIERS ARE TO BE FORMED WITH ROCK FORM LINER, BY CUSTOM ROCK, PATTERN NEW ENGLAND DRYSTACK, #12003, SEE DETAIL 14/A2. CONCRETE ADMIXTURE SCOFIELD C-27 WESTWOOD BROWN.
11. ARCHITECTURAL STONE VENEER, LONE STAR STONE, TYPE: ROCKY MOUNTAIN STACK STONE.
12. PAINT 6" ROAD MARKINGS ON PAVEMENT.
13. 1-1/2" DIAMETER WIRE ROPE.
14. CONCRETE DRIVE SURFACE, W/COLOR ADMIXTURE C-32 QUARRY RED AS MANUFACTURED BY SCOFIELD SYSTEMS.
15. CONCRETE PIER/PILE, SEE STRUCTURAL.
16. LINE OF BRIDGE PLATFORM ABOVE.
17. LINE OF 3'-6" HIGH GUARDRAIL ABOVE, SEE SHEET A2.
18. SMOOTH FORMED CONCRETE, COLOR: SCOFIELD ADMIXTURE C-25 SOMBRERO BUFF.
19. CONCRETE TO BE FORMED WITH A ROCK FORM LINER, BY CUSTOM ROCK, PATTERN: NEW ENGLAND DRYSTACK #12003.
20. LINE INDICATES WHERE ROCK LINER IS TO BE STOPPED AND ARCHITECTURAL STONE VENEER IS APPLIED.
21. VERTICAL REVEAL IN CONCRETE PIER, SEE DETAIL 20/A2.
22. SEE DETAIL 20/A2.
23. SHOTCRETE EMBANKMENT WITH SCOFIELD ADMIXTURE COLOR 6063 WINTER BEIGE.

SEE STRUCTURAL DRAWINGS FOR ALL DIMENSIONS.
SAMPLES OF ALL COLORED CONCRETE ARE REQUIRED, SEE SHEET A3 FOR REQUIRMENTS.

SOLEIL WEST
Architecture Planning Interior Design
11930 Menual NE Suite 109 Albuquerque, NM 87112

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AS BUILT INFORMATION
CONTRACTOR
WORK STAKED BY
INSPECTORS ACCEPTANCE BY
FIELD VERIFICATION BY
DRAWINGS CORRECTED BY
MICRO-FILM INFORMATION
RECORDED BY
NO. DATE

BENCH MARKS

SURVEY INFORMATION
NO. | FIELD NOTES BY | DATE

ENGINEER'S SEAL
STATE OF NEW MEXICO
KEVIN R. BALCIAR
No. 1882
REGISTERED ARCHITECT
7/14/05

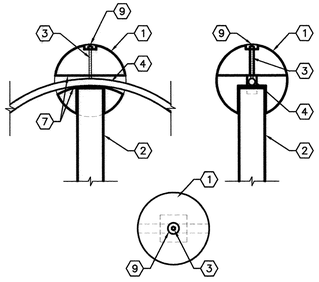
NO.	DATE	REMARKS	BY
REVISIONS			
DESIGN			
DESIGNED BY	KRB	DATE	4/14/05
DRAWN BY	JFS	DATE	4/14/05
CHECKED BY	KRB	DATE	4/14/05

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

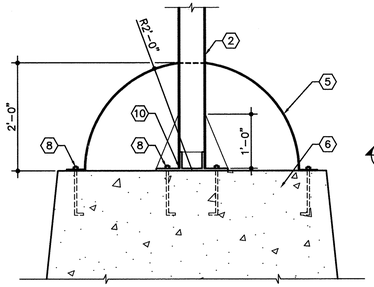
TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO ELEVATIONS

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

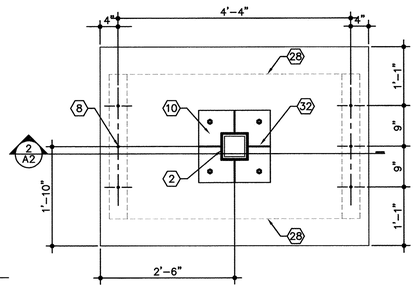
CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF	
756181	M-21/N-21	32	46	A-1



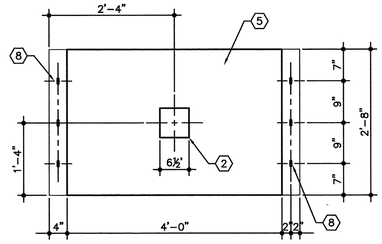
COLUMN & BALL DETAIL 1
3/4"=1'-0"



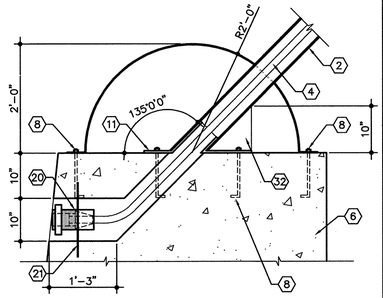
PIER CAP DETAIL (SECTION) 2
3/4"=1'-0"



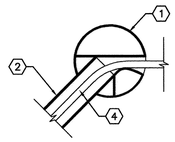
TOP OF PIER PLAN 3
3/4"=1'-0"



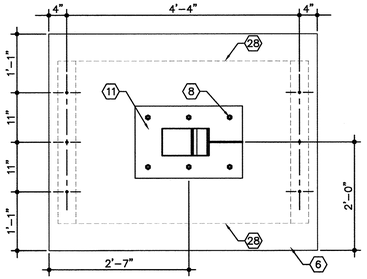
CAP DETAIL (TOP VIEW) 4
3/4"=1'-0"



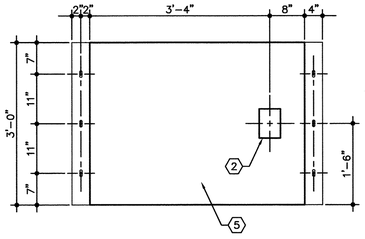
END PIER DETAIL (SECTION) 5
3/4"=1'-0"



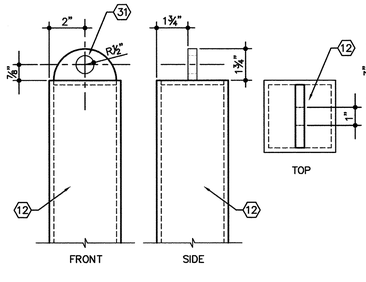
COLUMN & BALL DETAIL 6
3/4"=1'-0"



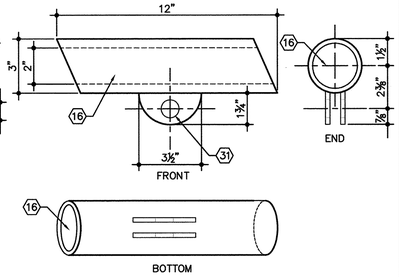
END PIER (PLAN) 7
3/4"=1'-0"



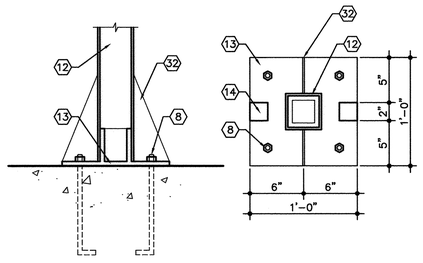
END PIER CAP (TOP VIEW) 8
3/4"=1'-0"



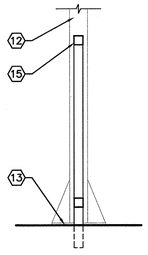
COLUMN DETAIL 9
3"=1'-0"



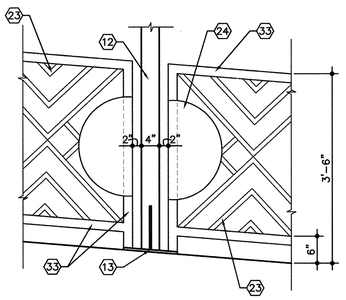
COLUMN ATTACHMENT 10
3"=1'-0"



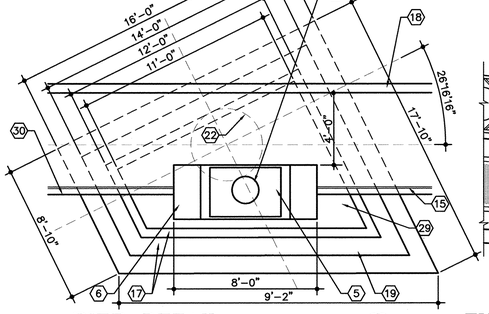
COLUMN ANCHOR DET. 11
1-1/2"=1'-0"



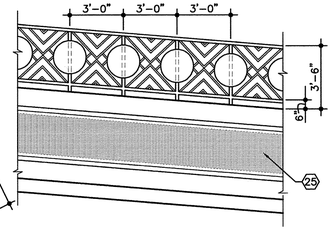
GUARDRAIL DETAIL 12
3/4"=1'-0"



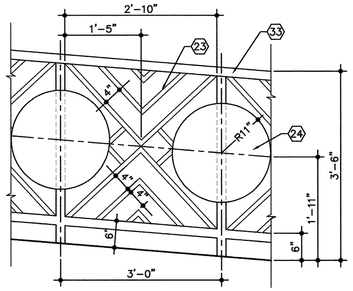
GUARDRAIL DETAIL 13
3/4"=1'-0"



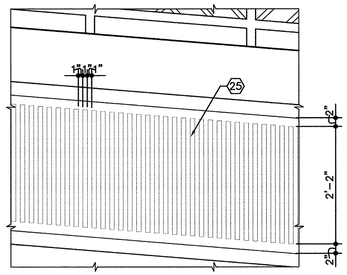
PIER DETAIL (TOP VIEW) 14
1/4"=1'-0"



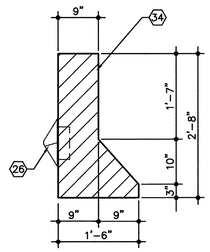
TYP. GUARDRAIL ELEV. 15
1/4"=1'-0"



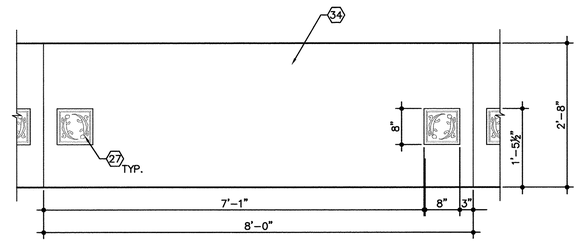
GUARDRAIL DETAIL 16
3/4"=1'-0"



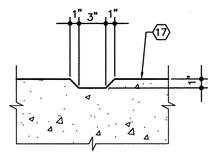
BOX BEAM DETAIL 17
3/4"=1'-0"



JERSEY BARRIER 18
3/4"=1'-0"



JERSEY BARRIER 19
3/4"=1'-0"



REVEAL DETAIL 20
1-1/2"=1'-0"

KEYED NOTES:

1. 1/4" CUSTOM HOLLOW STEEL SPHERE, 18" DIA. GOLD ANODIZED, FABRICATE AS SHOWN.
2. 6" x 6" x 1/4" STEEL COLUMN, GOLD ANODIZED.
3. 1/2" THREADED BOLT, TO PROVIDE TENSION ON THE WIRE ROPE. LENGTH AS REQUIRED.
4. 1-1/2" DIAMETER WIRE ROPE.
5. 3/16" THICK STEEL PIER TOWER CAP, GOLD ANODIZED, 2'-8" x 4'-0" x 2'-0".
6. CONCRETE PIER, SEE STRUCTURAL.
7. 3/16" REINFORCING STEEL PLATES.
8. 1/2" DIA. STAINLESS STEEL ANCHOR BOLTS.
9. PROVIDE A CAP FOR THE TOP OF THE SPHERE. CAULK AND SEAL FROM THE ELEMENTS.
10. 1/2" THICK 1'-4"x1'-4" STEEL BASE PLATE, FASTEN WITH (4) 1/2" ANCHOR BOLTS. WELD 1/4" THICK STEEL WINGS TO BASE PLATE AND STEEL COLUMN.
11. 1/2" THICK 1'-4"x2'-0" STEEL BASE PLATE, FASTEN WITH (6) 1/2" ANCHOR BOLTS. WELD 1/4" THICK STEEL WING TO BASE PLATE AND STEEL COLUMN.
12. 1/4" THICK 4"x4" STEEL COLUMN, GOLD ANODIZED.
13. 1/2" THICK 1'-0"x1'-0" STEEL BASE PLATE, FASTEN WITH (4) 1/2" ANCHOR BOLTS. WELD 1/4" THICK STEEL WINGS TO BASE PLATE AND STEEL COLUMN.
14. 2"x2" NOTCH FOR POSITIONING OF HANDRAIL.
15. 3'-6" HIGH GUARDRAIL, ALL INTERMEDIATE POST TO BE CAST IN SLEEVE IN CONCRETE UNLESS STATED OTHERWISE.
16. 1/2" THICK HOLLOW STEEL TUBE, GOLD ANODIZED, 11" LONG WITH TWO 1/4" THICK EARS WELDED ON.
17. CONCRETE FORM LINER BY CUSTOM ROCK, PATTERN NEW ENGLAND DRYSTACK, #12003.
18. CONCRETE JERSEY BARRIER, SEE DETAIL 18&19/A2.
19. CONCRETE PILE CAP, SEE STRUCTURAL.
20. WIRE ROPE ANCHOR SOCKET WITH INTERNAL THREADS.
21. PROVIDE A STEEL PLATE TO ANCHOR THE ANCHOR SOCKET IN THE CONCRETE PIER, FABRICATE PLATE OUT OF 1/4" STEEL PLATE MINIMUM.
22. CONCRETE PILE/PIER, SEE STRUCTURAL.
23. 1" x 1" TUBE STEEL COLOR: DUNN EDWARDS: DE410.
24. 18" DIA. 3/16" THICK, FLAT CIRCLE. WELD TO POSTS AND WELD SPACERS AT TWO SPOTS TO PREVENT WARPING. COLOR: DUNN EDWARDS DE410 VIVID TURK.
25. 1/2" DEEP CONCRETE RIBS, SPACE 1" APART. COLOR RIBBED PORTION OF CONC. DUNN EDWARDS DE877.
26. NOT USED.
27. 8"x8" PINEAPPLE GROVE DESIGNS, TOTAL OF 4 DESIGNS, TO BE STAGGERED, GECKOS PATTERN, ITEM #08SM-029, PINE #08SM-048, SONGBIRD #08SM-031, OAK #08SM-016, (TEL: 800-771-4595).
28. LINE OF CONCRETE PIER CAP.
29. CONCRETE PIER CAP.
30. EDGE OF BRIDGE DECK.
31. USE 1/2" DIA. A325 BOLTS AT COLUMN CONNECTION.
32. 1/4" THICK STEEL STIFFENERS.
33. 1 1/2" x 1 1/2" SQUARE TUBING. COLOR: DUNN EDWARDS DE410 VIVID TURK.
34. SMOOTH CONCRETE WITH SCOFIELD ADMIXTURE COLOR C-32 QUARRY RED.

SURVEY INFORMATION
FIELD NOTES
NO. | BY | DATE

BENCH MARKS

AS BUILT INFORMATION
CONTRACTOR A.U.I., Inc
WORK STAKED BY A.U.I. DATE 9/05
INSPECTED BY C.M. DATE 9/07
ACCEPTANCE BY A.U.I. DATE 9/05
FIELD VERIFICATION BY C.M. DATE 9/07
DRAWINGS CORRECTED BY MICRO-FILM INFORMATION DATE
RECORDED BY
NO.

ENGINEER'S SEAL
STATE OF NEW MEXICO
KEVIN R. BALCIAR
No. 1882
REGISTERED ARCHITECT
4/14/05

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	

DESIGNED BY KRB DATE 4/14/05
DRAWN BY JFS DATE 4/14/05
CHECKED BY KRB DATE 4/14/05

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CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO DETAILS

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO. 756181 | ZONE MAP NO. M-21/N-21 | SHEET 33 OF 46 | A-2

PAINTING:

1. PAINTS SHALL BE SUPPLIED BY DUNN EDWARDS OR INTERNATIONAL COATINGS. SUBMIT PAINT CHIPS FOR ALL ITEMS TO BE PAINTED.
2. DO NOT APPLY PAINT IN SNOW, RAIN, FOG, OR MIST, OR WHENEVER THE RELATIVE HUMIDITY EXCEEDS 80%. DO NOT APPLY PAINT TO DAMP OR WET SURFACES.
3. PREPARE CONCRETE SURFACES BY FILLING CRACKS AND IRREGULARITIES WITH PORTLAND CEMENT GROUT. REMOVE ALL EFFLORESCENCE PRIOR TO PAINTING. EFFLORESCENCE REMOVAL MAY BE BY MILD MURIATIC ACID SOLUTIONS.
4. APPLY PAINT AT THE RATE OF APPLICATION RECOMMENDED BY THE MANUFACTURER. FINISH COATS SHALL BE FREE OF BRUSH MARKS, STREAKS, OR RUNS.
5. AT THE COMPLETION OF THE PROJECT, FURNISH THE OWNER AN AMOUNT EQUAL TO 5 PERCENT OF THE TOTAL AMOUNT OF EACH PAINT COLOR USED DURING THE WORK, AND NO LESS THAN 5 GALLONS.

PAINTING SCHEDULE:

1. FERROUS METAL (SEMI-GLOSS):
   1 COAT CORROBAR (43-5)
   2 COATS SPARTAGLO (W 7500)
2. CONCRETE:
   1 COAT CONCRETE BLOCK FILLER (W 315)
   2 COATS SPARTAGLO (W 7500)
3. ALL CONCRETE SHALL BE SEALED FROM GRAFFITI:
   2 COATS OKON MASONRY SEALER, (W-2), 40 TO 60 GALLONS PER SQUARE FOOT.

JOB SITE SAMPLES:

1. FOR CAST IN PLACE AND FLATWORK CONCRETE, JOB SITE SAMPLES SHALL BE PREPARED AND APPROVED ONE MONTH PRIOR TO POURING CONCRETE.
2. A SEPARATE SAMPLE SHALL BE PREPARED FOR VERTICAL CONCRETE AND FLAT WORK. SEPARATE SAMPLES ARE REQUIRED FOR EACH COLOR.
3. FOR ACCURATE CONCRETE COLOR SAMPLES, THE QUANTITY OF CONCRETE MIXED SHOULD NOT BE LESS THAN ONE THIRD THE CAPACITY OF THE MIXING DRUM.
4. A VERTICAL SAMPLE OF THE CONCRETE FORM LINED MATERIAL IS REQUIRED. THE SAMPLE SHALL HAVE THE REQUIRED COLOR ADMIXTURE. THE SAMPLE SHOULD BE NOT LESS THAN 10' X 10'.
5. A 6' X 6' SAMPLE OF THE ARCHITECTURAL STONE VENEER IS REQUIRED. THE SAMPLE SHOULD BE PRODUCED TO INCLUDE CORNERS AND CAPS.

FORM LINERS:

1. FORM LINERS SHOULD BE MANUFACTURED BY CUSTOM ROCK CONCRETE WALL SYSTEMS, CUSTOM ROCK INTERNATIONAL, ST. PAUL, MINNESOTA 55116. TELEPHONE: 612-699-1345.
2. IF A RELEASE AGENT IS USED FOR THE FORM LINERS, IT MUST BE COMPATIBLE WITH THE CONCRETE ADMIXTURES.
3. THE FORM LINER MOLD IS CUSTOM ROCK MODEL #12003 NEW ENGLAND DRYSTACK.
4. A JOB SITE SAMPLE SHALL BE PRODUCED INCLUDING THE COLOR ADMIXTURE APPROXIMATELY ONE MONTH PRIOR TO PLACING ANY CONCRETE.

CONCRETE ADMIXTURES:

1. COLOR ADMIXTURES ARE REQUIRED IN CONCRETE WHERE SHOWN ON THE DRAWINGS. ADMIXTURES SHALL BE AS MANUFACTURED BY L.M. SCOFIELD COMPANY, TELEPHONE: 1-800-800-9900.
2. ADMIXTURES ARE PREMEASURED FOR THE CONCRETE MIX DESIGN AND PACKAGED IN DISINTEGRATING BAGS.
3. ALL CONCRETE FLATWORK SHALL ALSO BE CURED WITH A COLOR HARDENER AS MANUFACTURED BY L.M. SCOFIELD COMPANY. HARDENER PRODUCT IS LITHOCHROME.
4. CONCRETE TO RECEIVE COLOR ADMIXTURES SHALL HAVE A MAXIMUM SLUMP OF 4". THE SAME BRAND OF CEMENT, SOURCE OF SAND, AND WATER/CEMENT RATIO SHALL BE MAINTAINED FOR EACH LOAD OF CONCRETE OF THE SAME COLOR.
5. SUPPLEMENTAL ADMIXTURES OR CEMENT SUBSTITUTES MAY AFFECT THE COLOR FINISHING QUALITIES OF THE CONCRETE. SUPPLEMENTAL ADMIXTURES, SUCH AS ADDITIONAL WATER REDUCING ADMIXTURES, WATER PROOFING AGENTS, AND SUPER PLASTICERS, OR CEMENT SUBSTITUTES, SUCH AS FLYASH OR SLAG SHOULD NOT BE USED WITHOUT CONSULTING L.M. SCOFIELD.
6. BEFORE BATCHING, THE MIXING DRUM MUST BE THOROUGHLY CLEANED AND WET. ONE UNOPENED BAG OF CHROMIX ADMIXTURE, CORRECTLY PACKAGED BY THE DESIGN MIX SHOULD BE ADDED FOR EACH CUBIC YARD OF CONCRETE.
7. CONCRETE SHOULD BE DEPOSITED NEAR ITS FINAL POSITION TO AVOID SEGREGATION DUE TO REHANDLING OR FLOWING. IF HELD BACK WATER IS ADDED AT THE JOBSITE, THE CONCRETE SHOULD BE MIXED AT MIXING SPEED FOR A MINIMUM OF 30 REVOLUTIONS AFTER ADDITIONS OF THE WATER AND BEFORE DEPOSITING.
8. CONCRETE FLATWORK SHALL BE UNIFORMLY BROOM SWEPT.
9. HARD STEEL TROWELING OF CONCRETE FLATWORK SHOULD BE MINIMIZED TO AVOID TROWEL BURNS. FOR UNIFORMITY OF APPEARANCE, CONSISTENT FINISHING PRACTICES SHOULD BE USED WHEN APPLYING THE SPECIFIED FINISH. WATER MUST NOT BE SPRINKLED OR OTHERWISE ADDED TO THE SURFACE OF THE SLAB WHEN FINISHING. LONG-HANDLED FRESNOS MUST NOT BE USED. ALL FINAL HAND FINISHING SHOULD BE DONE IN THE SAME DIRECTION.
10. LITHOCHROME HARDENER AS MANUFACTURED BY L.M. SCOFIELD SHALL BE USED FOR ALL FLATWORK.

ADMIXTURES: VERTICAL CONCRETE

1. FORMWORK FOR CONCRETE MUST BE OF THE HIGHEST QUALITY TO OBTAIN SMOOTH, STRAIGHT, NONYIELDING SURFACES. UNLESS A FORM LINER HAS BEEN SPECIFIED, A RESIN, HIGH DENSITY OVERLAY OR AN EPOXY OR URETHANE COATED PLYWOOD SHOULD BE USED. ALL PLYWOOD PLUGS MUST BE FILLED AND THE FORMS COATED WITH A MATERIAL THAT IS SUFFICIENTLY HEAVY TO PREVENT UNWANTED GRAIN TRANSFER.
2. FOR COLOR UNIFORMITY, PROCEDURES AND MATERIALS USED IN PREPARING THE FORMS MUST NOT BE VARIED DURING THE JOB. ALL FORMS SHOULD BE CLEANED THOROUGHLY PRIOR TO USE OR REUSE. RELEASE AGENTS MUST BE NON-STAINING.
3. ANY LEAKAGE CAUSES THE WATER/CEMENT RATIO OF THE CEMENT PASTE TO VARY NEAR THE LEAKAGE POINTS AND DISCOLORATION OF THE FINISHED CONCRETE WILL RESULT. THIS STAINING CAN NOT BE REMOVED BY SANDBLASTING OR BUSH-HAMMERING. ALL PLASTIC SNAP-TIE CONES SHOULD BE OF THE NONLEAKING TYPE. AFTER CLEANING, JOINTS IN THE FORMS SHOULD BE SEALED WITH A TWO INCH WIDE VINYL OR POLYESTER TAPE OR SEALED WITH A SILICONE SEALANT APPLIED TO THE EDGES OF THE FORM ASSEMBLY.
4. TO PREVENT STAINING OF THE FINISHED CONCRETE SURFACE FORM TIES SHOULD LEAVE NO METAL CLOSER TO THE SURFACE OF THE CONCRETE THAN 1 1/2".
5. ALL WALLS SHOULD BE CAST TO THEIR FULL HEIGHT BETWEEN ENGINEERED HORIZONTAL JOINTS. FOR DESIGN REASONS, A TAPER CUT RECESSED CHAMFER STRIP IS PLACED AT THE HORIZONTAL LOCATIONS.
6. ALL CONCRETE SHOULD BE PLACE CAREFULLY SO THAT SURFACE GRINDING CAN BE AVOIDED AND A MINIMUM OF PATCHING WILL BE REQUIRED. WHEN POSSIBLE, BOTH EXTERNAL AND INTERNAL VIBRATORS SHOULD BE USED. OVER VIBRATION SHOULD BE AVOIDED, AND INTERNAL VIBRATORS MUST NOT BE USED TO MOVE THE CONCRETE.
7. TO PRODUCE MORE UNIFORM COLOR, ALL FORMS SHOULD BE STRIPPED WHEN THE CONCRETE IS THE SAME AGE. ALL VERTICAL SURFACES SHOULD BE SANDBLASTED SUFFICIENTLY TO REMOVE MINOR FORM MARKS AND ANY COLORED RESIDUE RESULTING FROM WATER, CEMENT, AND COLORING AGENTS MIGRATING (BLEEDING) TOWARD THE FORMS DURING CONCRETE PLACEMENT, VIBRATION AND COMPACTION.
8. PATCHING, IF REQUIRED SHOULD BE PERFORMED USING CHROMIX CONPATCH AS MANUFACTURED BY L.M. SCOFIELD.
9. TO PROTECT THE FINISHED SURFACES FROM DIRT AND MOISTURE PENETRATION, A HIGH QUALITY CLEAR WATER REPELLENT SHALL BE APPLIED TO THE WALLS AFTER ALLOWING THE WALLS TO CURE A MINIMUM OF 28 DAYS.

JOINT SEALING.

1. A COLOR MATCHED JOINT SEALER MUST BE USED IN ALL AREAS WHERE COLORED ADMIXTURES ARE USED. PRIOR TO SEALING, SUBMIT MANUFACTURER'S DATA AND COLOR SAMPLES TO THE ARCHITECT FOR REVIEW AND APPROVAL.

CONCRETE HARDENERS:

1. A COLOR HARDENER SHALL BE APPLIED AFTER THE CONCRETE FLATWORK HAS REACHED THE POINT WHERE THE BLEED WATER DISAPPEARS AND THE FLOATING PROCESS WILL NOT DISTURB THE LEVEL OF THE SURFACE. COLOR HARDENER SHOULD NEVER BE USED TO DRY BLEED WATER REMAINING ON THE SURFACE.
2. COLOR HARDENERS SHALL BE MANUFACTURED BY L.M. SCOFIELD, PRODUCT LITHOCHROME.
3. LITHOCHROME COLOR HARDENER SHOULD BE HAND BROADCAST UNIFORMLY ACROSS THE SURFACE OF THE CONCRETE BY THE DRY SHAKE METHOD. THE COLOR HARDENER SHOULD NORMALLY BE APPLIED IN TWO SEPARATE BROADCASTING OPERATIONS. TWO THIRDS OF THE MATERIAL SHOULD BE APPLIED IN THE FIRST SHAKE WITH ONE THIRD BEING WITH HELD FOR THE SECOND SHAKE AND FINAL TOUCH-UP. FOR APPLICATIONS OF OVER 100 POUNDS PER 100 SQUARE FEET, THREE SHAKES SHOULD BE USED WITH ONE HALF OF THE MATERIAL BEING APPLIED DURING THE FIRST SHAKE.
4. TO PREVENT SEGREGATION OF THE AGGREGATES, THE COLOR HARDENER SHOULD NOT BE BROADCAST FROM A POINT ABOVE KNEE LEVEL OR THROWN MORE THAN A FEW FEET. FOR MORE UNIFORM COVERAGE, APPLICATIONS SHOULD BE MADE AT 90 DEGREES TO EACH OTHER WHEN PRACTICAL.
5. SINCE CONCRETE SETS MORE RAPIDLY ALONG THE EDGES OF THE SLAB, MATERIAL SHOULD BE APPLIED TO THE EDGES FIRST, AND THEY SHOULD BE WORKED BEFORE THE REST OF THE SURFACE. A SMALL QUANTITY OF MATERIAL SHOULD BE WITH HELD FROM THE FINAL SHAKE FOR TOUCHING UP NON-UNIFORM OR WEAK-TONED AREAS AS NECESSARY.
6. THE NECESSARY MOISTURE FOR WETTING THE COLOR HARDENER MUST COME FROM THE CONCRETE SUBSTRATE TO DEVELOP THE PROPER STRENGTH AND MONOLITHIC BONDING. WATER MUST NOT BE SPRINKLED OR OTHER WISE ADDED TO THE SURFACE DURING APPLICATION. OTHERWISE A DISCOLORED AND WEAKENED SURFACE WITH REDUCED DURABILTY MAY OCCUR.
7. AFTER EACH APPLICATION, THE DRY COLOR HARDENER MUST BE THOROUGHLY AND COMPLETELY WORKED INTO THE SURFACE BY THE USE OF WOODEN HAND FLOATS OR A POWER TROWELING MACHINE EQUIPPED WITH FLOAT BLADES (SHOES). LONG-HANDLED FRESNOS MUST NOT BE USED. THE CONCRETE MUST NOT BE TROWELED UNTIL AFTER THE FINAL APPLICATION.
8. AFTER APPLICATION OF THE FINAL SHAKE, THE SURFACE SHOULD BE FLOATED, THEN HAND OR MACHINE TROWELED. TO PREVENT BURNING OR DARKENING OF THE SURFACE, HARD STEEL TROWELING SHOULD BE MINIMIZED, ESPECIALLY AT THE EDGES AND JOINT LINES.
9. THE SPECIFIED TEXTURE (BROOM FINISH) SHOULD BE APPLIED UNIFORMLY USING CONSISTENT FINISHING PRACTICES. ALL SURFACES SHOULD BE FINISHED WITHIN THE SAME TIME AFTER PLACING.

AS BUILT INFORMATION
CONTRACTOR AUI, Inc
WORK STAKED BY AUI DATE 9/05
INSPECTORS ACCEPTANCE BY C.M DATE 7/07
AS BUILT EDITED BY AUI DATE 9/05
VERIFICATION BY AUI DATE 9/07
DRAWINGS CORRECTED BY C.M DATE 7/07
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES BY DATE
NO.

ENGINEER'S SEAL
STATE OF NEW MEXICO
KEVIN R. BALCIAR
No. 1882
REGISTERED ARCHITECT
4/14/05

REVISIONS

NO.	DATE	REMARKS	BY
		DESIGN	
		DESIGNED BY KRB	DATE 4/14/05
		DRAWN BY JFS	DATE 4/14/05
		CHECKED BY KRB	DATE 4/14/05

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Albuquerque, New Mexico 87110 FAX 884-7048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO ARCHITECTURAL NOTES

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

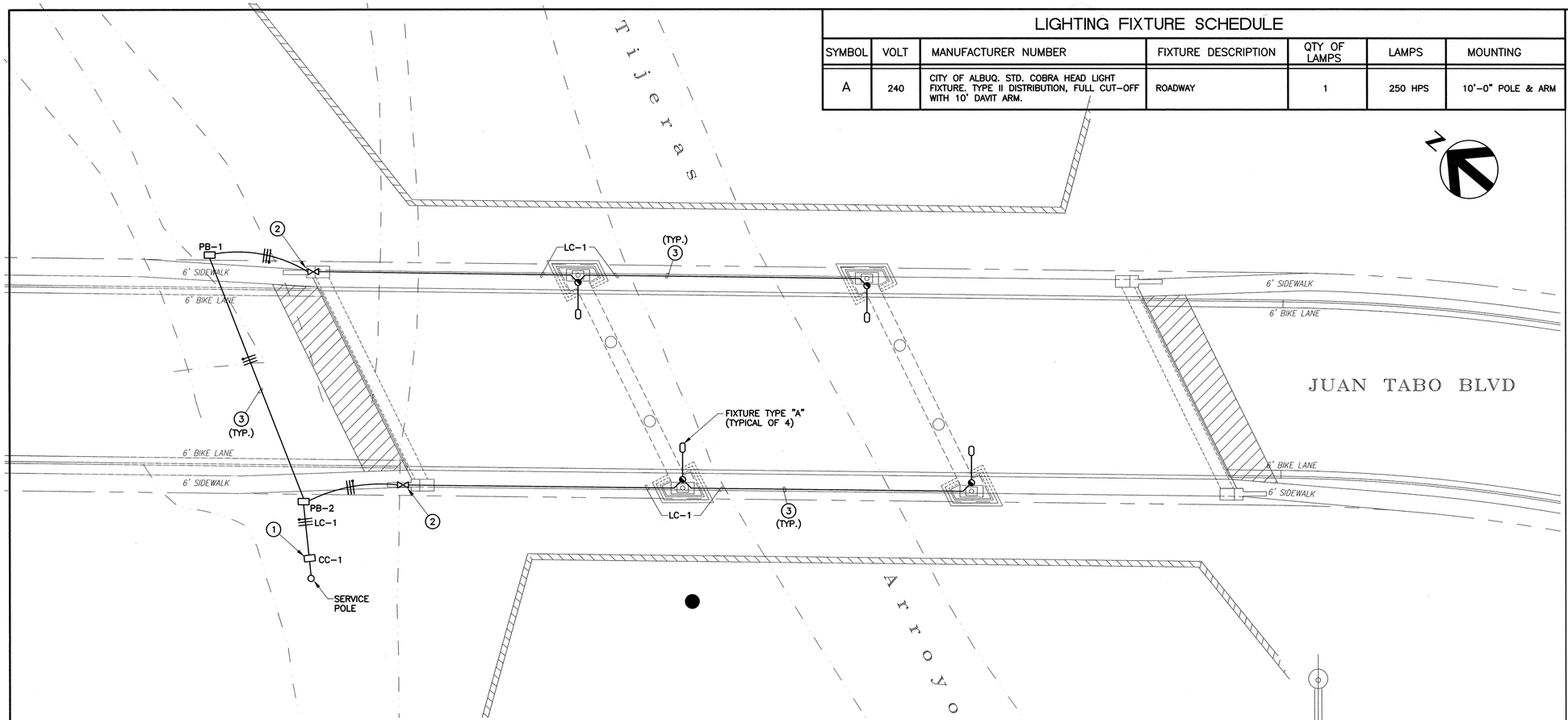
CITY PROJECT NO. 756181 | ZONE MAP NO. M-21/N-21 | SHEET OF 34 46 | A-3

LIGHTING FIXTURE SCHEDULE

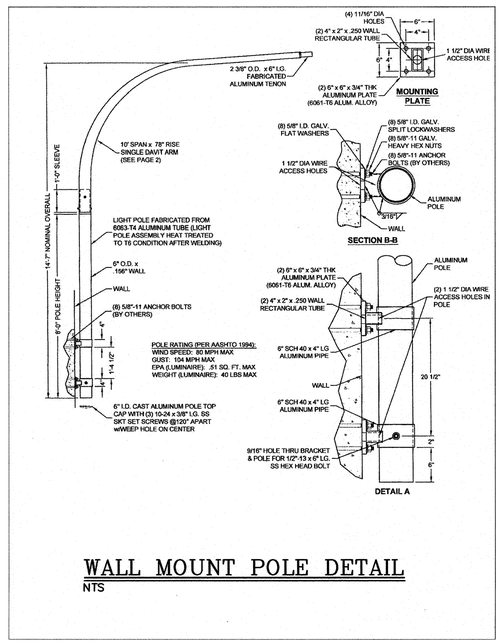
SYMBOL	VOLT	MANUFACTURER NUMBER	FIXTURE DESCRIPTION	QTY OF LAMPS	LAMPS	MOUNTING
A	240	CITY OF ALBUQ. STD. COBRA HEAD LIGHT FIXTURE. TYPE II DISTRIBUTION, FULL CUT-OFF WITH 10' DAVIT ARM.	ROADWAY	1	250 HPS	10'-0" POLE & ARM

○ KEYED NOTES:

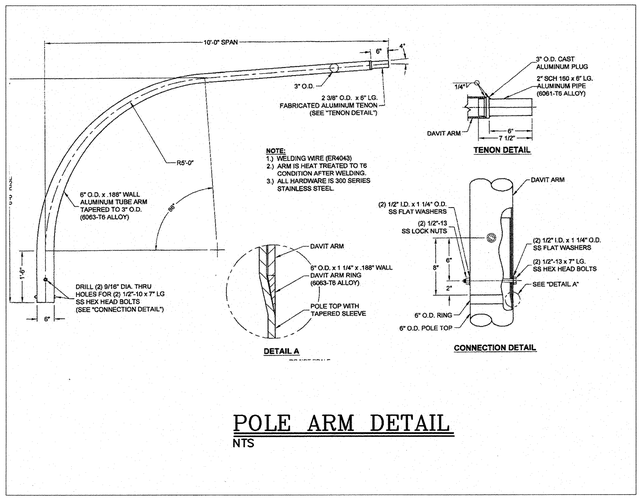
1. LIGHTING CONTROL CABINET "CC1". REFER TO SHEET E-2 FOR DETAILS.
2. INSTALL CONDUIT EXPANSION SLEEVES AT EXPANSION JOINTS.
3. CIRCUIT LC-1 TO BE 2 #2 + 1 #8 GR. IN 2" CONDUIT.



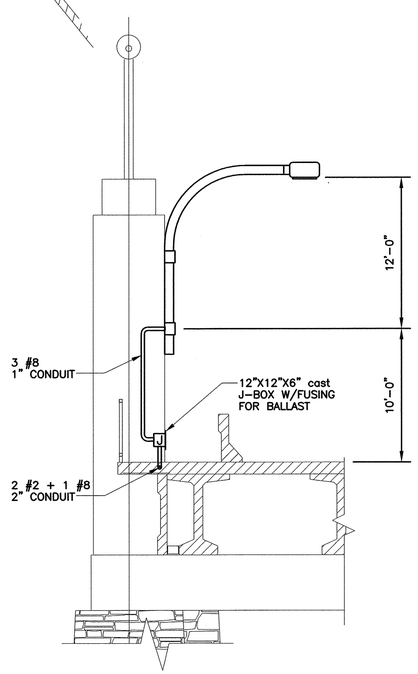
ELECTRICAL SITE PLAN
SCALE: 1" = 20'



WALL MOUNT POLE DETAIL
NTS



POLE ARM DETAIL
NTS



POLE CONNECTION DETAIL
NTS

20' 10' 0 20' 40'
SCALE: 1" = 20'

AS BUILT INFORMATION
CONTRACTOR 4UI, Inc
WORK VERIFIED BY
INSPECTOR'S ACCEPTANCE BY
FIELD VERIFICATION BY
DRAWINGS CORRECTED BY
MICRO-FILM INFORMATION
RECORDED BY
DATE
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES
NO. | BY | DATE

ENGINEER'S SEAL
DANIEL W. ROMERO JR.
NEW MEXICO
10004
REGISTERED PROFESSIONAL ENGINEER
7-10-05

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
		DESIGNED BY DWR	DATE 5/2/05
		DRAWN BY JDG	DATE 5/2/05
		CHECKED BY DWR	DATE 5/2/05

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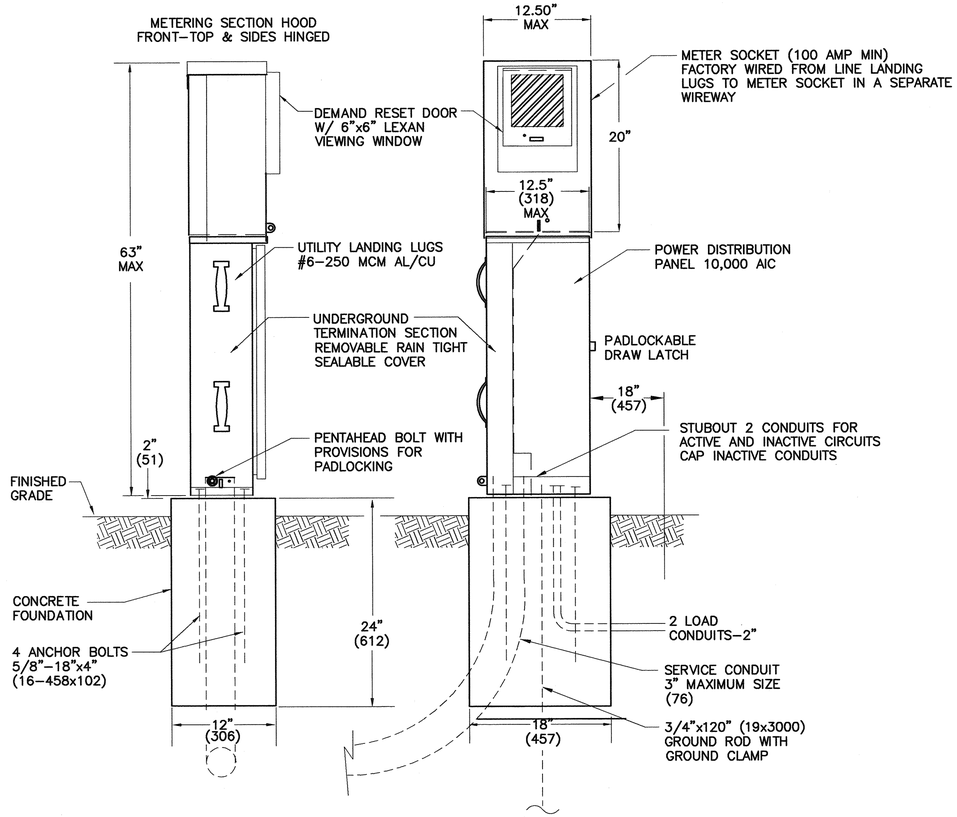
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
ELECTRICAL SITE PLAN

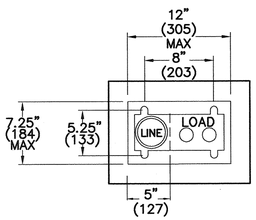
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF
756181	M-21/N-21 35 46	E-1	

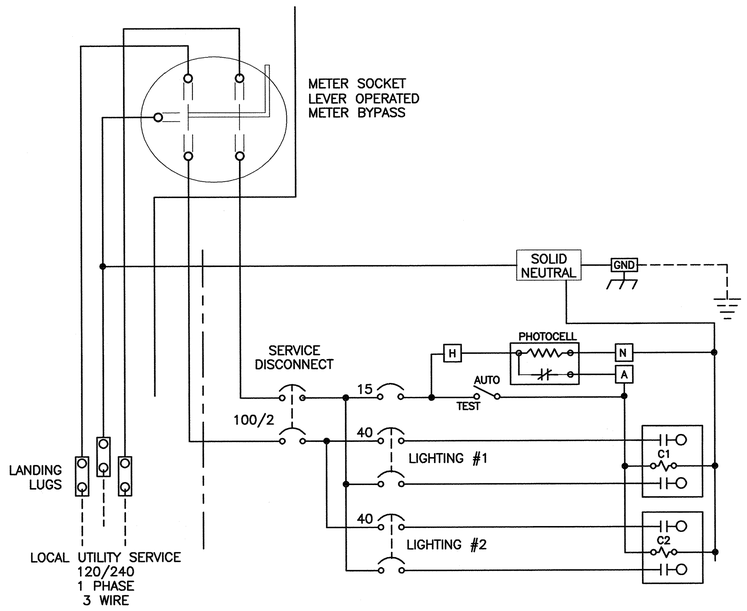


LEFT SIDE

FRONT VIEW



BASE PLAN



SERVICE EQUIPMENT
WIRING DIAGRAM L2UM

CONTROL CABINET CONSTRUCTION NOTES

1. CONTROL CABINET SHALL BE UL LISTED "INDUSTRIAL CONTROL PANEL" PER UL 508.
2. CONTROL CABINET SHALL MEET THE ELECTRIC UTILITY SERVICE EQUIPMENT REQUIREMENTS COMMITTEE (EUSERC) GUIDELINES.
3. CONSTRUCTION SHALL BE NEMA 3R AND 12, RAIN TIGHT AND DUST TIGHT. ELECTRICALLY WELDED AND REINFORCED WHERE REQUIRED.
4. ALL NUTS, BOLTS, SCREWS AND HINGES SHALL BE STAINLESS STEEL.
5. NUTS, BOLTS & SCREWS SHALL NOT BE VISIBLE FROM OUTSIDE OF CABINET.
6. PHENOLIC NAMEPLATES SHALL BE PROVIDED AS REQUIRED.
7. CIRCUIT BREAKERS SHALL BE CABLE IN–CABLE OUT WITH LINE ON TOP & LOAD ON THE BOTTOM. HANDLE POSITION UP="ON", MIDDLE="TRIPPED", DOWN="OFF".
8. A PLASTIC COVERED WIRING DIAGRAM SHALL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
9. CABINET SHALL BE FACTORY WIRED AND CONFORM TO REQUIRED NEMA STANDARDS.
10. ALL POWDER CONTROL COATED CONTROL CABINETS SHALL HAVE A CORROSION RESISTANT COATING WHICH INCLUDES A FIVE STEP DIP TANK METAL PREPARATION PROCESS:
    A. ALKALINE CLEANER 160° F.
    B. CLEAR WATER RINSE.
    C. IRON PHOSPHATE APPLICATION 150°.
    D. CLEAR WATER RINSE.
    E. INHIBITIVE RINSE TO SEAL PHOSPHATED SURFACES 120°.

    FINISHED WITH AN ELECTROSTATICALLY APPLIED DRY POLYESTER POWDER COATING THEN BAKED @ 380° TO CURE.
11. CONCRETE FOUNDATIONS FOR CONTROL CABINET INCLUDING EXCAVATION AND BACKFILL, CONCRETE, GROUND RODS AND ANCHOR BOLTS, COMPLETE IN PLACE, WILL BE CONSIDERED INCIDENTAL TO THE CONTROL CABINET.

CONSTRUCTION MATERIALS AND FINISH

- [x] 12 GA HD GALVANIZED SHEET STEEL
  - [x] POWDER COATED
- [ ] 14 GA #304D STAINLESS STEEL SHEET
  - [ ] POWDER COATED COLOR:
  - [ ] NATURAL
- [ ] 0.125" ALUMINUM SHEET
  - [ ] POWDER COATED COLOR:
  - [ ] ANODIZED

POWDER COAT COLORS

- [ ] WHITE
- [ ] RANCH GREEN
- [ ] MINT GREEN
- [ ] OTHER _____
- [x] CAMEL

PHOTO ELECTRIC CELL

- [ ] ON LIGHT POLE
- [x] IN SERVICE CABINET

AS BUILT INFORMATION
CONTRACTOR A.U.I., INC.
WORK STAKED BY — DATE 3/05
STAKING OKD BY C.M. DATE 3/22
ACCEPTANCE BY A.U.I. DATE 5/05
FIELD CHANGES
FIELD LOCATION BY C.M. DATE 3/22
DRAWINGS CORRECTED BY MICRO-FILM INFORMATION DATE
RECORDED BY
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL
DANIEL W. ROMERO JR.
NEW MEXICO
10004
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
		DESIGNED BY CDA	5/2/05 DATE
		DRAWN BY CDA	5/2/05 DATE
		CHECKED BY CDA	5/2/05 DATE

102597
CME, Inc.
Mechanical / Electrical / Structural Consulting Engineers
6001 Indian School Rd. NE, Ste 200 Albuquerque, New Mexico 87110
(505) 884-8868 FAX 884-7048

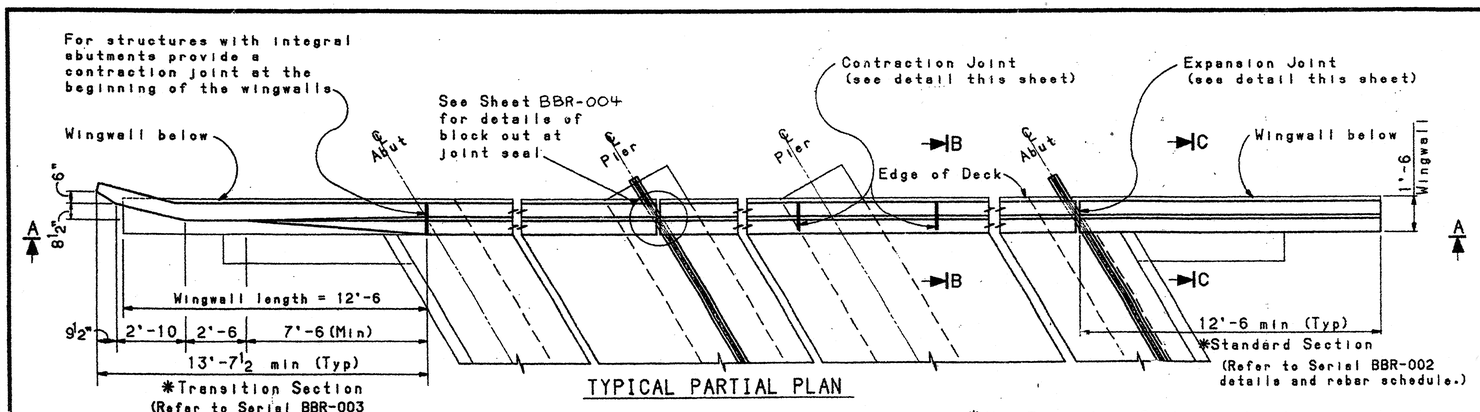
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: JUAN TABO CROSSING OVER TIJERAS ARROYO
STREET LIGHTING
CONTROL CABINET-TWO CIRCUIT UNMETERED

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE	APPROVED JUL 28 2005 CITY ENGINEER			

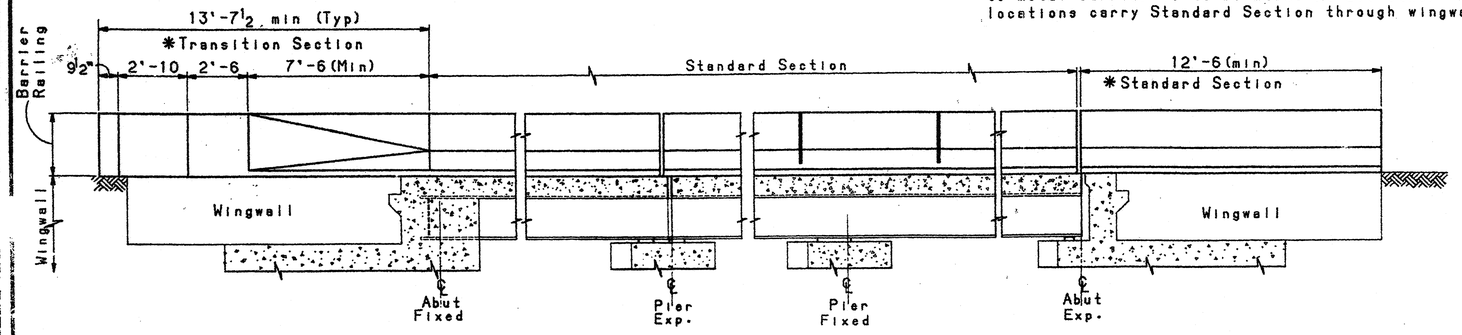
CITY PROJECT NO.	ZONE MAP NO.	SHEET OF	
756181	M-21/N-21	36 46	E-2

F.H.W.A. REGION NO. 6	SHEET NO.
NEW MEXICO PROJECT NO.	

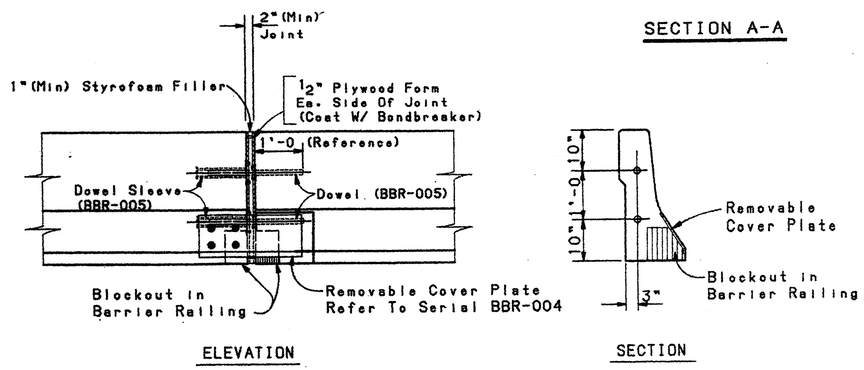


TYPICAL PARTIAL PLAN

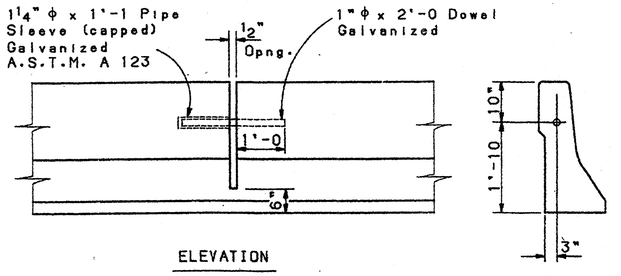
* Use Transition Section only where an attachment to metal barrier is to be made. At all other locations carry Standard Section through wingwall.



SECTION A-A



ELEVATION — SECTION



ELEVATION — SECTION

⚠ EXPANSION JOINT DETAIL

Provide Expansion Joints at each deck slab joint. Refer to Serial BBR-005 for for details of the joint, forming materials and dowels.

CONTRACTION JOINT DETAIL

Provide Contraction Joints at equally spaced intervals (15' min, 30'max) between Expansion Joints or, for structures with integral abutments, between contraction joints at wingwalls.

DESIGN DATA

DESIGN IS IN ACCORDANCE WITH AASHTO SPECIFICATIONS DATED 1989 AND LATEST INTERIMS.
f'c=3,000 psi @ 28 days, fc=1,200 psi
fy=60,000 psi, fs=24,000 psi, n=9.2

GENERAL NOTES

1. CONCRETE FOR BARRIER RAILING SHALL BE SUPERSTRUCTURE CONCRETE CLASS "AA". BARRIER RAILING SHALL BE PAID FOR AT THE UNIT PRICE PER LINEAR FOOT, INCLUDING COMPLETELY EMBEDDED REINFORCING STEEL, ANCHOR BOLTS AND ANY OTHER COMPLETELY EMBEDDED OR APPURTENANT STEEL ITEMS. BARRIER RAILING SHALL BE CAST-IN-PLACE USING REMOVABLE FORMS.
2. REINFORCING STEEL SHALL BE EPOXY COATED AND SHALL CONFORM TO A.A.S.H.T.O. SPECIFICATION M 31, GRADE 60. DIMENSIONS REFER TO CENTERLINE OF BAR UNLESS NOTED OTHERWISE ON THE DRAWINGS.
3. BARRIER RAILING INSTALLATIONS ON DECK SLABS MAY BE TYPE 1, 2, OR 3 AT THE OPTION OF THE CONTRACTOR. DECK THICKNESS (NEW OR EXISTING) MUST BE APPROPRIATE FOR THE TYPE OF INSTALLATION SELECTED.
4. FOR DETAILS OF BARRIER RAILING CONNECTION TO THE APPROACH METAL BARRIER - SEE TRAFFIC PLANS.
5. REFLECTIVE BARRIER DELINEATORS SHALL BE MOUNTED ON TOP OF THE BARRIER RAILING IN CONFORMANCE WITH THE TRAFFIC PLANS.
6. APPLY PENETRATING WATER REPELLANT TREATMENT TO ALL EXPOSED SURFACES OF THE BARRIER RAILING.
7. DISCONTINUE HORIZONTAL REINFORCEMENT AT ALL EXPANSION AND CONTRACTION JOINT OPENINGS.
8. STRUCTURAL STEEL FOR REMOVABLE COVER PLATES AT THE EXPANSION JOINTS SHALL CONFORM TO A.A.S.H.T.O. SPECIFICATION M-183, AND SHALL BE GIVEN A PROTECTIVE COATING IN CONFORMANCE WITH THE SPECIFICATIONS. GALVANIZE ALL BOLTS AND HARDWARE.
9. COST OF REMOVABLE COVER PLATES, IN PLACE, SHALL BE CONSIDERED INCIDENTAL TO THE COST OF BARRIER RAILING.
10. CONSTRUCTION JOINTS BETWEEN BARRIER RAILING AND BRIDGE DECK CONCRETE SHALL BE CLEANED AND ROUGHENED PRIOR TO PLACEMENT OF BARRIER RAILING CONCRETE AS IS REQUIRED BY THE SPECIFICATIONS. THE APPLICATION OF A MORTAR COATING TO THE SURFACE OF THE BRIDGE DECK CONCRETE WILL HOWEVER NOT BE REQUIRED.

NO.	DESCRIPTION	DATE	BY
6			
5			
4			
3			
2			
1	REVISED EXPANSION JOINT DETAIL	3/8/95	P.H.

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

BARRIER RAILING GENERAL DETAILS

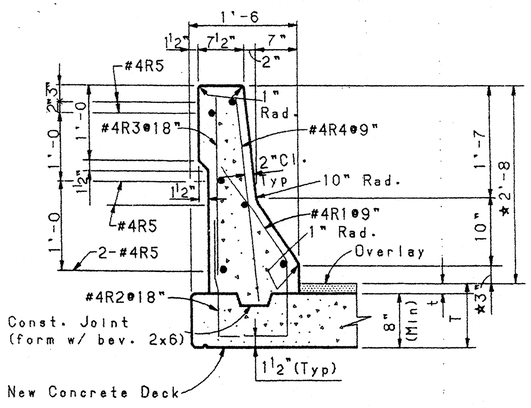
LAYOUT BY: D.J.R.
DESIGNED BY: J.A.K.
CHECKED BY: E.B.D.
APPROVAL RECOMMENDED: BRIDGE ENGINEER — 7/22/95 DATE
APPROVED: BUREAU CHIEF — 5/1/95 DATE

SERIAL BBR-001 — SHEET 37 OF 46

DESIGNED BY: C.J.K. 7/89 CHECKED BY: S.
DETAILED BY: J.A.K. 7/89 CHECKED BY: E.
PLOT DATE: 3/13/95
Barrier Railing
0/88

BRIDGE#1/STANDARDS/BRIDGE/MISC-DRAWS105A
SR3-8

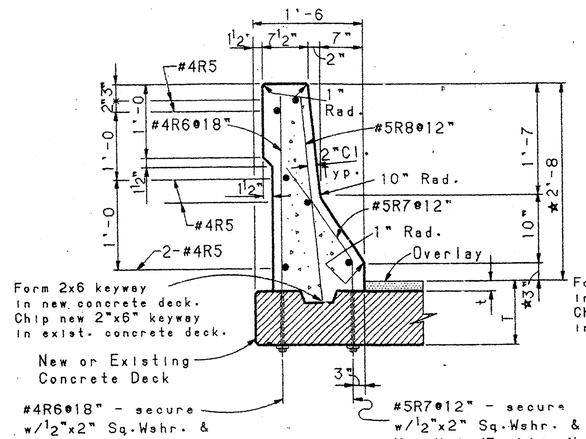
F.H.W.A. REGION NO. 6	SHEET NO.
NEW MEXICO PROJECT NO.	



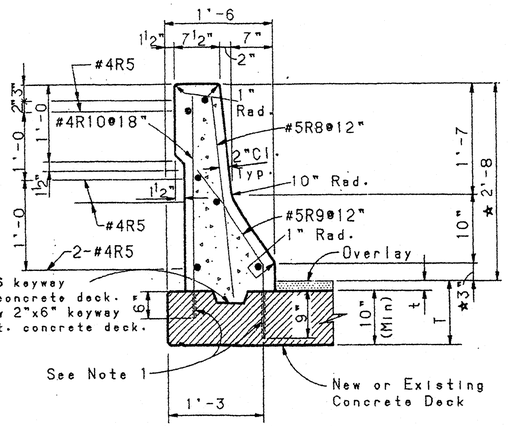
TYPE "1"

Place #4R1 and #4R2 bars with bridge deck reinforcement.

* These dimensions shall be measured above top of wearing surface, (top of concrete deck, or top of overlay - if any). In determining dimensions of the #4R1, #4R6 or #5R7 bars, the "T" dimension used shall include the thickness ("t") of any overlay.



TYPE "2"



TYPE "3"

Note 1

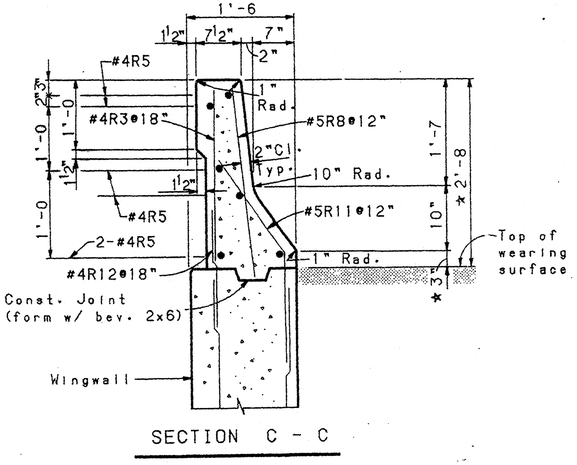
Reinforcing bars shall be placed in $\frac{7}{8}$" diameter cored holes, and grouted into place using a neat cement paste of portland cement and water. The water content shall be not more than 4 gallons per 94 pounds of cement. Retempering of grout will not be permitted. Immediately prior to placing the dowels the holes shall be cleaned of dust and other deleterious materials, shall be thoroughly saturated with water, have all free water removed and the holes shall be dried to a saturated surface dry condition. Sufficient grout shall be placed in the holes so that no voids remain after the dowels are inserted. Grout shall be cured for a period of 3 days or until the dowels are encased in concrete, whichever occure first, by either the curing compound method or by keeping the surface of the grout continuously damp. Any dowels or grout which fail to bond or are damaged before the concrete is placed shall be removed and replaced. Cost of coring and grouting are to be included in the unit price bid for "BARRIER RAILING".

ESTIMATED QUANTITIES

(FOR CONTRACTORS INFORMATION ONLY)

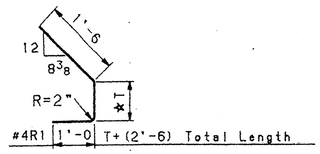
ITEM	UNIT	TOTAL
EPOXY COATED REINFORCING BARS, GRADE 60	LB./FT.	10.74
SUPERSTRUCTURE CONCRETE CLASS "AA"	CU. YD./FT.	0.080

The quantities shown in the above table are approximate only and may vary with the type of barrier rail selected.

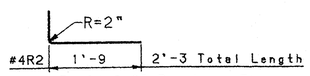


SECTION C - C

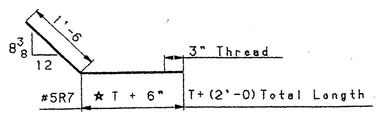
SECTION B - B



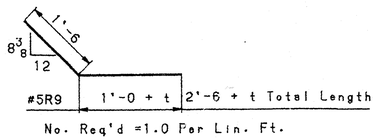
No. Req'd =1.33 Per Lin. Ft.



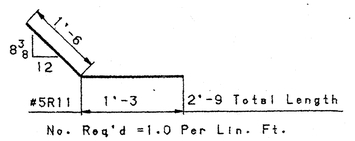
No. Req'd=0.67 Per Lin. Ft.



No. Req'd =1.0 Per Lin. Ft.



No. Req'd =1.0 Per Lin. Ft.



No. Req'd =1.0 Per Lin. Ft.

Mark	Length	No. Req'd Lin. Ft.
#4R3	2'-6 + t	0.67
#4R4	2'-8 + t	1.33
#4R5	Varies	6
‡ #4R6	*T + 2'-9	0.67
#5R8	2'-8 + t	1.0
#4R10	3'-0 + t	0.67
#4R12	2'-0	0.67

‡ Thread one end 3"
t = Thickness of overlay

NO.	DESCRIPTION	DATE	BY
6			
5			
4			
3			
2			
1			

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

BARRIER RAILING

STANDARD SECTION DETAILS

LAYOUT BY: C.J.K.
DRAWN BY: J.A.K.
CHECKED BY: E.R.D.

APPROVAL RECOMMENDED: Mark A. Lee, BRIDGE ENGINEER, 7/7/92 DATE
APPROVED: Ronald E. Graham, DESIGN BUREAU CHIEF, 7/6/92 DATE

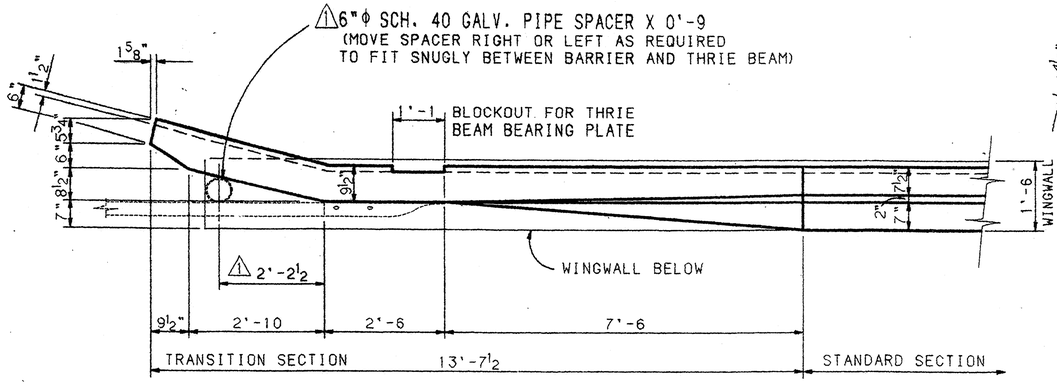
SERIAL BBR-002

SHEET 38 OF 46

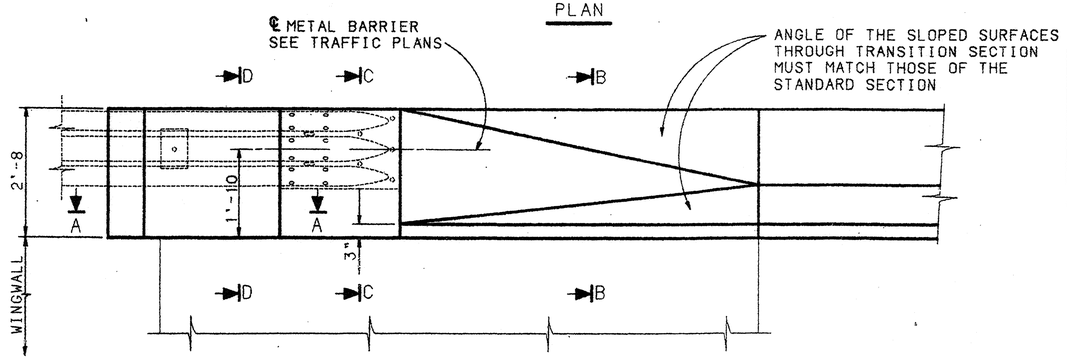
PLOT DATE: 2/4/92

DESIGNED BY: C.J.K. 7/89 CHECKED BY: S.J.M. 10/89
DETAILED BY: J.A.K. 7/89 CHECKED BY: E.R.D. 10/89

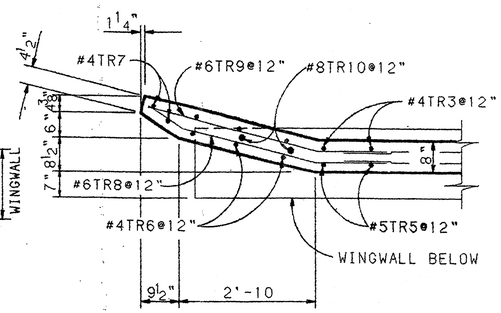
BRIDGE#1/STANDARDS/BRIDGE/MISC-DRAW$105B
SR3-8



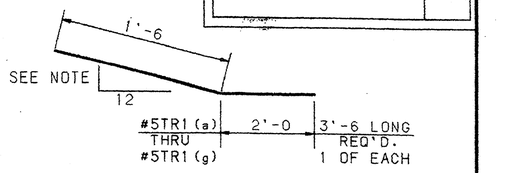
PLAN



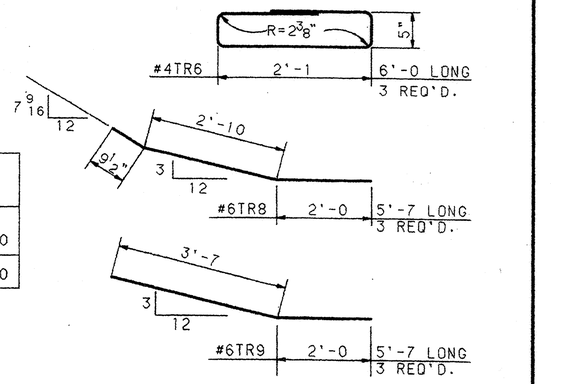
ELEVATION



SECTION A - A



NOTE: BEVEL VARIES FROM $8\frac{3}{8}$ TO 0 IN 6 EQUAL INCREMENTS.



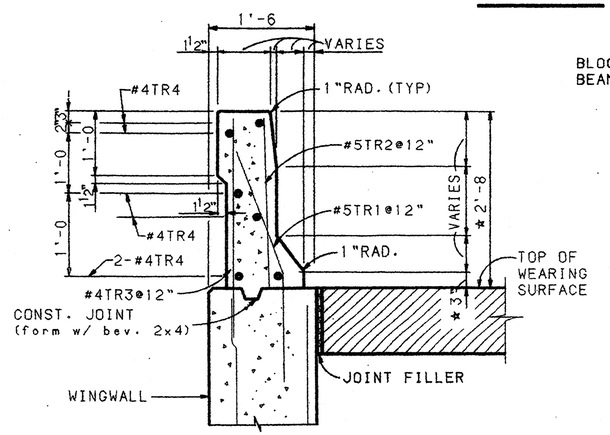
** ESTIMATED QUANTITIES (FOR ONE TRANSITION)		
EPOXY COATED REINFORCING BARS, GRADE 60	LBS.	220
SUPERSTRUCTURE CONCRETE CLASS "AA"	CU.YDS.	1.0

** FOR CONTRACTORS INFORMATION ONLY

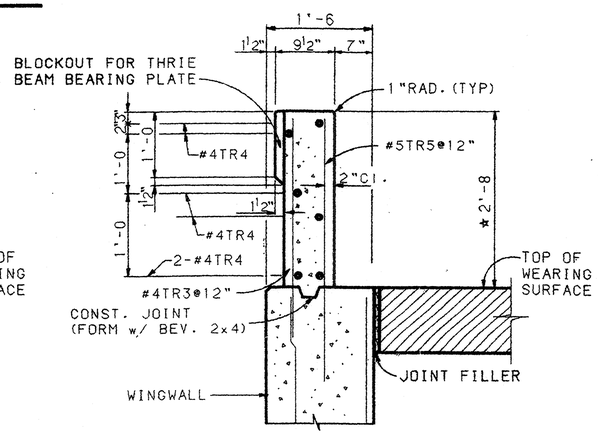
☆ THESE DIMENSIONS SHALL BE MEASURED ABOVE THE TOP OF WEARING SURFACE. (TOP OF DECK OR TOP OF OVERLAY - IF ANY)

#5TR2	2'-6	8 REQ'D.
#4TR3	3'-8	11 REQ'D.
#4TR4	9'-10	6 REQ'D.
#5TR5	4'-0	4 REQ'D.
#4TR7	2'-3	2 REQ'D.
#8TR10	4'-0	2 REQ'D.

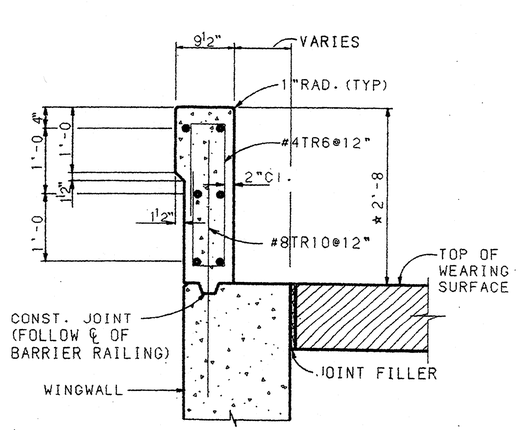
REBAR SCHEDULE
(FOR ONE TRANSITION)



SECTION B - B



SECTION C - C



⚠ SECTION D - D

NO.	DESCRIPTION	DATE	BY
6			
5			
4			
3			
2			
1	REV. PLAN (PIPE LOC.) & SEC. D-D	5/13/96	P.H.

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

BARRIER RAILING

TRANSITION SECTION DETAILS

LAYOUT BY: S.J.M.	APPROVAL RECOMMENDED	5/13/96
DRAWN BY: J.A.K.	BRIDGE ENGINEER	DATE
CHECKED BY: E.R.D.	APPROVED	6/3/96
	DESIGN BUREAU CHIEF	DATE

SERIAL BBR-003

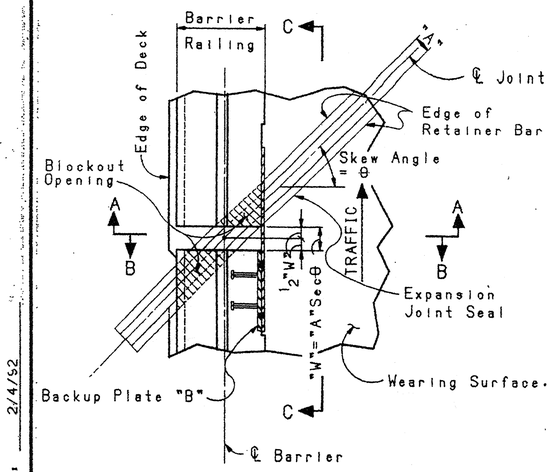
SHEET 39 OF 46

F.H.W.A. REGION NO. 6	SHEET NO.
NEW MEXICO PROJECT NO.	

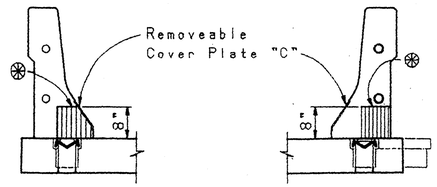
PLOT DATE: 5/14/96

DESIGNED BY: S.J.M. 4/90 CHECKED BY: S.J.M. 4/90
DETAILED BY: J.A.K. 4/90 CHECKED BY: E.R.D. 10/90

BRIDGE#1/STANDARDS/BRIDGE/MISC-DRAW$105C



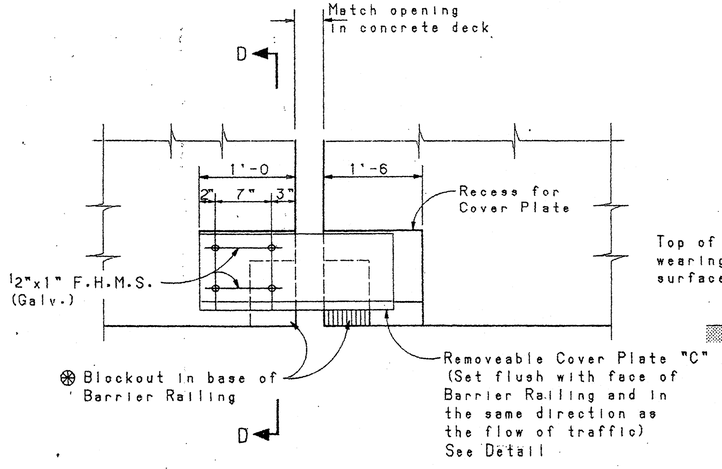
PART PLAN-SKEW JOINT
AT CONCRETE BARRIER RAILING



SECTION A-A SECTION B-B

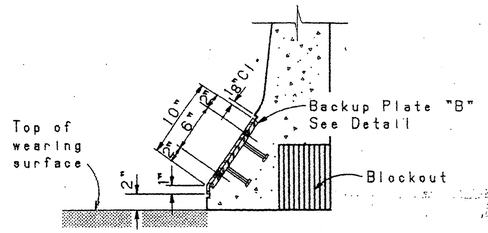
SIMILAR DETAIL FOR CURB AND SIDEWALK.

⊛ Blockout in base of Barrier Railing.

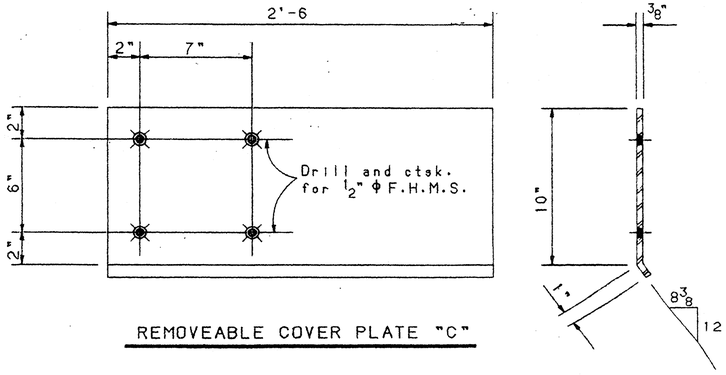


ELEVATION C-C

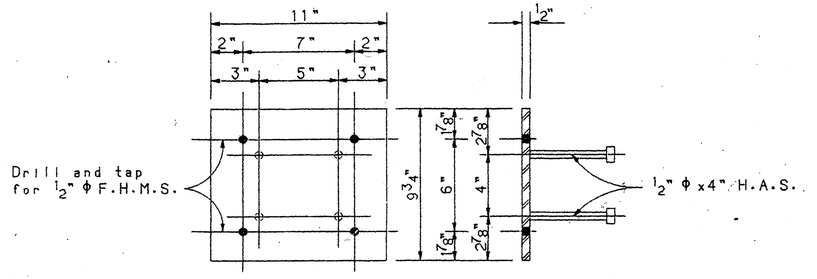
Provide Expansion Joints at each deck slab joint.



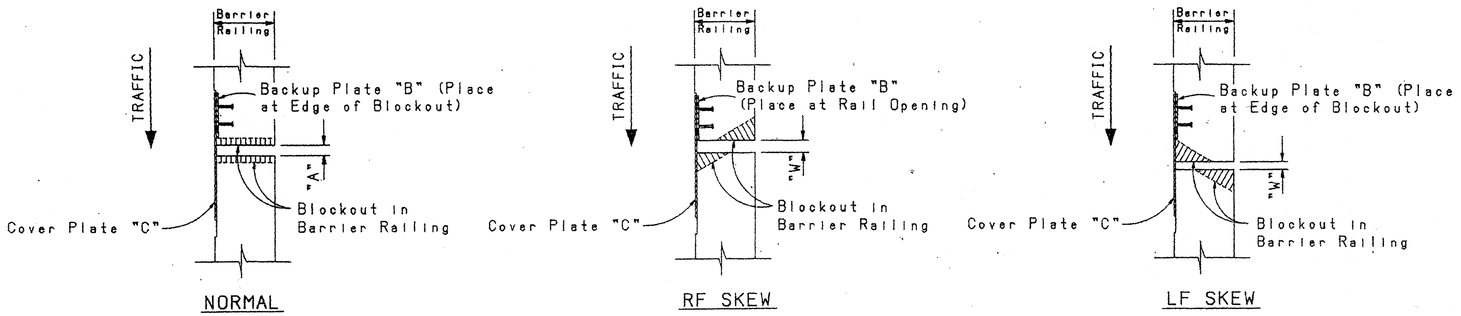
SECTION D-D



REMOVEABLE COVER PLATE "C"



BACKUP PLATE "B"



BACKUP PLATE "B" LOCATIONS

F.H.W.A. REGION NO. 6	SHEET NO.
NEW MEXICO PROJECT NO.	

NO.	DESCRIPTION	DATE	BY
6			
5			
4			
3			
2			
1			

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

BARRIER RAILING

DETAILS AT JOINT SEALS

LAYOUT BY: S.J.M. APPROVAL RECOMMENDED: BRIDGE ENGINEER 4-2-90 DATE
DRAWN BY: J.A.K.
CHECKED BY: S.J.M. APPROVED: Leonard D. Gardner DESIGN BUREAU CHIEF 2-4-92 DATE

SERIAL BBR-004 SHEET 40 OF 46

PLOT DATE: 2/4/92
DESIGNED BY: S.J.M. 4/90 CHECKED BY: S.J.M. 5/90
DETAILED BY: J.A.K. 4/90 CHECKED BY:

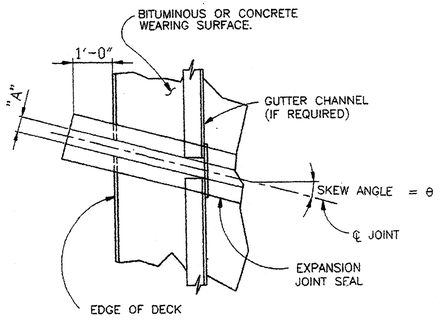
BRIDGE#1/STANDARDS/BRIDGE/MISC-DRAW$10SD
SR3-4

NEW MEXICO PROJECT NO.
F.H.W.A. REGION NO. 6

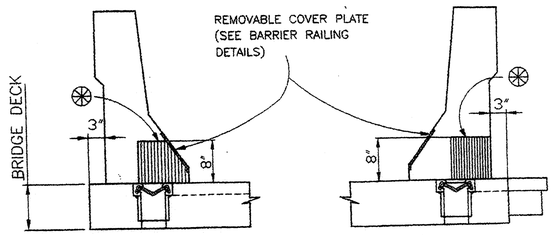
TABLE OF ALLOWABLE MOVEMENT LENGTHS AND ACCEPTABLE JOINT SEALS

SKEW	MOVEMENT LENGTH (FEET)				MANUFACTURER				JOINT MOVEMENT	* "A" [DIMENSION @ MID TEMP T_0]
	CONCRETE BRIDGE		STEEL BRIDGE		WATSON-BOMAN AND ACME	D.S. BROWN CO., INC.	STRUCTURAL ACCESSORIES INC.	R.J.WATSON		
	SEVERE CLIMATE (-10° TO 120° F) T_0 = 120° F	MODERATE CLIMATE (20° TO 120° F) T_0 = 70° F	SEVERE CLIMATE (-30° TO 120° F) T_0 = 45° F	MODERATE CLIMATE (0 TO 120° F) T_0 = 60° F	"STRIP SEAL" MODEL NO.	"STEELFLEX" MODEL NO.	"ONFLEX" MODEL NO.	"STRIP SEAL" MODEL NO.	(in.)	(in.)
0° to 15°	0-427	0-556	0-342	0-427	SE-400	SSA2	40SEQ	RJ-400	0 TO 4	2
15° to 30°	0-442	0-575	0-354	0-442	SE-400	SSA2	40SEQ	RJ-400	0 TO 4	2
30° to 45°	0-493	0-642	0-395	0-493	SE-400	SSA2	40SEQ	RJ-400	0 TO 4	2

* MAXIMUM "A" IS EQUAL TO TOTAL JOINT MOVEMENT



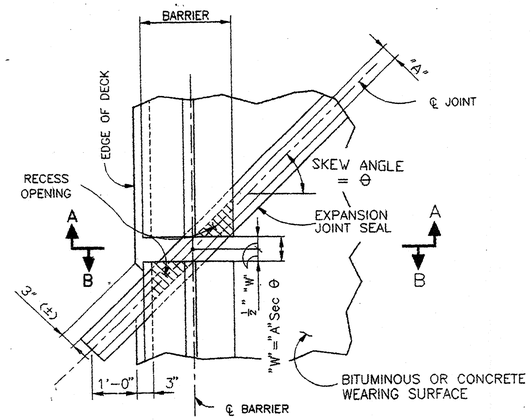
PART PLAN - SKEWED JOINT WITH METAL RAILING



SECTION A-A SECTION B-B

SIMILAR DETAIL FOR CURB AND SIDEWALK.

⊛ RECESS IN BASE OF WALL BARRIER



PART PLAN-SKEW JOINT WITH CONCRETE BARRIER RAILING

REQUIRED DRAWINGS

BJS-001 GENERAL DATA

BJS-002 TYPE A INSTALLATION

BJS-003 TYPE B INSTALLATION

GENERAL NOTES

1. JOINT SEALS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. SEALS HAVING EQUAL PERFORMANCE CHARACTERISTICS TO THOSE SHOWN MAY BE SUBSTITUTED IF THE ENGINEER'S WRITTEN APPROVAL IS OBTAINED AT LEAST TWO WEEKS PRIOR TO THE DAY OF THE BID OPENING.

2. JOINT SEAL SIZES ARE BASED ON AN INSTALLATION TEMPERATURE OF T_0 (DEGREES F, MIDPOINT TEMPERATURE) AND JOINT MOVEMENTS FOR A RANGE OF TEMPERATURES AS NOTED IN THE TABLE ON THIS SHEET. FOR INSTALLATION TEMPERATURES BELOW T_0 INCREASE DIMENSION "A" BY THE AMOUNT SHOWN BELOW. FOR INSTALLATION TEMPERATURES ABOVE T_0 DECREASE DIMENSION "A" BY THE AMOUNT SHOWN BELOW.

FOR CONCRETE BRIDGES:

CHANGE IN "A" = 0.000072 x L x cos θ x ΔT

FOR STEEL BRIDGES:

CHANGE IN "A" = 0.000078 x L x cos θ x ΔT

WHERE:
CHANGE IN "A" IS IN INCHES
L= MOVEMENT LENGTH IN FEET (SEE SUPERSTRUCTURE DETAILS)
θ = SKEW ANGLE
ΔT = CHANGE IN TEMPERATURE FROM T_0 IN DEGREES F.

EXAMPLE: (CONCRETE BRIDGE IN SEVERE CLIMATE T_0 = 55° F)
FOR T = 73° F, L = 100 FT. θ = 28°
CONCRETE BRIDGE, ΔT = 73° F - 55° F = 18° F
CHANGE IN "A" = 0.000072 x 100 x 0.8829 x 18
= 0.1144 INCHES: SAY 1/8 INCH

3. UNLESS OTHERWISE SPECIFIED, THE CONTRACTOR HAS THE OPTION OF INSTALLING EITHER TYPE "A" OR TYPE "B" JOINTS.

4. UNLESS OTHERWISE SPECIFIED ON THE PLANS, ALL STRUCTURES SHALL BE CONSIDERED TO BE SUBJECTED TO A SEVERE CLIMATE.

5. ALL SURFACES OF STEEL COMPONENTS OF THE SEAL, EXCEPT THOSE WHICH WILL BE IN CONTACT WITH THE ELASTOMERIC SEALING ELEMENT, SHALL BE GIVEN A PROTECTIVE COATING IN CONFORMANCE WITH THE SPECIFICATIONS. IN LIEU OF PAINTING, ALL COMPONENTS OF THE SEAL MAY BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO SPECIFICATION M-111.

NO.	DESCRIPTION	DATE	BY
6			
5	CHG. D.S. BROWN TO "SSA2"	11/99	TMC
4	GENERAL REVISIONS	4/96	KWZ
3	REV. GEN. NOTE 5, ADD NEW MFGR.	10/92	SJM
2	REVISED GENERAL NOTES	1/92	SJM
1	GENERAL REVISIONS	1/90	ERD

REVISIONS (OR CHANGE NOTICES)

DESIGNED BY: - Z.J.
DETAILED BY: - T.C.
CHECKED BY: T.M.

APPROVAL RECOMMENDATION — BRIDGE DESIGN ENGINEER — 28 Oct 99 DATE

APPROVED — DESIGN BUREAU CHIEF — DATE

NEW MEXICO STATE HIGHWAY & TRANSPORTATION DEPARTMENT

SYSTEM 1

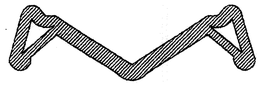
BRIDGE JOINT STRIP SEALS GENERAL DATA

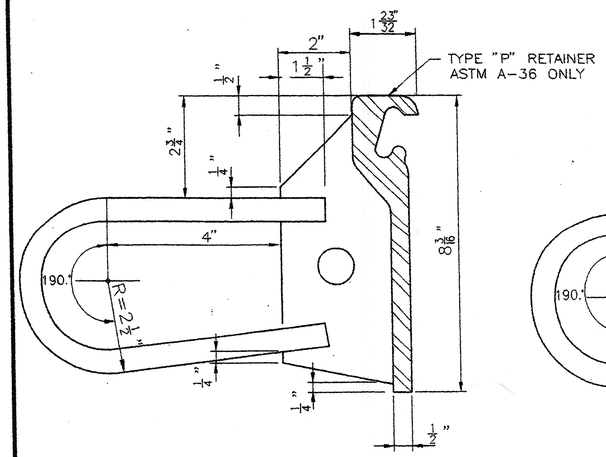
SERIAL BJS-001

SHEET 41 OF 46

NEW MEXICO PROJECT NO.
F.H.W.A. REGION NO. 6

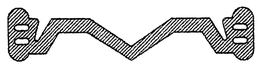
STRIP SEAL TYPE (SE)

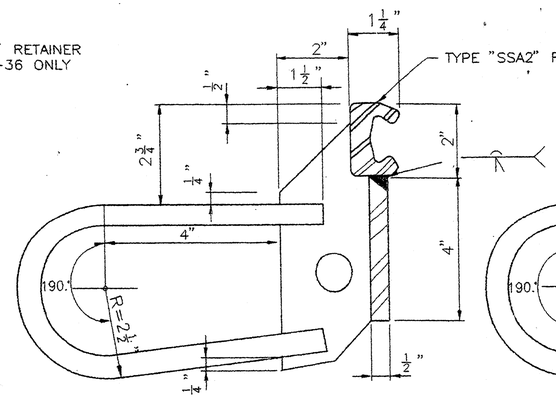




WATSON–BOWMAN & ACME

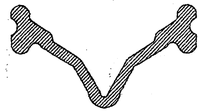
STEELFLEX SERIES SEAL A2R

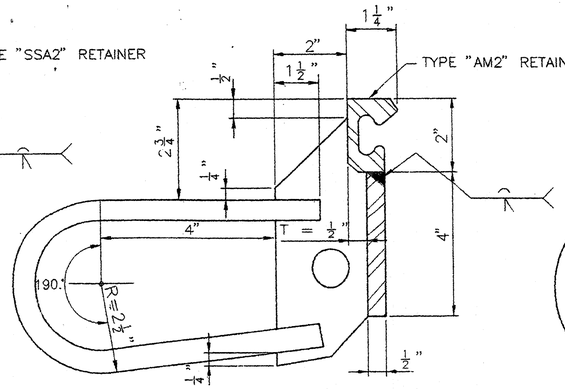




D.S. BROWN CO.

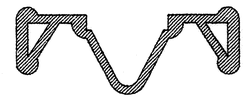
ONFLEX 40SEQ SEAL

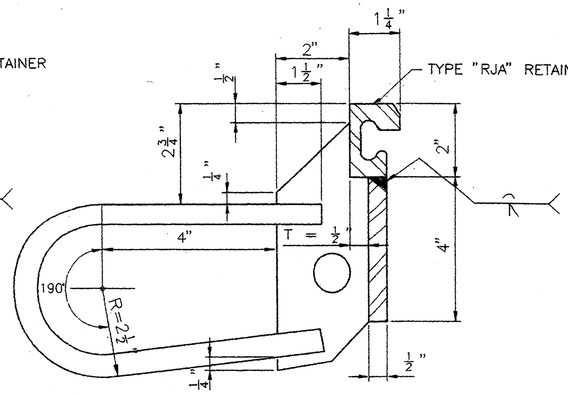




STRUCTURAL ACCESSORIES, INC.

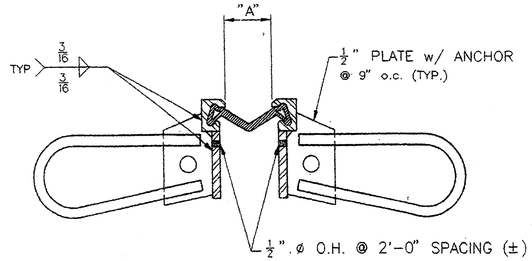
RJ SERIES STRIP SEAL



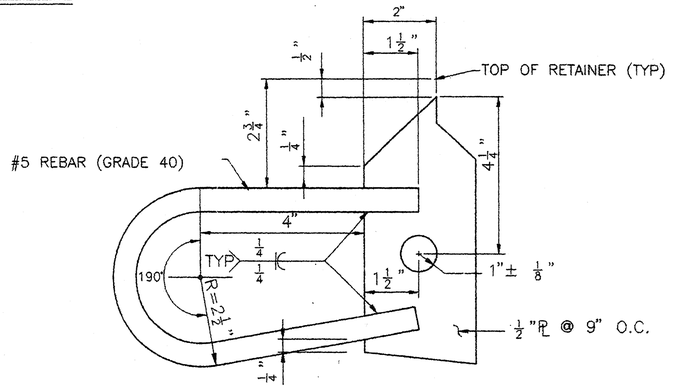


R.J.WATSON

* REMOVE BOLTS AND GRIND SURFACE OF RETAINER BAR SMOOTH AFTER INSTALLATION.



TYPICAL SECTION



ANCHOR DETAIL

* 1/2" x 2" LONG STUD BOLT
(TACK WELD TO RETAINER)

TEMPORARY SUPPORT ANGLES
@ 3'-0" MAX. SPACING.

9/16" ø
O.H.

9/16" x 2" SLOT

1/4" TYP
1/4"

TOP OF DECK

TOP OF STEEL RETAINER

"A"

#5 REBAR
@ 9" o.c.
(GRADE 40)

SEE NOTE 3

1'-3"

1/8"
7 3/4"
2 3/4"
1 1/2" (MIN. CLEARANCE)

ERECTION DETAIL

GENERAL NOTES

1. SEE SERIAL BJS–001 FOR APPROPRIATE MODEL NUMBERS AND DIMENSION "A".
2. THE 1/2" PLATE MAY BE ALTERED SLIGHTLY FROM THE DETAIL SHOWN TO BETTER FIT THE STEEL RETAINER PROVIDED.
3. THE TEMPORARY SUPPORT ANGLE SHALL BE SECURED IN POSITION SO AS TO PROVIDE FOR LATERAL AND VERTICAL ADJUSTMENT OF THE RETAINER BARS AND PERMIT FINAL FINISHING OF THE CONCRETE SURFACE AS APPROVED BY THE PROJECT MANAGER.
4. SHOULD THE DEPTHS OF THE WATSON–BOWMAN & ACME RETAINERS EXCEED THE DEPTH OF THE BRIDGE DECK, THE RETAINERS SHALL BE NOTCHED TO CLEAR THE BEAMS

NO.	DESCRIPTION	DATE	BY
6	REV. D.S. BROWN RET, JT. SEAL & DIMEN	10/99	TC
5	REV. ANCHOR DET. & ENTIRE DRAWING	4/96	K.W.Z.
4	REV. D.S. BROWN RET. JT. & NOTES	3/96	K.W.Z.
3	REV. WATSON–BOWAN & ACME RET.,JT.	5/95	K.W.Z.
2	GEN REV. ADD NEW SEAL	10/92	S.J.M.
1	GENERAL REVISIONS	1/90	S.J.M.

REVISIONS (OR CHANGE NOTICES)

DESIGNED BY: -Z.J.
DETAILED BY: - T.C.
CHECKED BY: T.M.

APPROVAL RECOMMENDATION — BRIDGE DESIGN ENGINEER — DATE 12.07.99
APPROVED — DESIGN BUREAU CHIEF — DATE

NEW MEXICO STATE HIGHWAY & TRANSPORTATION DEPARTMENT

SYSTEM 1

BRIDGE JOINT STRIP SEALS

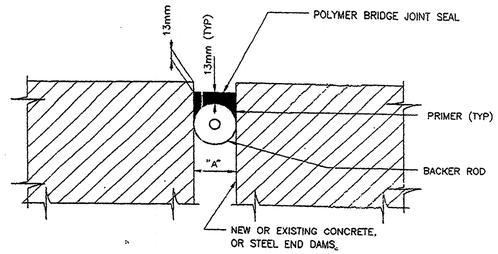
TYPE "A" INSTALLATION

SERIAL BJS–002

SHEET 42 OF 46

NEW MEXICO PROJECT NO.
F.H.W.A. REGION NO. 6

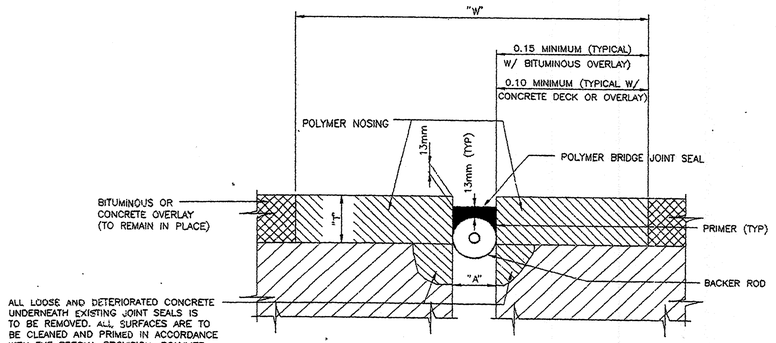
METRIC



BRIDGE DECK OR ABUTMENT BACKWALL

BRIDGE DECK

POLYMER BRIDGE JOINT SEAL TYPE "A"



BRIDGE DECK OR ABUTMENT BACKWALL

BRIDGE DECK

POLYMER BRIDGE JOINT SEAL TYPE "B"

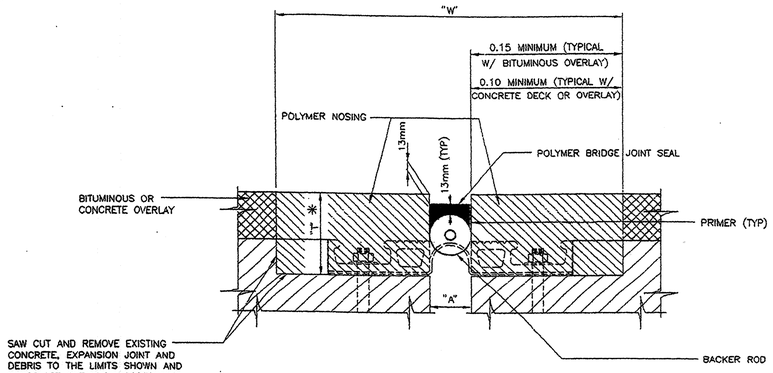
(NEW CONSTRUCTION OR REPAIR)

GENERAL NOTES

1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED ON THE DRAWING.
2. MATERIALS AND CONSTRUCTION OF POLYMER JOINT SEALS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIAL PROVISIONS FOR POLYMER BRIDGE JOINT SEALS, SECTION 562-A.
3. FOR NEW CONSTRUCTION, OR WHERE A BRIDGE DECK IS TO BE REPLACED, INSTALL NOSING MATERIALS AND SEAL ELEMENTS AFTER THE ENTIRE DECK ADJACENT TO THE JOINTS HAS BEEN PLACED AND ACHIEVED THE SPECIFIED DESIGN STRENGTH.
4. MOVEMENT LENGTHS FOR STEEL OR CONCRETE BRIDGES SHALL NOT EXCEED THE FOLLOWING:

GAP "A" IN mm	MOVEMENT LENGTH, METERS
13	0
25	18
50	36
75	54
100	72

5. WHEN OLDER BOLT-DOWN JOINT SEALS ARE BEING REPLACED, THE DIMENSIONS FOR "W" SHALL BE EQUAL TO THE OLD JOINT BLOCKOUT DIMENSIONS, OR THE MINIMUM SHOWN, WHICHEVER IS GREATER, PLUS ANY ADDITIONAL AMOUNTS NEEDED TO REPLACE SPALLED OR DETERIORATED CONCRETE AT THE EDGES OR UNDERNEATH THE OLD JOINT SEAL BLOCKOUT. ISOLATED AREAS REQUIRING EVEN GREATER WIDTHS DUE TO DETERIORATED CONCRETE SHALL ALSO BE IDENTIFIED ON THE BRIDGE PLANS. FOR NEW CONCRETE, WHERE A NOSING MATERIAL IS REQUIRED, THE DIMENSIONS "A", "W", AND "T" SHALL BE CALLED OUT ON THE PLANS.
6. IF A BITUMINOUS OVERLAY IS IN PLACE, THE DIMENSION "W" SHALL BE NO LESS THAN 2 × 0.15 + "A" = 0.30 + "A".



BRIDGE DECK OR ABUTMENT BACKWALL

BRIDGE DECK

* DIMENSION "T" AS SHOWN IN THIS DETAIL SHALL BE EQUAL TO THE DEPTH OF THE EXISTING EXPANSION JOINT ASSEMBLY PLUS THE DEPTH OF THE OVERLAY AS IS APPLICABLE.

POLYMER BRIDGE JOINT SEAL TYPE "B"

(INSTALLATION AT EXIST. EXPANSION JOINT ASSEMBLIES)

METRIC

NO.	DESCRIPTION	DATE	BY
6			
5			
4			
3			
2			
1			

REVISIONS (OR CHANGE NOTICES)

DESIGNED BY: K.W.Z
DETAILED BY: J.A.K.
CHECKED BY: P.H.

APPROVAL RECOMMENDATION: Glenn Hasselstein FOR BRIDGE DESIGN ENGINEER 1/7/97 DATE

APPROVED: DESIGN BUREAU CHIEF DATE

NEW MEXICO STATE HIGHWAY & TRANSPORTATION DEPARTMENT

SYSTEM 2

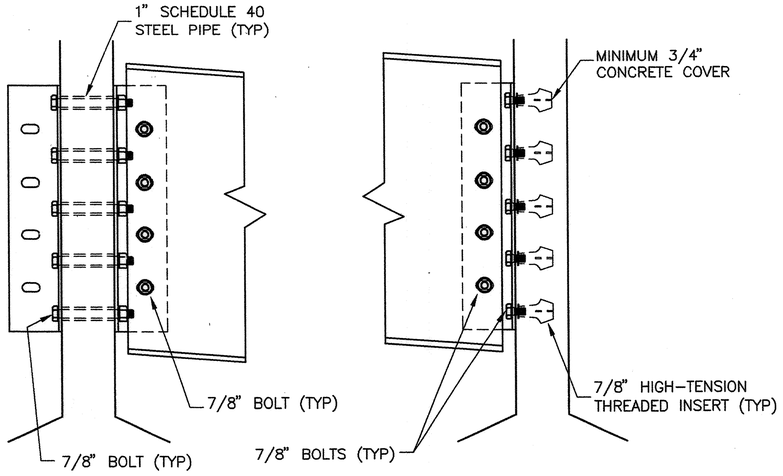
POLYMER BRIDGE JOINT SEALS

DRWG-BJS2

SHEET 43 OF 46

\\BRIDGE\VERTICAL\BJS2-8.SZ2 Tue Jan 07 08:51:16 1997

NEW MEXICO PROJECT NO.		SHEET NO.	
F.H.W.A. REGION NO. 6	CN	TOTAL SHEETS	



INTERIOR GIRDER
CONNECTION DETAIL

EXTERIOR GIRDER
CONNECTION DETAIL

PRESTRESSED CONCRETE BEAM TYPE	H (in)	A (in)	B (in)	C (in)	D (in)	L (in)	N	S1 (in)
TYPE 36	15	9	4 1/2	12	3 1/2	13	3	3
TYPE 45	15	10	4 1/2	16 1/2	3 1/2	13	3	3
TYPE 54	21	11	6 1/2	19 1/2	4	16	3	4
TYPE 63	33	11	7 1/2	16 1/2	5	28	4	6
TYPE 72	33	11	7 1/2	21	5	28	4	6
TYPE BT-54	33	9	7 1/2	13 1/2	5	28	4	6
TYPE BT-63	33	9	7 1/2	18	5	28	4	6
TYPE BT-72	33	9	7 1/2	22 1/2	5	28	4	6
TYPE 63-MODIFIED	33	9	7 1/2	16 1/2	5	28	4	6
TYPE 72-MODIFIED	33	9	7 1/2	21	5	28	4	6

GENERAL NOTES

1) ALL STRUCTURAL STEEL ELEMENTS IN THIS DETAIL SHALL BE COMPOSED OF WEATHERING STEEL CONFORMING TO AASHTO M 270, GRADE 50W, OR HOT-DIPPED GALVANIZED STEEL CONFORMING TO AASHTO M 270, GRADE 36. IF WEATHERING STEEL IS USED, ALL ELEMENTS SHALL BE SAND BLASTED TO SSPC SP-6 AND WET PRIOR TO SHIPPING. PAINTING OF THESE ELEMENTS IS NOT REQUIRED.

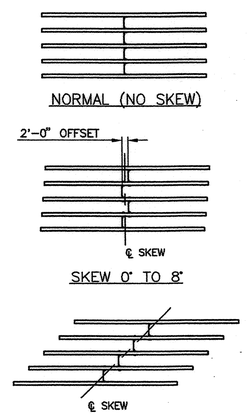
2) BOLTS SHALL MEET THE REQUIREMENTS OF AASHTO M 164. IF WEATHERING STEEL IS USED FOR THIS DETAIL, TYPE 3 WEATHERING STEEL BOLTS SHALL BE USED. IF GALVANIZED STEEL ELEMENTS ARE USED, BOLTS SHALL BE GALVANIZED AS PER AASHTO M 298.

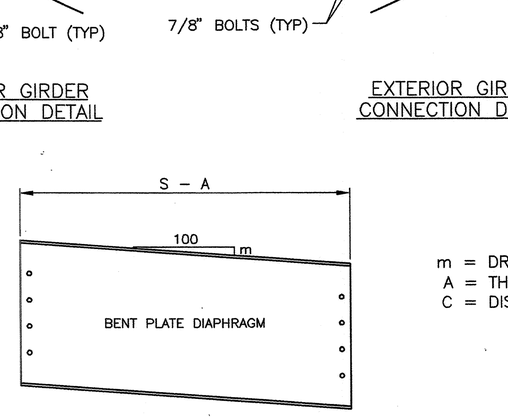
3) FOR BRIDGES WITHOUT SKEW, THE INTERIOR GIRDER CONNECTION DETAIL SHALL BE USED AS SHOWN. FOR SKEWED BRIDGES, THE OPPOSING CLIP ANGLE SHALL BE REPLACED WITH THE BACK PLATE SHOWN BELOW. DIAPHRAGMS SHALL BE OFFSET ON ALL SKEWED BRIDGES TO FACILITATE THE INSTALLATION OF THE BACK PLATES.

4) THE VERTICAL DISTANCE BETWEEN ANY TWO HOLES OR INSERTS SHALL NOT VARY FROM THE SPECIFIED DISTANCE BY MORE THAN 1/16". ALSO, THE TOTAL LENGTH OF THE GROUP OF HOLES OR INSERTS SHALL NOT VARY FROM THE DESIGN LENGTH BY MORE THAN 1/16". THE PRESTRESSED GIRDER FABRICATOR SHALL TAKE APPROPRIATE MEASURES TO ENSURE PROPER PLACEMENT OF INSERTS DURING THE GIRDER FABRICATION PROCESS.

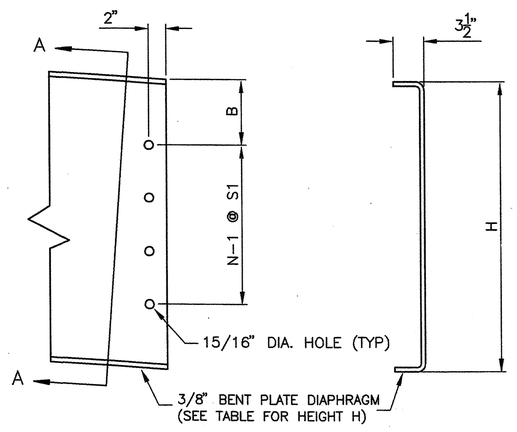
5) CLIP ANGLES AND BACK PLATES SHALL BE ATTACHED TO THE PRESTRESSED GIRDER AT THE FABRICATION SITE PRIOR TO TRANSPORT.

DIAPHRAGM PLACEMENT PATTERNS



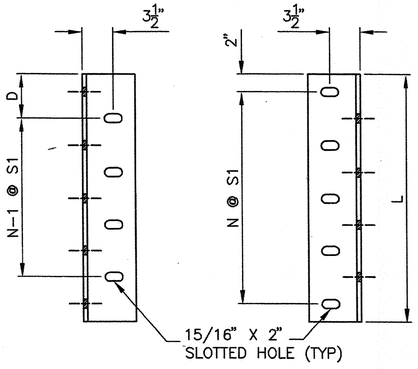


m = DRAINAGE SLOPE OR SUPERELEVATION IN PERCENT.
A = THICKNESS OF GIRDER WEB PLUS 3" (SEE TABLE).
C = DISTANCE FROM TOP OF BEAM TO ℄ OF FIRST INSERT.

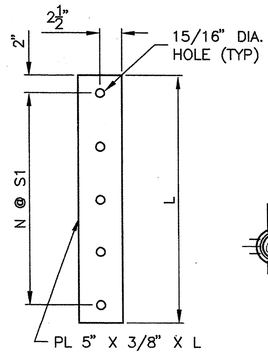


DIAPHRAGM END DETAIL SECTION A-A

BENT PLATE DIAPHRAGM DETAILS



CLIP ANGLE DETAILS
L 6 X 6 X 3/8"



BACK PLATE DETAIL
(SEE NOTE 3)

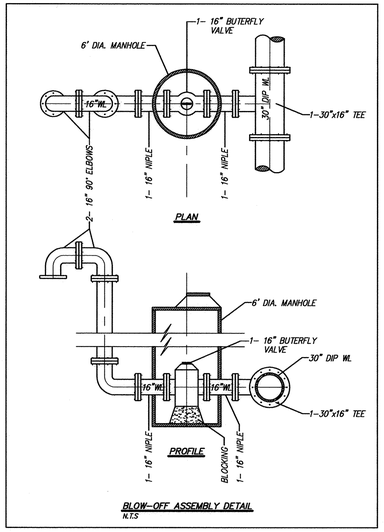
NEW MEXICO STATE HIGHWAY
& TRANSPORTATION DEPARTMENT

BOLTED STEEL DIAPHRAGMS FOR
PRESTRESSED CONCRETE GIRDERS

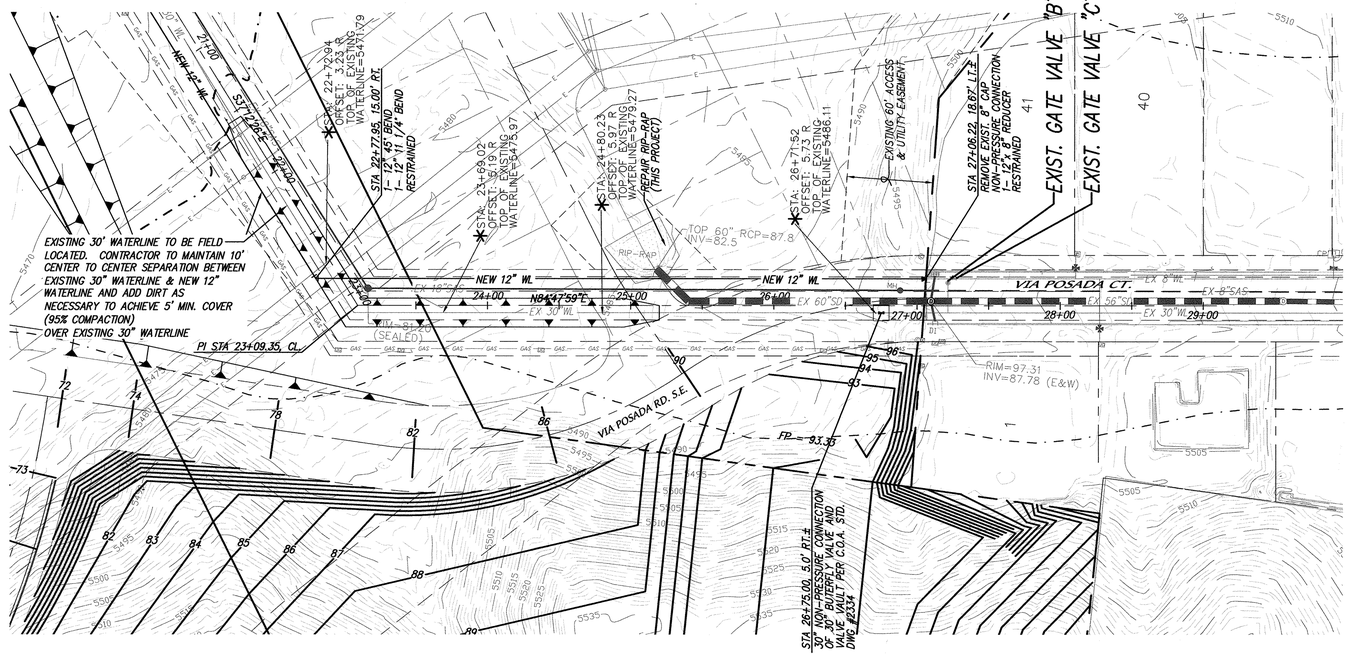
STANDARD DETAILS
U.S. STANDARD UNITS

SHEET 44 OF 46

RECORD DRAWINGS



BLOW-OFF ASSEMBLY DETAIL
N.T.S



NOTES

1. ALL STATIONING IS CENTERLINE STATIONING.

RESTRAINED JOINT LENGTH FOR BENDS, VALVES, DEAD ENDS (FT.)					
PIPE SIZE	90°	45°	22.5°	11.25°	VALVE
8"	22'	9'	4'	2'	60'
10"	26'	11'	5'	3'	72'
12"	30'	12'	6'	3'	85'

LENGTH OF RESTRAINED PIPE ON EACH SIDE OF THE BEND. RESTRAIN BRANCH AT FITTING ONLY MINIMUM ATTACHED PIPE LENGTH, RUN SIDE OF TEE: 10.00 FEET.

RESTRAINED JOINT LENGTHS FOR REDUCERS (FT.)		
PIPE SIZE	LARGE SIDE	SMALL SIDE
12" X 8"	45'	68'

RESTRAINED JOINT LENGTH FOR TEES (FT.)		
PIPE SIZE	RUN	BRANCH
12"x12"x12"	18'	3'

Certification
THE CHANGES SHOWN HEREON ARE BASED UPON A FIELD SURVEY CONDUCTED BY ME OR UNDER MY SUPERVISION AND REFLECT THE LOCATIONS (VERTICALLY AND HORIZONTALLY) TO THE BEST OF MY KNOWLEDGE AND BELIEF.

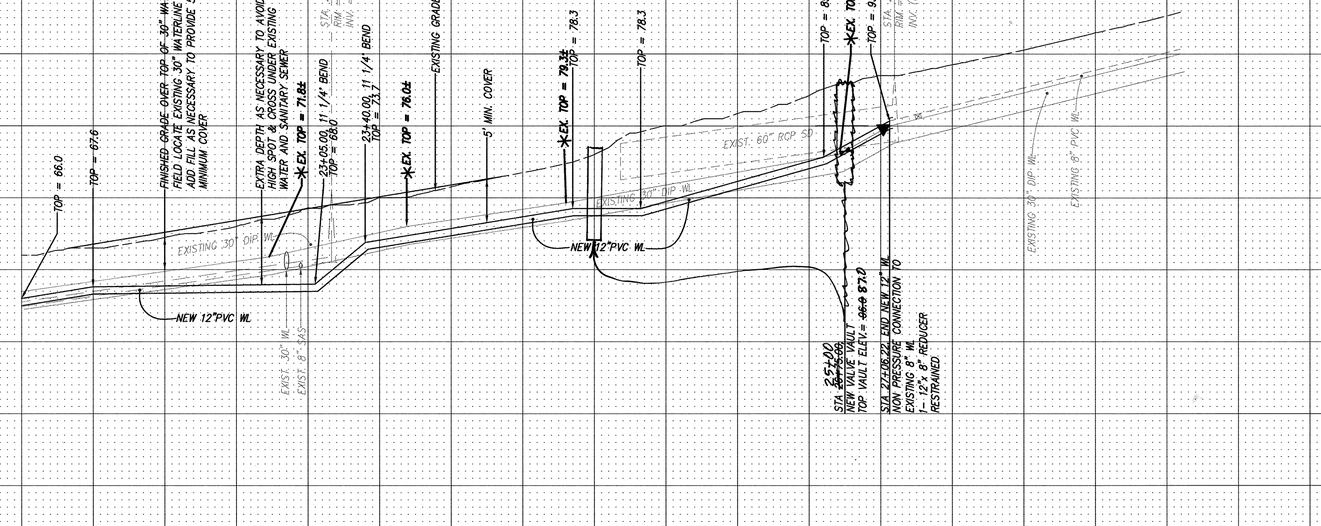
Will Ploetner, Jr.

* PER AS-BUILT SURVEY DATED JUNE 27TH, 20005

N

50' 25' 0 50' 100'
SCALE: 1" = 50'

VIA POSADA CT. WATERLINE
STA. 21+00.00 TO STA. 27+00.00
SCALE: HORZ. 1" = 50'



NGVD 29

RECORD DRAWING
CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, Mark Goodwin, NMPE 8948, of the firm Mark Goodwin & Associates, PA, a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision, and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met, except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me or personnel under my direction, and survey information provided by Will Ploetner, Jr. NMPS number 14271.

Mark Goodwin NMPE 8948 5/11/09

I, Mark Goodwin, certify that this electronic version is identical to the original reproducible APPROVED FOR CONSTRUCTION drawings signed by Jan Hancock on April 20, 2005.

AS BUILT INFORMATION
CONTRACTOR: AUZ, INC
WORK STARTED by: Cartesian Surveys Inc. DATE: 1/06
INSPECTOR'S ACCEPTANCE BY: ACA DATE: 4/07
FIELD VERIFICATION BY: Cartesian Surveys Inc. DATE: 4/07
DRAWINGS CORRECTED BY: MGA DATE: 4/09
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS
STATION "5-M22" IS LOCATED 8.7 MI. SE OF DOWNTOWN ALBUQUERQUE ON THE EAST SIDE OF THE MUNICIPAL LIMITS LINE IN THE FOUR HILLS SUBDIVISION AREA. STATION IS 600 FT. EAST OF MUNICIPAL LIMITS LINE, 77.9' SE OF POWER POLE #5337 & 186.0' NW OF POWER POLE #60. STATION IS A STANDARD ACS BRASS DISK SET IN A CONCRETE MONUMENT IN THE GROUND. STATION IS STAMPED "5-M22, 1975ACS". X= 424,017.61, Y= 1,475,700.01, (NAD 1927), Z= 5594.518 (GLD 1929).

SURVEY INFORMATION
FIELD NOTES
NO. DATE BY

ENGINEER'S SEAL
JAMES D. HANCOCK NEW MEXICO 10201 REGISTERED PROFESSIONAL ENGINEER
4-20-05

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
DESIGNED BY		JEH	
DRAWN BY		DER	
CHECKED BY		DMG	

DATE 02/05
DATE 02/05
DATE 02/05

MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
P.O. BOX 90606
ALBUQUERQUE, NEW MEXICO 87199
(505) 828-2200, FAX (505) 797-9539

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE:
JUAN TABO BOULEVARD S.E. - PHASE II
VIA POSADA COURT WATERLINE

DESIGN REVIEW COMMITTEE: APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE
CITY ENGINEER APPROVAL: APPROVED JUL 28 2005 CITY ENGINEER
LAST DESIGN UPDATE: MO./DAY/YR.

CITY PROJECT NO. 756181 | ZONE MAP NO. M-21/N-21 | SHEET OF 45 46 | C-11

A02jobs\A2079 4 HILS\Bridge Plans\PHASE II\A2079-Bridge-up3.dwg\06-23-05\DER5

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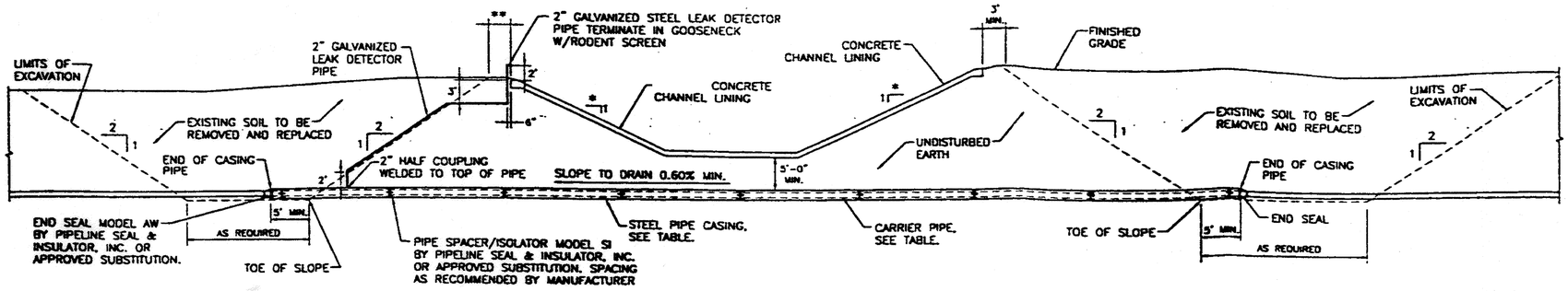
RECORD DRAWINGS



BORING SECTION AT *NEW* CHANNEL SECTION

N.T.S.

* SIDE SLOPE VARIES

** SEE NOTE 3.C

TABLE 1

CASING SIZE VERSUS CARRIER SIZE

STEEL CASING DIAMETER AND WALL THICKNESS	CARRIER PIPE (INSIDE PIPE DIAMETER)
14" SCHEDULE 30	6"
16" SCHEDULE 30	8"
18" STANDARD CLASS	10"
22" STANDARD CLASS	12"
24" SCHEDULE 20	14"
26" SCHEDULE 20	16"
30" 0.375" WALL	18"
36" 0.375" WALL	24"

TABLE 2

SIZE AND WALL THICKNESS OF SMOOTH WALL OR SPIRAL WELDED ENCASEMENT PIPE FOR BORING AND JACKING

NOMINAL DIAMETER (IN.)	NOMINAL WALL THICKNESS (IN.)
14 THROUGH 22	0.375
24 THROUGH 36	0.500
38 THROUGH 48	0.562

GENERAL NOTES

1. SPECIFICATION

   SECTION 710, BORING DRILLING AND JACKING OF THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS SHALL APPLY.

2. LOCATION AND ALIGNMENT

   A. LOCATE UTILITY CROSSINGS AT RIGHT ANGLES TO THE FLOOD CONTROL CHANNEL ALIGNMENT WHERE POSSIBLE.

3. CLEARANCE

   A. A MINIMUM 5 FOOT CLEARANCE IS REQUIRED BETWEEN THE UNDERSIDE OF A LINED CHANNEL OR BOTTOM OF AN UNLINED CHANNEL AND THE TOP OF CASING OR RUNNEL LINING CROSSING.

   B. INVERT GRADES SHALL BE SURVEY CHECKED EVERY 20 FEET OF WELDED STEEL CASING INSTALLED BY THE BORING AND JACKING METHOD.

   C. CLEARANCE FOR PIPELINES CARRYING TRANSMITTANTS WHICH ARE FLAMMABLE, CORROSIVE, EXPANSIVE, ENERGIZED, OR UNSTABLE, PARTICULARLY IF CARRIED AT HIGH PRESSURE POTENTIAL, MUST COMPLY WITH STATE, FEDERAL AND UTILITY CODES, BUT IN NO CASE SHALL THE CLEARANCE BE LESS THAN AS SHOWN IN 3.A ABOVE.

4. BORING PITS AND OTHER OPEN CUT EXCAVATIONS

   A. NO EXCAVATION SHALL BE PERFORMED ON FLOOD CONTROL CHANNEL DIKE EMBANKMENTS.

   B. EXCAVATION SIDE SLOPES ADJACENT TO THE FLOOD CONTROL CHANNEL MUST NOT BE STEEPER THAN 2 HORIZONTAL: 1 VERTICAL.

   C. IF THE FLOOD CONTROL CHANNEL IS IN A CUT SECTION, THE TOP SLOPE LIMIT OF EXCAVATION MUST BE A MINIMUM 12 FEET HORIZONTAL FROM THE TOP EDGE OF THE CHANNEL. IF THE CHANNEL IS IN A FILL SECTION, THE TOP SLOPE LIMIT OF EXCAVATION SHALL BE CLOSER THAN THE OUTSIDE TOE OF THE FILL.

   D. IMPACT DRIVEN PILING IS PROHIBITED FROM BEING INSTALLED ADJACENT TO ANY FLOOD CONTROL CHANNEL. AUGER-CAST DRILLED PILING MAY BE CONSIDERED ON A CASE- BY-CASE BASIS.

   E. SURFACE DRAINAGE SHALL BE DIRECTED AWAY FROM OPEN CUT EXCAVATIONS.

   F. SURROUNDING TERRAIN SHALL BE RESTORED TO ITS ORIGINAL CONDITION UPON COMPLETION OF THE WORK.

   G. THOROUGHLY COMPACT BACKFILL AT THE PROPER MOISTURE CONTENT.

      1) PERFORM COMPACTION BY USE OF MECHANICAL TAMPERS WITH THE ASSISTANCE OF HAND TAMPS WHEN NECESSARY BEFORE PLACING NEXT LAYER.

      2) PLACE BACKFILL IN 6 INCH LOOSE LIFTS.

      3) COMPACT BACKFILL TO THE FOLLOWING DENSITY REQUIREMENTS:

         a) 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557 (MODIFIED PROCTOR)
         OR
         b) 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D-698 (STANDARD PROCTOR)

4. G. (CONT.)

      4) AFTER COMPACTION, THE MOISTURE CONTENT SHALL BE WITHIN THE LIMITS OF 3 PERCENTAGE POINTS ABOVE OPTIMUM TO 2 PERCENTAGE POINTS BELOW OPTIMUM MOISTURE CONTENT.

      5) DETERMINE THE IN-PLACE MOISTURE CONTENT AND DENSITY OF THE BACKFILL AT A FREQUENCY OF NOT LESS THAN ONE SAMPLE FOR EACH 500 CUBIC YARDS OF BACKFILL PLACED. TESTING AT MORE FREQUENT INTERVALS MAY BE APPROPRIATE DEPENDENT ON JOB CONDITIONS ENCOUNTERED.

   H. DISPOSE OF ALL SURPLUS EARTH OR EXCAVATED MATERIAL OUTSIDE THE LIMITS OF THE RIGHT-OF-WAY.

   I. ANY ADJACENT ROAD OR STREET DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO A CONDITION EQUAL TO OR BETTER THAN ITS CONDITION BEFORE CONSTRUCTION.

5. ENCASEMENTS

   A. ENCASEMENTS SHALL EXTEND 5' BEYOND THE PROJECTED TOE OF ANY EXCAVATED SLOPE.

   B. ONLY CERTIFIED WELDERS ARE TO BE USED FOR JOINING OF THE WELDED CASING SECTIONS.

   C. VENTS FOR ENCASED PIPELINES CARRYING GAS OR LIQUID FUEL SHOULD BE EXTENDED TO THE RIGHT-OF-WAY LINE, OR AS OTHERWISE APPROVED BY THE ENGINEER. A VENT SHALL BE PLACED AT THE HIGH END OF SHORT ENCASEMENTS AND AT BOTH ENDS FOR ENCASEMENTS GREATER THAN 150 FEET IN LENGTH.

   D. CASING PIPE SHALL BE SO CONSTRUCTED AS TO PREVENT LEAKAGE OF ANY SUBSTANCE FROM THE CASING THROUGHOUT ITS LENGTH. PROVIDE LEAK DETECTOR SYSTEM AT THE LOW END OF THE PIPE CASING.

   E. ENCASEMENTS SHALL BE SO INSTALLED AS TO SLOPE TO ONE END.

   F. THE ANNULAR SPACE BETWEEN THE ENCASEMENT AND THE CARRIER SHALL BE SEALED AT EACH END.

6. APPURTENANCES

   DRAINS, MARKERS, SHUT-OFFS, AND MANHOLES ARE APPURTENANCES TO UTILITY INSTALLATIONS. CONTROLS FOR SUCH APPURTENANCES INCLUDE

   A. DRAINS ARE APPURTENANCES BY WHICH LIQUIDS OR HEAVY GASES MAY BE EVACUATED OR EXHAUSTED. DRAIN OUTFALL LOCATIONS ARE TO BE APPROVED BY THE ENGINEER.

   B. PLACE READILY IDENTIFIABLE AND SUITABLE MARKERS AT THE RIGHT-OF-WAY LINE WHERE IT IS CROSSED BY PIPELINES CARRYING TRANSMITTANTS WHICH ARE FLAMMABLE, CORROSIVE, EXPANSIVE, ENERGIZED, OR UNSTABLE, PARTICULARLY IF CARRIED AT HIGH PRESSURE OR POTENTIAL, EXCEPT WHERE A VENT WILL SERVE AS A MARKER. MARKERS ARE ALSO DESIRABLE FOR OTHER PIPELINES.

6. (CONT.)

   C. ACCESSIBLE EMERGENCY SHUT-OFF VALVES SHALL BE INSTALLED WITHIN EFFECTIVE DISTANCES EACH SIDE OF THE FLOOD CONTROL CHANNEL AS MUTUALLY AGREED TO BY THE ENGINEER AND THE UTILITY. WHERE PIPELINES ARE PROVIDED WITH AUTOMATIC CONTROL STATIONS AT LOCATIONS AND WITHIN DISTANCES APPROVED BY THE ENGINEER, NO ADDITIONAL VALVES SHALL BE REQUIRED. ALL VALVES LOCATED WITHIN CHANNEL RIGHTS-OF-WAY SHALL BE IN A PRECAST CONCRETE MANHOLE SECTION WITH A MANHOLE TYPE COVER.

   D. PROVIDE MANHOLES AT OPPOSITE ENDS OF ENCASEMENT AS DIRECTED BY THE PROJECT ENGINEER.
      1) TO PERMIT VISUAL INSPECTION FOR LEAKAGE;
      2) TO PERMIT PUMP OUT, OR BYPASS PUMPING IF REQUIRED FOR A SEWER LINE;
      3) TO PERMIT PULLING OF TELEPHONE OR ELECTRICAL CONDUIT FOR REPAIR OR REPLACEMENT;
      4) TO PERMIT REMOVAL AND REPLACEMENT OF PIPE SECTIONS.

   E. MANHOLES SHOULD BE DESIGNED AND LOCATED IN SUCH A MANNER THAT WILL CAUSE THE LEAST INTERFERENCE WITH CHANNEL MAINTENANCE OR OPERATION AND OTHER UTILITIES.

   F. PEDESTALS OR OTHER ABOVE GROUND UTILITY APPURTENANCES INSTALLED AS PART OF AN UNDERGROUND CABLE SYSTEM SHALL BE LOCATED AT OR NEAR THE RIGHT-OF-WAY LINE.

7. INSTALLATION STANDARDS

   A. IN ADDITION TO THE REQUIREMENTS OF SECTION 710 OF THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS, FOR CONCRETE LINED CHANNELS, DEPENDING ON THE STABILITY OF THE SOIL ZONE BETWEEN THE SOIL ZONE BETWEEN THE CASING AND THE BOTTOM OF THE CHANNEL LINING, CORE DRILLING ALONG THE BOTTOM OF THE CHANNEL AND ADJACENT TO UNDERDRAINS MAY BE REQUIRED. THESE CORED HOLES SHOULD BE POSITIONED TO PROVIDE PRESSURE RELIEF FOR PREVENTION OF HYDRAULIC JACKING AND BUCKLING OF THE CONCRETE CHANNEL LINER.

AS BUILT INFORMATION
CONTRACTOR AUI, Inc
WORK STAKED BY: Cartesian Surveys Inc. DATE 9/05
AS-BUILT SURVEY ACCEPTANCE BY MLA DATE 9/07
FIELD VERIFICATION BY Cartesian Surveys Inc. DATE 9/10
DRAWINGS CORRECTED BY MLA DATE 9/07
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES
BY DATE
NO.

ENGINEER'S SEAL
JAMES D. HUGHES 15074 NEW MEXICO REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REMARKS: REVISIONS DESIGN	BY	DATE
				05/05
				05/05
				05/05

DESIGNED BY JDH
DRAWN BY DER
CHECKED BY DMG

dmg MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
P.O. BOX 90606
ALBUQUERQUE, NEW MEXICO 87199
(505) 828-2200, FAX (505) 797-9539

ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY

JUAN TABO BOULEVARD S.E. - PHASE II

TITLE:

WATER LINE DETAILS

DESIGN REVIEW COMMITTEE: APPROVED JUL 27 2005 DESIGN REVIEW COMMITTEE
CITY ENGINEER APPROVAL: APPROVED JUL 28 2005 CITY ENGINEER
LAST DESIGN UPDATE: MO./DAY/YR. | MO./DAY/YR.

CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF	
756181	M-21/N-21	46	46	C-12

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