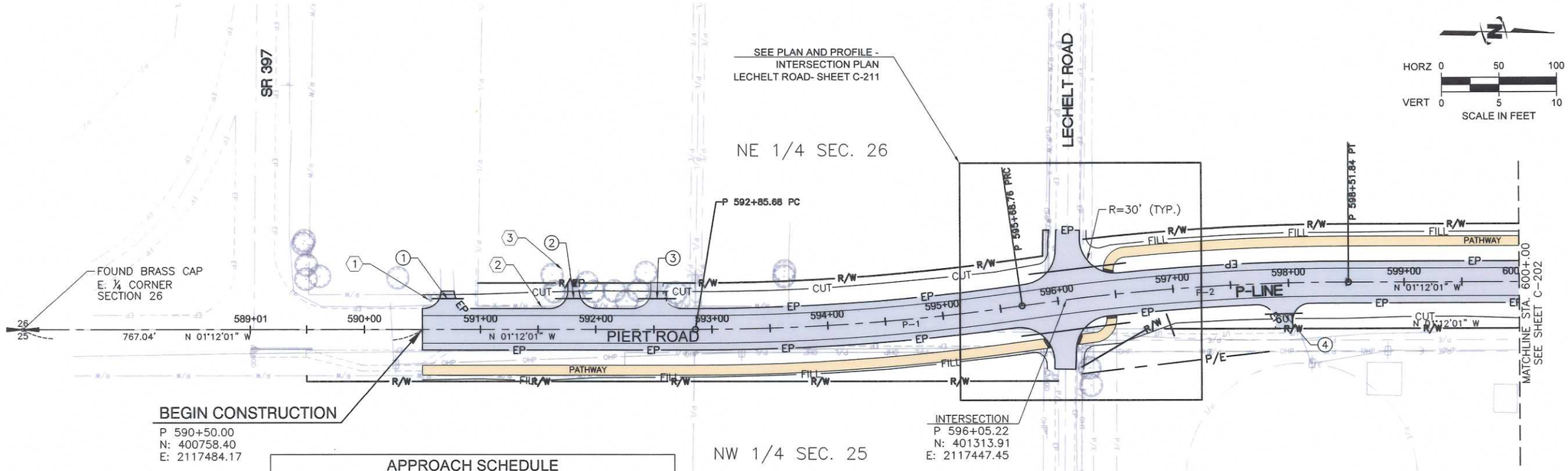
ALIGNMENT CURVE DATA							
CURVE NO.	PI STA.	DEGREE	DELTA	LENGTH	RADIUS	TANGENT	CHORD BEARING
P-1	594+27.46	2°51'53.24"	8°06'34.67"	283.08'	2000.00	141.78'	N5°15'18.03"W
P-2	597+10.54	2°51'53.24"	8°06'34.67"	283.08'	2000.00	141.78'	N5°15'18.03"W

TOWNSHIP 8 NORTH, RANGE 30 EAST, WILLAMETTE MERIDIAN



APPROACH SCHEDULE			
STATION	WIDTH	CULVERT/LENGTH	APPROX. LENGTH
P 590+72.00 LT.	11'	12" DIAM. CMP/28'	15'
P 591+80.71 LT.	10'	12" DIAM. CMP/32'	22'
P 592+52.77 LT.	10'	12" DIAM. CMP/32'	22'
P 597+95.00 RT.	15'	12" DIAM. CMP/32'	21'

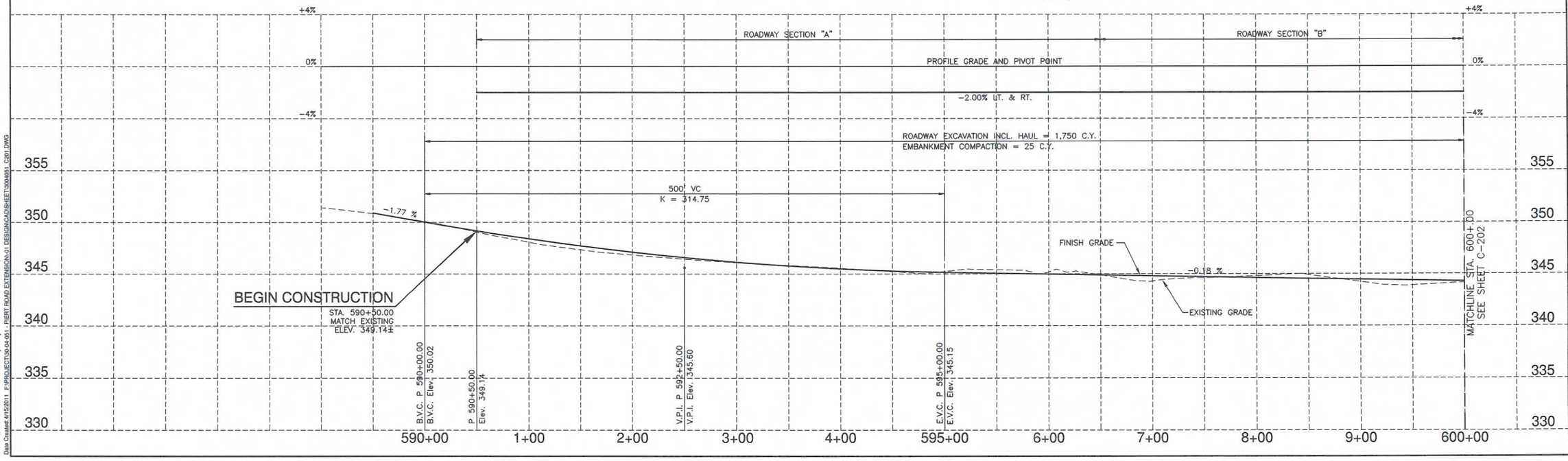
NOTE

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

CALL 2 WORKING DAYS BEFORE YOU DIG 1-800-424-5555

LEGEND:

- (#) - QUANTITY TABULATION NOTE
- (#) - STRUCTURE NOTE



J-U-B ENGINEERS, INC.
2810 W. Clearwater Ave.
Suite 201
Kennewick, WA 99336
Phone: 509.783.2144
Fax: 509.736.0790
www.jub.com

TRAVIS A. MARDEN — STATE OF WASHINGTON — 39982 — REGISTERED PROFESSIONAL ENGINEER — 9/21/12

REUSE OF DRAWINGS
ANY DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF J-U-B ENGINEERS, INC.

NO.	DESCRIPTION	REVISION	BY	APP'L	DATE

PIERT ROAD EXTENSION - CE 1619 CRP
BENTON COUNTY

PLAN & PROFILE STA. 589+01 TO STA. 600+00

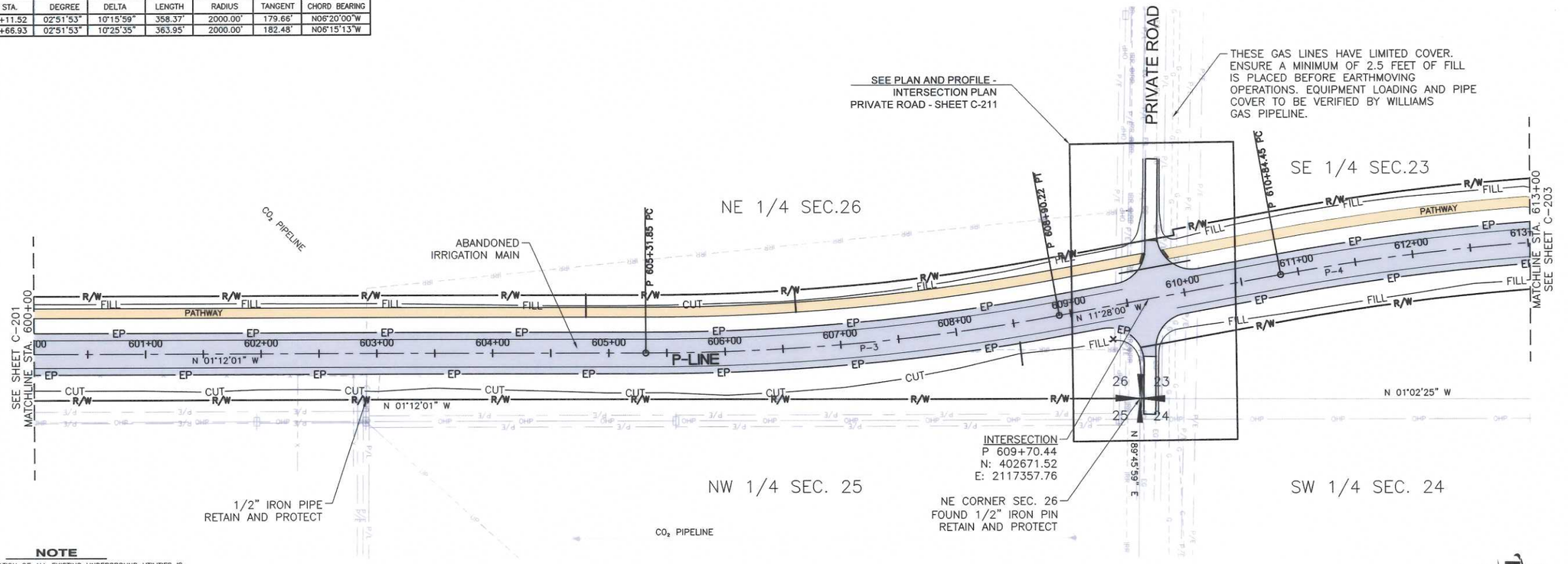
FILE: 3004051_C201
JUB PROJ. # : 30-04-051
DRAWN BY: STT
DESIGN BY: TAM
CHECKED BY: CSE
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 3/28/2012

SHEET NUMBER:
C-201
15 OF 38

Plot Date: 3/29/2012 10:04 AM Plotted By: Mary M. Garske
Data Created 4/15/2011 F:\PROJECT\30-04-051 - PIERT ROAD EXTENSION\-01 DESIGN\CAD\SHEET\3004051_C201.DWG

ALIGNMENT CURVE DATA							
CURVE NO.	PI STA.	DEGREE	DELTA	LENGTH	RADIUS	TANGENT	CHORD BEARING
P-3	607+11.52	02°51'53"	10°15'59"	358.37'	2000.00'	179.66'	N06°20'00"W
P-4	612+66.93	02°51'53"	10°25'35"	363.95'	2000.00'	182.48'	N06°15'13"W

TOWNSHIP 8 NORTH, RANGE 30 EAST, WILLAMETTE MERIDIAN



NOTE

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

CALL 2 WORKING DAYS BEFORE YOU DIG 1-800-424-5555

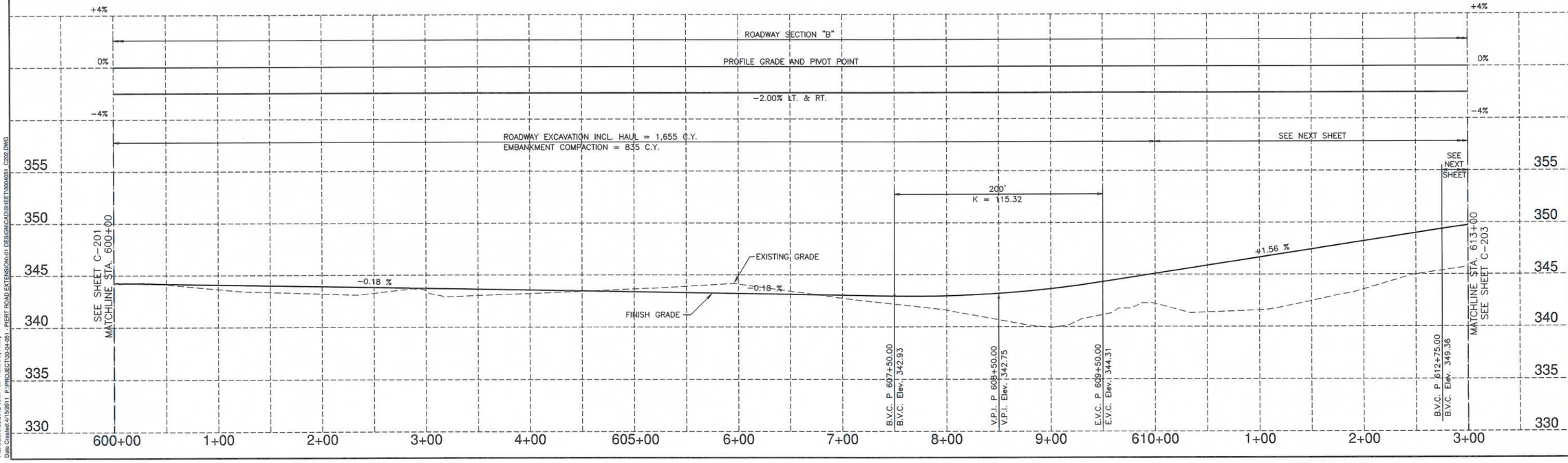
LEGEND:

(#) - QUANTITY TABULATION NOTE

(#) - STRUCTURE NOTE

0 50 100

SCALE IN FEET



J-U-B ENGINEERS, INC.
2810 W. Clearwater Ave.
Suite 201
Kennewick, WA 99336
Phone: 509.783.2144
Fax: 509.736.0790
www.jub.com

TRAVIS A. MARDEN — STATE OF WASHINGTON — 30882 — REGISTERED PROFESSIONAL ENGINEER

REUSE OF DRAWINGS
THE DOCUMENTS PREPARED BY J-U-B ENGINEERS, INC. ARE INSTRUMENTS OF SERVICE FOR USE SOLELY WITH RESPECT TO THIS PROJECT AND, UNLESS OTHERWISE PROVIDED, J-U-B ENGINEERS, INC. SHALL BE DEEMED THE AUTHOR AND OWNER OF THESE DOCUMENTS AND RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING THE COPYRIGHT THEREIN. THE DOCUMENTS SHALL NOT BE USED IN WHOLE OR IN PART FOR ANY PURPOSE WHATSOEVER WITHOUT THE WRITTEN CONSENT OF J-U-B ENGINEERS, INC. VISUAL CONTACT WITH THESE DOCUMENTS SHALL CONSTITUTE PRIMA FACIE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS.

NO.	DESCRIPTION	BY	APPR.	DATE
	REVISION			

PIERT ROAD EXTENSION - CE 1619 CRP
BENTON COUNTY

PLAN & PROFILE STA. 600+00 TO STA. 613+00

FILE : 3004051_C202
JUB PROJ. # : 30-04-051
DRAWN BY: STT
DESIGN BY: TAM
CHECKED BY: CSE
ONE INCH AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 3/28/2012

SHEET NUMBER:
C-202
16 OF 38

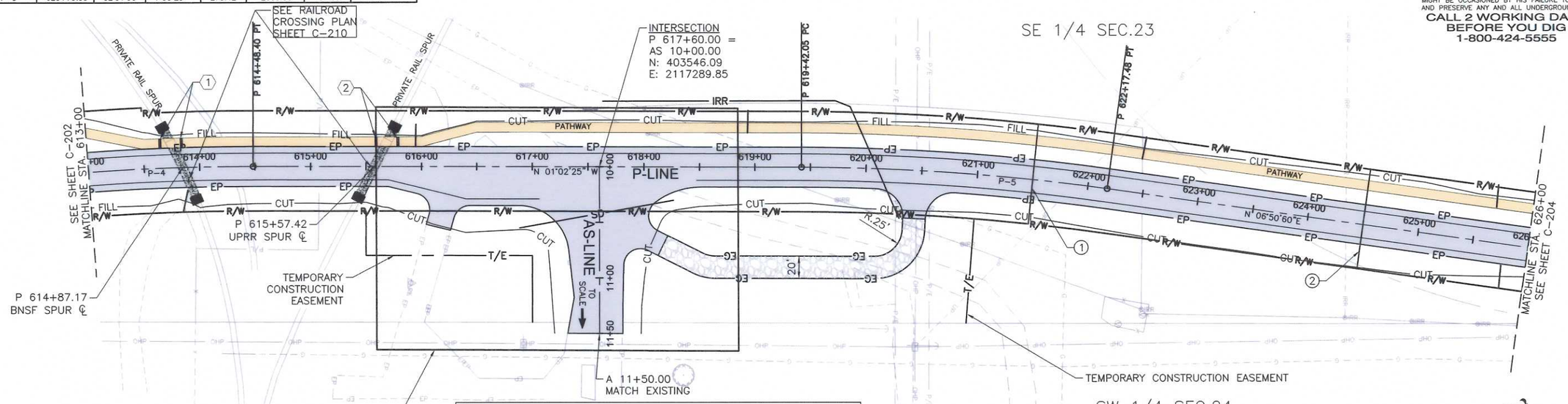
Plot Date: 3/28/2012 10:01 AM Plotted By: Mary M. Garske
Date Created: 4/15/2011 P:\PROJECTS\30-04-051 - PIERT ROAD EXTENSION\01 DESIGN\CAD\SHEET\3004051_C202.DWG

ALIGNMENT CURVE DATA

CURVE NO.	PI STA.	DEGREE	DELTA	LENGTH	RADIUS	TANGENT	CHORD BEARING
P-4	SEE SHEET C-202						
P-5	620+79.99	02°51'53"	7°53'25"	275.42	2000.00'	137.93'	N02°54'17"E

TOWNSHIP 8 NORTH, RANGE 30 EAST, WILLAMETTE MERIDIAN

NOTE
THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
CALL 2 WORKING DAYS BEFORE YOU DIG 1-800-424-5555

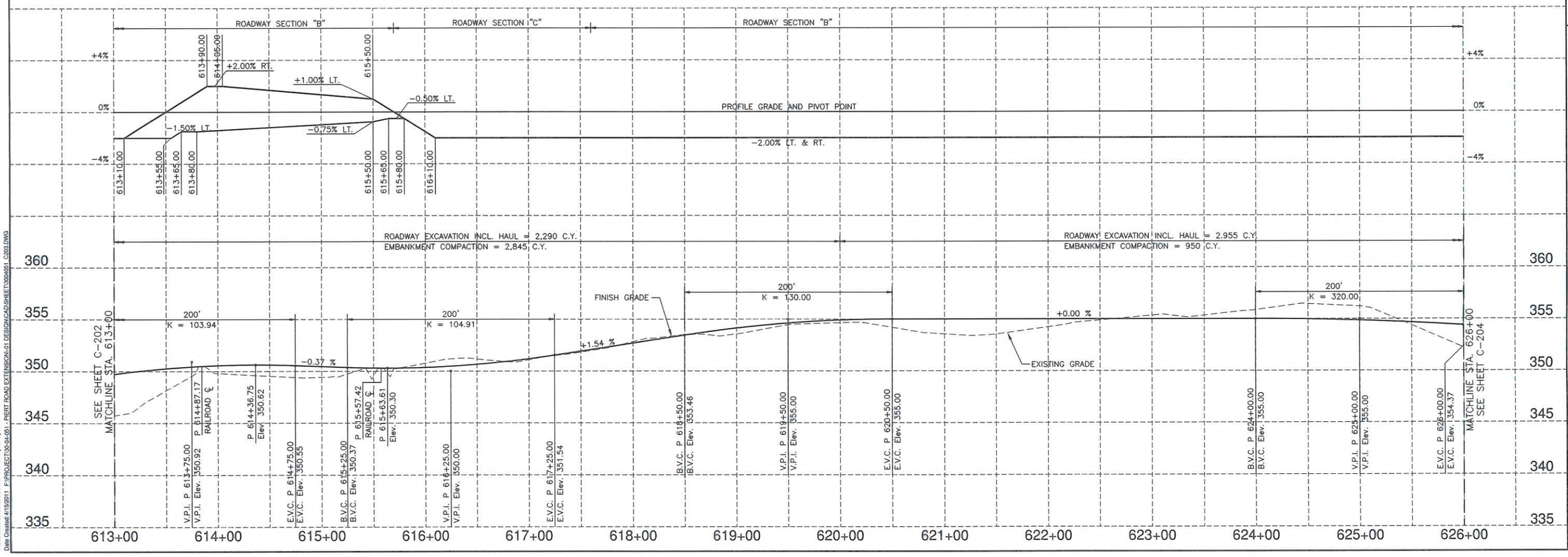


APPROACH SCHEDULE

STATION	WIDTH	CULVERT/LENGTH	APPROX. LENGTH
AS 10+56.36 LT.	20'	NONE	31.5'
P 616+21.00 RT.	22.65'	NONE	25'
P 620+45.00 RT.	20'	NONE	25'

LEGEND:
(#) - QUANTITY TABULATION NOTE
(#) - STRUCTURE NOTE

0 50 100
SCALE IN FEET



J-U-B ENGINEERS, INC.
2810 W. Clearwater Ave.
Suite 201
Kennewick, WA 99336
Phone: 509.783.2144
Fax: 509.736.0790
www.jub.com

CRAIG A. MARDEN — STATE OF WASHINGTON — 39980 — REGISTERED PROFESSIONAL ENGINEER

REUSE OF DRAWINGS
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

NO.	DESCRIPTION	REVISION	BY	APPR.	DATE

PIERT ROAD EXTENSION - CE 1619 CRP
BENTON COUNTY

PLAN & PROFILE STA. 613+00 TO STA. 626+00

FILE: 3004051 C203
JUB PROJ. #: 30-04-051
DRAWN BY: STT
DESIGN BY: TAM
CHECKED BY: CSE
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 3/22/2012

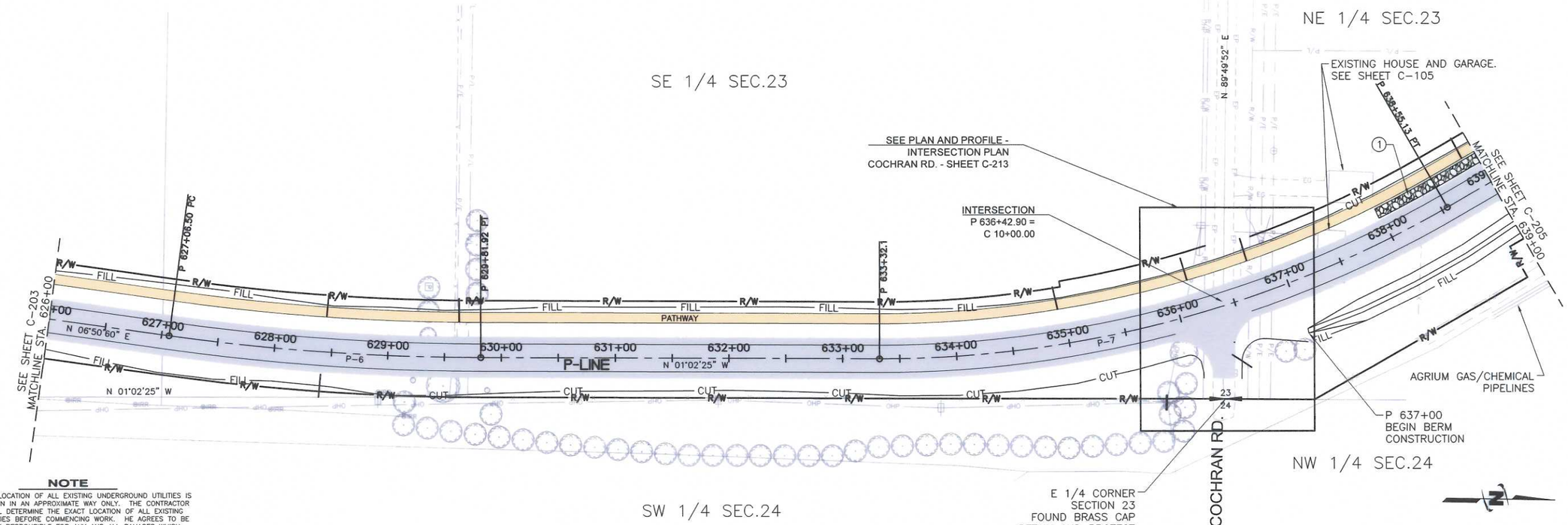
SHEET NUMBER:
C-203
17 OF 38

Plot Date: 3/29/2012 9:59 AM Plotted By: Mary M. Gamble
Date Created: 4/15/2011 F:\PROJECTS\30-04-051\ PIERT ROAD EXTENSION-01 DESIGN\CAD\SHEET\3004051 C203.DWG

ALIGNMENT CURVE DATA

CURVE NO.	PI STA.	DEGREE	DELTA	LENGTH	RADIUS	TANGENT	CHORD BEARING
P-6	628+44.43	02°51'53"	07°53'25"	275.42	2000.00'	137.93	N02°54'17"E
P-7	635+99.76	05°43'46"	29°57'58"	523.01	1000.00'	267.63	N16°01'24"W

TOWNSHIP 8 NORTH, RANGE 30 EAST, WILLAMETTE MERIDIAN



NOTE

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

CALL 2 WORKING DAYS BEFORE YOU DIG 1-800-424-5555

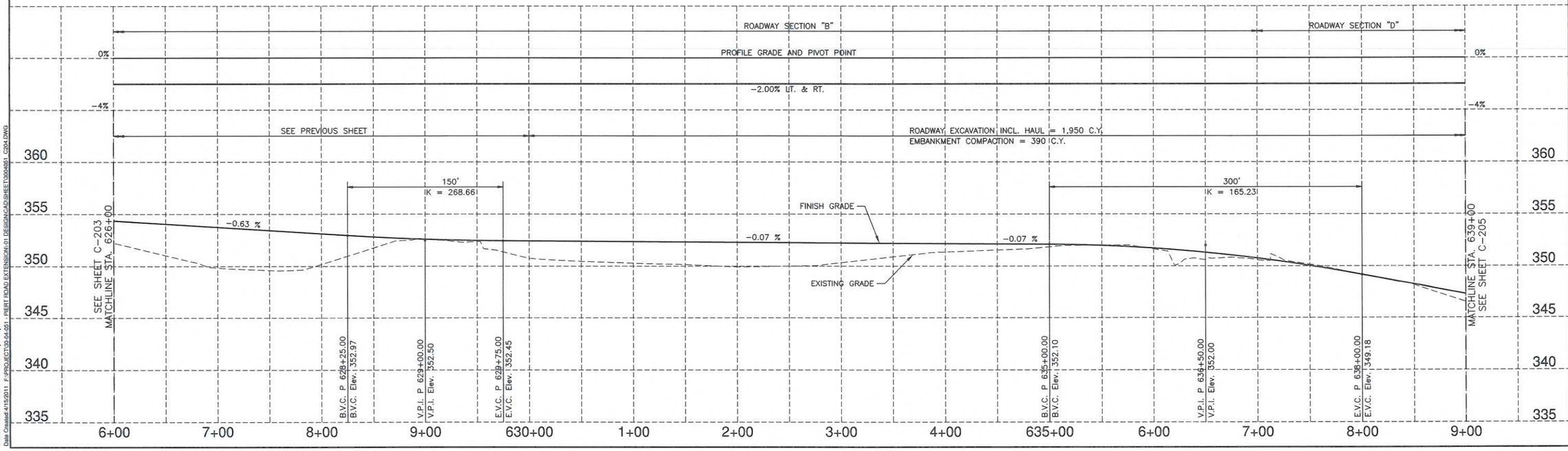
LEGEND:

(#) - QUANTITY TABULATION NOTE

(#) - STRUCTURE NOTE

0 50 100

SCALE IN FEET



J-U-B ENGINEERS, INC.
2810 W. Clearwater Ave.
Suite 201
Kennewick, WA 99336
Phone: 509.783.2144
Fax: 509.736.0790
www.jub.com

TRAVIS A. MARDEN — STATE OF WASHINGTON — 39082 — REGISTERED PROFESSIONAL ENGINEER

REUSE OF DRAWINGS
ALL DOCUMENTS AND DRAWINGS PREPARED BY J-U-B ENGINEERS, INC. ARE INSTRUMENTS OF PROFESSIONAL SERVICE AND SHALL REMAIN THE PROPERTY OF J-U-B ENGINEERS, INC. THEY SHALL NOT BE USED IN WHOLE OR IN PART FOR ANY PROJECT OTHER THAN THE SPECIFIC PROJECT FOR WHICH THEY WERE PREPARED AND PUBLISHED WITHOUT THE PRIOR EXPRESS WRITTEN CONSENT OF J-U-B ENGINEERS, INC.

NO.	DESCRIPTION	BY	APPR.	DATE
	REVISION			

PIERT ROAD EXTENSION - CE 1619 CRP
BENTON COUNTY

PLAN & PROFILE STA. 626+00 TO STA. 639+00

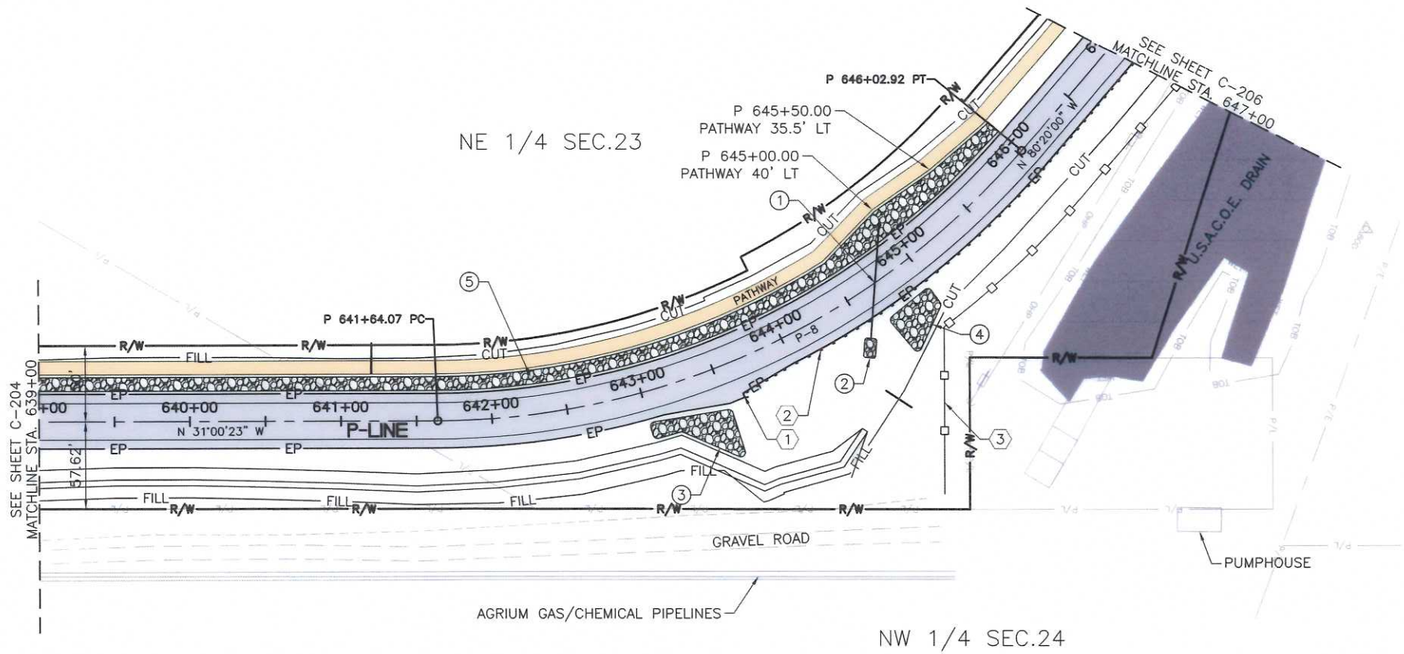
FILE: 3004051_C204
JUB PROJ. #: 30-04-051
DRAWN BY: STT
DESIGN BY: TAM
CHECKED BY: CSE
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 3/22/2012

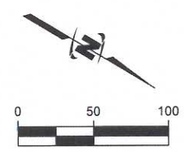
SHEET NUMBER:
C-204
18 OF 38

Plot Date: 3/29/2012 9:56 AM Plotted By: Mary M. Gaviia
Date Created: 4/1/2011 P:\PROJECTS\30-04-051 \PIERT ROAD EXTENSION-01 DESIGN\CAD\SHEET\3004051_C204.DWG

ALIGNMENT CURVE DATA							
CURVE NO.	PI STA.	DEGREE	DELTA	LENGTH	RADIUS	TANGENT	CHORD BEARING
P-8	643+98.03	11°14'04"	-49°19'37"	439.07'	510.00'	234.18'	N55°40'12"W

TOWNSHIP 8 NORTH, RANGE 30 EAST, WILLAMETTE MERIDIAN





SCALE IN FEET

NOTE

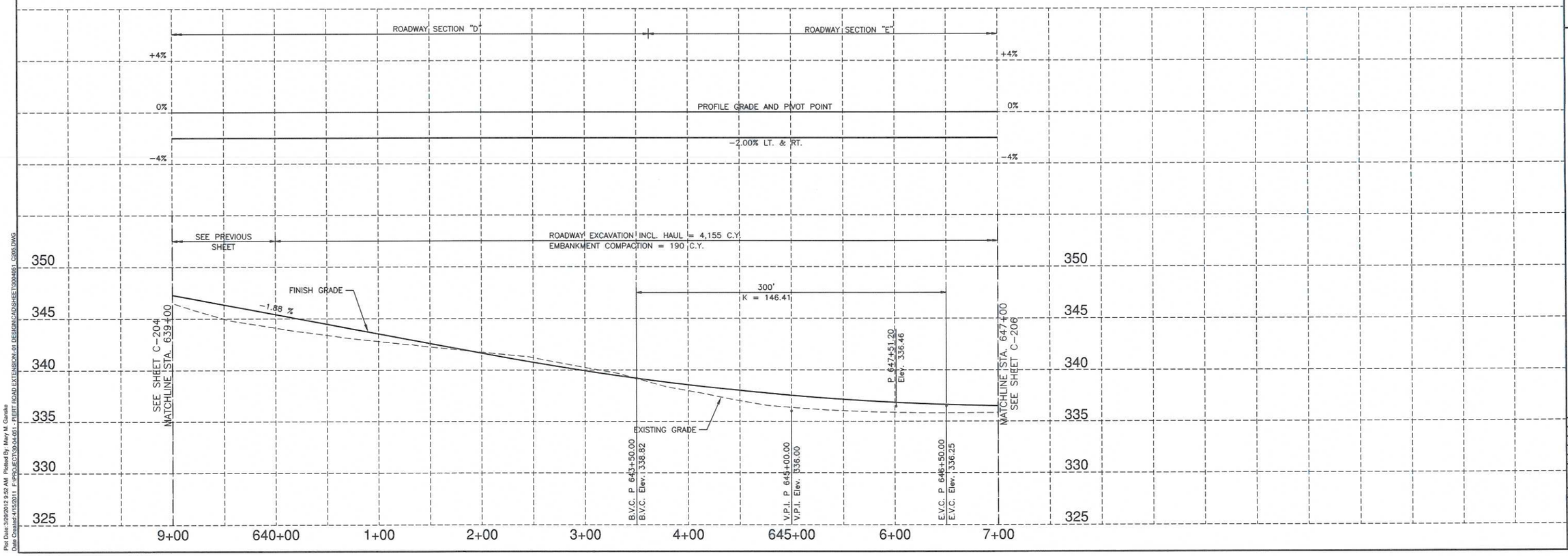
THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

CALL 2 WORKING DAYS BEFORE YOU DIG 1-800-424-5555

LEGEND:

(#) - QUANTITY TABULATION NOTE

(#) - STRUCTURE NOTE



J-U-B ENGINEERS, INC.
2810 W. Clearwater Ave.
Suite 201
Kennewick, WA 99336
Phone: 509.783.2144
Fax: 509.736.0790
www.jub.com

GRAVIS A. MARDEN — STATE OF WASHINGTON — 39882 — REGISTERED PROFESSIONAL ENGINEER

REUSE OF DRAWINGS
THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF J-U-B ENGINEERS, INC. AND SHALL NOT BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF J-U-B ENGINEERS, INC.

NO.	DESCRIPTION	REVISION	BY	APP'D	DATE

PIERT ROAD EXTENSION - CE 1619 CRP
BENTON COUNTY

PLAN & PROFILE STA. 639+00 TO STA. 647+00

FILE:	3004051_C205
JUB PROJ. # :	30-04-051
DRAWN BY:	STT
DESIGN BY:	TAM
CHECKED BY:	CSE

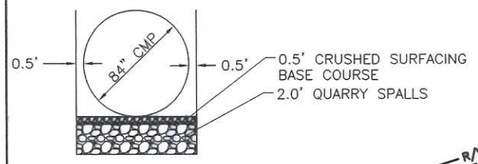
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY

LAST UPDATED: 3/22/2012

SHEET NUMBER:
C-205
19 OF 38

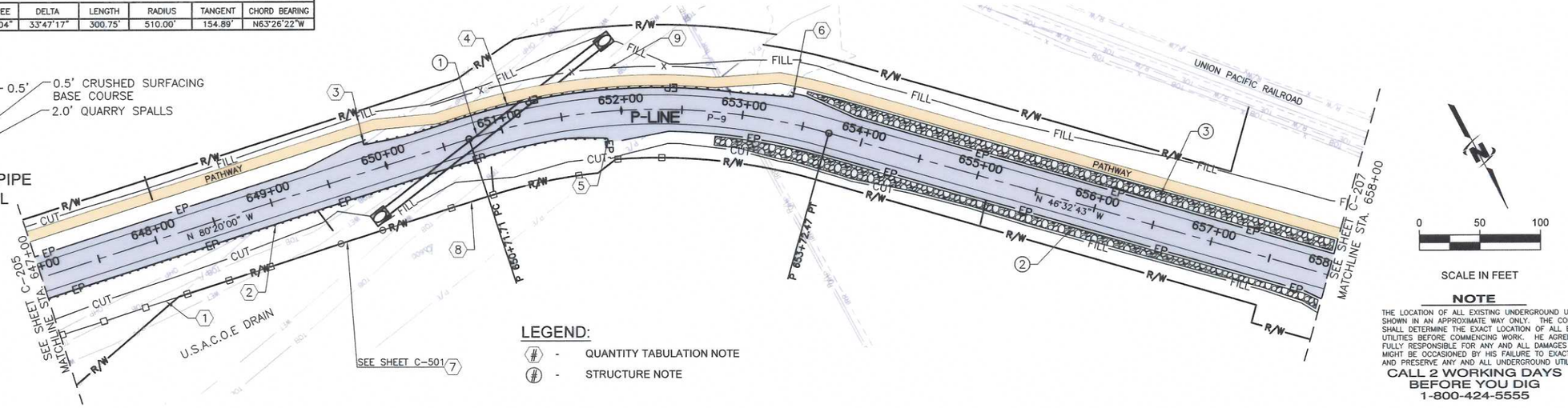
Plot Date: 3/26/2012 8:52 AM Plotted By: Mary M. Daniske
Date Created: 4/15/2011 P:\PROJECTS\30-04-051 - PIERT ROAD EXTENSION\C-01 DESIGN\CAD\SHEET\3004051_C205.DWG

ALIGNMENT CURVE DATA							
CURVE NO.	PI STA.	DEGREE	DELTA	LENGTH	RADIUS	TANGENT	CHORD BEARING
P-9	652+26.61	11°14'04"	33°47'17"	300.75'	510.00'	154.89'	N63°26'22"W



84" DIA. CULVERT PIPE BEDDING DETAIL

TOWNSHIP 8 NORTH, RANGE 30 EAST, WILLAMETTE MERIDIAN



SCALE IN FEET

LEGEND:

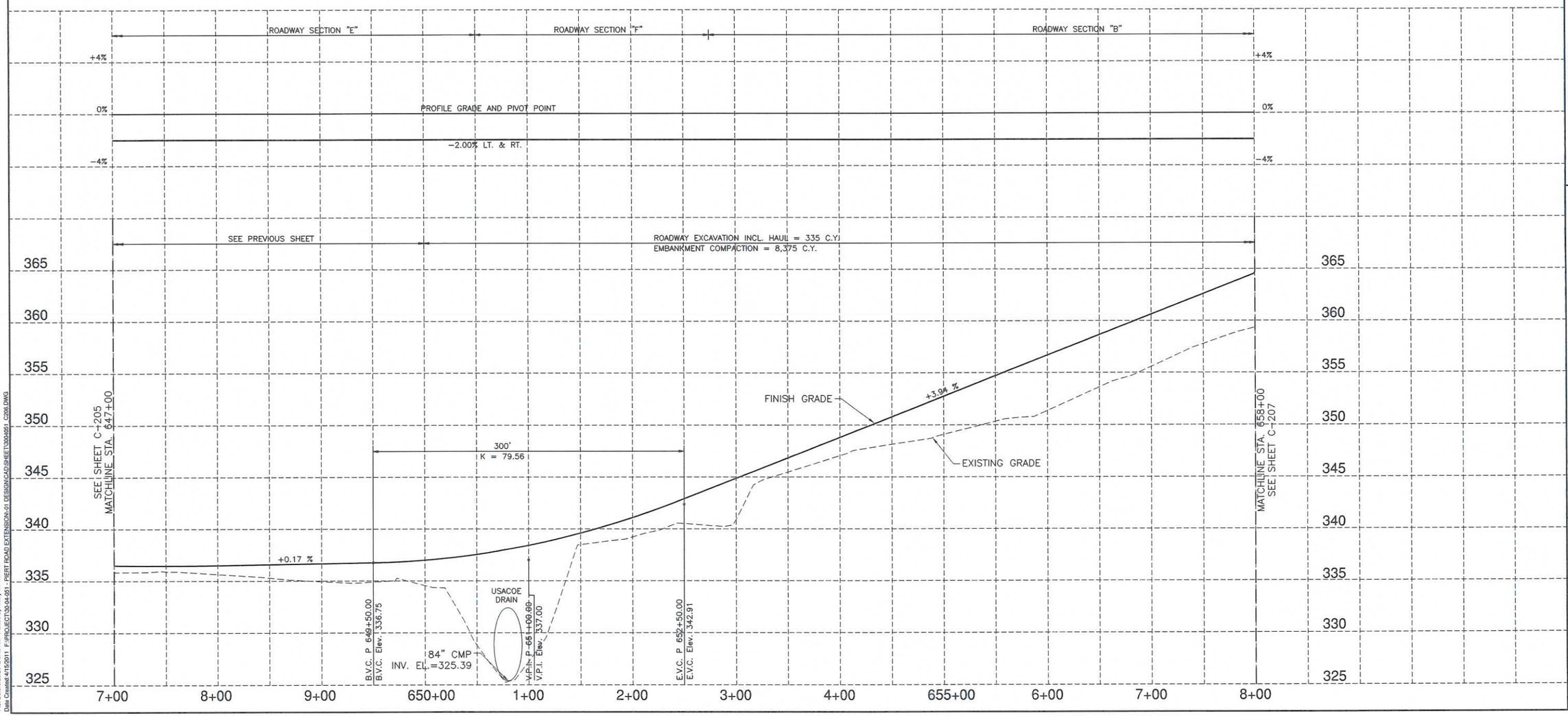
(#) - QUANTITY TABULATION NOTE

(#) - STRUCTURE NOTE

NOTE

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

CALL 2 WORKING DAYS BEFORE YOU DIG 1-800-424-5555



JUB
J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
2810 W. Clearwater Ave.
Suite 201
Kennewick, WA 99336
Phone: 509.783.2144
Fax: 509.736.0790
www.jub.com

STEVEN A. MARDEN
STATE OF WASHINGTON
20082
REGISTERED
PROFESSIONAL ENGINEER

REUSE OF DRAWINGS

NO.	DESCRIPTION	BY	APPR.	DATE
	REVISION			

PIERT ROAD EXTENSION - CE 1619 CRP
BENTON COUNTY

PLAN & PROFILE STA. 647+00 TO STA. 658+00

FILE: 3004051_C206
JUB PROJ. # : 30-04-051
DRAWN BY: STT
DESIGN BY: TAM
CHECKED BY: CSE
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 3/28/2012

SHEET NUMBER:
C-206
20 OF 38

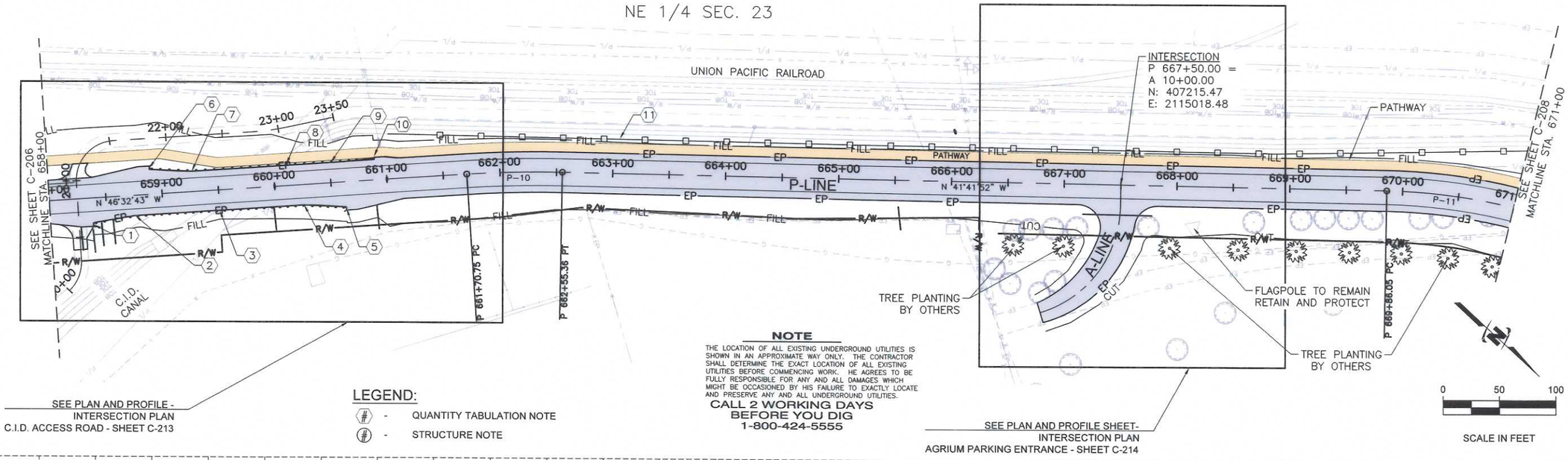
Plot Date: 3/29/2012 9:49 AM Plotted By: Mary M. Gamba
Date Created: 4/15/2011 P:\PROJECTS\30-04-051 - PIERT ROAD EXTENSION\01 DESIGN\CAD\SHEET\3004051_C206.DWG

ALIGNMENT CURVE DATA

CURVE NO.	PI STA.	DEGREE	DELTA	LENGTH	RADIUS	TANGENT	CHORD BEARING
P–10	662+13.08	05°43'46"	04°50'51"	84.60'	1000.00'	42.33'	N44°07'18"W
P–11	671+22.65	11°14'04"	29°59'17"	266.93'	510.00'	136.60'	N26°42'14"W

TOWNSHIP 8 NORTH, RANGE 30 EAST, WILLAMETTE MERIDIAN

NE 1/4 SEC. 23



NOTE

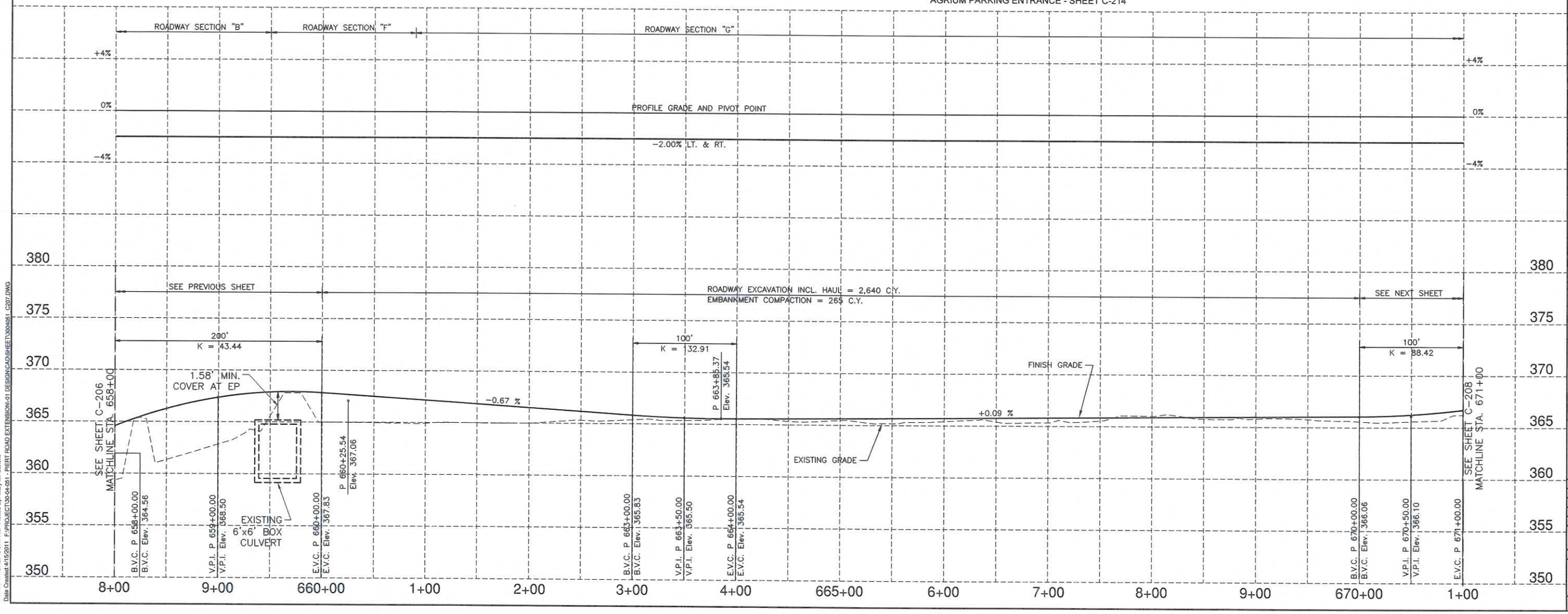
THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

CALL 2 WORKING DAYS BEFORE YOU DIG 1-800-424-5555

LEGEND:

(#) - QUANTITY TABULATION NOTE

(#) - STRUCTURE NOTE



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
2810 W. Clearwater Ave.
Suite 201
Kennewick, WA 99336
Phone: 509.783.2144
Fax: 509.736.0790
www.jub.com

TRAVIS A. MARDEN — STATE OF WASHINGTON — 39862 — REGISTERED PROFESSIONAL ENGINEER

REUSE OF DRAWINGS
THESE DRAWINGS ARE AN INSTRUMENT OF PROFESSIONAL SERVICE PREPARED BY J-U-B ENGINEERS, INC. FOR THE PROJECT DESCRIBED HEREIN. THEY ARE NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF J-U-B ENGINEERS, INC.

NO.	DESCRIPTION	BY	APP.	DATE
	REVISION			

PIERT ROAD EXTENSION - CE 1619 CRP
BENTON COUNTY

PLAN & PROFILE STA. 658+00 TO STA. 671+00

FILE : 3004051_C207
JUB PROJ. # : 30-04-051
DRAWN BY: STT
DESIGN BY: TAM
CHECKED BY: CSE
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 3/26/2012

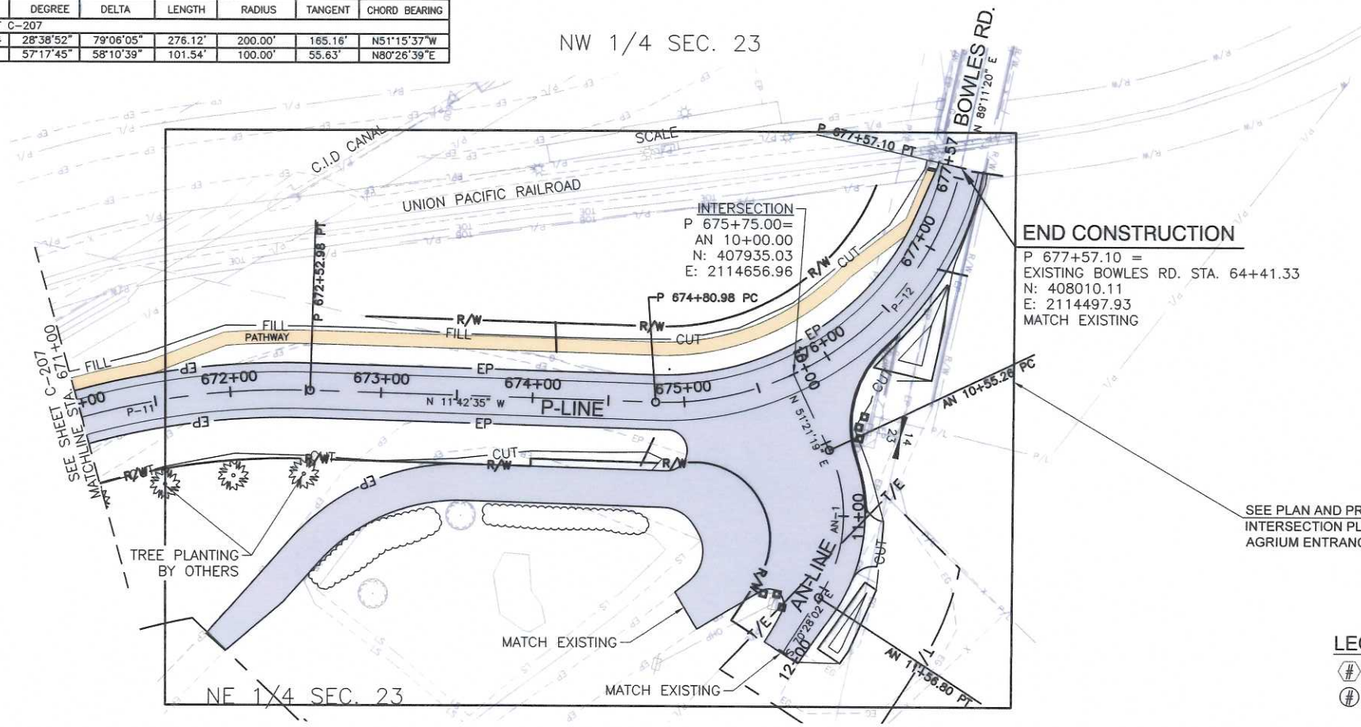
SHEET NUMBER:
C-207
21 OF 38

Plot Date:3/26/2012 9:47 AM Plotted By: Mary M. Carlisle
Date Created:4/1/2011 F:\PROJECTS\30-04-051 - PIERT ROAD EXTENSION-01 DESIGN\CAD\SHEET\3004051_C207.DWG

ALIGNMENT CURVE DATA

CURVE NO.	PI STA.	DEGREE	DELTA	LENGTH	RADIUS	TANGENT	CHORD BEARING
P–11	SEE SHEET C–207						
P–12	676+46.14	28°38'52"	79°06'05"	276.12'	200.00'	165.16'	N51°15'37"W
AN–1	11+10.90	57°17'45"	58°10'39"	101.54'	100.00'	55.63'	N80°26'39"E

TOWNSHIP 8 NORTH, RANGE 30 EAST, WILLAMETTE MERIDIAN



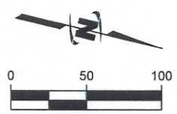
END CONSTRUCTION

P 677+57.10 =
EXISTING BOWLES RD. STA. 64+41.33
N: 408010.11
E: 2114497.93
MATCH EXISTING

SEE PLAN AND PROFILE -
INTERSECTION PLAN
AGRIUM ENTRANCE AT BOWLES ROAD - SHEET C-215

LEGEND:

(#) - QUANTITY TABULATION NOTE
(#) - STRUCTURE NOTE

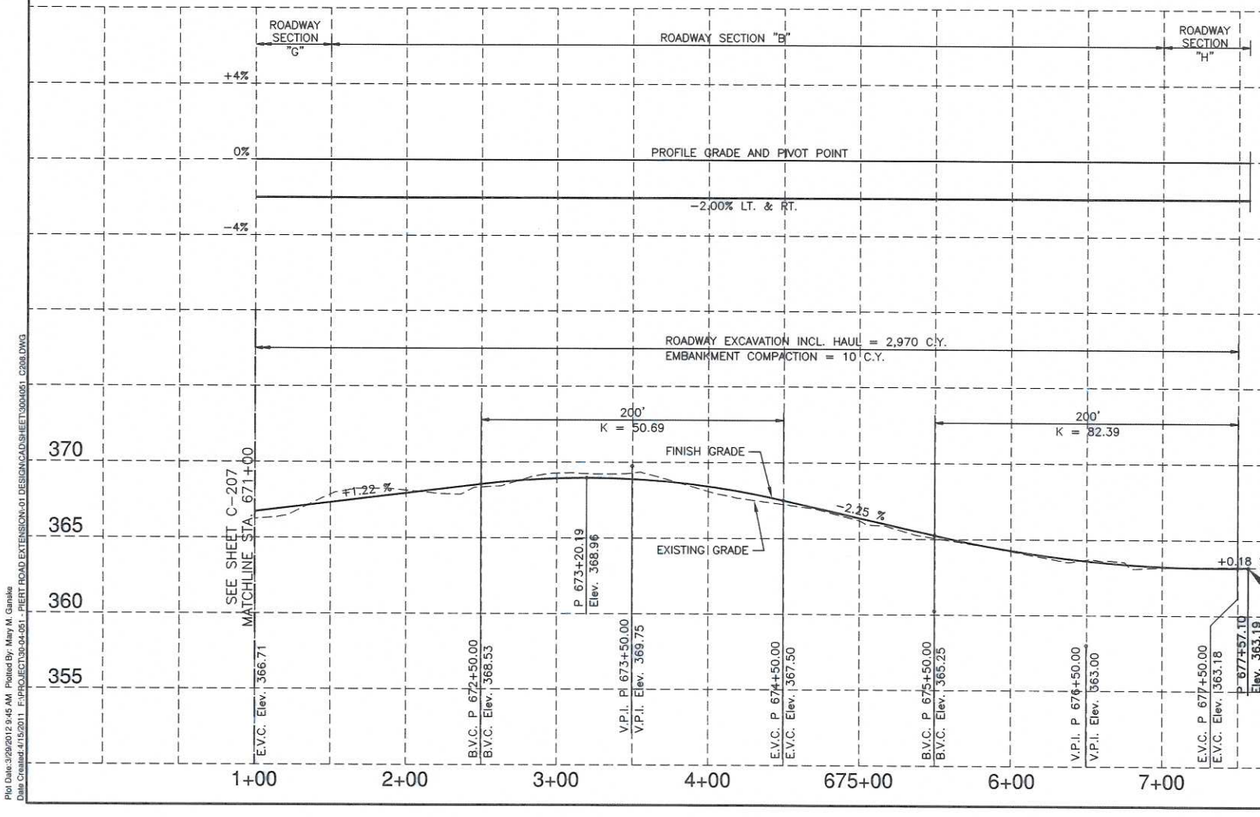


SCALE IN FEET

NOTE

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

CALL 2 WORKING DAYS BEFORE YOU DIG 1-800-424-5555



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
2810 W. Clearwater Ave.
Suite 201
Kennewick, WA 99336
Phone: 509.783.2144
Fax: 509.736.0790
www.jub.com

TRAVIS A. MARDEN
STATE OF WASHINGTON
99883
REGISTERED
3/27/12
PROFESSIONAL ENGINEER

REUSE OF DRAWINGS

NO.	DESCRIPTION	DATE	BY	APP.
	REVISION			

PIERT ROAD EXTENSION - CE 1619 CRP
BENTON COUNTY

PLAN & PROFILE STA. 671+00 TO STA. 682+84

FILE: 3004051_C208
JUB PROJ. # : 30-04-051
DRAWN BY: STT
DESIGN BY: TAM
CHECKED BY: CSE
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 3/28/2012

SHEET NUMBER:
C-208
22 OF 38

Plot Date: 3/29/2012 9:45 AM Plotted By: Mary M. Ganske
Date Created: 4/15/2011 F:\PROJECT\30-04-051 - PIERT ROAD EXTENSION\-01 DESIGN\CAD\SHEET\3004051_C208.DWG